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Rated at 2000, 3000, 4000, 5000, and 6000 V.D.C., RMC high voltage DIS-CAPS provide the safety factor necessary in yoke and other critical voltage applications. They are the proved answer to problems encountered in the design of standard or special purpose electronic equipment.

Write today on your company letterhead about your specific requirements.

CAPACITY	DIELECTRIC	SIZE	AVAILABLE C	
	2.	К٧		
331-470 471-1000 001-2700 701-5000 001-10000	1200-К 1200-К НІ К НІ К НІ К	9/16" 5/8" 9/16" 3/4" 3/4"	± 20% ± 20%	GMV GMV GMV GMV GMV
	3.	κv		
241-500 501-1000 001-5000	1200-К 1200-К НІ К	5/8" 5/8" 3/4"	± 20% ± 20%	GMV GMV GMV
	4	-KV		
81-680 81-1000	1200- <b>K</b> HI K	3/4" 5/8"	± 20%	GMV GMV
	5	-KV		
131-330 331-1000	1200-K HI K	7/8" 7/8"	±20%	GMV GMV
	6	-KV		
101-220 221-470 221-1000 471-1000	1 200-К 1 200-К Н1 К Н1 К	3/4" 7/8" 7/8" 7/8"	± 20% ± 20%	GMV GMV GMV
			. @ 1 KC (ir	
INSULATI	ON: Durez P	henolic	-vacuum wa	ixed



**RADIO MATERIALS CORPORATION** GENERAL OFFICE: 3325 N. California Ave., Chicago 18, III.

FACTORIES AT CHICAGO, ILL. AND ATTICA, IND. Two RMC Plants Devoted Exclusively to Ceramic Capacitors

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## TELE-TECH ε Electronic Industries

### JUNE, 1955

FRONT COVER: GRAPHIC SYMBOLS of wide range of electronic devices indicate comprehensive scope of two invaluable and unique features in this issue. One is the Electronic Industries Directory listing thousands of manufacturers and their products, consulting engineers, brand names, societies, reps and distributors-just about everything the engineer and executive need in a year round, complete, quick-reference source. The second feature is Section Two of this issue, the informative and eye-appealing chart of the electromagnetic spectrum and 1955 frequency allocations-the result of months of exhaustive study of FCC files and coordinated art-andengineering effort.

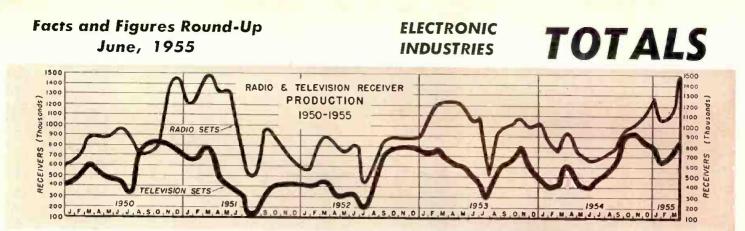
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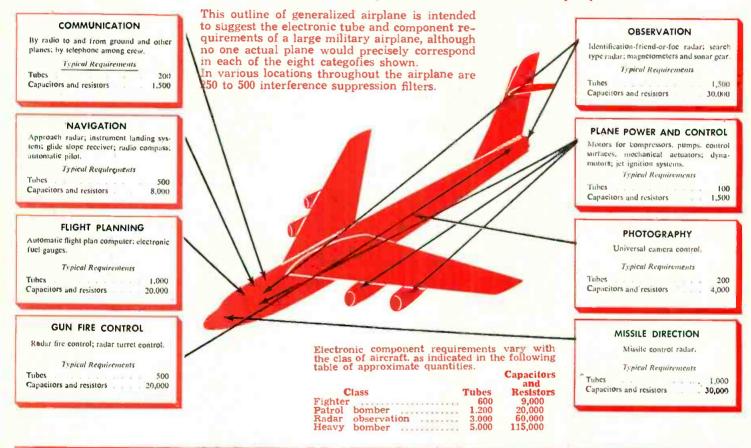
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2 For product information, use inquiry card on pages 185-186.



### Why as Much as Half the Cost of a Modern Military Airplane Is Represented by Its Electronic Equipment



### **GOVERNMENT ELECTRONIC CONTRACT AWARDS** This list classifies and gives the value of electronic equipment selected from contracts awarded by government procurement agencies in April 1955.

Absorbers, wave guide	04 577	· · · · · · · · · · · · · · · · · · ·			
Actuators	26,577	Facsimile Sets	70,039	Radar Sets, transistorized	253,391
Adaptor availar	56,172	Generators	66,245	Radars, receiving	26,840
Adapter, amplifier	595,579	Headsets	433,636	Radio Sets	445,957
Accelerometers, acft	132,600	Indicators	57,666	Recorders, broadband	90,318
Amplifiers	626,525	Indicators, bearing and range	341,243	Recorder-Reproducers	65,598
Amplifiers, fuel flow	100,533	Indicators, tachometer	336,512	Rectifiers, photogrammetric	89,700
Analyzers	26,745	Indicators, temperature	36,770	Regulators, audio	
Anodes	12,546	Indicators, Spare Parts, etc.			148,235
Antennas	38,710	Inverters, electronic	54,337	Relays	34,917
Batteries, dry	447.244	Inverters, 3 phase	319.068	Rotor Segments	66,500
Battery Jars	536,692	Jack Assys, telephone		Selector Switches, synchrogenerator	179,475
Beacon Radio	79,950	Kits, computer	37,323		2,339,659
Brushes, carbon	27.446	Kits, electronics	101,574	Signal Generators, X-band	202,423
Cabinets, equipment	51,246		40,757	Simulators, flight	40,000
Cable	364 573	Kits, modification, radio set	75,230	Telegraph\$, telephone terminal	377,779
Cable Assys	745.845	Line Analyzers	304,538	Telephone Equipments, central	284,257
Cables, thermocouple control		Magnetrons	256,000		1,024,362
Coder-Decoder Group	196,039	Meters, power	52,395	Test Sets	307,841
Communication Suctores	97,893	Modulator Assys	3,391,095	Timers	34,152
Communication Systems, air-to-ground	24,210	Motor Generators	130,403	Transmission Assys	41,283
Conduits, electrical winders, etc.	26,843	Motors			1,794,415
Connector Assys	28,230	Oscillators	1,861,051	Transmitter Elements, telephone	66,573
Converters, signal data	1,449,431	Plugs	40,289	Transistors, germanium, power	771,807
Counter Assys	328,815	Power Supplies	2,193,468	Transistar Devices	506.773
Diodes, crystal unit	32,813	Protectors, telephone	112,405		2,932,943
Diades, microwave	258,382	Pulse Analyzers	81,576	Wave Meters	
			01121.6	HEAR Migrels	26,460

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

## RAYTHEON TRANSIST MILLIONS C

### RAYTHEON IS FIRST AND FOREMOST IN

- mass production. Raytheon is long past the experiment and development stage in Germanium PNP Junction Transistors - for over 2 years has had the quantity production and quality control techniques and resources

- proved reliability in commercial application, based on billions of hours of actual field performance and a record of success exceeding that of many reliable vacuum tubes

- range of characteristics. Look at the chart. You'll find one or more Raytheon Transistors that meet your specific requirements, how ever exacting.

	FYPE		Collector		Caitter	Base	0 and	Maa.	Apta	Na.	Temp.
SUR		Volta	Meg. ohms	Cutoff µA	MA	ohms	Gaartent Acrupt Pactor	Noze Factor dla	Frenza Cation Mic.	Temp.	*C/nW
N	CK721 CK722	-6 -6	2.0 2.0	6		100 100	145	11 15	0.8 0.6	NU NU	0.25 0.25
	CK725 CK727	1.5	2.0 1.0	6		100	90 45	)2 12	0.8	70 70	0.25 0.25
A PAR		1200	Isma .			-		C E	-		CK722

TWDE		Collector		Emitter	Base	Base Current	Max. Noise	Alpha Freg.	Max. Junction	Temp. Rise °C/mW	
TYPE	Volts	Meg. ohms	Cutoff 'µA	MA	ohms	Ampl. Factor	Factor db	Cutoff mc.	Temp. °C		
2N63	-6	2.0	6	-1.0	350	22	25	0.6	85	0.58	
2N64	-6	2.0	6	-1.0	700	45	22	0.8	85	0.58	
2N65	6	2.0	6		1500	90	20	1.2	85	0.58	
2N106	-1.5	1.0	6	-0.5	700	45	12	0.8	85	0.58	
EN SIL	-12	No.	100	IST DIE	CF 300 /	761		1	Sauge 100	sin 112	

TYPE	Collector		Emitter	Extrin. Base	Base Current	Alpha Freq. Cutoff mc.	Max. Junc.	Temp. Rise	Coll. Capac. μμf		ain at	Rise time*	Decay time*
irr.	Volts	Cutoff µA	MA	Resis. Ampl. ohms Factor	Temp. °C		°C/mW	455kc db		2 mc db	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
CK760 CK761 CK762	-6 -6 -6	1 1 1	-1.0 -1.0 -1.0	75 75 75	40 45 65	5 10 20	85 85 85	0.62 0.62 0.62	14 14 14	32 33 33	18 20 22	0.05 0.04 0.02	0.06 0.05 0.03
		measured i	in circuit whic	h will be sup	oplied on requ	Note:	above characte	eristics are av	verage excep	ot where n	oted		

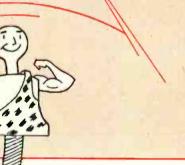
## **RAYTHEON TRANSISTORS** - more in use than all other makes combined

MATTHEONSILICONPOWERRECTIFIERSto 175°Cto 15 amps.to 200 volts

 $\frac{R}{R} \times E \times E \times E \times E > 100,000$ 

	Number of	Watts Output at Case Temperature† of							
Circuit	CK776	30°C	70°C	170°C					
One Phase Half Wave Full Wave Bridge	1 2 4	700 1600 3050	530 1070 2040	265 530 1020					
Three Phase Half Wave Bridge	3	3200 6800	2150 4550	1070 2270					

† Maintained with heat radiator



At maximum power handling capability of CK776, an equivalent selenium rectifier could occupy as much as 100 times the volume.

RAYTHEON	SILICON P	OWER REC	TIFIER CHA	RACTERIST	ICS
TYPE CK775	MAXIMUM	VOLTAGE	MAXIMUM	CURRENT	TYPICAL
	RMS	PEAK	PEAK	AVERAGE	DISSIPATIO
	VOLTS	VOLTS	AMPERES	AMPERES	WATTS
CASE TEMP. 30°C*	40	60	50	15	40
CASE TEMP. 170°C*	40	60	15	5	10
AMBIENT TEMP. 25°C	40	60	6	2.0	3.0
AMBIENT TEMP. 170°C	40	60	2.0	0.5	2.0
TYPE CK776					_
CASE TEMP. 30°C*	125	200	50	15	40
CASE TEMP. 170°C*	125	200	15	5	10
NO HEAT RADIATOR AMBIENT TEMP. 25°C AMBIENT TEMP. 170°C	125	200	6 2.0	2.0	3.0



At 25°C both CK775 and CK776 have maximum drop at 5 amperes of 1.5 volts.

RAYTHEON

Maximum reverse current is 25mA for CK775 at -60 volts, CK776 at -200 volts.

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### CIRCULATION NOW 27,000

An increase of 5,000, effective with the Januory 1955 issue, provides greater penetration of plants, stations and laboratories in the primary markets of the industry—Manufacturing, Broadcasting and Armed Forces procurement.

These ore the markets with greatest buying power and greatest expansion, industrially and geographically.

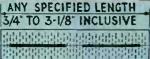
The circulation of TELE-TECH is increasing in two ways:

- -Growth of TELE-TECH's Unit Coverage of top-ranking engineers—the magazine's basic readership, preselected for complimentary subscriptions.
- Moking paid subscriptions available to other engineers in research, design, production, operation and maintenance.

Although currently effective, the increased circulation cannot appear in audit statements until the first half of 1955 is audited.

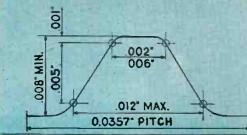
### THE ELECTRONIC INDUSTRIES DIRECTORY

Published annually as an integral section of TELE-TECH in June



NOTE-: INTERNALLY THREADED 1/4"-28 AND EMBOSSED TO PROVIDE 2"TO 7" OZ. RUNNING TORQUE WITH 1/4"-28 MPA STANDARD THREAD CORE AS DETAILED BELOW :

THE FOLLOWING MPA STANDARD CORE THREAD FORM DRAWING AND DIMENSION CHART IS THE RECOMMENDATION OF THE CLEVELAND CONTAINER CO. FOR USE WITH TORKRITE COIL FORMS



	and the second se
RE LENGTH	CORE O.D.
3/8	.249" ±.001"
1/2"	.248"±.001"
5/8"	.246" ±.001"
3/4"	.246"±.001"
7/8"	.245" ±.001"
1"	.245 ±.001

.283\*

020" WALL

±.003\*



## ORKRITE

CO

### BY THE MAKERS OF CLEVELITE\* PHENOLIC TUBING

### **IMPROVED PERFORMANCE-LOWER PRICE!!!**

Torkrite coil forms eliminate torque and stripping problems and are rapidly replacing other coil forms because Torkrite:

\*

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WEST COAST:

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- permits use of lower torque since it is completely independent of stripping pressure.
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Improved Torkrite is now available

in various diameter tubes. Lengths

from 3/4" to 3-1/8" are made to fit 8-32, 10-32, 1/4-28 and 5/16-24

+

cores.

- has no holes or perforations thru tube wall which eliminates cement leakage locking cores.
- has smooth adjustment of core without lubricant.
- torque increases less after winding as heavier wall reduces any tendency to collapse and bind core.
- maximum stability results as core cannot move in relation to winding after peaking as it is engaged in internal threads.
- embossings are evenly spaced, with a lead at each end of the form to permit easy insertion of core.



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### ITCHING TUBES TR, ATR

			ncy	Power Level							ncy	Power Level			
		Frequency	Center Frequency	KW Max.)	Туре	Description	Tube Designation		Band	Frequency	Center Frequency	(KW Max.)	Туре	Description	Tube Designation
ι		900-1200	•	450	TR	Cell Type, One Oisc, Fixed-Tuned	1B23		х	8490-9578	9000	1000	TR	Band Pass, Fixed-Tuned, Controlled	6164
L   L		1075-1095 1180-1220	*	1	TR TR	Electrodeless Discharge, Fixed-Tuned Tunable	1 B40 BL97		x	8490-9578	9000	1000	TR	Phase Shift 5863 with Full UG52/U Flanges —	
		1215-1355		450	TR	Cell Type, 2 Disc, Tunable	6322/BL25							No Struts	BL82
li		1215-1355		2000	TR	Tunable	6632/BL18		X	8490-9578	9000 9000	200	TR TR	Band Pass, Fixed-Tuned Long Life 1B63A	1 B63A 1 B63B
1 L		1220-1365	1292	2000	TR	Band Pass, Fixed-Tuned	6633/BL37		X X	8490-9578 8490-9578	9000	200	TR	Band Pass, Fixed-Tuned (1B63A)	6035
L	· (	1250-1350	*	750	TR	Cell Type, Fixed-Tuned	BL23 BL59		x	8490-9578	9000	200	TR		6232/TR427
11		1250-1350 1180-1220	1300 1200	500 3	TR ATR	Special For Coax Systems Fixed-Tuned	BL98		х	8490-9578	9000	1000	TR	Band Pass, Fixed-Tuned with 1B36A	6368
li		1215-1335	1285	2000	ATR	Low Q, Fixed-Tuned, Tuned in			х	8490-9578	9000	100	TR	Flanges Fast Recovery Time 1863A	6644 /BL95
Τ.,						quarter-height guide	6628/BL38		x	8490-9578	9000	100	TR	BL95 with Heater	6645/BL95H
l	•	1215-1335	1285	2000	ATR	Low Q, Fixed-Tuned, Tuned in half-height guide	BL38A		х	8490-9578	9000	200	TR	1B63A with Heater	BL611
1.		1250-1350	1300	550	Pre-TR	Pre-TR when used in pairs	5939A		Х	8490-9600	**	100	TR	Integral Cavity, Tunable	IB24A
ι		1250-1350	1300	2000	Pre-TR	Band Pass, Fixed-Tuned	6605/BL96		X	8490-9600 8490-9600	••	100	TR TR	Integral Cavity, Tunable Similar to 1824A without reservoir	1 B60 6378 / BL62
l	.	1250-1350	1300	2000	Pre-TR	Band Pass, Fixed-Turied, BL96 with Ceramic Window	BL612		X	8490-9600		30	TR	Tunable, Side-arm Ignitor, Integral	037870202
		2390-2710		5	TR	Integral Cavity, Tunable	6635/BL57					1		Cavity	BL20
	5	2600-3000	2800	750	TR	Band Pass, Fixed-Tuned	1B58		X	8490-9600	**	30	TR	Special Auxiliary Reservoir Within Tube Envelope	BL22
1		2600-3000	2800	750	TR	Band Pass, Fixed-Tuned	6117 BL603		х	8490-9600	**	100	Ϋ́R	6378 with Side-Arm Ignitor	BL79
		2600-3000	2800	750	TR	1B58 with High Q Window Integral Cavity, Tunable	BL602		х	8541-9862		75	TR	Cell Type, Two Disc, Fixed-Tuned	724B
		2700-3000 2700-3300		350	TR	(721 B) Slow Recovery Time	1B62		X	8700-8900	**	10	TR	Integral Cavity, Tunable, Fast R.T.	BL9
		2700-3300		350	TR	Cell Type, Two Disc, Fixed-Tuned	721B		X	9285-9335	9310	750	TR	Crossed-guide Duplexer Integral Cavity, Tunable	BL10 BL51
		2700-3400		500	TR	Cell Type, Two Disc, Tunable	1 B27		X X	10,000-10,500 8600-9200	8900	100 250	TR ATR	Miniaturized 1B35A	BL31 BL76
		2700-3400	•.••	500	TR	Cell Type, Two Disc, Tunable, High	BL8		x	8600-9200	8900	250	ATR	6393 for Half-Height Guide Operation	BL77
		0700 2400		600	TR	Interaction Ruggedized 1 B27 without Tuner Knob	6637 /BL31		x	8850-9450	9150	250	ATR	1B35A Outline	BL75
		2700-3400 2700-3400		500 500	TR	BL31 with Special Fill for Positive	0037 /0201		X	9000-9600	9430	250	ATR	1B35A Outline	BL49
ľ	'	2700-3400		000	10	Ignitor operation	6638/BL99		X	9200-9700	9500	250	ATR	1B35A Outline	BL73
		2760-2840	2800	1000	TR	Broadband	BL34		X	9200-9700	9550	250	ATR	1B35A Outline	BL74
	S	2900-3200	3050	750	TR	Band Pass, Fixed-Tuned	5853 5927		X	9200-9700	9600 8750	250 250	ATR	1B35A Outline Fixed-Tuned	BL72 1B37A
	S	3100-3500	3300 3550	750	TR	Band Pass, Fixed-Tuned Band Pass, Fixed-Tuned	1855		XX	8600-9050 8600-9050	8750	250	ATR	1B37A, Mounting Flange Flat Within	103/A
	s	3360-3740 2650-2950	2800	750	ATR	Fixed-Tuned	6024		L^	0000-5000		200		0.003"	6034
	s	2600-2900	2750	750	ATR	Fixed-Tuned	1 B44		x	8600-9050	8750	250	ATR	1B37A, New Mount	6284
	s	2600-2900	2750	750	ATR	1B44 with 15 µsec Recovery time	BL41		X	8600-9050	87,50	250	ATR	Miniature 1B37A, Contact Mount 1B37A with Ignitor	6369 6631 / BL94
	ş	2650-2900	2800	750	ATR	Fixed-Tuned	BL36		XX	8600-9050 8600-9050	8750 8750	250	ATR	1B37A with 1B63A Window	BL609
	s	2700-3000	2850	750	ATR	Fixed-Tuned	1 B56 BL40		x	8600-9050	8750		ATR	1B37A with Special Argon Fill	BL610
	s	2700-3000 2800-3100	2850 2950	750	ATR	1B56 with 15 µsec Recovery time Fixed-Tuned	5792		X	8600-9100	8800	250	ATR	1B35A Outline	5883
	s	2900-3200	3050	750	ATR	Fixed-Tuned	5793		X	8600-9100	8800		ATR	6304 for RG51 /µ Guide	6629/BL54
	s	3050-3350	3200	750	ATR	Fixed-Tuned	5921		X	8600-9100	8800		ATR	5883 in 6393 Outline	BL69
	s	3150-3450	3325	750	ATR	Fixed-Tuned	1857		X X	8800-9400	9080 9050		ATR	1B35A Outline	6162 /ATR388 6163
	s	3250-3550	3400	750	ATR	Fixed-Tuned	5922 1B53		x	8800-9400 9000-9600	9300		ATR	Fixed - Tuned	1B35A
	S	3400-3550	3479	750	ATR	Fixed-Tuned Fixed-Tuned	1B53		Î x	9000-9600	9375		ATR	For RG51 /µ Guide	5864/ATR321
	S S	3450-3750 2650-2950	2800	750	1	Band Pass, Fixed-Tuned	1B38		x	9000-9600	9300	250	ATR	1B35A, Mounting Flange Flat within	6002
	s	3300-3700	3550			Band Pass, Fixed-Tuned	1B54			0000 0000	9300	250	ATR	0.003" 1B35A with Ignitor	6033 6214
	C	5200-5530	5365	1000	Ϋ́R	Band Pass, Fixed-Tuned	5925/TR331		X X	9000-9600 9000-9600	9280		ATR	1B35A New Mount	6276
	C	5370-5430	5400	100	TR	Complete Duplexer, Integral Tr and ATR	BL88		x	9000-9600	9300		ATR	Miniature 1B35A, Contact Mount	6304/BL43
	c	5370-5430	5400	100	TR	TR for BL88 Duplexer, Special Input			X	9000-9600	9300	250	ATR	Miniature 1B35A with Special Flange	6393/BL68
	Ĭ	0070 5430	1			Flange Seat	BL605		X	9000-9600	9300			6393 Tuned in Half-Height Guide	6396
	C	5395-5905	5650		TR	Band Pass, Fixed-Tuned	5865/TR361		X	9000-9600	9375		ATR	6034 for RG51/u Guide	6630/BL55
1	C	5395-5905	5650		TR	Band Pass, Fixed-Tuned Integral Cavity, Tunable	6558/BL28 6639/BL46		X	9000-9600	9300	500	ATR	5864 in 6393 Outline for Use in RG51 / Guide	BL70
	C C	5540-5560 5200-5500	5280	100		Fixed-Tuned, Contact Mount	BL83		x	9000-9600	9375	250	ATR	Fixed-Tuned, 1B35A Outline	BL45
	c	5200-5550	5435		1	Fixed-Tuned	BL52		X	9000-9600	9375			Crossed -Guide Duplexer	BL29
	č	5200-5500	5365			Fixed-Tuned	6022/ATR332		X	9000-9600	9375			Crossed-Guide Duplexer	BL47
	C	5250-5550	5400	100	ATR -	For BL88 Duplexer, Special Mount-	BL606		Ku	15000-17000	16000			Band Pass, Fixed-Tuned	6649/BL56
	c	5500 5000	5640	30	ATR	ing Flange Fixed - Tuned	6081 /ATR407		Ku	16200-16800	10500	40		Integral Cavity, Tunable Fixed-Tuned	BL16 BL15
	c	5500-5800 5500-5800	5640			Fixed-Tuned, Contact Mount	6455/BL61		Ku	16000-17000					6282 /BL11
	Xb	6000-7100	••	500		Integral Cavity, Tunable	1B50		K	23350-24950		35		Band Pass, Fixed-Tuned Integral Cavity, Tunable	1B26
	Xb	6200-6700	6425	5 500	ATR	Fixed-Tuned	1B51		K	23630-24580 23630-24580		100		1B26, No Reservoir	6650/BL67
	X	8490-9578	9000	1000	TR	Band Pass, Special Flange for Use in RG 51 /μ Guide	5863		ĸ	23500-24500	1		1	Fixed-Tuned	1836
L	40-	Connet fromu	I new of and	IL type	fixed turn				**R	esonant frequen	icy of in	ntegrał	cavity typ	e tubes and tunable cell-type tubes is de	termined by the
	Ra	inge of freque	ncy show	n in th	e second c	ed tubes is determined by the external car olumn is from known applications. Specia	I cavity designs	5	S	etting of the adj	ustable	e tuning	mechani	sm.	

\*Resonant frequency of cell-type, fixed-tuned tubes is determined by the external cavity dimensions. Range of frequency shown in the second column is from known applications. Special cavity designs may alter the range.

HVERID JUNCTIONS RT-SLOT

Bomac produces fabricated or precisioncast short-slot hybrid junctions for all frequency bands. These hybrids are made to give excellent characteristics in all microwave equipment.

Bomac, because of its long experience in the microwave field, is especially equipped to design, develop, and produce all types of microwave systems.

### GNETRONS

Bomac has available tunable and fixedtuned magnetrons with high peak rf powers for pulsed service in the higher frequency bands.

### COMPONE CROWAV

Bomac now has a comprehensive line o microwave gaskets, waveguide seats, and mating flanges designed to give excellen electrical characteristics when used with appropriate components.

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SYSTEMS

Band	Frequency	Center Frequency	Power Level KW Max.	Туре	Description	Tube Designation
ι	1215-1355	1285	2000	TR	Dual, Band Pass	6634 /BL90
s	2600-3000	2800	750	TR	Dual, Band Pass	6636/BL87
S	2650-2950	2800	750	ATR	Dual	BL92
C	5400-5900	5650	700	TR	Dual 5865	6640/BL60
C	5400-5900	5650	3000	TR	Dual 6568, Band Pass	BL613
C	5400-5900	5640	300	ATR	Dual, Fixed-Tuned, Contact Mount	BL63
X	8490-9578	9000	200	TR	Dual 1B63A	6334/BL27
X	8490-9578	9000	200	TR	6334 tapped Flanges Both Ends	BL78
X	8490-9578	9000	200	TR	6334 plus Separate Channel 1B63A	BL81
X	8490-9578	9000	200	TR	6334 with Recovery Time 1 µsec at 1 db	6643/BL84
X	8490-9578	9000	200	TR	BL84 with Heater	BL84H
X	8490-9578	<b>9</b> 000	200	TR	6334 with Large X Flange Input and Small X Flange Output	6642/BL600
X	8490-9578	9000	200	TR	Dual 1B63A, 2 µsec Recovery Time	6646/BL604
X	8490-9578	9000	200	TR	BL604 with Heater	6647/BL604H
X	8490-9578	9000	200	TR	6334 with Special Hole Dimensions for Aluminum Flanges	BL607
X	8490-9578	9000	200	TR	6334 with Special Saddle Type Flange	6648/BL615
X	8500-9600	9050	250	TR	Large X Guide	6501
X	8500-9600	9050	250	TR	Four-Element Tube for Large X Guide	6564/BL71
X	8490-9578	9000	250		Integral 6334 Hybrid Duplexer	BL507
Ku	15000-17000	16000	100	TR	Dual, Band Pass	6560/BL35

	SILICON DIODES									
Band	Туре	Freq. (Mc)	Max. Conversion Loss (db)	Noise Ratio : Times :	Max. VSWR	IF Impedance Ohms				
S	IN21B	3060	6.5	2.0	-	-				
S	IN21BR	3060	6.5	2.0						
S	IN21C	3060	5.5	1.5	-	_				
S	IN21CR	3060	5.5	1.5	1	-				
х	IN23B	9375	6.5	2.7		-				
x	IN23BR	9375	5.5	2.7	-	-				
X	IN23C	9375	6.0	2.0	1.50	325-475				
X	IN23CR	9375	6.0	2.0	1.50	325-475				
х	IN149	9375	5.5	1.5	1.50	325-475				
X	IN23D	9375	5.0	I.7	1.30	350-450				
X	IN23DR	9375	5.0	1.7	1.30	350-450				

Matched Pairs of any of the above Diodes may be supplied. Characteristics of such pairs will be matched as follows:

	100	000 400
Conversion Loss		±10%
IF Impedance.		
Rectified Current		±10%
RF Impedance (VSWR)	.Such that	Unbalance $= 10\%$

of Available Power

		BON	AC	W	AVE	GUIDE SWITCHE	\$			
Band	Fr	equency	Center Frequency	Power Level KW Max.	Туре	Description	Tube Designation			
Х	bood soud soud so to the busic single only, for carge A durat,									
X Ku K	u 15000-17000 16000 100 28 Vdc			100		Shutler Only, 6378 Oulline Shutler Only, BL35 Outline Shutter, Low Level, 6282 Outline	6598/BL32 6600/BL32 6603/BL33 6588/BL31			
REFERENCE CAVITIES										
8	and	Frequenc				Description	Designation			
	х	9250	T	empera	ture compe	nsated ±0.3 MC from 0°C. to 100°C.	1022			
	Х	9270	T	empera	ture comper	isated $\pm 0.3$ MC from 0°C. to 100°C.	6301			
	х	9280	T	empera	ture comper	isated $\pm 0.3$ MC from 0°C, to 100°C.	1Q23			
	х	9280	T	empera	ture compe	nsated $\pm 0.3$ MC from 0°C. to 100°C.	1Q26			
	x	9280	1			nsated $\pm 0.3$ MC from 0°C. to 100°C.	5846			
	X	9308	T	Temperature compensated ±0.3 MC from 0°C, to 100°C. 6040						
	x	9310	T	Temperature compensated ±0.3 MC from 0°C. to 100°C. 1Q24						
	X	9312	T	empera	ture comper	nsated $\pm 0.3$ MC from 0°C. to 100°C.	6041			
	X 9350 Temperature compensated ±0.3 MC from 0°C, to 100°C. 6452									

Band	Frequency	Wave- Guide Size		int-	Description	Window Designation				
SSCXb XX XX XX XX XX XX XX XX XX XX XX XX X	2800 2800 5350 5550 6500 -9600 8800 9080 9080 9080 9100 9245 9200 -9405 9310 9310 9310 9310 9310 9375 16000 16500	48/U 49/U 50/U 50/U 52/U 52/U 52/U 52/U 52/U 52/U 52/U 52	Solo Solo Solo Solo Solo Solo Solo Solo	Ider Oval Val Val Val Val Val Val Val Val Val V	val Kovar Finish val Viewing Window, Obtically Clear val, Kovar Finish val, Kovar Finish lica Window, Rectangular, 4 Mounting Holes, Plated ound, Plated ound, Plated ound, Plated ound, Plated, 4 Mounting Holes ound, Plated, 4 Mounting Holes Und, Plated, 4 Mounting Holes val, Kovar Finish val, Kovar Finish					
	BO				TER - TR TUBE					
			Pawer							
Band	Frequency	Center Frequency	Level KW Max.	Туре	Description	Tube Designation				
SCCXXXX X	3070 - 3530 5200 - 5530 5395 - 5905 8490 - 9578 8490 - 9578 8490 - 9578 8490 - 9578 8490 - 9578 8490 - 9578	3300 5365 5650 9000 9000 9000 9000 9000 9000 90	750 1000 1000 250 250 250 250 500 250	17-30 Vdc 28 Vdc 28 Vdc 28 Vdc 28 Vdc 6V(ac-dc) 6V(ac-dc) 17-30 Vdc 28 Vdc 28 Vdc	Shutter and TR. 5925 Outline Shutter and TR, 5865 Outline Shutter and TR, BL82 Outline Dual Shutter and TR, 6334 Outline Shutter and TR, 1863A Outline Shutter and TR, 6334 Outline, Tapped Flange Both Ends	6602 BL329 6592 /BL309 6594 /BL311 6593 /BL310 6596 /BL317 6597 /BL320 6599 /BL322 6601 /BL327 6604 /BL509 6613 /BL307				

1	Peak Anode Vollage V Max.)	Peal Anod Curre Amps M	le nt	Avera Anoi Curri Ma N	de ent	Peak Trigger Voitage Volts Min	Special Feature	Tube Designation
	1.0 3.0 3.0 3.0 8.0 8.0 8.0 8.0 8.0 16.0 16.0	20 35 35 35 35 35 35 35 90 90 83 83 325 325		50 41 41 41 41 41 100 100 100 100 200 200	555555555555555555555555555555555555555	175 175 175 175 175 175 175 175 175 175	High Allitude 3C45 in 1-8 bulb, 3 Pillar Stem 3 Pillar Stem Low litter 4C35 Base Pin Connector and top Cap Low Jitter 5C22	1258 3C45 6130 BL255 BL255 BL255 BL254 E37A 59577E37 5C27 HT415
Band	Fre	q.	Res Po	onator lential Volts	Po	wer Dutput Milliwalts in. Max.	VSTRONS Type of Tuning	Tube Designation
х	8500-1	10000	n - 1	300 ieveral r		25 100 types will I	Mechanical — Capacitive be available shortly.	V151/BL80

TRAVELING WAVE AMPLIFIER TUBES							
Band	Frequency	Saturation Power Output	Gain at Max. Power Output	Small Signal Power Gain	Half Power Bandwidth	Tube Designation	
S	2000-4000	0.8-1.1 KW	28 db Several more ty	31 db pes will be ava	1000 Mc ilable shortly.	T230C/BL-850	

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# THOM SHOW ACTUAL

## NEW **3-WATTBlue** Jacket<sup>®</sup> miniaturized axial-lead wire wound resistor

This power-type wire wound axial-lead Blue Jacket is hardly larger than a match head *but it performs like a giant!* It's a rugged vitreous-enamel coated job—and like the entire Blue Jacket family, it is built to withstand severest humidity performance requirements.

Blue Jackets are ideal for dip-soldered sub-assemblies . . . for point-to-point wiring . . . for terminal board mounting and processed wiring boards. They're low in cost, eliminate extra hardware, save time and labor in mounting!

Axial-lead Blue Jackets in 3, 5 and 10 watt ratings are available without delay in any quantity you require.  $\star$   $\star$ 

SPRAGUE TYPE NO.	WATTAGE	DIMEN L (inch		MAXIMUM RESISTANCE	
151E	3	17/22	1364	10,000 Ω	-
27E	5	11/4	\$/16	30,000 Ω	-
28E	10	13%	\$/16	50,000 Ω	-

WRITE FOR ENGINEERING BULLETIN NO. 1118

Standard Resistance Talerance: ±5%



### SPRAGUE ELECTRIC COMPANY . 233 MARSHALLST. . NORTHADAMS, MASS.

10 For product information, use inquiry card on pages 185-186.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955



As We Go To Press...





New research building (1) for Minnesota Mining & Mfg., St. Paul, Minn. Dedication included first transmission of tape recorded color TV program from RCA's David Sarnoff Research Center, Princeton, N. J., to St. Paul. W. D. Houghton is shown (r) operating video recorder



### 3 M Co. Opens New Research Center

New products and processes developed through research highlighted the dedication of Minnesota Mining & Manufacturing Co.'s new Research Center on May 12. The dedication program was held in the Central Research Laboratory building, first unit to be completed at the Center, situated on high ground overlooking the Mississippi valley at St. Paul's eastern boundary.

Featured at the dedication was the world's first cross country transmission of color television on magnetic video recording tape developed and manufactured by 3M Company.

William L. McKnight, 3M board chairman; Archibald G. Bush, chairman of the executive committee; and the late Richard P. Carlton, former 3M president were honored as the three men who contributed most to the company's growth.

During its first quarter century, the company had only one product, sandpaper. Since that time it has added magnetic tape, "SCOTCH" Brand cellophane tape along with more than 200 varieties of pressuresensitive tapes, roofing granules, re-

flective sheeting for safety and advertising uses, a full line of electrical insulating products, a line of adhesives and coatings, a new series of fluoro-chemicals with unusual physical and chemical properties, a number of graphic arts products, office duplicating equipment and others. Sales last year totaled \$230,-000,000, compared with average annual sales of less than \$5,000,000 in the late '20's and early '30's. "Research and product development have made the difference," H. P. Buetow, 3M president said. "Last year our coated abrasives division had its second biggest year in 3M history but accounted for only 15% of total company sales, and products not in existence ten years ago accounted for 25% of the 1954 total." Buetow said the company confidently expects further growth to result from continued sound research and product development backed up by alert marketing and progressive selling methods.

The pre-recorded color-TV program included remarks by Brig. General David Sarnoff, Chairman of the Boards of RCA and NBC, who hailed the opening of the new research center as a "historic occasion," adding: "It is most gratifying to all of us in RCA that the scientists and engineers in our laboratories have built and are now fieldtesting the first television magnetic tape recorder which brings this message and other portions of this program to you in Minnesota."

The program included a brief explanation of the system by Dr. Harry F. Olson, Director of the Acoustical and Electromechanical Research Laboratory, RCA Laboratories, and an entertainment program featuring Eddie Fisher, Bambi Linn, Rod Alexander, and Al Kelly. The entire program was recorded in advance on the developmental video tape system at the NBC studios, and the tape was stored until the scheduled transmission time. The telecast was sent to Saint Paul over the microwave relay facilities' used for NBC commercial network programs.

MORE NEWS on page 12



### As We Go To Press . . . (Continued)

### **Cornell-Dubilier Opens West Coast Plant**



Community welcome for the executives of Cornell-Dubilier Electric Corp. at the opening of their West Coast Division plant in Venice, Calif. Pictured above left to right: Dr. E. Bubar, Venice Chamber of Commerce; D. R. Wilson, hostess; W. B. Knight, western distributor for the firm; H. Beyer, executive vice-president; P. McKnight Deeley, executive vice-president; W. Bailey chief engineer; P. Kuefter, manager of the new plant; B. Freude, hostess; and L. Albertson, Culver City Chamber of Commerce

### **Bonfig Heads CBS-Columbia**

Henry C. Bonfig has resigned as vice-pres. and director of sales of Zenith Corp. to become president of CBS-Columbia, the TV manufacturing division of C.B.S.

### Giant Ferrite Memory Begins Operation

International Telemeter Corp.'s "Mnemotron," reported as the world's largest ferrite core memory begins operation in Los Angeles. The Mnemotron (pronounced without the "M"—NEE-MOH-TRON and meaning "memory device") is installed in the Rand Corp.'s electronic computer.

### Solar Energy



Photo above shows Felix Trombe's 40 ft. solar oven on Mt. Louis in the Pyrenees. It is one of the largest applications of solar energy and is used in production of refractory materials. 3000°C temperature is attained. Additional data is contained in "Research for Industry" published by Stanford Research Institute of Calif.

### Seismic Noises on Record

For the first time available on a record, tapes of the Benioff Variable Discriminator Seismometer at Calif. Tech. have been speeded up in playback to audibility, and recorded on LP. Quakes in Mexico, Hawaii, Indian Ocean, as well as California are compared in various aspects. The other side of this unusual record contains the curious swish, whistler and dawn chorus manifestations of the ionosphere which are currently being investigated in the search for a workable explanation or hypothesis. Data for these disturbances is supplied by Dr. M. G. Morgan of Dartmouth College, Hanover, N.H. The record, called "Out of this World," is a 12" 33-1/3 RPM produced by Cook Laboratories, Stamford, Conn.

### HI-FI Auto Radio



Preview of audio system for the cars of tomorrow is seen in this two-way speaker system installed by Ralph P. Glover, vice-president of Jensen Mfg. Co., Chicago, in his Ford Thunderbird. The compression driver and horn-loaded tweeter (circled, below dashboard) and special  $\delta x 9$  in, woofer behind top opening of instrument panel, (area circled) are connected to the auto radio.

### Battery Unit Converts Radiation to Electricity

A tiny semiconductor that converts either light or atomic radiation directly to usable electrical energy has been described by scientists of the Radio Corp. of America. The device is a silicon junction.

When the wafer is exposed to bombardment either by beta particles from a radioactive source or by photons of light, electrons are released within the silicon. These electrons, flowing across the junction, produce a voltage that can be applied to a circuit.

The junction is about ¼ in. in diameter and 1/100 in. thick. To produce enough current to operate a low-power radio, several such units have been connected in series.

The radioactive source employed in the experiments is strontium-50. Some problems remain to be overcome in order to achieve commercially practical atomic and light batteries. One such problem in atomic batteries has been damage to the crystal wafer by beta particle bombardment. The report stated, however, that such damage ordinarily decreases as the energy of radiation decreases, and that a threshold energy is now believed to exist below which damage will not occur.

### **26-Tube Color TV Set**



RCA Victor's new 21-inch console color TV receiver with 26 tubes and simplified circuits list priced at \$895. It is a companion to the 21-in. consolette color set selling for \$795. Newly developed dual-purpose rectifier and triode-pentode tubes are used.

Boards are precisely positioned by pilot holes which also serve as registration marks for circuit printing and punching In automatic assembly system.

MORE NEWS on page 14



### RAYTHEON

### THE WORLD'S LARGEST PRODUCERS OF MAGNETRONS AND KLYSTRONS

### **REFLEX KLYSTRON OSCILLATORS** Self-Contained and External Cavity

### MAGNETRON OSCILLATORS for Pulse and CW Operation

												port				
Tub Typ		Power Outpu Milliwat Ave. M	t Poten- ts tial D.C.	Focus or Control Grid Potential D.C. volts	Maximum Temperature Coef. MC : C	filia- roest Cut- rest at 6 3 V Amps	e source versionalitettettettettettettettettettettettettet	Tape Mo.	Volts	er Amps		node A			Öp Mar Mar	opical eration Power k Re
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11 == Mechanical 2 == Mechanical 3 == Non-Conta 4 == Thermal C	Capacitive cting Plunger		E a	= Coaxial Ca = Waveguide With UG 422 Typical Operation	5/U Output Fl	ange		QK456 RK6344 QK313 QK457 RK4J59 QK298	6.3 11.0 11.0 5.0 12.6 6.0	1.50 11.0 11.0 .63 3.75 14.0	5360-5400 5450-5825 5450-5825 5500-5800 6375-6275 6275-6576	16.0 24.0 27.0 2.0 25.0 25.0	60.0 20.0 30.0 1.0 35.0 25.0	.001 .001 .001 .001 .002 .001 .001	2 2 3 3 2 3	1000.0 75.0 175.0 250.0 .20 180.0 250.0
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ng Wave Tubes, Storage Tubes and Other Special Types.

RAYTHEON MANUFACTURING COMPANY

Microwave and Power Tube Operations Section PL-37. Waltham 54, Mass.



	Tunable			5 = 1	ned Pie	quency.c		_
* Class 1 =	Tunable Fixed F		-Pulsed			ro-Mech. quency-C		Mo <mark>d</mark> .
RK6551	5.0	2.9	23800-24270	16.0	18.0	.0007	2	40
QK389	5.0	2.9	23750-24250	16,0	20.0	.0007	2	50
QK308	5.0	6.0	15800-16200	18.0	25.0	.001	2	50
QK324	4.8	12	15840-16160	30	14	.0028		7
QK362	5.0	.60	9300-9500	2.0	1.0	.002	23	
RK2J53	6.3	1.0	9345-9405	16.0	16.0	.0012		40
RK725A	6.3	1.0	9345-9405	16.0	16.0	.0012	2 2 2	- 40
<b>RK730A</b>	6.3	1.0	9345-9405	16.0	16.0	.0023	2	40
RK2J42	6.3	0.5	9345-9405	6.0	5.5	.0025		44
QK172	6.0	30.0	9330-9420	36.0	50.0	.002	2	44
RK5982	6.3	8.25	9320-9430	16.5	20.0	.002	2 2 2	2:
RK2J48	6.3	1.0	9310-9320	16.0	40.0	.002		225
RK6002	6.3 4.0	0.5	9230-9404	6.3 30.0	5.5	.002	2	0.00
RK2J55 OK472	6.3	1.0	9345-9405 9345-9405	16.0	16.0	.001	22	50
RK2J56	6.3	1.0	9215-9275	16.0	16.0	.001	2	40
RK2J36	6.3	1.5	9003-9168	13.5	12.0	.002	2	1-
QK366	6.3	2.9	9205-9285	15.5	14.5	.001	2	7:
RK2J49	6.3	1.0	9000-9160	16.0	16.0	.0012	2	40
RK 2149	63	1.0	9000-9160	16.0	160	0017	1	

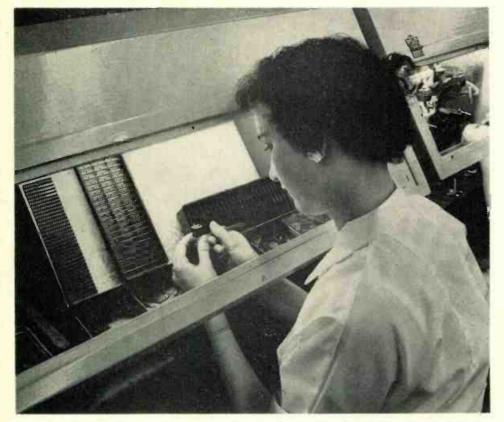
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americanradiohist

### As We Go To Press . . . (Continued)

"Operation Snow White"



Cage Assembly, the first step in mounting tubes is performed under hoods. The operator, dressed in the required white lintless uniform, is wearing rubber cots on each finger to protect the mount from moisture.

Significant progress in the control of lint and dust in the manufacture of both high-reliability miniature and subminiature tubes has been made at the General Electric Five-Star receiving tube plant in a project called "Operation Snow White." Tube inoperatives, mainly due to intermittent shorts caused by lint and dust, now are one-third of what they were before the program started.

Seven hundred and fifty employees in white lintless unifforms nylon and dacron—assemble these tubes under glass hoods in a glistening white factory pressurized by filtered air.

Basic to the success of the program has been the institution of rigid controls over the movements of materials and personnel in the factory area.

Air locks approximately 15 feet long and 12 feet wide were installed at the "Snow White" entrances and all empoyees must pass through these locks to enter the 30,000 square-foot assembly area. This area is pressurized with filtered air -70,000 cubic feet per minute being pumped into the area and 40,000 cubic feet taken out through a system of ducts. The "difference" of 30,000 cubic feet escapes and effectively dust seals the airlocks and any possible cracks or other openings.

Adjoining the air lock, a special cloak room for "Snow White" employees was constructed. All employees must leave their outer garments here before they may pass through the air lock on their way to the assembly area.

Previous to the actual assembly process, all grid sub-assemblies are put through a special cleaning operation to free them of dirt, dust and lint. After the cleaning, the grids are rinsed, dried and inspected. The grids, still on the trays, are then placed in glassine bags which are stapled shut. Assembly is performed under glass hoods.

### Claude Neon Becomes Dynamics Corp. of America

Claude Neon, Inc. has announced a change in the corporate name to Dynamics Corporation of America. In making the announcement, David T. Bonner, President and Board Chairman, stated that the new name was selected because "dynamics" is one of the characteristics common to all of the firm's products.

### Automatic Assembly Machines in Production

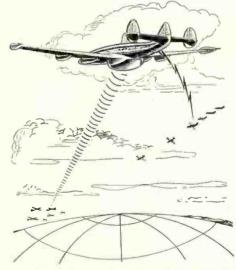
Following an intensive production testing program in radio and TV plants covering a period of six months and the insertion of millions of components, United Shoe Machinery Corp. has begun limited production on its conveyor type machines for automatic assembly of electronic equipment. Now in daily operation in several major radio and TV factories. United's machines have already been used to insert components in well over 400,000 printed wiring boards which have been put into commercial sets.

United is also continuing with the development and production evaluation of a complete line of inserting units designed to handle components such as one-and two watt resistors; mica, tubular and



disc type capacitors; jumper wires; tube sockets; and i-f transformers. Included in this system is an advanced method of automatic dip soldering.

### **Aerial Warfare**



New Navy Concept of aerial warfare, with airborne Combat information Center directing fighter planes to their targets. Four-engine Lockheed WV-2 plane, center, picks up enemy planes, left, on powerful search radar. Fighter planes, right, will be directed to targets by radio. Search radar, claimed to be most powerful ever airborne, was designed and built by the GE Light Military Electronic Equipment Dept.

## SEVEN NEW INSTRUMENTS!







### Type 219 STANDING WAVE DE-

**TECTOR.** Supersedes 100 to 1000 mc/s slotted sections. VSWR and reflection coefficient angle may be read directly. Small size. Low in cost,

**Type 858 "C" BAND SPECTRUM ANALYZER.** New r-f head combined with standard PRD indicator unit for the 5100 to 5900 mc/s range. Direct reading frequency meter. Cutoff attenuator with very low backlash enables high precision.

### Type 809 KLYSTRON POWER

**SUPPLY.** Complete, well-regulated source of power for wide assortment of low voltage klystrons. Includes square wave and saw tooth modulation and provision for external modulation. Clamping tube makes it unnecessary to readjust reflector voltage when switching modulation. Low in cost.

### Type 643 WAVEGUIDE THERM-

**ISTOR MOUNT.** Provides broadband match over entire 8.2 to 12.4 kmc/s range for faster power measurements. No tuning required. Rugged, efficient, accurate. Ideal for pulsed power measurements. Other waveguide sizes.

Type 277 STANDING WAVE IN-DICATOR. Three scales, one expanded for low VSWR plus easy-to-read db scale. Three bandwidths. Thus faster, more accurate VSWR measurements. High sensitivity, low noise, and wide range of input levels. Inexpensive.

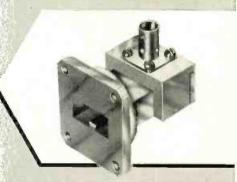
### Type 504 HETERODYNE FRE-

**QUENCY METER.** Measures frequency over the broad band of 100 to over 10,000 mc/s. Direct reading, hand calibrated dial for the heterodyne frequency oscillator eliminates calibration booklet. High sensitivity. Simple to use. Temperature-controlled crystal accuracy. Inexpensive.

### Type 408 DIRECTIONAL COUP-

**LER.** High directivity, frequency insensitive, 10 db coupler for precision measurements in the 8.2 to 12.4 kmc/s band. Guaranteed directivity of over 40 db. Ideal for reflection measurements. Other waveguide sizes.





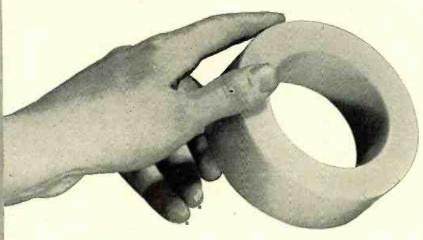


Request complete 1955 Catalog and Technical Bulletins on these new instruments.

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BROOKLYN 1, N. Y. Telephone: ULster 2-6800 & DEVELOPMENT CO., INC. Midwest Sales Office: 1 SOUTH NORTHWEST HIGHWAY, PARK RIDGE, ILLINOIS – TAICOT 3-3174 Western Sales Office: 741½ NORTH SEWARD STREET, HOLLYWOOD 38, CAL. – HOIIywood 5-5287

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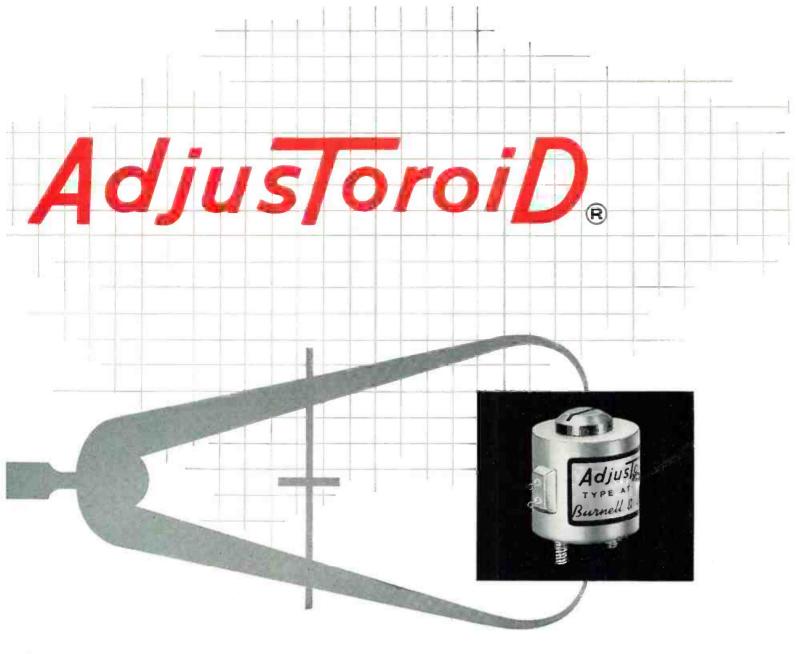
BULLETIN TC-101A... "Properties of Deltamax, 4-79 Mo-Permalloy and Super-malloy"—28 pages of technical data on Arnold Tape-Wound Cores of high-permeability alloys.

**2** BULLETIN SC-107 . . "Arnold Silectron Cores"—round, square, rectangular, or C and E cores; 52 pages of data on shapes, sizes, properties, etc.

ADDRESS DEPT. T-56



1.4. For product information, use inquiry cord on pages 185-186.



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- 📕 precise, instant adjustment
- inductance variation of 10%
- eliminates critical close tolerance capacitors
- 📕 high Q
- no external power supply

- 📕 truly hermetic sealing
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## TELEMETERING

BAND PASS · LOW PASS

FILTERS

in Standard Miniature **Subminiature** sizes

> COMPLETE LINE of filters for every channel and band width ... in Standard, Miniature, Subminiature and "Tom Thumb" sizes ... many available from stock.

62

15

ACT

MINIATURIZED filters that save 80% space ... retain all desired attenuation characteristics.

HERMETIC SEALING, OCTAL PLUGS and other new features.

### only Burnell offers you ...

10

Channel	Freq.	15% Band Width	30% Band Width	Case Size	Approx. Weight	Attenuation				
		Type No.	Type No.	W- L- H-		15% B. W.	30% B. W.			
400 560 730 960	CPS.	S-15456 S-15457 S-15458 S-15459	S-15477 S-15478	2 x 6 x 2¾	3 lbs.	4D8 - 15% 20D8 - 23% 40D8 - 27%	4D830% 20D8 46% 40D8 54%			
1300 1700 2300	14 41 11	S-15460 S-15461 S-15462		1 <sup>3</sup> / <sub>8</sub> x 4 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>4</sub>	I lb. 7 oz	3.5DB - 15% 2CDB - 23% 40DB - 27%	3.5DB - 30% 20DB - 46% 40DB - 54%			
2570 3000 3900 4500 5400 7350 10500 12300 14500 22000 27000 30000 52500 70000	а а а а а а а а а а а а а а а а а а а	S-15463 S-15464 S-15465 S-15467 S-15467 S-15469 S-15470 S-15470 S-15472 S-15473 S-15474 S-15475	S-15479 S-15480 S-15481 S-15482 S- S-15483 S-15484 S-15485 S-15486 S-15487 S-15488	1 <sup>3</sup> / <sub>6</sub> x 3 x 2 <sup>1</sup> / <sub>4</sub>	93/4 02.	3DB — 15% 20DB — 23% 40DB — 26%	3DB 30% 20DB 46% 40DB 52%			
OP	Termir	1 OPERAT INI nals 1 & 2 nals 1 & 3			NECTIONS					

**SPECIAL PHASE LINEARITY characteristics** to conform to new concepts of high accuracy telemetering practice.

SPECIFICALLY DESIGNED for telemetering, these filters have found great utility in a wide variety of communications and control applications.

**APPLICATION ENGINEERING** service plus complete technical literature. Write Dept. 45. ., for Catalog 102A.

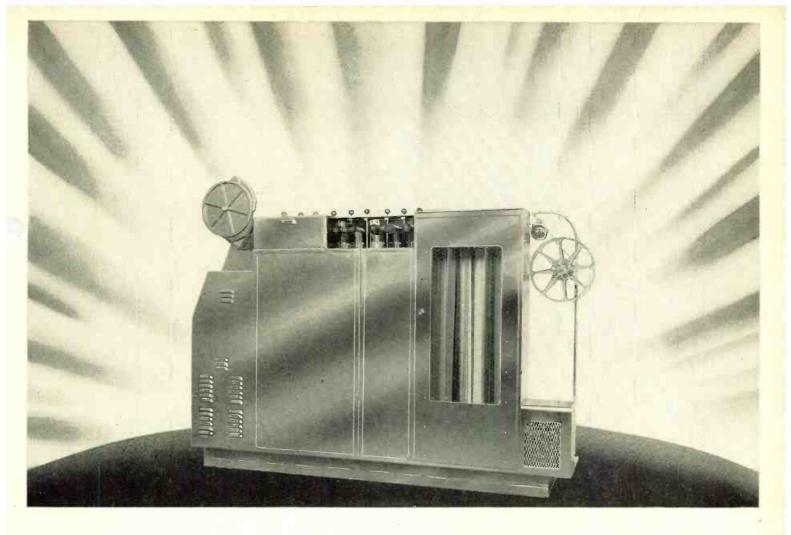


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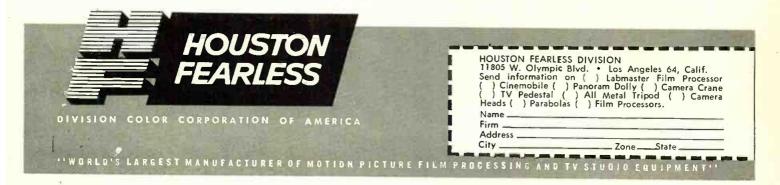
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TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

## **TACKPOLE XED COMPOSITION CAPACITORS** .for all low capacity requirements

Stackpole "GA" fixed composition capacitors represent the simplest, most inexpensive capacitor design ever produced-and their operating stability is more than ample for the great majority of applications.

Pioneered by Stackpole, these sturdy little units are now available in an expanded range of values from 0.10 to 10.0 µµf-all with standard RETMA 3 or 4 band color code. Insulated bodies, dielectrics and electrodes are integrally molded for maximum stability and durability. Leads are securely anchored and treated for easy soldering.

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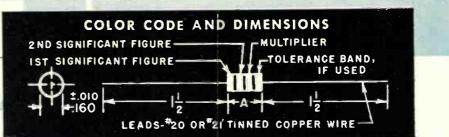
ETMA VALUES...

FROM IESE CHOOSI

-					-	-							
Cepacity in µµf Standard Volues in			Color Bands				apacity in ; ndard Valu			Color Bands		Max. Dim.	
20%	10%	5%	1 11	2nd	3rd	Dim. "A"	20%	10%	5%	1st	2nd	3rd	"A"
.10_	.10	* '	Brown	Black	Gray	.330	1.1.1	1.2	1.2	Brown	Red	White	.330
1	.12	*	Brown	Red	Gray	.330		L	1.3	Brown	Orange	White -	.330
,15	.15	*	Brown	Green	Gray	.330	1.5	1.5	1.5	Brown	Green	White	330
	.18	*	Brown	Gray	Gray	.330		1.1	1.6	Brown	Blue	White	330
1200		,20	Red	Black	Gray	.330		1.8	1.8	Brown	Gray	White	.290_
,22	.22	.22	Red	Red	Gray	.330			2.0	Red	Black	White	.290
The set		.24	Red	Yellow	Gray	.330	2.2	2.2	2.2	Red	Red	White	.230
1	.27	.27	Red	Violet	Gray	.330			2.4	Red	Yellow	White	.230
		.30	Orange	Black	Gray	.330		2.7	2.7	Red	Violet	White	.230
25	.33	.33	Orange	Orange	Gray	.330			3.0	Orange	Black	White	230
1		.36	Orange	Blue	Gray	.330	3.3	3.3	3.3	Orange	Orange	White	.210
	.39	.39	Orange	White	Gray	.330			3.6	Orange	Blue	White	.210
		.43	Yellow	Orange	Gray	.330		3.9	3.9	Orange	White	White	210
47	.47	.47	Yellow	Violet	Gray	.330			4.3	Yellow	Orange	White	.210
1		.51	Green	Brown	Gray	.330	4.7	4.7	4.7	Yellow	Violet	White	180
19	.56	.56	Green	Blue	Gray	.330			5.1	Green	Brown	White	.180
		.62	Blue	Red	Gray	.330		5.6	5,6	Green	Blue	White	.250
.68	.68	.68	Blue	Gray	Gray	.330		11111	6.2	Blue	Red	White	250 _
		.75	Violet	Green	Gray	.330	6.8	6.8	6.8	Blue	Gray	White	.250
1	.82	.82	Gray	Red	Gray	.330			7.5	Violet	Green	White	.220
		.91	White	Brown	Gray	.330		8.2	8.2	Gray	Red	White	220
1.0	1.0	1.0	Brown	Black	White	.330		1.00	9.1	White	Brown	White	220
		1.1	Brown	Brown	White	.330	10.0	10.0	10.0	Brown	Black	Black	.180

TOLERANCE Color Code						
<b>CAPACITIES</b> 0.1 to 10.0 μμf	CAPACITIES 10.0 μμf & over					
20 % none	20 % -Black					
10%-Silver	10 % -White					

5% -Green



5% -Gold

ONE OF THESE

HOWARD

FRACTIONAL

H.P. MOTORS

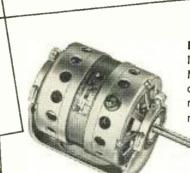
### WILL FIT YOUR ELECTRONIC APPLICATION



### Howard 2900

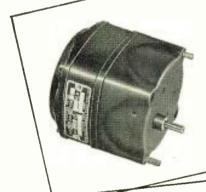
Induction motor. For facsimile equipment, tape recorders, blowers-used by many leading manufacturers.

Howard 2500



Howard 3700 Induction motor. Movie projectors, TV cameras, tape recorders-Resilient mounted.

why not investigate today?



Induction Motor. For instruments, tuning devices, light switching, metering devices, recordiographs, damper controls, telefax equipment and a host of other applications.



Howard 512 Universal Motor. Widely used in business machines, projectors, automatic tuning equipment, photo developing and printing, automatic pilots, photo copy machines.

Howard 100 & 200 Universal & D. C. Motors. For blowers, radio and radar equipment, aircraft pumps, aircraft cooling fans.

> Lots of power in a small package.



Howard 2400 Capacitor or 2-Phase Servo Motor. Used in servo type applications-tuning, instruments, meters. controls, etc.



UNIVERSAL AND D. C. MOTORS 1/1000 to 1/2 h.p.

SHADED POLE MOTORS 1/2000 to 1/8 h.p.

INDUCTION MOTORS 1/1400 to 1/4 h.p.

Here are just a few of the many fractional h.p. motors Howard can offer you for your quantity applications. To date, Howard motors have been used by leading

manufacturers in more than 85,000 applications. Chances are there's a specification in our file that will work for you and at the right price. If you use fractional h.p. motors, write and tell us your needs today. We'll handle your inquiry promptly.



### DEPT. TT-6, HOWARD INDUSTRIES, INC., RACINE, WIS.

SALES OFFICES: 208 S. La Salle St., Chicago 4 • 942 S. La Brea Ave., Los Angeles 36 • Room 4822, Empire State Bldg., New York I

DIVISIONS:

EMC ELECTRIC MOTOR CORPORATION (C) CYCLOHM MOTOR CORPORATION (E) RACINE ELECTRIC PRODUCTS

## **Coming Events**

A listing of meetings, conferences, shows, etc., occurring during the period June 1955 through January 1956 that are of special interest to electronic engineers

- May 31-June 3—The First Design Engineering Show, Convention Hall, Philadelphia, Pa.
- June 2-5—ARRL Hudson Div. Convention and Amateur Radio Equipment Show, Hotel Adelon, Long Beach, N.Y.
- June 2-3—IRE Electronic Materials and Components Symposium, sponsored by the Philadelphia Section, Professional Group on Components and the AIEE, Penn-Sherwood Hotel, Phila., Pa.
- June 6-8-National Community Television Assn. Convention-Park Sheraton Hotel, New York, N. Y.
- June 7-10—National Spring Meeting of the American Welding Society, Hotel Muehlebach, Kansas City, Mo.
- June 8-18—General Assembly Meeting, International Organization For Standardization, Stockholm, Sweden.
- June 14-16—Conference and Exhibit on Magnetics, sponsored by the AIEE, in cooperation with the APS and the AIMME, William Penn Hotel, Pittsburgh, Pa.
- June 20-23—2nd International Powder Metallurgy Congress, Reutte, Tyrol, Austria.
- June 20-25—Professional Group on Antennas and Propagation, University of Michigan, Ann Arbor, Mich.
- June 20-25—Symposium on Electromagnetic Wave Theory, sponsored by Commission VI of URSI and Univ. of Mich., University of Mich., Ann Arbor, Mich.
- June 25-July 1-58th Annual Meeting ASTM, Atlantic City, N. J.
- June 26-July 1—58th Annual Meeting of the American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N.J.
- June 27-July 1—AIEE Summer Meeting, New Ocean House, Swampscott, Mass.
- June 28-July 9—International Electrotechnical Commission, London, England.
- July 12-14—2nd Western Plant Maintenance Show, Pan Pacific Auditorium, Los Angeles, Calif.
- Aug. 15-19—AIEE Pacific General Meeting, Butte, Montana.
- Aug. 23-Sept. 3-British National Radio Show, Earls Court, London, England.

- Aug. 24-26—Western Electronic Show & Convention, San Francisco Civic Auditorium, San Francisco, Calif.
- August 26-28—Sixteenth Annual Summer Seminar, sponsored by the Emporium of the IRE, Emporium, Pa.
- Aug. 26-Sept. 4—German Radio, Television, Gramophone and Radiogram Exhibition, Dusseldorf, Germany.
- Sept. 6-17—Production Engineering Show and Machine Tool Show, Navy Pier and International Amphitheatre, Chicago, Ill.
- Sept. 12-16—10th Annual Conference and Exhibit, sponsored by ISA, Shrine Exposition Hall and Auditorium, Los Angeles, Calif.
- Sept. 14-16—ACM General Meeting, Moore School of Electrical Eng., Univ. of Pa., Philadelphia, Pa.
- Sept. 20-22—10th Anniversary Industrial Packaging and Materials Handling Show, Kingsbridge Armory, New York, N. Y.
- Sept. 26-27—RETMA Symposium on Automation, University of Pa., Philadelphia, Pa.
- Sept. 26-30—The First Trade Fair of the Atomic Industry, Sheraton-Park Hotel, Washington, D. C.
- Sept. 27-Oct. 1—Int'l. Analog Computation Meeting, Brussels, Belgium.
- Sept. 28-29—Industrial Electronics Conference, sponsored by the AIEE and IRE, Detroit Rackam Memorial Auditorium, Detroit, Michigan.
- Sept. 30-Oct 2—High Fidelity Show, Palmer House, Chicago, Ill.
- Sept. 30-Oct. 2—International Sight and Sound Exposition, Inc., Palmer House, Chicago.
- Oct 3-5—National Electronics Conference, Hotel Sherman, Chicago, Illinois.
- Oct. 3-7—AIEE Fall General Meeting, Morrison Hotel, Chicago, Illinois.
- Oct. 3-7-78th Semi-annual Convention of the SMPTE, Lake Placid, New York, N.Y.
- Oct. 11-13—AIEE Aircraft Electronic Equipment Conference, Los Angeles, California.
- Oct. 17-19-RETMA Radio Fall Meeting, Hotel Syracuse, Syracuse, N. Y.

- Oct. 21-23-New England Hi-Fi Show, Hotel Touraine, Boston, Mass.
- Oct. 24-25—Annual Technical Meeting sponsored by the IRE Professional Group on Electron Devices, Washington, D. C.
- October 24-26—Sixth National Conference on Standards, sponsored by the American Standards Association and the National Bureau of Standards, Sheraton Park Hotel, Washington, D. C.
- Oct. 31-November 1—East Coast Conference on Aeronautical and Navigational Electronics, Baltimore, Md.
- Nov. 2-5—World Symposium on Applied Solar Energy, conducted under leadership of Stanford Research Institute, Phoenix, Arizona.
- Nov. 9-10-11-19th Annual National Time and Motion Society and Management Clinic, Hotel Sherman, Chicago, Ill.
- Nov. 14-17—Second International Automation Exposition, Chicago Navy Pier, Chicago, Illinois.
- Dec. 12-17-Nuclear Congress and Atomic Exposition, sponsored by the Engineers Joint Council, Cleveland, Ohio.
- Jan. 30-Feb. 3, 1956—AIEE Winter General Meeting, Statler Hotel, New York, N.Y.

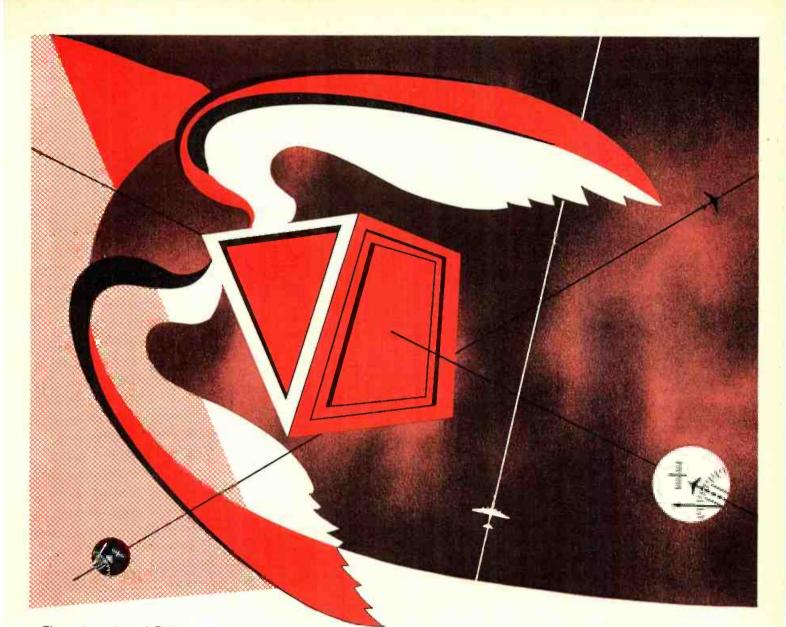
### JUNE 1955 NETWORK COLOR TV SCHEDULE

NBC "Producers' Showcase" (Live)

\*DuMant color film series, over WABD, will be suspended for three weeks while extended program is being prepared. Suspension dates not available at press time.

MORE NEWS on page 25

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955



The ancient priests of Egypt were engineers whose great pyramid of Cheops was sextant, compass and slide rule-all in one. From sighting the Pole Star, to squaring the compass, to the mathematics of pi-it's all there in the pyramid of Gizeh.

### flying pyramids

Wonder of the world for ages, Gizeh's pyramid was a fount of mathematical data—a tool to check measures, an aid to celestial navigation. Today's aircraft are "flying pyramids"—collecting and integrating instantaneous measurements for orientation and control. Kollsman activities cover these seven fields:

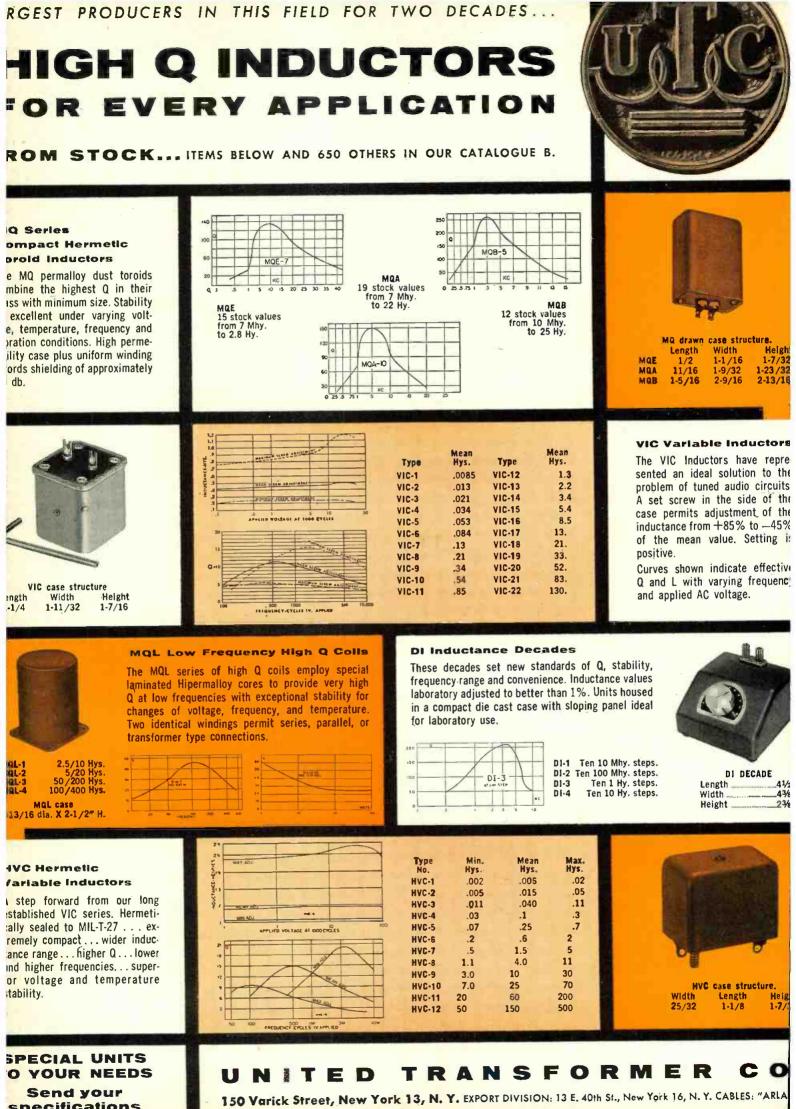
AIRCRAFT INSTRUMENTS PRECISION CONTROLS PRECISION COMPUTERS AND COMPONENTS OPTICAL COMPONENTS AND SYSTEMS RADIO COMMUNICATIONS AND NAVIGATION EQUIPMENT MOTORS AND SYNCHROS INSTRUMENTS FOR SIMULATED FLIGHT TRAINERS

Our manufacturing and research facilities . . . our skills and talents, are available to those seeking solutions to instrumentation and control problems.

kollsman INSTRUMENT CORPORATION

80.08 45th AVE., ELMHURST, N. Y. . GLENDALE, CALIF. . SUBSIDIARY OF Standard COIL PRODUCTS CO. INC.

For product information, use inquiry card on pages 185-186. 23



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## **Electronic Industries News Briefs**

Capsule summaries of important happenings in affairs of equipment and component manufacturers

AMERICAN TELEPHONE AND TELE-GRAPH COMPANY'S Long Lines Department, New York, N, Y., and six associated companies have sought authority from the FCC to construct new telephone facilities costing about \$27,000,000.

AMPEX CORP., Redwood City, Calif., has added a new customer relations department to be headed by James I. Schultz.

ANDREA RADIO CORPORATION'S Frank A. D. Andrea, Long Island City, N. Y., has completed a trip to Brazil and Argentina with the purpose of evaluating the merits of establishing local TV assembly operation there. Because of severe government restrictions and the low percentage of earnings measured against investment required, Mr. Andrea decided against the venture at present.

BENDIX AVIATION CORP., Baltimore. Md., will soon market a new transistorized audio control panel for aircraft. Available in two models, the equipment represents the first use of transistors in communication; for airlines. KLM Dutch Airlines has ordered 44 control panels of various types.

BRANIFF INTERNATIONAL AIRWAYS and the COLLINS RADIO COMPANY have installed the first high-frequency radio aid for navigation in South America at La Paz, Bolivia, the highest commercial airport in the world.

CALIFORNIA TESTING LABORATORIES, INC., has expanded its facilities with the acquisition of the CALIFORNIA ELEC. TRONIC SERVICES CO. The new addition will operate from its present location. 21133 Constanto St., Woodland Hills, Calif., as a wholly owned subsidiary of the parent organization.

**CONSOLIDATED DIESEL ELECTRIC CORP.**, recently announced the formation of a subsidiary, **CONSOLIDATED AVIONICS CORP.** The subsidiary will engage in the manufacture and developement of servos, digital data reduction and electronic instrumentation.

**CONVAIR**, a division of General Dynamics Corp., has installed in its San Diego, Calif., plant a general purpose digital computer to speed engineering work and cut development costs.

DAYSTROM, INC., Elizabeth, N. J., and WESTON ELECTRICAL INSTRUMENT CORP., Newark, N. J., have signed an agreement of merger under the terms of which Weston would be merged into Daystrom.

**DU PONT CO.,** Wilmington, Del., effected a price reduction of 35 cents a pound on all types and gauges of "Mylar" polyester film, except 25 gauge.

ELECTRA MANUFACTURING CO., Kansas City, Mo., has available a complete line of hermetically-sealed, deposited carbon resistors in ¼ and ½ w. sizes. The new resistors are recommended for close tolerance applications where extreme temperature or humidity conditions are a factor, also where mechanical or chemical protection is required.

**ELECTRA MANUFACTURING CO.**, has opened a new plant in Independence, Mo., replacing former facilities at Atchison, Kan. and Kansas City, Mo. The modern 1-story building affords fifty percent more space.

EMERSON RADIO AND PHONOGRAPH CORP., recently announced that the Engineering Division of Jersey City, N. J. has been expanded into two separate units; the Commercial Engineering Division and the Government Projects Engineering Division. Dorman D. Israel, Executive Vice President of the firm, said the move was made in connection with Emerson's policy of developing and expanding engineering facilities for government agencies.

ERWIN WASEY, 420 Lexington Ave., New York, N. Y. is the first advertising agency to sign with DuMont for experimental use of the new Electronicam, a camera that simullancously transmits live television pictures while making regular motion picture films. FAIRCHILD CAMERA & INSTRUMENT CORP., Syosset, N. Y., instituted a new activity which will concentrate on design, research on production of special, rapid film processing equipment for military and commercial application.

GENERAL ELECTRIC COMPANY, Syracuse, N. Y., has announced that the warranty period on GE transistors will be extended to one year. Previously, it had been for ninety days. The move was initiated to give design engineers greater reason for confidence in using transistors in electronic equipment designed for reliability.

GENERAL TRANSISTOR CORP., New York, N. Y., has added an export division to handle the export of transistors and germanium diodes to all parts of the world.

HELIPOT CORP., South Pasadena, Calif., has acquired a 15-acre ocean-view site in Newport Beach, Calif. where it will construct a two-million dollar plant.

I.F.I., Mineola, N. Y. will now be known as INSTRUMENTS FOR INDUSTRY, INC. President of the firm, Elston H. Swanson, announced the new name as being more in keeping with the broader aspects of I.F.I.'s service to American industry.

INDUSTRIAL TRANSFORMER CORP., Goldsborough, Pa. through its President, Dale Andrews, has announced that Mr. F. R. Rausch of I. B. M. Corp., won a TDC Three Dimension Stereo camera by guessing the length of wire placed in a tank at the Industrial Transformer booth during the recent IRE show.

**INSTRUMENT' SALES COMPANY,** Chicago, Ill. has established a new office at Genoa City, Wis., to handle sales in that territory.

INSULATED CIRCUITS, INC., Belleville, N. J. has broken ground in West Caldwell. N. J. for a new, modern plant which will contain 32,000 square feet of working area. The firm intends to concentrate on the advancement of printed circuits with an eye towards automatic processing. Each phase of circuit, switch or assembly will be manufactured under dust free, humidified and temperature controlled conditions.

INTERNATIONAL BUSINESS MACHINE CORP., New York, N. Y., has announced a commercially-available transistorized computer with several times the calculating speed and storage capacity of the experimental model demonstrated at the Poughkeepsie laboratory months ago.

The INTERNATIONAL CIVIL AVIATION ORGANIZATION has announced that Greece became the twenty-fiftd state to sign the Rome Convention of 1952 which specifies the rules and limits of liability in the case of an aircraft causing death or personal injury in a foreign territory.

MOTORDYNE, INC., Monrovia, Calif., has increased its plant area by 100% for manufacturing fractional horsepower motors, dynamotors and inverters.

The NARDA CORP., Mineola, N. Y., has announced the opening of a new branch office at 86 Holly Road, Uttoexter, Staffordshire, England. to handle the sale of its line of microwave test equipment throughout the United Kingdom.

NATIONAL BUREAU OF STANDARDS' Dr. Ladislaus L. Marton received the Gold Medal for exceptional service from the Department of Commerce for his major contributions to science and technology. He created and developed the electron interferometer and the electron optical technique of mapping electrostatic and magnetic fields of extremely small dimensions.

**OLYMPIC PLASTIC CO.**, Los Angeles, Calif., has contracted for the constructing of a new factory building to meet its expanding demands for increased production. **RADIO CORP. OF AMERICA**, New York, N. Y., has developed an experimental transistor automobile radio that operates from a 6-v. car battery and requires about onetenth the power used by a conventional car radio.

**RADIO RECEPTOR COMPANY** has taken a five year lease on the entire premises of the newly completed \$750,000 factory building, 80 N. 5th St., Brooklyn. The structure consists of 3 floors with 66,000 square feet.

**RAYTHEON MANUFACTURING CO.**, Waltham, Mass. has been issued 984 patents to date by the United States Patent Office. The firm also has pending 469 applications for U. S. patents.

REMINGTON RAND'S ENGINEERING RE-SEARCH ASSOCIATES DIVISION, St. Paul, Minn., plans a \$2,000.000 electronic computer laboratory. The new two-story building will be devoted to research and light manufacturing.

**ROBERTSHAW-FULTON CONTROLS COMPANY'S** Research Center, Irwin, Pa. is offering a four-year tuition-paid scholarship to study electrical or mechanical engineering at Carnegie Institute of Technology to an outstanding high school senior from Westmoreland County, Pa.

SOUTHWESTERN BELL TELEPHONE CO. in conjunction with the AMERICAN TELE-PHONE & TELEGRAPH CO., Long Lines Dept., has opened a new long distance telephone center in St. Louis, schedule to become the hub of a dialing network for the nation.

SPRAGUE ELECTRIC CO., North Adams, Mass., will continue to operate, as a joint venture, the Ferroxcube plant at Saugerties. N. Y. This announcement supersedes a previous disclosure that Ferrocube Corporation of America had sold certain of its assets to Indiana Steel.

STANDARD OIL COMPANY (Ohio) soon will place in operation a high speed data processing machine utilizing a 20,000 digit "memory" for solving high-powered scientific problems as well as tedious routine office work.

SYLVANIA ELECTRIC PRODUCTS and WESTERN UNION TELEGRAPH COMPANY announced plans for a nationwide 12,000 private electronic communication system, linking 51 cities with Sylvania's Data Processing Center to be constructed at Camillus, N. Y.

TELECHROME, INC., Amityville, N. Y., was sponsored by the U.S. Dept. of Commerce at the International 'Trade Fair at Hanover, Germany last month. The firm demonstrated its 3-Vidicon Color Film Chain in connection with the U. S. Government's feature of the story of electronics with color TV as the highlight.

WARNER ELECTRIC BRAKE & CLUTCH CO., Beloit. Wis., has announced a stationary field clutch that has been mounted on some model aircraft allowing power steering of the tail.

WEBSTER-CHICAGO CORP., formed a new British corporation, Webcor of Great Britain, Ltd., to manufacture and sell Webcor phonographs, tape recorders, and record changers.

WESTINGHOUSE ELECTRIC CORP., Pittsburgh, Pa., announced the formation of a director systems department; controls systems with no moving parts, and developed for industrial control applications.

MORE NEWS on page 36



YOU FURNISH THE PRINT, WE'LL FURNISH THE PART

OF SYNTHANE USED FOR THIS PART: Low Dielectric Constant PROPERTIES E Compressive Strength Insulation Resistance E Tensile Strength 2.515 Heat Resistance E Flexural Strength B Good Machinability Shear Strength 3.062 E Thermosetting Hardness Vibration Absorption Impact Fatigue Good Dimensional E Impact Strength Hoisture Resistance Chemical Resistance Low Thermal Π Conductivity Light Weight Low Dissipation Factor 🗌 Wear Resistance V must be accurately and economically printed PART SCA ELECTRONIC COMPONENT OF SYNTHANE HAS DURABILITY, DIMENSIONAL STABILITY, DIELECTRIC STRENGTH

Although this sturdy end plate will fit into the palm of your hand, it has in combination all the dielectric strength, the physical properties, and the printability the customer requires. It's made of *Synthane*, a laminated plastic, the same material used in hundreds of other electrical, mechanical, and chemical applications.

SYNTHANE CORPORATION, 11 River Road, Oaks, Pa. Please send my copy of the Synthane catalog.
Name
Title
Company
Address
CityZoneState

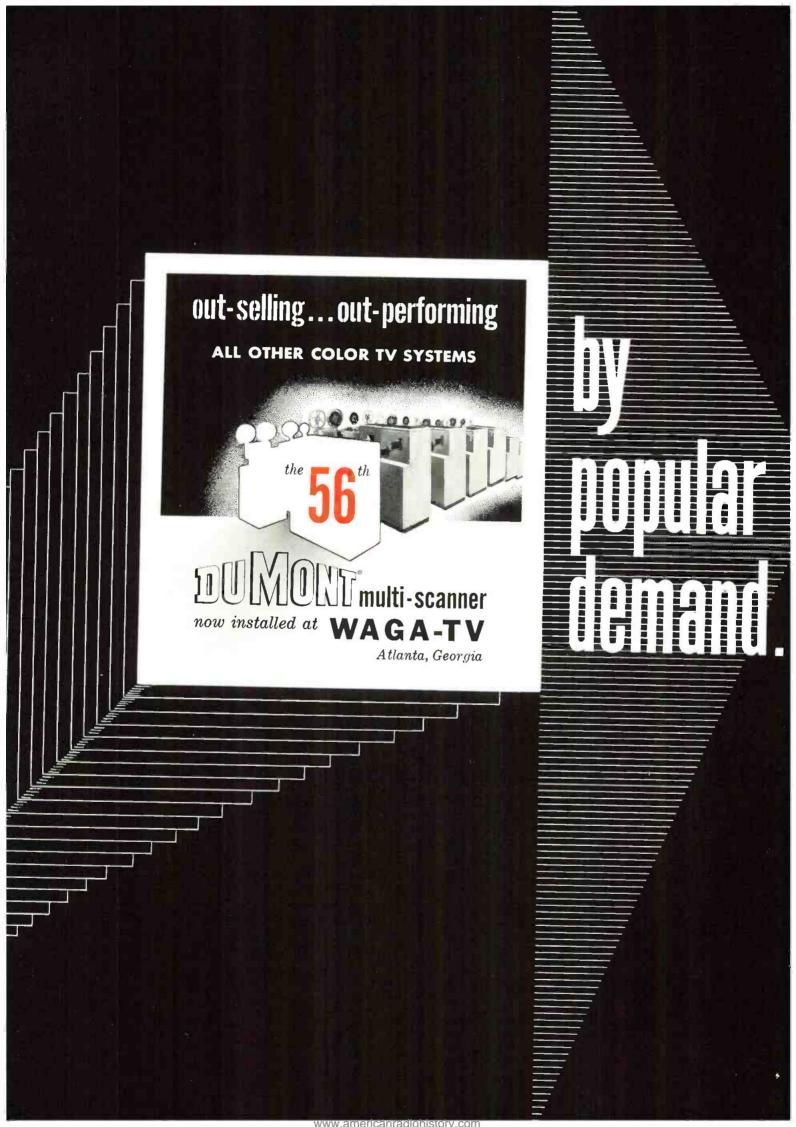
The blue print for this part calls for accurate machining, the punching of twenty holes of various shapes and sizes, and printing or engraving in three different colors. *Synthane* delivers finished parts exactly as specified, ready for the production line. The customer gets them promptly without problems of tooling up, waste, or rejects.

If you need components with many properties in combination, you will want to know more about *Synthane* laminates and the *Synthane* fabricating service. Send in the coupon for the full story.



SYNTHANE CORPORATION · DAKS, PENNSYLVANIA

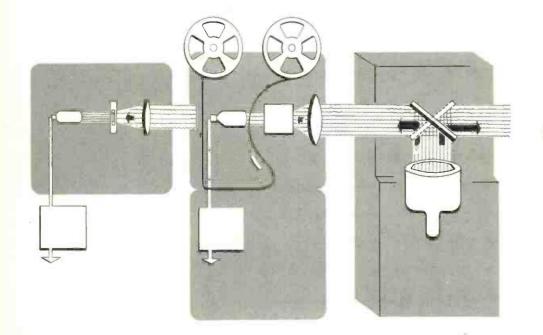
26 For product information, use inquiry card on pages 185-186.



DUMONT first with the finest in television



film, slides, opaques...



In monochrome operation the Multi-Scanner provides pickup for 16 mm film, transparent slides and glossy or matte opaques. Simplicity of system assures operating economies, dependability and top performance.

The Color Multi-Scanner can be ordered as such, or may be a modification of the Monochrome unit. Principle of operation is identical to monochrome. The pickup assembly consists of three multiplier phototubes and color filters. There are no registration problems with this system. for

## monochrome

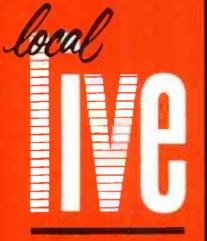
film, slides and opaques...

## color

film and slides...

and now

in a



## the DUMONT multi-scanner

DUMONT first with the finest in low-cost, local live color television!

## simple addition!

By means of a simple addition, the Du Mont Color Multi-Scanner can pick up local live color programs. The same light source scans the program subjects in a fully illuminated studio and multiplier phototubes, grouped like studio floods, pick up reflected light to form a picture. System permits specialized lighting effects similar to studio floods and spots.

This is the quick and economical way to achieve local live color programming now, along with color films and slides to provide complete color programming at minimum cost.

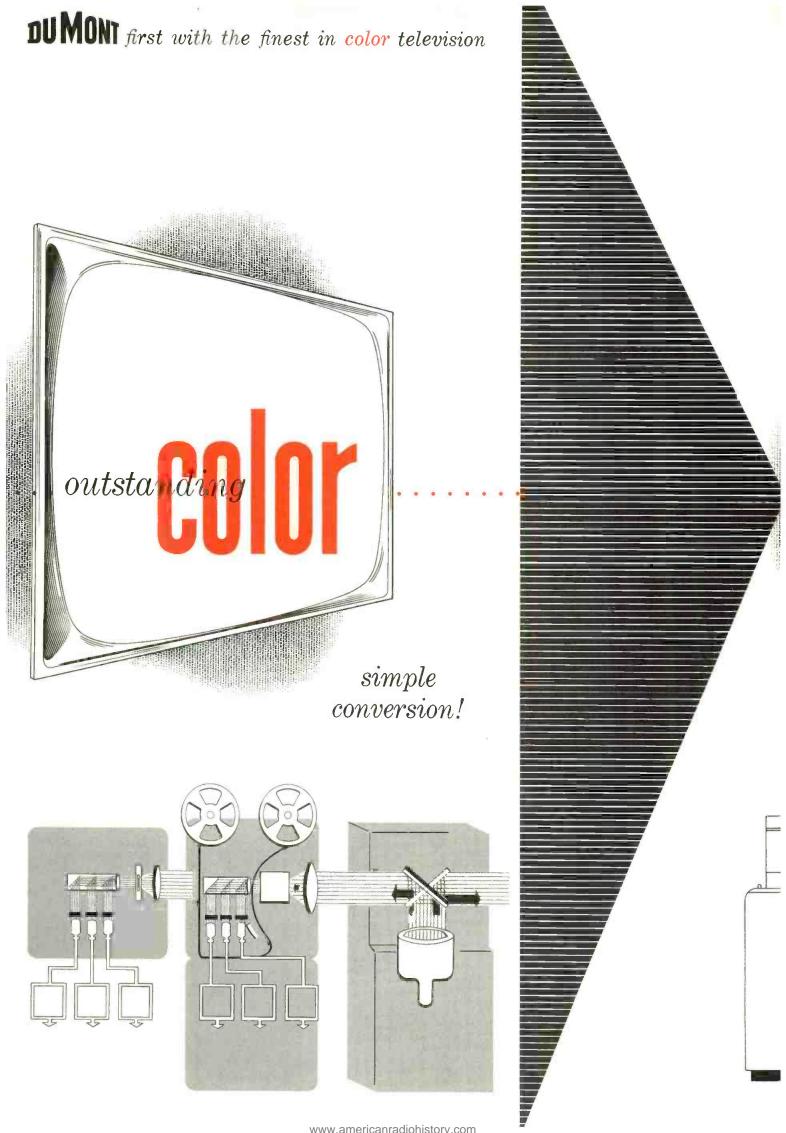
. and now

loca

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TELEVISION TRANSMITTER DEPARTMENT - AULEN B. DU.MONT LABORATORIES, INC. - CLIFTON, NEW JERSEY



UNENCODED COLOR SWITCHER For control of color signals from color film equipment or other color pickup sources.

COLOR ENCODER To form the composite color video signal as transmitted from the TV station.

BROADCAST COLOR PICTURE MONITOR Used to view a color picture either before or after system encoding.

MULTI-CHANNEL WAVEFORM MONITOR Four separate signals can be viewed simultaneously on a 4-gun display tube. Unit contains four separate video amplifiers and is designed for either monochrome or color operation.

UNENCODED COLOR PATCH PANELS AND CORDS Designed for use in color systems requiring patching of red, green, and blue unencoded color signals. One panel permits twelve unencoded color circuits to terminate at the panel.

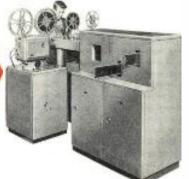
COLOR STABILIZING AMPLIFIER Corrects signal deficiencies resulting from network coaxial cable or microwave transmission.

COLOR SYNCHRONIZING GENERATOR Provides the basic driving signals needed by color signal generating units.

SUB-CARRIER GENERATOR

Provides the necessary signals to adapt most monochrome sync generators to operate at the frequency required for color system pickup equipment.

BURST KEY GENERATOR Supplies the "burst key" pulse to "key in" the color sub-carrier signal.



DU MONT

6

G

COLOR SUB-CARRIER FREQUENCY MONITOR This equipment checks the accuracy of the color sub-carrier frequency.

CONVERGENCE AND LINEARITY GENERATOR Supplies a bar or dot signal for linearity and convergence adjustments of color picture monitors.

COLOR BAR GENERATOR Supplies the color bar pattern used for checking encoders, color monitors and other studio broadcast equipment and for transmission of test patterns facilitating adjustment of home color receivers.

VECTORSCOPE Used to display and analyze an encoded color bar signal after passing through a television system.

SQUARE WAVE GENERATOR Provides a square-wave test signal for use in color studio equipment testing.

STEP WAVE GENERATOR Provides a composite video test signal for television system testing.

LUMI-CHROME FILTER This unit is a switchable input filter for use with oscillographs in certain color signal analysis work, and is also useful for other color systems measurements where either low or high-pass filtering is required.

POWER SUPPLY AND POWER SUPPLY REGULATOR Compact unit contains two low voltage supplies capable of delivering total of 500 ma. Single regulator supplies control voltage for any number of stacked power supplies.

TELEVISION TRANSMITTER DEPARTMENT • ALLEN B. DU MONT LABORATORIES, INC. • CLIFTON, NEW JERSEY Copyright 1955 Allen B. Du Mont Laboratories, Inc.

## studio color equipment by



Astron

THE Comet

## Paper Molded Plastic Miniature Tubular... EVERI

CREATED BY the thinking of tomorrow, Astron's newest capacitor gives you features never before possible. All the important operating characteristics of a metallized paper capacitor are combined with the absolute protection of a molded plastic shell and bonded seal... an Astron exclusive.

THE NEW Comet has the unique properties that add extra protection against over-loads and momentary surges...small size and light weight due to metallized paper construction...low R.F. impedance...new solid thermosetting impregnant for high dielectric strength...improved insulation resistance and dependable operation up to 125° C.

THE ATTRACTIVE bonded shell and patented seal are impervious to all extremes of heat, cold and moisture. Leads are locked in . . . can't pull or melt out. Clearly marked units completely immersion-proof . . . individually tested and guaranteed.

YEARS OF intensive engineering research culminate in this first really successful combination of miniaturized metallized paper sections with a tough, tight bonded shell and seal...another industry first, by Astron, the pioneer in advanced capacitor and R.F. filter design.

THE NEW Astron Comet can reduce your costs while saving space and weight... write for Bulletin AB-21 TODAY!



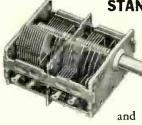
Export Division: Rocke Internation Carp., 13 E. 40th St., N. Y. C. In Canada: Charles W. Pointon, 6 Alcina Ave., Taranto 10.



## TUNE IN ON RADIO CONDENSER

### For Variable Capacitors Tuners Electromechanical Assemblies

The experience of Radio Condenser in producing tuners and variable capacitors to individual requirements has consistently proved its value to manufacturers through the right combination of quality and cost. However unusual a problem may be, chances are that R/C specialists have faced a similar problem and solved it. The products shown on this page are only a brief sampling of units designed, engineered, and manufactured by Radio Condenser. A more complete description of products in each category is given in our catalog, available on request. Or, we will be happy to arrange a direct interview with a Radio Condenser Engineer at your convenience.



### STANDARD HOME RADIO

R/C units cover every standard application, including AM-FM receivers. Each is a prodduct of high quality, performance-proved, and well adapted to rapid, low cost quantity production.



### CAPACITORS For limited space

Among the most recently announced R/C developments is a miniature variable capacitor for transistorized radio receivers, also adaptable to color TV phasing control. R/C accomplished important

reductions in size with no sacrifice of stability or calibration accuracy.



### UHF AND VHF TELEVISION TUNERS

STANDARD CAPACITORS FOR

SPECIAL APPLICATIONS

Always an important

part of R/C activities, design and manufacture of variable capaci-

tors of a special nature

are handled by a spe-

cial division. Products

include units for every type of military service, test equipment, etc.

R/C has provided tuners for major TV manufacturers since the earliest days of commercial TV. While most such tuners are secret designs, R/C has recently developed low cost standard tuners in several styles for UHF and VHF TV.



### AUTOMOTIVE RADIO TUNERS

Approximately one-third of all American automobiles are equipped with R/C tuners. Because every automobile radio tuner is an individual case, R/C custom manufacturing exproperties area to the radio

perience is an important asset to the radio manufacturer in this specialized field.

### ELECTRO-MECHANICAL ASSEMBLIES

As a contract manufacturer of electromechanical assemblies for industrial and military electronic equipment, automatic data processing systems, etc., R/C also offers engineering assistance in development and modification, leaving you completely free of production worries and details. Complete information on this well-qualified division is available on request.



## RADIO CONDENSER CO.

Davis & Copewood Streets • Camden 3, New Jersey EXPORT: Radio Condenser Co., International Div., 15 Maare St., N.Y. 4, N.Y. CABLE: MINTHORNE CANADA: Radio Condenser Co. Ltd., 6 Bermandsey Rd., Taranto, Ontario

## PEAK PERFORMANCE

### **Costs Less These Days**

THE TRUE MEASURE OF ECONOMY IS  $\frac{\text{TUBE PRICE}}{\text{HOURS}} = \text{COST PER HOUR}$ 

**Amperex** 5924/AX-9904R

AMPEREX 5924/AX-9904-R MADE IN U.S.A.

### 16

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8 8

OF THESE TUBES ARE USED IN THE TRANSMITTER SHOWN ABOVE

RETUBE WITH

For example, this Standard Electronics 40KW TV transmitter uses the AMPEREX 5924/AX-9904R in the aural and visual high-band VHF amplifier stages, designed for use in the "Heart of Dixie," at WABT, Channel 13, Birmingham, Alabama, where it has given up to 7,926 hours of consistent service at an operating cost of only 2.7 cents per hour. Also, six other 5924/AX-9904R's have withstood high power levels for over 7,000 hours

8

Remember, this long life was accumulated in high-band final amplifier stages where the going gets rough. Even longer life can be expected at the reduced power level in driver stages.

Long life has been deliberately "built in," by proper design and proper tube geometry, for operation with high peak output over the entire VHF range from 54 to 216 mc.

Low operating cost-per-hour is only part of the story; the low initial cost of this tube keeps your spare-tube-inventory-investment at a minimum! Here is a partial list of other important stations using the 5524/AX-9904R. These represent approximately 18 million viewers witnessing proof of reliable performance!

WOR-TV	- New York	50 KW, Ch. 9
WLWA	- Atlanta	50 KW, Ch. 11
WMAZ-TV	' — Macon, Ga.	25 KW, Ch. 13
WSPD-TV	— Toledo	40 KW, Ch. 13
WEAT-TV	- W. Palm Beach	10 KW, Ch. 12
WALB-TV	— Albany, Ga.	10 KW Ch. 10

**P** 

Available from Your Local Radio Parts Distributor



## New Tech Data for Engineers

Resumes of New Catalogs and Bulletins Offered This Month by Manufacturers to Interested Readers

### Connectors

No. B59. a 12-page, 2-color bulletin issued by Dept. J-78, of the Joy Manufacturing Co.. Henry W. Oliver Building, Pittsburgh 22. Pa., illustrates and describes the company's electrical plugs and receptacles. Presents technical data covering standard styles and adaptations. (Inquiry Card No. 6-49)

### Sound Powered Telephone

A 2-page catalog sheet illustrates, de-scribes, and gives prices and shipping weights of Wheeler sound powered electric telephone equipment and systems especially adapted to emergency field service. Issued by The Wheeler Insulated Wire Co.. Inc.. Div. of The Sperry Corp., Waterbury 20, Conn. (In-quiry Card No. 6-50)

### **Fine Wire and Ribbon**

A new 12-page booklet illustrates and de-scribes the facilities of Sylvania E.ectr.c Products, Inc., 1100 Main St., Buffaio 9, N. Y. for manufacturing fine wire and rib-bon, and ribbon and parts, and small parts plaling. Includes chemical composition charts and gives testing methods and toler-ance controls. (Inquiry Card No. 6-51)

### **High Voltage Test Equipment**

A new 8-page catalog lists the complete line of high voltage test equipment and asso-ciated instruments offered by Peschel Elec-tronics, Inc., 13 Garden St., New Rochelle. N. Y. Available on request. Includes such items as non-destructive hipot testers, corona test sets, production type insulation testers. fault indicators and counters, cable fault sets, and high power, high voltage test sets. (Inquiry Card No. 6-52)

### Oscillograph

A 4-page data release issued by Midwest-ern Instruments, P. O. Box 7186, Tulsa, Okla., illustrates and describes the Model 581 oscillograph and gives covering dimensional and engineering data. (Inquiry Card No. 6-53)

### **Equalizers and Wave Filters**

Catalog No. 12E, issued by Cinema En-gineering Co., Div. of Aerovox Corp., 1100 Chestnut St., Burbank, Calif., has 16 pages of technical data that includes response charts, application case histories, and de-scriptive terms covering the company's equalizers and wave filters. (Inquiry Card No. 6-54)

### International Scientific Language

Vol. VII, No. 5, March 1955, "Research for Industry," a news bulletin issued by Stan-ford Research Institute, Stanford, Calif., is written in "Interlingua." a proposed inter-national scientific language understandable to one able to read technical material in one major Furpnear language. The issue is being major European language. The issue is being distributed to SRI's foreign mailing list, but additional copies are available for interested persons who write to the institute. (Inquiry Card No. 6-55)

### **Connectors and Cables**

"This is Microdot," a 4-page folder issued by Microdot Div., the Felts Corp., 1826 Fre-mont Ave., South Pasadena, Calif., illustrates and describes the applications of the com-pany's series of micro-miniature coaxial con-nectors, cables, and assemblies. (Inquiry Card No. 6-56)

### Glass

"Servofrax" (arsenic trisulfide glass) in-frared lenses and windows are described in a 4-page color folder released by Servo Corp. of America, 2020 Jericho Turnpike, New Hyde Park, N. Y. The material's physi-cal, chemical, and optical properties are in-corporated in detail. (Inquiry Card No. 6-57)

### **Multi-Headers**

Catalog No. 200. MS Series, issued by Hermetic Seal Products Co., 29-37 S. Sixth St., Newark 7, N. J., presents 16 2-color pages that provide complete technical data and dimensional drawings covering "Vac-Tite Compression Multi-Headers" of "All-Glass" and "All-Metal" construction. (In-quiry Card No. 6-58)

### **Charactron Tube**

The paper, "The Type C-9K Charactron Tube And Its Application To Aircraft Sur-veillance Systems," delivered by Joseph T. McNaney, chief engineer of the Charactron Project, Convair Div. General Dynamics Corp. before the IRE Convention, New York City, March 22, 1955, has been reprinted in a 20-page booklet containing appropria e il-lustrations and diagrams. (Inquiry Card No. 6-59) No. 6-59)

### Klystron

"Klystron Facts—Case #2," a new booklet published by Technical Services Dept., Eitel-McCullough, Inc., San Bruno, Calif., discus-ses klystron power applications, as well as new Eimac developments. The new booklet is a continuation of "Klystron Facts," pub-lished in 1954 that explained the theory and principle of klystrons. Both are avalable on request. (Inquiry Card No. 6-60)

### Vibration and Shock Control

A 25-page booklet issued by Robinson Aviation Inc.. Teterboro. N. J., "A New Concept In Vibration And Shock Control For Airborne Electronic Equipment." de-scribes the performance benefits of Robinson Engineered Mounting Systems. (Inquiry Card No. 6-61)

### New Parts & Components

Four data sheets released by The Denson Electronics Corp., Box 122, Rockville, Conn. illustrate and technically describe respec-tively the company's r-f mixer-crystal os-cillator head assembly, 10.7 MC i-f ampli-fier, "tone plates." and special purpose au-dio amplifier & FM receiver. (Inquiry Card No. 6-62)

### Capacitors

The new 4-page, 2-color Bulletin No. AB-21, released by Astron Corp., 255 Grant Ave., E. Newark, N. J., contains full details, performance characteristics, and test specifi-cations covering the "Comet" molded plas-tic, tubular, metallized paper capacitor. Bul-letin No. AB-22, illustrated with actual size photographs, presents technical data, sizes, and prices covering the company's type ET subminiature electrolytic capacitors. (Inquiry Card No. 6-63)

### **Oscillographs and Accessories**

A "Quick Reference Instrument Catalog," issued by Technical Sales Dept., Allen B. Du Mont Laboratories, 760 Boomfield Ave.. Clifton, N. J. is an 8-page catalog divided into three sections; frequency instruments, high frequency instruments, and accessories. Lists the salient points of cathode-ray oscil-lographs and accessory instruments and gives tabular technical information. (Inquiry Card No. 6-68)

### **Pilot Lights**

Catalog OG-A illustrates and gives dimen-sional drawings and technical information covering the Series 1000 "Omni-Glow" pilot lights made by Industrial Devices. Inc., Edgewater, N. J. (Inquiry Card No. 6-69)

### Capacitors

New capacitor catalogs have been released by San Fernando Electric Manufacturing Co., 1509 First St. San Fernando, Calif., covering a paper and foil, (paper dielectric) series, a metallized paper series, and a metal-cased. glass-to-metal terminal, her-metically-sealed, tubular and rectangular series. The paper and foil catalog lists MIL-C-25 type capacitors and illustrates a new series having a maximum temperature co-efficient. (Inquiry Card No. 6-70)

### Electro-Magnetic Components

A new catalog of electro-magnetic com-ponents for TV and radio applications has been released by Heppner Manufacturing Co., Round Lake, Ill. Illustrates and com-pletely describes the company line of ion traps, centering devices, speakers, flybacks, TV focusing magnets, field neutralizing as-semblies, purity rings, blue beam bender, and barkhausen oscillation eliminators. (In-quiry Card No. 6-71)

### Electronic Design, etc.

A 16-page illustrated booklet entitled. "Facilities and Services" has been published by the Standard Electronics Corp., subsidi-ary of Claude Neon, Inc. 285 Emmet St., Newark 5, N. J. It explains the company's experience and performance in electronic design and construction, research and de-velopment engineering, installation, and field servicing. (Inquiry Card No. 6-64)

### "Printed Circuitry"

An 8-page booklet released by Cornell-Dubilier Electric Corp., South Plainfield, N. J., describes the application. uses. and advantages of printed circuits in a variety of electrical products and equipment. Ex-plains the different types of base materials. laminate characteristics, and circuit designs, soldering techniques, and pricing variables, Switch. (Inquiry Card No. 6-65)

### "Glaswitch"

The magnetically-operated, glass-enclosed "Glaswitch" is described in a 20-page book-let Engineering Bulletin 1057, issued by the Revere Corp. of America, subsidiary of Neptune Meter Co., Wallingford, Conn. Cov-ers the operation, performance, and charac-teristics of the element. (Inquiry Card No. 6 660) 6.66)

### Packaging

Shock-proof "Climate-Proof Packaging." issued by Cargo Packers, Inc., 73 Rutled ge St., Brooklyn, N. Y. describes the organiza-tion facilities, special equipment, packaging to military specifications, and the company operating and assembly line methods. (In-quiry Card No. 6-67)

### Mountings

Technical Bulletin No. 700, released by Lord Manufacturing Co., 1635 West 12th St., Erie, Pa., provides complete data on "Tem-preof" mountings for vibration isolation and shock control. Presents six pages of de-tailed drawings, performance data. and de-scriptions. (Inquiry Card No. 6-72)

### **Electronic Test Equipment**

The Narda Corp., 66 Main St., Mineola, N. Y. has issued a new 28-page catalog cov-ering the concern's high-power impedance meters, variable reactances, terminations, coaxial slotted lines, attenuators, termina-tions, and couplers. Gives descriptions and specifications. (Inquiry Card No. 6-73)

### **Pilot Relay**

A 2-page data sheet released by Industrial Electronic Controls Co., 2271 East 14th St., Brooklyn 29, N. Y. illustrates and describe<sup>3</sup> the Model EB electronic pilot relay. Presents specifications, dimensional sketches, and cir-cuit data. (Inquiry Card No. 6-74)

### Lock Nuts and Fasteners

The Palnut Co., Irvington 11. N. J. has released a new 16-page illustrated catalog covering the company line of lock nuts and fasteners for radio, TV, and electronic as-semblies. Shows various applications and gives thread sizes, dimensions, etc. (Inquiry Card No. 6-75)

### Acoustic Devices

Shure Brothers, Inc. 225 West Huron St., Chicago. Ill., manufacturers of microphones, Chicago. III., manufacturers of microphones, phone pickup cartridges, magnetic record-ing heads, and similar devices, has made available a detailed brochure covering th "instantaneous" method of determining quality output of magnet recording heads to executives and quality control engineers who request the information on company letterhead. (Inquiry Card No. 6.76)

### **Power Supplies**

"A Sensible Approach to Regulated Power Supply Design," released by New Jersey Electronics Corp., 345 Carnegie Ave., Kenil-worth, N. J. standardizes most conventional power supply applications. Gives full techni-cal description of 64 variations. (Inquiry Card No. 6-77)

## Spotlighting a NEW AIRBORNE NAVIGATIONAL COMPUTER

### Miniaturized Ground Position Indicator for Navigation and Radar Stabilization

## **NEW** in CONCEPT! DESIGN! SIZE!

- 71.1 % weight reduction
- 78.8% size reduction
- 81.8% area reduction
- increased accuracy under all service conditions!
- increased operational flexibility!
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A complete self-contained system utilizing airspeed pitot pressure, aircraft compass heading, and wind data in polar form. Computes and indicates ground displacement of aircraft in rectangular coordinates, from an initial fix.

**LORAL**—Specializing in development and production of <u>AIRBORNE</u> <u>EQUIPMENT</u>—devoted to the evolution of new concepts, miniaturization and peak accuracy.

LORAL —Serving the <u>Aircraft Industry</u> in the fields of:

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- **COMMUNICATIONS SYSTEMS**
- RADAR EQUIPMENT
- TEST EQUIPMENT

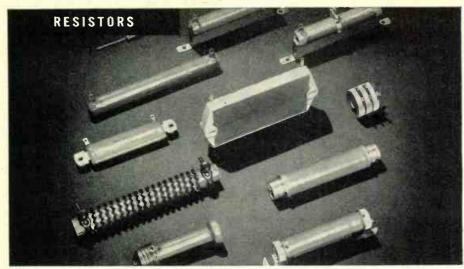
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## LORAL ELECTRONICS CORPORATION 794 EAST 140th STREET • NEW YORK 54, N. Y.

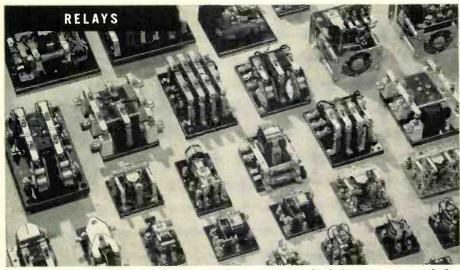
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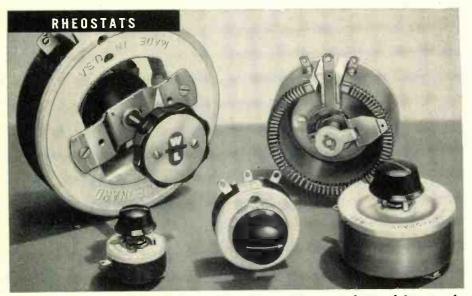




WIDEST SELECTION OF STOCK RESISTORS ever offered by any manufacturer is presented in W/L Catalog 15.



EXCEPTIONALLY LONG, TROUBLE-FREE LIFE is standard for W/L a-c and d-c magnetic relays. Write for data-packed Relay Catalog.



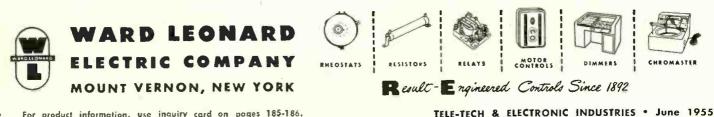
VITROHM RING RHEOSTATS in 25 to 300 watt sizes are designed for smooth, gradual resistance change. Send for Bulletins 1105-16.

Know your three R's in control components

That's resistors, relays and rheostats we're talking about - and a man looking for these devices earns his A when he shops at Ward Leonard.

You get more performance per dollar . . . a wider selection of stock items ... and guicker service on made-toorder controls from Ward Leonard than from anyone else.

Take a look at our basic three R's here. Then find out how well one of our components can meet your product's requirements by writing us. Ward Leonard Electric Co., TT, South St., Mount Vernon, N.Y. 4.38



For product information, use inquiry card on pages 185-186. 38

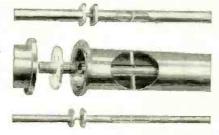
# antennas

ANDREW designed and produced antennas have an outstanding record for performance in the field. They excel both in quality of engineering and construction. Our standard antennas range from FOLDED UNIPOLES to gigantic 60-ft. Microwave parabolics, for pointto-point, broadcast, and mobile communication services.



# And Alexandre

HELIAX®, a truly flexible air dielectric cable is recommended for all installations from AM through Microwave. It has a very low VSWR at any frequency, and is the easiest cable to install-no hanger or layout problems, and no special tools required.



### RIGID AIR DIELECTRIC LINE-

ANDREW designed and manufactured transmission line is noted for its mechanical and electrical excellence. VSWR on all ANDREW standard lines is low. Especially designed flanges and inner connectors, make positive contact at all connections.



WAVE GUIDE is produced to the most rigid standards in the industry. The high efficiency, high power handling capacity, and low VSWR of this new copper clad steel wave guide make it the recommended choice for UHF-TV. ANDREW will design your complete wave guide system for easier and less costly installations.

SYSTEMS ENGINEERING . . . ANDREW designs and manufactures complete antenna systems for all applications, including antennas, transmission lines, hangers, fittings and related components. Write for our new general catalog and engineering guide.

ANDREW

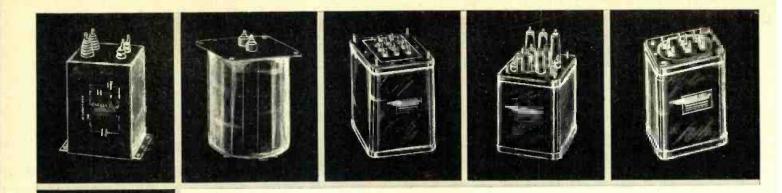
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TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

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**DESIGN** — Specifically planned for your use by Airdesign transformer experts, to make the most of space, environment, and application.

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WORKMANSHIP — Skilled to realize the advantages of superior design and materials in the finished product . . . PLUS production facilities to realize that skill.

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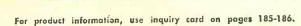
> Send today for Airdesign brochure on Industrial & Military Type Transformers, Reactors, & Filters.

> > Electronic Components

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40



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## manufacturers' representation

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Everything that experience, technological skill, equipment and ability can provide – plus a sincere desire to serve – will be found at Neely Enterprises – the Electronic Instrumentation Center of the West.

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BOONTON RADIO CORP., Boonton, N. J. Q meters, AM-FM signal generators, production and special test equipment for the VHF and UHF frequency range.



GERTSCH

ELECTRO-MEASUREMENTS, INC., Portland, Ore. General purpose C-R-L impedance bridges and accessories and high accuracy rheastats, patentiameters, and decade baxes.

GERTSCH PRODUCTS, INC., Los Angeles, Calif.

reading VTVM.

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with the finest names in electronic instrumentatio



HEWLETT-PACKARD CO., Palo Alto, Calif. General purpase and special laboratory test equipment from .01 cycles per second to over 18,000 megacycles.

High accuracy VHF-UHF frequency meters; supersonic, audio and sub-

audio filters; precision variable ratio autotransformers; and peak

HAY LAB

KAY LAB, San Diego, Calif. Highly regulated DC power supplies, amplifiers, and YTVM, also, industrial and broadcast TV camera systems.



SOD

LIBRASCOPE, INC., Glendale, Calif. Equipment and components for the digital and analog computer including magnetic amplifiers and X-Y plotters.



### **NEELY ENTERPRISES**

Electronic Manufacturers' Representatives

LOS ANGELES OFFICE 3939 Lankershim Bivd. (North Hollywood, Calif.) Phone STanley 7-0721

SAN FRANCISCO OFFICE 2830 Geary Blvd. Phone WA 1-2361

SACRAMENTO OFFICE 1317 15th St. Phone GI 2-8901 SAN DIEGO OFFICE 1029 Rosecrans St. Phone AC 3-8106

ALBUQUERQUE OFFICE 107 Washington, S.E. Phone 5-5586

PHOENIX OFFICE 641 E. Missouri Ave. Phone CR 4-5431 Oscillographic recorders in single and multiple channel systems, employing plug-in preamplifiers for maximum versatility.

SANBORN COMPANY, Cambridge, Mass.



SENSITIVE RESEARCH INSTRUMENT CORP., Mt. Vernon, N. Y. High accuracy ammeters, voltmeters, wattmeters, fluxmeters, special purpose meters, and universal test sets in a wide selection of types and ranges.

sierra

SIERRA ELECTRONIC CORP., San Carlos, Calif. Instrumentation for corrier current communication, line foult analyzers, and TV picture and waveform monitors.



TEKTRONIX, INC., Portland, Ore. Versatile, high quality laboratory oscilloscopes, special waveform generators, amplifiers, and accessories.



VARIAN ASSOCIATES, Palo Alto, Calif. Klystron tubes, klystron power supplies, research electra-magnets, and accessary items.



with the finest in Electronic Instrumentation

### **NEELY ENTERPRISES**



Q METER TYPE 190-A



Q METER TYPE 260-A



FM-AM SIGNAL GENERATOR TYPE 202-B



SWEEP SIGNAL GENERATOR TYPE 240-A



RX METER TYPE 250-A



RF VOLTAGE STANDARD TYPE 245-A

## PRECISION ELECTRONIC MEASURING INSTRUMENTS

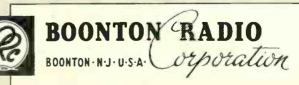
**RX METER: Wide Frequency Band RF Bridge** 

**Q** METERS: Low, Medium, High and Very High Frequencies UNIVERTERS: Low, Medium and High Frequency Converters

SIGNAL GENERATORS: Frequency and Amplitude Modulated For Aircraft Navigation, Mobile and TV Receivers. Precision broad band sweeps with markers

SIGNAL GENERATOR CALIBRATORS: RF Voltage Standard in the low microvolt range over a wide frequency range

		Q MET	ERS			
Туре	Freq. Range	Q Range	Tuhing Capacity Range		Q Accuracy	Price
260-A	50 kc to 50 mc	10 to 625	30-450 mn	1	5% to 30 mc	\$725.
190-A	20 mc to 260 mc	5 to 1200	7.5 to 100 mi	mf	7% to 100 mc	\$625.
		FM-AM SIGNAL	GENERATORS			
4			Modulation	_		
Туре	Freq. Range	Output Range	FM AI		Application	Price
202-B	54-216 mc	0.1 to 200,000 μν	0-240 kc 0-50	1%	General	\$975
202-C	54-216 mc	vu 0.1 to 200,000 v	0-240 kc 0-50		Mobile	\$1090
202-D	175-250 mc	0.1 to 200,000 עע ע	0-240 kc 0-10	0%	Telemetering	\$980
		SWEEP SIGNAL	GENERATOR	_		_
Туре	Freg. Range	Output Range	Modulation FM	AM	Markers	Price
240-A	4.5 to 120 mc	1.0 to 300,000 µv	± 1% to ±30% Center Freq.	30%	Crystal & Pip.	\$137
_	OMNI-R	ANGE SIGNAL GENE	RATOR (Crystal N	onito	red)	
Туре	Freg. Range	Output Range			Application	Price
211-A	88-140 mc	0.1 to 200,000 uv	0-100% am Om		ni-Range Revrs.	\$1800
		GLIDE SLOPE SIGN				
Туре	Freq. Range	Output Range	Modulation Application		Application	Price
232-A	329-335 mc	1.0 to 200,000 uv	0-100% am	Gli	de Slope Revrs.	\$1500
	WIDE BAN	IMPEDANCE MEASI	JRING EQUIPMEN		X Meter	
Туре	Freq. Range	R Range	C Range		L Range	Price
250-A	0.5 to 250 mc	15 to 100,000 ohms	أبرير 0-20 Jup	0.0	01 µh-100 mh	\$1250
		RF VOLTAGE	STANDARD			
Туре	Freq. Ronge	Calibrated Out.	Output Impedance	e	Application	Price
245-A	0.1 to 1,000 mc	0.5,1.0,2.0 mv	50 ohms	Sig	Calibrates gnal Generators	\$315.
		UNIVER	TERS			
Туре	Freq. Range	Output Range	Modulatio FM A	n M	Accessory to	Price
207-A	0.1 to 55 mc	0.1 to 100,000 µv	0-240 kc 0-1	50%	202-Band 202-C	\$345.
207-B	0.1 to 55 mc	0.1 to 100,000 µv			202-D	\$345
203-B	0.1 to 25 mc	1.0 to 100,000 uv		0-240 kc 0-50% 202-D 1.5 to 30 mc 30% 240 A		\$345.



### PRECISION ELECTRICAL INSTRUMENTS

Wesimmon

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FAULT LOCATING					st range. 		0, 1/1, 10/	1.100/1;	
WHEATSTONE		Varley -	- 1/9, 1/	4, 1/9; M	urray — 10				
BRIDGE			y: All resi		05%. ght cells, se		-		
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UNIVERSAL		Inducta	nce, O to 1	100 henry	5.				
IMPEDANCE		Accurac	y: Resista	nce, ±(0.	10% + 1 a = (0.9% +	lial divisio	n); Capacit	ance, $\pm$ (0.	.25% + 1
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					olts, 50 to 60	) cycles. \$4	95.00.		
		banery-			available.				
DEKABOX®		Poristan	- Dorad	+0.0	5% unifilar		· · · · ·		
DECADE BOXES		teristics.	. *Model	DB-655, 6	decades	of fixed re	sistors, 1.2	nt trequen megohms	cy charac-
		Capacito	ance Deco	ades: Hig	hest quality	y 1% pol	ystyrene co	apacitors,	
DEKAVIDER VOLTAGE		*Model	DC-40, 4 d	lecades, O	to 1.1110	uf in 0.000	μf steps, S	195.00.	
DIVIDERS		Precisio	n Voltage	Dividers,	dc and ac	, using Ke	lvin-Varley	circuit. */	Nodel DV-
		411, lin	earity 0.00	05%, resc	olution 0.00	03%, exce	llent frequ	ency respo	nse, \$132.
DEKABRIDGE	A States	Compac	t Wheatst	one Bridg	je, direct r	eading to	four figure	es, require	s external
WHEATSTONE BRIDGE		meter a	nd power .\$125.00.	source. /	Model 210,	0 to 12 m	egohms in	7 ranges.	. Accuracy
• •		•	•		٠				
DEKAPOT®		High pre	ecision de	cade pote	ntiometers	using Kelvi	n-Varley ci	rcuit. *Mod	el DP-211:
POTENTIOMETERS		linearity	0.01%;	resolution	0.002%; ir	put resisto	ince 10,000	) ohms. \$9	8.00.
<b>DEKASTAT</b> ®		Precision	n decade	rheostats.	Excellent	lemperatur	e stability,	resolution	, accuracy
RHEOSTATS		and fre	equenčy r ∾∠ + 1 ata	esponse.	*Model D ); 12,000 of	S-265: 12	,000 dial	divisions;	accuracy
DEKAPACITOR									
CAPACITORS					rene decad to 1.110 μt				mounting.
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PORTLAND 15, OREGON

ELECTRO-MEASUREMENTS, INC.

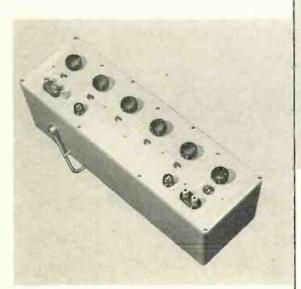
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4312 S. E. STARK STREET

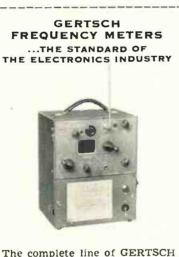
NOW! AN <u>AC</u> VOLTAGE DIVIDER WITH PERFORMANCE COMPARABLE TO THE BEST DC DIVIDERS...the new

### STANDARD RATIO TRANSFORMERS

-Xe



CASE MODELS



The complete line of GERISCH PRECISION INSTRUMENTS includes the Gertsch Frequency Meters (L. F. through Microwave) which have become the standard of the electronics industry for frequency measuring and generating uses. Included also are Peak Reading Vacuum Tube Voltmeters, Passive Filter Units, Bridging Transformers and auxiliary equipment for frequency standards. For detailed information regarding Gertsch instruments, contact your nearest Gertsch representative or



RACK MODELS

### NINE MODELS INCLUDING RUGGEDIZED VER-SIONS, WITH "BUILT-IN" ACCURACY NOT SUB-

### JECT TO VARIATIONS DUE TO NORMAL AGEING.

The PT Series consists of nine models of precision AC Voltage Dividers specifically designed to divide AC voltage with accuracies as good as .005% and resolution as good as .00001%. Models available to cover frequencies from 30 to 3,000 cps (to 10,000 cps at reduced accuracy).

These instruments represent what engineers will recognize as ideal AC voltage dividers, with high input impedance, low output impedance, and very low phase shift.

Four models, with ruggedized heavy silver rotary switches, are designed for use where severe continuous service is required. Five models for normal service, have a choice of rotary or push button solid silver contact switches. The permanent "built-in" accuracy of the PT Series makes these ageless devices not subject to the variations normally experienced with resistive dividers.

There is a Gertsch Standard Ratio Transformer for almost every application. If there isn't, we will design a special model for your use.

FOR DESIGN AND PRODUCTION USE SUCH AS:

- Core material investigation
- AC meter calibration
- Transformer turns ratio measurements
- Checking resolvers, servos, computers, synchros, selsyns, and AC transducers
- Bridge ratio arm
- AC potentiometer checking

=GERTSCH=

As a ratio standard

GERTSCH PRODUCTS, INC. 11846 Mississippi Avenue Los Angeles 25, California

### Direct reading, wide range, outstanding value

## SIGNAL GENERATORS



### NEW! -hp- 628A shf Signal Generator

15 to 21 KMC, 10 dbm output SWR 1.2, high accuracy No calibration charts Pulse, FM, square wave module

### Typical -hp- signal generators



-hp- 608D vhf Signal Generator



-hp- 612A uhf Signal Generatar



-hp- 624C X Band Test Set

△Rock mounted instrument available for \$15.00 less.

New *-bp*- 628A is the first commercial signal generator to bring the wide range, high power, convenience and accuracy of lower-frequency signal generators to the 15 to 21 KMC range.

Operation of the instrument is typical of -hp- generators. Frequencies are directly set and read on one dial. No calibration charts are required. Output voltage is directly set and read. Output is 10 to 20 db better than previous spot-frequency generators. SWR is better than 1.5 at full power, and better than 1.2 at levels of +7 dbm and less. Internal pulse, FM or square wave modulation is provided, together with provision for external pulsing or FM'ing. Model 628A, \$3,000.00.

Instrument	<b>Erequency Range</b>	Characteristics	Price
•hp• 608C	10 to 480 MC	Output 0.1 $\mu$ v to 1 v into 50 ohm load. Pulse or CW modulation. Direct calib.	\$ 950.00
-hp- 608D	10 to 420 MC	Output 0.1 µv to 0.5 v. Incidental FM 0.002 entire range.	1,050.00
-hp- 612A	450 to 1,200 MC	Output 0.1 µv to 0.5 v into 50 ohm load. Pulse, CW or square wave modulation. Direct calibration.	1,200.00
-hp- 614A	800 to 2,100 MC	Output 0.1 µv to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calib.	1,950.00
-hp- 616A	1,800 to 4,000 MC	Output 0.1 µv to 0.223 v into 50 ohm load. Pulse, CW or FM madulation. Direct calib.	1,950.00
·hp· 6188	3,800 to 7,600 MC	Output 0.1 µv to 0.223 v into 50 ohm load. Pulse, CW, FM or square wave modulation. Direct calibration.	2,250.00
-hp- 620A	7,000 to 11,000 MC	Output 0.1 $\mu$ v to 0.071 v into 50 ohm load. Pulse, FM or square wave modulation. Separate power meter and wave meter section.	2,250.00
-hp- 623B	5,925 to 7,725 MC	Output 70 µv to 0.223 v into 50 ohm load. FM or square wave modulation. Separate power meter and wave meter section.	1,750.00
.hp- 624C	8,500 to 10,000 MC	Output 3.0 $\mu$ y to 0.223 y into 50 ohm load. Pulse, FM or square wave modulation. Separate power meter and wave meter section.	2,265.004

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DEPT. W, 3340 PAGE MILL ROAD, PALO ALTO, CALIFORNIA, U.S.A.

FIELD REPRESENTATIVES IN ALL PRINCIPAL AREAS

## COMPLETE COVERAGE, HIGHEST QUALITY

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ELECTRONICS FOR COMMUNICATION . MEASUREMENT . CONTROL

### ABSOLUTE DC POWER SUPPLIES AND METER CALIBRATORS

### ABSOLUTE DC POWER SUPPLY SPECIFICATIONS

Short Time Stability..... ..... ±50 parts/million Output Voltage Variation .... Variable in 100, 10, 1-v steps; between 1-v steps with a potentiometer.

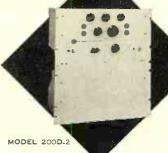
Output Impedance

DCLess than 0.01 ohm
AC to 200 kc Less than 0.5 ohm
Output Hum and NoiseLess than 0.5 my
Load Regulation Factor
Line Regulation Factor
Response Time

MODEL	VOLTAGE	CURRENT	PRICE
38-200	2-32	2 amp	\$1.045
30C-15	10-310	150 ma	595
30C-25	10-310	250 ma	645
30C-50	10-310	500 ma	780
30C-100	10-310	I amp	890
50C-25	10-510	250 ma	730
50C-50	10-510	500 ma	890
50C-100	10-510	1 amp	1,030
80C-50	10-810	500 ma	1,175
200D-2	100-2010	20 ma	1,175

### These units are sources of absolute DC voltage. Their output is independent of output load and supply variations, and the output voltage is constantly compared against an internal standard cell. The Meter Calibrators provide a secondary standard source of DC voltage and current.

			IBRATC	
Long Time Regulation	Stability	e voltage cha	nge	0.01%
MODEL	VOLTAGE	CURRENT	CALIBRATION	PRICE
M308-12 M10A-10	1.02-302 0-100 0-10	0-10 ma	0.02% or 5 my 0.05% or 5 my 0.05% or 0 5 my	\$ 495 1,190
M1004 20	0-1	0-100 ma 0-10 ma 0-1 ma	0.05% or 0.05 mv 0.05% or 5 µа 0.05% or 0.5 µа 0.05% or 0.05 µа	1050
M100A-20	0-1000 0-100	0-100 ma	0.05% or 50 mv 0.05% or 5 mv 0.05% or 5 µa	1,950
		0- <b>10</b> ma 0-1 ma 0-0.1 ma	0.05% or 0.5 µa 0.05% or 0.05 µa 0.05% or 0.05 µa	





-

AC DECADE AMPLIFIERS Less than 25 microvolts noise-40 volts RMS outputwide bandwidthgains of 40, 60, 80 db.

\_\_\_\_

#### DYNAMIC MICRO-MIKER Measures 0.1 to 1100 mmfd capacity or 0 to 250 übenries inductance with high precision and accuracy.

#### LOGATENS

Nonlinear attenuators whose output voltage is the logarithm of input.

### TELEVISION INTERCOMS FOR INDUSTRY CAMERA CHAINS FOR BROADCASTERS

ACCESSORIES 10, 17, 21-inch video monitors Video modulators Multiplexer Microscope adapter Special purpose lenses Weatherproof and explosion-proof housings Remote controls for camera positioning, lens iris and focusing adjustments

#### FEATURES

Interlaced scanning 8-megacycle bandwidth camera 8-megacycle bandwidth line amplifiers Electromagnetic and electrical focus Horizontal and vertical centering controls Overall operating controls adjustable remotely High sensitivity cascode video preamplifier Electronically regulated power supplies throughout Basic package provides economical system expansion All major components fabricated from subassemblies for rapid and easy plant personnel maintenance



PLUG-IN AMPLIFIERS Preamplifier, Driver Amplifier, Detector Amplifier-stabilized with negative feedback and flat within 1 db from 5 cps to 50 kc.

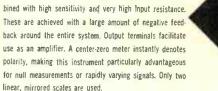
### PEAKED AMPLIFIERS Selective frequency high-Q amplifiers from 15 to 1,000 cps.

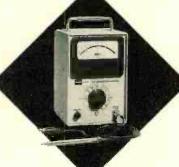
#### DC MICROVOLTMETER AND AMPLIFIER MODEL 202 SPECIFICATIONS

300 uv to 300 v full scale

fortage nange.	- 200 HA IO 200 A IDII 20816
Input Resistance	
10 millivolts full scale and below	
30 millivolts full scale	
100 millivolts full scale and above	
Accuracy on all ranges.	±3% of full scale
Maximum Gain as amplifier	
Output Voltage and Current as amplifier	±1 volt
	across 2000 ohms or more
Internal Impedance as amplifier	
Oritt as amplifier. Price	$ = 15 \mu v$ equivalent input
Price	\$350
Rack mounting available	Order Model 202-R

The KAY LAB DC Microvoltmeter and Amplifier employs unique circuitry to provide exceptionally stable performance combined with high sensitivity and very high input resistance. These are achieved with a large amount of negative feedback around the entire system. Output terminals facilitate





### DC DECADE AMPLIFIER MODEL 103

The KAY LAB DC Decade Amplifier employs direct-coupled and RC-coupled amplifiers to achieve exceptionally low drift, high gain stability, wide bandwidth, and low noise. The low drift is assured with a high gain chopper amplifier used to stabilize DC conditions. Equivalent input noise, drift, and bandwidth are essentially independent of the gain setting which is switch-selected for steps of 0, 20, 40, and 60 db. Output capabilities are high, further increasing the usefulness of this instrument.

SPECIFICATIONS	
Gain	db
Bandwidth on all ranges ±1 db DC to 25 I	
±3 db to 100 l	
Input Impedance	ns
DC Output Impedance 0.05 oh Output Voltage Range ±35 volts D	m
Utiput voltage Kange. ±35 volts L	Ю
Output Current Range. ±20 milliamps into 1500 ohn	
Accuracy of Gain Setting. ±0.5 c	
Hum and Noise referred to input	
Orift referred to input	01
Price S45	101
Rack mounting available	P

REPRESENTATIVES IN ALL MAJOR CITIES Write, wire or telephone the one in your vicinity



5725 KEARNEY VILLA ROAD, SAN DIEGO 12, CALIFORNIA

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## Complete line of rejection type filters from 15 to 25,000 cps.

TWIN-T

FILTERS

SERVO STABILIZERS Plug-in units with variable rate controls for stabilizing AC servo

## systems.

CATALOGS AND TECHNICAL DATA AVAILABLE FOR ALL PRODUCTS

### NEELY ENTERPRISES

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### Flexibility in Application Versatility in design...

## packaged analog-digital converters

**Shaft Position to Digital Converters** features reliability, long life, non-ambiguity and speed makes these converters ideal for computers or data handling systems where serial read-out is preferred. Librascope converters transmit information at almost any rate desired up to 1 mc and in some cases above, and may be multiple timeshared, holding extra circuitry to a minimum. All units quickly adjustable, syncro-mounted. Available in Binary, Gray code or Binary decimal code as shown in chart below. Special units may be designed to your order.

MODEL\*

CODE

Write for catalog information.

**RESOLUTION PER** 



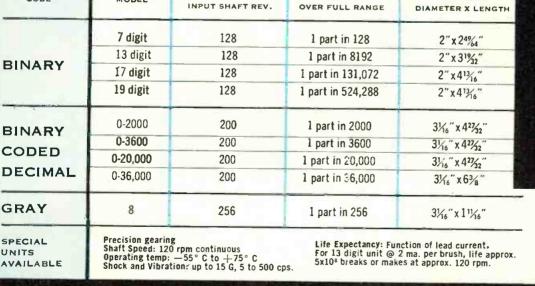
DIMENSIONS

- Unique, staggered double brush pick-off system.
- Reads out serially into relays or single or multiple scan matrices.
- Analog-digital or digitalanalog operation.
- May be time-shared.
- Syncro-mounted.

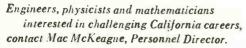
**IBRASCOPE** 

COMPUTERS. COMPONENTS AND CONTROLS.

 Associated circuitry can be designed to fit your data-handling problems.



RESOLUTION



A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

nou

Also 8 and 6 Channel Systems

for recording analog computer outputs,

or other applications where 1 volt/cm sensitivity is usable. complete eight-channel system shown comprises four Model 150-2000 Dual Channel DC Amplifiers and an eight-channel Recorder Assembly. Each Dual-Channel Amplifier is complete with common power supply. (The six-channel version is identical, except for two less galvanometers and one less Dual-Channel Amplifier.) Also four channel models.

Write for catalog material on any Sanborn "150" Recording System OSCILLOGRAPHIC RECORDING SYSTEMS

in addition to





and



Channel Models These new additions to the "150 family" follow the original "150" design concept which permits rapid change-over from one set of recording requirements to another by means of interchangeable, plug-in type preamplifiers.

The Model 158-5460 eight-channel system (upper left photo) consists of an eight channel recorder assembly and eight Driver Amplifier-Power Supply units. To this basic assembly the user adds any combination of Sanborn "150" plug-in preamplifiers to meet his requirements. Each channel provides a 4 cm deflection.

The six-channel system (156-5460) has the same basic assembly. except for *two less* galvanometers and *one less* Driver Amplifier-Power Supply unit in each cabinet. Each channel provides a 5 cm deflection.

Both systems offer: nine chart speeds (0.25 to 100 mm/sec.); extended frequency response; improved regulated power supplies; individual stylus temperature control for each channel; improved control of input signals by 1, 2, 5, 10, 20, etc. attenuator ratios; controls for timing, manual and remote coding.

CAMBRIDGE 39, MASS.



## use a "Sensitive Research" instrument...

For the past 28 years Sensitive Research has created the finest instruments for America's industry. Designed with pioneering imagination, produced with skill and care they have become America's standard of precision instrument engineering. <u>SRIC instruments</u> are designed for the future—today.

Indicating instruments for current, voltage, power and magnetic measurements; special instruments made to order.



SENSITIVE RESEARCH INSTRUMENT CORPORATION MOUNT VERNON, N.Y.

ELECTRICAL INSTRUMENTS OF PRECISION SINCE 1927



Direct Reading Frequency Meter. Model FRE • low audio levels • scale length 6.3" • accuracy .2 of 1% of center frequency.



Model DYL-Electro Dynamometer type. AC Laboratory Standard • 18 ranges of current and voltage • 12" scale length • accuracy .1 of 1%.



Universal Magnetic Testing Set. Model UMAG • core loss measurements according to A.S.T.M. specifications. Includes Epstein frame.



Universal 88". 88 range AC and DC Polyranger • 5.2" scale length • accuracy .5 of 1% on DC and .75 of 1% on AC.

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### NEELY ENTERPRISES

## OTHER SIERRA

VLF to UHF

### Frequency Selective Voltmeters

Four accurate, stable, tuned, vacuum tube voltmeters; collective frequency coverage of 3 kc to 500 kc.

### Wave Analyzer

Two precision wave analyzers for analyzing complex waveforms. Model 121, 15 kc to 500 kc; Model 158, 500 kc to 10 mc.

### Line Bridging Transformers

Converts voltmeter and wave analyzer inputs from single-ended to balanced operation.

### Line Fault Analyzer

Instantly pin points shorts, opens and grounds on open wire transmission lines. Direct reading to 200 miles.

Carrier Systems Impedance Meter Measures impedance on circuits with high noise levels at any frequency 30 to 300 kc.

### **Reflection Coefficient Meter**

Direct reading, compact instrument for measuring reflection coefficient and vswr on coaxial transmission lines. 32 mc to 1125 mc.

### Wideband Directional Couplers

Six models provide complete coverage in coaxial systems 1 mc to 2000 mc. Also available 10 kc to 3 mc for balanced or coaxial line.

### **Coaxial Readout Devices**

Crystal Detector and Bolometer Mount insures sensitive readout for Sierra's VHF-UHF Directional Couplers.

### **Double Stub Tuners**

Match loads to lines up to 1.5 kw peak power. Three models cover the frequency range of 140 mc to 3000 mc.

### **Calibrated RF Load**

Variable impedance load provides for correct power measurements up to 250 watts at 2 mc to 30 mc.

### UHF Transmitters

960 to 1215 mc. Highly stable, crystal controlled power signal sources for laboratory and field use.

### Color T. V. Monitors

Picture Monitor (Model 162) and Waveform Monitor (Model 161) provide full monitoring facilities for both color and black-and-white T. V.

WRITE FOR DETAILS

## New Bi-Directional Power Monitor



25 to 1,000 mc 10 to 500 watts Only 2 plug-in elements

MODEL 164

### Quickly measures incident or reflected power, simplifies matching loads to lines

New Sierra Model 164 is a compact, versatile, bi-directional monitor for intermittent or continuous measuring of incident or reflected power, or convenient and precise matching of loads to lines. The instrument offers unequalled measuring ease and economy, since only two plug-in elements are required for coverage of all frequencies 25 to 1,000 mc and wattages 10 to 500 watts. Two plug-in elements cover, respectively, 25 to 250 mc and 100 to 1,000 mc. Both have 4 power ranges: 10, 50, 100 and 500 watts. Accuracy is  $\pm 5\%$  full scale on all ranges and frequencies. No auxiliary power is required to operate the instrument.

Because of its compact size and wide range, Model 164 is ideal for portable applications (mobile, aircraft, etc.) as well as laboratory use. It is supplied in a sturdy carrying case (one or both plug-in elements supplied as ordered) and both meter and directional coupler may be removed from the case for remote monitoring. The monitor may be equipped for most connectors normally employed with 50 ohm lines. A twist of the wrist selects incident or reflected power, or any power range, without requiring removal of power. No exchange of plug-in elements is necessary to read low levels of reflected power.

### TENTATIVE SPECIFICATIONS

Power Ranges: 10, 50, 100 and 500 watts full scale direct reading.

Accuracy:  $\pm$  5% of full scale on all power ranges and at all frequencies.

### Insertion VSWR: Less than 1.08.

Frequency Ranges: 25 to 1,000 mc. Two plug-in elements. Low Frequency Element: 25 to 250 mc.

High Frequency Element: 100 to 1,000 mc. Impedance: 50 ohm coaxial line.

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Sales representatives in major cities Manufacturers of Carrier Frequency Voltmeters, Wave Analyzers, Line Fault Analyzers, Directional Couplers, Wildeband RF Transfarmers, Custom Radio Transmitters, VHF-UHF Detectors, Varioble Impedance Wattmeters, Reflection Coefficient Meters

## DC to 30 MEGACYCLES 12-Millimicrosecond Risetime

**Tektronix Oscilloscopes for Fast-Rise Applications** 

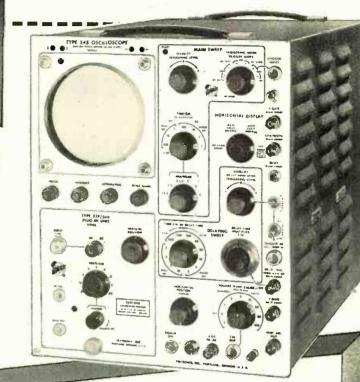
NOPI

**TYPE 545**—This new high-speed laboratory oscilloscope, in combination with the new Type 53K/54K Fast-Rise Plug-In Unit ...opens the way to quicker, eas-

ier analyses of fast-rising waveforms ... pro-

viding faithful displays and accurate measurement facilities well beyond the range of previous oscilloscopes of its size and cost. The Type 545-Type 53K/54K combination offers a vertical-amplifier passband of dc to 30 mc (12-millimicrosecond risetime) at calibrated sensitivities to 0.05 v/cm, with a full 4-cm linear vertical deflection. A wide range of calibrated sweeps, with calibrated sweep delay from 1  $\mu$ sec to 0.1 sec, and high accelerating potential, 10 kv, fully complement this greatly extended vertical-amplifier range.

The Type 545 is the most versatile oscilloscope ever made, for it can be quickly converted to many other applications. By merely plugging in the appropriate Type 53/54 Plug-In Preamplifier you are ready for wide-band, wide-band high gain, dual-trace, high-gain differential, microvolt-sensitivity, or wide-band differential applications. It's a rare oscilloscope application that isn't easily handled by this modern method.



### **Type 545 Oscilloscope Characteristics**

#### Wide Sweep Range

24 Calibrated sweeps from 0.1  $\mu$ sec/cm to 5 sec/cm, accurate within 3%. Accurate 5.x magnifier extends calibrated range to 0.02  $\mu$ sec/cm. Continuously variable from 0.02  $\mu$ sec/cm to 12 sec/cm.

### Wide Sweep-Delay Range

Additional delaying-sweep circuitry provides conventional, or triggered litter-free delay, 1  $\mu$ sec to 0.1 sec in 12 calibrated ranges. Range accuracy within 2%. Incremental accuracy within 0.2% of full scale.

#### Versatile Triggering

Internal or external, with amplitude-level selection or AUTOMATIC TRIGGERING. High-frequency synchronization up to 30 mc.

Square-Wave Amplitude Calibrator 0.2 mv to 100 v in 18 steps, accurate within 3%.

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New Cathode-Ray Tube

Tektronix T54P 5" precision metallized crt provides 4-cm vertical and 10-cm horizontal linear deflection. 10-kv regulated accelerating potential.

Bolanced Delay Network 0.15 µsec vertical signal delay.

### DC-Coupled Unblanking

Uniform unblanking at all sweep speeds and repetition rates.

Electronic Voltage Regulation All voltages affecting calibrations are fully regulated.

### **CRT Beam Position Indicators**

Type 545 --- \$1450 plus price of desired plug-in units.

Type 541 — Same characteristics, less delayed-sweep facility — \$1145 plus price of desired plug-in units.

> Prices f.o.b. Portland (Beaverton), Oregon

LOW INPUT CAPACITANCE With Accessory Probes for Type 53K/54K

Vertical-Amplifier Characteristics

Input impedance 20  $\mu\mu$ f, 1 megohm

Sensitivity - 0.05 v/cm to 20 v/cm in 9 calibrated steps.

seconds.

Price --- \$125

with Type 53K/54K Unit Plugged In

Transient Response - Risetime, 12 millimicro-

Frequency Response — Passband, dc to 30 mc. (down 3 db  $\pm \frac{1}{2}$  db at 30 mc, only 6 db at 45 mc).

Probe	Input Impedance	Maximum Sensitivity	
P405	11.5 µµf, 5 megohms	0.25 v/cm	
P410	7.5 µµf, 10 megohms	0.5 v/cm	
P420	4.5 µµf, 10 megohms	1 v/cm	
P450	2.5 µµf, 10 megohms	2.5 v/cm	
P4100	2.5 µµf, 10 megohms	5 v/cm	

Please call your Tektronix Field Engineer or Representative for complete specifications.



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# ADD SEVEN LEAGUE BOOTS

to microwave transmission...

Meet Varian's newest klystrons ... a related group of 1 Kw and 10 Kw cw amplifier tubes that extend microwave propagation **far beyond** conventional line-of-sight limits. Designed to exacting Varian quality and performance standards, applications for these versatile klystrons include long range communication and cw radar or illuminator service ... available in the following types and frequency ranges:

VARIAN TUBE TYPE				FREQUENCY RANGE (MC)
VA-800 (10 Kw)	A	1700-1930	VA-802 (1 Kw) D	2450-2700
	В	1930-2160	VA-803 (1 Kw) B	3700-4200
	C	2160-2400	VA-804 (1 Kw) B	4400-5000
VA-802 (1 Kw)	A	1700-1930	VA-805 (1 Kw) B	5925-6425
	В	1930-2160	4X-005 (1 KW) D	
	C	2160-2400	VA-805 (1 Kw) D	6575-6875
	C	2160-2400	171-005 (1 Ital) D	

VA-800 KLYSTRON

**EXTEND YOUR** MICROWAVE HORIZONS... Write today for complete specifications and technical information on the new Varian 1 Kw and 10 Kw amplifier klystrons... data on the Varian V-42 and other high power klystrons is also available. Address our Applications Engineering Department or contact your nearest Varian representative. Built for long, trouble-free service...

Varian 1 Kw omplifier klystrons offer many advantages for commercial transmitter operation. Rugged, integral-cavity design, air-cooled operation, wide range tuners and conservatively rated, thoriated tungsten buttons provide a life expectancy in excess of 10,000 hours. One power supply design can be used for the entire frequency range ... no special r.f. equipment is needed. Other outstanding features include:

- Low noise, negligible microphonics.
- High gain over 50 db . . . no intermediate amplifiers required.
- Standard waveguide output permits direct coupling.
- High efficiency and simplicity of installation.



KLYSTRONS, TRAVELING WAVE TUBES, BACKWARD WAVE OSCILLATORS, R.F. SPECTROMETERS, MAGNETS, STALOS, U HF WATERLOADS, MICROWAVE SYSTEM COMPONENTS, RESEARCH AND DEVELOPMENT SERVICES the new facilities for the Los Angeles office of Neely Enterprises The new Neely Enterprises sales, service and display facility in Los Angeles, California, stands as the most complete and comprehensive operation of its kind.

Here in one convenient location on more than an acre of land, products from the most respected names in electronic equipment manufacturing are presented and displayed under actual operating conditions in the new Neely Laboratory Display Room. Some of the other highlights of the new Neely building include an extensive Order and Expediting Department, a Literature and Direct Mail facility, general office and warehouse area. Also a factory authorized Service Department is maintained for customer convenience.

Experienced, factory-trained engineers are always available to perform functional tests or suggest effective product applications.

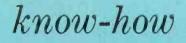
In addition to the Los Angeles office, display and demonstration facilities are also maintained in all the Neely branch offices in San Francisco, Sacramento and San Diego, California; Albuquerque, New Mexico and Phoenix, Arizona. These offices are fully staffed with experienced engineers, trained and qualified to serve you.

to serve you. New, finer and constantly expanding facilities and service are the order of the day at Neely Enterprises—bringing a new concept in manufacturers representation to the phenomenal growth and development of the electronics industry in the West. You are cordially invited to visit the new Neely Enterprises facilities at any time for a first-hand inspection.

### **NEELY ENTERPRISES**

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PLUS

show-how

... right now!

Or putting it another way, you get *more* than high-quality electronic equipment from Neely.

You get *expert help* with your specific instrumentation problems whether they concern application or operation—from highly-trained Neely Field Engineers. You get *doorstep demonstrations* of the very latest electronic instruments—brought by Neely's exclusive, fully-equipped MOBILE LAB which constantly crisscrosses California, Arizona, Nevada, and New Mexico. And you get *swift service*, from one of six conveniently located Neely offices.

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It's these "extras" that save you time and dollars!



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Exclusive factory representative for: BOONTON RADIO CORP.: ELECTRO-MEASUREMENTS INC.: GERTSCH PRODUCTS, INC.: HEWLETT-PACKARD CO.: KAY LAB.: LIBRASCOPE, INC.: SANBORN COMPANY: SENSITIVE RESEARCH INSTRUMENT CORP.: SIERRA ELECTRONIC CORP.: TEKTRONIX, INC.: AND VARIAN ASSOCIATES ... in California, Arizona, Nevada, and New Mexico.

## 20 years ago...

## and today

## They're both BLAW-KNOX Towers over 1000 feet high

The *first* broadcasting tower over 1000 feet high was a Blaw-Knox Tower, shown on the left.

And today we continue to design guyed towers over 1000 feet high ... such as the modern TV tower that accommodates an elevator, shown on the right.

These two examples well illustrate how Blaw-Knox has set the pace in tower design for many years. And why we are prepared to cooperate with you in designing a tower to meet your specific requirements.

For more complete information on the many modern types of Blaw-Knox Antenna Towers, write or phone for your copy of Bulletin No. 2417. Or send us your inquiry for prompt service, specifying height of tower and type of antenna.

### BLAW-KNOX COMPANY BLAW-KNOX EQUIPMENT DIVISION PITTSBURGH 38, PENNSYLVANIA ANTENNA TOWERS



Guyed and self-supporting—for AM • FM TV • radar • microwave • communications

www.americanradiohistorv.com

## "Eimac 450TH in excellent operating condition after 49 months of dependable service"

The 450T power triode first designed and produced by Eimac in 1937 is still a standard Eimac product widely acclaimed by the communications industry. It symbolizes the uncompromising quality, performance and reliability that has made Eitel-McCullough, Inc. the world's largest manufacturer of transmitting tubes.



December 6, 1954

Eitel-McCullough, Incorporated San Bruno, California

Gentlemen:

On November 30, 1954 I retired from service an Eimac 450TH, Serial Number C9-2416.

This tube was used as the Power Amplifier in the Gates EC-500D transmitter operated at this station.

It was installed in the transmitter and put into operation on November 1, 1950. The total hours of operation obtained before replacement amounts to 17,892.

Now to further explain the reason for this letter I must tell you that the tube is still in excellent operating condition as far as I am able to tell by its daily performance. It was replaced just on general principles after 49 months of dependable service.

Chief Omgin

PJR/ps

Mr. Paul J. Ripple, chief engineer, Station WBKV, West Bend, Wisconsin, holds Eimac 450T that he retired, "just on general principles after 17,892 hours of dependable service."



### EITEL-MCCULLOUGH, INC. SANBRUNO CALIFORNIA

58 For product information, use inquiry card on pages 185-186.

TELE-TECH & ELECTRONIC INDUSTRIES . June: 1955

AN LA SHA

# ANNOUNCING NEW ADVANCED DESIGNS IN REMOTE CONTROL SYSTEMS

### **RUST'S TWO NEW MODELS OUTMODE** ALL OTHERS ON THE MARKET TODAY!

Inside new modern chassis, lie the most advanced remote control units ever devised. Rust Industrial, pioneers in the field, now announces two new systems that offer performance and dependability never before achieved!

Already proven in actual operation in both full time directional and non-directional stations, where continuous operation is paramount, these systems are custom-engineered to each stations requirements . . . and complete in every respect. Such features as simplified design drop-down panel construction ... no tubes ... the very finest components, virtually assure years of trouble-free operation. And Rust facilitates proper installation with complete interconnecting diagrams and expert engineering consulting service.

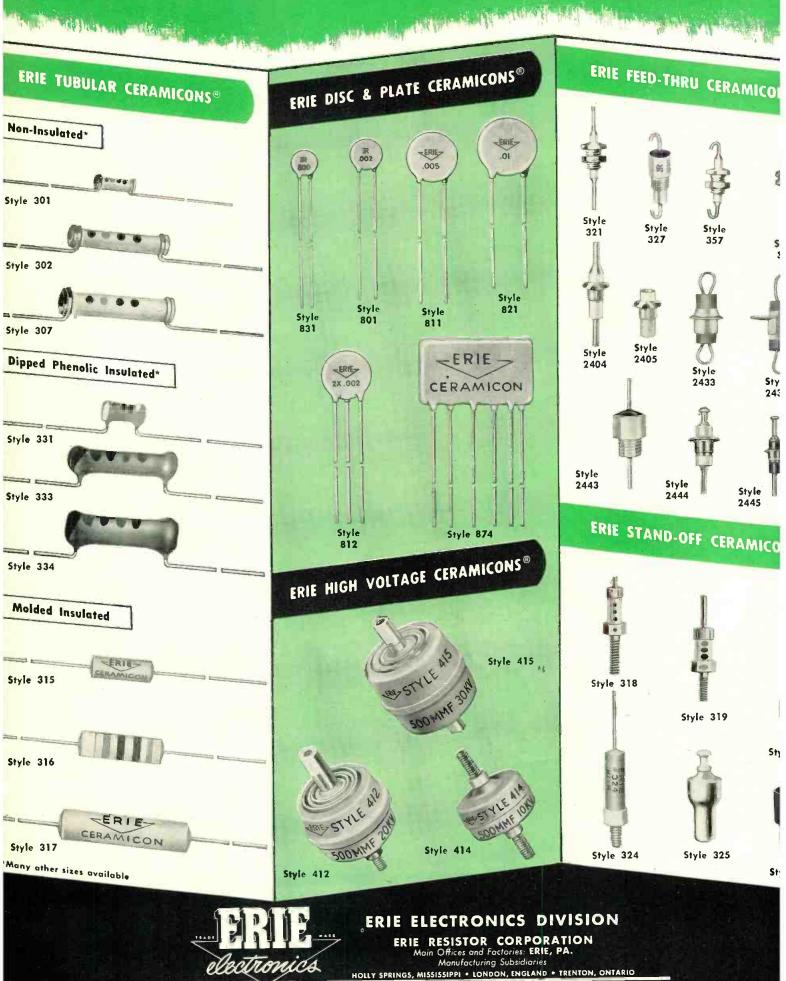
Write about these new systems today. Start saving thousands of dollars tomorrow!



For product information, use inquiry card on pages 185-186. 50

### from a single source, all these . . E ELECTRONIC COMPON R RF

1.1







....allashapes

...all types. ...all sizes

QUALITY .... THE BEST!

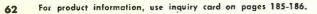
AMERICAN BEAUTY makes the finest of Soldering Irons. No second or third grade bears the name which is still the standard of top performance - sixty-one years of it!

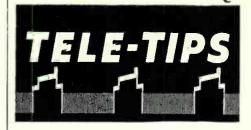
DEPENDABLE • DURABLE • EFFICIENT American Beauty Soldering Irons are doing fast, precision, production soldering on leading radio, TV, electronic and aviation equipment.

We also manufacture and stock a wide variety of soldering iron tips in special shapes and sizes. Tell us your requirements.



146·H





DO YOU KNOW which manufacturers make differential amplifiers? Bezels? Printed circuits? Annunciators? Radar altimeters? Frequency selective relays? Transistor testers? Or some 2300 other products for the electronic industries? Then just look them up in the directory in this issue.

CAN YOU SPOT the companies that own the following brand or trade names? Arcon; Blue Point; Digilog; Dilecto; Fixtohm; Gimmick; Largo; Minicube; Oscar; Vibrelay; and Windial. These names, and many more are listed with companies in the Brand and Trade Name Index in this issue.

A \$6,500,000 civic waste removal program under way in Philadelphia will harness a variety of robot-like electronic instruments to help eliminate air pollution. Harry Orths, instrumentation engineer for Minneapolis-Honeywell's Industrial Div. which designed the electronic units, said the automatic control setup achieves effective smoke control by automatically adjusting the incinerator flames. Radiation detecting units, which literally "see the heat," constantly monitor the temperature of the furnace flames.

AIR FORCE crews attached to the Strategic Air Command at Carswell Air Force Base are being trained under a new schedule calling for the use of a B-36 Simulator at the field for a total of 171/4 hours daily. The B-36 Simulator is an all-electronic device, developed by the Electronics Div. of the Curtiss-Wright Corp. to reproduce faithfully the flight characteristics of the airplane on which it is based.

**GUIDED MISSILE TEST EQUIP-**MENT for the "Falcon," a newly announced Air Force weapon, is now being shipped to Hughes Aircraft Co. from Stromberg Carlson, Rochester, N.Y.

AEROSOLOSCOPE is new electronic instrument used to measure air pollution. Developed for the Army Chemical Corps by the Illinois Institute of Technology the (Continued on page 66)

TECHNICAL DATA DESTINATION MARTICAN LAVA CORPORATION MARTICAN LAVA CORPO	TECHNICAL DATA Alsimog 555 Dolle April 13, 1556 Dolle April 13, 1556
AlSiMag 62k 10 a member of a series of similar ceramic compositions for AlSiMag 62k 10 a member of a series of similar ceramic compositions for	corazic cato
Boofcass Lordi AFFLICATIONS: AISIMAS 62% has been used successfully in microware attenuator shaped whose attenuation and VSWR at 9000 to 9500 m.6° and 2 waits of power whose attenuation and vSWR at 9000 to 9500 m.6° and 2 waits of power a contract of circles of circles of circles of circles of and sorbing energy at a much higher level. TIFLICAL PROFERENCES OF ALSIMAS 624 MODY A.S.T.M. Unit Property A.S.T.M. Unit Specific Gravity Mater Absorption Specific Gravity Density Density Density Defet 427	
CONCOMPOSE SPECIAL PURPOSE	
SPECIAL CERAMIC MATERIALS	TEST SAMPLES CAN BE MADE TO YOUR SPECIFICATIONS AT REASONABLE COST

Most of our customers find the exact ceramic for their needs on property chart No. 551. This handy chart (sent free on request) gives mechanical and electrical data on the most frequently used AlSiMag materials. But this is by no means the full selection. AlSiMag offers the widest choice of ceramic materials in the industry. It isn't practical to list them all on one chart.

If you need a ceramic with unusual characteristics, tell us your requirements. We'll be glad to send you specification sheets (like those shown above) on the special purpose AlSiMag material that most nearly fills the bill. If we don't have the right material, perhaps we can develop one. Laboratory records from over 50 years of specialized experience often enable us to produce promptly a new composition "tailor made" for your needs.

Remember, the right ceramic can make all the difference in your product's performance. And, the best source for the right special purpose ceramic is AMERICAN LAVA CORPORATION. Write us today for detailed information on your requirements.



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Branch offices in these cities (see your local telephone directory): Cambridge, Mass. • Chicago, III. • Cleveland, Ohio • Dallas-Houston, Texas • Indianapolis, Ind. • Los Angeles, Calif. • Newark N. J. • Philadelphia-Pittsburgh, Pa. • St. Louis, Mo. • South San Francisco, Calif. • Syracuse, N. Y. • Tulsa, Okla. Canada: Irvington Varnish & Insulator Div. Minnesota Mining & Mfg. of Canada, Ltd., 1390 Burlington Street East, Hamilton Ontario, Phone Liberty 4-5735.

## **DER POCKETSCOPE** The Pocket-Size Oscilloscope S-14-B S-15-A S-14-A L'6'INCHES 6'INCHES INC 6 combac accura

Featuring small size, light weight and outstanding performance the HIGH, WIDE and TWIN POCKETSCOPES have become the "triple threat" of the oscilloscope field. Their incomparable versatility, reliability and accuracy have skyrocketed this team of truly portable instruments into unparalleled demand. Each oscilloscope features DC coupled amplifiers in both vertical and horizontal channels.

The S-14-A HI-GAIN POCKET-SCOPE provides the optimum in oscilloscope flexibility for analysis oscilloscope flexibility for analysis of low-level electrical impulses. Extremely light weight  $(12\frac{3}{4} \text{ lbs.})$ , compact in size  $(12 \times 5\frac{3}{4} \times 7 \text{ in.})$ , dependable and accurate in per-formance. Vertical and horizontal channels: 10mv rms/inch with re-sponse within 2DB from DC to 200 KC and pulse rise of 1.8  $\mu$ s non-frequency discriminating non-frequency discriminating attenuators and gain controls with internal calibration of trace amplitude ... repetitive or trigger time base with linearization from  $\frac{1}{2}$  cycle to 50 KC with  $\pm$  sync or trigger.

HIGH

The S-14-B WIDE BAND POCKETSCOPE is ideal for 

KC ... pulse rise of 1.8 µs. Attenuators and gain controls are non-frequency discriminating... trace amplitude calibration... repetitive or triggered time base from  $\frac{1}{2}$  cycle to 50 KC ...  $\pm$  sync or trigger ... trace expansion, filter graph screen and many other features ... 14 lbs. ... 12 x 6 x 7 inches. The S-15-A POCKETSCOPE

is a portable, twin tube, high sensitivity oscilloscope with two independent vertical as well as horizontal channels. It is indispensable for investigation of electronic circuits in industry, school mv rms/in. with response within-2DB from DC to 200 KC and pulse rise time of 1.8  $\mu$ s . . . horizontal channels 1v rms/in. within -2DB from DC to 150 KC . . . non-frequency discriminating controls . . . internal signal amplitude ... linear time base from calibration .  $\frac{1}{2}$  cycle to 50 KC, triggered or repeti-tive, for both horizontal channels.

and laboratory. Vertical channels 10 The S-11-A INDUSTRIAL POCKETSCOPE is a small, compact (5x7x11 inches), and lightweight (83/4 lbs.) instrument for observing electrical circuit phenomena. The flexi-

bility of the POCKETSCOPE permits its use for AC measurements as well as for DC. The vertical and horizontal amplifiers are capable of reproducing within -2DB from DC to 200 KC with a sensitivity of 0.1v rms/in....repetitive time base from 3 cycles to 50 KC continuously variable throughout its range ... variations of input impedance, line voltage or controls do not "bounce" the signal-the scope stabilizes immediately.

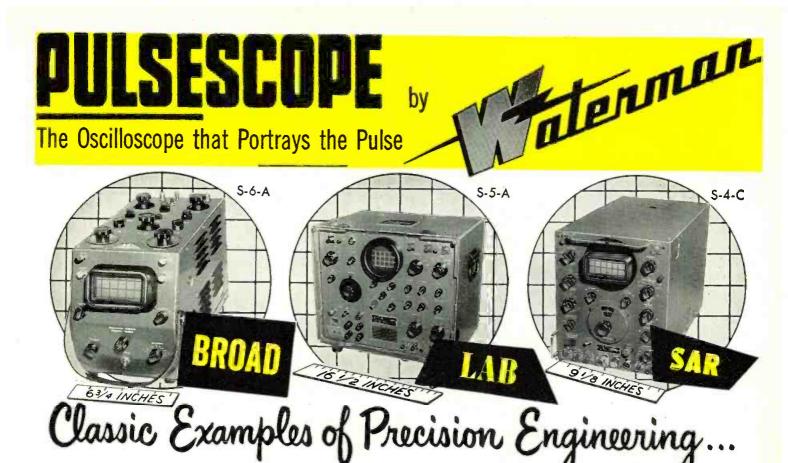
#### ONIC CATHODE RAY TUBES BY WATER

TUBE	PHYSICAL DATA		STATIC VOLTAGE		DEFLECTION*		LIGHT
	FACE	LENGTH	A3	A2	VERT	HOR	OUTPUT
3JP1	3"	10''	3000	1500	111	150	352
3MP1	3"	8''		750	99	104	33
3RP1	3''	9.12"		1000	61	86	44
35P1	1.5x3''	9.12"		1000	61	86	44
3XP1	1.5x3''	8.875''		2000	33	80	218

The basic properties of the cathode ray tube that concern the designer or the user are: deflection sensitivity, unit line brightness, line width, static voltage requirements and physical size. A comparison between cathode ray tubes manufactured by Waterman Products Company is shown in the table adjoining. These tubes are available in P1, P2, P7 and P11 phosphors. 3JP1, 3JP7, 3SP1 and 3XP1 are available as JAN tubes.

\*Deflection in volts per inch.

### Write for your complimentary copy of "POCKETSCOOP" · Official Waterman publication.



The PULSESCOPES are cathode ray tube oscilloscopes that portray the attributes of the pulse: shape, amplitude, duration and time displacement. All PULSESCOPES have internally generated markers with the basic difference that in the SAR PULSESCOPE the markers initiate the sweep while in the others the sweep starts the markers.

BROAD The S-6-A BROAD BAND Scope is a PULSESCOPE

in performance, POCKETSCOPE in size. The instrument measures DC as well as AC signals. Unique DC calibration methods permit rapid measurements of either positive or negative, AC or DC signals. Vertical amplifier sensitivity of 0.2v rms/inch, and response to 5 mc within 3DB... pulse rise time of  $0.1 \ \mu\text{s}$ ... internal markers from 1 to 1000  $\mu\text{s}$ ... repetitive or trigger sweep from 5 cycles to 500 KC with 5X sweep expansion ... sweep, marker and DC calibrating voltage available externally. Size  $8\frac{1}{2} \times 6\frac{3}{4}$ x  $13\frac{3}{4}$  in. Weight 22 lbs. Operates from 50 to 400 cycles at 115 volts AC.

S-12-B

LAB

The S-5-A LAB PULSESCOPE is a JANized (Gov't Model No. OS-26) e band-pass labo

portable, AC, wide band-pass, laboratory oscilloscope ideal for pulse as well as general purpose measurements. Internal delay of  $0.55 \ \mu s$ permits observation of pulse leading edge. Includes precision amplitude calibration, 10X sweep expansion, internal trace intensity time markers, internal trigger generators and many other features. Video amplifier 0.1v p to p/inch... pulse rise time of .035  $\mu s$  or response to 11 mc. 1.25 to 125,000  $\mu s$  triggered or repetitive sweep... internally generated markers from 0.2 to 5000  $\mu s$ ... trigger generator from 50 to 5000 pps. for internal and external triggering. Operates from 50 to 400 cycles at 115 volts AC.



The S-4-C SAR PULSESCOPE is a JANized (Gov't Model No. OS-4)

portable instrument (31.5 lbs.) for precision pulse measurements for radar, TV and all electronic measurements. Portrays all attributes of the pulse...internal crystal controlled markers of 10 and 50  $\mu$ s available for self-calibration... in R operation a small segment of the A sweep is expandable for detailed observation with a direct-reading calibrated dial accurate to 0.1%. Video amplifier band-pass up to 11 mc... optional video delay 0.55  $\mu$ s... pulse rise and fall time better than 0.07  $\mu$ s... R pedestal (sweep) 2.4 to 24  $\mu$ s... video sensitivity of 0.5v. p to p/inch. Easily convertible from  $\mu$ s to yards. Operates from 50 to 400 cycles at 115 volts AC.

RAKSCOPE

Because the panel is only 7" high and fits any standard rack, the S-12-B RAKSCOPE admirably fills the need for a small oscilloscope of

bly fills the need for a small oscilloscope of wide versatility. With all the features of the S-11-A POCKETSCOPE, the RAKSCOPE is JANized (Gov't Model No. OS-11), and has many additional advantages; the sweep, from 5 cycles to 50 KC, is either repetitive or triggered ... vertical and horizontal amplifiers are 50 mv rms/inch with bandpass from 0 to 200 KC... special phasing circuitry for frequency comparison.



TELE-TECH & ELECTRONIC INDUSTRIES . June 1955



of the tough, shock-proof construction of the SHURE Concert-Line Model''333''Microphone

Here's proof that the Shure "333" microphone can take punishment. This compact, beautifully designed, unidirectional microphone will take the most severe abuse that can be encountered in broadcasting operations—and still operate perfectly.

The Model "333" has a smooth, peak-free response – plus or minus 2½ db-from 30 to 15,000 c.p.s. The patented Shure "Uniphase" acoustic system and the ultra-cardioid polar pattern result in a 73% reduction in random noise energy pickup-making it particularly useful for remote broadcasts and TV studio use. With the Model "333" used as a hammer, seven nails were driven into a  $2'' \ge 4''$  hardwood block—without affecting the performance of this rugged microphone.



The same microphone used in the "hammer" test was mounted on a standard microphone floor stand. The stand was tipped until it fell over and the "333" crashed onto the bare floor. This was done six times—and there still was no noticeable change in the performance of the "333"!



SHURE BROTHERS, INC. • 225 W. HURON ST. • CHICAGO 10, ILLINOIS



(Continued from page 62) instrument is capable of measuring and counting airborne particles at the rate of 100 per second . . . 1000 times faster than by conventional means.

**SMPTE** reports that Spencer Allen, noted WGN-TV newscaster, blames film manufacturers for their delay in speeding up standard pan film and not letting users know how much speed could be obtained by processing techniques. He said, "we had damaged our claim of right of access to news with other media, because of our lights and our bulky conspicuous equipment." The improved film now available helps tremendously. Cameras filming White House weekly press conferences are using it.

WHAT A TAPE RECORDING MACHINE thinks of jet airplanes was revealed recently on a recording trip by Cook Laboratories, 101 Second Street, Stamford, Conn. The microphones were set up at the Suffolk Air Base to record take-offs of jets. Volume controls were turned down in expectation of the high sound levels of jet engines during take-off. As planes roared by, the gain was turned all the way down to zero . . . but even at this setting, the needle still swung completely off-scale.

ADVANCED ELECTRONIC EN-GINEERING DEGREES are available to outstanding engineering graduates through an Honors Cooperative Program recently arranged for between Apex Corp. and Stanford University. Under the plan Apex Corp. pays students for a 40 hour week and contributes five hours toward class attendance. Stanford University has arranged a program whereby an academic year's work is completed in two years.

**COUNTERFEITERS**, electronic tube variety, are in for some rough sledding. Latest news is the conviction of the operators of Barrack Electronics Corp., charged with removing old marks on used tubes and remarking them with established brands. Such tubes are either resold (Continued on page 78)

## BROADBAND MICROWAVE POWER SIGNALS

300

### as fast

as you

can turn the dial



POLARAD Microwove Signal Source

Make microwave measurements rapidly.

No mode charts or slide rule interpolations.

Turn only one dial and read the frequency directly on the dial with assured power output throughout the entire range.

Polarad's automatic tracking mechanism corrects reflector voltages for you as the klystron cavity is being tuned. Frequency accuracy is within 1%.

There are 5 models available, covering the range -650 to 10,750 mc... each has approximately a 2:1 frequency range with continuous tuning...power output: 10 to 100 mw...external modulation: square wave or fm . . . temperature compensated klystron tube.

### Polarad Microwave Signal Source's save engineering man hours in the laboratory and in the factory.

Unusual economy and accuracy in making antenna and transmission loss measurements and standing wave determinations in the laboratory-excellent for microwave component testing in the factory. Write for a complete catalog and data today.

### MINIMUM POWER AVAILABLE FROM POLARAD SIGNAL SOURCES IN THE RANGE OF 650 TO 10,750 MC

		MODEL	MODEL	MODEL	MODEL	MODEL
FREQUENCY R	SSR	SSL	555	SSM	SSX	
TREMOLITOT N	650-1300MC	1050-2350MC	2200-4550MC	4350-8250MC	8000-10.750MC	
MINIMUM ( L	ow Range	150	80	15	10	13
POWER AM	liddle Ronge	400	150	60	70	30
AVAILABLE (mw) (H	igh Ronge	100	100	40	15	10

Signal Sources in the range 10,750 to 50,000 mc available on special order.

## POLARAD ELECTRONICS CORPORATION

### 43-20 34th St., Long Island City 1, New York

REPRESENTATIVES: • Albuquerque • Atlanta • Baltimore • Bayonne • Bridgeport • Buffalo • Chicago • Dayton • Fort Worth • Los Angeles • New York Newton • Philadelphia • San Francisco • Syracuse • Washington, D. C. • Westbury • Winston-Salem • Canada, Arnprior, Toronto-Export: Rocke International Corporation



Model KX, Klystron Power Supply, especially designed for Polarad Signal Sources. Works with all 5 models. Has special 1000 cps square wave output for modulating purposes.



SWITCHES and COMMUTATORS

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Let Electralab quote on your next requirement for ...

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DIP SOLDER ASSEMBLIES

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MODULAR DESIGN for ELECTRONICS

Over the twelve years that Fairchild has been making precision potentiometers from our first unit (Type 736), on through the more than eighteen different types now in production — we have established and are carrying out a research and development program on new designs and materials, techniques and equipment that is constantly improving our potentiometer reliability. The results of this program are quickly applied to production units and these improved methods and designs are maintained by comprehensive quality control and type testing programs.

### MAXIMUM RELIABILITY ...

### how do you get it?

Reliability in precision potentiometers resolves itself into three basic factors; longer shelf life, longer rotational life, and longer environmental life. Fairchild has increased the average shelf and rotational life expectancy of precision potentiometers far beyond usually expected life cycles, in one way, by compounding and using special potentiometer lubricants. Life expectancy and stability under abnormal operating conditions have been vastly increased through the use of precision-machined aluminum alloy case construction. Epoxy resin insulation, one-piece Paliney conductive springs and contacts, and precious metal alloy resistance elements, for certain applications, also contribute to increased life and functional reliability. Whether one or all of these factors of reliability are important to you, you'll do better to choose Fairchild Precision Potentiometers. For specific facts, write Fairchild Camera and Instrument Corporation, Potentiometer Division, 225 Park Avenue, Hicksville, Long Island, New York, Department 140-64E.





The Model 983 is a high gain, wideband Oscilloscope designed to accurately reproduce waveforms comprising a wide band of frequencies. High sensitivity of 15 millivolts per inch RMS makes this Oscilloscope ideal for-SETTING RESONANT TRAPS...SIGNAL TRACING IN LOW LEVEL STAGES ...AS A GENERAL NULL INDICATOR...for PHASE CHARACTER-ISTIC MEASUREMENT IN INDUSTRIAL APPLICATIONS...and for SWEEP FREQUENCY VISUAL ALIGNMENT OF TV RECEIVERS.

The scope contains identical vertical and horizontal push-pull amplifiers with a choice of AC or DC coupling without affecting either sensitivity or bandwidth. Both amplifiers have compensated step attenuators and cathode follower input.

It has excellent square wave reproduction with overshoot of only 2 to 5% with a rise time of 0.1 microsecond. The scope response is essentially flat throughout the specified range of 4.5 mc and is usable to 6 mc.

The unit has provisions for internal calibration, internal phased sine wave, and Z-axis intensity modulation. Reversal of polarity of both horizontal and vertical signals is easily accomplished by means of toggle switching. *Tube replacements are non critical, and etched circuitry facilitates quick and rapid maintenance.* 

The Model 983 Oscilloscope is now available through local distributors. For complete literature, return the coupon today. WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey.

Price ... \$329.50

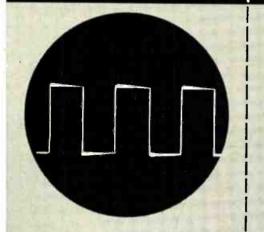


the All-purpose Scope!

#### SQUARE WAVE RESPONSE

#### PHASE MEASUREMENTS

#### **RESPONSE CHARACTERISTIC**



Overshoot is only 2 to 5%. Rise Time is 0.1 Microsecond. Square wove depicted 250 kc.



Phase shift between horizontal-vertical amplifiers, 0-100 kc-0°, to 1 mc within 2°; by internal adjustment with gain controls at max 0° phase shift possible on any specific frequency to 6 mc. 6 MC 4.5 MC Note flatness throughout specified

range; usable to 6 mc.



#### SPECIFICATIONS: MODEL 983 OSCILLOSCOPE

Wide Band Frequency Response: Flat within 1.5 db from 0-3,58 mc and within -3 db to 4.5 mc an both vertical and horizontal amplifiers. Transient response: overshoot 2 to 5%. Rise time: 0.1 microsecond.

High Deflection Sensitivity: 15.0 millivolts per inch, RMS, on both vertical and horizontal amplifiers.

- Phase Shift: Between horizontal-vertical amplifiers, 0-100 kc-0°, to 1 mc within 2°; by internal adjustment with gain controls at max 0° phase shift possible on any specific frequency to 6 mc.
- Calibrating Voltages: 500 millivolts, 5 valts, 50 volts, 500 volts, peak to peak. Readily available and adjustable by front panel controls.

Z-Axis Modulation: Input terminal mounted on front panel.

Sweep Frequencies: 10-500,000 cps, variable. Preset TV/V position – 30 cps. Preset TV/H Position – 7875 cps. Retrace Time – better than 2% to 100 kc; at 500 kc less than 10%.

#### OTHER WESTON 980 LINE INSTRUMENTS

980 Volt-Ohm-Milliammeter 981 Tubechecker 982 Vacuum Tube Voltmeter 984 Sweep Generator 985 Calibrator Internally Phased Sine Wave: Adjustable through 170°. Vertical and Horizontal Polarity: Reversible.

Input Impedance: Vertical Amplifier (without Shielded Cable), 1 meg shunted by 60 mmf. Vertical Amplifier (with Shielded Cable), 1 meg shunted by 120 mmf. Vertical Amplifier (with Low Capacitance Probe), 10 meg shunted by 12 mmf. Horizontal Amplifier (without Shielded Cable), 1 meg shunted by 60 mmf.

Power Supply: 105/125 volts, 50/60 cycles.

- Tube Complement: (1)-1V2, (1)-5U4-GA, (6)-6BQ7A, (4)-12BY7A, (4)-6AH6V, (1)-6U8, (1)-5UP1, (1)-0D3, and (1)-5NO60T.
- Case: Grey hammertone finished steel,

Size: 10" x 14" x 19.5"

Panel: Aluminum finish with etched, black markings.

Approx. Weight: 40 lbs.

#### SEND COUPON FOR COMPLETE DETAILS

WESTON Electrical Instrument Corporation 614 Frelinghuysen Avenue Newark 5, New Jersey

Please send literature on the 983 Scope and other 980 Line Instruments.

# "SCOTCH" Brand's new thin groove reel prevents tape tangles!



ninne

Won't dent... won't warp!

Write on it!

5/16" center hole for better balance

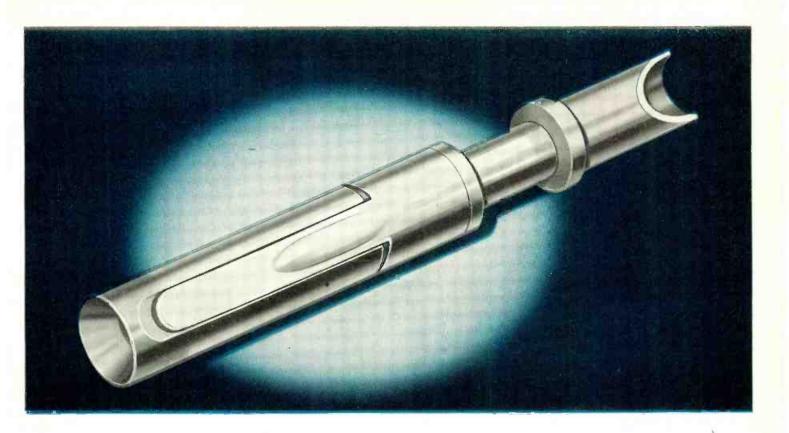
NO MORE "ZIG-ZAG" WIND to tangle tape! "SCOTCH" Brand has come up with a sure way to make magnetic tape wind smoother and reduce side play to a minimum. It's "SCOTCH" Brand's new, and reduce side play to a minimum. It's "SCOTCH" Brand's new,  $10\frac{1}{2}$ " professional reel. Made from glass-reinforced plastic, the new reel measures just .270" wide...75 mils *thinner* between flanges than older type aluminum reels. Offers plenty of other ad-vantages, too! "SCOTCH" Brand's reel spins true because of  $\frac{5}{16}$ " center hole conforming to RETMA specifications. Won't dent or warp, thanks to tough fiber glass reinforcement. And you can write on it for identification All these features plus evolue

identification. All these features, plus exclusive slot threading—at no increase in cost.



The term "SCOTCH" and the plaid design are registered trademarks for Magnetic Tape made in U.S.A. by MINNESOTA MINING AND MFG. CO., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y.





### "CLIP-TYPE" closed entry socket contact now standard in

### **BENDIX-SCINFLEX**



### **ELECTRICAL CONNECTORS**

CANNOT be overstressed eliminates intermittent circuit problems resulting from socket contact malfunction.

The heart of any electrical connector is the socket contact. This is why the Bendix-Scinflex\* socket contacts have always been machined from bar stock. Stampings, with their required thin sections, can be easily overstressed.



SCINTILLA DIVISION of SIDNEY, NEW YORK



Our sales department will be glad to furnish com-

TRADE-MARK

Even with the machined sockets, industry has been plagued with overstressed spring leaves due principally

to the misuse of test probes and lax tolerances on pin contacts. Bendix engineers have now provided the only

socket contact on the market today which completely

probe or pin, nor can one be forced into it. Also, no amount of wrenching or twisting of an acceptable pin or probe can possibly distort the spring clip. This new socket is now standard in all Scinflex connectors

including those using solderless, high-temperature and

The "Clip-Type" socket will not accept any oversize

Export Sales: Bendix International Division. 205 E. 42nd St., New York 17, N.Y.

eliminates all these problems.

thermocouple contacts.

plete information on request.

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### revolutionary ALUMINUM CORE BOX<sup>†</sup> construction

#### withstands HIGH TEMPERATURE • VACUUM IMPREGNATION HEAVY WINDING STRESSES • SHOCK and VIBRATION

This is a development which calls for immediate changes in purchasing specifications for Tape Wound Cores, because introduction of the Aluminum Core Box means designing your toroids around four important new advantages:

- 1. Use of an aluminum core box means the new Magnetics, Inc. tape wound cores will withstand temperatures of at least 450° F.
- 2. Because of the unusual seal provided by forming the aluminum over the silicone glass seal, true vacuum impregnation of your coils is now possible. Varnish cannot penetrate the core box and affect magnetic properties of the tape.
- 3. The strong aluminum construction absolutely prevents deflection of the core box when coils are wound—a distortion-free construction which means no change of magnetic properties.
- 4. Cushioned with an inert material, the tape winding in the core box is protected against vibration and shock. In most cases it is so completely minimized that it is no longer a problem.

Because of the many advantages of these new Magnetics, Inc. Tape Wound Cores, it will pay you many times over to specify "Aluminum Core Boxes" on your next order. Immediately available in 109 standard sizes, using all commercially available magnetic materials.

ALL Performance - Tuaranteed

For full details, write for Bulletin TWC-200 Catalog. TWC-100

MAGNETICS inc.

#### Hughes Diodes

FIRST OF ALL FOR

#### STABILITY

You can depend on Hughes Diodes to stay within their published rating and specifications. In the field, they have long maintained an extraordinary record of failure-free service under varied and severe operating conditions. Such reliability is possible because

#### ALL DIODES MADE BY HUGHES ARE:

THOROUGHLY TESTED—Diodes are tested 100% for electrical and mechanical characteristics. They retain stability, operate faithfully over wide ambient temperature ranges.

MOISTURE-PROOF—Fusion-sealed in the famous one-piece glass envelope developed at Hughes. This construction eliminates one major cause of diode failure.

RUGGED—Internal elements are completely isolated from damage or contamination, are undisturbed by physical shock and vibration.

SUBMINIATURE—You can achieve phenomenal component density with Hughes Diodes, even in miniaturized circuitry.

> HUGHES SILICON JUNCTION DIODE Maximum dimensions, standard diode glass envelope: 0.265 inch long by 0.105 inch diameter.

The Hughes line of semiconductor devices is being steadily expanded. It now comprises a wide selection of Germanium Point-Contact and Silicon Junction Diodes, and Photocells.

When you need diodes with High Temperature... High Forward Conductance... High Back Resistance... Computer Type... JAN-Approved... General Purpose, or other special characteristics, be sure to investigate Hughes Diodes. They are first of all—for STABILITY.



#### SEMICONDUCTOR SALES DEPARTMENT

Aircraft Company, Culver City, California



Chicago



Everything's big in Texas. No exception is this giant Truscon Guyed Tower which climbs 1030 feet into the air. The tower mounts an 83-foot antenna. Tower and antenna together total 1113 feet. And that's tall... even for Texas.

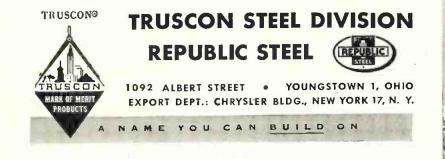
Taller towers such as this are a job for experts only.

Truscon knows towers, can offer you the top talent in towers. With Truscon handling your assignment, you are assured of the skill and experience responsible for the design and construction of many hundreds of towers now standing strong and tall in all types of topography... in all kinds of wind and weather.

As a matter of fact, to the best of our knowledge, not one Truscon Guyed Tower has ever failed in any kind of storm.

Truscon builds them for you tall or small ... guyed or selfsupporting ... tapered or uniform in cross-section ... for AM, FM, TV, and Microwave transmission.

Turn your tower problems over to experts. Your phone call or letter to any Truscon District Office—or to "tower headquarters" in Youngstown—will get your program started without delay.





Typical Capacitance Dritt Limits Of DMIS DUR-MIC A Capacitors After Remperature Excursion Of 25°C To Ref To 25°C To 55°C To 25°C

MMF

Ypical Temperature Coefficient Range For DM15 DUR-MICA Capacitors

Test Frequency 500 KC

CHARACTERISTIC C LIMIT

- CHARACTERISTIC D and E LIMITS

CHARACTERISTIC F LIMIT

\* 85°C To 25°C To -55°C To 25°C

CHARACTERISTIC F LIMIT

DMIS DUR MICA LIMITS

CAPACITY IN

### world's smallest mica capacitor

#### ... First Miniature Dipped Mica Capacitors with Parallel Leads.

El Menco's Dur-Mica DM15 provides assurance of peak performance in a variety of transistor circuits and other miniature electronic equipment in military and civilian applications.

A new, tougher phenolic casing provides assurance of long-life and stability through wide ranges in temperature.

Parallel Leads provide greater versatility—allow efficient, safe use of the El Menco Dur-Mica DM15 in applications heretofore impractical. Saves Money-El Menco's Dur-Mica DM15 costs even less than the famous El Menco CM15. Provides economy of size.

CAPACITIES AVAILABLE: DM15—Up to 510 mmf at 300vDCw Up to 400 mmf ot 500vDCw DM20—Up to 5100 mmf at 300vDCw Up to 3900 mmf at 500vDCw

Available in 125°C operating temperature. Minimum copacity tolerance avoilable-± 1/2 % or 0.5 mmf (whichever is greater).







MAXIMUM TEMP. COEF.

Jabbers and distributors write to Arco Electronics, Inc., 103 Lafayette St., New York, N. Y.

DRIFT

CAPACITANCE

04

206

180

161

140

120

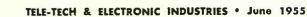
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In Canada: AEROVOX CANADA, LTD., Hamilton, Ont. Export: Ad. Aurlema., 89 Broad St., New York, N. Y. . Cables Aurisma, N. Y.

AEROVOX CORPORATION, NEW BEDFORD, MASS. . ACME ELECTRONICS, INC., MONROVIA, CALIF. CINEMA ENGINEERING CO., BURBANK, CALIF. . HENRY L. CROWLEY & CO., WEST ORANGE, N. J.





(Continued from page 66) or returned to the original manufacturer illegally for in-warranty replacement. J. M. Lang, general manager of the GE Tube Dept. reports that such frauds will face the full fury of that company. He also noted that several methods for preventing and uncovering such frauds have been devised, but did not disclose their nature.

LONG HOP MICROWAVE relays using portable, low-power equipment is receiving increasing attention in Europe, as well as the U.S. A recent report from the French firm, Compagnie Generale de T.S.F. (C.S.F.), notes the use of 1-watt transmitters with portable 1.15 m and 2 m paraboloids to carry 10 mc wide TV signals from Lyon to Marseille, a distance of over 180 miles. It was done in three hops: 31, 93 and 57 miles, respectively. Details on S/N ratio, fading, etc., are available from the firm's U.S. subsidiary, American Radio Co., 445 Park Ave., New York 22. N.Y.

BUSINESS executives who go to Chicago in September to preview the automatic factory of tomorrow will get an idea of how to beat the traffic problems of today. A scheduled helicopter passenger service, reportedly the first of its kind ever arranged for exposition visitors, will carry businessmen between Navy Pier, where the Production Engineering Show will be held, and International Amphitheatre, where the Machine Tool Show will be staged. With more than 100,000 executives expected for the concurrent events, Sept. 6-16, fleets of buses also will operate between Loop hotels and the two exhibition halls, and other buses will operate on round trips between the Pier and the Amphitheatre.

NUCLEAR POWER DOCTOR-**ATES** are available at Westinghouse through an arrangement with the University of Pittsburgh. Students receive regular industry-scale salaries through on-the-job training and take advanced courses one day a week, plus evenings and Saturdays. After the initial college-industry phase, graduates become eligible for an educational leave. They then (Continued on page 82)



### INTEGRATED

### ELECTRONICS

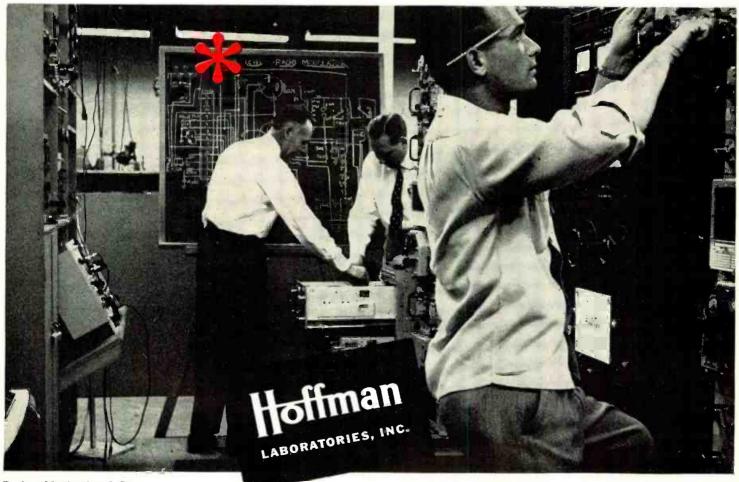
THE IMAGINATION FOR RESEARCH PLUS THE SKILLS FOR PRODUCTION

Hoffman Laboratories maintains a highly specialized group of engineers whose entire efforts are devoted to the complex problem of developing and producing specialized tactical test equipment for airborne navigation radar, fire control, missile guidance systems, and other advanced electronic gear. To meet the high standards of quality and reliability set by Hoffman Laboratories, this test equipment group is an integral part of the engineering staff.

For the past 13 years Hoffman Laboratories has been successfully solving advanced design and development problems in electronics.

During this time Hoffman Laboratories has never undertaken a development program that has not successfully gone into production.

Write the Sales Department for your copy of "Report From Hoffman Laboratories."



Radar, Navigational Gear Missile Guidance & Control Systems Noise Reduction Countermeasures (ECM) Computers Communications Transistor Application

A SUBSIDIARY OF HOFFMAN ELECTRONICS CORPORATION

Challenging opportunities for outstanding engineers to work in an atmosphere of creative engineering. Write Director of Engineering, Hoffman Laboratories, Inc., 3761 S. Hill St., Los Angeles 7, California. "State of the Union"

PHILCC

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#### FEATURES

- Provides preview—exclusive with Philco.
- Available in 16MM and 35MM models.
- Quiet, continuous film motion—no intermittent mechanism to cause film wear and damage.
- Cold light source—no burning or discoloring of film.
- Instantaneous run-up with provision for quick starts, stop and reversal.
- Highest quality reproduction in monochrome and color.

#### PHILCO REGIONAL OFFICES

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Los Angeles 25, Calif. 10589 Santa Monica Boulevard Dallas 1, Texas 201 Southland Life Bldg.

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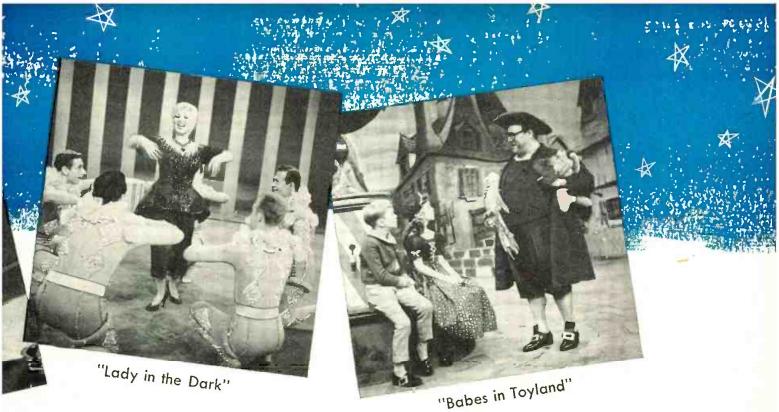
Dayton 2, Ohio Talbott Bldg., 1st & Ludlow Sts.

Philco 16MM CineScanner

(÷.,

as Seann

PHILCO



# Cine Scanner

### ... film "star" of network color shows!

Over and over, the Philco CineScanner continues to prove itself the star performer on top-notch network shows: Transforming scenes-on-film to bright, crisp, steady pictures in rich full color ... with unequaled simplicity and dependability!

CineScanner employs the simplest film telecasting technique known. There are no problems of shading or color registration. In fact, color registration insurance is actually built in!

Here's how CineScanner works:

OVERNMENT AND

NDUSTRIAL DIVISION

A dependable cathode ray tube projects bright "cold" light through the film on to low cost, non-synchronous pickup tubes. Simultaneously, these tubes generate signals for the red, green and blue imagesall from a single scanning tube! Operation is simple and direct. Costly camera tubes are eliminated. Perfect registration is assured.

CineScanner has other exclusive advantages. A continuous-motion film transport mechanism designed by Philco and built by the Mitchell Camera Company eliminates mechanical shutters and noisy filmdamaging intermittents. The film can be started, stopped-run forward and backward-instantaneously !

Install the Philco CineScanner and enjoy this simple, practical way of film telecasting. You can start today in monochrome ... convert tomorrow to color with a simple conversion kit.

#### For complete information write Dept. TT

PHILCO CORPORATION



www.americanradiohistory.com

PHILADELPHIA 44

PENNSYLVANIA





### PROVIDE THE ULTIMATE IN CIRCUIT TRIMMING

#### Simple screwdriver adjustment...

The TRIMPOT is a 25-turn, fully adjustable wirewound potentiometer designed and manufactured exclusively by BOURNE LABORATORIES. Electrical settings in increments as small as 1/4 % are securely maintained during vibration of 20 G's up to 2,000 cps or sustained acceleration of 100 G's. BOURNS unique self-locking design eliminates cumbersome locknuts. Power rating is 1/4 watt at 100° F. Standard resistance values from 10 onms to 20,000 ohms are available for immediate delivery. Information on TRIMPOTs for high temperature operation on request.

BOURNS TRIMPOTS are accepted as standard components by aircraft and missile manufacturers and major industrial corporations.

#### 9 TRIMPOTS TAKE LESS SPACE THAN A 2¢ STAMP



Tiny cross-sectional size—only  $1/4" \ge 5/16"$ —and rectangular shape save valuable panel space. Instruments are easy to mount individually or in stacked assemblies with two standard screws through the body eyelets.

BOURNS also manufactures precision potentiometers to measure Linear Motion; Gage, Absolute, and Differential Pressure and Acceleration.

OURNS LABORATORIES

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Technical Bulletin On Request, Dept. 172



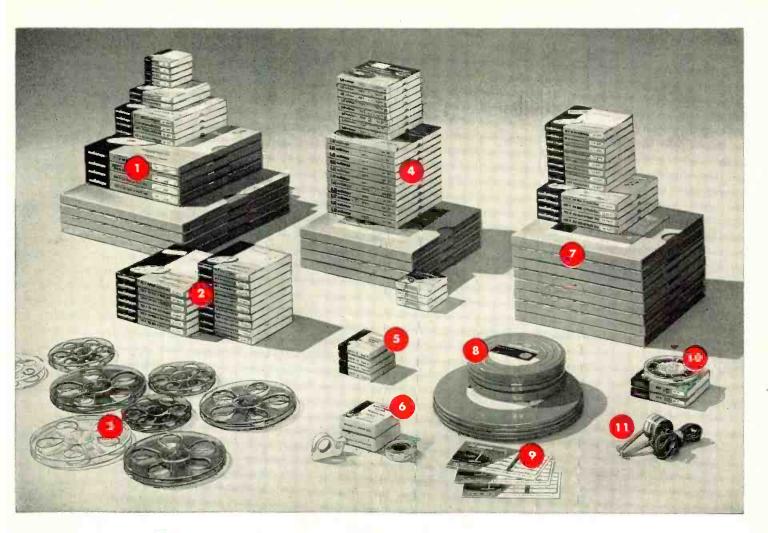
(Continued from page 78) complete work toward their doctorate on a full-time tuition-paid basis at the University.

SUBSCRIPTION TV proponents have received several refusals from TV networks to place commercials for fee-TV on the air. However, both CBS and NBC have offered to provide free air time for discussion of the pros and cons of the subject. In a recent debate over CBS, W. Theodore Pierson, Washington counsel for Zenith Radio Corp. stated: "It is technically possible for television to regularly bring the audience many more programs and events than it now does. . . . The industry thus far has relied only upon the advertiser for revenue. . . . Subscription television proposes to supplement television advertising revenue by giving the public a chance to pay the broadcaster direct a lower price. . . . It will cost the public nothing for us to try it. If it fails it is the proponent's money that will be lost." In opposition, Victor Sholis, Director of WHAS, Louisville, Ky., stated: "What these proponents of box office television suggest, in effect, is that the cost of television be shifted from the advertiser to the public . . . (they) are now asking the government to give them a slice of this scarce public resource free of any responsibility of serving the broad public interest . . . they really are offering the people nothing beyond what they already have free . . . are going to bid for this talent television now has . . . to undermine the present service."

**CLOSED CIRCUIT AIRBORNE TV** system featuring semi-miniaturized cameras, automatic illumination control and reliable operation from aircraft power supplies, has been made available recently by the Davies Laboratories, 4705 Queensbury Road, Riverdale, Md. The complete system includes up to seven cameras and a monitor station.

**KQED** San Francisco has received a special achievement award from the Northern California Academy of Television for demonstrating that non-profit TV can compare favorably with commercial operations in production and programming.

ENTS PENDING



## audiotape now offers you

### THE MOST COMPLETE LINE

of recording tape and accessories

#### PLASTIC-BASE AUDIOTAPE

The finest, professional quality recording tape obtainable — with maximum fidelity, uniformity, frequency response and freedom from background noise and distortion.

#### 2 COLORED AUDIOTAPE

Same professional quality as above, but on blue or green plastic base. Used in conjunction with standard red-brown tape, it provides instant visual identification of recorded selections spliced into a single reel — fast, easy color cueing and color coding. Available at *no extra cost!* 

#### COLORED AUDIOTAPE REELS

Plastic 5" and 7" Audiotape reels in attractive, jewel-tone colors – red, yellow, green and blue – provide still greater flexibility of color coding any tape recorded material according to subject matter, tape speed, single or dual track, etc. Also available at no extra cost.

#### TYPE "LR" AUDIOTAPE

Made on 1-mil Mylar\* polyester film, it provides 50% more recording time per reel. The thinner, stronger base material assures maximum durability and longer storage life even under adverse conditions.

#### SELF-TIMING LEADER TAPE

A durable, white plastic leader with spaced markings for accurate timing of leader intervals.

#### SPLICING TAPE

Permacel 91 splicing tape is specially formulated to prevent adhesive from squeezing out, drying up or becoming brittle.

#### STANDARD AUDIOTAPE ON "MYLAR" POLYESTER FILM

High-strength, super-durable Audiotape that meets highest professional standards of performance. Available in  $\frac{1}{1}$ ,  $\frac{1}{2}$  and 2 mil base thickness.

#### B TYPE "EP" AUDIOTAPE

Extra Precision magnetic recording tape for telemetering, electronic computers and other specialized data recording applications.

#### ADHESIVE REEL LABELS

Provide positive identification of your tapes, right on the reel.

**HEAD ALIGNING TAPE** Test frequencies, pre-recorded with precisely correct azimuth alignment, permit accurate aligning of magnetic recording heads.

#### **U** AUDIO HEAD DEMAGNETIZER

Completely removes permanent magnetism from recording heads in a few seconds.

This complete Audiotape line is backed by more than 16 years of specialized experience in the sound recording field, by America's largest exclusive manufacturer of sound recording media, both discs and tape. For full details on any of these items, see your Audiotape dealer, or write to Audio Devices.

AUDIO DEVICES, Inc.

444 Madison Avenue, New York 22, New York 

Offices in Hollywood – Chicago

HOW

# BUSS FUSES ...

help You guard against loss of customer Good Will



Dependable BUSS fuses can help safeguard your product or service against loss of user satisfaction because ...

When there is trouble on the circuit, BUSS fuses open and prevent further damage to equipment saving users the expense of replacing needlessly burned out parts.

However, BUSS fuses won't give a "false alarm" by blowing when trouble doesn't exist. Users are not annoyed with shutdowns caused by needless blows.

To make sure of unfailing dependability — every BUSS fuse, normally used by the Electronic Industries, is tested in a sensitive electronic device that rejects any fuse not correctly calibrated, properly constructed and right in all physical dimensions.

#### Save engineering time on new products

The BUSS fuse research laboratory and its staff of engineers are at your service to help you with problems involving electrical protection. They can help you select the right fuse for the job . . . if possible, a fuse available in local wholesalers' stocks, so that your device can easily be serviced.

BUSSMANN MFG. CO. (Div. McGraw Electric Co.)

University at Jefferson St. Louis 7, Mo.

MAKERS OF A COMPLETE LINE OF FUSES





FOR HOME, FARM, COMMER-CIAL, ELECTRONIC, AUTOMOTIVE AND INDUSTRIAL USE.

TT-655

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

5

### At WLAU, 250 watts, Laurel, Mississippi "EVERYONE IS SOLD ON THE AMPEX 600"



Every week WLAU pays an "Ampex visit" to a different county school for a program called "Salute to Jones County Schools".

"If the Ampex 600 were paid a salary, the figure would run into the overtime column every week. It is used by the salesmen, announcers and the sports man. Everyone is sold on its performance and it's especially popular because it is so light and easy to handle. Since the success of a small station greatly depends on good local programs with the personal touch, we feel the Ampex 600 is the practical and economical answer to a real need."

Hornov H.V

Mrs. Norma H. Leggett, Manager Radio Station WLAU, Laurel, Mississippi



For the grand opening of Sears Roebuck's newest and finest store in Mississippi (in Laurel), the Ampex 600 taped an interview with every department head.



Our program director interviewing the manager of Jones County Auto Sales at the showing of the new 1955 Mercury. We taped every new car showing in Laurel.

mountable and \$1315 console.

Ampex 350 studio tape recorder "The big Ampex" — versatile, adaptable

and durable, uses large or small reels, 71/2

and 15 in/sec. tape speeds and connections

for remote controls. Prices are \$1205 rack

Broadcast stations of 250 and 1000 watts are today discovering that for them too the Ampex Standard of Excellence pays for itself.

#### Ampex 600 portable tape recorder



Weighs just 28 pounds and has the Ampex standard of quality, reliability and durability throughout. Prices are \$498 unmounted or \$545 in portable case.

#### Ampex 620 portable amplifier-speaker

The perfect monitoring and demonstration unit, matches the 600 in quality, size and appearance, costs \$149.50 in portable case.

For full performance specifications on these machines, write Dept. U-1882

AMPEX CORPORATION . 934 CHARTER ST. . REDWOOD CITY, CALIF.

DISTRIBUTORS IN PRINCIPAL U.S. CITIES

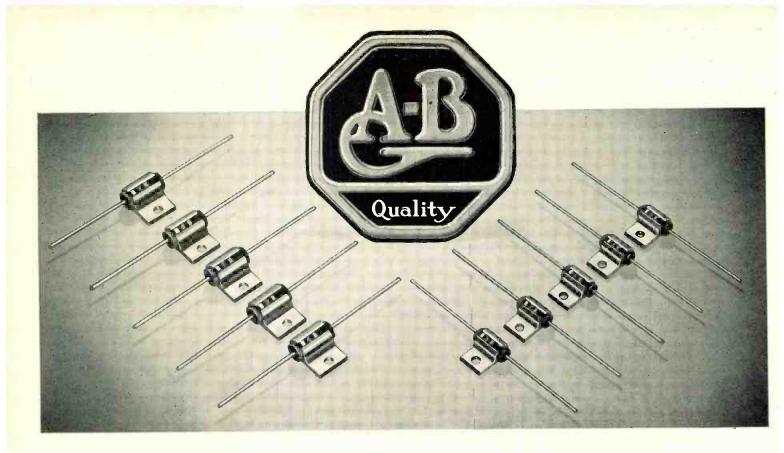
CANADIAN DISTRIBUTION BY CANADIAN GENERAL ELECTRIC COMPANY

TELE TECH & ELECTRONIC INDUSTRIES . June 1955



CORPORATION

For product information, use inquiry card on pages 185-186. 85



### ALLEN-BRADLEY COPPER CLAD MOLDED RESISTORS

#### rated at 3 and 4 watts at 70C Ambient Temperature

A new and important addition to the Allen-Bradley line of radio, electronic, and television components are these Types GM and HM copper clad Bradleyunits, each fitted with a heavily tinned copper clamp. These new resistors are designed to be attached to a metal panel or chassis with rivets, bolts, or self-tapping screws. If attached to a metal panel four inches square and 0.050 in. thick at an ambient temperature of 70 C, the maximum continuous wattage rating of the Type GM Bradleyunit is 3 watts; the Type HM Bradleyunit is 4 watts. At 40C ambient temperature, the ratings are 4 and 5 watts, respectively. However, if these copper clad Bradleyunits are suspended by their leads without being bolted to a metal panel, their respective ratings are 1 and 2 watts.

The copper clamp does not completely encircle the Bradleyunit, thus leaving a slot through which the color-code bands are plainly visible. Type GM Bradleyunits are available in all RETMA values from 2.7 to 22 megohms and Type HM Bradleyunits from 10 ohms to 22 megohms.

Allen-Bradley Co., 1342 S. Second St., Milwaukee 4, Wis. In Canada-Allen-Bradley Canada Limited, Galt. Ont.

#### OTHER QUALITY COMPONENTS FOR RADIO, TV & ELECTRONIC APPLICATIONS



BRADLEYUNITS 1/2, 1, 2, 3 & 4 WATT

RADIO,



BRADLEYOMETERS



CERAMIC CAPACITORS 0.00001 to 0.022 MFD



FERRITE COMPONENTS HIGH EFFICIENCY

# ALLEN-BRADLEY

#### This one **SPEED NUT** for either screw provides new savings!

If you use "A" and "Z" sheet metal screws in your product assemblies, here's good news for everyone from your design and production engineers to stock room clerks.

C7000 Flat Type SPEED NUTS work equally well on both "A" and "Z" sheet metal screws—only one type of SPEED NUT brand fastener to purchase, stock and handle. You reduce inventories, eliminate parts mixing. And you can also lower unit costs through larger quantity purchases.

One SPEED NUT replaces three parts . . . lock washer, threaded nut and spanner washer. Yet it offers an attachment that is permanently tight until you want to loosen it!

Ask your Tinnerman representative for samples of the new dualservice C7000 Flat Type SPEED NUT . . . it's the modern way to save time and money, and avoid headaches!

**TINNERMAN PRODUCTS, INC. BOX 6688, DEPT. 12, CLEVELAND 1, OHIO** Canada: Dominion Fasteners, Limited, Hamilton, Ontario. Great Britain: Simmonds Aerocessories, Limited, Treforest, Wales. France: Aerocessoires Simmonds, S. A., 7 rue Henri Barbusse, Levallois (Seine). Germany: Hans Sickinger GmbH "MECANO", Lemgo-i-Lippe.







Flat Type SPEED NUTS cut costs of attaching auto radio speaker to baffle.



Air-conditioner control-panel assembly costs cut 40% with help of Flat Type SPEED NUTS.



Special Flat Type SPEED NUT reduced assembly time 87% on washer motor mount bracket.



TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Speed Nut Savings Stories

### Vitamin Q<sup>®</sup> News

### SMALL DRAWN RECTANGULAR CASE CAPACITORS FOR 125°C

#### EXCEED REQUIREMENTS OF MIL-C-25A (CHARACTERISTIC "K")

FOR MANY YEARS Sprague Vitamin Q Capacitors have proven their ability to operate at high temperatures. Continued improvement in processing techniques and closer control of the materials used have permitted Sprague Engineers to design capacitors which exceed the performance requirements for Characteristic "K" of Military Specification MIL-C-25A.

Of particular importance to equipment designers specifying 125°C capacitors is the proven chemical inertness and stability at high temperatures of the Vitamin Q impregnant used. Consequently there is no degradation experienced in electrical characteristics following storage at high temperatures for long periods.

All Type 93P, 94P, and 95P Vitamin Q capacitors are, of course, hermetically sealed. The terminal bushings and mechanical case closure have been designed to withstand low barometric pressures at high ambient temperatures.

Complete information on these new Vitamin Q capacitors is provided in Engineering Bulletin 231, available on letterhead request to Sprague Electric Co., 233 Marshall Street, North Adams, Mass.

Sprague, on request, will provide you with complete application engineering service for optimum results in the use of Vitamin Q capacitors





Type 95P capacitors are interchangeable with MIL case styles CP67 and CP69 Here is another new series of reliable, conservatively rated Sprague capacitors.



Type 94P units are equivalent in size to MIL styles CP61, CP63, and CP65.

Type 93P Vitamin Q capacitors correspond in size to MIL styles CP53, CP54, and CP55.



Export for the Americas: Sprague Electric International Ltd., North Adams, Massachusetts. CABLE: SPREXINT

SPRAGUE

# **TELE-TECH** ε Electronic Industries

O. H. CALDWELL, Editorial Consultant 🛧 M. CLEMENTS, Publisher 🛧 480 Lexington Ave., New York 17, N. Y.

### High Fidelity at the Crossroads

The continual growth of the so-called "Hi-Fi" industry has been readily apparent to all of us over the past few years. The technological improvements in phonograph pickups, loudspeakers, amplifiers and microphones together with the development of magnetic tape recording has made it relatively easy to obtain the former elusive "end-points" of the audio frequency spectrum. Added to this is an ever increasing host of accessory items such as preciouspoint needles, liquid static and noise eliminators, scratch filters, footage counters, stroboscopes, etc. which enable the more serious audiophiles to enjoy their hobby as well-equipped research scientists. Now this growth ferment appears to have reached a plateau and a crossroad. In the one direction lies a vast new industry geared especially for the massmarketing of high quality audio products. In the other, an aimless twisting road with many hills and valleys that ultimately disappears from view. Let's take a closer look at the condition of this industry today.

#### **CO-EXISTENCE**

Initially, public interest in high fidelity was sparked by the smaller specialty electronic manufacturers and later the larger mass electronic producers began to take an active part. Some of the smaller manufacturers now resent what they term "intrusion" because they recognize the ability of the mass producers to capture volume markets. They fear that in making these products to a price, the overall quality of the equipment will be reduced and this, in the final analysis, will make it extremely difficult for them to be competitive. The smaller producers have confined their efforts to the single products such as turntables, amplifiers, loudspeakers, etc. The producer for the mass market favors the overall system concept which enables him to deliver the complete package.

The incompatibility of the two concepts is further evidenced by the increasing number of societies, organizations, and associations formed only recently and which purport to have the best interests of the high fidelity manufacturers at heart. But more than this...

#### **STANDARDIZATION**

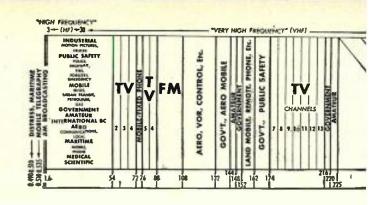
An official definition of high fidelity has never been arrived at. The performance standards of high fidelity speakers, pickups, amplifiers, and other principal system components have never been officially put forth. Comprehensive technical studies on such topics as: reproducing in relatively small enclosures what has been recorded in either free air or in relatively large recital halls or studios; stereophonic recording and reproduction; the effects of ambient sound on high fidelity reproduction have never been undertaken on as vast a scale as they might be. But for an industry to be dynamic and to grow, such standardization and such technical studies are basic building blocks. We must have them!

#### **AN NTSC FOR HI-FI**

The post-war growth of the black and white television industry is the personification of what can be done when all hands turn to. And history is destined for a repetition in the case of color-TV too judging from the increasing number of set availability notices now being made and previews for the increased tempo of color broadcasting this fall. Television owes its success to the system standardization building blocks set up by the National Television Systems Committee (NTSC). In Hi-Fi a similar engineering group has not come forth because no one association or group would be accepted as an industry spokesman by the others. Why then can't all the associations with interests in high fidelity pool, appoint and agree to live with an industry-agreed-upon standard? Perhaps the IRE professional group on Audio would be the logical vehicle to employ here since presumably it is unbiased. Or perhaps engineering representatives from all participating organizations can be appointed to resolve these problems. In any event, the time for an infant industry to take the right turn at the crossroads is now!

## RADARSCOPE

Revealing important developments and trends throughout the spectrum for radio, TV and electronic research, manufacturing and operation



#### **AVIONIC IDEAS**

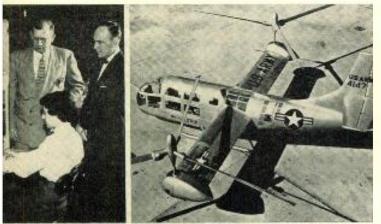
Do you have an idea for a new missile. Or a new principle which might revolutionize aircraft design? Or a new material which can withstand high temperatures? The Air Research and Development Command is greatly interested and has made special arrangements to evaluate your ideas. Mail to Assistant for Innovations, RDTE, Headquarters, Air Research & Development Command, Box 1395, Baltimore, Md.

**MODULAR CONSTRUCTED** television receivers will be placed on the market this fall. This type of construction is one of the fruits from the Navy's former "Project Tinkertoy." (See Tele-Tech May 1955, page 66 and Nov. 1953) Latter term is taboo today because it infringes on private tradename. Modular construction is term now being used. This too may ultimately be abandoned in favor of a more descriptive private tradename.

"SUPER DYLAN" is the trade name for a new polyethylene thermoplastic material developed and recently introduced by the Chemical Division of Koppers Co., Inc., Pittsburgh, Pa. It is expected to be used extensively as a radio housing material and for battery cases. Though the new material is now being produced in only small amounts, production quantities are expected this fall.

COLOR-TV RECEIVER for about \$400 has been de-

#### COMPUTER FOR AIRCRAFT



Bell Aircraft's radical SV-3 convertiplant (1) is one of several aircraft and missile developments which will undergo design and flight study on the IBM 650 Magnetic Drum Data Processing Machine. This computer (r) reads punched cards to a magnetic drum memory with a 20,000-digit, 2000address capacity. Observing machine's operation are Bell Aircraft's engineering vice-president, R. J. Sandstrom (r), and chief of dynamics section, Dr. E. T. Welmers. IBM will deliver more than 500 of the computers with the next two years signed and will be announced within the month. It uses the Chromatic tube.

#### **TV FOR DEFENSE**

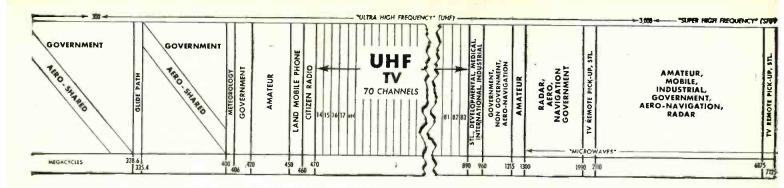
IN CASE OF WAR television will play a vital role in running the country. An experimental closed circuit TV network connecting the secret White House dispersal headquarters and important agencies has been set up in Washington, D. C., and 35 secret places outside of the capital. These emergency facilities would be tied into the commercial networks to enable the President to broadcast to the nation if necessary. This secret TV system is part of the Government's dispersal program directed by the Office of Defense Mobilization. Head of ODM has stated that this plan would seem "to insure against widespread confusion in governmental operations." Another phase of the dispersal program includes specially-trained full-time staffs maintaining the secret bases, ready to carry on Government business even if no department head survived an atomic attack on Washington. This month, a major test of the dispersal program with its closed circuit TV system is slated for a three-day period, with the President and other officials moving from Washington to emergency locations.

#### **AUTOMOTIVE-ELECTRONIC**

ELECTRONIC DEVICES are moving into the family automobile. Regular AM radios have long been established, and people are starting to accept electronic headlight dimmers, FM radios, car telephones and radio garage door openers. During the past month or so three new additions have been made to the Parade of Automobile Electronics. Philco has announced a completely transistorized radio which will be special equipment on Chrysler and Imperial cars this fall. Power consumption is cut more than 90%, and tubes, vibrator, power transformer and rectifier are eliminated. Universal Broadcasting System of Boston has developed a 14-inch TV set for General Motors. This unit mounts in the back of the front seat. It is reported, however, that some states have laws restricting the use of TV in cars. Jensen Mfg. has come up with a two-way hi-fi speaker installation for cars, which may be introduced in the high-priced line of Ford automobiles.

#### TUBES

**FAILURE PREDICTION** for electron tubes is the key to safe and acceptable use of electronic equipment, reports a top engineer in the field. Ruggedizing is very



desirable, he says, but no matter how much operating life is extended, eventually you run into the problem of trying to find out when it will fail. So far, an effective means of determining this has not been available, although considerable research is now in progress. The alternatives have, for the most part, been early tube replacement in preventative maintenance-which can be quite wasteful-or operation under a cloud of uncertainty. Because of this, in some cases electronic controls for submarines and other applications have been replaced by mechanical devices. According to work being carried out by the CAA and other organizations, it is believed that the rate of decrease of gm during use is a prime indication of impending failure. That is, the faster  $g_m$  decreases for a given tube the greater is the likelihood of failure, even though its absolute value may be higher than that of a comparable tube. Of course, this must be considered with regard to plate voltage and other circuit requirements. Additional factors such as increased filament resistance caused by "necking down" of the wire are also indicators. What is needed now is further statistical investigation to correlate all pertinent data, but it appears that critically important criteria for failure prediction is forthcoming.

#### COMPUTING CENTERS

ACCORDING to J. Douglas Elliot of the Detroit Edison Co... "it becomes more apparent that the completely automatic office made up of only sexless and shapeless machinery will not become a reality." In an address before the recent National Conference of Electric and Gas Utility Accountants Mr. Elliott observed that largescale electronic data processing machines are going to take people to tell them what to do; take people to get work ready for them; take people to operate them; and take people to interpret the results produced.

#### **CERAMIC SPACERS**

**THE SEARCH** for substitute materials for mica spacers as used in current vacuum tube designs still goes on. A great effort has been made in the ceramic field with the result that the "thinness" of ceramic spacers is fast approaching that of mica. The American Lava Corp. can now produce spacers down to 0.0075-in. in thickness.

#### **MILITARY PROCUREMENT**

IN 1956 the Department of the Army is expected to obligate \$2.5 billion for the procurement and production of military equipment. This money will be from previously appropriated funds and reimbursements. \$1.072 billion is for major military equipment including electronics and communications, \$1.128 billion is for am-

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

munition and guided missiles, and \$300 million is for industrial mobilization. Other procurement highlights include: \$41.7 million for AN/TRC-24 radio (battlefield communication); \$36.5 million for Skysweeper antiaircraft gun and related electronic equipment; \$7.4 million for AN/ARC-44 radio (fire control communication for airborne observers).

#### TOOLS

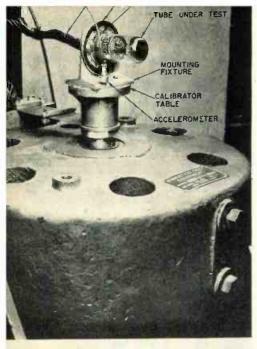
**SOMETIME AGO** Western Electric Co. explained the techniques of wrap-around wire connections for communication circuits and showed various tools for performing these connections. Additional research on this subject has led to a new tool which is scheduled to be announced soon. The tool is a combination wire-stripper and wrap-around which thus obviates the need of precutting and stripping prior to the wrapping operation.

**EDITORIAL MATERIAL** for the 4th Annual West Coast issue is now being prepared. This August issue brings you last minute information about WESCON 1955. Articles describing the latest in Western electronic engineering with special emphasis on items revealing current avionic activities will be included. Watch for it!

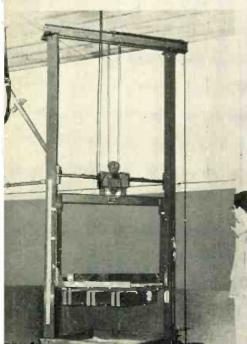
#### **PICTURE TUBE TARGET**



An employee at the RCA tube plant in Lancaster, Pa., blows a bubble from high quality optical glass and with a hydrogen flame cuts out a section having the exact curvature required for the "target" of an image orthicon camera tube. Only one "target" can be obtained from each bubble.







#### Dynamic Testing of

# Airborne Electronic

Vibration, shock and acoustic measurements, rate tubes, relays, capacitors, transformers and potentiometers under varied environmental conditions

> By R. H. JACOBSON and M. B. LEVINE Armour Research Foundation Illinois Institute of Technology 3422 S. Dearborn St., Chicago 13, III.

**I** T IS well known that present day electronic equipment frequently becomes inoperative when exposed to severe airborne environmental conditions, particularly those of vibration and shock, and possibly acoustic. In order to improve reliability of airborne electronic equipment, the limits within which components can perform satisfactorily must be known.

A program is presently being conducted in which the mechanical design level with respect to vibration and shock is being determined for various electronic components and equipments. An additional objective is to determine whether acoustic excitation can interfere with proper component functioning. This article presents some of the vibration, shock and acoustic test results for five components (tubes, relays, transformers, capacitors, and potentiometers) which were investigated under the program.

It should be kept in mind that this information is being published for technical information only, and does not necessarily represent recommendations or conclusions of the sponsors of the program, the Wright Air Development Center.

#### **Equipment and Procedures**

The test equipments and procedures used for conducting vibration, shock, or acoustic tests are described briefly as follows:

#### A. VIBRATION

Vibration tests were conducted on electrodynamic vibration exciters. Transformers were vibrated on an

Fig. 1: (Upper photo) Vibration exciter with 650 lb. force rating for transformer tests Fig. 2: (Center) Tube in vibration exciter

Fig. 3: (Bottom) Medium Impact shock machine

MB Model C5H Vibration Exciter, having a 650 lb. force rating. The other four types of components were



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R. H. Jacobson

vibrated on MB Model C1 Calibrators, having 50 lb. ratings. Both shakers were operated at frequencies up to 2000 CPS, and all components were tested at acceleration amplitudes up to and including 20 g. A small self-generating accelerometer mounted near the component under test was used to monitor the vibration. Experience had indicated that

Fig. 4: (r) Impact blocks under platform



# Components

the vibration could be monitored more accurately in this manner than by using the built-in velocity pickups contained in both vibration exciters.

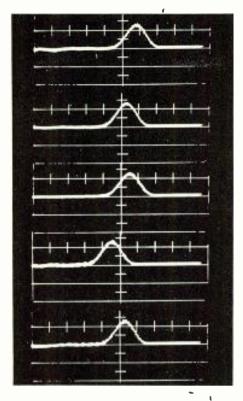
Components always were mounted by their normal mounting means, and were vibrated in their three mutually perpendicular principal directions. Unique vibration procedures were followed for each type of component which depended on the behavior and characteristics of the components. For example, relays were vibrated at continuously varying frequencies at increasing levels of acceleration amplitude to locate the points at which they malfunctioned; while tubes were vibrated at single resonant frequencies until failures occurred due to excessive microphonics or low plate current.

An electron tube being vibrated on a Model C1 Vibration Exciter is shown in Fig. 1. The MB Model C5H Vibration Exciter is shown in Fig. 2.

#### B. SHOCK

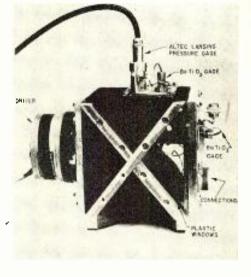
Shock tests were conducted mainly with the Type 150-400 VD Medium Impact Shock Machine manufactured by The Barry Corp. This machine is shown in Fig. 3. In operation, the components to be tested are secured to the elevator platform of the machine, and the shock pulse is produced by allowing the loaded elevator to fall freely into a box containing sand which forms the base of the machine. The free fall is arrested abruptly as the level surface of the sand meets a set of impact blocks attached to the lower side of the elevator platform, as shown in Fig. 4.

The severity of each shock pulse is controlled by the height of the drop and the time duration of each shock is controlled by the number and arrangement of the impact blocks. The maximum peak acceleration attainable is approximately 75 g. It is obtained for the 12-block table arrangement and a 5-ft. free fall. The duration of this shock pulse, computed for an equivalent half sine wave (one whose maximum acceleration and velocity change are the same as the shock pulse), is approximately 12 msecs.



With the 6-block table arrangement, shock pulses having an equivalent half sine wave duration of approximately 27 msecs. may be obtained; however the maximum peak acceleration attainable for the 6-block table arrangement is only 32 g, approximately.

When peak accelerations greater than 75 g were desired, shock tests were conducted on a pendulum impact machine constructed in the ARF laboratory. This machine includes an aluminum block, approximately  $2 \times 4 \times 6$  in. in size, on which the component under test is mounted. The block is supported by four fine wires attached to the corners of the top surface. Shock pulses are produced by allowing a pendulum to strike one end of the block. The severity of the shock pulse is con-



Above—Fig. 6: High intensity sound chamber

Left—Fig. 5: Successive shock pulses obtained with pendulum impact machine. Avg. peak 160g

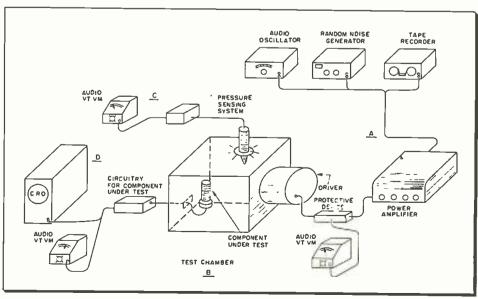
trolled by the amount and type of padding material added to the face of the block receiving the impact. Shock pulses with peak accelerations greater than 750 g were obtained without difficulty. These pulses had a time duration of approximately 0.15 msec. Shock pulses of approximately 125 g peak acceleration had time durations of 1.0 msec. The reproducibility of the shock pulses for any particular padding arrangement was excellent, as shown by the oscillograms in Fig. 5.

#### C. ACOUSTIC

Acoustic tests were conducted in a sound chamber designed and constructed at ARF for this purpose. The chamber, which is shown in Fig. 6, is approximately a 6-in. cube and is simply constructed from readily obtainable electronic parts. Its instrumentation is simple and cali-

(Continued on page 384)







# **Powdered Iron**

Manufacturing requirements for types of iron, together with physical and electromagnetic characteristics, guide utilization coils, tuner cores, direction finders

Fig. 1: I-F transformer cores for radios

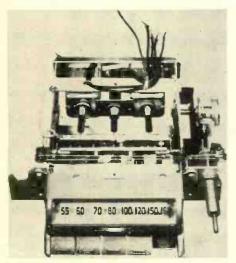
THE first high-frequency magnetic core was reportedly made by Heaviside in 1885 for experimental telephone and radio circuits.<sup>1</sup> It was simply constructed of iron filings imbedded in wax. A number of improvements followed and several patents were granted in the ensuing years, spurred by the need for high-Q telephone loading coils. However, not until iron powder production methods were improved and suitable binders and molding presses developed did the magnetic core achieve any real importance.

The first high-frequency powdered iron cores manufactured by mass production methods made their appearance about 1930. The names of Polydoroff in this country, and Vogt and Nissen in Germany are closely connected with those early successes. Powder and core production have made great progress since then, particularly in the past few years.

#### Methods of Manufacture

Powdered iron production starts, in general, with a source of cheap iron ore or scrap or an iron compound. The end results are powders, sometimes of subsieve size, with a high degree of purity.

#### Fig. 2: Automobile radio permeability tuner



#### By J. A. ROBERTS and G. O. ALTMAN General Aniline & Film Corp. New York, N. Y.

The different methods may be divided into two groups:

- a. Mechanical disintegration
- b. Chemical refinement

Mechanical disintegration may be further subdivided into, first, pulverizing of solids,—by crushing, grinding chopping of wire, etc.—and second, atomization of molten iron, where the liquid iron is blown onto water, air streams or mechanical interrupters. Neither of these methods, however, produce iron powders of the best quality.

Highest quality iron powders are produced by the chemical methods. These are:

- a. Iron in solution and electrolytic recovery.
- b. Iron in solution, precipitation of iron oxide and its reduction by hydrogen.
- c. Iron converted to iron pentacarbonyl and decomposition of this compound into iron and carbon monoxide.

Electrolytic iron can be made, for example, from a solution of ferrous sulphate and chloride. Anodes are made from mild steel. The iron is deposited on the cathodes which are made of polished sheet steel. This deposit is fairly brittle and may be ground mechanically to satisfactory fineness. The powder can be improved further by a hydrogenannealing treatment which relieves work-hardening stresses and removes some residual impurities.<sup>2</sup>

Hydrogen-reduced iron results at first in porous particles which are not well suited for magnetic cores, but these can be made solid and round by further processing such as special ball milling or high temperature treatments which promote shrinking and surface smoothing. This method has the added advantage of making alloy production relatively simple: one starts with mixtures of the oxides or complex solutions of the metals. Tin and antimony, for example, have been so added.

Carbonyl iron is formed in free space at elevated temperature. The particles that form are spherical. This is unexpected and paradoxical since iron crystallizes in the cubic system. However, each particle contains thousands of extremely small crystals-their order of magnitude is 100 Angstrom units-which are oriented at random, with no preferred direction, and thus build up into spheres. The reason for the smallness of the crystal is the occurrence of carbon impurities. Subsequent heating, preferably in hydrogen, removes this carbon and promotes crystal growth.

There are other iron powders and iron alloy powders used, such as microparticle iron for permanent magnets, iron-nickel alloy powder for telephone applications, and sendust and flake-iron for low frequency cores, but they have little or no importance for high frequency applications.

Iron oxide powders, on the other hand, are used extensively at high

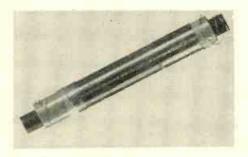


Fig. 3: Variable pitch tuning coil

Fig. 4: Three permeability tuning cores



# Applications

frequencies. They are made either mechanically by pulverizing natural magnitites or chemically, by producing and then heat-treating, precipitated oxides.

The Metal Powder Assoc. lists 27 electronic core materials which are divided according to their production methods, as follows:

Sponge iron powders, i.e. little refined and mainly mechanically disintegrated.<sup>4</sup>

Electrolytic iron powders<sup>3</sup>

Hydrogen reduced iron powders<sup>6</sup> Carbonyl iron powders, annealed and unannealed<sup>11</sup>

Magnetites and iron oxides<sup>3</sup>

#### **Properties of Powdered Iron**

In order to work well at radio frequencies, powdered iron must have some special properties.

A coil is a device that creates a magnetic field which in turn acts on



the same or another coil, in an effect known as "electro-magnetic induction." If a ferromagnetic material is placed into this magnetic field, the effect is much enhanced by virtue of the magnetization in the material. Ordinary bulk iron would have two important drawbacks, however: 1) The non-linearity of its magnetization curve would introduce distortion. 2) The alternating magnetic field would introduce eddy currents and other effects which would absorb useful power from the current flow-

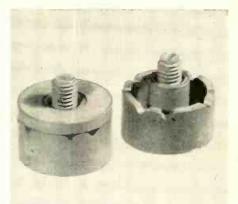


Fig.6

ABOVE—Fig. 6: Powdered iron cup core r-f inductors

LEFT-Fig. 5: Direction finder core loop assembly

ing in the coil, thereby acting as though an additional resistor were inserted into the circuit.

Powdered iron goes a long way to avoid these disadvantages. Its magnetization curve in the usual coils is practically linear and gives rise to only minimum harmonic distortion. It is called harmonic because the distortion is due to the appearance of frequencies 3, 5, 7, etc. times the original frequency.

Powdered iron, furthermore, very (Continued on page 396)

### "Electronicam" Unites TV and Film Operations

A COMPLETE system which combines electronic TV and motion picture equipment and makes possible utilization of the best features of each has been produced by Allen B. DuMont Labs., Inc.

It permits the live TV broadcasting of a program, the instantaneous high-definition filming of a scene, the simultaneous broadcast and filming of a performance, the use of TV techniques and monitors for motion picture production, and the filming of programs in black-and-white or color. The system, named the Du Mont "Electronicam" (trademark) TV-Film System, was developed by James L. Caddigan.

It operates in the following manner: An image-orthicon TV camera head and a film camera are mounted side-by-side on the same base and operate with a common lens system. (See Fig. 2.) The base is mounted conventionally on a tripod or dolly. Except for the common optical system, both units are independent and have their individual power supplies which function simultaneously. The optics of the "Electronicam" system (Continued on page 182) Fig. 1: System operation for filming and telecasting. Film processing permits delayed broadcasts

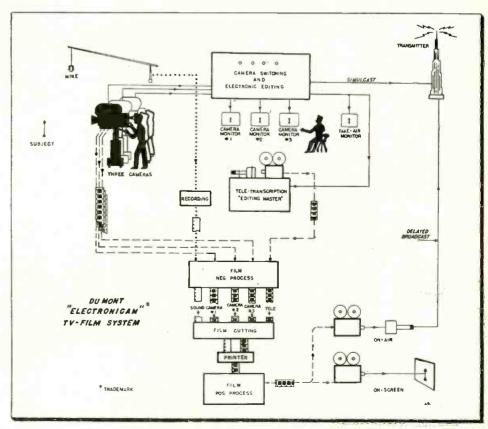




Fig. 1: Reference unit and preamplifier, using magamps, is part of a new high-speed regulating system for the excitation of large power generators

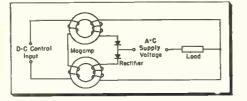
#### Key to rating magamp performance is defined as ratio of power amplification to time constant. Relation of Figure of Merit to power examined

**R**EGULATING systems are a combination of devices whereby a large amount of energy is controlled by a small amount of energy. For example, large amounts of heat in a furnace can be controlled by a small amount of thermal energy in a thermocouple; a feeble tachometer voltage can regulate the speed of a tandem mill; a tiny magnet governs the voltage of a large alternator; and a microwatt radar signal can guide a missile at supersonic speeds. It follows that power amplifiers play a major role in regulating systems.

#### **Power Amplification**

Of primary importance in power amplifiers is the ratio of power output to power input, namely the power amplification. It is fundamental that the system power amplification must be such that the output power can be controlled by the available controlling energy; hence, the system power amplification is determined by the power output required, the power level of the input or detecting device, the nature of the disturbances to which the sys-

#### Fig. 2: Single-phase self-saturating circuit



By J. T. CARLETON and W. F. HORTON Westinghouse Electric Corp. East Pittsburgh, Penna.

tem is subjected, and the degree or accuracy of regulation required.

The rapidity with which an amplifier responds to an input signal is also of importance in determining the performance of regulating systems. Associated with the output power of a power amplifier is the storage of a certain amount of energy in the control elements of the amplifier. For example, the response time of a thermocouple is determined by the amount of heat stored in bringing it up to the proper temperature; amplifiers utilizing magnetic fields store energy in the form of flux; and vacuum tubes are plagued with electrostatic energy stored in the inter-electrode capacitance. The phenomenon requiring a change in the amount of stored energy for a change of input power

# Figure of Magnetic

prevents an instantaneous change in power output to conform to a change in input. This delay in response time is frequently expressed as the time constant of the amplifier.

A third important characteristic of a power amplifier is gain or, in the case of electric power amplifiers, voltage amplification. System gain governs regulator stiffness, and in conjunction with the amplifier time delays, determines the system response time and stability. Unlike vacuum tubes for which voltage gains are fairly well fixed, magnetic amplifiers enjoy flexibility. The voltage gain obtainable is limited mainly by the maximum and minimum wire sizes that may be used in the control and output circuits.

#### **Figure of Merit**

In designing regulating systems it is necessary to know the power amplification, delay, and gain of the amplifiers involved. Since the gain of a magnetic amplifier is flexible, power amplification and time delays define the capability of the amplifier. For this reason, Figure of Merit of the amplifier is defined as the ratio of power amplification to time constant. Within the reasonable assumption that the amplifier is linear, the suitability of a magnetic amplifier for a specific application is determined by (1) rated output power and (2) Figure of Merit. For a given output-power rating, the excellence of the amplifier is a direct function of its Figure of Merit.

The Figure of Merit of a magnetic amplifier may be expressed as the ratio of power amplification (dimensionless) to amplifier response time (cycles or seconds). Since amplifier response time or time constant is usually expressed in terms of cycles

#### TABLE I

General	Purpose MAGAM	Rated Power Output	Figure of Merit	
	Туре	-	(per cycle)	(per second)
	3704	40 mw	170	10,200
	3708	0.3 w	310	18,600
	3712	7 w	410	24,600
	3716	40 w	850	51,000
	3720	180 w	1200	72,000

# Merit in Amplifers

of the ac supply frequency, Figure of Merit is usually expressed on a per-cycle basis. To facilitate comparison with other types of amplifiers, the per-second base can be used. The "per second" Figure of Merit is greater than the "per cycle" value by a factor equal to the amplifier ac supply frequency.

Figures of Merit of commercially available magnetic amplifiers are exemplary of the state of magnetic amplifier art. These amplifiers are capable of power amplification-toresponse time ratios two orders of magnitude greater than was possible 25 years ago. This pronounced improvement in basic amplifier performance is due to a number of factors listed in part below:

 Development of high-permeability, "square loop," core materials.

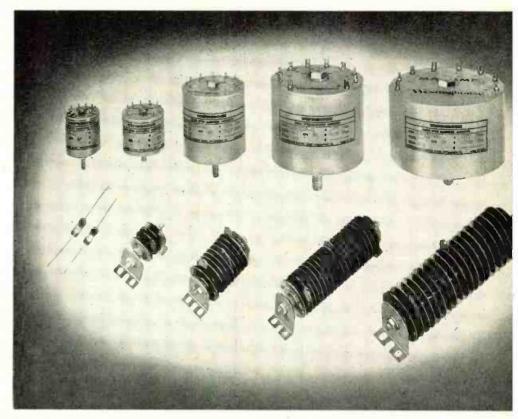


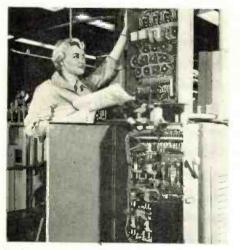
Fig. 3: Magamps with corresponding selenium rectifiers. Rated powers range from 40 mw to 180 watts

- 2) Development of efficient, lowleakage rectifiers.
- 3) Inventions in circuitry.

Of these, advances in circuitry are probably most significant. The invention of self-saturating circuitry led directly to the high Figure-of-Merit amplifier.

Self-saturation in magnetic amplifiers refers to the circuitry of a group of basic single- and multi-(Continued on page 160)

### "Cypak"—A System for Industrial Control



Cypak system panel (top) and relay control panel (below) for automatic bus duct welder

C YPAK systems are static switching circuits developed by Westinghouse for industrial control applications. They are not direct replacements for relays on a onefor-one basis; they are intended as replacements for relay systems.

Cypak systems come from the area of solid-state physics. They have no moving parts, and are, in a general sense, switching systems. Hence, they are essentially digital in nature, but can be easily combined with analog devices.

The functions performed may be thought of as building blocks that can be combined in a variety of ways to establish a desired relationship between the information that is fed into the control system, and that which is taken out.

The first is called the AND function, Fig. 1. Here an output is obtained only when all of a given number of input signals are applied. In other words, given inputs a and b and c and . . . j, and AND function delivers an output.

The second is the OR function, Fig. 2, where an output is obtained when any one of a number of inputs is applied. Hence, given any input a or b or c or . . . j the OR function delivers an output.

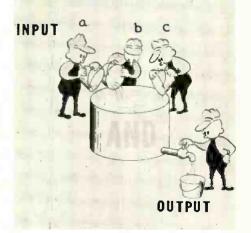
The third is the NOT function, Fig. 3. In this case, an output can be obtained only when no input is applied. Therefore, given an input, a, no output is obtained; or given no input, the NOT function delivers an output.

The fourth type is the TIME func-

tion, Fig. 4. Actually, there are two types of time functions—a limited TIME function and an unlimited. Limited TIME means that, following an input, a specified time passes before an output is obtained. Or in other words, given an input, a, an output is obtained from a limited TIME function after a specified time,  $T_1$ . The unlimited TIME function, as

(Continued on page 380)

Fig. 1: AND element's function requires all inputs be present before output is obtained



# **Factors Affecting Radio Propagation**

HE propagation of radio waves through the atmosphere and around the curve of the earth is influenced by many parameters. In the medium frequency band, which includes the standard broadcast band of frequencies, the conditions in the lower ionosphere and the electrical characteristics of the soil are paramount in determining the field strength and the range of effective communication; while in the international band of high frequencies below 50 MC, the characteristics of the ionosphere alone play the dominant role. Above 50 MC meteorological conditions in the troposphere and irregularities of terrain are the salient factors.

The term propagation is applied to the transfer, by a wave mechanism, of radiant energy from a transmitting antenna to a receiving antenna. A "free-space" transmission path is a straight-line path in a vacuum, sufficiently removed from all objects that would absorb or reflect radio energy. The free-space field strength is proportional to the square root of the effective radiated power of the transmitter and inversely proportional to the distance from the transmitter.

The presence of the ground modifies the generation and propagation of radio waves so that the received field strength is ordinarily less than would be expected in free space. The ground acts as a partial absorber and as a partial reflector. Both of these properties affect the distribution of energy in the region above the earth. A "ground wave" is a radio wave which travels along An analysis of the effects of atmospheric refraction, reflection, diffraction and scattering, as well as sporadic E; with experimental data obtained by NBS

#### By WILLIAM F. UTLAUT

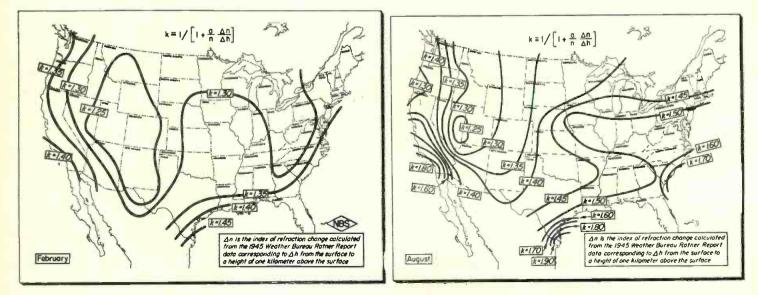
Central Radio Propagation Lab., National Bureau of Standards, Boulder, Colo.

over the earth. It may be thought of as having three components: a surface wave, a direct wave, and a ground reflected wave. The latter two combine to produce what is known as a space wave. The dominant component of the ground wave is dependent upon frequency and the heights of both transmitting and receiving antennas. At frequencies well below 50 MC the surface wave is of predominant importance and is entirely responsible for providing the service in the primary service area of a standard broadcast station. At frequencies above 50 Mc and with the height of antennas commonly used, the predominant factor is, generally, the space wave. In addition, the intensity of the surface wave is much less for a horizontally polarized wave—as in TV or FM signal than for a vertically polarized wave.

One process contributing to the propagation of radio waves into a narrow region beyond the radio line of the sight is diffraction. Diffraction is the mechanism by which radio waves curve around edges and penetrate into a "shadow" region behind opaque obstacles such as the bulge due to the earth's curvature or irregular features of terrain. The diffraction of radiant energy into the shadow zone increases with increasing wavelength or, to put it another way, the shadow of an opaque obstacle deepens with increasing frequency. A satisfactory explanation of diffraction is based upon Huyghen's principle which states that every elementary area on a wave front is a source point which radiates in all directions on the forward side of the wave front. The field strength either inside or outside of the shadow zone is obtained by summing the contributions from all of the elementary areas.

If a receiving antenna is elevated from ground level in successive steps, the received signal strength due to diffraction rises rapidly until line-of-sight is reached. Above the line of sight the direct and reflected waves interfere and result in maxima and minima patterns called the "Fresnel pattern" or lobes. The first maximum occurs when the difference in path length between the direct and reflected wave is one-half wavelength since the reflected signal undergoes a 180° phase reversal at the reflecting point. This may be

Figs. 1 & 2: The values of k are larger in the summeritime and are largest in the coastal areas due to the higher humidity gradients



# in the TV and FM Bands

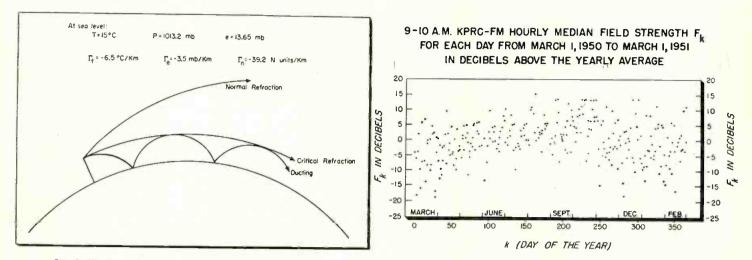


Fig. 3: (1) Comparison of ray paths for normal and critical refraction and ducting. Fig. 4: (r) Field strength of FM station 147 mi. cistant

considered as a partial explanation of the observed fact that the received field strength does not always increase with an increase of antenna heights.

#### Refraction

The atmosphere also greatly modifies the propagation of radio waves. From a simplified point of view, the atmosphere may be thought of as composed of three regions: the troposphere, the stratosphere, and the ionosphere. The troposphere lies adjacent to the earth and extends upward roughly six miles. The stratosphere extends beyond. Beginning at about 30 mi. above the earth's surface are a series of layers, composed of ions and free electrons known as the ionosphere. Both the lower atmosphere and the ionosphere play important roles in the transmission of radio waves.

Propagation of radio waves in the troposphere is materially influenced by the distribution of temperature, pressure, and water vapor. In order to have a reference basis from which tropospheric propagation may be studied, a "standard atmosphere" has been defined and under this condition calculations of expected field strength can be made. The refractive index, n, is the connecting link between radio and meteorology. For convenience, however, the radio refractive index is usually expressed in terms of N units of refractivity by the following relation;<sup>1</sup>

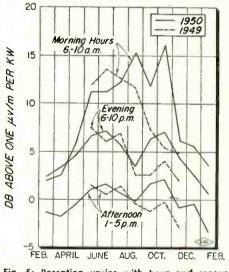
$$N = (n-1) \times 10^{6} = \frac{77.6}{T} (P + \frac{4810e}{T})$$
(1)

where P is atmospheric pressure in

millibars, T is temperature in degrees Kelvin, and e is the partial pressure of water vapor in millibars.

If the conductivity of the atmosphere is neglected, its dielectric constant is equal to n<sup>2</sup>.

The radiation energy emitted by an antenna takes the form of a wave spreading out in three dimensions which may be thought of as a series



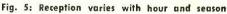
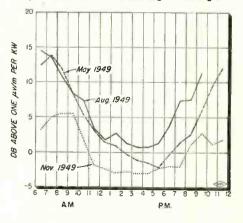


Fig. 6: Field intensities are highest at night



of concentric spherical wave fronts or represented by a system of lines called rays. The velocity at any given point on the wave front is equal to the velocity of light, c, divided by n or,

$$v = c/n$$

$$= 2.9979 \times 10^8/n \text{ meters/sec. (2)}$$

In a standard atmosphere, n decreases linearly with height. Therefore, since n > 1, the upper portions of the wave front move with higher velocities than the lower portions and the wave paths as represented by rays are curved slightly downward. The curvature of the rays is approximately equal to the negative gradient of n with respect to the height, i.e. -dn/dh. This curvature of the rays by the atmosphere is called refraction.

Only the relative curvature of the earth and the rays is of interest in making calculations of wave propagation. Compensation for the effects of refraction may be obtained by replacing the actual earth of radius "a" and the actual atmosphere (in which n decreases with height) with an equivalent earth of radius "ka" and a homogeneous atmosphere in which rays are straight lines. The curvature of an equivalent earth may be found by taking the difference of the curvature of the earth and the curvature of the rays.

When the dielectric constant decreases at the rate of  $2.4 \times 10^{-8}$  per foot of height, the resulting value of k is 4/3. This is the case for a standard atmosphere, representative of a temperate zone atmosphere. It should be noted that the larger the value of k, the flatter the earth appears, thus giving an increase in the distance to the radio horizon. Values

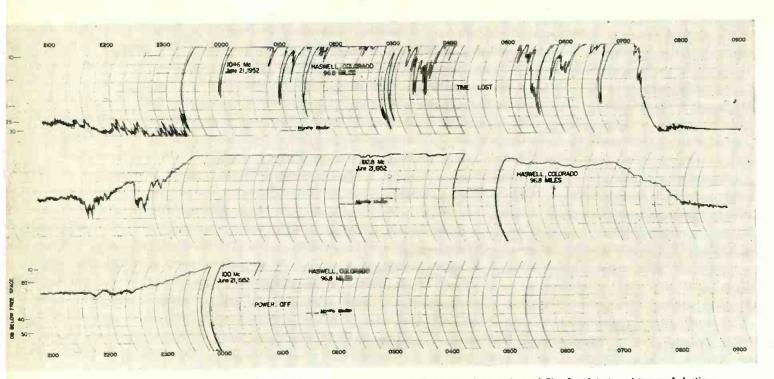


Fig. 7: Comparison between this received field strength recording and the meteorological data of Fig. 9 points to existence of ducting

#### **Radio Propagation (Continued)**

of typical wintertime and summertime k are shown in Figs. 1 and 2. These values were calculated from actual atmospheric data<sup>2</sup>. It may be noted from these figures that larger values of k are found near coastal areas and also that k is larger in the summertime than it is in the winter months. Both of these facts result from higher humidity gradients along coastal areas and in the summer atmosphere.

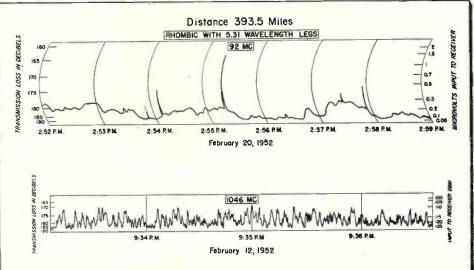
Under certain atmospheric conditions the lapse rate of dielectric constant may be greater than that for a standard atmosphere, resulting in a greater bending of the rays toward the earth as indicated for values of k greater than 4/3. When the dielectric constant decreases about four times as rapidly as normal, the value of k approaches infinity and critical refraction occurs. This means that, as far as tropospheric radio propagation is concerned, the earth can be considered flat and any ray that starts parallel to the earth will remain parallel.

If the dielectric constant decreases even more rapidly, radio waves may be bent downward sufficiently to be reflected from the earth. After reflection from the earth the wave may again be bent sufficiently for further reflection and the radio energy appears to be trapped in a duct. A similar effect may occur at an elevated level due to a greater than normal lapse of dielectric constant over some distance of elevated height. Fig. 3 shows a relative comparison of ray paths for normal refraction, critical refraction (k = $39-9V620 \times 0$ ), and ducting.

#### Reflection

Reflection of radio waves may take place from the earth's surface or objects on the earth's surface, from layers of the ionosphere, or from irregularities in the troposphere. The contribution of the reflected ray depends greatly on the manner in which the surface acts as a reflecting body. Snell's law, that the angle of incidence must equal the angle of reflection, applies irrespective of the type of polarization of the wave; the strength of the reflected wave depends upon the grazing angle, that is, the angle between the surface and the ray, the types of polarization, the reflecting property of the surface, and the amount of divergence or convergence caused by the curvature of the earth. The incident ray, in general, is partially refracted and partially reflected. The reflected portion in addition to being reduced in strength is given a phase shift relative to the incident ray.

Consider the effect of a plane of abrupt discontinuity between two media of different refractive indices,  $n_1$  and  $n_2$ . If the radiation is incident upon this plane from the side of higher refractive index one may think of the incident ray as being split into two parts, a refracted wave



#### Fig. 9: Meteorological data shows much greater than normal lapse rate for the index of refraction

and a reflected wave. The magnitude of each wave is dependent upon the grazing angle and the difference of refractive index. From Fresnel's equations it may be shown that if the grazing angle  $\phi$  is much larger than the change in refraction index  $\Delta n$ , and with  $\Delta n$  much less than 1, the reflection coefficient is  $\Delta n/2\phi^2$ . Under these imposed conditions on n and  $\phi$  the coefficient of reflection is very small. On the other hand, if the grazing angle becomes very small or less than some critical angle  $\phi_c$ , the coefficient of reflection becomes unity and there is total reflection. The critical angle may be determined by the following:  $\cos\phi_{c} = n_{2}/n_{1} = (n_{1} - \Delta n)/n_{1}$ (3)Since  $\Delta n$  in the atmosphere is quite small,  $\phi_e$  must also be a very small angle and hence for total reflection to take place, the grazing angle must

likewise be small. A necessary condition for total reflection is that the incident ray must approach the discontinuity from the side of higher index of refraction.

#### **Reflection** Coefficient

A modification of the idea just presented concerning an abrupt discontinuity must be made in the case of the atmosphere because of the fact that its refractive index changes continuously over some height distance rather than abruptly. A mathematical analysis of the problem by Smyth and Trolese<sup>3</sup> shows that the coefficient of reflection decreases rapidly as the thickness of the inversion layer (i.e., the distance over which the change of refractive index takes place) increases; however, the smaller the grazing angle, the less rapid the decrease of reflection coefficient. Under favorable atmospheric conditions which produce considerable bending of the rays, that is when k is large, the grazing angle of the incident ray may be small enough so that even though the discontinuity is not small in comparison with a wavelength, considerable reflection may be produced.

The phenomenon of trapping or ducting will generally give a higher than normal field strength. The necessary meteorological conditions for ducting may occur over long distances above water but are less likely to appear for any great distance over land masses since the terrain and turbulence near the earth keep the atmosphere rather well mixed. Elevated layers or ducts have been considered as anomalous conditions; with the accumulation of

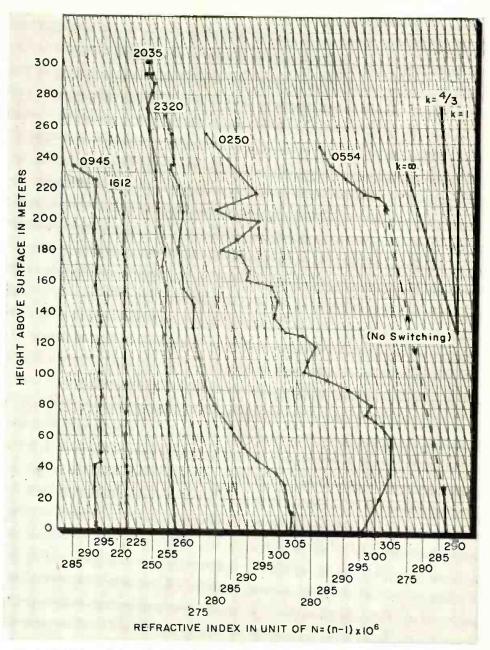


Fig. 8: Field strength recording of 92 and 1046 MC over transmission path length of 393 miles

more meteorological data, however, there emerges a belief that systematic changes in the atmosphere may produce these elevated layers or ducts over short distances for an appreciable portion of the time.

An additional component to the total field at a point is contributed by a phenomenon called scattering. The theory of scattering has not become completely solidfied but is still changing somewhat from time to time to bring closer agreement between theory and observations.

It had been discovered that under certain circumstances the field strength well beyond the horizon decreased with distance more slowly than could be explained by any existing theory. Booker and Gordon<sup>4</sup> developed the current version of the scattering theory and this has been expanded by others<sup>5</sup><sup>6</sup>. The theory of scattering in a turbulent medium is treated in terms of an autocorrelation function relating small variations of dielectric constant in the medium with a factor called the scale of turbulence. This scale is a quantity having the dimensions of length and is associated with the average size of eddies, or blobs of atmosphere, having essentially the same dielectric constant. Scales of turbulence in the atmosphere apparently have variation from as little as 10 cm. in unstable conditions to as large as 500 or 1000 m. in stable conditions.

The amount of radio energy scattered under turbulent conditions is dependent upon the wavelength, the scale of turbulence, and the variation of dielectric constant of the eddies from the average value. The portion of the atmosphere of importance to scattering is the volume of space within line of sight of both the transmitting and receiving an-

(Continued on page 376)

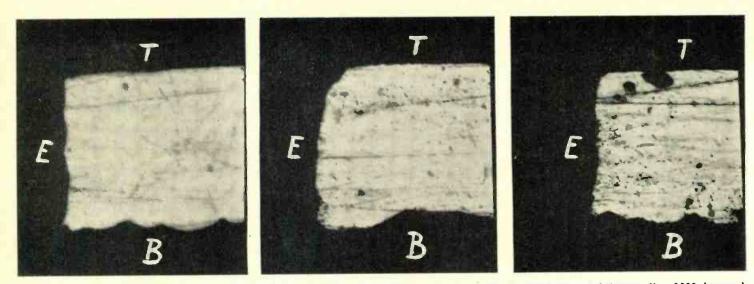


Fig. 1: Cross-sections of 0.0015 in. copper foil bonded to bakelite, after etching. T is top of foil, E etched edge, B foil base. Mag 1000 (approx.)

IN order to better understand the application of the printed foil process to a broad field of products, let us first consider the basic technology of this new art.

In nearly all electronic and electrical fields, the printed foil element is in direct competition with a lowcost wire element. Price advantage of the printed foil element is not, in most cases, of decisive importance where small production quantities are required. The successful development of these elements is due to the exploitation of favorable characteristics of the printed foil technique in the design of the element. Possibly the most important bydevelopments product of these arises, not quite unexpectedly, in the beginning of a new branch of science.

A basic concept of the foil technique is the replacement of volume elements—the wires and electrical

# **Printed Foil**

Microscopic study of foil structure leads to utilization of printed materials as aircraft de-icing mats, highwattage resistors and temperature sensing elements

By HUBERT L. SHORTT, President Technograph Printed Electronics, Inc. Tarrytown, N. Y. and DR. PAUL EISLER, Research Director Technograph Printed Circuits, Ltd. London, England

components which are made by conventional mechanical engineering techniques and regarded as the building bricks of electrical equipment—by surface elements—that is metal foils, semi-conductive layers and insulating films. Thus, the foil technique enhances the significance of such branches of science as the physics of solid surfaces, surface chemistry, and the structure and characteristics of layers of electrically important materials. Not only have these disciplines a great bearing on printed circuit design and technology, but there is a fair chance that the development of the technique will also prove most fruitful to these sciences by engendering new viewpoints and new formulations of problems.

A modest start in the foundation of what, for want of a better term, we call the Science of Printed Circuits, has already been made by

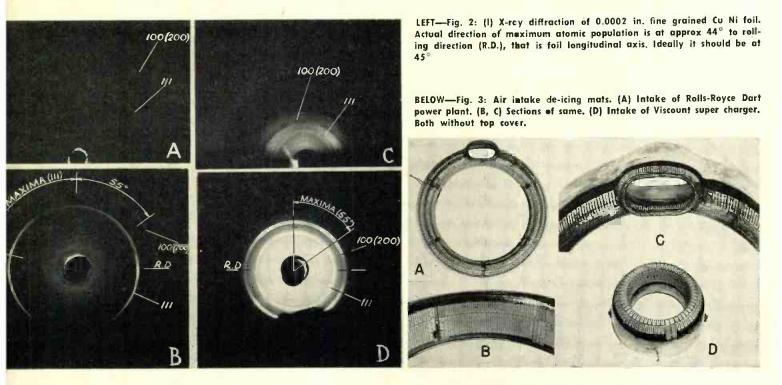
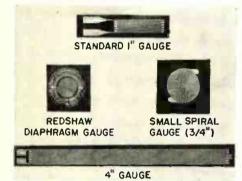




Fig. 4: Fixing de-icing mats to tail plane of Bristol Britannia airliner

# **Electronic Components**



#### Fig. 5: Types of foil strain gauges

Technograph during the last few years. The new outlook thus gained has been successfully used in the design of some of the foil elements to be described here.

#### **Crystal Structure**

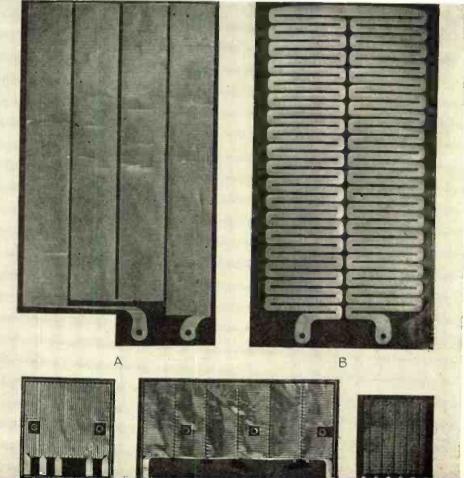
One of the most fascinating aspects of the Science of Printed Circuits is provided by the study of the crystal structure of the foil and its influence, first, on the electrical and mechanical characteristics of the printed element and second, on the various methods and means of production of this element—for example, the techniques of printing and etching.

Arising from this study, a method has been found to evolve a specification of a rolled metal foil of a special resistance alloy, so as to suit a particular application. Since no mill could be found capable of rolling this alloy to the specification in foils thin enough and at a reasonable width, we succeeded in developing a method to thin the foil chemically without causing pinholes and to center the foil at a thickness of a few ten-thousandths of an inch before providing it with insulating support in the form of a varnish film. We succeeded, after many failures, only after we had begun to study the rate of attack of various etching media and methods on crystal boundaries and crystal planes. We developed means of controlling these in a desired direction. Not only does the degree of control already reached permit us to thin suitable foils of any width and thickness down to what we want, but it also permits us easily to adjust resistance values of completed foil patterns to practically any degree of accuracy.

There are further results in the offing. For example: improvements in adhesion, in printing, in resistance to corrosion of the foil conductor, and in improved control of the undercut in etching.

The microphotographs in Fig. 1 and the pictures in Fig. 2 show sections of foil conductors. The three pictures were made for a study of (Continued on page 404)

Fig. 6: High-wattage foil resistors, in ohms: (A) 3300; (B) 20; (C) 50 tapped; (D) 300. (E) Precision decade 5 x 100

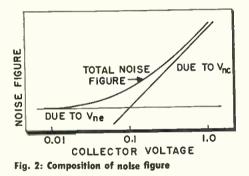


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# **Transistor Operating Points**

Design analysis for high-gain, low-noise amplifier stage shows equations may be utilized to predict performance

THE gain and noise figure of a junction transistor when used as an amplifier are functions of the collector-to-base voltage. In order to arrive at suitable design equations giving reasonable gain with relatively low noise figure, it is desirable to find the collector to base voltage "operating point" at which



the ratio of gain G to noise figure F is a maximum, if such exists, for a fixed set of terminations and a fixed emitter current bias. It is also desirable to predict, if possible, this "operating point" from the parameters of a transistor. Hence, the ensuing investigation deals with the relation of transistor noise and gain to the collector-to-base voltage "operating point."

The self-noise power of a transistor has been shown to have an amplitude variation approximately inversely proportional to frequency.<sup>1</sup> This characteristic of the transistor

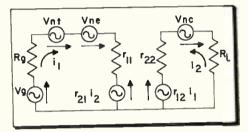
#### By ROBERT E. SKIPPER Haller, Raymond & Brown, Inc. State College, Pa.

self-noise should result in a favorable comparison of transistors to vacuum tubes in the megacycle per second frequency regions where vacuum tube amplifiers can have noise figures as low as 1.35 db at 30 Mcs. when used in a Wallman cascade amplifier.<sup>2</sup> However, the use of transistors at low frequencies involves difficulties with self-noise.

Numerous measurements of the noise figures of both point contact<sup>1</sup> and junction<sup>3, 4, 5, 6, 7, 8</sup> transistors have been given showing the relation of the noise figure to the collector-tobase voltage which is the circuit characteristic upon which the noise figure is mainly dependent. The nature of these measured variations of the noise figure F with the collectorto-base voltage V. for a grounded base amplifier suggests the possibility of a maximum in the gain vs. noise figure characteristic since the noise figure F is essentially constant with increasing  $V_c$  up to a certain V<sub>c</sub> and then increases with further increases in V<sub>c</sub>, while the gain has been shown to increase with increasing V<sub>e</sub> up to a certain Ve and then remain constant for further increases of V<sub>c</sub>.\* These are for a fixed load impedance, fre-

TABLE 1								
,	Maximum Gain in db		$V_{\rm c}$ for Gain Saturation					
Transistor	Measured	Calculated	Measured	Calculated				
RCA #A 5240	18.39 db	19.22 db	0.08 v	0.09 v				
RCA #A 5521	18.86 db	19.22 db	0.09 v	0.08 v				
RCA #A 5458	19.23 db	19.64 db	0.085 v	0.097 v				
RCA #A 5473	18.90 db	18.89 db	0.105 v	0.095 v				
GPC #6	16.95 db	17.83 db	0.16 v	0.07 v				
GPC #9	15.06 db	19.60 db	0.24 v	0.08 v				
GPC #10	17.50 db	20.35 db	0.24 v	0.09 v				
	For: I. = 100 µa;	$R_{\rm L} = 25$ K ohms;	$R_g = R_{in}$					

quency, emitter current bias, and generator impedance.



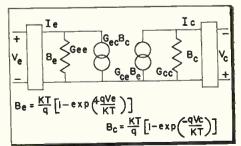
#### Fig. 1: Equivalent transistor circuit

The values of noise figures given in the references indicate that the junction transistor is considerably quieter than the point contact transistor. Hence, it is logical to turn to the improvement of the junction transistor noise figure since it is much closer to the ideal of O db. Thus all of the experimental work of this investigation is performed with junction transistors.

The noise figure, customarily expressed in db, is defined as 10 log of the ratio of the "input available signal power to available noise power ratio" to "output available signal power to available noise power ratio" and is a measure of the degradation of the signal-to-noise ratio as the signal and noise pass through the network in question.

If it is assumed that the input noise comes entirely from the generator resistance  $R_{z}$ , the input noise voltage  $V_{nt}$  will have an open circuit RMS value equal to the square root of 4 KT  $\Delta f R_{z}$  where K is Boltzmann's constant, T is the absolute temperature in degrees Kelvin, and  $\Delta f$  is the frequency band in CPS over which the open circuit noise voltage

Fig. 3: Transistor equivalent network



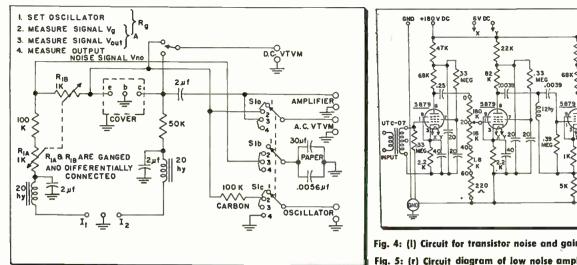


Fig. 4: (I) Circuit for transistor noise and gain measurements Fig. 5: (r) Circuit diagram of low noise amplifier

is measured. Thus the noise figure F is

$$F = \frac{V_{no^2}}{4 \text{ KT } \Delta f R_g a^2} \qquad (1)$$

where  $V_{no}$  is the output noise voltage and A is the ratio of the amplifier open-circuit output voltage to the generator open-circuit output voltage.

Using the equivalent circuit for a transistor shown in Fig. 1, the following equation can be written for the noise figure

$$F = 1 \oplus \frac{1}{4 \text{ KT } \Delta f R_g} \left[ V_{ne^2} + \left( \frac{r_{11} + R_g}{r_{21}} \right)^2 V_{ne^2} \right] (2)$$

where  $\oplus$  indicates the correlation between  $V_{n*}$  and  $V_{n*}$  is to be taken into account when combining the two terms, where  $V_{ne}$  and  $V_{nc}$  are respectively the emitter and collector equivalent internal noise voltage generators. When

$$R_{g} = r_{in} = r_{11} - \frac{r_{12} r_{21}}{r_{22} + R_{L}}, \text{ eq. 2 becomes}$$

$$F = 1 + \frac{1}{4 \text{ KT } \Delta f \left[ r_{11} - \left( \frac{r_{12} r_{21}}{r_{22} + R_{L}} \right) \right]} \left[ V_{ne^{2}} \oplus \left( \frac{2r_{11} - \frac{r_{12} r_{21}}{r_{22} + r_{L}} \right)^{2} V_{no^{2}} \right] (3)$$

Little information has been published about the behavior of the noise voltage Vnc and Vnc. However, Montgomery<sup>8</sup> presents data for the variation of the collector noise voltage Vnc with the collector-to-base voltage V. in which the curve with the highest slope yields the following empirical equation:

 $V_{no^2} = 0.75 \times 10^{-8} V_o^{4.2}$ over the region of Ve from 0.4 v. to 0.1 v. Schaffner and Keonjian<sup>5</sup> indicate that the noise figure versus V.

curve for a junction transistor is the result of the combination of a constant emitter noise voltage Vne and an increasing collector noise voltage Vne (Fig. 2).

The gain is defined as the ratio of the output power to the available power from the generator and is variously termed "operating power gain" or "transducer gain."

$$G = \frac{P_o}{(V)_{g^2}/4R_g}$$
(4)

In terms of the parameters of Fig. 1, the equation for the gain can be written as follows:

$$G = \frac{4R_{g} R_{L} (r_{21})^{2}}{[(r_{11}+R_{g}) (r_{22}+R_{L}) - r_{12} r_{21}]^{2}}$$
(5)  
which equals

$$G = \frac{R_{L} r_{21}^{2}}{(r_{11} R_{L} + r_{11} r_{22} - r_{12} r_{21}) (r_{22} + R_{L})} (6)$$
when  $R_{L} = r_{12}$ 

C

G and F can be represented in terms of the operating bias and the short circuit conductances. Shockley<sup>®</sup> has given the current-voltage relationships for a transistor in terms of the short-circuit conductances. Since the conductances are voltage sensitive, it is possible to represent both the noise figure F

and the gain G in terms of the parameters of the transistor and the supply voltages. The following relations for the grounded base configuration are utilized in the transformation from the resistive parameters of Fig. 1 to the zero voltage conductance parameters of Fig. 3,

$$r_{11} = \frac{G_{ee}}{[G_{ee} G_{ee} - G_{ee} G_{ee}] \exp\left(\frac{q V_e}{KT}\right)}$$
(7)  
$$r_{12} = \frac{-G_{ee}}{[G_{ee} G_{ee} - G_{ee} G_{ee}] \exp\left(\frac{q V_e}{KT}\right)}$$
(7)  
$$r_{21} = \frac{-G_{ee}}{[G_{ee} G_{ee} - G_{ee} G_{ee}] \exp\left(\frac{-q V_e}{KT}\right)}$$
(7)  
$$r_{22} = \frac{G_{ee}}{[G_{ee} G_{ee} - G_{ee} G_{ee}] \exp\left(\frac{-q V_e}{KT}\right)}$$
(7)

where V. and V. are the magnitudes of the emitter-to-base and collectorto-base d-c supply voltage respectively,  $G_{ec} = G_{ce}$ , and q is the charge of an electron.

Substituting the relations of Eq. 7 in Eq. 3 and Eq. 6 respectively yields Eqs. 8 and 9.

$$F = 1 + \frac{\exp\left(\frac{q}{KT}\right)}{4 \ KT \ \Delta f} \begin{bmatrix} V_{ne^2} \left\{ G_{ee} + R_L \left( G_{ee} \ G_{ee} \ - G_{ee} \ G_{ee} \right) \exp\left(\frac{-q}{KT}\right) \right\} \\ \left\{ 1 + G_{ee} \ R_L \exp\left(\frac{-q}{KT}\right) \right\} \\ \left\{ 1 + G_{ee} \ R_L \exp\left(\frac{-q}{KT}\right) \right\} \\ \left\{ 2G_{ee} \ G_{ee} - G_{ee} \ G_{ee} + 2G_{ee} \ (G_{ee} \ G_{ee} - G_{ee} \ G_{ee}) \ R_L \exp\left(\frac{-q}{KT}\right) \right\}^2 \exp\left(\frac{-2qV_e}{KT}\right) \\ \hline G_{ee^2} \left\{ G_{ee} + \left(G_{ee} \ G_{ee} - G_{ee} \ G_{ee}\right) \ R_L \exp\left(\frac{-qV_e}{KT}\right) \right\} \left\{ 1 + G_{eo} \ R_L \exp\left(\frac{-qV_e}{KT}\right) \right\} \exp\left(\frac{2qV_e}{KT}\right) \\ and \\ G = \frac{R_L \ G_{ee^2} \ exp\left(\frac{q}{KT}\right)}{\left[G_{ee} + R_L \left(G_{ee} \ G_{ee} - G_{ee} \ G_{ee}\right) \exp\left(\frac{-qV_e}{KT}\right)\right] \left[1 + G_{eo} \ R_L \exp\left(\frac{-qV_e}{KT}\right)\right] \\ (9) \\ (2ntinued on page 174) \end{bmatrix}$$

#### TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

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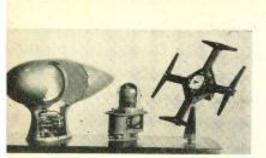
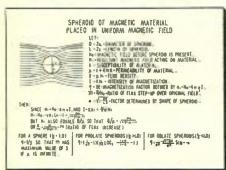


Fig. 1: Four radio compass loop antennas

**B**EFORE we discuss the magnetic antenna let us take a few minutes to go over the factors which determine the pickup of a loop antenna.

The voltage induced in an air core loop is dependent upon the number of turns, the height of the loop in wavelengths and the width of the loop in wavelengths. It is also a function of the orientation of the loop with respect to the signal source and the signal frequency. The effectiveness of the loop as a means of extracting energy from a passing wave is low because of the tendency of the opposite legs to cancel the effect of each other. The reason a loop has any pickup at all is because there is a small phase delay of the signal between the time it arrives at the front leg and the time it arrives at the back leg of the loop. The Bendix MN-36 loop shown at the left in Fig. 1 is an 8-in. air core coil having eight turns. The effective height is .05 in. at 200 KC. The phase difference between the front and back legs is approximately 1/36 of a degree at the low end of the operating range. These figures are for the loop in maximum pickup position, but, when used in radio compasses, the loop is operating near the null and the pickup at 2° from the null is the aforementioned pickup times the sine of 2° or an effective height of .05 in. times .035 or .0017 in. and the phase difference between the two legs is about 1/1000th of a degree. When you tell an aeronautical engineer that a device having an effective height of 0.002 in. cannot cause much drag, he will pay no attention

#### Ftg. 2: Configuration of spheroid of magnetic material placed in a uniform magnetic field



# **Designing an Aircraft**

Construction, performance and aerodynamic considerations for antenna in automatic direction finding system

By AL HEMPHILL Bendix Radio Div. Bendix Aviation Corp. Baltimore 4, Md.

The loop antenna is used on aircraft primarily as a direction finder because it has a figure 8 pattern with sharp nulls. Its most convenient application is combined with a unidirectional antenna in a Radio Compass. Nearly all commercial airlines and military planes have radio compass installations for navigation. The loop is also used for reception of signals under high static conditions.

and will insist that the drag is too high and must be reduced. The MN-60 iron core loop was a step in the right direction. The iron core with a permeability of about 50 and an effective permeability for the shape factor of about three, gives the same pickup as an 8-in. diameter air core loop with an area about one-half as great.

The powdered iron core loop has more pickup for the same area, because the high permeability results in an increase in flux, and because of the delay in propagation due to the permeability and dielectric constant of the iron. The velocity of propagation is inversely proportional to the square root of the permeability of the material. A higher permeability material has more lines of flux for a given magnetomotive force and the lower propagation rate gives more phase difference between the front and the back legs, so that pickup is increased. That is, a loop of given area and number of turns has much more pickup when a magnetic material is inserted but the inductance is also increased so in order to keep the same inductance, the number of turns must be reduced. However, with the introduction of the magnetic material, the pickup increases faster than the inductance increases so we still gain in effective height. The factor that contributes most to this fortunate circumstances is the change in propagation velocity.

#### Theory

A study was made to determine what happens when a magnetic ma-

terial is inserted in an electromagnetic field. We have made a number of charts to show the practical aspects of this effect. Fig. 2 shows the effect of a spheroid of magnetic material placed in a uniform magnetic field. A spheroid was used in these calculations because it is much easier to handle than a cylinder or bar. The practical differences are small and since we only want to get an idea of these characteristics to guide us in the development, the error due to using a spheroid would be of little consequence. Note the three form factors at the bottom of the chart and the formula for the demagnetization factor G given for each of these three form factors. For a sphere that is L/D=1, G=1/3 and when 1/3 is substituted in the formula on the next line above, M will be seen to have a maximum of three when permeability is infinite. So we do not get much gain by the use of high permeability materials if we use

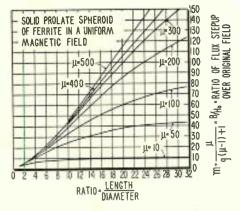


Fig. 3: Ferrite spheroid in a magnetic field

a sphere. The prolate spheroid formula in the center is the only one used in subsequent calculations and charts. Fig. 3 shows M (the ratio of flux step-up over the original field) plotted for various values of lengthto-diameter ratios of a solid prolate spheroid in a uniform magnetic field. This chart shows that if the lengthto-diameter ratio is small, that is two or less, the flux step-up is almost independent of permeability

## Magnetic Loop Antenna

for permeability ranges from 10 to 500. It shows that in order to take advantage of high permeability materials, the length-to-diameter ratio must be large. Our problem was to design an antenna for high speed aircraft where drag is a very important factor. A thin flat shape lends itself to this application when we take into consideration drag and pickup. Such an antenna can be mounted, external to the aircraft, in

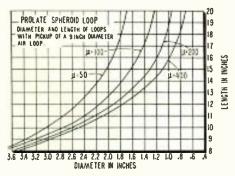


Fig. 4: Prolate spheroids having same pick-up as a 9-inch diameter air cor loop. U as shown

a very shallow blister that is in the boundary layer where the air flow is much slower than it is some distance from the skin. Or it can be submerged into the skin a short distance and covered with some non-conductive material. We find that high permeability materials such as ferrite are most efficient when in long, thin bars and this is the form that is most easily mounted on an aircraft. You are probably familiar with the German loop used in the last war. It was a long thin loop coil using ferrite rods and submerged into the aircraft skin. This type of loop was built by Bendix Radio and other manufactures nd is being used today. We decided that we could take advantage of this form factor in another way that allowed the rotor to be very small. In this design, we propose to use radial collector bars of high permeability ferrite to collect the magnetic energy and concentrate it at the center where a ferrite goniometer would extract the signal and directional information. The design of the collector bars and pole pieces would be such that a highly concentrated, but very accurate, reproduction of the radiated field would be produced in the center where the pickup loop is located. By the use of this principle, we hoped to be able to get the effective height of our present loop in a device that was very thin and easily mountable on an air-

craft. With the general concept, the next step was to determine the physical size and material. We had determined that the optimum pickup for a radio compass loop antenna for use with our ADF equipment was that of an 8-in. diameter air core loop. We then made the chart of ferrite loop dimensions that would have the same pickup as an 8-in. diameter air core loop. This chart is shown in Fig. 4. On it are plotted rod lengths vs. rod diameters for various effective permeabilities. This chart was very valuable in designing the loop because it allowed us to evaluate the effect of varying one parameter on the other two. For instance, if the air gap is doubled, the effective permeability is approximately cut in two and this chart shows how much increase in length and/or diameter is necessary to get the gain back.

The ferrite material is a ceramic, and therefore, very difficult to work. For this reason, preliminary work on this loop was done by using models made of soft iron in a 400 cps induction field. The preliminary studies on octantal error reduction were made with these models. This allowed us to make detailed investigations in pole piece shapes, and rotor winding investigations on inductance variation, with rotation and octantal error. When these results were checked with the loops using ferrite materials, the correlation was found to be fairly good.

#### Leakage Inductance

One of the problems we ran into in this development was an undesired flux path circumferentially through the pole pieces. This is shown in Fig. 5.

When the rotor is lined up with pole pieces A and C, the leakage inductance due to the flux path in pole pieces B and D greatly increases the inductance of the loop, but contributes nothing to the pickup. If the rotor is turned from this position, the additional air gap between the pole pieces will be in this path and will result in a change in the loop inductance. There are a number of ways to reduce this leakage inductance, but the method we are using consists of a shorted turn placed radially around the pole pieces at their center. The shorted turn introduced a high reluctance in the cen-

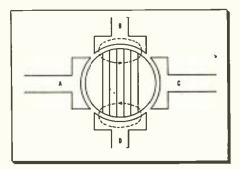


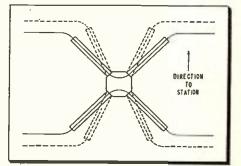
Fig. 5: Leakage inductance in a goniometer

ter of this path and reduced the coil inductance. After the shorted turn was added and the air gap between the pole pieces matched, the winding configuration was developed to give minimum octantal error and make the inductance constant with rotation. The sensitivity of the loop was increased materially by this change.

#### Quadrantal Error Correction

This loop could be corrected for quadrantal error by the conventional mechanical means such as cut cams, adjustable tape cams, eccentrics, and others. The use of four radial collector bars allows a number of methods of correction such as changing the position of the bars, tailoring their length or area, or by adding additional pieces of ferrite. These methods have the advantage of being accomplished without electrical measurement or disassembly of the loop. A further advantage is in the reduction of the amount of mechanism in the loop, with the resulting greater life and less power required from the loop drive motor. Our first models of this loop had collector bars that were pivoted at the pole pieces and positioned so their nominal position was at 45° from the line of flight. A normal quandrantal error would be compensated by moving the bars toward the line of flight. This method resulted in too great a loss in sensi-(Continued on page 382)

Fig. 6: Correction for quadrantal error



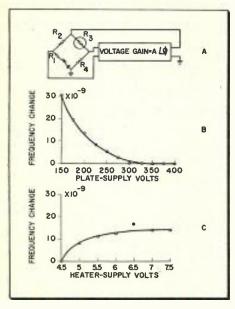


Fig. 1: Operation of Meacham-bridge circuit

HERE is a demand for a compact, simple frequency standard capable of providing a stability of one part in 10<sup>8</sup> per day. Such a standard is useful for checking radio transmitters or receivers, and as a time standard in radio-propagation studies, astronomical measurements, and other types of scientific work. The oscillator to be described, which employes inexpensive, commerciallyavailable components, has shown a maximum frequency change of a few parts in 10° per day, and is expected to have a stability of one part in 10<sup>8</sup> or better in two weeks.

High frequency stability can be obtained by using a crystal unit to control the frequency of an oscillator. Such a crystal-controlled oscillator can be considered to have three elements: the crystal unit itself, an amplifier or negative-resistance device to supply the losses in the crystal unit, and deliver power to a load, and an amplitude control of some kind. The oscillator designer attempts to choose and connect these elements in such a manner that frequency changes caused by tube or component instability are minimized. so that the ultimate stability is nearly that of the crystal itself.

It is understood that any phase shift in the amplifier must be offset by a corresponding, but opposite, phase shift in the crystal unit, thus producing a frequency change. Such a phase shift can be caused by an actual reactance change, resulting, perhaps, from a tube-capacitance change or a drift in the value of an inductor or a capacitor. It can be caused by a variation in the magnitude of a voltage gain, producing a change. Miller-effect-capacitance Phase shifts can also be produced by the electronic component of the in-

## High Stability

Stabilized, crystal-controlled 1 MC oscillator, constructed of inexpensive, commercially available components, provides accuracy of 1 part in 10<sup>8</sup> per week

put capacitance of a tube, by transit time, and by the effects of nonlinearity.

At least three general types of techniques have been used to decrease the effects of amplifier variations: Low reactances can be placed across the amplifier terminals, effectively decoupling the resonator from tube-capacitance changes;<sup>1</sup> phase shifts can be decreased by the use of inverse feedback;<sup>2</sup> or the resonator can be driven by an external oscillator whose frequency is adjusted to resonance by means of a servo system.<sup>3</sup>

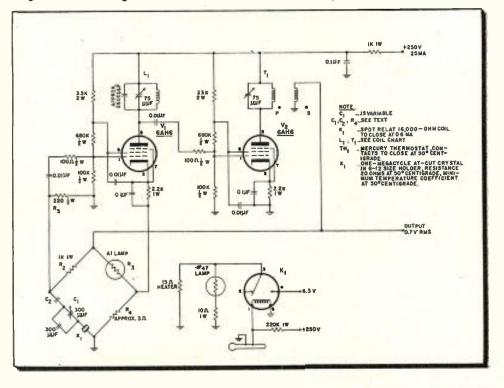
#### Meacham Bridge-Oscillator

The second method was chosen here because excellent results can be obtained with a comparatively simple circuit. Although good results can be obtained with the first method, the need for a separate amplitude control usually requires the use of three or more tubes because the amplitude control required for constant crystal drive normally conA simple frequency standard capable of providing a stability of one part in 10<sup>s</sup> is described. The oscillator employs the Meacham-bridge circuit and a relatively inexpensive crystal unit.

tains a feedback amplifier and rectifier for automatic gain control. The third method can provide extremely high performance, but is too complicated for consideration as a simple oscillator.

The familiar Meacham bridge-oscillator, which can be classified under the second method, is shown in Fig. (1a). It is convenient to study the operation of the bridge in terms of positive and negative feedback.<sup>4</sup> Here negative feedback occurs through  $R_2$  and the crystal resistance R<sub>1</sub>, while positive feedback occurs through the lamp resistance R<sub>3</sub> and resistor R<sub>4</sub>. If the amplifier has sufficient gain, oscillation will start at the frequency of minimum degeneration, which is nearly the seriesresonant frequency of the crystal, and the lamp resistance will increase with the amplitude of oscillation un-

Fig. 2: Schematic diagram of oscillator. DC stabilization is accomplished by returning grid to B $\pm$ 



## **Frequency** Standard

til the bridge is nearly balanced. When an equilibrium is reached, the bridge attenuation must equal the amplifier gain.

Considering a small amplifier phase angle  $\phi$ ,

$$\phi_{f} = \frac{\phi}{1 + A\beta} = \frac{\phi}{1 + A}, (R_{1}/R_{1} + R_{2})$$

where  $\phi$  is the phase angle of the amplifier without feedback,  $\phi_f$  is the phase angle with feedback, and  $\beta$  is the transmission through the negative-feedback path. Thus good phase



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stability requires a large voltagegain A and a maximum transmission  $\beta$ . Unfortunately, however, there are practical limitations to the increase of  $\beta$ . With a given amplifier, the product  $A\beta$  cannot be increased without increasing the crystal current or decreasing the lamp voltage. both of which are undesirable. The glass-enclosed, contoured AT-cut crystal chosen for the oscillator has a Q of 5 x  $10^5$  and a resistance of 20 ohms, but the crystal current must be kept below one milliampere. However, the A-1 switchboard lamp, which is a suitable amplitude-control element, requires at least 0.7 volt for proper operation. If a crystal current of 0.7 milliampere is specified, R<sub>2</sub> will be approximately 1000 ohms, and  $\beta = \frac{1}{50}$  with a 20-ohm crystal. If A = 1000,  $A\beta = 20$ , and a 20-fold reduction in effective phase shift is obtained.

#### **Voltage** Gain

Studies of several amplifier designs have shown that sufficient voltage gain for good amplitude stability cannot be obtained with only one stage. The crystal current must be kept constant because the resonant frequency is a function of current. With two similar stages the voltage gain is squared, while the shift is at most doubled, permitting sufficient

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gain without greatly increased phase shift. Although the use of three stages might appear to be even better by similar reasoning, the requirement for at least three tuned circuits leads to serious difficulties in controlling the sign of the feedback at frequencies far removed from the operating frequency, with a tendency toward parasitic oscillation.

A two-stage amplifier with a voltage gain of 1000 exhibited a maximum phase shift of  $\pm 10^{\circ}$  over a two-to-one supply-voltage range. Using the bridge discussed above,  $A\beta = 20$ , the maximum expected phase change with feedback becomes  $\pm 0.5^{\circ}$ . The crystal must experience the same phase shift, and its frequency will be pulled accordingly. A simple calculation shows that if  $Q = 5 \times 10^5$ , the corresponding fractional frequency change is  $\pm 1 \times 10^{-8}$ . Thus, with reasonably constant supply voltages, the shortterm frequency stability can be expected to be somewhat better than this. The long-term stability will depend on these and other factors, however, including the drift of the crystal resonator itself.

Figs. 1(b) and (c) show the effects of plate-supply and heatersupply variations on the frequency of the oscillator.

Fig. 2 is a schematic diagram of the oscillator, which employs two type 6AH6 pentodes. This tube type was chosen because it has a high trans-conductance and a long effec-

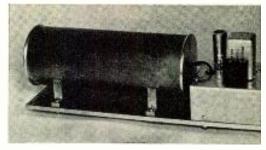


Fig. 3: Frequency standard. Crystal oven at left

tive life. Direct-current stabilization, which is accomplished by returning the control grid to a positive supply and using a high value of cathodebias resistor, helps stabilize the operating point. A tuned circuit including  $L_1$  is used for interstage coupling, while a tuned transformer is used at the output. Although a tuned input transformer would provide more gain, it would be difficult to obtain proper control of the phase shifts in the system. To this end,  $L_1$  has been designed with a high Q, and  $T_1$  with a low Q to decrease the gain rapidly with minimum phase shift outside the passband of the amplifier. The shunting resistor  $R_5$  is also used to keep the phase shift under 180° when the loop gain exceeds unity. This decreases the effective Q of the crystal unit approximately 10%, which is not considered important in the present application. Coil-design data are given in the accompanying paragraphs.

A frequency adjustment of  $\pm 5$ cycles is provided by the variable capacitor C<sub>1</sub>. The initial frequency adjustment is made with C<sub>2</sub>. If the crystal is series-resonant 20 cycles or more below one megacycle, a capacitor C<sub>2</sub> can be used here. If the crystal unit is higher in frequency, however, an inductor may be re-

(Continued on page 420)

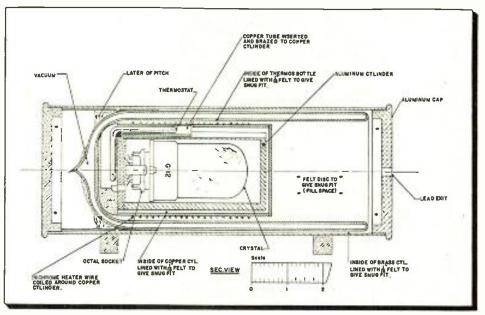


Fig. 4: Crystal oven uses Dewar flask to isolate controlled chamber from outside temperature changes

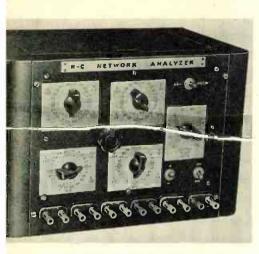


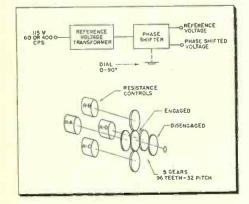
Fig. 1: New R-C network analyzer

Operating without tubes, directly from the power line, this new R-C network analyzer determines the phase and amplitude response of R-C networks at any frequency. In addition, the built-in phase shifter can be used in checking the phase shift in servo amplifiers and other electronic circuits at power frequencies. The phase measurements are accurate to 0.5 degree. Only an oscilloscope and several decade condenser boxes are required as auxiliary equipment: no audio oscillator is needed. The circuit to be analyzed is simulated using resistance elements contained within the R-C network analyzer and auxiliary decade condenser boxes. All measurements are made using the simulated network. After the desired response is obtained using this network, the actual network can be checked at either 60 or 400 CPS. Provision is not included for checking the actual network over the full frequency range. This would require a far more complicated and more expensive group of equipment.

A NEW R-C network analyzer has been developed which operates on the principle of varying the resistance elements in the network in lieu of the operating frequency (Fig. 1).

Changing the resistance values in an R-C network by multiplying them by some constant, K, produces the same phase and amplitude variations that would be obtained by

Fig. 2: Analyzer block diagram, gear controls



## Simplified R-C Network Analyzer

Rapid measurements of circuit phase and amplitude response made possible by instrument which varies resistance elements, keeping frequency constant



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changing the frequency of the input

signal by the same factor. Thus, it is

possible to determine the phase and

amplitude response of an R-C net-

work at any frequency by use of a

single frequency source provided a

means is made available for chang-

ing the values of all the resistances

simultaneously. This has many ad-

vantages. In the first place phase

measurements are far simpler when

made at a single frequency. The

need for wide band test equipment

is eliminated. Unwanted stray ca-

pacity effects usually encountered

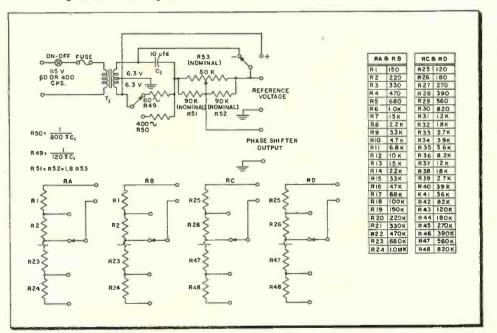
when making high frequency meas-

urements can be eliminated by using a sufficiently low test frequency. Difficulties normally encountered in making response measurements at frequencies below about 20 cps are also eliminated.

#### Analyzer Construction

A block diagram of the R-C network analyzer is shown in Fig. 2. The analyzer provides a means for varying all the resistances in a network simultaneously and in proportion to frequency over the frequency range for which the network is to be analyzed. External decade condenser boxes are used as shown in Fig. 7 for establishing the various condenser values used in the network to be analyzed. A reference voltage transformer in the analyzer supplies the necessary input voltage to the network and a built-in phase shifter is used to determine the phase shift in the network. The output of the phase shifter is applied to one input of an oscilloscope and the output of the network to be analyzed is ap-

Fig. 3: Schematic diagram of R-C network analyzer circuit and resistance values



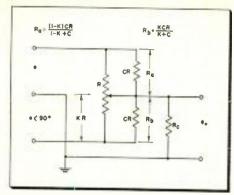
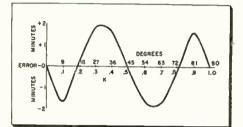


Fig. 4: Linear phase shifter circuit

Fig. 5: Error curve for various pot settings



plied to the other oscilloscope input. After adjusting the phase shifter to give a straight line on the oscilloscope the network phase shift may be read directly off the phase shifter dial. Where the amplitude response of the network is also desired, a VTVM may be connected directly across the output terminal of the

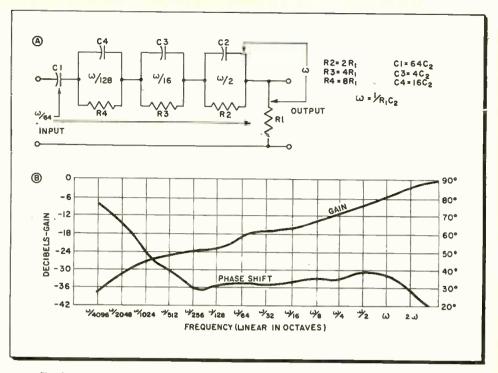


Fig. 6: Low frequency compensation network and corresponding frequency response curves

network to obtain the measurement. In cases where large resistance values are used and the highest accuracy is required it may be desirable to operate the network into an isolation amplifier, such as a cathode follower, to prevent loading by the

meter and the oscilloscope. Some of the newer VTVM's have 10 megohms input resistance and also have amplifier output terminals available. If the oscilloscope is connected across these output terminals as in

(Continued on page 414)

#### PART II OF TWO PARTS Systems Engineering for Flight Instruments

By LAWRENCE J. FOGEL Stavid Engineering Co. 312 Park Ave., Plainfield, N. J.

Before we review how these communication qualities can be used to guide the design of an instrument display, it is necessary to consider the system requirement that the human operator must share his time among several displays in order to gather the variety of information he needs concerning the state of the aircraft. This switching from parameter to parameter can be considered in terms of mathematical sampling, We can determine what the minimum periodic sampling rate must be to avoid the loss of any information in the sampled parameter. If the observer receives the amplitude of the function in almost "instantaneous" samples, then the time interval of sampling can be as great as T =1/2W and still provide all the information contained in the continuous message. W is the highest frequency harmonic in the displayed signal.

Since the human often perceives the rate of display value change as well as the displayed value itself, it was found necessary to extend this basic sampling theorem so as to redetermine the required periodic sampling rate which will still lose no information. The mathematical derivation provides a surprisingly simple result, T = M/2W where M is the total number of derivates observed

With this as a basis, one aspect of a practical problem which has received much attention in the recent past can now be solved in an analytical manner. It may be stated to be approximately true that a pointer-type indicator need be sampled only half as often as a counter display. This is because the counter allows little or no human judgment of the rate of change of the displayed value whereas the pointer almost forces the observer to judge the first time derivative of the displayed signal. If this were the only aspect of the counter vs. pointer controversy, this would provide the answer; however, other qualities have yet to be clearly defined and measured before each display can be properly evaluated.

It should be pointed out that this sampling difference in display quality must be biased in the practical evaluation to account for the fact that human judgments of rate have varying degrees of accuracy in comparison with the perception of the signal value. Further, the pilot normally samples aperiodically. Much work remains to be done to explore and utilize the mathematics of sampling in the design of one aspect of displays.

The pilot normally puts out a continuous operation on the aircraft controls. What he is operating on is the smoothed result of his sampling, where each one of the samples is, in itself, the smoothed value received during the observation time interval. Let us first examine this latter smoothing: It can be shown mathematically that the human operator raises the signal-to-noise level by watching the display for some short time since he normally performs some type of nonlinear weighted averaging. Since the signal spectrum is predominantly at the lowest frequencies which is not generally true

(Continued on page 140)

Survey of Power Transistors Currently Available

Compiled by R. P. TURNER, Registered California Engineer, 919 E. 116th Pl. Los Angeles, Calif.

	1.1	-	6.2	1				X-78	X-108	HD-197		- 1	INZ	2N83	VIN SA	CANS CANS	1 NINT	AD NO N
Type	PNP	aNd	F	ANA	PNP	NPN	NPN	ANP	AND	PNP	dNd	dNd		alva.	-NP	plementery with 2066	INA	Aleman tery
							SILICUN	Collandar	Collector		Collector	Collector	Collector	Emitter	Emitter	Collector	Collector	Collector
Flactorde Potential of Cooling Structure	Collector	Collector	Collector Collector Collector Collector	Collector	None			CONSCION	MUICCINI			Ameri	Am	Am	Anv	Anv	Anv	Anv
The Parition					Any	Any	Any			Any	Aux	101	407	TAN ARY	100 787	(R)	(8)	(R)
Contract and the second					5		85			53(s)	101 100	141	EN C E	30 /5/	22 (E)			
Max. D-C Collector Voltage	-30 (F)	-30 (F)	-30 (F) -60 (G)	-30 (F) -60 (G)	-45	35	8	-100	-100	-20	-90 (C)	-25	-22 C-B	45 (C)	-30 (C)	25	-25	25
Max. D_C Collector Current (ma)	-800	-800	400	-400	-50 (A) -100 (B)	75	100	-1000	-1000		-800	-1500	-250	-1000	-1000	1500	-1500	1500
Cutoff Current. i (ma)	-8 (-60V)	-8 (-60V)	-8 (-60V) -8 (-60V) -1.0 (-60V) -1.0 (-60V) 0.1 (C)	-1.0 (-60V)	0.1 (C)	25µa (P) 0.2 (Q)		1.2 (C) 3.0 (N)	0.3 (C) 3.0 (N)		-8.0 (-60V) 0.1 (E)	0.1 (E)		0.1 (E)	0.1 (E)			
Max. Dise. in free Air (works)					0.350 (A) 0.500 (B)	0.100 (G) 0.080 (F)		0.3	0.3	0.500		2.0	1.0	2.0 (H)	2.0 (H)	2.5	0.1	1.0
Max. Diss. with Heat Sink (watts)	20 (T)	20 (T)	5 (U)	5 (U)	0.500	0.350 (G) 0.200 (F)	1.0 (L) 1.5 (M)	(r) 0°£	(r) 0'E		20 (T)	4.0		() () () ()	() (r) (l)	4.0	5.0	5.0
Max. Ext. Base-to-Emitter Resistance (ohms)						00				00(F)		0.975		.94	.95			
ha Cutoff Frequency (kc)	20 (F)	20 (F)	20 (F)	20 (F)		225		1011	1-7 -1	150 (E)	20 (F)	400 (P)	250 (G)	200	200			
Base-to-Collector Current Amplification					16 1911	9,0		10 (0)		Neclicible		1.0 (P)		.3	.3			
Emitter Resistance (ohms)					10/ Val	32				70 (E)		(b)		25	25			
Base Resistance (ahms)					101 2021	200K				5000 (E)		100K (P)		20K	20K			
Collector Resistance (ohms)					In unce	VION Y						[ 300 (P)		400	400			-
Collector Capacitonce (uvid)	MMM	NNN	MINN	NNIM	HYD.	TEX.	TEX.	TRANSP.	TRANSP.	CBSH	MINN.	SYL.	WEST.	TRANSIT.	TRANSIT.	SYL.	SYL.	371.
ki ninte adminan	MIN N.	"MAINA	_	The second second			and the second s	and the second s										

TTTTTTT

# TABLE 1. GENERAL CHARACTERISTICS

CBSH. CBS-Hyrron. Danvers, Massochusetts. – HYD. Hydro-Aire Inc. Burbank, California. – MINN. Minneapolis. Honeywell Regulator Co. Minneapolis, Minn. – SYL. Sylvania Electric Products Inc. Wobwrn, Massachusetts. TEX. Texas Instruments Inc. Dallas 9, Texas. – TRANSIT. Transition Electronic Corp. Melrose 76, Mass. – TRANSP. Transition Florics Products Inc. Waltham 54, Mass. – WEST. Westinghouse Electric Corp., Electronic Tube Division. Elmiro, N. Y.

## FOOTNOTES FOR TABLE 1.

(A) Without chassis attachment. – (B) With chassis attachment. – (C) At  $v_{\pm} = -45$  v. – (D) At  $v_{\pm} = -22\%$  v. – (E) At  $v_{\pm} = -30$  v. – (F) Common-Emitter Circuit. – (G) Common-Base Circuit. – (H) With heat fin. – (I) With the soft fin.

TABLE 2. TYPICAL OPERATION

Collector Supply Volrage Collector Current (ma) Conse Current (ma) Conservior Resistonce (chma) Input Resistonce (chma)	X-2	X-15	X-78	X-108	HD-197	N57	2N68	2N83	2N84	2N71	1-df	IN	-14 -14	-14	-14	CKN7 21	*12	12
Collector Current (mo) Base Current (mo) Generators Resistance (ohme) Input Resistance (ohme)			-45	45		- 14	1		Not	211	111 IN 2/97-	-		21-		150	-150	150
Base Current (me) Generator Resistance (ohms) Input Resistance (ohms)			-60	-60				T.	NI.	0.0-						5.0	-5,0	5.0
Generator Resistance (ohms) Input Resistance (ohms) Load Besistance (ohms)							11	1	25	21								
Input Resistance (ahms)	-		40	00			1	1	30		165 (F,H)					75	75	75
I and Resistance (ohme)	-		17	200			1		500	500	1000 (F.H)					100	00	3
			200	1 2			11	1	4	0.400	0.400 (F,H)	2.5	2.5	0.1	1.0	0.600	0.600	0.000
Pawer Output (watts)			14/02	(V) YE		12.5	¥		32	25	15 (F,H)	10	20	17	20	23	23	23
Power Gain (db)			iv) no	14.3		ľ	81											
PUSHPULL CLASS-B COMMON BASE					-			~	*									
Collector Supply Voltage	22.5	35				-28	-24	R:	è e									
Collector Current (zero sig. ma)				-			-1.0 ()	140	140									
Collector Current (max. sig. ma)	40	45					N.C.	2 4	25						_			
Generator Resistance (ohms)							000	25	25									
Input Resistance (ohms)							1 A INVEN	5	100				1			5		
Load Resistance (ahms)	1000	2000					4	26	2.0									
Power Output (watts)	0.5	0.1				3 61	10	12	10									
Power Gain (db)	9.5	0.1		A COMPANY AND A COMPANY			~	-										
PUSHPULL CLASS-B COMMON EMITTER							10	30	-20	-40		-28	-28	-28	-28	12	-12	12
Collector Supply Yeltage	22.5	35			-		-1.0 (C)	20	20	-5.0						1,0	0.1.	0.1
Collector Current (zere sig. mo)		47					550	140	140	-120						500	-200	200
Collector Current (max. sig. ma)	40	45		-			50	100	100	5.0						4		00
Generator Resistance (ohms)							50 (B)	100	100						-	20 21	12/21	12/11
Input Resistance (ohms)	VIVI	2000					12 (E)	600	400	170 (E)				0.		12121	S O	50
Load Resistance (olims)	200	1.0					5.0	2.5 (F)(G)	-	- 1		01	00	N.4	200	15	15	15
Power Gain (db)	22.7	14					15	22	20	2		0	40	:	2			
PUSHPUT L CLASS-B COMMON COLLECTOR						-		~	8									
Collecter Supery Voltage	_						21.	R s	3 5				-					
Collector Current (zero sig. mo)		_					- 1.0	S	200									
Collector Current (max. sig. mo)							DOC-	2000	2000									
Generator Resistance (ohms)	-			-			050	200	200									
Input Resistance (ohms)	-						12	8	20									
Load Resistance (ohms)							5.0	15	10						-			
Power Output (watts)							10	2	6 .					_				
Power Gain (db)																		

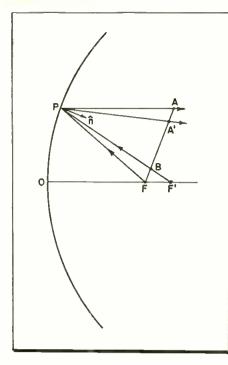


Fig. 1: Principle of construction

#### By DAVID K. CHENG & PRANAS GRUSAUSKAS, L. C. Smith College of Engrg., Syracuse University, Syracuse, N. Y.

'N microwave antenna work, it is often necessary to determine the phase-distribution curve in an aperture plane of a reflector. The phase distribution together with the amplitude distribution of the field in the aperture plane, in turn determines the radiation pattern of the antenna. When the equations of the reflector and the incident wavefront are given, the equation of the reflected wavefront<sup>1</sup> and that of the phase-distribution curve<sup>2</sup> in an aperture plane can be obtained analytically. However, the resultant expressions are quite involved for an arbitrarily located primary source (source of the incident wavefront) and interpretations are difficult.

Based upon the ray theory of geometrical optics, the reflected wavefront and phase-distribution curves can be constructed graphically. A graphical plot affords not only a clear picture of what actually happens but also a general idea of the restrictions on the usual assumption that for small deviations from a uniform phase over the aperture the reflected rays are nearly all parallel to the reflector axis. A non-uniform phase-distribution in the aperture plane of a paraboloidal reflector may be the result of a defocused primary feed for the purpose of testing the radiation characteristics of a microwave reflector in the optical-Fresnel region<sup>3</sup>.

The graphical construction of re-

## **Graphical Construction Of Reflected Wavefronts**

The ray theory of geometric optics provides the microwave engineer with a simple means for computing the radiation patterns of antennas

flected wavefronts is usually based upon Snell's law of reflection which states that the angle of reflection is equal to the angle of incidence; it necessitates first the construction of

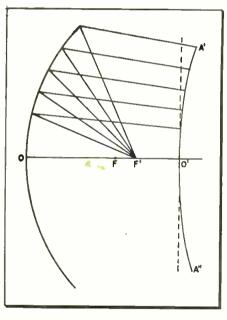
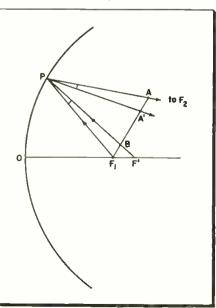


Fig. 2: For defocused ellipsoid reflector

Fig. 3: For defocused paraboloidal reflector



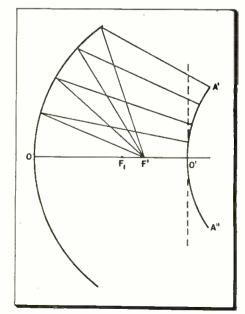
the normal to a given surface at the point under consideration. This is a difficult procedure and is the main source of inaccuracy.

It is well known that a perfect paraboloidal reflector with a point source at its focus F yields reflected rays that are everywhere parallel to the reflector axis. The reflected wavefront is then a plane and the aperture phase-distribution is uniform. If the primary source is at a point F' away from the focus<sup>3</sup>, as illustrated in Fig. 1, then the reflected ray will follow the direction of line PA' with  $\langle APA' = \langle FPF' \rangle$  by Snell's law of reflection.  $\bar{n}$  is a unit normal to the reflector at point P. The reflected ray PA' can be constructed without the use of the angles or the normal by the following procedure:

- (1) Measure  $\overline{PA} = \overline{FP}$  (PA is parallel to OF).
- (2) Draw line FA.
- (3) Join F' and P intersecting line FA at B.

(Continued on page 412)

Fig. 4: Construction for ellipsoidal reflector



## **CUES** for BROADCASTERS

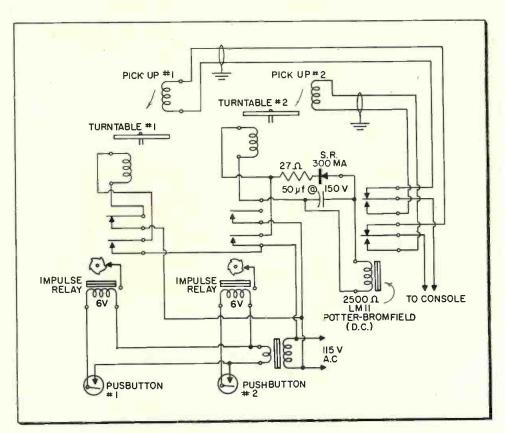
Practical ways of improving station operation and efficiency

#### Automatic Pickup Switching

PHILIP WHITNEY, Chief Engineer R. F. Lewis Stations WINC Building, Winchester, Va.

ITH the recent shift from 78 to 45 RPM recordings for broadcast stations, WINC, after extensive tests, switched from the heavy duty 78 and 331's RPM tables formerly used to one heavy duty three speed model and two of the small three speed models costing about \$60 apiece. (Presto 15G2M). These two small tables were built into a cabinet constructed by a local lumber firm and taking up about the same space as the heavy duty single table they replaced. The new RCA lightweight pickups and equalizers were installed on each table, but no extra input was available on the already overworked console. A separate manual switch was ruled out because the average disc jockey has only two hands. Therefore, an automatic switching device was incorporated into the pushbutton start and stop system, which automatically switches the correct pickup into the one available console input when that table is started up. For economic reasons, only one relay was used in the changeover circuit. The relay is energized when one table is used and de-energized when the table is stopped. The back contacts of this relay connect the other pickup to the console input. Two separate relays could be used, one for each table, so that no pickup would be connected to the console until a table rotates. The way it is set up at WINC, one pickup is always connected to the console. Generally, very little cueing is needed with 45 RPM discs, but is can be accomplished by starting up the table to be cued, then holding the record in place until it is turned off. This is made very easy with the cueing discs supplied by some record manufacturers.

The table motors are started and stopped by "Impulse" relay (Potter-Brumfield AP 11A, 6V.A.C.). With this type of relay, one application of the actuating voltage, (6V.A.C.) rotates a ratchet one step, applying voltage to the turntable motor. During the "on" time, the relay consumes no current. A second impulse



A turntable pushbutton operation with automatic pickup switching

problem is usually solved with a transformer; but good quality transformers cost money. For a simple, inexpensive remedy simply-terminate the line correctly with a resistance.

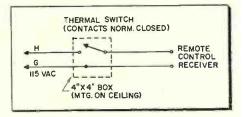
The "pad" shown in the drawing has worked very well. It should be placed near the input jack so that the lead from the pad to the recorder will be short. There may be some circumstances where a little unbalance will remain. If so, try reversing the connections in the recorder input plug. A few seconds experimenting will reveal which is correct.

#### **Remote Fire Alarm**

#### LAWRENCE L. PRADO, JR., Chief Engineer WPEP, Taunton, Mass.

Stations considering the installation of remote control equipment might also give some thought to the possibility of fire during the operating day.

A system which would bring someone from the studio to make an inspection involves the installation of a thermal switch (Fireomatic), such as is used with oil burner equipment. Current prices of the switch shown is about \$1.25, less a standard steel octagon outlet box. Switch should be mounted on ceiling over transmitter or heating plant, and must be in series with line voltage to remote control receiver unit only. Wiring should be done by a licensed electrician and conform to all wiring codes. In case of a fire,



#### An inexpensive thermal switch for fire control

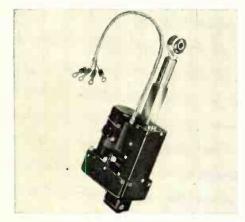
thermal switch would open at a temperature it is set for, removing line voltage from remote control unit thereby turning transmitter off. Most transmitter houses are usually located in an isolated spot where a fire could do considerable damage before being noticed.

(Continued on page 172)

## **New Avionic Products**

#### LINEAR ACTUATOR

The smaller and entirely different Type ACT-3090 linear actuator weighs only 1.40 lbs. and all major dimensions are reduced. Gear train and motor comprise a single unit, and each gear



is made of steel with a 180,000 lb./in. yield strength. Rate can be changed from 1.6 to 30.0 in./min. in convenient steps at any time by substituting two gears. Maximum end-play is less than 0.0018 in. in the screw and nut, due to an especially designed acme screw made to AGMA pitch diameter standards. Either internally or externally adjusted limit switches are available. John Oster Mfg. Co., Avionic Div., 1 Main St., Racine, Wis. (Inquiry Card No. 6-34)

#### SPEED TRANSDUCER

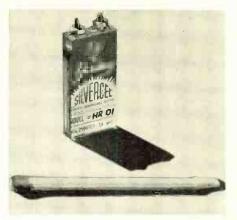
The new, recently-announced vertical speed transducer is a pressure-operated potentiometer with taps and provision for resistance loading across the winding. The mechanism operates in a hermetically-sealed evacuated container inside the instrument case. Outside the evacuated case, a resistor board to accommodate loading resistors can be reached by removing the instrument cover. Can be made linear as to altitude, air speed, and other aerody-



namic functions. The potentiometer wiper moves linearly with pressure over the range 3.42 to 30.36 in. of mercury. Accuracy,  $\pm 1\%$  of full scale voltage ratio. Trans-Sonics, Inc., Bedford Airport, Bedford, Mass. (Inquiry Card No. 6-38)

#### **RECHARGEABLE BATTERY**

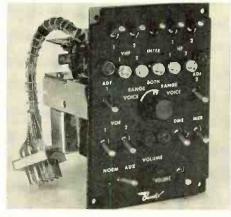
The new "Silvercel," built on a silver-zinc principle, measures  $3/16 \times 5/8 \times 1-1/8$  in. and weighs only 1/6 oz. The 1/10th ampere-hour cell provides maximum continuous drains of 500ma and



peak pulse currents in excess of two amperes. Designed for telemetering, voltage reference, and instrumentation applications, the unit is well suited for use in portable communications, recording, and photographic equipment. Has long cycle life, spill-proof construction, and dependable performance at high altitudes, in a wide temperature range under severe mechanical stress. Yardney Electric Corp., 30 Leonard St., New York 13, N.Y. (Inquiry Card No. 6-36)

#### **AUDIO CONTROL PANEL**

New audio control panels, Models CNA-2A and CNA20, are first that use transistors in airline and executive aircraft communications gear. The former is designed for DC-6&7 and Convair 340 pedestal mounting  $(4\frac{1}{2} \times 6\frac{1}{2} \text{ in.})$ and the latter, conforms to the new RTCA 5.75 in. wide standard. Output level, 75 mw. across 600 ohm load. Fi-



delity, output will vary not more than 4 db from 300 to 3,000 cps. Distortion will not exceed 10%. Temperature range -30 C. to +55 C. Humidity range, up to 95% relative. Bendix Aviation Corp., Communications Div., Baltimore 4, Md. (Inquiry Card No. 6-39)

#### **POSITION LIGHT FLASHER**

The Model T-196A position light flasher incorporates a resistance-capacitance network operating through two relays to switch position lights at the standard rate of 40 cycles per min.



The units meet or exceed the requirements of MIL-F-7414 (USAF). Including terminals and mounting plates, dimensions are  $4 \times 2\frac{1}{8} \times 3\frac{1}{4}$  in. Weight, 1.0 lb. The flasher is hermetically sealed and requires no maintenance. The interrupter circuit, operates on 24 to 30 v. dc. separately from the lamp circuits, which can use any voltage from 5 to 115 (ac or dc) at 30 amps. Electronic Specialty Co., 3456 Glendale Blvd., Los Angeles 39, Calif. (Inquiry Card No. 6-37)

#### **AUDIO AMPLIFIER**

The new Type F-13 audio amplifier is designed to power one or more loud speakers in the cockpit of aircraft. The unit has an output of 8 watts into a choice of 4, 8 or 300 ohms. Its weight, complete with dynamotor and mounting, is 5.9 lb. The output from several



radio receivers may be fed into the F-13 for simultaneous monitoring. Use of a cockpit loudspeaker is particularly advantageous, it is said, on long flights in hot weather when the alternative is headsets. Aircraft Radio Corporation, Boonton, N.J. (Inquiry Card No. 6-35)

## New Terminals & Mounts

#### **BINDING POST**

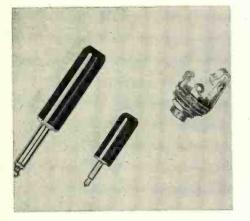
The Series 29 binding post has an O.D. of only  $\frac{1}{2}$  in. which permits mounting on  $\frac{3}{4}$  in. centers or less. Metal parts are brass, cadmium plated 0.0003 in. to 0.0005 in. thick to with-



stand 50 hr. minimum salt spray exposure. Insulation is molded thermosetting phenolic in accordance with MIL-P-14, type CFG. Will withstand approximately  $295^{\circ}$ F without distortion. The  $\frac{4}{32}$  in. crosshole of the stud is flush with the base to minimize crimping or cutting the inserted wire lead. Grayhill, 561 Hillgrove Ave., La Grange, III. TELE-TECH & ELECTRONIC IN-DUSTRIES. (Ask for 5-21)

#### MINIATURE PLUGS

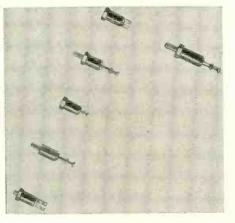
"Tini-Plug" for small radios, tape recorders, and musical instruments, features high-grade insulation throughout, one-piece tip-rod staked into tip terminal to insure tightness, and interlocking terminals and body that eliminate any shifting. Available in black and red "Tenite" handles and shielded handles. "Tini-Jax" features notched



insulating washers that interlock springs and solder lugs mechanically and eliminate shifts that result in "shorts" or adjustment changes. Switchcraft, Inc., 1328 N. Halstead St., Chicago 22, Ill. TELE-TECH & ELEC-TRONIC INDUSTRIES. (Ask for 5-22)

#### STANDOFF TERMINALS

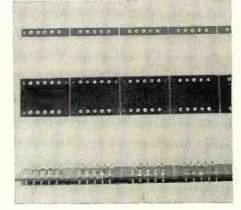
New miniature and sub-miniature insulated standoff terminals for high frequency applications are available for immediate delivery. The terminals are supplied with taper pin connectors to



accommodate ANP taper pins for solderless connections. These pins are also available on the company's "feed thru" terminals, headers, connectors, terminal boards, and other components. Body materials are designed to meet MIL-P-14D specifications. Studs, cadmium plated to QQ-P-416 specifications. Garde Manufacturing Co., 588 Eddy St., Providence 3, R. I., TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-23)

#### TERMINAL BOARD

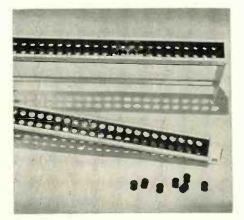
A new standard all-set taper pin terminal board uses new taper pin terminals that enable solderless connections. The boards are available in 5 sections with either 25 or 50 terminals. The 5-section boards can be cut into 5 or 10 terminal sections or used in any desired multiple. Boards are available with single or double end taper pin



terminals. Also available with taper pin terminals to meet specifications of size, type, or number of terminals. Lerco Div. of Lynn-Deatrick, Inc., 501 South Varney St., Burbank, Calif. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-25)

#### **JACK STRIPS**

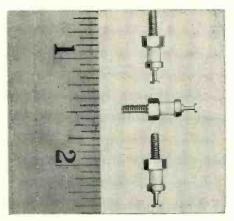
An improved telephone-type phenolic jack strip has molded construction that reduces cost and improves appearance. Each jack strip provides mounting spaces for 26 double jacks or 52 single



jacks. Horizontal and vertical hole spacings are designed for standard plugs such as Western Electric Type 241A. Circuit identification strips are held by a grounded aluminum band that also provides electrical shielding. Polyethylene hole-plugs are optionally available for unused mounting spaces. Lenkurt Electric Sales Co., 1105 County Rd., San Carlos, Calif. TELE-TECH & ELEC-TRONIC INDUSTRIES. (Ask for 5-20)

#### STANDOFF TERMINAL

A new miniature, insulated standoff terminal, designated X2128, is the first of a family designed for production line application. It is similar to the X1980XB in many respects, but exceeds the latter's mechanical limitations. The unit is constructed of solid ceramic rod silicone impregnated for maximum moisture resistance. The unit comes with 1/4 in. long screw stud, 3/48 thread,

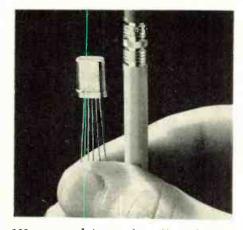


and grade L-5 ceramic insulator, silicone impregnated. Solder terminal is 24 k gold flashed over copper-plated brass. Cambridge Thermionic Corp., Cambridge, Mass., TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-24)

## New Electronic Relays

#### SHOCK-RESISTANT RELAY

The "Neomite," said to be the smallest shock-resistant relay, is a SPDT unit that weighs only 0.035 oz. It has a  $\frac{1}{4}$  amp. contact rating (non-inductive,) and a 26.5 v. dc rating. Its sensitivity is



100 mw. and it can be adjusted down to 40 mw. Capable of withstanding severe shock, vibration, and violent extremes of temperature, it is expected to have particular application in guided missiles. The unit is housed in a standard transistor case ½ in. high. Elgin-Neomatic, Inc., Los Angeles subsidiary of Elgin National Watch Co., Elgin, Ill. TELE-TECH & ELECTRONIC INDUS-TRIES. (Ask for 5-75)

#### SUPER-SENSITIVE RELAY

The Model No. R1-120 super-sensitive relay will operate on as little as 20  $\mu$ w. of control power from dc to 50 Mc ac. Capable of withstanding shocks of 10 G min. and vibration of 10 G from 10 to 500 cps without opening or closing contacts. Hermetically sealed to eliminate the effects of humidity. Computed on the basis of min. input power for switching to product of amps and volts



for output contacts, available power gains are approx. 75 db for ac, or 80 db for dc control signals. Olympic Radio & Television, Inc., Olympic Bldg., Long Island City 1, N.Y. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-73)

#### **COAXIAL RELAY**

A new moving coil relay design incorporates the advantages of the Marion coaxial mechanism. The new unit is sensitive, rugged, and reliable. Hermetically sealed, the miniature relay is



mounted on a standard 7 pin tube base. It weighs  $1\frac{1}{2}$  oz. and is  $\frac{1\frac{1}{16}}{6}$  in. in diameter,  $1\frac{9}{16}$  in high,  $1\frac{3}{16}$  in. overall. Engineering data is available at Marion Electrical Instrument Co., Canal St., Manchester, N.H. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-78)

#### PILOT RELAY

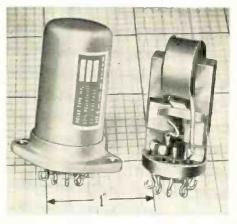
The Model EB electronic pilot relay is able to control large values of current and power with a current flow of only 2  $\mu$ amps. Its unusual cold cathode tube design and construction give greater sensitivity, and longer life. There is no filament to heat up or burn out. Has an unlimited lead length and a current amplification up to 2¼ million. The unit is sensitive to high speed impulses



and operates with an actuating pilot circuit resistivity from 0 to 10 megohms Has a visible jewel operational indicator. Industrial Electronic Controls Co., 2271 East 14th St., Brooklyn 29, N.Y. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-77)

#### 2-POLE RELAY

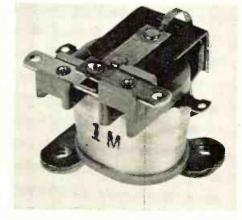
The HG-2SM relay withstands shock accelerations in excess of 20 G's at frequencies up to 2,000 cPs with no contact break. In conjunction with other equipment subminiature Hi-G relays



have passed MIL-E- 5009A qualification test for turbojet engines. The new unit is less than  $1\frac{1}{2}$  in. high and is enclosed in a cylindrical can equipped with a 2-hole mounting flange. Overall dimension,  $1\frac{3}{2} \times \frac{3}{4}$  in. Weight is 1 oz. maximum. Rated at 3 amps, 28 v. dc., and 3 amps, 115 v., ac. Hi-G Inc., Bradley Field, Windsor Locks, Conn. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-74)

#### SPDT RELAY

Tentative specifications of the Type 11F SPDT relay are: 50 mw. operate (24 ma. in 9,000 ohm coil); 1.0 amp. max. contact load; up to 9,000 ohm coil resistance;  $1\frac{3}{2} \times 1\frac{5}{16} \times 1.0$  in. maximum size. Weight 1 oz. The low cost unit is designed for use in such devices as automatic headlight dimmers, radio-



sondes, radio controlled toys, etc. Further data and information on price and delivery are available on request to Sigma Instruments, Inc., 81 Pearl St., S. Braintree, Boston 85, Mass. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-76)

## **New Semi Conductor Products**

#### **SELENIUM RECTIFIERS**

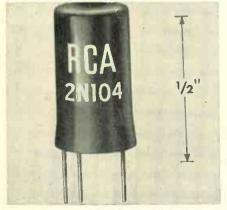
The U100HM hermetically-sealed selenium rectifier has a maxiimum ac. input of 3,300 v. RMS. Output rating is 1,420 v. dc and 1.5 ma. dc current at 35°C ambient temperature into a resis-



tive load. At 71°C ambient temperature --typical airborne ambient—the unit delivers 1.2 ma. dc current at 1,360 v. dc from 2,130 v. RMS ac. input. Lightweight tin-plated brass construction. Measures 5½ in. overall with a  $\frac{5}{16}$  in. O.D. Also available is a complete range of selenium rectifiers with input voltages from 33 v. to 660 v. International Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif., TELE-TECH & ELEC-TRONIC INDUSTRIES. (Ask for 5-65)

#### JUNCTION TRANSISTOR

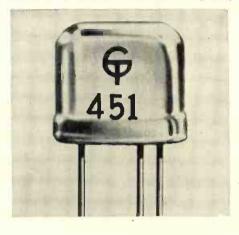
The RCA-2N104 hermitically-sealed, alloy-junction transistor is a p-n-p germanium type intended for lowpower audio applications in communications and other electronic equipment. The unit is only  $\frac{1}{4}$  in. in diameter and  $\frac{1}{16}$  in. in overall length. Plug-in type, the device will fit a linotetrar three-pin base. The design provides a low baselead resistance which minimizes ohmic



losses, improves frequency response, and insures high input-circuit efficiency. Has a maximum noise factor of 12 db. Radio Corp. of America, Tube Div., Harrison, N. J. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-63)

#### TRANSISTOR

The GT-88 diffused P-N-P junction transistor has a 1.0 Mc alpha cut-off frequency and is used in computers, automation, and other high speed circuits. It is double sealed for long life,



encapsulated in plastic, and hermetically sealed in a can. The unit has the following features: Voltage, -25 v. Dissipation at 50°C, 70 mw. Junction Temperature, 85°C. Collector cut-off, 15 µamps. Recently added to the line of transistors and germanium diodes, the new unit is available for immediate delivery. General Transistor Corp., 95-18 Sutphin Blvd., Jamaica, N. Y. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-61)

#### THERMISTOR KIT

The Model 168A "Veco" thermistorvaristor kit contains two each varistor washers, thermistor washers, discs and beads, and one each thermistor probe and rod with miscellaneous mounting hardware. For temperature measurement, control, and compensation, circuit protection, voltage regulation, etc., thermistors and varistors are tiny, extremely sensitive, semi-conductor circuit elements that have great stability. The new kit enables making comprehensive studies and experiments with these units. Victory Engineering Corp., Union, N. J. TELE-TECH & ELEC-TRONIC INDUSTRIES. (Ask for 5-62)

#### MORE TECHNICAL INFORMATION

describing the new products presented here may be obtained by writing on company letterhead to New Products Editor, TELE-TECH & ELECTRONIC INDUSTRIES, 480 Lexington Ave., New York 17, N.Y., listing numbers given at end of each item of interest. Please mention title of position held.

#### SILICON DIODE

The 1N286 silicon crystal diode is a broad-band, coaxial, point-contact type unit designed for use as a crystal mixer. Its internal geometry makes it possible to cover the band of frequencies from



10,000 to 20,000 MC. With the crystal holder made in WR-75 wave guide, the 10,000 MC to 15,000 MC can be covered; made in WR-51 wave guide the 15,000 to 22,000 MC band can be covered. The unit is particularly useful in tunable frequency radar systems and countermeasure devices. Sylvania Electric Products Inc., Electronics Div., Woburn, Mass. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-60)

#### **POWER RECTIFIERS**

New high-current, high-voltage silicon power rectifiers have an efficiency of approximately 99% and are able to withstand up to 200°C ambient temperatures. Occupy about <sup>1</sup>/<sub>8</sub> cu. in. Weigh about 1.0 oz. These all-welded construction, hermetically-sealed units function under the most severe environmental conditions imposed by any known military specifications. The high

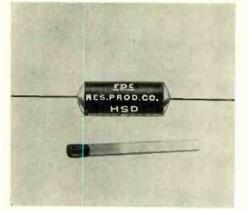


efficiency of the rectifiers is due to their low voltage drop and infinitesimal reverse leakage current—as low as 10<sup>-10</sup> amps. Bogue Electric Manufacturing Co., 52 Iowa Ave., Paterson 3, N. J. TELE-TECH & ELECTRONIC INDUS-TRIES. (Ask for 5-64)

## **New Electronic Components**

#### RESISTOR

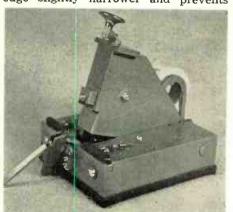
The miniature, hermetically-sealed Type HSD has a maximum resistance value of 10 million megohms. Standard tolerance is  $\pm 10\%$ , but the unit is available in  $\pm 5\%$  and  $\pm 3\%$ . Measuring only



7% in. long by 1%2 in. in diameter, and being light in weight, the resistor can be soldered directly into the circuit without other than lead-wire support. The long path length and use of low specific resistance materials results in extremely low noise level. Low voltage and temperature coefficients. Maximum voltage 2,500 v. Resistance Products Co., 914 S. 13th St., Harrisburg, Pa., TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 6-7)

#### TAPE SPLICER

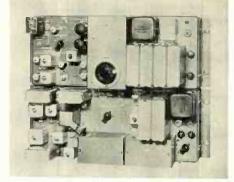
The Skila Model KI tape splicer completes a ¼ in. magnetic tape splice in six seconds. The magnetic tape is inserted into a channel and a 30° crosscut is made by a carboloy cutting wheel. Pressure on a knob causes mechanism to eject, apply, cut off, and press in place the correct amount of splicing tape in one operation. A small amount of magnetic tape is removed from one edge which makes the spliced edge slightly narrower and prevents



tape from hanging on the recording machine guides. Size, 4<sup>3</sup>/<sub>4</sub> by 5<sup>1</sup>/<sub>4</sub> in. Wt., 2 lbs. The Skila Model KI 2 is for <sup>1</sup>/<sub>2</sub> in. magnetic tape. F. Reiter Co., 3340 Bonnie Hill Dr. Hollywood 28, Calif. TELE-TECH & ELECTRONIC INDUS-TRIES. (Ask for 6-4)

#### **POWER LINE CARRIER**

Motorola's transistorized frequency shift power line carrier has a built-in universal power supply that operates interchangeably from either 129 v. dc or 117 v. 50/60 cps ac. The heterodyne



transmitter and superheterodyne receiver provide transmission of highspeed information at the same closed channel spacing of 500 cps throughout the 40 kc to 200 kc bands. Transistors for all but the power output reduce power consumption up to 75%. The receiver consumes only 6 w. without perceptible generation of heat. Motorola, Communications and Electronics Inc., Technical Information Center, 4501, Augusta Blvd., Chicago 51, III. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 6-8)

#### SOCKETS

The New "Hi-Voltage" and "Anti-Corona" for  $1 \ge 2$  type tubes, meet UL requirements and are guaranteed against tracking or carbonizing from corona. Designed to eliminate arcing when subjected to voltage between socket pins and a screw that extends  $\frac{3}{8}$  in. in a hole at the bottom of the post. Mount to chassis with self-tapping screws. Available in general purpose phenolic or mica-filled phenolic. Cup



diameters  $1\frac{1}{2}$  or  $1\frac{5}{16}$  in. Cup depths,  $\frac{1}{2}$  or  $\frac{11}{16}$  in. Cup heights,  $\frac{1}{2}$  or  $\frac{11}{16}$  in. Post height under socket,  $1\frac{1}{8}$ or  $1\frac{3}{8}$  in. National Fabricated Products, Inc., Dept TT, 2650 West Belden Ave., Chicago 47, Ill. TELE-TECH & ELEC-TRONIC INDUSTRIES. (Ask for 6-6)

#### **RADIAL BEAM TETRODE**

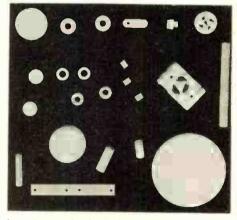
The 4X5000A radial beam power tetrode, constructed entirely of ceramic and metal, has a plate dissipation rating of 5,000 w. and a power output of 16 kw. in Class C telegraphy service through



30 mc. The new tetrode delivers 10 kw. output in Class AB1 service and handles high inputs without going into the positive grid region. The simple coaxial structure allows low lead inductance, and a finned anode improves cooling with low air pressure. Offers greater electron tube reliability and increased immunity to thermal and physical shock damage. Eitel-McCullough, Inc., Technical Service Department, San Bruno, Calif., TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 6-9)

#### CERAMICS

A new line now in production comprises, bodies made of "Steatite," electrical porcelain, and the new "Wollastonite" base ceramic—the research for which was conducted at Rutgers under the sponsorship of the Army Signal Corps. This latter material in the new line has an L-6A rating under the JAN-I-10 Specification and has low

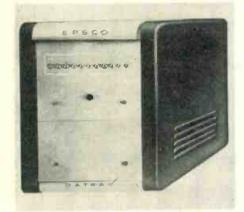


loss factor, high dielectric strength, excellent mechanical strength, good resistance to thermal shock, and high impact strength. R. Guastavino Co., 660 Main St., Woburn, Mass. TELE-TECH & ELECTRONICS INDUSTRIES. (Ask for 6-5)

## **New Computer Products**

#### DATA TRANSLATOR

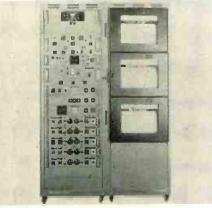
The "Datrac" data translator for use with analog computers, or as a laboratory instrument converts the voltage of a single input to digital output at 100,-000 samples per second. Also, it will



furnish continuously a parallel digital code at its output from a varying voltage input every 10 usecs, and provide immediate follow-up of each new signal input with a digital code at the output. The servo type voltage-to-digital converter consists of a reversible counter, and input comparator and control circuits. Accuracy is  $\pm 0.05\%$ with a full scale range as small as 20 mv or as large as 10,000 v. bipolar. Epsco Inc., 588 Commonwealth Ave., Boston 15, Mass. (Inquiry Card No. 6-40)

#### **PLOTTING DEVICE**

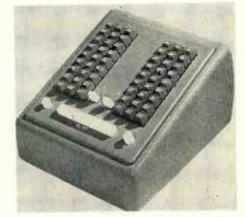
The "Plottomat" automatically plots and integrates values of any combination of parameters and reduces data compilation time. Adaptable to existing card punch systems, or the data can be fed into "IBM" or "Univac" calculators. Information can also be read visually. Automatic test programming and provision for constant plotting rate under maximum speed of obtaining data are possible applications. Can be used for



recording experimental turbine test rigs, testing stress or bending loads in steel strucures or airframes, and in laboratories where pressurers, temperatures, or angles are test parameters. Allied Engineering Division, South Norwalk, Conn. (Inquiry Card No. 6-45)

#### PLOTTER KEYBOARD

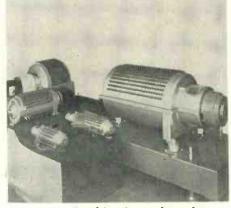
A new manually-operated decimal keyboard activates the Librascope Types "A" and "B" X-Y plotters and the punched card converter system by supplying excitation for the X and Y



input transducers. Self-wiping slide type contacts linked directly to the keys completely eliminate necessity for switch and contact adjustments. The keyboard simulates resistance potentiometers by two voltage dividers (one each for the X and Y axes) each consisting of three banks of series-connected precision resistors that are switched into the input circuit by front panel keys. Energized by recorder voltage. Size, 6 x 11 x  $8\frac{1}{2}$  in. WT., 12 lbs. Librascopc Inc., Glendale, Calif. (Inquiry Card No. 6-44)

#### MAGNETIC DRUMS

Five standard ERA magnetic storage drums, Types 1119, 1120, 1100, 1107, and 1110 are available for memory units for electronic computers and data reduction systems. Intelligence is recorded as combinations of magnetized marks or spots and represented by combinations of two possible states of the mediumbinary representation, a technique commonly used with relays, punched tapes



and cards. Combinations of marks can represent decimal numbers or other characters. A standard drum can hold 2,552,000 spots or ½ million alpha-numeric characters. Remington Rand, Inc., 315 Fourth Avc., New York 10, N.Y. (Inquiry Card No. 6-42)

#### ANALOG COMPUTER

The "Aerolog" computer will accurately calculate steady state rates of climb, maximum speeds, lift coefficients, and climb angles of any airplane. Output is based on the following input



variables: mach number, pressure ratio, speed of sound ratio, engine thrust, airplane grossweight, reference area, and profile and induced drag coefficients. Under assumed steady state conditions, the computer exactly solves the two longitudinal equations of motion, simultaneously. Accuracy is generally consistent with input to 0.1%. Link Aviation, Inc., Binghamton, N. Y. (Inquiry Card No. 6-43)

#### PRESET COUNTERS

The DS-8600 Series high speed preset counters will control any counting operation after a pre-selected total has been reached. Any event that can be converted into electrical impulses can be counted and controlled. Transducers to effect electrical impulse conversion can be photocells, magnetic coils, or switches. Applications include batching and packaging small commodities, machine parts, electronic components, etc.



Offered in 5 models, the DS-8600 series provides a proper unit for most applications. Count capacities range from 100 to 1,000,000. Computer-Mcasurement Div., Detectron Corp., 5528 Vineland Ave., N. Hollywood, Calif. (Inquiry Card No. 6-41)



Sub-miniature for small button subminor 8 pin base T3 tubes mounted perpendicular

to chassis.

type for mounting tubes arallel to chassis

> Seven pin stem type for tubes vertically mounted;

also available in five and six pln.

parallel to cha for printed circuits.

### ...FOR ''POSITIVE ELECTRICAL CONTACTS''... CINCH SUB-MINIATURE

SOCKETS:

The CINCH Sub-miniature socket insures positive electrical contact, holds tubes securely in place, permits easy maintenance and replacement, yields max-



imum insulation resistance and minimum high frequency loss. And provides manufacturer



of electrical controls transmitters, receivers trans-ceivers, air

bourne equipment, etc., and hearing aids ... c labor saving chassis installation which serves terminal board functions while permitting designer:

> to obtain maximum shel space afforded by the standard flat base tubes For mounting perpendicular tubes, retainer rings and saddles are available, when socket cannot be staked. Contacts silver platec beryllium copper. For the <u>Standara</u> sub-minature socket in quantity, quickly—

CINCH components are available at leading electronic jobbers—<u>everywhere</u>.

8888888



Retaining rings, subminar 8 pin socket with saddle (right) and all sub-miniature

sockets within yellow area (above) are shownenlargedtwice.





ELECTRONIC COMPONENTS

> Exclusively CINCH; quantity production of low loss mica components, <u>quickly</u>. CINCH constantly demonstrates ability to hold tolerances on Mica moldings ... to meet the most exacting requirements in small metal plastic assemblies for components of higher quality materials held to closer tolerances.

> > 121

CONSULT CINCH

**CINCH MANUFACTURING CORPORATION** 

1026 South Homan Ave., Chicago 24, Illinois Subsidiary of United-Carr Fastener Corporation, Cambridge, Mass.

THE-TECH & ELECTRONIC INDUSTRIES . June 1955



BILLION FOR DEFENSE-More than one billion dollars is required by the Department of Defense and the armed services for communications and electronics equipment during the 1956 fiscal year which starts July 1, an analysis of testimony by TELE-TECH's Washington bureau of the testimony presented to a House Appropriations subcommittee by high-ranking officers of the three armed services showed. The budget presentations of the Air Force, Army, Navy and Marine Corps showed funds specifically earmarked for communications and electronics needs at almost \$850 million, but additional sums are to be expended on electronic items integrated into other military equipment whose costs are not apparent as to the electronic procurement outlays. In addition, maintenance expenditures, with components and parts a major portion of this outlay, brings, according to the analysis from authoritative military sources, the total communications-electronics appropriation requirements above one billon dollars.

RADIO VETERAN HEADS IRAC-What might result in a broadening of the policies of the government agencies in the consideration of civilian uses of the radio spectrum—a goal which has been urged editorially by TELE-TECH-seemed possible in the appointment of Captain Paul D. Miles as Executive Secretary of the Interdepartment Radio Advisory Committee, the nineagency group which coordinates the technical use of radio frequencies by government agencies by assigning frequencies to the various agencies. Since the role of IRAC has been given concentrated study in the past three years by governmental policy organizations, it is felt that, in the future IRAC operations, government agencies will have to justify their spectrum needs. Capt. Miles has had a lengthy career in radio—radiocommunications companies, the Navy and the FCC. He served as the first chairman of the International Frequency Registration Board of the International Telecommunications Union from 1948 to mid-1953.

**COMMENTS COMPLETED**—By the end of May comments from the broadcasting and radio manufacturing industries—National Association of Radio and Television Broadcasters and Radio-Electronic-Television Manufacturers Association—as well as by the American Telephone & Telegraph Co. and broadcasting stations on the operation of off-the-air pickup television transmission service will have been completed to the FCC. **NAVY FUNDS INCREASED**—The procurement budget of the Navy for the next fiscal year totals \$136 million in new funds for electronics and communications equipment which is an increase of \$31 million over the present fiscal period and double that of the 1954 fiscal year. The Navy Bureau of Ships plans purchasing of \$70,634,000 in communications, navigation and detection equipment with special emphasis on improved radar and sonar. Bureau of Air has a program of more than \$33.5 million; and Naval Communications to modernize the facilities of its shore stations requested \$11.5 million for new equipment.

AIR FORCE IN FOREFRONT—As far as procurement is concerned, the Air Force with its vital importance in the national defense pattern is far in the forefront of its sister military services. For the next fiscal year its procurement program calls for expenditure of \$594,236,000 which includes obligations from the prior year program funds, but actually has a new procurement outlay for the new fiscal period of \$405,236,000 with \$111 million to be obligated in the future. The new fiscal year's procurement will be concentrated on airborne and ground radio and radar equipment, electronic countermeasures and security equipment and research and development projects.

TACAN'S VALUE CITED-TACAN, the air navigation system developed by the Federal Telecommunications Laboratories, is now being projected as the predominant system of air navigation by both the military and civilian aviation agencies of the government. The Air Coordinating Committee, composed of expert representatives of interested government agencies, recently completed a program aimed at the eventual replacement of VOR and DME by the TACAN system by 1965 in the case of VOR and by 1960 for DME. The Air Force has disclosed to Congress that its estimated expenditures for TACAN for the next five years provide for the equipping of 21,500 first-line aircraft with TACAN and using VOR in the remaining second-line aircraft which would number more than 18,000. The Navy is planning to equip its ground stations and aircraft used in overseas service with TACAN, it was cited.

National Press Building Washington, D. C. ROLAND C. DAVIES Washington Editor

## NEW COST-CUTTING IDEA!

Automation in TV...

CAMERA

#### HOW IT WORKS!...

Camera 1, in scene above, is a GPL or other standard make, plus GPL-Watson Vari-focal lens with zoom and focus run from Control Room.

Camera 2 is a GPL full remote control: pan and tilt, lens change, focus and iris run by remote, plus a "memory" of 6 pre-set positions switched by push-button to correct aim, lens, iris and focus.

In typical sequence, station's day begins with newscast. Announcer is covered by 1 from close-up to full set, allowing optional use of wall maps, props or guest interviews.

Camera 2 covers active area and switches automatically by push-buttoń to any of 6 easels or displays for advertising commercials.

Opening live news is followed by film and entire first program is run with only two men in building.

### ...with station-tested GPL studio technique !

This is a typical pattern of what you can do with equipment planned for quality with economical operation. There are many variants. Add a GPL-Watson 3''-30'' focal length lens to any make black and white or color camera—operate one camera only for most shows.

These are not dreams; smart station operators developed these techniques with GPL equipment. You can share in their savings.

GPL will be glad to analyze your present operations and give you engineering recommendations for a cost reduction program. For complete literature on remote control units and for engineering studies, at no obligation, write, wire or phone.

GENERAL Precision Laboratory

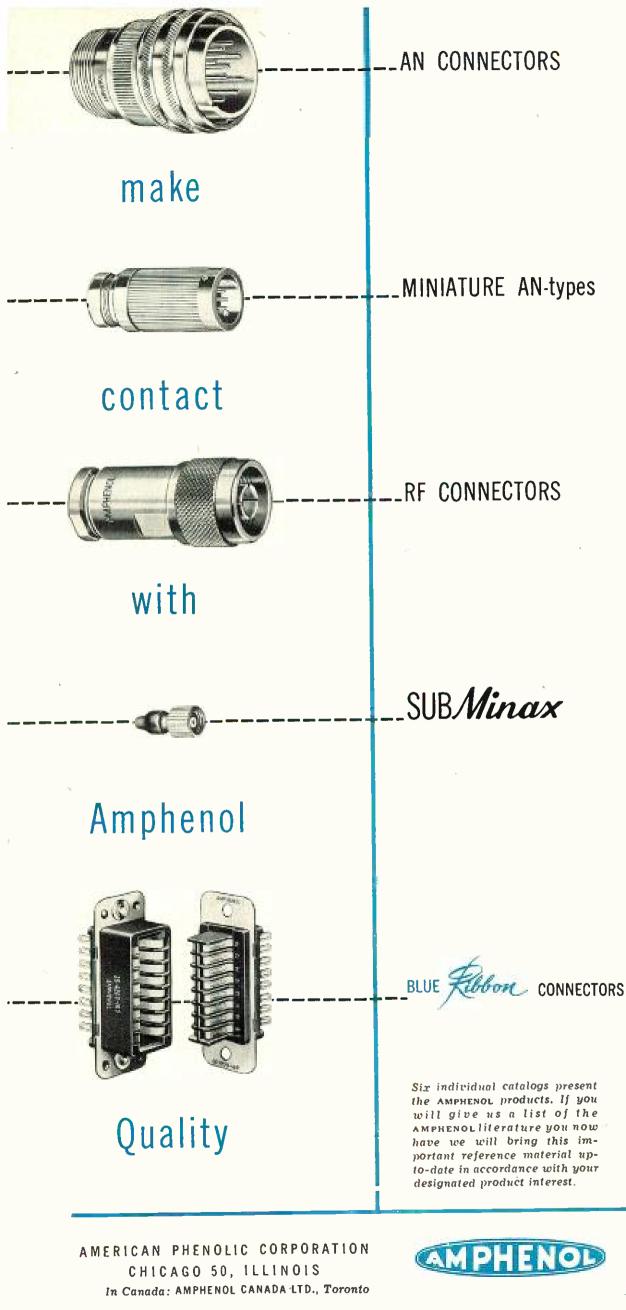
Incorporated • Pleasantville, New York



A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION



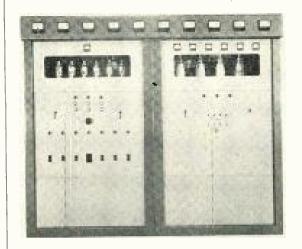
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#### **New Products**

#### **POWER SUPPLY**

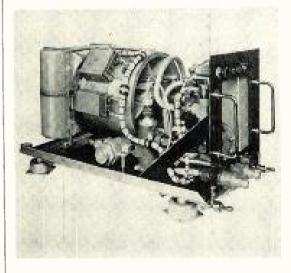
The Type PP-20-A electronic power supply is used in an aircraft and missile component and structure vibration testing system. Power output, 20,-000 w. into matched load at all output



impedance taps. Output impedances, 0.5, 1.0, 2.0, 4.0, 8.0, 16.0, 32.0 and 64.0 ohms with front panel interlocking switching. Total harmonic distortion, less than 5% at full rated output. Noise and Hum, 60 db below full rated output. Input Impedance, 20,000 ohms. Input voltage, 1.0 v. RMS for full power output. L. M. Electronics, Inc., 5017 Exposition Blvd., Los Angeles 16, Calif. (Inquiry Card No. 6-77)

#### COOLANT UNIT

Designed for automatic control of fluid output temperature for cooling electron tubes in aircraft, the Model RR-10850 unit incorporates a heat exchanger, air blower, and motor-driven oil circulating pump. Also includes thermal switches, a by-pass valve, flow switch, supply tank, etc. The pump has a capacity of 2 gpm at



2,700 rpm. The coolant is Monsanto OS-45 hydraulic fluid. Maximum pressure, 110 psia. Motor, 0.30 h.p., 115 v., 400 cps, single phase, 5,400 rpm, continuous duty, 700 w. max. Lear, Inc., Lear-Romec Div., Elyria, O. (Inquiry card No. 6-78) RESERVED

## NEW EXPANDED LINE OF HERMETICALLY SEALLY RESSION END SEALS

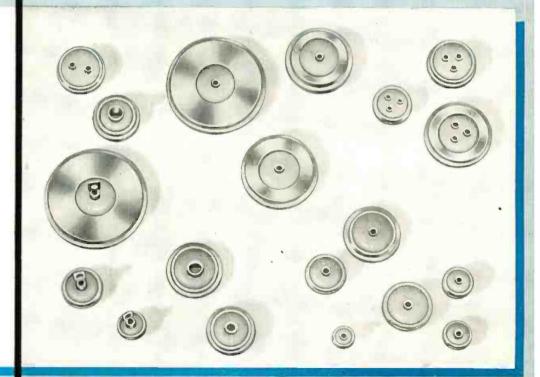
#### FOR HERMETICALLY SEALING CONDENSERS, RESISTORS AND OTHER TUBULAR COMPONENTS

E-1 standardization now makes it possible to offer designers and engineers the economy of standard components in a wide selection of types and sizes. These rugged compression type end seals are available in a broad range of dimensions, in either flared tube or pierced terminals, with single or multiple lead terminations. Inquiries invited.

#### - here's how

#### COMPRESSION CONSTRUCTION PROVIDES THE TIME-PROVEN LASTING SEALS

In this exclusive E-I compression construction, the glass remains under constant compression and is therefore extremely strong. These seals possess extraordinary immunity to shock, vibration and pressure changes. For all practical purposes E-1 Compression Seals are indestructible. No special skill is required to apply and assembly is rapid as all metal parts are tin dipped for easy soldering.



E-I Leadership-in the field of

hermetic sealing assures dependability, economy and fast delivery ... specify E-I for multiple headers, octal plug-ins, transistor bases and closures, sealed terminals, end seals and color coded terminals.



#### ELECTRICAL INDUSTRIES

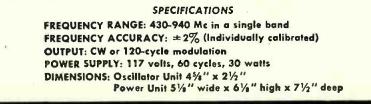
Division of Amperex Electronics Corporation . 44 SUMMER AVENUE, NEWARK 4, NEW JERSEY



The Model 59 UHF Megacycle Meter is specially designed to cover the UHF television band plus the many mobile and fixed communication services through its wide frequency coverage of 430 to 940 megacycles in a single range. It incorporates all of the quality features and the excellent performance of the popular Model 59 plus a unique design resulting in a maximum of convenience in use. It is an indispensable instrument for electronic engineers, researchers, experimenters and radio servicemen.

#### USES

- As a grid-dip oscillator for measuring the resonant frequency of passive circuits such as cavities, tank circuits, inductors, capacitors, chokes, transmission lines and antennas.
- As an auxiliary signal generator for alignment and tuning of UHF receivers and transmitters.
- As an oscillating or absorption marker for use with a sweep-frequency generator.
- As a wavemeter or heterodyne frequency meter.
- As a low sensitivity receiver or field-strength meter for tracing source of spurious oscillations in receivers and transmitters.
- For adjusting antenna systems, wave traps, and filters.

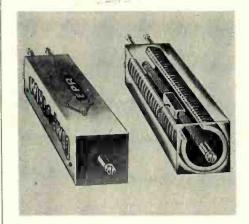




#### **New Products**

#### TRIMMING POTENTIOMETER

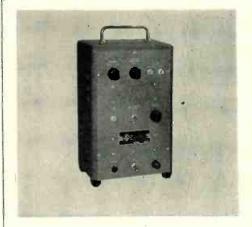
"Comp-U-Trim," a departure in trimming potentiometer design, combines such features as encapsulation to protect against humidity, and a wide range of temperature coefficients. It also offers



especially selected, amply-aged resistance wire to assure maximum stability. The unique design enables the combination of fixed and variable resistor that makes feasible fixed values up to 1 megohm with a variable as little as 50 ohms. Eastern Precision Resistor Corp., 130-11 90th Ave., Richmond Hill, N. Y. (Inquiry Card No. 6-79)

#### **PULSE GENERATOR**

The Model PG-215 millimicrosecond pulse generator is a mercury-relay plus pulse-forming-line type of unit that produces rectangular wave forms that have rise, duration, and decay times in the millimicrosecond range. Rectangular pulses at 60 or 120 per second recurrence rates are provided with rise and decay times down to 1.2 millimicroseconds. Minimum width is 1.2 millimicroseconds, and maximum width is



unlimited. Output pulse amplitude is variable from 0-35 v. with 93 ohm load. Furnishes an isolated trigger signal for synchronizing associated equipment. Teletronics Laboratory, Inc., 54 Kinkel St., Westbury, L. I., N. Y. (Inquiry Card No. 6-51)

www.americanradiohistory.com

### DVANCED STOM - SUBM



#### UNCASED TOROIDS

Basic inductor component. Dasic inductor component. Plain, wax, or plastic dip with flex-leads. Hi Q values up to 10 mc. Complete range of sizes: subminiature, wed-ding ring, etc.

## GENERAL SELECTR. PLASTIC CASED TOROIDS

ACANO ELECTRIC COMP.

CAC compression molded toroids have become the standard of the industry, Incorporated in most advanced mill-tary and domestic applications. Stocked units for immediate shipment.

#### STEEL CASED TOROIDS

----

Hermetically sealed to MIL-T-27 specifications—mounting area min-imized — Io-hum pickup — hi-perm cases — standard inductances in stock.

#### TUNED CIRCUITS

For Printed Circuit Applications • Multiple Tuned Transformers Delay Lines Tuned Circuits W — 1" L — 41/4" H — 7/16"

#### SUB-MINIATURE FILTERS

The Generation of the second s All types of filters—toroidal induc-tors and special capacitors for maxi-mum stability, sharpness, and atten-uation—advanced design and printed circuit techniques make possible high degree of miniaturization— hermetically sealed con-struction.

#### **PULSE TRANSFORMERS**

Customized toroidal units, Blocking oscillator and pulse coupling transformers for specific applications. Nth degree subminiaturi-



Designed to your specifications —of lumped constant type, Ideal for sonar applications.



#### SATURABLE REACTORS

Transformers: Up to 12" OD x 5%"ID x 41/2" high—handling 16 to 38 wire on largest units—miniature transformers to 48 AWG.

#### **MAGNETIC AMPLIFIERS**

Toroidal construction and quality mat-terials provide: high gain per stage— fast, stable response. Multiple, elec-trically isolated input and output wind-ings—line frequencies 60 cycles, 400 cycles and higher-operating tempera-tures  $-55^{\circ}$  to  $+100^{\circ}$  C—hermetic sealing to MIL specs.

TUNED REACTORS

#### Why is it? . .

UNION WERE

corportion of average

In 7 short years, CAC has reached a dominant position as an exclusive toroidal coil winding and component producer.

#### Why?

We believe it is due to meticulous care, advanced research—and to the specialized skill of our people.

Thankful for the trust important customers have placed in us, we are ever mindful of a growing responsibility—YOU CAN DEPEND ON CAC!

#### **HI-CYCLE TRANSFORMERS**

CO.

- Range—400-6000 cps Efficiency—up to 95% Wattage—6 mw—200 watts Temperature —55° to +155° C Depicted—6 KC 100 Watt Unit Less than 1.65 cubic inches

#### DISCRIMINATORS

Linear frequency sensitivity and temp. compensated. May be packaged with MAG AMPS to produce control functions from small signals.

FOR ADDITIONAL INFORMATION CONTACT

#### DMMUNICATION ACCESSORIES

HICKMAN MILLS. MISSOURI . PHONE KANSAS CITY SOLITH 5528

recision elivery uality

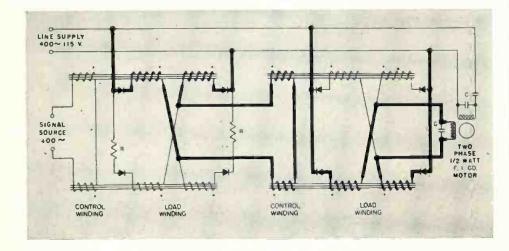
Applications: • Servo Systems • Data Telemetering • Remote Frequency Control Illustrated—High Frequency Reac-tor Tuned by Varying D.C. Current. W - 1" L - 11/4" H - 15/32"

NY ASSOCI

#### SINCE 1915 LEADERS IN AUTOMATIC CONTROL

### HALF-WAVE FAST RESPONSE MAGNETIC AMPLIFIER CIRCUITS

An important requisite of any practical amplifier is that it should be possible to cascade several units if more amplification is required than a single stage can offer. In usual magnetic amplifiers, this creates some practical difficulties because the inherently long time constants of each stage add up, and the cumulative time constant of the several stages may become excessive for practical applications.



Ford Instrument Company has perfected and holds the basic patents on circuits which allow cascading magnetic amplifiers with stages operating on successive half-cycles of the a-c supply.

In the circuit shown here, amplification in each stage of the amplifier is accomplished by pre-setting the core fluxes with the control-winding signal during one half-cycle of the applied load-winding voltage. During the next half-cycle, when the load-winding conducts, the control winding contribution is negligible. In this mode of operation the control winding of each stage of the amplifier receives its signal during the reset or non-conducting half-cycle of that stage of amplification. The effect of this signal occurs during the next half-cycle, thus the time constant in the stage is at a minimum of ½ cycle.

The amplifier uses half as many elements (cores and rectifiers) as the conventional bridge (full-wave circuit), and has a constantly higher figure of merit (power gain per cycle of time constant).

In amplification problems it will pay you to talk to the engineers of Ford Instrument Company. For forty years this company has specialized in designing and manufacturing special computers and controls. Send your problem to Ford.



FORD INSTRUMENT COMPANY

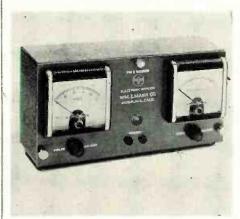
DIVISION OF THE SPERRY CORPORATION 31-10 Thomson Avenue, Long Island City 1, N.Y.

ENGINEERS of unusual abilities can find a future at FORD INSTRUMENT COMPANY. Write for information.

### New Products

#### TAP WELDER

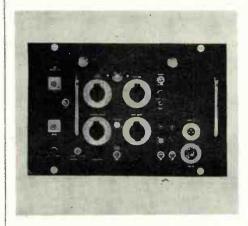
The TW-1 electronic tap welder is a precision instrument for welding 0.0007 to 0.025 in. resistance wire. The unit is designed for production line use where consistent direct-wire-to-wire and



wire-to-element welds must be applied without pressure. The welder is supplied with a foot switch and probe leads with clip and tweezers attached. Operating time, 6 sec. cycle. Has a sensitive ohmmeter for measuring tap resistance that is independent of the welding operation and a sensitive voltmeter to adjust the welding current accurately. Wm. I. Mann Co., 104 E. Foothill Blvd., Monrovia, Calif. (Inquiry Card No. 6-52)

#### RADAR MONITOR

The "Raytector," is a patented, automatic monitoring device that operates in conjunction with any radar search equipment to provide visual and audible alarms whenever an object appears in a predetermined zone. Can accept either positive or negative input signals. Zone of operation can be varied by a non-technical operator. Sensitivity and range can be adjusted to fit the imme-



diate traffic and navigational situation. A simple "eye" or visual indicator sets the equipment to the proper radar signal level. The alarm signal can be transmitted continuously or intermittently. Miller Associates, Lakeville, Conn. (Inquiry Card No. 6-46)

## **NOW!** the new

Eliminates extra manpower requirements



#### opaque and transparency projector



#### REMOTE OR LOCAL CONTROL CHECK THESE NEW FEATURES

- Completely automatic ... utilizing features contained in the now famous Telop and Telojector ... Slides change by push button control.
- Sequence of up to 50 slides can be handled at one loading ... additional pre-loaded slide holders easily inserted in unit.
- Remote control of lap dissolves ... superposition of two slides ... and slide changes.
- Shutter type dimming permits fades without variation of color temperature...opaque copy cooled by heat filters and adequate blowers... assembly movable on base which permits easy focus of image.

#### SCREEN OUT HIGH PRODUCTION COSTS FOR LOCAL SPONSORS



Telop III... interior view of automotic slide holder which accommodates 4" x 5" opaque slides...One lens... no registration problem... no keystoning.

Telop III by the elimination of extra manpower assures the production and projection of low-cost commercials that local sponsors can afford. It can be used with any TV camera including the new Vidicon camera. Telop III projects on single optical axis opaque cards, photographs, art work, transparent 31/4" x 4" glass slides, strip material, and 2" x 2" transparencies when Telojector is used with optical channel provided. Telop III eliminates costly film strips and expensive live talent.

**WRITE FOR:** Illustrated bulletin describing Telop III specifications. Your request will receive prompt response.



AND DEVELOPMENT CO., Inc., Hilliard St., Manchester, Conn. Division of the GRAY MANUFACTURING COMPANY Originators of the Gray Telephone Pay Station and the Gray Audograph and PhonAudograph.



Elco Corporation, Philadelphia man-Lfacturer of radio, TV and electronic components, has announced the appointments of Hoving Sales Co., Butler Court, Fort Wayne, Indiana, as their manufacturer and jobber representative for Indiana and Kentucky; Lowry-Dietrich, 1404 Swantek St., Pittsburgh, Pa. as manufacturer and jobber representative for Western Pennsylvania and West Virginia; and D. Dolan Sales, 1200 N. Ashmead, Chicago, as jobber representative for the Chicago area.

Henry P. Segel Company, Inc., 131 Newbury Street, Boston 16, Mass., has announced the purchase of land located two miles from Boston's State House and close to the main arteries leading to New England's largest research and development centers. On this site, Henry Segel will erect a completely modern air-conditioned building which will constitute an entirely new concept in manufacturers representation. Progressive ideas for this building, incorporate a permanent display of products which will enable engineers and buyers to view complete lines at their leisure, plus specialized displays built with the express purpose of enabling engineers to examine various products at first hand.

L&M Associates, sales and engineering representatives for Adler Communications Laboratories; Radio Frequency Laboratories, Inc.; and Tel-Instrument Co., Inc. announce the opening of new offices at 253 Boulevard, Hasbrouck Heights, N. J.

Westron, 7407 Melrose, Los Angeles 46, has been appointed as sales agent for The Walkirt Company, 145 West Hazel Street, Inglewood 3, Calif. They will cover the states of California, Arizona, and Nevada.

Pace Electrical Instruments Co., Inc., meter manufacturing division of Precision Apparatus Co., Inc., of Glendale, L. I., announces the appointment of several representatives to handle their industrial accounts. Reps who will handle the line in areas noted are: C. R. Strasser Co., Calif.; A. J. Nelson Co., Colorado; J. Clancy & Co., Indiana; Morris F. Taylor Co., Maryland; Wolfe-Marsey Sales Co.; New York State; and Northwestern Agencies, Inc. Washington State. Kaelber and Mack will cover Metropolitan New York & Northern New Jersey.

International Rectifier Corp., of El Segundo, Calif., has appointed E. W. McGrade Co., 213 West 75th Street, Kansas City, Mo., as their exclusive sales representative in Kansas City, Mo., and Southern Illinois.

The M & P Sales Co., Inc., 1116 Great Plain Ave., Needham, Mass., has changed the company name to Mosher & Peyser. The Hainge Company, Inc., 3518 Durness, Houston 25, Texas, has been appointed Gulf Coast sales representative by Naresco Equipment Corp., 160 Charlemont St., Newton Highlands, Mass.

James E. Wood, Pittsburgh, Pa., has been appointed manufacturer's representative for the line of electronic instruments manufactured by Laboratory For Electronics., Inc., Boston.

Clarostat Mfg. Co., Inc., Dover, N. H. manufacturers of resistors, has presented a testimonial plaque saluting each of its three top sales representatives. The recipients are: James Millar Associates, Atlanta, Ga.; Myers-Young-Forristal, Inc., St. Louis and Kansas City, Mo.; and Henry P. Segal, Inc., Boston, Mass., ranking first, second and third in 1954 distributor sales.

The Van Groos Company, Sherman Oaks, Calif., has been appointed to represent the Shallcross Mfg., Co., in Calif., New Mexico, Arizona, and Nevada. Van Groos will handle the complete line of Shallcross products.

Inter-State Radio and Supply Co., 1200 Stout Street, Denver, Colo., has been appointed as exclusive wholesale distributor in the state of Colorado for the Radio Receptor Co's Semi-Conductor Division.

**R.** W. Mureen has been appointed as Sales Engineer by the Campion Sales Company of Dallas, Texas to cover their industrial accounts in the Southwest territory.

Don. V. Hamilton & Co., 6516 Normandale Road, Minneapolis 10, Minn., has been appointed by the Oxford Electric Corp., speaker manufacturers, to represent them in North Dakota, Minnesota, South Dakota and northwestern Wisconsin.

National Semiconductor Products Co., of Evanston, Ill., a division of National Fabricated Products, Inc., has appointed the following new sales representatives to handle their line in the areas noted: Robert W. Jackson Co., Elliott Square Bldg., Buffalo 3, N. Y. for New York State; Electronic Sales Associates, 3409 45th Street, Long Island City 1, N. Y., for New York City, Long Island and Upper New Jersey; L. J. Daniels, 1622 Mathieson Bldg., Balti-more 3, Md., for Eastern Pennsylvania, Lower New Jersey, Maryland, Delaware, Washington D. C. and Virginia; Midwest Sales Co., 3219 West 117th St., Cleveland 11, Ohio, for Western Pa., Ohio, Kentucky and West Virginia; Don V. Hamilton & Co., 6516 Normandale Road, Minn., 10, Minn., for Minnesota, North Dakota, South Dakota, Western Wisconsin; Lawrence Sales Co., Box 13026, Dallas 20, Texas, for Miss., Louisiana, Ark., Texas and New Mexico; William Belfer, 926 Howard St., San Francisco 3, Calif., for Northern Calif., and Northwestern Nevada; Henry P. Segal Co., Inc., 143 Newbury St., Boston, Mass., for Maine, New Hampshire, Vermont, Mass., Rhode Island and Connecticut.

The Phaostron Corp., 151 Pasadena Ave., South Pasadena, Calif. has added seven new manufacturers reps to handle their lines in areas noted below: L. A. Nott & Co., San Francisco; Frank C. Nickerson Co., Atlanta, Ga.; G.McL. Cole Co., Chicago, Illinois; Tant Enterprises, Detroit, Mich.; Quinn, Cunningham & Associates, Indianapolis, Ind.; R. W. Farris Co., Kansas City, Mo.; and Henry Lavin & Associates, New England.

The Birtcher Corp., Los Angeles manufacturers of tube retention devices, has appointed two new sales representatives. They are I. A. Hotze, 148 Worden Ave., Syracuse, N. Y. (covering Upper New York State); and Engineering Services Co., 6635 Delmar Blvd., St. Louis, Mo., (covering Missouri, Kansas, and Southern Illinois).

Universal Electronics Company, 2012 South Sepulveda Blvd., Los Angeles, Calif., has appointed Marshall P. Sandelin Associates, Warren Street, Cheshire, Conn., as their New England representatives. Sandelin's territory includes the greater Boston area, Connecticut, Mass., Vermont, New Hampshire, Maine and Rhode Island.

#### **REPS WANTED**

Well-known manufacturer of line of industrial laboratory and production instruments is looking for Technical representatives in following areas: 1) Metropolitan New York; 2) Pennsylvania; 3) Illinois; 4) Northern Calif., 5) Southern Calif., 6) New England; 7) Upstate New York; 8) Southeastern States; 9) Texas, Okla., Arkansas, Louisiana. (Ask for R-6-4)

Manufacturers of etched and lithographed nameplates, panels, dials, scales etc. seek representation in Pittsburgh, Detroit, Dallas, Minneapolis and Atlanta. (Ask for R-6-2)

Ohio, Texas, Florida, New England and Canada are territories offered by manufacturer of precision test equipment. (Ask for R-6-3)

Manufacturer of precision microwave equipment line seeks representatives covering Texas-Oklahoma area. (Ask for R-6-1)



An architectual drawing of the new Neely headquarters now under construction in the Southwest

## Marketing in the Far West

#### Opening of Neely Enterprises' new headquarters building scheduled for June 23. Success of twenty-two years show importance of engineering-marketing relation.

Neely Enterprises, manufacturer's representative for electronic products, have scheduled the opening of their new headquarters office building at 3939 Lankershim Blvd., N. Hollywood for June 23. The building has been especially designed for the display, servicing and warehousing of electronic equipment.

The property, over an acre in size, is located on the historic site known as Camp de Cahuenga where, in 1847, General Pico for Mexico and Lt. Colonel John C. Fremont representing the United States, signed the Treaty of Cahuenga which ended the fighting for the possession of California. The land and improvements represent an investment of approximately \$250,000, with the financial arrangements made by the California Bank.

The building, of reinforced brick with a tile roof in Mexican ranch style, will cover 12,600 square feet. Decoration is in a Mexican motif with tile work and murals. The entire structure is airconditioned.

An important feature will be a laboratory display room which will offer operating displays of the latest electronic devices. Additional accommodations include a kitchen facility and an entertainment room with a large brick fireplace.

One of the truly big problems of the electronic industry is to bring its marketing operations in closer proximity to its standards of engineering and production. Marketing, as a problem, is too often tolerated instead of solved; too

Mr. Neely, a member of the Horseless Carriage Club, with his 1930 Rolls Royce



often denied the benefit of adequate planning. Marketing is a function of primary concern to engineering executives as well as sales heads because it is both the original idea and the final test of a business enterprise.

Sales directors never forget that all engineering and all manufacturing of a commercial product is done for the ultimate purpose of marketing. Yet the manufacturer who can figure production costs to the third or fourth decimal, seldom gives such precision or control to his marketing.

Nevertheless, marketing is an everpresent problem, whether it calls for straight selling of commercial products to industry or sales engineering on projects of government, industry, communications, etc. Of great importance also is the question whether a manufacturer's marketing can be done best through branch offices, independent representatives or other selling channels.

It is a well-known fact that the electronic field has hundreds of representatives who are full-fledged engineers, capable of doing complex engineering jobs for the manufacturers whom they represent. Many have done well as individual "Reps" while others have added manpower, clients and territory.

Manufacturers who have a distribution or marketing problem in California and the great Southwest, will be interested to know that the marketing "Oscar" goes to Neely Enterprises for outstanding advancement in the facilities and services of their Representatives organization.

In reality, the rise of Norman Neely is an inspiring and dramatic story of an engineer who was determined to set up the finest example of the marketing function as applied to electronic engineering products. That, of course, meant that Neely Enterprises would have to function better than a manufacturer's own headquarters.

(Continued on page 155)



#### SELENIUM RECTIFIERS

## fiers, electro-plating, battery charging, etc. RADIO TYPE RECTIFIERS TV in ratings up to 750 MA. EMBEDDED RECTIFIERS ..... HIGH TEMPERATURE TYPES

INDUSTRIAL TYPE RECTIFIERS

Years of service in every kind of application have proved the long life and dependability of these rugged units. Available in various voltage and current combinations up to several hundred kilowatts, they are useful in a multitude of industrial and power circuits such as power supplies, magnetic ampli-

Millions of these stacks are in service in radio and TV circuits as well as many small power applications. Thoroughly dependable under all types of grueling conditions, they are specified by an increasing number of engineers in the U. S. and throughout the world. Available for black and white as well as color

For top protection in military and other applications calling for the strictest requirements. Recommended for use where size and weight are important considerations such as in aircraft.

High temperature rectifiers are now available in the larger cell sizes up to 5" x 6" to operate without derating at 125°C. Radio Receptor research has brought the cost down so that the field is now wide open for use in many applications once considered prohibitive because of size and price.

#### HERMETICALLY SEALED UNITS

Built to special requirements to meet unusually severe conditions. Designed to meet individual needs.

### RECTIFIERS FOR MAGNETIC AMPLIFIERS

Special designs will be submitted to meet individual requirements. However in many cases standard Radio Receptor stacks will give highly satisfactory performance in mag-amp applications, saving both time and money. Let us study your specs and make recommendations.

If you have a problem involving rectification, submit your requirements and our engineering department will be glad to aid you in the solution ... , without obligation, of course. See our catalog in Sweet's Product Design File and write for our latest bulletin No. TR

Semiconductor Division



RR

In Radio and Electronics Since 1922

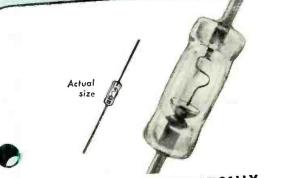
SALES OFFICES: 251 WEST 19TH ST., NEW YORK 11, N. Y., WAtkins 4-3633 . Factories in Brooklyn, N. Y.

Other Radio Receptor products: Germanium and Silicon Diodes, Transistors, Thermatron Electronic Heat Sealing Generators and Presses; Radar, Navigation and Communications Equipment.

Really Reliable



#### GERMANIUM and SILICON PRODUCTS



#### SUBMINIATURE HERMETICALLY SEALED GLASS DIODES

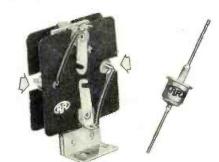
Featuring long life, reliable operation, small size, high efficiency, extraordinarily high ratings of forward cur-rents for their size, and extremely low reverse leakage. **GOLO BONDED GERMANIUM TYPES** – Characteristics of these diodes are so good that they supersede practically all existing point contact types. Typical characteristics: Forward current 200 ma. (a) 1V; Peak inverse voltage 150V; Reverse leakage 10 ua. (a) –10V and 50 ua. (a) \_50V.

-50V. SILICON ALLOYED JUNCTION DIODES — For operation at temperatures of  $175^{\circ}$ C and up. Typical characteristics: Reverse leakages of the order of 0.01 ua. @  $25^{\circ}$ C. For-ward currents or 500 ma. @ +1V. Reverse breakdown 200V 300V.

#### HERMETICALLY SEALED MINIATURE SILICON JUNCTION DIODES

For operation up to 100°C. Breakdown voltages from 17V to 320V. Units may be matched within ±5% for either forward voltage drop at a specified current or reverse breakdown voltage. Types available: 1N137A, 1N138A, and 1N204 through 1N218. Also DR177, DR178, DR221, and DR222.

The art of manufacturing silicon and germanium products is constantly changing as new methods and techniques are developed. New products and variations of the old are continuously added to our line. For the latest information write to Dept. TG



#### POWER RECTIFIERS

BOWLER RECTIFIERS With small size and weight, long life, reliable operation, ive forward drop, excellent regulation, high efficiency, extraordinarily high ratings of forward currents for their size, and extremely low reverse leakages. GERMANIUM ALLOYED JUNCTION DIODES – Types avail-able: 1N91, 1N92, 1N93, 1N151, 1N152, 1N153 and IN158. SILICON ALLOYED JUNCTION DIODES – Ratings similar to those of the group above at temperatures of the order of 150°C. GERMANIUM AND SILICON JUNCTION DIODES – Half wave stacks, doubler stacks, and full wave center tap and bridge stacks consisting of basic cells having same ratings as 1N151 or 1N152 types.



#### HERMETICALLY SEALED MINIATURE TRANSISTORS

MINIATURE TRANSISTORS GENERAL PURPOSE TYPES – Available in standard minia-ture, slim-jim miniature and subminiature "300" and "200" cases. Intended for low level audio, low RF and "200" cases. Intended for low level audio, low RF and R34, RR115, 2N34, 2N36, 2N37, 2N38, ZN39, 2N40, 2N42 and 2N93. HEARING AID TYPES – Available in standard miniature, slim-jim miniature and subminiature "300" and "200", cases. Types available: R142, RR202, RR342; RR38, R8952, RR962, RR972 and RR98. COMPUTER TYPES – Intended for moderate speed switch-ing applications up to 200 K.C. Types available: RR83, RR87, RR117, RR122. RADIO FREQUENCY TYPES – Available in standard minia-ture case. Intended for RF and IF applications in broad-cast receivers and for high speed computer circuits. Types available: RR160, RR161, RR162, RR152, RR157, R157. CLASS B PUSH-PULL AUDIO TYPES – Class R push-pull

RR157. CLASS B PUSH-PULL AUDIO TYPES — Class B push-pull audio transistors available in standard miniature case. Featuring high efficiency, moderate power, high gain and low distortion. Types available: RR106. PHOTO TRANSISTOR — Types available: RR66 and RR66A.

#### Semiconductor Division RADIO RECEPTOR COMPANY, INC.

In Radio and Electronics Since 1922

SALES OFFICES: 251 WEST 19TH ST., NEW YORK 11, N. Y., WAtkins 4-3633 • Factories in Brooklyn, N. Y. Other Radio Receptor products: Selenium Rectifiers, Thermatron Electronic Heat Sealing Generators and Presses, Radar, Navigation and Communication Equipment.



#### Large, varied selection of



available for immediate delivery!

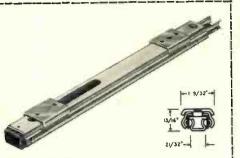


accessible. Grant Stock Slides provide such accessibility – easily and inexpensively. These slides may be ordered in desired lengths, within wide limits. For detailed information and prices, write to Grant Pulley and Hardware Corporation, 31.73 Whitestone Parkway, Flushing 54, N. Y.

Servicing and preventive maintenance

on any component take far less time

when electronic components are made

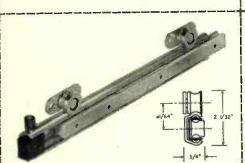


Two-section underneath mounting

slide. Ball bearing action. Glide

brackets permit full travel, easy

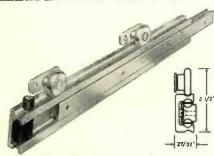
Two-section slide with rollers for moving unit. Ball bearing action. Full travel possible. Load capacity: 50 lbs. per pair mounted vertically.



#### No. 313R Slide

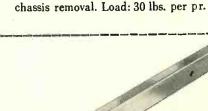
No. 306R Slide

Same as No. 306, but with solid center track of steel or aluminum. Load capacity: 75 lbs. per pair mounted vertically; 45 lbs. mounted horizontally.



No. 575R Slide

Same features as No. 306, but heavier sections for greater loads. Load capacity: 100 lbs. per pair mounted vertically; 60 lbs. mounted horizontally.



#### No. 330 Slide

No. 308 Slide

Very inexpensive roller type slide for quantity installation. Has some slide play. Travel 4" less than slide length. Load capacity: 50 lbs. per pair.

## Grant Industrial Slides

Grant Pulley & Hardware Corporation Flushing, N. Y. Los Angeles, Cal.

#### **New Products**

#### **Q** SWEEP

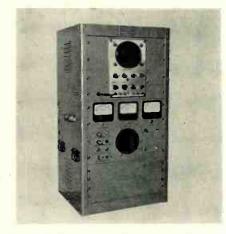
The "Q Sweep" is a new instrument that displays Q by a 5% swept frequency, thereby eliminating oscillator resetting for each component test. Within a specific tolerance range, it is



possible to measure large numbers of component parts visually or by meter reading without control readjustment. The instrument can be used as a Q meter by turning off the sweep. Frequency range is 20 to 220 MC. Q measure range, 0-125, 0-250. Resonating capacitor range, 7.5 to 100  $\mu\mu$ f, displayed on a digital counter for easy reading. Power supply, 105-125 v., 100 w. Kay Electric Co., 14 Maple Ave., Pinc Brook, N. J. (Inquiry Card No. 6-53)

#### **CORONA TEST SETS**

Corona test sets, available in many sizes to accommodate different voltage and kva requirements of materials under test, include all the necessary circuit refinements and controls. A continuously adjustable output control enables setting any voltage from zero to maximum and a zero start control prevents voltage application until the control is returned to zero. Overload relay protects specimen and power unit



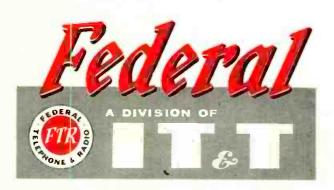
from fault or short circuit. A dual range kilovolt meter accurately indicates voltage at the output terminals. Meet ASTM, MIL, and JAN specs. No HV in control cabinet. Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y. (Inquiry Card No. 6-47)



More design and component engineers in the radio-TV industry have placed their approval on Federal Selenium Rectifiers than any other make—

#### And HERE'S why-point by point:

- **LONGER LIFE**... 5,000 hours life expectancy in approved applications.
- **HIGHER OUTPUT VOLTAGE**...3 to 6½ higher B+ output volts than competitive selenium rectifiers in conventional doubler circuits.
- **LOWER TEMPERATURE RISE**... 2° C to 10° C lower average operating temperature than competitive selenium rectifiers.
- **SUPERIOR HUMIDITY RESISTANCE**... passes 1,000hour life test in 95% relative humidity at 40° C.
- **PROVEN MECHANICAL CONSTRUCTION**... brass eyelet or aluminum stud construction used exclusively. Patented "dead-center" construction allows stack to be tightened until rigid, without affecting the pressure-sensitive selenium characteristic.



- UNDERWRITERS LABORATORY ACCEPTANCE FOR 85° C OPERATION... Federal's popular radio-TV types have been tested and accepted by UL for operation at cell temperatures of 85° C.
- **CONSERVATIVE RATINGS**...rectifiers offered to the industry are rated only after exhaustive temperature rise and aging tests on minimal grade units to insure full value and satisfaction.
  - **MORE UNIFORM QUALITY...** Federal rectifiers are automatically 100% tested and inspected to meet standard forward and reverse current specifications, as well as for dielectric strength.
  - LARGEST PLANT CAPACITY ... production facilities to satisfy any quantity requirement.
  - **MORE ENGINEERING KNOW-HOW**...the research and design facilities of the world-wide, Americanowned International Telephone and Telegraph Corporation assure continued product leadership.

#### For full information, write Dept. F666.

Federal Telephone and Radio Company A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION COMPONENTS DIVISION + 100 KINGSLAND ROAD + CLIFTON, N. J.

In Canada: Standard Telephones and Cables Mfg. Co. (Canada) Ltd., Montreal, P. Q. Export Distributors: International Standard Electric Corp., 67 Broad St., New York

For product information, use inquiry card on pages 185-186.

## Presenting New MICROWAVE FILTERS AND PRESELECTORS

#### Miniature Gang Tuned Filters and Preselectors

These new filters and preselectors feature a wide tuning range, single shaft tuning, Tschebycheff response and extremely compact design. They are usable over wide temperature ranges and con be furnished hermetically sealed.

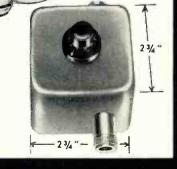
LUCONANCE

Components monufactured by Frequency Standords are the accepted standard of accuracy in the field of microwave frequency measurement and control. Engineering, design and monufacturing facilities are available for the solution of problems involvApprox. Dimensions:

bÿ

FREQUENCY

**STANDARDS** 



ing frequency measurement, frequency stabilization, frequency control and discrimination. Consult Frequency Standards engineers on your requirements for filters, preselectors, oscillator cavities, AFC covities and frequency meters for special opplications.

#### TYPICAL SPECIFICATIONS FOR PRESELECTORS AND FILTERS

	L	S	С	X
Tuning Range (KMC)	1.2-1.5	2.8-3.3	4.8-5.3	8.5-9.6
Bandwidth (MC)	10±2	10±2	10±2	10±2
Insertion Loss (db) (4 sections)	≤ 2.0	≤ 2.0	≤2.0	≤2.0
Coupling	TYPE N	TYPE N	TYPE N	WAVEGUIDE

Write for new Catalog containing complete information on Microwave Filters, Preselec-

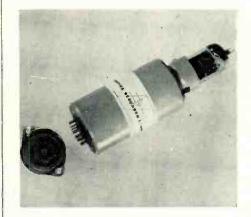
tors and Frequency Meters including completely self-contained Field Test Equipment,



#### **New Products**

#### **BASIC BUILDING BLOCK**

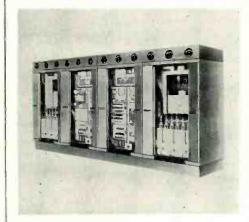
The "Logiblock," a new basic building block, contains 4 cores, 3 diodes and a buffer amplifier tube and is capable of performing complicated switching operations at speeds up to 200 kc. It



can accept the maximum of 8 input signals and combine them to give output signals that are in accordance with the built-in logic. The unit is split in 2 output sections. One output occurs when 2 pairs of input signals coincide (Or-And). The other occurs with the presence of either of 2 input signals, and the absence of 2 other signals (Or-Inhibit). The 2 outputs can be mixed. Magnetics Research Co., 142 King St., Chappaqua, N. Y. (Inquiry Card No. 6-50)

#### **TV TRANSMITTER**

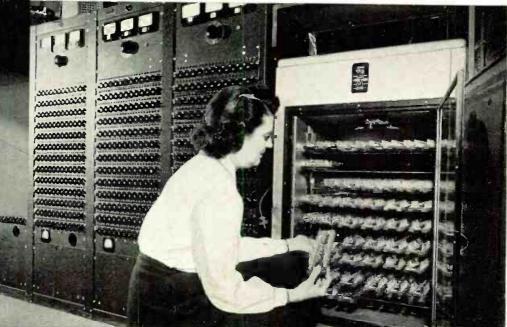
The new TH-614-2 TV transmitter has reduced floor-space requirements (187 x  $38\frac{1}{2}$  in.), a 3,500 lb. visual cabinet, and a 3,500 lb. aural cabinet. Power consumption is 30.2 kw at 90% power factor at black level. Cabinetry is by Dreyfus. Full-length glass doors enable visual inspection of all tubes. When the transmitter is on the air, single-ended coaxial circuits provide freedom from



spurious oscillations and parasitics. A built-in stretcher enables adjustment of the sync-to-picture ratio of the signal. Meets FCC requirements for monochrome and color TV. Standard Electronics Corp., 285 Emmet St., Newark, N. J. (Inquiry Card No. 6-48)



Here rectifiers are automatically tested and inspected in mass quantities. Rectifiers in mass-production lots are placed in Life-Test Equipment and are tested to 10,000-hour life standards.



### How G.E. assures 85°C operating reliability of the new 1N315 Germanium Rectifier

This array of testing equipment mass-checks individual germanium rectifiers to 10,000-hour standards under maximum voltage and current conditions and at  $85^{\circ}C$ . Each rectifier is electrically connected to a testing circuit and any unit which falls below guaranteed limits is automatically rejected.

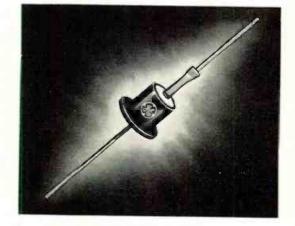
This life test is only one of the many severe quality checks imposed on General Electric Semiconductor products. Precision mass production coupled with precision mass testing assures uniform, reliable quality at low, mass-quantity prices.

G.E.'s new 1N315 rectifier operates efficiently and with long life at 85°C because of new germanium crystal growing techniques developed by the General Electric Research Laboratory and improved junction forming methods. Controlled characteristics are assured by accurate machines which reproduce assemblies to extremely close tolerances. The high reverse resistance and low forward resistance characteristics make it specially adaptable for use in magnetic amplifiers or other circuits where high temperature and extremely low leakage current are required.

Full details are available on request. Write or wire today to: General Electric Company, Section X4865, Semiconductor Products, Electronics Park, Syracuse, New York.

Progress Is Our Most Important Product





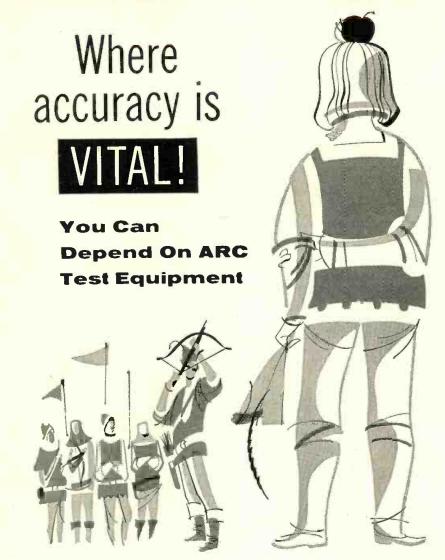
#### SPECIFICATIONS 1N315 and 1N315A (Resistive or Inductive Load)

55°C	71°C	85 ° C	
200	200	100	v
100	100	100	ma
.48	.46	.44	V
150	100	50	v
700	300	200	
1600	750	400	
50	50		кс
95	95	95	°C
	200 100 .48 150 700 1600 50	200         200           100         100           .48         .46           150         100           700         300           1600         750           50         50	100       100       100       100         .48       .46       .44         150       100       50         700       300       200         1600       750       400         50       50       50

For product information, use inquiry card on pages 185-186.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

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Type H-14A Signal Generator



Type H-16 Standard Course Checker



Type H-12 UHF Signal Generator

The Type H-14A Signal Generator has two uses: (1) It provides a sure and simple means of checking omnirange and localizer receivers in aircraft on the field, by sending out a continuous test identifying signal on hangar antenna. Tuned to this signal, individual pilots or whole squadrons can test their own equipment. The instrument permits voice transmission simultaneous with radio signal. (2) It is widely used for making quantitative measurements on the bench during receiver equipment maintenance.

The H-16 Standard Course Checker measures the accuracy of the indicated omni course in ARC's H-14A or other omni signal generator to better than  $\frac{1}{2}$  degree. It has a built-in method of checking its own precision.

Type H-12 Signal Generator (900-2100 mc) is equal to military TS-419/U, and provides a reliable source of CW or pulsed rf. Internal circuits provide for control of width, rate and delay of internally-generated pulses. Complete specifications furnished on request.

Dependable Airborne Electronic Equipment Since 1928

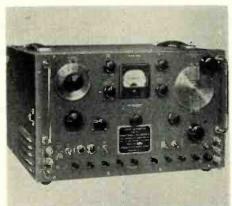


Omni Receivers • 900-2100 Mc Signal Generators • UHF and VHF Receivers and Transmitters • 8-Watt Audio Amplifiers • 10-Channel Isolation Amplifiers • LF Receivers and Loop Direction Finders

#### **New Products**

#### SIGNAL GENERATOR

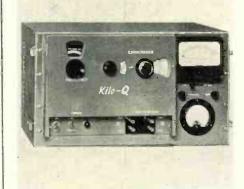
The Model 131 signal generator, for testing i-f amplifiers and other circuits operating in the 7-70 MC range, weighs 99 lbs. and is housed in an 11 x  $16\frac{3}{8}$  x  $18\frac{3}{4}$  in. cabinet. Capable of CW,



pulse, or standard operation. Has a built-in 5,000 MC crystal frequency standard, an electronic linear frequency sweep, and a continuously tunable frequency marker. Provides frequency deviation up to  $\pm$  30%, choice of spike or blanking markers, zero amplitude reference for sweep output, calibrated 0.5 v. RMS output to 50 ohm impedance, zero to 101 db step attenuator. Avion Instrument Corp., subsidiary of A.C.F. Industries, Inc., 299 State Highway No. 17, Paramus, N. J. (Inquiry Card No. 6-49)

#### **Q** METER

An l-f Q meter, the "Kilo-Q" covers a range of 20 cps to 1 Mc and combines a direct-reading dial over the entire range with 1% accuracy. The Q range control provides two positions with full scale Q readings of 0 to 125 and 0 to 250, respectively. For reading Q values between 250 and 500, it is necessary to set lever control at X 2 dial position and double the reading on the 250 scale. Has a tuning capacitor range of



60-1,200 μμf. A vernier capacitor control in shunt facilitates tuning sharp "Qs." Oscillator frequency accuracy, 2 to 5%. Calibration capacitance accuracy, 1%. Kay Electric Co., 14 Maple Ave., Pine Brook, N. J. (Inquiry Card No. 6-54)



TELE-TECH & ELECTRONIC INDUSTRIES . June 1955



### in your equipment design and layout

SINGLE-ENDED with leads clipped for socket mounting

DOUBLE-ENDED for soldered-in applications

SINGLE-ENDED for conventional soldered in use

### Sylvania offers you a choice in Silicon Junction Diodes

#### featuring

- -high back resistance
- -high rectification ratios
- sharp breakdown in saturation voltage region
- -ambient operating temperature to 150°C.

Chassis layout call for conventional soldering-in of diodes? Sylvania offers double-ended package design. Or you can choose the single-ended diode package which can be socketmounted as well as soldered-in. Broadrange diodes and narrow-range diodes are available in both packages.

Broad-Range Diodes—back resistance of 1000 to 10,000 megohms. Low capacitance and moderate forward conductance make them highly useful in general and computer applications as rectifiers, end gates, restorers, and clippers.

Double-ended
IN409
IN410

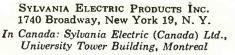
Narrow-Range Diodes—controlled breakdown voltages from 2 to 600 volts. These general-purpose diodes feature superior rectification ratios and an ability to function at elevated ambient temperatures. They have a very low impedance in the saturation voltage region. Low-voltage types make good voltage regulators for transistor power supplies. All types are applicable in magnetic amplifiers.

Single-ended IN200 to IN222 IN401 to IN408

Double-ended IN370 to IN400

139

For complete data on all Sylvania Junction Diodes, address Department F20R.





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arflex	Name
RPORATION	Compony
akers of Electrical	Street
nsulating Tubing and Sleeving	CityZoneState

#### **Systems Engineering**

#### (Continued from page 111)

of the noise, the human averaging process will eliminate more noise than signal for short time intervals of observation. The result is an improved signal-to-noise ratio. If the pilot continues to observe the display and average for longer periods of time, he will begin averaging out the signal as well as the noise; consequently, the signal-to-noise ratio will decrease. In other words, with a given signal frequency spectrum, known or estimated noise spectrum, and a mathematical representation of the human averaging process as fitted to measured data, the optimal amount of time with which any display should be observed can be computed. Several hypothetical examples of this have been carried out to prove the mathematical simplicity. Through this type of analysis, a practical design can utilize the human operator in the most efficient manner possible with respect to the anticipated incident noise.

#### Derivatives

The second type of smoothing, that of approximating a continuous variable from the observed samples can again be optimized in terms of signal-to-noise ratio. Since each derivative of increasing order is "read" with more error (noise), the smoothed continuous message can have a poorer signal-to-noise ratio if too many derivatives are observed. Although the human can only visually observe the first derivative with any reasonable amount of accuracy, certain flight parameters are so presented that the pilot can easily obtain three derivatives of the function if he should want to. For instance, the parameter altitude:-Function value, the altimeter; first derivative, the rate of climb indicator; second derivative, the G meter; the third derivative can be read by judging the rate of motion of the G indicator pointer. The point of all this is that if a mathematical expression were known for the human smoothing process, then the optimal number of derivatives which should be read can be determined, based upon the measured accuracy of human derivate observation. Although this data is unavailable at present, there seems to be no reason why it cannot be obtained through psychometric experiments. To illustrate that this work can be done, the author used the unrealistic example

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FOR EVERY SOUND REASON SOUNDCRAFT CORP.

\*Trade-Mark for DuPont Polyester Film

Dept. N6, 10 East 52nd Street, New York 22, N. Y.

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For product information, use inquiry card on pages 185-186. 141

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Only

11/3 Racks

1/3 Less Tubes

4 Functions

"All-in-one" Processing Amplifier combines the signal processing functions of previous channel amplifier, gamma corrector, shading generator, and monitor auxiliary.

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The new equipment utilizes only 100 inches of rack space; can be mounted in only 11/3 racks for efficient, compact installation.

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Requires half the ac power needs of conventional equipment and permits elimination of 50% of former dc power supplies. Uses 9 less rackmounted units, and 134 fewer tubes — conservatively operoted for extended life. No need to wait any longer for *production* live color TV equipment! RCA has it now...a complete new TK-41 Color Camera chain with new all-in-one Processing Amplifier, which combines four major functions in one. It not only provides important savings in components, floor space and operating costs, but assures highest quality at lowest expense.

This is the complete color camera TV equipment that television stations are now using in their swing to color, or in expanding their color facilities. For complete technical information, call your RCA Broadcast Sales representative. In Canada, write RCA VICTOR Company Limited, Montreal.

#### RCA TK-41 TYPE COLOR CAMERA

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#### FAST SETUP

Centralized controls minimize setup time, require but a single operator for control functions. In addition, over-oll stability, improvement in comera performance and picture quality are assured.

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# COLOR CAMERA TV EQUIPMENT

which combines all functions in a signal chassis.

2-Page Descriptive Brochure vailable on Request.

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View of Processing Amplifier with front shelf removed



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"P" TYPE ENCAPSULATED RESISTORS

# Stable...Small... Light-weight...

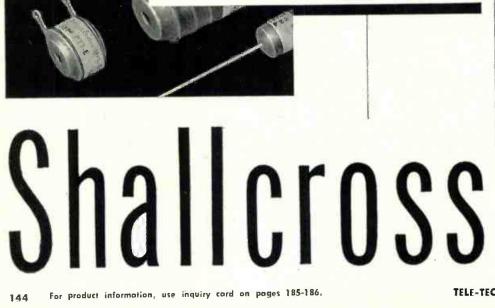
Shallcross "P" Type Encapsulated Resistors are ideal for installation where stability, dependability. and minimum size and weight are a must. These radically new resistors offer the performance advantages of hermetically-sealed steatite resistors at less cost.

Because of the unique Shallcross method of encapsulating windings, "P" type resistors have greater maximum resistances, longer leakage paths, and higher wattage ratings.

Shallcross "P" type resistors are available in six MIL-R-93A lug-type styles and five axial lead styles with wattage ratings ranging from .500 to 3.5 watts. All styles meet and exceed JAN-R-93A, Characteristic A.

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SHALLCROSS MANUFACTURING CO. 518 Pusey Avenue, Collingdale, Pa.



### **Systems Engineering**

### (Continued from page 140)

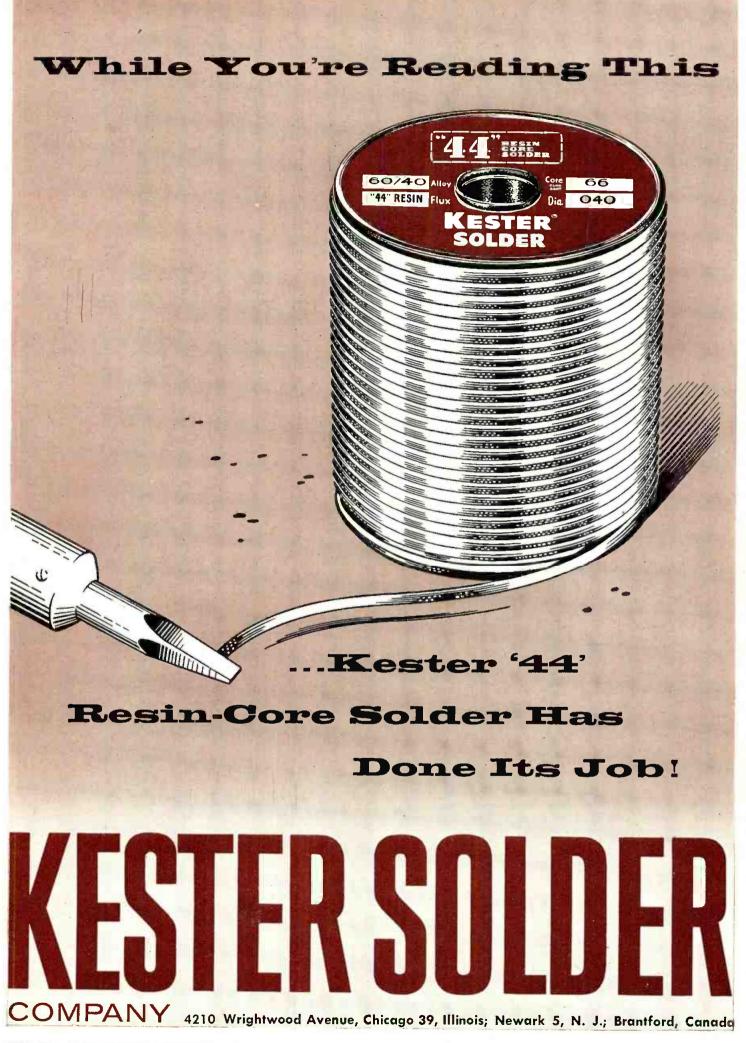
of linearly connected amplitude samples. Once again, the mathematics is rather straightforward.

Considerable work has recently been done under the direction of Dr. Henry Quastler of the Univ. of Illinois. toward determining the human channel capacity—a measure of how much information the human operator can handle in a given time. It has been shown that if the information input rate is too high, then the channel capacity is degraded by the excess of information which cannot be processed. The human becomes confused. This research can be put to practical use to insure that the human is used to his highest capability in the aircraft communication channel. The complexity of the total display which he can at any time perceive (this may include several indicators) should be so arranged as to present the optimal information rate in bits per second or bits per glance.

### **Predicting Values**

Besides the smoothing process mentioned above, the human being can and does predict the value of any parameter. He does this in judging the altitude at which he will pull out of a dive. The automobile driver does this in turning a corner and the baseball player does it in catching a fly ball. Since the aircraft time constant of reaction is different for each parameter, serious consideration should be given to the possibility of displaying the predicted value of the variable rather than the current value at the time of observation. For instance, the pilot could read a "safety modulated" altimeter. (See Fig. 2) Such an instrument would display the true altitude if the aircraft had positive pitch. However, it would display a decreased altitude in accordance with the amount of negative pitch so as to indicate the maximum pull-out altitude available in this maneuver.

Great difficulty is encountered in trying to hover a helicopter simulator. It seems reasonable to expect that if the long time constants of helicopter flight were eliminated by prediction, an experienced pilot would have no difficulty in blindflying a helicopter. Investigation should be made of currently available predicting techniques to determine the relation between the minimum predicted-value error as a



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### Systems Engineering

(Continued from page 144)

function of the prediction time interval. The work indicated above on sampling shows that it should be possible to use unstable predictors which are allowed to operate for short time intervals before quenching, with the resulting samples smoothed to form a continuous variable prediction. This would require a great amount of analysis and engineering.

Any study of aircraft instrumentation seems futile if it does not encompass or at least approach evaluation of the fundamental purpose of any display. That purpose is far more than the transfer of information; it is the stimulation of conceptual meaning in the observer upon which a decision may be based. These decisions can be categorized into various levels. Each of the higher level decisions concerning mission accomplishment and flight path planning can be directly related to lower level decisions establishing the state of the aircraft from still lower level decisions determining what the instruments displayed. Instruments are nothing more than enabling devices which assist in making the lowest level, sometimes the most important, decisions. Most important, because small inaccuracies in this lowest level will be reflected in poorer judgment (de-cisions) at higher levels and may, under certain circumstances, even affect the accomplishment of the entire mission. Some compromise has to be reached between pictorialism and symbolism in the encoding of each display. It is expected that the measure of a degree of pictorialism can be found in the redundancy of the perceived message. This quality is related to intelligibility in terms of the relative amounts of selective and contextual redundancy.

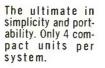
### **Contact Display**

One of the most redundant displays today's pilots encounter is that seen through the windshield in contact flight. The familiarity and naturalness of the earth provides the pilot with the feeling of flying with complete safety. However, much is left to be desired in the contact display. It may be presumed that the earth was not formed in its natural state to allow pilots to fly over it. The assumption that the contact display is optimal tacitly assumes that it was formed for just that purpose. Aside from the obvious lack of sensi-

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- <sup>†</sup> In use by leading TV stations throughout the U.S.A. names on request.



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### **Systems Engineering**

### (Continued from page 146)

tivity in visual judgment of various parameters, such as altitude and airspeed, the irregularity noise in the form of changing landscapes and deceptive countryside can mislead a pilot into dangerous situations. To illustrate this point even more forcefully, if your mission was to cruise very close to the terrain at extremely low altitudes and very high speeds, you would much prefer to fly by an instrument display which gave you a profile of the terrain ahead rather than to have to rely on your judgments of the blur made by the real world. Considerable effort is currently going into the design of fictitious earth displays which provide the pilot with the familiarity of the real world but without its noise and insensitivity. Proprietary rights prevent further disclosure at this time with the exception of illustrating this principle with one particular purpose instrument display.

### Searrain Altimeter

The Searrain Altimeter (Fig. 4) is an integrated pressure and radar altimeter for use in helicopter or other tactical aircraft where it is necessary to have both types of altitude information for rapid reference during the mission. As illustrated in Fig. 4, the aircraft symbol is driven vertically by the pressure sensing element. Sea level altitude can then be directly read on the right hand scale as indicated by the right wing tip. The mask which represents the terrain is an opaque section of the tape with the left hand scale imprinted on the upper transparent section. This tape is driven by the radar altitude sensing element. Terrain clearance altitude can then be directly read on the left hand scale as indicated by the left wing tip. It is important that the scales be identical so that if the radar altimeter is turned off, the opaque "earth" slips below the display face and both scales agree for any pressure altitude. Only the scale name, "Sea Level" would remain internally illuminated to prevent misinterpretation. Logarithmic scales are indicated to provide greater sensitivity at the lowest altitudes but these scales could also be linear. The value of such a display as this lies in the fact that: 1) it is truly integrated, i.e., one moving member can be read to indicate more than one parameter;







# PROOF OF THE

in a "crash program")! These 60-ft. diameter parabolic dishes, although designed for 1 inch of ice and a 116 mph wind, <u>have repeatedly</u> withstood ice loads in excess of 5 inches and winds over 150 mph.

The installation shown is one of a series of Kennedy dishes forming the critical SCATTER communications link in our Northern Defense Perimeter.

Antennas in 14, 18, 28, and 60-ft. diameters are presently in production.



### **Systems Engineering**

### (Continued from page 148)

2) it provides a highly pictorial display representing a cross section of the aircraft and the earth below the aircraft; and 3) it provides the required sensitivity for low level tactical operation.

Each of the above defined qualities, together with others which are yet to be defined, can be assimilated into a procedure for the analysis and design of a display. First, it is necessary to formally specify the acceptable range of each quality for the particular task which the instrument under consideration will be required to perform. This includes estimation of the anticipated noise characteristics of the system. These constraints must then be translated into the conditional probability domain in terms of the range of the acceptable measured curve. From psychometric measures, a matrix of scale parameters versus communication qualities should be constructed. Each square should indicate the approximate relation between its coordinates. For instance, some positive functional relation will be seen to relate scale length with sensitivity and some negative relation will relate pointer width and accuracy. Any suggested display is now measured under the expected environmental flight conditions. The various characteristics of the display are measured in terms of their communication qualities and compared to the specification. When a display quality is found to be deficient, the designer refers to the matrix to find out which scale parameters will correct this deficiency. Such a change will, of course, vary other communication qualities and this variation must now be examined to insure that these characteristics are also kept within their acceptable range. The scale parameter design then becomes the optimal compromise which will produce communication qualities within each one's specified tolerance. The designer then knows that this display will perform its intended task.

### Transmitting Information

It would be very unwise to suggest such a design procedure as above, without specifically indicating some of the limitations which are present. The most severe criticism which may evolve from a communication theory attack on the display design problem may lie in the fact that this theory deals with average amounts of information. This gen-



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Water-tight and weather-proof connectors for rugged service.

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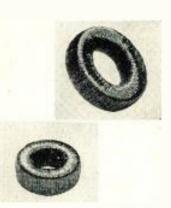
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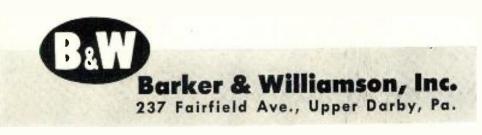


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A sure cure for production and miniaturization headaches.



### **Systems Engineering**

### (Continued from page 150)

erally leads to optimum system performance when low probability occurrences are of little importance. This, undoubtedly, is not true in the aircraft system. Much attention must still be given to this "low probability monitoring" and thus bias the optimal information transfer criterion into the optimal aircraft system criterion. In the meantime, however, it is well worth our attention to design aircraft displays so as to insure the best average transmission of information.

Secondly, the information measures are defined for stationary systems. The internal aircraft communication channel is not such a stationary system. In particular the human operator may change characteristics with the reception of a particular message, or even any message. It remains for future research to specify this variability so that it can be included in the system design procedure. Other limitations can be seen in terms of intersymbol influence and the yet unattained proof for certain of the hypotheses upon which this work was based. Further discussion of these points would be much too lengthy for inclusion in this short paper.

#### Servo-Loop

The entire discussion above has been concerned with how to display. Once the information is received by the human operator, he must perform some transformation upon the variable before feeding the information to the controls. In the past, the entire system has been considered as a servo-loop, where each element, the pilot, the aircraft kinematics, and the instrument each perform its individual transformation of the variable. To be realistic, this system analysis must include the communication link capabilities between and through the individual elements of the servo-loop. In an exactly similar manner to the above, the control output communication link can be studied and designed so as to be most effective. The cockpit environment can be examined with regard to a measure of the induced human noise (judgment error). An uncomfortable seat raises the noise level of the human operator. Proper cockpit lighting can lower his internal noise level.

In the past, much work has been (Continued on page 158)

# Smooth, Smoother, S-m-o-o-t-h-e-s-t

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DOLLY COLLAPSED

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Micro wave relay beam reflector head, also metal tripod. Head is perfect for parabolas up to 6 ft. diameter, withstands torque spec's environmental treated. Tripod legs work in unison, one lock knob, spurs and rubber foot pads included.



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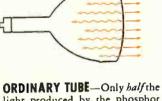
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The "Magic-Mirror" Aluminized Picture Tube produces the brightest, most realistic picture ever seen in the American home. The "Magic-Mirror" tube effectively utilizes *all* the light generated by the phosphor screen.

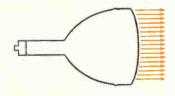
Tung-Sol has developed a unique "fogging" method of backing up the phosphor screen with a mirror-like aluminum reflector. This reflector prevents light radiating uselessly back into the tube. It brings out all the detail of which the receiver circuit is capable. So smooth and true is the Tung-Sol aluminum reflector that mottling, streaks, swirls, "blue-edge", "yellow center" and other objectionable irregularities are eliminated.

Tung-Sol pin-point-focused electron gun assures a steady, brilliant picture—free from alternate fading and overlighting. Tung-Sol's exacting standards of quality control, manufacture and testing further guarantee the high uniformity and maximum performance of the "Magic-Mirror" TV Picture Tube.

Let the superior qualities of "Magic-Mirror" Picture Tubes add selling advantages to your set.



**ORDINARY TUBE**—Only *half* the light produced by the phosphor screen is utilized in the picture. Other half radiates wastefully back into tube.



**MAGIC-MIRROR ALUMINIZED TUBE** — Aluminized reflector allows electron beam through. Blocks wasted light from backing up into tube. Reflects all the light into picture.



**RESULT**—A light background within the tube which reduces picture contrast.



**RESULT**—Pronounced increase in contrast to make a bright, clear, more realistic pictute.

# TUNG-SOL ELECTRIC INC., Newark 4, N. J.

Sales Offices: Atlanta, Chicago, Columbus, Culver City (Los Angeles), Dallas, Denver, Detroit, Montreal (Canada), Newark, Seattle. Tung-Sol makes All-Glass Sealed Beam Lamps, Miniature Lamps, Signal Flashers, Aluminized Picture Tubes, Radio, TV and Special Purpose Electron Tubes and Semiconductor Products.

### Marketing in the West

(Continued from page 131)

Location favored the Neely goal when the company was established in 1933. Being rooted in Los Angeles, in the center of the aviation industry, and also the electronic center of the Southwest, the firm was able to have continuous access to two industries that are large users of electronic apparatus.

As the market area widened with the establishment of new plants and removals to new locations in four states, so did Neely Enterprises widen its own horizon. Today, the company is proud of its six fully staffed offices, each having highly trained field engineers and a complete factory-type repair and service department. These offices are in Los Angeles, San Francisco, Sacramento, San Diego, Albuquerque and Phoenix.

### MANUFACTURERS REPRESENTED BY NEELY ENTERPRISES

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There is also a \$250,000 headquarters building under construction, and the Neely Mobile Laboratory. This unique vehicle for the display of products and the making of door-step demonstrations, is constantly criss-crossing the four states of California, Arizona, Nevada and New Mexico.

In the marketing and servicing of diversified types of electronic equipment, produced by eleven manufacturers, the Neely organization not only had to have facilities in the areas where they were needed, but also a definite program of sales training.

The selection of manpower was especially important because experience had shown that selling costs and productivity were closely proportional to the training of these representatives. They must have the know-how to sell the various products; also to instruct customers and answer any question about application, installation, operation and service.

### **RCA Opens New Center**

RCA recently completed a new five-building center at Cherry Hill, a suburb of Camden, N. J. The unit, comprising 58 acres with 325,000 square feet of building space, houses the consumer products and the Service Company and employs 1,400 persons.

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- Circuits: SPST only normally open or normally closed.

Amperite Thermostatic Delay Relays are compensated for ambient temperature changes from -55° to +70°C. Heaters consume approximately 2 W. and may be operated continuously. The units are most compact, rugged, explosion-proof, long-lived, and — inexpensive!

STANDARD



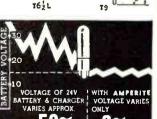
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Also — a new line of Amperite Differential Relays may be used for automatic overload, over-voltage, undervoltage or under-current protection.

# **BALLAST REGULATORS**

- Amperite Regulators are designed to keep the current in a circuit automatically regulated at a definite
- value (for example, 0.5 amp). For currents of 60 ma. to 5 amps.
- Operates on A.C., D.C., Pulsating Current.
- Hermetically sealed, light, compact, and most inexpensive.

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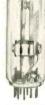
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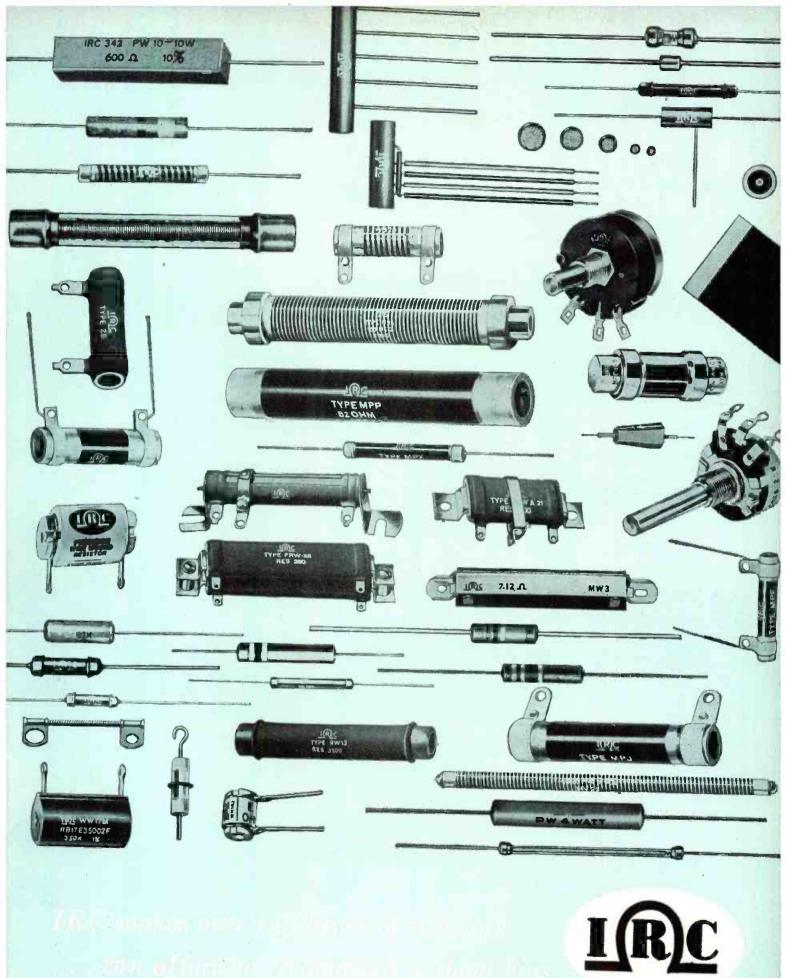
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### Systems Engineering

### (Continued from page 152)

accomplished toward the servo analog analysis of aircraft control and kinematics. In fact, this has become a standard design procedure. But, in the past the system was almost always approximated by linear functions for the sake of simplifying the analysis to a workable level. Only recently has servo analysis been applied to both the instruments and the human operator. We are now approaching a state of the art where the entire aircraft system can be mathematically described. Its essential nonlinear characteristics can be handled by studying each of these characteristics individually in the analysis. The most vital of these toward making servoanalysis possible is the assumption of multi-mode operation of the human operator; that is to say that he can be more closely and simply approximated by linear systems each operating sequentially and switching according to some pre-defined error and error rate conditions. Such a model breakdown allows the problem to be readily described and, more important, provides the means of designing displays so as to most effectively utilize the human by designing around his mode switching criterion. Such design can minimize the error integral criterion as defined for any parameter.

### **Joining Theories**

Other nonlinearities have already been discussed in this article although not mentioned by that name. They are element communication noise, parameter sequential sampling and feedback sampling. It is also important in servoanalysis to include the time delay of human reaction time so as to insure closer agreement between the experimental data taken on the prototype model and the results anticipated from mathematical servoanalysis.

Before a final mathematical analysis can be made to study the aircraft system engineering completely, various aspects of communication theory, servo theory and even strategy and game theory will have to be joined to produce an integrated picture. It is the last of these that can best help toward answering the difficult question of "what to display."

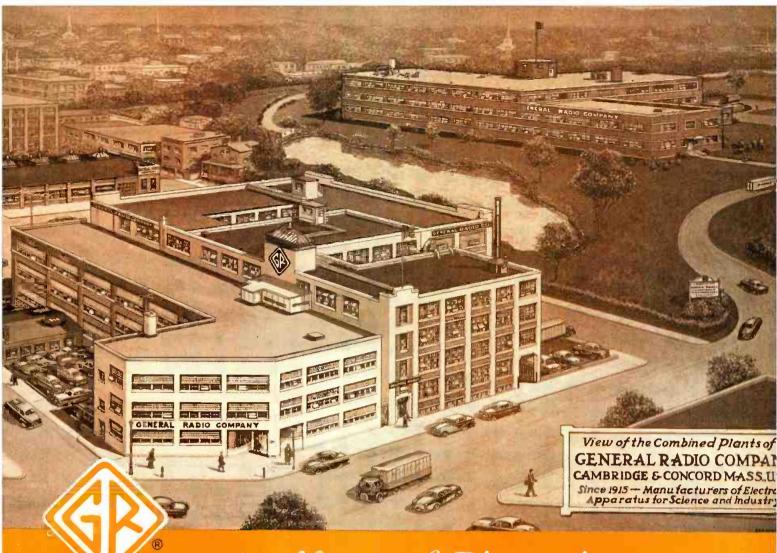
### References

- R. A. McFarland, "Human Engineering," Aviation Age, June 1953.
   W. E. Woodson, "The Human Engineering Guide."
   C. A. Baker and W. F. Grether, "Visual Presentation of Information," WADC 'TR 54.160 54-160.

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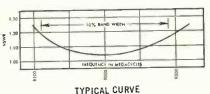
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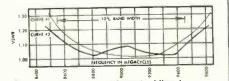
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### **Figure of Merit**

(Continued from page 97)

phase amplifiers. Amplifiers of this type have been described at some length in the literature. In general, the principle of self-saturation is employed when a rectifier is placed directly in series with a saturable reactor in a consumption circuit. This point is illustrated in Fig. 2. Here a single-phase self-saturating magnetic amplifier consisting of reactors, and self-saturating rectifiers is connected in series with a supply of ac voltage and a load. The average impedance of the reactors is of course a function of the reactor control winding dc ampere-turns. The self-saturating rectifiers are utilized to prevent cyclic demagnetization of the reactors by the ac supply voltage. (Removal of these rectifiers in Fig. 1 results in a parallel connected simple reactor circuit.) As a consequence of the self-saturating rectifier, the control ampere-turns required to drive the amplifier from maximum impedance to minimum impedance are greatly reduced. The effect is similar to positive feedback. As positive feedback is added to a magnetic amplifier, power amplification increases at a much faster rate than amplifier time constant. These remarks are quite general and apply to all of the self-saturating circuits. Steady state and transient characteristics of all single-phase selfsaturating circuits are very similar. The self-saturating magnetic amplifier is used in a large number of amplifying systems because of the high Figures of Merit obtainable.

#### **Design Considerations**

Design of self-saturating magnetic amplifiers requires a knowledge of the factors determining Figure of Merit. Some of these factors are:

1) Core material properties: As the amplifier core material hysteresis loop approaches rectangularity, the amplifier Figure of Merit increases. This increase is a direct function of the permeability of the core material along the flanks of the hysteresis loop.

2) Self-saturating rectifier properties: Self-saturating rectifier leakage results in negative feedback in the amplifier. This feedback may be non-linear, resulting in overall amplifier non-linearities in addition to reducing the Figure of Merit.

3) Proportioning of Windings: The amplifier Figure of Merit is increased as the ratio of load winding



For product information, use inquiry card on pages 185-186. 161

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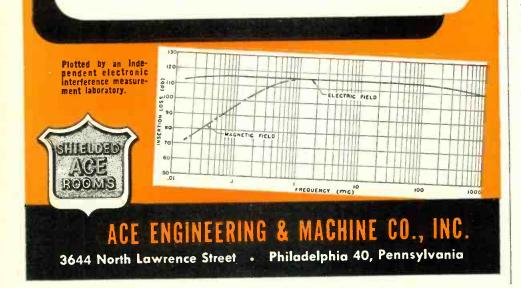


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### **Figure of Merit**

(Continued from page 160)

to control winding window area is increased.

4) Space Factor: The amplifier Figure of Merit increases directly with winding space factor. It is therefore necessary to fill the core window as completely as possible with copper.

5) Core Configuration: The configuration of the reactor core affects the amplifier Figure of Merit in the ratio of core window area to effec-

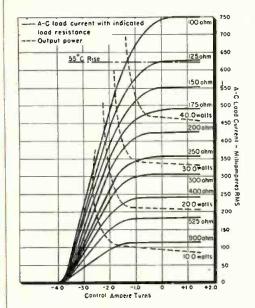


Fig. 4: Control characteristic for Type 3716 magnetic amplifier for various values of load

tive core length. The toroidal core offers the best value of this ratio.

6) Core Size of Amplifier Power Rating: The amplifier Figure of Merit increases directly with a linear dimension of core window area. As an example—directly with core inside diameter in the toroidal core.

The Figure of Merit increases approximately as the cube root of the amplifier output power rating. Table I illustrates this point. Here power ratings and Figures of Merit of five toroidal-type, single-phase, self-saturating magnetic amplifiers are tabulated. These amplifiers designed for 60 cps operation and varying in rated power output from 40 milliwatts to 180 watts are shown in Fig. 3. Core material is the highly oriented iron-nickel alloy, Hipernik V, and self-saturating rectifiers are the industrial selenium type.

### **General Purpose Types**

The design considerations which determine amplifier Figure of Merit are not in general amenable to specification by the industrial user of magnetic amplifiers. A number of

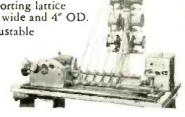
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• Winds random wound bobbins, solenoids, resistors and repeater coils up to  $5 1/2^{"}$  OD.

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Time-saving instant re-setting automatic counter.

### Automatic Variable Pitch Progressive Universal Winder MODEL 225-AMVP

• Winds variable pitch prog. univ. coils, var. pitch solenoids, prog. univ. coils, automatic pi-wound coils and single layer close wound and space wound solenoids up to 2" wide and 3" OD, universal coils up to 1 1/4" wide and 3" OD.

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• Winds straight or skewed external slot stators and rotors for either direction of rotation.

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- Winds *smallest* possible pitches—down to a slot span of from 1 to 3. (*Exclusive* feature).
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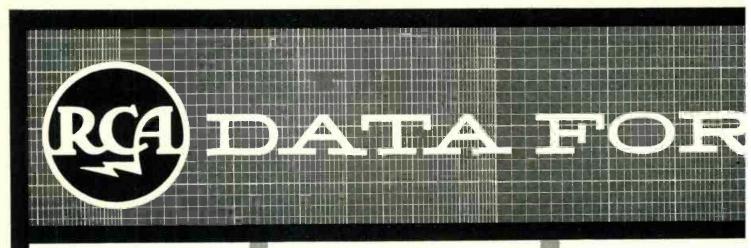


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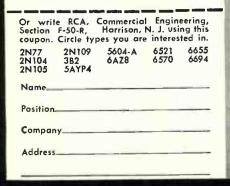
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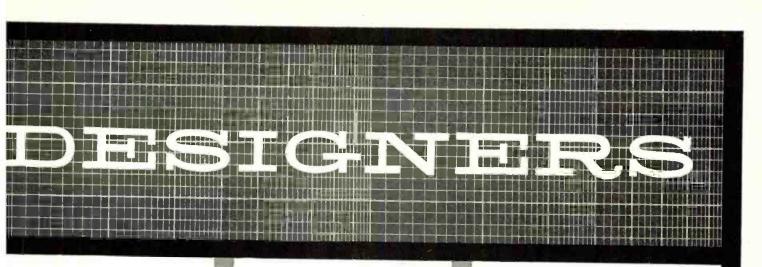




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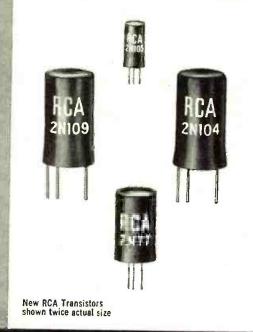


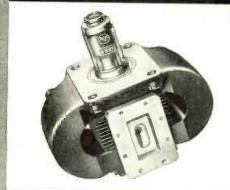
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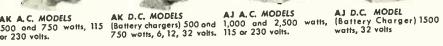


AK A.C. MODELS











### **Figure of Merit**

### (Continued from page 162)

manufacturers, at the present time, offer standard lines of general purpose self-saturating magnetic amplifiers. These standard amplifiers have been designed to supply a wide range of ac or dc loads, and to operate from a range of rated ac supply voltages and frequencies. Control windings have been made standard by some manufacturers, or have been left to customer specification within space and manufacturing limits by at least one manufacturer. By virtue of standardization of amplifier rated output power, the Figures of Merit of these general purpose magnetic amplifiers are relatively fixed. Since Figure of Merit is a basic consideration in the design of systems using magnetic amplifiers, the determination and use of this figure is a direct approach to magnetic amplifier application. The determination of the Figure of Merit of a specific amplifier can be made from the manufacturers published operating characteristics.

Typical operating characteristics of a standardized general purpose self-saturating magnetic amplifierthe Westinghouse Type 3716 Magamp are shown in Figs. 4 and 5. General characteristics are listed in Table II. Since its power output Magamp is standardized, its Figure of Merit is fixed and determinable from these two characteristic curves. The number of control windings, turns, and wire size, within published limitations, are at the option of the user. It should be noted that both control—and response-time character-

### TABLE II

Nominal power output	40 watts
Rated supply voltage	115 v., 60 cps
Rated output current:	
(55°C reactor temp. rise) .	0.60 a.
Rated load resistance	
(55°C reactor temp. rise)	130 ohms
Load resistance for maximum	
incremental power amplifi-	
cation	175 ohms
Output current for maximum	
power output	0.96 a.
Load resistance for maximum	
power output	60 ohms
Output winding resistance per	
reactor at 25°C	25 ohms
towerst at my a contract.	

istics are plotted in such a way as to be independent of the absolute design of control windings and control circuits.

### **Power Amplification**

The power amplification of the Type 3716 Magamp can be calculated

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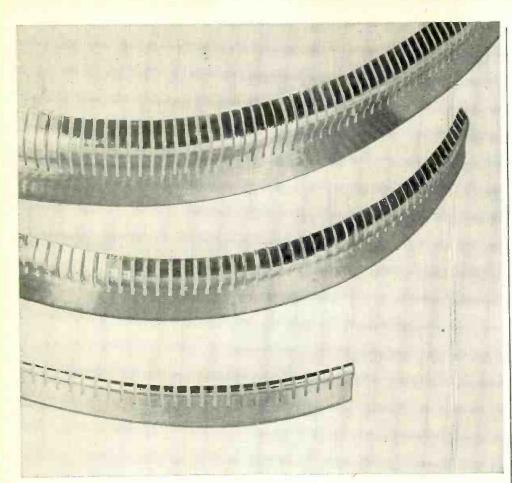
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### **Figure of Merit**

### (Continued from page 166)

from the Control Characteristic curve shown in Fig. 4. The value thus obtained is a function of the  $N^2/R$  of a single control circuit. The slope of the Control Characteristic curve at rated load (125 ohms) is used in determining power amplification. Arbitrarily, the range used for measurement of this slope is from 20 to 80% rated output current. The slope of the 125-ohm control characteristic over this range is:

$$S = \frac{\Delta I_{10\pi d}}{\Delta (NI)_{control}} = \frac{.360}{1.6}$$
  
amps/amp-turn

Power amplification is:

$$A_{p} = \frac{(\Delta I_{1 \text{ ond }})^{2} R_{\text{load circuit}}}{(\Delta I_{\text{control}})^{2} R_{\text{control eireuit}}}$$

In this equation:

 $A_{P}$  = power amplification — the ratio of the change in load circuit power to an initiating change in control circuit power.

( $\Delta$  I<sub>load</sub> = the change in load current from 20 to 80% of rated value at rated load resistance.

R load elircuit = the total resistance of the amplifier load circuit which is the sum of load resistance and amplifier internal resistance. Amplifier internal resistance can be measured or obtained from the manufacturer's "Operating Characteristics." For a close approximation, the internal resistance of the amplifier is equal to to the load resistance for maximum power output—in this case 60 ohms.

 $\Delta$  I control = the change in a control winding current required to change load current over the range from 20 to 80% of rated value.

R control circuit = the total resistance of the control circuit in which  $\Delta I$  control flows.

From the equation above:

$$\begin{array}{l} A_{p} \coloneqq \\ S^{2} R_{\text{lead circuit}} (N^{2}/R) \text{ control circuit} \\ = \frac{.360^{2}}{1.6} (125 + 60) (N^{2}/R) \end{array}$$

$$= 9.4 \text{ N}^2/\text{R}$$

### **Response Time**

As may be seen from the Response Time Characteristic curve in Fig 5, amplifier response time decreases uniformly with  $N^2/R$  to a response time value of approximately 5 cycles. (This value varies with the particular Magamp type.) In the region of response time values above 5 cycles, the 3716 Magamp Figure of Merit is approximately constant. In the region below 5 cycles, the response time is altered by a residual International



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### **Figure of Merit**

### (Continued from page 168)

response time (i.e. a value of response time which is not amenable to change-by-change in control circuit N<sup>2</sup>/R). Figure of Merit is calculated in the response time range above 5 cycles in the case of the

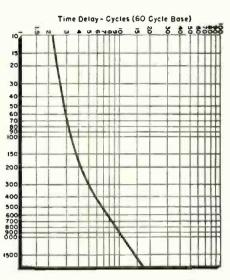


Fig. 5: Response time curve for Type 3716

Type 3716 Magamp. Choosing a value of response time equal to 10 cycles, the corresponding N<sup>2</sup>/R is 900 (turn <sup>2</sup>/ohm).

The "Figure of Merit" of the 3716 Magamp can now be calculated since

 $A_p = 9.4 N^2/R = (9.4)$  (900) for 10 cycle response.

The Figure of Merit is then:

$$m = \frac{A_{P}}{T} = \frac{9.4 \text{ N}^{2}/\text{R}}{T} = \frac{(9.4) (900)}{10}$$
  
= 850 (per/cycle)

where A<sub>P</sub> is power amplification and T is the corresponding response time.

This value of Figure of Merit is a constant of the Type 3716 Magamp over a wide range of response time values. If the value of the Figure of Merit is required in the response time region of 5 cycles and below, this value must be determined as outlined above for the specific response-time value.

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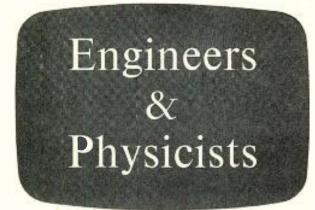
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# transistor and digital computer techniques

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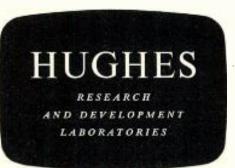


Digital computers similar to successful Hughes airborne fire control computers are being applied by the Ground Systems Department to the information processing and computing functions of large ground radar weapons control systems. The application of digital and transistor techniques to the problems of large ground radar networks has created new positions at all levels in the Ground Systems Department. Engineers and physicists with experience in the fields listed, or with exceptional ability, are invited to consider joining us.



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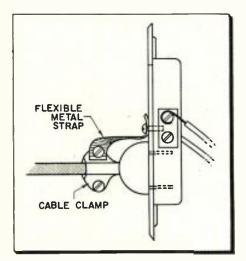
### Cues

(Continued from page 114)

### **Remote Amplifier Control**

FRANK P. SAIA, Chief Engineer, WCLI, Corning, N. Y.

**O** NE of our remote amplifiers being powered by 110 volts ac only was often knocked off the air by someone accidentally tripping



### Strap and clamp hold plug in place

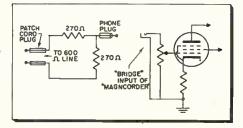
over the power cord, removing it from the ac outlet. This was remedied by installing a flexible metal strap to the ac plug cable clamp. Several holes were drilled at the other end of the strap to accommodate various outlet plates. At the remote location the loose end of the strap is fastened beneath the screw which holds the ac outlet plate . . . Plug stays in.

### **Correcting Unbalance Hum Noise**

### By JOHN CARLINI, WMBS Uniontown, Pa.

Anyone who has ever attempted to make a tape recording from a balanced telephone line using the "bridge input" of a Magnecorder, has realized that something is necessary between the recorder and the line if the hum, noise, and crosstalk that results from the unbalanced condition is to be avoided. This problem is usually solved with a transformer; but good quality transformers cost money. For a simple, inexpensive remedy simply-terminate the line correctly with a resistance.

Diagram to help eliminate hum



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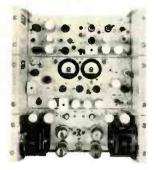
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FTL-P-127A Chromascope



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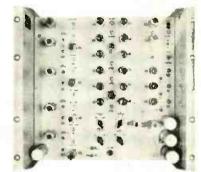
Dunky



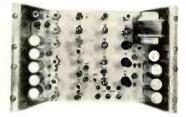
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### **Transistor Operating**

(Continued from page 105)

If, using the measured values of the conductance parameters, Eq. 9 can be shown to predict accurately the gain of a transistor for constant  $R_{\rm L}$  and  $V_{\rm e}$  the conductance pa-

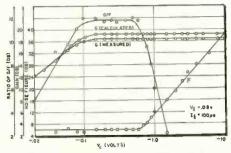


Fig. 6: Data for transistor RCA A5240

rameters of the transistor and the over the range of collector bias voltage used and Eq. 8 should predict the noise figure behavior of the same transistor for the same conditions.

### Measured Data

In order to verify experimentally the results predicted by Eqs. 8 and 9, it is necessary to measure both the gain and the noise figure as a function of collector voltage. Two types of junction transistors were used in this investigation, four RCA type TA-153 pnp transistors and three GPC type RD2517 npn transistors.

To satisfy Eq. 1 for the noise figure and Eq. 4 for the gain, it is necessary to measure the values of  $V_{no}$ ,  $R_s$ , A,  $V_s$ , and P.. These are measured by means of the circuit of Fig. 4<sup>10</sup> with a constant emitter current of 100 µa and a total load impedance of 25 k ohms for values of collector voltage V. from 0.02 v. to 10 v. The transistor output noise voltage Vno is amplified and filtered to a one-hundred cycle bandwidth at 1 KC in the amplifier of Fig. 5. At this frequency the parameters of the transistors can be considered ohmic. This amplifier has a maximum voltage gain of 60 db and an equivalent input noise level of -134 dbv. Type 5879 tubes are used to reduce microphonism and a 60 cycle notching filter is incorporated between the second and third stages to eliminate the effects of pickup across the high impedance in the input stage grid circuit. The amplified noise voltage is measured on a Ballantine Model 300 VTVM, whose meter movement is highly damped, and referred to a one cycle bandwidth at 1 KC.

Shockley has shown, as noted above, that the current-voltage relationship for a transistor can be written as follows:

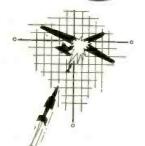
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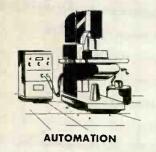
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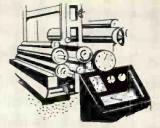
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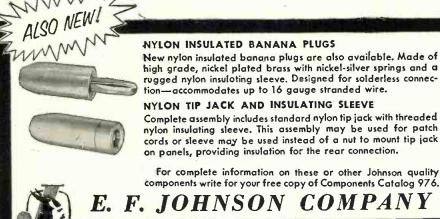


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### **Transistor Operating**

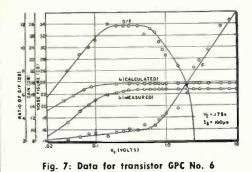
(Continued from page 174)

- $I_e = G_{ee} B_e + G_{ec} B_o \qquad (10)$
- $I_e = G_{ee} B_e + G_{ee} B_e \qquad (11)$

where the G's are the conductances at zero voltage and the B's are as defined in Fig. 3. Using Eqs. 10 and 11, it is possible to determine the conductances (G's) by means of dc voltage and current measurements.

### Conclusions

Table 1 shows that the point of gain saturation (defined as the value of  $V_c$  where the gain is 1 db down)



predicted by Eq. 9 is within 12% of the measured value for the RCA pnp transistors and within 30% for the GPC npn transistors when using d-c conductance parameters as determined by Eqs. 10 and 11 at 0.10 v. The values of maximum gain predicted by Eq. 9 are within 0.83 db of the measured values for the RCA pnp transistors and within 4.54 db for the GPC npn transistors. Representative curves of gain versus collector voltage are shown in Figs. 5 and 6.

From these data it is concluded that Eq. 9 is sufficient to predict the behavior of the gain of a transistor for variations of collector voltage with a constant emitter current and that the short-circuit conductance parameters measured at 0.10 v. are valid over the selected range of collector voltages.

### Noise Figure

Based on the foregoing assumptions and the stated conclusions with regard to the gain measurements, it is assumed that Eq. 8 should predict the behavior of the noise figure with collector voltage. However, there is a striking lack of correlation between the behavior of the noise figure F with V<sub>c</sub> as predicted by Eq. 8 and the measured data when it is assumed that the behavior of the noise voltages is such that  $V_{re^2}$  is constant and  $V_{nc^2}$  is an increasing function of V<sub>c</sub>, i.e.  $(V_{nc}^2 = .75 \times$ 

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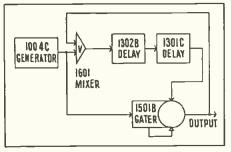
## Pulse sequence changed Transistor Operating

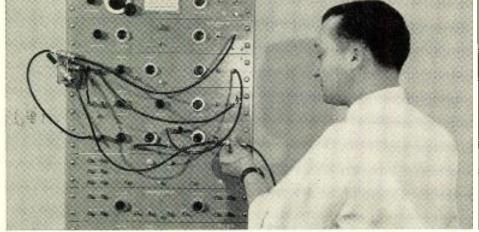
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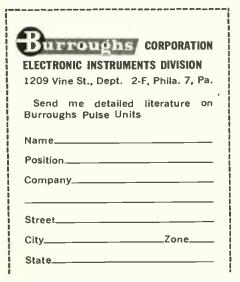


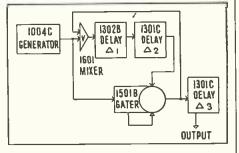


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(Continued from page 176)

10<sup>-s</sup>V.<sup>4.2</sup>) as given, for instance, by Montgomery's data.<sup>3</sup> (The data on the variation of the noise voltages given by Montgomery is not for the transistor types used in this investigation.) If  $V_{nc}$  were proportional to Ve<sup>4.2</sup>, the term of Eq. 8 containing it,

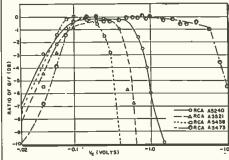


Fig. 8: Ratio of gain to noise vs Ve

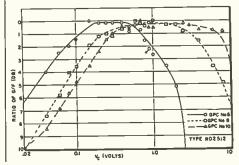
which is the term Schaffner and Keonjian indicate is the main factor in the increase of F with V. (Fig.2), would decrease very rapidly with V., i.e. (V.4.2/exp 80 V.) instead of increasing. Further, even with a correlation coefficient of +1 for the statistical relation between Vn. and Vn., the noise figure would decrease with increasing V. This would be contrary to all the available data on the noise figure which show the noise figure to be either constant or increasing but not decreasing with V.

However, the above mentioned data of Montgomery concerning the behavior of the noise voltages with V. may not be representative of all transistors. It is also possible that the equivalent circuit and equation used in this investigation are not satisfactory in their manner of representing the equivalent internal noise of the transistor.

### Gain vs. Noise Figure

A maximum of the ratio of G to F has been found experimentally (Figs. 8 and 9) but has not been shown theoretically since it was not found possible to predict theoretically the noise figure F from the (Continued on page 182)

Fig. 9: Ratio of goin to noise vs Ve



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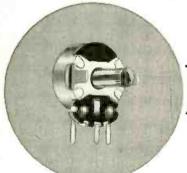


Type U70 (Miniaturized) Threaded bushing mounting. Terminals extend perpendicularly 5/32" from control's mounting surface.



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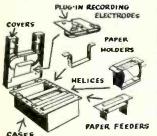
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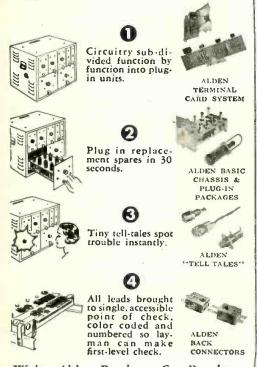
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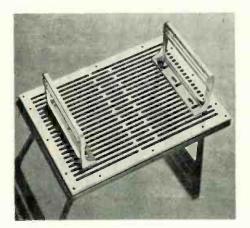


Power requirement, 115 v. 400 cPs, Power consumption; stand-by, 1.0 w., full output, 3.5 w. Input voltage, dc 0-1.0 v. or pulsating. AC, 0-1.0 v., phase angle 60° leading. Librascope, Inc., 808 Western Ave., Glendale, Calif. (Inquiry Card No. 6-14)

## BREADBOARD EQUIPMENT

For the Electronic

A new type of breadboard equipment features top-side fastening and precision alignment. The servo plates are reinforced with stainless steel sheets for extra rigidity, and the hangars and ac-



cessories are fastened to the plate from the top side with special T-nut cap screws. The need for supporting legs or suspensions is eliminated. Slots in the hangars enable additional fine adjustments ensuring optimum alignment and mesh. Sterling Precision Instrument Corporation, 34-17 Lawrence St., Flushing 54, N. Y. (Inquiry Card No. 6-12)

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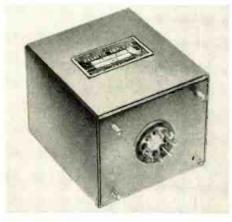


the clutch and provides instantaneous power pickup. When the coil is deenergized, the clutch is disengaged and braking action occurs, if desired. Standard voltage is 28 v. dc. Globe Industries, Inc., 1784 Stanley Ave., Dayton 4, O. (Inquiry Card No. 6-13)

# Industries

# SERVO AMPLIFIER

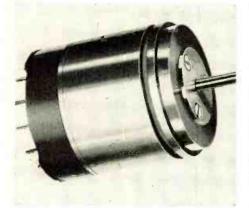
The PRD R40G7W6 combination silicon transistor-magnetic servo amplifier will deliver full power to the parallel connected control windings of the 400 CPS BuOrd MK7 and MK14 servo mo-



tors. Overall voltage gain when driving the MK7 motor is greater than 2,000. This gain, coupled with the wide bandwidth of 0 to 70 crs, makes the unit a useful component in instrument servo systems. Silicon type transistors for the preamplifier enables operation at ambient temperatures up to 85°C. Internal stabilization is provided by use of the dc. component in the amplifier output. Polytechnic Research & Development Co., Inc., 202 Tillary St., Brooklyn 1, N. Y. (Inquiry Card No. 6-11)

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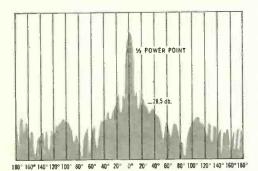
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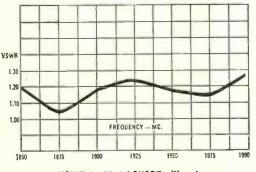


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THE GABRIEL COMPANY, Endicott Street, Norwood, Mass.

# **Transistor Operating**

(Continued from page 178)

available data on noise voltages. This maximum region is reasonably wide for most of the transistors measured but occurs at different values of V<sub>e</sub>. For the seven transistors measured, a value of V<sub>e</sub> of  $0.20 \pm 0.05$  v, will result in a value of G/F within 2 db of the maximum for 6 of the 7 transistors and within 3 db of the maximum for the other one. These measurements are for a constant emitter bias current of 100 µa in all cases.

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- 8. "A Study of Noise Factor for Transistor Amplifiers," J. H. Bell, Eighth Quarterly Progress Report, May I, 1953 to July 31, 1953, Communications Circuitry Laboratory, Northwestern University, Evanston, Illinois
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- "A Presentation of Transistor Test Equipment," K. W. Laendle, 1953 Transistor Short Course Proceedings. Conducted by the Department of Electrical Engineering, The Pennsylvania State University; ch. XV.

# Electronicam

#### (Continued from page 95)

are designed so that a portion of the light passing through the common lens is split up into two parts; one to the film and one to the imageorthicon tube.

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One type permits simultaneous broadcasting of a standard quality live monochrome TV signal while a high quality motion picture film of the identical scene is recorded in black-and-white or color.

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(Continued from page 182)

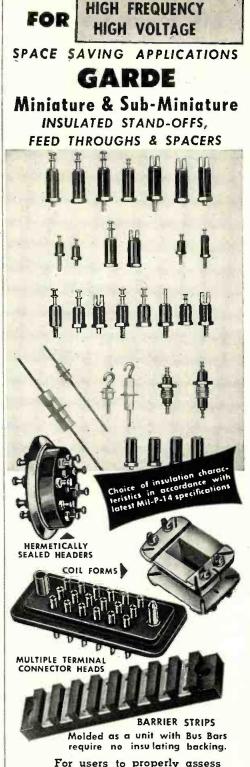
TV studio techniques such as rapid, less-expensive production, the use of TV monitors as a guide and the control of action being filmed.

Fig. 1 shows the complete system operation. The image being telecast or filmed is picked up by "Electronicam" camera units (upper left) and fed, as shown by the solid lines, to camera switching and electronic editing equipment (upper center). As indicated by the diagram, the director at this point has a complete and continuous view of what the camera units are picking up at all times. He may, therefore, direct which camera footage is to be used. The scene chosen may be sent directly to the transmitter (upper right) and/or relayed to the teletranscription "editing master" equipment (center). This equipment records the same scene being shot by the cameras together with all fades, wipes, dissolves, and superimpositions as ordered by the director. The scene being shot plus the special effects being added may be viewed on the "take-air" monitor shown at the right of the director's silhouette. The "editing master" and the high quality film footage are run through developing equipment as indicated by the dotted lines. The high quality film is then cut and edited quickly by comparing it with the "editing



TV Camera mounted on tripod dollies

master" on a special editing device. The high quality film is then printed up and processed for use on movie screens, as for example in theatres, or used for on-air delayed broadcasts as indicated by the lower right portion of the diagram.



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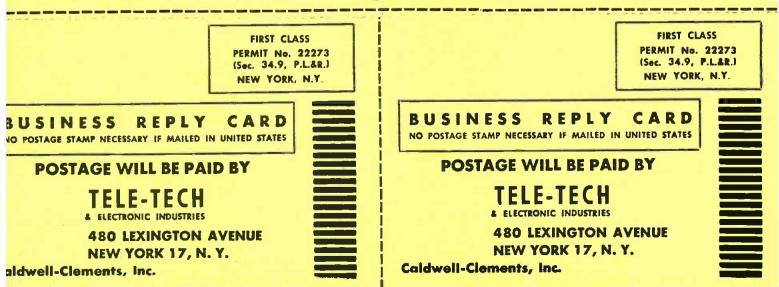
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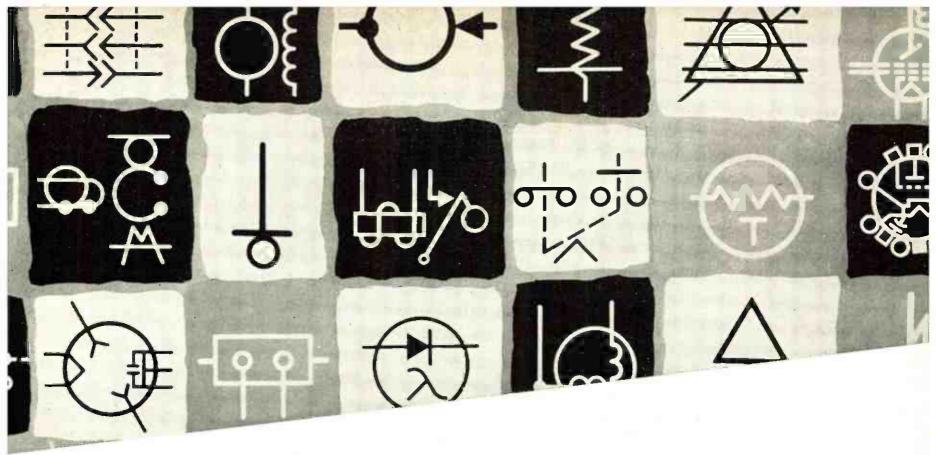
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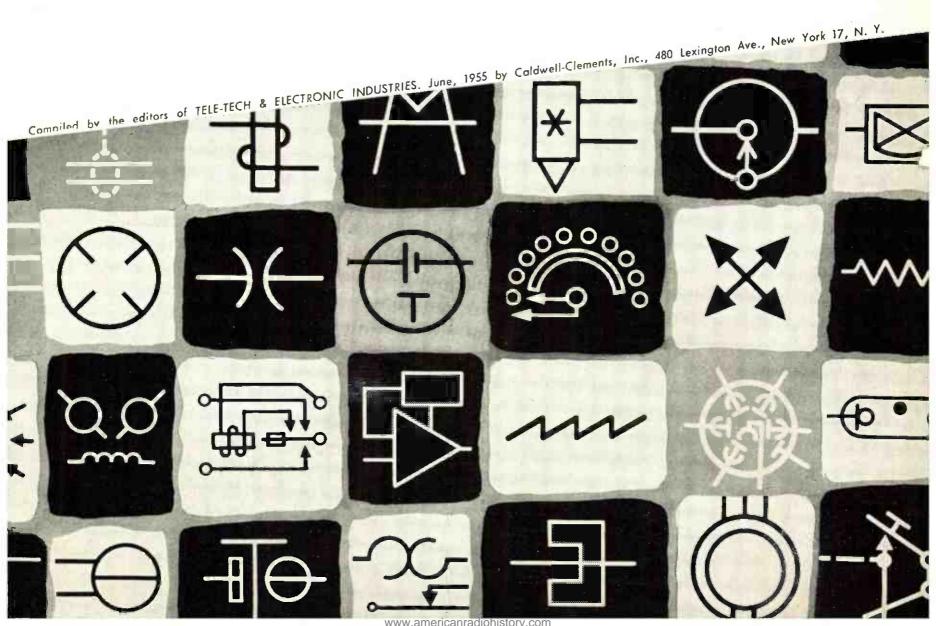
a dash, be sure to include you write code numbers in the boxes on the other side of these inquiry cards.

NOT GOOD AFTER AUG. 1, 1955





# TELE-TECH's 1955 ELECTRONIC INDUSTRIES DIRECTORY



# "JUST ABOUT EVERYTHING IN THE BOOK"

It would take over 500 listings in this directory to cover the major items of electronic equipment available via Graybar! Industrial, AM, TV, and FM installations can be supplied almost in their entirety through your nearby Graybar office or warehouse. In addition, you can select from over 100,000 other electrical items for wiring, lighting, communication, ventilation and power distribution. Just consult your local Graybar Representative for complete price and specification data on anything electrical.



#### AMPLIFIERS

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Audio "High-fidelity" Industrial sound Limiting Line Micraphone Mixing Monitoring Montage Recording Remate Tape playback ' Television Tone control ANALYZERS, VIDEO ANTENNAS, COMMERCIAL Broadcasting, AM Broadcasting, FM & TV **Fixed Station** Microwave Mobile Railroad UHF VHF Radiators, FM & TV Towers & Supports, Commercial ANTENNA ACCESSORIES **BATTERIES, CHARGERS** AND ACCESSORIES CABINETS, RACKS AND PANELS CHASSIS ACCESSORIES COMMUNICATION SYSTEMS Corrier current Civil defense Commercial Induction Intercom Microwave Multiplex Portable Railroad CONNECTORS AND TERMINALS CONTROL EQUIPMENT, COMMUNICATIONS Audio recording Broadcast input Frequency Illumination Motor & generator **Photoelectric Remote radio Tower lighting** Ventilation CONTROL EQUIPMENT, INDUSTRIAL Illumination Motor & generator Temperature

Traffic TV visual Ventilating Volume Industrial TV systems Regulators, automatic voltage CRYSTALS DIALS AND FRONT PANEL ACCESSORIES FILTERS Antenna Audio Vestigial sideband FUSES AND FUSE FOLDERS HARDWARE HEADPHONES INDUSTRIAL ELECTRONIC EQUIPMENT INSULATION MATERIALS AND COMPOUNDS INSULATORS Antenna Bead HV power line Standoff Tower LIGHTING EQUIPMENT AND ACCESSORIES FOR STUDIO, INDOOR, OUTDOOR MEASUREMENT AND TEST EQUIPMENT Color TV signal Sync. TV, composite signal Antennas phase Audio Frequency Modulation Video line Video off-the-air Waveform Attenuators, A-F Attenuators, logarithmic Converters, frequency Lenses METERS - AUDIO, ELECTRICAL MEASUREMENT, RF, SPECIAL PURPOSE MICROPHONES Carbon Condenser Crystol Dynamic

MICROPHONE ACCESSORIES MOBILE COMMUNICATIONS EQUIPMENT MOTORS AND GENERATORS POWER SUPPLIES AND CONVERTERS RECEIVERS, COMMUNICATION Railroad **Remote Pickup fixed** τv RECEIVERS, HOME **RECORDERS**, AUDIO **Binaural tape** Disc Magnetic tape Portable Sound Studio Synchronized film-tape Telephone **RECORDING ACCESSORIES** Tape, magnetic Turntables RECTIFIERS RELAYS **RESISTORS AND VOLUME** CONTROLS SEMI-CONDUCTORS - DIODES SOUND REPRODUCING EQUIPMENT: DISC Equalizers, record Magnetic and reluctance pickups Record changer, automotic **Record Players, transcription** Tape prerecorded SOUND REPRODUCING EQUIPMENT: MAGNETIC Magnetic tape playback **Magnetic tape** SOUND SYSTEMS, INTERCOMMUNICATORS Amplifiers, mobile Bells & buzzers Carrier current systems Consoles, studio Equalizers

Home sound systems Intercommunicators Megaphones, electronic Preamplifiers Public address systems **Telephone systems** Telephones, sound powered

SPEAKERS - ALL TYPES SPEAKER ACCESSORIES

STUDIO EQUIPMENT, AUDIO Amplifiers, distribution Consoles Controls, master Preamplifiers Remote audio equipment STUDIO EQUIPMENT, TELEVISION Amplifiers Camera: Cranes Dollies Switching equipment Cameras: Field Studio TV film Consoles: Control Controls: Camera Master TV film Control equipment Distribution equipment Generators: Sync.

> Monitors, line & program Panels, video patch **Projection** units Projectors: TV film TV mirror multiplexers TV rear screen **TV** slide **Receivers:** Scanners, flying spot Special effects equipment Studio tronsmitter links

STUDIO ACCESSORIES

Sync. stretchers

TESTERS

SWITCHES

TOOLS, HAND - ALL TYPES

TRANSFORMERS

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TRANSMITTER ACCESSORIES Control consoles Diplexers

TUBES - ALL TYPES

TUNERS - AM, FM

WIRE, CABLE, AND WAVE GUIDE



IN OVER 120 PRINCIPAL CITIES

Lapel

Magnetic

ELECTRIC CO., INC. GraybaR ELECTRIC CO., INC. 420 Lexington Ave., New York 17, N. Y.

# TELE-TECH's 1955 ELECTRONIC INDUSTRIES DIRECTORY

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# Product Finding Index

A fast reference guide that enables you to find the product you want in the Product Directory—quickly. Here's how to use the Product Finding Index: (1) Look for the product you want (under the name you ordinarily use to identify it). (2) Turn to the

section number given in the Product Finding Index. (3) From the manufacturers listed in this section, select only those with the code letters (listed in the Product Finding Index) after their names. These are the manufacturers of the products you want.

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Receivers, studio, TV     88     AK     Regulators, automatic     Si       Receivers, television     70     T     current     24     AS       Receivers, television     71     J     Regulators, automatic     Si       comb     71     J     Regulators, automatic     Si       comb     71     J     Regulators, automatic     Si       comb     71     K     Regulators, voltage     67     N       Receivers, transistor     71     K     Relay test sets     91     T       Receivers, UHF     70     M     Relays, audio operated 77     AH     Si       Receivers, VHF, omni-     72     D     Relays, coapacitance     77     A	icrews, standard	Z T B I N O S	Steatite 35 Steel, metal-coated 49 Steel, stainless 49 Stencils 28 Stethographs and Stethographs and 48	P AT AU
Breedvers, television       70       T       current       24       AS       So         Requirers, television       71       J       Regulators, automatic       So       So         comb.       71       J       Regulators, automatic       So       So         comb.       71       K       Regulators, voltage       67       N       So         comb.       71       K       Regulators, voltage       67       N       So         Receivers, transistor       71       X       Relays test sets       91       T       So         Receivers, UHF       70       M       Relays       64       H       So         Receivers, VHF, omni-       71       M       Relays, capacitance       77       A       So         range       72       D       Relays, coaxial       77       B       So	ielective paging systems 20 ielectors, mechanical	T B I N O S	Steel, stainless	AU
Receivers, television       71       K       Regulators, voltage       24       AT       Sc         comb.       71       K       Regulators, voltage       67       N       Sc         kreevers, transistor       71       X       Relay test sets       91       T       Sc         Receivers, UHF       70       M       Relays       91       T       Sc         Receivers, UHF       71       M       Relays, audio operated       64       H       Sc         Receivers, VHF, omni-       71       Relays, capacitance       77       A       Si         range       72       D       Relays, coapacitance       77       B       Si	iensitized paper 28 iervo amplifiers 3 iervos 62 iervos 62 ihaft locks 27 ihaft seals 31 ihafts, fiexible 31 ihafts, rigid 31 ihaet 49	I N O S	Stethographs and Stethophones 48	Р
Receivers, transistor     71     X     Relay test sets     91     T     St       Receivers, UHF     70     M     Relays, audio operated 77     AH     St       Receivers, VHF, omni-     71     M     Relays, capacitance     77     A       Receivers, VHF, omni-     72     D     Relays, capacitance     77     A       Receivers, VHF, omni-     72     D     Relays, capacitance     77     A	iervo amplifiers 3 iervos 62 ihaft locks 27 ihaft scals 31 ihafts, fiexible 31 Shafts, rigid 31 sheet metal 49	0 S	Stethophones 48	
Time         Time         Time         Relays, audio operated 77         AH         Si           Receivers, VHF, omni-         Relays, capacitance         77         A         Si           range         72         D         Relays, capacitance         77         A         Si	bhaft locks         27           shaft seals         31           bhafts, flexible         31           shafts, rigid         31           shafts, metal         31	s	Stethophones 54	Q L
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Tapes, pressure sensi-		Т	limiting	93	G	Tube pin straighteners	92	AE	Ultrasonic thickness equipment		AC
tive Tapes, test	83	AL L	differential Transformers,	93	AO	Tube pullers		AF AA	Ultrasonic vibrators Ultra-violet equipment		AD AI
Tellon		AG	filament	93	H	Tube seal leads	97	AB	Uranium Urea formaldehyde	49	AAP S
missile	9 20	WL	Transformers, fluorescent	93	T	Tube sockets Tubes, ATR		AB AD	Vacuum coating		
Telephone systems	84	P	Transformers, flyback Transformers, HV	93	AF	Tubes, backward wave		AJ	equipment Vacuum pumps		AZ Ak
field	57	F	Transformers,			Tubes, ballast	96	A	Vacuum tube aging racks	38	к
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	89	Ħ	shift		AN	Tubes, klystron	96	н	Vises Viewfinders	92	AH
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Testers, battery Testers, cable	91	BX	receiving	93	Т	Tubes, pirani	96	м	Vulcanized fibre Walkie-Talkies	35 57	AF
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ness Testers, coil	91 91	F G	Transformers, saturable Transformers, sub-	93	х	receiving Tubes, rectifying	96	Q	Washers, metal Washers, mica	31 31	AM AX
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Thermostatic metals Time measuring equip	-	AWW	Transistors, surface barrier	79	1	Tubing, asbestos Tubing, brass	49 49	AAW AAE	Wire, hookup Wire, litz	100	Y Z
ment Timers, counting	24	AV	Transistors, tetrode Transmission line 1	79	F AO	Tubing, ceramic	36	Y	Wire, magnet	100	AA O
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# **1955 ELECTRONIC INDUSTRIES DIRECTORY**

Product Listings

This is a complete listing of all the end products, component parts, equipment, instruments, and materials in the radio-TV-electronic and related industrieswith the names and addresses of the companies that

make them. 2,500 product categories are arranged according to 100 major group headings. Manufacturers are listed alphabetically under the group headings.

#### 1-AMPLIFIERS, AUDIO

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Amplifiers,	cuing
Amplifiers,	decadeS
Amplifiers,	distributionT
Amplifiers,	high-fidelityQ
Amplifiers,	industrial soundD
Amplifiers,	isolationE
Amplifiers,	limitingF
Amplifiers,	lineG
Amplifiers,	microphone
Amplifiers,	miniature plug-inU
Amplifiers,	mixing
Amplifiers,	monitoringK
Amplifiers,	musical instrument
Amplifiers,	noise-suppressingL
Amplifiers,	recordingM
Amplifiers,	remoteN
Amplifiers,	stereophonicW
Amplifiers,	tape playback
Amplifiers,	tone-controlR
Amplifiers,	transistorV
Amplifiers,	widebandP

Acme Telectronix Div., NEA Service, 1200 W. 3rd St., Cleveland 13, 'Ohio-M Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, 111.-V Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.-A.C.K.M Air Associates, Inc., 511 Joyce St., Orange, N.J.-A.E.H.K.Q.T Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A.E Aircraft Radio Co., Boonton, N.J.-A.E.H Alamo Electronics Corp., 1415 N. Brazos St., San Antonio, Tex.-I Alcar Instruments. 20 Wagaraw Rd., Fair Lawn, N.J.-A Allied Radio Corp., 9356 Santa Monica Blvd., Be erly Hills. Calif.-A.D.Q Altec Lansing Corp., 9356 Santa Monica Blvd., Be erly Hills. Calif.-A.D.F.G.J.K.N.Q.U American Electronic Laps. Inc., 641 Arch St.

- Be orly Hills. Call. -- A. D. J. Menham. Amerac. Inc., 116 Topsfield Rd., Wenham. Mass.--Q American Electronic Labs., Inc., 641 Arch St., Philadelphia 6. Pa.--A American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Man-hattan Beach. Calif.--A.U.V American Measuring Instruments Corp., 21-25 44 Ave., Long, Island City 1, N.Y.--A.M. O.Q.V Ampex Corp., 934 Charter St., Redwood City,

- A. A. K. Long Y Island City 1, A. H. A. M. O. Q. V
  Ampex Corp., 934 Charter St., Redwood City, Calif.-A.D.K.M.O.Q
  Amplifier Corp. of America, 398 Broadway, New York 13, N.Y.-A.M.O
  Ansley, Arthur Mfg. Co., Doylestown, Pa.-Q
  Applegate & Co., C.J., 1816 Grove St., Boulder, Colo.-E,H,P,U
  Approved Electronic Instrument Corp., 928 Broadway, New York 10, N.Y.-A,Q
  A.R.F. Products. Inc., 7627 Lake St., River Forest, Ill.-A,P,Q
  Astatic Corp., P.O. Box 120, Conneaut, Ohio --H

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- Astatic Corp., P.O. Box 120, Conneaut, Ohio —H Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.—D,I,Q,V Atlantic Research Corp., Alexandria, Va.— A.P.S Audar. Inc., Box 438, Pasadena, Calif.—A Audicon Electronics Inc., 216 Lyon St., Pater-son 4, N.J.—A,D,H,IJ,M,O,Q,V Audio Equip. Co., 805 Middle Neck Rd., Great Neck, L.I., N.Y.—A,H Audio Equipment Co., 15749 Wyoming Ave., Detroit 38, Mich.—A.V Audio Instrument Co., 138 W. 14th St., New York 11, N.Y.—H Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.—A Authorized Mfrs. Service Co., 914 Wyckoff Ave., Brooklyn 27, N.Y.—A,G,J,K.M,O,Q.U Autocrat Electronics Co., 5024 Elm St., Skokie 8, III.—I,Q

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Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—A,G,H,N Avion Instrument Corp., 299 State Hwy #17, Paramus, N.J.—E,M Baldwin Piano Co., 1801 Gilbert Ave., Cincin-nati 2, Ohio—I Ballantine Labs., Inc., Boonton, N.J.—S Barber & Howard, 120 East Ave., Westerly, R.I.—Q Barker & Williamson, 237 Fairfield Ave., Upper

- Barber & Howard, 120 East Ave., Westerly, R.I.-Q
  Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.-A
  Beam Instruments Corp., 350 Fifth Ave., New York 1, N.Y.-A.K.Q
  Bellaire Electronics Inc., 30 Prince St., Brooklyn 1, N.Y.-A.Q
  Bell & Howell, 7100 McCormick Rd., Chicago 45, III.-J.K
  Bell Sound Systems, Inc., 555 Marion Rd., Col-umbus 7, Ohio-A,D,Q
  Berndt-Bach, Inc., 6926 Romaine St., Holly-wood 38. Calif.-M
  Bliss Electronic Corp., Box 123, Sussex, NJ. -A

- -A
- -A Boetsch Bros., 115 Cedar St., New Rochelle, N.Y.-I Boxen Co., David. 29 Ninth Ave., New York 14, N.Y.-A,D.G.H.I.J.N.Q.T Bowen & Co., 4712 Bethesda Ave., Bethesda, Md.-A,D.M.Q Brach Mfg. Corp., 200 Central Ave., Newark 3. N.J.-A

- Md.-A,D,M.Q
  Brach Mfg. Corp., 200 Central Ave., Newark 3. N.J.-A
  British Industries Corp., 164 Duane St., New York, N.Y.-A,Q
  British Radio Electronics Ltd., 1833 Jefferson Pl., N.W., Washington 6, D.C.-A.R
  Brociner Electronics Lab., 344 E. 32 St., New York 28, N.Y.-A,Q,R
  Browne Electronics. 12450 W. Washington Blvd., Venice, Calif.-A,Q
  Bruno-New York Industries. 460 W. 34 St., New York 1, N.Y.-A,D,E,F,G,H,IJ,K,M,N, O,P,Q,R,S,T.UV
  Budchman Radio Corp., 375 Fairfield Ave., Stamford, Conn.-D
  Bunnel & Co., J.H., 81 Prospect St., Brooklyn 1, N.Y.-M
  Cable Specialists of Conn., 166 Palisade Ave., Bridgeport, Conn.-A
  Calbest F-m'r. & Electronics Co., 829.300
  N. Highland Ave., Hollywood 38, Calif.-A,G,M T
  Califore Corn., 1041 N. Sycamore Ave., Hollywood 38, Calif.-A,D,Q
  Calt ch Electronics X930 Lindblade St., Culver City, Calif.-A,Q
  Canbeart-Fornsworth Co., 3700 Pontiac, Fort Wayre, Ind.-A,O,Q
  Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-A,H,I,V
  Centralab Div., Globe Union, Inc., 900 E. Keefe Ave, Milwaukee 1, Wisc.-A,H,I,V
  Centralab Div., Globe Union, Inc., 900 E. Keefe Ave, Sath, 2611 West, 184, 2611 West, 194, 2611 West, 2611 West, 2611 West, 2611 West, 2611 West, 2611, 2611 West, 2611 West, 2611, 2611 West, 2611 West, 2611, 2611,

- Chestnut St. Burbank, Calif.—A,G,H,J,K. M,O
  Coax Electronics Co., 42 North Rd., Bedford, Mass.—A,C.G.H.J,K.M.P.Q.T
  Coil Co. of America, 8 Washington St., North-vale. N. J.—A
  Collins Audio Products Co., Route 29. Moun-tainside, N.J.—A
  Colortone Electronics. Inc., 200 Frank Rd., Hicksville, L.I., N.Y.—A
  Communication Measurements Laboratory, 350 Leland Ave.. Plainfield. N.J.—A.P.Q
  Conn. Telephone & Electric Corp., 70 Britan-nia St., Meriden. Conn.—A,D.O
  Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—D.J.K.N
  Consolidated Productions. Bldg. 9, Broward Int'l. Airport, Ft. Lauderdale. Fla.—A,K.O
  Cortinental Electronics Ltd., 302 Oakland St., Brooklyn 22, N.Y.—A
  Cook Laboratories, 101 2 St., Stamford. Conn. —M,Q
  Corbin Corp., 5419 56 Pl., Riverdale, Md.—A
  Crown Eng'g., 3821 Commercial N.E., Al-buquerque, N.M.—A
  Curtiss Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.—A

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- Daystrom Instrument, Archbald, Pa.—A,F,S, U,V
  - Dayton Aviation Radio & Equip. Corp., P.O. Box 167. Vandalia, Ohio-A.J Decade Instrument Co., Box 153, Caldwell, N.J.-S

  - N.J.-S Delson Mfg. Corp., 126 11 Ave., New York 11, N.Y.-A,Q Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.-A,F,P Demco Products, P.O. Box 5042, Philadelphia 11, Pa.-Q,U Denrad Mfg. Co., 310 W. Woodard St. Deni-son, Tex.-A,C,D,E,F,G,H,J,K.M,N,Q,R DeWald Radio Mfg. Corp., 35-15 37 Ave., Long Island City 1, N.Y.-A Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.-A,D,Q.V Dikks Co., P.O. Box 139, Seymour, Conn.-A,D Dormitzer, Electric & Mfg. Co., 5 Hadley St.,

  - Island City 1, N.I.—A
    Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.—A.D.Q.V
    Dilks Co., P.O. Box 139, Seymour, Conn.—A.D.
    Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge, Mass.—A.D.H
    Dubrow, Devel, Co., 235 Penn. St. Burlington, N.J.—A, C.D.E, F.G.H.J.K.M.S.T.U.V
    DuKane Corp., 305 N. 11th St., St. Charles, III.—A, D.G.H.J.K.
    DuMont Laboratories Inc.. Allen B. Communication Products Div., 1500 Main Ave., Clifton, N.J.—T
    Ducone Co., Locust St., Keyport, N.J.—H
    Dwyer Engineering Co., P.O. Box 483, Nashua, M.H.—A, U
    Dyna-Labs, Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.—H
    Eder Eng'g. Co., 1568 S. First St., Milwaukee 4, Wisc.—A.O.Q
    Edin Co., 207 Main St., Worcester, Mass.—M Edu-Craft Corp., 160-45 12th Ave., Whitestone, N.Y.—A.I
    Eeco Production Co., 827 S. Vermont Ave., Los Angeles 5. Calif.—U
    Eldema Corp., 5827 E. Beverly Blvd., Los Angeles 22, Calif.—U
    Electromet. Mfg. Corp., 88 University Pl., New York 3, N.Y.—A
    Electronic Mfg. Corp., 88 University Pl., New York 3, N.Y.—A
    Electronic Communication Eouip. Co., 1249 Loyola Ave., Chicago 26, 111.—A.D.F.G.H.J.K, M.O.P.Q
    Electronic Communication Eouip. Co., 1249 Loyola Ave., Chicago 26, 111.—A.D.F.G.H.J.K, M.O.P.Q
    Electronic Eng'g Co. of Calif. 180 S. Alvarado St., Los Angeles 57, Calif.—V
    Electronic Eng'g Co., 362 W. Bowery St., Aknon 7, Ohio-A.D.G.N
    Electronic Research Associates. 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Electronic Research Associates, 67 E. Broad St., Nutley, N.J.—V
    Elect

  - Epsco. Inc., 588 Commonwear. 15. Mass.—O Equipment Crafters Inc., 523 Winne Ave., River Edge. N.J.—A.D.I.P.Q Erco Radio Lab., 637 Stewart Ave., Garden City, N.Y.—A,F,G,H

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Ercona Corb., Scientific Instr. Div., 527 5 Ave., New York 17, N.Y.-Q
  Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.D.F.G.I.J.K.N.R.S.T.V
  Executone. Inc., 415 Lexington Ave., New York 17, N.Y.-A.D
  Fairchild Recording Equip. Co., 154 St. & 7 Ave., Whitestone 57, N.Y.-A.H.M.Q
  Femco, Inc., Irwin, Pa.-A.D.H
  Fidelity Amplifier Co., 703 W. Willow St., Chicago 14, 111-A.I.Q.V
  Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N.Y.-A.D.G.H.J.K.M.N.O.P. Q.R

- Chicago 14, 11. A.D.Y. Y
  Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N.Y.—A,D,G,H,J,K,M,N,O,P, Q,R
  Fleetwood Corp., 1037 Custer Dr., Toledo 12, Ohio—O
  Fluke Mfg. Co., John, 1111 W. Nickerson St., Seattle 99. Wash.—A
  Ford Instrument Co., Div. Sperry Corp., 31-10
  Thomson Ave., Long Island City 1, N.Y. —-E, V
  Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.—A,P,S,U
  Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N.Y.—A.Q
  Freed Transformer Co., 1718 Weirfield St., Brooklyn 27, N.Y.—P
  Fruchers, M.P., P. O. Box 28, Hackettstown, N.J.—M,N
  Furst Electronics, 3322-A W. Lawrence Ave., Chicago 25, 111.—A,P,S
  Galbraith & Son Electric Corp., 450 Ave. of the Americas, New York 11, N.Y.—A,D
  Gates Radio Co., 123 Hampshire St., Quincy, III.—A,C,E,F,G,H,J,K,M,N,Q,U
  General Communications, P.O. Box 169, Ft. Atkinson, Wisc.—A,C,E,G,K,N
  General Electric Co., Electronics Park, Syracuse, N.Y.—V
  General Electric Co., Blogat Ft., Atkinson, Wisc.—A,C,F,G,H,J,K,M,N,Q,R,U
  General Electric Co., Broadcast Equip, Communication Equip. Electronics Park, Syracuse, N.Y.—A
  General Hermetic Scaling Corp., 99 E. Hawthorne Ave., Valley Stream, N.Y.—A
  General Radio Co., 275 Mass Ave., Cambridge 39, Mass.—A,P
  Geotechnical Corp., 3712 Haggar Dr., Dallas 9, Texas—A
  Geotronic Labs., 1314 Cedar Hill Ave., Dallas 9, Texas—A
  Geotronic Labs., 1314 Cedar Hill Ave., Dallas 8, Texas—U
  G & M Equip. Co., 7315 Barna Ave., N. Hollywood, Calif.—A,K,N
  Godin Electric & Mfg. Co., 2921 W. Olive, Burbank, Calif.—A
  Gooslin Electric & Mfg. Co., 2921 W. Olive, Burbank, Calif.—A

- Gonset Co., 801 S. Main St., Burbank, Calif.— A
  Goslin Electric & Mfg. Co., 2921 W. Olive, Burbank, Calif.—A
  Gotham Audio Development Corp., 2 W. 46 St., New York 36, N.Y.—A.F.M.O.T
  Gotham Television Corp., 123 W. 64th St., New York 23, N.Y.—A
  Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—A,M
  Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—A,M
  Grayline Eng'g. Co., 12243 Ave. "O," Chicago 33, III.—Q
  Grav Research & Devel. Co., 658 Hilliard St., Manchester, Conn.—M.Q
  Greene Co. L. Charlton. 314 Washington St., Newton 58, Mass.—A,V
  Gulton Mfg. Corp., 212 Durham Ave.. Metuchen, N.J.—A,S,U
  Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.—A,D,K,N,P,R.T.V
  Hallen Corp., 3503 W. Olive Ave., Burbank, Calif.—O
  Hamilton Electronics Corp., 2726 Pratt Ave.,

- Beach 5. Calif. -- A. D. K. N. P. R. T. V
  Beach 5. Calif. -- A. D. K. N. P. R. T. V
  Hallen Corp., 3503 W. Olive Ave., Burbank, Calif. -- O
  Hamilton Electronics Corp., 2726 Pratt Ave., Chicago 45, 111. -- A. D. H.Q
  Hamon Electronics Corp., 32 Holman Blvd., Hicksville, N.Y. -- A. H
  Harmon Electronics Corp., 1431 Truman Rd., Indenendence, Mo. -- F.N
  Hartley Co., H. A., 521 E. 162 St., New York 51, N.Y. -- Q
  Hearth Co., 305 Territorial, Benton Harbor, Mich. -- A. P. Q
  Hedco Mig. Corp., 161 W. Huron St., Chicago 10, 111. -- A. Q
  Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif. -- A. P.
  Hydro-Aire, Inc., 3000 Winona Ave., Burbank, Calif. V
  Industrial Electronics Inc., 8060 Wheeler St., Detroit 10. Mich. -- A. D. W. York 3, N.Y. -- A, E.F. P.Q.S
  Interelectronics Corp., 147 Parkhouse St., Dallas 2, Texas. -- A
  Int'l Projector Corp., 55 LaFrance Ave., Bullas 2, Texas. -- A
  Int'l Projector Corp., 128 Clinton Ave., Huntington, N.Y.
  Johnson Labs., Div. Aladdin Industries, Willard Monica, Calif. -- A, Int'l Research Assoc., 2221 Warwick Ave., Santa Monica, Calif. -- A, P. K.
  Interelectronics Corp., 155 LaFrance Ave., Bloomfield, N.J. -- A
  Int'l Clip Mfg. Co., 128 Clinton Ave., Huntington, N.Y.
  Johnson Labs., Div. Aladdin Industries, Willard Monica, Calif. -- A, P. Kahn & Co., 541 Windsor St., Hartford 1, Conn. -- A, D.E.F. J. P.Q.S.U

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- Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.--K
  Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.--P,U
  Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio-S
  Kinevox, Inc., 116 S. Hollywood Way, Burbank. Calif.-J
  Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.--A
  Kirby Products Corp.. 20 E. Herman St., Philadelphia 44, Pa.--A.H.1
  Korb Engr. & Mig. Co., 30 Ottawa Ave., Grandville, Mich.--M.P
  Krohn-Hite Instrument Co., 580 Mass. Ave., Cambridge 39, Mass.--A.D.Q
  Lane Electronics Co., 7254 Atoll Ave., N. Hollywood. Calif.--A
  Langevin Mfr. Corp., 37 W. 65th St., New York 23, N.Y.--A.C.D.F.G.H.K.M.P.U
  Lear. Inc., 8171 S. Bundy Dr., Santa Monica, Calif.---N.U.V
  Lee Laboratories, Genesee, Pa.--A.E.G.H.U.V
  Leensard Electroic Products Co. Da. 67 24th

- Calif.—N.U.V Lee Laboratories, Genesee, Pa.—A.E.G.H.U.V Leonard Electric Products Co., Inc., 67 34th St., Brooklyn 32, N.Y.—A Linear Equipment Labs., 380 Oak St., Copiague, N.Y.—A.V Loge Sound Engrs., J. M., 2171 W. Washing-ton Blvd., Los Angeles 18, Calif.—A.D Lord Mrg. Co., 1635 W. 12 St., Erie 6, Pa.—E Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J.—A

- ton Blvd., Los Angeles 18, Calif.—A,D Lord Mfg. Co., 1635 W. 12 St., Erie 6, Pa.—E Lyrco Mfg. Co., 1401 Clinton St., Hoboken, N.J.—A
  McGohan, Inc. Don, 3700 W. Roosevelt Rd., Chicago 24, 111.—A,H.1,Q.R.T
  McIntosh Lab. Inc., 320 Water St., Bingham-ton, N.Y.—A.D.G.H.J.K.M.NO,Q.R.T
  Magna Electronics Inc., 9810 Anza Blvd., Inrelewood, Calif.—A,D.J.Q.
  Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.—A,D.J.K.L.M.O.Q.U.
  Magnaecord. Inc., 1101 S. Kilbourn Ave., Chi-cago 24, 111.—M.N.O
  Magnaecord. Inc., 1101 S. Kilbourn Ave., Chi-cago 24, 111.—M.N.O
  Magnaecord. Inc., 1101 S. Kilbourn Ave., Chi-cago 24, 111.—M.N.O
  Marine Co., 21 N. 3rd St., Minneapolis, Minn.—A
  Marine View Electronic Labs., 255 Mill St., Byram. Conn.—A
  Martin & Co., H. S., Electronics Div., 1916 Greenleaf St., Evanston, III.—Q
  Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.—A,G,H
  Masson-Cowley. 1487 Lincoln Ave., Pasadena 3, Calif.—A,D,H,M.Q
  Maurer, Inc. J. A., 37-01 31 St., Long Island City I. N.Y.—A.JL,M
  Maxson Corp., W.L., 460 W. 34 St., New York I, N.Y.—A
  Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, 111.—A.I.Q
  Mercury Mfg. Corp., Fourth & Montjoy Sts., Falmouth, Ky.—A
  Metal Products Co., Craigshead St., Nashville 4, Tenn.—A,C.G.J.P
  Metal Products Co., Craigshead St., Nashville 4, Ve., Pasadena S, Calif.—M,P,U
  Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S. Minneapolis & Minn.—V
  Morame Electronic Co., Fairfield 3, Conn.—A.D, Q.R
  National Bell Corp., 6 Lafayette Ave., Brook-lyn 17, N.Y.—A.JL.N

- National Bell Corp., 6 Lafayette Ave., Brook-lyn 17, N.Y.--A.D.I National Co., 61 Sherman St., Malden, Mass.
- -Q National Sound Equip. Co., 1212 Farnam St., Omaha, Nebr.-Q
- Neptune Electronic Co., 433 Broadway, New York 13, N.Y.—A,D,K,Q Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.—A,D,H,I,J,M,N,Q, W
- New London Instrument Co., Inc., 82 Union St., New London, Conn.—A.P Northern Radio Co., 143 W. 22nd St., New York 11, N.Y.—G
- Oherline Ltd., 6411 Hollywood Blvd., Holly-wood 28, Calif. A.C.D.F.G.H.J.K.N
- Ortho Filter Corp., 198 Albion Ave., Paterson 2, N.J.-L Osterland Co., Edmund, Mountain Lakes. N.J.
- --S
- Pacific Mercury TV Mfg., 5955 Van Nuys Blvd., Van Nuys. Calif.—A,Q Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.—D,G,L,Q
- Pampa Electronics Sales Corp., 808 N. Broad St., Philadelphia 30, Pa.--A,J,M,O,Q
- Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, Ill.—A,Q

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- Pedersen Electronics, P.O. Box 572, Lafay-ette, Calif.—A,Q.R Peer, Inc., 1200 Milton St., Benton Harbor, Mich.—A,F,G,H,N Pentron Corp., 755 S. Tripp St., Chicago, Ill.—

- Pentron Corp., 755 S. Tripp St., Chicago, Ill.— O
  O Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.—V
  Phebco. Inc., 3640 Woodland Ave., Baltimore 15, Md.—A,U,V
  "'ilmore Mfg. Co., 113 University Pl., New York 3, N.Y.—Q
  Phoenix Precision Instrument Co., 3803-05 N. Fifth St., Philadelphia 40, Pa.—A.M
  Photocircuits Corp., Glen Cove, N. Y.—A
  Pilot Radio Corp., 37-06 36 St., Long Island City 1, N.Y.—A,Q
  Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.—A,F,G,K
  Planet Television Corp., 903 Halsey St., Brooklyn 33, N.Y.—A,O,Q
  Plastics & Electronics Corp., 272 Northland Ave., Buffalo 8, N.Y.—A,P,U,V
  Plymouth Electronics Corp., 50 Kingsbury St., Worccster, Mass.—A,M
  Power Supplies, 1005 Olive St., Highland, Ill. —A
  Precision Associates, 354 Cumberland St.

Worcester, Mass.-A,M
Power Supplies. 1005 Olive St., Highland, 111.
-A
Precision Associates, 354 Cumberland St., Brooklyn 33. N.Y.-A.P.S
Precision Electronics, Inc., 9101 King Ave., Franklin Park, 111.--A,D,G,H,I.M.N,O,Q
Press Wireless Labs., Inc., 25 Prospect Pl., W. Newton 65. Mass.-A.F.G,M,O
Presto Recording Corp., P.O. Box 500, Paramus, N.J.-A,F,O
Qualitone Co., 4318 Upton Ave., S. Minneapo-lis 10, Minn.-A,V
Radar-Electronics, Inc., 229 W. 28 St., New York 30, N.Y.-A,D,Q
Radiation Counter Labs., 5122 W. Grove St., Skokie, 111.-P
Radio Corp. of America. Eng'g Products Div.. Camden 2, N.J.-A,A,D,F,G,H,J,K,N,O,Q,R,T,U
Radio Corp. of America, Eng'g Products Div.. Camden 2, N.J.-A,A,D,F,G,H,J,K,N,O,Q,R,T,U
Radio Mitz, Inc., 120 Cedar St., New York 6, N.Y.-A,Q
Radio Matic of America, 760 Ramsey Ave., Hillside. N.J.-Q
Radio Music Corp., 84 S. Water St., Port Chester, N.Y.-A,D,C.H.K,Q
Radio Music Corp., 84 S. Water St., Port Chester, N.Y.-A,D,C.H.K,Q
Radionic Laboratories, 1111 State Rd. 67 E., Anderson, 1nd.-R
Radioi Shack Corp., 167 Washington St., Bos-ton 8, Mass.-Q

Anderson, Ind.---R Radionics, Inc., 1040 N. York Rd., Towson 4, Md.--V Radio Shack Corp., 167 Washington St., Bos-ton 8, Mass.--Q Radio Supply & Eng'g Co., 85 Selden Ave., Detroit 1, Mich.--A,Q Radio Wire Television Inc., 100 6th Ave., New York 13, N.Y.--Q Railway Communications, Inc., Raytown, Mo. ---E,F,P Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, III.---A,D.N.J Raytovox Mfg. Co., 902 Albemarle, Brooklyn 18, N.Y.--A,D Raytheon Mfg. Co., 502 Albemarle, Brooklyn 18, N.Y.--A,D Raytheon Mfg. Co., 88-01 Queens Blvd., Long Island City 1, N.Y.--M,Q Remco Mfg. Co., 545 N. LaSalle St., Chicago 10, III.---A,L Remler Co., 2101 Bryant St., San Francisco 10, Calif.---A,H Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.--A,EL.V

10, Calif.—A.H Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.—A.E.I.,V Rhein Sound Systems Orlando, Fla.—A Ripley Co., 1 Factory St., Middletown, Conn. —A

Ripley Co., 1 Factory St., Middletown, Conn. —A
Roesch Co., D.J., 220 S. Figueroa St., Los Angeles 7, Calif.—A,P
Rogers Electronic Corp., 43 Bleecker St., New York. 12 N.Y.—J
Rowe Industries. 1702 Wayne St., Toledo 9, Ohio—A,D,I,M.Q
Sargent-Rayment Co., 1401 Middle Harbor Rd., Oakland 20, Calif.—A,Q,R
S/C Labs. Inc., 37 George St., Newark 5, N.J.—A
Scala Radio, 2814 19 St., San Francisco 10, Calif.—V
Schuttig & Co., 5005 Calvert Rd., College Park, Md.—F,H
Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, eMass.—A.K.I.M.Q.R.S
Scott Radio Labs., Liberty St., Plymouth, Ind.—A.J.Q
Seaboard Electric Co., 417 Canal St., New York 13, N.Y.—A
Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio—A

Seattron Co., 9701 Reading Rd., Cincinnati 15, Ohio---A. Selectar Industries, 3100 Ocean Parkway, Brooklyn 35, N.Y.--A Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park. N.Y.--U Shepard Labs., 480 Morris Ave., Summit. N.J. --E.F.O

--E.F.O Shrader Mfg., Co., 2803 M. St. N.W., Wash-ington 7, D.C.--A Shura-tone Products Inc., 440 Adelphi St., Brooklyn 38, N.Y.--A

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Simpson Mfg. Co., Mark, 32-28 49th St., Long Island City 3, N.Y.--A,D,H,I,J,M,N,O,Q

Simpson Mfg. Co., Mark, 32-28 49th St., Long Island City 3, N.Y.-A,D,H,J,J,M,N,O,Q
Sinte & Associates, Claude C., 11370 W. Olympic Elvd., Loc Angeles 64, Calif.-A,F,J,M
Smith Associates, Rawdon, 1319 19 St. N. W., Washington 6, D.C.-A,M,O
Smuckler & Co., A.F., 202 Tillary St., Brooklyn, I.N.Y.-P
Sonz, Inc., 245 Sansom St., Upper Darby, Pa.-A,D,Q,R
Sonotone Corp., Elmsford, N.Y.-A,Q
S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-HJ,M
Spar Eng's, & Devel, South & Paxton Ave., Wynote, Pa.-A
Special Products Co., P.O. Box 188, Rockville 1, M.-A,J,LQ
Specialty Assembling., 79 Clifton Pl., Brooklyn 38, N.Y.-A
Springfield Enterprises, P.O. Box 54, Spring-field Gardens 13, N.Y.-U
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-A,H,IQ
Standard Electronics Corp., 285 Emmet St., New Xr, N.J.-A,F,T
Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-PS,V
Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-PS,V
Statford Pen Corp., 44 W. 28 St., New York, N.Y.-A,C,D,G,I,J,K,N,PQ
Symphony Radio & TV Corp., 925 S. Western Ave., Los Angeles 6, Calif.-A
Taking Devices Co., 4447 Irving Park Rd., Chicago 41, III.-M
Terc Instruments, Inc., 97A Greenwich St., Hemstead, L.I., NY.-G,JT
Technology Instrument Corp., 531 Main St., Acton, Mass.-S
Teiner Co., Roland, 134 Tremont St., Everett, Mass.-J.L
Technology Instrument Corp., 531 Main St., Acton, Mass.-S
Teiner Co., Roland, 134 Tremont St., Everett, Mass.-J.L
Telephonics Corp., Park Ave., Huntington, N.Y.-A,E,H.Y
Teleound, Inc., 1805 Race St., Philadelphia 2, Pa.-D
Television Co. of America. 1761 Lincoln Blvd., Santa Monica, Calif.-A,M
Television Co. of America. 1761 Lincoln Blvd., Santa Monica, Calif.-A,M

Television Co, of America, 1761 Lincoln Blvd., Santa Monica, Calif.—A,M Televisio Corp., 1415 Golf Rd., Des Plaines, Ill. —A.L.P.V Thorderson-Meissner Mfg., Mt. Carmel, Ill.

--A,L,F, Y Thordarson-Meissner Mfg., Mt, Carmel, Ill. --A,D,E,F,G,H,J,K,M,N,O,P,Q,R,S,T,U Three Dimension Co., Div. Bell & Howell, 3512 N. Kostner Ave., Chicago 41, Ill.--A, M,O,Q

Three Dimension Co., Div. Bell & Howell, 3512 N. Kostner Ave., Chicago 41, Ill.—A, M,O,Q
Transistor Components Co., 301 Oakwood Ave., E. Aurora, N.Y.—A,U.V
Transmitter Equip. Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.—A,E,F,G,H,J,K,P
Transmitter Equip. Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.—A,E,F,G,H,J,K,P
Transvision, Inc., New Rochelle, N.Y.—Q
Triber Co., P.O. Box 1207, Lindsay, Calif.—A,Q
Triumph Mfg. Co., 1829 S. 55 St., Chicago 50, Ill.—A
Triwec Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, Ill.—A,Q
Trutone Electronics Inc., 812 N. Highland Ave., Los Angeles 38, Calif.—A,D,H,I,M,Q
Tutone Electronics Inc., 151 Jericho Turnpike, New Hyde Park, LI., N.Y.—A
Uhra Hi-Fi Co., 709 Sip St., Union City, N.J.—A,Q
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—H.V
Union Switch & Signal, Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.—E
United Geophysical Corp., P.O. Box "M", Pasadena 15, Calif.—M.O
United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—A
United Transformer Co., 150 Varick St., New York 19, N.Y.—H,JX,M
United Transformer Co., 150 Varick St., New York, N.Y.—A
United Transform Jabs., 1650 Broadway, New York, N.Y.—A
United Transformer Co., 150 Varick St., New York, N.Y.—A

N.Y.-A Valco Mfg. Co., 4700 W. Walton, Chicago 51, Ill.-I

III.—I
Varo Mfg. Co., 2201 Walnut St., Garland, Texas—A,E,F,G.H.K.T
Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.—A,P
Vidaire Electronics, 576 W. Merrick Rd., Lynbrook, L.I., N.Y.—Q
Videon Electronic Corp., 902 E. Michigan St., Indianapolis 2, Ind.—A
Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.—A,G,H,T

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Manual Contraction ELECTRONIC INDUSTRIES DIRECTORY

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Waldom Electronics Inc., 4625 W. 53 St., Chicago 32, 111.-T Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-A Waters Conley Co., Rochester, Minn.-A,I,M, O,O

Waters Conley Co., Rochester, Minn.—A,I.M., O,Q
Webster Electric, 1900 Clark St., Racine, Wisc. —A,Q
Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio—A,J.M.P.Q
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, III.—A,Q
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—N,P
Western Sound & Electric Labs., 805 S. 5 St., Milwaukee 4, Wisc.—A,I
Westinghouse Electric Corp., Box 868, Pitts-burgh 30, Pa.—A,D
Westinghouse Electric Corp., Electronics Div., 2519 Wilkens Ave., Baltimore 3, Md.—A
Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.—A
Wickes Eng'g & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.—F,G.H.T Wilcox Electric Co., 1400 Chestnut St., Kansas City 27, Mo.—F,G,H
Wirtron Products Electronic Div., Roberts Mfg. Co., 426 E. Shaffer St. Cleburne, Texas —A
Wricht Eng'g. Co., 180 E. California St.,

-A Wright Eng'g. Co., 180 E. California St., Pasadena 1, Calif.-M,P,S Wright Zimmerman, Inc., 330 5 Ave., New Brighton 12, Minn.-H Wurlitzer Co., R. N. Tonawanda, N.Y.-A Z & W Machine Products, 5100 St. Clair Ave., Cleveland 3, Ohio-A

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Amplifiers,	R-F
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M.t. Fleasant Ave., Divingscon, N.S.-K.D.M.
Circuitron, Inc. 155 W. Main St., Rockville, Conn.--A
Collins Audio Products Co., Route 29, Moun-tainside, N.J.--A
Communication Accessories Co., 110 St. & 71
Hi-way, Hickman Mills, Mo.--M
Conn. Telephone & Electric Corp., 70 Britan-nia St., Meriden, Conn.--A,F,K
Consolidated Productions, Bldg. 9, Broward Int'l. Airport, Ft. Lauderdale, Fla.--G,H,J
Consoly Laboratories, Inc., Box 233, Hicksville, N.Y.--M
Crown Eng'g., 3821 Commercial N. E., Al-buquerque, N.M.--K
Dayton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio--A.B,J
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DeMornay-Bonardi, Inc., 780 Arroyo Pkwy., Proceder Collif.

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DeMornay-Bonardi, Inc., 780 Arroyo Pkwy., Pasadena, Calif.—A
Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, II.—J.L.
Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.—I.F
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.—F.J
D&R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.—A
DuMont Laboratories Inc., Allen B. Communi-cation Product Div., 1500 Main Ave. Clifton, N.J.—O
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Electronic Central Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.—K
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Gates Radio Co., 123 Hampshire St., Quincy, Ill.-H.K.N

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General Electric Co., Broadcast Equip., Commercial Equip. Dept., Electronics Park, Syracuse, N.Y.—F.J.K.L
General Electric Co., Electronics Div. Communication Equip., Electronics Park, Syracuse, N.Y.—F.K
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.—A
G & M Equip. Co. 7315 Varia Ave. No. Heritage

sy, Mass.—A G & M Equip. Co., 7315 Varna Ave., No. Holly-wood, Calif.—A,C,F Gonset Co., 801 S. Main St., Burbank. Calif.— K,L,M

Green Electronics 8-03 149 St., Whitestone 57, L.I., N.Y.-A G. W. Associates, P. O. Box 2263 El Segundo, Calif.-F

Hallamore Mfg. Co. 2001 E. Artesia, Long Beach 5, Calif.—A,B,C,D,E,F,G,H,I,K,L,N,O Hamlyn Electronics Corp. 32 Holman Blvd., Hicksville, N.Y.—A,C,K,N

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Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.—F.L Hycon Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.—J

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Int'I Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.-A.C.H.K.L.M
Int'I Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.-B.E.G.K.L.N.O
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.-B.E.K.N.O
Johnson Labs., Div. of Aladdin Industries, Inc., Willard Rd., Norwalk, Conn.-K.L.
Kaar Eng'g. Corp., 2955 Middlefield Rd., Palo Alto, Calif.-K
Kahn & Co., 541 Windsor St., Hartford 1, Conn.-A.D.K.
Kahn Research Labs., 22 Pine St., Freeport, L.I., N.Y.-M.
Kay Electric Co., 14 Maple Ave., Pine Brook. N.J.-C.F.H.J.K.M
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Linear Electric Products Co., Inc., 67 84th St., Brooklyn 32, N.Y.-A.F.K.
Linear Electronics, 7350 Oak St., Copiague, N.Y.-A.L.
Liton Industries, 336 N. Foothill Rd., Beverly Hills. Calif.-F.J.K.L.
Urmar Engineers, 1432 N. Carlisle St., Phila adelphia 21, P.A.-L.N.O
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Matawan Electronics Co., 236 Creek Rd., Keansburg, N.J.-A.H.
Matawan Electronic Co., Box 450 Red Bank, N.J.-K.
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Radio Industries. Inc., 5225 N. Ravenswood Ave., Chicago 25, Ill.—A,K,L
Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.—A,N
Railway Communications, Inc., Raytown, Mo. —M
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Rust Industrial Co., 130 Silver St., Manchester, N.H.—K
Sanders Associates Inc., 137 Canal St., Nashua, N.H.—F
Scientific Associates, 530 Virginia Ave., N.E., Atlanta, Ga.—N
Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio—A
Selectar Industries, 3100 Ocean Parkway, Brooklyn 35, N.Y.—A.K.
Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N.Y.—A.K
Sierra Electronic Corp., 1060 Brittan Ave., San Carlos, Calif.—A.K.L
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Smuckler & Co. A.F. 202 Tillary St., Brooklyn 38, N.Y.—J
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Sperty Assembling, 79 Clitton Pl., Brooklyn 38, N.Y.—J
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Standard Electronics Corp., 285 Enwaret St., Newark, N.J.—L
Standard Electronics Corp., 285 Enwaret St., Newark, N.J.—L
Standard Electronics Corp., 285 Envert, N.J.—F.J.K.IN
Stendard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.—FL
Standard Electronics Corp., 126 Envertex, N.J.—E.G.H.L
Stendard Electronics Corp., 126 Envertex, N.J.—F.J., K.I.N
Stephens Mir. Corp., 8538 Warner Dr., Culver City, Calif.—F.J.K.L
Standard Electronics Corp., 37.1 Main St., Acton, Mass..., 164 Trennott St., Everett. Mass.—I for Response St., New Canan, Contestr 3, N.Y.—E.G.H.L
Tenhens Mir. Corp., 84 Mernent St., Everett. Mass.—I
Teiner Co., Roland, 184 Tremont St., Everett. Mass.—I
Teiner Co., Roland, 184 Tremont St., E

K.L
 Weston Labs., Inc., Old Littleton Rd., Harvard, Mass.—F
 White Electron Devices, Roger, 12 W. Island Rd., Ramsey, N.J.—F
 Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—F,G,J,N

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Acme Telectronix, Div.. NEA Service. 1200 W. 3rd St., Cleveland 13, Ohio--G, AB
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Advanced Electronics, Inc., 94 Silas Deane Hwy.. Rocky Hill, Conn.-R
Aero Electronics Co.. 1512 N. Wells St., Chicaso 10, III.-B,D,N,O,R,T,U,AC,AD
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Air Armaments, Inc., F.O. Box 126, Cockeysville, Md.-D
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Autotron Co., 128 W. Main St., Danville, Ill. —L Avion Instrument Corp., 299 State Highway #17, Paramus, N.J.—A.B.D.I.J.J.L.M.N.T Baldwin-Lima Hamilton Corp., Philadelphia 42, Pa.—O Barber & Howard, 120 East Ave., Westerly, R.I.—B.AB Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—B,C,E,K Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.—B,D,M, N,O,R,S,T,Y,AB

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- Berkeley Div., Beckman Instruments Inc., 2200 Wright Ave., Richmond, Calif.—D,I,J, L,M,S,T,Y,AB
  Berkshire Laboratories. 586 Bank Village, Greensville, N.H.—E, U
  Berndt-Bach. Inc., 6926 Romaine St., Hollywood 38, Calif.—T
  Beva Laboratory, 1640 Olden Ave. Ext., Trenton, N.J.—A,B,E,S,W,Y,AA,AB
  Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.—B,D,E,L,O,R,T,U,V
  Bittermann Electric Co., Barlow St., Canaan, Conn.—J

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  Bludworth Marine, 92 Gold St., New York 38, N.Y.-Q
  Boeing Airplane Co., P. O. Box 3107, Seattle 14. Wash.-B.N.
  Bogen Co., David, 29 9 Ave., New York 14, N.Y.-AB
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Centronics Corp., 21-04 122 St., College Point 56, N.Y.-M
Century Geophysical Corp., 1333 N. Utica Tulsa. Okla.-RAC
C.G.S. Labs., Inc., 391 Ludlow St., Stamford, Conn.-D.J.P.R
Chicago Electronic Eng's Co., 3223 Armitage Ave., Chicago 47, Ill.-A.J.N.U
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Circuitron. Inc., 116 E. Main St., Rockville, Conn.-M
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  Davies Labs., Inc., 4705 Queensbury Rd., Riverdale, Md.--D,T
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  Daytornic Corp., 216 S. Main St., Dayton 2, Ohio--A,E,O,R,T,AA
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  De Coursey Eng'g. Lab. P.O. Box 235, W. Los Angeles 25, Calif.-J
  Deitz Co., S. J., 38 River Edge Rd., River Edge, N.J.--A,L
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  Dynamic Electronics. N.Y. Inc., 73-39 Wood-haven Blvd., Glendale, L.I., N.Y.-Q.S



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El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.-B,D,N,R
Empire State Labs., 2608 Merrick Rd., Bell-more, L.I., N.Y.-N,S,V,W
Endevco Corp., 689 S. Fair Oaks Ave., Pasa-dena, Calif.-J,N
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  Feedback Controls. Inc., 1332 N. Henry St.,
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  37, Mich.-Q
  Fidelity Amplifier Co., 703 W. Willow St., Chicago 14, Ill.-L,AB
  Fisher Eng'g. Inc., 2060 H. S. 24 E., Huntington, Ind.-J
  Fisher Radio Corp., 21-21 44th Dr., Long
  Island City, N.Y.-N
  Fleetwood Corp., 1037 Custer Dr., Toledo 12, Ohio-D
  Fluke Mfg. Co., John. 1111 W. Nickerson St., Seattle 99, Wash.-AB
  Ford Instrument Co., Div. Sperry Corp., 31-10
  Thomson Ave., Long Island City 1, N.Y.-AB,C,D,I,J,L,M,N,T,U,Y,AB,AD
  Foto-Video Labs., P.O. Box 296, Clifton, N.J.-X.-W,S
  F.R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-X
  Franklin Electronics Inc., 415 W. Pike St.,

X-Ray Div., 26-12 Borough FI., Woushle H, N.Y.-X. Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-B,D,E,I,L,N,O,R,S,AA Freed Electronics & Controls, 200 Hudson St., New York 13, N.Y.-A,D,L,M,S,W,Y Freed Transformer Co., 1718 Weirfield St., Brooklyn 27, N.Y.-C,J,K.S Furst Electronics. 3322 W. Lawrence Ave., Chicago 25, Ill.-B,C,E,I,O,R,S,Y,AA,AB Garing Co., 34-40 79 St., Jackson Heights 72, N.Y.-J

Garod Radio Corp., 70 Washington St., Brook-lyn 1, N.Y.-G Gates Radio Co., 123 Hampshire St., Quincy, Ill.-B.M.T.Y.Z.AB

Garod Radio Corp., 70 Washington St., Brooklyn I, N.Y.-G
Gates Radio Co., 123 Hampshire St., Quincy, Ill.-B.M.T.Y.Z.AB
General Communications, P. O. Box 169, Fort Atkinson, Wisc.-J
General Electric Co., Apparatus Div., 1 River Rd., Schenetady 5, N.Y.-J.N
General Electric Co., Bldg 7 Rm, 106, Electronics Park, Syracuse, N.Y.-U
General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.-Q
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-B.K.Q.R.S
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-B.K.Q.R.S
General Ultrasonics, 1240 Main St., Hartford 3, Conn.-Q
Geotechnical Corp., 3712 Haggar Dr., Dallas, Texas-T.AC
Geotomic Labs. Inc., 1314 Cedar Hill Ave., Dallas 11 Texas-J.AC
Gilmore Industries, Inc., 5713 Euclid Ave., Cleveland 3, Ohio-A.K.O.T
Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-J.M.R
Gonset Co., 801 S. Main St., Burbank, Calif.-S
Gotham Audio Development Corp., 2 W. 46
St., New York 36, N.Y.-D
Grass Instrument Co., 101 Old Colony Ave., Quincy 70, Mass.-V
Gray Research & Devel. Co., 658 Hilliard St., Newton 58, Mass.-D
Greenel Co., L. Charlton, 314 Washington St., Newton 58, Mass.-D
Greenelaf Mfg. Co., 2001 E. Artesia. Long Beach 5, Calif.-A.C., 2001 E. Artesia. Long Beach 5, Calif.-A.C.D.G.M.P.S.U.W.Y.AB
Hamilton Electronics Corp., 322 Holman Blvd., Hicksville, N.Y.-Y
Hanson-Gorrill-Brian, Inc., 1 Continental Hill Clen Cove, N.Y.-Y.B.D
Hanson-Gorrill-Brian, Inc., 1 Continental Hill Clen Cove, N.Y.-Y.J.N.OU
Harson-Gorrill-Brian, Inc., 1 Continental Hill Clen Cove, N.Y.-B.D
Hanson-Gorrill-Brian, Inc., 1 Continental Hill Clen Cove, N.Y.-B.D

**TELE-TECH & ELECTRONIC INDUSTRIES • June 1955** 

- Harrison Labs.. 53 Industrial Rd., Berkeley Heights. N.J.--U Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.--B,D.O.R.S.AA.AC Heiland Research Corp., 130 E. 5 Ave., Den-ver 3. Colo.--O.R.T Herlec Corp., 6th & Beech St., Grafton 1, Wisc.--M Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.--C,S HI-Q Div., Aerovox Corp., Olean, N.Y.--J Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.--A.B.I.J,N,O, R.T.U.Y.AC Hogan Labs. Inc., 155 Perry St., New York 14,

- R.T.U.Y.AC Hogan Labs. Inc., 155 Perry St., New York 14, N.Y.-G.L.T Houston Technical Labs., 2424 Branard, Hous-ton 6, Texas-1.AC Hufford Machine Works, Electronics Division, 2201 Carmelina Ave., Los Angeles 64, Calif. -A, B.J.N, AD Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.-B, D.J.N.T.U.AD Hydro-Aire, Inc., 3000 Winona Ave., Burbank, Calif.-U Inductograph Lab., Hon Brook Rd, Box 75

- Nycon Alif. --B.D.J.N.T.U.AD
  Hydro-Aire, Inc., 3000 Winona Ave., Burbank, Calif.--U
  Inductograph Lab., Hop Brook Rd., Box 76, Brookfield. Conn.--D.U.V
  Inductograph Lab., Hop Brook Rd., Box 76, Brookfield. Conn.--D.U.V
  Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, N.Y.--A,B,C,E,J, K.N.O.U.V
  Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.--K.R.V
  Industrial Electronic Engineers. 3973 Lankershim Blvd., N. Hollywood, Cal.--B.T
  Industrial Electronics Co., Hanover St., Hanover, Mass.-A
  Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-L.O.T
  Industrial Telectronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-L.O.T
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-C.K.N.S.Y.AB.AD
  Infra Electronic Corp., Roseland, N.J.--N
  Instruments for Industries, 150 Glen Cove Rd., Mineola, N.Y.-D,W.S
  Insulated Circuits. Inc., 115 Roosevelt Ave., Bellville, N.J.-M
  Intrelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.--A,D.Q.R.S.T.V.W.AB
  Int'I. Projector Corp., 55 LaFrance Ave., Bloomfield, N.J.-L
  Int'I. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.-B.N.O.P.T.Y.AB
  Int'I. Research & Devel. Corp., 168 E. Hosack St., Columbus 7, Ohio-R
  Int'I. Research & Devel. Corp., 168 E. Hosack St., Columbus 7, Ohio-R
  Int'I. Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.-S
  Int'I. Testing Servicc, Div. Jackson & Church. 321 N. Hamilton St., Saginaw, Mich.--A,B, D.K.L.M.NO, Q.R.T.U.X.Y
  iq Industries, 6110 Wilshire Blvd., Los Angeles 36, Calif.--J.L.M.R
  I-T-E Circuit Hreaker Co., 19 & Hamilton Sts., Philadelphia 30, Pn.-J
  Jerrold Electronical Lab., 880 Bergen Ave., Jersey City 6, N.J.--S
  Jersey City 6, N.J.--B
  Johnson Labs. Div., of Aladdin Industries Inc., Willard Rd, Norwalk, Conn.-S
  Kahn & Co., 514 Windsor St., Hartford

- Conn.-A.B.C.D.F.L.N.O.Q.R.S.Y.A.B.AD
  Kaiser Metal Products, Inc., Bristol, Pa.-A, N.U
  Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.-B.C.Q.S
  Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuvs, Calif.-J.N.S.W.AD
  Kenrfott Co., 1378 Main Ave., Clifton, N.J.-J.N.AD
  Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio-B.C.E.V.Y
  Ketay Laboratories, Div. Norden-Ketay Corp., 555 Broadway, New York 12, N.Y.-J.N.AD
  Kinetix Inst. Co., 902 Broadway, New York 10, N.Y.-N.J.-J.N
  Kinetix Inst. Co., 902 Broadway, New York 10, N.Y.-N
  Kinetix Inst. Co., 902 Broadway, New York 10, N.Y.-N
  Kinetix Inst. Co., 20 E. Herman St., Philadelphia 44, Pa.-AA, AB
  Korh Engr. & Mfg. Corp., 30 Ottawa Ave., Grandville, Mich.-Q.S
  Langevin Mfg. Corp., 37 W. 65th St., New York 23, N.Y.-AB
  Lear. Inc., 3171 S. Bundy Dr., Santa Monica, California.-D.J.M.NAD
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-B,K
  Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.-J
  Lee Laboratories, Inc., 154 11th Ave., New York 11, N.Y.-L
  Leenard Electronic Products Co., 67 34th St., Brooklyn 32, N.Y.-J
  Libascope, Inc., 808 Western Ave., Glendale 1, Calif.-J.N

- Cann.-J.N Linear Equipment Labs., 380 Oak St., Copiague, N.Y.-U.AA Link Aviation, Inc., Binghamton, N.Y.--N Liston-Becker Instrument Co., 649 Hope St., Springdale, Conn.--B Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.--WAB
- Long Eng'g. Co., 54 Burke St., Winston-Salem, N.C.-O

TELE-TECH & ELECTRONIC INDUSTRIES • June 1955

- Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.-N
  L&O Research & Devel. Corp., 134 N. Wayne Ave., Wayne, Pa.-A,D.N.T.AD
  McIntosh Lab. Inc., 320 Water St., Binghamton, N.Y.-AB
  McKenna Laboratories, 2503 Main St., Santa Monica, Calif.-J.Q
  McNeill Enry'g. Co., 4057 W. Van Buren, Chicago 24, Ill.-L.
  MacDonald Co., W. S., 33 University Rd., Cambridge 38, Mass.-K.N
  Machine O'Matic, Inc., 2045 N. Hoyne Ave., Chicago 47, Ill.-L.
  Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.-A,V
  Magnetic Products, 12822 Yukon Ave., Hawthorne, Calif.-A,B.D,E,J,K,L,N,O,U,W, AB

- AB
- AB Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.--E.M.T.AB.AD Magnatox Co., Fort Wayne 4, Ind.--D.J.N Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N.Y.--A.B.D.E.J.L.N.U Magnetic Instrument Co., 82 Main St., W. Orange, N.J.--A.B.D.E.G.J.N.P.Q Magnetic Research Corp., 200 Center St., El Segundo, Calif.--B.N Magnetics Inc.. Box 230, Butler, Pa.--J Magnetics Research Co., 142 King St., Chap-paqua. N.Y.--J Maico Co., 21 W. 3rd St., Minneapolis 1, Minn. --N.V Magnon Labs., 207 Greenwich Ave., Stam-

- paqua. N.Y.-J
  Maico Co., 21 W. 3rd St., Minneapolis 1, Minn. -N,V
  Manson Labs., 207 Greenwich Ave., Stamford, Conn.-W
  Manufacturers Eng'g. & Equip. Corp., York & Mill Rd., Hatboro, Pa.-N
  Marchand Electronic Labs., 255 Mill St., Byram, Conn.-U,V
  Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-A,B,Q
  Mark Electronics, Inc., 250 Glenwood Ave., Bloomfield, N.J.-J.N
  Martin & Co., H. S. Electronics Div., 1916 Greenleaf St., Evanston, Ill.-A
  Massa Laboratories, 5 Fottler Rd., Hingham, Mass.-Q.R.S.Y
  Matason-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-AB
  Maxson Corp.. W. L., 460 W. 34 St., New York 1, N.Y.-B.E.V
  Melcraft Electronic Corp., Box 464, Babylon, N.Y.-B.E.V
  Melcury Electronic Corp., Fourth & Montjoy Sts., Falmouth, Ky.-B,D
  Metals Products Co., Craighead St., Nashville 4. Tenn.-S
  Metrotype Corp., 6100 Archer Rd., Summit, III.-B,K.L.N.T.W.AB
  Micromax Co., 1964 Utica Ave., Brooklyn 34, N.Y.-N

- N.1.--N Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13. 111.--C,D,Q,AB Midwestern Instruments, 41 & Sheridan Rd., Tulsa. Okla.--N,O,R,AC Miller Instruments, Inc., Wm., 325 N. Hal-stead Ave., Pasadena 8, Calif.--E,J,O.R,S,T, Y,AC
- Millivac Instrument Corp., 444 2 St., Schenectady, N.Y.—B
  Minnesota Electronics Corp., 1058 University Ave. St. Paul 4, Minn.—J
  Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.—L.M.T
  Motiograph, Inc, 4431 W. Lake St., Chicago 24, Ill.—L
- Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, Ill.—A,B National Radiac, Inc., 10 Crawford St., Newark 2. N.J.—L
- Newark 2. N.J.-L Neptune Electronics Co., 433 Broadway, New York 13, N.Y.-A Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.-AB
- New London Instrument Co. Inc., 82 Union St. New London, Conn.—S Newton Co., 55 Elm St., Manchester, Conn.— N.W
- Non-Linear Systems, Del Mar Airport, Del Mar. Calif.-M
- Norden-Ketay Corp., Wiley St., Milford, Conn. ---J,N,AD
- North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.--N Northeastern Development Engineers, Inc., 21 High St. Pawtucket 5, R.I.--A,D,L,N
- NRD Instrument Co., 6425 Etzel Ave., St Louis 14. Mo.-V.W.Y
- Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25 Ill.—B,E,O,T,V,Y
- Osterland Co., Edmund, Mountain Lakes, N.J. --C.AA
- Owen Labs., 412 Woodward Blvd., Pasadena 10. Calif.-E.AA
- Pacific Mercury T.V. Mfg., Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.—A,M,N,O,R, U
- Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, Ill.—B

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- Parsons Co., Ralph M., 617 S. Olive St., Los Angeles 14, Calif.—B,D
  PCA Electronics, 2180 Colorado Ave., Santa Monica, Calif.—M,U,W
  Peer, Inc., 1200 Milton St., Benton Harbor, Mich.—A,D,Z
  Peirce Wire Recorder Corp., 5900 N. North-west Hwy., Chicago 31, III.—J
  Pembrex Theatre Supply Corp., 1969 S. Ver-mont Ave., Los Angeles 7, Calif.—J
  Penna Testing Lab., Doylestown, Pa.—T,V.AD
  Penna East Engineering Corp., P.O. Box 240, Kutztown, Pa.—A,J,N
  Perkin Eng'g. Corp., 345 Kansas St., El Se-gundo. Calif.—J
  Permoflux Corp., 4900 W. Grand Ave., Chicago 39, III.—J,U
  Peschel Electronics, Inc., 13 Garden St., New
- 39, 111.—J.U
   Peschel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.—A, B, N, AB
   Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.—N.O
   Phebea Inc. 2540 Woodload Ann. Haltimurge

Phebco. Inc., 3640 Woodland Ave., Baltimore 15. Md.-T.U Phen-O-Tron. Inc., 455 Main St., New Rochelle, N.Y.-M

N.Y.-M Philbrick Research. Inc.. Geo. A., 230 Con-gress St., Boston 10, Mass.-A,B,E,K Phoenix Precision Instrument Co., 3803-05 N. Fifth St., Phila. 40, Pa.-A,B,C,D,E,I,L,O,T Photobell Co., 43 Vesey St., New York 7, N.Y.-L

N.Y.-L Photocircuits Corp., Glen Cove. N.Y.-M Photocorn Research Products, 421 N. Foothill Blvd.. Pasadena 8, Calif.--Y Photo Crystals, Inc., 15 S. First St., Geneva, Ill.-L.N.T Photo Research Corp., 127 W. Alameda Ave., Burbank, Calif.-L Pickard & Burns, 240 Highland Ave., Needham, Mass.-L

Mass.-

AB

Mass.—I
Mass.—I
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.—D
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—B,D,J,N,AB,AD
Plastics & Electronics Corp., 272 Northland Ave., Buffalo 8, N.Y.—M.N.U
Plymouth Electronics Corp., 50 Kingsbury St., Worcester. Mass.—N
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.—S
Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr. Pa.—O
Polytechnic Research & Development Co., 202
Tillary St., Brooklyn 1, N.Y.—A,B,J.N.O,X, AB

Tillary St., Brooklyn I, N.Y.—A,B.J.N.O,X, AB
Power Supplies, 1005 Olive St., Highland, Ill. -Q.AB
Power Transformer Co., 532 Mulberry St., Newark 5, N.J.—J
Precise Development Corp., 2 Neil Court, Oceanside, N.Y.—AA
Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N.Y.—J
Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.—J,AB
Precision Electronics, Inc., 9101 King Ave., Franklin Park, Ill.—J,AB
Precess & Instruments, 15 Stone Ave., Brook-lyn 33, N.Y.—B,E
Qualitone Co., 4318 Upton Ave., S., Minne-apolis 10, Min.—M.U
Qutronic Transformer Corp., 525 Broadway, New York 12, N.Y.—J,N.AC
Radiation Counter Labs., Inc., 5122 W. Grove St., Skokie, Ill.—I,S.V
Radiation, Inc., Box Q, Melbourne, Fla.—B,N, O
Radiation Instrument Devel. Lab., 2337 W. 67

O Radiation Instrument Devel. Lab., 2337 W. 67 St., Chicago 37. Ill.--W Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.--Y Radio Engineering Labs., 36-40 37 St., Long Island City 1, N.Y.--AB Radio Kita, Inc. 120 Cedar St., New York 6, N.Y.--Z, AA Radio-Music Corp., 84 S. Water St., Port Chester, N.Y.--A,J Radionics, Inc., 1040 N. York Rd., Towson 4 Md.--M,U

Radionics, Inc., 1040 N. York Rd., Towson 4 Md.—M,U
Radionics, Inc., 1040 N. York Rd., Towson 4, Radio Sonie Corp., Plainfield. N.J.-D.J.Q
Rallway Communications, Inc., Raytown, Mo. -O.Q.T,V,Z.AA,AC
Ransom Research, P.O. Box 382, San Pedro, Calif.—J.N.O.U
Rauland-Borg Corp., 3515 W. Addison, St., Chicago 18, III.—AB
Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—J.O
Reeves Instrument Corp., 215 E. 91 St., New York 28, N.Y.—B,N
Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.—J.U
Remoc Mfg., Co., 545 N. LaSalle St., Chicago 10, III.—K
Remington Rand, Inc., Eng'g. Research Assoc. Div., 1902 W. Minnehaha Ave., St. Paul W4, Minn.—A
Remiler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif.—D,U
Resdel Eng's., 2351 Riverside Dr., Los Angeles 39, Calif.—Q,V

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Rese Engineering, Inc., 301 Walnut St., Phila-delphia 6, Pa.-W Research Electronics Labs., Roslyn, Pa.-B,K Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.-E,N,O,U,Y,AD Rhein Sound Systems, Orlando, Fla.-A Rich Electronics, 212 N.W. 8 Ave., Miami 36, Fla.-E,T Rich Electronics, 1240 Main St. Hartford 8.

Rich Electronics, 212 N.W. 8 Ave., Miami 36, Fla.-E,T
Rich-Roth Labs., 1240 Main St., Hartford 3, Conn.-Q.S
Robey Rotor, Inc., 6006 Washington Blvd., Culver City. Calif.-B
Robinette Co.. W. C.. 802 Fair Oaks Ave., So. Pasadena, Calif.-A.J,N
Rockwell Eng's, Co., 4063 N. New Jersey St., Indianapolis 5, Ind.-L.N
Roesch Co.. D. J., 220 S. Figueroa St., Los Angeles 7, Calif.-A.B.P,S
Rollins Electronics Corp., 117 Schley Ave., Lewes, Dela.-J
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-A,D.N.R.T.V, RS Electronics Co.. 3707 S. Robertson Blvd., Culver City, Calif.-W
Sanborn Co.. Cambridge 39, Mass.-B.N.O
Sanders Associates Inc., 137 Canal St.. Nashua, N.H.-M.N
Sangamo Electric Co., 9 & Converse, Spring-field. III.-N
Scala Radio, 2814 19 St., San Francisco 10, Calif.-U
Schaevita Eng's, Crescent Blvd & Drexel Ave.,

- field. III.—N Scala Radio. 2814 19 St., San Francisco 10, Calif.—U Schaevits Eng'g., Crescent Blvd & Drexel Ave., Camden 1, N.J.—N Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.—I,N,T,X Scott. Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—C,I,K,Q,R,S,AB Seaboard Electric Co., 417 Canal St., New York 13, N.Y.—N Seay Instrument Co., 6521 N. Lamar Blvd., Austin 5, Texas—A.B,E.N Seismograph Service Corp., 701 Kennedy Blvd.. Tulsa. Okla.—R.T Selectar Industries. Inc., 3100 Ocean Pkwy.. Brooklyn 35, N.Y.--B.J Servo Corn. of America 2020 Jericho Turn. pike. New Hyde Park, N.Y.—D,N,T,X,AD Servomechanisms, Inc., 500 Franklin Ave.. Garden City. N.Y.—A,B,J,N,AB Servo-Tek Products Co., 1086 Goffle Rd., Haw-thorne, N.J:—A,N Shasta Div., Beekman Instruments, Inc., 1432 Nevin Ave.. Richmond, Calif.—S Shepard Labs., 480 Morris Ave., Summit, N.J. --D,J,O,Y Shoup Eng'g. Co., 1516 S. Wabash St., Chicago 16, IIL—O

--D,J,O,Y Shoup Eng'g. Co., 1516 S. Wabash St., Chicago 16. III.--O Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.--D,U Signal Equipment Co., 2706 3 Ave., Seattle 1. Wash.--J,S,Y Skiatron Electronics & TV Corp., 30 E. 10 St., New York 3, N.Y.--D,G,L,Q Slate \* Associates, Claude C., 11870 W. Olym-pic Blvd., Los Angeles 64, Calif.--A,D,J,N Smuckler & Co., A.F., 202 Tillary St., Brooklyn 1, N.Y.-S Sonex, Inc., 245 Sansom St., Upper Darby, Pa.

Sonex, Inc., 245 Sansom St., Upper Darby, Pa. —AB

S.O.S. Cinema Supply Corp., 602 W. 52 St.. New York 19, N.Y.-J

Southwestern Industrial Electronics Co.. 2831 Post Oak Rd., Houston, Texas-B,E,J,O,Q,R, T,AA,AC

T.AA.AU
Spar Eng'g. & Devel. South & Paxson Aves., Wyncote, Pa.—A,B,N
Specialties Inc. Skunks Missery Rd., Syosset. L.I., N.Y.—B.J,L,N
Specialty Assembling. 79 Clifton Pl., Brooklyn 38, N.Y.—V,W

- 38, N.Y.--V.W
  Spencer-Kennedy Labs., 186 Mass. Ave., Cambridge 39, Mass.--S,W.AA
  Sperry Gyroscope Co., Great Neck, N.Y.--R
  Springfield Enterprises. P.O. Box 54, Springfield Gardens 13, N.Y.--L,M
  Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N.Y.-D.J.L,M
  Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.--T.Z
  Standard Coil Products Co. 2025 N. Hearthorne

- Standard Coil Products Co., 2085 N. Hawthorne St., Melrose Park, Ill.-J.M.N Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-B.E.J.L.N. Q.S.U.Y Standard Piezo Co., 20 N. Hanover St., Car-lisle, Pa.-J,L
- Stanford Labs. 1661 Broadway, Redwood City, Calif.—S
- Calif.—S Statistical Instrument Co., 330 Haven Ave., New York 33, N.Y.—B,R,W Stavid Eng'g., Highway 22, Plainfield, N.J.— B,D,E.I.N.R.T.U.Z
- Stephens Mfg. Corp., 8538 Warner Dr., Culver City, Calif.—S,AB

- City, Calif.—S,AB Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.—A,D,K,L,N,R,T Sterling Transformer Corp., 297 N. 7 St., Brooklyn 11, N.Y.—J Stoelting Co., C. H., 424 N. Homan Ave., Chi-cago 24, III.—B,V Stratford Pen Corp., 44 W. 28 St., New York 1, N.Y.—U

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Stromberg-Carlson Co., 100 Carlson Rd., Roch-ester 3, N.Y.-R.S

- Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-R,S
  Strong Electric Co., 87 City Park Ave., Toledo 2, Ohio-N
  Summers Gyroscope Co., 2328 Broadway. Santa Monica. Calif.-J
  Ta-Mar, Inc., 11571 W. Jefferson Blvd., Culver City, Calif.-A
  Tech Laboratories Inc., Bergen & Edsall Blvd., Palisades Park, N.J.-C
  Technical Instrument Co., 3732 Westheimer Rd., Houston 6. Texas-AC
  Technology Instrument Corp., 531 Main St., Acton, Mass.-S,Z,AB
  Technology Instrument Corp., 531 Main St., Acton, Mass.-S,Z,AB
  Techron Corp., 254 Friend St., Boston 14. Mass.-M
  TeleBeam Industries, 6th & Soscol Ave., Napa, Calif.-Q
  TeleBeam Industries, 6th & Soscol Ave., Napa, Calif.-Q
  TeleBeam Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-I.J,U
  Telemarine Communications Co., 3040 W. 21 St., Brooklyn 24, N.Y.-Q
  Telephonics Corp., Park Ave., Huntington, L.I., N.Y.-P.S,W,X
  Television Associates, E. Michigan St., Michigan City, Ind.-A
  Television Co., of America. 1761 Lincoln Blvd., Serie Monito, Calif.-B K. W.N.

- Television Associates, E. Michigan St., Michigan City, Ind.—A
  Television Co. of America. 1761 Lincoln Blvd., Santa Monica. Calif.—B,K,L,N,R
  Televiso Corp., 1415 W. Golf Rd., Des Plaines, III.—A.B,C,D,E.J,P,Q,T.W,Y
  Telonic Industries, 444 S. Rural St., Indianapolis 1, Ind.—S,AA
  Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—L,M,R
  Thordarson-Meissner Mfg. Div., Maguire Industries, Inc., 7th & Bellmont, Mt. Carmel, III. A,B,C,D,E,G,I,J,K,L,N,O,P,S,T,V, W,Y,Z,AA,AB,AC,AD
  Timely Instr. & Controls Co., 1645 W. 135 St., Gardena. Calif.—J,N,O
  Torwico Electronics Inc., 967 Frelinghuysen Ave., Newark 5, N.J.—J
  Transformer Technicians Inc., 2608 N. Cicero

- Transformer Technicians Inc., 2608 N. Cicero Ave, Chicago 39, III.—AB Transformers, Inc., 532 North St., Endicott. N.Y.—J
- Transicoil Corp., 107 Grand St., New York 13, N.Y.--N
- 13, 14, I. N
   Transistor Components Co., 301 Oakwood Ave., E. Aurora, N.Y.—A.L.N.U
   Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.—N.Q.T
   Transonic, Inc., 808 16 St., Bakersfield, Calif. —J

Tresco, 3824 Terrace St., Philadelphia 28, Pa.

- Tri-Dex Co., P.O. Box 1207, Lindsay, Calif. --M
- Triumph Mfg. Co., 1829 S. 55 St., Chicago 50, Ill.-R
- V Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, L.I., N.Y.-D,AB τv Ultra Hi-Fi Co., 709 Sip St., Union City, N.J. -L,AB
- Ultrasonic Corp., 640 Memorial Dr., Cambridge, Mass.-J.K.N,Q
- Mass.-J.K.N.Q Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.--U United Control Corp., 4540 Union Bay Pl., Seattle 5, Wash.-U,AA United Geophysical Corp., P.O. Box "M", Pasa-dena 15, Calif.-M.R.T.AC United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.--AB Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.--J Vapor Heating Corp., 80 E. Jackson, Chicago 4, Ill.--A.J.K.L.N.T Vari-L Co., 432 Fairfield Ave., Stamford, Conn.

- Vari-L Co., 432 Fairfield Ave., Stamford, Conn.
- Varo Mfg. Co., 2201 Walnut St., Garland, Tex. --J,U,Y,AB
- Vectron. Inc., 1611 Trapelo Rd., Waltham 54, Mass.-A.E.L.N

- Mass.—A.E.L.,N Vickers Electric Div., Vickers, Inc., 1835 Lo-cust St., St. Louis 3, Mo.—J.N Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 12. Ohio—B Video Corp. of America, 229 W. 28th St., New York, N.Y.—J Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20, Calif.—L,T

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Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.—A,B,D,M,Q,U Volkers & Schaffer Mfg. Corp., 444 2 St., Schenectady, N.Y.—S,AA Waldorf Instrument Corp., Park Ave., Hunt-ington, N.Y.—D,N Walkirt Co., 145 W. Hazel St., Inglewood 8, Calif.—D,E,J,M,W,Y,AB Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio—A,B,D,E,J,K,L,P,Q,T,U Western Mfg. Co., 1400 W. 22 St., Kearney 14, Nebr.—S Western Radiation Lab., 1107 W. 24th St., Los

- X Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Con.--AB White Industries, 421 W. 54 St., New York 19, N.Y.--D.J.Q White & Sons, Wilfrid O., 178 Atlantic Ave., Boston 10, Mass.-Q Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.--B Wright Eng'g. Co.. 180 E. California St.. Pasadena 1, Calif.--B,C.D.J.L,N.O,Q.R.T.U, W.X.Y.AD Yellow Springs Instrument Co., P. O. Box 106, Yellow Springs, Ohio-V

4—AMPLIFIERS, TELEVISION Amplifiers, booster .....K Amplifiers, distribution .....L Amplifiers, isolation .....A Amplifiers, keying .....B Amplifiers, limiting .....C Amplifiers, line .....D

Amplifiers, mixing .....E Amplifiers, monitoring .....F Amplifiers, montage .....G Amplifiers, television .....J

Adler Communications Labs.. 1 Le Fevre Lane, New Rochelle, N.Y.-D,E,I,J,K Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-A,K,L Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio-K

Ohio-K American Electronic Laboratories, 641 Arch St. Philadelphia 6, Pa.-J Anchor Radio Corp., 2215 S. St. Louis Ave., Chicago 23, III.-K A.R.F. Products, Inc., 7627 Lake St., River Forest, III.-D Astatic Corp., P.O. Box 120, Conneaut, Ohio-K

N.J.-H Garod Radio Corp., 70 Washington St., Brook-lyn 1, N.Y.-J Gates Radio Co., 123 Hampshire St., Quincy, Ill.-D

Ill.-D General Communication. P.O. Box 169, Fort Atkinson, Wis.-D,E,F,G,J General Electric Co., Broadcast Equip.. Com-mercial Equip. Dept., Electronics Park, Syracuse, N.Y.-D,E,F,G,H,I,J General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.-L

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Gonset Co., 801 S. Main St., Burbank, Calif.—H Hallamore Mfg Co., 2001 E. Artesia, Long Beach 5, Calif.—A,B,C,D,F,H,I,J,L Hallicrafters Co., 4401 W. 5 Ave., Chicago 24,

Hallamore' Mfg Co., 2001 E. Artesia, Long Beach 5, Calif.-A,B,C,D,F,H,I,J,L
Hallicrafters Co., 4401 W. 5 Ave., Chicago 24, III.-J
Harmon Electronics Co., 11431 Truman Rd., Independence, Mo.-C,H
Harmon Labs. Inc., 53 Industrial Rd., Berkeley Heights, N.J.-L
Holland Electronics, 2133 Central Dr., S., E. Meadow, N.Y.-E,L
Industrial TV, 369 Lexington Ave., Clifton, N.J.-J,K,L
Int'I. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.-E,JK
Int'I. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.-E,JK
Int'I. Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.-D,L
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.-A,D,E,I,J,K,L
Johnson Labs., Div. of Aladdin Industries, Inc., Willard Rd., Norwalk, Conn.-J
Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-J
Kay Lectric Co., 14 Maple Ave., Pine Brook, N.J.-B,F,I
Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.-D
Langevin Mfg. Corp., 37 W. 65th St., New York 23, N.Y.-D,F
Linear Equipment Labs., 380 Oak St., Copiazue, N.Y.-D
Lymar Engineers, 1432 N. Carlisle St., Phila. 21, Pa.-A,D,E,K,L
Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-C,E,F,J
Metal Products Co., Craigshead St., Nashville 4, Tenn.-D.E
Oregon Corveck Co., 1005 N.W. 16 Ave., Portland, Ore.-J
Pacific Mercury TV Mfg., 5955 Van Nuys Blvd., Van Nuys, Calif.-J
Padio Corp. of America, Eng'g. Products Div., Camden 2, N.J..-D,E,F,G,J,K,L
Radio Mfg. Engineers. Inc., Div. Electro-Voice, Buchanan, Mich.-K
Roesch Co., D. J., 2200 S. Figueroa St., Los Angeles 7. Calif.-HJ
Semco Electronics Corp., 285 Hoover St., Los Angeles 7. Calif.-HJ
Semco Electronics Corp., 285 Emmet St., New York 3, N.Y.-G
Spencer-Kennedy Labs., 186 Mass. Ave., Cambridge 39, Mass.-D,H.K,L
Standard Electronics Corp., 285 Emmet St., Newark,

Calif.—K Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.—D,E.F.H.J Superex Electronics Corp., 4 Radford Pl., Yonkers, N.Y.—K Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.—A,D,E,F,J,L Tarzian Inc., Sarkes, 539 S. Walnut, Bloom-ington, Ind.—C.F.J,L Tech-Master Corp., 443 Broadway, New York 13, N.Y.—J,K Technical Appliance Corp., 1 Taco St., Sher-burne, N.Y.—L Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.—E,K Telechrome, Inc., <u>88</u> Merrick Rd., Amityville,

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# THE EXCLUSIVE MANUFACTURERS' LOCALIZER INDEX

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Lists Manufacturers alphabetically by name and address. Includes manufacturers' local representatives, branch and regional offices, executives and regional personnel, brand names, products, services, telephone numbers, and territory covered. Provides the shortest means of contacting any manufacturer . . . cuts correspondence; speeds services.



TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Tel-Instrument Co., 728 Garden St., Carlstadt, N.J.-A.D.J.L
Thordarson-Meissner Mfg. Div., Maguire Industries, Inc., 7th & Bellmont, Mt. Carmel, III.-A.B.C.D.E.F.H.I.J.L
Transvision, Inc., New Rochelle, N.Y.-E.K.L
Turner Co., 909 17 St., N. E., Cedar Rapids, Iowa-K
TV Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, L.I., N.Y.-F
United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.-J
U.S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.-E.F.H
Videon Electronic Corp., 902 E. Michigan St., Indianapolis 2, Ind.-K
Waldom Electronics, 4625 W. 53 St., Chicago 32, III.-L
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-H.J
Wickes Eng'g. & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.-A,D,J.L

5—ANALYZERS

	antenna patternAC
Analyzers,	audio-amplifierA
	cable
Analyzers,	capacitor
Analyzers,	circuit
Analyzers,	
Analyzers,	color
Analyzers,	dimensionalZ
Analyzers,	electrochemicalV
Analyzers,	engineAA
Analyzers,	
Analyzers,	gas
Analyzers,	harmonic
Analyzers,	intermodulation
Analyzers,	internal combustionU
Analyzers,	magnetic J
Analyzers,	microwaveK
Analyzers,	noiseL
Analyzers,	radar
Analyzers,	
Analyzers,	spectrumO
Analyzers,	stressW
Analyzers,	surface
Analyzers,	transducerX
Analyzers,	transistorY
Analyzers,	ultrasonic Q
Analyzers	vibrationR
	videoS
Analyzers,	waveformT

Advanced Electronics. Inc., 94 Silas Deane Hwy., Rocky Hill, Conn.—R Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, III.—C.F.G.H.J.K.L.M.N.O.Q.R.S., T.U.V.W.X.Y.Z.AA,AB Airborne Electronics Co., Hanger 6 Metro-politan Airport, Van Nuys, Calif.—O Airborne Instruments Laboratory, 160 Old Country Rd., Mineola, L.I., N.Y.—K, L.M.,W, Y

Y Aircraft Armaments, Inc., P.O. Box 126, Cock-essville, Md.—M Alcar Instruments, 20 Wagaraw Rd., Fair Lawn, N.J.—A.Q Allied Eng'g. Div., Connecticut & Richards Aves., S. Norwalk, Conn.—E Alpar Mfg. Co., 2910 Spring St., Redwood City, Calif.—C,AB American Electronic Laboratories 641 Arch

America Inc., 116 Topsneld Rd., Wenham, Mass.--K
American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.--Y
American Instrument Co., 8050 Georgia Ave., Silver Spring, Md.--U
American Optical Co., Instrument Div., Box A, Buffalo 15. N.Y.--E,O
American Oxygen Service Corp., 600 Essex St., Harrison. N.J.--G
Ansley Electronics, Inc., 85 Tremont St., Meriden, Conn.--M,O
Applied Physics Corp., 362 W. Colo. St., Pasa-dena 1, Calif.--G,O
Arenberg Ultrasonic Lab.. 94 Green St., Jamaica Plain 30, Mass.--Q
Atlantic Research Corp., Alexandria, Va.--F, H.Q.T

Atomic Instrument Co., 84 Mass. Ave., Cam-bridge 39, Mass.—D Atomiab, Inc., 489 5 Ave., New York 17, N.Y.

-n

Audicon Electronics Inc., 216 Lyon St., Paterson 4, N.J.-A

Audio Instrument Co., 133 W. 14th St., New York 11, N.Y.—I Audio-Tone Oscillator Co., 6511 Main St., Long Hill, Conn.—I

Hill, Conn .-Authorized Mfrs. Service Co., 914 Wyckoff Ave., Brooklyn 27, N.Y.-C,J,R,AB

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Auto-Test Inc., 600 S. Michigan Ave., Chicago 5, 111.—U
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio—G
Baker & Co., 113 Astor St., Newark 5, N.J.—G
Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—A,F,I,H,L
Berkshire Laboratories, 586 Bank Village, Greenville, N.H.—J
Beva Laboratory, 1640 Olden Ave., Ext., Trenton, N.J.—D,L,O,T
Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.—AB
Bristol Co., Waterbury 20, Conn.—C
Bristol Co., Waterbury 20, Conn.—C
Bristol Co., Waterbury 20, Conn.—C
Bristol Eng'g Corp., Beaver Dam Rd. & Oak Lane, Bristol, Pa.—C,AA
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio—F,O,P
Cambridge Instrument Co., 3068 Grand Central Terminal, New York 17, N.Y.—G
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.—M,O
Century Electronics, div. Century Metalcraft Corp., 14806 Oxnard St., Van Nuys, Calif.—M,O
C.G.S. Laboratories, Inc., 391 Ludlow St.

Corp., 14806 Oxnard St., Van Nuys, Calif. -O C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.-O Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.--K.M Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, III.--B Chromatic Television Labs., 1501 Broadway, New York 36, N.Y.-S,T Clegg Laboratories, Inc., 142 S. Livingston, N.J.-B,C,J.M.S,T,X,Y Clough-Brengle Co., 6014 Broadway, Chicago 40, III.--B Coax Electronics Co., 42 North Rd., Bedford, Mass.--A

Coax Electronics Co., 42 North Rd., Bedford, Mass.—A Color TV Inc., 973 E. San Carlos Ave., San Carlos, Calif.—C, AB Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, 111.—AB Conn., Ltd., C.G., Elkhart, Ind.—F Conn. Telephone & Electric Corp., 70 Brittannia St., Meriden, Conn.—A Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—Q Consolidated Eng'g. Corp., 300 N. Sierra, Madre Villa, Pasadena 15, Calif.—G.O,R.X Cornell-Dubilier Electric Corp., 333 Hamilton Ave., S. Plainfield, N.J.—B Cubic Corp., 2841 Canon St., San Diego 6, Calif. —K Dallons Labs., Inc., 5066 Santa Monica Blvd.,

-K Dallons Labs., Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.-Q Davies Labs., Inc., 4705 Queensbury Rd., River dale, Md.-H,R,T Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.-V Decade Instrument Co., Box 153, Caldwell, N.J. -F

Santa Monica, Calif.--V Decade Instrument Co., Box 153, Caldwell, N.J. --F Defender Instrument & Regulator Co., 815 Clark Ave., St. Louis 2, Mo.--G Delaware Optical Labs., 36 Williams St., Lans-downe. Pa.--E,O.P Deltron, Inc., 2905 N. Leithgow St., Philadel-phia 33, Pa.--A DeMornay-Bonardi, Inc., 780 S. Arroyo Pkway., Pasadena, Calif.--K,O Detectolab. Inc., 6544 Sheridan Rd., Chicago 26, III.--D,T Deutschmann Corp.. Tobe. 921 Providence Hwy., Norwood, Mass.--AB DIT-MCO, Inc., 505 W. 9 St., Kansas City 5, Mo.--C,AB Donner Scientific Co., 2829 7th St., Berkeley 10, Calif.--F,H,S,T Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.--K D&R, Ltd., 402 E. Gutierrez St., Santa Bar-bara, Calif.--I Drive-In-Theater Mfg. Co., 505 W. 9th, Kansas City. Mo.--C Dubrow Devel. Co., 235 Penn St., Burlington, N.J.--A,F,I,R DuMont Labs., Inc., Allen B. Instrument Div., 760 Bloomfield Ave., Clifton, N.J.--AA Dyna-Labs, Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-J,L,X Electrodyne Co., Endicott St., Norwood, Mass. --B Electro Impulse Lab., 62 White St., Red Bank, N.J.--K.O

Electro Impulse Lab., 62 White St., Red Bank,

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Electro Impulse Lab., 62 White St., Red Bank, N.J.-K.O
Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-B.C.N.AA
Electromec, Inc., 3200 N. San Fernando Blvd., Burbank, Calif.-R.T.AA
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.-C.Z.AB
Electronic Research Associates. 67 E. Broad St., Nutley, N.J.-Y
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.-K
Electron-Requip., 308 Canal St., New York, N.Y.-B,C
Elk Electronic Labs. Inc., 333 W. 52 St., New York 19, N.Y.-B,F,H.L.T
Ellis Associates, Box 77, Pelham, N.Y.-W
Ellison Draft Gage Co., 548 Monroe St., Chi-cago 6, Ill.-G
El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.-A,F,J,N,O,R,T
Empire Devices, Inc., 38-25 Bell Blvd., Bayside 61, N.Y.-H,I,L,Q
Endevco Corp., 689 S. Fair Oaks Ave., Pasa-dena 2, Calif.-H,R,X

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Engis Equip. Co., 431 S. Dearborn St., Chicago 5, III.—P Erwood, Inc., 1770 W. Berteau Ave., Chicago 13. III.—R

5, III.—P
Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, III.—R
Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.—A.B.F.R.S.T.AB
Fairchild Engine & Airplane Corp., Wyandanch, L.I., N.Y.—Y
Farnsworth Electronics Co., Div. I.T.&T. Corp., P.O. Box 810. Fort Wayne, Ind.—F
Feiler Engineering & Mfg. Co., 8026 N. Monticello Ave., Skokie, III.—A,C
Ford Instrument Co., Div. Sperry Corp., 31-10
Thomson Ave., Long Island City 1. N.Y.—
Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40. Pa.—A.F.L.O.R.W
Fraser Development Lab., Box 73, Huntington Station, N.Y.—J
Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—H
F.R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.—F.K.M.Q.T.AC
Garod Radio Corp., 70 Washington St., Brooklyn 1, N.Y.—O
General Communication Co., 681 Beacon St., Booston 15. Mass.—M

General Communication Co., 681 Beacon St., Boston 15. Mass.—M General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5. N.Y.—E.H.J.R General Electric Co., Germanium Products Div., Electronics Park, Syracuse, N.Y.—X General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.—A.O.Q General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.—F.H.I.L.R.T General Ultrasonics 1240 Main St., Hartford 3, Conn.—Q

General Ultrasonics 1240 Main St., Hartford 3, Conn.-Q Gerber Scientific Instrument Co., 162 State St., Hartford, Conn.-H G & M Equipment Co., 7315 Varna Ave., North Hollywood, Calif.-O Gow-Mac Instrument Co., 100 Kings Rd., Madi-son, N.J.-G Graphic Recorders, 62 Walter St., Bridgeport 5. Conn.-I

nollywood, Calif.-O
Gow-Mac Instrument Co., 100 Kings Rd., Madison, N.J.-G
Graphic Recorders, 62 Walter St., Bridgeport 5, Con.-I
Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-AA
Gulton Mfg. Corp., 212 Durham Ave., Metuchen, N.J.-B,Q.R.X
Hall Inc., F. Sumner, Amityville, N.Y.-C
Haltamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.C.D.F.I.L.R.S.AB
Hartman Eng's, Co., 182 Oakland St., Springfield 8, Mass.-Y
Hataway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-R.W
Hays Corp., East 8 St., Michigan City, Ind.-G
Hazeltine Electronics Corp., 58-25 Little Neck Pkwy., Little Neck 62, N.Y.-O
Heath Co., 305 Territorial, Benton Harbor, Mich.-A.I
H-wlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-A.F.H
Hever Products Co., 471 Cortlandt St., Belleville 9, N.J.-G
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio--E.L.S.T
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.--H.R.W
Hull & Co., R. O., 1300 Parsons Ct., Rocky River, Ohio-CT
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena S, Calif.-L.X
Industrial Control Co., Straight Path & Ar-Iington Ave., Wyandanch, N.Y.-M
Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-A.B.C.F.H.N.R.T.AB
Instrument Develomment Labs., 17 Pollock Ave., Jersey City 5, N.J.-B.R
Industrial Electronics. Inc., 8060 Wheeler St., Detroit 10, Mich.-P.W
Industrial Electronics. Inc., 8060 Wheeler St., Detroit 10, Mich.-P.K
Industrial Electronics. Inc., 8060 Wheeler St., Detroit 10, Mich.-P.W
Industrial Electronics. Inc., 797 Thomas Lane, Columbus 14, Ohio--R
industries, 6110 Wilshire Blvd., Los Angeles 36, Calif.-E
Jackson Electrical Instrument Co., 18 S. Patterson Blvd, Dayton 2, Ohio-B

36, Calif.-E Jackson Electrical Instrument Co., 18 S. Pat-terson Blvd, Dayton 2, Ohio-B Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.-O Jersey City Technical Lab., 880 Bergen Ave., Jersey City 6, N.J.-C Johnson-Williams, Ltd., 2625 Park Blvd., Palo Alto, Calif.-G

Alto, Calif.--G Kahn & Co., 541 Windsor St., Hartford 1, Conn.-AB

Conn.—AB Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.—A,B,C,E,F,H,K,L,M,O,R,S,T,Y Kaye Devel. Co., Connecticut Ave., S. Nor-walk, Conn.—E

Kaye Devel. Co.. Connecticut Andrew walk, Conn.-E Kenrfott Co.. Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.-K.M.N.O Kinetix Inst. Co., 902 Broadway, New York 10, N.Y.-N Wiese Electronics Co.. 40 Marbledale Rd., Tucka-

Kings Electronics Co., 40 Marbledale Rd., Tucka-hoe, N.Y.—A,K,M,X Kirby Products Corp., 20 E. Herman St., Phila-delphia 44, Pa.—B Laboratory Equip. Corp., Hilltop Rd., St. Joseph, Mich.—G

Laboratory Equip. Corp., Hilltop Rd., St. Joseph, Mich.—G Lab. for Electronics, Inc., 75 Pitts St., Boston, Mass.—J

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Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-AA

Calif.—AA Lee Electronic Labs., Inc., 233 Dudley St., Boston 19, Mass.—B.C Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44. Pa.—G.V Librascope, Inc., 808 Western Ave., Glendale 1, Calif.—E Linear Equip. Labs., 380 Oak St., Copiague, N.Y.—L

Linear Equip. Labs., 380 Oak St., Copiague, N.Y.-L
Liston-Becker Instrument Co., 649 Hope St., Springdale, Conn.-G.U
Loral Electronics Corp., 794 E. 140 St., New York 54. N.Y.-S.T
L & O Research & Devel. Corp., 134 N. Wayne Ave., Wayne, Pa.-N
Lynmar Engineers. Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.-F.L.O
Magner-Pulse Corp., 140 Nassau St., New York 38. N.Y.-J
Magneric Amplifiers, Inc., 632 Tinton Ave., New York 55. N.Y.-Y
Manifacturers Eng'g. & Equip. Corp., York & Mill Rds., Hatboro, Pa.-G
Marcon Instruments Ltd., 23 Beaver St., New York 4, N.Y.-K.M.T
Marine View Electronics, 744 E. 138 St., New York 54. N.Y.-AQ
Massa Laboratories, 5 Fottler Rd., Hingham, Mass.-A.X
McShan Development Corp., 71 Murray St., New York 7, N.Y.-C
Measurements Ltd., P. O. Box 522, Menlo Park, Calif.-P
Metronix, Inc., Trumbull Airport, Groton, Conn.-I
Mico Instrument Co., 80 Trowbridge St., Cam-bridge 38, Mass.-H

Menlo Research Lab., P. O. Box 522, Menlo Park, Calif.—P
Metnonix, Inc., Trumbull Airport, Groton, Conn.—I
Mico Instrument Co., 80 Trowbridge St., Cambridge 38, Mass.—H
Microwave Associates, 22 Cummington St., Boston 15, Mass.—K
Midwest Eng'g. Devel. Co., 3648 State Line, Kansas City 3, Kansas—K.M
Miller Instruments, Wm., 325 N. Halstead Ave., Pasadena 8, Calif.—A.R.W.X
Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa.—G
National Capacito. Co., 585 Washington St., Quincy 69, Mass.—B
National Research Corp., Equip. Div., 70 Me-morial Dr., Cambridge 42, Mass.—G
National Research Corp., Equip. Div., 70 Me-morial Dr., Cambridge 42, Mass.—G
National Spectrographic Labs., 6300 Euclid Ave., Cleveland 3, Ohio—O
Nestor Engineering Co., 50 Paterson Ave., E. Rutherford, N.J.—N
Newton Co., 55 Elm St., Manchester, Conn.—U
North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.—G
Northeastern Eng'g., Inc., S. Bedford St., Manchester, N.H.—O
Nuclear Specialty Co., Box 455, Center Mo-riches, N.Y.—D
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.—F
Oregon Corvek Co., 1005 N.W. 16th Ave., Portland, Ore.—G
Owen Labs., 412 Woodward Blvd., Pasadena 10, Calif.—Y
Pacific Mercury TV Mfg., 5955 Van Nuys Blvd., Van Nuys, Calif.—M,N.R.W
Panoramic Radio Prods., 10 S. 2nd Ave., Mt. Vernon, N.Y.—F,H.I.K.L.O.Q.R.T
Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.—B,C.F
Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.—A.L.M
Phoenix Precision Instrument Co., 3803 N. 5th St., Phila 40, Pa.—E.O.U.V.Z
Photo Crystals, Inc., 15 S. First St., Geneva, III.—N
Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—C,H

Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.--C.H
Plvmouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.--A,M
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.--O
Polvphase Instrument Co., 701 Haverford Rd., Bryn Mawr, Pa.--Y
Polytechnic Research & Development, 202 Tillary St., Brooklyn 1, N.Y.--K,M,O
Precise Measurements Co., 942 Kings Hwy., Brooklyn 23, N.Y.--AB
Precision Apparatus Co., 70-31 84 St., Glen-dale 27, L.I., N.Y.--C
Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.--A
Process & Instruments, 15 Stone Ave., Brooklyn 33, N.Y.--G

33, N.Y.—G

Pyramid Electric Co., 1445 Hudson Blvd., N. Bergen, N.J.—B Quare Associates, P.O. Box 95, Canton, Mass.

Radar-Electronics, Inc., 229 W. 28 St., New York 30, N.Y.-W

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Radiaphone Co., 600 E. Evergreen Ave., Monrovia, Calif.—C.N
Radiation, Inc., P.O. Box Q, Melbourne, Fla. —D.O
Radio City Products Co., Centre & Glendale Sts., Easton, Pa.—C.F
Radio Sonic Corp., Plainfield, N.J.—A.F.H,O.Q
Railway Communications, Inc., Raytown, Mo. —H.I.O.T
Rawson Electrical Instrument Co., 117 Potter St., Cambridge 42, Mass.—J
Rese Engineering, Inc., 301 Walnut St., Philadelphia 6, Pa.—J
Rese Engineering, Inc., 301 Walnut St., Philadelphia 6, Pa.—J
Rese Engineering, Inc., 301 Walnut St., Philadelphia 5, Pa.—G.J
Scala Radio Co., 2814 19 St., San Francisco 10, Calif.—F.O.S
Schauer Mfg. Corp., 4500 Alpine Ave., Cincinnati 36, Ohio—R
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—L
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.—C.J
Serva Corp. of America 2020 Jericho Turnpike, New Hyde Pk., Ll., N.Y.—N.O
Shalter St., Calif.—H.T
Spencer-Kennedy Labs., 186 Massachusetts Ave., Cambridge 39, Mass.—L
Sperry Gyroscope Co., Great Neck, N.Y.—K,M.O,R.AA
Sperry Products Inc., Shelter Rock Rd., Danbury, Conn.—Q
Sprague Electroics Research Corp., 2 East End Ave., New York 33, N.Y.—L.R.T
Stendard Electronics Research Corp., 2 East End Ave., New York 33, N.Y.—L.R.T
Sternic Instrument Co., 3732 Westheimer Rd. Houston 6, Texas—R
Technical Instrument Co., 3732 Westheimer Rd. Houston 6, Texas—R
Technical Instrument Co., 3732 Westheimer Rd. Houston 6, Texas—R
Technical Products Corp., 10 N. Dunlap, Medical Center. Memphis 1, Tenn.—E.P.Q.V.W
Technical Instrument Co., 6666 Lexington Ave., Los Angeles 38, Calif.—F.L.R
Telechnical Lin, N.Y.—E.S.T
Telectro Industries, Corp., 35-16 37 St., Long Radiaphone Co., 600 E. Evergreen Ave., Mon-rovia, Calif.-C.N Radiation, Inc., P.O. Box Q, Melbourne, Fla.

Los Angeles 38, Calif.--F',L.R Tele-Ream Industries, 6th & Soscol Ave., Napa, Calif.--Q Telechrome. Inc.. 88 Merrick Rd., Amityville, L.I., N.Y.--E.S.T Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.--C Telerad Mfg. Corn., 1440 Broadway, New York 18, N.Y.--F,H.K.M.O Televiso Corp., 1415 Golf Rd., Des Plaines, Ill. --G,M.Q.R Thompson Clock Co., H.C., 38 Federal St., Bristol. Conn.--B.C.F.T Ultrasonic Corp., 640 Memorial Dr., Cambridge, Mass.--F.D.M.N.O.Q.R Universal Microwave, 380 Hillside Ave., Hill-side, N.J.--K.O Vectron Inc., 1611 Trapelo Rd., Waltham 54. Mass.--K,M.O Vibro-Ceramics Corp., Metuchen, N.J.--Q.R Vitor Eng's. Corp., 103 A Springfield Rd., Univer, M.J.--G,U Viro Corp. of America, 120 Wall St, New York 5, N.Y.--G Waveline, Inc., Caldwell, N.J.--K.M Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio.--A.E.Q Westberg Mfg. Co., 144 S. Coombs St., Napa. Calif.--AA Western Sound & Electric Labs., Inc., 805 S. 5th St. Milwaukee 4, Wisc.--B Weston Labs., Inc., Box 407, Littleton, Mass.--C Weston Labs., Inc., Box 407, Littleton, Mass.--C Weston Labs., Inc., Box 407, Littleton, Mass.---O Weston Labs., Inc., Box 407, Littleton, Mass.---O Weston Labs., Inc., Box 407, Littleton, Mass.---O Weston Calif.--F

Westnort Electric, 149 Lomita St., El Segundo,

Calif.—F Westronics Inc., 3605 McCart., Ft. Worth, Texas—C,N,V,AB White Industries. 421 W. 54 St., New York 19. N.Y.—A.F.H.O.Q Wickes Eng'g. & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.—E Wright Eng'g. Co., 180 E. California St., Pasa-dena 1, Calif.—F,H,L,N.O.Q,R.S.T,X,Y

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thoroughness. Listings have been omitted

in all cases where, after three requests, a company has failed to return our direc-

tory questionnaire or otherwise verify its

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Calif .---F

activity.

#### 6-ANTENNAS COMMERCIAL

Antennas, aircraftA
Antennas, amateur
Antennas, broadcasting, AMB
Antennas, broadcasting, FM & TV C
Antennas, direction findingW
Antennas, fixed stationD
Antennas, loop
Antennas, loop-core
Antennas, marine
Antennas, microwave
Antennas, mobile
Antennas, radar
Antennas, radiation test
Antennas, railroad
Antennas, receiving, FM & TVL
Antennas, rotary beam
Antennas, slotted line
Antennas, UHF
Antennas, VHFp
Radiators, FM & TVQ
ReflectorsT
Rotators
Towers & Supports, commercial R

Abel Mfr. Co., 147-72 Ave., Flushing, L.I. 67, N.Y.-A.B.C.F.G.H.I.K.L.O.P.Q.S.T.U
Adler Communications Labs, 1 Le Fevre Lane, New Rochelle 1, N.Y.-B.O
Aerocoil, Inc., 24 Cliff St., Jersey City, N.J.-F.V

F.V Aerolite Electronics Corp., 507 26 St., Union City, N.J.-V Aeronautical Electronics. Inc., Raleigh-Dur-ham Airport, Raleigh, N.C.-A,F Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A,F,O,P Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-A,H,J.M.O,P,T Aircraft Armaments, P.O. Box 126, Cockeys-ville, Md.-H

Nile, Md.--H Aircraft Radio Co., Boonton, N.J.--A.F.I.P Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.--H.J

N.J.-H.J Alford Mfg. Co.. 299 Atlantic Ave., Boston 10, Mass.-A.C.H.O.Q Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio-L.M.O.P.S Allied Eng's, Div., Connecticut & Richards Aves., S. Norwalk, Conn.-G Allison Assoc., 3110 N. Highland Rd., N.E., Albuquerque, New Mcx.-I Allison Steel Mfg. Co., P.O. Box 6067, Phoenix, Arizona-B

Albuquerque, New Mex.-I
Albuquerque, New Mex.-I
Allison Steel Mfg. Co., P.O. Box 6067, Phoenix, Arizona--B
Alpar Mfg. Co., 2910 Spring St., Redwood City, Calif.-B.R
Alpha Erection Corp., Speer, III.--R
America Inc., 116 Topsfield Rd., Wenham, Mass.--H
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.--C,H,O,P
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.--C,H,O,P
American Tower Co., Shelhy, Ohio--R
Amy, Aceves & King, 11 W. 42 St., New York 36, N.Y.--L
Anchor Electronics Inc., 717 Sip St., Union City, N.J.--V
Andrew Corp., 363 E, 75 St., Chicago 19, III.--B.C.H.I.J.K.N.O.P.T
Analey Electronics. Inc., 85 Tremont St., Mer-iden, Conn.-H.J.N
Antenna Products, 3628 N. Lineoln Ave., Chi-cago 13, III.--L.O.P.
Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio--A.D.G.I.K.O.P.Q.U
Applied Electro Mechanics Inc., National Air-port Hangar 9, Washington 1, D.C.-A,F
Audio Products Corp., 2838 N. Naomi St., Burbank, Calif.-A,D
Bache & Co., Semon 636 Greenwich St., New York 34. N.Y.-T
Barlow Electronics Mex, 2950 N. Ontario St., Burbank, Calif.--R
Barlow Electrical Mfg. Co., 155 E. 128 St., New York 35. N.Y.-G.H.O.P
Barlow Electrical Mfg. Co., 155 E. 128 St., New York 35. N.Y.-G.H.O.P
Barlow Electrical Mfg. Co., 155 E. 128 St., New York 35. N.Y.-G.H.O.P
Bartell's Marine Radio, 800 W. Coast Hgwy., Newport Beach. Calif.-G.I.U
Bart Laboratories, 227 Main St., Belleville 9, N.J.-H.J.T
Basett. Inc., Rex, 1314 N. E. 17 Court, Fort Lauderdale, Fla.-G.I.L.U
Beacon Corp. 2846 Milwaukee Ave. Chicago

Balti Lamaton Res. 221 Math. St., Benevine S., N.J.-H.J.T.
Bassett. Inc., Rex. 1314 N. E. 17 Court, Fort Lauderdale, Fla.-G.I.L.U
Beacon Corp., 2846 Milwaukee Ave., Chicago 18, III.-L.
Bell Television, 254 W. 54 St., New York 19, N.Y.-L.
Bendix Aviation Corp., Bendix Radio Div., Baltimore 4, Md.-A.F.J.K.P
Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.-A.G., J.L.N.P
Blair Co., J.P., 89 Union St., Mineola, N.Y.-J.N
Blaw-Knox Co., P.O. Box 1198, Pittsburgh 30, Pa.-R.

Pa.-R. Bludworth Marine. 92 Gold St., New York 38,

N.Y.-

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Bogart Mfg. Corp., 315 Seigel St., Brooklyn 6, N.Y.-H.J.N.S Bone Eng'g. Corp., 701 W. Broadway, Glendale 4. Calif.-H.J

4. Call. - H.a Brach Mig. Corp. 200 Central Ave., Newark 3, N.J. - A.F.G.H.I.J.K.L.M.N.O.P.S.U.V Brooks & Perkins, 1950 W. Fort St., Detroit

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Caddell-Hurns Mfg Co., 40 E. 2nd St., Mineoux, N.Y.-F.V Calbest Eng'g & Electronics Co., 828 N. High-land Ave., Hollywood 38, Calif.-V Canoga Corp. 5955 Sepulveda Blvd., Van Nuys, Calif.-H.J.L.N.O.P.Q.S.T Century Electronics, div. Century Metalcraft Corp., 14844 Oxnard St., Van Nuys, Calif.-

H.J Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.—H.J.O.T Clear Beam Antenna Corp., 21341 Roscoe Blvd., Canoga Park, Calif.—O.P Collins Radio Co., 855 35 St., N.E., Cedar Rapids, Iowa—A Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.—H Columbia Products Co., Box 5207 Columbia, S. Car.—A,G,U Communication Devices Co., 2331 12 Ave., New York 27. N.Y.—D,G,P Communications Co., P.O. Box 6250, Coral Gables, Fla.—D,P Conn. Marine Instrument Co.—Essex, Conn. —G

-G Corp., 70 Brittannia St., Meriden, Conn.-C.D.I.O Corbin Corp., 5419 56 Pl., Riverdale, Md.-A, D.G.H.I.J.M.O.P.S.T Creative Eng'g. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-A,C,G,H,I,J,K,L,O,P, Q,T

N. Hollywood, Call. - A, C, G, H. I. J. K. L. O, I. Q. T
Q. T
Custom Components, 303 Bergen Ave., Kearny, N. J. - V
Dare TV Div., Thompson Products, Inc., Michigan City, Ind. --H
Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif. --H. J. O, T
Danbury-Knudson, Inc., P.O. Box 170, Danbury. Conn.-I
Dayton Aviation Radio & Equip. Co., R. R. #3, Troy. Ohio.-A, P
Dayton Products Corp., 4165 Main St., Flushing 52, NY.-L.
Delson Mfg. Corp., 126 11 Ave., New York 11, N.Y.-U
DeMornay-Bonardi, Inc., 780 S. Arroyo Pkway, Pasadena 2, Calif. --H

N.Y.--U
N.Y.--U
DeMornay-Bonardi, Inc., 780 S. Arroyo Pkway, Pasadena 2, Calif.--H
Diamond Mierowave Corp., 7 North Ave., Wakefield, Mass.--H,T
Dorne & Margolin, 30 Sylvester St., Westbury, L.I., N.Y.--A,H.J.O,Q
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.--H
Dresser-Ideco Co., 875 Michigan Ave., Columbus 8, Ohio--R
DuMont Laboratories Inc., Allen B., Communication Products Div. 1500 Main Ave., Clif-ton, N.J.--C.D.H.I.O.P.R.T
Eklico of N.Y., Inc., 72 E. Second St., Mineola, L.I., N.Y.--G.I.M,U
Electroical Tower Service. Inc., 206 S. Washing-ton St. or P.O. Box 1205, Peoria 2, Ill.--R
Electro Craft Inc., 5 Milton Ave., Dorchester 24. Mass.--A,E
Electromec, Inc. 3200 N. San Fernando Blvd., Burbank, Calif.--A.H
Electronicraft, Inc. 27 Milburn St., Bronxville 8, N.Y.-J.S.T
Electron-Radar Products. 1041 N. Pulaski Rd., Chicago 51, Ill.--H.J.X
El-Rad Mfg. Co., 2800 W. Cullom Ave., Chi-

Chicago 51, 11.—H.J.X
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—J.R
El-Rad Mfg. Co., 2800 W. Cullom Ave., Chi-cago 18, 111.—F.V
Empire State Laboratories, 2608 Merrick Rd., Bellmore, L.I., N.Y.—A.G
Emsco Derrick Equip., P.O. Box 1289, Hou-ston 1. Texas—R
Erco Radio Labs., 637 Stewart Ave., Garden City, N.Y.—D.O.P
Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.—V
Farnsworth Electronics Co., Div. I. T. & T. Corp., P.O. Box 810, Fort Wayne, Ind.—J
Federal Telecommunication Labs. 500 Wash-ington Ave., Nutley 10, N.J.—C.H.N.O.P
Federal Teleohone & Radio Co., Div. of I. T. & T., 100 Kingsland Rd., Clifton, N.J.—K
Ferno Electric Products, Kirkland, III.—L,O,P
Ferroscube Corp. of America, E. Bridge St. Saugerties, N.Y.—V
FKB Opticon Co., 1738 E. Calvert St., South Bend 14, Ind.—C.H.J,O.Q.T
Flader Inc., Fredric, 583 Division St., N. Tona-wanda, N.Y.—A
Ford Instrument Co. Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.—
S
Fretco, Inc., 406 N. Craig St., Pittsburgh 13,

S Fretco, Inc., 406 N. Craig St., Pittsburgh 13, Pa.-T.U
 F-R Machine Works. F-X-R Electronics & X-Ray Div. 26-12 Borough Pl. Woodside 77, N.Y.-H,J.N

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G & M Equip. Co., 7815 Varna Ave., N. Holly-wood, Calif.-D,F,I,J,O,P,R Gabriel Electronics Div., Gabriel Co., Endicott St., Norwood, Mass.-A,C,D,G,H,I,J,K,O,P,Q, S,T

Gates Radio Co., 123 Hampshire St., Quincy, Ill.-

Gavitt Wire & Cable Co., Div. American Hard Rubber Co., Brookfield, Mass.—F,V Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill. -P

Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill. —P
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—V
General Electric. Apparatus Div., 1 River Rd., Scheneetady 5, N.Y.—J
General Electric Co., Broadcast Equip., Com-mercial Equip. Dept. Electronics Park, Syra-cuse, N.Y.—I,J.O.P.V
General Electric Co., Electronics Div., Syra-cuse, N.Y.—D,H,I,P,T
General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.—J
General Instrument Corp., 829 Newark Ave., Elizabeth 3, N.J.—F,V
General Precision Lab., 63 Bedford Rd., Pleas-antville. N.Y.—C
General R-F Fittings Co., 702 Beacon St., Bos-ton 15, Mass.—H
Gonset Co., 801 S. Main St., Burbank, Calif.— A,D,M,P,U
Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—D.R
G. W. Associates, P.O. Box 2263 El Segundo, Calif.—H
Hallamore Mfg. Co. 2001 E. Artesia, Long

Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—D.R
G. W. Associates, P.O. Box 2263 El Segundo, Calif.—H
Hallamore Mfg. Co. 2001 E. Artesia, Long Beach 5, Calif.—B,C,D,L,O,P
Haydon Products Corp., 1801 8 Ave., Brooklyn 15, N.Y.—O,P,R
Hazeltine Electronics Corp., 58-25 Little Neck Pkwv., Little Neck 62, N.Y.—A,J
Heyer Products Co., 471 Cortlandt St., Belleville 9, N.J.—A,P
Hilburn Electronic Prods., 55 Nassau Ave., Brooklyn 22, N.Y.—V
Hi-Lo TV Antenna Corp., 3540 N. Ravenswood Ave., Chicago 13, III.—L,O.P
Hudson American Corp., 25 West 48 St., New York, N.Y.—G
Hy-Lite Antennae, Inc., 242 E. 137 St., New York 51, N.Y.—CI,L,M,O,P,U
Le. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, III.—O.P.R.T
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.—H
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.—H
Insuline Corp., of America, 186 Granite St., Manchester, N.H.—IL.O.P.Q.R.T.U
Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.—A,I
T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.—HJ,T
JaMac Products Co., 4605 N.E. 118 Ave., Port-land 20, Ore.—A,D,I.K.U
Jefferson. Inc., Ray, 40 E. Merrick Rd., Free-port. N.Y.—G
JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y. —L,O,P.S
Johnson Co., E. F., Waseca, Minn.—A,I,M,S,U
Johnson Co., E. F., Waseca, Minn.—A,I,M,S,U

-L.O.P.S Johnson Co., E. F., Waseca. Minn.—A.I.M.S.U Johnson Co., E. F., Waseca. Minn.—A.I.M.S.U Johnson Electronics, 521 Elwell St., Orlando, Fla.—F.V Jones & Laughlin Steel Corp., 3 Gateway Center. Pittsburgh 30, Pa.—I. Jontz Mfg. Co., 1101 E. McKinley Ave., Mish-awaka. Ind.—R Kaiser Metal Products. Inc., Bristol. Pa.—H.J.T Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.—H.J Keller Products, 41 Union St., Manchester, N.H.

Kennedy & Co., D. S., 432 S. Main St., Cohasset, Mass.-H.J,T

Mass.—H.J.I
Kings Electronics Co., 40 Marbledale Rd., Tucka-hoe, N.Y.—A.F.H.J,N.O.P
Kings Microwave Co., 719 Main St., New Ro-chelle, N.Y.—H
Kline Iron & Metal Co., 1225 Huger St., Columbia, S.C.—R
Warbase Mag. Co., 1401 St. 150 St.

Kuchne Mfg. Co., 1401 S. 19 St., Mattoon, Ill.-R Lambda-Pacific Eng'g Co., P.O. Box 105, Van Nuys, Calif.-H Land-Air. Inc., 201 N. Wells St., Chicago 6, Ill.

Lane Electronics Co., 7254 Atoll Ave., N. Holly-wood, Calif.—A,F

Lavoie Labs., Morganville, N.J.—C.J.O.P.R Leader Electronics. Inc., 2925 E. 55th St., Cleve-land 27, Ohio—S Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.—A.F.I.P

Calif. --A, F.I, F Lehigh Structural Steel Co., 17 Battery Pl., New York 4, N.Y.--B,R Link Radio Corp., 125 W. 17th St., New York 11, N.Y.-D, J.K.L.O, P.Q Lockheed Aircraft Corp., Burbank, Calif .-- A Luria-Cournand, Inc., Havre De Grace, Md.-T

Lyman Electronic Corp., 12 Cass St., Spring-field, Mass.-L,O.P Lynmar Engineers. Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.-L,P Lysco Mfg., Co., 1401 Clinton St., Hoboken, N.J.-E.G

Mackay Radio & Telegraph Co., 345 Hudson St., New York, N.Y.-G.J Macon Electronics, Merchant St. Warrensburg, Ill.-O.P

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-A

Marchand Electronic Labs., 255 Mill St., By-ram, Conn.-H,O,P Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-L Mark Products Co., 6412 W. Lincoln Ave., Morton Grove, Ill.-A,D,H,I,J,K,M,O,P,Q,U Mathis Tower & Equip. Co., 2200 E. Washing-ton St., East Peoria, Ill.-R Maxson Corp., W. L., 460 W. 34 St., New York 1, N.Y.-A.H.J.T McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.-T Melpar, 452 Swann Ave., Alexandria, Va.-A,H,I,J Metal Fabricators Corp., 73 Pond St., Wal-

Metal Fabricators Corp., 73 Pond St., Wal-tham 54, Mass.—J,S Metal Products Co., Craighead St., Nashville 4,

Metal Products Co., Craignead St., Nashville 4, Tenn.-B.C
Microwave Devel. Labs. 22D Grove St., Waltham 54, Mass.-H
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.-F.V
Molded Insulation Co., 335 E. Price St., Philadelphi 44 Proc. J.

delphia 44, Pa.—J Mosley Electronics, Inc., 8622 St. Charles Rock Rd., St. Louis 14, Mo.—M,U Munston Mfg. & Service, Beech St., Islip, N.Y.

-G

—Gorp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.—C,O,P
 Narda Corp., 66 Main St., Mineola, L.I., N.Y.
 —J,H

National Aeronautical Corp., 180 S. Main St.,

National Aeronautical Corp., 180 S. Main St., Ambler, Pa.—A.P
National Electronic Mfg. Corp., 186 Granite St., Manchester, N.H.—F,I,L,O,P,Q,T,U
National Instrument Co., 23 E. 26 St., New York 10. N.Y.—A.H
Nichols Products Co., 325 W. Main St., Moores-town, N.J.—H.N,O,P
Norden-Ketay Corp., Wiley St., Milford, Conn. —J

Omega Labs., Box 466 Billerica, Mass.-U Oregon Corvek Co.. 1005 N.W. 16 Ave., Port-land, Ore.-D.L.O Palmer, Inc., M. V., 4002 Fruit Valley Rd.-D.O.P.

oregon Corvek Co., 1005 N.W. 16 Ave, Portland, Ore.-D.LO
Palmer, Inc., M. V., 4002 Fruit Valley Rd.-D.O.P
Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.-G
Phaostron Co., 151 Pasadena Ave., S. Pasadena, Calif.-A
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-F
Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.-A,G,I,L,O,P
Pioneer Mfg. Co., Huntley, III.-R
Pipestone Sales Co., P.O. Box 311, Pipestone, Minn.-R
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.-J
Planet Television Corp., 903 Halsey St., Brooklyn 13, N.Y.-G
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.-H
Polytechnic Research & Devel. Co., 202 Tillary St., Brooklyn 1, N.Y.-N
Pratt, Albert, 114 W Lake View Ave., Milwaukee 17, Wis.-I
Premax Products Div., Chisholm-Ryder Co., Highland & College Aves., Niazara Falls, N.Y.-G,I,P,U
Prodelin Inc., 307 Bergen Ave., Kearny, N.J.-C,D,G,H,I,O,P,Q,R,T
Pruy-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-A,D,I,O,P
Q.L.C. Corp., 10 Aubrey St., Summit, N.J.-F,Y
Q-Line Mfg. Corp., 1562 61 St., Brooklyn 19, N.Y.-A,G,H,I,J,K,L,M,NO,P,Q,R,TU
Radio Corp. of America. Eng'g Products Div., Camden 2, N.J.-B,C,H,O,P,S
Radio Corp., 1130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Corp., 1130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Corp., 1130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Merchandise Sales, 2016 Bronxdale Ave.. New York 52, N.Y.-H,O,PS
Radion Corp., 130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Merchandise Sales, 2016 Bronxdale Ave.. New York 62, N.Y.-H,C,O,PS
Radion Corp., 130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Corp., 130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Corp., 130 W. Wisconsin Ave., Chicago 14, III.-L,O,P
Radio Corp., 1130 W. Wisconsin Ave., Chicago 14, III.-L

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St., Oneida, N.Y.--L
Rich Electronics, 212 N.W. 8 Ave., Miami 36, Fla.-D,G.P
Roesch Co., D. J., 2200 S. Figueroa St., Los Angeles 7. Calif.--A.H
Roflan Co., Topsfield. Mass.--A
Rohn Mfg. Co., 116 Limestone. Peorie. Ill.--R
Rostan Corp., 5660 59 St., Maspeth 78, L.I., N.Y.--R
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio--A.G
RS Electronics Corp. P.O. Box 368 Sta. A. Palo Alto, Calif.--O. Box 368 Sta. A. Palo Alto, Calif.--O. Box 368 Sta. A.
Pate Electronics Mfg. Co.. 9820 Irwin Ave.. Inglewood. Calif.-O
Sanders Associates, 187 Canal St., Nashua, N.H. --A.H.J.T
S/C Labs., Inc.. 37 George St., Newark 5, N.J.-L.M,O.P
Scala Radio. 2814 19 St., San Francisco 10, Calif.-D,K.L.O.P,Q
Schutter Mfg. Co., Carl W., 80 E. Montauk Highway. Lindenhurst. N.Y.-H
Scientific Associates, Inc.. 3100 Ocean Parkway, Brooklyn 35, N.Y.-H



Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N.Y.-D.F.W Sightmaster of Calif., Gillespie Airport, San-tee, Calif.-H.J.O Silver Bay Equip. Co., 5004 20th N.W., Seattle 7, Wash.-G Skuling Towner Co. 2425 W 50th St. Chicago

Silver Bay Equip. Co., 5004 20th N.W., Seattle 7, Wash.-G
Skyline Tower Co., 2436 W. 59th St., Chicago 29, Ill.-A,B,C,H,Q,R
Slate & Associates, Claude C., 11370 W. Olympic Blvd., Los Angeles 64, Calif.-A,L,O,P
Smith-Meeker Eng'g Co., 157 Chambers St., New York 7, N.Y.-U
Snyder Mfg. Co., 22 & Ontario St., Philadelphia 40, Pa.-L,O,P,R
South. Industries of Md., Baltimore 8, Md.-R
South River Metal Prod. Co., 377 Turnpike, South River, N.J.-R
Spencer-Kennedy Labs., 136 Mass. Ave., Cambridge 39, Mass.-L
Spenry Gyroscope Co., Great Neck, N.Y.-H,J
Spenref, Inc., 4122 W. State St., Milwaukee 8, Wisc.-A
Spinring Producta Co. P.O. Box 411 Hicks

Spinery Gynscope Oct., Great Neck, N.1.—11.3
Spineraft, Inc., 4122 W. State St., Milwaukee
8, Wise.—A
Spirling Products Co., P.O. Box 411. Hicksville, L.I., N.Y.—O.P
Stanless, Inc., North Wales, Pa.—R.T
Standard Electronics Corp., 285 Emmit St., Newark, N.J.—G,P
Stavid Eng'g, Highway 22, Plainfield, N.J.—A,G,H,J,O,P,S.T
Sterling Precision Instrument Corp., 34-17
Lawrence St., Flushing, New York—H.J
Superex Electronics Corp., 4 Radford Pl., Yonkers, N.Y.—V
Technical Appliance Corp., 1 Taco St., Sherburne, N.Y.—A,D,G,J,L,O,P
Teiner Co., Roland 134 Tremont St., Everett, Mass.—A.D.J
Tele-Beam Industries, 6th & Soscol Ave., Napa.

Mass.-A.D.J
Tele-Beam Industries, 6th & Soscol Ave., Napa. Calif.-A,D,I.L,O,P
Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-A,R
Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-A,R
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-A,H,I,J,N,O,P,T
Television Associates, E. Michigan St., Michigan City, Ind.-T
Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-M.O.P
Televue Towers, Inc., 701 49 St. So., St. Petersburg, Fla.-R
Telkor, Inc., Telegraph Rd., Elyria, Ohio-C

C,L

C.L Telrex, Inc., Feregraph Rd., Liyna, Onto-C.L Telrex, Inc., Neptune Hwy., Asbury Park, N.J.-L.M.U Tempo TV Sales Corp., 21341 Roscoe Blvd., Canoga Park, Calif.-O.P Tennalab, Quincy, Ill.-L.M.U Thomas Mold & Die Co., Box 126, Wooster, Ohio-R T. J. Mfg. Corp., 1020 S. Josephine St., Martins-ville, Ind.-F Torngren Co., C. W., 236 Pearl St., Somer-ville, Mass.-A.B.C.D.G.H.I.J.K.O.P.T Tower Construction Co., 1923 Geneva St., Sioux City 3, Iowa-B.C.H.R.T Tower Structures, Inc., Gregg St., Lodi, N.J. -R Tower --R

Towers Corp., 3332 E. 55th St., Cleveland 27 Ohio--R

Ohio-R Trilsch Co., John D., 1810 McKinney Ave., Houston, Tex.-B,H,Q,R,T Trukaradio, 228 E. Park Ave., Wheaton, Ill.-

Trukaradio, 228 E. Park Ave., Wheaton, Ill.— I
Truscon Steel Div., Republic Steel Corp., Albert St., Youngstown 1, Ohio-B.R
TV Hardware Mfg. Co., 919 Taylor Ave., Rockford, Ill.—V
TV Labs., Inc., 5045 W. Lake St., Chicago 44, Ill.—A,L.O.P
T-V Products Co., 145-68 228 St., Springfield Gardens 13, N.Y.—L.O.P
U.H.F. Resonator Co., 221—7 St., Racine, Wisc. —B,C,O.P,U
Ultra-hi TV Mfg. Corp., 69 Hammond St., Worcester, Mass.—L,O,P
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—B,F,L.U,V
Universal Microwave, 380 Hillside Ave., Hill-side, N.J.—H.N
Universal Products, 4100 Taylor Ave., Racine, Wis.—R,U
Univox Corp., 102 Warren St., New York 7, N.Y.—A
Upright, Inc., 1013 Pardee St., Berkeley 10,

Univox Corp., 102 Warren St., New York 7, N.Y.-A
Upright, Inc., 1013 Pardee St., Berkeley 10, Calif.-R
U. S. Tower Co., 219 Union Trust Bldg., Pe-tersburg, Va.-H,R
Varo Mfg. Co., 2201 Walnut St., Garland, Texas.-P
Vesto Co., 1916 Clay St., North Kansas City. Mo.-R
Video Accessory Mfg. Co., P.O. Box 223, Tulsa 1, Okla.-R
Video Electronic Lab., 304 Rodgers Rd., Des Moines, Iowa-D,L.P,T,U

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Video Industries Co., 42-46 Palmer Pl., Port Chester, N.Y.-L,U
Virginia Electronics Co., River Rd. at B & O RR., Washington 16, D.C.-G.H.I.J
Ward Products Corp., div. Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.-D,E,I,O,P
Waveline, Inc., Caldwell, N.J.-A.H.J
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.-I
Western Coil & Electrical Co., 215 State St., Racine, Wisc.-Q,U
Western Gear, Electro Products Div., 132 W. Colorado St., Pasadena, Calif.-S
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-A,D,E.F.G.H.I.L.M.N,O,P.S
Weston Labs., Inc., Box 407, Littleton, Mass.-H.N H.N

H.N Weymouth Instrument Co., 1440 Commercial St., E. Weymouth 89, Mass.—H Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.—H.J.O.P White & Son, J. L., 374 Verona Ave., Newark 4, N.J.—D.I

4. N.J.-D,I
Wilcox Electric Co., 1400 Chestnut St., Kansas City 27, Mo.-A,P
Wincharger Corp., E 7 & Division Sts., Siqux City 2, Iowa-B,R
Wind Turbine Co., E. Market St. & Penn. R.R., West Chester, Pa.-B.C.D,M.O.P.Q.R.S.T.U
Wright Eng's. Co., 180 E. Calif, St., Pasa-dena 1, Calif.-H.M.N
Z & W Machine Products, Electronics Div., 5100 St. Clair Ave., Cleveland 3, Ohio-A,G

Antennas, Auto Radio .....t

Antennas, home all-wave ......A Antennas, Indoor FM & TV .....J

Antenna kits .....B Antennas, loop Antennas, loop-core .....K Antennas, master community .....L Antennas, Outdoor FM & TV .....D

Antennas, UHF .....E Antennas, VHF .....F Towers & Supports, home .....G

Abel Mfg. Co., 147-11 72 Ave., Flushing, L. I. 67, N. Y.—A,C,D,E,F,H,I,J,M Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, III.—E Advance Electronics Co., 8510 North End Ave., Oak Park 37, Mich.—D,E,F Aerocoil, Inc., 24 Cliff St., Jersey City, N. J. —C.K

-C.K Aerolite Electronics, 507 26 St., Union City,

Aerolite Electronics, 507 26 St., Union City, N.J.--K
N.J.--K
All Channel Antenna Corp., 47-39 49 St., Woodside 77, N. Y.--D,E,F,J
Alliance Mfg. Cor, Lake Park Blvd., Alliance, Ohio--D,E,F,H
Alpar Mfg. Corp., 2910 Spring St., Redwood City, Calif.-G.M
Alprodco, Inc., Mineral Wells, Texas-A,D,E, F,G
American Phenolic Corp., 1830 S. 54 Ave.,

r.G American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.—B.D.E.F.M Amplitel, Inc., 362 W. 57 St., New York 19, N. Y.—L

Chicago 50, 111.—B.D.E.F.M
Amplitel, Inc., 362 W. 57 St., New York 19, N. Y.-L
Amy. Aceves & King, 11 W. 42 St., New York.
N.Y.-L
Anchor Electronics Inc., 717 Sip St., Union City, N. J.—K
Antenna Products, 3628 N. Lincoln Ave., Chi-cago 13, 111.—B.D.E.F.L
Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio—E.F.I.M
Arnac Co., P.O. Box 1083. Macon, Ga.—G
Artted Co. Inc., 367 Worthington St., Spring-field 3, Mass.—K
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.—E
Bardwell & McAlister, 2950 N. Ontario St., Burbank, Calif.—G
Bassett, Inc., Rex 1314 N.E. 17 Court, Ft. Lauderdale, Fla.—A.D.I.M
Beacon Corp., 2846 Milwaukee Ave., Chicago 18, III.—D
Bestcraft Products Co., 626 Broadway, New York 12, N.Y.—E.F.J
Birnbach Radio Co., 145 Hudson St., New York 13, N.Y.—A.J
Blonder-Tongue Labs. Inc., 526 North Ave., Westfield, N.J.—L.
Brach Mfg., Corp., 200 Central Ave., Newark 3, N.J.—A.B.C.D.E.F.H.I.J.K.L.M
Browning Laboratories, 760 Main St., Win-chester, Mass.—D.J
Buchan Co., R. J., P.O. Box 9, Bricelyn, Minn. —B.M
Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio—G

Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-G Buggie, Inc., H. H., 726 Stanton St., Toledo 4,

Conto-F Caddell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N. Y.--C.K Camburn Inc., 32-40 57th St., Woodside 77, N.Y.--B.D./E.F.I.J

**TELE-TECH & ELECTRONIC INDUSTRIES • June 1955** 

Ohio -F

7-ANTENNAS, HOME

- Camburn Sales & Mfg. Corp., P. O. Box 408, Battle Creek, Mich.-G CBC Electronics Co., 2601 N. Howard St., Philadelphia 33, Pa.-J Channel Master, Ellenville, N.Y.-D.E.F.G Circuitron, Inc., 155 W. Main St., Rockville, Conn.-A.D.E.F.G.H Clear Beam Antenna Corp., 21341 Roscoe Blvd., Canoga Park, Calif.-D.E.F.J Coilcraft, Inc., Cary, III.-C.K Columbia Products Co., Box 5207, Columbia, S. Car.-M

- Columbia Froducts Co., Box 5207, Columbia, S. Car.--M
  Communication Devices Co., 2831 12th Ave., New York 27, N.Y.--F
  Constad Laboratories, 214 W. 29 St., New York 1, N.Y.-G
  Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.--B,E,F,J
  Cornell-Dubilier Electric Corp., 833 Hamilton Blvd., S. Plainfield, N.J.--A.D,E,F,H,I,J,M
  Coronet Electronics, Inc., 505 N. LaSalle St., Chicago 10, III.--E,F,J
  Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.--K
  Crown Controls Co., 40 S. Washington St., New Bremen, Ohio--H
  Custom Components, 303 Bergen Ave., Kearny, N. J.-K

- N. J.--K Danforth Mfg. Co., 831 S. 3 St., Monmouth, Ill. --E.F.G Davis Electronics, 4002 Burbank Blvd., Burbank, Calif.--E.F.M Dayton Products Corp., 4165 Main St., Flush-ing 52, N. Y.--J Deal Products, Inc., Hellertown Rd., Easton, Pa.--G

- Pa.-G
  Delson Mfg. Corp., 126 11 Ave., New York 11, N. Y.-J.M
  Dynamic Electronics, N. Y. Inc., 73-39 Wood-haven Blvd., Glendale, L.I., N.Y.-J
  Eldico of N. Y., Inc., 72 E. 2 St., Mineola, L.I., N.Y.-M
  Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.--K
  Essex Electronics, 550 Springfield Ave., Berke-ley Heights, N. J.-K
  Falmer Mfg. Co., 312 N. Walnut St., Youngs-town 2. Ohio-A
  Forro Electric Products, Kirkland, Ill.-B,D, E.F
  Finney Co., 4612 St. Clair Ave., Cleveland 8.
- Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio-D,E

- Ohio--D,E FKB Opticon Co., 1738 E. Calvert St., South Hend 14, Ind.-E Fretco, Inc., 406 N. Craig St., Pittsburgh 13, Pa.--B,D,E,F,J,M Gavitt Wire & Cable Co., Div. American Hard Rubber Co., Brookfield, Mass.--C.K General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.--B,D,E,F,G,J,K Gonset Co., 801 South Main St., Burbank, Calif. --F,M Graf, R. F., 780 West End Aug. 201
- --F.M Graf. R. F., 780 West End Avc., New York 25, N.Y.-B.D.E.F.I.J Haydon Products Corp., 1801 8th Ave., Brook-lyn 15, N.Y.-E.F.G.J Heppner Mfg. Co., Box 608, Round Lake, Ill.

- Iyn 10, N.Y.-E.F.G.J
  Heppner Mfg. Co., Box 608, Round Lake, Ill. -K
  Hilburn Electronic Prods., 55 Nassau Ave., Brooklyn 22, N.Y.-K
  Hi-Lo TV Antenna Corp., 3540 N. Ravenswood Ave., Chicago 13, Ill.-A.D.E.J
  Hotel Radio Mfrs., 1040 W. Fort St., Detroit 26, Mich.-L
  Hy-Gain TV Products, 1828 N. St., Lincoln, Nebr.-D.E.F.M
  Hy-Lite Antenna Co., 242 E. 137 St., New York 51, NY.-D.E.F.M
  E. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, 111.-B.D.E.F.G.J
  Jamachester, N.H.-B.D.E.F.G.I.J.M
  Jamachester, N.H.-B.D.E.F.G.J.
  Jerrold Electronics Corp., 26th & Dickinson Sts.. Philadelphia 46, Pa.-L
  Jewell Inc., A. W., Elyria, Ohio-E.F
  JFD Mfg. Co., 1101 E. McKinley Ave., Mish-awaka, Ind.-G
  Kay-Townes Antenna, 1511 Dean Ave., Rome, Ga.-D.E.F
  Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.-D.E.F
  Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.-D.E.F
  Land-Air, Inc., 201 N. Wells St., Chicago 6, 111.-B
  Lavoie, Labs., Morganville, N.J.-E.F
  Lavoie, Labs., Morganville, N.J.-E.F
- III.-B
  Lavoie. Labs.. Morganville, N.J.-E.F
  Leader Electronics. Inc., 2925 E. 55th St., Cleve-land 27, Ohio-H
  Lyman Electronic Corp., 12 Cass St., Spring-field. Mass.-D.E.F
  Lyman Engineers, 1432 N. Carlisle St., Phil-adelphia 21, Pa.-D.F.L
  Macon Electronics. Warrensburg, III.-D
  Mathis Tower & Equip. Co., 2200 E. Wash-ington St., East Peorin. III.-G
  Medal Mfg. Co., 194 E. Silver St., Sharon, Pa. -B.E.F
  Midwest Naturlite Co., 6651 N. Clark St.
- -B,E,F Midwest Naturlite Co.. 6651 N. Clark St., Chicago 26, Ill.-A,E,F,J Miller Co.. J. W.. 5917 S. Main St., Los Ange-les 3, Calif.-C,K Miller Electronics, 2840 Naomi St., Burbank, Calif.-B,D,E,F,G,I,J

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Modern Wire Co., 39-30 Review Ave., Long Island City 1, N.Y.-B
  Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.-I
  Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.-A,B,D
  National Electric Products Corp., 2 Gateway Center, Pittsburgh 22, Pa.-E,F
  National Electronic Mig. Corp., 186 Granite St., Manchester, N. H.-B,C,D,E,F,I,J,M
  Neal Electronic Co., P.O. Box 376, Huntsville, Ala.-D,E,F,J
  Ohio Aerial Co., 4553 Lewis Ave., Toledo 12, Ohio-E,F
  Oregon Corvek Co., 1005 N.W. 16 Ave., Ports

- Neal Electronic Co., P.O. Box 376, Huntsville, Ala.-D,E,F,J
  Ohio Aerial Co., 4553 Lewis Ave., Toledo 12, Ohio-E,F
  Oregon Corvek Co., 1005 N.W. 16 Ave., Portland, Ore., D,E
  Peerless Products Industries, 812 N. Pulaski Rd., Chicago 51, III.-E,F,J
  Petroff, Peter A.. 127 Water St., New York 5, N.Y.-A,C,E,F,I,K
  Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.-D,E,F,G,H,I,J
  Philmore Mfg. Co., 118 University Pl., New York 3, N.Y.-B
  Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.-A,D,E,F,I
  Phoenix Electronics, Inc., 50 Island St., Law-rence, Mass.-B,D,E,F
  Promeer Mfg. Co., Huntley, III.-G
  Plymouth Electronics Corp., 50 Kingsbury St., Worcester 3, Mass.-E,F
  Premax Products Div., Chisholm-Ryder Co., Highland & College Aves., Niagara Falls, N.Y. -F,I,M
  Q.L.C. Corp., 10 Aubrey Summit, N.J.-C,K
  Q-Line Mfg. Corp., 1562 61 St., Brooklyn 19, N.Y.-B,D,E,F,G,J
  Radieco Mfg. Corp., 55 N. N.J. St., Indian-apolis, Ind.-F
  Radio Apparatus Corp., 55 N. N.J. St., Indian-apolis, Ind.-F
  Radio Industries, Inc., 5225 N. Ravenswood Ave., Chicago 25, III.-K
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Radio Matic of America, 760 Ramsey Ave., Hillside, N. J.-D,E,F,J,I
  Ramsey Radio & TV Co., 925 St. Louis Ave., Vandalia, III.-G
  Ray Co., 441 Summit St., Toledo 4, Ohio-B,E,F,G,J
  Reynolds Radio & Equ

- R'F Electronics, inc., 291 N.E. 61 St., Milann, Fla.-E Rohn Mfg. Co., 116 Limestone, Peoria, Ill.-G Rostan Corp., 5660 59 St., Maspeth, 78, L.I., N.Y.--G Ruckelshaus Labs., John G., Madison, N. J.

- N.Y.---G Ruckelshaus Labs., John G., Madison, N. J. --H S & A Electronics, 1025 Nevada St., Toledo 5, Ohio-E,F S/C Lubx., Inc. 37 George St., Newark 5, N.J. --C,D,E.F Scala Radio Co., 2814 19 St., San Francisco 10, Calif.--D,E,F,L Sightmaster of Calif., Gillespie Airport San-tee, Calif.-E Skysweeper, Inc., McHenry, Ill.--B,D,E,F,G,H Slate & Associates, Claude C., 11370 W. Olym-pic Blvd., Los Angeles 64, Calif.--D,E,F Smith-Meeker Eng'g Co., 1577 Chambers St., New York 7, N. Y.--M Snvder Mfg. Co., 22 & Ontario St., Phila-delphia 40, Pa.-E,F,IJ South River Metal Prod. Co., 377 Turnpike, Snoth River, N.J.-G Special Instruments Lab., Inc., 312 W. Vine St., Knoxville, Tenn.--E Spencer-Kennedy Labs., 186 Mass. Ave., Cam-bridge 39, Mass.--F,L Spirling Products Co., P.O. Box 411. Hicks-ville, L.I., N.Y.--K Tabet Mfg. Co., 1336 Ballentine Blvd., Norfolk, Va.--G. Technical Appliance Corp., 1 Taco St., Sher-burne, N.Y.--E,F Tel-A-Ray Enterprises Inc., 3rd & Water, Hen-derson, Kv.--A,D,G,L Tele-Bram Industries, 6th & Soscol Ave., Napa, Calif.--D,E,F

- Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.-D,E,F Tele-Ex-Pand Corp., 4th & Pine Sts., Berwick. Pa.-G
- Tele-Matic Industries. 1 Joralemon St., Brook-lyn 2, N.Y.--A,B.D.E,F Teletenna Co., 1033 Indiana Ave., LaPorte, Ind.--E,F,J
- Tele-Vue Towers, Inc., 701 49 St., So., St. Petersburg, Fla.-G Telkor, Inc., Telegraph Rd., Elyria, Ohio-E,J

- E,J Telrex. Inc.. Neptune Hwy., Asbury Park, N.J. —D,E,F,J,M Telvision Labs., Wauconda, Ill.—F Tempo TV Sales Corp., 21341 Roscoe Blvd., Canoga Park, Calif.—D,E,F,G,J Tennalab, Quincy, Ill.—D,L,M T. J. Mfg. Corp., 1020 S. Josephine St., Martins-ville, Ind.—K

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- Tower Structures, Inc., Gregg St., Lodi, N.J.
- Towers Corp., 8332 E. 55th St., Cleveland 27,
- Towers Corp., 3002 E. Sota Da, Ortonand Dho-G Ohio-G Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.—A,B,D,E,F,J Trio Mfg. Co., Griggsville, Ill.—A,D,E,F,H Trukaradio, 228 E. Park Ave., Wheaton, Ill.

Winpower Mfg. Co., Newton, Iowa-G

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Isolation units ................................J Lenses, R-F 

Remote Controls .....Z Spreaders, feeders .....R Springs, grounding .....S Switching equipment ......T Tower lighting .....U Tuning units .....V

Abel Mfr. Co., 147-11 72 Ave., Flushing, L.I. 67, N.Y.—A.B.C.D.G.I.L.M.Q.T.Y.Z.AA
Adler Communications Labs., 1 Le Fevre Lane, New Rochelle 1, N.Y.—C,V
Aerooit Electronics Corp., 507 26 St., Union City, N.J.—L.
Aeronautical Communications Equip., 3090 S. W. 37 Ave., Miami 33, Fla.—E,V
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.—G.I.M.N,S,V
Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.—D.E.F.V.W.AA
Airtorn Inc., 101 W. Elizabeth Ave., Linden, N.J.—C.E.F.W
Alford Mfg. Co., 299 Atlantic Ave., Boston 10, Mass.—Q
Alford Mfg. Co., 230 Park Ave., New York 17, N.Y.—C.F.M.V
Allied Intl. Inc., 230 Park Ave., New York 17, N.Y.—C.F.M.V
Allied Research & Eng'g. Inc., 6916 Santa Monica Blvd., Los Angeles, Calif.—E

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Trio Mfg. Co., Griggsville, II.—A,D,E,F,H
Trukaradio, 223 E. Park Ave., Wheaton, III.
I.
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Devel. Corp., 2024 McDonald Ave., Brooklyn 23, NY.—D
T. V. Products, Platte Center. Nebr.—D,F
T. V. Products, Platte Center. Nebr.—D,F
T. V. Products, Co., 145-68 228 St., Springfield Gardens 13, N.Y.—B,D,E,F,J
U. H. F. Resonator Co., 221—7 St., Racine, Wisc.—D,E,F,G,J,M
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—C,K,M
Universal Products Eng'g., 4100 Taylor Ave., Racine, Wisc.—D,G,M
U.S. Electronics Corp., 275 Warren St., Lyndhurst, N.J.—C,K
Video Accessory Mfg. Co., P. O. Box 223, Tulsa 1, Okla.—G
Video Industries Co., 42-46 Palmer Pl., Port Chester, N.Y.—E,F,G,M
Volta Mfg. Co., 2154 N. Halsted, Chicago 14, III.—K
Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.—B,E,F,K
Waltham Screw Co., 77 Rumford Ave., Waltham 54, Mass.—A
Weetern Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—H
Wheatland Tube Co., Bankers Securities Bldg., Philadelphia 7, Pa.—G
Wincarger Corp., E. 7 at Division St., Sioux City 2, Iowa—G
Winegard Co., 3000 Scotten Blvd., Burlington, Iowa—D
Winpower Mfg. Co., Newton, Iowa—G

Alpha Erection Corp., 508 Iowa State Bank Bldg., Iowa City, Iowa-U
Aluminum Co. of America, Alcoa Bldg., Pitts-burgh 19, Pa.-N
American Electronics Co., 1203 Bryant Ave., New York 59, N.Y.-A.C.D.J.O.W.AA
American Electronics Co., 1203 Bryant Ave., New York 59, N.Y.-A.C.D.J.O.W.AA
American Lava Corp., Cherokee Blvd. & Mfgrs. Rd., Chattanooga 5, Tenn.-I
American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.-C.F.L.AA
American Wood Working Co., 1682 N. Lowell Ave., Chicago 39, Ill.-N
Anchor Products Co., 2712 W. Montrose Ave., Chicago 18, 111.-Z.AA
Andrew Corp., 363 E. 75 St., Chicago 19, Ill. -A.C.D.E.F.U.Y.W
Antenna Products, 3628 N. Lincoln Ave., Chicago 13, Ill.-C.G.I.N.Y
Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio-N
A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.-E
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64 Calif.-L
Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.-C.E.F.V
Barlow Electrical Mfg. Co., 155 E. 128 St., New York 35. N.Y.-C.E.Y
Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.-M
Birbach Radio Co., 145 Hudson St., New York 13. N.Y.-B.C.G.I.L.R.S
Blaco Mfg. Co., 3654 I. Suiden Ave., Westfield, N.J.-C.H.J.Q.V.W.Z.AA
Border-Tongue Labs., Inc., 526 North Ave., Westfield, N.J.-C.H.J.Q.V.W.Z.AA
Brand & Co., William. North & Valley Sts., Willimantic, Corp., 200 Central Ave., Newark 3. N.J.-C.L.N.Z.AA
Brand & Co., William. North & Valley Sts., Willimantic, Corn.-A
Britshe Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.-Q.AA
Brooks & Perkins, 1950 W. Fort St., Detroit 16, Mich.-K
Buchan Co., R. J., P.O. Box 9, Bricelyn, Minn. -C

Mich.---K Buchan Co., R. J., P.O. Box 9, Bricelyn, Minn.

Radio, Inc., 2118 E. 55 St., Cleveland 3, Bud

-C
Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-R
Budd-Stanley Co., 43-01 22nd St., Long Island City 1, N.Y.-D.E.F.W
Camburn Inc., 32-40 57 St., Woodside 77, N.Y. -B.C.G.I.L.N.T.Y
Camburn Sales & Mfg. Corp., 134 Orchard Ave., Battle Creek, Mich.-N
Canoga Corp., 555 Sepulveda Blvd. Van Nuys, Calif.-C.D.E.F.J.K.L.P.T.W
Cascade Research Corp., 53 Victory Lane, Los Gatos, Calif.-J.W
Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-I.R.T.V
Centry Electronics, 14844 Oxnard St., Van Nuys, Calif.-E.W
C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.-C.P.Y
Channel Master Corp., Ellenville, N.Y.-C.G.N
Chicago 22, Ill.-G
Citation Products Co., 233 E. 146 St., New York 51, N.Y.-G.I

**GREEK ALPHABET** 

name	capital	small
ALPHA	A	α.
BETA	В	β
GAMMA	Г	
DELTA	Δ	δ
EPSILON	E	ε
ZETA	Z	٢
ETA	Н	η
THETA	Θ	θ
ATOL	Ι	t
КАРРА	K	· %
LAMBDA	Λ	λ
MU	М	μ
NU	N E O	v
XI	Ξ	μ,
OMICRON	<u>0</u>	0
PI	Π	π
RHO	P	Q
SIGMA	$\hat{\Sigma}$ T	σ
TAU	T	τ
UPSILON	Ý	v
PHI	Φ	¢
СНІ	X	χ
PSI	Ψ	ψ
OMEGA	Ω	ω

208



Clear Beam Antenna Corp., 21341 Rosco Blvd., Canoga Park, Calif.—B,C,G,I.L.N,Y,AA Cleveland Container Co., 6201 Barberton Ave.,

Cleveland Container Co., 6201 Barberton Ave., Cleveland 2, Ohio—I Clum Mfg. Co., 601 National Ave., Milwaukee, Wisc.—T Coaxial Connector Co., 37 N. 2 Ave., Mt. Vernon, N.Y.—E,Q Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, III.—L Commercial Products, 417 Main St., Toledo 4, Ohio—G.N.Y Communication Devices Co., 2331 12 Ave., New

Ohio-G.N.Y
Communication Devices Co., 2331 12 Ave., New York 27, N.Y.-E.V
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.-B.G.I,L
Continental Electronic Mfg. Co., 4212 S. Buck-ner Blvd., Dallas 17, Texas-E.J.V
Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.-E
Co-Operative Industries, Inc., Chester, N.J.-W
Conperweld Steel Co., Wire & Cable Div., Glassport. Pa.-B
Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., South Plainfield, N.J.-C.L.Y.Z
Craig Machine, Inc., 90 Holten St., Danvers, Mass.-N.Y

Craig Machine, Inc., 90 Holten St., Danvers, Mass.--N,Y Creative Eng'g, Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-F Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.-E Crown Controls Co., 40 S. Washington St., New Bremen, Ohio--AA Cubic Corp., 2841 Canon St., San Diego 6, Calif.--E Dale Products, Inc., Box 1, Columbus, Nebr. --G

G.

-G Dallons Labs., Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.—AB Deal Products, Inc., Hellertown Rd. MR37 Eas-ton, Pa.—N Delson Mfg. Corp., 126 11 Ave., New York 11, N.Y.—G.N.AA Delta Electronics, Inc., Div. of Electronic Indicator Corp., 259 Green St., Brooklyn 22, N.Y.—G DeMornay-Bonardi, 780 S. Arroyo Physics

Delta Electronics, Inc., Div. of Electronic Indicator Corp., 259 Green St., Brooklyn 22, N.Y.-G
DeMornay-Bonardi, 780 S. Arroyo Pkway, Pasadena. Calif.-E.K.W
Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.-A,D,E.F.W
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-C.E.V
Dow.Key Co., P.O. Box 57 Warren, Minn.-T
D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.-C
Duala Co., Box 78, Coal Fork, W. Va.-L
DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-D.E
Dwyer Engineering Co., P.O. Box 483 Nashua, N.H.-L
Dynamic Electronics, N.Y. Inc., 73-39 Wood-

Dwyer Engineering Co., P.O. Box 483 Nashua, N.H.-L.
Dynamic Electronics, N.Y. Inc., 73-39 Woodhaven Blvd., Glendale, L.I., N.Y.-V
Earle Electronics Corn., 177 Hart St., New Britain, Conn.-A,E.F,AA
Eby Co., Hugh H., 4704 Stenton Ave., Philadelnhia 44, Pa.-G,T
Eby Sales Co., 130 LaFayette St., New York 13, N.Y.-C.AA
Electrical Tower Service, 206 S. Washington St.. Peoria 2, Ill.-U
Electro Impulse Lab., 62 White St., Red Bank N.J.-E

St., reoria 2, 111.—0
Electro Impulse Lab., 62 White St., Red Bank N.J.—E
Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton N.J.—I
Electro Precision Products Inc., 139-30 34th Rd., Flushing 54, N.Y.—A.E
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—Y
Emerson Electric Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.—F.K.W
Empire Electronics Co., 166 River St., Paterson 1, N.J.—A
Energy Farm Equipment Co., 100 N. Main, Monticello, Iowa—N.Y
Epco Electronics, Inc., 140 Liberty St., New York 6, N.Y.—C.T.AA
Ferro Electric Products, Kirkland, III.—L,G
Flader, Inc., Fredric, 583 Division St., N. Tonawanda, N.Y.—G.I,N
Ford Instrument Co., Div. Sperry Corp., 31-10
Thomson Ave., Long Island City 1, N.Y.—Z
Fretz, Gross Co., 22 & Sedgley Ave., Philadelphia 32, Pa.—G.N,Y
F-R Machine Works, F-X-R Electronics & X.-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.—E.K.P.W
Gabriel Electronics Div., Gabriel Co., Endicott St., Norwood, Mass.—F.H.T
Gordris, Tuc., 3629 N. Dixie Dr., Dayton 5, Ohio.—M
Garde Mfg. Co., 588 Eddy St., Providence 3, R.I.—I

Ohio.--M Garde Mfg. Co., 588 Eddy St., Providence 3, R.I.--I

Gates Radio Co., 123 Hampshire St., Quincy, Ill.--C,D,E,F,J,O,W

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Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill. —B.C.G.I.L.N.Q.Y.AA General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—B.G.I.L.Y General Ceramics Corp., Crows Mill Rd., Kasebey N L L R

Rockford, Ill.—B,G,I,L,Y General Ceramics Corp., Crows Mill Rd., Keasbey, N.J.—I,R General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.—L General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.—D,E,F General R-F Fittings Co., 702 Beacon St., Boston 15, Mass.—C,E Gonset Co., 801 S. Main St., Burbank, Calif.— B,G,N,Y Graef Eng'g. Co., P.O. Box 416, Paramount,

Boston 15. Mass.—C.E Gonset Co., 801 S. Main St., Burbank, Calif.— B,G,N,Y Graef Eng'g. Co., P.O. Box 416, Paramount, Calif.—I Great Eastern Mfg. Co., 163 Remsen Ave., Brooklyn 12, N.Y.—AA Gries Reproducer Corp., 5 Second St., New Ro-chelle, N.Y.—G G. W. Assoc., Box 2263, El Segundo, Calif.—E Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.—A.T.Z Hartman Eng'g. Co., 182 Oakland St., Spring-field 8, Mass.—N Haydon Products Corp., 1801 8 Ave., Brook-lyn 15, N.Y.—B,C.G.I.L.N.T Heath Co., 305 Territorial Rd., Benton Har-bor, Mich.—C Hi-Lo TV Antenna Corp., 3540 N. Ravenswood, Chicago, 111.—I.L Houlihan Co. T. J., 2508 W. Lawrence Ave., Chicago 25, 111.—E Houston Fearless, Div. of Color Corp. of America, 11801 W. Olympic Blvd, Los Angeles 64, Calif.—Y Hughey & Phillips, 3300 N. San Fernando Blvd., Burbank, Calif.—U Hy-Gain TV Products, 1828 N. St., Lincoln, Nebr.—G,Y Hy-Lite Antennae Inc., 242 E. 137th St., New York 51, N.Y.—L I.E. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, III.—B,G,I.L.N.Y.AA Illinois Electric Porcelain Company, 510 N. Pearl St., Macomb, III.—I Independent Mfg. Co., 5 Belleview Ave., E. Riverton, N.J.—G Industrial Hardware Mfg. Co., 109 Prince St., New York 12, N.Y.—G Industrial TV, 369 Lexington Ave., Clifton, N.J.—AA Insulated Circuits, Inc., 115 Roosevelt Ave., Realeville N.J.—AC F.J.LT

Industrial TV. 369 Lexington Ave., Clifton, N.J.-AA
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.-A,C,F,J,L,T
Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.-I
Insuline Corp., of America, 186 Granite St., Manchester, N.H.-B,C,G,I,L,N,T,Y,AA
Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.-I,L,R
I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.-F,K,Y
JaMac Products Co., 4605 N.E. 118th Ave., Portland 20, Ore.-G
Javex, Box 646, Redlands, Calif.-C,F,G,Q,T, AA

Javez, Box 646, Redlands, Calif.—C,F,G,Q,T, AA
Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.—T
Jerrold Electronics Corp., 26th & Dickinson, Philadelphia 46, Pa.—C,J,Q,AA
JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y. —C,D,F,G,I,J,L,N,T,Y,AA
Johnson Co., E. F., Waseca, Minn.—C.I,J,R,U
Jones Electronics Co., M.C., 185 N. Main St., Bristol, Conn.—E
Jontz Mfg. Co., 1101 McKinley St., Mishawaka, Ind.—N.Y
Kahn & Co., 541 Windsor St., Hartford 1, Conn.—D,W
Kay-Townes Antenna Co., 1511 Dcan Ave., Rome, Ga.—Y
Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.—W
Kennedy & Co., 265 Colfax Ave., Kenil-worth, N.J.—G,N,Y
Kinney, Inc., Joseph, Rosslyn Rd., Carnegie, Pa.—H
Krueger & Hudepohl, 5 E. 3 St., Cincinnati 2,

hoe, N.Y.—A.C.D.E.F.H.W Kinney, Inc., Joseph, Rosslyn Rd., Carnegie, Pa.—H Krueger & Hudepohl, 5 E. 3 St., Cincinnati 2, Ohio—B.G Lambda-Pacific Eng'g Co., P.O. Box 105, Van Nuys, Calif.—Y Lane Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.—A.V Lapp Insulator Co., Radio Specialties Div., 27 Gilbert St., Le Roy 3, N.Y.—E.I.R Larson Co., Chas. O., P.O. Box 358, Sterling, III.—G Laughlin Co., Thomas, 143 Foré St., Portland

Laughlin Co., Thomas, 143 Foré St., Portland 6, Me.-G

Laughlin Co., Thomas. 143 Fore St., Portland 6, Me.—G Lehigh Structural Steel Co., 17 Battery Pl., New York 4. N.Y.—U Lottine Radio Mfg. Co., 62 Berkley St., Valley Stream. N.Y.—V Lieco. Inc., 147 Ocean Ave., Lynbrook, N.Y.— A,C,D,E,F,W Linear Equip. Labs., 1 Brightwater Pl., Mas-sapequa. N.Y.—C Link Radio Corp., 125 W. 17th St., New York 11 NY—A

Link Ramo Gorp., 123 W. 11th St., Rew John 11. N.Y.—A Lord M<sup>e</sup>c. Co., 1635 W. 12th St., Erie, Pa.—J Macon Electronics. Warrensburg. Ill.—T Makepeace Co.. D.E., Div. Union Plate & Wire, Pine & Dunham Sts., Attleboro, Mass.—F.W Malkin-Illion Co., 396 Coit St., Irvington 11, N L.—N Y.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

N.J.---N.Y

Mathis Tower & Equip. Co., 2200 E. Washington St., East Peoria, III.-G.M.N
McMillan Industrial Corp., Brownville Ave., Inswich, Mass.-E.K
Medal Mfg. Co., 194 E. Silver St., Sharon, Pa.-N.Y
Maridian Mathematic Inc., 8730 Millagramme

- Pa.--N,Y Meridian Metalcraft, Inc., 8739 Millergrove Ave., Whittier, Calif.--E,F,W Metal Fabricators Corp., 73 Pond St., Waltham 54, Mass.--Y Metal Products Co., Craighead St. Nashville 4, Tenn.--E
- Tenn-E Mica Insulator Co., P.O. Box 1076, Schenectady
- Milar Institution Co., P.O. Box 1076, Schenetzady
   I. N.Y.-I
   Microlab, Inc., 71 Okner Pkway, Livingston, N.J.-E.
   Miller Co., J. W., 5917 S. Main St., Los Angeles
   Calif.-U

- Miller Co., J. W., 5917 S. Main St., Los Angeles 3. Calif.-U
  Miller Electronics, 2840 Nuomi St., Burbank, Calif.-G,N,Y,AA
  Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.-I
  Modern-Aire Mfs. Corp., 4436 W. Roosevelt Rd., Chicago 24, III.-B,G,I,N
  Modern Wire Co., 39-30 Review Ave., Long Is-land City 1, N.Y.-B,I.G,L.N
  Modked Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.-A,I
  Mosley Electronics, Inc., 8622 St. Charles Rock Rd., St. Louis 14, Mo.-C,I,Q,R,T,AA
  Mueller Electric Co., 1583 E. 31 St., Cleve-land 14, Ohio-B,I
  Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.-I,R
  Narda Corp., 66 Main St., Mineola, N.Y.-D,E,F,P,W
  National Ceramic Co., 500 Southard St., Trenton 2, N.J.-I
  National Co., 61 Sherman St., Malden, Mass. I.R

- Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill. ---E,

- Ohmite Mik. Co., 3001 Howard St., Skokie, Hi. —E,
  Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15. Calif.—H.N
  Penn TV Prods., Ally. & Trenton Aves., Philadelphia 34, Pa.--C.T
  Petroff. Peter A., 127 Water St., New York 5, N.Y.—A.B., C.E., G.H.I, J.L.M, N.Q.S.T.V
  Phen-O-Tron, Inc., 455 Main St., New Ro-chelle, N.Y.—AA
  Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.—X
  Philadelphia St., Co., 113 University Pl., New York 3, N.Y.—I,L
  Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.—I,L
  Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.—G

- A DISON MIR. Co., 60 Sackett St., Brooklyn 31, N.Y.-G
   Phoenix Electronics, Inc., 50 Island St., Law-rence, Mass.-G
   Pix Mfg. Co., 5 Oliver St., Newark 5, N.J.
- Pix Mfg. Co., 5 Oliver St., Newark 5, N.J. --B.G
  Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-B.G
  Polytechnic Research & Development, 202 Tillary St., Brooklyn 1, N.Y.-P
  Porcelain Products, Inc., 422 W. Sandusky St., Findlay, Ohio-I
  Portchester Instrument Corp., 114 Wilkins Ave., Portchester. N.Y.-D.F.W
  Premax Products Div. Chisholm-Ryder Co., Highland & College Aves., Niagara Falls, N.Y.-B.I.N.Y
  Premier Instrument Corp., 52 W. Houston St., New York 12. N.Y.-D.F.F.T.W
  Predelin Inc., 307 Bergen Ave., Kearny, N.J. -D.X.Y
  Q-Line Mfg. Co., 1562 61st St. Brooklyn 19, N.Y.-A.B.C.D.E.G.I.J.L.N.W.Y.AA
  Rada Products Co., 2911 W. Carroll Ave., Chicago 12, Ill.-G
  Radeleo Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio-L.Y
  Radia Corp., 3455 Vega Ave., Cleveland 13, Ohio-C.L.Y
  Radio Corp. of America, Eng'g. Products Div., Cambel 2, N.J.-C.D.E.F.LUYX

- Ohio--C, L, Y Radio Corp. of America, Eng'g. Products Div.. Camden 2, N.J.-C, D, E, F, L, U, V, X Radio Merchandise Sales. 2016 Bronxdale Ave., New York 62, N.Y.--C, G, L, N, T, Y, AA Radion Corp., 1130 W. Wisconsin Ave., Chicago 14, 111.--L
- Radio Sonie Corp., Plainfield, N.J.- A.E.K Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 13, Ohio-S
- Resistoflex Corp., 30 Plansoen St., Belleville 9, N.J.—I Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.—G.Y
- Rich Electronics. Inc., 212 N.W. 8 St., Miami 36, Fla.—C,E,V Robinette Co., W.C., 802 Fair Oaks Ave., S. Pasadena, Calif.--Z Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria 5, Ill.—N

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Sanders Associates, Inc., 137 Canal St., Nashna, N.H.—F Scala Radio Co., 2814 19th St., San Francisco 10. Calif.—C.G.AB Seismograph Service Corp., 701 Kennedy Bldg., Tulsa 1, Okla.—C.E.J.V Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.—A.K.T Screw Corp. of America, 103 Park Ave., New York 17, N.Y.—G Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N.Y.—E.W Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N.Y.—A.B.Y Sherman Mfg. Co., H. B., 22 Barney St., Battle Crcek, Mich.—B

- Snerman Mig. Co., H. B., 22 Barney St., Battle Crcek, Mich.-B Silver Bay Equip. Co., 5004 20 N. W., Seattle 7, Wash.-V Skyline Tower Co., 2436 W. 59th St., Chicago 29, III.-I,N,U Skysweeper, Inc., McHenry, III.-B,G,I,L,N,Q,Y Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.-B,G Snyder Mfg. Co., 22 & Ontario Sts., Philadel-phia 40, Pa.-N Southern Industries of Md., 1401 Reistertown Rd., Pikesville, Baltimore 8, Md.-N South River Metal Products Co., South River, N.J.-B,G,I,N,Y Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl. Brooklyn 38, N.Y. -B,U,Y Spencer-Kennedy Labs, 186 Massachusetts
- -H, U, Y Spencer-Kennedy Labs, 186 Massachusetts Ave.. Cambridge 39, Mass.-C,Q,AA Sperry Gyroscope Co., Great Neck, N.Y.-E,W Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N.Y.-E,V States Co., 19 New Park Ave., Hartford, Conn. -E

- States Co., 19 New Park Ave., Hartford, Conn. —E
  Stavid Eng'g., Highway 22, Plainfield, N.J. —C,F.K.T,V.W.Z
  Stone City, Machine & Tool Co., 1206 7 St., Bedford, Ind.—G,
  Stupakoff Ceramic & Mfg. Div. Carborundum Co., Latrobe, Pa.—I
  Superex Electronics Corp., 4 Radford Pl., Yonkers, N.Y.—C.D.AA
  Syncor Products Co., 26 Irving Ct., Malden 48. Mass.—I
  Ta-Mar. Inc., 11571 W. Jefferson Blvd., Culver City, Calif.-J
  Taylor Fibre Co., Norristown, Pa.—I Taylor Mfg. Co., 302 S. Union St., Lima, Ohio—G,Y
  Technical Appliance Corp., 1 Taco St., Sher-burne, N.Y.—B,D,L,Q,T.Y
  Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.—C.E.V
  Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.—C,D,F
  Tele-Ex-Pand Corp., 4th & Pine Sts., Berwick, Pa.—N
  TeleMatic Industries, 16 Howard Ave., Brook-

- Tele-Ex-Pand Corp., 4th & Pine Sts., Berwick, Pa.-M TeleMatic Industries, 16 Howard Ave., Brook-lyn 21, N.Y.-Q,AA Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-N Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-N Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-N Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-N Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.-N Television Co. of America, 1761 Lincoln Blvd., Canoga Park, Calif.-B,C,G,I,L,N,Y,AA Tennalab, 417 S, 10th St. Quincy, III.-C Thomas Mold and Die Co., Henry & Grant St., Wooster 126. Ohio-N Thomas & Sons, R. Co., Lisbon, Ohio-I,R Thompson-Bremer Co., 520 N. Dearborn St., Chicago 10, III.-G Thor Ceramics, 225 Belleville Ave., Bloom-field, N.J.-I Tinnerman Products, Inc., P.O. Box 6688. Dept. 16 Cleveland 1, Ohio-G Torngren Co., C.M., 236 Pearl St., Somerville 45, Mass.-H Tower Construction Co., 1923 Geneva St., Sioux Citv. Jowa-U
- Tower Construction Co., 1923 Geneva St., Sioux City, Iowa-U Tower Structures, Inc., Gregg St., Lodi, N.J. -U
- Towers Corp., 3332 E. 55 St., Cleveland 27,

- Towers Corp., 3332 E. 55 St., Cleveland 27. Ohio--N
  Transformer Metal Prod. Inc., 343 W. 26th St., New York, N.Y.-B.G.H
  Trico Fuse Mfg. Co., 2948 N. 5 St., Milwaukee 12, Wisc.-B
  Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, III.-G.L.N.Y
  Trus-Art Industries, 1657 W, Evergreen St., Chicago 22, III.-G.L.Y
  Tru-Art Industries, 1657 W, Evergreen St., Chicago 22, III.-I
  T.V. Devel. Corp., 2024 McDonald Ave., Brook-lyn 23, N.Y.-G.L.T
  TV Hardware Mfg. Co., 919 Taylor Ave., Rockford, III.-B.C.G.I.L.N.YAA
  TV Products Co., 145-68 228 St., Springfield Gardens 13, N.Y.-G.L.N.YAA
  Ultra-hi TV Mfg. Corp., 69 Hammond St., Worcester, Mass.-G
  Universal Clay Prods. Co., 1528 1 St., San-dusky, Ohio-I
  Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-E,W
  Univox Corp., 102 Warren St., New York 7, N.Y.-C.F

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- U. S. Gasket Co., 602 N. 10 St., Camden 1, N.J.-E,I
  U. S. Tower Co., 219 Union Trust Bldg., Pe-tersburg, Va.,-U,V
  Utilities Service Co., Allentown, Pa.-B,G
  Vari-L Co., 432 Fairfield Ave., Stamford, Conn.-V
  Varia Mfr. Co., 2201 Wellowt St., Co., A.J.
- Conn.-V Varo Mfg. Co., 2201 Walnut St., Garland, Texas-O.P.V.W.AA Victor Insulators, Inc., Maple Ave., Victor, N.Y.-I
- N.Y.-I Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, L.I., N.Y.-C,J Video Accessory Mfg. Co., P.O. Box 223, Tulsa 1, Okla.-N,Y Vidco Electronic Lab., 304 Rodgers Rd., Des Moines 15, Iowa-G,Y Video Industries Co., 42-46 Palmer Pl., Port Chester, N.Y.-NAA Volta Mfg. Co., 2154 N. Halsted. Chicago 14, III.-E,S Walsco Electronics Corp. 3602 Computer

HI.-E.S.
Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.-B.C.G.AA
Ward Products Corp., div. Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.-D.L.
Waveguide Inc., 14837 Oxnard St., Van Nuys. Calif.-D.E.F
Waveline, Inc., Caldwell, N.J.-D.E.W
Western Coil & Electrical Co., 215 State St., Racine, Wisc.-G.I.N
Western Mfg., Co., 1400 W. 22 St., Kearney, Nebr.-F.L.N,T
Weston Labs., Inc., Box 407, Littleton, Mass. -E.W
White Dental Mfg. Co., S. S., 10 E. 40 St.

--E.W White Dental Mfg. Co., S. S. 10 E. 40 St., New York 16, N.Y.--Z White Industries, 421 W. 54 St., New York 19, N.Y.--A.E.K White & Son, James L., 374 Verona Ave., Newark 4, N.J.--B.G Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.--C.Y

Z1, MO.-..., V
Wincharger Corp., E. 7 & Division Sts., Sioux City 2, Iowa-U
Wind Turbine Co., E. Market St., & Penn. R.R., West Chester, Pa.-E,F,I,N,T.U.Y
Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.--D

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Test Equipment Vibration mountings ......J

COMMUNICATIONS NAVIGATION EQUIPMENT Airborne landing systems ......K Altimeters, radio Controls, aircraft navigation .....U Controls, remote radio .....AC Distance measuring equip. . . . . . . Z Facsimile .....AA Flight simulators & trainers ..... AD

Guided Missile telemetering .....W Intercommunication systems .....N

Navigation equipment, ground .....P Radar .....

Radar beacons ......AB Transmitters .....R

ACP Industries, Inc., Eng'g & Res. Div., P.O. Box 209, Hyattsville, Md.-AD
Acme Electronics Inc. (Sub. Aerovex Corp.), 2724 Peck Rd., Monrovia, Calif.-D
Acme Telectronix, Div., NEA Service, 1200
W. 3 St., Cleveland 13, Ohio-G,AA
Advance Instrument Corp., 1709 F St., Bel-mar, N.J.-D,E,F
Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.-D,F,S,T,U,V
Aermotive Equip. Corp., 1632 Central St., Kansas City 8, Mo.-S,U
Aeronautical Electronics, P. O. Box 6043, Raleigh, N.C.-B,D,N,O,R,X

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9-AVIATION

Ahrendt Instrument Co., 4910 Calvert Rd., College Park, Md.-O.P Air Associates, Inc., 511 Joyce St., Orange, N.J.-C.K.N.O.P.R.S.T.U.V.W.X.AA.AB Airborne Electronics Inc., 185 1 St., Mineola, N.Y.-A.B.D.E.F.K.L.N.O.Q.R.S.U.X.Z Airborne Instruments Lab. 160 Old Country Rd., Mineola, N.Y.-B.K.M.O.P.Q.R.S.U.V.X, Z.AB

Rd., I Z,AB

Airborne Instruments Lab. 160 Old Country Rd., Mineola, N.Y.-B.K,M,O,P,Q,R,S,U,V,X, Z,AB
Aircraft Armaments, Inc., P.O. Box 126. Cockersville, Md.-AB
Aircraft Radio Co., Boonton, N.J.-A,B,C,J,K, O.R.S.U.X
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.-D
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.-D
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.-D
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.-D
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.-D
Aircraft Transformer Corp., West & Willow Aves., Int. 2010
Aircraft Products Co., P.O. Box 137 Middle River, Baltimore 2. Md.-D,F
Alcar Instruments, 20 Wagaraw Rd., Fair Lawn. N.J.-D
Alden Electronic & Impulse Recording, Equip. Co., Alden Research Center, Westboro, Mass. -AA
Alford Mfg. Co., 299 Atlantic Ave., Boston 10, Mass.-A.B.P
Allied Ens'g. Div., Connecticut & Richards Aves., S. Norwalk, Conn.-D.E.F
Allison Associates. 3110 N. Highland Rd., N.E., Albuguerque, N. Mex.-Q
American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-V
American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-V
American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-V
American Radio Corp., 1830 S. 54 Ave., Chicago 50, Ill.-B
American Radio Hdwe. Co., 152 S. MacQueston Pkwy., Mt. Vernon, N.Y.-B
American Radio Hdwe. Co., 300 E. 4th St., St. Paul 1, Minn.-D.E
American Radio Corp., 95 Lafayette St., New York 13, N.Y.-D
American Radio Cong., 300 E. 4th St., St. Paul 1, Minn.-D.E
American Radio Cong., 363 E. 75 St., Chicago 19, Ill. -A.B
Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio-B
Antenna Specialists Co., 2435 Euclid Ave.,

Andrew Corp., 363 E. 75 St., Chicago 19, Ill. —A,B Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio—B Applegate & Co.. C. J., 1816 Grove St., Boulder. Colo.—D.F Applied Electro Mechanics Inc., Natl. Airport —Hangar 9, Washington 1, D.C.—A,B,R,S,X Applied Electro Mechanics Inc., Natl. Airport —Hangar 9, Washington 1, D.C.—A,B,R,S,X Applied Science Corp., P. O. Box 44, Prince-ton. N. J.—H.W Aremac Associates. 329 W. Washington St., Pasadena 3, Calif.—G Arens Controls, Inc., 2017 Greenleaf St., Evanston, Ill.—C.S Arma Corp., Roosevelt Field, Garden City. N.Y.—O.S Arnoux Corp., 1357 Hawthorne Blvd., Haw-thorne, Calif.—D Art-Lloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N.Y.—J Atlns Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.—K,M,O,P,Q,R,T,V,X,AB Audicon Electronics, Inc., 216 Lyon St., Pater-son 4, N.J.—D.E,F,Q,S,X Audio Products Corp., 2265 Westwood Blvd. Los Angeles 64, Calif.—B,D,F,L,O,R Austin Co., 76 9th Ave., New York 11, N.Y, —G,H Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.—N

-G.H Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.--N Avion Instrument Co., Paramus, N.J.-F.H, Q.T.U.V.W Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.-Q.R.X Bailey Industries, Arnold, 875 Elm St., Man-chester, N.H.-A.B.E.S.W Barber-Colman Co., 1300 Rock St., Rockford, Ill.--S

Ill.-S Bassett Inc., Rex. 1314 NE 17 Court, Ft. Laud-erdale, Fla.-D.R.X Bell Aircraft Corp., P. O. Box 1, Buffalo 5, N.Y.-S

Bell Aircraft Corp., P. O. Box I, Buffalo 5, N.Y.--S
Bell Sound Systems, Sub. Thompson Products. 555 Marion Rd., Columbus 7, Ohio-A.D.I.Q
Bendix Aviation Corp., Red Bank Div., Eaton-town, N.J.--D.F
Bendix Aviation Corp., Bendix Aviation Corp., Baltimore 4, Md.--B,K,M,N,O,Q,R,S,U,X.Z
Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro. N.J.-O,S.T,U.V.Y
Bendix Aviation Corp., Pacific Div., 11600
Sherman Way, N. Holywood, Calif.--O,Q,R, U,V.W.Z.AB
Beva Laboratory, 1640 Olden Ave. Ext., Tren-ton, N.J.--D
Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.--S
Birnbach Radio Co., 145 Hudson St., New York 13, N.Y.--A
Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Okie S

Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3,

Onio-S
Blair Co., J.P., 89 Union St., Mineola, N.Y.-Q
Bludworth Marine, 92 Gold St., New York 38, N.Y.-Q.R
Boehme Inc., H. O., 915 Broadway, New York 10, N. Y.-P

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Boeing Airplane Co., 7755 E. Marginal Way. Seattle. Wash.-A.S.
Borue Electric Mfr. Co., 52 Iowa Ave., Patterson 3, N.J.-D.E.F.
Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles 4, Calif.-D
Borg Equip. Div. George W. Borg Corp., 120
S. Main St., Janesville, Wisc.-O
Bowe & Co., Box 5818, Bethesda, Md.-Z
Brach Mfr. Co., 200 Central Ave., Newark 3, N.J.-B.M.O.S.Y.W.AA
Bristol Co., Waterbury 20, Conn.-S
Bristol Co., Waterbury 20, Conn.-S
Bristol Co., Waterbury 20, Conn.-S.
Bristol Co., Waterbury 20, Conn.-S.
Bristol Eng'z, Corp., Beaver Dam Rd. & Oak Lane, Bristol, Pa.-D.F.
Bundaker Mfg. Co., 9151 Exposition Dr., Los Angeles 34, Calif.-W
Burno-New York Industries, 460 W. 34 St. New York 1, N.Y.-C.D.E.F.K.L.N.O.P.Q.
R.T.V.W.X.Z.AB
Buffalo Instrument Corp., 1780 Elmwood Ave., Buffalo 7, N. Y.-G
Bunnell & Co., J. H., 81 Prospect St., Brook-Iyn 1, N.Y.-R
Burgess Battery Co., Foot of Exchange St., Freeport III.-E
California Plasteck. Inc. 225 E. 4 St., Los Angeles 13, Calif.-C.S.U
Canoga Corp., 5955 Sepulveda Blvd., Van Nuy, Calif.-A.D.K.M.O.P.Q.R.V.X.Z.AB
Carter Motor Co., 2644 N. Maplewood Ave., Chicaco 47, III.-D.F
CHS-Columbia. 3400 47 Ave., Long Island City 1, N.-J.M.P.R.U.X
Centralab Div., Globe Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-A
Centralab Div., Globe Union Inc., 900 E.
Keefe Ave., Milwaukee 1, Wisc.-A
Centralab Div., Globe St., Stamford. Conn.-O.U.V
Chabs.. Inc. 391 Ludlow St., Stamford. Conn.-O.U.V
Chomatic Television Labs., 1501 Broadway. New York 36, N.Y.-G
Cifford Mrc. Co., 152 Grove St., Waltham 54. Mass.-S
Cifford Mrc. Co., 355 35 St. N.E., Cedar Rapids, Lowa.-B.K.O.P.R.Y.X
Colorone Electronics, Inc., 100 Frank Rd., Hicksville, L.I., N.Y.-N
Communication Devices Co., 2331 12 Ave., New York City 27, N

Int'l Airport, Pt. Lauderdale, Fla.—D.s.R.S. T.V.W.X
Consolidated Vultee Aircraft. 3302 Pacific Highway. San Diego, Calif.—S
Continental Communications, 452 W. Chicago Ave., Chicago 10, 111.—U.V
Control Components Co., 1 Holden St., Brook-line 46, Mass.—S.V
Control Electronics Co., 1925 New York Ave.. Huntington Station, N.Y.—V
Control Eng's. Corp., Controls Div., 934 Washington St., Norwood, Mass.—T.V.Y.Z
Control Specialists, Inc., 115½ E. Arbor Vitae St., Inglewood 1, Calif.—S,T.U.V
Cook Electric, 2700 Southport Ave., Chicago 14, 111.—H
Corbin Corp., 5419 56 Pl., Riverdale, Md.—B, K.O.P.Q.R.T.W.X.Z.AB
Cornel.-Dubilier Electric Corp., 333 Hamilton t. 3302 Pacific -S

K.O.F.Q.K.I.W.A.J.A.B Cornell-Dublier Electric Corp., 333 Hamilton Ave., S. Plainfield, N.J.-E.F Creative Eng's. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-A.B Crosley Div. AVCO Mfg. Corp., Cincinnati 15, Ohio-O.W

Crown Eng'g., 3821 Commercial, N. E., Albu-querque, N.M.-W C-Thru Ruler Co., 827 Windsor St., Hartford 1, Conn.-T Cubic Comp. 2011 C

Cubic Corp., 2841 Canon St., San Diego 6, Calif.

Curtiss-Wright, Electronics Div., Carlstadt, N.J.—AD

Dale Prducts, Inc., P.O. Box 136, Columbus,

Nebr.--B Dalmo Victor Co., 1414 El Camino Real San Carlos, Calif.--B,O,V

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Davies Labs., 4705 Queensbury Rd., Riverdale, Md.-H Daystrom Instrument, Archbald, Pa.-K,Q,R,S, T,U,W,X,Y

1,0,W,X,I Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.-D,F,K.O,S,T,U,V,W,Y Dayton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio-A,B,D,K,M,N,O,Q,R,T,X Delaware Optical Labs. Lansdowne. Pa.-G Demco Products, P.O. Box 5042, Philadelhia

Troy, Ohio-A,B,D,K,M,N,O,Q,R,T,X
Delaware Optical Labs.. Lansdowne. Pa.-G
Demco Products, P.O. Box 5042, Philadelhia
11, Pa.-Z
Detroit Controls Corp., 1650 Broadway, Redwood City, Calif.-W
Devol Research Co., Brookside Dr., Greenwich, Conn.-H,V,W
DeWald Radio Mfg. Corp., 35-15 37 Ave., Long Island City 1, N.Y.-D,Q
Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.-T
Doelcam Div., Minneapolis-Honeywell Regulator Co., 1400 Soldiers Field Rd., Boston 35, Mass.-D,F,O,S,U,V,Y
Dorne & Margolin, 30 Sylvester St., Westbury. N.Y.-B
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-Q
Dressen-Barnes Corp., 250 N. Vinedo Ave., New Rochelle, N.Y.-Q
Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich.-D
Dubrow Development Co., 235 Penn St., Burlington, N.J.-D,N,T.V
Dyna-Labs., Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-S
Edison, Inc., Thomas A., Instrument Div., 93
Lakeside Ave., W. Orange, N.J.-C,S
Edmund Scientific Corp., Barrington, N.J.-T,Z
Eicor, Inc., 1501 W. Congress St., Chicago 7, WIL-D,F

Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.-D.F

Ill.—D,F
Electromec, Inc., 3200 N. San Fernando Blvd., Burbank, Calif.—J,V
Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.—A,S,U,V
Electro-Mechanical Research, 64 Main St., Ridgefield, Conn.—W
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.—H,O,P,Q,T,V, AB

Ridgefield. Conn.-W
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.-H.O.P.Q.T.V. AB
Electronic Measurements Co., Lewis St. & Maple Ave., Eatontown. N.J.-D.E.F.R
Electronic Research Associates. 67 E. Broad St., Nutley, N.J.-D
Electronic Research Associates. 67 E. Broad St., Nutley, N.J.-D
Electronic Research Associates. 67 E. Broad St., Nutley, N.J.-D
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.-B
Electron Products Labs. 4501 N. Ravenswood Ave., Chicago 40, Ill.-D
Electro Sound Corp., 115 Halleck St., Boston 20, Mass.-H.I.N
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.-L.N.R.Q
Elk Electronic Labs., Inc., 333 W. 52nd St., New York 19, N.Y.-P.Z
El Mec Laboratories, 730 Boulevard, Kenil-worth, N.J.-D
El-Tronics, Inc., 437 N. 5 St., Philadelphia 23, Pa.-H.K.M.N.O.P.R.V.W.X
Emerson Electric Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.-B.Q.T.V
Empire Devices Products Corp., 38-15 Bell Blvd., Bayside 61, N.Y.-D.F
Empineered Magnetics, 11812 Teale St., Culver City, Calif.-D
Engineered Magnetics, 11812 Teale St., Culver City, Calif.-D
Engineered Magnetics, 11812 Teale St., Culver City, N.Y.-M.P.R
Essev Mfc. Co., 528 Commonwealth Ave., Boston 15, Mass.-H.O.T.V.W
Equipment Crafters, Inc., 523 Winne Ave., River Edge, N.J.-N.X
Erco Radio Labs., 637 Stewart Ave., Garden City, N.Y.-M.P.R
Easev Mfc. Co., 528 E. 72 St. New York 21, N.Y.-D.E.J.K.M.O.P.Q.R.T.U.V.X.AA
Farnsworth Electronics Co., Div. I.T.&T. Corp. P.O. Box 810. Fort Wayne, Ind.-B.D.O.P., Q.R.T.U.V.W.AB
Federal Electric Corp., 6466 Santa Monica Blvd., Los Angeles 38, Calif.-D
Federal Telecommunication Labs., 500 Wash-ington Ave., Nutley 10, N.J.-K.O.P.Q.X.Z
Feedback Montrols, Inc., 1332 N. Henry St., Alexandria, Va.-O.T.V
Fish-Schurman Corp., 70 Portman Rd., New Rochelle,

Flight Research Inc., P.O. Box 1-F, Richmond 1, Va.-G,S

31-10

Ford Instrument Co., Div. Sperry Corp., 31-1 Thomson Ave., Long Island City 1, N.Y.-D.F.H.K.M.O.P.R.S.T.U.V.W.X.Y.Z

France Mfg. Co. 10325 Berea Rd., Cleveland 2, Ohio-D.F

2. Ohio—D.F Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.—C.D.V.W
 F.R. Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.—B,D,Q.V.AB
 Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N.Y.—G

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Gabriel Electronics Div., Gabriel Co., Endicott St., Norwood, Mass.—A.B.V.W Gadacts, Inc., 3629 N. Dixie Dr., Dayton &, Ohio.—A

- Gaikets, Inc., 3629 N. Dixie Dr., Dayton C., Ohio.—A
  Galbraith & Son, 450 6th Ave., New York 11, N.Y.—N
  Gates Radio Co., 123 Hampshire St., Quincy, Ill.—R
  General Electric Co., Apparatus Div., 1 River Rd., Scheneetady 5, N.Y.—D,F,Y
  General Electric Co., Lamp Div., Nela Park, Cleveland, Ohio—AE
  General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream, N.Y.—N
  General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream, N.Y.—N
  General Hermetic Sealing Corp., 135 Bloomfield Ave., Bloomfield, N.J.—D,F
  General Precision Lab., 63 Bedford Rd., Pleas-antville, N.Y.—O,Q.U.V.Z
  Georator Corp., Manassas, Va.—F
  Giannini & Co., G. M., 918 E. Green St., Pasa-dena 1, Calif.—T,V.W,Y
  Gibbs Mfg, & Research Corp., 450 N. Main St., Janesville, Wisc.—O,R
  Gilhilan Bros., 1815 Venice Blvd., Los Angeles, Calif.—Q,R
  Glass Fibers, Inc., 1810 Madison Ave., Toledo
  2. Obic—J

- Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio-J

- 2. Onio-J
   Globe Industries, Inc., 1784 Stanley Ave., Dayton 4, Ohio--V,Y
   G & M Equip. Co., 7815 Varna Ave., N. Holly-wood, Calif.--C,E,L,N,O,P,Q,R,X
   Gonset Co., 801 S. Main St., Burbank, Calif. --A.B,D
   Conder Enterprises 5569 M. Cohuerge Blud

- A.B.D
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-G
  Gray Research & Devel. Co., 658 Hilliard St., Manchester, Conn.-AA
  Greenleaf Mfg. Co., 7814 Maplewood Ind. Ct., St. Louis 17, Mo.-B,D,F,S,T,U,V,W,Y
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-H,W
  Gyro Electronics Co., 325 Canal St., New York 13, N.Y.-R,X.AC
  Gyromechanisms, Inc., Halesite, L. I., N.Y.-Y
  Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-D,E,F,K,M,N,P,R,S,U,V,W, X Gyromechanisms, Inc., Halesite, L. I., N.Y.-Y
  Hallamore Mfg. Co., 2001 E. Artesia, Long Beech 5, Calif.--D,E,F,K,M,N,P,R,S,U,V,W, X
  Hamilton Kent Mfg. Co., Kent, Ohio-J
  Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.-N,O,X
  Hammarlund Mfg. Co., 460 W. 34 St., New York 1, N.Y.-AC
  Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove, N. Y.-D,S,V
  Hastings Instrument Co., Newcomb Ave, & Ivy Home Rd., Hampton, Va.-Z
  Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-G,T
  Hazeltine Electronics Corp., 58-25 Little Neck Pkwy., Little Neck 62, N. Y.-B,K,L,O,P,Q, R.T.W,X
  Heyer Products Co., 471 Cortlandt St., Belleville 9, N.J.-B,D
  Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-G,H,J,K,S,T, U.V.W,Y.
  Hogan Laboratories, 155 Perry St., New York 14, N.Y.-AA
  Hudson American Corp., 25 W. 43 St., New York 36, N.Y.-R,X
  Hufford Machine Works, Electronics Div., 2201 Carmelina Ave., Los Angeles 64, Calif.-D
  Hughes Research & Development Labs., Culver City, Calif.-O, U,UW
  Hycon Mfk. Co., 2961 E. Colorado St., Pasadena 8, Calif.-VW
  L-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-D
  Industrial Production Co., 8969 Vernon Ave., Upland, Calif.-O
  Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.-D,E,F,T
  Insulated Circuits, Inc., 369 Lexington Ave., Clifton, N.J.-O,F.
  Industrial Test Equipment Co., 55 E. 11 St., New York 6, N.Y.-D,E,F,T
  Insulated Circuits, Inc., 115 Roosevelt Ave., Banta Monica, Calif.-O, Karr, A,A
  Isolantite Mfg. Corp., Warren Ave., Sterling, N.J.-A
  Industrial Teeker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.-Q
  Jacobs Instrument Corp., 6058 Fullerton Ave., Chicago 39, 111.-A,D,N,O,R,X
  Johnson Co., E. F., Wascca, Minn.-B.R
  Kaar Eng's. Corp. 2995 Middlefield Rd., Palo Alto, Calif.-R,X
  Kam Ketan Products, I

- Conn.-D,E,F Kaiser Metal Products, Inc., Bristol, Pa.-T Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-Q,R.X Kay-Townes Antenna Corp., 1511 Dean Ave., Rome, Ga.-A Kearfott Co., 1378 Main Ave., Clifton, N.J.-O.S.T,U,V,Y
- Kellogg Switchboard & Supply Co., 79 W. Mon-roe St., Chicago 3, Ill.-N

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Kepco Labs., 131-38 Sanford Ave., Flushing 55, N.Y.-D.E.F
  Ketay Laboratories, Div. Norden-Ketay Corp., 555 Broadway, New York 12, N.Y.-B.D.S.Y
  Kilken Aircraft Div., Kilgen Organ Co., 4632
  W. Florissant Ave., St. Louis, Mo.-M.V
  Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-A.B.Q.R.X.AB
  Kollsman Instrument Corp., 80-14 45 Ave., Elmhurst, N.Y.-S.U.V
  Korb Engr. & Mfg. Co., 302 Ottawa Ave., Grandville, Mich.-H.I.R.X.Z.AB
  Kroker Eng'g. & Devel. Co., 3022 N. 77 Ct., Elmwood Park 35, III.-D.F.
  Lab. for Electronics. Inc., 75 Pitts St., Boston, Mass.-K.M.O.P.Q.R.T.V.X
  Land-Air Inc., 201 N. Wells St., Chicago 6, III.-A.B.H
  Lane Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.-A.B.K.L.N.O.R.S.X
  Lear, I.C., 3171 S. Bundy Dr., Santa Monica, Calif.-A.B.C.D.E.N.K.R.S.U.Y.W.X.Y
  Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.-D.E
  Leland Electric 8, 051 Webster St., Dayton 1, Ohio-D.E.F
  Librascope, Inc., 808 Western Ave., Glendale 1, Calif.-T.
  Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.-K.O.P.Q.T.U.Y.Z.AB

- Librascope, Inc., 808 Western Ave., Glendale 1, Calif.—T
  Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.—K,O,P,Q,T,U,V,Z,AB
  Lockheed Aircraft, Burbank, Calif.—B,Q
  Lockheed Aircraft, Burbank, Calif.—BQ
  Lockheed Aircraft, Systems Div., Lockheed Aircraft Corp., Van Nuys, Calif.—W
  Loral Electronics Corp., 794 E. 140th St., New York 64, N.Y.—O,Q
  Lord Mfg. Co., 1535 W. 12th St., Erie, Pa.—J
  L & O Research & Devel. Corp., 134 N. Wayne Ave., Wayne, Pa.—AA
  McColpin-Christie Corp., 3410 W. 67 St., Los Angeles 43, Calif.—D, Brownville Ave., Ipswich, Mass.—A,B
  Magnasyne Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.—GH,I
  Magnavox Co., Fort Wayne 4, Ind.—A,B,N,O, Q,R,T,X
  Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 56 N.Y.—D F

- Q.R.T.X Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N.Y.-D.F Magnetic Instrument Co., 82 Main St., W. Orange, N. J.-D.E.F.R.U.V.X Magnetics Research Co., 142 King St., Chap-paqua, N.Y.-T Makepeace Co., D. E., Div. Union Plate & Wire, Pine & Dunham Sts., Attleboro, Mass. -A
- Malkin-Illion Co., 396 Coit St., Irvington 11,

- -A Malkin-Illion Co., 396 Coit St., Irvington 11, N.J.-J Mallory & Co., Indianapolis 6, Ind.-D.E Marchand Electronic Labs., 255 Mill St. Byram, Conn.-B,O,P,Q Marine View Electronics. 744 E. 138 St., New York 54. N.Y.-D,N,R Marion Electrical Instrument Co., Manchester, N.H.-O.S Mark Electronics, Inc., 250 Glenwood Ave.. Bloomfield, N.J.-F,S Martin Co., Glenn L., Baltimore 3, Md.-S Maryland Electronic Mfg. Corp., College Park 24. Md.-M,P,R Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.-S Mathis Tower & Equip Co., 2200 E. Washing-ton St., East Peoria, III.-A Maurer Inc., J. A., 37-01 31 St., Long Island City 1, N.Y.-G,S Maxson Corp., W. I., 460 W. 34 St., New York 1, N.Y.-B,D,F,O,P,S,T,U,V,W,X,Y MB Mfg. Co., 1060 State St., New Haven 11, Conn.-J Melpar Inc., 452 Swann Ave., Alexandria, Vo.-AD
- Conn.—J elpar Inc., 452 Swann Ave., Alexandria,
- Conn.-J Melpar Inc., 452 Swann Ave., Alexandria, Va.-An Mercurv Mfg. Corp., 45 Brown St., Buffalo 11, N. Y.-D Meridian Metalcra<sup>4</sup>t. Inc., 8739 Millergrove Ave., Whittier, Calif.-A Metal Fabricators Corp., 73 Pond St., Wal-tham 54, Mass.-M Metronics, Inc., U.S. Route 130, Burlington, N.J.-A,V Metrotyne Corp., 6100 Archer Ave., Summit, III.-D

- Metrotyne Corp., 6100 Archer Ave., Summit, III.-D Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, III.-D.F.N.R.X Midwestern Instruments, 41 & Sheridan Rd., Tulsa. Okla.-G.S Miller Co.. Sanford, 691 Bedford Ave., Brook-lyn 6, N.Y.-D Miller Instruments Inc., Wm., 325 N. Hal-stead Ave., Pasadena 8, Calif.-D,G,H Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S., Minneapolis 8, Minn.-S,U.V.Y Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.-J Mitchell Industries, Box 17, Mineral Wells.
- Mitchell Industries, Box 17. Mineral Wells. Tex.--X
- Mitchell Industries, Don A., Tex.--X
  Model Eng'g. & Mfg. Co., 50 Frederick St., Huntington, Ind.--R,X
  Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N. Y.--H,I
  Moloney Electric Co., 5390 Bircher Blvd., St. Louis 20, Mo.--D,E,F
  Moran Instrument Corp., 170 E. Orange Grove Ave., Pasadena 3, Calif.-Q,AB

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- Motoresearch Co., 1600 Junction Ave., Racine, Wis.-F Motor Generator Corp., Hobart Sq., Troy, Ohio-D.F

- Motor Generator Corp., Hooart Sq., Hos, Ohio-D.F
  Mountain Systems, Inc., 864 Franklin Ave., Thornwood, N.Y.-T
  Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.-W
  Nater Corp., 11777 Santa Monica Blvd., W. Los Angeles 25, Calif.-V,Y
  National Aeronautical Corp., 180 S. Main St., Ambler, Pa.-B,O.P,R,X,Z
  National Instrument Co., 23 E. 26th St., New York 10, N.Y.-O
  NEMS-Clarke, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.-W,X
  Neutronic Associates, 87-16 116 St., Rich-mond Hill 18, N.Y.-D,E,F
  Newton Co., 55 Elm St., Manchester, Conn.-O,T
  Uthela Deducta Co. 205 W. Main St. Magnes

O.T Nichols Products Co., 325 W. Main St., Moorestown, N.J.-A Norden-Ketay Corp., Wiley St., Milford, Conn. -B,L,O.Q.S,T,U,V,W,Y

-B.L.O.Q.S.T.U.V.W.Y North American Instruments. Inc., 2420 Lake Ave., Altadena, Calif.-H.T.W North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.-U Northeastern Eng's Inc., S. Bedford St., Man-chester, N.H.-V.W Northrop Aircraft Inc., Hawthorne, Calif. -S

chester, N.H.--V,W Northrop Aircraft Inc., Hawthorne, Calif. --S Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15, Calif.--B Olympic Radio & Television Inc., 34-01 38th we., Long Island City 1, N.Y.--B,O,Q.R,X Opad Electric Co., 69 Murray St., New York 7, N.Y.--D,E,F Ot's Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn 5, N.Y.--N,Q.T,U,V,W.AD Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.--D,K,O,P,Q,R, T.V,W.X Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.-SU,V,Y Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.--N Parsons Co., Ralph M., 617 S. Olive St., Los Angeles 14, Calif.--T,W.Z,AB Peer, Inc., 1200 Milton St., Benton Harbor, Mich.--A,D,M.N,P.R,S.U,V,X Peirce Wire Recorder Corp., 5900 N. North-west Hwy., Chicago 31, III.--H Perkin Eng'g. Corp., 345 Kansas St., El Se-gundo, Calif.-D,E,F Permoflux Corp., 4900 W. Grand Ave., Chicago 39, III--D,N Peschel Electronics Inc., 13 Garden St., New Rochelle, N.Y.-D,E Peters Co., O,S.--1353 N.Y. Ave., N.E., Wash-ington 2, D.C.-R,X Petroff, Peter A., 127 Water Ct., New York 5, N. Y.--J,K.M Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.-D,F,L,O,T,U,V,W,Z,AB Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.-B

Malibu, Calif.—O
Picco Instruments & Controls Corn., 3593 Hayden Ave., Culver City, Calif.—S.T.U.V.W
Pioneer Electric & Research Corn., 743 Circle Ave., Forest Park, Ill.—D.R.X
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—K.M.Q.R.T.X
Plvmouth Electronics Corn., 50 Kingsbury St., Worcester. Mass.—D.F.M
Polarad Electronics Corn., 43-20 34 St., Long Island City 1, N.Y.—O,P.R.X
Polytechnic Research & Devel. Co., 202 Til-lary St., Brooklyn 1, N.Y.—D,Z
Poertable Electric Tools, 200 W. 83 St., Chicago 20, Ill.—D.F
Power Supplies, 1005 Olive St. Highbard W

Power Supplies, 1005 Olive St., Highland, III. --D.E.F

-D,E,F Precise Measurements Co., 942 Kings Hwy., Brooklyn 23, N.Y.-D Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.-A.D,E Premier Instrument Corn., 52 W. Houston St., New York 12, N.Y.-K.Q Press Wireless Labs., Inc., 25 Prospect Pl., W. Newton 65, Mass.-B,H,P,Q,R,X,AA,AB Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-A,B Q-Line Mfg. Corn., 1562 61 St., Brooklyn 19

Beach 13, Calif.—A,B Q-Line M<sup>4</sup>C, Corp., 1562 61 St., Brooklyn 19, N. Y.—A,B Qutronic Transformer Corp., 525 Broadway, New York 12, N.Y.—D,S Radalab, Inc., 87-17 124 St., Richmond Hill 18, N.Y.—A,B,C.K,L,M.N,O,P,Q,R,T,U.V,W, X,Z,AA,AB Radar-Electronics, Los 200, W 20, 57

Radar-Electronics, Inc., 229 W. 28 St., New York 30, N.Y.--N Radiation, Inc., Box Q, Melbourne, Fla.--G,H Radionics, Inc., 1040 N. York Rd., Towson 4, Md.--F

Radio Sonic Corp., Plainfield, N.J.—A.B.O.P.Q Rea Co., J. B., 1723 Cloverfield Blvd., Santa Monica, Calif.—T

Ready-Power Co., 11231 Freud Ave., Detroit Reeves Instrument Corp., 215 E. 91st St., New York 28, N.Y.--U.V.Y Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.-D,E,S

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Remler Co., 2101 Bryant St., San Francisco 10, Calif.-N.R.X Renublic Aviation Corp., Farmingdale, L. I., N. Y. -S

Revere Camera Co., 320 E. 21 St., Chicago, Ill.

-H

-H -H Revere Corp. of America, 845 N. Colony Rd., Wallingford. Conn.-S Rich Electronics. Inc., 212 N.W. 8th St., Miami 36. Fla.-D.S.W Ripley Co.. Middletown. Conn.-N Robinson Aviation, Inc., Teterboro, N.J.-J Rocsch Co., D. J., 2200 S. Figueroa St., Los Angeles 7, Calif.-B.J.N Roflan Co., Topsfield, Mass.-B Rosen Engineering Products. Raymond, 32 & Walnut Sts., Philadelphia 4, Pa.-V.W Rowe Industries. 1702 Wayne St., Toledo 9, Ohio-B.L.V.W Royal Electric. Inc., P.O. Box 823, Dayton 1, Ohio-D.E.F. Ryan Aeronautical Lindberg Field. San Diego, Calif. Safe Flight Instrument Corp., 4 Water St.,

Ohio-D.E.F.
Ryan Aeronautical Lindberg Field, San Diego, Calif.
Safe Flight Instrument Corp., 4 Water St., White Plains, N.Y.-H
Sanders Associates, 137 Canal St., Nashua, N.H.-A.B.W.Y
Sangamo Electric Co., 9 & Converse, Spring-field, III.-D.F
Schutter Mfg. Co., Carl W., 80 E. Montauk Highway, Lindenhurst, N.Y.-Q
Schwien Eng'g. Co., 16217 Lindbergh St., Van Nuys, Calif.-S.U.V.X
Scientific Associates, 580 Virginia Ave., N.E., Atlanta. Ga.-A
Scientific Specialties Corp., Snow & Union Sts.. Boston 35, Mass.-D
Scott Radio Labs., Inc., Plymouth, Ind.-Q.R.X
Seaboard Electric Corp., 701 Kennedy Bldg., Tulsa. Okla.-O.P
Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35. N.Y.-V
Servo Corp. of Amer., 20-20 Jericho Tpke., New Hyde Park. N.Y.-NO,T.W
Serva Electronic Corp., 1050 Brittan Ave., Garden City. N.Y.-D.F.S
Sierra Electronic Corp., 1050 Brittan Ave., Santee Calif.-Q
Signal Equip. Co., 2706 3 Ave., Seattle 1. Wash.-D
Sillcocks-Miller Co., 10 W. Parker Ave., Maple-wood, N.J.-T

Wash.-D Sillcocks-Miller Co., 10 W. Parker Ave., Maple-wood, N.J.-T Simpson Mfg. Co., Mark, 32-28 49 St., Long Island City 3, N. Y.-N Skiatron Electronics & TV Corp., 30 E. 10 St., New York 3, N.Y.--K,L,M.O,P.T,U,V,Z,AA, A 12

Simpson Mfg. Co., Mark, 32-28 49 St., Long Island City 3, N. Y.-N
Skiatron Electronics & TV Corp., 30 E. 10 St., New York 3, N.Y.-K,L,M.O.P.T,U,V.Z,AA, AB
Slate & Assoc.. Claude C., 11370 W. Olympic Blvd., Los Anxeles 64. Calif.-B.C.Q.R.S.V
Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.-D,F
Specialtv Assembling Co., 79 Clifton Pl., Brooklyn 38. N.Y.-B.Q.X
Sperry Gyroscope. Great Neck. N.Y.-O.Q.S.T. U.V.Y.AB
Spincraft, Inc., 4122 W. State St., Milwaukee 8, Wisc.-Q
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers. N.Y.-D.F.S
Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38. Calif.-H.I
Stanford Labs., 1661 Broadway, Redwood City, Calif.-Q.AB
Stavid Eng's., Highway 22, Plainfield, N.J.-A, B.D.E.F.H.O.Q.R.S.T.V.W.X.Z.AB
Sterling Mfg. Co., 7201 Wentworth Ave., Cleveland 2, Ohio-S
Stratford Pen Corp., 44 W. 28th St., New York. N.Y.-N.O.S.U
Strong Electric Co., 87 City Park Ave., Toledo 2, Ohio-D
Summers Gyroscope Co., 2328 Broadway, Santa Monica, Calif.-V.W.X.Y
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-R.T.X
Tech Laboratories Inc., Bergen & Edsall Blvds., Palisedes Park. N. J.-DE
Technical Anpliance Corp., 100 Fenimore Rd., Mamaroneck. N.Y.-C.P.R.X
Telechrome. Inc., 88 Merrick Rd., Amityville, L.I. N.Y.-G.R.V.W.X.AA
Telechrome. Inc., 88 Merrick Rd., Amityville, L.I. N.Y.-G.R.V.W.X.AA
Telechrome. Inc., 88 Merrick Rd., Amityville, L.I. N.Y.-G.R.V.W.X.AA
Teleohon'es Corp., 1440 Broadway. New York 18, N.Y.-M.B.Z.
Telenonica Corp., 384 Merrick Rd., Amityville, L.I. N.Y.-G.R.V.W.X.AA
Teleohon'es Corp., Park Ave., Huntington, N.Y.-N.R.X
Teleohon'es Corp., Park Ave., Huntington, N.Y.-N.R.X
Teleohon'es Corp., 36 Grove St., New Canaan. Conn.-Q
Tele-Systems, Inc., 6442 Santa Monica Blvd., Los Anveles 38. Calif.-N

Tele-System<sup>4</sup>, Inc., 644? Santa Monica Blvd., Los Angeles 38. Calif.—N Televiso Corp., 1415 Golf Rd., Des Plaines, 111. —L.O.P.Q.R.X.Z.AB

Terado Co., 1068 Raymond Ave., St. Paul 14, Minn.-D

Texas Instruments. Inc., 6000 Lemmon Ave., Dallas 9, Texas-Q

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TV Labs., 5045 W. Lake, Chicago 44, Ill.—B Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N.J.—A Times Facsimile Corp., 540 W. 58 St. New York 19. N.Y.—AA Transelectric Mfg. Co., 58 Hopewell Rd., Ox-ford, Pa.—N Transformer Technicians Inc., 2608 N. Cicero Ave. Chicago 39, Ill.—F Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N. Y.—K.M.N.O.Q.R.T.U.V. W.X T.V. Products Co., 152 Sandford St., Brook-

T-V Products Co., 152 Sandford St., Brook-lyn 5, N.Y.-A,B Ucinite Co., 459 Watertown St., Newtonville. Mass.-J

T-V Products Co., 152 Sandford St., Brooklyn 5, N.Y.-A,B
Ucinite Co., 459 Watertown St., Newtonville. Mass.-J
Ultrasonic Corp., 640 Memorial Dr., Cambridge, Mass.-F,Q
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-D.J.L.Q.R.X
Union Switch & Signal, Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.-P.AB
United Control Corp., 4540 Union Bay Pl., Seattle 5, Wash.-S
United Mfg. Co., Div. W. L. Maxson Corp., 41 Hair St., Hamden 14, Conn.-D.F
United Scientific Labs., 35-15 37 Ave., Long Island City., N.Y.-D.Q
U. S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.-D
Univox Corp., 102 Warren St., N.Y. 7, N.Y.-A,B.J.S
Vapor Heating Corp., 80 E. Jackson, Chicago 4, III.-S
Varo Mfg. Co., 2201 Walnut St., Garland Tex.-K.R.X.AB
Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-F.G.M.O.Q.T,U.Z
Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 12, Ohio-D
Videon Electronic Corp., 902 E. Michigan St., Indianapolis 2, Ind.-R.X
Virginia Electronics Co., River R.I. at B & Q R.R.. Washington 16, D.C.-A,N.S.X
Waco, Inc., 2032 Broadway, Santa Monica, Cali-D
Waldorf Instrument Corp., Park Ave., Hunting Labs., 37 Hurley St., Cambridge 41, Mass.-O,P.T.U.V
Waldorf Instrument Corp., Sinte Monica, Cali-D
Watham Screw Co., 77 Rumford Ave., Waltham 54, Mass.-O,P.T.U.V
Warren Corp., S. Irvine St., Warren, Pa.-J
Welback Corp., S. Irvine St., Warren, Pa.-J

Pa.-J
Welch Electric Co., 1221 Wade St., Cincinnati
14, Ohio-D,F,S,U
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, Ill.-Q.R.S,U,X

West Coast Electronics Co.. 5873 W. Jefferson Blvd., Los Angeles 16, Calif.—N,O,P.R,T,V, W,X,AB

Western Gear, Electro Products Div., 132 W. Colorado St., Pasadena, Calif.—F

Western Sound & Electric Lab., 805 S. 5th St., Milwaukee 4. Wisc.--N

Milwaukee 4. Wisc.--N Westinghouse Electric Corp., Electronics Div., 2519 Willkens Ave., Baltimore 3, Md.-Q.R.V Westinghouse Electric Corp., Gateway Center, 401 Liberty Ave., Pittsburgh 30, Pa.--P,Q.V Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.--K,O

Weston Labs., Inc., Box 407, Littleton, Mass.

Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.—N White Dental Mfg. Co., S.S., 10 E. 40 St., New York 16, N.Y.—S.U

White Industries Inc., 421 W. 54th St., New York 19, N.Y.—A.B.O.P.Q Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.—S

Wilcox Electric Co., 1400 Chestnut St., Kansas City 27, Mo.-B.D.K,M.O.P.Q.R,S.T,U.X Wilmar Mfg. Co., 2715 E. 14 St., Kansas City 27, Mo.-A.R.X

Wilson & Co., G. C., 1950 8 Ave., Huntington, W. Va.--V

W. Va.-V
Wincharger Corp., E. 7th & Division Sts., Sioux City 2, Iowa-D,E
Wind Turbine Co., E. Market St. & Penna. R.R., W. Chester, Pa.-A.B
Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.-B,D,E,F,G,T
Machine Products 5100 St. Clair St.

Z & W Machine Products. 5100 St. Clair St., Cleveland 3, Ohio-A.B.C

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10-BATTERIES, CHARGERS & ACCESSORIES

Adapters, batteryA
Batteries, cadmium
Batteries, dry cellD
Batteries, hearing aidE
Batteries, mercuryF
Batteries, nickel alkalineG
Batteries, silver
Batteries, standard cellH
Batteries, storage, fixedI
Batteries, storage, non-spillJ
Batteries, storage, portableK
Batteries, transistorW
Battery chargers, electronic tube
rectified
Battery chargers, gas engine
drivenM
Battery chargers, hand crankedN
Battery chargers, metallic rectified O
Battery chargers, motor generator P
Battery chargers, portableQ
Battery chargers, vibrator rectified R
Battery chargers, wind-driven \$
Battery charging regulatorsX
TestersU

Accurate Eng'z. Co., 2005 Blue Island Ave., Chicago 8, Ill.—L.O
Acme Battery Corp., 59 Pearl St., Brooklyn 1, N.Y.—D.E,W
Acme Electroic Corp., Cuba, N.Y.—O
Acme Electronics, Inc., (Sub. Aerovox Corp.), 2724 Peck Rd., Monrovia, Calif.—O
Advance Instrument Corp., 1709 F. St., Bel-mar, N.J.—L,O,X
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.—J.S
Airpax Products Co., Middle River, Baltimore 20, Md.—O,R
Allied Int'l Inc., 230 Park Ave., New York 17, N.Y.—D.F.M.O
American Rectifier Corp., 95 Lafayette St., New York 13, N.Y.—O
American Television & Radio Co., 300 E. 4 St., St. Paul 1, Minn.—O,Q.R
Ameglo Corp., 2037 W. Division St., Chicago 22, Ill.—O
Assembly Products, Inc., Chesterland 21, Ohio

Assembly Products, Inc., Chesterland 21, Ohio

III.-O
Assembly Products, Inc., Chesterland 21, Ohio
-X
Auto-Test, Inc., 600 S. Michigan Ave., Chicago
5, III.-U
Bogue Electric Mfg. Co.. 52 Iowa Ave., Paterson 3, N.J.-L.M.O.P.Q.X
Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles 4. Calif.-O,U
Bright Star Industries, 600 Getty Ave., Clifton, N.J.-D
Burgess Battery Co., Freeport, III.-D.E.W
Chatham Electronics, Div., Gera Corp., 630 W.
Mt. Pleasant Ave., Livingston. N.J.-L
Conn, Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.-O
Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., S. Plainfield, N.J.-O.Q
Curtis Development & Mfg. Co., 3218 N. 33
St., Milwaukee 16, Wis.-X
Delco-Remy Div., General Motors Corp. P. O. Box 640, Anderson, Ind.-K
Dormitzer Electric Co., 942 E. Larned St., Detroit 7, Mich.-Q.X
Eagle-Picher Co., American Bldg., Cincinnati 1, Ohio-D.I.J.K
Eastern Smelting & Refining Corp., 109 W. Brookline St., Boston, Mass.-F,V
Ectro, Inc., 425 S. Sandusky St., Delaware, Ohio-J.K.Q
Edko Electroics Eng's., 202 Grand St., Brooklyn 11, N.Y.-L.O.R
Elecor Regulator Corp., Pearl St., Norwalk, Con.-X
Electric Regulator Corp., Pearl St., Norwalk, Con.-X

Angeles 3. Calif.—A Electric Regulator Corp., Pearl St., Norwalk. Conn.—X Electric Storage Battery Co., 42 S 15 St., Phila. 2, Pa..—I.J.K.O ElectronMechanical Instrument Co., 812 Chest-nut St., Perkesie, Pa.—U Electronic Batteries, Inc., 34 35th St., Brooklyn 32, N.Y..—J K Electronic Devices, Inc., 429 12 St., Brooklyn 15, N.Y.—O Electronic raft. Inc., 27 Milburn St., Bronx-ville 8, N Y.—O Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.—O Electronic Rectifier Co., 1462 E. Main St., Rochester 2, N.Y.—U Electronic Rectifier Co., 308 Canal St., New York, N.Y.—U Electro-Tech Equipment Co., 308 Canal St., New York, N.Y.—U Electro-Technic Products, 4602 Montrose Ave., Chicago 41, Ill.—O,Q

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Elgin Electronic Corp., P.O. Box 13, Bluffton, Ind.-O

- Elgin Electronic Corp., P.O. Box 13, Bluffton, Ind.-O
  Elly Electronics Corp., 22-02 Raphael St., Fair-lawn, N.J.- X
  El Mec Laboratories, 730 Boulevard, Kenil-worth, N.J.-L,O,U
  Engineered Magnetics, 11812 Tcale St., Culver City, Calif.- O
  Epco Products Inc., 2500 Atlantic Ave., Brook-lyn 7, N.Y.-O.R
  Ernst & Affiliates, W. Arthur, 825 Hayes Ave., W. Racine, Wisc.-M.N.P.Q
  Fansteel Metallurgical Corp., 2200 Sheridan Rd., N. Chicago, III.-O
  Federal Electric Corp., 6446 Santa Monica Blvd., Los Angeles 38, Calif.-O
  Federal Telephone & Radio Co. Div., of IT&T, 100 Kingsland Rd., Clifton, N.J.-O,Q
  France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio-L,O,R
  Galvanic Products Corp., 110 E. Hawthorne Ave., Valley Stream, N.Y.,-J.K.O
  General Armature & Mfg. Co., P.O. Box 370, Lock Haven, Pa.-P.S
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-A
  General Dry Batteries, 13000 Athens Ave., Cleveland 7, Ohio-D.E.F.W

- General Coment Mfg. Co., 919 Taylor Ave., Rockford, 111.—A General Dry Batteries, 13000 Athens Ave., Cleveland 7, Ohio—D,E,F,W General Electric Co., Apparatus Div., 1 River Rd., Scheneetady 5, N.Y.—L,O,P,Q General Electric Co., Germanium Products Div., Electronics Park, Syracuse, N.Y.—W Georator Corp., Manassas, Va.—M,O,Q Gyro Electronics Co., 325 Canal St., New York 13, N.Y.—O J Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.—S,X Hallett Mfg. Co., 1601 W. Florence Ave., Ingle-wood, Calif.—M,P Hercules' Elec. Mach'y & Equip. Co., 1442 E. Wash. Blvd., Los Angeles 21, Calif.—M,P Hertner Electric Co., 471 Cortlandt St., Belle-ville 9, N.J.—L,O,Q,U H&H Products Mfg. Co.. P. O. Box 2333, Terminal Annex, Los Angeles 54, Calif.— M,P,Q Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland 8, Ohio—U Hufford Machine Works. Electronics Division, 2201 Carmelina Ave., Los Angeles 64, Calif.— O Hull & Co., R. O., 1300 Parsons St., Rocky

- 2201 Carmelina Ave., Los Angeles 64, Calif. -0 Hull & Co., R. O., 1300 Parsons St., Rocky River, Ohio-O Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-R.U Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.-B.D.E.G.I.J.K.V.W Kahl Scientific Instrument Corp., P.O. Box 1166, El Calon, Calif.-U Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-O.Q Katolight Corp., First Ave., at Chestnut, Man-kato, Minn. M Kellogg Switchboard & Supply Co., 79 W. Mon-roe St., Chicago 3, 11.-D.I.O Larson Instrument Co., 24 Orchard St., Tarrytown, N.Y.-U Lee Electronic Labs., Inc., 233 Dudley St., Boston 19, Mass.-U Linear Equipment Labs., 380 Oak St., Copi-ague, N.Y. -K.V Lorain Products Corp., 1122 F St., Lorain Ohio-O Lyzero 1401 Clinton St., Hoboken, N.J.-O

- Lorain Products Corp., 1122 F St., Lorain Ohio.-O
  Lysco. 1401 Clinton St., Hoboken, N.J.-O
  Mackay Radio and Telegraph Co., 345 Hudson St., New York, N.Y.-G.L.O
  Mag.-Electric Products, 12822 S, Yukon Ave., Hawthorne, Calif.-O.X
  Magnavox Co., Fort Wayne 4, Ind.-F
  Magnavox Co., Fort Wayne 4, Ind.-F
  Magnetic Instrument Co., 82 Main St., W. Ornnre, N.J.-L,O,P
  Mallory & Co., P. R., 3029 E. Washington St., Indianapolis 6, Ind.-D,E,F,W
  Marathon Battery Co., 840 Henrietta St., Wausau, Wisc.-D,E,W
  Marither View Eelectronics, 744 E. 138 St., New York 54, N.Y.-O
  McColpin-Christie Corp., 3410 W. 67 St., Los Angeles 43, Calif.-L,O,Q,U
  Miller Co., Sanford, 691 Bedford Ave., Brooklyn 5, N.Y.-O
  Model Rectifier Corp., 557 Rogers Ave., Brooklyn 25, N.Y.-O
  Motorresearch Co., 1600 Junction Ave., Ra
- Motorresearch Co., 1600 Junction Ave., Ra
- National Carbon Co., 30 E. 42 St., New York 17, N.Y.-D.E.F.W
- 17. N.Y.-D.E.F.W
  New Jersey Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J.-L.O.Q
  Nickel Cadmium Battery Corp., Pleasant St., Easthampton, Mass.-B.G.I.J.K
  Olin Industries, 275 Winchester Ave., New Haven, Conn.-D.E
  Onan & Sons Inc., D. W., University Ave., S.E. at 25, Minneapolis 14, Minn.-M
  Opad Electric Co., 69 Murray St., New York 7, N.Y.-L.O.U
  Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-O

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Patterson. Moos, Div. Universal Winding Co., 90-28 Van Wyck Expressway, Jamaica 18, N.Y.--W Peer, Inc., 1200 Milton St., Benton Harbor, Mich.--L,O,X Perkins Eng'g. Corp., 345 Kansas St., El Se-guado Calif.--O

- Perkins Eng'g. Corp., 345 Kansas St., El Segundo, Calif.--O
  Perma-Power Co., 4727 N. Damen Ave., Chicago 25, 111.--O
  Peschel Electronics. Inc., 13 Garden St., New Rochelle, N.Y.-O
  Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.-D

- Rochelle, N.Y.-O
  Philco Corp., C & Tioga Sts., Philadelphia 34, Pu.-D
  Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, II.-M,P,Q
  Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-A,M
  Power Equipment Co., 5740 Nevada, E. Detroit 34, Mich.-L.O
  Power Supplies, 1005 Olive St., Highland. III.-L.O.Q.R
  Power Supplies, 1005 Olive St., Highland.
  HI.-L.O.Q.R
  Power Transformer Co., 532 Hulberry St., Newark 5, N.J.-O
  Precision Associates. 354 Cumberland St., Brooklyn 17, N.Y.-L,O,U
  Radiart Corp., 3455 Vega Ave., Cleveland 13. Ohio-R
  Radio City Products Co., Centre & Glendale Sts., Easton, Pa.-U
  Radio City Products Co., Centre & Glendale Sts., Easton, Pa.-U
  Radio City Products Co., 2881 Middletown Rd., Bronx 61, N.Y.-O
  Radio Electric Co., 2881 Middletown Rd., Bronx 61, N.Y.-O
  Ray-O-Vac Co., 212 E. Washington Ave., Mad-ison 10, Wisc.-D.E.F.W
  Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.-X
  Reading Batteries, P.O. Box 916, Reading, Pa. -D,I,J.K
  Readif.-L,O,Q,U,X
  Kateries 21 Calif.-L,O,Q,U,X

- Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.—M Rectifier Eng'k. Co., 1803 E. 7 St., Los Ange-les 21 Calif.—L,O,Q,U,X Regulator Eng'g. & Devel. Co., 11545 W. Jefferson Blvd., Culver City, Calif.—O Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.—X Richardson-Allen Corp., 116-15 15 Ave., College Point. N.Y.—L,O Rich Electronics, 212 N.W. 8 Ave., Miami 36, Fla.—O

- Rich Electronics, 212 R. W. & Atter, Lander, Fla.-O Rollins Electronics Corp., 117 Schley Ave., Lewes, Dela.-O Rowe Industries, 1702 Wayne St., Toledo 9.
- Rollins Electronics Corp., 117 Schley Ave., Lewes, Dela.-O
  Rowe Industries, 1702 Wayne St., Toledo 9. Ohio-L
  Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.-H
  Sangamo Electric Co., 9 & Converse, Spring-field, 11.-P
  Schauer Mfg. Co., 4500 Alpine Ave., Cincin-nati 36, Ohio-O,Q
  Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.-O
  Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.-H
  Shurite Meters, 61 Hamilton St., New Hayen 8, Conn.-U
  Smith-Meeker Eng'g. Co., 157 Chambers St., New York 7, N.Y.-P
  Sontone Corp., Elmsford, N.Y.-B.G.I.J.K
  Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.-L,O
  S. O. S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-A.D.W
  Specialty Battery Co., 212 E. Washington Ave., Madison 10, Wisc.-D.H.I.J.K
  Standard Electric Time Co., 119 Logan St., Sprinkfield, Mass.-B.I.J.K.O
  Sun Electric & Machine Works, 17 S. Jeffer-son St., Chicago 6, 11.-L.O,Q
  Thompson Clock Co., H. C., 38 Federal St., Bristol. Conn.-A.D.E.F.,G.H.I.J.KO
  Trime, Inc., 400 W. Lake St., Libertyville, Ill. -E
  Triwec Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, 111.-Q

- Trimm, Inc., 400 W. Lake St., Infertyville, Ill. —E
  Triwec Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, Ill.-Q
  TV Specialty Co., 350 W. 31 St., New York 1, N.Y.-Q.V
  Universal Motor Co., 186 Harrison St., Osh-kosh, Wisc.-M
  U.S. Electrie Mfg. Corp., 222 W. 14 St., New York 11, N.Y.-D.H
  U.S. Rubber Corp., 420 Nebraska St., Osh-kosh, Wisc.-M.Q
  U.S. Rubber Co., 1230 Avenue Of The Amer-icas, New York 20, N.Y.-A
  Vacolite Co., 3003 N. Henderson St., Dallas 6, Texas-E,F
  Waco. Inc., 2032 Broadway, Santa Monica.

- Texas—E,F Waco. Inc., 2032 Broadway, Santa Monica, Calif.—L,O Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—O,Q Wildberg Bros., 742 Market St., San Francisco 2, Calif.—F,V Willard Storage Battery Co., 1220 Huron Rd., Cleveland, Ohio—D,J,K,O,Q,U Wincharger Corp., E. 7 & Division Sts., Sioux City 2, Iowa—S Yardney Electric Corp., 105 Chambers St., New York 7, N.Y.—I,J,K,O,Q,V

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### 11-BOOKS AND DATA SERVICE

Manuals, engineering .....A Manuals, test equipment .....C Manuals, tube .....D Reference books .....E Reports & digests .....F Text Books, electronic .....G

Adelphi Co., 33 Key St., Eastport, Me.-E,F Allied Radio Corp., 100 N. Western Ave., Chi-cago 80, III.-E
American Electronics Co., 1203 Bryant Ave., New York 59, N.Y.-A,E,G
Amplex Div., Chrysler Corp., P.O. Box 2718, Detroit 31, Mich.-A
Ark Eng'g. Co., 431 W. Tabor Rd., Philadel-phia 20, Pa.-A
Associated Electronics Co., 132 Nassau St., New York 7, N.Y.-A,B,C,D,E,F
Audel & Co., Theo., 49 W. 23 St., New York 10, N.Y.-A,E,G
Berkshire Laboratories, 586 Bank Village, Greenville, N.H.-A
Brooks Radio & TV Corp., 84 Vesey St., New York 7, N.Y.-A
Burness Battery Co., Freeport, III.-A
Caldwell-Clements Manuals Corp., 480 Lexing-ton Ave., New York 17, N.Y.-A,B,C,D,E,G
Capehart-Farnsworth Co., 3700 E. Pontiac. Ft. Wayne, Ind.-E
Centralab Div., Globe Union. Inc., 900 E.
Keefe Ave., Milwaukee 1, Wisc.-E
Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.-A,B,C
Cisin, Harry G., Amagansett, L.I., N.Y.--B,E,G
Dasstrom Pacific Corp., 3030 Nebraska Ave.,

B.E.G Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica. Calif.—A.B.C Delaware Optical Labs., 36 Williams St., Lans-downe. Pa.—A Delco-Remy Div., General Motors Corp., P. O. Box 640. Anderson. Ind.—B Dement Labs., New Fliedner Bldg., Portland 5, Ore.—F

5. Ore.—F
Dover Publications Inc., 1780 Broadway, New York, N.Y.—F
Dubrow Devel. Co., 235 Penn St., Burlington, N.J.—A.B.C
Editors & Engineers, Ltd., Summerland, Calif.—D, E.G
Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.—D
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—A.C
Eletero-Search, 4337 N. 5 St., Philadelphia 40, Pa.—A.B.C
Ford Instrument Co., Div. Sperry Corp., 31-10
Thomson Ave., Long Island City 1, N.Y.—A.B.C
Frederick Research Corp., 4630 Montgomery

A,B,C Frederick Research Corp., 4630 Montgomery Ave., Bethesda 14, Md,-C,E General Electric Co., Tube Dept., 1 River Rd., Scheneetady 5, N.Y.-D General Electric Co., Broadcast Equip., Com-mercial Equip. Dept., Syracuse, N.Y.-E General Precision Lab., 63 Bedford Rd., Pleas-antville, N.Y.-A,B,C Harper & Bros., 49 E. 33 St., New York N.Y. -A,E Hickok Electrical Instruments Co., 10514 Du-pont Ave., Cleveland 8, Ohio.-F Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-A,C,F Kalın & Co., 541 Windsor St., Hartford 1, Conn.-C Kane Electronics Corp., 81 Willoughby St.,

Kalin & Co., 541 Windsor St., Hartford 1, Conn.--C
Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-A.B.C
Kann-Ellert Electronics, 9 S. Howad St., Baltimore 1, Md.--E
Lytle Engineering & Mfg. Co., 105 W. Monroe St., Chicago 3, Ill.-A.B.C.E.F.G
Macmillan Co., 60 5th Ave., New York 11, N.Y. -A.B.C.E
Marnetic Lastrument Co. 22 Main St. W.

Magnetic Instrument Co., 82 Main St., W. Orange, N.J.-A,B,C

Orange, N.J.-A,B,C
Marchand Electronic Labs., 255 Mill St., Byram, Conn.-F
Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.-A,B
Maurer, Inc., J. A., 37-01 31 St., Long Island City 1, N.Y.-A,B,C,F
McGraw-Hill Book Co., 330 W. 42 St., New York 36, N.Y.-A,E
Micro-Circuits Co., New Buffalo, Mich.-A
Opto Eng'g. Co., 3406 W. Washington Blvd., Los Angeles 18, Calif.-A,B
Pellegrini & Cudahy, 41 E. 5th St., New York 22, N.Y.-E
Pitman Publishing Corp., 2 W. 45th St., New

22, N.Y.-E
Pitman Publishing Corp., 2 W. 45th St., New York, N.Y.-E
Prentice-Hall Inc., 70 Fifth Ave., New York, N.Y.-A.E
Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.-D
Raytheon Mfg. Co., Receiving & Cathode Ray Tube Operation, 55 Chapel St., Newton 58, Mass.-D

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Cisin, H B.E.G

Ren Co., J. B., 1723 Cloverfield Blvd., Santa Monica, Calif.—A
Recker Co., Joseph, 140 Nassau St., New York 35, N.Y.—A,B,C
Rider Inc., John F., 480 Canal St., New York 13, N.Y.—B
Rinehart Books Inc., 232 Madison Ave., New York, N.Y.—E
Rocsch Co., D. J., 2200 S. Figueroa St., Los Angeles 7, Calif.—A,C
Sams & Co., Howard W., 2201 E. 46 St., Indianapolis 5, Ind.—B,F
Scientific Book Publishing Co., 530 S. 4 St., Vincennes, Ind.—E,G
Ser Co., 543 Lexington St., Waltham 54, Mass. —E,F,G
Sightmaster of Calif., Gillespie Airport,

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Vincennes, Ind.-E,G
Ser Co., 543 Lexington St., Waltham 54, Mass. -E,G
Sightmaster of Calif., Gillespie Airport, Santee, Calif.-F
Special Effects & Equip. Inc., 413 W. 54th St., N.Y. 19, N.Y.-F
Stavid Eng's: Inc., Highway 22, Plainfield, N.J.-A,B,C,F
Supreme Publications, 1760 Balsam Rd., High-land Park, III.-B,C,E,G
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-C,D,E
Technical Associates, 129 W. 52nd St., New York 19, N.Y.-B,C,F
Technical Publishing House, P.O. Box 61, Wal-tham 54, Mass.-D
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.-F
Tele-Systems, Inc., 6442 Santa Monica Blvd., Los Angeles 38, Calif.-A,B,C,F
Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.-A,B,C,D,E,F
TV Specialty Co., 350 W. 31 St., New York 1, N.Y.-A,B,C,D,E,G
United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.-A
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United Catalox Publishers, 110 Lafayette St., New York 18, N.Y.-E
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Van Nostrand Co., 250 4th Ave., New York, N.Y.-E,G
Wallace's Telaides, Inc., 136 Day St., Jamaica Plain 30, Mass.-BE
Wiley & Sons, Inc., John, 440 Fourth Ave., New York 16, N.Y.-E,G

#### 12-CABINETS, RACKS & PANELS

Audio-Radio Equip. CabinetsW
BinsA
BoxesQ
Boxes, storageR
Cabinet CoveringX
Cabinets, metalB
Cabinets, plasticC
Cabinets, woodD
Cases, portableE
ChassisF
ConsolesY
Dollies, equipmentAB
FeltG
Film finishesH
Housings, metalS
Instrument housings
Leather handlesJ
LeatheretteK
Mounting accessoriesL
Panels, fiber
Panels, metalM
Panels, plasticV
Plug-In Boards
RacksN
Slides, equipmentU
Speaker EnclosuresZ
Transformer CasesP
TraysO

Abalon Precision Mfg. Corp., 540 Casanova St., Bronx 59, N.Y.-B.E.F.I.M.N.Q.S.W.X
Ackerman Engravers, 458 Broadway, New York 13, N.Y.-M.T.V
Acme Folding Box Co., 149 E. 25 St., New York 10, N.Y.-Q
Acme Telectronix, Div. NEA Service, 1200 W. 3rd St., Cleveland 13, Ohio-B.F.M.N.O
Acme Tool & Specialties, 224 N. Loomis St., Chicago 7, 11.-F
Adler Communications Labs., 1 Le Fevre Lane, New Rochelle 1, N.Y.-N.W
Admiral Corp., Molded Products Div., P.O. Box 338, W. Chicago, III.-C.I.O.P.V.W.Z
Aernolite Electronics Corp., 507 26 St., Union City, N.J.-V
Aena Supply, 15 No. Hickory St., Arlington Heights, III.-M
Ainslie Electronic Products, Inc., 812 Quincy Ave., Quincy, Mass.-B.F
A. J. F. Industries, 852 Monroe St., Brooklyn 21, N.Y.-P

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Alden Systems Co., Alden Research Center, Westboro, Mass.-A,R
Allied Engraving & Stamping Co., 161 Ellicott St. Buffalo 3, N.Y.-M,T,V
Alloy Metalsmiths, Inc., 88 Commerce Rd., Cedar Grove, N.J.-B,F,M,O,P,S,Y
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.-M,N,W,Y,Z
Amelco, Inc., 2040 Colorado Ave., Santa Monica, Calif.-B,F,M.N
American Wood Working Co., 1682 N. Lowell Ave., Chicago 39, II.-D,E,L,M,N.O
Anchor Specialty Mfg. Co., 300 N. Industrial Ave., Teterboro, N.J.-B,C,D,E,M,Q,Y
Angle Genesee Corp., 107 Norris Dr., Rochester 10, N.Y.-D,F,I,W,Y,Z
Apex Coated Fabrics Co., 12 E. 22nd St., New York 10, N.Y.-H,K
Argos Products Co., 310 Main St., Genoa, III.-D,E,L,W,N,O
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Art-Lloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N.Y.-B,D,E,F,T,M,N,O
Auburn Mfg. Co., Stack St. & Pease Ave., Middletown, Conn.-G,J
Audio Equip. Co., 15749 Wyoming Ave., Detroit 38, Mich.-B
Autel Products Co., 120 Sutton St., Brocklyn 22, N.Y.-A,B,E,F,I,M,N,O,P,Q,R,S,W,Y
Bardwell & McAlister, 2950 N. Ontario St., Burbank, Calif.-B,Y
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Beck's Inc., 298 E. 5 St., St. Paul 1, Minn.-M,V
Bennett Mfg. Co., Alden, N.Y.-B,E,F,H,I,M, N,O,Q,R,SU,Y

-M.V Bennett Mfg. Co., Alden, N.Y.-B.E.F.H.I.M., N,O.Q.R.S.U.Y Bennett Products Mfg. Co., P.O. Box 1055, Palo Alto. Calif.-M Bestcraft Products Co., 626 Broadway, New York 12, N.Y.-T Bodner Industrics, Inc. 19 Railroad Ave.. New Rochelle, N.Y.-V Bowen & Co., 4712 Bethesda Ave.. Bethesda, Md.-F.S Boyle Metalcraft Corp. 150 Sullivan St. Brook:

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Clegg Laboratories. Inc., 142 S. Livingston Ave., Livingston, N.J.-J,L.M
Cline Electric Mfg. Co., 3405 W. 47 St., Chicago 32, II.-B
Color Plastics. Inc., 182 Beacon St., Boston 16, Mass.-C
Columbia Metal Box Co., 260 E. 143 St. New York 51, N.Y.-B,F,I,M,Q,R,S,Z

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Ill.—B,M
Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.—B,F,M.N,S
DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.—B,N,Y
Duotone Co., Locust St., Keyport, N.J.—Z
Electro Sound Corp., 115 Halleck St., Boston 20, Mass.—B,C,D,E,I,M,S,W,Z
Elgin Metalformers Corp., 901 N. Liberty St., Elgin, III.—B,F,I,M,N,S,W,Y
Elm Laba., 18 S. Broadway. Dobbs Ferry. N.Y. —M,S,V
Equipto Div., Aurora Equipment Co., Aurora, III.—B,N
Erie Resistor Corp., 644 W. 12th St., Erie. Pa.

III.—B,N Erie Resistor Corp., 644 W. 12th St., Erie, Pa. —C

Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.B.C.D.E.F.I.L.M.N.O.P.Q.R.S.T.U.V. W.X.Y.Z Falstrom Co., Passaic. N.J.-B.F.I.M.N.Q.S.Y Feay Co., Neal, 427 Olive St., Santa Barbara, Calif.-M Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-B,D,Q Feiner & Sons. Inc. P., 522 W. 45 St. New York City 36, N.Y.-B.E.F.I.L.M.N.Q.R.S.W. Y

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Fisher Co., Oscar. 1000 N. Division St., Peeks-kill, N.Y.-B.O
Flett Lab., 3711 Marshall Rd., Drexel Hill, Pa.-B.I
Franklin Electronics. 415 W. Pike St., Phila-delphia 40. Pa.-E.M.N
Gadzets, Inc., 3629 N. Dixie Dr., Dayton 5, Ohio-I.M
Gadzets, Inc., 3629 N. Dixie Dr., Dayton 5, Ohio-I.M
Gates Radio Co., 123 Hampshire St., Quincy, III.-B.D.E.F.M.N.S.W.Y
General Communications, P.O. Box 169. Fort Atkinson. Wisc.-B.F.M.N
General Electric Co., P.O. Box 1122, Syracuse, N.Y.-D
General Electric Co., Broadcast Equip., Com-mercial Electric Co., 75 N. 11 St., Brook-lyn 11, N.Y.-D.K.W
Gits Molding Corp., 4600 W. Huron St., Chicato 44, III.-C
Glass & Bro., Harry G., 10 Van Cortland Ave. E., New York 68, N.Y.-V
Gonset Co., 301 South Main St., Burbank, Calif.-B
Grant Pulley & Hdw. Corp., 31-85 Whitestone Pkwy., Flushing 54, N.Y.-U
Grant Pulley & Hdw. Corp., 31-85 Whitestone Pkwy., Flushing 54, N.Y.-U
Grant Pulley & Hdw. Corp., 31-85 Whitestone Pkwy., Flushing 54, N.Y.-U
Hallamore Mfg. Co., 2001 E. Artesia, Long Beech 5, Calif.-BF.M.N.Y.Y

Grinnan Fixture Co., R.D. #3, Minerva, Onio -D Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-B,F,M.N,W,Y Hamilton Electronics Corp. 2726 Pratt Ave., Chicago 45, Ill.-F,W.Y,Z Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove. N.Y.-F,I.M Harbo Mfg. Co., 4210 Del Rey Ave., Venice, Calif.-B,F,I.M,O,Q,S,W,X,Y Harmon Electronics Co., 11431 Truman Rd., Independence. Mo.-B,E,P Hastings Instrument Co., Newcomb Ave. & Ivy Home Rd., Hampton, Va.-B Hawley Products Co., St. Charles, Ill.-E Heldor Mfg. Corp., 238 Lewis St., Paterson, N.J.-B,F,I,M,N,P,S,W Hoffman Eng'g. Corp., Anoka, Minn.-B,F, M,Q,S

Honeycomb Co. of America, 3 Burroughs St., Bridgeport, Conn.-B,V

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

M,Q,S

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Hudson Tool & Die Co., 412 S. 14 St., Newark 7, NJ.-P
Illinois Wood Products Corp., 1656 N. Besly Ct., Chicago 22, Ill.-D
Independent Miz. Co., 5 Belleview Ave., E. Riverton, N.J.-F,M,N,O
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-F,M,S
Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.-T
Insuline Corp. of America, 186 Granite St., Manchester, N.H.-B,F,I,L,M,N,S,T,V.W,Z
Int'l. Business Machines, 590 Madison Ave., New York 22, N.Y.-N
Jansa Woodworking Corp., 360 Meserole St., Brooklyn 6, N.Y.-D,E,I,N,O,Q,T,U,W,X
Johns-Manville, 22 E. 40th St., New York 16, N.Y.-I,O,T
Juvenile Furniture, Inc., 202 N. Cass St., Peru, Ind.-D
Kaiser Metal Products, Inc., Bristol, Pa.-S
Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-A,B,D,M,N,Q,T
Kane Mig. Corp., Kane, Pa.-A,B,E,F,M,Q,R, S,W,Y
Karp Metal Products Co., Div. H & B Amer-ican Machine Co., 211 63rd St., Brooklyn 20,

Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-A,B,D,M,N,Q.T
Kane Mfg. Corp., Kane, Pa.-A,B,E,F,M,Q,R, S,W.Y
Karp Metal Products Co., Div. H & B Amer-ican Machine Co., 211 63rd St., Brooklyn 20, N.Y.-B,F,I,M,N,O,Q,R,S,W,X,Y,Z
Kees Mfg. Co., F. D., Drawer 8, Beatrice, Nebr.-B,S
Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, 111.-N
Kent Metal Mfg. Co., 490 Johnson Ave., Brook-lyn 37, N.Y.-B,E,F,I,M,N,O
Keystone Products Co., 904 23 St., Union City, N.J.-M,P
Keystone Watch Case & Instrument Div., Riverside Metal Co., Riverside, N.J.-I
Kilgen Aircraft Div., Kilgen Organ Co., 4632
W. Florissant Ave., St. Louis 15, Mo.-D
Kirk & Blum Mfg. Co., 3120 Forrer, Cincin-nati 9, Ohio-A,B,F,I,M.NO
Kleer-Vue Mfg. Co., 636 Penn Ave., Pitts-burgh 22, Pa.-B,C
Klise Mfg. Co., 50 Cottage Grove St., SW, Grand Rapids 2, Mich.-C,E,O
Kolton Electric Mfg. Co., 123 N.J. & R.R. Ave., Newark 5, N.J.-B,M,P,S
Laidman & Co., 1308 N. Halsted St., Chicago 22, 111.-G
Lamevin Mfg. Corp., 37 W. 65 St., N.Y. 23, -B,F,L,M,O,P,W
Lavoie Labs. Inc., Morganville, N.J.-E,F
Lindsay Structure, Inc., 5000 Dempster St., Skokie, 111.-B,X
Lorentzen, Inc., H.K., 391 W. Broadway, New York 12, N.Y.-B,E,F,ILQ,S
Lyon Metal Products, Inc., 9935 Madison Ave., Aurora, 111.-A,B,N,Q,R
Mackenzie Products Corp., 323 E. 13 St., New York, N.Y.-D,F,W,YZ
Magna Electronics Co., 9810 Anza Blvd., In-glewood 1, Calif.-B,M
Mackenzie Products Corp., 323 E. 13 St., New Haven 11. Conn.-I
Magic Vue Television Corp., 323 E. 13 St., New Haven 11. Conn.-I
Magine Vue Television Corp., 323 E. 13 St., New Haven 11. Conn.-I
Magine Vue Television Corp., 324 Creek Rd., Chicago 24, 111.-B,M
Mackenzie Products Co., 9810 Anza Blvd., In-glewood 1, Calif.-E,F,J,K,M,S,W,Z
Magner Corp., 1647 Lincoln Ave., Pasadena 3, Ca

Mederaft Electronic Corp., Box 464, Babylon, N.Y.-Y

Medcraft Electronic Corp., Box 464, Babylon, N.Y.-Y
Metal Fabricators Corp., 73 Pond St., Waltham 54. Mass.-F.I.N.S
Metal Forducts Co., Craighead St., Nashville 4, Tenn.-B.M.N.O
Metronics, Inc., U.S. Route 130, Burlington, N.J.-A.B.C.E.F.M.N.O.Q.R.S.T.Y.W.X
Midwest Radio & Television Corp., 909 Broad-way, Cincinnati 2, Ohio-D
Miller Electric Co., P. O. Box 1827, Jackson-ville, Fla.-B.C.D.F.M.N.O
Minute Man Products, Inc., 430 E. 102 St., New York 29, N.Y.-B.F.L.O
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.-V
Molded Products Corp., 4533 W. Harrison St., Chicago 24, Ill.-C
Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.-B
Motiograph, Inc., 4431 W. Lake St., Chicago

Motiograph, Inc., 4431 W. Lake St., Chicago 24. Ill.—M.N Muckle Mfg. Co., Owatonna, Minn.—E.Q.R Multi-Metal Wire Cloth Co., 1850 Garrison Ave., New York 59, N.Y.—B.F.I.M.N.P.Q.S. W

National Co., 61 Sherman St., Malden, Mass.

--U National Teletable Corp., Commonwealth Ave., High Point, N. Car.-B,D National Vulcanized Fibre Co., Maryland Ave. & Beech Sts., Wilmington, Dela.-R,T,V

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

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Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.-B,N
New England Etching & Plating Co., Spring & Race Sts., Holyoke, Mass.-M
New Products Co., 1071 E. 54 St., Indianapolis 20, Ind.--C,OT
Northeastern Eng'g. Inc., So. Bedford St., Manchester, N.H.-B,F,M,NS
Northern Metal Products Co., 9595 W. Grrand Ave., Franklin Park, III.-F
O'Brien Electric Corp., 6614 Santa Monica Blvd., Hollywood 38, Calif.-B,M,N,W,Y
Olympic Metal Products Corp., 32-62 49 St., Long Island City 3, N.Y.-B,F,M,N,Y
Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-Y
Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.-B,C,D,E,JL
Phoenix Precision Instrument Co., 3803 N. 5 St., Philadelphia 40, Pa.-B,F,M,N,Y
Peer, Inc., 1200 Milton St., Benton Ave., New York 51, N.Y.-B,E,F,S.V,W
Pierce Template Corp., 4316 N. Lawrence St., Philadelphia 40, Pa.-F,M,Q
Plastofin, Inc., 916 W. Union Ave., Wheaton, III.-C,I,O,Q,R,V
Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-A,B,E,F,I,L,M,NO
Poray, Inc., 3369 W. Grand Ave., Chicago 51, III.-B,F,I,M
Porter Metal Products Co., 121 Ingraham St., Brooklyn 37, N.Y.-A,B,F,M,Q,R,S,X
Precision Metal Products Co., 2100 King Ave., Franklin Park, III.-D,W
Premier Metal Etching Co., 21-03 44 Ave., Long Island City 1, N.Y.-M
Premier Metal Etching Co., 21-03 44 Ave., Long Island City 1, N.Y.-M
Premier Metal Etching Co., 3160 Webater Ave., Bronx 67, N.Y.-B,F,I,M,N,S,Z
Printed Circuits, Inc., 36 Tunxis Ave., Bloom-field, Conn.-F
Product Eng'g. Labs., 314 Adams St., Newark 5, N.J.-A,C,I,N,O,Q,R
Q.Line Mfg. Corp., Ib62 61 St., Brooklyn 19, N,Y.-A,B,C,D,E,F,I,L,M,N,O,P,Q,R,S,U,W, X,Y.Z
Radio City Products Co., 101 W. 31 St. New York 1, N.Y.-B,C,E,IN,S,U
Radio City Products Co., 101 W. 31 St. New York 1, N.Y.

Radio & Television Inc., Brunswick Div., 119 W. 57 St., New York 19, N.Y.-D
Railway Communications, Inc., Raytown, Mo. -N
Raytor Corp., 5th St., & Cannon Ave., Lansdale, Pa.-A,B,F,M,N,O,Q,R,S,T
REF Mig. Corp., 393 Jericho Turnpike, Mineola, N.Y.-B,E,F,I,M,O,Q,R,S
Reister & Thesmacher Co., 1526 W. 25 St., Cleveland 13, Ohio-B,F
Rek-O-Kut Co., 38-01 Queens Blvd., Long Island City 1, N.Y.-E,Y
Remler Co., 2101 Bryant St., San Francisco 10, Calif.-U
Research Instrument Co., 233 Broadway, New York 7, N.Y.-A,B,C,F,I,M,NO
Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-B,F,I,M,O,P,S
Risidized Metals, Corp., 658 Ohio St., Buffalo S, N.Y.-M
River Edze Industries, 5 River Edge Rd., River Edge, N.J.-D,E,I,W,Y,Z
RJ Audio Products, Inc., 164 Duane St., New York 13, N.Y.-Z
Rogal Tube Bending Co., 3543 S. Normal Ave., Chicago 9, 111.-L
Rogers Corp., Goodyear, Conn.-T
Romar Plastics, Inc., 1311 E. Main St., St. Charles, 111.-C,I,V
Royal Electric, Inc., P.O. Box 823, Dayton 1, Ohio-L,M,N,O,S
Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, 111.-M
Scientific Wood Cabinet Co., 85 Holmes St., Belleville 9, N.J.-D,E,I,O,Q
Service Parts Systems, 13380 E. 9 Mile Rd., E. Detroit, Mich.-A,O,Q,R
Service Parts Systems, 13380 E. 9 Mile Rd., E. Detroit, Mich.-A,O,Q,R
Service Parts Systems, 13380 E. 9 Mile Rd., E. Detroit, Mich.-A,O,Q,R
Sheron Electronics, 1201 Flushing Ave., Brooklyn 6, N.Y.-F
Shara Tone Products Inc., 440 Adelphi St., Brooklyn 6, N.Y.-DE
Skydyne, Inc., River Rd., Port Jervis, N.Y.-B,C.E,M,P,Q,V
Slate & Assoc., Claude C., 11370 W. Olympic Blvd., Los Angeles 64, Calif.-B,C
S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-H
South River Metal Products Co., South River, N.J.-L

South River Metal Products Co., South River,

N.J.-L Sparks-Withington Co., 2301 E. Michigan, Jackson, Mich.-D,W

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Spaulding Fibre Co., 310 Wheeler St., Tona-wanda, N.Y.-Q,T Specific Products, 14515 Dickens St., Sherman Oaks, Calif.-F.N Sperry Products Inc., Shelter Rock Rd., Dan-bury, Conn.-F.O Standard Electric Time Co., 119 Logan St., Springfield, Mass.-M

Springfield, Mass.—M Standard Pressed Steel Co., Box 899, Jenkin-town, Pa.—B Standard Wood Products Corp., 47 W. 63 St., New York 23, N.Y.—D,W,Y,Z Steiner-Ives Co., 483 Springfield Rd., Union, N.J.—B Streamline Wood Products, 4849 N. Cicero

Steiner-Ives Co., 483 Springfield Rd., Union, N.J.—B
Streamline Wood Products, 4849 N. Cicero Ave., Chicago 30, III.—D.E
Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.—W,Z
Suckle Electronics Co., 22 & Hayes Ave., Camden 5, N.J.—B.E.F.I.L, M.N.O.Q.S.W
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—C
Tabet Mfg. Co., 1336 Ballentine Blvd., Norfolk, Va.—F.M
Tarzian Inc., Sarkes, 539 S. Walnut, Bloomington, Ind.—F.N.W.Y
Taylor Fibre Co., Norristown, Pa.—V
Technical Development Corp., 4060 Ince Blvd., Culver City, Calif.—AA
Techron Corp., 254 Friend St., Boston 14, Mass.—M, V
Telectro Industries Corp., 37-16 37 St., Long Island City 1, N.Y.—E,Z
Tele Plastics Co., 202 Broadway, Brooklyn 11, N.Y.—V
Yaon Mfg. Corp., 1440 Broadway, New

N.Y.-V
Telerad Mfg. Corp., 1440 Broadway, Brooklyn 11, N.Y.-V
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-B,F,I,M,S
Television Products Co., 1147 N. McCadden Pl., Hollywood 38, Calif.-B,E,F,I,M,N,O,S,U
Telkor, Inc. Telegraph Rd., Elyria, Ohio-B
Thompson Clock Co., H.G., 38 Federal St., Bristol, Conn.-A,B,C,D,E,G,I,M,N,O
Transformer Metal Products Corp., 343 W. 26th St., New York, N.Y.-A,B,E,F,I,L,M,N, O,P,Q,R,S
Triad Portable Case Corp., 310 W. Lincoln Ave., Mount Vernon, N.Y.-D,E
Tri-Dex Co., P.O. Box 1207, Lindsay, Calif. -V
Tru-Art Industries, 1657 W Evergreen St

Tru-Art Industries, 1657 W. Evergreen St., Chicago 22, III.-E,T
TV Engineers, Inc., 3325 W. Bryn Mawr Ave., Chicago 45, III.-E,K
TV Products Co., 1147 N. McCadden Pl., Hollywood 38, Calif.-N,U,W,Y
TV Products Co., 145-68 228 St., Springfield Gardens 13, N.Y.-M
TV Specialty Co., 350 W. 31 St., New York 1, N.Y.-W
Ultra Hi-Fi Co., 709 Sip St., Union City, N.J. -W

Ultra Hi-Fi Co., 709 Sip St., Union City, N.J. —W Uni-Products Div., Uni-Science Inc., Rockville, Md.—F United Mfg. Co., Div. W. L. Maxson Corp., 41 Haig St., Hamden 14, Conn.—B,M United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—B,F,M University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N.Y.—D,S.W,Z U.S. Radium Corp., 536 Pearl St., New York 7. N.Y.—M, V Utility Metal Products Co., 117 Elliott, Beverly, Mass.—A,B,I,M,N,O,Q,R,S,W,Y Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.—Q Victory Mfg. Co., 1722 W. Arcade Pl., Chicago 12. III.—C Virginia Electronics Co., River Rd. At B&O R.R., Washington 16, D.C.—F Waldom Electronics, Inc., 4625 W. 53 St., Chicago 32, III.—C Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.—A Waters Conley Co., Rochester, Minn.—D,E,F, X,Z Western Int'l. Co., 45 Vesey St., New York 7, N Y.—B F M N

Western Int'l. Co., 45 Vesey St., New York 7, N.Y.-B,F,M,N

Western Sound & Electric Labs., Inc., 805 S. 5 St., Milwaukee 4, Wisc.-B,M Wickes Eng'g. & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.-Y

Ferry Ave., Camden 4, N.J.-Y Williams, Brown & Earle, 904 Chestnut St., Philadelphia 20, Pa.-U Willson Camera Co., 1395 Lawrence Rd., Havertown, Pa.-V Wright-Hepp Assoc., 138 West St., S. Hacken-sack, N.J.-A.B.E.F.I.L.M.N.O.P.Q.S Wright, Inc., 2233 University Ave., St. Paul 14, Minn.-B.M.Z Wyco Metal Products, 6918 Beck Ave., N. Hollywood, Calif.-B.F.M.N.S.W.Y Zero Mfg. Co., 1121 Chestnut St., Burbank, Calif.-B.E.F.I.M.P.Q

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ELECTRONIC INDUSTRIES

DIRECTORY

### 13—CAPACITORS, FIXED

Capacitors, airA Capacitors, bathtubV Capacitors, ceramicB
Capacitors, compositionZ
Capacitors, decadeW Capacitors, electrolytic dryC
Capacitors, electrolytic wetD
Capacitors, feed throughE Capacitors, gas-filledF
Capacitors, glassG
Capacitors, high voltage
Capacitors, JAN typeAB
Capacitors, metallized paperI Capacitors, mica
Capacitors, miniatureAC Capacitors, Mylar dielectricAG
Capacitors, neutralizingX
Capacitors, oil
Capacitors, plastic dielectricM
Capacitors, plug-in
Capacitors, porcelainAE
Capacitors, printed circuitAD Capicitors, silicone-filledY
Capacitors, silvered micaP Capacitors, standardQ
Capacitors, standardR
Capacitors, Teflon dielectricAF Capacitors, temperature com-
pensatedS
Capacitors, transmitting

M.AD

- Beek's Inc., 298 E. 5 St., St. Paul 1, Minn. M.AD
  Bendix Aviation Corp., Scintilla-Magneto Div., Sidney, N.Y.—AG
  Berkshire Laboratories, 586 Bank Village, Greenville, N.H.—N
  Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.—R
  British Radio Electronics Ltd., 1833 Jefferson Pl., N.W., Washington 6, D.C.—A.P
  Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio—A.T
  Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.—A.AD
  Centralab, Div. Globe-Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—B,E.H.N.Q, S,T,X.AA.AB,AC,AD
  Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, III.—E,K,L,V
  Church Co., George H., 5109 Halifax Ave., Minnearolis 10, Minn.—E, H, I. K, L, M. O, T, V, Y
  Colortone Electronics, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.—AA
  Condenser Products Co., 140 Hamilton St., New Haven 4, Conn.—A,G,H,K,M,O,S,V.W, Y,AA,AB,AC,AD,AF
  Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., South Plainfield, N.J.—B,C,E,H,IJ,K, L,M,N,O,P,Q,R,S,T,V,W,X,Y,Z,AA,AB,AC, AD,AG AD.AG

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Corning Glass Works, Corning. N.Y.-G.T. Corson Electric Mfg., Corp., 540 39 St., Union City, N.J.-H.K.L.M.O.Y.A.A.B Cosmic Radio Corp., 353 Whittier St., Bronx 59, N.Y.-C.L Delco Remy Div., General Motors Corp., P. O. Box 640, Anderson, Ind.-A.E Deutschmann Corp., Tobe, 921 Providence Hwy., Norwood, Mass.-C.E.H.I.K.L.M.O.Q. T.V.Y.AA.A.B.AC.AD.AG Dilectron Div., Gudeman Co., 2669 S. Myrtle Ave., Monrovia, Calif.-B.S.AA Dolinko & Wilkens, 1907 Summit Ave., Union City, N.J.-T.U Dumont.Airplane & Marine Instruments, Inc., 15 William St., New York 5, N.Y.-C.D.E. H.K.L.M.O.Q.S.V.Y.AG Dwyer Eng's. Co., P.O. Box 483, Nashua, N.H.-B.M.S.AD Eagle Electronics Corp., 177 Hart St., New Britain, Conn.-B Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.-U Electrical Utilities Co., 2427 St., Vincent's Ave., LaSalle, Ill.-E.K.L.M.V.Y Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.-W Electron Products, 919 Riverside Dr., Los Angeles 31, Calif.-I.K.L.M.O.Y.W.AC Electronic Fabricators, 682 Broadway, New York 12, N.Y.-M.P.V.Y.AG Electronic Fabricators, 682 Broadway, New York 13, N.Y.-W.P.V.Y.AG Electronic Scor, 50 Eastern Ave., Boston 13, Mass.-K.L Electro-Tech Equip. Co., 308 Canal St., New York 13, N.Y.-W Frasteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, 111.-R Fast & Co., 504 Sat. 72 St., New York 21. N.Y.-E.H.W Fansteel Metallurgical Corp., 2200 Sheridan Rd., No. Chicago, 111.-R Fast & Co., John, 3129 N. Crawford Ave., Chicago 41, 111.-H,K.L.M.O.T.V.A.A.B,AC. AG Film Capacitors Inc., 3400 Park Ave., New

General Electric U.O., APPLICA, R. M.R.V.AD, Rd., Schenectady 5, N.Y.—C, H.L.M.R.V.AD, AC.AD
General Electric Co., Tube Dept., 1 River Rd., Schenectady 5, N.Y.—U
General Products Corp., 107 Salem St., Union Springs, N.Y.—L
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.—A.J.O.Q.W
Geotronic Labs. Inc., 1314 Cedar Hill Ave., Dallas 8, Tex.—M
Girard-Hopkins, 1000 40 Ave., Oakland 1, Calif. —K.L
Glenco Corp., 212 Durham Ave., Metuchen, N.J.—B,R.AB.AC.AD
Go.d-All Electric Mfg. Co.. Ogallala, Nebr.— B.E.H.K.L.M.N.O.R.V.Y.Z.AA.AB,AC,AD,AG
Gudeman Co., 340 W. Huron St., Chicago 10, 111. — B,C.E.H.I.K.L.M.N.O.S.V.X.Y.AA.AB, AC,AD.AG
Corp., 212 Durham Ave., Metu-

Gudeman Co., 340 W. Huron St. Chicago 10, Ill. --- B,C,E,H,I,K,L,M,N,O,S,V,X,Y,AA,AB, AC,AD,AG Gulton Mfg. Corp., 212 Durham Ave., Metu-chen, N,J.--B,R,S,AC,AD Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif.--E Hansen Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.--AD Herlec Corp., 6th & Beach Sts., Grafton. Wis. --B

-B Hopkins Eng'g. Co., 2082 Lincoln Ave., Alta-dena, Calif.-E,I.K.L.M.O.S.AB,AC Illinois Condenser Co., 1616 N. Throop St., Chicago 22, Ill.-C,H.N,T,V Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.,-C,H.I.K.L.M.N.O.T.V. AF

Ave., Chicago 18, 111.,—C,H,1,K,L,M,N,O,T,V, AF
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.—M
Integrated Mica Corp., 202 Franklin Pl., Woodmere, L.I., N.Y.—J
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—Z
Jeffers Electronics Div., Speer Carbon Co., Hoover Ave., Du Bois, Pa.—B,E,S,Z
Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.—E,U,X,AA
Johnson Co., E. F., Waseca, Minn.—A
Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, III.—L
Lapp Insulator Co., Radio Specialties Div., 27 Gilbert St., Le Roy 3, N.Y.—F,H,AA
Leeds & Northrop Co., 4970 Stenton Ave., Philadelphia 44, Pa.—J,P,W

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Lenkurt Electric Co., 1105 County Rd., San Carlos, Calif.—L,M Linear Equipment Labs., 380 Oak St., Copiague, N.Y.—G Luther Electronic Mfg. Co., 5728 W. Wash-ington Blvd., Los Angeles 16, Calif.—H.K.L,

Luther Electronic Mig. Co., 5728 w. washing ington Blvd., Los Angeles 16, Calif.-H.K.L., M.AA
MacLeod & Hanopel, 10 Roland St., Charlestown 29, Mass.-Q
Magnavox Co., Fort Wayne 4, Ind.-D.L.R.AB
Maida Development Co., 214 Academy St., Hampton Va.-B,E,S,AA,AB.AC
Mallory & Co., P. R., 3029 E. Washington St., Indianapolis 6, Ind.-B,C.D.I.J.K.L.M.R.V. AC, AG
Mica Fabricating Co., 53T Central Ave., Rochelle Park, N.J.-J
Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 37, N.Y.-C,E,H.J.K.L.M.N.O.P.S, T,V.AA,AB,AC,AD
Mitronics Inc., 232 13 Ave., Newark, N.J.-B,E,C,AD
Mucon Corp.. 9 St. Francis St., Newark 5, N.J.-B,S,AC,AD
Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.-B,E,H.S.AB
National Capacitor Co., 60 Washington Ct., Outser Co.

- National Capacitor Co., 60 Washington Ct., Quincy 69, Mass.-E.G.H.I.L.M.O.Q.S.T.V, W.X.Y

National Capacitor Co., 60 Washington Ct., Quincv 69, Mass.—E.G.H.I.J.M.O.Q.S.T.V. W.X.Y
Neptune Electronic Co., 433 Broadway, New York 13, N.Y.-C.D.H.I.J.K.L.M.N.P.Q.V
New Haven Clock & Watch Co., Condenser Products Div., 140 Hamilton St., New Haven, Conn.—AG
New York Coil Co., 40 2 Ave., Phoenixville, Pa.—I.K.L.M.O.V.AC
Nichols Products Co., 325 W. Main St., Moorestown, N.J.—M
N.W. Plastics, Inc., 65 E. Plato St., St. Paul 1, Minn.—J.M.N.AC
Onondaga Pottery Co., Electronics Div., 1858 W. Fayette St., Syracuse 1, N.Y.—B
Parts Producing Corp. Manhattan Div., 1861 Second Ave., New York 28, N.Y.-A.H.T
PCA Electronics, Inc., 2180 Colorado Ave., Santa Monica. Calif.—AG
Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.—AD
Philco Corp., Clen Cove, N.Y.—AD
Philmore Mfg. Corp., 225 Belleville Ave., Bloom-field, N.J.—C.H.N.V.AD
Plastis Capacitors, Inc., 2511 W. Moffat S Chicago 47, III.—G,H.K.M.O.Q.S.T.V.W.Y.AG
Potter Co., 1950 Sheridan Rd., N. Chicago, Ill. —H,I.K.L.M.N.Q.T,V.AAAC
Pyramid Electric Co., 145 Hudson Blvd., N. Bergen, N.J.—C.E.H.J.K.L.M.N.O.Q.T,V.X.Y. AA,AB,AC.AD
"Q" Glass Co., 470 Broad St., Bloomfield, N.J.— C.U

"Q" Glass Co., 470 Broad St., Bloomfield, N.J. -G.U

Quality Components Co., St. Marys, Pa.-Z Radio Ceramics Corp., 109 S. Superior St., Angola, Ind.-B Pedia Engineering Co. Maddalla Mary, WWW

Radio Frequency Co., Medfield, Mass.-H.K.T.

AA Radio Industries. Inc., 5225 N. Ravenswood Ave., Chicago 25, Ill.—B,E,P

Radio Materials Corp., 3325 N. California Ave., Chicago 18. Ill.—B

Chicago 18, III.-B Radio Television Products Corp., 308 N. Lake St., Grass Lake, Mich.-P Research Instrument Co., 233 Broadway, New York 7, N.Y.-A.B.S.T.U Romar Plastics, Inc., 1311 E. Main St., St. Charles, III.-M Sanders Associates, Inc., 137 Canal St., Nashua, N.H.-B.M.AC.AD San Fernando Electric Mfg. Co., 1509 First St., San Fernando, Calif.-E.I.L.M.V.Y.AB, AC Sangamo Electric, 9 & Converse St., San ter

Sangamo Electric. 9 & Converse Sts.. Spring-field, III.-B,C,D,E.H,J,K,L.M,P,T,V,AA.AB, AC,AD,AG

AU, AD, AG Skottie Electronics, 204 Bridge St., Peckville, Pa.--B.E., S.A.A.AB, AD Solar Mfz. Corp., E. 46 & Seville. Los Angeles 58, Calif.--B.E.S.AA.AB, AC, AD Southern Electronics Corp., 239 W. Orange Grove Ave., Burbank, Calif.--M, N, O, Q, V, W, AA, AG

AA,AG Speer Carbon Co., Speer Resistor Div., St. Marvs. Pa.—B.E Sprague Electric Co., North Adams, Mass.— B,C,D,E,H,I,J,K,L,M,N,O,P,R,S,T,V,AA,AB, AC,AD,AF,AG

Stackpole Carbon Co., Tannery St., St. Marys, Pa.--B,Z,AD

Pa.-B.Z.AD
Standard Coil Products Co., 2085 N. Hawthorne St., Melrose Park 39, III.
Stupakoff Ceramic & Mfg., Div. Carborundum Co., Latrobe, Pa.-B,AD
Sun Chemical Corp., 10-10 44 Ave., Long Island City 1, N.Y.-L
Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas-G,AA
Thompson Clock Co., H. C. -38 Federal St., Bristol. Conn.-C.D.E.I.J,N.T
TV Hardware Mfg. Co., 919 Taylor Ave., Rockford, III.-AD
United Condenser Corp., 3400 Park Ave., New York 56, N.Y.-K.L,V,AA,AC,AD

- United Electronic Mfg. Corp., 542 39 St., Union City, N.J.-C United Electronics Co., 42 Spring St., Newark 4, N.J.-U
- 4. N.J.-U
  United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.-B
  U. S. Gasket Co., 602 N. 10 St., Camden. N.J.-E.M
  Vacumet Inc., 1009 W. Weed St., Chicago 22, 111.--1, M.O.U
  Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.-U
  Vitramon, Inc., Box 544. Bridgeport 1, Conn.-AE

- -AE
- --AE Walter Co. S., 1400 Atlantic Ave., Brooklyn 16, N.Y.-J.C.F.N.G Western Electric Co., 120 Broadway, New York, N.Y.-AE Western Int'l. Co., 45 Vesey St., New York 7, N.Y.-H,J,K,N

# 14-CAPACITORS, VARIABLE

Capacitors, air
Capacitors, ceramic trimmerB
Capacitors, gas-filledC
Capacitors, glass trimmer
Capacitors, mica trimmerD
Capacitors, miniature
Capacitors, modulated sweepE
Capacitors, neutralizing
Capacitors, oil filled
Capacitors, piston
Capacitors, plastic
Capacitors, precision
Capacitors, printed circuit
Capacitors, receiving tuning
Capacitors, transmitter tuning
Capacitors, vacuumJ

Admiral Corp., Molded Products, Div., P.O. Box 33%. W. Chicago, Ill.--N Aerovox Corp., 740 Belleville Ave., New Bed-ford. Mass.--B All Star Products, Defiance, Ohio--A,H American Lava Corp., Cherokee Rivd. & Mfrs. Rd., Chattanooga 5, Tenn.--B Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.--B Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.-F,I Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. ---O

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- Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. —O
  Bel Fuse Inc., 311 Mountain Rd., Union City, N.J.—A,G.M
  British Radio Electronics. 1833 Jefferson Pl., N.W. Washington 6, D.C.—A
  Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio—A,F,H,1
  Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.—B
  Cardwell Electronics Productions, Allen D., Plainville, Conn.—A,F,G,H,1,O
  Centralab Div., Globe-Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—B,L,N,O
  Colorvision Plastics, Inc., 182 Beacon St., Boston 16, Mass.—N
  Communication Device Co., 2331 12 Ave., New York City 27, N.Y.—H,I
  Corning Glass Works. Corning, N.Y.—K Dayton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio—I
  DeWald Radio Mfg. Corp., 35-15 37 Ave., Long Island City 1, N.Y.—A
  Dwyer Eng's. Co., P.O. Box 483, Nashua, N.H.—O
- N.R.-O Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.-J Electro-Motive Mfg. Co., Willimantic, Conn.-A.B.D.

- A,B,D Electronic Heating Corp., 66 Needham St., New-ton Highlands 61, Mass.—I Electronicraft, Inc., 27 Milburn St., Bronxville 8, N.Y.—A,E,H,1 Erie Resistor Corp., 644 W. 12 St., Erie, Pa. —B,L,O,N Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.—H,I Fryling Electric Products, Holly Springs, Miss. —B
- -B
- B General Instrument Corp., 829 Newark Ave., Elizabeth 2. N.J.—A.B.H.I.J.L.P General Radio Co., 275 Mass. Ave., Cambridge 39. Mass.—G Hammarlund Mfg. Co., 460 W. 34 St., New York 1. N.Y.—A.F.G.H.I.L.P Herlec Corp., 6th & Beach St., Grafton, Wisc. —B
- Hermaseal Co., 1101 Lafayette St., Elkhart,

- Hermaseal Co., 1101 Lafayette St., LIKHBAR, Ind.--K Hi Q Div. Aerovox Corp. Olean, N.Y.--B Insuline Corp. of America, 186 Granite St., Manchester, N.H.--B Intercontinental Industries, 555 W. Adams St., Chicago, III.--D Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.--F,I,J JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y. --M
- Johanson Mfg. Corp., Rockaway Valley Rd., Boonton, N.J.—A,G,H,L Johnson Co., E. F., Waseca, Minn.—A,C,F,I,L

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Lapp Insulator Co., Radio Specialties Div., 27 Gilbert St., LeRoy 3, N.Y.--C,I Linear Equipment Labs., 380 Oak St., Copiague, N.Y.--K McCoy Electronics Co., Chestnut & Watt St., Mt. Holly Springs, Pa.--H,L Maida Development Co., 214 Academy St., Hampton, Va.--B Mallory & Co., P.R., 3029 E. Washington St., Indianapolis 6, Ind.--L.N.P Millen Mfg. Co., James. 150 Exchange St., Malden, Mass.--A,F,I Mitronics Inc., 232 13 Ave., Newark, N.J.--B,K.O

- B.K.O. Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.—H Mucon Corp., 9 St. Francis St., Newark 5, N.J.
- Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.---B

- Mucon Corp., 9 St. Francis St., Newark 5, N.J. —B
  Muter Co., 1255 S. Michigan Ave., Chicago 5, III.—B
  Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.—B
  National Capacitor Co., 585 Washington St., Quincy 69, Mass.—G
  National Co., Inc., 61 Sherman St., Malden 48, Mass.—A, B, F, H.I
  Nilsen Mfg. Co., Addison, III.—G
  N.W. Plastics, Inc., 65 E. Plato St., St. Paul 1, Minn.—D,LN
  Oak Mfg Co., 1260 Clybourn Ave., Chicago 10, III.—H
  Parts Producing Corp., Manhattan Div., 1861 2nd Ave., New York 28, N.Y.—G.I
  Phen-O-Tron, Inc., 455 Main St., New Ro-chelle, N.Y.—O
  Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.—H
  Photocircuits Corp., Glen Cove, N.Y.—O
  "Q" Glass Co., 470 Broad St., Bloomfield, N.J.—J
  Radio Condenser Co., Davis & Copewood Sts., Camden, N.J.—G, H,I.I.,O
  Radio Condenser Co., S25 N. Ravenswood Ave., Chicago 25, III.—B
  Research Instrument Co., 233 Broadway, New York 7, N.Y.—F.G.I.J
  Solar Mfg. Corp., E. 46 & Seville, Los Angeles 58. Calif.—B,O
  Sperer Carbon Co., Speer Resistor Div., St. Marys, Pa.—B
  Tarzian Inc., Sarkes, 539 S. Walnut St., Bloomington, Ind.—A
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  Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.—E
  Thompson Clock Co., H.C., 38 Federal St., Bloomington, Ind.—A
  Television Co. of America, 1761 Lincoln Blvd., Santa Monica, Calif.—E
  Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.—H,I
  Tri-Point Mfg. Co., 919 Taylor Ave., Rock-ford, III.—O
  United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—B
  United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—B
  United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—B
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  Admiral Corp., Molded Products Div.. P.O. Box 338, W. Chicago, Ill.-AM
  Aerolite Electronics, 507 26 St., Union City, N.J.-A.C,D,E,F,I,K,L,N,AB,AC
  Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.-AC
  Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-B,C,D,K,N,AF,AG,AK,AI.
  Aircraft Marine Products, 2100 Paxton St., Harrisburg, Pa.-F,J,K
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  Alcon Metal Products, 1750 N. Kimball Ava., Chicago 47, Ill.-I,AB,AK
  Alden Products Co., 117 N. Main St., Brockton 64. Mass.-A,C,D,E,F,G,I,J,K,L,N,X,Y,Z,AB, A,CAD,AE
  Allied Industries, 2500 Woodland Ave., Louis-

- AC, AD, AE
  ALC, AD, AE
  Allied Industries. 2500 Woodland Ave., Louis-ville 10, Ky.—B, D, AA
  Amelco. Inc., 2040 Colorado Ave.. Santa Mon-ica, Calif.—C
  American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—K
  American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—K
  American Lava Corp., 1830 S. 54 Ave., Chicago 50, 111.—B, C, D, K, X, Z, AE
  American Radio Hardware Co., 152 S. Mac-Queston Parkway, Mt. Vernon, N.Y.—A, D, F, I, K, I
- F, J. R. L Anchor Metal Co., 244 Boerum St., Brooklyn 6, N.Y.-S Anchor Products Co., 2712 W. Montrose Ave., Chicago 18, Ill.-C Arey Machine Co., 1000 Stuyvesant St., Union, N.J.-C,D
- N.J.--C.J. Ark Eng'g. Co., 431 W. Tabor Rd., Philadelphia 20. Pa.--P.R.V Armco Steel Corp., 703 Curtis St., Middletown,

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  Armco Steel Corp., 703 Curtis St., Middletown, Ohio-T
  Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.-L
  Artisan Metal Works Co., 11400 Madison Ave., Cleveland 2. Ohio-T,AO
  Atlas E-E Corp., Bedford Airport, Bedford, Mass.-D,L,N,W,Y,AF
  Authorized Mfrs. Service Co., 919 Wyckoff Ave., Brooklyn 27, N.Y.-C
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  Avery Adhesive Label Corp., 1616 S. Califor-nia Ave., Monrovia, Calif.-AL
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  Bel Fuse Inc., 311 Mountain Rd., Union City, N.J.-L.N.AF,AG
  Bennett Products Mfr. Co., 815 San Antonio Rd., Palo Alto, Calif.-K
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  Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.-H
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  Birtcher Corp., 4371 Valley Blvd., Los Ange-les 32, Calif.-W

- Birtcher Corp., 4371 Valley Blvd., Los Ange-les 32, Calif.-W Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio.-J
- Bliss-Warren Electronic Corp., Box 123, Sussex, N.J.-C,K B & M Elec. Co., 838 4 Ave., Brooklyn 32, N.Y.--C

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 Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wisc.-AL

Breeze Corporations, Inc., 700 Liberty Ave., Union, N.J.-R

Brelco Electronics Corp., 55 Vandam St., New York 13, N.Y.-D British Electronic Sales Co., 28-08 45 Rd., Long Island City 1, N.Y.-A,B,D,G,K,L,N,X, Z,AF,AG,AH

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Elco Corp., "M" St. Below Erie Ave., Phila-delphia 24, Pa.—A,W,Y,Z,AE,AN
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Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.—K,Z
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Nuclear Instrument & Chemical Corp., 223
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Ocram Corp., Seneca Falls, N.Y.-C
Optical Film Engineering Co., 2731 N. 6 St., Philadelphia 33, Pa.-P
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Permacel Tape Corp., U.S. Hwy No. 1, New Brunswick, N.J.-AL
Parefiction Mica Co., 1310 N. Elston Ave., Chicago 22, III.-P.T
Permacel Tape Corp., U.S. Hwy No. 1, New Brunswick, N.J.-AL
Permonite Mfg. Co., 4554 N. Broadway, Chicago 40, III.-A.D.F.I.J.K.L.Z
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Petronics, I3 Garden St., New Rochelle, N.Y.-C
Petronics, Co., 50 Fairfield Ave., Stamford.

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Pomona Electronics Co., 524 W. 5 Ave., Pomona, Calif.—AC,AD,AE
Precision Metal Products Co., 41 Elm St., Stoneham 80, Mass.—F.K
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- Anims corp., 117 Schley Ave., Lewes, Dela. —C.E.K
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  Royal Electric Co., 95 Grand Ave., Pawtucket, R.I.—AF,AH
  Screw Corp. of America, 103 Park Ave., New York 17, N.Y.—A,D,F,J,K
  Sealectro Corp., 186 Union Ave., New Rochelle, N.Y.—D,F,I,K
  Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio—F,G,K
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- Shielding, Inc., 8 Reserve St., Riverside, N.J. —P.T
  Signalite Inc., 37-41 Neptune Hwy., Neptune, N.J.—AF
  Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.—G.H.I.J.K
  Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.—A.B.D.E.F.I.K.L.N
  Sperry Products Inc., Shelter Rock Rd., Dan-bury, Conn.—C
  Star Fuse Co., 235 Canal St., New York 13. N.Y.—L.M.N
  States Co., 19 New Park Ave., Hartford 6. Conn.—N
  Staver Co., 41-51 N. Saxon Ave., Bay Shore, N.Y.—W
  Stokes Molded Products. Taylor & Webster Sta, Trenton 4, N.J.—U
  Stone City Machine & Tool Co., 1206 7 St., Bedford, Ind.—F.I.K.L.N.X.AA
  Suckle Electronics Co., 22 & Haynes Ave., Camden 5, N.J.—O,T.AN
  Superior Electric Co., 83 Laurel St., Bristol. Con..—A
  Superior Electric Products, 1740 Broadway, New York 19, N.Y.—D.F.I.L.N.X.Y.Z.A.AB, AC,AD,AE
  Techron Corp., 254 Friend St., Boston 14, Mass. —H,Y

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- 2, Pa.-W United Technical Labs., Morristown, N.J.-AD
- Universal Circuit Control, 3610 Oakton St., Skokie. Ill.—D
  U. S. Eng's. Co., 521 Commercial St., Glen-dale 3, Calif.—A,F,K
  Vaco Products Co., 317 E. Ontario St., Chi-cago 11, Ill.—J
  Vallorbs Jewel Co., P.O. Box 958, Lancaster, Pa.—H,J
- Pa.-H.J
  Pa.-H.J
  Vector Electronics Co., 3352 San Fernando Rd., Los Angeles 65, Calif.-K,AD,AE
  Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, L.I., N.Y.-C,AC,AD,AE
  Virginia Electronics Co., River Rd. At B&O R.R., Washington 16, D.C.-C,K
  Visulite Co., 423 Broome St., New York 13, N.Y.-D.F,K
  Vitroseal Corp., 6325 Guilford Ave., Indianapo-lis 20, Ind.-K

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Volkert Metal Stampings, Inc., John, 223-34 96th Ave., Queens Village 29, N.Y.-W
  Waldman & Sons, Joseph, 133 Coit St., Irv-ington 11, N.J.-B,D,F
  Waldom Electronics, 4625 W. 53 St., Chicago 10, III.-A,F,I,K,Z
  Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.-F,I,K,L,AK
  Waltr Lee Chemical Corp., 567 3 Ave., New York 16, N.Y.-K
  Waltham Horological Corp., 711 Broad St., Lynn, Mass.-D
  Warren Plastics Corp., S. Irvine St., Warren, Pa.-K,Y
  Western Radiation Lab., 1107 W. 24 St. Los

- Warren Plastics Corp., S. Irvine St., Warren, Pa.-K.Y
  Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-S.AN
  Westline Products Div., Western Lithograph Co., 600 E. 2 St., Los Angeles 54, Calif. -AL
  Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.-C
  Whitaker Cable Corp., 1301 Burlington Ave. N., Kansas City, Mo.-R.W
  White Industries Inc., 421 W. 54 St., New York 19, N.Y.-K.AE
  Whitso, Inc., 9330 Byron St., Schiller Park, III.-A,D.K
  Willard Storage Battery Co., 1200 Huron Rd., Cleveland, Ohio-E,K
  Wiretron Products Electronic Div., Roberts Mfg., Co., 426 E. Shaffer St., Cleburne, Texas-C,AL
  Wood Counter Laboratory, N., 5491 Black-stone Ave., Chicago 15, III.-S,AN
  Wright Eng's Co., 180 E. Calif. St., Pasadena 1, Calif.-C,D
  York Co., Otto H., 69 Glenwood Pl., E. Or-ange N I.-Y
- Wright Eng'g. Co., 180 E. Calif. St., Fasadena 1, Calif.-C,D
  York Co., Otto H., 69 Glenwood Pl., E. Or-ange, N.J.-V
  Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.-K
  Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N.Y.-I,K,L
- - 16-CHEMICALS, COATINGS & LUBRICANTS
- Adhesives .....A Binders, liquid ....AJ Cleaning compounds .....AK Coli dope .....C Contact cleaners .....AL Dehumidifying chemicals .....AM Detergents .....AN Engmeis .....D Etching chemicals .....AC Fluorescent chemicals .....AD Impregnating compounds .....G Liquid flux .....AF Marking inks .....J Miscellaneous chemicals .....K Paste flux .....N Phosphors, b&w TV tube .....AP Phosphors, color TV tube ..... AQ Phosphorescent chemicals .....O Photosensitive chemicals .....AG Pitch .....P Printed circuit coatings .....AH Protective coatings .....Q Radioactive chemicals .....Al Rubber, conductive .....S Sealers, protective .....T Silicones .....AB Silver paste .....AR Solvents .....U Special iubricants .....V Vacuum greases .....W Waterproofing compounds ......Y Wax .....Z Wire Stripper, chemical .....AS

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- Ace Electric Mfg. Co., 1453 Shakespears Ave., New York 52, N.Y.-B
  Acheson Colloids Co., Port Huron, Mich.-F,J,M,V
  Acme Telectronix, Div. NEA Service Inc., 1200 W. 3 St., Cleveland 13, Ohio-AC
  Acme Wire Co., New Haven 14, Conn.-A.G
  Airfyte Electronics Co., 21 Cottage St., Bay-onne, N.J.-G
  Akron Rubber Co., 58 Warren St., New York 7, N.Y.-Q.S.T.AB
  Allied Asphalt & Mineral Corp., 217 Broad-way, New York, N.Y.
  Alpha Metals, Inc., 56 Water St., Jersey City 4, N.J.-E,N,AF
  American Chemical Paint Co., Ambler. Pa.-Q,U,AK
  American Phenolic Corp., 1830 S. 54 Ave.,

- American Chemical Paint Co., Ambler. Pa.— Q.U.AK
  American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.—B,C,AB
  American Products Mfg. Co., 8127 Orleander St., New Orleans 18, La.—A,B,C,G,O,AE
  American Resinous Chemicals Corp., 101 Foster St., Peabody, Mass.—A,B,AJ
  American Solder & Flux Co., 19th & Willard Sts., Philadelphia 40, Pa.—E
  Anderson Associates, H. V., 233 Broad St., Summit, N.J.—E
  Antara Chemicals, Sales Div. General Aniline & Film Corp., 435 Hudson St., New York 14, N.Y.—G,R
  Armstrong Cork Co., Lancaster, Pa.—A
  Associated Eng'g & Mfg. Corp., Glen Ridge, N.J.—O,AD,AP,AQ
  Bakelite Co., Div. Union Carbide & Carbon Corp., 30 E. 42 St., New York 17, N.Y.—A,G. Q.R.T,X,Y,AB
  Barco Chemical Products Co., 701 S. LaSalle St. Chicago 5, Ill.—K,U,AK,AL,AN,AO
  Barrett Varnish Co., 1532 S. 50 Court, Cicero 50, Ill.—A,B,D,Q,T,AA,AE
  Bassett, Inc., Rex, 1314 N.E. 17 Court, Ft. Lauderdale, Fla.—AC,AO
  Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. —AG,AH
  Bigelow Chemical Products, 98 Bigelow St., Quincy 69, Mass.—M,AH

- Beer's Inc., 298 E. 5 St., St. Paul 1, Minn. —AG,AH
  Bigelow Chemical Products, 98 Bigelow St., Quincy 69, Mass.—M,AH
  Biggs Co., Carl H., 2255 Barry Ave., Les Angeles 64, Calif.—A,B,C,G,Q,T,X,Y,AH
  Bisgs Corp., 10 Canfield Rd., Cedar Grove, N.J.—Q
  Biwax Corp., 3446 Howard St., 5kokle, III.— G,P,Q,R,T,Y,Z
  Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio—A,K,Q
  Borden Co., Monomer Dept., Chemical Div., 511 Lancaster St., Leominster, Mass.—A,B, G,R,T,U,AJ,AK
  Borden Co., Chemical Div., 350 Madison Ave., New York 17, N.Y.—R,AH
  Borthig Co., George C., P.O. Box 115, E. Rutherford, N.J.—B,D,G,Q,X,Y,AC,AH
  Boruski, Jr., Ernest F., 505 Fifth Ave., New York 17, N.Y.—G,T
  Bram Chemical Co., 820 65 Ave., Philadelphia
- Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.-K,O,AD,AI,AK,AM,AO,AP,AQ
- 26, FA.—K.O.AD.AI.AK.AMARAO, AF, AQ British Electronic Sales. 23-03 45 Rd., Long Island City 1, N.Y.—AL Brooklyn Paint & Varnish Co., 50 Jay St., Brooklyn 1, N.Y.—D,L.Q.T.X
- Canadian Radium & Uranium Corp., 630 5 Ave., New York 20, N.Y.-O,AD,AI,AP,AQ Catalin Corp. of America, 1 Park Ave., New York 16, N.Y.-A,G.R
- Central Coil Co., 1720 N. Luett St., Indiana-polis 22, Ind.-A,B,C,AH
- Chemical Electronics Corp., Irvington N.Y.--U Cibas Co., 627 Greenwich St., New York 14, N.Y.--A,G,Q,R,T
- Communication Products Co., Marlboro, N.J.
- Consolidated Vacuum Corp., 1775 Mt. Read Blvd., Rochester 3, N.Y.--W Constad Laboratories, 214 W. 29 St., New York 1, N.Y.--L,AE Cox & Co., 115 E. 23rd St., New York, New York--A
- Creative Eng'g. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-G,R
- Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.-B Delaware Optical Labs., 86 Williams St., Lans-downe, Pa.-A,B,O

DeMent Labs., New Fliedner Bldg., Portland 5, Ore.-O,AD

Dewey & Almy Chemical Co., Div. W. R. Grace & Co., 62 Whittemore Ave., Cam-bridge 40, Mass.—A.T.AF

Division Lead Co., 7742 W. 61 Pl., Summit, Ill.-E,N

Dolph Co., John C., Monmouth Junction, N.J. —A,B,C,D,G,L,Q,R,T,X,Y,Z,AE,AH

Dow Chemical Co., Midland, Mich.-Q,R,U,AB Dow Corning Corp., P.O. Box 592, Midland, Mich.—A,R,V,AB

D&R, Ltd., 402 E. Gutierrez St., Santa Bar-bara, Calif.—V Drakenfeld & Co., B. F., 45 Park Pl., New York 7, N.Y.—AR

DuPont de Nemours & Co., E.I., N.W. cor. 10th & Market Sts., Wilmington 98, Del.-A,B,D,L,Q,X.AA,AE

Durez Plastics & Chemicals, 1926 Walck Rd., N. Tonawanda, N.Y.-G.Q.R Dwyer Eng's. Co., P.O. Box 483, Nashua, N.H.-AH Eby Sales Co., 130 Lafayette St., New York 13, N.Y.-AL Edmund Scientific Corp., Barrington, N.J.-B.V.Y Electrochemical Industrian Inc. Incomes St.

B, V, Y Electrochemical Industries, Inc., Jacques St., Worcester '3, Mass.—M Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—A,F,G,J,M,O,U,V,AB, AC

Worcester '3, Mass.-M
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-A.F.G.J.M.O.U.V.AB, AC
Electronic Chemical Corp., 813 Communipaw Ave., Jersey City 4, N.J.-V.AL
Electronic Plastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.-G.Q.R.Y.AB.AH
Ellanar Chemical Co., 2308 Oakton St., Evanston, III.-E.K.R.AF.AK.AN.AS
Emerson & Cuming. Inc., 869 Washington St., Canton, Mass.-A.B.G.R.Y
Eutetic Welding Alloys Corp., 40-40 172 St., Tushing 58, N.Y.-N.AF
Farrelloy Co., 1243 N. 26 St., Philadelphia 21, Fa.-E.N.AF
Fidelity Chemical Products Corp., 470 Fre-inghuysen Ave., Newark 5, N.J.-D.L.Q.U. AA, AC, AE, AK.AO, AS
Plarrock Co., 3609 Filbert St., Philadelphia 1, Fa.-A.B.G.L.Q.T.Y.Z
Preport Sulphur Co., Port Sulphur, Ls.-K
Furne Plastics Inc., 4516 Brazil St., Los Angeles 39, Calif.-A
Gates & Co., Geo. W., Hempstead Tpke., & Lucille Ave., Franklin Square, N.Y.-AC
General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.-A.B.G.D.E.F.G.K.L.M.N.P.Q. R.T.U.V.X.Y.Z.AA, AB, AD, AE, AF, AH, AJ, AK,AL,AM.AN,AR
General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.-K.U.AC,AD, ALAO
General Tire & Rubber Co., Industrial Prod-ucts Div., Wabash, Ind.-S
Glaner Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N.Y.-E.R.AF
Groe Colloids Corp., 310 Wilkes Pl., Sharon, Pa.-G.V
Hanama Co., H.V. 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Hardman Co., H.V. 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Hardman Co., A. V. 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Harden Co., Mr., 165 Silverbrook Ave., Niles, Mich.-F.Q.V.Y.AN
Hardman Co., H.V. 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Hardman Co., H.V., 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Hardman Co., H.V., 571 Cortlandt St., Belle-wille 9, N.J.-A.B.M.S.Y
Hardman Co., A. C., 10th St.

Leland City 1, N.Y.-D.L.T.X.Y.Z.AA,AE
Houghton Labs., Inc., 322 Bush St., Olean, N.Y.
-A,B.D,G.L.T.Y.Y.AE,AJ
Industrial Accessories, Inc., 77 S. Broadway, Long Branch, N.J.-G.T.AB,AH
Industrial Develop. & Mfg. Corp., Box 43, Needham, Mass.-A,G.R
Industrial Develop. & Edgewater, N.J.-T
Industrial Develox. & Broadway, Ossining, N.Y.-A,C.G.X.Y
Industrial Levelox. & Broadway, Ossining, N.Y.-A,C.G.X.Y
Industed Circuits, Inc., 115 Roosevelt Ave., Helleville, N.J.-AH
Inter lectronics Corp., 2432 Grand Concourse, New York 58, N.Y.-MAD
Irvington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11, N.J.-D.G.L.Q.X
Javez, Box 646, Redlands, Calif.-A,G.M.Q.R. T.Y.AH
Jerona Lab., 1629 N. Salina St., Syracuse, N.Y.-U
Johnson Mfg. Co., 600 1st Ave., N. Mount Vernon, 10.-E,N,AF
Kelogg Co., M.W., P.O. Box 469 Jersey City. N.J.-V
Kerden Chemical Co., 6400 Herman Ave., Cleveland 2, Ohio-AK, AL
Keter Solder Co., 4201 Wrightwood Ave., Chi-cago 39, III.-N
Kcour Co., 4300 S. St. Louis Ave., Chicago 42, 111.-K,AO
Kright Machael Mcaller Corp., 214 40th St., Hrooklyn 32, N.Y.-A,B,C,D,L,M,O,R,T,U,X, A AD AP AF

Laconer & Chemical Corp., 214 40th St., Brooklyn 32, N.Y.-A.B.C.D.L.M.O.R.T.U.X. Y.AA,AD,AE,AH

Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, III.-E.N.Q LaMoree, C. D., 1325 San Julian St., Los Angeles 15, Calif.-AB

Angeles 15, Call.-AB Larsen Nuclear Research, 520 5 Ave., New York 36. N.Y.-O,AI Lawter Chemicals, Inc., 8550 Touhy Ave., Chi-engo 45, Ill.-O,Q,AD Lennard Co., P. M., 671 Bergen St., Brooklyn 18, N.Y.-AM

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Linde Air Products Co., Div. Union Carbide & Carbon. 30 E 42 St., New York 17. N.Y.-G, G.R.Y.X,Y.AA.AE,AM.
Linck Chemical Co., 153 E. Madison St., Chicago 3, 11.-A.B.E.K,N.AF.
London Chemical Co., 153 N. 31 Ave., Melrose Park, 111.-E.Q.Y.AF.AH,AK,ANAS
Lukens Steel Co., Coatseville, Pa.-Q.R.AB
Luminous Resins, 166 W. Washington St., Chicago 2, 111.-O.AD
Mackay Inc., A.D., 198 Broadway, New York 38, N.Y.-K.O.AC.AD,AG,AH,AI,AF,AQ.AR
Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, 111.-J
Malinckrodt Chemical Works, 2nd & Mallinekrodt Sts., St. Louis 7, Mo.-K,O,U,Y.AC, AD,AG,AH,AM,AO
Mandel Chemical Products, 207 Astor St., Newark 6, N.J.-Q
Manol Ceramics Co., 140 Little St, Belleville 9, N.J.-A
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 37-21 30 St., Long Island City 1, N.Y.-Q.R
Marbitte Corp., 369 Mulberry St., Newark 2, N.J.-MAH
Mico Instrument Co., 30 Trowbridge St., Cambridge 38, Mass.-N
Micro-Circuits Co., New Buffalo, Mich.-L.M.S.AE,AH.AO,AR
Mico Instrument Go., 301 Trowbridge St., Cambridge 38, Mass.-N
Mico Ruber Co., 49 Ackerman St., Bloomfeld, N.J.-A.S.AB
Muray Plastics Co., 26 Cottage St., New York 6, N.Y.-Q.G.L.P.R.X.Y.AB
Moren Col, C. P., 8167 Monticello Ave., Skokie, 111.-A.B.AE
Moren Co., C. P., 8167 Monticello Ave., Skokie, 111.-A.B.AE
Moren Co., C. P., 8167 Monticello Ave., Skokie, 111.-A.B.AB
Muray Plastics Co., 28 Cottage St., New York 6, N.Y.-Q.W.Y.-M.G.L.P.R.Y.Z.AB<

Mass.--V
Oakite Products. 19 Rector St., New York 6, N.Y.--Q,U,AC,AK,AN
Oppenheimer Corp., 578 Exchange St., Buffalo 10, N.Y.--Q,R.Z
Osborn Products, Box 52. Glen Ellyn. Ill.--N
Paisley Products Inc., 630 W. 51 St., New York 19, N.Y.--A,B,Q,R,AJ
Paul, F. H. & Stein Bros., Inc., 235 5 Ave., New York 16, N.Y.--Q
PCA Electronics, 2180 Colorado Ave., Santa Monica, Calif.--G,Q,AH
Peerless Photo Products Inc., Shoreham, L.I., N.Y.--AG
Penna. Salt Mfg. Co., 1067 Widener Bldg., Philadelphia 7, Pa.--Q,AC,AK
Philadelphia 7, Pa.--Q,AC,AK
Philadelphia 6, Pa.--A,Q,AJ,AN
Phillips Mfg. Co., 2816 Aldrich Ave., S., Minneapolis 8, Minn.--E
Photo Chemical Products, 479 Walton Ave., New York 51, N.Y.--D,L,O,AA,AD,AI
Plasti-Kote, Inc., 425 Lakeside Ave., N.W., Cleveland 13, Ohio--D,AE
Plastonics, P.O. Box 96, Winter Hill 45, Mass.--G,Q,R
Polyken Products, Dept. Kendall Co., 222 W. Adams St., Chicago 6, Ill.--Q
Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N.Y.-O
Quietrole Co., 395 St. John St., Spartanburg, S. Caro.--V,AL
Radio Corp. of America. Tube Div., 415 S. 5
St., Harrison, N.J.--AP,AQ

Radio Corp. of America. Tube Div., 415 S. 5 St., Harrison, N.J.—AP,AQ Ramsell Mfg. Co., 420 Market St., San Fran-cisco, Calif.—Q.T

Randolph Products Co., 12 St., Carlstadt, N.J. -D,Q,AA,AE

Rapid Electroplating Process, 1414 S. Wabash Ave., Chicago 5, Ill.—AO Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N.Y.—A,G,R,X,AJ

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Reilly Tar & Chemical Corp., 1615 Merchant Bank Bldg., Indianapolis, Ind.-D,P,Q,Y Rollon Rubber Products, Inc., 1805 Jerome Ave., Bronx 58, N.Y.-S,AB Rosco Labs., 367 Hudson Ave., Brooklyn 1, N,Y,-B,AL Rubber & Asbestos Corp., 225 Belleville Ave., Bloomfield, N.J.-A Ruby Chemical Co., 68 McDowell St., Columbus 8, Ohio-AF Ruckelshause Labs., John G., Madison, N.J.-Q

Q Saf-T-Flux Co., Box 64, Collegeville, Pa.-E,N Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, Ill.-L,M,O,Q,AD,AE,

AH Sauereisen Cements Co., 1045 N. Canal St., Pittsburgh 15, Pa.—A,B,C,G,M,Q,T,X,Y,AJ Seymour & Sycamore, 218 Lucas St., Sycamore, III.—D

Ill.—D Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.—L,O,AD Sherwin-Williams Co., 101 Prospect Ave., Cleveland 1, Ohio—C,D,G,L,M,Q,R,T,U,X,Y,

Cleveland 1, Ohio-C,D,G,L,M,Q,R,T,U,X,Y, AA,AE
Silicone Spray Products, 3514 Lee Rd., Cleve-land 22, Ohio-Q
Smith Mfg., Co., Nathan R., 105 Pasadena Ave., S. Pasadena, Calif.-G
S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-J,AK
Steel Protection & Chemical Co., Bridge St., Mooresville, Ind.-P,Q,AH
Sterling Varnish Co., Sewickley, Pa.-A,B,D, G,J,L,M,Q,X,Y,AB,AE
Stevenson, Bro., & Co., 110 Race St., Phila-delphia 6, Pa.-G,P,Q,R,V,Y,Z
Stokes Molded Products, Taylor & Webster Sts., Trenton 4, N.J.-S
Stone City Machine & Tool Co., 1206 7 St., Bedford, Ind.-G
Stroblite Co., 75 W. 45 St., New York 36. N.Y.-J,O,AD
Sun Chemical Corp., 10-10 44 Ave., Long Island City 1, N.Y.-Q,X,Y,AB
Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio-E
Switzer Bros., 4782 St. Clair Ave., Cleveland 3, Ohio-D,O
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-O,AC,AD,AJ,AP,AQ
Technic, Inc., 39 Snow St., Providence 8, R.I. -E,T,AF,AH
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.-A,B,E,R,U,V,AK

-E,T,AF,AH Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.-A,B,E,R,U,V,AK Techron Corp., 254 Friend St., Boston 14, Mass. -Q,AH Tempil Corp., 11 W. 25 St., New York 11, N.Y. -Q

-Q.AH
Tempil Corp., 11 W. 25 St., New York 11, N.Y.
-Q
Terrell Corp., 19 Lane St., Waltham 54, Mass.
-A,B,G,Q,R,Z
Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.-E,N,Y.AA
TV Hardware Mfg. Co., 919 Taylor Ave., Rockford, Ill.-D,L,M.AK
Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.-O
Union Bay State Chemical Co., 491 Main St., Cambridge 42, Mass.-A.B,Q
United Technical Labs., Morristowh. N.J.-Q
U.S. Plywood Corp., 55 W. 44 St., New York 36, N.Y.-A
U.S. Radium Corp., 535 Pearl St., New York 7. N.Y.-O,AD
U. S. Rubber Co., 1230 6 Ave., New York 20. N.Y.-S
Vacuum Metals Corp., 70 Memorial Dr., Cambridge 42, Mass.-T
Vorae Co., Route 17 at Meadow Rd., Rutherford, N.J.-D,L.M,Q.AE
Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.-A,B,C,D,K,U, AA,AE,AK
Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-AI
Westine Products Div., Western Lithograph Co., 600 E. 2 St., Los Angeles 54, Calif.-Q
Wildberg Bros., 742 Market St., San Francisco 2, Calif.-N,AO
Workman TV Inc., 309 Queen Anne Rd., Tea-neck, N.J.-B,AL
Zophar Mills Inc., 112 26 St., Brooklyn 32. N.Y.-A,B,G,P,Q,T,Y,Z,AH

Chokes, heavy-wire .....E Choker, power ......F Chokes, R-F receiving ......B Chokes, R-F transmitting .....C

Ace Coil & Electronics Co., 924 Middlesex Ave., Metuchen, N.J.-B,C
Acme Coil & Transformer Corp., 1915 N. Clybourne Ave., Chicago 14, III.-A,D
Acme Electric Corp., Cuba, N.Y.-F
Acme Electronics Inc., (Sub. Aerovox Corp.) 2724 Peck Rd., Monrovia, Calif.-A,B,C,D
Acro Products Co., 369 Shurs Lane, Phila-delphia 28, Pa.-A,D
Acro Transformer & Mfg. Corp., 26-02 4 St., Long Island City 2, N.Y.-A,D,F
A C Transformer Corp., 89 Madison St., Newark, N.J.-D,F

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

-17--CHOKES

Aerocoil Inc., 24 Cliff St., Jersey City, N.J. -B,C

Aeroconi Inc., 24 Cliff St., Jersey City, N.J. —B,C
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.—A,D,F
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.—A,D,E,F
Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.—A,B,C,D,F
Airpax Products Co., P. O. Box 137, Middle River-Baltimore 2, Md.—A,D,E,F
A.J.F. Industries, 352 Monroe St., Brooklyn 21, N.Y.—A
Aladdin Radio Industries, 703 Murfreesboro Rd., Nashville, Tenn.—D
Anchor Electronics Inc., 717 Sip St., Union City, N.J.—B,C
Apex Coil & Transformer Corp., 1919 S. Fairfield Ave., Chicago 8, III.—D
A.P.W. Co., 72 W. Main St., Rockaway, N.J.—D Apex Coil & Transformer Corp., 1919 S. Fairfield Ave., Chicago 8, III.-D
A.P.W. Co., 72 W. Main St., Rockaway, N.J. -D
Artted Co., Inc., 367 Worthington St., Spring-field 3, Mass.-B,C.E
Atlantic Transformer Corp., 30 Hynes Ave., Groton, Conn.-A,D,F
Atlas Coil Winders, Inc., 39 Manhattan St., Stamford Conn.-B,C
Atlas Coil Winders, Inc., 39 Manhattan St., Stamford Conn.-B,C
Atlas Engineering Co., 3 Edgewood St., Roz-bury, Mass.-A,B,C,D,E,F
Audio Development Co., 2833 13th Ave., S
Minneapolis 7, Minn.-A,D
Barker & Williamson, 237 Fairfield Ave., Upper Darby, Fa.-B,C
Barler Electric Co., 601 5th St., Highland, 11.-A,B,C,D,E,F
Berkshire Transformer Corp., 15 South Ave., New Milford, Conn.-A,B,C,D,E,F
Best Mfg. Co., 1200 Grove St., Irvington 11, N.J.-A,D
Bratford Components, 33 Bishop St., Bradford, Pa.-A,D
Bratford Components, 33 Bishop St., Bradford, Pa.-A,D
Bratford Components, 33 Bishop St., Bradford, Pa.-A,D
British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.-A
Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-B,C
Burnell & Co., 45 Warburton Ave., Yonkers 2, N.Y.-A,D
Cadell-Burns Mfg. Co., 40 E. 2nd St., Mine-ola, N.Y.-B,C,D
Cardell-Burns Mfg. Co., 40 E. 2nd St., Mine-ola, N.Y.-B,C,D
Cardoria Electronics & Transformer Corp., P.O. Box 298, Caledonia, N.Y.-A,D
Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.-A,D,E,F
Cambridge 38, Mass.-B,C
Carad Corp. 2550 Bay Rd., Redwood City, Calif.-A,B,C,D
Caral Corp. 250 Bay Rd., Redwood City, Calif.-A,B,C,D
Caral Corp. 315 W. Stephen St., Martinsburg, W. Va.,-A,D,F
Celco (Constantine Eng'g Labs. Co.) P.O. Box 471, Mahwah, N.J.-A,B,C,F
Central Coil Co., 1720 N. Luett St., Indian-apolis 27, Ind.-B
Central Coil Co., 1720 N. Luett St., Indian-apolis 27, Ind.-B
Chica

son & Elston, Unicaso 10, 11.—12.
Clarostat Mfg. Co., 1 Washington St., Dover, N.H.—C
Clippard Instrument Lab., 7390 Colerain Rd., Cincinnati 24, Ohio—B
Clum Mfg. Co., 611 W. National Ave., Milwakee 41, Wisc.—A
Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif.—A
Coil Co. of America, 8 Washington St., Northvale, N.J.—A.D.E.F
Coil Eng'g. & Mfg. Co., 200 Main St., Roanoke, Ind.—A.D.F
Coil Winders, Inc., 100 New York Ave., Westbury, L.I., N.Y.—A.B.C.D.E.F
Columbus Process Co., State & Mapleton Sts., Columbus, Ind.,—A,D
Communication Accessories Co., 110 St. & 711 Hgwy., Hickman Mills, Mo.—A
Communication Parts, 7466 W. Irving Park Rd., Chicago 34, III.—B,C
Condor Radio Mfg. Co., 4068 E. Paseo Grande, Tueson 12, Ariz.—B,C
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, III.—A,D
Continental Electronics Mfg. Co., 4212 S. Buckner Blvd., Dallas 10, Tex.—C
Corona Eng'g Service, 94-52 Corona Ave., Elmhurst 73, N.Y.—D
Crest Transformer Corp., 1834 W. North Ave., Chicago 22, III.—A,D,F

Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N.J.-B,C

Cycle Electronics Labs., 356 Glenwood Ave., E. Orange, N.J.-A,B,C,D,E,F Delta Radio Co., 115 Worth St., New York 18, N.Y.-B,C

Deutschmann Corp., Tobe, Providence High-way, Norwood, Mass.-D Developmental Electronics Corp., 4213 S. Broadway, Los Angeles 37, Calif.-B,D

DeWitt Development Co., 8008 W. 127th St., Blue Island, Ill.-B,D

Dietz Design & Mig. Co., Grandview, Mo.-A,B,D,E,F

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Dinion Coil Co., Caledonia, N.Y.—D
Dormitzer Electric & Mfg., Co., 5 Hadley St., Cambridge 40, Mass.—A,D,F
D&R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.—A
Drake Co., R. L., 18 E. Central Ave., Miamisburg, Ohio—B
Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich.—E,F
Dunkle Coil Co., 3257 W. 6 St., Los Angeles. Calif.—A,B,C
DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, UL.—A B CD F F

Calif. —A, B,C DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, III.—A,B,C,D,E,F Electran Mfg. Co., 1901 Clybourn Ave., Chi-cago 14, III.—A,D,F Electrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.—E,F Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, III.—A,D,E,F Electro Assemblies, Inc., 2935 W. Belmont Ave., Chicago 18, III.—M Electro Eng'g. Works, 6021 College Ave., Oakland 18, Calif.—A,D,E,F Electrometric Inc., Box 107, Woodstock, III. —B,C

-B,C Coll Co., 2506 N. Ontario St., Bur-bank, Calif.-B,C Electronic Coils, Inc., 38 Lyman St., Spring-field, Mass.-B,C.E,F Electronic Research Co., 11550-39 N.E., Seattle 55, Wash.-N Electronic Transformer Co., 207 W. 25 St., New York 1, N.Y.-A,D,F,F Electronicraft, Inc., 27 Milburn St., Bronx-ville 8, N.Y.-A,D,F El-Rad Mfg. Co., 2800 W. Cullom, Chicago 18, III.-B,C

ville S. N.Y. -A.D.F.
wille S. N.Y. -A.D.F.
El-Rad Mfg. Co., 2800 W. Cullom, Chicago 18, 111.-B.C
Empire Coil Co., Beschwood Ave. & 2nd St., New Rochelle, N.Y.-A.B.D.F
Epoco Products, Inc., 2500 Atlantic Ave., Brooklyn 7, N.Y.-A.D.F
Epoco, Inc., 588 Commonwealth Ave., Boston 15, Mass.-B,D
Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.B.C.D.E.F
Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.-B,C
Essex Electronics, 750 Springfield Ave., Berkeley Heights, N.J.-B,D
Fast & Co., John, 3129 N. Crawford Ave., Chicago 41, 111.-E
Feiler Eng's. & Mfg. Co., 8026 N. Monticello Ave., Skokie, 111.-F
Femco, Inc., Irwin, Pa.-A.B.C,D
Ferranti Electric, Ine., 30 Rockefeller Plaza, New York 20, N.Y.-A.E.F
Fisher Eng'g Inc., 2060 H.S. 24 E., Hunting-ton, Ind.-A.D,F
Forbes & Wagner, Inc., 345 Central Ave., Sil-ver Creek, N.Y.-B,C
Forster Transformer Co., 3820 Colerain Ave., Cincinati 23, Ohio-D
France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio-D,E
Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-A.D,E,F
Galbraith & Son Electric Corp., C. C., 450 6th Ave., New York 11, N.Y.-A.D,E,F
Galbraith & Son Electric Co., 123 Hampshire St., Quincy, III.-C
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-A.D,E,F

N.Y.-A.D.E.F Gates Radio Co., 123 Hampshire St., Quincy, III.-C General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-A.D.E.F Ceneral Electric Co., Broadcast Equip. & Commercial Equip. Div., Electronics Park, Syracuse, N.Y.-A.D.F General Transformer Co., 18240 Harwood Ave., Homewood, III.-A.D.F Geotronic Labs., Inc., 1314 Cedar Hill Ave., Dallas 11, Texas-D Gerlyn Eng'g. Co., 2151 N. Damen Ave., Chi-cago 47, III.-A.B.C Goslin Electric & Mfg. Co., 2921 W. Olive Ave., Burbank, Calif.-A.D.E Gramer-Halldonsen Transformer Co., 2734 N. Pulaski Rd., Chicago 39, III.-A,B.C,D Great Eastern Mfg. Co., 163 Remsen Ave., Brooklyn 12, N.Y.-F Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.-A Hamilton-Hall Mfg. Co., 227 N. Water St., Milwaukee 2, Wisc.-B Harnett Electric Corp., 138 Haven Ave., Port Washington, L.I., N.Y.-B.C Highland Eng'g. Co., Main & Urban Sts., Westbury, LI., N.Y.-B.C Hindle Transformer Co., Woods Church Rd., Flemington, N.J.-D.E.F Hillourn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N.Y.-B Hindle Transformer Co., 2082 Lincoln Ave., Alta-dena, Calif.-A,B.C,D.E.,F Houlihan Co., T. J., 2508 W. Lawrence Ave., Chicago 25, III.-B,C,E Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.-A Industrial Transformer, Gouldsboro, Pa.-A, D.F

Industrial Transformer, Gouldsboro, Pa.-A, D,F

Insuline Corp. of America, 186 Granite St., Manchester, N.H.—A,B,C,D,F

International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—B Islip Transformer & Metal Co., Bech St., Islip, N.Y.—A,B,C,D,E,F

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I-T-E Circuit Breaker Co., Resistor Div., 1924 Hamilton St., Philadelphia 30, Pa.-B Jeffers Electronics Div., Speer Carbon Co., Du Bois, Pa.-B Jeffries Transformer Co., 1710 E. 57th St., Los Angeles 58, Calif.-D.E Jobbins Electronic Enterprises, 500 Hamilton Ave., Menlo Park, Calif.-A,D.E,F Johnson Co., E. F., Waseca, Minn.-B.C Johnson Electronics Inc., 521 Elwall St., Or-Iando, Fla.-B,C Johnson Labs., Willard Rd., Norwalk, Conn. -B,C

Kenyon Transformer Co., 840 Barry St., New York 59, N.Y.-A,D,F Keystone Products Co., 904 23 St., Union City,

Keystone Products Co., 904 23 St., Union City, N.J.—A,B,C,D
Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—B,C
K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn.—A,D.F
Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.—A,D,E,F
Lenkurt Electric Co., 1105 County Rd., Saa Carlos, Calif.—D
Leonard Electric Products Co., Inc., 67 34 St., Brooklyn 32, N.Y.—A,B,C,D,E,F
Lepace Mfg. Corp., 447 South Blvd., Oak Park, III.—B,C
Mag-Electric Products, 12822 Yukon Ave.,

Lebace Mfg. Co., 5932 Putnam Ave., Brooklyn 27, N.Y.-A,D,E,F
Linell Eng'g Corp., 447 South Blvd., Oak Park, Ill.-B,C
Mag-Electric Products, 12822 Yukon Ave., Hawthorne, Calif.-A,B,C,D,E,F
Magnatran, Inc., 248 Schuyler Ave., Kearny, N.J.-C,D,E,F
Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N.Y.-F
Magnetic Instrument Co., 82 Main St., W. Orange, N.J.-A,D,E,F
Mark Electronics, 744 E. 138 St., New York 54, N.Y.-C,E
Mark Electronics, Inc., 250 Glenwood Ave., Bloomfield, N.J.-D
Mattson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-A,B,C,D,E,F
Mercury Electro-Products. Inc., 622 W. Kinsie St., Chicago 10, Ill.-A,B,C
Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 14, Ill.-B,D,F
Microtran Co., Div. Crest Labs., 84-11 Rockaway Beach 93, N.Y.-A,D,F
Miller Mfg. Co., James, 150 Exchange St., Malden, Mass-B,C
Miller Co., J. W. 5917 S. Main St., Los Angeles 3, Calif.-B,C,D
Miller Co., Sanford, 691 Bedford Ave., Brooklyn 6, N.Y.-F
Milwaukee Transformer Co.. 5231 N. Hopkins St., Milwaukee 9, Wisc.-A,B,C,D,E,F
Miller Co., Sanford, 691 Bedford Ave., Brooklyn 6, N.Y.-F
Milwaukee Transformer Co.. 5231 N. Hopkins St., Milwaukee 9, Wisc.-A,B,C,D,E,F
Moran Electronic Components, 10506 Wheatley St., Kensington, Md.-B,C
Muray Plastics Co., 26 Cottage St., Poughkeepsie, N.Y.-A
Muter Co., 1265 S. Michigan Ave., Chicago 5, Ill.-B,D
Moran Electronic Components, 10506 Wheatley St., Kensington, Md.-B,C
Muray Plastics Co., 61 Sherman St., Malden 48, Mass.-B,C
National Coil Co., P. O. Box 1287, Sheridan, Wyo.-B,C
New London, Instrument Co., 2124 W. Carroll Ave., Kenilworth, N.J.-A,D,F
New York Transformer Co., 2124 W. Carroll Ave., Chicago 12, Ill.-B,D
New York Transformer Co., 2124 W. Carroll Ave., Chicago 14, Ill.-B,C,F
New York Transformer Co., 2124 W. Carroll Ave.

Ohmite Mfg. Co., 3601 Howard St., Skokie, III. -B.C.F Orad Electric Co., 69 Murray St., New York 7, N.Y.-E,F Ortho Eng'g., 245 Wallace St., Orange 2, N.J.-A.D,E,F Ortho Filter Corp., 196 Albion Ave., Paterson 2, N.J.-A.D,E,F Ortho Filter Corp., 196 Albion Ave., Paterson 2, N.J.-A.D,E,F Osborne Electric Co., 712 S.E. Hawthorne Blvd., Portland 14, Ore.-A.D.E,F Oxford Electric Corp. 3911 S. Michigan Ave., Chicago 15, III.-A.D Pacific Transformers, 502 S. Avenue 17, Los Angeles 31, Calif.-A.D.E,F Palo Alto Eng'g., 440 Olive Ave., Palo Alto, Calif.-D Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-A.D,F Peerpers Electrical Products, Div. Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.-A.D,E,F Permoflux Corp., 345 Kansas St., El Segundo, Calif.-D,F Permoflux Corp., 245 Kansas St., El Segundo, Calif.-D,F Permoflux Corp., C & Tioga Sts., Philadelphia 34, Pa.-A.D.F Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.-B Pittsburgh Coil Co., Box 700, Carnegie, Pa.-C Polyphase Instrument Co., 701 Haverford Rd., Bryn Mawr 1, Pa.-D

Polyphase Instrument Co., 701 Haverford Rd., Bryn Mawr 1, Pa.-D

Power Transformer Co., 532 Mulberry St., Newark 5, N.J.-A,D,F

Putronic Transformer Corp., 525 Broadway, New York 12, N.Y.—A.D Badio Colls 1519 W. Devon Ave., Chicago 26, III.—M

Badio Colls 1519 W. Devon Ave., Unicago 20, III.—M.
Radio Corp. of America, RCA Tube Dept., 415
S. 5 St., Harrison, N.J.—A,B,C,D,E,F
Radio Frequency Co., Medfield, Mass.—C
Radio Industries, Inc., 5225 N. Ravenswood Ave., Chicago 40, III.—B.C
Radio Sonic Corp., Plainfield, N.J.—D.E
Badio TV Products, Grass Lake, Mich.—B
Radionic Controls, Box 237, Herrin, III.—A,D, E.F

Railway Communications, Inc., Raytown, Mo.

Ross Mfg. Co., 2405 Armitage Ave., Chicago, III.--B
Sag Harbor Industries, Box M Sag Harbor, L.I., N.Y.--A.E
Sangamo Electric Co., 9 & Converse, Spring-field, III.--A.D.E.F
Sarntoga Industries, Ballston Ave., Saratoga Springs, N.Y.--A.D.E.F
Stryweeper, Inc., McHenry, III.--A
SNC Mfg. Co., P.O. Box 277, Oshkosh, Wis. -A.D.E.F
Santhwestern Industrial Electronics, 2831

SNC Mfg. Co., P.O. Box 277, Oshkosh, Wis. -A.D.E.F
Southwestern Industrial Electronics, 2831 Post Oak Rd., Houston, Tex.—A.D
Speer Carbon Co., Speer Resistor Div., St. Marya, Pa.—A.B
Sumere Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N.Y.—A.B.C.D.E.F
Standard Electronics Corp., 285 Emmet St., Newark, N.J.—A.D
Standard Winding Co., 44-62 Johnes St., New-burgh, N.Y.—A.B.C.
Standard Winding Co., P. O. Box 70, New-burgh, N.Y.—A.B.C.
Standard Electronics Corp., 297 N. 7 St., Brooklyn 11, N.Y.—A.D.F
Strong Electric Co., 87 City Park Ave., To-lecto 2, Ohio—E
Super Ear Products Co., 675 Merrick Rd., Lynbrook, N.Y.—A.B.C
Tenh.Master Corp., 443 Broadway, New York 18, N.Y.—A.D.
Tech.Master Corp., 35-16 37 St., Long Island City 1, N.Y.—A.D.

I. N.Y.-A Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-A.D Televiso Corp., 1415 Golf Rd., Des Plaines, Ill.-D

Televiso corp., 1416 Golf Rd., Des Plaines, III.-D
Telvision Labs., Wauconda, III.-A,D
Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas-A,D
Thermador Electrical Mfg. Co., Electronics Plant, 2000 Camfield Ave., Los Angeles, Calif.-A,D,E,F
Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 7th & Bellmont, Mt. Carmel, III.-A,B,C,D,E,F
Thor Transformer & Electronics, Inc., 750 San Antonio Rd., Palo Alto, Calif.-A,D,E,F
T. J. Mfg. Corp., 1020 S. Josephine St., Mar-tinsville, Ind.-B,C,D,E
Todd Products Co., 156 Gramatan Ave., Mt. Varnon, N.Y.-A,D,E,F
Torocil Co., 1374 Mobile Ct., St. Louis 10, Mo.-A,D

Vernon, N.Y.--A,D.E.F
Torocoil Co., 1374 Mobile Ct., St. Louis 10, Mo.-A,D
Torwico Electronics, Inc., 967 Frelinghuysen Ave., Newark 5, N.J.--A,D
Transformer Engineers, 161 E. Calif. St., Pasalena 1, Calif.--A,D,F
Transformer Mfrs. Inc., 850 W. Weed St., Chi-cago 22, 111.--A
Transformer Technicians, Inc., 2608 N. Cicaro Ave., Chicago 38, 111.--A,D,E.F
Transformers Inc., 532 North St., Endicott, N.Y.-A,D,E,F
Transformer Corp., 822 E. State St., Trenton, N.J.--A,D,E,F
Trenton Transformer Corp., 822 E. State St., Trenton, N.J.--A,D,E,F
Triad Transformer Corp., 4055 Redwood Ave., Venice, Calif.--A,D,E,F
Tried Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, 111.--A,D,E,F
Trivec Co., Box 1207, Lindsay, Calif.--B,D,E
Trivec Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, 111.--A,D,E,F
Tv Products Corp., 907 E. 23 St., Patterson 3, N.J.-A
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,C,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,D,E,F
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City, N.J.-A,B,C,D,E,F
United Pressed Products Co., 741 W. Harrison St., Chicago 7, 111.-M,N
United Technical Labs., Morristown, N.J.--B,D

United Technical Labs., Morristown, N.J.-B,D

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U. S. Electronics Corp., 275 Warren St., Lyndhurst, N.J.--A,B,C,D,E,F United Transformer Co., 150 Varick St., New York, N.Y.--A,D,F

United Transformer Co., 150 Varick St., New York, N.Y.—A,D,F
University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N.Y.—A,D
Vanguard Electronice Co., 3884 Motor Ave., Los Angeles 34. Calif.—B,O
Varo Mfg. Co., 1801 Walnut St., Garland, Tex.—A,D,F
Vokar Corp., Dexter, Mich.—A,B,C,D,F
Volta Mfg. Co., 2154 N, Halsted, Chicago 14, 111.—B,C
Waco Inc., 2032 Broadward, Series Mathematical Series 2014

Waco Inc., 2032 Broadway, Santa Monica, Calif.—A,B,C,D,E,F
Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio—A,D,F
Western Coil Products Co., 2989 Middlefield Rd., Palo Alto, Calif.—B
Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury, Conn.—A,D
White Industries Ins., 421 W. 54 St., New York 19, N.Y.—D,E
Wilco Corp., 546 Drover St., Indianapolis 21, Ind.—A,B,C
Wilmar Mfg. Co., 2715 E. 14 St., Kansas City 27, Mo.—B,C
Wirt Co., 5221 Greene St., Philadelphia 44, Pa.—B,C

# 18—CIRCUITS

Circuits, etchedA
Circuits, embossedJ
Circuits, platedI
Circuits, pottedB
Circuits, printedC
Circuits, stampedD
Delay linesE
Plug-in circuit unitsL
Printed circuit copper laminatesK
Pulse forming networks

ACF Electronics, Div ACF Industries, Inc., 800 N. Pitt St., Alexandria. Va.—A,C,H,L
Acme Electronics Inc. (Sub. Aerovox Corp.) 2724 Peck Rd., Monrovia, Calif.—E,H
Advance Electronics Co., P. O. Box 394 Passaic, N.J.—E
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.—C,E,H
Airborne Instruments Lab., 160 Old Country Rd., Mineola, L.I., N.Y.—H
Aircraft Marine Products, 2100 Paxton St., Harrisburg, Pa.—H
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.—H,L
Airfyte Electronics Co., 21 Cottage St., Bay-onne, N.J.—B,C
Airdsign, Inc., 241 Fairfield Ave., Upper Dar-by, Pa.—H

Metuchen, N.J.--C Anderson Labs., 39 Talcott Rd., W. Hartford 10, Conn.--E Boulder, Colo. Arenberg .Ultrasonic Lab., 94 Green St., Jamaica Plain 30, Mass.--E Arrow-Hart & Hegeman Electric Co., 108 Haw-thorn St., Hartford 6, Conn.--B Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.--B Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.--B Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.--B Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.--B Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.--B Austin, O., 128 32 St., Brooklyn 32, N.Y.--C Autel Electronics Co., 1947 Farmingdale Rd., Westfield, N.J.--A.B.C.D.L Authorized Mfg. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.--L Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.--E Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. --A,B,C,D,E,H,I,J,K,L Bel Fuse Inc., 311 Mountain Rd., Union City, N.J.--E Brubaker Mfg. Co., 9151 Exposition Dr., Los Angeles 34, Calif.--A,B,C,E,H,I,K,L Buckbee Mears Co., Lindeke Bldg., St. Paul 1, Minn.--A,C

Buckbee Mears VV., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.-L. California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.-A.C.D.I.J.K Carad Corp., 2850 Bay Rd., Redwood City,

Carad Corp., 285 Calif.-B,E,H,L

Cardwell Electronics Productions, Allen D., Plainville, Conn.—C Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—C,E,H,L Centronics Co., 21-04 122 St., College Point 56, N.Y.—A,B,C,I

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Cramet Co., 5905 Broadway, New York 63, N.Y.-C.E
Chatham Electronics, Div. Gera Corp., 630
W. Mt. Pleasant Ave., Livingston. N.J.-H
Church Co., George H., 5109 Halifax Ave., Minneapolis 10, Minn.-H
Circon Component Co., 17544 Raymer St., Northridge, Calif.-A.C.I.L
Circuitron, Inc., 115 E. Main St., Rockville. Conn.-A.B.C.I.L
Citation Products Co., 233 E. 146 St., New York 51, N.Y.-A.C
Cleveland Metal Specialties Co., 1783 E. 21 St., Cleveland Metal Specialties Co., 1783 E. 21 St., Cleveland 14, Ohio--A
Colorvision Plastics Inc., 182 Beacon St., Boston 16, Mass.-J
Columbia Technical Corp., 5 E. 57 St., New York 22, N.Y.-E
Computer Control Co., 92 Broad St., Wellesley 57, Mass.-HL

Computer Control Co., 92 Broad St., Wellesley 57, Mass.-H,L Continental Diamond Fibre, Newark, Del.-K Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.-E,H Cornell-Dubliler Electric Corp., 333 Hamilton Ave., S. Plainfield, N.J.-C,H Corning Glass Works, Corning, N.Y.-E Corona Eng'g. Service, 94-52 Corona Ave., Elmhurst 73, N.Y.-E Corson Electric Mfg. Corp., 540 39 St., Union City, N.J.-H Coroname, Inc., 3701 Ravenswood Ave., Chicago

Corson Electric Mfg. Corp., 540 39 St., Union City, N.J.-H Croname, Inc., 3701 Ravenswood Ave., Chicago 13, Ill.-A Crown Engineering, 3821 Commercial N.E., Albuquerque, New Mex.-L Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-L Davelle Laboratories, Inc., 145-68 228th St., Springfield Gardens 13, N.Y.-A.B.C.D.I Davies Laboratories, 4705 Queensbury Rd., Riverdale, Md.-L Demco Products, P.O. Box 5042, Philadelphia. 11, Pa.-C,L Deutschmann Corp., Tobe, Providence High-way, Norwood, Mass.-E,H Developmental Electronics Corp., 4213 S. Broadway, Los Angeles 37, Calif.-E,H Digital Products, Inc., 7643 Fay Ave., La-Jolla, Calif.-A,I.L Drive-In-Theater Mfg. Co., 505 W. 9th, Kan-sas City, Mo.-H Dwyer Engineering Co., P.O. Box 483, Nashua, N.H.-A,B,C,I.L DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, IlL.-E

Dwyer Engineering Co., P.O. Box 483, Nashua, N.H.—A,B,C,I,L
DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, III.—E
Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, L.I., N.Y.—B.H,L
Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.—A.C
EECO Production Corp., 327 S. Vermont Ave., Los Angeles 5, Calif.—A.L
Eldema Corp., 5827 E. Beverly Blvd., Los Angeles 22, Calif.—L
Electrolab, Inc., 76 Atherton St., Boston 30, Mass.—A,B,C,D,I
Electrolab, Inc., 76 Atherton St., Boston 30, Mass.—A,B,C,D,I
Electronic Computer Co., 265 Butler St., Brook-lyn 17, N.Y.—E
Electronic Eng'g Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.—A,L
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, II.—C
El Mec Laboratories, 730 Boulevard, Kenil-worth. N.J.—A
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y. —A,C
El-Rad Mfg. Co., 2800 W. Cullom, Chicago 18, III.—E.H

El-Rad Mfg. Co., 2800 W. Cullom, Chicago 18, Ill.-E.H

III.-E.H
Empire State Labs., 2608 Merrick Rd., Bellmore, Long Island, N.Y.-E
Eng's. Research & Development Co., Addison, III.-C,D
Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.-B.E.H.L
Erie Resistor Corp., 644 W. 12th St., Erie, Pa.-C,J.L
ESC Corp., 534 Research Blud. Policador Bost

Eric Resistor Corp., 644 W. 12th St., Erie, Pa.-C,J,L
ESC Corp., 534 Bergen Blvd., Palisades Park, N.J.-E,H
Esco Corp., 578 E. 161st St., New York 56. N.Y.-B,C,D,H,I,L
Essex Electronics, 550 Springfield Ave.. Berkley Heights, N.J.-E,H
Etched Products Corp., 39-01 Queens Blvd., Long Island City 1, N.Y.-A
Farnsworth Electronics Co., Div. I. T. & T. Corp., P.O. Box 810, Fort Wayne, Ind.-A,C,E,H,I,J,K
Farrington Mfg. Co., 76 Atherton St., Bos-ton, Mass.-C
Federal Telephone & Radio Co., Div. of IT&T. 100 Kingsland Rd., Clifton, N.J.-E,L
Fielt Laboratory, 3711 Marshall Rd., Drexel Hill, Pa.-A.C
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.

Thomson Ave., Long Island City 1, N.Y.

Formica Co., 4614 Spring Grove Ave., Cin-cinnati 32, Ohio-A.K Garde Mfg. Co., 588 Eddy St., Providence 8,

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

-B.H

R.L.-L

- General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-H
  General Electric Co., Broadcast Equip & Com-mercial Equip. Div., Electronics Park, Syra-cuse, N.Y.-C.E.
  General Electric Co., P.O. Box 1122, Syracuse, N.Y.-A.C.E.I
  General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.-C
  Glass Products Co., 6911 S. Chicago Ave., Chicago 37, 111.-A.C.I.J.K
  Glenco Corp., 212 Durham Ave., Metuchen, N.J.-B,C
  Goldak Co., 1544 W. Glenoaks Blvd. Glendala

- Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.—C

- Goldak Co., Ibaa W. Glenoaks Bivd., Glendale I. Calif.—C
  Gudeman Co. of Calif., 9200 Exposition Blvd., Los Angeles 34, Calif.—B,E,H,L
  Gulton Mfg. Corp., 212 Durham Ave., Metu-chen, N.J.—B,E,H
  Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.—A,C,E,H,K,L
  Hanson Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.—C
  Harder Co., Donald C., 3338 India St., San Diego 1, Calif.—E,H
  Harnett Electric Corp., 138 Haven Ave., Port Washington, L.I., N.Y.—E
  Hasting's Instrument Co., Newcomb Ave. & Ivy Home Rd., Hampton, Va.—A
  Helipot Corp., 616 Meridian, S. Pasadena, Calif.—E
  Herlec Corp., 6th & Beach Sts., Grafton, Wis.

- Herlec Corp., 6th & Beach Sts., Grafton, Wis.
- Herlec Corp., 6th & Beach Sts., Grafton, Wis. -C
  Hi-Q, Div. Aerovox Corp., Olean, N.Y.-C
  Hodgson Co., R. W., 3406 W. Washington Bivd., Los Angeles 18, Calif.-H
  Hubbell Inc., Harvey, State St. & Bostwick Ave., Bridgeport, Conn.-C
  Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-L
  Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.-A,B.C, D.E.H.I
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.-A,C
  Integrated Mica Corp., 202 Franklin Pl., Woodmere, L.I., N.Y.-C
  International Resistance Co., 401 N. Broad St., Philadelphia 8, PA.-C
  Islip, N.Y.-B,L
  Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.-C
  Javex, Box 646, Redlands, Calif.-C
  Jobbins Electronics Fatornoice Entarmises

- N.J.-C Javez, Box 646, Redlands, Calif.-C Jobhins Electronic Enterprises 771 Hamilton Ave., Menlo Park, Calif.-H Johnson Labs., Willard Rd., Norwalk, Conn.

- Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J. -D Mag-Electric Products, 12822 Yukon Ave., Hawthorne, Calif., -E, H, L Magnavox Co., Ft. Wayne 4, Ind. -A, B, C Mahoney Teletronic Labs., 209 16th Ave., New-ark 3, N.J. -E Maryland Electronic Mfg. Corp., 5009 Calvert Rd.. College Park, Md. -C May Eng'g. Co., 6055 Lankershim Blvd., North Hollywood, Calif., -E, H Melpar, Inc., 3000 Arlington Blvd., Falls Church, Va. -H Methode Mfg. Corp., 2021 W. Churchill St., Chicago 47, Ill. -A, C, D, I, J Metrotype Corp., 6100 Archer Ave., Summit, Ill. -H Micro-Circuits Co., New Buffalo, Mich. -C Miller Labs., August E., 9226 Hudson Blvd., N. Bergen, N.J. -L Mitronica Inc., 232 18th Ave., Newark, N.J. -C Molded Insulation Co.. 335 E. Price St., Phila-

- Mitronics Inc., 232 18th Ave., Newark, N.J. —C
  Molded Insulation Co., 335 E. Price St., Phila-delphia 44. Pa.—A,C
  Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.—K
  Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.—C
  Nameplates, Inc., 425 E. 101st St., Brooklyn 12, N.Y.—A,C
  National Capacitor Co., 585 Washington St., Quince 69, Mass.—B
  National Vulcanized Fibre Co., Maryland Ave. & Beech Sts., Wilmington, Dela.—K
  Networks Electronic Corp., 14806 Oxnard St., Van Nuys, Calif.—E

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- North American Model Products, 9802 Warwick Rd., Warwick, Va.—A.C
  Onondaga Pottery Co., Electronics Div., 1858
  W. Fayette St., Syracuse 1, N.Y.—C
  Pacific Mercury TV Mfg., 5955 Van Nuys Blvd., Van Nuys, Calif.—A
  Patterson, Moos, Div. Universal Winding Co., 90-28 Van Wyck Expressway, Jamaica 18, N.Y.—A.B,C
  PCA Electronics Inc., 2180 Colorado Ave., Santa Monica, Cal.—A,B,C,E,H,L
  Permanent Label Corp., 578 Summit Ave., Jersey City 6, N.J.—C
  Phen-O-Tron, Inc., 455 Main St., New Ro-chelle, N.Y.—A,C,I,L
  Photo Chemical Products, 479 Walton Ave., New York 51, N.Y.—I
  Photocircuits Corp., Glen Cove, N.Y.—A,B,C, E,I,L
  Pitometer Log Corp., 287 Lafavette St., New

- Photochrcuits Corp., Glen Cove, N.Y.-A,B,C, E,I,L
  Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.-H
  Plastic Accessories, Inc., 93 Mercer St., New York 12, N.Y.-C
  Plastics & Electronics Co., 272 Northland Ave., Buffalo 8, N.Y.-A,B,C,H,I,L
  Plastronics, P.O. Box 96, Winter Hill 45, Mass.-B
  Precision Crystal Lab., 2223 Warwick Ave., Santa Monica. Calif.-L
  Precision Metal Products Co., 41 Elm St., Stoneham 80, Mass.-A,B,C,D,I,J
  Printed Circuits, Inc., 36 Tunxis Ave., Bloom-field, Conn.-A,C,I
  Printed Electronics Corp., 15 Willow St., Natick, Mass.-A,C,I,L
  "Q" Circuits Co., 32 Laskie St., San Fran-cisco 3. Calif.-A,B,C,D,I,J,K
  Radiation, Inc., Box "Q", Melbourne, Fla. -H,L

- Matick, Mass.-A,C,LL
  "Q" Circuits Co., 32 Laskie St., San Francisco 3, Calif.-A,B,C,D,I,J,K
  Radiation, Inc., Box "Q", Melbourne, Fla.-HL
  Radiation, Instrument Devel. Lab., '2337 W. 67 St., Chicago 37, 111-L
  Radio Ceramies Corp., 109 S. Superior St., Angola, Ind.-A
  Radio City Products Co., 101 West 31 St., New York 1, NY.-A,CI
  Radio Industries, Inc., 5225 N. Ravenswood Ave., Chicago 25, 111-E,H
  Ratigan Electronics, Inc., 3614 Maple Ave., Los Angeles 11, Calif.-E,H
  Ratigan Electronics Corp., 120 Prospect St., Thompsonville, Conn.-E
  Rex Electronics Corp., 1361 E. DeLoss St., Indianapolis 3, Ind.-C
  Rhode Island Electronics, Inc., Spring St., M. Dighton, Mass.-D
  RHO Eng's. Co., 2405 Sepulveda Blvd., Culver City, Calif.-B,L
  Richardson Co., 2790 Lake St., Melrose Park, III.-A,K
  RS Electronics Corp., P.O. Box 368, Sta. A. Palo Alto, Calif.-A,C,I,K,L
  Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, III.-C
  Sander Associatea, 137 Canal St., Nashua, N.H.-A,B,C,D,I,K,L
  Samson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, III.-C
  Sander Masc. Corp., 871 Willow St., Redwood City, Calif.-A,C, St. Nashua, N.H.-A,B,C,D,I,K,L
  Sansamo Electric Co., 9 & Converse, Spring-field, III.-H.
  Sequoia Process Corp., 871 Willow St., Redwood City, Calif.-A,C
  Shaltcross Mfg. Co., 520 Pusey Ave., Colling-dale, P.A.-E
  Sound Devices Inc., 129 E. 124 St., New York 35, NY.-C
  Spaulding Fibre Co., 310 Wheeler St., Tonawanda, N.Y.-K
  Sprague Electric Co., North Adams, Mass.-B,C,E H.L
  Springfield Enterprises, P.O. Box 54, Spring-field Gardens 13, NY.-A
  Stackpole Carbon Co., Tannery St., St. Marys, Fa.-CL.
  Standard Coil Products Co., 2055 N. Hawthorne St., Melrose Park, NJ.-B,L
  Technitrol Eng's, Co., 2751 N. 4 St., Philadelphia 33, Pa.-E
  Technitrol Eng's, Co., 2751 N. 4 St.,

- Transformers Inc., 532 North St., Endicott, N.Y.-B.H
- Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.--

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Trimount Plastics Co., 71 Dudley St., Arling-TV Labs. Inc., 5045 W. Lake St., Chicago 44, Ill.-A,C,D

- III.—A,C,D
  Underwood Corp., Electronic Computer Div., 35-10 36 Ave., Long Island City 6, N.Y.—E
  Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—E,H,L
  U. S. Eng'g. Co., 521 Commercial St., Glendale 3, Calif.—A,C
  U.S. Radium Corp., 535 Pearl St., New York 7, N.Y.—A

- U.S. Radium Corp., 535 Pearl St., New York 7, N.Y.-A
  Vacumet Inc., 1009 W. Weed St., Chicago 22, Ill.-A.B.C.D.E.I
  Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.-B.E.H
  Varo Mfg. Co., 1801 Walnut St., Garland, Texas-L
- Texas-L Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.-L Vectron Inc., 1611 Trapola Rd., Waltham 54, Los Austes vo, Van. Vectron Inc., 1611 Trapola Rd., Waltham 54, Mass.—B.H.L Virginia Electronics Co., River Rd. At B&O R.R., Washington 16, D.C.—B,L Visart Inc., 2634 Park Ave., New York 51, N.Y.

Vokar Corp., Dexter, Mich.—A.C.I Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—B,C,H,L Western Coil Products Co., 2989 Middlefield Rd., Palo Alto, Calif.—E White Instrument Laboratories, 203 Riverside Dr., Austin 4, Texas—L Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—E

Coil forms .....B Coil winding machines .....C Coils, antenna .....D 

Coils, relay .....L 

Coils, toroidal .....P Coils, toroidal variable ......AA Colls, transducer .....V Coils, TV centering .....AB Coils, TV convergence .....AF Coils, TV field .....U Colls, TV focusing .....Q Coils, TV linearity ......AC Coils, TV width .....AD Coils, video peaking .....AE Colls, inductors .....R Colls, reactors .....S

Accurate Paper Tube Co., 805 N. Peoria St., Chicago 22, III.-B Ace Coil & Electronics Co., 916 Lincoln Hway., Metuchen, N. J. - A.D.F.H.K.M.N.R.AB.AC, AD.AE

Acme Coil & Transformer Corp., 1915 N. Clybourne Ave., Chicago 14, Ill.—A,I Acme Electric Corp., Water St., Cuba, N.Y.

Arme Electronics Inc. (Sub. Aerovox Corp.), 2724 Peck Rd., Monrovia, Calif.-A,D,M.N, P.T

2724 Peck Rd., Monrovia, Calif.—A,D,M.N, P.T
Acme Wire Co., New Haven 14, Conn.—F,I,J,L
Acorn Electronics Corp., Box 848, Gibson City, IIL.—I,L,S
Adler Communications Labs., 1 Le Fevre Lane, New Rochelle 1, N.Y.—N
Admiral Corp., Molded Products Div., P.O. Box 338, W. Chicago, IIL.—B
Advanced Electronics, Inc., 94 Silas Deane Hwy., Rocky Hill, Conn.—Z
Aerocoil, Inc., 24 Cliff St., Jersey City, N.J. —A,B,D,H,M,N,R,Z,AE
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.—D
Airborne Electronics Labs., 160 Old Country Rd., Mineola, N.Y.—E
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.—L,R,S,Z
Airpar Products Co., P. O. Box 187, Middle River, Baltimore 2, Md.—P
A. J. F. Industries, 852 Monroe St., Brooklyn 21, N.Y.—S

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19—Coils

Aladdin Radio Industries, 703 Murfreeshoro Rd., Nashville, Tenn.—A,D,H,R
Alcar Instruments Inc., 20-21 Wagaraw Rd., Fair Lawn, N.J.—C
Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.—B
Allied Allegri Machine Co., 141 River Rd., Nut-lay 10, N.J.—D,M
Allied Control Co., 22 East End Ave., New York 21, N.Y.—J,L
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—R,S.T
American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—B
American Relay & Controls, Inc., 3621 How-ard St., Skokie, Ill.—J
Anchor Electronics Inc., 717 Sip St., Union City, N.J.—A,D,C,H,J,K,L,M,N,R,S,W,Z,AC, AD,AE
A. P. W. Co., 72 W. Main St., Rockaway, N.J.— A U Market Allier St., St., St., St., M.J.—

AD.AE A. P. W. Co., 72 W. Main St., Rockaway, N.J.--A,IJ,K,L,P,Q,R,S,V,X,Z Arco Transformer & Electric Corp., 1602 S. Hanna St., Ft. Wayne 5, Ind.--A,I,J,L,O,R, S,T,W,Z Artted Co. Inc., 367 Worthington St., Spring-field 3, Mass.--A,D,G,H,I,K,L,M,R,S,T,W,Z, Ac,AD,AE Assambly Products Inc. Chastanland 21 Obto Assembly Products, Inc., Chesterland 21, Ohio

AC, AD, AE
Associated Products, Inc., Chesterland 21, Ohio —A, L
Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.—B, C
Atlantic Transformer Corp., 30 Hynes Ave., Groton, Conn.—A, J, L, P, R, S, Z
Atlas Coll Winders, Inc., 89 Manhattan St., Stamford, Conn.—A, G, H, J, K, M, R, S
Atlas Engineering Co., 8 Edgewood St., Roxbury, Mass.—A
Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N.J.—D, E, F, H, R, V, Y, AD
Automatic Switch Co., 391 Lakeside Ave., Orange, N.J.—Z
Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—A, D, G, H, M, N, P, R, Z
Bassett Inc., Rex, 1314 NE 17th Court, Ft. Lauderdale, Fla.—A, D
Beck's Inc., 293 E. 5 St., St. Paul 1, Minn. —Y
Bellaire Electronics Inc., 30 Prince St.

Beck's Inc., 298 E. 6 St., St. Paul I, Minn. —Y
Bellaire Electronics Inc., 30 Prince St., Brooklyn I, N.Y.—A,D,H.M,N
Best Mg. Co., 1200 Grove St., Irvington 11, N.J.—A,O.X
Better Goil & Transformer Corp., 2000 Main St., Goodland. Ind.—A,L,O,R,S,T,Y,Z
Bitterman Electric Co., Barlow & Grove Sta., Canaan, Conn.—A,J,K,M,N,P,R,S,T,Z,AA
Bradford Components, 33 Bishop St., Brad-ford, Pa.—A,H,K,U,AC,AD,AE
Bram Chemical Co., 820 65th Ave., Philadel-phia 26, Pa.—P
Broadway Coll Co., 5638 Broadway, Chicago 40. Ill.—D,H,N,Q,R,W,Y,Z,AC,AD,AE
Brubaker Electronic Co., 9151 Exposition Dr., Los Angeles 34, Calif.—R
Buck Eng'g. Co., 37-41 Marcy St., Freehold, N.J.—N

J.---N Radio. Ind., 2118 E. 55 St., Cleveland 8, Bud

Bud Radio. Ind., 2118 E. 55 St., Cleveland 3, Ohio-A.N.R
Bunnell & Co., J.H., 81 Prospect St., Brooklyn N.Y.-L.N
Burnell & Co., 45 Warburton Ave., Yonkers 2, N.Y.-P.R.S.AA
Caddell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.-A.B.D.H.M.N.R.S.Z.AD
Calbest Eng'g. & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.-D,AD, AE

AE Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.—A,J,K,P,Q,R,S,T,U,W, X,Z,AB

Califf. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.-A.J.K.P.Q.R.S.T.U.W, X.Z.AB
Caltron Products Co., 1310 S. Hobart Blvd., Los Angeles 6, Calif.-Z
Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.-A.B.D.H.M.N.R.
Campbell X-Ray Corp., 110 Cummington St., Boston 15. Mass.-A
Carad Corp., 2850 Bay Rd., Redwood City, Calif.-A.D.F.H.K.M.N.P.R.S.V
Cardwell Electronics Productions, Allen D., Plainville, Conn.-Y
Cartore Calif.-A.C.Z
CBC Electronics Co., 2601 N. Howard St., Philadelphia 33, Pa.-A
Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-B.G.H.Y
Centralab Div., Globe-Union, Inc., 900 E.
Keefe Ave., Milwaukee 1, Wisc.-B.G.H.Y
Central Coli Co., 1720 N. Laett St., Indianapo-lis 22, Ind.-A.D.H.M.R.S.Y.Z.A.C.AD.AE
Central Transformer Co., 908 W. Jackson Blvd., Chicago 7, 111.-R.S
Centran, Inc., P.O. Box 168, Greensburg, Ind. -S.AC.AD
Cess Laboratories, Inc., 391 Ludlow St., Stam-ford. Conn.-M.N.K.S
Chicago Standard Transformer Corp., Addi-son & Elston, Chicago 18, 111.-E.F.Q.S.T, ABAC.AD
Citation Products Co., 233 E. 146 St., New York 51, N.Y.-AB
Cleveland Container Co., 6201 Barberton Ave., Cleveland 2, Ohio-B
Cleveland 2, Ohio-B
Clippard Instrument Lab. Inc., 7550 Colerain Rd., Cincinnati 24, Ohio-C.D.H.M.
Chum Mfg. Co., 601 National Ave., Milwaukee 41, Wisc.-A.D.I.M.Q.Z.A.C.AE
Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif.-P.R.S

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Coil Co. of America, 8 Washington St., North-vale, N.J.—A.G.I.J.L.R.S.Z Coilcraft, Inc., Jandus Rd., Cary, Ill.—A.D.H., M.R.Y.Z.AC,AD,AE

M,R,Y,Z,AC,AD,AE Coil Eng'g & Mfg. Co., 200 Main St., Roa-noke, Ind.-I.J,L,O Coil Winders, Inc., 100 New York Ave., West-bury, L.I., N.Y.--A,B,D,E,G,H,J,L,M,N,P,R,

Coil Winduss, N.Y.--A,B,U,E,G,A,F,J, S,V,Z,AA Coil Winding Equipment Co., 19 Maxwell Ave., Oyster Bay, N.Y.-C Collectron Corp., 216 E. 45 St., New York 17,

S, V.Z.AA Coil Winding Equipment Co., 19 Maxwell Ave., Oyster Bay, N.Y.-C Collectron Corp., 216 E. 45 St., New York 17, N.Y.-B Colorvision Plastics, Inc., 182 Beacon St., Boston 16, Mass.-B Comar Electric Co., 3349 W. Addison St., Chicago 18, 111.-A,L Communication Accessories Co., 110 St. & 71 Hwy., Hickman Mills, Mo.-P.R.S,AA Communication Parts, 7466 W. Irving Park Rd., Chicago 34, 111.-A,D,H.M.P.U.R.S Component Manufacturers, 38-01 23rd Ave., Long Island City 5, N.Y.-A.E.F.H.J.M.P.Q Conn. Telephone & Electric Co., 350 W. Erie St., Chicago 10, 111.-A,E.F.O,Q,X.AB,AC Constantine Eng'g. Labs, Co., P.O. Box 471, Mahwah, N.J.-A.E.F.P.R.S Continental-Diamond Fibre Co., Newark, Del. -B

\_R

Continental Electronics Mfg. Co., 4212 S. Buck-ner Blvd., Dallas 10. Tex.--N Control Components Co., 1 Holden St., Brook-line 46, Mass.--V

ner Blvd., Dallas 10. Tex.--N Control Components Co., 1 Holden St., Brook-line 46, Mass.--V Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.--A.T Control Eng'g. Corp., Controls Div., 934 Wash-ington St., Norwood, Mass.--P Corning Glass Works, Corning, N.Y.--B,M,R Corona Eng'g. Service 94-52 Corona Ave., Elmhurst, L.I., N.Y.--P Cosa Corp., 405 Lexington Ave., New York 17, N.Y.--C Coto-Coil Co., 65 Pavillion Ave., Providence 5, R.I.--A,J,L Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.--B Crown Engineering, 3821 Commercial, N.E., Albuquerque, New Mex.--D,H,M Custom Electronics Corp., 738 Speedwell Ave., Morris plains. N.J.--H.M.N Cycle Electronic Labs., 356 Glenwood Ave., E. Orange, N.J.--B. Dalmotor Co., 1375 Clay St., Santa Clara, Calif.--Z Dano Electric Co., Winsted, Conn.--B

Custom Electronics Corp., 738 Speedwell Ave., Morris plains. N.J.-H.M.N
Cycle Electronic Labs., 356 Glenwood Ave., E. Orange, N.J.-H.J.L.R.S
Dalmotor Co., 1375 Clay St., Santa Clara, Calif.-Z
Dano Electric Co., 230 N. Spring Ave., Cape Girardeau, Mo.-A.E.L.P.Q
Davis Electronics, 4002 W. Burbank Blvd. Burbank, Calif.-D
Daystrom Pacific Corp., 3080 Nebraska Ave., Santa Monica, Calif.-A.B.G.I.J.K.P.Z
Decoursey Eng?, Lab., P.O. Box 235, Los Angeles 25, Calif.-P
Delco Radio Division, Genaral Motors Corp., Kokmo, Ind.-H.M
Delta Electronics, 259 Green St., Brooklyn 22, N.Y.-H.M.N
Delta Electronics, 259 Green St., Brooklyn 22, N.Y.-H.M.N
Delta Radio Co., 115 Worth St., New York 18, N.Y.-A.N.P.R
Delta Radio Co., 115 Worth St., New York 18, N.Y.-A.N.P.R
Detta Bacting Corp., 706e, 921 Providence Highway, Norwood, Mass.-P
Developmental Electronics Corp., 4213 S. Broadway, Los Angeles 37, Calif.-H
DeWitt Development Co., 3008 W. 127th St., Blue Island, III.-A.K.L.M.Z
Disto Design & Mfg. Co., Grandview, Mo. -A.B.D.H.M.P.R.S.T.Z.AA.AE
Digital Products, Inc.-7643 Fay Ave., La-Jolia, Calif.-H
Dinion Coil Co., Caledonia, N.Y.-I
Doming Crystal Co., 191 Shaffer Ave., West-minister, M.A.-A
Dawning Crystal Co., 191 Shaffer Ave., West-minister, M.A.-A
Dawning Crystal Co., P.O. Box 483, Nashua, Nur, Ohio-A
Davis Products Corp., 40 Larkins-burg, Ohio-A
Davis Calif.-P
Dradi Oroducts Corp. 0. Soc 483, Nashua, N.H.-Y
NX Radio Products Corp., 40 Larkins-burg, Ohio-A
Dave Chicago 47, II.-A.D.E.F.H.J.K.M.N, O.P.Q.R.S.W.Z.AB.AC.AD.AE
Eastern Precision Resistor Corp., 130-11 90 Ave. Chicago 47, 11.-A.M.D.E.F.H.J.K.M.N, O.P.Q.R.S.W.Z.AB.AC.AD.AE
Eastern Precision Resistor Corp., 130-11 90 Ave. Richmond Hill 18, L.I., N.Y.-E,W
Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa

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202 Grand St., S,T,Z Edko Electronics Eng'g., 202 Grand St., Brooklyn 11, N.Y.-A.J.R.S.T.Z Eisler Eng'g. Co., 770 S. 13 St., Newark 3, N.J.-C.P Edko Electronics Eng'g. 202 Grand St., Brooklyn 11, N.Y.-A.J.R.S.T.Z
Eisler Eng'g. Co., 770 S. 13 St., Newark 3, N.J.-C.P
Electralab, Inc., 76 Atherton St., Boston 30, Mass.-Y
Electralab, Inc., 76 Atherton St., Boston 30, Mass.-Y
Electrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.-A.Z
Electrical Facilities, Inc., 4214 Holden St., Oakland 8, Calif.-A.Z
Electrical Facilities, Inc., 2015 N. Kilmar Ave., Chicago 39, Ill.-A.J.L.S.Z
Electro Assemblies, Inc., 2935 W. Belmont Ave., Chicago 18, Ill.-A.J.L.S.Z
Electro Development Co., 14701 Keswick St., Van Nuys, Calif.-B
Electro-Mee Lab. Inc., 21-09 43rd Ave., Long Island City 1, NY.-P
Electrometric, Inc., 106 Olson St., Woodstock, Ill.-A.D.F.H.J.M.N.R.Y.AC.AD
Electronic Brazing, 140 Glenridge Ave., Mont-clair, N.J.-G
Electronic Coils, Inc., 53 Lyman St., Spring-field, Mass.-J.K.J.L.P.R.S.Z.AC.AD
Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-B,M.N
Electronic Transformers Co., 209 W. 25 St., New York 1, N.Y.-D.E.R.S.T
Electronic Transformers Co., 209 W. 25 St., New York 1, Ill.-J
Electronic Products, 4602 Montrose Ave., Chicago 41, Ill.-J
Electronic Co., 3800 W. Cullom, Chicago 18, Ill.-A.D.F.H.J.K.L.M.N.R.T.Z.AC.AD,AE.AF
Empire Coil Co., 2506 S. Pulaski Kd., Chicago 23, Ill.-Q
Enectro-Technic Products, 4602 Montrose Ave., Chicago 41, Ill.-J
Electronic K., Storator, Act., AF
Empire State Laboratories, 2608 Merrick Rd., Beilmore, L.I., N.Y.-P.R.S.T
Engor Ordouts, Inc., 2500 Atlantie Ave., Brooklyn 7, N.Y.-P.R.S.T
Enger Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.C.H.J.S.K.L.M.N.Q.R.S.T.U.V.AB
Espery Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.C.H.J.K.L.M.N.Q.R.S.T.U.V.AB

-R Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A.C.H.I.J.K.L.M.N.Q.R.S.T.U.V.AB Essex Electronics, 550 Springfield Ave., Berk-eley Heights, N.J.-D.H.M.U.Y.Z.AB,AC,AD,

AE Federal Telephone & Radio Co., Div. of IT&T. 100 Kingsland Rd., Clifton, N.J.--P.R Femco, Inc., Irwin, Pa.--H.M.N.P Ferroxcube Corp. of America, E. Bridge St., Saugerties, N.Y.-J Fisher Eng'g. Inc., 2060 H.S. 24 East, Hunt-ington, Ind.-S Five Star Co., W. Main St., Plantaville, Cona. -J.LZ Forbes & Wagner, Inc., 345 Central Ave., Silver Creek, N.Y.--A,B,F,H,M,R,S,W,AC, AD

AD Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.

Thomson Ave., Long Island City 1, N.Y. —E Forest Electric Co., 7216 Circle Dr., Forest Park, Ill.—A,G,I,J,K,L,N,O,R,S,T,W,Z France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio—J,L Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington 99, Del.—B Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—P,R,S,T Frost & Co., L. H., 904 36 St., S.E., Grand Rapids 3, Mich.—A,J,L,S,Z Fugle-Miller Labs., 398 Main St., Metuchen, N.J.—A,H,M,N,R,S,AC,AD,AE Garde Mfg. Co., 588 Eddy St., Providence 3, R.I.—B Garing Co., 34-40 79 St., Jackson Heights 72, N.Y.—A,R,S,T Gates Radio Co., 123 Hampshire St., Quincy, Ill.—A,D,N,R General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—D,Q,U,Y,AB,AC General Ceramics Corp., Crows Mill Rd., Keas-bey, N.J.—B Generat Electric Co., Apparatus Div., 1 River

Rockford, III.-D.J.Q.U.Y.AB.AC
General Ceramics Corp., Crows Mill Rd., Keasbey, N.J.-B
General Electric Co., Apparatus Div., 1 River
Rd., Schenettady 5, N.Y.-P.R.S.Z
General Instrument Corp., \$29 Newark Ave., Elizabeth 3, N.J.-A.D.E.F.H.J.L.M.N.P.R.S, U.W.Z.AA.AC.AD.AE
General Products Corp., 107 Salem St., Union Springs, N.Y.-I
General Radio Co., 275 Mass. Ave., Cam-bridge 39, Mass.-P.R.AA
Gerlyn Eng'g. Co., 2151 N. Damen Ave., Chi-cago 47, III.-D.H.M.N.Z
Glaser-Steers Corp., 2 Main St., Belleville, N.J.-A.Q.W.X.AB.AF
Gramer-Halldorson Transformer Corp., 2734
N. Pulaski Rd., Chicago 39, III.-D.F.G.H.I, J.K.M.N.O.P.U.R.S
Grayhill, 561 Hillgrove Ave., LaGrange, III. -B

-B Green Co., C. A., 14651 Wood St., Harvey, Ill.-A.G.H.I.J.K.L.N.O.R.S.V.X.Z.AE Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-Z Gries Reproducer Corp., 5 Second St., New Rochelle, N.Y.-B

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

AD

- Guardian Electric Mfg., 1621 W. Walnut, Chicago 12, 111.—A,J,L
  Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.—P,R,S
  Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif.—I
  Hall Mfg. Co., 3901 Wesley Terr., Schiller Park, 111.—A,P,R,S
  Hamilton-Hall Mfg. Co., 227 N. Water St., Milwaukee 2, Wisc.—A
  Hanson Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.—Y
  Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove, N.Y.—P,V
  Harnett Electric, 138 Haven Ave., Port Washington, N.Y.—A,D,F,H,M,N,R,S,AB,AC,AD, AE

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AE Hazeltine Electronics Corp., 58-25 Little Neck Pkwy. Little Neck 62, N.Y.—A.D.F.H.M.T Heppner Mfg. Co., 608, Round Lake, III.—F Hercules' Elec. Mach'y. & Equip. Co., 1442 E. Washington Blvd., Los Angeles 21, Calif.—L Hetherinston, Inc., Sharon Hill, Pa.—A, J, L Highland Eng'g. Co., Main & Urban Sts., Westbury, N.Y.—A Hillburn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N.Y.—A,D,F,H,M,AC,AD, AE HiQ Div., Aerovox Corp., Olean, N.Y.—A,M, \_P,R

- AVE., DFOORLYN 22, N.I.—A,D.F.H.M., AC, A.D., AE
  HiQ Div., Aerovox Corp., Olean, N.Y.—A,M, P,R
  Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.—V
  Hopkins Eng'g. Co., 2082 Lincoln Ave., Altadena, Calif.—M,N.P.R.S
  Houlihan Co., T. J., 2508 W. Lawrence Ave., Chicago 25, 111.—A,D,F.H.J.K.M.N.O,P.R
  Hycor Co., 11428 Vanowen St., N. Hollywood, Calif.—P,R,S
  Hydro Molding Co., 100 Sharron Ave., Plattsburg, N.Y.—B
  Instrument Lab. Inc., 7350 Colerain Rd., Cincinnati 24, Ohio—M,N
  Instrument Lab. Inc., 7350 Colerain Rd., Cincinnati 24, Ohio—M,N
  Instrument Lab. Inc., 7350 Colerain Rd., Cincinnati 24, Ohio—M,N
  Instuding Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—B
  Insuline Corp. of America, 186 Granite St., Manchester, N.H.—A,1
  Islip Transformer & Metal Co., Beech St., Islip, N.Y.—A,D,E,L,M,N,R,S
  Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.—B
  I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.—A,B,E,H,P,Q,X
  Jeffers Electronics Div., Speer Carbon Co., Hoover Ave., Du Bois, Pa.—M
  Jobbins Electronic Enterprises, 771 Hamilton Ave., Menlo Park, Calif.—J.S,Q,Z
  Johnson Co., E. F., Waseca, Minn.—A,D,N
  Johnson Electronics Inc., 521 Elewell St., Orlando, Fla.—A,D,F,H,J,L,M,N,P,R,S,Y,Z,AC, AD,AE
  Johnson Labs, Willard Rd., Norwalk, Conn.—

- AD,AE Johnson Labs, Willard Rd., Norwalk, Conn.— A,B,C,D,F,H,M,N Kahle Eng'g. Co., 1307 7 St., N. Bergen, N.J.

- -C Kahn & Co., 541 Windsor St., Hartford 1, Conn.-A,Z Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.-A Kanthal Corp., Amelia Pl., Stamford, Conn.
- G
- G
  Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, Ill.—L
  Keystone Products Co., 904 23 St., Union City, N.J.—A,P,R,S,Y,Z
  Kinetex Inst. Co., 902 Broadway, New York 10, N.Y.—A
  Kirchberger & Co., M., 83 W. Forest Ave., Englewood, N.J.—B
  Klipsch & Associates, P.O. Box 64, Hope, Ark. —T

- Englewood, N.J.-B Klipsch & Associates, P.O. Box 64, Hope, Ark. -T **E-V** Transformer Corp., 20 E. Franklin St., Danbury, Conn.-A.P.S Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.-A.H.L.,M.N.P.R.S.T Lamaco Paner Tube, Franklin Park, III.-B Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.-A.R.S Lear. Inc. 3171 S. Bundy Dr., Santa Monica, Calif.-A.D.H.M.Y.AA LeCesa Eng's., 5610 W. Grand Ave., Chicago 39, II.-C Leonard Electric Co., 1105 County Rd., San Carlos, Calif.-P Leonard Electric Products Co., Inc., 67 84th St., Brooklyn 32, N.Y.-A.B.D.E.F.G.H.I.J. K,L.M.N.P.R.S.T.U.V LePace Mfg. Corp., Charles S., 447 South Blvd., Oak Park, III.-A.B.D.H.M.N.R.AC, AD,AE Lynch Carrier Systems, 895 Bryant St., San Francisco 7, Calif.-P Magnetic Amplifers, Inc., 632 Tinton Ave., Hawthorne, Calif.-P.R.S.AA Magnetic Amount Co., 82 Main St., W. Orange, N.J.-I.J.P.S.S. Magnetic Recording Industries, 11 E. 16 St., New York 3, N.Y.-K.

- Magnetics, Inc., Butler, Pa.—S Magnetics Research Co., 142 King St., Chap-paqua, N.Y.—A,O,S

**TELE-TECH & ELECTRONIC INDUSTRIES • June 1955** 

- Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-A.B.N Mark Electronics, Inc., 250 Glenwood Ave., Bloomfield, N.J.-A.F.J.L.P.R.S.Z Master Appliance MIE. Co., 715 Ontario St., Racine, Wisc.-J Mastson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-A.B.D.H.L.M.N.P.R.S.T. Z.A.C.AD.AE May Eng'g. Co., 6055 Lankershim Blvd. N.

- Pasadena 3, Calif. A,B,D,H,L,M,N,P,R,S,T, Z,AC,AD,AE
  May Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif. A,L,R
  Mercury Electro-Products, Inc., 622 W. Kinzie St., Chicago 10, Ill. A,D,E,H,K.L,M,N
  Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. D,E,F,H,M,Q,AC, AD,AE
  Mico Instrument Co., 30 Trowbridge St., Cambridge 38, Mass. C,P,R
  Microtran Div., Crest Labs., 84-11 Rockway Beach Blvd., Rockaway Beach, L.I., N.Y. K.R.S.T,Y
  Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill. A,B,S
  Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. A,B,N,R
  Miller Co., J.Y., 5917 S. Main St., Los Angles 3, Calif. A,B,D,H,M,N,Q,R,AC,AD,AE
  Miller & Son, Inc., Franklin P., 36 Meadow St., E. Orange, N.J. J,O,R,S,Z
  Miwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wisc. A,B,IJ,P,S
  Minded Insulation Co., 335 E. Price St., Phila-

- b., Milwaukee 5, Wisc. -A,D,J,MI, 55
  MinAtron Corp., Belle Mead 9, N.J. --K,V
  Modelectric Products Corp., Asbury Park, N.J. -I,J
  Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. -A,B,O,R
  Molding Corp. of America, 40 Church St., Pawtucket, R.I. --B
  Monrobot Corp., Sub. Monroe Calculating Machine, Morris Plains, N.J. --S
  Moran Electronic Components, 10506 Wheatley St., Kensington, Md. -A,B,D,F,H,J,K,L,N,O, R,T,X,Z,AC,AD,AE
  Mosley Electronics, Inc., 8622 St. Charles Rock Rd., St. Louis 14, Mo.-D
  Murray Plastics Co., 26 Cottage St., Poughkeepsie, N.Y.-H,M,S
  Muter Co., 1265 S. Michigan Ave., Chicago 5, III. -A,E,F,H,M,AC,AD,AE
  Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J. -B
  Mystic Transformers, 63 Swanton St., Winchester, Mass. -A,E,
  National Coil Co., P. O. Box 1287, Sheridan, Wyo.-A,B,D,H,M,N,R,U
  National Co., Inc., 61 Sherman St., Malden 48, Mass. -A,B,H
  National Moldite Co., 1410 Chestnut Ave., Hillside 5, N.J. -B
  Networks Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J. -J.R,S
  New London, Instrument Co. Inc., 82 Union St., New London, Con. -P
  New York Coil Co., Inc., 40 2 Ave., Phoenixville, Pa. -A,H,L,L,M,N,S,AC,AD
  New York Transformer Co., 325 W. Main St., Moorestown, N.J. -B
  North Electric Mfs. Co., 325 W. Main St., Moorestown, N.J. -B
  North Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 325 W. Main St., Moorestown, N.J. -B
  North Hills Electric Co., 69 Murray St., New York 7, N.Y. -J,R,S.Z<

- Ogden Coll & Transformer Col., 2124 W. Carroll Ave, Chicago 12, 111.—J.LR,S,Z
  Ohmite Mfg. Co., 3601 Howard St., Skokie, III.—J.L.R,S,Z
  Opad Electric Co., 69 Murray St., New York 7, N.Y.—J.R.S,Z
  Ortho Eng'g., 245 Wallace St., Orange 2, N.J.—A,P.R.S,T
  Ortho Filter Corp., 198 Albion Ave., Paterson 2, N.J.—A,P.R.S,T
  Osborne Electric, 712 S.E. Hawthorne Blvd., Portland 14, Ore.—A,I,J,K,L,P,S,Z
  Osborne Transformer Corp., 948 E. Lafayette Ave., Detroit 7, Mich.—S
  Oxford Electric Corp., 3911 S. Michigan Ave., Chicago 15, 111.—O,T
  Pacific Transformers, 502 S. Avenue 17, Los Angeles 31, Calif.—P.R,S
  Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.—P
  Paramount Paper Tube Corp., 616 S. Lafayette St., Ft. Wayne 2, Ind.—B
  Park Armature Co., 833 Boylaton St., Boston 16, Mass.—A,J,L
  PCA Electronics, 2180 Colorado Ave., Santa Monica, Calif.—R,S,T
  Peerless Electrical Products., Div. Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—R,S,T
  Peerless Products Industries, 812 N. Pulaski Rd., Chicago 51, 111.—B
  Penn-East Engineering Corp., P.O. Box 240, Kutztown. Pa.—A,R,S
  Penn Transformer Corp., E. Bishop St. Ext., Bellefonte, Pa.—E,F
  Peters Co., O. S., 1253 N.Y. Ave., N.E., Washington 2, D.C.—A
  Petroff, Peter A., 127 Water St., New York 5, N.Y.—C,D

- Petroff, Peter A., 127 Water St., New York 5, N.Y.-C,D
- Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.---Y
- Philadelphia Electronics Inc., 24 E. Coulter St., Philadelphia 44, Pa.-H,M,N

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- Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.-D,E.F.G.H.M.O.T.AC.AD.AE Philmore Mig. Co., 113 University Pl., New York 3, N.Y.-D Photocircuits Corp., New St., Glen Cove, N.Y. -D.H.Y

- YOTK 5, N.Y.-D
  Photocircuits Corp., New St., Glen Cove. N.Y. -D,H,Y
  Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.-A,F.M,R
  Pittsburgh Coil Co., Kox 700, Carnegie, Pa.-D,H,J,L,M,N,O,R,Z,AE
  Power Transformer Co., 532 Hulberry St., Newark 5, N.J.-A,J,L
  Precision, Inc., 730 N. Lyndale Ave., Minneapolis.11, Minn.-A,P
  Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, 111.-B
  Printed Circuits, Inc., 36 Tunxis Ave., Bloomfield, Conn.-Y
  PSP Eng'g. Co., 8420 Otis St., South Gate, Calif.-Z
  Q. L. C. Corp., 10 Aubrey St., Summit, N.J.-A,D,M,AC,AD,AE
  Quality Components, Inc., St. Marys, Pa.-B
  Quitronic Transformer Corp., 525 Broadway, New York 12, N.Y.-P,R,S
  Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.-E,F,R,S
  Radio Industries, Inc., 525 N. Ravenswood Ave., Chicago 40, 11.-A,D,F,H,L,M
  Radio Sonic Corp., 84 S. Water St., Port Chester, N.Y.-J,K,L,S
  Radio Sonic Corp., Plainfield, N.J.-N.R,S
  Radio Sonic Corp., Plainfield, N.J.-N.R,S
  Radio TV Products Corp., Grass Lakes, Mich. -A,D,H,M,R,AC,AD,AE
  Railway Communications, Inc., S. Buckout St., Irvington-On-Hudson, N.Y.-A,E,F,U

-P.R Ram Electronics Inc., S. Buckout St., Irvington-On-Hudson, N.Y.-A.E.F.U Randall, Inc., Douglas, 6 Pawcatuck Ave., Westerly, R.I.-A.D.F.H.J.L.M.P.R.S.Z Ratigan Electronics, Inc., 3614 Maple Ave., Los Angeles 11, Calif.-A.H.M.R.Z.AE Raypar Inc., 7800 W. Addison St., Chicago 24, III.-A.F.H.P.R.S Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.-A.E.H.P. R.S.AA

Raytheon Mig. Co., Equip. Maineting - A., 100 River St., Waltham, Mass. - A, E, H, P, R, S, AA
Redman Electronics Corp., 92 Prospect St., Thompsonville, Conn. - A, D, H, K, M, R, V, Z, AD
Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 13, Ohio-M
Remco Mfg. Co., 545 N. LaSalle St., Chicago 10, 111. - A, J
Research Instrument Co., 233 Broadway, New York 7, N.Y. - A, P, R, S
Reseinite Corp., 697 N. Lake Ave., Pasadena 6, Calif. - A, E, F, J, K, L, O, Q, R, S, V, Z
Reynolds Industries, 2105 Colorado Ave., Santa Monica, Calif. - A
Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass. - P, AA
Rich Electronics. Inc. - 212 N.W. 8 Ave., Miami 36, Fla. - D, N
R. K. Mfg. Co., P.O. Box 112, Marion, Ill. - R, S
Borare Electronic Corp., 43 Bleeker St., New

36. Fla.-D,N
R. K. Mfg. Co., P.O. Box 112, Marion, Ill. -R.S
Rogers Electronic Corp., 43 Bleeker St., New York 12, N.Y.-E,F
Rola Co., 2530 Superior Ave., Cleveland 14, Ohio-E,F
Rollins Corp., Lewes, Del.-I,J,R,S,T,Z
Ross Mfg. Co., 2405 Armitage Ave., Chicago, Ill.-A,D,E,H,M
RS Electronics Corp., P.O. Box 368, Sta. A, Palo Alto, Calif.-Y
Sag Harbor Industries, Box M, Sag Harbor, N.Y.-A,J,L
Sanders Associates, Inc., 137 Canal St., Nashua, N.H.-Y
Sangamo Electric Co., 9 & Converse, Spring-field, Ill.-P
Saratoga Industries, Ballston Ave., Saratoga Springs, N.Y.-A,P,R.S
Scientific Coil Co., 5619 Broadway, Chleago 40, Ill.-A,E,F,H,M,P,Q,R,S,Z,AA,AC,AD,AE
Scintilla Magneto Div., Bendix Aviation Corp., Sidney, N.Y.-I
Saratoga Coil Spring Div., Assoc. Spring Corp., 15001 S. Broadway, Gardena, Calif.-B
Sealtron Co., 9701 Reading Rd., Cincinnati 15.

-B Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio-A,B,D,H,K,L,M Senn Corp., New Augusta, Ind.-E Servo Corp. of America. 20-20 Jericho Turn-pike, New Hyde Park. N.Y.-A,M Setco Div., Stromberg-Carlson, 3127 Holmes St, Dallas 15, Tex.-P Sightmaster Corp., 111 Cedar St., New Rochelle, N.Y.-L Silver Bay Equip Co., 5004 20th NW, Seattle 7, Wash.-M,N Skysweeper, Inc., McHenry, Ill.-J,R,S Smith Mfg. Co., Nathan R., 105 Pasadema Ave., S. Pasadena, Calif.-A,B,I,J,L SNC Mfg. Co., P.O. Box 277, Oshkosh, Wisc. I,R,S,Z Southwatern Industrial Electronice Co., 2831

I.R.S.Z Southwestern Industrial Electronics Co., 2331 Post Oak Rd., Houston, Texas—P.R.S Speer Resistor Div., Speer Carbon Co., St. Marys, Pa.—B Square Root Mfg. Corp., 291 Saw Mill River Rd., Yonkers, N.Y.—A,D,F,H,M,N,P,R,S,T Stackpole Carbon Co., Tannery St., St. Marys, Pa.—B

Fa.—D Standard Coil Products Co., 2085 N. Haw-thorne St., Melrose Park, Ill.—A.D.E.F.G.H, J.K.M.N.P.R.S

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Pa.- $-\mathbf{B}$ 

- Standard Electrical Products Co., 2240 E. 8 St., Dayton 3, Ohio-J,L
  Standard Piezo Co., 20 N. Hanover St., Carlisle, Pa.-A,E,F,G,R,S,Z
  Standard Winding Co., 44 Johnes St., New-burgh, N.Y.-A,F,H,J,M,N,R,S,Z,AC,AD,AE
  Stanwyck Winding Co., P. O. Box 70. New burgh, N.Y.-D,F,H,K,M,N,R,S
  Sterling Mfg. Co., 7201 Wentworth Ave., Cleveland 2, Ohio-A
  Sterling Transformer Corp., 297 N. 7th St., Brooklyn 11 N.Y.-A,F,I.R,S,Z
  Stevens Products, Inc., 86 Main St., E. Orange, N.J.-B
  Stonite Coil Corp., Route 25, Yardville, N.J. -A,J,L,Z
  Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-A,L,O.P
  Summit Coil Co., 4 Claremont Rd., Bernards-ville, N.J.-A,D,H,M,N,AC,AD,AE
  Superior Steatite & Ceramic Corp., 83 W. Forest Ave., Englewood, N.J.-B
  Syntronie Instruments, Inc., 100 Industrial Rd., Addison, Ill.-E,F,Q
  Techrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-E,F,Q,AC,AD

- Mass.—Y Mass.—Y Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—E,F,Q,AC,AD Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.—A,D.H.R.S **Telestron Co.**, 4019 Prospect Ave., Cleveland 3, Ohio—E,F Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—E,H,M.N.R Televiso Corp., 1415 Golf Rd., Des Plaines, III.—P,R,S,AA Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. —A,B Tel-Rad Mfg. Co. 7 Medicer St. Francisco

- Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. —A.B Tel-Rad Mfg. Co., 7 Madison St., Fennimore, Wisc.—E.Q Telvision Labs., Wauconda, Ill.—E.P.Q Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas—P.R.S Thermador Electrical Mfg. Co., Electronics Div., 2000 S. Camfield Ave., Los Angeles 22, Calif.—P Thomase & Sons, R., Lisbon, Ohio—B Thorase & Sons, R., Lisbon, Ohio—B Thorase & Sons, R., Lisbon, Ohio—B Thorase, Inc., 225 Belleville Ave., Bloomfield, N.J.—B Thordarson-Meisner Mfg. Div., Maguire In-dustries, Inc., 7th & Bellmont, Mt. Carmel, Ill.—A,D,E,F,G,H,J,K,L,M.T,W,Y Thor Transformer & Electronics, Inc., 750 San Antonio Road, Palo Alto, Calif.—A,D, J.K.S Titeflex, Ine., 500 Frelinghuysen Ave., Newark

- J.K.S Titeflex, Ine., 500 Frelinghuysen Ave., Newark 5, N.J.-I T. J. Mfg. Corp., 1020 S. Josephine St., Martinsville, Ind.-A, D, G, H, J, K, L, M, NOP

- N.Q.R N.Q.R Todd-Tran Corp., 156 Gramatan Ave., Mount Vernon, N.Y.-E.F Torocoil Co., 1374 Mobile Ct., St. Louis 10, Mo. -P.R.T Torwico Electronics, 967 Frelinghuysen Ave., Newark 5, N.J.-P.S Transformer Mfrs. Inc., 850 W. Weed St., Chicago 22, Ill.-O.Q Transformer Technicans, Inc., 2608 N. Cicero Ave., Chicago 39, Ill.-S Transformers Inc., 532 North St., Endicott, N.Y.-S
- Transformers Inc., 532 North St., Endicott, N.Y.-S Transfite Electronics Corp., 5720 W. Armitage Ave., Chicago 39, Ill.-F Trenton Transformer Corp., 322 E. State St., Trenton, N.J.-A Tresco, 3824 Terrace St., Philadelphia 28, Pa. A,L.R.S Triad Transformer Corp., 4055 Redwood Ave., Venice, Calif.-E,F.P.S.T Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.-A,J.K.L.R.Y.Z Tru-Art Industries, 1657 W. Evergreen St., Chicago 22, Ill.-L TV Hardware Mfg. Co., 919 Taylor Ave., Rock-ford, Ill.-D

- ford, Ill.-D V Labs., Inc., 5045 W. Lake St., Chicago 44, ILL.-A.E.J.O.P.Q V Products Corp., 907 E. 23 St., Paterson 3, TΫ ni. v
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- T V Products Corp., 907 E. 23 St., Paterson S. N.J.-F Union Electric Products Co., 24 Edison Pl., Newark 2, N.J.-D.J.K.L.M.O.R.S Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A.B.D.E.F.G.H.I.J.K.L, M.N.O.P.Q.R.S.T.U.V.W.X.Y.Z.AA.AB.AC, AD.AE United Present Products Co., 741 W. Harrison
- AD,AE United Pressed Products Co.. 741 W. Harrison St., Chicago 7, Ill.-D.F.H.M.N United Technical Labs.. Morristown, N.J.-A United Transformer Co., 150 Varick St., New York 13, N.Y.-A
- Universal Mfg. Co., 484 Hillside Ave., Hillside, N.J.--P
- Univox Corp., 102 Warren St., New York 7, N.Y.-A.T
- U. S. Electronics Corp., 275 Warren St., Lynd-hurst, N.J.—A.D,G,H,I,J,K,L,M,N,O,Q,R,S,T, W,Z,AC,AD,AE
- Vanguard Electronics Co., 8384 Motor Ave., Los Angeles 34, Calif.—A.D.F.H.M.N.P.R, AC,AD,AE Vari-L Co., 432 Fairfield Ave., Stamford, Conn.—P.R.S.AA

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- Varo Mfg. Co., 1801 Walnut St., Garland, Tex.-A,R,S Vectron, Inc., 1611 Trapelo Rd., Waltham 54,
- Vectron, Inc., Mas., Mas., —A Victory Mfg. Co., 1722 W. Arcade Fl., cago 12, Ill.—B Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, L.I., N.Y.—D.M Videocraft Mfg. Co., 5720 W. Armitage Ave., Chicago 39, Ill.—E Voker Corp., Dexter, Mich.—A,F,H,J,L,M,N, OT 2154 N. Halsted, Chicago 14,

- Viewer Corp., Dexter, Mich.—A,F,H,J,L,M,A., Q,T
  Voker Corp., Dexter, Mich.—A,F,H,J,L,M,A.,
  Q,T
  Volta Mfg. Co., 2154 N. Halsted, Chicago 14, 111.—A,D,H,J,T,W,Z,AC,AD,AE
  Waco, Inc., 2032 Broadway, Santa Monica, Calif.—A,L,R,S,Z
  Welch Electric Co., 1221 Wade St., Cincin-nati 14. Ohio—A,K.L.R,S
  Western Coil Products Co., 2989 Middlefield Rd., Palo Alto. Calif.—A,D,H,M,N,R,T
  Weymouth Instrument Ca., 1440 Commercial St., East Weymouth 89, Mass.—A,C
  Wheaton Co., T. C., Wheaton Ave., Millville, N.J.—M,N
- N.J.-M.N
  Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury, Conn.-A.I.J.L.P.R.S.Y.Z
  White Industries Ina., 421 W. 54 St., New York 19, N.Y.-N.R.S
  Wilco Corp., 546 Drover St., Indianapolis 21, Ind.-A.D.M.N.Y.AE
  Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.-A.D.H.M.N.P
  Wirt Co., 5221 Greene St., Philadelphia 44, Pa.-A.D.H.M.N.R.S
  Woodward-Schumacher Electric Corp., 1725 W. North Ave., Chicago 22, Ill.-E.R.S
  Wright Eng'g. Co., 180 E. Calif. St., Pasadena I, Calif.-E.P
  Wybar Electronics, 507 E. Water St., Syra-

- I. Galif.-E.F.
   Wybar Electronics, 507 E. Water St., Syracuse 1, N.Y.-C
   Z & W Machine Products, Electronics Div., 5100 St. Clair Ave., Cleveland 3, Ohio-A,L,Z

#### -COMMUNICATION 20-SYSTEMS

AircraftA
Alrport traffic controlB
Carrier current
Civil defenseQ
CommercialD
FacsimileE
InductionF
IntercomR
MarineG
Microwave
MultiplexO
PortableI
RailroadJ
Selective pagingT
Single sidebandP
Speech scramblingK
TelemeteringL
Telephone
TeletypewriterM
VehicularN

Acme Telectronix, Div., NEA Service 1200 W. 3rd St., Cleveland 13, Ohio-E
Adler Communications Labs., 1 Le Fevre Lane, New Rochelle, N.Y.-H
Aronautical Communications Equip., Inc., 3090 Douglas Rd., Miami 33, Fla.-A
Aeronautical Electronics. Raleigh-Durham Airport, Box 6043, Raleigh, N.C.-A.B.Q
Air Associates, Inc., 511 Joyce St., Orange, N.J.-A.B.C.D.E.G.H.J.K.L.N.P
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A.G.Q
Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-B.H
Aircraft Radio Co., Boonton, N.J.-A.I.N
Alden Electronic & Impulse Recording Equip. Co., Alden Research Center, Westboro, Mass.-E
Alden Products Co., 117 N. Mair, St. Brecht

- Co., Mass.

- Co., Alden Research Center, Westboro, Mass.-E Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.-E Allied Eng'g. Div., Allied Intl. Inc., 230 Park Ave., New York 17, N.Y.-A.G.I.N Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill.-R.T American Communications Corp., 306 Broad-way, New York 7, N.Y.-C.D American Radio Co., 445 Park Ave, New York 22, N.Y.-A.B.H.M.P Applied Electro Mechanics Inc., National Airport, Washington 1, D.C.-A Applied Electronics Co., 1246 Folsom St., San Francisco 3, Calif.-G Applied Electron, N.J.-L A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.-I.N.O Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.-A.B.H.O Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.-L Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.-S.T

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- Authorized Mfg. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.-L.R Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.-B,C,D,G,H,I,J,O,

- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.—B.C.D.G.H.L.J.O. P.R.S.T
   Avionez Electronics Corp., 2338 North Na-omi Street. Burhank. Calif.—A.B.C
   Barber Labs. Alfred W., 3244 Francis Lewis Blvd., Flushing 58, N.Y.—P
   Barkel Swilliamon, Inc., 237 Fairfield Ava. Upper Darby, Pa.—C.D.I.K.M.N
   Bartell's Marine Radio. 800 W. Coast Hwy.. Newport Beach. Calif.—G
   Bassetl. Inc., 855 Asylum Ave., Hartford 5, Conn.—L
   Bassetl. Inc., 856 Asylum Ave., Hartford 5, Conn.—L
   Bassetl. Inc., 856 Asylum Ave., Hartford 6, Conn.—L
   Bassetl. Inc., 874. 1814 N.E. 17 Court. Fort Lauderdale, Fla.—A.D.G.I.N.F.Q.R.T
   Bell Aircraft Corp., Bufalo 5, M.Y.—A
   Bendix Aviation Corp., Bendix Radio Div., Baltimore 4, Md C.A.D., Pacife Div., 11600
   Schux Avayay, N. Hollywood, Calif.—L
   Bennett Laboratories, 2700 Bay Rd., Redwood
   City. Calif.—C.I.N.R.T
   Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach. Calif.—R
   Bilse-Warren Electronic Corp., Box 123, Sussex. N.J.—R.S.T
   Brach Mfs. Corp., 200 Central Ave., Newark 3, N.J.—A.C.E.F.H.K.L.O
   Breido Idotor Div. Vocaline Co. of America. Coulter St., Old Saybrook, Conn.—L.
   Britatol Co., Waterbury 20, Conn.—L.
   Britatol Co., Waterbury

Dukane Corp., 305 No. 11th St., St. Charles,

DuMont Laboratories Inc., Allen B., Communi-cation Products Div,, 1500 Main Ave., Clif-ton, N.J.-D,N,Q

ton, N.J.-D.N.Q.
Eldico of N.Y., Inc., 70-72 E. Second St., Mineola, L.I., N.Y.-B,D,G,I,J,N,P,Q
Electrical Tower Service, 206 S. Washington St., Peoria 2, Ill.-H
Electro-Mechanical Research, Inc., 64 Main St., Ridgefield., Conn.-L

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Ill.-R

Electronic Communication Equip. Co., 1249 Loyola Ave., Chicago 26, 111.—J.R.S.T Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.—T Electronic Eng'g. Co., 362 W. Bowery St., Ak-ron 7, Ohio—D.R.S.T Electronic Research Co., 11550 39 St., N. E., Seattle 55, Wash.—N Electronicraft, Inc., 27 Milburn St., Bronx-ville 8, N.Y.—A Electro Vision Lab., 4227 Francis Lewis Blvd., Bayside 61, N.Y.—L Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y. —R

Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y. —R
El-Tronics, Inc., 5th & Noble Sts., Phila. 23, Pa. —B,E,I,L,M,Q,R
Equipment Crafters, 523 Winne Ave., River Edge, N.J.—A,I,N,Q
Erco Radio Labs., Stewart Ave., Garden City, N.Y.—A,B,D,G,G,M,N,Q
Expey Mfg. Co., 528 E. 72nd St., New York 21, N.Y.—A,B,C,D,F,G,H,I,J,K,L,N,P,Q,R,S
Executone Inc., 415 Lexington Ave., New York 17, N.Y.—R
Farnsworth Electronics Co., Div. IT&T Corp., P.O. Box 810, Ft. Wayne, Ind.—A,H,L
Federal Telecommunication Labs, 500 Wash-ington Ave., Nutley 10, N.J.—A,H,O
Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.—C,H,J,L, M,N,S,T
Ferneo, Inc., Irwin, Pa.—C,D,J,L,R,T
Fearbling Electronics (M, Suit, State, Daily, State)

M.N.S.T Femco, Inc., Irwin, Pa.—C.D.J.L.R.T Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.—L Galbraith & Son Electric Corp., 450 Sixth Ave., New York, N.Y.—G.J.R Garod Radio Corp., 70 Washington St., Brooklyn 1, N.Y.—A.B Gates Radio Co., 123 Hampshire St., Quincy, III.—D.R

General Communications Ft. Atkinson, Wisc.

Brooklyn 1, N.Y.-A.B
Gates Radio Co., 123 Hampshire St., Quincy, III.-D.R
General Communications Ft. Atkinson, Wisc. -S
General Devices. Inc., P.O. Box 253, Princeton, N.J.-L,O
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, NY.-C
General Electric Co., Broadcast Equip., Communication Equip.. Electronics Div. Communication Equip.. Electronics Park, Syracuse, N.Y.-C.D.G.H.I.J.N.O.Q.T
General Railway Signal, 801 West St., Rochester 2, N.Y.-A.G.J.N.Q
General Railway Signal, 801 West St., Rochester 2, N.Y.-A.G.J. M.Y.-R.G., A.B.G.M.Q
Goffer Mig. Co., 25642
Guif. -A.B.G.M.Q
Goffer Mig. Co., 25642
S. Michigan Ave., N. Hollywood, Calif. -A.B.G.M.Q
Gatif. -A.B.G.M.Q
Gates Co., 801 South Main St., Burbank, Calif.-A.D.Q
Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-D.H.J.R
Greenela Mig. Co., 255 Canal St., New York 13, N.Y.-C.J.R
Hallamore Mig. Co., 2601 E. Artesin. Long Beach 5, Calif.-A.B.C.D.E.F.G.H.I.J.K.L.M, N.O.P.Q.R.S.T
Hallions Mig. Co., 460 W. 34 St., New York 13, N.Y.-C.J.R
Hamilton Electronics Corp., 2726 Pratt Ave., Chicago 45, 111.-R
Hammarlund Mig. Co., 460 W. 34 St., New York 1, N.Y.-D.L.O.P.Q.
Harmon Electronics Corp., 2726 Pratt Ave., Chicago 45, 111.-R
Hammarlund Mig. Co., 460 W. 34 St., New York 1, N.Y.-D.G.Y.O.P.G.S.T
Hamilton Electronics Corp., 255 K. & 3 Ave., Brooklyn 32, NY.-C.G.S.
Harmon Clearnoice Co., 11431 Truman Rd., Independence, Mo.-C.D.F.J.J.L.M.N
Harvey-Wells Electronics, North St., Southbridge, Mass.-D.I.N
Hodsson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-L
Hose-McCann Telephone Co., 25 St. & 3 Ave., Brooklyn 32, N.Y.-G.R.S
Hudson American Corp., 428 N. Parkside Ave., Chicago 44, 111.-C.1.Q
Independence, Mo.-C.J.F.J.J.L.M.N
Harvey-Wells Electronics Corp., 430 W. Washington

Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, Ill.-D,Q,R

Kinetix Inst. Co., 902 Broadway, New York 10,

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—H Kybernetes Corp., 9 E. 40 St., New York 16, N.Y.-L.O

Rybernetes Corp., 9 E. 40 St., New York 16, N.Y.-LO
Lambda-Pacific Eng'g Co., P.O. Box 105, Van Nuys, Calif.—H
Lane Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.—A.G
Lavoie Labs., Inc., Morganville, N.J.—I,N
Lear, Inc., 3171 Bundy Dr., Santa Monica, Calif.—A,B,L,N,Q,R
Lenkurt Electric Co., 1105 County Rd., San Carlos, Calif.—C,H
Leonard Electric Products Co., Inc., 67 34 St., Brooklyn 22, N.Y.—H
Leupold & Stevens Instruments, 4445 N.E. Glisan St., Portland 13, Ore.—L
Link Radio Corp. 152 W. 17 St., New York 11, N.Y.—D,G,I,J,N,Q
Loge Sound Engrs., J. M., 2171 W. Wash-ington Blvd., Los Angeles 18, Calif.—R
Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.—A
Lynch Carrier Systems, Inc., 895 Bryant St., Son Emergine Could Corp. 1000

York 54, N.Y.—A Lynch Carrier Systems, Inc., 895 Bryant St., San Francisco 5, Calif.—C.K.L.M.O.P.S Lysco Mfg., 1401 Clinton, Hoboken, N.J.—G.N Magnavox Co., Ft. Wayne 4, Ind.—A.R Magnetic Instrument Co., 82 Main St., W. Orange, N.J.—C,H Marchand Electronic Labs., 255 Mill St., Byram, Conn.—L.R

Marchand Electronic Labs., 255 Mill St., Byram, Conn.-L,R Marine View Electronics. 744 E. 138 St., New York 54, N.Y.-R Maxson Corp., W.L., 460 W. 34th St., New York 1, N.Y.-H,L McKenna Laboratories, 2503 Main St., Santa Monica, Calif.-Q Melpar, Inc., 452 Swann Ave., Alexandria, Va.-E,H.I,J.K.L.O Metronics, Inc., U.S. Route 130, Bursington, N.J.-R.S Metrotype Corp., 6100 Archer Ave. Summit

Metronics, Inc., U.S. Route 130, Bursington, N.J.-R.S Metrotype Corp., 6100 Archer Ave., Summit, III.-C.L.M Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, III.-D.F Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, III.-C.F.J.Q.R.T Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.-M Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.-D.G.Q Motorola Inc., 4545 W. Augusta Blvd., Chicago, III.-C.H.J.J.N.O.Q Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.-L National Aeronautical Corp., 180 S. Main St., Ambler, Pa.-A National Co., 61 Sherman St., Malden, Mass. -M

National Co., 61 Sherman St., Malden, Mass. -M
National Electronic Labs., 1713 Kalorama Rd., N.W.. Washington 9, D.C.—B,D,N
Nestor Engineering Co., 50 Paterson Ave., E. Rutherford, N.J.—J,M
Newton Co., 55 Elm St., Manchester, Conn.—L
N. American Aviation, 12214 Lakewood Blvd., Downey. Calif.—O
North Electric Mfg. Co., 53 Market St., Galion, Ohio-B.C.,D.L.M.O.R.S.T
Northern Radio Co., 143 W. 22 St., New York 11. N.Y.—E,M.O
Otis Elevator Co., Electronic Div., 35 Ryer-son St. Brooklyn 5, N.Y.—A.B.L.P
Pacific Mercury TW Mfg. Co., 5955 Van Nuys Blvd., Van Nuys, Calif.—A,D.L.N.P.Q
Palmer, Inc., M.V., 4002 Fruit Valley Rd., Vancouver, Wash.—C.F.H.M.P.R.S
Parsons Co., Ralph M., 617 S. Olive St., Los Angeles 14, Calif.—L
Peer. Inc., 1200 Milton St., Benton Harbor, Mich.—B.D
Penn Industrial Instrument Corp., 4110 Hnverford Ave., Phila. 4, Pa.—L
Pennfork Corp., 4700 W. Grand Ave., Chicago 39 III.—A

111.---B Permoflux Corp., 4900 W. Grand Ave., Chicago 39, III.--A.R Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.--H.O

Pa.-H.O
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park. Ill.-P
Planet Television Corp., 903 Halsey St., Brook-lyn 33, N.Y.-G
Plastica & Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.-H
Pratt, Albert, 114 W. Lake View Ave., Milwau-kee 17, Wis.-N,R
Press Wireless Labs., Inc., 25 Prospect Pl., W. Newton 65, Mass.-D,E
Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-D,L,N,Q
Radalab, Inc., 87-17 124 St., Richmond Hill 18, N.Y.-A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P Q,R,S,T 

Radiaphone Co., 600 E. Evergreen Ave., Monrovia, Calif.—G

Radio Corp., of America, Eng'g. Products Div., Camden 2, N.J.-H,R,T Radio Frequency Labs., Inc., Boonton, N.J.-L,

M.O

Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.-R

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Radio Mfg. Engineers, Inc., Div. Electro Voice, Buchanan, Mich.-N
Radiomarine Corp. of America, 75 Varick St., New York, N.Y.-G
Radio Matic of America, 760 Ramsey Ave., Hillside, N.J.-D,O
Radio Spec. Mfg. Co., 2023 S.E. 6 Ave., Port-land 14, Ore.-D,J.N.Q
Railway Communications Inc. Raytown, Mo. -C.J.K.L.M.N.P
Ratigan Electronics Inc., 3614 Maple Ave., Los Angeles 11, Calif.-B
Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.-R.T
Raytheon Mfg. Co., 2022 Albemarle, Brooklyn 18, N.Y.-R
Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham. Mass.-G.H
Reeves-Hoffman Corp., 145 Cheery St., Car-lisle, Pa.-G
Remeo Mfg. Co., 545 N. La Salle St., Chicago 10, Ill.-D,L
Remiler Co., 2101 Bryant St., San Francisco 10, Calif.-A,B,F,G,IJ,N,Q,R
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin. L.I., N.Y.-P.AA
Rich Electronics, Inc., 212 N.W. 8 Ave., Miami 36, Fla.-G
Roesch Co., D. J., 2200 S. Figueroa St., Los Angeles 7, Calif.-D
Rosech Co., D. J., 2200 S. Figueroa St., Los Angeles 7, Calif.-D
Rosech Co., D. J., 2200 S. Figueroa St., Los Angeles 7, Calif.-D
Row Associates, Inc., 137 Canal St., Nashua, N.H.-H
Seantlin Electronics, P.O. Box 24561, Los An-geles 24, Calif.-K.N.Q.T
Schuttig & Co., 5005 Calvert Rd., College Park. Md.-B
Selectar Industries, Inc., 3100 Ocean Park-way, Brooklyn 35, N.Y.-H

geles 24, Calif.-K.N.Q.T Schuttig & Co., 5005 Calvert Rd., College Park. Md.-B Selectar Industries, Inc., 3100 Ocean Park-way, Brooklyn 35, N.Y.-H Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N.Y.-B Setco Div., Stromberg-Carlson, 3127 Holmes St., Dallas 15, Texas-C.D.J.L.O.P.S Shepard Labs., 480 Morris Ave., Summit. N.J.-L Signal Equipment Co., 2706 3 Ave., Seattle 1. Wash.-R Silver Bay Equip. Co., 5004 20th NW Seattle 7, Wash.-G.K Simpson Mfg. Co., Mark, 32-28 49 St., Long Island City, N.Y.-A.G Skiatron Electronics & TV Corp., 30 E. 10 St., New York 3, N.Y.-K.L Slate & Associates, Claude C., 11370 W. Olym-pic Blvd., Los Angeles 64, Calif.-D.G.I.N.Q Smith-Meeker Eng'g. Co., 157 Chambers St., New York 7, N.Y.-A.G, H Southern Electric & Transmission Co., 3127 Holmes St., Dallas, Texas-C.H.L.M Sperti Faraday, Inc., 1322 E. Church St., Adrian, Mich.-T Springfield Enterprises, P.O. Box 54, Spring-field Gardens 13, N.Y.-I.Q Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-R Standard Piezo Co., 20 N. Hanover St, Car-lisle, Pa.-H Stavid Eng'g., Hwy. 22, Plainfield, N.J.-H,L Sterling Precision Instrument Corp., 34-17 Lawrence St., Flushing, N.Y.-L Stromberg-Carlson Co., 100 Carlson Rd.

Stavid Engg., Hwy. 22, Flainfeid, M.S. (2011)
Stelma, Inc. 389 Ludlow St., Stamford, Conn. J.M.
Sterling Precision Instrument Corp., 34-17 Lawrence St., Flushing, N.Y.-L
Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-C.D.G,H.I.J.N
Talk-A-Phone Co., 1512 S. Pulaski Rd., Chi-cago 23, III.-R
Tarzian Inc., Sarkes, 539 S. Walnut, Bloom-ington, Ind.-H
Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.-B.D.E.M.N.S
Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.-A
Tele-Broadcasters, Inc., 41 E. 42 St., New York, N.Y.-A
Telecom. Inc., 1019 Admiral Blvd., Kansas City 6, Mo.-J.L.R.S.T
Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-R
Telemarine Communications Co., 3040 W. 21 St., Brooklyn 24, N.Y.-A,B,D,G,H,I,N,Q.T
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-A,G,H
Teleregister Corp., 445 Fairfield Ave., Stam-ford, Conn.-L
Telerosine Laboratory, 54 Kinkel St., West-bury, L.I., N.Y.-L

Teletronics Laboratory, 54 Kinkel St., West-bury, L.I., N.Y.-L

Televiso Corp., 1415 Golf Rd., Des Plaines, Ill. -A.G.H.I.N

Times Facsimile Corp., 540 W. 58th St., New York 19, N.Y.-E

Transelectric Mfg. Co., 48 Hopewell Rd., Ox-ford, Pa.--R.S

Transitron, Inc., 154 Spring St., New York 12, N.Y.—A.G.N

Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn S., N.Y.-A.B.D.H.O.P.N
Union Switch & Signal-Div. Westinghouse Air Brake Co., 1789 Braddock Ave., Pitts-burgh 18, Pa.-C.J
United Geophysical Corp., P.O. Box "H." Pasadena 15, Calif.-L
United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.-R
U.S. Tower Co., 219 Union Trast Bldg., Petersburg, Va.-H
Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-A.B.G.I.K.N.Q. R.T
Vocaline Co., of America Inc., Coulter St.,

K.T Vocaline Co., of America Inc., Coulter St., Old Saybrook, Conn.--C.G.R Webster Electric Co., 1900 Clark St., Racine, Wisc.--C.R.T Welch Electric Co., 1221 Wade St., Cincinnati

Welch Electric Co., 1221 Wade St., Cincinnati 14. Ohio-R
West Coast Electronics Co., 5873 W. Jefferson Blvd., 'Los Angeles 16, Calif.-B.D.H.L.N.T
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-B.C.F.H.I.N
Western Sound & Electric Lab., 805 S. 5 St., Milwaukee 4, Wisc.-I
Westinghouse Electric Corp., Electronics Div., 2519 Wilkens Ave., Baltimore 3, Md.-C,D, H.J.L,O
Westinghouse Electric Corp., 401 Liberty St.,

H.J.L.U Westinghouse Electric Corp., 401 Liberty St., Pittsburgh 30, Pa.—C.H.J Westrex Corp., 111 8 Ave., New York 11, N.Y.—K.M

N.Y.-K.M Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury, Conn.-I.R Wickes Eng'r. & Const. Co., 12 St. & Ferry Ave., Camden. N.J.-B Wilcox Electric Co., 1400 Chestnut St., Kansas City 1, Mo.-A.B.D.M.Q Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.-I.R Wright Eng's. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-H,L

#### 21—COMPUTERS

Analog
Analog-to-digital converterG
Computer auxiliary equipmentH
Computer componentsI
Computer headsT
Data recorders, analogJ
Data recorders, digitalK
DecodersU
Differential analyzersR
DigitalB
Digital-to-analog convertersL
ElectronicC
EncodersV
Function generatorsW
Input equipmentD
Magnetic tapehandlersX
Memory, crystal AE
Memory drumsF
Memory, multi-core magneticY
Memory, tape loopZ
Output equipmentE
Plotters, X-YAA
Proportioning unitsAC
Punched card equipment AB
Resolvers
Storage, acousticN
Storage, dark trace tubeAD
Storage, electrostatic
Storage, ferroelectricP
Storage, magneticQ
Storage, mechanicalS
Storage, photographicAF

Storage, photographic ......AF
ACF Electronics, Div. ACF Industries, Inc., 800 N. Pitt St., Alexandria, Va.-G.H.I.L
Aero Electronics Co., 1512 N. Wells St., Chicago 10, III.-A.B.C.H.W.AA
Air Associates. Inc., 511 Joyce St., Orange, N.J.-A.B.C.D.E.G.H.K.L.U.V.AC
Airborne Instruments Lab. 160 Old Country Rd., Mineola, N.Y.-A.B.C.F.G.I.J.K.L.Q.AA
Aircraft Armaments, Inc., P.O. Box 126, Cockeeywille Md.-J
Alden Products Co., 117 N. Main St., Brockton 64, Mass.-Q.Y
American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.-G.M.W.X.Z
American Electronic Laboratories, 641 Arch St., Phildaelphia 6, Pa.-A.H
American Hydromath Corp., 145 W. 57th St. New York 19, N.Y.-A
Ampex Corp., 934 Charter St., Redwood City, Calif.-Q.X
Anatran Eng'g. Co., 10 Congress St., Pasadena, Calif.-G.L.
Andersen Labs., Inc., 39 Talcott Rd., W. Hartford, Con.-I.N
Anelex Corp., 150 Causeway St., Boston 14, Mass.-B.E.H.I.J.K.AA
Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.-E

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Applegate Co., 1816 Grove St., Boulder, Colo.

Arenberg Ultrasonic Lab., 94 Green St., Ja-maica Plain 30, Mass.—N Arma Corp., Roosevelt Field, Garden City, N.Y.

Arma Co —A,B

- -A,B Associated Eng'g. Corp. of Boston, 65 Kent St., Brookline 46, Mass.-A Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.-A,H,I,T,AA Atomic Instrument Co., 34 Mass. Ave., Cam-bridge 39, Mass.-G,K,L Audicon Electronics, 216 Lyon St., Paterson 4, N.J.-C

Audicon Electronics, 216 Lyon St., Paterson 4, N.J.-C
Audio Instrument Co., 133 W. 14 St., New York 11, N.Y.-Z
Audio Froducts Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.-B,C,D,E,H
Aurex Corp., 1117 N. Franklin St., Chicago 11, Ill.-F
Anstin Co., 76 9th Ave., New York 11, N.Y.-A,B,C,D,E,G,H,J,K,L
Authorized Mfrs. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.-F
Avion Instrument Corp., 299 State Highway

lyn 27, N.Y.-F Avion Instrument Corp., 299 State Highway 17, Paramus, N.J.-A.C.D.F.H.I.J.K Balco Research Labs., 49 Edison Pl., Newark 2, N.J.-I Bayside Watch Tool Co., 20-20 Utopia Park-way, Whitestone 57, N.Y.-M.T Beckman Div., Beckman Instruments. Inc., 2500 Fullerton Rd., Fullerton, Calif.-J.K Beck's Inc., 289 E. 5 St., St. Paul 1, Minn.-I.Y Belock Instrument Corp., 131.01, 14th Am

I,Y Belock Instrument Corp., 111-01 14th Ave., College Point 56, N.Y.-A.C.D.E.H.I.J Bendix Aviation Corp., Bendix Computer Div., 5630 Arbor Vitae St., Los Angeles 45, Calif. -A.B.C.D.E.F.G.H.I.R.T.X Bendix Aviation Corp., Scintilla Div., Sidney, N.Y.-C.H.I.M.S.U.AJ.AK Benson-Lehner Corp., 2840 Sawtelle Blvd., Los Angeles 64, Calif.-G.J.K.W.AA Berkeley Div., Beckman Instruments, Inc., 2200 Wright Ave., Richmond, Calif.-A.G.J., K.L.W.

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Berkeley Div., Beckman Instruments, Inc., 2200 Wright Ave., Richmond, Calif.--A,G.J. K.L.W.
K.L.W., Beckman Instrument Co., P.O. Box C-4, Solona Beach, Calif.--A
Boeing Airplane Co., P. O. Box 3107 Seattle 14, Wash.--A
Brew & Co., Richard D., Airport Rd., Concord, N.H.--LN
Brubaker Electronic Co., 9151 Exposition Dr., Lcs Angeles 34, Calif.--I.U.Y
Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.-B,C,I,Q
Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.--I
Clary Corp., 406 Junipero St., San Gabriel, Calif.-D.E.G,H.K
Codetyper Labs., 550 5th Ave., New York 19, N.Y.-C.I
Coleman Eng's. Co., 6040 W. Jefferson Blvd.,

N.X.-C.I. Coleman Eng'g. Co., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.-D,G,K,L,V,AB Computer Control Co., 92 Broad St., Wellesley 57, Mass.-B,C,D,E,F,G,H,I,K,L,N,P,Q,S,U, V,W,X,Y,Z

v, w, X, Y,Z Computer Instruments Co., 1964 Utica Ave., Brooklyn 34, N.Y.-G,I,M Computer Research, Hawthorne, Calif.--B,C, H.R

H.K Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—A.C.H Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.—B,C,F,G,J, K,L,Q,X

Consolidated Productions, Inc., Bldg. 9 Brow-ard International Airport Ft. Lauderdale, Fla.--I

Fla.—I Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.—I Control Eng'g. Corp., Controls Div., 934 Wash-ington St., Norwood, Mass.—A.I.M Control Specialists, Inc., 115<sup>1</sup>/<sub>2</sub> E. Arbor Vitae St., Inglewood 1, Calif.—A.C.G.H.L.M.R. Control Speciality Corp., 2708 Suffolk Dr., Houston 6, Texas—G

Corbin Corp., 5419 56 Pl., Riverdale, Md .- A. B,C

B,C Courter Products, Div. of Model Eng'g. & Mfg., Boyne City, Mich.—C Curtiss Wright Corp., 631 Central Ave., Carlstadt, N.J.—A.C.H.J.M.AA Datamatic Corp., Waltham, Mass.

Davies Labs., Inc., 4705 Queensbury Rd., Riverdale, Md.-J,K,Q,X,Z

Daystrom Instrument, Archbald, Pa.--G,H,J,K, L,Q,R,U,V,Y

Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.—C,I,M
 Detroit Controls Corp., 1650 Broadway, Redwood City, Calif.—G,U,V
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Eclipse-Pioneer Div., Bendix Aviation Corp., Director Corp., 100-100

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Electronic Associates, Long Branch, N.J.--A,D,H,I,J,L,M
Electronic Computer Corp., 265 Butler St., Brooklyn 17, N.Y.-B,H
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.-A,B,C,F,G,H, J,K,L,Q,S,U,V,X,Y,Z,AA
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 V,W,Y,Z
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-AE Goodyear Aircraft Corp., Akron 16, Ohio-A, C,H,I,J.R.W Greenleaf Mfg. Co., 7814 Maplewood Ind. Ct., St. Louis 17, Mo.-C Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-N.P Gurley, W. & L. E., 514 Fulton St., Troy, N.Y.-I Hallemore Mfg. Co. 2001 E. Artonia Lorg.

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Hughes Aircraft, Culver City, Calif.—A,B,H
Hughes Research & Development Labs., Culver City. Calif.—C,D,E,F,K
Industrial Control Co., Straight Path & Ar-lington Ave., Wyandanch, N.Y.—A,H
Industrial Electronic Engrs., 3973 Lanker-shim Blvd., N. Hollywood, Calif.—B,C,E,G, H,I,K,L,S,V,AC
Industrial Test Equipment Co., 55 E. 11th St., New York 3, N.Y.—A,C
Infra Electronics Corp., 1205 Chesapeake Ave., Columbus 12, Ohio—A
Industrial Test Equipment Co., 55 E. 11th St., New York 3, N.Y.—A,C
Infra Electronics Corp., Roseland, N.J.—I
Instrument Devel, Labs., Inc., 163 Highland Ave., Needham Heights 94, Mass.—G
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.—I
Intcrelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.—F,Q
Int'I. Business Machines Corp., 590 Madison Ave., New York 22, N.Y.—B,C,K,O,AB
Int'I. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.—A,B,F,G,H,IJ,K,T
Int'I. Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.—B,H,I,Y
iq Industries, 6110 Wilshire Blvd., Los Angeles 36, Calif.—T,X,Z,AB
Jacobs Instrument Co., 4718 Bethesda Ave, Bethesda 14, Md.—B,C,E,G,H,I,L,Q,V,Y
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Kearfott Co., 1378 Main Ave., Clifton, N.J.— A,B,C,G,H,LL,M,V,AC
Kenyon Instrument Co., 345 N.Y. Ave., Hunt-ington Station, L.I., N.Y.—AF
Kollsman Instrument Co., 80-08 46th Ave., Elmhurat, N.Y.—M
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Laboratory for Electronics. 75 Pitts St., Boston, Mass.-A,B,C,F,G,H,J,K,L,Q
Land-Air, Inc., 201 N Wells St. Chicago 6, 111.--C,F
Lane Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.--I
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Librascope, Inc., 808 Western Ave., Glendale 1, Calif.--A,B,C,F,G,H,I,M,Q,T,W,Y,AA
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Lipps Eng'g., Edwin A., 5485 W. Wesbington Calif.-A,B,C,F,G,H,I,M,Q,T,W,Y,AA
 Link Aviation, Inc., Binghamton, N.Y.-A,C, H,I
 Lipps Eng'g., Edwin A., 5485 W. Washington Blvd., Los Angeles 16, Calif.--T
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 Loristics Research Inc., 141 S. Pacific Ava., Redondo Beach, Calif.-B,C,D,E,F,G,H,I,K,L
 & O Research & Devel Corp., 134 N. Wayne Avc., Wayne, Pa.-A,C,G,H,I,J,W
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 Macleod & Hanopol, 10 Roland St., Charles-town 29, Mass.-G
 Mag-Electric Products, 12822 Yukon Ave., Hawthorne, Calif.-H
 Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-C,F,I,J,K,N,Q,T,X
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 Magnetics Research Co., 142 King St., Chap-paqua, N.Y.-F,H,K,L,Q,R
 Marchant Research Co., 142 King St., Chap-paqua, N.Y.-F,H,K,L,Q,R
 Marchant Research Co., 2503 Main St., Santa Monica, Calif.-A,G
 Matoratories, 2503 Main St., Santa Monica, Calif.-A,C
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Metrotype Corp., 6100 Archer Rd., Summit, Ill.—A,B,C,D,G,J,K,L,V,W,AB,AC
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Miller Instruments, Inc., Wm., 325 N. Hal-stead Ave., Pasadena 8, Calif.—A,I.J,M,R,W
Minnesota Electronics Corp., 1058 University Ave., St. Paul 4, Minn.—B,C,G,H,I,L,Q
Monrobot Corp., Sub. Monroe Calculating Ma-chine Co., Morris Plains, N.J.—B,C,F,H,I,T
Monson Mfg. Corp., 6059 Belmont Ave., Chi-

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Moran Instrument Corp., 170 E. Orange Grove Ave., Pasadena 3, Calif.—A Moseley Co., F. L., 509 N. Fair Oaks Ave., Pasadena 3, Calif.—AA

Mountain Systems. Inc., 94 Lake St., White Plains, N.Y.-B,C,D,E,F,H,I,Q

Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, Ill.-C

Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25 Calif.--I

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National Instrument Co., 23 E. 26 St., New York 10, N.Y.-G
Newton Co., 55 Elm St., Manchester, Conn.-A,B,G,K,LU,V,W
Won Linear Systems, Del Mar Airport, Del Mar, Calif.-G,L
Norden-Retay Corp., Wiley St., Milford, Conn.-A,C,G,H,I,J,L.M,V
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North American Instruments, Inc., 2420 Lake Ave., Altadena, Calif.-G,K,UAB
North American Instruments, Inc., 2420 Lake Ave., Altadena, Calif.-G,K,UAB
North American Instruments, Inc., 2420 Lake Ave., Mt. Vernon, N.Y.-A
North American Instruments, Inc., 2420 Lake Ave., Chicago 25, 111.-J
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, 111.-J
Oreson Electronic Mfg. Co., FO. Box 2224, Portland 14, Ore.-A
Oreson Electronic Mfg. Co., P.O. Box 2224, Portland 14, Ore.-G, Bartonic Div., S5 Ryerson St. Brooklyn 5, NY.-C,R
Pate Ko., Box 2121, El Segundo, Calif.-P
Pantek Co., Box 2214, El Segundo, Calif.-P
Parsons Co, Rabpi M., 617. S. Olive St., Los Austro, Moos, Div. Universal Winding Co., 9028 Van Wyck Expressway, Jamaica 18, N.Y.-A,B,C,G,H,J,L,Q,R,A,A
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Penna Testing Lab, Doylestown, Pa.-H,K
Pheno, Chic, 264 Woodland Ave., Baltimore 16, Md.-G,L
Pheno, Trecision Instr. Co., 3803 N. 6 St., Philadelphia 40, Pa.-J
Phona Kearches, Inc., 6504 St., Long Island City 1, NY.-B,CF,G
Potor Instrument Co., 1616 Detroit Ave., Cleveland 2, Ohio-J
Pitometer Log Corp., 237 Lafayette St., New York 12, NY.-A,B,G,L
Potoron Instrument Co., 1616 Detroit Ave., Cleveland 2, Ohio-J
Pitometer Log Corp., 237 Lafayette St., New York 12, NY.-A,B,G,CH
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Southwesern Industrial Electronics Co., 2831 Post Oak Rd., Houston 19, Texas—A,G,I,J, L,X,Z
Special Instruments Lab., Inc., 312 W. Vine St., Knoxville, Tenn.—K
Standard Coil Products Co., 2085 N. Haw-thorne St., Melrose Park, III.—A,B,C
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Stavid Eng'g., Hwy 22. Plainfield, N.J.—A,B,C, H.I.J,K.L,S,U,X,AB
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Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-A,B,C,S
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Waldorf Instrument Corp., Park Ave., Huntington, N.Y.-J
Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-B,C,I
Wang Labs, 37 Hurley St., Cambridge 41, Mass.-A,B,C.D,G,H,I,J,K,L,Q,R,U,V,W,Y
Warren Corp., J. C., 21 Hanse Ave., FreePort, L.I., N.Y.-Q,X,Z
Winancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.-A,B,C,G,I,Q
Wright Eng'g Co., 180 E. Calif. St., Pasa-dena 1, Calif.-A,B,C,D,E,G,I,J,K,L,N,P,Q, R,S,U,V,W,X,AA,AB

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Andrew Corp., 363 E. 75 St., Chicago 19, III. —D
Antenna Specialists Co., 12435 Euclid Ave.,

Ave., Teterboro, N.J.-O.AB.AC Andrew Corp., 363 E. 75 St. Chicago 19, Ill. -D Anton Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio-B Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.-U.AI Arey Machine Co., 1000 Stuyvesant, Union, N.J.-C.E.F.G.H.L.M.N.O Ark-Les Switch Corp., 51 Water St., Water-town 72, Mass.-I.U.A.AB.AC,AD Arrow-Hart & Hegeman, 103 Hawthorn St., Hartford 6, Conn.-H.AC Ariasan Metal Works Co., 11400 Madison Ave., Cleveland 2, Ohio-N.O Atlas E-E Corp., Bedford Airport, Bedford, Mass.-X Audio Development Co., 2833 13th Ave., Minneapolis 7, Minn.-F.L.M.N Audio Equip. Sales, 153 W. 33 St., New York 1, N.Y.-F.G.L.M.N Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.-D.I.J.N.U.X Automatic & Precision Mfg, 252 Hawthorne Ave., Yonkers 5, N.Y.-M Barlow Electrical Mfg. Co., 155 E. 123th St., New York 35, N.Y.-B.C.D.I Beden Mfg. Co., 4647 W. Van Buren St., Chicago 44, 11.-P.AA.AE Bennett Products Co., 815 San Antonio Rd., Palo Alto, Calif.-M.R Birnbach Radio Co., 145 Hudmon St., New York 13, N.Y.-A.B.C.E.F.G.L.M.P.R.S.U.AA.AC. AD, AJ Bial Co., J. P., 89 Union St., Mineola, N.Y. -D Bias Electronic Corp., Box 123, Sussex, N.J.-ABAC

Bliss Electronic Corp., Box 123, Sussex, N.J.-

Bliss Electronic Corp., Box 123, Sussex, N.J.— AB.AC
Blonder-Tongue Labs, Inc., 526 North Ave., Westfield, N.J.—D.R
Bogart Mfs. Corp., 315 Seigel St., Brooklyn 6, N.Y.—B.J
Brach Mfs. Corp., 315 Seigel St., Brooklyn 6, N.Y.—B.J
Brach Mfs. Corp., 315 Seigel St., Brooklyn 6, N.Y.—B.J
Brezez Corp., 700 Liberty Ave., Union, N.J.— O.T.U.AF
Breleo Electronics Corp., 55 Vandam St., New York 13, N.Y.—F.G
British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.—A.B.C.D.G.H.J.K.M.P. Q.R.S.U.V.W.X.Y.Z.AB.AC.AD.AG.AJ.AK
Brookhaven Electronics Corp., 450 7 Ave., New York 1, N.Y.—B.C.D.I.J.M
Brookhaven Electronics Corp., 450 7 Ave., New York 1, N.Y.—B.C.D.I.J.M
Broute 22, Hillside, N.J.—LAA.AB.AJ
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio—F.N.O
Budd-Stanley Co., 44-01 22nd St., Long Island City 1, N.Y.—J
Budd-Stanley Co., 44-01 22nd St., Long Island City 1, N.Y.—J
Budd-Stanley Co., 44-01 22nd St., Long Island City 1, N.Y.—J
Bud Stanley Co., 44-01 22nd St., Long Island City 1, N.Y.—J
Bud Stanley Co., 41-01 22nd St., Long Island City 1, N.Y.—J
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Bud Stanley Co., 41-01 22nd St., Long Island City 1, N.Y.—J
Bud Stanley Co., 41-01 22nd St., Long Island City 1, N.Y.—J
Burgh Eng Co., H. H., 726 Stanton St., Toledo 4, Ohio—C.D.I.J.L.M.R.S.U.Y.X.AI.AK
Burgh Eng Co., H. H., 626 Stanton St., Provi-dence 7, R.I.—M
California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.—AB.AC
Cambridge Thermionle Corp., 445 Concord Ave., Cambridge 38, Mass.—P.AB.AC

Cambridge Thermionle Corp., 445 Concord Ave., Cambridge 38, Mass.—P.AB.AC Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.—G,H,I,M,Q,S,U,V,X,AF, AK

Capitol Stage Lighting Co., 527 W. 45th St., New York 36, N.Y.-C.M

Carol Electronics Corp., 315 W. Stephen St., Martinsburg, W. Va.--C,H.Q

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Carter Parts Co., 213 Institute Pl., Chicago 18, III.--F.M.N Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.---B,C,D,R,U, X,AI

Keefe Ave., Milwaukee 1, Wisc.--B,C.D,R.U. X,AI
Century Lighting Inc., 521 W. 48rd St., New York 25, N.Y.--F,G.L.N,O
Chester-Morton Electronics Corp., 10 St. & Morton Ave., Chester, Pa.--L
Chicago Tool & Eng'g. Co., 5383 S. Chicago Ave., Chicago 17, III.--C
Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, III.-B,C,G,I,K,M,P,Q,U,V,W,X,Z, AB,AC,AF,AI
Cincma Eng'g. Co., Div. AeroVox Corp., 1100 Chestnut St., Burbank, Calif.--N
Circon Mfg. Coi., P.O. Box 152, Little Falls, N.J.--D
Circon Component Co., 17544 Raymer St., Northridge, Calif.-A,B,G,M,P,Q,U,V,W,X
Citation Products Co., 233 E. 146 St., New York 51, N.Y.--F,L,M,N,P,R,S,V,AB,AC
Coaxial Connector Co., 37 N. 2nd Ave., Mt. Vernon, N.Y.--B,C,D,I,J,L,M,N,O,R,S,T,U, AC,AI
Conn-Cord, Inc., Progress Ave. & Monroe Sta Unice.

AC,AI Conn-Cord, Inc., Progress Ave. & Monroe Sts., Union, N.J.—F,L.M.Q Connector Corp., 6025 N. Keystone Ave., Chi-cago 30, Ill.—B,E,K,M,Q,V,AF Connector Corp. of America, 3223 Burton Ave., Burbank, Calif.—D Conn. Telephone & Electric Co., 70 Britannia St., Meriden, Conn.—F,N,O,P,T,Z,AB,AC Constantin & Co., L. L., Route 46, Lodi, N.J. —Z

-Z Continental Connector Corp., 30-30 Northern Blyd., Long Island City 1, N.Y.-I.L.M.P Continental-Diamond Fibre Co., Newark, Del.

-AB Continental Electronics Ltd., 802 Oakland St., Brooklyn 22, N.Y.-F,L,M,N Cordware Eng's., 2195 42 Ave., Oakland 1, Colic.

Continental Electronics Link. 302 Oktainin St., Brooklyn 22, N.Y.-F.L.M.N
Cordware Eng'g., 2195 42 Ave., Oakland 1, Calif.-B
Curtis Development & Mfg. Co., 3218 N. 33rd St., Milwaukee 16, Wisc.-AB,AC
Dage Electric Co., 67 N. Second St., Beech Grove, Ind.-C.D.I.J.M.S.U.X
Danbury Knudsen, Inc., P.O. Box 170, Dan-bury, Conn.-H.S.V
Dante Electric Mfg. Co.. P. O. Box 170, Dan-bury, Conn.-H.S.V
Decaure Electronic Industries Corp., 203 Orinoco Dr., Brightwaters, L.I., N.Y.-L.M., O.F.AA,AD
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Deutsch Co., 7000 Avalon Blvd., Los Angeles,

Calif.-D,AI,AK Dialight Corp., 60 Stewart Ave., Brooklyn 37,

Deutsch Co., 7000 Avalon Blvd., Los Angeles. Calif.-D,AI,AK
Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y.-G
Dismond Mfg. Corp., 7 North Ave., Brooklyn 37, Mass.-D.I.J.U.X.AI
Dimco-Gray Co., 207 E. 6th St., Dayton 2, Ohio-AB,AC
Dorn Equip. Corp., 58 Broad St., Boston 10. Mass.-L.M.W.AB,AF
Dowkey Co., P.O. Box 57, Warren, Minn.-D
Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-AB,AC
Dumont Labs., Inc., Allen B., TV Transmitter Dept., Mobile Comm. Dept., 1500 Main St., Clifton, N.J.-D,L,M
Duralith Corp., 1025 Race St., Philadelphia 7, Pa.-AC
Dyna-Labs, Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-M.X
Eagle Electronics Corp., P.O. Box 775, Meri-den, Conn.-B,L,W.Y.AB,AC,AD
Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.-C,E,F,M,V,AB,AC,AF
Eby Sales Co., 130 LaFayette St., New York 13, N.Y.-A,B,E,Q,S,AF
Eitel-McCullough, Inc., 738 San Mateo Ave., San Bruno, Calif.-K
Eleco Corp., M St. below Erie Ave., Holadel-phia 24, Pa.-B,C,H,K,M,Q,U,V,X,Y,AG
Eleor Mastries, Div. Amperex Electronic Corp., 44 Summer Ave., Newark 4, N.J.-I.R.Z
Electro Development Co., 14701 Keswick St., Van Nuys, Calif.-UX

Corp., 44 Summer Ave., Newark 4, N.J.-I.R.Z Electro Development Co., 14701 Keswick St., Van Nuys, Calif.-U.X Electrofilm Inc., 7116Laurel Canyon Blvd., N. Hollywood, Calif.-C.H.P.S.Y.Z.AA Electromatic Mfg. Corp., 38 University Pl., New York 3, N.Y.-Q Electronicraft, Inc., 27 Milburn St., Bronx-ville 8, N.Y.-D Electro Precision Products Inc., 139-30 34th Rd., Flushing 54, N.Y.-D,F.J.S.U.X Electro-Tech Equip. Co., 308 Canai St., New York, N.Y.-AC Emerson Plattics Corp., 567 3 Ave., New York 16, N.Y.-AB.AC Empire Electronics Co., 166 River St., Pater-son 1, N.J.-C,D,J.L,O,AB,AC Equipment & Service Co., 6815 Oriole St., Dallas 9, Texas-O

Espey Mfg. Co., 528 E. 72nd St., New York 21, N.Y.-C,E,S,AA,AB,AC,AE,AG

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Fusite Corp., 6000 Fernview Ave., Cincinnati 18. Ohio-Z

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Gates Radio Co., 128 Hampshire St., Quincy. III.--N
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General Electric Co., Wiring Device Dept., 95 Hathaway St., Providence 7, R.I.--M.V
General Hermetic Scaling Corp., 99 E. Haw-thorne Ave., Valley Stream, N.Y.--N.O,Z
General Radio Corp., 107 Salem St., Union Springs, N.Y.--RU,AB
General R-F Fittings Co., 702 Beacon St., Boston 15, Mass.-B.C.I.J
Glass Solder Eng's, 300 N. Lake Ave., Pasa-dena 4, Calif.--Z
G. & M. Equipment Co., 7315 Varna Ave., North Hollywood, Calif.--O
Golden Co., 1054 38 St., Brooklyn 19, N.Y.-O
Gorn Electric Co., 837 Main St., Stamford, Conn.-V
Grayhill, 561 Hillgrove Ave., LaGrange, III.--Y

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M.N.Q
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Herlee Corp., 6th & Beech St., Crafton 1, Wise.--V
Hermascal Co., 1101 Lafayette St., Elkhart, Ind.--Z
Products Co., 37 So. 6 St.,

Ind.-Z Seal Products Co., 37 So. 6 St., Hermetic Seal Products Co., 37 So. 6 St., Newark 7, N.J.-A.B.C.D.E.F.G.H.I.J.K.M., P. Q. R. S. T. U. V. W. X. Y. Z. AB, AC, AD, AE, AF, AI, AJ, AK Hermetite Corp., 702 Beacon St., Boston 15, Mass.-Z Hobson Bros., 4940 W. Lawrence Ave., Chi-cago 30, Ill.-S.AB Holub Industries, 413 DeKalb Ave., Sycamore, Ill.-AD

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III.—AD
Hookins Eng's. Co., 2082 Lincoln Ave., Altadena, Calif.—D
Hubbell Inc., Harvey. State St., & Bostwick Ave., Bridgeport, Conn.—E.M.V.W
Ideal Industries. Inc., Sycamore, III.—C.AD,AJ
Imperial Radar & Wire Corp., 1661 Boone Ave., New York 60, N.Y.—K.M.W.AD,AK
Industrial Accessories, Inc., 77 S. Broadway, Long Branch, N.J.—R.Z.AG,AK
Industrial Devices, Edgewater. N.J.—J.P
AC
Industrial Hardware Mfg. Co., 109 Prince St.,

Industrial Hardware Mfg. Co., 109 Prince St., New York 12, N.Y.-A,B,E,M,P,AA,AB,AC,

Industrial Hardware Mfg. Co., 109 Prince St., New York 12, N.Y.—A,B,E,M,P,AA,AB,AC, AF
Industrial Products Co., Div. Danbury-Knudsen, Federal Rd., Danbury, Conn.—D
Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N.J.—V,AB,AC
Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AB,AC
Insuling Corp. of America, 186 Granite St., Manchester. N.H.—A,B,C,F,G,L,M,N,P,Q,S.
V,Y,AB,AC,AD,AG,AI
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—Z
Isolantite Mfr. Corp., Warren Ave., Stirling.
N.J.—P,Z,AA,AB
Jan Hardware Mfg. Co., 75 N 11th St., Brooklyn 11, N.Y.—S
Javez, Box 646, Redlands, Calif.—B,D,M,O.P.
Q,R,U,W,Y,AA,AD,AJ
Jerroid Electronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa.—D,AJ
J F D Mfg. Co., 128 Clinton Ave., Hunting-ton, N.Y.—P
Johnson Co., E. F., Waseca, Minn.—F,U,M,AJ
Johnson Co., E. F., Waseca, Minn.—F,U,M,AJ
Johnson A, Hoffman Mfg. Corp., 31 E. 2nd St., Mineola, N.Y.—V,
Johns-Manville, 22 E. 40th St., New York 16.
N.Y.—AB
Jones Div., Howard B, Cinch Mfg. Corp., 1026
S. Homan Ave., Chicago 24, 111.—B,C,G, M,N,AB,AC
Joy Mfg. Co., Electrical Connector Div., 1201 Macklind Ave., St. Louis 10, Mo.—C,H,M,O.
ST,AK
Kellogg Switchboard & Supply Co., 79 W.

Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, III.--F,L.M.N.W.AC Keystone Electronics Corp., 428 Broome St., New York 13, NY..-L.M.,P.R.W.AA,AB,AC, AJ

Keystone Watch Case & Instrument Div., Riverside Metal Co., Riverside, N.J.-I.Z

Kilgen Aircraft Div., Kilgen Organ Co., 4632 W. Florissant Ave., St. Louis, Mo.-T

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

K-F Development Co., 2 wood City, Calif.-AB

2606 Spring St., Red-

- Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-B,C,D,E,F,G,I,J,L,M,N,O,P, Q,R,S,T,U,X,Y,Z,AB,AC,AI,AK Kings Microwave Co., 719 Main St., New Ro-chelle, N.Y.-B,D,J Kliegl Bros., 321 W. 50 St., New York 19, N.Y. -C,AJ

- Angeli Broas, 521 W. 50 St., New York 19, N.Y. —C,AJ
  Kolton Electric Mfg. Co., 123 N. J. R.R. Ave., Newark 5, N.J.—C,O,P,AA,AB,AD,AJ
  Krueger & Hudepohl, 3rd & Viue Sta., Cin-cinnati 2, Ohio—B,C,H,P,Z,AA,AD,AJ
  Kulka Electric Mfg. Co., 633 S. Fulton Ave., Mt. Vernon, N.Y.—M,P
  LaMoree, C. D., 1325 San Julian St., Los Angeles 15, Calif.—AB,AC
  Land-Air, Inc., 201 N. Wells St., Chicago 6, III.—B,D.M
  Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.—N
  Lee Electronic Labs., 233 Dudley St., Boston 19, Mass.—U
  Lenkurt Electric Co., 1105 County Bd., San

- Lee Electronic Labs., 233 Dudley St., Boston 19, Mass.-U
  Lenkurt Electric Co., 1105 County Rd., San Carlos, Calif.-N
  Lerco, Div. Lynn-Deatrick, Inc., 501 S. Varney St., Burbank, Calif.-F,M.P.R.U.V.W.X.AA, AB,AC,AD,AE,AJ
  Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.-D,U
  Littelfuse. Inc., 1866 Miner St., Des Plaines, III.-P.AB
  Livingston Electronic Corp., Livingston, N.J. -I.K.U.X.Z
  Long Inc., Thomas J., 215 Stonehinge Lane, Carle Place, Long Island, N.Y.-AB,AC
  Lundey Associates, 694 Main St., Waltham 54, Mass.-P.R.S.Z
  Lynn Electronic Research Co., 9 W. Magnolia Blvd., Burbank, Calif.-F,R
  Macson Co., 3260 Motor Ave., Los Angeles 84, Calif.-C
  Malco Tool & Mfg. Co., 4025 W. Lake St., Chi-carde July

- Calif.--C Malco Tool & Mfg. Co., 4025 W. Lake St., Chi-cago 24, Ill.--P,AA,AJ Mandex Mfg. Co., 2608 W. 16 St., Chicago 8, Ill. --A.E.N.P.AB,AC
- Manufacturer's Laboratory, 10610 Keswick St., Sun Valley, Calif,-N Marathon Electric Mfg, Wausau, Wisc.-AB.

- Sun Valley, Calif.--N Marathon Electric Mfg, Wausau, Wisc.--AB. AC Marlin Electric Co., 1750 N. Campbell Ave., Chicago 47. III.--C,Y,AA,AB,AC Marshall Assoc. Inc., John. P.O. Box 2463, Bridgeport 8, Conn.--AE Mendelsohn Speedgun Co., 4th Ave., Haskell, N.J.--D,I,M.U.X,Y Mica Insulator Co., P.O. Box 1076, Schenec-tady 1, N.Y.--KAB,AC Microdot Div., Felts Corp., 1826 Fremont Ave., S. Pasadena, Calif.--D,J,U.X Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.--A.K.M.N.R.S.AB,AC Miller Electric Co., 120 Main St., Pawtucket, R.I.--M Miller Co., J.W., 5917 S. Main St., Los An-seles, Calif.--AB,AC Milwaukee 7 ansformer Co., 5231 N. Hopkins St. Milwaukee 9, Wisc.--AB Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.--AJ Mitronics, Inc., 232 13th Ave., Newark, N.J. --R
- Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.-AJ
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  Molding Corp. of America, 40 Church St., Pawtucket, R.I.--P,Z,AB,AC
  Moore Co., H. J., 266 William St., New York 38, N.Y.-AB,AC
  Morse Co., F. W., 1300 Soldiers Field Rd., Bos-ton, Mass.--M,AD
  Mosley Electronics, Inc., 8622 St. Charles Rock Rd., St. Louis 14, Mo.-B,Y,AA,AJ
  Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.-C
  NAER Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.-A, M,W,X
  National Ceramic Co., 500 Southard St., Trenton 2, N.J.-Z
  National Ceramic Co., 600 Southard St., Trenton 2, N.J.-Z
  National Fabricated Products, Inc., 2650 W. Belden. Chicago 47, III.--B,E,K,M,P,Q,S,U, V.Z,AB,AC,AI
  NEMS-Clarke, Inc., 919 Jesup-Blair Dr., Silver Sprinz, Md.--N
  Neosil Products, Div. of Rubber Assoc., 1 E. 57th St., New York 22, N.Y.-C,R,Z,AK
  Neptune Electronie Co., 423 Broadway, New York 13, N.Y.-C,F,G,L,M,N,O,AB,AC
  New Products Co., 1069 E. 54th St., Indian-apolis, Ind.-C,E,R,SW,AB,AC
  Nichols Preducts Co., 225 W. Main St., Moorestown, N.J.-DJ,M
  North Electric Mfg. Co., S. Market St., Galion Ohio, F,M.N,P,W,AB,AC
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  Pacific Mercury TV Mfg., 5955 Van Nuys Blvd., Van Nuys. Calif.-N,O
  Page-Fogwell Corp., 1311 Riverside Dr., Los Angeles 31, Calif.-M
  Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-F
  Peerless Products Industries, 812 N. Pulaski Rd., Chicago 51, III.-R
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- N.Y.-B,D,M,N,O,T Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.-F.M.N Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.-B,E,G,S,Y,AF Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-B,G,AC Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.-O Pix Mfg. Co., 5 Oliver St., Newark 2, N.J. -C.D.P.AC,AD Plymouth Electronics Corp., 50 Kingaburg St.

- FIX MIE. Co., 5 Oliver St., Newark 2, N.J. —G.D.P.AC.AD
  Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.—B
  Precision Associates, 854 Cumberland St., Brooklyn 17, N.Y.—N.O
  Precision Metal Products Co., 41 Elm St., Stoneham, 80, Mass.—P.R.V.AB.AC
  Precision Plastic Products, 225 N. Rasine Ave., Chicago 7, 11.—A.P.AB.AC
  Pyle-National Co., 1834 N. Kostner Ave., Chicago 51, 111.—C.H.M.O
  Quality Products Co., 387 Charles St., Provi-dence 4, R.I.—Z.AC
  Radelco Mfg. Co., 7580 Garfield Blvd., Cleve-land 25, Ohio-D
  Radio Merchandise Sales, 2016 Bronxdale Ave., New York 62, N.Y.—AJ
  Radio Sonic Corp., Plainfield, N.J.—P.Z
  Rajah Co., 58 Locust Ave., New York 11.

- Rau Fastener Co., 142 5th Ave., New York 11, N.Y.-A.B.A.A.A.E.A.J Reading Batteries, P.O. Box 916, Reading, Pa. -AF
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  Remler Co., 2101 Bryant St., San Francisco 10, Calif.-F.G.M
  Research Development Mfr., 429 E. Collom St., Philadelphia 44, Pa.-U
  Research Instrument Co., 238 Broadway, New York 7. N.Y.-N.P
  Revere Corp. of America, 845 N. Colony Rd., Wallingford, Conn.-N.O.R.U.AD.AE.AI
  Reynolds Industries, 2105 Colorado Ave., Santa Monica, Calif.-D,U.X
  Revnolds Metals Co., 2500 S. 3rd St., Louis-ville 1, Ky.-C
  Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-O.AA.AG,AJ
  Richardson Co., 2790 Lake St., Melrose Park, III.-V.AB
  Rich Electronics Inc., 212 N. W. 8 Ave., Miami

- III.--V.AB Rich Electronics Inc., 212 N. W. 8 Ave., Miami 36, Fla.--N,O Riverside Metal Co., 1 Pavilion Ave., Riverside, N.J.--I Robeo Mfg. Div., Pilot Int'l. Corp., 27-01 Bridge Plaza N., Long Island City 1, N.Y.--P.R.Z.AK
- Rodale Mfg. Co., Emmaus, Pa.—C,E,M,AK Roflan Co., Topsfield, Mass.—B,C,D,F,G,H,I,J, L.M,N.P
- L. M.N.P Rogan Bros., 8031 N. Monticello, Skokie, Ill.— AC Rollins Corp., 117 Schley Ave., Lewes, Dela.— N.O.AB.AC Roylyn, Inc., 1706 Standard Ave., Glendale 1, Calif.—D
- Ruckelshaus Labs., John G., Madison, N.J.-

- AJ Sanders Associates, Inc., 137 Canal St., Nashua, N.H.-V Screw Corp. of America, 108 Park Ave., New York 17, N.Y.-P Sealectro Corp., 186 Union Ave., New Ro-chelle, N.Y.-M,P.R.U.X.AB.AC Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio-P Sears Co., M. J., Roxbury, N.Y.-F.G.M Selectar Industries, Inc., 8100 Ocean Park-way, Brooklyn 85, N.Y.-C.D.F.J.L.M.N.O Shaw Insulator Co., 160 Coit St., Irvington 11, N.J.-AB
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  Spaulding Fibre Co., 310 Wheeler St., Tona-wanda, N.Y.-P.AC
  Standard Electric Time Co., 119 Logan St., Springfield, Mass.-L.N
  Steel Co., Herman, Lafayette Bldg., Philadel-phia 6, Pa.-F.M.U
  Stokes Molded Products, Taylor & Webster Sts., Trenton 4, N.J.-AB.AC
  Stone City Machine & Tool Co., 1206 7th St., Bedford, Ind.-P
  Stratoseal Mfg. Co., 8039 W. Fullerton Ava., Chicago 47, Ill.-P.Z.AA.AB.AC
  Stuper Ear Products Co., 675 Merrick Rd., Lyn-brook, N.Y.-K.X
  Switcheraft, Inc., 1828 N. Halsted St. Chi-cago, Ill.-F.G.M.N.Q.U.AI
  Sylvania Electric Products, 1740 Bdwy., New York 19, N.Y.-A.B.E.Q.W.Z.AA.AB.AC
  Techron Corp., 254 Friend St., Boston 14, Mass. X.AJ
  Telectro Industries, Corp., 35-16 37th St., Long Island City 1, N.Y.-F.H

- Techron Corp., 254 Friend St., Boston 14, Mass. X,AJ
  Telectro Industries, Corp., 35-16 37th St., Long Island City 1, N.Y.—F,H
  Telephonics Corp., Park Ave., Huntington, L.I., N.Y.—F,M
  Teletronic Labs., 1835 W. Rosecrans Ave., Gardena, Calif.—D
  Telex, Inc., 1633 Eustis St., St. Paul 1, Minn.
  —L,M
  Thomas & Betts Co., 36 Butler St., Elizabeth 1, N.J.—B,Y.AA
  Thompson-Bremer & Co., 520 N. Dearborn St., Chicago 10, III.—P.W.AD.AE.AJ
  Thompson Clock Co., H. C., 38 Federal St Bristol, Conn.—C,D.F.G.H.L.M.N.O.P
  Tinnerman Products, Inc., PO. Box 6688, Dept. 16, Cleveland 1, Ohio—C,K
  Torwico Electronics, Inc., 967 Frelinghuysen Ave., Newark 5, N.J.—P.Z.AB.AC
  Transradio Ltd., 138A Cromwell Rd., London SW7, England—X
  Trico Fuse Mfg. Co., 2948 N. 5th St., Milwaukee 12, Wisc.—C,AF,AJ
  Tri-Dex Co., P.O. Box 1207, Lindsay, Calif.— AB,AC
  Trimm, Inc., 400 W. Lake St., Libertyville, III.—L.M.N

SW7, England--X
Trico Fuse Mfg. Co., 2948 N. 5th St., Milwaukee 12, Wisc.-C.AF,AJ
Tri-Dex Co., P.O. Box 1207, Lindsay, Calif.-AB,AC
Trimm, Inc., 400 W. Lake St., Libertyville, III.-L,M,N
Tru-Connector Corp., 416 Union St., Lynn, Mass.-D.H.I.J. U.AI.AK
TV Development Corp. 2024 McDonald Ava., Brooklyn 23, N.Y.-B.C.D.G
TV Hardware Mfg. Co., 191 Taylor Ave., Rockford, III.-Y,AJ
Ucinite Co., Div. United-Carr Fastemer Corp., 459 Watertown St., Newtonville, Mass.-A,B, D.F.K.M.R.S.V.AB.AE.AF
UM & F Mfg. Corp., 10929 Vanowen St., N. Hollywood, Calif.-U,W
United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.-A.K.M.P
United-Carr Fastener Corp., 16 Hudson St., New York 13, N.Y.-Z
Universal Circuit Control, 3610 Oakton St., Skokie, III.-F.M.
U.S. Components Inc., Level Rd., Collegeville 2, Pa.-D.K.U.AD
U.S. Components Inc., 454 E. 148th St., New York 55, N.Y.-C.D.H.J.M.U.Y.X.AJ, AK
U.S. Components Inc., 454 E. 148th St., New York 55, N.Y.-C.D.H.J.M.U.Y.X.AJ, AK
U.S. Gaiket Co., 521 Commercial St., Glendale 3, Calif.-P.R.AB.AC
U.S. Wire & Cable Corp.. Progress and Monroe Sta., Union, N.J.-C.D
Vaco Products Co., 517 E Ontario St., Chicago 11, II.-P.A.A.E.AJ
Vallorbs Jewel Co., P.O. Box 958, Lancaster, Pa.-M.P.U.J.
Van Cleef Bros., 7800 S. Woodlawn Ave., Chicago 19, III.-P.A.A.E.AJ
Van Cleef Bros., 7800 S. Woodlawn Ave., Chicago 19, III.-P.A.A.E.AJ
Van Cleef Bros., 7800 S. Woodlawn Ave., Chicago 19, III.-P.A.A.E.AJ
Vangurd Electronic Co., 3384 Motor Ave., Los Angeles 34, Calif.-AB
Vector Electronic Co., 3382 San Fernando Rd., Los Angeles 65, Calif.-M.P.A.A.B.AC
Vising The Electric Co., 2133 Roscoe Blvd., Canoga Park, Calif.-L.M.P.U.V.X.AB.AK
Virginia Electric Co., 8252 San Fernando Rd., Los Angeles 65, Calif.-AB
Vector Stampings, Inc., 222-34 96th Ave., Queens Willagge 99, N.Y.-W.

Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-D.H.J.M

Whitaker Cable Corp., 1301 Burlington Ave., N. Kansas City 16, Mo.—AA,AD,AF,AJ
White Industries, 421 W. 54 St., New York 19, N.Y.—P.Z
Whitaer Blake Co., 1565 Dixwell Ave., New Haven 14, Conn.—C.I.M. U.X.AJ,AK
Whitao, Inc., Schiller Park, III.—F.P.U.X
Willard Storage Battery Co., 1220 Huron Rd., Cleveland, Ohio—P
Winchester Electronics, Willard Rd., Norwalk, Conn.—D.H.I.M.P.U.Y.X.AK
Wiretron Froducts Electronic Div., Roberts Mfg. Co., 426 E. Shaffer St., Cleburne, Texas—O
Wright Eng's, Co., 180 E. Calif. St., Pasadena

Texas-O Wright Eng'g. Co., 180 E. Calif. St., Pasadena I. Calif.--C.D.G.I.J.R.U.X.Z.AA.AJ,AK Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.--Z Sierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N.Y.--B,C,R,AF

# 23-CONTROL EQUIPMENT, COMMUNICATIONS

Controls, audio recordingL
Controls, broadcast inputA
Controls, frequencyB
Controls, illuminationC
Controls, motor & generatorD
Controls, photoelectricE
Controls, photographicF
Controls, power levelG
Controls, remote radio
Controls, remote TVM
Controls, tower lightingI
Controls, ventilationK
Tuners, automaticJ

- Adler Communications Labs., 1 Le Fevre Lane, New Rochelle, N.Y.—A,L
  Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.—E.F
  Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.—B
  Airlectron, Inc.. Box 151, Caldwell, N.J.—E
  Aitec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—A
  American Measuring Instruments Corp., 21-25 44 Ave., Long Island City 1, N.Y.—L
  Amper Corp., 934 Charter St., Redwood City, Calif.—L

Ampex Corp., 934 Charter St., Reawood Ony, Calif.-L Arens Controls, Inc., 2017 Greenleaf St., Evanston, III.-D.H.K Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass.-E Audicon Electronics, 216 Lyon St., Paterson 4, N.J.-B.L Authorized Mfrs. Co., 914 Wyckoff Ave., Brooklyn 27, N.Y.-A.L Barber-Colman Co., 1300 Rock St., Rockford, III.-K

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Bar-Ray Products, 209 25 St., Brooklyn 82,

Ill.--K
Bar-Ray Products, 209 25 St., Brooklyn 82.
N.Y.-F
Bell & Howell, 7100 McCormick Rd., Chicago 45, 111.-F
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4. Md.--H
Berkeley Div., Beckman Instruments, Inc., 2200 Wright Ave., Richmond, Calif.-B
Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio-K
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N.J.-D
Brach Mfg. Co., Div. General Bronze Corp., 200 Central Ave., Newark 3, N.J.-L
Britsh Electronic Sales Co., 23-08 45th Rd., Long Island City 1, NY.-A,L
Browning Laboratories, Inc., 750 Main St., Winchester. Mass.-A,B
Brush Electronics Co., 8405 Perkins Ave., Cleveland 14. Ohio-L
Budelman Radio Corp., 375 Fairfield Ave., Stamford, Conn-H
Bulova Watch Co., 630 5 Ave., New York. N.Y.-B
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego 16. Calif.-B

Bulova Watch Co., 630 5 Ave., New York, N.Y. —B
Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego 16, Calif.—B
Centralab Div., Globe-Union. Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—H.J.L.M
Century Lighting Inc., 521 W. 43rd St., New York 25, N.Y.—F.O
C.G.S. Labs., Inc., 391 Ludlow St., Stamford, Conn.—B.H.J.
Chicago Electronic Eng'g. Co., 3223 Armitage Ave., Chicago 47, Ill.—B,D
Cinema Eng'g. Co., Div. AeroVox Corp., 1100 Chestnut St., Burbank, Calif.—A,G.L
Cline Electric Mfg. Co., 3405 W. 47 St., Chi-cago 32, Ill.—B,D
Coax Electronics Co., 42 North Rd., Bedford, Mass.—A.L
Collins Radio Co., 855 35 St., N.E., Cedar

Coax Electronics Co., 42 North Rd., Beddid, Mass.—A.L
Collins Radio Co., 855 85 St., N.E., Cedar Rapids, Iowa—A
Colortone Electronics, 200 Frank Rd., Hicks-ville, L.I., N.Y.—B
Conn. Telephone & Electric Corp., 70 Brit-tannia St., Meriden, Conn.—H

Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-E

Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-E
Continental Communications, 452 W. Chicago Ave., Chicago 10, 111.-B,H
Control Corp., 718 Central Ave., Minneapolis 19, Minn.-H
Cosmo Eng's. Labs., Inc., Mountain Ave., Hackettstown, N.J.-D
Curtis Development & Mfg. Co., 3218 N. 33 St., Milwaukee 16, Wis.-D,K
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstaft. N.J.-M
Daven Co., 191 Central Ave., Newark 4, N.J.-A.G.H.L.M
Daven Co., 235 Penn St., Burlington, N.J.-A.B.L
Duhow Devel. Co., 235 Penn St., Burlington, N.J.-A.B.L
Duhow Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Chicago 12, 111.-K
Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.-E.F
Electron, Communication Equip. Co., 1249 Loyola Ave., Chicago 26, 111.-G.H
Electronic Communication Equip. Co., 1249 Loyola Ave., Chicago 26, 11.-G.H
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.-E
Electronic Castrin Corp., 362 W. Bowery St., Akron 7, Ohio-H
Electronic Research, 11560 39 St., N.E., Seattle 55, Wash.-E.H
Electro-Physics Co., 237 Broadway, New York 7, N.Y.-C.E.F
Electro-Teeh Equip. Co., 808 Canal St. New

b. S. Wash.--E.H
b. St. N.E., Seattle 55, Wash.--E.H
Electro-Physics Co., 287 Broadway, New York 7, N.Y.--C.E.F
Electro-Tech Equip. Co., 808 Canal St., New York, N.Y.--E
Electro Vision Lab. 4227 Francis Lewis Blvd. Bayside 61, N.Y.-E.F
Elly Electronics Corp., 22-02 Raphael St., Fairlawn, N.J.-D.E
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y.--H
El-Tronics. Inc., 5th & Noble Ster. Dirichal

Falriawn, N.J.-D.E
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y. —H
El-Tronics. Inc., 5th & Noble Sts., Philadel-phia 28, Pa.-E
Engineered Magnetics, 11812 Teale St., Culver City, Calif.-D
Eng's. Research & Devel. Co., Addison, III.-E
Erco Radio Laboratories, 687 Stewart Ave., Garden City, N.Y.-H
Espey Mfg. Co., 528 E. 72 St., New York 21. N.Y.-G.H.K
Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-B
Fleetwood Corp., 1087 Custer Dr., Toledo 12, Ohio-M
Gables Eng's. Inc., 247 Greeo Ave., Coral Gables, Fiz.-H
Gates Radio Co., 123 Hampshire St., Quincy, II.-A.B.G.H.L
General Electric Co., Broadcast Equip., Com-mercial Equip. Dept., Electronics Park, Syracuse, N.Y.-A.B
General Electric Co., Electronics Park, Syracuse, N.Y.--A.B
General Electric Co., Electronics Park, Syracuse, N.Y.--H
General Instrument Corp., 829 Newark Ave., Elizabeth 3, N.J.-J
General Radio Co., 275 Mass. Ave., Cambridge

General Instrument Corp., 525 Newalk Ave., Elizabeth 3, N.J.-J General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-C G. & M. Equipment Co., 7315 Varna Ave., North Hollywood, Calif.-H Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-E Cordon Enterprises, 5362 N. Cahuenga Blvd.,

Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-E Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-E,F Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-A.C Greenleaf Mfg. Co., 7814 Maplewood Ind. Ct., St. Louis 17, Mo.-D Gyro Electronics Co., 325 Canal St., New York 13, N.Y.-H Haledy Electronics Co., 57 William St., New York 15, N.Y.-E Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.B.G.H.L.M Hammarlund Mfg. Co., 460 W. 34 St., New York 1, N.Y.-H Hanson-Gorill-Brian. Inc., 1 Continental Hill, Glenn Cove, N.Y.-D Harmon Electronics Co., 11431 Truman Rd., Independence. Mo.-H Horlick Co., Wm. I., 266 Summer St., Boston 10, Mass.-D Hughey & Phillips, 3800 N. San Fernando Blvd., Burbank, Calif.-I Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.-A.L Industrial Electronics Co., Hanover St., Han-Over Mass.-D

Industrial Electronics Co., Hanover St., Hanover, Mass.-E

Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-E

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Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.—E Int'l. Electronics Corp., 147 Parkhouse St., Dallas 2, Texas—A Int'l. Testing Service, Div. Jackson & Church, 321 N. Hamilton St., Saginaw, Mich.—E Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.—F Kaar Eng'g. Corp., 2995 Middlefield Rd., Palo Alto, Calif.—H Kaye Devel. Co., Connecticut Ave., S. Norwalk, Conn.—C,E Kay Lab. 5725 Kearney Villa Rd., San Diego

Alto, Calif.-H
Kaye Devel. Co., Connecticut Ave., S. Norwalk, Con...-C,E
Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.-M
Kliegl Bros., 321 W. 50 St., New York 19.
N.Y.-C
Lane Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.-H
Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.-A,L
Larsen Nuclear Research, 520 5 Ave., New York 36, N.Y.-E
Larson Instrument Co., 24 Orchard St., Tarry-town, N.Y.-E
Lavoie Labs. Inc, Morganville, N.J.-J
Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-J.M
Leonard Electric Products Co., 67 34th St., Brooklyn 32, N.Y.-J
Luxor Lighting Products, Inc., 350 5 Ave., New York 1, N.Y.-C.I
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.-B
McLotsh Lab., Inc., 320 Water St., Bing-hamton, N.Y.-L
MacKenzie Products Co., 141 Brewery St., New Haven, Conn.-E
Magnasync Mfg. Co., 5617 Satsuma Ave., N. Hollywood, Calif.-A.E.F.L
Magnetic Amplifiers Inc., 682 Tinton Ave., New York 55, N.Y.-D.E
Malory & Co., P. R. 3029 E. Washington St., Indianapolis 6, Ind.-J
Manufacturer's Laboratory, 10610 Keswick St., Sun Valley. Calif.-L

Indianapolis 6, Ind.-J
Manson Labs., 207 Greenwich Ave., Stamford, Con.-B
Manufacturer's Laboratory, 10610 Keswick St., Sun Valley, Calif.-L
Master Appliance Mfg. Co., 4 & Ontario Sts., Racine, Wis.-D
Matawan Electronics Co., 236 Creek Rd., Keansburg. N.J.-B
Mattson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-L
Maxson Corp., W. L., 460 W. 84th St., New York 1, N.Y.-B
Mercury Mfg. Corp., Fourth & Montjoy Sts., Falmouth, Ky.-H
Meyer & Co., Hugo., 39 W. 60th St., New York 23, N.Y.-F
Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, 111.-A.K
Micro Balancing, Inc., 191 Herrick Rd., Gar-den City Park, N.Y.-E
Midwest Sound Systems. 2871 N. Lincoln Ave., Chicago 13, 111.-A.E.G.L
Miller Labs., August E., 9226 Hudson Blvd., N. Bergen. N.J.-B
Montgomery Mfg. Co., Owensville, Ind.-A
Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, 11.-C.E.I
Natural Lighting Corp., 612 W. Elk Ave., Glendale 4, Calif.-C.F
Neural Lighting Corp., 612 W. Elk Ave., Glendale 4, Calif.-C.F
Neural Lighting Corp., 612 W. Elk Ave., Glendale 4, Calif.-C.F
North American Model Products, 9802 Warwick Rd., Warwick, Va.-H
North Electric Mfg. Co., S. Market St., Galion. Ohio-C.L
Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-G.H

Ganon, Unio-C.L Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-G.H Peerless Photo Products Inc., Shoreham, L.I., N.Y.-F

Peerless Photo Products Inc., Shoreham, L.I., N.Y.-F
Perma-Power Co., 4727 N. Damen Ave., Chicago 25, 111.-H
Peters Co., O. S., 1853 N.Y. Ave., N.E., Washington 2, D.C.-B
Petroff. Peter A., 127 Water St., New York 5, N.Y.-H
Philamon Labs., 90 Hopper St., L.I., N.Y.-B
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-H
Phoeniz Precision Instrument Co., 3803 N. 5
St., Philadelphia 40, Pa.-E
Photobell Co., 48 Vesey St., New York 7, N.Y.-B
Picco Instruments & Controls Corp., 3593
Hayden Ave., Culver City, Calif.-D
Pioneer Electric & Research Corp., 748 Circle Ave., Forest Park, 111.-D
Pitometer Log Corp., 223 Lafayette St., New York 12, N.Y.-B,D
Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-B
Radio Corp., of America, RCA Victor Div., Fordt & Cooper Sts., Camden 2, N.J.-A,E, G,I,K
Regulator Eng's. & Devel. Co., 11545 W. Jef-

Regulator Eng'g. & Devel. Co., 11545 W. Jef-ferson Blvd., Culver City, Calif.—B Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.—D

Kiverbank Labs., Batavia Ave.—P. O. Box 65, Geneva, III.—B
Rust Industrial Co., 130 Silver St., Manchester, N.H.—H,L,M
Ryan Industries, 19159 John R. St., Detroit 3, Mich.—H
Schafer Custom Engineering, Paul, 235 S. 8 St., Burbank, Calif.—H
Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N.Y.—H,J
Servo-Tek Products Co., 1086 Goffie Rd., Haw-thorne, N.J.—D
Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.—B
S.O.S. Cinema Supply Co., 602 W, 52nd St.

- thorne, N.J.-D
  Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.-B
  S.O.S. Cinema Supply Co., 602 W. 52nd St., New York 19, N.Y.-E,F
  Sound Scriber Corp., 146 Munson St., New Haven 4, Conn.-L
  Spar Ens'g. & Devel. Inc., South & Parson Ave., Wyncote, Pa.-H
  Standard Coil Products Co., 2085 N. Haw-thorne St. Melrose Park, III.-F
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-B,E
  Sterling Instruments Co., 15310 W. McNichols, Detroit 36, Mich.-E
  Tarzian Inc., Sakes, 539 S. Walnut, Bloom-ington, Ind.-A
  Tech Laboratories Inc., Bergen & Edsall Blvd., Palisades Park, N.J.-A
  Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.-H
  Telerad Mfg. Corp., 1440 Broadway, New York 18. N.Y.-B,G,J
  Telescreen Corp., 36 Grove St., New Canaan, Conn.-H
  Telkor, Inc., Telegraph Rd., P.O. Box 186, Elyria, Chio-B
  Thomson Clock Co., H. C., 38 Federal St.,
- Telkor, Inc., Telegraph Rd., P.O. Box 186. Elyria, Ohio-B Thompson Clock Co., H. C., 38 Federal St., Bristol. Conn.-B,D.E,F,H Tork Clock Co., 1 Grove St., Mount Vernon, N.Y.-I Tower Construction Co., 1923 Geneva St., Sioux City, Iowa-I Tower Structures, Inc., Gregg St., Lodi, N.J. -I

- -I TV Specialty Co., 350 W. 31 St., New York 1, N.Y.-F,M Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-J Vapor Heating Corp., 30 E. Jackson, Chicago 4, 111.-E Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-F

- Mass.—F Virginia Electronics Co., River Rd., at B&O R.R., Washington 16, D.C.—H Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio—D.E Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19, Mich.—D Westrex Corp., 111 8 Ave.. New York 11, N.Y.—H White Dental Mfg. Co., S. S., 10 E. 40th St., New York 16, N.Y.—H Worner Electronic Div., Rankin, Ill.—C,E,I

# 24-CONTROL EQUIPMENT, INDUSTRIAL

Alarms, industrial
Alarms, intrusion
Controls, chemical
Controls, combustionC
Controls, computer
Controls, conductivityD
Controls, densityE
Controls, dimension
Controls, doorG
Controls, dynamometer
Controls, electronic
Controls, elevator
Controls, film thickness
Controls, fire
Controls, fluid flow
Controls, food processingK
Controls, gas
Controls, grading & sortingL
Controls, guided missile AAG
Controls, heat treatingM
Controls, humidityN
Controls, humidity
Controls, humidityN Controls, illuminationO Controls, inspectionP
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR Controls, materials thicknessS
Controls, humidity
Controls, humidity
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR Controls, materials thicknessS Controls, mechanical overloadT Controls, moistureU Controls, motor & generatorV
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR Controls, materials thicknessS Controls, mechanical overloadT Controls, moistureU Controls, motor & generatorV Controls, package wrappingW
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR Controls, materials thicknessS Controls, mechanical overloadT Controls, moistureU Controls, motor & generatorV Controls, package wrappingW Controls, pHAAH
Controls, humidityN Controls, illuminationO Controls, inspectionP Controls, liquid levelQ Controls, machine safetyR Controls, materials thicknessS Controls, mechanical overloadT Controls, moistureU Controls, motor & generatorV Controls, package wrappingW Controls, pHAAH Controls, photoelectricX
Controls, humidity
Controls, humidity
Controls, humidity

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Controls, printingAC
Controls, registerAD
Controls, servoAE
Controls, signal
Controls, smoke densityAF
Controls, speed
Controls, strainAG
Controls, surface finish
Controls, telemeteringAAJ
Controls, temperatureAH
Controls, tension
Controls, torque
Controls, trafficAJ
Controls, TV visualAK
Controls, ultrasonicAL
Controls, vacuumAM
Controls, ventilatingAN
Controls, volume
Controls, weightAO
Controls, weldingAP
Controls, X-ray
Counting Devices
Gyros
Regulators, automatic currentA\$
Regulators, automatic voltage AT
Solenoid ValvesAU
Timers, countingAV
Timers, cyclicAW
Timers, impulseAX
Timers, intervalAY
Timers, photoelectricAZ
Timers, sequence
Timers, thermal

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- Abbott Plastics & Machine Corp., 6322 N. Clark St., Chicago 26, III.—AM
  Ace Instrument Co., Inc., 172 Pacific St., Brooklyn 2, N.Y.—C.J.X.Z.AB,AF,AM
  Acme Electronics, 300 N. Lake Ave., Pasadena 4, Calif.—V.X.Z.AE,AH,AI,AS,AT,AW,AAA
  Adel Div., General Metals Corp., 10777 Van Owen St., Burbank, Calif.—A.U,V
  Advance Electronics Co., 451 Highland Ave., Passaic, N.J.—AQ,AV
  Advance Electronics, Inc., 94 Silas Deane Hgwy., Rocky Hill, Conn.—P,AAN
  Aero Electronics, 1512 N. Wells, Chicago 10, III. —C,D,E,F,I,J,N,S,T,U,X,Z, AB, AE, AF, AG, AAM,AAN,AAP
  Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.—AY
  Aerogati Pace St. Orange
- Pa.—AL
- Airborne AL
  Airborne Accessories Corp., 1414 Chestnut Airborne Accessories Corp., 1414 Chestnut Ave., Hillside 5, N.J.—AE
  Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.—K, AAN
  Aircraft Armaments, Inc., P.O. Box 126, Cockeysville, Md.—AE
  Airlectron Inc., 295 Bloomfield Ave., Caldwell, N.J.—X
  Air-Marine Motors Inc., 369 Bayview Ave., Amityville, L.I., N.Y.—V, AE
  Alden Electronic & Impulse Recording Equip. Co., Alden Research Center, Westboro, Mass. —AV
  Allen-Bradley Co., 136 W. Greenfield Ave.,

- AV
   Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisc.-V,AB,AH,AM
   Alliance Mfg. Co., Lake Park Blvd., Alliance. Ohio-G
   American Electronic Mfg., 9503 W. Jefferson Blvd., Culver City, Calif.-AE
   American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-AY,AAN
   American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.-AE,AS,AT,AV,AW, AX,AAN
   American Instrument Co., 8050 Georgia Ave.

- Los Angeles 22, Calif.—AE,AS,AT,AV,AW, AX,AAN American Instrument Co., 8050 Georgia Ave., Silver Spring, Md.—N,U American Sadio Co., 445 Park Ave., New York 22, N.Y.—AK American Solder & Flux Co., 19th & Willard Sts., Philadelphia 40, Pa.—AP Amglo Corp., 2087 W. Division St., Chicago 22, III.—AY,AAA Ansley Electronics, 85 Tremont St., Meriden, Conn.—AL Applegate & Co., C. J., 1816 Grove St., Boulder, Colo.—AS,AT,AW,AAN Applied Research Labs., 3717 Park Pl., Glen-dale 5, Calif.—H,S,AAC,AAQ Applied Research Labs., 3717 Greenleaf St., Evanston, III.—R,V,Z,AN A.R.F. Products, Inc., 7627 Lake St., River Forest, III.—G Ark Eng's. Co., 431 W. Tabor Rd., Phila-delphia 20, Pa.—AAN Arlin Products, Inc., 13541 Auburn Ave., Detroit 23, Mich.—AQ Arma Corp., 1357 Hawthorne Blvd., Haw-thornec, Calif.—AH
- -AE,AR,AAC Arnoux Corp., 1357 Hawthorne Blvd., Haw-thorne. Calif.-AH

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- Arrow-Hart & Hegeman, 103 Hawthorne St., Hartford 6, Conn.-G.V,AN,AAA
  Askania Regulator Co., 240 E. Ontario St., Chicago 11, 111.-J.Q.AB,AE
  Assembly Products, Inc., Chesterland 21, Ohio -A,C,M,AE,AH,AM,AS,AT,AAH,AAM
  Associated Valve & Eng'g. Co., 1150 W Marquette Rd., Chicago 21, 111.-J,Q.AB,AM
  Atkomatic Valve Co., 545 W. Abbott St., In-dianapolis, Ind.-AU
  Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.-A,B,O,X,AF,AH,AAR
  Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.-AE,AR,AAD,AAG
  Atomic Instrument Co., 84 Mass. Ave., Cam-bridge 39, Mass.-J,X,AD,AQ,AV,AX,AY, AAA.AAN
  Atomlab, Inc., 489 5 Ave., New York 17, N.Y. -AV,AX

- Audicon Electronics Inc. 216 Lyon St., Pater-son 4, N.J.—A,T.AL,AAO

- Audicon Electronics Inc. 216 Lyon St., Paterson 4, N.J.-A,T,AL,AAO
  Autel Electronics Co., 1947 Farmingdale Rd., Westfield, N.J.-F,L,P,AQ,AY
  Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.-AAO
  Authorized Mfrs. Co., 914 Wyckoff Ave., Brooklyn 27, N.Y.-A,AT,AAJ,AAN
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.-AAJ,AAO
  Automatic Electronic Eng'g., 2427 S. 6 St., Milwaukee 15, Wisc.-G,X
  Automatic Temperature Control Co., 5212 Pulaski Ave., Philadelphia 44, Pa.-E,F,I,J,M, Q,S,Z,AB,AE,AI,AO,AQ,AW,AY,AAA,AAF
  Autoron Co., Danville, Ill.-X,AF
  Avion Instrument Corp., 299 State Highway 17 Paramus, N.J.-AE,AI,AAD,AAG
  Badger Meter Mfg. Co., 2371 N. 30th St. Milwaukee 45, Wisc.-J
  Bailey Industries, Arnold, 875 Elm St., Manchester, N.H.-A,B,AAR
  Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio-A,C.D,E,J,K,M,N,Q.Z,AB,AF,AH, AM,AAF,AAH,AAJ,AAM
  Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.-aC6 Al

- Balley McVer VOI AVAILABLE AVAILABLE
- Beva Laboratory, 1640 Olden Ave. Ext., Tren-ton, N.J.-L.AQ,AAC,AAN,AAQ Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach.-Y.AX.AY,AAA Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.-X,AAQ
- Birdsell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.-AW
- Birdsell Mig. Co., 100 San Antonio Rd., Palo Alto, Calif.—AW
  Birtcher Corp., 4371 Valley Blvd., Los Ange-les 32. Calif.—C.D.E.F.G.H.I.J.K.L.M.N.O.P. Q.R.S.T.U.V.W.X.Y.Z.AA.AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AAC, AAD, AAE, AAF, AAG, AAH, AAI, AAJ, AKK, AAL, AAM
  Bogue Electric Mfg. Co., 52 Iowa Ave., Pater-son 3, N.J.—V, AS, AT, AAE, AAN
  Bolsey Corp. of America, 118 E. 25 St., New York 10, N.Y.—Y, AZ
  Borg Equip. Div., Borg Corp., George 120 S. Main St., Janesville, Wisc.—AE
  Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.—S, AL
  Bristol Co., Waterbury 20, Conn.—A, C.D.E, J, K.M.N.Q.T, U.X.Z, AA, AB, AE, AF, AG, AH, AM.AN, AO, AW, AX, AY, AAA, AAB, AAC, AAF, AAH, AAJ, AAK, AAM, AAN, AAO
  Brooke Eng'g. Co., 4517 Wayne Ave., Phila-

- Brooke Eng'g. Co., 4517 Wayne Ave., Phila-delphia 44, Pa.-C,AB.AF Brooks Rotameter, Box 432, Lansdale, Pa. Brown Equipment Co., 128 N. Main St., Mill-town, N. J.-P,AQ,AV,AAA,AAN

Brown Instrument Div., Minneapolis-Honey-well Regulator Co., Wayne and Windrim Ave., Philadelphia 44, Pa.—A.C.D.E.J.K. M.N.Q.U.AB, AE, AH, AI, AM, AO, AAF, AAH, AAK, AAI

Browning Laboratories, 750 Main St., Win-chester, Mass.--A

Bruno-New York Industries, 460 W. 34 St., New York 1, N.Y.—AK.AAD,AAG,AAN
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio—P,AG,AL,AP,AAI
Bunnell & Co., J. H., 81 Prospect St., Brook-lyn 1, N.Y.—Q
Burke & James, 321 S. Wabash Ave., Chicago 4, 111.—O.AY
Burling Instrument Co., 16 River Rd., Cha-tham, N.J.—M.AH
Burlington Instrument Co., 203 N. 3 St., Bur-lington, Iowa—AT
B/W Controller Corp., 2200 E. Maple Rd., Birmingham, Mich.—A,Q
Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.—O
CBS-Columbia, 3400 47 Ave., Long Island City 1, N, Y.—AK
Centralab Div., Globe Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—AK,AAG, AAK
Century Lighting Inc., 521 W. 43rd St., New York 25 N Y.—O YAK

Keefe Ave., Milwaukee 1, Wisc.—AK,AAG, AAK
Century Lighting Inc., 521 W. 43rd St., New York 25, N.Y.—O,Y.AK
C.G.S. Labs 391 Ludlow. Stamford. Ct.—AAG
Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N. J.—AQ
Chicago Electronic Eng's. Co., 3223 Armitage Ave., Chicago 47, Ill.—V,AE,AAN
Chicago Magnetic Control, 1616 Damon Ave., Chicago, Ill.—V,AE.AAN
Chicago, Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart. Ind.—AAK
Clark Controller Co., 1145 E. 152 St., Cleve-land 10, Ohio—R,V.Z,AB,AS,AT,AAN
Clark Cooper Co., Market St., Palmyra, N.J. —AH.AU
Cleveland Instrument Co., 735 Carnegie Ave., Cleveland 15, Ohio—F,L.P,R,S,T,Z,AAN
Cline Electric Mfg. Co., 3405 W. 47 St., Chi-cago 32, Ill.—V,Z,AD,AE,AS,AT,AAM,AAN, AAP
Codeturer Laboratories, 550 5th Ave., New

Clevelang 10, UND-F,L,P,R,S,T,Z,AAN
Cline Electric Mfg. Co., 3405 W. 47 St., Chicago 32, Ill.-V,Z,AD,AE,AS,AT,AAM,AAN,AAP
Codetyper Laboratories, 550 5th Ave., New York 19, N,Y.-AY,AAA
Coil Co. of America. 8 Washington St., Northvale, N. J.-A,B,J,L,W,X,AH,AQ,AAN
Coleman Eng'g. Co., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.-AQ
Colvin Labs., 12 Court, Morristown, N.J.-AB
Combustion Control Corp., 718 Beacon St., Boston 15, Mass.-C
Computer Control Co., 92 Broad St., Wellesley 57, Mass.-AC,AQ,AAD,AAJ,AAN
Computer Instruments Corp., 1964 Utica Ave., Brooklyn 34, N.Y.-A.Z
Conn. Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.-A,B,AJ
Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-R,X,Z,AH,AL,AAN
Consolidated Engineering Corp., 300 N Sierra, Madre Villa, Pasadena 15, Calif.-J,AB,AH, AM,AO,AAC,AAD,AAN
Consolidated Productions, Bldg. 9, Broward Int'l. Airport, Ft. Lauderdale, Fla.-N.U, AE,AZ,AAG,AAJ,AAR
Continental Communications, 452 W. Chicago Ave., Chicago 10, Ill.-A,AJ,AAN,AAR
Control Corp., 718 Central Ave., Minneapolis 14, Minn.-AAJ
Control Ecoris, Corp., Controls Div., 934
Washington St., Norwood, Mass.-AE,AR
Control Eng's. Corp., 2708 Suffolk Dr., Houston 6, Texas-J,Q,S,AB,AC,AF,AH,AM, AQ,AU,AAA,AAF,AAJ,AAN,AAO
Corona Eng'g. Service, 94-52 Corona Ave., Elmhurst 73, N.Y.-Q
Coson Eng'g. Service, 94-52 Corona Ave., Elmhurst 73, N.Y.-Q
Coson Eng'g. Service, 94-52 Corona Ave., Elmhurst 73, N.Y.-Q

Counter & Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wisc., AQ,AW,AX,AY, AAA

Cramer Co., R. W., Centerbrook, Conn.—AQ, AV,AW,AX,AY,AAA

Curtis Development & Mfg. Co., 3218 N. 33 St., Milwaukee 16, Wis.—AH.AI.AAN Curtiss Wright Corp., Electronics Div., 631 Central Ave., Carlstadt. N.J.—I,AE,AK,AQ, AV.AX

Cutler-Hammer Inc., 436 N. 12 St., Milwaukee 1, Wisc. — J.Q.T.V.Z.AB.AC.AE,AH,AM,AU, AW,AAC,AAF,AAG,AAM,AAN,AAP

AW,AAC,AAF,AAG,AAM,AAN,AAP Cyclotron Specialties Co., P. O. Box 1000, Moraga, Calif.—AQ,AV,AW,AX,AY Dage TV Div., Thompson Products, Inc., Michigan City. Ind.—AK Daven Co., 191 Central Ave., Newark 4, N.J.— AA,AE,AAJ,AAK.AAN

Daystrom Instrument, Archbald, Pa.—AE, AR,AV,AAD,AAG,AAJ,AAN

Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif—AE,AR,AS,AT,AV, AW,AX,AY,AAA,AAE,AAG,AAJ,AAN.AAO

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and the second second ELECTRONIC INDUSTRIES DIRECTORY

Daytronic Corp., 216 S. Main St., Dayton 2, Ohio — A.F.I.J.P.Q.R.S.T.X.Z.AB,AG,AI,AO, AQ,AAI,AAN,AAP

Daytronic Corp., 216 S. Main St., Dayton 2, Ohio — A.F.I.J.F.Q.R.S.T.X.Z.AB.AG,AI,AO, A.Q.AAI,AAN.AAP
Defender Instrument & Regulator Co., 815 Clark Ave., St. Louis 2, Mo. — A.B.J.AH.AM
Deitz Co., S. J., 38 River Edge Rd., River Edge, N.J.—A.B.Q.R.W.X.AD,AZ.AAA,AAN
Delaware Optical Labs., 36 williams St., Lans-downe. Pa.—E.F.L.AD.AQ
Delco-Remy Div., General Motors Corp., P. O. Box 640. Anderson, Ind.—AS.AT
Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.—J.Q.R.X.AB.AH.AAN,AAQ
Demco Products, P.O. Box 5042. Philadelphia 11, Pa.—L.X.AQ,AV,AW.AZ,AAN
Denrad Mfg. Co., 310 W. Woodward St. Deni-son, Texas.—A.B.D.E.G.J.K.L.N.Q.R.U.X.AF, AQ.AAC,AAN
Designers for Industry, 2915 Detroit Ave., Cleveland 13, Ohio
Detect-O-Ray Co., 2622 N. Halsted St., Chicago 14, III.—B.X.AF.AZ
Detectron Corp., 5528 Vineland Ave., N. Holly-wood, Calif.—AQ
De-Tec-Tronie Laba. Inc., 1711 Terra Cotta Pl., Chicago 14, III.—C.E.G.L.Q.X.Z.AF.AN
Detvol Research Co., Brookside Dr., Greenwich. Conn.—Z.AE.AAD.AAG
Devol Research Co., Brookside Dr., Greenwich. Conn.—Z.AE.AAD.AAG
Devtronics, Inc., 221 N. Hermitage Ave., Tren-ton, N.J.—A.C.D.J.Q.R.X.AD.AH.AQ.AS,AT, AV.AW,AX.AY.AZ.AAA,AAC,AAI
Diamond Power Specialty Corp., P.O. Box 415, Lancaster, Ohio—AK
Diamond Power Specialty Corp., P.O. Box 415, Lancaster, Ohio—AK
Diaron Co., 3827 Dixie Dr., Houston 21, Tex. —A.B
Dice Co. J. W., 1 Engle St., Englewood 1, N.J.—I.S

-A.B Dice Co., J. W., 1 Engle St., Englewood 1, N.J.-I.S Dietz Co. H. G., 12-16 Astoria Blvd., Long Is-land City 2, N.Y.-AB,AM Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-E,AQ,AV,AW.AX.AAA Dimco-Gray, 207 E. 6, Dayton 2, Ohio-AY Dixie Controls Co., Box 7013, Norfolk 9, Va. -AY

-AY Doelcam Corp., 1400 Soldiers Field Rd., Bos-ton 35, Mass.-K,M,Q,Z,AE,AH,AI,AR,AAG, AAJ,AAN Dondar Devices, 321 E. 6th St., Medford, Ore.

AAJ,AAN
Dondar Devices, 321 E. 6th St., Medford, Ore. —B
Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.—AAD
Dorothea Mechaniams, Gale, 39-39 63 St., Woodside, L.I., N.Y.—AV,AW,AY,AAA
Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 3, Calif. — Q.V.X.Z.AB,AH,AI,AO, AS,AT,AAK,AAM,AAN,AAP
Dubrow Development Co., 235 Penn St., Bur-lington, N.J.—AQ,AV,AW,AAC
Dumon Development Co., 235 Penn St., Bur-lington, N.J.—AQ,AV,AW,AAC
Dumon Development Co., 235 Penn St., Bur-lington, N.J.—AQ,AV,AW,AAC
Dumon Bayley, 785 Hertel Ave., Buffalo 7, N.Y.—T.Z.AE,AI
Dwyer Eng'g.Co., P. O. Box 483, Nashua, N.H. —AQ,AV
Dwyer Mfg. Co., F.W., 317 S. Western Ave., Chicago 12, 111.—AB.AN
Dyna-Labs., Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.—AH,AI,AL
Eagle Signal Corp., 202 20 St., Moline, III. —AJ,AQ,AV,AX,AY,AAA
Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.—J.Z,AB,AE,AH,AI,AM, AAG,AAJ
Edgerton, Germeshausen & Grier, 160 Brook-line Ave., Boston 15, Mass.—X.Y
Edison, Inc., Thomas A., Instrument Div., 93 Lakeside Ave., W. Orange, N.J.—A,AH,AAB
EECO Production Co., 827 S. Vermont Ave., Los Angeles 5, Calif.—AQ
Eletric Eng'g. Co., 770 S. 13 St., Newark 3, N.J.—AP
Eldema Corp., 5827 E. Beverly Blvd., Los Angeles 22. Calif.—AQAX
Eletric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohio-M,VAP
Eletric Eve Eucip. Co., 6 W. Fairchild St.

27 St., Long Island City I, N.I.—AS,AI, AAN
Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohio—M,V,AP
Electric Eye Equip. Co., 6 W. Fairchild St., Danville, III.—X,AC,AD
Electric Regulator Corp., Pearl St., Norwalk, Conn.—V,AS,AT,AAM
Electrical Service Co., 1271 Mission St., San Francisco 3, Calif.—B.L.R.X.AQ,AV.AZ
Electro-Circuits, Inc., 401 E. Green St., Pasa-dena, Calif.—AL
Electro-Devices, Inc., 4 Goodwin Ave., Paterson 1, N.J.—Z,AE,AI,AAM,AAN
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—D. I, J. M. P. S. W. AO, AS, AT, AAK, AAL

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Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Z,AE,AI, AAE,AAG,AAM,AAN,AAP
Electro-Mechanical Research, 64 Main St., Ridgefield, Con.-AJ
Electronic Communication Equip. Co., 1249 Loyola Ave., Chicago 26, Ill.-AAN
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich. - A,B,C,G,I,L,R,T,X,Z,AF, AH,AI,AQ,AY,AZ,AAN
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.-F,AE,AQ, AAD,AAG
Electronic Development Lab., 43-07 23 Ave., Long Island City 5, N.Y.-B
Electronic Eng's. Co., 362 W. Bowery St., Akron 7, Obio-AV,AX,AAN,AAO
Electronic Eng's. Co., 362 W. Bowery St., Akron 7, Obio-AV,AX,AAN,AAO
Electronic Machine Parts, 204 Lafayette St., New York 12, N.Y.-W,X,Z,AC,AD,AAN
Electronic Research, 1150 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1550 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 55. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 56. Wash.-AP,AT,AZ
Electronic Research, 1500 39 St. N.E., Seattle 56. Wash.-AP,AT,AZ
Electronic Research, 1600 E. Mermaid Lane, Phildelphia 18, Pa.-AG
Electronic Research, 1800 St., Boston 16, Mass.- C,X,F,AH,AU,AAN
Electron-Radar Products, 1041 N. Pulaski Rd, Chicago 51, III.-X, AF, AH, AP, AAC, AAF, AAG
Electron-Physics Co., 287 Broadway, New York 7, NY,-OX,Y,AZ,AAN

Chicago 51, 111.—X, AF, AH, AP, AAC, AAF, AAG
Electro-Physics Co., 287 Broadway, New York 7, N.Y.—O.X,Y,AZ,AAN
Electro Products Labs., 4501 N. Ravenswood Ave., Chicago 40, 111.—Z,AQ,AAM
Electro Sound Corp., 115 Halleck St., Boston 20, Mass.—A,B
Electro-Tech-Equip. Co., 308 Canal St., New York 13, N.Y.—A.B,M,Q,R,S,V,X,AD,AF, AH,AQ,AT,AU, AV, AW, AX, AY, AZ, AAA. AAB,AAM
Ellanar Chemical Co., 2308 Oakton St., Evanston, 111.—Y,AH
Ellis Associates, Box 77, Pelham, N.Y.—T,AG
Ellis Alsociates, Box 77, Pelham, N.Y.—T,AG
Ellis Corp., 22-02 Raphael St., Fairlawn, N.J.—A,B,X,AH,AW,AY,AAA,AAB
Ell Mec Laboratories, 730 Boulevard. Kenilworth, N.J., L,P,Z,AE,AH,AQ,AS,AT,AW, AAM,AAN
El-Tronics Inc., 5 & Noble Sts., Philadelphia 23, Pa.—B.CO. DE Y AOA WAW

Femco, Inc., Irwin, Pa.-A,AH,AAJ,AAN Fenwal Inc., Plesant St., Ashland, Mass .--AH, AAB Ferrara Inc., 8106 W. 9 Mile Rd., Oak Park 37, Mich.-Q, AL, AW, AX, AY, AAA

Fidelity Amplifier Co., 703 W. Willow St., Chicago 14, Ill.—A,C,AAN

Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. 4 St., Philadelphia 33, Pa.--D.E.I.K.M.Q.R.S. U. Z. AB, AG, AH. AO, AAC, AAH, AAM. AAN

AO,AAC,AAA,AAA,AAA,AAA Fischer-Pierce Co., 170 Pearl St., S. Braintree 85, Mass.—O,X,AAN Fischer & Porter Co., 19 Warminster Rd., Hatboro, Pa.—A,C,E,J,K, M, Q, AB, AH, AQ, AAC,AAD,AAF,AAJ,AAN

Fischer-Smith Inc., 164 State St., W. Engle-wood, N.J.-AH,AW

Fisher Co., Oscar, 1000 N. Division St., Peeks-kill, N.Y.-Y.AH

- Fisher Research Laboratory, 1961 University Ave., Palo Alto, Calif.—Q.AQ Fleetwood Corp., 1037 Custer Dr., Toledo 12, Ohio—AK
- Ohio-AK Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-V, AE,AQ,AR,AS,AT,AV,AW,AX,AY,AZ,AAA, AAB,AAD,AAG Foxboro Co., 38 Neponset Ave., Foxboro, Mass. -D.E.J.K.N.Q.S,U.Z,AB,AH,AI,AO Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-J,X,AB,AE,AG,AAG,AAJ, AAN,AAP Friez Instrument Div., Bendix Aviation Corp.

- AAN,AAP Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Baltimore 4, Md.-A,N F'R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-AX,AY,AAA,AQ Furnas Electric Co., 1000 McKee St., Batavia, III.-V Cotes Radio Co., 123 Hampshire St. Quincy.

- F-k Machine Works, F-X-k Electronics & A-Ray Div., 26:12 Borough Pl., Woodside 77, N.Y.-AX, AY, AAA, AAQ
  Furnas Electric Co., 1000 McKee St., Batavia, III.-A.
  Gates Radio Co., 123 Hampshire St., Quincy, III.-A.E.K.L.Q.R.U.X.ABAG, AI.AO
  General Coment Mfg. Co., 919 Taylor Ave., Rockford, III.-AAC
  General Communications. P.O. Box 169, Fort Atkinson, Wisc.-O.AK.AT
  General Controls Co., 801 Allen Ave., Glendale 1. Calif.-N.AH, AM, AU
  General Controls Co., 801 Allen Ave., Glendale 1. Calif.-N.AH, AM, AU
  General Controls Co., 801 Allen Ave., Glendale 1. Calif.-N.AH, AM, AU
  General Controls Co., 801 Allen Ave., Glendale 1. Calif.-N.AH, AM, AU
  General Controls Co., P.O. Box 253, Princeton, N.J.-AAJ
  General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-H.M.O.Q.R.V.W., X.Z.A.AB, AC.AD.AE, AF, AH, AI, AJ, AM, AAM, AAN, AAF, AAJ, AZ, AAA, AAE, AAJ, AAM, AAN, AAF, AAJ, AZ, AAA, AAA, AAE, AAJ, AAM, AAN, AAF, AAS
  General Magnetics Inc., 135 Bloomfield Ave., Bloomfield, N.J.-AS
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-O.AH, AT, AAM
  Gannini & Co., G.M., 918 E. Green St., Pasadena 1. Calif.-ZAR AAD, AAG
  Gibas Mfg. & Research Corp., 450 N. Main St., Janesville, Wisc.
  Gilmore Industries, Inc., 5713 Euclid Ave., Cleveland 3, Ohio-Q.S.AB, AG, AH, AI, AO, AAE, AAN, AAP
  Glens Falls Laboratory, Box 685 Upper Glen St., Glens Falls, N.Y.-X, AAN
  Globe Industries, Inc., 1784 Stanley Ave., Daytof. 4, Ohio-AR
  G. & M. Equipment Co., 7315 Varna Ave., N. Hollywood, Calif.-AK
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-AK
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-AK
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-AK
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-AK
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Cal

- N.Y.-J.
  Gyro Electronics Co., 325 Canal St., New York 13, N.Y.-A.B.G.Q.AAN.AAO
  Haledy Electronics Co.. 57 William St., New York 5, N.Y.-Q.X.AQ
  Hallamore Mfg. Co.. 2001 E. Artesia. Long Beach 5, Calif.-V.AA.AK.AQ.AS.AT,AX, AY.AAA.AAD.AAG.AAJ.AAN,AAO
  Hammarlund Mfg. Co., 460 W. 34 St., New York 1, N.Y.-AAJ
  Hanson-Gorrill-Brian Inc., 1 Continental Hill, Glen Cove, N.Y.-V.X.AE,AH.AT,AZ.AAD, AAG
  Hart Mfg. Co., 110 Bartholomew Ave. Hart.
- AAG Hart Mfg. Co., 110 Bartholomew Ave., Hart-ford 14, Conn.—AH Hartman Eng'g. Co., 182 Oakland St., Spring-field 8, Mass.—B,AAJ Hastings Instrument Co., Hampton, Va.—AM, AN

- Haydon Mfg. Co., 245 E. Elm St., Torrington, Conn.—AQAV.AW.AX.AY.AZ,AAA Hays CorD., E. 8 St., Michigan City, Ind.— C,J.M.Q.AAF
- Hays Mfg. Co., 12th & Liberty Sts., Erie 6, Pa.-J,AU
- H-B Instrument Co., American & Bristol Sts., Philadelphia 40, Pa.—AH
  Healy-Ruff Co., 2255 University Ave., St. Paul 14,Minn.—J,Q.AB
  Hercules' Elec. Mach'y. & Equip. Co., 1442 E. Wash. Blvd., Los Angeles, 21, Calif.—AW

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- Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-X.Z,AE,AQ
  Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-X,AE,AH,AI, AR.AS,AT,AAJ,AAN,AAP
  Holland Electronics 2133 Central Dr., So., E. Meadow, N.Y.-X,AD,AQ,AAN
  Horlick Co., Wm. I., 266 Summer St., Boston 10, Mass.-V
  Houston Fearless, Div. of Color Corp. of America, 11801 W. Olympic Blvd., Los Angeles 64, Calif.-Y
  Hughey & Phillips, 3300 N. San Fernando Blvd., Burbank, Calif.-X
  Hunter Mfs. Co., 330 S. Linn St., Iowa City, Iowa-AV,AW,AX,AY,AZ,AAA,AAB
  Huppert Co., K. H., 6880 Cottage Grove Ave., Chicago 37, Ill.-M,AH,AW,AAB
  Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.-AE,AQ,AY,AAG,AAN
  I-L-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-AAE
  Induction Motors Corp., 570 Main St., Westbury, N.Y.-V, AE,AI
  Industrial Control Co., Straight Path & Arington Ave., Wyandanch, N.Y.-Z,AE,AI, AAD,AAG
  Industrial Electronic Eng'rs., 3973 Lankerssim Blvd., N. Hollywood, Calif.-AK,L,P.
- lington Áve., Wyandanch, N.Y.-Z.AE,AI, AAD.AAG
  Industrial Electronic Eng'rs.. 3973 Lanker-shim Blvd., N. Hollywood, Calif.-A.K.L.P., W.Z. AB, AE, AO, AQ, AV, AW, AX, AY, AAA, AAC, AAD, AAJ, AAK, AAN
  Industrial Electronics, 8060 Wheeler St., De-troit 10. Mich. A.R.T.X.Z.AB,AG,AQ,AV, AW,AZ,AAI,AAN
  Industrial Electronics Co., Hanover St., Han-over, Mass.-B.S.X.AQ,AAN
  Industrial Instruments Inc., 89 Commerce Rd., Cedar Grove, N.J.-D
  Industrial Instruments Corp., 1205 Chesapeake Ave., Columbus 12, Ohio-I,P.Q.S.AD
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-AE,AQ
  Industrial Timer Corp., 131 Ogden St., New-ark 4, N.J.-AW,AX,AY,AAA
  Instrument Devel, Labs., Inc., 163 Highland Ave., Neednam Heights 94, Mass.-I,K.X.AC, AF

- AF
- AF Instrument Devel. & Mfg. Corp., 3018 E. Foot-hill Blvd., Pasadena 8, Calif.—Q Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.—C, AF, AH, AAC, AAN Int'l. Business Machines Corp., 590 Madison Ave., New York 22. N.Y.—AX, AY, AAN, AAO
- AAO Int'l. Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.—O,AN Int'l. Testing Service, Div. Jackson & Church, 321 N. Hamilton St., Saginaw, Mich.—X,Z, AE,AH
- AE,AH iq Industries, 6110 Wilshire Blvd., Los Angeles 36 Calif.-A.C.D.G.K.L.M.O.P.Q.R.T.U.W.X. Z. AF, AG, AP. AQ, AV, AW, AX, AY, AZ, AAA,AAC,AAM,AAN,AAR I-T-E- Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.-A.X Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda 14, Md.-AAD JAN Hardware Mfg. Co., 75 N. 11th St., Brooklyn 11, N.Y.-R Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.-Y

- Conn. --F, N. P. S. U. AE, AL, AAA, AAM Kaiser Metal Products Inc., Bristol, Pa. --AE, AQ. AAD Kay Lab. 5725 Kearney Villa Rd., San Diego 12, Calif. --AK, AS, AT, AAN Kaye Devel. Co., Connecticut Ave., S. Norwalk, Conn. --A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AAC, AAD, AAE, AAF, AAG, AAH, AAI, AAJ, AAK, AAM, AAN, AAO, AAP, AAQ, AAR Kearfott Co., 1378 Main Ave., Clifton, N.J. --Z, AE, AO, AQ, AR, AAG, AAN Kepco Laboratories, 131-38 Sanford Ave., Flushing 55, L.I., NY.--AS, AT, AAN Keystone Products Co., 904 23 St., Union City, N.J.-V.Z.AE, AT, AAG, AAN, AAR Kidde & Co., Walter, 1056 Main St.. Belleville 9, N.J.-B, AAC Kilgen Aircraft Div., of Kilgen Organ Co., 4632 W. Florissant Ave., St. Louis 15, Mo.--AJ, AAG Kinetix Inst. Co., 902 Broadway, New York

- AJ.AAG KInetix Inst. Co., 902 Broadway, New York 10, N.Y.-AE Kliegi Bros., 321 W. 50th St., New York 19, N.Y.-O Kocour Co., 4800 S. St. Louis Ave., Chicago 32, III.-M.AAH Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-AL Kybernetes Corp.. 9 E. 40 St., New York 16, N.Y.-A,Z,AG,AH,AAJ,AAN Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.-U,AJ Lambda Electronics Corp., 103-02 Northern
- Lambda Electronics Corp., 103-02 Northern Blvd., Corona 68, N.Y.-AS.AT

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- Landis & Gyr, 45 W. 45th St., New York 36, N.Y.-AQ Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.-AAN

- Januar C. M. M. A. Still SL. New York 26, N.Y.-AA
  Langevin Mfg. Corp., 37 W. 65 St., New York 23, N.Y.-AAN
  Larsen Nuclear Research, 520 5 Ave., New York 36, N.Y.-A.E.I.J.Q.S.X.AF.AQ
  Larson Instrument Co., 24 Orchard St., Tarrytown, N.Y.-A.C.E.R.X.AB,AF,AH,AZ,AAN
  Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-AE,AH,AR
  Leeds & Morthrup Co., 2806 Clearwater St., Los Angeles 39, Calif.-AS,AT,AAN
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-C,D,AF,AG,AN,AAC, AAH,AAN
  Lektra Labs. Inc., 154 11 Ave., New York 11. N.Y.-X.AP,AW,AY,AZ,AAA,AAN
  Lenkurt Electric Co., 1105 Country Rd., San Carlos, Calif.-AAJ
  Lennard Co., P.M., 671 Bergen St., Brooklyn 38, N.Y.-M.P.U.AH,AN
  Librascope, Inc., 808 Western Ave., Glendale 1. Calif.-AAD
  Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-O,X,Y
  Link-Belt Co., 307 N. Michigan Ave., Chicago 1, III.-AAM
  Liquidepth Indicators Inc., 43-22 10 St., Long Island City 1, N.Y.-Q.
  Liston-Becker Instrument Co., 649 Hope St., Stamford, Conn.-C.AAF
  Litton Industries, 336 N. Foothill Rd., Beverly Hills. Calif.-AJ,AAD
  Lord-Taber Co., Inc., 40 Ontario St., Canandaizua, N.Y.-AAC
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 6, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Luwenite Electronic Co., 407 S. Dearborn St., Chicago 6, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Luwenite Electronic Co., 407 S. Dearborn St., Chicago 6, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO
  Luwenite Electronic Co., 407 S. Dearborn St., Chicago 6, III.-K.O.Q.X.AF,AV,AW,AX,AY, AZ,AAA,AN,AAO

Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J.--X. Macdonald Co., W. S., 33 University Rd., Cambridge 38, Mass.--AH Machine O'Matic, Inc., 2045 N. Hoyne Ave., Chicago 47, 111.--W.Z.AC,AD,AAN Mack Electric Devices Inc., 37 Glenside Ave., Wyncote, Pa.--A,AH MacKenzie Products Co., 141 Brewery St., New Haven, Conn.--L.P.X.AX Mag-Electric Products, 12822 S. Yukon Ave., Hawthorne, Calif.--V,AE,AG,AH,AI,AJ,AS, AT,AAM,AAN,AAP Magmaflux Corp., 7300 W. Lawrence Ave.

AT, AAM, AAN, AAP Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, Ill.-P, AG Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-F.Y, AE, AAJ Magnavox Co., Ft. Wayne 4, Ind.-AAG Magnetic Amplifiers Inc., 632 Tinton Ave., New York 55, N.Y.-V, X, AE, AI Magnetic Instrument Co., 82 Main St., W. Oranze, N.J.-AS, AT Maico Co., 21 N. 3rd St., Minneapolis 1, Minn. -AE

-AE Manning, Maxwell & Moore, 250 E. Main St., Stratford, Conn.-Q.AB.AH,AM Marchand Electronic Labs., 255 Mill St., Byram. Conn.-P Mark Electronics, Inc., 250 Glenwood Ave., Bloomfield, N.J.-AAN Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.-AW.AX,AY,AAA, AAG.AAJ Maxon Corp., W. L., 460 W. 34th St. New

Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.-AW.AX,AY,AAA, AAG.AAJ
Maxson Corp., W. L., 460 W. 34th St., New York 1, N.Y.-AE.AAD,AAG,AAJ
May Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif.-AV
McKenna Laboratories. 2503 Main St., Santa Monica. Calif.-KZ,AE.AL.AAM.AAN
McKeinl Eng'g Co., 4057 W. Van Buren, Chi-cago 24, Ill.-A.AF
Mechanical Industries Production Co., 217 Ash St., AKron 7, Ohio-V.AH
Menolo Research Lab., Box 522, Menlo Park, Calif.-P
Mercoid Corp., 4201 Belmont Ave., Chicago 41, III.-C.K.Q.AB,AH.AM
Mercoid Corp., 4201 Belmont Ave., Chicago 41, III.-C.K.Q.AB,AH.AM
Mercoid Corp., 100, S. Harding St., In-dianapolis 7, Ind.-F.P.S
Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-C.M.AH,AU,AAP,AAQ
Metals & Controls Corp., General Plate Div., 33 Forest St., Attleboro, Mass.-AH
Metrotype Corp., 6100 Archer Rd., Summit, III.-X.AE,AQ,AAJ
Meyer & Co., Hugo, 39 W. 60th St., New York 23, N.Y.-P
Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, III.-X.AL,AAK,AAN
Midwestern Instrument Co., 601 E. Ogden Ave., Milwaukee 2, Wisc.-AW,AY
MinAtron Corp., Belle Mead 9, N.J.-F,Q,S,Z, AB.AG,AO,AQ,AAM,AAP
Minneapolis F, Minn.-A,C,D,E,J,K,

Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S., Minneapolis 8, Minn.-A.C.D.E.J.K., L.M.N.Q.U.AB,AH,AM, AN, AU, AAF, AAN,

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Minnesota Electronics Corp., 1058 University Ave., St. Paul 4, Minn.—I
Modelectric Prod. Corp., Asbury Park, N.J.— ARAY, AAN
Moisture Register Co., 1510 W. Chestnut St., Alhambra, Calif.—U
Montgomery Mfg. Co., Owensville, Ind.—AW, AX, AY, AAA, AAO
Moog Valve Co., East Aurora, N.Y.—J,Z, AE, AU, AAG
Motorola Inc., 4545 W. Augusta St., Chicago, Ill.—AH
Multi-Products Co., 21470 Coolidge Hwy., Oak Park 37, Mich.—G, AAC, AAN
Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, Ill.—O,X, AM, AP, AW, AZ, AAD
National Radiac, Inc., 10 Crawford St., New-ark 2, N.J.—AAQ
National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.—AM
Networks Electronic Corp., 14806 Oxnard St., Van Nuys, Calif.—AAM
Newark Controls Co., 18 Ward St., Bloomfield, N.J.—Q, AB
Newton Co., 55 Elm St., Manchester, Conn.— AE, AQ, AV, AAJ
Niagara Electron Labs, P.O. Box 128, Main St., Andover, N.Y.—D, J.N., QU, Z, AB, AH, AO, AAC, AAN
Norco Mfg. Co., 392 Elecker St., New York 14, N.Y.—O, P

AAU,AAN Norco Mfg. Co., 392 Bleecker St., New York 14, N.Y.-O,P Norden-Ketay Corp., Wiley St., Milford, Conn. --AE,AR

Norden-Ketay Corp., Wiley St., Milford, Conn. —AE,AR
North American Instruments, Inc., 2420 Lake Ave., Altadena, Calif.—J,AB.AAG
North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.—AAC,AAQ
Northeastern Development Engineers, Inc. 21
High St., Pawtucket 5, R.I.—J,O,R.T,X,Z. AE,AS,AU,AAN
North Electric Mfg. Co., S. Market St., Galion, Ohio—F,H,O,Z,AAD,AAJ,
North Electric Mfg. Co., S. Market St., Galion, Ohio—F,H,O,Z,AAD,AAJ,
Northeastern Ens'g. Corp., S. Bedford St., Manchester, N.H.—AB,AE,AM,AAG,AAJ
NRD Instrument Co., Co., 6425 Etzel Ave., St. Louis 14, Mo.—Q.AQ.AY
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.—E,AY,AY
Nuclear Research Corp., 2 St. Pike, Southamp-ton, Pa.—E,P,Q,S,AAN
Nucleonic Co. of America, 497 Union St., Brooklyn 31, N.Y.—AQ
O'Brien Electric Corp., 6514 Santa Monica Blvd., Hollywood 38, Calif.—A
Ocram Corp., 2368 Bogen St., Cincinnati 14, Ohio—A,E,Q,S,AAC
Ohmite Mfg. Co., 3601 Howard St., Skokie, III.—V
Opad Electric Corp. 69 Murray St., New York 7, N. V.—AAM

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Ohio--A.E.Q.S.AAC
Ohio--A.E.Q.S.AAC
Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill.-V
Opad Electric Co., 69 Murray St., New York 7, N.Y.--AAM
Optical Film Engineering Co., 2731 N. 6th St., Philadelphia 33, Pa.--AM
Optionic Research, Inc., 1374 Mass. Ave., Cambridge 58, Mass.--AQ
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn 5, N.Y.-H.AE, AAD.AAJ.AAN
Pacific Mercury TV Mfg. Corp., 5955 Van Nuya Elvd., Van Nuys, Calif.--AE,AG,AK, AAG,AJ,AAL
Pacific Scientifiic Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.--AR,AAG,AAJ
Panalarm, Div. Panellit Inc., 7401 N. Hamlin Ave., Skokie, Ill.-A.Q
Pantek Co., Box 212, El Segundo, Calif.--AQ.AV,AW,AY,AAA.AAN
Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, Ill.--A
Par Products Corp., 926 N. Citrus Ave., Holly-wood 38, Calif.-Y
Patterson, Moos, Div. Universal Winding Co., 90-28 Van Wyck Expresswar, Jamaica 18, N.Y.-C.I,X.AE,AV,AW,AX,AAAAAAAAAA,AAA,AAA,AAA,AAA, AAJ,AAN.AAO
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago 18, Ill.-Y
Peenless Photo Products, Shoreham, L.I., N.Y. -Y
Penn Controls, Inc., Goshen, Ind.-N.Q.AB,AH

-Y Penn Controls, Inc., Goshen, Ind.-N,Q,AB,AH Penn-East Engineering Corp., P.O. Box 240, Kutztown, Pa.-AE Penn Industrial Instrument Corp., 4110 Haver-ford Ave., Philadelphia 4, Pa.-A.J,Q.AB,AH, AM

Penna Testing Lab, Doylestown, Pa.-J,P.Z. AB,AAC,AAD,AAJ,AAN

Pereny Equip. Co., 893 Chambers Rd., Colum-bus 12, Ohio-AH

Peschel Electronics Inc., 13 Garden St., New Rochelle, N.Y.-P.AT.AAN Peters Co., C. S., 1353 NY Ave., N.E., Wash-ington 2, D.C.-AE,AG

Petroff, Peter A., 127 Water St., New York 5, N.Y.-X,AZ

Pfanatichl Chemical Co., 104 Lake View Ave., Waukegan. III.—AG Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.—AV,AAG,AAJ,AAM,AAN

Phila. Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.—A,B,U,AH,AM,AS,AAN

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Photocon Research Products, 421 N. Foothill Blvd., Pasadena 8, Calif.—S,AB,AL,AQ,AAJ
Photo Crystals, Inc., 15 S. First St., Geneva, III.—E,X,AE,AF,AAG
Photovoit Corp., 95 Madison Ave., New York 16, N.Y.—AY,AZ,AAH
Physical Research Labs., Inc., 1909 Park Ave., New York 35, N.Y.—N,U
Picco Instruments & Controls Corp., 3593
Hayden Ave., Culver City, Calif.—V.AE, AH,AI,AAD,AAG,AAJ
Piezo Products Co., Whitney St., Framingham, Mass.—AL
Pioneer Patents & Products Co., 3720 N. New England Ave., Chicago 34, III.—AAN
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—V,AE,AQ
Polytechnic Research & Development, 202 Tillary St., Brooklyn 1, N.Y.—V,AE,AS,AT, AAM
Portable Electric Tools Inc., 200 W. 83 St Chicago 20, III.—AE

Tillary St., Brooklyn I., N.Y.-V.AE.AS,AT, AAM
Portable Electric Tools Inc., 200 W. 83 St Chicago 20, III.—AE
Post Machinery Co., 140 Elliot St., Beverly. Mass.—X.AQ
Potter Aeronautical Co., Box 532. Route #22. Union, N.J..—J.AQ
Potter Instrument Co., 115 Cutter Mill Rd.. Great Neck, N.Y.—AQ,AV,AAN
Precise Measurements Co., 942 Kings Hwy.. Brooklyn 23, N.Y.—M
Precision Radiation Instruments, Inc., 4223 W. Jefferson Blvd., Los Angeles 16, Calif.—Q.S
Precision Thermometer & Instrument Co., 1434
Brandywine St., Philadelphia 30, Pa.—E,AH
Process & Instruments, IS Stone Ave., Brook-lyn 33, N.Y.—AH,AM,AAC,AAH
Pruyn-Moore, Inc., 1838 Cota Ave., Long Beach 13, Calif.—A,B,F,J,Q,T,X,Z,AA,AB, AF,AH,AO,AV,AW,AX, AY, AZ, AAA, AAB, AAC,AAJ,AAK,AAM,AAN,AAO,AAP
PSP Eng'g. Co., 8420 Otis St., South Gate, Calif.—AU
Pyrometer Instrument Co., Bergenfield, N.J.—M
"Q" Glass Co., 470 Broad St.,Bloomfield, N.J.—AM

"Q" Glass Co., 470 Broad St., Bloomfield, N.J.--AM Quare Associates, P.O. Box 95, Canton, Mass. --F,S

GIBSS UG., 470 Broad St., Bloomfield, N.J.-AM Quare Associates, P.O. Box 95, Canton, Mass. -F.S
Radar-Electronics, Inc., 229 W. 28 St., New York 30, N.Y.-A, AG, AAC, AAJ
Radiaphone Co., 600 E. Evergreen Ave., Monrovia, Calif.-AAG
Radiation, Inc., Box "Q," Melbourne, Fla.-Z, AE, AG, AI, AV, AAA, AAAJ, AAN
Radio-Music Corp., 84 S. Water St., Portches-ter, N.Y.-AH
Ransom Research, P.O. Box 382, San Pedro, Calif.-L, AQ, AV, AY, AZ, AAA, AAN
Ratigan Electronics, Inc., 3614 Maple Ave., Los Angeles 11, Calif.-E, X, AK
Ree Co., J. B., 1723 Cloverfield Blvd., Santa Monica, Calif.-AE, AAD
Recora Co., 56 W. 103 St., Chicago 28, Ill. -A, B, G, H, R, AQ
Reeves Instrument Corp, 215 E. 91 St., New York 28, N.Y.-AE, AR
Reflectone Corp., Cor. Post Rd. & Myano Lane, Stamford, Conn.-AQ
Refrigeration Systems, Inc., 646 W. Washing-ton Blvd., Chicago 6, Ill.-N, AH, AM
Regulator Eng's & Devel. Co., 11545 W. Jef-ferson Blvd., Culver City, Calif.-AS, AT
Regulator Eng's & Devel. Co., 1088 Ivanhoe Rd., Checago 6, Ill.-N, AA, AM
Reisance Electric & Eng'g Co., 1088 Ivanhoe Rd., Cleveland 10, Ohio-V
Remco Mfg. Co., 545 N. LaSalle St., Chicago 10, Ill.-AW, AAA
Research Electronics Labs., Roslyn, Pa.-A, D, L, X, AH, AM, AV, AW, AAA, AAF, AAN
Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.-AE, AI
Reveco, Inc., Deerfield, Mich.-AH
Reveco, Corp., 697 N. Lake Ave., Pasadena 6, Calif.-AE, AI
Reveno Highlands 61, Mass.-AH
Richards Co., Arkley S., 35 Winchester St., Newton Highlands 61, Mass.-AH
Richards Co., Arkley S., 35 Winchester St., Newton Highlands 61, Mass.-AH
Richards Co., Arkley S., 35 Winchester St., Newton Highlands 61, Mass.-AH
Richards Co., Arkley S., 35 Winchester St., Newton Highlands 61, Mass.-AH
Richards Co., Arkley S., 35 Winchester St., Newton Highlands 61, Mass.-AH
Richards Labs., 12

Ripley Co., 1 Factory St., Middletown, Conn. -AD Robey Rotor Inc., 6006 Washington Blvd., Cul-ver City, Calif.-AR,AAG Robinette Co., W. C., 802 Fair Oaks Ave., S. Pasadena, Calif.-Z,AE,AAM,AAN,AAP Robotron Corp., 21300 W. 8 Mile Rd., Detroit 19, Mich.-AP Rockwell Eng's. Co., 4063 N. New Jersey St., Indianapolis 5, Ind.-F,LO,X,Y,AE,AAN Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-A

Rowe Industries, 1102 1.2.1. Ohio-A Rust Industrial Co., 130 Silver St., Manchester, N.H.-AD,AH Ryan Industries Inc., 19159 John R. St. Detroit 8, Mich. 137 Canal St.,

Sarders Associates, Inc., 137 Nashua, N.H.-J,AE,AR,AAG

Sangamo Electric Co., 9 & Converse Sts., Springfield, Ill.—AE,AQ,AV,AW,AY,AAJ Schaevitz Eng'r., Crescent Blvd. & Drexel Ave., Pennsauken Twp., Camden 1, N.J. .-F,S,Z,AE,AO

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Schafer Custom Engineering, Paul, 235 S. 3rd St., Burbank, Calif.—AAJ
Schwien Eng'g. Co., 16217 Lindbergh St., Van Nuys, Calif.—AR,AAG
Sciaky Bros., 4915 W. 67th St., Chicago 38, III.—AP,AV.AY
Seaboard Electric Co., 417 Canal St., New York 18, N.Y.—AV,AW,AY,AAA
Seay Instrument Co., 6521 N. Lamar Blvd., Austin 5, Tex.—Z,AE
Seneca Falls Machine Co., 314 Fall St., Seneca Falls, N.Y.—Z,AE,AI,AAM,AAN
Servo Corp. of America, 2020 Jericho Tpke., New Hyde Park, L.I., N.Y.—AE,AAH
Servomechanisms, Inc., 500 Franklin Ave., Garden City, L.I., N.Y.—AE,AAD,AAG,AAJ, AAN

AAN Sheffield Corp., 718 Springfield St., Dayton 4,

Sheñald Corp., 718 Springfield St., Dayton 4, Ohio-2
 Shepard Labe., 480 Morris Ave., Summit, N.J. --Y.AEV, AZAJ
 Sherman Industrial Electronics Co., 505 Washington Ave., Belleville NJ.--MAY
 Skiaron Electronics & TV Corp., 30 E. 10th St., New York 3, NY.--AEAKAAJ.
 Sorensen & Co., 375 Fairfield Ave., Stamford, Con..-ASAT
 So.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, NY.--AEAKAAJ.
 Sorensen & Co., 375 Fairfield Ave., Stamford, Con..-ASAT
 So.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, NY.--AEAKAAJ.
 Sorensen & Co., F.O. Box 188, Rockville I., MA.--AE
 Special Instruments Lab., Inc., 312 W. Vine St., Knoxville, Tenn.-AC
 Special Instruments Lab., Inc., 312 W. Vine St., AG Groscope Co., Great Neck, N.Y.--AR, Adrian, Mich.--A.B
 Springfield Enterprises, P.O. Box 188, Rockville I., MA.--AB
 Springfield Enterprises, P.O. Box 54, Springfield Gardens 13, NY.--X
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, NY.--AQ.AAM
 Stackole Carbon Co., Tannery St., St. Marys, Pa.--AAK
 Standard Coil Products Co., 2085 N. Haw-thorne St., Melrose Park, III.-Y.H.B.AE.AH
 Standard Coil Products Co., 119 Logan St., Springfield, Mass.-AQ.AY.AY
 Standard Coil Products Co., 119 Logan St., Springfield, Mass.-AQ.AY.AY
 Steinerly Co., 200 N. Hanover St., Carlivá Electronic Hestrich Corp., 34-17
 Lak.AD.A.AG.AAJ.AAM
 Steinerly Co., 463 Springfield Rd., Union, N.J.-AM
 Steinerly Co., 463 Springfield Rd., Union, N.J.-AM
 Steinerly Co., 463 Springfield Rd., Union, N.J.-AM
 Steinerly Co., 464 N. Flymouth St., Leximaton Mig. Co., 463 N. Springfield Rd., Union, N.J.-AM
 Steinerly Co., 464 N. Springfield Rd., Nio-D. ZAE.AAD
 Stevens Mfg. Co., 450 N. Groand River, Detroit, Mich.--F.J.X.P.Q.R.S.T.XAA

Teletronic Laboratories Inc., 1835 W. Rose-crans, Gardena, Calif.—AW,AX,AY,AAA Television Utilities Corp., 1815 Jericho Turn-pike, New Hyde Park, L.I., N.Y.—Y,AK, AAN

- Teletronic Laboratories Inc., 1835 W. Rosecrans, Gardena, Calif.-AW.AX.AY.AAA
   Television Utilities Corp., 1815 Jericho Turnaka, New Hyde Park, L.L., N.Y.-Y.AK, AAN
   Television Corp., 1415 Golf Rd., Des Plaines, Ill.-Q.X.AH
   Tenistron, Inc., Pin Hill, Harvard, Mass.-AH.AAA
   Thermistor Corp. of America, 212 Durham Ave, Metuchen, N.J.-AH
   Thermon, Calif.-N.Q
   Thompson Clock Co., H. C., 38 Federal St. Bristol, Conn.-A.B.T.V.X.Y.AC.AD.AO.AQ, AS.AT.AU.AV.AW.AX.AZ.AAA.AAB
   Thor Transformer & Electronics, Inc., 760
   San Antonio Rd., Palo Alto, Calif.-AP
   Thwing-Albert Instrument Co., Penn St. & Pulaski Ave., Philadelphia 44, Pa.-AH.AAH
   Timety Instruments & Controls 1645 W. 135
   St. Gardena, Calif.-O.AH
   Timetrol Co., 2919 Gladatone Ave., Rockford, Ill.-AP,AW.AX.AAA
   Tork Clock Co., 1 Grove St., Mt. Vernon, N.Y.-X.J.AN.AY.A.AAA
   Tork Clock Co., 10 Grove St., Mt. Vernon, N.Y.-X.J.AN.AY.AZ.AAAAANAAO
   Torsion Balance Co., Monhegan St., Clifton, N.J.-E,P.AO
   Transformer M.G. Co., 345 Hudson St., New York 13, N.Y.-AE
   Transformer, DM.G. Co., 345 Hudson St., New York 14, N.Y.-AE.AT
   Transfonics Inc., Bedford Airport, Bedford, Mass.-B.AG.AH
   Trico Fuse Mfg. Co., 2948 N. 5 St., Milwaukee 12, Wisc.-Q
   Transfonics Inc., Bedford Airport, Bedford, Mass.-B.AG.AH
   Trico These Mfg. Co., 2948 N. 5 St., Milwaukee 12, Wisc.-Q
   Transfonics Inc., Bedford Anayword, Ill.-X.AL
   Utrasonice Corp., 640 Memorial Dr., Cambridge, Mass.-AB.AG.AH
   Utrasonice Corp., 641 Maronta Bay, P.O. Box 8007, Albuquerque, N.M.-AB.A.M.AJ
   Utrasonice Corp., 640 Memorial Dr., Cambridge, Mass.-AB,AG.AH
   Utrasonice Corp., 640 Memorial Dr., Cambridge, Mass.-A.B.AG.AH
   Utrasonice Corp., 640 Memorial Dr., Cambridge, Mass.-A.B.A,AB.A,AA</l

- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-X.Y. Z. AE, AQ, AR, AZ, AAA, AAM, AAN
- AAN Veeder-Root Inc., 70 Sargeant St., Hartford 2, Conn.—AQ Vemaline Products Co., P.O. Box 222, Haw-thorne, N.J.—X.AP,AV,AY,AZ,AAN Vibro-Ceramics Corp., Metuchen, N.J.—AL Vickers Electric Co., Vickers, Inc., 1835 Locust St., St. Louis 3, Mo.—T,X.AE,AI,AAP Victory Eng'g. Corp., 103 A Springfield Rd., Union, N.J.—J,Q,AH,AAF Viking Instruments, Inc., E. Haddam, Conn. —A,Q Vinson Co., E. R., 1401 Middle Harbor Rd.

- Viking Instruments, Inc., E. Haddam, Conn. -A.Q
  Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20, Calif.—A.B.W.X.AD,AV,AZ
  Virginia Electronics Co.. River Rd. at B & O. R.R., Washington 16, D.C.—AAJ,AAN
  Wakmann Watch Co., 15 W. 47 St., New York 36, N.Y.—AV,AW,AY,AAA
  Waldorf Instrument Corp., Park Ave., Hunt-Ington, N.Y.—Z.AE,AR
  Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—AQ,AV,AW,AX,AY,AAA,AAN
  Wallace & Tiernan, 25 Main St., Belleville 9, N.J.—AB,AM
  Wang Labs., 37 Hurley St., Cambridge 41, Mass.—AQ,AAD
  Ward Leconard Electric Co., 94 South St., Mount Vernon,N.Y.—V
  Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkley, Mich.—Q
  Washington Institute of Technology Inc., 4810 Calvert Rd., College Park, Md.—AM
  Welch Electric Co., 125 Uwade St., Cincinnati, Ohio—E,X.AF,AL,AO,AZ
  Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19 Mich.—V APAS AT AY AAA
- Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19, Mich.-V,AP,AS,AT,AV,AAA

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.—AE,AAG,AAJ, AAM West Instrument Corp., 525 N. Noble St., Chicago 22, 111.—K,M,W,AH Western Gear, Electro Products Div., 132 W. Colorado St., Pasadena, Calif.—V,AE,AAE, AAG
- AAG
- AAG Weatern Mfg. Co., 1400 W. 22 St., Kearney, Nebr.--B Westinghouse Electric Co., Box 868, Pittsburgh 30, Pa.--Z,AA,AH Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.--N,O, X,AH
- Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.-N,O, X,AH
  Westport Electric, 149 Lomita St., El Segundo, Calif.-AV,AY,AAN
  Westronics, Inc., 3605 McCart St., Ft. Worth, Texas-K,AH,AAA
  Wheelco Instruments Div., Barber-Colman Co., 1300 Rock St., Rockford, Ill.-C,M, AF,AH,AAB,AAJ
  Whittington Pump & Eng'g. Corp., 1126 Pros-pect St., Indianapolis 3, Ind.-AM
  Wianko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.-A,J,Q,AB,AH,AO,AQ, AAF,AAJ,AAN
  Wiezand Co., Edwin L., 7500 Thomas Blvd., ( Pittsburgh 8, Pa.-AH
  Wilson & Co., G. C., 1950 8th Ave., Hunting-ton. W. Va.-H.K,W,Y,AH,AP,AV,AW,AY, AAAAAC,AAG,AAN,AAQ
  Winelow Co., 9 Liberty St., Newark 5, N.J.--M,AH,AAC
  Winetrourn Mfg. Co., 11 Whittemore St., Put-nam, Conn.-H,J,R,V,AM
  Worner Electronic Devices, Rankin, Ill.-B, C.E.O,Q,X,AF,AZ
  Wrigh Eng's Co., 180 E. Calif. St., Pasa-dena 1, Calif.-L,T,X,Y,AB,AE,AG,AI,AL, AQ, AV, AX, AY, AAA, AAD, AAG, AAI, AAJ,AANO
  Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.-Y

#### 25—CRYSTALS & ACCESSORIES **CRYSTALS**

Crystals, barium titinate .....A Crystals, frequency control .....J Crystals, hermetically sealed .....K Crystals, quartz .....B Crystals, rochelle salt .....C Crystals, scintillation .....Q Crystals, synthetic sapphire .....M Crystals, tourmaline .....D Crystals, transducer .....L

#### CRYSTAL ACCESSORIES

Crystal	blanksN	
Crystal	cartridgesE	
Crystal	clampsO	
Crystal	electrodesF	
Crystal	filtersR	
Crystal	heatersP	
Crystal	socketsG	
Holders	· · · · · · · · · · · · · · · · · · ·	
Probes		

Aeronautical Electronics, Inc., Raleigh-Dur-ham Airport, Raleigh, N.C.-B,H Aeroprojects Inc., P.O. Box 555, W. Chester, Pa.-A,B,L Airborne Electronics Inc., 155 1 St., Mineola,

- N.Y.-B Airtron Inc., 1101 W. Elizabeth Ave., Linden,

- Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.-H Alden Products Co., 117 N. Main St., Brockton 64, Mass.-G,H Allied Industries, 2500 Woodland Ave., Louis-ville 10, Ky.-H American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.-G Andersen Laboratories, 39 Talcott Rd., W. Hartford 10, Conn.-L Applied Research Labs., 3717 Park Pl., Glen-dale 5, Calif.-Q Astatic Corp., P.O. Box 120, Conneaut, Ohio -E

- Astatic Corp., F.O. Box 100, Connected Con--E Atlantic Research Corp., Alexandria, Va.-L Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass.-Q Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.-G,H Bassett, Rex Inc., 1314 N.E. 17 Court, Ft. Lauderdale, Fla.-B,F,G,H,J,K,N,P Birtcher Corp., 4371 Valley Blvd., Los Ange-les 32, Calif.-A,B,C,D,J,K,L,O Bliley Electric Co., Union Station Bldg., Erie, Pa.-B,J,K,L,P Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.-A,B,C,D,M,N Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.-A
- Stamford, Conn.—A Breon Labs., 1520 Evergreen Rd., Williams-port, Pa.—B

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- British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.-E.H
  Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-A.B.C.E.F.L
  Bulova Watch Co., Quartz Crystal Div., Sun-rise Highway, Valley Stream, N.Y.-E,J.K.N
  Burnett Radio Lab., Wm. W. L., 4814 Idaho St., San Diego 16, Calif.-B.H.J.P
  Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-A.G.L
  Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston. N.J.-Q
  Chromatic Television Labs., 1501 Broadway. New York 36, N.Y.-L
  Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, Ill.-G.H
  Clark Crystal Co., 2 Farm Rd., Marlboro, -Mass.-B.J
  Commercial Radio Monitoring Co., P.O. Boa 7037, Kansas City, Mo.-B.J
  Commercial Radio Monitoring Co., P.O. Boa 7037, Kansas City, Mo.-B.J
  Commercial Corp., 6025 N. Keystone Ave., Chi-cago 30, Ill.-G
  Constantin & Co., L. L., Route 46, Lodi, N.J. -H
  Corning Glass Works, Corning, N.Y.-H

- Corning Glass Works, Corning, N.Y.—H Cox & Co., 115 E. 23 St., New York 10, N.Y. .-P

- -H Corning Glass Works, Corning, N.Y.-H Cox & Co., 115 E. 23 St., New York 10, N.Y. -P Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.-H Cryco Inc., 1138 Mission St. S. Pasadena. Calif.-B.J.K Dallons Labs., 5066 Santa Monica Blvd., Los Angeles 29, Calif.-B.J.K.L.N Dana, Inc., P. A., 233 Broadway, New York 7, N.Y.-B Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, III.-Q Diamond Drill Carbon Co., 244 Madison Ave., New York 16, N.Y.-B Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-B.F.H.J.N.P Dumont Labs., Inc., Allen B., TV Transmitter Dept., Mobile Comm. Dept., 1500 Main St., Clifton, N.J.-J DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, III.-B.F.H.J.K.L.N Dyna-Labs. Inc., 1076 Stewart Ave., Garden City, L.I., N.Y.-A.I.L Eby Sales Co., 130 Lafayette St., New York 13, N.Y.-H Elco Corp., 'M'' St. Below Erie Ave., Phila-delphia 24, Pa.-G Electroical Industries-Div. Amperex Electronic Corp., 44 Summer Ave., Newark 4, N.J.-H Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Bronx-ville 8, N.Y.-H. Electronic Assemblies Co., 122 W. 5th St., Bronx-ville 8, N.Y.-H. Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Bronx-ville 8, N.Y.-H. Electronic Assemblies Co., 122 W. 5th St., Kan-sas City 5, Mo.-F.H Electronic Assemblies Co., 122 W. 5th St., Bronx-ville 8, N.Y.-H. Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-G Electronic Assemblies Co., 27 Milburn St., Bronx-ville 8, N.Y.-H. Electronic Mechanics, Inc., 27 Milburn St., Bronx-ville 8, N.Y.-H. Electronic Mechanics, Inc., 27 Milburn St., Bronx-Ville 8, N.Y.-H. Electronic Mechanics Inc., 139-80 34th Rd., Flushing, 54, N.Y.-H. Electronic

Erie Resistor Corp., 644 W. 12 St., Erie, Pa. —A
Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.—L
F-R Machine Works, F-X-R Electronics & X-Ray Div, 26-12 Borough Pl., Woodside 77, N.Y.—H.I
Gastet Eng'g. Co., 2444 Charlotte St., Kansas City 8, Mo.—F
General Crystal Co., P.O. Box 9, Burlington, Wis.—B.J.K.L
General Electric Co., Broadcast Equip., Com-mercial Electric Co., Germanium Products Div., Electronics Park, Syracuse, N.Y.—B.K
General Radio Co., 275 Mass. Ave., Cam-bridge 39, Mass.—B
Gulton Mfg. Corp., 212 Durham Ave., Metu-chen, N.J.—A.I.L
Hansell, Inc., U., 50 Liberty St., Westerly, RL.—A
Hermetic Seal Products Co., 37 S. 6 St., Newark 7, N.J.—H
Hermetic Corp., 702 Beacon St., Boston 15. Mass.—H
Hill Electronic Eng's. & Mfg. Co., New

Hermetite Corp., 702 Beacon St., Boston 15. Mass.—H
Hill Electronic Eng's. & Mfg. Co., New Kingstown, Pa.—B.J.K.L.N.P
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.—L
Hoffman Co., P. R., 321 Cherry St., Carlisle, Pa.—B.F.J.K.L.N.Q
Howard Moldings, Inc., 2600 Grand Ave., Kan-sas City 8, Mo.—F.H
Hudson American Corp., 25 W. 43 St., New York 36, N.Y.—B
Hunt Corp., 453 Lincoln St., Carlisle, Pa.— B.J.K.L.P
Insuline Corp. of America. 186 Granite St., Manchester, N.H.—E.F.G.H.I.N.O
Intelectron Inc., 1114 St., S.E., Cedar Rapids.

Intelectron Inc., 1114 St., S.E., Cedar Rapids, Iowa-B,J,K

Int'l. Crystal Mfg. Co., 18 N. Lee Ave., Okla-homa City 1, Okla.-B.J.K

Javex, P.O. Box 646, Redlands, Calif.-G Johnson Co., E. F., Waseca, Minn.-G Kaar Eng'g Corp., 2995 Middlefield Rd., Palo Alto, Calif.-B.J Kontone Electronics Co., 114 Manhattan Ave., Stamford, Conn.-B.J.K.N.Q Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-H.I Knights Co., James, Church & Wells St., Sandwich, Ill.-B.J.K.L.R Larsen Nuclear Research, 520 5 Ave., New York 36, N.Y.-I.Q Lewinthal Electronic Products, Inc., 2821 Fair Oaks Ave., Redwood City, Calif.-Q Lewis Co., E. B., 11 Bragg St., E. Hartford 8, Conn.-A.B.J.K.L Linde Air Products Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N.Y.-M

Linde Alf Froducts Co., Div. Onion Carbins as Carbon Corp., 30 E. 42nd St., New York 17, N.Y.-M
L & O Research & Devel Corp., 134 N. Wayne Ave., Wayne, Pa.-J
Mackay Inc., A. D., 198 Broadway, New York 38, N.Y.-B.M.Q
Mag-Electric Products, 12822 S. Yukon Ave., Hawthorne, Calif.-C
Mataway Electronics 236 Creek Rd., Keans-bury, N.J.-R
McCoy Electronics Co., Chestnut & Watt St., Mt. Holly Springs, Pa.-B,H.J.K.N.P
McKenna Labs, 2503 Main St., Santa Monica, Calif.-A,L
Mendelsohn Speedgun Co., 4th Ave., Haskell, N.J.-H.I
Microlab, 71 Okner Pkwy., Livingston, N.J.-H.I

-H

-H Midland Mfg. Co., 3151 Fiberglas Rd., Kansas City 15, Kansas-J Millen Mfg. Co., James, 150 Exchange St., Malden 45, Mass.-G Miller Labs., A.E., 9226 Hudson Blvd., N. Bergen, N.J.-B,G,J,K.N,P Millivac Instrument Corp., 444 2nd St., Sche-nectady, N.Y.-I Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.-H

delphia 44, Pa.-H Monitor Products Co., 815 Fremont Ave., S. Pasadena, Calif.-B,H.J,K Mosley Electronics, Inc., 8622 St. Charles Rock Rd., St. Louis 14, Mo.-G National Co., 61 Sherman St., Malden, Mass.

-G

National Fabricated Products Inc., 2650 W. Belden, Chicago 47, Ill.-G,H National Radiac Inc., 10 Crawford St., New-

National Radiae Inc., 10 Crawford St., Newark 2, N.J.-Q
Nebel Laboratory, R. E., 1634 E. 12 St., Brooklyn 29, N.Y.-B.F.H.J.N
New Products Co., 1069 E. 54 St., Indianapolis, Ind.-H
Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.-Q
OMCO, Box 3196, N. Las Vegas, Nev.-Q
Pan-Electronics Corp., 901 W. Peachtree St. N.E., Atlanta, Ga.-B
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-H
Pieso Products Co., Whitney St., Framingham, Mass.-B.J.L
Pix Mfg. Co. 5 Oliver St., Newark 2, N.J.-F
Polytech Devices Inc. 1190 F. Cord. St.

Pix Mfg. Co. 5 Oliver St., Newark 2, N.J.— Pix Mfg. Co. 5 Oliver St., Newark 2, N.J.— Polytech Devices, Inc., 1180 E. Grand St., Elizabeth. N.J.—B,D.H.J.K.L. Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.—B,F.H.J.K.L.N.P Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.—B,J Premier Rescurch Labs., 79 7 Ave., New York 11. N.Y.—B,D,F.H.J.K.L.N.P Quality Products Co., 387 Charles St., Provi-dence 4, R.I.—H Radio Ceramics Corp., 109 S. Superior St., Angola, Ind.—P Radio Frequency Labs., Boonton, N.J. Reeves-Hoffman Corp., 145 Cheery St., Carlisle, Pa.—B,F.H.J.K.N Remler Co., 2101 Bryant St., San Francisco 10. Calif.—H Robuck Labs., 1431 S. LaBrea Ave., Los Angeles 19, Calif.—B,H.J.K.P Scala Radio, 2814 J9 St., San Francisco 10. Calif.—I Schutter Mfg. Co., Carl W., 80 E. Montauk Highway, Lindenhurst. N.Y.—H.I Scientific Radio Producta Inc., 215 S. 11 St., Omaha 8, Nebr.—B,J.K Scientific Radio, 4301 Sheridan St., Hyattsville, Md.—J Scaltron Co., 9701 Reading Rd., Cincinnati 15, Ohio—B

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Md.-J Seattron Co., 9701 Reading Rd., Cincinnati 15, Ohio-B Sherold Crystals. Inc., 1510 McGee St., Kansas City 8, Mo.-B.J.K Shure Bros., 225 W. Huron St., Chicago 10, III.-E

- III.—E
  Bandard Crystal Co., 1714 Locust St., Chicago To, III.—E
  Bandard Crystal Co., 1714 Locust St., Kansas City, Mo.—B.J.K.L.N
  Standard Piezo Co., 20 N. Hanover St., Car-lisle, Pa..—B.E.F.G.H.I.J.N.O.P
  Stupakoff Ceramic & Mfg., Div. Carborundum Co., Latrobe. Pa..—A
  Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa..—M
  Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—H
  Tedford Crystal Laba., 4126 Colerain Ave., Cin-cinnati 23, Ohio—B
  Tuncerlab. Inc., 130 High St., Boston, Mass.—Q

Tracerlab, Inc., 130 High St., Boston, Mass .--- Q



Ulanet Co., George, 413 Market St., Newark 5, N.J.-P Ulanet Co., George, 413 Market St., Newark 5, N.J.—P
Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.—B,D.H.J.K.L.N.P
Valverde Laboratories, 252 Lafayette St., New York 12, N.Y.—P
Vibro-Ceramics Corp., 212 Durham Ave., Metuchen. N.J.—I,L
Waldom Electronics Inc., 4625 W. 53 St., Chicago 32, Ill.—G
Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—J
Warren Plastics Corp., S. Irvine St., Warren, Pa.—G,H
Webster Electric Co., 1900 Clark St., Racine,

Pa.-G,H Webster Electric Co., 1900 Clark St., Racine, Wisc.-E Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-Q Westline Electronics Co., 11656 W. Olympic Blvd., Los Angeles 64, Calif.-B.J.K.L Weston Labs., Inc., Box 407, Littleton, Mass. -I

I
White & Sons, Wilfrid O., 178 Atlantic Ave., Boston 10, Mass.—L
Wood Counter Laboratory, N., 5491 Black-stone Ave., Chicago 15, III.—Q
Wright Electronic Devel. Co., 1519 McGee St., Kansas City 8, Mo.—B,D,J,K
Wright Eng's. Co., 180 E. Calif. St., Pasadena 1, Calif.—A,L
Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.—H

# 26—DETECTORS

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Detectors, crystalA
Detectors, fireB
Detectors, flawC
Detectors, gasD
Detectors, impedanceE
Detectors, leakF
Detectors, lieO
Detectors, metalG
Detectors, mineral
Detectors, null
Detectors, pipe & cableQ
Detectors, radiation
Detectors, resistanceJ
Detectors, scintiliationR
Detectors, smokeK
Detectors, standing waveL
Detectors, vibration
Detectors, voltageS
Detectors, water leakN
Detectors, water leak

Advance Electronics Co., 451 Highland Ave., Passaic, N.J.-E Advanced Electronics, Inc., 94 Silas Deane Hwy., Rocky Hill, Conn.-M Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.-C.D.G.M Aerolux Light Corp., 653 11 Ave., New York 36, N.Y.-S Airborne Electronics Co., Hangar #6, Metro-politan Airport, Van Nuys, Calif.-R Aircraft Armaments, Inc., P.O. Box 126, Cock-eysville. Md.-A Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.-A Alco Mfg. Co., 4011 Cuming St., Omaha 3, Nebr.-I Anton Electronic Laboratories, 1226 Flushing Ave., Brocklyn 37, N.Y.-I Applegate & Co., C. J., 1816 Grove St., Boul-der, Colo.-I Assembly Products, Inc., Chesterland 21, Ohio -B.H.S Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.-B.K Atomic Instrument Co. 84 Mass. Ave., Cam-bridge 39, Mass.-A.I.R Atomlab Inc., 488 5 Ave., New York 17, N.Y. -I

Audicon Electronics Inc., 216 Lyon St., Pater-son 4, N.J.-B Authorized Mfrs., 914 Wyckoff Ave., Brooklyn 27, N.Y.-H

Babaco Alarm Systems. Inc., 723 Washington St., New York 14, N.Y.-M Balteau Electric Corp., 5 New St., Stamford, Conn.-C

Barber-Colman Co., 1300 Rock St., Rockford, Ill.-H

Barker & Williamson Inc., 237 Fairfield Ave., Upper Darby, Pa.-H

Bassett, Inc., Rex. 1314 N.E. 17 Court, Ft. Lauderdale, Fla.--A

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Beckman Div., Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.--F
Berkeley Div., Beckman Instruments, Inc., 2200 Wright Ave., Richmond 3, Calif.--I.R
Berman Laboratories, 112-03 Rockaway Blvd., Ozone Park 20, N.Y.-G
Beva Laboratory, 1640 Olden Ave. Ext., Trenton, N.J.-I.R
Bogart Mfg. Corp., 315 Seigel St., Brooklyn 6, N.Y.-A.L
Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.-C
Brilmsyer Labs. Inc., E.W., 86 Fulton St., New York 38, N.Y.-G
Bringineering Corp., Bristol Pa.-D
Bruno-New York Industries, 460 W. 34 St., New York 1, N.Y.-H.S
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-A.L,M
Budd-Stanley Co., 43-01 22nd St., Long Island City 1, N.Y.-L
Byron Jackson Co., 2010 Lincoln Ave., Pasadena 3, Calif.-L
Century Electronics It4844 Oxnard St., Van Nuys, Calif.-A
Chatham Electronics Corp., Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.-R

-R Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-E,H,J Cline Electric Mfg. Co., 3405 W. 47th St., Chicago 32, III.-EJ,S Combustion Control Corp., 720 Beacon St., Bos-ton 15. Mass.-K Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-C

Con R. Ohio Ohio-C Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.-D.F.M Consolidated Vacuum Corp., 1775 Mt. Read Blvd., Rochester 3, N.Y.-F Corning Glass Works, Corning, N.Y.-I Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-I.R Daytronic Corp., 216 S. Main St., Dayton 2, Ohio-M DeMornay-Bonardi. Inc., 780 S. Arroyo Park-

Central Ave., Carlstadt, N.J.-I.R Daytronic Corp., 216 S. Main St., Dayton 2, Ohio-M DeMornay-Bonardi, Inc., 780 S. Arroyo Park-way, Pasadena 2, Calif.-L Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, III.-I.R Detect-O-Ray Co., 2622 N. Halsted St., Chi-cago 14, III.-K Detectron Corp., 5528 Vineland Ave., N. Holly-wood, Calif.-G.I.N.P.Q.R Detroit Controls Corp., 1650 Broadway, Red-wood City, Calif.-B Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-A.E.L Dyna-Labs, Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-M Elson, Inc., Thomas A., 93 Lakeside Ave., W. Orange, N.J.-B.J Electrical Facilities. Inc., 4224 Holden St., Oakland 3, Calif.-S Electro Impulse Lab., 62 White St., Red Bank, N.J.-L Electro Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.-H Electrones Corp. of America, 77 Broadway, Cambridge 42, Mass.-B.K Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, III.-B.K El-Tronics, Inc., 5 & Noble Sts., Philadelphia 23, Pa.-B.I Endeveo Corp., 639 S. Fair Oaks Ave., Pasa-dena 2, Calif.-A.M Eng's. Research Corp., Linwood & Dalzell, Shreveport, La.-G.P Equipment Crafters, 523 Winne Ave., River Edge, N.J.-I Federal Telephone & Radio Co., Div. of IT&T. 100 Kingsland Rd., Clifton, N.J.-L Fenwal Inc., Pleasant St., Ashland, Mass.-B Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.-F.G.I.M.N.P.Q.R Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y. -H Franklin Electronics. 415 W. Pike St., Phila-

-H Franklin Electronics. 415 W. Pike St., Phila-delphia 40, Pa.-I.M Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-H F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-A.I.L Gates & Co., Geo. W., Hempstead Tpke. & Lucille Ave., Franklin Square, N.Y.-C.F., N.P Gates Radio Co., 123 Hampshive St. Oui-or

Gates Radio Co., 123 Hampshire St., Quincy, Ill.-A

General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-C,D,F,G,I,K,M,S General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-A,H,L,M

Glens Falls Laboratory, Box 685 Upper Glen St., Glens Falls, N.Y.--P

G. & M. Equipment Co., 7815 Varna Ave., North Hollywood, Calif.--O Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.--F,G,I,N,P,Q.R

Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.—C

Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-M

G.W. Associates. P. O. Box 2263, El Segundo, Calif.-L

G.W. Associates. P. O. Box 2263, El Segundo, Calif.—L
Hallamore Mfg. Coi. 2001 E. Artesia, Long Beach 5, Calif.—I,L,R,S
Hansen Co., Wm., 165 Silverbrook, Niles, Mich.—I,R
Harworth Mfg. Co., 409 E. Camino Real, Menlo Park 1, Calif.—G
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.—M
Industrial Development Iabs., 17 Pollock Ave., Jersey City 5, N.J.—H
Industrial Electronics Inc., 8060 Wheeler St., Detroit 10, Mich.—C
Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.—E,H.J.S
Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.—D,K
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—A
iq Industries. 6110 Wilshire Blvd., Los Angeles 48, Calif.—B.C.E.G.I.K.M.P
Jonnson-Williams, Ltd., 2625 Park Blvd., Palo Alto, Calif.—D
Jones Electronics Co., M. C., 185 N. Main St., Bristol, Conn.—L
Jordan Electronic Mfs. Co., 3025 Mission Rd.,

Bristol, Con. L Jordan Electronic Mfg. Co., 3025 Mission Rd., Alhambra, Calif. I Kahn & Co., 541 Windsor St., Hartford 1, \_\_\_\_Con. J

Con.-J Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-A,M

N.J.-A,M Kaye Devel. Co., Connecticut Ave., S. Norwalk, Conn.-K,M Kemtron Electron Products, 14 Prince Pl., Newburyport, Mass.-A Keystone Products Co., 904 23rd St., Union City, N.J.-B Kidde & Co., Walter, 1056 Main St., Belle-ville 9, N.J.-B,K Land-Air, Inc., 201 N. Wells St., Chicago 6, 111.-B

ville 9, N.J.—B,R
Land-Air, Inc., 201 N. Wells St., Chicago 6, 111.—B
Landsverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.—I
Larsen Nuclear Research, 520 5 Ave., Newark 36, N.Y.—I,K,R
Larson Instrument Co., 24 Orchard St., Tarry-town, N.Y.—K
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.—H,I,J,S
Leonard Electric Products Co., 67 34th St., Brooklyn 32, N.Y.—A
Levinthal Electronic Products, Inc., 2821 Fair Oaks Ave., Redwood City, Calif.—R
Librascope, Inc., 808 Western Ave., Glendale 1, Calif.—I
Linde Air Products Co., Div. Union Carbide & Carbon Corp., 30 E. 42 St., New York 17, N.Y.—F
Liston-Becker Instrument Co., 649 Hope St., Stamford, Conn.—D
Lord-Taber Co., 40 Ontario St., Canandaigua, N.Y.—B
Lumenite Electronic Co. 407 S. Dearborn St., Chicago 5, III.—G,K,N
MacDonald Co., W.S., 33 University Rd., Cam-bridge 38, Mass.—H
Mackay Inc., A.P.R
Masg-Electric Products, 12822 Yukon Ave., Hawthorne, Calif.—S
Magnafiux Corp., 7300 W. Lawrence Ave., Chi-cago 31, III.—F
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.—G

Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, 111.—F
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.—G
Master Appliances, Inc., 1600 Factory Ave., Marion, Ohio—F
MB Mfg. Co., 1060 State St., New Haven 11, Conn.—M
McNeil Eng'g. Co., 4057 W. Van Buren, Chicago 24, 111.—K
Menlo Research Lab., P. O. Box 522, Menlo Park, Calif.—C,F,I,P,R
Microlab Inc., 71 Okner Pkwy, Livingston, N.J.—A
Microtone Co., Inc., 5740 Wayzata Blvd., Minneapolis 16, Minn.—G
Microwave Associates, 22 Cummington St., Boston 15, Mass.—L
Microwave Devel. Labs., 220 Grove St., Waltham, Mass.—A.L
Mine Safety Appliances Co., 201 N. Braddock Ave., Pitsburg 8, Pa.—D
Minneapolis-Honeywell Regulator Co., 2753 4th Ave. S., Minneapolis 8, Minn.—B
Narda Corp., 66 Main St., Mineola, L.I., N.Y.—E,L
National Radiac Inc., 10 Crawford St., Newark 2. N.J.—I.R -E,L
-E,L
National Radiac Inc., 10 Crawford St., New-ark 2, N.J.-I,R
National Research Corp., Equip. Div., 70 Me-morial Dr., Cambridge 42, Mass.-F
Nilsson Electrical Laboratory, 103 Lafayette St., New York 13, N.Y.-Q
North American Philips Co., 750 S. Fulton Ave., Mt. Vernon. N.Y.-I,R
NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.-I,R
Nuclear Development Lab., P.O. Box 7034,

Nuclear Development Lab., P.O. Box 7034, Kansas City 13, Mo.-I

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.-I

Nuclear Measurements, 2460 N. Arlington Ave., Indianapolis 18, Ind.—I

Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.—C,I,R

Nucleonic Co. of America, 497 Union St., Brooklyn 31, N.Y.-I

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Ohmart Corp., 2236 Bogen St., Cincinnati 14. Ohio-I OMCO, Box 3196, N. Las Vegas, Nev.-I,J,P, Q,R,S

Q.R.S Omega Labs, Box 466, Billerica, Mass.—A Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.—B Penberthy Instrument Co., 666 Adams St., Seattle 8, Wash.—I Peschel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.—S Peters Co., O. S., 1353 N.Y. Ave., N.E. Wash-ington 2, D.C.—H Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.—A

Philo Corp., C & Alge Lin, Pa.-A Philmore Mfg. Co., 113 University Pl., New York 8, N.Y.-A Phoenix Precision Instrument Co., 3803 N. Fifth St., Philadelphia 40, Pa.-H.K Photobell Co., 43 Vesey St., New York 7, N.Y. Photocon Research Products, 421 N. Foothill

Blvd., Pasadena 8, Calif.—C, Photo Crystais, Inc., 15 S. First St., Geneva, Ill.—K

Ill.-K Geneva, Precision Radiation Instruments, Inc., 4223 W. Jefferson Blvd., Los Angeles 16, Calif. -I,R

Astron. Corp. of America, Jude Div., 418 S.
5 St., Harrison, N.J.—A
Radioactive Products, 443 W. Congress, Detroit 26, Mich.—I
Raytheon Mfg. Co., Receiving & Cathode Ray Tube Operation, 55 Chapel St., Newton 58, Mass.—A
R-C Scientific Instrument, 307 Culver Blvd., Playadel Rey, Calif.—I
Research Electronics Labs., Roslyn, Pa.—D,F
Ripley Co., 1 Factory St., Middletown, Conn.—K.L
Robuck Labs., 1431 S. La Brea Ave., Los Angeles 19, Calif.—A
Rockwell Eng'g. Co., 4063 N. N.J. St., Indianapolis 5, Ind.—M
Rubicon Co., Ridge Ave., at 35th St., Philadelphia 32, Pa.—H.S
Scott, Inc., Herman Hosmer, 385 Putnam Ave.,

delphia 32, Pa.-H.S Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.-H.M Seismograph Service Corp.. 701 Kennedy Blig., Tulsa, Okla.-M Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.-H.J.S Servo Corp. of America. 2020 Jericho Turn-pike, New Hyde Park, L.I., N.Y.-B Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.-H.J Sherwin Instrument Co., 2875 Broadway New York 4, N.Y.-R Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.-A,L Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.

Sperry Gyroscope Co., Great Neck, N.Y.-A,E,L

Sperry Gyroscope Co., Great Neck, N.Y.-A.E.L Standard Electronic Research Corp., 2 East End Ave., New York 21, N.Y.-G.R Standard Piezo Co., 20 N. Hanover St., Car-lisle, Pa.-A Sterling Instruments Co., 15310 W. McNich-ols, Detroit 35, Mich.-H.M Stevens Mfg. Co., 45 N. Plymouth, Lexington, Ohio-B Stoelting Co., C. H., 424 N. Homan Ave., Chicago 24, 111.-O Superex Electronics Corp., 4 Radford Pl., Yonkers. N.Y.-A Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-A,B Technical Associates, 140 W. Providencia Ave., Burbank, Calif.-Q Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas-M Technical Operations. Inc., 6 Schouler Court, Arlington 74 Mass.-C.G.I Technical Products Co., P.O. Box 93, Memphis 1. Ten.-D.F.J.N Tele-Smoke Corp., 15 Ward St., Bloomfield, N.J.-K Televiso Corp., 1415 Golf Rd., Des Plaines, III. -F Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas-Q

Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas—Q Tracerlab. Inc., 130 High St., Boston 10, Mass. -----Cl.R

Internation Inc., 130 High St., Boston IO, Mass. --C.I.R
Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass.--A
Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, III.--K
Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena. Calif.--D
United Geophysical Corp., P.O. Box "M", Pasadena dena 16, Calif.--P
Universal Microwave, 380 Hillside Ave., Hillside. N.J.--A.L
Universal X-Ray Products, 1140 N. Western Ave., Chicago 22, III.--O
Vacuum-Electronic Eng'g. Co., 86 Denton Ave., New Hyde Park, L.I., N.Y.--F
Vacuum Tube Products, 506 S. Cleveland St.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside. Calif.—F

Valverde Laboratories, 252 Lafayette St., New York 12, N.Y.-B

Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-H,L

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Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 14, Ohio-I,M Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20, Calif.-I,P Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-I,P,R Weston Labs., Inc., Box 407, Littleton, Mass. -I.

Winslow Co., 9 Liberty St., Newark 5, N.J.

Winslow Co., S Liberty St., Newark 5, N.J. -E,F,H,J
 Wood Counter Lab., N., 5491 Blackstone Ave., Chicago 15, Ill.-I,R
 Worner Electronic Devices, Rankin, Ill.-K
 Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-M

### 27-DIALS & FRONT PANEL ACCESSORIES

BeltsA
Bezels AB
ChoinsB
CrystalsC
DecalcomaniasD
Dials, completeE
Dials, telephoneF
Drives, wormG
Escutcheons
FaceplatesJ
FacesI
Knobs, metal
Knobs, molded
Knobs, woodM
Lights, dialN
Lights, diai assemblyO
Lights, indicator
Lights, jewel pilotP
Lights, panelQ
Locks, dialR
Locks, shaftS
Luminous Markers
Nameplates
Pointers, dialU
Rubbers, driveV
ScalesW
Springs, knobX
Tabs
Windows, glassAC
Windows, metallized

Accurate Electronica Corp., 1312 Ontario St., N.W., Cleveland 13, Ohio-O
Ackerman Engravers, 458 Broadway, New York 13, N.Y.-E
Accomark Co., 601 Morrell St. Elizabeth 4, N.J.-E.T
Admiral Corp., Molded Products, Div., P.O. Box 338, W. Chicago, Ill.-L,U
Aerolatic Electronics Corp., 507 26 St., Union City. N.J.-N.O.P.Q.Z
Aeronautical Electric Co., 5656 Northwest Hgwy., Chicago 30, Ill.-N,O.P.Q
Aetna Supply, 15 N. Hickory St., Arlington Heights, Ill.-E,H.I.J.K.T,AB
Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.-L.N.O.P.Q.Z
Alina Corp., 401 Broadway, New York 13, N.Y.-U
Allied Engraving & Stamping Co., 161 Ellicott St., Buffalo 3, N.Y.-D.E,F,H.J.T.U
American Radio Hardware Co., 152 S. Mac-Questen Pkwy., Mt. Vernon, N.Y.-E,N.P. Q.Z
American Wood Working Co., 1632 N. Lowell Avea, Chicago 39 Ill.-M.T

W.Z American Wood Working Co., 1682 N. Lowell Ave., Chicago 39 III.-M.T Atlas Precision Products Co., 8601 Castor Ave., Philadelphia 24, Pa.-E.G.R.S.AB Austin, O., 128 32nd St., Brooklyn 32, N.Y.-D.J.T.W

Austin, O., 128 32nd St., Brooklyn 32, N.I.— D.I.T.W
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.—E,F
Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—F
Bache, Semon & Co., 636 Greenwich St., New York 14. N.Y.—P
Bassett, Inc., Rex, 1314 N.E. 17th Court, Ft. Lauderdale, Fla.—C
Beck's Inc., 298 E. 5th St., St. Paul 1, Minn. —E,AA
Belock instrument Co., College Point. N.Y.—E
Bestraft Products Co., 626 Broadway, New York 12, N.Y.—I,T
Blazon Mfg., 6021 Dempster St., Morton Grove, III.—L

Blazon Mfg., 6021 Dempster St., Morton Grove, III.--L
Bodnar Industries, 19 Railroad Ave., New Rochelle, N.Y.--E,L,W
Borg Equip. Div., George W. Borg Corp., 120
S. Main St., Janesville, Wis.--E,U
Bowen & Co., Box 5818. Bethesda Md.--E,I,T
Brady Co., W. H., 727 W. Glendale Ave., Mil-waukee 12, Wis.--D,H,T
Bram Chemical Co., 820 65th Ave., Philadel-phia 26, Pa.--C
British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.--N,O,P,Q,Z

Buckbee Mears Co., Lindeke Bldg., St. Paul 1, Minn -Н.Т

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Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio-R.S Ohio-R,S Buhl Optical Co., 1009 Beech Ave., Pittsburgh

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.-Y
California Plasteck, Inc., 225 E. 4th St., Los Angeles 13, Calif.-D.E.H.I.J.K.L.N.O.Q.R.T. U.W.Z.AA.AB
Cambridge Thermionic Corp., 446 Concord Ave., Cambridge 38, Mass.-R.S
Canadian Radium & Ursnium Corp., 630 Fifth Ave., New York 20, N.Y.-E.F.H.T.U.V.W.

AA

Ave., New York 20, N.Y.—E,F,H,T,U,V,W, AA
Capehart-Farnsworth Co., 3700 Pontiac, Ft. Wayne, Ind.—D,T
Cardwell Electronics Productions, Allen D., Plainville, Conn.—E,S
Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—L,U
Cinch Mfg. Corp., 1206 S. Homan Ave., Chi-cago 24, III.—X
Circuit Instruments, Inc., 1927 1st Ave. S., St. Petersburg 1, Fla.—K
Citation Products Co., 233 E. 146 St., New York 51, N.Y.—E,K,R,S
Colorvision Plastics, Inc., 182 Beacon St., Boston 16, Mass.—Q,U
Conn. Telephone & Electric Co., 70 Britannia St., Meriden, Conn.—F,P.Z
Corning Glass Works, Corning, N.Y.—AD
Cortland Industr.es, 4545 W. Cortland St., Chicago 39, III.—H.T
Croname. Inc., 3701 Ravenswood Ave., Chicago 13, III.—E.H.T,W
Dale Products, Inc., P.O. Box 136, Columbus, Nebr.—L
Daniels, Inc., C. R., Daniels, Md.—A

Nebr.—L Daniels, Inc., C. R., Daniels, Md.—A Daven Co., 191 Central Ave., Newark 4, N.J.—E, L Div. General Motors Corp.,

N.J.-E,L Delco Radio Div., General Motors Corp., Kokomo, Ind.-K Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y.-N.O.P.Q.Z Dietz Co., H. G., 12-16 Astoria Blvd., Long Is-land City 2, N.Y.-T Dimeo-Gray Co., 207 E. 6 St., Dayton 2, Ohio -L.

Dietz Co., H. G., 12-16 Astoria Blvd., Long Island City 2, N.Y.-T
Dimeo-Gray Co., 207 E. 6 St., Dayton 2, Ohio-L
Downing Crystal Co., 191 Shaffer Ave., Westminister, Md.-T
Drake Mfr. Co., 1713 W. Hubbard St., Chicago 22, 11.-N.O.P.Q.Z
Duralith Corp., 1025 Race St., Philadelphia 7, Fa.-E,F.H.J.T.W.AA
Easle Electronics Corp., 177 Hart St., New Britain, Conn.-L
Eldema Corp., 5627 E. Beverly Blvd., Los Angeles 22, Calif.-P.Q.Z
Electronicraft, Inc., 27 Milburn St., Bronxville 8, N.Y.-O
Elm Laba., 18 S. Broadway, Dobbs Ferry, N.Y. -E.G.T
Emeloid Co., 1239 Central Ave., Hillside, N.J. -E.J.L.T.U.W.AB.AD
Emerson Plastics Corp., 567 3 Ave., New York 16, N.Y.-E.T
Erea Tool Die & Stamping Co., 19 Ash St., Broklyn 22, N.Y.-T
Erei Resistor Corp., 644 W. 12th St., Erie, Pa. -E.H.I.L.T.U.AB
Feay Co., Neal. 427 Olive St., Santa Barhara, Calif.-E.H.J.K.T.W.Y
Federal Screw Products, Inc., 3917 N. Kedzia Ave., Chicago 18, 111.-L.N.O.P.Q.Z
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-C.J.AC.AD
Flock Process Co., 375 Main Ave., Norwalk, Conn.-H
Fuze-on Froducts Div., Aetna Supply, Inc., 15 N. Hickory St., Arlington Heights, 111.-E.H.J.T.U.W
General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-K.L.M
General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-K.L.M
General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-K.L.M
General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-K.L.M
General Come. 4400 W. Huron St., Chicago 44, 111.-F.H.L.T
Hart Mfg. Co., 10 Bartholomew Ave., Hartford 1, Conn.-P.Q.Z
General Electric Co., Maparatus Div., 1 River Rd., Schenectady 5, N.Y.--Y.Q
Hergo Miniature Lamp Works, 12-23 Jackson Ave., Long Island City. N.Y.-P.Q
Horgo Miniature Lamp Works, 12-23 Jackson Ave., Long Island City. N.Y.-P.Q
Horgo Miniature Lamp Works, 12-23 Jackson Ave., L

Johnson Co., E. F., Waseca, Minn.-E,H,L,N, O.P,Q,Z,AB

Kellogg Switchboard & Supply Co., 79 W. Monroe, Chicago, Ill.—F,N,O,P.Q.Z
Keystone Electronics Corp., 423 Broome St., New York 12, N.Y.—E,S

40

Keystone Watch Case & Instrument Div., Riv-erside Metal Co., 1 Pavilion Ave., Riverside, N.J.-AB

Kirkland Co., 10 King St., Morristown, N.J. -F

-P Klise Mfg. Co., 50 Cottage Grove St., SW Grand Rapids 2, Mich.-AB Krengel Mfg. Co., 227 Fulton St., New York 7, NY.-D.H.J.T Kurz-Kasch, Inc., 1420 S. Broadway, Dayton 1, Obio-L Labelon Tape Co., 450 Atlantic Ave., Rochester 3, NY.-D LaMoree, C. D., 1325 San Julian St., Los Angeles 15, Calif.-T Lawter Chemicals, Inc., 3550 Touhy Ave., Chicago 45, Ill.-AA Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-G

Lawter Chemicals, Inc., 3550 Touhy Ave., Chicago 45, III.—AA Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.—G Leceraft Mfg. Co., 60 Greene St., New York 25, N.Y.—N,O.P.Z Luminous Resins, 166 W. Washington St., Chicago 2, III.—E.F Luxor Lighting Products, Inc., 350 5th Ave., New York 1, N.Y.—Q Mansol Ceramics Co., 140 Little St., Belle-ville 9, N.J.—C.P Marco Industries Co., 207 S. Helena St., Ana-heim, Calif.—P,Q,Z Marion Electrical Instrument Co., 400 Canal St., Manchester, N.H.—AD Matthews & Co., Jas. H., 3958 Forbes St., Pittsburgh 13, Pa.—T Mayfair Molded Products Corp., 4440 Elston Ave., Chicago 30, III.—V Mayner Corp., 1961 W. 112 St., Cleveland 2, Ohio—E,J,T,U,W Metalcraft. Inc., 1619 S. Federal Ave., Mason City, Iowa—T Meyercord Co., 5328 W. Lake, Chicago, III.—D Mica Insulator Co., P.O. Box 1076, Scheneo-tady 1, N.Y.—E,I,J.T Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.—E,G,K,L,R,S,AB Miller Dial & Name Plate Co., 4400 N. Temple City Blvd., El Monte, Calif.—E,T Miller Fla.—T,W Mitronics, Inc., 232 13th Ave., Newark 2, N.J. —AD Morrow Radio Mfg. Co., 2794 Market St., Salaw Ore.—K

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Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.—K
Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.—L
Nameplates, Inc., 425 E. 101st St., Brooklyn 12, N.Y.—E,H,T
National Carbon Co., 30 E. 42 St., New York 17, N.Y.—Q
National Co., 61 Sherman St., Malden 48, Mass.—E,G.K.L.R.S.U
Natural Lighting Corp., 1124 E. Colo. Blvd., Glendale 5. Calif.—T
New England Electrical Works, 365 Main St., Lisbon, N.H.—A

New England Electrical works, soo main St., Lisbon, N.H.—A New Products Co., 1071 E. 54 St., Indianapolis 20. Ind.—C.H.I.J.K.L.T Nichols Products Co., 325 W. Main St., Moorestown, N.J.—U Norsid Mfg. Co., 21 Atherton St., Yonkers 1,

N.Y.-D North Electric Mfg. Co., S. Market St., Galion,

North Electric Mfg. Co., S. Market St., Johanness J., N.Y.-D
North Electric Mfg. Co., S. Market St., Galion, Ohio-F
North Shore Nameplate, Inc., 214-25 Northern Blvd., Bayside 61, L.I., N.Y.-D.H.T
Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15. Calif.-L.
Owens-Illinois Glass Co., Madison & St. Clair Sts., Toledo 1, Ohio-L.T
Oxford Electric Corp., 8911 S. Michigan Ave., Chicago 15, Ill.-N,Q,Z
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, Calif.--K
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-F
Permaglass, Inc., Genoa, Ohio-J.AC,AD
Petroff. P. A., 127 Water St., New York 5, N.Y.-E.G.U
Philco Corp., C & Tioga Sts., Philadelphia 34, Fa.-C, D. E. H, I, J, K, L, N, O, P. Q. T, U,W.X.Z.AB.AC
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-L.O.P.Q
Photo Chemical Products, 479 Walton Ave., New York 51, N.Y.-E.H.I.J.T.W.AAA
Pix Mfg. Co., 5 Oliver St., Newark 2, N.J.-Y
Plasto Film. Inc., 916 W. Union Ave., Wheaton, Ill.-C.J.T.AC,AD
Poray, Inc., 3269 W. Grand Ave., Chicago 51. Ill.-C.H.T.W
Ports Mfg. Co., 3265 Belmont Ave., Fresno 2, Calif.-T.W

Baray, Inc., 3505 w. Grand Aver. Chicago 51, 111.—C.H.T.W
Ports Mfg. Co., 3265 Belmont Aver., Fresno 2, Calif.—T.W
Precise Measurements Co., 942 Kings Hwy., Brooklyn 23, N.Y.—W
Precision Plastic Products, 225 W. Recipe Aver., Chicago 7, 111.—H.I.J
Premier Metal Etching Co., 21-03 44th Aver., Long Island City 1, N.Y.—E.H.J.U
Raytheon, Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—L.R.S.U
Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 13, Ohio—X
Republic Spec. Service, 232 Washington St., New York 7, N.Y.—D
Research Development Mfg., 429 E. Collom St.,

Research Development Mfg., 429 E. Collom St., Philadelphia 44, Pa.—G

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Research Instrument Co. 233 Broadway, New York 7, N.Y.-G,T,W Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-AB Richardson Co., 2790 Lake St., Melrose Park.

III.--Ľ.

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7, Wash.-J.T
Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.-K
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.-NO,P.Q.R.S.T.Z
Spaulding Fibre Co., 310 Wheeler St., Tonawanda, N.Y.-H
Specialty Assembling & Packing, 79 Clifton Pl., Brooklyn 38, N.Y.-E
Stemac Co., 1277 S. Cherokee St., Denver 10, Colo.-T
Sun Dial Corp., P.O. Box 326, Caldwell, N.J. -E,H.I,J,Q.T.U,W
Switzer Bros., 4732 St. Clair Ave., Cleveland 3, Ohio-D
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-H,L
Tech-Master Corp., 443 Broadway, New York 13, N.Y.-K
Technology Instrument Corp., 531 Main St., Acton, Mass.-L
Techron Corp., 254 Friend St., Boston 14, Mass.-T
Telephonics Corp., Park Ave., Huntington, N Y.-K K

Telephonics Corp., Park Ave., Huntington, N.Y.-F.K.L

N.Y.-F.K.L Tele Plastics Co. Div. Willmax Mfg. Co., 202 Broadway, Brooklyn 11, N.Y.-E.H Telex, Inc., 1633 Eustis St., St. Paul 1, Minn.

Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—C.D.G.H.I.K.L.N.O.P.Q.T.U V.W.X

Toman & Co., E., 8700 W. 47th St., Lyons.

III.--T

Ink

Ill.-T Topflight Tape Co., 116 E. Market St., York, Pa.-T.Y Translite Electronics, Corp., 5720 W. Armi-tage Ave., Chicago 39, Ill.-N.O.Q.Z Tung-Sol Electric, Inc., 95 8 Ave., Newark 4, N.J.-N T-V Products Co., 152 Sandford St., Brooklyn 5, N.Y.-U United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.-N.U.X

5. N.Y.--U United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.--N.U.X Universal Aviation Equipment, 362 5th Ave., New York 1. N.Y.--E.K.L.Q U. S. Radium Corp., 535 Pearl St., New York 7, N.Y.--E.J.L.T Varl.Equip. Co., 35 Grove St., White Plains,

U. S. Radian Col. J.
J. N.Y.-E.J.L.T
Vari-Equip. Co., 35 Grove St., White Plains, N.Y.-L
Waldom Electronics Inc., 4625 W. 53 St., Chi-cago 32, Ill.-E.H.L.S.T.U.W.X.AB
Walter Lee Chemical Corp., 567 3 Ave., New York 16, N.Y.-E.T
Wastern Color-Graphics, 39 S.E. Salmon St.,

Western Color-Graphics, 39 S.E. Salmon St., Portland 14, Ore.-H.I.Q.T.W Whitso, Inc., 9330 Byron St., Schiller Park,

Willson Camera Co., 1395 Lawrence Rd., Havertown, Pa.—E.T Winslow Co., 9 Liberty St., Newark 5, N.J.— L,W,AB

Drafting chairs .....L Drafting instruments .....A Drafting paper .....B Drafting tables .....C Electric erasers . . . . . . . . . . . . . . D 

Sensitized paper ..... Slide Rules .....J Stencils .....P Symbol stamps .....N Tracing cloth .....K Tracing cloth cleaner .....Q

Acromark Co., 309 Morrell St., Elizabeth 4, N.J.—P Allied Engraving & Stamping Co., 161 Ellicott St., Buffalo 3, N.Y.—N.P

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

28-DRAFTING ROOM EQUIPMENT

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- Art Specialty Co., 3245 W. Lake St., Chicago 24, III.—F
  Barco Chemical Products, 701 S. LaSalle St., Chicago 5, III.—Q
  Berger Scientific Supplies, 342 Madison Ave., New York 17, N.Y.—A.J
  Bowen & Co., Box 5818, Bethesda, Md.—A.M
  Bruning Co., Charles, 4700 Montrose Ave., Chicago 41, III.—A, B, C.D.E, F, G, H, I.J, K
  C-Thru Ruler Co., 827 Windsor St., Hartford, Conn.—A.J
  Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, III.
  Eagle Pencil, 703 E. 13 St., New York, N.Y.—G
  Eastman Kodak Co., 343 State St., Rochester 4, N.Y.—I
  Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N.Y.—G
  Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—H,J
  Flexo Int'I. Co., 3245 W. Lake St., Chicago 24, III.—F
  General Aniline & Film Corp., Ozalid Div., Johnson City, N.Y.—F
  Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.—N
  Holliston Mills, Lenox St., Norwood, Mass.—K
  Kent Metal Mfg. Co., 450 Johnson Ave., Brooklyn 37, N.Y.—F
  Keuffel & Esser, Hoboken, N.J.—A
  L. A. B. Corp., P.O. Box 278, Skaneateles, N.Y.—G
  Luxor Lighting Products, Inc., 350 5th Ave., New York 1, N.Y.—F
  Mathews & Co., Jas. H., 3958 Forbes St., Pittsburgh 13, Pa.—N
  Ozalid Div., General Aniline & Film Corp., Asson Rd., Johnson City, N.Y.—H,I
  Paragon-Revolute Corp., 77 South Ave., Rochester 3, N.Y.—G
  Luxor Lighting Products, Inc., 350 5th Ave., New York 1, N.Y.—F
  Mathews & Co., Jas. H., 3958 Forbes St., Pittsburgh 13, Pa.—N
  Ozalid Div., General Aniline & Film Corp., Ansco Rd., Johnson City, N.Y.—H,I
  Paragon-Revolute Corp., 77 South Ave., Rochester 4, N.Y.—H
  Paragon-Revolute Corp., 77 South Ave., Rochester

- I
   Post Co., Frederick, 3650 N. Avondale, Chicago, Ill.—A,B,C,D,E,F,G,H,I,J,K,L,M,O,Q
   Precise Measurements Co.. 942 Kings Highway, Brooklyn 23, N.Y.—M,N
   Technical Products Co.. 19 N. Dunlap, Medical Center, Memphis I. Tenn.—A,C,J,L
   Tecnifax Corp., 195 Appleton St., Holyoke, Mass.—I
   Thempeon Clock Co. H Co. 28 Endemi St.

- Mass.—I Thompson Clock Co., H.C., 38 Federal St., Bristol. Conn.—A.B.C.D.E.F.G.H.I.J.K Universal Drafting Machine. 7960 Lorain Ave., Cleveland 2, Ohio—A Williams, Brown & Earle. 904 Chestnut St., Philadelphia 7, Pa.—A,B,C,D,E,F,G,I,J,K,L, M.O,P,Q

#### 29—FILTERS

Filters, antenna
Filters, audioH
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- Acme Electronics Inc. (Sub. Aerovox Corp.) 2724 Peck Rd., Monrovia, Calif.—A,B,C,D,E, F,G,H,J
- F,G,H,J Acro Products Co., 369 Shurs Lane, Phila-delphia 28, Pa.-B,H.O,P Acro Transformer & Mfg. Corp., 26-02 4 St., Long Island City 2, N.Y.-B,H,O,P Advance Electronics Co., 8510 N. End Ave., Oak Park 37, Mich.-A.D,F Aerocoil, Inc., 24 Cliff St., Jersey City, N.J. -S

- -S Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.-F Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.-A,B,C,D,E,F,H,J,M,O,P,U Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-F,J

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- Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.—A.B.E.K.O.P
  Aircraft Armaments, Inc., P.O. Box 126, Cockeysville, Md.—K
  Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.—B.H.M.O.P
  Airpax Products Co., Middle River, Baltimore 20, Md.—B.C.H
  Ajax Condenser Co., 932 W. Wrightwood Ave., Chicago 14, 111.—J.L.M.O.P
  All-Tronics, Inc., 2 Secatoag Ave., Port Washington, N.Y.—F.J.M.P
  American Electronics Co., 1203 Bryant Ave

- Laudergaie, Fig.-Ray, Market Stream, Pacific Div., 11600
   Sherman Way, N. Hollywood, Calif.-B,N, O,P
   Berdik Aviation Corp., 1800 E. 38th St., Cleveland 14. Ohio-A
   Bird Electronic Corp., 1800 E. 38th St., Cleveland 14. Ohio-A
   Bittermann Electric Co., Barlow & Grove Sts., Canaan, Conn.-C
   Blonder-Tongue Labs. Inc., 526 North Ave., Westfield, N.J.-D,F
   Brubaker Electronic Co., 9151 Exposition Dr., Los Anzeles 34, Calif.-A,H,N.O,P
   BuddStanley Co., 43-01 22nd St., Long Island City 1, NY.-K
   Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio-D,F,O,P
   Budva Watch Co., Quartz Crystal Div., Sunrise Highway, Valley Stream, N.Y.-BO
   Burke & James, 321 S. Wabash Ave., Chicago 4, 111.-F,L
   Burnell & Co., 45 Warburton Ave., Yonkers 2, N.Y.-B,C,G,H.M.N,O,P,R
   Byron Jackson Co., 492 E. Union St., Pasadena, Calif.-K,P
   Caledonia Electronics & Transformer Corp., P.O. Box 298, Caledonia, N.Y.-H
   Cambridge Thermonic Corp., 445 Concord Ave., Cambridge 38, Mass.-A,B,D,E
   Carad Corp., 2850 Bay Rd., Redwood City, Calif.-A,B,C,E,H,K.N,O,P
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,E,F,H,J, K.O,Q
   Centralab Div., Contor Eng'S. Co., 3223 Armitage Ave., Chicago 7, 111.-B,H,O,P
   Centrolics Corp., 21-04 122nd St., College Point 56, N.Y.-A,B,D,E,F
   Corbanda Cali

- Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., S. Plainfield, N.J.---A,B,F,H,J,M,O,P, S
- Corning Glass Works, Corning, N.Y.-L Crown Engineering, 3821 Commercial N.E., Albuquerque, N.M.-A,B,E

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- Dayton Products Corp., 4165 Main St., Flush-ing 52, N.Y.-A,B,D,E,F,M,O,P DeCoursey Eng'g. Lab., P. O. Box 235, Los Angeles 25, Calif.-B,C,H,N,O,P Delson Mfg. Corp., 126 11th Ave., New York 11, N.Y.-D,M Delta Radio Co., 115 Worth St., New York 13, N.Y.-D

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  Delta Radio Co., 115 Worth St., New York 13, N.Y.-D
  DeMornay-Bonardi, Inc., 780 S. Arroyo Pkwy. Pasadena, Calif.-K
  Deutschmann Corp., Tobe, Providence Highway, Norwood Mass.-B,E,F,H.J.M,O,P,U
  Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.-A,B.K
  Dietz Design & Mfg. Co., Box 222, Grandview, Mo.-B,C,D,E,F,H.M.N,O,P
  Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.-D
  Douzlas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-K
  D & K Ltd., 402 E. Gutierren St., Santa Barbara, Calif.-C,F,H
  Drake Co., R. L., 18 E. Central Ave., Miamisburg, Ohio--B,D,E,F,O,P
  Dubrow Development Co., 2350 Penn St., Burlington, N.J.-B,H,O,P,Q
  DuMont Labs, Inc., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.-L
  DX Radio Products Corp., P.O. Box 775, Meriden, Corn.-A,B,D,F,H,JM,O,P,S
  Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, L.I., N.Y.-B,H,Q,P
  Edmund Scientific Corp., Barrington, N.J.-L.E Idico of N.Y., Inc., 70-72 E. 2nd St., Mineola, L.I., N.Y.-B,H,O,P
  Electronics Rafg., 202 Grand St., Brooklyn 11, N.Y.-B,H,O,P
  Electronical Research, 64 Main St., Ridzefield, Conn.-N
  Electronical Research, 64 Main St., Ridzefield, Conn.-N
  Electronic Coil Co., 2506 N. Ontario St., Burbank, Calif.-E,G,S
  Electron Products, 919 Riverside Dr., Los Angeles 31, Calif.-F,J
  Elector 7ansformer Co., 207 W. 25 St., New York, N.Y.-B,HD
  Electronic Coil Co., 2506 N. Ontario St., Burbank, Calif.-E,G,S
  Electron Products, 919 Riverside Dr., Los Angeles 31, Calif.-F,J
  Electronic Coil Co., 2506 M. Cuntario St., Burbank, Calif.-F,J
  Electronic Coil Co., 2506 Merrick Rd., Bellmore, L.I., NY.--B,CH,H
  Electronic Coil Co., 2506 Merrick Rd., Bellmore, Chi, Cago 18, 111.-D,E
  Electronic Coil Co., 85 Beechwood Ave., New Rochelle, NY.--A,E,J
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River Edge, N.J.-P River Edge, N.J.-P Erie Resistor Corp., 644 W. 12th St., Erie, Pa.-J ESC Corp., 534 Bergen Blvd., Palisades Park, N.J.-P Essey Mfg. Co., 528 E. 72nd St., New York 21, N.Y.-E,O Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.-A,D,P Essex Electronics, 550 Springfield Ave., Berke-ley Heights, N.J.-B.E Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-F Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.-F,L Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-B,O,T Feiler Eng'g. & Mfg. Co., 8026 N. Monticello Ave., Skokie, Ill.-M Femco, Inc., Irwin, Pa.-H Filtron Co., 131-15 Fowler Ave., Flushing, L.I., N.Y.-F Fisher Radio Corp., 21-21 44th Dr., Long Island City 1, N.Y.-H,I,J Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-F,L Forbes & Wagner Inc., 339 Central Ave., Silver Creek, N.Y.-A,D,E,F,M,S Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-B, C,F,O,Q Forest Electric Co., 7216 Circle Dr., Forest Park, II.-H,I,O,P Foster Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-B,C,F,H,N,O,P F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-K Galbraith & Son, 450 6th Ave., New York 11, N.Y.-F

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General Products Corp., Salem St., Union Springs, N.Y.-J
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-B,H,O,P
Geotronic Laba., Inc., 1314 Cedar Hill Ave., Dallas 11, Texas-B,O,P
Gertsch Products, 11846 Mississippi Ave., Los Angeles 25. Calif.-B
Gramer-Halldorson Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, III.-C
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Hallett Mfg. Co., 1601 W. Florence Ave., Ingle-wood, Calif.-F,J
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Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto. Calif.-K,P
Highland Eng'g. Co., Westbury, N.Y.-B.H.O,P
Hill Electronic Eng'g. & Mfg. Co., New Kings-town, Pa.-B
HI Q Div. Aerovox Corp., Olean, N.Y.-B,D,F
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Horkins Eng'g. Co., 2082 Lincoln Ave., Alta-dena, Calif.-A,B,C,F,H,J,M,O,P General Products Corp., Salem St., Union Springs, N.Y.-J

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Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.-P
Industrial Test Equip. Co., 55 E. 11 St., New York 3, NY.-F.H.Q
Insuline Corp. of America. 186 Granite St., Manchester, N.H.-A.H.M.O
Int'l. Research Assoc., 2221 Warwick Ave., Santa Monica. Calif.-E.F.O
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JFD Mfx. Co., 6101 16 Ave., Brooklyn, N.Y.-A.B.D.F.O.P
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Johnson Electronics, 521 Elwell St., Orlando, Fla.-A.B.C.E.O
Johnson Labs., Industries, Willard Rd., Nor-walk. Conn.-A.B.D
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Keystone Products Co., 904 23rd St., Union City, N.J.-B.C.H.O.P.Q
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Neptune Electronics Co., 438 Broadway New York 13, N.Y.-B.C.H
Non-Linear Systems. Box "S," Del Mar. Calif. -D
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Radio Sonic Corp., Plainfield, N.J.-B,D,E,H, O.P
Radionic Controls. Box 237, Herrin, II.-B.H
Railway Communication. Inc., Raytown, Mo. 0.P

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Radionic Controls. Box 237, Herrin, Ill.—B,H
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Richardson Labs., Kenneth, 254 Vincent Ave., Lynbrook, N.Y.—P
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Rollins Corp., P.O. Box 213, Mulberry St., Lewes, Dela.—B,C,N,O,P

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Southern Electric & Transmission Co., 3127 Holmes St., Dallas, Texas—B
Southern Electronics Corp., 239 W. Orange Grove Ave., Burbank, Calif.—B,O,P
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston, Texas—B,C,H.O.P
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Sprague Electric Co., North Adams, Mass. —F,J
Square Root Mfg. Co., 391 Saw Mill River Rd.,

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Sprague Electric Co., North Adams, Mass. -F,J
Square Root Mfg. Co., 391 Saw Mill River Rd., Yonkers, N.Y.-A.B,C,D,E,F,H,J
Standard Coil Products Co., 2085 N. Haw-thorne St., Melrose Park, Ill.-A,B,D
Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-B,E,H,O.P
Stander Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-B,E,H,O.P
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Stephens Mfg. Corp., 8538 Warner Dr., Cul-ver City, Calif.-B
Sterling Transformer Corp., 297 N. 7 St., Brooklyn 11, N.Y.-H
Superex Electronics Corp., 4 Radford Pl., Yon-kers, N.Y.-A.B,D,E,F,L,M,O,P,S
Ta-Mar Inc., 11571 W. Jefferson Blvd., Culver City, Calif.-A
Tartak Electronics, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.-LO,P,S
Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.-B,F,H,J,O,P
Tertak Electronics, Inc., Bergen & Edsall Blvds., Palisades Park, N,J.-BF,H,M,O
Televank, Calif.-Corp., 1440 Broadway, New York 18, N.Y.-D,F,O.P
Televati Industries, 16 Howard Ave., Brook-lyn 21, N.Y.-D,F,O.P
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Televad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-B,D,E,K,O,P
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Televad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-B,D,E,K,O,P
Televad Mfg. Corp., 1400 Lemmon Ave., Dallas 9, Texas-B,H,J
Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 728 Garden St., Carlstadt. N.J.-L.S
Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas-B,H,J
Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 710 S. Josephine St., Mar-tinsville, Ind.-A,B,E
Toroxio Co., 1374 Mobile St., St. Louis 10, Mo.-B,C,H,O,P
Transformer Tennicians, 2608

-B,O,P Treeco, 3824 Terrace St., Philadelphia 28, Pa. -H,M Triad Transformer Corp., 4055 Redwood Ave., Venice. Calif.-B,C.H.N.O,P Tri-Dex Co., P. O. Box 1207, Lindsay, Calif. -D.F,J.M TV Hardware Mfg. Co., 919 Taylor Ave., Rock-ford, III.-A T-V Products Co., 145-68 228 St., Springfield Gardens 13, N.Y.-A.F,O,P Union Electric & Mfg. Co., 1057 Summit Ave.. Jersey City 7, N.J.-A,B,C,D,E,F,H,K,L,M.O, P,S Union Spring & Mfg. Co., 1057 Summit Ave..

Jersey City 7, N.J.-A,B,C,D,E,F,H,K,L,M.O. P,S Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A,B.D United Pressed Products Co., 741 W. Harri-son St., Chicago 7, III.-A,D United Technical Labs., Morristown, N.J.-A,B,F United Transformer Co., 150 Varick St., New York, N.Y.-B,C.H,M.N,O.P Universal Mfg. Co., 410 Hillside Ave., Hill-side, N.J.-C Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-K U. S. Electronics Corp., 275 Warren St., Lynd-hurst, N.J.-A,B,D,E,F,H,J,M,O,P,S Vanguard Electronics Co., 3884 Motor Ave., Los Angeles 34, Calif.-B,C,D,E,H,O,P Vari-L Co., 432 Fairfield Ave., Stamford. Conn.-C

Vectron, Inc., 1611 Trapelo Rd., Waltham 54. Mass.-B,C,E,H Vidaire Electronics Mfg. Corp., 576 W. Mer-rick Rd., Lynbrook, N.Y.-A,B,D,F,J,M.O,P

Videon Electronic Corp., 902 E. Michigan St., Indianapolis 2, Ind.—F Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.—H.N Vokar Corp., Huron River Dr., Dexter, Mich.—F Mich.-F

Vokar Corp., Huron River Dr., Dexter, Mich.-F
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.-A
Weymouth Instrument Co., 1440 Commercial St., E. Weymouth 89, Mass.-K
Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.-C.H
Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.-K
White Industries. Inc., 421 W. 54 St., New York 19, N.Y.-B,D,E,H,O,P
White Instrument Labs., 203 Riverside Dr., Austin 4, Tex.-H
Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.-H,P
Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.-A
Wirt Co., 5221 Greene St., Philadelphia 44.
Pa.-E
Wirt Engin Co., 140 F. Co. 145 St.

Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—A.B.D.E.F.K.M.O.P Yonkers Industries, 28-30 School St., Yonkers, N.Y.—F

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Gages, inspection, electronicE
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Gages, needle pressureJ
Gages, opticalP
Gages, piraniG
Gages, pressure, electronicH
Gages, pressure, mechanicalQ
Gages, strainK
Gages, surface roughnessL
Gages, temperatureN
Gages, tension
Gages, thicknessT
Gages, threadS
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Gages, wire

Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.—A,B,C,D,E,H,K,P Alina Corp., 401 Broadway, New York 13, N.Y.

-A American Instrument Co., 8050 Georgia Ave., Silver Spring, Md.--K Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.-F Applied Research Labs., 3717 Park Pl., Glen-dale 5, Calif.-T Arlin Products, Inc., 13541 Auburn Ave., De-troit 23, Mich.--A,E Assembly Products, Inc., Chesterland 21, Ohio --N

-N -N Atlantic Research Corp., 901 N. Columbus St., Alexandria, Va.—H Autel Electronics Corp., 1950 Farmingdale Rd., Westfield, N.J.—B.E.H Authorized Mfrs. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.—E Automatic Temperature Control Co., 5212 Pulaski Ave., Philadelphia 44, Pa.—A.B.C.N Aviation Eng'g Corp., 58-15 Northern Blvd. Woodside, L.I., N.Y.—D Avien, Inc., 58-15 Northern Blvd., Woodside 77, N.Y.—D Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.—H

Pa.-H Barber-Colman Co., 1300 Rock St., Rockford, Ill.-N

III.—N
Bausch & Lomb Ontical Co., 628 St. Paul St., Rochester 2, N.Y.—P
Bendix Aviation Corp., Pacific Div., 11600
Sherman Way, N. Hollywood, Calif.—H
Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.—B
Bristol Co., Waterbury 20, Conn.—A,H,I,K,N,Q
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio—E,K,L
Buffalo Instrument Corp., 1780 Elmwood Ave., Buffalo 7, N.Y.—C
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.—P
Burke & James, 321 S. Wabash Ave., Chicago 4, III.—P

Burke & James, 321 S. Wabash Ave., Chicago 4, Ill.-P
Byron Jackson Co., 492 E. Union St., Pasa-dena, Calif.-C.H.N
Cambridge Instrument Co., 3033 Grand Cen-tral Terminal, New York 17, N.Y.-F
Central Sales & Mfg. Corp., Denville, N.J.--F.I
F.I
Central Sales & Mfg. Corp., Denville, N.J.--

F,I Central Scientific Co., 1700 W. Irving Park Rd., Chicago, III.—I Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.—A,E Cleveland Instrument Co., 735 Carnegie Ave., Cleveland 15, Ohio—A,B,C,E Colvin Labs., 12 Court St., Morristown, N.J. —C

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Computer Instruments Corp., 1964 Utica Ave., Brooklyn 34, N.Y.—A.B.C.E.J.K.Q Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa. Pasadena 15, Calif.—H.O Consolidated Vacuum Corp., 1775 Mt. Read Blvd. Rochester 3, N.Y.—F.G.I Control Components Co., 1 Holden St., Brook-line 46. Mass.—B.C.H.K.L Control Devices, Inc., 8299 E. Nine Mile Rd., Van Dyke, Mich.—B.E.H.K.O Control Eng's. Corp., Controls Div., 934 Wash-ington St., Norwood, Mass.—K Courter Products, Div. of Model Eng'g. & Mfg. Boyne City, Mich.—N Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt. N.J.—F.T Daytronic Corp., 216 S. Main St., Dayton 2, Ohio—B.C.E.H.K.L.R Defender Instrument & Regulator Co., 815 Clark Ave., St. Louis 2, Mo.—I Dice Co., J. W., 1 Engle St., Englewood, N.J. —E Dillon & Co., W. C., 14620 Keswick St., Van Nuwa. Calif.—KO

-E Dillon & Co., W. C., 14620 Keswick St., Van Nuys. Calif.-K.Q DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill. -A.L.P

Dillon & Co., W. C., 14620 Keswick St., Van Nuys, Calif.—K.Q
DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill. —A.L.P
Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.—H
DuMont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Ciliton, N.J.—C.K
Edmund Scientific Corp., Barrington, N.J.—P
Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.—F
Electric Eye Equip. Co., 6 W. Fairchild St., Danville, III.—E
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—B.E.L.M
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.—B
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.—B
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.—B
Electronic Control Systems, 1041 N. Pulaski Rd., Chicaro 51, Ill.—G
Electron-Radar Products, 1041 N. Pulaski Rd., Chicaro 51, Ill.—G
Electron-Tech Equip. Co., 308 Canal St., New York 13, N.Y.—L,N
Ellason Draft Gage Co., 548 W. Monroe St., Chicago 6, Ill.—I,Q
El Mec Laboratories, 730 Boulevard, Kenil-worth, N.J.—E
Endeveo Corp., 689 S. Fair Oaks Ave., Pasa-dena 2, Calif.—C,H,K,Q
Elpost. Inc., 588 Commonwealth Ave.. Boston 15, Mass.—H
Fischer & Porter Co., 19 Warminster Rd., Hat-boro. Pa.—I.N,Q
Franklin Electronics. 415 W. Pike St. Phila-delphia 40, Pa.—E,F,H
Gaertner Scientific Corp., 1247 Wrightwood Ave., Chicago 14, III.—P
General Cybernetics Corp., 1751 N. Coronado St. Los Angeles 26. Calif.—C
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.—C,F,I.K.L,N
Giannini & Co., G. M., 918 E., Green St., Pasa-dena 1, Calif.—H
Gimore Industries, Inc., 5713 Euclid Ave., Cleveland 3, Ohio—H.K
Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.—I
Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.—M
Greenleaf Mfg. Corp., 212 Dur

Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.-I Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.-M Greenleaf Mfg. Cor., 214 Maplewood Ind. Ct., St. Louis 17, Mo.-A.H.K.Q Guton Mfg. Corp., 212 Durham Ave., Metu-chen, N.J.--C,H.K.N,O.Q Hamiin Inc., 1316 Sherman Ave., Evanston, II.-F Hastings Instrument Co., Newcomb Ave. & Ivy Home Rd.. Hampton, Va.-I Hastings Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-A.B.C.H.K.Q.R Hays Corp., E. 8th St., Michigan City, Ind.--H. B. Instrument Co., American & Bristol Sta. Philadelphia 40, Pa.--N Hodgson Co., R. W., 3066 W. Washington Blvd., Los Angeles 18, Calif.-K,N.R Hoke, Inc., 148 S. Dean St., Englewood, N.J. -Q Intra Corp., 58 Charles St., Cambridge 41, Mass.-R Inductograph Lab., Hop Brook Rd., Box 76, Brookfield, Conn.-H Industrial Developmet Labs., 17 Pollock Ave., Jersey City 5, N.J.-C Industrial Nucleonics Corp., 1205 Chesapeake Ave., Columbus 12, Ohio-M Industrial Scientific Co., 34 W. 33 St., New York 1, N.Y.-E Industrial Scientific Co., 34 W. 33 St., New York 1, N.Y.-E Industrial Scientific Co., 35 E 11th St., New York 3, N.Y.-A Industrial Scientific Co., 55 E 11th St., New York 3, N.Y.-A Industrial Scientific Co., 55 E 11th St., New York 3, N.Y.-A Industrial Scientific Co., 55 E 11th St., New York 3, N.Y.-A Industrial Scientific Co., 55 E 11th St., New York 1, N.Y.-E Jordan Electronics, 3025 Mission Rd., Alham-ba, Calif.-F. Mah Scientific Instrument Corp., P.O. Box 166, El Caion, Calif.-N Man & Co., 541 Windsor St., Hartford 1, Con.-B,E

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Weksler Thermometer Corp., 49 W. 32nd St., New York 12, N.Y.-I

Kocour Co., 4800 S. St. Louis Ave., Chicago 32, 111.-T

32. 111.—T
Leiman Bros. Inc., 146 Christie St., Newark
5, N.J.—I
Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.—D
Mackenzie Products Co., 141 Brewery St., New Haven 11. Conn.—A, B, C, E
Manning Maxwell & Moore, 250 E. Main St., Stratford, Conn.—H,I
Massa Laboratories, 5 Fottler Rd., Hingham, Mass.—O Manning Maxwell & moore, 200 E. America. Stratford, Conn.-H.I
Massa Laboratories, 5 Fottler Rd., Hingham, Mass.-O
Merz Eng'g., Inc., 200 S. Harding St., Indianapolis 7, Ind.-A.B
Metroa Instrument Co., 432 Lincoln St., Denver 9, Colo.-A
Metrotype Corp., 6100 Archer Rd., Summit, III.-C.D
MinAtron Corp., Belle Moad 9, N.J.-C.H.K.R
Minneapolis.Honeywell Regulator Co., Minneapolis 8, Minn.-I.N.Q
Moeller Instrument Co., 132nd St. & 89th Ave., Richmond Hill 18, N.Y.-N
Multi-Tron Lab., 4624 Washington Blvd., Chlcago 44, III.-F.G.I
National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.-F.G.I
National Union Electric Corp., 350 Scotland Rd., Orange, N.J.-F
North American Instruments. Inc., 2420 Lake Ave., Altadena, Calif.-C.H.O
North American Philips Co., 750 S. Fulton Ave., Mt Vernon, N.Y.-T
North American Philips Co., 750 S. Fulton Ave., Mt Vernon, N.Y.-T
North American Philips Co., 2nd Street Pike, Southampton, Pa.-E
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, Calif.-J
Penna Testing Lab., Doylestown, Pa.-A.E
Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.-A.B.K
Philadelphia 40, Pa.-K
Photocon Research Prod., 421 N. Foothill Blvd., Pasadena 8, Calif.-H
Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio-A
Poceision Thermometer & Instrument Co., 1434 Brandywine St., Philadelhia 30, Pa.-N
Process & Instruments, 15 Stone Ave., Brooklans, Tex.-BE
Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelhia 30, Pa.-N
Process & Instruments, 15 Stone Ave., Brooklans, Tex.-BE
Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelhia 30, Pa.-N
Process & Instruments, 15 Stone Ave., Brooklans, Tex.-BE
Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelhia 30, Pa.-N
Process &

Quare Associates, P.O. Box 95, Canton, Mass.

-A,B Radar-Electronics, Inc., 229 W. 28 St., New York 30, N.Y.--K Research Electronics Labs., Roslyn, Pa.--F,I Resitron Labs., Inc., 2908 Nebraska Rd., Santa Monica, Calif.--F,G,I Revere Corp. of America, Wallingford, Conn. --D,K Respondie Corp. 652 Pacific St. Brocking 17

Mesitron Labs. H.C. 2500 (Forcase and, Same Monica, Calif.-F.G.]
Revere Corp. of America, Wallingford, Conn. -D.K.
Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.-A.
Rockwell Eng'z. Co., 4063 N. N.J. St., In-' dianapolis 5, Ind.-C
Selentific Spee. Corp., Snow & Union St., Brighton 35, Mass.-I
Sheffield Corp., 718 Springfield St., Dayton 4, Ohio-A.B.L.
Size Control Co., Div. American Gage & Machine Co., 2500 W. Washington Blvd., Chicago 12, III.-A.B.E.L.M.Q.S
Standard Electronic Research Corp. 2 East End Ave., New York 21, N.Y.-B.E.N
Standard Gage Co., Poughkeepsie. N.Y.-B
Statham Laboratories. Inc., 12401 W. Olympic Blvd., Los Angeles 64. Calif.-C.H.K
Stokes Machine Co., F. J., 5500 Tabor Rd., Philadelphia 20, Pa.-I
Sun Electric Products, 1740 Broadway, New York 19, N.Y.-G
Taber Instrument Corp., 111 Goundry St., N. Tonawanda, N.Y.-H
Technical Products Co., Po. Box 93, Memphis 1, Tenn.-A,B.E.F.G.H.I.K.L
Thermistor Corp. of America, 212 Durham Ave., Metuchen, N.J.-N
Thermo Instruments Co., 1310 Old County Rd., Belmont, Calif.-D
Trans-Sonics Inc., Bedford Airport, Bedford, Mass.-T
Trans-Sonics Inc., Bedford Airport, Bedford, Mass.-T
Trans-Sonics Inc., Bedford Airport, Bedford, Mass.-T
Wasahena I. Calif.-H
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.-H
Vacuum Tube Products, 506 S. Cleveland St., Coceanside, Calif.-H
Vacuum Tube Products, 506 S. Cleveland St., Coceanside, Calif.-H
Wasue K. Calif.-D
Wasthers Industries, 66. E. Gloucester Pike.

Wallace & Tiernan, 25 Main St., Belleville 9, N.J.-I.Q Weathers Industries, 66, E, Gloucester Pike, Barrington, N.J.-J

Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.-F,G,I West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.-N Weston Labs., Inc., Box 407, Littleton, Mass.

- White Electron Devices, Roger, 12 W. Island Rd., Ramsey, N.J.-I Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.-H.O.Q Winslow Co., 9 Liberty St., Newark 5, N.J. -G.I.N
- Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-C,E,H,K,L,O,Q,R

## 31-HARDWARE

Bearings	AH
Bolts	. , A
Brackets	AAB
Bushings	B
Cable clamps	C
Casters	AAC
Clips, alligator	, AP
Clips, crystal diode	AQ
Clips, fahnstock	. AR
Clips, grid	. AS
Clips, spring	D
Clips, test	E
Code markers	F
Contact points	G
Cord, lacing	.AT
Couplings	. н
Dowel	AAD
Fasteners	l
Felt parts	<b>. J</b> .
Gaskets	К
Gears	<b>L</b> .
Grommets	M
Handles	AAE
Hinges	N
Latches, magnetic	AAF
Locks	,.0
Mirrors	P
Mounting brackets	Q
Ngils	. <b></b> R
Nuts	.,.S
Pins	- <b>-</b>
Plugs	. <b> U</b> .
Plugs Retaining rings	V
Plugs Retaining rings Rivets	V W
Plugs Retaining rings Rivets Screw Machine products	V W AAS
Plugs Retaining rings Rivets Screw Machine products Self tapping Screws	V W AAS
Plugs Retaining rings Rivets Screw Machine products Self tapping screws Set screws	V W AAS X
Plugs Retaining rings Rivets Screw Machine products Self tapping screws Set screws Standard screws	V W AAS X Y
Plugs         Retaining rings         Rivets         Screw Machine products         Self tapping screws         Set screws         Standard screws         Shaft couplings, flexible	V W AAS X Y Z
Plugs Retaining rings Rivets Screw Machine products Self tapping Screws Standard screws Standard screws Shaft couplings, flexible Shaft couplings, rigid	V W AAS X Y Z AA AB
Plugs Retaining rings Rivets Screw Machine products Self tapping Screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals	V W AAS X Y Z AA AB AB
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Plugs Retaining rings Rivets Screw Machine products Self tapping screws Set screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals Shafts, flexible Shafts, rigid Shafts, rigid	V AAS X Y Z AA AB AC AD AE
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Plugs Retaining rings Rivets Screw Machine products Self tapping screws Standard screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals Shafts, flexible Shafts, flexible Shafts, rigid Shockproof mounts Slides, equipment Spacers Springs Strain reliefs Tape, lacing	
Plugs Retaining rings Rivets Screw Machine products Self tapping screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals Shaft seals Shafts, flexible Shafts, rigid Shockproof mounts Slides, equipment Spacers Springs Strain reliefs Tape, lacing Tube clamps	U V AAS X Z AA AB AZ AA AB AZ AA AB AZ AA AE AA AE AG AA AG AA
Plugs         Retaining rings         Rivets         Screw Machine products         Self tapping screws         Self tapping screws         Standard screws         Shaft couplings, flexible         Shaft couplings, rigid         Shaft seals         Shafts, flexible         Shafts, rigid         Shafts, equipment         Spacers         Springs         Strain reliefs         Tape, lacing         Tube clamps         Vibration mounts	U V AAS X Z AA AB AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AZ AA AB AA AB AA AB AA AB
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Plugs Retaining rings Rivets Screw Machine products Self tapping screws Standard screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals Shafts, flexible Shafts, rigid Shockproof mounts Siddes, equipment Spacers Springs Strain reliefs Tape, lacing Tube clamps Vibration mounts Washers, brass Washers, ceramic	
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Plugs Retaining rings Rivets Screw Machine products Self tapping screws Standard screws Standard screws Shaft couplings, flexible Shaft couplings, rigid Shaft seals Shaft seals Shafts, flexible Shafts, rigid Shockproof mounts Stides, equipment Spacers Springs Strain reliefs Tape, lacing Tube clamps Vibration mounts Washers, felt Washers, fiber	U V V AAS X Z AA AB AZ AA AD AE AG AI AV AI AV AI AI AI AI
Plugs         Retaining rings         Rivets         Screw Machine products         Self tapping screws         Self tapping screws         Set screws         Shaft couplings, flexible         Shaft couplings, rigid         Shaft seals         Shafts, flexible         Shafts, flexible         Shafts, rigid         Strain reliefs         Tape, lacing         Vibration mounts<	U V AAS X Z AA AB AZ AA AB AZ AA AU AG AI AV AJ AK AM
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- Abalon Precision Mfg. Corp., 540 Casanova St., Bronx 59, N.Y.-B.Q.AG.AAB,AAS
  Accurate Electronics Corp., 1812 Ontario St., N.W., Cleveland 13, Ohio-B,C,H.Q.U,AA, AG,AI,AK,AM,AN,AX,AAB
  Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago 24, Ill.-D,AF,AG,AS
  Ace Spring Mfg. Co., 78 W. Houston St., New York 12, N.Y.-AF
  Actioncraft Pruducts, 8 Sagamore Hill Dr., Port Washinyton, N.Y.-F
  Adel Div., General Metals Corp., 10777 Van Owen St., Burbank, Calif.-I,M.Q.AG,AAQ
  Admiral Corp., Molded Products Div., P.O. Box 388, W. Chicago, Ill.-AN
  Advance Electronics Co., 8510 North End Ave., Oak Park 37, Mich.-P

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- Aero-Coupling Corp., Burbank, Calif.-H Aerolite Electronics Corp., 507 26 St., Union City, N.J.-B.C.M.U.A.G.A.P.A.S.AAB Aeronautical Electric Co., 5656 Northwest Hgwy., Chicago 30, Ill.-U Aeroquip Corp., 300 S. East Ave., Jackson, Mich.-H Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.-U.AAA Aetna Felt Co., 204 Centre St., New York 13, N.Y.-J.K Airborne Accessories Corp., 1414 Chestnut Ave., Hillside 5, N.J.-L Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.-K Akron, Rubber Co., 53 Warren St., New York

- N.J.-K Akron Rubber Co., 53 Warren St., New York 7, NY.-B,K,M,Q,P,AJ,AK,AN Alcon Metal Products, 1750 N. Kimball Ave., Chicago 47, Ill.-C,Q,AM Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.-D,E,G,I,AG,AH,AQ,AS,AAA, AAB,AAD Alina Corp., 401 Broadway, New York 13, N.Y.-L Allen Mfg. Co., 133 Sheldon St., Hartford,
- Alina Corp., 401 Broauway, N.Y.-L Allen Mfg. Co., 133 Sheldon St., Hartford, Conn.-Y Machine Co., 141 River Rd.,

- Allien Mis. Co., 130 Shendon Su, Matchold, Conn.-Y
  Allied Allegri Machine Co., 141 River Rd., Nutley 10, N.J.-P.AG,AI,AM,AN,AO
  Allied Research & Eng'g. Inc., 6916 Santa Monica Blvd., Los Angeles, Calif.-P
  Allmetal Screw Products Co., Garden City, N.Y.-A,S,W,X,Y,Z,AM,AAS
  Aluninum Co. of America, Alcoa Bldg., Pitts-burgh 19, Pa.-A,RS,W,X,Y,Z,AAH,AAS
  Annerican Brass Co., Waterbury 20, Conn.-M,AI,AM,AAH
  American Laubscher Corp., 250 W. 57th St., New York 19, N.Y.-A,L,S,T,V,W,Y,AD,AG, AI,AM,AAS
  American Laubs Corp., Cherokee Blvd., & Mfrs.

- AI,AM,AAS American Lava Corp., Cherokee Blvd., & Mfrs. Rd., Chattanooga 5, Tenn.—B,H,AD,AU.AW American Mica Insulation Co., Manasquan, N.J.—AK,AN,AX American Nut & Bolt Fastener Co., 2029 Doerr St., Pittsburgh 33, Pa.—AG,AI,AL, AM

- American Nut & Bolt Fastener Co.. 2029 Doerr St., Pittsburgh 33, Pa.-AG,AI,AL, AM
  American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, 111.--C,M
  American Radio Hardware Co., 152 Mac-Queston Parkway S., Mount Vernon. N.Y. -B. C. D. E. H. M. Q. S. T. U. AB, AG, AI, AK, AM. AN, AP, AR AS, AU AV
  American Scientific Co., 1295 Grand Con-course, New York 52, N.Y.-I.M
  American Scientific Co., 1295 Grand Con-course, New York 52, N.Y.-I.M
  American Screw Co. 1670 W. Main St., Willi-mantic, Conn.-I.S.Z
  American Wood Working Co., 1682 N. Lowell Ave., Chicago 39, 111.-B.T,U
  Amplex Div., Chrysler Corp., P.O. Boz 2713, Detroit 31, Mich.-B.H.L.AAH
  Anchor Metal Co., 244 Boerum St., Brooklyn 6, N.Y.-K.AG,AL,AAH
  Anchor Specialty Mfg. Co., 300 N. Industrial Ave., Teterboro, N.J.-E
  Anti-Corrosive Metal Products Co., River Rd., Castleton-on-Hudson. N.Y.-A, I. R, S, T. W. X.Y.Z, ALAM, AN,AU,AAS
  Arch Gear Works, 97 Holmes St., North Quincy 71, Mass.-L
  Arens Controls, Inc., 2017 Greenleaf St., Evan-ston, III.--C.M.AC
  Associated Production Co., 162 N. Clinton St., Chicago 6, 111.-L.AI,AM,AAS
  Atlas E-E Corp., Bedford Airport, Bedford, Mass.-C,D,AG,AQ,AV,AAB
  Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.-AA
  Autom Mfg. Co., Stack St., Middletown, Conn.-J, K. AG, AI, AJ, AK, AM, AN, AO, AU, AW, AX
  Augat Bros., 33 Perry Ave., Attleboro, Mass. -V.AG,AV
  Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.-T.U,AC,AD.AAS

- -V.AG,AV Automatic Metal Products Corp., 815 Berry St., Brooklyn 11, N.Y.-T, U.AC,AD.AAS Automatic & Precision Mfg. Co., 252 Haw-thorne Ave., Yonkers 5, N.Y.-U.AY Autoscrew Co., 216 W. 18 St., New York 11, N.Y.-I.R.S.T.W, Y.Z.AI,AL,AM Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.-P Baer Co., N. S., 1 Montgomery St., Hillside 5 N.J.-K.M.AG,AI,AK,AM,AN,AO Baker & Co., 113 Astor St., Newark 5, N.J.-G G

- G Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.-H.AA Barry Corp., 700 Pleasant St., Watertown 72, Mass.-AAG Bayside Watch Tool Co., 20-02 Utopia Park-way, Whitestone 57, N.Y.-L.X.AD,AG Bead Chain Mfg. Co., 8 Mountain Grove St., Bridgeport 5, Conn.-AG Beaver Gear Works, Rockford, Ill.-L Belock Instrument, College Point, N.Y.-H.L, Q,AB,AD,AU Bendix Aviation Corp., Scintilla Div., Sidney, N.Y.-C

- N.Y.-C Birnbach Radio Co., 145 Hudson St., New York 13, N.Y.-A.B.C.D.E.G.H.S. U. X. Y. Z. AA, AB, AC, AD, AI, AL, AP, AR, AS, AT, AU, AV,
- AAB, AAS Birtchar Corp., 4871 Valley Blvd., Los An-geles 32, Calif.-AV
- Blaco Mfg. Co. 6541 Euclid Ave., Cleveland 3, Ohio-C,AC,AG Blazon Mfg., 6021 Dempster St., Morton Grove, III.-AN
- B & M Elec. Co., 888 4th Ave., Brooklyn 82, N.Y.-U.AH

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- Boston Insulated wire & Cable Co., 65 Bay St., Boston 25, Mass.—AT Bowen & Co., Box 5818, Bethesda, Md.—AG, AAS

- AAS Bowmar Instrument, 2415 Pennsylvania St., Ft. Wayne 4, Ind.-L Brainin Co., C. S., 320 Washington St., Mount Vernon, N.Y.-G Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.-AAH British Co., Waterbury 20, Conn.-I,X,Y British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.-H,L,O,T,U,AA,AB,AV Brush Nail Expansion Bolt Co., Greenwich, Conn.-I
- Brush Nail Expansion Boit Co., Greenwich, Conn.—I
  Buchanan Electrical Products, 236 Route 22, Hillside, N.J.—B
  Buckbee Mears Co., Lindeke Bldg., St. Paul, Minn.—AZ
  Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio—B, H, Q, U, AA, AC, AP, AAA, AAB, AAC, AAE
  Durguie Ing, H H, 726 Stanton St., Toledo

- AAC,AAE Buggie, Inc., H. H., 726 Stanton St., Toledo 4, Ohio—AY Burkem Lamination Corp., 811 Whittier St., New York 59, N.Y.—Q.AG,AAB Burndy Eng'g Co., Norwalk, Conn.—C.H.I,S, T.U. California Plantaly Inc. 607 Total Total
- T.U. California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.—F Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.—AV.AAS Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.—C Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.—N.AAA.AAE C.E.M. Co., 24 School St., Danielson, Conn.— B.I,T Centralab Div., Globe-Union, Inc., 900 E

- Div., Globe-Union, Inc., 900 E. Ave., Milwaukee 1, Wisc.—Q.S,AF, Centralab

- B.J.T.
  B.J.T.
  Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-Q.S.AF, AU,AW,AAB
  Central Screw Co., 3501 S. Shields, Chicago 9, Ill.-A.S.X.Z
  Chase Brass & Copper Co., 236 Grand St., Waterbury, Conn.-A.B.I.M.R.S.T.W.Z.AG, AI,AL,AM,AAS
  Chassis Trak Corp., 6252 Iona Rd., Indiana-polis 3, Ind.-Q.AAA,AAE
  Chester Morton Electronics Corp., 10th St. & Morton Ave., Chester, Pa.-AP
  Chicago Expansion Bolt, 1388 W. Concord Pl., Chicago 22, Ill.-A.I.AG
  Chicago 21, Bellwood. Ill.-W
  Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-icago 24, Ill.-C.D.I.Q.U.V.AG,AQ,AS,AV. AAB cago AAB

- AAB Circon Component Co., 17544 Raymer St.. Northridge, Calif.—I.S.W.AI,AL,AM,AAS Citation Products Co., 223 E. 146 St., New York 51, N.Y.—B,H.I.O.U.AB,AG,AN,AAS Cleveland Container Co., 6201 Barberton Ave., Cleveland 2, Ohio—B,AU Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio—AZ Colortone Television, 228 William St., New York 38, N.Y.—AAS Communication Products Co., Marlboro, N.J.— C

- Communication Products Co., Marlboro, N.J.--C Connector Corp., 6025 N. Keystone Ave., Chi-cago 30, III.--AV Continental-Diamond Fibre Co., Newark, Del. ---K.M.AK.AN.AX Creative Plastics Corp., Rt. 25-A, Stony Brook, N.Y.--B.M.AN Curran Machine Works, 20-20 Steinway St., Long Island City, N.Y.--A.B.L.Q.AG Daniels, Inc., C, R., Daniels, Md.--AAC Decatur Electronic Industries Corp., 203 Ori-noco Dr., Brightwaters, L.I., N.Y.--AH,AO Delaware Optical Labs.. 36 William St., Lans-downe, Pa.--P Delco Radio Div., General Motors Corp., 1446 S. Home Ave., Kokomo, Ind.--B,AG,AAS Dewey & Almy Chemical Co., Div. W. R. Grace & Co., 62 Whittemore Ave., Cam-bridge 40, Mass.--AAG Dimco-Gray Co., 207 E. 6 St., Dayton 2, Ohio --I,S,AAE Dorn Equipment Corp., 88 Broad St., Boston 10, Mass.--U Dudek & Bock Spring Mfg. Co., 2100 W. Fulton, Chicago 12, III.--AF,AG Durable Rubber Products Co., 549 W. Fulton St., Chicago 6, III.-AO

- Dzus Fastener Co., P. O. Box 185, Babylon, N.Y.-I
  Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.-AG,AAS
  Elastic Stop Nut Corp. of America, 2330 Vaux-hall Rd., Union. N.J.-I,S,T
  Elco Corp., "M" St. Below Erie Ave., Phila-delphia 24, Pa.-AG,AV,AAS
  Elco Tool & Screw Corp.. 1930 Broadway, Rockford, III.-A,I,S,X,Z
  Eldi Electronic Devices, 204 W. Houston St., New York 14, N.Y.-E
  Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-C,G,M,AK,AL,AM, AN,AV
  Electronic Mechanics, Inc., 101 Clifton Blvd.. AN,AV Electronic Mechanics, Inc., 101 Clifton Blvd.. Clifton, N.J.-K.AN Electro-Tech Equip. Co., 308 Canal St., New York 13, N.Y.-E,AP Emerson Plastics Corp., 567 3rd Ave., New York 16, N.Y.-K.M.V.AN,AO,AU,AX,AY Empire State Laboratories, 2608 Merrick Rd., Bellmore, L.I., N.Y.-L ERCA Tool Die & Stamping Co., 19 Ash St., Brooklyn 22, N.Y.-C,M,AG,AM

Erie Resistor Corp., 644 W. 12th St., Erie, Pa.-AG Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, 11.-L.AAE Esco Mfg. Co., Box 344, Summit, III. Factory Enterprises, Inc., 3431 Butler St., Pittsburgh 1, Pa.-AZ Fansteel Metallurgical Corp., 2200 Sheridan Rd., N. Chicago, 111.-G Federal Screw Products, Inc., 3917 N. Kedzie Ave., Chicago 18, 111.-A, C.I.M,S.T,U.W.X,Y, Z,AI,AK,AL,AM,AP,AR,AS,AU,AAS Federal Shock Mount Corp., 1077 Intervale Ave., Bronx, N.Y.-AE Federal Schephone & Radio Co., Div. of IT&T 100 Kingaland Rd., Clifton, N.J.-C Felters Co., 210 South St., Boston 11, Mass. -AJ Felt Products Mfg. Co., 1504 Carroll Ave.,

- Felt Products Mfg. Co., 1504 Carroll Ave., Chicago 7, Ill.--J.K.Al,AJ,AK,AM,AN,AO erner Co., R. Y., 110 Pleasant St., Malden 48, Mass.--Z Ferner
- 48, Mass.-Z Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-P Flock Process Co., 375 Main Ave., Norwalk, Conn.-J.AZ Foote Bros. Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, 111.-L Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-H.L

- H.L
- H.L Formica Co., 4614 Spring Grove Ave., Cin-cinnati 32, Ohio—AN Forsberg Mfg. Co., 125 Seaview Ave., Bridge-port 1, Conn.—AAS Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington 99, Del.—L,M,AG,AK,AN, AAS
- St., Wilmington 99, Del.-L,M,AG,AK,AN, AAS
  Freeway Washer & Stamping Co., 4911 Grant Ave., Cleveland 5, Ohlo-AG,AI,AK,AM,AN
  Fretco Inc., 406 N. Craig St., Pittsburgh 13, Fa.-C,Q,XAF,AG,AAB,AAS
  Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Baltimore 4, Md.-AAE
  Garde Mfg. Co., 588 Eddy St., Providence 3, R.I.-G,U,AU
  Garlock Packing Co., 402 E. Main St., Pal-myra, N.Y.-K,AN,AO
  Gaeket Eng'g. Co., 2444 Charlotte St., Kansas City 8, Mo.-K,AI,AJ,AK,AL,M,AN,AO
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, 111.-A,B,C,D,E,F,I,J,M,P,S,T,U,V, W, X, Y, Z, AA, AB, AD, AF, AG, AR, AI, AJ, AK, AL, AM, AN, AP, AQ, AR, AS, AT, AU, AW, AAB, AAG, AAS
  General Electric Co., Monowatt Dept., 95 Hathaway St., Providence 7, R.I.-C
  General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-Q
  General Electric Co., Wiring Device Dept., 95 Hathaway St., Providence 7, R.I.-C,U
  General Electric Co., S505 Frankstown Ave., Pittsburgh 21, Pa.-G
  Golden Co., 1054 38 St., Brooklyn 19, N.Y.-AAB
  Gramar Mfg. Co., Wright St., Lynn, Mass. -AAS AAS

- Gramar Mfg. Co., Wright St., Lynn, Mass. -AAS
- -AAS Grant Pulley & Hardware Corp., 31-85 White-stone Parkway, Flushing 54, N.Y.-AAA Graphite Metallizing Corp., 1002 Nepperhan Ave., Yonkers, N.Y.-B,G Grayhill, 561 Hillgrove Ave., LaGrange, Ill.-E,AN,AP,AQ Gries Reproducer Corp. 5 Second St. Market

- Graynill, 561 Hillgrove Ave., LaGrange, Ill.— E,AN,AP,AQ
  Gries Reproducer Corp., 5 Second St., New Bochelle, N.Y.—I,L.S.Y.W,AN,AU
  Gudebrod Bros. Silk Co., Electronics Div., 225
  W. 34 St., New York I, N.Y.—AAI
  Hallett Mfr. Co., 1601 W. Florence Ave., Ingle-wood, Calif.—C,H,M,AAS
  Hamilton Watch Co., Allied Products Div., Columbia Ave., Lancaster, Pa.—AG,AAS, Grave, Ill.—A,S.W.X.Y.AI,AL,AM,AAS
  Harvood Mfr. Co., 466 W. Superior St., Chi-cago 10, Ill.—B,C.U.AA,AB
  Hassall, Inc., John. P.O. Box 2240, Westbury, L.I., N.Y.—I,R.W
  Haydu Bros. of N.J., Box 1226, Plainfield, N.J. —AG,AS,AU,AAS
  Heldor Mfg. Corp., 238 Lewis St., Paterson, N.J.—B
  Heli-Coil Corp., Shelter Rock Lane, Danbury, Ourse

- N.J.-B Heli-Coil Corp., Shelter Rock Lane, Danbury, Conn.-B,I
- Heni-Coin, -B.I
  Conn.-B.I
  Heminway & Bartlett Mfg. Co., 500 5th Ave., New York 36, N.Y.-AT, AAH
  Hercules' Elec. Mach'y & Equip. Co., 1442 E.
  Washington Blvd., Los Angeles 21, Calif.-G
  Washington Blvd., Los Angeles 21, Calif.-G
- Hermetic Seal Products Co., 37 S. 6th St., Newark 7, N.J.--U
- Heyman Mfg. Co., 125 Michigan Ave., Kenil-worth, N.J.-B,C,AG,AH
- Hobbs Mfg. Co., 26 Salisbury St., Worcester 5, Mass.-AL
- Hobson Bros., 4940 W. Lawrence Ave., Chi-cago 30, Ill.—AG.AS
- Hoffman Co., P. R., 321 Cherry St., Carlisle, Pa.-F Pa.-
- Holub Industries, 413 DeKalb Ave., Sycamore,
- Hopkins Eng'g. Co., 2082 Lincoln Ave., Alta-dena, Calif.—AG,AAS
- Huck Mfg. Co., 2480 Bellevue Ave., Detroit 7, Mich.—A,W Hudson Tool & Die Co., 412 S. 14th St., Newark 7, N.J.—A,G

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- I.E. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, Ill.—A, B, D, H, I, J, L, M, Q, S, W, AE, AF, AG, AH, AI, AJ, AK, AM, AN, AO, AAB, AAD, AAE, AAF
  Illinois Electric Porcelain Co., 510 N. Pearl St., Macomb, Ill.—B
  Independent Mfg. Co., 5 Belleview Ave., E Riverton, N.J.—C,K,Q,AG,AM
  Indiana Metal Products Corp., Rochester, Ind. —I,XZ
  Industrial Accessories, Inc., 77 S. Broadway, Long Branch, N.J.—AY
  Industrial Devices, Edgewater, N.J.—E
  Industrial Electrical Works, 1509 Chicago St., Omaha, Nebr.
  Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N.Y.—V
  Instrument Specialties Co., 244 Bergen Blvd., Little Falls, N.J.—AF,AG
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
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  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulating Fabricators of N.E., 69 Grove St., Watertown 72, Mass.—AKAN
  Insulting Fabricators of N.E., 75 M. AL, AM, AN, AP, AS, AU, AV, AW, AAB, AAC, AAE, AAS
  Intrinational Electronic Research Corp., 175 W. Magnolia Blvd., Burbank, Calif.—AV
  Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.—AJ
  Jacobson Nut Mfg. Corp., Box
- N.J.-JAN F
- AN Hardware Mfg. Co., 75 N. 11th St., Brooklyn 11, N.Y.-B,H,K,AA,AB,AE,AV, AAS
- Javes, Box 646, Redlands, Calif.---Y,AG,AAS JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y.---AAB

- JFD Mig. Co., 6101 16 Ave., Brooklyn 4, N.Y.-AAB
  Jiffy Clip Mig. Co., 128 Clinton Ave., Huntington, N.Y.-E
  Johns-Manville, 22 E. 40th St., New York 16, N.Y.-K
  Johnson Co., E. F., Waseca, Minn.-AA,AB, AC,AD
  Johnson Eng'g. Inc., 97 Summit Ave., Summit, N.J.-T,AD,AAS
  Kahn & Co., 541 Windsor St., Hartford 1, Conn.-AAS
  Kaywoff Products Co., Overton, Nebr.-C,M, AE,AN,AO
  Kees Mig. Co., F. D., Drawcr 8, Beatrice, Nebr.-B,Q,AG
  Kellogg Switchboard & Supply, 79 W. Monroe St., Chicago 3, 111.-AT
  Keystone Electronics Corp., 423 Broome St., New York 13, N.Y.-B,U,AG,AK,AN,AQ, AAS
  Keystone Watch Case & Instrument Div.,
- New York 13, N.Y.-B,U,AG,AK,AN,AQ, AAS
  Keystone Watch Case & Instrument Div., Riverside Metal Co., 1 Pavilion Ave., River-side, N.J.-AG,AAS
  Klincher Locknut Corp., 2153 Hillside Ave., Indianapolis, Ind.-I,S
  Kolton Electric Mfg. Co., 123 N. J. Railroad Ave., Newark 5, N.J.-AG
  Kulka Electric Mfg. Co., 633 S. Fulton Ave., Mount Vernon, N.Y.-C.U,AH
  Kupfrian Mfg. Co., 367 State St., Binghamton, N.Y.-H,AA,AB,AC,AD
  Laboratory Equip. Corp., Hilltop Rd., St. Joseph, Mich.-AAE,AAF
  Laidman & Co., 1308 N. Halsted St., Chicago 2, 111.-J,K,AJ,AK,AO
  Laminated Sheet Products Corp., 449 Neponset St., Norwood, Mass.-AN
  Lamoree, C. D., 1325 San Julian St., Los An-geles 15, Calif.-M,AK,AN,AX
  Lamson & Sessions Co., 1971 W. 85 St., Cleve-land 2, Ohio.-X,Y,Z
  Larson Co., Chas. O., P.O. Box 358, Sterling. III.-A,AG
  Laughlin Co., Thomas, 143 Fore St., Portland 6, Me.-A,C
  Leet Electronic Labs., 233 Dudley St., Boston 19, Mass.-AG
  Lerco, Div. Lynn-Deatrick, Inc., 501 S. Var-ney St., Burbank, Calif.-B,G,I,Q,T,U,AQ, AAS
  Lewis Spring & Mfg. Co., 2656 W, North Ave.,

- AAS Lewis Spring & Mfg. Co., 2656 W. North Ave., Chicago 47, Ill.—AF Linear Inc.. State Rd., & Levick St., Philadel-phia 85, Pa.—KV, AO Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill.—H.L.AA.AB Lion Fasteners Inc., 500 Main St., Honeoye Falls. N.Y.—I

- Lord Mfg. Co., 1635 13 St., Erie, Pa.-H,AE, AG
- Lord Mfg. Co., 1635 13 St., Erie, Pa.-H,AE, AG
  AG
  Lorentzen, Inc., H. K., 391 W. Broadway, New York 12. N.Y.-J
  Lundey Associates, 694 Main St., Waltham 54. Mass.-B
  Lynn Electronic Research Co., 9 W. Magnolia, Burbank, Calif.-AU,AAS
  Makin-Illion Co., 396 Coit St., Irvington 11, N.J.-Q.AAB,AAG
  Mandex Mfg. Co., 2608 W. 16 St., Chicago 8, Ill.-U.AN,AAB
  Mansol Ceramics Co., 140 Little St., Belleville 9, N.J.-AW
  Martindale Electric Co., Box 617, Edgewater Br. Cleveland 7, Ohio-AK
  Mathis Tower & Equip. Co., 2200 E. Washing-ton St. E. Peoria, Ill.-A,B,M,Q,AG,AAB
  Mayfair Molded Products Corp., 4440 Elston Ave., Chicago 30, Ill.-K,M,AD,AAG
  MB Mfg. Co., 1060 State St., New Haven 11, Conn.-M,AE
  Methode Mfg. Corp., Roselle, N.J.-K,AM

- MB MIS. CO., LOC Conn.-M.AE Metal Textile Corp., Roselle, N.J.-K,AM Methode Mfg. Corp., 2021 W. Churchill St., Chicago 47, Ill.-AV

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- Metpro. Inc., R.I., 230 Toronto Ave., Providence 5, R.I.—1
  Micacraft Products, Inc., 701 McCarter Hwy., Newark, N.J.—AX
  Mica Insulator Co., P.O. Box 1076, Schenectady 1, N.Y.—B,K,L,M,Q,AB,AD,AN
  Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, III.—AF,AG
  Milford Rivet & Machine Co., Milford, Conn.—W

- W W Milleh, Mfg. Co., James, 150 Exchange St., Malden, Mass.-B,H,O,AA,AB,AS,AV,AY Miller Electronics, 2840 Naomi St., Burbank, Calif.-AG,AAB Milwaukee Stamping Co., 800 S. 72 St., Mil-waukee 14, Wisc.-AG,AAS Miniature Precision Bearings Inc., 101 Car-penter St., Keene, N.H.-AAH Minn. Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.-V Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.-B,K,M,AE,AJ,AK,AN,AO,AX, AY,AAE,AAG Mitronics, Inc., 232 13th Ave., Newark 2, N.J.-AW AY, AAE, AAG Mitronics, Inc., 232 13th Ave., Newark 2, N.J.-AW Modern-Aire Mfg. Corp., 4436 W. Roosevelt Rd., Chicago 24, 111.-Q.S.Z.AK Modern Wire Co., 39-30 Review Ave., Long Island City 1, N.Y.-AP, AR Molding Specialists, 289 Nepperhan Ave., Yonkers 2, N.Y.-L.S Moore Co., Howard J., 266 William St., New York, N.Y.-J,KAJ, AK.AN, AO Mueller Electric Co., 1583 E. 31 St., Cleve-land 14, Ohio-E, AP Mueller Laboratory, 239 W. Maple Ave., Mon-rovia, Calif.-B Multi-Tron Laboratory, 4624 W. Washington

Mueiler Laboratory, 239 W. Maple Ave., Monrovia, Calif.—B
Multi-Tron Laboratory, 4624 W. Washington Blvd., Chicago 44, III.—AG
Murray Plastics Co., 26 Cottage St., Poughkeepsie, N.Y.—B,H,AB,AD,AK,AN,AU,AAE, AAG
Nagel—Chase Mfg. Co., 2811 N. Ashland Ave., Chicago 13, III.—AAB,AAC
National Co., 61 Sherman St., Malden 48, Mass.—S,AA,AB,AC,AS,AV
National Electric Products Corp., 2 Gateway Center, Pittsburgh 22, Pa.—AAB
National Fabricated Products, Inc., 2650 W. Belden. Chicago 47, III.—D,G,U,AG,AI,AM, AN,AQ
National Gasket & Washer Mfg. Co., 124 E. 25 St., New York 10, N.Y.—J,K,AG,AI.AJ,AK, AM, AO,AU
National Instrument Co., 28 E. 26 St., New York 10, N.Y.—J,K,AG,AI.AJ,AK, AM, AO,AU
National Research Corp., 70 Memorial Dr., Cambridge, Mass.—I
National Tel/Tonics Corp., 35 St. Casimir

National Research Corp., 70 Memorial Dr., Cambridge, Mass.—I
National Tel-Tronics Corp., 35 St. Casimir Ave., Yonkers, N.Y.—V
National Vulcanized Fibre Co., Maryland Ave., & Beech Sts., Wilmington, Dela.—AK.AN
Neosil Products, Div. of Rubber Assoc., 1
E. 57 St., New York 22, N.Y.—K.M.AN.AO, AV

Neosil Products, Div. of Rubber Assoc., 1
E. 57 St., New York 22, N.Y.-K.M.AN.AO, AY
Newark Radio Labs., Box 33, Eastham 3, Mass.-AAH
Newcomb Spring Corp., 3902 7th Ave., Brooklyn, N.Y.-AF
New Departure, Div., GM, Bristol, Conn.
New Hampshire Ball Bearings. Inc., 20
Grove St., Peterborough, N.H.
New Products Co., 1069 E. 54th St., Indianapolis, Ind.-Q
Nichols Products Co., 325 W. Main St., Moorestown, N.J.-AN.AAH
Nielson Hardware Corp., 770 Wethersfield Ave., Hartford 14, Conn.-I.O.AG.AAE
Northern Metal Products, 9565 W. Grand Ave., Franklin Park, III.-AG
Nylok Corp., E. 14 St. & Grand Central Ave., Elmira Heights, N.Y.-A,J.S.T.U.W.Y.Z
Oak Mfg. Co., 1260 Clybourn, Chicago, III.-H
Pacific Universal Products Co., 168 Vista Ave., Pasadena 8, Calif.-P
Palnut Co., 61 Cordier, Irvington, N.J.-I.S
Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
Parker-Kalon Corp., 200 Varick St., New York 14, N.Y.-I.X.Y
Parts Producing Corp., 1861 2 Ave., New York 28, N.Y.-H.LAA.AB
Penn Eng. & Mfg. Corp., Box 311 Doylestown, Pa.-I
Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 34, Pa.-J,K.L., M.A.I.AJ.AK,AM,AN,AO
Permonite Mfg. Co., 4554 N. Broadway, Chicago 40, III.-AK,AN
Petorff. Peter A., 127 Water St., New York 5, N.Y.-B,C.G.L.Q.AA,AC,AF,AP,AAS
Phaoorn Co., 161 Pasadena Ave., S. Pasadena, Calif.-G.U
Pheno-Tron, Inc., 455 Main St., New Rochelle, N.Y.-AN
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, III.-A,I.S,X.Y.Z.AI
Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.-A, B, C, D, E, I, K, L, M, N, O, Q, S, T. U. V. W, X, Y, Z, AA, AB, AC, AD, AF, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AW, AX, AY, AAB, AAC, AAD, AAE, AAS
Philmore Mfg. Co., 113 University Pl., New York 3 N.Y.-G, AP, AR

Philmore Mfg. Co., 113 University Pl., New York 3 N.Y.-G,AP,AR

Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.--A,Q,AAB Pix Mfg. Co., 5 Oliver St., Newark 2, N.J.-B,C,G,I,K,M,Q,T,W,AG,AI,AM,AAB

Plasticraft Products Co., 1 Station Plaza, West Nyack, N.Y.-AN
Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-C.Q
Ponn Machine Cutting Co., 25 Curve St., Boston 11, Mass.-K
Powdered Metals Products Corp., 9335 W. Belmont Ave., Franklin Park, Ill.-AAH
Precision Metal Products Co., 14 Elm St., Stoneham 80, Mass.-AAB,AAS
Precision Plastic Products 225 N. Racine Ave., Chicago 7, Ill.-AJ,AKA,NAO
Progressive Mfg., Torrington, Conn.-I.S.W.Z
Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.-C.U
Q-Line Mfg. Corp., 1662 61st St., Brooklyn 19, N.Y.-I.N.R.S.T.W.X.Y.Z.AF.AG,AH,AI, AL,AM.AU.AV.AAS
Quaker City Gear Works, Bethayres, Pa.-L
Rada Froducts Co., 2911 W. Carroll Ave., Chicago 12, Ill.-Q.AG
Radio Frequency Labs., Boonton, N.J.-AY, AAA,AAE
Rapid Specialties Co., 325 W. Huron St., Chi-cago 10, Ill.-E
Ruu Fastener Co., 142 5th Ave., New York 11, N.Y.-DI.M.W.AI,AM,AS
Rayto Corp., 5th St., & Cannon Ave., Lans-dale, Pa.-C.Q.AG,AI,AM,AV
Red Seal Electric Co., 6321 Detroit Ave., Cleve-land 2, Ohio-B,AK.AN
Reed & Prince 1 Duncan Ave., Worcester 1, Mass.-A.I.S.W.X.Y.Z
Reilse Spring & Wire Forms Co., 3167 Ful-ton Rd., Cleveland 9, Ohio-D,I,AF,AG,AU, AB,AAC
Remardt, Inc., 98 Kirkland St., Cambridge 88, Mass.-H
Research Devel Mfg., 425 E. Collom St., Phila-delphia 44, Pa.-AD,AAS
Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-C.Q.AG,AS,AV,AAB,AAE
Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-C.Q.AG,AS,AV,AAB,AAE
Rhodes & Sons, 12 Porter St., Melrose Park, Ill.-AN

Richardson Co., 2790 Lake St., Melrose Park,

III.—AN Rogan Bros., 8031 N. Monticello, Skokie, III. BAN,AAE

B,AN,AAE Rollon Rubber Products, 1805 Jerome Ave., Bronx 53, N.Y.-K.M.AH,AO Romar Plastics, Inc., 1311 E. Main St., St. Charles, III.-AN,AAE Russell, Burdsall & Ward, Portchester, New York-A,R.W.X.Y.Z St. Marys Carbon Co., State St., St. Marys, Pa.-B

Mussel, J. Midshi & Vardy, Forenesser, J. W. York.-A. B., W.X. Y.Z.
St. Marys Carbon Co., State St., St. Marys, Pa.-B
Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.-A. H. I. M. S. T. V. W. X. Y. Z. AG, AI, AM.AAS
Screw Corp. of America, 103 Park Ave., New York 17, N.Y.-A.I. W.X.Y.Z
Seaboard Coil Spring Div., Assoc., Spring Corp., 15001 S. Broadway, Gardena, Calif. -D.AF, AG
Sealectro Corp., 186 Union Ave., New Rochelle, N.Y.-B, G, AE
Seral. Edward, 72 Spring St., New York 12, N.Y.-M.
Set Screw Mfg., 422 Main, Bartlett, Ill.-I,Y

N.Y.-B.G.AE Seral. Edward, 72 Spring St., New York 12, N.Y.-M Set Screw Mfg., 422 Main, Bartlett, Ill.-I,Y Stakeproof Inc., St. Charles Rd., Elgin, Ill.-I,L.S.Y.W.X.AH,AL. Sheffco Mfg. Corp., Grand & Ruby Aves., Palisades Park, N.J.-AG,AM,AN Sillcocks-Miller Co., 10 W. Parker Ave., Maplewood, N.J.-AN Sinclair Mfg. Co., PO. Box 243, Chartley, Mass.-A. B. G. Q. T. V. Y. AI, AG. AK, AM,AN,AU,AAS Skydyne, Inc., River Rd., Port Jervis, N.Y. -AAE Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.-D.E.H.I,M.S.X.Z.AB,AE, AF,AG,AI,AK,AL,AM,AR,AS,AT,AV,AAS Smith Mfg. Co., Nathan R., 105 Pasadena Ave., S. Pasadena. Calif.-AG South Chester Corp., Lester, Pa.-I,W South Metal River Products Co.. 277 Old Bridge Turnpike, South River, N.J.-AAB Spaulding Fibre Co., 310 Wheeler St., Tona-wanda, N.Y.-B,K.M.S.AK,AN,AAS Sperti Faraday Inc., 1322 E. Church St., Adrian, Mich.-AS Spring Packing Corp., 332 S. Michigan Ave., Chicago. 111.-J S. & S. Mfg. Co., 589 62nd St., W. New York, N.J.-H.I,S.AU,AAS Standard Locknut & Lockwasher, Inc., 2250 Valley Ave., Indianapolis 18, Ind.-I,S,T,V, AL,AAS Standard Pressed Steel Co., Box 899, Jenkin-town, Pa.-A,I,S,T,U,Y,AAD

Standard Pressed Steel Co., Box 899, Jenkin-town, Pa.-A,I,S,T,U,Y,AAD Stanley Works, 195 Lake St., New Britain, Conn.-N

Star Fuse Co., 235 Canal St., New York 13, N.Y.-E

Star Stainless Screw Co., 190 Union Ave.,

- Paterson, 1, N.J.—A,B,C,H,I,N,R,S,T,U,W, X,Y,Z,AF,AG,AJ,AK,AAS
- Steel Co., Herman D., Lafayette Bldg., Phila-delphia 6, Pa.-B,L,S,T,U,AAS Sterling Bolt Co. 375 W. Erie St., Chlcago 11, Ill-A,C,H,I,S,V,W,X,Y,Z,AI,AJ,AK,AL, AM, AN, AO, AAS

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and a supervision of the ELECTRONIC INDUSTRIES DIRECTORY

Sterling Precision Instrument Corp., 34-17 Lawrence St., Flushing, N.Y.-H,L,AA,AB,

- Lawrence St., Flushing, N.Y.-H,L,AA,AB, AD Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, 111.-AA,AC Stokes Molded Products, Taylor & Webster Sts., Trenton 4, N.J.-AN,AO Stone City, P. O. Box 351, Bedford, Ind.-D, I, N.Q.AG.AI,AK,AM Stronghold Screw Products, 216 W. Hubbard St., Chicago 10, 111.-A,I,S,W,X,Y,Z,AI,AL, AM Suckle Electronics Co., 22 & Hayes Ave., Cam-den 5, N.J.-AG,AAG Superior Steatite & Ceramic Corp., 83 W. Forest Ave., Englewood, N.J.-AW Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-U,AQ,AV Taylor Fibre Co., Norristown, Pa.-M,V,AD, AG,AK,AN,AU.AAS Telerad Mfg. Corp., 144 Broadway, New York 18, N.Y.-AG Television Products Co., 1147 N. McCadden Pl., Hollywood 38, Calif.-AAA,AAE Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. -L Tempo T-V Products Co., 2450 Ramona Blvd.

Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. -L
Tempo T-V Products Co., 2450 Ramona Blvd., Los Angeles 33, Calif.-Q,V
Thomas & Betts Co., 36 Butler St., Elizabeth 1, N.J.-AH
Thompson-Bremer & Co., 520 N. Dearborn St., Chicago 10, IIL-A.I.S.X.AI,AL
Thompson Clock Co., H. C., 88 Federal St., Bristol, Conn.-A,D.E,G.J.K.L.M.Q,S.T.U.X. Y,Z.AI,AJ,AK,AL,AM,AN,AO
Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N.J.
Times Facsimile Corp., 540 W. 58th St., New York 19, N.Y.-AV
Tinnerman Products, Inc., P.O. Box 6688, Cleveland 1, Ohio-C,D,I,S,V,AU,AAG
Transcoil Corp., 107 Grand St., New York 13, N.Y.-L
Trico Fuse Mfg. Co., 2948 N. 5th St., Mil-waukee 12, Wisc.-C,E,AV
Tub.Lok Mfg. Co., 767 Lorma Verde. Palo

- Tri-Dex Co., P.U. Box Levi, Ann AN Tub-Lok Mfg. Co., 767 Loma Verde, Palo Alto, Calif.—AV TV Hardware Mfg. Co., 919 Taylor Ave., Rock-ford, II.—A.B.C.P.Q.AG.AAB.AAC T-V Products Co., 152 Sandford St., Brooklyn 5, N.Y.—C.Q.AE.AG Ucinite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.— I.AE.AG.AAC

459 Watertown St., Newtonville, Mass.— I.AE,AG,AAC
UM & F Mfg. Corp., 10929 Vanowen St., N. Hollywood, Calif.—AG
United-Carr Fastener Corp., 31 Ames St., Cambridge 42. Mass.—C.I.M.U.S.AE,AG
United Screw & Bolt Corp., 2513 W. Culler-ton St., Chicago 3, Ill.—A.I.S.X.Y.Z.AG,AI, AM.AAS
U.S. Eng'g. Co., 521 Commercial St., Glendale 3, Calif.—B.AU, AAB, AAE, AAS
U.S. Gasket Co., 602 N. 10 St., Camden, N.J. —B.K.M.AC
U. S. Rubber Co., 1230 Avenue of the Ameri-

- D.S. Gasket Co., 602 N. 10 St., Califield, N.S. —B,K,M,AC
  U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N.Y.—AN,AO
  Universal Mfg. Co., 410 Hillside Ave., Hillside, N.J.—AG
  Universal Specialty Co., P. O. Box 1892, Boston 5, Mass.—S
  Utilities Service Co., \$1 Pine St., Allentown, Pa.—A,V.Z.AM
  Vallorbs Jewel Co., P.O. Box 958 Lancaster, Pa.—G,S.T.AAS
  Vemaline Products Co., P.O. Box 222, Hawthorne, N.J.—AQ
  Viking Electric, 21343 Roscoe Blvd., Canoga Park, Calif.—AQ,AAS
  Virginia Electronics Co., River Rd. at B & O
  R.R., Washington 16, D.C.—B,Q,AAB,AAE, AAS
  Wabash Metal Products Co., 1569 Morris St., Webset, Yad AC
- Wabash Metal Products Co., 1569 Morris St.,
- Walden Kohnoor Inc., 47-16 Austel Pl., Long Island City 1, N.Y.-I,S.V.AI-Waldman & Sons, Joseph, 133 Coit St., Irv-ington 11, N.J.-T,U.AAS Waldom Floatpanics Inc. 4625 W. 53 St.

- ington 11, N.J.—T,U.AAS Waldom Electronics Inc., 4625 W. 53 St., Chicago 82, 111.—I.M.S.X.Y.Z.AK.AL,AM.AO Wall Mfg. Co., Grove City, Pa.—AG.AAS Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 13, Calif.—A,B,C,D,I,M.S,X.Y, Z,AF,AH,AJ,AK,AL,AM,AR,AS,AU,AAB Walter Lee, Chemical Corp., 567 3rd Ave., New York 16, N.Y.—K,M,V,AN,AO,AX.AY Waltham Screw Co., 77 Rumford Ave., Wal-tham 54, Mass.—I,S,Y,Z,AAD,AAS Warren Plastics Corp., S. Ivyine St. Warren
- Warren Plastics Corp., S. Irvine St., Warren,
- Pa.-AQ.AS Weckesser Co., 5261 N. Avondale Ave., Chicago 30, Ill.-C
- Wenzel Projector Co., 2509 S. State St., Chi-cago 16, Ill.-AR

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- Western Int'l. Co., 45 Vesey St., New York 7, N.Y.-D.E.U.AA.AB
  Westfield Metal Products Co., 163 Elm St., Westfield Metal Products Co., 163 Elm St., Westfield Mass.-S
  Westline Products, 600 E. 2nd St., Los Angeles 54, Calif.-F
  Whitehead Stamping Co., 1661 W. Lafayette Blvd., Detroit 16, Mich.-C.K.U.AG.AI.AJ, AKA.M.AN.AO.AU.AX
  Willard Storage Battery Co., 1220 Huron Ed., Cleveland, Ohio-C
  Wilmard Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.-AA.AB
  Wilmington Fibre Specialty Co., P. O. Drawer 1028, Willmington 99, Del.-K.M.AG.AK
  Winzeler Mfg. & Tool Co., 1712 W. Arcade Pl., Chicago 12, III.-L
  Worcester Pressed Aluminum Corp., 13 Hope Ave., Worcester, Mass.-AG
  Wrought Washer Mfg. Co., 2275 S. Bay St., Milwaukes 7, Wisc.-AG.AI.AM
  Wycenbeek & Staff, 223 N. California Ave., Chicago 12, II.-AC
  York Co., Otto H., 69 Glenwood Pl., E. Orange, N.J.-AZ
  Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.-U.AG
  Zierick Mfg. Corp., Beechwood & Rockdale Ave, New Rochelle, N.Y.-C.AG.AR.AS.AAB

Headphones, crystal .....A Headphones, dynamic .....B Headphones, hearing aid .....C

Headphones, magnetic .....D

Airborne Electronics Inc., 155 1st St., Mineola N.Y.-B.D
Allied Electronic Equip. Co., 425 Brannan St., San Francisco 7, Calif.-B.D
Bassett, Inc., Rex, 1314 N.E. 17th Court, Ft. Lauderdale, Fla.-A
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.-D
British Electronic Sales, 23-03 45 Rd., L.I., N.Y.-A.C.D
British Industries Corp., 164 Duane St., New York 13, N.Y.-B
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-A,C
Cannon Co., C.F.-Springwater, N.Y.-D
Connuction Devices Co., 2331 12 Ave., New York City 27, N.Y.-D
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.-D
Dictograph Products Inc., 95-25 149th St., Jamaica 35, N.Y.-C.D
Dyna-Labs, Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-C.D
Ectro, Inc., 425 Sandusky St., Delaware, Ohio-A
Federal Telephone & Radio Co. Div. of IT&T., 100 Kingsland Rd., Clifton. N.J.-D

Ohio—A Pederal Telephone & Radio Co. Div. of IT&T, 100 Kingsland Rd., Clifton, NJ.—D Fenton Co., 15 Moore St., New York 4, N.Y.— C.D

C.D.
G. & M. Equipment Co., 7315 Varna Ave., N. Hollywood, Calif.—A.B
Insuline Corp. of America, 186 Granite St., Manchester, N.H.—B
Lear, Inc., 8171 S. Bundy Dr., Santa Monica, Calif.—D
MacKay Radio and Telegraph Co., 345 Hud-son St., New York, N.Y.—D
Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, III.—J.N
Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, III.—B.C
Permaflux Corp., 4900 W. Grand Ave., Chi-

Permafiux Corp., 4900 W. Grand Ave., Chi-cago 39, Ill.-B Philmore Mfg. Co., 118 University Pl., New York 3, N.Y.-D

> Manufacturers using the LOCAL-IZER INDEX are listed alphabeti-

cally. The LOCALIZER INDEX—an exclusive feature of the 1953 ELECTRONIC INDUSTRIES DIREC-TORY—lists local "reps" and

branch offices (names, addresses,

telephone numbers, territory covered), home telephone numbers,

executive personnel, trade names.

TELE-TECH

S ELECTRONIC INDUSTRIES

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TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

LOCALIZER INDEX

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- Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.-D Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.-B,D Sears Co., M.J., Roxbury, N.Y.-B,D Sonotone Corp., Elmsford, N.Y.-C,D S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, N.Y.-A,B Soundscriber Corp., 146 Munson St., New Haven 4, Conn.-B,D Specialty Assembling & Packing Co., Specialty Eng. Div. 79 Clifton Pl., Brooklyn 38, N.Y. -D

- -D Stromberg-Carlson Co., 100 Carlson Rd., Roch-ester 3, N.Y.-B Super Ear Products Co., 675 Merrick Rd., Lynbrook, N.Y.-C,D Superex Electronics Corp., 4 Radford Pl., Yonkers, N.Y.-D Tayloreel Corp., 3 Ruter St., Rochester 6, N.Y.-C

- N.Y.-C Corp., Park Ave., Huntington, N.Y.-B,D Telex, Inc., 1633 Eustis St., St. Paul 1, Minn.-B,C,D Trimm, Inc., 400 W. Lake St., Libertyville, Ill.-D U S Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.-A,B Winslow Co., 9 Liberty St., Newark 5, N.J.-D

# 33—INDICATORS

Indicators, annunciatorsAS
Indicators, antenna position
Indicators, broadcastB
Indicators, data display
Indicators, densityC
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Indicators, deviation AP
Indicators, dielectric constant E
Indicators, electronic
Indicators, film thickness
Indicators, fluid conductivityG
Indicators, fluid flow
Indicators, frequency
Indicators, ground detector, AT
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Indicators, humidity
Indicators, illumination
Indicators, linear displacement AU
Indicators, liquid level
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Indicators, modulationAV
Indicators, moisture
Indicators, null
Indicators, ocean depthP
Indicators, oxygenQ Indicators, PHR
Indicators, photographic exposureS
Indicators, positioning
Indicators, pressure
Indicators, radiationW
Indicators, R-F
Indicators, servo
Indicators, smoke & combustionAA
Indicators, sound levelAB
Indicators, specific gravityAC
Indicators, speed
Indicators, strain
Indicators, telemeteringAE
Indicators, temperature
Indicators, temperatureAF Indicators, timingAG
Indicators, torque
Indicators, turbidity
Indicators, vacuum
Indicators, vibration
Indicators, volumeAK Indicators, weightAL
indicators, weight At
Indicators, wind speedAN

Ace Instrument Co., 172 Pacific St., Brooklyn 1, N.Y.-T,AA Advance Electronics Co., 451 Highland Ave., Passaic. N.J.-I Advance Instrument Corp., 1709 F St., Belmar, N.J.-Y

- N.J.-Y N.J.-Y Advanced Electronics, Inc., 94 Silas Deane Hwy., Rocky Hill, Conn.-AW Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, III.-E.F.G.H.K.O.T.V.Y.AD,AH,AL, AO,AQ,AR,AU,AW Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.-I.AG Air Associates, Inc., 511 Joyce St., Orange, N.J.-AE,AO,AR Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-I.R.W.X.AO,AR

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Alina Corp., 401 Broadway, New York 18, N.Y.-L
- Alina Corp., 401 Broadway, New York 13, N.Y.-L
  American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—Y
  American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Man-hattan Beach Calif.—AD
  American Instrument Co., 8050 Georgia Ave., Silver Spring, Md.—F,K.N.R
  American Optical Co., Instrument Div., Box A. Buffalo 15, N.Y.-J
  Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.—M
  Applied Science Corp. of Princeton, P. O. Box 44, Princeton, N.J.—AE
  Arnoux Corp., 1357 Hawthorne Blvd., Haw-thorne, Calif.—AF
  Assembly Products, Inc., Chesterland 21, Ohio —W.X.AB.AF.AM
  Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.—YAN
  Atomic Instrument Co., 84 Mass. Ave., Cam-bridge 39, Mass.—AD.AR
  Atomiab, Inc., 489 5 Ave., New York 17, N.Y. —WAG
  Audicon Electronics Inc., 216 Lyon St., Pater-son A, N.J.—Y. VABAP

- bridge 39, Mass.-AD,AR
  Atomlab, Inc., 489 5 Ave., New York 17, N.Y. -W,AG
  Audicon Electronics Inc., 216 Lyon St., Paterson 4, N.J.-X.Y,AB,AR
  Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.-AE,AM
  Authorized Mfrs. Co.,914 Wyckoff Ave., Brooklyn 27, N.Y.-AE,AM,AP,AR,AW
  Automatic Temperature Control Co., 5212
  Pulaski Ave., Philadelphia 44, Pa.-C,F,M, N.Y.,Y,AC,AH,AL
  Avien, Inc., 58-15 Northern Blvd., Woodside 77, N.Y.-H,M,Q,AF
  Avion Instrument Corp., 299 State Highway 17, Paramus, N.J.-V.Y,AH
  Bailey Meter Co., 1050 Ivanhoe Rd.. Cleveland 10. Ohio-G,H,M,Q,R,Y,AA,AF,AQ
  Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.-M,P,V,AD,AG,AL
  Ballantine Laboratories, Boonton, N.J.-AM
  Barber-Colman Co., 1300 Rock St., Rockford, III.-T,AF,AR
  Barter & Williamson, Inc., 237 Fairfield Ave.. Upper Darby, Pa.-I
  Barside Watch Tool Co., 20-02 Utopia Parkway, Whitestone 57, N.Y.-T,AG,AH,AU
  Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton I, Calif.-R
  Beckman & Whitley Inc., 985 San Carlos Ave.. San Carlos, Calif.-W,AF,AN
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.-P,AE

- Beck's Inc., 28 E. 5 St., St. Paul 1, Minn. —AE
  Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.—P,AE
  Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.—K
  Blydworth Marine, 92 Gold St., New York 38, N.Y.—P,AR
  Bogue Electric Mfg. Co., 52 Iowa Ave., Pater-son 3, N.J.—AF
  Borden Engineering Co., 63 Clinton Ave., New Providence, N.J.—AT
  Boston Auto Gage Co., 70 West St., Pittafield, Mass.—M
  Bourns Laboratories, 6135 Magnolia Ave., Riv-erside, Calif.—T,V,AJ,AU
  Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.—F,N
  Bristol Co., Waterbury 20, Conn.—C,G,H,K,M, O. R. T. U, V. Y. AA. AC, AD, AE, AF, AG, AI, AJ, AK, AL, AM, AN, AP, AQ
  Brooke Engineering Co., 4517 Wayne Ave., Philadelphia 44, Pa.—AA
  Brown Instrument Div., Minneapolis-Honey-well Regulator Co., 3405 Perkins Ave., Cleveland 14, Ohio—N,AB,AD
- AF.AJ Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-N.AB,AD, Budd-Stanley Co., 48-01 22nd St., Long Island City 1, N.Y.-X Burke & James, 321 S. Wabash Ave., Chi-cago 4, Ill.-S B/W Controller Corp., 2200 E. Maple Rd., Birmingham, Mich.-M Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.-V Calidyne Co., 120 Cross St., Winchester, Mass. -AW

- Calidyne Co., 120 Cross St., Winchester, Mass. -AW California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.-AO Cambridge Instrument Co., Grand Central Terminal, New York 17, N.Y.-K.O.Q.R.W Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.-A.T.X.AR Central Scientific Co., 1700 W. Irving Park Rd., Chicago. III.-O Chatham Electronics. Div., Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.-W Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.-H,U,AF Chromatic Television Labs., 1501 Broadway, New York 36, N.Y.-AMAO.AR Clevg Laba., Inc., 142 S. Livingston Ave., Livingston, N.J.-Z,AF Cleveland Instrument Co., 735 Carnegie Ave., Cleveland I5, Ohio-N.T.AP.AR.AU Coleman Eng'g. Co., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.-T Colortone Television, 238 William St., New

- Colortone Television, 238 William St., New York 88, N.Y.—I Colvin Labs., 12 Court, Morristown, N.J.—V Combustion Control Corp., 718 Beacon St., Bos-ton 15, Mass.—AA

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- Computer Instruments Corp., 1964 Utica Ave., Brooklyn 34, N.Y.—T.AE Conn. Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.—AS Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.—V.AD,AO, AW
- AW

- Madre Villa, Pasadena Ib, Calir.--V.AD,AO, AW
  Consolidated Vacuum Corp., 1775 Mt. Read Blvd., Rochester 3, N.Y.--AJ
  Control Components Co., 1 Holden St., Brook-line 46, Mass.--Y,AU
  Control Eng'g. Corp., Controls Div., 934 Wash-ington St., Norwood, Mass.--A,V,AF
  Corning Glass Works, Corning, N.Y.--W
  Cosmo Eng'g. Labs., Mountain Ave., Hacketts-town, N.J.--AQ
  Courter Products, Div. of Model Eng'g. & Mfg., Boyne City, Mich.---VAF,AN
  Crown Controls Co., 40 S. Washington St., New Bremen, Ohio--A
  Daven Co., 191 Central Ave., Newark 4, N.J.--I, U.AB,AK
  Curtiss-Wright Corp., Electronics Div., 631

- I, U, AB, AK Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-N, W, Y Daystrom Instrument, Archbald, Pa.-V, W, Y. AE, AR

- AE,AR Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.—Y.AE,AG,AR Dayton Aviation Radio & Equip. Corp., RR #3, Troy, Ohio— Daytronic Corp., 216 Main St., Dayton 2, Ohio —F,H,M,N,T,V,AD,AH,AJ, AL, AO, AP, AR, AU,AW

- F.H.M.N.T.V.AD,AH,AJ, AL, AO, AP, AR, AU,AW
   Defender Instrument & Regulator Co., 815 Clark Ave., St. Louis 2, Mo.-V.AA,AJ
   DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-S
   Delaware Optical Labs, 36 Williams St., Lansdowne, Pa.-S
   Deltron, Inc., 2905 N. Leithgow St., Philadelphia 33, Pa.-AM,AR
   Demco Products, P.O. Box 5042, Philadelphia 11, Pa.-AR
   De-Tec-Tronic Laba., 1711 Terra Cotta Pl., Chicago 14, III.-AA.AI
   Detroit Controls Corp., 1650 Broadway, Red-wood City, Calif.-AE.AO
   Devol Research Co., Brookside Dr., Green-wich, Conn.-T.Y.AU
   Dice Co., J. W., 1 Engle St., Englewood, N.J.--F
   Disital Instrument Co., 212 Almeria Ave.

- Devol Research Co., Brookside Dr., Greenwich, Conn.-T.Y.AU
  Dice Co., J. W., I Engle St., Englewood, N.J.-F
  Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-I.AG
  Dillon & Co., W. C., 14620 Keswick St., Van Nuys, Calif.-AF,AL
  Doelcam Corp., 1400 Soldiers Field Rd., Boston 35, Mass.-T.Y.AE,AF,AH,AM,AR,AU
  Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.-M
  Dubings Co., 41-10 45 St., Long Island City 4, N.Y.-U,AB
  Duncan & Bayley, 785 Hertel Ave., Buffalo 7, N.Y.-Y
  Dwyer Mfg. Co., F.W., 317 8. Western Ave., Chicago 12, III.-V.AA.AN
  Dyna-Labs., Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-AB
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N.J.-H,M.T.V
  Ediaon, Inc., Thomas A., Instrument Div., 93 Lakeside Ave., W. Orange, N.J.-AF,AM
  Eldema Corp., 5827 E. Beverly Blvd., Los Angeles 22, Calif.-AO
  Electro-Devices, Inc., 4 Godwin Ave., Paterson 1, N.J.-AQ
  Electro Impulse Lab., 62 White St., Bed Bank. N.J.-U,X
  Electro Measurements, Inc., 4312 S. E. Stark St., Portland 16, Ore.-AM
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electro-Mechanical Instrument Co., 812 Chestnut St., Portland 18, Ora.-AM
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-Y.Z,AH,AQ
  Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.-AA,AF
  Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.-AA,AF
  Electronic Control Corp., 1200 E. M

AI,AR
Electronics Corp. of America, Combustion Control Div., 718 Beacon St., Boston 15, Mass.—AA
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, III.—H.AG
Electro-Physics Co., 287 E. Broadway, New York 7, N.Y.—C,L,S,AR
Electro Products Labs, 4501 N. Ravenswood Ave., Chicago 40, III.—V,AQ,AU,AW
Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.—Y
Electro-Tech Equip. Co., 808 Canal St., New

Electro-Tech Equip. Co., 808 Canal St., New York, N.Y.-E,I.L.M.N.O.A.A.AF,AT Elk Electronic Labs, 333 W. 52 St., New York 19, N.Y.-I.X.AR

Ellison Draft Gage Co., 548 W. Monroe St., Chicago 6, 111.—V,AJ El-Tronics, Inc., 437 N. 5th St., Philadelphia 23. Pa.—W,AE Endevco Corp., 689 S. Fair Oaks Ave., Pasa-dena 2, Calif.—AW Eng's. Research & Devel., Addison, 111.—D Epsco, Inc., 588 Commonwealth Ave., Boston 15. Mass.—AO,AR Equipment Crafters, Inc., 523 Winne Ave., River Edge, N.J.—W Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, 111.—AW Ess Instrument Co., 96 S. Washington Ave.,

13. III.—AW
Ess Instrument Co., 96 S. Washington Ave., Bergenfeld, N.J.—S.AI
Exact Weight Scale Co., 944 W. 5 Ave., Columbus 8, Ohio—AL
Federal Mfg. & Eng'g. Corp., 211 Stenhen St., Brooklyn 5, N.Y.—I
Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.—T.AF
Feedback Control, Inc., 1332 N. Henry St., Alexandria, Va.—Y
Femco, Inc., Irwin, Pa.—AE,AR
Fenval, Inc., 290 Pleasant St., Ashland, Mass. —AF

- -AF -Ar Ferrara Inc., 8106 W. 9 Mile Rd., Oak Park 37, Mich.-AG

- Ferrara Inc., S106 W. 9 Mile Rd., Oak Park 37. Mich.—AG
  Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. 4th St., Philadelphia 33. Pa.—C.F.M.N.O.R.V.AD.AF.AL.AR
  Fischer & Porter Co., 19 Warminister Rd., Hatboro. Pa.—C.H.M.V.AC.AE,AF.AJ
  Fisher Research Laboratory, 1961 University Ave., Palo Alto. Calif.—M
  Flader Inc.. Frederic, 583 Division St., N. Tonawanda, N.Y.—W
  Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y. —H.Y.AO,AR
  Foxboro Co., 3<sup>K</sup> Neponset Ave., Foxboro, Mass. —C.E.G.H.K.M.N.O.Q.R.T.V.AD.AF.AH.AL
  Franklin Electronics Inc., 415 W. Pike St., Briokolphia 40, Pa.—I,V.W.AD.AR.AU.AW
  Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—AM
  Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Baltimore 4, Md.—K.AF, AN
  F-R Machine Works. F-X-R Electronics &

- 1400 Taylor Ave., Baltimore 4, Md.-KAF, AN
  F-R Machine Works, F-X-R Electronics & X-Ray Div.. 26-12 Borough Pl. Woodside 77, N.Y.-U.W.X
  Gardner Lab. Inc., H. A., 4723 Elm St., Be-thesda 14. Md.-F.J.N
  Gates Radio Co.. 123 Hampshire St., Quincy, III.-B.I.X.AB.AK.AP,AR,AV
  General Cybernetics Corp., 1751 N. Coronado St., Los Angeles 26, Calif.-T
  General Devices, Inc., Washington Rd., Prince-ton, N.J.-AE,AO
  General Electric Co., Apparatus Div., 1 River Rd., Schenettady 5, N.Y.-A.F.I.K.L.M.O.S, T.V.W.Y.Z.AA.AB,AD,AE,AF,AG,AH,AI,AJ, AQ.AT.AW
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-I.L.AB,AM,AQ,AV,AW
  Georator Corp., Manassas, Va.-W
  Gertsch Products. 11846 Mississippi Ave., Los Angeles 25, Calif.-I
  Gimore Industries, Inc., 5713 Euclid Ave., Cleveland 3. Ohio-H.M.V.AD,AF,AH,AL,A, AP,AU.
  Gobe Industries, Inc., 1784 Stanley Ave., Dayton 4 Obi-AC

- Gilmore Industries, Inc., 5713 Euclid Ave., Cleveland 3. Ohio-H.M.V.AD.AF,AH.AL, AP.AU.
  Globe Industries. Inc., 1784 Stanley Ave., Dayton 4, Ohio-AG
  & M. Equipment Co., 7315 Varna Ave., North Hollywood, Calif.-I
  Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-W
  Gray Instrument Co., 64 W. Johnson St., Philadelphia 44.Pa.-AF
  Green, Henry J., 1191 Bedford Ave., Brooklyn 16, N.Y.--K
  Greenleaf Mfg. Co., 7814 Maplewood Ind. Ct., St. Louis 17. Mo.-A.H.T.V.Y,AD.AE, AG.AH.AJ.AM.AN.AQ.AR.AU
  Gulton Mfg. Corp., 212 Durham Ave., Metu-chen, N.J.-AW
  G. W. Associates. P. O. Box 2263, El Segundo, Cnlif.-X
  Halamore Mfg. Co., 2001 E. Artesia, Long Beach 5. Calif.-A.B.W.AE,AG.AO.AR.AS, AT.AU.AV
  Hanson-Gorrill-Brian. 1 Continental Hill, Glen Cove. N.Y.-T.Y.AF
  Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N.Y.-O
  Hastings Instrument Co., Newcomb Ave. & Ivy Home Rd.. Hampton, Va.-T.AJ.AN
  Hathaway Instrument Co., 1315 S. Clarkson St. Denver 10, Colo.-AD.A.J.AW
  Haydon Mfe. Co.. 245 E. Elm St., Torrington, Conn.-AG
  Haydon Mfe. Co.. 2255 University Ave., St. Philadelphia 40, Pa.-K.AC.AF
  Healy-Ruff Co.. 2255 University Ave., St. Paul 14. Minn.-M.V
  Herzog Miniature Lamp Works, 12-23 Jack-son Ave., Long Island City, N.Y.-U

- Herzog Miniature Lamp Works, 12-23 Jack-son Ave., Long Island City, N.Y.--L
- Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland 8, Ohio-G,H,I,L,X,AM, AN.AR
- Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-T,V,Y,AD,AE, AF,AG,AH.AU.AW
- Hoke. Inc., 136 S. Dean St., Englewood, N.J. --H

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Hunher & Phillips, 3800 N. San Fernando Blvd., Burhank, Calif.-L
Hunter Mfr. Co., 980 S. Linn St., Iowa City, Iowa-ACAR
Buppert Co., K. R., 6830 Cottage Grove Ave., Chicago 37, Ill.-AF
Illinous Testing Laba., 420 N. LaSalle St., Chicago 10, Ill.-AF
IL-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-H.I
Impact-O-Graph Corp., 1900 Euclid Ave., Cleveland 15, Ohio-AW
Inductograph Lab., Hop Brook Rd. Box 76, Brookfield, Conn.-V
Industrial Control Co., Straight Path & Ar-lington Ave., Wyandanch, N.Y.-Y.AM
Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.-AM,AR,AW
Industrial Electronics, 8060 Wheeler St. De-troit 10, Mich.-N.T.V.AD,AE,AL,AM,AR, AU

- AU Industrial Electronics Co., Hanover, Mass.--AR

- Industriai Electronics Co., Hanover. Mass.— AR
  Industriai Instruments Inc., 89 Commerce Rd., Cedar Grove, N.J.—G
  Industria: Nucleonics Corp., 1205 Chesapeake Ave., Columbus 12, Ohio—F,M.N.AL
  Industria: Test Equipment Co., 55 E. 11th St., New York 3, N.Y.—IY,AM,AP,AR
  Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.—F,AI
  Intri Business Machines Corp., 590 Madison Ave., New York 2, N.Y.—AG.AS
  International Medical Research Co., 60 E. 42
  St., New York, N.Y.—W
  Int? Research & Devel., Corp., 797 Thomas Lane, Columbus 14, Ohio—AW
  iq industries, 610 Wilshire Biva, Los Angeles 48, Calif.—E,G,L,M,O,W,AA,AG,AQ,AR
  Je-T Instruments, 441 Chapel St., New Haven, Conn.—I,AF,AM
  Jordan Electronics. 3025 Mission Rd., Alham-bra, Calif.—P
  Kahn & Co., 541 Windsor St., Hartford 1, Conn.—K,N,O,AQ,AR
  Kaiser Metal Products Inc., Bristoi, Pa.—Y
  Karton, P.O. Box 472, Huntington Beach, Calif.—Z
  Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.—I

- Kay Electric Co., 14 Maple Ave., Pine Brook,

- Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-I Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.—AR Kearfott Co., 1378 Main Ave., Clifton, N.Y.— T,Y.AO Ketay Labs., Div. Norden Ketay Corp., 555 Broadway, New York 12, N.Y.—H Keystone Watch Case & Instrument Div., Riverside Metal Co., Riverside, N.J.—T Kinetx Inst. Co., 902 Broadway. New York 10, N.Y.—Y Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.—Z Kirkland Co., 10 King St., Morristown, N.J.— AS

- AS Kocour Co., 4800 S. St. Louis Ave., Chicago 32, 111.-R Kybernetes Corp., 9 E. 40 St., New York 16, N.Y.-T.V.AD.AE.AF.AO.AU.AW LaMotte Chemical Products Co., Baltimore 4,
- Ayoernetes torp., y E. 40 St. New York 16, N.Y.-T.V.AD,AE.AF.AO,AU.AW
  LaMotte Chemical Products Co., Baltimore 4, Md.-R
  Landsverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.-W
  Larsen Nuclear Research, 520 5 Ave., New York 56, N.Y.-F.H.M.N.W.AA
  Larson Inst. Co., 24 Orchard St., Tarrytown, N.Y.-C.V.AA.AF.AP.AR
  Lear Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-A.Y.AE.AH
  Lerds & Northrup Co., 4907 Stenton Ave., Philadelphia 44, Pa.-G.K.L.Q.R.U.W.AA, AD.AF.AM,AR
  Lennard Co., P.M., 671 Bergen St., Brooklyn 38, N.Y.-K
  Leonard Electric Products Co., 67 34th St., Brooklyn 32, N.Y.-AE
  Leupold & Stevens Instruments, 4445 N. I. Glisan St., Portland 13, Ore.-H.M.Y.AE.AN
  Link Aviation, Inc., Binghamton, N.Y.-Y.AO
  Liquidoreter Corp., 39-21 Skillman Ave., Long island City 1, N.Y.-M
  Luxor Lighting Products, Inc., 350 5 Ave., New York 1, N.Y.-L
  Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.-AG
  Manning, Maxwell & Moore, 250 E. Main St., Stratford, Conn.-H.K.M.YAF.AJ
  Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-O,U
  Marconi Electrical Instrument Co., 400 Canal St., Manchester, N.H.-SAF,AG,AK,AM,AP, AS

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Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.—AG
Matawan Electronics Co., 236 Creek Rd., Keansburg, N.J.—I
McKesson Appliance Co., 2228 Ashland Ave., Toledo 10, Ohio—AF
McNeill Eng'g, Co., 4057 W. Van Buren St., Chicago 24, Ill.—AA
Menlo Research Lab., P. O. Box 522, Menio Park, Calif.—W
Merz Eng'g, Inc., 200 S. Harding St., Indian-apolis 7, Ind.—AU
Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.—AF
Metrotype Corp., 6100 Archer Rd., Summit, Ill.—I,IY,AE.AO
Millivac Instrument Corp., 444 2 St., Schenec

- 111.—H.I.Y.AE,AO Millivac Instrument Corp., 444 2 St., Schenec-tady, N.Y.—AR MinAtron Corp., Belle Mead 9, N.J.—F,M,N, T,V.AD,AL,AQ,AU,AW

- TH. LY, AE, AO
   Millivac Instrument Corp., 444 2 St., Schenectady, N.Y. AR
   Min Atron Corp., Belle Mead 9, N.J. F, M.N. T.Y, AD, AL, AQ, AL, AW
   Mine Safety Appliances Co., 201 N. Braddoek Ave., Pittslurght 8, Pa-Q
   Minneapolis-Honeyweil Regulator Co., Minneapolis-Honeyweil Regulator Co., Minneapolis-Koneyweil Regulator Co., 125 St. & 89 Ave., Richmond Hill 18, NY.-K.AC, AF
   Moeller Instrument Co., 132 St. & 89 Ave., Richmond Hill 18, NY.-K.AC, AF
   Moisture Register Co., 1610 W. Chestnut St., Alhambra, Calif.-O
   Multional Instrument Co., 23 E. 26 St., New York 10, NY.-A
   National Radiac Inc., 10 Crawford St., Newarat 2, NJ.-W
   National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.-AJ
   Non-Linear Systems, Del Mar Airport, Dei Mar, Cell'.-C.M
   Norden-Ketay Corp., Wiley St., Milford, Conn.-O., CH.Y. X, AJ, AQ, AR
   Norden-Ketay Corp., Wiley St., Milford, Conn.-O., CH.Y. X, AJ, AQ, AR
   Nosker Eng's, Products, 1216 Livermore St., Yellow Springs, Colo.-AD
   NRD Instrument Corp., 223 W. Erie St. Chicago 10, III.-W
   Nuclear Inst. & Chemical Corp., 223 W. Erie St. Chicago 10, III.-W
   Nuclear Research Corp., 124 Livingston St., Brooklyn 31, N.Y.-W
   Nuclear Research Corp., 2246 DN. Arlington AN, WAC AR
   Rooklyn 31, N.Y.-W
   Nurberg Thermometer Co., 124 Livingston St., Brooklyn 31, N.Y.-W
   Nurberg Thermometer Co., 124 Livingston St., Brooklyn 31, N.Y.-W
   Nurberg Thermometer Co., 124 Livingston St., Brooklyn 31, N.Y.-W
   Nangeles 24, Calif.-AE.AF
   Painer, Inc., M. V., 4

Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.—AJ

Pitometer Log Crop., 237 Lafayette St., New York 12, N.Y.-A,Y Polarizing Instrument Co., Irvington-on-Hud-son, N.Y.-AD

Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.-AD,AH

Polytechnic Research & Devel. Co., 202 Tillary St., Brooklyn 1, N.Y.--U

Potter Aeronautical Co., Box 532, Route #22, Union, N.J.-H

Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, N.Y.-I,AG Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-I

- recision Radiation Instruments, Inc., 4223 W. Jefferson Blvd., Los Angeles 16, Calif. -M,N,W Precision
- Precision Thermometer
- M.N.W.
   Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelphia 30, Pa.-C.K.AC,AF,AJ
   Process & Instruments, 15 Stone Ave., Brook-lyn 33. N.Y.-AJ
   Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif. A,H.V.X.AE,AF,AG,AH, AK,AN,AQ,AR
   "Q" Glass Co., 470 Broad St., Bloomfield, N.J. -AJ
- -AJ Quare Associates, P.O. Box 95, Canton, Mass.
- N

- York 28, N.Y.-Y
  Research Electronics Labs., Roslyn, Pa.-AJ, AP.AR
  Revere Corp. of America, 845 N. Colony Rd., Wallingford, Conn.-H, M.Y.AF, AK, AL
  Richards Co., Arklay S., 86 Winchester St., Newton Highlands 61, Mass.-AF
  Rich-Roth Labs., 1240 Main St., Hartford 3, Conn.-C, H, M
  Ripley Co., Middletown, Conn.-AA
  Robey Rotor, Inc., 6006 Washington Blvd., Culver City, Calif.-Y
  Rockwell Eng'z, Co., 4063 N. New Jersey St., Indianapolis 5, Ind.-L, S, Y.AL, AW
  Rowe Hulustrics, 1702 Wayne St., Toledo 9, Ohio-AE, AN
  Rubicon Co., Ridge Ave., at 35th St., Philadelphia 32, Pa.-AF, AM, AN
  Rust Industrial Co., 130 Silver St., Manchester, N.H.-AE, AF, AV
  Rubicon Co., 2814 19th St., San Francisco 10, Calif.-I
  Sangamo Electric Corp., Snow & Union Sts., Brighton 35, Mass.-AJ
  Scott Inc., H. H., 385 Putnam Ave., Cambridge 39, Mass.-AB, AM, AW
  Sensitive Research instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.-IX, AM
  Servo Corp. of America, 2020 Jericho Tpke., New Hyde Park, LI, N.Y.-Y Serdex, Inc., 91 Cambridge St., Boston 14, Mass.—K
  Servo Corp. of America, 2020 Jericho Tpke., New Hyde Park, L.I., N.Y.—Y
  Servo-Tck Products Co., 1086 Goffle Rd., Haw-thorne, N.J.—AQ
  Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.—AM
  Shepard Labs., 480 Morris Ave., Summit, N.J. —D,I.S.V.AD,AE,AR
  Shoup Eng., Co., 1516 S. Wabash, Chicago 16, III.—W,AD
  Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—U
  Signal Equip. Co., 2706 3 Ave., Seattle 1, Wash.—AS
  Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, III.—I.AF,AK
  Skiatron Electronics & TV Corp., 30 E. 10 St.. New York 3, N.Y.—CR,S,AB,AF,AR
  Special Instruments Labs., Inc., 312 W. Vine St.. Knoxville, Tenn.—W
  Specially Assembling & Packing Co., Specialty Eng. Div., 79 Clifton PL., Brooklyn 38, N.Y.—W,AN
  Sperry Gyroscope Co., Great Neck, N.Y.— D,I,AW

- Sperry Gyroscope Co., Great Neck, N.Y.-D.1.AW
- D.I.AW Standard Coil Products Co.. 2085 Hawthorne St., McIrose, III.--Y Standard Electric Time Co., 119 Logan St., Springfield, Mass.--AG,AQ Standard Electronic Research Corp., 2 East End Ave., New York 21, N.Y.-F,I.N,W,AF, AR AR
- AK Stavid Eng'g., Highway 22, Plainfield, N.J. —A,I,P,X,Y,AE,AP,AR,AU Sterling instruments Co., 15310 W. McNich-ols, Detroit 35, Mich.—M,N,T,U,V,Y,AJ,AK, AL,AM
- AL, AM Sterling Mfg. Co., 7201 Wentworth Ave., Cleveland 2, Ohio-A.U
- Stewart Instrument Co., 6507 Grand River, Detroit 8, Mich.—AG
- Sticht Co., Herman H., 27 Park Pl., New York 7, N.Y.-I.AW Stoelting Co., C. H., 424 N. Homan Ave., Chicago 24, Ill.—AG
- Strandberg Eng'g. Labs., 416 W. Market St., Greensboro, N.C.-O

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Streeter Amet Co., 4101 Kavenswood Ave., Chicago 13, Ill.—AL Sturtevant Co., P. A., Addison, Ill.—AH,AI

- Taco West Corp., 525 W. Noble St., Chicago 22, III.—AF
  Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N.J.—O
  Technical Products Co., 19 N. Dunlap, Medical Center, Memphis 1, Tenn.—C,G,J,K,L, M.N.O.K,S,V,AC
  Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—X,Z,AV
  Telechron Dept., General Electric Co., Homer Ave., Ashland, Mass.—AG
  Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—I,U,W,X
  Teleregister Corp., 36 Grove St., New Canaan, Conn.—E,F,K,M,NAA
  Tele-Smoke Corp., 15 Ward St., Bloomfield, N.J.—AA
  Televiso Corp., 1415 Golf Rd., Des Plaines, III.—AO,AR
  Tensitron, Inc., Depot Rd., Harvard, Mass.—

- Tensitron. Inc., Depot Rd., Harvard, Mass.-

- AG Thermo Instruments Co., 1310 Old County Rd., Belmont, Calif -E.K.M Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-S.AG Torsion Balance Co., Monhegan St., Clifton, N.J.-AC,AL Tracerlab, Inc., 130 High St., Boston 10, Mass.-F.M.N.W.AL Transelectric Mfg. Co., 48 Hopewell Rd., Oxford, Pa.-AO Transicoil Corp., 107 Grand St., New York 13, N.Y.-Y
- N.Y.-Y

- N.Y.-Y
  N.Y.-Y
  Trico Fuse Mfg. Co., 2948 N. 5 St., Milwaukee
  12, Wisc.-M
  Ultrasonic Corp., 640 Memorial Dr., Cambridge, Mass.-I,N.P.T.Y.AB,AE
  Unimax Div., Maxson Corp., W. L., 460 W. 34 St., New York 1, N.Y.-AD,AW
  Union Switch & Signal Div., Westinghouse Airbrake Co., 1789 Braddock Ave., Pittsburgh 18, Pa.-AO
  United Electric Controls Co., 85 School St., Watertown 75, Mass.-AF
  Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.-V,AJ
  Varo Mfg. Co., 1801 Walnut St., Garland, Tex.-I
  Vectron, Inc., 1611 Trapelo Rd., Waltham 54,

- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.—S,X,Y,AM Vibroscope Co., P.O. Box 97, Glenford, N.Y.— AW
- Aw Victoreon Instrument Co., 8800 Perkins Ave., Cleveland 14, Ohio-W Victory Eng'g. Corp., 103 A Springfield Rd., Union, N.J.--K,M,O,AAAF,AN Viking Instruments, Inc., E. Haddam, Conn. --E
- -E Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-U,AB,AV Vitro Corp. of America, 120 Wall St., New York 5, N.Y.-H Wakmann Watch Co., 15 W. 47 St., New York 36, N.Y.-AG Walkirt Co., 145 W. Hazel St., Inglewood 8, Calif.-I Wallace & Tiernan, 25 Main St., Belleville 9, N.J.-V,AJ Warren Corp. J. C., 21 Hanse Ave., Freeport, L.I., N.Y.-X Washington Institute of Technology Inc., 4810 Clavert Rd., College Park, Md.-K,V,AF, AN

- Clavert Rd., College Park, Md.-K,V,AF, AN Waveforms, Inc., 833 6 Ave., New York 31, N.Y.-AM Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohuo-C,AM Welch Mfg. Co., W. M., 1515 Sedgewick St., Chicago 10, Ill.-C,R,S,AJ Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19, Mic:.-AG Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.-AQ West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.-I,AO,AP Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-W Westingnouse Electric Corp., Box 868, Pitts-burgh 30, Pa.-I,T,U,X,AE,AF,AG,AQ,AT West Instrument Co., 525 N. Noble St., Chi-cago 22, Ill.-AF Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N.J.-I.K, L.S.U Weston Labs., Inc., Box 407, Littleton, Mass.

- Weston Labs., Inc., Box 407, Littleton, Mass. I.U
- 1.0 Westronics Inc., 8605 McCart, Ft. Worth, Texas—Y.AD.AF.AL Westrort Electric, 149 Lomita St., El Segundo, Calif.—I.AG.AR Wheelcon Instruments Div., Barber-Colman
- Wheelco Instruments Div., Barber-Colman Co., 1300 Rock St., Rockford, Ill.—AF White & Sons, Inc., Wilfrid O., 178 Atlantic Ave., Boston 10, Mass.—P Williams, Brown & Earle, 904 Chestnut St., Philadelphia 7, Pa.—K,R,S,AF
- Wilson & Co., G. C., 1950 8 Ave., Huntington, W. Va.-AG
- Winslow Co., 9 Liberty St., Newark 5, N.J.
- Witelrad Electrical Mfg., 76 Pulaski St., Stam-ford, Conn.-L Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-T,V,Y,AB,AE,AG,AU,AW

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Yellow Springs Instrument Co., P. O. Box 106, Yellow Springs, Ohio—AF Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.—S

#### **34**—INDUSTRIAL ELECTRONIC **EQUIPMENT**

Analysis equipment, electrochemical Z
Balancing equipment, dynamicY
Cookers, electronic
CyclotronsB
Dehumidifying equipmentAJ
Dielectric heating equipment, D
Diffraction equipment, electron AA
Electric furnacesE
Electron microscopesF
Electronic photoflashG
Electroplating equipmentH
Flaw locators, metal
Flaw locators, non metalAE
Geophysical instruments
Heating elementsJ
Induction heating equipmentK
Infrared equipmentL
Ionization chambers
IrradiatorsN
Meteorological equipmentX
Nuclear equipmentP
Photographic X-ray equipmentQ
Precipitators, electrostaticAB
Spectrographic equipmentR
Surface roughness equipment AG
Thickness equipment, ultrasonic AC
Titration apparatus
TV, industrialAF
Ultrasonic drillsAK
Ultrasonic solderingAH
Ultra-violet equipmentAl
Vibrators, ultrasonicAD
X-ray diffraction equipmentT
X-ray filtersU
X-ray inspection machinesV
X-ray screensW

Acme Electric Heating Co., 1217 Washington St., Boston 18, Mass.—J
Acme Industrial Co., 200 N. Laflin St., Chicago 7, Ill.—AG
Advance Instrument Corp., 1709 F St., Belmar, N.J.—X
Advanced Electronics, Inc., 94 Silas Deane Hwy., Rocky Hill, Conn.—V.X
Aero Electronics Co., 1512 N. Wells St., Chicago 10, Ill.—O,Y.Z.AE
Aeropoieets, Inc., P.O. Box 555, W. Chester, Pa.—AD.AH
Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.—Z
Air-Maze Corp., 25000 Miles Rd., Cleveland 28, Ohio—AB
Alcar Instruments, 20 Wagaraw Rd., Fair Lawn, N.J.—AH
American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.—I.R
American Instrument Co., 8050 Georgia Ave., Silver Spring, Md.—J
American Optical Co., 445 Park Ave., New York 29 NV—I

Silver Spring, Md.-J American Optical Co., Box A, Buffalo 15, N.Y. -R American Radio Co., 445 Park Ave., New York 22, N.Y.-L American Speedlight Corp., 63-01 Metropolitan Ave., Middle Village 79, N.Y.-G Ampex Corp., 934 Charter St., Redwood City. Calif.-I Applied Physics Corp., 862 W. Colo. St., Pasa-dena 1. Calif.-M Applied Research Lab., P.O. Box 1710, Glen-dale. Calif.-R Atlas Coil Winders Inc., 89 Manhattan St., Stamford, Conn.-U Atlas Electric Products, 114½ E. 6 St., Erie, Pa.-J Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.-P Atomic Instrument Co., 84 Mass. Ave., Cam-bridge 39, Mass.-P Atomiab, Inc., 489 5 Ave., New York 17. N.Y.-P Baird Associates Inc., 33 University Rd., Cam-bridge, Mass.-R Ballanine Laboratories, Boonton, N.J.-I Balteau Electric Corp. 5 New St., Stamford, Conn.-O.Q.T.V.W.AE Bar-Ray Products Inc., 209 25 St., Brooklyn 32, N.Y.-L,M.Q Bassett, Inc. Rex, 1314 N. E. 17 Court, Ft. Lauderdale, Fla.-H Bausch & Lomb Optical Co., 628 St. Paul St., Rochester, N.Y.-R Beckman Div., Beckman Instruments, 2500 Fullerton Rd., Fullerton I, Calif.-S Beckman Div., 985 San Carlos Ave., San Carlos, Calif.-X

Berkeley Div., Beckman Instruments, Inc., 2200 Wright Ave., Richmond 3, Calif.—P
Beva Laboratory, 1640 Olden Ave., Ext., Trenton, N.J.—I,P,V,Z
Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.—V,AF
Blonder-Tongue Labs. Inc., 526 North Ave., Westfield, N.J.—AF
Bracke-Seib X.Ray Ca., 293 3 Ave., New York 10, N.Y.—T,V
Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.—O,AC,AD
Brown Equipment Co., 128 N. Main St., Milltown, N.J.—AF
Brown Inst. Div., Minn.-Honeywell, Wayne & Windrim Ave., Phila., Pa.—AF
Buck Eng's. Co., 37-41 Marcy St., Freehold, N.J.—E
Burke & James, 321 S. Wabash Ave., Chicago 4, III.—Q
Cambridge Instrument Co., Grand Central Terminal. New York 17, N.Y.—I

Burke & James, 321 S. Wabash Ave., Chicago 4, III.—Q
Cambridge Instrument Co., Grand Central Terminal, New York 17, N.Y.—I
Centralab Div., Glove-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—I,P.AF
Oentury Geophysical Corp., 1833 N. Utica, Tulsa, Okla.—P
Chatham Electronics Corp., 680 W. Mt. Pleasant Ave., Livingston, N.J.—I,K.M
Chicago Electronic Eng'g. Co., 3223 Armitage Ave., Chicago 47, III.—AA
Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—G.O,Y.Z,AD
Consolidated Eng'g. Corp., 800 N. Sierra Madre Villa, Pasadena 15, Calif.—R.Z Corbin Corp., 5419 56 Pl., Riverdale, Md.—X Cox & Co., 115 E. 23 St., New York, N.Y.—J Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.—F,H.M.P
Cutler-Hammer, Inc., 436 N. 12 St., Milwaukee 1, Wisc.—J
Dage TV Div., Thompson Products, Inc., Michigan City, Ind.—AF
Damp-Chaser, Inc., 1440 Ridgewood Blvd., Hendersonville, N. Car.—J.AJ
Daystronic Corp., 216 S. Main St., Dayton 2, Ohio—AG
Delaware Optical Labs., 36 Williams St., Lans-

Daytronic Corp., 216 S. Main St., Dayton 2, Ohio—AG
Delaware Optical Labs., 36 Williams St., Lans-downe, Pa.—L,R,Q
Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.—V
De Ment Laboratories. New Fliedner Bldg., Portland 5, Ore.—AI
De Mornay-Bonardi Corp., 780 S. Arroyo Pkwy., Pasadena 2, Calif.—R
Despatch Oven Co., 619 S. E. 8 St., Minne-apolis 14, Minn.—E,L
Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, III.—P
Diatron Co., 8327 Dirie Dr. Houston 21.

apolis 14, Minn.-E.L Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, Ill.-P Diatron Co., 3327 Dixie Dr., Houston 21. Texas-D,I,K,S Dice Co., J. W., 1 Engle St., Englewood, N.J. --O,V,AC,AE Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-P Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge 40, Mass.-G Dubrow Development Co., 235 Penn St., Bur-lington, N.J.-Z DuMont Laboratories Inc., Allen B., Communi-cation Products Div. 1500 Main Ave., Clif-ton, N.J.-AF Eagle Electric Mfg. Co., 28-10 Bridge Plasa S., Long Island City. N.Y.-J Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.-I Egan, Lab., 107-56 113 St., Richmond Hill 19, N.Y.-E Eisler Eng'g., Co., 770 S. 13 St., Newark 3, N.J.-E

Eisler Eng'g., Co., 770 S. 13 St., Newark 8, N.J.-E Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohlo-K Electric Furnace Co., Wilson St., & Penna R.R., Salem, Ohlo-E Electrofilm Corp., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-E,H.J.K.L.O.R.S.AC Electronic Metchanical Div., General Riveter, Inc., 786 Hertel Ave., Buffalo 7, NY.-K Electronic Brazing Corp., 66 Needham St., Newton Highlands 61, Mass.-A,D,E,K,AB, AD Electronic Products Co., 111 E 2-4 St. MA

AD AD Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N.Y.--P Electronic Research Co., 11550 39 N.E., Seattle 55. Wash.-J.L Electronic Research Co., 11550 39 N.E., Seattle 55. Wash.-J.L Electronic Research Co., 287 E. Broadway. New York 7, N.Y.-S.Z Electron-Tech Equip. Co., 308 Canal St., New York, N.Y.-E,H,J.P.AG Elgin Metalformers Corp., 901 N. Liberty St., Elgin, III.-AF Elly Electronics Corp., 22-02 Raphael St., Fairlawn, N.J.-J El-Tronics Inc., 5 & Noble Sts., Philadelphia 23. Pa.-M.P Endevco Corp., 689 S Fair Oaks Ave., Pasa-dena 2, Calif.-Y.AD Eng'g. Res'ch. & Devel. Co., Addison, III.-D Ercona Corp., Scientific Instr. Div., 527 5

Ercona Corp., Scientific Instr. Div., 527 5 Ave., New York 17, N.Y.-F

Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-B

arnsworth Electronics Co., Div. I.T.&T. Corp., P.O. Box 810, Fort Wayne, Ind.--P.AF Farnsworth

Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-F.R

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and the second s ELECTRONIC INDUSTRIES DIRECTORY

Fisher Research Laboratory, 1961 University Ave., Palo Alto, Calif.—I.P Fleetwood Corp., 1037 Custer Dr., Toledo 12. Ohio—AF

Ford Instrument Co., Div. Sperry Corp., 31-10, Thomson Ave., Long Island City 1, N.Y.-P Foto-Video Labs, P.O. Box 296, Clifton, N.J.

AF

-AF Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-P Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N.Y.-P Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Towson, Baltimore 4, Md. -X

Toto Taylor Iroch Totoria, Daminio Toward, and Albraith & Sons, 450 6 Ave., New York 11, N.Y.-J
Gates & Co., Geo. W. Hempstead Tpke. & Lucille Ave., Franklin Square, N.Y.-AI
Gem Electric Mfg. Co., 237 37 St., Brooklyn 32, N.Y.-J
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-E,G,J,K,M,O,P,R, Y,AD.AG
General Electric Co., Broadcast Equip., Commercial Equip. Dept., Syracuse, N.Y.-D,E, K,AF

mercial Equip. Dept., Syracuse, N.Y.-D.E., K,AF General Electric Co., Industrial Electronics Sec., Commercial Equip. Dept. Electronics Park, Syracuse, N.Y.-A,K General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.-AF Georator Corp., Manassas, Va.-I,P Geotronics Labs., 1814 Cedar Hill Ave., Dallas 11, Tex.-1 Girdler Co., Thermex Div., 2820 W. Broadway, Louisville 1, Ky.-D Gisholt Machine Co., 1245 E. Washington Ave., Madison 10, Wisc.-Y Glens Falls Laboratory, Box 685, Upper Glen St., Glens Falls, N.Y.-AI Gordon Enterprises, 5862 N. Cahuenga Blvd., N. Hollywood, Calif.-Z Grieve-Hendry Co., 1815 W. Lake St., Chi-cago 12, Ill.-E,L Guild Electronics, Inc., 110 Duane St., New York 7, N.Y.-Q Gvro Electronics Co., 325 Canal St., New York 13, N.Y.-G

tuchen, N.J.-AD, AH
Gundlach Mfg, Co., 38 E. Main St., Fairport, N.Y.-Q
Gyro Electronics Co., 325 Canal St., New York 13, N.Y.-G
Hallamore Mfg. Co., 2011 E. Artesia, Long Beach 5, Calif.-F,I,AF
Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove, N.Y.-G
Harwood Mfg. Co., 466 W. Superior St., Chi-cago 10, III.-G
Hasting's Inst. Co., Newcomb Ave. & Ivy Home Rd., Hampton. Va.-X
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-I.P.AB
Huppert Co., K. H., 6330 Cottage Grove Ave., Chicago 37, III.-E.J
Hycon Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-P
Industrial Accessories, Inc., 77 S. Broadway, Long Branch, N.J.-N
Industrial Accessories, Inc., 3060 Wheeler St., Detroit 10, Mich.-AG
Industrial TV, 369 Lexington, Clifton, N.J.-AF
Int'l. Research & Devel, Corp., 797 Thomas

Industrial TV, 369 Lexington, Clitton, N.J.— AF
AF
Int'l. Research & Devel. Corp., 797 Thomas Lane, Columbus 14, Ohio—Y
I. Q. Industries, 6110 Wilshire Blvd., Los Angeles 43, Calif.—G,O.AE
Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.—I,L.R.T
Jordan Electronics, 3025 Mission Rd., Alham-bra, Calif.—M.P
Kabar Mfg. Co., 1907 White Plains Rd., New York 62, N.Y.—D.K
Kahle Eng'g. Co., 1307 7 St., N. Bergen, N.J. —E,K
Kahn & Co., 541 Windsor St., Hartford 1,

Kahle Eng g. Co., 1301 T De, M. Densen, 1401 ---E, K.
Kahn & Co., 541 Windsor St., Hartford 1, Conn.-Y, AC
Kay Lab, 5725 Kearney Villa Rd., San Diego 12, Calif.-AF
Kenger Halbert Corp., 8628 Eastham Dr., Culver City, Calif.-AF
Kemlite Laba., 1819 W. Grand Ave., Chicago 22, Ill.-G, AI
Kepco Labas., 181-38 Sanford Ave., Flushing 55, N.Y.-H
Kocour Co., 4800 S. St. Louis Ave., Chicago 32, Ill.-H, S.Z
Korb Eng's. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-AD

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Laboratory Equipment Corp., Hilltop Rd., St. Joseph, Mich.-E,H.J.K
Larsen Nuclear Research. 520 5th Ave., New York 36, N.Y.-I.M.P.Z.AI
Lee Electrice & Mfg. Co.. 2806 Clearwater St., Los Angeles 89, Calif.-E,H
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-E,P.R.X.Z
Leits, Inc., 468 4 Ave., New York 16, N.Y.-F
Lennard Co., P. M., 671 Bergen St., Brooking 38, N.Y.-AB
Lepel High Frequency Labs., 54-18 37 Ave., Woodside 77, L.I., N.Y.-K
Liston-Becker Inst. Co., 649 Hope St., Stamford, Conn.-L
Lovins Eng'g. Corp., 8203 Cedar St., Silver Springs, Md.-T
Lyzco Mfg. Corp., 7800 W. Lawrence Ave., Chi-cago 31, 111.-O.AC.AE
Mahouey Teletronic Labs., 209 16 Ave., New-ark 3, N.J.-D.K
Manufacturers Eng'g. & Equip., York & Mill Rds., Hatboro, Pa.-M.P
Marchand Electronic Labs., 255 Mill St., Byram, Conn.-Z
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-P
Mardna Electronic Devices, 6014 Hudson Bt., Manchester, N.H.-K
Mayflower Electronic Devices, 6014 Hudson Bt., W.New York, N.J.-D
McKenna Labs, 2503 Main St., Santa Monica, Calif.-H.AD.AH
Menlo Research Lab., P. O. Box 522, Menlo Park, Calif.-O.Z.AE
Metoring Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-D.E.H.K.L
Metrotype Corp., 6100 Archer Ave., Summit, III.-X

Metronics, Inc., U. S. Route 130, Burlington, N.J.-J
Metrotype Corp., 6100 Archer Ave., Summit, III.-X
Midwestern Instruments, 41 & Sheridan Rd., Tulsa, Okla.-I
Miller Co., Sanford, 691 Bedford Ave., Brook-lyn 6, N.Y.-H
Miller Instruments, Wm., 325 N. Halstead Ave., Pasadena 8, Calif.-I
Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S., Minneapolis 8, Minn.-Z
Miskella Infra-Red Co., E. 73 & Grand Ave., Cleveland 4, Ohio-J.L
National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.-M
National Spectrographic Labs. Inc., 6800 Eu-clid Ave., Cleveland 3, Ohio-R
New Rochelle Tool Corp., 320 Main St., New Rochelle, N.Y.-D.E.K
North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.-F.P.T.U.V.W

New Rochelle Tool Corp., 320 Main St., New Rochelle, N.Y.-D.E.K
Norco Mfg. Co., 392 Bleecker St., New York 14, N.Y.-G. Philips Co., 750 S. Fulton A.v., Mt. Vernon, N.Y.-F.P.T.U.V.W
North American Philips Co., 750 S. Fulton A.v., Mt. Vernon, N.Y.-F.P.T.U.V.W
Northeastern Eng'g., Bedford St., Manchester, N.H.-X
NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.-P
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.-I,M.P
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, III.-I,M.P
Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.-O.P.AE
Nucleonic Co. of America, 497 Union St., Brooklyn 31, N.Y.-M.P
Ohmart Corp., 2847 Ferguson Rd., Cincinnati 38, Ohio-M.P
OMCO, Box 3196, N. Las Vegas, Nev.-I,P.AI Opad Electric Co., 69 Murray St., New York 7, N.Y.-G.H
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.-E
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 39, Calif.-AG
Patterson, Moss, Div. Universal Winding Co., 90-23 Van Wyck Expressway, Jamaica 18, N.Y.-M.P
Patwin Instruments Div., Patent Button Co., 41 Brown St., Waterbury 20, Conn.-X
Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.-Z
Peine Tac., 1200 Milton St., Benton Harbor. Mich.-X
Penna Testing Lab. Doylestown, Pa.-A.D
Phetovolt Corp., 95 Madison Ave., Baltimore 15, Md.-Z
Philoe Corp., 95 Madison Ave., New York 7. N.Y.-AF
Photovolt Corp., 95 Madison Ave., New York 7. N.Y.-AF
Photovolt Corp., 95 Madison Ave., New York 16, N.Y.-X
Piezo Products Co., Whitney St., Framingham, Mass.-AD
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.-R
Power Supplies, 1005 Olive St., Highland, Ill.-K
Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-AD

--K Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.—AD Process & Instruments, 15 Stone Ave., Brooklyn 33, N.Y.—AI Radiation Counter Labs., 5122 W. Grove St., Skokie, III.—E.J.M.P Radiation Instrument Devel. Lab., 2337 W. 67 St., Chicago 37, III.—P

- ioactive Products Inc., 443 W. Congress, Detroit 26, Mich.—P Radio Ceramics Corp., 109 S. Superior St., Angola, Ind.—J Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.—AE Radio-Music Corp., 84 S. Water St., Port Chester, N.Y.—J Radio Sonic Corp., Plainfield, N.J.—AD,AH Rapid Electroplating Process, 1414 S. Wabash Ave., Chicago 5, III.—H Ratigan Electronics, Inc., 3614 Maplc Ave., Los Angeles 11, Calif.—R,Z,AI Raytheon Mfg. Co., Waltham, Mass.—AK Reeder & Co., C. M., 171 Victor Ave., Detroit 3 Mich.--R Reeve Electronics, Inc., 609 W. Lake St., Chi-

- 3 Mich.--R
  Reeve Electronics Inc., 609 W. Lake St., Chicago 6, III.--D.K
  Regulator Eng g. & Devel. Co., 11545 W. Jefferson Blvd., Culver City, Calif.--H
  Resdel Eng g., 2351 Riverside Dr., Los Angeles 39, Calif.--D,K
  Research Electronics Labs., Roslyn. Pa.-G
  Richardson Labs., Kenneth, 254 Vincent Ave., Lynbrook, N.Y.-D
  Rich Electronics, 212 N. W. 8 Ave., Miami 36, Fla.-D

- Rich Dictionas, 212 M. W. S Aver, Manni 38, Fla.-D
  Rich-Roth Labs.. 1240 Main St., Hartford 3, Conn.-AD
  Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Tex.-I
  Sciaky Bros., 4915 W. 67th St., Chicago 38. III.-K
  Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.-D,F,R,AA,AI
  Selsmograph Service Corp., P. O. Box 1590, Tulsa, Okla.-I
  Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.-AI
  Shepard Labs., 480 Morris Ave., Summit, N.J.-G

- N.J.-G Sherman Industrial Electronics Co., 5050 Washington Ave., Belleville, N.J.-D.K Size Controls Co., Div., American Gage & Machine Co., 2500 W. Washington Blvd., Chicago 12, 111.-AG Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston 19, Tex.-I Special Instruments Lab., 312 W. Vine St., Knoxville, Tenn.-P Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. -P

- -P Sperry Gyroscope Co., Great Neck, N.Y.-Y Sperry Products, Shelter Rock Rd., Danbury, Conn.-AC Standard Electronic Research Corp., 2 East End Ave., New York 21, N.Y.-O.S.V.AE Stanford Labs., 1661 Broadway, Redwood City, Calif.-P.V Steiner-Lyer Co., 482 Springfold Rd. Hairs
- Steiner-Ives Co., 483 Springfield Rd., Union, N.J.-D.E.L
- Stewart Engineering Co., P.O. Box 277, Soquel, Calif.—E Stroblite Co., 75 W. 45 St., New York 36, N.V.—A1
- Strobilte Co., 15 W. 17 Su, 200 N.Y.-AI Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.-AF Tarzian Inc., Sarkes, 539 S. Walnut, Bloom-ington, Ind.-AF Technic, Inc., 39 Snow St., Providence 3, R.I. -H

- -H -H Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas-I Technical Operations Inc., 6 Schouler Court, Arlington 74, Mass.-P.V Technical Products Co., P.O. Box 93, Mem-phis 1, Tenn.-E,I,P,R,S,Z,AC Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.-L Telechrome, Inc., 38 Merrick Rd., Amityville, L.I., N.Y.-AF Telemarine Communication Co., 3040 W. 21 St., Brooklyn 24, N.Y.-I Telephonics Corp., Park Ave., Huntington, N.Y.-AD Texas Instruments, Inc., 600 Lemmon Ave., Dallas 9, Texas-I Thermador Electrical Mfg. Co., Electronics

- Thermador Electrical Mfg. Co., Electronics Plant, 2000 Camfield Ave., Los Angeles 22, Calif.—E
- Thermo Electric Mfg. Co., Dubuque, Iowa-E Thompson Clock Co., H.O., 38 Federal St., Bristol, Conn.-J,L,Q,W
- Torngren Co., C. W., 236 Pearl St., Somerville, Mass.-P
- Tracerlab. Inc., 130 High St., Boston 10, Mass. ---M.O.P
- Trion, Inc., 1000 Island Ave., McKee Rocks, Pa.-AB
- Triplett & Barton, P. O. Box 3128, Burbank, Calif.



TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Triumph Mfg. Co., 1829 S. 55 St., Chicago 50,

- Triumph Mfg. Co., 1829 S. 55 St., Chicago 50, 111.--G
  TV Specialty Co., 350 W. 31 St., New York 1, N.Y.--AF
  TV Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, L.I., N.Y.--AF
  TU Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, L.I., N.Y.--AF
  Ultrasonic Eng's. Co., P.O. Box 46, Maywood. 111.--AD
  United Geophysical Corp., P.O. Box "M", Pasadena 15, Calif.--I
  U. S. Radium Corp., 535 Pearl St., New York 7, N.Y.--W
  Varian Associates, 611 Hansen Way, Palo Alto, Calif.--I
  Vibro-Ceramics Corp., 212 Durham Ave., Metuchen, N.J.--AD,AG,AH,AK
  Victorcen Instrument Co., 3800 Perkins Ave., Cleveland 14, Ohio-M.P.T
  Videon Electronic Corp.. 902 N. Michigan St., Indianapolis 2, Ind.--AB
  Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20, Calif.-D,K
  Virisnia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-O,X
  Vulcan Electric Co., 38 Holten St., Danvers, Mass.-E,J
  Washington Institute of Technology, 4810 Calvert Rd., College Park, Md.--X

- Mass.—E,J
  Washington Institute of Technology, 4810 Calvert Rd., College Park, Md.—X
  Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, III.—AH
  Welsh Electric Co., 1221 Wade St., Cincinnati 14, Ohio—G,K,Q,AC.AD
  Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19, Mich.—D,K
  Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.—I,M.P
  Westinghouse Electric Corp., Electronics Div., 2519 Wilkens Ave., Baltimore 3, Md.—D,K
  Westinghouse Electric Corp., Box 868, Pittsburgh 30. Pa.—D,K,V,Y
  Westport Electric, 149 Lomita St., El Segundo,
- Westport Electric, 149 Lomita St., El Segundo, Calif.—AF
- Westronics Inc., 3605 McCart, Fort Worth, Texas-1

- Westronics Inc., 3605 McCart. Fort Worth, Texas—I White Industries, 421 W. 54 St., New York, 19, N.Y.—AD.AH Wiegand Co., Edwin L.. 7500 Thomas Blvd., Pittsburgh 8, Pa.—J.L Wilcox Research Co., 2506 N. Ontario St., Burbank, Calif.—G Williams, Brown & Earle, 904-06 Chestnut St., Philadelphia 7, Pa.—E.G.X Wood Counter Laboratory. N.. 5491 Black-stone Ave., Chicago 15, Ill.—P Woodwelding, Inc., 3000 W. Olive Ave., Bur-bank, Calif.—D.K Wright Eng's. Co., 180 E. Calif. St., Pasadena 1, Calif.—Y.AG Wybar Electronics, 507 E. Water St., Syracuse
- Wybar Electronics, 507 E. Water St., Syracuse 1, N.Y.--K

### **35**—INSULATION MATERIALS & COMPOUNDS

- Aluminum oxide .....S Alundum grain .....A Asbestos .....B Asphalt ..... Capacitor dielectrics ......D Ceramic .....AC 

   Liners, can
   K

   Mica
   Y

   Mica compounds
   Z

   Paper
   L

   Phenolics
   AA

   Plastics
   M

   Porcelain
   AS

   Rubber
   N

   Silicon
   O

   Silicon ..... O Steatite ..... P Synthetic resin .....Q Tape, electrical ...... Teflon Varnished fabric .....R Vulcanized fiber .....AF
- Abbott Plastics & Machine Corp., 6322 N. Clark St., Chicago 26, Ill.-M
- Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio-G,H,M,R,X,AA,AF Acme Wire Co., New Haven 14, Conn.-L,R,
- Actioncraft Products, 8 Sagamore Hill Dr., Port Washington, N.Y.-AG

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- Admiral Corp., Molded Products Div., P.O. Box 338, W. Chicago, Ill.—M.Q.AG Akron Rubber Co., 53 Warren St., New York 7, N.Y.—G.H.M.N.O Allied Asphalt & Mineral Corp., 217 Broad-way, N.Y., N.Y.—C.M Aluminum Co. of America, Alcoa Bldg., Pitts-burgh 19, Pa.—S American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—D,P,AC, AE

- American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—D,P,AC, AE
  American Mica Insulation Co., Manasquan, N.J.—D,G,H,L,M,O,R,T,X,Y,Z,AA,AF,AG
  American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.—O
  American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.—O
  American Wood Working Co., 1688 N. Lowell Ave., Chicago 39, Ill.—H
  Antara Chemicals, Sales Div. General Aniline & Film Corp., 435 Hudson St., New York 14, N.Y.—D
  Apex Coated Fabrics Co., 12 E. 22 St., New York 10, N.Y.—X
  Asheville-Schoonmaker Mica Co., 900 Jeffer-son Ave., Newport News, Va.—Y
  Auburn Mfg. Co., Stack St.. Middletown, Conn.—B,G,L,N,O,X,AD,AF,AG
  Baache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—V
  Bache & Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N.Y. —M,Q
  Barrett Div., Allied Chemical & Dye Corp., 2112 Sylvan Ave., Toledo 6, Ohio—M,Q
  Bassett, Inc. Rex, 1314 N. E. 17 Court, Ft. Lauderdale. Fla.—H
  Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. H,L,M,N,X,AA,AB
  Biggs Co., Carl H., 2255 Barry Ave., Los Angeles 64, Calif.—H,M,WX
  Birbach Radio Co., 145 Hudson St., New York 13, N.Y.—R
  Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N.J..—K,M,NO
  Biwax Corp., 3445 Howard St., Skokie, Ill.— C,Q,W,AA
  Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio—W

- Blazo Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio-W
  Blazon Mfg., 6021 Dempster St., Morton Grove, 111.--M.X
  Boruski, Jr., Ernest F., 505 Fifth Ave., New York 17, N.Y.--M.Q.W
  Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.-N
  Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.-O,P
  Brand Dielectrics, Inc., 57 North St., Willimantic, Conn.-B,D,F,H,O,R,T,V,Y,Z,AB
  Brooklyn Paint & Varnish Co., 50 Jay St., Brooklyn 1, N.Y.-U
  Brown-Bridge Mills, E. Water St., Troy, Ohio -L
- California Plasteck. Inc., 225 E. 4 St., Los Angeles 13, Calif.—M.X.AA Cast Optics Corp., 1010 Post Rd., Riverside, Conn.—M

- California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.-M.X.AA
  Cast Optics Corp., 1010 Post Rd., Riverside, Conn.-M
  Catalin Corp. of America, 1 Park Ave., New York 16, N.Y.-M.Q
  Celanese Corp., of America. 180 Madison Ave., New York 16, N.Y.-M.Q
  Centralab Div., Globe-Union Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D.P.T.AC.AE
  Chase & Sons, 19 Highland Ave., Randolph. Mass.-E.F.H.I,W
  Citation Products Co., 233 E. 146 St., New York 51, N.Y.-G.M
  Columbia Tape Mills, E. Greenville, Pa.-E.H
  Conn. Hard Rubber Co., 407 East St., New Haven 9, Conn.-F.AA
  Continental-Diamond Fibre Co., Newark, Del.-F.G.H.M.O.T.X.Y.A.A.B.AF.AG
  Continental Textile & Supply, 4245 W. Armitage Ave., Chicago 39, III.-F.M.N.R
  Cok Ceramic Mfg. Co., 505 Prospect St.. Trenton 1, N.J.-P
  Corning Glass Works, Corning, N.Y.-D.V
  Corliand Industries, 4545 W. Cortland St.. Chicago 39, III.-M.AA
  Creative Plastics Corp.. Rt. 25-A. Stony Brook, N.Y.-M
  Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.-P
  Decatur Electronic Industries Corp.. 203 Orinoco Dr., Bridgewater, L.I., N.Y.-N
  Delaware Optical Labs., 36 Williams St., Lansdowne. Pa.-A,N
  Dielect Inc., P.O. Box \$27. Perth Amboy, N.J.-M

Dolph Co., John C., Monmouth Junction, N.J. -C.M.Q.W

Dow Corning Corp., P.O. Box 592, Midland. Mich.-N,O,T,U,W

Durable Rubber Products Co., 549 W. Ful-ton St., Chicago 6. Ill.-N

Durex Plastics & Chemicals. 1926 Walck Rd., N. Tonawanda, N.Y.--M,Q,AA

Dynakon Corp., 9623 Clinton, Cleveland, Ohio -H,X

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Dow Chemical Co., Midland, Mich.-M

- Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 15, I.I., N.Y.-H.M., P.W.X.AC
  Electrical Refractories Co., E. Clark St., K. Palestine, Ohio-AC.AE
  Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-O.P.Q.W.X.Y.Z
  Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-D.E.M.AB
  Electronic Plastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.-M.W.X.Z
  Electro Technical Products, Div. Sun Chemical Corp., 113 E. Centre St., Nutley 10, N.J.-B.E.F.H.J.K.L.Q.R
  Ellanar Chemical Co., 2308 Oakton St., Evans-ton, III.-Q
  Emerson & Cuming Inc., 369 Washington St., Canton, Mass.-D.H.M.Q.T.W.X
  Emerson Plastics Corp., 567 3 Ave., New York 16, N.Y.-M.O.AA.AF.AG
  Farnam Mfg. Co., P.O. Box 5098, Asheville, N.C.-Y
  Flexrock Co., 3609 Filbert St., Philadelphia 1, Pa.-C.W
  Flock Process Co., 375 Main Ave., Norwalk, Conn.-G
  Foote Mineral Co., 18 W. Chelton Ave., Phila-

- Flock Process Co., or and Conn.-G Conn.-G Foote Mineral Co., 18 W. Chelton Ave., Phila-delphia 44, Pa.-O Formica Co., 4644 Spring Grove Ave., Cin-cinnati 32, Ohio-X Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington 99, Dela.-G,H,M,O,X,AA,

- AF
  Frenchtown Porcelain Co., 8th and Harrison Sts., Frenchtown, N.J.—P.T.A.C.AE
  Furane Plastics Inc., 4516 Brazil St., Los Angeles 39, Calif.—M.Q.W
  Garlock Packing Co., Main St., Palmyra, N.Y.—M,N,O,X
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.—F,G.H.J.M,O,R,U.AAA,AC,AF
  General Ceramics Corp., Crows Mill Rd., Keasbey, N.J.—P,AC.AE
  General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.—S.T
  General Electric Co., Chemical & Metallurgical
  Divertical Metallurgical
- N.Y.-S.T General Electric Co., Chemical & Metallurgical Div., 1 Plastics Ave., Pittsfield, Mass.-E.F. G.L.M.N.O.Q.R.T.U.W.X.Y.Z.AA.AF Glass Fibers Inc., 1810 Madison Ave., Toledo Z. Ohio-H
- Glass Fibers Inc., 1810 Hausson 2, Ohio-H Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio-H.X Glenco Corp., Durham Ave., Metuchen, N.J. -D

- Glenco Corp., Durham Ave., Metuchen, N.J. -D
  Goodrich Chemical Co., B.F., 324 Rose Bldg., Cleveland 15, Ohio-M.N
  Graef Eng'z. Co., P.O. Box 416, Paramount, Calif.-M.Q.X.AA,AG
  Guastavino Co., R., 660 Main St., Woburn, Mass.-P,AE
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-D
  Gustin-Bacon Mfg. Co., 210 W. 10 St., Kansas City 6, Mo.-G.H
  Hartford City Paper Co., S. Spring St., Hartford City, Ind.-L
  Haynes Labs, Inc., C. W., 61 Chandler St., 'Springfield 4, Mass.-U
  Hermetic Seal Products Co., 37 So. 6 St., Newark 7, N.J.-T,V
  Hi-Test Chemical Corp., 722 64 St., Brooklyn 20, N.Y.-W
  Houghton Labs., Inc., 322 Bush St., Olean, N.Y. -T.U.M.Q.W
  Huse-Liberty Mica Co., 3012 Washington St., Boeton 19, Mass.-D.E.F.H.I.L.O,Q.R.V.W. X.Y.Z.AA,AB,AF
  Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N.Y.-MN, N.O.X,AF
  Industrial Accessories, Inc., 77 S. Broadway, Long Branch, N.J.-M.N.O.X,AF
  Industrial Tape Corp., New Brunswick, N.J. -1
  Insl-X Co., Water St. & Broadway, Ossining,

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- Insl-X Co., Water St. & Broadway, Ossining, N.Y.--W N.Y.-W Insulating Fabricators of New England, 69 Grove St., Watertown 72, Mass.-G.H.M.O.

- X Insulating Tube Co., 26 Cottage St., Pough-keepsie, N.Y.-M Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.-E,F,G,H,I,L,M,O,R,T, U,W,X,Y,Z,AA,AB,AF,AG Insuline Corp. of America, 186 Granite St., Manchester, N.H.-AA Integrated Mica Corp., 202 Franklin Pl., Wood-mere, L.I., N.Y.-D,P.T,Y,AE Irvington Varnish & Insulator, 6 Argyle Terr., Irvington 11, N.J.-B,F,K,L,M,N,O,Q,R,U, V,W,X Itrineton II, N.J.-B.F.R.L.M.N.O.G.K.U.
  V.W.X
  Isolantite Mfg. Co., Warren Ave., Stirling.
  N.J.-D.P.S.AC
  Johns-Manville. 22 E. 40 St., New York 16,
  N.Y.-B.C.E.H.I.L.V
  Joy Mfg. Co., 1201 Macklind Ave., St. Louis
  10, Mo.-N
  Kaswoff Products Co., Overton. Nebr.-M.Q
  Kensbey & Mattison Co., Ambler, Pa.-B
  Keller Products, Inc., 41 Union St., Manchester, N.H.-X
  Kellog Co., H W. P.O. Box 469 Lower

- Kellogg Co., H. W., P.O. Box 469, Jersey City 3, N.J.-M Keystone Electronics Corp., 423 Broome St., New York 13, N.Y.-G.X.AB
- Kimble Glass Co., P.O. Box 1035, Toledo 1, Ohio-V

252

- Kirchberger & Co., M., 83 W. Forest Ave., Englewood, N.J.-P.S Krylon Inc., 2038 Washington Ave., Philadel-

- Englewood, N.J.--P.S Krylon Inc., 2038 Washington Ave., Philadel-phia 46, Pa.--U Laidman & Co., 1308 N. Halstead St., Chicago 22, Ill.--B.G.L.N Laminated Sheet Products Corp., 449 Neponset St., Norwood, Mass.--M.X.AA,AF,AG La Moree, C. D., 1325 San Julian St., Los Angeles 15, Calif.-- H.L.O.R.X.Y.Z.AA,AF, AG
- Angeles 15, Calif. -- H,L,O,R,X,Y,Z,AA,AF, AG Lennard Co., P. M., 671 Bergen St., Brooklyn 38, N.Y.--M,AG Linde Aır Products Co., Div. Union Carbide & Carlon Co., 30 E. 42 St., New York 17. N.Y.--D,Q,S,T,W Long Inc., Thomas J., 215 Stonehinge Lane, Carle Place, N.Y.--G,M,X,AA,AF,AG Louthan Mfg. Co., P. O. Box 36, E. Liverpool, Ohio-P Mackay Inc., A.D., 198 Broadway, New York 38, N.Y.--A,O,S Mallinckrodt Chemical Works, 2 & Mallin-ckrodt Sts., St. Louis 7, Mo.--D,T Manning Paper Co., John A., P. O. Box 328, Troy, N.Y.--L Mansol Ceramics Co., 140 Little St., Belle-ville 9, N.J.--RV,AC Marblette Corp., 37-21 30 St., Long Island City 1, N.Y.--Q Mayfair Molded Products Corp., 4440 Elston Ave., Chicago 30, Ill.-N,O McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.-X Melpar, Inc., 452 Swann Ave., Alexandria, Va.--W Mesa Plasics Co., 11751 Mississippi Ave., Los

- Melpar, I Va.--W

- Va.--W Mesa Plastics Co., 11751 Mississippi Ave., Los Angeles 25, Calif.--H.M.Q Mica Coated Products Co., 426 Essex St., Salem, Mass.--F.Y Micacraft Products, Inc., 701 McCarter Hwy., Newark, N.J.--Y Mica Fabricating Co., 53 Central Ave., Rochelle Park, N.J.--D,G,M,R,X,Y,AA,AB, AF

- Mica Fabricating Co., 53 Central Ave., Rochelle Park, N.J.-D,G,M,R,X,Y,AA,AB, AF
  Mica Insulator Co., P.O. Box 1076, Schenec-tady 1, N.Y.-B,D,E,F,H,L,M,N,O,R,V,X,Y,Z
  Midland Paint & Varnish Co., 3801 E. 91st St., Cleveland 5, Ohio-E,U
  Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.-E,I,Q,W,X,AG
  Minn. Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.-N,O
  Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.-B,H,N,O,W,X,AD,AF,AG
  Mitchell Rand Insulation Co., 51 Murray St., New York 7, N.Y.-B,C,F,G,H,I,L,M,Q,R, U,W,Y,Z
  Molded Insulation Co., 335 E. Price St., Phil-adelphia 44, Pa.-H
  Molding Corp. of America, 40 Church St., Pawtucket, R.I.-M,AA,AG
  Molding Specialists, Inc., 289 Nepperhan Ave., Yonkers, N.Y.-M,W
  Moore Co., Howard Jr., 266 William St., New York, N.Y.-F,G,I,K,L,M,N,O,R,X,Y
  Mosinee Paper Mills, Mosinee, Wisc.-H,L
  Muray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.-G,H,K,M,Q,R,T,W,X,AA,AG
  Mycroy Inc., Wheeling & Hintz Rds., Wheel-ing, II.-M
  NAER CORP., 11777 Santa Monica Blvd., W. Los Angeles 25, Calif.-M
  NAER CORP., 11777 Santa Monica Blvd., W. Los Angeles 25, Calif.-M
  NAER CORP., 211 Randolph Ave., Wood-bridge, N.J.-D,R
  New York, N.Y.-B,G,L,M,N,O,R,W,X
  National Ceramic Co., 500 Southard St., Tren-ton 2, N.J.-AC
  National Gasket & Washer Mfg. Co., 124 E. 25, New York, N.Y.-B,G,L,M,N,O,R,W,X
  National Corp., 211 Randolph Ave., Wood-bridge, N.J.-D,R
  Neew Iroducts, Div. of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.-M,N
  New Products, Div., of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.-M,N
  New Products, Div., of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.-M,N
  New Products, Div., of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.-M,N
  New Products, Div., of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.-M,N
  New Products, Div.,

- Mass.--A Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15, Calif.--H Oppenheimer Corp., 578 Exchange St., Buf-falo 10, N.Y.--M,Q Owens-Corning Fiberglas Corp., 16 E. 56 St., New York 22, N.Y.--H Paisley Products, Div. Morningstar, Nicol, 630 W. 51 St., New York 19, N.Y.--H,Q Pan-Ormond Corp., Box 1605, Ormond Beach, Fla.--M

- Pan-Ormond Corp., Box 1605, Ormond Beach, Fla.--M
  Fla.--M
  Pearson Industries, 105 W. Monroe St., Chi-cago 3, III.--G,L,M,Q,X,AF
  Penn Fibre & Specialty Co., 2030 E. West-moreland St., Fhiladelphia 34, Pa.--G,M,X, AA,AF,AG
  Percelay Yarn & Textile Co., 180 Weeden St., Pawtucket, R.I.--H
  Permacel Tape Corp., U. S. Hwy. #1, New Brunswick, N.J.--I
  Permacita Mér. Co. 4554 N. Brundway, Chi-

- Permonite Mfg. Co., 4554 N. Broadway, Chi-cago 40, Ill.—G,H,M,N,O,P,R,X,AA,AF,AG Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-G,X,AA,AF
- Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.-V
- Phoenix Precision Instr. Co., 3803 N. 5th St., Philadelphia 40, Pa.--V Photo Chemical Products, 479 Walton Ave., New York 51, N.Y.--U

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- Plasticraft Products Co., 1 Station Plaza, West Nyack, N.Y.-M,O.X.AA,AG
  Plasti-Kote, Inc., 425 Lakeside Ave., N.W., Cleveland 13, Ohio-M.U
  Plastilight, 481 Canal, Stamford, Conn.-X
  Plastonics, P.O. Box 96, Winter Hill 45, Mass.-M,W
  Polyken Products, Dept. Kendall Co., 222 W. Adams St., Chicago 6, III.-E.H
  Polymer Corp., of Pa., 126 N. 5 St., Reading, Pa-M,Q,T,AG
  Porcelain Products, Inc., 422 W. Sandusky St., Findlay, Ohio-M,AC,AE
  Precision Plastic Products, 225 N. Racine Ave., Chicago 7, III.-M,X
  Resistoflex Corp., 39 Plansoen St., Belleville 9, N.J.-M,AA
  Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.-M,Q
  Rex Corp., Hayward Rd., W. Acton, Mass.-M
  Reynolds Metals Co., 2500 S. 3rd St., Louis-ville 1, Ky.-S
  Richards Co., Arklay S., 35 Winchester St., Newton Highlands 61, Mass.-P
  Richardson Co., 2790 Lake St., Melrose Park III.-H,M,T,X.AA
  Rogens Corp., Goodyear, Conn.-B,G,L,M,Q,

-AA Rogers Corp., Goodyear, Conn.-B,G,L,M,Q,

X Rollon Rubber Products, 1805 Jerome Ave., Bronx 53, N.Y.-N,O Romar Plastics, Inc., 1311 E. Main St., St. Charles, III.-H.M.Z.AA St. Regis Paper Co., 230 Park Ave., New York 17, N.Y.-X Sangamo Electric Co., 9 & Converse Sts., Springfield, III.-M Sauereisen Cements Co., 1045 N. Canal St., Pittsburgh 15, Pa.-W Saxonburg Ceramics, Saxonburg, Pa.-A,D, P,S

F.S. Sheffco Mfg. Corp., Grand & Ruby Aves.. Palisades Park, N.J.—X.AA,AF Sherwin-Williams 101 Prospect Ave., Cleveland 1, Ohio—Q.U.W,AA Sillcocks-Miller Co., 10 W. Parker Ave., Maple-

wood, N.J.-M Skydyne, Inc., River Rd., Port Jervis, N.Y.

Skydyne, Inc., River Rd., Port Jervis, N.Y. -X
Spaulding Fibre Co., 310 Wheeler St., Tona-wanda, N.Y.-G.M
Spruce Pine Mica Co., P.O. Box 456, Spruce Pine, N.C.-Y,Z
Star Porcelain Co., Muirhead Ave., Trenton 9, N.J.-P,AC,AE
Stevens Products, 86 Main St., E. Orange, N.J. -F,H,L,O,X
Stevenson Bro. & Co., 110 Race St., Phila-delphia 6, Pa.-T.W
Steward Mfg. Co., D. M., P.O. Box 510 Chat-tanooga, Tenn.-D,P,T,AC
Stokes Molded Products, Taylor & Webster Sts., Trenton, 4, N.J.-M,N
Stone City Machine & Tool Co., 1206 7th St., Bedford, Ind.-K
Stupakoff Ceramic & Mfg., Div. Carborundum Co., Latrobe, Pa.-D,P,AC,AE
Sun Chemical Corp., 10-10 44 Ave., Long Island City 1, N.Y.-E,F,H,L,M,O,Q,R,X,AA
Superior Steatite & Ceramic Corp., 83 W. Forest Ave., Englewood, N.J.-P,AC
Synthane Corp., 048, Pa.-X,AA
Taylor Fibre Co., Norristown, Pa.-B,F,G,M,O, V,X,AA,AF
Technical Tape Corp., 177 St. & Ft. of Harlem River, Morris Heights 53. N.Y.-E.H.IN

V.A.AAA,AF Technical Tape Corp., 177 St. & Ft. of Harlem River, Morris Heights 53, N.Y.-E,H.I,N Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.-M

Terrell Corp., 19 Lane St., Waltham 54. Mass. -Q,W

-Q,W Thomas & Sons, R., Lisbon, Ohio-AC,AE Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.-H Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N.J.-P Tingstol Co., 1461 W. Grand Ave., Chicago 22, Ill.-X

Trimount Plastics Co., 71 Dudley St., Arling-ton, Mass.-M,X

Trimount Plastics Co., 71 Dudley St., Arlington, Mass.-M,X
Tri-Point Mfg. & Developing Co., 401 Grand St., Brooklyn 11, N.Y.-AG
United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.-D,P,T,Y,AC
Universal Clay Prods. Co., 1528 1 St., Sandusky, Ohio-AE
U.S. Cashed Co., 602 N, 10 St., Camden L.

U. S. Gasket Co., 602 N. 10 St., Camden 1, N.J.-M U. S. Rubber Co., 1236 6 Ave., New York 20, N.Y.-M,N,X

Vacumet Inc. 1009 W. Weed St., Chicago 22, Ill.-M.X Van Cleef Bros., 7800 S. Woodlawn Ave., Chicago 19, Ill.-I.N

Var Flex Corp., 508 W. Court St., Rome, N.Y. --H,M,T

Vorac Co., Route 17th & Meadow Rd., Rutherford, N.J.--K,U Walter Lee Chemical Co., 567 3 Ave., New York 16, N.Y.--M,O,AAA,AF,AG

Warren Wire Co., Pownal, Vt.--H,AA

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Western Gold & Platinum Works, 589 ant St., San Francisco 7, Calif.-S,AC

17th & Meadow Rd.,

589 Bry-

P.S

Wilmington Fibre Specialty Co., P.O. Box 1028, Wilmington 99, Del.—G.L.M Wright & Sons, Wm. E., W. Warren, Mass. ٠E

Zophar ophar Mills Inc., 112 26th St., Brooklyn 32, N.Y.—W,Z

#### **36—INSULATORS**

Insulators, antennaA
Insulators, beadB
Insulators, bearingsQ
Insulators, ceramicC
Insulators, cordD
Insulators, couplingAA Insulators, fabricatedR
Insulators, feed throughS
Insulators, glass bonded micaE
Insulators, H.V. power lineF
Insulators, laminated
Insulators, metallized bushingG
Insulators, mica
Insulators, molded
Insulators, plastic
Insulators, rodsW
Insulators, sheetsX
Insulators, sleeve
Insulators, standoff
Insulators, test clipK Insulators, thermocoupleL
Insulators, towar
Insulators, tubing, asbestos, AB
Insulators, tubing, ceramic
Insulators, tubing, glass
Insulators, tubing, paper
Insulators, tubing, plastic
Insulators, tubing, varnish
Abel Mfg. Co., 147-11 72 Ave., Flushing, L.I. 67, N.YA
<ul> <li>b), N.YA</li> <li>Accurate Electronics Corp., 1312 Ontario St.,</li> <li>N.W., Cleveland 13, Ohio-H.R.T.U.V.W.X.Z</li> <li>Accurate Paper Tube Co., 805 N. Peoria St.,</li> <li>Chicago 22, IIIO.P.Z.AB</li> <li>Admiral Corp., Molded Products Div. P.O.</li> </ul>
N.W., Cleveland 13, Ohio-H,R,T,U,V,W,X,Z
Chicago 22. IllO.P.Z.AB
Admiral Corp., Molded Products Div., P.O.
Box 338, W. Chicago, Ill.—U,V Advanced Vacuum Broducts 20 Liberty Ct
Stamford, ConnC,G,J
Admiral Corp., Molded Products Div., P.O. Box 338, W. Chicago, IllU,V Advanced Vacuum Products, 22 Liberty St., Stamford, ConnC.G.J Aeronautical Radio Mfg. Co., 155 1st St., Mine- ola, N.YA,C.J.S Aerova Corp. 740 Relieville Ave. New Pad
Aerovox Corp., 740 Belleville Ave., New Red.
Aerovox Corp., 740 Belleville Ave., New Bed- ford, MassC,G,J,W,Y
NV ATC
Alden Products Co., 117 N. Main St., Brock-
Alden Products Co., 117 N. Main St., Brock- ton 64, MassJ,K,S,V Allied Allegri Machine Co., 141 River Rd., Nutler 10 N L OP
Nutley 10, N.JO,P
13. N.YN.P.Z
Nutley 10, N.JO.P Alpha Wire Corp., 430 Broadway, New York 13, N.YN.P.Z American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, TennB,C,G,I,J,L,S,W, X V AA
Rd., Chattanooga 5, Tenn.—B,C,G,I,J,L,S,W, X,Y,AA
A.Y.AA American Mica Insulation Co., Manasquan, N.J.—H.I.J.O.P.R.T.V.W.X.Z American Platinum Works, 231 N.J. R.R. Ave., Newark 5. N.I.—L.
American Platinum Works, 231 N.J. R.R. Ave.
American Platinum Works, 231 N.J. R.R. Ave., Newark 5. N.JL
ton Parkway S., Mount Vernon, N.V.
American Radio Hardware Co., 152 MacQues- ton Parkway S., Mount Vernon, N.YK American Wood Working Co., 1682 N. Lowell Ave. Chicage 29 11
American Wood Working Co., 1682 N. Lowell Ave., Chicago 39, 111. Anchor Plastics Co., 36-36 36th St., Long Island City 6, N.YI.V.W.Z Aries Laboratories, 270 Park Ave., New York 17, N.YV Asheville-Schoonmaker Mice Co. 000 Laboratoria
Island City 6, N.YI,V,W,Z
Aries Laboratories, 270 Park Ave., New York 17. N.YV
Asheville-Schoonmaker Mica Co., 900 Jeffer-
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Come 215 Denue St
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14 NY.—N
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—N Baer Co., N.S., 1-11 Montgomery St., Hill-
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—N Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N J.—J.T.Y.W.X.Z
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—N Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N J.—J.T.Y.W.X.Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.Y.—A
Asheville-Schoonmaker Mica Co., 900 Jeffer- son Ave., Newport News, VaH Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.YJ Bache & Co., Semon, 636 Greenwich St., New York 14, N.YN Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, NJJ.T.Y.W.X.Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.YA Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft.
son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—N Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N.J.—J.T.Y.W.X.Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.Y.—A Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft. Lauderdale. Fla.—A C.S
son Ave., Newport News, VaH Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.YJ Bache & Co., Semon, 636 Greenwich St., New York 14, N.YN Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N JJ.T.Y.W.X.Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.YA Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft. Lauderdale, FlaA,C,S B & C Insulation Products, 490 Lincoln Hwy., Iselin, N.IP
son Ave., Newport News, VaH Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.YJ Bache & Co., Semon, 636 Greenwich St., New York 14, N.YN Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N.JJ.T.Y.W.X.Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.YA Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft. Lauderdale, FlaA.C.S B & C Insulation Products, 490 Lincoln Hwy., Iselin, N.JP Beck's Inc., 298 E. 5 St., St. Paul 1, Minn
son Ave., Newport News, Va.—H Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, N.Y.—J Bache & Co., Semon, 636 Greenwich St., New York 14, N.Y.—N Baer Co., N.S., 1-11 Montgomery St., Hill- side 5, N.J.—J,T,V,W,X,Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.Y.—A Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft. Lauderdale, Fla.—A,C,S B & C Insulation Products, 490 Lincoln Hwy., Iselin, N.J.—P Beck's Inc., 298 E. 5 St., St. Paul 1, Minn.— T,X
son Ave., Newport News, VaH Automatic Metal Products Corp., 315 Berry St., Brooklyn 11, NYJ Bache & Co., Semon, 636 Greenwich St., New York 14, N.YN Baer Co., NS., 1-11 Montgomery St., Hill- side 5, NJJ,T,V,W,X,Z Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, NYA Bassett, Inc., Rex, 1314 N.E. 17 Ct., Ft. Lauderdale, FlaA,C,S B & C Insulation Products, 490 Lincoln Hwy., Iselin, N.JP Beck's Inc., 298 E. 5 St., St. Paul 1, Minn T.X

- T.X Bennett Products Mfg. Co., P.O. Box 1055, Palo Alto, Calif.—C,S Bentley, Harris Mfg. Co., Hector & Lime Sts., Conshohccken, Pa.—P.Z Bird & Co., Richard H., 1 Spruce St., Wal-tham 54, Mass.—Q Birnbach Radio Co., 145 Hudson St.. New York 13, N.Y.—A.C,D,F,I,J,K,P,S,V,W,Z,AA
- Biwax Corp., 3445 Howard St., Skokie, Ill.-U Blazon Mfg., 6021 Dempster St., Morton Grove, Ill.--V
- Brad & Co., W. H., 727 W. Glendale Ave., Mil-waukee 12, Wisc.--V Brand & Co., Wm., North & Valley Sts., Wil-limantic, Conn.--N,P,Z

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Brand Dielectrics, Inc., 57 North St., Wil-limantic, Conn.-E,H,R,X Buchanan Electrical Products, 225 Rt. 22, Hill-side, N.J.-G,U Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-V

- Dia Kadio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-V
  Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.-C, J, V
  Cast Optics Corp., 1010 Post Rd., Riverside, Conn.-V, W, X
  Celanese Corp. of America, 180 Madison Ave., New York 16, N.Y.-V, X
  Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-A, B, C, G, I, J, L, M, Q, R, S, U, W, X, Y, AA
  Cermascal Co., Box 25, New Lebanon Center, N.Y.-C
  Chase & Sons, 19 Highland Ave., Randolph, Mass.-T, X
  Cinch Mfg. Corp., 1026 S, Homan Ave., Chi-

- N.Y.-C
  Chase & Sons, 19 Highland Ave., Randolph, Mass.-T,X
  Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, 111.-J
  Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio-V
  Citation Products Co., 233 E. 146 St., New York 51, N.Y.-J,RS
  Cleveland Container Co., 6201 Barberton Ave., Cleveland 2, Ohio-O,P.Z,AB
  Collectron Corp., 216 E. 45th St., New York 17, N.Y.-U,V
  Colorvision Plastics, Inc., 182 Beacon St., Boston 16, Mass.-V
  Connector Corp., 6025 N. Keystone Ave., Chi-cago 30, 111.-R,U
  Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, 111.-A
  Continental Can Co., 100 E. 42 St., New York 17, N.Y.-T
  Continental Diamond Fibre Co., Newark, Dela. -H.N,O,T,V.W,X,Z
  Cook Ceramic Mfg. Co., 505 Prospect St., Trenton 1, N.J.-C
  Cortland Industries, 4545 W. Cortland St., Chicago 39, 111.-B,U,Y,W,X
  Crane Packing Co., 1800 Cuyler Ave., Chi-cago 13, 111.-B,U,Y,W,X
  Crane Packing Co., 1800 Cuyler Ave., Chi-cago 13, 111.-B,U,Y,W,X
  Crane Packing Co., 1800 Cuyler Ave., Chi-cago 13, 111.-B,U,Y,W,X
  Creative Plastics Corp., Rt. 25-A, Stony Brook, N.Y.-R,SU,V
  Crowley & Co., Henry L., 1 Central Ave., W. Orange, N.J.-A,C
  Delaware Optical Labs., 36 Williams St., Lans-downe, Pa.-C.E
  Demuth Glass Works, P.O. Box 629, Parkers-burg, W. Va.-N
  Dielectric Materials Co., 5315 N. Ravenswood Ave., Chicago 40, 111.-P,Z
  Dobeckman Co., Box 6417, Cleveland 1, Ohio -T,V,X
  Duralith Corp., 1025 Race St., Philadelphia 7, Pa.-T
  Dynakon, 9623 Clinton, Cleveland, Ohio-T,V
  Eby Co., Hugh H., 4700 Stenton Ave., Phila-

- Du-Co Ceramics Co., Box 587, Butler, Pa.-C.I.J.L.Y
  Duralith Corp., 1025 Race St., Philadelphia 7, Pa.-T
  Dynakon, 9623 Clinton, Cleveland, Ohio-T.V
  Eby Co., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.-J
  Elco Corp., M St., below Erie Ave., Philadelphia 24, Pa.-U
  Electrical Industries-Div. Amperex Electronic Corp., 44 Summer Ave., Newark 4, N.J.-J
  Electrical Refractories Co., E. Clark St., E. Palestine, Ohio-C.Y
  Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-C.H.L.Y
  Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-C.E.I.Y.W
  Electronic Plastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.-I.T.U.Y.W.X.Z
  Emerson & Cuming, Inc., 869 Washington St., Canton, Mass.-T.Y
  Emerson Plastics Corp., 567 3 Ave., New York 16, N.Y.-A.H.I.R.T.V.X.Z
  Farnam Mfg. Co., Inc., P.O. Box 5098, Asheville, N.C.-H
  Federal Screw Products, 3917 N. Kedzie Ave., Chicago 18, III.-P.Z
  Federal Telephone & Radio Co.. Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-H.T.U.Y
  Feroxcube Corp. of America, E. Bridge St., Saugerties, N.Y.-C
  Fischer & Porter Co., 19 Warminster Rd., Hatboro, Pa.-N
  Flader, Inc., Fredric, 583 Division St., N. Tonawanda, N.Y.-A.S.U.Y
  Formica Co., 4614 Spring Grove Ave., Cincinnati 32, Ohio-T.Y.W.X.Z
  Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Dela.-T.V.W.X.Z
  Franktin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Dela.-T.V.W.X.Z
  Franktin Fibre-Lamitex Corp., 411 E. Front St., Garde Mig. Co., 588 Eddy St., Providence 3, R.I.-A.B.J.R.S.U.Y
  Guereal Corp. 6000 Fernview Ave., Cincinnati 13, Ohio-J.S
  Garde Mig. Co., 588 Eddy St., Providence 3, R.I.-A.B.J.R.S.U.Y
  General Ceramites Corp., Crows Mill Rd., Keas-

- A,J General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—A,J,O,P,Z General Ceramics Corp., Crows Mill Rd., Keas-bey, N.J.—A,B,C,G,J,Y General Electric Co., Chemical & Metallurgical Div., 1 Plastics Ave., Pittsfield, Mass.—E,H, T,U,V,W,X,Z

General Products Corp., 107 Salem St., Union Springs, N.Y.--U Glastic Corp., 1823 E. 40th St., Cleveland 8, Ohio---U.V.W.X

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- Graef Eng'g. Co., Box 416, Paramount, Calif. —A.G.I.J.Q.R.T.U.V.W.X.Z
  Grayhill, 561 Hillgrove Ave., LaGrange. Ill.— J.K
  Gries Reproducer Corp., 5 Second St., New Rochell, N.Y.—I.V
  Guastavino Co., R., 660 Main St., Woburn, Mass.—C.Y
  Hermetic Seal Products Co., 37 S. 6 St., Newark 7, N.J.—B.C.G.J.S
  Holub Industries, 413 DeKalb Ave., Sycamore, III.—V
  Huse-Liberty Mica Co., 3012 Washington St., Boston 19, Mass.—P.Z
  I.E. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, Ill.—A,H.J.R.V
  Illinois Electric Porcelain Co., 510 N. Pearl St., Macomb, Ill.—A.C.I.J
  Imperial Radar & Wire Corp., 1661 Boone Ave., New York 60, N.Y.—A.J.Q.S.V.W.AA
  Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N.Y.—V
  Industrial Accessories Inc., 77 S. Broadway, Long Branch, N.J.—R.S.T.X
  Industrial Hardware Mfg. Co., 109 Prince St., New York 12, N.Y.—R
  Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.—E,H.I.N.P.R.T.V.W.X.Z
  Insulation Mfrs. Corp., 565 W. Washington Blvd., Chicago 6, Ill.—E,H.I.N.P.R.T.V.W.X.Z
  Insulation Mfrs. Corp., 202 Franklin P1. Wood-mere, L.I., N.Y.—H.W.X.Y.Z.AB
  Invington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11, N.Y.,—J
  Jennings Radio Mfg. Corp., 970 McLaughlin A.J.—A,B.C.F.G.I.J.L.R.S.W.Y.AA
  JAM Hardware Mfg. Co., 75 N. 11th St., Brooklyn 11, N.Y.—J
  Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.—S
  J F D Mfg. Co., 6101—16 Ave., Brooklyn 4, N.Y.—AE.S.Y
  Johnson Co., E. F., Waseca, Minn.—A,J.S Kaywoff Products Co., Overton, Nebr.—K

- N.Y.-A.C.S.Y Johns-Manville, 22 E. 40 St., New York 16, N.Y.-AB Johnson Co., E. F., Waseca, Minn.-A,J,S Kaywoff Products Co., Overton, Nebr.--K Keller Products, Inc., 41 Union St., Man-chester, N.H.-Z Keystone Electronics Corp., 423 Broome St., New York 12, N.Y.-E,R,S,T.V.W.X.Z Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-S.V Kirchberger & Co., M., 83 W. Forest Ave., Englewood, N.J.-C Laidman & Co., 1308 N. Halstead St., Chicago 22, III.-Q Laminated Sheet Products Corp., 449 Neponset St., Norwood, Mass.-T.V.W.X.Z LaMoree, C. D., 1325 San Julian St., Los Angeles 15, Calif.-H.I.P.T.V.W.X.Z,AB Lapp Insulator Co., Radio Specialties Div., 27 Gilbert St., LeRoy 3, N.Y.-A.C.F.J.M.W.Y Lennard Co., P. M., 671 Bergen St., Brooklyn 38, N.Y.-U.V.W.X.Z Lerco, Div. Lynn-Deatrick, Inc., 501 S. Varney St., Burbank, Calif.-U Locke Dept., of General Electric Co., P.O. Box 57, Baltimore 8, Md.-A.F.G,J Long Inc., Thomas J., 215 Stonehinge Lane, Carle Place, Long Island, N.Y.-V.Z Louthan Mfg. Co., P. O. Box 86, E. Liverpool, Ohio-C Mansol Ceramics Co., 140 Little St., Belle-ville, N.J.-C

Loutnan Mik. Co., F. C. BOX 50, E. Liverpool, Ohlo-C
Mansol Ceramics Co., 140 Little St., Belleville, N.J.-C
Marblette Corp., 37-21 30 St., Long Island City 1, N.Y.-U, V.W.X.Z
Mathis Tower & Equip. Co., 2200 E. Washington St., E. Peoria. III.-M
Mayfair Molded Products Corp., 4440 Elston Ave., Chicago 30, III.-U,V
McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.-V
Mesa Plastics Co., 11751 Mississippi Ave., Los Angeles 25, Calif., U.V
Mica Coated Products Cor, 426 Essex St., Salem, Mass.-E,X
Mica Fabricating Co., 53 Central Ave., Ro-chelle Park, N.J.-H.I.P.T.U.V.W.X.Y.Z
Mica Insulator Co., P.O. Box 1076, Schenec-tady 1, N.Y.-A,E,H,O,R.T.U.V.W.X
Micraenft Products, Inc., 701 McCarter Hwy., Newark, N.J.-H
Miller Mfg. Co., James, 150 Exchange St., Malden, Mass.-A,C,J,S,U,AA
Miller Electronics, 2840 Naomi St., Burbank, Calif.-A,U
Minerals & Insulation Co., 55 Central Ave., Rochelle Park, N.J.-H,J,U,V,W,X
Minature Precision Bearings, Inc., 101 Car-penter St., Keene, N.H.-Q
Minn. Rubber & Gasket Co., 8630 Wooddale Ave., Minneapolis 16, Minn.-U
Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.-D.I,U,V,W,X
Mitchell Rand Insulation Co., 51 Murray St., New York 7, N.Y.-D.E,H.P
Mitronics, Inc., 232 18th Ave., Newark, N.J. -G

odern Wire Co., 39-30 Review Ave., Long Island City 1, N.Y.-C

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Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.-A.U.V Moore Co., Howard J., 266 William St., New York, N.Y.-I,O.P.R.T.V

Modern

Mosley Electronics, 8622 St. Charles Rock Rd., St. Louis 14, Mo.—A.S Mueller Electric Co., 1583 E. 31 St., Cleveland

Mosley Electronics, 8622 St. Charles Rock Rd., St. Louis 14, Mo.-A.S
Mueiler Electric Co., 1583 E. 31 St., Cleveland 14, Ohio-K
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.-A,I,J,K,L,O,P,Q,R,S,T,U,V,W, X,Z,AA
Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.-E,I,R,S,U,V,W,X
Mykroy, Inc., Wheeling & Hintz Rds., Wheel-ing, IIL-A,C,E,J
NAER Corp., 1177 Santa Monica Blvd., W. Los Angeles 25, Calif.-V
National Ceramic Co., 500 Southard St., Tren-ton 2, N.J.-A,B,C,G,J,S,Y
National Ceramic Co., 500 Southard St., Tren-ton 2, N.J.-A,B,C,G,J,S,Y
National Electronic Mfg. Corp., 186 Granite St., Manchester, N.H.-A
National Vulcanized Fibre Co., Maryland Ave. & Beech Sts., Wilmington, Dela.-T,V,W,X,Z
Natver Corp., 211 Randolph Ave., Wood-Bridge N.J.-P,V,Z
New Products Co., 1669 E. 54th St., Indian-apolis, Ind.-R,U,V
Nichols Products Co., 325 W. Main St., Moorestown, N.J.-A,I.R,V
Oppenheimer Corp., 578 Exchange St., Buffalo 10, N.Y.-V
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Penn Fibre & Specialty Co., 2020 E. Westmore-land St., Philadelphia 34, Pa.-O,V,W,X,Z
Perfection Mica Co., 1310 N. Elston Ave., Chi-cago 40, III.-R,W,X,Z
Petroff, Peter A., 127 Water St., New York 5, N.Y.-A,B
Phen-O.Tron, Inc., 455 Main St., New Ro-chelle, N.Y.-Z
Philmore Mfg. Co., 113 University Pl., New York 8, N.Y.-A
Plasticraft Products Co. 1, Station Plaza, W. Nyack, N.Y.-J,R.T,V.W,X,Z
Pastronics. P.O. Box 96, Winter Hill 45, Mass.-V
Polyrier Corp. of Pa., 126 N. 5 St., Reading, Pa.-I,Q,R,V,W,Z
Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, III.-N,O,UAB
Precision Plastic Products, Icc, 422 W. Sandusky St., Findlay, Ohio-A,C,F,Y,Y
Precision Plastic Products, 225

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Calif.-U,V Rex Corp., Hayward Rd., W. Acton, Mass-Z Richards Co., Arklay S., 37 Winchester St., Newton Highlands 61, Mass.-L Richardson Co., 2790 Lake St., Melrose Park, III.-T,U,V,W.X.Z Rogan Bros., 8031 N. Monticello, Skokie, III.-U,V

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Rogers Corp., Goodyear, Conn.—A,R,T,V,X
Romar Plastics. Inc., 1311 E. Main St., St. Charles, Ill.—U,V
Saxonburg Ceramics, Saxonburg, Pa.—C
Schneider & Marquard, 199 S. Portland Ave., Brooklyn, N.Y.—H
Scalectro Corp., 136 Union Ave., New Ro-chelle, N.Y.—J.S
Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio—B.C.G.J
Silicocks-Miller Co., 10 W. Parker Ave., Maple-wood, N.J.—R,V,X
Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.—I,J.R.T,V,Z
Spaulding Fibre Co., 310 Wheeler St., Tona-wanda. N.Y.—V,Z
Spruce Pine Mica Co., P.O. Box 456, Spruce Pine. N.C.—H
Star Porcelain Co., Muirhead Ave., Trenton 9, N.J.—B,C
Stevens Products Inc., 86 Main St., East Orange, N.J.—U
Steward Mfg. Co., D. M., P.O. Box 510, Chattanooga, Tenn.—A,B,C,G,J,L,S,Y
Stone Paper Tube Co., 900 Franklin St., N.E., Washington 17, D C.—O

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Stupakoff Ceramic & Mfg., Div. Carborundum Co., Latrobe, Pa.—B.C.G.J.L.S.Y
Superior Steatite & Ceramic Corp., 83 W. Forest Ave., Englewood, N.J.—C.Y
Superior Ave., Co. 200
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Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.-V

DOSION O, MARS. – V Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-H,T,U.V Syncor Products Co., 26 Irving Court, Malden 48, Mass.-A,B,C,I.J

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Synthane Corp., Oaks, Pa.—R,T,W,X,Z Taylor Fibre Co., Norristown, Pa.—I,N \_ X,W,Z -I.N.R.T.V.

A. W. Z. Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.-L. Thomas & Sons Co., R., Lisbon, Ohio-A,B,C, F,J,Y

r,J,X Thompson, Co., H.I., 1733 Cordova St., Los Angeles 7, Calif.—I Thor Ceramics, Inc., 225 Belleville Ave., Bloom-field, N.J.—A.B.C.G.I.J.M Tingstol Co., 1461 W. Grand Ave., Chicago 22,

Tingstol Co., 1461 W. Grand Ave., Chicago 22, Ill.—T
Torwico Electronics, 967 Frelinghuysen Ave., Newark 5, N.J.—C
Trico Fuse Mfg. Co., 2948 N. 5th St., Milwark 5, No. 1207, Lindsay, Calif.—R,T
Trilsch Co., John D., 1310 McKinney Ave., Houston, Texas—M
Trinount Plastics Co., 71 Dudley St., Arlington, Mass.—B,I,T,V.X
Tri-Point Mfg. & Devel. Co., 401 Grand St., Brooklyn 11, N.Y.—V
TV Hardware Mfg. Co., 919 Taylor Ave., Rockford, Ill.—A,J.K.S.U.V
United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.—C,HY
U. S. Gasket Co., 2130 Avenue of the Americas, New York 20, N.Y.—Z
U. S. Tower Co., 219 Union Trust Bldg., Petersburg, Va.—M
Universal Clay Prods. Co., 1528 1 St., Sandusy, Ohio—A,C.F.Y
Var Flex Corp., 508 W. Court St., Rome, N.Y. —I,N,P,V.Z
Victor Insulators, Inc., Maple Ave., Victor, NY.—C.

Victor Insulators, Inc., Maple Ave., Victor, N.Y.-C

-I.N.P.V.Z
Victor Insulators, Inc., Maple Ave., Victor, N.Y.-C
Virginia Electronics Co., River Rd. at B&O
R.R., Washington 16. D.C.-R
Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.-P.Z
Walter Lee Chemical Corp., 567 3 Ave., New York 16, N.Y.-A,H,I,R.T.V.X.Z
Warren Plastics Corp., S. Irvine St., Warren, Pa.-U.V
Warren Gold & Platinum Works, 589 Bryant St., San Francisco 7, Calif.-C
Wheaton Co., T. C., Millville, N.J.-G.J.S
Whitso, Inc., 9330 Byron St., Schiller Park, Ill.-J.U.V
William & Co., Willimantic, Conn.-I
William Mfg. Co., 2715 E. 14 St., Kansas City 27, Mo.-AA
Wincharger Corp., E. 7 & Division Sts., Sioux City 20, Data

Z1, MO.—AA
Wincharger Corp., E. 7 & Division Sts., Sioux City 2, Iowa—M
Wind Turbine Co.. E. Market St. & Penn. R.R., West Chester, Pa.—A.C.J.R.S
Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.—J

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Incandescent lightsJ
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Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio-E Acme Electric Corp., Cuba, N.Y.-O Acme Electronics, Inc., (sub. Aerovox Corp.,) 2724 Peck Rd., Monrovia, Calif.-F,O

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 A.J.F. Industries, 852 Monroe St., Brooklyn 21, NJ.-G
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 American Communications Corp., 306 Broadway, New York A. Hurdware Co., 152 Macqueston Fkwy S., Mt. Vernon, N.Y.-E.F.
 American Television & Radio Co., 300 E. 4th St., St. Faul 1, Minn.-O
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 American St. St. St. Faul 1, Minn.-O.
 Art Specialty Co., 8245 W. Lake St., Chicago 22, 111.-P.Q.R.Y.
 Art Specialty Co., 8245 W. Lake St., Chicago 24, 111.-G.J.K.T.X.
 Bardwell & McAlister. 2950 N. Ontario St., Burbank, Calif.-S.Y.U.W.
 Bardwell & McAlister. 2950 N. Ontario St., Burbank, Calif.-A.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N.J.-F.O
 Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.-A
 Brith Electronic Sales Co., 23-03 45th Rd., Long Island City I, NY.-E
 Brown Eulp. Co., 128 N. Main St., Milltown.
 Burgess Battery Co., Freeport. III.-O
 Burke & James. 321 S. Wabash Ave., Chicago 4. 11.-A.F.L.S.W.
 Calie Electric Products. 234 Daboll St. Providence 7. R.I.-S.
 California Plasteck, Inc., 225 E. 4 St., Los Angele 13. Calif.-E.Y.
 Camera Eduin, Co. 1600 dowy. New York 19. N.Y.-A.F.I.K.O.T.W. 20. NY.-H.
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 Cadian Radym & M.Y.-H.
 Cadian Radym & 20. NY.-H.
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- Erie Resistor Corp., 644 W. 12th St., Erie, Erie Resistor Corp., 044 W. Lett. Pa.-F Federal Screw Products, Inc., 3917 N. Kedzie Ave., Chicago 18, 11.-E Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-P Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-B,C Fisher-Pierce Co., 170 Pearl St., S. Braintree 85, Mass.-N

- S5, Mass.-N Flett Labs., 3711 Marshall Rd., Drexel Hill, Pa.-P

- Jahr A. Hele Co., 110 Fearl St., S. Braintree 35, Mass.-N
  Flett Labs., 3711 Marshall Rd., Drexel Hill, Pa.-P
  Flexo Int'l. Co., 3245 W. Lake St., Chicago 24, 111.--A, G.J, K, T, X
  Florman & Blabb, 70 W. 45 St., New York 36, N.Y.-A, F.I., J.K. L, O, S.T. U, W, AA
  France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio-A, O
  Gates & Co., Geo. W., Hempstead Turnpike & Lucille Ave., Franklin Square, Long Island, N.Y.-B, C, G, J, X
  Gem Electric Mfg. Co., 237 37 St., Brooklyn 32, N.Y.-A
  General Cement Mfg., Co., 919 Taylor Ave., Rockford, Ill.-Q, X
  General Electric Co., Miniature Lamp Dept., Nela Park, Cleveland 12, Ohio--C, E, G, H, J, P, S, V, W, X, AB, AC
  General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-L, N, W
  General Electric Co., 275 Mass. Ave., Cambridge 39 Mass.-F, L, Q
  Georator Corp., Manassas, Va.-O
  Glens Falls, N.Y.-C.Y
  Graybar Electronics Co., 325 Canal St., New York 13, N.Y.-O, Q
  Haft & Sons, 950 Kent Ave., Brooklyn 5, N.Y. Haledy Electronics Co., 57 William St., New York 5, N.Y.-N,P
  Hallamore Mfg. Co., 466 W. Superior St., Chicago 10, Ill.-K,R
  Hauman Instruments, 70 Coolidge Hill, Watertown, Mass.-N
  Haydu Bros. of N.J., Box 1226, Plainfield, N.J. -A.V
  Herzog Miniature Lamp Works, 12-23 Jackson Ave., Long Island City, N.Y.-J

- Hauman İnstruments, 70 Coolidge Hill, Watertown, Mass.—N
  Haydu Bros. of N.J., Box 1226, Plainfield, N.J. —A.V
  Herzog Miniature Lamp Works, 12-23 Jackson Ave., Long Island City, N.Y.—J
  Hetherington, Inc., Sharon Hill, Pa.—E
  Hub Electric Co., 2255 W. Grand Ave., Chicago 12, III.—D.F.G.J.K.M
  Hudson Lamp Co., 528 Elm St., Arlington, N.J.—E.J.N
  Hughey & Phillips, 3300 N. San Fernando Islvd., Hurbank, Calf.—N.Z.
  Industrial Electrical Works, 1509 Chicago St., Omaha, Nebr.—K
  Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.—O
  Industrial Test Equip. Co., 55 E. 11th St., New York 3, N.Y.—O
  Industrial Test Equip. Co., 55 E. 11th St., New York 58, N.Y.—O
  Interlectronics Corp., 2432 Grand Concourse, New York 58, N.Y.—H
  Interlectric Corp., 1401 Lexington Ave., Warren, Pa.—G.J
  iq Industries, 6110 Wilshire Blvd., Los Angeles 36, Calif.—N,O.Z
  Joy Mfg. Co., Electrical Connector Div., 1201 Mackland Ave., St. Louis 10, Mo.—K,SW,Y Kahn & Co., 541 Windsor St., Hartford 1, Conn.—D,O
  Katolight Corp., First Ave. at Chestnut, Mankato, Minn.—Y
  Kemitte Labs., 1819 W. Grand Ave., Chicago 22, III.—C,Q
  Kent Metal Mfg., Co., 490 Johnson Ave., Brooklyn 37, N.Y.—C,G,J
  Kinetex Instrument Co., 902 Broadway, New York 36, N.Y.—N
  Larsen Nuclear Research, 520 Fifth Ave., New York 36, N.Y.—N
  Lawter Chemicals, 3550 Touhy Ave., Chicago 45, III.—C.H
  Leecraft Mfg. Co., 60 Greene St., New York 12, N.Y.—E, P. M., 671 Bergen St., Brooklyn 38, N.Y.—G
  Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.—N, X
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, III.—N
  Luxo Lamp Corp., 102 Cohumbus Ave., Tuckahoe, N.Y.—F, C.H.J.P.S.T.V.W.Y.Z
  Luxo Lamp Corp., 102 Cohumbus Ave., Tuckahoe, N.Y.—N
  Luxo Lamp Corp., 102 Cohumbus Ave., Tuckahoe, N.Y.—F, Co., 1401 Clinton St., Hoboken, N.J.—N
  Max-Electric P
- Mag-Electric Products. 12822 Yukon Ave., Hawthorne, Calif.-O
- Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, 111.—C Marion Electrical Instrument Co., 400 Canal St., Manchester, N.H.—L
- Matchless Electric Co., 1700 Washington Blvd., Chicago 12, Ill.-E,J,P

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  Metronics, Inc., U.S. Route 130, Burlington, N.J.—G,R,X,Y
  Meyer & Co., Hugo, 39 W. 60th St., New York 23, N.Y.—O
  Miller Electric Co., P. O. Box 1827, Jackson-ville, Fla.—D,F,N,O,P
  Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.—A,B,I,J,S,T,U,AA
  Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.—A
  Moulic Specialties Co., 1005-7 W. Washing-ton St., Bloomington, III.—G,V
  Multi-Tron Laboratory, 4624 Washington Blvd., Chicago 44, III.—N
  Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.—G
  National Carbon Co., Div. Union Carbide & Carbon Corp., 30 E. 42 St., New York 17. N.Y.—J
  National Union Electric Corp., 350 Scotland Rd., Orange. N.J.—V

- keepsie, N.Y.--G
  National Carbon Co., Div. Union Carbide & Carbon Corp., 30 E. 42 St., New York 17. N.Y.-J
  National Union Electric Corp., 350 Scotland Rd., Orange, N.J.--V
  Natural Lighting Corp., 1124 E. Colo. Blvd., Glendale 5, Calif.--A,I,J,K,T
  New Jersey Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J.--O
  Norco Mfg. Co., 392 Bleecker St., New York 14, N.Y.-C,G,H,W,X
  Oleson Co., Otto K., 1534 Cahuenga Blvd., Hollywood 28, Calif.--A,C,D,F,J,O,S,T,U,AA
  Olin Industries, Inc., Electrical Div., 275 Winchester Ave., New Haven, Conn.
  Opad Electric Co., 69 Murray St., New York 7, N.Y.--O,Q
  Pacific Electricord Co., 3217 Exposition Pl., Los Angeles 8, Calif.--K,S,U.W
  Pantek Co., Box 212, El Sexundo, Calif.--O,Q
  Patrick Brothers Inc., 1938 N. Springfield Ave., Chicago 47, Ill.--A,R
  Peer, Inc., 1200 Milton St., Benton Harbor, Mich.--D,O
  Peschel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.--O
  Petroff, Peter A., 127 Water St., New York 5, N.Y.-N
  Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.-O,P
  Phoner Mfg. Co., 113 University Pl., New York 3, N.Y.-E
  Phoenix Precision Instrument Co., 3803 N. Fifth St., Philadelphia 40, Pa.-C,L,N
  Pioneer Gen-E. Motor Corp., 5841 W. Dickens Ave., Chicago 39, 111-K
  Porter Transformer Co., 532 Hulberry St., Newark 5, N.J.-O
  Radiant Lamp Corp., 300 Jelliff Ave., Newark 8, N.J.-JST,W
  Radio Corp. of America, Tube Div., 415 S. 5 St. Harison, N.J.-E
  Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.-Y.-O
  Recisen 30, N.J.-E
  Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.-Y
  Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.-E
  Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.-Y
  Regulator Equip. Corp., 56 California Ave., Paterson 3, N.J.--F
  Ripley Co., 1 Factory St., Middletown, Conn.-N

- ---N Rodale Mfg. Co., Emmaus. Pa.--S Rolab Studios, Walnut Tree Hill, Sandy Hook.
- Con.-R Rust Industrial Co., 130 Silver St., Manches-ter. N.H.-M.T.Z St. Marys Carbon Co., State St., St. Marys,

- St. Marys Carbon Co., State St., St. Marys, Pa.—A
  Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, Ill.—G.H
  Schueler & Co., 75 Cliff St., New York 38, N.Y.—E,J
  Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.—O
  Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.—C
  Signalite Inc., 37-41 Neptune Hwy., Neptune, N.J.—G.F. K.M.P.S.W.Y
  Soderberg Mfg. Co., 628 S. Palm Ave., Al-hambra, Calif.—F.K.M.P.S.W.Y
  Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.—O
  S.O.S. Cinema Supply, 602 W. 52 St., New

- Con. —O S.O.S. Cinema Supply, 602 W. 52 St., New York 19, N.Y.—A.B.C,D.E.F.I.J,K,L,N,R,S.T, U.W
- U.W Specialty Assembling & Packing Co., Spe-cialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.-A.K.P Steber Mfg. Co., Broadview, Ill.-S.U.W Stroblite Co., 75 W. 45th St., New York 36, N.Y.-C.H.X Strong Electric Corp., 87 City Park Ave., To-ledo 2, Ohio-B.S

- Superior Electric Co., 83 Laurel St., Bristol, Conn.-F
- Switzer Bros., 4732 St. Clair Ave., Cleveland 3. Ohio-C,H Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-C,G,H,J,N,Q,V Tarzian Inc., Sarkes, 539 S. Walnut. Bloom-ington, Ind.-T
- Technical Products Co., 19 N. Dunlap, Medi-cal Center, Memphis 1, Tenn.—C,L,N Television Specialty Co., 350 W. 31 St., New York 1, N.Y.—A,B,D,F,G,I,J,K,M,O,R

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- Terado Co., 1068 Raymond Ave., St. Paul 14, Minn.-O Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.-A,E,F,G,J,K,N Tingstol Co., 1461 W. Grand Ave., Chicago 22, 111.-E Tower Construction Co., 1923 Geneva St., Sioux City, Iowa-Z Tower Structures, Inc., Gregg St., Lodi, N.J. -T,Z
- 22. II.-E
  Tower Construction Co., 1923 Geneva St., Sioux City, Iowa-Z
  Tower Structures, Inc., Gregg St., Lodi, N.J. -T.Z
  Trilsch Co., John D., 1310 McKinney Ave., Houston, Texas-A.K.N.O.Y.Z
  Tung-Sol Electric, Inc., 95 8th Ave., Newark 4, N.J.-J.P
  TV Specialty Co., 350 W. 31st St., New York 1, N.Y.-A.F.I.K.L.S.T.U.W
  Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.-C.H
  Union Switch & Signal. Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.-P
  Universal Match Corp., Armament Div., Box 191, Ferguson 21, Mo.-N
  U.S. Electric Mfg. Corp., 222 W. 14th St., New York 11, N.Y.-P.S.Y
  U.S. Motors Corp., 420 Nebraska St., Osh-kosh, Wisc.-O
  U.S. Radium Corp., 535 Pearl St., New York 7, N.Y.-H
  Verd-A-Ray Corp., 615 Front St., Toledo 5, Ohio-A.G.J.S.V.W.X.Z
  Vickers Electric Div., Vickers, Inc., 1835 Lo-cust St., St. Louis 3, Mo.-F
  Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 12, Ohio-O
  Wade Electric Products Co., 94 South St., Mt. Vernon, N.Y.-D.F.M
  Weston Electrical Instrument Corp., 614 Fre-linghuysen Ave., Newark 5, N.J.-N
  Wilcox Research Co., 2566 N. Ontario SE., Burbank, Calif.-O
  Wiltams, Brown & Earle, Inc., 904 Chestnut St., Piladelphia 7, Pa.-A.K.N
  Wincharger Corp., E. 7 & Division Sts., Sioux City 2, Iowa-O.Z
  Worner Ilectroin Devices. Rankin, III.-N
  Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.-L

38----MACHINE EQUIPMENT & ACCESSORIES

Air cleaners .....A Blower units ......B Bobbins .....C Crystal lapping discs .....D Crystal saw blades .....E Drive mechanisms ......F Dies .....G Electrodes, pressure welding .....H Jigs & fixtures .....I Soldering pots .....J

Vacuum tube aging racks .....K

Vacuum tube aging racks ......K
Vacuum tube aging racks ......K
Abbott Plastics & Machine Corp., 6322 N. Clark St., Chicago 26, III.—B
Acme Electric Heating Co., 1217 Washington St., Boston 18, Mass.—J
Acme Electronics, Inc. (Sub Aerovox Corp.), 2724 Peck Rd., Monrvia. Calif.—C
Acremark Co., 200 N. Laflin St., Chicago 7, III.—F,I
Acromark Co., 601 Morrell St., Elizabeth 4, N.J.—G,I
Advance Electronics Corp., 507 26th St., Union City, N.J.—G,I
Air-Marine Motors Inc., 369 Bayview Ave., Amityville, L.I., N.Y.—B
Air-Marine Motors Inc., 369 Bayview Ave., Amityville, L.I., N.Y.—B
Air-Marine Motors Inc., 601 Morrell St., Cleveland 28, Ohio—A
American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—B
American Lava Corp., Cherokee Blvd & Mfs. Rd., Chattanooga 5, Tenn.—G
American Wood Working Co., 1682 N. Lowell Ave., Chicago 89, III.—C
Achor Specialty Mfg. Co., 300 N. Industrial Ave., Teterboro, N.J.—F,I.K
Are Gear Works, 97 Holmes St., N. Quincy 71, Mass.—F
Belock Instrument Corp., 111-01 14th Ave., College Point 56, N.Y.—F
Bowmar Instrument, 2415 Pennsylvania St., Ft. Wayne 4, Ind.—F
Bowmar Lamination Corp., 811 Whittier St., Newn Sa, Pa.—I
Burkem Lamination Corp., 811 Whittier St., New York 59, N.Y.—G.I
Centralab Div., Globe Union, Inc., 900 E. Keef Ave., Milwaukee 1, Wis.—C
Chandler & Stedman, 398 Newton St., Waitham 54, Miass.—F.I
Cience Mfg. Co., 3405 W. 47th St., Chicago 32, III.—F.I

Communication Products Co., Marlboro, N.J.

Con Ray Corp., 29 W. Apple St., Dayton 2,

Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-D.I
Curnan Machine Works, 20-20 Steinway St., Long Island City, N.Y.-I
Delaware Optical Labs., 36 Williams St., Lansdowne, Pa.-B,D,E,I
DeWald Mfg. Corp., 35-15 37 Ave., Long Island City, N.Y.-I
Dynamic Air Eng'g. Inc., 7412 Maie Ave., Los Angeles 1, Calif.-B
Eisler Eng'g. Co., 770 S. 13th St., Newark 3, N.J.-B,J,K.M
Elco Corp., 'M'' St. Below Erie Ave., Philadelphia 24, Pa.-G,I
Electro-Draft Inc., 68 Jackson St., Stamford, Conn.-I
Electro-Devices, Inc., 4 Godwin Ave., Paterson 1, N.J.-F
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.-F
Eng'g. Developments, Inc., P.O. Box 1046, Portsmouth, R.I.-L
Erwood, Inc., 1770 Berteau Ave., Chicago 13, III.-G
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-D, E,L
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-F
Fracklin Control Corp., 1975 S. Allis St., Milwaukee 7, Wisc.-F
Fredo, Inc., 406 N. Craig St., Pittsburgh 13, Pa.-G,I
General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.-G, G.

Pa.-G.I
Pa.-G.I
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.-G.I
General Electric Co., Carboloy Dept., Box 237, R.P.A. Detroit 32, Mich.-G
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-J
General Riveters Inc., Elmwood & Hertel, Buf-falo 7, N.Y.-F
Hartman Eng'g Co., 182 Oakland St. Springfield 8, March

General Riveters Inc., Elmwood & Hertel, Buffalo 7, N.Y.-F
Hartman Eng'g Co., 182 Oakland St., Springfield 8, Mass.-F
Heinz Mueller Eng'g. Co., 1906 N. Cicero Ave., Chicago 39, II.-B,F,I
Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-F
Hoffman Co., P. F., 321 Cherry St., Carlisle, Pa.-D,G,I
Independent Mfg. Co., 5 Belleview Ave., East Riverton, N.J.-I
Induction Motors Corp., 570 Main St., Westbury, N.Y.-B
Instrument Devel. & Mfg. Corp., 3018 E. Foothill Blvd., Pasadena 8, Calif.-G,I
Insuline Corp. of America, 186 Granite St., Manchester, N.H.-G,I
Int'l Pump & Machine Works, 11-13 Governor St., Newark 2, N.J.-K
Kahle Eng'g. Co., 1307 7 St., N. Bergen, N.J.-I.J,K
Kahn & Co., 541 Windsor St., Hartford 1, Conn.-A
Kearfott Co., 1378 Main, Clifton, N.J.-F
Keystone Electronics Corp., 423 Broome St., New York 12, N.Y.-I
Leinnan Bros., 146 Christie St., Newark 5, N.J.-B
Lennard Co., P. M., 671 Bergen St., Brooklyn 38, N.Y.-A.B

Leiman Bros., 146 Christie St., Newark 5, N.J.-B
Lennard Co., P. M., 671 Bergen St., Brooklyn 38, N.Y.-A.B
Lima Electric Motor Co., Findlay Rd., Lima. Ohio-F
Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-F
Lufkin Rule Co., Saginaw, Mich.-L
Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-F
Mansol Ceramics Co., 140 Little St., Belleville 9, N.J.-G
Mars Eng'g & Mfg. Co., 3000 N. San Fernando Blvd., Burbank, Calif.-I
Master Appliance Mfg. Co., 715 Ontario St., Racine, Wisc.-B
Mathis Tower & Equip. Co., 2200 E. Washing-ton St., East Peoria, III.-I
Mayflower Electronic Devices, 6014 Hudson Blvd., W. New York, N.J.-G
McClean Eng'g., P.O. Box 228, Princeton, N.J. -B
Merz Eng'g., Inc., 200 S. Harding St., Indian-apolie 7, Loc. COM

McClean Eng'g., P.O. Box 228, Princeton, N.J. -B
Merz Eng'g., Inc., 200 S. Harding St., Indian-apolis 7, Ind.-G.I
Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-B
Metronics, Inc., U.S. Route 130, Burlington, N.J.-G.I
Molded Products Corp., 4533 W. Harrison St., Chicago 24, III.-G
Multi-Tron Lab., 4642 Washington Blvd., Chi-cago 44, III.-G.I.K
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.-C
N.Y. Testing Labs., 47 West St., New York 6, N.Y.-I
Oilpower Eng'g Co., 1067 Davis Terrace, Schenectady 3, N.Y.-G
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, 'Calif.-L
Peerless Electric Co., 1401 W. Market St., Warren, Ohio-B
Petroff, Peter A., 127 Water St., New York

Petroff, Peter A., 127 Water St., New York 5, N.Y.-F.G.I

Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.-B

Pix Mfg. Co., 5 Oliver St., Newark 2, N.J. -G,I

Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-D

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Precision Products, 719 7 St., N.W., Washing-ton, D.C.-D Research Instrument Co., 233 Broadway, New York 7, N.Y.-F,G,I Ripley Co., 1 Factory St., Middletown, Conn.

B
 Rotron Mfg. Co., Schoonmaker Lane, Woodstock, N.Y.-B
 Ryan Industries, 19159 John. R. St., Detroit 3,

Mich.—I Sciaky Bros., 4915 W. 67th St., Chicago 38, III.—H Balla Machine Co., 314 Fall St.,

III.--H Seneca Falls Machine Co., 314 Fall St., Seneca Falls, N.Y.--F Servo-Tek Products Co., 1086 Goffle Rd., Haw-thorne, N.J.--F Shepard Labs., 480 Morris Ave., Summit, N.J.

Snepard Labs., 480 Morris Ave., Summit, N.J. —F
Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.—G.I
Specialty Assembling & Packing Co., Spe-cialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.—D
Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.—K
Sta-Warm Electric Co., 553 N. Chestnut St., Ravenna Ohlo—J
Stone City Machine & Tool Co., 1206 7th St., Bedford, Ind.—G.I
Suckle Electronics Co., P.O. Box 173, Haw-thorne, N.J.—J
Technical Products Co., P.O. Box 93, Mem-phis 1, Tenn.—L
Toman & Co., E., 8700 W. 47th St., Lyons, III.—G.I
Torit Mfg. Co., 292 Walnut St., St. Paul

phis 1, Tenn.-L. Toman & Co., E., 8700 W. 47th St., Lyons, Ill.-G.I Torit Mfg. Co., 292 Walnut St., St. Paul Minn.-B Tri-Kris Co., Inc., P.O. Box 631, Lansdale, Pa.-F.I Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.-A

Trion, Inc., 1000 Island Ava., McKees Rocks, Pa.—A
United Scientific Labs., 35-15 37 Ave., Long Island City 1, N. Y.—I
Unitek Corp., 265 Halstead Ave., Pasadena 8, Calif.—H
Universal Mfg. Co., 410 Hillside Ave., Hill-side, N.J.—G.I
Vemaline Products Co., P.O. Box 222, Haw-thorne, N.J.—J
Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.—I
Vulcan Electric Co., 88 Holten St., Danvers, Mass.—J

Mass.--J Williams, Brown & Earle, 904-06 Chestnut St., Philadelphia 7, Pa.--L

### **39—MEASUREMENT & TEST** EQUIPMENT—BRIDGES

Bridges,	capacitanceA
Bridges,	conductivityJ
Bridges,	impedanceB
Bridges,	inductanceC
Bridges,	resistanceD
Bridges,	RFK
Bridges,	seif balancingF
Bridges,	standing waveG
Bridges,	synchroL
Bridges,	temperatureE
Bridges,	thermistor
Bridges,	wheatstonel

Aero Electronics Co., 1512 N. Wella St., Chicago 10, III.—F.L
Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.—A
Airborne Instruments Laboratory. 160 Old Country Rd., Mineola. L.I., N.Y.—B
Alco Electronics Mfg. Co., 3 Wolcott Ave., Lawrence, Mass.—D
Alford Mfg. Co., 299 Atlantic Ave., Boston 10, Mass.—G.K
American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Man-hattan Beach. Calif.—D.F
Andrew Corp., 1357 Hawthorne Blvd., Haw-thorne, Calif.—E
Baldwin-Lima-Hamilton, Phila. 42, Pa.—D
Barber-Colman Co., 1300 Rock St., Rockford, III.—E
Barnes Devel. Co., 213 W. Baltimore Pike.

Barnes Devel. Co., 213 W. Baltimore Pike, Lansdowne, Pa.-D.F
 Bayside Watch Tool Co., 20-20 Utopia Park-way, Whitestone 57, N.Y.-L

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Beckman & Whitley, Inc., 985 San Carlos Ave., San Carlos, Calif.-E,H
Bellaire Electronics Inc., 30 Prince St., Brook-lyn 1, N.Y.-H
Biddle Co., James G., 1316 Arch St., Phila-delphia 7, Pa.-D
Boonton Radio Corp., Intervale Rd., Boonton, N.J.-A.B.C.D.K
Borden Enrig Co. 63 Clinton Ave. New

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.-D
Boonton Radio Corp., Intervale Rd., Boonton, N.J.-A.B.C.D.K
Borden Eng's Co., 63 Clinton Ave., New
Providence, N.J.-D.I
Britsol Co., Waterbury 20, Conn.-A.D.E.F.I,J
Bruno. New York Industries, 460 W. 34 St., New York 1, N.Y.-D.H.K
Byron Jackson Co., 492 E. Union St., Pasadena, Calif.-G
Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood. Calif.-B.C.D.J
Cambridge Instrument Co., 3033 Grand Central Terminal, New York 17, N.Y.-A.D.I
Century Electronics, 14844 Oxnard St., Van Nuya, Calif.-H
CGS Laboratories, Inc., 391 Ludlow St., Stamford, Conn.-B
Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, III.-A,B,C.D.E
Cincinnati Sub Zero Products, 3932 Reading Rd., Cincinnati 29, Ohio-E
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-A,B.C,D.E.I
Clippard Instrument Lab., 7390 Colerain Rd., Cincinnati 24, Ohio-A,D
Clough-Brengle Co., 6014 Broadway, Chicago 40, III.-A,C,D
Coleman Eng's. Co., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.-F
Control Components Co., 1 Holden St., Brookline 46, Mass.-L
Cornell-Dubilier Electric Corp., 333 Hamilton Blvd., S. Plaifield, N.J.-A,D
Daystrom Pacific Corp., 300 Nebraska Ave., Santa Monica, Calif.-F
Donner Scientific Co., 2829 7th St., Berkeley 10, Calif.-D
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-G.
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-DE, I
Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.-D., E.I
Electronic Labs. Inc., 333 W. 52 St., New York 19, N.Y.-B, E.I
Electronic Labs. Inc., 333 W. 52 St., New York 19, N.Y.-B, CH, K
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y.-A, C.D
Electronic Labs. Inc., 333 W. 52 St., New York 19, N.Y.-B, CH, K

New JORK 19, N.I.-D.C.H.A.
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y. -A,C,D
El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.-D
Espey Mfg. Co., 528 E. 72nd St., New York 21, N.Y.-B.C.J
Farnsworth Electronics Co., Div. IT&T Corp., P.O. Box 810, Fort Wayne, Ind.-K
Ferroxcube Corp. of America. E. Bridge St., Saugerties, N.Y.-H
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-L
Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-B.C.D
Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Baltimore 4, Md.-H
F.R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Fl., Woodside 77, N.Y.-B.G.K
General Electric Co., Broadcast Equip. & Com-mercial Equip. Div., Electronics Park, Syra-cuse, N.Y.-A
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-A.B.C.J.J.J.K
Gray Instrument Co., 64 W. Johnson St., Philadelphia 44, Pa.-D,E.I.J.
Green Co., C. A., 14651 Wood St., Harvey, III.-D,I
Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-F.L.

Green Co., C. A., 14651 Wood St., Harvey, III.-D,I Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-F,L Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-A Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.B.C.D.F.G.I.J.K Hazeltine Electronics Corp., 58-25 Little Neck Pkwy., Little Neck 62. N.Y.-F Heath Co., 305 Territorial, Benton Harbor, Mich.-A.B.C.D.J Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland 8, Ohio-A.C.D.I Hi Q Div., Aerovox Corp., Olean, N.Y.-A Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-E.F.H.I Hycon Mfg. Co., 2961 E. Colo. St., Pasadena 8, Calif.-F Illinois Testing Labs., 420 N. LaSalle St., Chicago 10, III.-E Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.-A.B.C.D.E.H.I Industrial Electronics Engr's., 3973 Lanker-shim Blvd., N. Hollywood, Calif.-D.F.I Industrial Electronics 8060 Wheeler St., De-tenit 10 Mich-C D U

Industrial Electronics, 8060 Wheeler St., De-troit 10, Mich.—C,D,I

- ustrial Instruments, 89 Commerce Rd., Cedar Grove, N.J.-C.,D.F.I.J Industrial Test Equipment Co., 55 E. 11th St., New York 3, N.Y.-A.B.C.D.I.L Industrial Transformer, Gouldsboro, Pa.-B,C Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.-D Jones Electronics Co., M. C., 185 N. Main St., Bristol, Conn.-G,K Kahn & Co., 541 Windsor St., Hartford 1, Conn.-A.B.C.D.I.J Kearfott Co., 1378 Main Ave., Clifton, N.J.-L Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-G,K Kuljian Corp., 1200 N. Broad St., Philadelphia 21, Pa.-D Lear. Inc., 3171 S. Bundy Dr., Santa Monice

Juckanoe, N. Y., --U, K
Kuljian Corp., 1200 N. Broad St., Philadelphia 21, Pa.-D
Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-K
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.--A.C.D.E.F.I.J
Lewis Co., E. B., 11 Bragg St., E. Hartford 8, Conn.-E
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.--K
Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-L
Magnetic Instruments Co., 82 Main St. W. Orange, N.J.-B.C.D.E.K.I.
Marconi Instruments, Ltd.. 23 Beaver St., New York 4, N.Y.-A.B.C.D.I.K.I.
McShan Development Corp., 71 Murray St., New York 7, N.Y.-B.D
Measurements Corp., Boonton, N.J.-K
Metronix, Inc., Trumbull Airport, Groton, Conn.--A
Metropolitan Electronics & Instruments. 106

New York 7, N.Y.—B,D
Measurements Corp., Boonton, N.J.—K
Metropolitan Electronics & Instruments. 106
5 Ave., New York 11, N.Y.—A,D
Microwave Associates, 22 Cummington St., Boston 15, Mass.—G
Millen Mfg. Co., James, 150 Exchange St., Malden 48, Mass.—G
Miller Electro-Research Labs., 5529 S. 5 St., Milwaukee 7, Wisc.—D
Milliva Instrument Corp., 444 2nd St., Schenectady, N.Y.—B
Model Eng's. & Mfg. Co., 50 Frederick St., Huntington, Ind.—A,B,C,D
Moeller Instrument Co., 132nd St. & 89th Ave., Richmond Hill 18, N.Y.—E
Murphy & Miller, 1318 S. Michigan Ave., Chicago 5, III.—E
Mardia Corp., 66 Main St., Mineola, N.Y.—G.H
National Capacitor Co., 525 W. Main St., Quincy 69, Mass.—A
Nestor Engineering Co., 50 Paterson Ave., E. Rutherford, N.J.—L
Nichols Products Co., 325 W. Main St., Moorestown, N.J.—B,G
Non-Linear Systems, Del Mar Airport, Del Mar, Calif.—D
Penna, Testing Lab., Doylestown, Pa.—A,B,C, D,E,I,K,L
Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.—A,D,I
Phila Scientific Glass Co., Abington. Pa.—E
Phoenix Precision Instr. Co., 3803 N. 5 St., Philadelphia 40, Pa.—F
Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—D,I
Polytechnic Research & Development Co., 202 Tillary St., Brooklyn 1, N.Y.—B,F,G
Power Supplies, 1005 Olive St., Highland, III. —A,B,C,D,J
Precision Thermometer & Ins. Co., 1434 Bran-

-A.B.C.D.J Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.-D.I Precision Thermometer & Ins. Co., 1434 Bran-dywine St., Philadelphia 30, Pa.-E Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-D.E.H Pyrometer Instrument Co., Bergenfield, N.J.

Radex Corp., 2076 Elston, Chicago 14, Ill.—B Radiation, Inc., Box "Q", Melbourne, Fla.— K.F

K.F. Radio City Products Co., Centre & Glendale Sts., Easton, Pa.-A.B.D. Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.-A Refrigeration Systems, Inc., Hudson Bay Div., 646 W. Washington Blvd., Chicago 6, Ill.-E

E Robuck Labs., 1431 S. La Brea Ave., Los Angeles 19, Calif.—E Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32. Pa.—C,D,E,I,L Scientific Specialties Corp., Snow & Union Sts., Boston 35. Mass.—A,B,C,I Seco Mfg. Co., 5015 Penn Ave. S., Minneapolis 19. Minn.—C Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.—A,B,C,D,I Shasta Div., Beckman Instruments, Inc., 1432 Nevin Ave., Richmond, Calif.—B,D Sierra Electronic Corp., 1050 Brittan Ave., San Carlos 2, Calif.—B,K Silver Bay Equipment Co., 5004 20 N.W., Seattle 7, Wash.—K

Scattle 7, Wash.-A Simpson Electric Co., 5208 W. Kinzie St., Chi-cago 44, Ill.-A.D.E.I.K Southwestern Industrial Electronics. 2831 Post Oak Rd., Houston, Texas-A.B.C.D

Special Instruments Lab., 312 W. Vine St., Knoxville, Tenn.—D,I

Sperry Gyroscope Co., Great Neck, N.Y.-F.H

Sprague Electric Co., North Adams, Mass .-

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Standard Electronics Research Corp., 2 East End Ave., New York 21. N.Y.—E
Sterling Instruments Co., 16310 W. Mc-Nichols, Detroit 35, Mich.—E
Sticht Co., Herman H., 27 Park Pl., New York 7 N.Y.—I
Tech Laboratories Inc., Bergen & Edsall Blvd., Palisades Park, N.J.—D.E.I
Technical Products Co., 19 N. Dunlap, Medi-cal Center, Memphis 1, Tenn.—E
Technology Instrument Corp., 631 Main St., Acton, Mass.—A,B,C,D
Telecomputing Corp., 133 E. Santa Anita Ave., Burbank. Calif.—D.F
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—G
Telescreen Corp., 36 Grove St., New Canaan. Conn.—E
Thwing-Albert Instrument Co., Penn St. & Pulaski Ave., Philadelphia 44, Pa.—E
Vapor Heating Corp., 80 E. Jackson, Chicago 4, III.—E
Victory Eng'g. Corp., 103A Springfield Rd.,

Vapor Heating Corp., 80 E. Jackson. Chicago 4. III.--E Victory Eng'g. Corp., 103A Springfield Rd., Union, N.J.--E,H Videon Electronic Corp., 902 E. Michigan St., Indianapolis 2, Ind.--D Waco. Inc., 2032 Broadway, Santa Monica, Calif.--A.B.C Waters Mfg. Inc., 4 Gordon St., Waltham 54, Mass.--B,C Waveline, Inc., Caldwell, N.J.--G,K West Instrument Corp., 525 N. Noble St., Chicaso 22, III.--D,E Weston Labs., Inc., Box 407, Littleton, Mass. --G,H Winslow Co., 9 Liberty St., Newark 5, N.J.

Winslow Co., 9 Liberty St., Newark 5, N.J.

D.1
 Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif—F.G.L
 Yellow Springs Instrument Co., P.O. Box 106, Yellow Springs, Ohio—E.H

### 40—MEASUREMENT & TEST EQUIPMENT—COUNTERS

Counters,	electromagneticL
Counters,	electronicA
Counters,	events-per-unit timeB
	frequencyC
Counters,	geigerD
Counters,	impulseE
Counters,	mechanicalF
	photoelectricJ
Counters,	radiationG
	revolutionH
	scintillation
Counters,	time-measuringI

Advance Electronics Co., 451 Highland Ave., Passaic, N.J.-C Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, III.-A.B.C.H.I.J Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.-C.I Alina Corp., 401 Broadway, New York 13, N.Y.-I

Amerac Inc., 116 Topsfield Rd., Wenham, Mass.

American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—A.C
Anatran Eng'g. Co., 10 Congress St., Pasa-dena, Calif.—E.F.H.I
Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.—B.D.G
Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.—I
Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.—J
Atlas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.—F.H
Atomic Instrument Co., 84 Mass. Ave., Cam-bridge 39, Mass.—A.B.C.D.E.F.G.H.J
Atomich, Inc., 489 5 Ave., New York 17, N.Y.
—B.D

-B.D

Atomiab. Inc., 489 5 Ave., New York 17, N.Y. --B.D
Audicon Electronics, 216 Lyon St., Paterson 4, N.J.--A
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64. Calif.--A
Austin Co., 76 9 Ave., New York 11, N.Y.--A.E.
Authorized Mfg. Co., 914 Wyckoff St., Brooklyn 27, N.Y.-E
Automatic Temperature Control Co., 5212 Pulaski Ave., Philadelphia 44. Pa.--A.E.H
Barton Electronics, 955 Asylum Ave., Hartford 5. Conn.--A.H.J
Bayside Watch Tool Co., 20-02 Utopia Parkway, Whitestone 57, N.Y.-F.H
Berkeley Div., Beckman Instruments. Inc., 2200 Wright Ave., Richmond 3, Calif.--A, B.C.D.E.F.G.H.I.J
Beva Laboratory, 1640 Olden Ave. Ext., Trenton. N.J.--G

Beva Laboratory, 1640 Olden Ave. Ext., Trenton, N.J.-G
Boesch Mfg. Co., Danbury. Conn-A.F
Bolsey Corp. of America, 118 E. 25th St., New York 10, N.Y.-J
Brown Equipment Co., 128 N. Main St., Milltown, N.J.-A
Bunnell & Co., J. H., 81 Prospect Pl., Brooklyn 1, N.Y.-I
Carlson & Nicholson, 497 Maynard Dr., Buffalo 21, N.Y.-I
Clary Corp., San Gabriel, Calif.-A,B,C,E,F,I

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Clebar Watch Agency, 521 5 Ave., New York 17. N.Y.-I Coleman Eng's. Co., 6040 W. Jefferson Blvd., Los Angeles 16, Calif.-F,H Colortone Electronics, 200 Frank Rd., Hicks-ville, L.I., N.Y.-C Component Manufacturers, 38-01 23 Ave., Long Island City 5, N.Y.-H Computer Control Co., 92 Broad St., Welles-ley 57, Mass.-A Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-F,J Control Devices, Inc., 8299 E. Nine Mile Rd., Van Dyke, Mich.-A,E Cramer Co., R. W., Box 49, Centerbrook, Conn.-I Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-A,B,D,E,G,H, I Daystrom Instrument, Archbald, Pa.-G

Ohio-A Decade Instrument Co., Box 153, Caldwell, N.J.

Darte Mannes, Carl, 216 S. Main St., Dayton 2, Ohio—A
Decade Instrument Co., Box 153, Caldwell, N.J. —A
Democo Products, P.O. Box 5042, Philadelphia 11, Pa.—A,B,C,E,H,I,J
Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, II.—A,F
Detectoron Corp., 5528 Vineland Ave., N. Hollywood, Calif.—A,B,C,D,E,G,H,I
Digital Instrument Co. 212 Almeria Ave., Coral Gables. Fla.—A,B,C.D,E,F,G,H,I
Dillon & Co., W. C., 14620 Keswick St., Van Nuys, Calif.—F
Douglas Instrument Labs., 176 Norfolk Ave., Boston 19, Mass.—D,G
Dubrow Devel. Co., 235 Penn St., Burlington, N.J..—A,B,C
DuMont Labs., Inc., Allen B., TV Transmitter Dept., Mobile Comm. Dept., 1500 Main St., Clifton, N.J..—C
Eagle Signal Corp., 202 20 St. Moline, III. E,H
Eder Eng's. Co., 1668 S. 1st St., Milwaukee 4, Wis.—A,E,F
Eeco Production Co., 827 S. Vermont Ave., Los Angeles 5, Calif.—C
Eldema Corp., 5227 E. Beverly Blvd., Los Angeles 22, Calif.—G
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—G
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.—J
Electronic Control Corp., 1573 S. Mestwood Blvd., Los Angeles 26, Calif.—A
Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.—J
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 26, Calif.—A
Electronic Industries, 7649 San Fernando Rd., Burbank, Calif.—D,K
Electronic Sonp. of America, 77 Broadway, Cambridge 42, Mass.—A,J
Electronics, Inc., 588 Commonwealth Ave., Boston 15, Mass.—B,I
Electronics, Sc., 808 Canal St., New York, N.Y.—D,H,J
Electronics, Inc., 588 Commonwealth Ave., Boston 15, Mass.—B,I
Esco Mfg. Co., 528 E. 72nd St., New York 21, N.Y.—A,E
Esterline-Angus Co., P.O. Box 596, Indianapolis 6, Ind.—B
Farnawd Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.—J
Federal Equip. Co., 38 Brady St., San Francisco 3, Calif.—J
<

Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-J
Federal Equip. Co., 38 Brady St., San Fran-cisco 3, Calif.-J
Federal Mfg. & Eng'g. Corp., 211. Steuben St., Brooklyn 5, N.Y.-C
Federal Telephone & Radio Co., Div. of IT&T 100 Kingsland Rd., Clifton, N.J.-J
Ferrara, Inc., 8106 W. 9 Mile Rd., Oak Park 37, Mich.-I
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-A.F
Franklin Electronics Inc., 415 W. Pike St.

A.F Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-G Gaertner Scientific Corp., 1247 Wrightwood Ave., Chicago 14, Ill.-B.F.I Gates Radio Co., 123 Hampshire St., Quincy, III.-B

III.-B

III.—B
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.—I
General Electric Co., Germanium Products Div., Electronics Park, Syracuse, N.Y.— A,D,G
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.—C,H
Georator Corp., Manassas, Va.—D
Class Falls Laboratory, Box 685 Hupper Class

Glens Falls Laboratory, Box 685 Upper Glen St., Glens Falls, N.Y.-D

G. & M. Equipment Co., 7315 Varna Ave.,
 N. Hollywood, Calif.—C
 Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.—D,G

Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-J.I Greenleaf Mfg. Co., 7814 Maplewood Ind. Ct., St. Louis 17, Mo.-H Haledy Electronics, 57 William St., New York 5, N.Y.-A.J Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.B.C.D.E.G.H.I Haydon Mfg. Co., 245 E. Elm St., Torring-ton, Conn.-I Hazeltine Electronics

Haledy Electronics, 57 William St., New York 5, N.Y.-A.J
Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.B.C.D.E.G.H.I
Haydon Mfs. Co., 245 E. Elm St., Torrington, Conn.-I
Hazeltine Electronics Corp., 58-25 Little Neck 62, N.Y.-A.H
Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-A.B.C.E.G.J.J
Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-A.J
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-B.I
Hoffman Electronics, 6200 S. Avalon Blvd., Los Angeles Calif.-D
Hubbell Inc., Harvey, State St. & Bostwick Ave., Bridgeport, Conn.-A
Hunter Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.-F,G
I-L-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-A.B.C.H.I \squaremath{``St.}]
Industrial Electronics, Hanover, Mass.-E
Industrial Electronics, 1060 Wheeler St., Detroit 10, Mich.-J
Industrial Electronics, 3025 Mission Rd., Alhambra, Calif.-G
Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, III.-E
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.-A
Landwark Eng., 550 W. Garfield Ave., Glendale 4, Calif.-G
Kalorgs Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, III.-E
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.-A
Landwark Eng., 550 W. Garfield Ave., Glendale 4, Calif.-G
Larson Instrument Co., 24 Orchard St., Tarrytown, N.Y.-B.J
Lektra Laboratories, Inc., 154 11th Ave., New York 38, N.Y.-D.G
Larson Instrument Co., 407 S. Dearborn St., Chicago 5, III.-A.J
Macionald Co., W. S., 33 University Rd., Cambridge 38, Mass.-G
Mackonald Co., W. S., 33 University Rd., Cambridge 38, Mass.-G
Mackonald Co., W. S., 33 University Rd., Cambridge 38, Mass.-G
Mackonald Co., W. S., 33 University Rd., Cambridge 38, Mass.-G
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-A.C.

- Metronix, Inc., Irumoun America, Conn.-C Metrotype Corp., 6100 Archer Rd., Summit, III.-A.B.C.E.J Meyer & Co., Hugo, 39 W. 60th St., New York 23, N.Y.-J Min Atron Corp., Belle Mead 9, N.J.-E.H Moran Instrument Corp., 170 E. Orange Grove Ave., Pasadena 3, Calif.-D Mueller Laboratory, 239 W. Maple Ave., Mon-rovia, Calif.-L Multi-Tron Lab., 4624 W. Washington Blvd.,

Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.-L
Multi-Tron Lab., 4624 W. Washington Blvd., Chicago 44, Ill.-J
National Radiac Inc., 10 Crawford St., Newark 2. N.J.-G
National Union Electric Corp., 350 Scotland Rd., Orange, N.J.-A
Nichols Products Co., 325 W. Main St., Moorestown, N.J.-F
North American Mfg. Co., 501 S. Market St., Galion, Ohio-F
North American Philips Co., Mount Vernon, N.Y.-A,B,D,G
NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.-A,D,E,G,K
Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.-D,G
Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.-A,D
Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.-A,D
Nuclear O., 60, 212, El Segundo, Calif.-A, B,C,H,J
PCA Electronics 2180 Colorado Ave., Santa Monica, Calif.-I
Peters Co., O. S., 1353 N.Y. Ave., N.E., Wash-

B.U.n., PCA Electronics 2180 Colorado Monica, Calif.—I Peters Co., O. S., 1353 N.Y. Ave., N.E., Wash-ington 2, D.C.—A.C Petroff. Peter A., 127 Water St., New York 5. N.Y.—J Phabas Inc., 3640 Woodland Ave., Baltimore

5. N.Y.-J
Phebco, Inc., 3640 Woodland Ave., Baltimore
15. Md.-A
Phuenix Precision Instrument Co., 3803 N. 5
St. Philadelphia 40. Pa.-J
Photobell Co., 43 Vesey St., New York 7, N.Y.-J
Photocon Research Products, 421 N. Foothill Blvd., Pasadena 8, Calif.-F,H

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- Photo Crystals, Inc., 15 S. First St., Geneva. Ill.—J

Ill.—J Potter Aeronautical Co., Box 532, Route #22. Union, N.J.—A Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, L.I., N.Y.—A,B,C,E,G,H,I,J Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.—C Precision Radiation Instruments Inc., 4223 W. Jefferson Blvd., Los Angeles 16, Calif.— G

G Radiation Counter Labs., Inc., 5122 W. Grove St., Skokie, 111.—D.G Radiation Instrument Devel. Lab., 2337 W. 67th St., Chicago 37, 111.—A.B.,C.D.G.H.,I Radioactive Products, Inc., 443 W. Congress St., Detroit 26. Mich.—D.G Radionics, Inc., 1040 N. York Rd., Towson 4, Md.—I

Radionics, Inc., 1040 N. York Rd., Towson 4, Md.-I
Ransom Research. P.O. Box 382, San Pedro, Calif.-A,B,C,E,G,H,I,J
R. C. Scientific Instrument Co., 307 Culver Bivd., Playa Del Rey, Calif.-D,G
Reflectone Corp., Cor. Post Road & Myano Lane, Stamford, Conn.-H
Riverbank Labs., P.O. Box 65, Geneva, III.-C
Rockwell Eng'g. Co., 4063 N. N.J. St., Indi-anapolis 5, Ind.-I
Roller Smith Corp., Instrument Div., 1825 W. Market St., Bethlehem, Pa.-I
Sangamo Electric Co., 9 & Converse Sts., Springfield, III.-B,I
Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.-J
Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park. N.Y.-F
Shepard Labs., 480 Morris Ave., Summit, N.J. -B,C,H
Sherwin Instrument Co., 2875 Broadway, New York 4. N.Y.-K

Sherwin Instrument Co., 2875 Broadway, New

Sherwin Instrument Co., 2875 Broadway, New York 4, N.Y.—K
Simpson Electric Co., 5200 W. Kinzie St., Chicago 44, III.—D
Shoup Eng'g. Co., 1516 S. Wabash Ave., Chicago 16, III.—G
Special Instruments Lab., 312 W. Vine Ave., P.O. Box 2108, Knoxville, Tenn.—G
Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.—G

Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. -G
Standard Electric Time Co., 119 Logan St., Springfield, Mass.-A, B, C, H.I
Standard Electronics Research Corp., 2 E. End Ave., New York 21, N.Y.-A.C.G.I.J
Sterling Instruments Co., 15310 W. Mc-Nichols, Detroit 35, Mich.-A, B.H
Stewart Instrument Co., 6507 Grand River, Detroit 8, Mich.-A, B,I
Sticht Co., Herman H., 27 Park Pl., New York 7, N.Y.-H,I
Stoelting Co., C. H., 424 N. Homan Ave., Chicago 24, 111.-A.E.I
Ta-Mar, Inc., 11571 W. Jefferson Blvd., Culver City, Calif.-D
Technical Products Co., P.O. Box 93, Mem-phis 1, Tenn.-A,D,E,F,G,H,I,J
Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-C
Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.-A,H
Tensitron, Inc., Pin Hill, Harvard, Mass.-F
Thwing-Albert Instrument Co., Penn St. & Pulaski Ave., Philadelphia 44, Pa.-G
Transelectric Mfg. Co., 48 Hopewell Rd., Ox-ford Pa.-F

Transelectric Mfg. Co., 48 Hopewell Rd., Oxford, Pa.-F Trion, Inc., 1000 Island Ave., McKees Rocks,

Ultrasonic Eng'g. Co., P.O. Box 46, Maywood,

Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, III.-J
Unimax Div., Maxon Corp., W. L., 460 W. 34th St., New York 1, N.Y.-E
Universal Atomics Corp., 527 Lexington Ave., New York 17, N.Y.-D,K
Universal Match Corp.. Armament Div., Box 191, Ferguson 21, Mo.-J
Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 14, Ohio-D,G
Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20, Calif.-D,J
Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-A.B,C.E.H.I
Waveline, Inc., Caldwell, N.J.-C
Welch Electric Co., 1221 Wade St., Cincin-nati 14, Ohio-J
Westinghouse Electric Corp., 401 Liberty St., III.—J

Westinghouse Electric Corp., 401 Liberty St., Pittsburgh 30, Pa.—I

Westport Electric, 149 Lomita St., El Segundo, Calif.—A,B,C,H,I

Westronics Inc., 3605 McCart St., Ft. Worth, Texas-A

Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.—A,B,C Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.—D

Winslow Co., 9 Liberty St., Newark 5, N.J.-

C

Wood Counter Lab., N., 5491 Blackstone Ave., Chicago 15, Ill.—D.G Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—E,F,I,J

Yellow Springs Instrument Co., P. O. Box 106, Yellow Springs, Ohio-I

Zernickow Co., O., 15 Park Row, New York 38, N.Y.-H

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### 41 ---- MEASUREMENT & TEST EQUIPMENT-DECADE ROXES

· · · · A Decade boxes, capacitance Decade boxes, inductance .....B Decade boxes, resistance .....C

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.—A,B,C Alco Electronics Mfg. Co., 3 Wolcott Ave., Lawrence, Mass.—C Allegany Instrument Co., 1000 Oldtown Rd., Cumberland, Md.—C Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—B Bourns Laboratories, 6135 Magnolia Ave., Riv-erside. Calif.—C

Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.—C
Burnell & Co., 45 Warburton Ave., Yonkers 2, N.Y.—B
Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.—B,C
Cinema Eng'g. Co., Div. AeroVox Corp., 1100 Chestnut St., Burbank, Calif.—C
Clarostat Mfg. Co., 1 Washington St., Dover, N.H.—C
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.—A,B
Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif.—B
Cornell-Dubliter Electric Corp., 333 Hamilton Blvd., S. Plainfield, N.J.—A.C

Blyd., S. Plainfield, N.J.-A.C Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-C Daven Co., 191 Central Ave., Newark 4, N.J. -C

Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.—A,B,C Decade Instrument Co., Box 153, Caldwell, N.J.

-A.B.C Dubrow Development Co., 235 Penn St., Bur-

lington, N.J.—A,C Electrodyne Co., Endicott St., Norwood, Mass.

Dubrow Development Co., 235 Penn St., Burlington, N.J.-A,C.
Electrodyne Co., Endicott St., Norwood, Mass. -A,C
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-C
Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.-A,C
Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.-A,C
Electronic Measurements, Lewis St. & Maple Ave., Eatontown, N.J.-C
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, 111.-C
Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-A,C
Endevco Corp., 689 S. Fair Oaks, Pasadena, Calif.-A,B,C
Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-A,B
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-A,B,C
Gray Instrument Co., 64 W. Johnson St., Philadelphia 44, Pa.-C
Heath Co., 305 Territorial, Benton Harbor, Mich.-A,C
Hycor, Co., Inc., 11423 Van Owen St., N. Hollywood, Calif.-B
Industrial Instruments, 89 Commerce Rd., Cedar Grove, N.J.-A,C
Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, 11.-C
Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.-A,B
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.-A,B,C
Metropolitan Electronics & Instruments Co., 106 6 Ave., New York 11, N.Y.-A,C
National Capacitor Co., 585 Washington St., Philadelphia 44, Pa.-A,B,C
Metropolitan Electronics & Instruments Co., 106 6 Ave., New York 11, N.Y.-A,C
National Capacitor Co., 585 Washington St., Quincy 69, Mass.-C

Quincy 69, Mass.—A Quincy 69, Mass.—A Ohmite Mfg. Co., 3601 Howard St., Skokie, III.—C Penna Testing Lab., Doylestown, Pa.—A Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.—C Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—C Precise Development Corp., 2 Neil Court, Oceanside, N.Y.—A,C Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.—A,B,C Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.—A,B,C Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.—C Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.—B Shalleross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.—A,C Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.—C Technology Instrument Corp., 531 Main St., Acton, Mass.—C Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. —C Transitron, Inc., 154 Spring St., New York

--C Transitron, Inc., 154 Spring St., New York 12, N.Y.-C Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.-A.C Winslow Co., 9 Liberty St., Newark 5, N.J.

Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—A,B,C

# **42—MEASUREMENT & TEST EQUIPMENT-**GENERATORS

Generators, A-F signalA
Generators, color TV bar
Generators, color TV dotT
Generators, color TV signalN
Generators, F-M signalB
Generators, functionU
Generators, harmonic
Generators, microwave signal D
Generators, noiseE
Generators, pulse
Generators, R-F signalG
Generators, single-sidebandQ
Generators, square wave
Generators, sweep
Generators, syncJ
Generators, television, composite
signalK
Generators, timing marker
Generators, UHF
Generators, ultrasonicR
Generators, VHF
Generators, video signal
Generators, waveformV

Aerophyjects Inc., P.O. Box 555, W. Chester, Pa.-R

- Airopringetts Inc., F.O. Box 555, W. Chester, Pa.-R
  Airborne Electronics Co., Hangar #6, Metro-politan Airport, Van Nuys, Calif.-P
  Airborne Instruments Laboratory, 160 Old Country Rd., Mineola, L.I., N.Y.-D.E.G.O.P
  Aircraft Armaments, Inc., P.O. Box 126, Cock-eysville, Md.-D.F.M
  Aircraft Radio Co., Boonton, N.J.-G.O.P
  Airdesiren, Inc., 241 Fairfield Ave., Upper Darby, Pa.-G
  Allied Radio Corp., 100 N. Western Ave., Chi-cago 80, 111.-G
  American Electronic Labs., Inc., 641 Arch

- Amerac Inc., 116 Topsfield Rd., Wenham, Mass.—D
  American Electronic Labs.. Inc., 641 Arch St., Philadelphia 6, Pa.—H
  American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—C,U
  American Radio Co., 445 Park Ave., New York 22, NY.—D
  Amplitronix Inc., 155 W. 72nd St., New York 23, NY.—F,H,U.V
  Applied Science Corp., P.O. Box 44. Prince-ton, NJ.—F
  Approved Electronic Instrument, 928 Broad-way. New York 10, N.Y.—A,B,G,I,O
  Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.—F,R
  A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.—B,G
  Audicon Electronics, 216 Lyon St., Paterson 4, N.J.—A,G
  Authorized Mfc. Co. 914 Wyckoff Ave. Brook-

- St. Jamaica Fiain au, mass.—r,R.
  A.R.F. Products, Inc., 7627 Lake St., River Forest, III.—B.G
  Audicon Electronics, 216 Lyon St., Paterson 4, N.J.—A.G
  Authorized Mfg. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.—G,N.O.S.T
  Avion Instrument Co., 299 State Highway 17 Paramus, N.J.—B.I
  Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—A.H
  Bayside Watch Tool Co., 20.02 Utopia Park-way, Whitestone 57, N.Y.—L
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  Berkshire Laboratories, 586, Bank Village, Greenville, N.H.—F,V
  Beva Laboratory, 1640 Olden Ave. Ext., Tren-ton, N.J.—V
  Bonton Radio Corp., Intervale Rd., Boonton, N.J.—B.G.I,P
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  Burroughs Corb., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.—F
  Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.—B.D.G.O,P
  Carlson & Nicholson, 497 Maynard Dr., Buf-falo 21, N.Y.—F
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  Clegg Laboratories, Inc., 391 Ludlow St., Stamford, Conn.—I
  Clegg Laboratories, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.—C,S.T
  Commineation, Measurements Lab., 350 Le-land Ave., Plainfield, N.J.—A
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  DuMont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.-L
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  Electron Impulse Lab., 62 White St., Red Bank, N.J.-O,P
  Electro-Pulse Inc., 1181 Major St., Culver City, Calif.-F,L,U,Y
  Electronic Instrument Co., 308 Canal St., New York 13, N.Y.-A,H,I
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Panoramic Radio Products, 10 S. 2nd Ave., Mt. Vernon, N.Y.--D
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.--I
Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.--B
Polarad Electronics Corp., 43-20 34th St., Long Island City 1, N.Y.--F,G,H,K
Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.-B,I
Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-C
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-A,B,C,D,F,G,K
Ransom Research, P.O. Box 382 San Pedro, Calif.--C
Ratigan Electronics, Inc., 3614 Maple Ave., Low Appeles 11, Calif.-F

Ransom Researcn, P.O. BOX 382 San Pedro, Calif.—C
Ratigan Electronics, Inc.. 3614 Maple Ave., Los Angeles 11. Calif.—F
Reevesound Co., 35-54 36 St., Long Island City 1, N.Y.—B
Rust Industrial Co., 130 Silver St., Manches-ter, N.H.—A.C.D.I
Shasta Div., Beckman Instruments, Inc., 1432
Nevin Ave., Richmond, Calif.—C
Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—H.J.K
Stavid Eng's., Highway 22, Plainfield, N.J.—J
Tarc Instruments, Inc., 87A Greenwich St., Hempstead, L.I., N.Y.—F, G.H.I.K
Telechrome, Inc., 88 Merrick Rd.. Amityville, L.I., N.Y.—C.D.F.G.H.I.K
Telescreen Corp., 36 Grove St., New Canaan, Conn.—F
Tel-Instrument Co., 728 Garden St., Carlstadt, N.J.—K
Vano Mfg. Co., 1801 Walput St., Garland,

Tel-Instrument Co.. 728 Garden St., Carlstadt, N.J.--K
Varo Mfg. Co.. 1801 Walnut St., Garland, Texas--C
Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-B
Walkirt Co.. 145 W. Hazel St., Inglewood 3, Calif.--C

Calif.--C Waveforms, Inc., 333 6th Ave., New York 31, N.Y.--B West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.--C.D Westport Electric, 149 Lometa St., El Segundo, Calif.--C Wickes Eng'g. & Const. Co., 12th St. & Ferry Ave., Camden, N.J.--F.I.K Winslow Co., 9 Liberty St., Newark 5, N.J.--C

# 44-MEASUREMENT & TEST **EQUIPMENT**-**OSCILLATORS**

Osciliators, audioA
Oscillators, codeG
Oscillators, grid dip
Oscillators, microwave
Oscillators, pulseJ
Oscillators, R-F
Oscillators, tuning fork
Oscillators, ultra low frequencyK
Oscillators, ultrasonic
Oscillators, video patternE
Oscillators, video rangeF

Acme Telectronix, Div. NEA Service Inc., 1200 W. 3rd St., Cleveland 13, Ohio-C Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.-C

B.I.J American Radio Co., 445 Broadway, New York 22, N.Y.-I American Time Products, Inc., 580 5 Ave., New York. N.Y.-C Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.-D Audicon Electronics Inc., 216 Lyons St., Pater-son 4, N.J.-A

- Audio-Tone Oscillator Co., 6511 Main St., Long Hill, Conn.—A Authorized Mfg. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.—B

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—A,B
Branson Instruments, Inc., 430 Fairfield Ave., Stamford, Conn.—D
Bristol Eng'g. Corp., Bristol, Pa.—A
Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio—D
Bunnell & Co., J.H., 81 Prospect St., Brooklyn I, N.Y.—C
Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.—J
Byron Jackson Co., 2010 Lincoln Ave., Pasadena 3, Calif.—B,I
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.—I, E,F,I,J
Carol Electronics (Corp., 315 W. Stephen St., Martinsburg, W. Va.—A
Century Electronics, 14844 Oxnard St., Van Nuvs, Calif.—I
Clough-Brengle Co., 6014 Broadway, Chicago 40, III.—A,B
Canon. Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.—A,B
Davton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio—A,B

-A,B Dayton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio-A,B Deagan, Inc., J. C., 1770 W. Berteau Ave., Chicago 13, Ill.-C

Decade Instrument Co., Box 153, Caldwell, N.J. —A,B,F,I,J Detectolab, Inc., 6544 Sheridan Rd., Chicago 26,

Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, III.-J
Donner Scientific Co., 2829 7th St., Berkeley 10, Calif.-A,B,F
Dubrow Development Co., 235 Penn St., Burlington, N.J.-A
DuMont Labs., Inc., Allen B., TV Transmitter Dept., Mobile Comm. Dept., 1500 Main St., Clifton, N.J.-E
Dynamic Electronics, N.Y. Inc., 73-39 Woodhaven Blvd., Glendale, L.I., N.Y.-H
Eeco Production Co., 827 S. Vermont Ave., Los Angeles 5, Calif.-A,J
Eldico of N.Y., Inc., 70-72 E. 2nd St., Mineola, L.I., N.Y.-J
Electrical & Physical Instrument Corp., 42-19 27th St., Long Island City 1, N.Y.-J
Electronic Measurements Corp., 280 Lafayette St., New York 12, N.Y.-A,B,F
Electronic Labs., 333 W. 52 St., New York 19, N.Y.-A,B,F
Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y.-A
El-Tronics, Inc., 5 & Noble Sts., Philadelphia

Elm La N.Y.-

E F-R

F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.X.-B.I.J Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-A.B.I Gates Radio Co., 123 Hampshire St., Quincy, III.-B

III.—B General Electric Co., Germanium Products Div., Electronics Park, Syracuse, N.Y.—I General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.—D General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.—A.B.C.D.I.J Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—A Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.—D G. W. Associates, P.O. Box 2263, El Segundo, Calif.—I Hallamore Mfg. Co., 2001 E. Artesia, Long

tuchen, N.J.-D
G. W. Associates, P.O. Box 2263, El Segundo, Calif.-I
Hallamore Mfg. Co. 2001 E. Artesia, Long Beach 5, Calif.-A,B.D.E,F.G.H.J
Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.-A,B
Heath Co., 305 Territorial, Benton Harbor, Mich.-A,B,H
Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-A,B.D.I
Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland 8, Ohio-A,B.D.E.F.J
Hill Electronic Eng's. & Mfg. Co., New Kings-town, Pa.-A,C
Industrial Television, Inc., 369 Lexington Ave., Clifton, N.J.-A,F.J
Industrial Test Equipment Co., 55 E. 11th St., New York 3, N.Y.-A,C
Insuline Corp. of America, 186 Granite St., Manchester, N.H.-A
Int'l. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.-A,B,J
Jackson Electrical Instrument Co., 18 S. Pat-terson Blvd., Dayton 1, Ohio-A,B
Jersey City Technical Lab., 880 Bergen Ave., Jersey City Technical Lab., 880 Bergen Ave., Jersey City Constories, Div. of Aladdin Indus-tries, Inc., Willard Rd., Norwalk, Conn.-B
Kahn & Co., 541 Windsor St., Hartford 1, Conn.-A,J
Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-A,B,D,E,F,I,J
Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-B,I

Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-B,I

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Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.-B
Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-D
Krohn-Hite Instrument Co., 580 Mass. Ave., Cambridge 39, Mass.-A.D,K
Laboratory for Electronics, 75 Pitts St., Boston, 14, Mass.-I
Levinthal Electronic Products, Inc., 2821 Fair Oaks Ave., Redwood City, Calif.-J
Linear Equip. Labs., 380 Oak St., Copiague, N.Y.-H
Lux Industries, Inc., 38 Argyle Park, Buffalo 22, N.Y.-B
Lyrmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.-AJ
Manson Labs., 207 Greenwich Ave., Stamford, Conn.-I,J
Manufacturers Eng'g. & Equip. Corp., York & Mill Rds., Hatboro, Pa.-F
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-A,B.I
Matison-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-A
Maxaon Corp., W. L., 460 W. 34th St., New York 54, N.Y.-A,B.I
Mattoon-Cowley Corp., Boonton, N.J.-H
Merconix, Inc., Trumbull Airport, Groton, Conn.-A,B
Metropolitan Electronics & Instruments Co., 106 5 Ave., New York 11, N.Y.-A,B
Microwave Associates, 22 Cummington St., Boston 16, Mass.-H
Midwest Eng'g. Devel. Co., 3648 State Line, Kansas City 3, Kansas.-H
Midwest Eng'g. Devel. Co., 3648 State Line, Kansas City 3, Kansas.-H
Midwest Eng'g. Devel. Co., 3648 State Line, Kansas City 3, Kansas.-H
Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, 11.-A,D
Millen 44, Mass.-H
Model Eng'g. & Mig. Co., 106 Facherick St., Huntington, Ind.-B,I
Peters Co., O. S., 1863 N.Y. Ave., N.E., Washington 2, D.C.-B
Phebco. Inc., 3640 Woodland Ave., Baltimore 15, Md.-A
Philamon Labs., 90 Hopper St., Westbury, L.I., N.Y.-C
Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.-I
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.-B,CI

4700 Wissahickon Ave.. Philadelphia 44, Pa. —I
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—B,C,I
Polarad Electronics Corp., 43-20 34th St., Long Island City 1, N.Y.—I,J
Polytechnic Research & Development Co., 202 Tillary St., Brooklyn 1, N.Y.—I
Precise Development Corp., 2 Neil Court. Oceanside, N.Y.—A
Precision Apparatus Co., 70-31 84th St., Glen-dale 27, L.I., N.Y.—A,B,F
Precision Associates, 354 Cumberland St., Brooklyn 17, N.Y.—A,B,H
Precision Crystal Lab., 2223 Warwick Ave.. Santa Monica, Calif.—B,D
Press Wireless Laboratories, 25 Prospect Pl., W. Newton 65. Mass.—H
Pruyn-Moore, Inc., 1338 Cota Ave.. Long Beach 13, Calif.—A,B,D
Pulse Techniques, Inc., 1411 Palisade Ave., W. Englewood, N.J.—A
Radako, Inc., 27-17 124th St., Richmond Hill 18, N.Y.—A,B,C,D,E,F,G,H,IJ
Radex Corp., 2076 Elston Ave., Chicago 14, III.—A
Radio City Products Co., Centre & Glendale Sta., Easton. Pa.—A,B

III.—A Radio City Products Co., Centre & Glendale Sts., Easton, Pa.—A,B Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.—I Radio Corp. of America, Tube Div., 415 S. 5 St., Harrison, N.J.—A,B,E Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.—A Radio Sonic Corp., Plainfield, N.J.—D Resdel Eng'g., 2351 Riverside Dr., Los Ange-les 39, Calif.—D Riverbank Labs., Batavia Ave., P. O. Box 65. Geneva, III.—A,C Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.—J Scala Radio Co., 2814 19th St., San Francisco 10, Calif.—A

10. Calif.—A
Selectar Industries, 401 E. 138 St., New York 54, N.Y.—A,B
Shasta Div., Beckman Instruments, Inc., 1432 Nevin Ave., Richmond, Calif.—A
Sierra Electronic Corp., 1050 Brittan Ave., San Carlos 2, Calif.—B,J
Skiatron Electronics & TV Corp., 30 E. 10
St., New York 3, N.Y.—E,G
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston, Texas—A,D
Specialty Assembling & Packing Co., Spe-cialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.—A,J
Spencer-Kennedy Labs., 186 Massachusetta

Spencer-Kennedy Labs., 186 Massachusetts Ave., Cambridge 39, Mass.—J

Sperry Gyroscope Co., Great Neck, N.Y.-I Standard Electric Time Co., Springfield 2, Mass.-C

Mass.--C Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.--D,I Stanford Labs., 1661 Broadway, Redwood City, Calif.--B.I.J Stavid Eng'g. Highway 22, Plainfield, N.J.--I Supreme, Inc., Greenwood, Miss.--A,B,E Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.--E,F Teca Corp., 80 Main St., White Plains, N.Y.--A,J Technology Instrument Corp., 531 Main St.

A,J Technology Instrument Corp., 531 Main St., Acton, Mass.—B Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—B,E,F,J Teletronics Lab., 54 Kinkel St., Westbury, L.I., N.Y.—A Televiso Corp., 1415 Golf Rd., Des Plaines, Ill. —D

Tel-Instrument Co., 728 Garden St., Carls-tadt, N.J.-E

- taut, N.J.-E Telonic Industries, 444 S. Rural St., Indi-anapolis I, Ind.-B Times Facsimile Corp., 540 W. 58 St., New York 19. N.Y.-C Triumph Mfg. Co., 1829 S. 55 St., Chicago 50, III-A

Ultrasonic Eng'g. Co., P.O. Box 46, Maywood,

Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, III.-D
United Technical Labs., Morristown, N.J.-E
Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-I
Varian Associates, 611 Hansen Way, Palo Alto, Calif.-I
Varo Mfg. Co., 1801 Walnut St., Garland, Texas-A.C
Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-A.I

- Mass.—A.I Vibro-Ceramics Corp., 212 Durham Ave., Me-- tuchen, N.J.—D Voron & Co., George, 835 N. 19th St., Phila-delphia 30, Pa.—A Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—A
- Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—A Warren Corp., J. C., 21 Hanse Ave., Freeport, L.I., N.Y.—B Waveforms, Inc., 333 6th Ave., New York 14, N.Y.—A.B.D Waveline. Inc., Caldwell. N.J.—I Weinschel Eng'g. Co., 10503 Metropolitan Ave., Kensington. Md.—J Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio—D Weston Labs., Inc., Box 407, Littleton, Mass. —I

I
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.—I
Wheeler Laboratories. Inc., 122 Cutter Mill Rd., Great Neck, N.Y.—I
White Electron Devices, Roger, 12 W. Island Rd., Ramsey. N.J.—I
White Industries, Inc., 421 W. 54th St., New York 19, N.Y.—D
Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—B,D,I

## **45**—MEASUREMENT & TEST **EQUIPMENT-OSCILLOGRAPHS**

Oscillographs,	cathode-rayA
Oscillographs,	direct writingB
Oscillographs,	multi-channelE
Oscillographs,	multi-element F
	portableC
	projectionG
	recordingD

Allegany Instrument Co., 1000 Oldtown Rd., Cumberland, Md.—A.D.E Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill.—A American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.—A,F Amplitronix Inc., 155 W. 72nd St., New York 23, N.Y.—G Beta Electric Corp., 333 E. 103 St., New York 29, N.Y.—G Beva Laboratory. 1640 Olden Ave. Ext., Tren-ton, N.J.—A

- 23, N.1.—Gramma 1640 Olden Ave. Ext., Trenton, N.J.—A
  Browning Laboratory. 1640 Olden Ave. Ext., Trenton, N.J.—A
  Browning Labs. Inc., 750 Main St., Winchester, Mass.—A.D
  Brush Electronics Cor., 3405 Perkins Ave., Cleveland 14, Ohio—B.C.D.E.F
  Carol Electronics Corp., 315 W. Stephen St., Martinsburg, W. Va.—C
  Central Research Labs. Inc., Red Wing, Minn.—A,B,E.F
  Chatham Electronics. Div. Gera Corp., 630 W.
  Mt, Pleasant Ave., Livingston, N.J.—F
  Computer Control Co., 92 Broad St., Wellesley 57, Mass.—E
  Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.—A,B,C,D, E,F
  Crosby Laboratories, Box 233, Robbins Lane.

E.F. Crosby Laboratories, Box 233, Robbins Lane, Hicksville, N.Y.—A DuMontLaboratories, Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.—A.C.E Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.—D

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Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.-A
Electronic Measurements Corp., 280 Lafayette St., New York 12, N.Y.-A
Electronic Systems Co., 578 E. 161 St., New York 56, N.Y.-A
Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa.-A.E
Electron-Tech Equip. Co., 308 Canal St., New York, N.Y.-A
Electronics, Inc., 5 & Noble Sts.. Philadelphia 23, Pa.-A
Espey Mfg. Co., 528 E. 72nd St., New York 21, N.Y.-A, B.C.D.E.F.G
Feiler Eng'g. & Mfg. Co., 8026 N. Monticello Ave., Skokie, Ill.-A
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-G
Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-A.D.E
Freed Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-A.D.E
Freed Electronics, Inc., Washington Rd., Prince-ton, N.J.-E
General Devices, Inc., Washington Rd., Prince-ton, N.J.-E
General Electrois, Sa62 N. Cahuenga Blvd., N. Hollywood, Calif.-A.D.G
Grass Instrument Co., 101 Old Colony Ave., Quincy 70, Mass.-B
Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-A.D.E.F
Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.-A
Hathaway Instrument Co., 1315 S. Clarkson St. Denver 10, Colo.-A.C.E.F
Heath Co., 305 Territorial, Benton Harbor, Mich.-A.C
Hickok Electrical Instrument Co., 10514 Du-pont Ave., Cleveland 8, Ohio-A
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-B.C.D.E.F.G
Huil & Co., R. O., 1300 Parsons Ct., Rocky River. Ohio-A
Hycon Mfg. Co., 2061 E. Colo. Blvd., Pasadena 8. Calif.-A.C
Industrial Television, 369 Lexington Ave., Clif-ton, N.J.-A
Jackson Elect. Instrument Co., 18 S. Patter-son Blvd., Dayton 1, Ohio-A
Hycon Mfg. Co., 2061 E. Colo. Blvd., Pasadena 8. Calif.-A.C
Industrial Television, 369 Lexington Ave., Clif-ton, N.J.-A
Jackson Elect. Instrument Co., 18 S. Patter-son Blvd., Dayt

- Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.—A
  Lab. for Electronics. Inc., 75 Pitts St., Boston, Mass.—A
  Lavoie Labs., Inc., Morganville, N.J.—A,B
  Linear Equipment Labs., Brightwater Pl., Massapequa, L.I., N.Y.—A
  Maico Co., 21 N. 3rd St., Minneapolis 1, Minn.—A
  Maryland Electronic Mfg. Corp., 5009 Cal-vert Rd., College Park, Md.—E
  Midwestern Instruments, 41 & Sheridan Rd., Tulsa, Okla.—C,D.E.F
  Millen Mfg. Co., James. 150 Exchange St., Malden. Mass.—A
  Miller Instruments, Inc., Wm., 325 N. Hal-stead Ave., Pasadena 8, Calif.—A,E.F
  Minn.-Honeywell Regulator Co., Industrial Div. 4228 Wayne Ave., Phila. 44, Pa.—B
  Model Eng'g. & Mfg. Co., 50 Frederick St., Huntington, Ind.—A
  Offner Electronics. Instr. Co., 3803 N. 5 St., Philadelphia 40, Pa.—D
  Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—A
  Procise Dovelonment Corp., 2 Neil Court. Occanside, N.Y.—A
  Precision Apparatus Co., 70-31 84th St., Glen-dale 27, L.I., N.Y.—A
  Radio City Products Co., Centre & Glendale Sts., Easton, Pa.—AC
  Radio Corp. of America, RCA Tube Dept., 415 S. 5th St., Harrison N.J.—A.C
  Railway Communications, Inc., Raytown, Mo. —A

  - Rolab Studios, Walnut Tree Hill, Sandy Hook,

- Rolab Studios, Walnut Tree Hill, Sandy Hook, Conn. Sanborn Co., Cambridge 39, Mass.—B Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.—A Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, Ill.—A.C Skiatron Electronics & TV Corp., 30 E. 10th St., New York 3, N.Y.—A.G SoundScriber Corp., 146 Munson St., New Haven 4, Conn.—D Southwestern Indust. Electronics Co., 2831 Post Oak Rd.,Houston, Texas.—A,C,D,E,F Spencer-Kennedy Labs., 186 Mass. Ave., Cam-bridge 39, Mass.—A Stavid Eng'g., Highway 22, Plainfield, N.J.— E,F Supreme, Inc., Greenwood, Miss.—A
- Supreme, Inc., Greenwood, Miss. -A
- Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—A
- New IOTK J9, N.I.—A Syntronic Instruments, Inc., 100 Industrial Rd. Addison, Ill.—A Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.—A

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Teca Corp., 80 Main St., White Plains, N.Y .--

A Technical Instrument Co.. 3732 Westheimer Rd., Houston 6, Texas—C.D.F Technology Instrument Corp., 531 Main St., Acton, Mass.—B.D.E.G Tektronix, Inc., Box 831, Portland 7, Ore.— A.C.E Α

- Tektronix, Inc., Box Co., A.C.E Telechrome. Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—A Teletronic Labs. Inc., 1835 W. Rosecrans Ave., Gardena, Calif.—A.C Televiso Corp., 1415 Golf Rd., Des Plains, Ill. —A B.C
- -A,B,C

- -A.B.C Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas-B.D.E Thompson Clock Co., H. C., 38 Federal St., Bristol. Conn.-A.B.C.D Calif.-A T.L.G. Electric Corp., 31 W. 27th St., New York 1, N.Y.-A Trad Television Corp., 1001 First Ave., Asbury Park. N.J.-A Triumph Mfg. Co., 1829 S. 55 St., Chicago 50, III.-A Uni-Products Div., Uni-Science, Inc., P.O. Box

- Ill.—A
  Uni-Products Div., Uni-Science, Inc., P.O. Box 64, Rockville, Md.—A
  Victoreen Instrument Co., 4800 Perkins Ave., Cleveland 12, Ohio—C
  Volkers & Schaffer Mfg. Corp., 444 2 St., Schenectady, N.Y.—A,C
  Waterman Products Co., 2445 Emerald St., Philadelphia 25, Pa.—A,C,E
  Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—B,E
- 46-MEASUREMENT & TEST

PURPOSE

EQUIPMENT-SPECIAL

Attenuators, A-F .....A

Attenuators, R-F .....C Barreters .....D Bolometers .....E Cabinets, temperature test ......F Calibrators .....G Cameras, oscilloscope recording ....H

Chronographs .....l Combustion test equipment ..... AA

Comparators .....J Color equipment .....M Converters, frequency ......K Delay lines .....L Direction finders .....AR Filters ......T Frequency measuring equipment ... N Inverters .....W

Lenses .....X

Lights, neon test .....Y

Locators, open-short .....AT Microwave test equipment ..... AO Multivibrators .....AB Optical equipment .....O Pressure measuring equipment ....P Probes .....AC Pulse equipment .....AS Radar test sets ..... AP Recorders, frequency response ... AD

Regulators .....AE R-F interference equip .....Z Screen rooms .....AF Slotted lines .....AQ Soundproof rooms .....AV Specialties, capacitor ......AG Specialties, inductance .....AH Specialties, resistance .....AI

Spectrographic equipment .....Q Spring testing equipment .....R Stroboscopes & accessories .....AJ

Tuning forks .....AN Vibration measuring equipment ...S VSWR measuring equipment .....AU

Ace Eng'g. & Machine Co., 3644 N. Lawrence St., Philadelphia 40, Pa.—AF Acme Electric Corp., Cuba. N.Y.—L Acme Scientific Co., 1450 W. Randolph St., Chi-cago 7, Ill.—O Acme Telectronix, Div. NEA Service Inc., 1200 W. 3rd St., Cleveland 13, Ohio—AB Advance Electronics Co., 451 Highland Ave., Passaic, N.J.—L,N

- Advance Electronics, Inc., 94 Silas Deane Hwy., Rocky Hill. Conn.-S Advance Instrument Corp., 1709 F St., Belmar.
- N.J.-\_w
- N.J.-W Aermotive Equip. Corp., 1632 Central St., Kansas City 8, Mo.-N.AO,AP Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.-I.J.K.M.N.O.P.S.W.AA,AB,AO, AP.AR.AS
- Acrowox Corp., 740 Belleville Ave., New Bed-ford, Mass.—A,B Airborne Electronics Co., Hangar #6, Metro-politan Airport, Van Nuys, Calif.—N,AC, AO,AP
- Airborne Instruments Laboratory, 160 Old Country Rd., Mineola, L.I., N.Y.-C,AO,AP, AQ.AR.AU
- Aircraft Armaments, Inc., P.O. Box 126, Cock-eysville, Md.-N,AO,AP Airpax Products Co., Middle River, Baltimore 20, Md.-W

- Airpax Products Co., Middle River, Baltimore 20. Md.-W Air Transport Mfg. Co., 1114 N. Sycamore Ave.. Los Angeles 38, Calif.-V Airtronix Development Corp., 20 W. 22 St., New York 10, N.Y.-AE Alford Mfg. Co. 299 Atlantic Ave., Boston 10, Mass.-AQ.AU Allied Intl. Inc., 230 Park Ave., New York 17. N.Y.-N All-Tronics, Inc., 2 Secatoag Ave., Port Wash-ington, N.Y.-T.Z Alto Scientific Co., 4037 El Camino Way. Palo Alto, Calif.-AS America Inc. 116 Topsfield Rd., Wenham. Mass. -C.N.AO.AU American Chronoscope Corp., 316 W. 1st St., Mount Vernon, N.Y.-I
- American Instrument Co., Silver Spring, Md. -FH Electronics
- American Machine & Foundry, Ele Div., 1085 Commonwealth Ave., Mass.—J Boston,
- American Optical Co., Buffalo 15, N.Y.-M,O, Q,X

- American Optical Co., Buffalo 15, N.Y.-M,O, Q,X
  American Optical Co., Buffalo 15, N.Y.-M,O, Q,X
  American Platinum Works. 231 N.J. R.R. Ave., Newark 5, N.J.-AL
  American Platinum Works. 231 N.J. R.R. Ave., Newark 5, N.J.-AL
  American Padio Co., 445 Park Ave., New York 22, N.Y.-AO.AP
  American Thermo Electric Co., 7269 Santa Monica Blvd., Los Angeles 4, Calif.-AL
  American Time Products, 580 5 Ave., New York 36, N.Y.-AA
  Anchor Electronics, Inc., 717 Sip St., Union City. N.J.-AH
  Andersen Labs., Inc., 39 Talcott Rd., W. Hurtford 10, Conn.-L
  Andrew Corp., 363 E. 75th St., Chicago 19, III.-AQ
  Anton Electronic Laboratories, 1226 Flush-ing Ave., Brooklyn 37, N.Y.-AB
  Applied Research Labs., 3717 Park Pl., Glen-dale 5, Calif.-Q
  Aremac Associates. 329 W. Washington St., Pasadena 3, Calif.-H
  Arenberg Ultrasonic Lab. 94 Green St., Ja-manica Plain 30, Mass.-L, AS
  Ark Eng's. Co., 431 W. Tabor Rd., Philadel-phia 20, Pa.-Z, AF
  Arnoux Corp., 1357 Hawthorne Blvd., Haw-thorne, Calif.-AL
  Assembly Products, Inc., Chesterland 21, Ohio -AL
  Audio Instrument Co., 133 W. 14 St., New

- Arnoux Corp., 1387 Hawthorne Blvd., Hawthorne, Calif.—AL
  Assembly Products, Inc., Chesterland 21, Ohio —AL
  Audio Instrument Co., 133 W. 14 St., New York 11, N.Y.—B
  Austin Co., Special Devices Div., 76 9 Ave., New York 11, N.Y.—B
  Authorized Mfrs. Service Co., 919 Wyckoff Ave., Brooklyn 27, N.Y.—S
  Autortest, Inc., 600 S. Michigan Ave., Chicago 5, 111.—P.Y.AA,AJ
  Avion Instrument Corp., 299 State Hwy. #17, Paramus, N.J.—K,O,AE
  Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—AR
  Bache & Co., Semon. 636 Greenwich St., New York 14, N.Y.—X
  Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.—Q
  Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pn.—F.G.R.S
  Ballantine Labs., Inc., 100 Fanny Rd., Boonton, N.J.—G,W
  Barber-Colman Co., 1300 Rock St., Rockford, III.—F,AE,AL
  Barker & Williamson, Inc., 237 Fairfield Ave., Upper Darby, Pa.—K,L.N.T
  Barles Devel. Co., 213 W. Baltimore Pk., Lansdowne 2, Pa..—V
  Bar-Ray Products. Inc., 209 25 St., Brooklyn 32, N.Y.—N
  Bausch & Lomb Optical Co., 628 St. Paul St., Rochester, N.Y.—M.O,Q.X
  Bayaide Watch Tool Co., 200 Utopia Parkway, Whitestone 57, N.Y.—H.J.V
  Beckman & Whitley, Inc., 935 San Carlos Ave., San Carlos, Calif.—P,AA
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
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  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 Prince St., Brooklyn 32, N.Y.—A
  Bellaire Electronics, Inc., 30 P

- AS Berkshire Laboratories, 586 Bank Village, Greenville, N.H.—AJ,AS

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- Beva Laboratory, 1640 Olden Ave. Ext., Trenton, N.J.-AE.AS
  Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.-H.O
  Biley Electric Co., Union Station Bldg., Erie, De De J
- Pa.--L
- Biney Electric Co., Onton Station Bidg., Erie, Pa.-L
  Bogart Mfg. Corp.. 315 Seigel St., Brook-lyn 6, N.Y.-C.AC.AO.AP
  Boland & Boyce, 236 Washington Ave., Belle-ville, N.J.-AC
  Bomae Laboratories. Salem Rd., Beverly, Mass. -AO.AP.AU
  Borden Eng'g. Co., 63 Clinton Ave., New Prov-idence, N.J.-J.AT
  Bowser Tech. Refrigeration. Div. Bowser Inc., Terryville, Conn.-F
  Bram Chemical Co., 820-65 Ave., Philadelphia 26, Pa.-AL
  Bristol Co., Waterbury 20, Conn.-K,U,W,AC, AE.AL

- AE.AL Bristol Eng'g. Corp., Bristol. Pa.—F,G,AA,AE, AS,AT

- Bristol Eng'g. Corp., Bristol. Pa.—F,G,AA,AE, AS,AT
  Bristol Eng'g. Corp., Bristol. Pa.—F,G,AA,AE, AS,AT
  British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.—Y
  Brown Equipment Co., 128 N. Main St., Mill-town, N.J.—AE,AS
  Brubaker Electronic Co., 9151 Exposition Dr., Los Angeles 34, Calit.—L,AS
  Bruno-New York Industries, 460 W. 34 St., New York 1. N.Y.—C.E.AO,AP,AU
  Buck Eng'g. Co., 37-41 Marcy St., Freehold, N.J.—AS
  Budd-Stanley Co., 43-01 22nd St., Long Island City 1, N.Y.—C,AF,AO,AU
  Budelman Radio Corp., 375 Fairfield Ave., Stamford. Conn.—N.AO
  Buhl Optical Co., 1009 Beech Ave., Pittsburgh 12, Pa.—O,T,X
  Bunnell & Co., J., 81 Prospect St., Brooklyn 1, N.Y.—AN
  Burke & James, 321 S. Wabash Ave., Chicago 4, III.—O
  Burnell & Co., 45 Warburton Ave., Yonkers 2, N.Y.—L.T
  Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.—AB,AS
  Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.—C,P,AO,AQ,AU
  Calidyne Co., 120 Cross St., Winchester, Mass.—S
  Calif.—C,P,AO,AP
  Hindry Ave., Los Angeles 45, Calif.—CA.AP

- Byron Jackson Co., 2010 Lincoln Ave., Pasadena 3, Calif.-C,P.AO,AQ.AU
  Calidyne Co., 120 Cross St., Winchester, Mass.-S
  Cal-Tronics Corp., 11307 Hindry Ave., Los Angeles 45, Calif.-AO,AP
  Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.-X.AO.AP,AS
  Carlson & Nicholson Inc., 497 Maynard Dr., Buffalo 21, N.Y.-J
  Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47, III.-W
  Cascade Research Corp., 53 Victory Lane Los Gatos, Calif.-C,AO
  Central Eng's, Corp., 560 Providence Highway, Norwood, Mass.-P
  Central Eng's, Corp., 560 Providence Highway, Norwood, Mass.-P
  Central Eng's, Corp., 660 Providence Highway, Norwood, Mass.-P
  Central Research Labs., Inc., Red Wing, Minn.-AO,AP,AQ,AU
  Century Electronics, 14844 Oxnard St., Van Nuys, Calif.-C,AO
  Century Geophysical Corp., 1333 N. Utica. Tulsa, Okla.-C,D
  Century Metalcraft Corp., 630 W, Mt. Pleasant Ave., Livingston, N.J.-W,AP
  Chemalloy Electronics Corp., Gillespie Airport. Santee, Calif.-AO,AP
  Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, III.-AL
  Cinema Eng's, Co., Div. AeroVox Corp., 1100 Chestnut St., Burbank, Calif.-A
  Clary Corp., 408 Junipero St., San Gabriel, Calif.-AE
  Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-J.L.M.AB,AE,AG, AH,AI
  Cleveland Instrument Co., 735 Carnegie Ave., Cleveland Ist. Ohio-J
  Cline Electric Mfg. Co., 3405 W. 47th St., Chicago 2, 211.-AE
  Cilippard Instrument Lab., 7390 Colerain Rd., Cincinnati 24, Ohio-J
  Cole Instrument Co., 1320 S. Grand Ave., Los Angeles, Calif.-AU
  Color Television Inc., 973 E. San Carlos Ave., San Carlos, Calif.-AU
  Color Television Inc., 973 E. San Carlos Ave., San Carlos, Calif.-AU
  Color Television Inc., 973 E. San Carlos Ave., San Carlos, Calif.-AU
  Color Television Inc., 973 E. San Carlos Ave., San Carlos, Calif.-AU
  Color Measurements La

- -F Consolidated Eng'g, Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.-P,Q.S.AD Continental Communications 452 W. Chicago Ave., Chicago 10, III.-N Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.-L.T Control Eng'g. Corp., Controls Div., 934 Washington St., Norwood, Mass.-AA Cook Laboratories, 101 2nd St., Stamford, Conn.-AD

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- Corbin Corp., 5419 56 Pl., Riverdale, Md.-T.AP,AR.AU Corning Glass Works, Corning, N.Y.-X Crown Engineering, 3821 Commercial N.E., Albuquerque, N.M.-A.C Cubic Corp., 2841 W. Canon St., San Diego 6, Calif.-AO.AU Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-AS Custom Electonics Corp., 738 Speedwell Ave., Morris Plains, N.J.-G Daven Co., 191 Central Ave., Newark 4, N.J. -A.B.C.L.N.V.AI Daystrom Instrument. Archbald, Pa.-AB,AP,
- Daystrom Instrument, Archbald, Pa.-AB, AP,
- Morris Plains, N.J.-G Daven Co., 191 Central Ave., Newark 4, N.J. -A, B, C. L., N.V. AI Daystrom Instrument, Archbald, Pa.-AB, AP, AS Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.-K.U.W.X Daytronic Corp., 216 S. Main St., Dayton 2, Ohio-P,S Decade Instrument Co., Box 153, Caldwell, N.J.-K.N Delaware Optical Labs., 36 Williams St., Fern-wood, Pa.-H.I, M.O, Q. V.X Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.-AM Demco Products, P.O. Box 5042, Philadelphia 11, Pa.-G.AS DeMorney-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.-AO,AQ,AU,AV Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, Ill.-L.AS Deutschmann Corp., Tobe, 921 Providence Hwy. Norwood, Mass.-Z.AT DeWald Radio MfR. Corp., 35-15 37 Ave., Long Island City 1, NY.-AP Diamond Microwave Corp., 7 North Ave., Wakefeld, Mass.-AO Diatron Co., 3327 Dixie Dr., Houston 21, Texas-E,Z,AT Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-G.I,N,AB Donnic Scientific Co., 2829 7th St., Berkeley 10, Calif.-J.N Dormitzer Electric & MfR. Co., 5 Hadley St., Cambridge, Mass.-AS Dorn Equipment Corp., 88 Broad St., Boston 10, Mass.-X Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-M,AO,AQ,AU Drive-In-Theater MfR. Co., 505 W. 9th, Kan-sas City, Mo.-T Dubrow Development Co., 235 Penn St., Bur-lington, N.J.-A,B,N,ST.U Duwont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-L.M Dwaric Electronics, N.Y. Inc., 73-39 Wood-haven Blvd., Glendale, L.I., NY.-LAP Eastern Precision Resistor Corp., 130-11 90th Ave., Richmond Hill 18, L.I., N.Y.-AA Eastern Precision Resistor Corp., 130-11 90th Ave., Richmond Kill 18, L.I., NY.-LAP Eastern Precision Resistor Corp., 130-11 90th Ave., Richmond Corp., Barrington, N.J.-O Electronics Carge, 204 W. Houston St., New York 14, N.Y.-AC Eletertonic Corp., Barrington, N.J.-O Electronical & Physical Instrument Corp., 42-19 27th St., Long Island City 1, N.Y.-I, NAS Electrical & Physical Instrument Corp., 42-19 27th St., Long Island City 1, N.Y.-I, NAS

-H Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood. Calif.-AL Electro Impulse Lab., 62 White St., Red Bank, N.J.-C.N.AO.AP Electro-Mechanical Div.. General Riveter, Inc., 785 Hertel Ave. Buffalo 7, N.Y.-AJ Electro-Medical Lab., 1 Hoof-print Trail, S. Woodstock 10, Vt.-H.I Electrometric Inc.. Box 107, Woodstock, Ill. -L

-L Electronic Brazing Co., 140 Glenridge Ave., Montclair, N.J.-AJ Electronic Eng'g. Co. of Calif., 180 S. Al-varado St., Los Angeles 57, Calif.-AK Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.-G,AC.AM Electronic Measurements Co., Lewis St., & Maple Ave., Eatontown. N.J.-G,AE Electronic Systems Co., 578 E. 161 St., New York 56, N.Y.-L.T Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa.-H Electron-Radar Producta, 1041 N. Pulsaki

Electron-Radar Products. 1041 N. Pulaski Rd., Chicago 51, Ill.—A,B,C,AA,AL,AO,AP Electro-Physics Co., 287 Broadway, New York 7, N.Y.--M,O,X

Electro Products Labs., 4501 N. Ravenswood Ave., Chicago 40, Ill.-P.S Electro-Pulse, Inc., 11811 Major St., Culver City, Calif.—A,G,J,AB,AS Electro-Search 4337 N. 5th St., Philadelphia 40, Pa.-T,AF

Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-J

Electro-Technic Products, 4602 Montrose Ave., Chicago 41, 111.--Y Elk Electronic Labs., Inc., 333 W. 52 St., New York 19, N.Y.--A,B,C,G,K,N,Z,AO,AP,AU Ely Electronics Corp., 22-02 Raphael St., Fairlawn, N.J.--AE Ei Mec Laboratorics, 730 Boulevard, Kenil-worth, N.J.--N Elm Labs., 18 S. Broadway, Dobbs Ferry, N.Y.--N El-Tronics, Inc., 5 & Noble Sts., Philadelphia 23, Pa.-I,N,AI Empire Devices, Inc., 38-25 Bell Blvd., Bay-

Eim Labe., 18 S. Broadway, Dobbs Ferry, N.Y.-N
El-Tronics, Inc., 5 & Noble Sts., Philadelphia 23, Pa.-I.N.AI
Empire Devices, Inc., 38-25 Bell Blvd., Bay-side 61, N.Y.-C.AO,AS
Empire State Labs. 2608 Merrick Rd., Bell-more, L.I., N.Y.-A.C.I.T
Endevco Corp., 689 S. Fair Oaks Ave., Pasa-dena 2, Calif.-P.S
Eng's, Associates, 434 Patterson Rd., Dayton 9, Ohio-AO,AP
Engis Equipment Co., 431 S. Dearborn St., Chicago 5, III.-O
Ercona Corp., Scientific Instr. Div., 527 5th Ave., New York 17, N.Y.-O
ESC Corp., 534 Bergen Blvd., Palisades Park, N.J.-LAS
Esco Mfg. Co., Box 344, Summit, III.-AJ
Espey Mfg. Co., 528 E. 72 St., New York 21, 'N.Y.-W.AB,AK.AL,AM,AO,AF,AU
Esterline-Angus Co., P.O. Box 596, Indian-apolis 6, Ind.-N.P
Fairchild Camera & Instrument Corp., Com-mercial Camera Div., Robbins Lane, Syosset, L.I., N.Y.-H
Farnsworth Electronics Co., Div. IT&T Corp., P.O. Box 810, Fort Wayne, Ind.-L,N,AO
Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-JO,Q.X.AL
Fecker Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.-O
Federal Mfg. & Eng'g. Corp., 211 Steuben St., Brooklyn 5, N.Y.-B
Feiler Eng'g. & Mfg. Co., 8026 N. Monticello Ave., Skokie, III.-AM
Ferris Instrument Co., 110 Cornelia St., Boonton, N.J.-G
Field Electrical Instrument Co., 8 N. Manheim Blvd., New Paltz, N.Y.-AL
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-H,M,O.X
Flight Research Inc., P.O. Box 1-F, Richmond 1, Va.-H
Fuke Mfg. Co., John, 1111 W. Nickerson St., Seattle 99. Wash.-AE
Ford Instrument Co., 19 Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-K. U,V.W
Fotoro Co., 38 Neponset Ave., Foxboro, Mass.-P,AL

Foto-Video Labs, P.O Box 296, Clifton, N.J.— M.AB
Foxboro Co., 38 Neponset Ave., Foxboro, Mass.—P.AL
Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.—G.N.S.AB
Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.—AP
Freed Transformer Co. Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—N.T.AG.AH
F-R Machine, Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.—C.E.N.AO, AP, AQ.AS.AU
Frequency Standards, P. O. Box 504, Asbury Park, N.J.—N
Friez Instrument Div., Bendix Aviation Corp.. 1400 Taylor Ave., Baltimore 4, Md.—P.AC
Furst Electronics, 3322-A W. Lawrence Ave., Chicago 25, III.—A
Gaertner Scientific Corp., 1247 Wrightwood Ave., Chicago 14, III.—I.J.O.Q.S.V.X.AL.AN
Gates Radio Co., 123 Hampshire St., Quincy, III.—N
General Communication Co., 681 Beacon St.. Booton 16, Marc.

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Gates Radio Co., 123 Hampshire St., Quincy, III.--N
General Communication Co., 681 Beacon St., Boston 15, Mass.-N,AO,AP
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, NY.--K,N,P.S.W,AG,AL
General Electrosonics, Inc., 32 W. 22 St., New York 10. N.Y.--Z
General Electrosonics, Inc., 32 W. 22 St., New York 10. N.Y.--Z
General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream, L.I., N.Y.-L
General Instrument Corp., 829 Newark Ave., Elizabeth 3, N.J.-L
General Radio Co., 275 Mass. Ave., Cam-bridge 39, Mass.-A.C.E.H.N,S.T,AB,AE,AG, AI,AJ,AN,AO,AQ,AS,AU
General R-F Fittings Co. 702 Beacon St., Bos-ton 15, Mass.-C.AC
Gentard Corp., Manassas, Va.--K
Gerostor Corp., Manassas, Va.--K

64, Calif.— Georator Corp., Manassas, Va.—K Gerber Scientifie Instrument Co., 162 State St., Hartford, Conn.—U Gertsch Products, 11846 Mississippi Ave., Los Angeles 25, Calif.—N.T.AO Gilfallan Bros. 1815 Venice Blvd., Los An-zeles 6, Calif.—AO Gilmore Industries, Inc., 5713 Euclid Ave., Cleveland 3, Ohio—P.R

Glenco Corp., Durham Ave., Metuchen, N.J. —AG,AI

G & MEquipment Co., 7315 Varna Ave., Holly-wood, Calif.—N,AF,AK,AO,AP

Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-H.O.X Gorrell & Gorrell, Haworth, N.J.-V

Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.--P Gow-Mac Instrument Co., 100 Kings Rd., Madison, N.J.--AA Graphic Recorders, 62 Walter St., Bridgeport 5 Corp. --AD

Graphic Recorders, 52 Walter St., Bridgeport 5, Conn.--AD Grass Instrument Co., 101 Old Colony Ave., Quincy 70, Mass.-H Green Co., C. A., 14651 Wood St., Harvey, Ill.-J

Quincy 70, Mass.-H
Green Co., C. A., 14651 Wood St., Harvey, III.-J
Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, III.-F
Gulton Mfg. Corp., 212 Durham Ave., Metuchen, N.J.-L.S,T,AC,AG,AI
Gundlach Mfg. Co., 38 E. Main St., Fairport, N.Y.-O.X
G. W. Associates, P. O. Box 2263, El Segundo, Calif.-G,AO
Gyro Electronics Co., 325 Canal St., New York 13, N.Y.-Y
Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-H.K,N,AE
Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.-AE
Harder Co., Donald C., 3338 India St., San Diego 1, Calif.-L,T
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-AN
H-B Instrument Co., 275 Page Mill Rd., Palo Alto, Calif.-A.K.N.T.AO.AU
Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-A.K.N.T.AO.AU
Hickstown, Pa.-N.T.AN
Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-AP
Hactoronic Eng'g & Mfg. Co., New Kingstown, Pa.-N.T.AN
Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-AP
Hi-Q Div., Aerovox Corp., Olean, N.Y.-L.T.AI
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-H.L,O.P.S.T., AB,AC,AD.AE,AL.AS

AB,AC,AD.AE,AL,AS Honeycomb Co. of America, 3 Burroughs St., Bridgeport, Conn.—AP Horlick Co., Wm. I., 266 Summer St., Boston 10, Mass.—W Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, III.—AL Hycon Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.—EJ,AC,AK,AO,AP,AQ Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.—A.B L.L-S Instrument Corp., 10701 Briggs Rd.,

Chicago 37, Ill.—AL Hycon Mfg. Co., 2961 E. Colorado St. Pasa-dena 8, Calif.—E.J.AC,AK.AO,AP,AQ Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.—A.B LL-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio--N Imoedance Inc., 9 Alan St., Farmingdale, L.I., N.Y.—AO Industrial Acoustics Co., 341 Jackson Ave., New York 54, N.Y.—AV Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.—J.S.T.AG,AH.AI Industrial Devices, Edgewater, N.J.—Y Industrial Devices, Edgewater, N.J.—Y Industrial Television. 369 Lexington Ave., Clif-ton, N.J.—M,AP.AR Industrial Television. 369 Lexington Ave., Clif-ton, N.J.—M,AP.AR Industrial Television. 369 Lexington Ave., Clif-ton, N.J.—M,AP.AR Instrument Development Labs.. 163 Highland Ave. Needham Heights 94, Mass.—M Instruments for Industries, 160 Glen Cove Rd., Mineola, N.Y.—N Int'l Research & Devel. Corp., 3018 E. Foot-hill Blvd., Pasadena 8, Calif.—U Instruments for Industries, 150 Glen Cove Rd., Mineola, N.Y.—N Int'l Research & Devel. Corp., 797 Thomas Lane. Columbus 14, Ohio—S Int'l. Telemeter Corp., 2000 Stoner Ave., Los Angeles 25, Calif.—C I.Q. Industries, 6110 Wilshire Blvd., Los An-geles 48, Calif.—M,AJ Jackson Electrical Instrument Co., 18 S. Patterson Blvd., Dayton 2, Ohio—M Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda 14, Md.—L Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.—O,Q.X Javex, P.O. Box 646, Redlands, Calif.—AC J.R-T Instruments. Corp., 26 & Dickinson Sts., Philadelphia 46, Pa.—C Jiffy Clip Mfg. Co., 128 Clinton Ave., Hunting-ton, N.Y.—AC Jones Flectronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa.—C Jiffy Clip Mfg. Co., 128 Clinton Ave., Hunting-ton, N.Y.—AC Jores Flectronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa..—C Jiffy Clip Mfg. Co., 128 Clinton Ave., Hunting-ton, N.Y.—AC Jores Flectronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa..—C Jiffy Clip Mfg. Co., 128 Clinton Ave., S. Nor-walk, Conn.—AU Kay Lab. 5725 Kearney Villa Rd., San Diego 12, Cali

12, Calif.-B,G,U
Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.-C.N.AO,AP
Monroe St., Chicago 3, Ill.-A
Kellogg Switchboard & Supply Co., 79 W.
Monroe St., Chicago 3, Ill.-A
Kemlite Laboratories, 1819 W. Grand Ave., Chicago 22, Ill.-AJ

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Kepco Laboratories, 131-38 Sanford Ave., Flushing 55, L.I., N.Y.—AE Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—A,C,D,E,L,AC,AO,AP,AQ Kings Microwave Co., 719 Main St., New Ro-chelle, N.Y.—N Kocour Co., 4800 S. St Louis Ave., Chicago 32,

Kocour Co., 4800 S. St Louis Ave., Chicago 32, 11L-J
Kollmorgen Optical Corp., 30 Church St., New York 7, N.Y.-X
Kollsman Instrument Corp., 80-08 45 Ave., Elmhurst 73, N.Y.-C,N
K.V. Transformer Corp., 20 E. Franklin St., Danbury, Conn.-L,T
Kybernetes Corp., 9 E. 40th St., New York 16, N.Y.-S
Labo. for Electronics, Inc., 75 Pitts St., Boston, Mass.-L,AK,AP
Lampkin Laboratories, Technical Div., Bradenton, Fla.-N
Lavoie Labs., Inc., Morganville, N.J.-G,N,AK
Lee Electronic Labs., Inc., 233 Dudley St., Boston 19, Mass.-AG,AI
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-Q,AL
Lennard Co., P. M., 671 Bergen St., Brooklyn 38, N.Y.-F
Lenox Instrument Co., 2010 Chancellor St., Philadelphia 3, Pa.-O
LePace Mfg. Co., 75-19 64th St., Glendale 27, N.Y.-T
Levinthal Electronic Products, Inc., 2821 Fair Oaks Ave., Redwood City, Calif.-L.AH.AO.

N.X.—T Levinthal Electronic Products. Inc., 2821 Fair Oaks Ave., Redwood City, Calif.—L,AH,AO, AP,AS

N.Y.-T Levinthal Electronic Products. Inc., 2821 Fair Oaks Ave., Redwood City, Calif.-L,AH,AO, AP,AS Librascope, Inc., 808 Western Ave., Glendale 1, Calif.-O.U Lindgren & Associates, 4515 N. Ravenswood Ave., Chicago 40, Ill.-AF Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-O.X Linear Equipment Labs., 380 Oak St., Copiague, N.Y.-L,T.AC Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.-G,AG.AI Liston-Becker Instrument Co., 649 Hope St., Stamford, Conn.-AA Litton Industries. 336 N. Foothill Rd., Bev-erly Hills, Calif.-AO,AP Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.-N York 54, N.Y.-N Humar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.-K Lysco Mfg. Co., 1401 Clinton, Hoboken, N.J.-K Mag-Electric Products, 12822 Yukon Ave., Hawthorne. Calif.-L Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywöod, Calif.-AE Magne-Pulse Corp., 140 Nassau St., New York 38, N.Y.-L,AD Magnetic Instrument Co., 82 Main St., W. Orange, N.J.-L,T.AE Manning Maxwell & Moore, 250 E. Main St., Stratford, Conn.-P Manson Labs., 207 Greenwich Ave., Stam-ford, Conn.-AP,AS Manufacturers Eng'g. & Equip. Corp., York & Mill Rds., Hatboro, Pa.-E,M,Q Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-A.B,C,N.AO,AP,AU Marion, Electroical Instrument Co., Manches-ter, N.H.-G Massa. Labs., Inc., 5 Fottler Rd., Hingham, Mass.-P,S Marson Corp., W. L., 460 W. 34th St., New York 1, N.Y.-AE,AP Marson Corp., W. L., 460 W. 34th St., New York 1, N.Y.-AE,AP Mar Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif.-L Marson Corp., W. L., 460 W. 34th St., New York 1, N.Y.-AE,AP Mar Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif.-L Marson Corp., W. L., 460 W. 34th St., New York 1, N.Y.-AE,AP Mar Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif.-L Marson Corp., W. L., 460 K. 34th St., New York 1, N.Y.-AE,AP Mar Eng'g. Co., 6055 Lankershim Blvd., N. Hollywood, Calif.-L Marson Development Corp., 71 Murray St., New York 7, N.Y.-JAN Measurements Corp., Boonton, N.J.-C.D.G.N Mercury Electronic Co., Bo

Metal Products Co., Craighead St., Nashville 4, Tenn.-P Metronix, Inc., Trumbull Airport, Groton, Conn.-N.AI Meyer & Co., Hugo, 39 W. 60 St., New York 23, N.Y.-O.V.X Micoo Instrument Co., 80 Trowbridge St., Cambridge 38, Mass.-AO Microdot Div., Felt Corp., 1826 Fremont St., S. Pasadena, Calif.-L Microlab, Inc., 71 Okner Pkwy., Livingston, N.J.-C,T,AO Microwave Associates, 22 Cummington St., Boston 15, Mass.-C.N,AO,AF,AU Microwave Devel. Labs. Inc., 22D Grove St., Waltham 54, Mass.-C

Midwest Eng'g. Devel. Co., 3648 State Line, Kansas City 3, Kansas.-N.AO Millen Mfg. Co., James. 150 Exchange St., Malden, Mass.-L.N.AK

Miller Instrument, Wm., 325 N. Halstead Ave., Pasadena 8, Calif.-S,U,AN

Millivac Instrument Corp., 444 2nd St., Sche-nectady, N.Y.-AC Model Eng'g. & Mfg. Co., 50 Frederick St., Huntington, Ind.-C.AK

Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.-V Multi-Tron Laboratory, 4624 W. Washington Blvd., Chicago 44, 111.-M.O.X Munsell Color Co., 10 E. Franklin St., Balti-more 12, Md.-M Murphy & Miller, Inc., 1324 S. Michigan Ave., Chicago 5, 111.-F Narda Corp., 66 Main St., Mineola, N.Y.-C.D.E.N.AC.AO.AP.AQ.AU National Capacitor Co., 585 Washington St., Quincy 69, Mass.-L.T Neucor Inc., 45 W. Union St., Pasadena 1, Calif.-S New Jersey Electronics Corp., 345 Carnegie

Calif.—S New Jersey Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J.—AP New London Instrument Co., Inc., 82 Union St., New London, Conn.—C,G Nichols Products Co., 325 W. Main St., Moorestown, N.J.—V,AC,AP,AQ,AU Norden-Ketay Corp., Wiley St., Milford, Conn. P,U.V,AC,AP Norrman Labs., Ernst, Williams Bay, Wis. —W

Wortheastern Eng'g. Inc., Bedford St., Manchester, N.H.—AO
 Northeast Scientific Corp., 617 Concord Ave., Cambridge 38, Mass.—AE,AO,AP
 Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill.

-A Omega Labs, Box 466, Billercia, Mass.-AO Opad Electric Co., 69 Murray St., New York 7,

pad Electric Co., or ... N.Y.--AJ wen Labs, 412 Woodward Blvd., Pasadena 10, Calif.--G MY Mfg. Corp., 5955 Van Owen Labs. 10, Calif.-

Owen Labs., 412 Woodward Blvd., Pasadena 10, Calif.-G
Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.-M.S.AO.AP
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, Calif.-O
Pacific Universal Products Corp., 168 Vista Ave., Pasadens 8, Calif.-O.X
Palmer, Inc., M.V., 4002 Fruit Valley Rd., Vancouver, Wash.-T
Panoramic Radio Products, 10 S. 2 Ave., Mt. Vernon, N.Y.-S
Pantek Co., Box 212, El Segundo, Calif.-AJ
Pår Products Corp., 926 N. Citrus Ave., Hollywood 38, Calif.-O,V,X
Paul, F. H. & Stein Bros., Inc., 235 5 Ave., New York 16, N.Y.-AS
Penberthy Instrument Co., 666 Adams St., Seattle 8, Wash.-O
Penn Industrial Instrument Corp., 4110 Haverford Ave., Philadelphia 4 Pa.-P
Penna Testing Lab., Doylestown, Pa.-J,P, AG.AH

AG, AH
Peschel Electronics, Inc., 18 Garden St., New Rochelle, N.Y.—AT
Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.—G, J.K., NAB
Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.—G, AA, AO, AP
Philamon Labs., 90 Hopper St., Westbury, L.I., N.Y.—AN
Philbrick Researchers, Inc., Geo. A., 230 Con-gress St., Boston 10, Mass.—U
Philco Corporation—Accessory Div., "A" & Allegheny Ave., Philadelphia 34, Pa.—C
Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa. —M.AO
Phoenix Precision Instrument Co., 3803 N.

Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa. — M.AO
Phoenix Precision Instrument Co., 3803 N. 5 St., Philadelphia 40, Pa.—E,O,Q,V,AE
Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—J,U.AC,AL
Pickard & Burns, 240 Highland Ave., Needham 94, Mass.—E
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—AN,AO,AP
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.—C,M,AI,AO,AP,AS,AU
Polytechnic Research & Development Co., 202
Tillary St., Brooklyn 1, N.Y.—A,C,D,E,K,N, AC,E,AO,AP,AQ,AU
Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, N.Y.—I,N
Praktica Co., 705 Bronx River Rd., Bronxville 8, N.Y.—H
Precise Development Corp., 2 Neil Court, Oceanside, N.Y.—M,AC
Precision Apparatus Co., 70-31 84 St., Glendale 27, LI., N.Y.—AC, MAR, AP
Precision Apparatus, S54 Cumberland St., Brooklyn 38, N.Y.—A,Y,AM,AP
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, 111.—F
Premet Instrument Corp., 52 W. Houston St., New York 12, N.Y.—C,AO,AP
Press Wireless Labs., Inc., 25 Prospect Pl., W. Nierless Labs., Inc., 26 Prospect Pl., W. Nierless Labs., Inc., 25 Prospect Pl., W. Nierless Labs., Inc., 26 Prospect Pl., W. Nierless Labs., Inc., 25 Prospect Pl., W. Nierless Labs., Inc., 26 Prospect Pl., W. Nierless Labs., Inc., 26 Prospect Pl., W. Nierless Labs., Inc., 26 Prospe

Q-O-S Corp., 29 W. 60 St., New York 23, N.Y.--O

Quare Associates, P.O. Box 95, Canton, Mass. .T W

Radalab, Inc., 87-17 124 St., Richmond Hill 18, N.Y.—A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P, Q.R.S.T,U,V,W,X,Y,Z,AA,AB,AC,AD,AE,AF, AG,AH,AI,AJ,AK,AL, AM, AN, AO, AP, AQ, AR,AS,AT,AU

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

-AO.AP Radiation Instrument Devel. Lab., 2337 W. 67 St., Chicago 37, Ill.-N,AS Radio City Products Co., Centre & Glendale, Sts., Easton, Pa.-M Radio Corp. of America, Eng'g, Products Div., Camden 2, N.J.-AO Radio Corp. of America RCA Tube Dept., 415 S. 5th St., Harrison, N.J.-G,M,AC Radio Sonic Corp., Plainfield, N.J.-T,AR Radio Sonic Corp., Plainfield, N.J.-T,AR Radio Supply & Eng'g. Co., 85 Selden Ave., Detroit I, Mich.-H,M Railway Communications, Inc., Raytown, Mo. -T

Railway Communications, Inc., Raytown, Mo. —T
Ransom Research, P.O. Box 382, San Pedro, Calif.—N,AE
Ratigan Electronics, Inc., 3614 Maple Ave., Los Angeles 11, Calif.—M,Q
Rawson Electrical Instrument Co., 117 Pot-ter St., Cambridge 42, Mass.—G,AL
Reflectone Corp., Cor. Post Road & Myano Lane, Stamford, Conn.—U
Refrigeration Systems Inc., 646 W. Wash. Blvd., Chicago 6, Ill.—F
Regulator Eng'g. & Devel. Co., 11545 W. Jef-ferson Blvd., Culver City, Calif.—AE
Research Electronics Labs., Roslyn, Pa.—M
Revco, Inc., Deerfield, Mich.—F
Revere Corp. of America, 345 N. Colony Rd., Wallingford, Conn.—AC,AL
R.F.I. Shielded Enclosures Corp. 3634 N. Lawrence St., Philadelphia 40, Pa.—AF
Richards Co., Arklay S., 37 Winchester St., Newton Highlands 61, Mass.—AL
Riverbank Labs., Batavia Ave., Geneva, Ill.— AN

AN

AN Rockwell Eng'g. Co., 4068 N. N.J. St., Indian-apolis 5, Ind.—I Royal Electric, Inc., P.O. Box 823, Dayton 1, Ohio—K

apolis 5, Ind.-I Royal Electric, Inc., P.O. Box 823, Dayton 1, Ohio-K RS Electronics Corp., P.O. Box 368 Sta. A, Palo Alto, Calif.-AC Ruge-deForest, Inc., 50 Moulton St., Cambridge 38, Mass.-AI,AL Rutherford Electronics Co., 3707 S. Robert-son Blvd., Culver City, Calif.-AS Rutico, Inc., 490 S. Fair Oaks Ave., Pasadena I, Calif.-P Ryan Industries Inc., 19159 John R St., De-troit 3, Mich.-S Safe Flight Instrument Corp., 4 Water St., White Plains, N.Y.-S Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, 111.-Y Sanders Associates. Inc., 137 Canal St., Nashua, N.H.-C.J Sangamo Electric Co., 9th & Converse, Spring-field, III.-U Scala Radio Co., 2814 19 St., San Francisco 10, Calif.-AC,AM Scherr Optical Tools, Inc., Geo., 200 Lafayette St., New York 12, N.Y.-J.O Science Electronics, Inc., 485 Main St., Cam-bridge, Mass.-AC Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.-G.J.S.T,AC Seismograph Service Corp., 701 Kennedy Bldg., Tulsa, Okla.-H,S,AD Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.-G.J,NAL Servo Corp. of America, 2020 Jericho Tpke., New Hyde Park, LI., NY.-E,AR Shaltons Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.-A.B.C,L,AC Shasta Div., Beckman Instruments, Inc., 1432 • Nevin Ave., Richmond, Calif.-N.ACAI Sheiding, Inc., 8 Reserve St., Riverside, N.J. -AF Shoup Eng'g. Co., 1516 S. Wabash Ave., Chi-cago 16, III.-S

-Ar Shoup Eng'g. Co., 1516 S. Wabash Ave., Chi-cago 16, III.-S Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.-C.E.AC.AO.AS.AT.AU Signalite Inc., 37-41 Neptune Hwy., Neptune, N.J.-Y

Signalite Inc., 37-41 Reptune 1989, Action, N.J.-Y Silver Bay Equip. Co., 5004 20 N.W., Seattle, 7 Wash.-AR Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, III.-M,N,V.AC,AO Size Control Co., Div. American Gage & Ma-chine Co., 2500 W. Washington Blvd., Chi-cago 12, III.-J Skiatron Electronics & TV Corp., 30 E. 10 St.,

chine Co., 2000 W. Washington Blvd., Chicago 12, Ill.-J
Skiatron Electronics & TV Corp., 30 E. 10 St., New York 3, N.Y.-H,AP
Sorensen & Co., 375 Fairfield Ave., Stamford, Conn.-K, W.AE
Southwestern Industrial Electronics Co., 2831
Post Oak Rd., Houston, Texas-A, H,J,L,S,T
Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. --A.AR,AS
Spencer-Kennedy Labs., 186 Mass. Ave., Cam-bridge 39, Mass.-T,AS
Sperry Gyroscope Co., Great Neck, L.I., N.Y. --C.D,E,N,AO,AP,AQ,AU
Sprague Electric Co., North Adams, Mass. --Z.AT
Square Root Mfg. Co., 391 Saw Mill River Rd.,

-Z.AT Square Root Mfg. Co., 391 Saw Mill River Rd., Yonkers. N.Y.-T.AH Standard Cabinet Co., 54 Washington Ave., Carlstadt, N.J.-F. Standard Coil Products' Co.. 2085 N. Haw-thorne St., Melrose Park, Ill.-L, P, T Standard Electrical Products Co.. 2240 E. 3rd St., Dayton 3. Ohio-AE Standard Electric Time Co., 119 Logan St., Springfield 2, Mass.-AN

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Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-N.T.U.AB
Stavid Eng'g., Highway 22, Plainfield, N.J.-AE, AO, AP
Steiner-Ives Co., 483 Springfield Rd., Union, N.J.-AA
Stewart Instrument Co., 6507 Grand River, Detroit 8, Mich.-J
Sticht Co., Herman H., 27 Park Place, New York 7, NY.-1,AJ
Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.-C.Z
Sub Zero Products, 3932 Reading Rd., Cin-cinnati 29, Ohio-F
Sunrise Products, P.O. Box 173, Hawthorne, N.J.-AJ
Supreme Inc., Greenwood, Miss.-AM
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-GAK
Taber Instrument Corp., 111 Goundry St., N. Tonawanda, N.Y.-P
Taco West Corp., 525 N. Noble St., Chicago 22, III.-AL
Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.-M
Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.-A,B,C,T
Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas-S
Technical Products Co., 19 N. Dunlap, Medi-cal Center, Memphis 1, Tenn.-F.I.J.M.O, R.AAAN
Technicraft Labs., 1600 Thomaston Ave., Toomaston, Conn.-C,G,AC,AO,AQ,AU

cai Center, Memphis 1, Tenn.—F.I.J.M.O. R.AA.AN Technicraft Labs., 1600 Thomaston Ave., Thomaston, Conn.—C.G.AC.AO.AQ.AU Techno Instrument Co., 6666 Lexington Ave., Los Angeles 38, Calif.—S Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—H.L.M.T.AB.AD.AK.AO.AS Telectro Industries Corp., 35-16 37 St., Long Ia-land City 1, N.Y.—G Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.— E.G.L.N.T.V.AB.AC.AL.AO.AP, AQ.AR.AU Telescreen Corp., 36 Grove St., New Canaan, Conn.—AE Teletronics Lab., 54 Kinkel St., Westbury, L.I., N.Y.— AS Televiso Corp., 1415 Golf Rd. Dec. Division

N.X.-AS Televiso Corp., 1415 Golf Rd., Des Plaines, Ill.-C,L,T,AH

111.--C,L,T,AH Tel-Instrument Co., 728 Garden St., Carlstadt, N.J.--C,L,M.T,AP Telonic Industries, 444 S. Rural St., Indian-apolis I, Ind.---M,AU Tenney Engineering Inc., 1090 Springfield Rd., Union, N.J.--F Tensitron, Inc., Pin Hill, Harvard, Mass.--AL,AS

AL, AS Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—N, O, R, Y, Y, AJ, AK Times Facsimile Corp., 540 W. 58th St., New York 19, N.Y.—AN T.L.G. Electric Corp., 31 W. 27th St., New York 1, N.Y.—AK Trad Television Corp., 1001 1 Ave., Asbury Park. N.J.—C Transformers Inc., 532 North St., Endicott, N.Y.—T Tring. Inc. 1000 Island Ave. McKace Books

N.Y.-T Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.-T The Instrument Co., Harmon

N.Y.-T Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.-T Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio--M.N.AL Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.-Y Underwood Corp., Electronic Computer Div., 35-10 36 Ave., Long Island City, N.Y.-L Uniform Tubes, Inc., Level Rd., Collegeville 2, Pa.-AL United Mfg. Co., Div. W.L. Maxson Corp., 41 Haig St., Hamden 14. Conn.-W.AE United Scientific Labs., 35-15 37 Ave., Long Is-land City 1, N.Y.-AP Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-C.AO.AP.AQ.AU U.S. Gauge Co., Sellersville, Pa.-P Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.-AL Varian Associates, 611 Hansen Way, Palo Alto, Calif.-AO.AS Vari-L Co., 432 Fairfield Ave., Stamford, Conn. -AH Varo Mfg. Co., 1801 Walnut St., Garland, Tex. -K.N.T.AB.AE Vectron Inc.. 1611 Trapelo Rd., Waltham 54, Mass.-C.G.K.N.T.V.AO.AP Vibro-Ceramics Corp., 212 Durham Ave., Me-tuchen, N.J.-AC

Vibroscope Co., P.O. Box 97, Glenford, N.Y. -S
Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 14. Ohio-S
Victory Eng's. Corp., 103 A Springfield Rd., Union, N.J.-AA
Virginia Electronics Co.. River Rd. at B&O R.R., Washington 16, D.C.-V
Volkers & Schaffer Mfg. Corp., 444 2 St., Schenectady, N.Y.-AC
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.-G.AP
Wabash Metal Products Co., 1569 Morris St., Wabash, Ind.-P
Wabash Metal Products Co., Isfey Morris St., Wabash, Ind.-P
Waldorf Instrument Corp., Park Ave., Huntington. N.Y.-AO
Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-K.AB.AS
Wallace & Tiernan, 25 Main St., Belleville 9, N.J.-P
Warreck Co., Frederick P., 6732 Dixle Hwy., Clarkston, Mich.-H

Washington Institute of Technology Inc., 4810 Calvert Rd., College Park, Md.-N
Wavefornta. Inc., 333 6th Ave., New York 14, N.Y.-AB
Waveguide Inc., 14837 Oxnard St., Van Nuys, Calif.-AO
Waveline, Inc., Caldwell, N.J.-C,N.AC,AO, AP.AQ,AU
Weinschel Eng'g. Co., 10503 Metropolitan Ave., Kensington, Md.-C
Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, III.-AN
Weltronic Co., 19500 W. 8 Mile Rd., Detroit 19, Mich.-K.AE
West Instrument Corp., 525 N. Noble St., Chicago 22, III.-AL
Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., N.wark 5, N.J.-G.AK
Weston Labs., Inc., Box 407, Littleton, Mass.-C,G,N,AK,AO,AP.AQ,AU
Westronics Inc., 3605 McCart, Ft. Worth, Te.as-A,V.AP
Wheeleo Instruments Div., Barber-Colman Co., 1300 Rock St., Rockford, III.-AL
Whete I.alus. Great Nevk. L.I. N.Y.-AO
White Electron Devices, Roger, 12 W. Island Rd., Ramsey, N.J.-C,AO
White Electron Devices, Roger, 12 W. Island Rd., Ramsey, N.J.-C,AO
White Goss, Col., 255 N. Halstead Ave., Pasadena 8, Calif.-J.P.U
Wickes Eng'g. & Const. Co., 12th St. & Ferry Ave., Camden, N.J.-L.M
Wincko Eng's. Co., 2506 N. Ontario St., Burbank, Calif.-AJ
Winkler Laboratories, 5225 N. 20 St., Phoenix, Ariz.-AJ
Winslow Co., 9 Liberty St., Newark 5, N.J.-N.V., AC, Morester Pressed Aluminum Corp., 13 Hope Ave., Worckman TV, Inc., 309 Queen Anne Rd

--N,V,AE,AL Worcester Pressed Aluminum Corp., 13 Hope Ave., Worcester, Mass.--V Workman TV, Inc., 309 Queen Anne Rd., Teaneck, N.J.--AC Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-- C.E.H.I.L.,N.O.P.Q.S.T.AD, AG.AH.AI.AO.AP.AQ Zenith Optical Lab, 1940 Great Neck Rd., Copiague, L.I., N.Y.--O,X Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.--O,X

### 47—MEASUREMENT & TEST **EQUIPMENT-STANDARDS**

Standards,	capacitanceA
Standards,	frequencyB
Standards,	inductanceC
Standards,	phaseG
Standards,	resistanceD
Standards,	temperature
Standards,	timeE
Standards,	voltageF

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.—D
Aireco, Inc., 2315 2nd Ave., Carman, Schenectady, N.Y.—H
American Time Products, 580 5 Ave., New York 36, N.Y.—B
Andersen Laboratories, 39 Talcott Rd., W. Hartford 10, Conn.—E
A.R.F. Products, Inc., 7627 Lake St., River Forest. III.—B
Ballantine Laboratories, Boonton, N.J.—F
Barber-Colman Co., 1300 Rock St., Rockford, III.—F,H
Barker & Williamson. Inc., 237 Fairfield Ave.,

Ill.—F,H
Barker & Williamson. Inc., 237 Fairfield Ave., Upper Darby, Pa.—C
Bassett Inc., Rex., 1314 NE 17th Court, Ft. Lauderdale, Fla.—B
Biddle Co., James G., 1316 Arch St., Phila-delphia 7, Pa.—B,D
Bliley Electric Co., Union Station Bldg., Erie, Pa.—B

Bomac Laboratories, Salem Rd., Beverly, Mass.

Bomae Laboratories, Salem Rd., Beverly, Mass. —B Boonton Radio Corp., Intervale Rd., Boonton, N.J.—C Bristol Co., Waterbury 20, Conn.—D,H Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.—C,D Central Sales & Mfg. Corp., Richwood Pl., Danville, N.J.—A Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.—A,C,D Colortone Electronics, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.—B Conn. Ltd., C. G., Electronic Equip. Div. 1101 E. Beardsley Ave., Elkhart, Ind.—B Continetal Communications, 452 W. Chicago Ave., Chicago 10, III.—B Cornell-Dublier Elec. Corp., 333 Hamilton Blvd., S. Plainfield, N.J.—A Cramer Co., R. W., Centerbrook, Conn.—E Cubic Corp., 2841 Canon St., San Diego 6, Calif.—G Daven Co., 191 Central, Newark, N.J.—D

Cubic Corp., 2841 Canon St., San Diego Calif.—G Daven Co., 191 Central, Newark, N.J.—D

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Rani Scientinc Instrument Corp., P.O. Box 1166, El Cajon, Calif.—H
Kahn & Co., 541 Windsor St., Hartford 1, Conn.—D
Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.—A,B
Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.—F
Kepco Laboratories, 131-38 Sanford Ave., Flushing 55, L.I., N.Y.—F
Knights Co., James, Church & Wells St., Sandwich, III.—B
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.—A.D.H
Linear Equipment Labs., Brightwater Pl., Massapedua, L.I., N.Y.—B
Link Aviation, Inc., Binghamton, N.Y.—G
Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.—E
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.—B
Martindale Electric Co., 132 St. & 89 Ave., Richmond Hill 18, N.Y.—H
Murphy & Miller, 1318 S. Michigan Ave., Chicago 5, III.—H
N.Y.—A,B.C.D.E.F
Non-Linear Systems, Del Mar Airport, Del Mar, Calif.—D,F

N.I.-A.B.C.D.E.F Non-Linear Systems, Del Mar Airport, Del Mar, Calif.-D.F Norman Labs., Ernst, Williams Bay, Wis. -B.E

Peters Co., O. S., 1353 N.Y. Ave., N.E., Wash-ington 2, D.C.-B

Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.-D,F

Philadelphia Scientific Glass Co., 1866 Eckard Ave. Abington, Pa.—H

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Philamon Labs.. 90 Hooper St., Waterbury, L.I., N.Y.-B Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.-D Polytechnic Re-earch & Devel. Co.. 202 Tillary St., Brooklyn 1, N.Y.-B Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-B Precision Electronics, Inc., 9101 King Ave., Franklin Park, Ill.-F Precision Thermometer & Inst. Co., 1434 Brandywine Ave., Philadelphia 30, Pa.-H Pyrometer Instrument Co., Bergenfield, N.J. -H

Quare Associates, P.O. Box 95, Canton, Mass.

-r' Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.-A Ransom Research, P.O. Box 382, San Pedro, Calif.-B

Calif.—B Refrigeration Systems, Inc., Hudson Bay Div., 646 W. Washington Blvd., Chicago 6, Ill. 646 —H

Refrigeration Systems, Inc., Hudson Bay Div., 646 W. Washington Blvd., Chicago 6, Ill. —H Riverbank Labs., Batavia Ave., Geneva, Ill.—B Robuck Labs., 1431 S. La Brea Ave., Los Angeles 19, Calif.—B Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.—C,D,F Rutherford Electronics Co., 3707 S. Robert-son Blvd., Culver City, Calif.—E Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.—A,D Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.—D,F Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.—D Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, 111.—A,F,H Sorensen & Co., 375 Fairfield Ave.. Stam-ford, Conn.—F Standard Electronics Research Corp., 2 E. End Ave., New York 21, N.Y.—B Sterling Mfg. Co., 7201 Wentworth Ave., Cleveland 2, Ohio—F Sun Electric Corp., Harlem & Avondale Aves., Chicago 31, III.—F Tech Laboratories, Inc., Bergen & Edsall Blvd., Palisades Park, N.J.—D Technology Instrument Corp., 531 Main St. Acton, Mass.—G Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—B,E,G Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.—E, S6 Grove St., New Canaan, Conn.—A Teletronic Labs. Inc., 1835 W. Roscerans Ave., Gardena, Calif.—E Telezon, Con.—B Timeo Mate Co., 1106 Bahls St., Danville, III.—E Times Facsimile Corp., 540 W. 58 St., New York 19, N.Y.—B

III.-E Times Facsimile Corp., 540 W. 58 St., New York 19, N.Y.-B Tork Clock Co., 1 Grove St., Mt. Vernon, N.Y. -E Varo Mfg. Co., 1801 Walnut St., Garland,

Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-B Victory Eng'g. Corp., 103 A Springfield Rd.,

Union, N.J.-H Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-B

Calif.—B West Instrument Corp., 525 N. Noble St., Chicago 22. Ill.—H Westport Electric, 149 Lomita St., El Segundo, Calif.—B Wickes Eng'g. & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.—G

48-MEDICAL ELECTRONIC EQUIPMENT

Ballistocardiographs .....A Diathermy equipment .....C Electrocardiographs .....D Electrocauterizers .....E

Electroencephalographs .....F

Electromygraphs .....G Electron microscopes ......H Electrosedative generators ...... Electroshock machines .....J Electrosurgical equipment .....S Epilators ......W Fluoroscope machines ......K Germicidal lamps . . . . . . . . . . . . L

Hemoglobinometers .....N Oscillometers ......T Photographic x-ray equipment ....O

Psychogalvanometers .....P

Radioactivity equipment .....U

Stimulators .....B

Stethographs & stethophones . . . . . Q

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Tex.-B

## Ultrasonic equipment .....V X-ray equipment .....R

- Acme Electric Heating Co., 1217 Washington St., Boston 18, Mass.-M Advance Instrument Corp., 1709 F St., Eclmar, N.J.-B.Q
- Aerolux Light Corp., 653 11 Ave., New York 36, N.Y.-J.L Aeroprojects Inc., P.O. Box 555, W. Chester, Pa.-V
- Ahrendt Instrument Co., 4910 Calvert Rd., Col-

- Ahrendt Instrument Co., 4910 Calvert Rd., College Park, Md.
  Alcar Instruments, 20 Waßaraw Rd., Fair Lawn, N.J.--V
  American Cystoscope Makers, 1241 Lafayette Ave., New York 59, N.Y.--C.S
  American Diathermy Products, 11858 Miss. Ave., Los Angeles 25, Calif.--C
  American Electronic Labs., 641 Arch St., Philadelphia 6, Pa.--B
  American Machine & Foundry, Electronics Div., 1085 Commonwealth Ave., Boston, Mass.--D American Optical Co., Box A, Buffalo 15, N.Y.

- -N Anton Electronic Labs. 1226 Flushing Ave., Brooklyn 37, N.Y.-U Applegate & Co., C. J., 1816 Grove St., Boulder, Colo.-B Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.-V A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.-L Atlas Electric Products, 114½ E. 6 St., Erie, Pa.-M Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass.-U Balteau Electric Corn. 5 New St. Stamford
- Cambridge 39, Mass.—U Balteau Electric Corp., 5 New St., Stamford, Conn.—R Bar-Ray Products, 209 25 St., Brooklyn 32, N.Y.—O
- Beck-Lee Corp., 630 W. Jackson Blvd., Chi-cago 6, Ill.-D

- Beck-Lee Corp., 630 W. Jackson Blvd., Chicago 6, Ill.-D
  Bedford Surgical Co., 1326 Fulton St., Brooklyn, N.Y.-R
  Berkeley Div., Beckman Instruments Inc., 2200 Wright Ave., Richmond, Calif.-U
  Beva Laboratory, 1640 Olden Ave., Ext., Trenton, N.J.-R,U
  Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.-B,D,G,K,P,Q,R
  Birtcher Corp., 4371 Valley Blvd., Los Angeles 32, Calif.-C,L
  Bowen & Co., Box 5818, Bethesda, Md.-D
  Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio--D,F,G
  Burdick Corp., Milton, Wisc.-B,C,D,J,M,S,V
  Burke & James, 321 W. Wabash Ave., Chicago 4, Ill.-O
  Calbest Eng'g. & Electronics Co., 3033 Grand Central Terminal, New York 17, NY.-D,Q
  Cameron Surgical Specialty Co., 666 W. Division St., Chicago 10, III.-E
  Caast Optics Corp., 1010 Post Rd., Riverside, Conn.-R, V
  Chicago Electronic Inc., 900 E.
  Keefe Ave., Milwaukee 1, Wisc.-R,V

- Cast Optics Corp., 1010 Post Rd., Riverside, Conn.-R
  Centralab Div., Globe-Union Inc., 900 E.
  Keefe Ave., Milwaukee 1, Wisc.-R.V
  Chicago Electronic Eng?g. Co., 3223 Armitage Ave., Chicago 47, 111.-D
  Chicago Magnetic Control, 1616 Damon Ave., Chicago, 111.-D
  Columbia Resistors Inc., 23 W. Washington Ave., Pearl River, N.Y.-M
  Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-B,V
  Continental X-Ray Corp., 1536 N. Clybourn, Chicago 10, 111.-K
  Curtis-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-U
  Daystrom Instrument, Archbald, Pa.-U
  Delaware Optical Labs., 36 Williams St., Lanadowne, Pa.-L.O
  Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, 111.-U
  Douglas Instrument Labs, 176 Norfolk Ave.,

- B,D,F Egan Laboratory, 107-56 113th St., Richmond Hill 19, N.Y.-F,G,U Electrical & Physical Instrument Corp., 42-19 27 St., Long Island City I, N.Y.-B Electrodyne Co., Endicott S., Norwood, Mass. -B,G,I Electrofilm Corp., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-M Electro-Medical Lab., S. Woodstock, Vt.-B,F, G,P,Q

- Electronic Heating Corp., 66 Needham St., Newton Highlands 61. Mass.—C Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa.—F.G
- Empire State Iaboratories, 2608 Merrick Rd., Bellmore, L.I., N.Y.-D.F
- Eng'g. Research & Devel. Co., Addison, Ill .-- C
- Esco Mfg. Co., Box 344, Summit, Ill.-J Fairchild Camera & Instrument Corp., Com-mercial Camera Div., Robbins Lane, Syosset, L.I.,-N.Y.-O
- Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-H,N

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Fischer & Co., H. G., 9451-91 W. Belmont Ave., Franklin Park, III.—R
  Fischer & Co., R. A., 525 Commercial St., Glendale 3, Calt.—B,C,L,U,V
  Fisaer co., Oscar, 1000 N. Division St., Peeks-k.II, N.Y.—O
  Frascr Development Lab., Box 73, Hunting-ton Station, N.Y.—T
  F-R Macnine Works, F-X-R Electronics & X-lay Div., 26-12 Borough Pl., Woodside 77, N.Y.—D,K,O,R
  Gates & Co., G. W., Hempstead Tpke. & Lucille Ave., Franklin Square, L.I., N.Y.—L
  General Electric Co., X-Ray Dept., 1855 Elec-

- General Electric Co., Nela Park, Cleveland 12, Oh.o-L
  General Electric Co., X-Ray Dept., 1855 Electric Ave., Milwaukee 1, Wisc.-C,D,R
  General Electrosonics. Inc., 32 W. 22 St., New York 10, N.Y.-C
  General Precision Lab., 63 Bedford Rd., Pleas-antville, N.Y.-V
  Gorrell & Gorrell, Haworth, N.J.-B
  Grason-Stadler Co., 106 Hampshire St., Cam-bridge 39, Mass.-P
  Grass Instrument Co., 101 Old Colony Ave., Quincy 70, Mass.-B,F,G
  Guiton Mfg. Corp., 212 Durham Ave., Metu-conen, N.J.-A,V
  Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-U
  Hamlın, Inc., 1316 Sherman Ave., Evanston, 111.-Q
  Hanovia Chem. & Mfg. Co., 100 Chestnut St.,

- Hamlin, Inc., 1316 Sherman Ave., Evanston, 111.-Q
  Hanovia Chem. & Mfg. Co., 100 Chestnut St., Newark 5, N.J.-C,L
  Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-D
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio-D
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio-D
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio-D
  Huckow, N.Y.-B
  Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, 111.-M
  Incustrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.-A
  Jordan Electronics, 3025 Mission Rd., Alhambra, Calif.-U
  Keleket X-Ray Corp., Covington, Ky.-R
  Kemite Labs., 1819 W. Grand Ave., Chicago 22, 111.-L
  Land.verk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.-U
  Lardoverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.-U
  Lardoverk Lebs., 164 11 Ave., New York 11, N.Y. -I.J
  Lennard Co., P. M., 671 Bergen St., Brooklyn 38 N V L MU

- Levira Dates, for 11 Ave., Ave. Jon 14, Jon 14

- P P Marchand Electronic Labs., 255 Mill St., Byram, Conn.-D Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-C.D.F Master Appliances, 1600 Factory Ave., Mar-ion, Ohio-C Mattern Mfg. Co., F., 4647 N. Cicero Ave., Chicago 47, III.-R Medco Products Co., 3607 E. Admiral Place, Tulsa 12, Okla.-B Medcraft Electronic Corp., Box 464, Babylon, N.Y.-B.F.G.J.P.Y Medical Quartz Products Co., 5066 Santa Monica Blvd., Los Angeles 27, Calif.-C,L, V

- V Mendelsohn Speedgun Co., 457 Bloomfield Ave., Bloomfield, N.J.-D Menlo Research Lab., Box 522, Menlo Park, Calif.-L,U Mercury Mfg. Corp., 45 Brown St., Buffalo 11, N.Y.-C

- Mercury Mfg. Corp., 45 Brown St., Buffalo 11, N.Y.-C
  Metronics, Inc., U. S. Rt. 130, Burlington, N.J.-M
  Microtran Co. Div. Crest Labs., 84-11 Rocka-way Beach, Rockaway Reach 93, N.Y.-B
  Miller Surgical Co., 2449 N. Pulaski Rd., Chicago 10, Ill.-S
  MinAtron Corp., Belle Mead, N.J.-A
  Model Eng'g. & Mfr. Co., 50 Frederick St., Huntington, Ind.-D
  Mowradian High Frequency Labs., 13 E. Ft. Lee Rd., Bogota, N.J.-B,C,I,S
  Murray Plastics Co., 26 Cottage St., Pough-keensie, N.Y.-L
  New Hampshire Ball Bearings, Peterborough, N.H.-R
  New London Instrument Co., Inc., 82 Union St., New London, Conn.-U
  Norto Mfg. Co., 392 Bleecker St., New York 14, N.Y.-L
  North American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.-H,O,R
  Northeastern Dev. Eng'g. Inc., 21 High St., Pawtucket 5, R.I.-W
  NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.-U
  Nuclear Development Lab., P.O. Box 7034, Kansas City 13, Mo.-U

www.americanradiohistorv.com

- Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, 111.—U Nuclear Research Corp., 2nd St. Pike, South-hampton, Pa.—U Other Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, 111.—F.G.J Ohmart Corp., 2236 Bogen St., Cincinnati 22, Onio—U

- Ohmart Corp., 2236 Bogen St., Cincinnati 22, Onio-U
  OMCO, Box 3196, N. Las Vegas, Nev.-U
  Orecon Corvek Co., 1005 N. W. 16 Ave., Portland. Ore.-D
  Peerless Eng'z. Products, 30-81 21 st., Long Island City 2, N.Y.-B.1, W
  Peerless X-Ikay Labs. & Mfg. Corp., 467 10th Ave., New York 18, N.Y.-K.R
  Pereny Equip. Co., 893 Chambers Rd., Columbus 12 Ohio-M
  Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-S
  Ptoenix Precision Instrument Co., 3803 N. 5
  St. Philadelphia 40, Pa.-A.L
  Photovolt Corp., 55 Madison Ave., New York 16, N.Y.-R
  Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-V
  Precision Radiation Instruments Inc., 4223
  W. Jefferson Blvd., Los Angeles 16, Calif.-U
  Process & Instruments, 15 Stone Ave., Brook-Iva 23, N.Y.-BC

Process & Instruments, 15 Stone Ave., Brook-lyn 33, N.Y.-B,G Professional Equipment Co., Box 488, May-wood, Ill.-R

wood, Ill.—R
Radiation Instrument Devel. Lab.. 2337 W.
67 St. Chicago 37, Ill.—U
Radio Sonic Corp., Plainfield, N.J.—V
Radium Chemical Co., 161 E. 42nd St., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 17, N.Y.—U
Radium Emanation Corp., 420 Lexington Ave., New York 11, N.Y.—J
R-C Scientific Instrument, 307 Culver Blvd., Playa Del Rey, Calif.
Richardson Labs., Kenneth, 254 Vincent Ave., Lynbrook, N.Y.—B
Rich-Roth Labs., 1240 Main St., Hartford 3., Conn.—V
Ropar, Inc., 1316 Sherman Ave., Evanston

Conn.—V Ronar, Inc., 1316 Sherman Ave., Evanston, Ill.—Q

Sanborn Co., 39 Osborne St., Cambridge 39, Mass.—D Scientific Specialties Corp., Snow & Union Sts., Roston 35, Mass.—H

Scientific Specialties Corp., Snow & Union Sts., Boston 35. Mass.—H
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.—R
Shannon Luminous Materials Co.. 7356 Santa Monica Blvd., Hollywood 46, Calif.—L
Sherman Industrial Electronics Co.. 5060 Washington Ave., Belleville, N.J.—M
Special Instruments Lab., 312 W. Vine Ave., P.O. Box 2108, Knoxville, Tenn.—U
Specialty Assembling & Packing Co., Specialty Eng., Div., 79 Clifton PL, Brooklyn 38, N.Y.—U
Standard Electronic Research Corp. 2 Fort

N.Y.-U Standard Electronic Research Corp. 2 East End Ave., New York 21, N.Y.-B Standard X.Ray Co., 1932 N. Burling St., Chicago 14. 111.-R Stanford Labs., 1661 Broadway, Redwood City, Calif.-R.U

Calif.--R.U Stoelting Co., C. H., 424 N. Homan Ave., Chicago 24, 111.-B.P Teca Corp., 80 Main St., White Plains, N.Y. --B.G.I Technical Operations Inc., 6 Schouler Ct., Ar-lington 74, Mass.--O Technical Products Co., 19 N. Dunlap, Medi-cal Center, Memphis 1, Tenn.--C,D,E,F,J, L.N Technicon Co., Chauncey NY--D

L.N Technicon Co., Chauncey, N.Y.--D Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.--C.V Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.--L.M.O.R Tracerlab, 130 High St., Boston 10, Mass.--U Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, III.--V

III.-V Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.-L U.M.A. Inc., 56 Cooper Square, New York, N.Y.-T

U.M.A. Inc., 56 Cooper Square, New York, N.Y.-T
Universal X-Ray Products, 1140 N. Western Ave., Chicago 22, III.-P,R
U. S. Radium Corp., 585 Pearl St., New York 7. N.Y.-R
Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.-V
Valverde Laboratories, 252 Lafayette St., New York 12, N.Y.-B
Vibro-Ceramics Corp., 212 Durham Ave., Metuchen, N.J.-A
Vibro-Ceramics Corp., 212 Durham Ave., Cleveland 12, Ohio-R
Wall Mg. Co., P., Erie St., Grove City, Pa.-M
Wappler Inc., 27-16 Astoria Blvd., Long Island City 2, N.Y.-B,C,I,S,W
Welch Mg. Co., W. M., 1515 Sedgwick St., Chicago 10, III.-N,T
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, III.-V
Welsh Electric Co., 1221 Wade St., Cincinnati, 14 Ohio
Weatern Radiation Lab., 1107 W. 24 St., Los

nati. 14 Ohio Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-U White Industries, 421 W. 54 St., New York 19, N.Y.-V

Wolf X-Ray Prod. Inc., 59 Bank St., New York 14, N.Y.-R

Wood Counter Laboratory, N., 5491 Black-stone Ave., Chicago 15, 111.--U X-Ray Mfg. Corp. of America, 222 Bowery, New York 12, N.Y.--R Yellow Springs Instrument Co., P. O. Box 106, Yellow Springs, Ohio--P

#### 49—METALS & CARBONS

Carbides
Carbon
Cloth, wire screenD
Core materials, laminatedJ
Core materials, powderedK
Diamonds
Die castingsX
Electroplating compoundsG
FoilY
Graphite
Magnets, electroL
Magnets, permanentM
Metal bellows AH
Metal-coated glassAAT
Metallic paintAl
Porous bearing metalsAN
Sheet metal
Spring contact metalsAR
StampingsAS
Thermostatic metals AWW

#### METALS

)

AlnicoN
Aluminum
AntimonyP
BariumQ
BerylliumS
BrassT
BronzeU
Bronze phosphorV
CadmiumW
CesiumB
ChromiumC
CobaitE
CopperF
Ferrites
GoldZ
Iron
Iron oxideAB
Kovar
Lead & AlloysAC
LithiumAD
Magnesium & alloysAE
ManganeseAF
MercuryAG
MolybdenumAJ
MonelAK
NickelAL
PalladiumAAY
PlatinumAM
RadiumAAQ
RhodiumAAV
Silver alloys AQ
Silver
Steel, metal coatedAT
Steel, stainless
StrontiumAV
TantalumAW
Tin & AlloysAX
TitaniumAAN
TungstenAAO
Uranium
Zinc
ZirconiumAZ

#### SOLDER

....

Aluminum solder	
Lead-tin solder	
Printed circuit solder	AAC
Silver solder	AAD

#### TUBING

Aluminum tubing
Asbestos tubing
Brass tubingAAE
Ceramic tubingAAX
Copper tubing AAF
Flexible metal hoseAAL
Glass tubing
Monel tubingAAG
Nickel tubing AAH



Paper tubingAWA
Silver tubing AAI
Stainless steel tubingAWB
Steel tubingAAJ
Tungsten tubingAAK
VarnishAWC

- Acme Oxygen Co., 119 S. Fourth St., Harrison, N.J.-O.T.U.AQ,AU Aerolite Electronics Corp., 507 26 St., Union City, N.J.-AS Aeroprojects Inc., P.O. Box 555, W. Chester, Pa.-O.T Aladdin Bedio Industrian 700 Munfrouch

- Pa.—O.T
  Aladdin Radio Industries, 703 Murfreesboro Rd., Nashville, Tenn.—K
  Alcar Instruments, 20 Wagaraw Rd., Fair Lawn, N.J.—AAA
  Allegheny Ludlum Steel Corp.. Oliver Bldg..
  Pittsburgh, Pa. J,L,M,AP,AS,AU,AAN, AAS,AWB
  Alleg Brodlaw Co. 136 W Greenfield Ave.
- AAS,AWB Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisc.—AAR Allied Research & Eng'g. Inc., 6916 Santa Monica Blvd., Los Angeles, Calif.—F,Z,AL,
- AO Alloy
- AO Alloy Metal Wire Div., H.K. Porter Co., Prospect Park, Pa.—AK,AL,AU,AAN Alpha Metals, Inc., 56 Water St., Jersey City 4, N.J.—P,AC,AX,AAA,AAB,AAC,AAD Aluminum Co. of America, Alcoa Bldg., Pitts-burgh 19, Pa.—O,X,Y,AE,AI,AP,AAA,AAM American Brass Co., 414 Meadow St., Water-bury 20, Conn. F,S,T,U,V,AP,AS,AAE, AAF,AAL,AAM American Clastmetals Co., P. O. Box 544, Car-

- AAF, AAL, AAM American Cladmetals Co., P. O. Box 544, Car-negie, Pa.—J, AP American Electro Metal Corp., 320 Yonkers Ave., Yonkers 2, N.Y.—AJ, AN, AAK, AAO, AAS
- AAAS American Metal Co., 61 Broadway, New York 6, N.Y.-F,W,Z,AC,AM,AO,AQ,AX,AY,AAB, ÂAY
- AMERICAN Oxygen Service Corp., 600 Essex St., Harrison, N.J.—A,F,O,U,AQ,AU,AAA,AAD,
- AAO American Platinum Works, 231 N.J. R.R. Ave., Newark 5, N.J.-Z.AM,AO,AQ,AAD, AAI,AAV,AAY Share Co. 36-07 Prince St.
- Ave., Newark 5, N.J.-Z.AM.AO,AQ.AAD, AAI,AAV.AAY
  American Silver Co., 36-07 Prince St., Flushing 54, N.Y. F,O,T,U,V,Y,Z,AA,AJ, AK,AL,AM,AO,AQ,AR,AS,AT,AU,AW, AZ, AAD,AAN,AAU,AAY,AWW
  American Solder & Flux Co., 19th & Willard Sts., Philadelphia 40, Pa.-AAA
  Amplex Div., Chrysler Corp., P.O. Box 2718, Detroit 31, Mich.-AN
  Anchor Metal Co., 244 Boerum St., Brooklyn 6, N.Y. F,F,W,X,Y,AC,AG,AI,AO,AQ,AX, AY,AAA,AAB,AAC,AAD
  Antara Chemicals, Sales Div. General Aniline & Film Corp., 435 Hudson St., New York 14, N.Y.-K,AA
  Apollo Metai Works, 66 Place & S. Oak Park Ave. Chicago 38, IIL-AT
  Arco Transformer & Electric Corp., 1602 S. Hanna St., Ft. Wayne 5, Ind.-AP,AS
  Arens Controls, Inc., 2017 Greenleaf St., Evanston, III.-AAL
  Armco Steel Corp., 703 Curtis St., Middle-town, Ohio-J,AP,AT,AU,AAJ,AWB
  Arnold Eng'g. Co., P.O. Box G, Marengo, III. -J.K,M,N
  Art Wire & Stamping Co., 227 High St., Newark 2. NJ.-AS

- town, Ohio-J,AP,AT,AU,AAJ,AWB
  Arnold Eng'g. Co., P.O. Box G, Marengo, Ill. -J,K,M,N
  Art Wire & Stamping Co., 227 High St., Newark 2, N.J.-AS
  Associated Eng's. & Mfg. Corp., Glen Ridge, N.J.-D,AJ,AAK,AAO,AAU
  Associated Eng's. & Mfg. Corp., Glen Ridge, N.J.-D,AJ,AAK,AAO,AAU
  Bascaited Eng's. & Mfg. Corp., Glen Ridge, N.J.-D,AJ,AAK,AAO,AAU
  Bar.Ray Products, 120 Sutton St., Brook-lyn 22, N.Y.-AS
  Bar.Ray Products, Inc., 209 25 St., Brooklyn 32, N.Y.-AC
  Bethlehem Apparatus Co., Front & Depot Sts., Hellertown, Pa.-AG
  Bigelow Chemical Products, 98 Bigelow St., Quincy 69, Mass.-F,AI,AL,AQ
  Bishop & Co., J., King St., Malvern, Pa.-Z,AM,AU,AAG,AAH,AAJ
  Bow Solder Products Co., 251 Freeman St., Brooklyn 22, N.Y.-AC,AX,AAB
  Brainin Co., C. S., 320 Washington St., Mt. Vernon, N.Y.-AQ,AAI
  Bram Chemical Co., 520 65th Ave., Philadelphia 26, Pa. AB,C,E,F,G,J,K,N,O,P,Q,S,T,U,V, W,AA,AC,AD,AE,AF,AG,AJ,AK,AL,AM,AN, AO,AQ,AU,AV,AW,AZ,AAE,AAF,AAH,AAI, AAK,AAM,AAN,AAO,AAP,AAQ,AAR, AAS, AAU,AAV,AAY,AWB,AWW
  Brand & Co., Wm., North & Valley Sts., Willimantic, Conn.-AAZ,AWC
  Breeze Corporations, 700 Liberty Ave., Union, N.J.-AH,AAE,AAG,AAH,AAJ,AAL, AAM,AWB

- Bridgeport Brass Co., Bridgeport, Conn.— F.T.U.V.AP.AAE,AAF,AAM
  Bristol Brass Corp., 680 Broad St., Bristol, Conn.—F.T.U.AP.AR
  Brooks & Perkins, 1950 W. Fort St., Detroit 16, Mich.—AE,AP,AAN
  Bucks County Enterprises, Quakertown Munic-ipal Airport, Quakertown, Pa.—AS
  Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.—AAG,AAH,AAJ
  Burgess Battery Co., Foot of Exchange St., Freeport, Ill.—AE
  California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.—Y
  Canadian Radium & Uranium Corp., 630 6th Ave., New York 20, N.Y.—AAQ
  Carpenter Steel Co., 101 W. Bern St., Read-ing, Fa.—AU,AWB
  Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—AAX
  Cerro de Pasco Corp., 40 Wall St., New York 5, N.Y.—W,AC,AX,AAB
  Chase Brass & Copper Co., 236 Grand St., Waterbury 20, Conn.—D.F.T.U,V.AP,AR, AS,AU,AX,AAB,AAD,AAE,AAF,AWB
  Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.—R,X,AN,AAA
  Chicago Expansion Bolt, 1338 W. Concord Pl., Chicago 22, Ill.—X,AS
  Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio—D
  Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N.Y.—A,AL,AM,AQ,AAU,AAY
  Collectron Corp., 216 E. 45 St., New York 17, N.Y.—AS
  Columbian Carbon Co., Mapico Color Div., 601 Cass St., Trenton 10, N.J.—AZ
  Cronse Co., H. 15 Beeckman St., New York 38, N.Y.—AJ,AW,AAO
  Crowley & Co., Henry L., 1 Central Ave., W. Urange, N.J.—K,MAAR
  Crueble Steel Co., of America, P.O. Box 88, Pittsburgh 30, Pa.—M,AP,AU,AAJ,AAN, AWB
  Dana, Inc., P. A., 233 Broadway, New York 7, N.Y.—H

- AWB
- AWB Dana, Inc., P. A., 233 Broadway, New York 7, N.Y.--H Decade Instrument Co., Box 153, Caldwell, N.J.--AAF Dismoord Drill Corber Co. 244 Medicer Art
- Decade Institutient Cor, José Tor, José Calman, N.J...-AAF
  Diamond Drill Carbon Co., 244 Madison Ave., New York 16, N.Y.-H
  Dielectric Materials Co., 5315 N. Ravenswood Ave., Chicago 40, III.--AWC
  Division Lead Co., 7742 W. 61 Pl., Summit, III.-P.W.Y.AC,AX,AAB,AAC
  DeMent Labs., New Fliedner Bldg., Portland 5, Ore..-AAP,AAQ
  Dixon Crucible Co., Joseph, Wayne & Mon-mouth Sts., Jersey City 3, N.J.-I
  Do All Co., 254 Laurel Ave., Des Plaines, III. --AAS

- Do All Co., 254 Laurel Ave., Des Plaines, Ill. -AAS Dow Chemical Co., Midland, Mich.-X,AE Dudeck & Bock 2100 W. Fulton St., Chicago 12, Ill.-AS Eastern Smelting & Refining Corp., 109 W. Brookline St., Boston, Mass.-A,AG,AM,AO, AQ,AAD,AAI,AAV,AAY Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-A,C,E,F,I,J,K,O,T,U. W,AA,AB,AC,AE,AF,AJ,AL,AM,AO,AU,AY, AAB,AAN,AWW Electronic Parts Mfg. Co., 508 25 St., Union City, N.J. Elgin Metalformers Corp., 901 N. Liberty St., Elgin, Ill.-AP

- Elgin Metalformers Corp., 901 N. Liberty St., Elgin, Ill.—AP Enthoven Solders Ltd., 107 N. Water St., Rochester 4, N.Y.—P,AC,AX,AAA Erie Resistor Corp., 644 W. 12th St., Erie,

- Erie Resistor Corp., 644 W. 12th St., Erie, Pa.-AS Eutectic Welding Alloys Corp., 40-40 172 St., Flushing 58, N.Y.-AAA,AAB,AAD Fair-Rite Products Corp., Wallkill, N.Y.-AAR Fansteel Metallurgical Corp., 2200 Sheridan Rd., N. Chicago, III.-AJ,AW,AAO Farrelloy Co., 1245 N. 26 St., Philadelphia 21, Pa.-AAA,AAC,AAD Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N.Y.-F,G,O,T,U,W,AC,AE, AX, AAA, AAB, AAC Ferricore Inc., 16 School St., Yonkers, N.Y.

- N.Y.-F,G,O,T,U,W,AC,AE, AX, AAA, AAB, AAC Ferricore Inc., 16 School St., Yonkers, N.Y. -K,AAR Ferroxcube Corp of America. 233 E. Bridge St. Saugerties, N.Y.-J,K,M,AAR Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-H,AAT,AAZ Flexaust Co., 100 Park Ave., New York 17, N.Y.-AAJ Flexaust Co., 100 Park Ave., New York 17, N.Y.-AAJ Flexonics Corp., 1315 S. 3 Ave., Maywood. III.-AH,AAE,AAF,AAJ,AAL Foote Mineral Co., 18 W. Chelton Ave., Phila-delphia 44, Pa.-AD,AZ,AAN Fort Wayne Metals, Inc., 3211 MacArthur Dr., Fort Wayne Metals, Co., 919 Taylor Ave., Rockford, III.-D,I,AI,AS,AAC,AWC General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.-E,G,P,W,AB,AF,AG General Electric Co., Carboloy Dept., Box 237,
- General Electric Co., Carboloy Dept., Box 237, R.P.A., Detroit 32, Mich.-M,N,AAS
- General Magnetic Corp., 10001 Erwin Ave., De-troit 34, Mich.-M
- Glaser Lead Co., Inc., 31 Wyckoff Ave., Brook-lyn 37, N.Y.-AC,AQ,AX,AAA,AAB

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- Golden Co., 1054 38 St., Brooklyn 19, N.Y. -AS

- Golden Co., 1054 38 St., Brooklyn 19, N.Y. -AS
  Goldsmith Bros., 111 N. Wabash Ave., Chi-cago 2, Ill.—A,P,Y,AC,AG,AM,AO,AQ,AAD, AAV,AAY
  Graphite Metallizing Corp., 1050 Nepperhan Ave., Yonkers, N.Y.—I,R
  Gries Reproducer Corp., 5 Second St., New Rochelle, N.Y.—X
  Handy & Harman, 82 Fulton St., New York 38, N.Y.—A,AO,AQ,AAD
  Harper-Leader Inc., 1046 S. Main St., Water-bury 20, Conn.—G
  Harrington & King, 5655 Fillmore St., Chicago 44, Ill.—AS
  Hermetic Seal Products Co., 37 S. 6 St., Newark 7, N.J.—AAU
  Hobson Bros., 4940 W. Lawrence Ave., Chi-cago 30, Ill.—AS
  Hudson Tool & Die, 412 S. 14 St., Newark 7, N.J.—AS
  I E Manufacturing, 325 N. Hoyne Ave., Chi-cago 12, Ill.—AS
  Improved Seamless Wire Co., 775 Eddy St., Providence 5, R.I.—J.Z,AO,AQ,AAI
  Indiana Steel Products Co., 244 Bergen Blvd.,

- Providence 5, R.I. J.Z.AO.AQ.AAI
  Indiana Steel Products Co., Valparaiso, Ind.— M
  Instrument Specialties Co., 244 Bergen Blvd., Little Falls, N.J.—S,AR,AS
  Insuline Corp. of America, 186 Granite St., Manchester, N.H.—AS
  Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.—AAR
  Int'l. Nickel Co., 67 Wall St., New York 5, N.Y.—AK,AL.AP,AAG, AAH
  Int'l. Powder & Metallurgy, 439 W. Main St., Ridgway, Pa.—F,T,U
  Investment Casting Co., 319 Chestnut St., New-ark, N.J.
  Islip Transformer & Metal Co., Beech St., Islip, N.Y.—AP
  Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.—AAX
  Jarrell-Ash Co., 165 Newbury St., Boston 16, Mass.—A, B, C, E, F, I, O, P, Q, S, W, Y, Z, AA, AD, AF, AJ, AL, AM, AO, AV, AW, AY, AZ
  Jelliff Mfg. Corp., C.O., Southport, Conn.— D,AK,AL
  Johns-Manville, 22 E. 40 St., New York 16, N.Y.—AAW
  Johnson Mfg. Co., 6106 S. Broadway, St. Louis 11, Mo.—Y
  Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.—O,AAM
  Keystone Carbon Co., 1935 State St., St. Marys, Pa.—AN
  Keystone Caston Co., 1935 State St., St. Marys, Pa.—AN
  Keystone Watch Case Div., Riverside Metal Co., 1 Pavilion Ave., Riverside, N.J.—S,U,Y,AR
  Kimble Glass Co., P.O. Box 1035, Toledo 1, Ohio—AAZ
  Kings Labs., Inc., 127 Solar St., Syracuse 4, N.Y.—Q,AE,AS,AV
  Kinney Co., Rosslyn Rd., Carnegie, Pa.—AT, AU
  Kirk & Blum, 3120 Forer St., Cincinnati 9, ...Ohio—AP

- N.Y.-Q.AE,AS,AV Kinney Co., Rosslyn Rd., Carnegie, Pa.-AT, AU Kirk & Blum, 3120 Forer St., Cincinnati 9, Ohio-AP Kling Metal Spinning Co., 174 Centre St., New York 13, N.Y.-AS Kocour Co., 4800 S. St. Louis Ave., Chicago 32, III.-G Kulite Tungsten Co., 723 Sip St., Union City, N.J.-E,W.AJ,AL,AAK,AAO,AAR,AAS LaMoree, C. D., 1325 San Julian St., Los Angeles 15, Calif.-AWC Larson Nuclear Research, 520 Fifth Ave., New York 36, N.Y.-ACAP,AAQ Lenkurt Electric Co., 1105 County Rd., San Carlos, Calif.-K Lewis Spring & Mfg. Co., 2656 W. North Ave., Chicago 47, III.-AR,AS Libber-Owens-Ford Glass Co. Liberty Mirror Div., Breckenridge, Pa.-AAT Link-Belt Co., 307 N. Michigan Ave., Chicago 1, III.-R London Chemical Co., 1535 N. 31 Ave., Mel-rose Park, III.-AAB Mackay Inc., A.D., 198 Broadway, New York 38, N.Y.-A, B, C, D. E, F, H. I, K, N. O, P, Q. S. T, U, V, W, Y, Z, AA, AB, AC, AD, AE, AF, AG, AJ, AK, AL, AM, AN, AO, AP, AQ, AAR, AAS, AAU, AAV, AAY, AZ, AAD. AAG, AAH, AAI, AAN, AAO, AAP, AAQ, AAR, AAS, AAU, AAV, AAY, AY, AAD, AAG, AAR, AAS, AAU, AAV, AAY, AY, AAP, AAQ, AAR, AAS, AAU, AAV, AAY, Magnetic Core. Ossining, N.Y.-K,M Magnetic Devices Corp., 103 S. Van Brunt St., Englewood, N.J.-N Magnetic Metals Co., Hayes Ave., at 21 St., Camden 1, N.J.-J,AS

- Magnetic Metals Co., Hayes Ave., at 21 St., Camden 1, N.J.-J.AS
- Magnetic Powders, Inc., Box 247, Johnsonburg, Pa.-K,AA,AB Magnetics, Inc., Butler, Pa.—J,K
- Makepeace Co., D.E., Attleboro, Mass.-Z, AO,AQ,AR,AAD,AAF,AAI,AAY Mallinckrodt Chemical Works, 2nd & Mallin-ckrodt Sts., St. Louis 7, Mo.-F,G,O,P,AB, AE,AG,AY,AAP
- Metal Products Co., Craighead St., Nashville 4. Tenn.—AS Metal Textile Corp., Roselle, N.J.—D

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Metals & Controls Corp., General Plate Div. & Spencer Thermostat Div., 34 Forest St., Attleboro, Mass. S.Y.Z.AM, AO, AQ, AR, AT, AZ, AAD, AAH, AAP, AAV, AAY, AWW
  Metpro, Inc., R. I., 230 Toronto Ave., Provi-dence 5, R.I.—AS
  Metz Refining Co., 369 Mulberry St., Newark 2, N.J.—Z, AM, AO, AQ, AAY
  Modern Wire Co., 39-30 Review Ave., Long Island City 1, N.Y.—AAB
  Multicore Sales Corp., 164 Duane St., New York. N.Y.—AAB
  Multi-Tron Lab., 4624 W. Washington Blvd., Chicago 44, 111.—AS
  Mational Gasket & Washer Co., 124 E. 25th St., New York 10, N.Y.—AS
  National Gasket & Washer Co., 124 E. 25th St., New York 10, N.Y.—AS
  National Lead Co., 111 Broadway, New York 6, N.Y.—A(AAB, AAD)
  National Radiator Co., 165 Bridge St., Johns-town, Pa.—K, AA, AB, AF, AL, AN
  Newark Radio Laboratories, Box 33, Eastham 3, Mass.—AJ, AV, AAO
  Newark 4, N.J.—D
  Newark 4, Lewiston, Me.—F, H.O, AJ, AO, AAO
  North American Philips Co., 2595 W. Grand
  A. Excelific Back 111

- AAO Northern Metal Products Co., 9595 W. Grand Ave., Franklin Park, III.—AS Ohio Carbon Co., 12508 Berea Rd., Cleveland

- Ave., Franklin Park, III.—AS
  Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio—A
  Olympic Metal Products Co., 3 Ave., Alpha, N.J.—AS
  Oppenheimer Corp., 578 Exchange St., Buffalo 10, N.Y.—K.AB
  Patton-Mac Guyer Co., 201 Chapman St., Providence 5, R.I.—AS
  Paul, F. H. & Stein Bros., Inc., 235 5 Ave., New York 16, N.Y.—O,AW,AAY
  Permag Corp., 214 Taaffe Place, Brooklyn 5, N.Y.—M,N
  Permoflux Corp., 4900 W. Grand Ave., Chicago 39, III.—K
  Petroff, Peter A., 127 Water St., New York 5, N.Y.—H
  Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N.Y.—F,AAE,AAF
  Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.—AG
  Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.—T,U,V
  Photo Chemical Products, 479 Walton Ave., New York 51, N.Y.—AI
  Pix Mfg. Co., 5 Oliver St., Newark 5, N.J.—AS
  Plamondon Magnetics Co., 1850 W. Hubbard St., Chicago 22, III.—M
- -AS Plamondon Magnetics Co., 1850 W. Hubbard St., Chicago 22, III.-M Powdered Metal Products Corp., 9335 W. Bel-mont Ave., Franklin Park, III.-K,T,U, AA.AN
- AA.AN Precision Metalsmiths, Inc., 1081 E. 200 St., Cleveland 17, Ohio—X Precision Tube Co., Church Rd. & Wissahickon Ave., North Wales, Pa.—AAE,AAF,AAG, AAH,AAM Pyroferric Co., 621 E. 216 St., New York 67, N.Y.—K
- N.Y.-K Quality Components, Inc., St. Marys, Pa.-K Rada Products Co., 2911 W. Carroll Ave., Chi-cago 12, Ill.-AS Radio Cores, Inc., 9540 Tulley Ave., Oaklawn, Ill.-K

- Rada Products Co., 2911 W. Carroll Ave., Chicago 12, Ill.—AS
  Radio Cores, Inc., 9540 Tulley Ave., Oaklawn, Ill.—K
  Reliable Spring & Wire Forms Co., 3167
  Fulton Rd., Cleveland 13, Ohio—AS
  Rembar Co., 117 Main St., Dobbs Ferry, N.Y.
  —AJAAO
  Republic Foil & Metal Mills, 55 Triangle St., Danbury, Conn.—Y
  Resistron Labs., Inc., 2908 Nebraska Rd., Santa Monica, Calif.—P.Q.S
  Revere Copper & Brass, 230 Park Ave., New York 17, N.Y.—F,O,T,U,V,AQ
  Reynolds Metals Corp., 658 Ohio St., Buffalo 3, N.Y.—F,O,T,A.A.AE,AK.AP,AU,AY,AAN
  Rigidized Metals Corp., 658 Ohio St., Buffalo 3, N.Y.—F,O,T,A.A.AE,AK.AP,AU,AY,AAN
  Romac Products Co., 48-01 25 Ave., Long Island City 3, N.Y.—AS
  Ruby Chemical Co., 68-70 McDowell St., Columbus 8, Ohio—AAB
  Ryerson & Son. Inc., Joseph T., Box 8000-A, Chicago 80, Ill.—AP,AU,AAJ
  St. Marys Carbon Co., State St., St. Marys, Pa.—A.R.U.AN
  Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.—F,O,T,U,V,AL,AP,AS,AAE,AAF
  Seager Standard Carbon Co., 291 Church St., New York 13, N.Y.—A,I
  Secon Metals Corp., 7 Intervale St., White Plains, N.Y.—Z,AM,O,AQ,AAV,AAY
  Sel-Rex Precious Metals, 229 Main St., Belleville 9, N.J.—G.Z,AO,AAV,AAY
  Shefron Mg. Corp., 611 Prospect Ave., Cleveland 1, Ohio—AWC
  Sightmaster Corp., 111 Cedar St., New Rochelle, N.Y.—AN, Calif.—J

- Smith Mfg. Co., Nathan R., 105 Pasadena Ave., S. Pasadena, Calif.-J
- Somers Brass Co., Inc., P.O. Box 270, Water-bury 20, Conn.-F,T,V,Y,AK,AL,AU
- Spincraft, Inc., 4122 W. State St., Milwaukee 8, Wisc.—AS

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- Stackpole Carbon Co., Tannery St., St. Marys, Pa.--K.,M.AAR
  Standard Metals Corp., 262 Broad St., North Attleboro, Mass.--AAD,AM,AAI,AAM
  Star Expansion Products Co., 147 Cedar St., New York 6, N.Y.--X.AS.AY
  Star Stainless Screw Co., 190 Union Ave., Paterson 1, N.J.--AU
  Steward Mfg. Co., D.M., P.O. Box 510, Chattannooga, Tenn.--AAR,AAX
  Superflow Solder, 90 State St., Albany, N.Y. --AAG,AAH,AAJ,AWB
  Sylvania Electric Products, 1740 Broadway, New York 19, NY.--S.AJ,AZ,AAO
  Tayloreel Corp., 3 Rutter St., Rochester 6, N.Y.--AS
  Techalloy Co., Rahns, Pa.--AK,AL,AU,AAN
  Technical Products Co., 19 N. Dunlap, Medical Products Co., 1939 Bryn Mawr Ave., Chicago 26, 111.--J
  Thomas & Sons, Inc., Wm., Slocum Ave., Ridgefield, N.J.--AS
  Thomas & Sons, Inc., Wm., Slocum Ave., Ridgefield, N.J.--AS
  Thomas & Sons, Inc., Wm., Slocum Ave., Ridgefield, N.J.--AS
  Thomas & Con Freinghuysen Ave., Newark 5, N.J.--AAL
  Trion Mfg. Co. 8008 Wallace St., Chicago 20, 111.--Z.AM,AO,AQ,AD,AAY
  United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.--F,K,Y
  U.S. Radium Corp., 535 Pearl, N.Y., N.Y.--AQ
  Universal Mfg. Co., 109 W. Weed St., Chicago 22, 11.--AI
  Vacum Metals Corp., 70 Memorial Dr., Cambridse, N.J.--AS
  Wakehington 16, D.C.-AS
  Volkert Stampings, Inc., 222-34 96 Ave., Queens Village 29, N.Y.--AS
  Wakeshington 16, D.C.-AS
  Wakeshingto

enith Optical Lab., 1940 Great Neck Rd., Copiague, L.I., N.Y.--AAT

Meters, audio ......A Meters, decibei .....B Meters, distortion .....K Meters, frequency .....C Meters, intermodulation ......L Meters, modulation ......D Meters, noise ......E Meters, output .....F Meters, phase angle .....G Meters, wow & flutter .....J

Adler Communications Labs., 1 Le Fevre Lane, New Rochelle 1, N.Y.—A
Advance Electronics Co., P. O. Box 394, Pas-saic, N.J.—G
Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.—A,B.I
Audio Instrument Co., 133 W. 14 St., New York 11, N.Y.—L
Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—A,G
Ballantine Laboratories, Boonton, N.J.—B
Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—A,C,E
Bassett Inc., Rex, 1314 NE 17th Court, Ft. Lauderdale, Fla.—C
Barside Watch Tool Co., 20-20 Utopia Park-way, Whitestone 57, N.Y.—H
Burlington Instrument Co., 203 N. 3 St., Bur-lington, Iowa—B,I
Cinema Eng'g. Co., Div. Aerovox Corp., 1100 Chestnut St., Burbank, Calif.—B,H

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50-METERS, AUDIO

Clough-Brengle Co., 6014 Broadway, Chicago 40, 111,—B Conn Ltd., C. G., Elkhart, Ind.—C Crown Engineering, 3821 Commercial N.E., Albuquerque, New Mex.—E Daven Co., 191 Central Ave., Newark 4, N.J. —A.B.C.E.F.I.K Deuten Auistine Radie & Equin Co. R.B. #3

-A.B.C.E.F.I.K Dayton Aviation Radio & Equip. Co., R.R. #3, Troy. Ohio--A DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-B Digital Instrument Co., 212 Almeria Ave., Coral Gables. Fla.-C Donner Scientific Co., 2829 7 St., Berkeley 10, Calif. -K

Digital Instrument Co., 212 Almeria Ave., Coral Gables. Fla.—C
Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.—K
D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.—J.L
Dubbings Sales Corp., 41-10 45 St., Long Island City 4, N.Y.—I
Dubrow Development Co., 235 Penn St., Bur-lington, N.J.—C,G.K.L
Dyna-Labs., Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.—E
Electro-Mechanneal Instrument Co., 812 Chest-nut St., Perkasie, Pa.—H.I
Electro-Tech Equip. Co., 308 Canal St., New York 13, N.Y.—A,B
Elk Electronic Labs. 333 W. 52 St., New York 19, N.Y.—C,D.E.K
Elm Laboratories. 18 S. Broadway, Dobbs Ferry, N.Y.—C
Eng'g. Research & Dev. Co., Addison, III.—E
Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.—G
Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.—C,E
Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—B
General Electric Co., 275 Mass. Ave., Cambridge 39, Mass.—A, B,C,D,E,F,I,K,L
Gonact Co., x01 S Main St. Burbank. Calif.—D
Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.—H

cuse. N.Y.-D General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-A.B.C.D.E.F.I.K.L Gonact Co., 801 S Main St Burbank, Calif.-D Graphic Recorders, 62 Walter St., Bridgeport 5, Con.-H Gravon-Stadler Co., 106 Hampshire St., Cam-bridge 39, Mass.-A Heath Co., 305 Territorial. Benton Harbor, Mich.-B.C.F.L Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-C.K Hycen Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-I Industrial Test Equin. Co., 55 E. 11 St., New York 3, N.Y.-A.C.G.K Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.-A International Instrument, Inc., P. O. Box 2954, New Haven 15, Conn.-A.B.F.I Kings Electronics Corp., 794 E. 140 St., New York 54, N.Y.-C Iavoie Labs.. Inc., Morganville, N.J.-C Lavoie Labs.. Inc., Morganville, N.J.-C Uaral Electronics Corp., 794 E. 140 St., New York 54, N.Y.-C Marconi Instruments Ltd., 23 Beaver St., New York 54, N.Y.-C Marconi Instruments Ltd., 23 Beaver St., New York 54, N.Y.-C Marconi Instruments Ltd., 24 Beaver St., New York 50, N.Y.-C Marconi Instruments Ltd., 24 Beaver St., New York 50, N.Y.-C Marconi Instruments, 100, 400 Canal St., Manchester, N.H.-B.H.I Maxson Corp., W. L., 460 W. 34 St., New York 1, N.Y.-G Measurements Corp., Boonton, N.J.-E,L Meters, Inc., 5353 N. Keystone Ave., Indianap-olis 20, Ind.-B Moran Electronic Components, 10506 Wheatley St. Kensington, Md.-A.B North American Instruments, 108, 201 Ave., Mt. Vernon, N.Y.-D.L Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.-B.F.I Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.-B Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.-G Railo City Products Co., Centre & Glendale Sts., Easton, Pa.-A.B.C Railway Communications, Inc., Raytown, Mo. B.K.L Rawson Electrical Instrument Co., 117 Pot-ter St., Cambridge 42, Mass.-F Roller Smith Corp., Instrument Div., 1825 W. Market St., Bethlehem, Pa.-B.I Scala Radio, 2814 19 St., San Francisco 10, Calif.-B Scala Radio, 2814 19 St., San Francisco 10, Calif.-B Scand Labs., 480 Morris Ave., Summit, N.J. -C Shepa

-U Simpson Electric Co., 5200 W. Kinzie St., Chicago 44. Ill.—A.B.C.I Sonotone Corp., Elmsford, N.Y.—A Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. —B

--B Spencer-Kennedy Labs., 186 Massachusetts Ave., Cambridge 39, Mass.-E.K Statistical Instrument Co., 330 Haven Ave., New York 33, N.Y.-E Sticht Co., Herman H., 27 Park Pl., New York 7, N.Y.-C Supreme, Inc., Greenwood, Miss.-F Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.-C.G

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Trio Laboratories, 3293 Seaford Ave., Wantagh, L.I., N.Y.-B,F,I Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio-B,C Vacolite Co., 3003 N. Henderson St., Dallas 6, Texas-A Varo Mfg. Co., 1801 Walnut St., Garland, Texas-C Wang Labe 37 Hurley St. Combridge 41

Varo Mfg. Co., 1801 Wallas Texas—C Wang Labs., 37 Hurley St., Cambridge 41, Mass.—C Mass.—C Your St., New York 14, Wang Labs., 37 Hurley St., Cambridge 41, Mass.-C
Waveforms. Inc., 333 6th Ave., New York 14, N.Y.-A.B.F
Westinghouse Electric Corp., Box 868, Pitts-burgh 30, Pa.-B.H
Westport Electric, 149 Lomita St., El Segundo, Calif.-C
Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-C,H

### 51 — METERS, ELECTRICAL MEASUREMENT

Meters, ammeterA
Meters, capacitanceB
Meters, conductance
Meters, d'arsonval
Meters, electrometerD
Meters, flux
Meters, frequencyF
Meters, galvanometerG
Meters, impedance
Meters, kilovolt
Meters, kilowatt
Meters, megohmK
Meters, microampere
Meters, microfaradM
Meters, micromicroampereN
Meters, milliampereO
Meters, millivolt AD
Meters, multimeter
Meters, noiseQ
Meters, ohm
Meters, output
Meters, phaseT
Meters, power factorU
Meters, QV
Meters, Snap aroundAA
Meters, tensionAE
Meters, vacuum tube voltW
Meters, voltX
Meters, watt
Meters, watt-hourZ
Voltmeters, digitalAF

Advance Electronics Co., 451 Highland Ave., Passaic. N.J.-F.T
Aeronautical Electronics, P.O. Box 6048, Raleich. N.C.-T
Allied Radio Coro.. 100 N. Western Ave., Chi-cago 80, Ill.-W
American Chronoscope Corp., 316 W. 1 St., Mount Vernon, N.Y.-P.W
American Platinum Works, 231 N. J. R.R. Ave., Newark 5, N.J.-E
Assembly Products Inc., Chesterland 21, Ohio -A,C,G,L,L,O,X.AD
Associated Research Inc., 3758 W. Belmont Ave., Chicago 18, Ill.-K
Authorized Mfg. Co., 914 Wyckoff Ave., Brook-lyn 27, N.Y.-P.W
Auto-Test Inc., 600 S. Michigan Ave., Chicago 5, Ill.-AAA
Ballantine, Labs., Inc., Boonton, N.J.-I,P.W

5. III.—A.A Ballantine Labs., Inc., Boonton, N.J.—I,P,W Barber-Colman Co., 1300 Rock St., Rockford,

Barher-Colman Co., 1300 Rock St., Rockford, III.—AD
Barher-Colman Co., 1300 Rock St., Rockford, III.—AD
Barker & Williamson, Inc., 237 Fairfield Ave., Upper Darby. Pa.—F.H.Q
Bassett, Inc., Rex, 1314 N. E. 17 Court, Ft. Lauderdale, Fla.—F
Beede Electrical Instrument Co., Penacook. N.H.—A,C,G,L,O,P,R,X,AD
Beta Electric Corp., 333 E. 103 St., New York 29, N.Y.—I
Biddle Co., James G., 1316 Arch St., Phila-delphia 7, Pa.—F,G,K,R
Boonton Radio Corp., Intervale Rd., Boonton, N.J.—B,V,AC
Borden Eng's. Co., 63 Clinton Ave., New Prov-idence. N.J.—G,L
Bristol Co., Waterbury 20, Conn.—A,C,D,G,I,J, L,O,AD
Bruno—New York Industries, 460 W. 34 St.,

Bristol Co., wateroury 20, Conn.—A,O.D.G.A.S., L.O.AD
Bruno—New York Industries, 460 W. 34 St., New York 1, N.Y.—J.P.R.T.U.W.X.Y.AD
Burlington Instrument Co.. 203 N. 3 St., Bur-lington, Iowa—A,I,L.O.X.AD
Burton-Rogers Div., Hoyt Electrical Instru-ment. 42 Carleton St., Cambridge 42, Mass.— A,C,G.L.O.X.AD
Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.—K
Cal-Tronics Corp., 11307 Hindry Ave., Los Angeles 45, Calif.—X
Cambridge Instrument Co., 3033 Grand Cen-tral Terminal, New York 17. N.Y.—E,G
Carol Electronics Corp., 315 W. Stephen St., Martinsburg, W. Va.—P

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Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.--W, AD,AF

W. Mt. Pleasant Ave., Livingston. N.J.-W, AD,AF
Chicago Electronic Labs., 1214 W. Madison St., Chicago 7, Ill.-X
Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, Ill.-A,C,L,M,N,O,P,R,S, W,X
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-H
Clippard Instrument Lab., 7390 Colerain Rd., Cincinnati 24, Ohio-W
Colortone Electronics, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.-F
Columbia Electric Mfg. Co., 4519 Hamilton Ave., Cleveland 14, Ohio-A,X
Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N.J.-K.W
Control Devices, Inc., 8299 E. Nine Mile Rd., Van Dyke, Mich.-X
Cutiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-L,N
Daven Co., 191 Central Ave., Newark 4, N.Y. -FS,W
DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-A,C,I,J,L,O,P,X, Y,AD
Delta Electronics, 259 Green St., Brooklyn 22, N.Y.-W

Y, AD Pelta Electronics, 259 Green St., Brooklyn 22, N.Y.-W Deltron Inc., 2905 N. Leithgow St., Philadel-phia 33, Pa.-T DeMornay-Bonardi Corp., 780 S. Arroyo Park-way, Pasadena 2, Calif.-F Dice Co., J.W., 1 Engle St., Englewood, N.J. -K.R Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-F Doelcam Corp., 1400 Soldiers Field Rd., Bos-ton 35, Mass.-G Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.-W Dyna-Labs. Inc., 1075 Stewart Ave., Garden

ton sb. Mass.--G
Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.--W
Dyna-Labs. Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.--E.Q
Electric Design & Mfg. Co., Jefferson St., Burlington, Iowa-A,C,L,O,X,AD
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.--G,LJ,K,L,R,W,X
Electro-Instruments, 3796 Rosecrans St., Red Bank, N.J.-J,S,W
Electro-Instruments, 3796 Rosecrans St., San Diego 10, Calif.--X, AF
Electro-Mechanical Instrument Co., 812 Chestnut St., Perkasie, Pa.-A,O,X,AD
Electronic Instruments Co., Lewis St. & Maple Ave., Eatontown, N.J.-O,W,AD
Electronic Measurements Corp., 280 Lafayett St., Nutley, N.J.-Q
Electronic Research Associates, 67 E. Broad St., Nutley, N.J.-Q
Electro-Tech Equipment Co., 308 Canal St., New York, N.Y.-A,B,C,E,F,G,I,J,K,L,M,O, P,R,S,U,W,X,Y,Z,A,AD
Electronic Labs., Inc., 333 W. 52 St., New York 19, N.Y.-F,Q,V,W
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.-S
Engineering Research & Devel. Co., Addison, III.-Q
Eventoric Labs., Inc., 140 Liberty St., New

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.-S
Engineering Research & Devel. Co., Addison, III.-Q
Epco Electronics, Inc., 140 Liberty St., New York 6, N.Y.-K,P
Esterline-Angus Co. Inc., P. O. Box 596, Indi-anapolis, Ind.-A,C,F,I,J,O,U,X,Y,AD
Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N.Y.-D,I,Z
Fluke Mfg. Co., John, 1111 W. Nickerson St., Seattle 99, Wash.-U,W,Y
Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-F,Q
Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-F,Q
Fread Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-K,V,W
Frequency Standards, P. O. Box 504, Asbury Park. N.J.-F
F.R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-F
Furst Electronics, 3322-A W. Lawrence Ave., Chicago 25, III.-I,V,W,X
Gar Electrical Instrument Corp., 92-15 172 St., Jamaica 33, N.Y.-A,C,L,O,R,X,AD
Gaskins Co., 1005 S. Aurora Way, Wheaton, III. -H,P,W
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-A,E,F,G,H,I,J,K, L,N,O,R,T,U,X,Y,Z,AD
General Hermetic Sealing Corp., 99 E. Haw-thorne Ave. Valley Stream, L.I., N.Y.--K
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-F,K,Q,S,W
Gerry & Co., M. E., 230 Bayard Rd., Upper Derby, Pa.-P
Gertach Products, 11846 Mississippi Ave., Los Angeles 25, Calif.-F,W
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brook-lyn 37, N.Y.-E
Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.-A,X
Gray Instrument Co., 64 W. Johnson St., Philadelphia 44, Pa.--R

Greibach Instruments Corp., 212 Durham Ave., Metuchen, N.J.—A,G,I,K,L,N,O,P,R,X, AD Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.—A,G,I,K,L,N,O,P,R,X,AD

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Gray Instrument Co., 64 Philadelphia 44, Pa.-R

64 W. Johnson St.,

- G. W. Associates, P. O. Box 2263, E. Segundo, Calif.-X,Y

- Calif.—X.Y Gyro Electronics Co., 325 Canal St., New York 13, N.Y.—F.I Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.—C,G HD Electric Co., 760 Osterman Ave., Deer-field, III.—A Heath Co., 305 Territorial, Benton Harbor, Mich. A,B,F,H,K,M,O,P,R,S,U,V,W,X,Y, AD
- AD
  Hewlett-Packard Co. 275 Page Mill Rd., Palo Alto, Calif.—F,W.X,AD
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio—A,F,I,L,O,P, Q,R,U,W,X,Y,AD
  Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.—C,G
  Hycon Mfg. Co., 2961 E. Colorado St., P.O. Box 155, Pasadena 8, Calif.—P,W
  Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, L.I., N.Y.—G, AD

- Arlington Ave., Wyandanch, L.I., N.Y.-G, AD
  Industrial Development Labs., 17 Pollock Ave., Jersey City 5, N.J.-B.M.R
  Industrial Instruments Inc., 89 Commerce Rd., Cedar Grove, N.J.-K
  Industrial Television, Inc., 369 Lexington Ave., Clifton. N.J.-P
  Industrial Test Equipment Co., 55 E. 11 St., New York 3, N.Y.-B,H,T,U,V
  Instrument Electronics Corp., 90 Main St., Port Washington, N.Y.-W
  Instrument Labs., 315 W. Walton Pl., Chicago. Ill.-A,L,O,P.X,Y.AD
  International Instruments, Inc., P. O. Box 2954. New Haven 15, Conn.-A,C,L,O,S,AD
  Jackson Electrical Instrument Co., 18 S. Patterson Blvd., Dayton 2, Ohio-W
  Jamac Products Co., 4605 N.E. 118 Ave., Portland 20, Ore.-Y
  J-B-T Instruments, 41 Chapel St., New Haven, Conn.-F G.

- Jand 20, Ore.—Y
  J-B-T Instruments, 441 Chapel St., New Haven, Conn.—F,G
  Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.—I.W
  Jersey City Technical Lab., 880 Bergen Ave., Jersey City 6, N.J.—R,X
  Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.—B,W,X,AD
  Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio—D,I,K,L.N,O,W,AD
  Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—F
  Kirby Products Corp., 20 E. Herman St., Philadelphia 44, Pa.—P,R,W,X
  Kotula Co., 400 Madison Ave., New York 17, N.Y.—G
  Landi-Air, Inc., 201 N. Wells St., Chicago 6, Ill. —D

- N.Y.--G
  Land-Air, Inc., 201 N. Wells St., Chicago 6, Ill. -D
  Landis & Gyr, 45 W. 45th St., New York 36, N.Y.-Y,Z
  Lavoie Labs., Inc., Morganville, N.J.--F,H
  Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.--B,C,G,N,AC,AD
  Linear Equipment Labs., 380 Oak St., Copiague, N.J.--Q
  Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.--B
  Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.--F
  Lyman Electronic Corp., 12 Cass St., Spring-field, Mass.--R
  Lyman Electronic Corp., 12 Cass St., Spring-field, Mass.--R
  Lyman Electronic Lit., 23 Beaver St., New York 4, N.Y.--D, F,H,S, V,W
  Marion Instruments Ltd., 23 Beaver St., New York 4, N.Y.--D,F,H,S,V,W
  Marion Electrical Instrument Co., 400 Canal St., Manchester, N.H.--A,C,E,G,I,L,O,R,S,X, AD
  Martindale Electric Co., Box 617, Edgewater Br., Cleveland 7, Ohio--A,K,R,X
  Measurements Corp., Boonton, N.J.--Q,W
  Metrotype Corp., 6100 Archer Rd., Summit, Ill.--A,F,I,JX,Z
  Millivac Instrument Corp., 444 2 St., Schenec-tady, N.Y.-N,P,W,X,AD
  Museley Co., F. I., 509 N. Fair Oaks Ave., Prsadena 3, Calif.--X
  National Capacitor Co., 585 Washington St., Quincy 69, Mass.--B
  Non-Linear Systems, Box "S", Del Mar. Calif.-X
  Ohmart Corp., 2236 Bogen St., Cincinnati.22, Ohio--N

- Osterland Co., Edmund, Mountain Lakes, N.J.

- AD Phoenix Precision Instrument Co., 3803 5 St., Philadelphia 40. Pa.—C.G.N Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—A,B,C,F,G,J,K,L,M,O, P.R.T,U,X,Y,AD
- Polytechnic Research & Devel. Co., 202 Tillary St., Brooklyn 1, N.Y.-Q
- Precise Development Corp. 2 Neil Court, Oceanside, N.Y.--N,O,P,W

- Precise Measurements Co., 942 Kings High-way, Brooklyn 23, N.Y.-I Precision Apparatus Co., 70-31 84 St., Glen-dale 27, L.I., N.Y.-A,C,L,O,P,R,W,X,AD Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-F Precision Electronics, Inc., 9101 King Ave., Franklin Park, 111.-W Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N.Y.-A,P,X Radio City Products Co., Centre & Glendale Sts., Easton, Pa.-B,K,L,N,O,P,R,S,W,X,AD Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.-A,I,K,L,N,O,P, R.W
- R,W Radio Frequency Labs., Powerville Rd., Boon-ton 20. N.J.—F,H Radio Kits, Inc., 120 Cedar St., New York 6. N.Y.—W Rawson Electrical Instrument Co., 117 Potter St., Cambridge 42, Mass.—C,D,E,I,L,O,P,S,X, Y,AD
- Research Electronics Labs., Roslyn, Pa.--N,W,
- Roller Smith Corp., Instrument Div., 1825 W. Market St., Bethlehem, Pa.—A,C,F,I,J, L,O,U,X,Y,Z,AD

- Market SL, Bethlehem, Pa.-A,C,F,I,J, L,O,U,X,Y,Z,AD
  Rowe Industries, 1702 Wayne St., Toledo 9. Ohio-I
  Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.-C,E,G
  Sangamo Electric Co., 9th & Converse, Spring-field, 111.-J,Y,Z
  Scientific Specialties Corp., Snow & Union Sts., Boston 35. Mass.-A,C,H,N,R,W
  Seay Instrument Co., 6521 N. Lamar Blvd., Austin 5, Texas-W
  Sensitive Research Instrument Corp., 9 Elm Ave., Mount Vernon, N.Y.-A,C,E,F,G,H,I, J,K,L,N,O,P,R,X,Y,AC,AD
  Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.-G,I,R
  Shasta Div., Beckman Instruments, Inc., 1432 Nevin Ave., Klehmond, Calif.-F,H,K,R,W,X
  Shepard Labs., 480 Morris Ave., Summit, N.J. -F
  Sharite Meters. 61 Hamilton St., New Haven 8.

- Nevin Ave., Richmond, Calif.—F,H,K,R,W,X
  Shepard Labs.. 480 Morris Ave., Summit, N.J. —F
  Shurite Meters. 61 Hamilton St., New Haven 8, Conn.—A,O,R,X
  Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—H.W,X
  Signal Equip. Co., 2706 3 Ave., Seattle 1, Wash.—W
  Wash.—W
  Simpson Electric Co., 5200 W. Kinzie St., Chicago 44. Ill.—A,B,C,D,F,G,H,I,J,K,L,M,N, O,P,Q,R,S,T,V,W,X,Y,Z,AC,AD
  Smuckler & Co., A.F., 202 Tillary St., Brook-Iyn 1, N.Y.—W
  Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston, Texas—G,K,R,W,AD
  Special Instruments Lab., Inc., 312 W. Vine St., Knoxville, Tenn.—D
  Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.—O,P,R,W,X,AD
  Spellman Television Co., 3029 Webster Ave., Bronx 67, N.Y.—I
  Sperry Gyroscope Co., Great Neck. N.Y.—H
  Statistical Instrument Co., 330 Haven Ave., New York 33, N.Y.—Q
  Sterling Mfg. Co., 7201 Wentworth Ave., Cleve-land 2, Ohio—A,O,X
  Sticht Co., Herman H., 27 Park Place New York 7, N.Y.—P, KAR
  Superior Instrument Co. 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instruments Co. 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instruments Co. 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instruments Co. 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instrument Co., 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instruments Co. 2435 White Plains Rd., New York 67, N.Y.—P
  Superior Instrument Corp., 531 Main St., Actor More TW

- Taco West Corp., 525 N. Noble St., Chicago 22, III.—C.G
  Takk Corp., 525 N. Noble St., Chicago 22, III.—C.G
  Takk Corp., P.O. Box 346. Newark, Ohio—L
  Technology Instrument Corp., 531 Main St., Acton, Mass.—T, W
  Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—F,Q,T
  Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.—K,O,P,R,X
  Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—F
  Telescreen Corp., 36 Grove St., New Canaan, Conn.—B
  Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9. Texas—O
  Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.—A,B,D,F,G,R,T,U
  Transitron, Inc., 154 Spring St., New York 12, N.Y.—K
  Trio Laboratories. 3293 Seaford Ave., Wantagh, L.I., N.Y.—S,W,AD
  Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio—A,C,F,G,I,L,O,P,R,W,X, Y,AD
  United Mfg. Co., Div. W. L. Maxson Corp., 41 Haig St., Hamden 14, Conn.—T
  United States Gauge Div. American Machine & Metals, Inc., Clymer Ave., Sellersville, Pa. —A
  Universal Scientific Co., 1102 Shelby St., Vincennes, Ind.—A,C,O.P
- -A Universal Scientific Co., 1102 Shelby St., Vincennes, Ind.-A,C,O.P Valtronics, Inc., 242 Valley St., Dayton 4, Ohio-P
- Varo Mfg. Co., 1801 Walnut St., Garland, Texas-F Texas—F Videon Electronic Corp., 222 E. Ohio St., Indi-anapolis 4. Ind.—R

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TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—F ang Labs., 37 Hurley St., Cambridge 41, Wang

- Calif.-F
  Wang Labs., 37 Hurley St., Cambridge 41, Mass.-F
  Waveforms, Inc., 333 6 Ave., New York, N.Y. -S,W,AD
  Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, 111.-A,C,G,L,O,R,U,X,Y,AD
  Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.-F
  Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-W
  Westinghouse Electric Corp., Box 868, Pitts-burg 30, Pa.-A,C,F,I,J,K,L,O,R,T,U,X,Y,Z, AD
  West Instrument Corp., 525 N. Noble St., Chicago 22, 111.-O,AD
  Weston Electrical Instrument Corp., 614 Fre-linghuysen Ave., Newark 5, N.J.-A,C,F,G, K,L,N,O,P,R,S,T,U,W,Y
  Westport Electric, 149 Lomita St., El Segundo, Calif.-F
  Westonics Inc., 3605 McCart, Ft. Worth, Texas -D,F,K,N,AE
  Winslow Co., 9 Liberty St., Newark 5, N.J.-A,C,F,G,H,K,L,O,R,X
  Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.-W,AD

Meters, ammeters, RF . . . . . . . . . . . . A Meters, attenuation .....B Meters, decibel .....C Meters, distortion .....D Meters, field strength .....E Meters, FM deviation ......F Meters, frequency .....G Meters, grid dip .....H

Meters, microwave .....I Meters, noise .....J Meters, output .....K Meters, phase .....L Meters, wave .....O

Advance Electronics Co., P. O. Box 394, Passaic, N.J.-L Airborne Instruments Laboratory, 160 Old Country Rd., Mineola, L.I., N.Y.-J.M.N Aircraft Armaments, Inc., P.O. Box 126, Cockeysville, Md.-I.M Amerac Inc., 116 Topsfield Rd., Wenham, Mass. -I.M.N

I.M.N
 Andrew Corp., 363 E. 75 St., Chicago, Ill.—A
 Ansley Electronics, Inc., 85 Tremont St., Meriden, Conn.—N
 Approved Electronic Inst. Corp., 928 Broadway, New York 10, N.Y.—E
 A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.—F
 Ark Eng'g. Co., 431 W. Tabor Rd., Phila-delphia 20, Pa.—J
 Assembly Products Inc., Chesterland 21, Ohio —A

Assembly Products Inc., Chesterland 21, Ohio —A Barker & Williamson, Inc., 237 Fairfield Ave., Upper Darby, Pa.—D.G.H.J.M Bassett Inc., Rex, 1314 NE 17th Court, Ft. Lauderdale, Fla.—G Biddle Co., Jas. G., 1316 Arch St., Philadelphia 7, Pa.—G Bird Electronic Co., 1800 E. 38 St., Cleveland 14, Ohio—M Bruno—New York Industries, 460 W. 34 St., New York 1, N.Y.—B.K.M Budd-Stanley Co., 43-01 22nd St., Long Is-land City 1, N.Y.—I Budelman Radio Corp., 375 Fairfield Ave., Stamford, Conn.—E,F.G.M Burlington Instrument Co., 203 N. 3 St., Bur-lington, N.J.—A Byron Jackson Co., 492 E. Union St., Pasa-dena, Calif.—F,M.N Century Electronics, Div. Century Metalcraft Corp., 14806 Oxnard St., Van Nuys, Calif.— O

Corp., 18306 Oxnard St., Van Nuys, Calif.— O
Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.—I,M
Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, III.—A
Colortone Electronics, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.—G
Continental Communications, 452 W. Chicago Ave., Chicago 10, III.—G
Control Electronics Co., 1925 New York Ave., Huntington Station, N.Y.—M
Corbin Corp., 5319 56 Pl., Riverdale, Md.—E, I.J.K.L.M.N
Cubic Corp., 2841 W. Canon St., San Diego 6, Calif.—L,M.N
Daven Co., 191 Central Ave., Newark 4, N.J. —B,C.K
Dayton Aviation Radio & Equip. Co., R.R. #3

Dayton Aviation Radio & Equip. Co., R.R. #3, Troy, Ohio-E DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-A

Deltron Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.-L

DeMornay-Bonardi, Inc., 780 S. Arroyo Pkway, Pasadena, Calif.—I,M,N,O

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Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.-D Douglas Microwave Co., 11 Beechwood Av., New Rochelle, N.Y.-I.N.O Dynamic Electronics, N.Y. Inc., 73-89 Wood-haven Blvd. Glendale 1, L.I., N.Y.-H Eldico of N.Y., Inc., 70-72 E. Second St., Mineola, L.I., N.Y.-H Electro Impulse Lab., 62 White St., Red Bank, N.J.-G.I.K.M.N.O Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, 111.-B.I.M Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.-A

Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.—A Equip. Co., 308 Canal St., New York, N.Y.—A Elk Electronic Labs., Inc., 333 W. 52 St., New York 19, N.Y.—B.E.F.G.J.M.N.O Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—K Empire Devices, Inc., 38-25 Bell Blvd., Bay-side 61, N.Y.—E.J Engineering Research & Devel. Co., Addison, Ill.—J

Empire Devices, Inc., 38-25 Bell Blvd., Bay-side 61, N.Y.--E,J
Engineering Research & Devel. Co., Addison, Ill.-J
Ferris Instrument Co., 110 Cornelia St., Boonton, N.J.--E,J
F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.--G,I.K.M.N
Frequency Standards, P. O. Box 504, Asbury Park, N.J.--G & Standards, P. O. Box 504, Asbury Park, N.J.--G
General Communication Co., 681 Beacon St., Boston 15, Mass.-I.M
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-D.F.G
Gertsch Products, 11846 Mississippi Ave., Los Angeles 25, Calif.--G
G.W. Associates, P. O. Box 2263, El Segundo, Calif.--I
Heath Co., 305 Territorial Rd., Benton Harbor, Mich.--H
Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.--G, M.N.O
Hickok Electrical Instrument, 10514 Dupont Ave., Cleveland 8, Ohio--A,C,D,E.J,K
Instruments, Inc., P.O. Box 2954, New Haven 15, Conn.--A
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.--G
Jerrold Electronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa.-E
Jones Electronics Corp., 26 & Dickinson Sts., Philadelphia 46, Pa.-E
Jones Electronics Corp., 26 & Dickinson Sts., Philadelphia, 46, Pa.-E
Jones Electronics Corp., 26 & Dickinson Sts., Van Nuys, Calif.--IM,O
Kings Electronics Corp., 185 N. Main St., Bristol, Conn.--M,N
Kahn & Co., 541 Windsor St., Hartford 1, Conn.--E
Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.--IM,O
Kings Electronics Corp., 794 E. 140 St., New York 54, N.Y.--G
Losa, 380 Oak St., Copiague, N.Y.--O
Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.--B, E, F, GL,MO
Warconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.-B, E, F, GL,MO

-H -H Marconi Instruments Ltd., 23 Beaver St., New York 4. N.Y.-B.E.F.G.I.M.O Maxson Corp., W. L., 460 W. 34 St., New York 1. N.Y.-L Measurements Corp., Boonton, N.J.-E.H.J Mico Instrument Co., 80 Trowbridge St., Cam-bridge 38, Mass.-O Microwave Associates, 22 Cummington St., Boston 15, Mass.-J.M.N.O Midwest Eng's. Devel. Co., 3648 State Line, Kansas City 3, Kansas-G.I.M.N.O Mil Instrument Corp., 92-15 72 St., Jamaica 33. N.Y.-C Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.-G.H.N Morrow Radio Mfg. Co., 2794 Market St.,

Morrow Radio Mfg. Co., 2794 Market St., Salem. Ore.—E

Narda Corp., 66 Main St., Mineola, L.I., N.Y.

NEMS-Clarke. Inc., 919 Jesup-Blair Dr., Silver Spring, Md.—E.L New London Instrument Co.. Inc., 82 Union St.. New London, Conn.—F

Nichols Products Co.. 325 W. Main St., Moorestown, N.J.—N Ounega Labs.. Box 466, Billerica, Mass.—B.C. G.K.M.P.S.T.W.X.AA

Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.--G

Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.—A.J.K

Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.--A Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.-E.I.M

Polytechnic Res. & Development, 202 Tillary St. Brooklyn 1, N.Y.—B.J.M.N.O Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.—G

Premier Instrument Corp., 52 W. Houston St., New York 12, N.Y.-O

Press Wireless Laboratories, 25 Prospect Pl., W. Newton 65, Mass.-H

Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13. Calif.—M Radiation, Inc., Box "Q", Melbourne, Fla.—M

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Mannahana ELECTRONIC INDUSTRIES DIRECTORY

Radio City Products Co., Centre & Glendale Sta., Easton, Pa.-F Radio Kits, Inc., 120 Codar St., New York 6, N.Y.-E Radion Corp., 1130 W. Wisconsin Ave., Chicago 14, Ill.-E Ransom Research, P.O. Box 382, San Pedro, Colif. -C

14, 111.—E
Ransom Research, P.O. Box 382, San Pedro, Calif.—G
Rawson Electrical Instrument Co., 117 Potter St., Cambridge 42, Mass.—K
Sangamo Electric Co., 9th & Converse, Spring-field, 111.—M
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—J
Seismograph Service Corp., 701 Kennedy
Bldg., Tulsa, Okla.—N
Sensitive Research Instrument Corp., 9 ELm Ave., Mt. Vernon, N.Y.—A.M
Sierra Electronic Corp. 1050 Brittan Ave., San Carlos, Calif.—C.M,N
Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, 111.—A.C.D.E.F.G.J.M
Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 33, N.Y. —C.K
Sperry Gyroscope Co., Great Neck, N.Y.—G.I.

Sperry G M.N.O Gyroscope Co., Great Neck, N.Y.-G.I,

Sperry Gyroscope Co., Great Neck, N.Y.-G.I. M.N.O.
Statistical Instrument Co., 330 Haven Ave., New York 33, N.Y.-J
Sticht Co., Herman H., 27 Park Pl., New York 7, N.Y.-G
Stoddart Aircraft Radio Co., 6644 Santa Mon-ica Blvd., Hollywood 88. Calif.-E
Supreme, Inc., Greenwood Miss.-K
Technology Instrument Corp., 531 Main St., Acton, Mass.-L.
Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-F.J.L
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-E.G.H.I.M.N.O
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-G.L.M
Thompson Products Inc., 2196 Clarkwood Rd., Cleveland 3, Ohio-O
Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio-A,C,G
Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-G.I.N
Waveforms, Inc., 333 6 Ave., New York 31, N.Y.-C
Waveline, Inc., Caldwell, N.J.-G.I.N.O

Waveforms, Inc., 333 6 Ave., New York 31, N.Y.-C Waveline, Inc., Caldwell, N.J.-G.I.N.O Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.-A.C Westinghouse Electric Corp., Box 868, Pitts-burgh 30, Pa.-A Weston Electrical Instrument Corp., 614 Fre-linghuysen Ave., Newark 5, N.J.-A,C,G.K.L Weston Labs., Inc., Box 407, Littleton, Mass. -G,I.M.N.O Weymouth Instrument Co., 1440 Commercial

-G.1.M.N.O Weymouth Instrument Co., 1440 Commercial St., E. Weymouth 89, Mass.—I Winslow Co., 9 Liberty St., Newark 5, N.J.—G Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—E,I,M,N

#### 53—METERS, SPECIAL PURPOSE

Machme	tersAM
Meters,	accelerationA
Meters,	cable testingB
Meters,	counting rateC
Meters,	deflectionD
Meters,	densityE
Meters,	deviationAN
Meters,	dosimeterAC
Meters,	dynamometerF
Meters,	elapsed timeG
Meters,	electronic micrometerN
Meters,	events-per-unit timeH
Meters,	exposure for filmI
Meters,	flame photometerAK
Meters,	flowJ
Meters,	flutterK
Meters,	foot candleL
Meters,	geniometerAD
Meters,	infraredAE
Meters,	lightM
Meters,	moisture
Meters,	nuclear radiationAF
Meters,	nullP
Meters,	pHQ
Meters,	
Meters,	pyrometerS
Meters,	rateAG
	ratioT

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Meters, spectral
Meters, tachometerV
Meters, tensionAL
Meters, thermocoupleW
Meters, thermometerX
Meters, timeAH
Meters, ultra violet
Meters, vibrating reedAl
Meters, vibrationY
Meters, viscosityZ
Meters, volumeAJ
Meters, x-ray intensityAA
Meter shuntsAB

- Barber-Uolman Co., 1300 Rock St., Rockford, Ill.--S,W,X
  Beckman Div., Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.--Q,U, AE,AK,AO
  Beta Electric Corp., 333 E. 103 St., New York 29, N.Y.--N
  Barton Electronics, Inc., 955 Asylum Ave., Hartford 5. Conn.--R
  Biddle Co., Jas. G., 1816 Arch St., Philadelphia 7, Pa.--B,V
  Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.--I,AA,AE
  Bischof Die & Engraving Co., 1405 16 St., Racine, Wisc.--F
  Bolsey Corp. of America, 118 E. 25 St., New York 10, N.Y.-I,R
  Bone Eng'g. Corp., 701 W. Broadway, Glen-dale 4, Calif.-J
  Brinkmann Instruments Inc., 378 Great Neck Rd., Great Neck, L.I., N.Y.-I
  Bristol Co., Waterbury 20, Conn.-C.E,G.H,J, M.N,O,P,Q,S,T,U,V,W,X,Z,AA,AG,AH.AI,AJ, AN
  Burke & James, 321 S. Wabash Ave., Chicago

AN Burke & James, 321 S. Wabash Ave., Chicago 4, III.--I,L.M Burlington Instrument Co., 203 N. 3 St., Bur-lington, Iowa-G.W Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.--AL Calidyne Co., 120 Cross St., Winchester, Mass.--Y

Calidyne Co., 120 Cross St., Winchester, Mass.-Y
Cal-Tronics Corp., 11307 Hindry Ave., Los Angeles 45, Calif.-T
Cambridge Instrument Co., 3033 Grand Cen-tral Terminal, New York 17, N.Y.-O,Q.S. AC,AF
Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.-AF
Chemalloy-Electronics Corp., Gillespie Air-port, Santee, Calif.-J
Chicago Industrial Instrument Co., 536 W. Elm St., Chicago 10, III.-S.W.X
Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati 14, Ohio-AH
Clary Corp., 408 Juniper St., San Gabriel, Calif.-C.H
Clegg Laboratories, 142 S. Livingston Ave., Livingston, N.J.-B.P
Computer Instruments Corp., 1964 Utica Ave., Brooklyn 34, N.Y.-N
Consolidated Eng'g. Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.-U,Y.AM
Corbin Corp., 5419 56 Pl., Riverdale, Md.-O.X
Cramer Co., R. W., Centerbrook, Conn.-G
Curtiss-Wright Corp., 216 S. Main St., Dayton 2, Ohio-J.Y.ALAN

Daytronic Corp., 216 S. Main St., Dayton 2, Ohio-J,Y,AL,AN

- Decade Instrument Co., Box 153, Caldwell, N.J.-C.H
- N.J.-C,H DeJur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-G Delaware Optical Labs., 36 Williams St., Lansdowne, Pa.-L,M,R,U Delmhorst Instrument, 607 Cedar St., Boonton, N.I.-O

- Delmhorst Instrument, 607 Cedar St., Boonton, N.J.-O Deltron Inc., 2905 N. Leithgow St., Philadel-phia 33, Pa.-P Demco Products. P.O. Box 5042, Philadelphia 11, Pa.-G.H.AG.AH DeMent Laboratories, New Fliedner Bldg., Portland 5, Ore.-AO Detectolab, Inc., 6544 Sheridan Rd., Chicago 26, III.-C.E.H.AF.AG Dice Co., J. W., 1 Engle St., Englewood, N.J.-N

- Dice Co., J. W., 1 Engle St., Englewood, N.J.--N
  Digital Instrument Co., 212 Almeria Ave., Coral Gables, Fla.--C,G,H,V
  Dillon & Co., W. C., 14620 Keswick St., Van Nuys, Calif.-F.AL
  Dimco-Gray Co., 207 E. 6 St., Dayton 2, Ohio --G,AH
  Doelcam Corpi, 1400 Soldiers Field Rd., Bos-ton 35. Mass.-P,W,AG
  Donner Scientific Co., 2829 7 St., Berkeley 10, Calif.-A
  Douglas Instrument Labs., 176 Norfolk Ave.. Boston 19, Mass.--C
  Dubrow Development Co., 235 Penn St., Bur-lington. N.J.--C
  Dubrow Development Co., 785 Hertel Ave., Buf-falo 7, N.Y.-F
  Dwyer Mfg. Co., F.W., 317 S. Western Ave., Chicago 12, III.-J
  Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, L.I., N.Y.-Y
  Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N.J.-AM
  Edcliff Instruments, 333 N. Foothill Blvd., Pasadena 8, Calif.-A, J.P.T.V.AM
  Edison, Inc., Thomas A., Instrument Div., 93 Lakeside Ave., W. Orange, N.J.-T
  Electric Design & Mfg. Co., Burlington, Iowa --P
  Electrical Service Co., 1271 Mission St., San

- Electric Design & Mfg. Co., Burlington, Iowa —P
  Electrical Service Co., 1271 Mission St., San Francisco 3, Calif.—R
  Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.—C.D.G.S.W.X.Z
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.—F.V.AL
  Electro-Mechanical Instrument Co., 812 Chest-nut St., Perkasie, Pa.—P
  Electronic Brazing Co., 140 Glenridge Ave., Montclair, N.J.—B
  Electronic Control Systems. 2138 Westwood Blvd., Los Angeles 25, Calif.—N
  Electronic Corp. of America. 77 Broadway, Cambridge 42, Mass.—E.L.R.S.AK
  Electron-Radar Products. 1041 N. Pulaski Rd., Chicago 51, 111.—R.V.W
  Electron Sales Co., 287 Broadway, New York 7, N.Y.—I,M.R.AO
  Electro-Tech Equip. Co., 308 Canal St., New York N.Y.—BC LM OR SUW Y Y AP

- AR.A1 Elk Electronic Labs., 333 W. 52 St., New York 19, N.Y.—AN El-Tronics, Inc., 5 & Noble Sts., Philadel-phia 23, Pa.—H.AF Engineering Research & Devel. Co., Addison, III.—V.Y

- Epsco. Inc., 588 Commonwealth Ave., Boston 15. Mass. V Erwood. Inc., 1770 W. Berteau Ave., Chicago 13. Ill. Y

- 15. Mass.--V
  Erwood. Inc., 1770 W. Berteau Ave., Chicago
  13. III.--Y
  Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N.J.--R
  Esterline-Angus Co., Inc., P. O. Box 596, In-dianapolis, Ind.-H,V,AB
  Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.--R.W
  Federal Instrument Corp., 12-10 Broadway, Long Island City 6, N.Y.-I,R
  Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N.Y.-Z
  Fischer & Porter Co., 19 Warminster Rd., Hatboro. Pa.--E,J.T.Z
  Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.-Z
  Franklin Electronics. 415 W. Pike St., Phila-delphia 40, Pa.--N.Y.Y.AF
  Freed Transformer Co., Inc., 1718 Weirfield St. Brooklyn 27, NY.--P
  Furst Electronics, 3322-A W. Lawrence Ave., Chicago 25, III.--K
  Gardner Lab. Inc., Henry A., 4723 Elm St., Bethesda. Md.--R.Z
  General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.--AH
  General Electric Co., Apparatus Div., 1 River Rd., Schenetady 5, N.Y.--F,G,I,L.M,S.V.W, X,Y.Z,AB,AF,AH,AI
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-L,M.P.Y
  General Radio Co., 274 Stanley Ave., Dayton 4, Ohio--V
  Guldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.--AF

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-G,I Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-A,J,P,T,V,AG,AM Gulton Mfg. Corp., 212 Durham Ave., Metu-chen, N.J.-A,Y Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N.Y.-O Hall Inc., F. Summer, Amityville, N.Y.-B Haydon Mfg. Co., 245 East Elm St., Torring-ton, Conn.-G,AH Hays Corp., E. 8th St., Michigan City, Ind. -J

- Haydon Mfg. Co., 245 East Eim St., Iorrington, Conn.-G,AH
  Hays Corp., E. 8th St., Michigan City, Ind. J.
  Has Instrument Co., American & Bristol Sts., Philadelphia 40, Pa.-X
  Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-T
  Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio-AB
  Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-A.H.W.Y.AC, AI,AL
  Huppert Co., K. H., 6830 S. Cottage Grove Ave., Chicago 37, III.-S
  Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.-T.AE,AF
  Idea, Inc., Regency Div., 7900 Pendleton Pike, Indianapolis 26, Ind.-V
  Illinois Testing Labs., 420 N. La Salle St., Chicago 10, III.-WX
  I-L-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-G,H,V
  Impact-O-Graph Corp., 1900 Euclid Bldg., Cleveland 15, Ohio-A,Y
  Impact-O-Graph Corp., 1900 Euclid Bldg., Cleveland 15, Ohio-A,Y
  Impact-O-Graph Corp., 131 Ogden St., Newark 4, N.J.-AH
  Industrial Timer Corp., 131 Ogden St., Newark 4, N.J.-AH
  Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.-R
  Instrument Devel. Corp., 3018 E. Foothill Bldv., Calif.-AB, J.-C
  Inti. Research & Devel. Corp., 797 Thomas Lane, Columbus 14, Ohio-Y
  In Instruments. 441 Chapel St., New Haiven. Conn.-G, P.S., AI
  Jordan Electronics, 3025 Mission Rd., Alhambra, Calif.-AI
  Sata Calif.-AI
  Kahn & Co., 541 Windsor St., Hartford 1, Conn.-B,N,O
  Kentor Corp., 9 E. 40 St., New York 16,

- A Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, N.Y.--V Kybernetes Corp., 9 E. 40 St., New York 16, N.Y.-N.Y L.A.B. Corp., P.O. Box 278, Skaneateles, N.Y.

- L.A.B. Corp., P.O. Box 278, Skaneateles. N.Y. —F
  Landsverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.—AA,AF
  Larson Nuclear Research. 520 Fifth Ave., New York 36, N.Y.—R.AF,AG
  Leeds & Northrup Co.. 4970 Stenton Ave., Philadelphia 44, Pa.—W
  Link Aviation. Inc., Binghamton, N.Y.—T
  Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.—E
  Manning, Maxwell & Moore, 250 E. Main St., Stratford, Conn.—X
  Manufacturers Eng's. & Equin. Corp., York & Mill Rds., Hatboro, Pa.—C.H
  Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.—O, Q,AI,AN
  Marino Electrical Instrument Co., 400 Canal St. Manchester, N.H.—G,I,L,M,P,W,AB,AJ, AN
- AN Martindale Electric Co., Box 617, Edgewater Br.. Cleveland 7, Ohio--V Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.--AH Maxson Corp., W.L., 460 W. 34th St., New York 1, N.Y.-J Mav Eng'g. Co., 6055 Lankershim Blvd., No. Hollywood, Calif.--C MB Mfg. Co., 1060 State St., New Haven 11, Conn.-Y

- MB Mfg. Co., 1060 State St., New Haven 11, Conn.-Y McNeill Eng'g. Co., 4057 W. Van Buren, Chi-cago 24, III.-R Merz Eng'g., Inc., 200 S. Harding St., Indian-apolis 7, Ind.-N Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-S Meters, Inc., 5353 N. Keystone Ave., Indian-apolis 20, Ind.-S,W Metron Instrument Co., 432 Lincoln St., Den-ver 3, Colo.-V Metrotype Corp., 6100 Archer Rd., Summit, III.-J,R MinAtron Corp., Belle Mead 9, N.J.-A Minneapolis-Honeywell Regulator Co., Min-neapolis 8, Minn.-W,X Moeller Instrument Co., 132 St., & 89 Ave., Richmond Hill 18, N.Y.-S,W,X Moisture Register Co., 1510 W. Chestnut St.,

- Moisture Register Co., 1510 W. Chestnut St., Alhambra, Calif.—O St.,
- National Radiac. Inc., 10 Crawford Newark 2, N.J.—AA
- Non-Linear Systems, Del Mar Airport, Del Mar, Calif.-T

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Norden-Ketay Corp., Wiley St., Milford, Conn. —A.E.J.T.AM Norman Labs., Ernst, Williams Bay, Wisc.

- -AH
- Altiman Lauss, Ernst, Williams Bay, Wisc. —AH
  North American Instruments, Inc., 2420 Lake Ave., Altadena, Calif.—A
  North American Philips Co., 750 S. Fulton Ave., Mount Vernon, N.Y.—H,AC,AK
  NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.—C,AC,AF,AG
  Nuclear Instrument & Chemical Corp., 228 W. Erie St., Chicago 10, Ill.—C,AF,AG
  Nuclear Research Corp., 2nd Street Pike, Southampton, Pa.—C,E,AF
  Nucleonic Co. of America, 497 Union St., Brooklyn 31, N.Y.—AA
  Ohmart Corp., 2236 Bogen St., Cincinnati 22, Ohio—E,AA,AF,AI
  OMCO, Box 3196, N. Las Vegas, Nev.—R,AF, AO

AG Pacific Mercury TV Mfg. 5955 Van Nuys Blvd., Van Nuys, Calif.—B Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.—A Pantek Co., Box 212, El Segundo, Calif.—H Penna Testing Lab., Doylestown, Pa.—B,J,P, AN

Pantek Co., Box 212, El Segundo, Calif.—H
Penna Testing Lab., Doylestown, Pa.—B,J,P, AN
Peschel Electronics. Inc., 13 Garden St., New Rochelle, N.Y.—B
Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.—N,P
Phaostron Co., 151 Pasadena Ave., S. Pasadena, Calif.—P,W,AB
Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.—X
Phoenix Precision Instrument Co., 3803 N. 5
St., Philadelphia 40, Pa.—M,R
Photo Research Corn., 127 W. Alameda Ave., Burbank. Calif.—E.M
Photo Research Corn., 127 W. Alameda Ave., Burbank. Calif.—E.M
Photovolt Corp., 95 Madison Ave., New York 16, N.Y.—E.I.L,Q.R
Physical Research Labs., 1909 Park Ave., New York 35. N.Y.—O
Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—O,P,S,W
Potter Aeronautical Co., Box 532, Route #22, Union, N.J.—J,V
Potter Instrument Co., 115 Cutter Mill Rd., Great Neck. N.Y.—C,G.H
Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N.Y.—B
Precision Thermometer & Inst. Co., 1434 Brandywine St., Philadelphia 30, Pa.—E.X
Process & Instruments, 15 Stone Ave., Brooklyn 33, N.Y.—U,AO
Pruyn-Moore. Inc., 1338 Cota Ave., Long Beach 13, Calif.—J,R.W.X
Pyrometer Instrument, Bergenfield, N.J.—S
Radiation Counter Labs., Inc., 5122 W. Grove St., Skokie, IL.—C.A.CAFAG

Pyrometer Instrument, Bergenfield, N.J.-S
Radar Engineers, 4528 5th NE, Seattle 5, Wash.-B
Radiation Counter Labs. Inc., 5122 W. Grove St.. Skokie, Ill.-C.AC,AF,AG
Radiation, Inc., Box "Q", Melbourne, Fla.-B
Radiation, Inc., Rox "Q", Melbourne, Fla.-B
Radiation Instrument Devel. Lab., 2337 W.
67th St., Chicago 37, Ill.-H
Radio Kits. Inc., 120 Cedar St., New York
6, N.Y.-N,AB
Ransom Research, P.O. Box 382, San Pedro, Calif.-C.G.H
Ratisan Electronics. Inc., 3614 Maple Ave., Los Angeles II, Calif.-N.R,AO
Rawson Electrical Instrument Co., 117 Potter St. Cambridge 42, Mass.-W
R-C Scientific Instrument Co., 307 Culver Rivds. Playa Del Rey, Calif.-AA
Reflectone Corp.. Cor. Post Road & Myano Lane, Stamford, Conn.-V
Revere Corp. of America, 845 N. Colony Rd., Wallingford, Conn.-W
Richards Co., Arklay S., 37 Winchester St., Newton Highlands 61, Mass.-S.W
Rockwell Eng<sup>8</sup>, Co., 4063 N. New Jersey St., Indianapolis 5, Ind.-A,E,I,L,R,Y
Roller Smith Corp., Instrument Div., 1825 W. Market St., Bethlehem, Pa.-G.AB
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-B,P
Sangamo Electric Co., 9th & Converse, Spring-field, Ill.-C,H,V

Ohio-B,P Sangamo Electric Co., 9th & Converse, Spring-field, III.--C,H,V Schaevitz Eng'r., Crescent Blvd. & Drexel Ave., Camden 1. N.J.--A Schwien Eng'g. Co., 16217 Lindberg St., Van Nuys, Calif.--AG Scott. Inc., Hermon Hosmer. 385 Putnam Ave., Cambridge 39, Mass.--P.Y Sensitive Research Instrument Corp., 9 Elm Ave., Mount Vernon, N.Y.--B,P.S.T,W,AB Shepard Labs., 480 Morris Ave., Summit, N.J. --I.V

Shepard Labs., 480 Morris Ave., Summit, N.J. —I.V
Simpson Electric Co., 5200 W. Kinzie St., Chi-cago 44, III.—F,X.W
S. O. S. Cinema Supply Corn., 602 W. 52nd St., New York 19, N.Y.—K
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston 19, Texas—J
Specialties, Inc., Skunks Misery Rd., Syosset, N.Y.—I.M.R.AM
Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. —N.AC.AF
Standard Electroic Time Co., 119 Logan St., Springfield, Mass.—G.H.V.AH
Standard Electronic Research Corp., 2 East End Ave., New York 21, N.Y.—C.G.H.N
Statistical Instrument Co., 330 Haven Ave., New York 33, N.Y.—E
Stewart Instrument Co., 6507 Grand River, Detroit 8, Mich.—H,AG

- Sticht Co., Herman H., 27 Park Pl., New York 7, N.Y.-G,L,V,Y,AI Supreme, Inc., Greenwood, Miss.-AB Taco Wesu Corp., 525 N. Noble St., Chicago 22, 111.--S,W Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.-O.S.X Technical Associates. 140 W. Providencia Ave., Burbank. Calif.-AA,AF Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas-Y Technical Products Co., 19 N. Dunlap, Medi-cal Center, P.O. Box 93, Memphis 1, Tenn. -E,I,L,M,O,Q,S,U,V,W,X,Z,AC,AH Tensitron, Inc., Depot Rd., Harvard, Mass.-AL

AL

- AL Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—C,F,G,H,M,R,V,Z Thwing-Albert Instrument Co., Penn St., & Pulaski Avc., Philadeiphia 44, Pa.—Q,W Tracerlab, Inc., 130 High St., Boston 10, Mass.—C,AC,AF Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio—F,AB,AJ Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, Ill.—Z

- Rd, Blufton, Ohio-F, AB,AJ
  Ultrasonic Eng'g. Co., P.O. Box 46, Maywood, III.-Z
  Union Switch & Signal, Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.-T
  U.S. Gauge Co., Sellersville, Pa.-X
  Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 14, Ohio-A,C,Y,AC,AE
  Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-B
  Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.-G,H
  Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio-BR,AA
  Welch Electric Co., 121 Wade St., Cincinnati 14, Ohio-BR,AA
  Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-AF
  Western Radiation Lab., 1107 W. 24 St., Los Angeles 7, Calif.-AF
  West Instrument Corp., 525 N. Noble St., Chicago 22, III.-W,X
  Weston Electric Corp.. Box 868, Pittsburgh 30, Pa.-G,V,W,X,AB
  Weston Electric 149 Lomita St., El Segundo, Calif.-G,H,J,AH
  Wheelco Instruments Div., Barber-Colman Co., 1300 Rock St., Rockford. III.-W
  Wiancko Eng'g. Co., 255 N. Halstead Ave., Pasadena 8, Calif.-AM
  Williams, Brown & Earle, Inc., 904 Chestnut St., Philadelphia 7, Pa.-M.Z
  Wilsow Co., 9 Liberty St., Newark 5, N.J.-B,G,S,Y,AI
  Wood Counter Laboratory, N., 5491 Blackstone Ave., Chicago 15, III.-AF
  Weinslow Co., 0, 15 Park Row. New York 38, N.Y.-V
  Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.-I.L

#### 54—MICROPHONES

Handsets, telephone
Microphones, carbonB
Microphones, ceramic
Microphones, condenserC
Microphones, contactD
Microphones, crystalE
Microphones, differentialR
Microphones, dynamicF
Microphones, hearing aidG
Microphones, lapelN
Microphones, lip
Microphones, magnetic
Microphones, pressure
Microphones, throatJ
Microphones, velocityK
Microphones, wireless
Sound powered phonesQ
StethophonesL
alemohianas

- Admiral Corp., Molded Products Div., P.O. Box 338, W. Chicago. Ill.—A Air Associates, Inc., 511 Joyce St., Orange, N.J.—C

- Air Associates, inc., 511 Joyce St., Orange, N.J.-C Airborne Electronics Inc., 155 1st St., Mineola, N.Y.-B,H,J,Q Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.-C,F,K,N,R American Elite Inc., 7 Park Ave., New York 16, N.Y.-C American Microphone Co., Elgin Nat'l. Watch Co., Affiliate, 370 S. Fair Oaks Ave., Pasa-dena 1, Calif.-A,B,E.F,K.N,O,Q Amperite Co., 561 Broadway, New York 12, N.Y.-D,F,K Astatic Corp., P.O. Box 120, Conneaut, Ohio -B,E.F,M,N Audio Instrument Co., 133 W. 14 St., New

- Audio Instrument Co., 133 W. 14 St., New York 11, N.Y.-C

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Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—C
Beam Instruments Corp., 350 5th Ave., New York 1, N.Y.—F,O
British Electronic Sales. 23-03 45 Rd., Long Island City, N.Y.—E,G.O
Brush Electronics Co.. 3405 Perkins Ave., Cleveland 14, Ohio—E,G,N
Budelman Radio Corp., 375 Fairfield Ave., Stamford, Conn.—P
Capps & Co., Frank L., 20 Addison Pl., Valley Stream, N.Y.—C,E,F
Century Lighting Inc., 521 W. 43rd St., New York 25, N.Y.—A,B,H.J
Conn. Telephone & Electric Co., 70 Britannia St., Meriden, Conn.—A,B,C,F,H,J,K,N,O
Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N.Y.—Q
Dean Electronics, 38 5 Ave., Brooklyn 17, N.Y.—B
Dictograph Products Corp., 95-25 149th St., Inwards.

- N.Y.-B Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.-B.Q DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-B.F.O Duotone Co., Locust St., Keyport, N.J.-E Dyna-Labs., Inc., 1075 Stewart Ave., Garden City, L.I., N.Y.-E.G.I.M.O Ectro, Inc., 425 S. Sandusky St., Delaware, Ohio-L
- Ectro, Ohio--E

- Ectro, Inc., 425 S. Sandusky St., Delaware, Ohio-E.
  Ohio-E.
  Electronicraft. Inc., 27 Milburn St., Bronx-ville 8, N.Y.-Q
  Electro-Voice, Inc., Cecil & Carroll Sts., Buchanan, Mich.-A,B,D,E.F,I,K,M.P,R
  Executone, Inc., 415 Lexington Ave., New York 17, N.Y.-E,F
  Femco, Inc., Irwin, Pa.-B
  General Cement Mfg. Co., 919 Taylor Ave., Rockford. Ill.-B
  Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-C,F
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-I
  Int'l. R:search Assoc. 2221 Warwick Ave., Santa Monica, Calif.-C
  Kellogg Switchboard & Supply Co., 79 W. Morroe St., Chicago 3, Ill.-A,C
  Knowles Electronics. Inc., 9400 Belmont Ave., Franklin Park, Ill.-G,N,O
  Lear. Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-B,R
  Morroe Loba Loc 5 Fottler Bd Hingham.

- Knowles Electronics. Inc., 9400 Definition Paver, Franklin Park. Ill.-G,N,O
  Lear. Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-B,R
  Massa Labs., Inc., 5 Fottler Rd., Hingham, Mass.--E.
  McClure Talking Pictures, O. J., 1115 W.: Washington Blvd., Chicago 7, 111.-E.M
  McGohan, Inc., Don, 3700 W. Roosevelt Rd., Chicago 24, 111.-E.F
  Mercury Electro-Products. 622 W. Kinzie St., Chicago 10, 111.-C
  Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-E.J.N
  Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.-B
  Permoflux Corp., 4900 W. Grand Ave., Chicago 39, 111.-F.N
  Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-B
  Phntocon Research Products. 421 N. Foothill Blvd., Pasadena 8, Calif.-I
  Radio Corp. of America. Eng's. Products Div., Camden 2. N.J.-F.K.N,O
  Radionic Laboratories, 1111 State Rd. 67 E., Anderson, Ind.-F
  Perneise Co., 2101 Bryant St., San Francisco

- Radionic Laboratories, 1111 State Ru. 91 2., Anderson. Ind.—F Remler Co., 2101 Bryant St., San Francisco 10. Calif.—A.O Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.—A.B.F.H.O.R Ronette Acoustical Corp., 135 Front St., New York 5, N.Y.—E Rowe Industries, 1702 Wayne St., Toledo 9, Obio—O

- York 5, N.Y.-E
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-O
  Sears Co., M. J., Roxbury, N.Y.-A.B.F.H.O.Q
  Shure Bros.. 225 W. Huron St., Chicago 10, Ill.-A.B.E.F.G.K.M.N.O.P
  Sonotone Corp., Elmsford, N.Y.-E.G.M.N.O
  Youndscriber Corp., 146 Munson St., New Haven 4, Conn.-F
  Stephens Mfg., Corp., 8538 Warner Dr., Cul-ver City. Calif.-C
  Super Ear Products Co., 675 Merrick Rd., Lynbrook, N.Y.-G.N.O
  Televhonics Corp., Park Ave., Huntington. N.Y.-A.B.F.H.O.Q.R
  Telex, Inc., 1633 Eustis St., St. Paul 1, Minn.-F

- Tibbetts Industries, Inc., Camden, Maine-E.G Toys & Specialties, Inc., 622 W. Kinzie St., Chi-
- Transelectric Mfg. Co., 48 Hopewell Rd., Ox-ford, Pa.-A
- Trimm, Inc., 400 W. Lake St., Libertyville, Ill.
- A Turner Co., 909 17th St., N.E., Cedar Rapids, Iowa-B,D,E,F,G,L,K,M,N,O,R

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Union Switch & Signal, Div., Westinghouse Air Brake Co., Pittsburgh 18, Pa.-B
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.-B,H,J
U. S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.-B,C,D,E,F,K
Warren Corp., J. C., 21 Han.e Ave., Freeport. L.I., N.Y.-P
Western Mfg., Co., 1400 W. 22nd St. Kearney

- Western Mfg., Co., 1400 W. 22nd St., Kearney,

Nebr.-B Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.-Q

#### 55—MICROPHONE ACCESSORIES

Microphone	boomsA
Microphone	connectorsB
Microphone	coversE
Microphone	desk mountsF
Microphone	springsC
Microphone	standsD
Microphone	transformersG

- Air Transport Mfg. Co., 1114 N. Sycamore Ave., Los Angeles 38, Calif.—D
  Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.—B
  Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—D,E,F,G
  American Microphone Co., Elgin Nat'l. Watch Co Affiliate, 370 S. Fair Oaks Ave., Pasa-dena 1, Calif.—A,D,E,F,G
  American Phenolic Corp., 1830 S. 54th Ave., Chicago 50, III.—B
  Arey Machine Co., 38 Long Ave., Hillside 5, N.J.—B
  Art Specialty Co., 3245 W. Lake St., Chicago

- Chicago 50, Ill.-B Arey Machine Co., 38 Long Ave., Hillside 5, N.J.-B Art Specialty Co., 3245 W. Lake St., Chicago 24, Ill.-D Astatic Corp., Conneaut. Ohio-D.F Atlas Sound Corp., 1449 39 St., Brooklyn 18, N.Y.-A,C,D.F Baughman Co., E. J., 1914 N. Cogswell Rd., El Monte, Calif.-A Better Coil & Transformer Corp., 2000 Main St., Goodland, Ind.-G Bill Jack Scientific Instrument Co., P. O. Box C-4, Solana Beach, Calif.-A Birnbach Radio Co., 145 Hudson St., New York 13, N.Y.-B British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.-G Bud Radio, Inc., 2118 E. 55th St., Cleve-land 3, Ohio-B Camera Equipment Co., 1600 Broadway. New York 19, N.Y.-A Camera Mart, 1845 Broadway, New York 23, N.Y.-A Carter Case Co., 1 W. 34th St., New York 1, N.Y.-E Carter Parts Co., 213 Institute Pl., Chicago 10, Ill.-B
- Carrier Case Co., 1 W. 34th St., New York 1, N.Y.-E
  Carter Parts Co., 213 Institute Pl., Chicago 10, Ill.-B
  Century Lighting Inc., 521 W. 43rd St., New York 36, N.Y.-A
  Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, Ill.-B
  Daniels, Inc., C. R., Daniels, Md.-E
  Dazor Mfg. Co., 4481 Duncan Ave., St. Louis 10, Mo.-D.F
  DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-A
  Duotone Co., Locust St., Keyport, N.J.-D
  Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N.Y.-D
  Electro-Voice, Inc., Cecil & Carroll Sts., Buchanan, Mich.-D.F.G
  Executone, Inc., 415 Lexington Ave., New York 17, N.Y.-A, B.F.G
  Flexo Int'l. Co., 3245 W. Lake St., Chicago 24, Ill.-A,D.F
  Garde Mfg. Co., 588 Eddy St., Providence 3, R.I.-B.W
  Genment Mfg. Co., 919 Taylor Ave., Rockford, Ill.-B

General Cement Mfg. Co., 919 Taylor Ave., Rockford. III.—B Gramer-Halldorson Transformer, 4500 Ravens-wood Ave. Chicago 40, III.—G Hamilton Electronics Corp., 2726 Pratt Ave., Chicago 45. III.—D Insuline Corp. of America. 186 Granite St., Manchester. N. H.—B Keystone Products Co., 904 23rd St., Union City, N.J.—G Kings Electronics Co., 40 Marbledale Rd., Tuckhoe, N.Y.—B Lord Mfg. Co., 1635 W. 12th St., Erie 6, Pa. —F

Lord Mig. Co., 1635 W. 12th St., Erie 6, Pa. —F McGohan, Inc., Don, 3700 W. Roosevelt Rd., Chicago 24, Ill.—G Microwave Associates, 22 Cummington St., Boston 15, Mass.—A,B,C,D,E,F,G,H,I,J,K,L, M,N,O,P,R,S,T,U,V,W,X,AA Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.—B Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.—B Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 88, Calif.—A Permoflux Corp., 4900 W. Grand Ave., Chi-cago 39, Ill.—G Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.—A,F Racon Electric Co., 1261 Broadway, New York 1, N.Y.—D

Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.—A,D,F
Reevesound Co., 35-54 36th St., Long Island City 1, N.Y.—A
Reliable Spring & Wire Forms Co., 3167 Ful-ton Rd., Cleveland 13, Ohio—C
K. Mfg. Co., P. O. Box 112, Marion, Ill.— G

R. K. Mfg. Co., P. O. Box 112. Marion, Ill.— G
G Roanwell Corp.. 662 Pacific St., Brooklyn 17, N.Y.—A,F
Sears Co., M. J., Roxbury, N.Y.—A,B,F
Shure Bros., 225 W. Huron St., Chicago 10, Ill.—F,G
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.—B
Sonotone Corp., Elmsford, N.Y.—G
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.—G
Starbird, George A., 950 N. Highland Ave., Los Angeles 38, Calif.—A
Stromberg-Carlson Co., 100 Carlson Rd., Roch-ester 3, N.Y.—A,E,F
Studio TV Products Sales, 500 5th Ave., New York 36, N.Y.—A
Super Ear Products Co., 675 Merrick Rd., Lynbrook, N.Y.—A
Telephonics Corp., Park Ave., Huntington, N.Y.—A,B,G
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—D
Tresco, 3824 Terrace St., Philadelphia 28, Pa. —G

Turner Co., 909 17th St., N.E., Cedar Rapids, Iowa-D,G

Iowa-D,G
TV Products Co., 1147 N. McCadden Pl., Hollywood 38, Calif.—A,F
U. S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.—A,B,D
Wheeler Insulated Wire Co., 150 East Aurora St.. Waterbury 20, Conn.—G
Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—B

## 56—MICROWAVE COMPONENTS

Assemblies
AttenuatorsB
BendsC
CavitiesD
ConvertersE
CouplersF
Crystal mountsG
Discriminators
Duplexers1
Filters
HornsK
Hybrid junctionsL
Joints, fixed
Joints, rotatingN
Microwave antennas
MixersP
ParabolasQ
PhasersR
Probes
ShuttersT
Sliding loadsU
Slotted lines ,V
Terminations ,
Tuners
Waveguides, flexible
Waveguides, rigidZ
Waveguide switches ,

Aero Electronics Co., 1512 N. Wells St., Chicago 10, Ill.—A,B,C,D,E,F,G,K,L,M,N,O,S,Z
Aermotive Equip. Corp., 1632 Central St., Kansas City 8, Mo.—A,D
Airborne Instruments Lab., 160 Old Country Id., Mineola, N.Y.—A,B,D,E,F,I,J,K,L,M,N,O,P,Q,R,S,V,W,X,AA
Aircraft Armaments, Inc., P.O. Box 126, Cockeysville, Md.—F,G,H,K,L,P,T
Air Transport Mfr. Co., 1114 N. Sycamore Ave., Los Angeles 38, Calif.—A
Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.—A,B,C,E,F,G,H,I,K,L,M,N,O,P,Q,R,S,T, U.W,Y,Z,AA
Alpha Erection Corp., 508 Iowa State Bank Bldg., Iowa City, Iowa—O
American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Manhatian Beach, Calif.—Z
Andrew Corp., 363 E. 75th St., Chicago 19, Ill.—I,J,K,L,O,Q,V,Z
Alas Precision Products Co., 3801 Castor Ave., Philadelphia 24, Pa.—A,D,Q,X
Bart Laboratorirs. 227 Main St., Belleville 9, N.J.—C,D,K.O.Z
Baslet Electric Co., 601 5th St., Highland, Ill.—J,I,
Bellaire Electronics Inc., 30 Prince St., Brook-Ivn I, N.Y.—O

-J.L. Bellaire Electronics Inc., 30 Prince St., Brook-lyn 1, N.Y.--O Bomac Laboratories, Salem Rd., Beverly, Mass. -A.C.D.F.G.H.I.J.L.P.T.AA Brew & Co., Richard D., Airport Rd., Concord, N.H.--B

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Brooks & Perkins, 1950 W. Fort St., Detroit 16, Mich.—A,K,O,Q
Budd-Stanley Co., 43-01 22nd St., Long Is-land City 1, N.Y.—A,B,C,D,E,F,G,H,I,J,K, L,M,N,O,P,R,S,T,U,V,W,X,Z,AA
Byron Jackson Co., 492 E. Union St., Pasa-dena, Calif.—B,D,J,V
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.—A,D,F,I,J,K,M,N,O,P,Q,R,AA
Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.—A,D,X
Cascade Research Corp., 53 Victory Lane, Los Gatos, Calif.—B,I,R,AA
Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.—B,J
Chemalloy-Electronics Corp., Gillespie Airport, Santee, Calif.—C,K,O,Y,Z
Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, Ill.—G
Connector Corp. of America, 3223 Burton Ave., Burbank, Calif.—Z
Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—A
Co-Operative Industries, 100 Oakdale Rd., Chemeter 1, N.J.—Y.Z

Ohio-A
Ohio-A
Ohio-A
Co-Operative Industries, 100 Oakdale Rd., Chester I, N.J.-Y,Z
Corning Glass Works, Corning, N.Y.-B
Creative Eng'g. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-K,O.Q
Cubic Corp., 2841 Canon St., San Diego 6, Calif.-A,B,C,D,F,G,H,I,J,K,L,M,P,W,X
Dage TV Div., Thompson Products, Inc., Michigan City Ind.-A
Danbury-Knudsen, Inc., P.O. Box 170, Dan-bury, Conn.-A
Daven Co., 191 Central Ave., Newark 4, N.J. -B

Michigan City Ind.-A
 Danbury-Knudsen, Inc., P.O. Box 170, Dan-bury, Conn.-A
 Daven Co., 191 Central Ave., Newark 4, N.J.
 Decade Instrument Co.. Box 153, Caldwell, N.J.-Z
 DeMornay-Bonardi Corp., 780 S. Arroyo Park-way, Pasadena 2, Calif.-A, B,C,D,E,P,G,H,J, J,K,L,N,O,P,R,S,U,V,W,X,Z,AA
 Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.-A,B,C,D,F,G,I,J,K,L,M,N, O,P,S,W,Z,AA
 Dorne & Margolin, 30 Sylvester St., Westbury, L.I., N,Y.--N,O,AA
 Douglas Microwave Corp., 11 Beechwood Ave., New Rochelle, NY.--A,B,C,D,E,F,G,H,I,J,K, L,M,N,O,P,R,S,U,V,W,X,Z,AA
 Dumont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N,J.-O
 Dunn Eng's. Associates, 11 Windsor St., Cam-bridge 39, Mass.-X
 Electron.Radar Products. 1041 N. Pulaski Rd., Chicago 51, 111.-B,K,O
 Electron-Radar Products Corp., 38-15 Bell Blvd., Bayside 61, N.Y.--B,P (30)
 Electrones 2608 Merrick Rd., Bellmore, L.I., N.Y.--A,B,D,G,JO
 Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.--J
 Fansworth Electronics Co., Div. of IT&T, 100 Kingsland Rd., Clifton, NJ.--D,I
 Frankin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-G
 Frankin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-G
 Frankin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-G
 Frankin Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.-B
 Frankin Electronics Div., Gabriel Co., Endicott St., Norwood, Mass.-O
 Gahagen Inc., 11 W. 4 St., Bethlehem, Pa.-P
 General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-W
 Hewlett-Packard Co., 275 Ma

Lambda-Pacific Eng'g. Co., P. O. Box 105, Van Nuys, Calif.—B,F,O,Q Lear, Inc., 3171 S. Bundy Dr., Santa Monica,

Calif.—A

Lieco. Inc., 148 Ocean Ave., Lynbrook, N.Y.-A,B,C,D,F,G,I,J,K,L,M,N,O,P,U,W,X,Z,AA

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Litton Industries Components Div. 336 N. Foothill Rd., Beverly Hills, Calif.—C.F.K.M, N.X.Z
Luhrs & Co., C. H., 297 Hudson St., Hack-ensack, N.J.—F.R.AA
Magnevox Co., Ft. Wayne 4, Ind.—O
Makepeace Co., D. E., Div. Union Plate & Wire, Pine & Dunham Sts., Attleboro, Mass. -I.N,O,P,Z
McMillan Industrial Corp., Brownville Ave.

Wire, Pine & Dunham Sts., Attleboro, Mass. -I.N,O.P,Z
McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.-W
Meridian Metalcraft. Inc., 8739 Millergrove Ave., Whittier, Calif.-A,B,C,F,G,I,J,K,L,M, N,P,Q,S,U,W,Z,AA
Microlab, 71 Okner Pkwy., Livingston, N.J.-B,G,J,W,X
Model Eng'g. & Mfg. Co., 50 Frederick St., Huntington, Ind.-A,B,C,D,F,G,H,I,K,L,M,N, P,V.W.Z
Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.-O
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.-S
Narda Corp., 66 Main St., Mineola, N.Y.-A,B, C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,S,U,V,W,X,Z
New London Instrument Co. Inc., 82 Union St., New London, Conn.-W
Nichols Products Co., 325 W. Main St., Moores-town, N.J.-A,D,K,O,S,T,V,W,Z
N. R. K. Mfg. & Eng'g. Co., 4601 W. Addison St., Chicago 41, 111.-A,B,F,G,I,J,K,N,P,W, Z,AA

N. K. St.

N. R. K. Mfg. & Eng'g. Co., 4601 W. Addison St., Chicago 41, 11.—A,B,F,G,I,J,K,N,P,W, Z,AA
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—I.P
Polarad Electronics Corp., 43-20 34th St., Long Island City 1, N.Y.—A,B,D,I,J,O
Polytechnic Research & Devel. Co., 202 Tillary St., Brooklyn 1, N.Y.—B,C,D,F,G,S,V,W,X
Portchester Instrument Corp., 114 Wilkins Ave., Port Chester, N.Y.—A,B,C,D,E,F,G,H, I,J,K,L,M,N,O,P,R,S,T,W,X,Z,AA
Precision Associates. 354 Cumberland St., Brooklyn 38, N.Y.—D
Premier Instrument Corp., 52 W. Houston St., New York 12, N.Y.—A,B,C,D,E,F,G,H,I,J,K, L,M,N,O,P,R,S,T,U,W,X,Z,AA
Press Wireless Laboratories. 25 Prospect Pl., W. Newton 65, Mass.—D,P,V,W
Prodelin Inc., 307 Bergen Ave., Kearny. N.J. —J,K,O,Q,Z
Radalab, Inc., 87-17 124th St., Richmond Hill 18, N.Y.—A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P, Q,R,S,T,U,V,W,X,Y,Z,AA
Radiation, Inc., Box "Q", Melbourne, Fla.— B,P,X
Radio Corp. of America, Eng'g. Products Div.,

Radiation, Inc., Box "Q", Melbourne, Fla.— B.P.X
Radio Corp. of America. Eng'g. Products Div., Camden 2, N.J.—A,J,O,Q,Y,Z
Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—A,B,C,D,I,J,K, L,M,N,O,P,V,W,Z
Sanders Associates Loc. 127 Court St.

L.M.N.O.P.V.W.Z Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—A,B.D.F.G.H.I.J.K.L.M.N.O. P.Q.R.W.X.Y Scala Radio Co., 2814 19th St., San Francisco 10, Calif.—S Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.—A.F.G.K.L.M.N.O.P.Q.S.W.AA Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—D.F.G Specialty Automatic Machine Corp., 88 Ger-rish Ave., Chelsea 50, Mass.—A,C.K.O,Z Sperry Gyroscope Co., Great Neck, N.Y.—B.C, F.G.I.J.K.L.O.P.U.V.W.X.AA Standard Metals Corp., 262 Broad St., N. Attle-boro, Mass.—Z

Stavid Eng'g., Highway 22, Plainfield, N.J.-A.D.

Standard metans corp., 202 broat 5., 14 Attachor boro, Mass.-Z.
Stavid Eng'g., Highway 22, Plainfield, N.J.-A,D
Sterling Precision Instrument Corp., 34-17 Lawrence St., Flushing, New York-O
Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-D
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-D,G,Y
Technicraft Labs., 1600 Thomaston Ave., Thomaston, Conn.-A,B,C,D,F,G,I,J,K,L,M,P,R,S,T,U,V,W,X,Y,Z
Telephonics Corp., Park Ave., Huntington, L.I., N.Y.-L
Telephonics Corp., Park Ave., Huntington, L.I., N.Y.-L
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P, Q,R,S,T,U,V,W,X,Y,Z,AA
Thompson-Bremer Co., 520 N. Dearborn St., Chicago 10, 111.-W
Thompson Products. Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio-AA
Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N.J.-Y,Z
Transline Assoc. P.O. Box 251. Bloomfield, N.J.-B,L.W,X
TRU-Connector Corp., 416 Union St., Lynn, Mass.-G
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A,B,H,J,K,X
Universal Microwave Corp., 804 Hillside Ave., Hillside, N.J.-A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,R,S,T,U,V,W,X,Z,AA
Vation Associates, 611 Hansen Way. Palo Alto, Calif.-D
Vector, Inc., 1611 Trapclo Rd., Waltham 54, Mass.-A,B,D,E,P.Y
Victory Eng'g. Corp., 103 A Springfield Rd., Union. N.J.-S
Virginia Electronics Co., River Rd. at B & O R., Washington 16, D.C.-A
Waveguide, Inc. 14837 Oxnard St., Van Nuys, Calif.-A,B,C,D,C,A,S,T,U,V,W,X,Z,AA
Waveguide, Inc., 14837 Oxnard St., Van Nuys, Calif.-A,B,C,D,P,G,I,K,L,M,N,O,P,U,W,X,Z,AA
Waveguide, Inc., 14837 Oxnard St., Van Nuys, Calif.-A,B,C,D,P,G,I,K,L,M,N,O,P,U,W,X,Z,AA
Waveguide, Inc., 14837 Oxnard St., Van Nuys, Calif.-A,B,C,D,P,G,I,K,L,M,N,O,P,U,W,X,Z,AA
Waveguide, Inc., 14837 Oxnard St., Van Nuys, Calif.-A,B,C,D,P,G,I,K,L,M,N,O,P,U,W,X,Z,AA</lim

Weston Labs., Inc., Box 407, Littleton, Mass.— A,B,C,D,F,G,I,K,L,M,O,P,S,U,V,W,X
Wheeler Labs., Inc., 122 Cutter Mill Rd., Great Neck, N.Y.—A,B,C,D,E,F,G,H,LJ,K,L,M,N,O, P,R,S,U,W,X
White Electron Devices, Roger, 12 W. Ireland Rd., Ramsey, N.J.—B,AA
Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—B,F,G,I,J,K,L,M,N,O,P,Q,R,V,X,Z

# 57-MOBILE COMMUNICA-TIONS EQUIPMENT

Citizens Handsets					
ntercom					
ack set					
Receiver	s, fixe	d.			 D
Receiver	s, mol	oile			 Е
Telephor	ies, po	rtab	e fie	ld .	 F
Transceiv	vers .				 G
Transmit					
Walkie-1	alkies				 !

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- D.E.H Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.—B.J Dollar Co., Robert, Communications Equipment Div., 50 Drumm St., San Francisco, Calif.— Div. 5 D.E.H
- Div. 50 Drumm St., San Francisco, Calif.— D.E.H
  DuMont Laboratories Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N.J.—A.B.D.E.G.H
  Eldico of N.Y., Inc., 70-72 E. Second St., Mineola, L.I., N.Y.—D.E.G.H.I
  Electro Craft Inc., 68 Jackson St., Stamford, Conn.—I
  Electronic Research Associates, 67 E. Broad St., Nutlev, N.J.—G.I
  Electronic Research Co., 11550—39 St., N.E., Seattle 55, Wash.—H
  Electro-Voice, Inc., Cecfl and Carroll Sts., Buchanan, Mich.—D.E.H
  Electrovics, Inc., Cecfl and Carroll Sts., Buchanan, Mich.—D.E.H
  El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.—B.D.E.G.H
  Equipment Crafters, Inc., 523 Winne Ave., River Edge, N.J.—B.C.D.E.G.H.I
  Erco Radio Laboratories, 687 Stewart Ave., Garden City, N.Y.—B.C.D.E.G.H
  Expert Mfg. Co., 528 E. 72nd St., New York 21, N.Y.—A.B.D.E.G.H.I
  Executone, Inc., 415 Lexington Ave., New York 17, N.Y.—B



Feiler Eng's. & Mfg. Co., 8026 N. Monticello Ave., Skokie, III.-A,B,D,E,F,G,H,I
Fernoc, Inc., Irwin, Pn.-B,G
Freed Electronics & Controls Corp., 200 Hudson St., New York 13, NY.-H
General Electric Co., Electronics Park, Syra-cuse, N.Y.-A,C,D,E,G,H
General Electric Co., Broadcast Equip., Com-mercial Equip., Dept., Electronics Park, Syra-cuse, N.Y.-D,E,H
General Hermetic Scaling Corp., 99 E. Haw-thorne Ave., Valley Stream, Long Island. N.Y.-B
Gonset Co., 801 S. Main St., Burbank, Calif.-C,D,E,G,H
Hailamore Mfg. Co., 2001 E. Artesia, Long

Gonset Co., 801 S. Main St., Burbank. Calif.-C.D.E.G.H Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-B. Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.-B.D.G.H Harmon Electronics Co., 11431 Truman Rd., Independence, Mo.-B Industrial Radio Corp., 428 N. Parkside Ave., Chicago 44. Ill.-C.I Insuline Corp. of America, 186 Granite St., Manchester, N.H.-B.G Int'l. Research Corp., 2221 Warwick Ave., Santa Monica, Calif.-E.H Johnson Co., E. F., Waseca, Minn.-H Kaar Eng'g Corp., 2995 Middlefield Rd., Palo Alto, Calif.-D.E.G.H Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-E.J Larsen Nuclear Research. 520 Fifth Ave., New York 36, N.Y.-A,B.E.F.H.J Lavoie Labs., Morganville, N.J.-E.G.H Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-D.E.G.H

Lear, Inc., 51/1 S. Bundy Dr., Santa Monte, Calif., D.E.G.H
Lettine Radio Mfs. Co., 62 Berkley St.. Valley Stream, N.Y.-H
Link Radio Corp., 125 W. 17th St.. New York 11, N.Y.-A.B.D.E.G.H.I
Lysco Mfs., Co., 1401 Clinton St.. Hoboken. N.J.-C.D.E.G.H.I
Magnavox Co., Ft. Wayne 4, Ind.-O
Marchand Electronic Labs., 255 Mill St.. Byram. Conn.-B
Mattson-Cowley Corp., 1487 Lincoln Ave., Pas-adena 3, Calif.-D.E
Mercury Mfg. Corp., Main Office-45 Brown St.. Buffalo 11. N.Y.-D
Metal Products Co., Craighead St., Nashville 4. Tenn.-H
Midwest Sound Systems, 2871 N. Lincoln Ave.. Chicago 13, Ill.-E.I

Metal Products Co., Craighead St., Nashville
4. Tenn.—H
Midwest Sound Systems, 2871 N. Lincoln Ave.. Chicago 13, 111.—E.I
Miles Reproducer Co., 812 Broadway, New York 3. NY.—I
Morrow Radio Mfg. Co., 2794 Market St.. Salem. Ore.—C.D.E.G.H.I
Motorola, Inc., 4545 W. Augusta Blvd., Chi-cago, III.—A.C.D.E.G.H.I
National Electronics Labs., 1713 Kalorama Rd. N.W., Washinoton 9. D.C.—G
North Electric Mfg., Co., S. Market St., Galion. Ohio-B.F.J
Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys. Calif.—A.D.E.G.H.I
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.—B F
Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.—G.H
Peerroff. Peter A., 127 Water St., New York 5, N.Y.—B.I
Phebco. Inc.. 3640 Woodland Ave., Baltimore 15, Md.—C.D.G.
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, UI.—E.G.H
Plastics & Electronics Corp., 50 Kingsbury St., Worcester, Mass.—I
Pratt. Albert. 1939 N. 18 St.. Milwaukee 5. Wisc.—B.D.E.H
Prescion Associates. 254 Cumberland St.. Rrooklyn 38, N.Y.—B.F
Precision Associates. 254 Cumberland St.. Rrooklyn 38, N.Y.—B.F
Precision Electronics Corp., 700 Pendleton Pike, Indianapolis 26, Ind.—D.E.
Radio Apparatus Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.—D.E.
Radio Corp. of America, Eng's. Products Div., Camden 2, N.J.—A.B.G.H
Radio Mfg. Engineers, Inc., Div. Electro-Voice, Buchanan. Mich.—A.D.E
Radio Mfg. Engineers, Inc., Div. Electro-Voice, Buchanan. Mich.—

Ratigan Electronics. Inc., 3614 Maple Ave., Los Angeles 11, Calif.-G Rauland-Borg Corp., 3515 W. Addison St., Chi-cago 18, Ill.-B

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Rayovox Mfg. Co., 902 Albemarle, Brooklyn 18, N.Y.-B
Remco Mfg. Co., 545 N. LaSalle St., Chicago 10, 11.-D,E
Remler Co., 2101 Bryant St., San Francisco 10, Calif.-B,C,H \ Rex Electronics COrp., 1351 E. DeLoss St., Indianapolis 3, Ind.-D,E
Reynolds Radio & Equip. Lab., H. B., 219 Stone St., Oneida, N.Y.-E,G,H
Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.-J
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-G,I
Scantlin Electronics, P.O. Box 24561, Los Angeles 24, Calif.-A,B,D,E
Silver Bay Equip. Co., 5004 20th N.W., Seat-tle 7, Wash.-D,E,G,H
Simpson Mfg. Co., Mark, 32-284 9 St., Long Is-land City 3, N.Y.-B
Slate & Associates, Claude C., 11370 W. Olym-pic Blvd., Los Angeles 64, Calif.-D,E,H, Springfield Enterprises, P.O. Box 54, Spring-field Gardens 18, N.Y.-C,D,E,G,H,I
Square Root Mfg. Corp., 391 Saw Mill River Road, Yonkers 2, N.Y.-B
Stavid Eng's., Highway 22, Plainfield, N.J.-C,E,G
Stromberg-Carlson Co., 100 Carlson Rd., Roch-

Stavid Eng'g., Highway 22, Plainfield, N.J.-C, G
Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-F
Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.-D,E
Telemetering Associates. 494C. Pine Forest Drive, Marietta, Ga.-H
Telephonics Corp., Park Ave., Huntington, N.Y.-B, E, F, G, H. J.
Tele-Systems, Inc., 6442 Santa Monica Blvd., Los Angeles 38, Calif.-B, F
Televiso Corp., 1415 Golf Rd., Des Plaines, Ill.-B, C, D, E, G, H. J
Transitron, Inc., 154 Spring St., New York 12, N.Y.-D, E, G, H.I.
Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.-D, E, H
Trukaradio, 228 E. Park Ave., Wheaton, Ill.-A, E
Hnion Electric & Mfg. Co., 1057 Summit Ave

Trukaradio, 228 E. Park Ave., Wheaton, III.--A,E
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.--G.H
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.--C,D,E,G.H.I
Virginia Electronics Co., River Rd. at B & O R.R., Washington 16. D.C.--B,D,E,G.H
Vocaline Co. of America, Coulter St., Old Saybrook, Conn.--B,G
Voron & Co., George. 835 N. 19th St., Phila-delphia 30. Pa.--B,F
Warren Corp. J. C., 21 Hanse Ave., Freeport. L.I., N.Y.--E.H
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.--D,E,H
Western Mfg., Co., 1400 W, 22 St., Kearney. Nebr.--B,D,E,G,H,IR
Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.--B,F,J

58----MOBILE COMMUNICA-**TIONS ACCESSORIES** 

Antenna bases .....B Auto alarms .....C Control equipment .....D Crystals .....E Microphones .....F Power supplies .....G Power supplies, emergency .....H 

Aeronautical Electronics, P.O. Box 6043. Raleigh, N.C.-A.G
Airborne Electronics Inc., 155 1st St., Mineola, N.Y.-A.B.E.F.G.H
Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-A
Aircraft Radio Co., Boonton, N.J.-A.G
Air Transport Mfg. Co., 1114 N. Sycamore Ave., Los Angeles 38. Calif.-A.B
Allied Intl. Inc., 230 Park Ave., New York 17, N.Y.-G.H
American Microphone Co., (Elgin National Watch Affiliate) 370 S. Fair Oaks Ave., Pasadena 1, Calif.-F
American Television & Radio Co., 300 E. 4th St., St Paul 1, Minn.-G.H
Ampex Corp., 363 E. 75th St., Chicago 19, III.-A
Antenna Specialists Co., 12435 Euclid Ave., Cleveland & Obio-A B

Anterna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio—A.B
Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio—A.B
Applied Electronics Co., 1246 Folsom St., San Francisco 3, Calif.—A
Art-Lloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N.Y.—B.J
Bassett Inc., Rex., 1314 NE 17th Court, Ft. Lauderdale, Fla.—A, B.D.E.F, G, H
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.—A
Bogue Electric Mfs. Co., 52 Iowa Ave., Paterson 3, N.J.—G.H
Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.—A

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Antennas

Brelco Electronics Corp., 55 Vandam St., New York 13, N.Y.-C
Burgess Battery Co., Foot of Exchange St., Freeport, III.-G.H
Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47, III.-G
CGS Laboratories, Inc., 391 Ludlow St., Stam-ford, Conn.-D
Commercial Radio Monitoring Co., P.O. Box 7037, Kansas City 13, Mo.-E
Communications Co., 300 Greco Ave., Coral Gables, Fla.-A
Conn. Telephone & Electric Corp., 70 Brit-tannia St., Meriden, Conn.-A.C.D.F
Consolidated Productions, Bldg. 9, Broward Int'l. Airport, Ft. Lauderdale, Fla.-G
Creative Eng'z. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-A
Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-E
DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-A.B.D.E.F.G.J
Eldico of N.Y., Inc., 70-72 E. Second St., Mineola, L.I., N.Y.-A.D.G.H
Electroic Measurements Co., Lewis St. & Maple Ave., Eatontown, N.J.-G.H
Electrovoice Inc., Cecil & Carroll Sts., Buchanan, Mich.-F
Erco Radio Laboratories, 637 Stewart Ave., Garden City, N.Y.-D
Espey Mfg. Co., 523 E. 72 St. New York 21, N.Y.-G.H
Federal Shock Mount Corp., 1077 Intervale Ave., Skokie, III.-B
Femco, Inc., Irwin, Pa.-A.F
Finn & Co., T. R., 200 Central Ave., Haw-thorne, N.J.-J.
Freed Electronics & Controls Corp., 200 Hud-son St. New York 13, N.Y.-D.G.H
Gabriel Electronics & Controls Corp., 200 Hud-son St., New York NY, NY.-D.G.H
General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.-D
General Control Co., 1200 Soldiers Field Rd., Boston 34, Mass.-D
General Electric Co., Broadcast Equip., Com-munication Equip., Electronics Park, Syra-cuse, N.Y.--D.G
General Electric Co., Broadcast Equip., Com-munication Equip., Electronics Park, Syra-cuse, N.Y.--B.G
General Electric Co., Broadcast Equip., Com-munication Equip., Electronics Park, S

Pa.-E Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.-G Insuline Corp. of America, 186 Granite St., Manchester, N.H.-A.B.K Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.-A Johns-Manville, 22 E. 40th St., New York 16, N.Y.-J

N.J.-A
Johns-Manville, 22 E. 40th St., New York 16, N.Y.-J
Johnson Co., E. F., Waseca, Minn.-A.G
Kaar Eng'g, Corp., 2995 Middlefield Rd., Palo Alto, Calif.-A.B.D.E
Kepco Labs., 131-38 Sanford Ave., Flushing 55, N.Y.-G.H
Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-A
Kirby Products Corp., 175 Fifth Ave., New York 10, N.Y.-G
Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-A.E.J
Link Radio Corp., 125 W. 17th St., New York 11, N.Y.-A, B.D.E.F.G
Lord Mfg. Co., 1635 W. 12 St., Erie, Pa.-J
MagreElectric Products, 12822 Yukon Ave., Hawthorne, Calif.-G.H
Magneeord, Inc., 1101 S. Kilbourn Ave., Chi-cago 24, III.-K
Magnetic Instrument Co., 82 Main St., W. Orange, N.J.-G
Matson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-G.I
MB Mfg. Co., 1060 State St., New Haven 11. Conn.-J
McCoy Electronics Co., Chestnut & Watt St., Mt. Holly Springs, Pa.-E

Pasadena 3, Calif.—G,1
MB Mfg. Co., 1060 State St., New Haven 11. Conn.—J
McCoy Electronics Co., Chestnut & Watt St., Mt. Holly Springs, Pa.—E
Mercury Mfg. Corp., Main Office—45 Brown St., Buffalo 11, N.Y.—C.D
Metal Fabricators Corp., 73 Pond St., Waltham 54, Mass.—A,B
Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, Ill.—K
Miles Reproducer Co., 812 Broadway, New York 3, N.Y.—I
Miller Labs., August E., 9226 Hudson Blvd., N. Bergen, N.J.—E
Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.—J
Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.—K
Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.—B

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Morrow Radio Mfg. Co., 2794 Market St., Salem. Ore.—F.G
Motordyne Inc., 2661 S. Myrtle Ave., Mon-rovia, Calif.—G.H
Motor Generator Corp., Hobart Sq., Troy, Ohio—G
Multi-Products Co., 21470 Coolidge Hwy., Oak Park 37. Mich.—G
Multi-Products Co., 21470 Coolidge Hwy., Oak Park 37. Mich.—G
Multi-Products Co., 21470 Coolidge Hwy., Oak Park 37. Mich.—G
Muttoric Associates, 87-16 116th St., Rich-mond Hill, N.Y.—G,H
New Jersey Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J.—G,H
Onan & Sons, D. W., University Ave., S.E. at 26th, Minneapolis 14, Minn.—G,H
Opad Electric Co., 69 Murray St., New York 7, N.Y.—G,H
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.—A.B,D
Pearce-Simpson Inc., 3023 Coral Way, Miami 34, Fla.—A Vancouver, Wash.-A.B.D
Pearce-Simpson Inc., 3023 Coral Way, Miami 34, Fla.-A
Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.-F
Peschel Electronics, 13 Garden St., New Rochelle, N.Y.-G,H
Petroff, P. A., 127 Water St., New York 5, N.Y.-A,B.D
Philson Mfg. Co., 60 Sackett St., Brooklyn 31, N.Y.-A
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.-G
Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-B,G
Polytechnic Research & Devel., 202 Tillary St., Brooklyn 1, N.Y.-G
Portable Electric Tools Inc., 200 W. 83 St., Chicago 20, Ill.-G
Pratt. Albert, 114 W. Lake View Ave., Milwaukee 17. Wisc.-A,D
Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-E
Premax Products, Highland & College Ave., Niagara Falls, N.Y.-A,B
Prodelin Inc., 307 Bergen Ave., Kearny, N.J.-A
Pruyn-Moore, Inc., 1338 Cota Ave., Long

-A Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-A,B,C,D,G,K Radelco Mfg. Co., 7580 Garfield Blvd., Cleve-land 25, Ohio-A,B Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio-G Radio Apparatus Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.-A Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-D Radionic Laboratories, 1111 State Rd. 67 E., Anderson. Ind.-D

Radionic Laboratories, 1111 State Rd. 67 E., Anderson. Ind.—D
Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.—H
Reevesound Co., 35-54 36 St., Long Island City 1, N.Y.—G,I
Regulator Eng'g. & Devel. Co., 11545 W. Jef-ferson Blvd., Culver City, Calif.—G
Reliable Spring & Wire Forms Co., 3167 Ful-ton Rd.. Cleveland 13, Ohio—B
Remler Co., 2101 Bryant St., San Francisco 10, Calif.—F,J
Rich Electronics, 212 N.W. 8th Ave., Miami 36, Fla.—D
Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.—F
Sangamo Electric Co., 9th & Converse, Spring-

36, Fla.-D
Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.-F
Sangamo Electric Co., 9th & Converse, Springfield, III.-G, H
Sangamo Generators. Inc., 2110 Clear Lake Ave., Springfield, III.-G
Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.-G
Sharold Crystals. Inc., 1510 McGee St., Kansas City 8, Mo.-E
Simpson Mfg. Co., Mark, 32-28 49th St., Long Island City 3, N.Y.-K
Snyder Mfg. Co., 22 & Ontario Sts., Philadelphia 40, Pa.-A,B
Stephens Mfg. Corp., 8538 Warner Dr., Culver City, Calif.-F
Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.-F.G
Tech Laboratories. Bergen & Edsall Blvds., Palisades Park, N.J.-G
Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck. N.Y.-A.D
Telenhorme, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-I
Telenarine Communications Co., 3040 W. 21 St., Brooklyn 21, N.Y.-G,H
Telendonics Corp., Park Ave., Huntington, L.I., N.Y.-F.G
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-A.G
Terado Co., 1068 Raymond Ave., St. Paul 14. Minn.-G
Trilsch. John D., 1310 McKinney Ave., Houston 2, Texas-A
Tukaradio, 228 E. Park Ave., Wheaton, Ill.-A.B
TV Hardware Mfg. Co., 919 Taylor Ave.,

TV V Hardware Mfg. Co., 919 Taylor Ave., Rockford. Ill.--A

Ucinite Co., 459 Watertown St., Newtonville, Mass.—J

Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-G,H Union Switch & Signal-Div., Westinghouse Air Brake Co., 1789 Braddock Ave., Pitts-burgh 18, Pa.-F

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U, S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.—F,G Valpey Crystal Corp., 1244 Highland St., Hol-liston, Mass.—E Virginia Electronics Co., River Rd. at B & R R.R., Washington 16, D.C.—A,D,G Vokar Corp. Huron River Dr., Dexter, Mich. —C.G.H

R.R., Washington 10, D.O. ..., Mich.
Wokar Corp. Huron River Dr., Dexter, Mich.
--G,G,H
Ward Products Corp., Div. Gabriel Co., 1148
Euclid Ave., Cleveland 15, Ohio-A,B
Warren Corp., J. C., 21 Hanse Ave., Freeport, L.I., N.Y.-G,K
West Coast Electronics Co., 5873 W. Jefferson , Blvd., Los Angeles 16, Calif.-A,D
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-A,F
White & Son, J. L., 374 Verona Ave., Newark 4, N.J.-A
Wincharger Corp., E. 7th and Division Sts., Sioux City 2, Iowa-G,H

Cameras, 8 mm .....J Cameras, 16 mm ......A Kinescope recording apparatus ....C Projectors, 8 mm ......K Projectors, 16 mm .....D Projectors, 35 mm .....E Sound readers ......H Tape, synchronized magnetic .....

Acme Camera Corp., 2704 W. Olive Ave., Burbank, Calif.—A,B,C,D,E,F
Akeley Camera & Instrument Corp., 345 Hudson St., New York, N.Y.—A,B
Ampex Corp., 934 Charter St., Redwood City, Calif.—I
Ampro Corp., 2335 N. Western Ave., Chicago 18, III.—D,E,J,K
Background Engineers, 7313 Santa Monica Blvd., Hollywood 46, Calif.—F
Bell & Howell, 7100 McCormick Rd., Chicago 45, III.—A,B,D,J,K
Berndt-Bach, Inc., Auricon Div., 6916 Romaine St., Hollywood 38, Calif.—A,C,I
Beseler Co., Charles, 60 Badger Ave., Newark 8, N.J.—F
Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.—A,B,D,E
Bodde Screen Co., 8829 Venice Blvd., Los Angeles 34, Calif.—F
Bolsey Corp. of America, 118 E. 25th St., New York 10, N.Y.—A,B,E,J
Brea Instruments, P.O. Box 248, Brea, Calif.—B
Burke & James, 321 S. Wabash Ave., Chicago

& James, 321 S. Wabash Ave., Chicago 4, III.--A,B Calvin Co., 1105 Truman Rd., Kansas City 6, Mo.-D

Burke

Burke & James, 321 S. Wabash Ave., Chicago 4, 111.-A,B
Calvin Co., 1105 Truman Rd., Kansas City 6, Mo.-D
Century Projector Corp., 729 7 Ave., New York 19, N.Y.-E,F
Chromatic Television Labs., 1501 Broadway, New York 36, N.Y.-B,C,G
Cinematic Developments Co., 2125 32 Ave., San Francisco, Calif.-A,D
Cinetch Co. Inc., 106 West End Ave., New York 23, N.Y.-A,B
Colonial Films, 2118 Mass. Ave., N. W., Washinton 8, D.C.-A,C
Defur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-J.K
Delaur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-J.K
Delaur-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N.Y.-J.K
Devry Corp., 1111 Armitage Ave., Chicago 14, 111.-D,E,F
Devry Corp., 1111 Armitage Ave., Chicago 14, 111.-D,E,F
Dufort Active Silv., 1500 Main Ave., Clifton, N.J.-C,F
Edgetton, Germeshausen & Grier, 160 Brook-Ind.-H
Erooklayn 5, N.Y.-D,1
Erderton, Germeshausen & Grier, 160 Brook-Ind.-H
Erooklyn 5, N.Y.-D,1
Fetau Mfg. & Eng's, Corp., 211 Steuben St., Brook-Ind.-H
Erooklyn 5, N.Y.-D,1
Fish-Schurman Corp., 70 Portman Rd., New Kochle, N.Y.-F.G
Geral Mfg. & Eng's, Corp., 211 Steuben St., Brook-Ind.-G
Fish-Schurman Corp., 70 Portman Rd., New Kochle, N.Y.-F.G
Geral Mfg. Co., 4888 N. Clark St., New York 36, N.Y.-A,B
Geraral Precision Lab., 63 Bedford Rd., Pleas, antwille, N.Y.-A,C,DE,F.G
Gold Mfg. Co., 4888 N. Clark St., Chicago 40, II.-F
Gueral Precision Lab., 63 Redford Rd., Pleas, antwille, N.Y.-A,C,DE,F.G
Gold Mfg. Co., 4888 N. Clark St., Chicago 40, II.-F
Mid. Mfg. Co., 4888 N. Clark St., Chicago 40, II.-F
Mid., Detroit, Mich.-A

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**59**—MOTION PICTURE EQUIPMENT

Int'l. Projector Corp., 55 LaFrance Ave., Bloomfield, N.J.-E
Kinevox, Inc., 116 N. Hollywood Way, Burbank, Calif.-H
Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-I
Land.Air, Inc., 201 N. Wells St., Chicago 6, III.-A,B
Libra Film & Equipment, 6525 Sunset Blvd., Hollywood 28, Calif.-A
Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-H,I
Maurer, Inc., J. A., 37-01 31 St., Long Island City 1, N.Y.-A,B,C,D,F
McAuley Mfg. Co., 554 W. Adams St., Chicago, III.-Spot Light Projectors
Michigan Film Library, 15745 Rosemont Rd. Detroit 23, Mich.-A
Mitchell Camera Corp., 666 W. Harvard St., Glendale 4, Calif.-A,B
Motiograph, Inc., 4431 W. Lake St., Chicago 24, III.-D,E,G
Natural Lighting Corp., 612 West Elk Ave., Glendale 4, Calif.-A
Paillard Products Inc., 100 6th Ave., New York 13, N.Y.-A,D,J,K
Paramount TV Productions, Paramount Bldg., New York 18, N.Y.-C
Pembrex Theatre Supply Corp., 1969 S. Ver-mont Ave., Los Angeles 7, Calif.-F
Precision Products Inc., 719 17 St., N. W., Washington, D.C.-A
Producers Sales Corp., 2704 W. Olive Ave., Burbank, Calif.-A,B,C,D,E,F
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-C,D,E
Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N.Y.-I
Revere Camera Co., 320 E. 21 St., Chicago, III.-A,D,I,JK
Schoen Products Co., 15029 S. Figueroa Blvd., Gardena, Calif.-H
S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-A,B,C,D,E,F,G,H,I
Snecial Effecta & Enuip. Inc., 418 W. 54 St.

Gardena, Calif.—H S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.—A,B,C,D,E,F,G,H,I Special Effects & Equip. Inc., 418 W. 54 St., New York 19, N.Y.—F Spellman Television Co., 3029 Webster Ave., Bronx 67, N.Y.—G Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.—H,I Swank Films, 19 W. 4th St., Dayton 2, Ohio— A,B Synchropmatic Prode. 766 Broadware Paramater

Synchromatic Prods., 766 Broadway, Bayonne, N.J.-E T-Bar-V Inc., 5919 Hollywood Blvd., Holly-

A,B
Synchromatic Prods., 766 Broadway, Bayonne, N.J.-E
T-Bar-V Inc., 5919 Hollywood Blvd., Hollywood 28, Calif.-F
Technical Products Co., P.O. Box 93, Memphis 1, Tenn.-A.B.D.E.I
Telechrome. Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-C
Telefex, 5919 Hollywood Blvd., Hollywood 28, Calif.-D.F
Television Cartoons, Inc., 155 W. 46 St., New York, N.Y.-A.B
C.D.E.F.H.J.K
Trutone Electronics, 821 N. Highland Ave., Los Angeles 38. Calif.-H.I
TV Utilities Corp., 1315 Jericho Turnpike, New Hyde Park. L.I., N.Y.-C
Vectron. Inc., 1611 Trapelo Rd., Waltham 54, Mass.-B
Victor Animatrograph Corp., P. O. Box 600, Davenport. Inwa-D
Vought Co., 9278 Santa Monica Blvd., Beverly Hills. Calif.-A.B
Wenzel Projector Co., 2511 S. State St., Chicasen 66, III.-E
Weitnes. Roven & Earle. Inc., 904 Chestnut St., Philadelnhia 7. Pa.-A.B.D.F.J.K
Wollensak Optical Co. 850 H. Masson Ave., Rochester 21. N.Y.-A.D.J.K.
Wright Eng'g Co., 180 E. Calif. St., Pasadena 1, Calif.-A.B

# 60-MOTION PICTURE EQUIPMENT ACCESSORIES

Animation equipmentA
Chemical developersR
Cue markers
Editing equipmentC
Film cansS
Film scrapersD
Lenses
Magnetic Film Heads
Optical apparatus
Printing equipmentG
Processing equipmentH
Projection lampsU
Projector carbonV
Projector standsW
Range findersX
Rapid development equipment
Reels, continuous projectionJ
Rewinds, autoK
Screens, backgroundL
Screens, projectionM
Special effects equipmentN

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Lord Mfg. Co., 1635 W. 12 St., Erie 6, Pa.-C
C
Lytle Engineering & Mfg. Co., 105 W. Monroe St., Chicago 3, Ill.-L.P
Magnetic Metals Co., Hayes Ave. at 21 St., Camden 1, N.J.-AF.AG
Marathon Electric Mfg. Corp., Wausau, Wisc.-A.B.G.H.K.M
Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.-P
Master Appliances Mfg. Co., Fourth & Ontario Sts., Racine, Wis.-K.M.U.AD.AF.AG
Master Electric Co., 126 Davis Ave., Dayton I. Ohio-A.G.H.K.M
Mascon Corp., W.L., 460 W. 34th St., New York 1, N.Y.-O
McAlister, Inc., J. G., 1117 N. McCadden Pl., Hollywood 28, Calif.-R
McKenna Labs., 2503 Main St., Santa Monica, Calif.-J
McKenna Labs., 2503 Main St., Santa Monica, Calif.-J
McKenna Labs., 2503 Main St., Santa Monica, Calif.-J
McKena Labs., 2503 Main St., Santa Monica, Calif.-J, McKena Labs., 2504 Main St., Santa Monica, Calif.-J, McKena Labs., 2503 Main St., Santa Monica, Calif.-J, Micago 30, Ill.-L.P.AC.AD.AE
Mica Insulator Co., P.O. Box 1076, Schenectady I, N.Y.-D
Midco Mfg. & Dist. Co., 1129 S. 13th St., Sheboygan, Wisc.-F.G.H
Midwest Moulding & Mfg. Co., Gurnee (Waukegan), Ill.-X.Y.Z.AA
Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S., Minneapolis 8, Minn.-L.S
Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-M.N
Motordyne Inc., 2661 S. Myrtle Ave., Monrovia, Calif.-A, B.E.G.H.J.K.M.N.U
Motoresearch Co., 1600 Junction Ave., Racine, Wisc.-A.B.G.H.J.K.M.R.AD
Motor Generator Corp., Hobart Sq. Troy, Ohio-B.H.J
Mueller Eng'g. Co.; Heinz A., 801 N. Linde

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio—Y
Onan & Sons, Inc., D.W. University Ave., S. E. at 25, Minneapolis 14, Minn.—F.G.H.R.AB
Oster Mfg. Co., John. 1 Main St., Racine, Wis-consin—G.H.K.L.M.N.O.T.U
Palmer Electric Mfg. Co., 6629 Bear Ave., Bell, Calif.—A.G.J.K.R.AE
Par.-Ormond Corp., Box 1605, Ormond Beach, Fla.—AA
Park Armature Co., 883 Boylston St., Boston 16, Mass.—E.G.H.J.K.L.M.N.Q
Par Products Corp., 926 N. Citrus Ave., Hollywood 38, Calif.—S
Paul, F. H. & Stein Bros., 235 5 Ave., New York 16, N.Y.—Z
Peerless Electric Co., 1401 W. Market St., Warren, Ohio—K.M
Pennwood Numechron Co. 7249 Frankstown Ave., Pittsburgh 8, Pa.—P
Pesco Prods. Div., Borg-Warner Corp., Bed-ford, Ohio
Phoenix Precision Instr. Co., 3803 N. 5th St., Publicalerbic 40 E-

Phoenix Precision Instr. Co., 3803 N. 5th St., Philadelphia 40. Pa.--O Picco Instruments & Controls Corp., 3593 Hayden Ave., Culver City, Calif.--K,L,M,

Hayden Ave., Culver City, Calif.-K,L,M, N,O.P
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.-E,M.N,O,AD
Pioneer Gen-E-Motor Corp., 5841 W. Dickens Ave., Chicago 39, Ill.-E.G.H.I,R
PM Industries, Inc., 280 Fairfield Ave., Stam-ford, Conn.-V,AA
Portable Electric Tools, Inc., 200 W. 83rd St., Chicago 20, Ill.-A,B,E,G,H,J,K,M,N,O
Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.-G.H.R
Redmond Co., Owosso, Mich.-B,E,G,H,I,J,K,M, N,U,AD
Relance Electric & Eng'g Co., 1088 Ivanboe

Reliance Electric & Eng'g Co., 1088 Ivanhoe Rd., Cleveland 10, Ohio-G.H.K.M

Reynolds Electric Co., 8000 River Rd., River Grove, Ill.-AD

Robey Rotor, Inc., 6006 Washington Blvd., Culver City, Calif.—G,I,K,M,N,O,P,T,AE,AF, AG

Rotron Mfg. Co., Schoonmaker Lane, Wood-stock, N.Y.-K.AD

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allow the second ELECTRONIC INDUSTRIES DIRECTORY

Royal Electric, Inc., P.O. Box 823, Dayton 1, Ohio—A,B,G,H,J,K,M,R,S,V,X,Z,AA,AD,

AF,AG AF,AG Safe Flight Instrument Corp., 4 Water St., White Plains, N.Y.—B,E St. Marys Carbon Co., State St., St Marys, Pa.—W,X,Y Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—N Sangamo Electric Co., 9th & Converse Spring-field, Ill.—A,E,G,H,I,J,L,M,N,O,P,T,AC,AD, AE

field, III.—A,E,G,H,I,J,L,M,N,O,P,T,AC,AD, AE
Sangamo Generators, Inc., 2110 Clear Lake Ave., Springfield, III.—B,E,G,H,I,M
Saratoga Industries, Ballston Ave., Saratoga Springs, N.Y.—I
Schwien Eng'g. Co., 16217 Lindbergh St., Van Nuvs, Calif.—K,L.M.N,O.T
Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.—D,AD
Seager Standard Carbon Co., 291 Church St., New York 13, N.Y.—V,X,Y.Z
Servomechanisms, Inc., 500 Franklin Ave., Garden City, N.Y.—K,L,M,N,O,T,AE
Servo-Tek Froducts Co., 1086 Goffie Rd., Haw-thorne, N.J.—H,K,L,M,N,O,U,AD
Sessions Clock Co., E. Main St., Forestville, Conn.—K,N,P,AE
Small Motors Inc., 2076 Elston Ave., Chicago 14, III.—E,G,H,K,M,N,T,U,AD,AE
Specialty Battery Co., 212 E. Washington Ave., Madison 10, Wisc.—N
Stackpole Carbon Co., Tannery St., St. Marys, Pa.—W,Y
Stancil-Hoffman Corp., 921 N. Highland Ave.,

Stackpole Carbon Co., Tannery St., St. Marys, Pa.-W.Y
Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.-T.AE
Standard Coil Products Co., 2085 N. Hawthorne St., Melrose Park, Ill.-K.L.N,O
Star-Kimble Motor, 200 Bloomfield Ave., Bloomfield, N.J.-A.B.G.H.K.M
Stephens Mfg. Corp., 8538 Warner Dr., Cul-ver City, Calif.-O
Sterling Electric Motors, 5401 Telegraph Rd., Los Angeles 22, Calif.-M
Superior Carbon Products, 9115 George Ave., Cleveland 5, Ohio-X.Y
Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.-B
Technical Development Corp., 4060 Ince Blvd., Culver City, Calif.-AE,AH
Telechron Dept., General Electric Co., 43 Ho-mer Ave., Ashland, Mass.-N.P
Telex. Inc., 1633 Eustis St., St. Paul 1, Minn. -VAF
Thompson Clock Co., H.C., 38 Federal St., Britel Corp. K M PO

mer Ave., Ashland, Mass.-N.P Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. --V,AF Thompson Clock Co., H.C., 38 Federal St., Bristol, Conn.--K,M,N,P,Q Thorens Co., Stewart & Atlantic Ave., Garden City Park, N.Y.--K,M,Q Times Facsimile Corp., 540 W. 58 St., New York 19, N.Y.--AE TKM Electric Corp., 1160 University Ave., Rochester 7, N.Y.--J Toledo Commutator Co., 1101 S. Chestnut St., Owosso, Mich.--Z,AA Trans-American Precision Instr. Corp., 34-17 Lawrence St., Flushing 54, N.Y.--O Transicoil Corp., 107 Grand St., New York 13, N.Y.--L.N,O United Pressed Products Co., 741 W. Harrison St., Chicago 7, III.--K,Q.N Universal Electric Co., 100 E. Main St., Owosso, Mich.--K,M,U,X,Y,AD,AF,AG Universal Scientific Co., 1102 Shelby St., Vincennes, Ind.--A,G,H,K,M,O.T U.S. Electrical Motors, 200 E. Sauson Ave., Los Angeles 54, Calif.--K,AD Vibro-Ceramics Corp., 212 Durham Ave., Me-tuchen, N.J.-J Waco, Inc., 2032 Broadway, Santa Monica, Calif.--K,M.N,O,T,AD Ward Leonard Electric Co., 94 South St., Mount Vernon, N.Y.--S Western Gear, Electro Products Div., 132 W. Colorado St., Pasadena, Calif.--A,B,E,G,H,I, J.K,L,M,N,O,P,Q,R,S,T,U,V,Z,AA,AC,AD,AE, AFAG Western Mfg., Co., 1400 W. 22 St., Kearney,

AF,AG
 Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—E,K.M.N
 Wincharger Corp., E, 7 & Division Sts., Sioux City 2, Iowa—E,G,H,R,AD

### 63-NAVIGATION SYSTEMS

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Aero Electronics Co., 1512 N. Wells St., Chi-cago 10, Ill.—B,E Aeronautical Electronics, P.O. Box 6043, Raleigh, N.C.—B,J Air Associates, Inc., 511 Joyce St., Orange, N.J.—B,J,K Airbarg Electronics Inc. 155 1 St. Mincola

cago 10, 111.-D.E
 Aeronautical Electronics, P.O. Box 6043, Raleigh, N.C.-B.J
 Air Associates, Inc., 511 Joyce St., Orange, N.J.-B.J.K.
 Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-B.C.H.I.J
 Aircraft Radio Co., Boonton, N.J.-B.I.J
 Alcar Instruments, 20 Wagaraw Rd., Fair Lawn, N.J.-G
 Allied Intl. Inc., 230 Park Ave., New York 17, N.Y.-B
 American Radio Co., 445 Park Ave., New York 22, N.Y.-C
 Applied Electronics Co., 1246 Folsom St., San Francisco 3, Calif.-0, 1246 Folsom St., San Francisco 3, Calif.-0, 265 Westwood Blvd., Los Angeles 64, Calif.-A.C
 Aviantic Research Corp., Alexandria, Va.-G
 Atlantic Research Corp., 2255 Westwood Blvd., Los Angeles 64, Calif.-A.C
 Aviance Electronics Corp., 2838 North Naomi St., Burbank, Calif.-C
 Bailey Industries Arnold, 875 Elm S., Man-chester, N.H.-K
 Bendix Aviation Corp., Pacific Div., 11600
 Sherman Way, N. Hollywood, Calif.-C.G.H
 Bendix Radio Div., Berdix Aviation Corp., Baltimore 4, Md.-B.C.H.J.J.K
 Borg Equip. Div., Borg Corp., George, 120 S. Main St., Janesville, Wis.-B
 Bruno-New York Industries, 460 W. 34 St., New York 1, N.Y.-A.G
 Corp., 555 Sepulveda Blvd., Van Nuys, Calif.-C.I.K
 Colins Radio Corp., 3030 Nebraska Ave., Sante Calif.-C.I.K
 Commication Devices Corp., Gliespie Airport, Santee, Calif.-C.I.K
 Commication Devices Corp., 3031 Parena, New York 27, N.Y.-A.G
 Corbin Corp., 35-15 37 Ave., Long Is-land city 1, N.Y.--A.G
 Corbin Corp., 549 56 Pl., Riverdale, Md.-B.C.H.I.J.K
 Baystrom Instrument, Archbald. Pa.-C
 Daystrom Pacific Corp., 15601 Arrow Hwy. Acusa, Calif.-C.I.K
 Commication Radio & Equip. Corp., RR #3 Troy, Ohio-B.J.K
 Democ P., 0hio S. 637 Stewart Ave., Garden City. N.Y.-B
 Espe

K Federal Telecommunication Labs., 500 Wash-ington Ave., Nutley 10. N.J.-B.C.H.I.J.K Flett Laboratory, 3711 Marshall Rd., Drexel Hill, Pa.-I Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-H.J.J General Communication Co. 100

Thomson Ave., Long Island City 1, N.Y.-H.I.J General Communication Co., 681 Beacon St., Boston 15, Mass.-C General Electrosonics Inc., 32 W. 22 St., New York 10, N.Y.-A.G General Precision Lab.. 63 Bedford Rd., Pleasantville, N.Y.-C.H Hammarlund Mfg. Co., 460 W. 34 St., New York 1, N.Y.-K Hastings Instrument Co., Newcomb Ave. & Ivy Home Rd., Hampton, Va.-D Hazeltine Electronics Corp., 58-25 Little Neck Pkwy., Little Neck 62, N.Y.-C Hudson American Corp., 25 W. 43 St., New York 36, N.Y.-K Industrial Production Co., 8969 Vernon Ave., Upland, Calif.-I Industrial Television Inc., 369 Lexington Ave., Clifton. N.J.-A Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.-B.J Kinetex Instrument Co., 902 Broadway, New York 10, N.Y.-A.B.C,D.E.F.G Kings Electronics Cor., 40 Marbledale Rd., Tuckahoe, N.Y.-C

Laboratory for Electronics Inc., 75 Pitts St., Boston 14, Mass.--C

Larson Nuclear Research, 520 Fifth Ave., New York 36, N.Y.-C

Lavoie Labs. Inc., Morganville, N.J.-B.C Lear Inc., 3171 S, Bundy Dr., Santa Monica, Calif.-B.C.H.I.J.K

Litton Industries, 336 N. Foothill Rd., Bev-erly Hills, Calif.—C,H,I,J

- ackay Radio & Telegraph Co., 345 Hudson St., New York 14, N.Y.-C Magnavox Co., Fort Wayne 4, Ind.-J Marchand Electronic Labs., 255 Mill St., Byran, Conn.-G,IJ Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.-B,1 Masson Corp., W. L., 460 W. 34 St., New York 1, N.Y.-C,E Melphar, Inc., 452 Swann Ave., Alexandria, Va.-C

- Va.--C Minneapolis-Honeywell Regulator Co., 2753 4 Ave. S., Minneapolis 8, Minn.--G Moran Instrument Corp., 170 E, Orange Grove Ave., Pasadena 3, Calif.--C.E National Instrument Co., 23 E. 26 St., New York 10, N.Y. Norden-Ketay Corp., Wiley St., Milford, Conn. --C

- Norden-Ketay Corp., Wiley St., Millord, Conn. —C
  Otis Elevator Co., 35 Ryerson St., Brooklyn 5, N.Y.—C,E,G,H,J
  Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys. Calif.—B,C
  Parsons Co., Ralph M., 617 S. Olive St., Los Angeles 14, Calif.—C,H
  Peer, Inc., 1200 Milton St., Benton Harbor, Mich.—I,K
  Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—C,1
  Polytechnic Research & Development Co., 202 Tillary St., Brooklyn 1, N.Y.—H
  Radalab, Inc., 87-17 124 St., Richmond Hill 18, N.Y.—A,B,C,D,E,F,G,H,I,J,K
  Radio Sonic Corp., Plainfield, N.J.—A,G,J
  Rust Industrial Co., 130 Silver St., Manchester, N.H.—A
  Ryan Industries, 19159 John R St., Detroit 3, Mich.—C

- N.H-A Ryan Industries, 19159 John R St., Detroit 3, Mich.-C Sanders Associates, Inc., 137 Canal St., Nashua, N.H.-C.G Sangano Electric Co., 9th & Converse, Spring-field, 111.-G Seismograph Service Corp., P. O. Box 1590, Tulsa, Okla.-A Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N.Y.-J Skiatron Electronics & TV Corp., 30 E, 10 St., New York 3, N.Y.-C Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.-C,J Sperry Gyroscope Co., Great Neck, N.Y.-A,C Starling Precision Instrument Corp., 34-17 Lawrence St., Flushing, N.Y.-B,C Telephonics Corp., Park Ave., Huntington, N.Y.-F Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-C,K Televiso Corp., 1415 Golf Rd., Des Plaines,

- Telescreen Corp., 36 Grove St., New Canaan, Conn.—C
  Televiso Corp., 1415 Golf Rd., Des Plaines, Ill.—A,B,C,D,E,H,J,K
  Texas Instruments Inc., 6000 Lemmon Ave., Dallas 9, Tex.—C,G
  Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.—A,C,E,G
  Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—A,C,E,H,I,J,K
  United Scientific Labs. 35-15 37 Ave., Long Is-land City 1, N.Y.—C,K
  Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.—C,E
  Wells-Gardner & Co., 2701 N. Kildere Ave.

- Mass.—C,E Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, III.—K White Industries, 421 W. 54 St., New York 19, N.Y.—A,G,J White & Sons, Wilfrid O., 178 Atlantic Ave., Boston 10, Mass.—G,J Wilcox Electric Co., 1400 Chestnut St., Kansas City 27, Mo.—B,C
  - 64-PHOTOELECTRIC

# EQUIPMENT

Cells, photoelecti	ricA
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Acme Telectronix, 1	Div. NEA Service Inc.

- Acme Telectronix, Div., NEA Service Inc., 1200 W. 3rd St., Cleveland 13, Ohio-J
  Aero Electronics Co., 1512 N. Wells St., Chicago 10, 111.-J
  Airlectron, Inc., Box 151, Caldwell, N.J.-D
  Allied Radio Corp., 100 N. Western Ave., Chicago 80, 111.-H
  Allied Research & Eng'g. Inc., 6916 Santa Monica Blvd., Los Angeles, Calif.-F
  American Chronoscope Corp., 316 W. 1st St., Mount Vernon, N.Y.-D
  American Optical Co., Instrument Div., Box A, Buffalo 15, N.Y.-A
  Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.-D
  Automatic Electronic Eng'g. Co., 2427 S. 6 St., Milwaukee 2, Wisc.-D
  Avia Products Co., 7266 Beverly Rd., Los Angeles 36, Calif.-E
  Bache, Semon & Co., 636 Greenwich St., New York 14, N.Y.-F

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Baird Associates Inc., 33 University Rd., Cam-bridge, Mass.-G Barber-Colman Co., 1300 Rock St., Rockford, Ill.-H
- Barber-Colman Co., 1300 Rock St., Rockford, Ill.—H
  Barton Electronics, Inc., 955 Asylum Ave., Hartford 5, Conn.—D,E
  Bausch & Lomb Optical Co., 628 St. Paul St., Rochester, N.Y.—F
  Beckman Div., Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.—C
  Berkeley Div., Beckman Instruments Inc., 2200 Wright Ave., Richmond, Calif.—D
  Better Coil & Transformer Corp., 2000 Main St., Goodland, Ind.—A,B
  Biophysical Instruments Inc., 2194 Bridge St., Philadelphia 24, Pa.—J
  Bradley Laboratories Inc., 168 Columbus Ave., New Haven, Conn.—A
  Brinkmann Instruments Inc., 378 Great Neck Rd.. Great Neck, L.I., N.Y.—G
  Coleman Instruments Inc., 318 Madison St., Maywood, Ill.—C
  Commercial Optical Mfg., 118 Bridge St., Huntington, W. Va.—F
  Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio—D,J
  Consolidated Productions, Bldg. 9, Broward Until. Airport Et Lauderdale Fla.—1

- Commercial Optical Mfg., 118 Bridge St., Huntington, W. Va.-F
  Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-D.J
  Consolidated Productions, Bldg. 9, Broward Int'l. Airport, Ft. Lauderdale, Fla.-D.J
  Deitz Co., S. J., 38 River Edge Rd., River Edge, N.J.-D.J
  Delaware Optical Labs., 36 Williams St., Lans-downe, Pa.-B.C.E.F.G
  Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.-H
  Denrad Mfg. Co., Inc., 310 W. Woodard St., Denison, Texas-D.G.H
  Digual Instrument Co., 212 Almeria Ave., Coral Gables, Fla.-D.E.H
  DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.J.-J
  Dynotron Corp., 13124 Shaker Square, Cleve-land 20, Ohio-I
  Electrical Service Co., 1271 Mission St., San Francisco 3, Calif.-A.D.H
  Electroic Cortrol Corp., 1573 E. Forest Ave., Danville, III.-C
  Electronic Cortrol Corp., 1573 E. Forest Ave., Detroit 7, Mich.-D.H
  Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, III.-A.E.I
  Electron-Tech Equip. Co., 308 Canal St., New York, N.Y.-D.H.J
  Electronics Corp., 22-02 Raphael St., Fairlawn, N.J.-D.H
  Electronices Corp., 22-02 Raphael St., Fairlawn, N.J.-D.H
  Electronice Corp., 21-02 Raphael St., Berg's. Research & Devel. Co., Addison, III.-D.E.H

- Elly Électronics Corp., 22-02 Raphael St., Fairlawn, N.J.-D.H
  Eng's, Research & Devel. Co., Addison, Ill.—
  D.E.H
  Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N.J.-D
  Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.-D.H
  Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-G
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.I
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.I
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.I
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.I
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  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.I
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.J
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.J
  Fecker, Inc., J. W., 2016 Perrysville Ave., Pittsburgh 14, Pa.—G.J
  Fisher-Pierce Co., 170 Pearl St., So. Brain-tree 85, Mass.—J
  Fisher-Pierce Co., 170 Pearl St., So. Brain-tree 85, Mass.—J
  Gardner Lab. Inc., H. A., 4723 Elm St., Be-thesda 14, Md.—C.G
  General Control Co., 1200 Soldiers Field Rd., Boston 34, Maas.—H
  General Electronics, Co., 57 William St., New York 5, N.Y.—D,H
  Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove, N.Y.—D
  Harwood Mfg. Co., 466 W. Superior St., Chi-cago 10, Ill.—E
  Hercules' Elec. Mach'y. & Equip. Co., 1442 E.
  Washington Blvd., Los Angeles 21, Calif.—H
  Hillyer Instrument Co., 528 Elm St., Arlington, N.J.—E
  Husbey & Phillips, 3300 N. San Fernando Blvd., Burbank, Calif.—D
  Industrial Electronics Co., Hanover St., Han-over, Mass.—D
  Instrument Devel. Labs., 163 Highland Ave., Needham Heights 94, Mass.—C.G
  Inf.' Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.—A
  Q Industries, 6110 Wilshire Blvd., Los A

- Kaye Devel. Co., Connecticut Ave.. S. Nor-walk, Conn.—C.D.E.G.H.J Larsen Nuclear Research, 520 Fifth Ave., New York 36, N.Y.—C.D

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- Larson Instrument Co., 24 Orchard St., Tarrytown, N.Y.-D.H
  Leitz, E., 468 4 Ave., New York 16, N.Y.-C
  Lektra Laboratories, Inc., 154 11 Ave., New York 11, N.Y.-D
  Libbey-Owens-Ford Glass Co., Liberty Mirror Div., Brackenridge, Pa.-F
  Librascope, Inc., 808 Western Ave., Glendale 1, Calif.-C
  Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-D.F.H.J
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, III.-D
  Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J.-D
  Mag-Electric Products, 12822 Yukon Ave., Hawthorne, Calif.-E
  Manufacturers Eng's. & Equip. York & Mill Rds., Hatboro, Pa.-C,G
  Marchand Electronic Labs., 255 Mill St., Byram, Conn.-G
  McNeill Eng's. Co., 4057 W. Van Buren St., Chicago 24, III.-D
  Metronics, Inc., U. S. Route 130, Burlington, N.J.-H
  Michigan Electronics, Inc., 854 N. Rockwell St., Chicago 22, 111.-A,D

- Metronics, Inc., U. S. Route 130, Burlington, N.J.-H
  Michigan Electronics, Inc., 854 N. Rockwell St., Chicago 22, 111.—A,D
  Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, 111.—A,D,E,H
  National Radiac, Inc., 10 Crawford St., New-ark 2, N.J.-D
  Natural Lighting Corp., 612 West Elk Ave., Glendale 4, Calif.—E
  Northeastern Development Engineers, Inc., 21 High St., Pawtucket 5, R.I.—H
  Optionic Research, Inc., 1374 Mass. Ave., Cambridge 38, Mass.—A
  Patwin Instruments, Div. of Patent Button Co., 41 Brown St., Waterbury 20, Conn.—G
  Pedersen Electronics, P.O. Box 572, Lafayette, Calif.—D
  Petroff, Peter A., 127 Water St., New York

A1 Brown St., Waterbury 20, Conn.-G Pedersen Electronics, P.O. Box 572, Lafayette, Calif.-D
Petroff, Peter A., 127 Water St., New York 5, N.Y.-D
Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.-H
Phoenix Precision Instrument Co., 3803 N. 5
St., Philadelphia 40, Pa.-A,B,C,D,E,F,G,H
Photobell Co., 43 Vesey St., New York 7, N.Y.-A,B,D,H
Photo Crystals, Inc., 15 S. First St., Geneva, III.-A,B,D,I
Photo Research Corp., 127 W. Alameda Ave., Burbank, Calif.-G
Photoron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio-C,J
Price Electric Corp., Frederick, Md.-H
Radio-Music Corp., S4 S. Water St., Port Chester, N.Y.-H
Ratigan Electronics, Inc., 3614 Maple Ave., Los Angeles 11, Calif.-G,J
Remco Mfg. Co., 545 N. La Salle St., Chicago 10, III.-H
Ripley Co., 1 Factory St., Middletown, Conn. -E,F,G,H
Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.-C,D
Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.-A
Special Products Co., P.O. Box 138, Rock-ville 1, Md.-D
Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.-J

Ling. Div., 19 Chiton Pl., Brooklyn 38, N.Y.-J
Springfield Enterprises, P.O. Box 54, Spring-field Gardens 13, N.Y.-D.E
Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-D.J
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-G,I
Tabet Mfg. Co., 1336 Ballentine Blvd., Nor-folk, Va.-D

New York 19, N.Y.-G.I
Tabet Mfg. Co., 1336 Ballentine Blvd., Norfolk, Va.-D
Technical Products Co., 19 N. Dunlap, Medical, Box 93, Memphis 1 Tenn.-C.G.H
TelAutograph Corp., 16 W. 61 St., New York 23, N.Y.-H
Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-C,G.J
Television Specialty Co., 350 W. 31 St., New York 1, N.Y.-E
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-A,B.D.E.F.G.H
Trinics, John D., 1310 McKinney Ave., Houston 2, Texas-D
Trionics Co., P.O. Box 367 Geneva, Ill.-A
Ultrasonic Eng'g. Co., P. O. Box 46, Maywood, Ill.-G
Veenaline Products Co., P.O. Box 222, Haw-

Mass.-J Wendline Products Co., P.O. Box 222, Haw-thorne, N.J.-D.H Vickers Electric Div., Vickers, Inc., 1835 Lo-cust St., St. Louis 8, Mo.-A Vinson Co., E.R., 1401 Middle Harbor Rd. Oakland 20, Calif.-D.J Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-I Welch Electric Co., 1221 Wade St., Cincin-nati 14. Ohio-H

Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.-G Weston Electrical Instrument Corp., 614 Fre-linghuysen Ave,, Newark 5, N.J.-A,H Worner Electronic Devices, Rankin, Ill .-- D

Zenith Optical Lab., 1940 Great Neck Rd., Copiague, L.I., N.Y.-F Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.-F,G

#### 65—PLASTIC MATERIALS

27 A
AcrylicsA
Cellulose acetateC
Cellulose acetate butyrateD
Cellulose ethyl
Cellulose nitrateF
Chloroprene rubberT
Dially] phthalateAC
Electrically conductive plasticY
ЕрохуХ
Laminates
Laminates, metal cladZ
MelaminesH
MethylsI
PhenolicsJ
Plated plastics
PolyamidesU
PolyestersAD
PolyethyleneK
PolystyreneL
PolytetrafluoroethyleneM
PolytrifluorochlorethyleneN
PolyvinylsV
Reinforced plasticsAB
Resin, aniline-formaldehydeO
Resin, castP
Resin, viny!Q
Rubber, syntheticW
Urea formaldehyde

Abbott Plastics & Machine Corp., 6322 N. Clark St., Chicago 26, 111.—A,C,D,E,F,L,T,V Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio—G,AB Accurate Paper Tube Co., 805 N. Peoria St., Chicago 22, 111.—X Ace Plastic Co., 91-30 Van Wyck Expressway, Jamaica 35, N.Y.—A,C,D,E,G,J,U Actioncraft Products, 8 Sagamore Hill Dr., Port Washington, L.I., N.Y.—A,H,J,K,L,M, 'N

- Actioncraft Products, 8 Sagamore Hill Dr., Port Washington, L.I., N.Y.-A,H.J.K.L.M.'N
  Admiral Corp., Molded Products. Div., P.O. Box 338, W. Chicago, Ill.-A,H.J.AB
  Airflyte Electronics Co., 21 Cottage St., Bayonne, N.J.-P
  American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Manhattan Beach, Calif.-G,Z.AA
  American Micia Insulation Co., 245 Parker Ave., Manasquan, N.J.-J
  Antara Chemicals, Sales Div. General Aniline & Film Corp., 435 Hudson St., New York 14, N.Y.-Q
  Apex Coated Fabrics Co., 12 E. 22 St., New York 10, N.Y.-Q
  Aries Laboratories, 270 Park Ave., New York 17, N.Y.-G,P.X.AB
  Authorized Mfrs. Service, 914 Wyckoff Ave., Brooklyn 27, N.Y.-AB
  Baer Co., N S., 1 Montgomery St., Hillside 5, N.J.-C.D.G.H.J
  Bakelite Co., Div. Union Carbide & Carbon Corp., 30 E. 42 St., New York 17, N.Y. -J.K.L,N.O.S
  Barrett Div., Allied Chemical & Dye Corp., 2112 Sylvan Ave., Toledo 6, Ohio-G,H.J.S
  Beck's Inc., 298 E. 5 St., St. Paul 1, Minn. -G,H.I.J.S.U.Z.AB
  Biggs Co., Carl H., 2255 Barry Ave., Los Angeles 64, Calif.-P.X
  Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio-V
  Bodnar Industries, 19 Rail Road Ave., New Rochelle, N.Y.-AJ,Q.S.V.W.X
  Parenti Corp., 70 Garden St., Lawrence, Mass. -G

- -G -G Borden Co., Chemical Div., 350 Madison Ave., New York 17, N.Y.-A,J,Q,S,V,W,X Boruski, Jr., Ernest F., 505 Fifth Ave., New York 17, N.Y.-P,W Bram Chemical Co., 820 65 Ave., Philadelphia 26, Pa.-G,X Brand & Co., Wm., North & Valley Sts., Willimantic. Conn.-V Cast Optics Corp., 1010 Post Rd., Riverside, Conn.-A,P,L Catalin Corp. of America. 1 Park Ave., New York 16, N.Y.-HJ,L,S Celanese Corp. of America. 180 Madison Ave.. New York 16, N.Y.-C,K.AD Ciba Co., 627 Greenwich St., New York 14, N.Y.-O Colorvision Plastics, Inc., 182 Beacon St.,

- Ciba Co., 627 Greenwich St., New York 14, N.Y.-O
  Colorvision Plastics, Inc., 182 Beacon St., Boston 16. Mass.-A.V
  Continental Can Co., 100 E. 42 St., New York 17, N.Y.-G
  Continental-Diamond Fibre Co., Newark, Del. -G.H.J.X.Z.AA.AB
  Continental Textile & Supply Co., 4245 W. Armitage Ave., Chicago 39, Ill.-K.Q.V
  Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.-M
  Creative Eng'g. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-AB
  Dilectrix Corp., 60 Ocean Ave., Lynbrook, L.I., N.Y.-M

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Dow Chemical Co., Midland, Mich.-E,L,Q,V Duralith Corp., 1025 Race St., Philadelphia 7, Pa.-G,H,J,V Duramark Inc., Port Washington, N.Y.-G,V Durez Plastics & Chemicals, Inc., 1926 Walck Rd., N. Tonawanda, N.Y.-J,P.Y,AA,AB Dynakon Corp., 9603 Clinton, Cleveland, Ohio -G,AB

Eastman Chemical Products, Inc., Kingsport, Tenn.-C,D,K

Eastman Chemical Products, Inc., Kingsport, Tenn.-C,D,K
Electrofilm Inc., 7116 Laurel Canyon Blvd., N. Hollywood, Calif.-C, D, E, F. G, K, L, M, N, O, Q, S, U, V
Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-M.N
Electronic Plastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.-G,P,X,AA,AB
Electro-Technical Products Div., Sun Chemi-cal Corp., 113 E. Centre St., Nutley 10, NJ. -G,H,K,N
Ellanar Chemical Co., 2308 Oakton St.,

cal Corp., 113 E. Centre St., Nutley 10, N.J. -G.H.K.N Ellanar Chemical Co., 2308 Oakton St., Evanston, III.-P,AB Emerson Plastics Corp., 567 3 Ave., New York 16, N.Y.-M.AB Emerson & Cuming 869 Washington St., Canton, Mass.-G.L.M.P.X.Y.AB Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.-K Fidelity Chemical Products, 470 Frelinghuy-sen Ave., Newark 5, N.J.-D Filmwood Corp., Merchantville 8, N.J.-C,E, F,G,H,J.V Formica Co., 4614 Spring Grove Ave., Cincin-nati 32, Ohio-G,X.Z Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington 99, Del.-G,H,J,Z,AB Furane Plastics Inc., 4516 Brazil St., Los Angeles 39, Calif.-P,X,AB Garlock Packing Co., Main St., Palmyra, N.Y.-M.N Gee-Lar Mfg. Co., 819 Elm St., Rockford, III. -K General Cement Mfg. Co., 919 Taylor Ave.

-K General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.-A.C.D.E.V General Electric Co., Chemical & Metallurgical Div., 1 Plastics Ave., Pittsfield, Mass.-G.J.P.W

G.J.P.W General Plastics Corp., 165 3rd Ave., Pater-son 4, N.J.--M.N.P.Y General Tire & Rubber Co., Industrial Prod-ucts Div., Wabash, Ind.--G.K.V Gits Molding Corp., 4600 W. Huron St., Chi-cago 44, Ill.--A.C.D.E.K.L Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio--G

Ohio—G.
Ohio—G.
Goodrich Chemical Co., B.F. 2060 E. 9 St., Cleveland 15, Ohio—P.Q.V.W
Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio—G.Z.AB
Graef Eng'g. Co., P.O. Box 416, Paramount, Calif.—G.J.K.M.N.U
Hermes Plastics. Inc., 13 University Pl., New York 3, N.Y.—A.G.J
Honeycomb Co. of America, 3 Burroughs St., Bridgeport, Conn.—G
Hopp Press, Inc., 460 W. 34th St., New York 1, N.Y.
Houghton Laboratories. 322 Bush St. Olean

N.Y. Houghton Laboratories, 322 Bush St., Olean, N.Y.-P.X Imperial Radar & Wire Corp., 820 E. 233rd St., New York 66, N.Y.-V Industrial Accessories, Inc., 77 S. Broadway, Long Branch. N.J.-G.W Industrial Develop. & Mfg. Corp., Box 48, Needham, Mass.-P,X Insulating Fabricators of New England, 69 Grove St., Watertown 72, Mass.-A,C,G,H, I.J.K.L.M.N

Insulating Fabricators of A. Mass.—A,C,G,H, I,J,K,L,M,N
Insulating Tube Co., 26 Cottage St., Pough-keepsie, N.Y.—J.G
Int'l. Testing Service, Div. Jackson & Church, 321 N. Hamilton St., Saginaw, Mich.—V
Irvington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11. N.J.—K
Isolantite Mfg. Corp., Warren Ave., Stirling. N.J.—X
Jodee Plastics Co., 534 Glenmore Ave., Brook-Jodee Plastics Co., 534 Glenmore Ave., Brook-

- Isolanitie Mfg. Corp., Warren Ave., Stirling. N.J.—X
  Jodee Plastics Co., 534 Glenmore Ave., Brook-lyn 7, N.Y.—A,C,D,E,F,G,H,J,K,L,M,N,T,U, V,X,Y,AB
  Keller Products. 41 Union St., Manchester, N.H.—G,X,Z,AB
  Kellogg Co., M. W., P.O. Box 469, Jersey City 3, N.J.—N,W
  Kennedy & Co. D. S., 432 S. Main St., Cohas-set, Mass.—G,AB
  Keystone Electronics Corp., 423 Broome St., New York 13, N.Y.—G,H,J
  Keywoff Products Co., Overton. Nebr.—Q
  Kings Electronics Co., 40 Marbledale Rd., Tuckaboe. N.Y.—M
  Lacquer & Chemical Corp., 214 40th St., Brooklyn 32, N.Y.—A,C,D,E,F,H,L,O,S,U,V
  Laminated Sheet Products Corp., 449 Neponset St., Norwood, Mass.—A,G,H,J,K,L,M,N,V,Z, A.A.B
  LaMoree, C.D., 1325 San Julian St., Los
- LaMoree, C.D., 1325 San Julian St., Los Angeles 15, Calif,—G,H,I,M,AA

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Lennard Co., P.M., 671 Bergen St., Brooklyn 38, N.Y.-A.C.D.E.G.H.I.J.K.L.M.N.P.Q.U.V. X.AB.AD Long. Inc., Thomas J., 215 Stonehinge Lane, Carle Place, Long Island, N.Y.-A.C.G.H.J. X.Z

Luminous Resins, 166 W. Washington St., Chicago 2, Ill.—A,D.G,K,L,V Lunn Laminates, Inc., Huntington Station, N.Y.—G

N.Y.-G Luria-Cournand, Inc., Havre De Grace, Md. -A.G.V.X.AB Marblette Corp., 37-21 30 St., Long Island City 1, N.Y.-G.J.P.X.AB McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.-X.Y Marbon Corp., 1926 W. 10th Ave., Gary, Ind. -V

Melpar, Inc., 452 Swann Ave., Alexandria, Va.--P

- Meipar, Inc., 452 Swann Ave., Alexandria, Va.--P Mesa Plastics Co., 11751 Mississippi Ave., Los Angeles 25, Calif.--V,X,Y,AB,AC Mica Insulator Co., 797 Broadway, Schenee-tady, N.Y.-G Micro-Circuits Co., New Buffalo, Mich.--Y Miller Electric Co., P. O. Box 1827. Jackson-ville, Fla.--A,C,D,E,F.H.J,K,L,M.N,Q Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.--C,G,M,P.V.W,X Minor Rubber Co., 49 Ackerman St., Bloom-field, N.J.--M,W,Y Mitchell Rand Companies, 51 Murray St., New York 7, N.Y.--P Moore Co., H.J., 266 William St., New York 38, N.Y.--C,D,G,H,J,K,L,M,T,V Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.--C,G,H,J,M,O,P,S,U,W,X,Y,Z, A.A.B National Gasket & Washer Mfg. Co., 124 E. 25

- ACCEPSIC, N.I. G.G.H.J.M.U.P.S.U.W.X.Y.Z. AA,AB
  National Gasket & Washer Mfg. Co., 124 E. 25
  St., New York 10, N.Y.—C.J.Q
  National Plastic Products, Odenton, Md.—G
  National Vulcanized Fibre Co., Maryland Ave., & Beech St., Wilmington 99, Del.—G. H.J.Z.AB
  Neosil Products. Div. of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.—J.T.W
  New Hermes Engraving Machine Corp., 13
  University Pl., New York 3, N.Y.—A,G.J
  Oppenheimer Corp., 578 Exchange St., Buffalo 10, N.Y.—A,C.D.E.F.K.L.Q.V
  Paisley Products. Div. Morningstar, Nicol, Inc., 630 W. 51 St., New York 19, N.Y.
  Pan-Ormond Corp., Roy 1605, Ormond Reach

Pan-Ormond Corp., Box 1605, Ormond Beach,

- Inc., 630 W. 51 St., New York 19, N.Y. -V
  Pan-Ormond Corp., Box 1605, Ormond Beach, Fla.-P
  Pearson Industries, 105 W. Monroe St. Chicago 3, III.-D, G.J.Q.V.X.Z.AA.AB
  Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 34, Pa.-A,C,D, G.J.S.AB
  Peters Chemical Mfg. Co., 3623 Lake St., Melrose Park, III.-A
  Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-A.G.H.J.K.L.X.Z
  Plasticraft Products Co., 1 Station Plaza, West Nyack, N.Y.-A.C.D.G.H.J.K.L.X.Z
  Plastifight, Inc., 481 Canal St., Stamford. Conn.-G
  Plastonics, P.O. Box 96, Winter Hill 45, Mass.-P.Q.X.AD
  Polyken Products, Dept. Kendall Co., 222 W. Adams St., Chicago 6, III.-K
  Polymer Corp. of Pa., 126 N. 5th St., Reading, Pa.-M.N.U
  Porcelain Products, Inc., 422 W. Sandusky St., Findlay, Ohio-K.AB
  Precision Plastic Products, 225 N. Racine Ave., Chicago 7, III.-A,L
  Red Seal Electric Co. 6321 Detroit Ave., Cleveland 2, Ohio-J.AB
  Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N.Y.-J
  Reilly Tar & Chemical Corp., 1615 Merchant Bank Bldg., Indianapolis, Ind.-J
  Resinite Corp., 20351 W. Charleston St., Chicago 47, III.-P
  Resistoflex Corp., 697 N. Lake Ave., Pasadena 6, Calif.-K.L.P
  Red Seq V., J. K.L.X.R., Melrose Park, III.-G.J.Z
  Richardson Co., 2190 Lake St., Melrose Park, III.-G.J.Z
  Rodale Mfg. Co., Emmaus, Pa.-J
  Rodale Mfg. Co., 2055 epulveda Blvd., Culver City, Calif.-P,X
  Richardson Co., 2190 Lake St., Melrose Park, III.-G.J.Z
  Rodale Mfg. Corp., Grand & Ruby Aves., Palisades Park, N.J.-C.J.E.F.G.K.L.Y
  St. Regis Paper Co., Panelyte Div., 230 Park Ave., New York, N.Y.-G
  Sheftco Mfg. Corp., Grand & Ruby Aves., Palisaden A, Culi.-W Corp., Grand K. Ruby Aves., Palisaden A, Culi.-W St., Regis Paper Co., Panelyte Div., 230 Park Ave., New York, N.Y.-G
  Sheftco Mfg. Corp., Grand & Ruby Aves., Palisaden A, Culi.-

Snyder Chemical Corp., Bethel, Conn.-J Stevenson, Bros., & Co., 110 Race St., Phila-delphia 6, Pa.-E.K

Stakes Molded Products, Taylor & Webster Sts. Trenton 4, N.J.—C,D.J.K.L.S.V Sun Chemical Corp., 10-10 44 Ave., Long Island City 1, N.Y.—H,J.X Superior Steatite & Ceramic Corp., 83 W. Forest Ave., Englewood, N.J.—X Synthane Corp., Oaks, Pa.—G,H.J.X.Z.AB Taylor Fibre Co., Norristown, Pa.—G,H.J.X., Z,AB Tarking Tane Corp. 177 St. & Hoslaw Bings

Synthane Corp., Oaks, Pa.—G.H.J.X.Z.AB
Taylor Fibre Co., Norristown, Pa.—G.H.J.X. Z.AB
Technical Tape Corp., 177 St. & Harlem River, Bronx, N.Y.—K
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.—P.Q
Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.—I.P.Q
Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.—I.P.Q
Tele Plastics Co. Div. Willmax Mfg. Co., 202 Broadway, Brooklyn 11, N.Y.—A.G
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—A.J.L
Tingstol Co., 1461 W. Grand Ave., Chicago 22, Ill.—G.H.I.J.X.Y.Z.AA
Trimount Plastics Co., 71 Dudley St. Arling-ton, Mass.—C.D.G.J.K.L.V.X.Z
Tri-Point Mfg. & Developing Co., 401 Grand St., Brooklyn 11, N.Y.—A.G,J.K.L.M.N
Union Bay State Chemical Co., 491 Main St., Cambridge 42, Mass.—A
Union Plastics Corp., 1627 Paterson Plank Rd., Secaucus, N.J.—K.M.V
Universal Aviation Equipment, 362 5th Ave., New York 1, N.Y.—A.G, U.S. Gasket Co., 602 N. 10 St., Camden 1, N.J. —M.N
U. S. Rubber Co., 1230 Avenue of the Amer-icas, New York 20, N.Y.—A.G,Q.W.Z.AB
Var Flex Corp., 508 W. Court St., Rome, N.Y.—V
Walter Lee Chemical Corp., 567 3 Ave., New York 16, N.Y.—M.AB
Watertown Mfg. Co., 1000 Echo Lake Rd., Watertown, Mfg. Co., 1000 Echo Lake Rd., Watertown, Sp. Col., 1235 Lawrence Rd., Havertown, Pa.—G,H

### 66-PLASTIC MOLDERS & **FABRICATORS**

FabricatorsA
Forms
InjectorsF
Molders, cabinet
Molders, extruded shapesD
Molders, partsC
Mold releasesG
Presses
SlittersI

Accurate Electronics Corp., 1312 Ontario St., N.W., Cleveland 13, Ohio—A.C
Ace Plastic Co., 91-30 Van Wyck Expressway, Jamaica 35, N.Y.—A.D
Acme Wire Co., New Haven 14, Conn.—G
Admiral Corp., Molded Products, Div., P.O. Box 338, W. Chicago, Ill.—B,C
Aerolite Electronics, 507 26 St., Union City, N.J.—A,C
Allied Engraving & Stamping Co., 161 Ellicott St., Buffalo 3, N.Y.—A
American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Manhattan Beach. Calif.—A
American Mica Insulation Co., 245 Parker Ave., Manasquan, N.J.—A
American Wacuum Products Corp., 2242 S. Colby Ave., W. Los Angeles 64, Calif.— A.C.F
Anchor Plastics Co., 36-36 36 St., Long Island City 6, N.Y.—D
Anchor Specialty Mfg. Co., 300 N. Industrial Ave., Teterboro, N.J.—A
Anti-Corrosive Metal Products Co., River Rd., N., Castleton-on-Hudson, N.Y.—A
Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitman 9, N.J.—C,F,H
Auburn Button Works, Auburn, N.Y.—B,C,D,F
Auburn Button Works, Auburn, N.Y.—B,C,D,F
Auburn Mfg. Co., Pease Ave. & Stark St., Mid-dletown, Con.—A
Baer Co., N. S., 1 Montgomery St., Hillside 5, N.J.—A
Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N.J.—A
Bishop Mfg. Corp., 3445 Howard St., Skokie, Ill. —C
Blacher, B., 752 Broadway, New York 3, N.Y.

Blacher, B., 752 Broadway, New York 3, N.Y.

Blaco Mfg. Co., 6541 Euclid Ave., Cleveland 3, Ohio-

- Ohio—G
  Blazon Mfg., 6021 Dempster St., Morton Grove, III.—A.C
  B & M Elec. Co., 838 4th Ave., Brooklyn 82. N.Y.—A.C.D
  Bolta Corp., 70 Garden St., Lawrence, Mass. —B.C
  Brew & Co., Richard D., Airport Rd., Con-cord., N.H.—C.H
  Brihart Plastics Sales Corp., P.O. Box 31, Mineola, N.Y.—C

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Buggie, Inc., H. H., 726 Stanton St., Toledo 4, Ohio-C
California Plasteck, Inc., 225 E. 4 St., Los Angeles 13, Calif.-A,C
Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.-A
Chicago Molded Products Corp., 1020 N. Kolmar Ave., Chicago 51, III.-B,C,F
Cinch Mfg. Corp., 1026 S. Homan Ave., Chi-cago 24, III.-C
Cincinnati Molding Co., 2037 Florence Ave., Cincinnati 6, Ohio-C
Collectron Corp., 216 E. 45th St., New York 17, N.Y.-A,C,F
Condector Plastics, Inc., 182 Beacon St., Boston 16, Mass.-A,D,E
Commercial Plastics Cor., 2812 W. North Ave., Chicago 47, III.-D,C
Consolidated Molded Products Corp., 309 Cherry St., Scranton 2, Pa.-A,B,C
Continental Connector Corp., 30-30 Northern Blvd., Long Island City 1, N.Y.-C
Continental Connector Corp., 30-30 Northern Blvd., Long Island City 1, N.Y.-C
Continental Connector Corp., 10-26 Continental Connector Corp., 80-30 Northern Blvd., Long Island City 1, N.Y.-C
Cortained Industries, 4545 W. Cortland St., Chicago 39, III.-A
Craative Eng'g. Corp., 10816 Burbank Blvd., N. Hollywood, Calif.-A,C,E
Creative Plastics Corp., Rt. 25-A, Stony Brook, N.Y.-A,C
Decatur Electronic Industries Corp., 203 Orinoco Dr., Brightwaters, L.I., N.Y-C
Demco Products, P.O. Box 5042, Philadelphia 11, Pa.-A,C,E
Dienco-Gray Co., 207 E. 6 St., Dayton 2, Ohio -C

-A Dimco-Gray Co., 207 E. 6 St., Dayton 2, Ohio

Dimco-Gray Co., 207 E. 6 St., Dayton 2, Ohio -C
Dynakon Corp., 9603 Clinton Rd., Cleveland 13, Ohio-A,C
Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.-A,C
Elco Corp., M St. below Erie Ave., Phila-delphia 24, Pa.-C
Elcon Mfg. Co., 436 E. Manchester Ave., Los Angeles 3, Calif.-C
Electron Development Co., 14701 Keswick St., Van Nuys, Calif.-C
Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.-A,C,D
Electronic Plastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.-G
Ellanar Chemical Co., 2308 Oakton St., Evans-ton, II.-A,C
Emeloid Co., 1239 Central Ave., Hillside, N.J. -A,C,E,F
Emerson, Plastics Corp., 567 3 Ave., New

----, U.C., F Emerson Plastics Corp., 567 3 Ave., New York 16, N.Y.--A Erie Resistor Corp., 644 W. 12th St., Erie, Pa.--B,C

Erie Resistor Corp., 644 W. 12th St., Erie, Pa.-B,C Extruders Inc., 3232 W, El Segundo Blvd., Hawthorne, Calif.-D Flexrock Co., 3609 Filbert St., Philadelphia 1. Pa.-C,D Formica Co., 4614 Spring Grove Ave., Cin-cinnati 32, Ohio-A

cinnati 32, Ohio—A Garde Mfr. Co., 588 Eddy St., Providence 3, R.I.—C,E Garlock Packing Co., Main St., Palmyra, N.Y.—A General Electric Co., Chemical & Metallurgi-cal Div., 1 Plastics Ave., Pittsfield, Maşs. —B,C,G General Products Corp., Union Springs, N.Y. —C

General Products Corp., Union Springs, N.Y. —C
General Tire & Rubber Co., Industrial Products Div., Wabash, Ind.—A,B,D
Gits Molding Corp., 4600 W. Huron St., Chicago 44, III.—C
Glass & Bro., Harry H., 10 Van Cortlandt Ave. E., New York 58, N.Y.—A
Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio—A,C
Goody E., Don. 1014 Fair Oaks Ave., S. Pasadena. Calif.—D
Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio—A,E,H
Graef Eng'g. Co., P.O. Box 416, Paramount. Calif.—A,C,D,E
Grayhill, 561 Hillgrove Ave., LaGrange, III. —C
Gries Reproducer Corp., 5 Second St., New

--C ries Reproducer Corp., 5 Second St., New Rochelle, N.Y.--C,F Gries

Gries Reproducer Corp., b Second St., New Rochelle, N.Y.-C.F
Hermes Plastics, Inc., 13 University Pl., New York 3, N.Y.-A
Honeycomb Co. of America, 3 Burroughs St., Bridgeport, Conn.-C
Hopp Press. Inc., 460 W. 34 St., New York 1, N.Y.-A,C
Hydraulic Press Mfg. Co., Marion Rd., Mt. Gilead. Ohio-H
Hydra Molding Co., 100 Sharron Ave., Plattsburg, N.Y.-C.F
I E Manufacturing. 325 N. Hoyne Ave., Chicago 12, III.-D.F
Industrial Devel. & Mfg. Corp., Box 48, Needham, Mass.-A
Industrial Devel. & Mfg. Co., 109 Prince St., New York 12, N.Y.-C
Industrial Hardware Mfg. Co., 109 Prince St., New York 12, N.Y.-C
Insulating Fabricators of New England, 69 Grove St., Watertown 72, Mass.-A,C,D
Int'l. Testing Service Div., Jackson & Church. 321 N. Hamilton St., Saginaw, Mich.-F,H
Javex, P.O. Box 646, Redlands, Calif.-A

Javex, P.O. Box 646, Redlands, Calif .- A

Jodee Plastics Co. 534 Glenmore Ave., Brook-lyn 7, N.Y.-A.E

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Kaywoff Products Co., Overton, Nebr.—A,C,D Keller Products, 41 Union St., Manchester, N.H.—C

N.H.-U Kennedy & Co., D.S., 432 S. Main St., Cohasset, Mass.-A Klise Mfg. Co., 50 Cottage Grove St., S.W., Grand Rapids 2, Mich.-A Kurz-Kasch, Inc., 1420 S. Broadway, Dayton 1, Ohio-BC

Kurz-Kasch, Inc., 1420 S. Broadway, Dayton 1, Ohio-B,C
Laminated Sheet Products Corp., 449 Neponset St., Norwood, Mass.—A
Lee Electronic Labs., Inc., 233 Dudley St., Boston 19, Mass.—A
Lennard Co., P.M., 671 Bergen St., Brooklyn 38, N.Y.—A, B,C,E,F,H
Lerco, Div. Lynn-Deatrick, Inc., 501 S. Varney St., Burbank, Calif.—A,C
Long Inc., Thomas J., 215 Stonehinge Lane, Carle Place, L.I., N.Y.—A
Luminous Resins, 166 W. Washington St., Chicago 2, III.—A
Lunn Laminates Inc., Huntington Station, L.I., N.Y.—A
Luria-Cournard, Inc., Havre De Grace, Md.—A
Luxor Lighting Products, Inc., 350 5 Ave., New York 1, N.Y.—A
Mandex Mfg. Co., 2608 W. 16 St., Chicago 8, III. —A,C
Mayfair Molded Products Corp., 4440 Elston Ave., Chicago 30, III.—C
McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.—A
Merix Chemical Co., 1021 E. 55 St., Chicago 15, III.—G

McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.—A
Merix Chemical Co., 1021 E. 55 St., Chicago 15, III.—G
Mica Insulator Co., 797 Broadway, Schenec-tady, N.Y.—A,C
Microtone Co., 5740 Wayzata Blvd., Minnea-polis 16, Minn.—A,B
Midwest Moulding & Mfg. Co., Gurnee Waukegan, III.—C,F
Midwest Plastic Products. 1801 Chicago Rd., Chicago Heights, III.—D
Millen Mfg. Co., James, 150 Exchange St., Malden. Mass.—C
Modern Equip. Co., 17 Bleecker St., New York 12, N.Y.—A
Molded Insulation Co., 335 E. Price St., Phil-adelphia 44, Pa.—A,B,C,F
Molded Products Corp., 4533 W. Harrison St., Chicago 24, III.—A,B,C
Molding Corp. of America, 40 Church St., Pawtucket, R.I.—C
Molding Specialists, Inc., 289 Nepperhan Ave., Yonkers, N.Y.—A
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.—A
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.—C
Maer Corp., of America, 125 Clifton Blvd., Clifton, N.J.—C
Naer Corp., 1177 Santa Monica Blvd., W. Los Angeles 25, Calif.—A,C
National Gasket & Washer Mfg. Co., 124 E. 25 St., New York 10, N.Y.—A
National Moldite Co., 1410 Chestnut Ave., & Beech Sts., Wilmington, Dela.—A
New Products Co., 325 W. Main St., Moores-town, N.J.—A.C

New Hermes Engraving Machine Corp., 13 University Pl., New York 3, N.Y.-A
New Products Co., 1071 E. 54 St., Indianapolis, Ind.-A,C
Nichols Products Co., 325 W. Main St., Moores-town, N.J.-A,C
Northern Industrial Chemical Co., 7 Elkins St., South Boston 27, Mass.-C
Northern Industrial Chemical Co., 7 Elkins St., South Boston 27, Mass.-C
Northern Industrial Chemical Co., 7 Elkins N.Y.-C
N.W. Plastics, Inc., 65 E. Plato St., St. Paul 1, Minn.-A.B,C,F,H
Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15, Calif.-B,C,F
Owens-Illinois Glass Co., Madison & St. Clair Sts., Toledo 1, Ohio-C
Pacific Electricord Co., 3217 Exposition Pl., Los Angeles 8, Calif.-C,F,H
Parisian. Novelty Co., 3510 S. Western Ave., Chicago 9, Ill.-A
Pearson Industries, 105 W. Monroe St., Chi-cago 3, 111.-D,E,I
Peerless Products Industries, 812 N. Pulaski Rd., Chicago 51, Ill.-A
Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-A
Photo Chemical Products, 479 Walton Ave., New York 51. N.Y.-A
Plastic Accessories Inc., 91 Mercer St., New York 12, N.Y.-A
Plasticite Corp., 327 Rider Ave., New York 51, N.Y.-C,F
Plasticita Co., 110 Cedar Ave., Pitman 15, N.Y.-C,F
Plasticita Co., 110 Cedar Ave., Pitman 15, N.Y.-A
Phasticita Corp. of Penna., 126 N. 5 St., Read-ing. Pa.-A,D,E
Precision Plastic Products, 225 N. Racine Ave., Chicago 7, Ill.-A,C,D
Printloid, Inc., 93 Mercer St., New York 12, N.Y.-A
Product Eng'g. Labs., 314 Adams St., Newark 5, N.J.-A
Quality Components, Inc., St. Marys, Pa.-C
Radio City Products Co., Centre & Glendale Sts., Easton, Pa.-F
Radio Sonic Corp., Plainfield, N.J.-A
Redio Sonic Corp., Plainfield, N.J.-A

Remler Co., 2101 Bryant St., San Francisco 10, Calif.—B,C
Research Instrument Co., 233 Broadway, New York 7, N.Y.—A,B,C
Rex Corp., Hayward Rd., W. Acton, Mass.—D
Reynolds Industries, 2105 Colorado Ave., Santa Monica, Calif.—C
RHO Eng'g. Co., 4205 Sepulveda Blvd., Culver City, Calif.—A
Richardson Co., 2790 Lake St., Melrose Park, Ill.—A,B,C,F
Rogan Brothers, 8031 N. Monticello Ave., Skokie, Ill.—C
Romar Plastics, Inc., 1311 E. Main St., St. Charles, Ill.—B,C,F
Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—A
Shaw Insulator Co., 160 Coit St., Irvington 11, N.J.—C
Sheffco Mfg. Corp., Grand & Ruby Aves., Palisades Park, N.J.—A
Silkocks-Miller Co., 10 W. Parker Ave., Maplewood, N.J.—A
Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.—A
Slate & Associates, C. C., 11370 W. Olympic Blvd., Los Angeles 64, Calif.—A BC D

Mass.—A Slate & Associates, C. C., 11370 W. Olympic Blvd., Los Angeles 64, Calif.—A,B,C,D Smith Mfg. Co., Nathan R., 105 Pasadena Ave., S. Pasadena, Calif.—C Stevens Products, 86 Main St., E. Orange, N.J. —A,C,E Stalker, Wolded, Products, Taylor, & Webster

---A,C,E Stokes Molded Products, Taylor & Webster Sts., Trenton 4, NJ.--C,D Sun Dial Corp., P.O. Box 326, Caldwell, NJ.

Sun Dial Corp., P.O. Box 326, Caldwell, N.J. —A Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—A.B.C.F Synthane Corp., Oaks, Pa.—A Taylor Fibre Co., Norristown, Pa.—A Taylor Fibre Co., Norristown, Pa.—A Taylor Fibre Co., Norristown, Pa.—A Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.—G Techron Corp. 254 Friend St., Boston 14, Mass.—A Tele-Beam Industries, 6th & Soscol Ave., Napa, Calif.—C Tele-Plastics Co. Div. Willmax Mfg. Co., 202 Broadway, Brooklyn 11, N.Y.—A,C Ther Electric & Machine Works, 17 S. Jeffer-son St., Chicago 6, III.—A Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—A,B,D Tri-Dex Co., P.O. Box 1207, Lindsay, Calif. —A

A

Tri-Dex Co., P.O. Box 1207, Lindsay, Calif. —A
Tri-Point Mfg. & Devel. Co., 401 Grand St., Brooklyn 11, N.Y.—A
Tri-State Plastics, Inc., 5509 Lincoln Ave., Chicago 25, Ill.—A,C
Ultra Electroforming & Mfg. Co., 110 Cedar Ave., Pitman 15. N.J.—C,F
Union Plastics Corp., 1627 Paterson Plank Rd., Secaucus, N.J.—D
Universal Aviation Equip. Inc., 362 5 Ave., New York 1. N.Y.—H
Universal Aviation Equip. Inc., 362 5 Ave., New York 1. N.Y.—H
Universal Specialty Co., P. O. Box 1892, Bos-ton 5, Mass.—C
U.S. Gasket Co., 602 N. 10th St., Camden 1, N.Y.—A
Veraile Products Co., P.O. Box 222. Haw-thorne, N.J.—A
Victory Mfg. Co., 1722 W. Arcade Pl., Chi-cago 12. III.—B,C
Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.—A
Visulite Co., 423 Broome St., New York 13, N.Y.—A

Visulite Co., 423 Broome Co., 1569 Morris St., N.Y.-A Wabash Metal Products Co., 1569 Morris St., Wabash, Ind.-H Walter Lee Chemical Corp., 567 3 Ave., New York 16, N.Y.-A Warren Plastics Corp., S. Irvine St., Warren, Pa.-C.H Washington Institute of Technology Inc., 4810

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Washington Institute of Technology Inc., 4810 Calvert Rd.. College Park, Md.—C
Watertown Mfg. Co., 1000 Echo Lake Rd.. Watertown. Conn.—B.C.E.F
Western Coil & Electrical Co., 215 State St., Racine, Wisc.—A,C.E.F
White Co. S. S., Industrial Div., 10 E. 40th St.. New York 16, N.Y.—A
White Industries, 421 W. 54 St., New York 19, N.Y.—A
Whiteso, Inc., 9330 Byron St., Schiller Park, III.—C
Willson Camera Co., 1395 Lawrence Rd., Havertown. Pa.—H
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.—A
Woodall Industries, Inc., 7569 E. McNichols

Woodall Industries. Inc., 7569 E. McNichols Rd., Detroit 34, Mich.—A

### 67—POWER SUPPLIES & CONVERTERS

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Power	supplies, ACA
Power	supplies, DCB
Power	supplies, high voltageP
Power	supplies, low voltageQ
Power	supplies, miniatureR
Power	supplies, mobileF
Power	supplies, regulatedC

Power supplies, special purpose . . . . D Power supplies, transistor ......S Power supplies variable frequency ... E . . . G . . . . . . . . . . . . . . Choppers .. Converters, frequency .....J Converters, voltage ......K Converters, waveform ..... Regulators, voltage .....N Vibrators .....O

Accurate Engineering Co., 2005 Blue Island Ave., Chicago 8, Ill.—B,D,N,Q
ACF Electronics, Div. ACF Industries Inc., 800 N. Pitt St., Alexandria, Va.—N,Q
Acme Electric Corp., Cuba, N.Y.—A,B.C
Acme Electric Corp., Cuba, N.Y.—A,B.C
Acome Electric Corp., Cuba, N.Y.—A,B.C
Acome Electronics Corp., Box 348, Gibson City, Ill.—A,O
Adler Communications Labs., 1 LeFevre Lane, New Rochelle, N.Y.—C
Advance Instrument Corp., 1709 F St., Belmar, N.J.—A,B,C,D,E,F,H,I,J,K,L,M,N,O,P,Q,R,S
Aero Electronics Co. 1512 N. Wells St., Chi-cago 10, Ill.—D
Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.—B,C
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.—A,B,D,F,H,I,J,M,O
Aircraft-Marine Products, 2100 Paxton St., Harrisburg, Pa.—D,P
Airpax Products Co., 8 Wolcott Ave., Lawrence, Mass.—B,C,D,N,Q
Alied Eng'g. Div., Conn. & Richards Ave., S. Norwalk, Conn.—A,B,C,D
Allied Eng'g. Div., Conn. & Richards Ave., S. Norwalk, Conn.—A,B,C,D
Allis Co., Louis, 427 E. Stewart St., Milwau-kee 4, Wisc.—E
American Electric Motors, 4811 Telegraph Rd., Los Angeles 22, Calif.—A,B,C,D,E,F,H.

Allied Engg. Div., Colli. & Reinfalds 1999, S. Norwalk, Conn.-A.B.C.D
Allis Co., Louis, 427 E. Stewart St., Milwaukee 4, Wisc.-E
American Electric Motors, 4811 Telegraph Rd., Los Angeles 22, Calif.-A.B.C.D.E.F.H. I.J.K.L.M.N.P.Q.R
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.-B.C
American Rectifier Corp., 95 Lafayette St., New York 13, N.Y.-B.C.D.P.Q
American Television & Radio Co., 300 E. 4th St., St. Paul 1, Minn.-A.B.D.F.G.H.I.M.O
Anton Electronic Lab's., 1226 T Flushing Ave., Brooklyn 37, N.Y.-C.D.N
Applegate & Co. C. J., 1816 Grove St., Boulder, Colo.-B.C.D.N.P.R
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Arnoux Corp., 1357 Hawthorne Blvd., Haw-thorne, Calif.-B.C.D.Q
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Atlas Eng'g. Co., 3 Edgewood St., Roxbury

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Atlas Eng'g. Co., 3 Edgewood St., Roxbury 19, Mass.-D.N
Atomic Instrument Co., 84 Mass. Ave., Cambridge 39, Mass.-B,C,P
Autel Electronics Co., P.O. Box 225, Linden. N.J.-D.P
Authorized Mfrs. Service. 919 Wyckoff Ave., Brooklyn 27, N.Y.-A,B,C,D.N,Q,R
Avion Instrument Corp. 299 State Hwy #17, Paramus. N.J.-A,B,C,D,E,G,I,J,N
Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.-A.B
Barker & Williamson, Inc., 237 Fairfield Ave., Upper Darby, Pa.-B,C,D
Barnes Development Co., 213 W. Baltimore Ave., Lanadowne, Pa.-G
Bassett Inc., Rex. 1814 NE 17th Court, Ft. Lauderdale, Fla.-J
Belock Instrument Corp., 111-01 14th Ave., College Point 56, N.Y.-D
Bendix Aviation Corp., Red Bank Div., Eatontown, NJ..-A,B,C,D,E,H,I,J,K,M,N
Berkeley Div.. Beekman Instruments Inc., 2200 Wright Ave., Richmond, Calif.-A,B
D,G,J
Beta Electric Corp., 333 E. 103 St., New York 29, N.Y.-A,B,C,D,P.O

D.G.J Beta Electric Corp., 333 E. 103 St., New York 29, N.Y.—A.B.C.D.P.Q Beva Laboratory, 1640 Olden Ave., Ext., Trenton, N.J.—C.D.N.P.Q Birdsell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.—A.B Bludworth Marine, 92 Gold St., New York 38, N.Y.—I

Alto, Calif.—A,B Bludworth Marine, 92 Gold St., New York 38, N.Y.—I Bogart Mfg. Corp., 315 Seigel St., Brooklyn 6, N.Y.—C Bogue Electric Mfg. Co., 52 Iowa Ave., Pater-son 3, N.J.—A,B,C,D,E,F,H,I,J,K,N,P,Q,R,S Boland & Boyce, 236 Washington Ave., Belle-ville, N.J.—D,P,Q Booth Co., A, E., E., 265 S. Alexandria Ave., Los Angeles 4, Calif.—A,B,C,H,I,P,Q Bristol Co., Waterbury 20, Conn.—G,H,I,M Bristol Eng'g. Corp.. Beaver Dam Rd., & Oak Lane, Bristol, Pa.—A,B,C,D,P,Q,R Browning Laboratories, 750 Main St., Mill-town. N.J.—B,C,D Browning Laboratories, 750 Main St., Win-chester, Mass.—D Bruno-New York Industries, 460 W. 34 St., New York 1. N.Y.—C Buck Eng'g Co., 37 Marcy St., Freehold, N.J. —B,C,P Burgess Battery Co., Foot of Exchange St., Freenort. III.—R B S

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Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia. 7, Pa.-B,C
Carol Electronics Corp., 315 W. Stephen St., Martinsburg, W. Va.-A,B,C,N,O
Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47, Ill.-F,I,M
Chase Electronics Lab., 2631 Woodlyn Rd., Pasadena 8, Calif.-C
Chatham Electronics Corp., 630 W. Mt. Pleasant Ave., Livingston. N.J.-B,C,D,M,N, P
Chicago Electronics Lab., 1014 W. 24, W

Pleasant Ave., Livingston. N.J.-B,C,D,M.N.
P
Chicago Electronics Lab., 1214 W. Madison St., Chicago 7, Ill.-B
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-A,B,C,D,K,L,N
Cline Electric Mfg. Co., 3405 W. 47 St., Chicago 32, Ill.-H,I,J,K,M.N
Communication Measurements Lab. Inc., 350
Leland Ave., Plainfield, N.J.-A,B,C,E
Condenser Products Co., 140 Hamilton St., New Haven 4, Conn.-B,D,P,R
Conn. Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.-F,I,M
Con Ray Corp., 29 W. Apple St., Dayton 2, Ohio-C,D,K
Cornell-Dubilier Elec. Corp., 333 Hamilton Blvd., S. Plainfield, N.J.-C,D,F,H,I,K,O
Cosmo Eng'g. Labs., Mountain Ave., Hackettstown, N.J.-H
Cubic Corp., 2841 Canon St., San Diego 6, Calif.-C,D,S
Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica. Calif.-H.1.M

town, N.J.-H
Cubic Corp., 2841 Canon St., San Diego 6, Calif.-C,D,S
Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.-H,I,M
Dayton Aviation Radio & Equip. Co., R.R. #3, Troy. Ohio-B
DeMornay-Bonardi, Inc., 780 S. Arroyo Pkway, Pasadena, Calif.-C,D,P
Detronics, Inc., 221 N. Hermitage Ave., Tren-ton, N.J.-A.B,C.N
DeWald Radio Mfg. Corp., 35-15 37 Ave., Long Island City 1, N.Y.-A.C,D,H,I,P,Q
Doelacam Div., Minneapolis-Honeywell Regu-lator Co., 1400 Soldiers Field Rd., Boston 35, Mass.-A.D
Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge, Mass.-C
Dowglas Instrument Lab., 176 Norfolk Ave., Boston 19, Mass.-C
Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-G,O
Drake Co., R. L., 18 E. Central Ave., Miamis-burg, Ohio--B,C,H,Q
Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.-A,B,C,D,F,N,O,P,Q,R,S
Detroit 7, Mich.-B,H
Drive-In-Theater Mfg. Co., 505 W. 9th, Kan-sas City, Mo.-A,B,C,D
DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Cliffton N.J.-A,B,F,N,P,Q
DuMont Laboratories, Inc., Allen B., Instru-ment Div., 760 Bloomfield Ave., Clifton, N.J.-P
Eastern Precision Resistor Corp., 130-11 90th Ave., Richmod Hill 18, N.Y.-P
Eastern Precision Resistor Corp., 130-11 90th Ave., Richmod Hill 18, N.Y.-P
Eastern Precision Resistor Corp., 130-11 90th Ave., Richmod Hill 18, N.Y.-P
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Ave., Richmond Jim To. NAT. A. Start, Boston 16.
Mass.-C
Eder Engineering Co., 1568 S. First St., Milwaukee 4, Wisc.-A.B.C.D.N
Edko Electronics Eng'g., 202 Grand St., Brooklyn 11, N.Y.-A.B.C.D.F.P.Q.R
Eeco Production Co., 827 S. Vermont Ave., Los Angeles 5, Calif.-N
Eidor, Inc., 1501 W. Congress St., Chicago 7, III.-A.B.C.D.F.F.I.M.P.Q.R
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Electran Mfg. Co., 1901 Clyhourn Ave., Chi-cago 14, III.-B.D
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Electric Indicator Co., Camp Ave., Springdale, Conn.-A.B.C.D.F.H.I.N
Electric Regulator Corp., Pearl St., Norwalk, Conn.-N.

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Electronic Devices, Inc., 429 12 St., Brooklyn 15, N.Y.--B,P.Q
Electronic Heating Corp., 60 Needham St., Newton Highlands 61. Mass.-D
Electronic Industries, 7649 San Fernando Rd., Burbank, Calif.--B,P.S
Electronic Measurements Co., Lewis St. & Maple Ave., Eatontown, N.J.--A.B,C.H.I.N.P
Electronic Rectifiers, Inc., 2102 Spann Ave., Indianapolis 3, Ind.--B
Electronic Research Associates, 67 E. Broad St., Nutley, N.J.--C.D.R.S
Electronic Research Co., 11550-39 N.E., Seat-tle 55, Wash.-B,C.D
Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.--H,I.J.K.L.M
Electro-Tech Equipment Co., 308 Canal St., New York, N.Y.--B,C.H.N.O

308 Canal St.,

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El Mec Laboratories, 730 Boulevard, Kenilworth, N.J.-A.B.C.D.N.P.Q.R.S
El-Tronics, Inc., 5 & Noble Sts., Philadelphia 23, Pa.-D.E.J.K
Embassy Eng'g. Co., 673 Elton Ave., New York 51, N.Y.-P
Empire Devices Products Corp., 38-15 Bell Blvd., Bayside 61, N.Y.-E
Engineered Magnetics, 11812 Teale St., Culver City, Calif.-B.C.D.N.P.Q.R.S
Engineering Research & Development Co., Addison, Ill.-A.B.C.D.
Equipment Crafters, 523 Winne Ave., River Edge, N.J.-A.P.Q
Espey Mfg. Co., 628 E. 72 St., New York 21. N.Y.-B
Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-B
Federal Electric Corp., 6446 Santa Monica Blvd., Los Angeles 38. Calif.-A.C.D.H
Federal Telephone & Radio Co., Div. of IT&T. 100 Kingsland Rd., Clifton, N.J.-B.C.H.N.O. P
Federal Tool Eng'g. Co., 1384 Pompton Ave., Cedar Grove N.J.-D

- Federal Telephone & Radio Co., Div. of TT&T. 100 Kingsland Rd., Clifton, N.J.-B.C.H.N.O. Pederal Tool Eng'g. Co., 1384 Pompton Ave.. Cedar Grove, N.J.-D
  Fluke Mfg. Co., John. 1111 W. Nickerson St.. Seattle 99, Wash.-A.B.C.D.E.P.Q
  Ford Instrument Co.. Div. Sperry Corp.. 31-10
  Thomson Ave., Long Island City 1, N.Y. -C.G.M.N
  Foto-Video Labs., P.O. Box 296, Clifton. N.J. -B.C.P.Q
  France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio-A.B.D.P.Q.R
  Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-B.C.D.P.Q
  Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.-A.B.C.P.Q
  Furat Electronics, 3322 W. Lawrence Ave., Chicago 25, 111.-A.B.C.D.N.P.Q
  Furat Electronics, 3322 W. Lawrence Ave., Chicago 25, 111.-A.B.C.D.N.P.Q
  Galbraith & Son, 450 6 Ave., New York 11. N.Y.-A.B.C.D.E
  Galvanie Products Corp., 110 E. Hawthorne Ave. Valley Stream, N.Y.-B
  Gates Radio Co., 123 Hampshire St., Quincy, III.-C.N.P.Q
  General Armature & Mfg. Co., P.O. Box 370. Lock Haven, Pa.-B.H.I.M
  General Communications, One Mile and Janes-ville Rd., Ft. Atkinson, Wisc.-B.C.H.N
  General Electric Co., Apparatus Div. 1 River Rd., Schenectady 5, N.Y.-A.B.D.E.H.I.J.K., M.N.P.Q
  General Electronics Park, Syracuse, N.Y.-B.C.D
  General Hermotic Sconies, Inc., 32 W. 22 St. New York 10, N.Y.-A.B.C.D.E

- B.C.D
  B.C.D
  General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.--A,B,CD,E
  General Hermetic Sealing Corp., 99 E. Haw-thorne, Valley Stream, N.Y.--B,C
  General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.--B,N,P,Q
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.--A,B,C,I,N
  Georator Corp., Manassas, Va.--A,D,E,F,H,I,J
  G & M Equipment Co., 7315 Varna Ave., N. Hollywood, Calif.--A,B,G,H,I,O
  Gonset Co., 801 S. Main St., Burbank Calif.--A,B,P
  Graphite Metallizing Corp. 1650 Menageher

- A.B.P Graphite Metallizing Corp., 1050 Nepperhan Ave., Yonkers, N.Y.-G Great Lakes Electric Mfg. Co., 17 S. Desplaines St. Chicago 6, III.-I.J G.W. Associates, P. O. Box 2263, El Segundo, Calif.-C
- G.W. Associates, P. O. Box 2263, El Segundo, Calif.--C Gyro Electronics Co., 325 Canal St.. New York 13, N.Y.--A, B, D, F, G, H, I, O, P, Q, R, S Hall Inc, F. Sumner, Amityville, N.Y.--B, C Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.--A, B, C, D, E, N, P, Q, S Hamlyn Electronics Corp., 32 Holman Blvd., Hicksville, N.Y.--C, D, P, Q Hanson-Gorrill-Brian, 1 Continental Hill, Glen Cove, N.Y.--N, C Heath Co., 305 Territorial, Benton Harbor, Mich.--B, C Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.--B, C, Q Hewson Co., 443 Broad St., Newark 2, N.J. --B, P

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  Inet Div., Leach Corp., 4441 S. Santa Fe Ave., Los Angeles 58, Calif.—A,B.C.F.H.J.K., N,P
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  Instrument Development Labs., 163 Highland Ave., Needham Heights 94, Mass. G,H,I
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  DoAll Co., 254 N. Laurel Ave., Des Plaines, III.-G
  Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-HAF
  Dumore Co., 1800 17 St., Racine, Wise.-B
  Durant Mfg. Co., 1950 N. Buffum St., Mil-waukee 1, Wisc.-D
  Edanbob Mfg. & Sales Co., 1906 N. Cicero \_Ave., Chicago 39, III.-T,AT
  Eisler Eng'g Co., 770 S. 13 St., Newark 3, N.J.-C,O,P,AE,AG,AK,AN,AY
  Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.-AK
  Electro-Mcchanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.-V.AB
  Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, III.-AE
  Electronics Corp. of America, 77 Broadway, Cambridge 42, Mass.-D
  Electro-Tech Equip. Co., 308 Canal St., New York 13, N.Y.-O
  El Mc Laboratories, 730 Boulevard, Kenil-worth, N.J.-D,U.AD
  El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.-T
  Emerson Electric Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.-AE
  Empire State Laboratories, 2608 Merrick St., Bellmore, L.I., N.Y.-T
  Endevco Corp.. 689 S. Fair Oaks, Pasadena, Calif.-N
  Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R.I.-U.AG,AI,AK

Endeuco Corp., 689 S. Fair Oaks, Pasadena, Calif.—N.
Enteuco Corp., 689 S. Fair Oaks, Pasadena, Calif.—N.
Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R.I.—U.AG,AI,AK
Entwironmental Equip. Corp., 369 Linden St., Brooklyn 27, N.Y.—AR
Eraser Co., Rush Wire Stripper Div., 1063 S. Clinton St., Syracuse 4, N.Y.—AI,AO,AAD
Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, 111.—H,AF
Federal Tool Engineering Co., 1384 Pompton Ave., Cedar Grove, N.J.—AE
Finn & Co., T. R., 200 Central Ave., Hawthorne, N.J.—N
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.—GI,MAA,AZ
F & M Sales, Inc., 1054 Cahuenga Blvd., Hollywood 38, Calif.—J,AA
Ford Instrument Co., Div. Sperry Corp., 31-10
Thomson Ave., Long Island City 1, N.Y.—T
Forder-Teichmann Co., 1210 Clark Bldg., Pittsburgh 22, Pa.—O,P,AF,AG,AY
Ft. Wayne Metals, Inc., 3211 MacArthur Dr., Ft. Wayne Metals, Inc., 3211 MacArthur Dr., Ft. Wayne 6, Ind.—AAA
Fretco, Inc., 406 N. Craig St., Pittsburgh 13, Pa.—AAA
Gabriel Electronics Div., Gabriel Co., Endicott St., Norwood Mass.—T

Gabrier Electronics Div., Gabrier Co., Endicou St., Norwood Mass.—T Gasket Eng'g. Co., 2444 Charlotte St., Kansas City 8, Mo.—V Gates Radio Co., 123 Hampshire St., Quincy,

General Electric Co., 123 Hampshire St., Quincy, Ill.—AF
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—B
 General Electric Co., Carboloy Dept., Box 237, R.P.A., Detroit 32, Mich.—K,S

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-O,AE
  Gisholt Machine Co., 1245 E. Washington Ave., Madison 10, Wisc.-AL
  Gleason-Avery, Inc., 45 Aurelius Ave., Auburn, N.Y.-T
  Gombos Co., John, 103 Montgomery Ave., Irvington, N.J.-T
  Good-All Electric Mfg. Co., 112 W. 1st St., Ogallala, Nebr.-AD
  Green Instrument Co., 385 Putman Ave., Cam-bridge 39, Mass.-M
  Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, III.-O,AF
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-N.AC.AD
  Gundlach Mfg. Co., 38 E. Main St., Fairport, N.Y.-AO

- Gundlach Mfg. Co., 38 E. Hain St., Fangers, N.Y.-AO Hamilton Watch Co., Allied Products Div., Columbia Ave., Lancaster, Pa.-T Henry Valve Co., 3215 North Ave., Melrose Park, Ill.-AM Hercules' Elec. Mach'y & Equip. Co., 1442 E. Washington Blvd., Los Angeles 21, Calif. -AE

- Park, III.—AM
  Hercules' Elec. Mach'y & Equip. Co., 1442 E.
  Washington Blvd., Los Angeles 21, Calif. —AE
  Hermes Plastics, Inc., 13 University Pl., New York 3, N.Y.—M
  High Speed Hammer Co., 305 Norton St., Rochester, N.Y.—LAB,AI
  Hill Electronic Eng'g. & Mfg. Co., New Kings-town. Pa.—H
  Hinde & Dauch, Sandusky, Ohio
  Hofman Co., P.R., 321 Cherry St., Carlisle, Pa. —G.I.J.AU
  Hofman Needle Works, 535 59 St., W. New York, N.J.—V
  Huppert, Co., K.H., 6830 Cottage Grove Ave., Chicago 37, III.—O,AF,AO
  Hydraulic Press Mfg. Co., Marion Rd., Mount Gilead, Ohio—V.W.Y,AV
  Industrial Electronic Eng'rs., 3973 Lanker-shim Blvd. N. Hollywood, Calif.—AQ
  Industrial Electronics. 8060 Wheeler St., De-troit 10, Mich.—D.P.AQ
  Industrial Television, Inc., 369 Lexington Ave., Clifton, N.J.—T
  Instrument Devel. & Mfg. Corp., 3018 E. Foothill Blvd., Pasadena 8, Calif.—B,T
  Insuline Corp. of America. 186 Granite St., Manchester, N.H.—AD
  Int'! Rudiant Corp., 40 Matinecock Ave., Port Washington, N.Y.
  Int'! Rescarch & Devel. Corp., 797 Thomas Lane, Columbus 14, Ohio—N,AL
  Jeffrey Mfg. Co., Mt. Vernon 3, Iowa—AD
  Joyal Products, Inc., 115 Edison Pl., Newark 5, N.J.—C.F.H.J.O.F.Q.(TULAD,AE,AF,AG,AK, ANAP,AS,AT,AY,AZ
  Kahle Eng'g. Co., 114 Manhattan St., New York 24, N.Y.—H
  Kinney Mfg. Co., 207 Futors St., Martford 1, Con...—K,SAS,AV
  Kelien Electronics Co. 114 Manhattan St., New York 24, N.Y.—H
  Kinney Mfg. Co., 207 Futors St., Newark 5, N.J.—C.F.H.J.O.P.Q.TIUAD,AE,AF,AG,AK, ANAP,AS,AT,AY,AZ
  Keine Electronics, Leo, 2404 S. LaBrea Ave., Los Angeles 16, Calif.—K
  Krengel Mfg. Co., 227 Fulton St., New York 7, N.Y.—V
  L.B. Ectronics, Leo, 2404 S. LaBrea Ave., Los Angeles 16, Calif.—K
  Krengel Mfg. Co., 227 Fulton St., New York 7, N.Y.—V
  LaB. Corp., P.O. Box 278, Skaneateles, N.Y. —AC
  Lavoic Labo

- Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-O Leiman Bros., 146 Christie St., Newark 5, N.J. -B.I.U.AK

- -B.I.U.AK Lennard Co., P.M., 671 Bergen St., Brooklyn 38, N.Y.-AR Lepel High Frequency Laboratories, Inc., 54-18 37 Ave., Woodside 77. Long Island, N.Y.-AG.AZ Linde Air Products Co., Div. Union Carbide & Carbon, 30 E. 42 St., New York 17, N.Y. -X AE
- -X.AE Littell M
- -X.AE Littell Machine Co., F.J., 4127 Ravenswood San Carlos, Calif.-O,P,Z,AE,AK Livingston Electronic Corp., Livingston, N.J. -T.AF,AN L&O Research & Devel. Corp., 134 N. Wayne Ave., Wayne, Pa.-H Lufkin Rule Co., 1730 Hess St., Saginaw, Mich. -K

- Lutkin Rule Co., 1730 Hess St., Saginaw, Mich. —K
  Luma Electric Equipment Co., 1112 Derr St., Toledo 6, Ohio—K,AD
  Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.—T
  Magnaflux Corp., 7300 W. Lawrence Ave., Chicago 31, Ill.—K,S
  Magnetic Devices Corp., 103 S. Van Brunt St., Englewood, N.J.—U
  Mann Co., Wm. L., 104 E. Foothill Blvd., Monrovia, Calif.—AE
  Markem Machine Co., 150 Congress St., Keene, N.H.—U
  Markwik Mfg. Co., 147-39 18th Ave., White-stone 57, N.Y.—U
  Mars Electronics Corp., 3000 N. San Fernando Blvd., Burbank, Calif.—T

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- Martindale Electric Co., Box 617, Edgewater Br., Cleveland 7, Ohio-K May Eng'g. Co., 6055 Lankershim Blvd., North Hollywood, Calif.-U MB Mfg. Co., 1060 State St., New Haven 11, Conn.-N
- MB MILE. Ocs., 1000 Barre Conn.--N Conn.--N McCoy Electronics Co., Chestnut & Watt St., Mt. Holly Springs, Pa.--H.AF Mendelsohn Speedgun Co., 4th Ave., Haskell,
- Mendelsohn Speedgun Co., 4th Ave., Haskell, N.J.-T Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-B.O Metaplast Co., 34-51 56th St., Woodside 77, N.Y.-AAC Micro Instrument Co., 80 Trowbridge St., Cam-bridge 38, Mass.-C,L,M Micro Balancing, Inc., 191 Herricks Rd., Gar-den City Park, N.Y.-AL Microdot Div., Felts Corp., 1826 Fremont St., S. Pasadena, Calif.-Al Milford Rivet & Machine Co., Milford, Conn. -AB Miskella Infra-Red Co., E. 73rd & Grand

-AB Miskella Infra-Red Co., E. 73rd & Grand Ave., Cleveland 4, Ohio-O,AF,AT Monitor Products Co., 815 Fremont Ave., S. Pasadena, Calif.-AF Multi-Tron Lab., 4624 Washington Blvd., Chi-cago 44, III.-P,T,AG Murphy & Miller, 1318 S. Michigan Ave., Chi-cago 5, III.-A

cago 5, 111.--A National Gasket & Washer Co., 124 E. 25th St., New York 10, N.Y.--J National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.--AG,AK New Hermes Engraving Machine Corp., 18 University Place, New York 8, N.Y.--M,U Nichols Products Co., 325 W. Main St., Moores-town, N.J.--T Noble & Westbrook Mfg. Co., E. Hartford 8, Conn.--U Numberall Stamp & Tool Co., 379 Huguenot Ave., Staten Island 10, N.Y.--U

Ave., Staten Island 10, N.Y.--U Oilpower Eng'g Co., 1067 Davis Terrace, Sche-nectady 3, N.Y.--L,V.W.Y O'Neil-Irwin Mfg., Co., 300 Eighth Ave., Lake City, Minn.--V,Z Opad Electric Co., 69 Murray St., New York 7, N.Y.--K,S Optical Film Engineering Co., 2731 N. 6th St., Philadelphia 33, Pa.--AK Ozalid Div., General Aniline & Film Corp., Ansco Rd., Johnson City, N.Y.--A

Ozalid Div., General Aniline & Film Corp., Ansco Rd., Johnson City, N.Y.-A
Pacific Electricord Co., 3217 Exposition Pl., Los Angeles 8, Calif.-W
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.-O
Pancro Mirrors. Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.-AZ
Parts Producing Corp., Manhattan Div., 1861
Second Ave., New York 28, N.Y.-T
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago 18, Ill.-A
Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-AE
Penn-East Engineering Corp., P.O. Box 240, Kutztown. Pa.-C
Pereny Equip Co., 893 Chambers Rd., Colum-bus 12. Ohio-O,AF
Peschel Electronics, 13 Garden St., New Ro-chelle, N.Y.-T
Petroff, Peter A., 127 Water St., New York 5, N.Y.-C
& H Sales Corp., 5650 N. Western Ave., Chicago 45, Ill.-A
Phoenix Precision Instrument Co., 3803 N. Fifth St., Philadelphia 40, Pa.-P
Pioneer Machine Works, 6136 Adam St., W. New York, N.J.-P,AG,AY
Pittsburgh Jectrodryer Corp., P.O. Box 1766, Pittsburgh So, Pa.-AM
Poinsettia Co., 110 Cedar Ave., Pitman 15, N.J.-W
Popper & Sons, 300 Fourth Ave., New York 10, N.Y.-U
Portable Electric Tools, Inc., 200 W. 83 St., Chicago 20, Ill.-B.T

N.Y.-U
Portable Electric Tools, Inc., 200 W. 83 St., Chicago 20, III.-B.T
Precision Crystal Lab., 2223 Warwick Ave., Santa Monica, Calif.-F.G.H.I.J.AF.AU
Precision Products, 719 7 St., N.W., Washing-ton, D.C.-I.T
Presis Engraving Machine Co., H. P., 651 U.S. Hwy. #22, Hillside, N.J.-M
Premier Research Labs. Inc., 79 7 Ave., New York 11, N.Y.-H
Prodelin Inc., 307 Bergen Ave., Kearney, N.J. -AM

-Am Production Tool and Fixture Co., 87 W. Main St., Oyster Bay, N.Y. Protectoseal Co., 1920 S. Western Ave., Chi-

Radio Frequency Co., Medfield, Mass.-O.AD, AI, AP

Radio Frequency Labs., Boonton, N.J.—K.S Radio Sonic Corp., Plainfield, N.J.—AG Ransom Research, P.O. Box 382, San Pedro, Calif.—D

Rason Mfg. Co. 3050 W. 21 St., Brooklyn 24, N.Y.--K Remco Mfg., Co., 545 N. LaSalle St., Chicago 10, Ill.-T Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, L.I., N.Y.--L Paurolds Elastric Co. 2000 Dium Dd. Dium

L.I., N.Y.-L Reynolds Electric Co., 3000 River Rd., River Grove, Ill.-B Rich Electronics, 212 N.W. 8th Ave., Miami 36, Fla.-T Richardson Labs. Kenneth, 254 Vincent Ave., Lynbrook, N.Y.-K.S Robinson. Inc., Edward E., 95 Park Ave., Nut-ley 10, N.J.-AAE

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cago 8, Ill.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio —K.T Royal Metal Mfg. Co., 175 N. Michigan Ave., Chicago, Ill.—AAG Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—T,AO Schmidt, Inc., Geo. T., 1804 Belle Plaine Ave., Chicago 13, Ill.—U Scientific Electric Div., "S" Corrugated Oursehed Course

chicago 13, 11.-0 cientific Electric Div., "S" Corrugated Quenched Gap Co., 107 Monroe St., Garfield, -0

N.J.-O Scientific Radio Products, Inc., 215 S. 11th St., Omaha 8, Nebr.-G.H.I.J Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.-J

Boston 35. Mass.—J Semrow Prod. Co., 6138 Northwest Hwy., Chi-cago 31, 111.—T.V.AE,AS Shakeproof Div., Illinois Tool Works, St. Charles Rd., Elgin, 111.—AW Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.—T Sittler Corp., 18 N. Ada St., Chicago 7, II1.— AD.AE

AD,AE Skil Corp., 5033 Elston Ave., Chicago 30, Ill. —AW

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Ind.---L,R Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. F,G,I,J,AU Standard Crystal Co., 1714 Locust St., Kansas City 8, Mo.--H Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.--AAA Stark Mfg. Co., P.O. Box 489, Tuscaloosa, Ala. --AD

Stark Mfg. Co., P.O. Box 489, Tuscaloosa, Ala. —AD
Stark Mfg. Co., P.O. Box 489, Tuscaloosa, Ala. —AD
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Sunrise Products Co., P. O. Box 173, Haw-thorne, N.J.—A,S
Taber Instrument Corp., 111 Goundry St., N. Tonawanda, N.Y.—AG
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Technical Products Co., 19 N. Dunlap, Medi-cal Center, Memphis 1, Tenn.—O,P,R,W, AK.AQ
Technograph Printed Electronics, 185 Valley \_St., Tarrytown, N.Y.—AO

AK.AQ Technograph Printed Electronics, 185 Valley St., Tarrytown, N.Y.—AO Television Accessories Co., Box 368, Scottsdale, Ariz.—V

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- U.S. Tool Co., 255 N. 18th St., E. Orange, N.J. --V Vacuum-Electronic Eng'g. Co., 86 Denton Ave., New Hvde Park, L.I., N.Y. Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.—AE.AZ Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.—H Veeder-Root Inc., 70 Sargeant St., Hartford 2, Conn.—D Vemaline Products Co., P.O. Box 222, Haw-thorne, N.J.—K,L.AD,AE,AO,AX Vickers Inc., Vickers Electric Div., 1835 Lo-cust St., St. Louis 3, Mo.—AE Virginia Electronics Co., River Rd., at B & B R.R., Washington 16, D.C.—AD,AX Waage Electric Inc., 720 Colfax Ave., Kenil-worth, N.J.—AO Wabash Metal Products Co., Box 805 Wabash,

Waage Electric Inc., 720 Colfax Ave., Kenil-worth, N.J.-AO Wabash Metal Products Co., Box 805 Wabash, Ind.-W Waldorf Instrument Corp., Park Ave., Hunt-ington, N.Y.-T Walker Electric Co., B., 132 Nassau St., New York 7, N.Y.-T Warren Plastics Corp., S. Irvine St., Warren, Pa.-W

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Welch Mfg. Co., W. M., 1515 Sedgwick St., Chicago 10, III.-AK
Weldex Inc., 2200 W. Fort St., Detroit 16, Mich.-AD,AE
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.-AI
White Industries, 421 W. 54 St., New York 19, N.Y.-AG

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Whitney Metals Tool Co., 734 Forbes St., Rockford, Ill.-V
Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.-AK
Windigton Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.-AK
Windigton Pump & Earle, 904 Chestnut St., Philadelphia 32, Pa.-Z
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Windsor, 999 N. Main St., Glen Ellyn, Ill.-P
Wire Stripper Co., 1725 Eastham Ave., East Cleveland 12, Ohio-AI
Woodruff & Stokes, 349 Lincoln St., Hingham, Mass.
Wright Electronics, 1519 McGee St., Kansas City 8, Mo.-H
Wright Eng'g. Co., 180 E. California St., Pasadena 1, Calif.-N.AC
Wybar Electronics, 507 E. Water St., Syra-cuse 1, N.Y.-AI
Wyzenbeek & Staff, 223 N. California Ave., Chicago 12, Ill.-B

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AltimetersB
AntennasC
CalibratorsO
Indicators, moving targetL
Indicators, plan positionD
Indicators, proximityE
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OscillographsG
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RadomesM
Receivers
Recording camerasN
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- Airborne Electronics Inc., 155 1st St., Mineola, N.Y.-B.H.I
  Airborne Instruments Labs., 160 Old Country Rd., Mineola, L.I., N.Y.-A,C,D,H,I,J,K,L
  Aircraft Armaments. P.O. Box 126, Cockeys-ville, Md.-C,D,H,I,J,K
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  Allied Research & Eng'g., 6916 Santa Monica Blvd., Los Angeles, Calif.-C
  Allison Associates, 3110 N. Highland Rd., N.E., Aluguerque, N.M.-D,F,L
  Amerac Inc., 116 Topsfield Rd., Wenham, Mass. -C,K
  American Electronic Laboratories. 641 Arch

-C,K American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-C,K American Helicopter Div., Fairchild Engine & Airplane Corp., 1800 Rosecrans Ave., Man-hattan Beach, Calif.-C,M American Radio Co., 445 Park Ave., New York 22, N.Y.-A,B,C.D,E,F,G,H,IJ,K,L Andrew Corp., 363 E. 75th St., Chicago 19, 111.-C Aremac Associates, 329 W. Washington St

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Austin Co., 76 Ninth Ave., New York 11, N.Y. -D.E.G.J.L Avion Instrument Corp., 299 State Highway 17, Paramus, N.J.-H Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.-B.H Barlow Electrical Mfg. Co., 155 E. 128th St., New York 85, N.Y.-C Bart Laboratories, 227 Main St., Belleville 9, N.J.-M Bayside Watch Tool Co., 20-02 Utopia Pkwy., Whitestone 57, N.Y.-N Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.-H.L Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J.-C Bendix Radio Div., Bendix Aviation Corp., Baltimore 5, Md.-A.H.I.K Bludworth Marine, 92 Gold St., New York 38, N.Y.-H Bolsey Corp., of America. 118 E. 25th St., New York 10, N.Y.-N Bomac Laboratories, Salem Rd., Beverly, Mass. -A.B.H.K.L Bone Eng's Corp., 701 W. Broadway, Glen-dale 4, Calif.--C.M

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F
Control Eng's. Corp., Controls Div., 934 Washington St., Norwood, Mass.—C
Corbin Corp., 5419 56th Pl., Riverdale, Md.— A.B.F.H.K
Creative Eng's. Corp., 10816 Burbank Blvd., N. Hollywood. Calif.—C
Crosley Div., A VCO M'g. Corp., Cincinnati 15, Ohio—H
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Dalmo Victor Co., 1414 ElCamino Real, San Carlos, Calif.—C.M
Daytom Instrument, Archbald, Pa.—A.H.I.K
Daytom Microwave Corp., 7 North Ave., Wakefield. Mass.—C
Dorne & Marcolin. 30 Sylvester St. West-bury, LI., N.Y.—C.H
Duomied Microwave Corp., 7 North Ave., New Rochelle, N.Y.—C.H
Duomied Ave., Clifton, N.J.—G.N
DX Radio Products Co., 2300 W. Armitage Arc. Chicago 47, 111.—D.L
Edo Corp., 13-10 111 St., College Point 56.
N.Y.—F.H
Electronice Ilastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.—M
Electronice Ilastic Corp., 130 St. & 90 Ave., Queens 18, N.Y.—M
Electronice Tube Corp., 1200 E. Mermaid Lane. Philadelphia 18, Pa.—G
Electronence Top., 15601 Arrow Hwy, Azusa, Calif.—B.G.I
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—C
Eletronekence Corp., 15601 Arrow Hwy, Azusa, Calif.—B.G.I
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—C
Eletronices Conp., 15601 Arrow Hwy, Azusa, Calif.—B.G.I
Elm Laboratories, 268 E. 72 St. New York 21, N.Y.—A.C.D.E.F.G.H.I.J.K.M
Famson Electric Mix, Co., 8100 Florissant Ave., St. Louis 21, Mo.—C.E.H.I.K.L
Empire State Laboratories, 2608 Merrick Rd., Bellmore, L.I., N.Y.—C.F.H
Engrg. Assoc., 434 Patterson, Davton 9, Ohio—I Espey Mix. Co., 528 E. 72 St. New York 21, N.Y.—A.C.D.E.F

Hycon Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.—H

Industrial Television. Inc., 369 Lexington Ave., Clifton, N.J.—F.G

Insuline Corp. of America, 186 Granite St., Manchester, N.H.—C I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.—C

Johnson Labs., Div., of Aladdin Industries, Willard Rd., Norwalk, Conn.—I Kaiser Metal Products, Inc., Bristol. Pa.—C

Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.—H,I,K
Kennedy & Co., D. S., 432 S. Main St., Co-hasset, Mass.—M
Kenyon Instrument Co., 1345 N.Y. Ave., Hunt-ington Sta., L.I., N.Y.—N
Kinetix Instruments Co., 902 Broadway, New York 10, N.Y.—I.J,K
Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—C,H.I
Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.—D.I.
Lab for Electronics Co., 7254 Atoll Ave., N. Hollywood, Calif.—B
Larsen Nuclear Research, 520 Fifth Ave., New York 36, N.Y.—B
Levinthal Electronic Products, Inc., 2821 Fair Oaks Ave., Redwood City, Calif.—K
Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.—H,I,K
Lockheed Aircraft Corp., Burbank, Calif.—H
Loral Electronics Corp., 794 E. 140 St., New York 54, N.Y.—H.I
Lunn Laminates Inc., Huntington Station, L.I., N.Y.—M
Luria-Cournand, Inc., Havre de Grace, Md.—M
Magnavox Co., Ft. Wayne 4, Ind.—C,D,H

Magnavox Co., Ft. Wayne 4, Ind.—C,D.H Magnavox Co., Ft. Wayne 4, Ind.—C,D.H Manson Labs., 207 Greenwich Ave., Stamford, Conn.—K Maryland Electronic Mfg. Corp., 5009 Cal-vert Rd., College Park, Md.—C Maurer, Inc., J.A., 37-01 31st St., Long Is-land City 1, N.Y.—N Maxson Corp., W. L., 460 W. 34th St., New York 1, N.Y.—A,C,H,I.K,L McMillan Industrial Corp., Brownville Ave., Ipswich, Mass.—C,M Melpar, Inc., 3000 Arlington Blvd., Falls Church, Va.—B,C,H,I,L Metal Fabricators Corp., 73 Pond St., Waltham 54, Mass.—A,C,H,M Metronics, Inc., U.S. Rt. 130, Burlington, N.J. —M

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 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.—C.M
 Moran Instrument Corp., 170 E. Orange Grove Ave., Pasadena 3. Calif.—H
 Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.—M
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 Olympic Blastics Co. 215 E. Washington Blvd.

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Olympic Plastics Co., 215 E. Washington Blvd., Los Angeles 15, Calif.—M
Olympic Radio & TV Inc., 34-01 36th Ave., Long Island City I, N.Y.—I.K
Otis Elevator Co., 35 Ryerson St., Brooklyn 5, N.Y.—D,H,1,K,L
Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuya, Calif.—D,H,1,L
Petroff, Peter A., 127 Water St., New York 5, MY.—A,C
Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.—B,J,L
Pitometer Log Corp., 237 Lafayette, New York 12, N.Y.—A.H,L
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Polarad Electronics Corp., 43-20 34th St., Long Island City 1, N.Y.-I
Premier Instrument Corp., 52 W. Houston St., New York 12, N.Y.-A.C
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Radiation, Inc., Box Q, Melbourne Fla.-C
Ravtheon Mfg. Co. Equip. Marketing Div., 100 River St., Waltham, Mass.-C.F.H
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Ryan Industries, 13159 John R. St., Detroit 3, Mich.-H.J
Sanders Associates, 137 Canal St., Nashua,

Sanders Associates, 137 Canal St., Nashua, N.H.-K.M

Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.--C

- Skiatron Electronics & TV Corp., 30 E, 10th St., New York 3, N.Y.-A,B,C,D,G,H,J,L Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. C.H.I Sperry Gyroscope Corp., Great Neck, N.Y.-F,H

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Stcrling Precision Instrument Corp., 34-17 Lawrence St., Flushing, N.Y.—C
Stupakoff Ceramic & Mfg., Div. Carborundum Co., Latrobe, Pa.—M,
Syntronic Instruments, Inc., 100 Industrial Rd., Addison, Ill.—D.G
Telectro Industries Corp., 35-16 37th St., Long Island City 1, N.Y.—C
Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—C,D.E.H.I.J.K
Telescreen Corp., 36 Grove St., New Canaan, Con.—G,I.J.K
Tevas Instruments, Inc., 6000 Lemmon Aye.,

Texas Instruments. Inc., 6000 Lemmon Ave., Dallas 9, Texas—H Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.—D,H,I,J,K,L

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Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-A,B,G,H,J,N
Waveline, Inc., Caldwell. N.J.-C
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, III.-D.E,H,I,L
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.-D,I,J,K
Weston Labs., Inc., Iox 407, Littleton, Mass. -C,H
Wheeler Laboratories, Inc., 122 Cutter Mill

C.H. Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.—C
White Industries, 421 W. 54 St., New York 19, N.Y.—C
Wilcox Electric Co., 1400 Chestnut St., Kan-sas City 27, Mo.—A
Williams, Brown & Earle, 904 Chestnut St., Philudelphia 20, Pa.—N
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Astatic Corp., P.O. Box 120, Connenut, Ohio —P
Audicon Electronics Inc., 216 Lyon St., Pater-son 4, N.J.—B.C.E.G.O.Y
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.—B.D.F.G.M,N
Aurex Corp., 1117 N. Franklin St., Chicago 10, III.—I
Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.—B.G.I
Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—C.D.H,V
Barker & Williamson, 287 Fairfield Ave., Up-per Darby, Pa.—F,R
Bartell's Marine Radio. 800 W. Coast Hwy., Newport Beach, Calif.—H
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Crosby Laboratories, Box 233, Robbins Lane, Hicksville, N.Y.—R,W,Z
Crown Eng'g., 3821 Commercial N.E., Albuquerque, N.M.—F
Davton Aviation Radio & Equip. Corp., RR 3, Troy, Ohio—N
Dewald Radio Mfg. Corp., 35-15 37 Ave., Long Island City 1, N.Y.—B,E,F,G,H,I,M,N,O,P, R.S.T

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 Curto Electronics Co. 295 Concl. St. New York

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American Corp., 2835 N. Western Ave., Chicago 18, Ill.—I
Andrea Radio Corp., 27-01 Bridge Plaza, N., Long Island City 1, N.Y.—A,D,H,J,K,L,M,R, T
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Bassett Inc., Rex 1314 NE 17th Court, Ft. Lauderdale, Fia.--A,B,C,S,T
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.--A,J.L.M,R
Bennett Laboratories, 2700 Bay Rd., Redwood City, Calif.-D
Benrus Watch Co., 50 W. 44th St., New York. N.Y.--A,B,G
Blonder-Tongue Labs., Inc., 526 North Ave., Westfield, N.J.--O,Q,W
Bogen Co., David, 29 9 Ave., New York 14, N.Y.--B,H,O,Q,S
Browne Electronics, 12450 W. Washington Blvd., Venice, Calif.--A,B,E,F,H,J,K
Bulova Watch Co., Bulova Park, Flushing 70, N.Y.--A,B,G

Calbest Eng'g. & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.—A,B,D,E,J, K,L,M,O,R
Caltech Electronics, 8930 Lindblade St., Culver City, Calif.—J
Capehart-Farnsworth, Co., Div. IT.&T Ft. Wayne 1, Ind.—A,B,D,H,I,J,K,L,M,R
Cardwell Electronics Productions, Allen D., Plainville, Conn.—O
Castlewood Mfg. Co., 1430 S. 12 St., Louisville 10, Ky.—A,B,H,J,K
CBS-Columbia, 3400 47th Ave., Long Island City 1, N.Y.—A,B,D,H,J,L,M,R,V
Certified Radio Labs., 5507 13 Ave., Brooklyn 19, N.Y.—F,J
Chromatic Television Labs, 1501 Broadway, New York 36, N.Y.—R
Collins Audio Products Co., Route 29, Mountainside, N.J.—A,B,F,U
Commercial TV Equip. Co., 196 Albion Ave., Paterson 2, N.J.—E
Communication Devices Co., 2331 12 Ave., New York 27, N.Y.—D,M
Cornati, Inc., 196 Albion Ave., Patterson 2, N.J.—E
Coronet Radio & TV Corp., 1451 E. 27 St., Brooklyn 10, N.Y.—A,D,E
Crawford Inc., 456 N. Rodeo Dr., Beverly Hills, Calif.—H
Crosely Div., Avco Mfg. Corp., Cincinnati 25, Ohio—A,J

- Crawford Inc., 456 N. Rodeo Dr., Beverly Hills, Calif.-H Crosley Div., Avco Mfg. Corp., Cincinnati 25, Ohio-A,J Davis & Co., J. W., 9212 Denton Dr., Dallas 9, Texas-A,D,H Delco Radio, 1446 S. Home Ave., Kokomo, Ind. -C DeWald Radio & TV Corp., 35-15 37th Ave., Long Island City I, N.Y.-A,B,C,D,E,F,G,H, I,J,K,J,M,N,O,P,Q,R,S,T,V Douglas Roesch Inc., 2200 S. Figueroa St., Los Angeles, Calif.-J Dubrow Development Co., 235 Penn St., Bur-lington, N.J.-A,B DuMont Laboratories, Inc., Allen B., Receiver Div., 35 Market St., E. Paterson, N.J.-J,K,O,R Dwyer Eng'g. Co., P.O. Box 483, Nashua, N.H. -B DX Radio Products Co., 2300 W. Armitage Ave. Chicagn 47 III-O

- D.S. B. Co., 110. Box 435, Nashua, N.H.
   DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, Ill.—O
   Eckstein Radio & TV Co., 3400 E. 42 St., Minneapolis 6, Minn.—A.B.G
   Edu-Craft Sales Corp., 150-45 12 Ave., White-stone, N.Y.—I
   Eldico of N.Y., Inc., 72 E. 2nd St., Mineola, L.I., N.Y.—F,S.T
   Electrix Co., 1304 Spruce Ave., Wanamassa, N.J.—F
   Electromatic Mfg. Corp. 29 University Displayers

- L.I., N.I.--F, S.I.
  Electrix Co., 1304 Spruce Ave., Wanamassa, N.J.--F
  Electromatic Mfg. Corp., 88 University Pl., New York 3, N.Y.--A, B, D, H
  Electron Enterprises, 6917 W. Stanley Ave., Berwyn, Ill.--D, E, G
  Electronic Instrument Co., 84 Withers St., Brooklyn 11, N.Y.--C, D, P, S
  Electro-Voice, Inc., Cecil & Carroll Sts., Buchanan, Mich.--O, Q.T
  Electronic Labs., 10, N.Y.--W.
  Electronic Labs., 333 W. 52nd St., New York 19, N.Y.--F
  Emerson Radio & Phono Corp., 14th & Coles St., Jersey City, N.J.--A, B, G, J, R, X
  Equipment Crafters Inc., 523 Winne St., River Edge, N.J.--F
  Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.--A, B, C, G, H, S, T, U, V
  Esquire Radio Corp., 62-01 15th Ave., Brooklyn 19, N.Y.--A, B, D, G, H, S
  Fada Radio & Electric Co., 525 Main St., Belleville, N.J.--A, B, D, J, L, M
  Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.--M
  Fenton Co., 15 Moore St., New York 4, N.Y.-O, Q
  Fisher Radio Corp., 21-21 44th Dr., Long Is-

- 100 Kingsland Rd., Clifton, N.J.-M
  Fenton Co., 15 Moore St., New York 4, N.Y. -O,Q
  Fisher Radio Corp., 21-21 44th Dr., Long Is-land City, N.Y.-A.B.G.H.J
  Flush Wall Radio Co., 1012 Cleveland St., Clearwater, Fla.-A
  Freed Electronics & Controls Corp., 200 Hud-son St., New York 13. N.Y.-A.B.G.H.J.K
  Garod Radio Corp. 70 Washington St., Brook-lyn 1, N.Y.-A.D.G.J.K.
  Geiss-America. 6424 Northwestern Ave., Chi-cago, III.-A.B.G
  General Electric Co., Broadcast Equip., Com-mercial Equip. Dept., Electronics Park, Syra-cuse, N.Y.-A.B.D.G.H.K.L.M.O.R.V
  General Instrument Curp., 329 Newark Ave., Elizabeth 3, N.J.-O
  G & H Wood Products Co., 75 N. 11th St., Brooklyn 11, N.Y.-H
  Gonset Co., 801 S. Main St., Burbank, Calif. -C.M.N.O
  Gotham Television Corp., 123 W. 64th St., New York 23. NY.-A.B.C.D.H.J.K.M

- Hallicrafters Co., 4401 W. 5 Ave., Chicago 24 Ill.—A,B,J,L,M,S,T
- Harmon-Kardon Inc., 520 Main St., Westbury, L.I., N.Y.-B,G Hartley Co., H. A., 521 E. 162nd St., New York 51, N.Y.-B,H

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   Hastings Products, 171 Newbury St., Boston 16, Mass.-C.D.G
   Heath Co., 305 Territorial Rd., Benton Harbor, Mich.-A.F.S
   Hedco Mg. Corp., 161 W. Huron St., Chicago 10, 111--A.D.H.Y
   Hinners-Galanek Radio Corp., 25-14 Bdwy, Long Island City 6, N.Y.--A.B.D.F.H.S
   Hoffman Radio Div., Hoffman Electronics Corp., 6200 S. Avalon Blvd., Los Angeles, Chilar A.B.D.G.H.J.K.L.M.R.S.T
   Hot H.A.B.D.G.H.J.K.L.M.R.S.T
   Hot H.A.B.D.G.H.J.K.L.M.R.S.T
   Hot H.A.B.D.G.H.J.K.L.M.R.S.T
   Hot H.A.B.D.G.H.J.K.L.M.R.S.T.
   Hot H.A.B.D.G.T.
   Invit TV Corp., 238 William St., New York 7, N.Y.-J
   Jackson Industries, 500 E. 40 St., Chicago 15, III.-A.B.H.J.K.S
   Jertoid Electronics Corp., 26th & Dickinson, Philadelphia 46, Pa.-O.Q.W
   Jackson Industries, 500 E. 40 St., Chicago 15, III.-A.B.H.J.J.K
   Jertoid Electronics Corp., 31, Willoughby St., Brooklyn 1, N.Y.-A.B.J.L.M.R
   Kaye-Halbert Corp., 362 Bastham Dr., Culver City, Calif.-J.L.M.
   Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-O
   Keeney & Co., J. H., 2600 W. 50 St., Chicago 32, III.-A.J.
   Kent TV, Inc., 505 Driggs Ave., Brooklyn 11, N.Y.-H.J.K.
   Haston Froducts Corp., 1412 N. Webster St., Brooklyn 12, N.Y.-L
   Kibraft Products Corp., 1412 N. Webster St., Brooklyn 32, N.Y.-L
   Lavie Labs., Inc., 400 Black Oak Ridge Rd., Wayne, N.J.-A.B.G.
   Lavie Labs., Inc., 400 Black Oak Ridge Rd., Wayne, N.J.-A.B.G.
   Lon Mfs. Corp., 2640 Belmont Ave., Chicago 18, III.-J.R.
   Hectonic Co., 8910 Anza Blvd., Inglewing Nature, N.J.-A.B.G.
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   Lawing N.Y.-A.B.G. Limbon Ave., Chicago 18, III.-J.R.
   Mation Polacking Art P.G.H.M.
   Maior Electronice Co., 810 An

- Orthon Corp., 196 Albion Ave. Paterson, N.J. -A,D,E,N,V.W
- -A,D,E,N,V,W Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.-A,B,E,G,H, J,K,R Pacific Vorue Radio, 215 W. 5 St., Los Angeles 12, Calif.-A Packard-Bell Co., 12333 W. Olympic Blvd., W. Los Angeles, Calif.-A,B,D,G,H,I,J,K,L,M,R, S

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- Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, Ill.—A,B,H Pedersen Electronics, P.O. Box 572, Lafayette, Calif.—B Pentron Corp., 777 S. Tripp Ave., Chicago 24, Ill.—B,G

- Pentron Corp., 777 S. Tripp Ave., Chicago 24, III.--B,G
  Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.--W
  Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.--A.B,G,H.I,J,K.L.M,O
  Philharmonic Radio Co., 235 Jersey Ave., New Brunswick, N.J.--A,J
  Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.--F
  Pilot Radio Corp., 87-06 36 St., Long Island City 1, N.Y.--B,G,J,N,O
  Pratt Albert, 114 W. Lake View Ave., Milwaukee 17, Wis.--G,N
  Precision Electronics, 7518 Melrose Ave., Los Angeles 46, Calif.--J,K.R
  Progressive Electronics Co., 497 Union Ave., Brooklyn 11, N.Y.--F
  Q-Line Mfg. Corp., 1562 61st St., Brooklyn 19, N.Y.-W

Premotit TV Co., 7350 Beverly Rd., Los Angeles (6 Calif.-J.K.R
 Progressive Electronics Co., 497 Union Ave., Brooklyn 19, NY.-F
 Q.Line Mfg. Corp., 1662 61st St., Brooklyn 19, NY.-W
 Radio Corp., of America, Eng'g. Products Div., Camden 2, NJ.-A.J.R.
 Radio Mfg. EnEineers, Inc., Div. Electro-Volce, Buchanan, Mich.-M.Q.S.T
 Radio Mfg. EnEineers, Inc., Div. Electro-Volce, Buchanan, Mich.-M.Q.S.T
 Radio G.TV., Inc., Brunswick Div., 119 W. 57
 St., New York 19, N.Y.-A.B.J.K.L.M.R.X
 Radio G.TV., Inc., Brunswick Div., 119 W. 57
 St., New York 19, N.Y.-A.B.J.K.L.M.R.X
 Resoney Div., IDEA Inc., 7900 Fendleton Pike, Indianapolis 26, Ind.-A,O,X
 Remcon Mfg. Co., 5921 W. Dickens Ave., Chicago, III.-A.C.D.J.K.I.A.M.R.X
 Regency Div., IDEA Inc., 7900 Fendleton Pike, Indianapolis, Ind.-O
 Riviera Electronics Corp., 1351 E. De Loss St., Indianapolis, Ind.-O
 Riviera Electronics Co., 6060 SW 114th St., Miami 43, Fla.-A.D.S.T
 Roland Radio Corp., 1351 E. De Loss Ave., Mt. Vernon, N.Y.-A.B.D.H
 Scott, Inc., Herma Hosmer, 335 Putnam Ave., Cambridge 39, Mass.-G
 Scott Radio Labs, Liberty St., Plymouth, Ind.-A.B.G.H.J.K.L.M.R.S
 Sentinel Radio Corp., Evanston, III.-A,J
 Sentinel Radio Corp., 2023 W. Carroll St., Brooklyn 38, N.Y.-H
 Sightmaster Corp., 2011 Cedar St., New Rochelle Carlson, Co., 2001 E. Michigan, Jackson, Mich.-A.B.C.D.G.H.J.K.L.M.R.
 Springfield Enterprises, P.O. Box 54, Spring-field Gardens 18, NY.-E, F.M
 Stromberg-Carlson Co., 2012 W. Carroll St., Chicago, III.-A, J
 Stentinel Radio Corp., Evanston, III.-A, J
 Strone Mfg. Co. Mark, 32-28 49th St., Long Island Citty 3, NY.-H
 Simpson Mfg. Co., 426 W. Short St., Lexington, Ky.-O
 S.W.Yania Electronic Co., 426 W. Short St., Lexington, Ky.-O

Transvision, Inc., 460 North Ave., New Ro-chelle, N.Y.-J.K

Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill.—A,J

Trutone Electronics Inc., 812 N. Highland Ave., Los Angeles 38, Calif.—A,B,E,H
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—W
 United Pressed Products Co., 741 Harrison St., Chicago 7, Ill.—Q

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Trebor Radio Co., Pasadena 18, Calif .-- A

- United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.-A.B.C.D.E.F.G.H.I.J.K. L.M.N.O.P.Q.R.S.T.V Vanity Fair Electronics Mfg., 576 W. Merrick Rd., Lynbrook, N.Y.-J Vidaire Electronics Mfg., 576 W. Merrick Rd., Lynbrook, L.I., N.Y.-J Videola TV Corp., 447 Broadway, New York 13, N.Y.-J Walsco Electronics, 3602 Crenshaw Blvd., Los Angeles, Calif.-J Warwick Mfg. Corp., 4640 W. Harrison St., Chicas. 44, Ill.-A.J Webster-Chicago, 5610 W. Bloomingdale Ave., Chicago 39, Ill.-A.B.G Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago, Ill.-A.B.C.D.E.G.H.I.J.K.L.M.R.S. T.V

- Chicago, Ill.—A,B,C,D,E,G,H,I,J,K,L,M,R,S, T,V Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—A,C,D,F,N,O,Q Westinghouse Electric Corp.. Radio & TV Div., Metuchen, N.J.—A,B,J,R Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.—V Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill.—A,B,D,G,H,J,K,L,M,T,V

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  Alden Products Co., 117 N. Main St., Brockton

- F.G.K.
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  Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—B
  Barber & Williamson, 237 Fairfield Ave., Up-

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- Rapproved Electronic Inst. Corp., 328 Broad-way, New York 10. N.Y.-B
  Avionex Electronics Corp., 2838 N. Naomi St., Burbank. Calif.-B
  Barker & Williamson, 237 Fairfield Ave., Up-per Darby. Pa.-B
  Bartell's Marine Radio. 800 W. Coast Hgwy., Newbort Beach. Calif.-A
  Bassett Inc., Rex, 1314 N. E. 17 Court, Ft. Lauderdale. Fla.-B
  Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.-A.B.D.H.I.J
  Bludworth Marine. 92 Gold St., New York 38, N.Y.-A.C
  Bowen & Co., Box 5818, Bethesda. Md.-H
  Bruno-New York Industries. 460 W. 34 St, New York 1. N.Y.-A.C.H
  Canoga Corp., 5955 Sepulveda Blvd., Van Nuys. Calif.-A.B.H
  Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville. Conn.-F
  CBS-Columbia, 3400 47th Ave., Long Island City 1. N.Y.-A.K
  C.G.S. Labs., Inc., 391 Ludlow St., Stamford, Conn.-G
  Collins Radio Co., 855 35th St. N.E., Cedar Rapids, Iowa-B.D.I
  Communication Devices Co., 2331 12 Ave., New York 27, N.Y.-A.C
  Communications Co., 300 Greco Ave., Coral Gables, Fla.-B
  Conn Marine Instrument Co., Essex, Conn.-A
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- A Conn. Telephone & Elec. Co., 70 Britannia St., Meriden. Conn.—E Continental Communications, 452 W. Chicago Ave., Chicago 10, Ill.—B.E.H.J Corbin Corp., 5419 56th Pl., Riverdale, Md.— A.B.D.H.I Cubic Corp., 2841 Canon St., San Diego 6, Calif.—H
- A. D. D. A. Cubic Corp., 2841 Canon Su, --Calif.--H Dayton Aviation Radio & Equip. Corp., RR 3, Troy, Ohio-D



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  Electroicraft, Inc., 15601 Arrow Hwy, Azusa, Calif.-B
  Elk Electronic Labs. Inc. 333 W 52nd St., New York 19, N.Y.-C.H
  El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.-B,F
  Erco Radio Labs., 637 Stewart Ave., Garden City, N.Y.-B
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  General Electric Co., Electronics Div., Communication Equip. Electronics Park. Syracuse. N.Y.-E
  Gibs Mfr. & Research Corp., 450 N. Main St., Janesville, Wisc.-G
  G & M Equip. Co., 7315 Varna Ave., N. Hollywood, Calif.-A,B
  Gryo Electronics Co., 325 Canal St., New York 13, N.Y.-L
  Halamore Mfr. Co., 2001 E. Artesia. Long Beach 5, Calif.-J
  Hamiyn Electronics Co., 11431 Truman Rd., Independence, M.S.-B
  Hogan Laboratories, 155 Perry St., New York 14, N.Y.-J
  Harmon Electronics Corp., 221 Warwick Ave., Santa Monica, Calif.-K
  Jarvistial Television Inc., 369 Lexington Ave., Chicago 39, III.-A,D
  Kaas Endry C.Corp., 2995 Middlefield Rd, Palo Alto, Calif.-K, 510 Wilshire Blvd., Los Angeles 48, Calif.-K
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  - Peer, Inc., 1200 Milton St., Benton Harbor, Mich.—B
    Perma-Power Co., 4727 N. Damen Ave., Chi-cago 25, Ill.—E.L
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    Radiation, Inc., Box "Q," Melbourne, Fla.—G
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    Radio Sonic Corp., Plainfield, N.J.—A.B.C
    Remco Mfg. Co., 545 N. La Salle St., Chicago 10, Ill.—A
    Scott Radio Labs., Inc., Plymouth. Ind.—A
    Seismograph Service Corp., P. O. Box 1590, Tulsa, Okla.—C
    Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N.Y.—K
    Silver Bay Equip. Co., 5004 20 N.W., Seattle 7, Wash.—A.B
    Skiatron Electronics & TV Corp., 30 E. 10th St., New York 3, N.Y.—F
    Sonar Radio Corp., 3050 W. 21st St., Brook-lyn 24, N.Y.—A

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- Specialty Assembling & Packing Co.. Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.-A
  Sperry Gyroscope Co., Great Neck, N.Y.-C
  Standard Electronics Research Corp., 2 East End Ave., New York 21. N.Y.-K
  Stavid Eng'g., Highway 22, Plainfield, N.J.-B,H,K
  S & W Electronics, 3418 W. Pico Blvd. Los Angeles 19, Calif.-J
  Telemarine Communications Co., 3040 W. 21
  St., Brooklyn 24, N.Y.-A,B,C,K
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  Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-G,H
  Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-A
  Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-B
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  Bristol Eng'g. Corp., Bristol. Pa.-F
  Broadcast Equip. Specialties Corp., Box 149, Beacon. N.Y.-B.M
  Burneel & Co., J.H., 81 Prospect St., Brooklyn 1, N.Y.-B
  Burke & James. 321 S. Wabash Ave., Chi-cago 4, III.-B
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  Columbia Records Inc., 799 7th Ave., New York 19, N.Y.-B
  Conn. Telephone & Electric Corp., 70 Britan-nia St., Meriden. Conn.-B.I.O
  Crescent Industries, Inc., 5900 W. Touhy Ave., Chicago 31, III.-B.C.J
  Crosby Enterprises, Inc., Sing, 9030 Sunset Blvd., Los Angeles 46, Calif.-B.D
  Davies Laboratories 4705 Queensbury Rd., Riverdale, Md.-B.O
  Daystrom Electric Corp., 837 Main St., Pough-keepsie, N.Y.-B

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  Electronic Secretary Industries, 805 S. 5th St., Milwaukee, Wisc.—B,C
  Electrosonic Labs., 35-54 36th St., Long Island City, N.Y.—B,K
  Electrosonic Specialties, 7230 Clinton Rd., Upper Darby, Pa.—B,F
  Fairchild Recording Equip. Co., 154th St., & 7th Ave., Whitestone 57, N.Y.—B,G,H,K
  Federal Mfg. & Eng'g Corp., 211 Steuben St., Brooklyn 5, N.Y.—B,E
  Felt & Tarrant Mfg. Co., Dictation Machine Div., Algonquin, III.—J
  Fenton Co., 15 Moore St., New York 4, N.Y.—B
  Fort Wayne Metals, Inc., 3211 MacArthur Dr.,

- -B Fort Wayne Metals, Inc., 3211 MacArthur Dr., Fort Wayne 6, Ind.-C.M Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.-F Garod Radio, 70 Washington St., B'klyn, N.Y. -J

- J General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.-B,C General Industries Co., Olive & Taylor Sts., Elyria, Ohio-B,K Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-B,D,E,F Gotham Audio Devel. Corp., 2 W. 46th St., New York 36, N.Y.-B,K Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-B,K Gray Mfg. Co., 16 Arbor St., Hartford, Conn. -J

- Gray Mig. Co., 16 Arbor St., Hartford, Conn. -J
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-M
  Hallen Corp., 3503 W. Olive Ave., Burbank, Calif.-A.E.G.H
  Hartley Co., H. A., 521 E. 162nd St., New York 51, N.Y.-B
  Hodgson Co., R. W., 3406 W. Washington Bldv., Los Angeles 18, Calif.-A.B.H.M
  Int'l. Radio & Electronics Corp., Box 123 Rt. 4, Elkhart, Ind.-B.E
  Int'l. Scientific Industries, 3101 42nd St., Minneapolis 6, Minn.-B
  I.S.I. Corp., 3101 E. 42nd St., Minneapolis 6, Minn.- B.E.G.L.M
  Jersey City Technical Lab., 880 Bergen Ave., Jersey City Technical Lab., 880 Bergen Ave., N.J.-F.N
  Kinevox, 116 S. Hollywood W., Burbank, Calif.

- N.J.--F.N Kinevox, 116 S. Hollywood W., Burbank, Calif. --H Korb Eng'g. & Mfg. Co., 30 Ottawa Ave. Grandville, Mich.-B.C Land-Air. Inc., 201 N. Wells St., Chicago, Ill.-B.C

- Korb Eng'g. & Mfg. Co., 30 Ottawa Ave. Grandville, Mich.-B.C
  Land-Air. Inc., 201 N. Wells St., Chicago, 111.-B.C
  Livingston Electronics Corp., Livingston, N.J. -B.L
  Macon Electronics, Merchant St., Warrensburg, III.-B
  Magnasyne Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-A.B.D.E.F.G.H.I.L.M.O
  Magnecord, Inc., 1101 S. Kilbourn Ave., Chi-cago 24, 111.-B, E.F.G.L.O
  Magnetic Recording Industries, 11 E. 16 St., New York 3, N.Y.-I.J.K.N
  Majestic Radio & TV. Div. Wilcox-Gay Corp., 70 Washington St., Brooklyn I. N.Y.-B
  Muryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.-N
  Maurer, Inc., J. A., 37-01 31 St., Long Island City 1, N.Y.-D.E.F.G
  Michigan Electronics, Inc., 854 N. Rockwell St., Chicago 22, 111.-B,C.E.F.G.I.J.M
  Microtone Co., 5740 Wayzata Blvd., Min-neapolis 16, Minn.-B
  Miles Reproducer Co., 812 Broadway, New York 3, N.Y.-E.F.H.J.M
  Miller Electronics, 2840 Naomi St., Burbank, Calif.-B
  Mitchell Mfg. Co., 2525 Clybourn Ave., Chicago 14, 111.-E.O
  Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-B,C.E.F.G.I.J.L.M
  Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-1
  Pampa Electronics Sules Corp., 808 N. Broad St., Philadelnhia 30, Pa.-A.B.L
  Park Armature Co., 833 Boylston St., Boston 16, Mass.-B.C.K
  Pentron Corp., 775 S. Tripp Ave., Chicago 24, 11.-B,C.E.F.G.I.J.L.
  Permoflux Corp. 4900 W. Grand Ave., Chi-cago 39, 11.-J
  Planet Television Corp., 903 Halsey St., Brook-lyn 33, N.Y.-B
  Press Wireless Laboratorics, Inc., 25 Prospect PI. W. Newton 65, Mass.-B
  Press Wireless Laboratorics, Inc., 25 Prospect PI. W. Newton 65, Mass.-B
  Prest Recording Corro., P.O. Box 500, Par-amus, N.J.-B,E,F.G.K
  Product Associates, 318 W. Olympic Blvd., Los Angeles 15, Calif.-B,E.J
  Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-B
  Rad
- Rangertone. Inc., 73 Winthrop St., Newark 4, N.J.-B,H

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Raytheon Mfg. Co., 5921 W. Dickens Ave., Chicago, Ill.—B Raytronic Labs., 9701 Reading Rd., Cincin-nati 15, Ohio—L Recordisc Corp., 395 Broadway New York 13, N.Y.—N

- Recordise Control, 2021 N.Y.-N Rek-O-Kut Co., 38-01 Queens Blvd., Long Island City 1, N.Y.-K Revere Camera Co., 320 E. 21 St., Chicago, Ill.-B Recording Labs., 35 S. 9 St., Phila-

- Revere Camera Co., 320 E. 21 St., Chicago, III.—B
  Robinson Recording Labs., 35 S. 9 St., Philadelphia 7, Pa.—K
  Scott, Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—K
  Scully Machine Co., 62 Walter St., Bridgeport 8, Conn.—K
  Seismograph Service Corp., 701 Kennedy Bldg., Tulsa, Okla.—D
  Sentinel Radio Corp., 2100 W. Dempster St., Evanston. III.—B
  Shoup Eng'g Co., 1516 S. Wabash Ave., Chicago 5, III.—B
  Simpson Mfg., Mark, 32-28 49 St., Long Island City 3, N.Y.—B,K
  Smith Associates, Rawdon, 1319 19 St., N.W., Washington 6, D.C.—B,F,L
  S.O.S Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y—A,B.F,G,H
  Soundscriber Corp., 146 Munson St., New Haven 4, Conn.—E,F,I.J,K
  Southwestern Industrial Electronics Co., 2331 Post Oak Rd., Houston 19, Texas—B
  Speak-O-Phone Recording & Equip. Co., 23 W. 60th St., New York N.Y.—B,E,K
  Speale Products Co., P.O. Box 188, Rockville 1, Md.—L
  Stancil-Hoffman Corp., 921 N, Highland Ave., Hollywood 38, Calif.—A, B.E, G.H IL.M.O
- Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.—A.B.E.F.G.H.I.L.M.O Stavid Eng'g., Highway 22. Plainfield, N.J.
- -B.E.O

- nonywood 38, Calif.—A.B.L.F.G.H.I.D.M.O.
  Stavid Eng'g., Highway 22. Plainfield, N.J.
  —B.E.O.
  Talking Devices Co., 4447 Irving Park Rd., Chicago 41, Ill.—F.K.
  Tape Recorders Inc., 1501 W. Congress St., Chicago 7, Ill.—B.E.J.
  Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.—I
  Techno Instrument Co., 6666 Lexington Ave., Los Angeles 38, Calif.—B
  Teletro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.—B.C.E.F.I.J.L.M.O.
  Television Specialty Co., 350 W. 31 St., New York 1, N.Y.—D
  Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas—N
  Thorens Co., Stewart & Atlantic Ave., Garden City Park, N.Y.—E
  Three Dimension Co., Div. Bell & Howell, 3512 N. Kostner Ave., Chicago 41, Ill.—B.E.F.L
  United Geophysical Corp., P.O. Box 'M'', Pasadena 15, Calif.—B,O
  United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.—B
  United Recording Labs., 1650 Broadway, New York 19, N.Y.—EG.K
  U.S. Time Co., 500 5 Ave., New York, N.Y.—K
  Universion Corp., 102 Warren St., New York 7, N.Y.—B

- - 74-RECORDERS-SPECIAL

PURPOSE

Memory DrumsR
Recorders, antenna pattern AA
Recorders, codeA
Recorders, dataAB
Recorders, facsimileB
Recarders, filmC
Recorders, film thicknessD
Recorders, fluid flowE
Recorders, frequencyF
Recorders, graphicG
Recorders, machine assemblies H
Recorders, meteorologicalS
Recorders, oscillographAC
Recorders, portable
Recorders, power levelJ
Recorders, strainK
Recorders, telemeteringL
Recorders, teletype

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temperatureN timingO torqueP
transientW
VacuumQ
vibrationT
video tapeU
weightV
X-Y AD

- Acme Telectronix, Div., NEA Service Inc., 1200
  W. 3rd St., Cleveland 13, Ohio—B
  Aero Electronics Co., 1512 N. Wells St., Chicago 10, 111.—C,D,E,F,G,H,I,K,N,O,P,S,T,V,AB,AC,AD
  Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.—O
  Air Associates, Inc., 511 Joyce St., Orange, N.J.—A.B,L,AB
  Airborne Instruments Lab., 160 Old Country Rd., Mineola, L.I., N.Y.— C,H,AA,AB,AD
  Alden Electronic & Impulse Recording, Equip. Co., Alden Research Center. Westboro, Mass.—B,E,F,G,I,J,K,N,O,P,S,AD
  Alden Products Co., 117 N. Main St., Brockton 64, Mass.—A.B,AA,AB
  Ambex Corp., 934 Charter St., Redwood City, Calif.—F,I,I,T,W,AB
  Andersen Laboratories, 39 Talcott Rd., W. Hartford 10, Conn.—R
  Aremac Associates, 329 W. Washington St., Pasudena 3, Calif.—C,L,AC
  Arkay, 605 1st Ave., S.W., Rochester, Minn.—A
  Atomic Instrument Co., 133 W. 14th St., New York 12, N.Y.—J
  Audio Instrument Co., 133 W. 14th St., New York 11, N.Y.—J
  Audio Con.—G

- Aurex Co 10, III.
- tin Co., 76 9th Ave., New York 11, N.Y. G,L Austin -G,L -G,L Authorized Mfrs. Service 914 Wyckoff Ave., Brooklyn 27, N.Y.--R,T,W Automatic Temperature Control Co., 5212 Pulaski Ave., Philadelphia 44, Pa.--D,E,P,V Avion Instrument Corp., 299 State Highway 17, Paramus. N.J.--R Bailey Meter Co. 1050 Ivanhoe Rd., Cleveland, 10, Ohio--E,L,N,Q Baldwin-Lima-Hamilton, Phila, 42, Pa.--K,P Barber-Coleman Co., 1300 Rock St., Roekford, 11.--N Barnes Devel Co., 213 W. Baltimore Pk.

Daroer-Coteman Co., 1300 Rock St., Rockford, Ill.—N
Barnes Devel Co., 213 W. Baltimore Pk., Lansdowne 2. Pa.—K.AB
Becknian Div., Beckman Instruments, Inc., 2500 Fullerton Rd., Fullerton, Calif.—K
Becknan & Whitley, 985 San Carlos Ave., San Carlos, Calif.—N.S
Berkeley Div., Beckman Instruments Inc., 2200 Wright Ave., Richmond, Calif.—L.M.N.O.P. Q.T.U.V.W.AB
Berndt-Bach, Inc., 6926 Romaine St., Holly-wood 38, Calif.—C
Beva Laboratory, 1640 Olden Ave., Ext., Tren-ton, N.J.—AC
Boehme, Inc., H. O., 915 Broadway, New York 10, N.Y.—A,M
Bristol Co., Waterbury 20, Conn.—E,G,I,J,K,L, N.O,Q,S,V,AD
Brown Instrument Div., Minneapolis-Honey-wall

IO. N. I.-A.M.
Bristol Co., Waterbury 20, Conn.—E.G.I.J.K.L. N.O.Q.S.Y.AD
Brown Instrument Div., Minneapolis-Honey-well Regulator Co., Wayne & Windrim Ave., Philadelphia 44, Pa.—E.F.N.Q
Brush Electronics Co., 3405 Perkins Ave., 'Cleveland 14, Ohio—I.R
Bunnell & Co., 81 Prospect St., Brooklyn 1, N.Y.—B.M
Cardwell Electronics Productions, Allen D., Plainville, Conn.—B
CBS-Columbia, 3400 47 Ave., Long Island City 1, N.Y.—U
Century Geophysical Corp., 1333 N. Utica, Tulsa, Okla.—AC
Clary Corp., San Gabriel, Calif.—O
Color Television Inc., 973 E. San Carlos Ave., San Carlos, Calif.—AA
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.—GK.L.R. T,AB.AC
Consolidated Vacuum Corn., 1775 Mt. Read Blvd.. Rochester 3, N.Y.—Q
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.—AD
Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.—G.AD
Davies Labs, Inc., 4705 Queensbury Rd., River-dale, Md.,—L.R
Daystrom Instrument, Archbald, Pa.—L,O
DeMornay-Bonardi Corp., 780 S. Arroyo Park-way, Pasadena 2, Calif.—AA

Detroit Controls Corp., 1650 Broadway, Red-wood City. Calif.-L Devol Research Co., Brookside Dr., Greenwich, Conn.--A.R Digital Products. Inc., 7643 Fay Ave., La-Jolla, Calif.-R

Dumont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.-AC Ectro Inc., 425 S. Sandusky St., Delaware, Ohio.-I

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Edin Co., 207 Main St. Worcester 8, Mass. --G.K.N.T.W.AC
Electronic Associates. Long Branch, N.J.--G
Electronic Control Systems, 2138 Westwood Blvd., Los Angeles 25, Calif.--A,G.R.AB
Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa.--K.T.AC
Ellis Associates. Box 77, Pelham, N.Y.--K,W
Empire State Laboratories. 2608 Merrick Rd., Bellmore, LI., N.Y.--AA
Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.--A,K.L.N.O,P.R.T.U.V.W.AB
Ercona Corp., Scientific Instr. Div., 527 5 Ave., New York 17, N.Y.--AB
Esterline-Angus Co., P.O. Box 596, Indianap-olis 6, Ind.-F.G.I,L.Q
Fairchild Recording Equip. Co., 154 St., & 7 Ave., Whitestone 57, N.Y.-L
Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N.Y.--AC
Fischer & Porter, 19 Warminster Rd., Hat-boro, Pa.-E.N.Q
Flight Research Inc., P.O. Box 1-F, Richmond 1, Va.-C
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y.-AB
Foxboro Co., 38 Neponset Ave., Foxboro. Mass.--E.K.N.V
Franklin Electronics, 415 W. Pike St., Phila-delphia 40, Pa.-K.T.W

Foxboro Co., 38 Neponset Ave., Foxboro. Mass.-E.K.N.V
Franklin Electronics. 415 W. Pike St., Phila-delphia 40, Pa.-K.T.W
Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.-B.C
General Devices, Inc., Washington Rd., Prince-ton, N.J.-L.AB
General Electric Co., Apparatus Div., 1 River Rd., Schnectady 5, N.Y.-L,N,O,AC
Gilmore Industries, 5713 Euclid Ave., Cleve-land 3, Ohio-K,N.V
Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-AB
Gordyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio-G,AC
Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-C
Gorrell, Haworth, N.J.-G,O,AB
Gotham Instruments Div., American Machine & Metals, Sellersville, Pa.-E,I,N,Q
Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.-G
Green, Henry J., 1191 Bedford Ave., Brooklyn

Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.-G Green, Henry J., 1191 Bedford Ave., Brooklyn 16, N.Y.-N,S Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.-E,K,L Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.-L,T Gurley, W. & L. E., 514 Fulton St., Troy, N.Y. -S

-S Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-F.J.LAA.AB Haller, Raymond & Brown, 124 N. Atherton. St., State College, Pa.-B Hastings Instrument Co., Newcomb Ave. & Ivy Home Rd., Hampton, Va.-Q Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.-J.K.N.AC Haydon Mfg. Co., 245 E. Elm St., Torrington, Conn.-O

Conn.-O Ays Corp., E. 8th St., Michigan City. Ind. Hays

Conn.-O
Hays Corp., E. Sth St., Michigan City, Ind. -E,N
Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.-K,L.AC
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-K,L,N,O,P,T. AB,AC
Hogan Labs., Inc., 155 Perry St., New York 14, N.Y.-B,G,O,R
Houston Technical Labs., 2424 Branard, Hous-ton 6, Texas-AC
Imtra Corp., 58 Charles St., Cambridge 41, Mass.-R
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.-K,L
Insuline Corp. of America, 186 Granite St., Manchester, N.H.-A
Intercontinental Industries, 555 W. Adams St., Chicago, III.-I
International Business Machines Corp., 590 Madison Ave., New York 22, N.Y.-O
Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-A,F,R,T
Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst 73, N.Y--R
Lab. for Electronics, 75 Pitts St., Boston 14, Mass.-R

Eimhurst '13, N.Y-K
Lab. for Electronics, 75 Pitts St., Boston 14, Mass.-R
Larson Instrument Co., 24 Orchard St., Tarry-town, N.Y.-G.H.N
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-J.N
Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore.-E.L.S
Librascope, Inc., 808 Western Ave., Glendale 1, Calif.-R.AD
Lipps Eng'g. Edwin A., 5485 W. Washington Blvd. Los Angeles 16, Calif.-U
Litton Industries. 336 N. Foothill Rd., Beverly Hills, Calif.-R
Logistics Research, Inc., 141 S. Pacific Ave., Redondo Beach, Calif.-R
L & O Research & Devel Corp., 134 N. Wayne Ave., Wayne, Pa.-B.G.I.AB
MacDonald Co., W.S., 33 University Rd., Cambridge 38, Mass.-R
Magnafux Corp., 7300 W. Lawrence Ave., Chicago 31, Ill.-D
Magnasync Mfg. Co. J D AN

Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-B,C,L,R,AB Magnavax Co., Fort Wayne 4, Ind.-G

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Magne-Pulse Corp., 140 Nassau St., New York 38, N.Y.--R.W Manning Maxwell & Moore, 250 E. Main St., Stratford, Conn.--N.Q Mfrs. Eng's. & Equip. Corp. York & Mill Rds., Hatboro, Pa.

Hatboro, Pa. Medcraft Electronic Corp., Box 464, Babylon,

Hatboro, Pa. Medcraft Electronic Corp., Box 464, Babylon, N.Y.-G Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-N Metrotype Corp., 6100 Archer Rd., Summit, III.-E.F.L.M.N.V Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, III.-O Midwestern Instruments, 41 & Sheridan Rd., Tulsa, Okla.-I.AC Miller Instruments, Wm., 325 N. Halstead Ave., Pasadena 8, Calif.-K.T.AC Money Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-I Mosaek Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-I Mosaeka Corp., 160 Charlemont St., Newton Highlands 61, Mass.-Q Norden-Ketay Corp., Wiley St., Milford, Conn. -R

E,V Rosen Engineering Products, Raymond, 32 & Walnut Sts., Philadelphia 4, Pa.-L Sangamo Electric Co., 9 & Converse Sts., Springfield, Ill.-L.AD Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.-AA,AD Serdex, Inc., 91 Cambridge St., Boston 14, Mass.-S,N Shoup Eng'g Co., 1516 S. Wabash Ave., Chi-cago 5, Ill.-L.U Sound Apparatus Co., Stirling, N.J.-F,G,J.T, AA

Sound Apparatus Co., Stirling, N.J.—F,G,J,T, AA
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston 19, Texas—E,T,AC
Stancil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.—L
Stavid Eng'g., Highway 22, Plainfield, N.J.— L,N,T,W,AA,AB
Sterling Instruments Co., 15310 W. Mc-Nichols, Detroit 35, Mich.—J.P,T
Stoelting Co., C. H., 424 N. Homan Ave., Chicago 24, III.—O
Streeter-Amet Co., 4101 Ravenswood Ave., Chicago 13, III.—L,V,AB
Tally Register Corp., 5300 14 Ave., N.W., Se-attle 7, Wash.—A
Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas—I,AC
Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.—A,B,M
Techno Instrument Co., G,G,J,K

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Technology Instrument Corp., 531 Main St., Acton, Mass.-AC

Technology Instrument Corp., 531 Main St., Acton, Mass.—AC
Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.—I,R
Teleregister Corp., 445 Fairfield Ave., Stam-ford, Conn.—L,R,AB
Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9, Texas—G,AC
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—O
Thompson Products, Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio—AA
Thwing-Albert Instrument Co., Penn St. & Pulaski Ave., Philadelphia 44, Pa.—N
Tigerman Eng'g. Co., 4332 N. Western Ave., Chicago 18, III.—L
Times Facsimile Corp., 540 W. 58 St., New York 19, NY.—B
T.L.G. Electric Corp., 31 W. 27 St., New York 1, N.Y.—AC
Ultradyne Eng'g Labs., P.O. Box 8007, Albu-querque, N. Mex.—A
Underwood Corp., Electronic Computer Div., 35-10 36 Ave., Long Island City. N.Y.—R
United Geophysical Corp., P.O. Box "M". Pasadena 15, Calif.—L.AC
U.S. Gauge Co., Sellersville, Pa.—I,N,Q
U.S. Recording Co., 1121 Vermont Ave., N.W.. Washington 5, D.C.—I
Vacuum Tube Products, 506 S. Cleveland St., Occanside, Calif.—Q
Victory Eng'g. Corp., 103 A Springfield Rd., Union, N.J.—N
Virginia Electronic Sco., River Rd. at B & O R.R., Washington 16, D.C.—L
Wang Labs. 37 Hurley St., Cambridge 41, Mass.—AB
West Instrument Corp., 525 N. Noble St., Chi-cago 22, III.—N
Westinghouse Electric Corp., Box 568 Pitts-burgh 80, Pa.—F,G.I
Westronics Inc., 3605 McCart, Ft. Worth, Texas—E,F,H.I.J.K.N.AC
Westronics Inc., 3605 McCart, Ft. Worth, Texas—E,F,H.I.J.K.N.AC
Winght Eng'g. Co., 180 E. California St., Pasa-dena 1, Calif.—I,K.L.T,AA.AD

F.Q Wright Eng'g. Co., 180 E. California St., Pasa-dena 1, Calif.-I,K,L,T,AA,AD

Discs, blank ..... A

Drivers .....B Equalizers .....C Footage counters .....P Heads, cutting ......D Heads, recording .....E Needles, cutting .....F Record molding compounds .....G

Record preforms ......H

Recording paper .....I Recording pen accessories ......S Reels ......Q Screw feeds Stylus, rotary .....K Tape magazines, continuous .....R Tape, magnetic .....L Turntables .....N Wire, magnetic .....O

Advance Recording Products Co., 36-12 34 St., Long Island City, N.Y.—A
Airborne Instruments Labs., 160 Old Country Rd., Mineola, N.Y.—I
Alfax Paper & Eng'g. Co., P.O.Box 125 West-boro, Mass.—I
Allied Recording Products Co., 32-32 Green-point Ave., Long Island City 1, N.Y.—A.J.N
Alonge Products, Inc., 163 W. 23rd St., New York 11, N.Y.—M
American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—E.L.R
American Elite, Inc., 7 Park Ave., New York, 16 N.Y.—D
American Laubscher Corp., 250 W. 57 St., New York 19, N.Y.—F
American Molded Products, 2727 W. Chicago Ave., Chicago 22, Ill.—Q.R
Astatic Corp., P.O. Box 120, Conneaut, Ohio —E
Audek Co., 500 5 Ave., New York 36, N.Y.

-E Audak Co., 500 5 Ave., New York 36, N.Y. -D,E Audio Devices Inc. 444 Madison Ave., New York 22, N.Y.-A,F,L,Q Audio-Master Corp., 17 E. 45 St., New York 17, N.Y.-L Avion Instrument Corp., 299 State Hwy #17, Paramus, N.J.-E Bayside Watch Tool Co., 20-02 Utopia Park-way, Whitestone 57, N.Y.-A,B,J Berndt-Bach, Inc., 6926 Romaine St., Holly-wood 38, Calif.-E British Electronic Sales, 23-03 45 Rd., Long Island City 1, N.Y.-N

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

75-RECORDING

ACCESSORIES

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-D,E,L
Burke & James, 321 S. Wabash Ave., Chi-cago 4, Ill.-L
Caliton Products Co., 1310 S. Hobart Blvd., Los Angeles 6, Calif.-A,E,F
Camera Equipment Co., 1600 Broadway, New York 19, N.Y.,-M,P
Capitol Transcription Service, 1906 M St., N. W., Washington 6, D. C.-C
Capps & Co., Frank L., 20 Addison Pl., Valley Stream, N.Y.-F
Carron Mfg. Co., 741 W. Harrison St., Chi-cago 7, Ill.-E
Cinema Eng'g. Co., Div. Aerovox Corp., 1100 Chestnut St., Burbank, Calif.-C
Cinematic Developments Co., 2125 32 Ave., San Francisco 16, Calif.-P
Cook Laboratories, 101 2 St., Stamford, Conn. -D,E
Cousino, Inc., 2325 Madison Ave., Toledo 2, Ohio: M.B.

Cousino, Inc., 2325 Madison Ave., Toledo 2, Ohio-M.R

Cousino, Inc., 2325 Madison Ave., Toledo 2, Ohio-M,R
Crescent Industries, 5900 W. Touhy Ave., Chicago 31, Ill.-L,O
Culbertson Co., G. K., 8471 Leroy St. San Gabriel, Calif.-N
Davies Laboratories, 4705 Queensbury Rd., Riverdale, Md.-E
Daystrom Electric Corp., 337 Main St., Pough-keepsie, N.Y.-L
Dubbings Co., 41-10 45 St., Long Island City 4, N.Y.-L
Duobings Co., Locust St., Keyport, N.J.-A.F.Q
Ectro, Inc., 425 S. Sandusky St., Delaware, Ohio-L
Electrovox Co., 60 Franklin St., E. Orange, N.J.-F
Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.-E
Esterline-Angus Co., P.O. Box 596, Indian-

Electrovox Co., 60 Franklin St., E. Orange, N.J.-F
Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.-E
Esterline-Angus Co., P.O. Box 596, Indianapolis 6, Ind.-I,S
Fairchild Recording Equip. Co., 154 St. & 7
Ave., Whitestone 57, N.Y.-C,D,F
Federal Sapphire Products, 12 River Rd., Fair Lawn, N.J.-F
Fercoube Corp. of America, 35 Marshall St., N. Adams, Mass.-E
Flahan Co., 7517 Pelham Dr., Cleveland 29, Ohio-T
Florman & Babb, 70 W. 45 St., New York 36, N.Y.-M.P,Q
Fort Wayne Metals, Inc., 3211 MacArthur Dr., Fort Wayne 6, Ind.-O
Frutchey, M., Box 28, Hackettstown, N.J.-E
Garod Radio Corp., 70 Wasnington St., Brooklyn 1, N.Y.-L
Garrard Sales Corp., 164 Duane St., New York 13, N.Y.-M
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.-O
Gorrell & Gorrell, Haworth, N.J.-I
Gotham Audio Development Corp., 2 W. 46
St., New York 36, N.Y.-D,E
Graphic Recorders, 62 Walter St., Bridgeport 5, Conn.-I
Hartley Co., H. A., 521 E. 162 St., New York 14, N.Y.-I
Home Recording Products Corp., 56 Mill Rd., Freeport. N.Y.-A
Intercontinental Industries, 555 W. Adams St., Chicago, Ill.-L,R
Kollsman Instrument Corp., 80-08 45th, Elmhurst 73, N.Y.-E
Koolsman Labs. 16, 201 N. Wells St., Chicago 10, 111.-E
Leeds & Northrup Co., 4970 Stenton Ave., Grandville, Mich.-O
Land-Air, Inc., 201 N. Wells St., Chicago 10, 111.-E
Leeds & Northrup Co., 5517 Satsuma Ave., N. Hollywood, Calif.-C,M,P
Magnetic Recording Industries, 11 E. 16 St., New York, 38, N.Y.-A.
Magnetic Recording Industries, 11 E. 16 St., New York, 38, N.Y.-A.
Magnetic Recording Industries, 11 E. 16 St., New York, 38, N.Y.-A.
Magnetic Recording Industries, 11 E. 16 St., New York, 38, N.Y.-A.
Magnetic Recording Industries, 11 E. 16 St., New York, 38, N.Y.-A.
Magnetic Recording Industries, 11 E. 1

City 1, N.Y.-C.M
Merix Chemical Co., 1021 E. 55 St., Chicago 15, III.-G
Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, III.-L,O,Q
Microtone Co., 5740 Wayzata Blvd., Minneapolis 16, Minn.-E
Miller Mfg. Co., M. A., Libertyville, III.-F
Minneapolis-Honeywell Regulator Co., 2753 4
Ave., S., Minneapolis 8, Minn.-L,S
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.-L,M
Minor Rubber Co., 49 Ackerman St., Bloomfield, N.J.-B
Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.-E,L
Monson Corp., 919 N. Michigan Ave., Chicago, 11, III.-L
National Hollywood, 1475 El Mirador Dr., Pasadena 3, Calif.-A.F,L,Q
NEMS-Clarke, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.-B
Orradio Industries, T-120 Marvyn Rd., Opelika, Ala.-L,Q,R
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, Calif.-C
Pampa Electronics Sales Corp., 808 N Broad St., Philadelphia 30, Pa.-E
Peirce Wire Recorder Corp., 5000 N. Northwest Hwy., Chicago 31, III.-E,0

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Pentron Corp., 777 S. Tripp Ave., Chicago 24, III.-E
Permo, Inc., 7314 N. Ravenswood Ave., Chicago 26, III.-F,L,O
Poinsettia Co., 112 Cedar Ave., Pitman 15, N.J.-H
Presto Recording Corp., P.O. Box 500, Paramus, N.J.-A.D.E.F.N
Prestoseal Mfg. Co., 37-27 33 St., Long Island City 1, N.Y.-M
Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-R
Pulse Techniques, Inc., 1411 Palisade Ave., W. Englewood, N.J.-C
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-L.N.
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-L.N.
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-L.N.
Radio Corp. of America, Toto E St., New York & Cooper St., Camden 2, N.J.-L.N.
Radio Recorders, 7000 Santa Monica Blvd., Santa Monica, Calif.-E
Reecon Corp., 52-35 Barnett Ave., Long Island City 4, N.Y.-A,FLI
Reevess Soundcraft Corp., 10 E, 52 St., New York 22, N.Y.-A,FLQ
Reiter Co., 7: 3340 Bonnie Hill Dr., Hollywood 25, Calif.-M
Rek-O-Kut Co., 38-01 Queens Blvd., Long Island City 1, N.Y.-D,F.N.
Robins Industries Corp., 41-08 Bell Blvd., Bayside 61, N.Y.-L,M.90
Robins Industries Corp., 41-08 Bell Blvd., Bayside 61, N.Y.-L,M.90
Robinson Recording Labs., 35 S. 9 St., Philadelphia 7 Pa.-N
Schaevitz Eng'g., Creasent Blvd. & Drexel Ave., Camden 1, N.J.-I
Scientific Associates, 580 Virginia Ave., N. E., Atlanta, Ga.-N
Shure Bros., 225 W. Huron St., Chicago 10, III.-E,O
Sonic Recording Products, 58 Mill Rd., Freeport, Li., N.Y.-A,F
Sound Apparatus Co., Sterling, N.J.-L,S
Sound Devices Inc., 129 E. 124th St., New York 35, N.Y.-A,F
Stanci-Hoffman Corp., 921 M. Highland Ave., Hollwood 88, Calif.-C.E
Talking Devices Corp., 146 Munson St., New Haven 4, Conn.-A
Southwestern Industrial Electronics Co., 2381
Poot Oak Rd. Houston 19, Texas-E
Speak-O-Phone Recordi

Wisc.--E
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.--L
Westinghouse Electric Corp., Box 868, Pitts-burgh 80, Pa.--I
Westrex Corp., 111 Eighth Ave., New York 11, N.Y.--B,D
Williams, Brown & Earle, 904 Chestnut St., Philadelphia 7, Pa.-L.M.N.R
Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1. Calif.--P

#### 76—RECTIFIERS

Battery eliminators       A         Inverters       B         Rectifier power units       D         Rectifiers, copper oxide       N         Rectifiers, electronic tube       E
Rectifiers, copper oxideN Rectifiers, electronic tubeE
Rectifiers, copper oxideN Rectifiers, electronic tubeE
Rectifiers, electronic tubeE
Rectifiers, germaniumL
Rectifiers, hand-crankedF
Rectifiers, mercury arcG
Rectifiers, metal oxide
Rectifiers, metal sulphideO
Rectifiers, selenium
Rectifiers, siliconQ
Rectifiers, titaniumP

Accurate Eng'g. Co., 2005 Blue Island Ave., Chicago 8, 111.-D.F.G.M Adler Communications Labs., 1 LeFevre Lane, New Rochelle 1, N.Y.-Q

www.americanradiohistorv.com

Aerolux Light Corp., 653 11 Ave., New York 36, N.Y.-E
Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A.B.D.E.N
Allied Eng'z. Div. Conn. & Richards Ave., S. Norwalk, Conn.-D
American Communications Corp. 806 Broadway, New York 7, N.Y.-D.E
American Rectifier Corp., 95 Lafayette St., New York 7, N.Y.-M
American TV & Radio Co., 300 E. 4 St., St. Paul 1, Minn.-A.B.D
Arnhold Ceramics Inc., 1 E 57 St., New York 22, N.Y.-N
Authorized Mfrs. Service Co., 919 Wyckoff Ave., Brooklyn 27, N.Y.-E
Barry Electronics Corp., 512 Broadway, New York 12, N.Y.-M
Berkeley Div., Beckman Instruments Inc., 2200 Wright Ave., Richmond, Calif.-D
Berkshire Laboratories, 586 Bank Village, Greenville, N.H.-M
Birdsell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.-D
Bogue Electronics Lnc., 168 Columbus Ave., New Haven 11, Conn.-D.M.N
Chatham Electronics Labs., Box 165, Palm Springs, Calif.-D,E.G. L.M.O.P
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-B.E.G
Clark Electronics, N.J.-D
Color Television, Inc., 973 E, San Carlos, Calif.-AA
Communication Devices Co., 2331 12 Ave., New York City 27, NY.-BD

Communication Devices Co., 2331 12 Ave., New York City 27, N.Y.—B,D Conant Labs., 6500 "O" St., Lincoln 5, Nebr. —M,N M.N
Conn. Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.—B
Cosmo Eng's. Labs., Inc., Mountain Ave., Hackettstown, N.J.—D
Dayton Aviation Radio & Equip. Co., RR #3, Troy, Ohio—D
Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.—A,D
Dressen-Barnes Corp., 42 E. Larned St., Detroit 7, Mich.—D,L,M
Drive-In-Theater Mfg. Co. 505 W. 9th, Kansas City, Mo.—E,M
Eastrap Co., 285 Columbus Ave., Boston 16, Mass.—D
Eitel-McCullough, Inc., 788 San Mateo Ave.,

troit 7, Mich.-D.LM
Drive-In-Theater Mfg. Co. 505 W. 9th, Kan-sas City, Mo.-E.M.
Eastgap Co., 235 Columbus Ave., Boston 16, Mass.-D
Eitel-McCullough, Inc., 738 San Mateo Ave., San Bruno, Calif.-E
Eideo of N.Y., Inc., 70-72 E. 2nd St., Mine-ola, Li., N.Y.-D
Electrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.-D,M
Electronic Devices Inc., 4221 Holden St., Oakland 8, Calif.-D,M
Electronic Devices Inc., 4224 Holden St., Oakland 8, Calif.-D,M
Electronic Devices Inc., 429 12th St., Brook-lyn 15, N.Y.-A,M.
Electronic Rectifier Co., 1462 E. Main St., Rochester 2, N.Y.-D
Electronic Rectifiers, Inc., 2102 Spann Ave., Indianopolis 3, Ind.-D.
Electronic Rectifiers, IIS12 Teale St., Culver (City, Calif.-A,D)
Electronic Rectifiers, IIS12 Teale St., Culver (City, Calif.-A,D)
Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.-B
Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-D,M
Enscherd Magnetics, IIS12 Teale St., Culver City, Calif.-A,D
Enscherd Magnetics, IIS12 Teale St., Culver City, Calif.-A,D
Enscherd Magnetics, IIS12 Teale St., Culver City, Calif.-A,D
Enscherd Magnetics, IIS12 Teale St., Monica Hvd., Los Angeles 38, Calif.-A,D,LM
Federal Electric Corp., 60 Santa Monica Elver, Los Angeles 38, Calif.-A,D,LM
Genaral Communications, P O Box 169, Fort Atkinson Wisc.-M
General Electric Co., Germanium Products Div., Electronics Park, Synacuse, N.Y.-L
General Electric Co., Broadcast Equip. Com-mer, Synacuse, N.Y.-B,C
General Electric Co., Broadcast Equip., Com-tation Wings Parkatos Div., 1 River Rd, Schenectady 5, N.Y.-E,D,C
General Electric Co., Boga Tanum Products Div., Electronics Park, Synacuse, N.Y.-L
General Electric Co., Broadcast Equip., Com-Main, Inc., 1316 Sherman Ave., Evanston, Jamaica 36, N.Y.-L
General City, W.Y.-D,E
General Transistor Corp.

Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.—D
Inet Div., Leach Corp., 4441 S. Sante Fe Ave., Los Angeles 58, Calif.—D
Intercontinental Industries, 555 W. Adams St., Chicago, III.—L,M,P
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—M
Intl. Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.—L.M
Jobbins Electronic Enterprises, 500 Hamilton Ave., Menlo Park, Calif.—D
Kane Electronics Corp., 81 Willoughby St., Brooklyn 1, N.Y.—A
Kellogg Switchboard & Supply, 79 W. Monroe St., Chicago 3, III.—I.M
Kemtron Electron Products, 14 Prince Pl., Newburyport, Mass.—E,L
Kepco Labs., 131-38 Sanford Ave., Flushing 55 N.Y.—A.D
Kotron Rectifier Corp., 175 Murray St., Newark 5, N.J.—M
Lambda Electronics Corp., 103-02 Northern Blvd. Corona 68 N.Y.—D.E
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.—D
Leland Electric Co., P.O. Box 1060, Dayton, Ohio—B
Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio—M
Lewis & Kaufman, Ltd., P.O. Box 337 Los Gatos, Calif.—E
Lorain Products Corp., 1122 F St. Lorain, Ohio—A.M
Lysco Mfg., 1401 Clinton, Hoboken. N.J.—D
Mag-Electric Products. 12822 Yukon Ave., Lewis & Kaufman, Ltd., P.O. Box 337 Los Gatos, Calif.-E
Lorain Products Corp., 1122 F St. Lorain, Ohio-A.M
Lysco Mfg., 1401 Clinton, Hoboken. N.J.-D
Magneticric Products. 12822 Yukon Ave., Hawthorne. Calif.-A.D
Magnetic Amplifiers. Inc., 632 Tinton Ave., New York 55. N.Y.-D
Mallory & Co., P. R., 3029 E. Washington St., Indianapolis 6., Ind.-A.D.M.N.O.P
Matson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3. Calif.-A
Maxon Corp. W.L., 460 W. 34th St., New York 1. N.Y.-B
McColpin-Christie Corp., 3410 W. 67 St., Los Angeles 43, Calif.-D
McKesson Appliance Co., 2228 Ashland Ave., Toledo 10. Ohio--M
Mercury Electronic Co., Box 450, Red Bank, N.J.-D.E
Metal Treating Equip. Exchange, 9825 Greeley, Detroit 11, Mich.-M.N
Millen Mfg. Co., James. 150 Exchange St., Malden 48, Mass.-D
Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wisc.-B.D
Minneapolis-Honeywell Regulator Co., 2753 4 Ave., S., Minneapolis 8, Minn.-M
Modol. Rectifier Corp. 557 Rogers Ave., Brooklyn 26, N.Y.--A, B.D.M
Moloney Electric Co., 500 Bircher Blvd., St. Louis 20, Mo.-E.M
Moloney Electric Corp. 350 Scotland Rd., Orange. N.J.-L
New Jersey Electronics Corp., 345 Carnegie Ave., Kenilworth, N.J.-A, B.D
Opad Electric Co., 69 Murray St., New York 7, N.Y.-A.D.E.LM
Orgen Electronic Mfg. Co., P.O. Box 2224, Portland 14, Ore-D.E
Pacific Semiconductors. Inc., 10451 W. Jefferson Blvd., Culver City, Calif.-LQ
Perk. Ferliner, Mfg. Co., 13 Garden St., New Rockelle, N.Y.-A.D.
Perk. Electronics Corp., 345 Kansas St., El Segundo. Calif.-A.D.
Perk. Electronics Corp., 345 Kansas St., El Segundo. Calif.-A.D.
Perk. Schlander, N.J.-A.B.D
Perk. Electronics, Inc., 13 Garden St., New Rockelle, N.Y.-A.D.
Perk. Electronics, Inc., 13 Garden St., New York 7, N.Y.-A.D.
Perk. Electronics, Inc., 13 Garden St., New Yor

Power Transformer Co., 532 Hulberry St., Newark 5, N.J.—A.D.E.I.L.M.N.O Precise Measurements Co. 942 Kings Highway, Brooklyn 23, N.Y.—D

Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.—A,B,D

Pyramid Electric Co., 1445 Hudson Blvd., N. Bergen. N.J.—M Qutronic Tranformer Corp., 525 Broadway, New York 12, N.Y.—D Radio Corp. of America, Tube Div., 415 S. 5 St., Harrison, N.J.—L

Radio Products Co., 2300 W. Armitage Ave., Chicago 47 Ill.—A Radio Receptor Co., 251 W. 19 St., New York 11, N.Y.---M

Radio Sonic Corp., Plainfield, N.J.-D

Rapid Electric Co., 2881 Middletown Rd., Bronx, 61 N.Y.-A,D,L,M,N

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Raytheon Mfg. Co., Receiving & Cathode Ray Tube Operation, 55 Chapel St., Newton 58, Mass.—E.L.Q Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—A,D Reading Batteries, P.O. Box 916, Reading, Pa. —M

100 River St., Waltham, Mass.—A,D
Reading Batteries, P.O. Box 916, Reading, Pa. —M
Regulator Eng'g. & Devel. Co., 11545 W. Jefferson Blvd., Culver City, Calif.—D
Remco Mfg. Co., 545 N. La Salle St., Chicago 10, Ill.—E
RHO Eng'g. Co., 4205 Sepulveda Blvd., Culver City, Calif.—D
Sangamo Electric Co., 9 & Converse Sts., Springfield. Ill.—F,M
Schauer Mfg. Corp., 4500 Alpine Ave., Cincinnati 36, Ohio—A,D,I,N
S/C Laboratories, 37 George St., Newark 5, N.J.—D
Soriensen & Co., 375 Fairfield Ave., Stamford, Conn.—A,B,D
S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 7, N.Y.—D
Sorensen & Co., 370 Fairfield Ave., Toledo 2, Ohio—D,E,G,I,M
Superior Rectifier Co., 87 City Park Ave., Toledo 2, Ohio—D,E,G,I,M
Superior Rectifier & Mfg. Co., 3000 Kenwood St., Hammond, Ind.—M
Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—E,L
Synton Co., Homer City, Pa.—M
Tarzian Inc., Sarkes, 415 N. College Ave., Bloomington. Ind.—M
Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.—B,D
Teleard Mfg. Corp., 1440 Broadway, New York 18, N.Y.—D
Telerard Mfg. Corp., 1440 Broadway, New York 18, N.Y.—D

Texas Instruments, 6000 Lemmon Ave., Dallas 9, Texas-Q

Texas Instruments, 6000 Lemmon Ave., Dallas 9, Texas—Q
Ther Electric & Machine Works 17 S. Jef-ferson St. Chicago 6. Ill.—A.D
Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—B,D,E,I
Thor Transformer & Electronics, Inc., 750 San Antonio Rd., Palo Alto. Calif.—D
TKM Electric Corp., 1160 University Ave., Rochester 7. NY.—B
Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass.—L.Q
Union Spring & Mfg. Co., 1057 Summit Ave., Jeraey City 7, N.J.—A,D
Union Switch & Signal Co., 1789 Braddock Ave., Pittsburgh 18, Pa.—M.N
Universal Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.—D
Universal Scientific Co., 1102 Shelby St., Vincennes, Ind.—M
Varo Mfg. Co., 1801 Walnut St., Garland, Tex.—B,E,M
Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.—D
Vokar Corp., Dexter, Mich.—A,B
Westinghouse Electric Corp., Box 868, Pitts-burgh 30, Pa.—E.M.N
White Industries, 421 W 54 St., New York 19, N.Y.—D

### 77—RELAYS

Relays, audio operatedAH
Relays, capacitanceA
Relays, coaxialB
Relays, crossbarD
Relays, differentialE
Relays, electronicF
Relays, frequency selectiveG
Relays, hermetically sealedAC
Relays, high voltageH
Relays, impulse
Relays, keyingJ
Relays, latchingK
Relays, mercuryL
Relays, meterAl
Relays, overfrequencyAJ
Relays, overloadM
Relays, overvoltageN
Relays, plate circuitAD
Relays, polarized
Relays, powerP
Relays, R-FQ
Keluya, K-I

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Relays, rotary
Relays, sequence
Relays, stepping
Relays, subminiature
Relays, telephone
Relays, thermal AE
Relays, thermostatic delay AF
Relays, three positionAG
Relays, time-delayW
Relays, tuned audioAK
Relays, underfrequencyAL
Relays, undervoltageX
Relays, vacuum contactY
Relays, vibrating reed typeZ
Relays, video switching
SolenoidsAB

- Adams & Westlake Co., 1175 N. Michigan, Elkhart, Ind.-L,M,N.P.W.X,Y.AC Advance Electric & Relay Co., 2435 N. Naomi St., Burbank, Calif.-B,F,H,J,K,M,P,Q,U,V, W,AC,AD,AE,AF Aero Instrument Co., 11423 Vanowen St., N. Hollywood, Calif.-N,X.AC A'G'A, Div. Elastic Stop Nut Corp. of Amer-ica, 1027 Newark Ave., Elizabeth 3, N.J.--W Aircraft Radio Co., Boonton, N.J.--V Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.--W,L,R Airpax Products Co., Middle River, Baltimore 20, Md.---U Allen-Bradley Co.. 136 W. Greenfield Ave.
- Aves., Dong Manch, Adv., Alexa, Baltimore 20, Md.-U Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wisc.-M.P Allied Control Co., 2 East End Ave., New York 21, N.Y.-B,E,H,I,J,K,M,N,O,P,Q,R,U, V,AC,AD American Instrument Co., 8050 Georgia Ave.,
- N.Y.-E.W.AE,AF
  American Instrument Co., 8050 Georgia Ave., Silver Spring. Md.-F.P.AC
  American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.-A,C
  American Radiotelephone Co. Inc., 3505 4 St. N., St. Petersburg, Fla.-V
  American Relay & Controls. Inc., 3621 Howard St., Skokie. Ill.-H.K.M.N.P.V.W.X.AC
  American TV & Radio Co., 300 E. 4 St., St. Paul 1, Minn.-Z
  Amperite Co., 561 Broadway, New York 12, N.Y.-E.W.AE,AF
  Anchor Electronics Inc., 717 Sip St., Union City, N.J.-AB
  Andrew Corp., 363 E. 75 St., Chicago 19, Ill.-B
  Arrow-Hart & Hegeman Electric Co., 103

City, N.J.—AB
Andrew Corp.. 363 E. 75 St., Chicago 19, 111.—B
Arrow-Hart & Hegeman Electric Co., 103
Hawthorn St., Hartford 6, Conn.—K,M
Assembly Products. Inc., Chesterland 21, Ohio
—K,M,N,O,W,X,AC,AD,AI
Atlas Electric Products, 114½ E. 6 St., Erie, Pa.—F.J
Authorized Mfrs. Service. 914 Wyckoff Ave., Brooklvn 27, N.Y.—F.I.M,N.X.AL
Automatic Electric Mfg. Co. 10 State St., Mankato, Minn.—B.H.I.J.K,P,V.W
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.—E.F.H.I.J.K.L.M., O,P,Q.R.S.T.U.V.W.X.AB.AC.AD.AG.AH
Automatic Electronic Eng'g. Co., 2427 S. 6 St., Milwaukee 15. Wisc.—A
Automatic Temperature Control Co., 5212
Pulaski Ave., Philadelphia 44. Pa.—F.S.W
Babcock Radio Eng'g., 7942 Woodley Ave., Van Nuys, Calif.—S.U
Barber-Coleman Co., 1300 Rock St., Rockford, 111.—E.K.O
Barton Electronics, Inc., 955 Asylum Ave., Hartford 5, Conn.—F
Bendix Aviation Corp., Red Bank Div., Eatontown. N.J.—N.AB
Biddle Co., Jas. G., 1316 Arch St., Philadelphia 7, Pa.—G.Z
Bitterman Electric Co., Barlow & Grove Sts., Canaan Conn.—AB
Bionder-Tongue Labs., Inc., 526 North Ave. E., Westfield. N.J.—AE
Brunnell & Co., J. H. 81 Prospect St., Brooklyn 1, N.Y.—M,O,V
Calif. Magnetic Control Corp., 7245 Atoll Ave., N. Hollywood, Calif.—AB
Caltron Products Co., 1310 S. Hobart Blvd., Los Angeles 6, Calif.—AB
Clare & Co., C. P., 3101 Pratt Blvd., Chicago 45, III.—E, I.J.K.L.O, P.R.T.U.V.W.Y.AA.AC, AD
Clark Controller Co., 1146 E. 152 St., Cleveland 10, Ohio—F, K\_M.N.O.W,X

AD Clark Controller Co., 1146 E. 152 St., Cleve-land 10. Ohio-F,K.M.N,O.W.X Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-F Cline Electric Mfg. Co., 3405 W. 47 St., Chi-cago 32, 11.-E.H.M.N,P.R.W.X Coil Co. of America, Washington St., North-vale, N.J.-AB Comar Electric Co., 3349 W. Addison St., Chicago 18, 11.-D.K.V.W.AC Conn. Telephone & Electric Co., 70 Britannia St., Meriden, Conn.-F,G.K.O.S,T.V.AB,AC, AG,AH

Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N.Y.-B,W
Control Corp., 718 Central Ave., Minneapolis 14, Minn.-G,K,V

- Cook Electric, 2700 Southport Ave., Chicago, 14, Ill.-E.F.G.H.I.J.K.M.P.S.T.U.V.W.X.AB Corona Engg. Service, 94-62 Corona Ave., Elmhurst, L.I., N.Y.-F.L Cramer Co., R. W., Box 49, Centerbrook, Conn.-W
- Conn.--W Cunningham Son & Co., James, 33 Litchfield St. Rochester 8, N.Y.--D Cutler-Hammer, Inc., 436 N. 12 St., Milwau-kee 1, Wisc.--H.M.W.AC Dage Electric, 71 N. 2nd Ave., Beech Grove, Ind -- AA

- kee I, Wisc. --H.M.W.AC
  Darke Electric, 71 N. 2nd Ave., Beech Grove, Ind.--AA
  Dallons Laboratories, Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.--U,AC
  Danbury-Knudsen, 15 Thorpe St., Danbury, Conn.--B,Q,AA
  Davis Electric Co., 230 N. Spring Ave., Cape Girardeau, Mo.--B,U.V.AB
  De Coursey Eng'g, Lab., P.O. Box 235 W. Los Angeles 25, Calif.-P
  Deltron, Inc., 2905 N. Leithgow St., Philadel-phia 33, Pa.--F,L
  Detect-O-Ray Co., 2622 N. Halsted St., Chicago 14, 111.--F, 2015 N. Leithgow St., Priladel-phia 33, Pa.--F,L
  Detect-O-Ray Co., 2622 N. Halsted St., Chicago 14, 000, NJ.--F
  Dilectron Div., Gudeman Co., 2669 S. Myrtle Ave., Monrovia, Calif.--W
  Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge 40, Mass.--U,W,AE,AF
  Dow-Key Co., Warren, Minn.-B,P
  Dressen-Bannes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.-F
  Durakool, Inc., 1010 N. Main St., Elkhart, Ind.,-L,W,
  Eagle Signal Corp., 202 20 St., Moline, Ill.--K,W
  Kastern Smelting & Refining Corp., 109 W.
  Brookling St., Boston 18, Mass.--L

- Earle Signal Corp., 202 20 St., Moline, Ill.— K.W
  Eastern Smelting & Refining Corp., 109 W. Brookline St., Boston 18, Mass.—L
  Ebert Electronics Corp., 212-26 Jamaica Ave., Queens Village 28, N.Y.—K.L.W.Y.AC
  Edison, Inc.. Thomas A., Instrument Div., 93 Lakeside Ave., W. Orange, N.J.—M,N,O,W, X.AC,AD,AE,AF,AI,AJ,AL
  Electrical Service Co., 1271 Mission St., San Francisco 3, Calif.—I,W
  Electric Controller & Mfg. Co., 2700 E. 79th St. Cleveland 4, Ohio—G,M
  Electro-Devices, Iuc., 4 Godwin Ave., Paterson I, N.J.—F
  Electro-Mechanical Instrument Co., 812 Chest-nut St., Perkasie, Pa.—D,E,O,R,UAC,AI
  Electro-Mechanical Specialties, 6819 Melrose Ave., Los Angeles 38, Calif.—I,J,M,N,P,W, X.AC,AD
  Electronic Control Corp., 1573 E. Forest Ave.,

- X.AC.AD Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.—F.M Electronicraft, Inc., 27 Milburn St., Bronxville 8, N.Y.—P.V.AB Electronics Corp. of America, 77 Broadway, Cambridge 42. Mass.—F.J Electro-Physics Co., 287 Broadway, New York 7. N.Y.—F Electro-Seal Corp., 946 North Ave., Des Plains, 11.—AC Electro-Switch & Controls, 5755 Camillo Ave.
- Electro-Switch & Controls, 5755 Camille Ave., Culver City, Calif. I,J,K.O,P,Q,U,V,W,X, AC.AD

- AC.AD Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-G.K.L.M., N.P.S.T, U, V, W, X, Z, AB.AC.AD.AG.AI Elgin-Neomatic, Inc., 9010 Bellanca Ave., Los Angeles 45, Calif. F.H.K.M.N,O.P.U.W.X, AC.AD Elly Electronics Corp., 22-02 Raphael St., Fair-lawn, N.J.-E.F.H.I.M.N,S, W, X, Y, AC, AD, AF.AF
- El Mec Laboratories, 730 Boulevard, Kennil-worth, N.J.-F
- worth, N.J.-F Eng'g. Research & Development Co., Addison, Ill.-A.F Farmer Electric Co., 21 Mossfield Rd., Waban 68. Mass.-F Federal Telephone & Radio Co.. Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-B,D,E,I,J, S.V

- Federal Telephone & Radio Co.. Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.—B,D,E,I,J, S,V
  Ferrara Inc., 8106 W. 9 Mile Rd., Oak Park 37. Mich.—F,M,AH
  Filtors, Inc., 30 Sagamore Hill Dr., Port Washington, N.Y.—K,M,R,U,AC,AD,
  Five Star Co., West Main St., Plantsville, Conn.—P
  Frost & Co., L. H., 904 36 St. S.E., Grand Rapids 8, Mich.—AB
  General Aviation Corp., 540 E. 80 St., New York 21, N.Y.—P
  General Communications, P.O. Box 169, Fort Atkinson, Wisc.—R,T
  General Communications, P.O. Box 169, Fort Atkinson, Wisc.—R,T
  General Electric Co., Apparatus Div. 1 River Rd., Schenectady 5, N.Y.—F.G,M.N.O.P.U.W, X,AB,AC,AD,AE
  General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream, L.I., N.Y.—AC
  Gianinni & Co., G. M., 914 E. Green St., Pasadena 1, Calif.—U
  Green Co., C.A., 14651 Wood St., Harvey, Ill. —F, U.V.AB,AC,AD
  Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, 11.—F,I,J,K,M,P,T,U,V,W,X, AB,AC,AD
  Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.—K,NQ
  G-V Controls Inc., 28 Hollywood Plaza. East Orange, N.J.—M,W.X.AC,AE,AF,AJ,AL
  Gyro Electronics Co., 325 Canal St., New York 13. N.Y.—F,Q,Z,AK

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- Haledy Electronics Co., 57 William St., New York 5, N.Y.-F.L.X.AC
  Hart Mfg. Co., 110 Bartholomew Ave., Hartford 14, Conn.-F.AC.AD
  Haydon Mfg. Co., 245 E. Elm St., Torrington, Conn.-S.W.AC
  H-B Instrument Co., American & Bristol Sts., Philadelphia 40, Pa.-F.L.P.Y.AC.AE
  Hedin Tele Technical Corp., 640 W. Mt. Pleasant Ave., Livingston, N.J.-F.AC.AD
  Heineman Electric Co., Penn. Ave. & Plum St., Trenton 2, N.J.-W
  Hercules' Elec. Mach's. & Equip. Co., 1442 E. Wash.ngton Blvd., Los Angeles 21, Calif.-M.V.AB
  Hetherington, Inc., Sharon Hill, Pa.-HK P.

- Wash.ngton Blvd., Los Angeles 21, Calif.— M, V, AB
  Hetherington, Inc., Sharon Hill, Pa.—H,K,P, AB,AC
  Hi-G, Inc., Bradley Field, Windsor Locks, Conn.—R,U,AC,AD
  Hoffman Eng's. Corp., Anoka, Minn.—K
  Hufco Industries, 2815 W. Olive Ave., Burbank, Calif.—U, V, AB,AD
  Hunter Mfg. Co., 930 S. Linn St., Iowa City, Iowa—AH
  Imtra Corp., 58 Charles St., Cambridge 41, Mass.—K,U,V
  Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.—F
  Industrial Products Co., Div. Danbury-Knudsen, Inc., Federal Rd., Danbury, Conn.—B
  Int'l. Business Machines Corp., 590 Madison Ave., New York 22, N.Y.—F
  IQ Industries, 6110 Wilshire Blvd., Los An-geles 48, Calif.—F,W
  Jaidinger Mfg. Co., 1921 W. Hubbard St., Chicago 22, 111.—D,J,K,M,O,P,U,W,AC,AD, AE
  Jennings Radio Mfg. Corp., 970 McLaughlin Ave. San Jose Calif.—B H PO V

- Jaldinker Mig. Co., 1921 W. Hunoard St., Chicago 22, Ill.—D,J,K,M,O,F,U,W,AC,AD, AE
  Jennings Rudio Mfg. Corp., 970 McLaughlin Ave., San Jose. Calif.—B,H.P.Q,Y
  Johnson Co., E. F., Wascea, Minn.—H,Q
  Kellogg Switchboard & Supply Co., 79 Mon-roe St., Chicago 3, Ill.—D,I,S,T,V
  Keystone Products Co., 904 23 St., Union City, N.J.—AB,AC
  Kings Electronics Co., 902 Broadway, New York 10, N.Y.—M
  Kings Electronics Co., 40 Marbledale Rd., Tuckaboe. N.Y.—B,Q
  Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville. Mich.—AH,AK
  Kurman Electric Co., 35-18 37 St., Long Is-land City 1, N.Y.—B,F,H,I,J,K,M,O,Q,V,W, AC,AD,AH
  Larson Instrument Co., 24 Orchard St., Tarry-town, N.Y.—M,NAI
  Leach Relay Co., 5915 Avalon Blvd., Los An-geles 3.Calif.—I.J,K,N,P.Q,V,AC,AD
  Leland. Inc., G. H., 123 Webster St., Dayton 2, Ohio—R,T,AB
  Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.—F,W
  Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, Ill.—A,F,I,K,L,P,S,T,W
  Lyman Electronic Corp., 12 Cass St., Spring-field. Mass.—Q
  Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J. —B
  Mack Electric Devices Inc., 48 Glenside Ave., Wyncote, Pa.—L,P,Y,AB,AC

- В Mack Electric Devices Inc., 48 Glenside Ave., Wyncote, Pa.—L,P,Y,AB,AC Magnecraft Electric Co., 3352 W. Grand Ave., Chicago 51. Ill.—A,E,J,K,M,N,P,U,V,W,X,Y, AC,AD

- Manneerait Electric Co., 3352 W. Grand Ave., Chicago 51. 111.—A.E.J.K.M.N.P.U.V.W.X.Y. AC.AD
  Magnetic Devices, Inc., 712 East St., Frederick, Md.—H.K.O.R
  Marion Electrical Instrument Co., 400 Canal St., Manchester, N.H.—E.U.AC,AI
  Mark Electronics, Inc., 250 Gleuwood Ave., Bloomfield, N.J.—AB
  Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.—W
  Menchelsohn Speedkun Co., 4th Ave., Haskell, N.J.—B
  Mercury Contacts, P.O. Box 615, Far Hills Station, Dayton 9, Ohio.—L
  Mercury Mfr. Corp., Fourth & Montjoy Sts., Falmouth, Ky.—A.I.J.Q.S.AH.AK
  Metronics, Inc., U.S. Route 130, Burlington, N.J.—F.L.O.P.AC
  Milwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, 111.—AH.AK
  Minneapolis-Honeywell Regulator Co., Min-neapolis 8, Minn.—F.M.AB
  Moulic Specialties Co., 1005 W. Washington St., Bloomington, III.—F
  Mullenbach Electrical Mfg. Co., 2300 E. 27 St., Los Angeles 58, Calif.—A.AD
  Multi-Tron Laboratory, 4624 W. Washington Blvd., Chicago 44, III.—H
  Naer Corp., 11777 Santa Monica Blvd., W. Los Angeles 25, Calif.—Y
  Neomatic Inc.. 9010 Bellanca Ave., Los Angeles 45, Calif.—A.F.G.H.I.K.M,N.O.P., U, W.X.Z, AC,AD
  Niagara Electron Laboratories, P.O. Box 128 Main St., Andover, N.Y.—A
  Martheenter Envelopment Envelopment Envelopment

- AC.AD Niagara Electron Laboratories, P.O. Box 128 Main St. Andover, N.Y.-A Northeastern Development Engineers. Inc., 21 High St., Pawtucket 5, R.I.-M.AB North Electric Mfg. Co., S. Market St., Gal-ion, Ohio.-D,E.I.K.O.R.S.T.U.V. W, AA. AC, AD
- Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, III.-R.T
- III.--R.T
  Ohmite Mfg. Co.. 3601 Howard St., Skokie, III.--H.K.M.N.P.V.W.X.AC
  Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.--T.V
  Pan-Ormond Corp., Box 1605, Ormond Beach, Fla.--U.AB
  Parts Producing Corp., 1861 Second Ave., New York 28, N.Y.-O,V

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- Patterson, Moos, Div. Universal Winding Co., 90-28 Van Wyck Expressway, Jamaica 18, N.Y.-A
  Penta Laboratories, 312 N. Nopal St., Santa Barbara, Calif.-Y
  Peschel Electronics, Inc., 13 Garden St., New Kochelle N.Y.-F
  Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.-F
  Petroff, Peter A., 127 Water St., New York 5, NY.-B
  Phaostron Co., 151 Pasadena Ave., S. Pasadena Ave., Calif.-E,G.I,K.M.N.O,P.U.W.X.ABAC, AI.AJ,AL
  Phila. Scientific Glass Co., 1866 Eckard Ave., Abington, Penna.-L.P.W.Y
  Phillips Control Corp., 59 W. Washington St., Joliet, III.-E,F.I.K.V.W.AB,AC,AD
  Photobell Co., 43 Vesey St., New York 7, N.Y.-A.F.W.AE,AF,AH
  Pickering & Co., 309 Woods Ave., Oceanside, L.I., N.Y.-AB
  Pioneer Electronics Corp., 2235 S. Carmelina, W. Los Angeles 64, Calif.-H,IY,AC
  Polate Corp., Joseph, 85 Freeport St. Boston 22, Mass.-B,E,G,H,I,J,K,P,Q,R,U,V,X,Y,Z, AB,AC,AD,AH,AK
  Polytron Eng's, Inc., P.O. Box 124, Middle River, Baltimore 20, Md.-U
  Potter & Brumfield. Princeton, Ind.-F,H,I,J, K,M.P.T,U,V.W.AC,AD
  Precision Thermometer & Inst. Co., 1434 Brandywine St., Philadelphia 30, Pa.-F
  Price Electric Corp., 153 Church St., Footr Chester, N.Y.-AB
  Radio Corp., of America, RCA Tube Dept., 415 S. Fifth St. Harrison, N.J.-AC
  Radio-Gunsport, Ind.-F,M.V,AC
  Resultor Equip. Corp., 56 California Ave., Paterson 3, N.J.-AJ,AL
  Research Electronics Labs., Roslyn, Pa.-F
  Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.-AB
  Revnolds Electric Co., 3000 River Rd., River Grave, III.-AE,AF
  Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford 6, Conn.-W
  Rich Electronics Labs., Roslyn, Pa.-F
  Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.-AB
  Revnolds Electric Co., 3000 River Rd., River Grave, III.-AE,AF
  Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford 6, Conn.-W
  Rich Electronics Labs., Roslyn,

-R -R Sightmaster Corp., 111 Cedar St., New Ro-chelle, N.Y.-F.O Sigma Instruments. 170 Pearl St., South Braintree 85, Mass.-E.F.J.K.O.U.AC.AD.AG Signal Eng'g & Mfg. Co., Long Branch, N.J. -B.H.J.K.O.P.U.Y.W.AC.AD Smith Mfg. Co., Nathan, 105 Pasadena Ave., S. Pasadena, Calif.-AB Standard Coil Products Co., 2085 N. Hawthorne Ave., Melrose Park, Ill.-W.AB Standard Electrical Products Co., 2240 E. Third St., Dayton 3. Ohio.-E.H.J.K.L.M.N, P.V.W.AC.AD.AE.AF Sterling Eng'g. Co., 54 Mill St., Laconia, N.H. -P.T.V.AC.AD

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Ulanet Co., George, 413 Market St., Newark, 5, N.J.-W.AE

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Varor Heating Corp., 80 E. Jackson, Chicago 4, 11.-E.F.L.M.N.P.AB,AC
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Viroreen Instrument Co., 3800 Perkins Ave., Cleveland 14, Ohio-W
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Van Corp., Huron River Dr., Dexter, Mich.-F.J.K.F
Was, Inc., 2032 Broadway, Santa Monica, Chif.-AB
Was Leonard Electric Co., 94 South St., Mount Vernon, N.Y.-J.K.M.N.P.Q.W.X.AD, Walne & Tiernan, 25 Main St., Belleville 9, N.J.-G
Ward Leonard Electric Co., 94 South St., Mount Vernon, N.Y.-J.K.M.N.P.Q.W.X.AD, Walne Inc., Caldwell, N.J. - M.N.U.W.X. A.C.AE.AF
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Waton Electrical Instrument Corp., 614 Freeman, A.J.A.L
Waton Electrical Instrument Corp., 614 Freeman, A.J.AL
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## 78-RESISTORS & VOLUME CONTROLS

Attenuators, precisionQ
Potentiometers, compositionR
Potentiometers, metallic filmY
Potentiometers, precisionS
Potentiometers, slide wireT
Potentiometers, wire-woundU
Resistors, boroncarbon
Resistors, composition, variableZ
Resistors, decadeB
Resistors, deposited-carbonC
Resistors, filmD
Resistors, fixed compositionE
Resistors, fixed wire-woundF
Resistors, fuseV
Resistors, high frequencyAE
Resistors, high voltageAF
Resistors, industrial fixedG
Resistors, negative temperature
coefficientH
Resistors, plug-in tube
Resistors, precisionJ
Resistors, printed circuitW
Resistors, subminiatureK
Resistors, tapeX
Resistors, variableL
Resistors, wirewound, variable AA
Rheostats, power AB
Suppressors
ThermistorsN
VaristorsAC
Volume controlsP
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  American Barrograph Corp., 599 Sackett St., Brooklyn 17, N.Y.—K,W
  American Elite Inc., 7 Park Ave., New York 16, N.Y.—C.F
  American Radio Co., 445 Park Ave., New York 22, N.Y.—N
  Applegate & Co., C. J., 1816 Grove St., Boulder, Colo.—E
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  Arnhold Ceramics, Inc., 1 E. 57 St., New York 22, N.Y.—C.D.J.K
  Atlas Resistor Co., 24 E. Coulter St., Phila-delphia 44, Pa.—F,G,I,L,AA

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Biddle Co., 1816 Arch St., Phila. 7, Pa.-T
Bindlan Corp., 200 E. 3, Mt. Vernon, N.Y.-S
Blonder-Tongue Labs. Inc., 526 North Ave., Westfield, N.J.-Q
Bond Electronics Corp., 60 Springfield Ave., Springfield, N.J.-Q
Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.-C,K,R,S,U,Z,AA
Bradford Components, 83 Bishop St., Brad-ford, Pa.-F,G.J,V
British Electronic Sales, 23-08 45 Rd., Long Island City 1, N.Y.-C,F,J,K,P,Q,U,W,AA
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Cambell Industries Inc., 3806 St. Elmo Ave., Chattanooga 9, Ten.-B,C,D,G,H,J,K
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W.Z.AA
Cima Corp., 119 Braintree St., Allston, Mass. -F(J,S,S,TU,V
Cinema Eng'g. Co., Div. Aerovox Corp., 1100 Chestnut St., Burbank, Calif.-F,K,Q,T,U
Circuit Instruments, Inc., 1927 1 Ave. S., St. Petersburg 1, Fla.-S,U
Ciarostat Mfg. Co., 1 Washington St., Dover, N.H.-C,D,F,G,L,J,K,L,P,Q,R,S,U,V,W,Z,AA, AB
Columbia Resistors Inc., 23 W. Washington

Cleveland 10, Ohio--F,G,U,AB
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Columbia Resistors Inc., 23 W. Washington Ave., Pearl River, N.Y.--F,G,L,M,O
Colvin Labs., 364 Glenwood Ave., E. Orange, N.J.-S,U
Computer Instruments Co., 1964 Utica Ave., Brooklyn 34, N.Y.-D,R,S,Z
Continetal Carbon, Inc., 1300 Lorain Ave., Cleveland 11, Ohio--C,D,F,J,M
Dale Products, Inc., P.O, Box 136, Columbus, Nebr. C,F,G,J,K,S,U,W,AA
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Dayen Co., 191 Central Ave., Newark 4, N.J.-B,F,G,H,J,K,L,P,Q,R,S,U,AA
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DeWitt Development Co., 3008 W. 127th St., Blue Island, III.-F,U
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-Q
Dwyer Engineering Co., P.O. Box 483, Nashua, N.H.-D,E,F,P,R,W,Y
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Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-B,GL,T,AB
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Gray Instrument Co., 64 W. Johnson St., Philadelphia 44, Pa.—B.J.T
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Hansen Electronics Co., 7117 Santa Monica Blvd., Los Angeles 46, Calif.—K.W.X
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Herlec Corp., 6th & Beech St., Grafton 1, Wisc.—W
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Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.—F,J,Q,S
Instrument Resistors Co., 1036 Commerce St., Union, N.J.—F,J,K
Instuine Corp. of America, 186 Granite St.. Manchester, N.H.—F,M
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.—A,C,E,F,G,J,L,F,Q, R,U,Z,AA
Ircal Industries, 2242 S. Sepulveda Blvd., Los Angeles 64, Calif.—J
I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.—F,I,J,K,L,S,U,AA
Javvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.—F,J,L,S,T,U,AA
Javes, P.O. Box 646, Redlands, Calif.—W
Keybelopment Co., 2606 Spring St., Redwood City, Calif.—F,J,S,T,U,AA

Marky & Co., 1980 State St. St. Marky & Pa.-H,N
K-F Development Co., 2606 Spring St., Redwood City, Calif.-F,J,S,T,U,AA
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Markite Corp., 155 Waverly Pl., New York

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Mallory & Co., P.R., 3029 E. Washington St., Indianapolis 6, Ind. - F.I.K.L.P.Q.R.T.U.Y. AA, AB
Markite Corp., 155 Waverly Pl., New York 14, N.Y.-L.R.S
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- Precision, Inc., 730 N. Lyndale Ave., Minneapolis 11, Minn.-F,J,AA
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  Precision Thermometer & Inst. Co., 1434
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  Resistance Products Co., 914 S, 13 St. Harris.

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   Resistors, Inc., 5226 W. 26 St., Cicero, Ill.— F,AA

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  Foxhurst Rd., Baldwin, L.I., N.Y.-F,L.T,U,V
  RHO Eng'g. Co., 4205 Sepulveda Blvd., Culver City, Calif.-F,J,K,W
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  Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.-B,F,J
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  Sanders Associates, 137 Canal St., Nashua, N.H.-K,W,X
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- White Dental Mfg. Co., S. S., 10 E. 40 St., New York 16, N.Y.-E
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- Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa. —A,D,I
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- Radio Devel. & Research Corp., Germanium Products Corp. Div., 26 Cornelison Ave., Jersey City 4, N.J.-D Radio Receptor Co., 251 W. 19 St., New York 11, N.Y.-A,B,D
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- Sprague Electric Co., North Adams, Mass.-
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  Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—A,B,D,E,F,G,H
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  Tung-Sol Electric Inc., 95 8 Ave., Newark 4, N.J.—A,B,D,E,F,G,H
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Allied Int'l Inc., 230 Park Ave., New York 17, N.Y.-B
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  Allied Int'l Inc., 280 Park Ave., New York 17, N.Y.-B
  Allison Steel Mfg. Co., P.O. Box 6067, Phoenix. Ariz.-T
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  Anton Productions Ltd., E. J., 60 W. 46 St., New York 36, N.Y.-F
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  Arizona Recording Productions, 834 N. 7 Ave., Phoenix, Ariz.-O
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  Audio-Master Corp., 17 E. 45 St., New York 36, N.Y.-F
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  Barbre Motion Picture Productions, 1215 E. Virgina, Derver 9, Colo.-F
  Basch Radio & TV Productions, 17 E. 45 St., New York 17, N.Y.-O
  Becker Productions, V. S. 562 5 Ave., New York 36, N.Y.-AF
  Beasett, Inc., Rex, 1314 N. E. 17 Court, Ft. Lauderdale, Fla.-H
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  Beeland-King Film Productions 752 Spring St. N.W., Atlanta, Ga.-O
  Bell Picture Corp., 630 9 Ave., New York 36, N.Y.-F
  Boulevard Recording Studio. 25 E. Jackson Blvd., Chicago 4, III.-O,P.Q.R.Y
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  Bracken Productions, Inc., 8259 Beverly Blvd., Los Angeles 48, Calif.-F
  Brav Studios. Inc., 729 7 Ave., New York 19, N.Y.-C.F,G.J.O
  British Information Services, Film Div., 30 Rockefeller Plaza, New York 20, N.Y.-F
  Brown Radio Froductions, Inc., 101 S. Mera-mec, St. L N.Y.--B Allison Steel Mfg. Co., P.O. Box 6067, Phoenix,

urke & James, 321 S. Wabash Ave., Chicago 4, Ill.—N

Burnett Radio Labs., Wm. W. L., 4814 Idaho St., San Diego 16, Calif.-H

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Calhoun Studios, 266 E. 78 St., New York, N.Y.

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Commerce Pictures, 525 Poydras St., New Orleans, La.—F
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Consolidated Film Industries, 1740 Broadway, New York 19, N.Y.—E
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Electrical Tower Service, P.O. Box 1205, Peoria, III.—T

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Industrial Film Labs., 3333 Iowa Ave., New York 19, NY.-F
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Interstate TV Corp., 4376 Sunset Dr., Holly-wood, Calif.-F
Ivanhoe Electronics Labs., 14238 S. LaSalle St., Chicago 27, Ill.-H
Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-Q
Wing Studio Inc. 601 N. Fairbanks St., Chi-

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March of Time, 369 Lexington Ave., New York 17. N.Y.—F
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Moriton TV Productions, 165 Madison Ave., New York, N.Y.—F
Motion Pictures for Television, 655 Madison Ave., New York, NY.—F
Motion Pictures for Television, 655 Madison Ave., New York, NY.—F
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Neal Productions, Stanley, 45 Rockefeller Plaza, New York 20, N.Y.-F
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Paramount Merker, Santa Monica Blvd., Hollywood 38, Calif.-E, F
Peerless Film Processing Corp., 959 Seward St., Hollywood 38, Calif.-E
Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-B
Phioaeliophia 40, Pa.-N

Hollywood 38, Calif.-E,F
Peerless Film Processing Corp., 959 Seward St., Hollywood 38, Calif.-E
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Phoenix Precision Instrument Co., 3803 N. 5
St., Philadelphia 40, Pa.-N
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Radio Corp. of America, R.C.A. Victor Div., Front & Cooper St., Camden 2, N.J.-Z
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Ramer of America, 1558 Pierce Ave., Camden 5, N.J.-R
Recording Associates, 14 Hillcrest Rd., E. Hartford 8, Conn.-R
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Regency Productions Inc., 102 W. 48th St., New York 19, N.Y.-F
Regency Productions, Inc., 112 W. 48th St., New York 36, N.Y.-F
Regency Productions, Inc., 59 E. 79 St., New York 36, N.Y.-F
Reiner Con, 2101 Bryant St., San Francisco 10. Calif.-F
Republic Productions, Inc., 59 E. 79 St., New York, N.Y.-F
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Robinson Recording Labs., 35 S. 9 St., Philadelphia 7, Pa.-O
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Pa.-B S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.-C,E

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  Transfilm, Inc., 1310 McKinney Ave., Houston, Texas.-T
  TV Associated Productions, 4860 Valley Blvd., Los Angeles 32, Calif.-F, U
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  United Artists TV Corp., 729 7 Ave., New York 19, N.Y.-F

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Printed Electronics Corp., 15 Willow St., Natick, Mass.-B.D.F.I.L.R.Y
Product Eng'g. Labs. 314 Adams St., Newark 5, N.J.-X
Puan-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.-B.K.P.R.S
Quality Products Co., 2911 W. Carroll Ave., Chicago 12, Ill.-K.
Radiaphone Co., 600 E. Evergreen Ave., Monrovia, Calif.-B.K.P.R.S
Quality Products Co., Centre & Glendale Sts., Easton, Pa.-K.
Radiation, Inc., Box "Q," Melbourne, Fla.-P.R.AA
Radia City Products Co., Centre & Glendale Sts., Easton, Pa.-K.

Radio City Products Co., Centre & Glendale Sts., Easton, Pa.--K Radio Recorders, 7000 Santa Monica Blvd., Hollywood 38, Calif.--M Radio Sonic Corp., Plainfield, N.J.--C,I,K,L,P, R,S,V,W,X,AA Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.--N,S,Z

Remco Mfg. Co., 545 N. La Salle St., Chicago 10, Ill.--G Remler Co., Ltd., 2101 Bryant St., San Fran-cisco 10, Calif.-M Rese Engineering Inc., 301 Walnut St., Phila-delphia 6, Pa.—AA Research Instrument Co., 233 Broadway, New York 7, N.Y.-B Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.--R Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.—K,R.V

Richardson Co., 2790 Lake St., Melrose Park,

Rigidized Metals Corp., 657 Ohio St., Buffalo 3, N.Y.-D

Robco Mfg. Div., Pilot Int'l. Corp., 27-01 Bridge Plaza N., Long Island City 1, N.Y.-C,K,L,R

Rogers Corp., Rogers, Conn.-L

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Ill.-L

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-B,K,L,M
Ruby Chemical Co., 68 McDowell St., Columbus 16, Ohio-Y
Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, Ill.-D,H,I
Sangamo Electric Co., 9 & Converse Sts., Springfield, III.-U
Santa Monica Bay Sheltered Workshop, 2521
5 St., Santa Monica, Calif.-G,R,X,Y
Saratoga Industries, Ballston Ave., Saratoga Springs, N.Y.-C
Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.-K,L,N,P,R,S,Y,Z,AA
Scientific Electronic Labs., 866 Bergen St., Newark 8, N.J.-C
Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.-D,K,R
Sealtron Co., 9705 Keading Rd., Cincinnati 15, Ohio-C,F,G,H
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.-P,AA
Sherwin-Williams Co., 101 Prospect Ave., Cleveland 1, Ohio-D,H
Shielding, Inc., 8 Reserve St., Riverside, N.J. -AA
Silver\_Bay Equip. Co., 5004 20th N.W., Seattle

- Sherwin-Williams Co., 101 Prospect Ave., Cleveland 1, Ohio-D,H
  Shielding, Inc., 8 Reserve St., Riverside, N.J. -AA
  Silver Bay Equip. Co., 5004 20th N.W., Seattle 7, Wash.-M
  Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.-K,LR,Y
  Smith-Meeker Eng'g. Co., 157 Chambers St., New York 7, N.Y.-B,M,N,R,S,U
  Sonex, Inc., 245 Sansom St., Upper Darby, Pa.-B,R,Y,AA
  Southwest Products, Alamo Downs Box 35-D, Rt. 4, San Antonio, Texas-P
  Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. -K,L,S,U.X
  Sperry Products Inc., Shelter Rock Rd., Dan-bury, Conn.-K
  Spincraft Inc., 4122 W. State St., Milwaukee 8, Wisc.-D
  S.&S. Mfg. Co., 589 62 St., W. New York, N.J.-D,K,L,R
  Standard Electronics Research Corp., 2 East End Ave., New York 21, N.Y.-W,AA
  Stavid Eng'g., Highway 22, Plainfield, N.J.-J,M.R,S
  Steel Protection & Chemical Co., Bridge St., Mooresville, Ind.-F,G
  Stevens Mfg. Co., 628 Springfield Rd., Union, N.J.-K
  Superder Corp., Harlem & Avondale Aves, Camden 5, N.J.-D, K,R,Y,YZ
  Sun Electronics Corp., 4 Radford Pl., Yonkers, N.Y.-R
  Taylor Fibre Co., Morristown, Pa.-L
  Telechrome, Inc., 38 Merrick Rd., Amityville, L.I., N.Y.-K
  Superex Electonics Corp., 35-16 37 St., Long Island City 1, N.Y.-C,H,R,S,X,Y,AA,AC
  Teleconing Labs., Inc., 1835 W. Rosecrans Ave., Gardena, Calif.-B,K,L
  Teletonic Specialty Co., 350 W. 31 St., New

- Pa.-I.S
  Teletronic Labs., Inc., 1835 W. Rosecrans Ave., Gardena, Calif.-B,K,L
  Television Specialty Co., 360 W. 31 St., New York 1, N.Y.-E
  Tenney Engineering, Inc., 1090 Springfield Rd., Union, N.J.-AA
  Tensitron, Inc., Pin Hill, Harvard, Mass.-AA
  Thompson-Bremer Co., 520 N. Dearborn St., Chicago 10, Ill.-K
  Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-B
  Torngren Co., C. W., 236 Pearl St., Somerville, Mass.-K
  Tricon Mfg. Co., 8008 Wallace St., Chicago 20, III.-Y.Z
  Tri-Dex Co., P.O. Box 1207 Lindsay, Calif.-

- III.—Y,Z
  Tri-Dex Co., P.O. Box 1207 Lindsay, Calif.— B,L,R,Y
  Trilsch Co., John D., 1310 McKinney Ave., Houston, Texas—B,K,N
  Tru-Art Industries, 1657 W. Evergreen St., Chicago 22, III.—K,L,R,X
  Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.—H,J,O
  Uniton Switch & Signal, Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.—F
  United Mfg. Co., Div. W. L. Maxson Corp., 41 Haig St., Hamden 14, Conn.—U,AA
  Universal Circuit Control, 3610 Oakton St., Skokie, III.—R
  U.S. Radium Corp., 535 Pearl St., New York

- U.S. Radium Corp., 535 Pearl St., New York 7, N.Y.-I
- U.S. Testing Co., 1415 Park Ave., Hoboken, N.J.-AA
- U. S. Tower Co., 219 Union Trust Bldg., Pe-tersburg, Va.-B
- Utility Metal Products Co., 117 Elliott, Bev-erly, Mass.---K
- Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.—AC
- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-K.R
- Vinson Co., E. R., 1401 Middle Harbor Rd., Oakland 20. Calif.—S

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-B,K,L,R,V,Y, Z,AA

- Wightha Electronics Co., Kiver Rd. at B&O
  R.R., Washington 16, D.C.-B,K,L,R,V,Y,Z,AA
  Waldorf Instrument Corp., Park Ave., Huntington, N.Y.-K
  Walker Electric Co., B., 132 Nassau St., New York 7, N.Y.-A.B
  Walter Lee Chemical Co., 567 3 Ave., New York 16, N.Y.-L
  Washington Institute of Technology, 4810 Calvert Rd., College Park, Md.-K
  Waveguide, Inc., 14337 Oxnard St., Van Nuys, Calif.-K.V
  Western Coil & Electrical Co., 215 State St., Racine, Wisc.-X
  Western Instrument Co., 826 N. Victory Blvd., Burbank, Calif.-P,S,AA,AB
  White Industries, Inc., 421 W. 54th St., New York 19, N.Y.-C,I,K,L,P,R,S,V,W,X,AA
  Whittington Pump & Eng'g. Corp., 1126 Prospect St., Indianapolis 3, Ind.-AA
  Wiretron Products Electronic Div., Roberts Mfg. Co., 426 E. Shaffer St., Cleburne, Texas -K,L,R,Y
  Wyeth Eng'g., Inc., 1336 W. 89 St., Chicago 20, III.-AA
  Zen Mfg. Co., 1121 Chestnut St., Burbank, Calif.-K

## 82—SOUND REPRODUCING EQUIPMENT, DISC

Cloths, record cleaningAE
Equalizers, recordAF
Filtørs, needlø scratchA
MicroscopesB
Needles, diamondAA
Needles, metalAB
Needles, sapphire,
Needles, steelAD
Phonographs, electricE
Phonographs, hand-woundF
Phonographs, radio combinations .G
Pickup armsD
Pickups, binauralAG
Pickups capacitanceAN
Pickups, ceramic
Pickups, crystal
Pickups, dynamicI
Pickups, magnetic
Pickups, photoelectricK
Pickups, reluctance
Pickups, resistive
Record changers, automatic
Record compoundsY
Record Players, coin-operatedN
Record Players, home
Record Players, transcriptionP
Record RacksQ
Record PressesR
Records, binauralAH
Records, blankAL
Records, commercial
Records, frequencyT
Records, homeU
Records, sound effectsV
Records, testAl
Transcriptions, broadcastW
TurntablesX

- Acoustic Equip. Co., 323 Walton Bldg., At-lanta 3. Ga.-W Airtronix Development Corp., 20 W. 22nd St., New York 10, N.Y.-E,G,M,O,P Allied Recording Products Co., 32-32 Green-point Ave., Long Island City 1, N.Y.-X,AL American Laubacher Corp. 250 W. 57 St.

- point Ave., Long Island City 1, N.Y.-X.AL American Laubscher Corp., 250 W. 57 St., New York 19, N.Y.-AB.AD American Microphone Co., Elgin Nat'l. Watch Co. Affiliate, 370 S. Fair Oaks Ave., Pasa-dena 1, Calif.-D.H AMI Inc., 1500 Union Ave. S.E., Grand Rapids, Mich.-E Ansley Mfg. Co., Arthur, Doylestown, Pa.-E.G.O A. P. W. Co., 72 W. Main St., Rockaway, N.J.-J Audak Co., 500 5 Ave., New York 36, N.Y.-J Audak Co., 500 5 Ave., New York 36, N.Y.-J Audio Devices, Inc., 444 Madison Ave., New York 22, N.Y.-AB,AC Audio Industries, Inc., 532 W. Fourth St., Michigan City, Ind.-E,G Audio-Master Corp., 17 E. 45 St., New York 17, N.Y.-V Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.Y.-A,AF Autocrat Electronies Co., 5024 Elm St., Skokie 8, III.-E,M,O Beam Radionics Corp., 224 N. Desplaines St., Chicago 6, III.-E

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- Becker Productions. V. S., 562 5 Ave., New York 36, N.Y.-W Bennett & Co., Paul, 230 E. Ohio St., Chicago 30, Ill.-N.O.AA.AB.AC Boetsch Bros., 115 Cedar St., New Rochelle, N.Y.-E Bogen Co., David, 29 Ninth Ave., New York 14, N.Y.-O.P.X

- N.Y.-O.P.A Bowen & Co., 4712 Bethesda Ave., Bethesda, Md.-E,O,P Bowen & Co., 4712 Bethesda Ave., Bethesda, Md.-E,O,P
  British Electronic Sales, 23-03 45 Rd., Long Island City, N.Y.-D,H.X
  British Industries Corp., 164 Duane St., New York 13, N.Y.-D
  Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio-H
  Califone Corp., 1041 N. Sycamore St., Holly-wood 38, Calif.-E,H.J.L.O.P.X.AG
  Caltron Products Co., 1810 S. Hobart Blvd., Los Angeles 6, Calif.-D,AL
  Calvin Co., 1105 Truman Rd., Kansas City 6, Mo.-E
  Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.-H,L.M.AJ,AM
  Capitol Transcription Service, 1906 M St. N. W., Washington 6, D. C.-S,U,V,W.AF
  Capps & Co., Frank L., 20 Addison Pl., Valley Stream, N.Y.-AB,AO,AD
  Central Electronics Corp., 4875 San Fernando Rd. W., Los Angeles 39, Calif.,-E
  Corvens, Inc., 16 Horstman Dr., Scotia 2, N.Y.-U
  Crescent Industries, 5900 W. Touby Ave., Chi-

- Rd. W., Los Angeles 39, Calif.,--E. Corvens, Inc., 15 Horstman Dr., Scotia 2, N.Y.-U Crescent Industries, 5900 W. Touhy Ave., Chi-cago 31, Ill.--E,M,O Culbertson Co., George K., 8471 Leroy St., San Gabriel, Calif.--E,O Dean Electronics, 35 5 Ave., Brooklyn 17, N.Y.--E,F,O,P Decca Records, Inc., 50 W. 57 St., New York, N.Y.--U Dela. Optical Labs. 36 Williams St., Lansdowne, Pa.--K

- Dela. Optical Labs. 36 Williams St., Lansdowne, Pa.-K
  Piamond Tool Eng'g. Co., 25 Huntington Ave., Boston 16, Mass.-AA,AC
  D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.-X
  Dubbings Co., 41-10 45 St., Long Island City, N.Y.-T,AI
  DuKane Corp., St. Charles, III.-E.P
  Ducone Co., Locust St., Keyport, N.J.-M.AA, AB,AC,AD,AE,AL
  Edu-Craft Sales Corp., 150-45 12 Ave., White-stone, N.Y.-E,G,O
  Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, III.-K
  Electrovox Co., 60 Franklin St., E. Orange, N.J.-AA,BACC
  Elex Co., 150-50 Melbourne Ave., Flushing 67, N.Y.-E,F,G
  Elgin Electronic Corp., P.O. Box 13, Blufton, Ind.-E
  Epco Electronics, Inc., 140 Liberty St., New York, 6 N.Y.AE

Fisher Radio Corp., 21-21 44th Dr., Long Island City 1, N.Y.-A,G,K,AF
Frutchey, M.P., P. O. Box 28, Hackettstown, N.J.-I.J.L
Garrard Sales Corp., 164 Duane St., New York 13, N.Y.-M,P
Gates Radio Co., 123 Hampshire St., Quincy, III.-P,W,X
General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.-AE
General Electric Co., Broadcast Equip., Commercial Equip. Dept., Electronics Park. Syracuse, N.Y.-D,J,AA,AC,AF
Glaser-Steers Corp., 2 Main St., Belleville 9, N.J.-D
Gotham Television Corp., 123 W. 64 St., New York 23, N.Y.-E,G,O,AF
Gray Research & Devel. Co., 658 Hilliard St., Manchester, Conn.-D,AF
Greene Co., L. Charlton, 314 Washington St., Newton 58, Mass.-E,O,P
Hamilton Electronics Corp., 2726 Pratt Ave., Chicago 45, III.-E,O,P,X
Hedco Mfg. Corp., 161 W. Huron St., Chicago 10, III.-E,G
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-J
Interelectronics Corp., 25 La France Ave., Blvd., Los Angeles 18, Calif.-J
Interelectronics, Corp., 55 La France Ave., Bloomfield, N.J.-K
I. Q. Industries, 6110 Wilshire Blvd., Los Angeles 48, Calif.-K, L
Jensen Industries, Inc., 7333 W. Harrison St., Forest Park, III.-AA,AB,AC,AD,AE
Kay Electric Co., 14 Maple Ave., Fine Brook, N.J.-T
Kraft Bros., 1299 Jerome Ave., New York 52, N.Y.-E
Lindberg Instrument, Alamo Downs, Culebra Rd., San Antonio 4, Texas

Lindberg Instrument, Alamo Downs, Culebra Rd., San Antonio 4, Texas Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-B

Lipps Co., Edwin A., 5485 W. Washington Bivd., Los Angeles 16, Calif.—AA,AC Livingston Electronic Corp., Livingston, N.J.— D.U.AH

D.U.AH London Records, 539 W. 25 St., New York 1, N.Y.--U Magna Electronics Inc., 9810 Anza Blvd., Inglewood, Calif.--E,O Maico Co., 21 N. 3rd St., Minneapolis 1, Minn.

Major Electronics Co., 42 Meserole St., Brook-lyn 6, N.Y.-E Mfg. Lab., 10610 Keswick, Sun Valley, Calif. -D

-D Markel Electric Products, 145 Seneca St., Buf-falo 3, N.Y.--M McClure Talking Pictures, O.J., 1115 W. Wash-ington Blvd., Chicago 7, 111.--E, O.P Mercury Record Corp., 839 S. Wabash Ave., Chicago, I11.--U Merix Chemical Co., 1021 E. 55 St., Chicago 15, 111.--AE MGM Records, 701 7 Ave., New York 36, N.Y. ---U Michigan Electronics Inc. 854 N. Bockwell

15. 111.—AE
MGM Records, 701 7 Ave., New York 36, N.Y.
—U
Mich Records, 701 7 Ave., New York 36, N.Y.
—U
Mich Records, 701 7 Ave., New York 36, N.Y.
—U
Mich Records, 701 7 Ave., New York 36, N.Y.
Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio-E,G,M,O
Miller Mfg. Co., M.A., 4 & Church Sts., Libertyville, Ill.—A,A.B.AC,AD
Milwaukee Record Changer Corp., 39 Warren St., New York 7, N.Y.—M
Mitchell Mfg. Co., 2525 Clybourn Ave., Chicago 14, Ill.—O
National Union Electric Corp., 350 Scotland Rd., Orange, N.J.—J
Newcomb Audio Prods, Co., 6824 Lexington Ave., Hollywood 38, Calif.—E.P
Optron Mfg. Co., 3223 N. Sheffield Ave., Chicago 13, Ill.—E
Pacific Transducer Corp., 11836 W. Pico Blvd., Los Angeles 64, Calif.—E.G.O
Pampa Electronics Sales Corp., 808 N. Broad St., Philadelphia 30, Pa.—I,J,AF,AG
Park Armature Co., 883 Boylston St., Boston 16, Mass.—E.M.O
Permo, Inc., 7314 N. Ravenswood Ave., Chicago 26, Ill.—AA,AB,AC,AD
Pfanstiehl Chemical Co., 104 Lake View Ave., Waukeran. II.—D,A.,AB,AC,AD.AF
Philoc Corp.. C & Tioga Sts., Philadelphia 34, Pa.—D,E,G,H.J,K.M.O,AA,AB.AC,AD
Philoc Crystals, Inc., 15 S. First St., Geneva, Ill.—K
Pickering & Co., 309 Woods Ave., Oceanside, M. Fichering & Co., 309 Woods Ave., Oceanside, M. H. Tukeren Con.

III.—K
Pickering & Co., 309 Woods Ave., Oceanside, N.Y.—D.J.L.AF
Piymouth Electronics Corp., 50 Kingsbury St., Warcester, Mass.—O
Precision Electronics, 7518 Melrose Ave., Los An eles 46, Calif.—E.G
Precision Supply & Machine Co., 12-36 River Rd., Fairlawn, N.J.—AA.AC
Puter Techniques, Inc., 1411 Palisade Ave., W. Englewood, N.J.—AF
QRK Electronic Products. 445 N. Circle Dr., Fresno. Calif.—X
Radio Music Corp., 84 S. Water St., Port

QRK Electronic Products, 445 N. Circle Dr., Fresno. Calif.—X
Radio Music Corp., 84 S. Water St., Port Chester, N.Y.—D.E.J.L.X
Radio Recorders, 7000 Santa Monica Blvd., Hollywood 38, Calif.—E.G.M.O.P.S.T.W
Ralston Record Co., 110 Cedar Ave., Pitman 15, N.J.—AD
RCA Victor Div., Radio Corp of America., Font & Cooper Sts. Camden 2, N.J.—B.W.X
RCA Victor. Custom Record Sales Div., 630 5 Ave., New York 20, N.Y.—S.W.AI
Recordisc Corp., 395 Broadway, New York 13, N.Y.—U,AB.AC.AD.AL
Recoton Corp., 52-35 Barnett Ave., Long Island City 4, N.Y.—J.AB.AC
Rek-O-Kut Co., 38-01 Queens Blvd., Long Is-land City 1, N.Y.—E.O.P.X
Remington Records, 551 5 Ave., New York, N.Y.—U
Ristauerat. Inc., 1216 E. Wisconsin Ave., Appleton, Wisc.—E.G
Robinson Recording Labs., 35 S. 9 St., Phila-delphia 7, Pa.—P.W.X
Ronette Acoustical Corp., 135 Front St., New York 5, N.Y.—D.H.AB
Royal Diamond Tool Co., 172 Green St., Bos-ton 30, Mass.—AA
Scott. Inc., Hermon Hosmer, 385 Putnam Ave.,

ton 30, Mass.—AA Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—X Scott Radio Labs., Liberty St., Plymouth, Ind.

Cambridge 39, Mass.-X Scott Radio Labs., Liberty St., Plymouth, Ind. -E,G.O Seeburg Corp., J. P., 1510 N. Dayton St., Chi-cago 22, Ill.-N Shura-tone Products. 440 Adelphi St., Brook-lyn 38, N.Y.-E,G.O Shure Bros., 225 W. Huron St., Chicago 10, Ill.-D.H.AA,AB,AC.AJ Simpson Mfg. Co., Mark, 32-28 49 St., Long Island City 3, N.Y.-E.G Smith Associates, Rawdon, 1319 19 St. N.W., Washington 6, D.C.-AF Sonotone Corp., Elmsford, N.Y.-AA,AB,AC, AJ

AJ S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, N.Y.—AF Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2. N.Y.—E.O Steelman Radio & Phono Co.. 2-30 Anderson Ave., Mt. Vernon, N.Y.—E.G.M.O.P Stromberg-Carlson Co., 100 Carlson Rd., Rochester 3, N.Y.—M

Swiss Jewel Co., Lafayette Bldg., Philadel-phia 6, Pa.—AA,AC

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Symphonic Radio & Electronic Corp., 160 Washington St. N., Boston 14, Mass.—N,O,P Televex Co., P.O. Box 101, Riverdale Station, New York 71, N.Y.—B.AA,AB,AC Tetrad Co., 62 St. Mary St., Yonkers, N.Y.—

AA Thorens Co., Stewart & Atlantic Ave., Garden City Park, N.Y.-E.F.M.O.P.X Toman & Co., E., 8700 W. 47th St., Lyons, Ill.-F

Toman & Co., E., 8700 W. 47th St., Lyons, Ill.--F
Trebor Radio Co., Pasadena 18, Calif.--O
United Pressed Products, 741 W. Harrison St., Chicago 7, Ill.--A,C,E
United Recording Labs., 1650 Broadway, New York 19, N.Y.-S,W
U.S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.--B,D,E,H,J,L,P,X
Vallorbs Jewel Co., P.O. Box 958, Lancaster, Pa.-AA,AB,CAD
Van Eps Lab., R-D 2, Plainfield, N.J.--B
VM Corp., 280 Park St., Benton Harbor, Mich.--E,M,O
Waters Conley Co., Rochester, Minn.--E
Weathers Industries, 66 E. Gloucester Pike, Barrington, N.J.-D,E,O,P,S,T,U,W,AI,AN
Webster-Chicago Corp., 5610 W. Bloomingdale Ave., Chicago 39, Ill.-E.M.O
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.--E
Williams, Brown & Earle, 904 Chestnut St., Philadelphia 7, Pa.--B,O,P,X

# 83—SOUND REPRODUCING EQUIPMENT, MAGNETIC

Editing blocks .....H Heads, magnetic film stripe .....J Heads, magnetic tape playback ... A Heads, magnetic wire playback ... B Players, magnetic tape .....C Players, magnetic wire .....D Reels .....I Tape indexes ..... E Tape, magnetic Tape, prerecorded .....K Tapes, test .....L Wire, magnetic .....G

Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass .--- A,J

ford, Mass.-A,J
American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.-C,D
American Measuring Instruments Corp., 21-25 44 Ave., Long Island City 1. N.Y.-C
American Silver Co., 36-07 Prince St., Flush-ing 54, N.Y.-F
Ampex Electric Corp., 934 Charter St., Red-wood City, Calif.-C,I
Ampro Corp., 2835 N. Western Ave., Chicago 18, III.-J
Audak Co., 500 5 Ave., New York 36, N. Y.-A
Audio Devices. Inc., 444 Madison Ave., New York 22, N.Y.-F,L
Audio Master Corp., 17 E. 45 St., New York 17, N.Y.-F

N.Y.-F Aurex Corp., 1117 N. Franklin St., Chicago 10. Ill.-D

Ill.—D Berndt-Bach, Inc., 6926 Romaine St., Holly-wood 38, Calif.—J Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio—A.C.F Burke & James, 321 S. Wabash Ave., Chicago 4, Ill.—F

Burke & James, 321 S. Wabash Ave., Chicago 4, 111.—F Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.—F Capitol Transcription Service 1906 M St., N. W., Washington 6, D. C.—K Century Projector Corp., 729 7th Ave., New York 19. N.Y.—J Cook Electric, 2700 Southport Ave., Chicago 14, III.—A Corvens, Inc.. 15 Horstman Dr., Scotia 2, N.Y. —K

Corvens, Inc., 15 Horstman Dr., Scotia 2, N.Y. -K Crescent Industries, 5900 W. Touhy Ave., Chi-cago 31, Ill.-A,B.C.D,F.G Davies Labs., Inc., 4705 Queensbury Rd., Riv-erdale, Md.-A.C Dubbings Sales Corp., 41-10 45 St., Long Island City 4, N.Y.-F.K.L Electro-Mechanical Instrument Co., 812 Chest-nut St., Perkasie, Pa.-A,J Electrosonic Specialties, 7230 Clinton Rd., Up-per Darby, Pa.-C.K EMC Recordings Corp., 806 E. 7 St., St. Paul 6. Minn.-C Ess Tee Distrs., Inc., Box 397, Smithtown, N.Y.-K Fenton Co., 15 Moore St., New York 4, N.Y.-C Ferroprint, 7070 Santa Monica Blvd., Los Angeles 38. Calif.-F Fischer-Smith Inc., 164 State St., W. Engle-wood, N.J.-C Florman & Babb. 70 W. 45 St., New York 36, N.Y.-A,C,H.I

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Fort Wayne Metals, Inc., 3211 MacArthur Dr., Fort Wayne 6, Ind.—G
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—C,D,F,G
Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.—C
Hamilton Watch Co., Allied Products Div., Columbia Ave., Lancaster, Pa.—F
Hartley Co., H. A., 521 E. 162 St., New York 51, N.Y.—C
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.—C
Intercontinental Industries, 555 W. Adams St., Chicago, Ill.—F
Jansen Electronic Co., Teaneck, N.J.—F
Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.—G
Land-Air, Inc., 201 N. Wells St., Chicago 6, Ill.—C,D,F,G
Lipps Co., Edwin A., 5485 W. Washington Blvd., Los Angeles 16, Calif.—A,J
Liwingston Electronic Corp., Livingston, N.J. —K

Livingston Electronic Corp., Livingston, N.J. —K
Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.—A.C.H.I.J
Magnecessories, P.O. Box 6960, Washington 20, D.C.—H
Magnecord, Inc., 1101 S. Kilbourn Ave., Chi-cago 24, Ill.—C.K
Magnetic Sound, Inc., 4803½ Grand Ave., Des Moines, Iowa—F
Michigan Electronics. Inc., 854 N. Rockwell St., Chicago 22, Ill.—C.D.F.G
Miller Electronics, 2840 Naomi St., Burbank. Calif.—K
Mohawk Business Machines Corp., 944 Halsey St., Brooklyn 37, N.Y.—A.C.D.F
Mational Union Electric Corp., 350 Scotland Rd., Orange, N.J.—J
Pampa Electronics Sales Corp., 808 N. Broad St., Philadelphia 30, Pa.—A.C.J
Pentron Corp., 777 S. Tripp Ave., Chicago 24, III.—A.C
Pfanstieni Chemical Co.. 104 Lake View Ave. Pampa Electronics Sales Corp., 808 N. Broat St., Philadelphia 30, Pa.-A.C.J
Pentron Corp., 777 S. Tripp Ave., Chicago 24, III.-A.C
Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, III.-F
Press Wireless Labs. Inc., 25 Prospect Pl., W. Newton 65, Mass.-C
Radio Corp. of America. Eng'g. Products Div., Camden 2, N.J.-F,I.K
Radio Recorders, 7000 Santa Monica Blvd., Hollywood 38, Calif.-F
Recorded Tape of the Month Club, P.O. Box 195 Radio City Sta., New York, N.Y.-K
Recorded Tape of the Month Club, P.O. Box 195 Radio City Sta., New York, N.Y.-K
Recordisc Corp., 395 Broadway, New York 13, N.Y.-F,G
Recoton Corp., 52-35 Barnett Ave., Long Island City 4, N.Y.-F
Remsel Industries, 2427 S. Calumet Ave., Chicago 16, III.-A
Robins Industries Corp., 41-08 Bell Blvd., Bayside 61, N.Y.-FI
Smith Associates, Rawdon, 1319 19 St. N.W., Washington 6, D.C.-A.C.F,K
S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 35, N.Y.-F
Staneil-Hoffman Corp., 921 N. Highland Ave., Hollywood 38, Calif.-A.C.J
St. Cecile Assoc., P.O. Box 55, Westwood, N.J.-F
Tape Recording Apparatus Co., Box 218 Scotch Plains, N.J.-A
Tayloreel Corp., 3-33 Rutter St., Rochester 6, N.Y.-I

N.Y.-I
N.Y.-I
Technical Tape Corp., 177 St. & Harlem River, Bronx, N.Y.-F
Techno Instrument Co., 6666 Lexington Ave., Los Angeles 38, Calif.-D
Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-C,D
Three Dimension Co., Div. Bell & Howell. 3512 N. Kostner Ave., Chicago 41, Ill.-C
U.S. Recording Co., 1121 Vermont Ave., N.W., Washington 5, D.C.-A.C.F
V-M Corp., Park & 4 Sts., Benton Harbor, Mich.-C
Warren Corp., J. C., 21 Hanse Ave., Freeport,

Mich.—C Warren Corp., J. C., 21 Hanse Ave., Freeport, L.I., N.Y.—C Webster-Chicago Corp., 5610 W. Bloomingdale Ave., Chicago 39, III.—C.D.F.G Webster Electric Co., 1900 Clark St., Racine, Wisc.—A,C Wenzel Projector Co., 2509 S. State St., Chi-cago 16, III.—I Williams Brown & Earle, 904 Chestnut St., Philadelphia 7, Pa.—C,F,I

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Equalizers .....H

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IntercommunicatorsK
Megaphones, electronicL
Musical electronic equipmentM
Paging systemsR
PreamplifiersN
Public address systems
Telephone systemsP
Telephones, sound poweredQ
Theater sound systems

Acme Electronics, Inc., (sub. Aerovox Corp.) 2724 Peck Rd., Monrovia, Calif.—E,H Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.—C,F,H,N

Airborne Electronics Inc., 155 1 St., Mineola,

Airtoorne Electronics Inc., 155 1 St., Mineola, N.Y.,-B Airtronix Devel. Corp., 20 W. 22 St., New York 10, N.Y.-K.N.O Allen Organ Co., Locust St., Macungie, Pa.---M

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Ampro Corp., 2835 N. Western Avc., Chicago 18, 111.-S
Atlantic-Central Mfg. Co., 10 Esplanade Ave., Pitnan 9, N.J.-J.M.O.R
Atlas Sound Corp., 1449 39 St., Brooklyn 18, N.Y.-L.O.R.S
Audicon Electronics Co., 4 Green St., Newark 2, N.J.-1

Audicon Electronics Co., 4 Green St., Accurate 2, N.J.—I Audio Equipment Co., 15749 Wyonning Ave., Detroit 38, Mich.— I Audio Equipment Co., 805 Middle Neck Rd., Great Neck, N.Y.—L.O Audio-Master Corp., 17 E. 45 St., New York 17 N.Y.—()

Audio-Master Corp., 17 E. 45 St., New York 17, N.Y.-O
Auth Electric Co., 34-20 45 St., Long Island City 1, N.Y.-D.P
Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.Y.- C.F.K.N.O
Autophone Ltd., 73 Great Peter St., London, England-K,P
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Baldwin Pinno Co., 1801 Gilbert Ave., Cin-cinnati 2, Ohio-M Barber & Howard, 120 East Ave., Westerly, R.I.--N

Baldwin Pinno Co.. 1801 Gilbert Ave., Cincinnati 2, Ohio.-M
Barber & Howard, 120 East Ave., Westerly, R.I.-N
Bellaire Electronics Inc., 30 Prince St., Brooklyn 1, N.Y.- C.H.J.K.N
Bell Sound Systems, 555 Marion Rd., Columbus 7, Ohio.-B.C.O.R
Beltone Hearing Aid Co., 1450 W. 19 St., Chicago 8, III.-I
Bennett Laboratories, Inc., 2700 Bay Rd., Redwood City, Calif.-E,K
Bill Jack Scientific Instrument Co., P.O. Box C-4, Solana Beach, Calif.-K
Billss-Warren Electronic Corp., Box 123, Susses, N.J.-K.O.,P
Booren Co., David, 29 Ninth Ave., New York 14, N.Y.-B.C.F.H.J.K.M N.O.R
Boom Electric Corp., 5226 W. Grand Ave., Chicago 39, III.-F.O
Brelco Electronics Corp., 55 Vandam St., New York 16, N.Y.-C.N
Brush Electronics Corp., 55 Vandam St., New York 16, N.Y.-C.N
Brunell & Co., J.H., 81 Prospect St., Brooklyn 1, N.Y.-D
Calbest Eng'R, & Electronics Co., 328 N. Highland Ave., Hollywood 38, Calif.-C.J.K.O
Canpitol Transcription Service, 1906 M St., N.W. Washington 6, D.C.-E.H.K
Century Projector Corp., 729 7 Ave., New York 19, N.Y.-CS
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Chardons, S. Calif.-J.
Conter Electronics Lab., 2631 Woodlyn Rd., Pasadenn 8, Calif.-J.
Cinema Eng'R. Co. Div. Aerovox Corp., 1100
Chestnut St., Burbank, Calif.,-F.H.N
Chark Cooper Co., Palmyra, N.J.-D
Cleartone Hearing Aids, 1303 S. Michigan Ave., Chicago 5, HI.-J
Donne Electronics Lab., 2631 Woodlyn Rd., Pasadenn 8, Calif.-J.
Damotron Co., 534 Laurel St., San Carlos, Calif.-J.K.
Daven, 191 Central. Newark 4, N.J.-H
Deagan, Inc., J.C., 1770 W. Berteau Ave., Chicago 13, HI.-M
Deater Hearing Aids, 1305 S. Ave., Chicago 14, HI.-M
Deater Forders, S5 5 Ave., Brooklyn 17, N.Y.-J.K.O
Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.-C.D.I.J.K.O.P.Q.R

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Dilks Co., Derby Ave., Seymour, Conn.—C.O.R.
Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge, Mass.—C.K.N.O.R
DuKane Corp., St. Charles, III.—C,K.N.O
Dumont Labs., Inc., Allen B., TV Trans-mitter Dept., Mobile Comm. Dept., 1500
Main St., Clifton, N.J.—F
Edu-Craft Sales Corp., 150-45 12 Ave., White-stone, N.Y.—C,J.N
Electronic Communication Equip. Co., 1249
Loyola Ave., Chicago 26, III.—C,F.G.K.N.O, P.R
Electronic Engrig. Co., 362
W. Bowery St

Electronic Eng'g. Co., 362 W. Bowery St., Akron 7, Ohio--C.K.N.O.P.R.S Electronic Organ Arts, Box 41084, Los Angeles

Electronic Organ Arts. Box 41084, Los Angetes 41, Calif.—M
Electronic Research Associates, 67 E. Broad St. Nutley. N.J.—B.J
Electrosonic Specialties, 7230 Clinton Rd., Upper Darby, Pa.—H.J
Electro-Sound Corp., 115 Halleck St., Boston, Mass.—C.D.J.K.M.N.O.P.R.S
Elex Co., 150-50 Melbourne Ave., Flushing 67, N.Y.—O
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—K

Fim Laboratories, 18 S. Broadway, Dobbs Ferry, N.Y.—K
El-Tronics, Inc., 437 N. 5th St., Philadelphia 23, Pa.—B.C
Epco Electronics, Inc., 140 Liberty St., New York 6, N.Y.—N
Espey Mfg. Co., 528 E, 72 St., New York 21, N.Y.—B.C,I.J.K,N,O,R
Fenton Co., 15 Moore St., New York 4, N.Y. —I

Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.- H
Industrial Test Equip. Co., 55 E 11 St., New York 3, N.Y.-N
Inter-Communications Corp., 620 W. Douglas. Witchita 12, Kan.-G.J.K
Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.-B.C.H.I.,N
Int'l Business Machines Corp., 590 Madison Ave., New York 22, N.Y.-D.K.P.R
Int'l Electronics Corp., 147 Parkhouse St., Dallas 2, Texas.-F.N
Int'l Electronics Corp., 55 LaFrance Ave., Bloomfield. N.J.-C.N.O
Johns-Manville, 22 E. 40th St., New York 16, N.Y.-A
Kellogg Switchboard & Supply. 79 W. Mon-roe St., Chicago 3, III.-P
K-F Development Co., 2606 Spring St., Red-wood City, Calif.-E
Klipsch & Associates, P.O. Box 64. Hope, Ark.-J
Lee Laboratories, Genesee, Pn.-C
Loge, Sound Engineers, J.M., 2171 W. Wash-ington Blvd., Los Angeles 18, Calif.-B,O,R
Loral Electronics Corp., 12 Cass St., Spring-field, Mass.-K
Magna Electronics Inc., 9810 Anza Blvd., Inglewood, Calif.-B,C,J.M,O

Magna

agna Electronics Inc., 9810 Anza Blvd., Inglewood, Calif.—B.C.J.M.O Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.—N

Magnecord, Inc., 1101 S. Kilbourn Ave., Chi-cago 24, Ill.-M

Maico Co., 21 N. 3 St., Minneapolis, Minn.-I

Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-J.N.O Martin & Co., H. S., 1916 Greenleaf St., Evanston, Ill.-C.N

Master Electronics & TV, Rt. 1, Box 36, Lib-ertyville, III.-J

Masterpiece Custom TV, 715 Flatbush Ave., Brooklyn 26, N.Y.--J

Mattson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.--C,M.N.R

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McClure Talking Pictures. O. J., 1115 W. Washington Blvd.. Chicago 7, 111.--O
McGohan, Inc., Don, 3700 W. Roosevelt Rd., Chicago 24, 111.--B,C,H,N,O
Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, 111.--I,K,M,O,R
Metronics, Inc., U.S. Route 130, Burlington, N.J.--C,K,N

N.J.-C.K.N Michigan Electronics Inc., 854 N. Rockwell St., Chicago 22, Ill.-L.O Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, Ill.-C.E.F.G.H.J.N.O.R Myers & Sons, E. A., 306 Beverly Rd., Pitts-burgh 16, Pa.-I National Bell Corp., 6 Lafayette Ave., Brook-lyn 17, N.Y.-C.D.M National Co., Inc., 61 Sherman St., Malden 48, Mass.-J

National Co., 10c., 61 Sherman St., Malden 48, Mass.-J
National Sound Equip. Co., 1212 Farnam St., Omaha, Nebr.-C.J
Neptune Electronics Co., 433 Broadway, New York 13, N.Y.-G.J.K.N,O
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.-B.C.H.N,O,R
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio-P
Oberline, Ltd., 6411 Hollywood Blvd., Hollywood 28, Calif.-C.F,N,O,R
O'Brien Electric Corp., 6514 Santa Monica Blvd., Hollywood 38, Calif.-C.F,O
Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.-C.I
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-E,K,O,P,Q
Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, 111.-N
Partrick & Wilkins, 51 N. 7 St., Philadelphia 6, Pa.-D,P
Peer, Inc., 1200 Milton St., Benton Harbor, Mich.-C
Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, 111.-N
Philmore Mfg. Co., 309 Woods Ave., Oceanside, N.Y.-N
Pilot Radio Corp., 37-06 36th St., Long Is-

Philmore Mig. Co., 113 University Pl., New York 3, N.Y.—J
Pickering & Co., 309 Woods Ave., Oceanside, N.Y.—N
Pilot Radio Corp., 37-06 36th St., Long Island City 1, N.Y.—J.N
Plastics & Electronics, 272 Northland Ave., Buffalo 8, N.Y.—I,N
Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.—C
Pratt. Albert, 114 W. Lake View Ave., Milwaukee 17, Wis.—K
Precision Lectronics, 7518 Melrose Ave., Los Angeles 46, Calif.—C, L, K,O,P
Precision Electronics, Inc., 9101 King Ave., Franklin Park, Ill.—B,C,J,N,O,R.S
Precision Hearing Aids, 5157 W. Grand Ave., Chicago 39, 111.—H.I
Rudin-Co., 4318 Upton Ave. S., Minneapolis 10, Minn.—I
Radio Corp. of America, Eng'R. Products Div., Canden 2, N,J.—C,N,O,P,R,S
Radio Recorders, 7000 Santa Monica Blvd., Hollywood 38, Calif.—J.O
Radio Sonic Corp., 167 Washington St., Roston 8, Mass.—J
Radio Sonic Corp., 315 W. Addison St., Chicago 18, III.—B,C,K,N,O,R
Radio Sonic Corp., 167 Washington St., Roston 8, Mass.—J
Radio Sonic Corp., 638 Ohio S., Buffalo 3, N.Y.—A
Ridized Metals Corp., 658 Ohio S., Buffalo 3, N.Y.—A

10. Calif.-B.C.K.L.N.O.P
Rigidized Metals Corp., 658 Ohio S., Buffalo 3, N.Y.-A
Ripley Co., Middletown, Conn.-C
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio--C.M
Scantlin Electronics. P.O. Box 24561. Los Angeles 24. Calif.-R
Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio--C
Sears Co., M. J., Roxhury. N.Y.-Q
Shrader Sound. Inc., 2803 M St., N.W., Washintton 7. D.C.-CJ.R.S
Simpson Mfg. Co., Mark, 32-28 49 St., Long Island City 3, N.Y.-B,C,E,J.K.N,O
Smith-Meeker Eng'g. Co., 157 Chambers St., New York 7, N.Y.-B,F,O,R
Sonotone Corp., Elmsford, N.Y.-I
Sonstone Corp., Elmsford, N.Y.-I
Sons. Cinema Supply Corp., 602 W., 52nd St., New York 19, N.Y.-C,S
Sperti Faraday, Inc., 1322 E. Church St., Adrian, Mich.-D,K,R
Square Root Mfg. Corp., 391 Saw Mill Rd., Yonkers , N.Y.-C,K,N
Standard Electric Time Co., Sprinfield 2, Mass.-R
Stephens Mfg., Corp., 8538 Warner Dr., Cul-

Stephens Mfg., Corp., 8538 Warner Dr., Cul-ver City, Calif.—C.O.S Stromberg-Carlson Co., Rochester 3, N. Y.— B.C.E.F.G.J.K.M.N.O.P.Q

Talk-A-Phone Co., 1512 S. Pulaski Rd., Chi-cago 23, Ill.—K

Talk-O Products. Inc., 163 St. Paul St., Rochester 4, N.Y.---K Tayloreel Corp., 3 Rutter St., Rochester 6, N.Y.-I

Telecom, Inc., 1019 Admiral Blvd., Kansas City 6. Mo.-K.P.R

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Mass.-R

Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-B,C.D.G,K
Telemarine Communications Co., 3040 W. 21st St. Brocklyn 24, N.Y.-B,C,O
Telesound, Inc., 1505 Race St., Philadelphia 2, Pa.-F,O,R
Tele-Systems, Inc., 6442 Santa Monica Blvd., Los Angeles 38, Calif.-K.P
Television Specialty Co., 350 W. 31 St., New York 1, N.Y.-A
Transelectric Mfg. Co., 48 Hopewell Rd., Ox-ford, Pa.-K.P
Trebor Radio Co., Pasadena 18, Calif.-K
Tri-Dex Co., P.O. Box 1207, Lindsay, Calif.-N
N

Trebor Radio Co., Pasadena 18, Calif.--K
Tri-Dex Co., P.O. Box 1207, Lindsay, Calif.--N
Trutone Electronic Eng'g., 812 N. Highland Ave., Los Angeles 38, Calif.--C.J.N.O
Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.--B.C,G.H.N.O
Union Switch & Signal, Div. Westinghouse Air Brake Co., Pittsburgh 18, Pa.-E
University Loudspeakers. Inc., 80 S. Kensico Ave., White Plains, N.Y.-J.L.O,R.S
U.S. Instrument Corp., 409 Broad St., Summit. N.J.-Q
U.S. Recording Co., 1121 Vermont Ave., N.W., Washington 6, D.C.-F,L,O
Vacolite Co., 3003 N. Henderson St., Dallas 6, Texas-I.K
Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-C.G.J,K,N
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.-K,P
Webster Electric Co. 1900 Clark St., Racine, Wisc.-B,E,K,N,O,R
Western Labs, Inc., Stanley, 3951 W. Fullerton Ave., Chicago 47, Ill.-I
Wenzel Projector Co., 2509 S. State St., Chicago 16, Ill.-C
Western Mfg., Co., 1400 W. 22 St., Kearney, Nebr.-B,E.I.J,K,L,P,Q
Western Sound & Electric Labs., 805 S. 5 St., Milwaukee 4, Wisc.-O,J,K,O
Western Sound & Electric Labs., 805 S. 5 St., Milwaukee 4, Wisc.-O,J,K,O
Wester Insulated Wire Co., 150 E. Aurora St., Waterbury, Conn.-P,Q
White Industries. 421 W. 54 St., New York 19, N.Y.-H
Z&W Machine Products, 5100 St. Clair Ave., Cleveland 3, Ohio-B

### 85-SPEAKERS

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Speakers,	electrodynamicC
Speakers,	electrostaticK
Speakers,	explosion-proofD
Speakers,	high-fidelityE
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Tweeters	H
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Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—A,C,E,H.I American Elite Inc. 7 Park Ave., New York 16, N.Y.—B,C,E,G,H,I,J,K Atlas Sound Corp., 1449 39 St., Brooklyn 18, N.Y.—A,C,D,E,G,H Audicraft Inc., 77 S. 5 St., B'klyn 11, N.Y.—A,C Beam Instruments Corp., 350 5 Ave., New York 1, N.Y.—E,G,H,I Becker Electronics Mfg. Corp., 1091 Rock-away Ave., Valley Stream, L.I., N.Y.—G Best Mfg. Co., 1200 Grove St., Irvington 11, N.J.—F,G Bozak Co., David, 29 9 Ave., New York 14, N.Y.—E Bozak Co., R. T., P.O. Box 966, Darien, Conn. —H,I

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British Electronic Sales, 23-03 45 Rd., Long Island City, N.Y.—B,C.E,G.H.I.K
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Brociner Electronics Lab., 344 E. 32nd.St., New York 16, N.Y.—A,G
Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.—C,E,G.H.I
Carbonneau Industries, 100 Lexington Ave. S.W., Grand Rapids, Mich.—C.G
Century Projector Corp., 729 7th Ave., New York 19, N.Y.—A,C
Cleveland Electronics, 6611 Euclid Ave., Cleve-land 3, Ohio—C.D,E,F,G.H.I
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, III.—C,E,F,G.K
Crawford Dimensitone Co., 456 N. Rodeo Dr., Beverly Hills, Calif.—E,G
Crescent Industries, 5900 W. Touhy Ave. Chi-cago 31, III.—E,F,G.H.I
Delco Radio Div., General Motors Corp., Ko-komo. Ind.—G
DeMars Eng's & Mfg. Co., Lawrence Mass.—E

DeMars Eng's & Mfg. Co., Lawrence Mass .- E

Dictograph Products Corp., 95-25 149th St., Jamaica 1, N.Y.-E

Dilks Co., Derby Ave., Seymour, Conn.—A,G DuKane Corp., St. Charles, Ill.—A,F Duotone Co., Locust St., Keyport, N.J.—E

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Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-B.C,D.E,F,G,H.I
Gulton Mfg. Corp., 212 Durham Ave., Metuchen, N.J.-J
Hartley & Co., H. A., 521 E. 162nd St., Bronx 5, N.Y.-E,G
Heath Co., 505 Territorial Rd., Benton Harbor, Mich.-G
Heppner Mfg. Co., Box 608, Round Lake, Ill.-C,E,G,H.I
Horton Machine Products Co., 1091 Rockaway Ave., Valley Stream, L.I., N.Y.-G
Interelectronics Corp., 147 Parkhouse St., Dallas 2, Texas.-E
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, III.-A.C,E,G.H.I.
Klipsch & Associates, P.O. Box 64, Hope, Ark.-A.E
Lansing Sound Inc., James B., 2439 Fletcher Dr., Los Angeles 39, Calif.-F.H.I

-A,E Lansing Sound Inc., James B., 2439 Fletcher Dr., Los Angeles 39, Calif.-F,H,I Magnasync, Mfg. Co., 5517 Satsuma Ave., N. Hollywood. Calif.-A Magnavox Co., Fort Wayne 4, Ind.-C,E,F,G, H,I McGohen Inc. Doc. 2700 W. D.

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Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, III.-E.F.F
Permoflux Corp., 4900 W. Grand Ave., Chi-cago 33, III.-E.G.H.I
Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.-C.G.K
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-F
Physical Research Associates, 1 Azurelee Dr., Malibu, Calif.-E.H.I.J
Quam-Nichols Co., 234 E. Marquette Blvd., Chicago 37, III.-C.E.G.H
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Quincy Speaker Mfg. Co., 221 Oak St., Quincy, III.-C.D.E.G.H.I
Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.-A.D.E.G.H.I
Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.-C.D.E.F.G.H.I
Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.-C.D.E.F.G.H.I
Radio Corp. 2530 Superior Ave., Cleveland 14, Ohio.-C.G
Ronette Acoustical Corp., 135 Front St., New York 5, N.Y.-B, H
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio-A.D.E.H.I
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Stromberg-Carlson, Co., 100 Carlson Rd., Rochester 3, N.Y.-A.D.E.G.H.I
Stromberg-Carlson, Co., 100 Carlson Rd., Rochester 3, N.Y.-A.D.E.G.H.I
Telemarine Communications Co. 3040 W. 21 St., Brooklyn 24, N.Y.-A.D.
Telex, 1633 Eustis St., St. Paul 1, Minn.-F
Transvision, Inc., New Rochelle, N.Y.-H.I
Ultrasonic Corp., 640 Memorial Dr., Cam-bridge, Mass.-E

-E Ultrasonic Corp., 640 Memorial Dr., Cambridge. Mass.-E
 University Loudspeakers Inc., 80 S. Kensico Ave., White Plains, N.Y.-A.C.D.E.G.H.I
 Utah Radio Products Co., 1123 E. Franklin St., Huntington, Ind.-C.D.E.G.H.I
 Wright Inc., 2233 Univ. Ave., St. Paul, Minn. -E.G
 Wright Zimmerman, Inc., 330 5 Ave., New Brighton 12, Minn.-G.H.I

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Shims, adjusting
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Acme Coil & Transformer Corp., 1915 N. Clybourne Ave., Chicago 14, Ill.—E.F Acoustical Products Mfg. Co., Dorsa Ave., Livingston, N.J.—G

Basler Electric Co., 601 5 St., Highland, Ill.-

M Beam Instruments Corp., 350 5 Ave., New York 1, N.Y.-B,C.H.M Besteraft Products Co., 626 Broadway, New York 12, N.Y.-L.N Bittermann Electric Co., Barlow & Grove Sts., Canaan, Conn.-E,F Bogen Co., David, 29 9 Ave., New York 14, N.Y.-A.B,C British Industries Corp., 164 Duane St. New York 13, N.Y.-L.M Brociner Electronics Lab., 344 E. 32nd St., New York 16, N.Y.-M Buckbee Mears Co., Lindeke Bldg., St. Paul 1, Minn.-L

Minn.-L Bucks County Enterprises Inc., Quakertown, Pa.-L Pa.-L 2118 E. 55 St., Cleveland 3,

Bucks County Enterprises Inc., Quakertown, Pa.-L. Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-B.C.O. Butler Mfg. Co., B. B., 3150 Randolph St., Bellwood, Ill.-B,C Califone Corp., 1041 N. Sycamore Ave., Hol-lywood 38, Calif.-B Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.-C,D,E,G,M Cleveland Wire Cloth & Mfg. Co., 3573 E. 78 St., Cleveland 5, Ohio-L Coil Eng'g. & Mfg. Co., Roanoke, Ind.-F Cordware Eng'g, 2195 42 Ave., Oakland 1, Calif. -E

Cordware Eng'g, 2195 42 Ave., Oakland 1, Calif. -E C.S. Mfg. Co., 211 Glencoe Ave., Venice, Calif. -E,H,M Custom Electronics, 813 Chartres St., New Orleans, La.-A,B,C Dilks Co., Seymour, Con..-H D & M Products. 13144 W. McNichols Rd., Detroit 35, Mich.-B,L DuKane Corp., St. Charles, III.-B Duotone Co., Locust St., Keyport, N.J.-B Dynamic Electronics, N.Y. Inc.. 73-39 Wood-haven Blvd., Glendale, L.I.. N.Y.-A,M Electro-Voice, Inc., Cecil & Carroll Sts., Bu-chanan, Mich.-A,B,C,E,H,M El-Rad Mfg. Co., 2800 W. Cullom Ave., Chi-cago 18, III.-E,F.M Eltran Corp., 113 W. Station St., St. Anne, III.-L Executone, Inc., 415 Lexington Ave., New

Bridin L. L. L. Alto, Alto Lexington Ave., New York 17, N.Y.—H
Fidelity Products Co., 2 Lackawanna Pl., S. Orange, N.J.—B
Fisher Radio Corp., 21-21 44th Dr., Long Island City 1, N.Y.—A,B,C
Flock Process Co., 375 Main Ave., Norwalk, Conn.—B,D,L,N
Forest Electric Co., 7216 Circle Dr., Forest Park, Ill.—F,I
Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill.
\_D,L
General Cement Mfg. Co., 919 Taylor Ave.,

D.L.
General Cement Mfg. Co. 919 Taylor Ave., Rockford, III.—D.J.L.
General Electric Co., Broadcast Equip., Commercial Equip. Dept., Electronics Park, Syracuse, N.Y.—A.C.G
G & H Wood Prods. Co., 75 N. 11th St., Brooklyn 11, N.Y.—A,B,C,D
Gustin-Bacon Mfg. Co., 210 W. 10 St., Kansas City 6, Mo.—N
Hamilton Electronics Corp., 2726 Pratt Ave.

Hamilton Electronics Corp., 2726 Pratt Ave., Chicago 45, III.-B,C Hartley & Co., H. A., 521 E. 162nd St., Bronx 5, N.Y.-A,B,C,N

Hawley Products Co., 335 N 6 St., St. Charles, Ill.-B,C,G

Hawley Products Co., 335 N 6 St., St. Charles, III.-B,C,G
Houlihan Co., T. J., 2508 W. Lawrence Ave., Chicago 25, III.-F
Illinois Wood Products Corp., 1656 N. Besly Ct., Chicago 22, III.-B,C
Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.-I
Insuline Corp. of America, 186 Granite St., Manchester, N.H.-C,L,O
Interelectronics Corp., 2422 Grand Concourse, New York 58, N.Y.-E,F.I
Int'l Electronics Corp., 147 Parkhouse St. Dallas 2. Texas.-E
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, III.-A,B,C,H,M,O
Johns-Manville, 22 E. 40th St., New York 16, N.Y.-A,N
Kahn & Co., 541 Windsor St., Hartford 1, Conn.-C
Klipsch & Associates, P.O. Box 64, Hope, Ark.-M
Lansing Sound Inc., James B. 2439 Fletcher Dr., Los Angeles 39, Calif.-CH.M

Klipsch & Associates, P.O. Box 64, Hope, Ark.-M
Lansing Sound Inc., James B. 2439 Fletcher Dr., Los Angeles 39, Calif.-C.H.M
Lowell Mfg. Co., 3030 Laclede Station Rd., St. Louis 17, Mo.-C
Magna Electronics Inc., 9810 Anza Blvd., In-glewood, Calif.-B,C
Magnasync Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.-A,B
Marine View Electronics, 744 E. 138th St., New York 54, N.Y.-M
Master Electronics & TV. Rt. 1 Box 36, Lib-ertyville, III.-C
Mago 24, III.-B,C
McGohan, Inc., Don. 3700 W. Roosevelt Rd., Chicago 24, III.-B,C
Metronics, Inc., U.S. Route 130, Burlington, N.J.-L
Moran Electronic Components, 10506 Wheatley St., Kensington, Md.-E,F
Muter Co., 1255 S. Michigan Ave., Chicago 5, III.-A
National Sound Equip. Co., 1212 Farnam St., Oursen Subt. Net Metronics, Net Metronics, Net Actional Sound Equip.

St., Kensington, Jau.-E., r
Muter Co., 1255 S. Michigan Ave., Chicago 5, 111.-A
National Sound Equip. Co., 1212 Farnam St., Omaha. Nebr.-A.B,C
Patrick Brothers Inc., 1938 N. Springfield Ave., Chicago 47, 111.-K
Pearless Products Industries, 812 N. Pulaski Rd., Chicago 51, 111.-D
Pernoflux Corp., 4900 W. Grand Ave., Chicago 39, 111.-B,D,L
Peerless Products Industries, 812 N. Pulaski Rd., Chicago 51, 111.-D
Permoflux Corp., 4900 W. Grand Ave., Chicago 39, 111.-B,C.M
Phen-O-Tron. Inc., 455 Main St., New Rocchelle, N.Y.-M
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-B
Physical Research Associates, 1 Azurelee Dr., Malibu, Calif.-A,C
Pickard & Burns, 240 Highland Ave., Needham, Mass.-C
Pix Mfg. Co., 5 Oliver St., Newark 5, N.J.-O
Plymuth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-C,E
Premier Metal Products Co., 3160 Webster Ave., New York 67, N.Y.-C
Q-Line Mfg. Corp., 1562 61 St., Brooklyn 19, N.Y.-B,O
Radion Corp. of America, Eng'g Products Div., Camden 2, N.J.-B,C,H
Radionic Laboratories, 1111 State Rd. 67 E., Anderson, Ind.-C
Radio & TV Inc., Brunswick Div., 119 W. 57
St. Naw York 10 N V-B

Radionic Laboratories, 1111 State Rd. 67 E., Anderson, Ind.—C Radio & TV Inc., Brunswick Div., 119 W. 57 St., New York 19, N.Y.—B Rapid Die & Molding Co., 39901 Wesley Terrace, Schiller Park, III.—G Raytor Corp., 5th St. & Cannon Ave., Lans-dale, Pa.—C Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.—L,O Rigidized Metals Corp., 658 Ohio St., Buffalo 3, N.Y.—L,N River Edge Industries, 5 River Edge Rd., River Edge, N.J.—A,B,C R.J. Audio Products, 164 Duane St., New York 13, N.Y.—B,C R. K. Mfg. Co., P.O. Box 112, Marion, Ill.— M

R. K. Mfg. Co., P.O. Box 112, Marion, Ill.-M
M
Rowe Industries, 1702 Wayne St., Toledo 9
Ohio-H.M
Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.-M
Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.-L
Semrow Products Co., 6138 N. W. Highway, Chicago 31, Ill.-B,D,L
Shrader Sound, Inc., 2803 M St., N.W., Washington 7, D.C.-C
S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, N.Y.-A,B,C,I,M
Spaulding Fibre Co., 310 Wheeler St., Tonawanda, N.Y.-B.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-E,M
Stephens Mfg. Corp., 3638 Warner Dr., Culver City, Calif.-A,B,C,D,E,G,H,L,M
Stevens Products, 86 Main St., E. Orange, N.J.-G
Stromberg-Carlson Co., Rochester S, N.Y.-A,B,C,H
Telesound. Inc., 1505 Race St., Philadelphia 2,

A,B,C,H Telesound, Inc., 1505 Race St., Philadelphia 2, Pa.—A,C

Telex, Inc., 1633 Eustis St., St. Paul 1, Minn.

Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-K

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Tru-Art Industries, 1657 W. Evergreen St., Chicago 22, Ill.—B,D Trutone Electronics Inc., 812 N. Highland Ave., Los Angeles 38, Calif.—C,M Ultra Hi-Fi Co., 709 Sip St., Union City, N.J. —A,C,D

University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N.Y.-B,C,E,H,K,M,O, Ave., P

Univox Corp., 102 Warren St., New York 7, N.Y.--M

Univox Corp., 102 Warren St., New 10rk ', N.Y.-M U. S. Recording Co., 1121 Vermont Ave., N. W., Washington 5, D.C.-H,K Utah Radio Products Co., 1123 E. Franklin St., Huntington, Ind.-B,C.E.F.H.I.M Western Coil Products Co., 2989 Middlefield Rd., Palo Alto, Calif.-E Woodalı Industries, Inc., 7569 E. McNichols Rd., Detroit 34, Mich.-C Wright, Inc., 2233 University Ave., St. Paul 14, Minn.-B,C,L

### 87-STUDIO EQUIPMENT, AUDIO

Amplifiers, distributionAConsoles, audioCConsoles, controlDConsoles, remote switchingFControls, masterEDistribution equiomentGPreamplifiersOReceivers, cueHReceivers, studioIRemote audio equipmentJRemote pickup, audioKReverberation unitsPSpecial effects equipmentLStudio transmitter linksMTransmitters, cueN	
<ul> <li>Adler Communications Labs., 1 Le Fevre Lane, New Rochelle, N.YC,E,M</li> <li>Aerovox Corp., 740 Belleville Ave., New Bedford, MassC,D,E,F,L,O</li> <li>Air Transport Mfg. Co., 1114 N. Sycamore Ave., Los Angeles 38, CalifC,D,F</li> <li>Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, CalifA,C,J,K,O</li> <li>Audio Instrument Co., 133 W. 14 St., New York 11, N.YP</li> <li>Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.YA,C,D,E,O</li> <li>Baldwin Piano Co., 1801 Gilbert Ave., Cincinnati, 2, Ohio-P</li> <li>Barber &amp; Howard, 120 East Ave., Westerly, R. IC,F,J</li> <li>British Electronic Sales, 23-03 45 Rd., Long Island City 1, N. YE</li> <li>Brociner Electronics Lab., 344 E. 32nd St., New York 16, N.YO</li> <li>Capitol Transcription Service, 1906 M. St., N.W., Washington 6, D.CG</li> <li>Century Lighting Co., 521 W. 43 St., New York 25, N.YF</li> <li>Cinema Eng's, Co., Div. Aerovox Corp., 1100 Chestnut St., Burbank, CalifC,DO</li> <li>Coax Electronics Corp. 738 Speedwell Ave., Morris Plains, N.JH,N</li> <li>Daven Co., 191 Central Ave., Newark 4, N.J. E,G,L</li> <li>Deagen, Inc., J. C., 1770 W. Berteau Ave., Chicago 13, 111L</li> <li>Dictograph Products Corp., 95-25 149th St., Jamaica 1, N. YC,D,E,G</li> <li>Dubrow Development Co., 235 Penn. St., Burlington, N. JA,C,D,F,J,K,O</li> <li>Dubrow Development Lab., 43-07 23 Ave., Clifton, N. JC,F,G,M</li> <li>Electronic Development Lab., 43-07 23 Ave., Clifton, N. JC,F,G,M<th></th></li></ul>	
<ul> <li>Ercona Corp., Scientific Instr. Div., 527 5 Ave., New York 17, N. YO</li> <li>Expey Mfz. Co., 528 E. 72 St., New York 21, N.YA.C.G.I.J.K.L.N.O</li> <li>Fairchild Recording Equip. Co., 154 St. &amp; 7 Ave., Whitestone 57, N. YO</li> <li>Federal Telecommunication Labs., 500 Wash- ington Ave., Nutley 10, N. JA.E.F.G.L.M. Gates Radio Co., 123 Hampshire St., Quincy, IIA.C.D.E.F.G.J.K.L.O</li> <li>General Communications, P O Box 169, Fort Atkinson, WiscA.C.D.E.F.G.J.O.</li> <li>General Electric Co., Broadcast Equip., Com- mercial Equip. Dept., Electronics Park, Syracuse, N. YA.C.D.E.F.G.H.J.J.K.L.M.O</li> <li>Gotham Audio Devel Corp., 2 W. 46th St., New York 36, N.YA</li> <li>Graybar Electroics, 8-03 L49 St., Whitestone 57, L. I., N. YO</li> <li>Hallamore Mfs. Co., 2001 E. Artesia, Long Beach 5, CalifA.C.D.E.F.G.K.O</li> </ul>	
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Hyeor Co., 11423 Vanowen St., North Hollywood, Calif.-L
Interelectronics Corp., 2432 Grand Concourse, New York 58, N.Y.-A.C.J.O
Int'l Electronics Corp., 147 Parkhouse St., Dallas 2, Texas.-C
Int'l Research Assoc, 2221 Warwick Ave., Santa Monica, Calif.-A
Kay Electric Co., 14 Maple Ave., Pine Brook, N. J.-L.N.P
Kilgen Organ Co., 4632 W. Florissant Ave., St. Louis 15, Mo.-C.D.E.F
Krohn-Hite Instrument Co., 580 Massachusetts Ave., Cambridge 39, Mass.-A
Magnasync Mfg. 5617 Satsuma Ave., N. Hollywood, Calif.-O
Mation-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.-A.C.D.E.F.G.H.I.J.K.L.O
McGohan, Inc., Don, 3700 W. Roosevelt Rd., Chicago 24, III.-O
McIntosh Lab., Inc., 320 Water St., Binghamton, N.Y.-A,O
Metal Products Co., Craighead St., Nashville 4, Tenn.-C,M
Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, III.-A,C.D.F.H.J.N.O
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio-F
Oberline Itd., 6411 Hollywood Blvd., Hollywood 28, Calif.-L
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-M
Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.-L
Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-I
Pickering & Co., 309 Woods Ave., Oceanside, N.Y.-O
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N. Y.-H.N
Radio Corp. of America, Eng'g. Products Div., Cander 2, N. J.-A,C.D.E.F.G.J.M.O
Radio Engineering Labs., 36-40 37 St., Long Island City 1, N.Y.-A
Standard City 1, N.Y.-H.
Radio Corp. of America, Eng'g. Products Div., Cander 2, N.J.-A, C.D.E.F. G.J.M.O
Special Effects & Equip. Inc., 413 W. 54 St., New York 3, N.Y.-I
Sutare Root Mfg. Corp., 331 Saw Mill River Rd., Yonkers 2, N.Y.-A
Standard Electronics Corp., 235 Eutham Ave., Cambridge 38, Mass.-A,O
Sonex, 245 Sanson St., Upper Darby, Pa.-O
Special Eff

Telescreen Corp., 36 Grove St., New Canaan, Conn.-I
Tri-Dex Co., P.O. Box 1207, Lindsay, Calif.-O
United Recording Labs., 1650 Broadway, New York 19, N. Y.-C,D,E,O
U. S. Recording Co., 1121 Vermont Ave., N. W., Washington 5, D.C.-A,C
Victorlite Industries, 4117 W. Jefferson Blvd., Los Angeles 16, Calif.-L
Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D. C.-A,D,F
Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-H,N

88—STUDIO EQUIPMENT, TV (Color & Black-and-White) Adapters, field sequential .....A Adapters, line & dot sequential ...B

Amplifiers, distribution .....C Amplifiers, montage .....D Amplifiers, stabilizing .....E Camera cranes .....F Camera dollies .....G Camera switching equipment .....H Cameras, field .....J 

Color TV film chains .....AU Color TV generators ......AV Color TV monitors .....AW

Color TV stabilizing amplifiers ... AAE Color TV sync equipment ......AZ

Color TV test equipment ......AAA Consoles, control .....M

Consoles, remote switchingN
Control equipment
Controls, camera
Controls, masterQ
Controls, remote cameraP
Converters, field sequential,T
Distribution equipmentU
Faders
Generators, color signalV
Generators, sync
Generators, sync stretchersX
Generators, TV signalY
LensesZ
Mirrors
Monitors, line & programAA
Panels, video patch AB
Pan heads
Pedestals
Projection unitsAC
Projectors, TV film AD
Projectors, TV kaleidoscope AS
Projectors, TV mirror multiplexers AF
Projectors, TV rear screen AG
Projectors, TV slideAH
Projectors, TV special purpose Al
Prompting equipmentAAB
Receivers, cueAJ
Receivers, studioAK
Remote pickup, videoAL
Scanners, flying spotAM
Special effects equipmentAN
Studio transmitter links
Transmitters, cueAP
Tripods
Tubes, colorAR

Adler Communications Labs., I Le Fevre Lane, New Rochelle, N.Y.-C.M.N.O.Q.U.AA.AW, AAC

t

- American Electronic Laboratories, 641 Arch St., Philadelphia 6, Pa.-C American Optical Co., Buffalo 15, N.Y.-AG,
- AH Ampro Corn., 2835 N. Western Ave., Chicago 18, Ill.—AD

- Ampro Corn., 2835 N. Western Ave., Chicago 18, III.—AD
  Audio Equipment Sales, 153 W. 33 St., New York 1. N.Y.—AB
  Bache, Semon & Co., 636 Greenwich St., New York 14, N.Y.—AB
  Bache, Semon & Co., 636 Greenwich St., New York 14, N.Y.—AAF
  Background Engineers, 7313 Santa Monica Blvd., Hollywood 46, Calif.—AF,AG
  Baugh & Lomb Optical Co., 628 St. Paul St., Rochester, N.Y.—Z,AH,AAF
  Bav-ide Watch Tool Co., 20-02 Utopia Parkway, Whitestone 57. N.Y.—H
  Bell & Howell. 7100 McCormick Rd., Chicago 45, III.—Z,AD,AG.AH
  Berndt-Bach. Inc., 6926 Romaine St., Hollywood 38, Calif.—L
  Bionder-Tongue Labs., Inc., 526 North Ave., Westfield. N.J.—U
  Bodde Screen & Projector Co., 8829 Venice Blvd., Los Angeles 34, Calif.—AC
  British Electronic Sales, 22.03 45 Rd., Long Island City, N.Y.—Z,AAI
  Buhl Obtical Co., 1009 Beech Ave., Pittsburgh 33, Pa.—AAF
  Burke & James, 321 S. Wabash Ave., Chicago 4, III.—Z

- 33. Pa.—AAF
  Burke & James, 321 S. Wabash Ave., Pittsburgh
  33. Pa.—AAF
  Burke & James, 321 S. Wabash Ave., Chicago
  4, Ill.—Z
  Camera Equinment Co., 1600 Broadway, New
  York 19, N.Y.—G.Z.AQ.AAG
  Camera Mart. Inc., 1845 Broadway, New York
  23, N.Y.—G.AQ
  Ceco Distr. Corp., 1600 Broadway, New York
  19, N.Y.—G
  Century Lighting Inc., 521 W. 43rd St., New
  York 25, N.Y.—M.N.S.AG.AI
  Clegg Laboratories, Inc., 142 S. Livingston
  Ave., Livingston, N.I.—V,W.X.Y.AV.AZ
  Conrac, Inc., 19217 E. Foothill Blvd., Glendora, Calif.—AA.AW
  Dage TV Div., Thomnson Products. Inc.,
  Michigan City, Ind.—H,I.J.K,L,V.W.AF.AS.
  AU.AW
  Daven Co., 191 Central Ave., Newark 4, N.J.—
  N.Q.S.AAC.AAI
  Delaware Optical Labs., 36 S. Williams St.,
  Lamsdowne, Pa.—Z.AC
  DuMont Laboratories Inc., Allen B., Communication Products Div., 1500 Main Ave.,
  Clifton, N.J.—C, D. E. G. H. I. J. K. L. M.
  N. O. P. Q. U. V. W. Y. Z. AA, AB, AC.
  AD, AF, AG, AH, AM, AO, AQ, AR, AS,
  AW, AX, AY, AZ, AAA, AAB, AAD, AAE,
  AAG, AAH
  Dynamic Electronics, N.Y. Inc., 73-39 Woodhaven Blvd., Glendela, J. V. W.
- Dynamic Electronics, N.Y. Inc., 73-39 Wood-haven Blvd., Glendale, L.I., N.Y.-AW
- Broona Corp., Scientific Instr. Div., 527 5
  Ave., New York 17, N.Y.-Z.AN
  Federal Telecommunication Labs, 500 Washington Ave., Nutley 10, N.J.-C,D,E,J,K,L,M, N,Q,U,W,AA,AB,AM,AN,AO

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Fisher Co., Oscar, 1000 N. Division St., Peekskill, N.Y.—S.U
Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N. Y.—Z.AF,AG,AI,AM,AN,AW, AY,AAA.AAF
Fleetwood, Corp., 1037 Custer Dr., Toledo 12, Ohio—K,L,M,N,O,P,Q,U.AI,AU
Flett Lab. 3711 Marshall Rd., Drexel Hill, Pa. —AF,AI
Florman & Babh. 70 W. 45 St., New York 36

- -AF,AI Florman & Babb. 70 W. 45 St., New York 36, N.Y.-G,L,Z,AQ Foto-Video Labs. P.O. Box 296, Clifton, N.J. -C, D, H, O, P, U, V. W, Y, AA, AM, AS, AW, AY, AZ, AAA, AAC, AAD Gates Radio Co., 123 Hampshire St., Quincy, III.-E Ill.-E General Communications, Box 169. Fort At-kinson, Wisc.-C, D, E, M, N, O, Q, R, U,
- General Communications, Box 169, Fort Atkinson, Wisc.--C, D, E, M, N, O, Q, R, U, AA, AB
  General Electric Co., Broadcast Equip., Commercial Equip. Dept., Electronics Park, Syracuse, N.Y.-A, B, C, D, E, H, J, K, L, M, O, P, Q, T, U, V, W, X, Y, AA, AB, AC, AD, AH, AI, AR, AS, AT, AU, AV, AW, AX, AY, AZ, AAA, AAC, AAD, AAE, AAI
  General Electric Co., Industrial Electronics Sec. Commercial Equip. Dept. Electronics Park, Syracuse, N.Y.-J, M, O, P, AS, AT, AW, AAA
  General Precision Lab, 63 Bedford Rd., Pleasantville, N.Y.-C, H, I, J, K, L, M, N, O, P, S, U, V, W, Z, AAA, AB, AC, AD, AF, AG, AH, AI, AS, AT, AU, AV, AW, AZ, AAA, AAC, AAD, AAG, AAH
  Gordon Enterprises, 5362 N. Cahuenga Blvd, N. Hollywood, Calif.-H, I, J, K, O, P, Z, AAF
  Grant Pulley & Hardware Corp., 31-85 Whitestone Parkway, Flushing 54, N.Y.-AH
  Graybar Electric Co., Nat'l. Headquarters, 420 Lexington Ave., New York 17, N.Y.-K, Q, AD, AO

- 420 Lexingto -K.Q.AD,AO
- Gray Research & Devel Co., 658 Hilliard St., Manchester, Conn.—AF,AH,AI,AN,AS Gurley, W. & L. E., Fulton St., Troy, N.Y.— Z,AC
- Hallamore Mfg. Co., 2001 E. Artesia. Long Beach 5, Calif.—J.K.M.N.O.P.Q.S.U.Y.AA. Beach AB

- Hallamore Mfg. Co.. 2001 E. Artesia. Long Beach 5, Calif.-J.K.M.N,O,P.Q.S,U,Y,AA, AB
  Harrison Labs., 53 Industrial Rd., Berkeley Heights. N.J.-AN
  Harwood Mfg. Co.. 466 W. Superior St., Chi-cago 10. III.-AQ
  Hickok Electrical Instrument Co.. 10514 Du-pont Ave., Cleveland 8, Ohio-V,W.AV
  Holland Electronics. 2133 Central Dr. S., E. Meadow. N.Y.-C,AAC
  Houston Fearless, Div. of Color Corp. of America, 11801 W. Olympic Blvd., Los Angeles 64. Calif.-F.G.P
  Hycon Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-AAA
  Industrial Television Inc.. 369 Lexington Ave., Clifton, N.J.-AW
  Q. Industrise. 6110 Wilshire Blvd.. Los Angeles 48. Calif.-N
  Kay Electric Co., 14 Manle Ave.. Pine Brook. N.J.-V.W.AP.AS.AV.AW.AZ.AAA
  Kay Electric Co., 14 Manle Ave.. Pine Brook. N.J.-V.W.AP.AS.AV.AW.AZ.AAA
  Kay Electric Co., 4632 W. Florissant Ave., St. Louis 15, Mo.-Q
  Kliel Brns.. 321 W. 50 St.. New York 19. N.Y.-M.N AG.AH
  Kollmorgen Optical Corp., 30 Church St., New York 7, N.Y.-Z
  Libbey-Owens-Ford Glass Co., Liberty Mirror Div., Brackenridge, Pa.-AF
  Lindly & Co., 248 Herricks Rd., Mineola, N.Y. -Z.AAF
  Linear Equipment Labs., 380 Oak St., Copiague, N.Y.-C

- Lindly & Co., 248 Herricks Rd., Mineola, N.Y. —Z.AAF Linear Equipment Labs., 380 Oak St., Copiague, N.Y.—C Magnasyne Mfg. Co., 5517 Satsuma Ave., N. Hollywood, Calif.—C Metal Products Co. Craighead St., Nashville 4. Tenn.—C.AO Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, III.—AJ,AP,AAB Mitchell Camera Corp., 666 W. Harvard St., Glendale 4. Calif.—AQ Multi-Tron Laboratory, 4624 W. Washington Blvd., Chicago 44, III.—AI,AX Musicolor, Inc., 920 N. Michigan Ave., Chicago 11. III.—AI National Cine Equip., 209 W. 48 St., New York 36. N.Y.—G NEMS-Clarke, Inc., 919 Jesup-Blair Dr., Silver Spring, Md.—AL O'Brien Electric Corp., 6514 Santa Monica Blvd., Hollywood 38, Calif.—N Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.—V,W,Y.AM, AV,AY,AZ,AAA Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.—Z,AAF

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- Paillard Products, 100 6 Ave., New York 13, N.Y.-J Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.-Z,AN,AAB,AAF Par Products Corp., 926 N. Citrus Ave., Hollywood 38, Calif.-I.Z Patrick Bros., 1938 N. Springfield Ave., Chi-cago 47, Ill.-AQ Penna, Optical Co., 234 S. 8 St., Reading, Pa. -Z

- Penna. Optical Co., 234 S. 8 St., Reading, Pa. -Z
  Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa. -AD,AF,AH,AU,AY,AAA
  Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-AK
  Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.-V,W.Y.AJ,AM,AP,AS, AT,AV,AW,AY,AZ,AAA,AAD
  Ponder & Best. 814 N. Cole Ave., Hollywood 38, Calif,-L.Z
  Precise Development Corp., 2 Neil Court. Oceanside. N.Y.-C, M. W., Washington, D.C.-Z
  Radiation, Inc., Box "Q." Melbourne, Fla.-O
  Radiation, Inc., Box "Q." Melbourne, Fla.-O, Radio Corp. of America. Eng'g. Products Div., Camden 2, N.J.-C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q. V, W, X, Y, AA, AB, AC, AD, AF, AG, AH, AL, AN, AO, AP, AQ, AS, AT, AU, AV, AW, AZ, AAAA, AAC, AAE. AAG, AAH
  Rauland Corp., 4245 N. Knox Ave., Chicago 41. III.-AR
  Scala Radio. 2814 19 St., San Francisco 10.

- AAE. AAG, AAH
  Rauland Corp., 4245 N. Knox Ave., Chicago 41.
  Ill.—AR
  Scala Radio, 2814 19 St., San Francisco 10, Calif.—AAA
  Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—AS,AW.AAA
  S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, N.Y.—F, G, J, K, L, O, P, Z, AC, AD, AG, AH, AI, AQ
  Sound-Screen Supplies, 752 Broadway, New York 3, N.Y.—AG,
  Special Effects & Equip., Inc., 418 W. 54 St., New York 19, N.Y.—AG,AN
  Spencer-Kennedy Labs., 186 Mass, Ave., Cambridge 39, Mass.—AA
  Standard Electronics Corn., 285 Emmet St., Newark 5, N.J.—C.H.K,L,M.O,P.Q.AS,AU, AW.AZ
  Strong Electric Co., 87 City Park Ave., To-

- Stanuard Electronics Corn., 285 Fimmet St., Newark 5, N.J.-C.H.K.L.M.O.P.Q.AS.AU, AW.AZ
  Strong Electric Co., 87 City Park Ave., To-ledo 2, Ohio-AH
  Studio TV Products Sales, 500 5 Ave., New York 36, N.Y.-G.AQ.AAH
  Tarc Instruments, Inc., 97A Greenwich St., Hempstead, LI., N.Y.-C.E.H.U.V.W.X.Y. AM,AS.AV,AW,AY.AZ.AAA.AAD.AAE
  Tarzin Inc., Sarkes, 539 S. Walnut St., Bloomington, Ind.- C.H.J.K.L.M.N.O.W.AC, AD,AH,AO,AT,AU.AW.AY.AZ.AAC.AAH
  T-Bar-V Productions. Inc., 5919 Hollwood Blvd., Hollywood 28. Calif.-AG.AI.AN
  Telechrome. Inc., 88 Merrick Rd., Amitvville, LI., N.Y.-A. B. C. D. E. H. J. K. L. M. N. O, P. Q. T, U. V. W. Y. AA. AB, AL, AM, AN, AS. AT, AU. AW, AW, AY, AZ, AAA. AAB. AAC, AAD. AAE, AAH
  Telecolor Services Div., Musicolor Inc., 920 N. Michigan Ave., Chicago 11, 111.-AI
  TelePromoTer Corp., 300 W. 43 St., New York 36, N.Y.-AAB
  Grove St., New Canaan, Conn.-H. I. J. O, P. S. Y. AC. AK. AM
  Television Associates, E. Michigan St., Michi-gan City. Ind.-G,AF.AQ
  Television Specialty Co., 950 W. 31st St., New York 14, N.Y.-F,G.I.L.AG,AH,AI,AQ, AAB
  Television Utilities Corp., 1315 Joricho Turn-

- New AAB

- AAB Television Utilities Corp., 1315 Jaricho Turn-pike, New Hvde Park, LI., N.Y.-C.D.E.H. AA,AJ,AK.AL.AW.AAC Tel-Instrument Co., 728 Garden St., Carlstadt, N.J.-C.V.W.Y.AS,AV.AW.AZ,AAA.AAD Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-J.K.L Three Dimension Co., Div. Bell & Howell, 3512 N. Kostner Ave., Chicago 41, Ill.-AG.AH Trans-Lux Corp., 1270 Ave. of the Americas. New York 20, N.Y.-AG.AN TV Zoomar Corp., 500 5 Ave., New York 36, N.Y.-Z

- New York 20, N.1.-AGAM
  TV Zoomar Corp., 500 5 Ave., New York 36, N.Y.-Z
  U. S. Recording Co., 1121 Vermont Ave., N. W., Washington 5, D.C.-C
  Victorlite Industries, 4117 W. Jefferson Blvd., Los Angeles 16, Calif.-AGAH.AI
  Wenzel Projector Co., 2509 S. State St., Chi-cago 16, III.-AC
  Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-AJ.AP
  Wickes Eng'g. & Construction Co., 12 St. & Ferry Ave., Camden 4, N.J.-C,E,V,AS,AW, AAA.AAD,AAE
  Wind Turbine Co., E. Market St. & Penna R.R., W. Chester, Pa.-N
  Zenith Optical Lab., 1940 Great Neck Rd., Copiague, L.I., N.Y.-Z,AC,AAF
  Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y.-Z,AAF

89-STUDIO ACCESSORIES

Fire detection & fighting equipment B Miscellaneous color accessories .... Patch cords .....C

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TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Clocks

....A

Patch panelsJ	
Power suppliesD	
Racks, disc storageE	
Racks equipmentG	
Racks, film storageK	
Racks, tape storageF	
Stop watchesL	
Test equipment	

- Adler Communications Labs. 1 Le Fevre Lane, New Rochelle 1, N.Y.- 1) Aerolite Electronics Corp., 507-26 St., Union City, N.J.-C

- New Rochelle 1, N.Y.- D
  Aerolite Electronics Corp., 507-26 St., Union City, N.J.-C
  Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.-C.G.J
  Alden Products Co., 117 N. Main St., Brockton 64, Mass.-C.J
  American Wood Working Co., 1682 N. Lowell Ave., Chicago 39, III.-G
  Arcy Machine Co., 1000 Stuyvesant, Union, N.J.-C
  Artisun Metal Works, Co., 11400 Madison Ave., Cleveland 2, Ohio-E.F.G.K
  ArtLloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N.Y.-G
  Audio Equipment Sales, 153 W. 33 St., New York 1, N.Y.-A
  Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.Y.-D
  Brown Equipment Co., 128 N. Main St., Milltown, N.J.-H
  Cantera Equipment Co., 1600 Brondway, New York 19, N.Y.-F.G.K
  Century Lighting Inc., 521 W. 43 St., New York 25, N.Y.-CI
  Chester Morton Electronics Corp., 10th St. & Morton Ave., Chester, Pa.-C
  Daven Co., 191 Central Ave., Newark 4, N.J.-H
  Dictograph Products Corp., 95-25 149th St., Jamaica 1. NY.-B
- Dictograph Products Corp., 95-25 149th St., Jamaica 1. N.Y.—B Dimeo-Gray Co., 207 E. 6 St., Dayton 2, Ohio.
- Dorn Equip. Corp., 88 Broad St., Boston 10, Mass.—C Ducommun Co., M., 580 5 Ave., New York 36,

- Dorn Equip. Corp., 88 Broad St., Boston 10, Mass.-C
  Ducommun Co., M., 580 5 Ave., New York 36, N.Y.-I.
  DuMont Laboratories Inc., Allen B., Communi-cation Products Div., 1500 Main Ave., Clif-ton, N.J.-C,D.G.H.I.J
  Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, N.Y.-D.J
  Electromec, Inc., 3200 N. San Fernando Blvd., Burbank, Calif.-H
  Electro Sound Corp., 115 Halleck St., Boston 20, Mass.- E.F.G.K
  Elgin, Ill.-G
  Empire Electronics Co., 166 River St., Pater-son 1, N.J.-C
  Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-D.E.F.G.H.K
  Federal Telecommunication Labs., 500 Wash-ington Ave., Nutley 10, N.J.-C,D
  Fish-Schurman Corp., 70 Portman Rd., New Rocchele, N.Y.-H.I
  Florman & Habb, 70 W. 45 St., New York 36, N.Y.-K.L
  Gates Radio Co., 123 Hampshire St., Quincy, Ill.-D.G.H.J
  General Electric Co., Broadcast Equip., Com-mercial Equip. Dept., Electronics Park, Syra-cuse, N.Y.-A.C.D.H.J
  Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-H
  Hallamore Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-H
  Hallamore Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-H
  Hallamore Mfg. Co., 2961 E. Colorado St., Pasa-dena 8, Calif.-H
  Hallamore Mfg. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial Test Equip. Co., 55 E. 11 St., New York 3, N.Y.-D
  Industrial

- Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.--H,I Kepco Laboratories, 131-38 Sanford Ave., Flushing 55, L.I., N.Y.--D
- Keystone Electronics Corp., 423 Broome St., New York 13, N.Y.-C Kidde & Co., Walter, 1156 Main St., Belle-ville 9, N.J.-B
- Kliegl Bros., 321 W. 50 St., New York 19, N.Y.--C,J
- Malkin-Ilion Co., 396 Coit St., Irvington 11, N.J.--G
- Neumade Products Corp., 330 W. 42 St., New York 36, N.Y.-F,G,K
- Neutronic Associates, 87-16 116 St., Richmond Hill, N.Y.-D
- Opad Electric Co., 69 Murray St., New York 7, N.Y.-D

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Peschel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.-D
  Pioneer Patents & Products Co., 3720 N. New England Ave., Chicago 34, 111.-H
  Plymouth Electronics Corp., 50 Kingsbury St., Worcester, Mass.-D, 50 Kingsbury St., Worcester, Mass.-D, FJ.
  Precision Associates, 354 Cumberland St., Brooklyn 38, N.Y.-D,H,J
  Precision Scientific Co., 3737 W. Cortland St., Chicago 47, 111.-HL
  Premier Metal Products Co., 3160 Webster Ave., New York 67, N.Y.-G
  Radio Corp. of America, Eng'r. Products Div., Camden 2, N.J.-C.D,H,IJ
  Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.-D
  Rupp's Assembling & Mfg. Works, 2341 N. Seminary Ave., Chicago 14, 111.-C
  Sangamo Electric Co., 9 & Converse Sts., Springfield, 111.-D
  Sessions Clock Co., E. Main St., Forestville, Conn.-A
  Signal Eng'g. & Mfg. Co., Branchport Ave., Long Branch, N.J.-B
  S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19, NY.-KL
  Sperit Faraday, Inc., 1322 E. Church St., Advian, Mich.-A,B
  Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-H
  Standard Electronics Corp., 236 Emmet St., Newark, N.J.-G
  Tarzian Inc., Sarkes, 539 S. Walnut St., Bloomington, Ind.-G
  Technical Products Co., 19 N. Dunlap, Mempikia I. Tepn.-A

- Technical Products Co., 19 N. Dunlap, Mem-phis I. Tenn.—A Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—C,D,G,H,I,J
- Telechron Dept., General Electric Co., Homer Avenue, Ashland, Mass.—A TelePrompTer Corp., 300 W. 43 St., New York
- 36, N.Y.-A
- Telescreen Corp., 36 Grove St., New Canaan, Conn.-D
- Television Products Co., 1147 N. McCadden Pl., Hollywood 38, Calif.—F.K Television Specialty Co., 350 W. 31 St., New York 1, N.Y.—C,I,J,L Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.—A
- Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-J Wallach & Associates, 1532 Hillcrest Rd., Cleveland 18, Ohio.-E,F,K

### 90—SWITCHES

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- Acro-Mu Switch Div., Acro Mfg. Co., 2040 E. Main St., Columbus 16, Ohio-U
  Adams & Westlake Co., 1175 N. Michigan, Elkhart. Ind.-Y
  Adler Communications Labs., 1 LeFevre Lane, New Rochelle 1, N.Y.-D.AF
  Aeromotive Equip. Corp., 1632 Central St., Kansas City 8, Mo.-N
  Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.-E,H,1,AN
  A'G'A, Div. Elastic Stop Nut Corp. of America, 1027 Newark Ave., Elizabeth 3, N.J.-Y
  Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A.R.Z,AH
  Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-B,AD.AF
  Airtpax Products Co., Middle River, Baltimore 20, Md.-A
  Aldren Products Co., 117 N. Main St. Brock-

- Airtron Inc., 1101 W. Elizabeth Ave., Linden, N.J.-AD
  Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.-P.AH
  Alina Corp., 401 Broadway, New York 13, N.Y.-Y
  Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.-F.P.Y.AG,AH
  Allison Associates, 3110 N. Highland Rd., N.E., Albuquerque, N.Mex.-AD
  American Radio Hardware Co., 152 Mac-Queston Parkway S., Mount Vernon, N.Y. -H.I.P.Z
  American Vacuum Products Corp., 2242 S. Colby Ave., W. Los Angeles 64, Calif.-K, L,R.AA,AF
  Anatran Eng'g. Co., 10 Congress St., Pasa-
- Anatran Eng'g. Co., 10 Congress St., Pasa-dena, Calif.—E.AN Andrew Corp., 363 E. 75 St., Chicago 19.
- -18 TIL -

- Ill.—B
  Applied Science Corp., P.O. Box 44, Princeton. N.J.—C.O.Q.W
  Ark-Les Switch Corp., 51 Water St., Water-town 72, Mass.—M.P.R.U.Z
  Arrow-Hart & Hegeman. 103 Hawthorn St., Hartford 6, Conn.—P.R.U.Z.AE.AH
  Associated Eng. & Mfg. Corp., Glen Ridge, N.J.—G
  Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.—U
  Authorized Mfrs. Service, 919 Wyckoff Ave.,

- Altrex Corp., 1117 N. Franklin St., Chicago 10, 111.--U
  Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.Y.--AF
  Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, 111.--I, K.L.P.V
  Automatic Precision Mfg. Co., 252 Hawthorne Ave., Yonkers, N.Y.--AM
  Automatic Switch Co., 391 Lakeside Ave., Orange, N.J.--AF
  Automatic Temperature Control Co., 5212 Pulaski Ave., Philadelphia 44, Pa.--O.Y
  Auto-Test, Inc., 600 S. Michigan Ave., Chicago 5, III.--P
  Barber-Colman Co., 1300 Rock St., Rockford, III.--R
  Barker & Williamson, 237 Fairfield Ave., Up-

- III.—R
  Barker & Williamson, 237 Fairfield Ave., Upper Darby, Pa.—R
  Barton Electronics, Inc., 955 Asylum Ave., Hartford 5, Conn.—AF
  Bayside Watch Tool Co., 20-02 Utopia Parkway, Whitestone 57, N.Y.—C
  Beck's Inc., 298 E. 5 St., St. Paul 1, Minn.—C, D, Q, R, V, W, AF, AN, AO, AP
  Bird Electronic Corp., 1800 E. 38 St., Cleveland 16, Ohio—B
  Birnbach Radio Co., 145 Hudson St., New York
- C.J.Q.R., V.W.AT, AN, NO.A1
  Bird Electronic Corp., 1800 E. 38 St., Cleveland 16, Ohio-B
  Birnbach Radio Co., 145 Hudson St., New York 13, N.Y.-J.P.S.T.Z
  Blonder-Tongue Labs, Inc., 526 North Ave., Westfield, N.J.-X
  Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N.Y.-B.AD
  Bomac Laboratories Inc., Salem Rd., Beverly, Mass.-B.AB, AC, AD, AF
  Bracke-Seib X-Ray Co., 293 Third Ave., New York 10, N.Y.-A
  Bristol Co., Waterbury 20, Conn.-F.N.R.W. X.Y.AA, AP
  British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.-E, I.K.P.Q.R.T. U.X.Y.Z., AB, AC, AG, AH, AI
  Brubaker Mfg. Co., 9151 Exposition Dr., Los Angeles 34, Calif.-AN
  Budd-Stanley Co., 43-01 22 St., Long Island City 1, N.Y.-BAD
  Bud Radio, Inc., 2118 E. 55 St., Cleveland 3, Ohio-Z
  Ohio-Z
  Burling Instrument Co., 16 River Rd., Chat-

Ohio-Z
Burling Instrument Co., 16 River Rd., Chatham, N.J.-X
Burling Instrument Co., 16 River Rd., Chatham, N.J.-X
Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.-AN
Carling Electric, 505 New Park Ave., W. Hartford 10, Conn.-M.P.T.U.Z
Carter Parts Co., 213 Institute Pl., Chicago 10, III.-H.M.N.P.T.Z.AF
Cascade Research Corp., 53 Victory Lane, Los Gatos. Calif.-AD
Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-E,I,R,T,U, Z,AF,AN
Century Electronics. 14844 Oxnard St., Van

Century Electronics, 14844 Oxnard St., Van Nuys, Calif.—AD Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.—K,AA, AF,AM

Cherry Electrical Products Corp., 3080 Skokie Valley Rd., Highland Park, Ill.-F,N,P,R,S, U,AG,AH

Cinema Eng'g Co., Div., Aerovox Corp., 1100 Chestnut St., Burbank, Calif.-E,I,R

1142 W.

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Chicago Telephone Supply Corp., 11 Beardsley Ave., Elkhart, Ind.-U.AN

Circuit Controls Co., 3201 Peona St., Steger, III.-H.I.J.K.P.S.T.U.Z.AH Clare & Co., C. P., 8101 Pratt Blvd., Chicago 45, III.-I.V.AM Clark Controller Co., 1146 E. 152 St., Cleve-land 10, Ohio-F.L.N.P.R.U.X.Y.AE,AG,AH Clark Cooper Co., Market St., Palmyra, N.J. -F.N.X Claretat Mfr. Co. 1 Washington St. Dover

-F,N,X Charvetat Mfr. Co, 1 Washington St., Dover, N.H.-E,U Clary Corp., San Gabriel, Calif.-AF Clerg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.-AF Clum Mfg. Co., 601 National Ave., Milwaukee, Wise.-E.M.P.Q.R.S.T.U.AB,AC,AN,AP Collectron Corp., 216 E. 45 St., New York 17, N.Y.-C

Collectron Corp., 216 E. 45 St., New York 17, NY.-O Colman Laber, 12 Court, Morristown, N.J.-N Comar Electric Co., 3349 W. Addison St., Chi-cago 18, Ill.-D,U Onn. Telephone & Electric Corp., 70 Britan-nia St., Meriden, Conn.-H,P,V,AI Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N.Y.-H,Y Control Products. Inc., 306 Sussex St., Harri-son, N.J.-P,U,V,X,Z,AM Cook Electric, 2700 Southport Ave., Chicago 14,111.-N.R.X.Y,AA Counter & Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wisc.-O Cunningham Son & Co., James, 33 Litchfield St., Rochester S, N.Y.-D,O.AF Cut er-Hammer, Inc., 436 N. 12 St., Milwau-kee 1, Wis.-A,F,L,N,P,R,S,U,V,Y,Z,AA, AF,AH,AM Danbury-Knudsen, Inc., P.O. Box 170, Dan-

Luter-Hammer, Inc., 436 N. 12 St., Milwallker, J., Wis.-A,F,L,N,P,R,S,U,V,Y,Z,AA, AE,AF,AH,AM
Danbury-Knudsen, Inc., P.O. Box 170, Danbury. Conn.-B
Daven Co., 191 Central Ave., Newark 4, N.J. -C,E,Q,R,W,AN,AO,AP
Demorray-Bonardi, Inc., 780 S. Arroyo Pkwy.
Pasadena, Calif.-AD
Detroit Controls Corp., 1650 Broadway, Redwood City, Calif.-C,Q,W
Dieta Co., Henry G., 12-16 Astoria Blvd., Long Island City 2, NY.-NAA
Dieta Products, Inc., 7643 Fay Ave., LaJella, Calif.-C,Q
Dimco-Gray, 207 E. 6 St., Dayton 2, Ohio--Y
Dolmko & Wilkens, 1901 Summit Ave., Union City, N.J.-AA
Dormizer Electric & Mfg., Co., 5 Hadley St., Cambridge 40, Mass.-G
Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-AD
Dow-Key Co., Warren, Minn.-B
Dubrow Development Co., 235 Penn St., Burlington, N.J.-AF
Durnont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.-AF
Durakool, Inc., 1010 N. Main St., Elkhart, Ind.-K,Y
Dwyer Mfg. Co., F. W., 317 S. Western Ave., Chicago 12, III.-N
Eagle Electric Mfg. Corp., 180-11 90
Ave., Richmond Hill 18, L.I., N.Y.-C,R, AF,AM.AN
Eastern Smelting & Refining Corp., 109 W.

Lagle Electric Mrg. Co., 23-10 Bridge Plaza S., Long Island City, N.Y.-J.Z.AF
Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, L.I., N.Y.-C.R, AF,AMAN
Eastern Smelting & Refining Corp., 109 W. Brookline St., Boston 18, Mass.-K
Eastern Specialty Co., 3617 N. 8 St., Phila-delphia 40, Pa.-R
Ebert Electronics Corp., 212-26 Jamaica Ave., Queens Village 28, N.Y.-K.M.AA.AM
Eby Co., Hugh H., 4700 Stenton Ave., Phila-delphia 44, Pa.-P
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Eder Eng's Co., 1568 S. 1st St., Milwaukee 4, Wisc.-AF
Edison, Inc., Thomas A., Instrument Div., 93 Lakeside Ave., W. Orange, N.J.-X.Y.AM
Eletrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.-AA
Electro Controller & Mfg. Co., 2700 E. 79 st., Cleveland 4, Ohio-L.AE
Electro Development Co., 14701 Keswick St., Van Nuys, Calif.-Y.AF
Electronatic Mfg., Corp., 88 University PL. New York 3, N.Y.-R
Electronics Corp. of America, 77 Broadway, Cambridge 42, Mass.-S.Y.AF.AH
Electronics Corp. 946 North Ave., Des Plaines, Ill.-R.V.W.Y.AM
Electro-Seal Corp., 946 North Ave., Des Plaines, Ill.-R.V.W.Y.AM
Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.-M.P.S.U.AH,AM, AO
Electon Switch Corp., King Ave., Weymouth 88, Mass.-R.U

AO Blectro Switch Corp., King Ave., Weymouth 88, Mass.-R,U Flectro Tec Corp., 10 Romanelli Ave., S. Hackensack, N.J.-C Bletro-Tech. Equip. Co., 308 Canal St., New York, N.Y.-A.F.K,O.P.R.U.Y.Z.AE,AG,AH Fly Electronics Corp., 22-02 Raphael St., Fairlawn, N.J.-U,X,Y,Z,AM Im Laboratories, 18 S. Broadway, Dobbs Perry, N.Y.-O Endevco Corp., 689 S. Fair Oaks Ave., Pasa-

Endevco Corp., 689 S. Fair Oaks Ave., Pasa-dena 2, Calif.—E,AN

Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.—O,AO,AP

Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.—AH

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Fenwel Inc., Ashland, Mass.-X
Ferrara Inc., 8106 W. 9 Mile Rd., Oak Park 37, Mich.-Y,AF
Flett Laboratory, 3711 Marshal Rd., Drexel Hill, Pa.-K
Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Baltimore 4, Md.-N
F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.-AD
Frost & Co., L. H., 904 36 St. S.E., Grand Rapids 8, Mich.-R
Furnas Electric Co., 1000 McKee St., Batavia, Ill.-F.N.P.AE,AG,AH
Gables, Fla.-R
Gabriel Electronics Div., Gabriel Co., Endicott St., Norwood, Mass.-B
Galbraith & Son, 450 6th Ave., New York 11, N.Y.-AH
Genz Iderting Co., 237 37 St., Brooklyn 32, N.Y.-J

J. N.Y.--AH
Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill. -B.P.Z.AF
Gem Electric Mfg. Co., 237 37 St., Brooklyn 32, N.Y.-J
General Communication Co., 619 Taylor Ave., Rockford, Ill.-P.T.U.Z.AF.AP
General Communication Co., 681 Beacon St., Boston 15. Mass.-B
General Communications, One mile and Janes-ville Rd., Ft. Atkinson. Wisc.-R.V
General Control Co., 1200 Soldiers Field Rd., Boston 15. Mass.-P.Y.AF.AG.AH
General Devices, Inc. P.O. Box 253, Prince-ton, N.J.-C.O.Q.W.AF.AP
General Electric Co., Construction Mat. Div., 1285 Boston Ave., Bridgeport 16, Conn.-G.I.P.Z
General Electric Co., Apparatus Div., 1 River Rd. Schenectady 5, N.Y.-A.F.L.N.P.R.W. AA,AE,AH
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-E
Giannini & Co., G. M., 918 E. Green St., Pasa-dena 1, Calif.-N.O.Q.W.AN,AO,AP
Globe Industries, Inc., 1784 Stanley Ave., Day-ton 4, Ohio-AP
Gorn Electric Co., 106 Hampshire St., Cam-bridge 39, Mass.-AF
Grano-Stadler Co., 106 Hampshire St., Cam-bridge 39, Mass.-AF
Gray Instrument Co., 64 W. Johnson St., Philadelphia 44, Pa.-E
Grayhill, 561 Hillgrove Ave., LaGrange, Ill. -L.P.Z.AF
Grigsby-Allison Co., 407 N. Salem Ave., Ar-lington Heights, 11.-P.Q.R.T.U.AB.AC,AF, AI,AJ,AN
Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, 111.-O.U.V.AO
G.-V. Controls Inc., 28 HollWood Plaza. East AI,AJ,AN Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.—O,U.V,AO G.-V. Controls Inc., 28 Hollywood Plaza, East Orange, N.J.—X,Y Gyro Electronics Co., 325 Canal St., New York 13, N.Y.—AF Hamlin, Inc., 1316 Sherman Ave., Evanston, Ill.—K

Hamlin, Inc., 1316 Sherman Ave., Evanston, III.--K
Hart Mfg. Co., 110 Bartholomew Ave., Hartford 14, Conn.-B,P,R,Z
Haydon Mfg. Co., 245 E. Elm St., Torrington. Conn.-O.R,Y
Haydon Switch, Inc., 232 N. Elm St., Waterbury 20, Conn.-M,N,R,U,Z,AH,AM
H-B Instrument Co., American & Bristol Sts., Philadelphia 40, Pa.--K,M,X,AF,AM
Healy-Ruff Co., 2255 University Ave., St. Paul 14, Minn.-F.N
Heath Co., 305 Territorial, Benton Harbor, Mich.-AF
Heineman Electric Co., Penn. Ave. & Plum St., Trenton 2, N.J.-A
Hetherington, Inc., Sharon Hill, Pa.-I,J,M, N,P,Q,R,T,U,Z,AH,AM
Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.-AD
Hodgson Co., R. W., 3406 W. Washington Bivd., Los Angeles 18, Calif.-C,NW
Hubbell Inc., Harvey, State St. & Bostwick Ave., Bridgeport. Conn.-G,I,K,P,U,Z
Imtra Corp., 58 Charles St., Cambridge 41, Mass.-R,V
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N.J.-E,Q

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Industrial Products Co., Div. Danbury-Knudsen, Inc., Federal Rd., Danbury, Conn.—B
Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.,—C,AP
Inauline Corp. of America, 186 Granite St., Manchester N.H.—J,P.R.T.Z
International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.
Int'l. Research Assoc., 2221 Warwick Ave., Santa Monica, Calif.—AF
iq Industries, 6110 Wilshire Blvd., Los Angeles 86, Calif.—Y,AF
Jaidinger Mfg. Co., 1921 W. Hubbard St., Chii cago 22, Ill.—D,P,U,X
Janco Corp., 3111 Winona Ave., Burbank, Calif.—R
J B L Instrument Co., Sycamore & Mill Rd., Clifton Hts., Pa.—E,R,U
J-B-T Instruments, Inc., 441 Chapel St., New Haven 8, Conn.—R,Z
Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.—AB,AA,AE,AM
JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y. Kearfott Co., 1378 Main Ave., Clifton, N.J.—AD
Kellogg Switchboard & Supply, 79 W. Monroe

nard St., Van Nuys, Calif.—AD Kearfott Co., 1378 Main Ave., Clifton, N.J.— AD Kellogg Switchboard & Supply, 79 W. Monroe St., Chicago 3, 111.—D,I,P,V Kinney, Inc., Joseph, Roslyn Rd., Carnegie, Pa.—AD Kolton Electric Mfg. Co., 123 N.J. Railraod Ave., Newark 5, N.J.—A,J Kulka Electric Mfg. Co., 633 S. Fulton Ave., Mt. Vernon, N.Y.—Z Kybernetes Corp., 9 E. 40 St., New York 16, N.Y.—Q,W,AF Laine Electronic & Mfg. Co., 113 Sussex Ave., Newark 4, N.J.—K Landis & Gyr, Inc., 45 W. 45 St., New York 36, N.Y.—Y Larson Instrument Co., 24 Orchard St., Tarry-town, N.Y.—S Leader Electronics, Inc., 2925 E. 55 St., Cleve-land 27, Ohio—R Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.—N,O,R,U Lektra Laboratories, Inc., 154 11 Ave., New York 11, N.Y.—AG Lieco, Inc., 147 Ocean Ave., Lynbrook, N.Y. —Z,AD

Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-Y

-Z,AD
Lindly & Co., 248 Herricks Rd., Mineola, L.I., N.Y.-Y
Lumenite Electronic Co., 407 S. Dearborn St., Chicago 5, 111.-V,Y,AE,AF
Lyman Electronic Corp., 12 Cass St., Spring-field, Mass.-R
Mack Electric Devices Inc., 48 Glenside Ave., Wyncote, Pa.-K,MAA,AE,AM
Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.-AD
Magnavox Co., Fort Wayne 4, Ind.-AN
Mallory & Co., P. R., 3029 E. Washington St., Indianapolis 6, Ind.-A.E.H.M.P.R
Masce Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.-Y
Master Electronics & TV, Rt. 1, Box 36, Libertyville, III.-O
Maxson Corp., W. L., 460 W. 34 St., New York 1, N.Y.-U
Mercury Mfg. Corp., 45 Brown St., Buffalo 11, N.Y.-AA
Meridian Metalcraft, Inc., 8739 Millergrove Ave., Whitter, Calif.-AD
Metals & Controls Corp., Central Plate Div. & Spencer Thermostat Div., 34 Forest St., Attleboro, Mass.-AU,X,AM
Metronics. Inc., U.S. Route 130, Burlington, N.J.-KAF,AM
Microwave Associates, 22 Cummington St., Boston 15, Mass.-AD
Miller Harris Instrument Co., 601 E. Order

lator Co., Freeport, Ill.—K,M,P,R,S,U,Z, AG,AH,AM
Microwave Associates, 22 Cummington St., Boston 15, Mass.—AD
Miller-Harris Instrument Co., 601 E. Ogden Ave, Milwaukee 2, Wisc.—P
Miniature Switch Corp., 147 Ocean Ave., Lyn-brook, N.Y.—U,Z.AJ
Minneapolis-Honeywell Regulator Co., Minne-apolis 8, Minn.—K,N,Y,AE,AH
Mohawk Business Machines Corp., 944 Halsey
St., Brooklyn 37, N.Y.—R
Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.—H,I,P
Mosley Electronics, 8622 St. Charles Rd., St. Louis 14, Mo.—R
Mossman Inc., Donald P., Box 265, Brewster, N.Y.—H,I,P
Multi-Tron Laboratory, 4624 W. Washington Blvd., Chicago 44, Ill.—AA
Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.—T,U
Mycalex Corp. of America, 125 Clifton Blvd., Clifton Live Corp.

Mycalex Corp. of America, 125 Clifton Blvd., Clifton, N.J.—A,C,Q,R.W
Naer Corp., 11777 Santa Monica Blvd. W., Los Angeles 25, Calif.—C,R,V,AA
Network Mfg. Corp., 213 W. 5 St., Bayonne, N.J.—R,U,Z,AM

Norco Mfg. Co., 392 Bleecker St., New York 14, N.Y.-G

Norden-Ketay Corp., Wiley St., Milford, Conn. -N,O,Y

North Electric Mfg. Co., S. Market St., Galion, Ohio-D,H,I,V

- N.R.K. Mfg. & Eng'g. Co., 4601 W. Addison St., Chicago 41, Ill.—AD Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.—P.R.T.V.AB Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill. —B
- -R
- Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.-V Paragon Electric Co., 1600 12 St., Two Rivers, Wisc.-Y

- Paragon Electric Co., 1600 12 St., Two Rivers, Wisc.--Y
  Partrick & Wilkins, 51 N. 7 St., Philadelphia 6, Pa.-P
  Partrick & Wilkins, 51 N. 7 St., Philadelphia 6, Pa.-P
  Parts Froducing Corp., Manhattan Div., 1861 Second Ave., New York 28, N.Y.-A,C
  Paul & Stein Bros., F. H., 235 5 Ave., New York 16, N.Y.-C
  Penta Laboratories, 312 N. Nopal St., Santa Barbara, Calif.-AA
  Permoflux Corp., 4900 W. Grand Ave., Chi-cago 39, III.-AG
  Peachel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.-L,AF
  Peters Co., O. S., 1353 N.Y. Ave., N.E., Washington 2, D.C.-AF
  Phaostron Co., 151 Pasadena Ave., S. Pasa-dena, Calif.-M.N.P.U.AH
  Phen-O-Tron, Inc., 455 Main St., New Rochelle, N.Y.-AN
  Philadelphia Scientific Glass Co., 1366 Eckard Ave., Abington, Pa.-K.M.Y.AA,AM
  Philadelphia Scientific Glass Sts., Philadelphia 34, Pa.-T,U.Z,AB
  Philmore Mfg. Co., 113 University Pl., New York 8, N.Y.-J,P.Y

- Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-J.P.Y Photobell Co., 43 Vesey St., New York 7, N.Y. -X.Y
- Photobell Co., 43 Vesey St., New York 7, N.Y. -X.Y
  -X.Y
  Photocircuits Corp., Glen Cove, N.Y.-C.AN
  Photoswitch Inc., 77 Broadway Cambridge 42,
  Mass.-O,Y.AF
  Pioneer Electronics Corp., 2235 S. Carmelina,
  W. Los Angeles 64, Calif.-AA
  Pioneer Patents & Products, 3720 N. New
  England Ave., Chicago 34, Ill.-M.P.AG
  Plastics & Electronics Corp., 272 Northland
  Ave., Buffalo 8, N.Y.-AN
  Power Equip. Co., 5740 Nevada E., Detroit 34,
  Mich.-P
  Precision Thermometer & Inst. Co., 1434
  Brandywine St., Philadelphia 30, Pa.-X
  Premier Instrument Corp., 52 W. Houston St.,
  New York 12, N.Y.-AD
  Printed Circuits, Inc., 36 Tunxis Ave., Bloomfield, Conn.-AN
  Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.-P.S
  Radiation, Inc., Box "Q," Melbourne, Fla.-W
  W

- New York 62, N.Y.--J
  Recora Co., 56 W. 103 St., Chicago 28, Ill. --N.V.Y.AF.AG
  Research Instrument Co., 233 Broadway, New York 7, N.Y.--E.J.J.R.T.AA
  Revere Corp. of America. 845 N. Colony Rd., Wallingford, Conn.-F.N.U.AH.AM
  Reynolds Electric Co., 3000 River Rd., River Grove, Ill.--R.X.Y.AM
  RF Electronics Inc. Div., Electro Switch Corp., King Ave., Weymouth 88, Mass.--R.U
  Rhodes, Inc., M.H., 30 Bartholomew Ave., Hartford 6, Conn.--A
  Ripley Co., 1 Factory St., Middletown, Conn.
  Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.--P.U.AI
  Rodale Mfg. Co., Emmaus, Pa.--J.Z.AP
  Roller Smith Corp., Instrument Div., 1825 W. Market St., Bethlehem, Pa.--A.R
  Rotron Mfg. Co., Schoonmaker Lane, Wood-stock, N.Y.-S
  Rubicon Co., Ridge Ave. at 35th St., Phila-delphia 32, Pa.-E
  Rupp's Assembling & Mfg. Works 2341 N. Seminary Ave., Chicago 14, Ill.-G.J.K.P.Z
  Sangamo Electric Co., 9 & Converse Sts., Springfield, Ill.-Y.
  Scintilla Magneto Div., Bendix Aviation Corp., Sherman Ave., Sidney, N.Y.-R
  Sears Co., M. J., Rozbury, N.Y.-W
  Shaltonoss Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.-P.R
  Shepard Labs., 480 Morris Ave., Summit, N.J. -AF
  Shure Bros., 225 W. Huron St., Chicago 10, Ill. -P.T.Z

- -AF Shure Bros., 225 W. Huron St., Chicago 10, Ill. -P.T.Z Slater Electric & Mfg. Co., 56 St. & 37 Ave., Woodside, N.Y.-N.P.U.Z.AM Smith. Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.-J.P.T.Z Sperry Gyroscope Co., Great Neck, N.Y.-AD Stackpole Carbon Co., Tannery St., St. Marys, Pa.-M.T.U.AF States Co., 19 New Park Ave., Hartford 6, Conn.-J
- Con.-J Stevens Mg. Co., 45 N. Plymouth, Lexington, Ohio-X Con. Consistent Co. Rochester 3, N.Y.-Stromberg-Carlson Co., Rochester 3, N.Y.-

- V Strong Electric Co., 87 City Park Ave., To-ledo 2, Ohio-R Sunrise Products Co., P.O. Box 173, Haw-thorne, N.J.-AG Switchcraft, Inc., 1328 N. Halsted St., Chicago, III.-H.I.P Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-G Tech Laboratories Inc., Bergen & Edsall Blvds., Palisades Park, N.J.-B,E,R,T,V,AC, AD,AM,AN

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Techron Corp., 254 Friend St., Boston 14, Mass. —AN

- Techron Corp., 254 Friend St., Boston 14, Mass. —AN
  Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.—Y.AA,AM
  Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—B.AD,AF
  Teletronics Laboratory, 54 Kinkel St., West-bury, L.L, N.Y.—AF
  Television Specialty Co., 350 W. 31 St., New York 1, N.Y.—B
  Tensitron, Inc., Pin Hill, Harvard, Mass.—AO
  Thermo Instruments Co., 1310 Old County Rd., Belmont, Calif.—F.AF
  Thompson Clock Co., H.C., 33 Federal St., Bristol, Conn.—A,P.R.T.U.V.X.Y.Z
  Thompson Products 2196 Clarkwood Rd., Cleveland 3, Ohio—B.R
  Time-O-Matic Co., 1106 Bahls St., Danville, III.—V
  Ucinite Co., Div. United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.— P.R.U,AM,AN
  Ulanet Co., George, 413 Market St., Newark N.J.—X,Y
  Unimax Div., W. L. Maxson Corp., 460 W. 34th St., New York 1, N.Y.—M,S,U,AH
  Universal Circuit Control, 3610 Oakton St., Skokie, III.—H,I.K.T,U,X,Z
  Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.—AP
  U.S. Gauge Co., Sellersville, Pa.—N,X,AA
  Vacuum Tube Products 506 S. Cleveland St., Oceanside, Calif.—AA
  Vemaline Products Co, P.O. Box 222, Haw-thorne, N.J.—AF,AG
  Victory Eng'g. Corp., 103 A Springfield Rd., Union, N.J.—X,Y
  Wade Lelectric Products Co., 2000 Jacobs St., Sturzis, Mich.—T
  Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—AF
  Wade Lelectric Corp., 420 Lexington Ave., New York I7, N.Y.—Y
  Ward Leonard Electric Co., 94 South St., Mount Vernon, N.Y.—P,Y.AE
  Wester Intt'I. Co., 45 Vesey St., New York 7, N.Y.—P,T.Z
  Winshow Co., 9 Liberty St., Newark 5, N.J. —E.I,P,Q,R
  Winterburn Mfg. Co., 11 Whittemore St., Putnam, Con.—S.AE
  Wirt Co., 5221 Greene St., Philadelphia 44,

- Winterburn Mfg. Co., 11 Whittemore St., Putnam, Conn.—S.AE Wirt Co., 5221 Greene St., Philadelphia 44, Pa.—T
- Wright Eng'g Co., 180 E. California St., Pasa-dena 1, Calif.-D,E,O,V,AP

### 91—TESTERS

- Testers, antenna .....V Testers, automatic tube .....A Testers, battery .....B Testers, cable · · · · · · · · · · · · · · · · · X Testers, capacitor .....C Testers, cathode ray tube .....D Testers, circuit .....E Testers, coating thickness ......F Testers, coil .....G Testers, distortion ......K Testers, dynamotor .....Z Testers, Testers, HV breakdown .....L Testers, metallic rectified .....N Testers, meter .....O Testers, microwave .....U Testers, motor .....AB Testers, multitester Testers, radar .....Q Testers, synchro error .....R Testers, transistor .....W Testers, tube socket .....AE Testers, vacuum tube ......S Testers, vibration .....AC Testers, vibrator .....AD Test sets, relay .....T
- Advance Instrument Corp., 1709 F St., Belmar, N.J.--R

- Advance Instrument Corp., 1/09 F St., Beimar, N.J.-R
  Advanced Electronics, Inc., 94 Silas Deane Hghwy., Rocky Hill, Conn.-AC
  Aermotive Equip. Corp., 1632 Central St., Kansas City 8, Mo.-J.Q.U.Y.AA
  Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.-J.Q.U.Y.W.Y
  Air Transport Mfg. Co., 1114 N. Sycamore Ave., Los Angeles 38, Calif.-V
  All American Tool & Mfg. Co., 8027 Lawndale Ave., Skokie, III.-AC
  Allegany Instrument Co., 1000 Oldtown Rd., Cumberland, Md.-D.I.P
  Allied Radio Corp., 100 N. Western Ave., Chicago 10, III.-P.S

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- Alpar Mfg. Corp., 2910 Spring St., Redwood City, Calif.—I.X Amelco, Inc., 2040 Colorado Ave., Santa Monica, Calif.—I Amerac Inc., 116 Topsfield Rd., Wenham, Mass.
- American Chronoscope Corp., 316 W. 1 St., Mount Vernon, N.Y.-T
- Mount Vernon, N.Y.—T American Electronic Laboratories, 641 Arch St. Philadelphia 6, Pa.—W American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.—R,AA American Instrument Co., Silver Spring, Md. —F

- American Instrument Co., Silver Spring, Ed. —F Anko Mfg. Co., 5042 W. State St., Milwaukee 14. Wisc.—A Apex Coil & Transformer Corp., 1919 S. Fair-field Ave., Chicago 8, Ill.—L Associated Research Inc., 3758 W. Belmont Ave., Chicago 18, Ill.—G,L,M,X Audio Instrument Co., 133 W. 14 St., New York 11, N.Y.—K Authorized Mfrs. Service, 919 Wyckoff Ave., Brooklyn 27, N.Y.—D.E.I.P.S.X.AC Auto-Test, Inc., 600 S. Michigan Ave., Chicago, 5, Ill.—B Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.—S Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—K

- Burbank, Calif.—S Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—K Barlow Electrical Mfg. Co., 155 E. 128 St., New York 35, N.Y.—L Barrett Electronics, 22319 Kathryn Ave., Tor-rance, Calif.—AF Bellaire Electronics Inc., 30 Prince St., Brook-lyn 1, N.Y.—Q Berkshire Laboratories, 586 Bank Village, Greenville, N.H.—F Bliss Electronic Corp., Box 123, Sussex, N.J. —E.I.L.M.X Boland & Boyce. 236 Washington Ave., Belle-

- Bliss Electronic Corp., Box 123, Sussex, N.J. -E,I.L,M,X Boland & Boyce. 236 Washington Ave., Belle-ville, N.J.-A.D,S Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles 4, Calif.-O,T Borden Engineering Co., 63 Clinton Ave., New Providence, N.J.-X Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25. Mass.-X Bracke-Seib X-Ray Co., 293 3 Ave., New York 10, N.Y.-M Branson Instruments Inc., 430 Fairfield Ave., Stamford, Conn.-F Bristol Co., Waterbury 20, Conn.-E,O Bristol Eng'g. Corp., Beaver Dam Rd. & Oak Lane, Bristol, Pa.-S Brown Equipment Co., 128 N. Main St., Mill-town, N.J.-A,D,L,S,T Bruck Industries, Syosset, L.I., N.Y.-O Bruno-New York Industries, 460 W. 34th St., New York 1, N.Y.-P,Q,U Buck Eng'g. Co., 37 Marcy St., Freehold, N.J. -S

-S Byron Jackson Co.. 2010 Lincoln Ave., Pasa-dena 3, Calif.-U Cable Electric Products, 234 Daboll St., Provi-dence 7, R.I.-E Calidyne Co., 120 Cross St., Winchester, Mass.

Calidyne Co., 120 Cross St., Winchester, Mass. —AC
Calidyne Co., 120 Cross St., Winchester, Mass. —AC
Calison & Nicholson, 497 Maynard Dr., Buffalo 21, N.Y.—C.D.G
CBS-Columbia, 3400 47 Ave., Long Island City 1, N.Y.—S
Central Electronics Inc., 1247 Belmont Ave., Chicago 13, 111.—D
Central Sales & Mfg. Corp., Richwood Pl., Denville, N.J.—D
Central Sales & Mfg. Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.—A,M,S
Chemalloy Electronics Corp., 630 W. Mt. Pleasant Ave., Livingston, N.J.—A,M,S
Chemalloy Electronics Corp., Gillespie Airport, Santee, Calif.—Q,U
Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.—A,C,D,E,G,I,Q,S,T
Clifton Precision Products Co., Marple at Broadway, Clifton Heights, Pa.—R
Coil Co. of America, 8 Washington St., Northvale, N.J.—L.
Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.—E,I,M,P,U
Component Manufacturers, 38-01 23rd Ave., Long Island City 5, N.Y.—G
Computer Control Co., 92 Broad St., Wellesley 57, Mass.—S,Y
Computer Research Corp., 5348 W. El Segundo Blvd., Hawthorne, Calif.—J
Control Devices, Inc., 8299 E. Nine Mile Rd., Van Dyke, Mich.—AC
Cornell-Dubilier Electric Carp., 333 Hamilton Blvd., S. Plainfield, N.J.—F
Dante Elec. Mfg. Co., Bantam, Conn.—I
Davenco Inc., 150 Broadway, New York, N.Y.—W
Daystrom Instrument, Archald, Pa.—I,Q.AA
Daystrom Pacific Corp., 3030 Nebraska Ave., Sant Macine Corp.

-W Daystrom Instrument, Archbald, Pa.-I,Q.AA Daystrom Pacific Corp., 3030 Nebraska Ave., Santa Monica, Calif.-I.P.R.T.AA,AB Delaware Optical Labs., 36 Williams St., Lans-downe, Pa.-H Deltron, Inc., 2905 N. Leithgow St., Phila-delphia 33, Pa.-C.G Deutschmann Corp., Tobe, 921 Providence Hwy., Norwood, Mass.-X DeWald Radio Mfg. Corp., 35-15 37 Ave., Long Island City, N.Y.-Q

Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.-U
Dice Co. 1 Engle St. Englewood, NJ.-M
Di'T-MCO, Inc. 505 W. 9 St. Kansas City 5, Mo.-E.I.L.M.X
Dockam Div. Minneapolis-Hencywell Regu-Intor Co., 1400 Soldiers Field Rd., Boston 35, Mass.-C.I.M.R.AA
Dongan Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-Q.U
Drive-In Theater Mfg. Co., 505 W. 9th, Kan-sas City, Mo.-E.I.L.M
Dubrow Development Co., 235 Penn St., Bur-lington, N.J.-K.AC
Dunn Engle, Associates, 11 Windsor St., Cam-bridge 19, Mass.-J.W
Baske Electric Mfg. Co., 23-10 Bridge Plaza S. Long Island City 1, N.Y.-E
Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, L.I., N.Y.-AC
Bastern Specialty Co., 3617 N. 8 St., Phila-delphia 40, Pa.-M
Eder Engineering Co., 1568 S. 1st St., Mil-waukee 4, Wisc.-A.E.I.M.S
Edko Electroics Engle, 202 Grand St., Brook-lyn 11, N.Y.-L
Electrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.-O
Electro Engle, Works 6021 College Ave., Oak-land 18, Calif.-L.M
Electro Impules Lab., 62 White St., Red Bank, N.J.-U
Electron Impules Lab., 62 White St., Red Bank, N.J.-U
Electron Engle, Works Gold Nepperhan Ave., Yonkers 3, N.Y.-D
Electronic Beam Corp., 923 Old Nepperhan Ave., Yonkers 3, N.Y.-D
Electronic Beam Corp., 923 Old Nepperhan Ave., Yonkers 3, N.Y.-D
Electronic Beam Corp., 923 Old Nepperhan Ave., Yonkers 3, N.Y.-D
Electronic Beam Corp., 923 Old Nepperhan Ave., Yonkers 3, N.Y.-D
Electronic Beam Corp., 923 Old Asystewood Blvd., Los Angeles 25, Calif.-A.E.I.X
Electronic Research Associates, 67 E. Broad St., Wutley, N.J.-W
Electronic Research Associates, 67 E. Broad St., Nutley, N.J.-W
Electronic Research Associates, 67 E. Broad St., Nutley, N.J.-W
Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-A.B.C.E.F., LM.O.P.S.X.AC

Electro Sales Co., 50 Eastern Ave., Boston 13, Mass.—Y
Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.—A,B,C,E,F,L,M,O,P,S,X,AC
Electro-Technic Products, 4602 Montrose Ave., Chicago 41, 111.—D
Elk Electronic Labs, Inc., 333 W. 52nd St., New York 19, N.Y.—C,G,K,O,Q,T
El Mec Laboratories, 730 Boulevard, Kenil-worth, N.J.—L
Empire State Labs., 2608 Merrick Rd., Bell-more, N.Y.—Y
Endevco Corp., 689 S. Fair Oaks, Pasadena, Calif.—AC
Entwistle Co., James L., 1475 Elmwood Ave., Providence 7. R.I.—M
Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, 111.—S
Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.—P,Q,S,U,V,AC,AD
Fairchild Engine & Airplane Corp., Guided Missiles Div., Wyandanch, L.I., N.Y.—W
Fisher Research Laboratory, 1961 University Ave., Palo Alto, Calif.—X.AC
Ford Instrument Co., Div. Sperry Corp., 31-10 Thomson Ave., Long Island City 1, N.Y. —R
Fordham Mfg. Co., 2220 Pearsall Ave., New

Thomson Ave., Long Island City 1, N.Y. —R
Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N.Y.—E.I
France Mfg. Co., 10325 Berea Rd., Cleveland 2, Ohio—L,M
Franklin Electronics Inc., 415 W. Pike St., Philadelphia 40, Pa.—Q,AC
Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.—D,Q
Freed Transformer Co., Inc., 1718 Weirfield St., Brooklyn 27, N.Y.—G,K,M
F.R Machine Works, F.X-R Electronics & X-Ray Div., 26-12 Borough Pl., Woodside 77, N.Y.—L,Q,U,V
General Cement Mfg. Co., 919 Taylor Ave., Boston 15, Mass.—Q,U
General Communication Co., 681 Beacon St., Boston 15, Mass.—Q,U
General Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.—G,L,M,X,Z,AA, AB

Ru., Schenectady 5, N.Y.-G.L.M.X.Z.AA, AB
General Electric Co., Electronic Park, Syra-cuse, N.Y.-S
General Electrosonics Inc., 32 W. 22 St., New York 10, N.Y.-D,S
General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream, N.Y.-L.M.T
General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-M.X
Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.-AA
Goldak Co., 1544 W. Glenoaks Blvd., Glendale 1, Calif.-B.W
Gordon Enterprises, 5362 N. Cahuenga Blvd., N. Hollywood, Calif.-E
Green Co., C. A., 14651 Wood St., Harvey, Ill. -L
Greenleaf Mfg. Co., 7814 Manlewood Industrial

Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.—AA,AB

Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.—AC

Hall Inc., F. Sumner, Amityville, N.Y.-E

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Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.-E.I.K.L.T.V.X

and the state of the ELECTRONIC INDUSTRIES DIRECTORY

Hartman Eng'g Co., 182 Oakland St., Springfield 8, Mass.—G
Heath Co., 305 Territorial, Benton Harbor, Mich.—B,C,P,S,AD
Hewson Co., 443 Broad St., Newark 2, N.J.—M
Heyer Products Co., 471 Cortlandt St., Belleville 9, N.J.—B
Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio—B,C.D.E.H.I, K.P.S
Hillyer Instrument Co., 54 Lafavette St., New

AIRONA Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio-B,C.D.E.H.I, K,P.S
Hillyer Instrument Co., 54 Lafayette St., New York 13, N.Y.-Q
Hodgson Co., R. W., 3406 W. Washington Blvd., Los Angeles 18, Calif.-AC
Holtzer Cabot Div., Nat'l. Pneumatic Co., 125 Armory St., Boston 19, Mass.-M
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.-A,Q.S.U
Ideal Industries, 3316 Park Ave., Sycamore, III.-I.M
I-L-S Instrument Corp., 10701 Briggs Rd., Cleveland 11, Ohio-X
Impact-O-Graph Corp., 1900 Euclid Ave., Cleveland 15, Ohio-AC
Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, LI., N.Y.-Y
Industrial Development Labs., 17 Pollock Aye., Jersey City 5, N.J.-C.AC
Industrial Television, 369 Lexington Ave., Clifton, N.J.-P
Industrial Television, 369 Lexington Ave., Clifton, N.J.-P
Industrial Tast Equip. Co., 55 E. 11 St., New York 3, N.Y.-C.E.J.M.R.Y
Industrial Transformer Corp., Gouldsboro, Pa.-L.M
Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.-H

York 3, N.Y.—C.E.J.M.R.Y
Industrial Transformer Corp., Gouldsboro, Pa.—L.M
Instrument Devel. Labs. Inc., 163 Highland Ave., Needham Heights 94, Mass.—H
Instrument Devel. & Mfs. Corp., 3018 E. Foot-hill Blvd., Pasadena 8, Calif.—K.AB
Instrument Labs., 315 Walton Pl., Chicago, Ill. —E,O,P
Int'l. Research & Devel. Corp., 797 Thomas Lane, Columbus 14, Ohio—AC
Jackson Electrical Instrument Co., 20 S. Pat-terson Blvd., Dayton 2, Ohio—C.S
Janco Corp., 3111 Winona Ave., Burbank, Calif.—M
Jersey City Technical Labs, 880 Bergen Ave., Jersey City Technical Labs, 880 Bergen, N.J. —D.J.S.W.Y
Kahn & Co., 541 Windsor St., Hartford 1, Conn.—C.M.T.X
Kapner Hardware, 2248 2 Ave., New York 29, N.Y.—E
Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.—C.G.H.J.K.Q.U.V.W.Y.AC
Kay Lelectronics Corp., 423 Broome St., New York 13, N.Y.—E,I
Kings Electronics Corp., 20 E. Herman St., Philadelphia 44, Pa.—B,C.D.E,G.I.P.S
Kocour Co., 4800 S. St. Louis Ave., Chicago 32, 111.—F
Korb Eng'g & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.—Q
Krouse Testing Machine, Inc., 573 E. 11 Ave., Columbus 3, Ohio.—F
L.A.B. Corp., P.O. Box 278, Skaneateles, N.Y. —AC

L.A.B. Corp., P.O. Box 278, Skaneateles, N.Y. --AC
Laboratory for Electronics, 75 Pitts St., Boston 14, Mass.-Q
Lambda-Pacific Eng's. Inc., P.O. Box 105, Van Nuys, Calif.-T, U
Larson Instrument Co., 24 Orchard St., Tarrytown, N.Y.-A.B.L.M
Lee Electronic Labs., Inc., 238 Dudley St., Boston 19, Mass.-B,C,D,E,I,L,M
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.-M
Link Aviation, Inc., Binghampton, N.Y.-X
Liquidometer Corp., 39-21 Skillman Ave., Long Island City 1, N.Y.-C,E,I,M
Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.-Q
Long Eng's. Co., 54 Burke St., Winston-Salem, N.C.-L
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.-J,M
MacLeod & Hanopol, 10 Roland St., Charlestown 29, Mass.-S

MacLeod & Hanopol, 10 Roland St., Charlestown 29, Mass.—S
Manson Labs., 207 Greenwich Ave., Stamford, Conn.—C.D.L.S
Manufacturers Eng'g & Equip. Corp., Hatboro, Pa.—H
Marconi Instruments Ltd., 23 Beaver St., New York 4, N.Y.—K.Q.S.U
Marion Electrical Instrument Co., 400 Canal St., Manchester, N.H.—O
Martindale Electric Co., Box 617, Edgewater Br., Cleveland 7, Ohio—AB

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Maxson Corp., W. L., 460 W. 34 St., New York I, N.Y.-Q.U
Mercury Electronic Co., Box 450, Red Bank. N.J.-L
Mercury Electro-Products. Inc., 622 W. Kinzie St., Chicago 10, III.-S
Mercury Mfg. Corp., Fourth & Montjoy Sts., Falmouth, Ky.-E.T
Metropolitan Electronics & Instruments Co., 106 5 Ave., New York 11, N.Y.-A.B,C.P.S
Midwest Eng'g Devel. Co., 3648 State Line, Kansas City 3, Kansas-U
Midwestern Instruments, 41 & Sheridan Rd., Tulsa, Okla.-L
Miller Electronics, 2840 Naomi St., Burbank. Calif.-D
Miller Instruments, Wm., 325 N. Halstead Ave., Pasadena 8, Calif.-AC
Millivac Instrument Corp., 444 2 St., Schenectady, N.Y.-J,Y
Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wisc.-L
Model Rectifier Corp., 567 Rogers Ave., Brooklyn 25, N.Y.-N
Multi-Tron Lab., 4624 Washington Blvd., Chicago 44, III.-D.H.L,S.T
Murray Plastics Co., 26 Cottage St., Poughkeepsie, N.Y.-I
Narda Corp., 66 Main St., Mineola, L.I., N.Y.-Q.U
National Capacitor Co., 585 Washington St., Quincy 69, Mass.-C

Naroa Corp., bb Main St., Mineola, L.I., N.Y.-Q.U National Capacitor Co., 585 Washington St., Quincy 69, Mass.-C National Cash Register Co., Electronics Div., 3348 W. El Segundo Blvd., Hawthorne. Calif.-Y Nestor Engineering Co., 50 Patterson Ave., E. Rutherford, N.J.-R Networks Electronic Corp., 14806 Oxnard St., Van Nuys, Calif.-L Neutronic Associates, 87-16 116 St., Richmond Hill, N.Y.-M New Jersey Electronics Corp., 345 Carnezie Ave., Kenilworth, N.J.-L,M,N,O New London Instrument Co. Inc., 82 Union St., New London, Conn.-S Norden-Ketay Corp., Wiley St., Milford, Conn. -Q.R.V Oberline, Inc., 6411 Hollywood Blvd., Holly-

-Q,R,V Oberline, Inc., 6411 Hollywood Blvd., Holly-wood 28, Calif.-E,X Opad Electric Co., 69 Murray St., New York

Opad Electric Co., 69 Murray St., New York 7, N.Y.—B
Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.—D
Penna Testing Lab., Doylestown, Pa.—A,C.G, R,S,W,AC
Perkin Eng'g. Corp., 345 Kansas St., El Segundo, Calif.—N
Peschel Electronics, 13 Garden St., New Rochelle, N.Y.—E.I,L.M,X
Phaostron Co., 151 Pasadena Ave., S. Pasadena, Calif.—C,E,G,L.M.P
Phebco, Inc., 3540 Woodland Ave., Baltimore 15, Md.—Q,T
Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington Pa.—S
Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.—D,E,I,S
Physics Research Labs., 507 Hempstead Tpke.,

Physics Corp., C & Hoga Sts., Philadelphia 34, Physics Research Labs., 507 Hempstead Tpke., W. Hempstead, N.Y.—M.P.X
Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.—Q.V
Polarad Electronics Corp., 43-20 34 St., Long Island City 1, N.Y.—Q.U
Polyphase Instrument Co., 701 Haverford Rd., Bryn Mawr 1, Pa.—W
Pomona Electronics Co., 524 W. 5 Ave., Po-mona, Calif.—D
Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, L.I., N.Y.—T
Power Supplies, 1005 Olive St., Highland, Ill. —P.AD
Precise Development Corp., 2 Neil Court

Power Supplies, 1005 Olive St., Highland, III. —P.AD
Precise Development Corp., 2 Neil Court, Oceanside, N.Y.—D,P,S
Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N.Y.—L.M.X
Precision Apparatus Co., 70-31 84 St., Glen-dale 27, L.I., N.Y.—D,E,P,S
Precision Associates, 354 Cumberland St., Brooklyn 17, N.Y.—B,E,I.P,X
Precision Electronics Inc., 9101 King Ave., Franklin Park, III.—C,S
Premier Instrument Corp., 52 W. Houston St., New York 12, N.Y.—Q,U
Pres Probe Co., 4034 N. 6 St., Milwaukee 12, Wisc.—C
Prun-Moore, Inc., 1338 Cota Ave., Long Beach 13, Calif.—V.Z
Pyramid Electric Co., 1445 Hudson Blvd., N.

Pyramid Electric Co., 1445 Hudson Blvd., N. Bergen, N.J.—C Quare Associates, P.O. Box 95, Canton, Mass. —R Radiation, Inc., Box "Q" Melbourne, Fla .---

Q,X Radio City Products Co., Centre & Glendale Sts., Easton, Pa.—B,D,E,S Radio Corp. of America. RCA Tube Dept., 415 S. 5 St., Harrison, N.J.—B Radio Frequency Labs., Powerville Rd., Boon-ton 20, N.J.—O

Radio Kits, Inc., 120 Cedar St., New York 6, N.Y.-E,S.V

Radio Supply & Eng'g. Co., 85 Selden Ave., Detroit 1, Mich.-D

Rawson Electrical Instrument Co., 117 Potter St., Cambridge 42, Mass.—O.P

Radio Sonic Corp., Plainfield, N.J.-D

Raytronic Labs., 9701 Reading Rd., Cincinnati 15, Ohio-D

- Raytronic Labs., 9701 Reading Rd., Cincinnau 15, Ohio-D
  Rectifier Engineering Co., 1803 E. 7 St., Los Angeles 21, Calif.—B
  Remco Mfg. Co., 545 N. La Salle St., Chicago 10, Ill.
  Research Electronics Labs., Roslyn, Pa.—A, D I.S.

- Renco Mrig. Co., 546 N. La Salle St., Chicago 10, 11.
  Research Electronics Labs., Roslyn, Pa.—A, D.J.S.
  Rockwell Eng'g. Co., 4063 N. New Jersey St., Indianapolis 5, Ind.—AC
  Rowe Industries, 1702 Wayne St., Toledo 9, Ohio—B
  Rubicon Co., Ridge Ave. at 35 St., Philadel-phia 32, Pa.—R
  Schauer Mfr. Corp., 4522 Alpine Ave., Rossmoyne, Ohio—AD
  Scientific Associates, 580 Virginia Ave., N.E., Atlanta, Ga.—V
  Scientific Specialties Corp., Snow & Union Sts., Boston 35, Mass.—W
  Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—AC
  Secaltron Co., 9701 Reading Rd., Cincinnati 15, Ohio.—L
  Seco Mfg. Co., 5015 Penn Ave. S., Minneapolis 19. Minn.—E,S
  Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N.Y.—E,O,P
  Service Instruments Inc., 422 S. Dearborn St., Chicago 5, III.
  Shallcross Mfg. Co., Jackson & Pusey Aves., Collingdale, Pa.—M,X
  Sierta Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—K,V
  Silver Bay Equip. Co., 5004 20th St. NW, Seattle 7, Wash.—V
  Simpson Electric Co., 5208 W. Kinzie St., Chicago 4, III.—B,C,D,H,L,M,O,P,S,V,X
  Sittler Corp., 18 N. Ada St., Chicago 7, III.
  —I.T
  Size Control Co., Div. American Gage & Machine Co., 2500 W. Washington Blod., Chica
- -1.1 Size Control Co., Div. American Gage & Ma-chine Co., 2500 W. Washington Blvd., Chi-cago 12, III.-AE Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.

- cago 12, 11.—AE Specialty Assembling & Packing Co., Specialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y. —E,P Sperry Gyroscope Co., Great Neck, N.Y.—Q,U Standard Electronic Research Corp., 2 East End Ave., New York 21. N.Y.—F,X Star Fuse Co., 235 Canal St., New York 13. N.Y.—E. Stavid Eng'g., Highway 22, Plainfield, N.J.— Q.R.U,V Sterling Mfg. Co., 7201 Wentworth Ave., Cleveland 2, Ohio.—B Sticht Co., Herman H., 27 Park Pl., New York, N.Y.—M,AC Sturtevant Co., Addison, Ill. Sun Electric Corp., Harlem & Avondale Aves., Chicago 31, 111.—B,E,G Superex Electronics Corp., 23 Atherton St., Yonkers, N.Y.—D Superior Instruments Co., 2435 White Plains Rd., New York 67, N.Y.—D,P,S Supreme, Inc., Greenwood, Miss.—B.S Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—D,S Syntronic Instruments, Inc., 100 Industrial Rd., Addison, III.—D Takk Corp., P.O. Box 346. Newark, Ohio—M Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.—H Technical Development Corp., 4060 Ince Blvd., Culver City, Calif.—E,I.X Technical Instrument Co., 3732 Westheimer Rd., Houston 6, Texas—AC Technicraft Labs., 1600 Thomaston Ave., Thomaston, Conn.—U Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.—RQ,U Telectro Industries Corp., 35-16 37 St., Long Island City I, N.Y.—C,E,G,I,M,R,T,Z Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.—Q,U Television Engineers, Inc., 325 W. Bryn Mawr Ave., Chicago 45, 111.—D,S Thompson Clock Co, H. C., 38 Federal St., Bristol, Conn.—E, C.Z, 41 Crescent St., Waltham 54, Mass.—W Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass.—W Transistor Products, Inc., 241 Crescent St., Waltham 54, Mass.—W

- III.---R Trojan Electronics, 3706 N. Halsted St., Chi-cago 13, III.--D Tru-Vue Television Co., 99 Featherbed Lane, Bronx 52, N.Y.--D Ultrasonic Corp., 640 Memorial Dr., Cambridge 42, Mass.--R

- Ultrasonic Corp., 640 Memorial Dr., Cambridge 42, Mass.—R
  Union Spring & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—G. R
  United Mfg. Co., Div. W. L. Maxson Corp., 41 Haig St., Hamden 14, Conn.—Z
  United Scientific Labs., 35-15 37 Ave., Long Island City 1, N.Y.—Q
- Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-Q,U Universal X-Ray Products, 1140 N. Western Ave., Chicago 22, Ill.-L Vacolite Co., 3003 N. Henderson St., Dallas 6, Texas.-S

- Vacuum Electronic Eng'g. Co., 86 Denton Ave., New Hyde Park, L.I., N.Y. Valtronics, Inc., 242 Valley St., Dayton 4, Ohio-S.AD

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass. -Q.R.U Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.-E Visulite Co., 423 Broome St., New York 13, N.X.-I

- Visulite Co., 423 Broome St., New York 13, N.Y.--1 Waters Mfg., Inc., 4 Gordon St., Waltham 54, Mass.--S.Y Waveline, Inc. Caldwell, N.Y.--U Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio--I,L.M Weston Electrical Instrument Corp., 614 Fre-linghuysen Ave., Newark 5, N.J.--B,E,G,O, P.S
- P.S. Westronics Inc., 3605 McCart. Ft. Worth, Texas—E,I,L,M,Q,R,X,Z Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Grat Neck, N.Y.—U White Industries, 421 W. 54 St., New York 19, N.Y.—D Willard Storage Battery Co., 1220 Huron Rd., Cleveland, Ohio.—B Winslow Co., 9 Liberty St., Newark 5, N.Y. —M

- —M Wright Eng'g. Co., 180 E. Calif. St., Pasa-dena 1, Calif.—J.S.V,AD

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Alignment toolsA
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Demagnetizers E
Drills, electric
Drills, handG
Drills, twist
Drivers, staple
Etchers, electric
FilesK
GagesL
Hammers
Holders, Chassis
Knob pullers
Lenses, inspectionP
Marking stampsAK
MicrometersQ
Mirrors, inspectionR
PliersS
Punches
Ratchet wrenchesU
Rivet tools
Saws
Scales & TapesV
Scissors
ScrewdriversX
Snips AN
Solder potsZ
Soldering iron standsAB
Soldering iron tips
Soldering irons
Splicing tools
Steelens
Staplers
Terminal lug swagers
Tube pin straightenersAE
Tube pullers
Tweezers
Vises
Wire strippersAG
WrenchesY

- Acme Electric Heating Co., 1217 Washington St., Boston 18, Mass.—Z.AA
  Acromark Co., 601 Morrell St., Elizabeth 4, N.J.—J,T.AK
  Acro Tool & Die Works, 4554 Broadway, Chicago 40, III.—N
  Aerolite Electronics Corp., 507 26 St., Union City, N.J.—A
  Aeroprojects Inc., P.O. Box 555, W. Chester, Pa.—AA,AB.AC
  Airdraulics Eng'g., Inc., 30 Burtis Ave., New Canaan, Conn.—L,V,X
  Alina Corp., 401 Broadway, New York 13, N.Y.—Q
  Alpha Metals. Inc., 56 Water St., Jersey City 4, N.J.—AC

- Alpha Metals. Inc., 56 Water St., Jersey City 4, N.J.—AC
  American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.—AA
  American Mercantile Co., 33 W. 42 St., New York 36. N.Y.—AM
  American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, 111.—A
  American Radio Hardware Co., 152 MacQues-ten Parkway S, Mount Vernon, N.Y.—A, X,Y
- Anchor Metal Co., 244 Boerum St., Brooklyn 6, N.Y.-Z,AA

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Annis Co., R. B., 1101 N. Delaware St., Indi-anapolis 2, Ind.-E.J

- Artos Eng'g. Co., 2757 S. 28 St., Milwaukee 46, Wisc.—AG Autel Electronics Co., P.O. Box 225, Linden, N.J.—Y
- Autel Electronics Co., P.O. Box 225, Linden, N.J.-Y Bausch & Lomb Optical Co., 628 St. Paul St., Rochester, N.Y.-P Black & Decker Mfg. Co., Towson 4, Md. -C.F

- Black & Decker Mfg. Co., Towson 4, Md. -C.F
  Bowen & Co., Box 5818, Bethesda, Md. --V
  British Electronic Sales Co., 23-03 45 Rd., Long Island City 1, N.Y.-AA,AB,AC,AE, AF,AG,AJ,AN
  Buchanan Electrical Products Corp., 236 Route 22, Hillside, N.J.-AD
  Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.-P,R
  Burke & James, 321 S. Wabash Ave., Chicago 4, III.-P
  Burndy Eng'g Co., Richards Ave. & Post Rd., Norwalk, Conn.-AD,AG,AP
  Chase Brass & Copper Co., 236 Grand St., Waterbury 20, Conn.-AA
  Chase Brass & Copper Co., 236 Grand St., Waterbury 20, Conn.-AA
  Chase Israss & Copper Co., 9600 W. Jack-son Blvd., Bellwood, 111.-AL
  Chicago Tool & Eng'g. Co., 5038 S. Chicago Ave., Chicago 17, 111.-S,AH
  Clauss Cutlery Co., 223 N. Prospect St., Fre-mont, Ohio-W,YAO
  Cleco Div., Reed Roller Bit Co., 5125 Clinton Dr., Houston 20, Texas-MX
  Commercial Optical Mfg., 118 Bridge St., Huntington, W. Va.-P
  Contact, Inc., 238 Main St., Cambridge 42, Mass.
  Cummins-Chicago Corp., 4740 Ravenswood

- Mass, I.C., 1990 Math. Sot., Statistics e.J., Mass, Chicago Corp., 4740 Ravenswood Ave., Chicago 40. III.—F
  Curran Machine Works. 20-20 Steinway St., Long Island City, N.Y.—L
  Dee Electric Co., 1101 N. Paulina St., Chicago 22, III.—Z
  Delaware Optical Labs., 36 Williams St., Lans-downe. Pa.—P.R
  D & M Products, 13144 W. McNichols Rd., Detriot 35, Mich.—A
  DoAll Co., 254 N. Laurel Ave., Des Plaines. III. —B,L,Q, V.AM
  Drake Electric Works, 3654 N. Lincoln Ave.

- -B,L,Q,V,AM Drake Electric Works. 3654 N. Lincoln Ave., Chicago 13, Ill.--Z,AA,AB,AC Duro Specialty Co., 8 Bennett St., Lynn, Mass.-AE Edmund Scientific Corp., Barrington, N.J.-P,R

- Mass.—AE
  Edmund Scientific Corp., Barrington, N.J.— P.R
  Eitel-McCullough, Inc., 798 San Mateo Avc., San Bruno, Calif.—AF
  Electric Soldering Co., Deep River, Conn.— Z.AA.AB.AC
  Electro-Mechanical Div., General Riveter, Inc., 785 Hertel Ave., Buffalo 7, N.Y.—T.AL
  Electro-Mechanical Div., 287-P Broadway, New York 7, N.Y.—T
  Eng'g. Developments, Inc., P.O. Box 1046, Portsmouth, R.I.—P.R
  Enthoven Solders Ltd., 107 N. Water St., Roch-ester 4, N.Y.—A.Z.AA.AC
  Eraser Co., 1068 S. Clinton St., Syracuse 4, N.Y.—AG
  Erikson Specialized Tool Co., P.O. Box 424, Pico 1, Calif.—A.G.S.U.X
  Erwood. Inc., 1770 W. Berteau Ave., Chicago 13, III.—C
  Esser, Maurice H., 107 N. Water St., Roches-ter 4, N.Y.—Z.AA.AC
  Fairchild Industries, Div. Fairchild Camera & Instrument Corp., 110 Main St., Burling-ton Vt.—F
  Federal Sapphire Products, Div. Precision Supply & Machine Co., 12 River Rd., Fair Lawn, N.J.—I,L.Q.X
  Federal Tool Eng'g. Co., 1384 Pompton Ave., Cedar Grove, N.J.—AO
  Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y.—P
  Forsberg Mfg. Co., 125 Seaview Ave., Bridge-port 1, Conn.—B.G.M.X.AM
  Gee-Lar Mfg. Co., 819 Elm St., Rockford, III.— AC
  General Cement Mfg. Co., 919 Taylor Ave., Rockford, III.—A,N,O,R,X,Y,AC,AD,AE,AF,

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.—A,N,O,R,X,Y,AC,AD,AE,AF, AG,AL,AO Reneral Electric Co., Apparatus Div., 1 River Rd., Schenectady 5, N.Y.-Z,AA,AB,AC Graphic Recorders, 62 Walter St., Bridgeport

Grenlee Tool Co., 2136 12 St., Rockford, Ill. -C.T.X

Gustafson Mfg. Co., G. D., 5328 N. Kedzie Ave., Chicago 25, 111. Henkel-Clauss Co., Fremont, Ohio-W Hexacon Electric Co., 157 N. Clay Ave., Ro-selle Park, N.J.-Z.AA,AB,AC Holub Industries, 413 DeKalb Ave., Sycamore, III.-AG Hunter Tools. 6608 S. Gretna Ave., Whittier, Calif.-M.X.Y.AF

Ideal Industries, 3316 Park Ave., Sycamore, Ill.—E,J,M,AA,AG,AP I.E. Mfg. Co., 325 N. Hoyne Ave., Chicago 12, Ill.—AE,AG Industrial Engineered Products Co., 919 E. Slauson St., Los Angeles 11, Calif.-Z,AA, AL

Insuline Corp. of America. 186 Granite St., Manchester, N.H.-A,C,X,Y,AA,AC,AL

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5. Conn.-L

Kahn & Co., 541 Windsor St., Hartford 1,

Kahn & Co., 541 Windsor St., Hartford 1, Conn.-E
Kedman Co., 233 S. 5th St., W., Salt Lake City 1, Utah-X
Keller Tool Co., 1333 Fulton St., Grand Haven, Mich.-U.X
Kelnor Mfg. Corp., 222 Kearny St., San Fran-cisco 8, Calif.-AA
Kemode Mfg. Co., 161 W. 18 St., New York 11, N.Y.-AA
Keystone Electronics Corp., 423 Broome St., New York 13, N.Y.--A, AL, AP
Kinetix Instrument Co., 902 Broadway, New York 10, N.Y.
Klein & Sons, Mathias, 7200 W. McCormick Rd, Chicago 45, Ill.-S,W,AG,AJ
Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.-AA,AB,AC
Lenk Mfg., 30 Cummington St., Boston 15. Mass.-AA,AC
Lenk Mfg., Co., 248 Herricks Rd., Mineola, L.I., N.Y.-P,R,AG,AO
London Chemical Co., 1535 N. 31 Ave., Melrose Park, Ill.--AG
Lund Lecric Equip. Co., 1112 Dorr St., To-

-E,L,X Luma Electric Equip. Co., 1112 Dorr St., To-ledo, Ohio-E,J,AA

Iedo, Ohio-E.J.AA
Marnetic Devices Corp., 103 S. Van Brunt St., Englewood, N.J.-AI
Martindale Electric Co., Box 617, Edgewater Br., Cleveland 7, Ohio-E.J.AG
Matthews & Co., Jas. H., 3958 Forbes St., Pittsburgh 13, Pa.-AK
Merr Engr., Inc., 200 S. Harding St., In-dianapolis 7, Ind.-L
Metzger & Son, E. F., 2600 N. 6 St.; Philadel-phia 33, Pa.-A
Mico Instrument Co., 80 Trowbridge St., Cambridge 38, Mass.-C,J
Millers Falls Co., Greenfield, Mass.-B,C,G,J, Q,X

0.X

G.A.
Mitchell Industries, Box 17, Mineral Wells, Texas—AA
Moody Machine Products Co., 42 Dudley St., Providence 5, R.I.—G.X
Murray Plastics Co., 26 Cottage St., Pough-keepsie, N.Y.—A

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Murray Plastics Co., 26 Cottage St., Poughkeepsie, N.Y.-A
Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.-R
Phillips Mfg. Co., 2816 Aldrich Ave., S., MinneaDolis, Minn.-AA.AB.AC.AI
Pioneer Tool Co., 5008 W. Jefferson Blvd., Los Angeles 16, Calif.-C,TY
Portable Electric Tools, 200 W. 38 St., Chicago 20, 111.-F
Porter, Inc., H. K., 74 Foley St., Somerville 43, Mass.-X,Y,AJ,AN
Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N.Y.-C, AK
Precision Metal Products Co., 11 Elm St., Stoneham 80, Mass.-AL
Precision Metal Products Co., 12 River Rd., Fair Lawn, N.J.-L.Q.X
Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N.Y.-AE, AX
Precision Mfg., 3060 W. 21, Brooklyn, N.Y.-E
Rau Fastener Co., 142 5 Ave., New York 11, N.Y.-AL.AP
Richmont, Inc., 922 S. Myrtle Ave., Monrovia, Calif.-X
R-L Electronics, 7100 Avalon Blvd., Los Angeles 3, Calif.-AF
Scherr Co., 200 Lafayette St., New York, N.Y.-C
Skil Corp., 5033 Elston Ave., Chicago 30, III.-C,F
Smith Heat Treating Co., 5865 Wilmington Ave., Los Angeles 1, Calif.-Y

Skil Corp., 5033 Elston Ave., Chicago 30, III.—C,F
Smith Heat Treating Co., 5865 Wilmington Ave., Los Angeles 1, Calif.—Y
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y.—A.Y.AE.AF
S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, N.Y.—AD.AI
SpeedWay Mfg. Co., 1834 S. 52 Ave., Cicero 50, III.—F, AM
Stanley Works, 195 Lake St., New Britain, Conn.—C,F,G,M,T,X,AA.AC,AH
Star Expansion Products Co., 147 Cedar St., New York 6, N.Y.—A.L,AE
Star Fuse Co., 235 Canal St., New York 13, N.Y.
Shark Mfg. Co., P.O. Box 489, Tuscaloosa, Ala.—AA

-AA

Stark Mfg. Co., P.O. Box 489, Tuscaloosa, Ala.—AA
Sta-Warm Electric Co., Ravenna, Ohio—Z
Sturtevant Co., P. A., Addison, Ill.—Y
Sunrise Products Co., P. O. Box 173, Haw-thorne, N.J.—AA,AB,AC
Technical Products Co., 19 N. Dunlap, Mem-phis 1, Tenn.—F.J.K.L.Q.W.Z
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.—B,C.AA,AM
Television Accessories Co., Box 368, Scotts-dale, Ariz.—AA,AC
Thompson Clock Co., H. C., 38 Federal St., Bristol. Conn.—A. B, C. D. F. G. I. J. K, M, O. P. Q. R. S. T. U. V. W. X, Y. AA, AB, AC, AD, AE, AF, AG, AH. AI
Tipco Co., 5865 Willmington Ave., Los Angeles 1, Calif.—Y.AG
Trico Fuse Mfg. Co., 2948 N. 5 St., Milwaukee 12, Wisc.—S

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Tri-Kris Co., P.O. Box 631, Lansdale, Pa.— A,L,R,AE Turner Brass Works Sycamore, III.—Z Ungar Electric Tools, P.O. Box 312, Venice, Calif.—AA,AC Utica Drop Forge & Tool Corp., 2415 Whites-boro, Utica 4, N.Y.—S,T,X,Y,AG,AJ,AN Vaco Products Co., 317 E. Ontario St., Chi-cago 11, III.—A,D,M,S,X,Y,AG,AJ,AP Vemaline Products Co., P.O. Box 222, Haw-thorne 1, N.J.—Z,AA,AB,AC Vibro-Ceramics Corp., 212 Durham Ave., Metuchen, N.J.—AA Viking Instruments, Inc., E. Haddam, Conn.— AA,AG

AA.AG Visulite Co., 423 Broome St., New York 13, N.Y.-A

N.Y.-A Waage Electric, Inc., 720 Colfax Ave., Kenil-worth, N.J.-Z Waldes Kohinoor, Inc., 47-16 Austel Pl., Long Island City 1, N.Y.-S Wall Mfg. Co., Grove City, Pa.-AA,AB,AC Walsco Electronics Corp., 3602 Crenshaw Blvd., Los Angeles 18, Calif.-A,R,AE,AF, AC.AO

Bivd., Los Angeles 18, Calif.—A,R,AE,AF, AG,AO Wassco Electric Products Corp., 126 W. Cass St., Joliet, Ill.—AA,AC Wasserlein Mfg. Co., 126 W. Cass St., Joliet, Ill.—AA,AC Weller Electric Corp., 808 Packer St., Easton, Pa.—AA Wen Products, Inc., 5806 N. West Highway, Chicago 31, Ill.—AA Wenzel Projector Co., 2509 S. State St., Chi-cago 16, Ill.—M,T Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.—J

Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-J Weymouth Instrument Co., 1440 Commercial St., E. Weymouth 89, Mass.-AG White Dental Mfg. Co., S. S., 10 E. 40 St., New York 16, N.Y.-R Wilder Mfg. Co., Mechanic St. & Erie R.R., Port Jervis, N.Y.-AB Wybar Electronics, 507 E. Water St., Syracuse 1, N.Y.-AG Wyzenbeek & Staff, 223 N. California Ave., Chicago 12, 111.-C Xcelite Inc., Thorne Ave. & Bank St., Or-chard Park, N.Y.-S.X.Y

# 93—TRANSFORMERS

Transformers, audio broadcasting .A
Transformers, audio inputAK
Transformers, audio interstage AL
Transformers, audio output AM
Transformers, audio receiving B
Transformers, autotransformerC
Transformers, biasD
Transformers, bridgeE
Transformers, current
Transformers, current limitingG
Transformers, differential
Transformers, filament
Transformers, fluorescent
Transformers, flybackAF
Transformers, HVJ
Transformers, isolation
Transformers, microphone cableN
Transformers, microwave0
Transformers, miniatureAG
Transformers, modulationP
Transformers, phase shiftAN
Transformers, plateQ
Transformers, plug-inR
Transformers, powerS
Transformers, power receivingT
Transformers, power transmitting .U
Transformers, pulseV
Transformers, RF-IFW
Transformers, saturableX
Transformers, sub miniatureAH
Transformers, subsonicY
Transformers, toroidalZ
Yransformers, transistorAl
Transformers, TV antenna
matching
Transformers, ultrasonicAB
Transformers, variableAC
Transformers, vibrator AP
Transformers, voltage, regulating AD
Transformers, weldingAE
Transformers, X-ray
transtermors, servey treated

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- Accurate Eng'g. Co., 2005 Blue Island Ave., Chicago 8, Ill.—H,L,Q,S
  Acme Coil & Transformer Corp., 1915 N. Clybourne Ave., Chicago 14, Ill., B,C,F,G, H,L,K,L,P,Q,S,T,V,X
  Acme Electric Corp., 1374 W. Jefferson Blvd., Los Angeles 7, Calif.—A,B,C,D,E,G,H,L,P,Q, R,S,T,U,V,X,AG,AH,A1,AK,AL,AM
  Acme Electric Corp., Cuba, N.Y.—C,H,J,K,L, O,Q,R,S,T,U,V,X,AC,AD,AE,AG,AH,AI,AJ
  Acme Electronics Div., Aerovox Corp., 272a Peck Rd., Monrovia, Calif.—E,G,K,X,AD, AG

- AG Acorn Electronics Corp. Box 348 Gibson City, III.—B,C,H,J,Q,S,T,V Acro Products Co., 369 Shurs Lane, Phila-delphia 28, Pa.—A,S,V,X,Y,AB,AH,AK,AL, AM

- delphia 28, Pa.—A,S,V,X,Y,AB,AH,AK,AL, AM
  Acro Transformer & Mfg. Corp., 26-02 4 St., Long Island City 3, N.Y.—A,B,C,D,E,G,H,L, P,Q,R,S,T,U,X,AG,AK,AL,AM
  A C Transformer Corp., 89 Madison St., New-ark, N.J.—C,H,J,K,L,Q,S,T,U,AE,AN
  Aerovox Corp., 740 Belleville Ave., New Bed-ford, Mass.—B,X,Z,AK,AL,AM
  Aircraft Armanents, Inc., P.O. Box 126, Cock-eysville, Md.—V
  Aircraft Transformer Corp., West & Willow Aves., Long Branch, N.J.—A,B,C,D,E,F,G,H, J,K,L,N,P,Q,R,S,T,U,V,X,Y,AB,AG,AH,AK, AL,AM,AN,AO
  Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.—A,B,C,D,F,G,H,J,K,L,P,Q,S,T, U,V,X,AD,AG,AH,AM
  Airpax Products Co., Middle River, Baltimore 20, Md.—A,B,C,D,E,F,G,H,J,K,L,N,P,Q,R,S, T,U,V,X,Y,Z,AB,AF,AG,AH,AI,AK,AL,AM, AN,AO
  Airtron Inc., 1101 W. Elizabeth Ave., Linden, N L Q

- T, U, V, A, Y, Z, AB, AF, AG, AH, AI, AK, AL, AM, AN, AO Airton Inc., 1101 W. Elizabeth Ave., Linden, N.J.-O Aladdin Radio Industries, 703 Murfreesboro Rd., Mashville, Tenn.-W Alden Products Co., 117 N. Main St., Brockton 64, Mass.-Z Allied Allegri Machine Co., 141 River Rd., Nutley 10, N.J.-W Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.-A, B, C, D, E, G, H, J, L, N, P, Q, R, S, V, X, Y, Z, AG, AH, AI, AK, AL, AM, AN American Rectifier Corp., 95 Lafayette St., New York 13, N.Y.-X Anchor Electronics. Inc., 717 Sip St., Union City, N.J.-W, AA Anchor Products Co., 2712 W. Montrose Ave., Chicago 18, III.-AD Andrew Corp., 363 E. 7 St., Chicago 19, III.-L

- L Annis, R. B. Co., 1101 N. Delaware St., Indian-apolis 2, Ind.--K Apex Coil & Transformer Corp., 1919 S. Fairfield Ave., Chicago 8, Ill.--C.H.L.O.Q.S., AH.AI.AM Areo Transformer & Electric Corp., 1602 S. Hanna St., Ft. Wayne 5, Ind.--B.C.D.F.H.J., K.L.P.Q.R.S.T.AE.AG.AI.AJ.AK.AL.AM Arma Corp., Roesevelt Field, Garden City, N.Y.-S Atlantic Transformer Corp., 30 Hynes Ave., Groton, Conn.--A,B,C,D,E,F,G,H,J,K,L,P,Q.R., S.T.U.V.X.Y.Z.AA.AB.AC.AG,AH.AI.AJ.AK, ALAM.AN.AO Atlas Coil Inc., 205 Main St., Ansonia, Conn. Atlantic Transformer Gorp., 30 Hynes Ave., Groton, Conn. -A.B., C.D.E.F.G.H.J.K.L.P.Q.R. S.T.U.V.X.Y.Z.AA.AB,AC,AG,AH,AI,AJ,AK, AL,AM,AN,AO
  Atlas Coil Inc., 205 Main St., Ansonia, Conn. -B.H.L.S.AC
  Atlas Engineering Co. 3 Edgewood St. Rox-bury, Mass.-C.D.H.K.L.Q.V.W.X.Z.AF,AK, AL,AM
  Audio Devel. Co., 2838 13 Ave., S., Minnespolis 7, Minn.-A.B.E.H.L.O.P.Q.T.U.V.AD.AG, AH,AI,AK,ALAM,AN
  Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N.J.-W.AA.AF,AG,AH,AI
  Auto-Test, Inc., 600 S. Michigan Ave., Chicago 5, III.-C.H.L.Q.S.T.AM
  Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.-AK
  Balteau Electric Corp., 5 New St., Stam-ford, Conn.-AJ
  Balteau Electric Corp., 5 New St., Stam-ford, Conn.-AJ
  Barber & Howard, 120 East Ave., Westerly, R.I.-S
  Barker & Williamson, Inc., 237 Fairfield Ave., Upper Darby, Pa.-W.Z.AC
  Bart Electronics Corp., 512 Broadway, New York 12, NY.-H.Z
  Bart Electronics Inc., 30 Prince St., Brook-lyn, I. N.Y.-W
  Bealtaire Electronics, 586 Bank Village, Greenville, N.H.-R.V
  Berkshire Transformer Corp., 15 South Ave., New Milford, Conn.-A.B.C.D.E.F.G.H.J.K.L., P.Q.R.S.T.U.X.AC,AE,AG,AH,AI,AJ,AK, AL,M,AN,AO
  Bellaire Electronics, 586 Bank Village, Greenville, N.H.-R.V
  Berkshire Transformer Corp., 15 South Ave., New Milford, Conn.-A.B.C.D.E.F.G.H.J.K.L., P.Q.R.S.T.U.X.AC,AE,AG,AH,AJ,AK,AL, AM,AN,AO
  Best Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.-C.L.O.S.AE,AJ
  Bittermann Electric Co., Barlow & Grove Sts., Canaan, Conn.-C.F.H.J.K.L.S.X.Z.AG
  Bindeell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.-C.L.O.S.AE,AJ
  Bittermann Electric Co., Barlow & Grove Sts., Canaan, Conn.-C.F.H.J.K.L.S.X.Z.AG
  Bindeell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.-C.L.O.S.AE,AJ
  Bittermann Electric Co., Barlow & Grove Sts., Canaan, Conn.-C.F.H.J.K.L.S.X.Z.AG
  Bondell Mfg. Co., 750 San Antonio Rd.,

- Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.—N
  Brach Mfg. Corp., 200 Central Ave., Newark 3, N.J.—AA
  British Electronic Sales Co., 23.03 45th Rd., Long Island City 1, N.Y.—A,N,AG,AH,AK, AL,AM
  Brubaker Electronic Co., 9151 Exposition Dr., Los Angeles 34, Calif.—V
  Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.—V
  Byron Jackson Co., 2010 Lincoln Ave., Pasa-dena 3, Calif.—O
  Caddell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 40 E. 2nd St., Mineola, N.Y.—W
  Caldell-Burns Mfg. Co., 7245 Atoll Ave., N. Hollywood, Calif.—A, B, C.D, E, F, G, H, J, K, L, N.O, P, Q, R, S, T, U, V, X, Y, Z, AA, AB, AC, AD, A E, AG, AH, AI, AJ, AK, AL, AM, AN, AO
  Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.—W, AC
  Campbell X-Ray Corp., 110 Cummington St., Boston 15, Mass.—H, Q, S, V, AJ
  Carlol Stage Lighting Co., 527 W. 45 St., New York 36, N.Y.—C
  Carad Corp., 2850 Bay Rd., Redwood City, Calif.—J, K, O, V, W, X, Z, AB, AF, AG, AH
  Carol Electronics Corp., 315 W. Stephen St., Martinsburg, W. Va.—A, B, C, D, E, G, H, L, P, Q, S, T, X, AG, AH, AI, AJ, AK, AL, AM
  Central Coil Co., 1720 N. Luett St., Indianap-olis 22, Ind.—W
  Central Transformer Co., 903 W. Jackson Blvd., Chicago 7, 111.—A, B, C, D, E, F, G, H, J, L, O, P, Q, S, T, U, V, X, AC, AE, AG, AK, AL, AM, AN, AO
  Centran, Inc., P.O. Box 168, Greensburg, Ind. A, B, C, D, E, F, G, H, J, K, L, O, P, Q, RS, TU, W,

- Blvd., Chicago 7. 11.—A.B., U.B.F., G.H.J.L., O.P.Q.S.T.U.V.X.AC.AE, AG, AK, AL, AM, AN, AO
  Centran, Inc., P.O. Box 168, Greensburg, Ind. A.B.C.D.E.F.G.H.J.K.L.O.P.Q.R.S.T.U.W, X.AA, AD, AE, AJ, AK, AL, AM, AN, AO
  Centronics Corp., 21-04 122 St., College Point, 56, N.Y.—AA
  C.G.S. Labs. Inc., 391 Ludlow St., Stamford, Conn.—W.X.AC
  Chicago Electronic Eng. Co., 3223 Armitage Ave., Chicago 47, III.—B.C.D.E.F.G.H.L.S.T. U.V.X.Z.AE, AG, AH, AK, AL, AM, AN, AO
  Chicago Magnetic Control. 1616 Damon Ave., Chicago, III.—B, C.D.E.F.G.H.L.S.T. U.Y.X.Z.AE, AG, AH, AK, AL, AM, AN, AO
  Chicago Standard Transformer Corp., Addi-son & Elston, Chicago 18, III.—A.B.C.D.H. L.P.Q.S.T.U, V.Z.AC, AD, AF, AG, AH, AI, AK, AL, AM
  Clark Electronic Laboratories, Box 165, Palm Springs, Calif.—S.X., AD, AE
  Clum Mfg. Co., 601 National Ave., Milwaukee, Wisc.—A.B.C.D.E.F., G.H.I.J.K., Los An-geles 16, Calif.—X.Z
  Coil Co. of America, 8 Washington St., North-vale, N.J.—A.B.C.D.E.F., G.H.I.J.K., LN.P.Q.R. S.T.U.V.X.A.C.AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, O
  Coil Eng'g. & Mfg. Co., Roanoke, Ind.—B, C, H. J.L.Q.S.T
  Coil Winders Inc., 100 New York Ave., West-bury, L.I., N.Y.—C.H.P.R.V.W.Y.Z.AC, AG, AH
  Columbus Process Co., State & Mapleton Sts., Ocuments I.G. Columbus Process Co., State & Mapleton Sts.

- AH Columbus Process Co., State & Mapleton Sts., Columbus, Ind.—B,C,F,G,H,L,S,T,AK,AL,AM Comar Electric Co., 3349 W, Addison St., Chicago 18, III.—S Communication Accessories Co., 110 St. & 71 Hgwy., Hickman Mills, Mo.—C,P,V,X,Z,AG, AH,AI,AK

- Hgwy. Hickman Mills, Mo.-C.P.V.X.Z.AG, AH,AI,AK
  Communication Parts, 7466 W. Irving Park Rd., Chicago 34, Ill.-W,AA
  Component Manufacturers, 38-01 23rd Ave., Long Island City 5, N.Y.-Z.AF
  Conno. Telephone & Electric Corp., 70 Britania St., Meriden, Conn.-AP
  Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.-BAF,AI,AK,AL,AM
  Constantine Eng'g Labs. Co., P.O. Box 471. Mahwah, N. J.-C.H.K.L.S,V.X.Z,AF,AH,AI
  Control Components Co., 1 Holden St., Brook-line 46, Mass.-X.AO
  Control Corp. 718 Central Ave., Minneapolis 19, Minn.-H.S
  Cornell-Dubilier Electric Corp., 1834 W. North Ave., S. Plainfield, N.J.-AF
  Crest Transformer Corp., 1834 W. North Ave., Chicago 22, Ill.-C.G.H.J.L.P.Q.S.T.AD, AE,AG,AK,AL,AM
  Crown Eng'g., 3821 Commercial N.E., Albu-querque, New Mex.-W
  Cycle Electronic Labs., 356 Glenwood Ave., E. Orange, N.J.-A.B.C.D.E.F.G.H.J.K.L.Q, S.T.V.X.AE,AG,AH,AI
  Dane Electronic Labs., P.O. Box #209, Salem, Mass.-AA
  Davitonic Corp., 216 S. Main St., Dayton 2, Ohio-AO
  Delco Radio Div., General Motors Corp., Ko-

- Delco Radio Div., General Motors Corp., Ko-komo, Ind.-W
- Delta Electronics, 259 Green St., Brooklyn 22. N.Y.---W
- Delta Radio Co., 115 Worth St., New York 13. N.Y.-W
- AL.AM

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955



- Dinion Coil Co., Caledonia, N.Y.--C,H,I,Q,S,V, AG,AI,AK,AL,AM
  Dongan Electric Mfg. Co., 2987 Franklin St., Detroit 7, Mich.--L,S
  Dormeyer Industries, 3418 Milwaukee Ave., Chicago 41, Ill.--A,B,G,H,I,S,T,U,V,AE,AG, AJ,AK,AL,AM
  Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge 40, Mass.--B,C,H,J,Q,S,T,V,AK, AL
  Dourglas, Microwave, Co., 11 Booshmood Aug.

- Cambridge 40, Mass.—B,C,H,J,Q,S,T,V,AK, AL
  Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.—O
  D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.—H,Z
  Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich.—C,F
  DuMont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.—AO
  Dunkle Coil Co., 3257 W. 6 St., Los Angeles, Calif.—B,C,H,W,AF
  DX Radio Products Co., 2300 Armitage Ave., Chicaro 47, III.—B,C,H,J,L,S,T,V,W,X,Z,AF, AG,AK,AL,AM
  Edko Electronics Eng'g., 202 Grand St., Brooklyn 11, N.Y.—A,B,C,D,E,F,G,H,I,J,K,L, P,Q,R,S,T,U,X,Y,AE,AG,AH,AJ,AK,AL,AM, Eisler Eng'g. Co., 770 S. 13 St., Newark 3,
- AU, AP Eisler Eng'g. Co., 770 S. 13 St., Newark 3, N.J.--C,H,L,Q,S,AD,AE Electran Mfg. Co., 1901 Clybourn Ave., Chi-cago 14, III.--A.B,C,E,F,G,H,K,L,P,Q,S,T,U, X.AE,AG

- X.A.E.A.G
  Electrical Facilities, Inc., 4224 Holden St., Oakland 8, Calif.—C.F.H.K, I.Q.S
  Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.—B,C,F,H,K,L,M,P,Q,S, T,U,X,Y,AK,AL,AM
  Electricoil Transformer Corp., Westerly Rd., Ossining, N.Y.—A,B,H,P,Q,S,U,V
  Electro Assemblies Inc., 2935 W. Belmont Ave., Chicago 18, Ill.—W
  Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.—A,B,C,D,E,F,G,H,J,K,L,P,Q,S,T,U,X,Y,AC,AD,AE,AG,AH,AJ,AK,AL, AM,AN
  Electrometric, Inc. 106 Oken St Woodtack

- Q.S. 1.O.A.Y. IAC, AD, AE, AG, AH, AJ, AK, AL, AM, AN
  Electrometric, Inc., 106 Olson St., Woodstock, III.-V, W, AF, AI
  Electronic Coil Co., 2506 N. Ontario St., Burbank, Calif.-W, AA
  Electronic Coils, Inc., 33 Lyman St., Spring-field, Mass.-V,Z
  Electronic Components Corp., 835 N. Larrabee St., Chicago 10, III.-A, B, T, U
  Electronic Heating Corp., 66 Needham St. New-ton Highlands 61, Mass.-U, X, AE
  Electronicraft, Inc., 27 Milburn St., Bronx-ville 6, N.Y.-A, B, C, H, J, Q, S, T, U, V, W, AK, AL, AM
- Electronic Transformer Co., 209 W. 25 St., New York, N.Y.--A,B,C,D,E,F,H,P,Q,S,T,U, V,AG

- New Tora, N.T.-A.D., G.D., B.F., M.J., S.B., A.G., V.A.G.
  Electro-Tech Equip. Co., 308 Canal St., New York, N.Y.-C,F.K.S, AC, AD
  Electro-Voice, Inc., Buchanan, Mich.--N
  El-Rad Mfg. Co., 2800 W. Cullom Ave., Chicago 18, III.--W, AF, AI
  Empire Coil Co., 85 Beechwood Ave., New Rochelle, N.Y.-A, B, C, H.J. L, P, Q, ST, U, V, W, X, AA, AD, AF, AG, AH, AK, AL, AM
  Empire State Laboratories, 2608 Merrick Rd., Bellmore, L.I., N.Y.--A, B, C, D, E, F, HJ, K, L, P, Q, R, S, T, U, V, X, Z, AB, AC, AE, AG, AK, AL, AM, AN, AN

- AN Epsco, Inc., 588 Commonwealth Ave., Boston 15, Mass.--V,W ERCA Tool Die & Stamping Co., 19 Ash St., Brooklyn 22, N.Y.-M ESC Corp., 534 Bergen Blvd., Palisades Park, N.J.--V Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.--A,B.C.D.E.F.G.H.I.J.K.L.N.O.P.Q.R.S, T.U.V.W.X.Y.Z.AA,AB,AC,AD,AE,AF,AG, AH,AI,AJ,AK,AL,AM,AN,AO Essex Electronics, 7303 Atoll Ave., N. Holly-wood, Calif.--V,W,AA,AI Essay Electronics, 550 Springfold Are. D

- Essex Electronics, 550 Springfield Ave., Berk-eley Heights, N.J.-O,V,W,AA,AG,AH Esterline-Angus Co., Inc., P. O. Box 596, In-dianapolis 6, Ind.-F,K,AN

- dianapolis o, ind.—F, K, AN
  Eutectic Welding Alloys Corp., 40-40 172 St., Flushing 58, N.Y.—AE
  Fairchild Recording Equip. Co., 154 St. & 7 Ave., Whitestone 57, N.Y.—AK
  Federal Telephone & Radio Co., Div. of IT&T 100 Kingsland Rd., Clifton, N.J.—D, L, P, Q, V.Z.AG, AK, AL, AP
- Femco, Inc., Irwin, Pa.-S,AK,AM
- Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N.Y.-A,C,D,E,H,J,L,P,Q,S,T, U,X,Y,AB,AG,AH,AK,AL,AM,AN

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- Fisher Eng'g. Inc., 2060 H.S. 24 East, Huntington, Ind. B,C.H.L.P.Q.R.S.T.U.V.X.AH, AJ,AK,AL,AM,AN
  Forest Electric Co., 7216 Circle Dr., Forest Park, Ill. A,B,C.D.E,F.G.H.J.K.L.N.P.Q.R.S.T.U.V.W.X.Y.AB,AE,AG,AH,AI,AJ,AK,AL,AM,AN,AO
  Foster Transformer Co., 3820 Colerain Ave., Cincinnati 23, Ohio-H.P.S.V.X.AK,AM
  Frace Mfg. Co., 10325 Beres Rd., Cleveland 2, Ohio-C,G.H.I,J.L.S
  Freed Transformer Co., Inc., 1718 Weirfield St. Brooklyn 27, N.Y.-A,B,C.D.E.G.H.J.K., L.P.Q.R.S.T.U.V.X.Y.Z.AB, AE, AG, AH, AI, AK.AL.AM,AN
  Frost & Co., L. H. 904 36 St. S. E., Grand Rapids 8, Mich.-C.S.AE
  Fugle-Miller Labs., 398 Main St., Metuchen, N.J.-W
  Gabriel Electronics Div., Gabriel Co., Endicott Street, Norwood, Mass.-AA
  Galbraith & Son, 450 Sixth Ave., New York 11, N.Y.-A,B,C,D,H,L,Q,R,S,T,U,AG
  Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.-I,S
  Garing Co., 34-40 79 St., Jackson Heights 72, N.Y.-A,B,C,D,E,F,G,H,K,L,P,Q,R,S,T, U,V,Y,Y,AB,AD,AG,AH,AI,AK,AL,AM,AN,AO
  Gates & Co., Geo. W., Hempstead Tpike, & Lucille Ave., Franklin Square, N.Y.-I
  General Electric Co., Apparatus Div., 1 River Rd., Schenetcady 5, N.Y.-C,F,G,H,IJ,K,O, Q,S.Y.X.Y.Z.AD,AE,AF,AG,AH,AK,AL,AM
  General Electric Co., Cabratus Div., 1 River Rd., Schenetcady 5, N.Y.-C,F,G,H,J,K,O, Q,S.Y.X.Y.Z.AD,AE,AF,AG,AH,AK,AL,AM
  General Electric Co., 275 Mass. Ave., Cambridge 39, Mass.-C,EZ,AC,AD,AM
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-C,EZ,AC,AD,AM
  General Transformer Co., 18240 Harwood Ave., Homewood, 11.-A,B,C,D,E,F,G,H,J,L, P,S.T.U.X.Z.K,AL,AM,AN
  Godin Electric M Mfg. Co., 2921 W. Olive Ave., Buomfield, N.J.-X
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-C,EZ,AC,AD,AB
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-C,EZ,AC,AD,AM
  General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-C,EZ,AC,AD,AB
  Godin Electric & Mfg. Co., 2921

Gudeman Co., 340 W. Huron St., Chicago 10, Ill.--V
Gudeman Co. of Calif., 9200 Exposition Blvd., Los Angeles 34, Calif.--R.V
G. W. Associates, P. O. Box 2263, El Segundo, Calif.--O
Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.--A.B.C, D.E.F.H.J,K.L.N, P.Q.R.S.T.U.V.X.Y.Z.AB
Hall Mfg. Co., 3901 Wesley Terr., Schiller Park, Ill.--X,Z
Hanovia Chemical & Mfg. Co., 100 Chestnut St., Newark, N.J.-G.F.V
Harder Co., Donald C., 3338 India St., San Diego, Calif.--K.Z
Harnett Electric Co., 138 Haven Ave., Port Washington, N.Y.-W.AF
HD Electric Co., 760 Osterman Ave., Deer-field, Ill.--F
Heath Co., 305 Territorial Rd., Benton Har-bor, Mich.-L
Heppner Mfg. Co., Box 608, Round Lake, Ill. --AF
Hevi Duty Electric Co., 4212 W. Highland Blud Milwzowac J. Wing-CE H. LI OR S

evi Duty Electric Co., 4212 W. Highland Blvd., Milwaukee 1, Wisc.—C,F,H,J,L,Q,R,S, X,AC,AE,AK,AM

Hewlett-Packard Co., 275 Page Mill Rd., Palo Alto, Calif.—E Highland Eng'g. Co., Main & Urban Sts., Westbury, N.Y.—A,B,C,D,E,F,G,L,N,P,Q,S,T, U,V,AG,AH,AK,AL,AM,AO

Hillburn Electronic Products 55 Nassau Ave., Brooklyn 22, N.Y.-W,AF Hindle Transformer Co., Woods Church Rd., Flemington, N.J. - C,H,J,K,L,Q,R,S,U,V,X, AE,AJ,AN

Hi-Q Div., Aerovox Corp., Olean, N.Y .--- A, B, Z

Horlick Co., Wm. I., 266 Summer St., Boston 10, Mass.—S.AC,AD Hycor Co., 11423 Vanowen St., N. Hollywood, Calif.—G,V,X,Z

Industrial Transformer Corp., Gouldsboro, Pa.--B,C,D,E,F,G,H,K,L,P,Q,S,V,X,Z,AB,AG, AI,AJ,AK,AL,AM

Instrument Labs, 315 W. Walton Pl., Chicago 10, Ill.-K

Islip Transformer & Metal Co., Beech St., Islip, N.Y.—A,B,C,F,H,J,K,L,P,Q,R,S,T,U,V, W,AA,AD,AK,AL,AM,AN

I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.-W,Z

Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda 14, Md.--V

Jefferson Electric Co., 910 S. 25 St., Bellwood, Ill.-S.V

John R.,

Clifton

315

Hollingsworth Corp. Heights, Pa.—AF

Hevi

Jeffrice Transformer Co., 1710 E. 57 St., Los Angeles 58, Calif. — C.F.K.S.Z.
Jobbins Electronic Enterprises, 771 Hamilton Ave., Menlo Park, Calif. — A.B.C.D.E.F.G.H. J.L.P.Q.S.T.U.V.X.AD.AK.AL.AM
Johnson Electronics Inc., 521 Elwell St. Or-lando, Fla. — J.W.Z.AF
Johnson Labs., Div. of Aladdin Industries. Inc., Willard Rd., Norwalk, Conn. — W
Waynon Transformer Co., 840 Barry St., New York 59, N.Y. — A.B.C.D.E.F.G.H.J.K.L.P.Q. F.S.T.U.V.X.Y.Z.AB.AC.AD.AG.AH. AI. AK, AL.M.AN.AO
Kostone Products Co., Union City 2, N.J. — A. B.C.D.E.H.J.K., L.O.P.Q.R.S.T.U. V.X. Z. AD. A.G.H.AI.AK, AL.AM.AN
Inetix Instrument Co., 1ac, 902 Broadway, Wew York 10, N.Y. — S
Inton Electric Mfg. Co. 123 N.J. R.R. Ave., Newark 5, N.J. — C.J.L
Yaransformer Corp. 20 E. Franklin St. Danbury, Conn. — A.B.C.D.E.H.J.K.L.Q.P.Q. S.T.U.V.X.Y.Z.AB.AG.AH.AI.AK.AL.AM.AN
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Imgevin Mfg. Corp. 37 W. 65th St. New York 23, N.Y. — A.B.C.D.E.F.G.H.J.L.N.P.Q. S.T.U.V.X.AD.AG.AH.AI.AK.AL.AM.AN
I.M. Gr. Electric, Inc., 132 Beckwith Ave. Pater-m. N.J. — C.F.G.J.K.L.P.R.S.T.U.V.X.AC, D.A.E.AG.AH.AI.A.M
Le Electric, Inc., 132 Beckwith Ave. Pater-m. N.J. — C.F.G.J.K.L.P.R.S.T.U.V.X.AC, D.A.E.AG.AH.AI.A.M.M
Le fonderlie Co., 1105 County Rd. San Carlos, Calif. — A.B.C.D.E.F.G.H.J.J.K.J., N.P.Q. A.E.A.G.AH.AI.AJ
Meurt Electric Co., 1105 County Rd. San Carlos, Calif. — A.B.C.D.E.F.G.H.I.J.L.N.P.Q. A.E.A.G.AH.AI.AJ.AK.AL.AM
Leonard Electric Products Co., Inc., 67 34 St., N.O.P.Q.R.S.T.U.V.W.X.Y.Z.AA.AB.AC.AD, A.E.A.F.AG.AH.AI.AJ.AK.AL.AM
Leonard Electric Nifs. Co., 5728 W. Washing-m. N.Y. — A.B.C.D.E.F.G.H.I.J.L.M.F.Q.R.S. T.U.V.X.AG.AK.AL.AM.M
Leonard Electric Mfg. Co., 5728 W. Washing-m. N.Y. — A.B.C.D.E.F.G.H.I.J.L.M.F.Q.R.S. T.U.Y.X.AG.AK.AL.AM.M
Liberg Eng's. Co., 2450 W. Hubbard St., Chicago 12, 111. — C.H.Q.X
Li

Linell Eng. Corp., 447 South Blvd., Oak Park, II.—W
Luther Electronic Mfg. Co., 5728 W. Washing-ton Blvd., Los Angeles 16, Calif—V
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.—AA
Mag-Electric Products, 12822 Youkon Ave., Hawthorne, Calif.— C,F,G,H,J,L,P,S,V,X,Z, AC,AD,AG,AH,AI,AN
Magnatran Inc., 248 Schuyler Ave., Kearny, N.J.—A,C,H,J,P,Q,S,U
Magnavox Co., Ft. Wayne 4, Ind.—H,S,V,AG, AK,AL,AM
Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N.Y.—C,D,F,H,P,X,Z,AI
Magnetic Instrument Co., 82 Main St., W. Orange, N.J.—B,C,D,F,G,H,L,P,Q,S,T,U,V,X, Y,Z,AB,AC,AD,AG,AH,AI
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.—AD
Magnetics Research, Inc., Sub. Marchant Cal-culators, 1475 Powell St., Oakland 8, Calif. —V
Warne View Electronics, 744 E. 138 St., New Work E M.

-V Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-W Mark Electronics, Inc., 250 Glenwood Ave., Bloomfield, N.J.-C.H.J.L.Q.S.X.AF.AG Mtson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif. - B.C.D.L.S.T.U.W.X.Z., AK.AL.AM McIntosh Lab.. Inc., 320 Water St., Bingham-ton, NY..-AK.AL.AM Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.-B.C.H.J.L.P.Q.S. T.U.W.AC.AF.AK.AL.AM Mico Instrument Co., 80 Trowbridge St., Cam-bridge 38, Mass.-W.Z.AG Microlab, 71 Okner Pkwy., Livingston, N.J.

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-O Microtran Co., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N.Y.-A,B,C,D,E,F,H,J, K,L,N,P,Q,R,S,T,U,V,Y,AB,AC,AD,AG,AH, AI,AK,AL,AM Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, III.-A,B,C,D,G,H,I, L,O,P,Q,S,T,U,V,X,AB,AC,AH,AI Midwest Electric Products Mankato, Minn.-

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.-W
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.-W,AA,AC,AH
Miller & Son, Inc., Franklin P., 36 Meadow St., E. Orange, N.J.-A,C,D,E,F,G,H,I,J,K, L,N,Q,S,T,AF,AG,AH,AI,AK,AL,AM,AO
Milwaukee Transformer Co., 5231 N, Hopkins St., Milwaukee 9, Wisc.-A,B,C,D,E,F,G, H, I, J, K, L, P, Q, R, S, T. U, V, W, X, Z, AA,AE,AF,AG,AH,AI,AJ,AK,AL,AM,AN
MinAtron Corp., Belle Mead 9, N.J.-AO
Moloney Electric Co., 5390 Bircher Blvd., St. Louis 20, Mo.-C,H,J,L,O,P,Q,S,V,AE
Mater Co., 1255 S. Michigan Ave., Chicago 5,

Meter Co., 1255 S. Michigan Ave., Chicago 5, Ill.—AF

ystic Transformers. 63 Swanton St., Win-chester, Mass.—A,B,K,S,V,W,X,AK,AL,AM Mystic

National Coil Co., P.O. Box 1237, Sheridan. Wyo.—W

National Instrument Co., 23 E. 26 St., New York 10, N.Y.-O

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All transmission and ELECTRONIC INDUSTRIES DIRECTORY

Natural Lighting Corp., 612 West Elk Ave., Glendale 4, Calif.—C
Newcomb Audio Froducts Co., 6824 Lexington Ave., Hollywood 38, Calif.—B
New Jersey Electronics Corp., 345 Carnegie Are, Kenilworth, N.J..—A.B.C.D.H.I.J.L.Q.S. T.U.V.AG.AK.AL.AM.AN
New London, Conn.—B.H.J.P.Q.S.V.Z. AG.AK.AL.AM
New London, Conn.—B.H.J.P.Q.S.V.Z. AG.AK.AL.AM
N.Y. Transformer Co., Alpha, N.J.—B.C.D.E. F.G.H.K.L.P.S.T.U.V.Z.AG.AK.AL.AM.AO
Noet Hills Electric Co., 203-18 35 Ave., Bay-side 61, N.Y.—W.AA
Ordel Aff. Co., 69 Murray St., New York 7, N.Y.—H.S
Ordel Electric Co., 69 Murray St., New York 7, N.Y.—CL.S
Ortho Ens'g 245 Wallace St., Orange 2, N.J. — A.B.C.D.E.F.G.H.I.J.K.L.P.Q.R.S.T.U. V.X.Z.A.AD.AG.AH.AK.A.L.AM.AN,AO
Ortho Filter Corp., 196 Albion Ave., Paterson 2, N.J. — C.E.F.G.H.K.L.P.S.V.X.Z.K.AL.AM
Osborne Electric Corp., 196 Albion Ave., Paterson 2, N.J. — C.E.F.G.H.K.L.R.S.V.X.Z.K.AL.AM
Osborne Transformer Corp., 1948 E. Lafayrette Ave., Octroid T, Mich.—A.B.C.D.E.F.H.K.L.F. P.G.S.T.U.V.X.Z.AG.AH.AK.AL.AM.AN
Osborne Transformer Corp., 1948 W. Pico Blvd., Los Angeles 64, Calif.— A
Pacific Transformers. 502 S. Avenue 17, Los Angeles 31, Calif.—A.B.C.D.E.F.G.H.K.L.F. P.Q.S.T.U.V.X.Z.AG.AH.AK.AL.AM.AN AO
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vacouver, Wash.—O.Z
P C A Electronics Inc., 2180 Colo. Ave., Santa Monica, Calif.—Y
Peer, Inc., 1200 Milton St. Benton Harbor, Mich.—A.B.C.O.E.F.G.H.J.K.L. P.Q.R.S.T.U.V.X.Z.AG.AH.A.L.A.M.AN AO
Palmer J.C. A.G.Z.AK.AL.AM
Peerless Electrical Products, Div. of Altec Instrument Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.—A.B.C.D.E.G.H.J.K.M. P.G.R.S.T.U.V.X.Z.AG.AH.A.A.L.AM.AN
Pentore Mg.C.O., 113 University P.I., New York 3, N.Y.—H
Polybechnic Research & Devel. Co., 202 Tillary St. Beooklyn 1, N.Y.—X
Power Transformer Corp., E. Bishop St. Ext., Bellefonte, Fa.—AF

Q. L. C. Corp., 10 Aubrey St., Summit, N.J. —W
Quam-Nichols Co., 234 E. Marquette Rd., Chicago 37, Ill.—AM
Qutronic Transformer Corp., 525 Broadway, New York 12. N.Y.—A,B.C.D.E.,G.H.J.K.L.P. Q.S.T.U.X.Z.AG.AH.AI.AK.AL.AM.AN,AO
Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis, Ind.—AD
Radio Corp. of America, Tube Div., 416 S. 5th St., Harrison, N.J.—A,B,C.D.E.F,G.H.J. L.O.P.Q.R.S.T.U.V.W.X.Y.AB.AC.AD.AE.AF, AG,AH,AI
Radio Fequency Co., Medfield, Mass.—W
Radio Fequency Co., Medfield, Mass.—W
Radio Foster, N.Y.—A,B,V.X.AG.AH.AK.AL.AM
Radionic Controls, Box 237, Herrin. Ill.—A,B, C. D. E. F. G, H. J. K. L. P. Q. S. T. U, V. X. Y. AG, AH. AI
Radio Sonic Corp., Plainfield, N.J.—H.J.Q,T,U, Radio Television Products Corp., 308 N. Lake St., Grass Lake, Mich.—W,AI
RAM Electronics, Irvington-on-Hudson, N.Y. —V.AF
Rapid Electric Co., 2881 Middletown Rd., Bronx 61, N.Y.—C
Ratigan Electronics, Inc.. 3614 Maple Ave., Los Angeles 11, Calif.—V.W.AH
Raypar, Inc., 7800 W. Addison St., Chicago 34, Ill.—H.R.V.W.Z.AD.AF,AI

Raypar, Inc., 7800 W, Addison St., Chicago 34, Ill.-H,R,V,W,Z,AD,AF,AI

Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—C,F,H.J.K., L,O,P,Q,S,T,U,V,W,X,Z,AB,AC, AD, AE, AG, AH,AK,AL,AM,AO

Redman Electronics Corp., 92 Prospect St., Thompsonville, Conn.-W

Rese Engineering Inc., 301 Walnut St., Phila-delphia 6, Pa.-V

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Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.—AF

Retron Corp., 697 N. Lake Ave., Pasadena 6, Calif.—AF
Richardson-Allen Corp., 116-15 15 Ave., Col-lege Point, N.Y.—C,S
R,K., Mfg. Co., PO Box 112 Marion, Ill.—A,B, C,D,E,G,H,L,N,P,Q,S,T,V,X,Y,AG,AH,AI,AK, AL,AM,AN,
Rola Co. 2530 Superior Ave., Cleveland 14, Ohio—B,AF
Rollins Corp., P.O. Box 213, Lewes, Dela.— A,B,C,D,E,F,G,H,J,K,L,N,P,Q,R,S,T,U,V,X,Y, A,B,C,AG,AH,AI,AJ,AK,AL,AM,AN,AO
Sangamo Electric Co., 9th & Converse, Spring-field, Ill.—C,F,H,J,K,L,Q,S,U,V,Y,Z,AB,AG, AK,AM,AN,AO
Saratoga Industries, Ballston Ave., Saratoga Springs, N. Y. — A,B,C,D,E,F,G,H,K,L,P,Q, R,S,T,U,V,X,Z,AG,AH
Schaevitz Engr., Crescent Blvd. & Drexel Ave., Camden I, N.J.—AC
Schutter Mfg. Co., Carl W., 80 E. Montauk Highway, Lindenhurst, N.Y.—O
Sciaky Bros., 4915 W. 67th St., Chicago 38, Ill.—AE
Sealtron Co., 9701 Reading Rd., Cincinnati 15, Ohio—W
Servo Corp. of America, 20-20 Jericho Turn-nike New Hyde Park N.Y.—W

Ohio-W Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park, N.Y.-W Servo-Tek Products Co., 1086 Goffle Rd., Haw-thorne, N.J.-L

Serva-lek Floude Corp., 1050 Brittan Ave., Sierra Electronic Corp., 1050 Brittan Ave., San Carlos, Calif.—O,V.W Skysweeper, Inc., McHenry, III.—B,C,H,S,T,

San Carlos, Calif.-O,V,W III.-B,C,H,S,T, AK,AL,AM Smith Mfg. Co., Nathan R., 105 Pasadena Ave., S. Pasadena, Calif.-I SNC Mfg. Co., P. O. Box 277, Oshkosh, Wisc. -B,C,D,E,H,J,L,P,Q,S,T,U,X,AC,AK,AL,AM, Sola Electric Co., 4633 W. 16 St., Chicago 50, III.-L,AD Construction Ludustrial Electronics Co., 2831 SNC MIE. Co., F. O. BOX 277. UShKosh, Wisc. -B.C.D.E.H.J.L.P.Q.S.T.U.X.AC.AK.AL.AM, Sola Electric Co., 4633 W. 16 St., Chicago 50, Ill.-I.AD
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., Houston, Texas-K.AG,AK, AL.AM
Sperry Gyroscope Co., Great Neck, N.Y.-O
Sprague Electric Co., North Adams, Mass.-V
Square Root Mfg. Corp., 391 Saw Mill River Rd. Yonkers, N.Y.-A.B.C.D.E.F.G.H.K.L.P. Q.R.S.T.U.V.W.X.Z.AA.AF,AC.AH
Standard Coil Products Co., 2085 N. Haw-thorne Ave., Melrose Park, Ill.-X.Z
Standard Electrical Products Co., 2240 E. 3 St., Dayton 3. Ohio-B.C.F.G.H.J.K.L.P.Q. S.T. U. X. Y. Z. AC, AD, AE, AG, AH., AI, AJ.AK.AL.AM,AN
Standard Electronic Research Corp., 2 East End Ave., New York 21, N.Y.-X
Standard Electronics Corp., 285 Emmet St., Newark, N.J.-A.D.H.J.P.Q.T.U.AD.AE,AK, AL.AM
Standard Piezo Co., 20 N. Hanover St., Car-lisle, Pa.-C.H.S.X.AF.AH
Standard Piezo Co., 137 Walsh Ave., New-burgh, N.Y.-S.T.U.V.W.Z
Sterling Transformer Corp., 297 N. 7 St., Brooklyn, N.Y.-C.D.E.H.K.L.F.Q.S.V.X.AG, AH.AI.AK.AL.AM
Stone City, P. O. Box 351, Bedford, Ind.-M
Storog Electric Corp. 87 City Park Ave., To-ledo 2. Ohio-C.H.LS
Summit Coil Co., 4 Claremont Rd., Bernards-ville, N.J.-W.AA
Superior Electric Co., 675 Merrick Rd., Lynbrook. N.Y.-AH
Superior Electric Co., 63 Laurel St., Bristol, Con..-C.AC,AD
Syntronic Instruments, Inc., 100 Industrial Rd. Addison, Ill.-AF
Tartak Electronics, 2979 N. Ontario St., Bur-bank, Calif. - AB.C.D.E.F.H.K.L.P.Q.S.T.U.V.V.Z
Superior Electric Co., 63 Laurel St., Bristol, Conn.-C.AC,AD
Syntronic Instruments, Inc., 100 Industrial Rd. Addison, Ill.-AF
Tartak Electronics, 2979 N. Ontario St., Bur-bank, Calif. - A.B.C.D.E.F.H.K.L.P.Q.S.T.U.V.V.Z
Sterlingraft Labs., 1600 Thomaston Ave., Thomaston, Conn.-O
Technitrol Eng'g. Co., 2751 N. 4

Technicraft Labs., 1600 Thomaston Ave., Thomaston, Conn.—O Technitrol Eng'g. Co., 2751 N. 4 St., Philadel-phia 33, Pa.—V,AG Telechrome, Inc.. 88 Merrick Rd., Amityville, L.I., N.Y.—J.V. Telectro Industria

Telectro Industries Corp., 35-16 37 St., Long Island City 1, N.Y.-C.E.H.J.K.P.S.AG.AK,

TeleMatic Industries, 16 Howard Ave., Brook-lyn 21, N.Y.-AA Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-K,O,V,W

Telescreen Corp., 36 Grove St., New Canaan, Conn.-X Telex, Inc., 1633 Eustis St., St. Paul 1, Minn. -R,AI

Texas Instruments, Inc., 6000 Lemmon Ave., Dallas 9. Texas — K,L,S,V,W,X,AB,AG,AH, AI,AK,AM

Thermador Electrical Mfg. Co., Electronies Div., 2000 S. Camfield Ave., Los Angeles 22. Calif. — A,B,C,D,G,H,J,K,L,P,Q,R,S,T,U, V,Z,AG,AI,AK,AL,AM

Thomas & Skinner, 1120 E. 23 St., Indianapo-lis 7, Ind.--

Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-H,K,R

Bristol, Conn.—H.K.K Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 7th & Bellmont, Mt. Carmel, III.—A.B.C.D.E.F.G.H.I.J.K.L.N.P. Q. R. S. T. U.V.W.X.Y.Z.AA.AC.AD,AE.AF,AG,AH, AJ, AK,AL,AM,AN,AO

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

AM

Thor Transformer & Electronics, 750 San Antonio Road, Palo Alto, Calif.--C.F.G.H, K.L.O.Q.S.T.U.X.AC,AD,AE,AJ

Timely Instruments & Controls 1645 W 135 St., Gardena, Calif.—X,Z,AC,AD

Todd Products Co., 156 Gramatan Ave., Mt. Vernon, N.Y.-A,B,C,H,I,K,P,Q,S,T

- Todd-Tran Corp., 156 Gramatan Ave., Mount Vernon, N.Y.-AF Torocoil, 1374 Mobile Ct., St. Louis 10, Mo .- Z,
- AB
- AB
   Torwico Electronics, Inc., 967 Frelinghuysen Ave., Newark 5, N.J.—S,Z
   Transelectric Mfg. Co., 48 Hopewell Rd., Oxford, Pa.—AI,AK,AL,AM
   Transformer Engineers, 161 E. California St., Pasadena 1, Calif.—A,B,C,D,E,F,G,H,K, L,P,Q,S,V,Z,AG,AH,AK,AL,AM
   Transformer Manufactures 850 W Weed

- L.F. G.S. V. D. AG, AB, AB, AL, AB
   Transformer Manufacturers, 850 W. Weed
   St., Chicago 22, 111.—B, C, H, L, S, T
   Transformer Technicians, 2608 N. Cicero
   Ave. Chicago 39, 111.—A, B, C, D, E, F, H, J, K, L,
   P, Q, R, S, T, U, V, X, AC, AD, AG, AH, AI, AK, AL,
   AM, AN
- Transformers, Inc., 532 North St., Endicott, N.Y.-A,B,C,D,E,F,H,J,K,L,P,Q,R,S,T,U,V,X, Y,Z,AB,AG,AH,AI,AK,AL,AM,AN

- N.I. A,B,C,D,E,F,H,J,K,L,P,Q,R,S,T,U,V,X,Y,Z,AB,AG,AH,AI,AK,AL,AM,AN
   Transistor Components Co., 301 Oakwood Ave., E. Aurora, N.Y. R,AG,AH,AI,AK,AL,AM
   Translite Electronics Corp., 5720 W. Armitage Ave., Chicago 39, 111. AF
   Transonic, Inc., 808 16 St., Bakersfield, Calif. A,B,C,F,G,H,K,L,P,Q,S,U,V,W,X,Y,Z,AB,AC,AE,AG,AH,AI,AJ,AK,AL,AM,AN
   Trenton Transformer Corp., 822 E. State St., Trenton, N.J. C,D,E,F,G,H,J,K,L,Q,R,S,W,X,AE,AJ,AK,AAM,AN
   Tresco, 3824 Terrace St., Philadelphia 28, Pa. A,B,C,D,E,F,G,H,J,K,L,N,P,Q,R,S,T, U, V, X,Y,AB,AC,AG,AH,AI,AJ,AK,AL,AM,AN
   Triad Transformer Corp., 4055 Redwood Ave., Venice, Calif. A,B,C,D,E,H,J,K,L,N,
   Triwec Transformer Co., 3261 N. Milwaukee Ave., Chicago 18, 111. A,B,C,H,S,T,U,V,AG,AK,AI,AM
   T V Products Corp., 907 E. 23 St., Paterson 3, N.J. B,C,H,Q,S,T

- AK,ÅI,ÅM
  AK,ÅI,ÅM
  T V Products Corp., 907 E. 23 St., Paterson
  N.J.-B,C,H,Q,S,T
  Underwood Corp., Electronic Computer Div., 35-10 36 Ave., Long Island City 6, N.Y.--V
  Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A,B,C,D,E,F,G,H,I,J,K, L,N,O,P,Q,R,S,T,U,V,W,X,Y,Z, AA, AB, AC, AD,AE,AF,AG,AH,AI,AJ,AK,AL,AM,AN,AO
  Union Electric Products Co., 24 Edison Place, Newark 2, N.J. B,C,G,H,I,L,N,Q,S,T,AD, AG,AH,AI
  United Pressed Products Co., 741 W. Harrison St. Chicago 7, 111.-W

- AG,AH,AI United Pressed Products Co., 741 W. Harri-son St., Chicago 7, III.—W United Transformer Co., 150 Varick St., New York 13, N.Y.—A,B,C,D,E,F,G,H,K,L,N,O,P, Q,R,S,T,U,V,X,Z,AC,AD,AG,AH,AI,AK,AL, M.AN

- AM.AN Universal Mfg. Co., 410 Hillside Ave., Hill-side, N.J.-Z Universal X-Ray Products, 1140 N. Western Ave., Chicago 22, Ill.-AJ Univox Corp., 102 Warren St., New York 7, N.Y.-AG U.S. Electronics Corp., 275 Warren St., Lynd-hurst, N.J.-B.C.D.E.F.H.I.J.K.L.P.Q.S.T.U, V.W.X.Y.Z.AA,AC,AD,AE,AG,AH,AI,AJ,AK, AL,AM Utah Radio Products Co., 1123 E. Franklin
- AL, AM
  Utah Radio Products Co., 1123 E, Franklin St., Huntington, Ind.—B,C,E,H,J,K,L,P,Q,S, V,AG,AH,AI,AK,AL,AM
  Vacuum Tube Products, 506 So. Cleveland St., Oceanside, Calif.—AE
  Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34. Calif.—W,Z,AF
  Vari-L Co., 432 Fairfield Ave., Stamford, Conn. —X,Z,AB
  Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.—Z
  Wacou Inc., 2032 Broadware Santa M.

- Maco Inc., 2032 Broadway, Santa Monica, Calif.—B,C,D,E,F,G,H,I,J,K,L,P,Q,S,X,AD, AG,AK,AL,AM
- Waveline, Inc., Caldwell, N.J.-O Welch Electric Co., 1221 Wade St., Cincinnati 14, Ohio-B,C,H,Q,T,AB
- Western Coil Products Co., 2989 Middlefield Rd., Palo Alto, Calif.--W
- Weston Electrical Instrument Corp., 614 Frel-inghuysen Ave., Newark 5, N.J.—F Wheeler Insulated Wire Co., 150 E, Aurora St., Waterbury, Conn.—H,K,Q,S,V,Z,AC,AG, AH,AK,AL,AM
- Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.-O White Industries, Inc., 421 W. 54 St., New York 19, N.Y.-H.J.Q.T.U
- Wilmar Mfg. Co., 2715 E. 14 St., Kansas City 27, Mo.--W
- Woodward-Schumacher Electric Corp., 1725 W. North Ave., Chicago 22, Ill.—C,H,J,L,Q, S,V,X,AH,AI,AK,AL,AM
- Workman TV Inc., 309 Queen Anne Rd, Teaneck, N.J.-AG
  Z & W Machine Products, Electronics Div., 5100 St. Clair Ave., Cleveland 3, Ohio-D,S,T

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

## 94—TRANSMITTERS

Code senders, automaticA
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RadiosondesC
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Transceivers, fixedE
Transceivers, portable handF
Transceivers, portable lifeboat
Transmission monitoring equipment.H
Transmitters, amateur
Transmitters, aviation
Transmitters, broadcast AM
Transmitters, broadcast FM
Transmitters, broadcast UHF-TV M
Transmitters, broadcast VHF-TVN
Transmitters, citizens radio
Transmitters, code
Transmitters, color TV
Transmitters, direction finding,Q
Transmitters, facsimileR
Transmitters, loran
Transmitters, marine, T
Transmitters, microwave
Transmitters, mobileV
Transmitters, radar
Transmitters, radio range
Transmitters, radioteletype
Transmitters, remote control
Transmitters, single sideband AE
Transmitters, sonar
Transmitters, telemetering
Transmitters, UHF
Transmitters, VHFAC

- Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.--R.W CBS-Columbia, 3400 47 Ave., Long Island City 1, N.Y.-F.J.W.AB,AC
- Central Electronics Inc., 1247 W, Belmont Ave., Chicago 13, Ill.-I,AE
- C.G.S. Labs., Inc., 391 Ludlow St., Stamford, Conn.--U

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Chatham Electronics Corp., 630 W. Mt. Pleasont Ave., Livingston, N.J.-AB
Collins Radio Co., 855 35 St., N.E., Cedar Ragids, Iowa-IJ,K.U.X.A.B.AC.AE
Communication Devices Co., 2331 12 Ave., New York 27, N.Y.-E, F, G. J, K, Q. T, V, X, AB
Communications Co., 300 Greco Ave., Coral Gables, Fla.-E, JAC
Conn Marine Instrument Co., Essex, Conn.-O,Q.T,V,W,AB
Continental Communications, 452 W. Chicago Ave., Chicago 10, Ill.-A.O,V
Continental Electronics Mfg., Co., 4212 S. Buckner Blvd., Dallas 10, Tex.-K,M
Corbin Corp., 5419 56 Pl., Riverdale, Md.-A.B.C.E.J.Q.T,U.V.W.X.A.B.AC.AE
Crown Eng'g., 3821 Commercial N.E., Albu-querque, NM.-AA.AC
Dage TV Div., Thompson Products, Inc., Michigan City, Ind.-M,N
Daytom Aviation Radio & Equip. Corp., RR 3, Troy, Ohio-J, W.AC
Deltronic Corp., 780 S. Arroyo Park-way, Pasadena 2, Calif.-U
Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge 40, Mass.-W
DuMont Laboratories Inc., Allen B., Communi-cation Products Div., 1500 Main Ave., Clif-ton, N.J.-E,O,U,V.AB,AC,AD
Electronic Co., 9010 Bellance Ave., Los Angeles, Calif.-F
DeMornay-Bonardi Corp., 780 S. Arroyo Park-way, Pasadena 2, Calif.-U
Dormitzer Electric & Mfg. Co., 5 Hadley St., Cambridge 40, Mass.-W
DuMont Laboratories Inc., Allen B., Communi-cation Products Div., 1500 Main Ave., Clif-ton, N.J.-E,O,U,V.AB,AC,AD
Electronic Mechanical Research, 64 Main St., Ridgefield, Conn.-AA
Electronic Masurements Co., Lewis St. & Maple Ave., Eatontown, N.J.-J
Electronic Masurements Co., Lewis St. & Maple Ave., Eatontown, N.J.-J
Electronic Masurements Co., Lewis St. & Maple Ave., Eatontown, N.J.-J
Electronic Measurements Co., Lewis St. & Maple Ave., Sc. Tro, Sc. Winne St., River Edge, N.J.-F, I.AB,AC
Erro Radio Labs., Stewart Ave., Garden City, N.Y.-E, G.P.R.T.Y.W.X.Y.AA,AB
Equipment Crafters Inc., 523 Winne St., Ri

- AC Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-S,U,V,AC Franklin Electronics. 415 W. Pike St., Phila-delphia 40, Pa.-C,AA Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Ave., Towson, Baltimore 4, Md.-C Friez Instrument Div., Bendix Aviation Corp., 1400
  Taylor Ave., Towson, Baltimore 4, Md.—C
  Garod Radio Corp., 70
  Washington St., Brooklyn, N., NY.—C
  Gates Radio Co., 123
  Hampshire St., Quincy, III.—J.K.L.M.N.P.Q.X.AB.AC
  General Communication Co., 681
  Beacon St., Boston 15, Mass.—W
  General Electric Co., Broadcast Equip., Commercial Equip. Dept., Electronics Park, Syracuse, N.Y.—M.N.R.U.V.W.AB.AC.AD
  General Electric Co., Electronics Div., Communication Equip., Electronics Park, Syracuse, N.Y.—M.N.R.U.V.AB.AC
  General Electrosonics, Inc., 32
  W 22
  St. New York 10, N.Y.—S.Z
  General Precision Lab., 63
  Bedford Rd., Pleasantville, N.Y.—M.AB.AD
  General Radio Co., 275
  Mass.—H
  G. & M. Equipment Co., 7315
  Varna Ave., North Hollywood, Calif.—E.F.J.K.T
  Gonset Co., 801
  S. Main St., Burbank, Calif.— E.I.J.V.AC
  Graybar Electric Co., Nat'l Headquarters, 420
  Lexington Ave., New York 17, N.Y.—K.M.
  Gray Radio Co., 501
  Forest Hill Blvd., W. Palm

N
Gray Radio Co., 501 Forest Hill Blvd., W. Palm Beach, Fla.—T
Greenleaf Mfg. Co., 7814 Maplewood Industrial Court, St. Louis 17, Mo.—AA
Gulton Mfg. Corp., 212 Durham Ave., Me-tuchen, N.J.—AA
G. W. Assoc., Box 2263 El Segundo, Calif.—U
Gyro Electronics Co., 325 Canal St., New York 13, N.Y.—O,AF
Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.— D,E.H.J.K.L.M.N.X.Y.AA, AB,AC
Hallarafters Co., 4401 W. 5 Aye, Chicago 24

Hallicrafters Co., 4401 W. 5 Ave., Chicago 24, Ill.-E,F,I,V,AE Hamlyn Electronics Corp., 82 Holman Blvd., Hicksville, N.Y.-J

Harmon Electronics Co., 11431 Truman Rd., Independence, Mo.-V,AA Heath Co., 305 Territorial, Benton Harbor, Mich.-I

Hogan Labs. Inc., 155 Perry St., New York 14, N.Y.-R

Hudson American Corp., 25 W 43 St., New York, N.Y.-T

Int'l. Research Associates, 2221 Warwick Ave., Santa Monica, Calif.-J,AC

Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, Ill.-J

Jefferson, Ray, 40 E. Merrick Rd., Freeport, N.Y.-T

Johnson Co., E. F., Waseca, Minn.-I.V Kaar Eng'g. Corp., 2995 Middlefield Rd., Palo Alto, Calif.-B.E.J.T.V.AC Kahn Research Laboratories, 22 Pine St., Freeport, N.Y.-AE Kay Electric Co., 14 Maple Ave., Pine Brook, N.J.-M.N.U.AB.AC.AD.AE Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-U.W.AB.AC Lambda-Pacific Eng'g. Inc., P.O. Box 105, Van Nuys, Calif.-M.U Larsen Nuclear, Research, 520 5 Ave., New York 36, N.Y.-J.M.O.W Lavoie Labs Inc., Morganville, N.J.-E.V.W. AB.AC Lear., Inc., 3171 S. Bundy Dr., Santa Monica,

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Larsen Nuclear, Research, 520 5 Ave., New York 36, N.Y.-J.M.O.W
Lavoie Labs Inc., Morganville, N.J.-E,V,W. AB,AC
Lear. Inc., 3171 S. Bundy Dr., Santa Monica, Calif.-E,H.J.Q.V.AA.AC
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N.Y.-I.V.AC
Leupold & Stevens Instruments. 4445 N.E. Glisan St., Portland 13, Ore.-AA
Levinthal Electronic Products, Inc., 2821
Fair Oaks Ave., Redwood City, Calif.-U.W
Link Radio Corp., 125 W. 17th St., New York 11, N.Y.-E,F,O.V.AB,AC
Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.-U.W
Lysco Mfg. Co., 1401 Clinton St., Hoboken, N.J.-F.I.T.Y.AB,AC
Magnavox, Fort Wayne 4, Ind.-J.W.AB,AC
Maryland Electronic Mfg. Corp., 5009 Calvert Rd., College Park, Md.-X.AB,AC
Mattson-Cowley, 1437 Lincoln Ave., Pasadena 3, Calif.-AB,AC
McElroy Mfg. Co., Littleton, Mass.-A
Millen Mfg. Co., James, 150 Exchange St., Maiden 48, Mass.-I
Mohawk Electronic Research Labs., RD #4
Box 126A, Amsterdam, N.Y.-P.AC,AE
Morrow Radio Mfg. Co., 2194 Market St., Salem, Ore.-E,F,H,I.T.V.AC
Multi-Froducts Co. 21410 Coolidge Hwy. Oak Park 37, Mich.-I
Munaton Mfg. & Service, Inc., Beech St., Is-lip, N.Y.-T
National Electronics Labs., 1713 Kalorama Rd., N.W., Washington 9, D.C.-V.AC
New London, Conn.-H
North American Model Products, 9802 Warwick A. Rd. Warwick, Va.-O
Otis Elevator Co, Electronic Div., 35 Ryerson St., Brooklyn 5, N.Y.-B,W.Z,AAAE
Parisier & Co., Maurice I., 1860 Broadway, New York 23, N.Y.-W
Paree-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.-E.T.V
Perer, J.C. 2100 Milton St., Benton Harbor, Mich.-J.T.X
Perma-Power Co., 4727 N. Damen Ave., Chicago 25, Ill.-AF
Petrof, Peter A., 127 Water St., New York 5, N.Y.-C
Phebco, Inc., 3640 Woodland Ave., Baltimore 15, Md.-C

cago 25. Ill.—AF Petroff. Peter A., 127 Water St., New York 5, N.Y.—C Phebco. Inc.. 3640 Woodland Ave., Baltimore 15. Md.—C Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.—I Planet Television Corp., 903 Halsey St., Brook-lyn 33, N.Y.—T Plastics & Electronics Co., Inc., 272 North-land Ave., Buffalo 8, N.Y.—F Pratt, Albert, 114 W. Lake View Ave., Mil-waukee 17, Wis.—V Pruyn-Moore, Inc., 1338 Cota Ave., Long Beach 13. Calif.—A Radiation, Inc., Box "Q," Melbourne, Fla. —Z,AA Radio Corp. of America, Eng'g. Products Div., Camden 2, N.J.—K.M.N.U.AD Radio Engineering Labs, 36-40 37 St., Long Island City 1, N.Y.—D.L.U.AB,AC Radio Frequency Labs., Powerville Rd., Boon-ton 20, N.J.—Y.AA Radio Sonic Corp., Plainfield, N.J.—Z

Radio Sonic Corp., Plainfield, N.J.-Z

Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.-B,U,W,Z Remco Mfg. Co., 545 N. LaSalle St., Chicago 10, Ill.-C

Remler Co., 2101 Bryant St., San Francisco 10, Calif.--J

Rex Electronics Corp., 1351 E. DeLoss St., Indianapolis 3, Ind.—I Reynolds Radio & Equip. Lab., H. B., 219 Stone St., Oneida, N.Y.—F.V Rosen Eng'g. Products, Inc., Raymond, 32 & Walnut Sts., Philadelphia 4, Pa.—AA

Ryan Industries, Inc., 19159 John R St., Detroit 8, Mich.-W

Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—U,W,AA

Sangamo Electric Co., 9th & Converse, Spring-field, III.-Z Scantlin Electronics, P.O. Box 24561, Los Angeles 24, Calif.-A.O

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ELECTRONIC INDUSTRIES DIRECTORY

Schuttig & Co., 5005 Calvert Rd., College Park. Md.-J,V

Md.-J.V Servo Corp. of America, 20-20 Jericho Turn-pike, New Hyde Park. N.Y.-Q Shepard Labs. 480 Morris Ave., Summit, N.J. AA

skylo Gylver, Byde Park, N.Y.—Q
Shepard Labs, 480 Morris Ave., Summit, N.J. AA
Sierra Electronic Corp., 1060 Brittan Ave., San Carlos, Calif.—R,U.W.AB,AC
Sightmaster Corp., 111 Cedar St., New Rochelle, N.Y.—O
Silver Bay Equip. Co., 5004 20th NW Seattle 7, Wash.—E,F,T
Simmonds Accessories. Tarrytown, N.Y.—G
Slate & Assoc., Claude C., 11370 W. Olympic Blvd., Los Angeles 64, Calif.—J.T.U.AB,AC
Sonar Radio Corp., 3060 W. 21 St., Brooklyn 24, N.Y.—E,F,G,H.I.J.T.V.AB,AC
Springfield Enterprises. P.O. Box 54, Springfield Gardens 13, N.Y.—E,F.U.AA.
Stavid Eng'g., Highway 22, Plainfield, N.J. —B,Q.T.U.V.W.Z.AB,AC
Stavid Eng'g., Highway 22, Plainfield, N.J. —B,Q.T.U.V.W.Z.AB,AC
Stavid Eng'g., Highway 22, Plainfield, N.J. —BQ,T.U.V.W.Z.AB,AC
Stavid Eng'g., Highway 22, Plainfield, N.J. —BQ,T.U.V.W.Z.AB,AC
Stone City Machine & Tool Co., 1206 7th St., Beddrod, Ind.—N
Tarc Instruments, Inc., 97A Greenwich St., Hempstead, L.I., N.Y.—AB
Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.—I.J.Y.AE
Telautograph Corp., 16 W. 61st St., New York 23, N.Y.—A
Tele-Broadcasters, Inc., 41 E. 42 St., New York, N.Y.—H,N.AC,AD,AE
Telemetering Associates, 494C Pine Forest Dr., Marietta, Ga.—C,AA,AE

Telemetering Associates, 494C Pine Forest Dr., Marietta, Ga.-C,AA,AC

Telephonics Corp., Park Ave., Huntington, N.Y.-Z,AB,AC Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-C,J,Q,U,W,X,AB,AC

Telescreen, 36 Grove, New Canaan, Conn. --U,W

Tel-Instrument Co., 728 Garden St., Caristadt. N.J.—AC,AD

exas Instrument, Inc., 6000 Lemmon Ave., Dallas 9, Texas—W,Z Texas

Times Facsimile Corp., 540 W. 58 St., New York 19, N.Y.-R Transitron, Inc., 154 Spring St., New York 12, N.Y.-I,T,V

Transmitter Equipment Mfg. Co., 35 Ryerson St., Brooklyn 5, N.Y.-J,Q,S,U,V,W,X,Y,Z,

St., Brookl AA,AB,AC

Ultradyne Eng'g. Labs., Inc., P. O. Box 8007. Albuquerque, N. Mex.—A,AA Ultrasonic Corp., 640 Memorial, Dr., Cam-bridge, 42, Mass.—C,W,Z

Valley Eng'g., Co., 601 Cedar St., Los Alamos, New Mex.-I

Varian Associates. 611 Hansen Way, Palo Alto, Calif.--U,W,AB

Varo Mfg. Co., 2201 Walnut St., Garland, Texas-J,X,AC

Video Corp. of America, 229 W. 28 St., New York 1, N.X.-U.W Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.-I.J

Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.-T.V

Warren Corp., J.C., 21 Hanse Ave., Freeport, L.I., N.Y.-D.V West Coast Electronics Co., 5878 W. Jefferson Blvd., Los Angeles 16, Calif.-V,W,AA,AB, AC

Western Mfg. Co., 1400 W. 22 St., Kearney, Nebr.-E,F,I,Q,U,V,AB,AC

Westinghouse Electric Corp., Box 868, Pitts-burgh 30, Pa.-K,AA Westrex, 111 8 Ave., New York 11, N.Y.-Y

White Industries, Inc., 421 54 St., New York 19, N.Y.-Z

White & Sons, Inc., Wilfrid O., 178 Atlantic Ave., Boston 10, Mass.-Z

Wilcox Electric Co., 1400 Chestnut St., Kansas City 1, Mo.-J.W.X.Y.AC
Wilmar Mfg. Co., 2715 E. 14th St., Kansas City 27, Mo.-G

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### 95-TRANSMITTER ACCESSORIES

BlowersA	
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Control consolesB	j.
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Keys	
Power Supplies	į.
Power Supplies, auxiliary	I.

Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-G.H Air Transport Mfg. Co., 1114 N. Sycamore Ave., Los Angeles 38, Calif.-B Airtron, Inc., 1101 W. Elizabeth Ave., Linden, N.J.-C Allied Research & Encire, 1041 N. Yes Polyco

Altrofol, Thor We Linesca N.J.--C Allied Research & Eng'g., 1041 N. Las Palmas Ave., Hollywood 38, Calif.--C American Electronics, 4811 Telegraph Rd., Los Angeles 22, Calif.--A Andrew Corp., 363 E. 75 St., Chicago 19, Ill.

American Electronics, 4811 Telegraph Ed., Los Angeles 22, Calif.—A Andrew Corp., 363 E. 75 St., Chicago 19, Ill. —D Applied Electronics Co., 1246 Folsom St., San Francisco 3, Calif.—G Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.—B,G Authorized Mfrs. Service, 914 Wyckoff Ave.. Brooklyn 27, N.Y.—G Avionex Electronics Corp., 2838 N. Naomi St.. Burbank, Calif.—A,E,F,G,H Barker & Williamson, 237 Fairfield Ave., Up-per Darby, Pa.—C,E,G Beck's Inc., 298 E. 5 St., St. Paul 1, Minn.—E Bendix Aviation Corp., Pacific Div., 11600 Sherman Way, N. Hollywood, Calif.—C Boehme, Inc., H. O., 916 Broadway, New York 10, N.Y.—E,F Breico Electronics Corp., 55 Vandam St., New York 18, N.Y.—E,F British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.—A Bunnell & Co., J. H., 81 Prospect St., Brook-lyn 1, N.Y.—E,F C.G.S. Labs, Inc., 391 Ludlow St., Stamford, Conn.—C Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N.J.—E,G Continental Electronic Mfg. Co., 4212 S. Buckner Blvd., Dallas 17, Texas.—D Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.—C Dow-Key Co, Warren, Minn.—F DuMont Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.Y.—E,F,G,H,I Electronic Edity, Dallas 17, Texas.—G Duwton Laboratories Inc., Allen B., Com-munication Products Div., 1500 Main Ave., Clifton, N.Y.—E,F,G,H,I Electronic Heating Corp., 66 Needham St., Newton Highlands 61, Mass.—G Electoronic Hast, Gr., 27 Milburn St., Bronx-ville 8, N.Y.—A,G,H Erco Radio Laboratories, 637 Stewart Ave., Garden City, N.Y.—E,F O. Box 296, Clifton, N.J. —G,H Gates Radio Co., 123 Hampshire St., Quincy, III.—B,C.D.E.G

-G,H Gates Radio Co., 123 Hampshire St., Quincy, Ill.-B,C,D,E,G General Electric Co., Electronics Div., Com-munication Equip., Electronics Park, Syra-cuse, N.Y.-G General Precision Lab., 63 Bedford Rd., Pleasantville, N.Y.-D Gonset Co., 801 Main St., Burbank. Calif.-G.H

G.H Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5. Calif.—B,E,G,H Hogan Laboratories. 155 Perry St., New York 14. N.Y.—E Industrial Rectifier Co., 161 Washington St., New York 6, N.Y.—G Jarvis Electronics Corp., 6058 Fullerton Ave., Chicago 39, III.—G Johnson Co., E. F., Waseca, Minn.—F Kaar Eng'g. Corp., 2995 Middlefield Rd., Palo Alto, Calif.—I Kahn & Co., 541 Windsor St., Hartford 1, Con.—G,H

Alto, Con. 541 Windsor Co., Conn.-G,H Kahn Research Labs., 22 Pine St., Freeport, L.I., N.Y.-E Kay Electric Co., 14 Maple Ave., Pine Brook,

Li, Mar. Ray Electric Co., 14 Maple Ave., J. N.J.-E Keystone Products Co., 904 23 St., Union City, N.J.-G King's Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.-C,D Lear, Inc., 3171 S. Bundy Dr., Santa Monica,

McClean Eng'g., P.O. Box 228, Princeton, N.J.

-A Marine View Electronics, 744 E. 138 St., New York 54, N.Y.-G Mattson-Cowley, 1487 Lincoln Ave., Pasadena 3, Calif.-G Mercury Mfg. Corp., Fourth & Montjoy Sts., Falmouth, Ky.-E Millen Mfg. Co., James, 150 Exchange St., Malden 43, Mass.-G

Mohawk Electronic Research Labs., Box 126-A, RD #4, Amsterdam, N.Y.-G,H

- Molded Insulation Co., 335 E. Price St., Phila-delphia 44, Pa.-F Neutronic Associates, 87-16 116 St., Richmond Hill, N.Y.-G,H Opad Electric Co., 69 Murray St., New York 7, N.Y.-G,H Oster Mfg. Co., John, Avionic Div., Racine, Wisc.-A

- Opad Electric Co., 69 Murray St., New York 7, N.Y.-G,H
  Oster Mfg. Co., John, Avionic Div., Racine, Wisc.-A
  Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn 5, N.Y.-B,G
  Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.-G
  Peschel Electronics, Inc., 13 Garden St., New Rochelle, N.Y.-G,H
  Philadelphia Scientific Glass Co., 1866 Eckard Ave., Abington, Pa.-I
  Precision Aasociates, 354 Cumberland St., Brooklyn 38, N.Y.-G,H
  Press Wireless Labs., Inc., 25 Prospect Pl., W. Newton 65, Maas.-C,E,G
  Radio Corp. of America, RCA Victor Div., Canden 2, N.J.-B,D,G
  Raytheon Mfg. Co., Eduip. Marketing Div., 100 River St., Waltham, Mass.-D,G
  Ripley Co., 1 Factory, Midletown, Conn.-A
  Rotron Mfg. Co., Schoonmaker Lane, Wood-stock, N.Y.-A
  Scantlin Electronics, J. R., 145 W. Hazel St., Los Angeles 24, Calif.-B
  Standard Electric Mfg. Co., Haddon Ave., W. Berlin. N.J.-A
  Standard Electronics Corp., 285 Emmet St., Newark, N.J.-D,G,H
  Stone City, P.O. Box 351, Bedford, Ind.-C
  Tarzian Inc., Sarkes, 539 S. Walnut St., Bloomington, Ind.-D
  Tele-Broadcasters, Inc., 41 E. 42 St., New York. N.Y.-J
  Telechrome, Inc., 88 Merrick Rd., Amityville, L.I., N.Y.-G,H
  Telephonics Corp., Park Ave., Huntington, L.I., N.Y.-G,H
  Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 7th & Bellmont, Mt. Carmel. III.-G,H
  Time-O-Matic Co., 1106 Dahls St., Danville, III.-E
  Ultrasonic Corp., 640 Memorial Dr., Cambridge 42, Mass.-B
  Vibroplex Co., 833 B'dway, New York, N.Y.-F
  Vibroplex Co., 833 B'dway, New York, N.Y.-F
  Vibroplex Co., 833 B'dway, New York, N.Y.-F
  Vibroplex Co., 833 B'dway, New York, N.Y.-F

- Vibroplex Co., 833 B'dway, New York, N.Y.-F
- Virginia Electronics Co., River Rd. at B&O R.R., Washington 16, D.C.--B West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.--C Winslow Co., 9 Liberty St., Newark 5, N.J.--F
- Wright Eng'g. Co., 180 E. Calif. St., Pasadena 1, Calif.—C,D

# 96-TUBES

Tubes, ATRAD
Tubes, backward waveAJ
Tubes, bailastA
Tubes, battery chargerB
Tubes, cathode-ray
Tubes, color TV pictureAE
Tubes, counting
Tubes, electron multiplierD
Tubes, gamma rayAL
Tubes, gasE
Tubes, geiger counterF
Tubes, ignitron
Tubes, infra-red
Tubes, klystron
Tubes, magnetron
Tubes, miniatureJ
Tubes, noiseK
Tubes, photo
Tubes, piraniM
Tubes, projectionN
Tubes, receiving
Tubes, rectifying, industrialP
Tubes, rectifying, receivingQ
Tubes, rectifying, transmitting R
Tubes, scintillation
Tubes, special purposeT
Tubes, strobe AN
Tubes, subminiatureU
Tubes, switchingAH
Tubes, thyratronV
Tubes, TRAF
Tubes, transducerAl
Tubes, transmitting-receivingW
Tubes, transmittingX

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Tubes, traveling wave .....Y Tubes, TV camera iconoscopes ....Z Tubes, TV camera image orthicons .....AA

- Tubes, ultra violet .....AP Tubes, voltage regulators .....AB Tubes, X-Ray .....AC

- Accurate Eng'g. Co., 2005 Blue Island Ave., Chicago 3, Ill.—B,P Aerolux Light Corp., 653 11 Ave., New York 36, N.Y.—E,T.AB,AH,AK,AM,AN,AP Airborne Instruments Lab., 160 Old Country Rd., Mineola, N.Y.—K.T.Y Allen Electronics Corp., 294 S. Saginaw St., Pontiac. Mich.—AG American Elite Inc., 7 Park Ave., New York 16, N.Y.—C,H,I,J,O,P.Q,R,S,T,U,V,W,X.Z,AG,AI American Radio Co., 445 Park Ave., New York 12, N.Y.—F,H,I,J,P,Q,R,T,U,Y,AD American Standard Television Tube Corp., 94-50 153 St., Jamaica 33, N.Y.—C,A,E,AG,AO American Television, Inc., 5050 N. Broadway, Chicago 40, III.—C,T,V American Vacuum Products Corp., 2242 S. Colby Ave., W. Los Angeles 64, Calif.—C,T, AEAG,AO

- Chicago 40. 111.-C.T.Y American Vacuum Products Corp., 2242 S. Colby Ave., W. Los Angeles 64, Calif.-C.T. AE,AG,AO Amglo Corp.. 2037 W. Division St., Chicago 22, III.-E,AN Amperex Electronic Corp., 230 Duffy Ave., Hicksville, L.I., N.Y.-B,E,F,G,H,I,J,P,R,T. U, V.W,X,AB,AC,AK,AL Amperite Co., 561 Broadway, New York 12, N.Y.-A Anton Electronic Laboratories, 1226 Flushing Ave., Brooklyn 37, N.Y.-E,F,L,S,U,AB Atlantic Electronics Corp., 39 Jefferson St., Passaic, N.J.-AG Atomic Instrument Co., 34 Mass. Ave., Cam-bridge 39, Mass.-F,AK,AL Barry Electronics Corp., 136 Liberty St., New York 6, N.Y.-C, D, G, H. I, J, L, O, P. Q. R. T. U. V, X, AB Bendix Aviation Corp.. Red Bank Div.. Eaton-town, N.J.-D,E,F,H,J,K,O,P,Q,T,U,V,W,AB, AD,AF,AH,AI Bomac Laboratories, Salem Rd., Beverly, Mass. -D,H,I,T,V,W,X,Y,AD,AF,AH,AJ,AN British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N.Y.-E,J,U,AK Calvideo Tube Corp., 5232 W. 104 St., Los An-geles 45, Calif.-AG Capehart-Farnsworth Co., 3700 Pontiac, Fort Wayne, Ind.-C,O,Q,AG CBC Electronics Co., 2601 N. Howard St., Philadelphia 33, Pa.-A CBS-Hytron, Div. Columbia Broadcasting Sys-tem. 100 Endicott St., Danvers, Mass.-C,E,J, O,Q,T,W,X,AE,AG Central Research Laboratories. Red Wing, Minn.-A,S,V Central Research Laboratories, Red Wing, Minn.-A,S,V Central Research Laboratories, Box 165, Palm St. Westbury, N.J.-C,AE Claremont Tube Corp., N.Y. Ave. & Main St. Westbury, N.Y.-CAG Clark Electronic Laboratories, Box 165, Palm Springs, Calif.-G Clark Lectronic Laboratories, Box 165, Palm Springs, Calif.-G Clarkelectronic Laboratories, Box 165, Palm Springs, Calif.-G Clarkelectronic Laboratories, Box 165, Palm Springs, Calif.-G Clarkelectronic Laboratories, Box 165, Palm Springs, Calif.-G Clarence, III.-C.L.Q,V Curtiss-Wright Corp., Electronics\_Div., 631

- Charostat mig. Co., 1 Washington St., Dover, N.H.-A
  Continental Electric Co., 715 Hamilton St., Geneva. III.-C.L.Q.V
  Curtisa-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N.J.-C.F.N.S.Z.AK
  Cyclotron Specialties Co., Moraga, Calif.-F
  Du Mont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N.J.-C.AG
  Du Mont Laboratories Inc., Allen B., Commu-nication Products Div., 1500 Main Ave., Clifton, N.J.-C.H.AA.AE.AG
  Du Mont Laboratoried Ave., Clifton, N.J.-C, D.S
  Eclipse-Pioneer Div., Bendix Aviation, Teter-

- Div., 760 Bloomfield Ave., Clifton, N.J., C, D,S
  Eclipse-Pioneer Div., Bendix Aviation, Teterboro, N.J., T
  Edgerton, Germeshausen & Grier, 160 Brookline Ave., Boston 15, Mass., E,T,V
  Eitel-McCullough. Inc., 798 San Mateo Ave., San Bruno, Calif., H.P.R.T,V,X,AEAG
  Electrical Service Co., 1271 Mission St., San Francisco 3, Calif., L
  Electronic Beam Corp., 923 Old Nepperhan Ave., Yonkers 3, N.Y., C
  Electronic Products Co., 111 E. 3 St., Mount Vernon, N.Y., E,F,T
  Electronic Products Co., 4755 Telegraph Rd., Los Angeles 22, Calif., C,F,R,T
  Electronic Tube Corp., 1200 E. Mermaid Lane, Philadelphia 18, Pa., C,T
  Electrone Radar Products. 1041 N. Pulaski Rd., Chicaro, III., Ly, V
  Electrons. Inc., 127 Sussex Ave., Newark 4, N.J., B,P,T,V
  Eureka X-Ray Tube Corp., 3250 N. Kilpatrick Ave.

- Eureka X-Ray Tube Corp., 3250 N. Kilpatrick Ave., Chicago 41, Ill.—AC
- Farrand Optical Co., 4401 Bronx Blvd., Bronx 70, N.Y.-D

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- Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-C.I.P.Q.R
  Ferranti Electric Inc., 30 Rockefeller Plaza, New York 20, N.Y.-C.P.T
  Freed Electronics & Controls Corp. 200 Hudson St., New York 13, N.Y.-C
  Freeland Products Co., 700 Dryades St., New Orleans 12, La.-X.AG
  Gates & Co., Geo. W., Hempstead Tpke. & Lucille Ave., Franklin Square, N.Y.-AP
  General Electronics, Div. Arcturus Electronics, Inc., 101 Hazel St., Paterson, N.J.-C.E.O, P.Q.R.T.V.X
  General Vacuum Tube Corp., 45 Elm St., Ardsley, N.Y.-C
  Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-O.P.X
  Hamlin, Inc., 1316 Sherman Ave., Evanston, III.-AC
  Haydu Bros. of N. J., Box 1226, Plainfield, N.J.-C.J.O.U.AG.AH,AO
  Huggins Laboratories, 711 Hamilton Ave., Mentrial Tubes. Inc., 321 Stevens St., Geneva, III.--O,U
  Kemite Laboratories, 1819 W. Grand Ave., Chicago, III.--O,U
  Kemite Laboratories, 555 W. Adams St., Chicago, III.--O,U
  Kemite Laboratories, 555 W. Adams St., Chicago, III.--O,U
  Kemite Laboratories, 1819 W. Grand Ave., Chicago, 22, III.--AM,AN,AP
  Kip Electronic & Mfg. Co., 113 Sussex Ave., New K 4, N.J.--A,E.J.P.R.T.U.V.AB,AP
  Landsverk Electrometer Co., 550 W. Garfield Ave., Glendale 4, Calif.-F,AL
  JFD Mfg. Co., 6101 16 Ave., Brooklyn 4, N.Y.--A

- Lectro Max, Inc., 15 S. 1st St., Geneva, Ill.
- A.A.
  Lectro Max, Inc., 15 S. 1st St., Geneva, III.
  Letro Max, Inc., 15 S. 1st St., Geneva, III.
  Lewis & Kaufman, Ltd., 17320 El Rancho Ave., Los Gatos, Calif.-P.R.T.X
  Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.-H.I
  Machlett Laboratories, 1063 Hope St., Spring-dale, Conn.-P.R.T, V.X.AC
  Mackay Research Labs., R.R. #2 Box 401, McHenry, III.-C,D,E.I,L.T.AM
  Manufacturers Eng'g & Equip Corp., York & Mill Rds., Hatboro, Pa.-F
  Matchless Electric Co., 1700 Washington Blvd., Chicago 12, III.-A
  Meyer & Co., Hugo, 39 W. 60 St., New York 23, N.Y.-AM
  Microwave Associates. 22 Cummington St., Boston 15, Mass.-I,AD,AF
  Midland Mfr. Co., 3151 Fiberglas Rd., Kansas City 15, Kans.-C
  Multi-Tron Lab., 4624 Washington Blvd., Chi-caro 44, III. C,D,E,F,H,I,M,N,P,Q,R,S,T. AB, AC, AE, AG
  National Electronics, Inc., 623 North St., Gen-eva, III.-B,E,G,P,V
  National Union Electric Corp., 350 Scotland Rd., Orange, N.J.-C,D,J,O,T,U,AB,AK
  National Union Electric Corp., 350 Scotland Rd., Orange, N.J.-C,DJ,O,T,U,AB,AK
  National Video Corp., 4300 W. 47 St., Chicago 32, III.-C,AG
  Neon Eng'g Labs., 172 Front St., Marietta, Ohio-E.AC
  Norch American Philips Co., 750 S. Fulton Ave., Mt. Vernon, N.Y.-F,SAK,AI.
  NRD Instrument Co., 6425 Etzel Ave., St. Louis 14, Mo.-F,S,AK,AL
  Nuclear Instrument Lab., P.O. Box 7034, Kansas City, Mo.,-F,AK,AL
  Nuclear Instrument Lab., P.O. Box 7034, Kansas City, Mo.,-F,AK,AL
  Nuclear Instrument and Chemical Corp., 223 W. Erie St., Chicago 10, III.-F
  Nuclear Instrument and Chemical Corp., 223 W. Erie St., Chicago 10, III.-F
  Nuclear Instrument and Chemical Corp., 223 W. Erie St., Chicago 10, III.-F
  Nuclear Instrument and Chemical Corp., 223 W. Erie St., Chicago 10, III.-F
  Nuclear Instrument And Chemical Corp., 223 W. Erie St., Chicago 10, III.-F
  Nuclear Instru

-C Penta Laboratories, 312 N. Nopal St., Santa Barbara, Calif.-P.R.T.V.X.Y Philoc Corp., C & Tioga Sts., Philadelphia 34, Pa.-C.N.O.AG Phoenix Precision Instr. Co., 3803 N. 5th St., Philadelphia 40, Pa.-L.T Photo Crystals, Inc., 15 S. First St., Geneva, 111.-L.V.AM Pioneer Electropics Corp. 2225 S. Cormelian

111.-L.V.AM Pioneer Electronics Corp., 2235 S. Carmelina, W. Los Angeles 64, Calif.-B.T.Q.AG Precise Measurements Co., 942 Kings Hwy., Brooklyn 23, N.Y.-AM Precision Products, 719 7 St., N.W., Washing-ton, D.C.-L

ton, D.C.-L
Precision Radiation Instruments Inc., 4223 W, Jefferson Blvd., Los Angeles 16, Calif.-F
Radiation Instrument Devel. Lab., 2337 W. 67
St., Chicago 37, 111.-F,S,AK,AL
Radio Corp. of America, RCA Tube Dept., 415
S. 5 St., Harrison, N.J.-C,D,E,F,G,H,I,J,L, M,N,O,P,Q,R,S,T,U,V,X,Z,AA,AB,AE,AG,AI
Pacias Decoards Laba, 172 Event St. Mari

Radio Research Labs. 172 Front St., Mari-etta, Ohio-E.AC,AM,AP Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.-C.E.N.T.V

Raytheon Mfg. Co., Receiving & Cathode Ray Tube Operation, 55 Chapel St., Newton 58, Mass.-E,F,J,O.Q,T,U,X,AB,AE,AG

Resitron Labs., Inc., 2908 Nebraska Rd., Santa Monica, Calif.-C.L.P.R.T.V.W.X.Z.AA,AC, Monica, AG,AH

Rowe Industries, 1702 Wayne St., Toledo 9,

Ohio-F Sanders Associates, 137 Canal St., Nashua, N.H.-LJ.T.U.AD,AF,AJ Sanford Labs., 1661 Broadway, Redwood City, Calif.-H.I.Y.AC,AJ,AL

Sel-Son Electronie Tube Corp., 9 & Summit Sta., Darby, Pa.-AG

sheldon Electric Co., 68 Coit St., Irvington 11, N.J.--C.O

Signalite Inc., 37-41 Neptune Hwy., Neptune, N.J.-A.E.AB

Sonotone Corp., Elmsford, N.Y.-J.O.U

S.O.S. Cinema Supply Corp., 602 W. 52nd St., New York 19, N.Y.-AB

- Sperry Gyroscope Co., Great Neck, N.Y .--- H,Y
- Standard TV Tube Corp., 706 Dryades St., New Orleans 12, La.—C Steiner-Ives, Springfield Rd., Union, N.J.—C, H,I,J,T,V,Z,AA,AC,AG
- Stewart Eng'g Co., P.O. Box 277, Soquel, Calif.-Y,AJ
- Super Ear Products Co., 675 Merrick Rd., Lyn-brook, N.Y.--U
- Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.—A,C,E,H,I,J,L,M,O,P,Q, R,T,U,V,W,X,Y,AD,AE,AF,AG,AK,AN Taylor Tubes. Inc. 2312 Wabansia Ave. Chi-cago 47, 111.—B,E,G,P,Q,R,T,V,W,X,AH,AK Tele-Ray Tube Co., 984 Saw Mill River Rd., Yonkers, N.Y.—C

Tel-O-Tube Corp. of America. 180 Van Riper Ave., E. Paterson, N.J.-C,AG,AO

- Texas Electronics Mfg. Co., 3120 Lamar Ave., Houston, Texas—C
- Thomas Electronics. Inc., 118 9th St., Passaic, N.J.--C
- Thompson Clock Co., H. C., 38 Federal St., Bristol, Conn.-B,J,L,O,P,Q,R,U
- Tracerlab. Inc., 130 High St., Boston 10, Mass.-F.AL Transitron, Inc., 154 Spring St., New York 12, N.Y.-P
- Tube Service Corp., 2 Gaston Ave., Garfield, N.J.-AG
- Tung-Sol Electric Inc., 95 8 Ave., Newark 4, N.J.—A.B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R, S,T,U,V,W.X,Y,Z,AA,AB,AC,AD,AE,AF,AG, AH,AI,AJ,AK,AL,AM,AN,AO,AP

United Electronics Co., 42 Spring St., Newark 4, N.J.—P.R.T.V.X

- 4, N.J.-F.R.I.V.X.
  Universal X-Ray Products, 1140 N. Western Ave., Chicago 22. Ill.—AC
  Vacuum Tube Products. 506 S. Cleveland St., Oceanside, Calif.—C,M,T,V,W,AF,AH
  Varian Associates, 611 Hansen Way, Palo Alto, Calif.—H,X,Y,AJ
- Varo Mfg. Co., 1801 Walnut St., Garland, Texas-V

Victoreen Instrument Co.. 3800 Perkins Ave., Cleveland 14, Ohio—A,E,F,J,T,U,AB

- Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.—AK
- Western Radiation Lab.. 1107 W. 24 St., Los Angeles 7, Calif.—F,T,AL Westinghouse Electric Corp., Electronic Tube Div., Box 284, Elmira, N.Y.—C,E,G,I,L,O,P, Q,R,V,W,X,AD,AE,AF,AG,AH,AK

White Electron Devices, Roger, 12 W. Island Rd., Ramsey, N.J.-E,W,Y,AF,AJ
Wood Counter Lab., N., 5491 Blackstone Ave., Chicago 15, Ill.-F,S,AL

## 97-TUBE PARTS

320

AdaptersA
Anodes, graphiteB
Anodes, metalC
Base pinsE
BasesD
BulbsF
CapsG
Cathode ray, deflection plates H
Cathode ray, electrodesI
Cathode ray, electron gunsJ
Cathode ray, phosphors
Cathode ray, shields
Cathode ray, side contactsL
Cathode ray, sleeves
CathodesN
Cavities
Ceramic partsAH
Coatings, CRT AM
Faceplates, CRTAl
Fittings, power tapeAK
Fluorescent materials
Focusing magnetsAE



Fused quartz partsQ
GettersR
Grids
Heat dissipators AF
Ion TrapsT
Metal shellsAL
Mica partsV
Picture tube masksW
Picture tube revitalizersAG
Rare gasesX
Stamped partsY
Supports
Tube repairing
Tube seal leadsAB
Water jacketsAC
Wire parts

Accurate Paper Tube Co., 805 N. Peoria St., Chicago 22, Ill.—AJ Adel. Div., General Metals Corp., 10777 Van Owen St., Burbank, Calif.—Y.Z Airborne Instruments Labs., 160 Old Country Rd., Mineola, N.Y.—J,N.O.V

- Ad., Mineola, N.Y.-J.N.O.V Alden Products Co., 117 N. Main St., Brockton 64, Mass.-A Allied Research & Eng'g. Inc., 6916 Santa Monica Blvd., Los Angeles, Calif-C A. L. Products, 311 Hickory St., Kearny, N.J. --A
- American Brass Co., 414 Meadow St., Water-bury 20. Conn.-C.E
- American Lava Corp., Cherokee Blvd. & Mfrs. Rd., Chattanooga 5, Tenn.—D.AH American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.—A
- American Platinum Works, 231 N.J. R.R. Ave., Newark 5, N.J.—N Anchor Products Co., 2712 W. Montrose Ave., Chicago 18, Ill.—AD,AG
- Anton Machine Works, 1226 Flushing Ave., Brooklyn 37, N.Y.--C,O,S,Y
- Art Wire & Stamping Co., 227 High St., Newark 2, N.J.-C.E.L.M.R.S.Y.Z.AA,AD Associated Eng'g & Mfg. Corp., Glen Ridge. N.J.-D.I.J.K.N.P.X.AB,AD
- N.J.--D.I.J.R.N.F.A.AD.AD Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N.J.-Z,AB,AD Bram Chemical Co., 820 65 St., Philadelphia 26, Pa.--C,P,R,X,AD
- British Electronic Sales Co., 23-Long Island City 1, N.Y.-D.E 23-03 45th Rd.,
- Brunswick Div., Radio & TV. Inc., 119 W. 57 St., New York 19, N.Y.-M.N
- Buckbee Mears Co., Lindeke Bldg., St. Paul 1, Minn.—S
- Celomat Corp., 521 W. 23 St., New York, N.Y.
- -w Central Electronics, Inc., 1247 Belmont Ave., Chicago 13, Ill.-AG Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.-D,AH Ceramic Heater Cathode Resistor Co., 20 1 St., Keyport N.J.-N
- Chatham Electronics, Div. Gera Corp., 630 W. Mt. Pleasant, Livingston, N.J.—F,AB,AD
- Clarostat Mfg. Co., 1 Washington St., Dover, N.H.-T
- Continental-Diamond Fibre Co., Newark, Del.
- Corning Glass Works, Corning, N.Y .--- F Dixon Crucible Co., Joseph, Wayne & mouth Sts., Jersey City 3, N.J.—AM Mon-

- mouth Sts., Jersey City 3, N.J.—AM Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.—O Driver Co., Wilbur B., 150 Riverside Ave., Newark 4, N.J.—C,AD DuMont Labs., Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N.J.—AJ Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.—S Electrical Refractories Co., E. Clark St., E. Palestine, Ohio—AH Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N.J.—D Electronic Parts Mfg. Co., 508 25 St., Union

- Electronic Parts Mfg. Co., 508 25 St., Union City, N.J.-Z.AD
   Electronic Test Equipment Corp., 13224 Liver-nois Ave., Detroit, Mich.-AG

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ERCA Tool Die & Stamping Co., 19 Ash St., Brooklyn 22, N.Y.-D.J.S.V.Y Fansteel Metallurgical Corp., 2200 Sheridan Rd., N. Chicago, III.-C.Y Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.-C.AC Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.-K General Ceramics Corp., Crows Mill Rd., Keas-bey, N.H.-D,AH General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.-P General Electrosonics, Inc., 32 W. 22 St., New York 10, N.Y.-A Glaser-Steers Corp., 20 Main St., Belleville 9,

- Glaser-Steers Corp., 20 Main St., Belleville 9, N.J.-AE
- Golden Co., 1054 38 St., Brooklyn 19, N.Y.-Y,Z Haydu Bros. of N.J., Box 1226, Plainfield, N.J. -C,E,G,J,S,Y,Z,AD

- Int'l. Electronic Research Corp., 177 W. Mag-nolia Blvd., Burbank, Calif.—AJ Ippolito & Co., James, 401 Concord Ave., Bronx 54, N.Y.—Z
- Isolantite Mfg. Corp., Warren Ave., Stirling, N.J.-C.AH
- I-T-E Circuit Breaker Co., 19 & Hamilton Sts., Philadelphia 30, Pa.—F JAN Hardware Mfg. Co., 75 N. 11th St., Brooklyn 11, N.Y.—Z
- Javex. Box 646. Redlands. Calif .- E
- Johnson Eng'g Inc., 97 Summit Ave., Summit, N.J.-E Johnson & Hoffman, 31 E 2 St., Mineola. L.I.,
- N.Y.-C,H,J,M,Y Kemet Co., P. O. Box 6087, Cleveland 1, Ohio -R,S,AD
- Kine Laboratories 3250 Kenilworth, Berwyn, Ill.--J
- King Labs. Inc., 127 Solar St., Syracuse 4, N.Y.--R.Y.Z.AD
- N.Y.-R.Y., 2, AD Kirchberger & Co., M., 83 W. Forest Ave., Englewood, N.J.-G.AH Klise Mfg. Co., 50 Cottage Grove St., S.W., Grand Rapids 2, Mich.-W Korb Eng'g. & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-O
- Kulite Tungsten Co., 723 Sip St., Union City, N.J.-N,S,AB,AD
- Laine Electronic & Mfg. Co., 113 Sussex Ave., Newark 4, N.J.-F,I,J,AB,AD
- Lancaster Lens Co., 220 W. Main St., Lan-caster, Ohio-F
- Lapp Insulator Co., LeRoy, N.Y .--- Z
- Lewis & Kaufman, Ltd., 17320 El Rancho Ave., Los Gatos, Calif.--C
- Linde Air Products Co., Div. Union Carbon & Carbide, 30 E. 42 St., New York 17, N.Y.
- Livingston Electronic Corp., Livingston, N.J. —AJ
- -AJ Mackay, Inc., A.D., 198 Broadway, New York 88, N.Y.-K.P.R.X MacKay Research Labs., R.R. 2 Box 401, McHenry, Ill.-AB MacKenzie Products Co., 141 Brewery St., New Haven, Conn.-O New Haven, Conn.-O
- Mansol Ceramics Co., 140 Little St., Belleville 9, N.J.-AH
- 9, N.J.—AR Metal Hydrides, Inc., Congress St., Beverly, Mass.—R Metal Textile Corp., 647 E. 1st Ave., Roselle, N.J.—S.AD

Methode Mfg. Corp., 2021 W. Churchill St., Chicago 47, Ill.-AJ

Micacraft Products, Inc., 701 McCarter Hwy., Newark, N.J.--V

Microtran Co., 797 Broadway, Schenec-tady, N.Y.-V.Z Microtran Co., 797 Broadway, Schenec-tady, N.Y.-V.Z Microtran Co., Div. Crest Laboratories, 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N.Y.-AG

Millen Mfg. Co., James, 150 Exchange St., Malden 48, Mass.—AJ

Miller Electronics, 2840 Naomi St., Burbank, Calif.—AG Minerals & Insulation Co., 55 Central Ave., Rochelle Park, N.J.—V

Kochelle Fark, N.J.-V
Modern Equip. Co., 17 Bleecker St., New York 12, N.Y.-W
Multi-Tron Lab., 4624 Washington Blvd.. Chicago 44, Ill.-C.H.I.J.Y.AA
National Fabricated Products. Inc., 2630 W. Belden, Chicago 47, Ill.-A,AJ
National Union Electric Corn. 350 Sectland

National Union Electric Corp., 350 Scotland Rd., Orange, N.J.-J National Video Corp., 4300 W. 47 St., Chicago 32, Ill.—J

Neon Eng'g Labs., Radio Research Div., 172 Front St., Marietta, Ohio-X,Z

- Norco Mfg. Co., 392 Bleecker St., New York 14, N.Y.—P
  North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Me.—K.P.AD
  Owens-Illinois Glass Co., Madison & St. Clair Sts., Toledo 1, Ohio—D
  Pennsylvania Optical Co., 234 S. 8th St., Read-ing, Pa.—AI
  Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, III.—T.AE
  Permaglass, Inc., Genoa, Ohio—AI
  Pix Mfg. Co., 5 Oliver St., Newark 2, N.J.— E.I.L.Y.AD
- Pomona Electronics Co., 524 W. 5th Ave., Pomona, Calif.—A Precision Plastic Products, 225 N. Racine Ave., Chicago 7, Ill.—W
- "Q" Glass Co., 470 Broad St., Bloomfield, N.J.—AA Quality Products Co., 387 Charles St., Provi-dence 4, R.I.—AB,AD Radiation Counter Labs. Inc., 5122 W. Grove St., Skokie, Ill.—Q

- Radio Corp. of America, RCA Tube Dept., 415 S. 5 St., Harrison, N.J.—A,B,C,D,E,G,H,I,J, K,L,M,N,O,P,R,S,T,V,Y,Z,A,C,AD,AE,AF,AK
- Radio Research Labs., Neon Eng. Labs., 170 Front St., Marietta, Ohio—AA Radio Sonic Corp., Plainfield, N.J.—A
- Rau Fastener Co., 142 5 Ave., New York 11, N.Y.-G.L
- Reliable Spring & Wire Forms Co., 3167 Fulton Rd., Cleveland 13, Ohio-Y,AD Rembar Co., 117 Main St., Dobbs Ferry, N.Y.
- Resitron Labs., Inc., 2908 Nebraska Rd., Santa Monica, Calif.-J.K.N.T
- Rotron Mfg. Co., Schoonmaker Lane, Wood-stock, N.Y.-Z
- Sampson Chemical & Pigment Corp., 2830 W. Lake St., Chicago 12, Ill.-K,P
- Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—AA
- Saxonburg Ceramics, Saxonburg, Pa.-AH Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.-Y,AD
- Sheffco Mfg. Corp., Grand & Ruby Aves., Pali-sades Park, N.J.-Y Sinclair Mfg. Co., P.O. Box 243, Chartley, Mass.-A,C,E,L,M,N,Y,Z,AD
- Sonotone Corp., Elmsford, N.Y .- J
- Spaulding Fibre Co., 310 Wheeler St., Tona-wanda, N.Y.--Y Staver Co. 41.51 N. Saxon Ave., Bay Shore, L.I., N.Y.--C,Y,Z,AJ
- Steel Co., Herman D., Lafayette Bldg., Phila-delphia 6, Pa.-E
- Stone City. P.O. Box 351, Bedford, Ind.,--D,E,R,Y,AD
- Superior Eng'g., 2500 Germantown Ave., Nor-ristown, Pa.-C,M,N
- Superior Steatite & Ceramic Corp., 83 W. Forcst Ave., Englewood, N.J.-G,AH
- Sylvania Electric Products, 1740 Broadway, New York 19, N.Y.-C,D,E,G,H,I,K,L,M,N,O, P,S,V,Y,Z,AD,AJ
- Syncor Products Co., 26 Irving Court, Mal-den 48, Mass.-Q
- Tele Plastics Co., 202 Broadway, Brooklyn 11, N.Y.--W
- Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N.J.-D
- Tinnerman Products, Inc., P.O. Box 6685, Dept. 16, Cleveland 1, Ohio-Y
- Trojan Electronics, 3706 N. Halsted St., Chi-cago 13, Ill.—AG Tru-Vue Television Co., 99 Featherbed Lane, Bronx 52, N.Y.—AG
- Ultra-Violet Products, 145 Pasadena Ave., S. Pasadena, Calif.--P,Q U M & F Mfg. Corp., 10929 Vanowen St., N. Hollywood, Calif.--Y United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.--F
- United Electronics Co., 42 Spring St., Newark 4, N.J.-J
- United Mineral & Chemical Corp., 16 Hudson St., New York 13, N.Y.-V United Specialties Co., 9705 Cottage Grove Ave., Chicago 28, 111.-AL
- U.S. Gasket Co., 602 N. 10 St., Camden 1, N.J.-D U.S. Radium Corp., 535 Pearl St., New York
- 7, N.Y.-K Vacuum Metals Corp., Sub. of National Re-search Corp., 70 Memorial Drive, Cambridge 42, Mass.-R
- Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.—AA Volkert Stampings, Inc., 222-34 96 Ave., Queens Village 29, N.Y.—C,D
- Waldman & Sons. Joseph, 133 Coit St., Irving-ton 11. N.J.-E

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Western Gold & Platinum Works, 589 Bryant St., San Francisco 7, Calif.—AH Westinghouse Electric Corp., Electronic Tube Div., Box 284, Elmira, N.Y.—J.O White Industries, 421 W. 54 St., New York 19, N.Y.—A
- White Industries, 421 W. 54 St., New York 19, N.Y.-A
  Woodall Industries, 7569 E McNichols Rd., Detroit 34. Mich.-W
  Workman TV, Inc., 309 Queen Anne Rd., Tea-neck, N.J.-AG
  Zell Products Corp., Defense Production Div., 276 Main St., Norwalk, Conn.-Y,AB

#### 98—TUNERS

Tuners,	AM
Tuners,	AM-FM
Tuners,	FM
Tuners,	KlystronD
Tuners,	Microwave
Tuners,	PermeabilityF
Tuners,	TelevisionG
Tuners,	UHF

- Airtronix Devel. Corp., 20 W. 22 St., New York 10, N.Y.-A
- Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill.—B
- Anchor Radio Corp., 2215 S. St. Louis Ave., Chicago 23, Ill.—G.H Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.-B
- Ampro Corp., 2835 N. Western Ave., Chicago 18, Ill.-A
- Ansley Mfg. Co., Arthur, Doylestown, Pa.-B
- Anoroved Electronic Instrument Corp. 928 Broadway, New York 10, N.Y.-A,B,C A.R.F. Products, Inc., 7627 Lake St., River Forest, III.-E
- Authorized Mfrs. Service, 914 Wyckoff Ave., Brooklyn 27, N.Y.-B
- Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N.J.-G
- Barber & Howard, 120 East Ave., Westerly, R.I.-C
- Bell Sound Systems, 555 Marion Rd., Colum-bus, 7, Ohio-B Blonder-Tongue Labs., Inc., 526 North Ave., Westfield, N.J.-H
- Bogart Mfg. Corp., 315 Seigel St., Brooklyn 6, N.Y.-E Bomac Laboratories, Salem Rd., Beverly, Mass.—D,E
- Browne Electronics, 12450 W. Washington Blvd., Venice, Calif.—A,B Browning Labs., Inc., 750 Main St., Winches-ter, Mass.—A,B,C Calbest Eng'g & Electronics Co., 828 N. High-land Ave., Hollywood 38, Calif.—A,B,C
- Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.-H
- Century Electronics, 14844 Oxnard St. Van Nuvs, Calif.—E C.G.S. Labs., 391 Ludlow, Stamford, Conn.— A,B,F
- Collins Audio Products Co., Route 29, Moun-tainside, N.J.-A.B,C
- Conn. Telephone & Electric Corp., 70 Britan-nia St., Meriden, Conn.-C
- Delco Radio Div., General Motors Corp., Ko-komo, Ind.-A,F
- beMornay-Bonardi, Inc., 780 S. Arroyo Pkwy, Pasadena, Calif.—D,E Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.—D,E

- Wakelen, Mass.-D.E.
  Douglas Microwave Co., 11 Beechwood Ave., New Rochelle, N.Y.-E
  Dumont Labs., Inc., Allen B., 750 Bloomfield Ave., Clifton, N.J.-H
  Dunn Eng'g Associates, 11 Windsor St., Cam-bridge 39, Mass.-E
  D.Y. Bedie, Durch texts. Co. 2020, W. 4, 555
- DX Radio Products Co., 2300 W. Armitage Ave., Chicago 47, Ill.—G,H
- Eitel-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif.--D
- Electro Assemblies, Inc., 2935 W. Belmont Ave., Chicago 18, Ill.-A,F Electro-Voice, Inc., Cecil & Carrol Sts., Buchanan, Mich.—H
- Elk Electronic Labs., 333 W. 52 St., New York 19, N.Y.-H
- Engineering Associates, 434 Patterson Rd., Dayton 9, Ohio-E
- Equipment Crafters, Inc., 523 Winne St., River Edge, N.J.-A,B,C,F,H
- Espey Mfg. Co., 528 E. 72 St., New York 21, N.Y.-A,B,C,D,E,F,G,H
- Executone, Inc., 415 Lexington Ave., New York 17, N.Y.-B

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- Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N.Y.—A.B.C Freed Electronics & Controls Corp., 200 Hud-son St., New York 13, N.Y.—B.C F-R Machine Works, F-X-R Electronics & X-Ray Div., 26-12 Borough Place, Woodside 77, N.Y.—D.E Garod Radio Co., 70 Washington St., Brooklyn 1, N.Y.—A.B General Electric Co., Radio-TV Dept., Elec-tronics Park, Syracuse, N.Y.—H General Instrument Corp., 829 Newark Ave., Elizabeth 2, N.J.—F.G.H Gonset Co., 801 S. Main St., Burbank, Calif. -A,B Gotham TV Corp., 123 W. 64 St., New York

- -A,B Gotham TV Corp., 123 W. 64 St., New York 23, N.Y.-C Granco Products Inc., 36-17 20 Ave., Long Is-land City 5, N.Y.-C Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-B
- G. W. Associates, Box 2263. El Segundo. Cal.-D.E
- D.E. Griesby-Allison Co., 407 N. Salem Ave., Ar-lington Heights, Ill.—G Hartley Co., H. A., 521 E. 162 St., New York 51, N.Y.—B
- Heath Co., 305 Territorial. Benton Harbor, Mich.-A.C
- IDEA. Inc., Regency Div., 7900 Pendleton Pike, Indianapolis 26, Ind.—B,G I-T-E Circuit Breaker Co., Resistor Div., 1924 Hamilton St., Philadelphia 30, Pa.—
- Johnson Labs. Div.. Aladdin Industries, Wil-lard Rd.. Norwalk, Conn.-G.H

Kay Lab., 5725 Kearney Villa Rd., San Diego 12, Calif.—G Kearfott Co., Western Mfg. Div., 14844 Oxnard St., Van Nuys, Calif.—E

Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N.Y.—D.E.H

Kings Microwave Co., 719 Main St., New Ro-chelle, N.Y.-E

chelle, N. I.-E Kingston Products Corp., 1412 N. Webster St., Kokomo, Ind.-A.E.G.H Korb Eng'g & Mfg. Co., 30 Ottawa Ave., Grandville, Mich.-E

Lab. for Electronics, Inc., 75 Pitts St., Bos-ton, Mass.—E Lavoie Labs. Inc., Morganville, N.J.

Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.—A.F.H Leonard Electric Products Co.. 67 34 St., Brooklyn 32, N.Y.—A.G.H

Lieco, Inc., 147 Ocean Ave., Lynbrook, N.Y. Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.-D.E

Lytle Engineering & Mfg. Co., 105 W. Mon-roe St., Chicago 3, Ill.-B,C,G

McLaughlin. J Box 529, La Jolla, Calif.—A Magna Electronics Co., 9810 Anza Blvd., Inglewood 1, Calif.—A.B
Mallory & Co., P. R., 3029 E. Washington St., Indianapolis 6, Ind.—A.B.G.H
Marine View Electronics, 744 E. 138 St., New York 54, N.Y.—A.B.C
Mattson-Cowley Corp., 1487 Lincoln Ave., Pasadena 3, Calif.—A.B.C.H

Microlab. Inc., 71 Okner Pkwy. Livingston, N.J.-D.E

N.3.-D,E Midwest Sound Systems, 2871 N. Lincoln Ave., Chicago 13, Ill.-C Miller Co., J W., 5917 S. Main St., Los An-geles 3, Calif.-A

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.-A

Narda Corp., 66 Main St., Mineola, N.Y.-D,E National Co., Inc., 61 Sherman St., Malden 48, Mass.-B

Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.--G. H

Orthon Corp., 196 Albion Ave., Paterson, N.J. —A,B,C Parts Producing Corp., Manhattan Div., 1861 2 Ave., New York 28, N.Y.-E Pedersen Electronics, P.O. Box 572, Iafayette,

Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.-A,B,C,G,H

Pilot Radio Corp., 37-06 36 St., Long Island City 1, N.Y.—B,C Precision Electronics, Inc., 9101 King Ave., Franklin Park, III.—B

Premier Instrument Corp., 52 W. Houston St.. New York 12, N.Y.-D.E Radiation, Inc., Box "Q," Melbourne, Fla.-E,H

Radio Condenser Co., Davis & Copewood Sts., Camden 3, N.J.-F,G,H

Radio Corp. of America, Eng'g Products Div., Camden 2, N.J.-B

Radio Craftsman Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.--B,C Radio Engineering Labs., 36-40 37 St., Long Island City 1, N.Y.--C

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Calif.--B

McLaughlin. J Box 529, La Jolla, Calif .-

Radio Industries, Inc., 5225 N. Ravenswood Ave., Chicago 40, Ill.—A,C,F
Radio Shack Corp., 167 Washington St., Boston 8, Mass.—A,C
Radio & TV Inc., Brunswick Div., 119 W. 57 St., New York 19, N.Y.—B,C,G,H
Radio Wira Talevision Inc., 100 6th Ave., New York 13, N.Y.—A,B

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, III.—B Raytheon Mfg. Co., Equip. Marketing Div., 100 River St., Waltham, Mass.—E Rex Electronics Corp., 1351 E. De Loss St., Indianapolis, Ind.—H

Sanders Associates, Inc., 137 Canal St., Nashua, N.H.—E Sargent-Rayment Co., 1401 Middle Harbor Rd., Oakland 20, Calif.—A,B Schafer Custom Engineering, Paul, 235 S. 3 St., Burbank, Calif.—A Schutten Mér. Co. Cont. W. 20 F. Montauk

- Schutter Mfg. Co., Carl W., 80 E. Montauk Highway, Lindenhurst, N.Y.—E Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.—C
- Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N.Y.—E
- Specialty Assembling & Packing Co., Spe-cialty Eng. Div., 79 Clifton Pl., Brooklyn 38, N.Y.-A
- Sperry Gyroscope Co., Great Neck, N.Y.-D,E Standard Coil Products Co., 2085 N. Hawthorne Ave., Melrose Park, Ill.-A.B,F,G,H

Stavid Eng'g, Highway 22, Plainfield, N.J.-D.E.H

Stromberg-Carlson Co., Rochester 3, N.Y.-B.C

Tarzian, Inc., Sarkes, 539 S. Walnut St., Bloomington, Ind.—G,H

Technical Materiel Corp., 700 Fenimore Rd., Mamaroneck, N.Y.--A

- Telerad Mfg. Corp., 1440 Broadway, New York 18, N.Y.-D,E Televiso Corp., 1415 Golf Rd., Des Plaines, Ill.-H

Thordarson-Meissner Mfg. Div., Maguire In-dustries, Inc., 7th & Bellmont, Mt. Carmel, Ill.—A.B.C.F.G Three Dimension Co., Div. Bell & Howell, 3512 N. Kostner Ave., Chicago 41, Ill.— A.B.C

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.—A

Technicraft Labs., Thomaston-Waterbury Rd., Thomaston, Conn.-E

Universal Microwave Corp., 380 Hillside Ave., Hillside, N.J.-E Varian Associates, 611 Hansen Way, Palo Alto, Calif.—D

- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.-D,E

Victoreen Instrument Co., 3800 Perkins Ave., Cleveland 12, Ohio-G Voron & Co. George, 835 N. 19th St., Phila-delphia 30, Pa.-A

Waveline, Inc., Caldwell, N.J.-E

Weston Labs., Inc., Box 407, Littleton, Mass .--

Weymouth Instrument Co., 1440 Commercial St., E. Weymouth 89, Mass.--E

Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.-E

#### **99—TUNING PARTS**

Gear unitsA	
Mechanical selectorsB	
Motor operated unitsC	
Remote controlD	
Trimmer capacitorsE	
Trimmer inductances	

- Airborne Instruments Labs., 160 Old Country Rd., Mineola, N.Y.--C,D
- Allied Int'l Inc., 230 Park Ave., New York 17, N.Y.-D
- Amplex Div., Chrysler Corp., P.O. Box 2718, Detroit 31, Mich.-A Anchor Electronics Inc., 717 Sip St., Union City, N.J.-F
- Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.-D

- Los Angeles 64, Calif.--D Bayside Watch Tool Co., 20-02 Utopia Park-way, Whitestone 57, N.Y.--A,B,C,D Bead Chain Mfg. Co., 88 Mountain Grove St., Bridgeport 5, Conn.--A Bowmar Instrument Corp., Smith Municipal Airport, Fort Wayne, Ind.--A,C Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.--E,F Centralab Div., Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee 1, Wisc.--E CGS I aboratorize Inc. 301 Ludlow St., Stam-
- CGS Laboratories, Inc., 391 Ludlow St., Stam-ford, Conn.-D

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- Colortone Electronics, Inc., 200 Frank Rd., Hicksville, L.I., N.Y.--B '
- Corning Glass Works, Corning, N.Y.-E,F Electro Assemblies, Inc., 2935 W. Belmont Ave., Chicago 18, Ill.-F
- Electromec, Inc., 3200 N. San Fernando Blvd., Burbank, Calif.—A,B,C,D
- Empire State Laboratories, 2608 Merrick Rd., Bellmore, L.I.,N.Y.-A. Erie Resistor, 644 W. 12 St., Erie 6, Pa.-E Erwood, Inc., 1770 W. Berteau Ave., Chicago 13, Ill.-A
- General Instrument Corp., 829 Newark Ave., Elizabeth 2, N.J.-E.F
- Greenleaf Mfg. Co., 7814 Maplewood Indus-trial Court, St. Louis 17, Mo.—A,C
- Gries Reproducer Corp., 5-2nd St., New Ro-chelle, N.Y.--A Grigsby-Allison Co., 407 N. Salem Ave., Ar-lington Heights, Ill.--C
- Hermaseal Co., 1101 Lafayette St., Elkhart, Ind.-E
- HI-Q Div., Aerovox Corp., Olean, N.Y.-E
- Insuline Corp. of America, 186 Granite St., Manchester, N.H.-E I.
- Q. Industries, 6110 Wilshire Blvd., Los Angeles 48, Calif.—D Johanson Mfg. Corp., Rockaway Valley Rd., Boonton, N.J.—A
- Lavoie Labs., Inc., Morganville, N.J.-B,C,D Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.--C
- Calif.--C Microtone Co., 5740 Wayzata Blvd., Minneapo-lis 16, Minn.--D Millen Mfg. Co., James, 150 Exchange St., Malden 48, Mass.--E Molded Insulation Co.. 335 E. Price St., Philadelphia 44, Pa.--E
- Pacific Mercury TV Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.—D
- Petroff, Peter A., 127 Water St., New York 5, N.Y.--A,D
- N.I.--A,D
  Pitometer Log Corp., 237 Lafayette St., New York 12, N.Y.--A,B,C
  Radio Industries, Inc., 5225 N. Ravenswood Ave., Chicago 25, Ill.--E,F
  Radio Sonic Corp., Plainfield, N.J.--C
- Research Development Mfrs. Inc., 429 E. Col-lon St., Philadelphia 44, Pa.—A
- Ion St., Finladelphia 33, Fa.—A
   Research Instrument Co., 233 Broadway, New York 7, N.Y.—A,C
   Ryan Industries, Inc., 19159 John R. St., Detroit 3, Mich.—D
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-F Standard Coil Products Co., 2085 N. Hawthorne Ave, Melrose Park, Ill.-B.E.F
- Stavid Eng'g, Highway 22, Plainfield, N.J.-A,B,C,D
- Tarzian Inc., Sarkes, 539 S. Walnut St., Bloom-ington. Ind.-E
- Television Remote Control Co., 820 N. Fairfax Ave., Los Angeles 46, Calif.—D
- T.J. Mfg. Corp., 1020 S. Josephine St., Mar-tinsville, Ind.-F
- Tru-Vue Television Co., 99 Featherbed Lane, Bronx 52, N.Y.-D Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 7, N.J.-A,B,C
- Vectron, Inc., 1611 Trapelo Rd., Waltham 54, Mass.—A
- Western Gear, Electro Products Div., 132 W. Colorado St., Pasadena, Calif.—A,C
- White Industries, 421 W. 54 St., New York 19, N.Y.-C
- Winzeler Mfg. & Tool Co., 1712 W. Arcade Pl., Chicago 12, Ill.—A

#### 100-WIRE & CABLE

Bus barAR
Cable, antenna transmission,
receivingA
Cable, antenna transmission,
transmittingB
Cable, assembliesC
Cable, coaxialD
Cable, delayAV
Cable, flat wovenE

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Cable, insulatedF
Cable, microphoneG
Cable, shielded
Cable, solid dielectricJ
Cable, telephoneAW
Cable, UHFK
Cords, attachment
Cords, resistance
Test Leads AP
Transmission line
Wire, aluminumN
Wire, asbestos insulated
Wire, ceramic insulatedP
Wire, copper, bareQ
Wire, copper, insulatedR
Wire, enameledS
Wire, filament
Wire, formsAAA
Wire, glass insulatedU
Wire, guyV
Wire, harnessesW
Wire, high voltageX
Wire, hookup
Wire, litzZ
Wire, magnetAA
Wire, magnetic recording AB
Wire, markers AAB
Wire, molybdenumAX
Wire, nickel-clad copperAC
Wire, phosphor bronzeAD
Wire, plastic insulatedAE
Wire, platinumAF
Wire ReelsAS
Wire, resistanceAG
Wire, shieldedAH
Wire, silicon bronzeAY
Wire, silver platedAl
Wire, steelAJ
Wire, tantalumAK
Wire, teflon insulatedAZ
Wire, thermocoupleAAC
Wire, tungstenAL

Cable, Ignition .....I

- Accurate Insulated Wire Corp., 25 Fox St., New Haven 13, Conn.—A,C,D,F,G,H,I,L,R, AE,AO,AW
- Ackerman-Gould Co., 92 Bleecker St., New York 12, N.Y.—AAB
- Acme Wire Co., New Haven 14, Conn.-F,R, S,U,AA
- Advance Insulated Wire & Cable, P. O. Box 1026. Plainfield, N.J.—A.D.F.G.H.I.J.K.L.R, U.X.Y.AE,AH,AO
- Aerolite Electronics, 507 26th St., Union City, N.J.-C,W,AP
- Aeronautical Electronics. Inc., P.O. Box 6043, Raleigh, N. Car.-W
- Aero Research Instrument Co., 1901 N. Her-mitage Ave., Chicago 22, Ill.—P,U,AAC Aero Specialties Inc., 25 Hermon St., Wor-cester, Mass.—C,D,F,H,R,U,W,X,Y,AE,AH, AW,AZ
- Airborne Electronics Inc., 155 1 St., Mineola, N.Y.-A,B,D,F,H,R,W,AD,AE,AH A-K Mfg. Co., 115 S. Northwest Hwy., Bar-rington, Ill.-C,D,E,F,G,H,L,M,R,W,X,Y,AE, AH,AP
- Alden Products Co., 117 N. Main St., Brock-ton 64, Mass.-C,H,K,AP

- ton 64, Mass.--C,H,K,AP All Channel Antenna Corp., 47-39 49 St., Woodside 77. N.Y.--A Allegheny Ludlum Steel Corp., 2020 Oliver Bidg., Pittsburgh 22, Pa.--AJ Allied Allegri Machine Co., 141 River Rd., Nutley 10, N.J.--C,L Allied Electronic Equip. Co., Bidg. #604, Oak-land Airport, Oakland, Calif.--C,L Allied Eccentre & Eng's Inc. 6916 Santa

- land Airport, Oakland, Galit.—G.L
  Allied Research & Eng'g, Inc., 6916 Santa Monica Blvd., Los Angeles, Calif.—AN,AQ
  Alloy Metal Wire Co., 13 & Penna. Ave., Prospect Park, Pa.—AC, AG
  Alpha Wire Corp., 430 Broadway, New York
  13. N.Y.—C.D.E,F,G,H,I,L,Q,R,U,V,W,X,Y, AD,AE,AH,AO,AP,AR,AW,AZ,AAB
- Aluminum Co. of America, Alcoa Bldg., Pitts-burgh 19, Pa.—N.AR Aluminum Mfg. Co., 1629 Portland Ave., Louisville 3, Ky.—F.J.N

- American Brass Co., 414 Meadow St., Water-bury 20, Conn.—Q American Electric Cable Co., 181 Appleton St., Holyoke, Mass.—A.C.F.G.H.I.J.K.L.M.R.U. W.Y.AE,AG,AH,AP,AW American Electro Metal Corp., 320 Yonkers Ave., Yonkers, N.Y.-AL,AX

- American Mercantile Co., 33 W. 42nd St., New York 36, N.Y.-Q,S,Z,AA
  American Phenolic Corp., 1830 S. 54 Ave., Chicago 50, Ill.-A,B,C,D,F,G,H,J,K,R,X,Y, AE,AO,AZ
  American Platinum Works, 321 N. J. R. R. Ave., Newark 5, N.J.-AF,AG,AAC
  Anaconda Wire & Cable Co., 25 Broadway, New York, N.Y.-A,B,D,E,F,G,H,I,K,N,Q, R.S,U,X,Y,AA,AE,AH,AO,AP,AR,AW,AAA
  Anchor Wire Corp., 183-16 Jamaica Ave., Jamaica 23, N.Y.-V
  Andrew Corp., 363 E. 75 St., Chicago 19, Ill. -A,B,D,AO
  Ansonia Wire & Cable Co., 63 Main St., An-sonia, Conn.-D,F,G,H,J,R,X,AE,AO,AW
  Antenna Products, 3628 N. Lincoln Ave., Chi-cago 13, 111.-A
  Antenna Specialists Co., 12435 Euclid Ave.,

- Antenna Specialists Co., 12435 Euclid Ave., Cleveland 6, Ohio-C Apex Wire & Cable. 237 37 St., Brooklyn 32, N.Y.-C,F,G,H,L,R,W,Y,AE,AH
- Arey Machine Co., 1000 Stuyvesant, Union, N.J.-L.M.AP
- ASC Cable Div., Radio Apparatus Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.--C
- Associated Eng'g Corp. of Boston, 65 Kent St., Brookline 46, Mass.-L,AP
- Associated Eng'g & Mfg. Corp., Glen Ridge, N.J.-T.AL.AX
- Atlantic & Pacific Wire & Cable, 112-01 North-ern Blvd., E. Elmhurst, L.I., N.Y.-F.H.I, K.L.M.N,O.P.Q.R.S,U.X.Y,Z,AA,AE, AG, AH, AS,AW
- Atlantic Wire & Cable Corp., 119-14 14th Road, College Point 56, N.Y.-A.B.D.F.G, H.K.R.Y.AE,AH,AO,AW
- Barber-Colman Co., 1300 Rock St., Rockford, Ill.-AAC
- Barlow Electrical Mfg. Co., 155 E. 128th St., New York 35, N.Y.—C,D,AN
  Belden Mfg. Co., 4647 W. Van Buren St.. Chi-cago 44, 111.—A,B,F,G,H,I,K,Q,R,S,U,Y,Z,AA, AE,AH,AO,AP
- Bergen Wire Rope Co., Gregg St., Lodi, N.J.-C.AL
- Birnbach Radio. 145 Hudson St., New York, N.Y.—A.B.C.D.E.F.G.H.I.L.M.N.Q.R.S.T.U.V. X.Y.AA.AD.AE.AH.AI. AJ, AO, AP, AR, AV, AW.AY.AZ
- Bishop & Co., J., King St., Malvern, Pa.-AF ir Co. J.P., 89 Union St., Mineola, N.Y. -AN,AQ Blair
- Bliss-Warren Electronic Corp., Box 23, Sussex, N.J.-C.W
- B & M Elec. Co., 838 4th Ave., Brooklyn 32, N.Y.-F.N.R.W.Y.AE
  Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.-A.B.C.D.E.F.G.H.I.J.
  N.O.P.R.U.X.Y.Z.AB, AC, AE, AH, AI, AO, AP, AY, AZ, AAC
- Brady Co., W. H., 727 W. Glendale Ave., Mil-waukee 12, Wisc.—AAB
- Bram Chemical Co., 820 65th Ave., Philadel-phia 26, Pa.-Q,AD,AF,AI,AK,AL,AX,AY Brand & Co., William, North & Valley Sts., Willimantic, Conn.-A,B,C,D,F,G,H,J,K,R,U, W.X,Y,AE,AH,AO,AW,AZ,AAB
- Brew & Co., Richard D., Airport Rd., Con-cord, N.H.-AV
- Breeze Corporations, 700 Liberty Ave., Union, N.J.-W
- Bridgeport Brass Co., 30 Grand St., Bridge-port 2, Conn.-AR,AY
- Bristol Co., Waterbury 20, Conn.-AAC Buchen Co., R. J., P.O. Box 9, Bricelyn, Minn. —A.B.AO
- Buggie, Inc., H. H., 726 Stanton St., Toledo 4. Ohio--C
- Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 7, Pa.-D
- Cadre Industries Corp., 19 Delaware Ave., Endicott, N.Y.—X.W Campbell X-Ray Corp., 110 Cummington St., Boston 15, Mass.—X
- Capitol Stage Lighting Co., 527 W. 45 St., New York 36, N.Y.—O Carol Cable Co., 190 Middle St., Pawtucket, R.I.—C,D.F,G,H,I,K,L,W,AP
- BC Electronics Co., 2601 N. Howard St., Philadelphia 33, Pa.-D CBC
- Century Lighting Inc., 521 W. 43rd St., New York 25, N.Y.—F Chase Brass & Copper Co., 236 Grand St., Waterbury 20, Conn.—F.Q.R,U.AA,AD,AR
- Chester Cable Corp., Oakland Ave., Chester, N.Y. A,B,D,F,G,H,J,K,R,X,Y,AE,AO,AP, AW
- Chester-Morton Electronics Corp., 10 St., and Morton Ave., Chester, Pa.—C,G,L,W,AP
- Clarostat Mfg. Co., 1 Washington St., Dover, N.H.---M
- Cleveland Wire Cloth & Mfg. Co., 3573 E. 78 St., Cleveland 5, Ohio—E Cohn Corp., Sigmund, 121 S. Columbus Ave., Mount Vernon, N.Y.—F,N,Q,R,S,T,AD,AF, AG,AI,AL,AAC

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Coleman & Sons, D., 4515 W. Addison St., Chicago 41, III.—A.B.C.E.F.G.H.K.L.O.Q.R. S.U.W.X.Y.Z.AA.AH Columbia Technical Corp., 5 E. 57 St., New York 22, N.Y.—A.D.AV Columbia Wire & Supply, 2850 Irving Park Rd., Chicago, III.—A.C.D.E.F.G.H.I.K.L.N, O.Q.R.S.U.V.W.X.Y. AA.AE, AH.AO, AP.AR, AW.AZ
- Conn-Cord. Inc., Progress Ave. & Monroe St., Union, N.J.-C,W
- Consolidated Productions, Bldg. 9, Broward Int'l Airport, Ft. Lauderdale, Fla.--W
- Consolidated Wire & Associated Co.'s., 1635 S. Clinton St., Chicago 16, Ill.—A,B,D,E,F,G, H,I,J,K,L,M,O,Q,R,S,U,W,X,Y,Z,AA,AD,AE, AG,AH,AP,AT
- Consolidated Wire & Cable Corp., 2 Neil Ct., Oceanside, L.I., N.Y.-A,B,F,G,K,L,R,Y,AE, AO,AW
- Co-operative Industries, Inc.. 100 Oakdale Rd., Chester, N.J.—C,H,I,W,AH
- Copperweld Steel Co., Glassport, Pa.—A,B,Q, R,V,Y
- Cornish Wire Co., 50 Church St., New York 7, N.Y. A.C.F.G.H.K.L.O.R.U.W.X.Y.AE,AH, AO,AP,AZ
- Decatur Electronic Industries Corp., 203 Ori-noco Dr., Brightwaters, L.I., N.Y.-C,L,W, Y,AP,AW
- Diamond Mfg. Corp., 7 North Ave., Wake-field, Mass.--C
- Diamond Wire & Cable Co.. 445 Park Ave., Sycamore, Ill.-F,G,H,R,AW
- Dielectric Materials Co., 5315 N. Ravenswood Ave., Chicago 40, Ill.—A,B,D,F,G,H,J,K,R, U,X,Y,AE,AH,AO
- Downing Crystal Co., 191 Shaffer Ave., West-minster, Md.-C
- Driver Co., Wilbur R., Riverside Ave., New-ark 4, N.J.--AG Driver-Harris Co., Harrison, N.J.--T,U,AG,
- AAC Dudek & Bock. 2100 W. Fulton, St., Chicago 12, Ill.-AAA
- DuMont Laboratories Inc., Allen B., Communi-cation Products Div., 1500 Main Ave., Clif-ton, N.J.-AO
- Duralith Corp., 1025 Race St., Philadelphia 7, Pa.—AAB Duramark Inc., Port Washington, N.Y.-AAB
- Duramark Inc., Port Washington, N.Y.—AAB
  Eagle Electric Mfg. Co., 23-10 Bridge Plaza
  S., Long Island City, N.Y.—L
  Eagle Electronics Corp., P.O. Box 775, Meriden, Conn.—C,F,G,H,L,R,W,Y,AO
  Eastern Specialty Co., 3617 N. 8 St., Phila-delphia 40, Pa.—C,AP
  Elcon Mfg. Co., 436 E. Manchester Ave., Los Angeles 3, Calif.—C
  Eldi Electronic Devices 204 W Houston St

- Eldi Electronic Devices, 204 W. Houston St., New York 14, N.Y.-C,AP Electri-Wire Assemblies, 700 W. Va. St., Mil-waukee 4, Wis.-F,L,M,O,W,AE,AH,AP Electronic Production & Devel., Inc., 138 Nevada St., El Segundo, Calif.--W Electronicraft Loc. 27 Millione St. D.
- Electronicraft, Inc., 27 Milburn St., Bronx-ville 8, N.Y.—D,F,G,H,AO,AV
- Electro Precision Products Inc., 139-30 34th Rd., Flushing 54, N.Y.—AU Electro-Tech Equip. Co., 308 Canal St., New York 13, N.Y.—AC
- Empire Electronics Co., 166 River St., Pater-son 1, N.J.-C.L.M.AP
- ESC Corp., 534 Bergen Blvd., Palisades Park, N.J.-AV
- Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.—C,F,G,I,L,R,S,W,Y,AA,AZ
- Everlast Wire & Cable Co., 12 Maple Ave., Haverstraw, N.Y.-F,K,R
- Factories Enterprises Inc., P.O. Box 4025, Pittsburgh 1, Pa. Fairbanks Wire Co., 2287 Hollers Ave., New York 69, N.Y.-AA
- Fansteel Metallurgical Corp., 2200 Sheridan Rd., N. Chicago, Ill.-AK,AX
- Federal Electric Corp., 6446 Santa Monica Blvd., Los Angeles 38, Calif.—A,B,D,H,J,K
  Federal Telecommunication Labs., 500 Washington Ave., Nutley 10, N.J.—D,AE
  Federal Telephone & Radio Co., Div. of IT&T, 100 Kingsland Rd., Clifton, N.J.—A,C,D,F, G.H.K,Y,AO,AR

- Fenton Co., 15 Moore St., New York 4, N.Y. --D,F,G,H,K,N,O,R,Y,AE,AH,AJ
- Ferris Instrument Co., 110 Correlia St., Boonton, N.J.-AQ Ferro Electric Prod., Kirkland, Ill.-A,K,N
- Fidelitone, Inc., 6415 Ravenswood Ave., Chi-cago 26, Ill.—AB
- Fort Wayne Metals, Inc., 3211 MacArthur Dr., Fort Wayne 6, Ind.—AB,AJ
- Garfield Wire Div., Overlakes Corp., 142 Mon-roe St., Garfield, N.J.--Q,S,AA Gavitt Wire & Cable Co., Brookfield, Mass.--F,G,H,M,R,U,W,Y,AE,AH,AP,AW,AAC

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- Gee-Lar Mfg. Co., 819 Elm St., Rockford, Ill .-

- L Gem Electric Mfg. Co., 237 37 St., Brooklyn 32, N.Y.-L General Cable Corp., 420 Lexington Ave., New York 17, N.Y.-N,O,Q,R,S,U,Y,AA,AE,AH General Cement Mfg. Co., 919 Taylor Ave., Rockford. III.-A.AA,AB,AS General Electric Co., Construction Mat. Div., 1285 Boston Ave., Bridgeport 16, Conn.-F,H.O,R.S,U.W,Y,AA,AE,AZ General Electric Co., Apparatus Div., 1 River Rd., Schenectady, N.Y.-AR General Electric Co., Monowatt Dept., 95
- General Electric Co., Monowatt Dept., 95 Hathaway St., Providence 7, R.I.-C
- General Hermetic Sealing Corp., 99 E. Haw-thorne Ave., Valley Stream N.Y.—C General Insulated Wire Works, 69 Gordon Ave., Providence, R.I.—C,D,F,G,H,L,R,AE,
- Ave., F AH,AW
- General Products Corp., Salem St., Union Springs, N.Y.-C General Radio Co., 275 Mass. Ave., Cambridge 39, Mass.-D.K
- Goldsmith Bros. Smelting & Ref. Co., 111 N. Wabash Ave., Chicago 2, Ill.—AF
- Good, Inc., Don, 1014 Fair Oaks Ave., S. Pasadena, Calif. A.F.I.J.K.Q.R.X.AE.AO, ÂP
- Graybar Electric Co., 420 Lexington Ave., New York 17, N.Y.-G,AO
- Green Co., C. A., 14651 Wood St., Harvey, Ill.-W Gulton Mfg. Corp., 212 Durham Ave., Metu-
- chen, N.J.-D G. W. Assoc., Box 2263. El Segundo, Calif.-AM.AN.AQ.AU

Hackensack Cable Corp., 110 Orchard St., Hackensack, N.J.—A,B

Haft & Sons. 950 Kent, Brooklyn 5, N.Y .--- Y Hallamore Mfg. Co., 2001 E. Artesia, Long Beach 5, Calif.—A,B,C,AP,AW Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif.—C,H,I,W,AH,AP

Hitemp Wires Inc., 126 Windsor Ave., Min-eola, L.I., N.Y.-D.H.R.S,U.Y.Z.AA,AZ Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.-A,C,F,G,H,K,L,M,R,W,X,Y, AE,AH,AO

Houlihan Co., T. J., 2508 W. Lawrence Ave., Chicago 25, Ill.--W

Hudson Wire Co., 62 Water St., Ossining, N.Y. ---N,Q,S,U,Z,AA,AD,AI

I E Manufacturing, 325 N. Hoyne Ave., Chi-cago 12, III.--V

Imperial Radar & Wire Corp., 1661 Boone Ave., New York 60, N.Y.—A.B.C.D.E.F.G.H.I.J., K.L.M.NO,P.Q.R.S.T.U.V,W. X.Y.Z. AA,AC, AD,AE,AF,AG,AH,AI,AJ,AK,AL,AO,AP,AR, AS,AV,AW,AY,AZ,AAA,AAB

Improved Seamless Wire Co., 775 Eddy St., Providence 5, R.I.-AC,AI

Industrial Wire Troducts, 1106 Carnegie Ave., Cleveland 15, Ohio-C.L.M., W Instrument Devel. & Mfg. Corp., 3018 E. Foot-hill Blvd., Pasadena 8, Calif.-C Instrument Wire Co., 158 Church St., Guil-ford, Conn.

Insuline Corp. of America, 186 Granite St., Manchester, N.H.—A,C,M,V,AP Jelliff Mfg., Southport, Conn.—AG

Jersey Specialty Co., Burgess Pl., Mountain-view, N.J.-A.F.K.R.AO Jiffy Clip Mfg. Co., 128 Clinton Ave., Hunting-ton, N.Y.-AP

Kahn & Co., 541 Windsor St., Hartford 1, Conn.-C,I,W

Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.—I,N,AA.AO,

Kanthal Corp., Amelia Pl., Stamford, Conn .--

Kaywoff Products Co., Overton, Nebr.—AE Kellogg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, Ill.—Q,R Kemet Co., Div. Union Carbide & Carbon, P.O. Box 6087, Cleveland 1, Ohio—AX

Kerrigan Lewis Mfg. Co., 4421 W. Rice St., Chicago 51, Ill.—Z,AA
Kings Microwave Co., 719 Main St., New Ro-chelle, N.Y.—AN,AQ
Koiled Kords, Inc., Box K, New Haven 14, Conn.—F,G,H,L,AH,AP

Kulite Tungsten Co., 723 Sip St., Union City, N.J.-T.AC.AL.AX

N.J.--I.AC.AL.AX Kulka Electric Mfg. Co., 633 S. Fulton Ave., Mount Vernon, N.Y.--L Lear, Inc., 3171 S. Bundy Dr., Santa Monica, Calif.--C

Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.—AAC Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.—C,D,E,F,G,H,L,R,U, X,Y,AH

Mackenzie Products Co., 141 Brewery St., New Haven 11, Conn.-AN

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AR

MacLeod & Hanopol, 10 Roland St., Charles-ton 29, Mass.-C

Markwik Mfg. Co., 147-39 18 Ave., White-stone 57, N.Y.-AAB Mendelsohn Speedgun Co., 4th Ave., Haskell, N.J.--AN

Mercury Eng's Corp., 399 E. Cottage Pl., York, Pa.--W

Metals & Controls Corp., General Plate Div. & Spencer Thermostat Div., 34 Forest Ave., Attleboro, Mass.—AF,AI,AAC

icrodot Div., Felts Corp., 1826 Fremont Ave., S. Pasadena, Calif.—A,B,C,D,G,H,AO, AV Microdot

Microwave Devel. Labs. Inc., 22D Grove St., Waltham 54, Mass.—AN Miller Electric Co., 120 Main St., Pawtucket, R.I.—F,L,R,U,W

Modelectric Products Co., 1500 Bangs Ave., Asbury Park, N.J.-I,L,W,AP Modern-Aire Mfg. Corp., 4436 W. Roosevelt Rd., Chicago 24, Ill.-N,V

Modern Wire Co., 39-30 Review Ave., Long Island City 1, N.Y.-N.Q.R.V.AJ

- Mohawk Plastic Corp., 320 River St., Fitch-burg, Mass.—A,F,G,H,K,R,Y,AE,AH,AO,AW Monotuck Mfg., Water St., Holyoke, Mass.—Q Moore Tool Works, 1311 Riverside Dr., Los Angeles 31, Calif.-L

National Electronic Mfg. Corp., 186 Granite St., Manchester, N.H.—K.V Neosil Products, Div. of Rubber Assoc., 1 E. 57 St., New York 22, N.Y.—C,F,K,L,M

Newark Radio Laboratories, Box 33, Eastham 3, Mass.—P,AL,AX

New England Electrical Works 365 Main St., Lisbon, N.H.—E,F,H,L,Q,R,S,Z,AA Ney Co., J. M., 71 Elm St., Hartford, Conn.—

Ney Co., J. AG, AAA

- Nichols Wire & Aluminum Co., 1728 Rocking-ham Rd., Davenport, Iowa—N,V Noel Mfg. Co., 25 E. 4 St., New York 3, N.Y.-L,W
- North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Me.—N,Q,S,T,AA,AI, AL,AX
- Okonite Co., Passaic St., Passaic, N.J.—D,F,G, H,I,J,X,AE,AH
- Overlakes Corp., Garfield Wire Div., 142 Mon-roe St., Garfield, N.J.-Q,S,AA
- Pacific Electricord Co., 3217 Exposition Pl., Los Angeles 18, Calif.—C,I,L,R,U,W,AP

Paraplegics Mfg. Co., 10068 Franklin Ave., Franklin Park, Ill.-C,W

Peirce Wire Recorder Corp., 5900 N. North-weşt Hwy., Chicago 31, Ill.—AB

Peschel Electronics, Inc., 18 Garden St., New Rochelle, N.Y.--C,W

A

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- Petroff, Peter A., 127 Water St., New York 5, N.Y.-A,B,D,K,AL,AM,AN
- Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.—A,B,C,D,F,G,H,L,R,W,X,Y,AE,AH, AO,AP,AW
- Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N.Y.—A,B,D,F,H,I, J,K,L,O,Q,R,S,U,X,Y,AA,AE,AH,AO,AP,AR, AV,AW

Philadelphia Electronics Inc., 24 E. Goulter St., Philadelphia 44, Pa.—C Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.—A,D,K,AO.AP

Philmore Mfg. Co., 113 University Pl., New York 3, N.Y.-G,M

- IOFK 3, N.I.—G,M
  Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.—AD
  Plastic Wire & Cable Corp., E. Main St., Jewett City, Conn.—D,F,G.H.I.L.R.W.Y.AH,AP
  Plastoid Corp., 42-61 24 St., Long Island City 1, N.Y.—A,B,D,F,G,H,I,K,R,U,X,Y,AE,AH, AO,AW
- Plymouth Electronics Corp., 50 Kingsbury St., Worcester 3, Mass.--V
- Porter Co., H. K., Alloy Metal Wire Div., Prospect Park, Pa.—AC,AD,AJ,AY Precision Tube Co., N. Wales, Pa.—D,H

Prodelin Inc., 307 Bergen Ave., Kearny, N.J.-B,D,AO

- Quincy Speaker Mfg. Corp., 221-5 Oak St., Quincy, Ill.—C,L,W Radio City Products Co., 101 W. 31st St., New York 1, N.Y.—C,L,M,AP
- Radio Cores, Inc., 9540 Tulley Ave., Oaklawn, Ill.-Z Ray Co., 441 Summit St., Toledo 4, Ohio—A,K,V
- Rea Magnet Wire Co., E. Pontiac St., Fort Wayne 4, Ind.-F,R,S,AA Rego Insulated Wire Co., 830 Monroe St., Hoboken, N.J.-D,G,R.X,Y
- Rembar Co., 117 Main St., Dobbs Ferry, N.Y. —AL,AX

Remco Mfg., 545 N. LaSalle, Chicago, Ill.-

Revere Corp. of America, 845 N. Colony Rd., Wallingford, Conn.—C,F,H,I,O,R,U,W,Y,AE, AG,AI,AP,AZ,AAC

and the second s ELECTRONIC INDUSTRIES DIRECTORY

- Rex Corp., Hayward Rd., W. Acton, Mass.— A,D,F,G,H,K,R,X,Y,AE,AH Reynolds Metals Co., 2500 S. 3rd St., Louis-ville 1, Ky.—N
- Rhode Island Electronics, Inc., Spring St., N. Dighton, Mass.-C
- Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R.I.—A,C,D,F,G,H,I,J,K,L, O,R,W,X,Y,AH
- Roanwell Corp., 662 Pacific St., Brooklyn 17, N.Y.--L
- Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.—D,F,H,K,O,R,U,Y,AA,AE, AH,AZ,AAC
- Roesch Co., D.J., 2200 S. Figueroa St., Los An-geles 7, Calif.--C
- Roflan Co., Topsfield, Mass.-AN
- Rollins Corp., 117 Schley Ave., Lewes, Dela.-
- Rome Cable Corp., Rome, N.Y.-D,F,G,H,N, O,Q,R,U,X,Y,AA,AE,AH Royal Electric Co., 95 Grand Ave., Pawtucket, R.I.-C,F,L,O,R,U,AW

Runzel Cord & Wire Co., 4727 Montrose Ave., Chicago 41, Ill.—F,H,R,U,W,Y,AE,AH Rupp's Assembling & Mfg., 2341 N. Seminary Ave., Chicago 14, Ill.—C,F,G,L,O,R,Y

Sanders Associates, Inc., 137 Canal Nashua, N.H.--C St.

Santa Monica Bay Sheltered Workshop, 2521 5 St., Santa Monica, Calif.—C,W

- Saxton Products, 2101 Grand Concourse, New York 53, N.Y.—AO Schutter Mfg. Co., Carl W., 80 E. Montauk Highway, Lindenhurst, N.Y.—AM.AN
- Scientific Coil Co., 5619 Broadway, Chicago 40, III.—I
- Scovill Mfg. Co., 99 Mill St., Waterbury 20, Conn.-Q,AC,AD,AY
- Sears Co., M. J., Roxbury, N.Y.-G
- Scars Co., M. J., Roxbury, N.Y.—G
  Secon Metals Corp., 7 Intervale St., White Plains, N.Y.—N,Q,R,S,T,AF,AI
  Selectar Industries, Inc., 8100 Ocean Park-way, Brooklyn 35, N.Y.—C,AN,AP,AQ
  Sequoia Process Corp., 871 Willow St., Red-wood City, Calif.—D,F,G,H,R,X,Y,AE,AH, AW,AZ
- Sightmaster of California Co., Gillespie Air-port, Santee, Calif.—AM.AN
- Sightmaster Corp., 111 Cedar St., New Ro-chelle, N.Y.--AM,AN
- Sittler Corp., 18 N. Ada St., Chicago 7, Ill. ---C,E,F,Q,R,W
- Slepian & Co., Arthur, 22 Burroughs St., Bridgeport, Conn.-R,Z,AA Smith Mfg. Co., F. H., 3047 W. Carroll Ave., Chicago 12, Ill.-L
- Sprague Electric Co., North Adams, Mass.--P,AZ
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers 2, N.Y.-C Standard Metals Corp., 262 Broad St., N. Attleboro, Mass.-Y.AJ
- Standard Wire & Cable Co., 3440 Overland Ave., Los Angeles 34, Calif.—A,B,D,E,F,G, H,I,J,K,N,O,P,Q,R,S,U,X,Y,Z,AA.AD,AE,AG, AH,AI,AO,AR,AS,AW,AY,AZ,AAC
- Star-A Electric Mfg. Co., 269 Meseroles St., Brooklyn 6, N.Y.-L
- Star Stainless Screw Co., 190 Union Ave., Pat-
- erson 1, N.J.—AJ Stromberg-Carlson Co., 100 Carlson Rd., Roch-ester 3, N.Y.—C,F,L,R Suprenant Mfg. Co., 199 Washington St., Bos-ton 8, Mass.—D,F,G,H,N,R,T,U,Y,AE,AH,AI Switchcraft Inc., 1334 N. Halsted St., Chicago 22, Ill.-C
- Sylvania Electric Products. 1740 Broadway, New York 19, N.Y.-Q,T,AC,AI,AJ,AL,AX
- Techalloy Co., Rahns, Pa.-AC
- Teletronic Laboratories Inc., 1835 W. Rose-crans Ave., Gardena, Calif.—C.W Tensolite Insulated Wire Co., 198 Main St., Tarrytown, N.Y.—C,D,F,H,R,U,W,Y,AE,AH,
- ÂI,AZ
- Thompson Clock, Bristol, Conn.-L,V,AR
- T. J. Mfg. Corp., 1020 S. Josephine St., Mar-tinsville, Ind.-C
- Transradio Ltd., 138a Gromwell Rd., London SW 7, England-D
- Tricon Mfg., 8008 Wallace St., Chicago, Ill.—AF Tri-Dex Co., P.O. Box 1207 Lindsay, Calif.—C, W

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T.V. Development Corp., 2024 McDonald Ave., Brooklyn 23, N.Y.-AO

- V Hardware Mfg. Co., 919 Taylor Ave., Rockford, Ill.—A,C,F,L,N,AP,AS Uniform Tubes, Inc., Level Rd., Collegeville 2, Pa.-D,H,AH
- Union Plastics Corp., 1627 Paterson Plank Rd., Secaucus, N.J.—A,D,E,F,G,H,K,L,Q,R,U,W,Y, AE,AH,AI,AP,AZ
- Uni-Products Div., Uni-Science, Inc., P.O. Box 64, Rockville, Md.—AP United Mfg. & Service Co., 405 S. 6th St., Milwaukee 2, Wisc.--W
- Univox Corp., 102 Warren St., New York 7, N.Y.-A,D,AO,AZ
- U.S. Rubber Co., 1230 Avenue of the Amer-icas, New York 20, N.Y.-D,F,G,H,K,L,N,Q, R,X,Y,AE,AH,AO,AW
- U.S. Tower Co., 219 Union Trust Bldg., Pe-tersburg, Va.-V,AO
- U.S. Wire & Cable, Progress & Monroe Sts., Union, N.J.—A,B,D,F,G,H,I,K,L,M,X,AE,AH, AP,AQ
- Utilities Service Co., Allentown, Pa.—V Vergon Specialties, 481 Mountainview Dr., N. Plainfield, N.J.—AAB
- Flainneid, N.J.—AAB
  Virginia Electronics Co., River Rd. at B & O R.R., Washington 16, D.C.—C
  Victor Electric Wire & Cable Corp., 64 Ack-erman Ave., Clifton, N.J.—A,B,C,F,G,H,I, K,L,R,X,Y,AE,AH,AO,AW,AAC
  Ward Products Corp., Div. Gabriel Co., 1148 Euclid Ave. Cleveland 15, Ohio.—K,AO
  Warren Wire Co., Pownal, Vt.—D,E,H,Q,R,S, Y,AA,AH
  Webster-Chicago Corp., 5610, W. Electric table
- Webster-Chicago Corp., 5610 W. Bloomingdale Ave., Chicago 39, Ill.—AB
- Western Gold & Platinum Works, 589 Bryant St., San Francisco 7, Calif.—AF,AI Western International Co., 45 Vesey St., New York 7, N.Y.—D,G,H,K,AH,AN,AP Western Mfg. Co., 1400 W. 22 St., Kearny, Nebr.—A,D,K,AO

West Instrument Corp., 525 N. Noble St., Chi-cago 22, III.—AAC Westline Products Div., Western Lithograph Co., 600 E. 2 St., Los Angeles 54, Calif.— AAB

Wheeler Insulated Wire Co., 150 E. Aurora St., Waterbury 20, Conn.—Q.R.S.W.Z.AA Whitaker Cable Corp., 1301 Burlington Ave., N. Kansas City 16, Mo.—C.F.H.I.R.W.X.Y, AE AH

Whitney Blake Co., New Haven 14, Conn.-C,F,G,H,L,R,AE,AH,AW Wildberg Bros., 742 Market St., San Fran-cisco 2, Calif.-AF,AI

Wind Turbine Co., E. Market St. & Penna. R.R., West Chester, Pa.-V Winsted Div., Hudson Wire Co., Main St., Win-sted, Conn.-S,Z,AA

Wiretron Products Electronic Div., Roberts Mfg. Co., 426 E. Shaffer St., Cleburne, Texas—C,H.W

Witelrad Electrical Mfg., 76 Pulaski St., Stam-ford, Conn.-L,M,O,R,W,AE Wright Eng'g Co., 180 E. Calif. St., Pasadena 1, Calif.-D,H,J,W,AZ

Wright Steel & Wire Co., G. F., 243 Stafford St., Worcester, Mass.-V

THE EXCLUSIVE

**MANUFACTURERS'** 

LOCALIZER INDEX

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Lists Manufacturers alphabetically by

name and address. Includes manufac-

turers' local representatives, branch and regional offices, executives and re-gional personnel, brand names, products,

services, telephone numbers, and terri-

tory covered. Provides the shortest means

of contacting any manufacturer . . . cuts

TELE-TECH

& ELECTRONIC INDUSTRIES

correspondence; speeds services.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

N. Kan AE,AH

# 1955 ELECTRONIC INDUSTRIES DIRECTORY Brand & Trade Mame Index

The brand names of the products, equipment, instruments, and materials in the radio-TV-electronic and related industries are listed alphabetically, with the name of the manufacturer.

The address of the manufacturer whose brand or trade name is listed may be obtained by referring to the Alphabetical Listing of Manufacturers, beginning on page 348.

A A—Fairbanks Wire Co. Abbot-Mational Gasket & Washer Abogias—Natvar Corp. A-B Quality—Ailen-Bradley ACA Firewali—Rockbestos Prods. Accuray—Ind. Neceleonics Accuray—Ind. Neceleonics Accwire—Accurate insulated Wire Acc—Croslev Actor - Accurate insulated wire Ace-Crosley Acepot-Ace Electronics Assoc. Acetrim-Ace Electronics Assoc. Acetrim-See Electronics Assoc. Acetrim-Sol Cinema Supply Acoustical Quad-Beam Instruments Acoustical-Acromark Acrograve-Acromark Acrograve-Acromark Acrograve-Acromark Acrograne-Acromark Acrograne-Acromark Acrograne-Acromark Acrosend-Acro Prods. Actoristical-Contralab Adaphone-Fenton Adashaft-Centralab Adaphone-Fenton Adashaft-Centralab Adaphone-Actor Prods. Aducio-Advance Electronics Addcola-Stribin Clock Addapluy-Associated Engig Add-A-Setion-Alpar Mfg. Addigst-A-Cone-Quam-Nichols Adjest-A-Volt-Std. Electronics Addigst-A-Cone-Quam-Nichols Adjest-A-Volt-Std. Electronics Addist-Acome Quam-Nichols Adjest-A-Volt-Std. Electronics Adistohm-Ward Leonard Adalake-Adams & Westiake Adastad-Macleod & Hanopol Advancetor-Acroave Electronics Adastad-Macleod & Hanopol Advance-Driver-Harris Co. Advancetor-Acroave Electronics Adastad-Macleod & Hanopol Advance-Driver-Harris Co. Advancetor-Acroave Electronics Adastad-Macleod & Hanopol Advance-Driver-Harris Co. Advancetor-Acroave Electronics Advancetor-Acroave Electr Account of the second of the s Advancetron-Advance Electronics Aeco-Amer, Electric Cable Aercom-Aerovox Aeroflim-Aerovox Aeroflim-Aerovox Aeroflim-Aerovox Aeroflim-Aerovox Aeroline-Aerovox Aeroline-Aeronautical Radio Aero-Seal-Breeze Corps. Aerosine-Aeronautical Electronics Aerosine-Friez Instroment Afsco-A, F. Smuckler Agastat-Elastic Stop Nut Aga-Arendt Inst. Air-Airborne Instruments Airboy-Mitchell Industries Airbraive-S. S. White Dental Aircall-J, R. Scantlin Aircall-JFD Mig. Air Cone-American Phenolic Air Commander-Auulo Equip. Air Cone-American Phenolic Air Gemeal-Brach Mig. Corp. Airle Bergen Wire Rope AIr King-CBS Columbia Airlea-Don Good Airline-Weils-Gardner & Co. Air Guene-Costop Inter Acolo Airlea-Don Good Airline-Weils-Gardner & Co. Air Guene-CBS-Columbia Airlea-Com Scolumbia Airlea-Com Scolumbia Air-Airber-Hastings Instrument Air Queen-CBS-Columbia Air-Airber-Masings Instrument Air-Taek-Walshington Institute Akra-Ohm-Shalleross Mig. Alaka-Lacquer & Chemical

Alathon—E. 1. DePent de Nemours Albaseal—Johns-Manville Alchrome-Wilbur B. Driver Alco—American Lava Alco10—T. C. Wheaton Alcopate-Metals & Controls Alfer—Metals & Controls Algeo—Aoburn Mfg. Algen—Aabur Electronics Alilim—Alter Electronics Alilimetti—Barry Alfer-Metals & Controls Algon-Aoburn Mfg. Algon-Aoburn Mfg. Algon-Aoburn Mfg. All-Metle Electronics All-Metle-Barry All-Weather-S. S. White Dental Almanox-Frenchtown Porcelain Alnico-Arnoid Eng'g. Alnifer-Metals & Controls Alnor-Illinois Testing Labs. Alodine-American Chemical Al-1009-Western Gold & Plat-Inum Works Alphatron-Can. Radium & Uranium Alphiex-Alpha Wire Corp. Alsimag-American Lava Alsipiate-Metals & Controls Al-3009-Western Gold & Platinum Alphiex-Alpha Wire Corp. Alsimag-American Lava Alsipiate-Metals & Controls Al-3009-Western Gold & Platinum Alto-Trols-Healy-Ruff Co. Alumaveid-Johnson Mfg. Alamiladders-Werner Co. R.D. Alumac-Logistics Research AM-Aostin Ambirite-Micamol Radio Ameo-American Solder Amene-American Solder Ameco-American Solder America-Amer. Electronics Ameto-Amer. Electronics Ameto-Amer. Electronics Ameto-Amer. Electronics Ameto-American Mersoning Max-weil & Moore American-Manoring Max-weil & Moore Amico-Amer. Relays Amerca-American Instrument Amp-Aircraft-Marine Amphenol-Amer, Phenolic Amine—American Measoring Instru. Amineo—American Instrument Ampp—Cantralab Amptenci—American Instrument Amptenci—American Contralab Amptenci—American Phenolic Ampliet—Devol. Research Co. Ampliet—Bauland-Borg Corp. Ampli-Vision—Int'l. Telemeter Amrad—Crosley Amrecon—American Relay Amrecon—American Relay Amrecon—American Relay Amrecon—American Rotay Amrite—American Tower Anderometer—Micrometrical Mfg. Angel-Bell=National Sound Equip. Angel-Bell=National Sound Equip. Angle Geneses—Angle Geneses Anglegar—Airborne Accessories Announcemat—Recora Co. Anefla Chrometer—Coleman Instr. Anset—Dongdar Devices Announcemat—Recora Co. Anefla Mather Anstat—Frederic Fiader Antensifier—Bionder-Tongue Labs. Anti-Statie "79"—Merix Chemical AQ—Amet. Optical Alties Froducts Apuets Apuets Apuets Anstat—Frederic Fiader Anti-Statie "79"—Merix Chemical AQ—Amet. Optical AQ—Amet. Optical AQ—Amet. Coptical AQ=Amet. Coptical AQ=Amet. Coptical AQ=Amet. Coptical AQ=Amet. Coptical AQ=Amet. Coptical ACPC-Allies Products Aguada—Acheson Colloids Aquada—Acheson Colloids Aquada—Acheson Colloids Aquada—Acheson Colloids Aquada—Chamet. Radio Aracolite—Berlieb Electeronic Aracolite—Berlieb Electeronic Aratoric—Jua Arbooite—Amer. Radio Hdw. Arbooite—Amer. Radio Hdw. Arcadia—Wells-Gardner Arcolectrie—British Electronic Sales Ardoux—Ciba Ardux—Ciba Argyline—Argyle Electronics Arhto—Amer. Radio Hdw. Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrat—Electro-Volce Aristocrad—Dions-Marville Armaturo—Johns-Marville Armato-Johns-Marville Armaco—Armco Steel -Armco Steel

Arroh—Arnoid Balley Ind. Artisan—Electronic Organ Arts Asbestos Ebony—Johns-Manville Ascop—Automatic Switch Ascop—Applied Science Ascor—Amer. Speedlight Asheroft—Manning Maxwell & Moore

Ascop-Applied Science Ascor-Applied Science Ascor-Amer. Specialist Ashcroft-Manning Maxwell & Moore A-S-Allen-Stevens Corp. A/S-Antenna Specialists Ate-Automatic Emperature Control Attoatomature Comperature Control Attoatomature Comperature Control Attanticable-Atlantic Wire & Cable Atlas-Automatic Radio Attas-Automatic Radio Attas-Automatic Radio Attas-Automatic Radio Attas-Automatic Radio Attas-Automatic Radio Attas-Control Electronics Aubeston-Auban Mfg Audax-Audak Audio-Add-Greene Co. L. C. Audio-Aid-Greene Co. L. C. Audio-Aid-Freene Co. L. C. Audio-Aid-Pentron Andio Devices Audioliss--Audio Devices Audio-Nix-Pentron Audiophone-Femco Inc. Audio-Points-Audio Equipment Audiotape-Audio Devices Audiotape-Cousino Audiotape-Cousino Audiotape-Costan Mfg. Audograph-Gray Mfg. Co. Audoid-Cook Labs. Autopaph-Metaleraft Autolec-Automatic Radio Autorola-Automatic Radio Autorola-Auto-Test Autorola-Auto-Test Auto-Tong-Auto-Test Auto-Tong-Matu-Fest Auto-Tong-Matu-Fest Auto-Tong-Matu-Fest Auto-Tong-Matu-Fest Auto-Tong-Matu-Fest Auto-Tong-Matu-Fest Auto-Tong-Mato-Test Auto-Tong-Ma

Babyery-Electro Vision Baby Sitter-C. L. Greene Co. Baby Switch-R-F Electronics Bakelite-Union Carbide Baker & Adamson-Gen'I. Chem. Balata-Conant Labs. Balata-Bishop Mfg. Balta-Wilbur B. Driver Baline-JFD Mfg. Ballast-Wilbur B. Driver Ballast-Wilbur B. Driver Ballast-Wilbur B. Driver Ballast-Wilbur B. Driver Baltam-Aerovox Corp. Bantam-Smail Motors Bantam-Aerovox Corp. Bantam-Aerovox Corp. Bartam-Patwin Instruments Barelay-Patwin Instruments Barelay-Patwin Instruments Baretaw-Ming Laboratorles, Inc. Barhausen-Perfection Electric Baronet-Electro-Voice, Inc. Barrymount-Barry Corp. Bars Achew-Jensen Mfg. Bass Reflex-Jensen Mfg. Battery-Scope-McColpin-Christie Bartynower-Radiart Barty Step-D. S. Konnedy Bazooka-Ind, Eng'g Prods. B & B-Boland & Boyee

BD—Barnes Devel. Co. Beamajuster—Perfection Electric Beam Bender—Technicraft Labs. Beamed\_Power\_Rotaries—Teirex Beco-Electro-Measurements Beco—Electro-Measurements Bees Line—Radio Merchandise Sales BEL—Bei Fuse inc. Belab—Browne Electronics Belco—Bogue Electric Mfg. Beifono—Beil Sound Beifano—Packard Beil Beilant—Therme Lortements Beitone—Beit Sound Beitain—Packard Beit Beitain—Thermo Instruments Benco—Buck Eng'g Co. Ben-Har—Bentley, Harris Bepco—Buck Eng'g Co. Beraloy A—Wilbur B. Driver Berg—Erikson Specialties Tool Beryico—Beryilium Corp. Besteina—Bestferaft Profs. Besteina—Bestferaft Profs. Besteina—Besteraft Profs. Bistona—Besteraft Profs. Bistona—Besteraft Profs. Big Dan—Danforth Mfg. Big Jack—Kay-Townes Antenna Biluxor—Par Profs. Bimorph—Brush Electronics Bi-Prene—Bishop Mfg. Biraco—Birbach Radio Birch—Boetsch Bros. Birch—Bottsch Bros. Birmingham—British Electronics Bi-Seal—Bishop Mfg. Bisilok—Bishop Mfg. BI-Seal—Bishop Mfg.
Bislick—Bishop Mfg.
Bit Carrier—Femeo Inc.
Bit Step—Femeo Inc.
Bit Step—Femeo Inc.
Biaek Reauty—Sprague Electric
Blaek & White—Tro-Pine
Blaek Any—Ultra-Violet Prods.
Bluebird—Radio Corp. of Amer.
Blue Jacket—Sprague Electric
Bluepoint—Astron
Blue Streak—Amer. Elec. Cable
Bodde—Background Engineers
Bodde—Background Engineers
Bolex\_Prace—SoS Cinema Supply
Boes-Daytom—Vaitronics
Boltaron—Bolta
Bombarder—"S' Corrugated
Quenched Gap
Bondwin—Metals & Controls
Bondwin—Metals & Controls
Bondwin—Metals & Controls
Boordin—Wilkor Div., Aerovox
Borohm—Shallcross Mfg.
Borohm—Shallcross Mfg.
Borohm-Shallcross Mfg.
Borohm-Shallcross Mfg.
Borohm-Shallcross Mfg. Boron X-Technicraft Boscar-Benson-Lehner Bow-Radio Merchandise Sales Bow-Radlo Merchandise Sales Boy-Mar-Electrical-Service Bosol-Blacher Chemical B-Prene-Bishop Mf9. Corp. Bradleyometers-Allen-Bradley Bradleyometers-Allen-Bradley Bradleyometers-Allen-Bradley Bradleyometers-Allen-Bradley Brameo-Bram Chemical Co. Branet-Bram Chemical Co. Branets-C. F. Cannon Braze-Clad-Amer. Silver BRC-Boonton Radlo Breneo-Bristol Eng'g. Brenkert-Radlo Corp. of Amer. Bridgamatle-S. O. S. Clnema Bridger-Aodlo Inst. Britecarb-Wilbur B. Driver Bronco-Metals & Controls Bronco-Metals & Controls Bronzidite-JFD Mfg. Bronzochrom-Eutectic Welding Bronzochrom-Eutettie weigin Brook-Caledonia Electronics Brooklyn-Johns-Manville Brown Devil-Ohmite Mfg. Brown-Hill-R-F Electronics Brownie-Browning Labs. Brunswick-Radio & TV

Bryden—Chandler & Stedman BT— illinois Condenser Buczaneer il—Hudson Amer. Bulpiato—Sprague Electric Bushend—Buchanon Elec. Prods.. Buss—Bussmann Mfg. Button Mica—Erle Resistor B & W—Barker & Williamson

C—Philadelphia Quartz Cabinart—G & H Wood Prods. Cadet—Raytheon Mfg. Call-Bridge—Industrial Electronics Call-Power—Industrial Electronics Call-Bridge—industrial Electronics Call-Power—Industrial Electronics Call-A-Phone—Taik-A-Phone Callmaster—Lyman Electronic Calmag—Callf. Magnetic Calmag—Callf. Magnetic Calrol—Cattron Prods. Cal-Met—Richardson Co. Camart Products—Camera Mart Cambricold—Amer. Electric Cable Camart Products—Camera Mart Candohm—Muter Co. Cannon-Ball—C. F. Cannon Canto-Chime—J. C. Deagan Capacitog—Barber-Colman Capacitog—Epsco Capaswitch—Mullenbach Electrical Capofmist—Speelal Products Captoin—Medal Mfg. Carbolim—Aerovox Corp. Carbonim—Aerovox Corp. Carbonim—Aerovox Corp. Carbonim—Continental Carbon Carbon-Tet—Kerden Chemical Cardon-Tet—Kerden Chemical Cardava-Electro-Voice Carbon-Tet-Kerden Chemicai Cardon-Tet-Kerden Chemicai Cardinx-Electro-Voice Cardinton-Amer. Machine & Foundry Cardyne-Electro-Voice Carlton-Hudson Lamp Caro-Western Electronic Carorneo-Coral Cable Carrinon Dynamic-Miller, M.A. Cartri-Dry-Pyramid Elec. Cartrhed-Aerovox Cary-Applied Physics Cascade-Industrial TV Cast Alnico-General Magnetic Cast Him-Dilectrix Corp. Castomatie-Aener. Smotting Castomatie-Amer. Smotting Castomatie-Maner. Smotting Castomatie-Maner. Smotting Castomatie-Maner. Smotting Castomatie-Maner. Smotting Castomatie-Castone Colloids Cathe the Beam-Bhend Electrical Cathaolog-CBS-Hytron Cat's Eye-Ess Inst. Cavalier-Hinners-Galanek Radio Cavitometer-Poole Instruments C-D-F-Continental-Diamond Fibre CDM-Celest-Poole. & Mfg. CDP-Electro-Voice Contraits Devel. & Mfg. CDP-Electro-Voice Castomite-Central Scientific Ceco-Calbest Eng'g & Electronics Cece-Calbest Eng'g Celeron-Cont. Diamond Fibre CENCO-Central Scientific Cencol-Central Scientific Cencol-Central Scientific Cencol-Central Scientific Centrathene-Centralab Centrathene-Ce

Challenger Badon Challenger Banson Instrument Challenger Banson Instrument Challenger Banson Instruct Coalingage Branson Instruct Coaling Winger Badon Chalenger Badon Instruct Coaling Winger Badon Challenger Badon speakers speakers Coed—Symphonie Radio Cohriastic—Conn. Nard Rubber Coll-Flex—Ideal Industries Collife—National Vulcanized Fibre Co-Lateral—Finney Co. Collegiate—Symphonic Radio Colorama—Musicolor Coloredo—Instr. Devel. Labs. Color Cord—Paelfic Electricord Colorcuo-Instr. Devel. Labs. Color Cord-Paelhe Electricord Color-Cord-Paelhe Electricord Colornater-Sightmaster Colornater-Mirs. Eng'g. & Equip. Colortop-Trico Fuse Mig. Colortran-Natural Lighting Conco-Commanications Co. Comet-Astron Corp. Comet-Astron Corp. Commet-BS-Columbia Commandair-JFD Mig. CommenceBS-Columbia Commandair-JFD Mig. CommenceTai-Trimm CommencePhone-David Bogen Competicat-Trimm Compentrol-Centralab Competicat-Torner Complac-Poinsettia Co. Compo-Muter Compo-Instrument Motors Competicat Kaar Engin Com Compress-Aid—Auto-Test Inc. Compress-Aid—Auto-Test Inc. Consert—Kaar Engig Corp. Concert—Haar Engig Corp. Concert-Line—Shure Bros. Concert-Line—Shure Bros. Concerto—Symphonic Radio Concerto—Symphonic Radio Context—Metals & Controls Context—Netals & Controls Context—V-Beam—Telrex Connect-A-Cail—Conn. Telephone & Elec. Connect-A-Phone—Conn. Telephone & Elec. Connetc—Conn. Telephone & Elec. Connetc—Conn. Telephone & Elec.

Constriet-O-Grip-Technology Instr. Contactene-Waisco Contactene-Waisco Contactene-Bracke-Seib Conteilco-Conn. Telephone & Elec. Continnat-Conn. Telephone & Elec. Continnat-Conn. Telephone & Elec. Continnat-Conn.-Chilen Controller Controller-Ward Leonard Elec. Controller-Ward Leonard Elec. Controller-Ward Leonard Elec. Controller-Ward Leonard Elec. Controller-Communications Co. Convorto-Matomatic Elec. Controller-Communications Co. Convorto-Matomatic Elec. Convorto-Matomatic Elec. Conymaster-P & H Sales Corp. Corpox-Bradley Labs. Copyfizh-Charles Bruing Copymaster-P & H Sales Corp. Coral Designs-H. E. Dietz Cor-Lac-Cornish Wire Cornet-Camburn Coronado-Weils-Gardner Coronado-Weils-Gardner Coronado-Weils-Gardner Coronado-Weils-Gardner Coronado-Weils-Content Wire Corol-Cenetal Electric Corol-Consish Wire Corono-Consish Wire Corol-Consish Wire Conso-Corolsh Wire Conso-Corolsh Wire Corol-Consish Wire Corol-Consish Wire Corol-Consish Wire Corol-Consish Wire Corol-Consish Wire Conso-Corol Prods. Cratima-Radio Cratismen Cratig-Kalard Co. Cranephone-Fenco Ine. Creaton-Crest Transformer Crestbrite-Crest Prestone Corving Sealed-Amer. Radionic Crescon-Walden Electronics Crystal-Seal-Gitk Midding Crystograph-Offmer Electronics Crystal-Seal-Gitk Midding Crystograph-Offmer Electronics Crystal-Seal-Gitk Midding Crystograph-Offmer Electronics Crystal-Seal-Gitk Midding Crystograph-Offmer Electronics Crystal-Seal-Gitk Widing Corystograph-Offmer Electronics Crystograph--Downing Crystal Dabs-Prods

Dabs-Downing Crystal Dag Dispersion-Acheson Colioids Dasias-Pheips Dodge Copper Prods Dathom-Date Prodocts Dandwa-C. R. Daniels Darc-Arnoid Bailey Ind. Darte-Arnoid Bailey Ind. Datareader-Electro Data Corp. Datarender-Electro Data Corp. Datarender-Electro Data Corp. Datron-I-Electro Data Corp. Davnoil-Daven Co. Davoni-Daven Co. Davoni-Daven Co. Davoni-Daven Co. Davoni-Daven Ind. D-B-Dressen-Barnes Corp. Decacounter-Decade Instr. Decalor-Decade Instr. Decalor-Common Electric Decon-Tenna-Midwest Natarilte Decon-Atomic Instr. Dekatats-Electro-measurements Dekatats-Electro-measurements Detalors-Electro-measurements Detadyne-Arnoid Bailey Delta Glo-K-G Electronics Deltadyne-Arnoid Bailey Delta Glo-K-H. Huppert Demo-Dormitzer Electrol Demi-Tape-Jansen Electronic Densheth-Anaconda Wire & Cable Densheth-Anaconda Wire & Cable

Dependable—Trimm Deoxidine—American Chemical Derbylyte—Luminous Resins Descaps—Dietz Design & Mfg. Desco—Dietz Design Detectodes—Detectolab Determohm—Ohmite Mfg. Deterchem—Ohmite Mfg. Deterchem—Ohmite Mfg. Develco—Developmental Electr. Dew Pointer—Iillnois Testing Labs. D-SOO—Dubbings Sales DFS—Valpey Crystal Diacone—Altec Lansing Di-Acto—O'Nell-irwin Diagnometer—Supreme Diagnoscope—Supreme Dialophaneter—Supreme Dialophaneter Diamond—Royal Diamond Tool Dial-D-Phone-Conn. Telephone Diamatrol-Standard Electronic Diamatrol-Standard Electronic Diamond-Continental-Diamond Fibre Diamond-Wayal Diamond Tool 'Diamond-Wayal Diamond Tool 'Diamond-Wayal Diamond Tool 'Diamond-Wayal Diamond-Tool Diamond-Waya-General Instr. Diamond-Tetrad Co. Diamond-Tetrad Co. Diamond-Meave-General Instr. Diaboine-Mational Sound Equip.' Diatono-Consolidated Eng'a Diot-Diamond Microwave Corp. Dietafim-Miles Reproducer Dietafim-Miles Reproducer Dietafim-Miles Reproducer Differential-Electro-Voice Diffraction-Bracke-Seib Diffractial-Electro-Voice Diffracto-Diffracke-Seib Diffusicer-Coleman Eng'a. Digit-Verter-Electronic Assoe. Dilectoid-Cont. Diamond Fibre Dimensitone-Crawford Dimensitone Dimite-Transistor Prods. Dipolit-Dielectric Materials Dipolit-Dielectric Materials Dipret-Acil-Conn. Telephone Direct-Drive-Shure Bros. Direction-Barry Electronics Directon-Barry Electronics Directon-Sanford Miller Directron-Sanford Miller Directron-Sanford Miller Directone-Sanford Miller Discops—Radio Materials Discohm—Ward Leonard Dispatcher-Shure Dit-Meo-Drive-In-Theatre Mfg. Diveo—Division Lead Dividohm—Ohmite Mfg. Dixie—C. F. Cannon Dixie—Dixie Controls Dixonac-Dixon Crucible Dixonac—Dixon Urucibie D-K—Western Electronie Dobar—Dobeckmain Dormatic—Automatic Electronic Don't Improvise RTV-ize—Clarostat D-100 & D-101—Dubbings Sales D-110 & D-111—Dubbings Sales Dot—United-Carr Douglas—British Ind. Dovohm—Daven Dragnet—Radelco Mfg. Dovonm-Daven Dragnet-Radeleo Mfg. Dragnet-Radeleo Mfg. Dri-Film-General Electric Drill Hole-Presision Radiation Drop-Lock-South River Metal Dualdrum-Gorerit & Gorrell Dual-Match-Mosley Electronics Duette-Jensen Mfg. Dufeit-Filters Dumeiter-Allen B. DuMont Duno-Bart-Filters Dumonitor-Allen B. DuMont Duno-Struthers-Dunn Duo-Band-Teirex Dueotonic-Paraplegics Mfg. Due Struthers Mfg. Due Struthers Mfg. Duotonic-Paraplegics Mfg. Duo Sand-S. River Metal Duo-Sant-Carter Motor Duglex-Altec Lansing Duglican-Can. Radium & Uranium Dupy-Inet Durae-Mole-Richardson Durafim-Filmwood.Corp. Durafilm—Filmwood Corp. Duraflad—Joseph Kinney Duraflex—Co-operative Ind. Duramarker—Duramark Duramarker—Duramark Durameg—Spragne Electrie Duramic—Aerovox Duramid—Damont-Airplane & Marine Duranite—Aerovox Durapower—Carol Cable Durasheath—Anaconda Wire Duratex—Stromberg-Carlson Durator—Destschmann Corp. T. Durayin—Whitaker Cable Duravin-Whitaker Cable Dustronic—Radex Dutch—Van Cleef Duxseal—Johns-Manville

D&W--Dolinko & Wilkens D-Xer-JFD Mfg. DX Mitter-Babcock Radio Dykanol-Corneti-Dubilier Dymon-Yane-Ward Profs. Dynagage--Photocon Research Dynagraph-Offner Electronics Dynam-Meter-Bristol Dyna-Meter-Bristol Dyna-Mike-Ind. Electr. Dyname-British Inds. Dynare-Esitektica Dynare-Centery Electronics Dynaset-Telex Dynatracer-Century Electronics Dynatral-North America Model Prods. Dynagraph-R. B. Annis Dynograph-R.

EAD-Eastern Air Devices Earset-Telex Earset-Handy & Harman Ebeon-Electronic Beam Ebony-Johns-Manville EC-Electronic Comm. Equip. Eceo-Emerson & Cuming Co. Ecd-Filtors Inc. Echophone-Haillerafters Eckeo-Eckstein Radio TV Econ-O. Grown-Atlantic-Central Econo-Switch-Centralab ECS-Electronic Control Systems Ecdy Mag-Electric Controlise Edgetrol-Airlectron Inc. Edgetrol-Airlectron Inc. EDJ-Electronic Opeles Edgov Mag—Electric Controller Edgovin—Ward Leonard Elec. Edgetrol—Airlectron Inc. Edjetrol—Airlectron Inc. Editall—Tech Labs. Editall—Tech Labs. Editall—Tech Labs. Eeco—Electronic Eng'g Co. of Calif. Efcon—Electronic Fabricators Eico—Electronic Fabricators Eico—Electronic Instr. 8-Ball—Ward Prods. Ellex—Electro Impulse Ellex—Electro Impulse Ellex—Electron Belles. Eleco—Electrons Elcon—Wabster Elec. Elect—Electrons Elcor—Eagle Electronics Elcor—Eagle Electronics Electraces—Special Products Electrod—Pacific Electricord Electrod—Pacific Electroines Electrod—Pacific Electronics Electrod—Pacific Electronics Electrod—Pacific Electronics Electrod—Pacific Electronics Electrod—Hays Mfg. ElectronG—Hays Mfg. Electroname—Electr. Processes Electroname=Drecision Apparates Electroname=Drecision Apparates Electronicat—Precision Apparates Electronicat—Resdel Eng'9. Electronicat—Resdel Eng'9. Electronicat—Resdel Eng'9. Electronicat—Resdel Eng'9. Electronicat—Resdel Eng'9. Electronicat—Back & Webster Electron Ik. Minn-Honeywell Electron Ik. Minn-Honeywell Electron Ik. Minn-Honeywell Electropunch-Black & Webster Electrosteneh-Black & Webster Electrosteld-Joseph Kinney Electrostield-Joseph Kinney Electrostake-Black & Webster Electrotherm-Electr. Processes Electro-Touch-Attomatic Radio Electrotyper-Benson-Lehner Electrotter-Pioneer Electric Electrotter-Pioneer Electric Electrotter-Pioneer Electric Electrotter-Pione Bronze Elethan-Ward Prods. Elektran-Ward Prods. Elektran-Phosphor Bronze Elime-A-Trace-Vidaire Electronics Elineo-Electric Indicator Elineo-Deita Electronics Elite-Cambun Elite-Camburn Elita—El Products Elimat—Electromatic Elimat—Electromatic Elimeta—Amer. Electro Motive Elimeta—N. American Phillips Elpheo—Electro-Physics Eltrena—Eltran Eiphco—Electro-Physles Eitran—Eltran Em-Bed-It—Electronic Plastic EMC—Howard Ind. Emcor—Elgin Metalformers EMI—Eastern Metals Inds. Empiro—Electro Mechanical Instr. Empiro—C.F. Cannon Empiro—Berdaall & Ward Russell Empire-Bardsall & Ward Russell Empirelme-Laxor Lighting Prods. Emsco-Trilsch Co., Enameis-Laxouer & Chem. End-Shak-Newark Wire Cloth Energized-Alpha Metais Inc. Energrace-Alpha Metais Inc. Engravograph-New Hermes Entozeno-Enthoven Solders Envoy-Arthur Ansley E P C-Electronic Parts Mfg.

Epco-Etched Produets Epi-Electro Precision Prods. Epibond-Furane Plastics EPIC-Electrone Prats Mfg. Epocast-Furane Plastics Eput-Berkeley Scientifie Equipmobile-Esco Mfg. Era-Eng'g Research Erla-Sentinel Radio Ersin-Multicore Sales Esco-Electro Switch Esco-Electro Switch Esca-Electro Measurements Esca-Universal Match Etalom-Alina E-Therm-Sangamo Elec. EthoLoc-Weckesser Co. ETS-7-Industrial Electronic Engrs. Eureka-Semon Bache & Co. Esterod-Eatectic Weiding Alloys Euteetrod-Eatectic Weiding Alloys Euteetrod-Eatectic Weiding Alloys Evabrito-Estemon Bache Evanohm-Wilhur B. Oriver Everiock-Thompson-Bremer Everady-Union Carbids and Carbon Exatohm-Belectrosonic Spee. Excher-Central Electronics Expandit-Tele-Ex-Pand Explainette-Ouxane 

Farm-A-Larm—Lofd-Taber FarmRadio—Wilmar Mfg. Farnamiea—Farnam Mfg. Farnsworth—Capehart-Farnsworth Fastach—Centralab Fastop—Lear, Inc. Fathometers—Raytheon Fastherers—Raytheon Fastmile—Hogan Labs. Faxpaper—Hogan Labs. F & B—Florman & Babb F & T-dational Filmgraph—Miles Reproducer Film.Harmonic-Remsel Ind Filmite—Sprague Electric Filmosound—Bell & Howell Filpiac—centralab Filt.A-Cor—Magnetic Core Filterette—Deutschmann T. Fire Detective—Dictograph Prods. Fireguard—F. H. Smith Firestone—Wells-Gardner Firetron—Electr. Corp. of Amer. Firetron—Electr. Corp. of Amer. Fireyo—Electr. Corp. of Amer. Fireyo—Electr. Corp. of Amer. Firetron—Rockbestos Prods. Fischertaretta—R A. Fischer Fischertherm—R A. Fischer Fischertherm—R A. Fischer Fischertmem—R A. Fischer Fischertmem—R A. Fischer Fischertmem—R A. Fischer Fischerwave-R A Fischer Fiver—Crosley 5-P Robut—Miller-Harris Instr. Fixed Witcome Fixed Witcome Fixed Witcome Fixtohim—Campbell Inds. Fixtohim—Clarostat Mig. Flamenol-General Electric Flamenol-General Electric Fiash—A P Electro Lab.

Flash—Phillips Mfg. Flatohm—Contralab Flawmaster—C. H. Biggs Fleetcom—Communications Co Fleet Control—Hammarlund Fleetway—Conn. Telephone & Elec. Fleetway—Conn. Telephone & Elec. Fleetway—Conn. Telephone & Elec. Fleetway—Conn. Telephone & Elec. Flexaguide—Airtron Inc. Flexion—Standard Pressed Steel Flexion—Classiat Flexoin—Classiat Flexoind—Plattonics Flexon Mikester—Flexo Int'l. Flexo Mikester—Flexo Int'l. Flexo Mikester—Flexo Int'l. Flexoind—Canstat Flexoind—Communications Co Flighteom—Communications Co Flighteom—Communications Co Flighteom—Communications Co Flighteom—Controlier Floating Jewel—Crosley Floating Jewel—Crosley Floating Jewel—Coster & Porter Flowtron—Vitro Corp. Flud Scau—BJW Controlier Flexoind—Flighteor & Porter Flewarter—Flscher & Porter Flewarter—Flewarter Vigite Prode Fluid Sound-Lindberg Instr. Fluord-Film—E. 1. Du Pont de Nemours Fluorolor-Menlo Research Lab. Fluorolochek-Ultra-Vioiet Prods. Fluorolast-U. S. Gasket Fluorolast-U. S. Gasket Fluorolast-U. S. Gasket Fluorolast-U. S. Gasket Fluorineter—R-C Scientific Flushites—Drake Mfg. Flux Gate-Eelipse-Ploneer Fluxol-Standard Metals Fiux-Stik-Lake Chemical Foamline-Plastoid Corp. Focalizer-Quam-Nichois Fold-A-Flex-Angle Genesse Fonex-Transelectrie Mfg. Form-A-Jig-Eutette Welding Form-A-Jig-Eutette Welding Formex-Aircraft Transformer Formilex-Aircraft Transformer Formals O-Constad Labs. Fortissimo-Permoflux 4-Star-Johns-Manville "44" Resin Core-Kester Solder 49N-Magnetic Devices Fotoactor-Haworth Mfg. #479-Signund Cohn Corp. Franklin J. G. Biddle Frameformer-France Mfg. Franklin Control Frakkin Drive-Franklin Control Fraker-Inter Radio Mfra. Freas Dvens-Precision Scientifie Free-Elsemann-Freed Electronies Freisnelite-Century Lighting Fretay-Fretco Fretione-Fretco Friction Free-Cousino Frigidarc-Eutetie Weiding Alloys Fringe Beam-Neal Electronie Fringeleader-Radio Merchandise Sales FSL-National Sales FSK—National FSL—National FSL Mational FSL Mational FSL Mational FTL Federal Telecomm. Labs. FTR Federal Tele. & Radio Fusetrom-Bussmann Mfg. Fusetrom-Bussmann Mfg. Fuse-0.-Let Hillo TV Antenna Futurabold-Westinghoese Fuze-on-Aetna Supply Fuz-Lox-D & M Prods. Fuzohm-Clarostat Mfg. FXR-F-R Machine Works Fyberoid-Wilmington Fibre Fyberoid-Wilmington Fibre Fyberoid-Wilmington Fibre Fybrglass-Eraser

GA & F-Antara Chemicals, Galvo-Protector-Audio Instr. Gamater-Const. Eng'g Gamco-General Armature Gamma-Brinkmann Instrements Gaogot-Giannini & Co. Garcaau-Electro-Medical Lab. Gardisma-Taco West Gatde-Central Electronics G-C-General Cement Mfg. G-E-General Electric Co. Geneo. Ceraet Eastern Mfg. Geneo. Ceraet Eastern Mfg. Genenoto-Carter Motor Gen-Rai-Muter Geonater-Georator Geon-Mite-Ailled Int'I Geocalie-Goorator Georgian-Electro-Voice Georgian-Electro-Voice Georgian-Electro-Voice Georater Hotor Ger-Bk-Geriag Prods. GH-Girad-Hopkins GI-General Inds. Gibslioyz-Gibson Electric Giant Six-Burgess Battery

Gibson Giri-Robins Industries Gimmick-SOS Cinema Supply Gits-Nife-Cits Molding G-L-Gee-Lar Mfg. Co. Gianuer-Tone-Crostey Gias-Guide-Lee Laboratories Giasine-James Knights Giasine-James Knights Giasine-James Knights Giasanoid-Honeycomb of Amer. Giassine-Yaramid Electric Giaswitch-Revere Corp. of Amer. Giennite-Vibro-Ceramics Corp. Gilennite-Shure Giobaltice-Lsminous Resins Giobar-Carborundum Gio-Fein-Mational Electronics Giydag-Acheson Coiloids Giydag-Acheson Coiloids Giydag-Acheson Coiloids Giydag-Acheson Coiloids Giydag-Acheson Coiloids Giydag-Acheson Coiloids Giydag-Carbonneau Ind. Goiden Throat-Radio Corp. of Amer. Goiden Throat-Radio Corp. of Amer. Amer. Golden Wand-Peerless Prods. Inds. Golden Wand-Luxor Lighting Amer. Golden Wand—Peerless Prods. Inds. Golden Wand—Peerless Prods. Inds. Golden Wald—Luxor Lighting Prods. Goddil--Minn. Electronics Goodelie--Minn. Electronics Gooden-Mark Electronics Gooden-Mark Electronics Gotham--U. S. Gauge Co. Gothard--Sangamo Generators GP--Erle Resistor GPL--General Precision Labs. GR--General Precision Labs. Graduemp--Assembly Prods. Graduemp--Assembly Prods. Graduemp--Assembly Prods. Graduemp--Mark Electronics Graphion--Graphite Metallizing Graphion-Graphite Metallizing Gravelike--New Hormes Engraving GRC--Gries Reproducer Green Builet--Shure Bros. Greenohms--Clarostat Mfg. Greenohms--Clarostat Mfg. Grip-Spintite--Stevens Walden Grip Tip--Steinen Electronics Groenohms-Precision Electronics Groenohms-Precision Electronics Grownometer-Borden Electronics Grownometer-Borden Electronics Grownometer-Borde Bros. Gide-Nylace--Gudebrod Bros. Slik Guideline--Airton Inc.-Groosburd Electronics Grownometer-Borden Electronics Grownometer-Borden Electronics Grownometer-Borden Electronics Grownometer-Borden Bros. Slik Guideline--Airton Inc.-Gyroston-Sperry Gyroscope Gyroston-Sperry Gyroscope

Habirshaw-Phelps Dodge Copper Haero-Aero Instrument Hallmark-British Radio Electronics Ltd. Ltd. Hall-Ohm—Hamilton-Hail Mfg. Hallowell—Standard Pressed Steel Halolight—Sylvania Electric Prods. Ham R-Prosses—Chase Mfg. Hamitenna—Tennalab Handi Talk—Rayovox Mfg. Handile-Talkle—Motorola Handkilp—H. K. Porter Han-D-Ohm—Cima Handkilp-H. K. Porter Han-D-Ohm-Cima Hand-Omatic-Eutectle Welding Hansard-T-Bar-U Productions Harmio-P. Wall Mfg. Harmon Colors-B. F. Goodrich Harmonic-Kilgen Organ Hawilte-Hawley Products Hays-Penn-Hand Instr. Hays-Penn-Hand Bouch H & D--Hinde & Dauch H & D--Hinde & Dauch H & D--Hinde & Dauch H & A-Switch-Clarostat Mfg. Heathkit-Heath Heatory Daty-Ebert Electronics Heco-Harmon Electronics Heco-Harmon Electronics Heco-Harmon Electronics Heco-Hopkins Eng'g Heliax-Andrew Corp. Helidel-Helipot Corp. Helidel-Carl H. Briggs Hersules-Semon Bache & Co. Hersules-Shure Bros. Hermico-Hermatic Seal Prods. Hermolex-Kearfott Hermoflex—Kearfott Hex Seal—Automatie & Precision

Heyco—Heyran Mfg. HFS—National HHB—H. H. Buggie HI—Holub industries HI—Ac-Cel—Diehi Mfg. HI-HOID ENDESTIES Hi-Ac-Cel-Diehi Mfg. HI-Ball-Radiart HI-Caps-Centralab HIco-Lite-Hauman Ins: HI-D-Penberthy Instr. Hi-de-Away-JFD Mfg. HI-Farad-Aerovox HI-Farad-Aerovox Instr. Hi-D-Penbertny Instr. Hide-Away-JFD Mfs. Hi-Farad-Aerovox Hi-Foam-Plastronics Hish ho Outpst-Minn. Mining & Mfg. Hi-K ceramicon-Erie Resistor High Ataps-Centralab Hi-K Ceramicon-Erie Resistor High Outpst-Minn. Mining & Mfg. Hish Outpst-Minn. Mining & Mfg. Hibour-Radiart Hi-O-Radiart Hi-O-Wilbur B. Driver Hi-Co-Radiart Hi-Q-Aerovox Corp. Hi-Q-E. F. Johnson His Master's Voice-Radia Corp. of Amer. Hi-Stab-Erie Resistor Hi-Temp-Cons. Wire & Assoc. Hi-Temp-K. H. Hugpert Hi-Top-Teis-Ex-Pand Hitronic-Bilss Electronic Hi-You-Kaps-Centralab HKP-H. K. Porter Hobby-Time-Western Coil Holsphone-Mine Safety Appil. Holsphone-Mine Safety Appil. Holsphone-Mine Safety Appil. Holywood Recordatape-Foroprint Holywood Recordatape-Miller Electr. 18M-int\*l Rusiness Machines ICA-Insuline Corp. of Amer.

IBM-Int'I Business Machines ICA-Insuline Corp. of Amer. IcOnle-Altex Lansing IDA-Computer Corp. of Amer. Ideal-Federal Instrument Ideal-Medory Master Mfg. Idealone-Automatic Elec. Ideco-Dresser-Ideco Ideico-Industrial Electronics IEPC-Industrial Electronics IEPC-Industrial Electronics IEPC-Industrial Eng's Prods. I.E.R.C-Int'I. Elect. Research IHC-IIIInols Condenser IHT-IIIInols Condenser IHT-IIIInols Condenser IHC-Insulation Mfrs. Imcor-Insulation Mfrs. Immerial-Jensen Mfg. Imperial-Jensen Mfg. Imperial-Valsco Electronies Im-Sincerd Spray-Silicone Spray Prods. Inbedded Circuits-Vacumet Prods. Inbedded Circuits-Vacumet

Inceloide Circuits—Vacumer Inceloide—American Products INCO—International Nickei Incord—Western Gold & Platinum Incosil—Western Gold & Platinum Incroductor—C.G.S. Labs. Indalloy—Indiana Steel Prods.

indco Oli—Industrial Condenser indelco—Industrial Electronics indi-AC—Cleveland Instrument indoor Tenna—Spirling Prods. Inductronics—Edwin I. Cutiman Inductronics—Edwin I. Cutiman Inductronics—Edwin I. Cutiman Industraves—Electronics Engig Ind X-Matle—Brask Electronics Inine—American Phenolic Inmo—Instrument Motors Inspectray—Bracke-Solb In-Sta-Com—Marine View Electronics Insui-Dip—Plastronics Insui-Dip—Plastronics Insui-Dip—Plastronics Insui-Stapatoff Ceramic Insui-Dip—Plastronics Insui-Dip—Plastronics Insui-Sematy Engig Insuick—Richardson Intelex—Federal Tele. & Radio Intelin—Federal Tele. & Radio Interlock—Harvey Hubbeli Interlock—Harvey Hub

Jacknife—Radio Merchandise Sales Jackson—Vulcan Elee. Jaco—Jarrell-Ash Jackson-Vulcan Elec. Jaco-Jarrell-Ash Jainco-Jacobs Instr. Jainco-Jacobs Instr. Javabond-Javox Jay-Bee-Teo-J-B-T Instruments Jeco-Jarvis Electronics Jefferson-Travis-Emerson Radio Jefferson-Travis-Emerson Jet-Kotte-Forane Plastics Jetlone-Garbonmean Industries Jetonie-JFD Mfg. Jet Probe-Workman TV Jetroi-Allied Int'i Jewel-Swiss Jewel Jiffy-Tenna-Delson Mfg. JM Capacitor-Speer Carbon Jomanco-Johns-Manville JF Capacitor-Speer Carbon J-Tram-Actomatic Mfg. Jumbo-JFD Mfg. J-W-Johnson-Williams

"KA"—Omega Labs Kalwood—Keiler Products Kantark—Trico Fuse Mfg. Kantark—Trico Fiss Mig. Kantark—Trico Fiss Mig. Kantilnk—American Bolt & Nat Kapok-Unisorb—Filters Karadio—Eekstein Radio & TV Kardon—Premier Instrument Karma—Driver-Harris Co. Karropak—Feit Products Kashaba—Surface Combustion Kaydal—Hart Moisture Gauge Kay-Lab—Kalbfell Labs. "K" Band—Omega Labs KB-11—Plastonics K-Cap—Automatic Mfg. Kel-J—Electronic Mechanics Kel-J—Electronic Mechanics Kenco—Korb Eng'g & Mfg. Kcmetal—Radio Inds, Kenco—Korb Eng'g & Mfg. Kcmetal—Radio Inds, Kenco—Korb Eng'g & Mfg. Kim-Krueger & Hudepohi Kim-Kay Electric Kime-Cathy Vidaire Electronics Kine-Ta—Vidaire Electronics Mfg. Kine-Kaw Vidaire Electronics Mfg. Kine-Kaw Vidaire Electronics Mfg. Kine-Kaw Vidaire Electronics Mfg. Kine-Kaw Vidaire Electronics Mfg. Kine-Kaw Didaire Siectronics Mfg. Kilps-South River Metal Prod. Kilpok—Trico Fase Mfg. Kilpok—Trico Fase Mfg. Kilpok—Trico Fase Mfg. Kilpok—Chilpsch & Asso. Kilpok—Chilpsch & Asso. Kilpok—Chilpsch & Asso. Kiloa—Erie Resistor Kiosd—Sterling Election Motors Kingha—Ailled Radio Kantlink-American Bolt & Not

Knight—Espey Mfg. Knockometer—Sperry Gyroscope Knopp—Electrical Facilities Knurlite—Chase Mfg. Co. Kodak—Eastman Kodak Kol-Klamp—Birtcher Kool-Klamp—Birtcher Koolohm—Sprague Electrie Korohm—Aerovox Korona—Gundlach Mfg. Kovar Metal—Stupakuff Ceramic Kovar Moly—Zell Products Krank-Up Masts—Jontz Mfg. Krank-Up Masts—Jontz Mfg. Krank-Up Masts—Jontz Mfg. Krank-Up Masts—General Cement K-Tran—Autumatie Mfg. Ktrol—Gaydon Co. "KU" BAND—Omega Labs Kum-Kieen—Avery Adhesive "KU" BAND—Dmega Labs Kwm-Kleen—Avery Adhesive Kurmelec —Kurman Elec. Kwick Climb Towers—Jontz Mfg. Kwick-N-Easy—Jontz Mfg. Kwick-Up—Jontz Mfg. Kwik-Suth River Metal Kwik-Xati Jr.—J. M. Loge Sound Energi Engrs.

Labcase—Berkshire Labs. Labeheck—Berkshire Labs. Labkote Enamels—C. W. Hayne Labs.

Labst. Labst. Labstrobe—Berkshire Labs. Labstrobe—Berkshire Labs. Labstrobe—Berkshire Labs. Labstrobe—Berkshire Labs. Lab Unit—G. W. Gates Latorithe—G. W. Gates Latorithe—Berkshire Labs. Latayette—Espey Mfg. Lafayette—Espey Mfg. Lafayette—Franklin Fibre-Lamitex Lansing—Aitee Lansing La Pointe—Circuitron Inc. Laquer Stik—Lake Chemical Largo—Permolux Corp. Laquer Stik—Lake Chemical Largo—Permolux Corp. Lavite—Steward Mfg. Co. Lay-X--Radiart LB—Leiman Bros. LGChecker—Aerovox Leak—British Industries Learadio—Lear, Inc. Leartran-Lear, Inc. Leartran-Lear, Inc. Letrodryre—Pittsburgh Leetrodryer Leetrodryre—Bart Labs. Leetrodryre—Bittsburgh Leetrodryer Leetrodryre—Bittsburgh Leetrodryer Leetrodryre—Bittsburgh Leetrodryer Leetrodryer—Pittsburgh Leetrodryer Leetrodryer—Pittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Pittsburgh Leetrodryer Leetrodryer—Bittsburgh Leetrodryer Leetrodryer—Dittsburgh Leetrodryer Leetrodryer Dettsburgh Leetrodryer Leetr Labmarker-Berkshire Labs. Lektron-Electronic Rectifiers Letab Coenters-Mirs. Eng's. & Englp. L.E.M.-JFD Mig. Lemac-Borden Co. Lemco-Lytle Eng's & Mig. Len X-1 X-2 X-3 X-4 Lennard Co. Lerco-Lynn Electronic Lesco-Hoffman Radio Levelimeter-Fischer & Porter Lever-Type-Shure Bros. Lev-R-Switchcraft Lewis-Universal Products Lex-R-Switchcraft Lifelimo-Resves Sounderaft Lifelimo-Resves Sounderaft Lifelimo-Resves Sounderaft Lifelimo-Let. Storaße Battery Lightining-JFD Mig. Lightining-Vaco Prods. Lightwatchman-Ripley Lin-A-Sym-MinAtron Corp. Line-Aro-Electronics Lightning—Vaco Prods. Lightmatchman—Ripley Lin-A-Syn—MinAtron Corp. Line-Aro—Electric Controller Linearsyn—Control Components Lineator—Alrborne Accessories Line-O-Life-Carter Motor Line-Carter Motor Line-Carter Motor Line-Carter Motor Line-Carter Motor Line-Carter Motor Line-Carter Motor Line-Game-Photocon Research Lite-Gade—Photocon Research Lite-Gade—Photocon Research Lite-Gade—Photocon Research Lite-Gade—Photocon Research Lite-Gade—Photocon Research Lite-Gade—Photocon Research Lite-Switchcraft Littel Jax—Switchcraft Littel Jax—Switchcraft Littel Jax—Switchcraft Littel Gam—Equipto Litte Gam-Equipto Little Jewel—Danforth Mfg. Little Jowel—Danforth Mfg. Little Jupper-Radio Corp. of Amer. Supply Amer. Little Six—Burgess Battery Philmore Mfg. Littie Six—Bergess Battery Littie Wonder—Philmore M Littie Wonder—Trans-Lux Livermont—Richmont Inc. LL300—R. J. Buchen Co. LL300—R. J. Buchen Co. Lloyd's—Johnson Mfg. LN—IIIInois Condenser Leadalarm—Brinneil Leaded-X—Badlart

Megaligner—Kay Electric Megaline—Kay Electric Mega-Note—Kay Electric Mega-Note—Kay Electric Mega-Puls—Kay Electric Mega-Puls—Kay Electric Mega-Puls—Kay Electric Mega-Puls—Kay Electric Mega-Puls—Kay Electric Mega-Puls—Kay Electric Mega-Central Scientific Mega-Central Scientific Mega-Central Scientific Mega-Central Scientific Mega-Datas—Sprague Electro: Melcore—Melpar Mellophone—Electron Enterprises Melodier—Waters Conley Melody Mike—Audio Equip. Melody Mike—Conserve Electron Mercors—Howe Recording Melody Mater —Mercory Electro Pross. Menco—Maryland Electronic Memotape—Electro-Volce Mercury—Electro-Volce Mercury—Electro-Nolse Mercury—Electro-Nolse Mercury—Electro-Nolse Mercury—Electro-Nolse Mercury—Electro-Nolse Mercury—Mather Resiston Metrona—Electronics Metamatics—Ensistol Metro-Altad—Ensistol Metro-Altad—Ensistol Metro-Altad—Ensistol Metro-Altad—Ensistol Metro-Altad—Electronics Metro-Mather Metro-Colse Mercury Metamols Alton Metro-Mica Insulator Micotal—Merco-Searce Precise Measurements Micro-Alta Insulator Micotal—Merco-Circuits Microal—Electro Microdia—Essech Microila—Essech Microal-Circuits Microal—Cess Massiments Microal—Cess Labs. Microal—Cess Massiments Microal—Reamond Badio Micro Millimag—Transistor Prods. Millisadic—Consolidated Eng'g. Millisec—Stevens-Arnold Milwaokee—Wronght Washer Mfg Mine-A-Phone—Stromberg-Carlson Mineola—Television Specialty Minephone—Mine Safety Appl.

Mineralight—Ultra-Viulet Prods. Miniac—Marchant Research Mini-Coupler—Javex Minigang—G. M. Giannini Miniaturized S-Band—CGS Labs. Mini-Cor—JFD Mfg. Ninicobe—Sanders Assoc. Mini-Line—Balley Meter Mini-Max—Union Carbide & Carbon Minmiltr—Assron Mini-Line—Balley Meter Mini-Line—Balley Meter Mini-Max—Union Carbide & Carbon Mini-Max—Union Carbide & Carbon Mini-Mix—Switcheraft Minipak—Astoon Mini-Pite—Javes Mini-Secket—Javes Mini-Secket—Javes Mini-Socket—Javes Mini-Socket—Carbon Mini-Socket—Javes Mini-Socket—Carbon Mini-Socket—Carbon Mini-Socket—Carbon Mini-Kaps—Centralab Miniot Rubber Co. Mirragraph—Techno Instr. Mirrosome—Techno Instr. Mirrascope—Techno Instr. Mirrascope—Techno Instr. Mirrotom—Electrosonic Spec. Mistey—Mite—Jontz Mifg. M-Jax—Switchcraft Ninder\_Model Actor MobileMites—Electro-Volce Mobilfone—Radionic Labs. Model-A-100—Adv. Electronics Modelpack—Model Rectifier Modiled=Hic—Withur B. Driver Modulite—Electronic Control Modulite—Electroic Control Modulite—Electroic Control Modulite—Electroic Control Modulite—Electroic Control Modulite—Electroic Control Modulite—Electroic Control Modulites—Electro-Volce Modulite—Electronic Control Modulites—Electroic Control Instr. odu Wave-Sclaky Bros. 105 Modu Modu Wave—Sclaky Bros. Molarc—Mols-Richardson MolatEase Per—Merix Chem. Moldex—Neosil Products Moldite—United Condenser MoldX—American Radionie Monarch—British Electronic Monarch—British Electronic Monarch—British Electronic Monobies—Winchester Electronics Monobies—Shure Bros. Monoset—Telex Monoset—Telex Monore Alert—Atlantic-Central Mories—Shure Bros. Monoset—Telex Monore Alert—Atlantic-Central Norbond—Howard J. Moore Morcon—Howard J. Moore Mortex—Howard J. Moore Mortex—Howard J. Moore Mortex—Howard J. Moore Motel-O-Phone—Conn. Tele. & Elec. Mota-Ma—Keystone Products Moto-Mite—Globe Inds. Motol-Mite—Globe Inds. Motor/Vics—Micamold Radio Motor/Vics—Micamold Radio Motor/Vics—Micamold Radio Motor-Mite—Calvin Moy=SOS Cinema Supply My-Sous—Fisher Research MT—1111nols Condenser MT-1111nols Condenser MT-1111nols Condenser MT-1111nols Condenser MI-1111nols Matheris Mutit-Electon Fay Research MI-1111nols Condenser MI-1111nols Condenser MI-1111nols Mitheris MITI-Reser—Perelsion Apparatus MITI-Reser—Perelsion Apparatus MITI-Reser—Applied Research Labs. MITI-Bayed—Periton MITI-Matter—Applied Research Labs. MITI-Bayed—Periton MITI-Mather—Applied Research Labs. MITI-Seed—Pentron MITI-Mather—Applied Research Labs. MITI-Seed—Pentron MITI-Mather—Applied Research Labs. MITI-Bayed—Pent Restronics Mysalast—United Condenser Mykajast—United Condenser Mykajas

Na-Ald—Alden Products Nabtron—Sorensen Narco—National Aeronautical Narco—National Aeronautical Nato—National Aeronautical Nato—National Fabricated Prods. National—Valco Mfg. Natiea—Iohns-Manville Navascal—Johns-Manville Navarea—Johns-Manville Navare—Videon Electronic Nebroc—Hitemp Wires Inc. Neck Band—J. M. Loge Sound Neillite—Watertown Mfg. NEL-201—National Electronics Neccoal—National Electronics Neccoal—National Electronics Neccoalmatic—Cast Mfg. Neo-Flash—Auto Test Neo-O-Line—General Coment Neopene—Bishop Mfg. Neo-IIm—Electric Controller Nepto—National Electric Prods. Nester—Doepke Mfg. Nevamar—National Plastic Prods. Nevatip—Radio Merchandise Sales Na-Ald-Alden Products Nabtron-Sorensen Narco-National Aeronautical Aluminum Aluminum Neweasy—H. K. Porter New Life—A P Electro Lab. Ney-Cro—J. M. Ney Nibbiex—Nord Int'l. Nicad—Nicket Cadmium Battery Nichrome—Driver-Harris Co. Nicoro—Western Gold & Platinum Nicote—Frenchtown Porcelain Nifer—Metals & Controls Nifstain—Wilbor B. Driver Nine Lives—Union Carbide and Carbon 99—Blonder-Tongoe Labs. 99 Line-Walsco Electronics Nine Lives—Union Carbide and Carbon 99—Bionder-Tongoe Labs. 99 Line—Walsco Electronics Niloro—Western Gold & Piathum Nipper—Radio Corp. of America Ni-Spanie—H. A. Wilson Nitelighter—Fisher-Pierce Nobatrons—Sorensen & Co. Nobeloy—Continental Carbon Noblette—Continental Carbon Notiseraser—Minn. Electronics No-Roise—Electronic Chemical No-Noise—Electronic Chemical Noroseana—Erikson Specialties Norseda—Norwestern Plastics Norsean—Efics Specialties Norseda—Norsid Mfg. Nubraze—American Silver Nuclear—Chicago-Nuclear Instr. Nukemite—Nukem Products Nombergraphs—Metalcraft Nomedron—Penymood Numechron Nut-JFD Mfg. Nu-Way-John Marshall Assoc. NYC—National Video NYCO—N. Y. Coll NyGrip—Weckesser Co. Nylasint—Polymer Nylatint—Polymer Nylatint—Polymer Nylatint—Polymer Nylatint—Polymer Nylatint—Polymer Nylex-Boston Insulated Wire

0ACO-Ohio Aeriai Oakwood-Osborn Products Octran-Ogden Coll Offione-Inter-Communications Ogtran-Ogden Coil & Transformer O-Gyro-Dynamic Electronics Ohiohm-Ohio Carbon OHM-Shalicross Mfg. Ohmoid-Wilmington Fibre Dimspon-States Omstone-Johns-Manville Olidag-Acheson Colloids OilMite-Deustschmann Corp. T O.K.-H. K. Porter Olson-Edwin A. Lipps Omnimatic-Lear, Inc. Omnimeter-Lear, Inc. Omnimeter-Lear, Inc. Omnimeter-Lear, Inc. Omnitenna-Trennalab Opaque-Charles Beseler Operatio-DuKane Ortanol-Magnetics Ortsoil-Thomas & Skinner Oryx-Television Accessories Oscillatiro-Vectron Oscillor-Dekane Tress Mfg. Ortanol-Magnetics Ortsoil-Thomas & Skinner Oys-Television Accessories Oscillatiro-Vectron Oscillor-Dekane Test Equip. Oscill-O-Pen-General Test Equip. Ovaltube-Plastoid Overhead-Charles Beseler Ov-O-Line-Atlantic Wire & Cable Oxlardino-Petton Oscillor-Den-Magnetics Oxye-British Radio Electronies Oxye-Dine-Atlantic Wire & Cable Oxlarko-Lowell Mfg. Oz-O. Zernickow

P.A.—Aerovox P-A.B-X.—Automatic Electric Pace-Precision Apparatus Pace-Setter.—JFD Mfg. Pacitor.—Simmonds Aeroeessories Packtrons-Simmonds Aeroeessories Packtrons-Binnonds Aeroeessories Packtrons-Badio Specialty Mfg. Pad Hacksaw-American Mercantile Pagemaster.—Scantlin Electronics Palth-Shield—Ramsell Mfg. Paktschanges—North Electric Pak-Exchanges—North Electric Paliney 47—J. M. Ney Pallet-Pak—Eric Resistor Corp. Palmgren—Cnicago Tool & Eng'g Pandux—Panoramic Radio Panatrope—Brunswick Radio Pandite—Paite Elest Paper Pan-1-Lite—Aliden Prodocts Panoramic—Radio Merchandise Sales Panorame Vision—Stromberg-Carlson Panstanescope—Panoramic Radio Panto\_H. Pay Pris Engraving rerco-C. S. Lineii Eng<sup>\*</sup>g Pereco-Pereny Equip. Perfection-Williams, Brown & Earle Per-Key-Pioneer Electric Perma-Cals-Actioncraft Prods. Perma-Cals-Actioncraft Prods. Permaine-Columbia Wire Permaine-Columbia Wire Permaine-Columbia Wire Permatage-Actioncraft Prods. Permatage-Actioncraft Prods. Permatage-Actioncraft Prods. Permatage-Actioncraft Prods. Permatage-Actioncraft Prods. Perma-Fidelfione Permo-Fidelfione Phantom-Yonkers Industries Per Screen-Petrick Bros. Pfan-Tone-Pfanstiehl Chemical Phazor-Industrial Test Equip. Phenolite-Mational Vulcanized Fibre Phantom Plastics-Tele-Beam Inds. Philling-H. M. Harper Phillon-D-Phillips Control Phono-Gode-Sbrue-Tone Phono-Gard-Grayline Eng<sup>\*</sup>g Phonola-Waters Conley Co. Phonostrobe-Berkshire Labs. Photo-Eye-Helland Research Photoplan-Williams, Brown & Earle Photoprobe-Electro-Physics Earle Photoprobe-Electro-Physics Photosphore—Iq Industries Phototron—Thomas Electronics Phototronic—Weston Elec. Instr.

Photo-Writ-E. I. Dupont de Nemours P&I-Process & Instruments Pic-Polyphase Instr. Picbeast-CBC Electronics Pick-a-Saat-Alrpax Products Pick-a-Saat-Alrpax Products Pick-A-Shaft-Clarostat Pic-Tron-Tube Service Corp. Pierceway-Ciliton Conduit Pio-Tron-Tube Service Corp. Pierceway-Ciliton Conduit Pio-Tron-Balley Mater Pilotune-Pilot Radio Pilotune-Pilot Radio Pilotune-Pilot Radio Pilotune-Pilot Radio Pilotune-Pilot Radio Pilotune-Chase Mig. Co. Pipetite-Stik-Lake Chemical Pistogrip-P. Wall Mig. Pitac-Pailard Prods. P-K-Parker-Kalon Planet-Arie-Planet Television Planet Products-Designers for Industry Planofax-Times Facsimile Piaskon-Ailled Chemical & Dye

Pipetite-Stik-Lake Chemical Pipetite-Stik-Lake Chemical Pisto-Pittsburgh Cuil Piv-Link-Belt Pizar-Palilard Prods. P-K-Parker-Kalon Planet-Aire-Planet Television Planet-Marker-Kalon Planet-Marker-Designers for Industry Planofax-Times Facsimile Plaston-Ailled Chemical & Dye Plast-National Radiator Plast-Alloy-Plastic Metals Plastie-National Radiator Plastie-National Radiator Plastie-National Radiator Plastie-Vor-United Tech. Labs. Plastie-Condenser Products Plasticot-Condenser Products Plasticot-Chester Gable Plastif-Remets-Shakeproof Plastis-Eletronic Devices Plastolytie-Condenser Mrs. Plastolytie-Condenser Mrs. Plastolytie-Condenser Mrs. Plastoreom A-Plastronics Plastrocom Master Applance Mfg. Playmaster-Markel Electric Private Line—Conn. Telephone of Elec. Private Tutor—Eldico of N. Y. PRMCO—Parts Mfg. Probograph—Ind. Scientific Prodag—Acheson Colloids Prodactimeters—Durant Mfg. Profilometer—Micrometrical Mfg.

Profitmaker—TV Spec. Projector—Charles Beseler Prokar—Spragee Electric Protectox—Technic P-28 Steatite—Cook Ceramic Mfg. Protectox—Technic Provisor—Bristol PTM-7—Control Devices Inc. Pulesscope—Waterman Products Pulesscope—Waterman Products Puter—Pulse Techniques Purifil—Electric Eye Equip. 'P'' Wee—Superex Electronics Pyes—British Radio Electr. Pylets—Pyle-National Pyrom-Pyle-National Pyrometer Instr. Pyrometer Instr. Pyrometer-Instr. Pyrometer-Instr. Pyromater—Elistol Pyromater—Bristol Pyromater—Bristol Pyrotarl—Reistol Pyrotarl—Bristol Pyrotarl—Bristol Pyrotarl—Bristol Pyrotarl—Bristol Pyrous—Fistol

Q-Beston—Auburn Mfg. Q-Max—Communication Prods. Q-Tran—Johnson Electronics Quadnaurai—Dynamic Electronics Quantograph—Applied Research Quantograph—Applied Research Quaitarc—Pyle-National Quick\_RgyIn, i.e. Quick\_RgyIn, i.e. Quick\_RgeGe—Kedman Quik\_Call—Motorola Quik\_Call—Motorola Quik\_Lok—George Stevens Mfg. Quik\_Lok—George Stevens Mfg. Quik\_Lok—George Stevens Mfg. Quik\_Shot—Kemode Mfg. Co. Quik\_Shot—Kemode Mfg. Co. Quik\_Shot—Kemode Mfg. Co. Quik\_Shot—Kemode Mfg. Co. Quik\_Shot—Manvilie Quinorgobord—Johns-Manvilie Quinterna Johns-Manvilie Quinterra Johns-Manvilie

R/A-Rubber Associates R & A-British Electronic Sales Rada-Kay Elec. Rada-Cor-Magnetic Core Radaligner-Kay Elec. Radar-Poiser-Kay Electric Radar-Poiser-Kay Electric Radar-Doiser-Kay Electric Radar-Cor-Naraking Radar-Sweep-Kay Electric Radar-Sweep-Kay Electric Radar-Sweep-Kay Electric Radar-Sweep-Kay Electric Radar-Sweep-Kay Electric Radar-Nordan Electronics Radeitor-Jordan Electronics Radeitor-Jordan Electronics Radeitor-Wilbur B. Driver Radiaca-Arnoid Ceramies Radiocarb-Wilbur B. Driver Radiocarter-Technicraft Co. Radiohm-Centrala Radiocarter-Technicraft Co. Radioha-Wastern Coil Radiocarter-Sales Radiocarter-Sales Radiona-Kaj Corp. of Amer. Radiopak-Kaar Eng's Corp. Radiopak-Sale Labs. Rakscores-Waterman Products Rafar-Haller, Raymond & Brown Rak-Lab-Davies Labs. Rasscores-Waterman Products Rams-I-Jordan Electronic Mfs. Ranger-JFD Mfs. Ranger-JFD Mfs. Ranger-Shure Bros. Rangerod-Rangertone Rangertio-Kanyon Instrument Raptar-Weilensak Optical Rate Gros-American Gyro Ratel-Radio Television Prods. Ratel-Radio Television Prods. Ratel-Radio Electronic Hosting Rayono-Electronic Heating Rayono-Waterman Products Rayono-Wate

Rebat—Reading Batteries Rebel—Klipsch & Assoc. Receptacle "M"—Page-Fogweil Re-Cirk-1t—Helnemann Electric Rectalist—Rek-0-Kut Reco—Rectlifter Engineering Reconofax—Haller, Raymond & Brown Reconfax—Haller, Raymond & Brown Recoraloy—Wilbur B. Driver Recoraloy—Wilbur B. Driver Recoralow—Wilcox-Gay Record Life—Minn, Electronics Re-Cord-O-Fone—Bell Sound Systems Recticharger—Raytheon Mig. Co. Rectifilter—Raytheon Mig. Co. Rectifilter—Raytheon Mig. Rectodyne—M & Colopin-Christle Rectodyne—M & Colopin-Christle Red Bail—Columbia Resistors Red Dot—Int'l Rectifier Corp. Red Flash—Enthover Solders Red Head—Blaco Mig. Co. Red Lish—Enthover Solders Red Head—Blaco Mig. Co. Red Lish—Radlo Corp. of Amer Red Seal—Radlo Merchandise Sales Red Staid—Radlo Merchandise Sales Red Stridy—Radlo Merchandise Sales Red Stridy—Radlo Merchandise Sales Red Stridy—Radlo Merchandise Sales Red Stre-V-Brown Bridge Mills Redux-Ciba Revvicc-Reve Electronics Reflext-Ciba Repenzy-Electronic Measurements Regency-Electronic Measurements Regency-Electronic Measurements Regency-Electronic Measurements Regency-Electronics Regolator Energin Regolator-Electric Regulator Regulate-Banders Associates Relation-Sanders Associates Re-ionizer-H & H Prods. Mfg. Relative-Sanders Assoc. Reliapiate-Sanders Assoc. Repeater-Wentlice Lie. Resolver-Attaing Devices Ressine-Sanders Assoc. Resenter-Kemilte Labs. Repeater Records-Talking Devices Resine-Sangame Elec. Resine-Kemilte Labs. Resolver-Ketster Solder Resolver-Ketster Solder Resolver-Ketster Solder Resolver-Electrosonic Spec. Revothene-Revere Corp. of Amer. Revothene-Revere Corp. of Amer. Revothene-Revere Corp. of Amer. Revother-Circuit Instruments Revolute-Paragon-Revolute Rew-Roger White Electr Devices Rexo-Hamilton Kent Mfg Rezistal-Circuible Steel Co. Richmond-Lowell Mfg. Rotomarker-Acco-Ket Co. Robe-Re. 0. Hall Rotomotive—Jack & Heintz Rotorac—Airborne Accessories Rotorette—Airborne Accessories Rotoroid—Burnell & Co. Roto-Speed—General Devices Roto Stepper—G. M. Glannini RotoTimer—Farmer Electric Roto-Trois—Healy-Ruff Co. Potran\_Cars. Wire Rotran—Cons. Wire Royal—Electro-Voice Royal Permoflux Royal Scintillator Precision Radia-tion Instrs.

RPC-Resistance Products RPL-Robinson Recording RPM-Iq Industries RSE-Radio Specialty Mfg. RSMC-Radio Specialty Mfg. RTMA 141-Coli Eng'g & Mfg. RT.-R.B. Blacher RTS-200-American Smelting RTV-Clarostat Mfg. Rub-Fickardson Rubyflaid-Ruby Chemical Ruco-Ruby Chem. Rub-Kack-General Cement Runer Kieen'r-Conrac Rush-Eraser Rutishause-Rubico Inc. Rx Meter-Boonton Radio Rycom-Raliway Cummenications

Sadic—Consolidated Eng'g Saf-T-Glo—Galbraith & Son Safe TV Guard—JFD Mfg. Co. SafeTVision—Bennett Labs. Safety—Laughlin Co. T. Safety MargIn—Astron Salbrick—Amer. Solder & Flux Saleseaster—Electronic Specialties Salon—Videon Electronic Sarah—Arnold Bailey Ind. Sardap—Nuclear Research Savdap—Nuclear Research Savdap—Nuclear Research Savdap—Videon Electronic Devices Savdap—Sampson Chemical & Pig-ment Schuco—Schoeler & Co. Scapco-Sampson Chemical & Pig ment Scinfiex-Scintilia Magneto Scinfiex-Scintilia Magneto Scinfiex-Scintilia Magneto Scotehast-Minn, Mining & Mfg. Scotehaito-Minn, Mining & Mfg. Scotehaito-Minn, Mining & Mfg. Scotehok-Minn, Mining & Mfg. Scottehok-Minn, Mining & Mfg. Scotte-Note-Minn, Mining & Mfg. Scotte-C, F. Cannon Serewball-Freteo Inc Sereho-Permoday Scott—C. F. Cannon Serewball—Freteo Inc Serewball—Freteo Inc Seriba—Permofiux Script Ald—Video-Corp. of Amer. Scaled-Cast—Carad Scalinet—Radio Frequency Labs. Scal Silicate—Philadeiphia Quartz Sea-Track—Washington Institute SECO—Southern Electronics Seco—Suewart Engip Co. Seco-Suewart Engip Co. Se Sei-Lok-Standard Pressed Steel Seisyn-Ketzy Mfg. Senntronic-Senn Corp. Sensituner-Alien B. DuMont Labs. Sentinei-Photobell Sentry-JFD Mfg. Sequetroi-Emmett Mach. & Mfg. Sere-Standard Electronics Res. Serrasold-Radio Eng'g Labs. Serva-Unit-Alien Products Servise-Lee Electronic Labs. Servo Board-Servo Corp. of Amer. ServoBoard-Servo Corp. of Amer. Servofrax-Servo Corp. of Amer. Servofrax-Servo Corp. of Amer. Servoitab-Servo Corp. of Amer. Servoita-Servo Corp. of Amer. Servoita-Servo Corp. of Amer. Servoita-Servo Corp. of Amer. Servo-Dhm-Hamilton-Hall Servoscope-Servo Corp. of Amer. Servospeed-Electro-Devices Servospeed—Electro-Devices Servos Therm—Servo Corp. of Am. Servos Therm—Alrborne Aecessories Servotron—Raytheon Mfg. Setko—Set Screw & Mfg. 7 Star—Tele-Ex-Pand S1-Jax—Switcheraft Shapers—South Bend Lathe Shapers—South Bend Lathe Sheffber—Sheffco Mfg. Sheffbilte—Sheffco Mfg. Shield—Ramsell Mfg. Showcasc—Corvens Inc. Showcasc—Corvens Inc. Sharte-D. B. T. Inst. Sharte-D. B. T. Instr. S-I—Steiner-Ives Sickles FW—General Instrument Siemens—Arnhold Ceramics Sightmastermoid—Chemalloy-Electr Signa-Giow—Industrial Devel. Labs. Signaiette—Lytie Eng'g Signal King—Walsco Signalock—Allen B. DuMont Labs. Signaimax—Wilmar Mfg. Co.

Signa-Matcher-Centralab Signature-Lansing Sound James B. Silastic-Dow-Corning Silectron-Arnold Eng'g Silentbloe-General Tire & Rubber Silentonic-Packard-Bell Silertex-Erie Resistor Sili-Fos-Handy & Harman Siliconductors-Nat. Semiconductor Silic-O-Netic-Heinemann Electric Silotex-Anaconda Wire & Cabie Silvaloy-American Platinum Silvercel-Yerdney Electric Silverer-Yerdney Electric Silverreine-General Instr. Silvergak-Television Specialty Silverstreak-Link-Belt Silver Wand-Peerless Prods Ind. Silver Wand-Peerless Prods Ind. Simplex-General Precision Lab. Simplex-General Precision Lab. Simplytrol-Assembly Prods. Single-Core-Alpha Metals Sintino-Matlonal Radiae Sis-Aline GT-4 Strobecon-C. G., Conn. 6T-4 Stroboconn—C. G., Conn. 68U & 92 Al-Magnetic Devices 65C-Tenite Acetate—Eastman Chem. 65D-Tenite—Eastman Chem. Prods. 650-1enite—tastman Chem Ical Prods. 65K—Eastman Chem Ical Prods. 8Ka—G. M. Labs. 8kandograph—Nuclear Research 8ki-HI.—General Cement Ski-HI-General Cement SkilWill Dolt-Spinoraft SKL-Spencer Kennedy Sky-Bullett-Maeon Electronics Sky-Hi-Thomas Mold and Die Sky-High-Page-Fogwell Sky-Lick-Hy-Lite Antennas Sky-Lok-Hy-Lite Antennas Sky-Master-A. W. Jewell Sky-Ranger-JFD Mfg. Sky-Streak-Amer. Electrie Cable Sky Streak-JFD Mfg. Slendyne-Shure Bros. Sky Streak—JFD Mfg. Slendyne—Shure Bros. Slide King—Charles Beseler Slidenhm—Aerovox Slimair—Electro-Voice Silmair—Electro-Voice Silm-Dive-Elarostat Mfg. Silp-Dive-Elarostat Mfg. Silp-Dive-Elarostat Mfg. Silmbertone—Electro-Sound SM A—Lytic Eng'9 Smail Broadcast—Shore Bros. Smait Unidyne—Shore Bros. Smait Unidyne—Shore Bros. Smatteo—Stone City Machine SMC—St Mary's Carbon Smart Set—Calbest Eng'9 Smith-Baidwain—Consolidated Radio Motors Smith-Balawann-Constitutes Radio SMT — 111. Condenser Sma-A-Round Jacket—Haydon Prod. Snapper Clip—Musiler Electric Sniffer—Johnson-Williams Snooper—Precision Radiation Instr. Snowlite—Laxor Lighting Prods SNS—Special Products Co. Snipec—Centralab Snydermatic—Snyder Mfg. Sodeco—Landis & Gyr. Sodereze—Phelps Dodge Conper Sod-Start—George Stevens Mfg. Sof-Tec—Apex Coated Fabrics Solarspots—Mole.Richardson Solderforms—Kester Solder Soldersons—Mele.Richardson Solderforms—Kester Solder Soldersons—Acade Lectric Soldersonal—General Coramics Solderdom-JFD Mfg. Soirex—Herzog Min. Lamp Solvail—A P Electric Sona—Kay Electric Sona—Caph—Kay Electric Sona—Electro-Voice Sonder-Tack—Washington Institute Sono-Probe—Advanced Electronics Sondarat—Beras Instraments Sono-Probe—Advanced Electronics Sondarat—Reves Soundcraft Sound Cil—Brush Electronics Sondart—Brash Electronics Sondart—Brash Electronics Sondart—Brash Electronics Sondart—Brash Electronics Sondart—Reves Soundcraft Sound Mirror—Brash Electronics Sondart—Reves Soundcraft Sound Mirror—Brash Electronics Sondart—Reves Soundcraft Sound Mirror—Brash Electronics Sondartat—Reves Soundcraft Sound Mirror—Brash Electronics Sondartat—Reves Soundcraft Sound Mirror—Brash Electronics Sore-Iness Speciel Prodets Spec-Power—National Spectrographic Spectoraside—Consolidated Eng'g Spectvolux—Laxar Lighting Prods. Speed-Cassis—Specific Prods. Speed-Cessories—Phoenix Electr. Speed-Deal—Prankin Control

Speeddrills—Speedway Mfg. Speedax—General Cement Mfg. Speed Grip—Tinnerman Speed mater—P & H Sales Speed-Mounts—Phoenix Electronics Speed-Mounts—Phoenix Electronics Speed Nut—Tinnerman Speed Sort—Associated Research Speed-Trol—Sterling Electric Speed-Trol—Sterling Electric Speed-Cal—Nuth Shore Name-plate plate Speedy-Marx—North Shore Name-plate Speedy Shift—Wincharger Spherex—Electro-Voice Spirco—Spirling Products Spinco—Specialized Instr. Spin-Lock—Russell, Burdsall & nlate Ward Spin-Pin-Bruno-NY Industries Spintit-Stevens Walden Spintit-Stevens Walden Spintito-Stevens Walden Spintito-Stevens Walden Spintito-Stevens Walden Spintito-Stevens Walden Spintito-Stevens Mig. Spintito-G. M. Giannini Spintito-Stevens Uitho. Spintito-Fiexible Tubing Spintito-Fiexible Tubing Spinto-Western Litho. Spotheck-Magnaflux Spot-O-Graph-Audio Master Spray Booth Shield-Ramsell Mig. Spray Booth Shield-Ramsell Mig. Spray South Shield-Ramsell Mig. Spray Court-Sheidon Electric S S B-100-Eldico of N. Y. Stabelex-Industrial Condenser Stabelex-Industrial Condenser Stabelex-Industrial Condenser Stabelex-Industrial Condenser Stabelex-Industrial Condenser Stabelex-Industrial Condenser Stato-Thomas & Betts Stancer-Chl. Std. Transformer Standard-Ebert Electronics Stander-Charsta Wire & Cable Stander-Standard Wire & Cable Stan-Gar-JFD Mig. Sta-Put-Cons. Wire Star Miniture-Star Expansion Staticon-General Precision Staticon-General Precision Staticon-General Precision Staticon-Gristie Stemos-Arnold Ceramics Stemos-Stevens Mig. Stemos-Crevent Industries Stemos-Crevent Industries Stemos-Stevent Mig. Stemos-Crevent Industries Stenotan-Beam Instruments Steinite-Fred Stein Steinter-Fred Stein Stentorian-Beam Instruments Steinite-Fred Stein Stentor-Crescent Industries Stentoran-Spirling Prods Strat-O-Filte-Stratoseal Mig. Strato-Lite-Stratoseal Mig. Stratoliner—Shurs Bros., Inc Stratol-C-Lite—Stratoseal Mfg. Strato Ray—Fretco Strato Towers—Pipestone Sales Stratovision—Westinghouse Electr. Stress Coat—Magnafux String-A-Lite—Joy Mfg. Co. Stripline—Airborne Instr. Stripline—Airborne Instr. Stripohm—Ward Leonard Strobotac—General Radio Strobolux—General Radio Strobolux—General Radio Strobolux—General Radio Strobolux—General Radio Strobolux—General Radio Strobolux—General Radio Strobolax—General Radio Strobina—Heliand Research Stydio Zoomar—TV Zoomar Corp. Styrofilex—Natvar Corp. Styrofilex—Natvar Corp. Styrofilex—Natvar Corp. Styrofilex—Helps Dodge Copper Prods. Sunflash—Kemilte Sunflash—Kemilte Sungae—Corvens Inc.

Suburban—Radion Sunapee—Corvens Inc. Sunswitch—Ripley Super—Union Spring

Super-Beam—JFD Mfg. Super Boom-Lite—O'Nell-Irwin Super Cor—Cornish Wire Super-Cor—Cornish Wire Super-Cor—Cornish Wire Super-Cor—Cornish Wire Super-Cor—Cornish Wire Super-Cor—Cornish Wire Super-Cor—Bradh Mfg. Superior—P, Wall Mfg. Superior—P, Wall Mfg. Superior—P, Wall Mfg. Superior—P, Wall Mfg. Superior—Products Super Laty—Acme Scientific Co. Superlite—Projection Optics Super Laty—Kay-Towaes Super Mater—Scial Radio Super Cor—Cader Electronics Super Laty—Kay-Towaes Super Nater—Scial Radio Super-Pro—Hammariund Super Con—Leader Electronics Super Inter—Scial Radio Super-Pro—Hammariund Super Con—Hammariund Super Con—Hammariund Super Scintillator—Prec Radiation Supersued—Ester Madicet H. Superspeed—Ester Madicet Supertester—Color TV Supertester—Signing Prods. Surface—Suprenant Mfg. Surface—Superenant Mfg. Surface—Superenant Mfg. Surface—Suprenant Mfg. Surface—Superenant Mfg. Surface—Superenant Mfg. Surface—Superenant Mfg. Surface—Paillard Prods Switch-O-Lite—Hoffman Eng'g Switch-O-Lite—Hoffman Eng'g Switch-O-Lite—Hoffman Eng'g Switch-O-Lite—Hoffman Research Synchromount—Mi G. Glannini Synchromount—Mi G. Glannini Synchromount—Mi G. Glannini S Syncroverter—Bristol Syncroverter—Bristol Synctron—Dormitzer Electric Synthinol—Cons. Wire Synthinol—Cons. Wire

Tabtron—Tech. Apparatus Tab.weid—Electric Controller Taco—Technical Appilance Taco—Technical Appilance Tacopiex—Technical Appilance Tacopiex—Technical Appilance Taking Table—Magnetic Recording Tanko—Alliance Mfg. Tapek—Braadcast Equip. Spec. Tapecaster—Electronic Spec. Tapecaster—Electronic Spec. Tapecaster—Electronic Spec. Tape.Taiks—Fischer-Smith The Tapett—Specialties Corp. Tape.Taiks—Fischer-Smith The Tapett—Specialties Corp. Tape.Taiks—Fischer-Smith The Tapett—Specialties Corp. Tape.Taons—Ess Tee Distributors Teeraft-Equip Crafters Inc. Teeco—Trutone Electronic Tefilte—Boston Insulated Wire Tefilte—Boston Insulated Wire Tefilte—Technic Tech-Niloy—Technic Tech-Niloy—Technic Tech-Niloy—Technic Telecaster—Packard-Beil Telecaster—Packard-Beil Telecaster—Packard-Beil Telecaster—Packard-Beil Telecaster—Vestern Lithe. Tel-A-COI—Magnetic Core Tel-A-COI—Magnetic

Tabtron-Tech, Apparatus

Telecordex—Telecomputing Tele-Coupler—Vidare Electronles Telecarne—Mine Safety Appl. Telecroiser—Ailen B. DuMont Labs. Teleducer—Telecomputing Teleduct—Whitney Blake Teletanken—American Elite Telemagnet—Mohawk Bus. Ma-chines Telemetroscope—Deutschmann Corp. Tele-Match—Vidaire Electronics Telemike—Miles Reproducer Telemike—Miles Reproducer Telemike—Miles Reproducer Telemike—Miles Reproducer Telemike—Miles Reproducer Telemix—Hamilton Electronics Telemix—Hamilton Electronics Telepixe—Fradelin Telepioter—Telecard Dimensitone Telepioter—Telecomputing Telepioter—Telecomputing Telepioter—Telecomputing Telepicater—Telecomputing Teleradex—Telecomputing T Tele-Thermometer—Yellow Springs Instr. Teletranscription—Allen B. Du-Mont Tele-Trol—Teletronic Labs Teletron—Allen B. DoBont Labs. Teletron—Allen B. DoBont Labs. Televanes—Ward Products Telever Switches—Switchcraft Televider—Jackson Electrical Instr. Tel-Ohnike—Sprague Electric Telojector—Gray Research Telton—Television Labs. Televan—Television Labs. Telvac—Television Labs. Temeo—Thermo Electric Mfg. Temo—Thermo Electric Mfg. Temp-Alam—Tempil Tempilad—Tempil Tempilates—Tempil Temparation—Hi-Temp Wires Inc. Tempreme—Hi-Temp Wires Inc. Tempreme—Hi-Temp Wires Inc. Tempreme—Hi-Temp Wires Inc. Tempaca—Allates—Tencial Tenna Stor—Conn. Hard Rubber Tenna Stor—Alliance Mfg. Tenna Stor—Alliance Mfg. Tenna Stor—Alliance Mfg. Tenna Stor—Alliance Mfg. Tenna Switch—Leader Electronics Tenna-Top—Electro-Volce Instr. Teletranscription—Allen R Dr-Terna Scope—Alliance Mig. Tenna-Shingle—Javex Tenna-Shingle—Javex Tenna-Shingle—Javex Tenna-Tob—Electro-Volce Tenna-Tob—Electro-Volce Tenna-Tob—Electro-Volce Tenna-Tob—Javex Tennatube—Mational Electric TenneyEner—Tenney Eng'g Tensite—Wilbur B. Driver Tensolar—Tensolite Insul. Wire Tescolar—Terrell Corp. Terremeter—Eng'g Research Tescom—Terrell Corp. Terrometer—Eng'g Research Tescom—Terrell Corp. Terrometer—Eng'g Research Tescom—T-V Products Test-Aid—Auto-Test Test-Glo—Ideal Industries Test-Aid—Auto-Test Test-Glo—Ideal Industries Test-Aid—Auto-Test Test-Glo—Ideal Industries Test-Aid—Auto-Test Test-Glo—Ideal Industries Test-O-Lite—Brach Mig. Tetalliner—Mfrs. Eng'g & Equip. Tetalline—Bracke-Seib Thermale—Deterion Thermall—LaRose & Assoc. Thermall—LaRose & Assoc. Thermallow—Ni Accelle Tool Thermaton—Ni. Rochelle Tool Thermo-Ideal Industries Thermo-Ideal Indus

Thommsoprene—Whitney Blake Thor—Forsberg Mfg. Thrupass—Spraque Electric Ticon—Technical Instrument Ticon—Ticanium Alloy Ticonography—Technology Instr. Ticonderoga—Joseph Dixon TI-Match—Camburn Timefax—Times FacsImile Times Records—Cook Labs Tini-Jax—Switchcraft Inc. Tini-Jax—Switchcraft Inc. Tini-Jax—Switchcraft Inc. Tinol—Amer. Solder & Flux Tinymite—Renbrandt Inc. Tiny 10—Daystrom Pacific Corp. Tinga—Sheldon Electric TioleAtrik—Amer. Lava Tipwrench—Smith Heat Treating Tigtmer—Electro-Physics Co. Titlemaster—Flett Lab. Titome—Sonotone Titrine—Consolidated Eng'g Titrimete—Deutschmann Corp. T Tobemite—Deutschmann Corp. T Tobemite—Deut Tom Boy—Automatic Radio Tom Thumb—Automatic Radio Tom Thumb—Automatic Radio Tom Thumb—Automatic Radio Tonetax—Electro-Voice Tong Test—Columbia Electric Top Hat—Times Facsimile Tophet—Wilbur B. Driver Topper—Camburn Top-Lay—Metals & Controls Torchumaster—Industrial Eng'g Torkrite—Cleveland Container Torque Watch—Waters Mfg. Inc. Totalume—Universal Match Touch.0-Matlc—Automatic Radio Town & Country—Kraft Bros. Tracometer—Mickok Electrical Instr Tracker—White & Sons W. O. Trac.Tape—Tage Recording Appar. Tradiowision—Trad TV Tradiovision—Trad TV Tradiovision—Trad TV Transart—Hoffman Radlo Transel—Johns-Manville Transalyzer—Kay Electric Transster—Useo Mfg. Transmaster—Useo Mfg. Transmaster—Hertme Electronics Transite—Johns-Manville Transde-Pancro-Mirrors Transmaster—Hertme Electronics Transite—Johns-Manville Transter—Hertme Electronics Transite—Transitor Prods. Transter—Hertme Electronic Transter—Hertme Electronic Transite—Electronic Research Transter—Hertme Electronics Transite—Transitor Prods. Transve—Electronic Research Transter—Hertme Electronics Transite—Transitor Prods. Transve—Electronic Research Transter—Hertme Electronics Transter—Hertme Electronics Transter—Hertme Electronics Transve—Electronic Research Transter—Hertme Electronics Transve—Hertme Electronics Transter—Hertme Electronics Transve—Hertme Electronics Transve—Hertme Electronics Transve—Hertme Electronics Transve—Hertme Electronics Transve—Tri-Dex Co. Tri-Dexe—Tri-Dex Co. Tri-Dexe—Tri-Dex Co. Tri-Play—Stawarm Electric Tri-Play—Stawarm Electric Tri-Play—Redennd Co. Tri-Play—Redennd Co. Tri-Play—Redennd Co. Tri-Play—Redennd Co. Tri-Play—Tripett Electrical Instr. Tri-Play—Stawarm Electronics Tru-Nauch—Walds Kohinnor Truerana—Technicraft Co. Tropicana—Technicraft Co. Truerana—Technicraft Co. Truerana—Tech

Tunctape—Miller Electronics Turbo—William Brand Turbogias—Wm. Brand Turboiene—Wm. Brand Turboiene—Wm. Brand Turboisi—Wm. Brand Turbotif=Wm. Brand Turbotif=Wm. Brand Turbotif=Wm. Brand Turbotif=Wm. Brand Turbotif=Wm. Brand Turbocne—Wm. Brand Hite-Electro-Voles Twin Channel—Sound Apparatos Twist-Mount—Pyramid Elec. Twinstime—Fenton Twist-Lock—Harvey Hubbeli Twist-Lock—Brange Electric Twist-Tite—Harvey Hubbeli Two-Timer—Vocaline Co. of Amer. Inc Inc Tycoon Recorder—SoundScriber Tynee-Dry—Pyramid Elec. Tyniswitch—Sessions Clock

U-Ask-It—Electronic Eng'g Uee.D.X.—Circuitron, Inc. Uitra.—Kay Elec Uitra.Beam.—Camburn Uitraaeustic—Camburn Uitraaeustic—Gustin-Baker Mfg. Uitradoustic—Gustin-Baker Mfg. Uitradapt—Radlo Merchandiss Sales Uitradhe—Gustin-Baker Mfg. Uitracen.—Alcar Instroments Uitrace.—Alcar Instroments Uitrace.—C. W. Mayne Labs. Uitra-Linear—Acro Prods. Uitralte.—Gustin-Baker Mfg. Uitra-Uite.—Baker Mfg. Uitra-Uite.—Baker Mfg. Uitra Stigmat—Gandlach Mfg. Umbolt.—Valsco Unibatk—Walsco Unibatk—Redmand Une Cap-United Electronic Mfg. Unesco-Western Mfg. Unibelt-Walsca Unibridge-Industrial Electronics Uni-Cast-Redmand Uniclosed-U. S. Electrical Motors Uni-Cone-Alpha Metals Uni-Crimp-H. B. Sherman Mfg. Unidyne-Shure Brothers Uni-Glow-Miskell Infra-Red Unite-Cascade Research Uni-Lock Macon Industries Uni-Cone-Cascade Research Uni-Lock Macon Industries Unimate-Cascade Research Unimate-Calabest Eng'g & Elec Unimatic-Unitek Unimate-Witt L. Maxson Unipole-Andrew Corp. Unipole-Andrew Corp. Unipole-C. J. Applegate Unimatic-Unitek Unimate-Enging & Elec Unimatic-Unitek Unimate-C. J. Applegate Unipole-Andrew Corp. Unipole-Filters Co. Unit Breaker-Cutler-Hammer Universal-Brush Electronics Universal-Mueller Electro Universal-Mueller Electronics Universal-United Recording Labs. Usalite-U. S. Electric Mfg. Usaco-U. S. Eng'g UTC-United Transformer Utilicom-Dlamond Power Utone-Utah Radio Prods.

VA—Varian Assoc. Vacombe—Vaco Products Vacorder—F. J. Stokes Mach. Vac·Tite—Hermetic Seal Prods. Vac-Tite—Hermetic Seal Prods. Vacuum Plate—Vacumet Valenco—Valley Eng's Co. Valimitor—Electric Controller Mfg. Valvseal—Richardson VAM—Video Accessory Mfg. Vamistor—Ruckelshaus Labs. Vapormaster—Mfrs. Eng's & Equi Vapormaster—Mfrs. Eng's & Equi Vapormaster—Mfrs. Eng's & Equi Equip.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Varfio—Varfiex Varjas—Varfiex Varias—Varfiex Varias—General Radio Varicell—General Radio Varicell—Superior Electric Varicon—Eleo Variopem—Nilsen Mis. Co. Varipoter—Eleetronic Assoc. Varipoter—Eleetronic Assoc. Varipoter—Eleetronic Assoc. Varipoter—Eleetronic Assoc. Varipoter—Par Products Varispeed—Audio Master Varitar—Par Products Varitar—Photographic Prods. Vari-Tenna—Superex Electronics Varpak—Deutschmann Corp. T Varsity—Halidorson Transformer Veco—Vietory Eng'g Vectolyzer—Advance Electronics Vectoron Inc. Veco—Vietory Eng'g Vectoolizer—Advance Electronics Vectoron Electronic Veco—Vietory Eng'g Vectoo—Vector Inc. Veco—Vietory Eng'g Velco—Virginia Electronics Veiveronic—Packard-Beil Velometer—Itilinois Testing Labs. Verloom—Remington-Rand Ventisel—Electronic Devices Vericolor—Remington-Rand Vericon—Remington Rand Vericeli—West Instrument Vermiculiter—Mica Fabrienting Versatex—Share Bros. Versat=Share Bros. Versa-Tool—Phillips Mfg. Versatrol—Assembly Prods. Inc. Versi-Nount—Radio Merchandise Sales Vertar—Par Products

Sales Vertar—Par Products Vertical Drive—Shure Bros. Vibragiass—Glass Fibers

Vibralyzer—Kay Electric Vibracode—Motorola Vibrapacks—P. R. Mallory Co. Vibrashock—Robinson Avlation Vibrelay—Advanced Electronics Vibrashock-Robust Vibrashock-Robust Vibroiteday-Advanced Electronics Vibroites-Assoe. Research Vibroites-Assoe. Research Vibroiten-Byron Jackson Co. Vieo-Video Inds. Victor-Radio Corp. of Amer. Victor-Radio Corp. of Amer. Victorlite-T-Bar-V Productions Videon Zoomar-Zoomar Inc. Video Beam-Camburn Videofilm-General Precision L Videofilm-General Precision L Videofilm-General Precision L Videcon Zoomar Zoomar Inc. Video-Beam-Camburn Videofim-General Precision Lab. Videometer-Hickok Electrical Instr. Videostigmat-Burke & James Videostigmat-Burke & James Videostigmat-Burke & James Videostoron-National Union Radio Vidigage-Branson Instruments Viking-Forsberg Co., Jensen Mfg., E. F. Johnson E. F. Johnson Vinapex—Apex Coated Fabrics Vinex—Union Plastics Vipower—Radlart Visi-Mag—Magneeessories Visi-U-AII—Television Engrs. Visual Cast-Vietoriite industries Visitron-Rauland Visulite-Keystone Electronics Visutrol-Stewart Instrument Vitamin <u>—</u>Sprague Electric Vitawox—British Industries Vitrohm—Ward Leonard Elec. Vitrohm—Glass Fibers Vitrom—Glass Fibers Vitrom\_Wolcen Cable Viz—Moloco Insulation V-King—Walsco Vocat-Aire—Dilks Vocatron—Vocaline Co. of Amer.

Vogelite—Ultra-Violet Prods. Vo-Gio—Ultra-Violet Prods. Volce Master—Magnetic Recording Voice of the Theatre—Altec Lans-..ing Corp. Volcano—Industrial Eng'g Prods. Volseal—Johns-Manville VoltageSittler Corp. Volt-A-Test—Sittler Corp. Volto-Superior Elec. Voltohymst—Radio Corp. of America RCA Tabe Dept. Voltostat—Industrial Transformer Voyager—Fidelity Amplifier Voyager—Magnecord, ine V-Z=Fretco VI-Cot—Magnecord, ine V-2=Fretco VI-Charles Beseler Co. Vu-Cotarles Beseler Co. Vu-Cot-Mational Vulcanized Fibre Corp. VU-Lyte—Beseler Vx-ier—Eldico of New York, Inc. Vycor—Corning Glass Works Walco-Electroyox Co.

Waleo-Electrovox Co. Walkie-Recordali-Milos Beprodueer Wall-O-Matic-JP Seeberg Corp. Wall-Thra-Mosley Electronics, Inc. Walscolub-Walsco Wally-P. Wall Watchmaster-American Time Pruds. Waterseal-Rubber Assoc. Waterside-Semon Bache & Co. Watterson-J. W. Davis Waveflex-Titeflex

Wavometer-Micrometrical Mig. Weather Master-Jensen Mig. Webcor-Webster-Chleago Wecco-Wickes Engig & Const. Wedgle-Insulation Mirs. Weidpower-Raytheon Mig. Weidgawn-Superior Tube Weidmaster-Unitek Weidmaster-Unitek Corp. Weidwood-U. S. Plywood Wempy-Westfield Metal Prods. Wesco-West Coast Elec. West-Cap-San Fernando Elec. West-Cap—San Fernando Elec. Wesgo—Western Gold & Platinum Westach-Westberg Mfg. Westboosten-Westberg Mig. Westboosten-Western Mfg. Western Paeifie-Birdsell Mfg. West Test Set-Automatic Elec. Whale-Forsberg Mfg. Wharfedale-British Industries Whetha-Tube-Whetaiand Tube White Eleb Sounder-White & Sons White Flash-Enthoven Solders White Flash-Enthoven Solders White Flash-Enthoven Solders White Solder-British Inds. Wilco-H. A. Wilson Wilcolee-Wileox Elec. Wilco-Hudson Wire Winco-Hudson Wire Winco-Hudson Wire Winco-Wincharger Windal-Friez Instrument Westbooster-Western Mfg. Winco—Wincharger Windial—Friez Instrument Wipe—Merix Chem. Wire Lube—Ideal Inds. Wire-Ohm—Phaostron Wire-ohm—Phaostron Wire-Thread—Richard Bird Wire-Thread—Richard Bird Wirewatt—Ohmite Mfg.

Wissh—Workman TV Wonderflux—American Silver Wonderod—Columbia Prods. Wood-Ray—Woodwelding Worbud—Dubrow Development Wrinlay—Photo Chemical Prods. Worometer—Stewart Instrument Wyto—Wyzenbeek & Staff Wyd-Angle—Ess Instr.

"X" Band—Omega Labs. Inc. Xtalator—Kay Elee Xtalector—Valpey Crystal X-Tra Fast—E. I. DuPont de Atalector—values of sea X-Tra Fast—E. I. DuPont Nemoors X-Var—Fidelity Chemical Xyron—Eutectic Welding Alloys Xy Systems—Stromberg-Carison

Yok-Ex—Vidaire Electronics Mfg. Yvar—Paillard Prods.

Zak-U. M. & F. Mfg. Zee-National Electric Prods. Zephy-Sound Devices Zero-Max-Revco Zero Reader-Sperry Gyroscope Zig-Zag-Trilo Mfg. Zinktrom-Constad Labs. Zipohm-Muter Co. Zipper-Centralab Zirmet-Foote Mineral Co. Zoom-Up-JFD Mfg. Zyglo-Magnaflux

## **ELECTRONIC INDUSTRIES DIRECTORY**

Consulting Engineers

A complete alphabetical listing of individual engineers and engineering companies specializing in consulting services for the radio-TVelectronic and allied fields. The particular specialty of each engineer is indicated by a code letter following his name and address.

Broadcast
CommunicationsB
Component ManufacturingC
Electronic Control SystemsD
Equipment ManufacturingE
Industrial ElectronicsF
Medical ElectronicsG
Recording, Audio

- Adair G P 1610 1 St N W Washington 6 D C EX 3-1230 A,B,D,F Adler Comm Labs 1 LeFevre Lane New Rochelle 1 N Y 6-1620 A,B,H
- Alford A 299 Atlantic Ave Boston 10 Mass HA 6 2338
- Alforu A 222 Analysis A,B,C Amoo L R Granger Hill Valley City N D 136 A Anderson-Nichols 150 Causeway St Boston 14 Mass Ri 2-3400 B,D,F,H Andrews Inc L W 1927 College Ave Davenport Iowa
- Andrews Inc L W 1927 College Ave Davenport Iowa 2-8683 A.B.E Andros Co A A 249 N 48 St Lincoln Nebr 6-2364 F Annis Electric Research 1401½ S Neil St Champaign III 6-1780 D.F Antony W E P0 Box 1387 Shreveport 92 La 2-8711 B Bacon J W 2001 Bay View Dr Hermosa Beach Calif FR 2-5739 C Bailey Arnold B 875 Elm St Manehester N H MA 3-6389 B.D Bailey B H 107 Campania Rayne La 3119 A.B.D.H Baker L E 826 Landers Bidg Springfield 4 Mo 2-1951 B
- Baldwin Eng'g 11168 Santa Monica Blvd Los Angeles 25
- Calif RR 2.6858 n Battison J H 4515 Saul Rd Kensington Md 01 7-9593 A,B
- A,B har M F 245 Melwood Ave Pittsburgh 13 Pa SC 1-1100 F Behar

- Bennett S D 225 E Miner Ave Stockton Callf HO 6-6981 A enns Jr W E 3738 Kanawha St N W Washington D C Benns Jr W E EM 2-8071
- EM 2-8071 A Bergen Labs 11 Godwin Ave Fair Lawn N J FA 4-5654 D.E.F
- Berger Communication Lab 109-01 72nd Rd Forest Hills L I N Y Bernard Assoc 5010 Sunset Bivd Hollywood 27, Calif

- NO 2-6715 A Bird J R Box 1032 Oroville Calif 1340 A Bitter A R 3721 Douglas Rd Toledo 13 Ohio KI 5159 A Bixby Assee H O 238 Main St Cambridge 42 Mass EL 4-0404
- Bjorksten Research 323 W Gorham St Madison 3 Fise 5-7291

5-7291 Blair W W 24 S Front St Wormleysburg Pa HBG-CE 3-8355 A,B,D,F,H Bogan & Assoc C W 1204 Wisconsin Ave N W Washing-ton 7 D C AD 4-3868 A,B,C,D,F,G,H Brennan & Assoc C E 2035 E Tripoll Ave Milwaukee 7 Wise HU 1-0790 A Briggs & Assoc T H RD #1 Malvern Pa D,E,F Brown Duncan & Porter P0 Box 9296 Raleigh N Car 8892 A

8892 A Brown R A 1312 Richmond St Joliet 111 2-2201 D.E.F Brown W J 71 Gurley Rd Stamford Conn D.F.H Brownell H R 188 W 4 St New York 14 N Y CH 2-4208

- C.D.E.F Bumstead R W 624 Maple St Westfield N J WE 2-0628M D.F.H
- Burnett W W L 4814 Idaho St San Diego 16 Calif AT 2-2740 A,B,D,E Burwen R S 17 Sheffield Rd Meirose 76 Mass ME 4-4526
- A, B, D, E, H Charp S 39 Maple Ave Upper Darby Pa SU 9-7498 B,D,F,G
- Clarke & Hartman 408 Summit Ave Jersey City 6 N J B,F
- Collins Jack 9025 N Pelham Pkwy Milwaukee 11 Wisc BR 2-5163 E.F
- Commercial Radio Equip 1319 F St N W Washington D C 7-1319 A

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- Commonwealth Eng'g Co 1771 Springfield St Dayton 3 Dhio KE-1165 D,E,F,G,H Craven Lohnes & Cuiver 1242 Munsey Bidg Washington 4 D C Di 7-8215 A Crosby Labs Box 233 Hicksville N Y WE 1-3191 A,B,E Cullum Jr A Earl Highland Park Village Dallas 5 Tex
- JU 6108 A,B Culver L R Box 607 Melbourne Fia 214-W C,E Davis George C 501 Munsey Bidg Washington 4 D C ST 3-0111 A
- Day ay George 697 Sterling Pl Bruoklyn 16 N Y MA 2-0699 G.H DeRyder H 610 Bloomfield Ave Bloomfield N J BL 2-2665
- Design Service Co 50 Broad St New York 4 N Y DI 4-3788 D.F.F
- Dixie Service PO Box 1435 Anniston Ala AD 6-4503 A,B,H
- Douglas Eng'g Co Taylortown Rd Montville N J DE
- 4-2430 C Droke 0 S P0 Box 1387 Shreveport 92 La 2-8711 A Dunleavey F S 2660 North Ave Bridgeport 4 Conn 67-1708 F

- Duschinsky W J Raymond & Rado 101 Park Ave New York 17 N Y MU 3-5797 A.B.D.F.H du Trell & Assoc L J N 202 Homedale Ave New Orleans 24 La AU 3525 A Ebel James A 212 S Jefferson St Peoria III 6-0711 A Edelman Samuel 315 E 77 St New York 21 N Y RH 4-6762 B.C.F.F Edgerton Germeshausen & Grier 160 Brookline Ave Boston 15 Mass C0 7-3520 E Ehrlich C N 130 W 12 St New York 11 N Y DR 5-2807 B.C.F. Elchwald Assoc 237 E 39 St New York 16 N Y MU 6-7445 A.B.F.H Elcar Eng'g 623 Crandall Rd Tiverton R 1 4-8553 F
- 6-7445 A.B.F.H Elcar Eng'g 623 Crandall Rd Tiverton R I 4-8553 F Electronics Research 221 Angelique St Weehawken N J UN 3-5136 B Emerson Harold L 3622 Gunston Rd Afexandria Va
- OV 3-2909 B Engineering Services 621 Jones Way Sacramento 18 Calif GL 3-1400 D,E,F
- Espy Dawkins Box 933 Beverly Hills Calif CR 4-7111 A,B,E,H Fein Mitchell 202 Saddlewood Drive Hillsdale N J WE
- 5-2055 C.D.E.F. Foley E J 1711 Massachusetts Ave N W Washington 6 D C HD 2-1325 B Foss Wm L 927 15 St N W Washington 5 D C RE 7-3883 B
- Frazier H S 708 Bond Bidg Washington 5 D C NA 8-2173 A
- T B 19 W 44 St New York 36 N Y VA Friedman
- Frieman F B 19 W 44 St New York 36 N Y VA 6-0909 A,B Frommer J C 1525 Teakwood Ave Cincinnati 24 Ohlo Ki 8730 D,F Galanty H E 36 Montgomery Rd Livingston N J LI 6-2937 D,F Gallay Harris 60 Perry St Believille 9 N J PL 9-4237
- B.D.F aring Co 34-40 79 St Jackson Heights 72 N Y HA 6-3123 C Garino
- 6-3123 C Garrison M M 1519 Connecticut Ave N W Washington D C AD 2-2261 A Gautney & Jones 1052 Warner Bidg Washington 4 D C NA 8-7757 A.B Gelierup D W 5437 N Santa Monica Bivd Milwaukee Wise W0 2-53172 A.H Gerst & Co Paul E 1733 N Milwaukee Ave Chicago 47 III HU 9-2160 C.E

- Gilleit & Assoc Glenn D 982 National Press Bidg Washington 4 D C NA 8-3373 A,B,G God y Co Paul P 0 Box J Upper Montelair N J MO 3-3000 A,B,0,F Goldsmith A N 597 5 Ave New York 17 N Y PL-3-4150
- Golewater F J 572 Broome St New York 13 N Y CH 2-1312 D,F,G Gardon H L Warner Bidg Washington 4 D C NA 8-2497
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- Rudolph 780 West End Ave New York 25 N Y Un 5-6663 Gray C M P 0 Box 602 Birmingham 1 Ala TR 1-3570
- A Grimwood Co Fred 0 2025 Ry Exchange Bidg St Louis 1 Mo CH 1-4977 A,B Haigler E D North York Rd Hatboro Pa 0S 5-3562 D.F Haller Raymond & Brown 124 N Atherton St State Col-lege Pa AD 7-7611 D.F.H ' Hammett Robert L 821 Market St San Francisco 3 Calif SU 1-7545 A,B,D.F Hannes H P.O. Pace & Balbas Island Calif HA 2453 B
- Calif SU 1-7545 A.B.D.F Hansen E H P 0 Box 6 Balboa Island Calif HA 2453 B Hare Co D G C 30 Burtis Ave New Canaan Conn WO 6-9569 A.B.C.D.E.F.G.H Haffeld J B 936 35 Ave Seattle 22 Wash FR 7860 A
- Heatt Bernard 5410 Wilshire Blvd Los Angeles 36 Calif WE 0121 C
- B 815 E 83 St Kansas City 10 Me Heffelfinger J
- HI 7010 Å Hilly R C 2032 Indianola Ave Columbus 1 Ohio UN 9229 Å
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- 2-7855 B Holisington D B 150 Ford Rd Carmel Valley Calif L0 279 B.D.E.F Holmy W J 1146 Briarcliff PI N E Atlanta Ga'AT 3328
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- C.E
- C,E Thenes Eng'g John G 29-10 Northern Blvd Long Island City 1 N Y ST 6-2832 C.D.E.F Hutcheson G C Box 32 Arlington Texas AR 4-8721 A,B Industrial Res Product: 9400 Belmont Ave Franklin Park III GL 5-3600 B.F Instruments for Industry 150 Gien Cove Rd Mineola N Y Pi 2-5300 B.E.F Tex Corp 16 Hudson St New York 13 N Y RE 2-2996 C.D.F
- C.D.F. F.D.F. Herg R A 2001 Barbara Drive Palo Alto Calif DA Isberg

- 1-1237 A.B.D.H ٨
- Ker & Kennedy 1302 18 St N W Washington 6 D C HU 3-9000 A,B Kei J J 1121 E Capitol St Washington D C LI 4-5131 A,B Kem L B 24 W 55 St New York 19 N Y CI 6-1288
- Kelburn Eng'g 600 W Jackson Blvd Chleago 6 111 DE 2-2827 D.F Kinn T P 7007 Lancaster Rd Baltimore Md HU 6-8988 B.C.D.F
- Kip Electronies 29 Holly PI Stamford Conn 48-5328 C Kohlhagen Walter 818 Oakley Ave Eigin III F Korn G A & T M 11201 Penrose St Sun Valley Calif CH 7-7832 D
- Kramer A W 2000 P St N W Washington 6 D C AD 4-3442 AB Kunins M K 1730 Popham Ave New York 53 N Y LU 7-0024 D
- Levey Labs H A 8127 Oleander St New Orleans 18 La GA 1501 F

- Little Inc A D 30 Memorial Dr Cambridge Mass UN 4-9370 D.F.G Long Eng'g 54 Burke St Winston-Salem N C 5-2306 B,C
- Lubcke Harry R 2443 Creston Way Hollywood 28 Calif HD 9-3266 A,B,E,H Lyon H H 4004 Jefferson St Hyattsville Md WA 7-7137
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- Magnuson Eng'rs 509 Emory St San Jose Calif CY 2-3657 E
- 2-3657 E Mathematical Computing Service 67-24 211 St Bayside 64 N Y BA 4-6184 B,D,E.F,G.H May Russell P 711 14 St N W Washington 5 D C RE 7.3984 A.B McCachren & Assoc W S 2404 Columbia Pike Arlington Va JA 8-8000 A McLintosh F H 777 14 St N W Washington 5 D C ME 8.4077 A B E
- 8-4477 A.B.F eNary J C National Press Bldg Washington D C DI MeNary
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- 7-7012 D.F Meyers J G 1056 Sheridan Ave New York 56 N Y WY 2-0138 H Microwave Consultants Box 844 Brooklyn 1 N Y BO 9-2306 C.E
- 9-2306 C.E Microwave Services Inc 45 Rockefeller Plaza New York 20 N Y Cl 7-4953 B Morecroft J H 2637 Pickens St Montrose Calif CH 9-6418 A.B.D.F.G
- 9-5418 A.B.D.F.G Morefield John A Camp Hill Pa RE 7-3416 B.D.H Morris Jr F W 11600 Fairway Dr Los Altos Calif WH 8-3928 B Morrissey T G 5700 W 28 Ave Denver 14 Colo BE 3-5320 A.B.D.F
- Moulie Specialties 1005 W Washington St Bloomington III 6123 F
- Mullaney John H 2000 P St N W Washington 6 D C AD 4-6393 A.B

- AD 4-6393 A.B Murray A F 4900 Hillbrook Lane Washington 16 D C EM 2-4841 A.B Myse & Assoc D A 1411 Pennsylvania Ave N W Wash-ington 4 D C RE 7-7040 A.B.C.D.F Nat'l Scientific Labs 2010 Mass Ave N W Washington 6 D C HU 3-4030 B.D.F.G Nikirk T E 2020 E Villa St Pasadena Calif SY 6-4264 B F C H
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- C,D,E,F Polydoroff W J 927 15 St N W Washington 5 D C NA 7-6724 C,E Pooley R R 3153 N E 83 Ave Portland 20 Ore KE
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- 4-1463 B.E.G.H Radio Communications Service 151 North St San An-tonio 5 Texas CA 4-7292 B Radio End'g Co 1355 Market St San Francisco Calif MA 1-8173 A.H Raesler J L 93 Phelps Rd Manchester Conn M1 9-0949 D.E.F.
- Bay G W Hilltop Dr Stratford Conn ED 7-2465 A Richardson William E 1935 S W Moss St Portland 19 Ore AT 7777 A.B
- 19 Ore AT 7777 A.B Ring & Co A D 1032 Pennsylvania Bidg Washington 4 D C RE 7-2347 A.B Rochester Electrical & Radio 462 Plymouth Ave N Rochester 6 N Y LO 6696 D.E.F. Rosenberg Assoc P 100 Stevens Ave Mt Vernon N Y MO 7-8040 B.C.D.E.F.G Rothrock R B 5413 Lynett Dr Knoxville 18 Tenn 6-4834 A.B
- A.B



Alphabetical listing of professional societies, industry associations and technical organizations serving the radio-TV-electronic and allied fields

- Acoustical Society of America, 57 E. 55 St., New York, N. Y.
- Aircraft Industries Ass'n. of America, 7660 Beverly Blvd., Los Angeles, Calif.
- American Assoc. of Engineers, 8 S. Michigan Ave., Chicago 3, III.
- American Institute of Electrical Engineers, 33 W. 39 St., New York, N. Y.

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- American Institute of Physics, 57 E. 55 St., New York, N. Y.
- American Physical Society Columbia Univ., Broadway & 116 St., New York, N. Y.
- American Radio Relay League, 38 La Salle Rd., W. Hartford, Conn.
- American Society for Mechanical Engrs., 29 W. 39 St., New York, N. Y.

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Rountree J G 4515 Prentice St Dallas 6 Texas EM 3266 A,B Saxon Meri P 0 Box 575 Lufkin Texas 3-4242 A Selby H E 619 68 St Brooklyn 20 N Y SH 5-5332 C.E.F.

- Sheikofsyk C I Rt 1 Foley Ala L 297R A,B Shepard Labs 480 Morris Ave Summit N J SU 6-5255 D F
- D,F Sherwood R H 230 Park Ave New York 17 N Y OR 9-5104 D,F.G.H Silliman & Assoc 1405 G St N W Washington 5 D C RE 7-6646 A.B
- Silliman & Assoc 1405 G St N W Washington 5 U C RE 7-6646 A.B Singleton Harold C 4488 S W Council Crest Dr Portland 1 Ore BE 1201 A Smeby L 1311 G St N W Washington D C EX 3-8073
- A Smith Carl E 4900 Euclid Ave Cleveland 3 Ohio HE 2-3177 A.B.F Smith G D 136 Liberty St New York 6 N Y RE 2-6688
- в Snow W B 2179 Mandeville Canyon Rd Los Angeles 49
- Calif AR 7-9139 A Stone C G 304 S 1 Ave Mt Vernon N Y M0 8-8167 D.E.F. Strain C E 1298 Niles Ave N W Atlanta Ga BE 5164
- A Swanson E H 15 Cleveland Ave Glen Head N Y GL 4-6324 A.B.D.F Swantek J J 3132 Glacier Way Ann Arbor Mich NO 2-9608 A.B
- Swarthe Erie P 0 Box 212 El Segundo Calif FR 4-1757
- D.F Tammen & Denison 650 S Clark St Chicago 5 III HA 7-3955 A.B.D.F.H Technical Operations Inc 6 Schouler Ct Arlington 74 Mass MI 3-4500
- 80 Wheeler Ave Pleasantville N Y
- Ten Bosch ine M 80 Wheels ... PL 2-3000 D.E.F Toeppen M K P 0 Box 24726 Los Angeles 24 Calif GR 7-4936 B 7-4936 B Park Row New York 7 N Y C0 7-8962 B
- /-4936 B Toth A F 38 Park Row New Yark 7 N Y CO 7-8962 B T & T Radio Measurements 2557 Atlantic Ave Long Beach 6 Calif 4-2015 A Turner R P 919 E 116 PI Los Angeles 59 Calif LO 6-3480 F
- Uglow Kenneth M 7961 Eastern Ave Silver Spring Md JU 9-2603 B Unitel Ine 205 E 42 St New York 17 N Y MU 6-5280
- A.B
- A.B. Universal Research Labs 2655 Van Ness Ave San Francisco 9 Calif PR 5-5833 A.B.H Vandivere Cohen & Wearn 1420 New York Ave N W Washington 5 D C NA 8-2698 A.B Voorhees Walker Smith & Smith 101 Park Ave New York 17 N Y LE 2-1600 B Walsh Eng'g 34 DeKart PI Elizabeth 2 N J EL 2-7600 C.D.F.H
- Walsh Eng'g 34 DeWart Pi Elizabeth 2 W J EL 2-7800 C.D.E.H Weldon & Carr 1001 Conn Ave N W Washington 6 D C ST 3-2550 A.B.H Westlabs Inc P 0 Box 1111 Palo Alto Calif DA 4-0514 C Wheeler Labs 122 Cutter Mill Rd Great Neck N Y HU 2-7876 B.C.E
- Whiteford Lab 587 Washington St Lynn Mass LY 8-9119 B, D. E
- Williams B M 1805 Westway Ave Garland Texas 6-3443 Williams & m 1005 Normal Ave Pittsburgh 18 Pa C.D.E.F.G Williams E M 415 Maple Ave Pittsburgh 18 Pa PE 1-8083 B.F Williams M R 7401 E 14 St Indianapolis 19 Ind

BL-0038 A.B.F Williams N 20 Algoma Blvd Oshkosh Wise RL 885 A Williams N 20 Algoma Blvd Oshkosh Wise RL 885 A Wilmott Ine R M 737 Warner Bldg Washington 4 D C

Wyeth Eng'g 1336 W 89 St Chicago 20 III HI 5-1447 B

American Society for Quality Control, 50

American Society for Testing Materials, 1916

American Soc. of Tool Engineers, 10700 Puri-

American Standards Ass'n., 70 E. 45 St.,

American Women in Radio & TV, 70 E. 45

Armed Forces Communications & Electronics

Associated Police Communication Officers,

Ass'n. for Computing Machinery, 2 E. 63 St.,

Ass'n. of Electronic Parts & Equip. Mfrs., 11

528 Tuily Rd., San Jose, Calif.

S. LaSalie St., Chicago 3, Ill.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Ass'n., 1624 Eye St., N. W., Washington

Church St., New York, N. Y.

Race St., Philadelphia 3, Pa.

tan Ave., Detroit 38, Mich.

St., New York 17, N. Y.

New York 21, N.Y.

New York, N. Y.

6, D. C.

Winkler Labs 5225 N 20 St Phoenix Ariz B.D.E Wortman L A 2780 Rockaway Ave Oceanside N Y RO 4-3378 A.B.H

Wrathall G R Aptos Callf MU 8-3352 A.B Wright Eng'g Co 7941 McNulty Ave Canoga Park Callf DU 9-0063 B.D.F.H Wright L R Munsey Bldg Washington 4 D C DI 7-1740-A

8-4619 A.B.F

- Ass'n. of Federal Communications Consulting Engrs., 810 International Bldg., Washington 5, D. C.
- Audio Eng'g Society, Box 12, Old Chelsea Sta., New York 11, N.Y.
- Carta, 453 Madison Ave., New York, N. Y. Electrochemical Society, 216 W. 102 St.,
- New York, N. Y. Electronic Mfrs. Ass'n., 598 Madison Ave.
- New York, N. Y. Electronic Parts Mfrs. Ass'n., 430 Wyatt Bldg.,
- Washington 5, D. C. Engineers Joint Council, 29 W. 39 St., New
- York 18, N. Y. Federal Communications Bar Ass'n., 703
- Perpetual B!dg., Washington 4, D. C.
- Hi-Fidelity Institute, Inc., 1 N. LaSalle St., Chicago 2, Ill.
- Industrial Communications Ass'n., c/o Bethlehem Steel, 701 E. 3 St., Bethlehem, Pa.
- Institute of Aeronautical Sciences, 2 E. 64 St., New York, N. Y.
- Institute of High Fidelity Mfrs., 25 Broad St., New York, N. Y.
- Institute of Radio Engineers, 1 E. 79 St., New York 21, N. Y. Instrument Society of America, 1319 Alle-
- gheny Ave., Pittsburgh 33, Pa. Int'l. Municipal Signal Ass'n., 130 W. 42nd
- St., New York 36, N. Y.
- Joint Committee on Educational Television, 1785 Massachusetts Ave., N. W. Washington 6, D. C.
- Joint Electron Tube Eng'g Council of RETMA and NEMA, 500 5 Ave., New York, N. Y.

- Joint Technical Advisory Committee, 1 E. 79 St., New York 21, N. Y.
- Magnetic Recording Industry Assoc., 444 Madison Ave., New York 22, N.Y.
- National Alliance of TV & Electronic Service Ass'ns., 5908 S. Troy Ave., Chicago 29, 111.
- National Appliance and Radio-TV Dealers Assoc., 1141 Merchandise Mart, Chicago 54, 111.
- National Ass'n. of Electrical Distributors, 290 Madison Ave., New York, N. Y.
- National Assoc. of Music Merchants, 25 E. Jackson Blvd., Chicago 4, III.
- National Ass'n. of Radio & TV Broadcasters, 1771 N. St., N. W., Washington 6, D. C. National Audio-Visual Ass'n., 2540 East-
- wood Ave., Evanston, III.
- National Citizens Committee for Educational Television, 1200 18 St., Washington, D. C. National Community TV Ass'n., 710 14 St.
- N. W., Washington, D. C.
- National Conference on Aeronautical Electronics, Wright Patterson AF Base, Dayton. Ohio.
- National Electrical Mfrs. Ass'n., 155 E. 44 St., New York 17, N. Y.
- National Electronic Distributors Ass'n., 4704 W. Irving Park Rd., Chicago 41, III.
- National Electronics Conference, 84 E. Randolph, Chicago 1, Ill.
- National Society of Professional Engrs., 1121 15 St. N.W., Washington 5, D. C.

- Operational Fixed Microwave Council, c/o Ass'n. of American Railroads, 59 E. Van Buren St., Chicago 5, Ill.
- Phonograph Mfrs. Ass'n., 562 Fifth Ave., New York 36, N. Y.
- Radar-Radio Industries of Chicago, Inc., 1 N. LaSalle St., Chicago 2, Ill.
- Radio Club of America, 11 W. 42 St., New York 36, N. Y.
- Radio-Electronics-TV Mfrs. Ass'n., 777 14 St., N. W., Washington 5, D. C.
- Radio Pioneers, 589 Fifth Ave., New York 17, N. Y.
- Radio Technical Commission for Aeronautics, Rm. 2036, Bldg. T-5, 16th & Constitution Ave. N. W., Washington 25, D. C.
- Radio & TV Executives Soc., 420 Lexington Ave., New York 17, N. Y.
- Record Industry Ass'n. of America, 1 E. 57 St., New York 22, N. Y.
- Representatives of Electronics Products Mfrs., 600 S. Mich. Ave., Chicago 5, III.
- Scientific Apparatus Makers Ass'n., 20 N. Wacker Drive, Chicago 6, III.
- Society of Motion Picture & Television Engrs., 55 W. 42 St., New York 36, N. Y.
- Society of Plastic Engrs., 34 E. Putnam Ave., Greenwich, Conn.
- Ultra High Frequency TV Assoc., 1012 14 St. N. W., Washington 5, D. C.
- Veteran Wireless Operators Ass'n., 149 President St., Lynbrook, L. I., N. Y.
- West Coast Electronic Mfrs. Ass'n., 339 S. Robertson Blvd., Beverly Hills, Calif.
  - ARKANSAS
- BLYTHEVILLE Blytheville Radio Supply 112 S 1 St 4467 FORT SMITH

- Biytheville Radio Supply 112 S 1 St 4467 FORT SMITH Carter Electronic 805 N 11 St 3-4129 Interstate Electric Hdqrs Shreveport La Lyon Co Frank 101 N 2 St \*Wise Radie Supply 1001 Towson Ave Sanset 3-8926 HOT SPRINGS White Radie Supply 643 Malvern Ave 2038 LITTLE ROCK \*C.riten Wholesale 109 W 9 St 27-9248 Connerly Radie Distrs 1201 E 2 St FR 2-7917 General Electric Supply 601 E Markham 5-5328 Graybar Electric 417 Byrd St L1 5-1246 Frank Lyon 214 E Markham St FR 5-5311 0'Bannen Bres 409 Shall St FR 2-2211 Southern Radie 1419 Main St FR 2-211 Southern Radie 1419 Main St FR 2-3154 \*White Radie Supply 1222 Main FR 6-1391 MORTH LITTLE ROCK Rys Wholesale 117 W Washington FR 5-2426 PARAGOULD Martin Wholesale 1207 W Kings Highway CE 6-4049 PINF RIFE
- Martin Wholesale 1207 W Kings Highway CE 6-4049 White Radio Supply David 615 Main St 3888 TEXARKANA
- - Antonna Interstate Electric Co Hdurs Shreveport La \*Lavender Radio Supply 520 E 4 St 2-4195 McCulloch Whse TV 305 E Front St 22-8411
    - CALIFORNIA
- ALHAMBRA
- \*Coast Electronic Supply 527 V Main Cu 3-4049 BAKERSFIELD
- Arbuckle J C 500 E 19 St 5-5816 Hdors Fresne Gough Industries 3125 Jeweit St Valley Radio Sopply 716 Baker St FA 7-8831
- BERKELEY Pacific Radio Supply 1940 Ashby Ave TH 3-8900 BURBANK
- IRBANK Dean's Electronies 1500 W Burbank Ch VI 9-2277 Pacific Radio Exch 4101 W Burbank Hdgrs Holly-
- wood Valley Electronic Supply 1302 N Magnolia Blvd Wholesaic Electronic Specialists 573 Broadway PA 8-3302
- CHICO
- Kemp Co E M 851 Main St Fi 2-8703 Radio Television Products 738 Cherry Fi 2-8140
- COMPTON CUMPTON Electronic Parts Distrs 1508 E Compton NE 1-7227 CULVER CITY Stewart & Stevens 8525 Steller Dr TE 0-6511 EL CENTRO Alnza-Huffman Olstrs 1125 W Main 2307 E' MONTE Parts Distrs 1508 E Compton Blvd

- EL MONTE
- Kimbali-Stark 713 S Tyler FO 0-2594

Harris Supply 10 N Water 2-0541 McDavid & Co 120 Water St 8-1691 McGowin-Lyons Water & St Louis Sts 2-8721 \*Nelson Radio 451 St Louis 2-0411 Radio Labs 111 N Royal 2-1715 MONTGOMERY

MONTGOMERY Nolin-Melnnis 205 Commerce 7323 Southeastern Radio Parts 224 N Court St 3-6488 Teague Hardware PO Box 240 2-0541 Waither Bros 2245 W Fairview Ave SYLACAUGA Campbeli Distributing Co 300 W 1 St 2-4122 TUSCALOOSA \*Allen & Jemison Co 8-2781 Radio Parts 402 20 Ave 8-5585

### ARIZONA

HOENIX Areal Radio Parts 532 W Van Buren Al 3-4023 Dalis Bros 528 W Jefferson St Electrical Comm 202 E Filimore Al 2-8248 Electrical Equip 1 Ave at Madison 3-3186 General Electric Buply 1102 N 22 Ave AL 8-6721 Gough Industries 917 W Madison AL 2-2375 Mathias & Co Albert Hdgrs El Paso Tex Midland Specialty 233 S 11 Ave AL 4-7351 Momsen-Ounnegan-Ryan 11 E Buchanan \*Radio Parts of Ariz 214 S 11 Ave Al 8-6476 Radio Spec & Appi 305 E Reosevelt AL 4-7184 Redmond Supply 1 F 625 W Madison Southwest Wholesale Radio 126 S 2 St AL 2-6539 Westiern Radio & Eng 1915 E Wash 4-7084 Westinghouse Elec 1110 N 21 AL 8-8211 UCSON PHOENIX

UCSON Art Electronic Supply 145 S Park 4-4413 General Electric Supply 2 E 6 St 3-4773 \*Elliott Electronics 418 N 4 Ave 4-2473 \*Standard Radio Parts 218 N 1 Ave 3-2545

TUCSON

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These are the names and addresses of organizations handling the distribution of radio-TV-electronic parts and equipment in the United States.

Listings are alphabetical under states and cities. Asterisk (\*) indicates membership in National Electronic Distributors Association (NEDA).

**ELECTRONIC INDUSTRIES DIRECTORY** 

Distributors

### ALABAMA

MOBILE

- ANNISTON Dickert Supply Co 130 W 11 St AD 5-3933 Radio Oist & Supply 109 W 10th St AD 6-0671 BESSEMER
- Bessemer Radio Supply 114 N 20 St 5-9573 BIRMINGHAM
- Aris Radio Supply 3101 4th Ave SE 4-0588 Air Engineers 1529 2 Ave 54-3431 Auto Service 1916 S 4 Ave 3-4102 Clark & Jones 1601 2 Ave S 4-4529 Clark & Jones 1601 2 Ave S 4-4529 Clark & Jones 1601 2 Ave S 4-2488 Electric Constructors 3000 3rd S 3-3243 Forbes Distr 2600 3 Ave S 3-4105 Graybar Elec 709 1 Ave N Bi 4-1861 Lewis Supply Co 1025 N 19 St 7-1148 Long Lewis Hawe 840 4th Ave McDavid & Co R P 1430 2 Ave S 7-7165 Radio Parts & Equip 1909 5 Ave N 4-4405 "Reid Distributing 1724 5 Ave N 4-7357 Steel City Supply Go N 7 St 4-0433 ECATUR

- Radio & Television Supply 415 Bank 2231 DOTHAN
- Carmichael Wholesale 140 S Foster St 2-1255 Hand Supply Co 705 S Dates 4-3300 Signal Supply Co 248 E Troy 4-0360
- Southerstern Radio Parts 120 Chestnut St 6-9761 HUNTSVILLE Curle Radio Supply Co 406 Meridian JE 4831 JASPER

Ramco Radio Supply 20 St & 2 Ave 2-5321

Emrich Radio Supply 656 Dauphin St HE 8-2596 General Elec Supply 701 N Joachim St MO 2-3511 EUREKA

- Commercial Radio & Eise 317 W 7 St HI 3-4179 Redwood Electronics 313 W 7 St HI 2-1301 FRESNO

- RESNO Arbuckle J C 2349 Kern 4-6555 Billings Wholesale Redio 260 Fulton St Delarnatt Whsie B J 223 Fulton 2-2153 Dooley Harry 725 L St 2-4108 Fresno TV Supply 1244 9 Broadway 6-9665 General Elec Supply 1234 0 St 4-4746 Graybar Electric 101 Van Ness Ave FR 2-4175 rioffman Sales 1740 Van Ness 6-8321 Kiereiff & Co 725 L St Hdgrs Los Angeles ' Kinney & Fasst 1740 Van Ness 6-8321 Meyberg Co L J 2930 Butier Hdgrs San Francisco Ports Mfg Co 3265 Beimont 3-6728 Schlefer Sound 2121 Blackstone 7-7234 Westinghouse Elec 2608 Calif 4-5091 ULLERTON
- FULLERTON
- United Radio & Electr 122 S Pamona St LA 5-3424 GARDENA Video Suppliers 14526 Crenshaw DA 9-4053
- GLENDALE
- Hagerty Radio 6826 San Fernando Rd TH 8-2453 •Weatherford Co R V 6921 San Fernando RO 9-2281 HOLLYWOOD
- SLLYWOOD Hollywood Radie 5606 Hellywood H0 4-8321 Pacific Radio Exch 1407 Caheenga HW 2-1393 Western States Elec 1509 N Western Ave H0 5-7185 Yale Radio Elec 6616 Sunset Bivd GL 4169 HUNTINGTON
- Martin

.

- Dist Co 2475 E Fiorence Ave INGLEWOOD
- GLEWOOD Acorn Radio 599 La Brea OR 8-5344 Cook Electronics 210 E Hardy St OR 8-7644 Ingiewood Electronics 836 S LaBrea OR 4-2366
- Inglewood Electronics 836 S LaBrea OR 4-2366 LONG BEACH Cal-Tenna Electronic 363 South St LB 20-7954 Dean Co F S 969 American 6-5281 General Electric Supply 840 W 12 St 3-5311 Gough Industries 838W12 Hdgrs Los Angeles Graybar Electric 800 W 16 St L0 70-2911 Kleruiff & Co 1760 Pacific Ave 6-8268 Ley Co Elwyn W 5550 Oalty Ave 20-5444 Lynde Electronics 1526 E 4 St 7-4807 Radio & TV Equip 2227 Pacific Hdgrs Sants Ana "Scott Radio Supply 266 Alamitos 7-8629 Waller inc H T 645 W 15 St 35-4844 Westinghouse Elec Supply 901 W 12 St LOS ANGELES
- Westinghouse Eiee Supply 901 W 12 St LOS ANGELES Allide Radio Supply 7319 S Normandle Ave PL 2-3134 American Electronic 567 S Fairfax Ave YO 5181 Basford Co H R 3320 Leonis Blvd LU 1-6258 Beil Radio Supply 1311 W Fiorence Ave PL 2-7191 Calif Electronic Supply 11801 W Pice Blvd BR 2-2126 Ceazan J N Co 3535 S Broadway AD 1-9133 Central Scientific Co 6446 Telegraph Rd RA 3-6141 Dunkle Radio Parts 2506 W 8 St \*Federated Purchasers 11275 W Olympia Blvd BR 2-0831

- BR 2-0831
- Dunkie Radio Parts 2506 W 8 St \*Federated Purchasers 11275 W Olympia Bivd BR 2-0831 Figart's Radio 6320 Comm Stoat Dr Y0 6218 General Elee Supply 700 Turner St MA 5-7141 Gerstman Dist 414 S. Western DU 8-2238 G.L. Electronicz 905 S Vermont DU 7-5104 Gough Industries 560 S Mission Rd MA 6-2474 Graybar Electric 210 Anderson AN 3-7282 Henderson Co 628 N Alvarado DU 2-8301 Henry Radio Shop 11240 W Olympic Bivd GR 7-6701 Hollywood Electronics 7460 Nulrose Ave WE 3-8208 Kerwin Co JJ 1525 S Flower St PR 5323 Kierulff Electronics 8200 W Olympic Bivd GR 7-6701 Hollywood Electronics 7460 Nulrose Ave WE 3-8208 Kerwin Co JJ 1525 S Flower St PR 5323 Kierulff Electronics 8200 W Olympic Bivd GR 7-6701 Mayberg Co Leo J 2027 S Figuera St RI 7-4451 Minthorne Music 2920 W Pice Bivd RE 4-2177 National TV Supply 4032 S Figueroa AD 3-8058 Olympic Elec 7636 Santa Monica Bivd H0 4-9144 Pacific Radio Exch 1407 Cahuenga Bivd H0 2-1393 Pacific Television 4032 S Figueroa AD 3-8058 \*Papel Bros 2605 E 4 St AM 2-5151 Quality Dist 2545 S Yates Ave RA 3-7121 Radio Dard S Suis I501 S Hill PR 7471 Radio Equip Dist 1340 S Olive St PR 9151 Radio Parts Sales 1501 S Hill PR 7471 Radio Equip Dist 1340 S Olive St PR 9151 Radio Pred Sales 1501 S Hill PR 7471 Radio Equip Dist 1340 S Olive St PR 9151 Radio Parts Sales 1501 S Hill PR 7471 Radio Equip Dist 1340 S Olive St PR 9151 Radio Parts Sales 1501 S Hill PR 7471 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 1340 S Olive St PR 9151 Radio Equip Dist 245 S Figueroa R 7.6741 United Radio & Elec 1924 S Grand RI 7-0441 \*Univ Radio 2008 Westwood GR 7-6741 Vietor Distr Ce 2027 S Figueroa

- MALIBU

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- MALIBU Teicoa 1 Azureleo Dr GL 6-2611 Yale Radio Electric 6616 Sunset Bivd GL 4169 MARYSVILLE •Duniap Whsie Radio 826 5 St Hgrs Stockton
- MAYWOOD
- Klerniff 6058 Walker Ave L0 5-5461 MODESTO
- Duniap Whsie Radio 1216 K St Hdurs Stockton Pacific Teletronic & Radio Sup 417 7 St 3-7751 WONTEREY Wholesale Electronics 229 Alvarado St 2-7642
- NORTH HOLLYWOOD Hyen
- veor Sales 11423 Vanowen St Hollywood Radio 4212 Lankershim Blvd St 7-3063

- BAKLAND
- AKLAND Basford Co H R 2101 Bush St GL 1-0314 Brill Co W D 198 10 St TE 2-6100 Cass Altschaler Co 6038 Telegraph Ave uL 3-7557 Electric Supply 140 11 St "Elmar Electronics 140 11 St HI 4-7011 General Electric Supply 5400 Hollis St OL 3-4433 Graybar Elec 1911 Union St GL 1-5451 "Millers Radie & TV 336 E 8 St TW 3-3848 Rayeraft Co 568 3 St TW 3-9698 Wenger Co E C 1450 Harrison GL 1-1020 Westinghouse Elec 711 E 8 TE 4-9900 ALO ALTO

- PALO ALTO Asoelated Radio Distr 459 California Ave DA 3-3173 Zaek Radio Supply 525 High St BA 5-5678 PASADENA
- Dow Radio 1759 E Colorado SY 3-1196 Electronic Supply 2615 E Foothili SY 5-8902 Empire Electronic Dis 37 E Union St RY 1-7671
- Anderson-Maggs 1095 E Third LY 9-9669 REDWOOD CITY
- Luwoud Cliff Electronic Supply 1740 Broadway EM 8-4093 Tolevision-Radie Supply 415 Lathrop St Hdgrs San Francisco RICHMOND

- RICHMOND Millers Radie & TV Supply 319 37 St BE 5-4424 RIVERSIDE Electronic Supply 2486 3 St OV 3-8110 Massey's Radie Supply 2992 8 St SACRAMENTO Broili-Parks 2225 19 St Gi 2-2983 Brown Co C C 1714 10 St Gi 3-5931 Capitol Electronics 1714 10 St Gi 3-5931 \*Duniag While 1628 "S" St Gi 2-1031 Hdgrs Stockton Camera Elec Supply 1131 "S" St Gi 3-9001 Stoekton General Elee Supply 1131 "S" St Gl 3-9001 Graybar Electrie 1900 14 St Gl 2-8976 "Komp Co E M 1115 R St Gl 3-4668 Meyberg Co Leo J 1730 8 St Gl 2-5837 Radio Television Prod 2012 19 St Gl 2-7691 "Sacramento Electronics 1219 "S" St HU 1 Westinghouse Elee 1730 14 St Gl 3-6525 111085
- 1-4821
- SALINAS Peninsula TV & Radio 42 W Gabilan 2-6503 SAN BERNARDINO
- SAN BERNARDINO Arrowhead Radio & Television 418 Base Line 2-5181 Electronie Equip 1123 W Base Line Faatherstone Radio & TV 1010 E St 81-1306 General Elec Supply 485 S "!" St 5135 Goegh Industries PO Box 222 Hders Los Angeles Graybar Electric 655 S "H" St SA 9-1051 HIFI Supply 418 Baseline 2-5181 •Inland Electronic Supply 843 Cotten Ave 6-5571 Kleruff & Co 1123 W Base Line Hders Los Angeles SAN DIEGO Caszan Co J N 1945 F Harber Dr RE 9-1301
- \*inland Electronic Supply 843 Cotten Avs 6-5571 Kierelff & Co 1123 W Base Line Hdqrs Los Andeles SAN DIEGO Ceazan Co J N 1945 E Harbor Dr BE 9-1301 Electric Supplies Dist 435 2 Ave Electronic Equip Dist 1228 2 Ave BE 2-3155 General Eice Sapply 450 2 Ave BE 9-0271 Gough Industries 3255 5 Are W0 0659 Graybar Electric 720 State St BE 3-1361 Kierelff & Co 2426 4th Ave Radio Parts Co 2060 India BE 9-9361 Shanks & Wright 2045 Kettner F BE 9-0176 Silvergate Radio Supply 2361 India FR 9-6125 Western Radio & TV 1415 India St BE 9-0361
  SAN FRANCISCO \*Assoc Radie Distr 1929 Market St HE 1-0212 Basford Co H R 235 15 St MA 1-8545 \*Brown Co C C 61 9 St MA 1-6350 \*Brown Co C C 61 9 St MA 1-4332 Edwards Co Frant 382 6 St MA 1-9700 Ets-Hokin & Gaivan 551 Mission St EX 2-0432 General Electric T 1500 Miss UN 3-3080 \*Mayberg Co L J 33 Gough St MA 1-5131 Kaemper & Barrett 1850 Miss UN 3-3080 \*Mayberg Co L J 33 Gough St MA 1-0552 \*San Francisco Radio 1284 Market St KL 2-2100 Offenbach & Remus 1564 Market St KL 2-2100 \*Pacifie Whisie 1850 Mission St UN 3-2045 Tal-Radio Supply 281 9 St MA 1-0552 \*San Francisco Radio 1284 Market UN 3-6000 \*Saifi & Crawford 785 Sterenson St UN 3-2045 Tal-Radio Supply 408 Market St XL 2-24388 Radio Parts Supply 408 Market St XL 2-24388 Talo Partison Radio 1294 Market St NL 2-2100 \*Tal-Radio Supply 408 Market St XL 2-2488 Fadio Parts Supply 408 Market St XL 2-2488 Fadio Parts Supply 408 Market St XL 2-2488 \*Tal-Radio Supply 408 Market St XL 2-2488 \*Tal-Radio Supply 408 Market St XL 2-24898 \*Tal-Radio Supply 404 Market MA 1-14244 SAN JOSE Peninsata TV & Radio 881 S 1
- SAN JOSE Poninsaia TV & Radio 881 S 1 St CY 4-8781 "Quement ine Frank 161 W San Fernande St CY 4-D464 San Jose TV Supply 986 The Alameda CY 4-7900 Schad Electronic Supply 256 W San Fernande CY 7-5858 Westinghouse Electric 292 Stockton Ave CY 5-3707 SAN LEANDRO Millers Radio & TV Supply 1600 150 Ave BR 6-3214 Styles & Engleman 2255 Bancroft Ave LO 9-9433 SAN MATEO Associated Radio Distributors 1701 Gum St FI 5-3575 SAN RAFAEL

- SAN RAFAEL Abbett Co E B 345 Francisco GL 3-1130
- Abbett Co E B 349 Flattisto GE 3420 Graybar Electric 301 French St KI 3-8309 Hurley Electronics 1434 S Main KI 3-9237 Radio & TV 207 Oak KI 2-6741 SANTA BARBARA Channel Radio Supply 523 Anacapa WO 2-3429 Gough Industries 404 State St Hidgrs Los Angeles
- SANTA CLARA Central Scientific Co 1040 Martin Ave AX 6-6650

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- SANTA MARIA Dealers Wholesale Supply 310 W Main WA 5-7213 SANTA MONICA Santa Monica Radio 117 Santa Monica EX 3-8231
- SANTA ROSA Santa Rosa Electro 1066 Santa Rusa Ave 7708 SHERMAN OAKS
- STERMAN UAKS Oak Radio Supply 13454 Ventura ST 7-6666 SOUTH GATE Mae's Radio Supply 8320 Long Beach KJ 4111 STOCKTON
- UCKTON DeJarnatt Whsie B J 515 N Henter Hdors Fresse •Daniap Whsie Badio 27 N Grant H0 6-7907 General Electric Sepply 24 N Aurora St H0 5-7231 Kemp Co E M 50 N Wliese Wary H0 5-5976 Sacramento Elect Sepply 710 E Main St H0 5-2691 •Stockton Electronics 710 E Main St H0 5-2691 AUTEIO
- VALLEJO Associated Radio Distr 1927 Solano Ave VA 3-4531 Walker Co R Lyman 1401 Hiway 40 VA 3-5675 VAN NUYS
- Tags Radio & TV Supply 14530 Caivert St ST 5-3123
- VENTURA Dealer's Whsle 265 S Laurel MI 3-6147
- VERNON VERNON Westinghouse Elec Supply 4601 S Boy L St K1 0141 WALNUT CREEK Millers Radio 2497 Mt Diable Bivd YE 4-8404 WEST LOS ANGELES
- California Electronics 11801 W Pice BR 2-2126

### COLORADO

- ROULDER
- BOULDER Boulder Distri Co 1633 18 St Hi 2-8750 COLORADO SPRINGS D & M Electr Supply 717 N Weber St ME 3-0902 Murray Radio Co 9 E Vermijo ME 3-8248 Waiker Radio Co L B 324 N Tejon ME 3-5426

- Waiker Radio Co L B 324 N Tejon ME 3-5426 DENVER Electroic Accessories 1959 Stort St Electroic Parts Co 1322 Lincoln St Fistells Radio 1085 Lincoln St Fistells Radio 1085 Lincoln St Hasco Inc 1745 Wazee Market TA 5-7116 Hasco Inc 1745 Wazee Krystone 4-8151 Hendrie & Bolthoff 1635 17 St KE 4111 Inter-State Radio 1200 Stort St TA 5347 Larson Distrs 550 Lincoln St Niles Phonograph & Radio 1254 Arapahoe TA 5-7776 Radio Parts Distr 3040 W Coltax CH Radio Parts Distr 3040 W Coltax CH Radio Products Sales 1237 16 St CH 6591 Sweeney Co B K 1601 23 St KE 6211 Ward Terry 70 Rie Grande Bivd Walker Radio L B 620 Broadway Hdgrs Pueble AL 5-3695 Wreee Parts of Colorado 780 Broadway GRAND JUNCTION Radio & Elee Supply 511 Ute Are 486 Waiker Radio Co L B 962 North Are 3698 PUEBLO Pueblo Radio TV Supply 211 Polk 8515 Walker Radio TV Supply 211 Polk 8515 Pueblo Radio TV Supply 211 Polk 8515 •Walker Radio Co L B 100 N Victoria Ave Li 2-1924

### CONNECTICUT

- BRIDGEPORT RIDGEPORT Coastal Radio 1106 Barnom Ave 5-7441 D'Ella Distra 1330 Fairfield Ave ED 3-0195 General Elec Supply 1899 Seaview Ave FO 8-1621 •Hatry of Bridgeport 1700 Main St 5-3124 Kaafman Electronics 1710 Main St ED 3-1842 Sprague Electrical Supplies 347 RR Ave 6-2535 Waldhaus L N 1132 Norman St FA 5-7985 •Westchester Electronic 195 Colorado Ave FO 7-7747
- •Westchester Electronic 195 Colorado Ave FO 7-7747 DANBURY Pilgrim Electronics 11 Spring St 3-4617 EAST HARTFORD Radio & Appliance Dist 673 Connecticut JA 8-6544 EAST HAVEN J V Electronics 677 Main St H0 7-3034 HARTFORD Camical Light & Samply 6 Huntley Pi JA 7-8115

ARTFORD Capital Light & Sapply 6 Huntley PI JA 7-8115 D'Ella Distributors inc 217 Wainat St JA 2-1252 Emerson Radio 20 Chestnut St JA 5-1476 Freed Electronics Inc 1301 Main St CH 9-7579 General Elec Supply 2964 Main St JA 2-4111 •Hatry of Hartford 203 Ann St JA 7-1881 •Moses Radio & Elec 54 Flower St 7-7247 Orkil Inc P 0 Box 208 HA 8-6581 Scell & Co R G 78 Maple Ave JA 2-1144 Signal Conter 21 New Britain Ave JA 2-9393 Westinghouse Elec 185 Ann St 2-9303 Westinghouse Electronics 1215 Main JA 2-9300 ENSINGTON

Tale Kaulo Electronics 1215 Main JA 2-9300 KENSINGTON "Modern Radio 131 Farmington Ave NB 4-0840 NEW BRITAIN Radio & TV Supply 183 Arch St 5-3024 "United Radio Supply 53 E Main St 3-2731 Universal Radio Co 61 E Main St NEW HAVEN American Distr 76 Franklin UN 5-0861 American TV 84 Commerce St L0 2-6122 Ammrad Co 843 Grand Ave UN 5-4508 "Brown Co T H 15 Whiting St ST 7-2297 Congress Radio 207 Congress UN 5-6365 Connectient Appl Distrs 140 Ferry St L0 2-9941 Dale Electronic Div Dale-Conn Inc 150 Jam SP 7-5555 Electronic Sales 353 Crown St UN 5-0161 General Elec Supply 74 Forbes St H0 7-6331

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James

- Graybar Electric 25 Union St UN 5-4163 Hatry of New Haven 77 Broadway ST 7-5921 Plymouth Electric 393 Chapel St. ST 7-0291 Radio Shack Corp 230 Crown St SP 7-6871 Tower Distr H M 48 Country St SP 7-5320 Westinghossa Elec 240 Cedar SP 7-3601 Yale Radio-Electric 680 Chapel MA 4-0834 NEW LOMOON Alkins Electronic 531 Broad St Gl 2-4407 MORWICH Alkins Electronic Supples 98 Water St TU 9-8427 STAMFORD Hatry of Stamford 97 Main St Stamford Radio Sopply 181 Stillwater Ave Fl 8-5397 WATERBURY

- WATERRURY
- WATERBURY <sup>®</sup>Bond Radio Supply 439 W Main St 3-2149 Goneral Elee Supply 23 Nichols Dr PL 4-2143 <sup>®</sup>Hatry of Waterbury 89 Cherry 5-1181 Mac's Radio & Electronic 200 Bank St Pilgrim Electronics 312 Wainut St PL 6-0063 WEST HARTFORD Graybar Electric 453 New Park Ave AD 3-2631

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WILMINGTON Aimo Radio 1122 French St Hdgrs Philadelphia Pa Wf 5-5161 D & M Radio & Electronics 215 W 4 St 2-0424 General Electric Supply 310 S Market St 5-5561 Graybar Electric 1005 W 4 St WI 4-6245 Radio Electric 3 & Tatnail Sts 6-8664 Westinghouse Electric 400 S Market 5-9611 Wholesale Electronic Supply 3rd & Monroe Sts 6-1144 Wilmington Elec Supply 405 Delaware Ave 5-4321

### DISTRICT OF COLUMBIA

ASHINGTON Capitol Radio 2120 14 St N W H0 2-0800 Educational Labs 1625 Conn N W DU 3434 \*Electronic Whosle 2345 Sherman N W HU 5200 General Electric Supply 705 Edgewood St N E HU 3-6800 Graybar Elect 60 Fia Ave N E AD 4-4800 Kenyon Radio Supply 2020 14 St DE 2-5800 Mid-Atiantic Appl 2040 W Va Ave NE 1A 6-5500 \*Recker Electronic 1312 14 St NW AD 2-8554 \*Silberne Radio 3308 11 St NW H0 2-7000 SE Radio Whioslers 2027 Nichois SE LU 4-5142 \*Southern Electronics 3405 Georgia NW TV 2-5000 Southern Electronics 3405 Georgia NW TV 2-5000 Southern Whislers 707 Edgewood NE HU 3-3422 Sun Parts Olstr 514 10 St ME 8-2697 Westinghouse Elec 1216 K St NW NA 9700 Zamoiski Jos M 2122 24th NE LA 6-3300 WASHINGTON 5000

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- DAYTONA BEACH Hammond Electronics 719 N Ridgewood 2-0704 FORT LAUDERDALE Certified Radio TV 2606 S Federal Hwy 3-6451 Goddard Distr 2113 S Andrews Ave Hdgrs W Palm
- Graybar Electric 845 N W 6th Ave F0 3-9672
- Graybar Electric 845 N W 6th Ave F0 3-9672 FT PIERCE McRoes Radio Supply 900 S Dixle Hgwy 2728 GAINESVILLE
- Baird Hardware Co 101 E Main St 8531 JACKSONVILLE AcKSONVILLE AckSONVILLE Acmo Electronics Distr 811 Main St 6-0485 Bent Distributing Co 4012 W Beaver St General Elec Supply 530 E Forsyth St EL 3-90 Graybar Electric 12 & Main Sts JA 6-7611 Kinkade Radio 1402 Laura Hdgrs Miaml Pearle Electronic Sapply 672 E 8th St Pethoff Co G F 2231 W Beaver 6-1591 Radio Parts Co 1411 Main St Southeast Audio Co 930 W Adams St 4-6372 Southeast Madio Co 930 W Adams St 4-6372 Southeast Hardware 11 S Newman St \*Thurow Distributors 15 E Church St 5-3727 Westinchouse Elec 545 E 4 St 3-7431 EY WEST 3-9011
- KEY WEST Certified Radio TV 903 Duvai St 2-8550 LAKELAND
- Hammond Electronics 116 W Lemon St Hdqrs Orlande MU 6-9121 Radio Accessories 1054 S Florida Ave Hdqrs Orlande
- nadio Accessories 1054 S Florida Ave Hdgrs Urlande IAMI Cartified Radio TV Seppiy 675 NW 11 St 82-1637 East Coast Radio 1932 N W Miami Ct 82-4636 Electronic Suppiy 61 N E 9 St 9-4512 Emerson Radio of Fla 131 NE 10th St Flavier Radio Co 1068 W Flayler St General Electric 2111 N W 22 Ave MI 65-1361 Graybar Electric 2111 N W 22 Ave MI 65-1361 Graybar Electric 2111 N W 22 Ave MI 65-1361 Major Appliances 2201 N W 17 Ave 3-5533 Radio Parts Ine 325 N W 3 Ave 2-7441 Sanders Electronics Co 3408 NW 7 Ave 65-1389 Sea Coast Appl Dist 1481 N W 22 St 9-1761 Thurow Distributors 2207 N E 2 Ave 9-4794 Westinghouse Electric 3400 N W 31 St 82-3691 Wholesale Appliance 965 S W 8 St RLANDO MIANE
- ORLANDO RLANDO General Electric Supply 523 N Garland 3-6407 Geddard-Orlandu 631 W Central Ave 5-5531 Graybar Electric 400 Pittman St DR 5-4551 Hammond-Adams Inc 533 W Central Ave Radio Accessories Co 2305 McRae St 5-2677 \*Thurow Distributors 625 W Central Ave

- PANAMA CITY Thompson Appliance 316 Luverne Ave SU 5-4821 PENSACOLA
- PENSACOLA Grite Radio & Elec 300 E Wright St HE 3-4616 Guif Elec & Hdwe 115 E Gregory St 6146 Hundley Distributing 1110 N 13 Ave HE 2-5457 Noison Radio & Supply PO Box 3014 ST. PETERSBURG Gooper Radio Co 648 2 Ave S 7-7120 Graybar Electric 1900 1 Ave S 35 7-4161 Southern Electronic Labs 938 9 St 5 75-2911 TeeVee Parts 702 3 St S 7-0533 \*Thurow Distr 342 3 Ave S Weich Radio Supply 408 9 St S 7-8655 TALLAHASSEE Gameral Elec Sunniv 705 S Woodward St 3-0520
- General Elec Supply 705 S Woodward St 3-0520 Radio-Television Supplies 1320 S Adams St 3-2337 \*Therow Distributors 739 Monroe St 2-1263
- TAMPA Elee Supply Co 106 S Franklin St 2-3745 Emerson Radio of Fia 209 S Franklin St General Electric Supply 514 S Morgan 2-1805 Goddard Distr 1502 Grand Central Ave 8-3117 Graybar Electric 416 Ellamae Ave TA 2-4621 Kinkade Radio Supply 1707 Grand Central 8-6043 Major Appliances 419 Ellamae Hdgrs Miami Radio Accessories Co 135 S Franklin Hdgrs Orlande \*Therow Distributors 134 S Tampa St 2-1885 Westinghnuse Electric 417 Ellamae Ave 2-4271 WEST PALM BEACH Goddard Distributors 1309 N Dixle 3-5701 MeNees Radio Supply 805 N Olxle 3-9969 \*Thurow Distr 327 Okeechobee Rd TAMPA

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- ALBANY ALBANY General Electric Supply 410 Hodges Ave HE 5-5631 Specialty Distributing 104 Pine Ave Hdgrs Atlanta Stewart's Radio 212 N Washington 2-1072 Westinghousse Elec 610 N Washington 667 ATLANTA
- Atlanta Phonograph 27 Pryor SW WA 3380 Beek & Gregg Hardware 217 W Luckle St N W WA 2010 Beck & Gregg Hardware 217 W Luckle St N W WA 2010 Brown Distributing Co 731 Gienn St SW RA 6137 Economy Auto 1130 Bankhead N W AT 1672 Edwards-Harris 258 Peachtree NW LA 5668 Electrical White 229 Whitehall St SW CY 3431 Garvin Electric 69 Forsyth St General Electric 5upply 172 Haynes St S W MA 3811 Georgia Appliance 1405 Spring St N W Graybar Electric 333 North Are N W CY 1751 Hopkins Equip 418 W Peachtree CY 6031 Jackson Electronic Sup 840 Marietta St NW EL 5808 Martin Distr C 51000 Marietta NW Southeastern Radio Parts 400 W Peachtree 6-9761 Specialty Distributing 425 Peachtree EL 5816 Thomas Electronics H 331 Luckle St NW LA 8477 Westingbouse Elec 1299 Northside Dr N W AT 2721 Yancey Co 1500 Northside Dr N W AT 2722 Yancey Co 1500 Northside Dr N W AT 2424 Specialty Distributing 644 Reynolds St Hdgrs Atlants COLUMBUS \* Prestwood Electronics 1445 Greene St 4-5444 Specialty Distributing 644 Reynolds St Hdgrs Atlants
- \*Radio Sales 1326 1 Ave Westad 1047 13th St
- MACON ACON \*Electronic Distr 995 Riverside Dr 3-9379 Hatcher Co A S 586 3 St 3-5464 Specialty Distributing 539 Arch St Hdgrs Atlanta White Radie Co 654 Mulberry St 3-3768 RÖMF
- ROME Electronic Supply 217 E 1st St 7842 SAVANNAH Gameral Electric Supply 301 E Bay St 4-2231 Graybar Electric 2601 Whitaker St SA 2-1121 Southeastern Radio Parts 38 Montgomery St 7565 Specialty Distributing 411 E Broughton St Tuton & Long 1508 E 50 St Westinghouse Elec 580 Indian 3-9682 Yaneay Co 666 Indian St 4-1611 Hdurs Atianta

### **IDAHO**

- BOISE BOISE •Craddock Radio Sup PO Box 297 2-6471 General Electric Supply 618 \$ 8 St 4343 Graybar Electric 1325 Idaho St B0 2-4501 •Kopke Electrones 3112 Rosshill 2-2371 Robbies Radio 4001 Hill Rd 2-8892 Westinghouse Electric 318 \$ Capital Bivd 2-3531 IDAHO FALLS Schwendiman Dist 380 E St 4393 PECATELLO
- POCATELLO
- PBCATELLO Ballard-Carter 840 N Main St Billimeyer's Wholesalers 240 S Arthur St TWIN FALLS Craddeck Radio Supply 310 2 Ave E 971 United Automotive 304 3 St E 2390

### ILLINOIS

- ALTON Ebinger Radio 2416 E Broadway 2-0521 Radonies Alton Inc 1320 E Broadway AL 2-0076
- AURORA Pioneer Radio Supply 103 S La Salle St
- BELLEVILLE \*Lurtz Electric 219 N illinois St AD 3-0942

- BENTON \*Lampley Radio 802 N McLeansboro 5111 BLOOMINGTON Alverson Sales Co 217 E Front St 2-8380 Arco Electric Supply 908 S Lee St 2-5145 RPD-Arthur Nagel inc 506 W Market 4-5109 CALUMET CITY Chaunceys Inc 136 Pulaski Ave Hdgrs Chicage CENTRALIA Controlle Fice Sceney 308 C Chicago 2023
- Centralia Elec Supply 108 S Chestnut 7111 CHAMPAIGN Electronic Parts Co 905 S Nell St 9525 Radio Doctors 340 N Hickory
- CHAMPAIGN Electronic Parts Co 905 S Netl St 9525 Radio Doctors 340 N Hickory CHIGAGO Alton Electronic 2737 N Ashland GR 7-5386 American Electronic 621 W Randolph DE 2-5226 Arpio Sales 4305 Lincoin St WE 5-7781 Ashbach Enterprises 743 N LaSalie St WH 4-0077 Atronic Sales 6566 Sheridan R0 1-2424 \* Bowman & Co J G 515 E 75 St TR 4-8070 Bradwin TV & Radio 5004 Broadway UP 8-6060 Central Scientific 1700 Irving Park Rd WE 5-8600 \* Chaunceys Ine 4740 W Chicago Ave ES 3-0830 Chicago Electronic 420 E 87 St HU 3-9700 Chicago Electronic 820 F 845 S Cilinten WA 2-5556 Graybar Electric 850 W Jackson Bivd CA 6-4100 Green Mill Radio Supply 145 W 111 St PU 5-9840 Grove Electronic Sup 4645 S Cottage Grove WA 4-5452 Howard Elect 1410 Archer Ave Cl 4-1777 Joseph Radio Paris 5959 W Failerton NA 2-3914 Lake Radio Sales 3458 W Failerton IN 2-2310 Lakko Sales Corp 5024 Irving Park Rd AV 3-4800 MId-States Electronic 5028 N Bdwy LO 1-2894 \*Midwest Electro 6907 N Western Ave R0 1-1160 Mort's Radio Shaek 1920 N Milwaakee BR 8-5600 Nagel Ine Arther 918 E 55 St BU 8-5050 Nation Wide Radio 572 W Randolph St DE 2-6509 Newark Electric 223 W Madison ST 2-2950 Olson Radio 623 W Ronth St AR 6-5550 \*Radio Parts Co 612 W Randolph DE 2-5556 Radio Parts Co 612 W Randolph DE 2-5556 Radio Parts Co 612 W Randolph DE 2-5556 Radio Parts Distr 925 E 55 St BU 8-5050 Radio Parts Co 612 W Randolph DE 2-5556 Radio Parts Co 612 W Randolph DE 2-5556 Radio Parts Oxit 445 N Lake Shore Or WN 4-4600 Star Electronic 7736 S Alsited HU 9-3311 RCA Vieter Distr 445 N Lake Shore Or WN 4-4600 Star Electronic 311 S Western WA 5-6210 Triangle Indestries 600 W Adams AN 3-5060 U S Radio & TV 6346 S Ashland
- Allen Electric 18 E North St Bud Electronic 118 Van Buren St E 925 Westinghouse Electric 603 N Gilbert 1901
- Westinghouse Electric 605 N Gilbert 1901 DECATUR Crum Dist 704 N Monroe 3-7775 Leughname & Co 802 N Water St 2-4187 York Radio & TV 801 N Broadway 3-3484
- DIXON
- illinois Appliance 407 W 1 St ELGIN
- ELGIN Electronic 157 Brook 7635 Fox Electric Supply 67 N State St ELMHURST
- Malone Electronics 123 Addison St TE 4-5110 EVANSTON Chaunceys Inc 1908 Central St Hdgrs Chicage HARRISBURG

- NARAJOUNG Standard Radio 523 W Popiar 640 JACKSONVILLE Baptist Radio & TV 419 S Mauvaisterro 2526
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- OAK PARK \*Melvin Electronics 541 Madison VI 8-3960

- •Melvin Electronics 541 Madison vi 8-2500 PEORIA Graybar Electric 704 S Adams PE 3-8516 Griffin Distributing Co 400 Franklin St •Herberger Radio Supply 136 1 St Klaus Radio & Electric 707 Main St Peoria Elec Appl 631 Franklin 3-3847 Rohn Electronic 2108 Main St 4-9156 Ross Radio 1915 Main St 3-3721 warren Radio 308 S Oak St Westinghouse Electric 2800 N Adams St 2-5456 Williams Ine 828 S Adams St 3-4446 Yeomans Distributing 3302 N Adams 5-7631 OULNCY
- QUINCY
- \*Cooper Supply 419 S 10 St 237 Quincy Electronic 310 Hampshire ROCKFORD
- DCKFORD General Electric Supply 810 20 St 5-0551 H & H Electronic Supply 51° Kishwaukee St 5-4625 Johnson Sales Art A 1117 Charles St J & M Radio & Telev 1133 Railroad Ave Mid-West Associated 506 Walnut St 4-5843 State-Wide Whelesale 913 S Main St Superior-Rockford 2310 Charles St 3-6451 Westinghouse Elec Supply 323 S Main St 5-0577

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- WHEATON Gaskine Distributor 1005 S Aurora Waw

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- GARY
- Cosmopolitan Radio 524 Washington 5-7746 R-B Distr 3763 Broadway GA 4-8824 Walker-Jimicson 615 W 11 Ave GA 5-5501

- R-B Distr 3763 Broadway GA 4-8824 Walker-Jimicson 615 W 11 Ave GA 5-5501 WAMMOND Broadwin Radio & TV 6516 Calumet St RU 6940 General Elee Supply 506 Fayette St SH 5155 Graybar Electric 6445 Indianapolis Bivd SH 5830 Nation Wide Radio 7015 Calumet Ave WE 2-8410 Westinghouse Elec 6341 Ind Bivd RU 9400 HUNTINGTOM Celfax Co 67 E State 3610 INDIANAPOLIS Appliance Dist ine 415 Mass Ave ME 4-6391 Associated Distr 210 S Meridian St Li 2593 General Electric Supply 1250 Stadium Dr ME 4-8445 Gibson Co 433 N Capitol Ave Li 3321 °Graham Electronics 102 S Penna St ME 4-8487 Graybar Electri 1300 W 16 St AT 2351 Grimth Distr 321 W Maryland Hoesler Radio 912 N HI St Li 3010 Indianapolis Radio 912 N HI St Li 8010 Kiefer-Stewart Co 122 S Senate Ave Li 4321 Meunier Radio Supply 524 N Illinois St Li 8884 Peerless Electrie 122 S Meridian Dr Radio Distributing 1013 N Capital Ave ME 5-8311 Radie Equipment Co 1010 Central Ave PL 6453 Rodefeld Co 614 N Capital Li 8331 Sanborn Electronics 311 N III St Li 9566 Li 8970 Mdgrs Toledo Ohlo Westinghoms Elec Supply 139 S Penna St MA 3301 JEFFERSONVILLE Moskier Electronic 949 E Maple 2-2229 KOKOMO
- Moakier Electronic 949 E Maple 2-2229 KOKOMO
- George's Electronic 125 N Buckeye 6771 Radie TV Distr 507 N Washington 2-5651 RPD-Arther Nagel Inc 219 W Main 2-8932
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- Conrad Co A E RFD #4 2606 Television-Radio Dist 431 E Market 2879

336

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- Mobile Radio Supply 507 N Washington 5734 Myers Radio Supply 115 W 22 St 1357 MICHIGAN CITY
- Tri-State Eisetrical 601 W 10th 2-5551 MUNCIE
- General Electric Supply 904 Burlington Dr MU 6614

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- RU Clingaman Sound Equipt Co 814 W Main St 9151 Marburger Suppiy Co 8 W 2 St 5541 Television-Radio Distr 812 W Main 2005 RICHMOND

- Television-Radio Uistr 812 W main 2005 RICHMOND Fox Electronics 711 8 9 St 2-4676 Radiu 4 TV Dist 717 S 5 St 2-4752 Mdgrs South Bend Ribehart ine 511 Main 2-2581 Redefeld Co 96 W Main St 2-4088 SOUTH BEND Cieud Bros 110 E Western Ave 6-0395 Colfax Co 802 S Main AT 9-5548 Comm Sound 4 Radio 528 E Colfax 3-9394 General Elec Supply 422 E Monroe St 6-3411 Radio Distributing 432 S Carroli St AT 9-0365 Rudie Ecolpment Ce 1202 S Lafayotte 6-3951 Radio & TV Distr 116 M Hills 13 3-9394 Ridge Co 315 W Jefferson Bivd 4-3145 TERRE HAUTE Archer & Evinger 1216 Wabash Ave CR 7757 General Elec Supply 801 Ponlar St CR 9-695 Terre Haute Radio P0 Box 804 2-6025 Walker Electric Supply 126 S 3 St VALPARAISO PRowman & Atomicka Las 257 W Lingeinway 3-4381
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- DAVENPORT Gressent Electric 206 E 5 St DA 3-2769 Havercamp Co 402 E Locast St 3-1857 Midwest-Timmerman 114 Western Ave 7-5288 RCA Victor Distr 1235 W 5 St 4-9847 TCR Distrs 1205 E River Dr 3-8051 Union Supply Co 324 E 4 St 6-3713 Westinghouse Electric 402 E 4 St 3-9996 DES MOINES General Electric Supply 108 E 4 St 8-7401 OAVENPORT
- ES MOINES General Electric Supply 108 E 4 St 8-7401 "Gifford-Brown inc 14 & Wainut St 3-1257 Graybar Electric 24 11 St DE 3-8614 "Iowa Radio Corp 1212 Grand 2-8197 "Mid-State Distr 1201 Grand 8-7231 "Midwest-Timmermann 812 Tuttle St Hdgrs Daven-arct
- "Midwest-Timmermann 812 Tettle St Hadrs Dave port Onthank Co G W 10 & Mulberry 3-8166 "Radio Trade Supply 1224 Grand 8-7237 Schneiderhahn Co A A 319 SW 5th St Sidies Co 8 7 St 4-0138 Sorenson Co H E 100 S W 1 St 4-6267 Westinghouse Elec Supply 2515 Dean Ave 2-0244 Uptonic
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   Duke's Radio 209 6 St 5-5056
   Graybar Elet Co 510 Pearl St Sl 8-7507
   Omaha Appliance Co 1411 Jackson 2-2625
   Power City Radio 410 Jones St 5-5992
   Warren Radio Supply 617 Douglas 2-2731
   Westingheuss Electric 1005 Date St 5-7634
- WATERLOO
- AIEKUUO Farnsworth Radio & TV 201 E Muilen Ave AD 4-6682 PRay-Mac Supply Co 200 Ballou St AD 3-5296 Westinghouse Electric 300 W 3 St 4679

### KANSAS

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- Ashland Radio Supply 2125 Winchester 3125 BOWLING GREEN Crescent Radio Supply 212 W 10 St VI 2-2444
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- General Else Supply Hoskins St 815 NOPKINSVILLE Bandolph & Hale 2325 S Virginia TU 5-8696 LEXINGTON Electronic Distr 134 W 3 St 2-7414 General Electric Supply 309 N Ashland Ave 2-1887 Ky Radio Supply 376 E Main St 2-3373 Lex-Tronics 810 E 3rd St 4-3470 Miller's Barney 232 E Main 2-9622 «Radio Equip Co 480 Skain Ave 3-1577 LOUISVILLE Arobe Fleetronics Hancock & Gray WA 8851
- DUISVILLE Areby Electronics Hancock & Gray WA 8851 Burks Co P | 911 W Broadway JA 7323 Ewaid Olstributing 309 S 9 St JA 8227 Fails City Supply 315 Roland WA 7447 General Electric Supply 2311 S Brook St CA 3651 Graybar Electric G14 Myrtis CA 5411 "Peerless Elect Equip 2210 S 7 St CA 7678 R-K Distr 801 W St Gatherine JA 5349 Universal Radio Supply 533 S 7 St JU 4-4166 EWPORT
- NEWPORT Appx Distributing 506 York St AX 1945 Holds & Hogg Co 217 E 10 St HE 4211 OWENSBORD
- Centronics Inc 600 W 3 St 3-6727 Peerless Elee Equip 1206 Tripiett hdgrs Louisville PADUCAH
- NOUCAN Warren Badio 455 \$ 31st St 2-4367 Westinghouse Electric 1000 Broadway Ave 2-2753 W Ky Electronic 1205 Broadway 4503

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- BOGALUSA Gautreaux's 1101 Columbia St RE 2-3234

- LAFAVETTE Butcher Bros 438 Jefferson \*Ralph Radio & Electronic 1419 Cameron St LAKE CHARLES \*Ralphs Radio Electronic 1127 Broad St Wholesale Radio Equip 324 Ryan St HE 9-9017
- Wonrot Electronics 500 N 3 St 3-5732 C & O Electronics 500 N 3 St 3-5732 Haie & Menoel 421 Walnut 2-5136 Posians Electrical Co 501 Morris Ave 3-7701
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  Bell Radio Supply 2625 Tulane Ave
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  •Creseent Radio & Supply 1600 Baronne St CA 3112
  Eaco Ine 601 S Peters St
  Electrical Supply Co 201 Magazine St
  Electrical Supply 2746 Orleans Ave AU 1619
  General Elec Supply 2746 Orleans Ave AU 1619
  General Elec Supply 227 Iackson Ave
  Industries Sales 2927 Jackson Ave
  Industries Sales 2927 Jackson Ave
  Interstate Electric 1001 S Peters CA 8541
  Ole Miss Supply Co 901 Carondelet St TU 3555
  Pee-Jay Radio Supply B24 N Broad St
  Radio Parts Ine 807 Howard Ave CA 0217
  Radio Supply 2508 Tulane Ave RA 2166
  •Southern Radio Supply Do Tulane
  Stratton-Baldwin P0 Box 253
  Telev & Appl Distrs 500 N Carroliton
  Watinchosse Elec 2538 Poydras TU 5411
  OPALOUSAS
  Wholesale Radio Equipment 230 N Court 7856
  SHREVEPORT
  Baugett Radio 620 La Ave 2-5137

Wholesaie Radio Equipment 230 N Court 7856 SHREVEPORT Baggett Radio 620 La Ave 2-5137 Dunckelman Distributing Co 119 Beech St 2-8452 General Electric Supply 1430 Daizell St 5-8631 Graybar Electric 90 Fannin St SH 5-3271 Interstate Electric Co 1419 Celpepper St 3-6131 \*Koelemay Sales Co 2530 Linwood Ave 3-4256 \*Lavender Radio & TV 936 Milam St Ports Electronics Parts 309 Airport Dr 2-2193 Westinghouse Electric 120 Caddo St 3-0583

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

## **DISTRIBUTORS SERVING the ELECTRONIC INDUSTRIES**

### MAINE

- AUBURN
- •Radio Supply Ce 26 Cross St 4-5486 AUGUSTA
- Westinghouse Electric 98 Water St 2040 BANGOR
- BANGOR Commercial Distrs 135 Exchange St General Elec Supply 840 Hammond St 7331 \*Maine Electronic Supply 494 Broadway Radio Serv Lab 16 Salem Ct 7396 Radio Supply Co 151 Center St 6416 Westinghouse Elec Supply 175 Broad St 6487 HALLOWELL \*Remul Radio 135 Works Co 2 2020
- Powell Radio 115 Water St 3-3839
- \*Powell Radio 115 Water St 3-3839 PORTLAND Brown Co F M 12 Free St 3-4791 Commercial Distributers 35 Commercial St General Electric Supply 170 Anderson St 2-3721 Graybar Electric Contar & Commercial Sts P0 3-1766 Hub Distributers 81 Franklin 2-4679 \*Maine Electronic 148 Anderson 4-0301 Radio Serv Lab 1004 Congress 3-0297

### MARYLAND

- MARYLAND BALTIMORE American Distr Co 1200 N Fulton L0 6-8930 Berman H 0 Co 10 E Lombard LE 9-7002 D & H Distr Co 25 S Liberty SA 5100 Electronic Parts 4530 Harford HA 6-2808 General Elect Supply 1500 Barclay LE 9-3565 Graybar Electric 100 South ST SA 7-5050 \*Kann-Eliert Electronics 9 S Howard SA 4242 Lytron Distr Co 1338 W North Ave LA 3-8880 \*Radio Elec Serv 5 N Howard LE 9-3835 Spartana Ca A R 239 Gay St N SA 7-5762 Video Electronics 5617 Belair Rd HA 6-7913 Westinghoss Electric 2415 W Franklin L0 4400 \*Wholesale Radio Parts 308 W Redwood St MU 5-2134 CUMBERLAND CUMBERLAND
- \*Zimmerman Wholesalers 162 Bedford 920 FREDERICK Hanket's Radio & TV 404 Eim St MG 2-1381
- Hanket's Radio & TV 404 Eim St M0 2-1381 HAGERSTOWN General Elec Supply 1095 Jefferson Bivd. 6216 Stoddard Supply Co 354 S Cannon 6342 York Radio & Ref 67 W Franklin 5586 \*Zimmerman Wholesalers 114 E Washington St 408
- SALISBURY
- Aime Radio Co 219 Highland Ave 317 Park Heights Aime Radio Co 219 Highiand Ave 317 rara 2-1395 Arteraft Elec Calvert & Baptist St Standard Electronics 301 Snow Hill Rd 7593 SILVER SPRINGS Rucker Electronics 8049 13 St JU 7-6700 Silver Spring Electronic 948 Silgo JU 8-3567

### MASSACHUSETTS

- BOSTON Acme Distributors 1103 Columbus Ave HI 2-1400 Adams Distr 70 Brookline Ave C0 7-2940 Arvedon Distributors 73 Portland CA 7-4034 Brattle Radio Co 42 Brattle St CA 7-7529 Burke Co J H 39 Brighton Ave AL 4-4050 Commercial Radio 136 Brattle R1 2-1241 \*Cramer Elestronics 811 Boyiston CO 7-4700 Del Padre Assoe L L hdqrs Springfield \*DeMambro Radio 1111 Commonwealth St 2-7870 Elettro Sales Co 50 Eastern Ave CA 7-3456 General Electric Supply 1900 Columbus GA 7-1144 Graybar Electric 287 Columbus KE 6-4567 \*Barya Ya Yoang 811 Boyiston St CO 7-4700 Herman Co L M 885 Boyiston St CO 7-5520 Uncoln Electric 790 Commonwealth BE 2-8550 Makingan TV Distr 16 Gilmer St \*Mayer Co A W 895 Boyiston CO 7-5520 Makingter L J 243 Columbus CO 7-2500 Northeastern Distrs 588 Commonwealth CO 7-2000 \*Radio Wire TV 110 Federal St HU 2-7850 Sager Elec Supply 201 Congress St Li 2-2281 Te-Vee Supply 201 Congress St Li 2-2281 Te-Vee Supply 211 Washington JA 2-9380 Wastinghouse Elec 55 Roukline Ave CO 6-0212 SMCKINN
- \*Ware Radio Supply 913 Centre St 8-0810 CAMBRIDGE
- CAMBRIDGE Eastern Co 620 Memorial TR 6-4720 \*Electrical Sopply 1739 Mass Ave UN 4-6300 HIFI Lab 89 Mt Auburn St TR 6-2666 Selden Distr Co 800 Mass Ave KI 7-0920 FALL RIVER Ross & Co E A 341 Columbia St 3-0921 FITCHBURG \*Young & Young 372 Water St 3-3078 HOLYOKE

- HOLYOKE Holyoke Radio Supply 215 Main St SpringReid Radio Co 93 High St JE 2-8302 Tei-0-Wire Sound Co 24 Newton Pi 5626 LAWRENCE \*Young & Young 262 Lowell St 7171 LITTLETON Wether Statustic Co
- Weston Electronic Sales LOWFLE
- McCartin Co F P 181 Market St 9751 LYNN Dos Roberts Elec 24 Mt Vernen St LY 5-0015 MEDFORD
- Durrell Distr 222 Mystle Ave MY 6-8780

- •Melrose Sales Ce 60 Essex St ME 4-3821 NATICK
  - Willett Radio Supply 11 Court 1313 NEW BEDFORD
  - \*Beckman Co C E 11 Commercial 6-8201 Ross & Co E A 1663 Purchase St 3-7878 NEWTON
  - Delta Distr 314 Washington Bi 4-1560 Leonard Greene-Shaw 342 Watertown St DE 2-9300 NORTHAMPTON C & I Distributors 228 Pleasant St 3138 PEABODY

  - TeeVee Supply 39 Main St JE 5-4359 PITTSFIELD PIttsReid Radio 41 West St

  - QUINCY

  - Genber Radio 41 West St UlinCY Gerber Radio Supply 1153 Hancock St MA 9-4300 SPRINGFIELD \*Cushing T F 349 Worthington St ST 8-7341 \*Del Padre Assoc L L 236 Chestnat 9-5558 General Electric 32 Patton SP 7-4373 N E Service Center 891 State St 9-4754 Radio & TV Supply 906 State St 9-4754 Regent Sales 236 Chestnat St \*Soundco Electronic 147 Dwight RE 7-3425 Sprinsfield Radio 405 Dwight St RE 2-3411 Tarbell-Watters 144 Chestnat 6-1841 Western Mass Distr 1 Beiment Ave RE 6-6374 Westinshouse Elec 46 Hampden 4-3101 \*Young & Young 169 Spring St RE 4-1138 TAUNTON
  - TAUNTON
  - <sup>•</sup>Dean & Co D B 85 Cohannet St TA 4-4117 WALTHAM Weston Electronics 717 Main St WA 5-9140 WEBSTER
  - 10 Ardioek Place Ianman
  - WORCESTER
  - DeMambro Radio Supply 222 Summer St hdqrs Roston Boston General Elec Supply 163 Mechanic 6-4351 Graybar Electric 108 Grove W0 6-4311 Johnson Electronic 12 E Worcester St PL 6-7136 •Radie Electronic Sales 52 Chandler St PL 7-5671 •Radie Maint Supply 80 Thomas St PL 6-8311 Wustinghuese Elec 107 Thomas St 7-5641

## MICHIGAN

- ANN ARBOR Purchase Radio 605 Church 8696 \*Wedemeyer Electronic 214 N 4 Ave 2-4457 8ATTLE CREEK

- BATTLE CREEK •Electronic Supply 94 Hamblin 2-9515 BAY CITY Kinde Distr Co 504 Washington St 7461 BENTON HARBOR Benton Electronic 643 W Main 5-1373 Radio & TV Distr Co 1331 M-139 WA 5-3301 CADILLAC
- Straits Distrs 417 N Mitchell PR 5-3895 CHEBOYGAN
- Straits Distributors 412 N Main St 960 OFTROIT Detroit Electronic 8000 Grand River TY 6-9500
- ETROIT Detroit Electronic 8000 Grand River TY 6-9500 Duffy & Co M N 2040 Grand River W0 3-2270 Faik Distr Co 9339 Grand River TE 4-0625 \*Ferguson Radie 2306 Peritan Ave UN 1-6700 General Elec Supply 680 Antoinette St TR 5-9400 \*Giendale Supply Co 12866 Woodward Ave TU 3-1500 Grayhar Electric 15045 Hamilton Ave TO 8-9409 \*KLA Labs 7422 Woodward TR 4-1100 Mercury Distr Co 3727 Woodward TR 4-1100 Mercury Distr Co 3727 Woodward TR 4-1000 Retury Distr Co 3727 Woodward TB 2-7720 RCA Victor Distr 7400 Intervale TE 4-3500 Radio Distr 15401 Woodrow Wilson TØ 9-7900 Radio Distr 15401 Woodrow Wilson TØ 9-7900 Radio Specialties 455 Charlotte TE 2-5611 \*Radio Specialties 456 Charlotte TE 2-5611 \*Rist Electronic 1112 W Warren TE 2-5611 \*Rist Electronic 112 W Warren TE 2-5611 \*Rist Electronic 2211 W Edsel Ford Expresswar
- Westinghouse Electric 2211 W Edsei Ford Expresswav TY 8-9000 \*West Side Radio 8140 Mich LU 4-0120
- ESCANABA Feiton Radio 1617 Ludington 2855 FERNDALE
- Erickson's Electronic 23525 Woodward LI 5-6710 Erlekson's Electronic 23525 Woodward LI 5-6710 FLINT General Electric Supply 4705 N Dorl Hgwy SU 9-9101 Graybar Electric 2424 Kansas FL 2-4101 \*Lifsey Distr Co 1409 N Saginaw CE 5-6657 Radio Tabe Merch Co 508 Clifford CE 4-3654 \*Shand Radio Spec 2608 Leith St CE 2-9714 Wertinnahouse Electric 2330 N Dart H'way 4-8623 GRAND RAPIDS Bursma Radio Supply 870 Grandville CH 5-0501 General Electric 432 Monroe Ave N W GL 1-2561 Perkins Sales Co 12 Oakes S W hdgrs Detroit \*Radio Electroic 505 Jeffron S E 9-4611 Radio Electroit S Jonia Ave S W GL 6-9551 Radio Parts Ine 542 S Division 9-0247 Republic Distr J9 La Grave Ave Warren Radio 24 Logan St SW Westinghouse Elec 511 Monroe Ave N W 9-4664 Wholesale Radio Co 24 Logan S W GL 6-1432 FLINT

- JACKSON
- \*Fulton Radio 1208 Greenwood St 4-6106 Matteson Electronic 1000 E Michigan 4-4450 KALAMAZ00

- Mattesion Electronic 1000 E mitchigan 4-4450 \*Electronic Supply 906 E Mich Ave hdgrs Battle Creek General Electric Supply 112 Parkway 3-2645 Raiston Co R M 201 N Park St 5-0189 Stavens Radio Parts 713 Portage St \*Warren Radio 713 Portage St \*Warren Radio 713 Portage St CANSING \*Elec Product Sales 427 E Mich Ave 24-123 General Elec Supply 428 N Grand IV 7-5401 Graybar Elec Supply 428 N Grand IV 7-5401 Graybar Elec Supply 428 L E Eim St LA 4-5434 Morley Bros 1330 S Harrison \*Offenhauer Co 227 W Washentaw 2-9896 \*Wedemeyer Electronic 800 Merrill St 5-7727 Westinghouse Elec Supply 2730 Alpha St LAURIUM \*Northwest Radie 435 Tamarack 797
- ANOTHWEST Radie 435 Tamarack 797 LINCOLN PARK Giendale Electronic Sup 1067 Southfield DU 3-0740 MANISTEE MANISTEE Gardner Radie 258 River St 1653 MUSKEGON Beli-Lourim 1839 Peck St 2-6019 Bursma Radie 1211 Pine St 6334 •Fitzpatrick Elec 444 irwin 2-6621 MUSKEGON HEIGHTS Western Electronic 517 W Broadway 3-1639 PONTIAC •Electronic Sunday

- \*Electronic Supply 248 E Pike St FE 2-8341 PORT HURON Main TV Supply 1503 24 St YU 5-5103
- SAGINAW AGINAW Carson Distrs 708 N Washington Ave 5-5301 General Eles Supply 125 Davenport St 3-6474 Merley Bros 115 N Washington Orem Distributing 801 E Genesee \*Radle Parts Co 803 S Washington 5-5338 Saginaw Distributors 1751 E Genesee Ave 3-5444 Westinghouse Electric 221 S Jefferson St 4-2640 AULT STE MARIE Straits Distributors 144 Ridge St W ME 5-5461
- SAULT

### MINNESOTA

- AUSTIN Radio Elee 219 N Franklin 7-4214 hdqrs Min-nsapolis DULUTH
- DULUTH Bonn Co Lew 228 E Superior RA 2-5568 General Electric Supply 246 Lake Ave S 2-0826 Graybar Electric 320 W 1 St DU 2-6646 Kelley How Thomson 309 S 5 Ave W 2-5881 \* Northwest Radio 123 E 1 St RA 7-1565 Popkey G M 206 E 1 St \*Stark Radio Supply 109 Lake Ave S Westinghouse Elec 230 Lake Ave S ME 2-2625 HOPKINS Welter Electronic Co 710 Ave N HD 3632
- Wolter Electronic Co 710 Ave N HD 3632 hdgrs Fargo N Dak MANKATO
- A Fare N Dak MAKATO Southern Minn Supply 2 & Main Sts. 4501 MINNEAPOLIS \*Bauman Co 3033 Lyndale Ave S Gi 1745 \*Bonn Co Lew G7 S 12 St Fi G351 Eckien Radio 114 N Lyndale Ave AT 0516 \*Electronic Center 107 3 Ave N Li 8678 Forster Distr 1122 Harmon Pi AT 5471 General Electric Supply G3 S 13 St BR 3266 Graybar Electric 824 S 4 St GE 1621 Hayer Co F C 250 3 Ave N AT 1401 Larson Elec J H 114 Gienwood Ave Fi 2761 National Electronics 1215 Nicoliet BR 2185 Northwest Radio 52 S 12 St Fi 6346 Radio Elec Supply 2451 Nicoliet GE 7733 Radio Maintenance 3016½ 27th Ave S 0R 7546 Reinhard Bros 11 S 9 St K GE 2681 Spencer George 444 Stinson St GR 7241 \*Stark Radio Supply 71 S 12 St GE 4623 Sterling Electric 33 S 5 Ave MA 4571 Westinghouse Electric 515 S 7 St Li 7001 ROCHESTER Elilott & Hanson 119 1 Ave N W 2-2778 S Minn Supply 902 7 St N W 2-3218 ST. PAUL Bonn Co Lew 141 W 7 St CA 4-2821 \* Electronic Diator
- r. PAUL Bonn Co Lew 141 W 7 St CA 4-2821 Bonn Co Lew 141 W 7 St CA 4-2821 Felectronic Distr 855 Raymond PR 3911 General Electric Supply 540 N Fairview Ave PR 2761 Gopier Electronics 370 Minnesota St CA 4-9666 Graybar Electric 717 N Prior Ave NE 2631 \*Hall Electric Co 566 N Robert St GA 5696 Northwest Radio & Electronic 194 W 4 St GA 3801 \*Stark Radio & Electronic 194 W 4 St GA 3801 \*Stark Radio & Supply Co 250 W Kellogg Bivd CE 1994 Westinghouse Electric 253 E 4 St GA 7441 ADENA
- WADENA Central Co-op Wholesale hdgrs Superior Wise

### **MISSISSIPPI**

- BILOXI BILOXI Neison Radio Supply 613 Calilavet St 2-8651 COLUMBUS Swan Distributing Co 724 5 St S 1513 GREENVILLE Gover Supply Co 815 Alexander St 8151 CILI FORM
- - CULFPORT Crescent Radio Sopply 1311 28 Ave 4854 HATTIESBURG
- Swan Distributing Co 506 Bouie St JU 4-5494 JACKSON

337

Cabell Elec Co 422 S Farish 2-2624

- Ellington Radie 816 S Galiatin St 3-1327 General Electric Supply 610 Gesco PI 2-5041 Graybar Elec 154 E Porter St JA 3-6316 Industrial Supplies Highway 80 May & Jackson Dist Co 628 S State St 5-6880 Orgill Bros Hdw 301 W Pearl St Radio & TV Supply Co 328 N West St Ryan Supply Co 208 S State St 5-2241 Southern Distributors 1400 Terry Rd 2-3456 Swan Distr Co 342 N Galiatin 2-5516 Television & Radio 323 N West 5-6406 Westinghouse Elect 325 S Farish 4-8354 AUREL
- LAUREL Radio & TV Essentiais 448 Auburn Ave 6104 MERIDIAN ERIDIAN Grimn Radio Supply 2511 8 St 6174 Radio Supply Co 909 24 Ave 8802 Ryan Supply Co 814 21 N E

### MISSOURI

- BUTLER
- BUTLER Henry Radio Co 211 N Main St 395 CAPE GIRARDEAU General Electric Supply 402 S Sprigg 805 \*Suedekum Electronic 2215 Broadway 5-8202 HANNIBAL
- York Radio & TV 2205 Market St JEFFERSON CITY \*Contral Mo Distr Co 324 E Capital Ave 6-3149 JOPLIN
- KANSAS
- \*Central Me Distr Ce 324 E Capital Ave 6-3149 PPLIN \*Brotherson Co M 515 N Byers Ave 1596 \*Foor States Radio 201 Main St 979 General Electric Supply 922 Penna Ave MA 4-5622 (ANSAS CITY \*Burstein-Appiebee 1012 McGee St BA 1155 Columbian Elec 2603 Grand Ave GR 1001 Continental Electric 1321 W 13 GR 1180 Electronics Supply 3536 Main St WE 3383 Gaines & Co J G 1730 Grand BA 4-8888 General Elec Sopply 2101 Broadway HA 7447 Graybar Elee Co 1644 Baltimore Ave BA 1644 \*Henshaw Radio 3617 Troost Ave WE 5550 \*Manhattan Radio & Equip 1732 Grand Ave BA 9797 \*MeGee Radio & Electric 1422 Grand Ave BA 9797 RCA Victor Distr Corp 2113 Broadway HA 0300 Radiolab 1612 Grand Ave HA 0171 \*Walter's Radio Supply 3645 Main St 108ERLY

- •Waiter's Radio Supply 3645 Main St MOBERLY Central Missouri Dist Co Clark & Coates St 260 POPLAR BLUFF •Tri-State Radio 536 E Pine Bivd 2821 ST. JOSEPH •Acme Radio Supply 819 S 8 St 4-0651 American Electric Co 116 N 4 St •St Joseph Radio 720 S 9 St 2-8000 ST. LOUIS •Athe Radio Co Waiter 1125 Pine CH 1125

- American Electric to 110 the training of the second - Westinghouse Elec 1011 Sprees St 2000 SPRINGFIELD Four States Distr 700 E Brower Gaines & Co J G 351 Boonville hdgrs Kansas City General Elec Sepply 1301 W Webster 2-1722 Graybar Electric Co 524 St Louis St SP 2-0587 \*Reed Radio Supply Harry 805 Boonville St 4-0752 Stort Radio Sopply 702 Boonville 2-9444

### MONTANA

- BILLINGS LLINGS American Appliances 2505 Montana St Contral Distr Co P 0 Box 1551 8-8447 Electronic Supply 214 11 St W 2-2197 General Elec Supply 2710 Montana Ave 9-4559 Heard Supply 3008 1st St N Heard Supply 3008 18 58 8 Marshall-Wells Co Midland Implement 2301 Montana Ave Northwestern Auto 420 N Broadway 3-3146 Smith Sopply 2521 Montana Ave 9-2055 Westinghouse Electric 302 N 15 St 9-2813 BUTTE UTTE General Electric Supply 900 E Front St 2-2314 Graybar Electric 604 E Aluminum St BU 3233 Smith Supply 425 S Arizona 2-8278 Smithy's Electronics 126 W Broadway Westinghouse Electric 949 S Montana St 2-1269
- Westinghouse Electric 949 5 montana 31 2-1209 GREAT FALLS Bakers Rainbow Radio & TV Supply 20 2 St S 2-7825 Lindgren Co Geo 16 4 St N W 8-8721 Radio Electronic Box 1376 6-6645 Smith Supply Co 808 Central Ave 2-4834 Valley Motor Sup 512 1 Ave S 6-6557
- HAVRE Land O B 426 1st St Valley Motor Sapply Box 1271

338

HELENA Latus & Co DN 1531 Nat'i Ave 3182 MISSOULA Northwest Distr 509 S Higgnis 4-4311

### NEBRASKA

- GERING Messersmith-Corr Radio-TV Supply 1345 S St W 625 Central Radio Supply 518 W 1 St 2-2139 KEARNEY
- Western Radio 1400 W 22 St 2-3521
- Western Radio 1400 W 22 St 2-3521 LINCOLN Electronic Equip Supply 249 N 48 St 6-2364 General Radio & TV 322 S 12 St 2-6000 •Hicks Radio Co 1422 "0" St 2-7561 •Leuck Radio Supply 243 S 11 St 2-2797 Scott Electronic Supply 2201 0 St
- NEBRASKA CITY Arbor Radio TV Supply 921 Central 757 OMAHA
- OMAHA Aleo Radio 4011 Cuming St WA 8461 BI-State Distr Corp 911 Douglas St General Appliance 1101 Harney WE 4620 General Electric 3626 Martha St WE 76 \*JB Distr Co 1616 Cass St AT 5525 NoII Co H C 2226 Harney St Omaha Appl 18 & St Mary's AT 3440 \*Radio Equip Co 2852 Douglas AT 7700 \*Sidles Co 502 S19 St WE 8400 Westinghouse Elec 117 N 13 HA 8700 SCOTTSBLUFF Jeachim Radio 1913 Breadway 109 0456 7676

- Jeachim Radio 1913 Broadway 109 Raber Supply 1305 1st Ave 700
- YORK Radio Supply 110 E 7 37

### ΝΕΥΔΟΔ

- LAS VEGAS Electronic Supply 8 E Charleston Metcalf's Radio 25 E California St 5585 Saviers Elec Prod 110 E Charleston 4818
- RENO Osborne & Dermody 255 Chestnut St 2-6957 Saviers Elec Prod 640 Sierra St 2-9134

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- CONCORD \*Evans Radio PO Box 312 CA 5-3358
- •American Radio Corp 6 St 404

American Radio Corp 6 St 404
 MANCHESTER
 DeMambro Radie Supply 1308 Eim St 4-4006
 General Elec Supply 57 Bedford 5-5418
 Graybar Electric 103 Hampshire Lane MA 4-4341
 Radio Serv Lab 670 Chestnut 5-5444
 Westinghouse Electric 147 Hanover 5-5456

RYE BEACH Oeita Oistributors South Rd RY 127

### **NEW JERSEY**

- NEW JERSEY ATLANTIC CITY Almo Radio Co 4401 Ventnor Ave AT 2-5928 BR Elect Suppiy 926 Atlantic Ave AT 5-3448 Kearns ine Harrisburg & Atlantic AT 5-3233 M & H Sporting Goods hdgrs Philadelphia Pa Radio Elec Serv 452 N Aibany Ave 5-8525 BLOOMFIELD Berger Electronic 241 Bicomfield BL 2-7900 BRADLEY BEACH Holman's Radio & TV 504 Main PR 5-5870 BRIDGETON Joe's Radio Shop 67 S Pearl 9-0251 CAMDEN Almo Radio Co 1133 Haddon Ave EM 5-1960

- CAMDEN Almo Radio Co 1133 Haddon Ave EM 5-1960 General Radio 600 Penn St W0 4-8393 Radio Elec Service 513 Cooper St W0 4-2830 CLIFFSIDE PARK Nidisco-Cliffside 658 Anderson Ave CL 6-0510 CLIFTON Eastern Radio 1074 Main Ave GR 1-2800 Graybar Electric 1454 Main Ave SH 2-7868 COLUMBIA Columbia Distr Route 8 P0 42 C0 4-2500 FAST ORAMGE

- EAST ORANGE Gross Service 444 William St OR 6-7500 \*International Distr 185 Central OR 5-1927 **ELIZABETH**
- ELIZABLIH Bridge Electronics 502 Bayway EL 3-4147 Jersey Radio-TV Supply 1068 Elizabeth Ave EL 2-7324 New Jersey TV Supply 906 E Westid El 3-6166 FARMINGDALE
- RAW Jorsoy TV Scipping 500 E weind El 50200 FARMINGDALE Holmans Radio & TV Supping 85 Main St HACKENSACK American Distr 115 Hudson St hdurs North Bergen Nidisco-Hackensack 55 State St HU 9-2000 Radio & Elect Supping Co 756 Main St HU 7-1267 Trade Radio Sales 14 Essex St HU 7-5512 HiGHLANO PARK Park Electr Rt 37-Lincoln Hwy KI 5-3363 HILLSIDE Sherwood Distr 1255 Liberty Ave EL 2-1126 HOBOKEN Grange Inc 830 Monroe St WH 3-5793 JERSEY CITY \*Halimark Electric 592 Communipaw BE 2-9696 Nidisco-Jersey City 713 Newark J0 2-2360 LAKEWOOD

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- LYNOHURST \*Economy Electronics 624 Ridge Rd WE 9-7418 MORRISTOWN M & M Television 7 Maple Ave MO 4-5274 MORRIS PLAINS Continental Sales 642 Speedwell Ave MO 4-8223 Park Electronics 187 Speedwell MO 4-6922 MOINTALMSCOF
- NOUNTAINSIDE Federated Purchaser 1021 Route 22 WE 2-8200
- Foderated Parchaser 1021 Route 22 WE 2-8200
  NEWARK
  All-State Distr 457 Chancellor WA 3-4900
  Apolle Distr Co 15 Shipman MI 2-7266
  Continental Sales 521 Bioemfield HU 2-8223
  Electronic Marketers 25 Hoyrt St MA 3-2516
  Emerson-New Jersey 985 Broad MA 2-2217
  \*Federated Parchaser 114 Hudson MA 4-3915
  General Elec Sopply 254 Elizabeth Ave BI 2-1600
  Graybar Electric 2 Liberty St MA 4-3915
  Ifoe Bros 35 Halsey St MA 4-5151
  Ifoe Bros 35 Halsey St MA 4-5200
  \*Krich-New Jersey 428 Elizabeth BI 8-7408
  \*Lippman & Co Aaron 99 Newark St MA 3-9477
  Mytelka & Rose 1020 Broad MA 3-6272
  O'Loeghin & Co T A 88 Washington St MI 3-8200
  Pyramid Supply 343 W Market MA 3-78800
  Radie Wire Television 24 Central Ave BM 2-1661
  Tubes of New York 944 18 Ave ES 2-2631
  Varlety Electric 468 Broad MA 2-6760
  Westinghosse Elec Supply 255 Ferry MI 2-3450
  NEW BRÜNSWICK
  Graybar Electric 5762 Livingston Ave CH 9-4300
  Park Electronic ROS 37 Lincoln KI 5-3363
  William Radio Supply 265 Woodbridge CH 7-4908
  NORTH BERGEN
  American Distr 6335 Hudson Bivd UN 5-8027
  OCEAN GROVE
  Asbury Electronic 108 S Main St PR 6-7070
  PASSAIC
  Midisco-Passaic 294 Passalc St PR 9-4962
  PATERSON NEWARK

- PASSAIC Nidisco-Passaie 294 Passaic St PR 9-4962 PATERSON General Elec Supply 561 E 31 St La 5-5100 Jersey Electronic Distr 524 21st Ave LA 5-3134 Trade Radio Sals 780 E 18 St hdqrs Hackensack PERTH AMBOY Bennett's Radio 327 Mapie St PE 2-1736 PHILLIPSBURG Williams Co C B 154 S Main St 5-1245 PLAINFIELD Lafavethe Radio 139 W 2 St PL 6-4718

- PLAINFIELD Lafayette Radio 139 W 2 St PL 6-4718 Union TV Parts 403 Watchong Ave PL 4-6930 RED BANK Monmouth Radio 404 Shrewsbury RB 6-3300 RIDGEFIELD PARK MRM Wholesale Radio 284 Teaneck Rd HU 7-0715 TEANECK Parts Homes M 367 Owner Anna Rd TE 6-5331
- TEANECK Ross Homer M 367 Queen Anne Rd TE 6-5331 TRENTON Allen & Hurley 23 S Warren LY 9-4535 Alled Electric 333 S Warren TR 9-4535 Cooper Sales 508 Hamilton Ave EX 2-8008 Dragon Co 959 Liberty St 4-1479 Fineburg's 547 S Broad TR 4-5125 General Elec Supply Brenswick Circle Ext 5-3453 Nidisco 126 S Warren St EX 3-4536 Westinghoose Electric 745 E State TR 5-5421

### NEW MEXICO

- ALBUQUERQUE ALBUQUERQUE General Electric Supply 820 1 St NW 2-5246 Midland Specialty 1712 Lumas Blvd Miller Supply 211 W Coal Ave 2-3450 Radio Equip Co 523 Central Ave N E 2-5681 Tel-Radio Supply 205 Central NE 2-1141 Walker Radio L B 114 W Granite St Westinghouse Electric 816 1 St N W 3-3708 LOS ALAMOS Valley Engly Co 601 Cedar St 2-4883 ROSWELL

NEW YORK

ALBANY Air Wave Electr Rad Distr 213 Hudson \*Ft Orange Radie 904 Broadway 5-1594 Graybar Electric 40 Van Woert AL 5-1564 R T A Distrs 36 Broadway PR 5-7346 \*Taylor Ce E 2465 Central 8-8713 Wayne Merriam A Maplewood Ave Ext Westinghouse Electric 19 R R Ave 8-7801 AMSTERDAM \*Adirondack Radio Supply 185 W Main St VI 2-8350 AUBURN

AUBURN \*Dare Radio 22 Genesee 2-0441 Roberts & O'Brien 191 Hardenbergh Ave 2-6561 BAYSHORE See Long Island BELLROSE See Long Island BELLROSE See Long Island BINGHAMTON Broome Distr 221 Washington St 2-4273 \*Faderal Radio 188 State 2-2394 int'l Radio & TV 138 Beethoven St L & K Elestric 72 State St 2-7261 Morris Distr 195 Water 4-2461 Stack Electronic Supply 25 State St 3-7337 BUFFALO

Bergman Co W Oak & Eagle MO 6300

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

ROSWELL Supply Co 605 E 2 St 3512 Supreme Radio 129 W 2 St 148 SANTA FE A-1 Communications 110 W Palace Ave

ALBANY

AUBURN

BUFFALO

## **DISTRIBUTORS SERVING the ELECTRONIC INDUSTRIES**

Bison Electrical 1137 Main St LI 8447 Buffalo Radio 219 E Genesee WA 9004 <sup>o</sup>Dymae inc 2329 Main PA 2300 Faysan Distra 506 7th St SU 1300 General Electric Supply 960 Basti EL 5100 <sup>o</sup>Genesee Radio & Parts 205E Genesee CL 1970 Graybar Electric 180 Perry WA 3700 <sup>o</sup>Harron Electronics Supply 324 N 0at St M0 6865 RCA Victor Oist 1209 Broadway Fi 1209 Radio Equipment 147 E Genesee MA 9676 Radio Equipment 147 E Genesee MA 9676 Rains Ce W E 11 W North GR 4944 Scheller Radio 269 Dak WA 3081 Standard Elect 1501 Main GA 5000 Strauss Co Joseph 25 High SU 8080 Summit Distra 916 Main GE 3100 CORTLAND Winchell Radio 149 Main St SK 3-0868 ELMIRA ELMIRA ELMIRA \*Harrison Co F C 108 W Church 3-5676 LeValisy-McLeon 312 State St 6167 Rose-Kimbali-Barker 511 Baldwin St ARMINGOALE See Long Island EUSHING Sem Long Island FREDÔNIA Barker-Higbee 27 Water 2-8666 GLENS FALLS • Ray Distr 284 Gien 2-5848 GLOVERSVILLE GLUVENSVILLE Fulton County Dist 16 Bieecker 5-2515 GREAT NECK See Long Island HEMPSTEAD See Long Island HICKSVILLE See Long Island HORNELL Horneli Else Motor 286 Main St 2451 **LTHACA** Staliman of Ithaea 123 S Tioga 4-9918 JACKSON NEIGHTS See Long Island JAMAICA See Long Island JAMESTOWN JAMESTOWN Johnson Radio 119 Nunt Rd 8916 Warren Radio 31 Forest 9-8185 JOHNSON CITY Westinghouse Elec 419 Grand Ave 9-1561 KINGSTON \*Arace Electronics 25 Nenry 6622 LOCKPORT Standard Electronies 8 Eim St 4-3684 MALONE MALONE Pond Electric 123 E Main St 135 Ray Distr 55 W Main St 1966 Vermont Hdw hdqrs Burlington Vt MASSENA

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  Variety Electronics 605 Bigelow Bivd EX 1-1524
  Westinghouss Elect 230 F Marwarian 3742 PITTSBURGH Wostinghouse Lieve 230 K Jowenson 3742 \*Moyer Electronic 330 E Norweglan 3742 Schuylkill Electric 611 Mauch Chunk St 4404 READING A G Radio Parts 628 Schwylkili Ave Barbey Geo D 155 Penn St 6-7451 \*Barnett Bros 201 S 4 6-4814 General Electric Supply 447 N Front St 4-2169 Graybar Electric 22 S 3 St RE 6-1581 Westinghoose Electric 4 & Eim Sts 6-7236
- ROCHESTER
- Rellable Motor 402 Adams St
- ROSLYN Grove Enterprises 1373 Easton Rd
- SAINT MARYS \*B & R Electric 26 Railroad St 4-4918 SCHUYLKILL HAVEN Ace Electronics 33 Stanton St 304-R
- SCRANTON
- CRANTOW Consolidated Distr 844 Capouse DI 7-6380 Emerson Radio of Pa Penn Ave & Poglar DI 7-1134 General Electric Supply 204 Monroe Ave Di 4-8563 General Radio & Refr 1013 Capouse Ave DI 7-5033 Mortis Distr 616 Mulberry St Pursell Fred P 1221 N Washington Ave Scott Charles B 119 Franklin Ave 2-8221 "Scranton Radio/TV Supply 419 Poplar St DI 3-1259 WaenM
- SHARON
- Sharon Electronics Supply 1336 E State 3014 SUNRURY
- Big Boys Distr 132 S 2 St 990 Electronic Sales 734 Market St 911J Moyer Electronic 5 Haas Ave
- UNIONTOWN
- TV & Radio Parts 1 Mili St GE 7-7551

Superior Distr 25 Dunbar St GE 8-2357 \*Zimmerman Wholesalers 104 W Peter St GE 7-6110 WILKES-BARRE

- "Zimmerman Wholesalers 104 W Peter St GE 7-6110
   WILKES-BARRE General Electric Supply 85 E Union St VA 2-5106
   General Radie 396 S Main 4-7881
   Modern Electronic hdgrs Nantieoke Radio Service 346 S Main 3-7713
   Sonoret Tele-Radio Co 36 Wundbary St VA 2-2431
   Electronics Merchandisera-Tubes, Antennos, Accessories, Wire, Ports, Botteries, Tuners, UHF Strips, Television, Radio, Phono, Recarders, Test Equipment, Tools, Allied Items, "DeWald", "Meck", "Roland", "Crescent", "Sonora", "Olympic", "Standard Coil", "Chicago Instruments", "Olin", "Ames", "Synkole", "Youngstown", "R.M.S." etc.
   Wall R B 16 E Union St VA 4-2411
   WILLIAMSPORT
   Alve Electrs Distrs 240 Pine St Electric Appliance 329 E 4 St Westinghomas Electric 465 Hepbarn St 2-6183
   Willimsport Radio 518 W 3 St 7696
   YORK

- YORK unx Eshelman Supply 10 Broad St hdurs Lancaster Pa \*J R S Distr 646 W Market 4-3217 Minnich Radio & Sound 624 W Market St Motter Electric 815 N George St Westinghouse Elee Ogantz St & 6 Ave W0 5556 \*York Radio & Refrig 263 W Market St 8-1588

### RHODE ISLAND

CRANSTON Rimace Sales 2181/2 Warren Ave East Prov 1-5213 PROVIDENCE

ROVIDENCE Adams Distr 116 Broadway DE 1-9200 Dandreta & Co Wm 129 Regent Ave UN 1-2800 \*DeMambro Radio 90 Broadway Duro Electronics 78 Atwells DE 1-6272 Eddy & Co 43 Hoxpilal St GA 1-2045 Edwards & Co W H 94 Broadway GA 1-6158 General Electric Supply 241 Harris Ave GA 1-6523 Graybar Electric 194 Richmond DE 1-8100 Television Access House 41 Broadway JA 1-7515 Westinghouse Elec 233 Harris GA 1-6484

### SOUTH CAROLINA

- ANDERSON A & S Electronics 205 W River St CA 5-8260 Dixie Radio Supply 211 W Whitemer St 7567 CHARLESTDM TARILSIUN Butt's Elee Supply 480 E Bay St 2-4085 Perry-Mann Electric 70 Romney St 2-6691 Radio Labs 215 King St 3-5328 Wholesale Radio 78½ Calhonn St 11UMB1A
- COLUMBIA Associated Distr 822 Gervals St
- Associated Distr 822 Gervais St Dixle Radio Supply 1700 Laurel 4-0383 Electronles ine 1513 Tavior St Graybar Electric 710 Lady St C0 2-2125 Horiacher & Barrett 1909 Main Kreil Radio 1714 Main 2-2103 McElhenney Co 1215 Henderson Perry-Mann Electric 901 Taylor St 2-4375 Southeastern Radio Parts 1606 Gregg St 2-1141 Southeastern Radio 1929 Hampton Ave Westinghouse Electric 915 Lady 8145 FLDRENCE Dixle Radio Supply 234 E Evans 8201 \*Fiorence Radio 355 N Irby St 2-1446 GREENVILLE

- Florence Radio 355 N Irby St 2-1446
   GREENVILLE
   Carolina Radio 225 W Wash 2-6740
   Dixle Radio Supply 306 Wade Hampton Blvd 2-5357
   Gilliam Radio 802 Bencombe St 5-0438
   Perry-Mann Electric 400 Rhett St 5-1677
   Westinghouse Electric 205 Airport Rd 3-6201
   SPARTANBURG
   MacLinerary Co. 483 Union 64 6300
- McElhenney Co 481 Union St 6309 SUMTER
- Florence Radio 8 E Hampton Ave SP 3-2080

### SOUTH DAKOTA

- SOUTH DAKOTA AB Burghard Radio Supply 102 S 2nd St 2469 Graybar Electric 224 1 Ave S E AB 2974 RAPID CITY Power City Radio 253 E Main FI 2-0360 SIDUX FALLS Graff Motor Supply 122 W 7 St 4-6911 Graybar Electric 300 N Phillips St SI 4-5621 Lippert L C 221 S 1 Ave 4-4001 \*Power City Radio 209 S 1 Ave 4-4071 \*Warren Radio Supply 105 S Indiana Ave 8-6051 WATERTOWM \*Burghardt Radio Supply Box 746 749 Larson Elect J H 128 N Broadway 2240 YANKTON Electrical Trade Supply 514 Mapia

### TENNESSEE

- BRISTOL
- BRISTOL Clark Radio Supply 620 Bread St S0 3301 Graybar Electric 536 Anderson St S0 4415 Interstate Hardware & Supply 200 State McClung Appliances 611 Haynes S0 5600 Roden Electrical Supply hdgrs Knoxville CHATTANDOGA Bryant & Trimble 100 Market St 6-2703 Curie Radio Supply 439 Bread St 6-4720 General Electric Supply 112 W 13 St 5-4571 Graybar Electric 210 N Highland Park Ave CH 4-3351 McClung Appliances 1401 Williams 7-9514 Radio & Appliance Distr 323 W Main St 7-6541 Radio Sales 401 Bread St 7-9578

## **DISTRIBUTORS SERVING the ELECTRONIC INDUSTRIES**

Specialty Distributing hours Atlanta Ga Standard Appliances 618 Broad St JACKSON

- Carlton Wholesale Radio 312 S Shannon 7-0816 Pash L K 103 Highland Ave 2-4731 JOHNSON CITY General Elec Supply 114 Ashe St 3117
- KINGSPORT
- KINGSPORT Radio Electric Supply 245 E Market St Cl 5-1471 KNOXVILLE Bomar Appliance 520 Western 2-1181 Chemeity Radio & Elec 12 Emory Pk 4-3641 General Electric Supply 701 W Jackson Ave 5-2104 Graybar Elect Henley & Union KN 3-6171 Hahn Electronic Supply 350 E Seott St McClung Appliances 310 Georgia St 4-1811 \*Roden Electrical 808 N Central 3-0491 Westinghouse Electric 403 E 5 Ave 4-8644 MECMPHIS MEMPHIS
- Westingnouse Electric 403 E 5 Ava 4-8644 MEMPHIS Allen Co Gien 1146 Union Ave GL 2-1685 \*Binff City Distr 234 East St 36-4501 Boyd Electronic Supply 1130 Union Ave 2-5565 Electronic Supply 1100 Union Ave 7-0366 Fulmer Co Arthur 296 Monroe Ave 5-5711 General Electric Supply 500 S Front St 37-5531 Graybar Electric 1474 Lamar Ave ME 7-7150 \*Lavender Radio Supply 180 S Casper 36-2757 McGregor's 1071 Union Ave 36-3351 Orglil Bros 2100 Latham St 9-3381 Shobe ine 1195 Union Ave 32-3411 Uffer Co Frank G 1318 Madison Ave 36-4555 Westinghouse Elect 845 N Main 37-9431 Woodson & Bozeman 733 S Sommerville 32-2445 W & W Distr 644 Madison 37-4628 MORRISTOWN Clark Radio Supply 300 W 2 St S 2760
- NORRISTOWN Clark Radio Supply 300 W 2 St S 2760 NASHVILLE Braid Elec 1100 Demonbreum 42-6511 Cerrey's 1600 McGavock St 4-0553 Electra Distr 1914 West End Ave 5-8444 General Elect Supply 90 Peabody St 4-7661 Graybar Electric 125 16 Ave N NA 4-6501 Keith Simmons 144 Cummins Stat -1761 Radio & Appliance 4 Cummins Station Randoiph & Cole 1213 McGavock St 42-5426

### **TEXAS**

- ABILENE General Electric Supply 190 Locust 2-2827 Graybar Elec Co 1601 S Treadaway AB 2-2861 \*R & R Electronic 1010 Pine 4-9544 AMARILLO Amarilio Hdw 600 Grant St Amarilio Hdw 600 Grant St Arrow Television Radio 1017 NE 3rd 4-5974 Dulaney's of Texas 1420 NE 3rd St Generai Electric Supply 701 E 5 Ave DR 6-7254 Graybar Electric 601 E 2 St AM 2-6778 °R & R Electronic 707 Adam DR 2-3255 Westinghouse Electric 99 Taylor 2-6536 °West Texas Radio Supply 1026 W 6 2-3179 INCTIM
- AUSTIN AUSTIN Electronic Hdgrs 310 Willow St 8-8888 Graybar Electric 214 E 3 St AU 8-5674 "Hargis Co 410 Baylor St 8-6618 Standard Radio 309 Lavaca St 7-9241 BEAUMONT
- AUMONT General Electric Supply 1295 Pearl St 4-6435 Graybar Electric 1070 Fannin St BE 2-8484 Hall Inc RC & LF hdgrs Houston \*Montague Radio 760 Laurel 4-5697 Reed Co 200 Fannin St 4-7431 \*Storling Radio 1025 4 St 4-7503 Westinghouse Electric 265 Cypress 4-8635 (C Spence)
- BIG SPRING Pioneer Electronic Supply 1206 E 3 3454 BROWNSVILLE
- BROWMSVILLE Electronic Equip & Eng'g 1154 E Madison 2-4222 CORPUS CHRISTI \*Electronic Equip 805 S Staples 3-9271 General Electric Bopply 1134 E Port Ave TU 2-9237 Graybar Electric 1311 Agnes CO 4-6374 Hayes Radio Sup 1116 S Staples St 4-1991 Wastinghousse Elect 110 N Staples St 2-3351 \*Wichs Radio Equip 513 S Staples St 4-8285 DALLAS
- "Wicks Hadio EQuip >1.3 S Stapies St 4-5255 ALLAS Adleta Co 1914 Cedar Springs PR 7576 "Ail State Distr 2411 Ross Ave Ri 1295 "Crabtree Whole Radio 2608 Ross ST 5361 Dallas Electric 1800 Magnolla Ri 5396 Engineering Supply 6000 Denton Dr FL 7-2861 General Electric 1800 Magnolla Ri 5396 "Industrial Electronic 134 Lesile 3-8122 "Industrial Electronic 134 Lesile 3-8122 Medaris Co 1202 Drago N St PR 4841 "Ra-Tel 2409 Ress Ave PR 8689 "Southwestern Co 1202 Dragon PE 4841 "South West Radio 1820 N Harwood RI 6272 Wanslow & Co 912 N Peak St TA 9836 Westinghouse Electronic 2800 Ross Ave ST 5738 "Wilkinson Bros 2406 Ross Ave PR 1571 DENISON
- DENISON \*Denison Radia Supply 310 W Woodard 45
- EL PASO EL PASO Eles & Mech Supply 2000 Texas St 2-4614 General Electric Supply 300 Dailas St 3-3407 Graybar Electric 3513 Rosa St EL 3-7561 •McNicol C C 811 N Estrella 5-3992 Midland Specialty 425 W San Antonio 3-2401 Momaen-Dennegan-Ryan 800 E Overland 3-1621

- Barnes Radio Supply 720 N Stanton 3-5752 Sunland Supply 1200 E Missouri 3-7400 Walz Co W G 500 San Francisco St 3-1677 FDRT WORTH \*Electronic Equip 917 Fiorence St ED 5407 \*Fort Worth Radio Supply 1201 Commerce F0 7107 General Electric Supply 409 Jones St FA 5385 Graybar Electric 1107 Foeh St ED 4525 \*H & L Radio Supply 1608 Commerce St FA 7311 \*'Seoster's' Radio 509 Commerce St F0 7448 Shields Co 1008 Macon St FA 3111 \*Sutton's Electronics 104 S Main St \*Swieco Co 1518 E Lancaster FA 7157 \*United Electronics 403 Jones ED 9295 Westinghouse Elec 205 NE 7 F0 5611 GALVESTON
- GALVESTON R C & L F Hall of Galveston 1803 Tremont St 3-1656 HOUSTON
- R C & L F Hall of Gaiveston 1803 Tremont St 3-1656 OUSTON Automatic Distr 100 Jackson CA 0261 Beyer & Co A R 1318 Polk Ave CA 8-7491 Busacker Electric 1721 Waugh Dr JU 5546 Citly Radio & TV Parts Co 2321 Milam JA 1556 Cevington Distr 34 N Hamilton CA 0326 Crempacker Distr 1200 National CH 9366 Electrotex Electrolies 2401 Taft St LY 3211 Electro-Mechanical Prods 1510 Lombardy AT 7910 Frankin Co R E 1905 Chartres St CA 0194 General Electric Supply 1312 Live Oak FA 3121 Goophysical Supply 1311 Dalias Ave BL 0561 Graybar Elect 1702 Cullen AT 4571 Guif Coast Electronic 1110 Winbern St W-1551 Hail Inc R C & L F 1301 Polk CA 9731 Harrison Equip 1422 San Jacinto AT 6315 Houston Radio Supply Clay at La Branch CA 6261 Lonert Co 2213 Congress Ave CH 2663 Moore Bros 3401 Milam St JU 4175 Send Sales & Engineering 2005 La Branch Straus-Frank 4000 Leeland CA 1201 Tele-Radio 1721 Wangh Dr JA 9777 Waish & Co JA 4301 Guif Freeway CA 3-4281 Westinghouse Elect 1903 Ruiz CA 7272 LARED0 Guarantee Radio 1314 Iturbide St 3-6913
- LAREDO
- Guarantee Radio 1314 Iturbide St 3-6913 Pan American Electronic 1015 Iturbide St 3-6242 Radio & Electronics Supply 1219 Lincoln St LONGVIEW
- Wholesale Electronic 203 S High St
- LUBBOCK Anderson-Young 2002 Clovis Rd 5-8581 \*B & L Radio & TV Supply 2424 Texas Ave P0 5-6352
- 6352 General Electric Supply P0 Box 1361 P0 3-8271 \*R & R Supply 1607 Ave G P0 5-5737 Westinghouse Electric 605 Main St 3-0425 West Texas Radio Supply 1009 Ave hdgrs Amarille LUFKIN Radio Parts Co 1010 N Raguet

- NCALLEN Rio Radio Supply 608 S Broadway 6-5781 ODESSA
- Midiand Specialty 2101 Andrews Hwy

- Dichi Ration Dichi Radio & TV Supply 1927 7 St 2-6311 SAN ANGELO Genter Wholesale Co 606 Irving St 3455 SAN ANTONIO Alter Radio 359 E Crockett St Amateur Headquarters & Supply 828 Brooklyn GA 7388 Electronics Inc 512 Broadway CA 4-8381 General Electric Supply 1801 Broadway CA 7-1261 Graybar Elec 1401 N Hackberry FA 6274 Lamp's Letronics 828 Brooklyn Are CA 7-1388 "Mission Radio Supply 635 Soledad St CA 6-0175 Olsen Radio Supply 412 Pereida St Radio & TV Parts 116 7 St F-5329 Sherman Electronics 722 San Pedro CA 6-0247 South Taxas Appl. 641 S Flores St Straus-Frank Box 600 CA 6-0101 Warnecke Co R 121 Navarro St Westinghouse Electric 1211 E Houston GA 9271 TEMPLE
- TEMPLE Central Radio & Supply 410 E Ave A
- TYLER

- 4-5667

### UTAH

- OGDEN Bailard & Carter 2428 Grant 3-7844 Iverson Radio 265 25 St 6286 Tri-State Electronic 2217 Klesei Ave 4-3438
- Tri-State Electronic 2217 Klessi Ave 4-343 SALT LAKE CITY Ballard & Carter 1486 Major St 7-0671 Bintz Co W H 433 W 3rd S St Central Supply Co 47 E 5th St S 3-2631 Flint Distr Co Box 1470

General Electric Supply 312 W 2 S St 3-3911 Gienn Earl 245 S 1st West 3-7601 Graybar Electric 336 N 3 St W SA 9-8771 Kimbali Distr Co 115 S W Temple St Lloyd Co W 8 51 S 2nd W 3-3825 Moore Radio Supply 157 Motor Ave O'Loughlin's Radio Supply 113 E 3 S St 4-5051 Radio Supply 157 Motor Ave 5-2817 Ross S R 1212 S State St 6-8607 Standard Supply 257 E 6 St 5-2971 Stravell-Paterson 126 S W Temple 22-5795 Westinghouse Elect 210 Rio Grande 5-2972

### VERMONT

- BURLINGTON URLINGTON General Electric Supply 316 Pine St 3-3424 Hagar Hardware & Paint 164 St Paul St 4-6842 Radio Service Lab 703 Pine St 2-5771 Vermont How 180 Flynn Ave 4-6835 Westinghouse Electric 208 Flynn Ave 4-9985
- RUTLAND Oakman Electric Supply 12 Water St 594

### VIRGINIA

- ALEXANDRIA Certified Radio 1330 Powhatan St KI 8-5115 Suburban Distr 222 S Henry St KI 9-6804
- Suburban Distr 222 S Henry St KI 9-6804 ARLINGTON Rucker Electronic 1906 N Moore St JA 7-7903 BRISTOL Bristol Radio 31 Moore St N-3544 CHARLOTTESVILLE Virginia Radio 715 Henry Ave 3-3928 DANVILLE •Womack Radio 502 Crashead 4622 HAMPTON General Elec Supply 1247 39 St Hgwy 3-6526 IVMCHHIRC

- General Lies Supply JLT, J. Commerce St 2-3497 LYNCHBURG Eastern Electric Co 920 Commerce St 2-3497 Lynchburg Battery 406 5 St 2-1236 NEWPORT NEWS General Supply 4215 Huntington 2-4007
- General Supply 4215 Huntington 2-4007 NORFOLK General Electric Supply 709 E 26 St 2-7183 Goodman Electric Supply 3610 Hampton 4-82: Graybar Electric 1081 W 35 St N0 5-7441 Radio Equip 821 W 21 St NA 7-4534 Radio Paris Distr 128 W Oiney MA 2-5711 Radio Sepply 711 Granby St MA 7-9211 Scheitz 1ne G J 639 W 24 St PH 2-7985 Trant, Inc R F 924 W 21st St MA 2-2683 Westinghouse Elec 2600 Hampton 5-0325 Wyatt-Cornick 919 W 21 St MA 5-6737 PETERSBURG 8233
- PETERSBURG Electronic Supply 13 E Washington St PE 481 Virginia Battery 21 E Bank St RE 2-5051 RICHMOND
- Virginia Battery 21 E Bank St RE 2-5051 RICHMOND Commonwealth Sales 1601 Summit Ave Cottrell Jr W C 408 E Main St 3-2402 Cramp Co Banj T 1310 E Franklin Durai Distr Co 1221 Admiral St General Elect Sepply 1505 Sherwood 6-4941 Graybar Electrie 10 S 6 St RI 7-3491 Johnson Co D R 1315 E Cary St 7-3617 \*Johnston-Gasser Co 3023 W Marshall 6-9405 Mattson's Electronic S19 W Broad St 3-6011 Meridan Electronic 1001 W Broad 5-2834 \*Radio Supply 3302 W Broad St 3-6011 Meridan Electronic E Main St 7-3054 Tillier, Inc A R 957 Myers St Trant Dist R F 1221 Admiral St 2-2805 Westinghouse Electric 511 E Byrd St 3-0111 \*Winfree Supply Co 800 W Cary St Wyatt-Cornick 1705 Brook Rd 3-1945 ROAMOKE \*Baker Sales HC 19 Franklin Rd 4-9209 General Elec S01 Salem Are R0 3-3615 \*Leonard Electronic 131 Center Are N W 3-9339 Peoples Radio & TV 1015 Moorman Rd NW 8900 \*Radio Supply 2009 Williamson Rd 4-6288 Roanoke Electronic 1322 Williamson 4-6612 Wyatt-Cornick Co5 3 St S E hdgrs Richmond Westinghouse Electric 732 1 St SE 7771 STAUNTON Hartley & Co 327 N Central 5-2333
- Westingnouse Electric 752 1 51 52 7771 STAUNTON Hartley & Co 327 N Central 5-2333 Radio Electric Prodects 114 N Central Southern Electric 818 Greenville Ave 5-2313 WINCHESTER Leonard Electronics 213 S Braddock 8668

### WASHINGTON

- WASHINGION BELLINGHAM Waitkus Supply 110 Grand Ave 274 BREMERTON \*C & G Radio Supply 1301 Pacific Ave 7-5515 ELLENSBURG
- Geiger Radio W A 1101 Columbia 2-7701

- Geiger Radio W A 1101 Softmatic 2 1152 EVERETT Pringle Radio Whole 2514 Colby Ave KENNEWICK Wible Radio Supply Inc 13 S Dayton Ave 3591 SEATTLE Alaska Radio Supply 1846 Westlake N AL 8777 Associated industries 1752 Rainler St MI 4400 Central Electronic 2023 7th Ave Coast Radio 110 University St MA 9133 Conneily Co F B 1015 Republican St SE 4155

- PORT ARTHUR Diehl Radio & TV Supply 1927 7 St 2-6311

## TEXARKANA •Lavender Radio Supply 520 E 4 St. 2-9981

General Electric Supply 416 N Bway 2-1673 Clavender Radio Supply 503 E Oakwood St Radio Service 111 University 4-4441

## VICTORIA L & G Electronic 1412 N Main Hi 3-2272 WACO

- WACO General Elec Supply 217 S 4 St 2-1611 •Hargis Co 1205 Washington Ave 4-56 L & M Sales 1307 Austin Ave 2-3391 WICHITA FALLS •Clark & Gose Radio 1203 Indiana St •Mooney Radio 1635 Huff 2-0731

- Electronic Supply 5601 Calif Ave Fidelity Electric 960 Republican St SE 5100 Garretson Radio Supply 2416 2 Ave MU 4380 Generai Elect Supply 1212 1 Ave S SE 6400 "Generai Radio 100 Wali St Graybar Elec King & Occidental MU 0123 Instrement Lab 934 Elilott W AL 4940 Marshall-Welis 1258 1 SE 7447 "Radio Products Sales 1214 1st Ave MA 1035 Radio TV & Appl 500 Westiake Ave N MA 0787 Ratelco Inc 820 Minor N SE 7770 "Seattle Radio Supply 2117 2 Ave SE 2345 Stusser Electric 2246 1st Ave S SE 5285 "Western Electronic 717 Oexter Ave SE 3200 Westinghouse Elcc 1051 1 Ave S EL 7001 Westiake Electronic 511 Westiake N MU 6501 Zerega Distr 515 Westlake N MU 2525 "20brist Co H E 2121 Westlake MU 2121 POKANE
- \*Zobrist Co H E 2121 Westlake MU 2121 SPOKANE Columbia Electric S 123 Wall St RI 3131 Connelly Co F B S 124 Wall St RI 6174 Frank's Radio Supply 161 S Adams St MA 8108 General Electric kupply E 1805 Trent Ave KE O. Graybar Electric 1033 W Gardner Ave EM 6611 Johnson Co E M W 615 1 Ave RI 5432 \*Northwest Electr N 102 Monroe MA 9289 Prudential Oistr 318 W Trent Ave MA 6002 Spokane Radio Supply 301 W 2 Ave RI 8441 Standard Sales 1219 W 1 Ave RI 7196 Taylor Oistributing E 206 Augusta EM 3301 Westinghouse Elec N 1023 Monroe EM 3371 TACOMA E 0431 TACOMA
- COMA \*C & G Radio Supply 2502 Jefferson Ave BR 3181 General Electric Supply 2316 A St BR 8454 Graybar Electric 2112 A St Ma 0164 Stewart Co A T 711 Broadway BR 3174 Westinghoese Elec 1930 Pacific BR 8417 \*Wible Radio Supply 2360 S Fawestt St BR 8395 MCGUVER
- VANCOUVER Saelens Radio 310 W 8 St 4-2671 WALLA WALLA Kar Radio & Electric 12 & Pine Sts 4572
- WENATCHEE Mid-State Radio 611½ N Wenatchee Ave 510 Pringle Radio 417 King St
- Pringio Bauro YAKIMA Lay & Nord 112 S 2 St 3-5591 Westinghoese Elec 210 W B YA 3-4701 Yakima Wholesale Radio 506 S 1st 4670

### WEST VIRGINIA

- BECKLEY \*Chemeity Radie & Elec 340 B Prince St 2-5353 BLUEFIELD
- Chavanerty matter a lite 340 for the first of the second s

- CLARKSBURG Mountain Electronics 433 Clark St 4-5559 Trenton Radio Co 414 Clark St 4-4141 Westinghousse Electric 315 N 4 4-6311 White Electric 903 W Pike St 4-5591 ELKINS M & M TV & Radio Co 3 Piessant Ave W VA Radio & TV 444 HUNTINGTON \*Electronic Supply 422 11 St 8779 \*King & Irwin 314 11 St 3-8414 Mountain Electronics 1127 3 Ave 2-0339 \*TV Supply 1226 3 Ave 6639 Van Zandt Supply 1123 4 Ave JA 5-5193 Virginian Electric 740 6 Ave 2-8396 MARTINSBURG Plummers Radio 526 W King St 3821 **CLARKSBURG**

- Plummers Radio 526 W King St 3821 WORGANTOWN Trenton Radie 507 Beecherst Ave 5637
- Trenton Radie 507 Beecherst Ave 5637 PARKERSBURG Charieston Elect Supply 227 Ann St 7-4513 Cox Radio Supplies 554 7 St General Electronics 512 7 St 8-3391 Randie & Hornbrook 536 7 St 8-3391 WHEELING General Electric Supply 1818 Eoff St WH 2555 General Electronics 735 Main St 5738 Hamberg Bros 360 National Rd 727 \* Radie Parts Co 1312 Main St Westinghoese Electric 1803 Eoff St 3980 Wheeling Radie Supply 924 Market St Wh 1077

### WISCONSIN

- APPLETON APPLETON Appleton Radio Supply 1217 N Richmond St 3-3345 General Electric Supply 1307 W Spencer St AP 4-7155 Valley Radio Olstr 518 N Appleton St 3-6012 CHIPPEWA FALLS Beshland Radio Specialties 6052 EAU CLAIRE Beshland Radio Spec 419 Water 7425 Larson Electrical J H 402 Water St 9716 Frei More

- Larson Electrical J H 402 Water St 9716 FENIMORE Tel Rad Mfg Co 7 Madison St FOND DU LAC "Harris Radio 289 N Main St 8204 GREEN BAY Electronic Expeditors 420 N Clay St HE 2-4165 Graybar Elec Co 1140 N Irwin Ave HE 7-3284 Nesie Electronic 308 N Chestnat HE 5-4881 "Northern Radio & TY 708 S Broadway HE 5-3789 Westinghosus Electric 619 Main H0 8200 HUDSON
- Larson Elec Co J H 109 Wainut St 248 W Progress Supply 1321 3 St 828 JANESVILLE
- Goodenough Radio 111 N Jackson St 7033
- Goodenough Date: AL KENOSHA Badger Electronic Parts 4050 7 Ave 4-1484 Chester Electronic 2012 52nd St OL 2-8607 Midwest Electronics 5515 22 Ave OL 4-1732
- Midwest Electronics 5515 22 Ave uL 4-17. A CROSSE General Electric Supply 222 Pearl St 2-7802 Lew Bonn Co 115 Pearl St 4-7378 Southern Minn Supply 122 N Front St 2-966 \*Stark Radio Supply 131 S 6 St 2-3186 St 2-9660

## **ELECTRONIC INDUSTRIES DIRECTORY of**

Representatives ("Reps")

This section of the 1955 Electronic Industries Directory lists those representatives operating as independent "reps" who handle two or more lines. They do not include factory staff salesmen. "Reps" are listed alphabetically under states and cities. Asterisks (\*) indicate membership in "The Representatives" of Electronic Product Manufacturers, Inc. Telephone numbers are given to speed contacts.

#### ALABAMA BIRMINGHAM

Nordstrom & Co R C 580 N Woodward Ave : 4-6129

### ARIZONA

PHOENIX Moore Sales Co Harry A Box 7245 AM 5-4662 Shefter Co H Goorge Box 1587 AL 8-7893

### CALIFORNIA

CALIFORNIA LOS ANGELES AREA \*Appleton Co Harry 136 San Fernando CA 1-2171 Barron-Jurco 817 S Heover St DU 3-5248 \*Barstow & Doran 1406 S Grand Ave RI 6191 Baughman Co E J 350 S Central Ave MA 9-1403 \*Becker Co Herb 1140 Crenshaw Bird WE 1-1257 Berman Co J 1141 LaClenega St BR 2-9138 Buchman Co W B 923 E 3 St MA 6-2325 Cobm S H 1769 S Holt Ave TE 0-4398 \*Coehrane Co Irv M 408 S Alvarado DU 5-1715 Craig Ralph P 715 N Harper Ave WE 0468

Oavidson & Assoc Joe PO Box 108 (South Gate) NE 6-2245 6-2245 •Davis Sales Co George 5259 E Beverly Bivd UN 3-3594 Dunkle B 3257 W 6 St •Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 2320 E 8 St TR 6317 \*Edwards & Co 134 St 8503 Fox Associates 5401 Santa Monica Blvd H0 3-7194 Hardis Co R M 901 S Manhattan PI RE 4-2752 \*Harmon Co W S 121 N Robertson Bivd (Beverly Hills) BR 2-3321 \*Hartis AW P 0 Box 1116 (Gardena) er 8-4817 Hastings Sales Co 4942 Vineland Ave (M Helly-wood)

Hastings Sates ou 9742 Finistant Art (n. 1007)
Hill Sates Co J T 800 W 11 St Bi 7-5384
Hill Sates Co J T 800 W 11 St Bi 7-5384
Hill Co W C 1165 S Broadway PR 2105
King Co W C 1355 Westwood Bivd GR 8-8679
Kittleson Co. 7614 Melrose Ave WH 1167
Knight Co W Bert 10373 W Pice Bivd BR 2-5647

- MADISON
- MADISON Graybar Elec Co 103 N Park St MA 5-5005 \*Radio Distr 701 E Johnson St AL 6-6801 \*Satterfield Electronics 326 W Gorham AL 6-0267 Supprior Radio Parts 2211 Atwood CH 9-2191 Westinghouse Elect 1022 E Washington 5-4868 MANITOWOC
- MANITOWOC "Hartis Radio Corp 115 N 10 St 9313 MARINETTE Popkoy Co G M Main & 9 Sts Milwaukee

- Popkey Co G M Main & 9 Sts MILWAUKEE \*Ackermann Radio 3861 N 35 HI 5-1860 \*Acme Radio 1009 N Water St BR 1-0641 "Central Radio 1723 W Fond du Lae Are WE 3-2982 Electronic Expeditors 2205 W Vilet WE 3-5804 Electro-Pitance Distr 2458 W Lisbon Ave 01 2-9240 General Electric Supply 540 S I BR 6-7730 Graybar Elec 180 N Jefferson BR 6-8400 Janear Radio Supply 838 N 4 St BR 6-1320 Mid-City Electronic 2327 W Weils WE 3-8304 Pritzaf John Hdw 333 N PlankInton Ave BR 1-1965 \*Radio Spesialty 829 N Bway MA 8-2060 Roth Appl 647 W Virginia BR 1-1111 Seemath Distr 2406 W Lisbon St DI 2-9240 State Distr 1415 W Mitchell St OR 2-9000 State Distr 2405 W Fond de Lae HI 4-9585 Taylor Elee 4080 N Pt Wash Rd W0 4-4321 Television Parts 714 W State BR 2-6111 Westinghouse Elec 546 N Bway DA 8-1800 OSHKOSH
- Electronic Expeditors 1244 6th St BL 5718 Jenear Radio Supply 3110 W Lisbon Ave RACINE
- GUNE Allen's Merehandising 1206 N Wisconsin St **3-8589** Badger Electronic 856 Washington 3-4024 \*Standard Radio Parts 1244 State St 4-3634 Seperior-Racine 908 State St 2-5142
- SHEBOYGAN Koepsell Co J J S 9 at Commerce 3646 Nitze's 1129 N 8 St 9531 STEVENS POINT AMCO Electronics N 2nd & Franklin 3351 WAUSAU \*Radio Service 4 Structure
- Radio Service & Supply 615 3 St 3272

### WYOMING

- CASPER Casper Supply 444 S Center St General Electric Supply 428 S Elm St 2-7333
- CHEYENNE •Houge Radio & Supply 4012 Central 2-6474
- SHERIDAN Barton Battery & Electric Co 102 Grignell St 59

### ALASKA

- ANCHORAGE Yukon Radio Supply Box 406 2-7964
  - •Koessier Sales 6907 Meirose Ave Y0 6271 Lacey Bob 436 S Beachwood Or (Burbank) TH 8-9421 La Moree G D 1325 San Juitan Ri 6378 Larshan inc 1409 Wilshire Bivd (Santa Monica) TE 0-8489
  - 0-8489 \*Lasure Co Harry A 9041 W Pice Bivd BR 2-7805 \*Loskota Co Doessias 1052 W 6 St MA 6-4505 Lynch & Son C R 3307 Giendate Bivd N0 3-8236 Lynn & Brooks 3055 Wilshire Bivd OU 2-2255 Mann Assoe Martin 8346 Beveriy Bivd WE 3-8528 \*Marshall Co & S 40 S Los Robles (Pasadena) SV 5-022
- SY 5-2022
- 91 9-2022 Marshank Sales 672 S Lafayette Pk DU 7-8235 Maynard Sales Co 6214 W Manchester OR 8-3150 •Miller Co Geraid B 1550 N Highland (Hollywood)
- HO 2-1195 Mitchell Co C H 256 S LaPeer Dr Beverly Hills BR
- 2-0183

- 2-0183 \*Neely Enterprises 7422 Meirose Ave WE 3-9201 Olander & Co Roland 7225 Beverly Bivd WY 0028 Osborne K 10448 S Park View OU 8-1039 \*Owens Co Lee H 2331 W Washington RE 0230 Perimath-Colman & Assoc 2419 S Grand Ave BI 7-4321 \*Power Raiph L 767 Castelar St MU 5277 Renz Rey E 207 S Orange St (Glendale) CH 5-2047 Rios Ed 1250 Wilshire Bivd MA 6-8912 \*Rissi Al J 2724 S Peek Rd (Monrovia) D0 6-2135 \*Roberts & Aassoc E V 5068 W Washington WE 8-2541 \*Repp Co V T 2230 W 11 St OU 3-4197 \*Sagi & Assoc Howard M 5015 San Vincente Bivd. WE 8-3591 \*Stegi Co Samuel\_1133 S LaClenega Bivd BR 2-4183

- Star Constant and the solution of the solution

- Uecke E H 4938 Neola PI CL 7-9611 Van Groos Co 14515 Dickens St (Sherman Oaks) St 7-7882

- St 7-7882 Vermilye Co Charles 3440 Wilshire Bivd DU 2-5695 \*Wallace & Wallace 1206 Maple Ave RI 7-0401 \*Weber Co Wedge 1217 Venice Bivd DU 7-2111 \*Wetern Electronic Enterprises 3348 W Compton Bivd (Gardena) OR 8-4817 \*Wiley Paul F 1632 Silverlake Bivd NO 3-8028 \*Wood Co A M Box 150 (Elmonte) CU 3-1201 SACRAMENTO \*New Foterprises 300 October Filed CL 3-3462

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  Awit C E 625 Lawrol Ave (Menlo Park) DA 5-4983
  Barstow k Doran 248 9 St UN 3-2079
  Belchamber P A 1401 Middle Harbor Rd (Oakland) GL 1-4460
  Berman Jo E L 780 Natoma St UN 3-0317
  Brainard W V 721 Clementina St UN 1-2569
  Buchman Jo W B 444 Brannan St YU 2-4312
  Detsch A Co 341 10 St MA 1-2788
  Elchorn & Melchior 500 Minn. St UN 1-8309
  Frazar & Hansen Ltd 301 Clay St EX 2-5112
  French > P 721 Carland Dr (Palo Alto) DA 3-0597
  Harriss Swies Co L H 383 Brannan St YU 6-1084
  Heid Herman E 147 10 St UN 3-4250
  Nermans Co James P 1234 Folsom St MA 1-4166
  Hitt Co W C 1355 Market St KL 2-2311
  Hodges Elmer C 1264 Folsom St UN 1-2367
  Howard G M 782 Bryant D0 2-6320
  Jewett Samuel 0 13537 Addison St (Sherman 0aks) ST 9-6027
  Kittieson Co 2166 Market St HE 1-5304
  Lewis Assoc 725 Greenwich GA 1-0076
  Logan Sales Co 500 Gough St HE 1-5480
  Moulthrop & Honter 165 11 St HE 1-2624
  Moxon Sales G E 422 LaJolla Ave (San Mateo) FI 5-2866
  Neely Enterprises 2830 Geary Blyd WA 1-2361

  - Moxon Sales G E 422 LaJolia Ave (San Mateo) FI 5-2866 \*Neely Enterprises 2830 Geary Bivd WA 1-2361 \*Nickerson & Rudat 381 Brannan St YU 2-2982 \*Nott & Co L A 1061 Howard St HE 1-4738 \*Purdy Co W J 312 T St UN 3-4321 \*Ross Co David H 534 EI Camino Real (San Carlos) LY 3-8224 Scales Co James M 1355 Market St KL 2-2311 \*Sinal Arnold A 65 9 St UN 1-6259 \*Tompkins & Co W W 941 Newell Rd (Palo Alto) DA 3-3270 West Coast Electronics 1013 S Claremont (San Mateo' DI 3-4700

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Colliner W B 1003 Grandview Ave HI 2-7899 COLORADO SPRINGS \*Poyser W J 1501 N Weber 4-3401 DENVER BOULDER

- Bower Co Ronald G 446 Broadway SH 4-2501
  Bower Co C R 2759 W 33 Ave GR 7292
  Connors Co W H 375 Birch St DE 3-7608
  Halliday Gall 2576 S Milwaukee St PE 2650
  Hydo Sales Co 3250 S Dexter SK 6-7151
  McLoud & Raymond 5528 E Colfax FR 3067
  Mceller Mark G 1644 Blake St AC 3515
  Nelson Co A J Box 5502 KE 6751
  O'Brien Sales A J Box 1681 BE 3-4845
  Pearson & Co Mel Ioll S Josephine St SP 7-7878
  Williams Co Allen 1 124 W 12 Ave MA 0343
  FT COLLINS
  Leeper & Assoc Wilson Box 324 3-0444J
  GREELEY

- GREELEY Moss Gordon G 1530 13 Ave 770

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- Hannigan Co Wt 1115 Main St ED 3-2772 Reynolds Co Harrison 211 State St BR 5-9634
- CANAAN •Holliday-Hathaway Co Box 797 CA 8-7215
- DARIEN Jacobson Leo 3 Belleval Rd ST 3-0828 EAST HAVEN
- EAST HAVEN Steele Assoc Joseph R 22 Green Garden HO 7-5864 HARTFORD Gibson Engineering Co 119 Ann St CH 7-6919 Hatton & Co Arthur T 955 Asylum Ave 5-2159 \*Kahn Assoc Irving 541 Windsor St 46-7431 MANCHESTER Cotto: Augusta W 4516 Summar 24 NLO 7763
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- \*Abbett & Hustis Box 52 6-7477 WEST HARTFORD Pettigrew & Co R S 62 La Salle Rd HA 3-8533 WESTPORT
  - Nief Assoc P W 15 Oak St CA 7-3834

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- FORT MYERS Lynch Arthur H & Assoc Box 466 ED 4-4431 JACKSONVILLE
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- \*Burwell Co Henry W 1025 Ponce de Leon Ave \*\*
- \*Burwein Go nom, n. 2127 2127 \*Cartwright & Bean 3230 Peachtree Rd NE EX 2273 \*Duckett Sales Co Grady 26 E Andrews Dr NE CH
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- Wood & Co L K 1299 W Peachtree St NE EL 5683
- DECATUR McCorvey Co V Avis 215 Church St CR 6167 EAST POINT
- •Kayden Assoc Paul 118 W Nabell Ave FA 9646 •Little W T 704 Lumpkin St

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Beebe Assoc 1155 Waukegan Rd (Glenvlew) C0 7-2292
Bauman W J 2753 W North Ave HU 6-6809
Beler Co Leroy W 6518 W North Ave BE 7-2420
Berggren & Assoc 2015 S Michigan Ave CA 5-1450
Bluzat Co Rene 2842 N Cleero Ave PE 6-2238
Bonke Sales Co WFE 6966 W North Ave ME 7-8433
Booth Claude R 400 W North Ave CA 7-2810
Brouillette & Assoc 5049 Quincy St MA 6-0499
Bruning Co A H 2215 W Wison Ave DE 2-2769.
Burgoyne Wm E 7001 N Clark St H0 5-2112
Calne Sales Co 3020 N Cleero Ave SP 7-4022
Cappels & Assoc J L 1214 W Madison TA 9-1818
Carroll & Carroll 3223 W Armitage Ave D1 2-9878
Chambers Co Larry A 5906 North Ave ID 9-4884
Champion Earl T 6459 N Sheridan Rd AM 2-3565
Cole Co G McL 4753 N Broadway L0 1-7611
Cozzens W B 220 Kueta (Evanston) DA 8-4800
\*Croasley & Assoc Struce 6029 W Belmont Ave ME 7-370
Gushing Co L G: 605 N Michigan Ave DE 7-6456

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\*MeBride Sales Co J J 14107 Merchandise Mart DE 7-3575 \*McCarthy Co L C 5933 Addison St KI 5-7976 \*Magnuson Associates 3347 W Irving Park Rd KE 9-7555 Memae Sales Co 9 S Clinton AN 3-5728 Milles Paul H 333 N Michigan Ave FR 2-7100 \*Monson Corp 6059 Belmont Ave 7-3226 \*Mulay Sales 4308 W Armitage Ave BE 5-7411 \*Newman-Krause Co 5306 W. Lawrence Ave PE 6-6776 \*Petit Co George 349 Ashland Ave (River Forest) Co 1-0342 Pivan Eng'g Co 2871 N Lincoln Ave DI 8-6885 Powers Co J J 4938 W Irving Pk Rd PA 5-3888 Quackenbush Al 2629 N 77 Ct FR 2-7100 Ridgeway Eng'g Co L L 1137 W Sheridan BR 4-2628 \*Ridley Assoc 1551 N Austin Bivd TU 9-2940 \*Ritter Sales Co 5839 W Beon Ave AM 2-5584 Rosenblum & Co Murray 1818 W North 2\*8 EV 4-6565

6565

8-8060

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9460

Rosenblum & Co Murray 1818 W North 25 EV 4-6565 Ryan Co Gerald G 549 Washington Bivd ST 2-7665 "Saffro-Gettleman Co 227 W Chicago Ave DE 7-5092 "Sarkis & Co Henry 6560 N Sheridan Rd H0 5-1481 Smith Co Oren H 221 W Huron St SU 7-7919 "Stemm Redward 5681 W Lake St CO 1-2227 "Stemm Ratph T 1551 N Aostin Bivd NA 2-4074 Sutins N Ratph T 1551 N Aostin Bivd NA 2-4074 Sutins S J 228 E Park Ave (Wheaton) 8-2409 "Swinke & Co W F 541 Diversey Pkwy BI 8-4343 "Tatro & Assoe F 8 6022 N Rogers Ave JU 8-0333 "Taylor Co R F 308 W Washington St AN 3-1808 "Twintronic Sales Co 2949 W Diversey Ave SP 2-3410 "Twist Co J G 2800 N Milwawee Ave KU 9-2550 "Victoria Sales Co 7522 N Sheridan Rd BR 4-5400 "Vultassociates Ltd 2154 N Halsted St L 5-7755 Ward Co E M 8307 S Raelne Ave VI 6-6300 "Warner Co D L 15423 Honore Ave (Harvey) WA 8-8060

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9460 \*Southern Sales Co 1605 Lincoln Tower AN 5278 \*Valentine Forjest C 511 Ft Wayne Bk Bldg AN 9122 INJIANAPOLIS Blind & Co Harrison J 1616 Cord St BE 0191 Chatheld C E 503 Iilloois Bldg PL 1838 Crandali & Assoc R M 6220 E 56 St CH 8373 \*Ounningham Assoc Quinn 6101 College Ave GL 3222 \*OeVne Co Lesile M 4010 Washington Blvd HU 1395 Everett Associates 5308 W 10 BE 4893 \* Maenabb V C 909 Wastheld Blvd BR 6770

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Schuiz Co Edwin A 721 Sherwood Dr BR 1993
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- "Greene Dan PO Box 124 (Cambridge) UN 4-2220 Hannigan Co Walter T 272 Centre St (Newton) DE 2-6020
- 2-6020 \*Harris Co Stanley A 317 Chestnut St (Needham) NE 3-4780 Hart Co Frederick H 115 Pond St (Nahant) JU 1-0381

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Halfway Electronics of the main 2.0 main det (binder) bridge) EL 4-1751
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- \*Thibau Co A R 402 Mfrs Exchange Bidg VI 7057 T LDUIS Beneke Co Jules 575 Arcade Bidg CE 1677 Borphoff Co Wm 1210 Edgewater Dr Butilvant F J 1913 Washington Ave CH 6510 Harris-Hanson Co 5506 S Kings Hwy FL 1-5584 Hessel & Co M 722 Chestnut St CE 1-0905 Jaques L E 8112 Thiane Ave (Univ. City) RA 1-5349 \*Kathrinus & Co 4356 Dunean Ave OL 2-7005 \*Knagss Co H W 106 Lucas St CE 1-1853 Levin Mfg Atency Sidney M Box 405 W1 2869 \*Lowell Theodore B Box 21 Normandy BR MU 7803 Mayerson-Follman Co 2342 Dilve St CH 1-1122 McGary Co William T 6635 Delmar Bivd DE 5-6430 MeGrade Co E W 1110 S Brentwood PA 5-6550 \*Myers-Young-Forrestal 8147 Delmar Bivd DE 5-7701 Rose Equipment Co W L 317 N 11 St CH 7247 \*Serlight & Co Russ D 6344 Clayton Rd M1 5-8871 \*Waelterman L F 3938 Lindel Bivd OL 6455 Wells-White Co 6625 Delmar Bivd PA 7-7622 Winslow Oesign & Sales Co 106 W Madisen St (Kirk-wood) YD 5-5880

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- •Baum Sydney H 70-15 Fleet St (Forest Hills NY) B0 3-8101

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- 3-1379
- 3-1379 Brown Assoc Jack 207 Rosedale Rd (Yonkers NY) SP 9-7330 Burlingame Assoc 103 Lafayette St DI 9-1240 \*Camber Marty 1700 York Ave EN 9-4222 \*Cardener Sales Corp 164 Duane WA 5-0900 Cerf & Co Art 744 Broad St (Newark NJ) MI 2-6734 Christe & Co B S 175 F Amount 100

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   Engel & Assoc 6 Cartis 75 N Mapie Ave (Ridgewood NJ) Gi 4-0878
   ERA Inc 340 Great Neck Rd (Great Neck NY) HU 2-9320

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•Saftier Perry 53 Park Pl RE 2-5333

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- Moyer H A P6 Bex 14 (Haddonfield N J) 9-6347 Muggetworth J C 324 Hadden Ave (Cellingswood N J) 5-7200
- N J) 5-7200 \*Naudain L Parter Suberban Sta Bide Ri 6-3185 \*Newson Jr C H 150 Terminal Ave CH 8-0282 Noian J J 314 W Sparks St WA 4-1595 Orsi Ce John F Box 346 (Bryn Mawr) C0 6-2698 Paragen Sales Ce 111 S 22 St Ri 6-5699 Pearl Eng's & Toel Ce 8056 Rodney St Li 8-4103 Perna Co Frank J 2015 Chestnut St L0 4-3954 \*Quinian D G 4700 Frankford Ave JE 3-0650 \*Randail Ce Ken 121 N Bread St L0 4-2151 Relinger Co A R 3617 N 8 St SA 2-0500 Robinson Co I E 7404 W Chester Pike (Upper Darby) SH 8-1294

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## 1955 ELECTRONIC INDUSTRIES DIRECTORY

Alphabetical Listing of Manufacturers

# WITH THE NEW, EXCLUSIVE

LOCALIZER INDEX

A complete listing of the names and addresses of all the manufacturers in the electronic and allied industries. In the LOCALIZER INDEX listings, many manufacturers have listed home office telephone numbers, executive personnel, brand names, products, branch and regional offices as well as local reps. The LOCALIZER INDEX provides you with the shortest means of contacting any manufacturer. Symbols show type of representation: BO signifies branch off; D distributor; DS distributor sales; GV government sales; IDS industrial & distributor sales; R rep; SE sales engineer

Indented listings are advertisements.

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Automatic Metal Prods 315 Berry Brooklyn 11 NY Automatic & Precision Mfg 252 Hawthorne Yonkers 5 N Y Automatic Radio Mfg 122 Brookline Boston Mass Automatic Radio Mfg 122 Brookline Boston Mass Automatic Switch 391 Lakeside Ave Orange NJ Automatic Temp Control 5212 Pulaski Phila 44 Pa Autophone Ltd 73 Great Peter St London England Autosterew Co 216 W 18 St New York NY Auto-Test Inc 600 S Michlgan Chicago 5 III Autotron Co 128 W Main St Danvilie III Avery Adhesive Label 1616 S Callf Monrovia Calif Avien Aviation 58-15 Northern Blvd Woodside N Y Avionax Electronics 2838 N Naomi Berbank Calif Avion Tube Div Higble Mfg Rochester Mich Avor Corp 450 Broome St New York 13 N Y

Babaco Alarm Systems 723 Wash New York 14 N Y Babcock Radio Eng'g 7942 Woodley Van Nuys Calif Bache Semon & Co 636 Greenwich St New York 14 N Y Babaco Alarm Systems 723 Wash New York 14 N Y Babacok Radio Eng'g 7942 Woodley Van Nuys Calif Bache Semon & Co GS G Greenwich St New York 14 N Y Background Eng'rs 7313 Santa Monica Hellywood 46 Cal Badger Meter Mig Co 2371 N 30 St Milwankee 45 Wise Baer Co N S 1 Montgomery St Hillside 5 N J Baia Motion Picture Eng'g 120 Victor Detroit 3 Mich Bailey Industries Arnold Amoskeag Bank Big Manchester NH Baley Meter 1050 Ivanhoe Rd Cleveland 10 Ohio Baird Associates 33 University Rd Cambridge Mass Bakelite Div Union Carbide 30 E 42 St N Y 17 N Y Baker Chemical J T Phillpsburg N J Baker & Co 113 Astor St Newark 5 N J Baleo Research Labs 49 Edison PI Newark 2 N J Baldor Electric 4353 Duncan St Louis Mo Baldwin Eng'g 1136 Santa Monica Los Angeles Baldwin Eng'g 1136 Santa Monica Los Angeles Baldwin Eng'g 11168 Santa Monica Los Angeles Baldwin Eng'g 1106 Santa Monica Los Angeles Baldwin Eng'g 100 Ribert Ave Cincinnati Ohio Baltantine Labs Boonton N J Baltastran Corp 1701 N Calhoun Ft Wayne Ind Baltea I Electric Corp 5 New St Stamford Conn Baltic Metal Prods 120 Sutton Brooklyn 22 N Y Barb City Industries DeKalb III Barber & Howard 120 East Ave Westerly R I Barber Labs A W 32-44 Francis Lewis Flushing 58 N Y Barco Chemical Prods 701 S LaSalle St Chicago 5 III Barber & Williamson 237 Fairfield Ave Upper Darby Pa Barres Devel 213 W Baltimore Pike Lansdowne Pa Barres Produst 209 25 St Brooklyn 32 N Y Barres Devel 213 W Baltimore Pike Lansdowne Pa Barres I bir 212 Sylvan Ave Toledo 6 Ohio Barrett Uca Lj 1521 Crafton Rd Worcester 1 Mass Barrett Dir 2125 Sylvan Ave Toledo 5 Ohio Barrett Varnish 1532 S 50 Court Cicero 50 III Bartet Varnish 1532 S 50 Court Cicero 50 III Barry Controls 700 Pleasant St Watertown 72 Mass Barry Electronics 512 Broadway New York 12 N Y Barrett Marine Radio 800 W Coast Hwy Newport Beach Calif Bart Laboratories 227 Maln St Belleville 9 N J Barton Lever 207 Maln St Belleville 9 N J

Barry Electronics 512 Broadway New York 12 NY Bartelis Marine Radio 800 W Coast Hwy Newport Beach Calif Bart Laboratories 227 Main St Belleville 9 N J Barton Electronics 955 Asylum Hartford 5 Conn Basch Radio & TV 17 E 45 St New York 17 N Y Basler Electric Co 601 5 St Highland III Basset Lice Rex 1314 N E 17 Cf Ft Lauderdale Fla Baner & Black 309 W Jackson Chicago 6 III Baughman Co E J 1914 N Cogswell Rd El Monte Calif Baumker Mfg Co 3826 Summit St Toledo 11 Ohio Bassh & Lomb 628 St Paul St Rochester N Y Bayside Watch Tool 20-02 Utopia Whitestone 57 N Y B&C Insulation Prods 490 Lincoln Hwy Iselin NJ BC Mfg 1629 Portland Louisville 3 Ky BDN Steel Erecting 82 W Wash Blvd Chicado 2 III Beach Rass 544 Union Ave Brooklyn 11 NY Beacon Corp 2846 Milwaukee Chicago 18 III Beaver Rass 544 Union Ave Brooklyn 11 NY Beam Radionics 224 N Desplaines St Chicago 6 III Beaver Pipe Tools 310 Oana Ave Warren Ohio Beeker Electronics 1091 Rockaway Valley Stream N Y Becker Electronics 1091 Rockaway Valley Stream N Y Becker Carp 630 W Jackson Blvd Chicago 6 III Beaver Org 28 E 5 St St Paul 1 Minn Bedford Surgical Co 1326 Fulton Brooklyn N Y Beeker Deductions 562 5 Ave New York 36 NY Becks Inc 298 E 5 St St Paul 1 Minn Bedford Surgical Co 1326 Fulton Brooklyn N Y Beede Electrical Instrument Penacook NH Beeland-King Film 752 Spring St NW Atlanta Ga Belden Mfg Co 4647 W Van Buren St Chicago 44 III Belding Hemlmway Corticelli Putnam Conn Bel fuse Inc 311 Mountain R Union City NJ Bell Aircraft Corp Buffalo 5 NY Bell Aircraft Corp Buffalo 5 NY Bell Aircraft So Prince St Brooklyn N Y Bell Aircraft Carl Bust St New York N Y Bell Aircraft Corp Buffalo 5 NY Bell Aircraft Acid So Yens St Chicago 45 III Benchaster Mfg 1835 W Rosecrans Ave Gardena Calif Bendix Aviation Computer Div 5630 Arbor Vitae Los An-geles Calif Bendix Aviation Friez Instr Div Baltimore MJ Bendix Aviation Friez Instr Div Baltimore MJ Bendix Aviation Friez Instr Div Baltimore MJ Be geles Calif Bendix Aviation Eclipse-Pioneer Div Teterboro NJ Bendix Aviation Friez Instr Div Baltimore Md Bendix Aviation Pac Div 11600 Sherman Way Los Angeles Bendix Aviation Radio Oiv Baltimore 4 Md Bendix Aviation Radio Div Eatontown NJ Bendix Aviation Scintilla Magneto Div Sidney NY Bennett & Co Paul 230 E Ohio Chicano 30 III Bennett Labs 2700 Bay Rd Redwood City Calif Bennett Mfg Co Alden NY Bennett Products 815 San Antonio Rd Palo Alto Calif Benson-Lehner 2340 Sawtelle Blvd Los Angeles 64 Calif Benteley-Harris Mfg Conshohocken Pa Bergen Wire Rope Co Gregg St Lodi N J

Berger Scientific 342 Madison New York 17 NY Berger Scientific 342 Madison New York 17 NY Berkeley Div Beckman Instruments Richmond 3 Cal Berkshire Labs 586 Bank Village Greenville NH Berkshire Transformer 15 South New Milford Conn Berlant Concertone 4917 W Jefferson Los Angeles 16 Calif Berman Laboratories 112-03 Rockaway Bivd Ozone Park 20 NY Berndt-Bach Inc 6926 Remains Hollywood 38 Calif

Berndi-Bach Inc 6926 Romaine Hollywood 38 Calif Beryllium Corp Reading 2 Pa Bester Co Charles 60 Badger Newark 8 NJ Bestroaft Products 626 Bdwy New York 12 NY Best Hieleric Gorg 332 E 103 New York 29 NY Bethichem Apparatus Front & Depot Hellertown Pa Bether Coil & Transf 2000 Main St Goodland Ind J Bera Electrical 437 NH Michigan Iran 7 Pa Bill Lack A Transf 2000 Main St Goodland Ind J Bera Electrical 437 NH Michigan Iran 7 Pa Bill Jack Scientific Instr Po Box C4 Solana Bch Cali Bioglaw Hig 225 W Bioplew St Quincy 69 Mass Birledw Mig 225 W Bioplew St Quincy 69 Mass Birledw Mig 225 W Bioplew St Quincy 69 Mass Birledw Mig 225 W Bioplew St Quincy 69 Mass Birledw Mig 750 San Antonio Pala Oklo Calif Birlskin Grap 200 E 3 St Mt Vernon NY Birthelm Grap 200 E 3 St Mt Vernon NY Birthelm Grap 200 E 3 St Mt Vernon NY Birthelm CArpitol 2:9101 President-Cecil J Birtcher Cheif Solas Engl-J E Doniels Combridge 38 Moss-R-Don Greene P O Box 124 UNiversity 4:2220 Conn.Mex-Moss-NH-RI-Yi Chicoga 30 Ill-R-Houry Holinton Engineers 5500 W Devon Ave ROdory 3:2132 Covers No Calif-Ariz (Clork Conny Nev) St Louis 5 Mos-E-Bonne Greene P O Box 124 UNiversity 4:2220 Conn.Mex-Moss-NH-RI-Yi Chicoga 30 Ull-R-Houry Holinton Engineers 5500 W Devon Ave ROdory 3:2132 Covers No Calif-Ariz (Clork Conny Nev) St Louis 5 Mo-R-Engineering Services Co 6d35 Del-mor Blvd VOlunteer 3:3661 Covers Mo-Io-Kan-So III Stiver Springs Md-R-L G White & Co 8416 Georgio Ave 210 Devices Sp64 Covers So Calif-Ariz (Clork Conny Nev) St Louis Avennistra 3:6219 Covers No-Io-Kan-So III Summin NJ-R-W P Luce & Co 4810 Morris Ave SUm-mit 6-9211 Covers NVC-Long Island-Westchester Co-No NJ Synocus NY-R-L A Hotze 148 Worden Ave SYro-cuses 74:2028 Covers Upper NY State Bistop 8 Co .J Ptatium Wk Maiver Pa Bistop MG 10 Cannatid Md Cerar Grow N J Bitterman Electric Bairy 1405 IG St Razine Wise Bistor MG 20 Genthal Md Cerar Grow N J Bister Bistor MG 20 Gental Md Bia Erie Pa Bistory 13 Covers UNC-Long Island-Westchester Co-No NJ Synocus NY-R-L A Hotze 148 Worden Ave SYro-cuses 7:4 Bracke-Selb X-Ray Pelham Manor NY Bradford Components 33 Bishop St Bradford Pa

- Radio 2118 E 55 St Cleveland 3 Dhio
  HE 1-7166
  President—A N "8ud" Haas in chg sales
  Atlanta-R—Cartwright & 8can Co 3230 Peachtree Rd
  NE EX 2273 Covers Ga & S C
  Boston-R—Henry P Segel 131 Newbury St KE-6-3012
  Covers all New England stotes
  Charlotte-R—Cartwright & Bean Co P O Box 9203
  FR 6-8648 Covers N C and Va
  Chicago-R—Bruce Cumming Asso 6029 West Belmont
  Ave Phane: MErrimac 7-3770 Covers Illinois—
  Wisconsin
  Dallos-R—Crackett-Lund Co Reserve Loon Life Bldg
  Covers Tex & Oklo
- Dallos-R—Crackett-Lund Co Reserve Loon Life Bldg Covers Tex & Oklo
  Denver-R—A J Nelson Box 2244 1639 S Blake Ke 6751 Covers Ariz-Colo-Ida-Mont-NM-Utah-Wyo
  Detroit-R—Jack M. Thorpe 4390 Haverhill Ave TU-5-4438 Covers Mich
  Fort Wayne-R—Southern SIs Co 1605 Lincoln Bank Tower AN-5278 Covers Ind-Ky
  Haddonfield NJ-R—Harold Moyer 152 Merion Ave HAddonfield P-6347 Covers Del-Dis Col-Md-W N J-E Po
  Hawaii-R—Brenna & Browne 414 Hind Drive Aina Haina Covers Howoii

Haina Covers Howoii Kansos City Mo-R—Fred C. Somers 315 Grand Ave Bonk Bldg GR 1355 Covers Iowo-Neb-Kon-Mo Los Angeles-R—Jock Berman 1141 S La Cienga BRadshow 2-9138 Covers S Col Los Vegas & N M

- N M Memphis-R—Cartwright & Bean Co 1336 Madison Ave Phone 2-1914 Covers Alo-Ark-Miss-Tenn Minneapolis-R—Clark Gibb 1409 Hennepin Minne-apolis 3 Minn Covers N & S Dok & Minnesoto Lincoln 2550

- Lincoln 2550 New Orleans.R—Cartwright & Bean Co 821 Pontalba St AV 2264 Covers La New York.R—Willgold Electronic SIs Co Suite 7806 Empire Stote Bldg 350 Fifth Ave LOngocre 4-2525 Covers Met NY-E NJ New York.R—Roburn Agencies 39 Warren St DI 9-2260 Covers exports for US possessions and territories New Tork-K--Koourn Agenetes 37 Horst of 9-2260 Covers exports for US possessions ond territories
  Rochester-R--Wolfe-Marsey Sls 74 Pork Ave MO 6238 Covers NY outside Met area-Erie Po Son Carlos-R--David H Ross 534 El Camino Real LY 3-8224 Cavers N Col & Reno Nev Saattle-R--Fronk Wedel 3215 Western Ave GA-0222 Covers Wash-Ore-British Col-Alberta Tompo-R--Cortwright & Beon Co 3610 Kensington Ave 63-7364 Covers Florida
  University Heights Ohio-R--M Roth 13947 Cedar Rd YEllowstone 2-4262 Covers Ohio W Va Pa except Erie
  Baffalo Instrament 1780 Elmwood Ave Boffalo NY Bagule & Co H H 726 Stanton St Toledo 1 Dhio
  Bahl Optical 1009 Beech Ave Pittsborgh 12 Pa Balova Watch Co Suntse Highway Valley Stream N Y Bundy Tablag Ce 8109 E Jefferson Ave Detroit 14 Mitch

Bundy Tubing Co 8109 E Jefferson Ave Detroit 14 Mich Bunnell & Ce J H 81 Prospect Brooklyn 1 NY Burdlek Corp Milton Wise

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Burgess Battery Freeport III Burkem Lamination 811 Whittler St New York N Y Burke Electric 12th & Cranberry Erie Pa Burke & James 321 S Wabash ave Chicago 4 III Burling Instrument 16 River Rd Chatham N J
- Burlington Instrument 203 N 3 St Burlington Jowa

- Burlington Instrument 203 N 3 St Burlington Iowa Burndy Eng'g Norwalk Conn Frank Edmonds President Burnell & Co Inc Pacific Division 720 Mission St South Pasadena Calif PYramid 1-2841 Burnell & Co Inc 45 Warburton Ave Yonkers NY Phone: YOnkers 5-6800-01-02-03-04-05 Administration—Norman Burnell Chief Eng—Lewis G Burnell Purchaser—Vincent Triwedi Sales Mgr—Leo Schwartz Binghamton N Y-R—Holliday-Hathoway Inc 124 Chenogo St. Binghomton 3-1511 Mid New York Stote

- Stote Combridge Mass-R—Glenn M Hothaway Electronics
- Compringe Mass-R—Glenn M Hothaway Electranics Inc 228 Moin St ELliott 4-1751 covers N Eng Canoan Conn-R—Glenn M Hathaway Electronics Inc P O Box 797 covers Conn Chicago III-R—Caine Sales Co 3020 North Cicero Ave Spring 7-4022 covers III-Ind-Iowa-Wis-Mino Ave Minn
- Minn Dallas Tex-R—Edward F Aymond Ca 431B Maple Ave LOgan 5233 covers Ark-Lo-Tex-Okla Dayton O-R—Myron P Roebuck 9 Moss Ook Dr WAI-nit 1638 covers Dayton Ohio Fort Monmouth N J—Philip Treston 1114 Raymere Ave Wanamassa N J Phone Dunkirk 903054 Detroit Mich—Jim Morrow Sales 85 Louise Ave Highland Park Mich TOwnsend 8-0649 Covers Mich

- Anch
  Fort Myers Fla-R—Arthur H Lynch & Associates P
  O Box 466 5-6762 covers Florida
  New York City-R—Hollidoy-Hathaway Inc 270 Park
  Ave Suite 614-A MUrray Hill 8-5858 covers
  Met NY & NJ
  Pasadeno Calif-R—Gordon S Marshall Co 4B S Los
  Robles RYan 1-8345
  Philadelphio Po-R—Massey Assoc Inc 529 Broakhurst
  Ave Narberth Pa Mohawk 4-4200
  Rochester N Y-R—Holliday-Hathaway Inc 182 May-flower Dr MOnroe 3143 covers Upper New York
  State
  St Louis Mo—Engineering Services Compony 6635
  Delmar 81vd HArrison 7-6278 Covers Kas-So III-Mono
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Adv Mgr. Wing State Control 9387 E Keele Milwakkee 1 Wis President Wm S Parsons Sls Mgr P. E. C. Ceramics (Switch Var Resistors)— Walter Peck Sls Mgr.—(capacitors)—Dauglas E Thatcher Sls Mgr.—(capacitors)—Dauglas E Thatcher Assistant Sls Mgrs.— Variable Resistors—James A Honnan Switches—Wm J Fay Capacitors—John Lefeber Steotite Ceromics—Harvey Schmit Printed Electronics Circuits—W G Tuscany Export Mgr.—Paul 8 Lomboley Adv Mgr.—Wm S Sutherland Canada—Centrolab Canoda Ltd 804 Mt Pleosant Rood Toronta CALIFORNIA-Son Francisco—IDS-Logan Sales Ca 154 Eighth St Hemlock 1-5127 Beverly Hills-IS—Walter S Harmon Co 121 N Robertson Blvd 8Radshow 2-3321 CRestview 6-3027

COLORADO-Denver—IDS-McLoud & Roymond Ca 5528 E Colfox Ave Freemont 3067 GEORGIA-Atlanto—IDS-Frank Nickerson 901 Ber-

GEORGIA-Atlanto—IDS-Frank Nickerson 901 Bernino Ave NE Lamar 6878
 ILLINOIS-Chicago—80-IS-F L Tiegs and A A MacDonald 5308 W Diversey PAlisade 5-5366
 Chicago—IDS-Earl T Champion 6459 N Sheridan Road AMbassador 2-3565
 INDIANA-Indionopolis—IDS-L M DeVoe Co 4010 Washington Blvd Humboldt 1395
 IOWA-Cedar Ropids—IDS-Jerry Vrbik 621 Guoronty Bldg 4-0833
 MASSACHUSETTS-Needham—IDS-Stanley A harris Co 317 Chestnut St Needham 3-4780 3-4781
 MICHIGAN-Detroit—IDS-R C Merchant 4829 Woodward Ave TEmple 1-1677
 MINNESOTA-Minneapolis—IDS-Merrill K Franklin 336 E Franklin Geneva 1805
 MISSOURI-St Louis—IDS-Theodore B Lowell Box 21

TENNESSEE-Memphis—IDS-AI S Engelman 3205 Crump Ave 48-6263 (Listings continued on next page)

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sey

- Dayton-R—Alfred Crossley & Asscc 53 Park Ave OXmoor 3594 Detroit-R—S Sterling Co 15310 W McNichols Rd BRaadwoy 3-2900 High Point N C-R—Bivins & Caldwell Security Bonk Bldg High Point 3672 Hollywood Cal-R—Gerald B Miller Co 1550 N Highland Ave Hollywood 9-6305 Konsos City-R—Harris Hanson Co 7916 Paseo Ave Victor 0610 Pittsburgh-R—H E Ransford Co Grond 8ldg GRant 1-1880

- Pittsburgh-R—H E Ransford Co Grond 8ldg GKant 1-1880
  St Louis Mo-R—Harris Hanson Co 15506 Kings Highwoy SWeetbriar 5584
  St Paul 14 Minn-R—Alfred Crossley & Assoc 2388 University Ave Midway 5-4955
  Seattle-R—Gerald 8 Miller Co King County Airpart Room 101 LAnder 3320
  Syracuse-R—Land-C-Air Soles Co 600 James St SYracuse 7283
  Tuckahoe N Y-R—Land-C-Air Soles Co 42 Oak Ave TUckahoe 3-5500

Stracuse 7283 Tuckohoe N Y.-Land-C-Air Sales Co 42 Oak Ave TUckohoe 3-5500 Burton-Rogers 42 Carleton St Cambridge 42 Mass Bussmann Mfg Co 2536 W University St St Louis 7 Me Better Mfg 3150 Randolph Bellwood III B/W Controller Corp 2200 E Maple Rd Birmingham Ala Byron Jackson Co 2010 Lincoln Ave Pasedena Calif Cable Electric Produets Providence RI Cable Specialists 166 Palisade Bridgeport Conn Caddell-Burns 40 E 2 St Mineola Li NY Cadiliae Electronics 19 W 26 New York NY Cadie Industries Corp 19 Delaware Ave Endicott N Y Calbest Eng's 828 N Highland Hollywood 38 Calif Calif Electronics & Transformer Caledonia NY Calidone Corp 1041 N Sycamore Hollywood 38 Calif Calif Magnetic Control 7245 Atoli N Hollywood Calif Magnetic Control 7245 Atoli N Hollywood Calif Mig 15 Union Lawrence Mass Califone Corp 4543 Brazil St Los Angeles 39 Calif Caliri Mfg 15 Union Lawrence Mass Calresen Corp 4543 Brazil St Los Angeles 39 Calif Caltech Electronics 416 W 8 St Los Angeles 14 Calif Caltern Prods 1310 S Hobart Los Angeles 6 Calif Cal-Tronics Corp 11307 Hindry Ave Los Angeles 45 Calif Calvideo Tube 5232 W 104 Los Angeles 45 Calif Calvin Co 1105 Truman Rd Kansas City 6 Mo Cambridge Instrument Grand Cent Term New York 17 NY Cambridge Thermionic 445 Concord Cambridge 38 Mass Camburn Inc 32-40 57 Weedside 77 NY

336 E Franklin Ĝeneva 1805 MISSOURI-St Louis—IDS-Theodore B Lowell Box 21 Normandy EVergreen 5-7803 STerling 1-6290 NEW JERSEY-Jersey City—IS-D P Galasso 921 Ber-gen Ave JOurnal Square 4-7277 DIgby 4-1763 New Brunswick—IS-Jerome Bresson 75 Poterson St Charter 9-8787 NEW YORK-New York City—DS-James M Pickett 205 E 66th St TRofalgar 9-9520 Dewitt—IS-George P Marron The Kollusch 81dg Syracuse Phone 75-1686-7 Phelps & Fondo—DS-LeRoy & McGuire Inc R D #1 Phelps 3F-16 Phelps and Box 288 Fonda OHIO-Brecksville—IS-Allen Nace Co 7601 Parkview #1 Phelps 3F-16 Phelps and Box 288 Fonda
 OHIO-8recksville—IS-Allen Nace Co 7601 Parkview Road JAckson 6-7300
 Cleveland—DS-F A Daugherty & Co 1120 Croy-den Road Hillcrest 2-3311
 PENNSYLVANIA-Philodelphia—IDS-Except Phila 5 K Macdonold Inc 1531 Spruce St Kingsley 5-1205 Philodelphia—IS-Jerome Bresson—See New Jer-sev

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- Centralab Div (Continued) TEXAS-Dallas—IS-Robert E Nesbitt 1925 Cedar Springs Prospect 5824 Dallas—DS-J Earl Smith 505 N Ervay Rondolph
  - 2566 WASHINGTON-Seattle—IDS-J J Backer Co 2321 Second Ave MAin 8811 CANADA-Toronto—IS-P J Heenan Co 804 Mt Pleas-ant Road MA-2236
- ant Road MA-2236 Toronto—DS-R C Kahnert 1908 Avenue Road Rediern 7078 Vancouver—IDS-D E McLennan 2191 W First Avenue Sayview 2898 HAWAII-Honolulu—IDS-Brenna & Browne 211 Hona-Iulu Merchandise Mart Central Electronics 1247 W Belmont Ave Chicago 13 III Central Electronics 1247 W Belmont Ave Chicago 13 Cal

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  - Detroit 11—R T Holl 2832 E Grand Blvd TRinity 3-7500
    Kolamazoo—R H Eggericks 5006 Loke Forest Dr Phone 5-5686
    Los Angeles 14—A C Moynard 1709 W 8th St DUnkirk 7-5371
    Memphis—Cartwright & Bean 1336 Madison Ave Phone 2-1914
    Newtonville Mass—E P Cogswell 459 Wotertown St LaSalle 7-8400
    New York 10—G S Maynard Jr A R Kubitz 15 E 26th St MUrray Hill 3-9356
    Philadelphia 40—W C MocFodden 3701 N Brood St Rodcliffe 5-4775
    Hamilton Ont—R M Healy Gage Ave & Beach Rd Phone 4-5791
    Montreol Que—J R Johnston 502 University Tower Bldg Marquette B609
    Toronto 5 Ont—B H Morash—W C Miller 265A Dovenport Rd Princess 2157

Cinch-Janes Sis Div Cinch Mfg 1026 S Homan Chicago III President-Lester W Torr VP & Gen Mgr-E J Pool Sis Mgr-S Pfannstiehl VP & Dev Engr-S M DelCamp Vice Pres-8 F Butis Credit Mgr-E L Hvale Purch Agt-T A Hopkins Adv Mgr-D T Campbell Export Mgr-Carrington H Stone Traffic Mgr-T A Hopkins Sis Mgr H B Jones Div-C W Nelson Plastics Engr-G F Mangin Atlanta-Cartwright & Bean 4030 Club Drive NE CHerokee 2483 Boston-Ray Perron & Co 1870 Centre St FAirview 4-1008

Cincinnati-IDS—Danald C Bruce 6225 Joyce Lane John O Olsen CoJ JEfferson 3998 Cleveland-IDS—John O Olsen Co 16201 Shaker Blvd WYoming 1-2624 Dallas-IDS—J Y Schoonmoker Co 2011 Cedar Springs

STerling 3335 Denver-IDS—W H Connors Co 375 Birch St DExter 3-7628

Denver-IDS---W H Connors Co 375 Birch St DExter 3-7628
Detroit-IS---H E Walton Co P O Box 5 Kensing-ton Sta TUxedo 1-5858-9
Detroit-DS---Robert Milsk Co 19763 James Couzens Highway Broadway 3-2930 3-0465
Fort Wayne-IS---E S Needler 5302 Fairfield Ave HArrison 9726
Kansas City Mo-DS---Arthur K Elliott Co P O Box 8493 8305 Cherokee Lane
Kansos City Mo-DS---Merker-Young-Forristol Inc Zell S Myers 4538 Main Street JEfferson 7221
Los Angeles-IDS---Perlmuth-Calmon & Assoc 2419 South Grand Ave RIchmond 7-4321
Marion Ind-DS----Victor Musser P O Box 331 608 West Secand St WOrth 2-7874
Minneopolis-IDS---A J Warner Co 5022 29th Avenue S PArkway 4-1895
New York-IS---Leon L Adelman Co 25 Chiltenden Avenue WOrth 2-5308 TOmpkins 7-1145
New York-IS---Sanuel Bialek 205 East 42 St MUr-roy Hill 4-1655 4-1927
New York Clarostot Office--George T Higgins 141 Broodwoy Room 1801 WOrth 2-5308
Narberth Pa-IS---Clorence W Henderson 400 Gilpin Road
Philodelphia-DS---Leban & Graham 1412 Manoa

roy Hill 4-1655 4-1927 New York Clarostot Office-George T Higgins 141 Broodwoy Room 1801 WOrth 2-5308 Norberth Po.IS-Clorence W Henderson 400 Gilpin Rood Philodelphic-DS-Lebon & Graham 1412 Manaa Rood Midway 9-2045 9-9822 Pittsburgh-IDS-Lowry-Dietrich Co 1404 Swantek St WAInut 1-2959 St Louis-IDS-Myers-Young-Forristol Inc Ed Young B147 Delmor Blvd PArk View 5-7701 Sentle-IDS-Samuel N Stroum Co 1612 Broodwoy FRankin 7515 Silver Spring Md-IDS-Charles Lienau & Co 9427 Georgia Ave JUniper 7-5888 South San Franctsco-IDS-Bill Kolons & Co 101 San Felipe Ave YUkon 6-5510 JUno 3-2273 Syrocuse-IDS-Leonid D Allen, Inc 2401 South State St P O Box 88 Phone 4-4195 Toronto-IDS-Canadian Marcani Co Lid 830 Boyview Ave MAyfair 0401 Hovano Cuba-IDS-William Rodriguez P O Box 1976 SAn Ignocia 313 A-4521 Export-ID-M Simons & Son Co Inc 25 Warren Street BArclay 7-5513 ''Manufactured under license in Great Britain by A B Metal Products Lid 17 Stratton St London W 1 England concessionories for the British Commonwealth except Conada' (Clay Carl QG Juniper San Gabriel Calif Claus Catlery Co 223 N Prospect St Fremont Ohio Claer Beam Antenna 21341 Rosee Canega Park Calif Clear Watch Agency 521 S Ave New York 17 NV Cleao Div Reed Roller Bit 5225 Clinton Moston Texas Clegg Labs 142 S Livingston Av Livingston N J Clement Mrig 6650 S Narrangansett Chiago 58 III Cleveland Container 6201 Barberton Cleveland 20 Nhi Cleveland Metal Specialitis 1783 E 21 Cleveland 3 Ohio Cleveland Mitel Specialitis 1783 E 21 Cleveland 3 Ohio Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Wire Cloth 3573 E 78 St Cleveland 50 Hi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Mitel Specialitis 1783 E 21 Cleveland 0 Shi Cleveland Broadway Chicaga 60 Hi Cleveland Broadway Chicaga Hi Cleveland Contastione 35 N 2 KH Vernon NY

Columbia Technical 5 E 57 New York 22 NY Columbia Wire & Supply 2850 Irving Park Chicago III Columbian Carbon Co 601 Cass St Trenton N J Columbus Process State & Mapleton Sts Columbus Ind Columbus Research & Devel Columbus Nebr Colvin Labs 12 Court St Morristown NJ

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

- Boston—Roy 4-1008
- 4-1008 Charlotte---J M Cartwright & Son PO Box 9203 Plaza Stotion Chicago---B F Becker Covers Wisc---P G Tomy Covers Iowa-Minn NEvada 2-2000 Clevelond---Scott & Steffon Inc 1836 Euclid Ave MAin 1-12B6 Detroit--Howard B Jones Div 2832 E Grond Blvd TRinity 2-9500
- TRinity 3-9500 Kalamazao-H B Jones Div 5006 Loke Forest Dr Phone 5-5686

- Phone 5-5686 Los Angeles—Howard B Jones Div 1709 W Eighth St DUnkirk 7-5371 Memphis—Cortwright & Bean 1336 Modison Ave Phone 2-1914 New York—M A Sachs 15 E 26th St MUrray Hill 3,9954

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larostat Mfg Co 1 Washington St Dover NH Pres—Victor Mucher Exec VP—George J Mucher VP SIs—I Jomes Youngblood Sis Mgr Dist Div—Fran J Chamberlain Purch Agt—Emil O Schramm Credit Mgr—Al Wilkens Adv. Mgr—Austin C Lescarboura Atlonta-IDS—James Millar Asso 1036 Peachtree St NE ELgin 0919 Roston-IDS—Henry P Seael Co Inc 131 Newbury St

NE ELgin 0919 Boston-IDS—Henry P Segel Co Inc 131 Newbury St KEnmore 6-3012 6-6333 6-9755 Buffalo-IDS—Leonard D Allen Inc Robert Bush 128 Knox Ave WOodlown 1500 Chicago-DS—Bruce Cumming & Asso 6029 W 8el-mont Ave MErrimoc 7-3770 Chicago-IS—Henry Sarkis 6560 N Sheridon Rd HOILycourt 5-1481 Cincinnati-IDS—John O Olsen Co Williom F Needles 4016 Diehl Ave SYcamore 1297

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  Los Angeles-BOISGV—George H Osborn Rm 208 4433 S Crenshaw Blvd AXminister 5258 Covers Ariz-S Calif-Nev
  Los Angeles-DS—R E Osborne 1044 S Parkview DUnkirk 81039 Covers S Calif
  Merriam Kan-IDS—Koenig Soles 6359 Antioch Ave HEdrick 3166 Covers Iowo-Kan-Mo-Eastern Neb Mexico-IDS—Kenneth H Jones Apartado 2250 Rio Elba 32-104 Covers Mexico
  Newark-DS—Art Cerf & Co 744 Broad St Mitchell 2-6734 Covers N N J- N Y City & State
  Palisades Park N J-BOISGV—D N Sawtelle #6 State Highway #5 MOrsemere 65100 Covers Metropolitan New York
  Paul-IDS—Edward Hoffman 1641 Scheffer Ave Covers Minn-N Dak-S Dak-Western Wisconsin EMerson 1979
  San Carlos-DS—David H Ross Co 534 El Camino Real LYtell 3-8224 Covers N Calif-Nev
  Seattle-IDS—Ferd Eaton 4972 Dundos St West BElmont 1-1712 Covers Canada

- TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

Wynnewood Pa-DS-L D Lowery Inc 50 E Wynne-wood Rd PO Box 255 Midway 2-9100 Covers DC-Del-E Po-Vo-S N J-Md Ernst & Affilates W A 825 Hayos W Raeine Wise Erwood Ine 1770 W Berteau Chicago 13 III Esc Mf6 Ce Box 344 Summit III Espey Mfg 528 E 72 New York 21 MY Esquire Radie Corp 62-01 15 Ave Brooklyn 19 N Y Esser Mariee H 113 N Water St Rachester NY Essex Electronics 7303 Atoli N Hollywood Calif Essex Wire 1601 Wall Ft Wayne 6 Ind Ess Instrument 96 S Washington Bergendeid NJ Ess Tee Ine Box 397 Smithtown N Y Esterline-Angus PO Box 596 Indianapolis 6 Ind Ethed Prods 3901 Queens Bivd Long Island City 1 NY Etraco Mfg Woods Church Rd Flomington NJ Euclid Electric Madison Ohio Eureka X-Ray Tube 3250 N Kilpatrick Chicago 41 III Exeetione Ine 435 Ave Columbus Ohio Evertast Wire & Cable Haverstraw NY Exact Weight Scale 944 W 5 Ave Columbus Ohio Exeetione Ine 4323 W El Segunde Hawtherne Calif Factory Enterprises Ine 3431 Butler St Pittsburgh 1 Pa Everlast Wire & Cable Haverstraw NY Exact Weight Scale 944 W 5 Ave Columbus Ohio Executore Ine 415 Lexington New York 17 NY Extruders Ine 3232 W El Segundo Hawtharne Calif Factory Enterprises Ine 3431 Butler St Pittsburgh 1 Pa Fada Radie & Electric 525 Main St Belleville NJ Fahrstack Electric 46-44 11 St Long Island City NY Fairchalks Wire Co 2287 Hollers Ave New York N Y Fairchild Camera & Instrument Corp Commercial Camera Div Robbins Lane Sysoset Li NY Fairchild Camera & Instrument Corp Potentiometer Div 225 Park Ave Hicksville Li NY Phone Hickville 3-4500 Monoger—H Erwin Hale Sis Mgr—Thomos H Bay Lo. Angeles Plant—Fairchild Camero & Inst Corp Washington Sk m 1057 Fairchild Engine & Airplane Corp Guided Missiles Div Wyandanch N Y Fairchild Recording Eauj Whitestone 57 NY Fairchild Recording Eauj Whitestone 70 N Y Farreiloy Co 1245 N 26 St Phila 21 Pa Farmer Mfg 312 N Walnut St Youngstown 2 Ohio Fairstoof Metallurgical 2200 Sheridan Rd N Chleago III Farmer Electric 21 Mossfield Rd Waban 68 Mass Farnam Mfg Co P 0 Box 5098 Asheville N C Farnsworth Electronic Co P0 Box 810 Ft Wayne Ind Farrand Optical 4401 Bronx Bivd Bronx 70 N Y Farreiloy Co 1245 N 26 St Phila 21. Pa Farringtor Mig Co 76 Atherton St Boston Mass Fast & Co John E 3143 N Grawford Chleago 41 III Feader Ine J W 2016 Perrysville Pittsburgh Pa Federal Cash Register P 0 Box 2265 Kansas Citf Federal Electric Fods 50 Parls Newark 5 NJ Federal Electric Prods 50 Parls Newark 5 NJ Federal Straps 211 Steubers St Brocking 50 NY Federal Electronic JJ Providers 7 Kingeles St Briffaio N Y Federal Straps 211 Steuber St Brocking 50 NY Federal Electronic JJ Kords Acc Albeston Bi Infederal Straps 211 Steuber St Brocking 50 NY Feder

- Atlanta-IDS—Cartwirght & Bean 3230 Peachtree Rd NE EXchange 2273 Covers Alobamo-Florida-Georgia-Mississippi-North Carolina-South Caro-lina-Tennessee Atlantic City-IDS—Victor W Williams 5 Circle Drive
- Margate ATlantic City 2-7859 Covers Maryland-District of Columbia-Delaware (Counties of Kent and Sussex)-Virginia
- Baston-DS—Abbett & Hustis 1105 Commonwealth Avenue Algonquin 4-B100 Covers Maine-New Hampshire-Vermont-Mossachusetts-Rhade Island-
- Hampshire-Vermont-Massacrive-Connecticut Boston-IS—Robert W Gray Inc 572 Washington Street Wellesley 81 WEllesley 5-5296 5-0191 Covers Connecticut (except Counties of Fair-field, New Haven and Middlesex) Maine-Massa-chusetts-New Hampshire-Rhode Island-Vermont (Listings continued on next page)

### Federal Telephone (Continued)

- Burral Frephone (Continued) Buffolo-IDS—R W Mitscher 487 Ellicott Square Building WAshington 2517 Covers New York (except Caunties of Bronx, Kings, Nossau, New York, Queens, Richmond, Rockland, Westches-ter Suffalti York
- Building WAshington 2517 Covers New York (except Caunties of Bronx, Kings, Nossau, New York, Queens, Richmond, Rockland, Westches-ter, Suffolk)
  Charlatte-North Carolina-IDS—Cartwright & Bean PO Box 9203 FRonklin 6-8648 Covers Alabamo-Florida Georgio Mississippi North Carolina-South Carolina-Tennessee
  Chicago-IDS—Leroy W Beier Company 6518 West North Avenue BErkshire 7-2420 Covers Illinois-Wisconsin (South of an East-West Line through La Crosse but not including the City of Lo Crosse and East of o North-Sauth Line through Iranwood, Michigan)
  Dallas-IDS—Campion Sales Campany\* 208 West Avery St RAndalph 6620 Covers Oklahoma-Arkonsas-Louisiona and Texas (except El Paso County)
  \*Dayton-IDS—Neol Bear Corp 1110 Brood Blvd OXmoor 3041 Covers Ohio-West Virginia-Pennsylvania (that portion of the State lying West of but not including the Counties of Tiogo, Lycaming, Northumberland, Douphin and York)
  Denver-IDS—Hyde Sales Company 3250 South Dexter Strates Skyline 6:2151 Covers Oklandon-

- Tioga, Lycaming, Northumberland, Douphin and York)
  Denver-IDS—Hyde Sales Company 3250 Sauth Dexter Street SKyline 6-7151 Covers Colorado-Wyoming-Utah-Montana (Eostem half of the State to the boundaries of Hill, Chateau, Judieth Basin, Wheatland, Sweetgrass and Park Counties) Idaho (Southern half of State including the counties of Washingtan, Gem, Boise, Custer, Clark and Fremont)-New Mexico-Texas (El Paso County)
  Detroit-IDS—K C Burcaw and Company 22128 Grand River Avenue KEnwood 3-7700 Covers Michigan
  Indianapolis-IDS—Quinn Cunningham & Associotes 6101 College Avenue GLendale 3222, 0225 Covers Indiana-Kentucky
  Kansos City-IDS—F C Somers 18th ond Grand Ave-nue Office GRand 1355 Covers Iowa-Nebraska-Missouri-Kansas
  Los Angeles-IDS—J W Marsh Company 4216 W Jef-ferson Bivd REpublic 2-0145 Covers Colifornia-Nevado-Arizona

- Los Angeles-IDS-J W Marsh Company 4216 W Jetters ferson Bivd REpublic 2-0145 Covers California-Nevado-Arizona
  Memphis-IDS-Cattwright and Bean 1336 Madison Avenue MEmphis 2-1914 Covers Alabamo-Florida Georgia Mississippi North Carolina South Carolina-Tennessee
  Minneapolis-IDS-H. M., Richardson\* 9 East 22nd Street GEneva 4078 Covers Minnesoto-North Dakota-South Dakota-Wisconsin (the Section North of an East-West Line through LaCrosse including the City of LaCrosse ond West to a North-South Line to Ironwood Michigan)
  Philadelphia-IDS-J R Benge Technical Representation 25 S Eoston Road Suite 200 Glenside Pa Umer 1325 and 1336 Covers Delaware (New Castle Caunty)-New Jersey (Radio Carp of America at Princeton the City of Phillipsburg the City of Trenton and all area south of the City of Trenton), Pennsylvania (all the area West to and including the Counties of Tiogo, Lycoming, Northumberland, Dauphin, and York)
  Philadelphia-IS-J R Benge Technical Representation 25 South Covers Delaware (New Castle County)-New Jersey Radio Carp of America at Princeton the City of Phillipsburg the City of Trenton, Pennsylvania (all the area West to and including the Counties of Tiogo, Lycoming, Northumberland, Dauphin, and York)
  Philadelphia-IS-J R Benge Technical Representation 26 South Ecotom Pand Suite 200 Glenside
- ing, Northumberland, Dauphin, and York)
  Philadelphia-IS—J R Benge Technical Representation 25 South Easton Road Suite 200 Glenside Pa TUrner 1325 and 1326 Cavers Maryland-District of Columbia and Delaware
  Phoenix-IDS—J W Marsh Company 1011 West Whitton AMherst 6-9124 Barney Schlecht Covers California-Nevada-Arizona
  Ridgefield-Conn-DS—Abbett & Hustis 52 Main St Cavers Cannecticut-Maine-Massochusetts-New Hompshire-Rhode Islond-Vermont
  Son Froncisco-IDS—J W Marsh Compony 1258 Fitzgerald Avenue VAlencia 4-6714 Cavers Californio-Nevado-Arizona
  Sonta Fe-NM-DS—Hyde Soles Co 206 Lugor De Mante Visto Santo Fe 3-7884 Covers New Mexica-Texos (El Pasa County)-Utoh-Wyaming
  Seattle-IDS—Fred H. Haight Company 3212 East Lake Avenue Caver

- Monte Vista SAnta Fe 3-7884 Covers New Mex-ica-Texos (El Pasa County)-Utoh-Wyaming Seattle-IDS--Fred H. Haight Company 3212 East Lake Avenue EAst 1818 Covers Oregon-Wosh-ington-Idaha (Northern half of the State in-cluding Counties of Adams, Walley, Lemhi)-Montana (Western half of State including Coun-ties of Hill, Choteau, Judieth Basin, Wheat Iand, Sweetgross, and Park) Tampa-IDS--Cortwright & Bean 3610 Kensington Ave Covers Alobomo-Florida-Georgia-Missispipi-North Carolina-South Carolino-Tennessee Westfield N J-IDS--H G Richter 467 Hillside Avenue Westfield 2-4615 and Mingins Sales 107-37 Tist Avenue Forest Hills Long Island New York BOulevard 3-1643 Covers New York City (in-cluding Caunties of Nossau, Rockland, West-chester, and Suffolk)-New Jersey (except Radio Carp of America at Princetan, the City of Phil-lipsburg, Trenton and the area South of Tren-ton)-Connecticut (Counties of Fairfield, New Hoven, and Middlesex) West Hartford-Conn-IS--Robert W, Gtoy Inc 10 N Main St ADams 3-5629 Covers Connecticut (ex-cept Counties of Fairfield, New Haven and Middlesex)-Maine-Massachusetts-New Hompshire-Rhode Island-Vermont West Richfield Ohio-IDS--Neal Bear Corporation\*
- Middlesex)-Maine-Massachusetts-New Hompshite-Rhode Island-Vermont West Richfield Ohio-IDS—Neal Bear Corporation\* 3435 Streetsboro Rd WEst Richfield 100 Covers Ohio, West Virginia, Pennsylvania (Ihat portion of the State lying West of but not including the Counties of Tioga, Lycoming, Northumber-land, Douphin, and York) \*Selenium Rectifiers and Cooxial Cable Only

Federal Tool Eng'g 1384 Pompton Ave Cedar Grove N J Federal Tool & Mfg 3600 Ala Ave Minneapolis Minn Federated Metals 120 Bdwy New York 5 NY Feedback Controls inc 1332 N Henry Alexandria Va Federall Corp 125 Barclay New York 7 NY Felier Engs 8026 N Monticelle Ave Skokle III Felier Engs 8026 N Monticelle Ave Skokle III Felsen & Sons Inc P 522 W 45 St New York 36 NY Felker Mfg 128 Border Torrance Calif Felsenthal & Sons 4100 W Grand Ave Chicage 51 III Felters Co 210 South St Boston 11 Mass Felt & Tarrant Dictation Mevh Div Algonquin III Femen Irwin Pa Femco inc Irwin Pa Femeo Inc Irwin Pa Fenton Co 15 Moire St New York 4 N Y Fenwal Inc 290 Pleasant St Ashland Mass Ferner Co RY 110 Pleasant St Malden 48 Mass Ferrart Electric 30 Rockefeller PI New York 20 Ferrara Inc 8106 W 9 Mile Rd Oak Park 37 Mich Ferricore Inc 16 School St Yonkers NY Ferris Instrument 110 Cornelia Boonton NJ Ferro Electric 2020 Kirkland III 20 NY Ferro Electric Proos Kirkian III Ferrorprint 7070 Santa Monica Los Angeles Calif Ferroxcube Corp 233 E Bridge St Saugerties NY Fidelitone Inc 6415 Ravenswood Ave Chicago 26 III Fidelity Ampliner 703 W Willow Chicago 14 III Fidelity Chem Proots 470 Frelinghnysen Newark 5 N Fidelity Electric Co 332 N Arch St Lancaster Pa 5 NJ Fidelity Electric Co 332 N Arch St Lancaster Pa Fidelity Electronics 4 Green St Newark 2 NJ Fidelity Products 2 Lackawanna Pl S Orange NJ Field Electrical Instr 8 N Manhelm Blvd New Paltz NY Fielden Instraments 2920 N 4 St Phila 33 Pa Film Arts Prods 1032 N 6 St Milwauke 3 Wise Film Associates 4600 S Dixle Hwy Dayton 9 Dhio Film Capacitors 3400 Park Ave New York 56 N Y Film Arts Prods 1032 N 6 St Milwaukee 3 Wise Film Associates 4600 S Dixie Hwy Dayton 9 Dhio Film Capacitors 3400 Park Ave New York 56 N Y Filmwood Corp Merchantville 8 N J Filtors Ine 30 Sagamore HII Dr Pt Washington N Y Filtron Co 131-15 Fowler Ave Hew Fleshing 1 I N Y Fink Electronics 518 E 95th St Chicago 19 Hi Finn & Co T R 200 Central Ave Hawthorne N J Finney Co 4612 St Clair Ave Cleveland 3 Ohio Fischer & Cu R A 517 Commercial Glendale 3 Calif Fischer & Cu R A 517 Commercial Glendale 3 Calif Fischer & Co Bar 1000 N Division St Peekskill N Y Fisher Eng'g Inc 2060 H S 24 Huntinston Ind Fisher Co Oscar 1000 N Division St Peekskill N Y Fisher Eng'g Inc 2060 H S 24 Huntinston Ind Fisher Co Oscar 1000 N Division St Peekskill N Y Fisher Research 1961 University Palo Alto Calif Fish-Schurman 70 Portman New Rochelle NY Five Star Co Plantsville Conn FKB Opticon Co 1738 E Calvert South Bend Ind Flader Inc Fredric 583 Division N Tonawanda NY Flahan Co 7517 Pelham Dr Cleveland 29 Ohio Fleetwood Corp 1037 Custer Dr Toledo 12 Ohio Flett Lab 3711 Marshail Rd Drexel Hill Pa Flexast Co 100 Park Ave New York 17 N Y Flexible Tubing Guilford Conn Flexo Int' Co 3245 W Lake St Chicago 24 HI Flexroek Co 3509 Filbert St Philadelphia 1 Pa Flight Research P0 80x 1-F Richmond Va Filppen Mfg 132 S Main Orange Calif Flock Process 375 Main Ave Norwalk Conn Florman & Babb 70 W 45 St New York 36 N Y Flusk Mfg John 1111 W Nickerson St Saattle 99 Wash Flush Wail Radio 1012 Cleveland Clearwater Fla F & M Sales 1054 Cahnense Biv Hollywood 38 Calif Fonotalk Corp 11 S LaSalle Chicago 111 Foote Mineral Co 18 W Chelton Philadelphia Pa Forbes & Wagner 345 Central Sliver Creek NY Ford Instrument 31-00 Thomson Long Island City 1 NY Ford Radie & Mica 536 G3 St Brooklyn 20 NY Fored Radie & Mica 536 G3 St Brooklyn 20 NY Fored Relectic 27 Park PI New York 69 NY Ford Radie & Mica 536 G3 St Brooklyn 20 NY Fored Radie & Mica 536 G3 St Brooklyn 20 NY Fored Radie & Mica 536 G3 St Brooklyn 20 NY Fored Radie & Mica 536 G3 St Brooklyn 20 NY Fored Radie & Mica Forest Electric 7216 Circle Ave Forest Park III Formatic Co 178 Bridge St Naugatuck Conn Formica Co 4614 Spring Grove Cincinnati 32 Ohio Forsberg Mfg Co 125 Seaview Ave Bridgepert 1 Conn Forter-Teichmann Ciark Bidg Pittsburgh Pa Fort Wayne Metals 3211 MacArthur Ft Wayne Ind Forty-Niner Co 5245 Grand River Detroit 8 Mich Foster Transformer 3820 Colerain Ave Cincinnati 23 0 Fostoria Pressed Steel Fostoria Ohio Foto-Video Labs PO Box 296 Clifton N J Foxboro Co., 38 Neponset Foxboro Mass France Mfg Co 10325 Bersa Rd Cleveland 2 Ohio Francon Mfg 161 Washington New York NY Frankel Connector 27 Vestry St New York NY Franklin Control 1975 S Allis Milwaukee 7 Wise Franklin Electronics 415 W Pike St Philadelphia Pa Franklin Electronics 415 W Pike St Philadelphia Pa Franklin Electronics 415 W Pike St Philadelphia Pa Fraser Devel Lab Box 73 Huntinston Del Frazer Engg 1965 Peck Muskegon Mich Frederick Research 4630 Montgomery Bethesda Md Freed Electronics 200 Hudson New York 13 NY Freed Transformer 1718 Weirfield Brookiyn 27 NY Freeland Products 700 Dryades New Orleans 12 La Freeway Washer & Stamping P0 Box 1756 Cleveland 5 0 Frenchtown Porcelain 8th & Harrison Frenchtown NJ Freedomery Standards P0 Box 504 Asbury Park NJ Freto Ine 406 N Craig St Pittsburgh 13 Pa Pres—Joseph V Fisher Vice Pres—Frank H Robinson 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—Spectrum—Customliner—V-2—V-4—Mi Ray—Bo-Ti—Strata-Ray—Saucerline and Tee Fretline

- REPRESENTATIVES
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- waii Canada---Mike Rosen 17 Claxton Blvd Taranto On-torio Canada Territary---Canada Florida---R J Gibbons Elec Sales Co 3051 North West 4th St Miami Fla Territory---Flarida Missouri---Ward Paden Co 80x 569 Jefferson City 1 Mo 51023 Territory---Missouri-Kansas-Iowa &
- Nebraska York-H/V Associates 136 Liberty St NY 6 NY WOrth 4-6193 Territary-New York-N Jersey down to Trenton New

- down to Trenton Pennsylvania—Herman Lewis 1622 68th Ave Phila-delphia Pa Llvingston 8-1281 or 8-8487 Terri-tory—Dela-Md-N Jersey & Eastern Pa Pittsburgh—Ed Lips 1565 McForland Raad P O 8ox 8046 Pittsburgh Po Fieldbrook 1-5100 Terri-tory—Chio-W Ya-Western Pa except Metropoli-tan Pah tory—Oh tan Pgh

fory-Ohio-W Va-Western Pa except Metropolition Pgh
Texas-Bee Sales Co 4200 Sherry Lane Dallas Texas Forest 87034 Territory-Texas-La-Okla & Ark
Washington-M K Widdekind 216 First Ave N Seattle Wash Elliott 6981 Territory-Idoho-Montana-Oregon & Washington
Fretz Gross Co 22 & Sedgley Ave Philadelphia Pa
Friez Instrument Div Bendix Avlation Baltimore 4 Md
Fr Machine Works 26-12 Borough P1 Woodside 77 NY
Frost & Co L H 904 36 St S E Grand Radids 8 Mich
Fryling Electric Products Holly Springs Miss
Fryling Mfg Co 639 W 12 St Erie Pa
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Furst Electronics 3322 W Lawrence Chicago 25 111 Furst Electronics 3322 W Lawrence Chicago 25 III Fusite Corp 6000 Fernview Cincinnati 13 Ohio Fuze-On Prods 15 N Hickory Arlington Hgts III

Gables Engg 247 Greco Coral Gables Ha Gabriel Electronics Div Gabriel Co Norwood Mass Gadgets ine 3629 N Dixie Dr Dayton 5 Ohlo Gaertner Scientific 1247 Wrightwood Chicago III Gahagan Inc 11 W 4 St Bethleham Pa Galbraith & Son 450 6 Ave New York 11 NY Gailerup D W 5437 N Santa Monica Milwaukee Wise Galvanic Prods 110 E Hawthorne Valley Stream NY Garvanic Proof 110 E Hawknorne valley Stream NY Gamewell Co Newton Upper Falls 64 Mass Ganz Co W J 40 E 49 St New York 17 N Y Garde Mfg Co 588 Eddy Providence 3 R1 Atlanta Ga-D B Buchonan 5130 Powers Ferry Road N W

- Cleveland O-George L Herrick Co 15326 Lorain Avenue
- Los Angeles 7 Calif-Perlmuth-Colman & Associotes 2419 South Grand Avenue Philadelphia Pa—D G Quinlan Campany 4700 Frankford Avenue
- Phoenix Arizona—H Geo Shefler Campany P O Box 1587
- 1587 Chicago 26 III—Arthur J Ellis Company 1607 Howard Street Webster Groves 19 Missouri—Richard H Faulkner 896 Woodbine Drive Brooklyn N Y—Anthony P Mauceli 81 Irving Avenue New Hartford N Y—Arthur F Schultz 96 Oxford

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- San From Street ment Company 1156 Yonge Street Francisco 3 Calif—Wm Belfer 926 Howard

Street Houston 2 Texas—Jim and Dave Pockard P O Bax 15234 Gardner Lab Henry A Bethesda 14 Md Gar Elee Instr 92-15 172 St Jamaica 33 N Y Garlog Co 34-40 79 St Jackson Heights 72 N Y Garlock Packing 402 E Main Palmyra NY Gardo Radio 70 Washington Brookyn 1 NY Garead Sales Cara 164 Deans St New York 13 NY Garrard Sales Corp 164 Duane St New York 13 NY Garrett Co G K D & Tloga Sts Phila Pa Gasket Engg 2444 Charlotte Kansas City Mo Gaston Power Tools 14829 Loomis St Harvey III Gates & Co G W Franklin Sq L I NY Gates Radio 123 Hampshire Quincy III Gatti Inc Aurele M 524 E Wash St Trenton NJ Gavitt Wire & Cable Co Brookfield Mass Gaydon Co 561 Hillgrove Ave LaGrange III Gear Specialties 2635 W Medill Chicago 47 III Gear Specialties 2635 W Medili Chicago 47 III Gee-Lar Mfg 819 Eim Rockford III Gem Electric Mfg 237 37 St Brooklyn 32 N Y General Aniline & Film Johnson City NY General Cable Corp 420 Lexington New York 17 NY General Cement Mfg 919 Taylor Rockford III General Ceramics Corp Crows Mili Rd Keasbey NJ General Chem Div Allied Chem 40 Rector New York 6 NY General Communications 681 Beacon St Boston 15 Mass Conneral Communications 681 Beacon St Boston 15 Mass General Communications Box 169 Ft Atkinson Wise General Control 801 Allen Glendale Calif General Control 1200 Soldiers Field Rd Boston 34 Mass

## ALPHABETICAL LISTING of MANUFACTURERS with LOCALIZER INDEX

General Crystal Co PO Box 9 Burlington Wisc General Cybernetics 1751 N Coronado Los Angeles Calif General Devices Washington Rd Princeton NJ General Elec Co Com Mat 1285 Boston Bridgeport 2 Conn General Electric Co Chemical Div Pittsfield Mass General Electric Carboloy Div Box 237 RPA Detroit 32 General Electric Carboloy Div Box 237 RPA Detroit 32 General Electric Co Tube Div 1 River Rd Schenectady NY General Electric Co Tube Div 1 River Rd Schenectady NY General Electric Co Electronics Park Syracuse NY Broadcost Equipment Div:

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Houston-H W Granberry 1100 E Holcombe Boule-

Houston—H W Gronberry 1100 E Holcombe Boule-vard JUstin 0657
Los Angeles—F R Walker 3460 Wilshire Baulevard Room 618 DUnkirk 5-2391
New York—W R Chapin 420 Lexington Avenue Plaza 1-1311
Philadelphia—J W I Cody Mgr Government Soles 1405 Locust Street PEnnypacker 5-9000
San Francisco—C T Hoist Jr 235 Montgomery Street DOuglas 2-3740
Seattle—V H Russell 705 Second Avenue Room 1615 SEneca 8-300

Douglas 2-3740 Seattle—V H Russell 705 Second Avenue Room 1615 SEnca 8-300 St Louis—R E Lauterbach 4227 Lindell 8oulevard JEfferson 5-8873 Syracuse—W G Broughtan Onondaga County Sav-ings Bank Building 2-3308 Washington D C—L F Page 777 14th Street NW EXecutive 3-3600 Broadcast Field Service Syracuse—Roy Duncan Electronics Park 76-4411 Night phone 76-3175 General Electric Industrial Electronics Building 7 Room 113 Syracuse 76-411 I. TELEVISION RECEIVER TEST EQUIPMENT— Oscilloscope, sweep, marker and color alignment generators—for color and monochrome TV re-ceiver testing by laboratories and service dealers R P White Ext 2734 2. INDUSTRIAL TELEVISION—Complete line of color and monochrome cameras, large color projectors, and associated closed-circuit tele-vision equipment for all industrial, hospital and reloted applications R S Yeandle Ext 2727 General Electric Semiconductor Products Complete line of Germonium Diodes-Rectifiers-Tran-sistors Manager-Marketing—J H Sweeney

- sistors Manager-Marketing—J H Sweeney Manager-Sales—R H Rudolph District Sales Managers Clifton New Jersey—200 Main Avenue F J Van-poppelen Jr New England States J B Jolly Metropalitan New York Area-C J Goadman Atlantic Coast States Chicago Illinois—3800 North Milwaukee Avenue A C Oeinck-East Central District H F Hodsdan Central District V J Huntoon-West Central Dis-trict
- Irich Los Angeles—11340 West Olympic Boulevard W O Hoverman Western District General Electric Co Lamp Div Nela Pk Cleveland 12 Ohio General Electric X-Ray Div 4855 Electric Milwaukee

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Dallas Texas—4212 S Buckner Blvd—Continental Electronics General Products Union Springs NY

General Radio Co 275 Mass Ave Cambridge 39 Mass Chairman of Baard—H B President—E H Locke V P Engr—D 8 Sinclair -H B Richmand

General Radio Co 275 Mass Ave Cambridge 39 Mass Choirmon of Boord—H B Richmond President—E H Locke V P Engr—D B Sincloir V P Monufocturing—C C Corey Troos—F L Tucker V P SIs—A E Thiessen Soles Mgr—H T Smith Publicity Dir—C E Worthen Advs Mgr—J M Clayton Service Mgr—H H Dowes Dir of Purchoses—C E Kelly Chicogo-BO—K A Adoms & W M. Inde 920 S Michigon Ave WAbosh 2:3820 Covers Ohio-Ind-Mich-III-Wisc-Iowo-Minn-Mo Los Angeles-BO—F Ireland & J G Hussey 1000 N Seward St HOllywood 9-6201 Covers Col-Ore-Wash-Ariz-N Mex-Nev New England-80 R B Richmond 275 Massochusetts Ave Cambridge Moss TRobridge 6-4400 Cavers New England-80 R B Richmond 275 Massochusetts St WOrth 4-2722 Covers Greater N Y {incl Westhester Co & L I) Conn-NJ-Penn-Del Washington D C-BO—W R Saylor 8055 13th St Silver Spring Md JUniper 5-1088 Covers Md-DC-W Vo-Vo-NC-SC-Ga-Flo General Railway Signal 801 West Ave Rochester 2 NY General R-F Fittings 702 Beasen Boston Mass General Scientific 12017 Vose St N Hollywood Calif General Transformer 18240 S Harwood Homewood 111 General Transformer 2823 Federal Los Angeles 64 Calif Georetor Corp Manasas Ya Gorge Co P D 5200 N 2 St St Logis Mo Geotechnical Corp 3712 Hagaar D Talias 9 Texas Getron K A 724 W Winnebaso St Hilwawkee 5 Wise Gering Products 11846 Miss Ave Los Angeles Calif G 4 H Wood Prods 75 N 11 St Brooklyn 11 NY Giannini & Co G M 918 E Green St Pasadena 1 Calif Gibbs Mig Co 4500 N Main Lanserville Wise Gibbon Electric 8350 Frankstown Pittsborgh 21 Pa Giffilian Bros 1815 Venice Bivd Los Angeles Z Calif G 4 H Wood Prods 75 N 11 St Brooklyn NY Giaser-Sters Corp 2820 W Bdwy Louisvill 1 MY Giannini & Co G M 918 E Green St P

S Angeles-R—Perlmuth-Colman & Associates 2419 S Grond Ave Tel RI 7-4321 Syracuse-R—Wm A Franklin 3 Holly Rd Tel

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  New York-BO—International Resistance Co 165 Braadway Rm 2205 COriland 7-5020 covers N NJ (excl Trenton)-NYC-NYS (bounded by Rockland & Westchester cos)-Long Island
  Pittsburgh-R—Tanner & Covert 300 Mt Lebanon Blvd LOcust 1-5067 covers Pa (W of Harrisburg)-W Va-Cumberland Md (only)
  San Francisco-R—James P Hermons 1234 Folsom St MArket 4166 covers N Cal from Fresno-Nev (N of & excl Esmerolda-Nye & Lincoln cos)
  Seattle-R—David M Lee Co 2517 2nd Ave MAin 5512 covers Ore-Wosh-Mont (W of & incl Judith Basin)-Id (W of & incl Boise)
  St Louis-R—Narman W Kathrinus 4356 Duncan Ave OLive 7005 covers Mo-Kan-S III (from Quincy-Champaign & Danville)
  Syracuse-BO—International Resistance Co 112 Montgomery St Stracuse 2-0274 covers N NY (from Rockland & Westchester cos)
  Int'I Scientlific Instr 3101 E 42 Minneapolis Minn Inti Telemeter 2000 Stoner Los Angeles 25 Calif int'I Testing Service 321 N Hamilton Saginaw Mich Inti Telemeter 2003 Service A 201 N Hamilton Saginaw Mich

Int'I Testing Service 321 N Hamilton Saginaw Mich Inti TV 238 William New York 7 NY Interstate TV 376 Sunset Hollywood Calif Interstate IV 3/6 Sunset Hollywood Callf Investment Casting 319 Chestnut Newark 5 NJ Ippolito & Co James 401 Concord Bronx 54 NY Iq Industries 6110 Wilshire Los Angeles 48 Callf Ircal Industries 2242 S Sepulveda Los Angeles Calif Irvington Varnish & Institutor 6 Argyle Irvington 11 NJ ISI Corp 3101 E 42 St Minneapolis 6 Minn ISIIn Transformer & Mathl Co Rush 54 Lulia MY Islip Transformer & Metal Co Beech St Islip NY Isolantite Mfg Stirling NJ

I-T-E Circuit Breaker 1924 Hamilton Phila 30 Pa ivanhoe Electronic 14238 S LaSalle Chicago 27 III

#### TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

#### ALPHABETICAL LISTING of MANUFACTURERS with LOCALIZER INDEX

Jack & Heintz 17600 Broadway Cleveland 1 Ohio ackson Electrical Instr 18 S Patterson Dayton Ohio ackson Electronics 1805 S Michigan Chicago III Jacobs Instrument 4718 Bethesda Bethesda Md Jarobson Nut Mfg Box 177 Kenilworth NJ Jaidinger Mfg 1921 W Hubbard St Chicago 22 III Jamas Products 4605 N E 118th Ave Portland 20 Ore James Vianaer 4036 N Rockweil Chicago 18 III Jane Voo worning Corp 350 Meserole Brooklyn N Y Jansen Electronic Co Teaneck N J Jarrell-Ash Co 165 Newbury Boston 16 Mass Jarvis Electronics 6058 Fullerton Chicago 39 III Javev PO Box 646 Rediands Calif Jayeil Mfg 1379 Wash Ave New York 56 NY -B-L Instrument Clifton Heights Pa B-T Instruments 441 Chapel New Haven Conn Herse Electronic DBols Pa Ifferson Inc Ray 40 E Merick Freeport Li NY Hirfer Mfg Co PO Box 1879 Columbus 16 Ohio Inferson Flectrie 910 S 25 Bellwood III Inferson Inc Ray 40 E Merick Freeport Li NY Hirfer Mfg Co PO Box 1879 Columbus 16 Ohio Inferson Flectrie 91 Salina Syracuse NY Hilff Mfg 122 Pequot Rd Southport Conn m-0-Matic Inc 530 Cherry Lane New Hyde Pk NY Innings Radio Mfg 970 McLaughlin Ave San Jose Calif Jelliff Mfg 122 Pequot Rd Southport Conn Im-0-Matic Inc 530 Cherry Lane New Hyde Pk NY Innins Radio Mfg 970 McLaughlin Ave San Jose Calif In Products 419 W 42 St New York NY Insen Industries 7333 W Harrison Forest Park III Insen Mfg 6601 S Laramie Chicago 29 III Ind Electronics 26 & Dickinson Phila 46 Pa rsey City Tech Lab 880 Bergen Jersey City 6 NJ rsey Specialty Burgess Pl Mountainview N J well Ine A W Elyria Ohlo IFD Mfg 6101 16 Ave Brooklyn 4 NY JFD Mfg 6101 16 Ave Brooklyn 4 NY Jiffy Cilp Mfg 128 Clinton Huntington Li NY Jiffy Clip Mfg 128 Clinton Huntington LI NY Jobbins Electronic Enterprises Menio Park Calif Jodee Plastics Co 534 Glenmore Brooklyn 7 N Y Johanson Mfg Co PO Box 327 Boonton NJ Johnson Co E F Waseca Minn Johnson Electronics 521 Elweil St Orlando Fla Johnson Eng'g W V 95 Summit Summit NJ Johnson Labs Wiltard Rd Norwalk Conn Johnson Labs Wiltard Rd Norwalk Conn Johnson Mfg GOO 1 Ave N Mt Vernon Iowa Johnson-Williams Ltd 2625 Park Blvd Palo Alto Calif Johnson Foil Mfg G106 S Bdwy St Louis 11 Mo Johnson Mil 600 1 Ave N Mt Vernon Iowa Johnson-Williams Ltd 2625 Park Bivd Palo Alto Calif Johnston Foil Mfg 6106 S Bdwy St Louis 11 Mo Jones Div H B Clnch Mfg 1026 S Homan Chicage 24 President—Lester W Tarr VP & Gen Mgr—E J Pool Sis Mgr—S Pfonnstiehl VP & Dev Engr—S M DelCamp Vice Press—B F Butts Credit Mgr—C L Hvole & Purch Agi—T A Hopkins Adv Mgr—D T Campbell Export Mgr—CT A Hopkins Plostics Engr—G F Mongin Atlanta—Cortwright & Bean 4030 Club Drive NE CHerokee 2483 Boston—Ray Perron & Co 1870 Centre St FAirview 4-1008 Buffalo—Cinch-Jones SIs Div 463 Huvley Dr Patrice

- 4-1008 8uffalo—Cinch-Jones SIs Div 463 Huxley Dr PArkside 0984 Chicago—B F Becker Covers Wisc—P G Tamy Covers Iowa-Minn NEvada 2-2000 Cleveland—Scatt & Steffen 1836 Euclid Ave MAin 1-1286 Detroit—Cinch-Iones Sis Div 2832 F Grand Rivd
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- Pittsburgh—S K Mocdonald 335 Fifth Ave Allantic 2253 Washington DC—S K Macdonald 3308 Fourteenth St NW COlumbia 3938 Hamilton Ont—Cinch-Jones Sls Div Gage Ave & Beach Rd Jones Electronics M C Bristol Conm Jones & Laughlin 3 Gateway Ctr Pittsburgh 30 Pa Jontz Mfg 1101 McKinley Mishawaka Ind Locas Electronic 2005 Misina Rd Albambra Callf

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Kaar Eng'g 2995 Middlefield Palo Alto Calif Kabar Mfg 1907 White Plains Rd New York 62 N Y Kahl Scientific Instr PO Box 1166 El Cajon Calif Kahle Eng'g 1307 7 St N Bergen NJ Kahn & Co 541 Windsor St Hartford 1 Conn Kahn Research Labs 22 Pine Freeport NY Services—Research Stoff for Communications and

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- Television Products—Single-Sideband Transmitter Adopter ol-lows AM transmitter to operate twin channel single-sideband Phase locked tone converter provides six channels two tone keying with peak Pho
- power savings Phone—Freeport 9-8800 Export—RCA International 30 Rockefeller Plaza New York City

Kaiser Aluminum & Chemicai 1924 Bdwy Oakland 12 Calif Kaiser Metal Prods Inc Bristol Pa Kalart Co Huitenius St Plainville Conn Kamm Co L J 40 W 96 New York 25 NY Kane Electronics 81 Willoughby Brooklyn 1 NY Kane Mfg Corp Kane Pa Kanthal Corp Amelia Pl Stamford Conn Kapner Hardware 2248 2 Ave New York 29 NY Karp Metal Prods 211 63 St Brooklyn NY Kartron PO Box 472 Huntington Beach Calif Katolight Corp 1 Ave at Chestnut Mankato Minn Kapup & Sons C B 23 Newark Way Maplewood N J Kay Flettrie 14 Manle Ave Pine Brook NJ Katolight Corp 1 Ave at Chestnut Mankato Minn
Kaupp & Sons C B 23 Newark Way Maplewood N J
Kay Electric 14 Maple Ave Pine Brook NJ
Soles Mgr—John Gilmore
Export Soles Mgr—C L Jonik
Albuquerque-R—Gerold B Miller Co 327 Wyoming
S E Albuquerque 5-8606
Belmant Calif-R—Gerold B Miller Co 1334 Old
County Rd Phone LYtell 3-3438
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Brookline Mass BEacon 2-4804
Canada-R—Measurement Engineering Ltd Amprior
Ontorio Phone Amprior 400
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Ave NAtionol 2-2370
Clevelond-RS—Sterling Co 4311 Mayfield Road
Evergreen 2-4115
Detroit-RS—Sterling Co 15310 W McNichols Rd
BRoadway 3-2900
Hollywood-R—Gerold B Miller Co PO Box 1471
1550 N Highland Ave HOllywood 9-6305
New Hoven-R—Broger Instrument Sis Co Inc 42
Church St SPruce 7-6279
Toronto Ontorio Can—Measurement Engineering Ltd
Xaye Devel Ce Connecticut Ave S Norwalk Conn
Kaye Jabs 5725 Kearney VIIIa Rd San Diego Calif Kay Labs 5725 Kearney VIIIa Rd San Diego Calif Kay-Townes Antenna 1511 Dean Ave Rome Ga Kaywoff Prodocts Overton Nebr Kearfott Co 14844 Oxnard St Van Nuys Calif Kearfott Co 1378 Main Ave Clifton N J Keasbey & Mattison Ambier Pa Kedman Co 233 S 5 St W Salt Lake City 1 Utah Keeney & Co J H 2600 W 50 Chicago 32 11 Kees Mfg Co F D Drawer 8 Beatrice Nebr Keithley Instruments 3868 Carnegle Cleveland 15 Ohio Keleket X-Ray Corp Covington Ky Keller Prods 41 Union Manchester NH Keller Tool Div. Gardner-Denver Co Grand Haven Mich Kellogg Co M W PO Box 469 Jersey City NJ Keilogg Switchboard 79 W Monroe Chicago 3 11 Kemet Co PO Box 6087 Cleveland 1 Ohio Kemilte Labs 1819 W Grand Chicago 22 11 Kemode Mfg Co 161 W 18 St New York 11 N Y Kemtron Electron Prods Newburyport Mass Kennedy & Co D S 432 S Main Cohasset Mass Kenney & Co J H 2600 W 50 Chicage 32 III Kent Co F C 64 Howard St Irvington NJ Kent. Metal Mfg 490 Johnson Brooklyn 37 NY Kent Television 505 Driggs Brooklyn 11 NY Ken-Way Prods 110 E 1st Owensboro Ky Kenwood Eng'g 265 Colfax Kenllworth NJ Kenyon Instrument 1345 N Y Ave Huntington Sta N Y Kenyon Instrument 1943 at Are Mainington Statistics Kenyon Transformer 840 Barry Bronx 59 NY Atlanta-R-J E Joyner Jr PO Box 341 Station A Chicago-R-Harry Halinton 5500 West Devon Ave Cleveland-R-Midwest Sis Co 3219 W 117th St Dallos-R-Campion Sis Co Box 4116 Station A Ft Myers Flo-R-Arthur H Lynch & Assoc P O Ft Myers Fla-R—Arthur H Lynch & Assoc P O Box 466 Greeley Colo-R—Gordan G Moss P O Box 428 Kansas City Mo-R—F C Samers Co 415 City Bank Btdg 18th & Grand Ave Los Angeles—Electronic Sales Associates 7405 Mel-rose Avenue Los Angeles 46 California Jersey City NJ-R—Adolph Schwartz 15 Exchange Place Jersey City New Jersey Wellesley Hills Mass—R W 8 Pray 51s 18 8rewster Rd Kepce Labs 131-38 Sanford Flushing 55 NY Kerden Chemical Co 6400 Herman Cleveland 2 Ohio Kern-Moss Optical 12 John St New York NY Kerrigan Lewis Mfg 4421 W Rice Chicago 51 11 Kester Solder 4210 Wrightwood Chicago 39 111

Kinevox Inc 116 S Hollywood Way Burbank Calif King Elec Equip 9123 Inman Ave Cleveland 5 Ohio King Labs 127 Solar St Syracuse 3 NY Kings Electronics 40 Marbiedale Tuckahoe NY Kinney Co Joseph Rossiyn Rd Carnegle Pa Kinney Mfg 3259 Washington Boston 30 Mass Kip Electronics Corp 20 Holly PI Stamford Conn Kirby Products Corp 20 E Herman St Phila 44 Pa Kirchberger & Co M 83 W Forest Ave Englewood N J Kirk Blem Mfg 3120 Forver Cincinnati 9 Ohio Kirking Frods 4507 Brunswick Los Angeles Calif Kiter-tue Mfg Co Go Fenn Ave Pittsburgh 22 Pa Klein Electronics 2404 S La Brea Los Angeles Calif Kiein & Sons M 7200 W McCormick Rd Chicago 45 III Kliege Fue Mfg Co Go Fenn Ave Pittsburgh 22 Pa Klein Electronics 2404 S La Brea Los Angeles Calif Kiein & Sons M 7200 W McCormick Rd Chicago 45 III Kliegi Bros 321 W 50 New York 19 NY Klinecher Locknut 2153 Hillside Indianapolis Ind Kline Iron & Metal Co 1225 Huger St Columbia S C Kiing Metal Spinning 174 Centre New York 13 NY Kligesch & Associates Box 64 Hoge Ark Klige Co Nyron E Platte Center Nebr Knights Co James Sandwich III Knowles Electronics 9400 Belmont Franklin Pk III Koeour Co 4800 S St Louis Av Chicago 32 III Koiled Kords Inc Box K New Haven 14 Conn Kollmorgen Optical 30 Church New York 7 NY Kollsman Instrument Corporation Subsidiary of Standard Coil Products Co Inc 80-08 45th Avenue Elmhorst 73 New Yerk Telephone NEwtown 9-2900 President—V E Carbonaro Kollsmain Instrument Corporation Subsidiary of Standard Coil Products Co Inc 80-08 45th Avenue Elmhorst 73 New York
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NcAlister Inc J C 1117 N McCadden Holywood Calif McAley Mfg Co. 554 W Adams St Chicago III McCine Talking Pictures 1115 W Wash Chicago III McCoy Electronics Watt & Chestnat Mt Holly Springs Pa McElroy Mfg Littleton Mass McCohan Co Don 3700 W Rosewelt Rd Chicago 24 III McGrave Till Book Co 300 W 42 St New York SG NY McGrave Till Book Co 320 W 42 St New York SG NY McGrave Till Book Co 2228 Ashinal Toleto Ohlo McLaubh III So & Co 2228 Ashinal Toleto Ohlo McLaubh III La LaJolia Calif McKesson Applance Co 2228 Ashinal Toleto Ohlo McLaubh III L A LaJolia Calif McKesson Applance Co 2228 Ashinal Toleto Ohlo McLaubh III L A LaJolia Calif McKesson Industrial Brownill Ave Igsvich Mass McMillan Co GO Sth Ave New York NY McMillan III L A LaJolia Calif McLaubh III L A LaJolia Calif McLaubh III L A LaJolia Calif McLaubh III L A LaJolia Calif McChan Development 71. Morray St New York 7 N Mashine OrMatic 2005 U News York 38 W McSan Development 71. Morray St New York 7 N Masad Malstein Co 435 Riverside Av Newark NJ Macalien Co Newmarket N H Mackay Inc A D 198 Bdwy New York 38 W Mackay Research Labs R7 2 Box 401. McHenry III Mackay Research Labs R7 2 Box 401. McHenry III Mackay Research Labs R7 2 Box 401. McHenry III Mackay Research Labs R7 2 Box 401. McHenry III Mackay Corp 323 E 13 St New York 38 W Maakay Research Labs R7 2 Box 401. McHenry III Mage Electronics McTay Lanza Inglewood Calif Magneteronics 9200 Motor Ave Los Angeles 34 Calif Magneteronics 920 Motor Ave Los Angeles 34 Calif Magneteronics 920 Motor Ave Los Angeles 34 III Magneteronics 920 Tastum AN Holywood Calif Magneteronics 920 Tastum AV Molywood Calif Magneteronics 921 Tastum AV Molywood Calif Magneteronics 222 S Yukon Ave Ave Chicago 23 III Magneters 722 E Has St Prederick Md Magnete Corp 2352 W Grand Ave Chicago 24 III Magneters 722 E ast St Prederick Md Magnete Devices 732 E ast St Prederick Md Magnete Devices 733 S Campa S Hant Englewo

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- Moorestawn 9-0201R2 Covers Maryland & Vir-ginia Syrocuse-R--Wally Swank 2310 Bellevue Ave Phone Syrocuse-R--Wally Swank 2310 Bellevue Ave Phone Syrocuse 4-2141 Covers Upper NY State Toronto Can-R--J R G McVity 51 Dalewood Road Hu 8-9457 Covers Can Radio-Matle of America 760 Ramsey Ave Hillside N J Radio Merchandise Sales 2016 Bronxdale New York 62 NY Radio Musie 84 S Water Port Chester NY Radion Corp 1130 W Wisconsin Ave Chicago 14 III Radionie Controls Box 237 Herrin III Radionie Labs 1111 State Rd 67 E Anderson Ind Radionies Ine 1040 N York Rd Towson 4 Md Radiopiane Co P0 Box 511 Van Nuys Calif Radio Receptor 251 W 19 New York 11 NY Radio Receptor 251 W 19 New York 11 NY Radio Receptor 251 W 19 New York 11 NY Radio Receptor 251 W 19 New York 11 NY Radio Receptor 172 Front Marietta Dhia Radio Sanek Corp Isinfield N J Radio Specialty Mfg 2023 S E 6 Portiand 14 Ore Radio Supply 85 Selden Ave Detroit 1 Mick

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   Buffala-R-Art Cerf & Co L J McTaggort 116 Eiseman Ave Kenmore 17 NY Buffalo Riverside 1009 Covers W NY State
   Chicago-BO-C R Hommond Raytheon Mfg Co 9501 Grand Ave Franklin Pork III TUxedo 9-5400
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Warner-SE-O Jaeger B Cameron 2211 W Pershing Rd FRontier 6-2346
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GArfield 2250 shing Ka FKontier 6-2346 Cincinnati-IDS—L Rice F T Grant 207 W Third St GArfield 2250 Dallas-IDS—H E Goff 1232 Fidelity Union Bldg Riverside 5231 Denver-IDS—H J Zimmerman 5757 Trumbull Ave TRinity 2-7010 Elmira-IDS—M H Parker P O 80x 284 ELmira 9-3611 Los Angeles-IDS—G Sherman E F Larson R L Ford 11470 Tennessee Ave ARizona 7-1243 Minneopolis-IDS—E T DeBlock 2303 Kennedy St NE GRanville 3545 Philadelphia-IDS—A Fox 306 Fourth Ave ATlantic 1-8400 Providence-IDS—R E Richard 51 Empire St GAspee Providence-IDS-R E Richard 51 Empire St GAspee 1-0818 Louis-IDS-8 R Sanders 411 N 7th St CEntral St 1120 San Francisco-1DS—R E Thomos 410 Bush St EX-broak 2-5353 West Instrument Corp 525 N Noble St Chicago III Westlabs Inc PO Box 1111 Palo Alto Calif Westilne Prods 600 E 2 St Los Angeles Calif West Mich Sound 1932 Peck St Muskegon Mich Weston Electrical inst 614 Freiinghuysen Newark 5 NJ

#### LOCALIZER INDEX

Winterburn Mfg Co 11 Whittemore St Putnam Conn Winzeler Mfg & Tool 1712 W Arcade Chicago III Wire Stripper 1721 Eastham E Cleveland 12 Ohio Wirt Co 5221 Greene St Philadelphia 4 Pa Wisconsin Porcelain Sen Prairie Wise Wite Co 5221 Greene St Philadelphia 4 Pa Wisconsin Porcelain Sen Prairie Wise Witefa Electrical Mfg 76 Pulaski Stamfurd Conn WMC Ine 1753 N Damen Chicago 47 III Wolf X-Ray Prods 59 Bank St New York 14 N Y Wollensak Optical 850 Hudson Rochester 21 NY Woodbury Glass Co 34 Burnstie Ave E Wattford 8 Conn Wood Counter Lab N 5491 Blackstone Chicago 15 III Wooddand Mfg 416 Woodland Ave Toledo 2 Ohio Woodward-Schamacher 1725 W North Chicago 22 III Woodward-Schamacher 1725 W North Chicago 22 III Woodward-Schamacher 1090 Queen Anne Rd Teaneck N J Worreesler Pressed Aluminum 13 Hops Worcester Mass Workman TV Inc 309 Queen Anne Rd Teaneck N J Warnhen Corp 430 N Camden Dr Beverly Hills Calif Wright Electronic Devices Rankin III Wright Electronic Devices Rankin St Worcester Mass Workhen Corp 430 N Camden Dr Beverly Hills Calif Wright Eng'g 180 E Calif St Pasadena 1 Calif Wright Electronic Devices Stafford St Worcester Mass Wright Eng'g 180 E Calif St Pasadena 1 Calif Wright Eng 233 University St Paul 14 Minn Wright & Sons W R West Warren Mass Wright Zimmerman Inc 330 5 Ave New Brighton Minn Wroght Washer Mfg 2275 S Bay Milwawkee 7 Wise Wright Zimmerman Inc 330 5 Ave New Brighton Minn Wroght Washer Mfg 2275 S Bay Milwawkee 7 Wise Wright Zimmerman Inc 330 5 Ave New Brighton Minn Wroght Washer Mfg 2275 S Bay Milwawkee 7 Wise Wright Zimmerman Inc 330 5 Ave New Brighton Minn Wroght Washer Mfg 2275 S Bay Milwawkee 7 Wise Wright Zimmerman Inc 330 5 Ave New Brighton Minn Wroght Washer Mfg 2275 S Bay Milwawkee 7 Wise Wright Zimmerman So 507 E Water St Syracuss 1 NY Wybar Electronics 6918 Beck N Hollywood Calif Wyen Metal Products 6918 Beck N Hollywood Calif Wyen Heal Products 6918 Beck N Hollywood Calif Wyen Heal Products 6918 Beck N Hollywood Calif

Xcelite Inc Bank St Orchard Park NY X-Ray Mfg Corp 222 Bowery New York 12 N Y

Yale & Towne 9335 Belmont Ave Franklin Park III Yardney Electric 40 Leonard St New York 13 NY Yellow Springs Instroment Yellow Springs Ohio Yonkers Industries 28 School St Yonkers NY York Co Otto H 69 Glenwood PI E Orange N J Young Bros 1829 Columbus Rd Cleveland Ohio

Zeil Products 276 Main St Norwalk Conn Zenith Electric 152 W Waiton St Chicago 10 III Zenith Optical Lab 1940 Great Neck Coplague LI NY Zenith Radio Corp 6001 Dickens Ave Chicago 39 III Zephyr Products Co 129 E 124 St New York 35 NY Zernickow Co 0 15 Park Row New York 38 N Y Zero Mfg Co 1121 Chestnut St Burbank Cailf Zierick Mfg Beechwood & Rockdale New Rochelle NY Zoomar Inc 55 Sea Cliff Ave Gien Cove L i N Y Zophar Mills 112 26 Brooklym 32 NY Z & W Machine Prods 5100 St Clair Cleveland 3 Ohlo

#### Air Transport Fleet Called Inadequate

America's present air logistics transport fleet is obsolete in the event of a military emergency.

This view was expressed by W. R. Rhoads, chief military operations research engineer for Lockheed Aircraft Corp's Marietta, Ga. plant, speaking at the Golden Anniversary aeronautic meeting of the Society of Automotive Engineers at the Hotel Statler, N. Y.

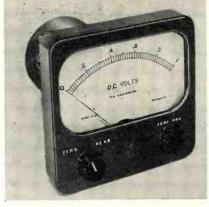
"In the time remaining to us by the atomic clock, we must provide our fighting forces (and those of the friendly nations) with mobility on a global scale, regardless of cost," Mr. Rhoads asserted.

Mr. Rhoads believes within the next ten years we must: Increase the capacity of our air cargo fleet four or five times, reduce the cost of carrying air cargo and reconcile the differences between military and civil (operational) requirements for cargo aircraft.

## NEW TECHNICAL PRODUCTS For the Electronic

#### **TUBE VOLTMETER**

The Model F vacuum tube voltmeter consists of a 4 in. rectangular meter in a housing that extends approximately 3 in. from the rear of the meter movement, and contains complete amplifier



and power supply circuits. Terminals are available for dc signal input and for 60 crs power input. The front panel has a switch to remove the input signal, and a zero adjustment. A rear control adjusts calibration. Accuracy, 3%. Input impedance 10 megohms. Single scale sensitivities available from 1.0 to 300 v. Multiple scale operation can be tailored to meet equipment needs. Trio Laboratories, Inc., 3293 Seaford Ave., Wantagh, N. Y. (Inquiry Card No. 6-19)

#### WATTMETER-BRIDGE

The Type 28A r-f wattmeter-bridge, measuring only 2 x 4 x 8 in., can serve as a wattmeter, impedance bridge, or probe in determining the r-f characteristics of transmission lines, wave traps, resonant impedance, antennas, etc., and as a field strength indicator and AM detector. The instrument has 3 ranges, 1.0, 10.0, and 100 w. Resistive load is 50 ohms ( $\pm 1$  ohm) for frequencies up to 180 Mc. Constant service rating is



30 w. Intermittent, 60 w. Meter resistive bridge portion is direct reading over a calibrated range of 4 to 250 ohms for frequencies from 500 kc to 200 mc. Budelman Radio Corp., 375 Fairfield Ave., Stamford, Conn. (Inquiry Card No. 6-18)

## DIRECT READING

The Weston Model 1 instrument, fore-runner of all direct-reading instruments of the permanent moving coil type, now has a core magnet mechanism containing an "Alnico" V core inside



the moving coil; the instrument's first basic change. The outer frame serves as the yoke and provides excellent shielding and allows a minimum loss of flux. Relatively immune to the effects of external field influence, the movement has a high degree of magnetic stability. Used 15 inches from a conductor carrying 1,000 amps (a 5 oersteds field), effect is less than 0.10%. Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N. J. (Inquiry Card No. 6-16)

#### **RMS NOISE VOLTMETER**

The MV-19 A noise voltmeter covers a frequency range of 20 cPs to 200 kc with its internal RMS voltage detector (crystal diode) and frequencies up to 200 Mc with its external probe-style detector. Measuring accuracy does not depend on the frequency response of attenuators, the frequency spectrum of noise generators, nor the frequency response of oscilloscopes. Noise mea-



surements are made by feeding "reference signals" from a calibrated signal generator into the amplifier under test. Millivac Instrument Corporation, P.O. Box 997, Schenectady, N. Y. (Inquiry Card No. 6-21)

## Industries

#### PRE-AMPLIFIER

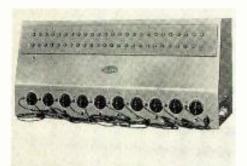
The Type VS-61 A ultra-low-noise scope pre-amplifier has less than 0.5 mv RMS over its entire frequency range, 2 CPS to 60 kc. Based on the discovery that transistor noise can be reduced



substantially below the noise level of vacuum tubes if suitable low noise operating parameters are selected. The new amplifier is expected to find application in biological research, hot-wire anemometer measurements, strain gauge measurements, etc. Input impedance 1,000 ohms, gain 1,000. Differential or adding input. Entirely battery operated, with 4 transistors, 6 vacuum tubes. Volkers & Schaffer Mfg., Corp., P.O. Box 996, Schenectady, N. Y. (Inquiry Card No. 6-20)

#### **NETWORK SYNTHESIZER**

The NS-1 is a network synthesizer and universal laboratory filter for experimental circuits or systems evaluation—particularly in TV. The unit will synthesize any selectivity curve expressible by a Fourier cosine series, or any transient response function. A 50section delay line enables rapid synthesis of any filter characteristic over the entire video range. Voltages are picked off the line by means of 10 cath-



ode followers, each with an attenuator and polarity (algebraic sign) selector switch. Any 10 voltages can be combined. Wickes Engineering and Construction Co., 12th St. and Ferry Ave., Camden 4, N. J. (Inquiry Card No. 6-17)

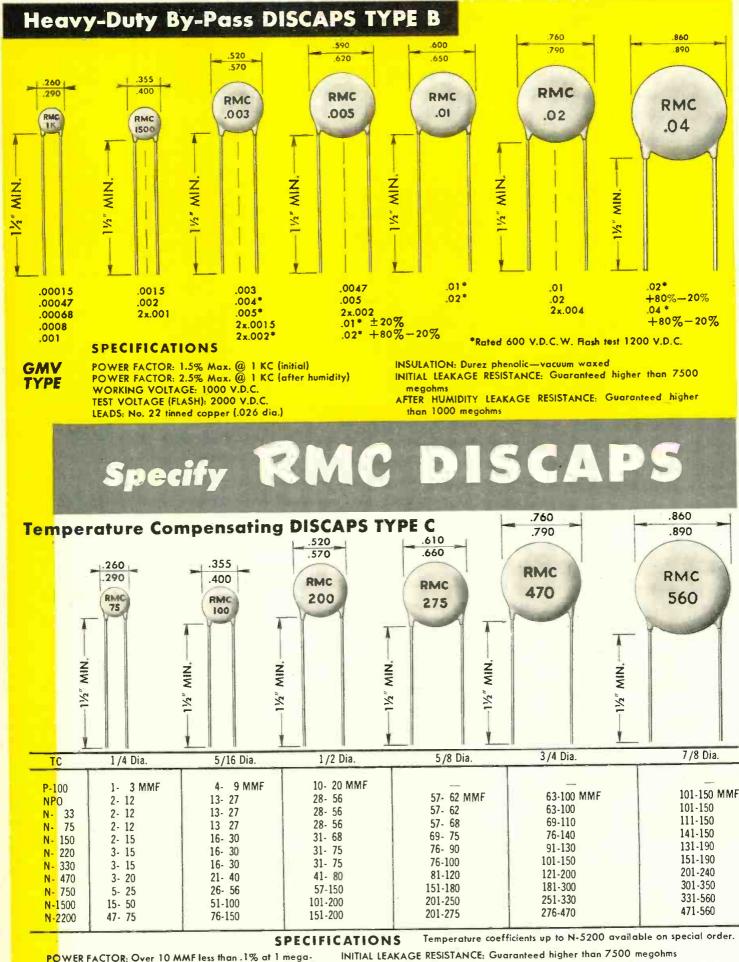
#### MILITARY CONTRACT AWARDS

Electronic Products, dollar value, and names of manufacturing contractors receiving awards as reported by U. S. Dept. of Commerce

- Modification Kit, rectifier tube—26,928—Western Electric Co., Inc., Winston Salem, N.C.
- Modification Kit, safe switch-61,610-Avaco
- Manufacturing Corp., Evendale 15, O. Replacement Kit, sealed amplifier—249,642— General Motors Corp., Milwaukee, Wis.
- Power Supply—437,135—Heyer Products Co., Inc., Belleville 9, N.J.
- Kit A Assy—66,120—Hughes Tool Co., Culver City, Calif.
- Base, antenna-49,707—The Compo Corporation, 3218 W. Fond du Lac Ave., Milwaukee 10, Wis.
- Tube, electron—59,309—Sonotone Corp., Elmsford, N.Y.
- Tube, electron—40,560—Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N.Y.
- Dynamotor—307,496—Victor-Bernard Industries, Inc., 1511 North 26th St., Philadelphia 21, Pa. Tube, electron—172,400—Radio Corp. of Amer-
- ica, RCA Victor Div., Harrison, N.J. Crystal Unit—76,557—Kemtron Electron Prod.,
- inc., 14 Prince Pl., Newburyport, Mass.
- Headset, microphone—1,220,675—The Lionel Corp., 28 Sager PI., Irvington, N.J.
- Cable Assy—287,876—Automatic Metal Products Corp., 315-323 Berry St., Brooklyn, N.Y.
- Line Analyzer—304,538—The Sperry Corp., (Sperry Gyroscope Co., Div.) Great Neck, L.I., N.Y.
- Modification Kit, antenna sub-assys—41,060— The Allen D. Cardwell Electronics Productions Corp., Plainville, Conn.
- Electronic Components, various—5,590,990— General Electric Co., Utlca, N.Y.
- Replacement Kit, magnetic holding clutch—80,-694—General Motors Corp., A.C. Spark Plug Div., Milwaukee, Wis.
- Generator Set-574,854-Detroit Diesel Engine Corp., Detroit, Mich.
- Motor Generator—742,161—Electric Machinery Mfg. Co., Minneapolis 13, Minn.
- Test Equipment, printer-projector—103,052— Morse Instrument Co., Hudson, O.
- Actuator—217,997—Wm. R. Whittaker Co., Ltd., Los Angeles 38, Calif.
- Indicator 1,915,822 Kollsman Instrument Corp., Elmhurst, N.Y.
- Indicator—560,138—The Sperry Corp., Sperry Gyroscope Co. Div., Great Neck, I.I., N.Y.
- Indicator—46,623—Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J.
- Indicator—32,403—Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J.
- Indicator—559,650—Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J.
- Indicator—36,518—Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J. A.C. Generators—757,626—Jack & Heintz, Inc.,
- Cleveland 1, Ohio Flight Simulator, trainer—450,000—Curtiss-
- Wright Corp., Carlstadt, N.J. Motor Assy—127,361—Jack & Heintz Inc., Cleve-
- land 1, 0. Actuator Assy—86,046—Hoover Electric Co., Los
- Angeles, Calif. Voltage Regulators—190,253—Bendix Aviation
- Corp., Red Bank Div., Eatontown, N. J. Exciter, vibration-26,719-The Calidyne Co
- Exciter, vibration—26,719—The Calidyne Co., 120 Cross St., Winchester, Mass.
- Cable, electric—70,600—Hatfield Wire and Cable Div., Continental Copper and Steel Industries, Inc., Hillside, N.J. Gunfire Control System—2,304,225—Belock In-
- Gunfire Control System—2,304,225—Belock Instrument Corp., College Point, N.Y.
- Tube, electron—29,885—Radio Corp. of America, Tube Div., 415 South 5th St., Harrison, N.J.
- Tube, electron—129,594—Sylvania Electric Products Inc., 100 Sylvan Rd., Woburn, Mass.
- Tube, electron—97,300 Tung-Sol Electric Co., Inc., 95 Eighth Ave., Newark 4, N.J.
- Tube, electron—61,740—Radio Corp. of America, Tube Div., 415 South 5th St., Harrison, N.J.

- Resistor—35,147—G. M. Glannini and Co., Inc., 580 Fifth Ave., New York 36, N.Y.
  - Generator, signal—106;638—Polarad Electronics Corp., 100 Metropolitan Ave., Brooklyn 11, N.Y.
- Tube, electron—39,900—Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
- Switch-Float—29,162—Aerotec Corp., Comly Ave., Greenwich, Conn.
- Tube, electron—46,375—Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
- Tube, electron—48,387—Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.
- Dummy Load—27,180—A.R.F. Products, Inc., 7627 Lake St., River Forest, III.
- Transformer, power filament and plate—33,410 —Bendix Aviation Corp., Bendix Radio Div., Towson 4, Md.
- Transformer, pulse-35,227-Fisher Engineering Inc., 2060 U.S. 24 East, P.O. Box 327, Huntington, Ind.
- Power Supply—60,605—Radio Corp. of America, RCA Victor Div., 19th and Federal Sts., Camden, N.J.
- Tube, electron—171,920—Bomac Laboratories, Inc., Salem Rd., Beverly, Mass.
- Tube, electron—42,600—Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
- Transformer—62,224—Western Electric Co., Inc., North Carolina Works, Winston-Salem, N.C.
- Generator, starter—375,206—Continental Aviation and Engineering Corp., Detrolt, Mich. Indicator, airspeed—2,049,388—Kollsman In-
- strument Corp., Elmhurst, N.Y. Recorder Group-1,518,743-Vectron, Inc., Wal-
- tham, Mass.
- Radio Sets, etc.—268,273—Aircraft Radio Corp., Boonton, N.J.
- Kits—48,249—Airesearch Mfg. Co., 9851-9951 Sepulveda Blvd., Los Angeles 45, Calif.
- Indicotors—26,010—The Lewis Engineering Co., 399 Church St., Naugatuck, Conn.
- Replacement Kit, transformer—305,405—Sperry Gyroscope Co., Great Neck, Long Island, N.Y.
- Modification Kit, wiring—99,330—Sperry Gyoscope, Great Neck, Long Island, N.Y.
- Modification Kit, shaft clamp-30,377-Sperry Gyroscope Co., Great Neck, Long Island, N.Y.
- Kit, drone control—48,176—Canoga Corp., 5955
- Sepulveda Rd., Van Nuys, Calif. Modification Kit, pedestal—99,988—Reeves Instrument Corp., 215 E. 91st St., New York, N.Y.
- Receivers, radar set—28,064—RCA Victor Div., Front and Copper Sts., Camden, N.J.
- Tube, electron—85,000—Sylvania Electric Products Inc., 1740 Broadway, New York, N.Y.
- Tube, electron—112,575—Raytheon Mfg. Co., 55 Chapel St., Newton 58, Mass.
- Tube, electron—28,180—Raytheon Mfg. Co., 55 Chapel St., Newton 58, Mass.
- Tube, electron—110,810—Radio Corp. of America, RCA Victor Div., Harrison, N.J.
- Indicator-33,445-Panoramic Radio Products, Inc., 10 South Ave., Mount Vernon, N.Y.
- Tube, electron—54,500—Bomac Laboratories, Salem Rd., Beverly, Mass.
- Controls, air conditioning—39,268—Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S. Minneapolis 8, Minn.
- Electrode, welding—26,025—Westinghouse Electric Corp., 3001 Walnut St., Philadelphia 4, Pa.
- Electrode, welding—33,750—Harnischfeger Corp., 4400 W. Notional Ave., Milwaukøe, Wis.
- Battery, portable storage—57,143—Price Battery Corp., Grand St., Hamburg, Pa.
- Electrode, welding—49,750—Arcos Corp., 1500 S. 50th St., Philadelphia 43, Pa.
- Power Supply—620,443—Bendix Aviation Corp., Bendix Radio Div., Towson, Md.
- Modulator, radio-121,094-General Riviters, Inc., 785 Hertel Ave., Buffalo, N.Y.

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

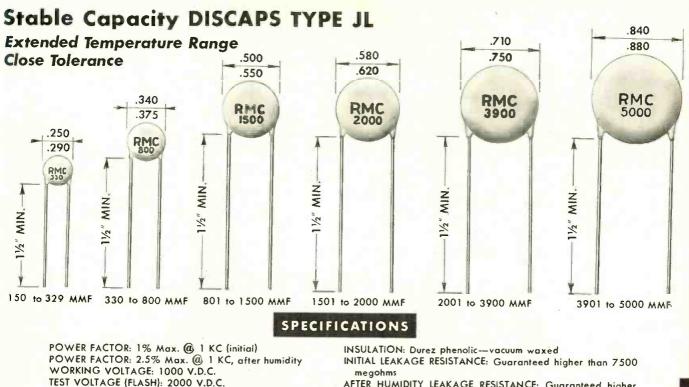


POWER FACTOR: Over 10 MMF less than .1% at 1 megacycle. Under 10 MMF less than .2% at 1 megacycle WORKING VOLTAGE: 1000 V.D.C. TEST VOLTAGE (FLASH): 1750 V.D.C.

INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohins AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohins LEADS: No. 22 tinned copper (.026 dia.) TOLERANCES:  $\pm 5\% \pm 10\% \pm 20\%$ 

TEST VOLTAGE (FLASH): 1750 V.D.C. CODING: Capacity, tolerance and TC stamped on disc INSULATION: Durez phenolic-vacuum waxed

These capacitors conform to the RTMA specification for Class 1 ceramic condensers The capacity of these condensers will not change under voltage



AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms CAPACITY TOLERANCE: ±10% ±20% at 25° C

### for economical, trouble-free capacitor perform<u>ance</u>

Wedg-loc

LEADS: No. 22 tinned copper (.026 dia.)

RMC

.02

RMC

.005

RMC

100

DISCAP

CERAMIC

CAPACITORS

The exclusive wedge design of the leads on these DISCAPS locks them securely in place on printed circuit assemblies prior to the soldering operation. The "Wedg-Loc" leads eliminate the possibility of the capacitors becoming loose or falling out. Application of "Wedg-Loc' lead DISCAPS to printed circuits will cut production time, reduce costs, and insure a uniform soldered connection.

"Wedg-Loc" DISCAPS are available in capacities between 2 MMF and 20,000 MMF in temperature compensating, by-pass, and stable capacity types with lead spacing as shown above. Suggested hole size for these DISCAPS is a .062 square hole.



Now that more and more manufacturers of television receivers and electronic equipment are using printed circuits, ceramic capacitors with special leads are required to speed up production operations. RMC plug-in DISCAPS are specifically designed to simplify production line problems when printed circuit assemblies are used. In addition to providing a worthwhile saving in assembly cost, like all DISCAPS, they add quality to the finished product.

**Plug-in** 

Leads are constructed of No. 20 tinned copper (.032 diameter) and are available up to  $1\frac{1}{2}$ " in length. Plug-in DIS-CAPS are manufactured in temperature compensating, by-pass, and stable capacity types.

#### RADIO MATERIALS CORPORATION GENERAL OFFICE: 3325 N. California Ave., Chicago 18, Ill.

FACTORIES AT CHICAGO, ILL. AND ATTICA, IND. Two RMC Plants Devoted Exclusively to Ceramic Capacitors

TELE-TECH & ELECTRONIC INDUSTRIES . June 1955

For product information, use inquiry card an pages 185-186. 373

#### MILITARY CONTRACT AWARDS

Electronic Products, dollar value, and names of manufacturing contractors receiving awards as reported by U. S. Dept. of Commerce

Multiplex Terminal, G-E-45,522-General Electric Co., Electronic Div., Syracuse, N.Y.

- Tube, electron-38,750-Raytheon Mfg. Co., Newton, Mass.
- Motor-Generator 41,669 Sperry Gyroscope Co., Great Neck, Long Island, N.Y.
- Tube, electron-298,681-CBS-Hytron Div. of CBS, Danvers, Mass.
- Receivers, radio—744,738—Lewyt Mfg. Co., 60 Broadway, Brooklyn, N.Y.
- Assy 46,035 J.F.D. Electronics Connector Corp., 1462 62nd St., Brooklyn 19, N.Y.
- Modification Kit, signai generator—41,790— Teie-King Corp., 601 W. 26th St., New York, N.Y.
- Telephone Set-55,883-White Industries, Inc.,
- 421 W. 54th St., New York, N.Y. Amplifier Controls and Amplifiers—79 Stromberg-Carlson Co., Rochester, N.Y. -79.974---
- Receivers, radio Corp., Chicago, III. radio — 1,106,579 — Rauland-Borg
- Amplifier 63,740 Dynamic Electronics-New York, Inc., Glendale, Long Island, N.Y.
- Field Change, Radar Repeater—26,349—West-Inghouse Electric Corp., Washington, D.C.
- navigation—102,100—Seismograph Receivers, Service Corp., Tulsa, Okla.
- Direction Finder-181,700-Bendix Radio Div.,
- Bendix Aviation Corp., Towson 4, Md. Indicators, airspeed—25,768—The Lachner Co., Inc., Cincinnati 14, O.
- Motors, ac-43,100-Arma Division, American Bosch Arma Corp., Roosevelt Field, Garden City, N.Y.
- Cable—13,461—Simplex Wire & Cable Co., Cambridge, Mass.
- Spare Parts, amplifier preservation—437,184— Electronic Corp. of America, Cambridge, Mass.
- Components, radio altimeter—137,013—Stewart Warner Corp., Chicago, Iil.
- Radio Set-3,200,000-Coilins Radio Co., Cedar Rapids, Ia.
- Modification Kits-393,770-Chicago Aerial Industries Inc., Melrose Park, III.
- Transmitter-280,809-Bendix Aviation Corp., Eclipse-Pioneer Div., Teterboro, N.J. Computer Assy — 416,517 — Servomechanisms,
- Inc., El Segundo, Calif.
- Control, roll and pitch indicator-3,999,056-Lear, Inc., Grand Rapids, Mich.

- Radar Sets-7,801,040-Bendix Aviation Corp., Bendix Radio Div., Towson, Md.
- Microphone, dynamic—208,782—Electro-Voice Cecil & Carrol, Buchanan, Mich.
- Actuator-37,373-Lear, Inc., 110 Inoia Ave., N. W. Grand Rapids 2, Mich.
- Kit, "Retrofit"-252,503-Air Research Mfg. Co., 9851-9951 Sepulveda Blvd., Los Angeles, Calif. Transformer, pulse—35,344—General Electric
- Co., 840 South Canal St., Chicago 80, 111. Tube, electron-65,700-Sylvania Electric Prod-
- ucts, Inc., 1740 Broadway, New York 19, N.Y. Tube, electron—100,775—Sylvania Electric
- Products, Inc., 1740 Broadway, New York 19, N.Y.
- Oscillator, sub-assy---4,310-Radio Corp. of America, RCA Victor Div., 19th & Federal Sts., Camden, N.J.
- Oscillator, sub-assy-5,060-Radio Corp. of America, RCA Victor Div., 19th & Federal Sts., Camden, N.J.
- \_40,814—Kuthe Laboratories, Tube, electron-Inc., 730 S. 13th St., Newark 3, N.J. Antenna and Equipment—2,269,361—Texas In-

struments, Inc., 6000 Lemmon Ave., Dallas 9, Texas.

- Klystron—29,600—Sperry Gyroscope Co., Great Neck, Long Island, N.Y. 1
- Tube, electron-289,712-General Electric Co., Schenectady, N.Y.
- Tube, electron—Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N.Y.
- Tube, electron—206,035—Raytheon Mfg. Co., Newton, Mass.
- Tube, electron—38,024—Sylvania Electric Products, Inc., 100 Sylvan Rd., Woburn, Mass.
- Tube, electron-155,679-Eitei-McCullough, Inc., 798 San Mateo Ave., San Bruno, Calif. electron-29,938-Chatham Electronics, Tube,
- 630 Mt. Pleasant Ave., Livingston, N.J. Tube, electron-83,341-Radio Corp. of Amer-
- ica, RCA Victor Div., Harrison, N.J. Tube, electron-125,821-Radio Corp. of Amer-
- ica, RCA Victor Div.; Harrison, N.J.
- Modification Kit, signal power unit—83,640— John R. Hollingsworth Corp., Syracuse & Mill Rds., Clifton Heights, Pa.
- Battery, storage-680,711 Sonotone Corp., Elmsford, N.Y.
- Power Supply-65,408-Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N.J.

#### RCA Asks Anti-Trust Dismissal

Radio Corp. of America, in an answer filed in United States District Court in New York to a Government civil anti-trust complaint, said that RCA's patent licensing policies have been "a major factor in the spectacular growth of the electronics industry, including the radio-television industry, and the pre-eminence of the United States in that industry."

Branding the Government's request for relief as "unreasonable, unnecessary and contrary to the public interest," RCA denied each and every allegation in the complaint.

Describing the license agreements, the answer stated that RCA's "licenses contain no restrictions as to price, quantity, territory, or anything else, require no minimum royalty, and are offered under any one or more patents and for any apparatus as may be desired by any prospective licensee."

The answer continued: "RCA's present royalty rates are further reduced, now being only 1/2% for radio broadcast receivers using tubes, 11/8% for radio broadcast receivers using transistors, 11/4% for black-and-white TV receivers, 1¾% for color TV receivers, 1¼% for electron tubes other than color tubes, 134% for color tubes, 2% for color TV commercial apparatus except government apparatus, 11/2% for other commercial apparatus except government apparatus, and 1% for all commercial apparatus manufactured for government use."

#### **New Products**

#### VACUUM TUBE VOLTMETER

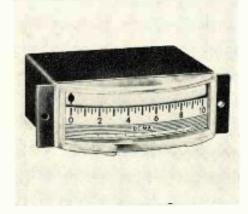
The Model V-7 vacuum tube voltmeter employs a printed circuit board to reduce assembly time and achieve constant circuit performance. Comprehensive measurement is possible with



seven ac. (RMS) and dc. voltage ranges of 1.5, 5, 15, 50, 500, and 1,500; seven peak-to-peak ac voltage ranges of 4, 14, 40, 140, 400, 1,400, and 4,000; and ohm-meter ranges of X1, X10, X100, X1,000, X10k, X100k, and X1 meg-ohm. A db scale is provided and a zero-center operation is within the range of front panel controls. Employs 4½ in. meter-1% precision resistors –ac. power supply. Heath Co., 305 Territorial Rd., Benton Harbor, Mich. (Inquiry card No. 6-22)

#### PANEL METER

The Model 1145 side indicator panel meter, available for vertical or horizontal mounting, requires an area of only 5.5 sq. in. as compared with 16.4 in. for a conventional 41/2 in. round instrument and 18.6 sq. in. for a  $4\frac{1}{2}$  in. rectangular meter. Overall dimensions are 3.5 in. wide, 1.3 in. high, 3.5 in. deep-plus required terminal length. Weighing approximately 9.8 oz., a num-



ber of these larger meters can be stacked next to each other. The Model 1145 units have an initial accuracy of  $\pm 2\%$  of full scale deflection on dc. and ±5% on ac. International Instrument Corp., 486 Derby Ave., New Haven 15, Conn. (Inquiry Card No. 6-23)

#### THE STANDARD OF QUALITY

MODEL 7001 MODEL 700 Most complete and accurate tube Tester available. 7 other HICKOK tube testers are available to fill all your requirements.



#### TRUE VACUUM TUBE VOLTMETER Laboratory Size and Accuracy

Model 209A: Contains large 9" meter with zero-center scale. Highly accurate for servicing industrial electronic equipment. DC Volts: 0-1200 in 6 ranges. AC RMS Voltage: 0-1200 V. in 6 ranges. AC Peak-to-Peak Voltage: 0-1200 V. in 6 ranges. Capacitance 0.1 to 10,000 MMF in 2 ranges, 0-1000 MF in 5 ranges.

50 MH to 100 henries. 0.1 ohm to 10,000 megohms in 7 ranges.



#### Model 710: Provides an accurately

SINE-SQUARE WAVE GENERATOR For Laboratory & Industrial Use

calibrated source of sine wave and square wave functions over a wide frequency range. Sine wave total harmonic distortion below 1%. Hum level better than 90 db down. Square wave rise time less than .1 Micro

second. 20 cycles to 1 MC in five ranges on both sine and square waves.



#### NOISE GENERATOR Industrial & Technician Model

Model 755: The first noise generator to be completely self-contained. Has two indicating meters. This instrument is divided into two parts --VTVM side and Generator Noise side.

MODEL 755 Permits noise level adjustments to

improve sound and videa in TV receivers. Ranges: 0-0.1, 0.5, 1.0 and 5.0 Volts, zero-center DC scale. Frequency rangeflat from 10 to 250 MC. Noise level: 0-20 db.

MODEL 295X

#### LABORATORY TUBE TESTER All Voltages Variable and Metered

Model 700: Most complete and accurate Tube Tester. Covers wide ranges of values to duplicate the results in tube manuals. This instrument is invaluable for electronic developmental and research work. Model 7001: Null Reading Apparatus, for use with the Model 700 to obtain bridge type Null readings with an accuracy of 1%.



MODEL 770



FOR OVER FORTY THREE YEARS

5 MC without sacrifice to 10 M.V. RMS per inch sensitivity. Built-in calibrating voltages. Illuminated calibrated screen. Mu-metal shield. Shock mounted. This highly stable 'Scope is laboratory quality throughout...Moderately priced. Test leads are furnished. 5 other Hickok oscilloscopes are available.



Model 385R: DC to 4MC, within 3db. .075

RMS volts per inch sensitivity. Sweep circuit

oscillator; 3 cycles to 50 KC. Input imped-

ance: vertical and horizontal amplifiers; 2.2



megohms — 25 mmf. Features replaceable circuit sections. High quality throughout. MODEL 385 R

Also available in portable, moisture-proof

cose with telescopic light shield as preferred by field engineers.



TECHNICIANS' OSCILLOSCOPE 5-Inch Portable or Rack Mount

> Model 670R: DC to 600 KC, within 3db. Useable to beyond 2MC. .015 RMS volts per inch sensitivity. Sweep circuit oscillator; 3 cycles to 50 KC. Fixed sweep frequencies; 30 and 7875 cycles. Input impedance: vertical, 2.2 megohms—15 mmf; horizontal, 1 megohm — 35 mmf. Features illuminated

MODEL 670R

calibrated screen. Also available in portable case as Model 670.



Ammeters, Milliammeters, Microammeters, Voltmeters, Millivoltmeters, Volt-Ammeters Thermo-Meters are contained in a phenolic case lined with heavy steel shell which shields from the effects of stray magnetic fields. Scale divisions are spaced equal distances apart. Accuracy within ½ of 1%. On special order, Model 14 can be supplied with a calibration chart to provide accuracy to 0.2%. Also available is a complete line of pocket portables with accuracies to 0.5%.

**MODEL 14** 

The many special movements developed by HICKOK are: electrodynamometers, self-contained frequency meters, galvanometers, true logarithmic deflections, special curves for special purposes and ruggedized designs for highest shock tests. Full technical information on the complete line of HICKOK instruments and test equipment is available on request. Kindly list details of your requirements and ask for Catalog No. 28.



#### **MICROVOLT SIGNAL GENERATOR** 125 KC to 175 MC On Fundamentals

Model 295X: Ideal for mobile radio and other communication equipment design and maintenance. Output 0.1 microvolt to 100,000 microvolts. 125 KC to 175 MC continuous on fundamentals. 400 cycle modulation—approximately 30%. Attenuation down to 0.1 microvolt—no external attenuator pad required. Vernier Control permits

hairline settings. Silverplated copper cage shielding. Test leads are furnished.

### THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10606 Dupont Avenue

**Cleveland 8, Ohio** 

Manufacturers of the World's Most Complete Line of Electrical-Electronic Test Equipment

#### Radio Propagation (Continued from page 101)

tennas. If we were to look at a section of this volume through the great circle plane between transmitter and receiver, it would be a Vshaped section with the bottom of the V formed by the intersection of the lines tangent to the earth from the transmitter and the receiver. The volume of interest lies within the V.

According to the scattering theory each blob in this elevated volume of space scatters energy. The total scattered field strength at a point is the integration of the contribution of each blob over the entire volume of space If the scale of turbulence, or the size of the blob, is small with comparison to a wavelength, the blob scatters energy like a dipole oriented along the incident electric field. If the scale of turbulence is large compared with a wavelength, energy is scattered mainly forward. Thus, if each blob were to be considered as a radiating antenna, the beam angle would be a function of the scale of turbulence. The larger the scale, the narrower the beam angle.

#### Sporadic E

Since the inception of regular television broadcasting many viewers have reported reception, occasionally, at distances greater than 200 mi. In a survey<sup>7</sup>—of some of these reports it was concluded that one of two modes of propagation, depending upon distance, was responsible for these anomalus receptions. Where the transmission paths were between 200 and 500 mi. in length tropospheric propagation was usually indicated, while for path lengths between 500 and 1600 miles, single-hop reflection from the sporadic-E region of the ionosphere was mainly in evidence.

To enumerate some of the differences to be expected between tropospheric and sporadic-E transmissions, it may be noted that skip distance does not generally apply to tropospheric propagation while it is a characteristic of sporadic-E reflection. Sporadic-E propagation will decrease with increasing frequency while the opposite is true of the tropospheric phenomena. The rate of occurrence of signals propagated through the troposphere will decrease with increased path length while those due to sporadic E will be most numerous at distances of around 1000 mi. Tropospheric propagation over extraordinarily long paths would necessitate proper atmospheric conditions over a long path which, as has been mentioned, is rather unlikely over land. On the other hand, sporadic-E transmission would depend upon conditions in the ionosphere only over the midpoint of the path.

The importance of sporadic E is not so much in the extreme distance a station may be received but rather in the interference that may be caused stations 1000 mi. or more apart. In this sense then the higher ordered TV channels will have less chance of interference from this source since the probability of reflections from the ionosphere decrease with the higher frequencies.

Several theories have been advanced concerning the production of sporadic E. Attempts to correlate sporadic E with meteor showers, corpuscular eminations from the sun, and thunderstorms have all met with but little success, as reported by various investigators<sup>8</sup>. Although the mechanism causing sporadic E is not understood, several of its characteristics have been tentatively determined. In the northern hemisphere there appears to be a maximum incidence of sporadic E in the months of June and July, with a secondary maximum in December and January. The equinoctial months show a minimum level. Some studies indicate that sporadic E may be more prevalent during the sunspot cycle minimum.

#### **Experimental Data**

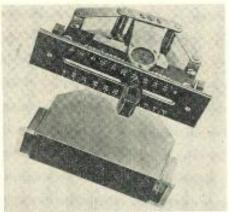
In an effort to increase knowledge concerning propagation it has been found desirable to record field strength under various conditions of climate and terrain from a variety of geographical locations over extended periods of time. Accordingly, a field strength recording program in the VHF range has been carried on by the Central Radio Propagation Lab for several years.

One of the sites at which recordings are being made, the Cheyenne Mountain Field Station located near Colorado Springs, Colo., is of special interest because of its uniqueness. Five transmitters, operating at frequencies of 92, 100, 192.8, 210.4, and 1046 MC, are located on Cheyenne Mt. which rises abruptly more than 3000 ft. above the adjacent plains to the east. The 92 and 100-MC transmitters have an available continuous power output of 3 kw while the

#### **New Products**

#### **VERTICAL ATTENUATOR**

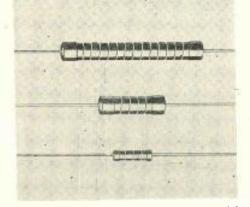
A new low cost vertical attenuator covering the audio range accomplishes straight-line, finger-tip operation by a linkage system that eliminates backlash and stickiness. Both plug-in and



fixed-panel designs are available. Standard units are in 20 and 30 step sizes -20-step units are at 2 db; 30-step at 1.5 db. Ladder "T" or potentiometer circuits are standard. Impedance values for ladders range from 30 to 600 ohms -250,000 ohms for potentiometers. Completely shielded, dust-proof construction. Tech Laboratories, Inc., 16 E. Edsall, Palisades Pk., N. J. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-2)

#### RESISTORS

Metal film resistors (Noblette) with axial leads are now available in ½, 1.0,



and 2.0 w. ratings. Resistance range, 1.0 ohm to 1.0 meg in  $\frac{1}{2}$  w., 1 ohm to 5 meg in 1.0 w., and 2 ohms to 10.0 meg in 2.0 w. Tolerances available,  $\pm 1\%$ ,  $\pm 2\%$ , and  $\pm 5\%$ . 1955 catalog available. Continental Carbon, Inc., 13900 Lorrain Ave., Cleveland 11, O. (Inquiry Card #6-2)

#### Summer Course at M.I.T.

A two week Special Summer Program in "Switching Circuits" will be offered by the Massachusetts Institute of Technology from June 20 through July 1 during the 1955 Summer Session.

### Now-an entirely new kind of signal cable!

## PHELPS DODGE PIRAIE COAXIAL CABLE

with exceptional Community Antenna System characteristics

PHELPS DODGE SPIRAFIL CABLE 3/8 700

Spirafil coaxial signal cable was developed by Phelps Dodge as a companion cable to Styroflex coaxial cable. It is designed for specific use in applications where the precise Styroflex tape helix construction is not required.

This unique signal cable is made up of a solid copper center conductor, a solid polyethylene helix and an outer, tubular aluminum conductor.

Spirafil cable is particularly adaptable to use in community antenna systems. For this purpose, it has a number of outstanding features—no radiation, low attenuation, excellent frequency response, uniform electrical properties over wide temperature variations and unlimited operating life.

Spirafil cable is one of that select group

of cables assigned the highest life expectancy rating.

These special Spirafil characteristics, together with the economical cost of the cable, also make it suitable for certain applications in VHF, UHF and microwave communications circuits.

Spirafil cable is manufactured in 1000foot, continuous lengths without joints. A Habirlene(polyethylene)jacket is supplied for protection against corrosion when the cable is to be installed in underground ducts, under water, or buried directly in the ground.

For special bulletin describing new Spirafil coaxial cable, write Dept. TT.



PHELPS DODGE COPPER PRODUCTS CORPORATION 40 WALL STREET, NEW YORK 5, N.Y.

#### Radio Propagation (Continued from page 376)

other three transmitters have a 4 kw rating.

Four fixed receiving sites are located at distances ranging from 49 to 227 miles from the transmitters. These sites were chosen to provide propagation measurements over paths that were within the radio horizon, near the radio horizon, a moderate distance beyond the horizon, and far beyond the horizon. A mobile receiving-recording system has also been used for additional investigations of field strength at distances well beyond the horizon up to as great a distance of 616 mi.

Samples of typical data which have been obtained in the above mentioned program are of interest. Fig. 4 shows the 9-10 A.M. hourly median field strength for a period of one year. The transmissions were from KPRC and FM station operating at 97.3 MC in Houston, Texas. The field strength recordings were made at the Univ. of Texas in Austin, a path distance of 147 mi. The radio horizon on this path for a standard atmosphere is approximately 30 mi. from the transmitter. In this figure one may observe the non-systematic change which occurs from day to day and thus get an insight into the difficulty which would be encountered in attempting to predict the field strength at any given position and time.

In Fig. 5, which gives the monthly median received field strength for the same station, KPRC-FM, a typical seasonal trend may be seen. This seasonal trend is due to a normal increase of lapse rate of index of refraction in the summer atmosphere. This is also indicated by the larger value of k in Fig. 2. It is apparent from Fig. 5 that a variation of field strength occurs with respect to the hour of the day. This diurnal variation (Fig. 6) shows that higher field intensities are found in the late afternoon and at night when temperature inversions build up and the humidity lapse rate increases; lower values are found in the mid-portion of the day when convection removes these conditions.

Correlation between meteorological data and received field strength is demonstrated in Figs. 7 and 9 which present data obtained at Haswell, Colorado, a recording station located 96.6 miles from the transmitters on Cheyenne Mt. It is apparent that around 2330 MST some element is greatly affecting the strength of the received signal in that the transmission loss becomes much less than it had been previous to this time and also much less than the monthly median value. A look at the meteorological data for the same period indicates a much greater than normal lapse rate for the index of refraction. In fact, the lapse rate is great enough to produce a duct near the surface. It is unfortunate that the 100-mc receiver ceased to operate shortly after the ducting period began; however, the fields received on the 192.8 and 1046-mc receivers indicate that the duct remained in effect until 0730 MST or later the next morning.

Fig. 8 is a field strength recording of 92 and 1046 MC over a transmission path length of 393 miles showing the relative magnitude and rapidity of fading at this distance. Scattering should be the predominant mode of propagation over the path. The recordings were made with a receiver having a short time constant in the metering circuit and a fast chart speed. Although the amplitude of fading is about the same at both frequencies the fading rate is greater at the higher frequency, being roughly proportional to the frequency. The sharp spikes which may be seen on the 92-MC transmission but not on the 1046-MC trace are believed to be reflections of the signal from ionized meteor trails. They are not apparent at the higher frequency presumably because the meteor trail has insufficient ion density and is thus transparent to this higher frequency.

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  8. M. G. Morgan, "A Review of VHF Iono-spheric Propagation," Proc. IRE, Vol. 41, No. 5, pp. 582-587, May, 1953.

#### **New Products**

#### FIELD INTENSITY RECEIVER

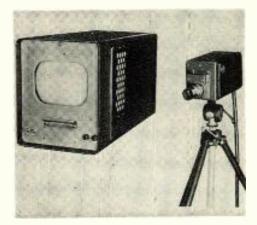
The Model R, field intensity receiver covers the microwave range 950 to 11,260 MC with four interchangeable plug-in r-f tuning units. The instrument features single dial frequency



control with a direct reading dial and double-tuned r-f pre-selection. The unit receives AM, FM, and pulse, reads directly in db, and provides separate audio and video outputs. It provides for external metering and recording, and connectors for external i-f attenuators. Klystron voltages are automatically regulated and tracked with the oscillator. Polarad Electronics Corp., 43-20 34th., Long Island City 1, N. Y. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5-1)

#### TV SYSTEM

The RCA closed-circuit TV system is made rugged for continuous round-theclock industrial service. It reproduces sharp, TV pictures of 550 to 600 line resolution. The system combines a 10in. monitor kinescope, power supply, and all monitor and camera controls in a dust-tight metal case smaller than the average TV set. The ITV camera, built around a "Vidicon" TV pickup tube, can be located up to 500 ft. from the



monitor-control unit. Dimensions: Monitor-unit, 273/4 x 163/8 x 1311/16 in. TV Camera, 111/4 x 51/2 x 51/8 in. Engineering Products Div., Radio Corp. of America, Camden, N. J. TELE-TECH & ELECTRONIC INDUSTRIES. (Ask for 5 - 3)



COMPLETE FACILITIES FOR TV STATIONS, MANUFACTURERS & LABORATORIES Finest color film chains, colorplexing, transmitting, analyzing, monitoring, testing equipment.



#### 617-BR AUTOMATIC BALANCE CONTROL FOR ALL COLORPLEXERS

#### (Regardless of Manufacture)

An ingenious circuit locks the entire encoding equipment in balance within 20 seconds after being turned on. Thereafter balance is held under even the most difficult operating conditions.

63

1073-A SINE-SOUARED

SQUARE WAVE GENERATOR

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**302-AR DRIVE GENERATOR** 

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609-ER AUTOMATIC BALANCE CONTROLLED COLORPLEXER The only colorplexer which incorporates Auto-matic Bolonce Control. Eliminates oll drift problem. Colorplexer outomatically and in-stantaneously in balance of all times.

CHROMASCOPE Signal Certification Experiment. Activities many area the performance without the photo er-rors of color TV aquipment. Persons on a cath-ode ror screen a continence polar plot of the ode many screen a continence polar plot of the ode many screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen a continence polar plot of the ode ror screen activities of all the plots in a con-

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VIDEO TRANSMISSION TEST EQUIPMENT

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1071-AR WINDOW GEN.

OSCILLOSCOPE CAMERA

MODEL 1521-A

1041-BR STAIR STEP GEN.

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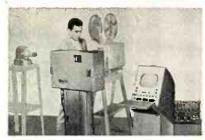
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1070-BR MULTI-BURST

FREQUENCY GEN.



700-A 3V COLOR FILM CHAIN Finest in quality, lawest in price. 3V provides greatest latitude in selection of color films. De-signed specifically for broadcast application, requires little space. Multiplexes 35 or 16mm film, slides, apaques.



#### 1604-AR PHASE MAGNIFIER Expanded phose indicator of a signal for measurements of differential phase to .2° or better accuracy at chroma traquencies.



636-B CHROMALYZER Portable Precision Color Bar Generator for checking color broadcast studio ond transmission facilities, receivers and monitors. Can be tied into a system. Provides complete composite color signals at 100 or 75% chroma.



#### "Cypak"

#### (Continued from page 97)

the name connotes, will deliver an output following an input until such time as a second input is fed into the system; the second input stops the output. Hence, given input, a, the unlimited TIME function will deliver an output until input b is applied.

The first objective established in the design of Cypak systems was the elimination of all moving mechanical parts to assure longer life, higher reliability, and a high degree of freedom from environmental influence; second, was availability and reasonable ease of manufacture; and third was cost. The end product had to be produced at a cost equal to or less than existing systems. These objectives have prompted the use of semiconductor and magnetic-core devices for components of Cypak systems.

The AND and OR functions are conveniently accomplished by semiconductor diode networks. Selenium diodes, and dry-plate units have been perfected for use in magneticamplifier circuits. They have proved highly reliable and relatively inexpensive. If environmental conditions preclude the use of selenium diodes,

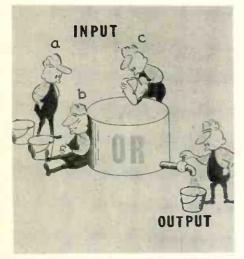


Fig. 2: OR element's function is to obtain output when any one of a number of inputs is applied

silicon diodes can be used, but at somewhat higher cost.

The components to accomplish NOT and TIME functions are more complex since they require information storage, and amplification. To meet the design objectives, special magnetic amplifiers and transistors with appropriate circuit components have been used. Because there is often a weakening of signal through diode networks, it is desirable to use magnetic or transistor amplifiers to maintain the original signal strength throughout the system.

The principal method employed to maintain comparable cost was the

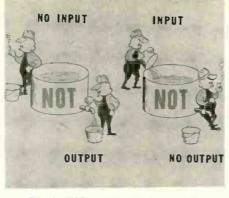


Fig. 3: NOT, an output can be obtained only when no input is applied

use of very low power levels in the decision-making or logic components of the Cypak system. It is the current thinking that these power levels should be as low as 10 milliwatts or even less.

Amplification from the logic to the power level is preferably accomplished by magnetic amplifiers. However transistor amplifiers may be used, and there may be some cases where, due to the large amount of power to be handled, a standard

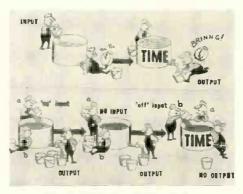


Fig. 4: TIME, two types of time functions, Limited and Unlimited

electromechanical contactor would be desirable. This use of low power level inputs also makes it possible to utilize unique push buttons and limit switches that have no moving functional parts or contacts. Photo transistors, for example, can be easily integrated into a Cypak system without intermediate amplification.

#### **Art Competition at Wescon**

The West Coast Electronic Manufacturers Association is sponsoring a competition in art as applied to electronics during the 1955 WESCON Show in San Francisco, August 24th-26th. Individuals employed by electronic manufacturers are eligible to compete for cash and vacation trips in a contest planned to augment the Association's annual scholarship program. Entries in the competition will be exhibited at WESCON, and auctioned to the highest bidders. Proceeds from the sale will go to the WCEMA Scholarship Fund.



**Douglas C. Lynch**, formerly executive vice-president of Brush Electronics Company, Cleveland, has been named President of the company.

**Perry R. Roehm** has been appointed a Vice President of Norden-Ketay Corporation of New York. Mr. Roehm will be responsible for coordination of sales and product engineering.

Major General Gordon P. Saville, USAF (ret'd) has been appointed Director of the newly-created Office of Military Requirements of The Ramo-Wooldridge Corporation of Los Angeles.



G. P. Saville

G. Yarbrough

Gramer Yarbrough has been named sales manager of the newly created electronics division of the Elgin National Watch Co., Elgin, Ill., which operates the American Microphone Co. plant. Mr. Yarbrough is a son of F. A. Yarbrough, founder of American Microphone Co. who retired in February after selling his company to Elgin.

**Robert L. Borchardt** has been appointed assistant manager of Motorola's Technical Information Center in the company's Communications and Electronics Division.

Dan F. Meadows has been appointed to the position of Commercial Manager for the Broadcast Equipment Division of Sarkes Tarzian, Inc., Bloomington, Ind.

Todd Products Co., Inc., Mount Vernon, N. Y. has elected David Easton as Chairman of the Board of Directors, and Joseph L. Heller as Secretary.

Dr. Myles L. Mace, Professor Harvard University Graduate School of Business Administration, will become Vice President of Litton Industries, Inc., of Beverly Hills, California.

Major General Francis H. Lanahan, U. S. A. (Ret.) has been elected Vice President and General Manager of Federal Electric Corporation, a subsidiary of International Telephone and Telegraph Corporation.

Robert C. Overstreet has been elected president of Tinnerman Products, Inc. and John E. Potter, formerly comptroller, has been elected secretary and treasurer of the large fastener manufacturing firm.

## MAKE **KENYON** YOUR SOURCE OF SUPPLY FOR STANDARD and SPECIAL TRANSFORMERS



#### T LINE

The famous Kenyon T Line has long been popular with manufacturers who require the finest transformers at the lowest possible cost.

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 ML meets all MIL-T-27 requirements.

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Improvements in transformer construction have produced a process for molding an insulated covering which accomplishes hermetic sealing in a finished product amazingly small and light.

- Less volume and weight.
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Our engineering department is at your disposal for assistance in design, construction and favorable quotations. Inquiries and specifications receive prompt attention.

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#### **Designing an Antenna**

distance as shown, the magnetic lines of the field would travel down the page and be horizontal. Therefore, other things being equal, the longer the bar in the horizontal direction, the greater the pickup. When the bars are displaced as shown by the dotted lines, the horizontal distance is less; therefore, the flux is less, but since it has more length in the vertical (on the page) direction, a line is "captured" earlier and released later. Since a line cuts the loop wires as soon as it is "captured" and does not cut the other wire until it is released, the phase difference between the wires on each side of the loop is increased. This increased phase difference partially compensates for the reduction in flux density. The pickup for a signal at right angles to the above, with the bars moved, is greater because of the longer magnetic path in line with the flux lines, and it is reduced by the slightly less phase difference as explained above. The result of the above is that in order to get the necessary quadrantal compensation by changing the ratio of fore-and-aft to sideways pickup, the bars have to be moved so far that the effective area and, therefore the pickup is materially reduced.

The present loop has the bars parallel to, and at right angles to, the line of flight. But the quadrantal compensation is accomplished by changing the length of additional cross pieces that are added at the ends of the collector bars. By making these fairly long, we get good sensitivity because we are using most of the effective area of the opening in the aircraft skin. We plan to stock these cross pieces in a number of lengths so that two pairs that will give the required compensation can be selected for each installation. The antennas would be interchangeable in all installations, except for these cross pieces which would be labeled for each different airplane and added when the antenna was installed.

#### **Octantal Errors**

Since this is a four pole device it has a number of possible sources of octantal errors. The coupling to space is by means of four collector bars so this is one source. The rotor is coupled to the collector bars through four pole pieces constituting another source. The change in inductance and coupling in the rotor is the other source. The latter source

#### (Continued from page 107)

can be compensated for by proper distribution of the winding of the rotor. This is similar to the octantal error problem in goniometers. The pole piece shape is very precisely held to close tolerance in manufacturing, to reduce errors. The error caused by the use of four collector bars is fairly small because the length is very, very small compared to the wavelengths used. However, it would be of considerable consequence because in a system having the bars parallel to, and at right angles to the line of flight, the error occurs within a few degrees of the four cardinal points. The direction of the error is such that it tends to increase the width of the null at these four points. A very large percentage of the time, the radio compass is taking a bearing on a station almost directly ahead of the airplane. Therefore, this error of two or three degrees is of much more consequence than a similar error occurring at the 45° points. The error occurs at the four cardinal points because then two of the bars are parallel to the magnetic field and have a high flux density, whereas the other two collector bars have no longitudinal flux. A small change in direction of signal arrival will not produce the required increase in flux in these two bars because since their reluctance is not zero, an appreciable "in line" length must exist to make the reluctance of this relatively long bar lower than the reluctance of the air path. The result of this is that in this region a small deviation in direction of signal arrival produces a much less deviation in the null position of the pickup loop. In the LPA-70, we have right angle compensating bars on the ends of the collector bars so this octantal error is practically eliminated, because the pickup element is not a narrow bar but has large end area.

#### **Anti-Static Operation**

One of the main advantages of this loop, second only to the reduction in drag, is its anti-static operation.

It does not project into the air stream. An insulator in the air stream develops charges which produce static as they discharge into the air. This effect is greatly reduced in our previous loops by making the housing slightly conductive but charges do develop under severe conditions, especially after the loop has been in service for some time and the conductivity has been reduced by erosion. In cases where the loop has been placed under the canopy, this is very severe because the canopy surface cannot be made conductive. The new loop is flush, so the surface is protected by the boundary layer on the surface of the aircraft and charges will be small and can be conducted off by graphite impregnation.

The LPA-70 is a magnetic antenna. The MN-60 and other iron core loops could also be called magnetic antennas, but in the new loop, the magnetic energy is picked up by the collector bars and conducted as magnetic energy to the small pickup coil in the center. This feature gives an exclusion of the electric field because only the magnetic component is conducted by the material.

The pickup is very small because it is in a concentrated magnetic field. Because of its size, it has very small effective height to the electric field, which is not concentrated, so its pickup of static is very low. Both this loop and previous models have electrostatic shields which cannot completely eliminate the static field, but this antenna, the area of which is about 2 sq. in., will pick up far less energy than the MN-60 with an area of about 12 square inches.

This paper was delivered at the 1954 National Electronics Conference.

#### **Officers Visit Sylvania**

Fourteen officers from the Industrial College of the Armed Forces visited the Great Arrow plant, Electronic Systems Division, of Sylvania



Electric Products Inc. recently as part of their curriculum in logistical studies, the Company has announced. Henry Lehne, general manager of Sylvania's Electronic Systems Division, said that the Great Arrow plant had been selected as one of the plants on the Niagara frontier for visitation by the military group because of the Armed Forces' interest in development and production facilities for electronic systems and equipment.

## TELE-TECH COUTES feathers

It's edited for, and circulated to the Electronic Chiefs

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#### **Dynamic Testing**

bration and operation are straightforward. Sound pressure levels of the order of 150 db have been obtained, utilizing single frequency or random noise source inputs. The operation of the sound chamber may be observed from Fig. 7. A more complete description of the chamber is given in References 1, 2, and 4.

#### **Test** Results

Limitation of space precludes the presentation of all the test results obtained for the components reported upon herein. Therefore, only some more significant findings are summarized in the following sections. Additional information may be obtained from the references cited in each section.

#### A. TUBES

#### 1. Vibration

A group of twenty-four 6J5WGT tubes were investigated. Preliminary tests showed that the major resonant frequency of the tubes occurred at approximately 220 cps. At this frequency, the interior structure vibrated as a whole in the fundamental cantilever mode relative to the base of the tube. The most critical orientation was that wherein the plane determined by the grid side rods was normal to the direction of vibration.

Vibration life tests were carried out under the above conditions at acceleration levels of 5, 10, and 20 g. Specification MIL-E-1B limit values of microphonic output and plate currents were selected as test end points. Test results based upon the plate current failure criterion are

Fig. 8: Results of vibration life test

#### (Continued from page 95)

shown in Fig. 8. Seven of the tubes failed initially and the average time to failure of the remainder was as follows:

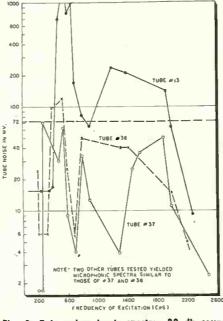
- at 20 g: 3 hrs., 17 mins.;
- at 10 g: 6 hrs., 18 mins.;

at 5 g: more than 7 hrs., 20 mins.

Based on the microphonic output failure criterion, 16 of the 24 tubes malfunctioned before the life tests could be started; only two tubes withstood 8 hrs. of vibration successfully. Further details regarding these tests are contained in Reference 3.

#### 2. Acoustic

Samples of four types of tubes





(6J5WGT, 6095/CT, 6099/CT, and 6100/CT) were subjected to acoustic tests. In the absence of any applicable acoustic testing specification, the circuitry and limits given for vibration testing in the MIL-E-1B Specification for the tube types were utilized. Single frequency excitation tests permitted the microphonic response of the tube as a function of frequency to be determined. An example is shown in Fig. 9 for a 6J5WGT sample. White noise excitation tests at successfully increasing sound pressure levels yielded data pertaining to the response of the tube in a general noise environment. A comparison of microphonic outputs of samples of each of the four tube types at increasing sound pressure levels is shown in Fig. 10. It was found that moderately high sound pressure levels, on the order

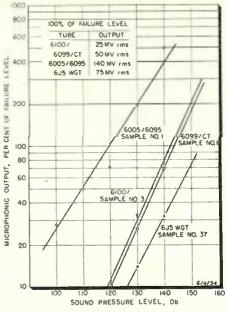


Fig. 10: Microphonic output of various tubes in high intensity sound field; white noise

of those found in the proximity of existing aircraft, can produce tube malfunction. The need for further work in this area is indicated. Further test data may be found in References 1, 2, and 4.

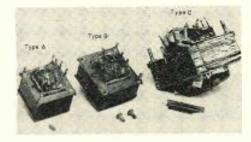
#### **B. RELAYS**

#### 1. Vibration

Samples of six types of relays were vibrated in each of their principal directions at frequencies between 20 and 2000 crs, and at acceleration amplitudes up to 20 g. The relays and the tests are described in Reference 5. All six relay types were hermetically sealed and were designed to meet military specification. They ranged in weight from approximately 1 oz. to 5 oz., and all were designed to operate on 28 v. dc (nominal). Each type of relay was tested in both the energized and de-energized conditions.

In general, it was found that the relays malfunctioned much more frequently when tested in the deenergized condition. The majority of the malfunctions were caused by opening of closed contacts rather than closing of open contacts. No mechanical failure of a relay or its mounting was encountered during the tests, and in nearly every case of malfunction, the relay resumed

Fig. 11: Transformer failures, A, B, C types



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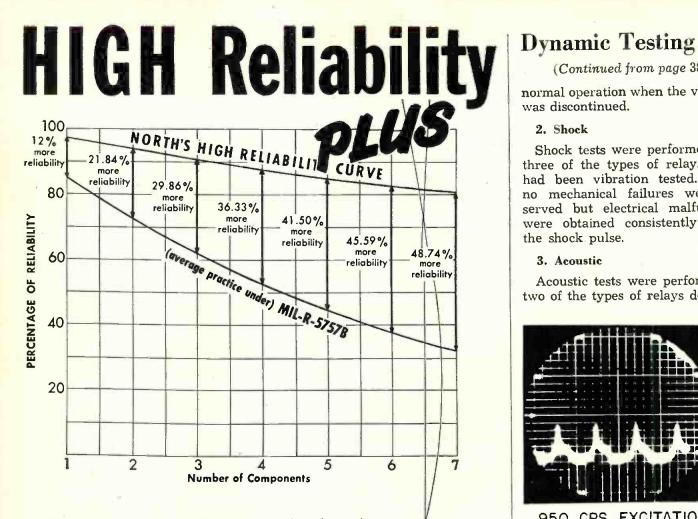
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(Continued from page 384)

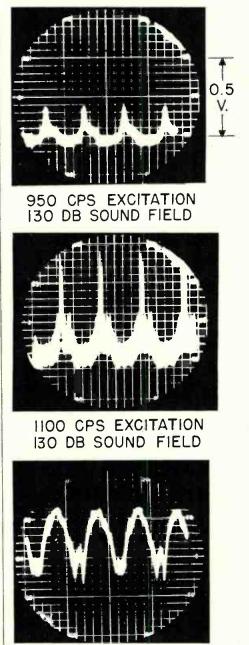
normal operation when the vibration was discontinued.

#### 2. Shock

Shock tests were performed upon three of the types of relays which had been vibration tested. Again, no mechanical failures were observed but electrical malfunctions were obtained consistently during the shock pulse.

#### 3. Acoustic

Acoustic tests were performed on two of the types of relays described



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Fig. 12: Scope tracings of contact resistance increases for relays under acoustic test

above and also on a sample of a sensitive polar relay. The acoustic

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#### **Dynamic Testing**

#### (Continued from page 386)

tests produced no failures, and malfunctioning was observed only for the sensitive polar relay. It occurred when the relay was completely deenergized and was due to inadvertent opening of closed contacts. However, variations in relay contact resistance were obtained much more readily. Examples of contact resistance increases as observed on the oscilloscope are shown in Fig. 12. The oscillograms shown were obtained by connecting a dc oscilloscope across closed relay contacts having 1 a. dc flowing through them. Any change in contact resistance is then indicated by a deviation from the base line. The three oscillograms shown were taken in the region of the resonant frequency of the relay armature. The indications of contact sliding, lifting and finally bounce are present in various degrees in all three. These effects of changing contact resistance and the resultant electrical noise could easily obscure low level signals, or, in the case of servo application, cause random response or hunting.

It is recommended that additional investigations should be made of the effects of acoustic excitation on electronic components and equipments.

#### C. TRANSFORMERS 1. Vibration

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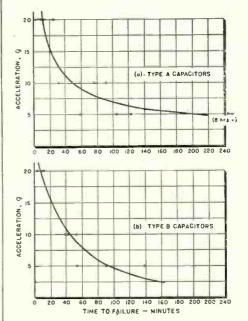
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Five types of filament transformers were tested. Three of the transformer types were 60 cps, open-

#### Fig. 13: Capacitor vibration test results



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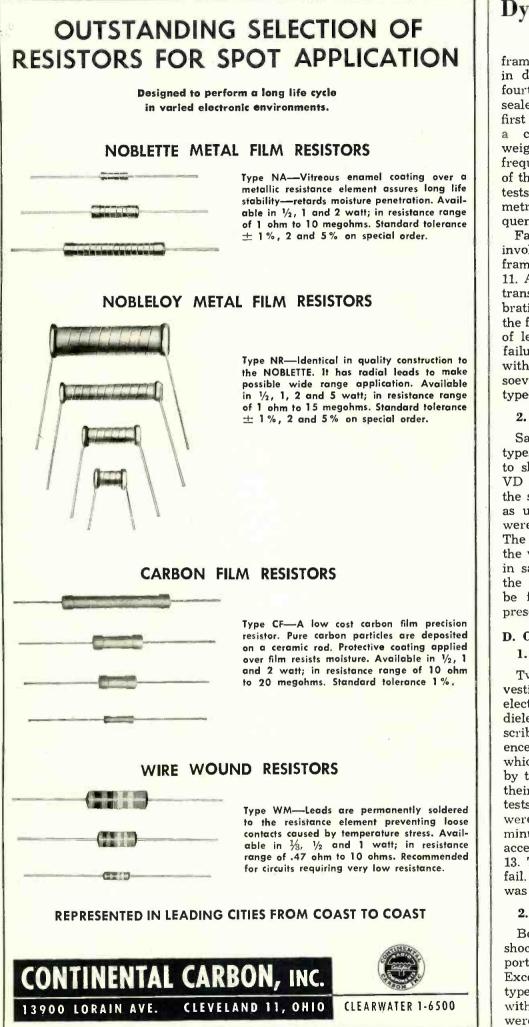


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#### (Continued from page 388)

frame models, which were similar in design, but different in size. A fourth type was a hermetically sealed counterpart of one of the first three, while the fifth type was a completely impregnated, light weight, 400 crs model. No resonant frequencies could be found for any of these transformers. Vibration life tests were conducted at 20 g at geometrically progressing discrete frequencies between 10 and 2000 crs.

Failures for the first three types involved the mounting studs or frames; examples are shown in Fig. 11. An inverse relationship between transformer size and life under vibration was observed. Failures of the fourth type were due to breaking of leads to the headers, caused by failure of the mounting bracket within the case. No failures whatsoever were observed for the fifth type.

2. Shock

Samples of three of the above types of transformers were subjected to shock tests also. The Barry 400 VD Drop Tester was used to apply the shock. The same failure criteria as utilized in the vibration testing were applied to the shock testing. The shock tests correlated well with the vibration tests, as they resulted in same type of failures. However, the transformers were indicated to be fairly insensitive to shocks as presented by the drop tester.

#### **D. CAPACITORS**

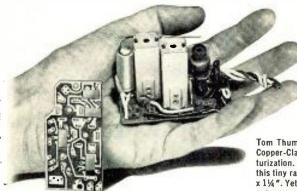
#### 1. Vibration

Two types of capacitors were investigated: a miniature tantalum electrolytic capacitor and a Teflon dielectric capacitor. They are described more completely in Reference 7. Tests were conducted in which capacitors were (a) supported by their leads, and (b) clamped by their bodies. In the lead-supported tests, failures involving the leads were obtained in approximately 10 minutes at 20 g, and longer at lower acceleration levels, as shown in Fig. 13. The clamped capacitors did not fail. No internally generated noise was detected during the vibration.

2. Shock

Both types of capacitors were shock-tested also in the lead-supported and clamped configurations. Except for a few isolated cases, both types of capacitors successfully withstood all the shock tests which were performed. The tests included COPPER·CLAD PHENOLITE

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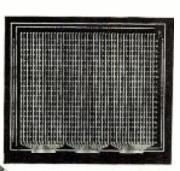


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#### **Dynamic Testing**

(Continued from page 390)

200 shocks on the Barry machine and 300 shocks on the pendulum shock machine. Nearly all of the 200 shocks on the Barry machine consisted of drops from 5 ft. with table configurations ranging from 12 blocks to 6 blocks. The 300 shocks on the pendulum impact machine included: 25 shocks at 125 g peak; 25 shocks at 250 g peak; 150 shocks at 750 g peak, and an additional 100 shocks at 125 g peak.

#### E. POTENTIOMETERS

A single type of potentiometer was investigated with respect to vibration, as described in Reference 8. It was a wire-wound model, 1.75 in. in diameter, and rated at 4 watts. Malfunctions, due to contact resistance variations, and failures, due to shaft rotation, were produced by vibration. The potentiometer samples malfunctioned most readily when vibrated perpendicular to their shafts. Most critical frequencies were those between approximately 100 and 300 CPs. In this range malfunctions started to occur at approximately 5 g acceleration amplitude. It was also found that changes in the potentiometer shaft configuration had a pronounced effect on the occurrence of malfunctions. Increasing the mass of the potentiometer shaft, as by lengthening or adding a pointer knob, tended to produce shaft rotation malfunctions at lower acceleration levels.

Mechanical environmental tests were performed on the five types of components described above. These tests generally did not follow those described in existing specifications; rather, they were developed individually for each type of component to permit the component to be evaluated for applications under airborne service conditions.

Among the conclusions and recommendations offered as a result of these tests are the following:

1. To improve the reliability of electronic equipments, the relationship between suitable indices of disturbance, and other suitable indices of failure probability or survival must be determined. A promising attempt to determine such a relationship was made in the tube vibration tests reported, wherein tube life, based upon a plate current failure criterion, was determined for three levels of vibration at the resonant frequency. However, to obtain a statistically significant rela-

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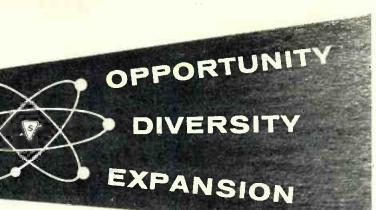
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#### **Dynamic Testing**

(Continued from page 392)

tionship, a greater number of levels should be investigated and a larger number of tubes should be tested at each level.

2. To a somewhat lesser extent, the latter recommendation applies also to many of the other components tested.

3. Since it was found that doublethrow relays were able to withstand vibration more successfully when energized, it is recommended that the relays be used in the energized condition whenever a choice is possible.

4. The great majority of the transformer failures obtained involved the mounting studs and the base frame. It was found that the openframe transformer models were assembled with tie bolts through the laminations at the center legs only. Studs were welded to the corners of the base frame to provide mounting means. The failures of the mounting studs and base frame can be overcome, it is believed, by utilizing a tie bolt at each of the four corners, and allowing the tie bolts to extend far enough so that they also serve as mounting studs. This is a practical solution in the sense that the necessary holes in the corners of the laminations already exist, since standard three hole "E" laminations are used.

5. Capacitors always should be clamped to the chassis or a terminal board, rather than supported by their leads.

6. Potentiometer shaft lengths should be reduced to the minimum permissible and knobs should be made as light as possible. Any unnecessary mass on the potentiometer shaft increases the tendency for inadvertent shaft rotations to occur during vibration.

7. The effects of acoustic excitation on electronic components and equipment should be investigated further. The acoustic investigations reported in this paper were designed to be only preliminary in nature.

(This paper was presented at the 1955 IRE Convention.)

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- In A.I.L.E., FeD., 1955.
   R. H. Jacobson and F. Mintz, "Evaluation of Mechanical Design Level of Electronic Equipment Leading to Vibration and Shock Criteria," Armour Res. Foundation, Chi-cago, Contract No. AF33(616)-223, Techni-cal Phase Report No. 2, Jan. 27, 1954 (Re-port No. 19).

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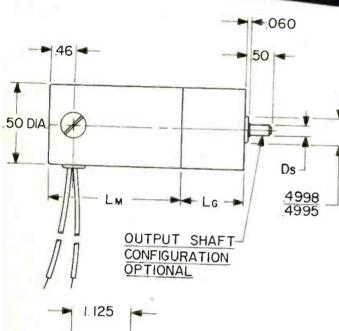
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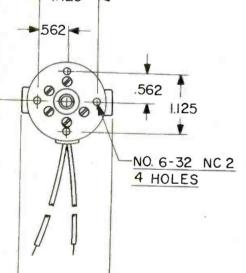
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320	24.7	21.8	16.0	12.6	
240	34.9	31.1	24.7	19.1	9.9
160	55.8	49.5	34.9	27.8	14.2
80	104	93.0	73.4	57.2	20.1
40	255	224	160		49.5
20	510	456	364	112.3	99
16	655	579	408	288	224
8.0	1315	1160		363	288
3.50	3290		922	737	579
3.1	5290	2630	2345	1880	1490
		3290	2345	1675	1315
2.5			3290	2630	2105
2				3290	2345
1.6					3290

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STILL FOR EED-REIM	.94 TO 19	19 TO 456	510 TO 1032	1165 TO 3290	
GEAR TRAIN LENGTH-LG.	1-15/16 IN.	1-3/16 IN.	7/8 IN.		
SHAFT DIAMETER-DS-			1/0 IN.	3/4 IN.	
Contraction Contraction Contraction	.281 IN.	.187 IN.	.187 IN.	.187 IN.	

Speed will vary within  $\pm$  10% of nominal value.

Ambient temperature range -50°C to + 71°C.

The above ratings are for continuous duty with Class "A" insulation.

Higher ratings may be obtained with high temperature construction or with intermittent duty requirements.

Add  $\frac{5}{8}$ " to length for thermal protector if required.

Maximum stall torque of gear train-70 in. Ibs. Maximum continuous duty torque-368 oz.-in.

Available in 6V, 12V, 28V, 115V DC or 28V, 115V AC.

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# **Powdered** Iron

(Continued from page 95)

effectively decreases power losses. The intensity of the power losses which still remain is determined by the properties of the various powders as follows:

1. Hysteresis loss. This is power expended to move magnetic domain walls back and forth every cycle against the forces of crystal anisotropy, magnetostriction, non-magnetic inclusions, etc. This loss is generally small for materials of a high degree of purity, but is extremely small for the unannealed carbonyl iron powders, for reasons not well understood. These carbonyl iron powders are mechanically hard but magnetically soft. However, hysteresis is not important for most radio applications because of the smallness of the magnetic fields produced by most coils.

2. After-effect or residual loss. This is power expended to produce alternating magnetization against forces of a frictional type characterized by relaxation times. These forces retard the induced magnetization and thus create a phase shift between the applied field and the field in the core<sup>3</sup>. The physical reasons for this loss are not understood but it is often the predominant core loss at medium frequencies. This loss, too, is extremely low in those carbonyl iron powders which have very low hysteresis.

3. Eddy current loss. This is the power expended by the applied alternating magnetic field in creating

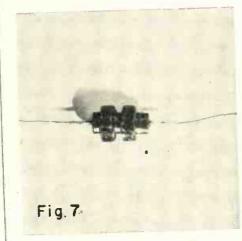


Fig. 7: Radio frequency choke

electric currents inside each particle. If particles would not be well insulated from each other, eddy currents would also flow from particle to particle. Since alloy powders and oxide powders have a lower conductivity than iron, they show much

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lower eddy current losses. The losses may be reduced by controlling particle size since the smaller the particle, the smaller will be the eddy current losses, all else being equal. The particle sizes shown in Table I are published for a series of hydrogenreduced powders and one of carbonyl iron powders<sup>4</sup>. (These are mean particle diameters based on weight or  $= \Sigma d_1^4 / \Sigma d_1^3$ .)

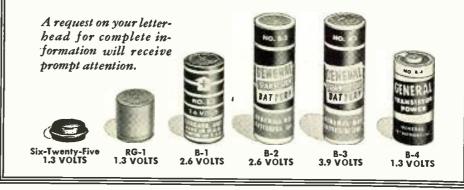
	TAB	LEI	
IRN			
TYPE NUMBER	DIAMETER MICRONS	TYPE SYMBOL	DIAMETER MICRONS
31	40	L	20
3	20	HP	10
21	20	с	10
2	15	1	9
15	15	<b>GQ-4</b>	8
6	8	Ε	8
16	8	GS-6	5
9	8	TH	5
8	6	w	3
17	5	SF	3

All of these cover thus a relatively narrow range. One can conclude that larger particles give eddy currents which are too high. Particles smaller than about 1 micron are usually found to be too prone to oxidation or too difficult to surround with an insulating coating. It is also clear, as well as borne out by experience, that particles must be round, if they are to be surrounded by the thinnest and most efficient coating; and thin, to permit high concentration of iron and efficient, to prevent eddy currents between particles. The effectiveness of insulation coating can be determined by measuring the volume resistivity of a molded core. It is interesting to note that while iron has a resistivity of 10-5 ohm-cm, our American core industry is able to mass-produce cores with resistivities of 10<sup>+10</sup> ohm-cm and above, an increase by a factor of  $10+^{15}$  and higher. This is in spite of the fact that pure metallic iron may occupy 80% of the core volume, while the other 20% is mostly occupied by binder and pores. Insulation takes up only about 3% of the volume.

4. Dielectric leakage loss. This is power expended by currents produced by electric fields in the core. It depends upon coil construction and is connected with distributed capacitance. Good particle insulation will also keep it small. This loss may be visualized as deriving from the core being a dielectric with a dielectric constant and a dissipation factor. In contrast to eddy current loss, dielectric leakage loss is proportional to the third power of frequency and to the square of the inductance. Because of the latter, it becomes quite



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### 308 For product information, use inquiry card on pages 185-186.

# **Powdered** Iron

(Continued from page 397)

small for small coils as used at higher frequencies.

5. The losses in the coil winding are also very important and have been studied at length. In this discourse of iron powder it should be mentioned that iron cores generally decrease the coil losses because they permit a smaller number of turns and because they reduce leakage fields. Furthermore, it should not be concluded from the prominence here given to iron losses that these are necessarily always predominant. Quite the contrary is true. In usual applications, with an average powdered iron core, at around 1 mc for example, coil losses are several times larger than all iron losses combined.

6. Finally, there are other losses which have been found with ferrites and which may be occasionally important in powdered iron also. The following three should be mentioned: a) The dimensional resonance absorption loss. It occurs when the electromagnetic wave length inside the core is of the same order of magnitude as the physical dimensions of the core<sup>5</sup>, b) Absorption loss due to domain wall motion resonance or relaxation. This occurs when the applied frequency approaches the frequency in which domain walls would naturally oscillate<sup>6</sup>. c) Absorption loss due to spin resonance. This is also known as ferromagnetic resonance. It occurs when magnetic field and frequency approach the condition at which precession of electron spins resonates<sup>7</sup>).

In measuring the efficiency of a coil, with or without core, the concept of Q or quality factor has proved highly useful. Q of a coil is defined as the ratio of its inductive reactance to its effective resistance. It may also be termed the ratio of the coil's useful power to the lost power. It is practically equal to the magnification factor which is the ratio of the voltage across the coil, when in resonance, to the input voltage.

Powdered iron cores have found such wide use mainly because they serve to raise the Q of coils. Klapperich<sup>8</sup>, for example, describes a progressive-universally wound coil whose maximum Q is 98. After insertion of a core containing carbonyl iron type HP, the Q rises to 180. A core with carbonyl type E raises the Q to 242. These measurements were made at around 500 kc. At 10 kc Polgreen<sup>9</sup> was able to increase Q-values by a factor of as



high as 20, by the use of powdered iron cores.

A core always very effectively increases the inductance of a coil. This often effects a saving in wire which amounts to more than the cost of the core, thus justifying use of a core on that score alone.

A very attractive advantage of a core is its ability to afford a large change of inductance by a simple movement in one direction, in or out of the coil. Movable cores are used for tuning, trimming and adjustment of coupling coefficients.

Fig. 2 is a portion of a radio as used in automobiles which shows three cores used for tuning purposes<sup>10</sup>. This type of tuning is known as permeability or inductance tuning. The advantage of permeability tuners over ganged capacitor tuners is mainly the absence of "microphonic" noises which derive from vibration of the condenser plates in a moving automobile and better balance obtainable with the combination of inductance tuning and capacitance antenna such as is usual on automobiles. Under some conditions permeability tuning may also permit smaller size, lower cost and improved sensitivity. Inductance ratios of over 10:1 may easily be reached.

Special variable-pitch coils, as shown in Fig. 3, were developed to permit tuning in such a way that stations are evenly spaced from one another on the dial<sup>11</sup>.

A refinement developed by Delco Radio in 1952 was the signal-seeking feature of the tuner, an arrangement in which a push button jumps the receiver tuning from station to station automatically<sup>12</sup>.

Permeability tuning cores, such as shown in Fig. 4, are usually made from iron of high purity which is soft and thus permits compression to high density and high magnetic permeability. Densities are about 6.5 or 83% of bulk density of iron. They



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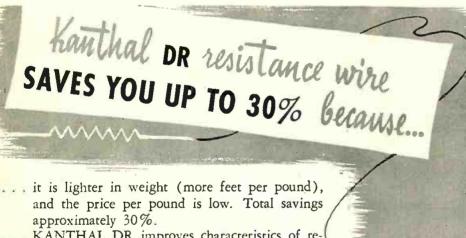
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# **Powdered Iron**

(Continued from page 399)

are molded with the pressure applied sideways. This gives a partly angular cross section which is rounded off in centerless grinders. Their length is  $1\frac{3}{32}$  in. to  $1\frac{1}{2}$  in. and their diameters are either 180 or 198 mils. At one end, for the purpose of mounting and guiding, a screw is inserted whose concentricity with the core must be carefully controlled. Spring type inserts and spaded inserts are also in frequent use.

Permeability tuning is also used in other than the broadcast band, notably for FM, at 88 to 108 mc. The cores have similiar shapes but are made from powder with very low losses, such as a combination of synthetic iron oxide powder and very fine-grained carbonyl iron powder.

Powdered iron cores have also pioneered in the magnetic loop antenna. The cored loops are mounted near the surface (above or below) of airplanes, ships or automobiles so that they are exposed to the electromagnetic waves in space. The response in the loop is then proportional to effective permeability and Q-value. Thus, small cored loops give better reception than much larger un-cored loops; besides, fields are concentrated so that closer mounting to airplane housing is possible and drag is thus reduced. One of these loop assemblies, designed about 10 years ago, is shown in Fig.  $5^{13}$ . The density of these cores is about 7.4 or 94% of that of bulk iron

#### Transformers

The most important use, by number and by weight, is in cores of transformers for radio receivers, particularly for intermediate frequency. Fig. 1 shows a typical i-f transformer<sup>14</sup>. The transformer couples the different stages of detection, amplification, etc. to each other. By moving the cores the coupling factor can be adjusted to the desired value, usually close to "critical coupling," i.e. the one giving the highest secondary current. Impedance matching or tracking can also be achieved very easily by a few turns of a screw.

I-F transformer cores are often cup shaped with center pins. Two such cores are set mirror image fashion against one another (as in Fig. 1). They have a ground-in thread which rides in a plastic frame and can be adjusted by means of a molded-in screw-driver slot on their flat face. Other i-f transformer cores

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are simply end-pressed cylinders with inserted brass screws. Lately, cores with threads ground into them by means of a centerless grinder are becoming more popular. The piece rides through the grinder at an angle against work wheel and grinding wheel. These cores are made from iron powders that give high Q-values and have good stability against temperature changes which in turn appears to depend upon efficient insulation. The demands of grinding require iron powder particles that can be dislodged without damaging a larger area, a condition fulfilled with round particles.

Recently, the problem arose of obtaining good gain stability in a marker beacon receiver. The problem was solved by several changes of which the most important was the use of powdered iron toroids of high Q in the i-f transformer. This toroid permitted insertion of a lower load resistor and resulted in much gain stability against temperature changes and magnetic fields<sup>15</sup>.

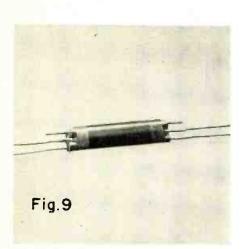


Fig. 9: R-F choke core for two coils

Radio frequency inductors, as the one shown in Fig 6, are often made by using a powdered iron cup core that shields the coil magnetically yet leaves the center available for a movable powdered iron core with, for example, a threaded shaft. Ends may be sealed off with special platelike cores. This construction is fairly shock proof and permits the coils to be mounted close together, as in miniaturized equipment.

Telephone filters often use toroidal coils and cores. Some carbonyl iron powders have performed particularly well there because of their extremely low modulation factors, i.e. close linearity of magnetization with coil current. This warrants virtual absence of harmonics and thus of interference with higher frequency channels on carrier communications.

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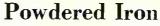
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(Continued from page 397)

Another demand successfully met by these toroids is very small temperature coefficients. However, it may be well to caution here that the art has not yet advanced to the point where just any temperature coefficients can be produced at will.

Filter cores at higher frequencies use a variety of powdered iron. Most filter coils are wound directly on the core and are often disc shaped on a cylindrical core, as shown in Fig. 7. Such cores are known as "coil form" cores and the cored coils as r-f chokes. Some are made spool shaped, as shown in Fig. 8. Many cores have wires cemented into their flat end faces. The coil wire is soldered to these wires so that the

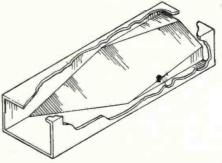


Fig. 10: Prismatic shaped UHF attenuator

### Transmitter-Receiver Field Test

Joseph H. Quick, president of the National Co. of Malden, Mass., has announced that extensive field tests will be made of the company's new light-weight (10 lbs.) transmitter-receiver unit by the fiveman expedition currently surveying the great basin at the head of Ruth Glacier, Alaska. The expedition, headed by Bradford Washburn, director. of the Boston Museum of Science, is finishing its field work in connection with the preparation of an accurate map of Mt. McKinley, highest peak in North America.

The new transmitter-receiver will be used with dry batteries and will be tested for possible future use as standard emergency equipment on aircraft operating over remote country.

The transmitter operates on two frequencies—3023.5 (the aeronautical emergency service monitored 24 hours a day) and 2922 kc., with power output of approximately two watts. The tiny receiver covers frequencies from 2000-4000 kc., which include the aircraft band as well as the lower end of the amateur band and the forestry service.

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eration permits adjustment for optimum coverage. coil can be handled like a resistor. As mentioned above, the resistance of the core is extremely high so that there can be no question of shunting. Nevertheless, some cores have plastic end sections. As shown in Fig 9, these hold wires which are bent like hairpins, with two ends sticking out, one for attaching the coil wire, the other end for attaching the cored coil to a point in the circuit. The core shown is designed to carry two independent coils, for economy, and thus has two sets of wires. A somewhat related function is served by the "wave traps" which prevent interference between adjacent carrier waves in TV channels and with intermediate frequency.

Not long ago, the use of iron powder suspensions in oil, instead of molded cores was proposed. Such suspensions are similar to the ones used in magnetic fluid clutches, but there would, of course, be no steel parts like the clutch magnets, in such high frequency coils. The advantages claimed are convenience in winding any sort of coil which is then simply submerged, better stability against atmospheric influences, lower temperature coefficients and higher Q-values<sup>16</sup>.

Finally, an interesting application should be mentioned which lies in the UHF field. It was found that powdered iron structures, at frequencies of the order of 1,000 to 10,000 mc, make very good attenuators and impedance matching devices. As shown in Fig 10, such cores are frequently of prismatic shape. Their advantage is that their permeability, dielectric constant and power dissipation result in a favorable impedance<sup>17</sup>. The iron powders used are the same that perform well at medium and high frequencies. (This article was presented at the 11th Annual Metal Powder Assoc. meeting in May, 1955.)

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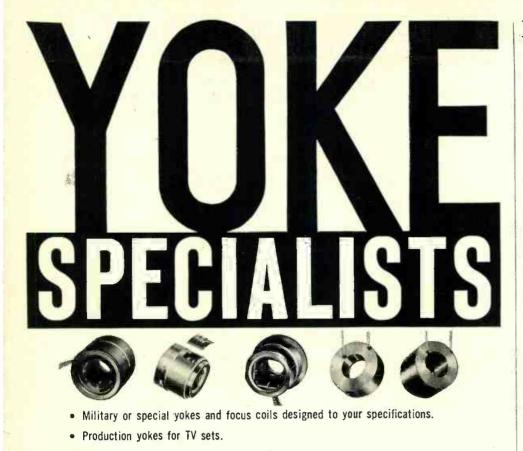


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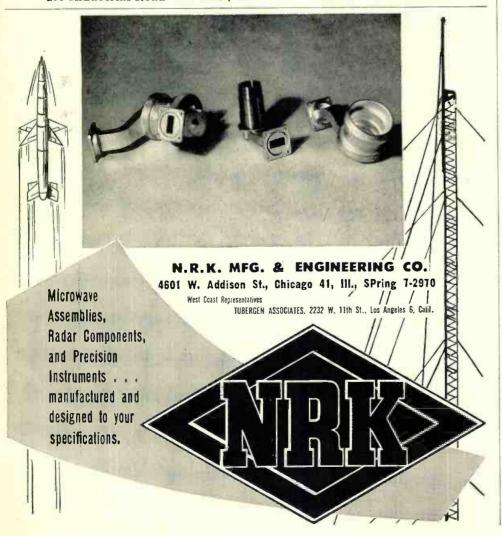




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# **Printed Foil**

(Continued from page 103)

the variations in undercut which can be produced by various etching methods of circuits made from copper-foil clad plastic laminates.

Let us now consider anisotropy (Dict: Having different physical properties in different directions, especially with regard to the transmission of light and heat.) as related to foil conductors. Solid state physics tries to explain the relation of the atomic structure with various characteristics of the bulk material. We are closely studying this relationship for various metal foils, and it is hoped that we will be able to extend this investigation to semiconductors and insulators in the near future. The foil technique gives us a unique chance to custom-make and position the very crystals of the metals in our electrical elements exactly how and where we think best for our purpose. It offers this chance by the transformation of the circuit components from body elements into surface elements.

#### **Drawn Wire Conductor**

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The metallic conductor derived from a thin-rolled metal foil is, by contrast, a surface element. The study of its crystal structure is, therefore, of the greatest interest because, even with the most perfect foil which the metallurgist could give us, we still have freedom of choice as to the direction in which we lay out our pattern. We can print the conductor on the foil in practically any direction, obtaining eventually a conductor composed of metal grains, lying in the rolling direction of the foil, or at any other selected angle to the original rolling direction. Since the foil is a polycrystalline aggregate which has a definite texture-that is, a preferred orientation of its crystals-some properties of the foil will not generally be the same in all directions. The foil is anisotropic. Anisotropy may apply to the following properties of the foil: (1) electrical resistivity; (2) thermal coefficient of linear expansion; (3) heat conductivity; (4) thermal e.m.f.; (5) magnetic susceptibility; (6) Young's modulus; (7) the modulus of rigidity; (8) stress-strain relation and yield point; (9) rate of solution in a chemical reagent; and so on. Consequently, it appears that our choice of the direction of the printing layout of our pattern should depend on a thorough-going scientific investigation. (In very thick foils we may get a variation of texture over the cross-section as well. The extent of preferred orientation is highest in the core and decreases towards the surface. Determination of the layout of the printing pattern is, of course, one practical purpose of the investigation of the grain structure of the foil. In due course, we hope to expand this study to all basic materials which we use.)

Our study comprises three lines of investigation: theory—observation experiment. So far, we have concentrated on investigating cupronickel foil, which we use for strain gauges and for precision resistors. Its crystals have a face-centered cubic structure. The preferred orientation of the grains in the rolled foil is for the body-diagonal (110) crystal-planes to be parallel to the rolling plane, and for the (112) direction to be parallel to the rolling direction.

Using these established facts, we calculated the direction of the octahedral (111) crystal-planes in the foil. This direction should have the maximum atomic population and offers a preponderance of easy slip planes. (Atomic population of the (100): (110): (111) planes relate 8:12:15, and slip planes 6:6:8.) From these conclusions, derived from known findings of the physics of metals, we are trying to derive others and thus gradually to gain some insight into, and some degree of understanding of, the atomic structure of the foil and its relation to the foil properties which are required in our circuit components.

#### Microscopy

This theoretical approach is accompanied by observation through microscopy and X-ray diffraction. Microscopy is mainly used to investigate grain formation and the conditions of and at grain boundaries, the presence of single or multiple conditions, and the presence of foreign matter in the form of inclusions. X-ray diffraction is used to give sufficient information for the determination of grain size, rolling



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# **Printed Foil**

(Continued from page 405)

texture and orientation of grains. Both methods are indispensable, but X-ray analysis appears so far to be the most sensitive, most direct, most reliable, most informative and most speedy method of study at our disposal.

We also propose to investigate the foil surface by electron diffraction at very small glancing angles, but we have not yet inaugurated this work

Fig. 2 shows X-ray diffraction pictures of 0.0002 in. thick, fine-grained, cupro-nickel foil (55% copper: 45% nickel. Pictures A and B were taken before stress relieving and C and D after stress relieving. A and C are glancing angle reflection patterns (5°), and B and D are transmission patterns.

A third line of investigation of the crystal structure and surface character of the foil conductor is experimental. We closely co-ordinate it with the two other attempts at gaining an understanding of our subject, theory and observation or more particularly, the theory of atomic structure and X-ray analysis. We have used the chemical thinning technique mentioned previously to gain test pieces from all strata of the foil thickness. We printed, photomechanically, resistor patterns in the directions to be investigated, and then tested the elements obtained from these prints. Fusing and chemical tests were also carried out.

It is to be understood, of course, that we are only at the threshold of this scientific work and that the results are, as yet, rather tentative and require further confirmation. However, it is perhaps one of the main merits of the foil technique that it has led to such a study, because a better understanding of atomic and crystal structure and of surface phenomena of the elements from which we make circuit components is bound to result eventually in an improvement in the basic quality of these components, and in a very high degree of control of the structure of the elements and of their production.

Now let us consider the shape factor. For most of the applications described later, a fairly primitive consideration turned out to be of greatest consequence. It concerned the heat dissipation characteristics of the foil resistor as compared with a wire resistor. The main difference between the conductors in both

cases is the shape factor. The printed foil has a nearly rectangular crosssection, with a width many times greater than its thickness; its ratio of surface area to cross-sectional area is far greater than for the corresponding round wire. While the ohmic losses in the conductor are inversely proportional to the crosssectional area of the conductor, the heat dissipation, on the other hand, under conditions of comparison, is directly proportional to the surface area of the conductor. Consequently, for the same wattage, the foil element runs either cooler or weighs much less than the wire element. This result is not at all surprising, but its magnitude is very remarkable.

#### Aircraft De-Icing Mats

Weight-saving is, of course, of paramount importance for any airborne application, and the use of printed circuits for de-icing, and anti-icing, of those surfaces of aircraft which cannot conveniently be heated by exhaust gases appears to be promising. Investigations have shown that, even under very heavy icing conditions, it is not necessary to keep all the critical surfaces heated continuously. Rather, only small strips. For instance, only the leading edge of the airfoil must be kept hot. All other areas can be cycled, that is, ice can be allowed to form for a period and then the area suddenly heated so that only the thin ice layer next to the airfoil surface melts. The air-stream then does the rest. Cycling means, of course, a substantial saving in electric power and weight of generating equipment, and generally helps to render electrical de-icing attractive.

Figs. 3 and 4 illustrate various deicing mats and their use on airplane and aircraft engine parts.

From a manufacturer's point of view, de-icing mats are customerdesigned products requiring individual attention, special care in bonding, uniformity, and material control. The stringent specifications called for by most aircraft requirements are, in this case, the more justified not only because of the vital importance of proper functioning of the mats but also because the loading may go up as high as 40 watts/ sq. in. in certain areas of the mat. Also the danger of damage by erosion, vibration, various stresses, over-heating, bond failures, and so on are obvious.

From heating and de-icing the application of this technique to resistance-thermometers appears at

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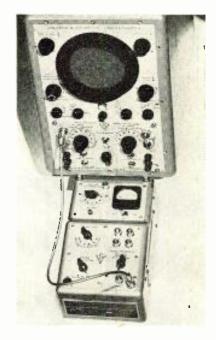
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# **Printed Foil**

(Continued from page 407)

first sight to be a logical and simple task. However, we have encountered special difficulties which had to be overcome, particularly in connection with the purity of the metals suitable for the purpose. Platinum elements, for instance, must be made from thermo-pure platinum (99.98% purity-minimum). So far we have failed in the production and processing of foil to guarantee such a degree of purity under the conditions of our work. We have also been unable to produce by electro-deposition nickel foil of the required stability and repeatability. However, we have been successful in making temperature-sensing elements from rolled pure nickel foil. The elements made from this nickel foil on thin epoxy and silicone resin films proved, as far as calibration, to have the necessary stability and repeatability and are at least equal to thermo-metric elements made with nickel wire.

Printed foil elements are more desirable for measuring and indicating surface temperature. The small mass and relatively large surface area; the thin flexible body which permits bonding or holding in close proximity to the surface to be sensed; the quick response; the ease of conforming to a desired shape of pattern; the immunity to "overload"; all ensure recognition of the printed foil element as a unique temperature-sensing device.

Various temperature-sensing units made from foil laminates have been used to measure and regulate the temperature of surfaces and have been embedded in heating mats to indicate the temperature of inside layers. Their use for "sensing" radiant heat, for differentiating between radiant and convective and conductive heat—where these foil elements should have obvious advantages—has not, as yet, been tried seriously.

#### Strain Gauges

An unusual application of the printed foil technique has been found in the production of strain gauges. Made from rolled copper-nickel foil, having a near-zero temperature coefficient of resistance, and epoxyresin varnish, foil strain gauges have proved very accurate and reliable transducers of mechanical strain into electrical resistance change. The gauge factor is well over two, and the ability to dissipate heat into a heat-sink, and from the unbonded side, is so high that a relatively high current can be used without danger. Under recent test, a gauge having an area 1 in.  $\times \frac{1}{4}$  in. was loaded with 104 watts over 30 mins.; a bond failure then led to its destruction.

Foil gauges can be made for any desired pattern to pick up particular stresses. They can be easily waterproofed, used for fatigue tests, and be transferred from a soluble temporary base, to be embedded in inorganic cements for high temperature work. There is no terminal trouble, no cross-strain sensitivity; in short, there appears to be very little wrong with the product. The first types that we put on the market were designed for a lower resistance value than most of the then users of strain gauges were accustomed to expect. The new types, scheduled for this year's production, have the desired higher resistance values. They are being made from chemically-thinned foil.

It is hoped that similar and cheaper devices for strain measuring with these gauges will be on the market shortly, so that the use of strain testing will rapidly spread beyond the aircraft industry into very many fields where at present it is used only to a limited extent. We hope and expect that the near future may also see the inception of a research project for the application of foil strain gauges and other printed circuits to artificial limbs, in order to equip these with some sensation of touch.

Fig. 5 shows various types of foil strain gauges produced in the last two years.

#### **Printed Foil Resistors**

Tests made with foil strain gauges have not only shown their high heat dissipating capability but have also revealed that, after a storage of over 13 mos., the resistance value of the gauge changes less than thirty parts in a million. These foil strain gauges were not designed as either high wattage or precision resistors. Gauges designed for these purposes lead to even better results.

Fig. 6 illustrates various high wattage resistors, numbered A, B, C and D, in which the resistors are are resistance alloy-foil patterns on epoxy-resin films. In all cases the surface area of the resistor has been made the maximum, compatible with the use of the resistor. Resistors A and B are cemented on the inside of the metal housing of an amplifier. Dissipating 50 watts will not make them too warm to touch. Resistors CROSSBAR

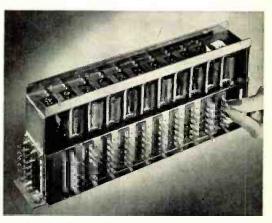
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"THEY NEED MONEY, though. \$5,000,000 is still less than 4 cents per American *per year*. Not enough to find the answer *fast* enough—230,000 Americans are going to die of cancer *this year*, they say.

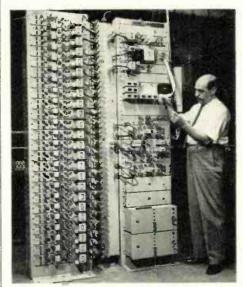
"I'M NOT RICH, but I gave 'em \$50 last year—hope to do better this time. After all, where would I be if the laboratorics working on diabetes, that time, hadn't been given enough support—?"



C and D are sandwiched between an aluminum angle of a television set on one side, and an asbestos paper and aluminum plate on the other. Resistor C is fixed by three screws, the openings for which can be seen in the pattern. Dissipating 30 watts, it relies on the heat-sink of the aluminum angle to run cool. However, it is sufficiently large that bad anchoring, which may mean a deficient heat-flow from the coil to the heat-sink, will not cause any dangerous hot spots. Cool running, utmost space saving, long life and very low cost are the main advantages of high wattage foil resistors. To these must be added a series of other claims, when it is a matter of high precision resistors.

Some of the principles underlying the design of high precision resistors have been referred to previously in the section on the Science of Printed Circuits. The reduction of thermal stresses by large area design, and the avoidance of long lines and other design features which may cause strain particularly in any "high" resistance part of the foil pattern, are obvious precautions to be taken. Matching of the insulating base, scientific layout of the pattern, metallurgical control of the foil and foil surface, high-class photo-mechanical printing and regularity of etching, are other steps necessary for attaining really good results.

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#### M

Voltage Range: 0-	600
<b>Resolution:</b> At least	5
	50
Absolute Accuracy:	+
Input Impedance:	

Volts DC millivolts between 0 and 10 volts millivolts between 10 and 600 volts 0.1% of reading Infinite at null

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# **Reflected Wavefronts**

(Continued from page 113)

(4) Measure AA' = FB. A' is the direction of the reflected ray PA'.

That the above construction is correct can be easily proved by noting that both FPA and BPA' are isosceles triangles. Since  $\overline{AA}^* = \overline{FB}$ , so must  $\langle APA' = \langle FPF' \rangle$ . The reflected wavefront is obtained by repeating this procedure at other points on the reflector and keeping  $\overline{F'P} + \overline{PA'} = \text{constant } W$  (optical path-length).

With a circularly symmetrical reflector only the two-dimensional graph in a typical cross section has to be shown. A'A" in Fig. 3 is the reflected wave front with  $\overline{FF'} = \overline{OF}/4$  and  $W = 3\overline{OF}$ .

#### Ellipsoidal Reflector

The principle of construction for the ellipsoidal case is based upon

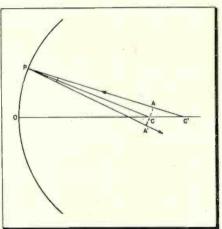


Fig. 5: Spherical reflector geometry

the property that source rays emanating from one focus  $\mathbf{F}_1$  will converge at the other focus  $\mathbf{F}_2$ . The construction procedure is then exactly similar to the paraboloidal case with the line joining the point P on the reflector and  $\mathbf{F}_2$  replacing the parallel line as the reference. Fig. 4 illustrates the basic construction, where  $\overline{\mathbf{PA}} = \overline{\mathbf{F}}_1 \overline{\mathbf{P}}$  and  $\overline{\mathbf{AA'}} = \overline{\mathbf{F}}_1 \overline{\mathbf{B}}$ .

A cross section of a circularly symmetrical ellipsoidal reflector with a point source located at F' is shown in Fig. 2. The reflected wavefront A'A" is for a constant optical path-length  $W = 3\overline{OF_1}$  and  $\overline{F_1F'} = \overline{OF_1}/4$ .

#### Spherical Reflector

Any radius of a sphere drawn from its center C is normal to the surface. For rays emanating from an



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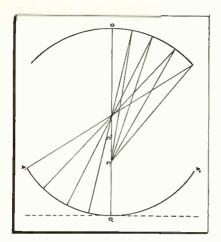


Fig. 6: Cross-section of spherical reflector

off-center point source at C', the direction of reflected rays can be determined as follows without using protractors:

- (1) For any point P on the reflector, CP and C'P.
- (2) With P as the center draw an arc of a circle with radius  $\overline{PC}$ . intersecting C'P at A.
- (3) Measure  $\overline{CA'} = \overline{CA}$  on the arc. PA' determines the direction of the reflected ray at P.

It is quite obvious that  $\langle CPA' =$ <CPA as desired. This is illustrated in Fig. 5.

Fig. 6 shows a cross section of a spherical reflector and the reflected wavefront A'A" at O' due to a point source at C'. The off-center distance  $(\overline{CC'})$  is equal to  $\frac{1}{4}$ th the radius  $(\overline{OC})$  and the constant optical path-

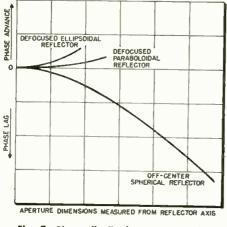
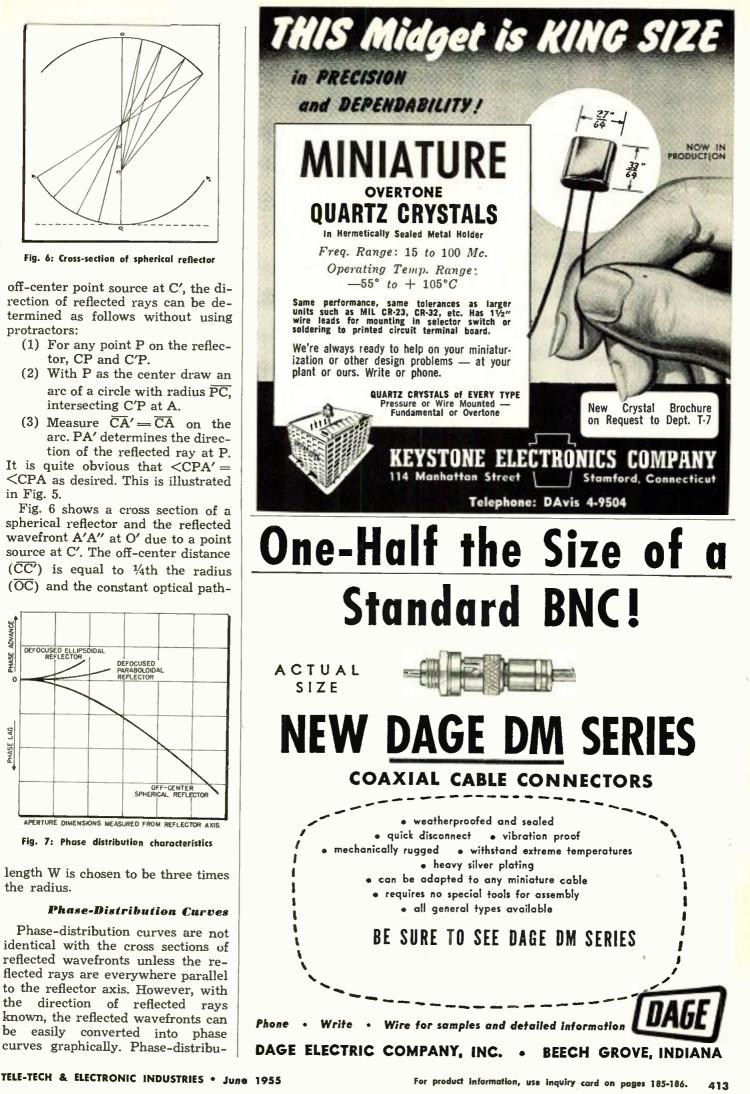


Fig. 7: Phase distribution characteristics

length W is chosen to be three times the radius.

#### **Phase-Distribution Curves**

Phase-distribution curves are not identical with the cross sections of reflected wavefronts unless the reflected rays are everywhere parallel to the reflector axis. However, with the direction of reflected rays known, the reflected wavefronts can be easily converted into phase curves graphically. Phase-distribu-



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## **Reflected Wavefronts**

(Continued from page 413)

tion curves are relative curves; only the phase deviations relative to a reference point is of importance. For circularly symmetrical cases, point O on the reflector axis is the most convenient reference point. The phase deviations are then proportional to the path-length differences measured along the reflected rays from the reflected wavefront to the aperture plane passing through point O' and perpendicular to reflector axis. The phase-distribution curves for the paraboloidal, ellipsoidal, and spherical cases shown in Figs. 2, 4, and 6 respectively are plotted in Fig. 7. Since all three cases are symmetrical, only the parts of the curves above the reflector axis are shown. The curves are plotted versus the dimensions in the aperture plane; the maximum effective aperture dimensions are different for the three cases.

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   D. K. Cheng and S. T. Moseley, "Defocus Characteristics of the Paraboloidal Reflector" -Presented, IRE Western Convention, (Au-gust 1954).

# **Network Analyzer**

(Continued from page 111)

Fig. 7, oscilloscope loading on the network is eliminated and the meter loading is negligible for most applications. As the network output voltage changes when varying the relative frequency, switching scales on the meter to obtain a better reading also adjusts the oscilloscope gain. This is convenient when checking networks over a wide frequency range.

The resistive loading of the oscilloscope on the phase shifter does not affect its accuracy. The phase shifter is virtually independent of external resistive loading, as is shown later.

#### Design Details

In the R-C network analyzer all the resistance elements are made to vary simultaneously by use of the gearing arrangement illustrated. To set in the various network resistance values it is merely necessary to move the master gear forward in its bearings to disengage it from mesh with the gears on the individual resistance controls. Each of the gears on the individual controls has a num-



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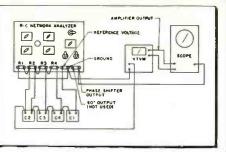


Fig. 7: Set-up for simulating and checking low frequency characteristics of network

ber of teeth that is an integral multiple of the number of switch positions in order to maintain synchronism between the various controls. Once the various resistance values for the network have been set, the master gear is engaged with the other gears so that they can be turned in synchronism.

As may be seen from the schematic in Fig. 3, standard value composition resistors are used. By using every other size in the 10% tolerance group each step in resistance becomes equivalent to a 1.14:1 ratio in resistance and one half octave in frequency. This is quite convenient in plotting the data on linear graph paper to a log frequency scale. By using decibels for the other coordinate, slopes in decibels per octave can be easily determined and asymptotic slopes for simple networks become straight lines. In the R-C network analyzer the values for the various resistance controls were staggered so that any value of resistance in the 10% tolerance group could be obtained. In addition, resistors with 5% tolerance were used in order to obtain better precision.

### Condenser Size

The condensers required for the R-C network to be analyzed must be supplied externally. Decade condenser boxes are most convenient. It is desirable to choose the condenser values such that mid-frequency operation of the analyzer occurs at the power frequency used. Thus if the actual network is to be used at 600 CPS and the resistance values correspond to those at about midscale on the analyzer it will be desirable to use ten times the actual capacity in the simulated circuit. This will make the midband frequency for the network correspond to the middle of the relative frequency scale on the analyzer. In this way the relative frequency scale can be made to correspond to any frequency.

### Phase Shifter Design

The linear phase shifter built into the R-C network analyzer is of a novel design. It consists of a linear



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# **Network Analyzer**

(Continued from page 415)

potentiometer with loading resistors and a two phase supply. A linear phase shift scale is obtained by virtue of the loading resistors. The phase of the output voltage from the phase shifter is independent of external resistive loading with respect to ground.

The basic circuit for the phase shifter is shown in Fig. 4. As can be seen, a voltage of zero phase is connected to one end of a potentiometer and a voltage of 90° phase is connected to the other end. As the arm of the potentiometer moves from one end to the other, the output voltage, e<sub>o</sub>, will vary in phase from zero to 90°. It is not so readily apparent that the phase will vary linearly. Actually, a linear variation is only approximated; however, the errors are extremely small, as is shown in the following analysis.

#### **Output Voltage Phase**

The equation for the phase of the output voltage from the phase shifter is derived as follows. The output voltage from a circuit with two input voltages is the sum of the voltages obtained when each input is considered independently and the other input is shorted. Referring to Fig. 4, it can be seen that the output voltage is.

$$\mathbf{r}_{o} = \mathbf{e} \left[ \frac{\frac{\mathbf{R}_{b}\mathbf{R}_{c}}{\mathbf{R}_{b} + \mathbf{R}_{c}}}{\mathbf{R}_{a} + \frac{\mathbf{R}_{b}\mathbf{R}_{c}}{\mathbf{R}_{b} + \mathbf{R}_{c}}} + \mathbf{J} \frac{\frac{\mathbf{R}_{a}\mathbf{R}_{c}}{\mathbf{R}_{a} + \mathbf{R}_{c}}}{\mathbf{R}_{b} + \frac{\mathbf{R}_{a}\mathbf{R}_{c}}{\mathbf{R}_{a} + \mathbf{R}_{c}}} \right]$$

Simplifying this we have,

$$e_{o} = \frac{e R_{o}}{R_{a}R_{b} + R_{b}R_{c} + R_{a}R_{o}} [R_{b} + J R_{a}]$$

The phase of the output voltage is simply,

$$\theta = \tan^{-1} \frac{R_{a}}{R_{b}}$$

Thus the output phase is independent of any resistive loading on the phase shifter. The loading does reduce the output voltage but this is of no consequence in the application described. It has been determined by trial and error that C equal to 1.8 produces the desired linearity of phase shift. The curve in Fig. 5 shows the error for various potentiometer settings assuming the input voltages are equal and exactly 90° apart in phase.

A simple R-C phase shift circuit using a center tapped transformer is

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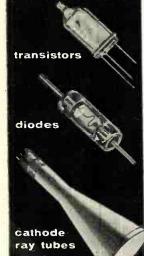
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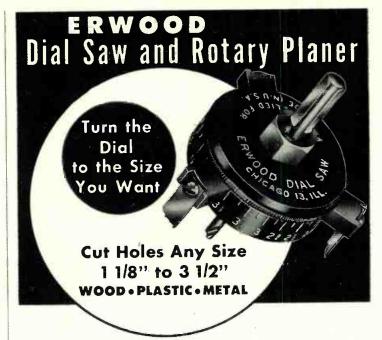
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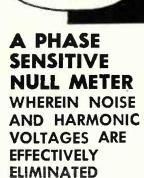
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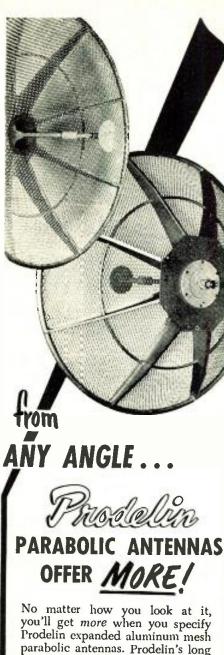
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# **Network Analyzer**

(Continued from page 416)

used to obtain the 90° reference voltage required for the phase shifter. By using the values shown in the schematic the loading errors are reduced to a maximum of about 0.4° when used at 60 cps. They are only 1/7th this value at 400 cps. By using a potentiometer with a linearity error of 0.1% or less the overall phase shifter error is reduced to less than 0.5° at 60 CPS and about 0.1° at 400 CPs. For many applications it will suffice to use a standard commercial potentiometer, in which case an accuracy of about 2° will be obtained.

The phase shifter covers the range from 0 to 90°. A reversing switch permits coverage from 0 to  $-90^{\circ}$ . The other two quadrants are covered by permitting the line on the oscilloscope to slope either to the right or to the left.

### Applications

The R-C network analyzer is particularly useful in designing low frequency lead networks for servos and feedback amplifiers. The phase and amplitude response of the networks can be checked over any frequency range that is encountered. The phase and amplitude response for a typical interstage coupling network for a feedback amplifier is shown in Fig. 6. Considerable time would be required to obtain the network response in any other way. Only a few minutes are required with the R-C network analyzer and if it is desired to observe the results of changing some of the constants, a complete family of curves can be obtained quite quickly. The usual design procedure is to approximate the circuit constants by graphical means and then to check the results using the R-C network analyzer,

The linear phase shifter is also quite useful in checking the phase shift in transformers, servo amplifiers and other electronic equipments at power frequencies.

The resistance controls are useful in setting up breadboard circuits in the laboratory. Since all values of the standard 10% tolerance resistors between 100 ohms and 1.0 megohms are available, the controls are useful in experimentally determining the size resistance required in a circuit. One watt resistors have been used for the values below 10,000 ohms to avoid damage when used with external voltage sources.

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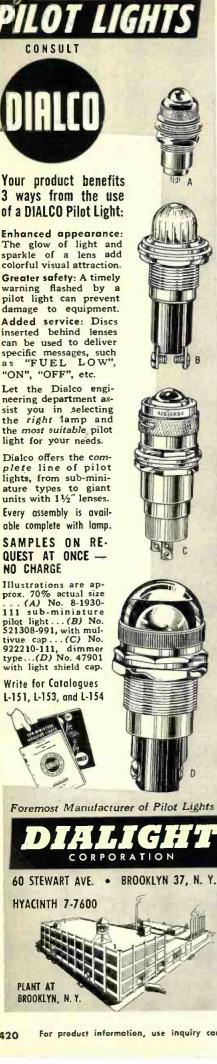
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# **Frequency Standard**

(Continued from page 109)

quired. The crystal unit has an inductive reactance of 10 megohms, and therefore a series reactance of 20 ohms is required to produce a frequency shift of one cycle. The value of capacitance or inductive reactance can be computed accordingly. The inductor, if required, should have high stability and a high Q; a design similar to that of  $L_1$ should be used (see coil data).

#### **Oven** Design

The AT-cut crystal should be maintained at a specified, constant temperature to obtain the best frequency stability. The oven used in this oscillator is of the single-stage type, with temperature control provided by a 50°C. mercury thermostat. Fig. 3 shows the mechanical details of the oven, whose principal feature is the use of a Dewar flask to isolate the controlled chamber from outside temperature changes. Consequently the average-power requirement, 0.4 watt at a temperature difference of 25°C, is very low for an oven of this size.

Detailed performance data cannot be given for the oven itself, as tests have not been completed. It can be stated, however, that with the specified crystal, frequency changes due to oven cycling were less than 10<sup>-9</sup>, and that the normal (10°C) laboratory-temperature changes were apparently not reflected in crystal-temperature changes.

#### Adjustment

Proper alignment of the oscillator requires that the tuned circuits L<sub>1</sub> and  $T_1$  be adjusted to exactly one megacycle. This is best accomplished by opening R., shorting R<sub>4</sub>, and applying a one-millivolt, one-megacycle signal across  $R_3$ . One volt should appear across  $R_3$  when the trimmers across  $L_1$  and  $T_1$  are tuned to resonance. The oscillator can then be restored to its original condition, and R<sub>4</sub> should be increased until an output of 0.7 volt is produced. If the output voltage decreases as R<sub>4</sub> is increased, the secondary connections of T, should be interchanged.

The amplitude stability of the oscillator should be checked by varying the plate supply from 150 to 300 volts. The output voltage should vary less than 1% over this range.

It will take approximately 12 hours for the oven to reach its normal operating temperature of 50°C. After





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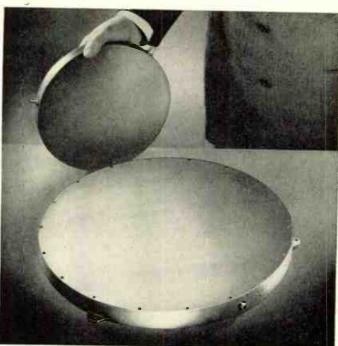
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# **Frequency Standard**

(Continued from page 420)

this period it may be necessary to readjust R4 because the crystal unit resistance is a function of temperature.

Frequency-stability measurements can be made three hours after the oven duty cycle becomes constant. The effects of supply-voltage variations should be approximately as shown in Fig. 1(b) and (c). Longterm tests with constant supply voltages should be made against WWV or some other time or frequency standard.

It should be pointed out that a buffer amplifier should be used to isolate the oscillator from the effects of load variations. A satisfactory buffer consists of a well-shielded pentode amplifier, preferably with a tuned plate circuit if the maximum output voltage is desired.

L<sub>1</sub>: The inductor contains two windings in parallel, each consisting of 28 turns of 90-44 Litz wire, and each covering one-half of the available space on a T-1060-07-A powdered-iron toroidal form. The windings progress in opposite directions so that adjacent leads are connected together, placing high-potential points on the ends of a diameter of the toroid. The Q of the coil with its silvered-mica capacitor is 280 at 1 megacycle.

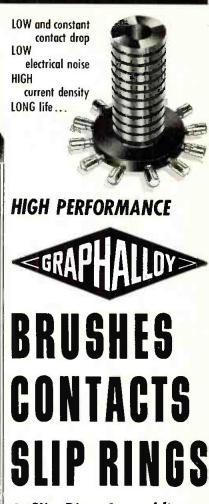
T<sub>1</sub>: The primary contains 120 turns of No. 30 Formex-insulated wire. The secondary contains 14 turns of the same type of wire. Both windings are placed on a T-1060-07-R, powdered-iron toroidal form, with the secondary wound over the lowpotential end of the primary. The Q of the primary is 25 at 1 megacycle.

As an aid to the duplication of the oscillator it can be stated that the crystal resonator was supplied by The James Knights Co., Sandwich, Ill. The toroidal coil forms were supplied by the Lenkurt Electric Sales Co., San Carlos, Calif. The Litz wire was supplied by the New England Electrical Works, Inc., Lisbon, N. H.; and the mercury thermostat was supplied by the Precision Thermometer and Instrument Co., 1434 Brandywine St., Philadelphia, Pa.

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Centralab Div., Globe-Union Cinch Manufacturing Corp. Cinch-Jones Sales Div., Cinch Mfg. Corp. Cinema Engineering Co. Clrcuit Instruments Inc. Clarostat Manufacturing Co., Inc. Consolidated Molded Prods, Corp. Continental Carbon, Inc. Corning Glass Works

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Hickok Electrical Instrument Co. Hobson Brothers Hughes Co., Kenneth E. Hughey & Phillips, Inc. Hycon Manufacturing Co. Hycor Co.

Induction Motors Corp. International Rectifier Corp. International Resistance Co. Jones Div., H. B. Cinch Mfg. Corp.

Kahn Research Labs. Kay Electric Co. Kenyon Transformer Co., Inc. Kollsman Instrument Corp.

Lavin Associates, Henry Liquidometer Corp.

Microtran Co. Minnesota Mining & Manufacturing Co.

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U. M. & F. Manufacturing Co. University Loudspeakers, Inc. Univox Corp.

Varo Manufacturing Co., Inc. Vectron, Inc. Vibration Research Labs., Inc.

Westinghouse Electric Corp.

MEMO To: Purchasing Dept. From: Engineering Jim - Get PL 259 and So 239 for Project A from Coaxial Connector Co. RUSH this one...

This is why COAXIAL CONNECTOR CO. makes a line of connectors that is top-rated throughout the industry:

if "know-how" means precision-engineered JAN Connectors;

if "know-how" means the superior product of the knowledge of engineering specialists;

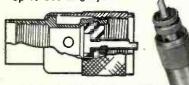
if "know-how" means economy, workmanship, and a short production cycle:

then Coaxial Connector Co. has the kind of know-how that will help you keep your manufacturing operation smooth, superior, and trouble-free!

Rugged service in field and laboratory give our Connectors a proven dependability. Quality-controlled to give insurance-plus when you use a Coaxial Connector Co. precision-made Connector.

#### UHF SERIES CONNECTORS

For dependable low-cost, general purpose use. Satisfactory up to 200 megacycles and may be used with caution up to 500 megacycles.



PL-259, PLUG (NT. 49190) Non-weatherproof type. Mates with UHF female. Two-piece construction. For use with Cable RG-/U: 8, 9, 10, 11, 12, 13, 63, 65.

PL-259A, PLUG (NT. 49195) Similar to PL-259. It is a 3-piece unit for ease of handling. Non-weatherproof. Mates with UHF female. SO239.



SO-239, NT. 49194 Receptacle Mates with male plugs PL-259, PL-259A, UG-203/U. Non-weatherproof, single piece construction. For use with Cable RG-/U8, 9, 10, 11, 12, 13, 63, 65.

Also avoilable special Adapter for the above Plugs (UG-175/U, UG-176/U) used with RG-58/U, RG-59/U, RG-62/U and other small cables.

Design Problems? Engineering information? Special requirements? Our engineering specialists will help you solve your problems.

FREE! Cross Reference Chart! Just ask for it or for more information.

COAXIAL CONNECTOR COMPANY 37 No. 2nd Ave., Mt. Vernon, N. Y. MOunt Vernon 8-6416 Government Designation C B W U



N. L. "Nibs" Jochem has recently been promoted to the position of Director of Engineering at Gates Radio Co., of Quincy, Ill. For the past two years he has been in charge of the Audio Division of the sales department.



N. L. Jochem 🛶 R. F. Mettler

Dr. Ruben F. Mettler, who received recognition as the outstanding young electrical engineer in the United States in 1954, has joined the Ramo-Wooldridge Corporation, Los Angeles. Dr. Mettler will occupy a key position in the firm's major guided missile and electronic systems activities.

Walter A. Weiss has been named general manager of the Radio Tube Division of Sylvania Electric Products, Inc., at Emporium, Pa. Mr. Weiss had formerly been general manufacturing manager of the Radio Tube Division since 1952.

James W. Browder has been appointed Design Specialist in the electronic engineering department of the Ryan Aeronautical Co., San Diego, Calif. Mr. Browder will act as technical assistant to Owen Olds, Chief of Electronics.

**Donald D. Pepin** has been promoted to Assistant to the Engineering Manager, Electronics X-Ray Division, Westinghouse Electric Corp., Baltimore, Md. He was formerly Manager, Technical Publications, of the Baltimore Division.

John M. Wilson has been named chief engineer of the development and design division of the engineering department of Minneapolis-Honeywell's Brown Instruments Division.

Nils G. Andersson has been appointed as Manager of the Camden, N. J. manufacturing plant, Engineering Products Division, Radio Corporation of America. His appointment was announced by S. N. Lev, the division's General Plant Manager.

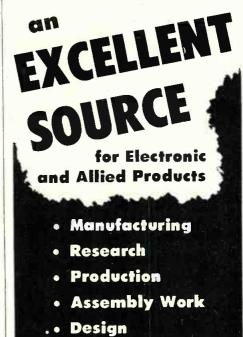
Leonard A. Mayberry has been appointed to the newly created position of engineering manager of Hoffman Laboratories, Inc., Los Angeles, Calif. Gene Lamphear, former radar group engineer for Hoffman, has been advanced to the position of chief electrical engineer.



## MUELLER MINI-GATOR (miniaturized alligator clip)

Half an "alligator" is better than one!... the Mini-gator is half the length of standard alligator clips. It's the smallest clip ever made, for quick temporary electrical connections.







If you are looking for an alert and competent organization to do any of the above functions, don't make a final decision until you've seen us. We are equipped with modern mochinery ... experienced personnel for sub-contract or other types of work. We invite your inquiry today.

PARAPLEGICS MFG. CO. 10068 Franklin Ave., Franklin Park, III.

# NON...) Bomac/

# dual TR MICROWAVE tubes

covering the frequencies from 1215 to 17,000 me

Band	Frequency	Center Frequency	Power Level KW Max.	Туре	Description	Tube Designation
L	1215-1355	1285	2000	TR	Dual, Band Pass	6634/BL90
S	2600-3000	2800	750	TR	Dual, Band Pass	6636/BL87
S	2650-2950	2800	750	ATR	Dual	BL92
C	5400-5900	5650	700	TR	Dual 5865	6640/BL60
C	5400-5900	5650	3000	TR	Dual 6558, Band Pass	BL613
C	5400-5900	5640	300	ATR	Dual, Fixed-Tuned, Contact Mount	BL63
Х	8490-9578	9000	200	TR	Dual 1B63A	6334/BL27
X	8490-9578	9000	200	TR	6334 tapped Flanges Both Ends	BL78
X	8490-9578	9000	200	TR	6334 plus Separate Channel 1B63A	BL81
X	8490-9578	9000	200	TR	6334 with Recovery Time 1 µsec at 1 db	6643/6L84
х	8490-9578	9000	200	TR	BL84 with Heater	BL84H
х	8490-9578	9000	200	TR	6334 with Large X Flange Input and Small X Flange Output	6642 /BL600
х	8490-9578	9000	200	TR	Dual 1863A, 2 µsec Recovery Time	6646 /BL604
х	8490-9578	9000	200	TR	BL604 with Heater	6647/BL604H
x	8490-9578	9000	200	TR	6334 with Special Hole Dimensions for Aluminum Flanges	BL607
X	8490-9578	9000	200	TR	6334 with Special Saddle Type Flange	6648/BL615
х	8500-9600	9050	250	TR	Large X Guide	6501
X	8500-9600	9050	250	TR	Four-Element Tube for Large X Guide	6564/BL71
X	8490-9578	9000	250		Integral 6334 Hybrid Duplexer	BL 507
Ku	15000-17000	16000	100	TR	Dual, Band Pass	6560/BL35

Seo our advertisement on insert pp. 8 & 9

Unlimited design possibilities are now afforded the systems engineers with Bomac's complete line of dual TR tubes.

Bomac dual tubes are designed for use with suitable short-slot hybrid junctions to provide balanced duplexers of utmost simplicity.

In operation, the balanced duplexer is similar to magic-T or rat race duplexers. The very low coupling between the transmitter and antenna eliminates the necessity of employing one or more ATR tubes and reduces the losses introduced in radar systems by these tubes. The features of compactness, weight and excellent performance with respect to both transmission and reception characteristics offered by these dual tubes hold many advantages for microwave systems designers and engineers.

Bomac offers a complete line of hybrids to be used in conjunction with these dual tubes — the tubes can be supplied with integral shutters, offering continuous crystal protection.

We invite your inquiries regarding ENGINEERING DEVELOPMENT PRODUCTION

Bomac Laboratories, Inc. BEVERLY MASSACHUSETTS

GAS SWITCHING TUBES, TR. ATR and Pre-TR - DUAL TR and ATR TUBES - SILICON DIDDES - WAVEGUIDE SWITCHES REFERENCE CAVITIES - MAGNETRONS - PRESSURIZING WINDOWS - SHUTTER TUBES - HYDROGEN THYRATRONS REFLEX KLYSTRONS - TRAVELING WAVE AMPLIFIER TUBES - SYSTEMS Catalog on request. Write(onyour company letterhead) Dept. T-6 BOMAC Laboratories, Inc. Beverly, Mass., or phone Beverly 6000.

PAT. APPLIED

#### New Technical Builetin

Up-to-date information on RCA-21AXP22. Includes: New cut-off design chart, New drive data, New curves. Write RCA, Com-mercial Engineering, Harrison, New Jersey.

# CA 21" COLOR PICTURE TUBES

ASS PRODUCTION

To meet your production-line requirements on color-TV sets, RCA's extensive manufacturing facilities are now turning out 21-inch color picture tubes-in quantity. And, these facilities are being expanded to keep pace with your needs. Now you can plan "21-inch color" with confidence! Now, you can capitalize on the advantages of the RCA-21AXP22 in your color TV line. Consider just a few features of this remarkable tube:

- Brilliant, faithful colors Through unique shadow mask.
- Big, life-size pictures-255 sq. in. area.
- Bright, sharp pictures in color or black-and-white Precise registration uniform color field.
- · Compact overall size for attractive cabinet styling-70° deflection, plus short electron gun.
- Proven performance-Acclaimed by thousands of satisfied viewers-backed

by full 1 year warranty.

- Light, strong metal-bulb construction-Weight 28 lbs.-no external magnetic shielding required.
- · Economical-All these features-and more-at moderate cost.

For complete technical data on the continuously produced RCA-21AXP22 color tube-and the other RCA tubes needed to round out your design and production program-call your RCA Field Representative.



