

BROADCAST AND INDUSTRIAL  
PROFESSIONAL NET CATALOG

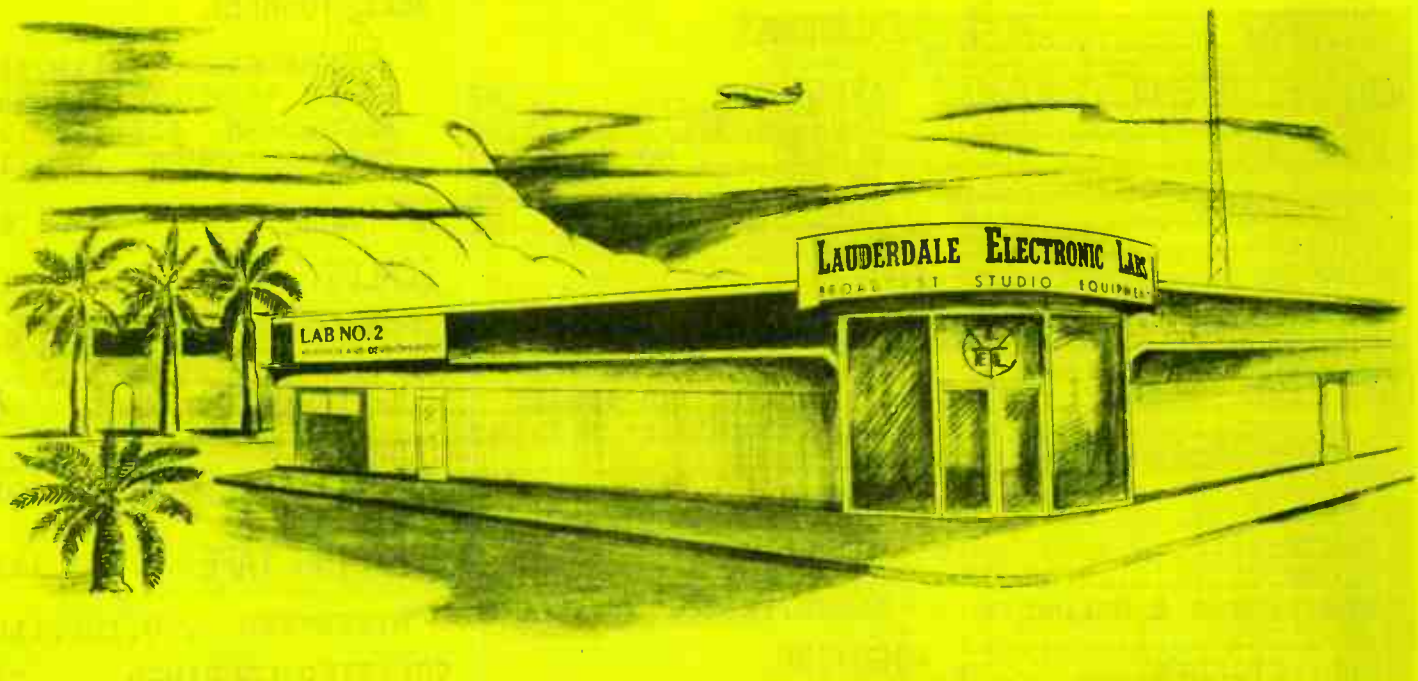
CAT. NO. 5176 BI

FOR RETAIL AND GENERAL  
CONSUMER PRICING REFER  
TO CAT.NO. 8176 RC

ORDERS: (305) 764-7755

PRODUCT INFORMATION: (305) 764-7756

ORDER FORMS IN BACK PAGES OF BINDER



TERMS: (BROADCAST STATIONS ONLY)  
5%-DISCOUNT WHEN PAYMENT ACCOMPANIES ORDER.  
2%-DISCOUNT FOR PAYMENT WITHIN 10 DAYS OF BILLING DATE.  
NET 30--PAYMENT IN FULL WITHIN 30 DAYS OF BILLING DATE.

TERMS:  
EXPORT ONLY PREPAYMENT, LETTER OF CREDIT.

PRICES IN THIS CATALOG ARE SUBJECT TO CHANGE WITHOUT NOTICE  
FREIGHT CHARGES ARE BILLED SEPARATELY--NOT AVAILABLE FOR DISCOUNTS

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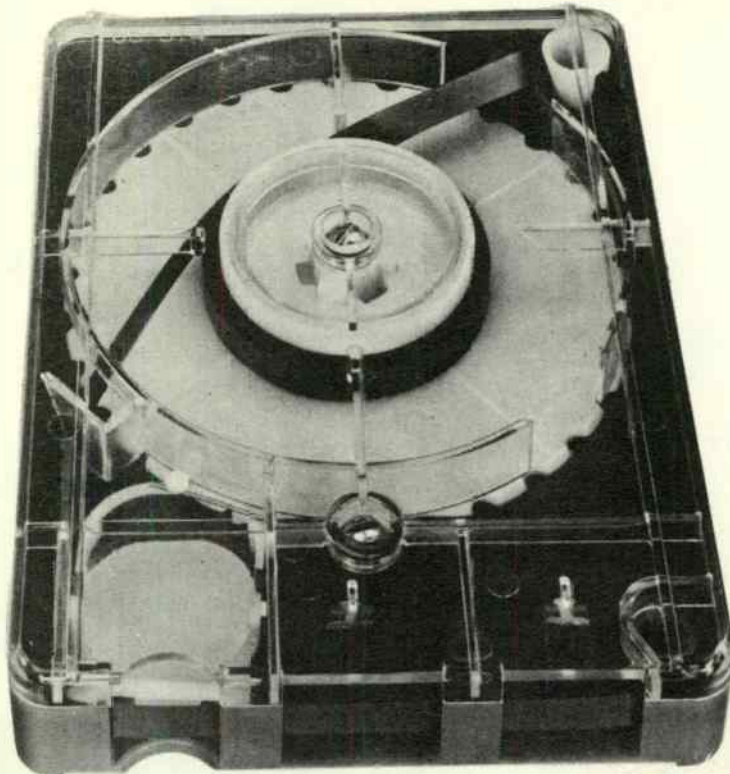
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\*Nortronics Tape Head Replacement Guide

# FIDELIPAC MASTER CARTRIDGES



## *The MASTER CART*

For the cleanest cart sound your station can broadcast, Master Cart is the answer. Engineered to use natural tape flow patterns that eliminate erratic tape behavior and assure repeatability both from cartridge to cartridge and usage to usage. Provides that added edge in stereo performance that conventional cartridges can't deliver. Fewer parts for simpler maintenance . . . and greater reliability.

CATALOG NUMBER	TIME 7.5 IPS	BROADCAST NET (1-99) (100+)
3MC-E	EMPTY	\$1.89 \$1.79
3MC-20	20 SEC.	\$2.37 \$2.19
3MC-40	40 SEC.	\$2.44 \$2.26
3MC-70	70 SEC.	\$2.49 \$2.32
3MC-90	90 SEC.	\$2.60 \$2.46
3MC-100	100 SEC.	\$2.67 \$2.49
3MC-2.5	2½ MIN.	\$2.84 \$2.66
3MC-3.5	3½ MIN.	\$3.00 \$2.77
3MC-4.5	4½ MIN.	\$3.17 \$2.90
3MC-5.5	5½ MIN.	\$3.35 \$3.07
3MC-7.5	7½ MIN.	\$3.70 \$3.35
3MC-8.5	8½ MIN.	\$3.87 \$3.58
3MC-10	10 MIN.	\$4.40 \$3.99
3MC-10.5	10½ MIN.	\$4.44 \$4.05

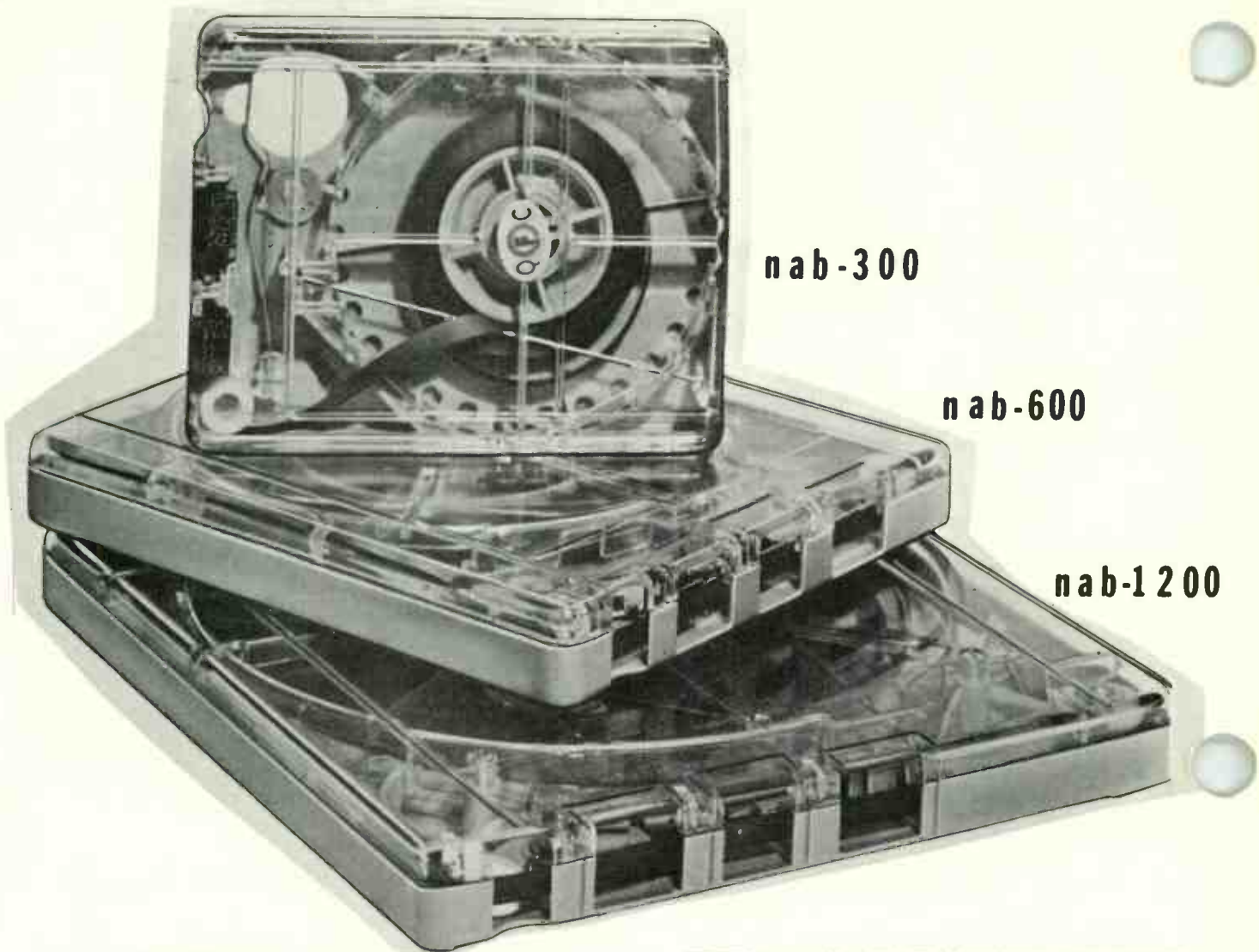
**NEW!**

**SUPER TAPE NOW AVAILABLE - ADD 10%**

*(NO BIAS CHANGE NECESSARY)*

**LESS TAPE HISS - HIGHER OUTPUT - BETTER FREQUENCY RESPONSE**

# FIDELIPAC NAB CARTRIDGES



<b>nab-300 series</b>			
CATALOG NUMBER	TIME 7.5 lps	BROADCAST NET (1-99)(100 +)	
3c-E	EMPTY	\$1.69	\$1.59
3c-20	20 SEC.	\$2.11	\$1.93
3c-40	40 SEC.	\$2.17	\$2.00
3c-70	70 SEC.	\$2.23	\$2.06
3c-90	90 SEC.	\$2.34	\$2.17
3c-100	100 SEC.	\$2.40	\$2.23
3c-2.5	2½ MIN.	\$2.57	\$2.39
3c-3.5	3½ MIN.	\$2.74	\$2.51
3c-4.5	4½ MIN.	\$2.91	\$2.64
3c-5.5	5½ MIN.	\$3.09	\$2.80
3c-7.5	7½ MIN.	\$3.43	\$3.09
3c-8.5	8½ MIN.	\$3.61	\$3.32
3c-10	10 MIN.	\$4.14	\$3.73
3c-10.5	10½ MIN.	\$4.18	\$3.79

<b>nab-600 series</b>			
CATALOG NUMBER	TIME 7.5 lps	BROADCAST NET (1-49) (50 +)	
6c-E	EMPTY	\$3.48	\$2.67
6c-15	15 MIN.	\$6.50	\$6.16
6c-16	16 MIN.	\$6.76	\$6.50

<b>nab-1200 series</b>			
CATALOG NUMBER	TIME 7.5 lps	BROADCAST NET (1-11) (12 +)	
12c-E	EMPTY	\$4.84	\$3.97
12c-30	30 MIN.	\$11.29	\$10.84
12c-32	32 MIN.	\$11.67	\$11.29
12c-35	35 MIN.	\$11.98	\$11.60
12c-40	40 MIN.	\$12.62	\$11.98

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*(NO BIAS CHANGE NECESSARY)*

**LESS TAPE HISS - HIGHER OUTPUT - BETTER FREQUENCY RESPONSE**

# AUDIOPAK - A2 CARTRIDGES

3



CATALOG NUMBER	TIME 7.5 IPS	BROADCAST NET	
		(1-99)	(100+)
AC-E	EMPTY	\$2.08	\$1.75
AC-20	20 SEC	\$2.30	\$1.92
AC-40	40 SEC	\$2.41	\$2.03
AC-70	70 SEC	\$2.52	\$2.14
AC-90	90 SEC	\$2.55	\$2.17
AC-100	100 SEC	\$2.57	\$2.19
AC-2.5	2½ MIN	\$2.74	\$2.35
AC-3.5	3½ MIN	\$2.90	\$2.46
AC-4.5	4½ MIN	\$3.12	\$2.68
AC-5.5	5½ MIN	\$3.34	\$2.85
AC-7.5	7½ MIN	\$3.78	\$3.12
AC-8.5	8½ MIN	\$4.00	\$3.29
AC-10	10 MIN	\$4.19	\$3.48
AC-10.5	10½ MIN	\$4.38	\$3.67

**NEW!**

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*(NO BIAS CHANGE NECESSARY)*

**LESS TAPE HISS - HIGHER OUTPUT - BETTER FREQUENCY RESPONSE**



# BROADCAST CARTRIDGE REBUILDING AND RELOADING

**FREE!**

**CARTRIDGE PICK-UP  
ANYWHERE IN CONTINENTAL U.S.**

**PHONE (305) 764-7755**

## nab-300 reloaded

CATALOG NUMBER	TIME 7.5 ips	BROADCAST NET (1-99)(100 +)	
reload	20 SEC.	\$ .87	\$ .83
reload	40 SEC.	\$ .93	\$ .87
reload	70 SEC.	\$ .97	\$ .93
reload	90 SEC.	\$1.03	\$ .97
reload	100 SEC.	\$1.07	\$1.03
reload	2½ MIN.	\$1.23	\$1.13
reload	3½ MIN.	\$1.38	\$1.27
reload	4½ MIN.	\$1.53	\$1.37
reload	5½ MIN.	\$1.63	\$1.47
reload	7½ MIN.	\$1.93	\$1.73
reload	8½ MIN.	\$2.13	\$1.97
reload	10 MIN.	\$2.38	\$2.17
reload	10½ MIN.	\$2.43	\$2.18

## nab-600 reloaded

CATALOG NUMBER	TIME 7.5 ips	BROADCAST NET (1-49) (50 +)	
reload	15 MIN.	\$3.47	\$3.07
reload	16 MIN.	\$3.67	\$3.17

## nab-1200 reloaded

CATALOG NUMBER	TIME 7.5 ips	BROADCAST NET (1-11) (12 +)	
reload	30 MIN.	\$5.47	\$4.97
reload	32 MIN.	\$5.57	\$5.03
reload	35 MIN.	\$5.77	\$5.07
reload	40 MIN.	\$5.97	\$5.17

SENSING FOIL APPLIED .15 PER CARTRIDGE

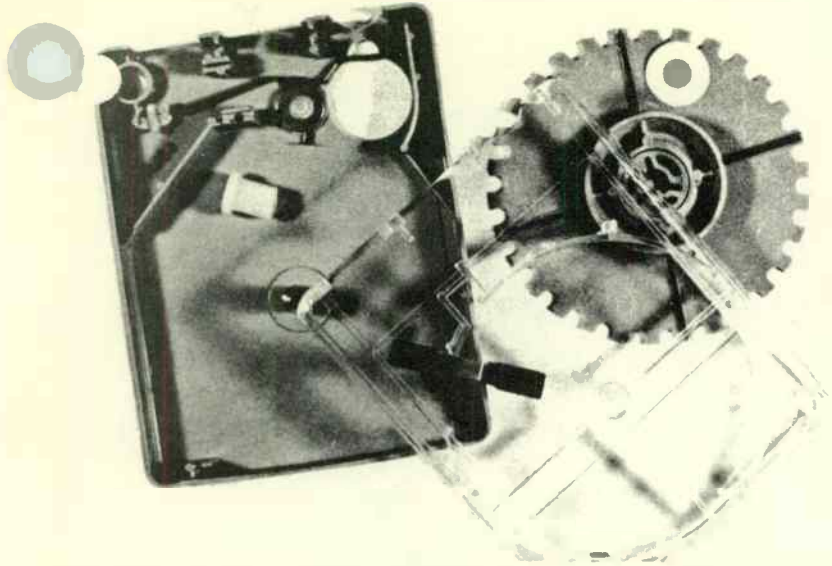
**NEW!**

**SUPER TAPE NOW AVAILABLE - ADD 10%**

**(NO BIAS CHANGE NECESSARY)**

**LESS TAPE HISS - HIGHER OUTPUT - BETTER FREQUENCY RESPONSE**

# FIDELIPAC CARTRIDGE PARTS



## FIDELIPAC NAB CARTRIDGE PARTS

CATALOG NUMBER      DESCRIPTION      BROADCAST NET

### "COMMON PARTS"

CP-1	* TOP SCREW (CENTER)	\$ .05
CP-2	* TEFLON WASHER (CENTER)	\$ .05
CP-3	* BRASS WASHER (NAB-600 & 1200)	\$ .06
CP-4	FOAM/TEFLON PRESSURE PAD	\$ .25
CP-5	LEAD INSERT (HUB NAB-300 & 600)	\$ .05
CP-6	LEAD INSERT (HUB NAB-1200)	\$ .10

### NAB-300 PARTS

3A-1	TOP COVER (CLEAR)	\$ .45
3A-2	REEL ASSEMBLY (HUB)	\$ .45
3A-3	BASE ASSEMBLY	\$ .80
3A-4	* CORNER POST (DELRIN)	\$ .15
3A-5	* GUIDE WIRE (PIN ROD)	\$ .10

### NAB-600 PARTS

6B-1	TOP COVER (CLEAR)	\$ .80
6B-2	REEL ASSEMBLY (HUB)	\$ .90
6B-3	BASE ASSEMBLY	\$1.25
6B-4	* CORNER POST (DELRIN)	\$ .15
6B-5	GUIDE WIRE (PIN ROD)	\$ .15

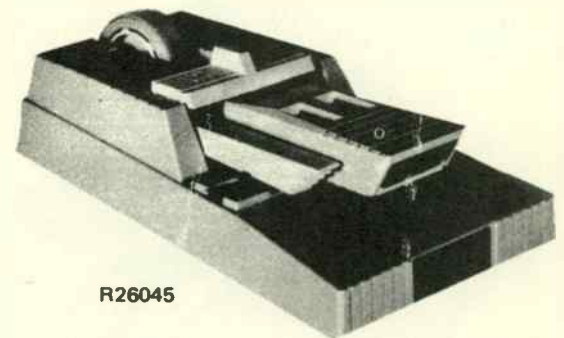
### NAB-1200 PARTS

12C-1	TOP COVER (CLEAR)	\$1.25
12C-2	REEL ASSEMBLY (HUB)	\$1.50
12C-3	BASE ASSEMBLY	\$2.00
12C-4	GUIDE WIRE (SPECIFY STRAIGHT OR V)	.15
12C-5	* CORNER SCREW	\$ .05

\* NO CHARGE ITEMS IN LEL CARTRIDGE REBUILDING



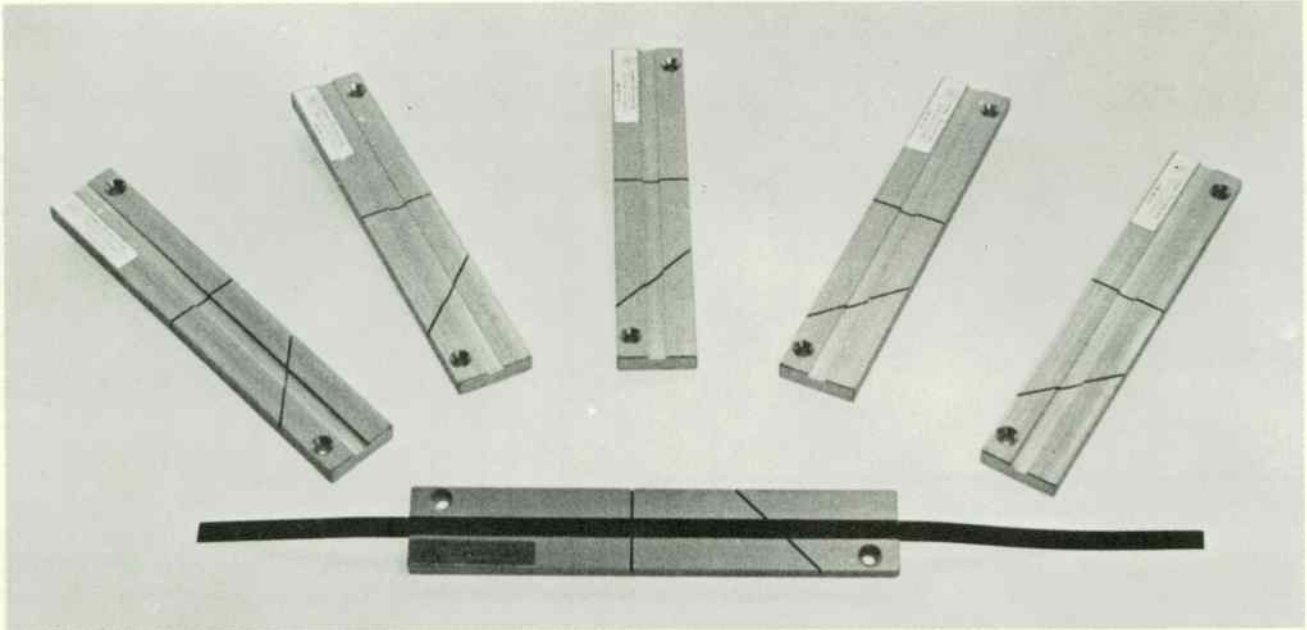
LUBRICATED CARTRIDGE TAPE  
 156- $\frac{1}{2}$ -1800 7" REEL \$5.50  
 156- $\frac{1}{2}$ -3600 10" HUB \$9.85



R26045

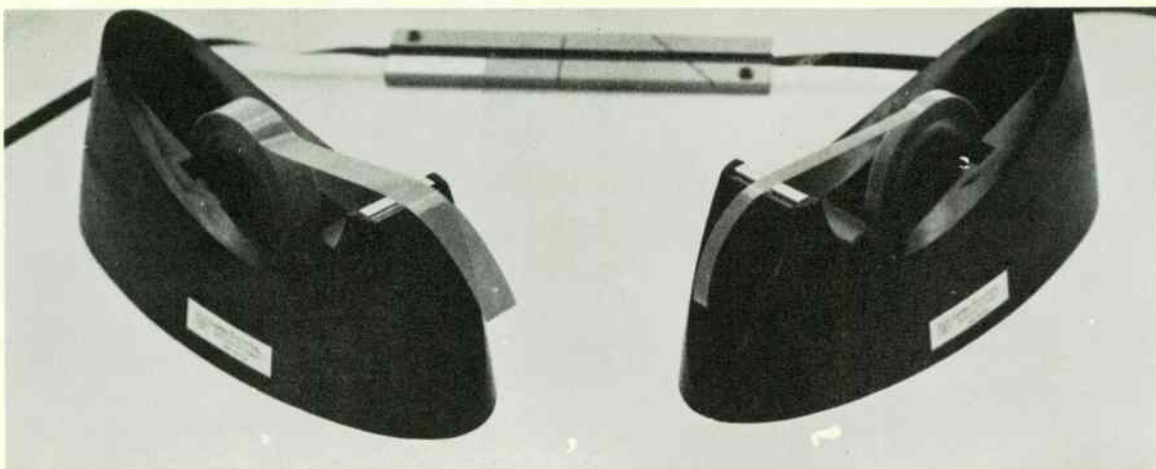
GIBSON GIRL  
 CARTRIDGE TAPE SPLICER  
 #R26045.....\$14.50

# SPLICING BLOCKS



#SB-3...HEAVY DUTY SPLICING BLOCK FOR 1/4" TAPE.....\$10.50

## PROFESSIONAL SPLICING TAPE DISPENSER HEAVY DUTY-RUBBER BASE-7/32" or 1/2" TAPE



#STD-1...PROFESSIONAL SPLICING TAPE DISPENSER.....\$ 4.60



# RECORDING MAINTENANCE



8 oz. DIP  
\$2.59



8 oz. SPRAY  
\$2.89

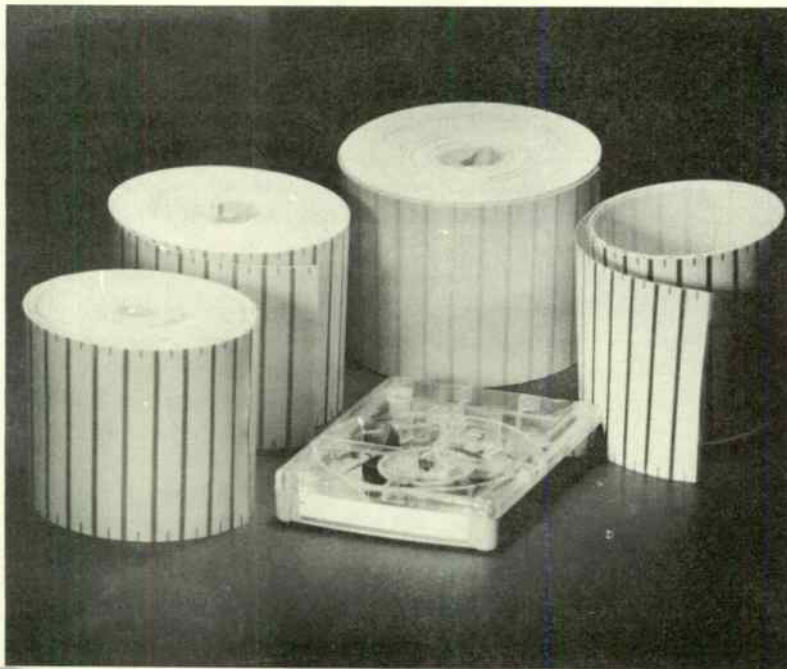


16 oz. SPRAY  
\$3.69



32 oz. DIP  
\$6.49

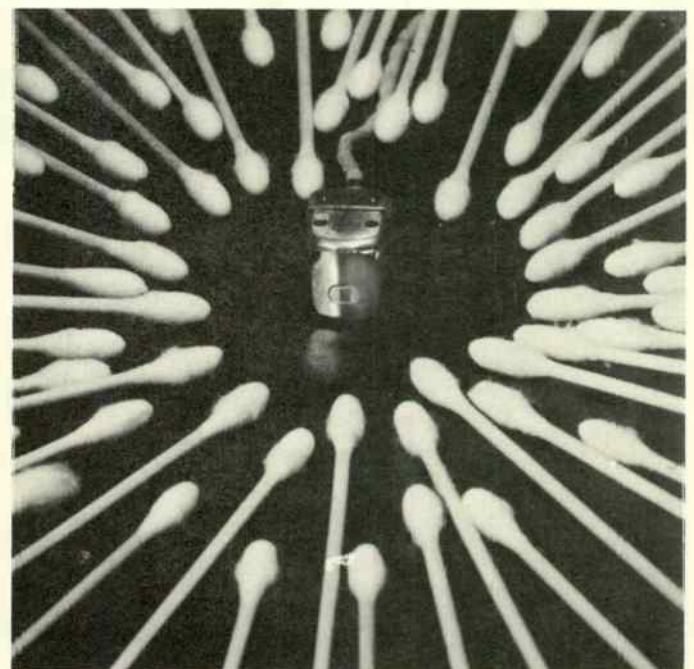
LAUDERDALE ELECTRONIC LABS "QC" series of head cleaner has been formulated for use on both audio and video tape heads. Removes the most impacted dirt and oxide deposits without damaging head epoxy. Leaves no residue and contains no silicone lubricant. Available in dip can or spray.



COLOR CODED CARTRIDGE LABELS FIT THE END OF THE CARTRIDGE WITHOUT OVERLAPPING AND ARE MADE WITH REMOVABLE ADHESIVE RACKING.

Colors: RED-WHITE-BLUE-GREEN-YELLOW-BLACK

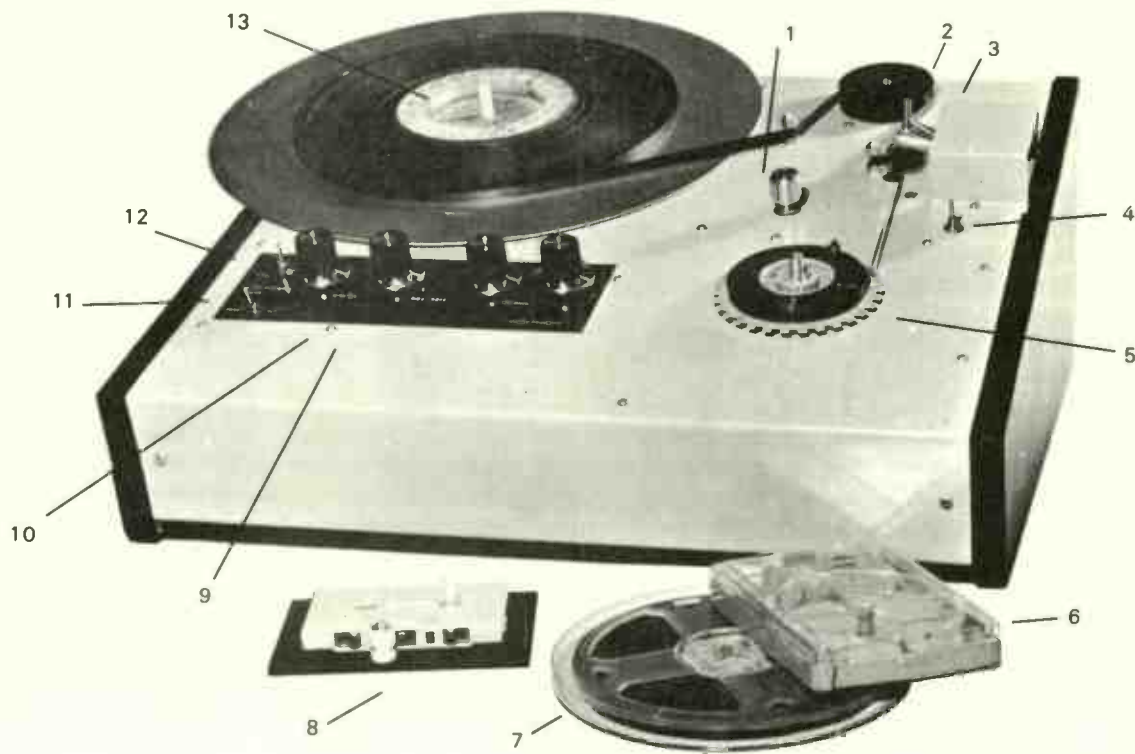
CL-100 PKG/100 \$1.50  
CL-1000 PKG/100 \$12.00



A CONVENIENT PACKAGE OF 6" COTTON SWABS USED TO SAFELY CLEAN MAGNETIC HEADS AND GUIDES.

HCS-100 PKG/100 \$1.00  
HCS-1000 PKG/1000 \$7.00

# CARTRIDGE WINDERS



## OPERATING FEATURES

**Easy to load.** Takes only seconds to set up and start.

**Automatic tape length determination.** Playback speed selector eliminates guesswork. No need to divide or multiply for carts and cassettes to be played back at different speeds. Simply set selector to  $1\frac{7}{8}$ ,  $3\frac{3}{4}$  or  $7\frac{1}{2}$  i.p.s.

**Exclusive torsion control.** Insures proper tape pack on all size hubs, cassettes and reels.

**Accurate.** Precise braking stops tape within one second of playback time.

**Easy Reset.** RESET/RUN switch resets circuitry, for next tape to be wound, without erasing previously entered settings.

**Able to wind all tapes.** Cartridge, cassette and reel.

**Guaranteed performance.** 2 year guarantee on all electronics and 6 months on mechanical parts.

**Loads from any tape source.** All machines are capable of winding off of the smallest reels and/or up to 14" pancakes.

## DESIGN FEATURES

- 1—Take up tape tension control.
- 2—Light beam chopping tachometer.
- 3—Cue tone sense head (BT models only).

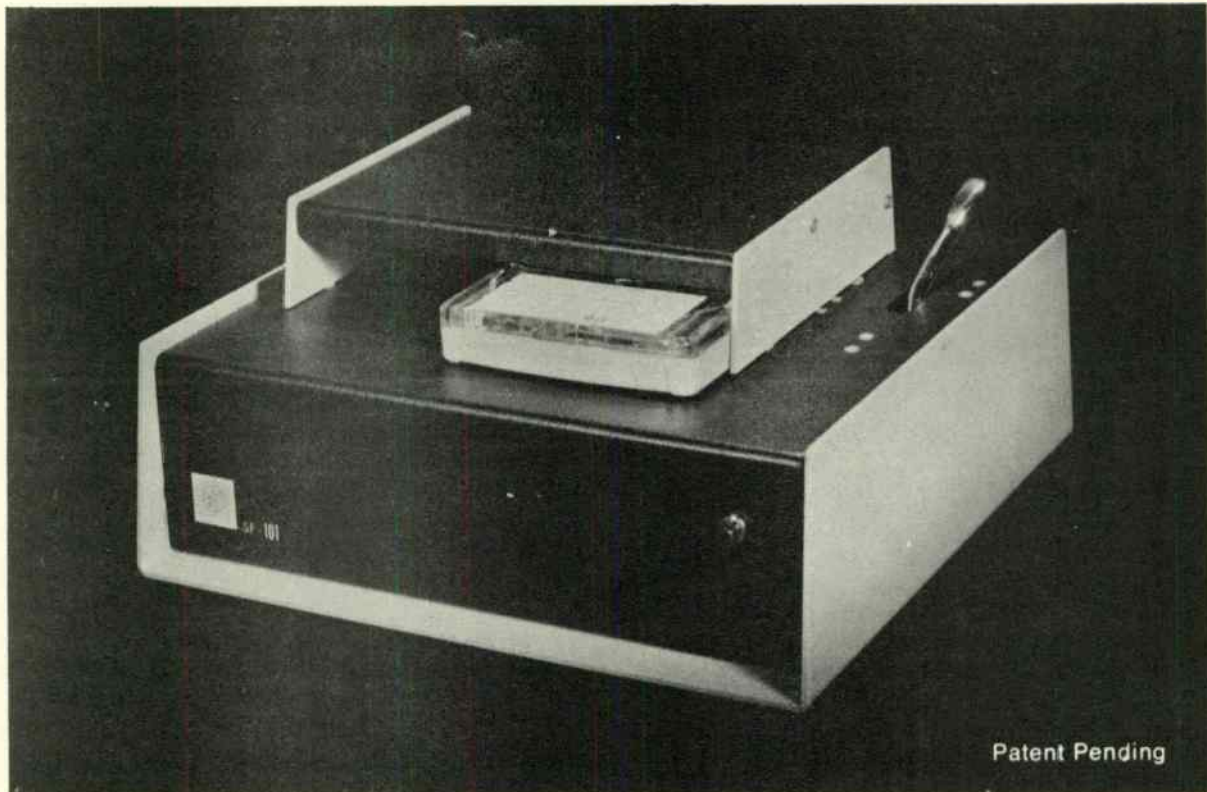
- 4—AC on/off switch.
- 5—Tape take-up spindle.
- 6—Loads all sizes of tape cartridges.
- 7—Loads up to 7" reels from pancake supply.
- 8—Optional cassette adapter (fits all machines).
- 9—Digital time select panel (select from 1 second to 100 minutes, 00 seconds).
- 10—Tone/blank select (BT models only).
- 11—Playback speed select switch,  $1\frac{7}{8}$ ,  $3\frac{3}{4}$ ,  $7\frac{1}{2}$  i.p.s.
- 12—RUN/RESET switch.
- 13—Pancake adapter (for ACL-25/E only).

## ACL-25/E

## \$195.00

**AUTOMATIC**

# **SPLICE FINDER**



**NEW!**

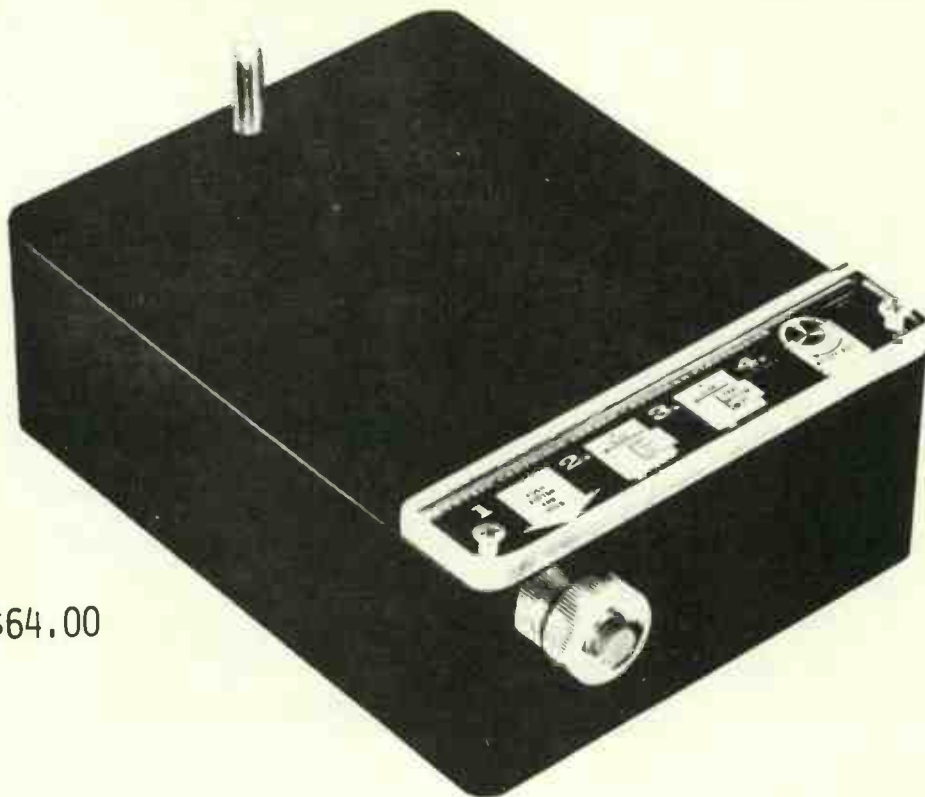
**PROFESSIONAL NET \$269.00**

## **FEATURES:**

- USES LATEST DESIGN IN OPTO-ELECTRONICS TO SENSE SPLICE.
- SENSES SPLICE REGARDLESS OF THICKNESS. (NO MECHANICAL SENSING LINKAGE USED)
- ACCEPTS NAB 300, 600 AND 1200 SIZE CARTRIDGES.
- SPLICE IS FORWARDED AUTOMATICALLY 2" BEYOND CAPSTAN FOR VIEWING.
- AUDIBLE TONE ALERTS OPERATOR WHEN SPLICE HAS BEEN FOUND.  
(TONE ON/OFF SWITCH PROVIDED)
- AUTO-TORQUE CONTROL ATTAINS A SPEED OF 30 IPS.
- ELIMINATES ANNOYING NOISE OF RECORDING OVER SPLICE.

# TAPE ERASERS

## TD-1A TAPE DEGAUSSER



\$64.00



#R24017 \$19.00



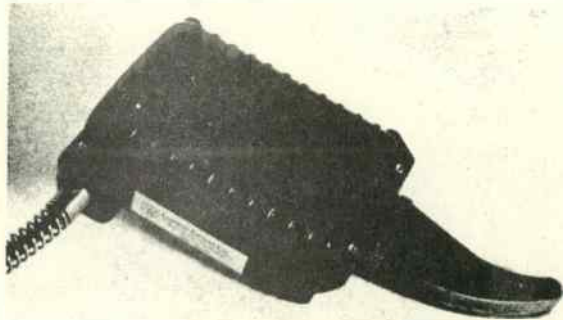
65-311  
ERASER \$34.50

# DEMAGNETIZERS



**QM-202** \$17.60  
**PROFESSIONAL HEAD DEMAGNETIZER**

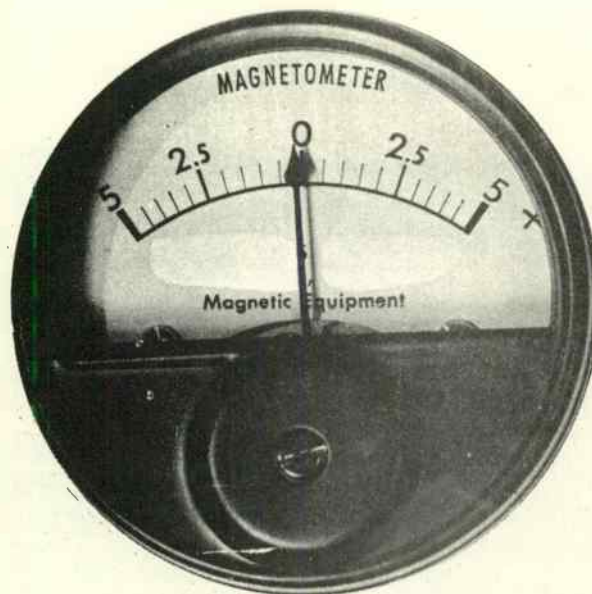
Another industry exclusive by Nortronics. For use on all reel-to-reel, cassette and 8-track cartridge recorders. Generates magnetic field from a flexible probe tip that reaches into tight spaces to remove residual magnetism from heads, guides and other metallic parts. Quality leaf switch activates with fingertip pressure and de-activates when unit is put down. Burnout proof. Features an attractive Cyclac case and convenient AC power cord. Probe tip is covered with a soft plastic that cannot scratch or damage sensitive head faces. Operates on 110-120 VAC, 50-60 Hz.



# HDM/800 DEMAGNETIZER \$32.00

# MAGNETOMETERS

CHECK MAGNETISM IN RECORDER COMPONENTS



**MAGNETOMETER**

Measures level of magnetism in components.  
Calibrated to read directly in gauss.  
Model 20/B5 shown.

\$15.00

**CLIP-ON EXTENSION PROBE**

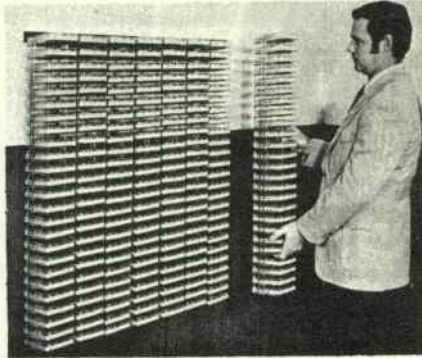
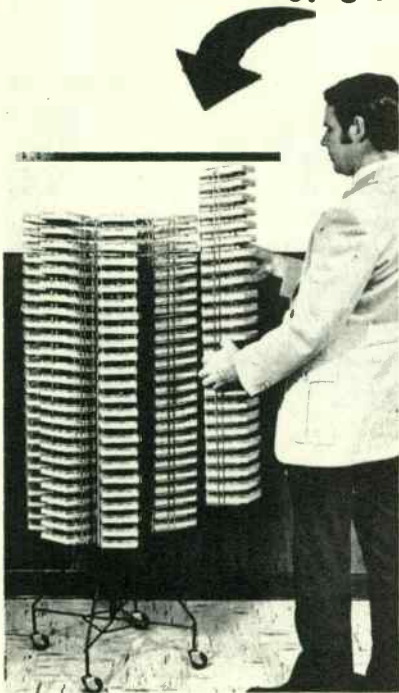
Extension probe is 1 3/4" long. Can be formed with fingers. Improves checking of magnetism in hard to reach components.

\$ 3.50

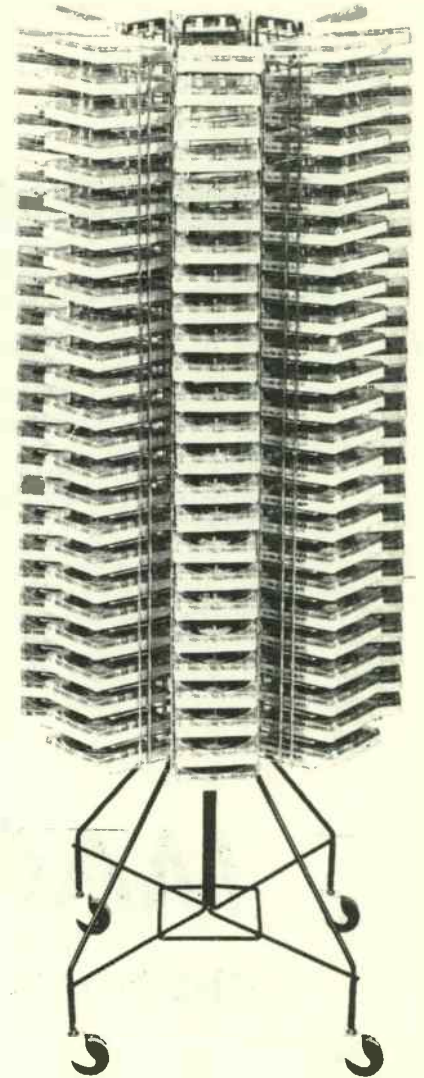
# CARTRIDGE RACKS

Featuring  
the...

**WR-25**  
**m-o-d-u-l-o**



• **WR-25; Welded Steel,  
Chrome Plated \$13.50**



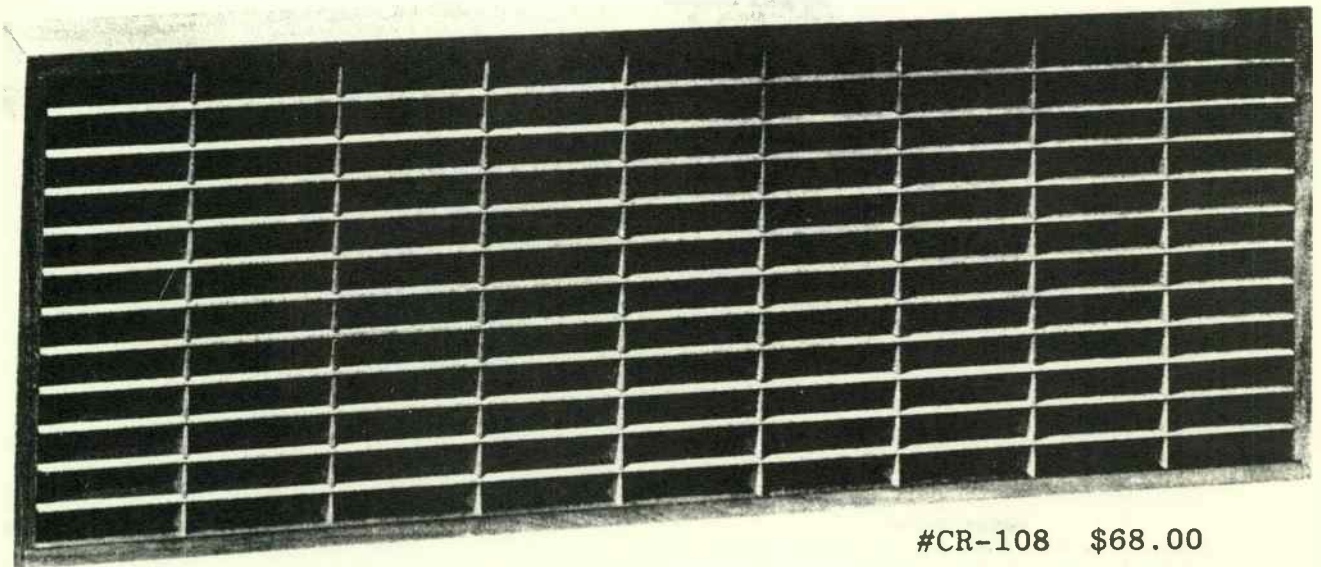
**MR-200 Mobile Cartridge Rack  
Holds 200 Cartridges \$ 148**



Length - 40½"  
Height - 15"  
Depth - 4"  
Weight - 21 lbs.  
Shipping - 23 lbs.  
Capacity - 108

**CR-108**

**Walnut Formica Cartridge Rack**



**#CR-108 \$68.00**

# CARTRIDGE RACKS

13

**NEW**

FROM



**LAUDERDALE ELECTRONIC LABS**

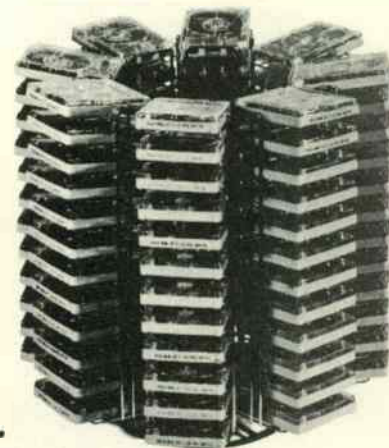
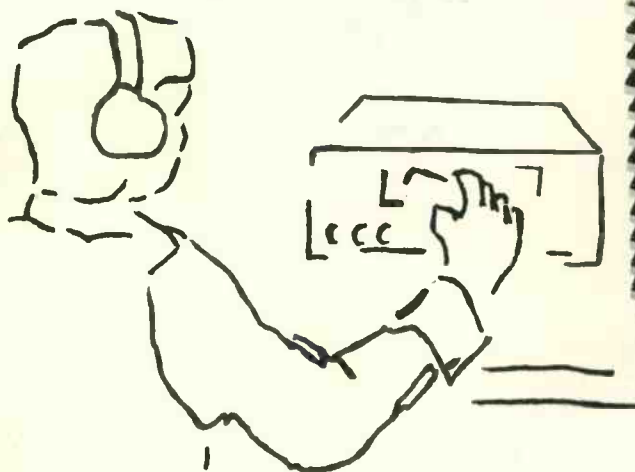
16 S. W. 13th Street, Fort Lauderdale, Florida 33315

Tel. (305) 525-0478

## Cart-A-round

PORTABLE  
REVOLVING

TABLE TOP  
CARTRIDGE RACK



**Model TR-96**

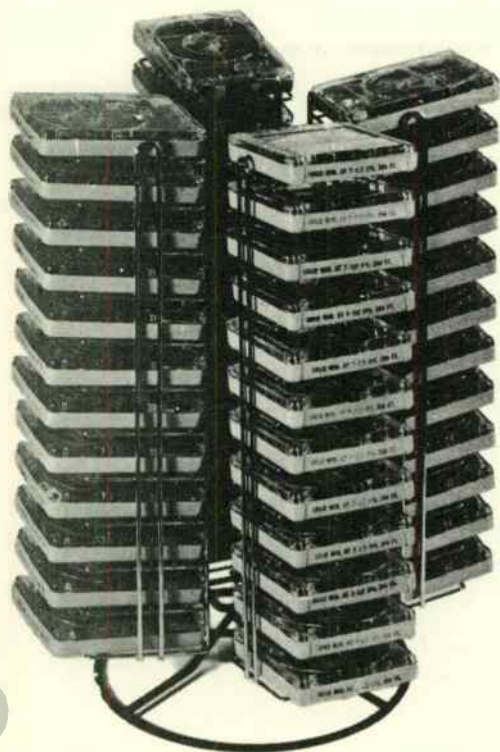
Cart-A-Round racks are available in two smaller, table top models that have the same versatile features of the larger models. Each bank of twelve cartridge slots is an integral unit that mounts on the revolving center. Programs of twelve cartridges can be assembled in the library before "air" time and taken to the Studio when needed. Carrouzels rotate freely and maintain balance even when partially loaded.

### MODEL TR-96

Storage for 96 cartridges. Eight individual, removable racks each holds 12 cartridges. Outside diameter when loaded - 20 inches; 20 inches high. Individual racks are chrome plated, welded steel. Base is black japanned steel. **\$72.00**

### MODEL TR-48

Storage for 48 cartridges. Four individual, removable racks each holds 12 cartridges. Outside diameter when loaded - 15 inches; 20 inches high. Individual racks are chrome plated, welded steel. Base is black japanned steel. **\$39.00**



**Model TR-48**

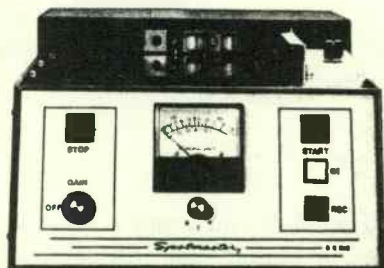
# CARTRIDGE MACHINES

## 500 D Series

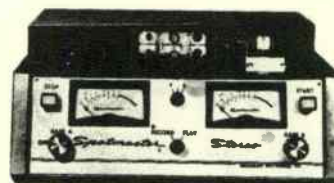
**SINGLE DECK  
CARTRIDGE MACHINES**



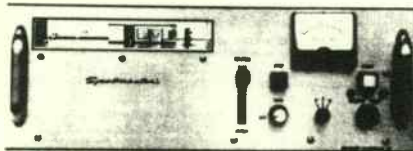
- TRADITIONAL FAVORITE THAT MEETS OR EXCEEDS NAB SPECIFICATIONS
- COMPLETE RANGE OF MODELS AT MODERATE PRICES
- 500 D FEATURES AUTOMATIC RECORD CANCEL, BUILT IN MIKE PRE-AMP AND FULL AUXILIARY CUE TONE OPTIONS



500 D/DL Record/Playback/Delay. Records, stores and plays back any program material for pre-determined length on standard cartridges. Also normal record/playback functions.



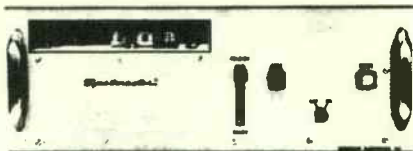
500 DS Stereo Record/Playback. Optional mike pre-amp.



500 DR. Rack Mount 500 D in 7" panel height. Chassis rolls out for access. Optional mike pre-amp.



500 DR/DL Record/Playback/Delay. Rack mount version of 500 D/DL. Optional mike pre-amp.



505 DR and 505 DRS. Rack mount mono and stereo playback units. All rack mount units accept A, B or C size cartridges.



500 DRS Stereo Record/Playback. Full stereo record and playback in a 7" rack unit.

CALL US FOR LATEST PRICING AND QUANTITY QUOTATIONS... (305) 764-7755



# CARTRIDGE MACHINES

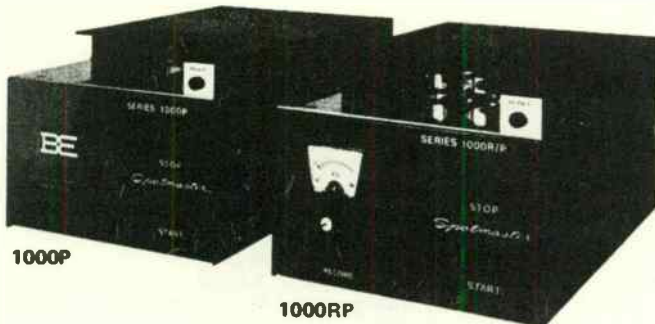
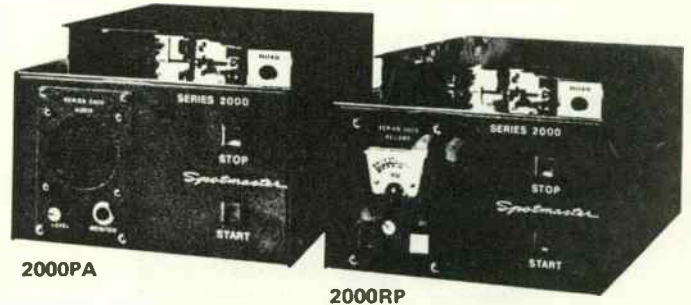
## Series 2000

- **PLUG-IN MODULES FOR RECORD AND AUDITION FUNCTIONS PERMIT FIELD CONVERSION OF PLAYBACK UNITS**

SERIES 2000 cart machines have low power consumption and run cool to protect your tapes. Their noise figure exceeds 57 dB. Start/stop times are fast — under 80 milliseconds. Standard features include balanced transformer output, 150 Hz cue, 1000 Hz cue, and provision for remote control and telephone interface.

Separate front panel plug-in modules are used to implement record and audition functions. These add flexibility and permit instant field conversion of Series 2000 playback machines. Table top units accept A, B and C size cartridges, and the dual rack mount configuration accepts size A and B cartridges. Available in mono and stereo playback and record/playback, and mono playback/audition.

### SINGLE DECK CARTRIDGE MACHINES



## SERIES 1000

- **SIMPLE, BASIC CART MACHINES AT VERY LOW PRICES**
- **FULL +16 DBM PEAK OUTPUT WITH EXCELLENT FREQUENCY RESPONSE**

In today's battle against inflation, SPOTMASTER<sup>®</sup> introduces a basic, spartan audio tape cartridge machine — the SERIES 1000. The SERIES 1000 combines a rock-bottom price with the quality and reliability of the SERIES 2000. The SERIES 1000 includes: low noise electronics; fast starting and stopping tape transport; full +16 dBm peak output; excellent frequency response with high frequency adjustment; automatic cueing with 1 KHz tone; rugged construction for durability and long life; cool and quiet operation; easy accessibility for periodic maintenance; table top or rack mounting; adjustable head mounting; self-cancelling record preset; stable, low flutter, hysteresis synchronous tape drive; minimum component circuitry; and line or microphone input capability to the recorder.

CALL US FOR LATEST PRICING AND QUANTITY QUOTATIONS... (305) 764-7755

# CARTRIDGE MACHINES

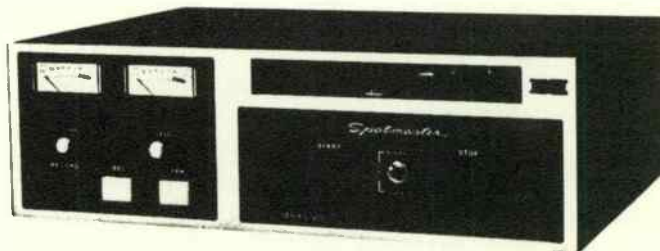
## Series 4000

### THE RUGGED ONES



Model 4200 space saver for size A and B cartridges, available in mono and stereo playback.

#### SINGLE DECK CARTRIDGE MACHINES



Model 4300 for size A, B and C cartridges, available in mono and stereo playback only or record/playback.

## Series 3000

### THE RUGGED ONES

- AUTOMATIC RELEASE DECK WITH LARGE AIR DAMPED SOLENOID
- LOW POWER CONSUMPTION – COOLEST RUNNING UNIT IN THE INDUSTRY
- PHASE-LOK III HEAD BRACKET ELIMINATES STEREO PHASING PROBLEMS
- EXCEEDS PRESENT AND PROPOSED NAB SPECIFICATIONS
- FULL RANGE OF MODELS AND OPTIONS

#### SINGLE DECK CARTRIDGE MACHINES



Model 3100 for A size cartridges, available in mono or stereo playback. Three Model 3100's mount side-by-side in 19 inch rack adapter.



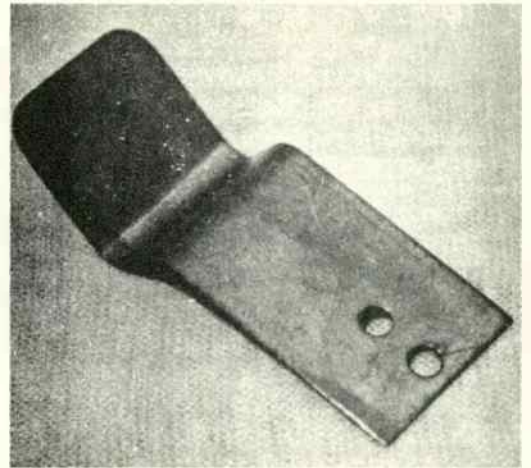
Model 3200 for A and B size cartridges, available in mono or stereo playback only, record/playback, or delay programmer. Mono record/playback shown. Two Model 3200's mount side-by-side in 19 inch rack adapter.

CALL US FOR LATEST PRICING AND QUANTITY QUOTATIONS... (305) 764-7755

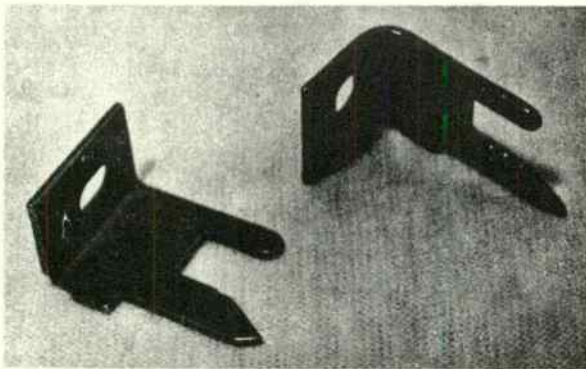
# PARTS



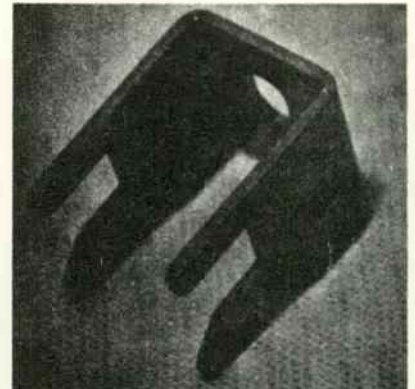
# CPR-10 PRESSURE ROLLER \$5.95



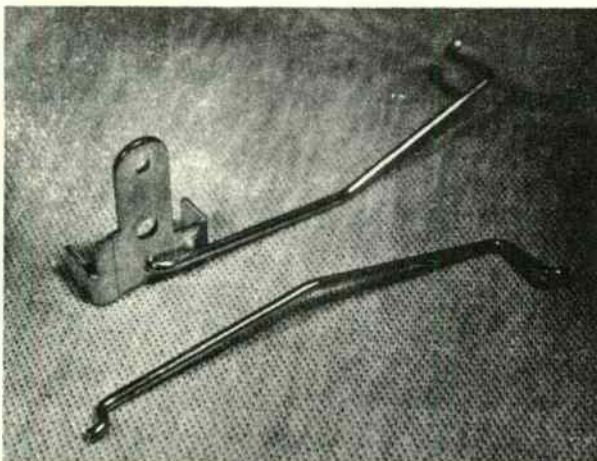
# HDS-4 HOLD DOWN SPRING  
(SPECIFY MAKE AND MODEL) \$1.60



# LTG-1 LEFT TAPE GUIDE \$1.20  
# RTG-1 RIGHT TAPE GUIDE \$1.20



# DCG-1 DUAL CENTER GUIDE \$2.60

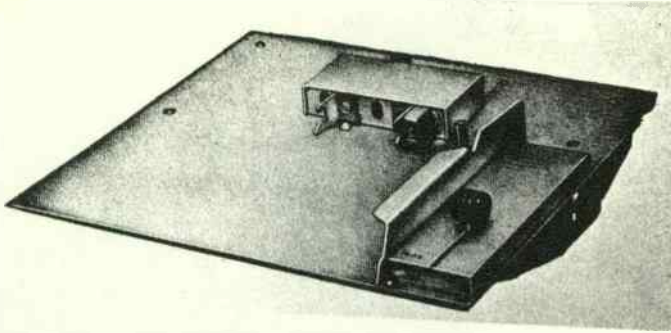


# CCL-11 CONTROL LINK \$1.80

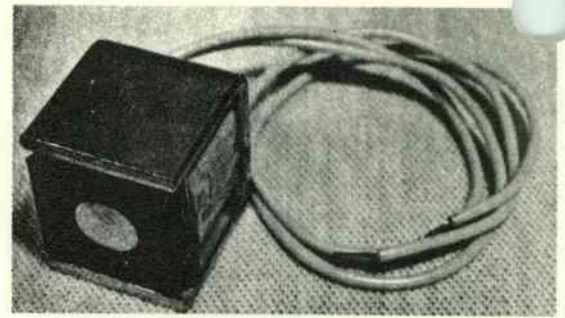


# CRA-12 CONTROL RELEASE ASSEM. \$2.60

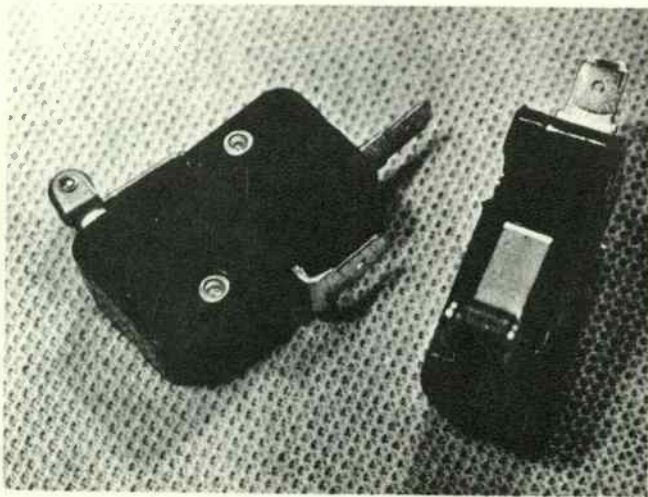
# PARTS



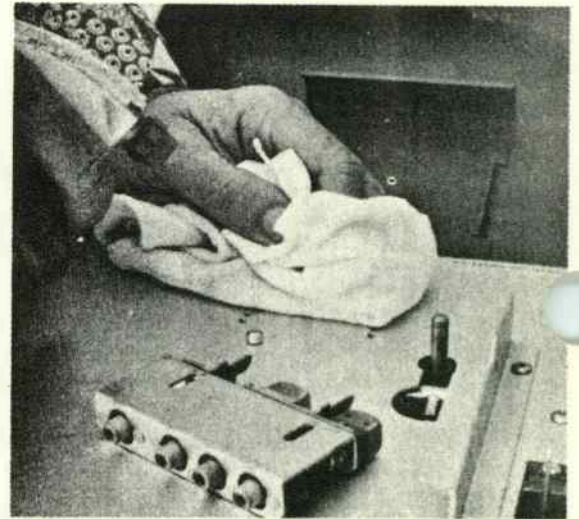
# TM-60 TELEX MOTOR \$46.00  
# DB-1 DRIVE BELT \$2.80



# SA-3 SOLENOID ASSEM. \$14.60



# RS-3 ROLLER SWITCH \$4.20



#EC-16 (16 OZ. PUMP SPRAY)  
L.E.L. ELECTROCLEAN \$4.60



**NON SLIP**

**ROLLER AND BELT DRESSING \$1.50**

STOPS SLIPPAGE OF IDLER WHEELS, PULLEY BELTS AND CORDS. FAST DRYING. WILL NOT HARM RUBBER.

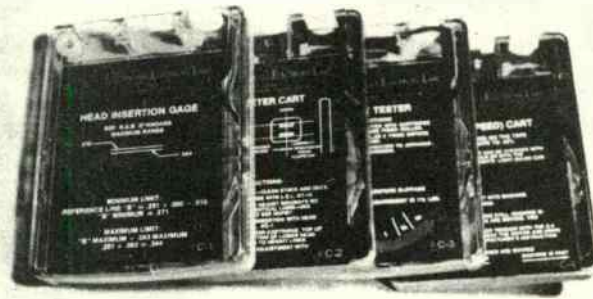


**BRONZE BEARING GREASE**

**\$1.50**

DESIGNED FOR APPLICATION TO CARTRIDGE PINCH ROLLER BEARINGS AND TURNABLE IDLER WHEEL BEARINGS. PREVENTS WEAR AND CORROSION. EASY TO USE SQUEEZE BOTTLE WITH POINTED APPLICATOR TIP.

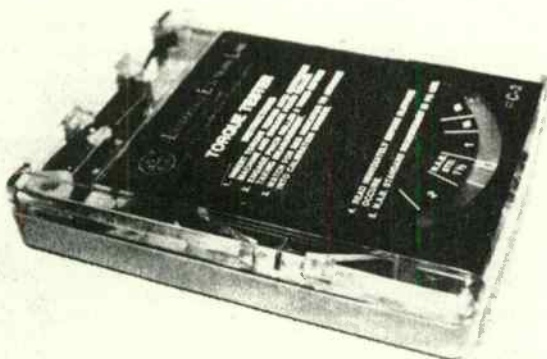
# ALIGNMENT TOOLS



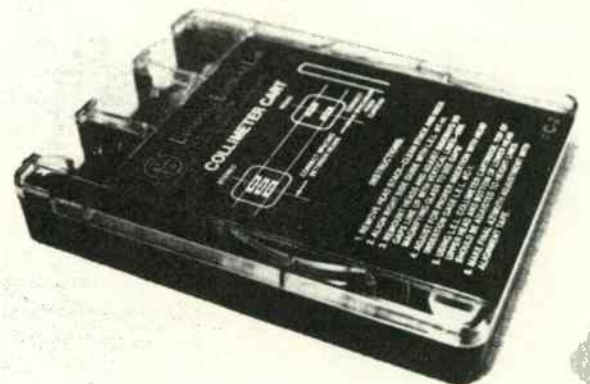
# C-1 HEAD INSERTION CARTRIDGE \$4.50



# C-4 STROBE CARTRIDGE \$14.50

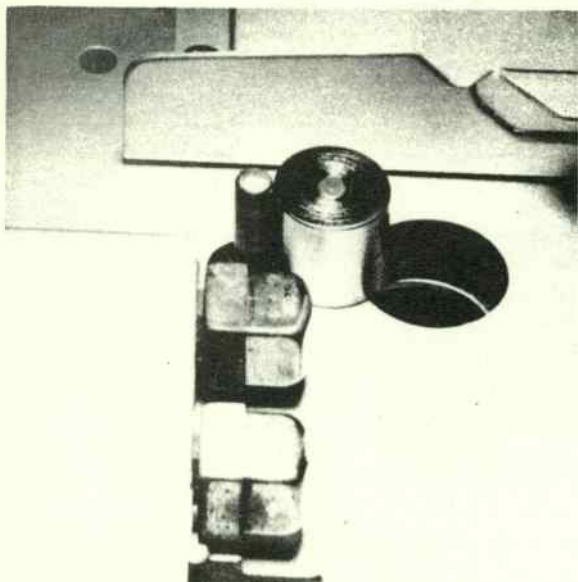


# C-3 TORQUE CARTRIDGE \$16.50

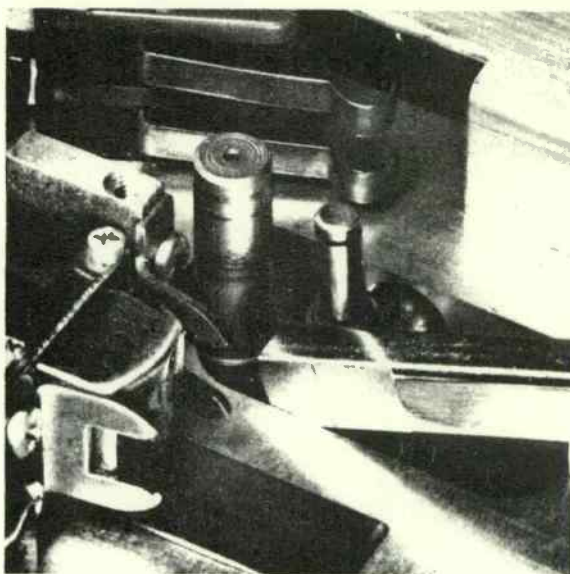


# C-2 COLLIMETER CARTRIDGE \$19.50

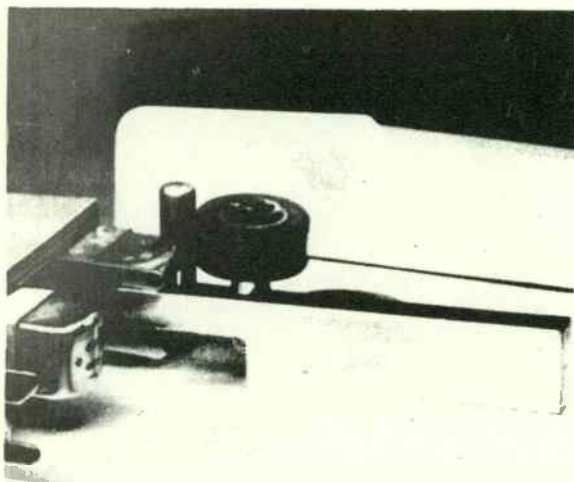
# ALIGNMENT TOOLS



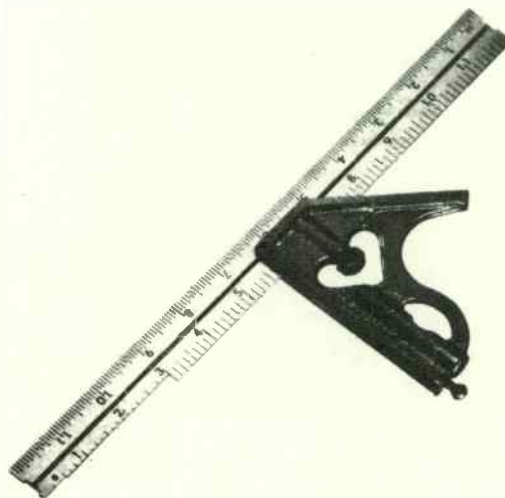
L.E.L. # T-10 PINCH ROLLER GAGE \$10.00



L.E.L. # T-11 CAPSTAN GAGE \$5.00



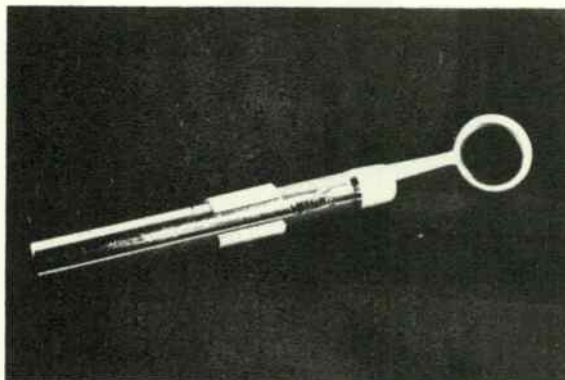
L.E.L. # T-12 TAPE GUIDE HEIGHT GAGE \$10.00



L.E.L. # T-14 RIGHT SIDE AND HEAD ROTATION GAGE \$14.50

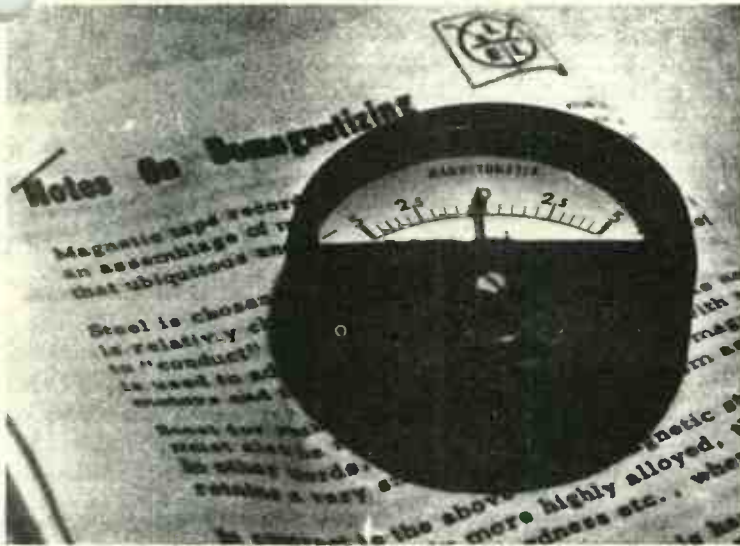


# CM-12 WHITE CHINA MARKERS (DOZ.) \$4.95



# QM-506 INSPECTION MIRROR WITH LIGHT \$4.30

# ALIGNMENT TOOLS



# 20/B5 MAGNETOMETER \$15.00

# CEP/3 CLIP-ON EXTENSION PROBE \$3.50



# HDM/800 DEMAGNETIZER \$32.00



# CMH/2 COMBINATION PACKAGE CONTAINING BOTH MAGNETOMETER & DEMAGNETIZER \$45.00



# MG-10 HIGH POWER MAGNIFYING GLASS \$8.60



# MGI-20 HIGH POWER (ILLUMINATED) MAGNIFYING GLASS \$14.50

# ALIGNMENT CARTRIDGES

THE IDEA BEHIND THIS SERIES OF TEST CARTS IS TO HAVE THE TEST YOU NEED, WHEN YOU NEED IT, AND NOT TO HAVE TO LISTEN THROUGH ALL OTHER RECORDED MATERIAL NOT PERTINENT TO THE TEST BEING PERFORMED. IF YOU WANT TO ADJUST THE AZIMUTH, THE 20 SECONDS OR SO OF 15KHz ON THE FRONT OF THE REGULAR ALIGNMENT CART NEVER SEEMS TO BE QUITE ENOUGH TO FINISH THE ADJUSTMENTS AND YOU HAVE TO LISTEN TO 4½ MINUTES OF OTHER MATERIAL YOU DON'T WANT, WAITING TO GET ANOTHER 20 SECOND SHOT AT THE AZIMUTH. WE ARE PUTTING ONE TEST ON ONE CART AND THE WHOLE SET WILL NOT COST MUCH MORE THAN THE PRESENT SET. THIS IS WHAT WE ARE OFFERING:

ALL TEST CARTS ARE FIDELIPAC'S NEW MASTER CARTS LOADED WITH 3M PREMIUM LUBED TAPE. ALL LEVELS AND FREQUENCIES ARE HELD WITHIN LESS THAN 1% (ACTUALLY LESS THAN ¼ % IN MOST CASES).

DETAILED INSTRUCTIONS AND OTHER TECHNICAL INFORMATION ARE PACKED WITH EACH CART.

ALL CARTS ARE AVAILABLE (ON SPECIAL ORDER) WITH 3 db HIGHER LEVELS.

## # 5 — 15KHz AZIMUTH ALIGNMENT # C-5 \$15.00

A CONTINUOUS, NO CUE TONE TAPE, OF ACCURATELY AZIMUTHED 15KHz AT -10 db. TAKE AS LONG AS YOU WANT TO GET A PRECISE ADJUSTMENT!

## # 6 — FREQUENCY RESPONSE # C-6 \$20.00

THE LEVELS ON THIS CART ARE ACCURATE TO BETTER THAN ¼ db. THE FREQUENCY IS ACCURATE. IT TAKES LESS THAN ONE MINUTE FOR A FREQUENCY RUN. THE TONES ARE FROM LOW TO HIGH TO MAKE STEREO PHASING EASIER.

## # 7 — CUE TEST (1000Hz) # C-7 \$ 8.00

CUE TONES ARE RECORDED -6 db. IF YOU ADJUST THE CUE SENSITIVITY TO PICK UP THIS LEVEL YOU WILL HAVE NO TROUBLE WITH YOUR NORMAL LEVEL. ONE TONE EVERY 5 SECONDS IS RECORDED FULL TRACK SO YOU CAN HEAR WHEN THE CUE COMES BY.

## # 8 — SWEEP TONE — 0 TO 15KHz # C-8 \$12.50

IF YOU HAVE A 'SCOPE, THIS CART IS THE GREATEST THING SINCE THE INVENTION OF THE WHEEL! PUT IN THIS CART, HOOK UP YOUR'SCOPE TO THE OUTPUT AND YOU HAVE A COMPLETE FREQUENCY RESPONSE CURVE DRAWN ON YOUR SCOPE. YOU CAN ADJUST THE AZIMUTH AND WATCH THE HIGH END POP UP AND DOWN. ADJUST THE EQUALIZATION AND WATCH THE WHOLE CURVE MOVE. YOU CAN SEE HUM AND NOISE. IT IS REALLY FAST AND EASY. WILL ALSO CHECK FOR WORN HEADS. IT'S GOOD FOR FASTER STEREO HEAD PHASING ADJUSTMENT. FOR EVERY DAY CHECKING OF THE STUDIO CART MACHINES, THERE IS NO FASTER WAY KNOWN. THE SWEEP IS ALSO ON THE CUE TRACK FOR ALL YOU AUTOMATION PEOPLE.



# ALIGNMENT CARTRIDGES

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## # 9 - PRE-RECORDED MUSIC

# C-9 \$11.00

THE FINAL TEST -- HOW DOES IT SOUND? THIS IS REALLY HI-FI MUSIC PICKED FOR THE WIDEST FREQUENCY RANGE. HERE IS KNOWN GOOD SOUND! AFTER YOU HEAR IT A FEW TIMES ON ONE OF YOUR GOOD MACHINES, YOU WILL BE ABLE TO NOTICE IF SOMETHING IS SOUR LATER ON. KNOWING YOU WANT YOUR OWN KIND OF MUSIC, WE HAVE:

9A - MOR

9B- COUNTRY

9C - ROCK

9D - LIGHT CLASSICAL

## # 10 — STANDARD LEVEL TONE

# C-10 \$ 8.50

700HZ IS THE NAB STANDARD TONE FOR REFERENCE ON TAPE AND CARTS. WITH THIS CART AND A METER (OR THE V.U. METER IN THE BOARD), YOU CAN SET THE OUTPUT OF ALL THE CART MACHINES ALL THE SAME IN BOTH THE STUDIO AND PRODUCTION ROOM. 1000Hz IS THE STANDARD REFERENCE FOR MOST OTHER THINGS. IT IS A LOT EASIER TO THROW THE 1KHz TONE CART INTO THE CART MACHINE AND USE FOR TESTING THE WHOLE AUDIO SYSTEM THAN IT IS TO GET THE AUDIO GENERATOR, CLIP LEADS, PLUGS, ETC., AND GET IT ALL HOOKED UP. THE 1KHz IS RIGHT ON FREQUENCY, SO YOU CAN PUT A COUNTER ON IT FOR A REAL ACCURATE CHECK ON TAPE SPEED.

3000Hz IS THE U.S. STANDARD TONE FOR WOW AND FLUTTER TESTING. YOU CAN HEAR SPEED CHANGES IN THIS FREQUENCY RANGE BETTER. IF YOU HAVE A FLUTTER METER, THIS IS THE CART YOU WANT. EAR OR METER, THIS CART IS A MUST FOR CHECKING MACHINE STABILITY.

ORDER:

#10A - 700Hz

#10C - 3000Hz

#10B - 1000Hz

#10D - 3150Hz

## # 11 — PINK NOISE

# C-11 \$12.50

PINK NOISE IS AN OLD TIME TOOL FOR INDUSTRY WHICH IS JUST NOW STARTING TO BE USED BY BROADCAST AND RECORDING ENGINEERS. IT SOUNDS LIKE THE HISS BETWEEN FM STATIONS. IT HAS EQUAL POWER PER OCTAVE ALL ACROSS THE AUDIO RANGE. THIS IS IT WHEN IT COMES TO PHASING STEREO HEADS. THERE IS NO FASTER OR EASIER WAY. IT IS BETTER THAN TONES OR SWEEPS. YOU START OUT WITH A "FUZZY BALL" ON YOUR SCOPE AND TWIST THE AZIMUTH SCREW FOR A STRAIGHT LINE. THAT'S ALL --- PERFECTION!!

# ALIGNMENT CARTRIDGES

## #12 — CHANNEL I.D.

# C-12 \$10.00

WE HAVE ALL HAD TROUBLES WITH MIXED HEAD LEADS, ETC. HERE IS POSITIVE PROOF OF LEFT ON LEFT AND RIGHT ON RIGHT AND CUE ON CUE. WHEN YOU GET FOULED UP, IT SURE IS NICE TO HAVE ONE SOURCE YOU KNOW IS RIGHT!

## #13 — 150Hz SECONDARY CUE

# C-13 \$ 8.50

FULL TRACK 150Hz PULSES EVERY 10 SECONDS SO YOU CAN HEAR WHEN THE RELAY SHOULD PULL IN -- TONE RECORDED AT -6db -- SO IF THE CUE SENSITIVITY IS SET FOR THESE, ALL NORMAL CUE TRIGGERING WILL BE 100% RELIABLE!

## #14 — 8KHz TERTIARY CUE

# C-14 \$ 8.50

FULL TRACK 8000Hz PULSES EVERY 10 SECONDS SO YOU CAN HEAR WHEN THE RELAY SHOULD PULL IN -- TONE RECORDED AT -6db -- SO IF THE CUE SENSITIVITY IS SET FOR THESE, ALL NORMAL CUES WILL BE 100% RELIABLE! FREQUENCY IS EXACT.

## #15 — AUTOMATION CYCLE

# C-15 \$10.50

THE "OLETIMER" CARRIES SIX OF THESE GOODIES WITH HIM. IT IS JUST A 40 SECOND CART WITH MUSIC ON THE PROGRAM TRACKS AND A 150Hz CUE TONE AT 35 SECONDS AND A 1000Hz CUE TONE AT 40 SECONDS. YOU CAN PUT 2 OR 3 OF THESE IN EACH CAROUSEL -- ONE IN THE FILL DECK, ONE IN THE NEWS DECK, ETC. THIS WAY YOU CAN CHECK OUT THE SYSTEM FASTER WITHOUT LISTENING THROUGH A LOT OF LONG SPOTS AND SONGS. THE CUE TONES ARE CORRECT IN LEVEL AND FREQUENCY. WITH THE 35 SECOND LENGTH, THE OTHER CAROUSEL HAS JUST ENOUGH TIME TO RECYCLE BEFORE BEING CALLED AGAIN. YOUR CHOICE OF MUSIC:

- 15A - MOR
- 15B - COUNTRY
- 15C - ROCK
- 15D - LIGHT CLASSICAL

## #16 — 25Hz CUE TONES

# C-16 \$12.50

YOUR FIRST THOUGHT HAS TO BE "WHY 25Hz ON CART?" IF YOU ARE HAVING TROUBLE WITH YOUR REEL-TO-REEL 25Hz CUE SYSTEM\* IT IS HANDY TO HAVE A SEPERATE SOURCE. THIS CART HAS STANDARD LEVEL 25Hz TONES EVERY 10 SECONDS. NO STOP CUE TONES ARE ON THE CART CUE TRACK. SIMPLY CONNECT THE "CART OUT" TO THE "AUDIO IN" ON THE REEL-TO-REEL RECORDER.

# ALIGNMENT CARTRIDGES

25

## #17 — PULSE TEST

# C-17 \$18.50

THIS IS A PRECISION DUB OF THE PULSE PART OF THE CBS TEST RECORD. THIS IS A 400Hz TONE WITH SHORT PULSES OF 3KHz AT 10db ABOVE THE 1KHz. THIS IS THE BEST WAY TO CHECK FOR HEADROOM IN BOARDS AND AMPS. ALSO GOOD FOR CHECKING THE PROPER OPERATION OF COMPRESSORS, LIMITERS AND V.U. METERS. THIS CART HAS NO STOP CUE, SO IT WILL RUN ALL NIGHT IF YOU WANT IT TO. IT SURE IS NICE NOT TO HAVE TO START THE RECORD OVER EVERY 62 SECONDS.

## # 18 — EQUALIZATION

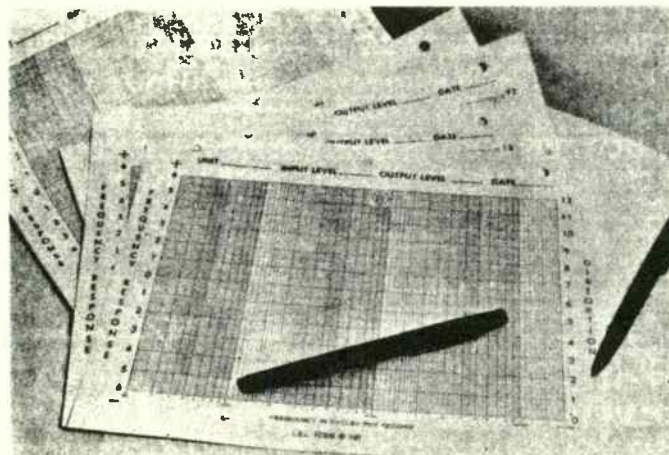
# C-18 \$12.50

WHEN YOU WANT TO ADJUST THE RESPONSE TO FLAT, THE FASTEST WAY IS THE SWEEP CART, BUT IF YOU NEED TO USE A METER INSTEAD OF A 'SCOPE -- THIS IS THE ANSWER. IT IS A 1KHz TONE WITH 10KHz AND 100 Hz FOR COMPARING THE HIGH AND LOW ENDS WITH 1KHz. IT IS GOOD FOR QUICK RESPONSE CHECKS ON YOUR "AIR" STUDIO MACHINES WITHOUT TAKING THEM OUT OF SERVICE. IT SHINES FOR ADJUSTING BIAS AND EQUALIZERS ON TAPE MACHINES. THE "OLETIMER" SAYS, "IT IS MY MOST USED TEST CART."

## #19 — HEAD CLEANER

# C-19 \$ 4.60

THIS IS MORE FOR YOUR D.J.'S USE. IF YOUR STATION IS LIKE MOST OF THE ONES THE "OLETIMER" HAS WORKED, THE D.J. DOES NOT TAKE THE TIME TO USE A Q-TIP AND HEAD CLEANER. THIS CART HAS A CLOTH BAND WITH HEADCLEANER IN IT! YOU CAN USUALLY GET THE D.J. TO RUN IT FOR 20 SECONDS OR SO. LEAVE ONE OF THESE IN EACH STUDIO OR PRODUCTION ROOM FOR CLEANER HEADS AND BETTER OVERALL SOUND.



L.E.L. FORM # 100 AUDIO FREQUENCY RESPONSE FORMS \$1.00

# NORTRONICS HEADS



## CARTRIDGE MACHINES



Tape Head Replacements for Broadcast Cartridge Recorders

Tape Head Replacements for Broadcast Cartridge Recorders

RECORDER MANUFACTURER AND MODEL	ORIGINAL HEADS			NORTRONICS REPLACEMENT	
	Mfg. Head No.	Head Function	Mount	Original Head	

### ATC (GATES)

CP11, CP12, CP13 Mono	20-1014 20-1011	Record-Program & Cue Play-Program & Cue	Rear Mount	2053 2057
CP21, CP22, CP23, CPR23 Stereo	20-1016 20-1015	Record-Program & Cue Play-Program & Cue	Rear Mount	5753 5757
P150, P190, PB150, PB190 PC150, PC190 Mono	20-1001 20-1001	Record/Play-Program Record/Play-Cue	Rear Mount	3251 3250

### COLLINS

P150, P190, PB150, PB190 Mono	235-0012 235-0012	Record/Play-Program Record/Play-Cue	Rear Mount	3251 3250
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### GATES

Criterion (Compact) (Play Only) 6794, 6815 Mono	730-1376 730-1371	Mono Playback Stereo Playback	No Mount	2007 5707
Criterion I, 80 Mono CPD-811, MPD-811 Mono	730-1155 730-1153	Record-Program & Cue Play-Program & Cue	Rear Mount	2053 2057
Criterion I, 80 Stereo CPD-821, MPD-821 Stereo	730-1157 730-1156	Record-Program & Cue Play-Program & Cue	Rear Mount	5753 5757

### SPOTMASTER (BROADCAST ELECTRONICS)

2 Channel Heads 303C, 303D; 305C, 305D; 400A, 400B; 405A, 405B; 500B, 500BR, 500C, 500C/A, 500CR, 500D, 500D/A, 500DR; 505B, 505BR, 505C, 505C/A, 505CR, 505D, 505D/A, 505DR; 605B, 605C; 610A, 610BR, 610BX, 610CR, 610CX; Three/70; 1070P, 1070RP Mono	DM2RB DM1B	Record-Program & Cue Play-Program & Cue	Rear Mount	2053 2051
	DM2RC DM1C	Record-Program & Cue Play-Program & Cue	Rear Mount	7252 7251
3 Channel Heads 303C, 303D; 305C, 305D; 500ARS, 500AS, 500BS, 500BRS, 500CRS, 500CS; 1070RP-S Stereo	DM3RB D1SA	Record-Program & Cue Play-Program & Cue	Rear Mount	5753 5751
	DM3RC	Record-Program & Cue	Rear Mount	7253

### TAPECASTER

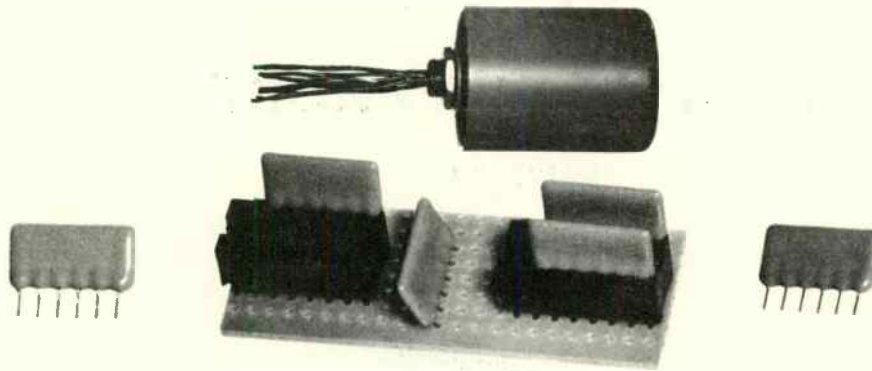
700P, 700RP Mono	P-B2H7K-R P-B2H7K-R	Record & Play (2 heads, same)	Rear Mount	2051 2056
700PS, 700RPS Stereo	P-B3Q7K-R P-B3Q7K-R	R/P-Program & Cue (1 head only)	Rear Mount	5751 5754

### INTERNATIONAL TAPETRONICS

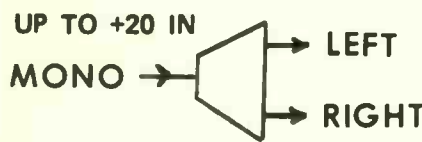
SP-0001, SP-0003, SP-0005 (WP Series also) Mono	504-0002 504-0001	Playback Dummy Head	No Mount	2001 7605
SP-0002, SP-0004, SP-0006, (WP Series also) Stereo	504-0004 504-0001	Playback Dummy Head	No Mount	5701 7605
RP-0001, RP-0003, RP-0005 Mono	504-0004 504-0002	Record Playback	No Mount	2003 2001
RP-0002, RP-0004, RP-0006 Stereo	504-0005 504-0004	Record Playback	No Mount	5703 5701

# SPLITTER / COMBINER

WHAT CAN THE L.E.L. 200 SPLITTER / COMBINER DO FOR YOU?

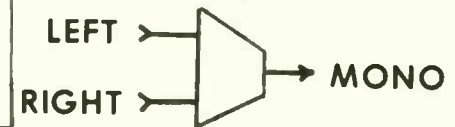


## USED AS A SPLITTER



PHASE SHIFT \_\_\_\_\_ ○  
LOSS \_\_\_\_\_ 9.1 DB

## USED AS A COMBINER



PHASE SHIFT \_\_\_\_\_ ○  
LOSS \_\_\_\_\_ 4 DB

- MIX left & right to drive your AM transmitter without loss of separation on your stereo signal.
- BRIDGE left & right to drive your mono house monitor.
- EXCELLENT for checking phase in stereo systems.
- PERFECT for phone patches - replaces expensive hybrid transformers.
- FEED mono sources such as network, production rooms, news, etc. into left & right with NO phase shift. Can also be used to feed mono cart, cart machines, tape or telephone to a stereo board.

Its easy to transmit a good stereo signal, but how does it sound in mono?

Now with the L.E.L. SPLITTER / COMBINER if your jock has stereo phones and mono control room monitor speaker he can tell if anything has gone sour.

FREQUENCY RESPONSE: . . . . . 10Hz - 150 KHz ± 1 DB ● IMPEDANCE = 600 OHM IN & OUT  
 THD ----- UNMEASURABLE ● IM DISTORTION (WITH 60 & 7000 MIXED 4:1) - .01%  
 CONFIGURATION ----- BALANCED IN & OUT ● ISOLATION BETWEEN STEREO CHANNELS - 64 DB

L.E.L. 200 SPLITTER / COMBINER \$9.50

L.E.L. 200-C SPLITTER / COMBINER IN CAN \$11.00

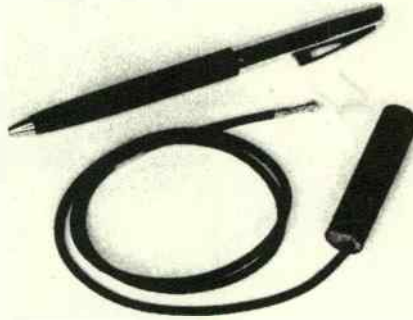
COMPLETE INSTRUCTION AND APPLICATION SHEET FURNISHED WITH EACH ORDER.

**NEW!**



**Model DS-1 RF PROBE**

"SNIF-IT"



WHAT IS A SNIF-IT YOU ASK?

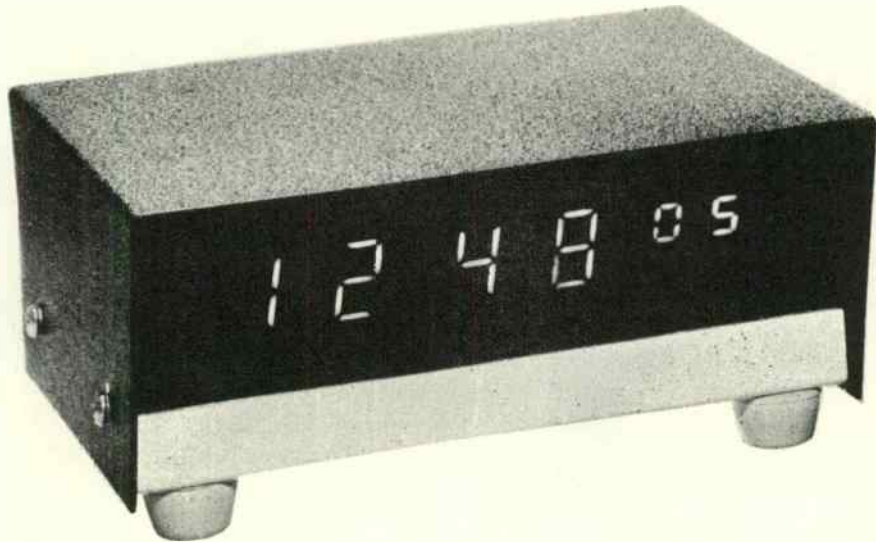
**\$12.60**

OUR ANSWER, WE DON'T KNOW!

BY HOOKING THE "SNIFF-IT" UP TO A 50 MICROAMP METER YOU CAN USE A SIMPSON 260, PUT THE PROBE NEAR SOME RF, AND THE NEEDLE WILL GO UP. A ONE MILOWATT OSC WILL GIVE YOU A GOOD READING. YOU CAN CHASE A SIGNAL THROUGH A TRANSMITTER BY JUST GETTING CLOSE TO THE TUBES, COILS OR OTHER PARTS CARRYING RF. PRECISE NEUTRALIZATION IS A CINCH. FINDING BREAKS IN THE COAX SHIELD IS EASY, EVEN GETTING YOUR ANTENNA IN THE BALLPARK IS NO PROBLEM. YOU CAN CHECK A QUARTER WAVE WHIP. IT IS SENSITIVE ENOUGH TO DETECT OSCILLATIONS IN OpAmps. SO SENSITVIE IN FACT, A ONE WATT HANDY TALKY WILL GIVE YOU A GOOD READING, YET USUABLE WITH CAUTION. THE POSSIBLE USES FOR THIS "QUISIMO" ARE LIMITED ONLY BY YOUR IMIGATION AND INGENUITY.

# DIGITALS

**NEW!**



**L.E.L. 112**

## DIGITAL 12 HOUR CLOCK

THE PERFECT MATCH FOR THE LEL 510 OR LEL 510-B TIMER. EASY TO OPERATE, AND EASY TO READ WITH THE LARGE  $\frac{3}{4}$ " DIGITS FOR THE MINUTES AND HOURS, THE SMALLER  $\frac{1}{2}$ " DIGITS SHOW THE SECONDS TICKING AWAY. THIS MODULAR DIGITAL TIMER IS A MUST FOR ANY MODERN STUDIO, AND AN ACCURATE, FUNCTIONAL ADDITION TO ANY EXISTING STUDIO.

INTRODUCTORY PRICE \$105.00



## DIGITALS

**NEW!**



### L.E.L. 510

## DIGITAL SIXTY MINUTE TIMER

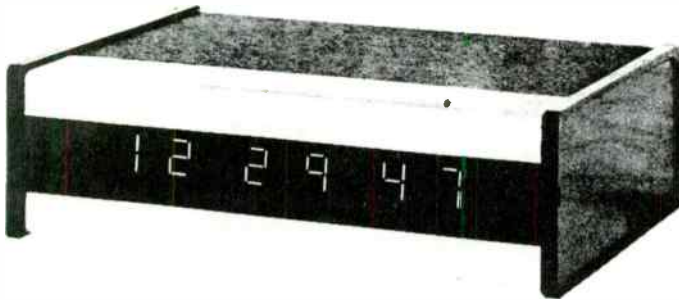
A FOUR DIGIT SIXTY MINUTE TIMER WITH ONLY ONE CONTROL, TO RESET THE CLOCK AND RESUME COUNTING FROM 00:00 TO THE MAXIMUM OF 59:59. THIS CLOCK IS COMPLETELY SOLID STATE, INCLUDING THE  $\frac{3}{4}$  INCH LARGE LIGHT EMITTING DIODE DISPLAY. A BARRIER STRIP AT THE REAR OF THE CLOCK ENABLES THE USER TO INCORPORATE REMOTE CONTROL SWITCHES (MOMENTARY), EITHER NORMALLY OPEN OR NORMALLY CLOSED. THIS CLOCK IS COMPLETELY BUILT, DEFINITELY NOT A KIT.

INDUCTORY PRICE \$97.00



# DIGITALS

## ES 112 Digital Clock:



A six digit, 12 hour clock.

Three simple controls make setting to the precise second easy. Completely solid state, MSI components with printed circuit board. No moving parts. Silent, seven segment tubes. Built to last a lifetime. Three setting controls: Fast Advance, Slow Advance, Hold.

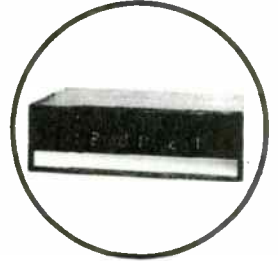
**Dimensions:** 2 3/4" high x 8" wide x 5 5/8" deep

**Case:** Etched Aluminum.

**Electrical:** 117 VAC 50/60 Hz 10 W max.

**ASSEMBLED \$130**

**KIT \$90**



## ES 510 Sixty minute timer:

A four digit, sixty minute timer (59:59) with start, stop and reset controls (Single pole, momentary, push-button). Runs continuously unless stopped or reset. If stopped, display will hold time reading and when restarted will continue with next count from last displayed figure. Reset returns display to all zeros. Can reset while running or stopped.

**Dimensions:** 2 3/4" high x 6" wide x 5 5/8" deep

**Case:** Etched Aluminum

**Electrical:** 117 VAC 60 Hz 10 W max.

**ASSEMBLED \$125 KIT \$98**



## Digital Multimeter:

**ES 210** — An extremely sensitive and accurate bipolar multimeter with automatic polarity indicator. Displays ohms, volts or amps in five ranges. Voltage from 100 Microvolts to 500 V. Resistance from 100 Milliohms to 1 Megohm. Current from 100 Nanoamps to 1 Amp. Optional probe.

**Dimensions:** 2 3/4" high x 8" wide x 5 5/8" deep

**Case:** Etched Aluminum

**Electrical:** 117 VAC 60 Hz 8 W max.

**ASSEMBLED \$165. KIT \$115.**

## ES 500

### Combination Six Digit Clock/Timer:

A 12 hour clock or timer with 5 front-mounted controls Start, Stop, Reset, Fast Advance, Slow Advance. Will run continuously to 12:59:59. Advances to 1:00:00 and continues as clock unless stopped or advanced. Same start, stop, and reset action as ES 400.

**Dimensions:** 2 3/4" high x 8" wide x 5 5/8" deep

**Case:** Etched Aluminum

**Electrical:** 117 VAC 60 Hz 12 W max.

**ASSEMBLED \$150 KIT \$115**



## 40 MHz Digital Frequency Counters:

**ES 220** — 5 Digit line frequency time base (1 KHz resolution)

**ASSEMBLED \$139. KIT \$98**

**ES 221** — 6 Digit crystal time base (100 Hz resolution) These counters will not be damaged by high power transmission levels. Simple one cable connection to transmitter's output. Both have pots for sensitivity adjustment.

**Dimensions:** 2 3/4" high x 8" wide x 5 5/8" deep

**Case:** Etched Aluminum

**Electrical:** 117 VAC 60 Hz 12 W max.

**ASSEMBLED \$179 KIT \$145.**

# CHEMICAL MAINTENANCE



**DG-16 CLEANER** **\$3.80**  
 EXCELLENT FOR CLEANING CIRCUIT BOARDS, SWITCHES, SOLENOIDS, GENERATORS, STARTERS AND MANY OTHER DELICATE PIECES OF EQUIPMENT. EQUIPPED WITH HIGH BLAST NOZZLE.



**SS-16 SILICONE SPRAY** **\$3.95**  
 LUBRICANT WAS ORIGINALLY FORMULATED FOR L.E.L. CARTRIDGE REBUILDING PROGRAM. SPRAY IS NON-TOXIC, HEAT RESISTANT, SAFE ON ALL PLASTICS. NOZZLE FOR HARD TO GET TO PLACES IS INCLUDED.



**BG-4 BRONZE BEARING GREASE** **\$1.50**  
 DESIGNED FOR APPLICATION TO CARTRIDGE PINCH ROLLER BEARINGS AND TURNTABLE IDLER WHEEL BEARINGS. PREVENTS WEAR AND CORROSION. EASY TO USE SQUEEZE BOTTLE WITH POINTED APPLICATOR TIP.

NON SLIP



**\$1.50**

**NS-4 ROLLER AND BELT DRESSING**  
 STOPS SLIPPAGE OF IDLER WHEELS, PULLEY BELTS AND CORDS. FAST DRYING. WILL NOT HARM RUBBER.

## MAINTENANCE KIT



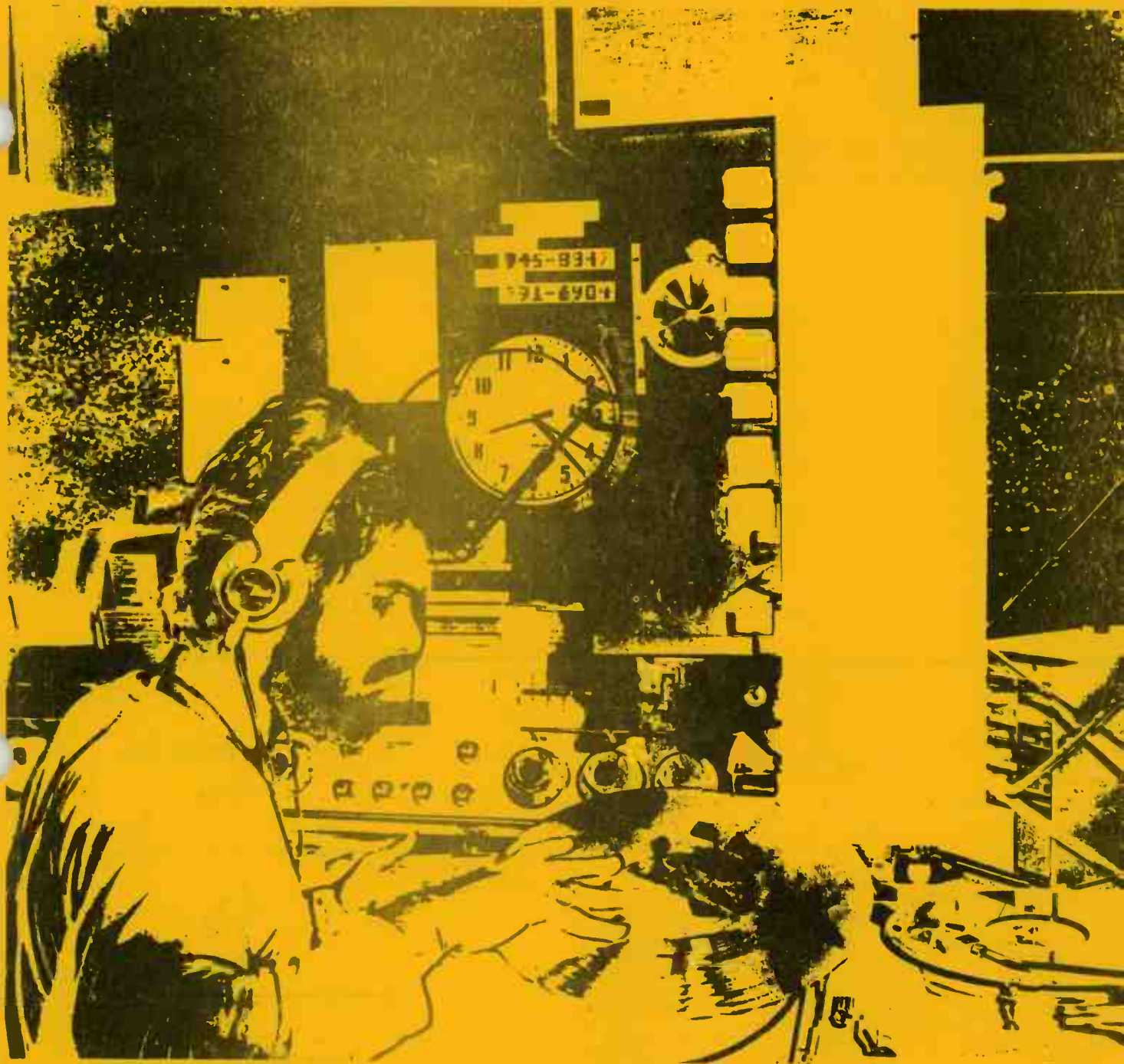
CONTAINING  
 ALL SIX CHEMICALS  
**\$11.50**



**10-4 TELETYPE INK-OFF** **\$1.29**  
 SPECIALLY FORMULATED TO REMOVE TELETYPE INK FROM THE HANDS. EXTREMELY EFFICIENT AND EXTREMELY MILD.



**TO-4 TURNTABLE OIL** **.79**  
 PROVIDES EXCELLENT LUBRICITY REDUCES FRICTION AND WEAR ON TURNTABLE SHAFTS AS RECOMMENDED BY MOST PROFESSIONAL TURNTABLE MANUFACTURERS. CONVENIENT 4 oz. SQUEEZE BOTTLE.



**CALL L.E.L. FOR ANY:**

**AMPLIFIERS  
HEADPHONES  
STUDIO LIGHTING**

**(305) 764-7755**

**World Radio History**

**(305) 764-7756**

## PADS

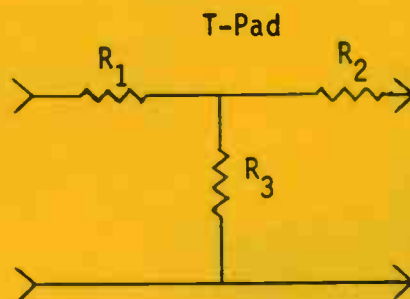
What are the resistor element values for the more commonly used minimum loss attenuators?---Values for "L"-type configuration are as follows:

$Z_1/Z_2$	$R_1$	$R_2$	dB loss
600/500	245	1224	3.8
600/250	458.2	326.8	8.8
600/150	519.6	173.3	11.4
600/30	584.8	30.8	18.9
500/250	253.6	353.6	7.8
500/30	484.8	30.9	18.1
250/30	234.4	32	14.8

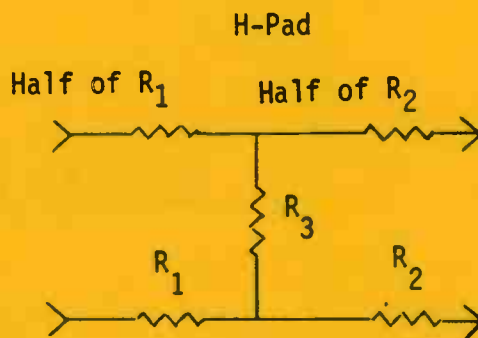
### T-Pad 600Ω

Loss (dB)	$R_1$ & $R_2$	$R_3$
4.....	136Ω	1258Ω
5.....	168Ω	987Ω
6.....	199Ω	803Ω
7.....	229Ω	670Ω
8.....	258Ω	568Ω
9.....	286Ω	487Ω
10.....	312Ω	422Ω
11.....	336Ω	367Ω
12.....	359Ω	322Ω
13.....	380Ω	283Ω
14.....	400Ω	249Ω
16.....	436Ω	195Ω
18.....	466Ω	153.5Ω
20.....	491Ω	121Ω
22.....	512Ω	96Ω
24.....	529Ω	76Ω
26.....	543Ω	60Ω
28.....	554Ω	48Ω
30.....	563Ω	38Ω
35.....	579Ω	21.4Ω
40.....	588Ω	12Ω
50.....	596Ω	3.8Ω

For Unbalanced Use:



For Balanced Use:



# MICROPHONES



D-1000E.....\$75.00



D-140E.....\$150.00



D-120E.....\$50.00



D-190E.....\$65.00

# MICROPHONES

## BEYER DYNAMIC

### M 160

#### Unidirectional Dynamic Microphone

- Unique double ribbon microphone
- True hypercardioid characteristic
- Imperceptible non-linear distortion
- "Standard" setting specification consistency i. e. any two "random choice" microphones are acceptable as a stereo matched pair
- Available with Cannon or DIN connector



### M 260

#### Unidirectional Dynamic Microphone

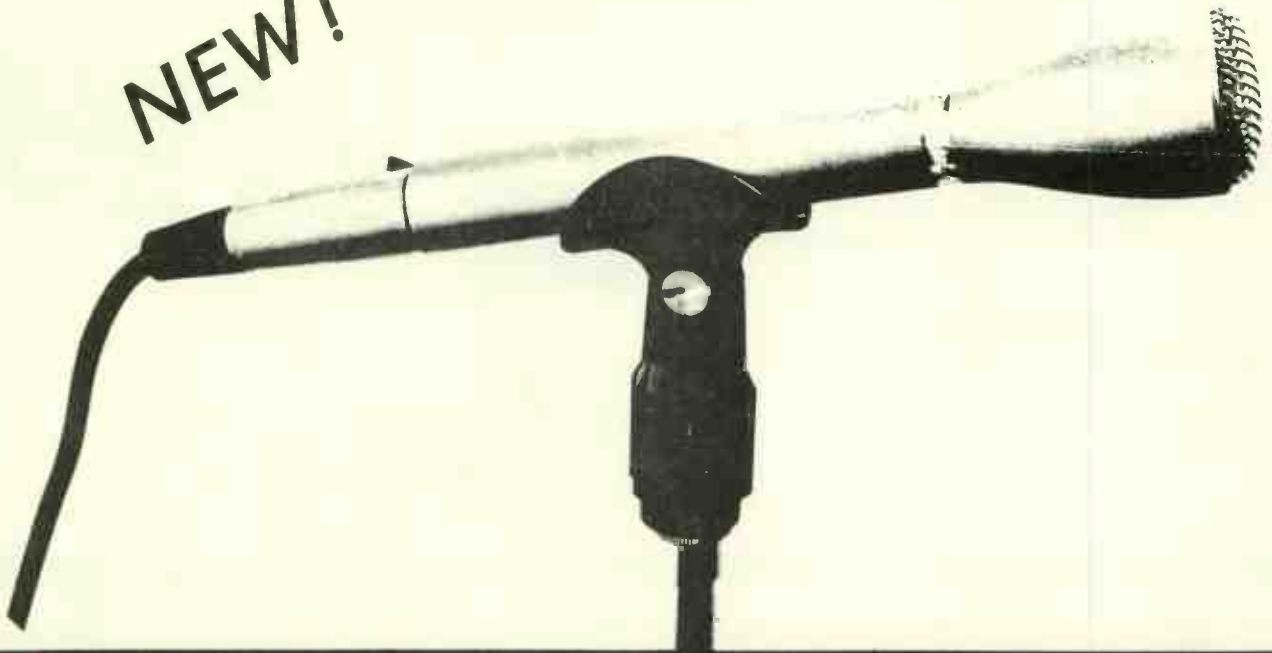
- Unique ribbon microphone
- True hypercardioid characteristic
- Robust all-metal construction
- Highly sensitive
- "Standard" setting specification consistency i. e. any two "random choice" microphones are acceptable as a stereo matched pair
- Available with Cannon or DIN connector



# MICROPHONES

L.E.L. 735

**NEW!**



## OMNI-DIRECTIONAL MIKE WITH VOICE SHAPED RESPONSE CURVE

THIS IS AN ALL-PURPOSE MIKE FOR NEWS, SPORTS OR STUDIO USE. SUPER RUGGED AND MOISTURE PROOF. THE 50-20K RESPONSE SHOWS THIS IS NO "CHEEPIE". SINGERS CAN MAKE GOOD USE OF THE SPECIAL CURVE OF THE L.E.L. 735-M. THIS DYNAMIC MIKE CAN BE USED FOR CLOSE TALKING WITHOUT THE BRASSYNESS YOU WOULD EXPECT. THE 735 OR 735M CAN'T BE MATCHED FOR \$100.

600 OHMS--55 DBM (735)

600 OHMS---45 DBM (735M)

LESS THAN 4OZ.-ONLY 8½" LONG.

COMES WITH HOLDER 15' OF GOOD MIKE.

CABLE AND A FREQUENCY RESPONSE GRAPH.

\*\*\*\*\*735M RECOMMENDED FOR STUDIO USE\*\*\*\*\*

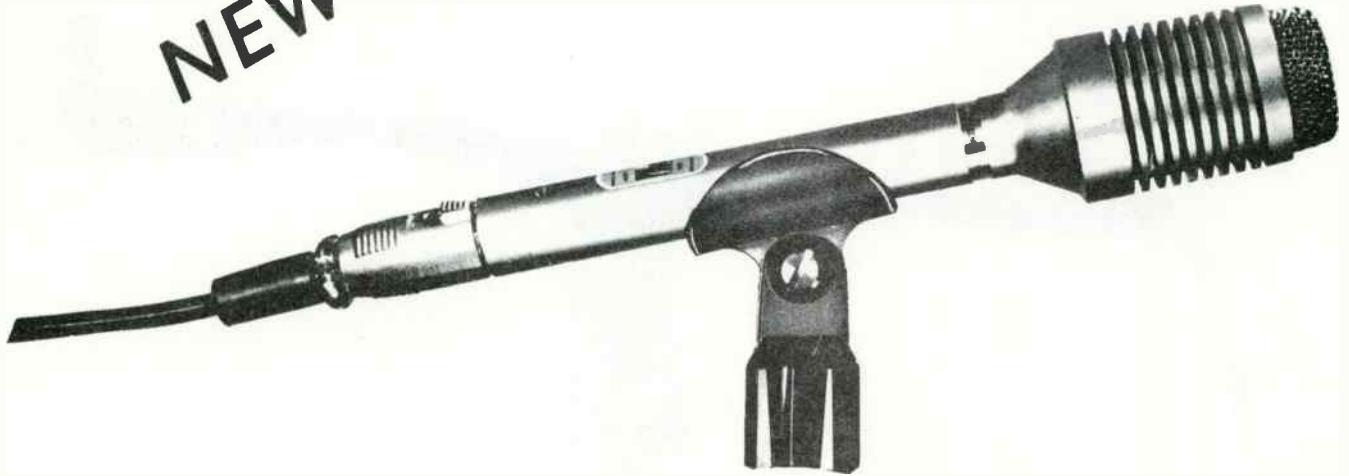
735.....\$56.80

735M.....\$61.80

# MICROPHONES

**NEW!**

L.E.L. E-200



A SHARP CARDIOID PATTERN WITHOUT THAT RASPY SOUND WHICH YOU WOULD EXPECT FROM AN UNDER \$200 MIKE. THIS MIKE IS DESIGNED FOR STUDIO USE. ITS RESPONSE IS NOT FLAT-- IT IS SHAPED TO SOUND GOOD IN A SMALL ROOM SUCH AS THE AVERAGE AIR STUDIO. AT 1 FOOT IT WILL GIVE A NATURAL SOUND--AT 2-3 INCHES YOU GET A SEXY, DEEP SOUND FOR MORE INTIMATE PROGRAMMING. YOU WON'T PICK UP ALL THE CART MACHINE NOISE OR OTHER SOUNDS FROM THE BOARD.

SMOOTH RESPONSE--NO PEAKS.  
EXCELLENT FRONT-TO-BACK/  
SIDE RATIO 45-18KHZ.  
BUILT IN GRILL TO REDUCE POPS.  
YOU WON'T NEED AN UGLY RUBBER  
BALL ON THIS ONE!

3 PIN-XLR TYPE CONNECTOR.  
15 FEET OF GOOD MIKE CABLE.  
LO-PROFILE ON/OFF SWITCH  
--NO GOOFS!--  
MIKE HOLDER INCLUDED.

E-200.....\$66.40



# MICROPHONES

L.E.L. D-100



BROAD, SMOOTH FREQUENCY RESPONSE WITH A 3-4 DB RISE IN THE PRESENSE RANGE GIVES THIS CARDIOD MIKE THE CRISPNESS OF A CONDENSER MIKE WITHOUT HAVING THE PROBLEMS OF BATTERIES OR POWER SUPPLIES.

COMES WITH 15 FEET OF GOOD MIKE CABLE AND A HOLDER WITH STANDARD THREAD SOUND ELEMENT ACOUSTICALLY INSULATED FOR HAND HELD USE, ON/OFF SWITCH (SMALL TO PREVENT ACCIDENTS), GOOD FRONT TO BACK/SIDE RATIO, 3 PIN XLK-TYPE CONNECTOR, 600 OHM OUTPUT AT 55 DBM, 600-16KHz.....D-100, \$53.80.

# MICROPHONES

L.E.L. E-140



THIS HAS TO BE THE MOST BEAUTIFUL MIKE ON THE MARKET!

E-140.....\$33.80

BRIGHT GOLD (EVEN HAS A GOLD CORD), BUT THIS BEAUTY HAS PERFORMANCE TO MATCH. A WIDE CARDIOID PATTERN-- FLAT RESPONSE--20 DB FRONT-TO-BACK--LO PROFILE ON/OFF SWITCH AND ON AND ON.....THE E-140 COMES WITH A HI/LO IMPEDANCE SWITCH SO YOU DO NOT HAVE TO CARRY TWO DIFFERENT MIKES OUT TO THE RECORDING SITE. "A GOOD NITE CLUB, DISCO OR COMBO MIKE."

LO-SENSE TO KEEP OUT BACKGROUND NOISE

600 OHMS OR 50K (WITH SWITCH)

COMES IN ZIPPER POUCH

15' MIKE CABLE

40-17k± 2½ DB

STAND ADAPTOR

**NEW!**

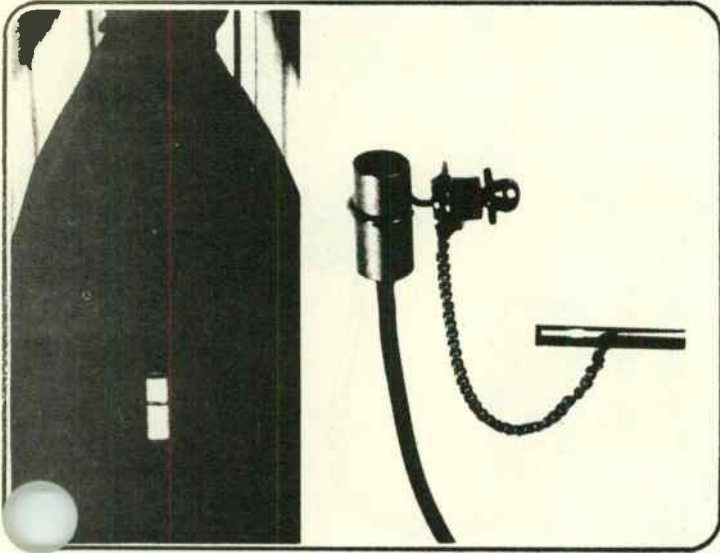
# MICROPHONES

## SPECIAL-PURPOSE

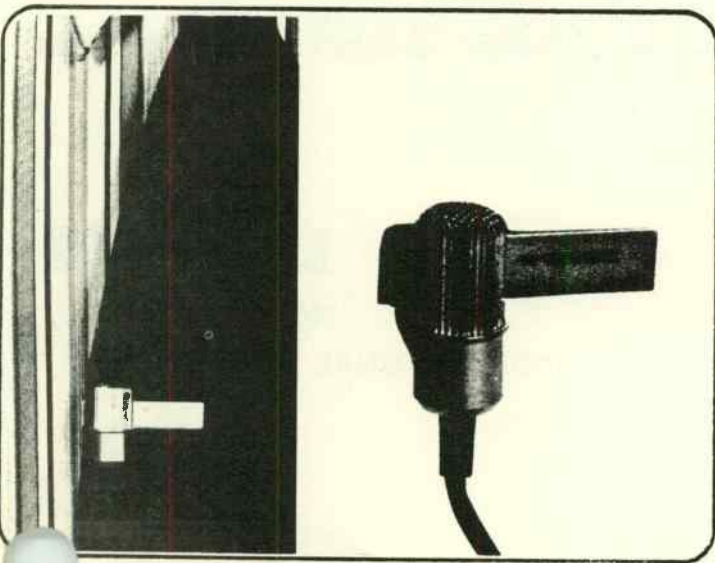
## MICROPHONES



### World's Smallest Electret Condenser

1/4" diameter, 9/16" long, tie-pin lavalier—the ultimate solution to the search for a totally unobtrusive microphone to be used by individuals for voice reinforcement. Has response and performance characteristics fully compatible with large-size instruments. The secret of its low mass is the "wearable" case which houses the low-noise FET preamp and silver oxide battery and is connected to the microphone with a featherweight, ultra-thin cable that minimizes mechanical noise. Mike cable has standard phone plug. 70-13,000 Hz response, -70 dB output, 600 ohms.

#M-360.....\$36.80



### Electret Condenser Tie-Clasp Lavalier

A low-cost, ultra-miniature microphone that still has the professional pickup features permitting compatible mixing with full-size instruments. Weighs just 1 ounce — has the low-noise FET preamp and battery supply housed in the mike plug and connected with a super-thin diameter cord to eliminate mechanical noise. 70-13,000 Hz response, -55 dB output, 600 ohms impedance. An ideal microphone for interviewers, reporters, anyone who requires freedom of movement with excellent sound reinforcement.

#M-300.....\$22.60

# MICROPHONES



**SHURE**

*SM7*

\$268.00

**SHURE**

**MODEL SM53**

**UNIDIRECTIONAL DYNAMIC**

\$183.00



**SHURE**

**MODEL SM61**

**OMNIDIRECTIONAL DYNAMIC**

\$79.00



# MICROPHONES



3 - in - 1

● UNIDIRECTIONAL MICROPHONE

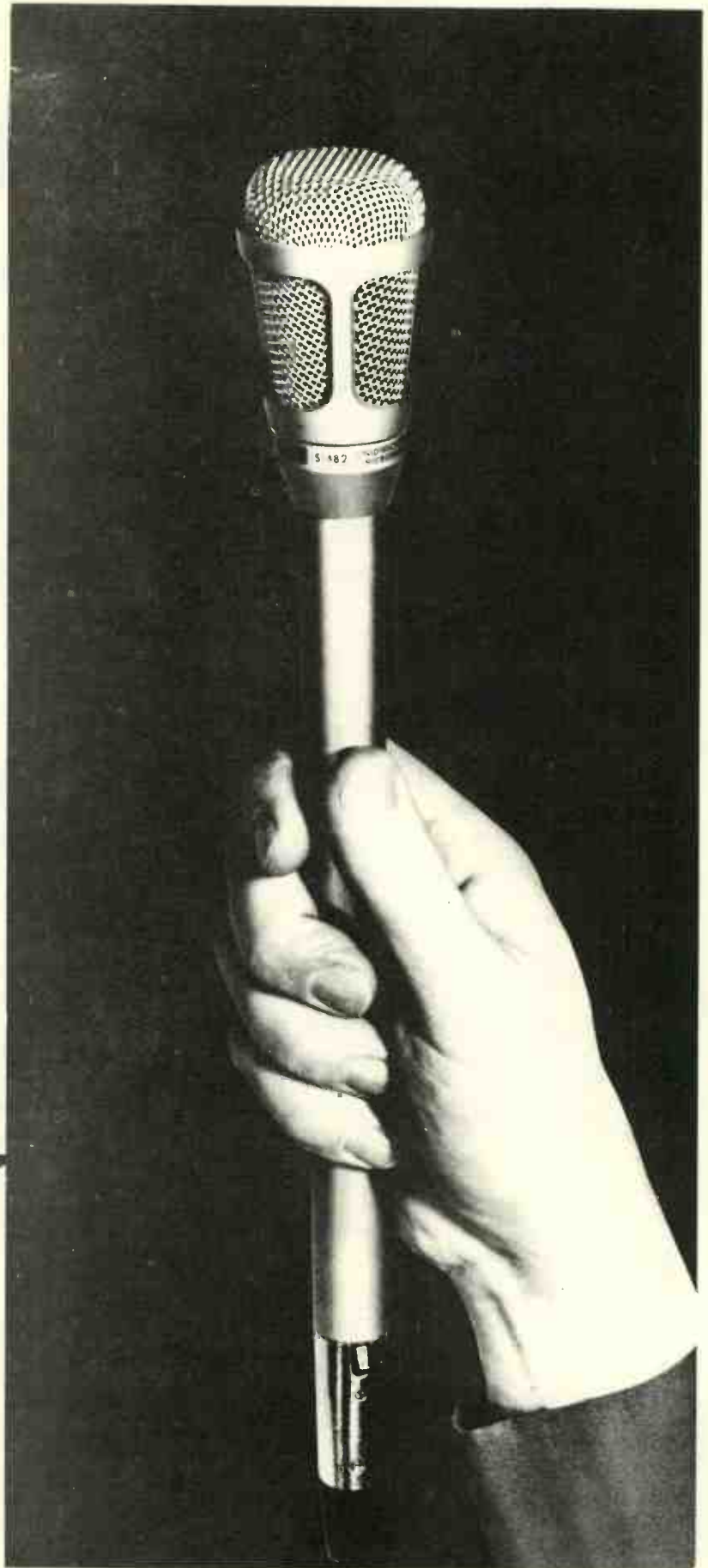
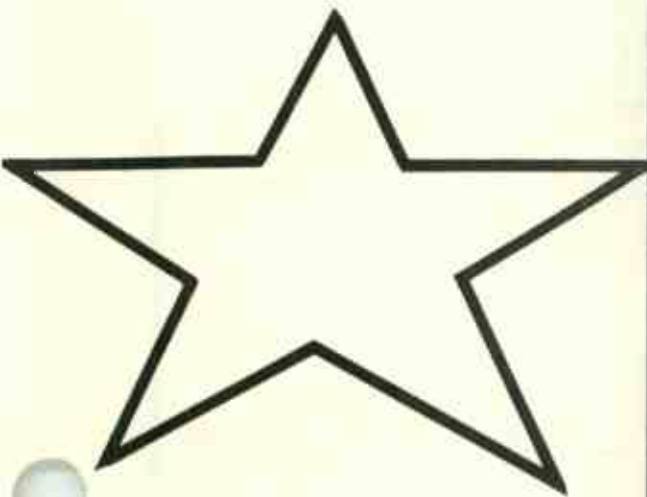


● LINE LEVEL AMPLIFIER



● PEAK LIMITER

SM-82     \$176.00



# ENGINEERING TOOLS



## MODEL A15TG MICROPHONE LEVEL TONE GENERATOR

### A15TG TONE GENERATOR:

Produces a continuous 700 Hz signal capable of driving low impedance balanced lines, and is extremely useful in setting up trouble-shooting audio equipment. Plugs into microphone input to enable engineer to check levels, connections, mixer inputs, cables and speakers. Permits one man to do the work of two. Powered by a miniature mercury battery.

\$30.00



### A97A LINE MATCHING TRANSFORMER:

High quality transformer designed to match 150 ohm-600 ohm microphone outputs to MEDIUM IMPEDANCE (1-10 K OHM) devices, such as those frequently used in cassette recorders. Input-professional three-pin audio connector (Male). Output --MC1M type connector.

\$25.00

CALL US ABOUT ANY OTHER TRANSFORMER. THERE ARE MANY AVAILABLE.

(305) 764-7755

# MICROPHONE ACCESSORIES

## "plug-in" problem solvers

### A15 SERIES "PLUG-IN" MICROPHONE ATTENUATORS, EQUALIZERS AND ADAPTERS



4 1/2" long x 3/4" dia.

\$25.00

**A15A MICROPHONE ATTENUATOR** (Yellow Nameplate) Prevents input overload. Ideal in applications where very strong signals are applied to a microphone input, as in feeding high level vocal or instrumental signals into microphone mixers, consoles or recorders. The Model A15A has an insertion loss of 15 db and an input and output impedance of 150 ohms. It is symmetrical, so it can be used in either direction.

**A15BT BRIDGING TRANSFORMER** (Brown Nameplate) Balanced unit that matches balanced or unbalanced devices of different impedances. (33 K ohm primary, and 600 or 7,500 ohm secondary.)

**A15LA LINE INPUT ADAPTER** (Blue Nameplate) Converts balanced low impedance microphone input to line level input. Provides a simple means of using existing microphone level inputs for high level signals. It has a balanced bridging input (100,000 ohms). Attenuation is 50 db.

**A15HP HIGH PASS FILTER** (Gray Nameplate) Provides a low-frequency cut-off to reduce all types of unwanted low-frequency mechanical noises, such as boom, stand, or floor rumble; or electrical hum; or environmental sounds such as crowd noise, wind sounds, air conditioner rumble. Can also be used as an equalizer to create special effects. Slope is 12 db per octave, down 3 db at 100 Hz with 150 ohm load. One kHz loss is 0.5 db maximum.

**A15LP LOW PASS FILTER** (Green Nameplate) Provides high-frequency cut-off to reduce effects of objectionable high-frequency noises. Useful for suppressing sibilance. Excellent for minimizing difficult "hiss," jingling, crinkling, whistling sounds. Can also be used as an equalizer to create special effects. Slope is 12 db per octave, down 4 db at 8 kHz with 150 ohm load. One kHz loss is approximately 0.5 db.

**A15PA PRESENCE ADAPTER** (Orange Nameplate) Adds controlled vocal or instrumental "presence" in recording and broadcast applications. Adds extra brilliance to sound systems. Improves voice range intelligibility. Provides a moderate response rise of 4 db in the 3 to 5 kHz region. Loss at 500 Hz is 6 db with 150 ohm output load. It is symmetrical, so it can be used in either direction.

**A15RS RESPONSE SHAPER** (Black Nameplate) Provides excellent sibilance filtering in broadcasting and recording applications. It may also be used to flatten response in microphones which exhibit a rising characteristic in the 6 kHz region. It provides a 4 db dip in response in the 6 kHz region. One kHz loss is approximately 2 db (150 ohm output load).

**A15PR PHASE REVERSER** (Red Nameplate) Reverses the phase of a balanced line without modification of the equipment. It is symmetrical and can be used in either direction.

### A95 SERIES LINE TRANSFORMERS

High quality transformers which make it possible to connect low impedance (25-50 ohms or 150-250 ohms) lines to high impedance, or vice versa, such as connecting a low impedance microphone to a high impedance amplifier input. Solves problems of excessive high frequency loss and objectionable hum when long lengths of cable are used.



Model A95U:

Input — Professional three-pin Male audio connector\*  
Output — Amphenol MC1M type connector  
63.5 mm long x 19.9 mm diam. (2 1/2" x 3/4")

\$25.00



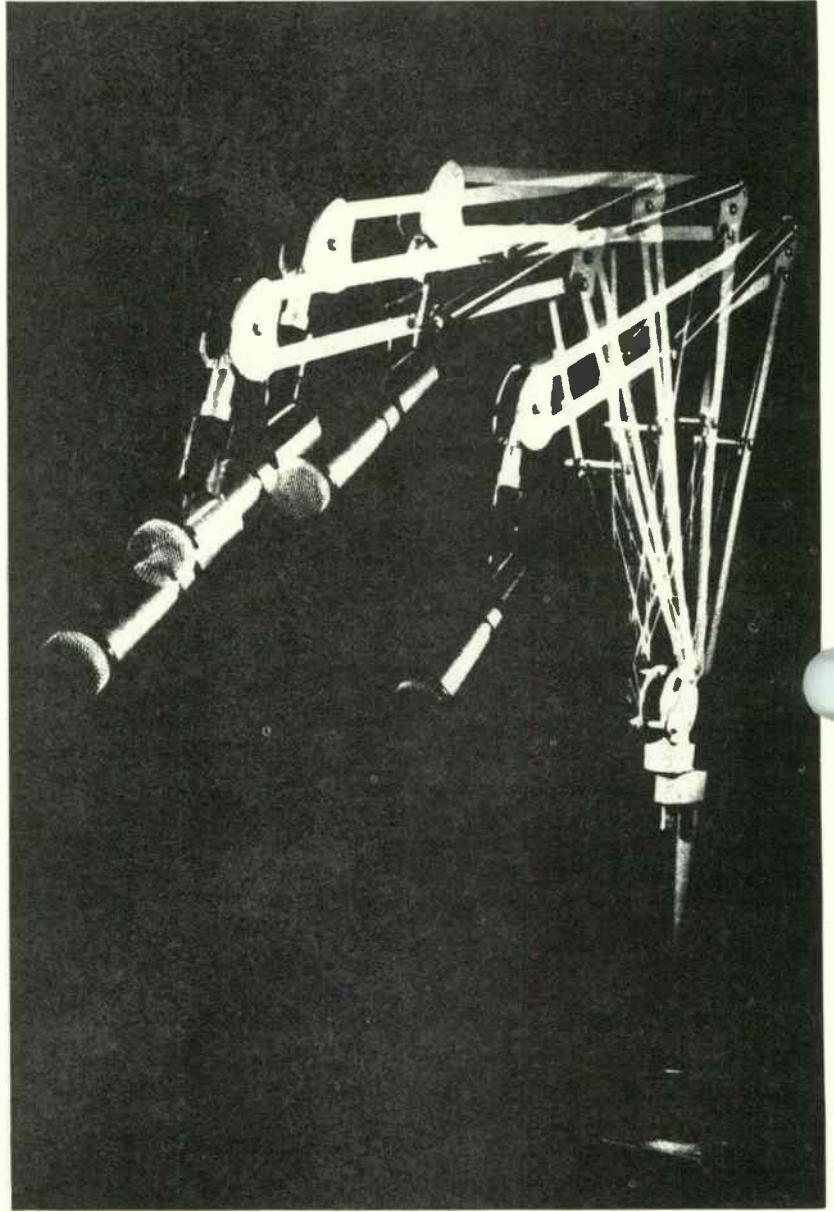
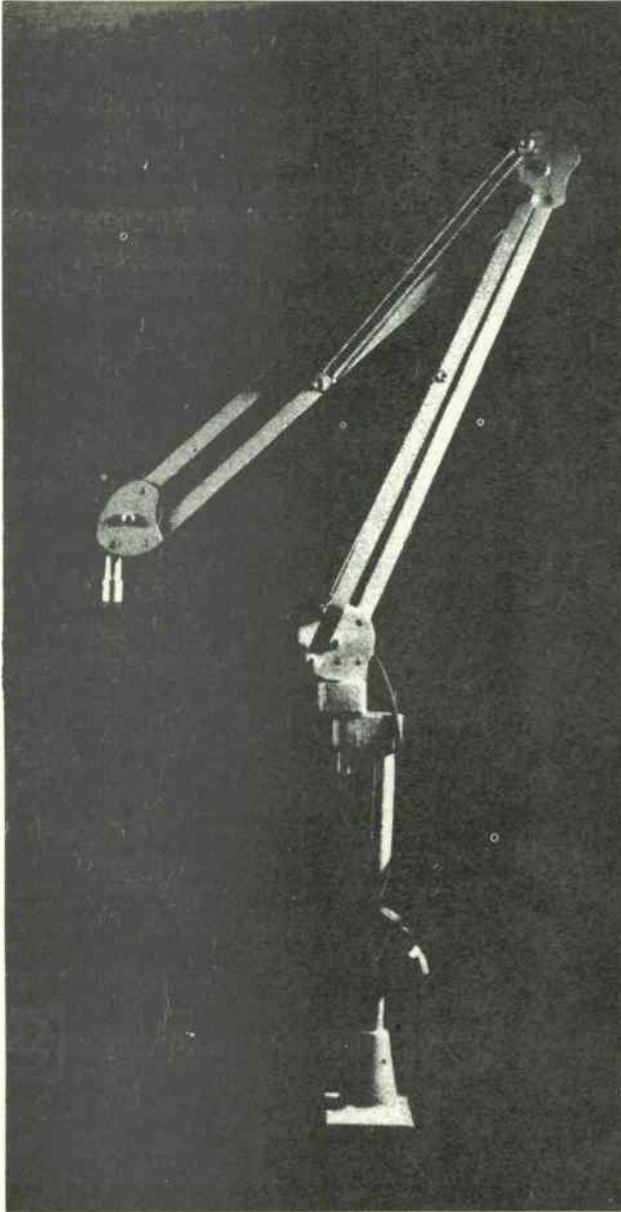
Model A95UF:

Input — Professional three-pin Female audio connector\*  
Output — Amphenol MC1M type connector  
88.9 mm long x 19.9 mm diam. (3 1/2" x 3/4")

\$25.00

# MICROPHONE STANDS

**NEW!**



L.E.L. is proud to announce the finest, most versatile studio microphone stand ever!

**FEATURES:**

- Extremely heavy duty.
- Unlimited Flexibility.
- No spring change regardless of microphone weight.
- Swing arm is instantly detachable from base.
- Complete with shielded microphone cable.

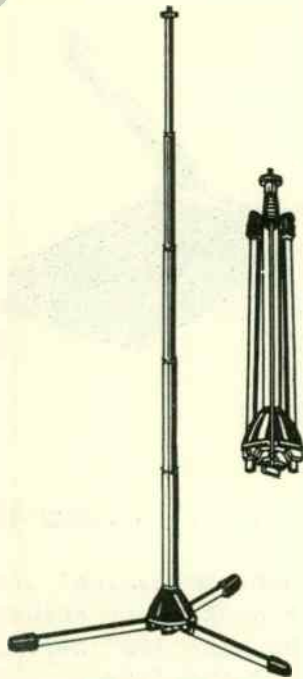
**SPECIFICATIONS:**

- Horizontal arm swivel; full 360°.
- Vertical arm reach with stand; 12" to 42".
- Horizontal arm reach; 6" to 36".
- Microphone head swivel; vertical 180°.

#MB-360 . . . . . **\$56.79**



# MICROPHONE STANDS



**ST199**  
Lightweight, portable. Maximum height of 4 ft. 8 in. Telescopes down to 17 in. Very stable, ideal for location recording, touring musicians and news reporting. Weighs approx. 3 lb. Standard American 5/8" thread. Leg length 12". **\$20.00**



**ST205A/1**  
Adjustable floor stand. Fold away legs with rubber shock absorbers. Weighs approx. 4 lb. Standard American 5/8" thread. Leg length 12". **\$20.00**

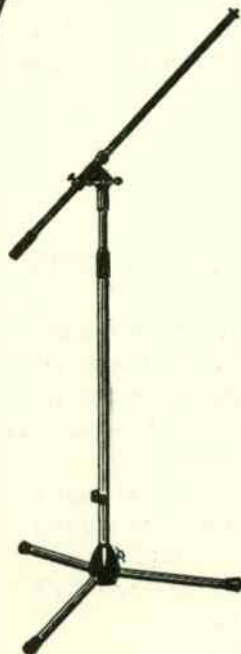


**SCH211**  
Lightweight, burnished nickel plated boom arm, suitable for all floor stands. Extends to a maximum length of 2 ft. 3 in. It can be pivoted through 360° in two planes and has a simple-to-operate pressure grip locking mechanism. Non-slip rubber locking pads ensure maximum grip with minimum effort. Weighs approx. 2½ lb. Standard American 5/8" thread. **\$14.00**



**ST212**  
The giant stand, designed exclusively for professional recording. Heavy duty tripod extends to maximum height of 7 ft. 6 in., boom arm reaches over 6 ft., yet everything folds down to a convenient 3 ft. 8 in. Can position a microphone up to 13 ft. 6 in. above a studio floor. A 4 lb. adjustable counter balance weight allows precise placement of heavy microphones over an orchestra or choir. Standard American 5/8" thread.

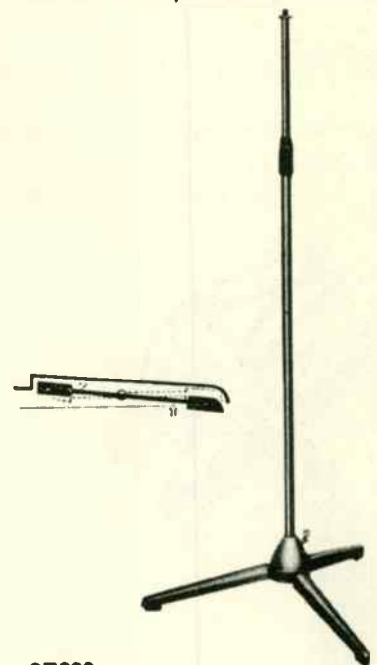
**\$110.00**



**ST210/2**  
The complete combination stand and boom. Incorporates the ST201A/2 and the SCH211 boom arm. Weighs approx. 12 lb. Standard American 5/8" thread. Leg length 13". **\$39.00**



**ST201A/2**  
Noiselessly adjustable floor stand. Heavy duty fold away legs with rubber shock absorbers. Weighs approx. 9 lb. Standard American 5/8" thread. Leg length 13". **\$26.00**



**ST220**  
Probably the most sophisticated stand on the market. Incorporates special vibration damping legs. Designed to overcome the problem of unwanted sound from being transmitted up the stand to the microphone. Unique shock absorbers are built in so that at no time does the stand base make direct contact with the floor. Ideal for use on hollow rostrums, dance floors, etc. Fold away legs. Weighs approx. 6 lb. Standard American 5/8" thread. Leg length 10". **\$40.00**

# MICROPHONE ACCESSORIES

S39A VIBRATION ISOLATION STAND.....\$28.00

*Isolates microphone from even extreme mechanical vibration. For tables, desks, podiums, etc. Designed for use with any Shure microphone or swivel adapter assembly. Heavy-duty "non-fatigue" foam rubber internal isolation element. Low-silhouette, black high-impact, non-glare plastic housing. Base size: 44.5 mm H x 133 mm W x 184 mm D (1 3/4" H x 5 1/4" W x 7 1/4" D).*

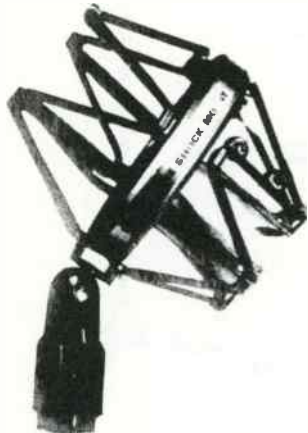


A53 ISOLATION MOUNT.....\$22.40

*A breakthrough in noise isolation. Reduces mechanical and vibration noises by more than 20dB. For desk, floor stand and fish pole use. 5/8"-27 Female thread with 180° swivel action. Size: 88.9 mm H x 38.1 mm D x 47.6mm diam. (3 1/2" H x 1 1/2" D x 1 7/8" diam.)*

A55M ISOLATION MOUNT.....\$22.40

*Reduces mechanical and vibration noises by more than 20dB. For use with SM50, SM57 and SM58 microphones. Size: 95.2mm H x 38.1mm D x 50.8mm diam. (3 3/4" H x 1 1/2" D x 2" diam.)*



SHOCK MOUNT...MODEL MA-034.....\$19.50

*Provides an extra measure of flexibility and ruggedness for performance situations where rough use is likely. For stand or boom.*

QUICK-DISCONNECT ISOLATION UNITS.....\$16.00

*Designed for use with microphones normally mounted on desk or floor stands but which are periodically removed from stand for hand-held or carry-around use. The molded rubber isolates the microphone from mechanical vibration.*

*Model A45 Designed both for microphones incorporating an isolation assembly such as Model SM56 and for microphones using an A25B Swivel Adapter such as Model SM50, SM57 and SM58. For use with standard 5/8"-27 microphone stands. Satin Aluminum finish.*

# MICROPHONE ACCESSORIES



## MICROPHONE CLAMPS



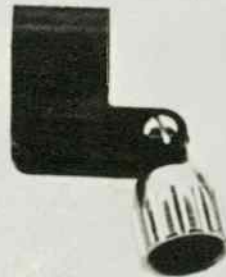
MVK-6

FITS 3/4" to 1 1/2"  
MVK-6.....\$6.80



M95A

FITS 1" SHAFT  
M95a....\$2.70



M96A

FITS 7/8" SHAFT  
M96a.....\$2.70



M97A

FITS 3/4" SHAFT  
M97a.....\$2.40



20 FT.  
PREWIRED  
MICROPHONE  
CABLES



#MC-20F.....\$12.60

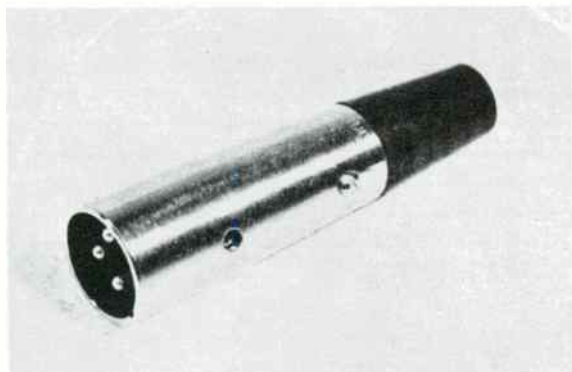
A SUPER SOFT AND FLEXIBLE MIC CABLE WITH STANDARD 3 COND. MALE & FEMALE PLUGS ATTACHED.

#MC-20R.....\$12.60

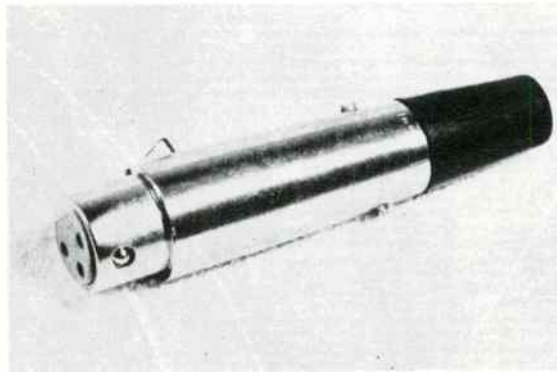
A RIGID NON-KNOTTING CABLE WITH STANDARD 3 COND. MALE AND FEMALE PLUGS ATTACHED.

\* WE WILL CUSTOM MAKE ANY LENGTH MICROPHONE CABLE UPON REQUEST.

# MICROPHONE ACCESSORIES



3 CONTACT MALE MICROPHONE PLUG  
#MMP-3 \$2.68



3 CONTACT FEMALE MICROPHONE PLUG  
#FMP-3 \$2.68

# MICROPHONE FLAGS

NEW!



NEW!

MICROPHONE FLAGS ARE AVAILABLE IN BOTH VERTICAL OR HORIZONTAL MOUNT. RAISED CALL LETTERS WITH RAISED WHITE BOARDER OR ENGRAVED CALL LETTERS WITH ENGRAVED WHITE BOARDER.

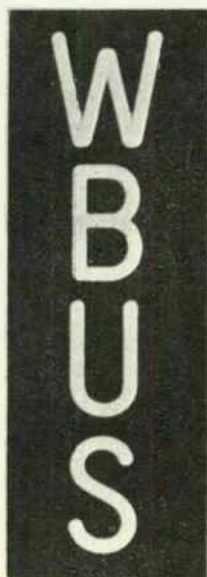
\*SPECIAL MICROPHONE CLIP ALLOWS A 360° SWING OF FLAG FOR MAXIMUM VIEWING UNDER ANY CONDITION. (INCLUDED)

SIZE: VERTICAL 1 3/4" X 5"

SIZE: HORIZONTAL 1 1/2" X 4"



VR-5 \$8.95  
RAISED LETTERS



VE-5 \$7.95  
ENGRAVED LETTERS



HR-4 \$8.95  
RAISED LETTERS



HE-5 \$7.95  
ENGRAVED LETTERS

# MIC/LINE AMPLIFIERS

## RAMKO RESEARCH



MLA-1/E.....MONO.....\$103.00

MLA-2/E.....STEREO.....\$149.00

# MICROPHONE LIMITERS

## RAMKO RESEARCH



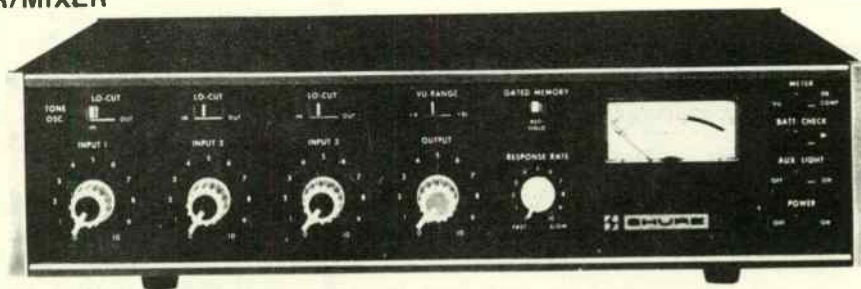
DML-1S.....STEREO (AC SUPPLY)...\$249.00

DML-2M/B....DUAL MONO (BATTERY).....\$225.00

# SHURE MIXERS



## SE30 GATED COMPRESSOR/MIXER

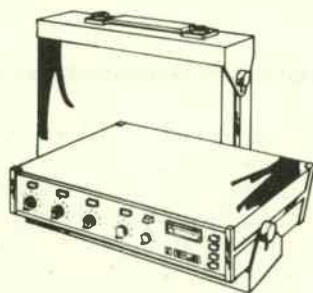


SE-30.....\$355.00

### SE30 CUSTOM ACCESSORIES

#### MODEL A100A CARRYING HANDLE ASSEMBLY

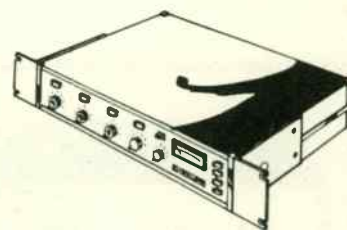
Dual-function assembly serves as a convenient carrying handle (when positioned over the front panel of the SE30) or as a tilt stand that gives greater visibility and easier operation (when positioned under the SE30). Locking knurled knobs on each end give fast, positive positioning. Rubber feet provide an extra cushion and non-slip grip on smooth surfaces when the A100A is used in tilt stand position.



A100A.....\$24.30

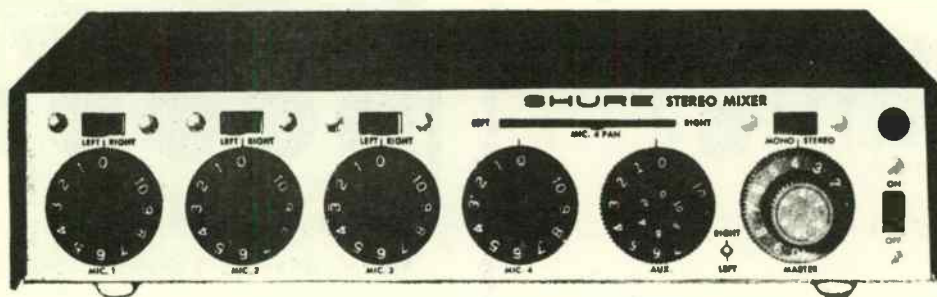
#### MODEL A100B RACK PANEL

Equips the SE30 for mounting in a standard audio rack panel. Brackets mount securely on each side of the SE30 to extend overall width to 19" for mounting. With brackets in place, overall height is only 3 1/2". The front panel of the SE30 is flush with the front of the rack when mounting is complete.



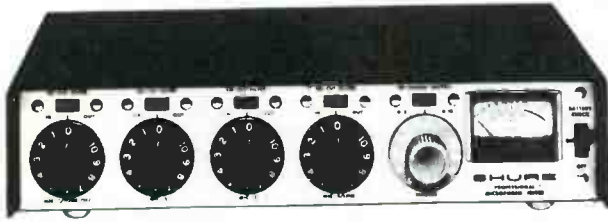
A100B.....\$14.40

# SHURE STEREO MIXERS



M688.....SHURE STEREO MIXER.....\$136.00

microphone mixers **SHURE** audio control components

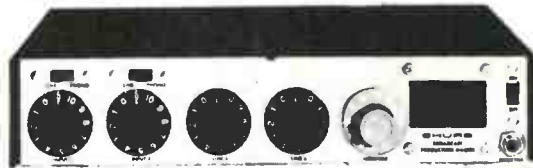


The **M67** is a transistorized microphone mixer/remote amplifier specifically designed for professional applications. The excellent performance and versatility of this complete, compact console make it an ideal choice for studio, remote, or original sound reinforcement use, and as an "add-on" mixer for expanding existing facilities. It is also ideally suited for use with tape recorders and VTR's to provide multiple microphone inputs.

\$193

The Shure Model **M675** Broadcast Production Master is designed to be used as an accessory to the Shure Model M67 (or M67-2E) Professional Microphone Mixer to significantly broaden the scope of applications for the M67 in the professional field. When used with an M67, it provides additional magnetic phono and line inputs with cue provision for previewing the material supplied to these added inputs.

The combination of the M67 and the M675 Broadcast Production Master provides a complete, compact console permitting mixing of a number of microphones, high level sources (such as tape or tape cartridge machines) and turntables. By making an internal jumper change, the two phono inputs may be used for tape head or high impedance microphone inputs.



\$179



**GENERAL:**

The Shure Models **M68** five channel, completely transistorized, portable microphone mixers for use with sound reinforcement, tape recording and audio-visual systems.

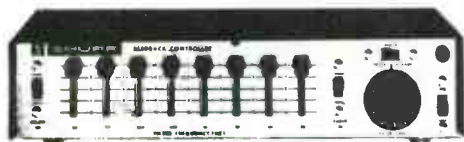
\$108

**General:** The Shure Model **M63** Audio Master is a unit designed to give maximum flexibility in the control of volume, bass response, treble response, and high and low frequency roll-off. The Model M63 works ideally as a Master Control Center when used in conjunction with the Shure Model M68 Series of Microphone Mixers.

The M63 provides a means to equalize sound systems for correction of room acoustics, to reduce feedback, to provide special sound effects, to reduce stand and stage noise and for tape recording.

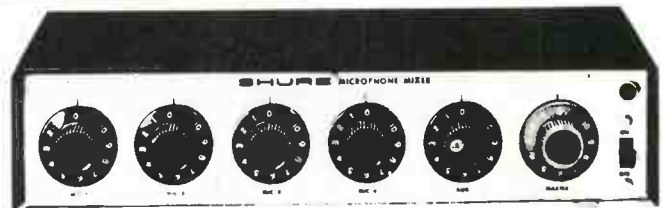


\$115



**MODEL M610 FEEDBACK CONTROLLER**

\$134



**REVERBERATION MIXER**

\$139

**Model M68RM. 4-channel Reverberation Mixer.**



# BROADCAST CONSOLES



## RAMKO RESEARCH

SC-5M	Single Channel, 5 Mixer Audio Console (Mono)	\$780.00
DC-5M	Dual Channel, 5 Mixer Audio Console (Mono)	\$1032.00
DC-5MS	Dual Channel, 5 Mixer Audio Console (Stereo)	\$1252.00
DC-8M	Dual Channel, 8 Mixer Audio Console (Mono)	\$1390.00
DC-8MS	Dual Channel, 8 Mixer Audio Console (Stereo)	\$1880.00

## *Spotmaster*<sup>®</sup>



4BEM-50	Spotmaster 4-Mixer Monophonic Console	\$535.00
4BES-50	Spotmaster 4-Mixer, Stereophonic Console	\$875.00

# BROADCAST CONSOLES

## *Spotmaster*<sup>®</sup>



5BEM-200



8BEM-200



5BEM-100



8BEM-100

5BEM-100	Spotmaster 5-Mixer Monophonic Console, sealed Pots Dual	\$ 890.00
5BES-100	Spotmaster 5-Mixer Stereophonic Console, sealed Pots	\$1250.00
5BEM-200	Spotmaster 5-Mixer Deluxe Monophonic Console, Step Type Attenuators, Dual	\$1365.00
5BES-200	Spotmaster 5-Mixer Deluxe Stereophonic Console, Step Type Attenuators	\$2095.00
8BEM-100	Spotmaster 8-Mixer Monophonic Console, sealed Pots, Dual	\$1470.00
8BES-100	Spotmaster 8-Mixer Stereophonic Console, sealed Pots	\$2195.00
8BEM-200	Spotmaster 8-Mixer Deluxe Monophonic Console, Step Type Attenuators, Dual	\$2495.00
8BES-200	Spotmaster 8-Mixer Deluxe Stereophonic Console, Step Type Attenuators	\$3295.00

# MOD ONE

AM & FM BROADCAST CONSOLES

MODELS  
110 MONO,  
210 STEREO

57



Mod One is all that the name implies: The **one** MODERN, MODULAR broadcast audio console system. While utilizing design concepts developed for contemporary recording studio consoles, Mod One is specifically radio oriented — physically, electronically and humanly engineered for AM and FM broadcasting.

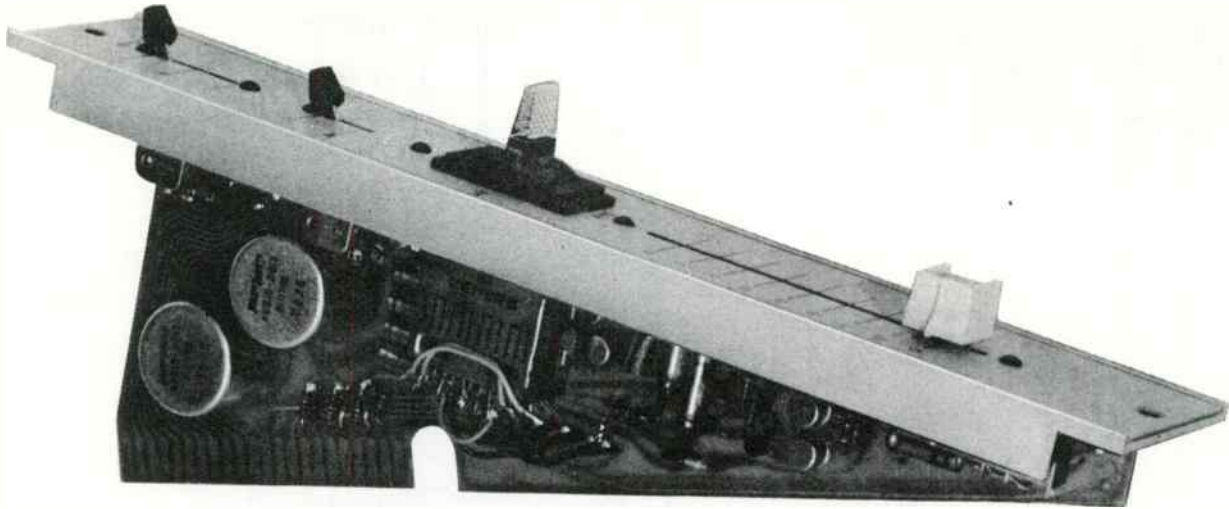
Modular, printed circuit board construction provides extreme flexibility at lowest cost. All solid-state-of-the-art, Mod One exceeds all FCC proof-of-performance requirements. Plug-in modules and

amplifiers make format changes simple — start with only the modules you need, and expand or change to meet new requirements.

Basic console housing and printed-circuit mother-board is identical for all configurations. A wide selection of input modules and plug-in amplifier cards permits customizing your Mod One to exactly suit your present or future requirements — AM or FM, monaural, stereo or quadraphonic.

Compare features — compare specifications — compare prices. Look into the future with Mod One!

**CALL OR WRITE FOR LATEST PRICING AND SPECIFICATIONS**



The modern, modular design of UREI's Mod One broadcast consoles provides a wide choice of plug-in input modules to meet specific requirements in AM and FM broadcasting. All modules mate automatically in any of the 10 module positions of the MOH-110 or MOH-210 consoles, allowing optional organization of console functions with minimum installation labor. Blank modules may be installed in unused positions, and used for custom controls, etc., or future expansion.

All modules have a rugged extruded aluminum frame, overlaid with a pale green vinyl-clad steel faceplate. Designations are permanent black. Circuitry is on military-grade glass-epoxy printed cir-

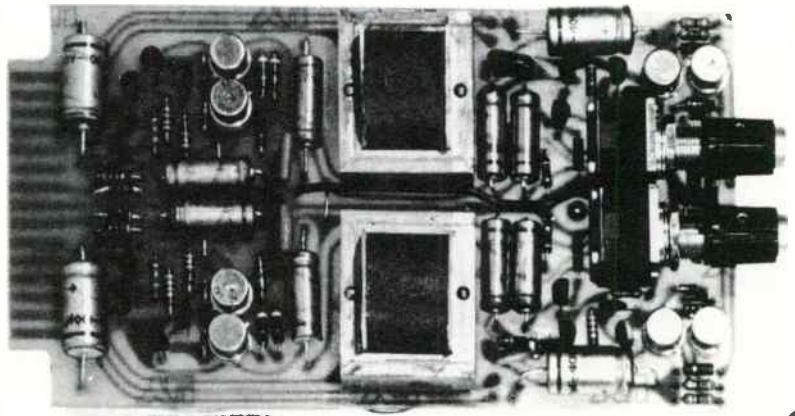
cuit boards, with gold plated edge contacts which mate with a gold-plated connector on the console mother board. Two Allen-head screws attach the module to the chassis frame.

Switches are silent-action. PGM-OFF-AUD switches are illuminated Switchcraft Lever-Lite type. Vertical faders are long-life, smooth, conductive plastic, with cue switches (where applicable) operated when the fader is below the detented OFF position.

All modules have high quality input transformer isolation for balanced (floating) or unbalanced sources.

MOD ONE modular broadcast audio consoles from UREI employ all solid-state circuitry for ultimate reliability and performance. All active circuits are on plug-in printed circuit cards, or within the plug-in Input Modules — no active components are part of the console housing.

Various plug-in circuit cards are furnished with a Mod One console, or available as spares or to modify your console for specific applications, whether Monaural, Stereo or Quadraphonic. Basic requirements for a complete MOH-110 (Monaural) or MOH-210 (Stereo) console are: 2 line amplifiers, 1 monitor booster amplifier, 1 cue amplifier and 1 headphone amplifier. Model numbers and specifications for each are listed below:

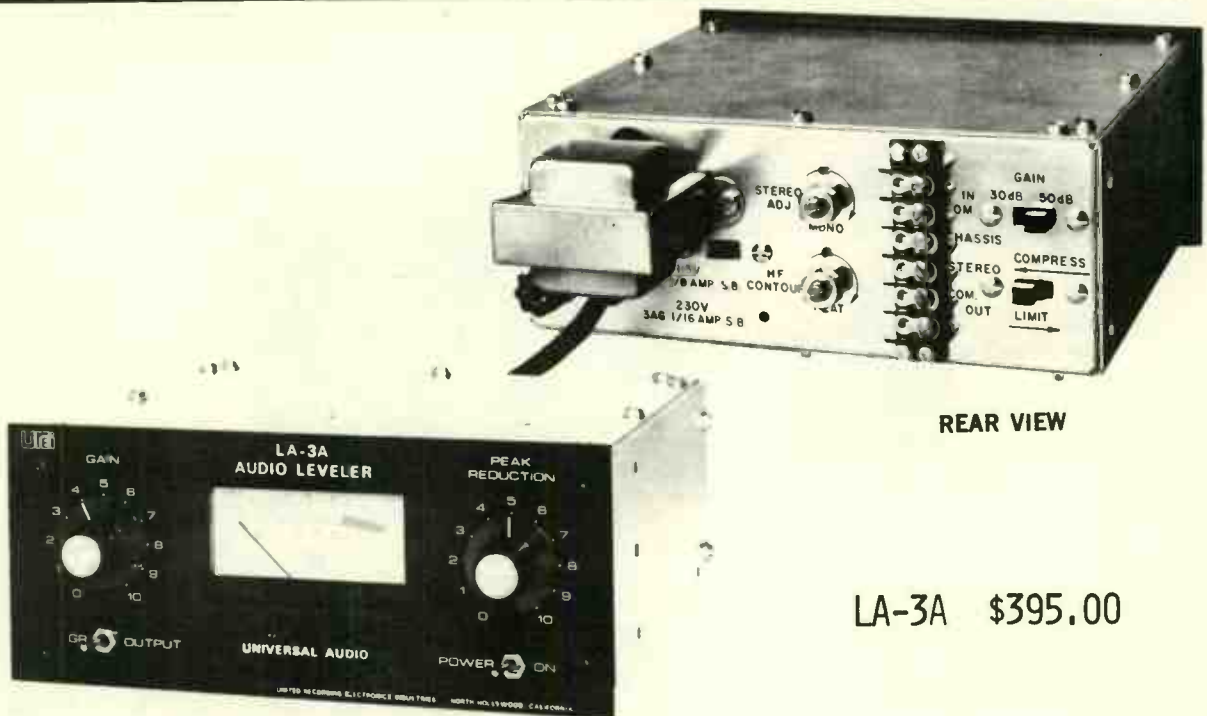


# LEVELING AMPLIFIERS

59

Universal Audio  
**AUDIO LEVELER**

MODEL  
**LA-3A**



REAR VIEW

LA-3A \$395.00

WHEN IT COMES TO COMPRESSORS--THE LA-3A IS THE STANDARD OF COMPARISON--  
THE ONE THAT STATION WITH THE SUPERB SOUND IS USING. SMOOTH-FAST &  
STRONG (OPTICAL,  $\frac{1}{2}$  CYCLE AT 50KHZ--UP TO 50:1 RATIO).

SET UP FOR HIGH OR LOW LEVEL INPUTS (30 OR 50DB GAIN)-- +24 OUT (NO HEAD-  
ROOM PROBLEMS HERE). SWITCH ON BACK FOR EXTRA HIGH FREQUENCY LIMITING  
ON F.M.--BACK PANEL CONNECTION FOR TWO UNITS FOR STEREO.

WHAT MORE COULD YOU WANT??? RACK PANEL AVAILABLE FOR 1 OR 2 UNITS.

# LEVELING AMPLIFIERS

## Universal Audio COMPRESSOR/LIMITER

Covered by U.S. Patent Office No. 3,258,707

MODEL  
LA-4



THE LA-4 IS THE SUCCESSOR TO THE FAMOUS LA-3A. IT HAS CONTROLS TO ADJUST SOME OF THE FUNCTIONS WHICH ARE FIXED IN THE LA-3A. THIS UNIT IS FOR THE STATION WITH SPECIAL NEEDS, A BETTER THAN AVERAGE ENGINEER AND A PROGRAM DEPARTMENT WITH A NEED FOR OTHER THAN ORDINARY SOUND. THE COMPRESSION RATIO IS CAPABLE OF BEING SET FROM A VERY SMOOTH, SOFT 2:1 UP TO A SUPER TIGHT 20:1, WITH RELEASE TIMES TO MATCH!!! AN OVERLOAD INDICATOR ON THE INPUT GETS AWAY FROM ONE OF THE COMMON SOURCES OF DISTORTION.

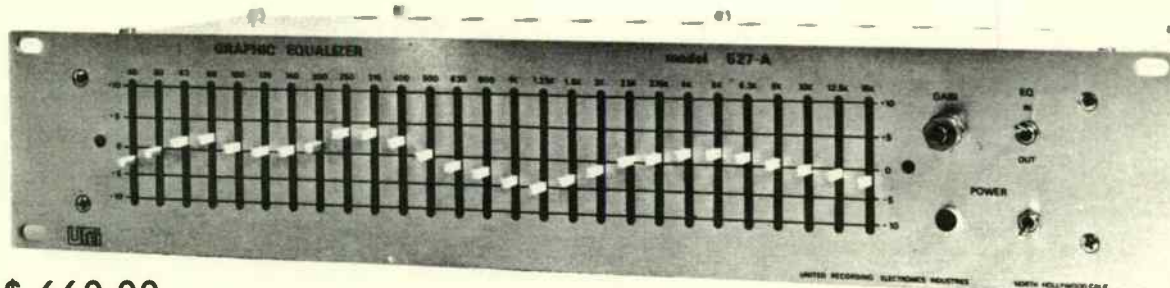
LA-4 \$346.00

# GRAPHIC EQUALIZERS



Universal Audio  
1/3 OCTAVE  
**GRAPHIC EQUALIZER**

**MODEL**  
**527-A**  
**527 SC**  
**527 K**



**\$ 660.00**

Model 527-A 1/3-octave Graphic Equalizer is a narrow-band equalizing set designed primarily for equalizing frequency response of sound playback and reinforcement systems in: Churches, auditoriums, sports arenas, theatres, convention centers, night clubs and broadcast and recording studios. Featuring both boost and attenuation at 27 contiguous 1/3-octave ISO center frequencies, the 527-A offers much more flexibility than competitive "filter sets" which provide attenuation only.

As a creative tool in sound recording and re-recording, the 527-A permits complete freedom in contouring response over the complete audio spectrum from 40 Hz to 16 kHz.

Each of the 27 equalizers provides boost or attenuation of up to 10 dB with stepless, noiseless vertical controls. The positions of the 27 control arms provide a graphic representation of the resulting response curve.

Equalization is accomplished with active LC filters. Gain is adjustable with a locking front panel control, and up to 10 dB of voltage gain may be obtained. Program levels from -20 dBm to +20 dBm are accommodated with excellent signal-to-noise and low distortion. An optional accessory, Model 527 SC Security Cover, may be installed over the front panel to provide protection against disturbance of the equalization controls in fixed installations.

Model 527-A is completely self-contained with built-in power supply, and operates from either 110-120 or 220-240 VAC, 50 or 60 Hz.

## FEATURES

- 27 adjustable equalizers on 1/3-octave ISO center frequencies.
- 10 dB boost or 10 dB attenuation at any center frequency.
- Stepless, noiseless vertical controls, precision calibrated.
- State-of-the-art active filter circuitry.
- Low distortion, low noise.
- All solid-state.
- Zero insertion loss—up to 10 dB voltage gain.
- Standard rack mounting—only 3 1/2" high.
- Optional accessory front panel security cover.
- Competitive price—lowest in industry.

## ACCESSORY

**527 SC SECURITY COVER \$ 24.00**

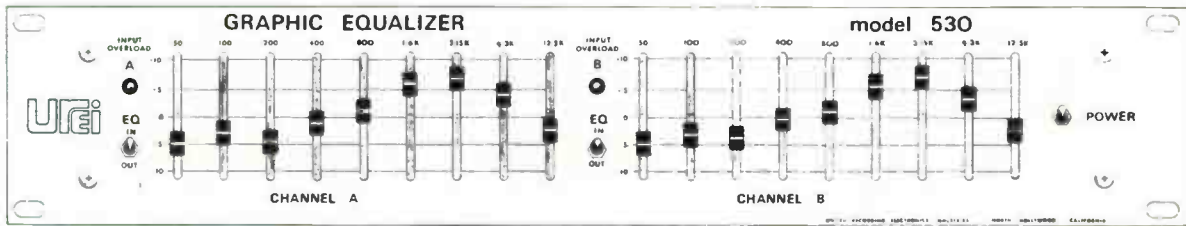


# GRAPHIC EQUALIZERS

## Universal Audio Dual GRAPHIC EQUALIZER

NEW!

MODEL  
530



\$424.00

### FEATURES:

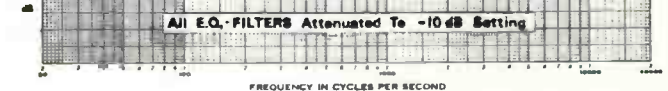
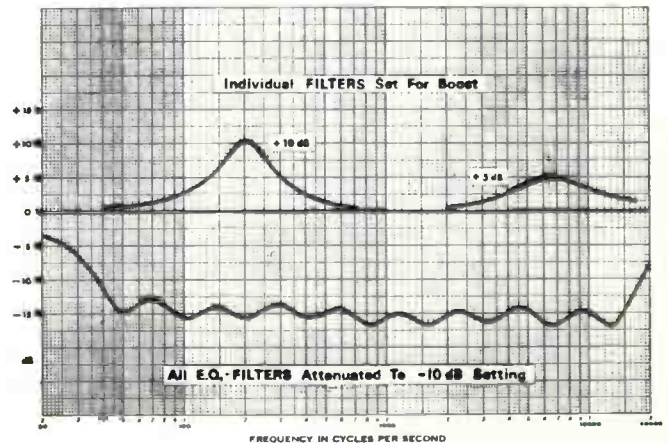
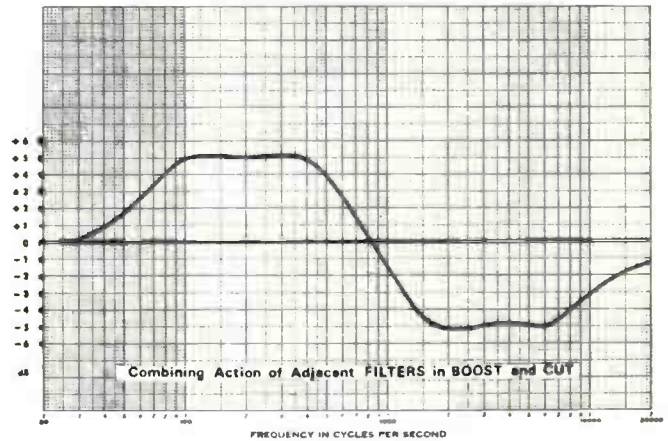
- Two Channels in one compact package.
- Nine equalizers per channel.
- Professional quality throughout.
- Balanced or unbalanced inputs and outputs.
- 115 or 230 V.A.C. operation, 50/60 Hz.

### TYPICAL CURVES:

The 530 Dual Graphic Equalizer is a studio quality product which has wide application in recording, sound reinforcement, radio and TV production, and high fidelity music systems.

Two completely independent Graphic Equalizers with a common power supply are attractively housed in the 530's 3½" x 19" chassis. Each channel begins with a differential input stage, includes nine variable active equalizers centered at each octave from 50 Hz to 12.5 kHz, and ends in an output amplifier capable of delivering +20 dBm into a 600 ohm load. The inputs may be fed from balanced or unbalanced sources. The output amplifiers are transformer isolated, and will accommodate balanced or unbalanced loads. Signal-to-noise ratio at maximum output is an outstanding 110 dB, harmonic distortion below 0.5%.

State-of-the-art design techniques and components assure uncompromised performance at a reasonable price. UREI quality, of course.





# LIMITERS

Universal Audio  
**MODULIMITER**

MODEL  
BL-40



"DO YOU WANT TO GET MORE OUT OF YOUR TRANSMITTER?"

"DO YOU WANT TO BE LOUD?"

"WOULD YOU RATHER NOT SPEND \$3,000.00?"

The Modulimiter is for you. Hook this up to your transmitter and get the loudest signal your transmitter is capable of putting out. As you can see from the controls and beautiful metering system you can now achieve full control of your signal. 124.99% capability is yours safely. The ultra-fast peak limiter does not jolt your transmitter with the square waves you get out of the cheap clippers.

Your transmitter will LOVE you for only..... **\$ 695.00**



**NEW!**



**Model DS-1 RF PROBE**

"SNIF-IT"



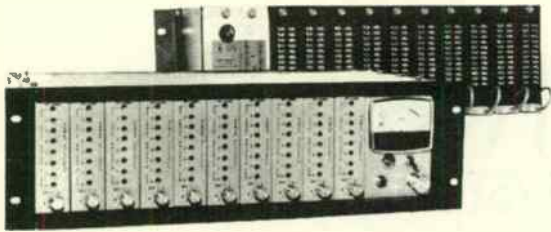
WHAT IS A SNIF-IT YOU ASK?

**\$12.60**

OUR ANSWER, WE DON'T KNOW!

BY HOOKING THE "SNIFF-IT" UP TO A 50 MICROAMP METER YOU CAN USE A SIMPSON 260, PUT THE PROBE NEAR SOME RF, AND THE NEEDLE WILL GO UP. A ONE MILOWATT OSC WILL GIVE YOU A GOOD READING. YOU CAN CHASE A SIGNAL THROUGH A TRANSMITTER BY JUST GETTING CLOSE TO THE TUBES, COILS OR OTHER PARTS CARRYING RF. PRECISE NEUTRALIZATION IS A CINCH. FINDING BREAKS IN THE COAX SHIELD IS EASY, EVEN GETTING YOUR ANTENNA IN THE BALLPARK IS NO PROBLEM. YOU CAN CHECK A QUARTER WAVE WHIP. IT IS SENSITIVE ENOUGH TO DETECT OSCILLATIONS IN OpAmps. SO SENSITVIE IN FACT, A ONE WATT HANDY TALKY WILL GIVE YOU A GOOD READING, YET USUABLE WITH CAUTION. THE POSSIBLE USES FOR THIS "QUISIMO" ARE LIMITED ONLY BY YOUR IMIGATION AND INGENUITY.

# DISTRIBUTION AMPLIFIERS



## DA-2080

Up to 20 in and 160 out

More inputs & outputs, for the size & price, than any other ADA on the market!

Highly versatile modular concept allows you to buy only what you need now and expand later on. The DA-2080 Main Frame comes complete with all wiring for 10 slide in modules. Power supply and metering module included.

The DA-2080 amplifier modules each have 2 balanced inputs and 8 balanced outputs. Thus there are two separate 1x4's on each module. In addition each module has its own meter select switch and individual output level controls. These modules are completely self contained and only need be plugged into the main frame.

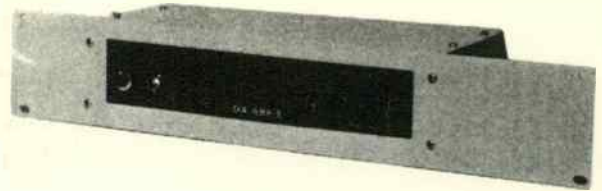
Versatile. Any or all inputs may be strapped together to form whatever combination desired. In addition any or all of the outputs may be used in the unbalanced mode to double the output capability. Thus each module would have a 2 in, 16 out capability. Eight outputs in phase and eight outputs out of phase.

Compact. Only 5 1/2" high and 19" wide.

Price and performance? We know of no other unit on the market that compares with this unit at even twice the cost.

DA-2080 MAIN FRAME . . . . . \$175  
(with power supply & meter module)

DA-2080 AMPLIFIER MODULE . . . . . \$150



## DA-6BR/E

1x6 with individual output adjustments.

One balanced input and 6 balanced outputs. Each output level may be individually adjusted via recessed front panel controls. Compact 3 1/2" high with Cinch Jones type connectors on rear. Standard 19" rack mounting.

DA-6BR/E . . . . . \$179



## DA-6RS/E

2x12 Stereo or Dual mono.

Two 1x6 audio DA's in the same package. All features are the same as our standard DA-6R/E above except twice as much in a 3 1/2" rack unit. Like our other units inputs may be strapped for 1x12 operation.

DA-6RS/E . . . . . \$239

## Specifications

(All distribution amplifiers)

**Response** . . . . . 10 Hz —20KHz, ±0.5db  
**Distortion** . . . . . 0.1% or less (typically 0.05%)  
**Input Impedance** . . . . . 200K ohms, balanced bridging. May be changed to any lower impedance by placing an appropriate resistor across the input terminals.  
**Output Impedance** . . . . . 125/600 ohms balanced. Unique output stage allows the outputs to work into any impedance over 125 ohms without affecting response or distortion.  
**Output Level** . . . . . +20 dbm max.

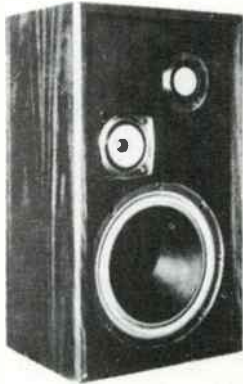
**Gain** . . . . . Variable from full off to +26db.  
**Hum & Noise** . . . . . 90db down referenced to +20 dbm out.  
**Channel Separation** . . . . . 80db  
**Solid State** . . . . . Plug-in Integrated circuits  
**Power** . . . . . 115VAC, 50/60Hz (220VAC, 50Hz optional)  
**Color** . . . . . Sand and charcoal brown.  
**Connectors** . . . . . Cinch Jones type carrier strips



# STUDIO MONITOR SPEAKERS

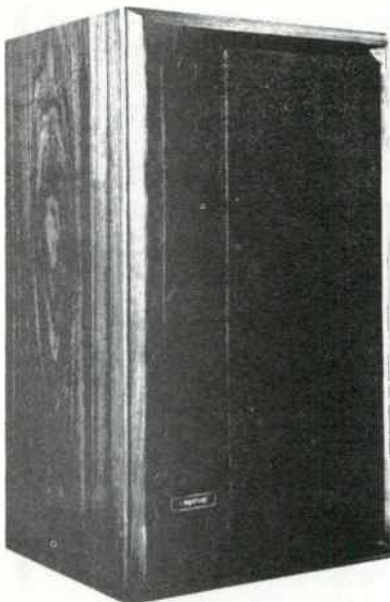
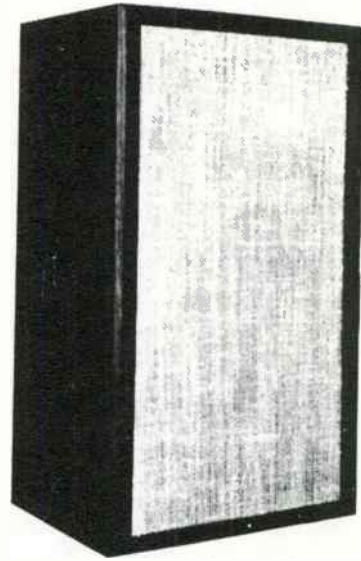
## CREATIVE<sup>®</sup> SPEAKER SYSTEMS

### MODEL 77V



Three-way 10" + 4" + 2½" Air Suspension.  
 Frequency Response 35 to 19K Hz.  
 Handles full program material output  
 of receiver/amplifier rated at 30 watts  
 RMS per channel.  
 Impedance, 8 Ohms.  
 Crossover at 4K and 8K Hz. Life-Saver  
 Circuit.  
 Dimensions: 22" x 12¾" x 9½"  
 Packed 1-per-carton.  
 Shipping weight: 26.5 lbs.

\$ 75.00



**MODEL 100** Three-way 3-speaker system (12" + 5" + 1" Dome). Air suspension. Frequency response, 30 to 20K Hz. Impedance 8 Ohms. Crossover at 700 and 8K Hz. Equipped with Life Saver Circuit<sup>®</sup>. Two trim controls for mid and high frequencies. Enclosure of Genuine Walnut veneers and solid contoured molding. Dimensions: 23¾" x 14¾" x 12¼". Packed 1-per-carton. Total shipping weight: 42 lbs.

\$168.00



**BROADCAST TURNTABLES**

69

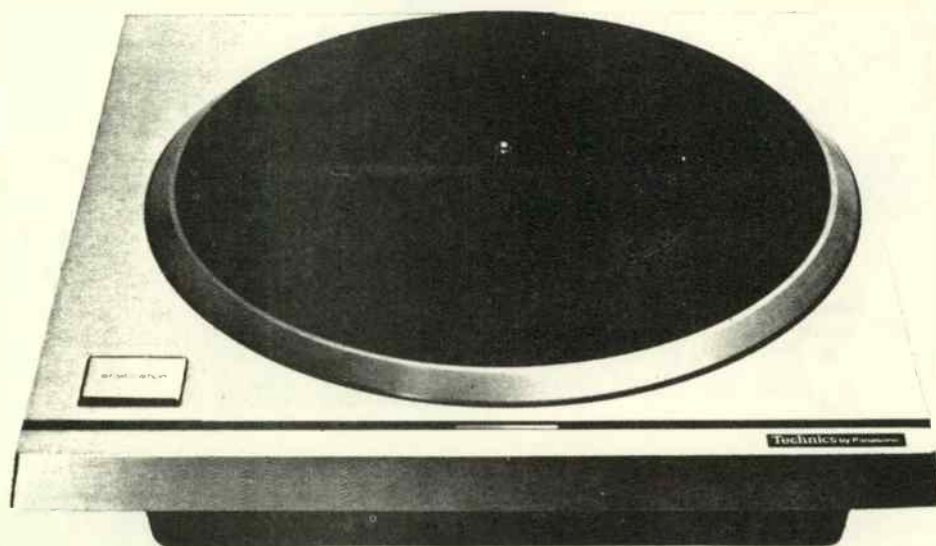
# Technics SP-10MK II

Quartz-Controlled Direct-Drive  
Turntable

**NEW!**

**A New Standard of Accuracy in  
Disc Reproduction.  
The Professional, Quartz-Controlled  
Direct-Drive Turntable,  
Technics SP-10MK II.**

**NEW!**



SP-10 MKII....."INSTANT START" DIRECT DRIVE TURNTABLE.....\$650.00



# BROADCAST TURNTABLES

**NEW**  
**RUSSCO**  
**STUDIO-PRO**  
 Custom Model  
 The Ultimate in  
 2 speed precision  
 engineering!



#SP-12 TURNTABLE \$272.00

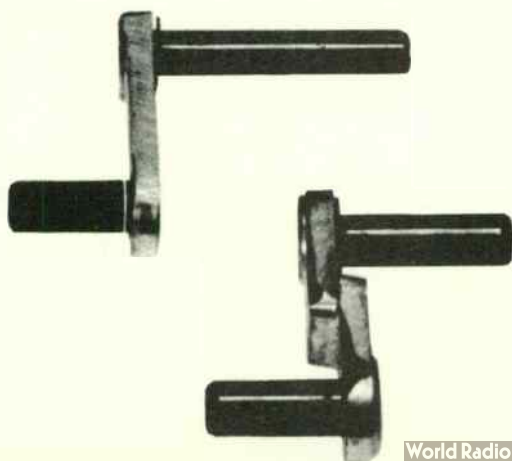
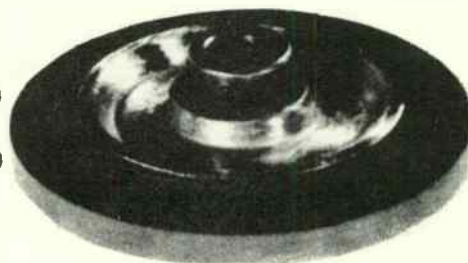
#CM-12 TURNTABLE \$236.00



**NEW**  
**RUSSCO**  
**CUE-MASTER**  
 A new standard in  
 dependable 3 speed  
 performance

#SP-5 STUDIO-PRO IDLER WHEEL \$12.50

#CM-5 CUE-MASTER IDLER WHEEL \$12.50



#SP-19 STUDIO-PRO IDLER SHAFT \$8.60

#CM-19 CUE-MASTER IDLER SHAFT \$8.60

CALL US FOR ANY RUSSCO REPLACEMENT PARTS

# BROADCAST TURNTABLES



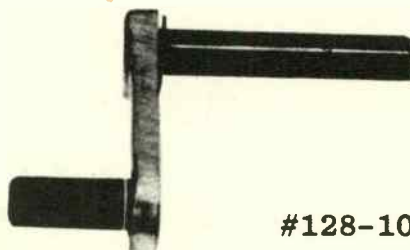
## -12C INSTANT START



#QRK-12C TURNTABLE \$225.00



#128-9 IDLER WHEEL \$12.50



#128-10 IDLER SHAFT \$7.20

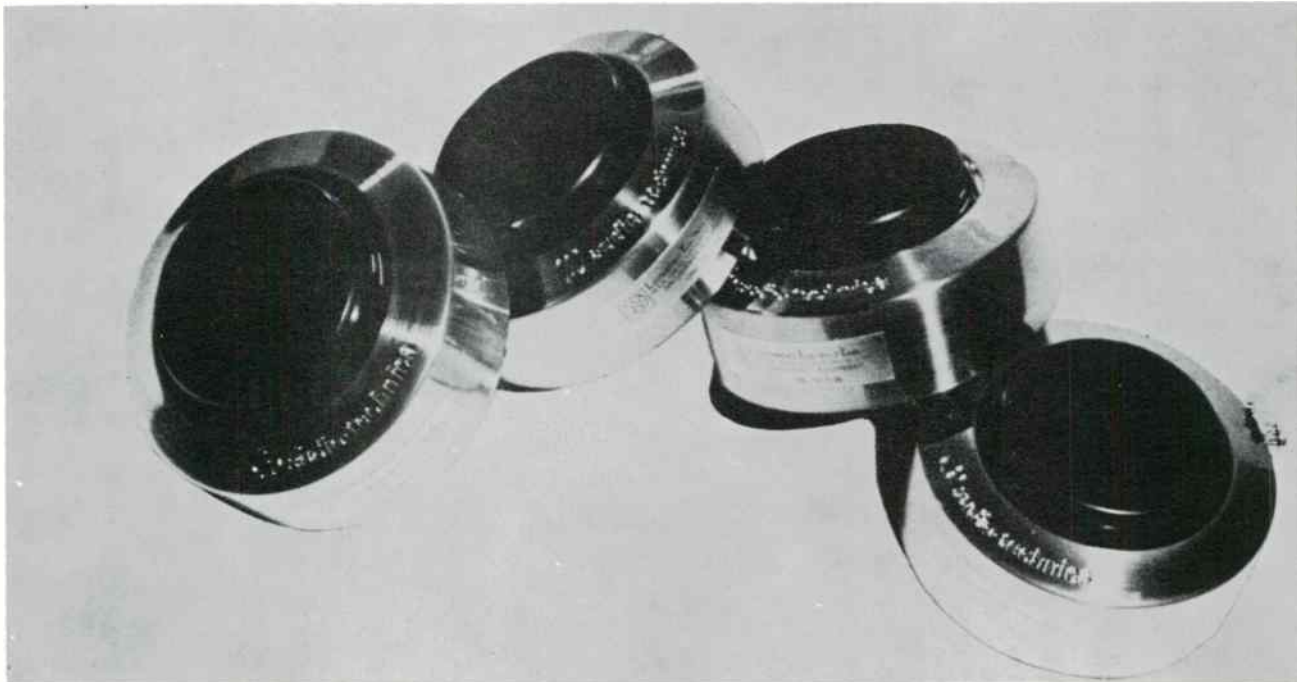
CALL US FOR ANY REPLACEMENT PARTS

# TURNTABLE ACCESSORIES



TURNTABLE LEVEL  
#TL-1.....\$4.80

MOTOR START CAPACITOR  
#MSC-1.....\$4.50



## TURNTABLE INSULATORS

ADJUSTABLE SHOCK ABSORBERS DESIGNED TO  
PREVENT VIBRATIONS FROM REACHING TURNTABLE.

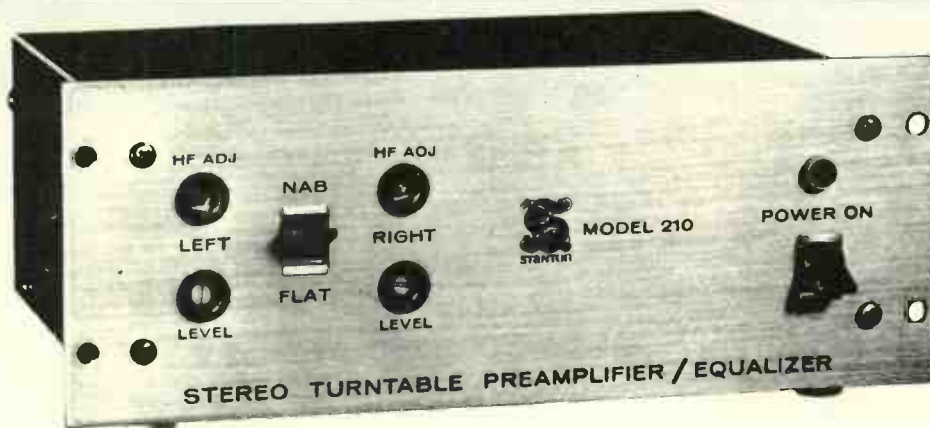
#TI-4 (SET OF 4).....\$27.50



# TURNTABLE PREAMPS

75

NEW!



## STANTON MODEL 210 STEREO TURNTABLE PREAMPLIFIER/EQUALIZER

The Model 210 is a solid state and IC modular stereo preamp/equalizer with a self-contained, IC regulated power supply.

This preamp/equalizer is designed for table-top or standard rack panel mounting with an optional adapter.

All the controls are accessible on the front panel and consist of:

- Individual Channel Level Screwdriver Controls.
- Individual Channel Screwdriver — Adjust High Frequency Trimmers.
- Two Switched Positions for Flat Response or Precise NAB Record Playback Equalization.
- Power Switch.

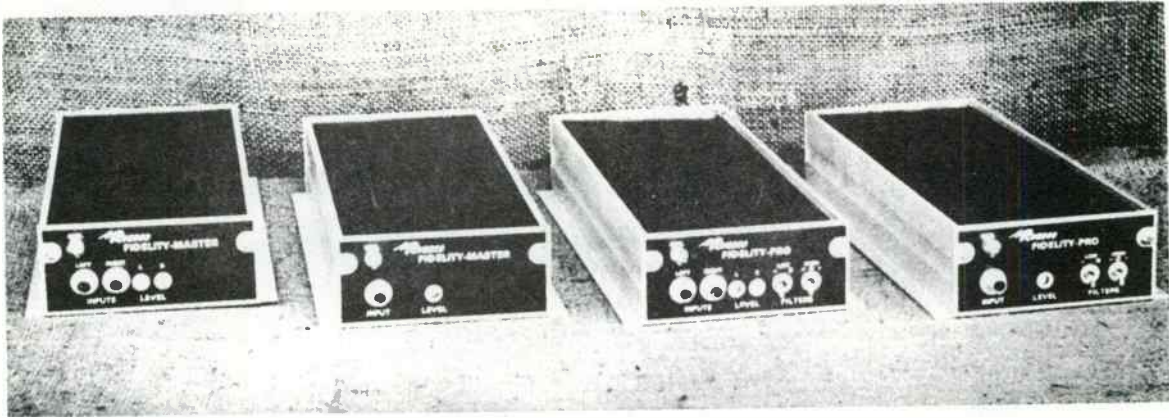
The Model 210 is an extremely low noise, low distortion device with line level output over a wide range of input levels. It provides the necessary stage between the turntable and the studio console input to ensure highest quality disc reproduction for the professional user.

PROFESSIONAL NET PRICE: \$240.00

RACK PANEL ADAPTER \$ 36.00

# TURNTABLE PREAMPS

## RUSSCO PREAMPS



MODEL FMMU	FIDELITY MASTER MONAURAL (unbalanced output)	\$92.00
MODEL FMMB	FIDELITY MASTER MONAURAL (balanced output)	\$111.00
MODEL FMSU	FIDELITY MASTER STEREO (unbalanced output)	\$140.00
MODEL FMSB	FIDELITY MASTER STEREO (balanced output)	\$178.00
MODEL FPMU	FIDELITY PRO MONAURAL (unbalanced output)	\$108.00
MODEL FPMB	FIDELITY PRO MONAURAL (balanced output)	\$127.00
MODEL FPSU	FIDELITY PRO STEREO (unbalanced output)	\$160.00
MODEL FPSB	FIDELITY PRO STEREO (balanced output)	\$198.00

## RAMKO RESEARCH

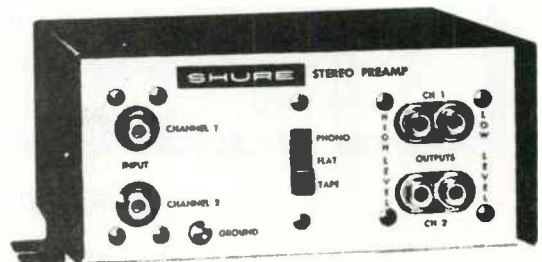


MP-8E \$90 (MONO)

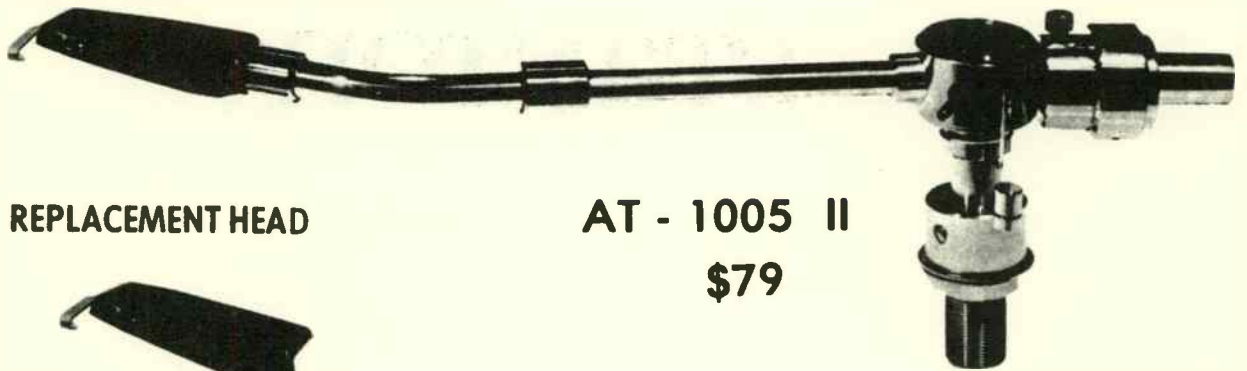
SP-8E \$144 (STEREO/DUAL MONO)

**M64 SERIES UNIVERSAL  
STEREO PREAMPLIFIERS**

M64 \$57



# 77 TONE ARMS AND ACCESSORIES

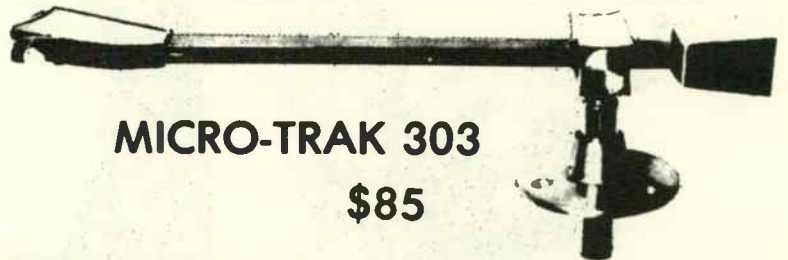


REPLACEMENT HEAD

AT - 1005 II  
\$79

\$12.50

REPLACEMENT HEAD



\$15.20

MICRO-TRAK 303  
\$85

REPLACEMENT HEAD



\$14.60

REK-O-KUT S-320

\$68

REPLACEMENT HEAD



\$6.50

SHURE M-232

\$42.50



# PHONO CARTRIDGES AND STYLUS

## STANTON

REMOVABLE LONG  
HAIR BRUSH



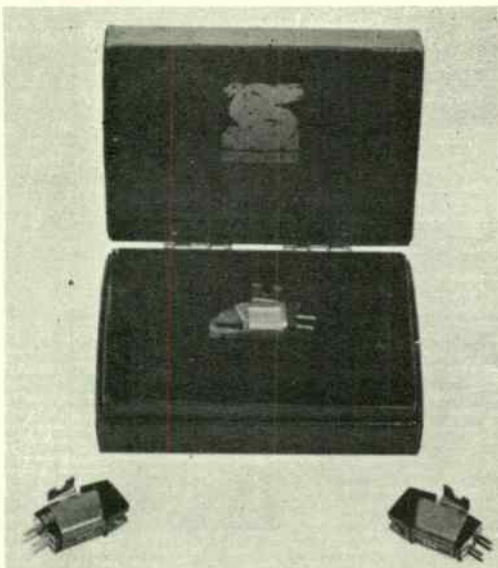
681 EEE CARTRIDGE STYLI \$53.00

D6800 EEE REPLACEMENT STYLI \$26.50

# PHONO CARTRIDGES AND STYLUS



## STANTON



(1½ TO 3 GRAMS)

- 681A-CARTRIDGE WITH STYLI.....\$43.20
- D6807A-REPLACEMENT STYLI.....\$19.40

(1½ TO 3 GRAMS)

- 681 EE-CARTRIDGE WITH STYLI.....\$46.80
- D6800 EE-REPLACEMENT STYLI.....\$23.40

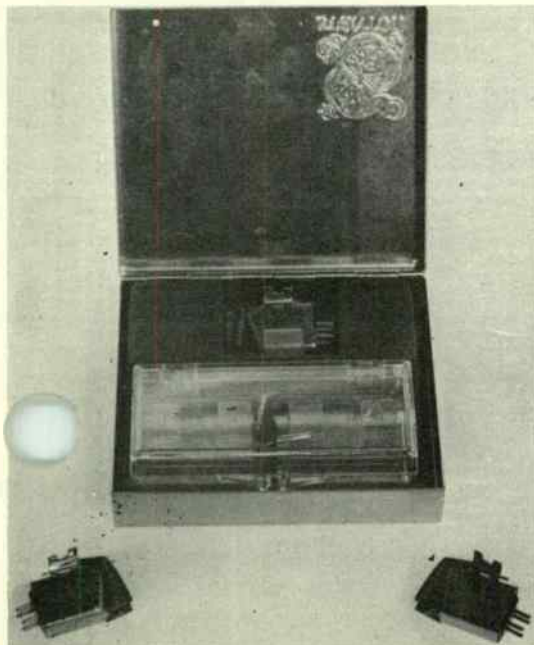
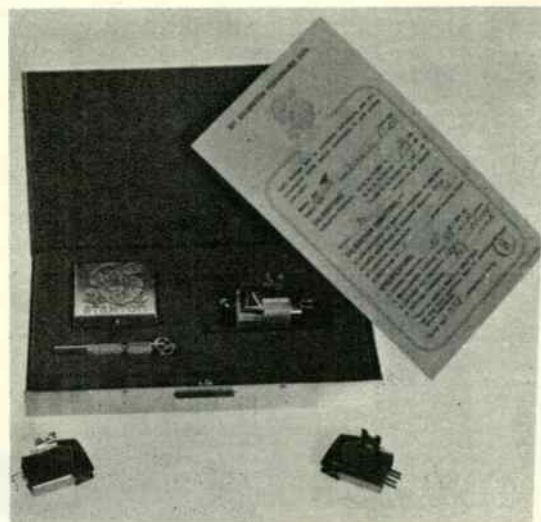


(2 TO 5 GRAMS)

- 500A-CARTRIDGE WITH STYLI.....\$16.50
- D5107A-REPLACEMENT STYLI.....\$ 7.20

(3 TO 7 GRAMS)

- 500AL-CARTRIDGE WITH STYLI.....\$16.50
- D5107AL-REPLACEMENT STYLI.....\$ 7.20



"DISCO DUTY"

(2 TO 5 GRAMS)

- 680EL-CARTRIDGE WITH STYLI.....\$47.00

\*ALL 680 EL CARTRIDGES COME COMPLETE WITH ONE EXTRA SPARE STYLI.

- D6800EL-REPLACEMENT STYLI.....\$18.00



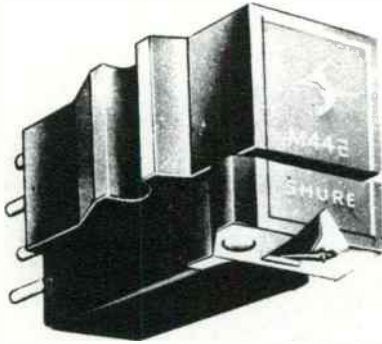
# PHONO CARTRIDGES AND STYLUS



stereo dynetic® cartridges

YOUR CHOICE

**M44 SERIES  
PHONO CARTRIDGES—  
A BROADCAST STANDARD**



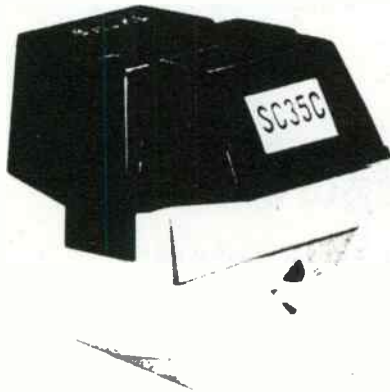
**M44 SERIES CARTRIDGES**

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size	Recommended Applications
M44-7	N44-7	Medium 1½-3 grams	Spherical	.0007"	All 33½ & 45 rpm Records
M44C	N44C	Heavy 3-5 grams	Spherical	.0007"	All 33½ & 45 rpm Records
M44E	N44E	Medium 1¾-4 grams	Biradial (Elliptical)	.0004" x .0007"	All 33½ & 45 rpm Records
	N44-3	Medium 1½-3 grams	Spherical	.0025"	78 rpm Records

**Cartridge with Styli \$25.00**

**Replacement Styli \$12.00**

**MODEL SC35C  
PROFESSIONAL  
STUDIO PHONO  
CARTRIDGE**

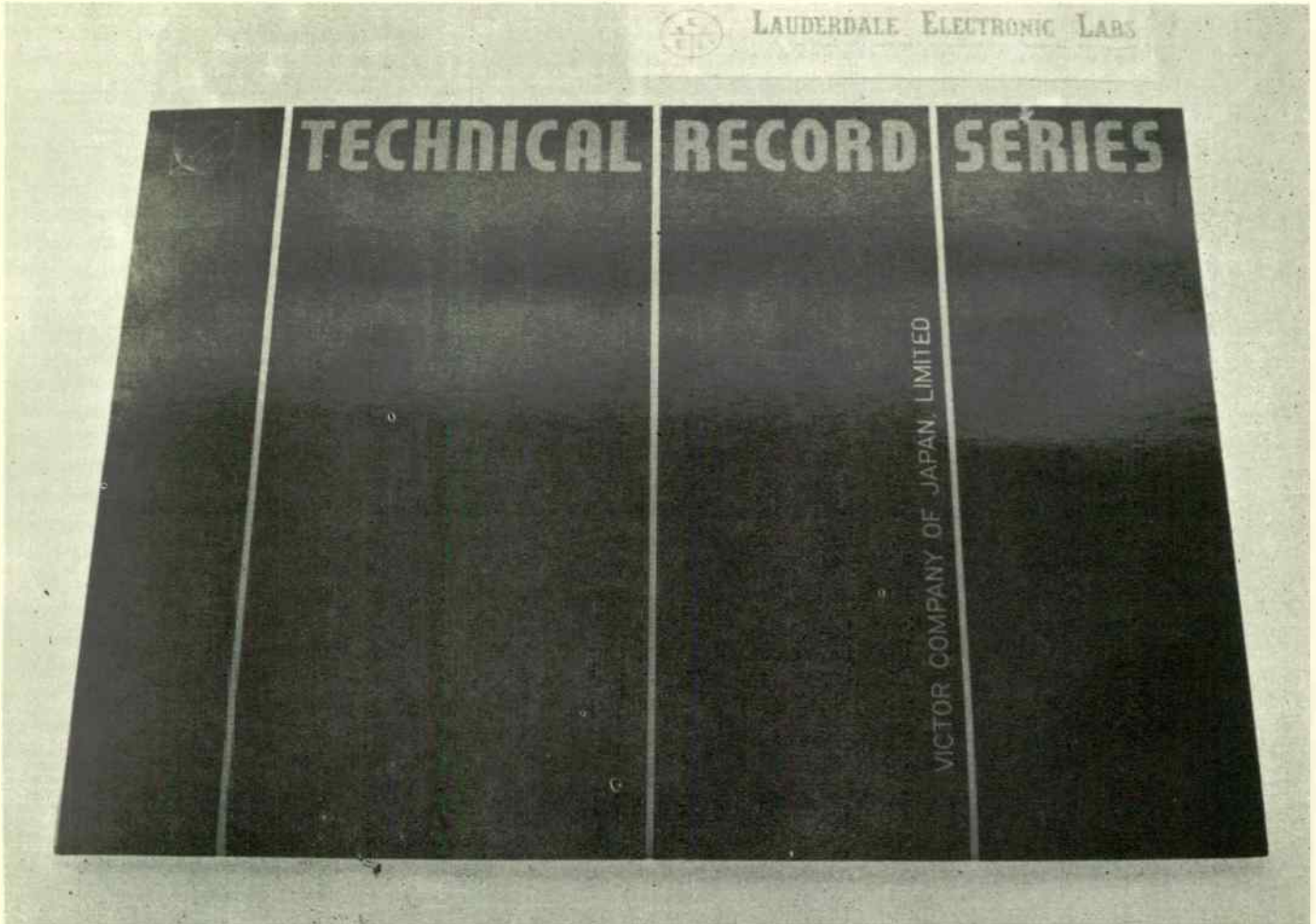


**SC35C Cartridge with Styli \$26.00**

**SS35C Replacement Styli \$ 8.60**

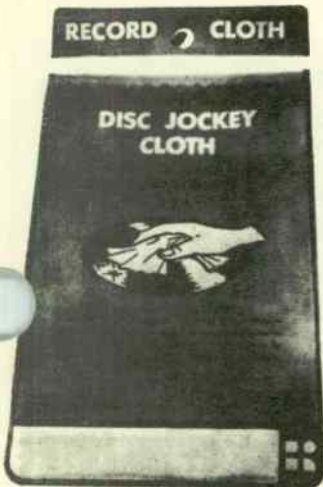
# TEST RECORDS

Frequency Response Test spot-stereo TRS-1002



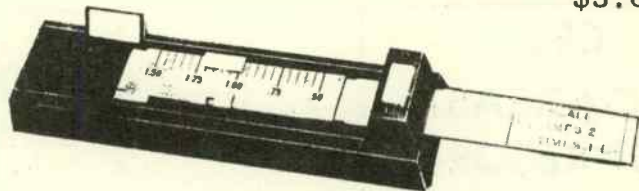
L.E.L. JVC

BTS-100.....\$12.00

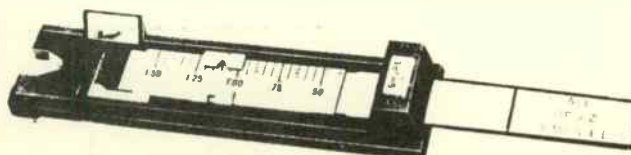


JOCKEY CLOTHS  
SILICONE TREATED

PG-1 \$ .80



ROBINS.....#R41073  
STYLUS FORCE GAUGE  
\$3.60



SHURE.....SFG-2  
STYLUS FORCE GAUGE

\$5.95

# Technical Series

PROFESSIONAL TEST RECORDS



**CBS**  
**BROADCAST**  
**TEST RECORD**  
***LATEST SERIES***  
**\$18.00**

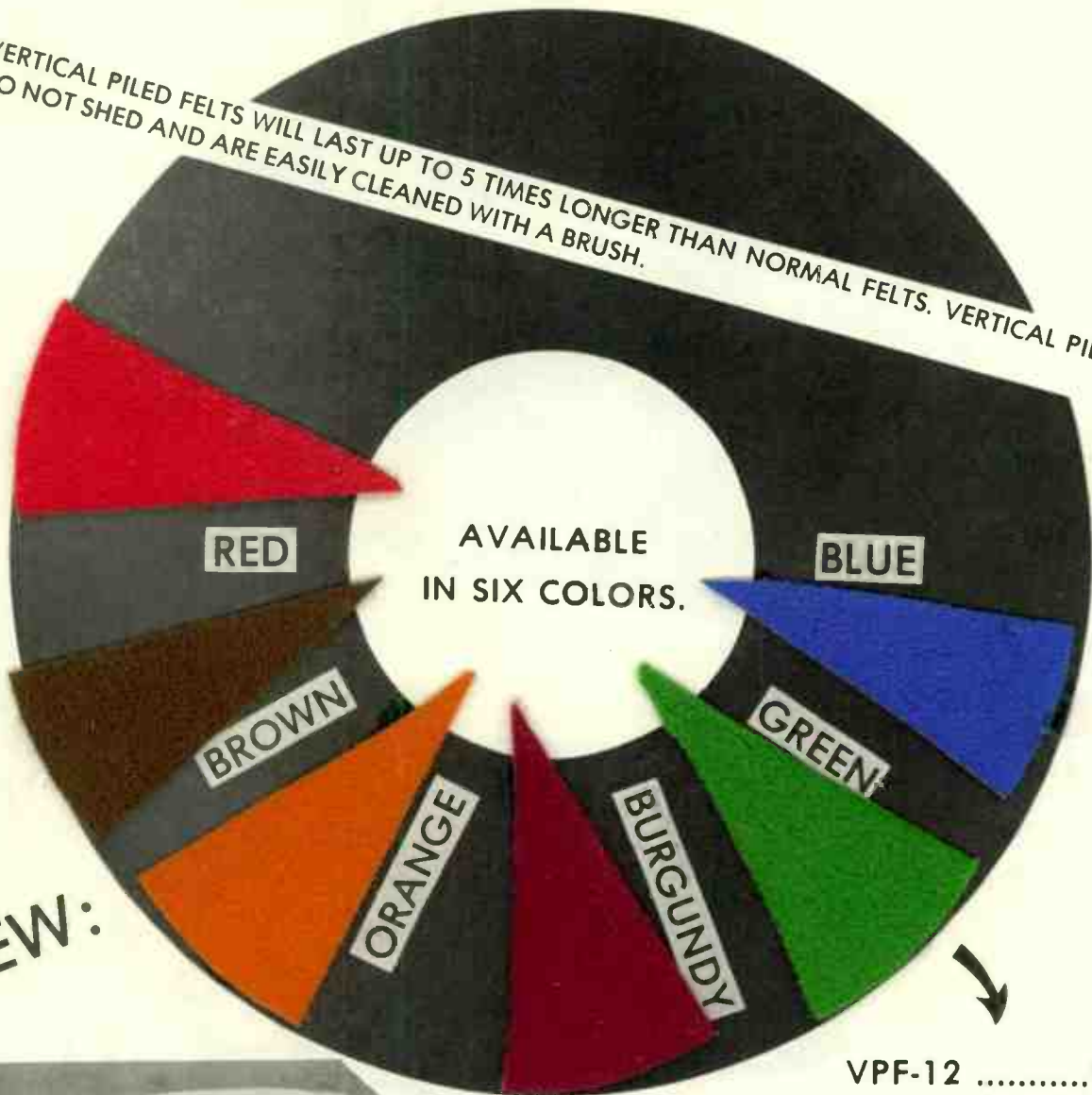
**OTHER CBS TEST RECORDS**

STEREO FREQUENCY TEST RECORD	\$12.50
PICKUP RESPONSE TEST RECORD	\$18.00
RIAA FREQ. RESPONSE TEST RECORD	\$18.00
RIAA PINK NOISE TEST RECORD	\$18.00



# TURNTABLE FELT

VERTICAL PILED FELTS WILL LAST UP TO 5 TIMES LONGER THAN NORMAL FELTS. VERTICAL PILED FELTS DO NOT SHED AND ARE EASILY CLEANED WITH A BRUSH.



NEW:

VPF-12 .....\$4.87



## TURNTABLE FELT ADHESIVE

A CONVENIENT WAY OF APPLYING ADHESIVE TO FELT. ENOUGH TO APPLY UP TO FOUR FELTS.

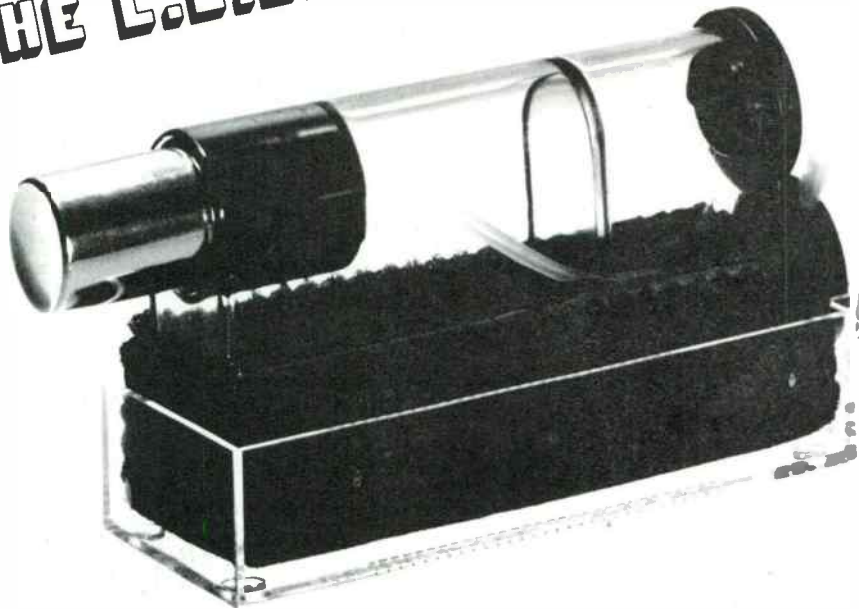
QC-201-A..... \$2.19

## TURNTABLE FELT REMOVER

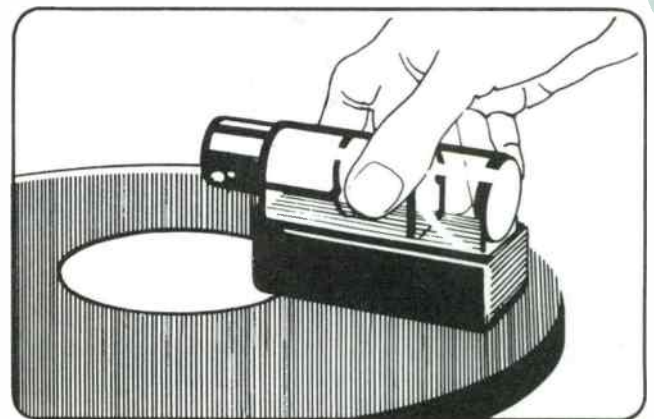
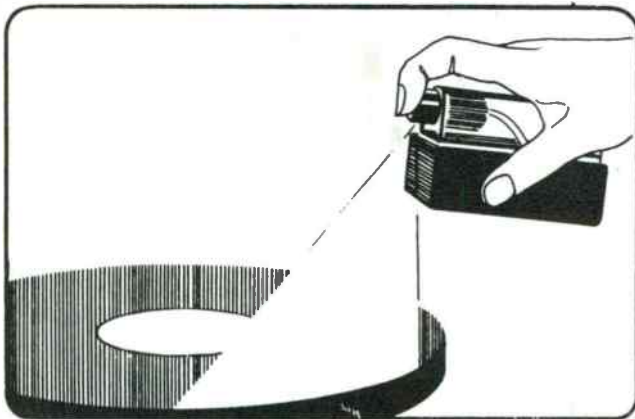
JUST SPRAY REMOVER TO TOP SURFACE OF FELT ALLOW 30 SECONDS TO PENETRATE AND REMOVE OLD FELT.

QC-201-B .....\$1.79

# THE L.E.L. ION CHASER



THE WAY TO KEEP THE GOOD SOUND OF NEW RECORDS.....



IMPROVE THE LIFE AND SOUND OF YOUR RECORDS BY KEEPING THEM CLEAN AND STATIC FREE. IT IS NOT ENOUGH TO CLEAN THE SURFACE. IF YOU DO NOT NEUTRALIZE THE STATIC CHARGE, AS SOON AS YOU FINISH CLEANING, THE DISC STARTS TO ATTRACT EVERY BIT OF DUST THROUGHOUT THE STATION.

BY USING THE L. E. L. ION CHASER WITH L. E. L. RECORD CLEANING FLUID, THE DISC IS DE-IONIZED, ALL STATIC IS REMOVED AND IT IS CLEANED — REALLY CLEANED — IN ONE FAST OPERATION. IT WILL CUT THROUGH THE DRIED OIL OF OLD FINGER PRINTS OR THE REMAINS OF THAT SPILLED CUP OF COFFEE AND STILL NOT HARM THE VINYL SURFACE!

ALSO INCLUDED FREE IS A SMALL BRUSH DESIGNED ESPECIALLY TO REMOVE GRIME BUILDUP OFF THE STYLUS TIP WITHOUT BENDING IT.

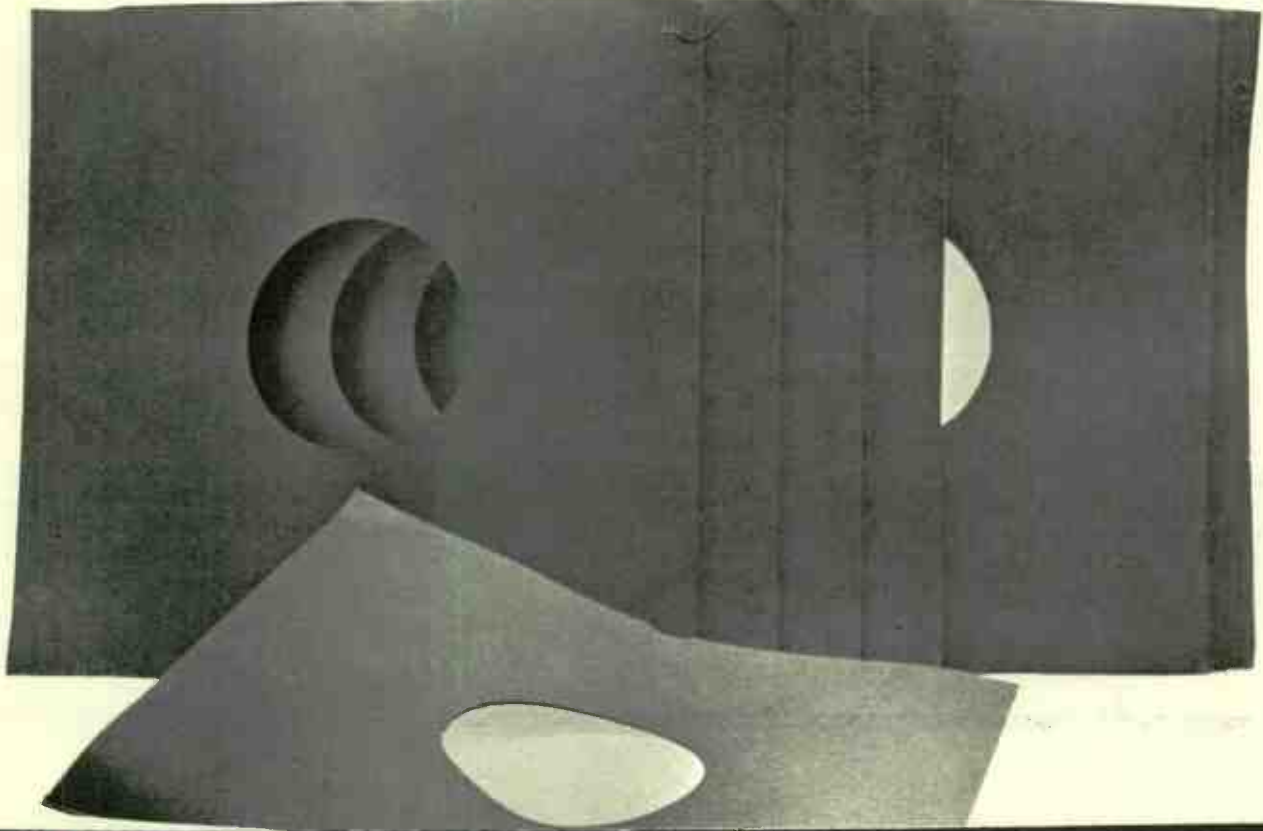
IC-22 L.E.L. ION CHASER.....\$12.40

RC-4 4-OZ. L.E.L. RECORD CLEANING FLUID ..... \$1.50

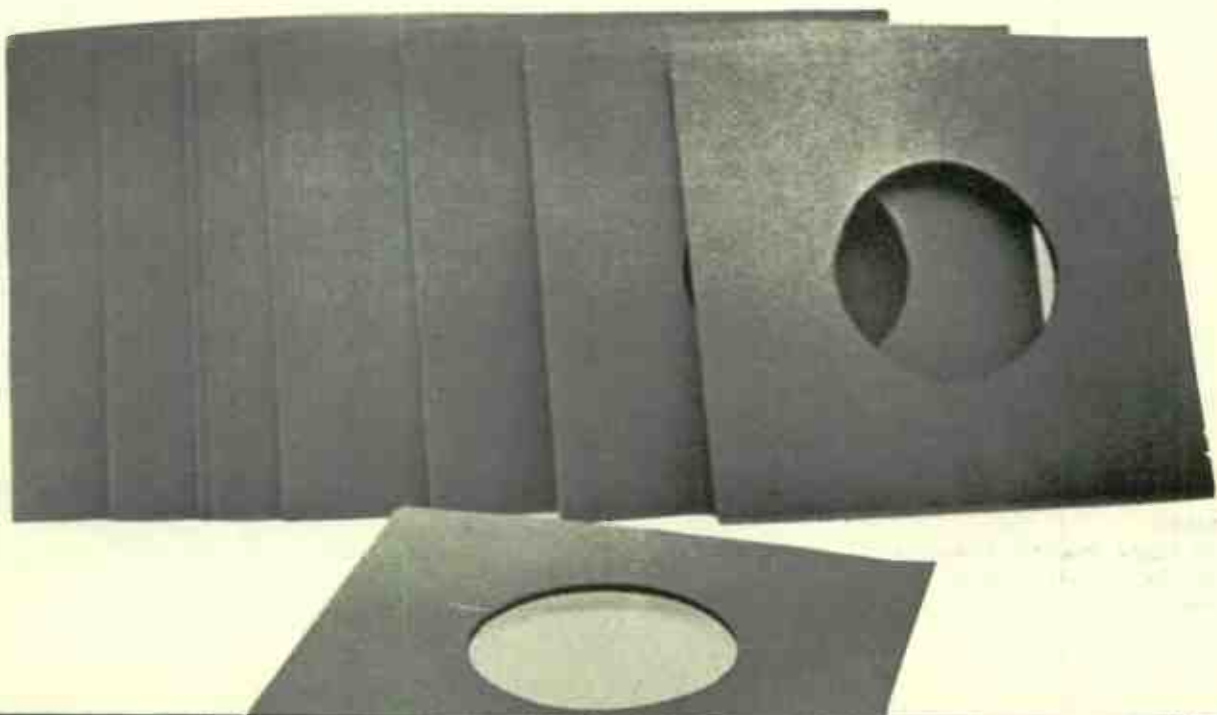
RC-32 QT. L.E.L. RECORD CLEANING FLUID ..... \$6.78

# RECORD COVERS

" HEAVY DUTY GREEN RECORD SHUCKS "

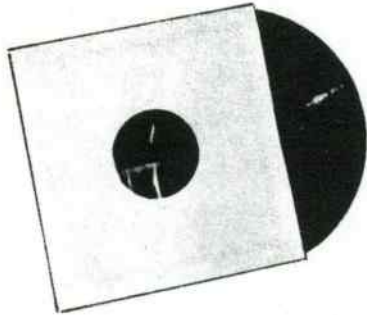


#RS-33.....HEAVY DUTY RECORD COVER FOR 33 1/3 rpm...\$15.00/100



#RS-45.....HEAVY DUTY RECORD COVER FOR 45 rpm.....\$9.00/100

# RECORD AND ALBUM COVERS



### POLY-LINED PROTECTIVE RECORD SLEEVES

Package of 12 decorative paper sleeves featuring a protective poly-lining for 12" records. Has clear poly windows. Seals out dust and grime.  
R41192 (PRS-12) ..... \$1.99



### ALBUM COVERS HEAVY DUTY

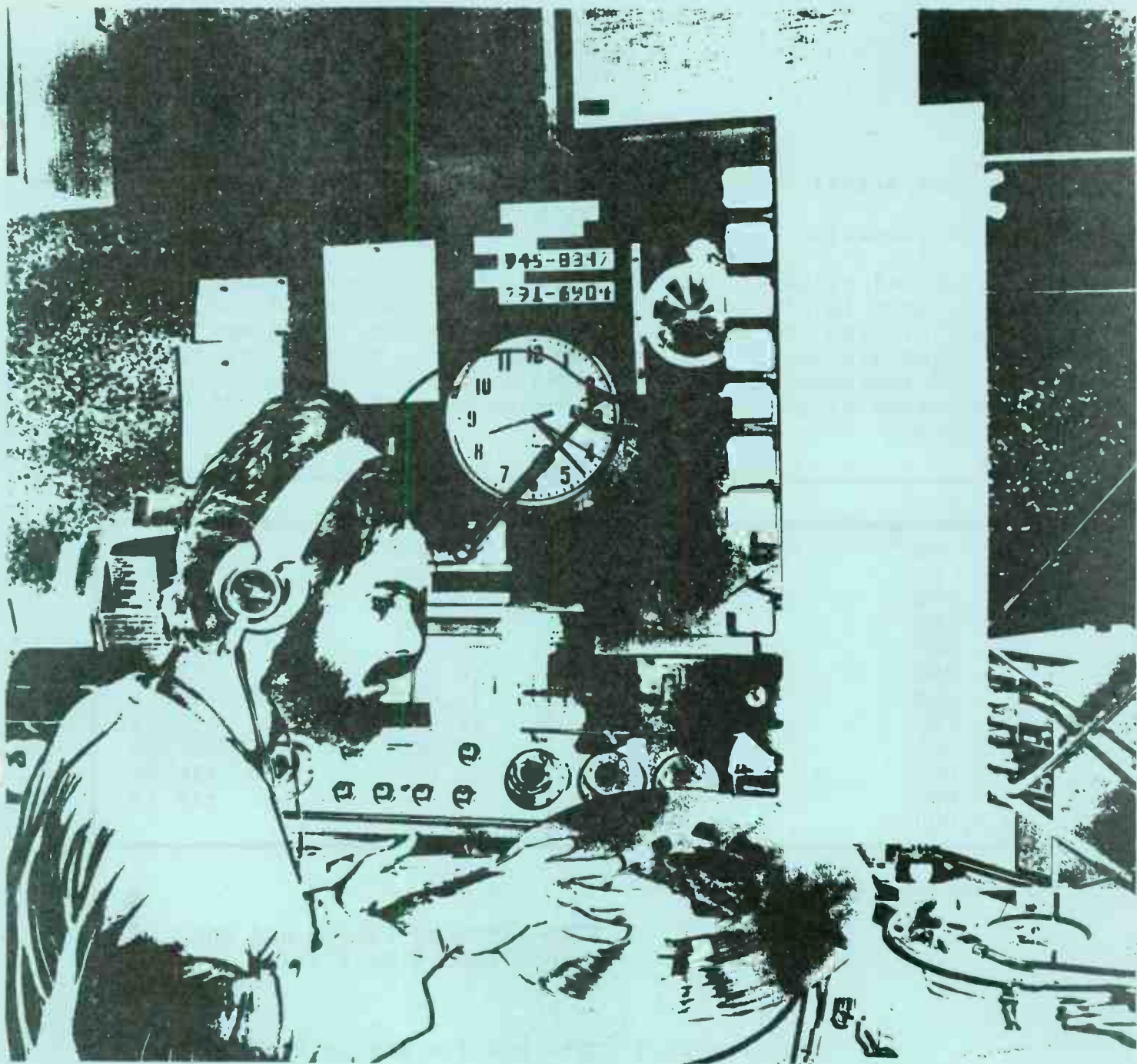
Package of 12 heavy-weight plastic Album Covers. Accommodates standard 12" record albums.  
R41191 (PJ-25) ..... \$1.69

# NEW!



### RECORD COVERS

Round bottom Plastic Protective Covers for 12" records. Prevents scratching, seals out dust and moisture. Package of 15.  
R41190 (PJ-18) ..... \$1.25



**CALL L.E.L. FOR ANY:**

**AMPLIFIERS  
HEADPHONES  
STUDIO LIGHTING**

**(305) 764-7755**

**(305) 764-7756**

## PHONO PREAMP CURVE

What are the actual values in decibels of equalization used for the RIAA standard reproducing characteristic?

The actual values in decibels are tabulated below and are values from which the curve is plotted. The recording characteristic is the inverse of the curve. The original standard specified the frequency response of the recording system, but later it was found to be more practical to specify the reproducing characteristic. The characteristics of this curve may be obtained by the use of three networks having 3180, 318 and 75 micro-seconds each.

Hz	dB	Hz	dB
30	-18.61	5,000	+8.23
50	-16.96	6,000	+9.62
70	-15.31	7,000	+10.85
100	-13.11	8,000	+11.91
200	-8.22	9,000	+12.88
300	-5.53	10,000	+13.75
400	-3.81	11,000	+14.55
700	-1.23	12,000	+15.28
1,000	0.00*	13,000	+15.95
2,000	+2.61	14,000	+16.64
3,000	+4.76	15,000	+17.17
4,000	+6.64		

\*Reference frequency.

Feed in these levels and the  
output should be flat.



"NAB PLAYBACK CURVE FOR 7.5 AND 15 ips"

Frequency	Response	Frequency	Response
20 Hz	-8.6 dB	1 kHz	+0.4 dB
25	7.0	2	1.45
30	5.8	4	4.1
50	3.0	5	5.4
70	1.8	8	8.6
100	1.0	10	10.35
200	0.2	12	11.8
400	+0	15	13.6
600	-0.1	17	14.7
		20	+16.1

# HEADPHONES



**KOSS®**

## PRO/4AA



PRO/4AA.....\$59.00

\*\*\*\*\*

### PRO 600AA

Same as above except nominally 600 ohm voice coil impedance for matching audio transmission lines 600 ohm characteristic impedance.

PRO/6AA.....\$67.00



HEADPHONES

# ***BROADCAST SPECIAL***



## **L.E.L. HP-202**

**INTRODUCTORY PRICE \$ 12.40**

**COMPLETE WITH 6 FT. CORD AND  
STANDARD 1/4" STEREO PHONE PLUG.**

**EARPIECES ARE ADJUSTABLE AND ARE SUPPLIED  
WITH REMOVABLE VINYL CUSHIONS.**

***SUPER COMFORTABLE TO WEAR !***



# HEADPHONES



DT 302

**NEW!**

**\$29.95**

Beyer turns back the clock! Now you can buy again a classic European headphone for \$29.95. The lightest yet, 2.3 oz., the DT302 features 20 — 20000 Hz frequency response and outstanding high level capability. Designed to suit all impedances. **\$29.95**

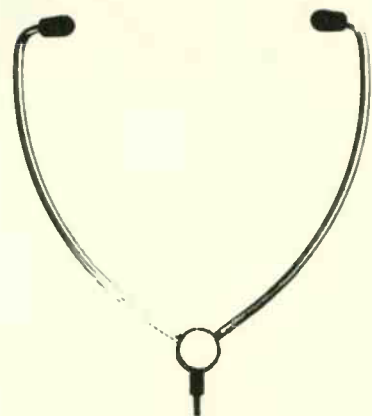
**TELEX.**



**TWINSET®**  
AVAILABLE IN THE  
FOLLOWING IMPEDANCE

**HTW-2 500 OHM \$17.15**

**HTX-2 1000 OHM \$17.15**



**MONOSET®**  
AVAILABLE IN THE  
FOLLOWING IMPEDANCE

**HMV-2 125 OHM \$10.75**

**HMY-2 2000 OHM \$10.75**

# HEADPHONES



## K- 140



K-140.....SELF ADJUSTING HEADPHONE.....\$34.50



K-2000.....SINGLE EAR HEADPHONE.....\$7.95

K-2000

HEADPHONES

93

# ***BROADCAST SPECIAL***



**L.E.L. HP- 404**

**▶ INTRODUCTORY PRICE \$10.50 ◀**

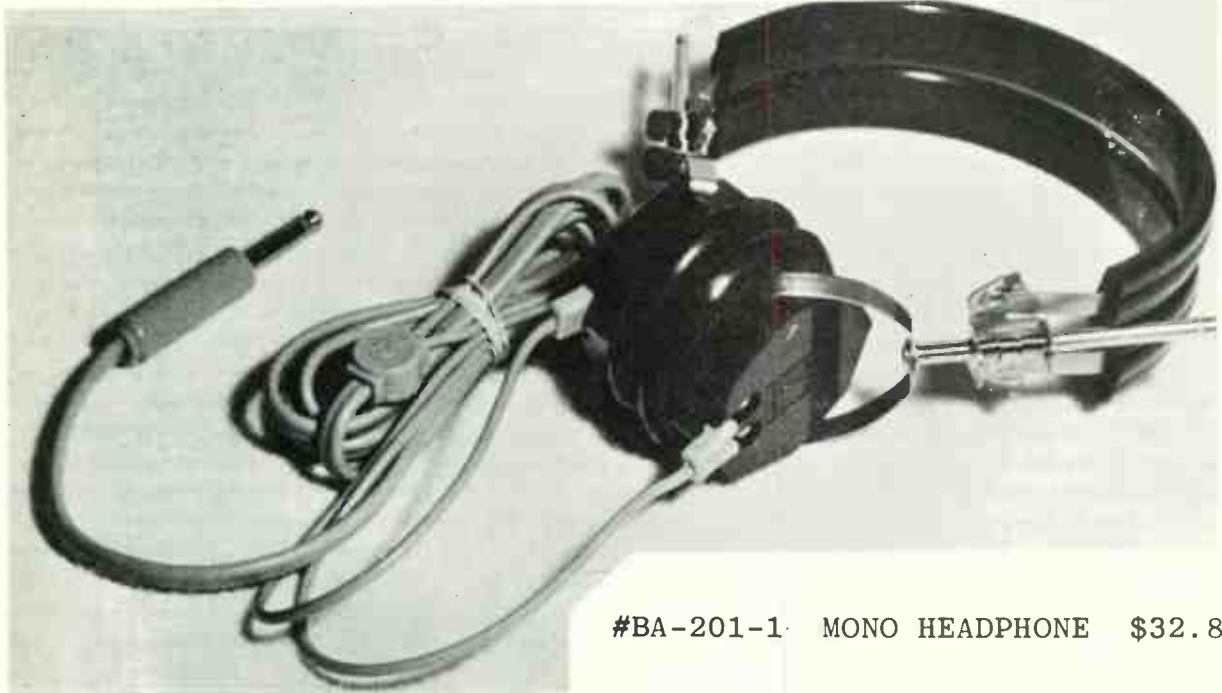
**COMPLETE WITH 6 FT. CORD AND  
STANDARD ¼" STEREO PHONE PLUG.**



# HEADPHONES

BRUSH-CLEVITE SUPER HIGH IMPEDANCE HEADPHONES :

BRUSH-CLEVITE DOUBLE ELEMENT HEADPHONE



#BA-201-1 MONO HEADPHONE \$32.85

#BA-201-2 STEREO HEADPHONE \$32.85

## REPLACEMENT PARTS

#R-201-MC MONO CORD \$6.75

#R-201-SC STEREO CORD \$6.75

#PN-2020 ELEMENT \$10.55

---

## BRUSH-CLEVITE SINGLE ELEMENT HEADPHONE

#BA-201 SINGLE PHONE \$25.15



**LIGHTWEIGHT !**

**COMPACT !**

# HEADPHONES AND HEADSETS

95

**SHURE** MODEL SM12 • HEAD-WORN MICROPHONE WITH RECEIVER

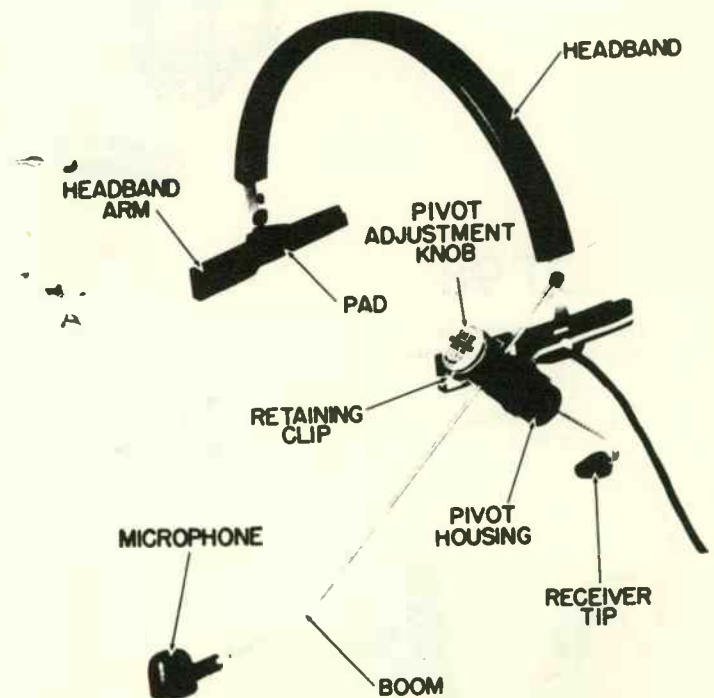


## Model SM12 Features:

- Close-talk operation and unidirectional polar pattern for effective noise reduction
- Smooth natural voice frequency response
- Locking adjustment knob permits boom to pivot 20° in any direction
- Boom length adjustment through 3½ inch range
- Receiver ear tube adjustable through 55° arc
- Light weight plus padded headband eliminate user fatigue
- Does not interfere with eyeglasses
- Ruggedly constructed of stainless steel, aluminum and high-impact thermoplastic
- Convenient, secure clips attach connectors to belt or clothing

SM-12  
MICROPHONE WITH RECEIVER \$96.00

SM-10  
MICROPHONE --NO RECEIVER \$72.00





# HEADSETS



CS-85

\$93.35

**TELEX**

CAMERAMAN'S SERIES HEADSETS



CS-81

\$63.75



\$128.00

SPORTSCASTER HEADSET  
MODEL CS-90

**DT 98**

Dynamic Headphone -  
Microphone Combination



\$80.00

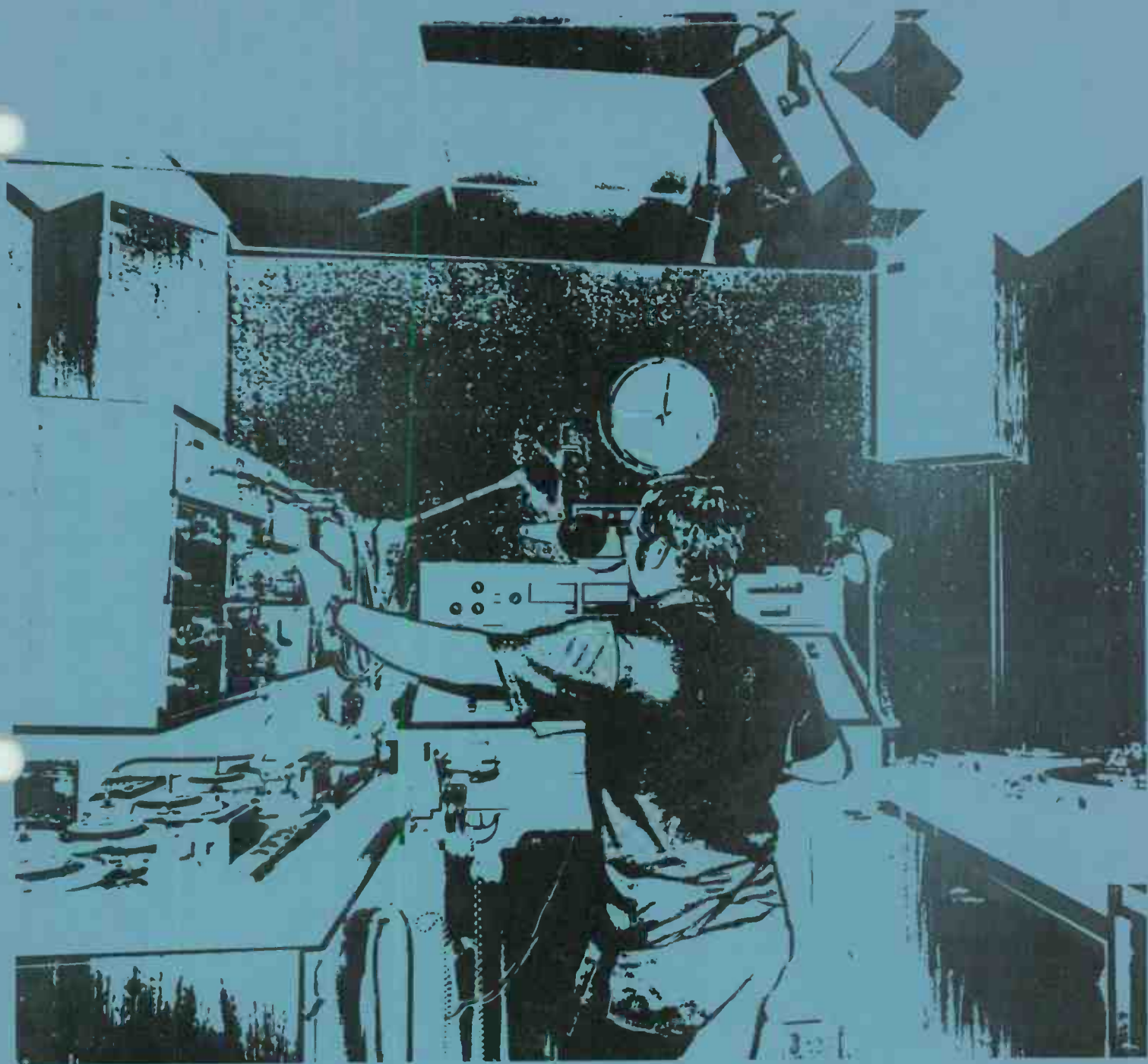
**DT 109**

Dynamic Headphone -  
Microphone Combination



\$96.00

**BEYER**



**CALL L.E.L. FOR ANY:**

**REVOX PARTS**

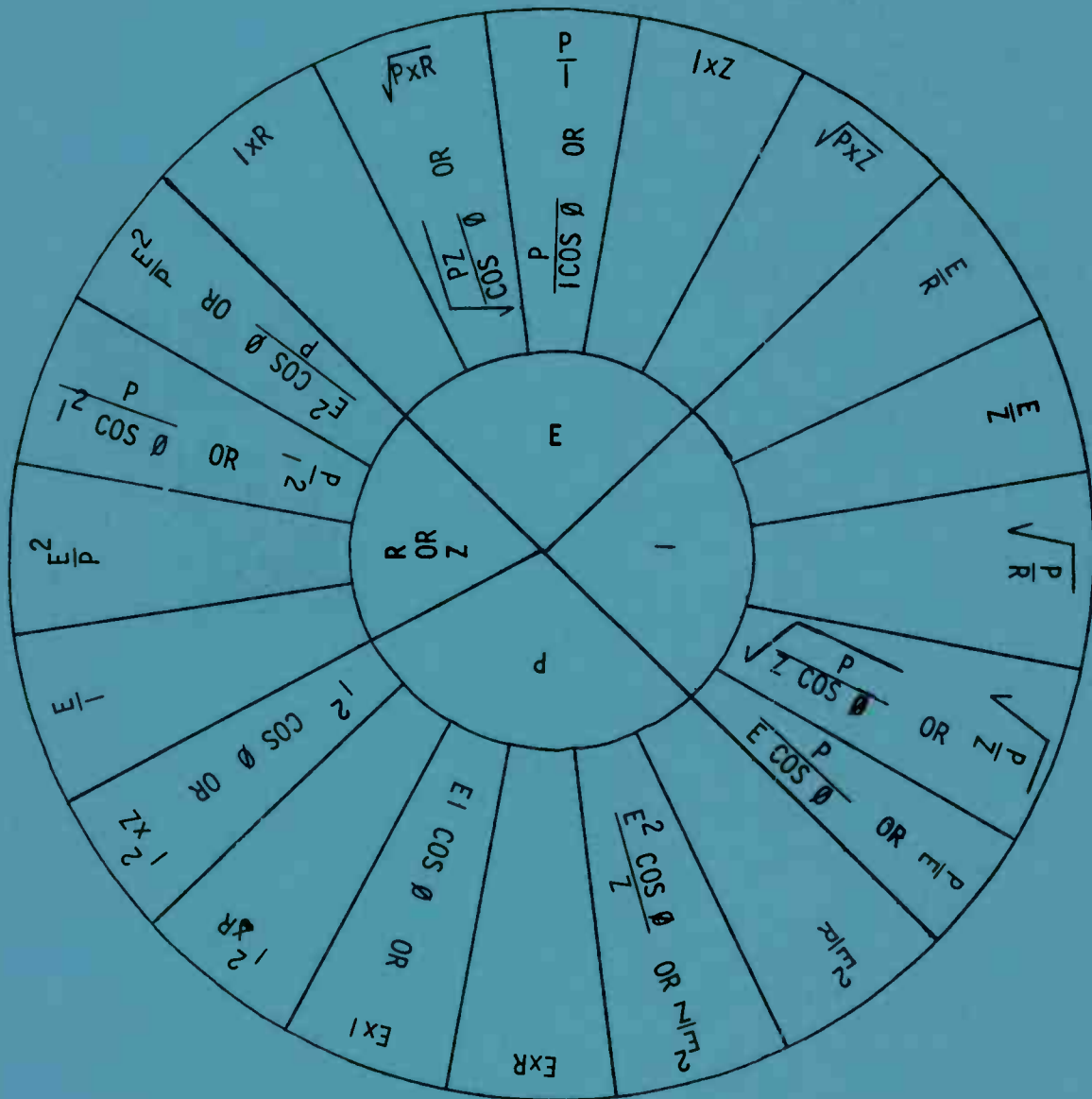
**VIKING PARTS**

**MAGNECORD PARTS**

**(305) 764-7755**

**(305) 764-7756**

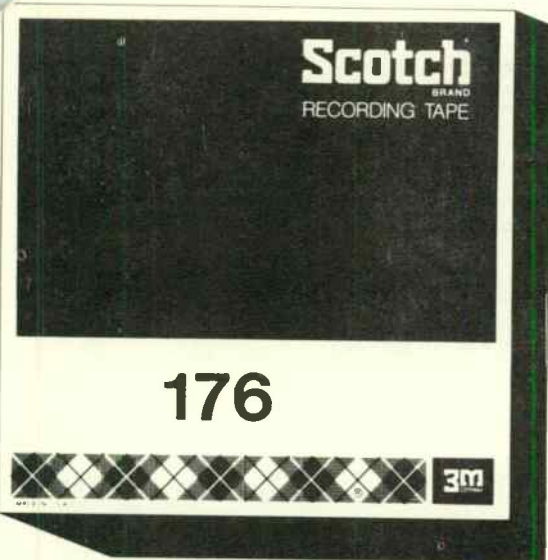
# OHMS LAW



# OHMS LAW



# SCOTCH BROADCAST TAPE

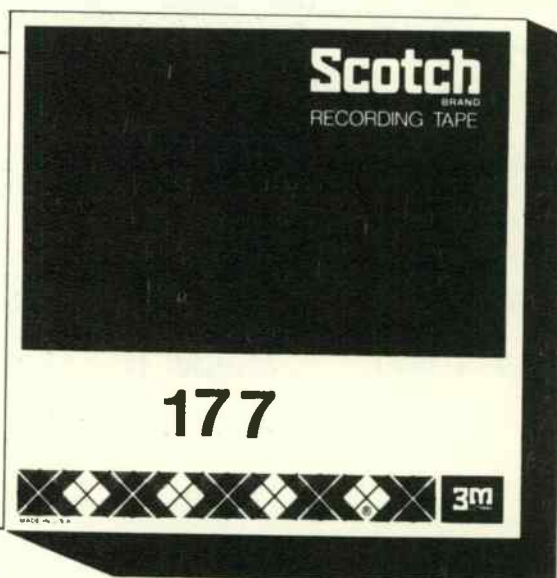


## 176 LOW NOISE

CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
176- $\frac{1}{4}$ -1200-PRB	7" BULK PAK	\$4.05	\$3.08	\$2.86
176- $\frac{1}{4}$ -2500-HPB	BULK HUB	\$6.29	\$4.75	\$4.48
176- $\frac{1}{4}$ -2500-RO	10 $\frac{1}{2}$ " METAL	\$10/62	\$9.47	\$8.53

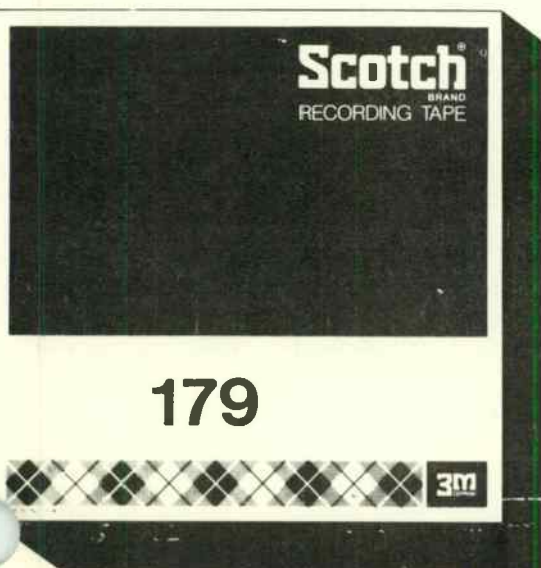
## 177 LOW NOISE

CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
177- $\frac{1}{4}$ -1800-PRB	7" BULK PAK	\$5.93	\$4.48	\$4.20
177- $\frac{1}{4}$ -3600-HPB	BULK HUB	\$7.72	\$5.82	\$5.45
177- $\frac{1}{4}$ -3600-RO	10 $\frac{1}{2}$ " METAL	\$14.03	\$12.57	\$11.32



## Triple Play

## 179 LOW NOISE



CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
179- $\frac{1}{4}$ -3600	7" PLASTIC	\$12.75	\$10.43	\$9.56

\*\*\*\*\*  
ALL MATERIAL IS INDIVIDUALLY BOXED UNLESS DESCRIBED AS HPB OR PRB



# SCOTCH BROADCAST TAPE



## MUSIC MASTERING 206 HIGH OUTPUT LOW NOISE

CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
206- $\frac{1}{4}$ -1200	7" PLASTIC	\$6.05	\$4.84	\$4.36
206- $\frac{1}{4}$ -2500-HPB	BULK HUB	\$9.49	\$7.18	\$6.75
206- $\frac{1}{4}$ -2500-RO	10 $\frac{1}{2}$ " METAL	\$13.75	\$11.92	\$10.77

## MUSIC MASTERING 207 HIGH OUTPUT LOW NOISE

CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
207- $\frac{1}{4}$ -1700	7" PLASTIC	\$7.64	\$6.40	\$5.78
207- $\frac{1}{4}$ -3600-HPB	BULK HUB	\$15.07	\$11.38	\$10.64
207- $\frac{1}{4}$ -3600-RO	10 $\frac{1}{2}$ " METAL	\$18.69	\$16.80	\$15.13

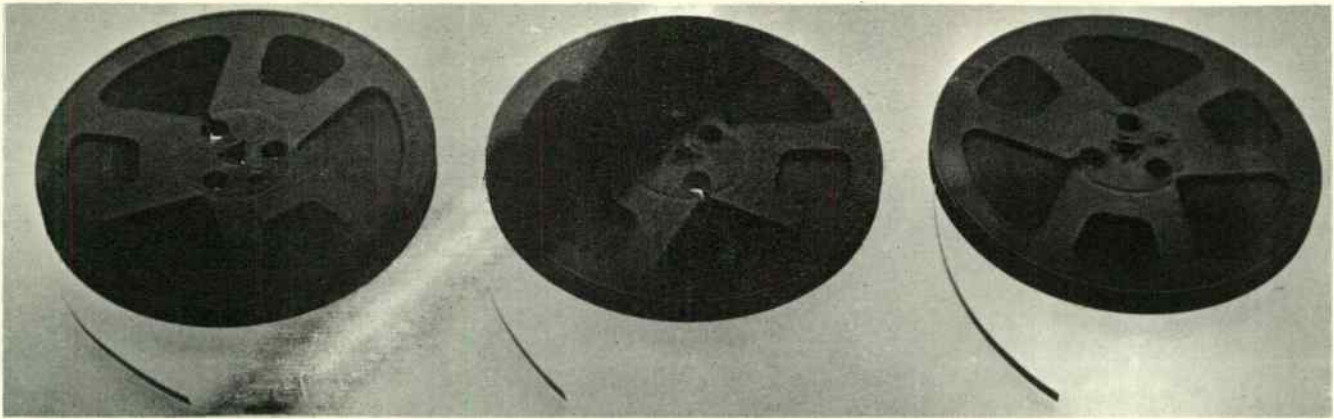


## MUSIC MASTERING 250 HIGH OUTPUT LOW NOISE

CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....		
		(1-11)	(12-47)	(48-143)
250- $\frac{1}{4}$ -1200	7" PLASTIC	\$5.99	\$4.68	\$4.29
250- $\frac{1}{4}$ -2500-HPB	BULK HUB	\$9.75	\$7.49	\$7.15
250- $\frac{1}{4}$ -2500-RO	10 $\frac{1}{2}$ " METAL	\$14.50	\$12.50	\$11.2

ALL MATERIAL IS INDIVIDUALLY BOXED UNLESS DESCRIBED AS HPB OR PRB

# LOGGING AND DUBBING TAPE

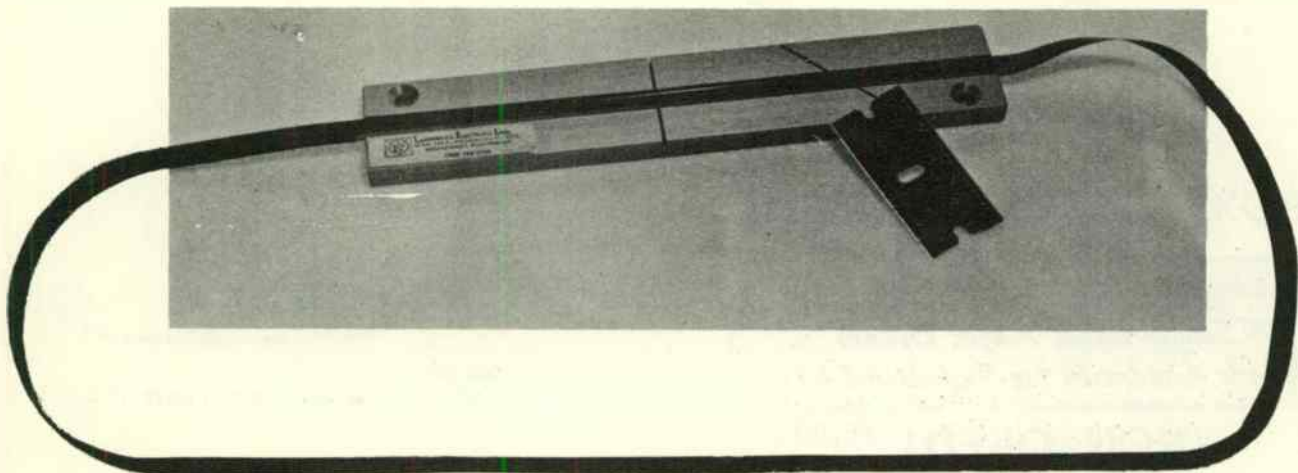


TAPE THICKNESS	CATALOG NUMBER	TAPE LENGTH	BROADCAST NET	
			(1-99)	(100 &)
1½ mil	DT-¼-1200	1200 FT.	\$1.59	\$1.19
1 mil	DT-¼-1800	1800 FT.	\$1.99	\$1.59
½ mil	DT-¼-2400	2400 FT.	\$3.69	\$2.99

\* ALL MATERIAL IS ON 7" PLASTIC REEL IN WHITE BOX.

---

## SPLICING BLOCKS



#SB-3.....PROFESSIONAL ¼" SPLICING BLOCK.....\$10.50

# ACCESSORIES

## LEADER TAPE & SPLICING TAPE



**NO. 41**

STANDARD

CATALOG NUMBER	TAPE SIZE	BROADCAST NET	
		(1-11)	(12+)
41-7/32-66	7/32" X 66'	\$1.95	\$1.75
41-1/2-66	1/2" X 66'	\$2.05	\$1.85

CATALOG NUMBER	TAPE SIZE	BROADCAST NET	
		(1-11)	(12+)
620-7/32-66	7/32" X 66'	\$3.49	\$2.99
620-1/2-66	1/2" X 66'	\$5.19	\$4.19



**NO. 620**

MASTERING POLYESTER



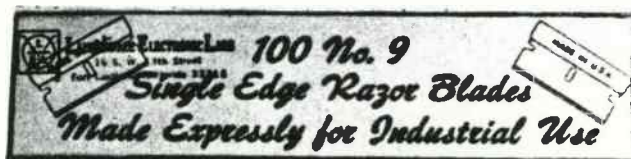
**20**

**23w**

LEADER TAPE

CATALOG NUMBER	TAPE SIZE	BROADCAST NET	
		(1-11)	(12+)
20-1/4-900	1/4" X 900' PAPER	\$3.80	\$2.90
23W-1/4-1000	1/4" X 1000' PLASTIC	\$6.49	\$5.40

## 1 BOX ( 100 ) RAZOR BLADES



(NON-OILED) \$5.60



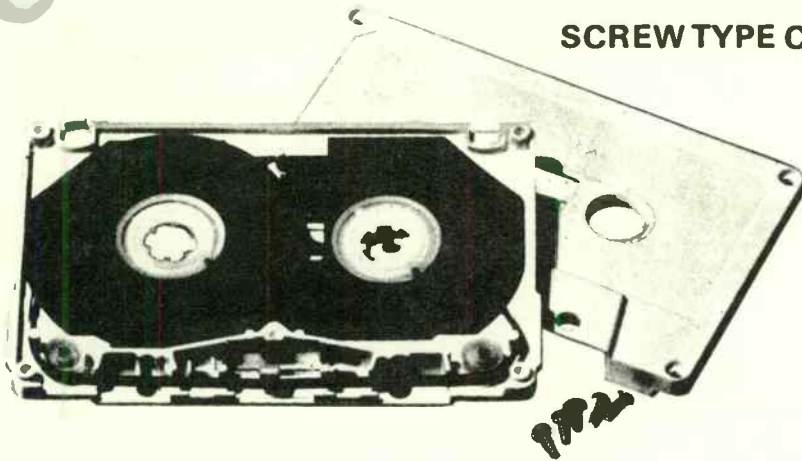
QM-506 INSPECTION MIRROR WITH LIGHT \$4.30

# PROFESSIONAL CASSETTES



L. E. L. PRO

## SCREW TYPE CASSETTE



### CASSETTE: Physical Properties

**Shell Assembly:** Five screws on PRO cassette series.

**Slip Sheets:** Die cut and formed flat for light internal drag. Special conductive material prevents static buildup and generation of debris.

**Pressure Pad:** Non-fatiguing beryllium copper spring with felt pad.

**Shield Plate:** Made of High Mu (Anti-Magnetic) permalloy material.

**Hub and Hub Tape Clamp:** Precision hubs guard against uneven winding of tape. Minimizing wow.

**Case Material:** Specially compounded polystyrene for high tensile strength and rigidity.

**Case Color:** White

**Corner Rollers:** Precision molded and flanged so that tape hugs center of roller.

**Corner Pins:** Rollers turn on large oversize stainless steel diameter pins machined to a micro-smooth finish (largest diameter in the industry). Reduces dynamic skew, flutter and wow.

CATALOG NUMBER	TAPE TIME	BROADCAST NET		
		(1-11)	(12-49)	(50+)
PRO-C-30	30 MIN.	\$1.59	\$1.19	\$1.09
PRO-C-45	45 MIN.	\$1.69	\$1.29	\$1.19
PRO-C-60	60 MIN.	\$1.89	\$1.49	\$1.29
PRO-C-90	90 MIN.	\$2.49	\$2.09	\$1.79
PRO-C-120	120 MIN.	\$3.59	\$2.99	\$2.49

PRO series cassette come complete with white labels and hinged storage box.

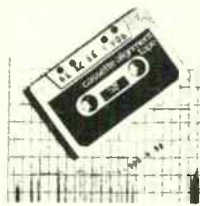
## ACCESSORIES



**QM-240 CASSETTE HEAD DEMAGNETIZER**

Unique product that removes residual magnetism from all cassette heads. Powerful enough to completely demagnetize without any possibility of creating permanent magnetism. Operates on 110-120 VAC, 50-60 Hz. and supplied with AC cord.

\$13.10



**AT-200 CASSETTE ALIGNMENT TAPE**

A splice-free, first generation master recording which provides zero reference, azimuth alignment and frequency response tests to DIN standards. Individual response graph supplied with each tape. Also includes 3,000 Hz. tone for speed and flutter test. For use with all track configurations.

\$25.90



**QM-140 CASSETTE HEAD CLEANER**

Features a special non-abrasive belt that safely removes accumulated oxide and dirt from magnetic heads in cassette recorders.

\$2.60

# SP SERIES CASSETTES

## SPECIAL PURPOSE CASSETTES

THE L.E.L. SP LINE OF COLOR CODED CASSETTES ARE MADE FOR THE BROADCAST SALES FORCE WHERE LONG PLAYING TIMES ARE NOT REQUIRED. THESE HIGHEST QUALITY SCOTCH LOADED CASSETTES WORK IN ANY STANDARD CASSETTE MACHINE.

\*\*\*\*\*ALL COME COMPLETE WITH INDIVIDUAL PLASTIC BOX AND WHITE LABEL\*\*\*\*\*



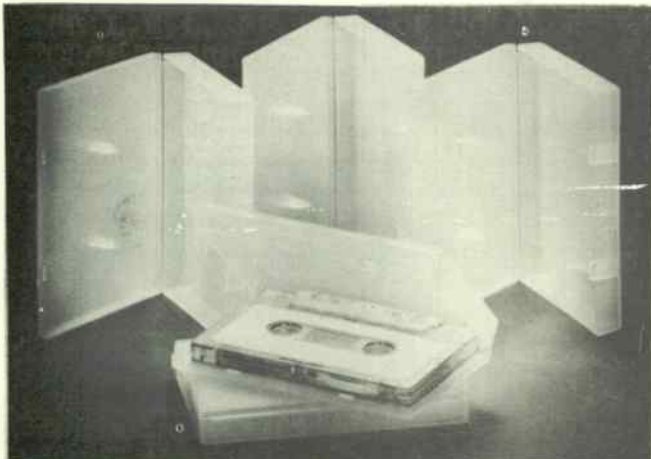
CATALOG NUMBER	COLOR	TAPE TIME	BROADCAST NET		
			(1-11)	(12-49)	(50+)
SP-C-3	RED	3 MIN.	\$.89	\$.85	\$.79

CATALOG NUMBER	COLOR	TAPE TIME	BROADCAST NET		
			(1-11)	(12-49)	(50+)
SP-C-5	BLUE	5 MIN.	\$.99	\$.95	\$.89



CATALOG NUMBER	COLOR	TAPE TIME	BROADCAST NET		
			(1-11)	(12-49)	(50+)
SP-C-10	GREEN	10 MIN.	\$1.09	\$1.05	\$.99

CATALOG NUMBER	COLOR	TAPE TIME	BROADCAST NET		
			(1-11)	(12-49)	(50+)
SP-C-15	YELLOW	15 MIN.	\$1.19	\$1.15	\$1.09



**CASSETTE STORAGE BOXES**  
#CSB-12 Pkg./12 \$2.40

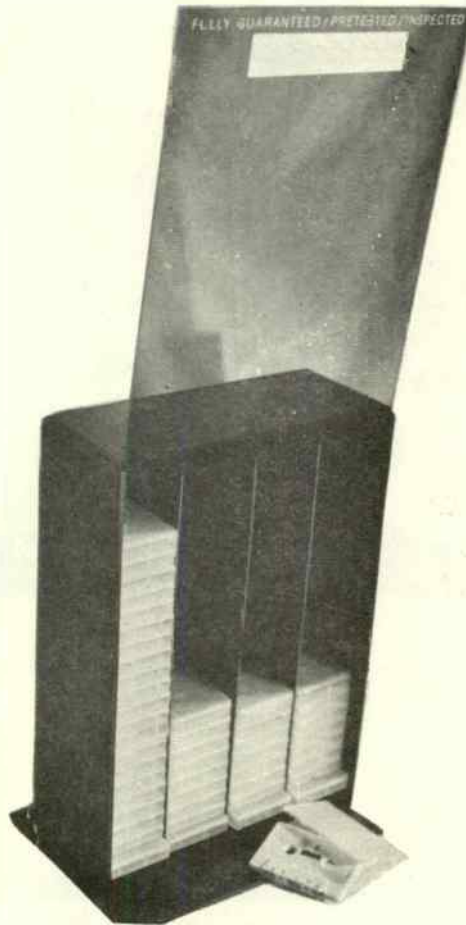


**CASSETTE LABELS**  
#CL-120 Pkg./120 \$2.20

# CASSETTE DISPENSERS



**NEW!**



HOLDS  
100  
CASSETTES

HOLDS  
100  
CASSETTES

WITH THE PURCHASE OF 100 L.E.L.  
SP OR PRO SERIES CASSETTES

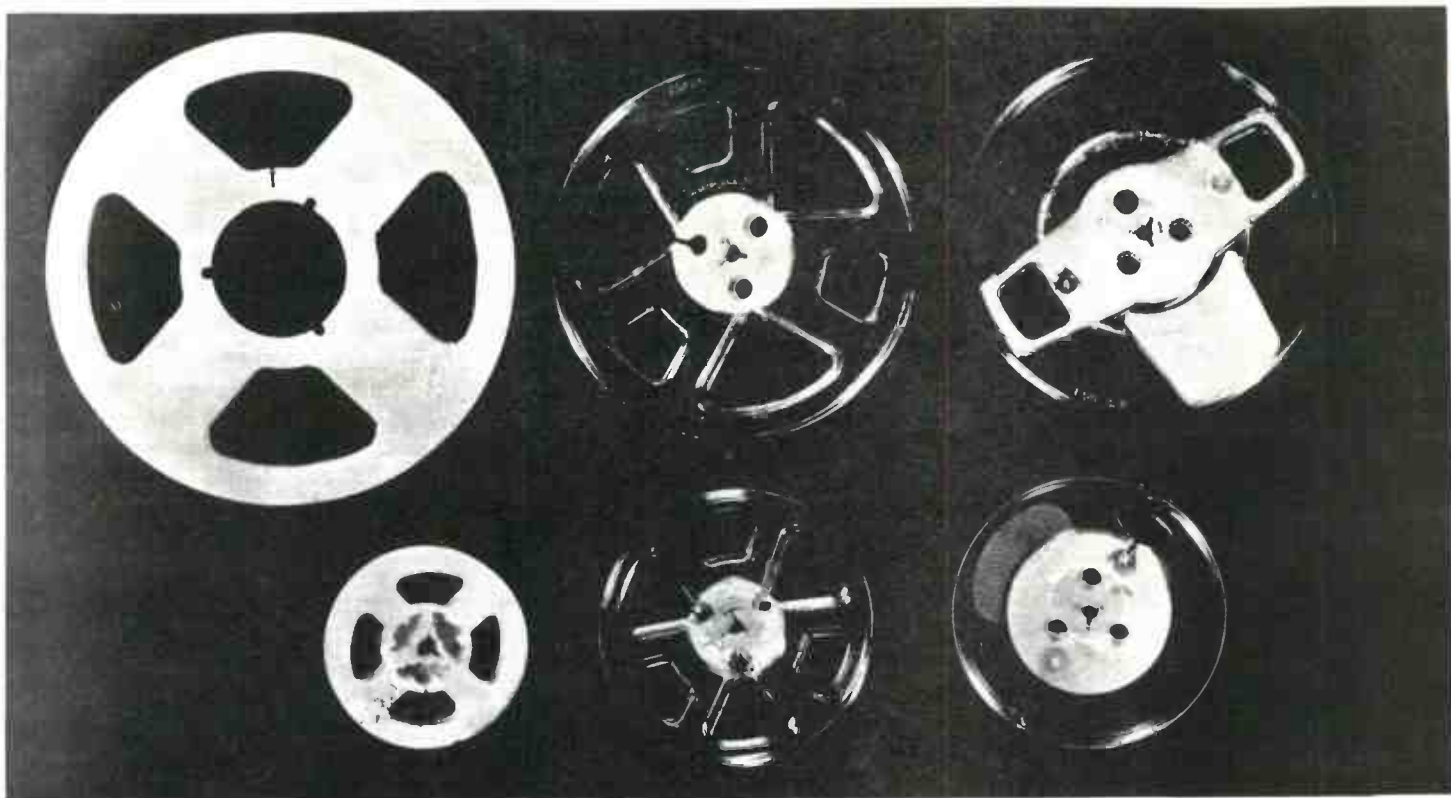
QUANTITIES ARE LIMITED!

#CD-100.....\$10.00

PURCHASED SEPARATELY

#CD-100.....\$26.80

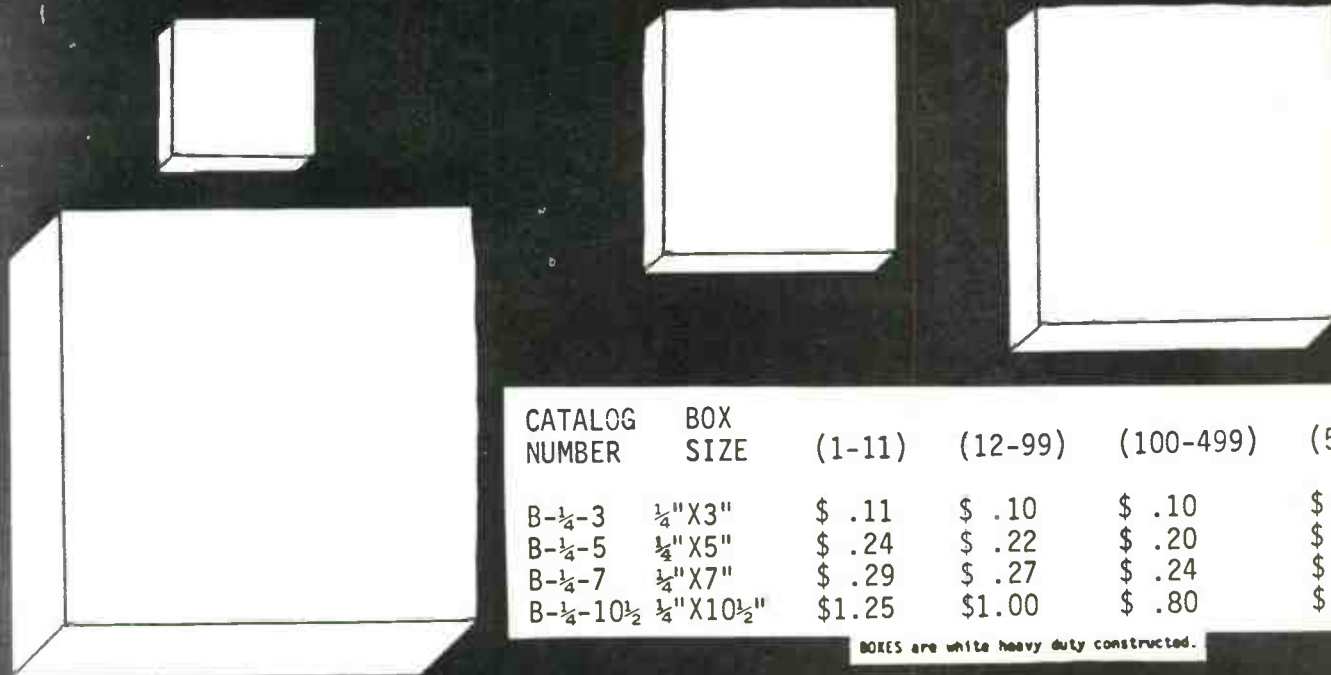
# PLASTIC REELS AND BOXES



CATALOG NUMBER	REEL SIZE	.....BROADCAST NET.....			
		(1-11)	(12-99)	(100-499)	(500+)
PR- $\frac{1}{4}$ -3	$\frac{1}{4}$ " X 3"	\$ .16	\$ .12	\$ .11	\$ .11
PR- $\frac{1}{4}$ -5	$\frac{1}{4}$ " X 5"	\$ .32	\$ .31	\$ .29	\$ .24
PR- $\frac{1}{4}$ -5-NAB	$\frac{1}{4}$ " X 5" NAB	\$ .44	\$ .39	\$ .30	\$ .30
PR- $\frac{1}{4}$ -7	$\frac{1}{4}$ " X 7"	\$ .44	\$ .39	\$ .34	\$ .30
PR- $\frac{1}{4}$ -7-NAB	$\frac{1}{4}$ " X 7" NAB	\$ .49	\$ .44	\$ .39	\$ .34
PR- $\frac{1}{4}$ -10 $\frac{1}{2}$	$\frac{1}{4}$ " X 10 $\frac{1}{2}$ "	\$3.00	\$2.50	\$2.25	\$2.00

\*\*NAB Specifies 3" low torque center hub\*\*\*

## EMPTY WHITE BOXES

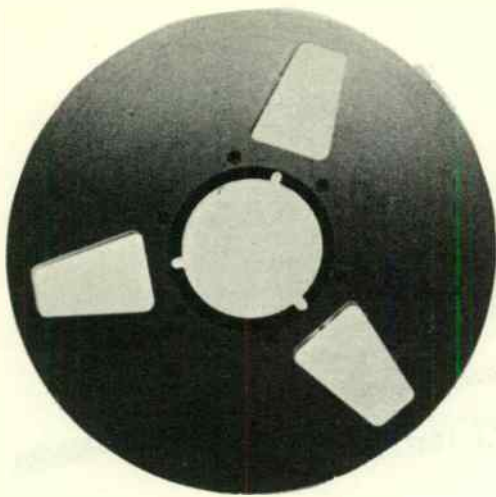


CATALOG NUMBER	BOX SIZE	(1-11)	(12-99)	(100-499)	(500 +)
B- $\frac{1}{4}$ -3	$\frac{1}{4}$ " X 3"	\$ .11	\$ .10	\$ .10	\$ .10
B- $\frac{1}{4}$ -5	$\frac{1}{4}$ " X 5"	\$ .24	\$ .22	\$ .20	\$ .19
B- $\frac{1}{4}$ -7	$\frac{1}{4}$ " X 7"	\$ .29	\$ .27	\$ .24	\$ .22
B- $\frac{1}{4}$ -10 $\frac{1}{2}$	$\frac{1}{4}$ " X 10 $\frac{1}{2}$ "	\$1.25	\$1.00	\$ .80	\$ .75

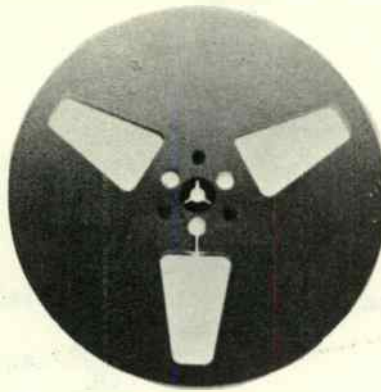
BOXES are white heavy duty constructed.



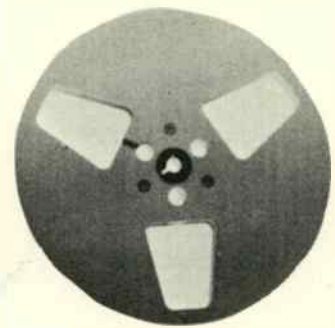
# METAL REEL AND ACCESSORIES



10 1/2"



8 1/4"



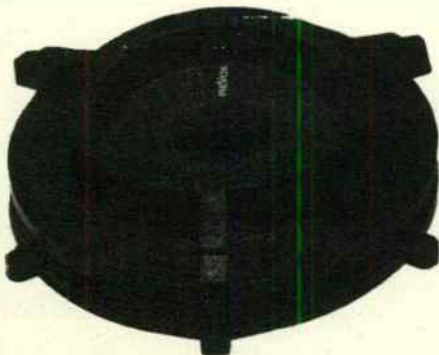
7"

CATALOG NUMBER	REEL SIZE	BROADCAST NET	
		(1-11)	(12+)
M7A	7"	\$3.75	\$3.35
M8A	8 1/4"	\$5.00	\$4.50
M10A	10 1/2"	\$7.50	\$6.75

## NAB HUB ADAPTERS

**PRO-2  
ADAPTERS**

**PAIR \$20.00**

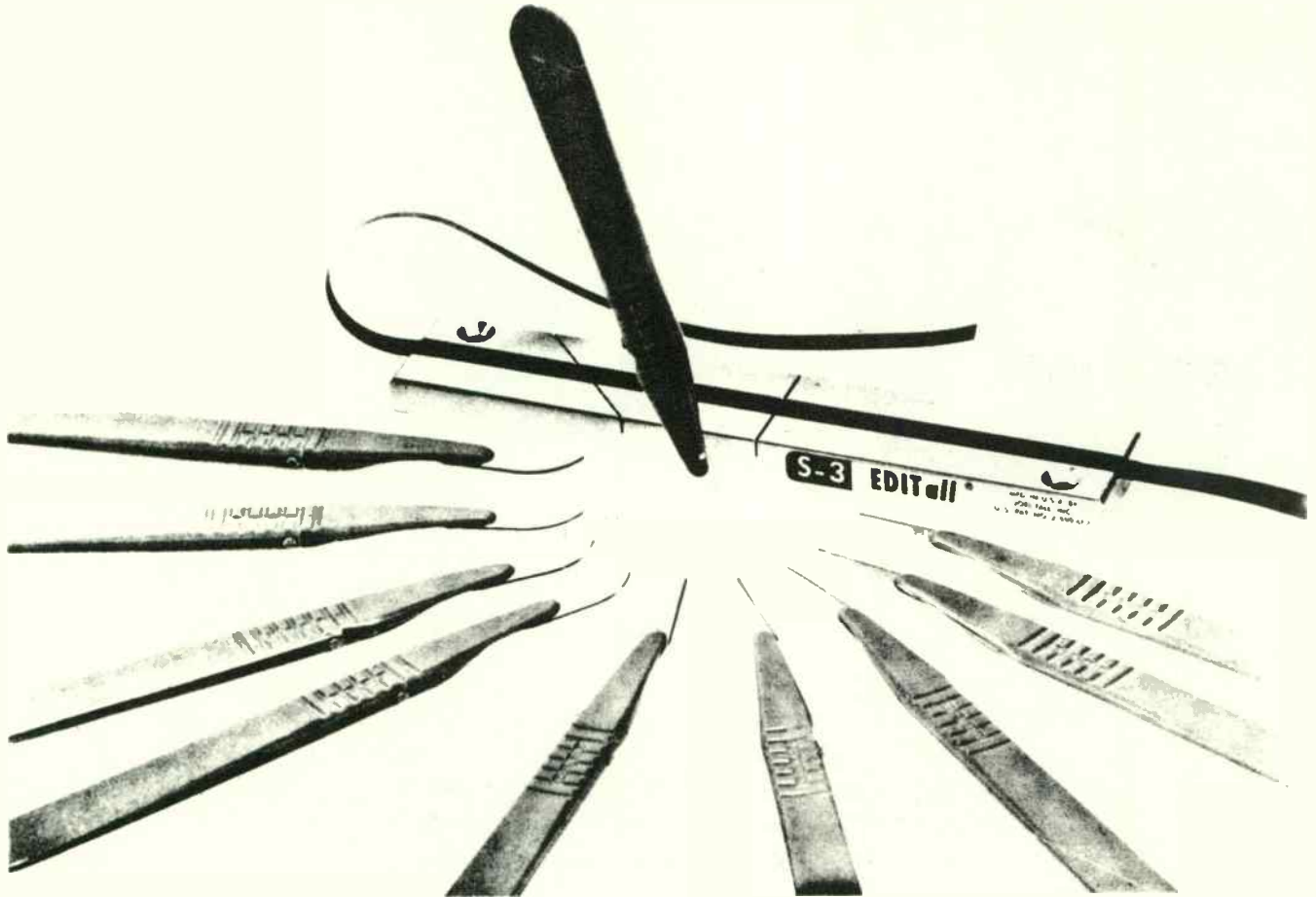


**PRO-3  
ADAPTERS**

**PAIR \$58.00**



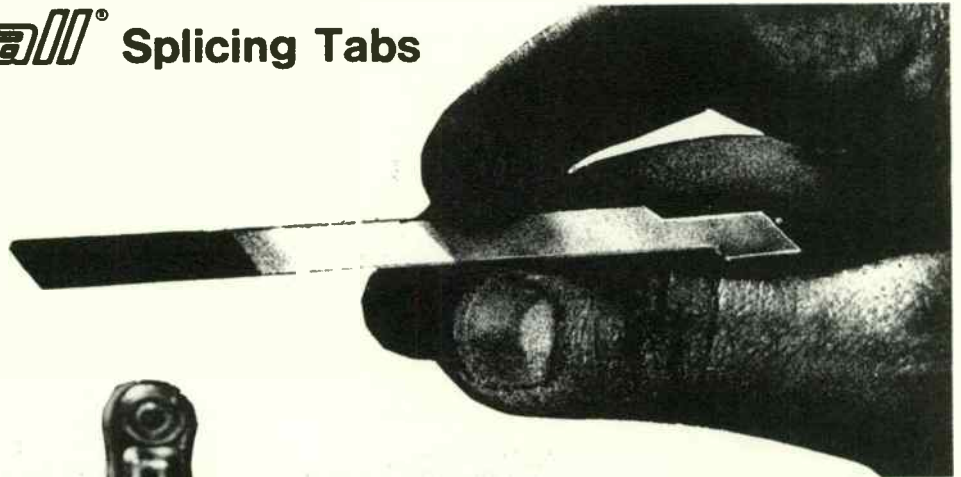
# PRODUCTION SUPPLIES



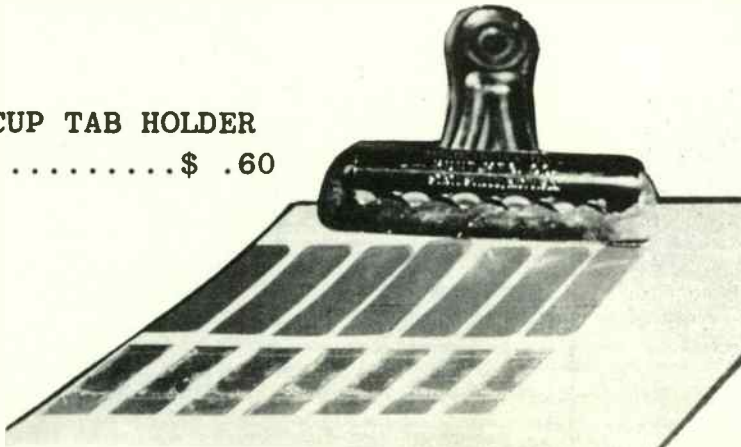
EASY TO USE EDITING SCALPELS ARE FAST - SAFE AND SHARP. STAINLESS STEEL BLADE/PLASTIC HANDLE. INDIVIDUALLY PACKAGED

CURVED BLADE	# 1610	PKG./10	\$5.79
STRAIGHT BLADE	# 1611	PKG./10	\$5.79

## EDITall® Splicing Tabs



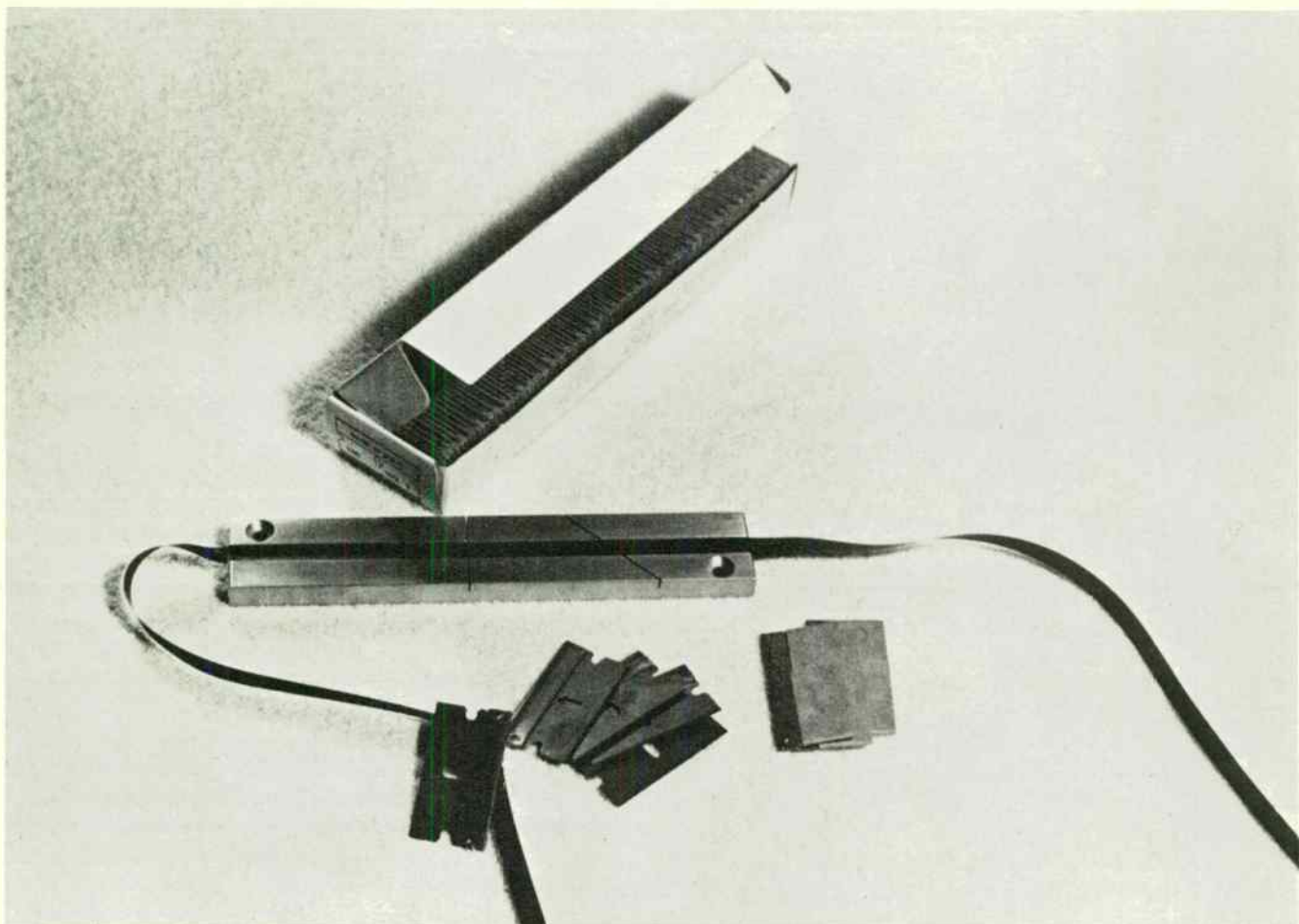
SUCTION CUP TAB HOLDER  
TH-1.....\$ .60



¼" PRECUT SPLICING TABS  
CX-1...PKG. 50...\$2.50  
CX-1B..PKG.1000..\$25.00

¼" PRECUT SENSING TABS  
CX-2...PKG. 50...\$2.75

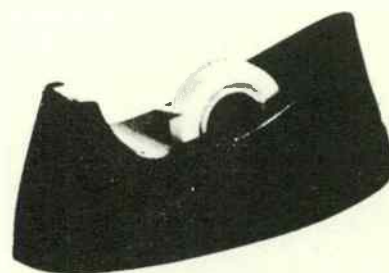
# PRODUCTION ROOM ITEMS



**1 BOX ( 100 ) RAZOR BLADES (NON - OILED) \$5.60**

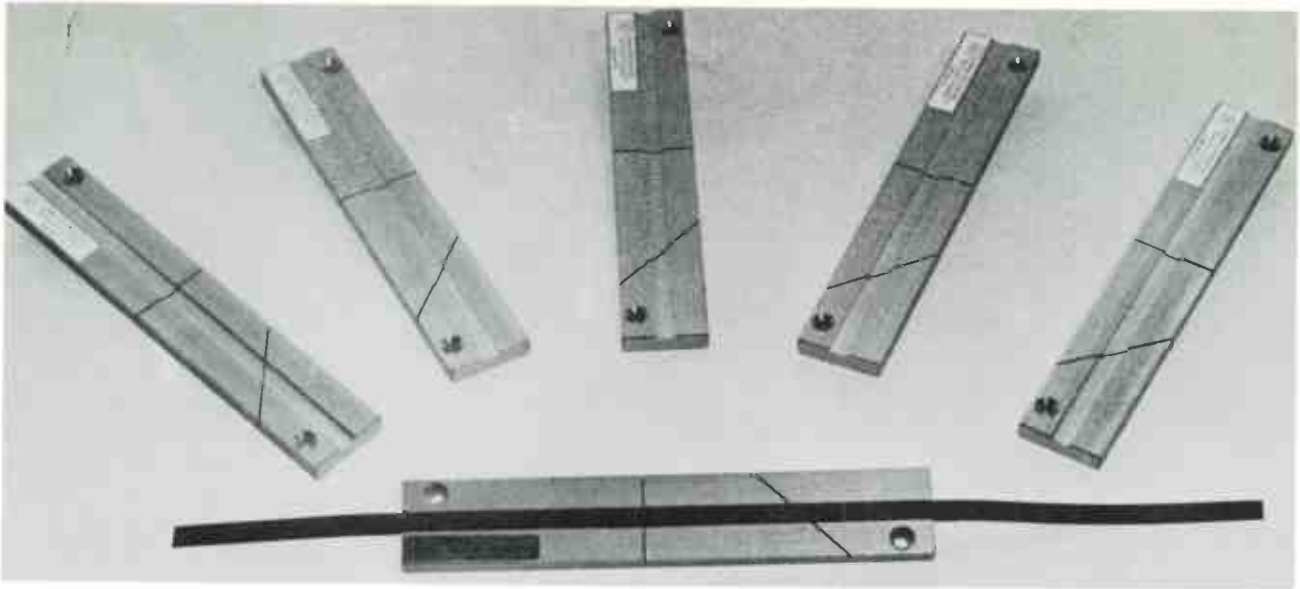


**( WHITE )  
CHINA MARKERS  
1 DOZEN  
\$ 4.95**



**PROFESSIONAL  
SPLICING TAPE DISPENSER  
HEAVY DUTY - RUBBER BASE  
7 / 32 " or 1/2 " TAPE  
STD - 1 \$4.60**

# SPLICING BLOCKS



#SB-3.....HEAVY DUTY SPLICING BLOCK FOR 1/4" TAPE.....\$10.50

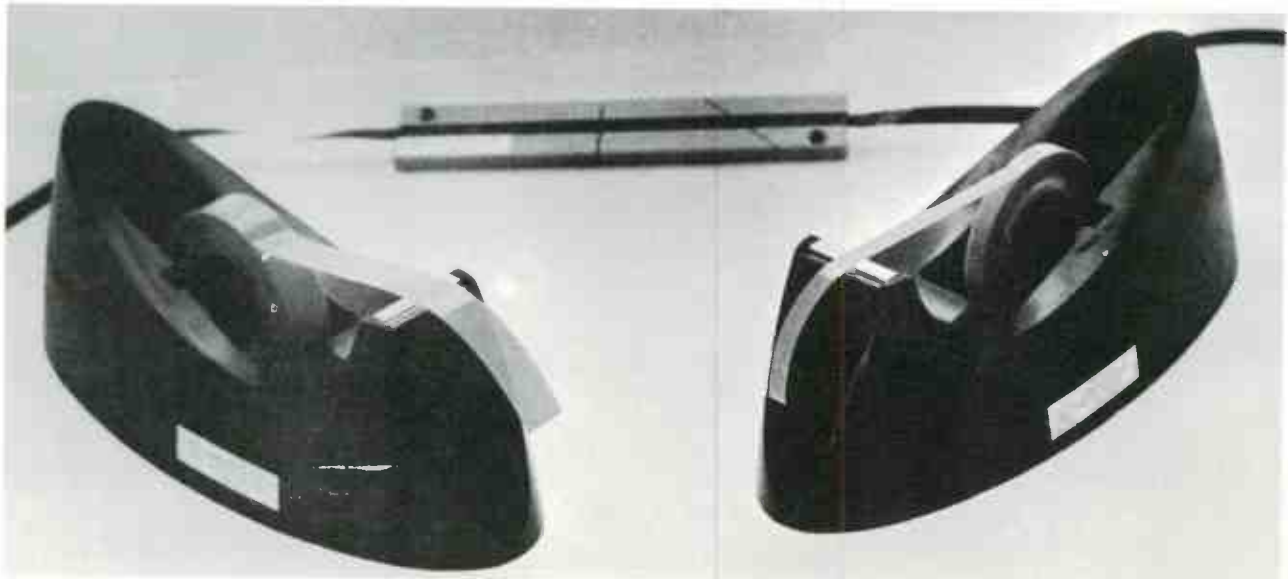
## 1 BOX ( 100 ) RAZOR BLADES



(NON - OILED)

#RB-100....BOX OF 100 NON-OILED RAZOR BLADES.....\$5.60

## PROFESSIONAL SPLICING TAPE DISPENSER HEAVY DUTY - RUBBER BASE - 7/32" or 1/2" TAPE

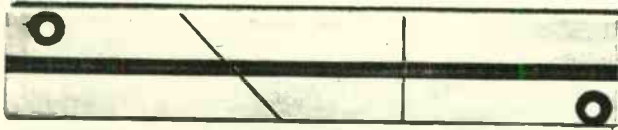


#STD-1....PROFESSIONAL SPLICING TAPE DISPENSER.....\$4.60

# SPLICING BLOCKS

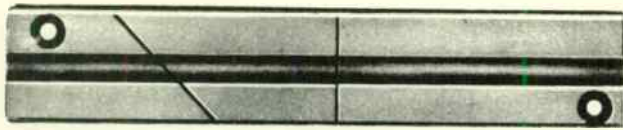


## EDITall®



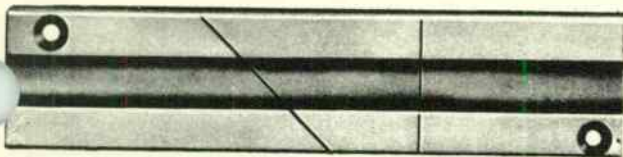
S-1 For .150" audio tape.

**\$12.50**



S-3 For 1/4" audio tape on console machines.

**\$12.50**

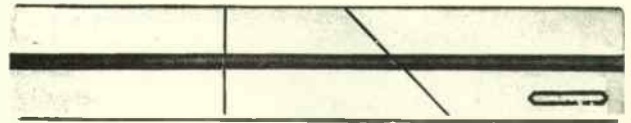


S-3.5 For 1/2" audio tape.

**\$27.50**

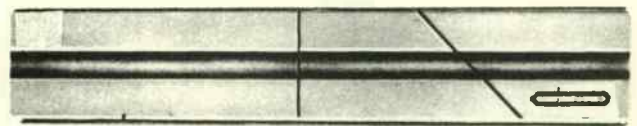
## NORTRONICS

### SELF ADHESIVE BLOCKS



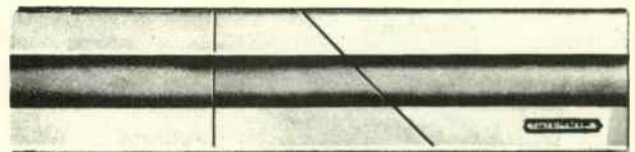
QM-312 For .150" audio tape.

**\$12.00**



QM-311 For 1/4" audio tape

**\$12.00**



QM-313 For 1/2" audio tape.

**\$19.80**

## SCOTCH SPLICING TAPE



(ALL PURPOSE)

**\$1.95**

**41 SPLICING TAPE**

7/32" X 66'



**\$2.05**

**41 SPLICING TAPE**

1/2" X 66'



(MASTER - POLYESTER)

**\$3.49**

**620 SPLICING TAPE**

7/32" X 66'



**\$5.19**

**620 SPLICING TAPE**

1/2" X 66'

# RECORDING ACCESSORIES

**NEW!**



A New Product that lets You see -- Not just Hear a Recording. Magview comes in an Aerosol Spray Can. When applied to any Magnetically Recorded Medium, such as tape, cards, discs, film, etc. The pattern of the recording becomes visible.

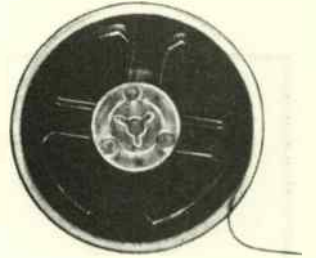
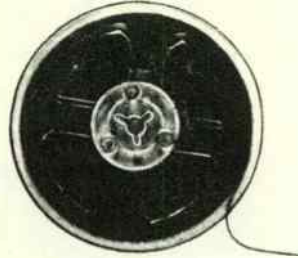
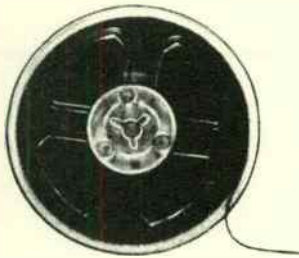
The Spray contains very finely divided particles of pure Iron, suspended in a Volatile Liquid. When sprayed on the Recorded Medium, the Magnetized Areas attract the Iron Powder. The particles form a residue clinging to the pattern of Flux Lines, making them visible as the liquid quickly evaporates.

The Iron Particles in Magview are so fine they can resolve very High Density Recordings with distinct definition.

QM-601 \$4.95

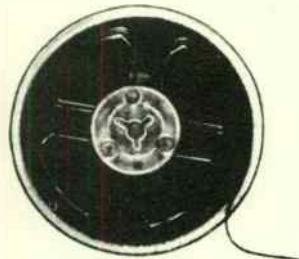


# REEL-TO-REEL ALIGNMENT TAPES

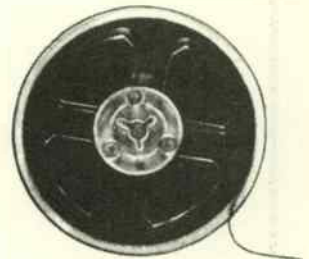


STL Test Tapes are recorded directly from precision generating equipment to provide the most accurate Azimuth reference possible – thanks to Standard Tape Laboratory's exclusive production techniques.

## REEL-TO-REEL ALIGNMENT TAPES

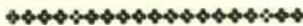


TAPE WIDTH	TAPE SPEED	DESCRIPTION	PRICE
¼"	7½ ips	FULL TRACK	\$29.00
¼"	15 ips	FULL TRACK	\$29.00
¼"	7½ ips	2 TRACK	\$29.00
¼"	15 ips	2 TRACK	\$29.00
½"	7½ ips	FULL TRACK	\$49.50
½"	15 ips	FULL TRACK	\$49.50



## REEL-TO-REEL FLUTTER TAPES

¼" 7½ ips 3kHz \$29.00



## REEL-TO-REEL SWEEP TAPES

¼" 7½ ips 300ft. \$24.50

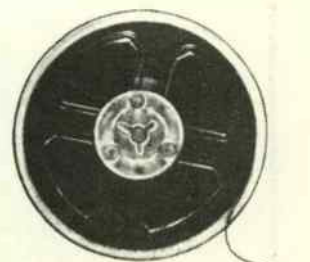
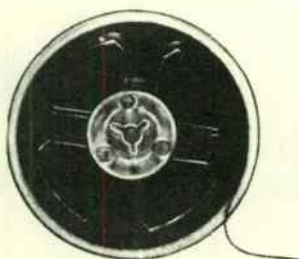


## REEL-TO-REEL PINK NOISE TEST TAPES

7½ ips REEL PINK NOISE \$24.00

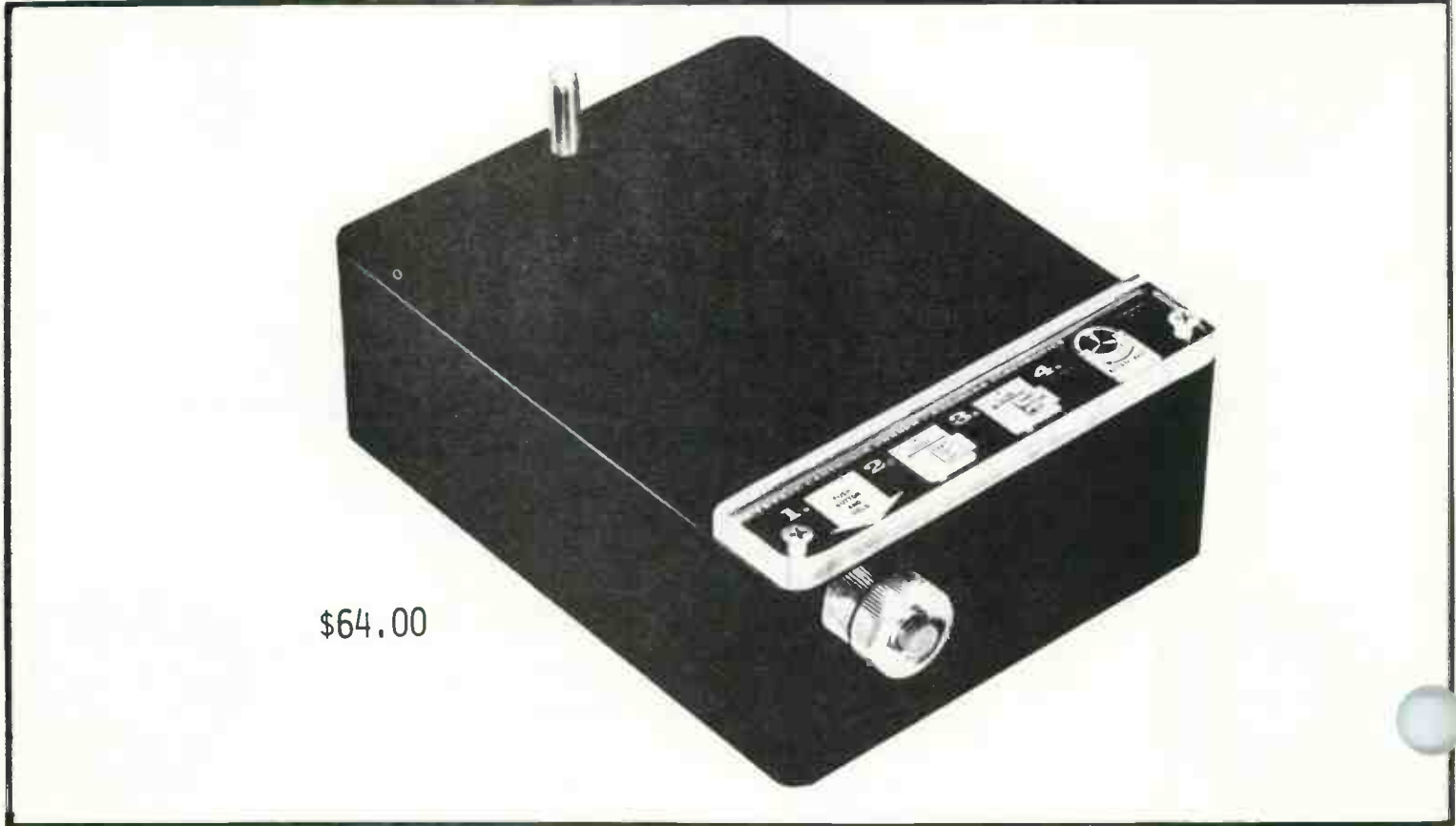
## REEL-TO-REEL " STROBE " TEST TAPES

¼" 7½ ips 1200ft. \$16.50



# TAPE ERASERS

## TD-1A TAPE DEGAUSSER





# ENGINEERING TOOLS



## INSTRUMENT SCALE



IN-6.....\$28.40

### NEW!

#### MEASURE:

REEL-TO- REEL BRAKE TENSION

PINCH ROLLER TENSION

CART MACHINE TENSION



IN-2.....\$19.50

Oh what a difference it makes in the performance of a tape deck when all the tensions are set up right on the button, according to the MFG's. specs.

For example: Ampex says you should have 6 oz. of hold back tension on the reel. If you don't have enough (less than 5 oz.) the tape will wonder around over the heads and give you distortion. If you have too much (more than 7 oz.) the fast forward and rewind won't function properly and you will stretch or break the tape when you try to stop it.

Lack of wow and flutter is dependant upon pinch roller tension. The following table is representative of some of the common studio tape deck tension:

<u>MAKE-MODEL</u>	<u>SUPPLY</u>	<u>TAKE-UP</u>	<u>CAPSTAIN</u>	<u>BRAKE</u>
SCULLY 270	6-8 oz.	6.5-7.5	4 lbs.	6
SCULLY 280	5-7 oz.	6-7	4 lbs.	5½-6¼
AMPEX 350-351	5-6½oz.	5-6½oz.	5 lbs.	12-17 oz.
AMPEX 440	5-6 oz.	5-6 oz.	6 lbs.	15-17 oz.

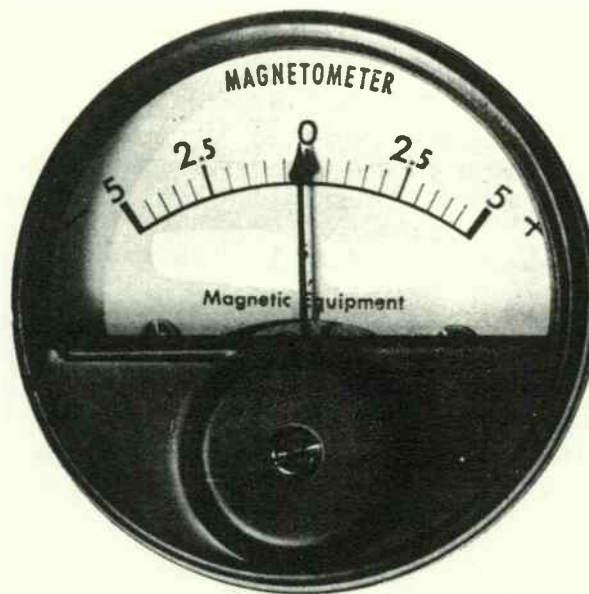
### WORKS VERTICAL OR HORIZONTAL!

NEW!

A MUST FOR ALL BROADCAST STATIONS!

# MAGNETOMETERS

CHECK MAGNETISM IN RECORDER COMPONENTS



## Protect valuable recorded tapes

Valuable audio and video tapes can be damaged when played on equipment that is not thoroughly and regularly demagnetized. Magnetism can easily build up in capstans, tape guides or recorder heads to a point where it will degrade the magnetically recorded signal on tapes passing over them. Tape damage is first apparent as a loss of recorded high frequencies and a progressive increase in background noise each time they are played on magnetized equipment.

### MAGNETOMETER

Measures level of magnetism in components.  
Calibrated to read directly in gauss.  
Model 20/B5 shown.

\$15.00

### CLIP-ON EXTENSION PROBE

Extension probe is 1 3/4" long. Can be formed with fingers. Improves checking of magnetism in hard to reach components.

\$ 3.50

# REEL-TO-REEL RECORDERS



**OTARI**

**MX-5050**

**\$1450.00**

**"HERE IS YOUR PRODUCTION ROOM MACHINE!"**

***RUGGED! RELIABLE!! RESPONSE LIKE YOU'VE NEVER HEARD BEFORE!!!***

**THE FACTORY CLAIMS THE FREQUENCY RESPONSE TO BE 7½ ips: 30 Hz to 18,000 Hz ± 2dB. We haven't seen a machine yet that didn't hold much better than this. We're not kidding when we say this is the best machine we have listened to. This is not a home consumer machine. This is a FULL PROFESSIONAL. And we mean Full Professional! This is by far the easiest machine to work on we've seen yet.**

**ARS 1000**

- \*STANDARD CONFIGURATIONS: Full Track.  
Quarter Track Stereo.
- \*Four track Quad Discrete  
(Available upon request).

\*Four Head Standard: quarter track stereo playback is standard equipment.

\*Outputs: variable, fixed at either +4, -10 or other level of your choosing.

\*Built in 1000Hz standard level osc. \*8 OHM headphone.

\*Transformer in and out. \*All XLR type connectors.

*All of this with better sound than you've ever heard before.*



**\$1190.00**

# REEL-TO-REEL RECORDERS

**REVOX**

**A77**



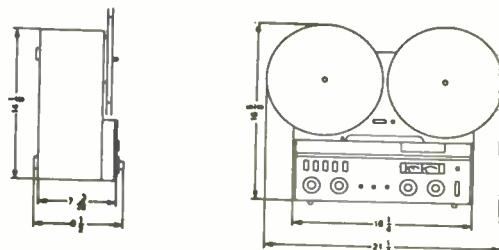
Where the kind of reliability you need in an automation system, the Revox A77 is hard to beat. It can be ordered with 3-3/4 / 7-1/2 or 7-1/2 / 15. In either configuration wow and flutter never exceed 0.1% and average is one half of that.

The machine comes standard with half track stereo. Quarter track available at no extra charge. Wood cabinet is available but metal cabinet for rack mounting is also available at no extra charge. 600 OHM in and out is standard.

The A77 works very well in automation systems, but is not too handy in the production room.

Revox A77 2-Track or 4-Track...\$899.00

### Dimensions Walnut Cabinet

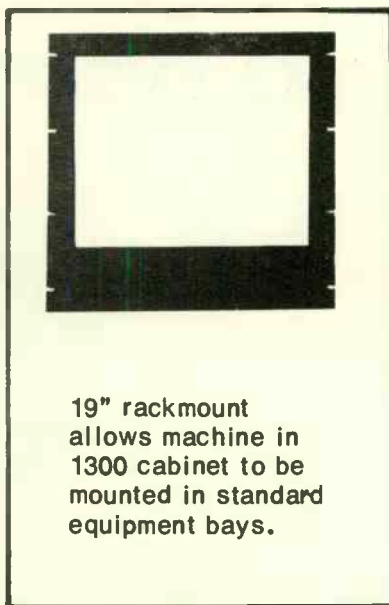


\*Rack Mounting Kit.....\$19.00

# REVOX A77 ACCESSORIES



Service manual provides complete circuit diagrams and setting up and maintenance procedure. Available for A77 Dolby or A77. Separate Dolby supplement also available.



19" rackmount allows machine in 1300 cabinet to be mounted in standard equipment bays.

A77 OWNER'S OPERATING MANUAL \$3.65

A77 SERVICE MANUAL WITH DOLBY SUPPLEMENT \$15.50

A77 UNBOUND DOLBY SERVICE SUPPLEMENT \$5.50

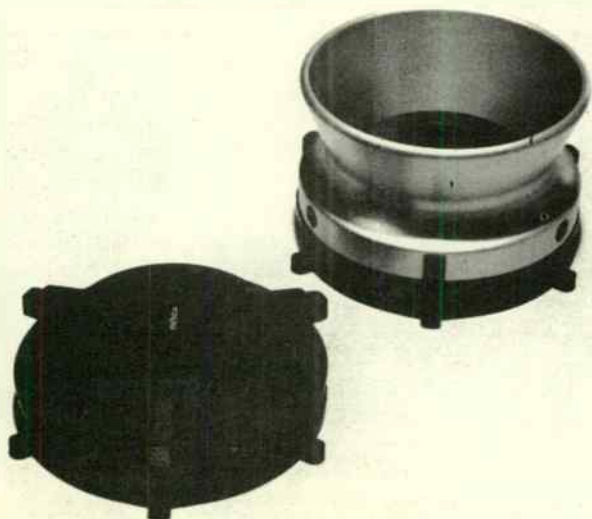
A77 RACKMOUNT FLANGE, 19" STANDARD \$19.00

REMOTE CONTROL UNIT (1605), MECHANICAL, 15' CORD \$37.50

REMOTE CONTROL UNIT (1610), MECHANICAL, 30' CORD \$41.50

REMOTE CONTROL UNIT (1705), ILLUMINATED, 15' CORD \$52.00

REMOTE CONTROL UNIT (1705A), ILLUM., AUTO REWIND \$69.00



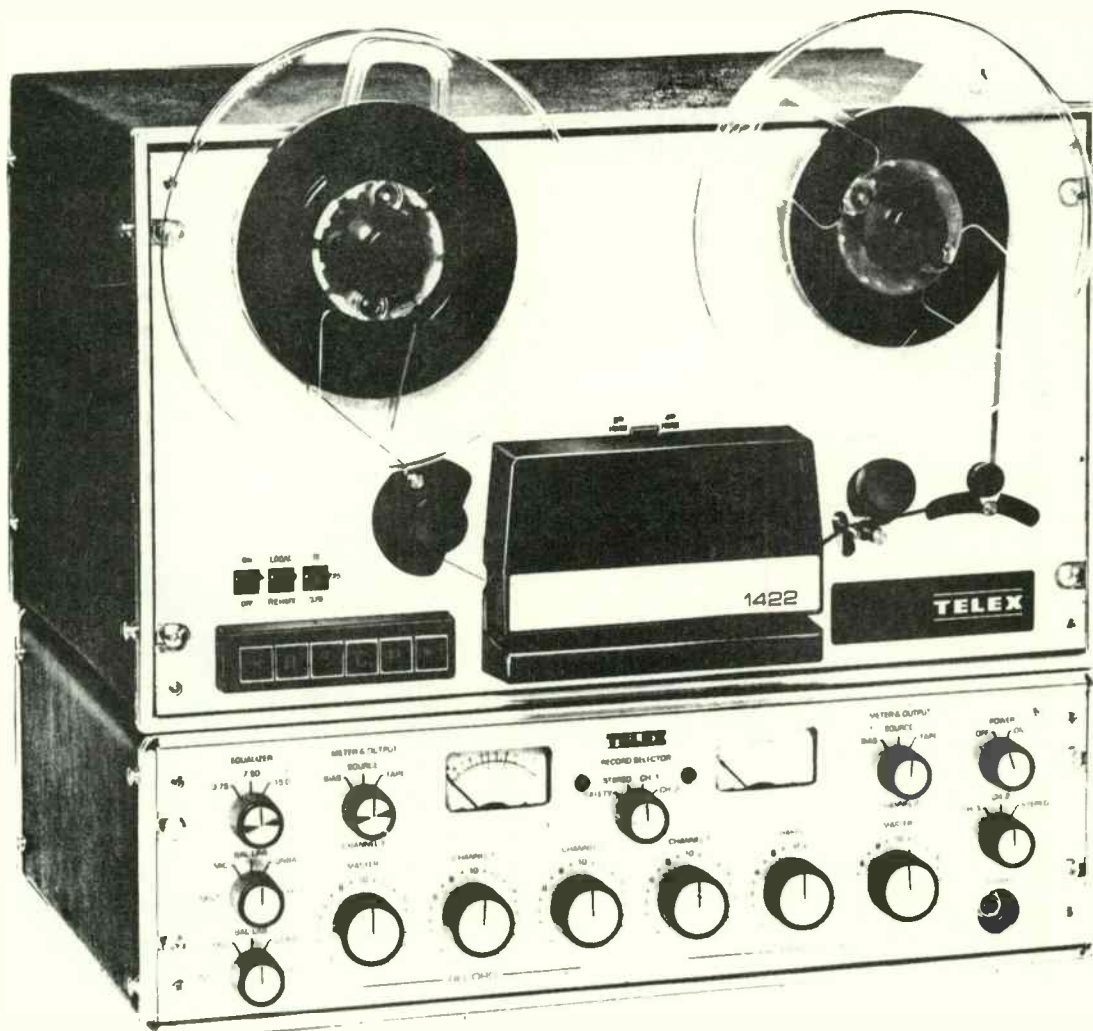
PROFESSIONAL NAB ADAPTERS, PAIR \$58.00

STANDARD USE NAB ADAPTERS, PAIR \$20.00

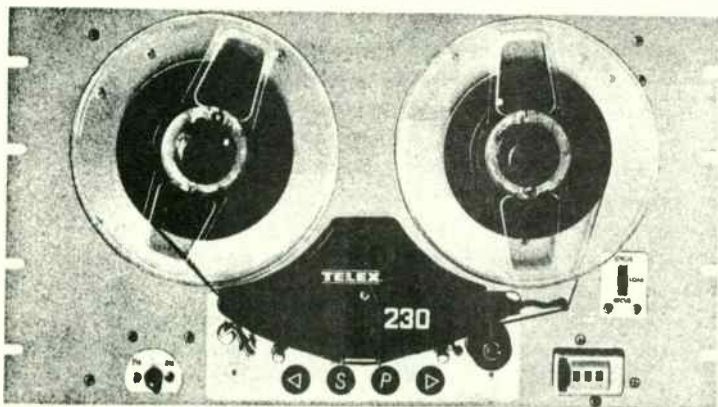


# REEL-TO-REEL RECORDERS MAGNECORD

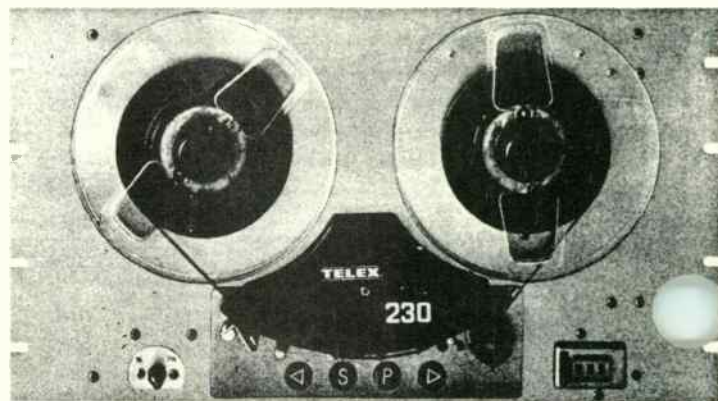
## TELEX 1400 SERIES



**MODEL 230  
TAPE TRANSPORT**



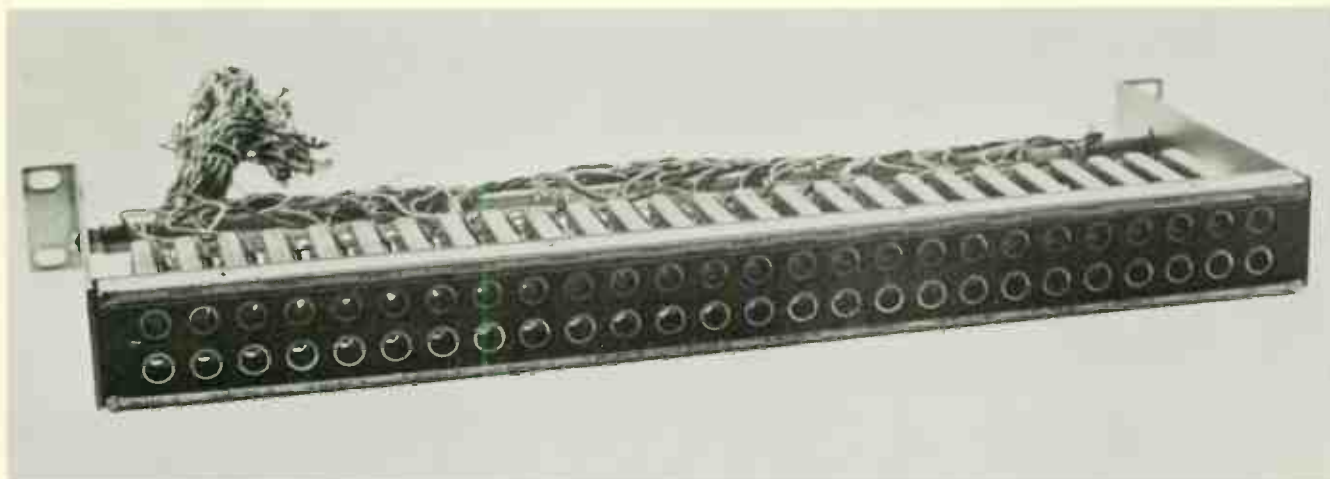
**DUAL PHOTO-CELL UNIT**



**SINGLE PHOTO-CELL UNIT**

LATEST PRICING AND CONFIGURATIONS UPON REQUEST... (305) 764-7755

# STEREO PATCH PANELS — USED



PPS-52.....\$40.00

## PHONE PLUGS



MONO PLUG

#R-64261.....\$1.20

STEREO PLUG

#R-64267.....\$1.50

# CHEMICAL MAINTENANCE



**DG-16 CLEANER**

**\$3.80**

EXCELLENT FOR CLEANING CIRCUIT BOARDS, SWITCHES, SOLENOIDS, GENERATORS, STARTERS AND MANY OTHER DELICATE PIECES OF EQUIPMENT. EQUIPPED WITH HIGH BLAST NOZZLE.

**NON SLIP**



**\$1.50**

**NS-4 ROLLER AND BELT DRESSING**

STOPS SLIPPAGE OF IDLER WHEELS, PULLEY BELTS AND CORDS. FAST DRYING. WILL NOT HARM RUBBER.



**SS-16 SILICONE SPRAY**

**\$3.95**

LUBRICANT WAS ORIGINALLY FORMULATED FOR L.E.L. CARTRIDGE REBUILDING PROGRAM. SPRAY IS NON-TOXIC, HEAT RESISTANT, SAFE ON ALL PLASTICS. NOZZLE FOR HARD TO GET TO PLACES IS INCLUDED.

## MAINTENANCE KIT



CONTAINING  
ALL SIX CHEMICALS

**\$11.50**



**10-4 TELETYPE INK-OFF**

**\$1.29**

SPECIALLY FORMULATED TO REMOVE TELETYPE INK FROM THE HANDS. EXTREMELY EFFICIENT AND EXTREMELY MILD.



**BG-4 BRONZE BEARING GREASE**

**\$1.50**

DESIGNED FOR APPLICATION TO CARTRIDGE PINCH ROLLER BEARINGS AND TURNABLE IDLER WHEEL BEARINGS. PREVENTS WEAR AND CORROSION. EASY TO USE SQUEEZE BOTTLE WITH POINTED APPLICATOR TIP.



**TO-4 TURNTABLE OIL**

**.79**

PROVIDES EXCELLENT LUBRICITY REDUCES FRICTION AND WEAR ON TURNTABLE SHAFTS AS RECOMMENDED BY MOST PROFESSIONAL TURNTABLE MANUFACTURERS. CONVENIENT 4 oz. SQUEEZE BOTTLE.

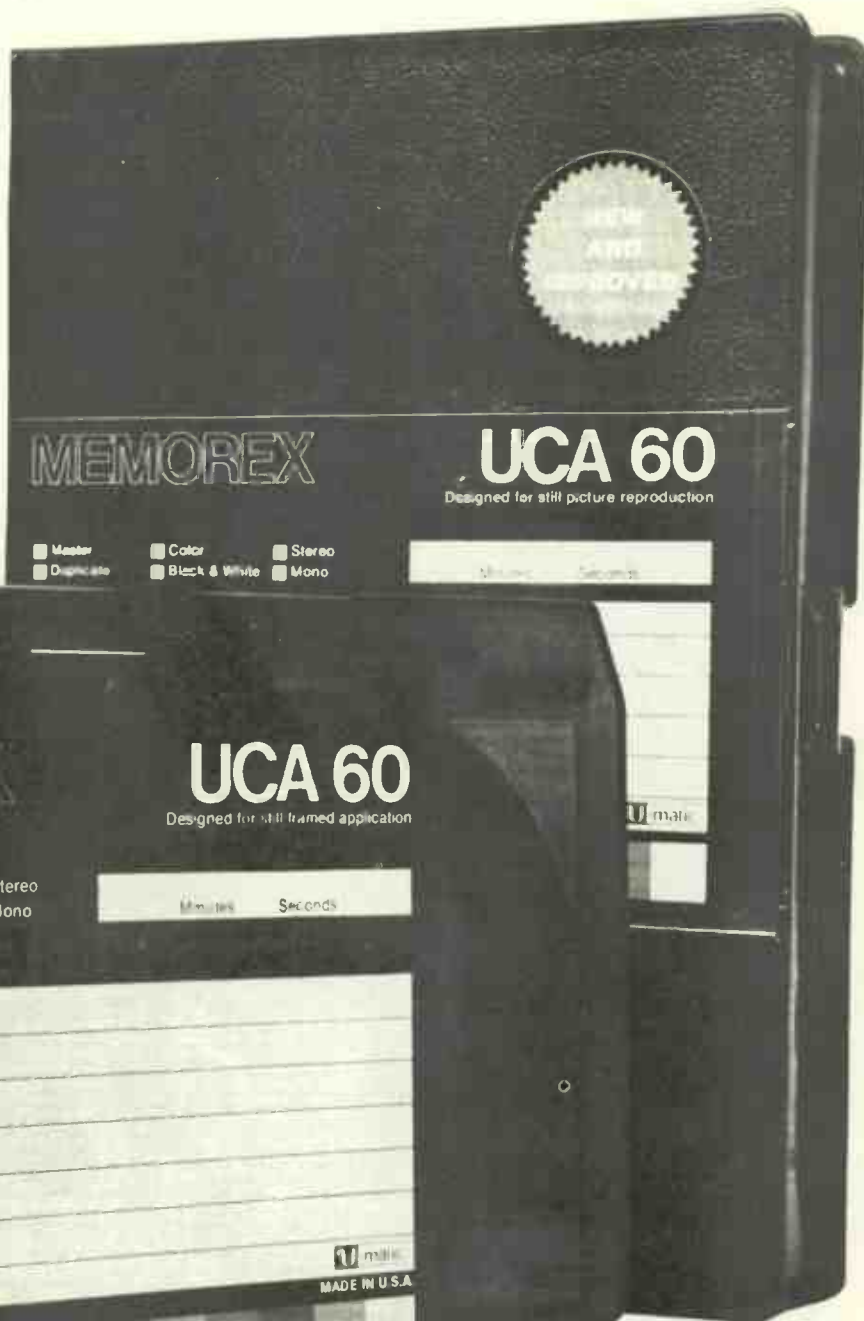


# VideoTape

123

**NEW!**

3/4" VIDEO CASSETTE	BROADCAST NET	
	(1-49)	(50-99)
10 MIN.	\$12.67	\$12.18
15 MIN.	\$14.30	\$13.75
20 MIN.	\$15.21	\$14.62
30 MIN.	\$17.94	\$17.25
40 MIN.	\$20.02	\$19.25
50 MIN.	\$23.40	\$22.50
60 MIN.	\$25.35	\$24.37



# MEMOREX

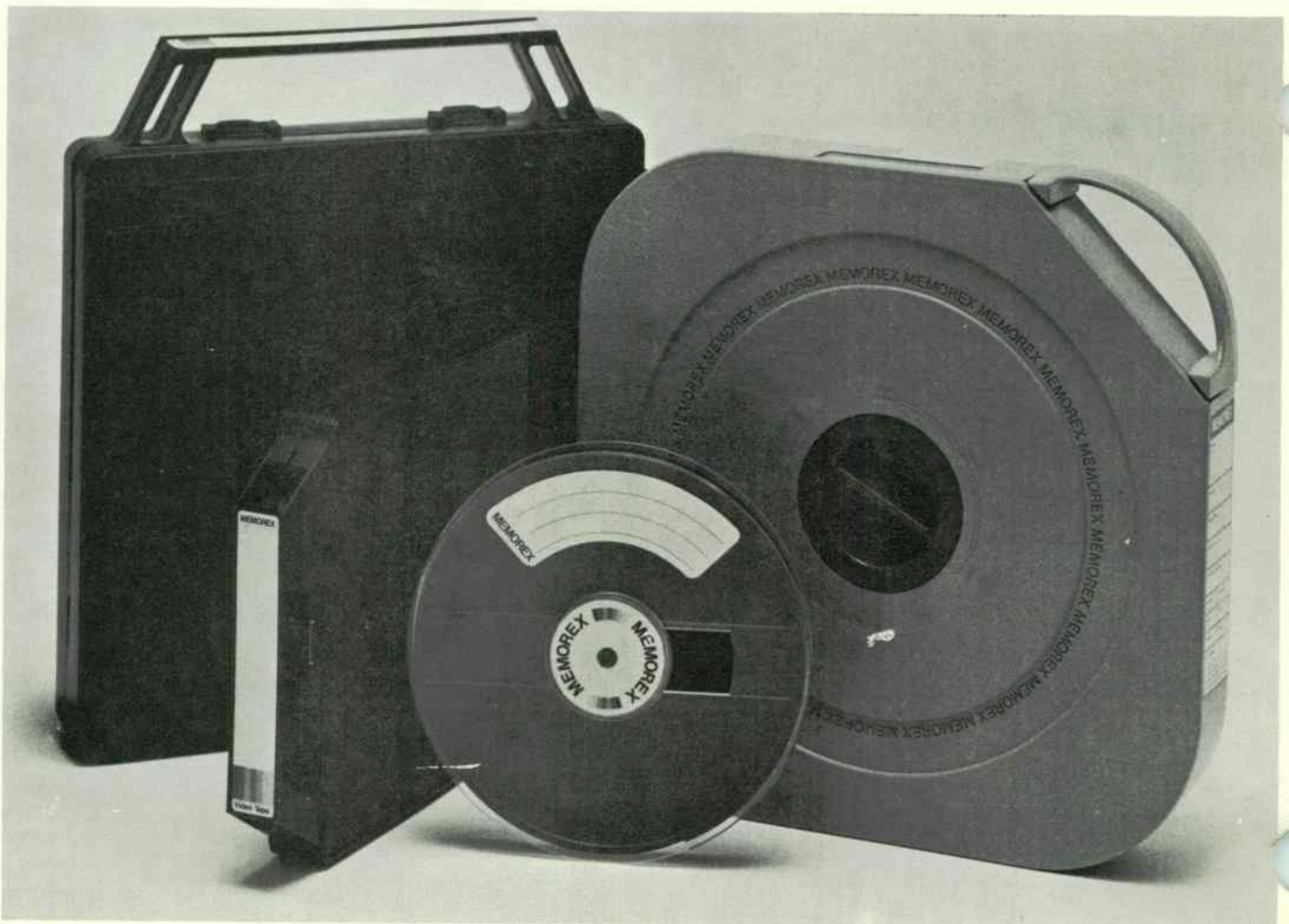
World Radio History

# VideoTape

**NEW!**

## MEMOREX

CATALOG NUMBER	TAPE TIME	REEL SIZE	LENGTH	..BROADCAST NET..	
				(1-49)	(50-99)
MRX 80-8C	60 MIN.	7"	2400'	\$18.85	\$18.12
MRX 80-7C	30 MIN.	7"	1250'	\$11.00	\$10.75
MRX 83-8C	60 MIN.	7"	2400'	\$23.07	\$22.18
MRX 83-7C	30 MIN.	7"	1250'	\$14.10	\$13.56



# RECORDING

# MAINTENANCE



8 oz. DIP  
\$2.59



8 oz. SPRAY  
\$2.89

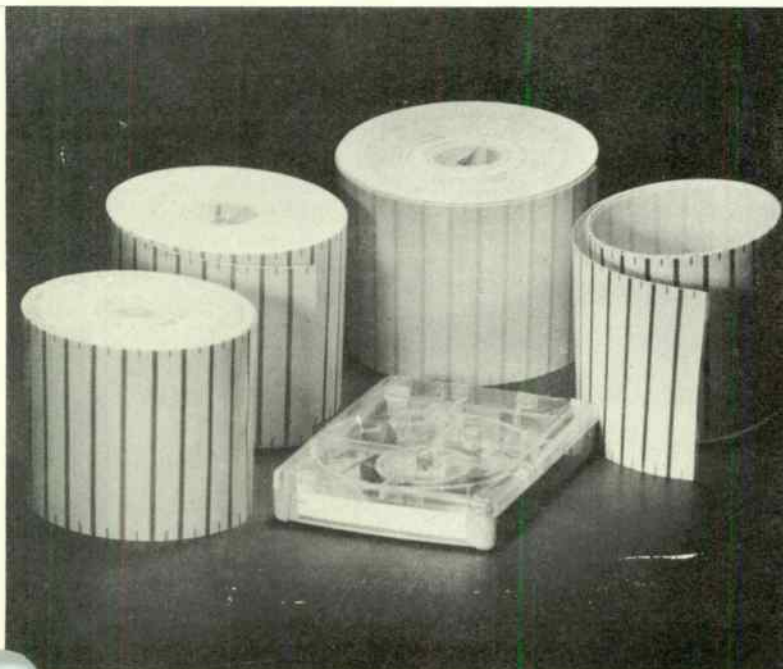


16 oz. SPRAY  
\$3.69



32 oz. DIP  
\$6.49

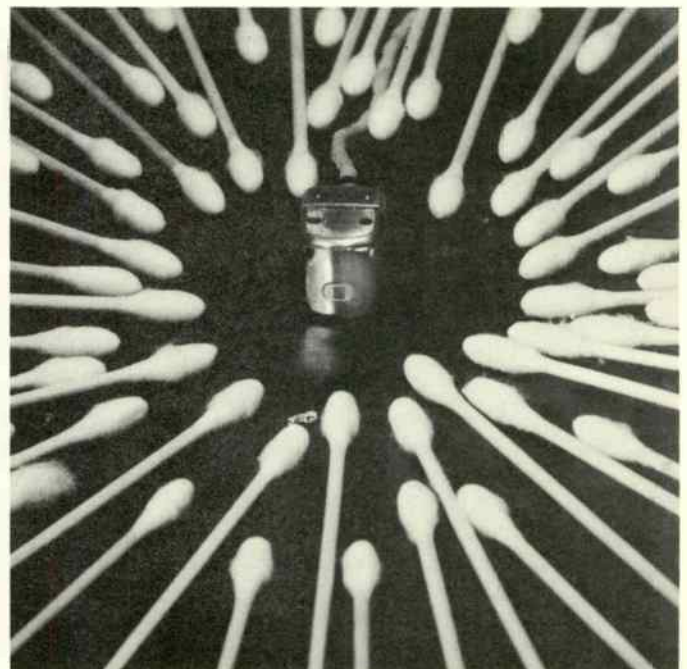
LAUDERDALE ELECTRONIC LABS "QC" series of head cleaner has been formulated for use on both audio and video tape heads. Removes the most impacted dirt and oxide deposits without damaging head epoxy. Leaves no residue and contains no silicone lubricant. Available in dip can or spray.



COLOR CODED CARTRIDGE LABELS FIT THE END OF THE CARTRIDGE WITHOUT OVERLAPPING AND ARE MADE WITH REMOVABLE ADHESIVE BACKING.

Colors: RED-WHITE-BLUE-GREEN-YELLOW-BLACK

CL-100 PKG/100 \$1.50  
CL-1000 PKG/100 \$12.00



A CONVENIENT PACKAGE OF 6" COTTON SWABS USED TO SAFELY CLEAN MAGNETIC HEADS AND GUIDES.

HCS-100 PKG/100 \$1.00  
HCS-1000 PKG/1000 \$7.00

# TAPE ERASERS

## TD-3 TAPE DEGAUSSER



**Erases audio, video,  
computer, and  
cartridge tape.**

- Designed for heavy duty use in the audio-visual, and computer industries.
- Strong degaussing field insures full erasure of new high coercivity tapes.
- Erases tape reels up to 14 inches in diameter and 1 inch wide.
- Tapes may be erased in original carton by sliding along guide rail.
- Timer with adjustable ON cycle and automatic shut-off.
- Built in blower assures cool and quiet operation.
- Standard 5/16 inch center post and NAB hub supplied.
- Conservative design throughout assures long lasting performance.

### SPECIFICATIONS:

DUTY CYCLE — 50%, 30 minues maximum with fan on.  
 LINE VOLTAGE — 108 to 135 Volts A. C., 60 cycles.  
 POWER CONSUMPTION — 1350 watts nominal.  
 DIMENSIONS — 10 x 13 x 4 inches.  
 SHIPPING WEIGHT — 24 pounds.

**\$345.00**

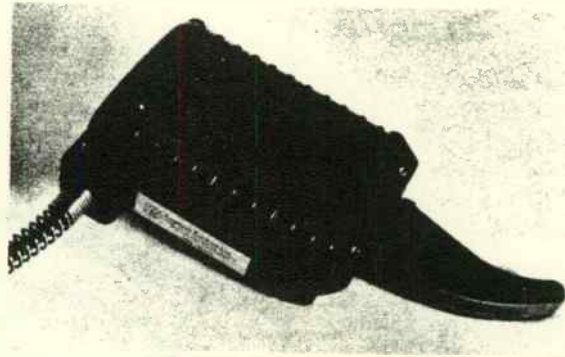
# DEMAGNETIZERS

127



**QM-202** \$17.60  
**PROFESSIONAL HEAD DEMAGNETIZER**

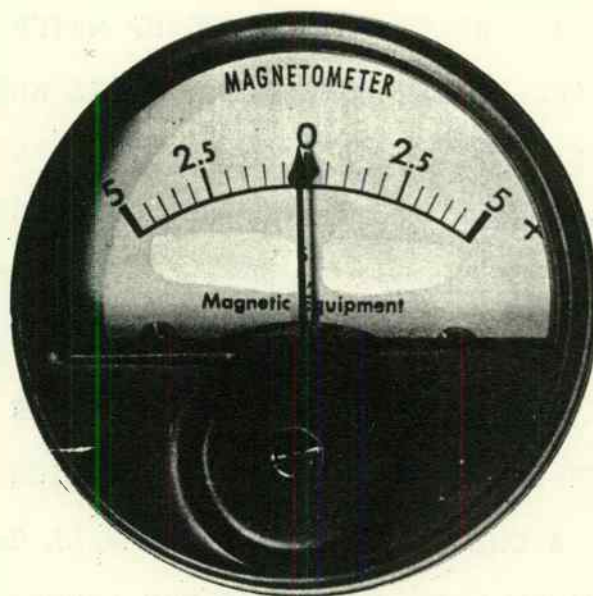
Another industry exclusive by Nortronics. For use on all reel-to-reel, cassette and 8-track cartridge recorders. Generates magnetic field from a flexible probe tip that reaches into tight spaces to remove residual magnetism from heads, guides and other metallic parts. Quality leaf switch activates with fingertip pressure and de-activates when unit is put down. Burnout proof. Features an attractive Cyclopedia case and convenient AC power cord. Probe tip is covered with a soft plastic that cannot scratch or damage sensitive head faces. Operates on 110-120 VAC, 50-60 Hz.



# HDM/800 DEMAGNETIZER \$32.00

# MAGNETOMETERS

CHECK MAGNETISM IN RECORDER COMPONENTS



**MAGNETOMETER**

Measures level of magnetism in components. Calibrated to read directly in gauss. Model 20/B6 shown.

\$15.00

**CLIP-ON EXTENSION PROBE**

Extension probe is 1 3/4" long. Can be formed with fingers. Improves checking of magnetism in hard to reach components.

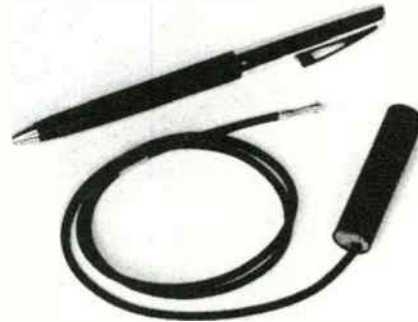
\$ 3.50

**NEW!**



**Model DS-1 RF PROBE**

**"SNIF-IT"**

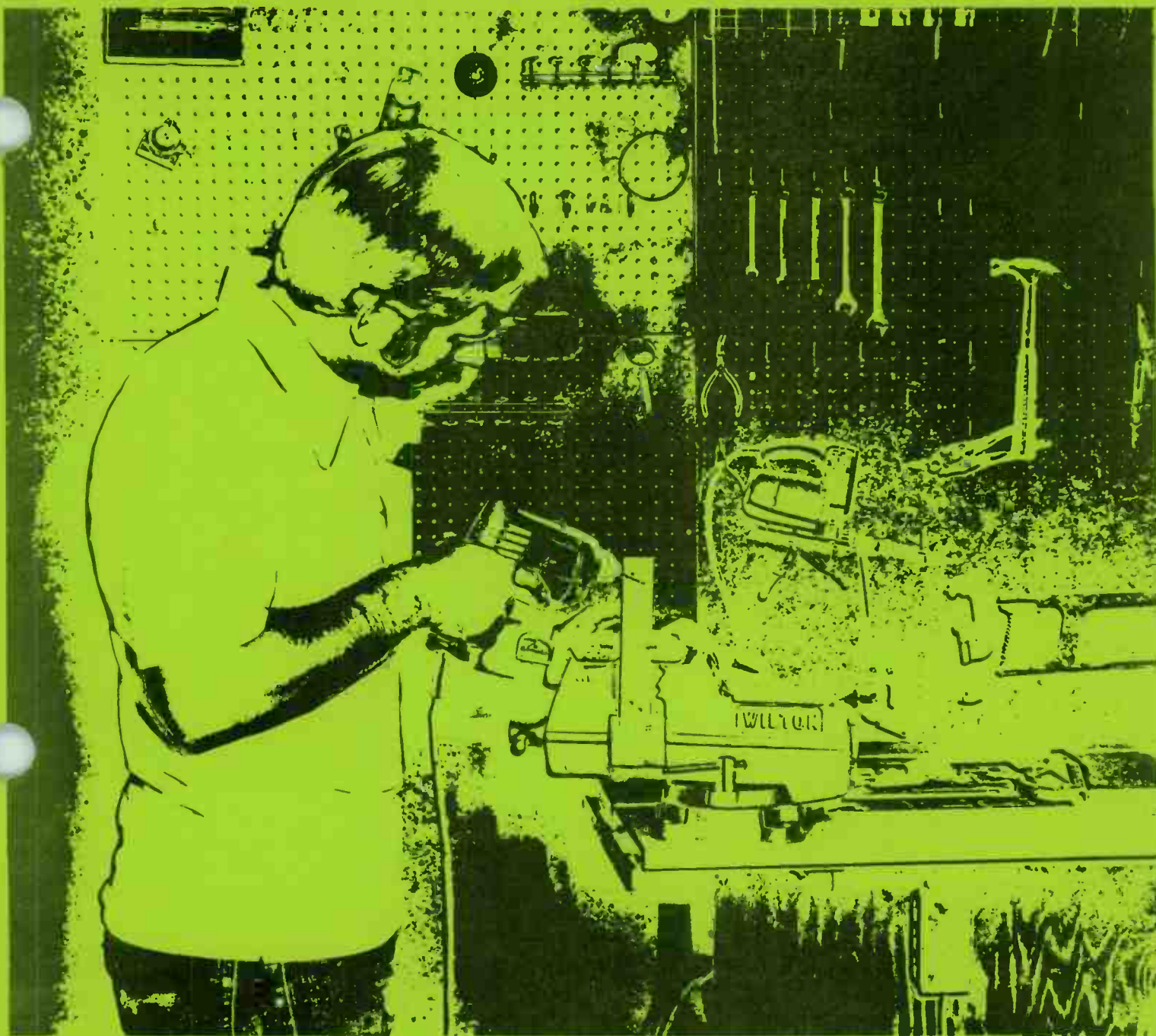


WHAT IS A SNIF-IT YOU ASK?

**\$12.60**

OUR ANSWER, WE DON'T KNOW!

BY HOOKING THE "SNIFF-IT" UP TO A 50 MICROAMP METER YOU CAN USE A SIMPSON 260, PUT THE PROBE NEAR SOME RF, AND THE NEEDLE WILL GO UP. A ONE MILOWATT OSC WILL GIVE YOU A GOOD READING. YOU CAN CHASE A SIGNAL THROUGH A TRANSMITTER BY JUST GETTING CLOSE TO THE TUBES, COILS OR OTHER PARTS CARRYING RF. PRECISE NEUTRALIZATION IS A CINCH. FINDING BREAKS IN THE COAX SHIELD IS EASY, EVEN GETTING YOUR ANTENNA IN THE BALLPARK IS NO PROBLEM. YOU CAN CHECK A QUARTER WAVE WHIP. IT IS SENSITIVE ENOUGH TO DETECT OSCILLATIONS IN OpAmps. SO SENSITVIE IN FACT, A ONE WATT HANDY TALKY WILL GIVE YOU A GOOD READING, YET USUABLE WITH CAUTION. THE POSSIBLE USES FOR THIS "QUISIMO" ARE LIMITED ONLY BY YOUR IMIGATION AND INGENUITY.



**CALL L.E.L. FOR ANY:**

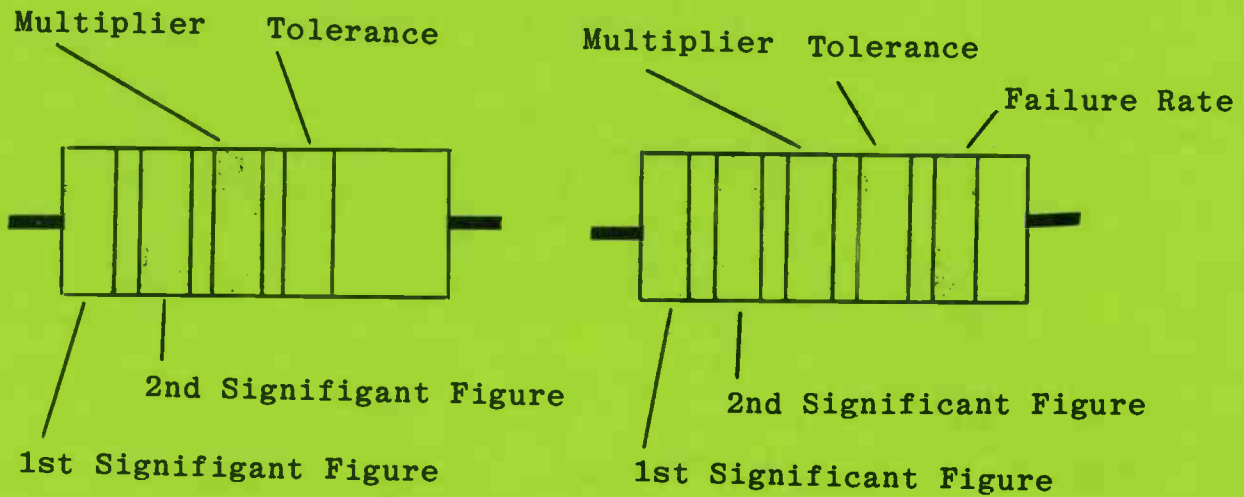
**TOWER LIGHTING  
WORKSHOP TOOLS  
EMERGENCY EQUIPMENT**

**(305) 764-7755**

**(305) 764-7756**

# NEW RESISTOR COLOR CODE

Resistors with Black Body color are Composition, Non insulated.  
 Resistors with Colored Bodies are Composition Insulated.  
 Wirewound Resistors have the 1st digit color band double width.



**RESISTOR COLOR CODE**

COLOR	1st + 2nd SIGNIFICANT FIGURES	MULTIPLIER	TOLERANCE	FAILURE RATE*
Black	0	1	-	-
Brown	1	10	+1%	1.0
Red	2	100	+2%	0.1
Orange	3	1,000	+3%	0.01
Yellow	4	10,000	+4%	0.001
Green	5	100,000	-	-
Blue	6	1,000,000	-	-
Violet	7	10,000,000	-	-
Gray	8	100,000,000	-	-
White	9	-	-	Solderable*
Gold	-	0.1	+5%	-
Silver	-	0.01	+10%	-
No Color	-	-	+20%	-

\*When used on composition resistors, indicates % failure/1,000 hrs. On film resistor, a white fifth band indicates solderable terminal.



# MONITOR CLOCKS

129

## QUARTZMATIC

### HIGH FREQUENCY BATTERY CLOCKS

Quartz crystal oscillator and sophisticated electronic circuitry are scientifically matched to produce time-keeping accuracy far superior to that of any other clock. Accurate to plus or minus one minute per year.

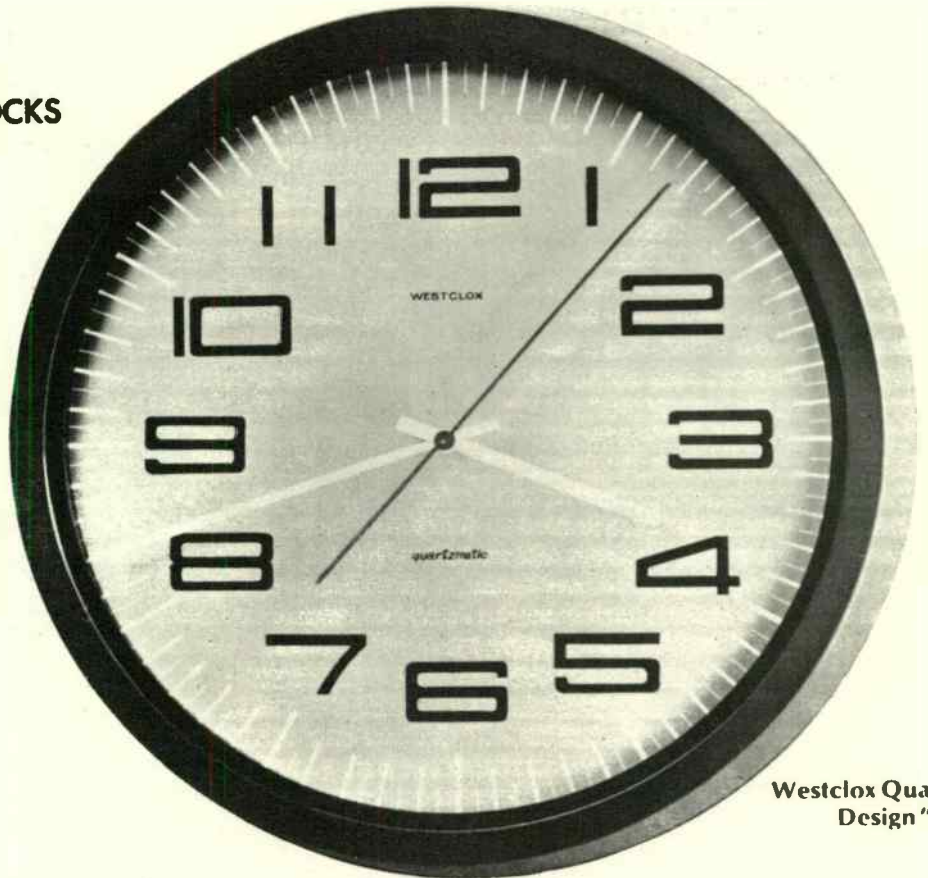
The power requirement problem is solved by a synchronous induction-type motor that operates on only 300 microwatts (300 millionths of one watt). By comparison, one synchronous electric clock type motor requires 10,000 times greater power input.

#### WESTCLOX MONITOR

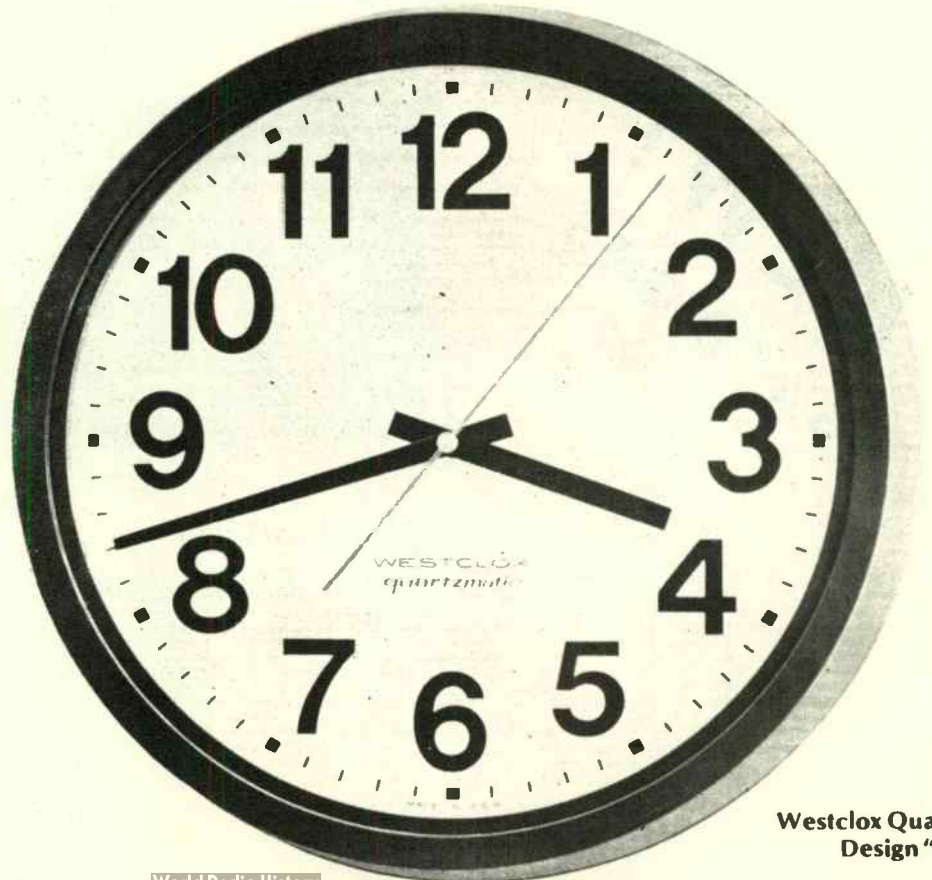
Another modern treatment, with Woodhue case and tan dial for the color-coordinated office. Contemporary numerals and graduations in charcoal and white. Glass lens over 12 in. diameter dial.

14½ in. diameter, 2¾ in. deep.

**\$59**



Westclox Quartzmatic Design "B"



#### WESTCLOX MONITOR

Super-legible, full numeral dial. Black characters on white face. Round, Woodhue finish case. Full sweep second hand. Dial protected by 12 in. diameter glass lens.

14½ in. diameter, 2¾ in. deep.

**\$59**

Westclox Quartzmatic Design "C"



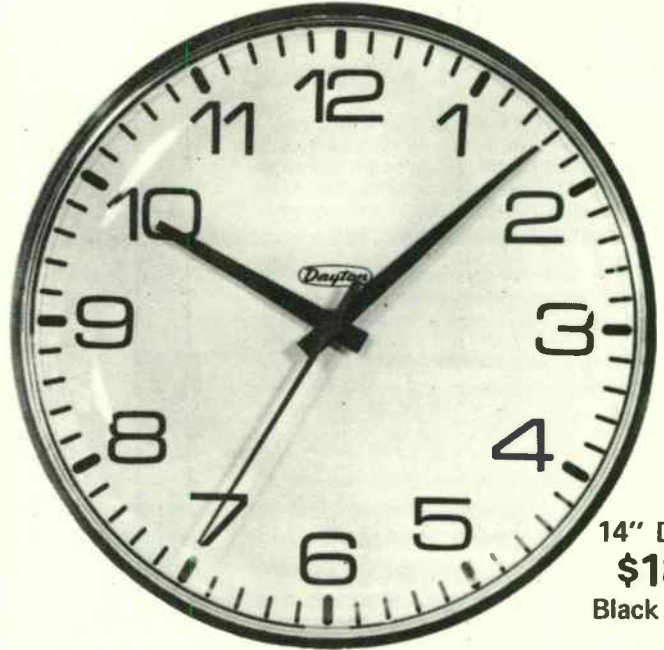
# MONITOR CLOCKS

## ELECTRIC MODELS

Performance meets Federal Spec. GG-C-446e, all state and local codes. UL listed.

### 14" DIA. DAYTON EXECUTIVE CLOCK

Large, black numerals on 12" dia. white face. Black hour and minute hands, red sweep-second hand. 14" dia. high-impact polystyrene case with concealed hanger.

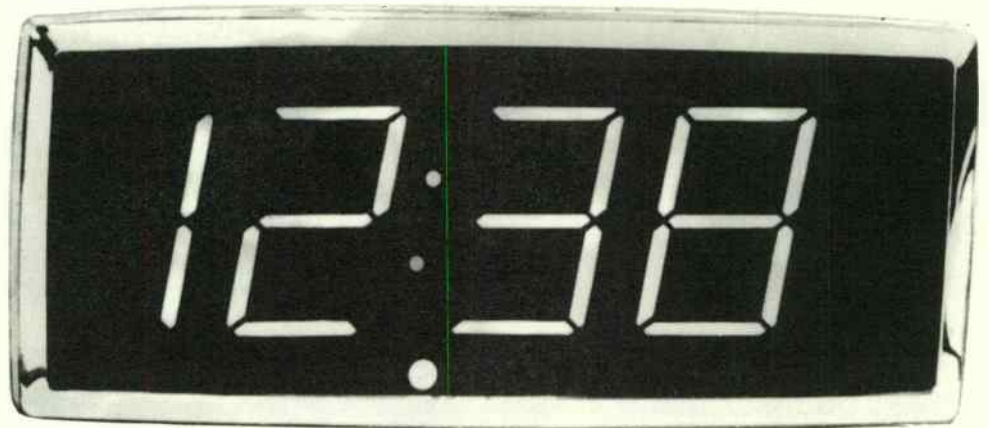


14" Diameter  
**\$18.95**  
Black or Beige

Case	Stock No.	
Black	5H350	\$18.95
Beige	5H351	\$18.95

## DIGITAL

**NEW!**  
3 1/4" DIGITS



### FEATURES:

- Unique light emitting 3 1/4" computer type numerals.
- Red time display readout can be seen at any angle.
- Time setting can be done clockwise or counter clockwise.
- Suitable for wall or panel mounting.
- 120V-60C A.C. U.L. Listed H-5 7/8 x W-14 3/4 x D-3 3/4

**KT-300**

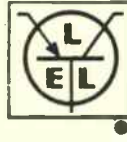
**\$69.00**

# ON AIR LIGHTS



**NEW**

FROM

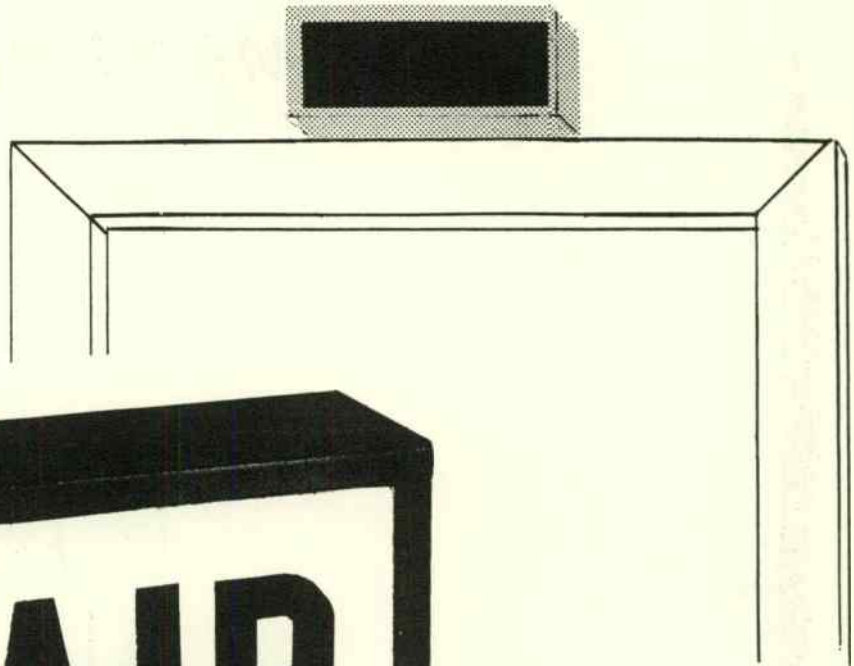


**LAUDERDALE ELECTRONIC LABS**

16 S. W. 13th Street, Fort Lauderdale, Florida 33315

Tel. (305) 764-7755

**STUDIO  
"ON AIR"  
LIGHT**



An energy conserving studio "ON AIR" light that draws only 14 watts, showing vivid red in the ambient light of the studio. Total "Black Out" when off with no lettering visible.

( 1-3 )

\$35

( 4 OR MORE )

\$29.95

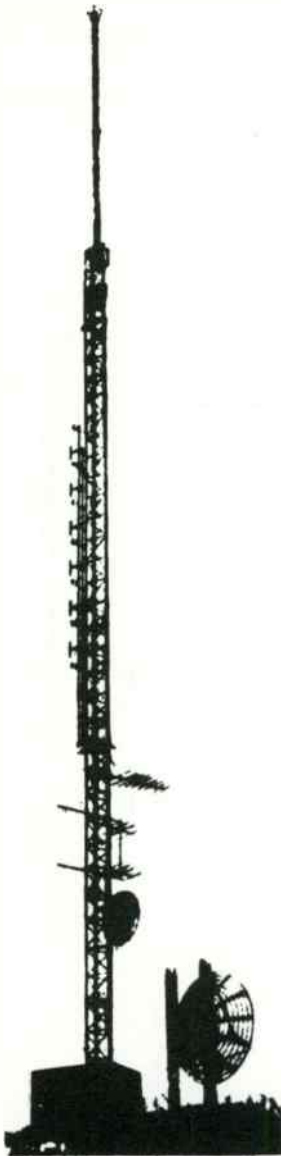
## Specifications:

### SIZE:

- 5 inches high — 10 inches long — 2½ inches deep — 2½ inches high lettering.
- Constructed of #20 gage steel. May be used 120V or 240V AC/DC.
- Power consumption **energy conserving 14 watts.**
- Window made of 1/8 thick unbreakable Plexiglas®.
- Mounting provisions for standard NEMA Electrical Hardware.
- May be "built in" or surface mounted.
- Lamps replaceable from front.
- Accepts 2 standard 7 C7 lamps. (Supplied)

® Plexiglas Trademark registered by Rohm & Haas

# BEACON – SIGNAL – SPOT LITES



***STOP CLIMBING THAT TOWER!***



PS

**GUARANTEED  
5,000 HOURS**

CATALOG NUMBER	LAMP DESCRIPTION	....BROADCAST NET.....		
		(1-11)	(12-47)	(48+)
PS-40-682	CODE BEACON, CLEAR 620W	\$18.96	\$16.90	\$15.14

**GUARANTEED 6,000 HOURS**

CATALOG NUMBER	LAMP DESCRIPTION	....BROADCAST NET.....		
		(1-11)	(12-47)	(48+)
AT-21-358	V-BEAM TRAFFIC, CL. 100W	\$1.48	\$1.36	\$1.18
AT-21-486	V-BEAM TRAFFIC, CL. 150W	\$2.11	\$1.75	\$1.68

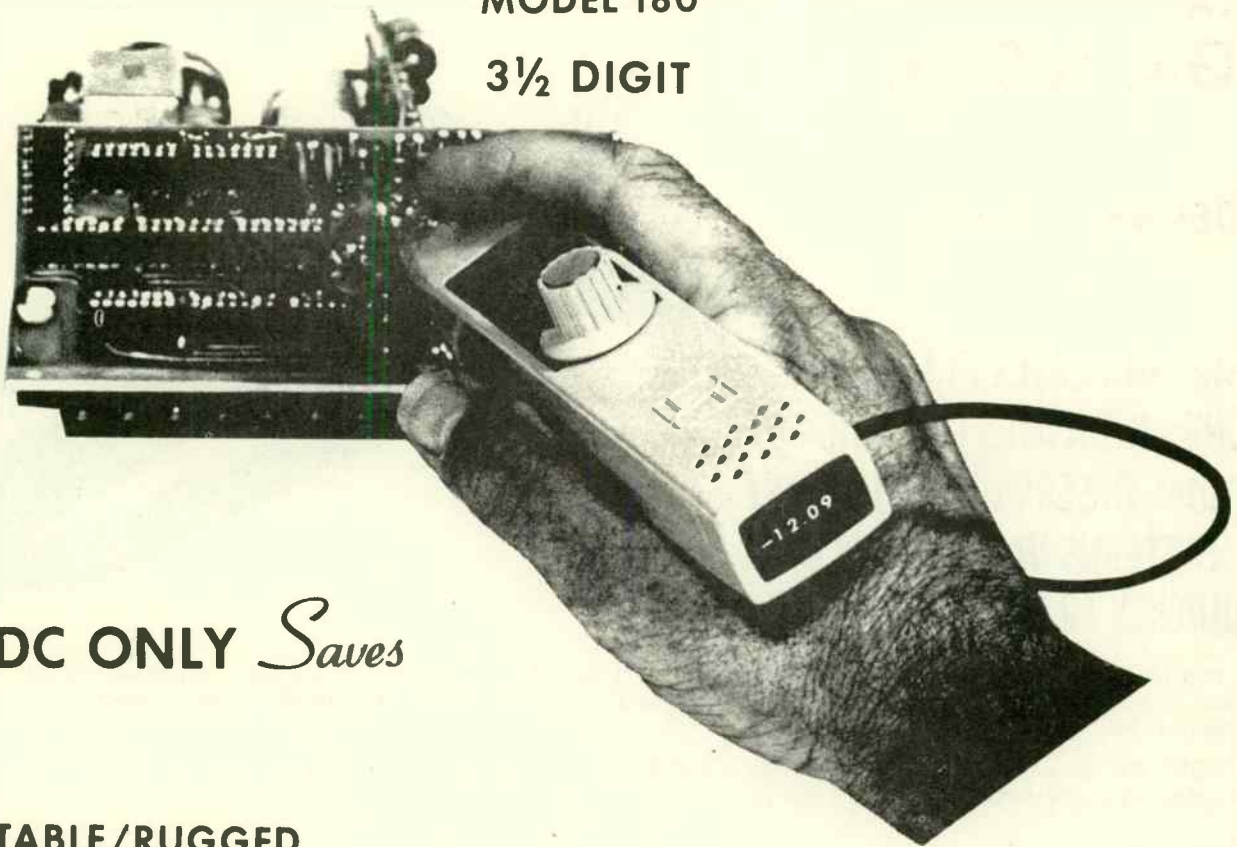
# ENGINEERING TOOLS

135

## DIGITAL DC VOLTMETER

MODEL 180

3½ DIGIT



DC ONLY *Saves*

### PORTABLE/RUGGED

A tiny self contained probe in a high impact plastic case. Weighs only 4½ ounces. Tuck it in your shirt pocket or wear it on your belt.

### EASY TO READ

Display is close to point of measurement. No need to turn your head & risk shorting the circuit.

### "PRESS TO READ" SWITCH

Extends 9 volt battery life to over 2000 readings.  
(with alkaline battery)

### AUTOMATIC POLARITY INDICATOR

### AUTOMATIC DECIMAL POINT

### AUTOMATIC OVERRANGE INDICATOR

### BUILT IN BATTERY TEST

### SPECIFICATIONS

RANGES - 0 to ± 19.99 VDC  
0 to ± 199.9 VDC  
0 to ± 1000 VDC

ACCURACY .25% of READING ± 1 DIGIT

OVERLOAD PROTECTED TO 1000V

INPUT IMPEDANCE - 1 MEG OHM

AC REJECTION - 30 DB at 50-60 Hz

RESPONSE TIME - .25 SECONDS

SIZE - 1" x 1¼" x 6¾"

MODEL 180 - DC VOLTMETER . . . . . \$85.00

MODEL 180 C - SIMULATED LEATHER CASE \$ 7.95  
(with belt strap)

## DIGITAL LOGIC TESTER

**MODEL 95**      \$24.60



**HI TONE - INDICATES HI LOGIC "1"**  
**LO TONE - INDICATES LO LOGIC "0"**  
**NO VISUAL OBSERVATIONS TO MAKE**  
**TONE PATTERNS IN LOGIC CIRCUITS**  
**ARE QUICKLY MEMORIZED**

A complete electronic tester compatible with D T L & T T L. Ideal for trouble shooting logic circuits, including computers, telephone systems, digital test equipment and desk calculators. A feather weight retractable cord permits easy handling of the probe.

**TO OPERATE** — Connect power leads to +5 V.D.C. in equipment being tested. Logic "1" or "0" may be determined by placing probe on various circuit points.

**SPECIFICATIONS:**

Power Requirements +5 V.D.C. (Power leads are reverse polarity protected.)

Input Impedence — Greater than 150K ohms. (prevents loading of circuit under test.)

Overload Input Protection — +50V.D.C. continuous (input is reverse polarity protected.)

**Logic Voltage Levels**

- 0-.8VDC — Low Tone
- .8-2.2VDC — None
- 2.2VDC & up — high tone

**Size and Weight**

7/8" Dia. 6" long, 2.5. oz.

Patent Pending

### L.E.L.

### AUTOMATION

**\*\*\*SPECIAL\*\*\*SPECIAL\*\*\*SPECIAL\*\*\***

MODEL 95	DIGITAL LOGIC TESTER	REG.	\$24.60
MODEL 100	TRANSISTOR TESTER	REG.	\$24.60
MODEL 180	DIGITAL DC VOLTMETER	REG.	\$85.00

TOTAL PURCHASED SEPERATELY....\$134.20

**\*\*\*PURCHASE ALL 3 PROBES.....\$120.00**

# ENGINEERING TOOLS

137

## NEW

## TRANSISTOR TESTER



**model 100**

\$24.60

A complete electronic tester. No additional equipment required. Designed to reach into small areas. Maximum voltage applied to the base-emitter junction by tester is 0.8 volts.

**TO OPERATE** — Set the selector switch to NPN or PNP. Place the contacts of the tester in the correct position on the printed circuit board. The tester will emit a tone indicating that the transistor under test is a functioning unit. The absence of a tone indicates a shorted or open transistor. Setting the selector switch to the wrong position will cause no harm to your circuit.

**Movable base pin — Tester will conform to  
TO-5, TO-18 & small "in line" leads**

**Extender cables —**

**may be used in conjunction with nose pins**

**Improved electronics —**

**Prevents battery drain when not in use**

**Rugged, Pocket size case**

**Tests transistors in or out of the circuit**

**Places transistor into actual operation**

**Operates upon contact**

**Clear speaker tone—**

**no visual observations to make**

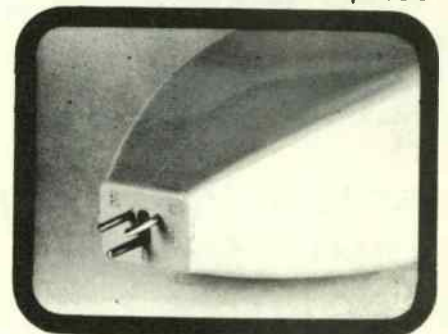
**9 volt battery included**



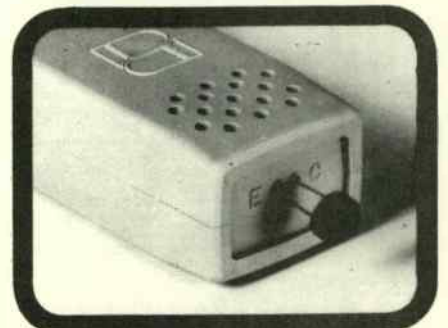
**3 EXTENDER CABLES**  
(incl. with mod. 100)



**CONTINUITY/DIODE TESTING ADAPTER**  
Model 101 \$3.95



**MOVABLE BASE PIN**



**'OUT OF CIRCUIT' TEST SOCKET**

# AUDIO SWEEP GENERATOR



MODEL 140 \$56.40

This low cost instrument provides a sine, square and triangle wave output that is variable from 0 to 2.5VPP. Once set, the amplitude remains flat over the entire frequency range ( $\pm 1\text{DB}$ ).

The generator may be operated manually as a conventional, or swept automatically to test frequency response of all station equipment. No external components or circuits are required.

- FREQUENCY RANGES — 40Hz to 1KHz & 1KHz to 20KHz
- VARIABLE OUTPUTS — SINE, SQUARE & TRIANGLE, 0-2.5V PP (into 600ohm load)
- FIXED SQUARE WAVE OUTPUT — 8V PP
- SYNC OUTPUT — POSITIVE 5V PULSE AT BEGINNING OF SWEEP
- SINE WAVE HARMONIC DISTORTION — LESS THAN 1.5%

- SQUARE WAVE RISE & FALL TIME — LESS THAN 200ns
- OUTPUT — DC COUPLED, SHORT CIRCUIT PROOF
- AUTOMATIC SWEEP SPEEDS — FAST 500 millisc., SLOW 25 sec.

- SWEEP — LINEAR
- POWER REQUIREMENTS — 110VAC, 60Hz
- SIZE — 6 3/4" x 5 1/4" x 3" WEIGHT — 1.5 Lbs.

## PRECISION STEP FREQUENCY GENERATOR

MODEL 120 \$32.50

**LESS THAN 0.5% HARMONIC DISTORTION  
OUTPUT - 600 OHM, DC COUPLED  
PORTABLE - BATTERY POWERED**



**SINE OR SQUARE WAVE  
SIX FREQUENCIES AT 1%**

The Model 120 is an audio sine and square wave generator providing six precision frequencies. The generator utilizes integrated circuitry with calibrated notch filters for each frequency. This provides a high degree of frequency stability, with no warm up time requirements. Once the gain control is set, the output amplitude remains constant across all frequency settings (within  $\pm 1\text{DB}$ ). The generator delivers 4 volts PP sine wave or 2 volts PP square wave, into a 600 ohm load, with no change in wave form. A battery test point is located on the front panel. When the 9V battery measures 6 volts or more the generator is guaranteed to be within the following specifications.

**SPECIFICATIONS:**

- Frequencies — 100 Hz, 400 Hz, 1 kHz, 3 kHz, 10 kHz, 15 kHz,  $\pm 1\%$
- Frequency change to battery voltage changes — .1%/Volt
- Output Amplitude — Sine wave 0 to 4V PP, Square wave 0 to 2V PP, (into 600 ohm load)
- Sine Wave Harmonic Distortion — 0.5% or less
- Square Wave — 250 ns rise or fall time

- Power Requirements — Two 9V batteries (included)
- Power Consumption — 10 mA nominal
- Noise Output — Less than 0.5MV rms
- Dimensions — 6-3/4" x 5-1/4" x 3" Weight — 1 lb.
- Output — DC coupled, short circuit proof

patent pending



We ship by UPS whenever we can (unless you specify otherwise) because it is faster and safer than Parcel Post. UPS does not deliver to P. O. boxes, and will not leave a parcel without a signature.



**WORLD RADIO HISTORY ELECTRONIC LABS**  
 16 S. W. 13th Street, Fort Lauderdale, Florida 33315  
 Tel. (305) 764-7755

MINIMUM ORDER  
**\$ 20**

**ORDER FORM**

TEL. No. \_\_\_\_\_ **Purchase** Order No. \_\_\_\_\_ DATE: \_\_\_\_\_

**SHIP TO:**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**Attn:** \_\_\_\_\_

**SHIP TO:**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**Attn:** \_\_\_\_\_

**TERMS:** 5% PREPAYMENT DISCOUNT - 2% 10 DAYS/NET 30 DAYS

HOW MANY	NUMBER	NAME OF ITEM	PRICE EACH		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents

"Your Order Is Your Charge Account"

TOTAL AMOUNT

1% SERVICE CHARGE per month will be added to Customer's account at the end of each month for all balances 30 days or more past due.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

\_\_\_\_\_  
 CUSTOMER SIGNATURE



we ship by UPS whenever we can (unless you specify otherwise) because it is faster and safer than Parcel Post. UPS does not deliver to P. O. boxes, and will not leave parcel without a signature.



LAUDERDALE WORLD RADIO HISTORY

16 S. W. 13th Street, Fort Lauderdale, Florida 33315

Tel. (305) 764-7755

MINIMUM

ORDER \$20

Purchase Order No: \_\_\_\_\_

DATE: \_\_\_\_\_

TEL. No. \_\_\_\_\_

SHIP TO:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Attn: \_\_\_\_\_

SHIP TO:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Attn: \_\_\_\_\_

TERMS: 5% PREPAYMENT DISCOUNT - 2% 10 DAYS/NET 30 DAYS

HOW MANY	CATALOG NUMBER	NAME OF ITEM	PRICE EACH		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents

"Your Order Is Your Charge Account"

TOTAL AMOUNT

1% SERVICE CHARGE per month will be added to Customer's account at the end of each month for all balances 30 days or more past due.

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CUSTOMER SIGNATURE













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# LAUDERDALE ELECTRONIC LABS

16 S. W. 13th Street, Fort Lauderdale, Florida 33315

Tel. (305) 764-7755

**MINIMUM**

**ORDER**

**\$ 20**

## ORDER FORM

**TEL. No.** \_\_\_\_\_ **Purchase Order No.:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

<b>BILL TO:</b>			
NAME _____			
ADDRESS _____			
CITY _____	STATE _____	ZIP _____	
<b>Attn:</b> _____			

<b>SHIP TO:</b>			
NAME _____			
ADDRESS _____			
CITY _____	STATE _____	ZIP _____	
<b>Attn:</b> _____			

**TERMS:** 5% PREPAYMENT DISCOUNT - 2% 10 DAYS/NET 30 DAYS

HOW MANY	CATALOG NUMBER	NAME OF ITEM	PRICE EACH	TOTAL PRICE	
				Dollars	Cents

*"Your Order Is Your Charge Account"*

**TOTAL AMOUNT** \_\_\_\_\_

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PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

\_\_\_\_\_  
CUSTOMER SIGNATURE



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