

GE H-Chases

TELEFAX 112

TV SCHEMATICS COVER OVER 15 MANUFACTURERS • HUNDREDS OF CHASSIS & MODEL NUMBERS • PUBLISHED BY ELECTRONIC TECHNICIAN/DEALER MAGAZINE, 1 EAST FIRST STREET, DULUTH, MINNESOTA 55802

ADMIRAL

TV Chassis:

TR2	3
NA10-1A	12
TR3	13

Color TV Chassis:

T11K10-1A	4-5
930 Series	6-7
1K18-1A,-2A	8-9
K19	10-11

AIRLINE

Color TV Models:

GCI-17821A, 41A, 51A	14-15
GEN-12442A	16-17
GCI-12102A	18-19

Color TV Chassis:

20K17-2A	20-21
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CHANNEL MASTER

Color TV Chassis:

T5001 Series	22-23
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ELECTROHOME

Color TV Chassis:

C12	24-25
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EMERSON

TV Chassis:

T2R2-1A	26
T8K3-1B	28
T2L2-1A	29
11H5	39

TV Model:

12HPO2	27
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Color TV Chassis:

30K17	30-31
32K1673-32, 1686-4, 1687-2	32-33
5K1675-2-3	34-35
30M20	36-38

GENERAL ELECTRIC

TV Chassis:

S-3	40
A-2	41
U-1	42
R-2	43
U1/UA	44
BA	45

Color TV Chassis:

C-2/L-2	46-47
H-4	48-49
N-1	50-51
L-T2	52-53
JA	54-55

MAGNAVOX

TV Chassis:

T946 Series	58
T959	59
T960	60
T961	61
T966	76

Color TV Chassis:

T952	56-57
T956	62-63
T962	64-65
T958	66-67
T957	68-69
T974	70-71

T979	72-73
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T947	74-75
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MOTOROLA

TV Chassis:

TS-467	77
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Color TV Chassis:

TS-938 Series	78-79
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OLYMPIC

TV Chassis:

9P94 Series	80
3P70	81

PHILCO-FORD

TV Chassis:

21HT15	82
21L23A	83
21ST31V	95

Color TV Chassis:

20QT75	84-85
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22QT79	86-87
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22LT45/R	88-89
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20ST30AV	90-91
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3CY91	92-94
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RCA SALES CORPORATION

TV Chassis:

KCS 186 Series	96
KCS 172 Series	97
KCS 188 Series	118

Color TV Chassis:

CTC 46 Series	98-99
CTC 55 Series	100-101
CTC 50 Series	102-103
CTC 59 Series	104-105
CTC 51	106-109
CTC 54 Series	110-113
CTC 48 Series	114-117

SYLVANIA

TV Chassis:

B15-1-2	119
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A10-1	130
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Color TV Chassis:

D15-3,-5	120-121
D19-1,-2,-3	122-123
D17-1-2	124-125
D18,-1,-2,-3	126-127
EO2-1,-2	128-129

ZENITH

TV Chassis:

19CB36	131
12CB12X	150

Color TV Chassis:

25CC55	132-133
19CC19	134-135
14CC14Z	136-137
19DC20	138-139
12B8C15, 12B9C16	140-141
12B14C50	142-143
14DC15, 16	144-145
23DC14	146-147
25DC57	148-149

TEKIFAX 112

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Duluth, Minnesota 55802

ADMIRAL

Color-TV Chassis
T11K10-1A

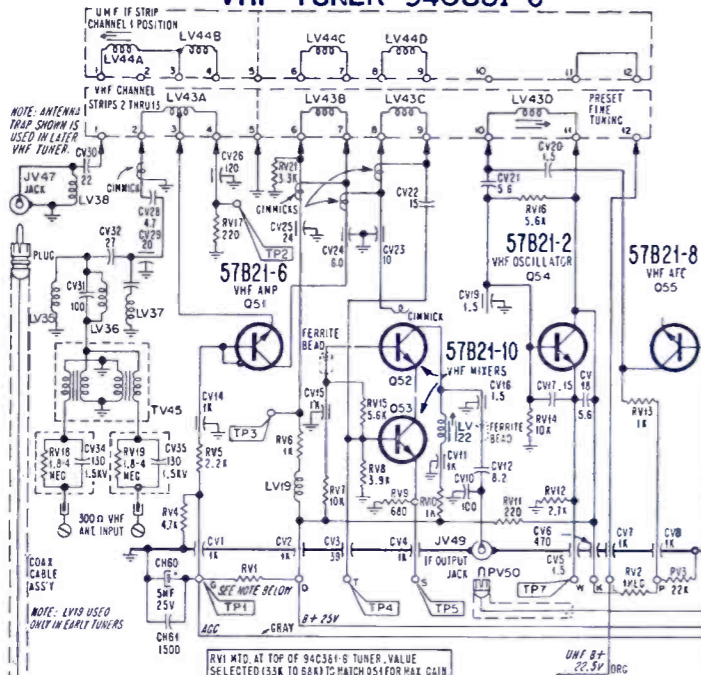
ELECTRONIC TECHNICIAN/DEALER TEKFAK

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
RE54	vert lin	
RE55	green drive	triple control
RE56	blue drive	triple control
RF37	60K, HV adjust control	75A101-9
RF76	blue screen	
RF77	green screen	triple control
RF78	red screen	triple control
RH27	500Ω, master brite	75A135-11
RH28	2000Ω, brite control	75A140-1
RH29	350Ω, contrast control	75A140-3
RH30	100K, vert hold control	75A140-2
RH31	3.4M, vert size control	75A135-6

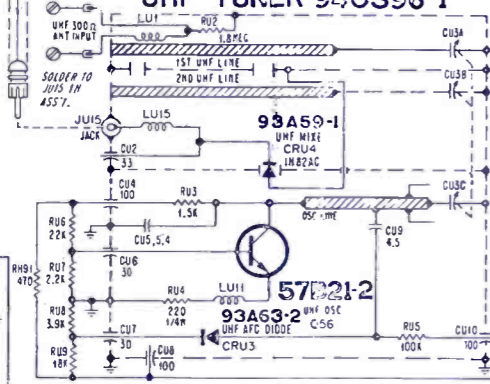
RH34	500Ω, slide tint control	75A149-1
RH35	2000Ω, AGC control	75A135-7
RH36	200Ω, AGC delay control	75A135-21
RH37	10K, color killer control	75A135-10
RH39	500Ω, color slide control	75A149-1
RH42	50K, volume slide control	75A149-2
RH56	thermistor	61A27-1
RH69	voltage dependent	61A46-7
RH87	400Ω, reactance control	75A135-19
ZE23	vert integrator	63A6-29
CH10A	200μf, 350v	
CH10B	160μf, 350v	
CH10C	80μf, 350v	
CH10D	10μf, 350v	

CH14A	2000μf, 40v	electrolytic	67A15-401
CH14B	2000μf, 40v	electrolytic	67A15-401
LA49	video detector		72A316-10
LA81	41.25MHz trap		72A316-12
LB2	4.5MHz coil		72A317-1
LC16	chroma input coil		72A329-1
LD52	1μh, 3.58MHz, output coil		73A55-37
LF24	horiz hold control		94A351-1
TA59	4.5MHz trap		72A216-7
TB20	ratio xformer		72A318-1
TC14	burst xformer		72A325-3
TC29	bandpass xformer		72A327-1
TH4	power xformer		80A108-6
TH18	horiz output xformer		79A158-1

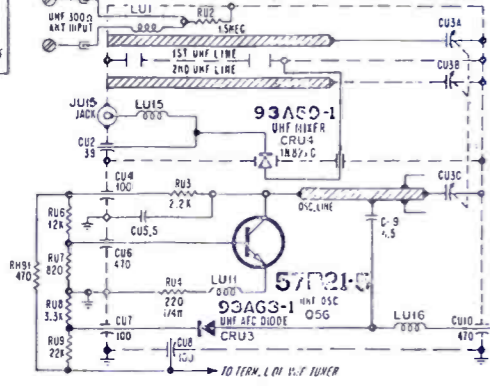
VHF TUNER 94C381-6



UHF TUNER 94C396-1

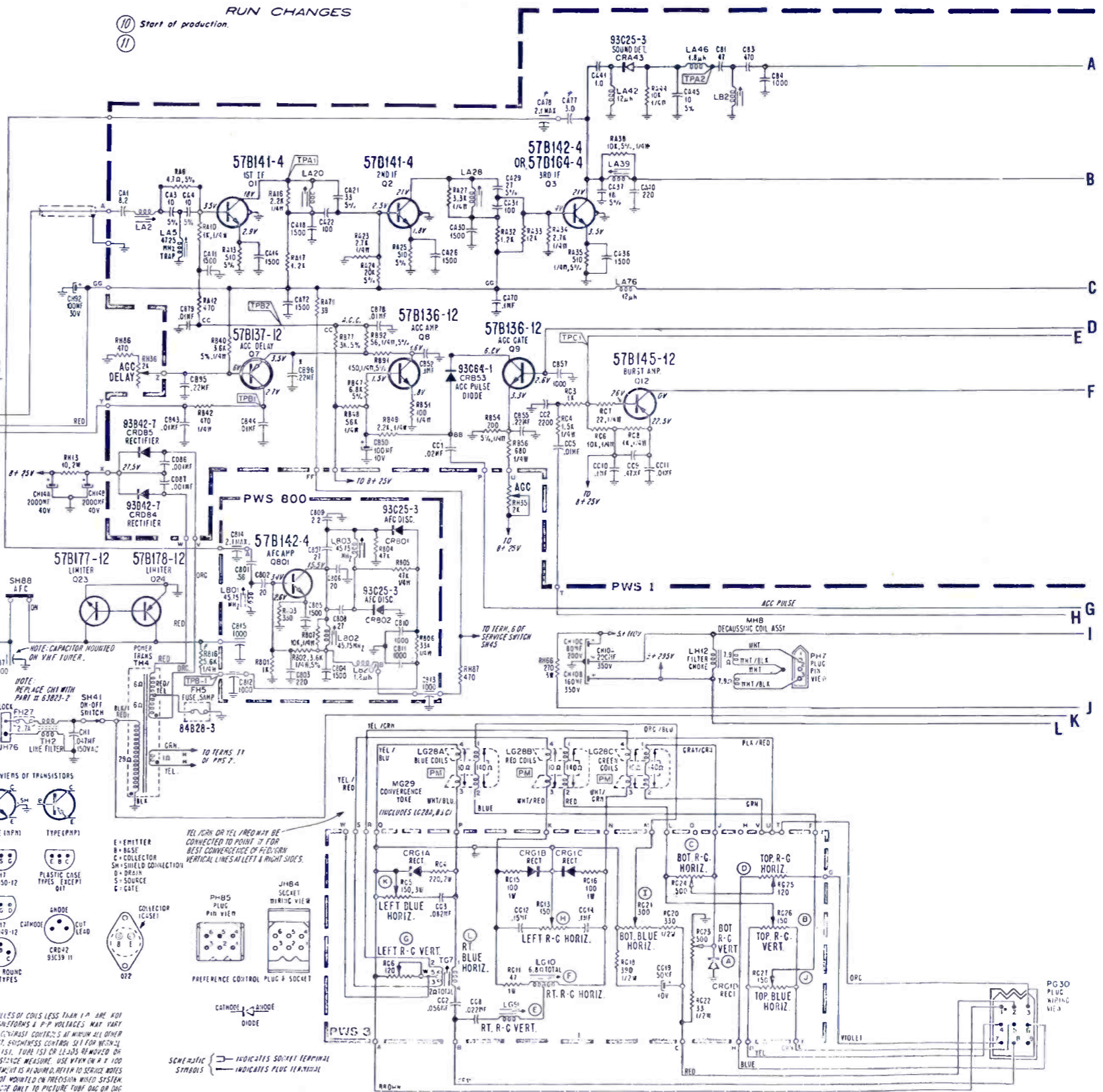


UHF TUNER 94C397-1 ALTERNATE UHF TUNER



RUN CHANGES

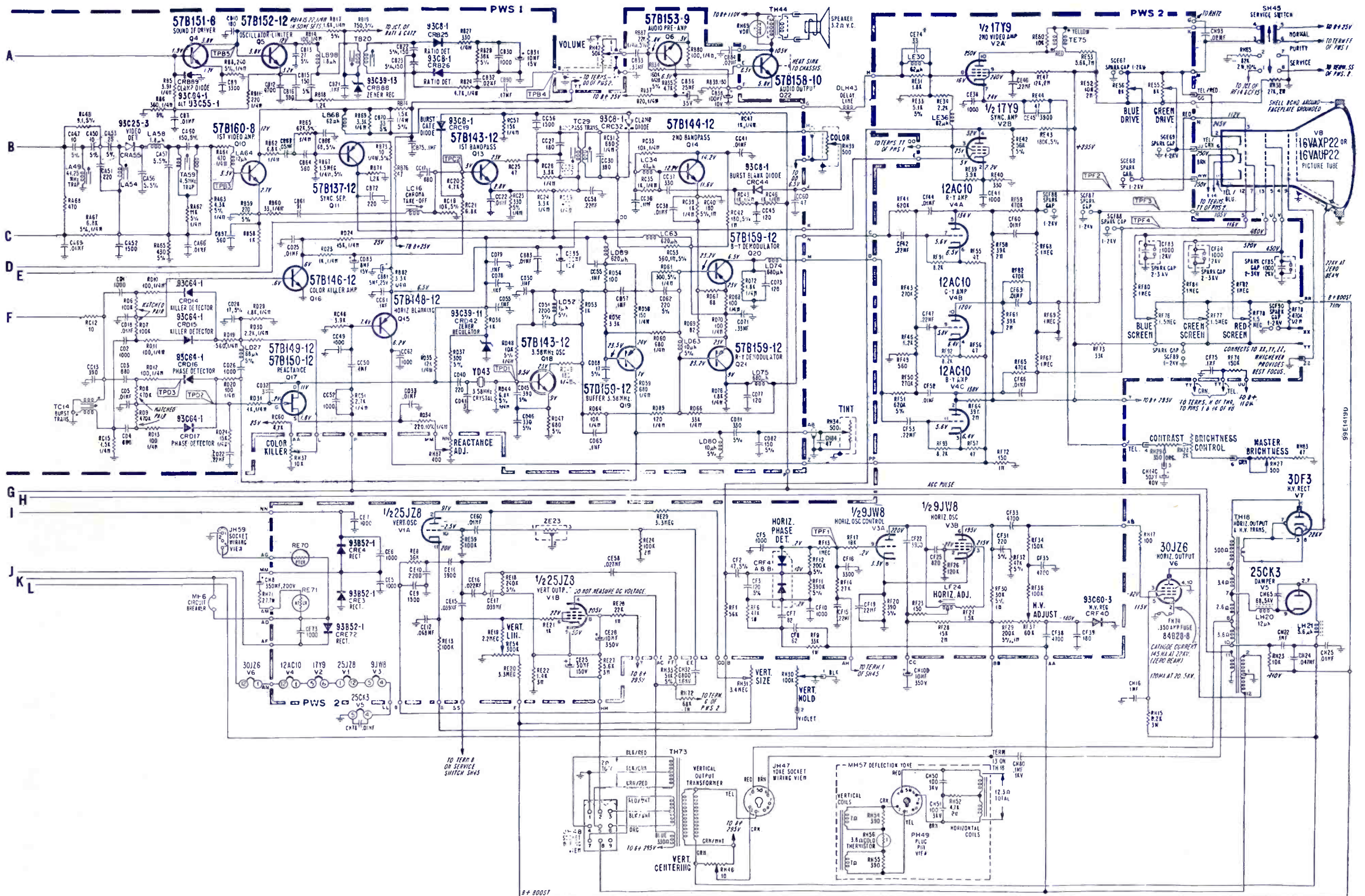
- 10 Start of production.
- 11



SCHEMATIC NOTES: RESISTOR VALUE: 1/2WAT, 10% CAPACITOR VALUE IN PICO FARADS UNLESS OTHERWISE INDICATED. RESISTOR VALUES OF COILS LESS THAN 1 μH ARE NOT SHOWN. IN INDICATES GATES PER SECOND VOLTAGE & FREQUENCY. DC VOLTAGES TAKEN WITH VTM WITH RESPECT TO CHASSIS GROUND AT 170V AC LINE UNLESS OTHERWISE NOTED. VOLTAGES MAY VARY DEPENDING ON ENVIRONMENT OF TEST EQUIPMENT & PLUGS. TOLERANCES: RESISTORS 1% UNLESS OTHERWISE NOTED. CAPACITORS 5% UNLESS OTHERWISE NOTED. SENSITIVITY: 0.1 μV PER CHANNEL. CONTROLS IN NORMAL OPERATING POSITION. REVERSES: SUPER WITH TRANSMITTED MODES. SIGNAL PRODUCING 5 TO 10 V RMS. AT TEST POINT VPP. CONTRAST CONTROL: 50% FOR NORMAL PICTURE. TRANSMISSION CAUTION: TO AVOID DAMAGE TO TRANSDUCERS DO NOT USE PROBE TIP TO TOUCH CHASSIS GROUND. DO NOT USE PROBE TIP TO TOUCH CHASSIS GROUND OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORTS BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT USE AN ORDINARY DIMMER FOR RESISTANCE MEASURE. USE VTM ON A 100 RANGE OR HIGHER. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTORS OR LEADS. ACC CAUTION: DO NOT DISTURB FACTORY SETTING OF AGC CONTROL. IF AGC ADJUSTMENT IS REQUIRED, REFER TO SERVICE NOTES IF NECESSARY TO DISTURB AGC ADJUSTMENT MARK ROTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING. COMPONENTS NOT MOUNTED ON PRECISION WIRE SYSTEM. WARNING: USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ELECTRICAL SHOCK & DAMAGE TO TEST EQUIPMENT. ARE AND ANGE ONLY TO PICTURE TUBE OR OR GROUNDING SPRING. CHASSIS IS CONNECTED DIRECTLY TO POWER LINE. PART MOUNTED ON BOTTOM OF PRECISION WIRE SYSTEM.

- TH44—audio output xformer
- TH73—vert output xformer
- FH5—.5a fuse
- FH27—2.7a fuse
- FH74—.35a fuse
- MH6—circuit breaker
- SH41—on/off/switch
- tuner, VHF, T11K10-1A
- T12K 10-1B
- 79A141-3
- 79A131-2
- 84A28-3
- 84A28-9
- 84A28-8
- 84A17-13
- 77A201-1
- 94A381-6
- 94A344-2

ADMIRAL
Color-TV Chassis
T11K10-1A

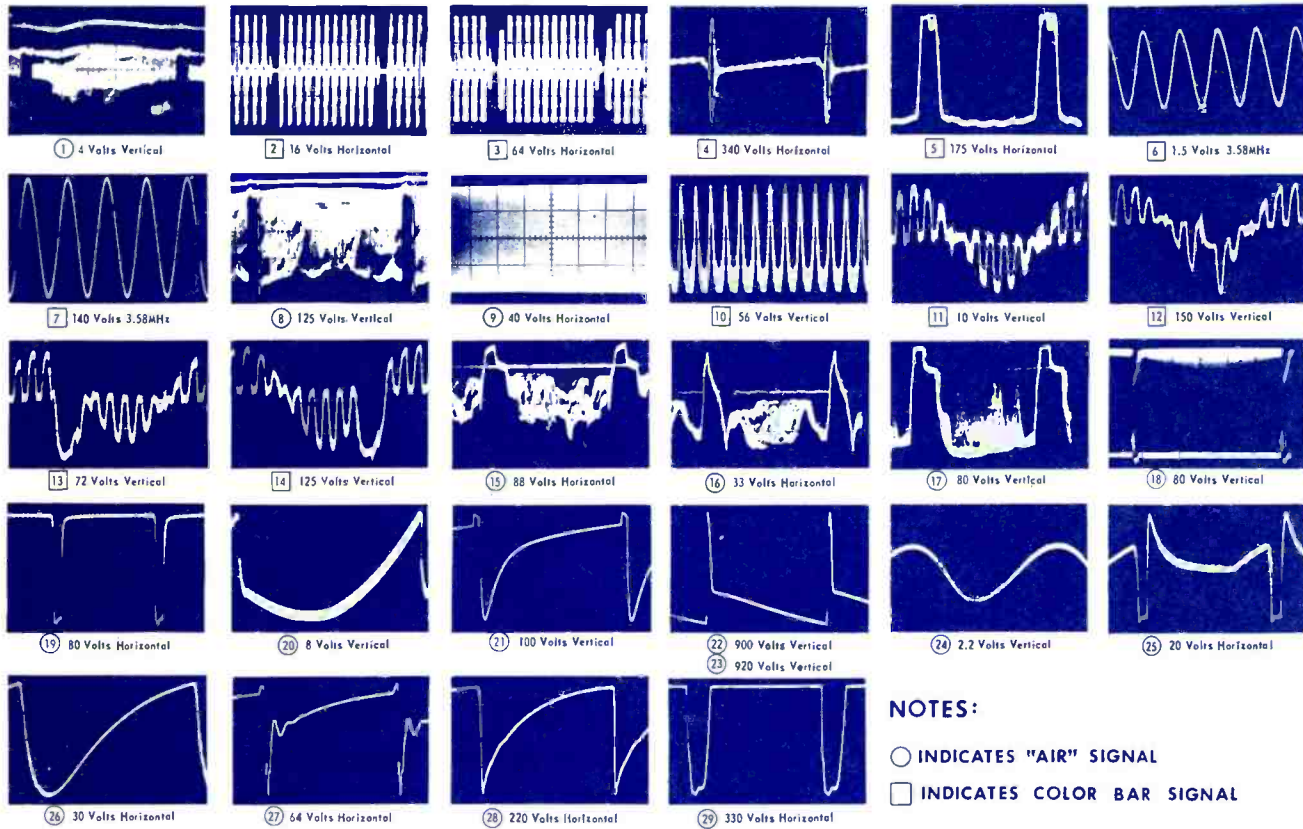


B+ 800ST

ADMIRAL

Color TV Chassis
930 Series

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X

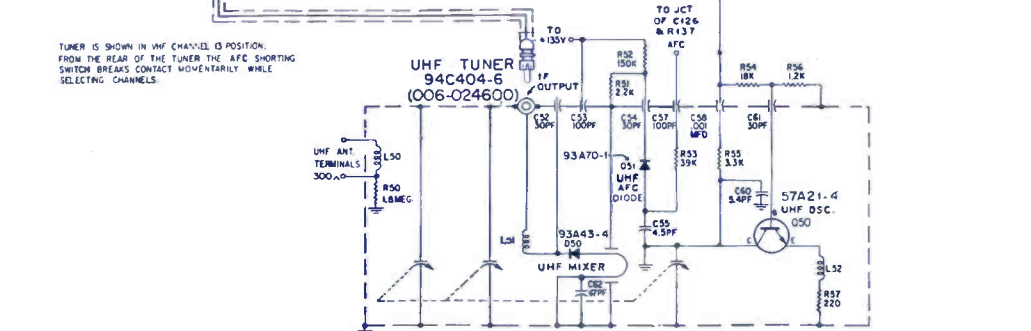
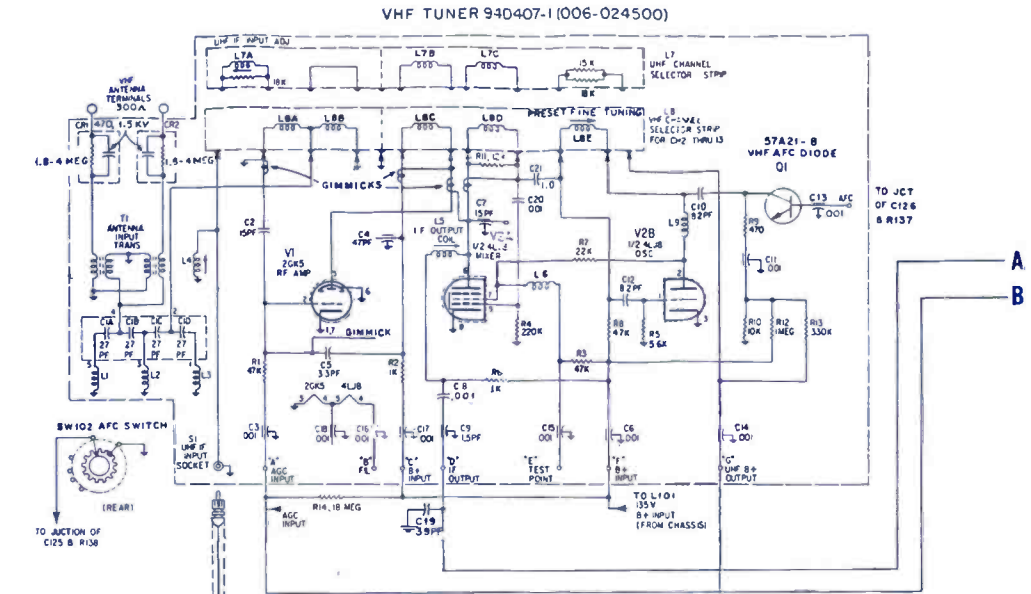


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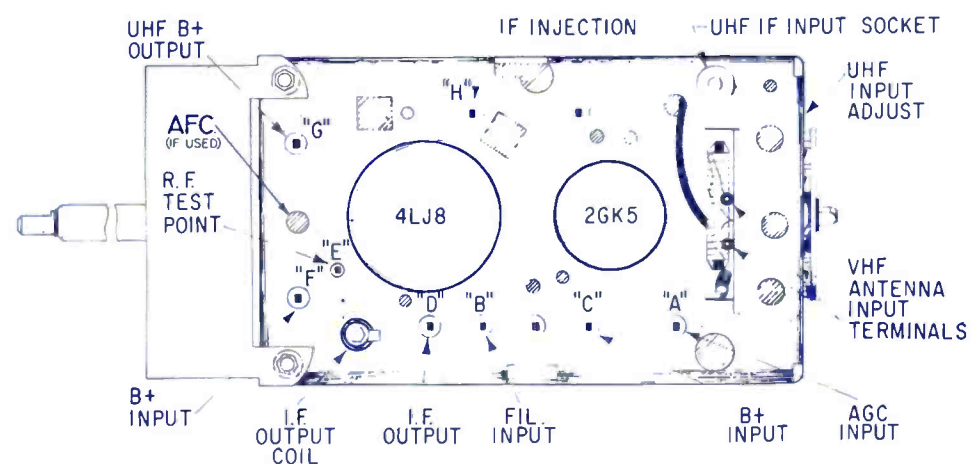
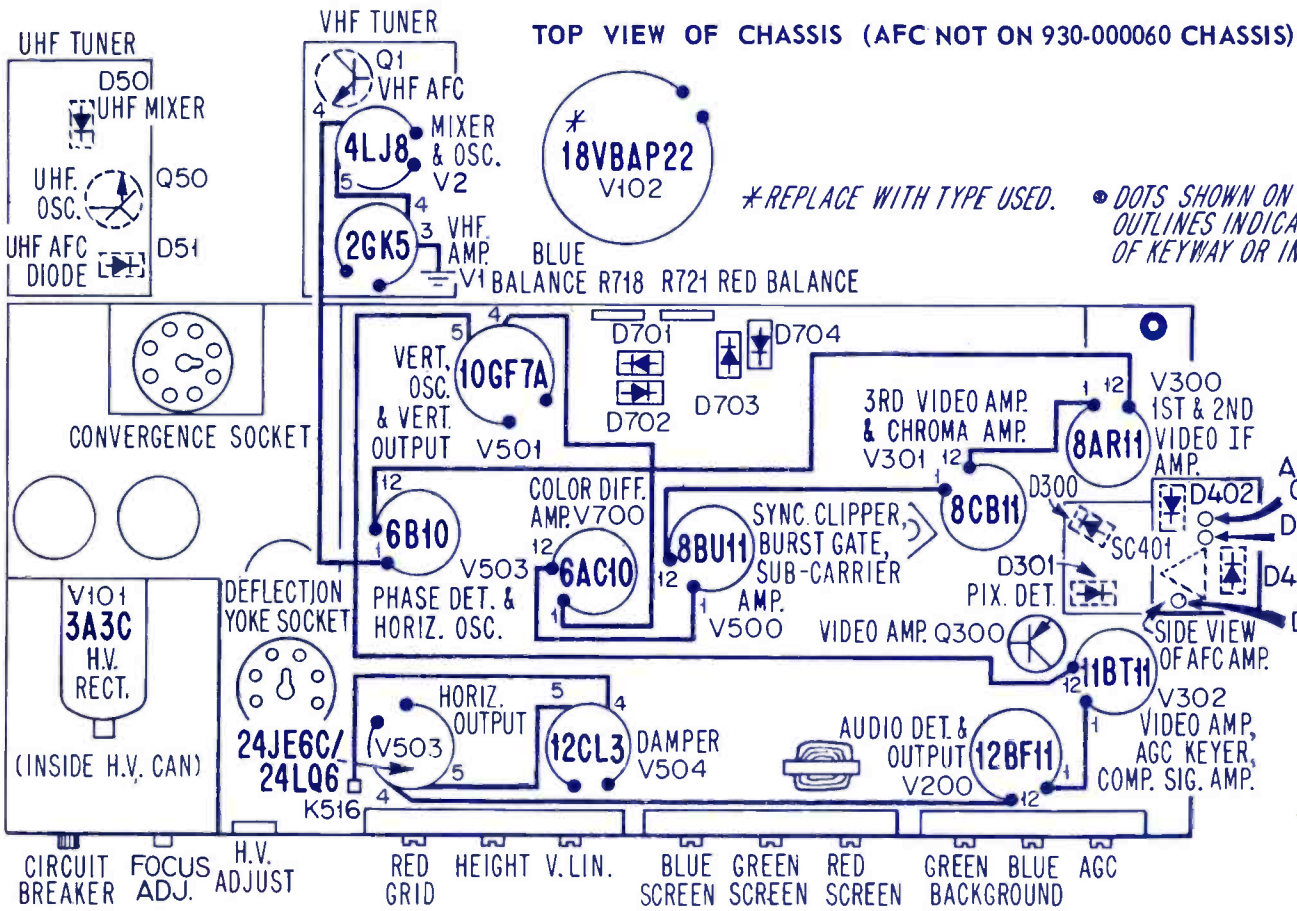
- INDICATES "AIR" SIGNAL
- INDICATES COLOR BAR SIGNAL

MODEL CHART				
MODEL	COLOR	SIZE	TUNER	CHASSIS
8T391C	Walnut	*18"	94A407-1 VHF 94A404-6 UHF	930-00030
8T760	Black		94A416-1VHF 94A402-1 UHF	930-00060
8T771C	Walnut			

*Picture diagonal measurement.

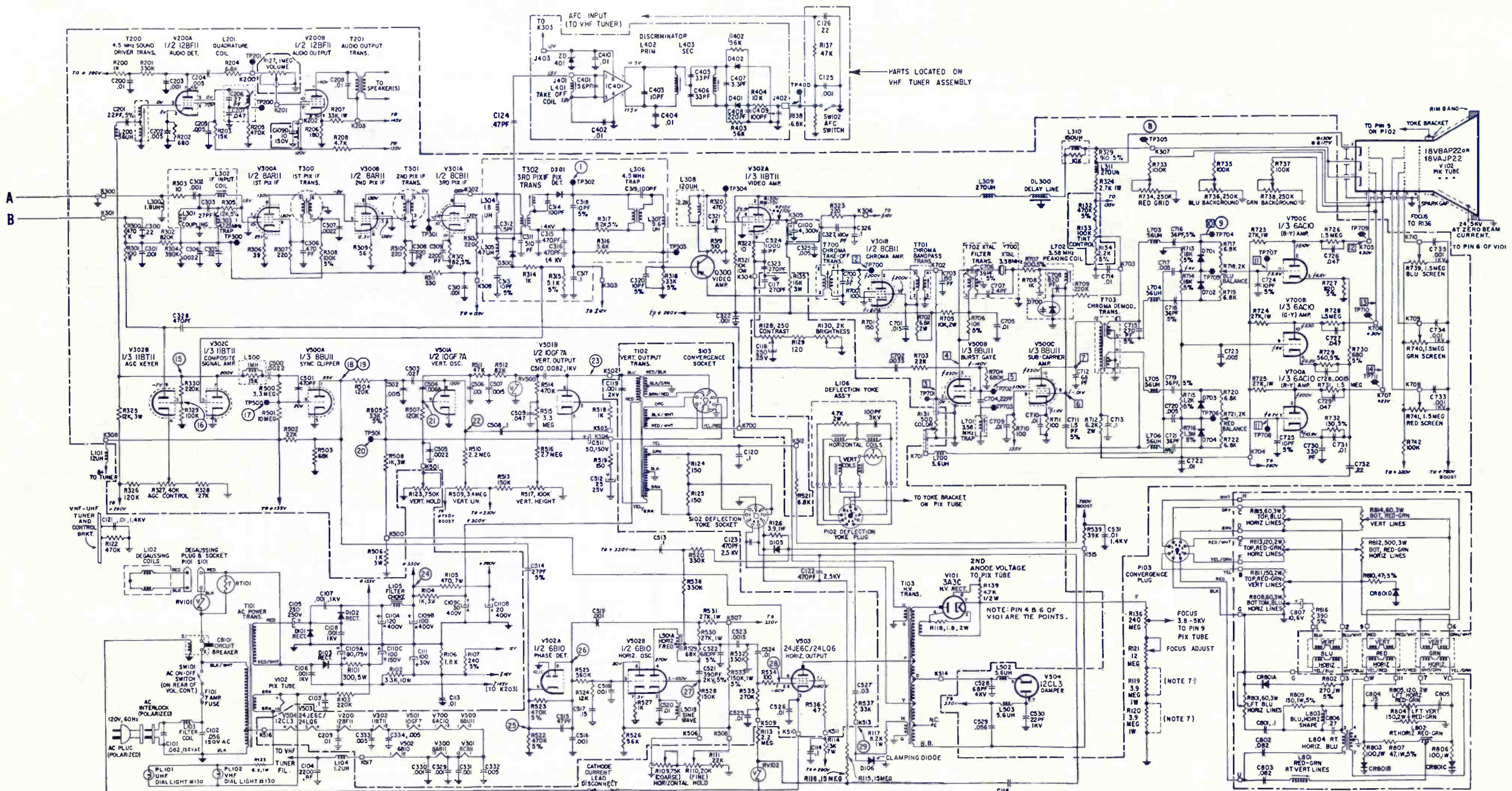


TUNER IS SHOWN IN UHF CHANNEL 13 POSITION. FROM THE REAR OF THE TUNER THE AFC SHORTING SWITCH BREAKS CONTACT MOMENTARILY WHILE SELECTING CHANNELS.



ADMIRAL
Color TV Chassis
930 Series

SYMBOL	DESCRIPTION	ADMIRAL PART NO.			
R109	75K horiz control, coarse	75A156-1	R509	3.4M vert lin control	75A155-5
R110	20K horiz control, fine	75A156-1	R517	100K vert height control	75A155-5
R123	750K vert control	75A156-1	R734	250K red background control	75A155-5
R121	12M focus adj control	75A157-14	C109A	80 μf/175V electrolytic	67A76-1
R127	1M on/off volume control	75A152-1	C109B	100 μf/400V electrolytic	67A76-1
R128	250Ω contrast control	75A158-1	C109C	30 μf/400V electrolytic	67A76-1
R130	2K bright control	75A158-1	C109D	10 μf/150V electrolytic	67A76-1
R131	500Ω color control	75A149-7	C110A	120 μf/400V electrolytic	67A75-1
R133	100K tint control	75A149-6	C110B	20 μf/400V electrolytic	67A75-1
R136	240M focus bleeder	61A83-1	C110C	100 μf/150V electrolytic	67A75-1
R327	40K AGC control	75A155-6	C110D	4 μf/400V electrolytic	67A75-1
R736	250K blue background control	75A155-6	IC401	integrated circuit	58A1-1
R738	250K green background control	75A155-6	DL300	delay line coil	72A372-1
			L106	deflection yoke	94A405-1
			L201	quad coil	72A366-1
			L303	47.25 MHz trap coil	72A359-3
			L306	4.5MHz trap coil	72A367-1
			L501A, B	horiz freq/sine wave coil	72A373-1
			L701	3.58MHz trap coil	72A363-1
			L702	3.58MHz peaking coil	72A364-1
			T101	power xformer	80A113-2
			T102	vert output xformer	79A153-1
			T103	HV xformer	79A154-1
			T200	4.5MHz sound driver xformer	72A361-1
			T201	audio output xformer	79A151-1
			T700	chroma take-off xformer	72A368-1
			T701	chroma bandpass xformer	72A358-1
			T703	chroma demodulator xformer	72A357-1
			C8101	circuit breaker	84A31-1
			F101	7a fuse	84A30-1



NOTES:
 1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
 2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
 3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
 4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED & CHASSIS GRN, WITH NORMAL SIGNAL INPUT.
 (W) INDICATES VOLTAGE READING TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULL CW).
 (W*) INDICATES VOLTAGE READING TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULL CCW).
 † INDICATES VOLTAGE READING TAKEN WITH COLOR SIGNAL.
 5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.

6. LINE VOLTAGE INPUT SET AT 120VAC
 7. INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
 (O) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.
 † JUMPER REMOVED AT FACTORY IF NECESSARY TO SET FOCUS CONTROL RANGE.
 (J) INDICATES THE VOLTAGE WILL VARY WITH FINE TUNING SETTING FROM 0V TO 3V.
 NUMBERS IN CIRCLES OR SQUARES IDENTIFY WAVEFORM OBSERVATION LOCATIONS.
 CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.
 CHASSIS GROUND.

ADMIRAL

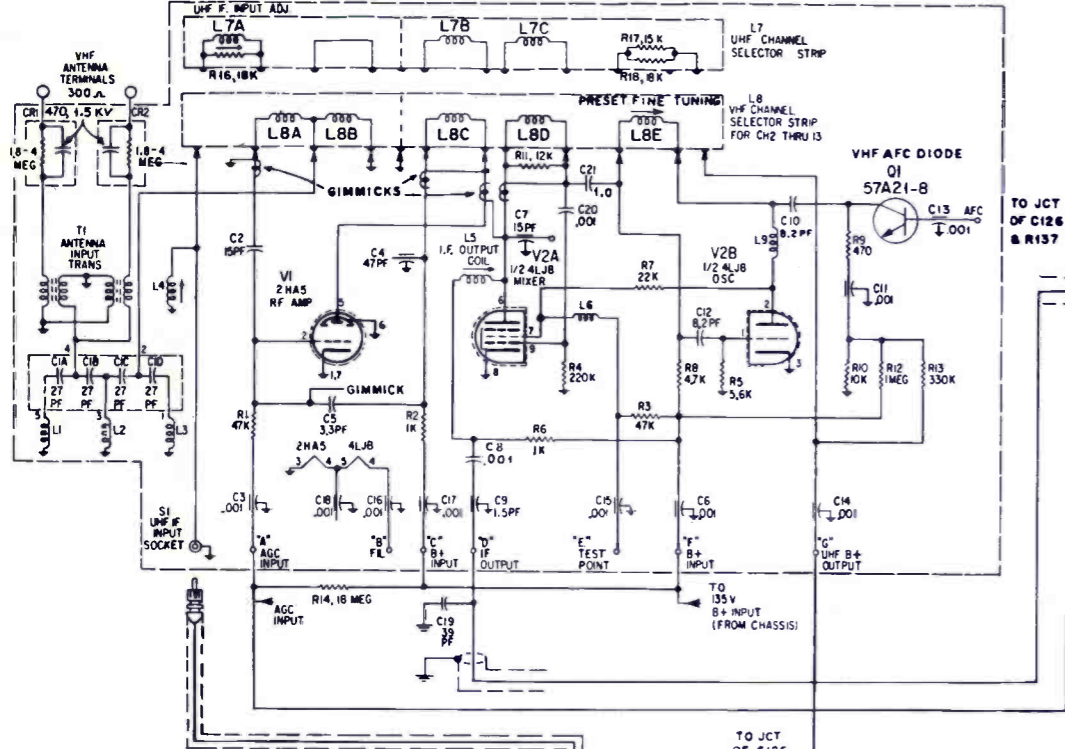
Color TV Chassis
1K18-1A,-2A

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

- NOTES: VHF & UHF DIAL LIGHTS NOT IN 1K18-2A CHASSIS.
 1. ALL RESISTORS ARE 1/2 WATT, 10% UNLESS OTHERWISE NOTED.
 2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
 3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
 4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED & CHASSIS GRN, WITH NORMAL SIGNAL INPUT.
 (*) INDICATES VOLTAGE READING TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULL CW).
 (**)(*) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULL CCW).
 † INDICATES VOLTAGE READING TAKEN WITH COLOR SIGNAL.
 5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.

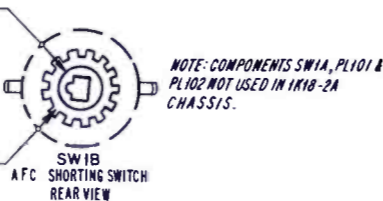
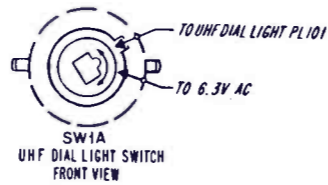
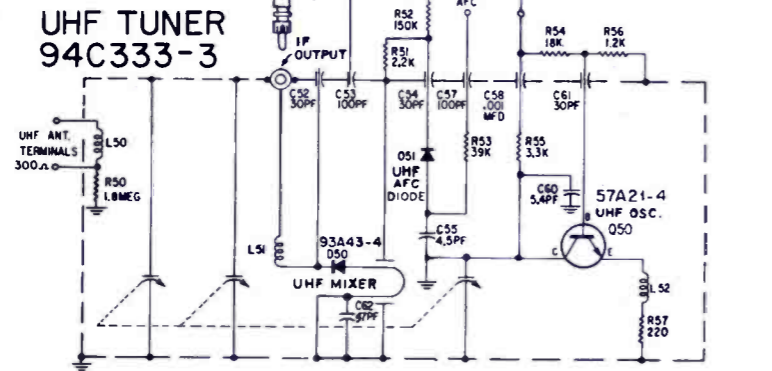
6. LINE VOLTAGE INPUT SET AT 120VAC
 ‡ INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
 (O) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.
 7. JUMPER REMOVED AT FACTORY IF NECESSARY TO SET FOCUS CONTROL RANGE.
 8. (/) INDICATES THE VOLTAGE WILL VARY WITH FINE TUNING SETTING FROM 0V TO ± 3V
 NUMBERS IN CIRCLES OR SQUARES IDENTIFY WAVEFORM OBSERVATION LOCATIONS.
 CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.
 CHASSIS GROUND.

VHF TUNER 94C421-1



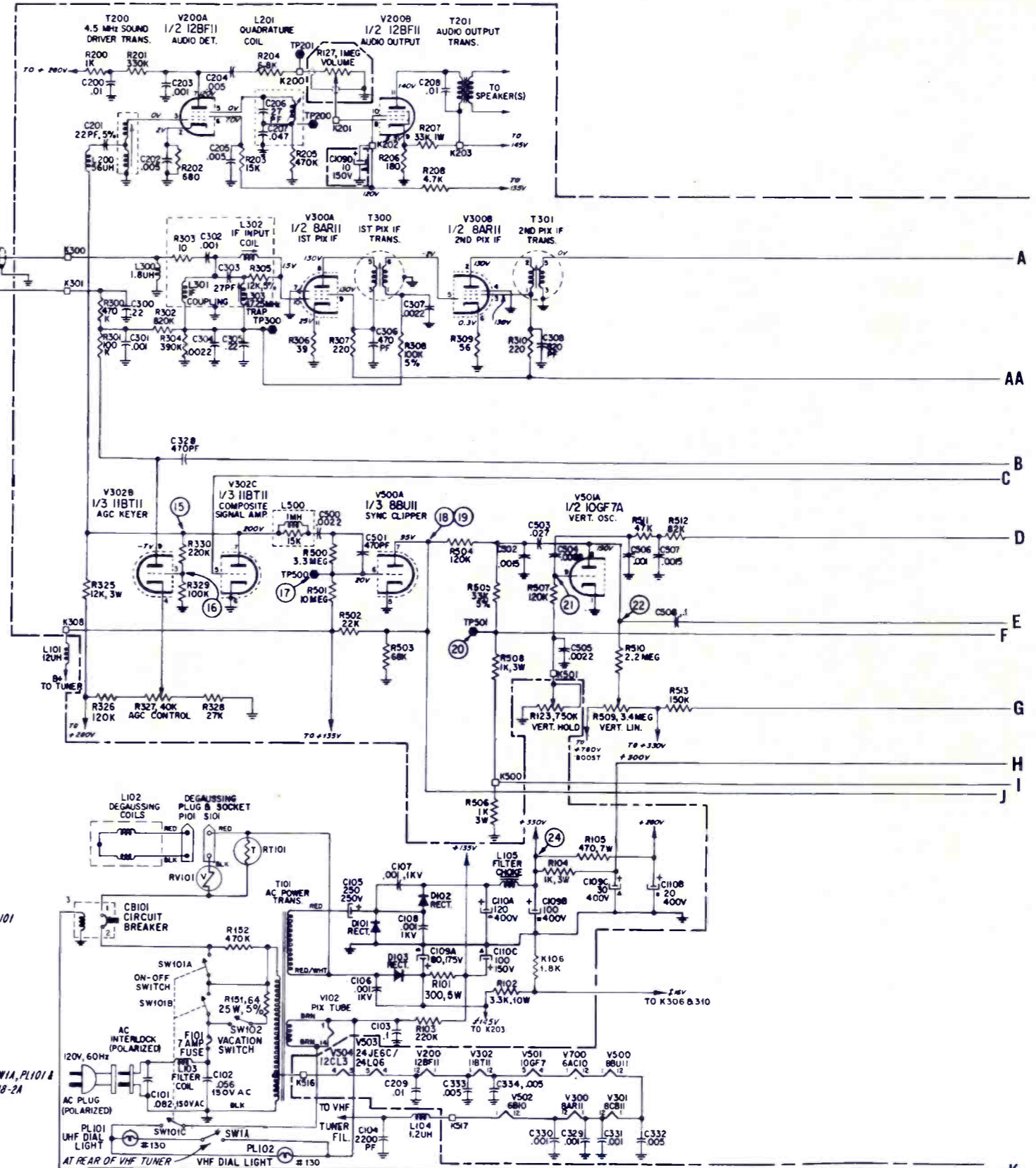
TUNER IS SHOWN IN VHF CHANNEL 13 POSITION. FROM THE REAR OF THE TUNER THE AFC SHORTING SWITCH BREAKS CONTACT MOMENTARILY WHILE SELECTING CHANNELS.

UHF TUNER 94C333-3

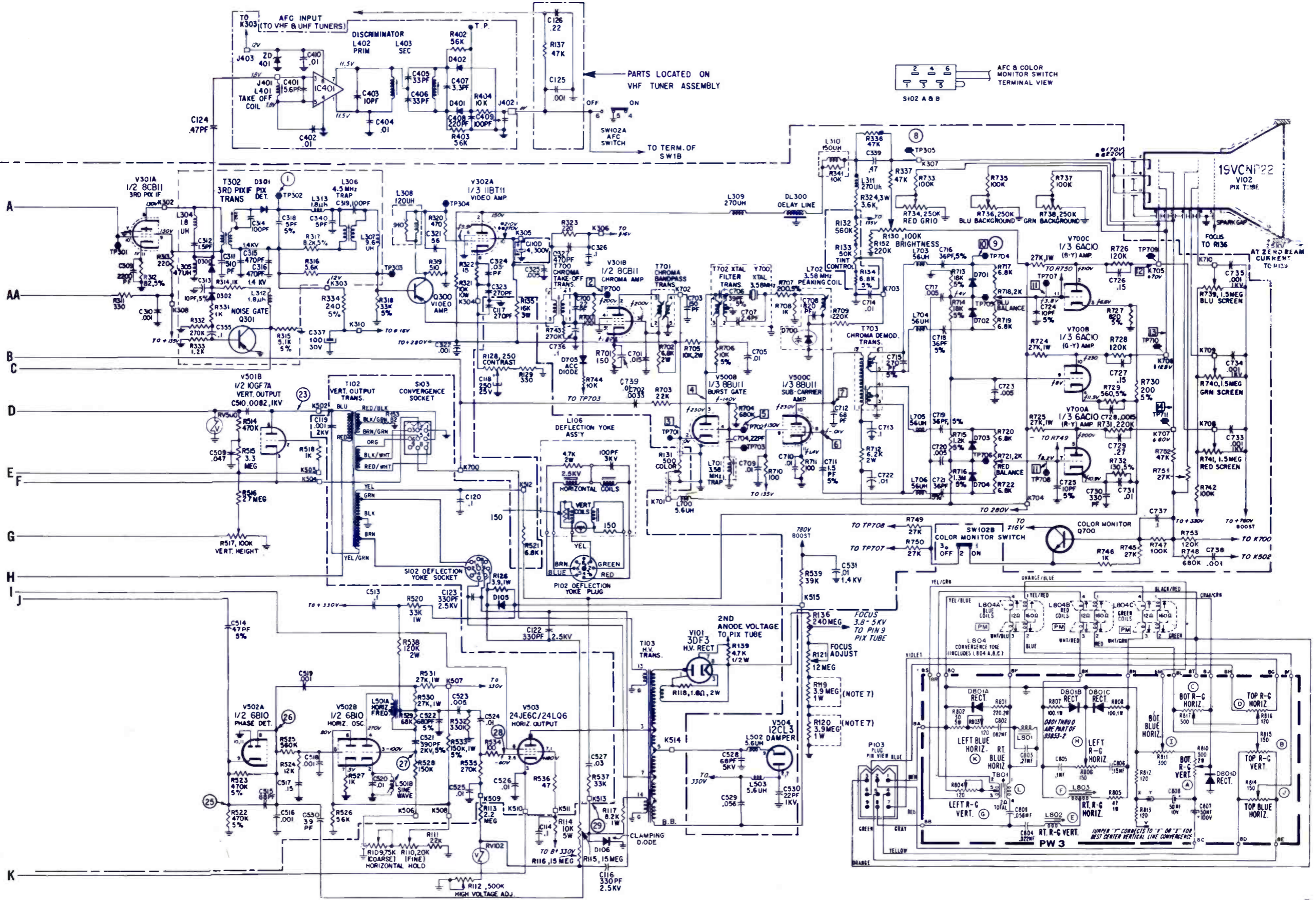


RUN CHANGES

10 Start of production.



ADMIRAL
Color TV Chassis
1K18-1A,-2A



ADMIRAL

Color-TV Chassis
K19

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10K, 1/2 WATT; CAPACITANCE VALUES FOR HIGHER ARE IN PF; CAPACITANCE VALUES LESS THAN 1 ARE IN UF; INDUCTANCE VALUES ARE IN UH.
 ⊕ INDICATES CHASSIS GROUND, ⊕ CABINET GROUND. Hz - CYCLES PER SECOND.

DC VOLTAGES ARE MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 120V AC & ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH VHF TUNER SET AT UNUSED CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.
 # INDICATES THESE VOLTAGES MAY VARY WITH VIDEO CONTENT OF THE PROGRAM BEING RECEIVED AND ARE AVERAGE READINGS.

TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR(S), TUBE(S) OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC 2ND ANODE LEAD TO CHASSIS GROUND. DISCHARGE 2ND ANODE ONLY TO

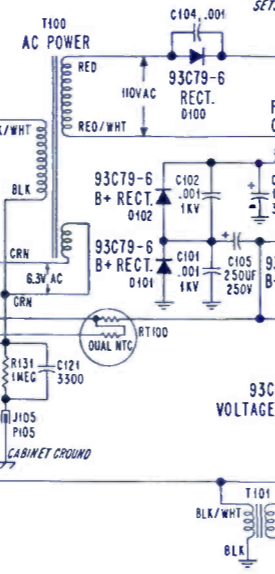
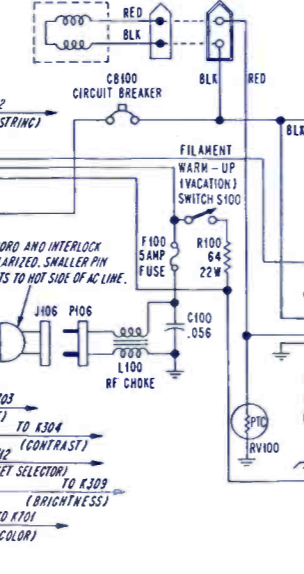
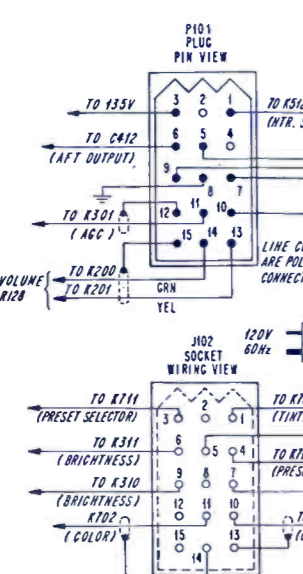
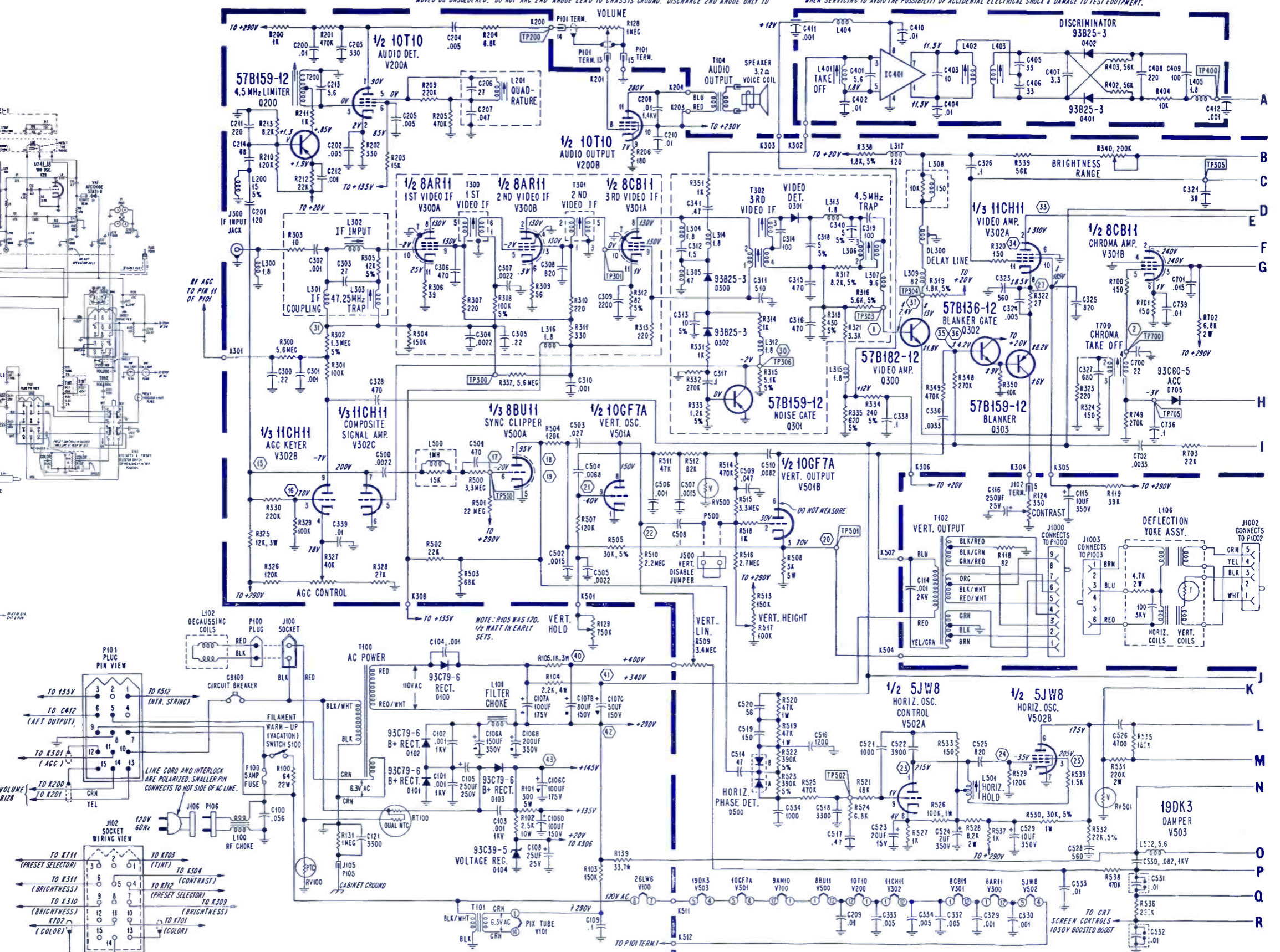
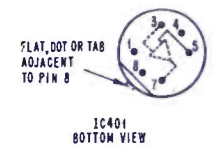
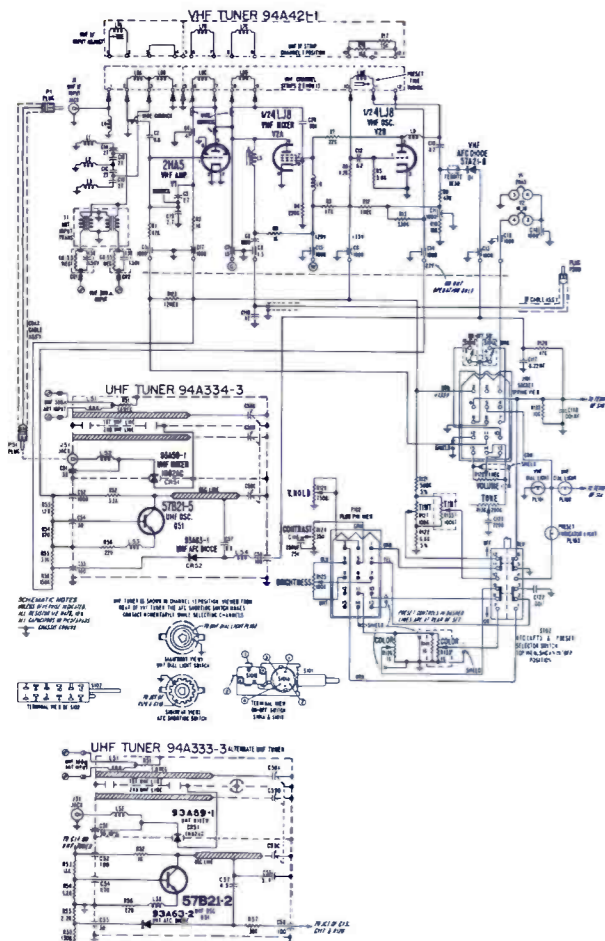
PICTURE TUBE DAG OR DAG GROUND. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS. DO NOT USE AN ORDINARY DIMETER FOR RESISTANCE MEASUREMENT, USE VTVM ON R-100 RANGE OR HIGHER.

Ⓜ RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.

Ⓟ SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

Ⓛ HEXAGONS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

WARNING: CHASSIS IS CONNECTED DIRECTLY TO ONE SIDE OF AC POWER LINE. USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ACCIDENTAL ELECTRICAL SHOCK & DAMAGE TO TEST EQUIPMENT.



SYMBOL DESCRIPTION ADMIRAL PART NO.

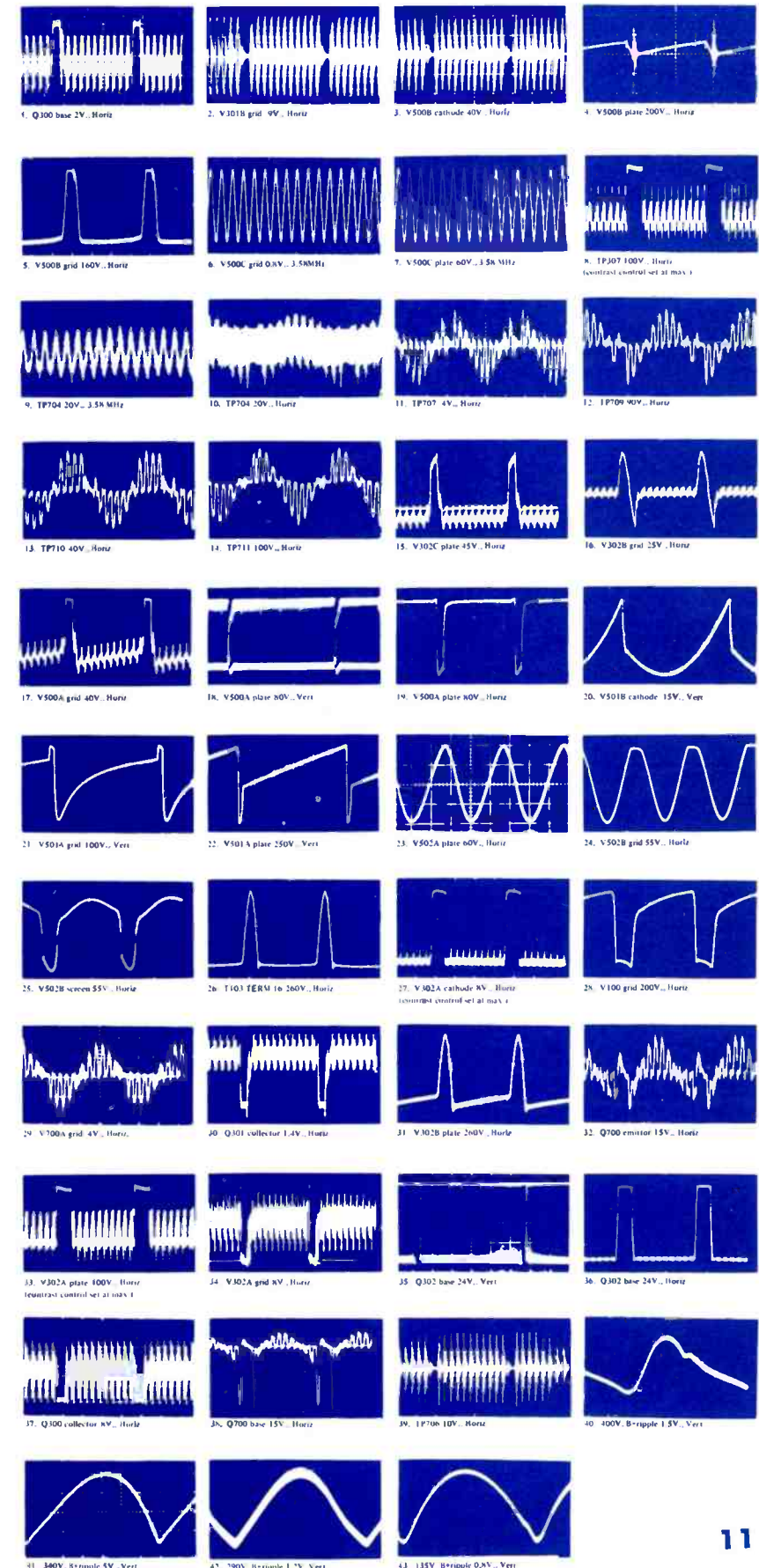
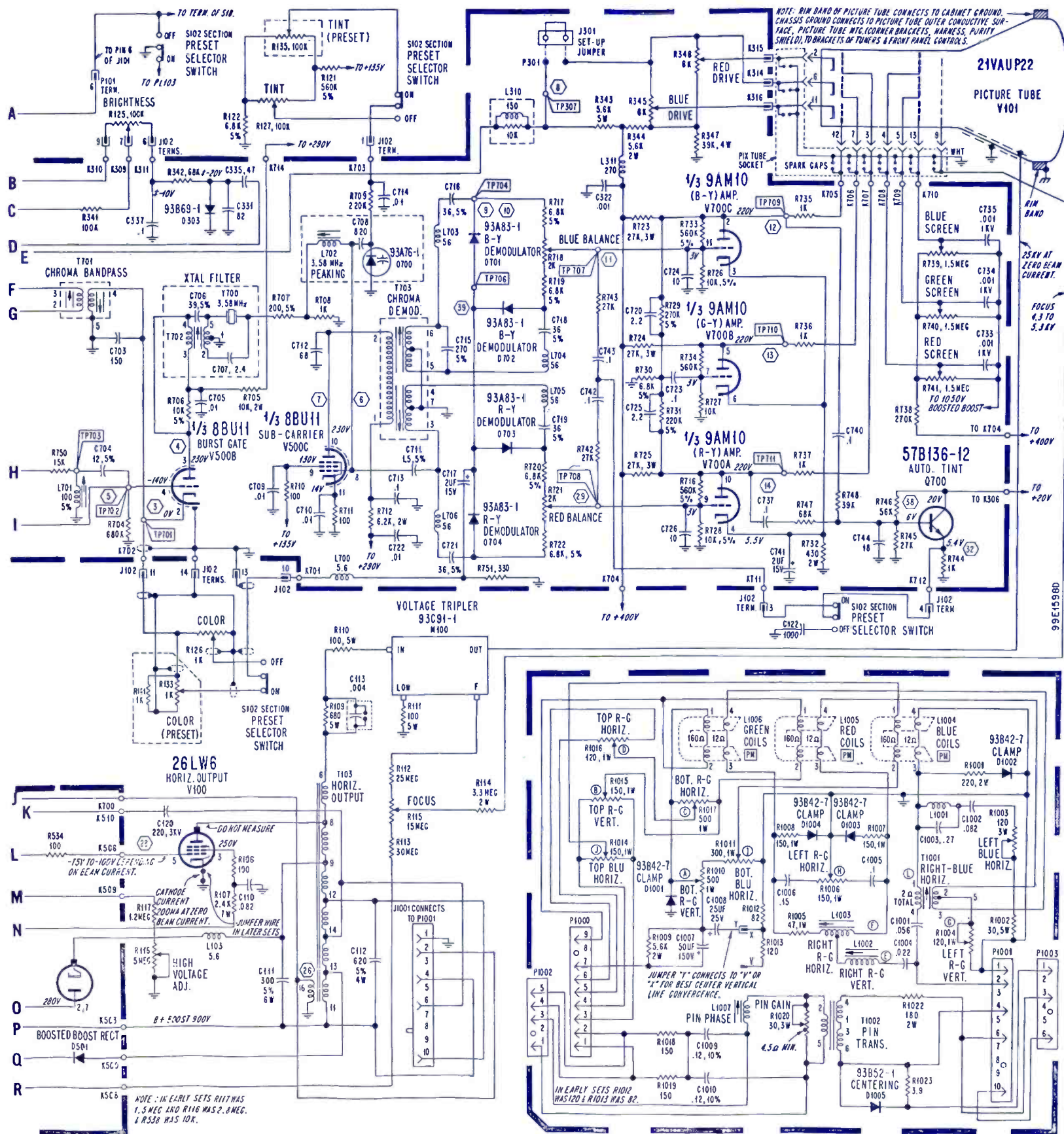
R115-15M focus cont	75A108-7
R116-5M high volt cont	75A135-48
R129-750K vert hold cont, K-19	75A186-1
R129-750K vert hold cont, 2K-19	75A134-28
R327-40K AGC cont	75A155-9
R340-200K bright range cont	75A155-10
R718-2K blue balance cont	75A101-40
R739-1.5M blue screen cont	

R740-1.5M green screen cont	75A155-1
R741-1.5M red screen cont	
RT100-dual thermistor, NTC	61A53-3
RV500-varistor	61A65-1
C106A-150µf, 250v, electr	
C106B-200µf, 350v, electr	67A15-412
C106C, D-100µf, 175v, electr	
C107A-100µf, 175v, electr	
C107B-80µf, 150v, electr	67A15-511
C107C-50µf, 150v, electr	

L100-line choke	73A31-16
L201-quadrature coil	72A366-1
L303-47.25MHz trap	72A359-3
L306-4.5MHz trap	72A367-1
L501-horiz hold coil	94A351-1
L702-3.58MHz peaking coil	72A364-1
T100-power xformer	80A116-3
deflection yoke	94A377-12
VHF tuner	94A421-1
T101-CRT filament xformer	80A119-1

T102-vert output xformer	79A153-4
T103-horiz output xformer	79A164-1
T104-audio output xformer	79A88-7
T200-45MHz driver xformer	72A303-17
T700-chroma take-off xformer	72A368-1
T701-chroma bandpass xformer	72A358-1
T703-chroma demodulator xformer	72A357-1
M100-high volt tripler	93A91-1
F100-5a fuse	84A7-13

ADMIRAL Color-TV Chassis K19



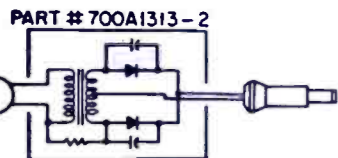
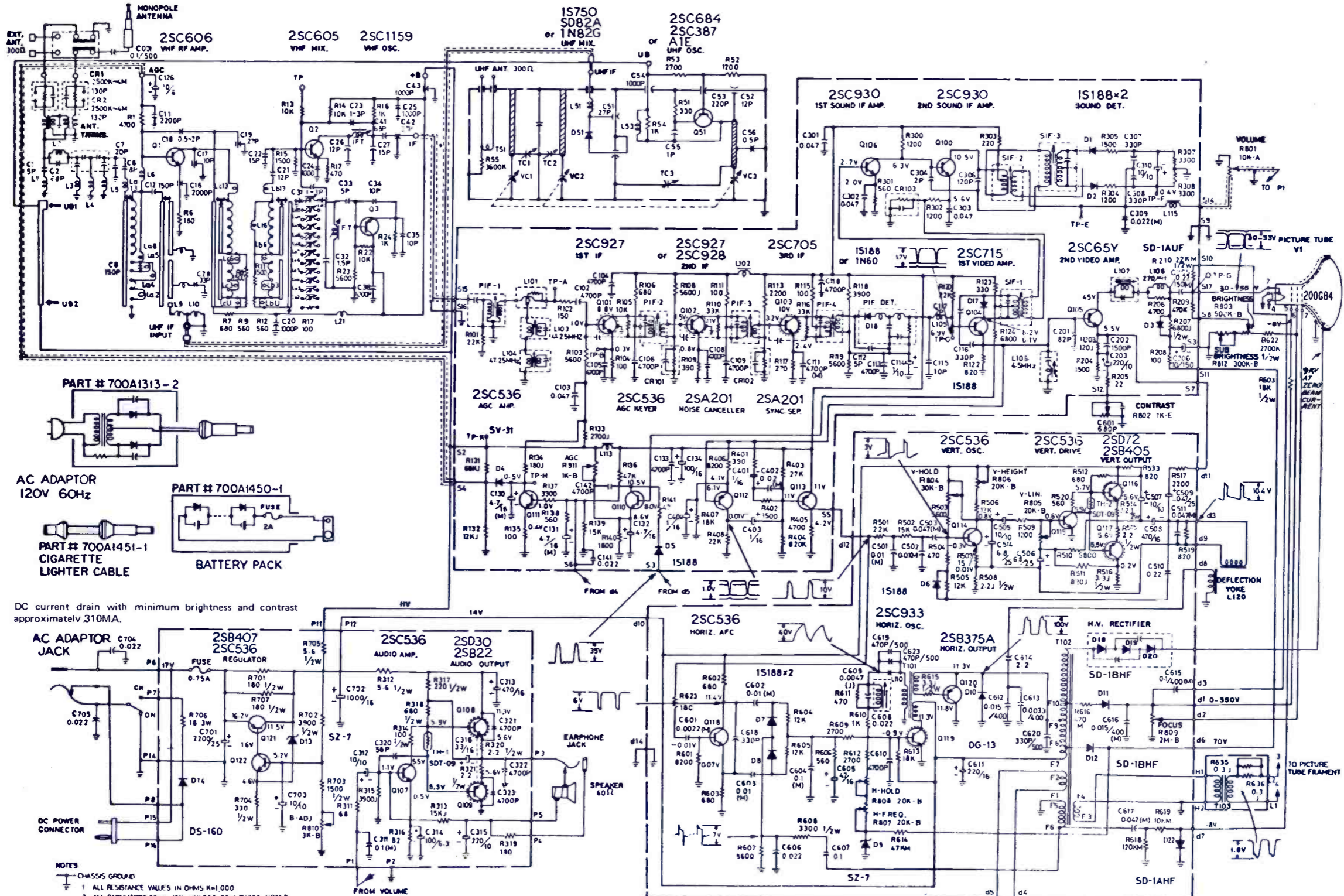
ADMIRAL

TV Chassis
NA10-1A

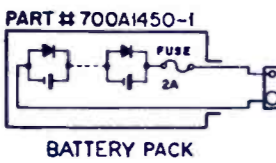
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R801	10K, volume control	2075A89-146
R802	1K, contrast control	2075A89-148
R803	500K, brite control	2075A89-147
R804	30K, vert hold control	2075A89-162
R805	20K, vert lin control	2075A89-160
R806	20K, vert height	2075A89-161
R807	20K, horiz frequency	2075A89-163
R808	20K, horiz hold control	2075A89-159
R809	2M, focus control	2075A89-158
R810	3K, bias control	2075A89-158
R811	1K, AGC control	2075A89-170
R812	300K, sub-brite control	2075A89-170

TH-1	thermistor	2061A45-63
TH-2	thermistor	2061A45-63
L101	bandpass coil	2073A72-131
L103	sound trap coil 41.25MHz	2072A254-298
L106	4.5MHz trap coil	2073A72-134
L107	trap coil	2073A72-131
L110	horiz stabilizer coil	2079A2-7
L120	deflection yoke	2073A3-2
S1F1	sound takeoff xformer	2072A254-306
T101	horiz osc xformer	2079A2-6
T102	horiz output xformer	2079A2-5
	fuse 0.75	2084A1-2
	UHF tuner	2094A2-3
	VHF tuner	2094A1-3



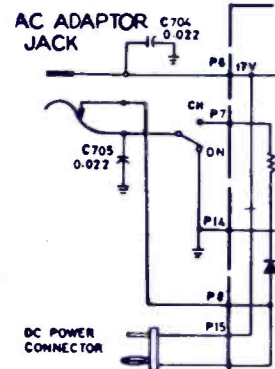
AC ADAPTOR
120V 60Hz



PART # 700A1451-1
CIGARETTE
LIGHTER CABLE

BATTERY PACK

DC current drain with minimum brightness and contrast
approximately 310mA.

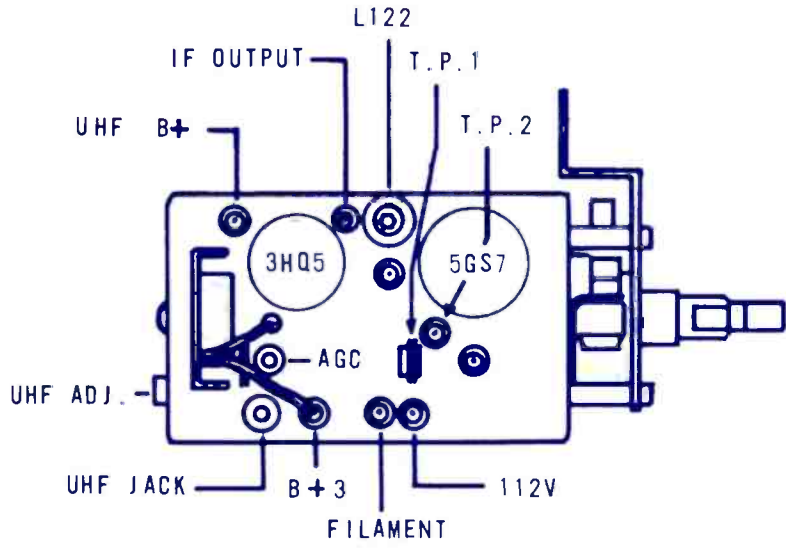


NOTES

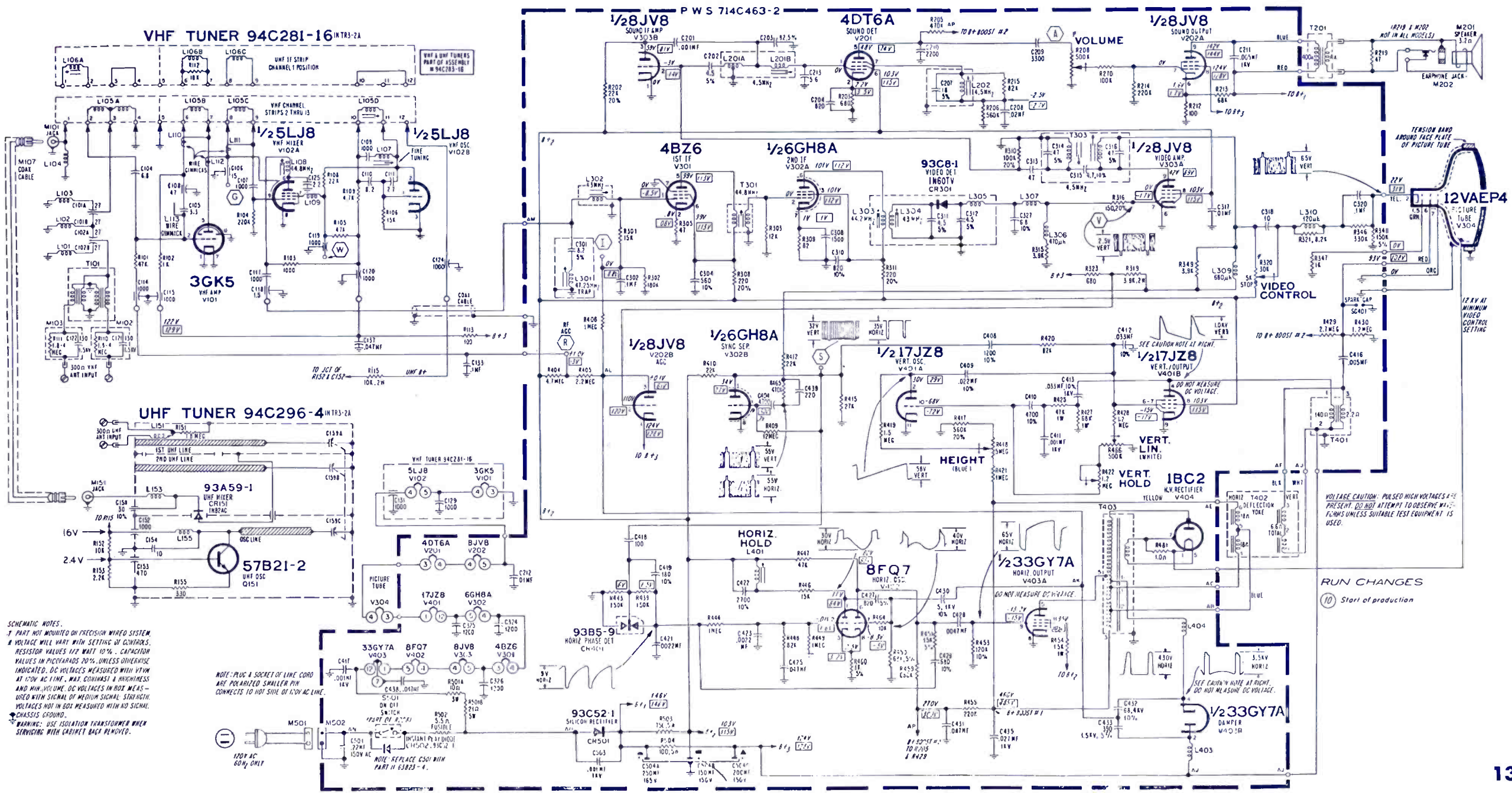
- 1 ALL RESISTANCE VALUES IN OHMS R=1,000
- 2 ALL CAPACITORS 50% W.T. UNLESS OTHERWISE NOTED
- 3 ALL RESISTORS 1/4W, 10% UNLESS OTHERWISE NOTED
- 4 UNLESS OTHERWISE NOTED IN SCHEMATIC, ALL CAPACITORS LESS THAN 1 ARE REFERRED IN μ
- 5 DC VOLTAGE MEASURED AT 120V AC LINE

ADMIRAL

TV Chassis TR3



SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R20B	500K vol control w/switch	75A1-185
R320	30K, video control	75A112-13
R418	height control	75A101-16
R422	1.2M vert hold control	75A100-8
R466	vert lin control	75A101-17
R502	5.5Ω fuse type	61A48-1
C432	68pf, 4kv, cer. disc N1500	65A10-275
C504A	150μf, 156v	
C504B	150μf, 150v elect	67A30-11
C504C	200μf, 150v	
L202	quad coil	72A132-77
L301	47.25MHz trap	72A296-4
L303,304	1F xformer	72A296-7
L401	horiz lock coil	94A17-19
T201	audio output xformer	79A124-5
T301	1st 1F xformer	72A132-76
T303	sound takeoff xformer	72A185-5
T401	vert output xformer	79A139-4
T402	deflection yoke assembly	94A372-2
T403	horiz output xformer	79A138-15
	tuner VHF	94A363-7
	tuner UHF	94A361-3



SCHEMATIC NOTES:
 † PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 ‡ VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 § RESISTOR VALUES 1/2 WATT 10%. CAPACITOR VALUES IN MICROFARADS 20% UNLESS OTHERWISE INDICATED. DC VOLTAGES MEASURED WITH VTVM AT 120V AC LINE. MAX. CONDUCTANCE AND MIN. VOLUME. DC VOLTAGES IN BOX MEAS-URED WITH SIGNAL OF MED. SIGNAL. STRAIGHT VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL.
 ◆ CHASSIS GROUND.
 † WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

NOTE: PLUS A SOCKET OF LINE CORD ARE POLARIZED SMALLER PIN CONNECTS TO HOT SIDE OF 120V AC LINE.

NOTE: REPLACE C501 WITH PART # 63B23-4.

VOLTAGE CAUTION: PULSED HIGH VOLTAGES ARE PRESENT. DO NOT ATTEMPT TO OBSERVE WAVEFORMS UNLESS SUITABLE TEST EQUIPMENT IS USED.

RUN CHANGES
 (10) Start of production

AIRLINE

Color TV Models
GCI-17821A, 41A, 51A

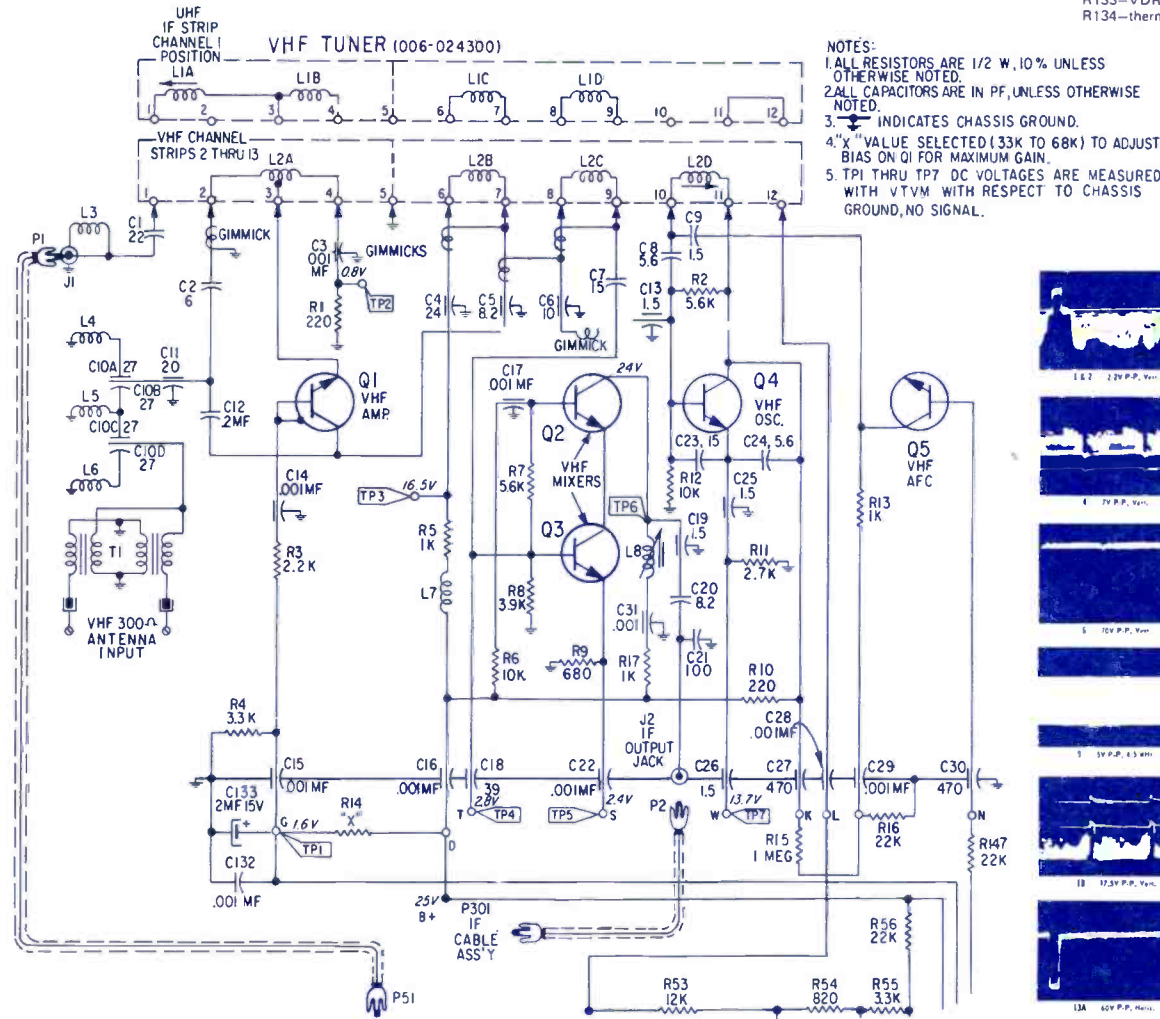
ELECTRONIC TECHNICIAN/DEALER TEKFAK

SYMBOL DESCRIPTION AIRLINE PART NO.

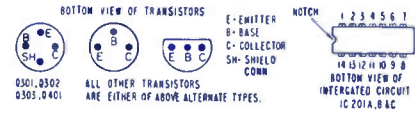
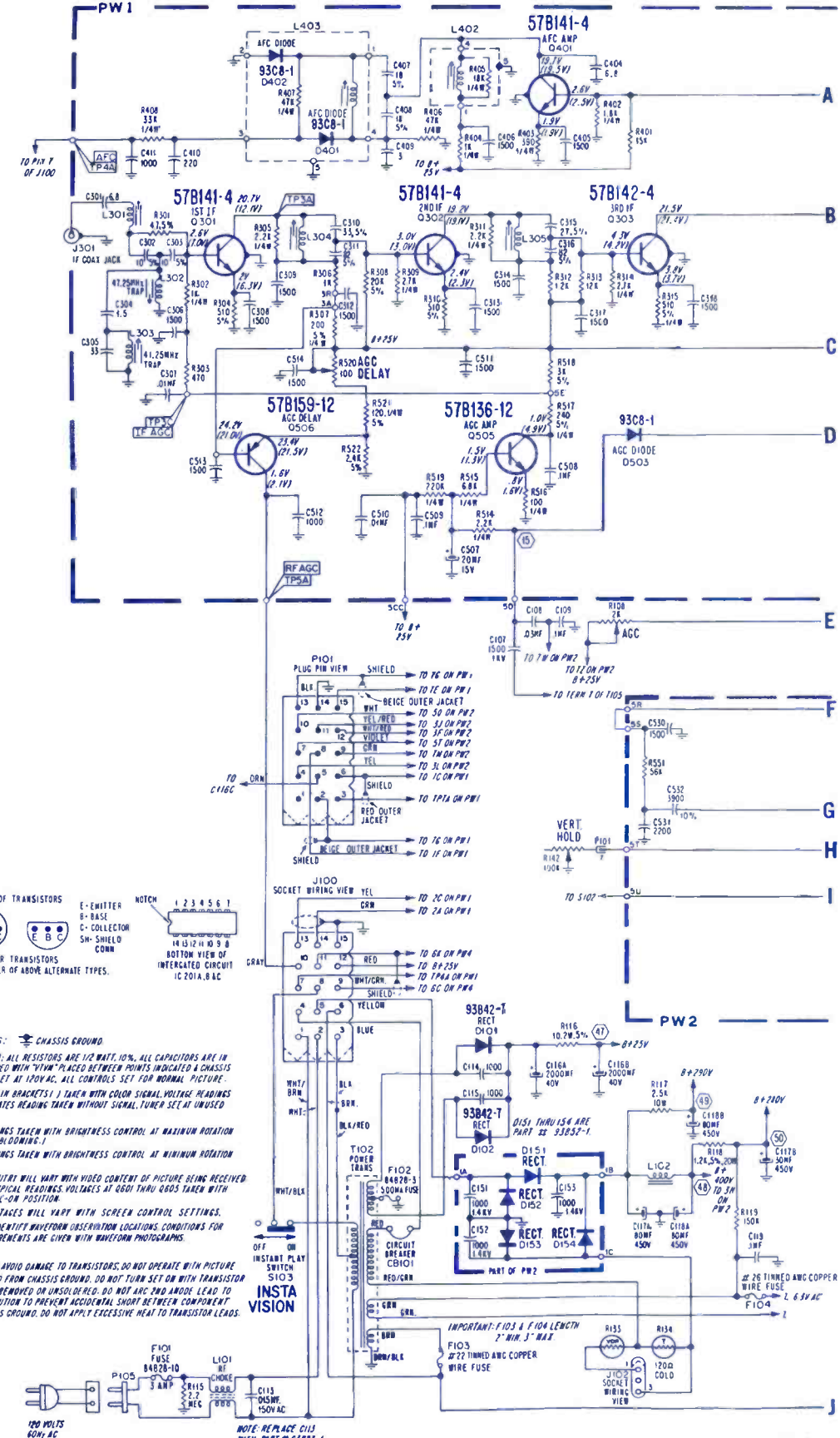
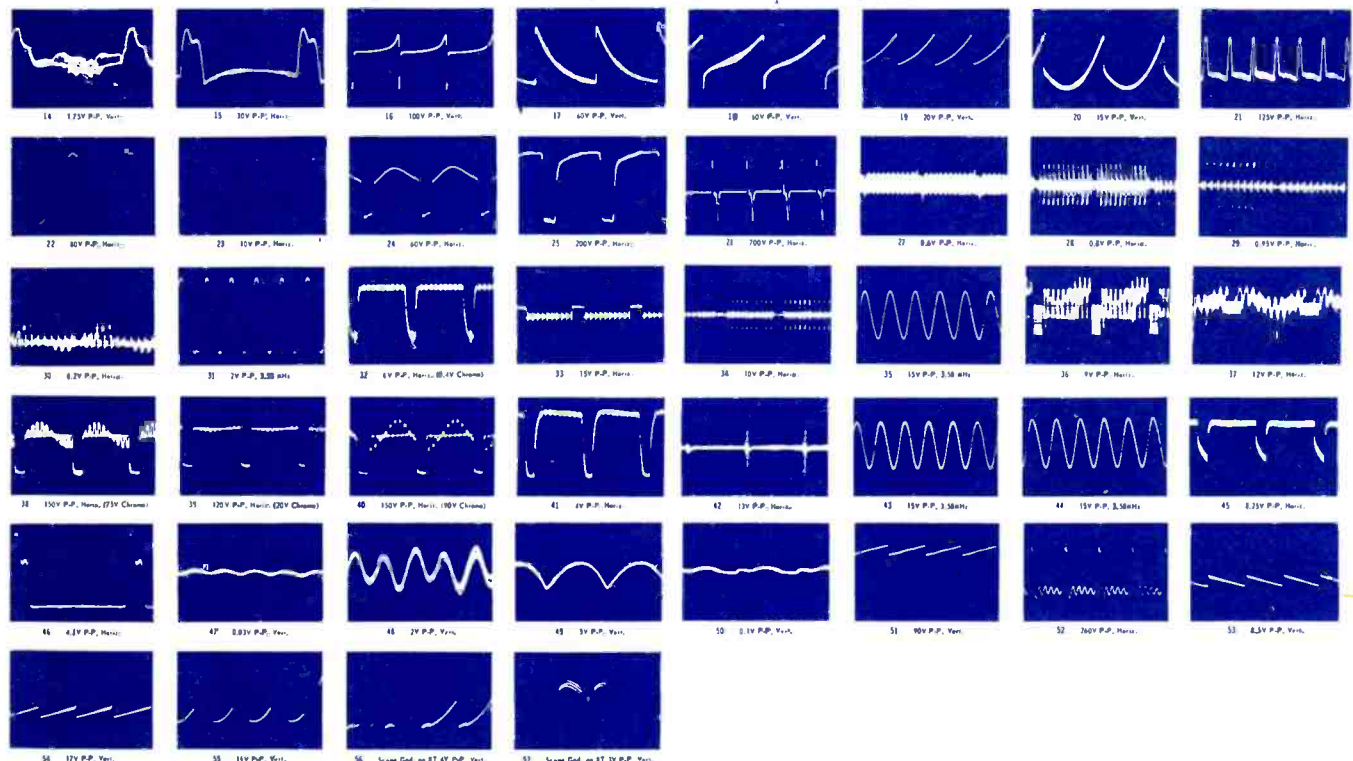
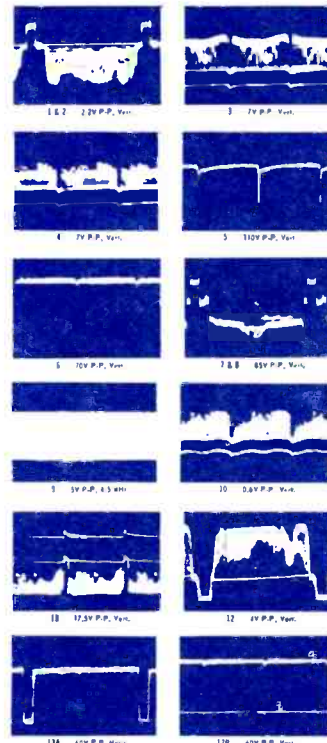
C117A—80µf/450v elect	67A15-398
C117B—30µf/450v elect	67A15-398
C117C—20µf/450v elect	67A15-398
C118A—80µf/450v elect	67A15-399
C118B—80µf/450v elect	67A15-399
C118C—10µf/450v elect	67A15-399
R131—200M/40M (focus module) resistor	750A871-4
R133—VDR resistor	61B46-8
R134—thermistor	61C49-3

R108—2K, AGC control	75A110-11
R110—3.4M, vert size control	75A96-20
R123—10n, vert centering control	75A64-37
R124—10n, hold centering control	75A64-30
R132—15M, focus control	75A108-2
R139—250K, bright control	055-071300
R140—500K, color control	055-067300
R141—1.1K, tint control	055-071800
R142—100K, vert hold control	055-072800
R143—350n, contrast control	055-071200
R144—50K, loudness control	055-071600

R145—100K, tone control	055-072900
R149—2K, preference control	055-072100
R330—200K, bright limiter control	75A95-15
R341—6K, blue drive	75A95-15
R342—5K, green drive	75A95-15
R520—100n, AGC delay	75A101-33
R549—8K, hi voltage adjust	75A64-41
R652—300K, vert lin	75A101-10
DL101—delay line	72A217-3
L101—coil, line choke	72A31-16
L102—coil, filter choke	74A27-4



NOTES:
1. ALL RESISTORS ARE 1/2 W, 10% UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS ARE IN PF, UNLESS OTHERWISE NOTED.
3. ⚡ INDICATES CHASSIS GROUND.
4. "X" VALUE SELECTED (33K TO 68K) TO ADJUST BIAS ON Q1 FOR MAXIMUM GAIN.
5. TP1 THRU TP7 DC VOLTAGES ARE MEASURED WITH VTVM WITH RESPECT TO CHASSIS GROUND, NO SIGNAL.



SCHEMATIC NOTES:
⚡ CHASSIS GROUND
UNLESS OTHERWISE NOTED: ALL RESISTORS ARE 1/2 WATT, 10%. ALL CAPACITORS ARE IN PF. DC VOLTAGES MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 120V AC. ALL CONTROLS SET FOR NORMAL PICTURE. VOLTAGE READINGS SHOWN IN BRACKETS () TAKEN WITH COLOR SIGNAL. VOLTAGE READINGS WITHOUT BRACKETS INDICATES READINGS TAKEN WITHOUT SIGNAL. TUNER SET AT UNUSED CHANNEL.
INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MAXIMUM ROTATION (FULLY ON, BUT BELOW BLOWING.)
\$ INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MINIMUM ROTATION (FULLY OFF).
% VOLTAGES IN VIDEO CIRCUITRY WILL VARY WITH VIDEO CONTENT OF PICTURE BEING RECEIVED. VOLTAGES SHOWN ARE TYPICAL READINGS. VOLTAGES AT 600 THRU 800 TAKEN WITH COLOR MONITOR IN FULL-ON POSITION.
@ INDICATES THESE VOLTAGES WILL VARY WITH SCREEN CONTROL SETTINGS.
NUMBERS IN HEADERS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.

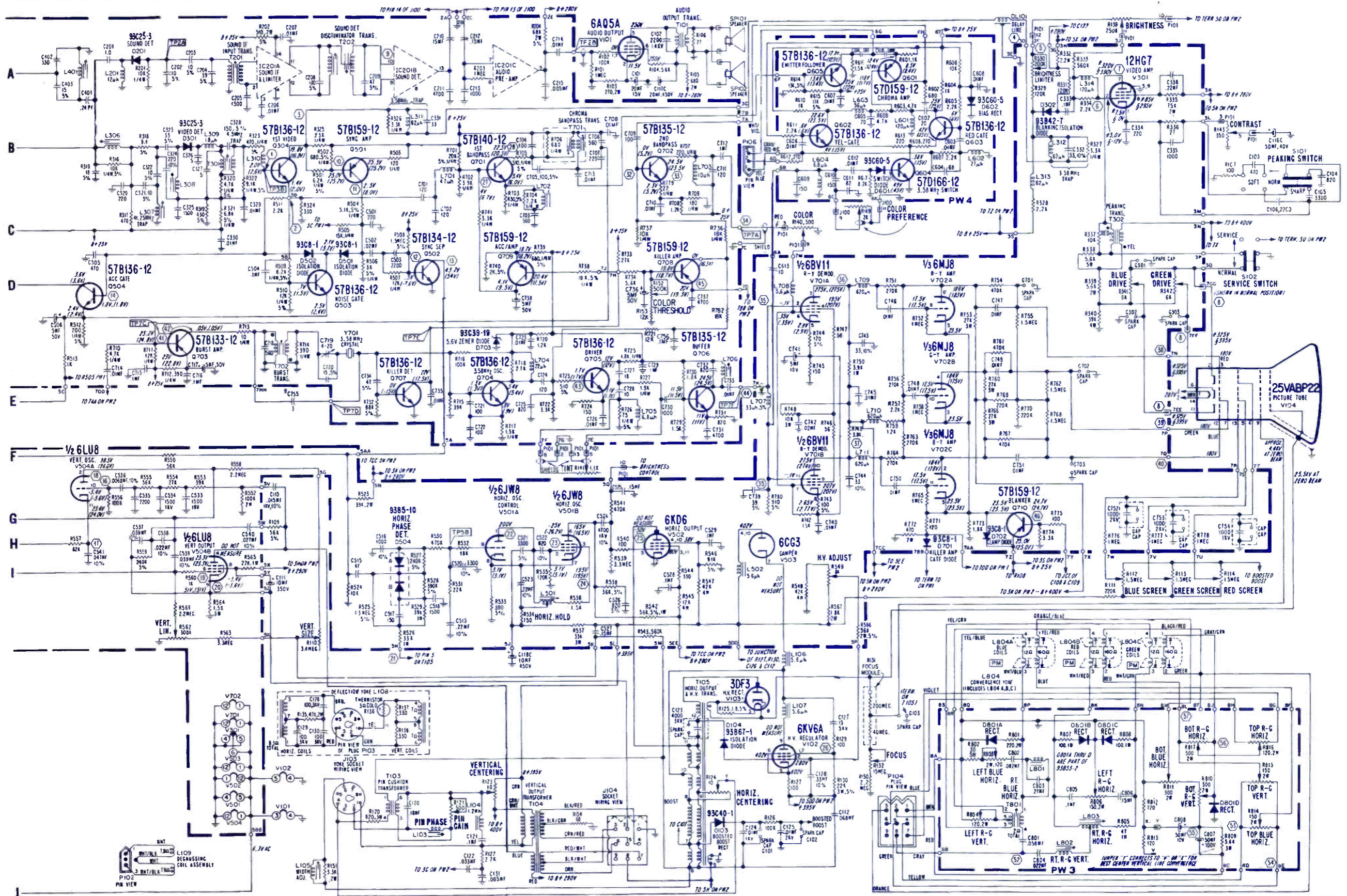
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE WITH PICTURE TUBE BAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR (S) TUBE (S) OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC 2ND ANODE LEAD TO CHASSIS GROUND. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS.

NOTE: REPLACE C115 WITH PART # 63825-1.

- L105—roll width 94A279-3
- L108—deflection yoke 94A377-1
- L501—coll, horiz hold 94A351-1
- T101—audio output xformer 79A142-1
- T102—power xformer 80A106-1
- T103—pin cushion xformer 79A143-2
- T104—vert output xformer 79A134-2
- T105—horiz output xformer 79A145-2
- T201—4.5MHz xformer 72A317-4
- T202—4.5MHz discriminator xformer 72A356-1
- T701—bandpass xformer 72A333-3

- T702—burst xformer 72A325-2
- CB101—circuit breaker 84A17-14
- S104—ON/OFF switch 146-013500
- VHF tuner 006-024300
- F101—.3a (chemical) fuse 84A28-10
- F102—.05a (chemical) fuse 84A28-3

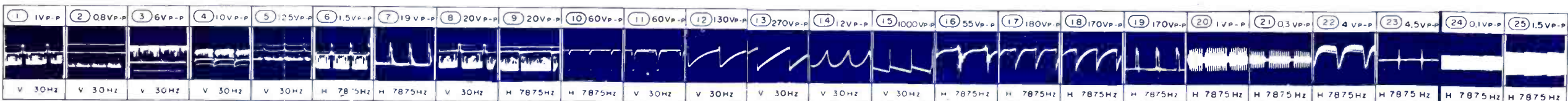
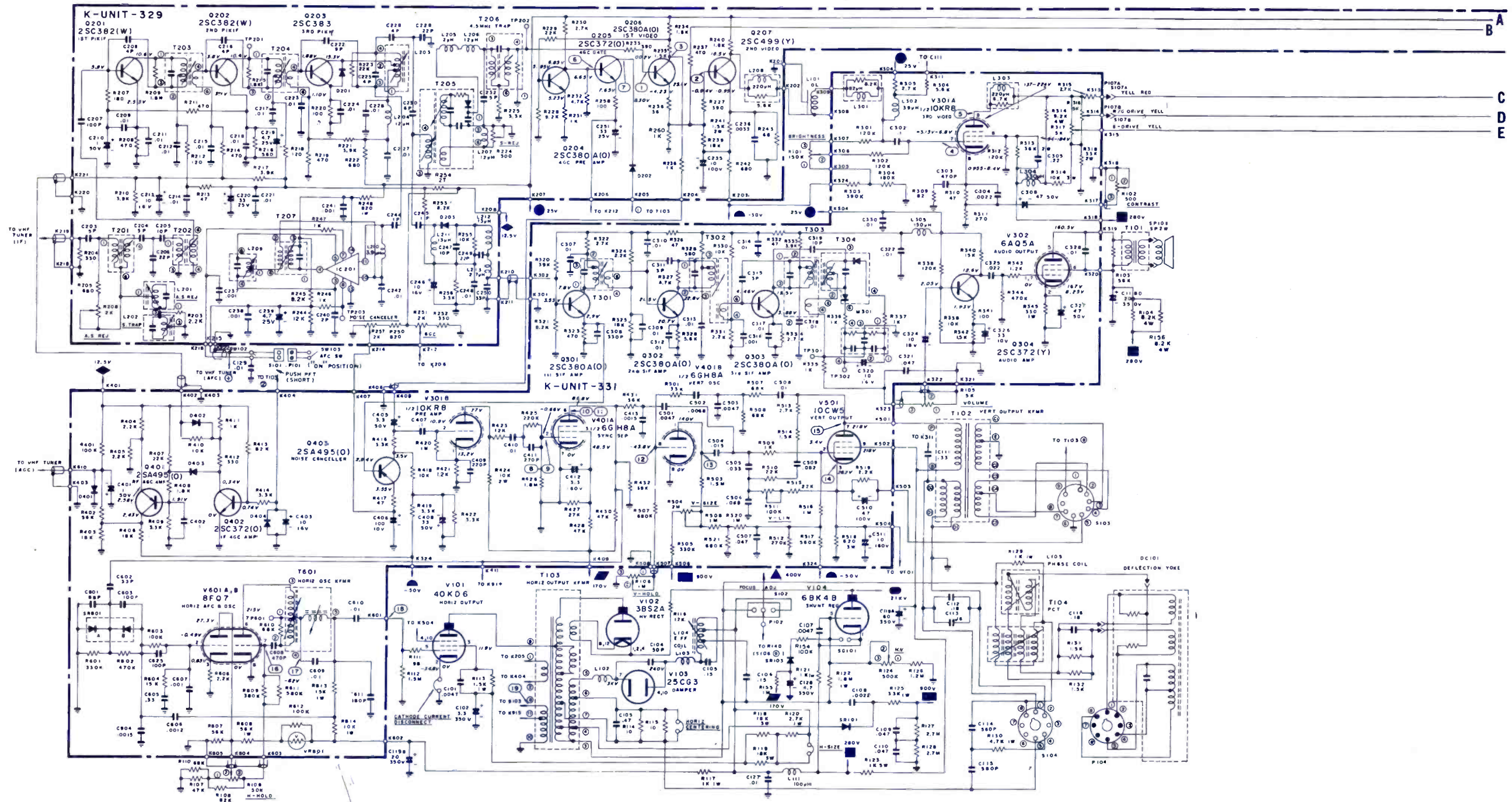
AIRLINE
Color TV Models
GCI-17821A, 41A, 51A

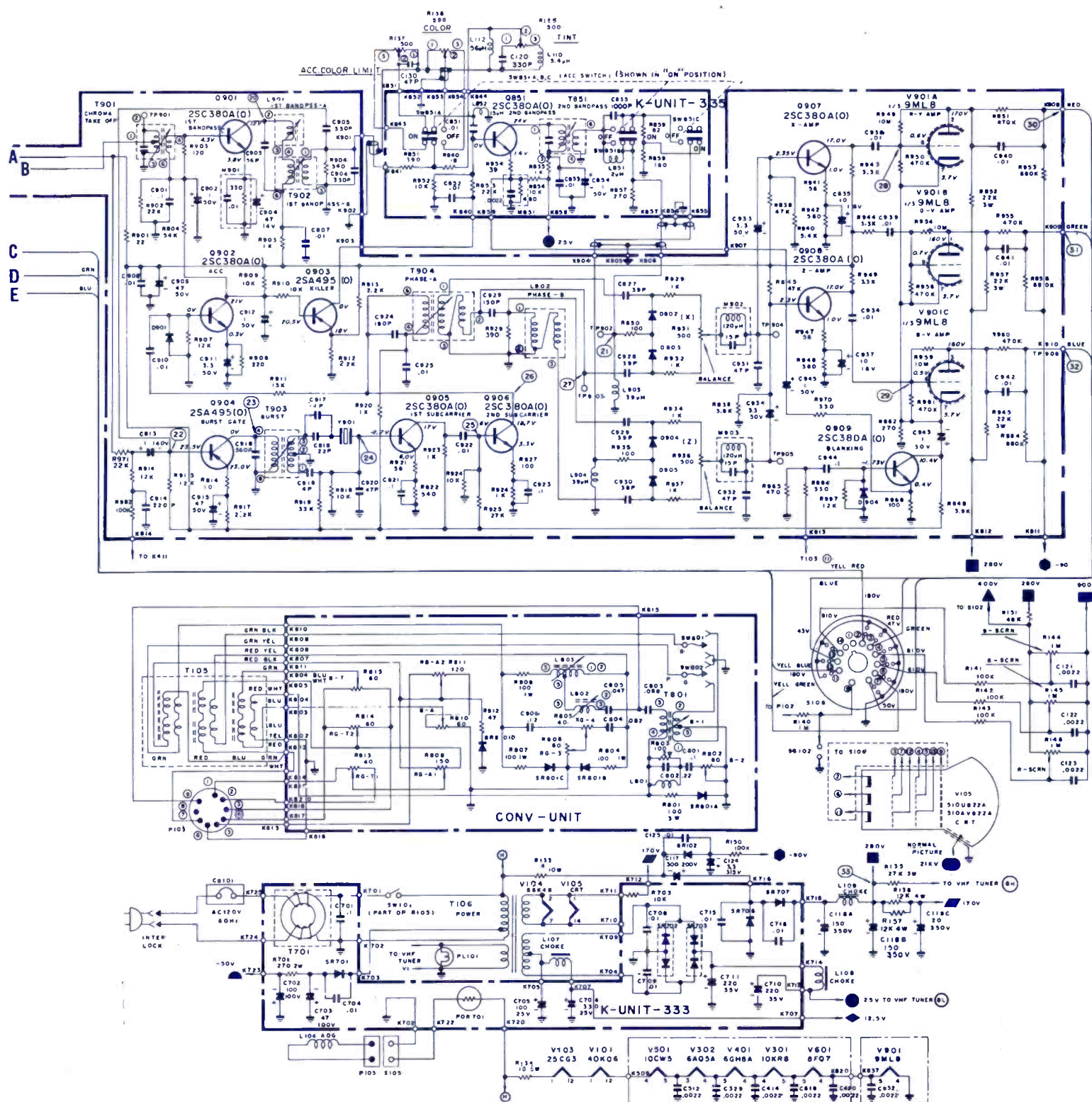


AIRLINE

Color-TV Model
GEN-12442A

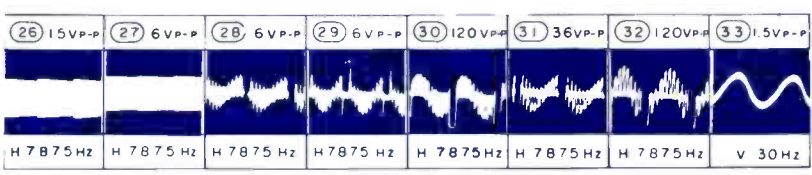
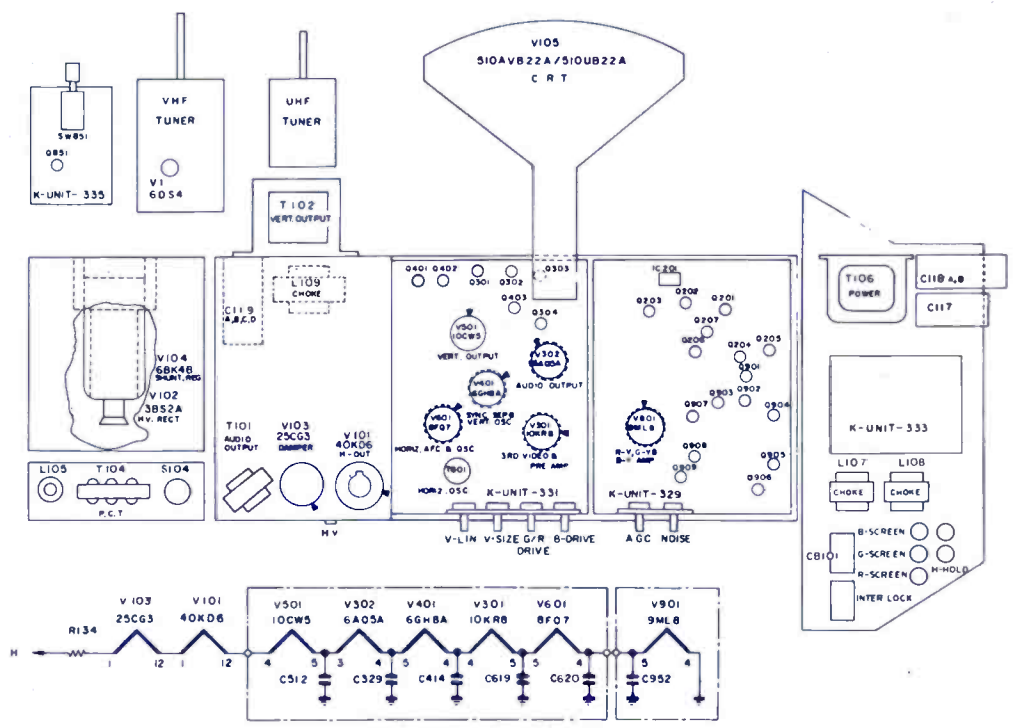
ELECTRONIC TECHNICIAN/DEALER **TEKFA**X





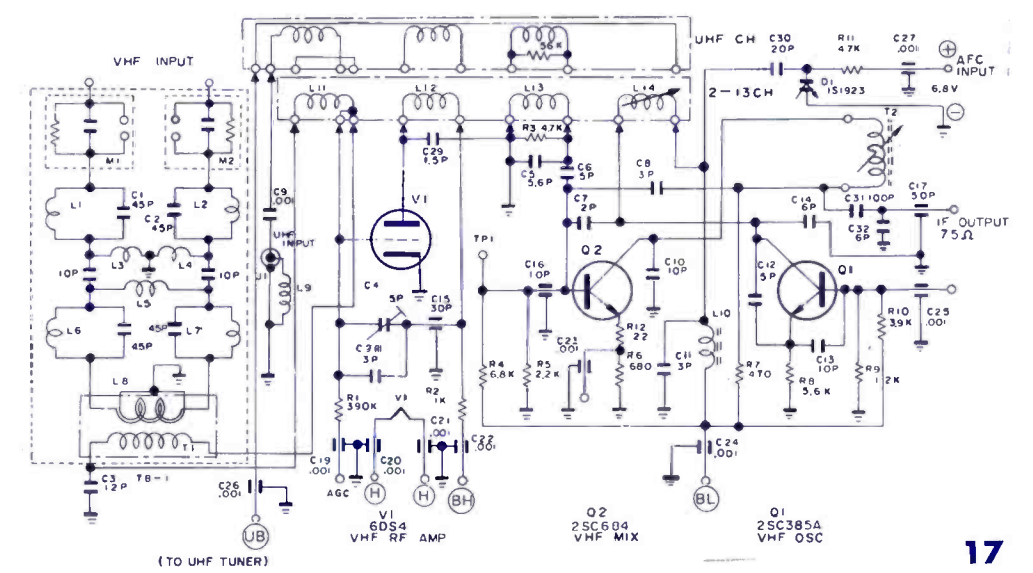
SYMBOL	DESCRIPTION	AIRLINE PART NO.	DESCRIPTION	AIRLINE PART NO.	
C119A,B	80/20/20 μf. @350v		L209	coil, discriminator	TV61866
C,D	electrolytic	TV32452	T101	x-former, sound output	TV11239
R101	150K, brite control	TV25264	T102	x-former, vert output	TV11297
R102	500Ω, contrast control	TV25354	T103	x-former, horiz output	TV11345
R105	5K, volume control	TV25342	T106	x-former, power	TV11275
SW101	w/on-off switch	TV25342	T206	x-former, 4.5MHz trap	TV62513
R106	1M, vert hold control	TV25460	T301	x-former, sound take off	TV62471
R109	50K, horiz hold control	TV25363	T601	x-former, horiz osc	TV62334
R124	500K, HV adjust	TV25269	T851	x-former, 2nd bandpass	TV62620
R137	500Ω, ACC color limit control	TV25461	T901	x-former, chroma takeoff	TV62621
R224	500Ω, sound reject	TV25348	T903	x-former, burst	TV62623
R316	5K, green red drive		M101	capristor	TV3465
R317	5K, blue drive		M301	capristor	TV34107
R504	2M, vert size	TV25349	M851	capristor	TV34121
R511	100K, vert lin		M901	capristor	TV34122
R257	2K, noise canceller control	TV25463	M902	capristor	TV34123
L104	coil, horiz efficiency	TV61673	M903	capristor	TV34123
L202	coil, sound trap	TV61658	1C201	integ circuit, AFC	TV24993
			VR601	varistor	TV24238
				tuner, VHF	TV35375
			DC101	yoke deflect (DC-115U)	TV61908

CHASSIS LAYOUT



VOLTAGE SYMBOL LEGEND

BB	900V	B3	25V
B P	400V	B4	12.5V
B 1	280V	B5	-50V
B 2	170V	B6	-90V



AIRLINE

Color-TV Model
GC1-12102A

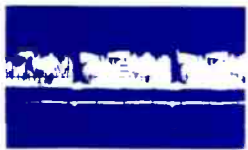
ELECTRONIC TECHNICIAN/DEALER **TEKFA**X



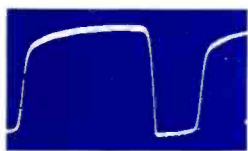
1. BASE, TPB3, 1st VIDEO AMPL. (Q10), 2V P-P, VERT. (PWS1)



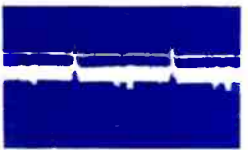
2. TPA2, SOUND DETECTOR 0.25V P-P, VERT. (PWS1)



3. COLLECTOR, 1st VIDEO AMPL., (Q10), 8V P-P VERT. (PWS1)



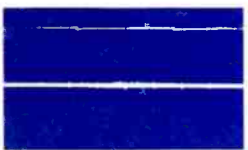
4. GRID, HORIZ. OUTPUT, V6, "AB", 335V P-P HORIZ. (PWS2)



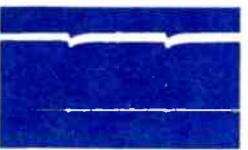
5. PLATE (PIN 10) 2nd VIDEO AMPL., 50% CONTRAST, 100V P-P VIDEO, 150V P-P BLANKING (PWS2)



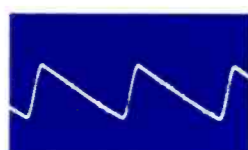
6. BASE, SYNC. SEPARATOR, (Q11), 7V P-P, VERT. (PWS1)



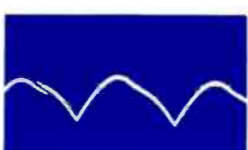
7. COLLECTOR, SYNC. SEPARATOR, (Q11), 6V P-P, VERT. (PWS1)



8. PLATE (PIN 4) SYNC. AMPL., (V2), 60V P-P, VERT. (PWS2)



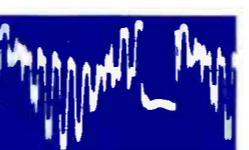
9. RIPPLE at "NN", 18V P-P, VERT. (PWS2)



10. RIPPLE at "EE", 1.6V P-P, VERT. (PWS2)



11. RIPPLE of CH 10C, 0.1V P-P, VERT. UNDERSIDE CHASSIS NEAR TH73 (ON SCHEMATIC)



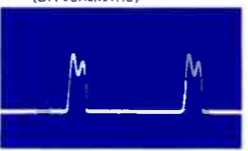
12. COLLECTOR, B-Y DEMODULATOR (Q20), "M", 8.2V P-P, HORIZ. (PWS1)



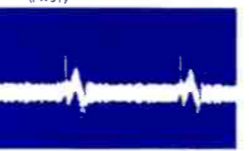
13. AGC PULSE, BASE, AGC GATE, (Q9), HORIZ. (PWS1)



14. COLLECTOR, 1st BANDPASS AMPL., (Q13), BURST 8V P-P, CHROMA 4V P-P, HORIZ. (PWS1)



15. JUNCTION RC43 AND CRC 44, 8V P-P, HORIZ. (PWS1)



16. BASE, 2nd BANDPASS, (Q14), CHROMA 0.13V P-P, HORIZ. (PWS1)



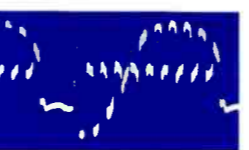
17. COLLECTOR, 2nd BANDPASS, (Q14), 0.22V P-P, HORIZ. (PWS1)



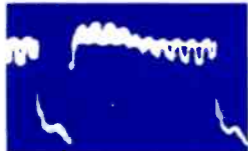
18. EMITTER, 2nd BANDPASS AMPL. (Q14), CHROMA 0.18V P-P, HORIZ. (PWS1)



19. EMITTER, B-Y DEMODULATOR (Q20), 0.7V P-P, HORIZ. EMITTER, R-Y DEMODULATOR (Q21), 0.9V P-P, HORIZ. (PWS1)



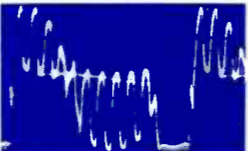
20. COLLECTOR, R-Y DEMODULATOR (Q21), "N", 1.5V P-P, HORIZ. (PWS1)



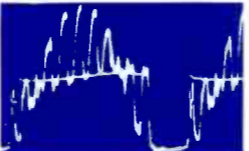
21. JUNCTION RF43 AND RF46, 2.2V P-P, OVERALL, HORIZ. (PWS2)



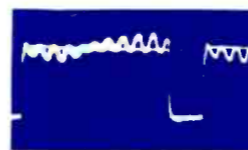
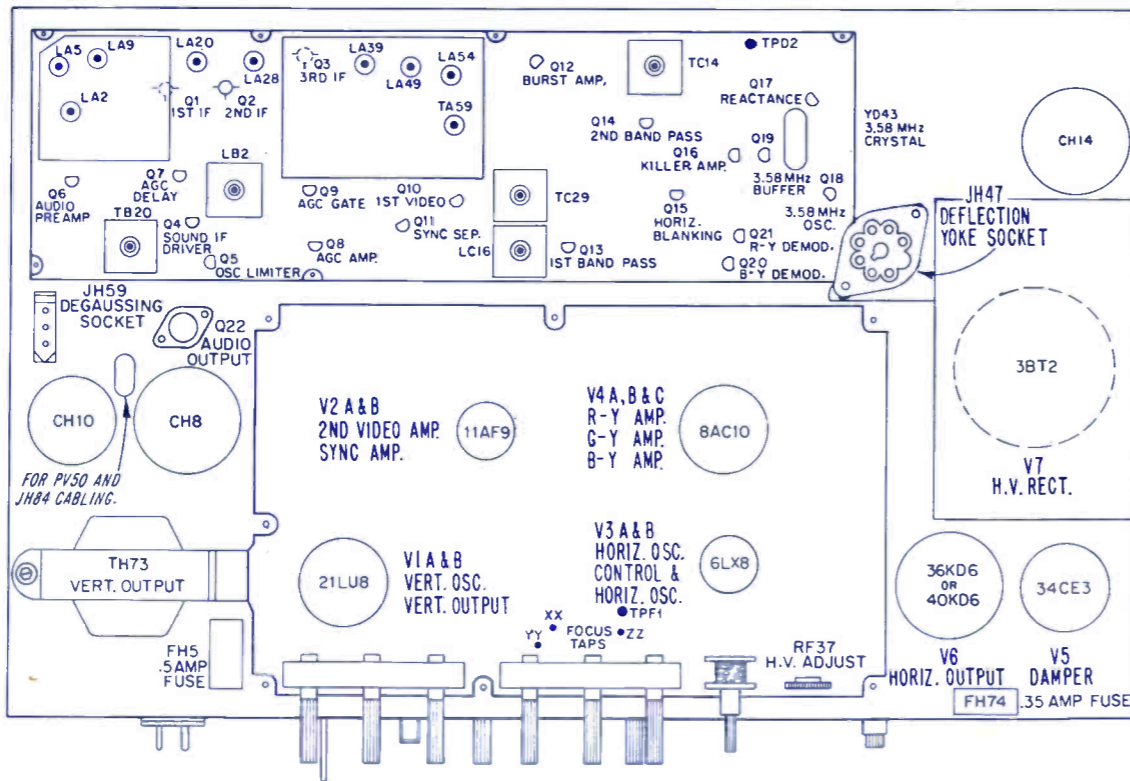
22. OUTPUT R-Y AMPL. V4, TPF2, NO COLOR, 90V P-P, HORIZ. (PWS2)



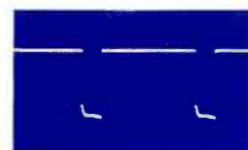
23. OUTPUT R-Y AMPL. V4, TPF2, WITH COLOR, 250V P-P, HORIZ. (PWS2)



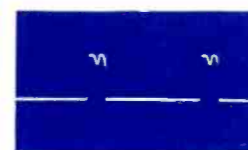
24. OUTPUT B-Y AMPL. V4, TPF4, WITH COLOR, 280V P-P, HORIZ. (PWS2)



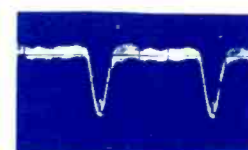
25. OUTPUT G-Y AMPL., V4, TPF3, WITH COLOR, 150V P-P, HORIZ. (PWS2)



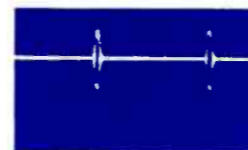
26. COLLECTOR, HORIZ., BLANKER, (Q15), "Z", 3.3V P-P, HORIZ. (PWS1)



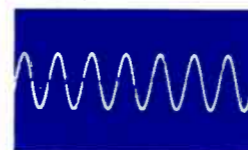
27. BASE, HORIZ. BLANKER, (Q15), 5.8V P-P, HORIZ. (PWS1)



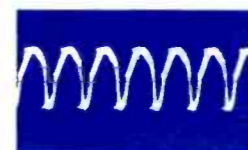
28. BASE, BURST AMPL. (Q12), 6V P-P, HORIZ. (PWS1)



29. COLLECTOR, BURST AMPL. (Q12), 45V P-P, HORIZ. (PWS1)



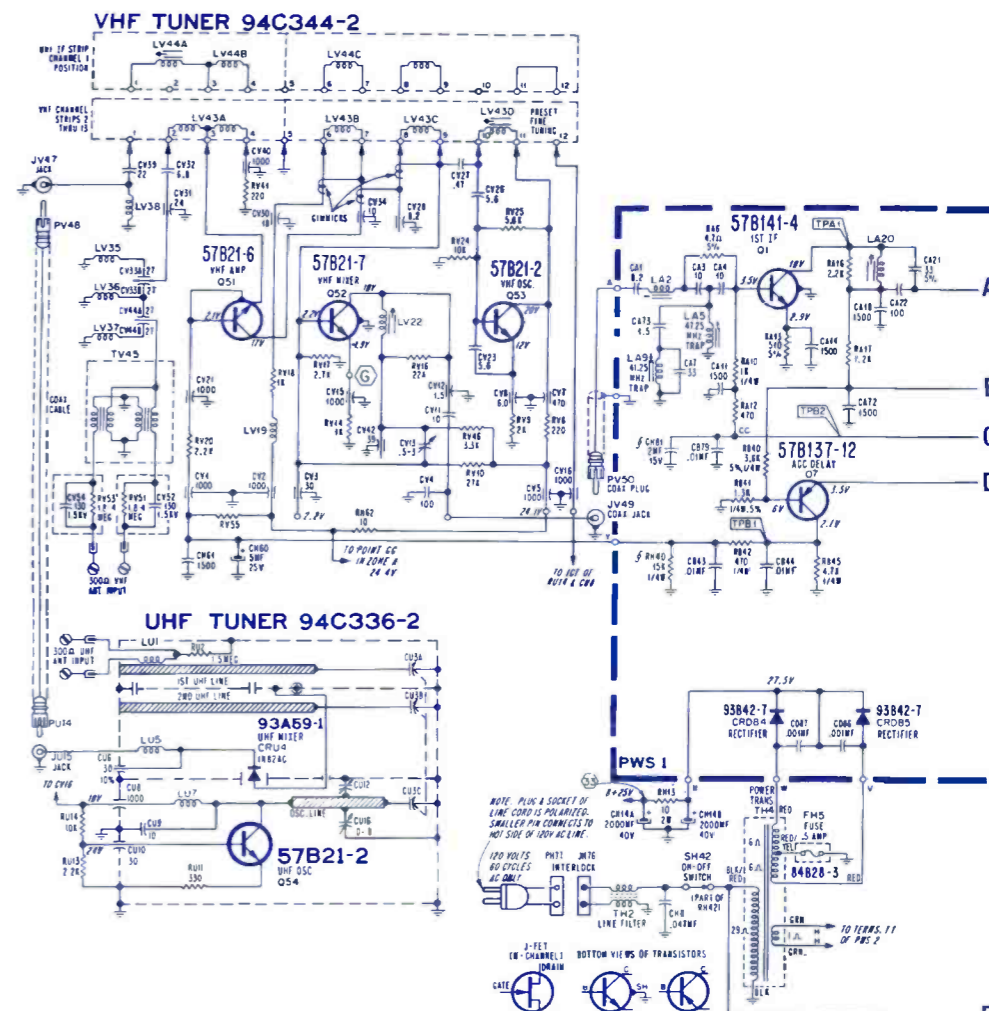
30. COLLECTOR, 3.58 MHz BUFFER, (Q19), 22V P-P, BASE 2.3V P-P, EMITTER 2.2V P-P, BASE Q20 AND Q21 6V P-P (PWS1)

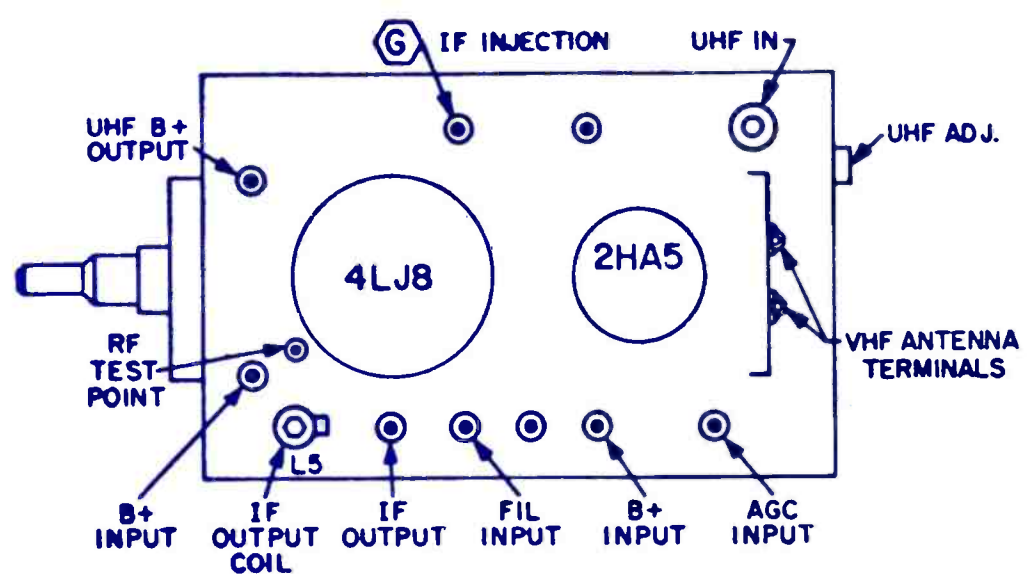
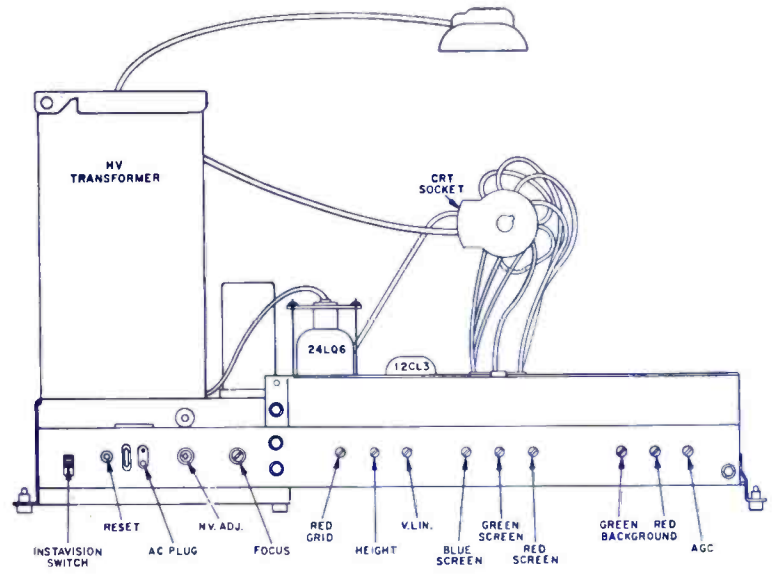


31. COLLECTOR, 3.58 MHz OSCILLATOR (Q18), 11V P-P (PWS1)

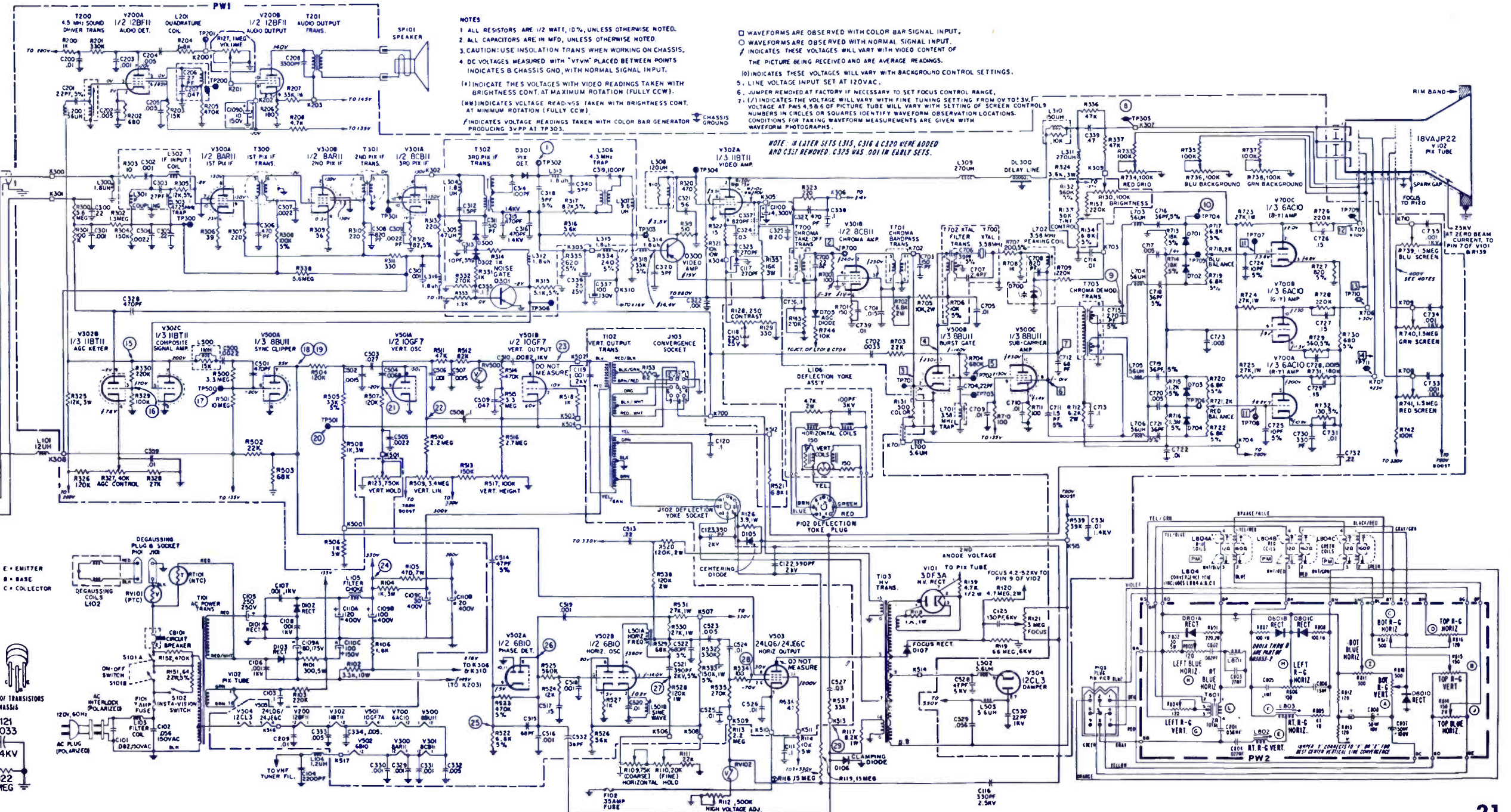


32. CATHODE, BURST GATE DIODE, (CR19) 12.5V P-P, HORIZ. (PWS1)





- NOTES**
1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
 2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
 3. CAUTION: USE INSULATION TRANS WHEN WORKING ON CHASSIS.
 4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATES B CHASSIS GND, WITH NORMAL SIGNAL INPUT.
 - (1) INDICATES THESE VOLTAGES WITH VIDEO READINGS TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULLY CCW).
 - (2) INDICATES THESE VOLTAGES WITH VIDEO READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULLY CCW).
 - (3) INDICATES VOLTAGE READINGS TAKEN WITH COLOR BAR GENERATOR PRODUCING 3V P/P AT TP303.
 - (4) WAVEFORMS ARE OBSERVED WITH COLOR BAR SIGNAL INPUT.
 - (5) WAVEFORMS ARE OBSERVED WITH NORMAL SIGNAL INPUT.
 - (6) INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
 - (7) INDICATES THESE VOLTAGES WILL VARY WITH BACKGROUND CONTROL SETTINGS.
 5. LINE VOLTAGE INPUT SET AT 120VAC.
 6. JUMPER REMOVED AT FACTORY IF NECESSARY TO SET FOCUS CONTROL RANGE.
 - (7) INDICATES THE VOLTAGE WILL VARY WITH FINE TUNING SETTING FROM 0V TO 3V. VOLTAGE AT PINS 4, 5 & 6 OF PICTURE TUBE WILL VARY WITH SETTING OF SCREEN CONTROLS. NUMBERS IN CIRCLES OR SQUARES IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.



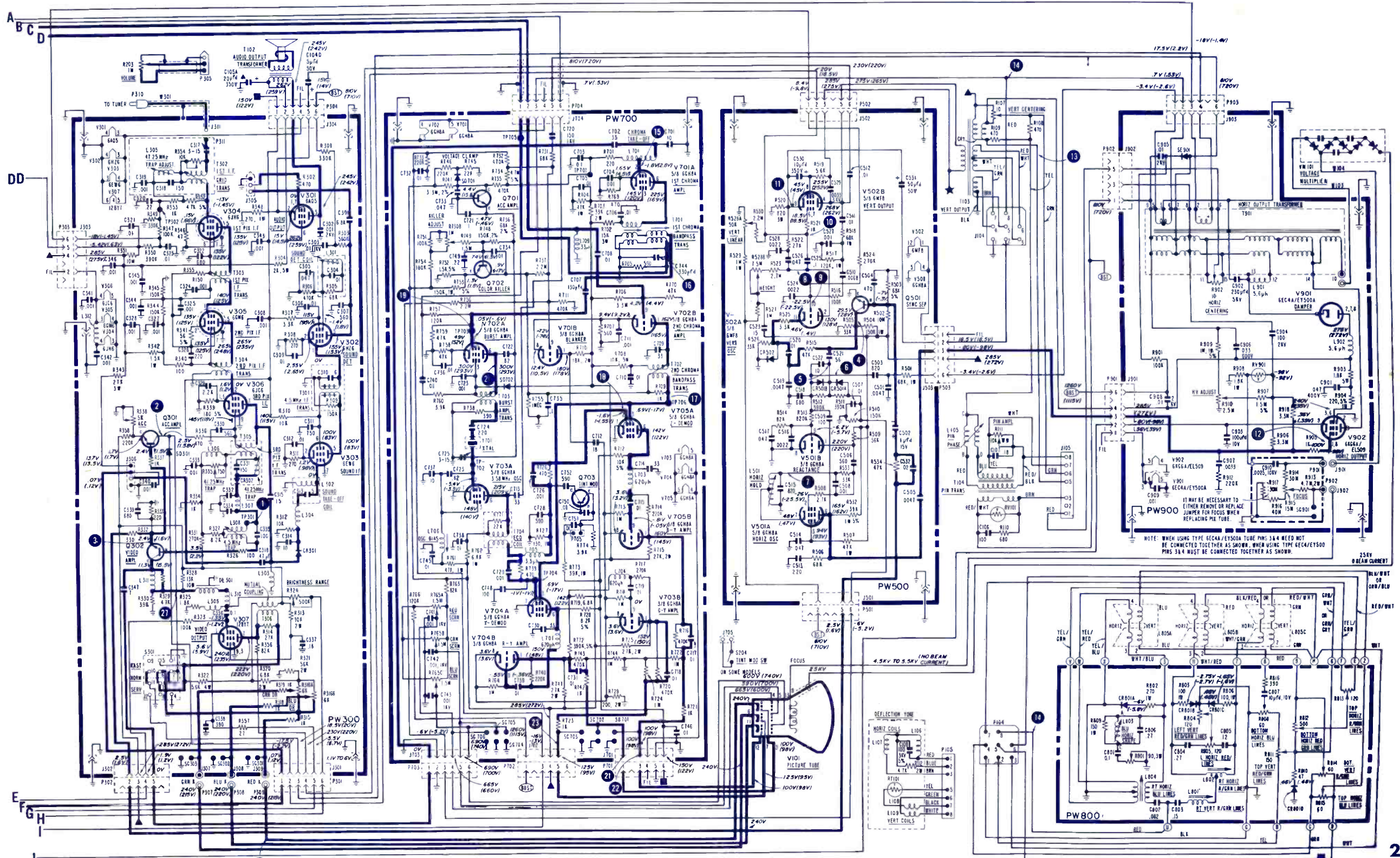
SYMBOL DESCRIPTION CHANNEL MASTER PART NO.

C104A-200 μ f, 350v, electrolytic	45X0536-001
C104B-120 μ f, 350v, electrolytic	45X0536-001
C104C-80 μ f, 350v, electrolytic	45X0536-001
C104D-5 μ f, 50v, electrolytic	45X0536-001
C105A-20 μ f, 350v, electrolytic	45X0539-001
C105B-20 μ f, 350v, electrolytic	45X0539-001
C105C-50 μ f, 50v, electrolytic	45X0539-001
R107-10 n, vert centering	40X0608-001
R111-10K, pin amp control	40X0677-004
R204-350 n, contrast control	40X0594-003
R205-750K, vert hold control	40X0585-048

R206-250K, brite control	40X0585-063
R324-500K, brite range control	40X0590-009
R335-750 n, 41.25MHz trap control	40X0590-007
R338-5K, AGC control	40X0590-008
R528A-50K, vert lin control	40X0614-003
R528B-7.5M, height control	40X0614-003
R730B-1M, killer control	40X0614-004
R902-10 n, horiz centering control	40X0619-001
R915-15M, focus control	40X0618-001
R916-40M, HV fiim	43X0451-004
L302-sound takeoff coil	9A2697-001
L308-coil, 4.5MHz trap	9A2565-000
L501-coil, horiz osc	9A2708-001

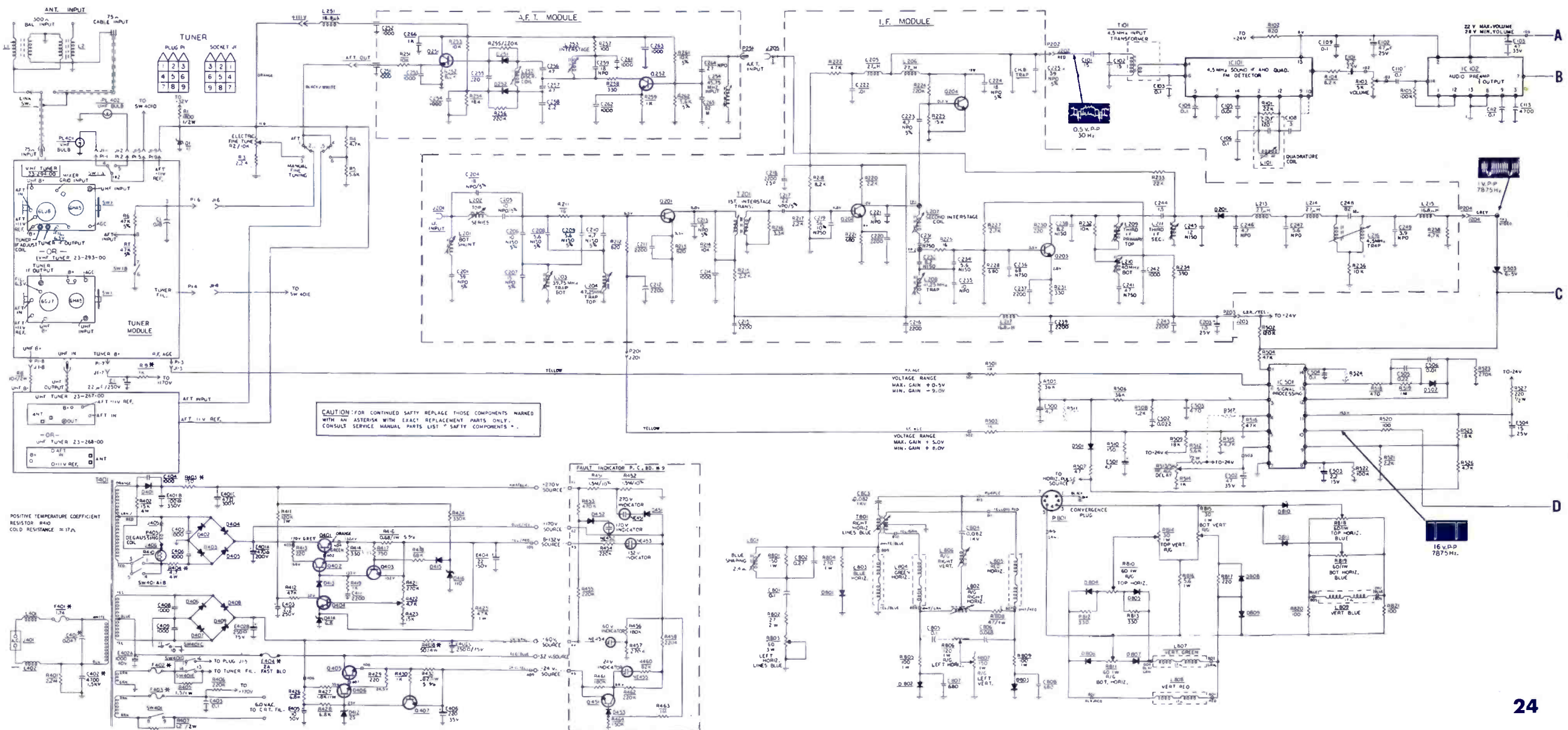
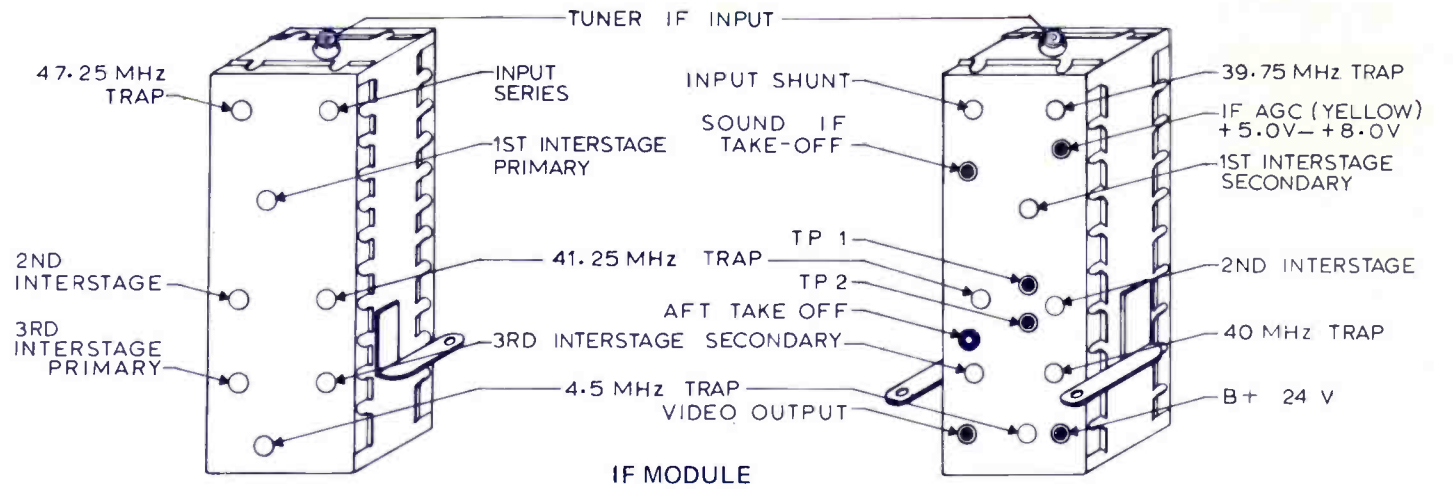
T101-power xformer	53X0445-002
T102-audio output xformer	51X0249-001
T103-vert output xformer	51X0248-001
vert output xformer	38A4145-000
T701-1st bandpass xformer	9A2661-003
T702-2nd bandpass xformer	9A2709-001
T704-ECO xformer	9A2660-002
T901-horiz output xformer	53X0453-001
CB-101-circuit breaker	2A0610-001
RV-101-varistor (white dot or band)	43X0456-001
RV-901-varistor (black & blue dot or bands)	43X0457-004
RV-1101-varistor	43X0454-001
RT-101-thermistor	43X0453-001
RT-1101-thermistor	43X0455-002

CHANNEL MASTER
Color-TV Chassis
T5001 Series



SYMBOL	DESCRIPTION	ELECTROHOME PART NO.
T101	x-former, sound input	21-1121-01
L722	coil, chroma osc	21-1122-01
T721	x-former, chroma ref output	21-1123-01
R359	bright limiter cont 100K	41-265-15
L901	coil, horiz osc	21-1070-02
T901	x-former, horiz buffer	24-170002-01
R422	cont, HV adj	41-192-24
R316	cont, 470 contrast	41-263-03
R328	cont, 750 bright	41-263-04
R325	cont, 2K detail	41-263-02
R609	cont, 20K vert	41-263-05
R942	cont, horiz centering	41-263-01
	470 Ω 3W	41-281-01

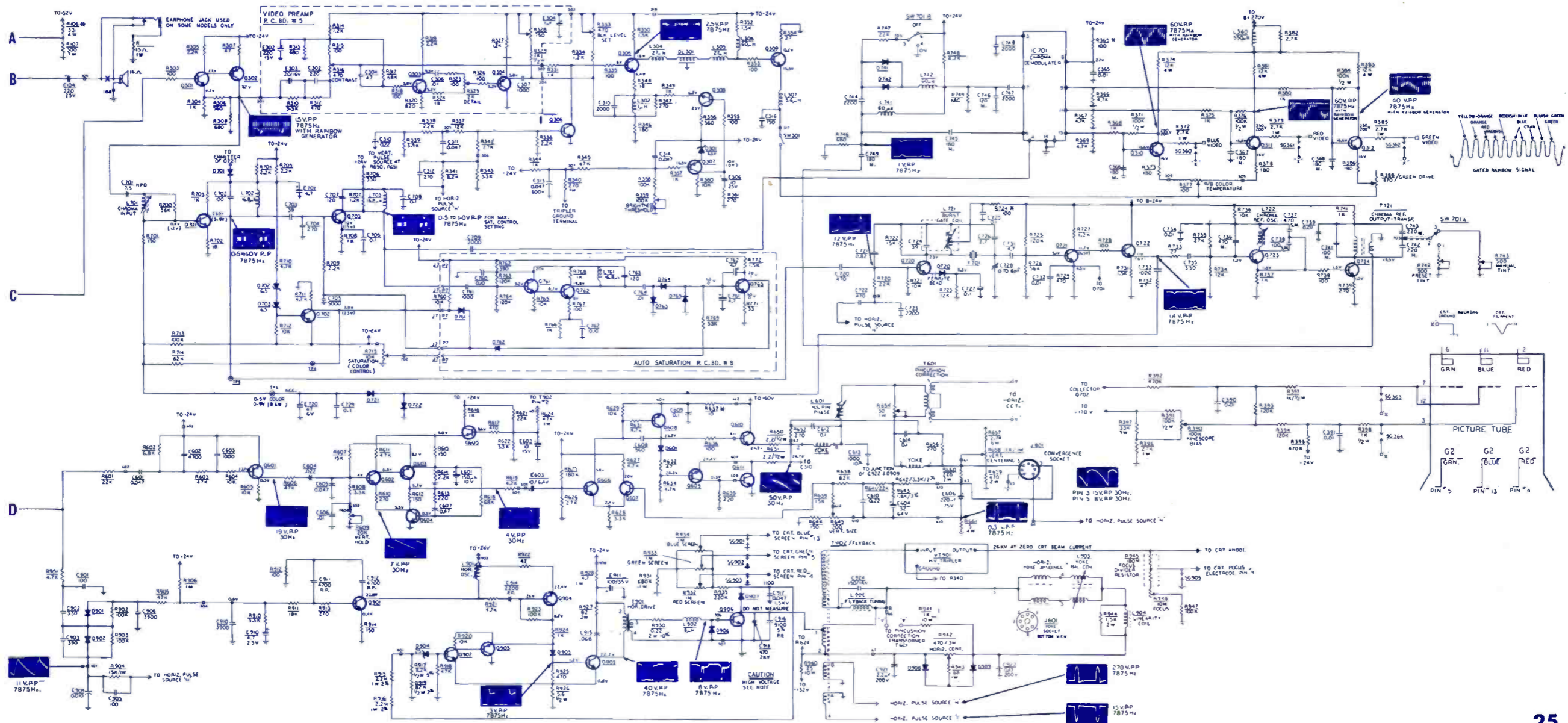
VT901	voltage tripler	28-32-01,02,03
T902	horiz output x-former	21-229-01
T401	power x-former	24-10157-01
R513	RF AGC delay 5K	41-227-65
R658	vert center 1K	41-228-33
R964	focus 10M	41-251-02
E401A	470 μf 200v electr	44-203-19
E401B	100 μf 250v 3 section	
E401C	47 μf 300v	
E402A	1000 μf 40v electr	44-203-20
E402B	250 μf 75v 3 section	
E402C	250 μf 75v	
F401	1.7 a chemically activated fuse	27-25-01



TRANSISTOR CROSS REFERENCE CHART							
SYMBOL	ELECTROHOME LTD. PART NO.	BASING	FUNCTION	SYMBOL	ELECTROHOME LTD. PART NO.	BASING	FUNCTION
IC101	14-2008-01		SOUND IF AND FM DETECTOR	Q304	14-862-32		2ND PEAKING AMP. BRIGHTNESS LIMIT THRESHOLD
IC102	14-2009-01		POWER AUDIO OUTPUT	Q301	14-809-23		1ST VIDEO AMP.
IC501	14-2011-01		SIGNAL PROCESSING	Q302	14-856-23		2ND VIDEO AMP. COLOR KILLER
IC701	14-2010-01		CHROMA DEMODULATOR	Q309	14-857-12 OR 14-867-32		VIDEO DRIVER
Q201	14-653-21		1ST IF AMPLIFIER	Q310	14-901-12		BLUE VIDEO OUTPUT
Q202	14-654-21		2ND IF AMPLIFIER	Q311	14-904-12		RED VIDEO OUTPUT
Q203			3RD IF AMPLIFIER	Q312			GRN. VIDEO OUTPUT
Q252			AFT RF AMPLIFIER	Q402			+132V REG. DRIVER
Q703	14-660-12		CHROMA BANDPASS OUTPUT	Q404			+132V ERROR AMP.
Q204	14-661-21		SOUND DETECTOR	Q601	14-803-12		VERT. SYNC INVERTER
Q251			AFT DC AMPLIFIER	Q903			HOLD DOWN DRIVER
				Q303			1ST PEAKING AMP.
				Q602	14-805-12		VERT. OSC.
				Q403			+132V CURRENT LIMIT
				Q604	14-858-12		VERT. OSC.
				Q605			VERT. B+ REG.

		DELAY LINE DRIVER	
Q305	14-802-12		H & V BLANKER
Q306			BRIGHTNESS LIMIT DR.
Q308			+24V REG. DRIVER
Q406			+24V CURRENT LIMITER
Q407			+24V FAULT SWITCH
Q451			LINEARITY COMPARATOR
Q607			1ST CHROMA AMP.
Q701			REF. BURST GATE
Q720			1ST REF. BUFFER
Q721			ACC. BUFFER
Q722	REF. OSCILLATOR		
Q724	REF. OUTPUT		
Q761	AUTO. SAT. RF BUFFER		
Q762	AUTO. SAT. RF AMP.		
Q763	AUTO. SAT. DC AMP.		
Q901	REACTANCE CONTROL		
Q606	14-805-12		LINEARITY COMPARATOR
Q608	14-807-12		VERT. OUTPUT DRIVERS
Q609			
Q603	14-807-12		VERT. OSC.
Q904	14-861-12		HOR. OSC.
Q902	14-801-23		HOLD DOWN MULTIVIBRATOR
Q401	14-601-26		+132V REGULATOR
Q906	14-601-27		HORIZONTAL OUTPUT
Q905	14-910-13		HORIZONTAL DRIVER
Q610	14-905-23		VERTICAL OUTPUTS
Q611			
Q405	14-909-23		+24V REGULATOR

THE DASH NO'S. OF NEW ELECTROHOME TRANSISTOR PART NO'S. RELATE TO LEAD IDENTIFICATION. EMITTER = 1, BASE = 2, COLLECTOR = 3. FIRST 2 LEADS READ FROM LEFT, WHILE LEADS ARE FACING YOU AND FLAT OR OPEN TRIANGLE POINT DOWNWARD, CONSTITUTE THE DASH NUMBERS.



EMERSON

TV Chassis
T2R2-1A

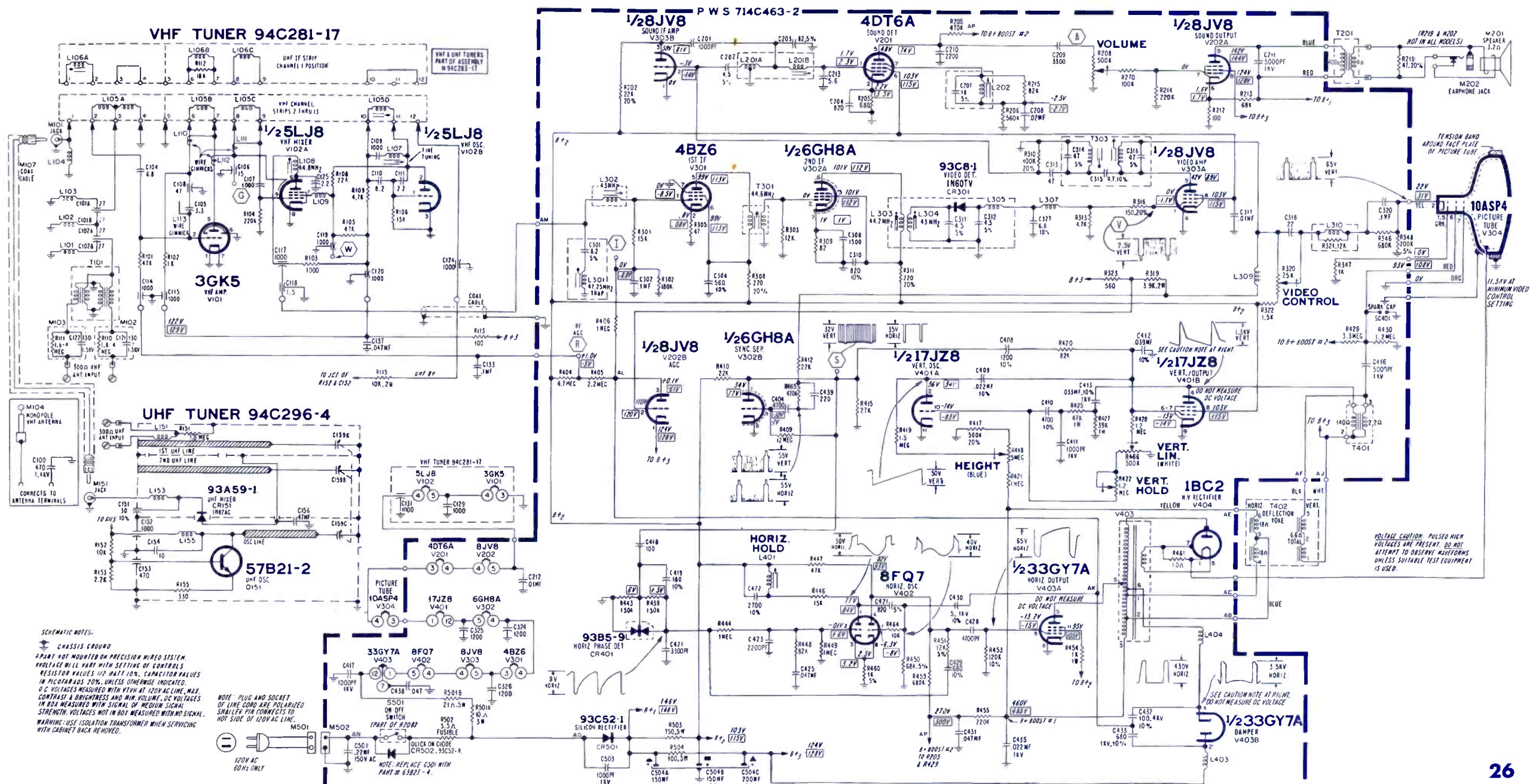
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL DESCRIPTION EMERSON PART NO.

R208	—500K volume control (includes R320 and S501)	970989
R320	—25K video control	970989
R418	—5M vert height control	970001
R422	—1.2M vert hold control	75A100-8
R502	—5.5Ω, fusible resistor	61A48-1
R503	—750Ω, 5w, 10% resistor	970990
R504	—100Ω, 5w, 10% resistor	61A20-76
C432	—100 μf, 4kv, 10%, N1500, cer disc	970994
C504A	—150 μf, 150v elect	970996
C504B	—150 μf, 150v elect	970996
C504C	—200 μf, 150v elect	970996
L201A	—sound IF coil	72A301-2
L201B	—sound IF coil	72A301-2
L202	—quad coil (includes C207)	970383
L309	—video peaking coil	73A5-20
L401	—horiz hold coil	94A17-19
T201	—audio output xformer	79A124-5
T303	—sound take-off and 4.5MHz trap	72A185-5
T401	—vert output xformer	79A139-4
T402	—deflection yoke	94A372-1
T403	—horiz output xformer	970998

MODEL/CHASSIS CROSS-REFERENCE CHART

MODEL NO.	MODEL TYPE	CHASSIS NO.	PICTURE TUBE	VHF TUNER	UHF TUNER
9FP02	(Plastic) Beige-White	T2R2-1A	10ASP4	971034	94A 296-4
9FP03	(Plastic) Green-White	T2R2-1A	10ASP4	971034	94A 296-4
9FP04W	(Plastic) Walnut-Black	T2R2-1A	10ASP4	971034	94A 296-4



SCHEMATIC NOTES:

- CHASSIS GROUND
- POINT NOT MOUNTED ON PRECISION WIRED SYSTEM. ISOLATE WILL VARY WITH SETTING OF CONTROLS.
- RESISTOR VALUES 1/2 WATT 10%, CAPACITOR VALUES IN MICROFARADS 20%, UNLESS OTHERWISE INDICATED.
- D.C. VOLTAGES MEASURED WITH 10MΩ AT 120V AC LINE, MAX. CONTRAST & BRIGHTNESS AND MIN. VOLUME. D.C. VOLTAGES IN RMS MEASURED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH. VOLTAGES NOT IN RMS MEASURED WITH NO SIGNAL.
- WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

NOTE: PLUG AND SOCKET OF LINE CORD ARE POLARIZED. SMALLER PIN CONNECTS TO HOT SIDE OF 120V AC LINE.

NOTE: REPLACE C501 WITH PART # 63823-4.

VOLTAGE CAUTION: PULSED HIGH VOLTAGES ARE PRESENT. DO NOT ATTEMPT TO OBSERVE WAVEFORMS UNLESS SUITABLE TEST EQUIPMENT IS USED.

EMERSON

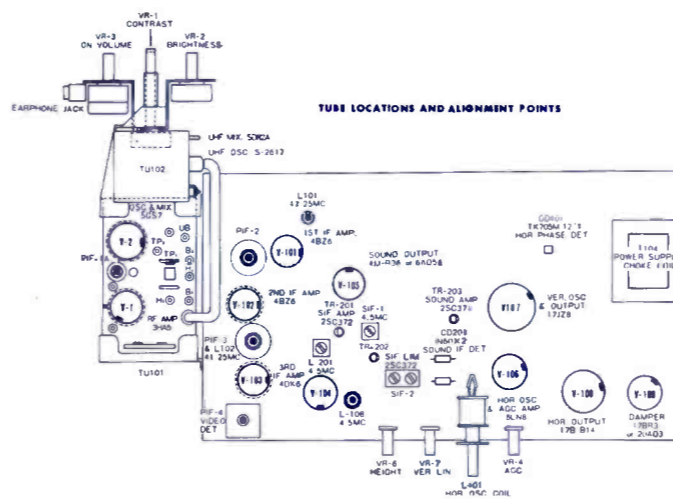
TV Model
12HP02

ELECTRONIC TECHNICIAN/DEALER **TEKFAX**

SYMBOL DESCRIPTION EMERSON TV PART NO.

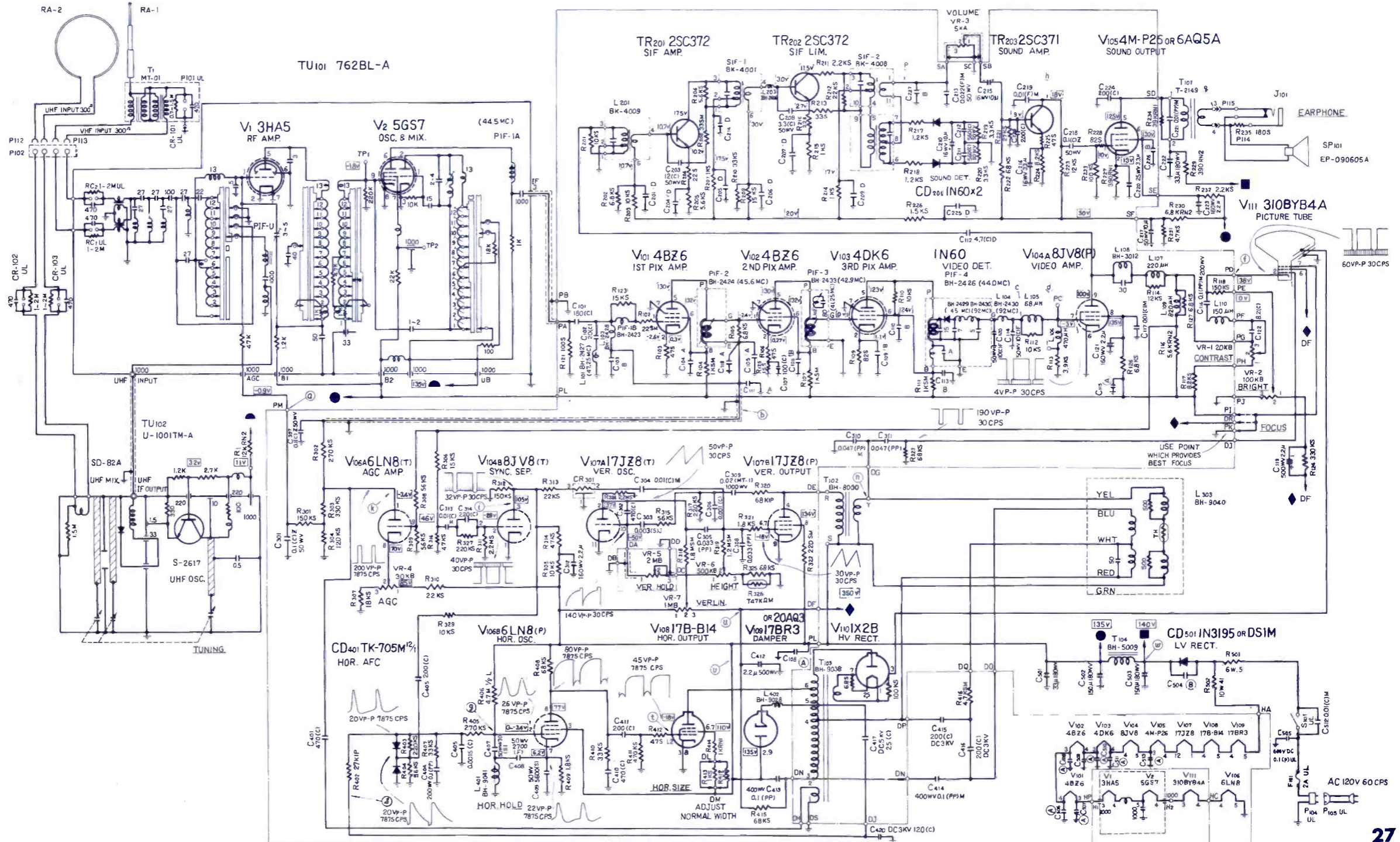
TR-201, 202—transistor	983742
TR-203—transistor	983743
SIF-2—sound detector xformer 4.5MHz	983750
L201—sound take off coil 4.5MHz	983759
L303—deflection yoke assembly	983760
L401—horiz osc coil with knob	983761
T101—sound output xformer	983762
T102—vert output xformer	BH-8000
T103—horiz output xformer	983763
T104—filter choke power supply	983764
C417—ceramic capacitor-25pf ± 10% 5kv	983765

C222, 501, 502—electrolytic capacitor-150+150+33	983771
503—+33 μf at 180v	983772
CR301—couplate-vert integrator	039001
VR-1—control-cont	983778
VR-2—control-bright	983779
VR-3—control-on volume	983780
VR-4—control-AGC	983781
VR-5—control-vert hold	983782
VR-6—control-height	983783
VR-7—control-vert lin	983784
TU101—VHF tuner 762BL-A	983785
TU102—UHF tuner U-1001 TM-A	983786



RESISTANCE READINGS

SYMBOL NO.	TUBE TYPE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10
V-1	3HA5	280K	0	(FILAMENT)	*1.2K	0	0	...	...	...	...
V-2	5GS7	10K	250K	0	(FILAMENT)	*1K	0	0	220K	...	...
V-101	4BZ6	700K	47	(FILAMENT)	*1K	*1K	0	...	...	...	...
V-102	4BZ6	700K	47	(FILAMENT)	*1K	*1K	0	...	...	...	...
V-103	4DK6	0	82	(FILAMENT)	*1K	*1K	0	...	...	...	...
V-104	8JVB	0	3.9M	26K	(FILAMENT)	0	120	*0	*4.7K	...	...
V-105	4M-P26 or 6AQ5A	100K	390	(FILAMENT)	*620	*2.2K	NC	...	...	...	...
V-106	6LN8	450K	330K	*0	(FILAMENT)	*68K	1.8K	1.8K to 48K	56K	...	...
V-107	17JZ8	(FIL)	1.8M to 2.8M	NC	*150	NC	to 1.7M	to 1.7M	*220	0	500K to 2.5M
V-108	17B-B14	470K	470K	0	(FILAMENT)	*1K	to 2K	*1K	to 2K	0	NC
V-109	17BR3	NC	*0	NC	(FILAMENT)	NC	NC	NC	*0	...	...
V-110	1X2B	INF	INF	INF	INF	INF	NC	INF	INF	(CAP)	1.2M
V-111	CRT 310BYB4A	68K	180K to 280K	(FILAMENT)	67K	260K	...	...	...	...	...

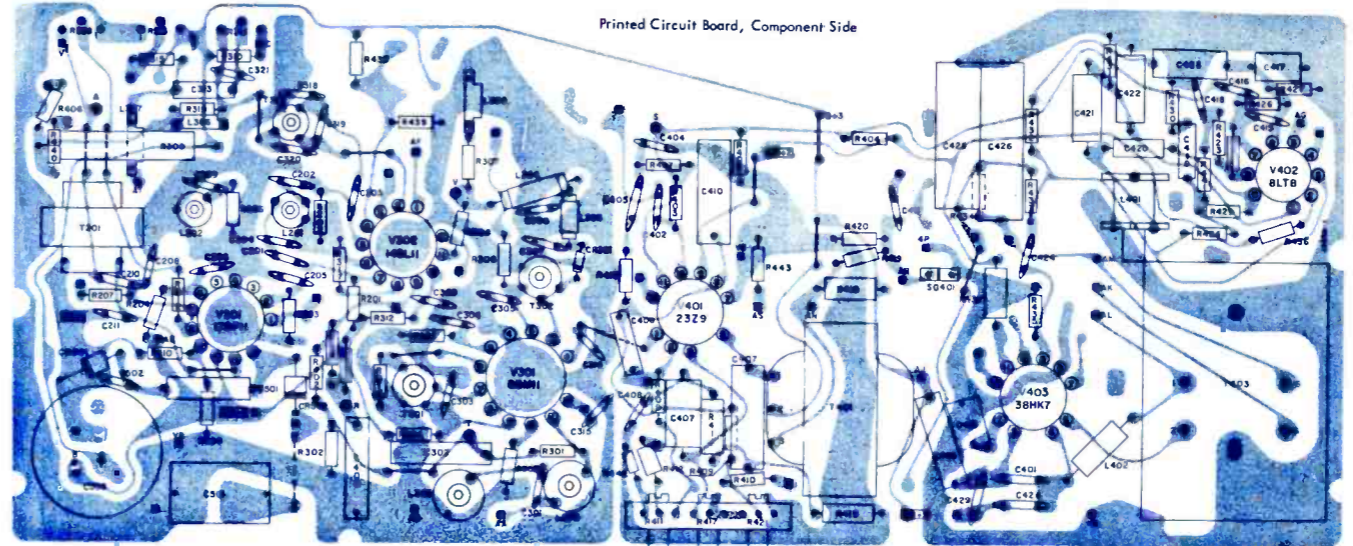


EMERSON

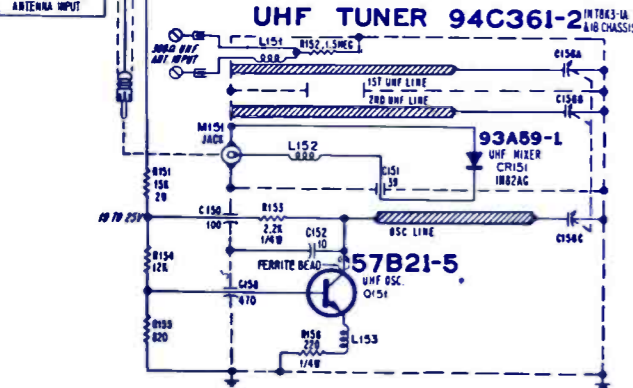
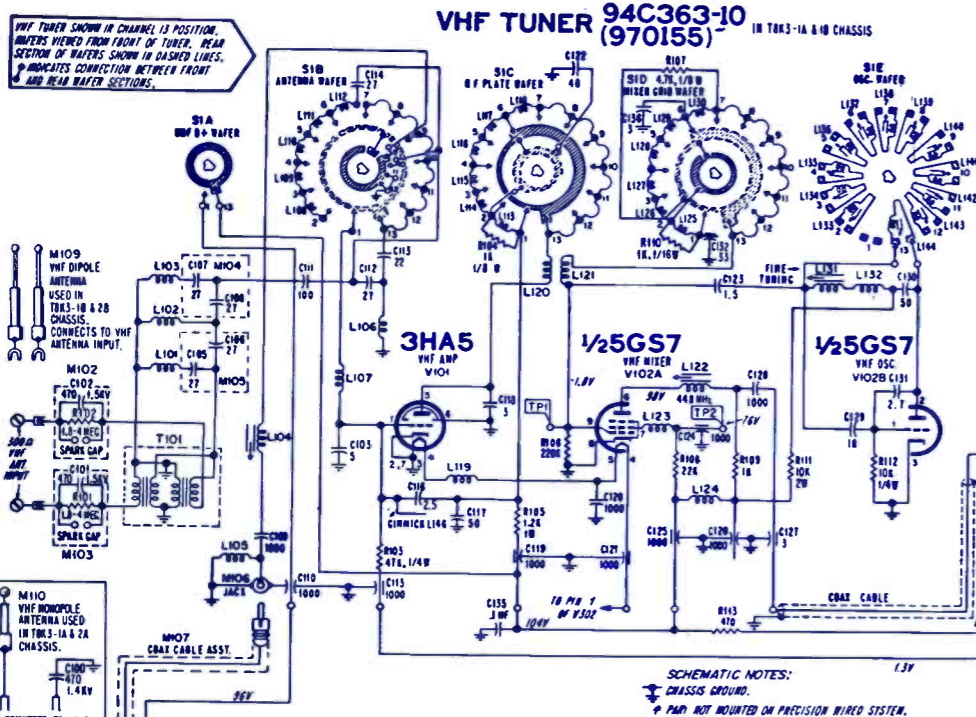
TV Chassis
T8K3-1B

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

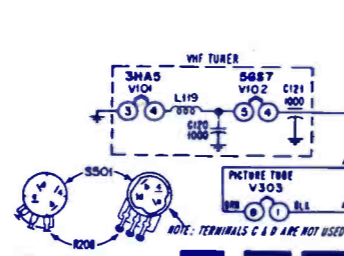
SYMBOL	DESCRIPTION	EMERSON PART NO.
R208	1M volume control and on-off switch S501	75A1-176
R311	30K contrast control	970103
R313	100K brightness control	970104
R320	varistor	61A46-6
R411	3M height control	Part of 75A129-3
R417	1.2M vertical hold control	Part of 75A129-3
R421	500K vertical linearity control	Part of 75A129-3
R501	5.5 n fusible	61A48-1
L201	sound IF & phase shift coil (includes C213)	72A301-4
L202	quadrature coil (includes C207 & R205)	970013
L301	47.25MHz trap	72A308-8
L401	horiz lock coil	94A17-21
T201	audio output xformer	79A124-3
T303	sound take-off & 4.5MHz trap	72A185-7
T401	vertical output xformer	79A139-2
T402	deflection yoke assembly	970116
T403	horiz output	79A138-4
CR301	diode, video detector (IN541)	93A25-3



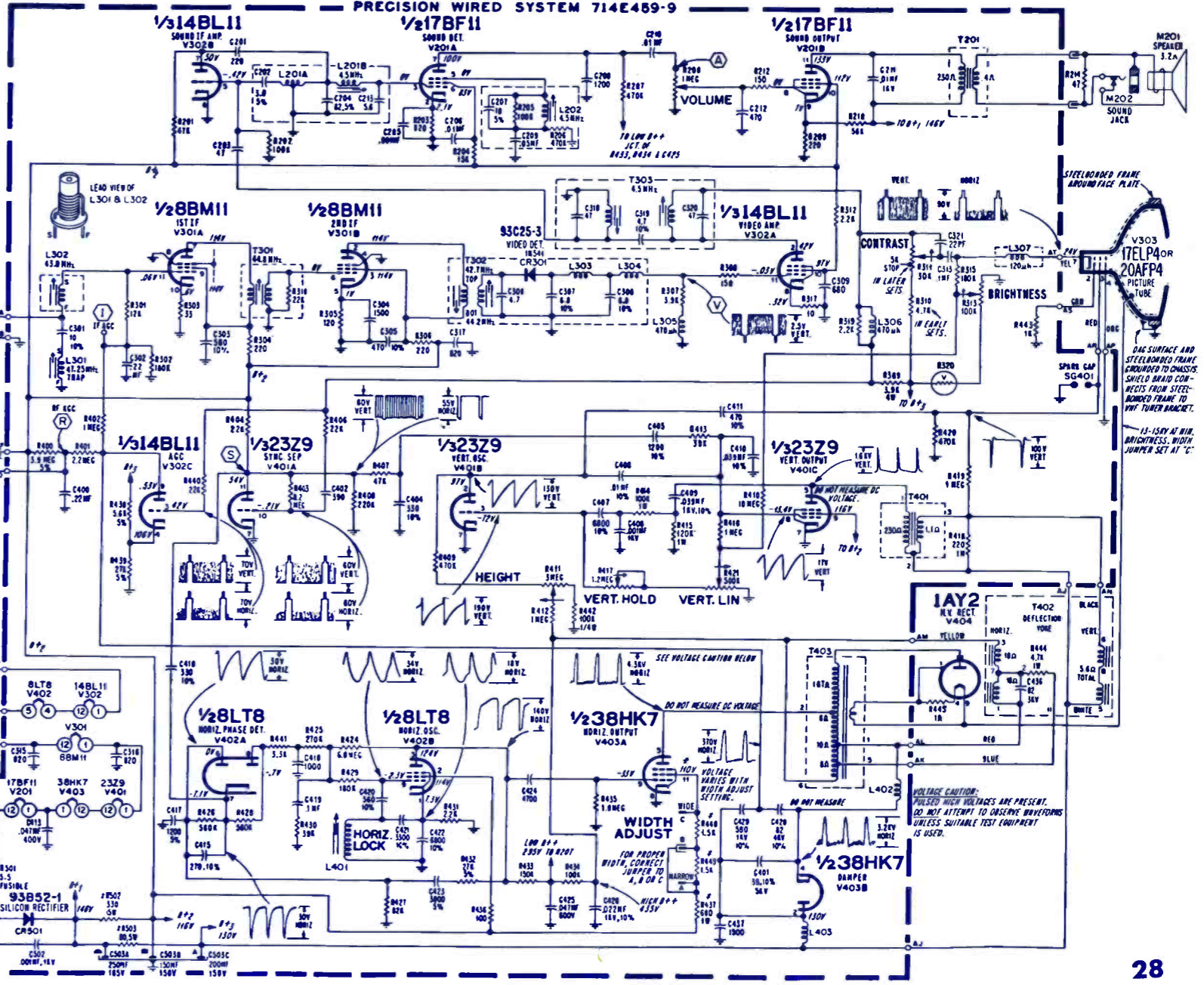
VHF TUNER SHOWN IN CHANNEL 13 POSITION. WAFERS VIEWED FROM FRONT OF TUNER. REAR SECTION OF WAFERS SHOWN IN DASHED LINES. * INDICATES CONNECTION BETWEEN FRONT AND REAR WAFER SECTIONS.



SCHEMATIC NOTES:
 CHASSIS GROUND.
 * PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 † VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 RESISTOR VALUES 1/2 WATT, 10%. CAPACITOR VALUES IN MICROFARADS, UNLESS OTHERWISE INDICATED. DC VOLTAGES MEASURED AT 100V AC LINE, NO SIGNAL, MAX. CONTRAST & BRIGHTNESS & MIN. VOLUME WITH VTRM.
 ‡ COMPONENT MOUNTED AT UNDERSIDE OF PRECISION WIRED SYSTEM.



NOTE: IN "ON" POSITION SWITCH S503 IS DISCONNECTED FROM TIMER MOTOR AND STAYS PERMANENTLY CLOSED.
 S503 VACUUM SWITCH PART OF R208
 REPLACE C501 WITH PART IN 93B23-6

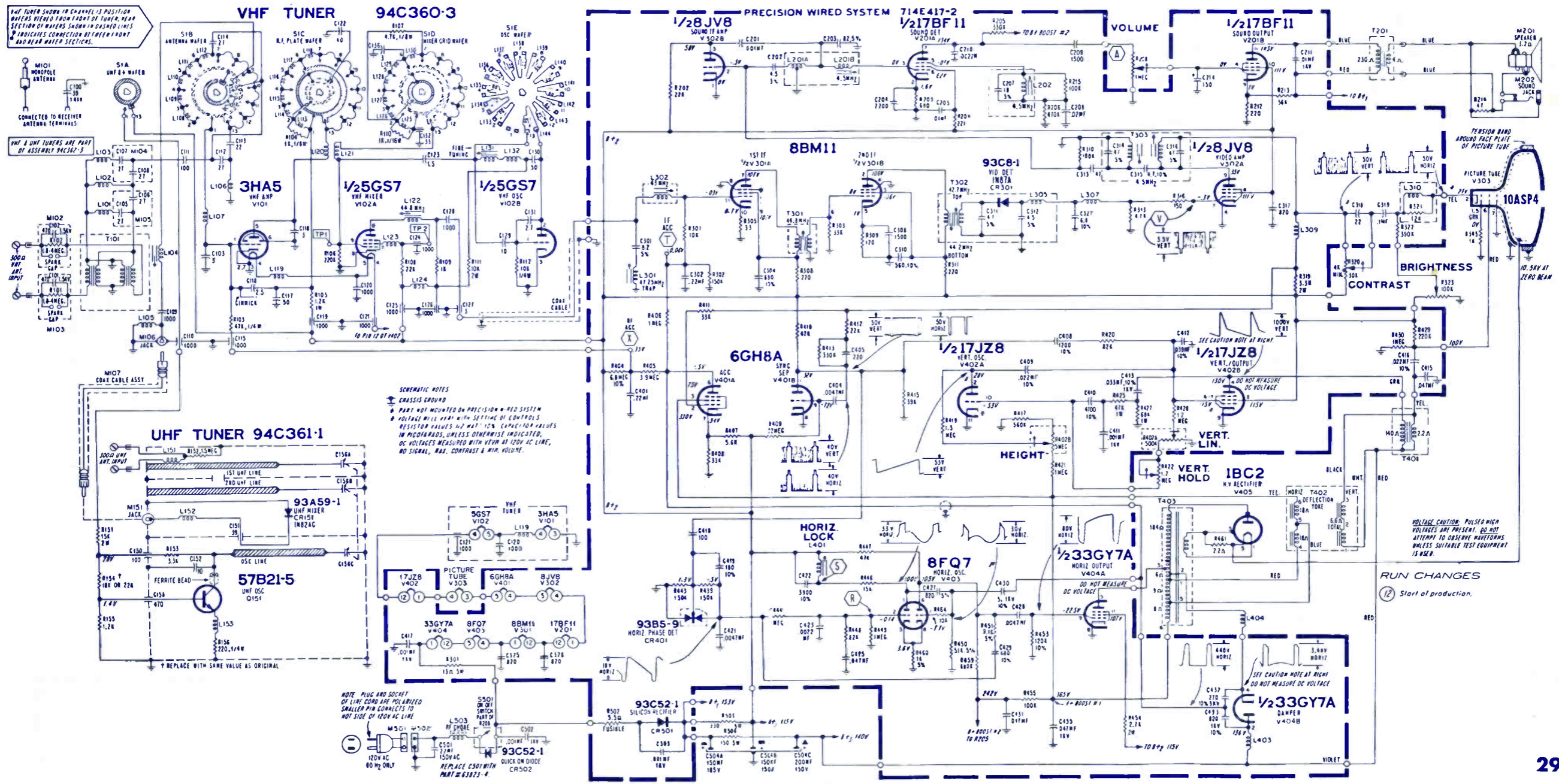


EMERSON

TV Chassis
T2L2-1A

SYMBOL	DESCRIPTION	EMERSON PART NO.
R208	1M volume control	75A120-1
R320	30K contrast control	75A121-3
R323	100K bright control	75A121-2
R402A	500K, vert lin control	
R402B	5M height control	75A95-6
R422	1.2M, vert hold	75A121-1
C504A	150µf, 165v	
C504B	150µf, 150v Electrolytic	970382
C504C	200µf, 150v	

L201A	Sound IF & phase shift coil	72A301-2
L201B		
L202	quad coil (includes C207)	970383
L401	horiz lock coil	94A17-17
T201	audio output xformer	79A81-23
T301	1st IF xformer	970384
T302	2nd IF xformer	72A261-8
T303	sound take-off & 4.5 MHz trap	72A185-5
T401	vert output xformer	970385
T402	deflection yoke assembly	94A372-1
T403	horiz output xformer	79A138-5



EMERSON

Color TV Chassis
30K17

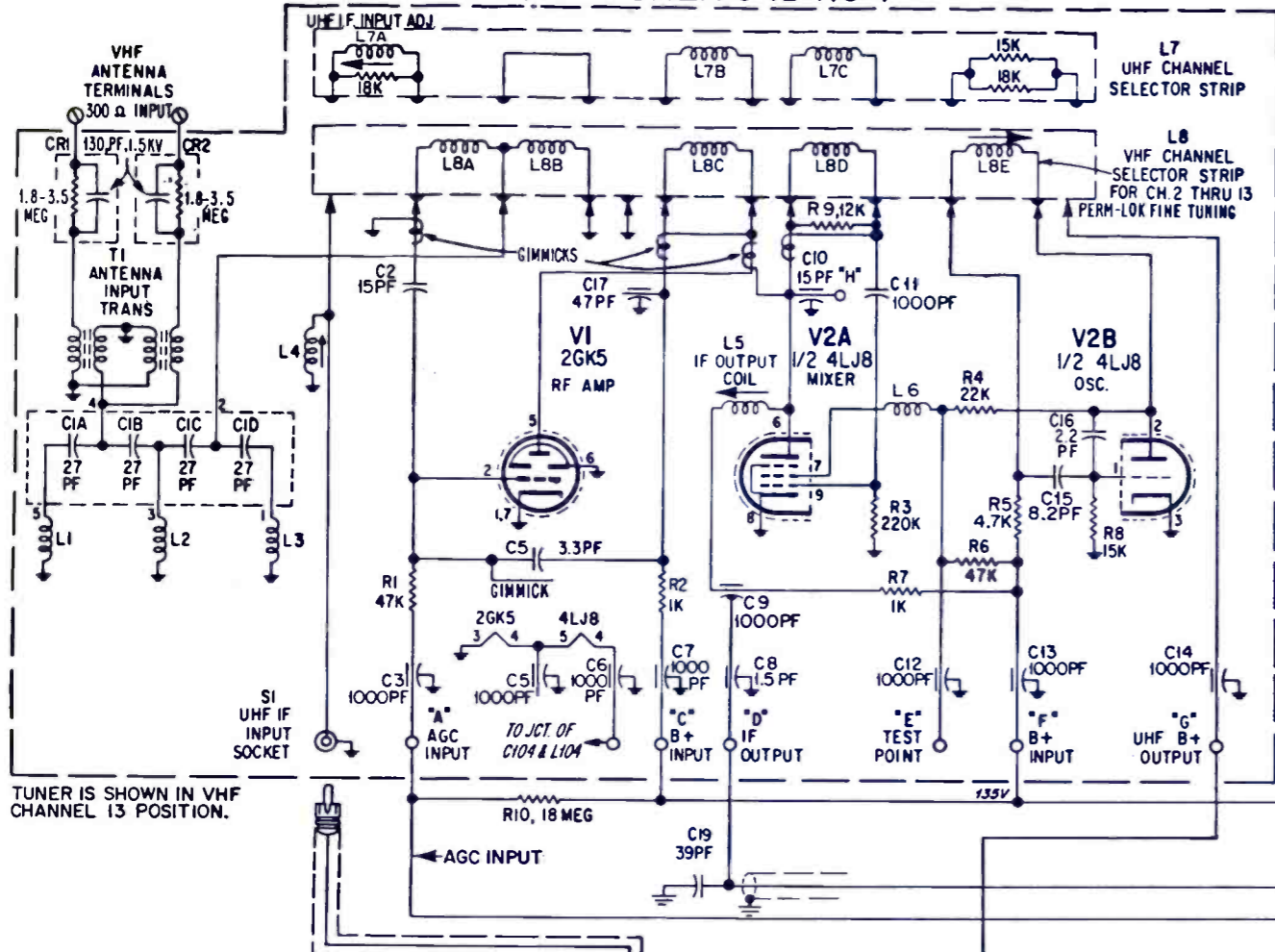
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	EMERSON PART NO.
R119	66M, 6kv	60A30-5
R121	3M, focus adjust control (K17)	970807
R121	12M, focus adjust control	970806
R123	750K, vert hold control	971430
R127	1M, vol control on/off switch	75A179-6
R128	250n, contrast control	971432
R130	100K, bright control	971433
R131	500n, color control	75A149-7
R133	50K, tint control	971434
R509	3.4M, vert lin control	75A155-5
R517	100K, vert height control	part of R509
RT101	thermistor, degaussing	61A60-1

RV102	2ma@95v VDR	61A61-1
RV500	1ma@870v VDR	61A65-1
C109A	80 pf 175v elect	
C109B	100 pf 400v elect	
C109C	30 pf 400v elect	67A76-1
C109D	10 pf 150v	
C110A	120 pf 400v	
C110B	20 pf 400v	67A75-1
C110C	100 pf 150v	
C110D	4 pf 400v	
L105	filter choke	74A31-1
L201	quad coil	72A366-1
L501A	horiz osc coil	72A373-1

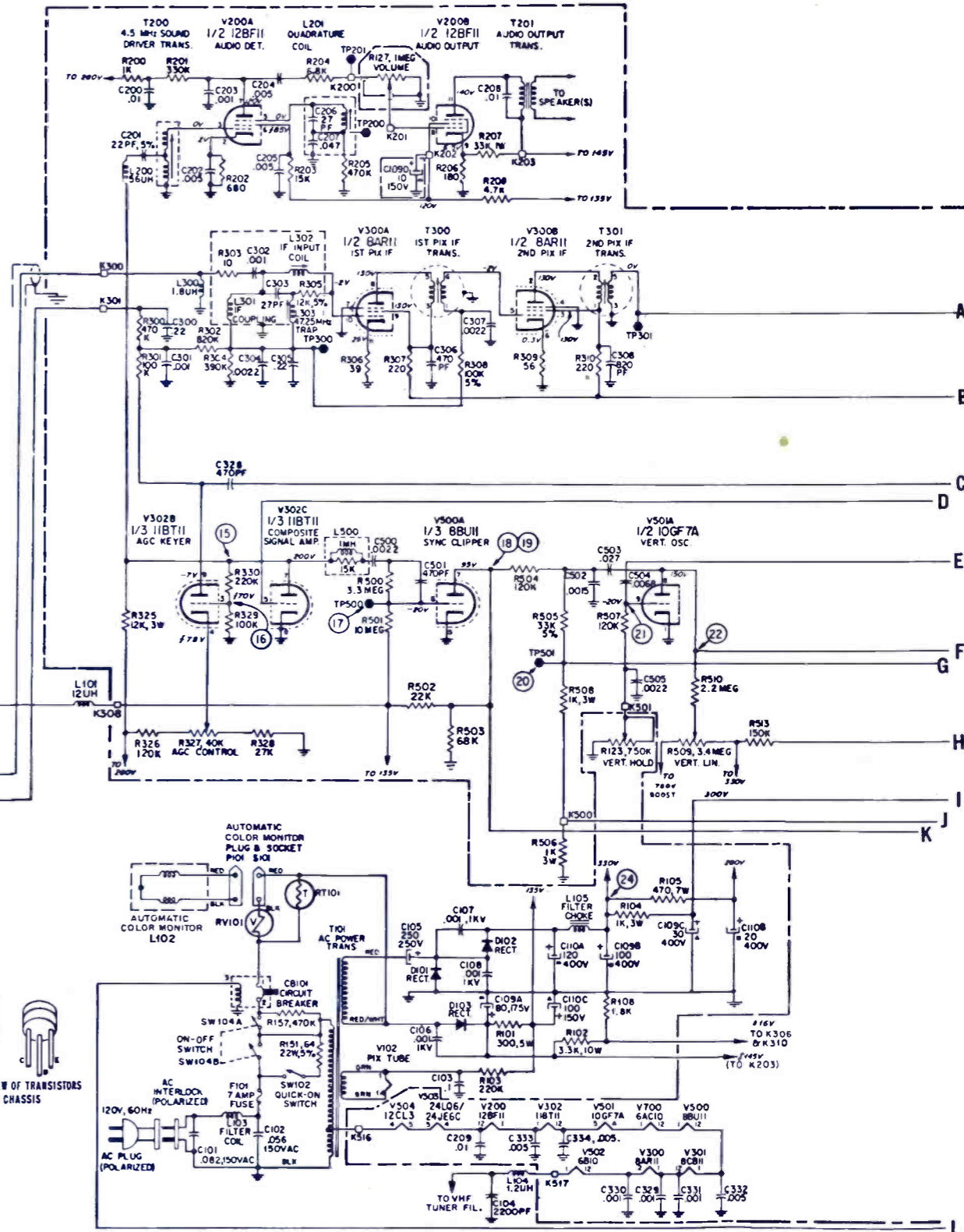
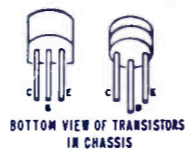
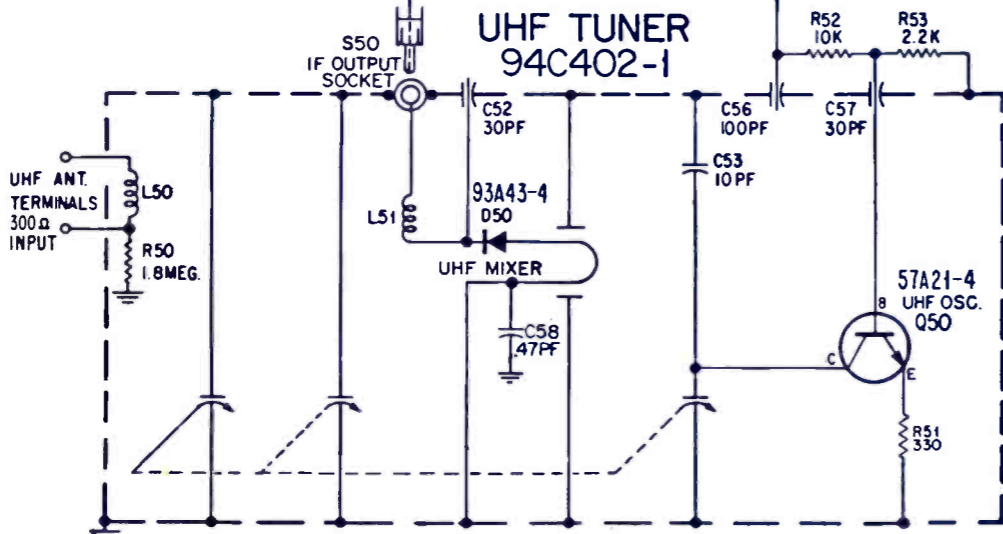
L501B	horiz osc coil	72A373-1
L700	5.6 pf RF choke	73A125-3
DL300	delay line	72A372-1
T101	power xformer	80A116-1
T102	vert output xformer	79A153-2
T103	horiz output xformer	79A162-1
T200	sound take off & 4.5HMz trap	72A361-1
T201	audio output xformer	79A151-1
T700	chroma take off	72A368-1
T701	chroma bandpass	72A358-1
T702	Xtal filter xformer	72A362-1
CB101	circuit breaker	84A31-1
F101	fuse, 7a, 125v type	84A30-1

VHF TUNER 94D416-1



TUNER IS SHOWN IN VHF CHANNEL 13 POSITION.

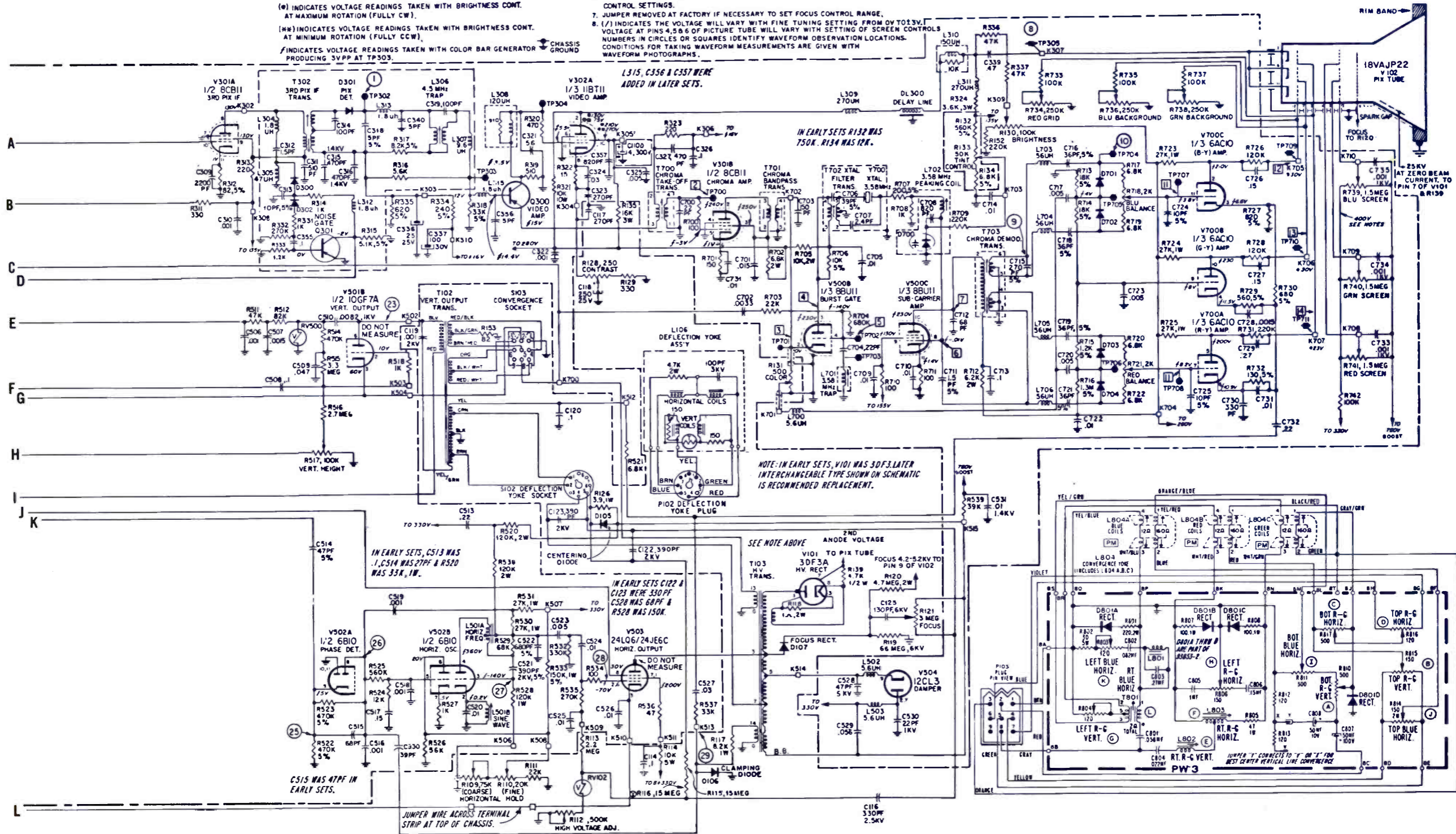
UHF TUNER 94C402-1



NOTES

1. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS ARE IN MFD, UNLESS OTHERWISE NOTED.
3. CAUTION: USE ISOLATION TRANS WHEN WORKING ON CHASSIS.
4. DC VOLTAGES MEASURED WITH "VTVM" PLACED BETWEEN POINTS INDICATED & CHASSIS GND, WITH NORMAL SIGNAL INPUT.
- (*) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MAXIMUM ROTATION (FULLY CW).
- (#) INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONT. AT MINIMUM ROTATION (FULLY CCW).
- (/) INDICATES VOLTAGE READINGS TAKEN WITH COLOR BAR GENERATOR PRODUCING 3VPP AT TP303.

5. WAVEFORMS ARE TAKEN WITH NORMAL SIGNAL INPUT.
6. LINE VOLTAGE INPUT SET AT 120 VAC.
- (/) INDICATES THESE VOLTAGES WILL VARY WITH VIDEO CONTENT OF THE PICTURE BEING RECEIVED AND ARE AVERAGE READINGS.
- (\)- 7. JUMPER REMOVED AT FACTORY IF NECESSARY TO SET FOCUS CONTROL RANGE.
- 8. (/) INDICATES THE VOLTAGE WILL VARY WITH FINE TUNING SETTING FROM 0V TO 13.5V. VOLTAGE AT PINS 4,5 & 6 OF PICTURE TUBE WILL VARY WITH SETTING OF SCREEN CONTROLS. NUMBERS IN CIRCLES OR SQUARES IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.



SYMBOL	DESCRIPTION	EMERSON PART NO.
R258	1M, volume control	971571
R301	10K, adj. rej. control	75A101-8
R315	750n, sound rej. control	75A101-3
R321	8.2K, 3w	970432
R401	60K, AGC control	75A101-9
R468	300K, vert lin control	970435
R474	120n, thermistor	61A50-3

R475	67ma, 20v, VDR	61A51-1
R504	1M, color killer control	970436
R701	500n, color control	75A149-3
R703	100K, vert hold control in 25-in. picture tube sets	75A134-6
R704	100K, vert hold control in 21-in. picture tube sets	75A127-9
R704	3.4M, vert size control	75A96-20
R707	1.1K, tint control	75A149-4
R708	250K, bright control in 25-in. picture tube sets	75A134-5
R709	250K, bright control in 21-in. picture tube sets	75A127-8

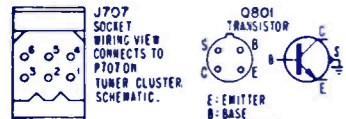
R709	250n, contrast control in 25-in. picture tube sets	75A134-4
R709	250n, contrast control in 21-in. picture tube sets	970447
R710	3.4M, master bright control	970449
R724	VDR	61A46-13
R725	2.8M, high voltage adj.	970452
R728	10n, vert center control	75A64-17
R732	15M, focus control	75A108-2
R739	VDR	61A46-2
R745	3.8n, thermistor	61A27-1

RUN CHANGES

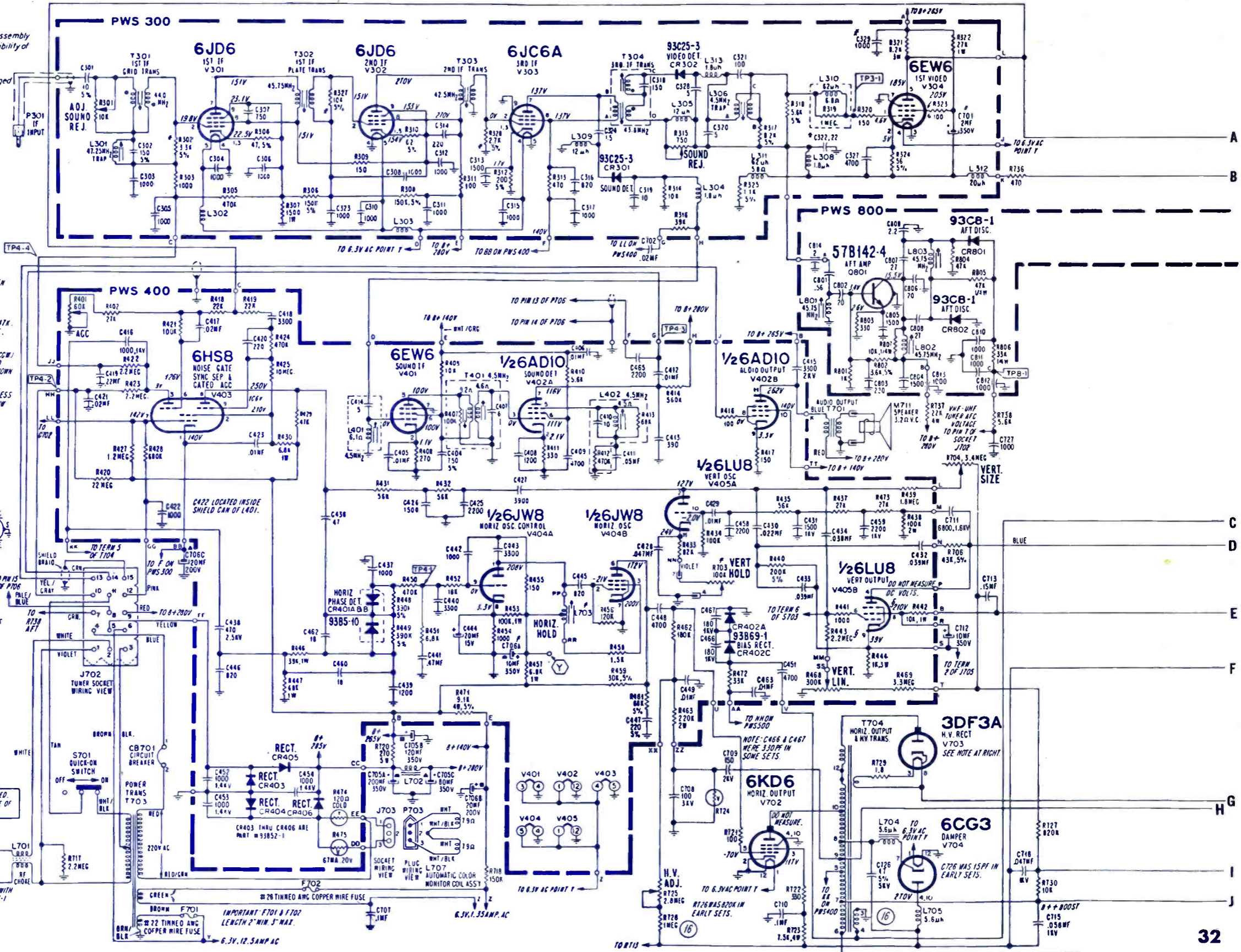
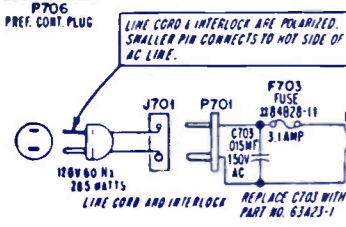
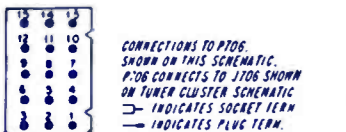
- (13) Start of production.
- (14) Component part numbers of HV housing assembly (except T704) changed to eliminate possibility of 15KHz buzz.
- (15) Set-up switch S701 not in later sets.
- (16) To limit high voltage range, R726 was changed from 820K to 1 meg, C726 was changed from 15pF to 47pF.
- (17) No service significance.

SCHEMATIC NOTES:

- VOLTAGE READINGS SHOWN IN BRACKETS () TAKEN WITH COLOR SIGNAL. VOLTAGE READINGS WITHOUT BRACKETS, INDICATES READING TAKEN WITHOUT SIGNAL, TUNER SET AT UNUSED CHANNEL.
- TO PREVENT LOADING IN CRITICAL STAGES, USE A 47K 1/2 W ISOLATING RESISTOR AT END OF TEST PROBE.
- † INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MINIMUM ROTATION (FULLY CCW). VOLTAGES IN VIDEO CIRCUITRY WILL VARY WITH VIDEO CONTENT OF PICTURE BEING RECEIVED. VOLTAGES SHOWN ARE TYPICAL READINGS.
- Δ INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MAXIMUM ROTATION (FULLY CW, BUT BELOW BLOOMING.)
- § INDICATES VOLTAGE WILL VARY WITH SETTING OF CONTROLS.



- SCHEMATIC NOTES CONT'D**
- * PART MOUNTED ON CHASSIS OR OTHER ASSEMBLY.
 - † CHASSIS GROUND.
 - ‡ PART MOUNTED ON BOTTOM OF PRECISION WIRED SYSTEM. RESISTOR VALUES 1/2 WATT, 10% ± CAPACITOR VALUES IN PICOFARADS UNLESS OTHERWISE INDICATED. SEE SEPARATE SCHEMATIC FOR VHT-UNT TUNERS AND CONTROL CIRCUITRY.
 - § VOLTAGES MEASURED WITH VTVM AT 120 VOLTS AC LINE. NO SIGNAL ON UNUSED UNF CHANNEL. ALL CONTROLS IN NORMAL OPERATING POSITION.

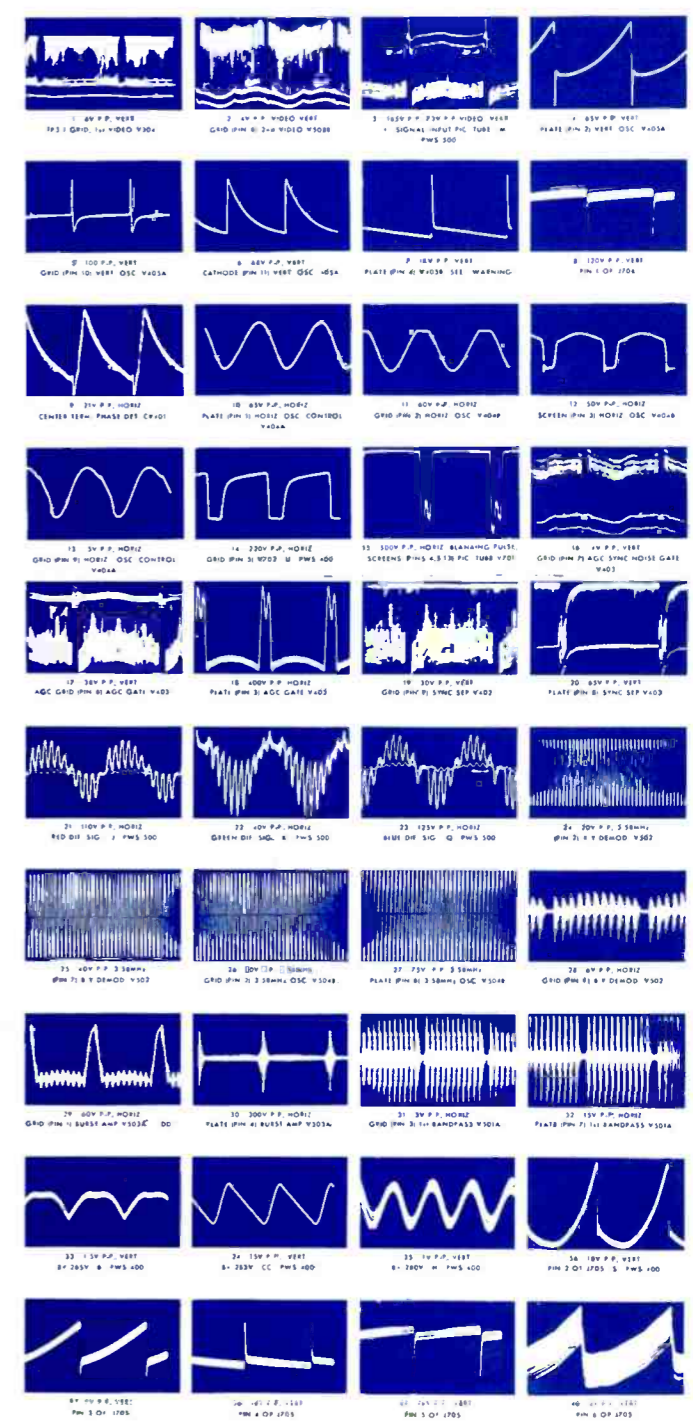
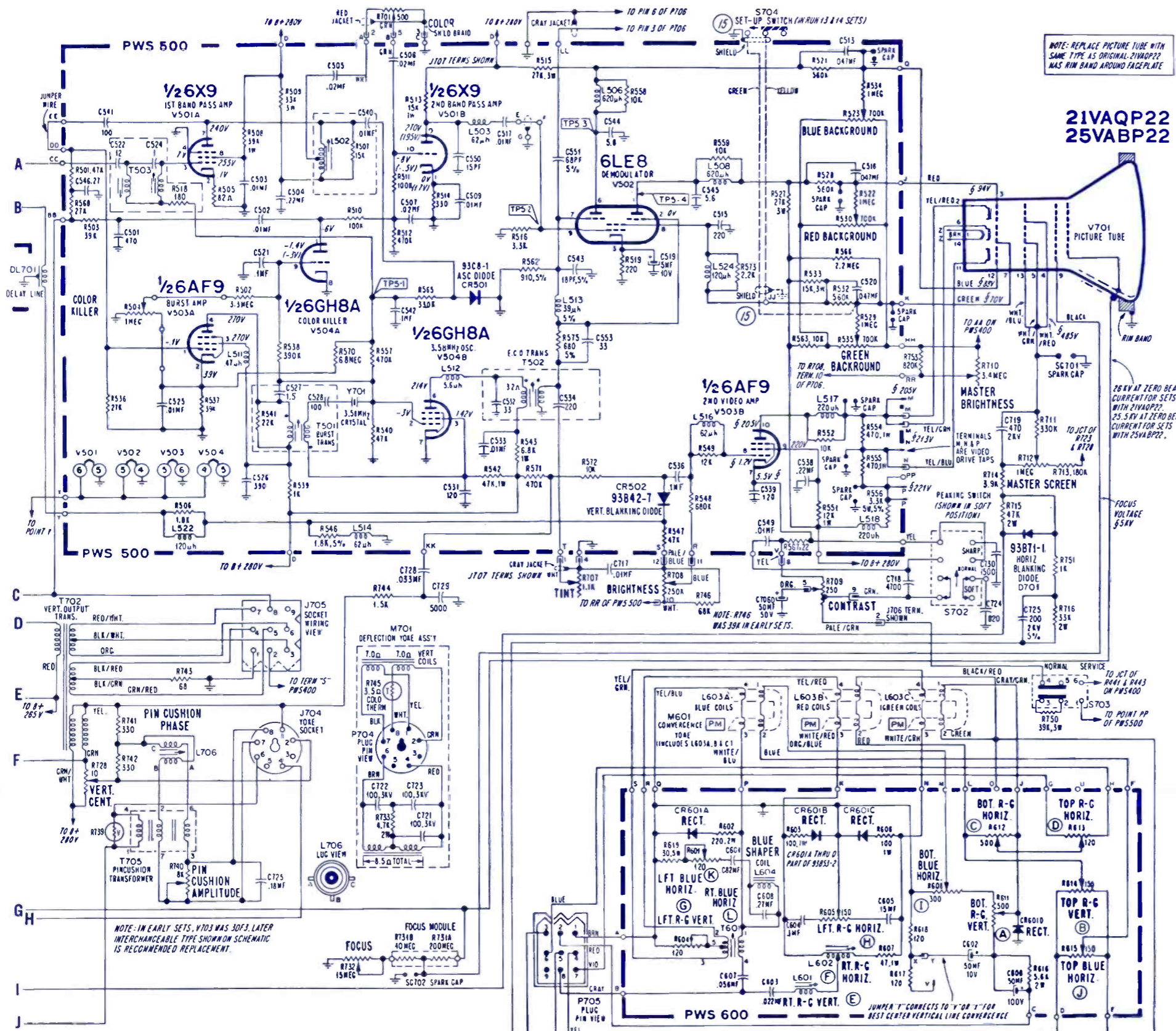


C705A-200 μ f, 350v, multiple elect 970475
 C705B-120 μ f, 350v, multiple elect 970476
 C705C-80 μ f, 350v, multiple elect 970475
 C706A-10 μ f, 350v, multiple elect 970476
 C706B-20 μ f, 200v, multiple elect 970476
 C706C-20 μ f, 200v, multiple elect 970476
 C706D-50 μ f, 50v, multiple elect 970476
 L401-sound takeoff coil 72A287-4
 L402-quadrature coil 72A287-3

L502-bandpass coil 72A269-4
 L702-filter choke 74A18-62
 L703-horiz osc coil 94A268-4
 T303-second IF xformer 72A251-8
 T304-third IF xformer 72A220-2
 T401-sound IF xformer 72A314-2
 T501-burst xformer 72A284-4
 T502-ECO xformer 72A285-2
 T503-bandpass input coil 72A302-1

T701-audio output xformer 970485
 T702-vert output xformer 79A106-5
 T703-power xformer 80A104-4
 T704-horiz output xformer 79A146-3
 M701-deflect yoke for 21-in. picture tube sets 94A377-8
 M701-deflect yoke for 25-in. picture tube sets 94A377-4
 CB701-circuit breaker 84A17-11
 F703-fuse, 3a 84A28-11

EMERSON
 Color-TV Chassis
 32K1673-32, 1686-4, 1687-2



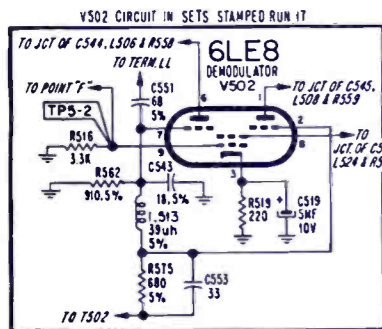
EMERSON

Color-TV Chassis
5K1675-2-3

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

RUN CHANGES

- 17 PWS500 circuitry changed to standardize with other models. See other schematic for sets stamped RUN 16 or lower.
- 18 V502 color demodulator circuit changed to increase color output.
- 19 No service significance.



SCHEMATIC NOTES

RESISTOR VALUES 1/2 WATT, 10% & CAPACITOR VALUES IN PICOFARADS UNLESS OTHERWISE INDICATED. SEE SEPARATE SCHEMATIC FOR VHF-UHF TUNERS AND CONTROL CIRCUITRY.

VOLTAGES MEASURED WITH VTVM AT 120 VOLTS AC LINE. TO PREVENT LOADING IN CRITICAL STAGES, USE A 47K 1/2W ISOLATING RESISTOR AT END OF TEST PROBE.

1) VOLTAGE READINGS SHOWN IN BRACKETS TAKEN WITH COLOR SIGNAL. VOLTAGE READING TAKEN WITHOUT SIGNAL. TUNER SET AT UNUSED CHANNEL.

1 INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MINIMUM ROTATION (FULLY CCW). VOLTAGES IN VIDEO CIRCUITRY WILL VARY WITH VIDEO CONTENT OF PICTURE BEING RECEIVED. VOLTAGES SHOWN ARE TYPICAL READINGS.

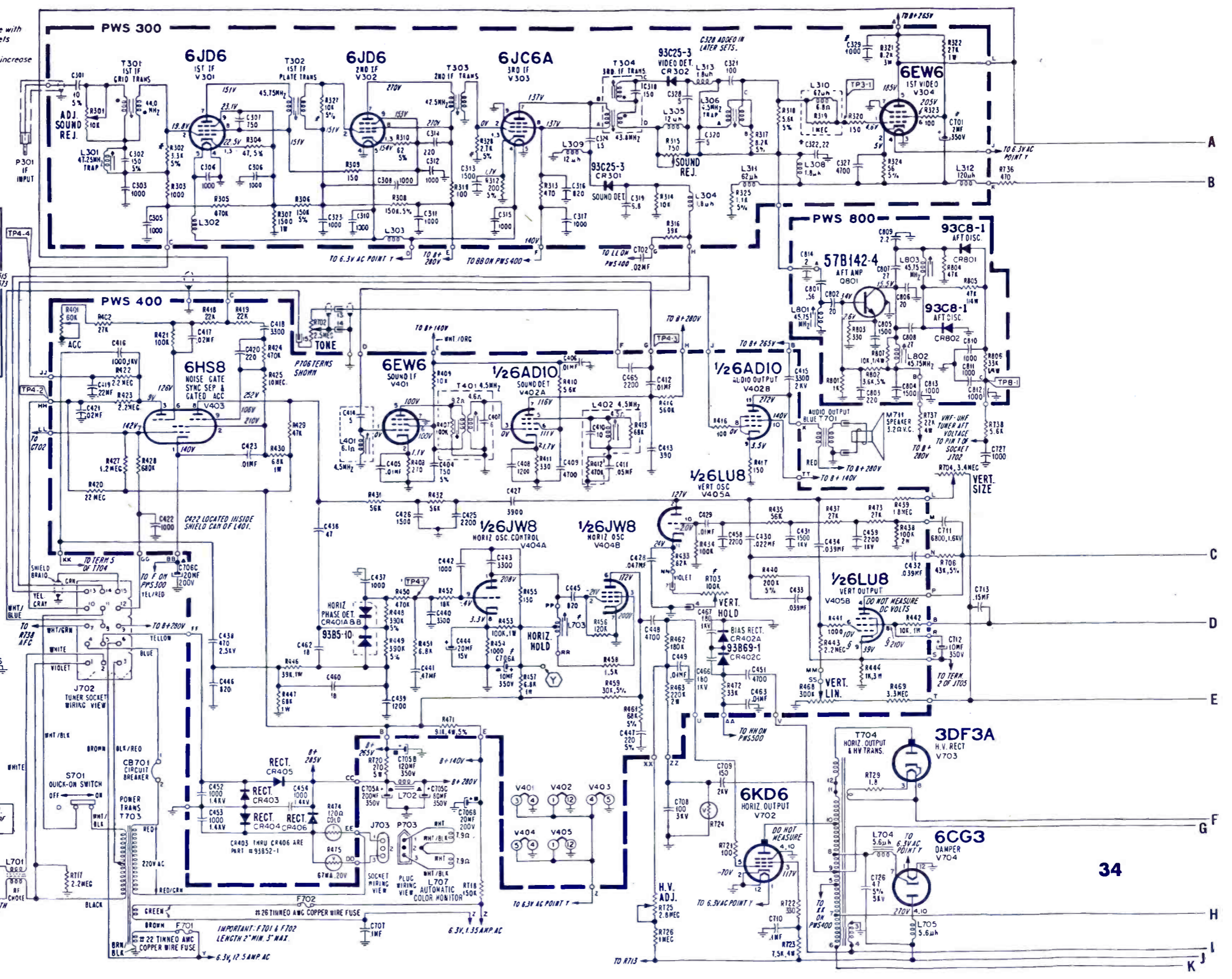
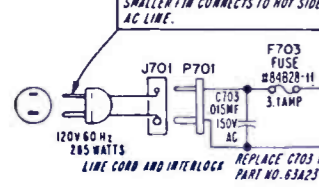
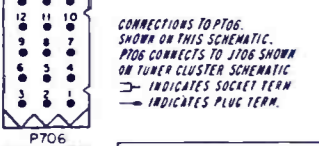
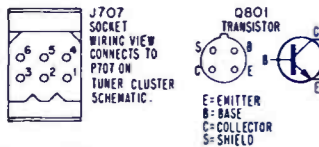
Δ INDICATES VOLTAGE READINGS TAKEN WITH BRIGHTNESS CONTROL AT MAXIMUM ROTATION (FULLY CW, BUT BELOW BLOOMING).

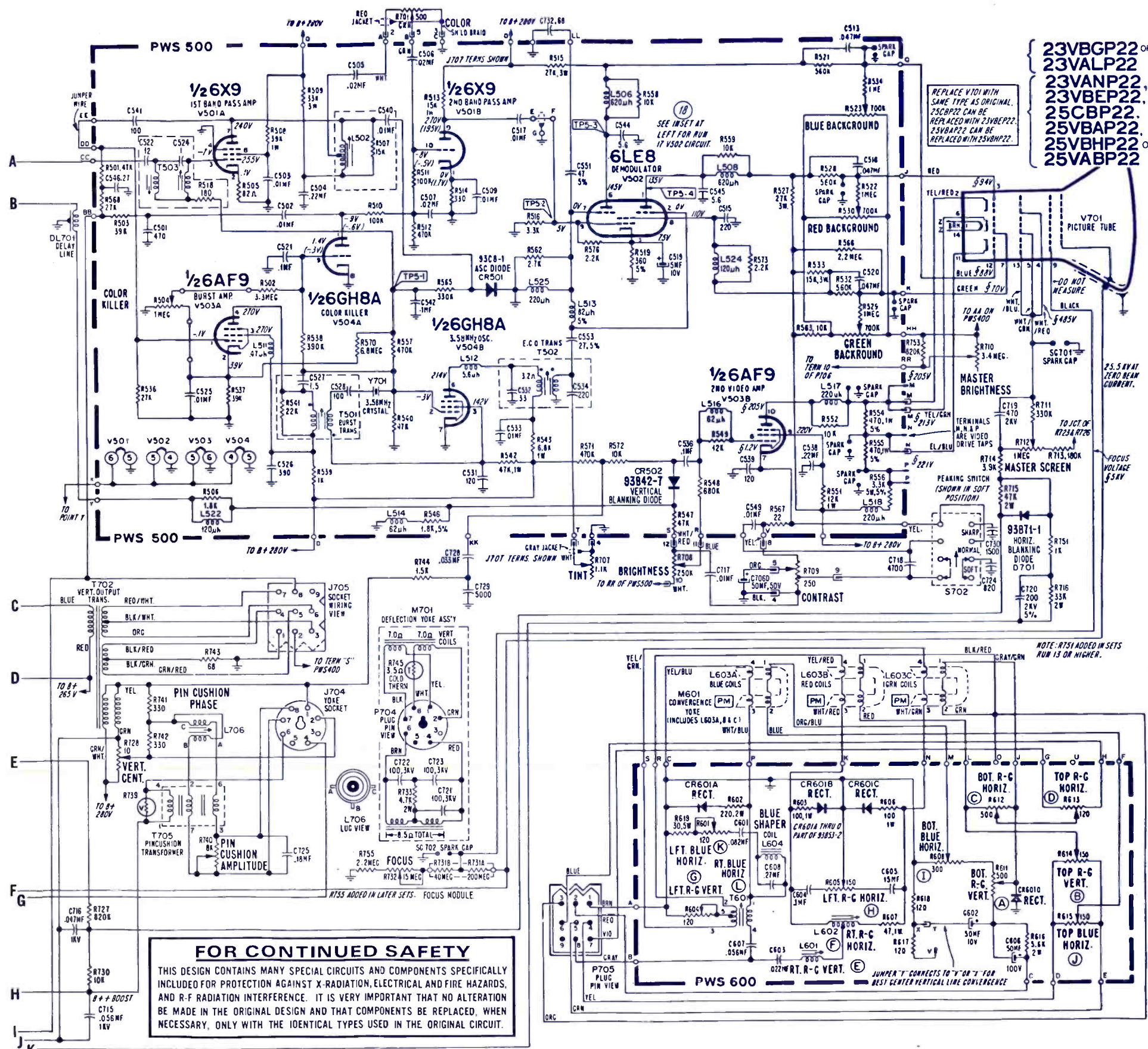
5 INDICATES VOLTAGE WILL VARY WITH SETTING OF CONTROLS.

PARTS MOUNTED ON BOTTOM OF PRECISION WIRED SYSTEM.

P PART MOUNTED ON CHASSIS OR OTHER ASSEMBLY.

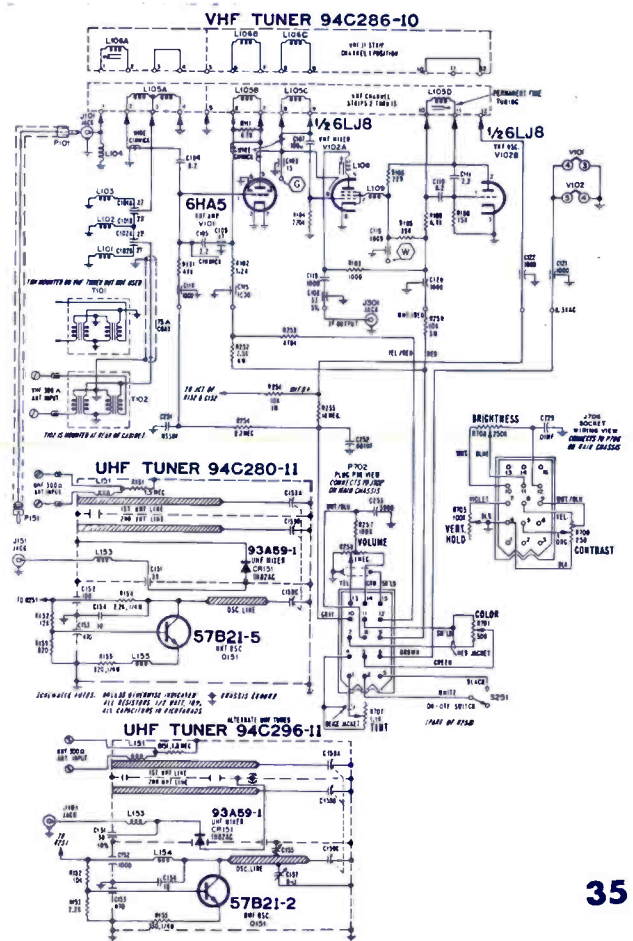
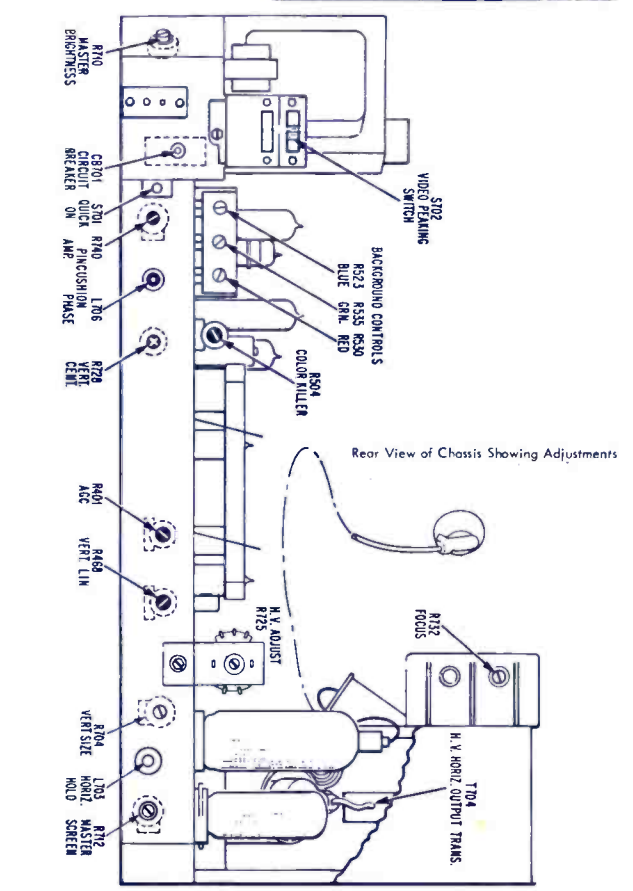
⊕ CHASSIS GROUND.





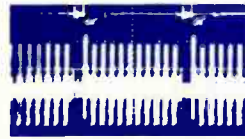
23VBGP22 OR
23VALP22
23VANP22,
23VBEP22,
25CBP22,
25VBAP22,
25VBHP22 OR
25VABP22

REPLACE V701 WITH SAME TYPE AS ORIGINAL. 25CBP22 CAN BE REPLACED WITH 23VBEP22. 25VBAP22 CAN BE REPLACED WITH 25VBHP22.

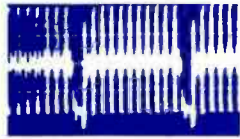


FOR CONTINUED SAFETY

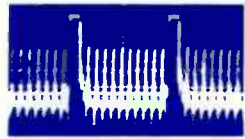
THIS DESIGN CONTAINS MANY SPECIAL CIRCUITS AND COMPONENTS SPECIFICALLY INCLUDED FOR PROTECTION AGAINST X-RADIATION, ELECTRICAL AND FIRE HAZARDS, AND R-F RADIATION INTERFERENCE. IT IS VERY IMPORTANT THAT NO ALTERATION BE MADE IN THE ORIGINAL DESIGN AND THAT COMPONENTS BE REPLACED, WHEN NECESSARY, ONLY WITH THE IDENTICAL TYPES USED IN THE ORIGINAL CIRCUIT.



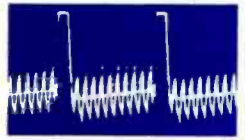
1. Q204 Base 2V., H.



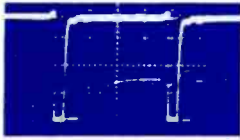
3. Q204 Collector 10V., H.



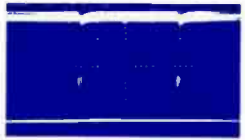
5. Q304 Collector 18V., H.



2. Q204 Emitter 2V., H.

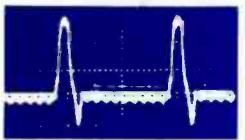


4. Q304 Base 0.8V., H.

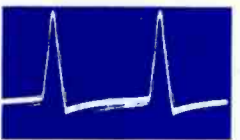


7A. Q305 Collector 62V., H.

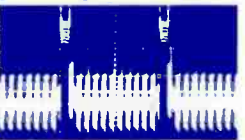
7B. Q305 Collector 62V., V.



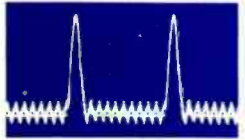
6. Q305 Base 4.3V., H.



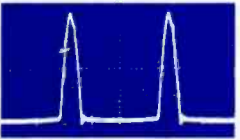
9. Q302 Collector 130V., H.



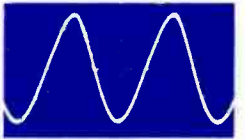
8. Q302 Base 1.8V., H.



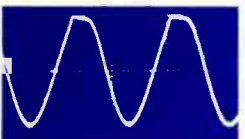
11. Q303 Collector 8V., H.



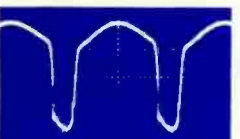
12. Pin 4 of P802 300V., H.



10. Q303 Base 1.8V., H.



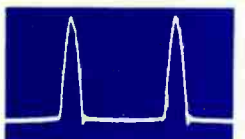
14. 6JW8 Pin 2, 42V., H.



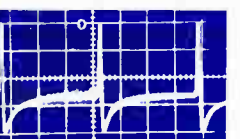
15. Pin 3 6JW8 40V., H.



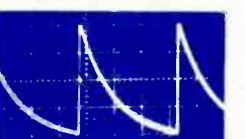
13. Pin 1 of 6JW8 52V., H.



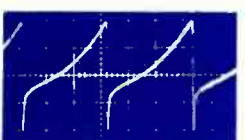
17. T104, Pin 1 HORIZ Output Pulse, 300 V., H.



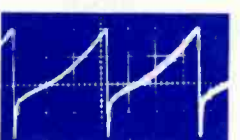
18. Pin 10 6LJ8 60V., V.



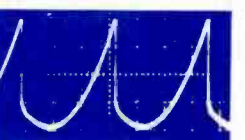
19. Pin 11 6LJ8 60V., V.



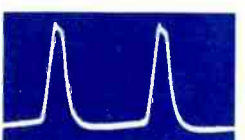
20. Pin 2 6LJ8 65V., V.



21. Pin 6 6LJ8 70 V., V.



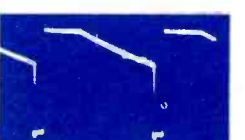
22. Pin 6LJ8 15V., V.



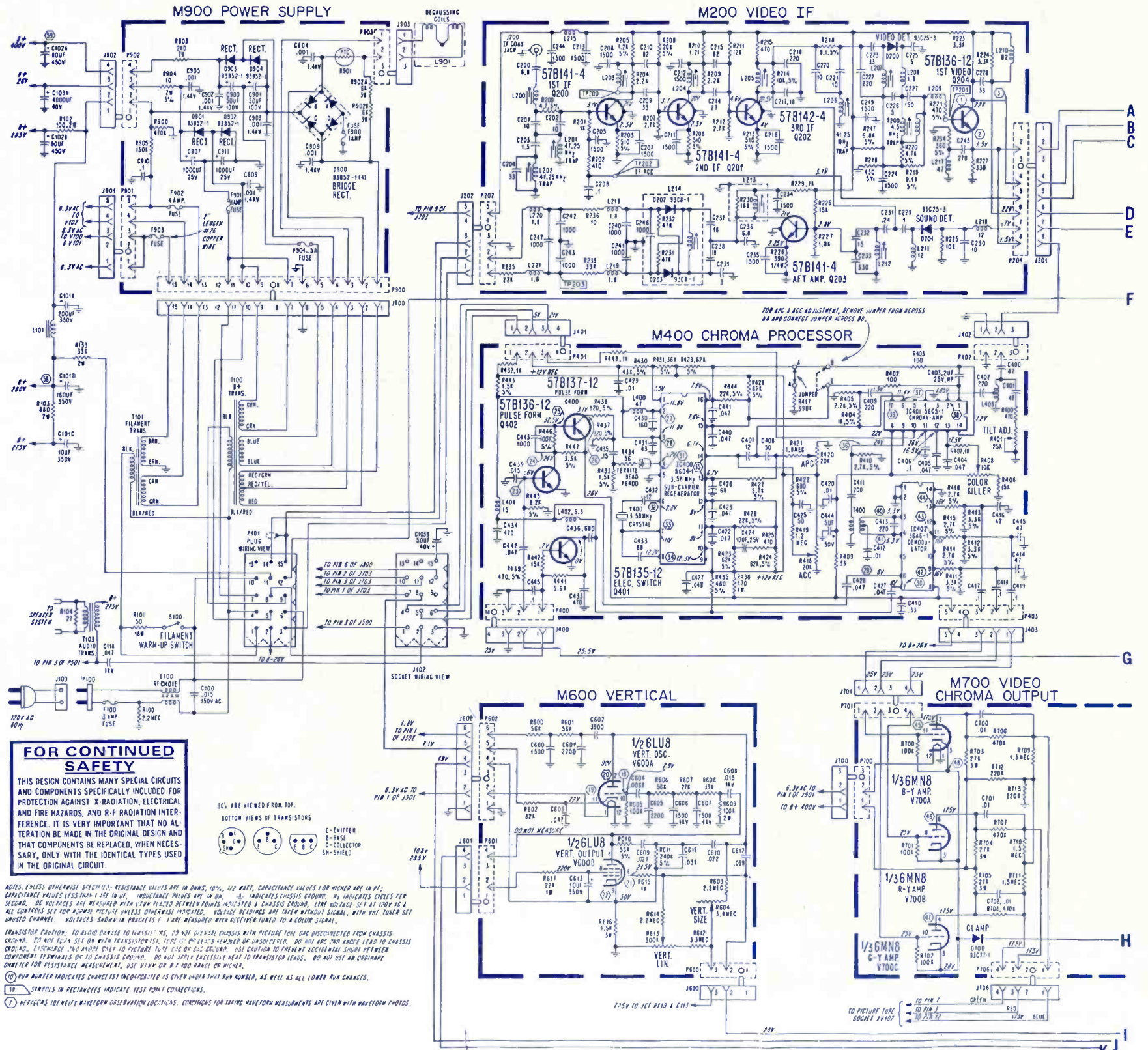
23. Q402 Base 2V., H.



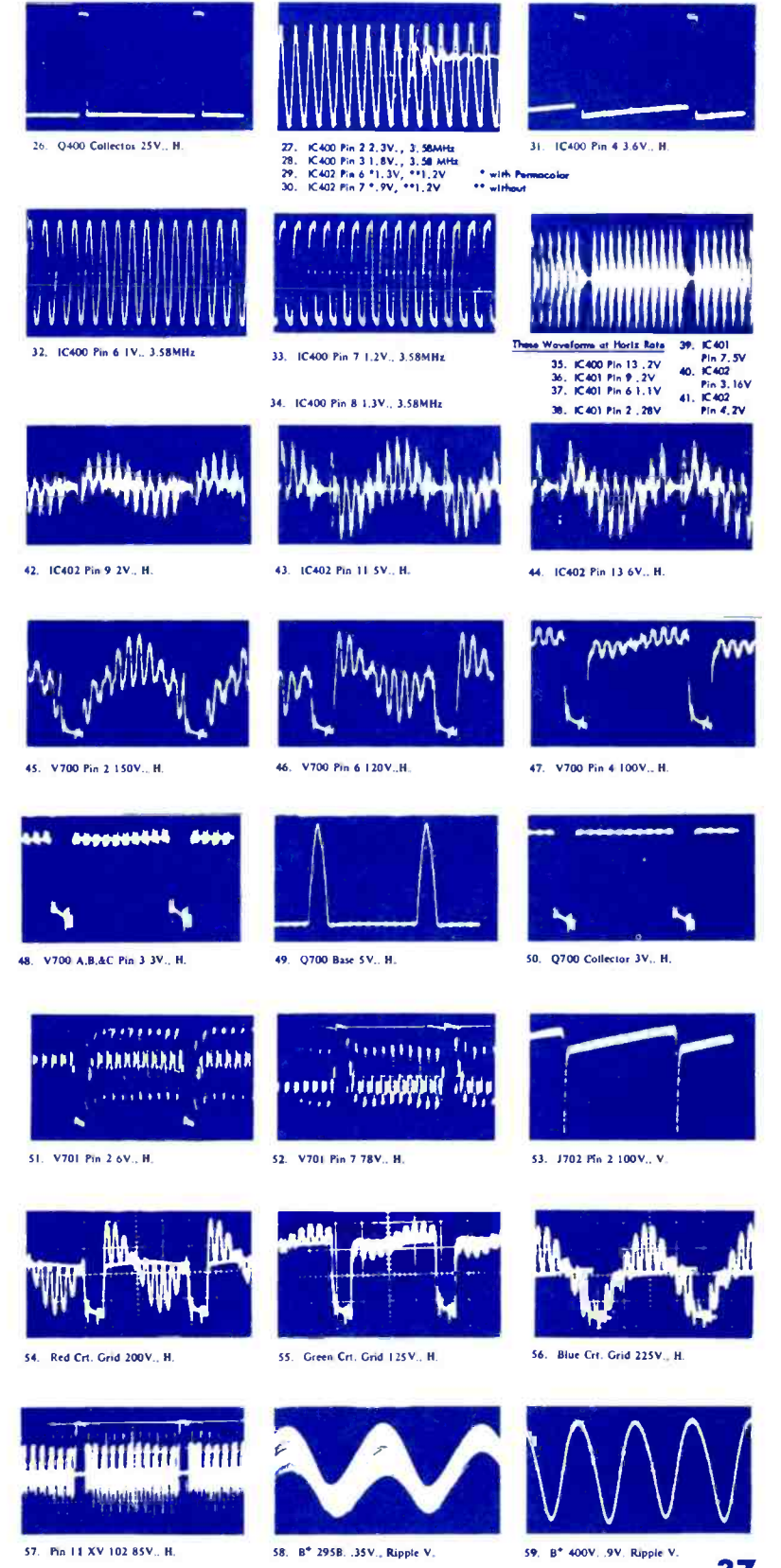
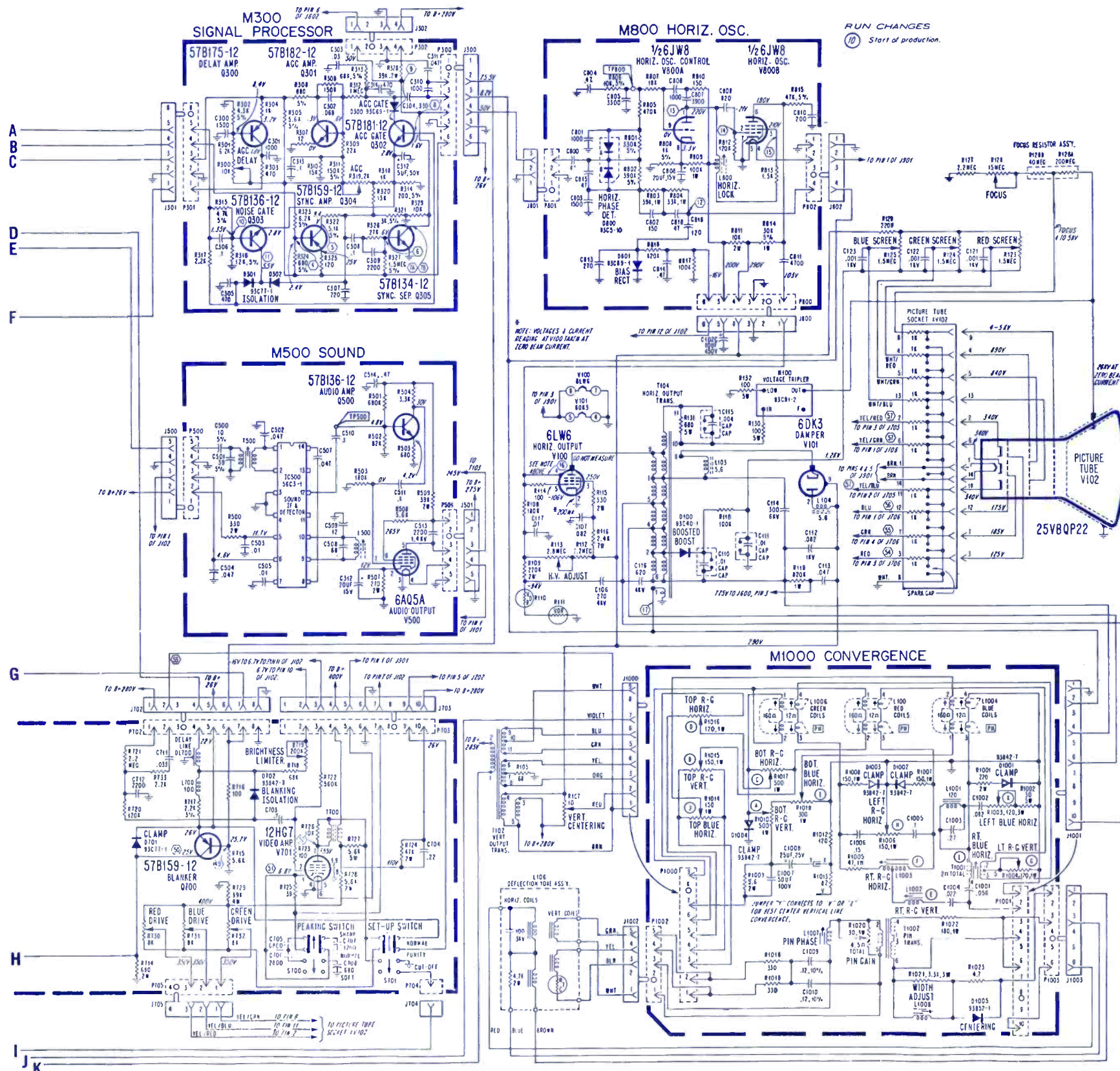
24. Q402 Collector 25V., H.

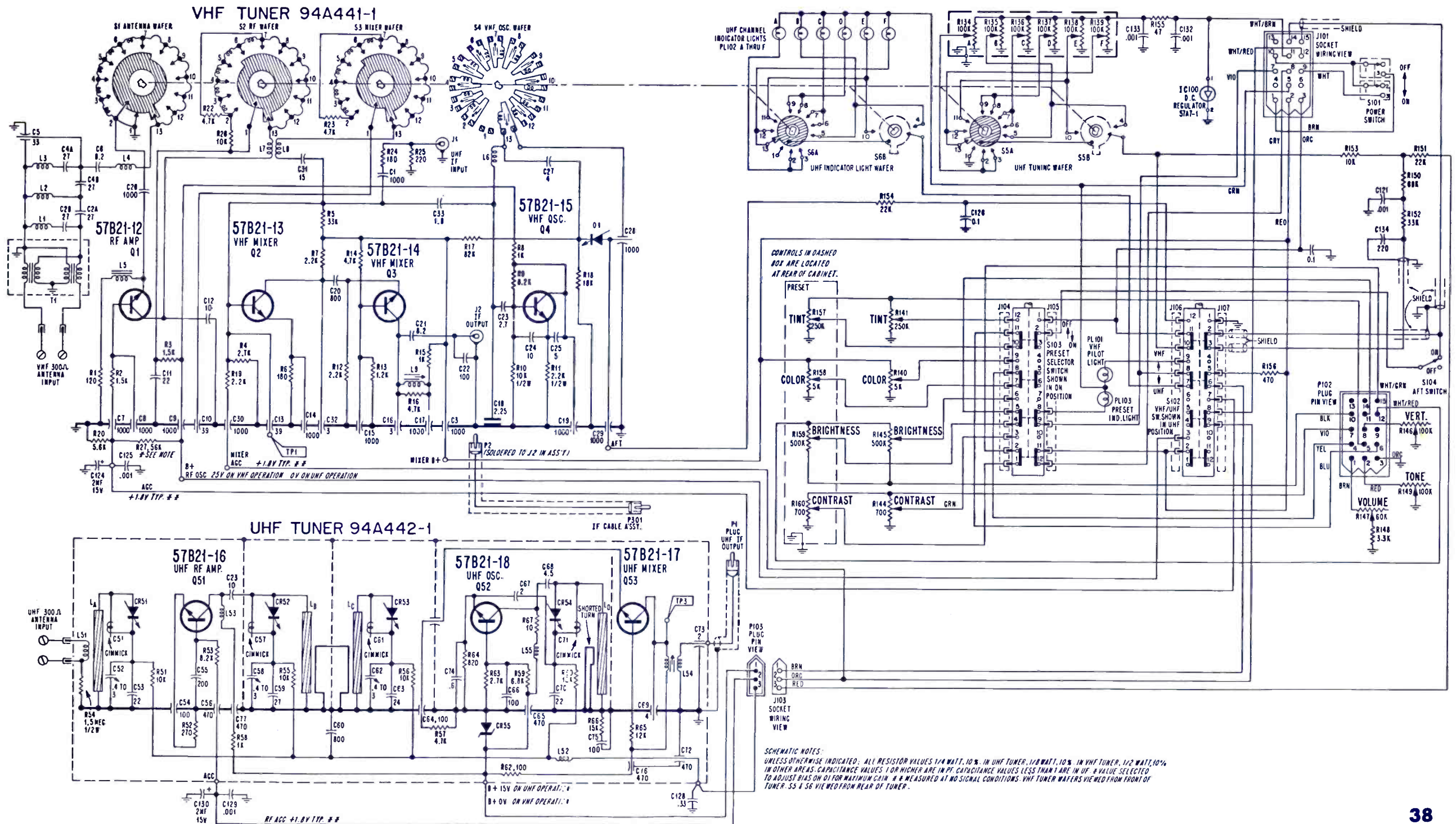


25. Q400 Base 8V., H.



ADDITIONAL INFORMATION NEXT PAGE



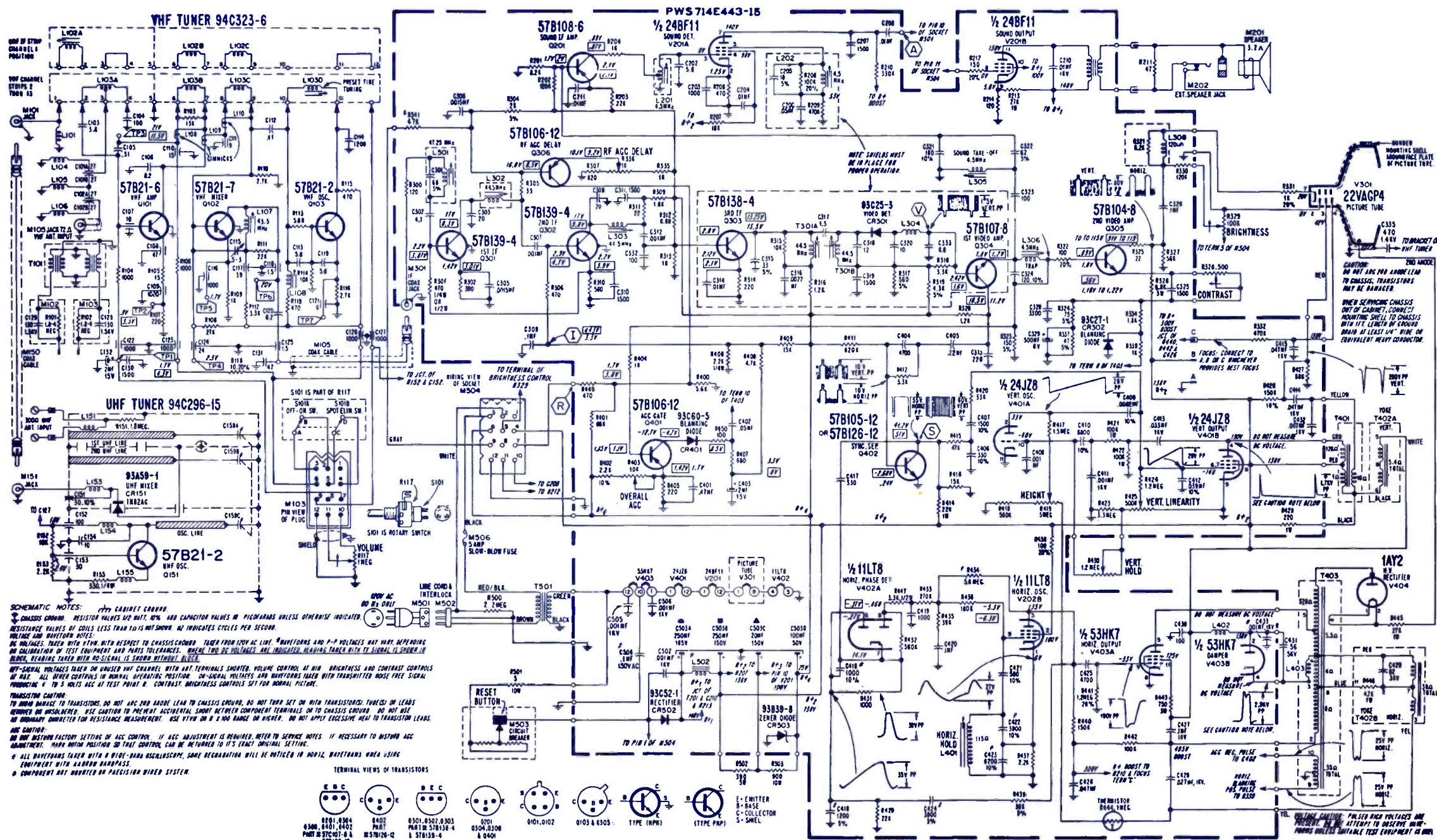


EMERSON

TV Chassis
11H5

SYMBOL	DESCRIPTION	EMERSON PART NO.
R117	1M, volume control for Model 19FP05W	75A-182
R328	500Ω, contrast control	75A1-181
R329	100K, bright control	75A1-183
R336	1K, RF-AGC delay control	970695
R342	voltage dependent resistor, 1ma @ 60v	61A46-6
R403	10K, overall AGC control	970696
R419	5M, height control	970001
R425	500K, vert hold control	970002
R430	1.2M, vert hold control	75A1-180
R444	1M, thermistor	61A41-2
C503A	elect, 250μf, 165v	67A30-14
C503B	elect, 250μf, 150v	67A30-14

C503C	elect, 20μf, 150v	67A30-14
C503D	elect, 100μf, 50v	67A30-14
L201	sound 1F coil (includes C202)	970705
L202	quad coil, (R208 and C205)	970013
L301	47.25MHz trap	72A316-4
L305	4.5MHz sound take off coil	72A303-9
L306	4.5MHz trap	72A303-9
L401	horiz lock coil	94A17-19
L502	filter choke	74A18-45
T201	audio output xformer	970917
T401	vert output xformer	970708
T402	deflect yoke assembly	970800
T403	horiz output xformer	970915
M503	circuit breaker (2.2a)	84A17-4

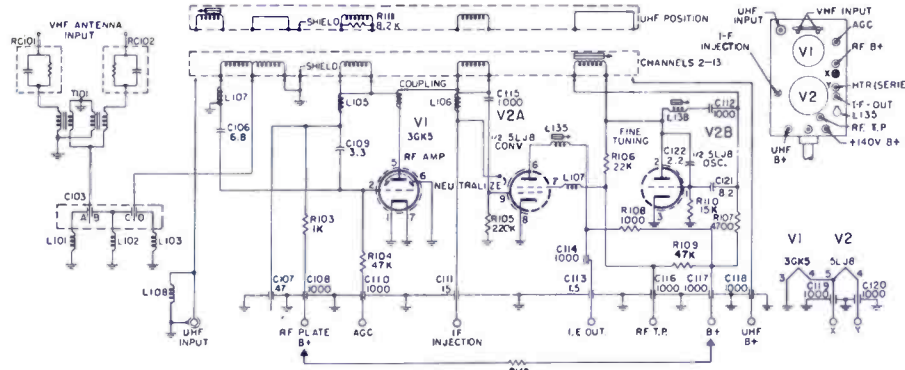


GENERAL ELECTRIC TV Chassis S-3

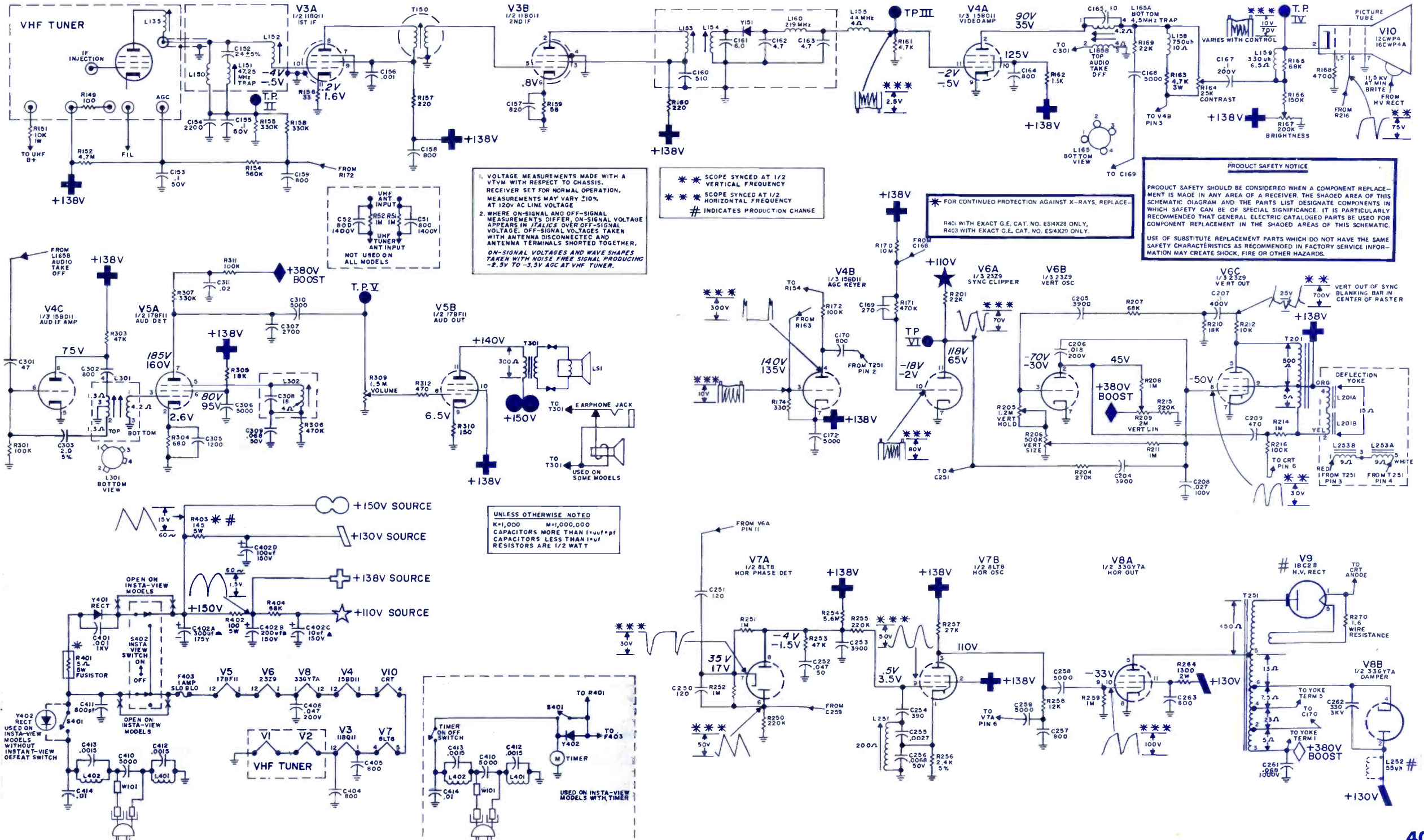
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
	TRIPLE CONTROL	ES49X2
R205-1.2M	vert hold	
R206-500K	height	
R209-2M	vert lin (WM150, WM190, WM500 Series)	ES49X10
R164-25K	contrast	
R167-200K	bright	
R309-1.5M	volume w/S401 (WM160, WM520 Series)	ES49X4
R164-25K	contrast	
R167-200K	bright	
R309-1.5M	volume (w/S401)	
C402A-300 μ f, 175v		ES31X254

C402B-200 μ f, 150v	
C402C-10 μ f, 150v	
C402D-100 μ f, 150v	
L151-coil-47.25MHz trap	ES36X3
L165-coil-4.5MHz trap sound takeoff	ES36X4
L201A, B-yoke-deflection, 21mm, toroidal	ES76X48
L251-coil-horiz osc	EU35X1
L301-coil-4.5MHz audio interstage	ES61X1
L302-coil-quadrature	ES36X665
T201-xformer-vert output	ES64X6
T251-xformer-horiz output	ES77X1
T301-xformer-audio output	ES64X1
fuse-4a, fast-blo	EP10X52
pig tail, W101	
fuse-1a, slo-blo, F403	ES10X7



VHF TUNER SCHEMATIC DIAGRAM (ET86X245)



1. VOLTAGE MEASUREMENTS MADE WITH A VTVM WITH RESPECT TO CHASSIS. RECEIVER SET FOR NORMAL OPERATION. MEASUREMENTS MAY VARY $\pm 10\%$ AT 120V AC LINE VOLTAGE.

2. WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS DIFFER, ON-SIGNAL VOLTAGE APPEARS IN ITALICS OVER OFF-SIGNAL VOLTAGE. OFF-SIGNAL VOLTAGES TAKEN WITH ANTENNA DISCONNECTED AND ANTENNA TERMINALS SHORTED TOGETHER. ON-SIGNAL VOLTAGES AND WAVE SHAPES TAKEN WITH NOISE FREE SIGNAL PRODUCING $-2.5V$ TO $-3.5V$ AGC AT VHF TUNER.

* * SCOPE SYNCED AT 1/2 VERTICAL FREQUENCY

* * SCOPE SYNCED AT 1/2 HORIZONTAL FREQUENCY

INDICATES PRODUCTION CHANGE

* FOR CONTINUED PROTECTION AGAINST X-RAYS, REPLACE R401 WITH EXACT G.E. CAT. NO. ES4X28 ONLY, R403 WITH EXACT G.E. CAT. NO. ES4X29 ONLY.

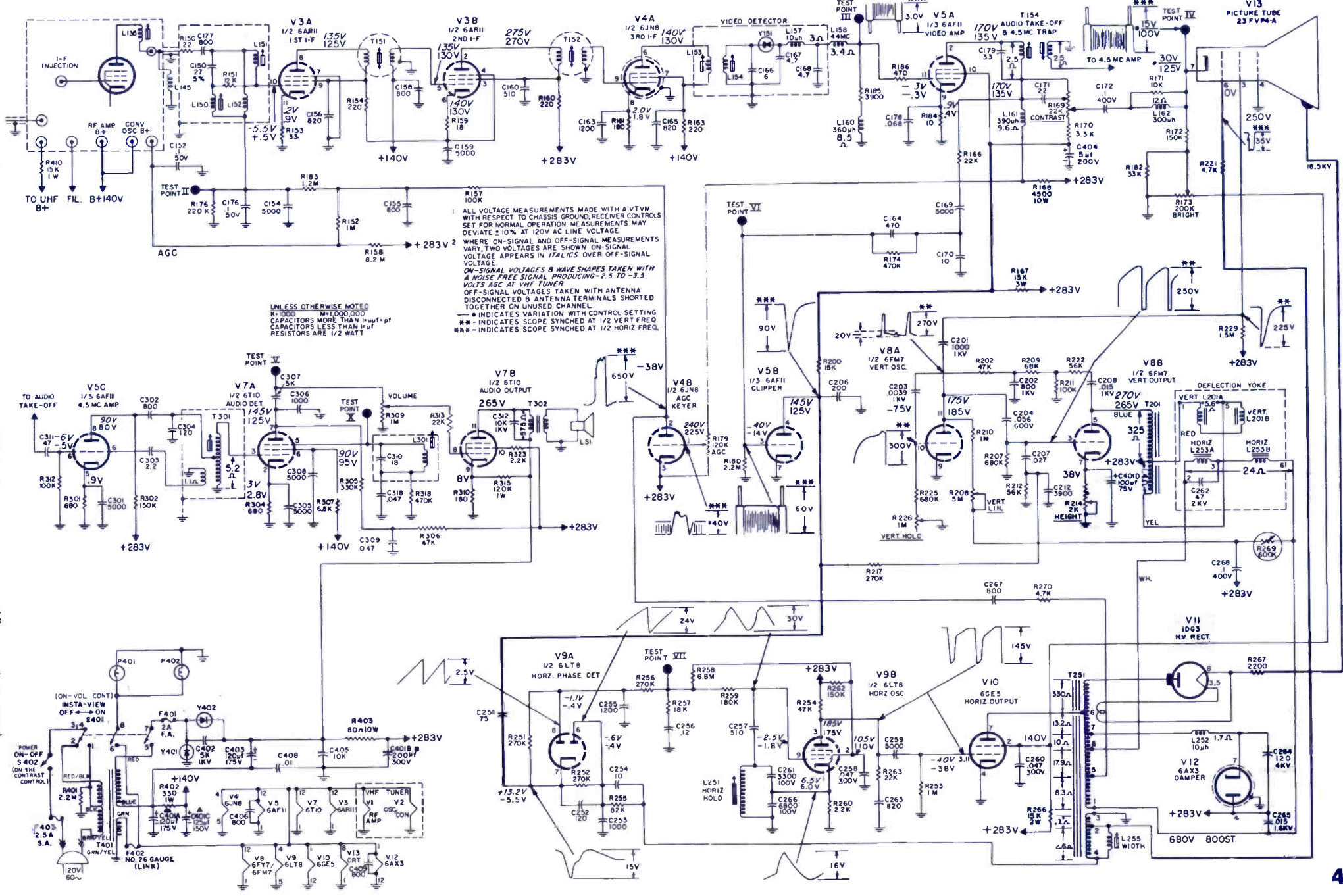
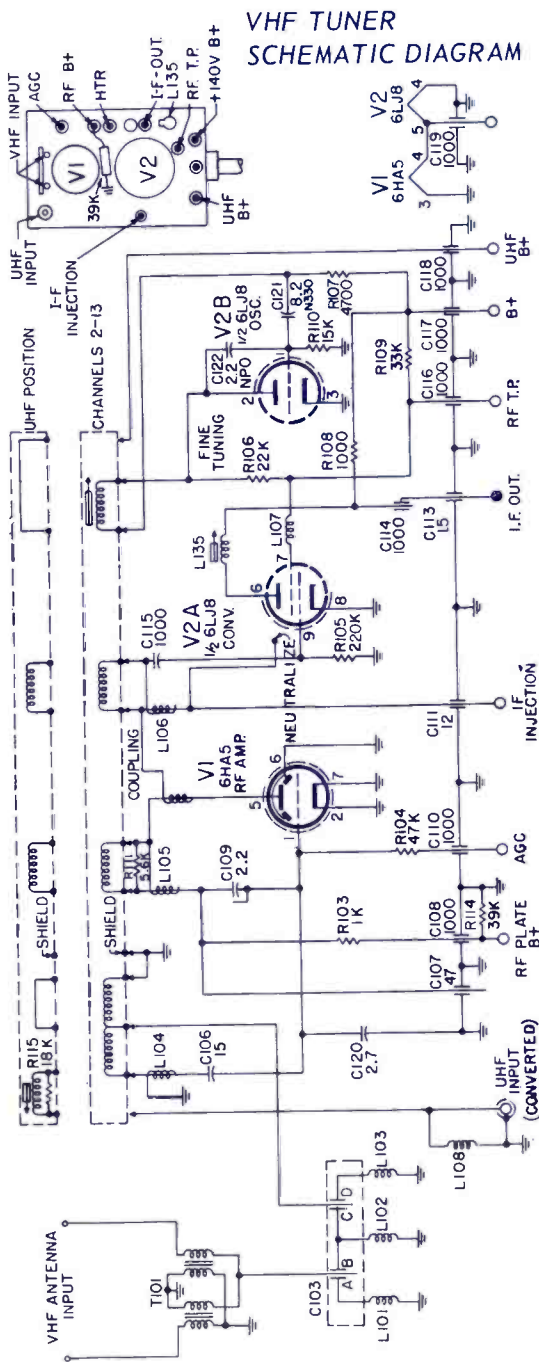
PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. THE SHADED AREA OF THIS SCHEMATIC DIAGRAM AND THE PARTS LIST DESIGNATE COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. IT IS PARTICULARLY RECOMMENDED THAT GENERAL ELECTRIC CATALOGED PARTS BE USED FOR COMPONENT REPLACEMENT IN THE SHADED AREAS OF THIS SCHEMATIC.

USE OF SUBSTITUTE REPLACEMENT PARTS WHICH DO NOT HAVE THE SAME SAFETY CHARACTERISTICS AS RECOMMENDED IN FACTORY SERVICE INFORMATION MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.

UNLESS OTHERWISE NOTED
K=1,000 M=1,000,000
CAPACITORS MORE THAN 1 μ f*pf
CAPACITORS LESS THAN 1 μ f
RESISTORS ARE 1/2 WATT

VHF TUNER SCHEMATIC DIAGRAM



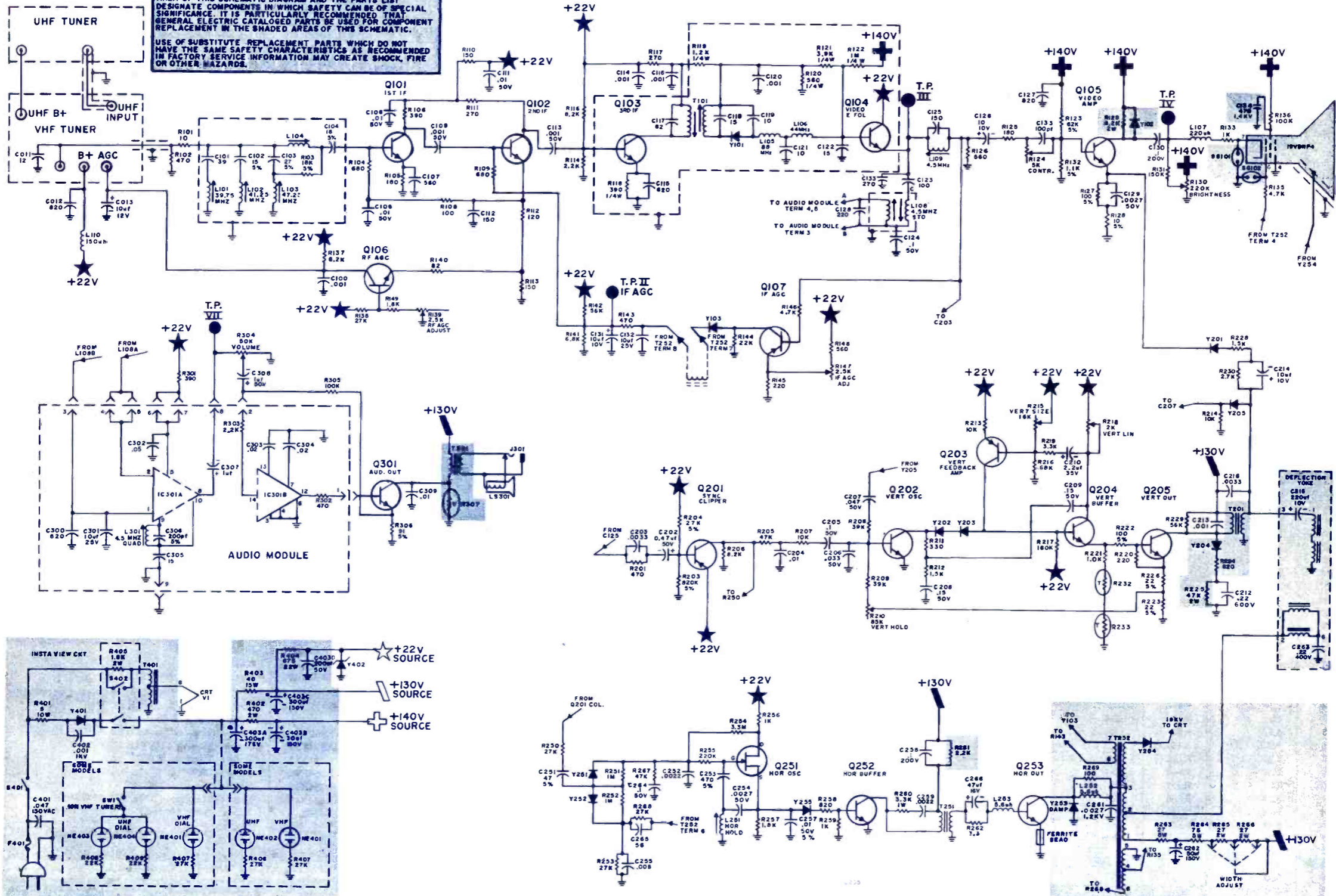
GENERAL ELECTRIC
TV Chassis U-1

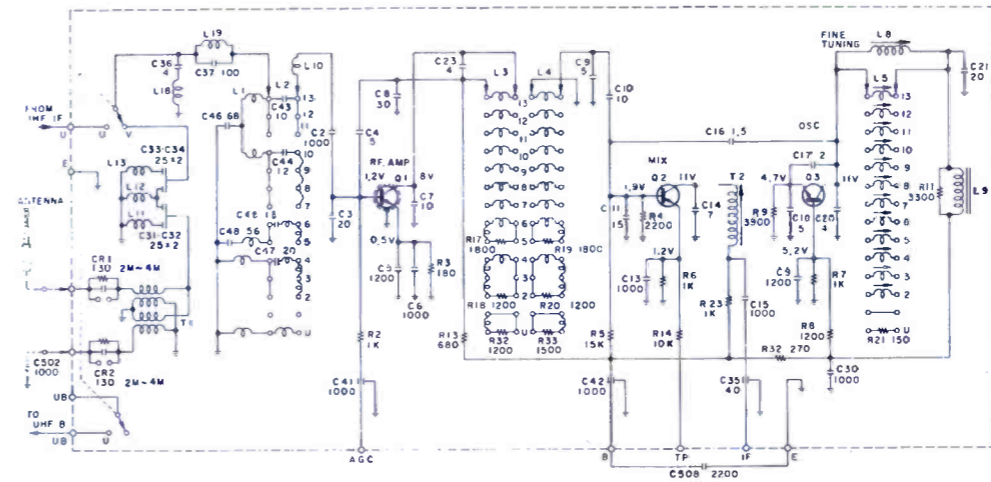
ELECTRONIC TECHNICIAN/DEALER *TEKFAX*

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R139	control-IF AGC, 2.5K	ES49X60
R147	control-RF AGC, 2.5K triple	ES49X60
R210	85K, height	ES49X61
R215	16K, vert size	
R218	2K, vert lin	
R232	therm assembly	ES41X5
R233	therm, 650 Ω , 10%	ES14X27
R307	VDR (180-200v)	ES13X3
C403A	300 μ f, electro, 175v	ES31X38
C403B	30 μ f, electro, 150v	
C403C	300 μ f, electro, 150v	
C403D	200 μ f, electro, 50v	

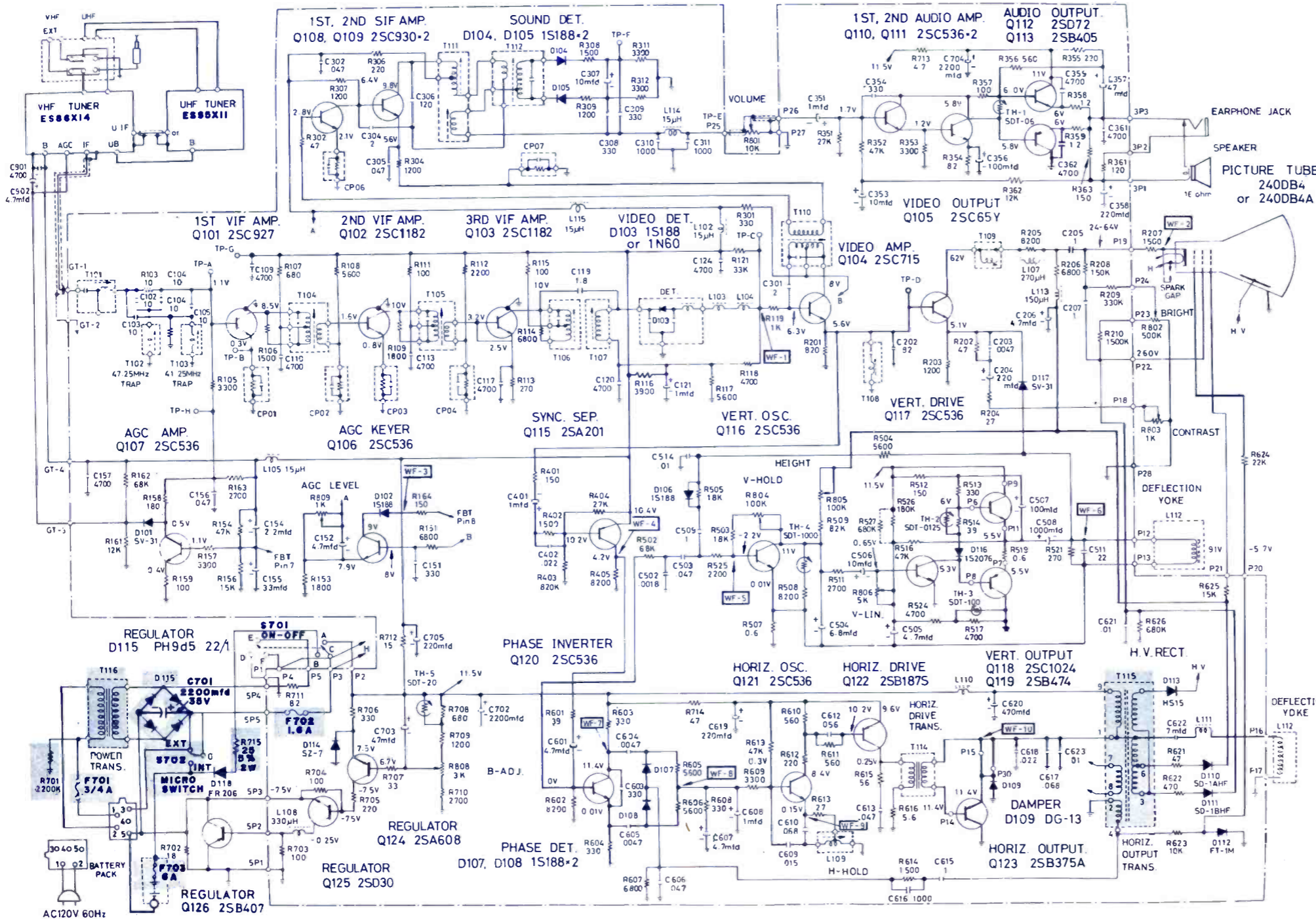
L102	coil-41.25MHz trap	ES36X83
L103	coil-47.25MHz trap	EP36X13
L106	coil-44MHz trap	ES36X84
L108	coil-sound take off	ES36X86
L109	coil-4.5MHz trap	ES36X87
L251	coil-horiz osc	ES36X88
	deflection yoke	ES76X6
T101	video detector xformer	ES57X6
T201	vert output xformer	ES64X11
T251	horiz buffer xformer	ES64X12
T252	horiz output xformer	ES77X12
T301	audio output xformer	ES64X13
T401	CRT filament xformer	ES64X10
	fuse 4a, fast blow, pigtail, 250v, (F401)	EP10X52

PRODUCT SAFETY NOTICE
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USE OF SUBSTITUTE REPLACEMENT PARTS WHICH DO NOT HAVE THE SAME SAFETY CHARACTERISTICS AS RECOMMENDED IN FACTORY SERVICE INFORMATION MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.

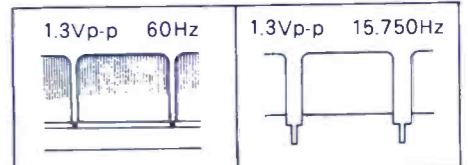




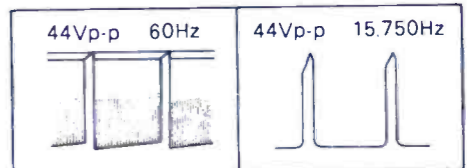
VHF TUNER



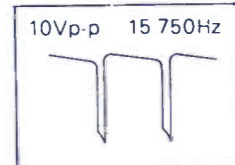
WF-1



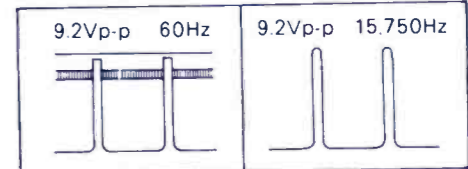
WF-2



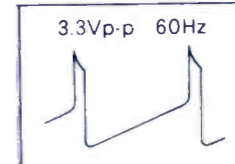
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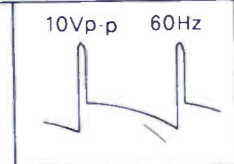
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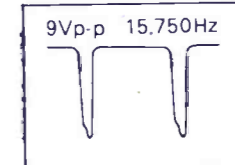
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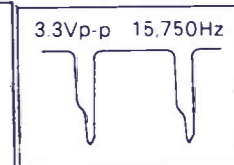
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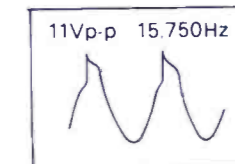
WF-7



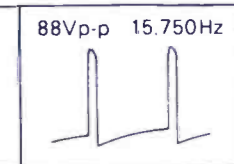
WF-8

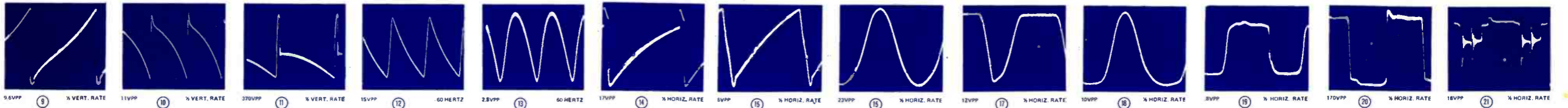
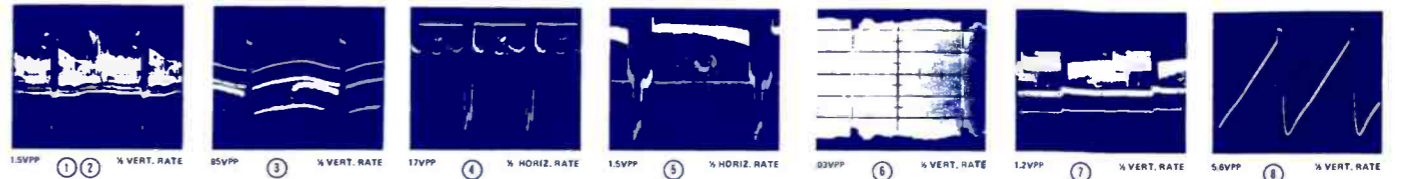


WF-9

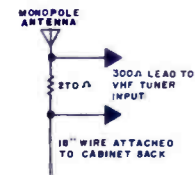
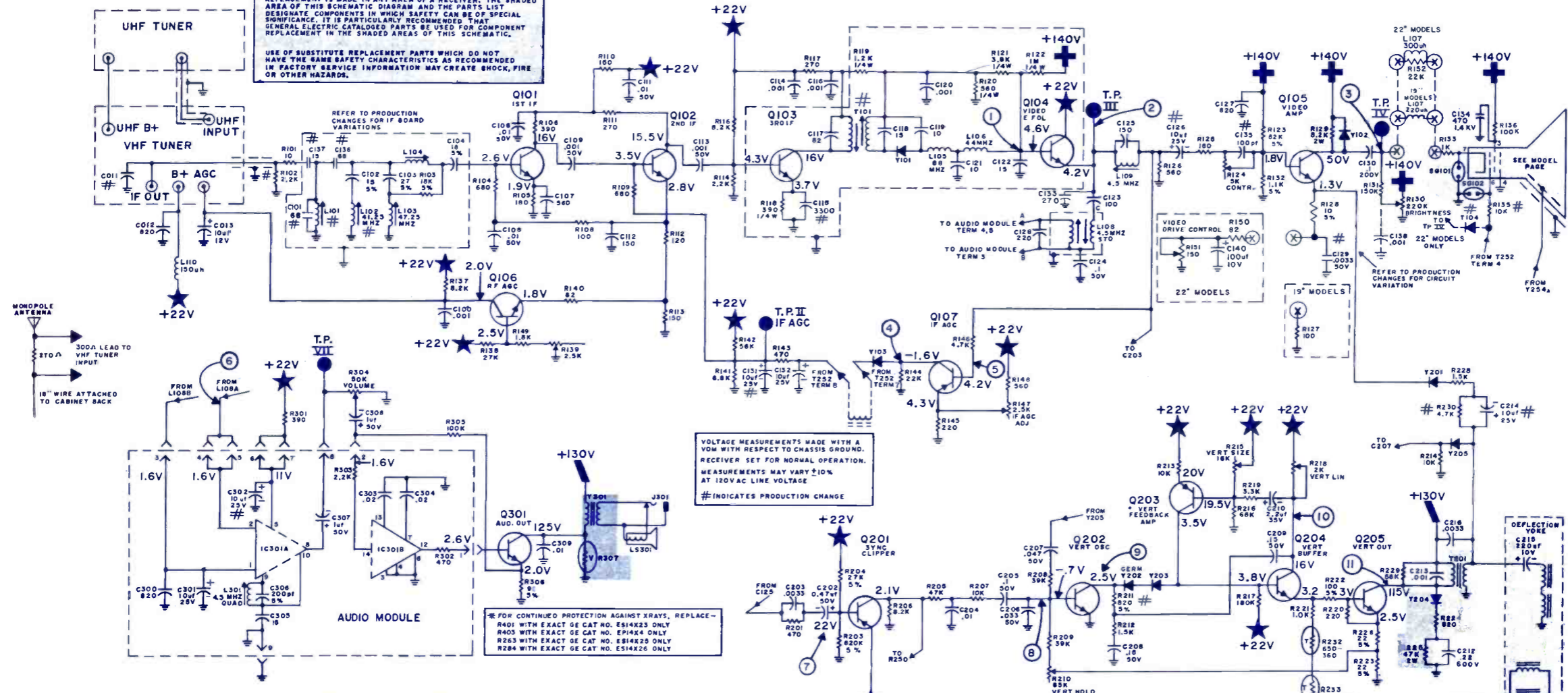


WF-10





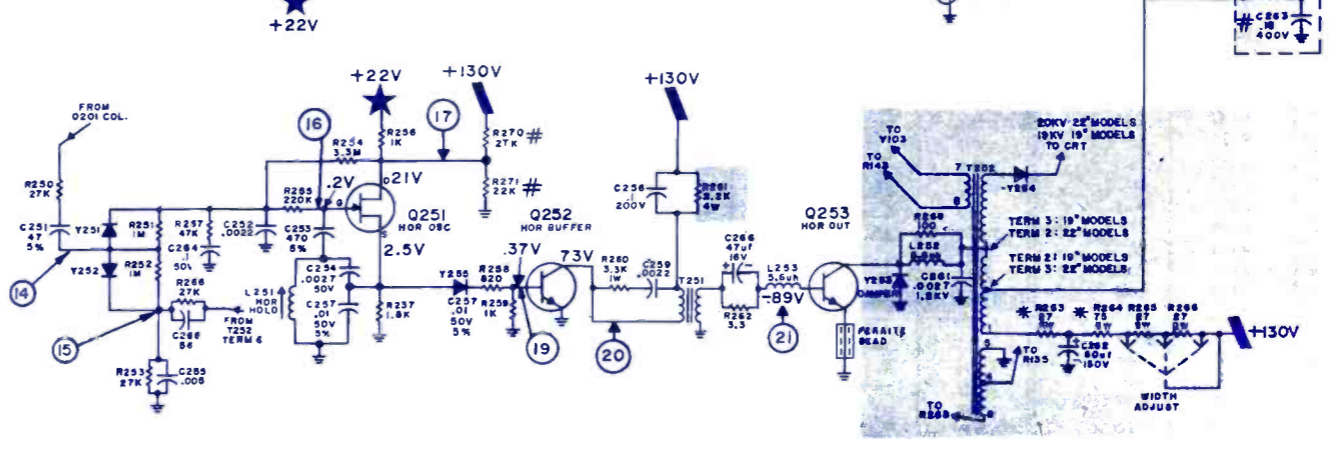
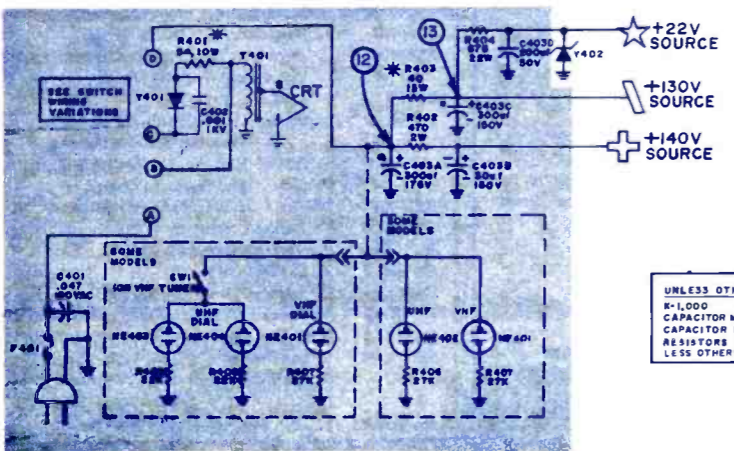
PRODUCT SAFETY NOTICE
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USE OF SUBSTITUTE REPLACEMENT PARTS WHICH DO NOT HAVE THE SAME SAFETY CHARACTERISTICS AS RECOMMENDED IN FACTORY SERVICE INFORMATION MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.



VOLTAGE MEASUREMENTS MADE WITH A VOM WITH RESPECT TO CHASSIS GROUND. RECEIVER SET FOR NORMAL OPERATION. MEASUREMENTS MAY VARY 5.0% AT 120V AC LINE VOLTAGE.
INDICATES PRODUCTION CHANGE

FOR CONTINUED PROTECTION AGAINST X-RAYS, REPLACE:
R401 WITH EXACT GE CAT NO. E514X23 ONLY
R403 WITH EXACT GE CAT NO. EPI4X4 ONLY
R263 WITH EXACT GE CAT NO. E814X25 ONLY
R284 WITH EXACT GE CAT NO. E514X26 ONLY

UNLESS OTHERWISE NOTED
K=1,000 M=1,000,000
CAPACITOR MORE THAN 1-μF
CAPACITOR LESS THAN 1-μF
RESISTORS ARE 1/2 WATT UNLESS OTHERWISE NOTED.

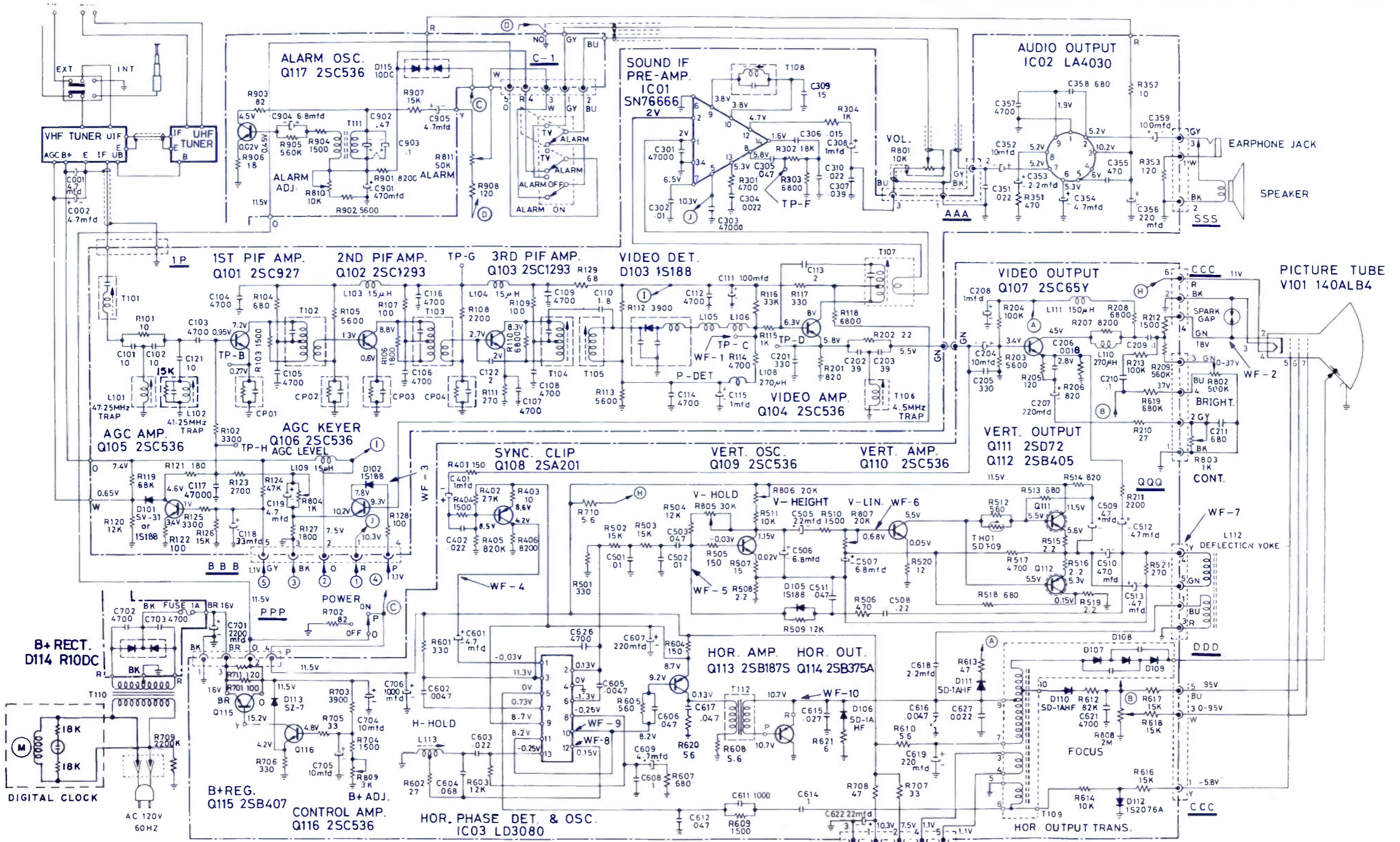
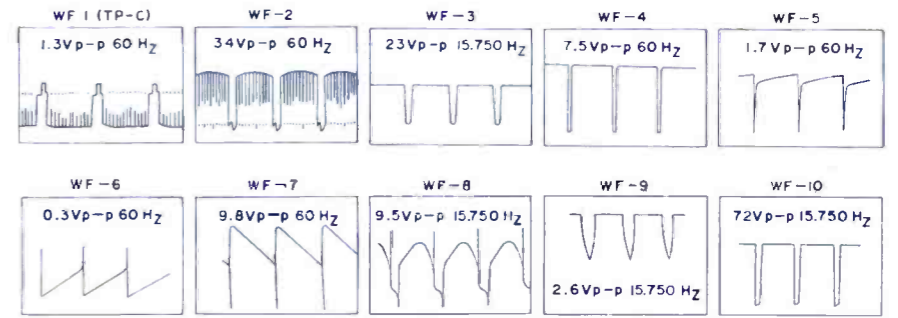


GENERAL ELECTRIC

TV Chassis BA

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R801	on/off vol, 10K	ES49X74
R802	brite, 500K	ES49X75
R803	contrast, 1K	ES49X77
R804	AGC, 1K	ES49X45
R805	vert hold, 30K	ES49X39
R806	vert ht, 20K	ES49X78
R807	vert lin, 20K	ES49X78
R808	focus, 2M	ES49X42
L112	deflect yoke	ES76X9
L113	coil, horiz osc	ES35X6

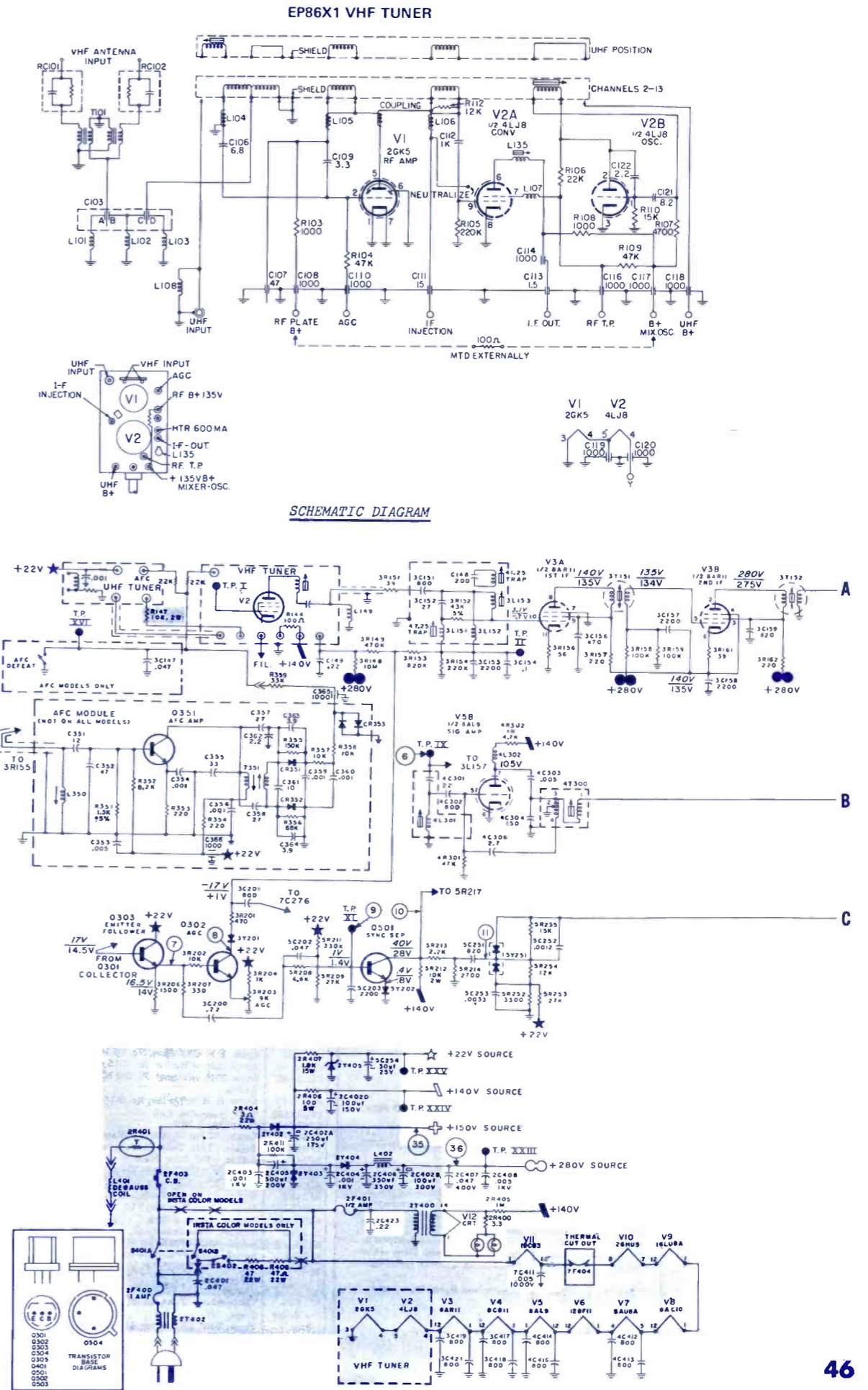
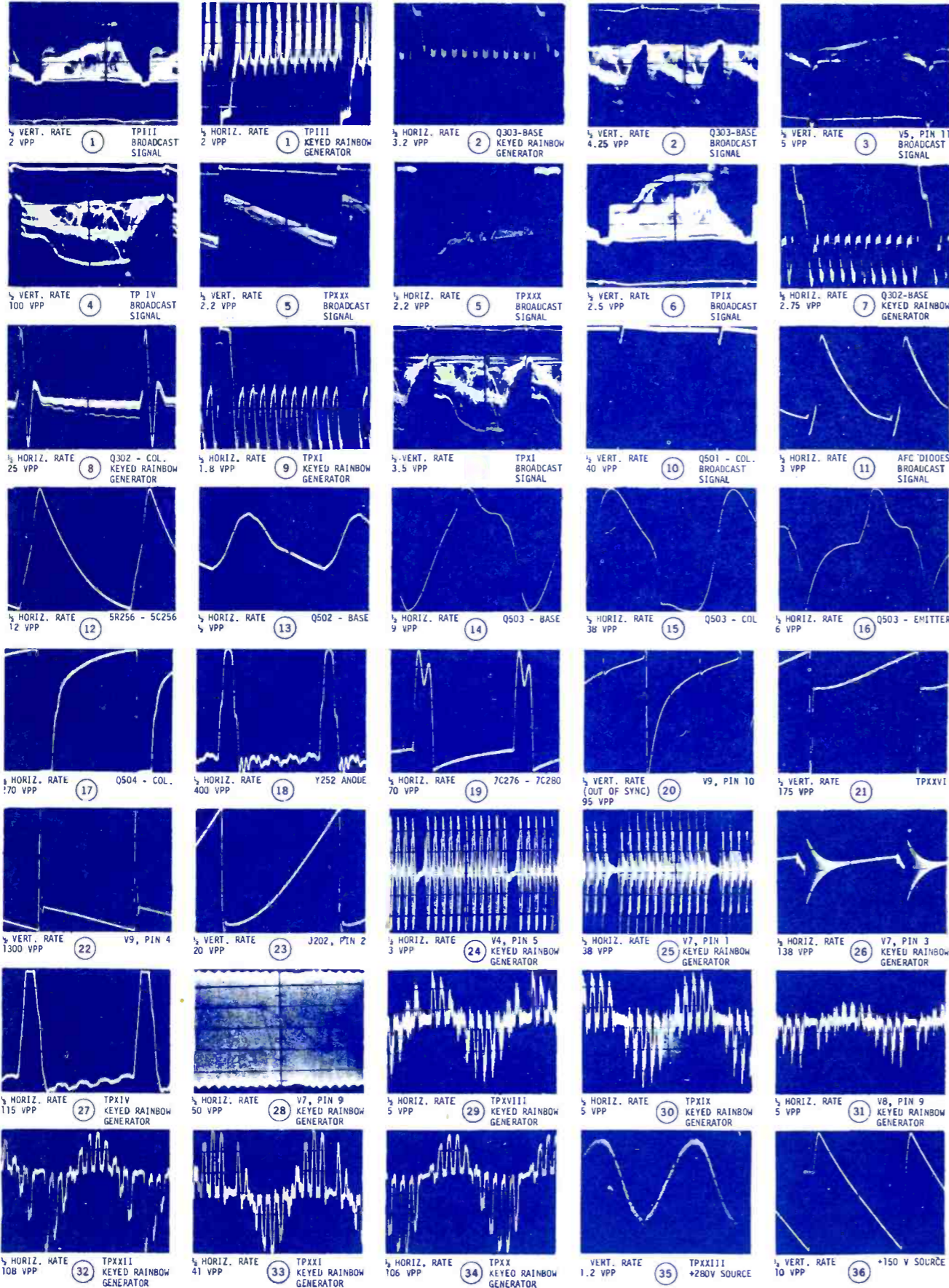
T109	x-former, horiz output	ES77X15
T110	x-former, power	ES88X4
IC01	sound IF pre-amp	ES84X3
IC02	audio output	ES84X1
IC03	horiz phase det	ES84X2
TH01	thermistar	ES14X30
CP01		ES57X15
CP02		ES57X16
CP03		ES57X17
CP304		ES57X16
	fuse 1a, slo blo F701	ES10X7



B253
D293

GENERAL ELECTRIC
Color TV Chassis
C-2/L-2

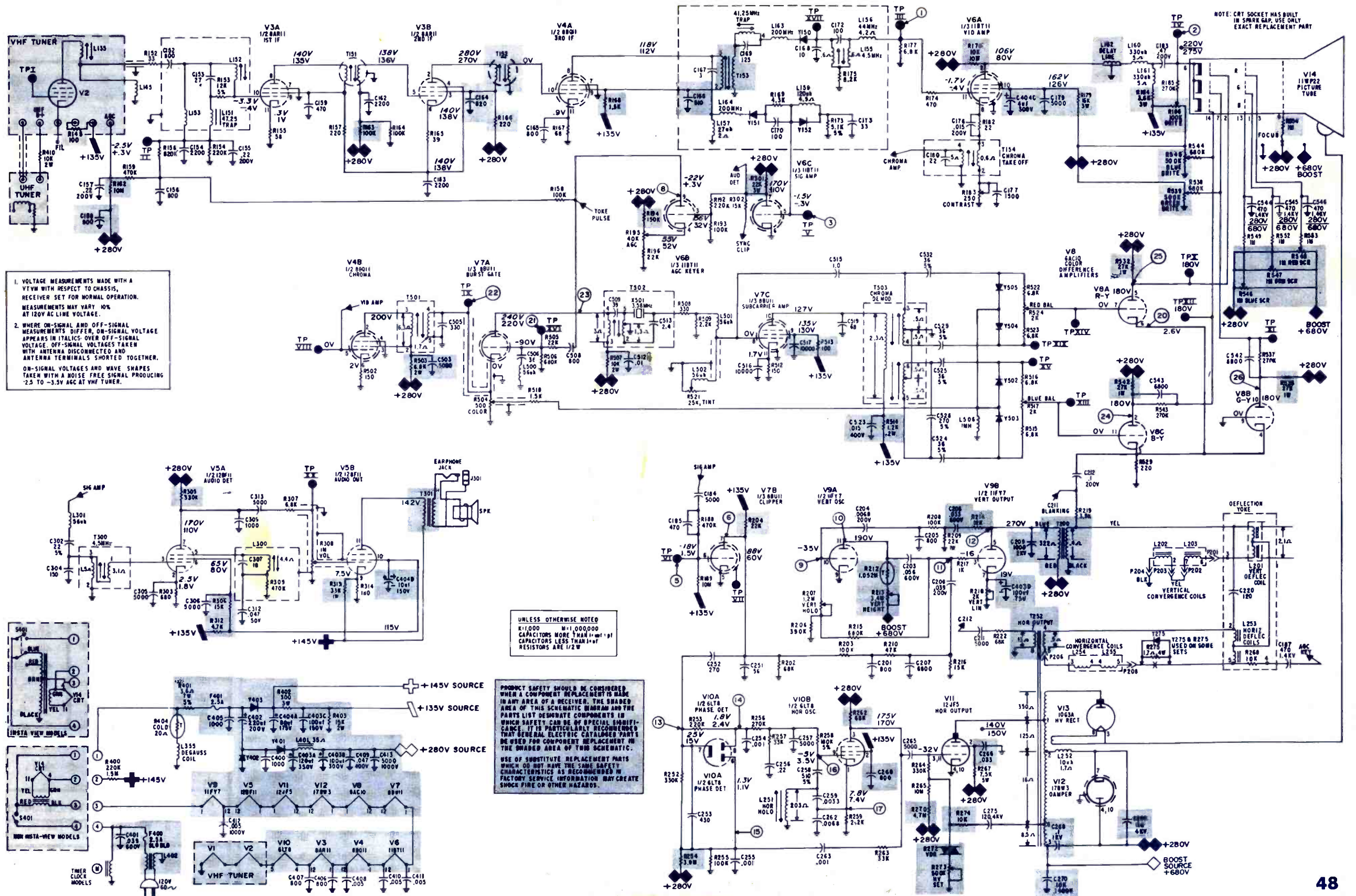
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**



GENERAL ELECTRIC

Color TV Chassis
H-4

ELECTRONIC TECHNICIAN/DEALER **TEKFAKX**

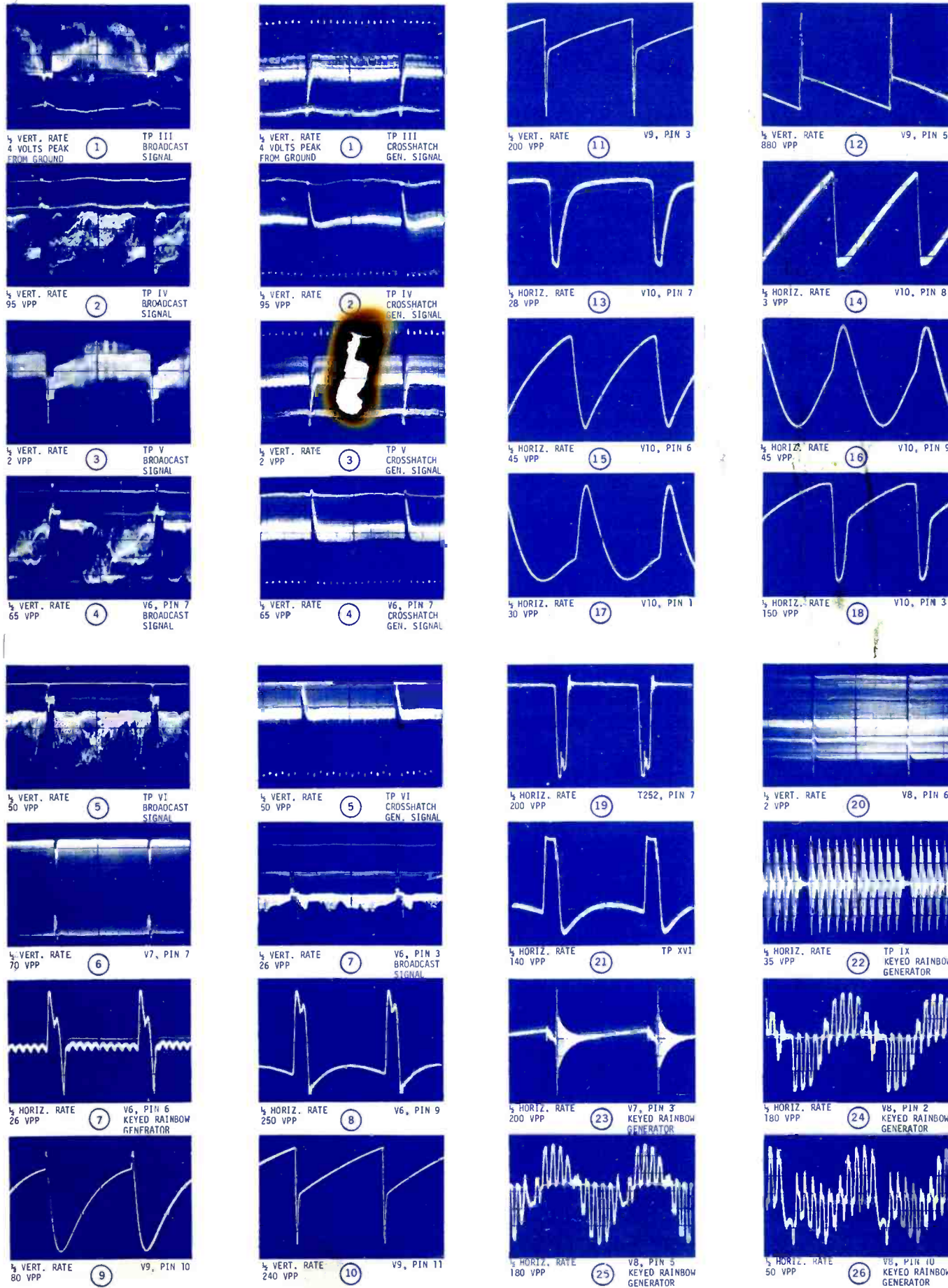


- VOLTAGE MEASUREMENTS MADE WITH A VTVM WITH RESPECT TO CHASSIS, RECEIVER SET FOR NORMAL OPERATION. MEASUREMENTS MAY VARY 10% AT 120V AC LINE VOLTAGE.
- WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS DIFFER, ON-SIGNAL VOLTAGE APPEARS IN ITALICS; OVER OFF-SIGNAL VOLTAGE. OFF-SIGNAL VOLTAGES TAKEN WITH ANTENNA DISCONNECTED AND ANTENNA TERMINALS SHORTED TOGETHER. ON-SIGNAL VOLTAGES AND WAVE SHAPES TAKEN WITH A NOISE FREE SIGNAL PRODUCING -2.5 TO -3.5V AGC AT VHF TUNER.

UNLESS OTHERWISE NOTED
 K=1,000 M=1,000,000
 CAPACITORS MORE THAN 1μF
 CAPACITORS LESS THAN 1μF
 RESISTORS ARE 1/2W

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. THE SHADED AREA OF THIS SCHEMATIC...
 PARTS LIST DESCRIBE COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. IT IS PARTICULARLY RECOMMENDED THAT GENERAL ELECTRIC CATALOG PARTS BE USED FOR COMPONENT REPLACEMENT IN THE SHADED AREA OF THIS SCHEMATIC.
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WAVEFORMS FOR POINTS INDICATED

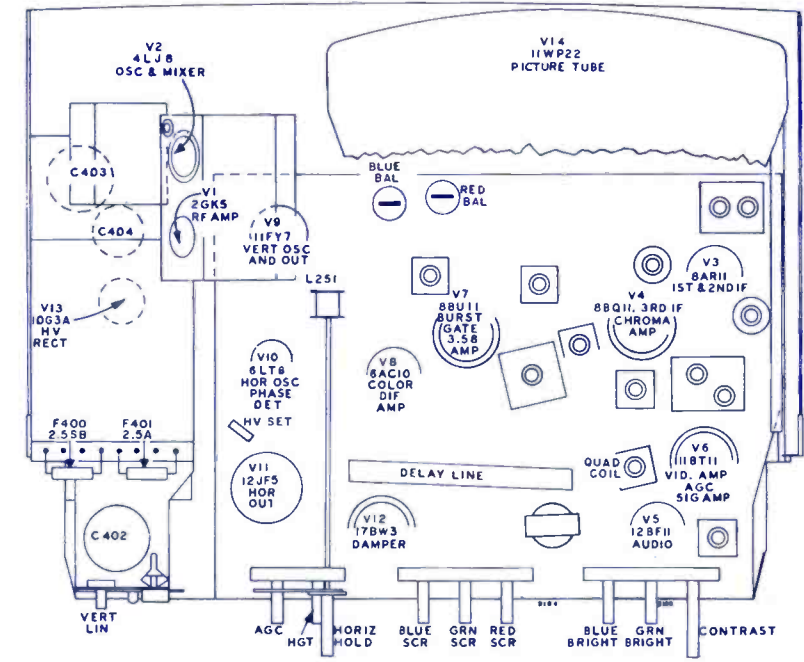


SYMBOL DESCRIPTION GENERAL ELECTRIC PART NO.

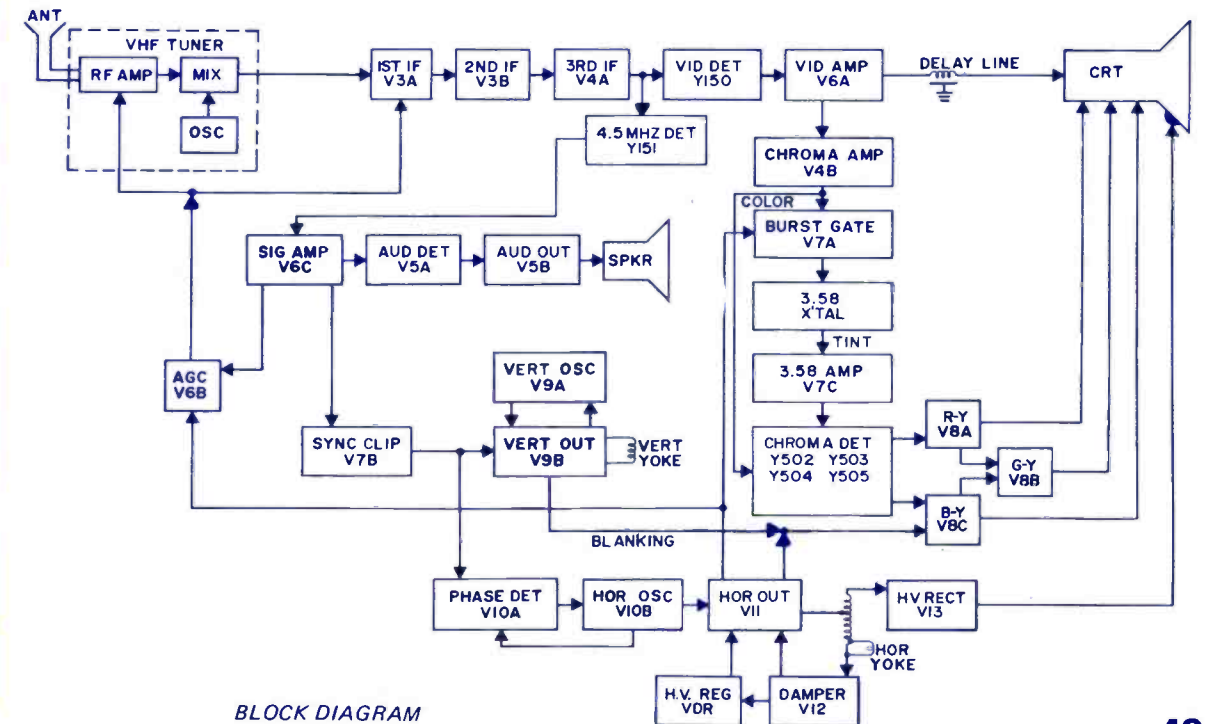
R212—thermistor 1.052M	EP14X206
R272—VDR, 1ma @850+15%	EP13X2
R275—1.75 Ω, 10%, 5WW	ET14X211
—triple control	EP49X592
R183—250 Ω, contrast	
R539—500K, green bright	
R545—500K, blue bright	
—dual control	EP49X593
R195—40K, AGC	
R213—3.4M, vert height	
R218—2K, vert lin	EP49X590
R273—HV set., 500K	EP49X42
—triple control	EP49X591
R546—blue screen	
R547—green screen	
R548—red screen	
C528—270pf, 5%, silver mica	ET19X94
C403A—120 μf, +100-10%, 350v	EP31X265
C403B—100 μf, +100-10%, 300v	
C403C—100 μf, +100-10%, 150v	
C403D—100 μf, +150-10%, 75v	

GENERAL ELECTRIC
Color TV Chassis
H-4

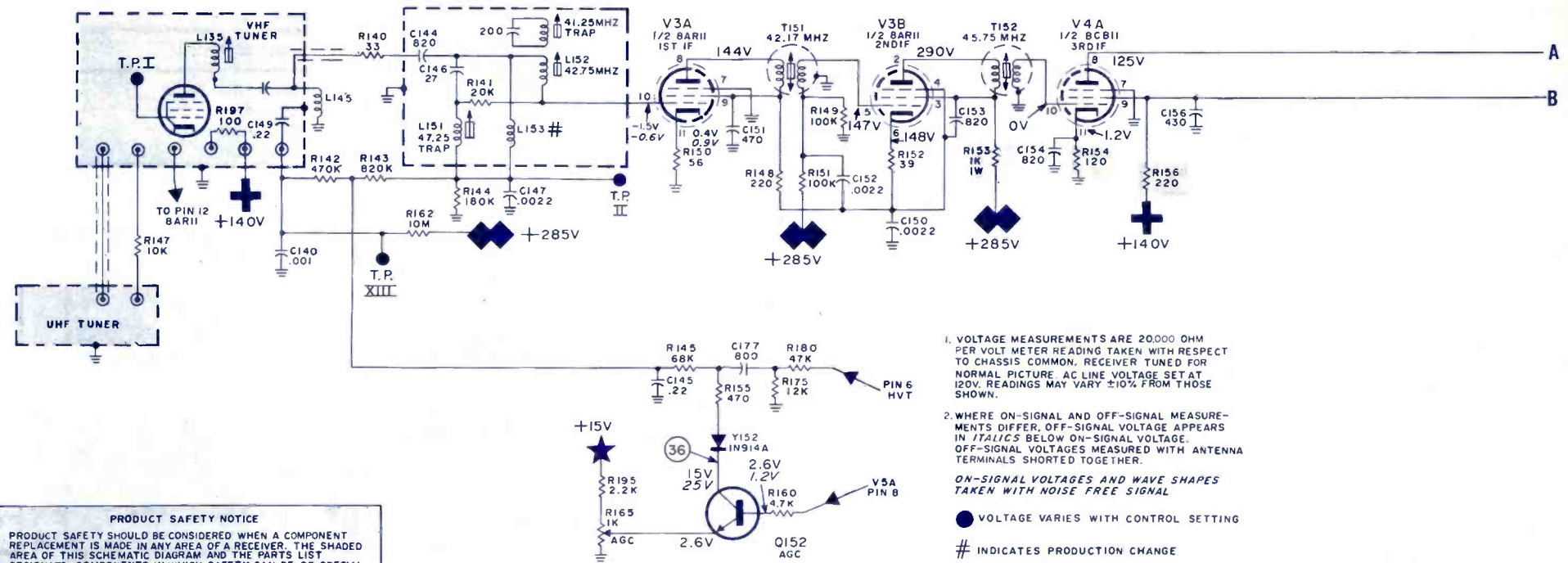
C404A—80 μf, +100-10%, 175v	EP31X266
C404B—10 μf, +100-10%, 150v	
C404C—1 μf, +100-10%, 300v	
L155—coil—4.5MHz trap w/core	EU61X121
L162—coil, delay line	EP36X809
L201—deflect yoke, horiz and vert	EP76X4
L251—coil, horiz. osc. w/core	ET35X52
L300—coil, audio detect w/core	EP36X814
L501—coil, 3.58MHz peaking w/core	EP36X20
T154—xformer, chroma take-off w/core	EP61X177
T200—xformer, vert output	EP64X14
T252—xformer, horiz output w/cap & lead assembly	EP77X4
T300—xformer, 4.5MHz interstage w/core	EP36X813
T301—xformer, audio output	ET64X105



TUBE AND ADJUSTMENT LOCATOR



BLOCK DIAGRAM



PRODUCT SAFETY NOTICE

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USE OF SUBSTITUTE REPLACEMENT PARTS WHICH DO NOT HAVE THE SAME SAFETY CHARACTERISTICS AS RECOMMENDED IN FACTORY SERVICE INFORMATION MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.

1. VOLTAGE MEASUREMENTS ARE 20,000 OHM PER VOLT METER READING TAKEN WITH RESPECT TO CHASSIS COMMON. RECEIVER TUNED FOR NORMAL PICTURE. AC LINE VOLTAGE SET AT 120V. READINGS MAY VARY ±10% FROM THOSE SHOWN.

2. WHERE ON-SIGNAL AND OFF-SIGNAL MEASUREMENTS DIFFER, OFF-SIGNAL VOLTAGE APPEARS IN *ITALICS* BELOW ON-SIGNAL VOLTAGE. OFF-SIGNAL VOLTAGES MEASURED WITH ANTENNA TERMINALS SHORTED TOGETHER.

ON-SIGNAL VOLTAGES AND WAVE SHAPES TAKEN WITH NOISE FREE SIGNAL

● VOLTAGE VARIES WITH CONTROL SETTING

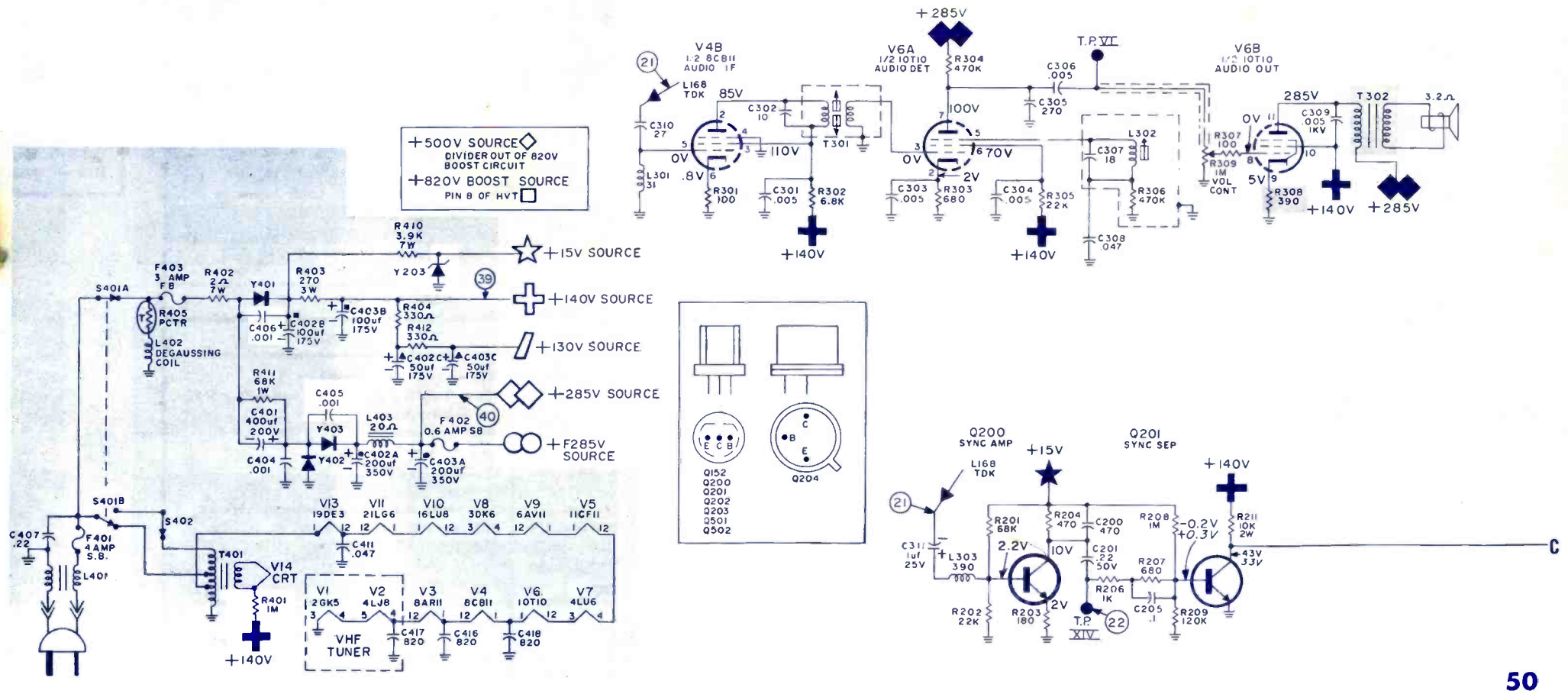
INDICATES PRODUCTION CHANGE

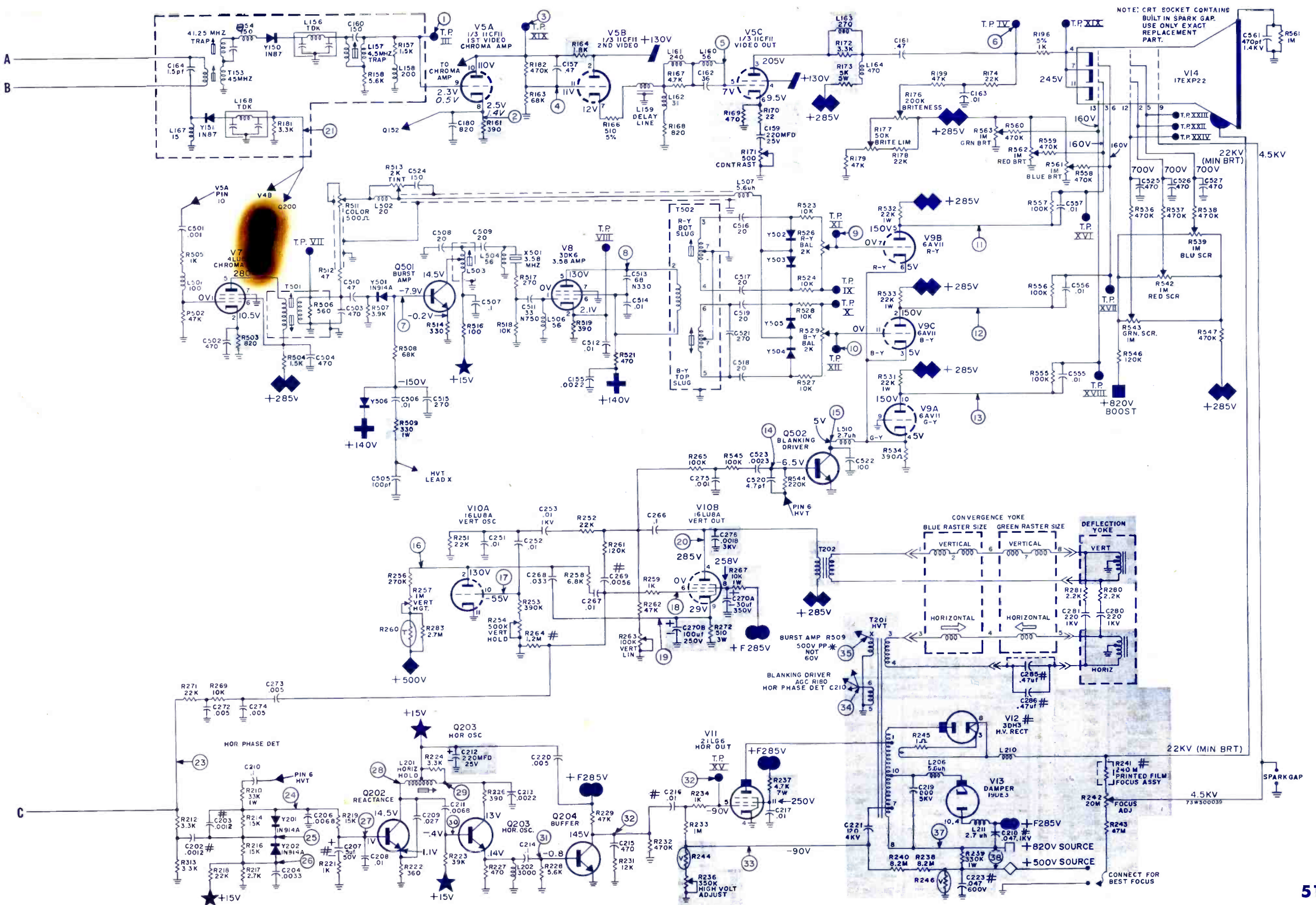
X TO *Y* FROM *X* TO *Y*

UNLESS OTHERWISE NOTED
K=1,000 M=1,000,000
CAPACITORS MORE THAN 1-μuf = μf
CAPACITORS LESS THAN 1-μf = pf
RESISTORS ARE 1/2 WATT

SYMBOL DESCRIPTION GENERAL ELECTRIC PART NO.

R244—varistor, 1ma, ±15%, @850v	EP13X2
R246—varistor, 1ma, ±15%, @575v	EP13X3
R260—thermistor, 500K, ±10%, @25°	EP14X20
R405—klixon, TDR 20n cold/5K hot	EP39X4
C402A—200 μf, +100%-10%, 350v, electro	EP31X18
C402B—100 μf, +100%-10%, 175v, electro	EP31X11
C402C—50 μf, +100%-10%, 175v, electro	EP31X12
C403A—200 μf, +100%-10%, 350v, electro	EP31X19
C403B—100 μf, +100%-10%, 175v, electro	EP31X13
C403C—50 μf, +100%-10%, 175v, electro	EP31X14
R165—control, AGC, 1K	EP49X2
R171—control, triple contrast 500K, 20%	EP49X3
R176—control, triple brite, 200K, 30%	EP49X5
R177—control, 50K, brite limit adjust	EP49X52
R236—control, H V adj, 350K	EP49X46
R242—control 20M, focus adj	EP49X51
R254—control, triple, vert hold, 500K, 30%	EP49X50
R257—control, dual vert height, 1M	EP49X45
R263—control, dual, vert lin, 100K	EP49X45
R309—control, on/off vol, 1M	EP49X3
R511—control, color, 500 Ω	EP49X54
R513—control, tint, 2K	EP49X55
R526—control, dual, red balance, 2K	EP49X594
R529—control, dual, blue balance, 2K	EP49X594
Q152—transistor, NPN, silicon AGC keyer	EP15X7
Q200—transistor, NPN, silicon, sync. amp	EP15X3
Q201—transistor, horiz, AFC	EP15X7
Q202—transistor, horiz react	EP15X9
Q203—transistor, horiz osc	EP15X9
Q204—transistor, horiz driver	EP15X10
Q501—transistor, NPN, silicon, burst amp	EP15X5
Q502—transistor, NPN, silicon, blanking driver	EP15X9
L157—coil, 4.5MHz trap w/core	EP6JX3
L159—coil, delay line	EP36X50
L201—coil, horiz osc	EP36X55
L302—coil, quad	EP36X52
L401—line choke, 3.2–4.1MHz	EP36X57
T201—x-former, horiz output	EP77X7
T202—x-former, vert output	EP64X7
T301—x-former, audio Interstage	EP36X34
T302—x-former, audio output	EP64X8
T401—x-former, filament	EP64X9
T501—coils, chroma bandpass	EP36X2
T502—x-former, chroma demod	EP36X65
fuse, 4 amp slow-blo (F401)	EP10X7
fuse, .6a slow-blo (F402)	EP10X5
fuse, 3a fast-blo (F403)	EP10X4
yoke, deflection	EP76X5
yoke, convergence	EP62X18





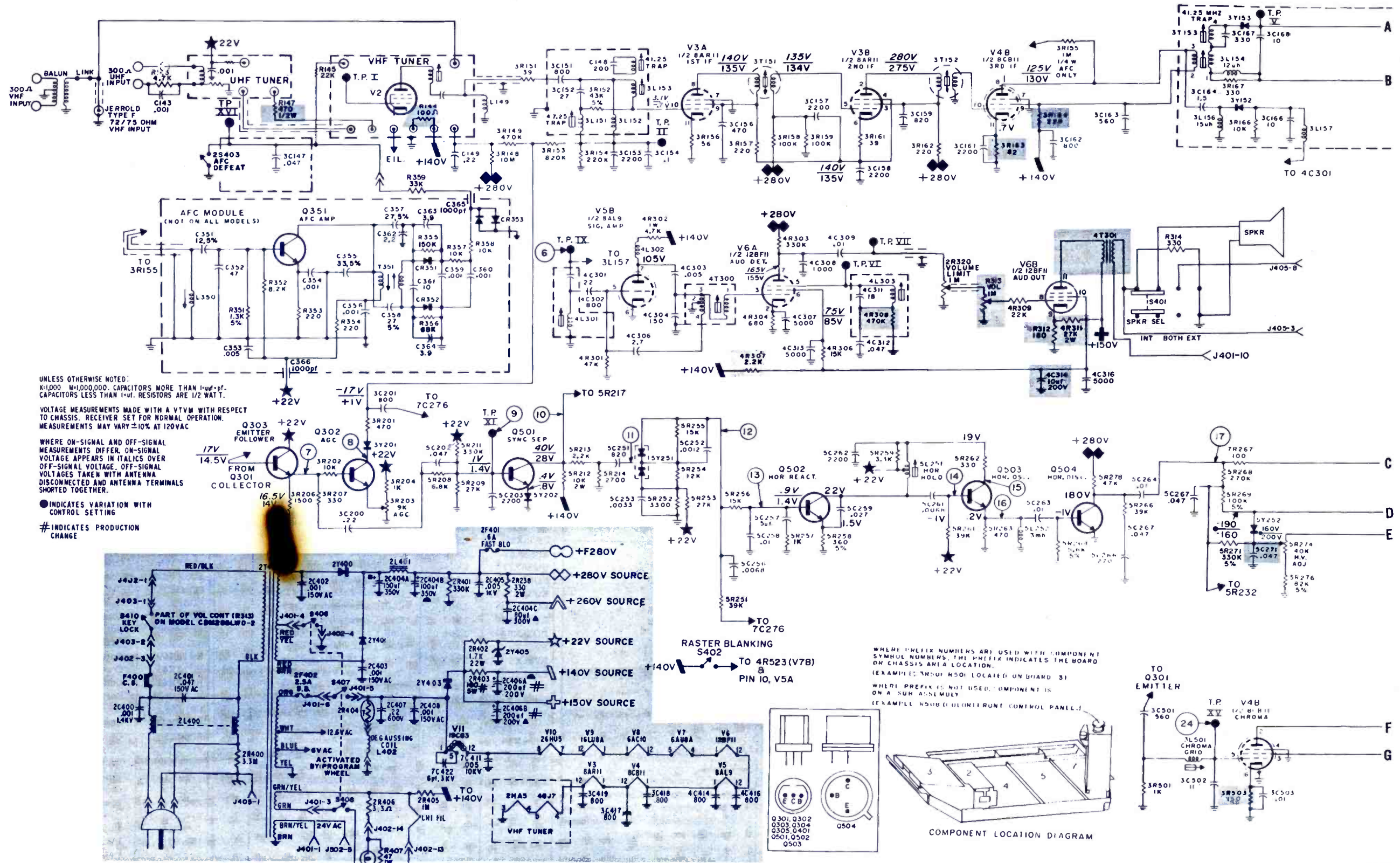
GENERAL ELECTRIC
Color-TV Chassis L-T2

ELECTRONIC TECHNICIAN/DEALER *TEKFAX*

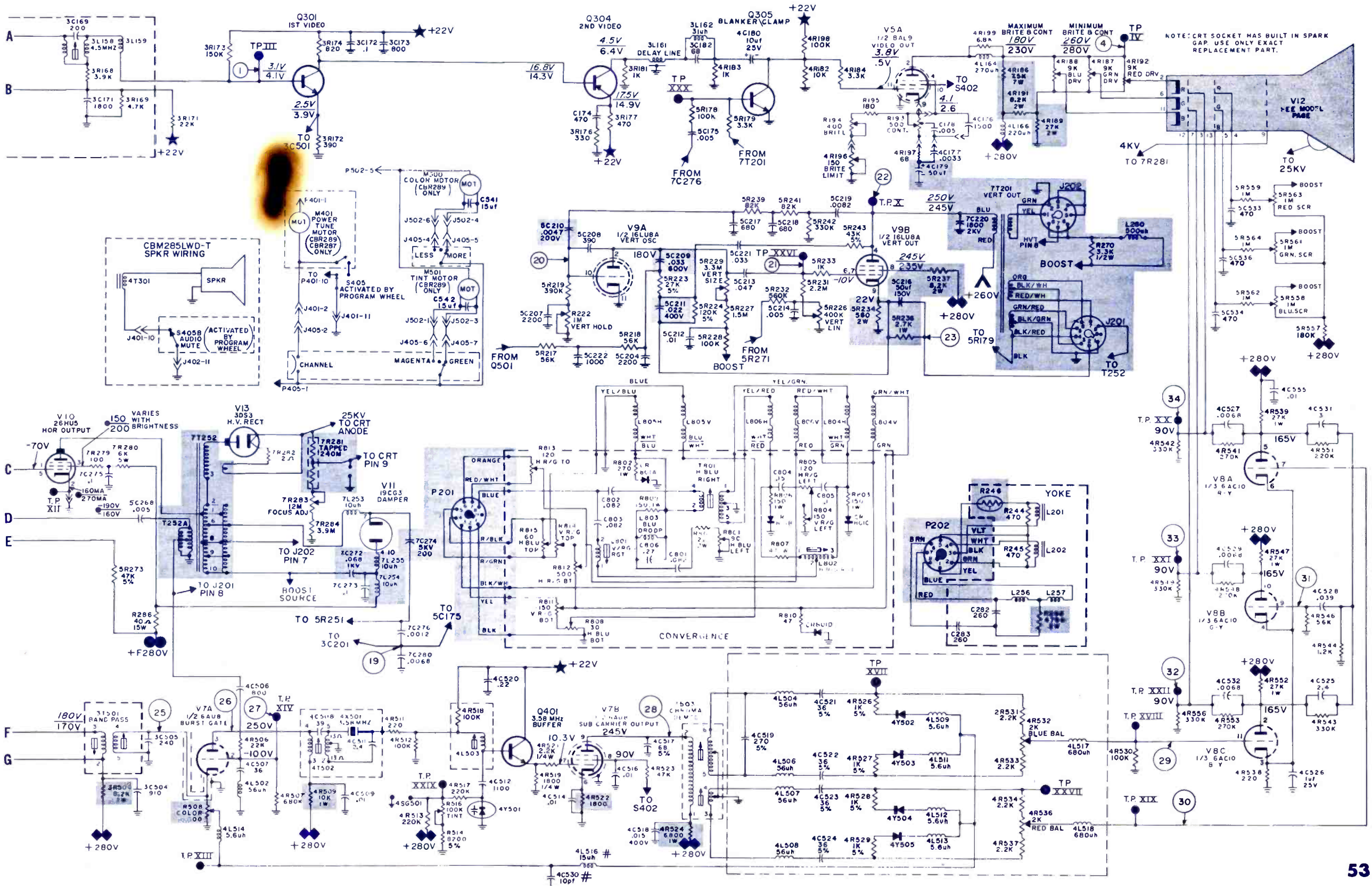
SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R246	thermistor, 3.8Ω at 25°C	EU14X147
R281	240M, tapped at 40M, focus	EP14X33
R404	PTCR, 100Ω cold, 4K hot	EP39X4
R187	triple control, 9K green drive	EP49X49
R188	9K, blue drive	
R192	9K, red drive	
R196	150Ω, bright limit dual control	EP49X28
R226	330K, vert lin	EP49X31

R229	3.3M, height	
R274	40K, hi voltage adjust	EP49X32
R283	focus 12M	EP49X73
R558	triple control, 1M, blue screen	EP49X33
R561	1M, green screen	
R563	1M, red screen	
C404A	150μf, 350v	EP31X26
C404B	100μf, 350v	
C404C	80μf, 300v	
C406A	200μf, 200v	EP31X27
C406B	200μf, 200v	
Y256	rectifier, focus 3ma	EU57X32

Y501	varicap	EU30X87
L151	coil, 47.25MHz, trap w/core	EP36X13
L153	x-former, 1st IF	EP61X1
L157	coil, choke	EP36X7
L158	coil, 4.5MHz, trap	EP61X3
L161	delay line	EP36X12
L251	coil, horiz osc	EP35X2
L301	coil, audio take off	EP36X28
L303	coil, quad	EP36X30
L400	coil, line choke	EP36X57
L501	coil, chroma input	EP36X24
T201	x-former, vert out	EP64X6



T252-xformer, horiz sweep (HVT)	EP77X9
T300-xformer, audio interstage	EP36X34
T301-xformer, audio output	EP64X16
T351-xformer, AFC discriminator	EU61X6
T400-xformer, power	EP88X3
T501-xformer, chroma bandpass	EP61X173
T502-xformer, crystal, filter	EP61X174
T503-xformer, chroma, demodulator	EP61X175
circuit breaker (F400)	EP10X9
fuse, 6a, fast blow, F401	EP10X12
fuse, 2.5a, slow blow, F402	EP10X13
yoke, deflection	EP76X2



GENERAL ELECTRIC

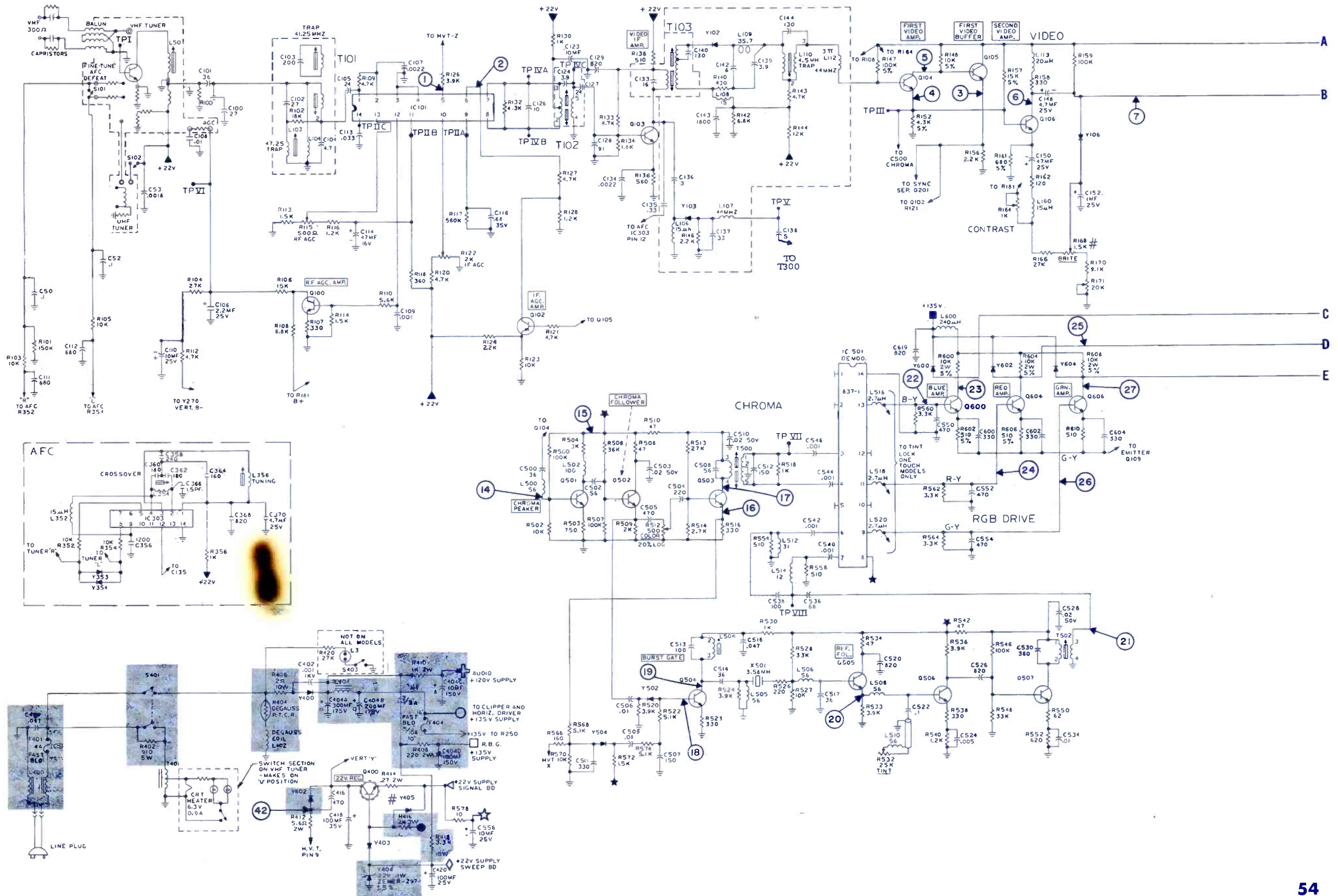
Color-TV Chassis JA

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X

SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R248-1K, 10%, 7w, WW		EP14X43
R404-degaussing		EP39X4
R115-RF AGC, 500Ω, 20%		EP49X02
	dual control	EP49X94
R122-1F AGC, 2K		
R196-blue drive, 40K		
R171-brite centering, 20K		EP49X96

R258-focus, 15M, 20%		EP49X91
	dual control	EP49X95
R263-vert hold, 500K		
R270-vert height, 500K		
R277-vert centering, 2K		EP49X90
	triple control	EP49X93
R640-green screen, 1M		
R642-red screen, 1M		
R644-blue screen, 1M		

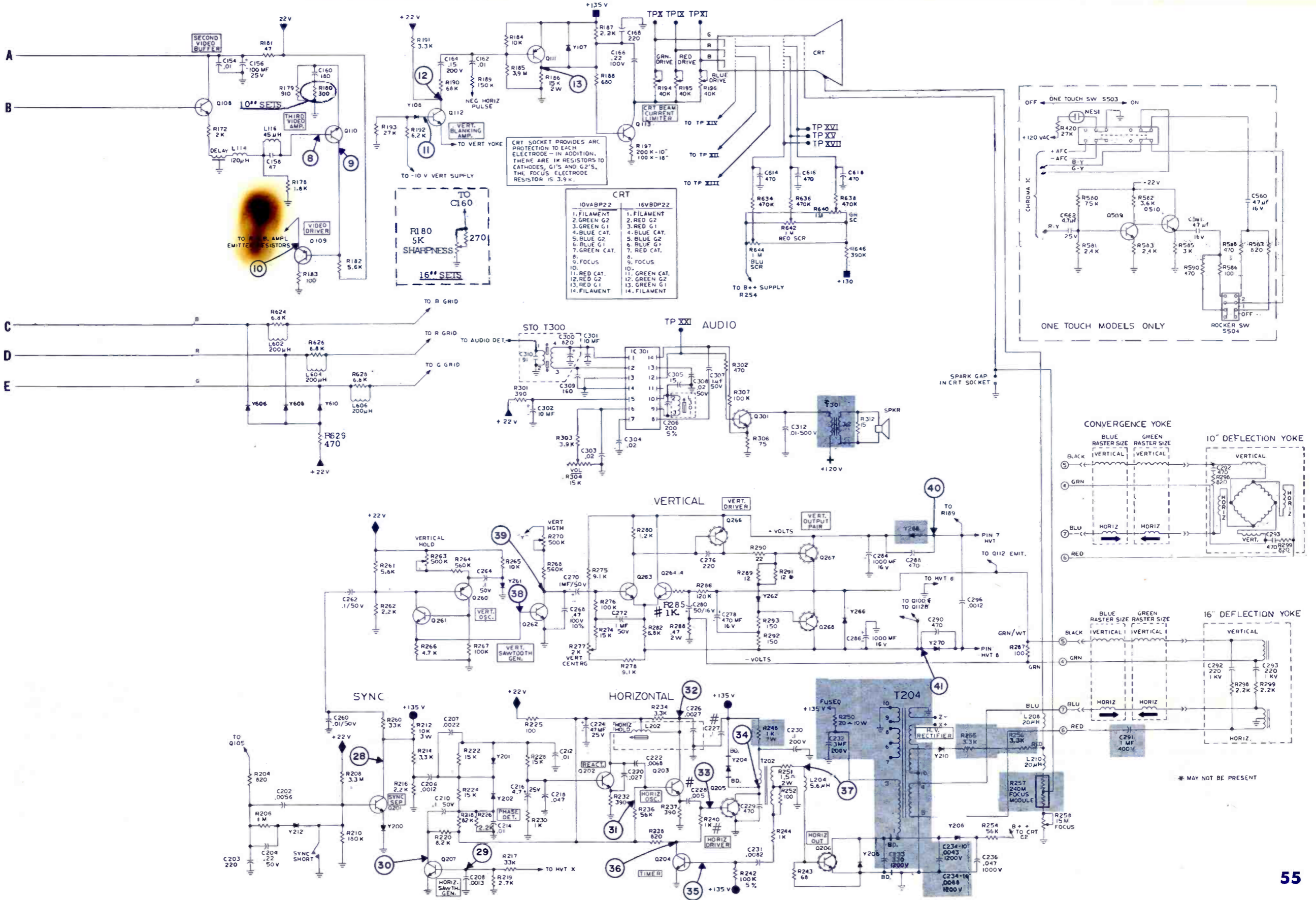
C404A-300μf, 175v		EP31X28
C404B-200μf, 175v		
C404C-10μf, 150v		
C404D-100μf, 150v		
L103-coil, 47.25MHz trap		EP36X86
L112-coil, 44MHz trap		EP36X4
	conv yoke assembly	EP62X32
	yoke & plug assembly, 10 in. set	EP76X9
	yoke & plug assembly, 16 in. set	EP76X8



- L202—coil, horiz osc w/core EP36X55
- L301—coil quad w/core EP36X83
- T102—xformer, IF, 44MHz, w/core EP61X11
- T202—xformer, horiz buffer EP64X19
- T204—HV xformer, w/air gap, 10 in. sets EP77X11
- T204—HV xformer, w/air gap, 16 in. sets EP77X12
- T301—xformer, audio output ET64X105
- T401—xformer, filament, 10 in. sets EP64X18
- T401—xformer, filament, 16 in. sets EP64X20

- T500—xformer, chroma bandpass w/core EP61X14
- T502—coil, 3.58MHz output xformer, w/core EP36X84
- 1C101—integ ckt, IF, AGC EP84X1
- 1C301—integ ckt, audio EP84X2
- 1C303—integ ckt., AFC module EP84X4
- 1C501—integ ckt., demod EP84X3
- Y404—diode, zener, 22v, 5% ES16X29
- fuse, 4a, fast blow, F401 EP10X52
- fuse, 0.5a, fast blow, F404, 10 in. sets EP10X3
- fuse, 0.67a, fast blow, F404, 16 in. sets EP10X16

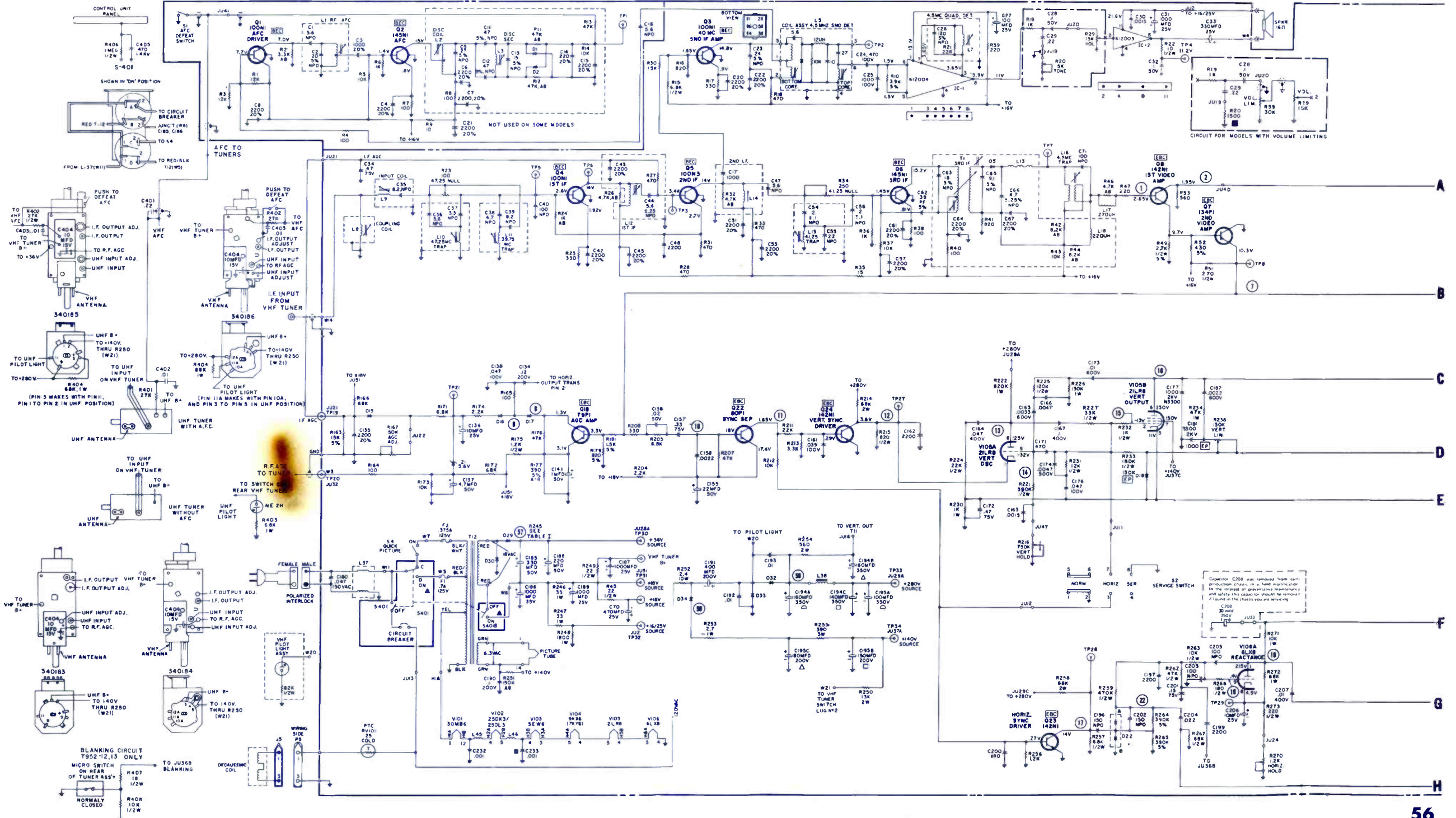
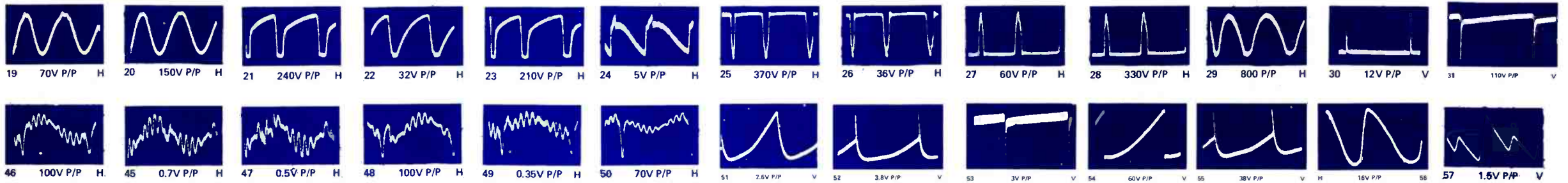
- EP61X14
- EP36X84
- EP84X1
- EP84X2
- EP84X4
- EP84X3
- ES16X29
- EP10X52
- EP10X3
- EP10X16



MAGNAVOX

Color-TV Chassis
T952

ELECTRONIC TECHNICIAN/DEALER *TEKFA*X

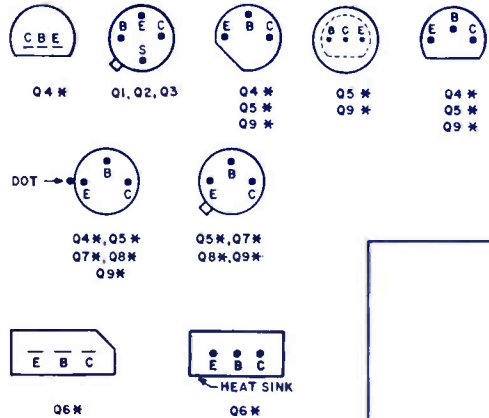


MAGNAVOX

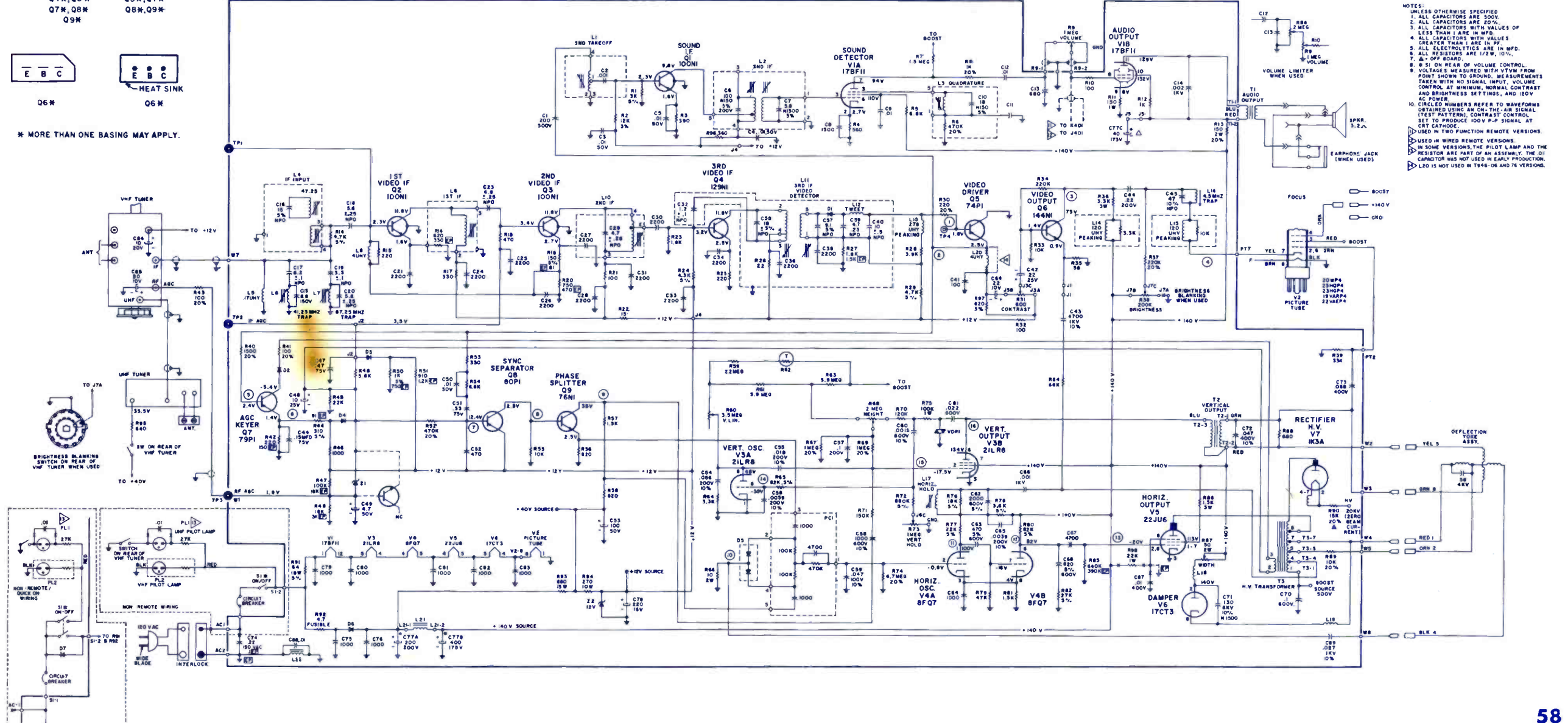
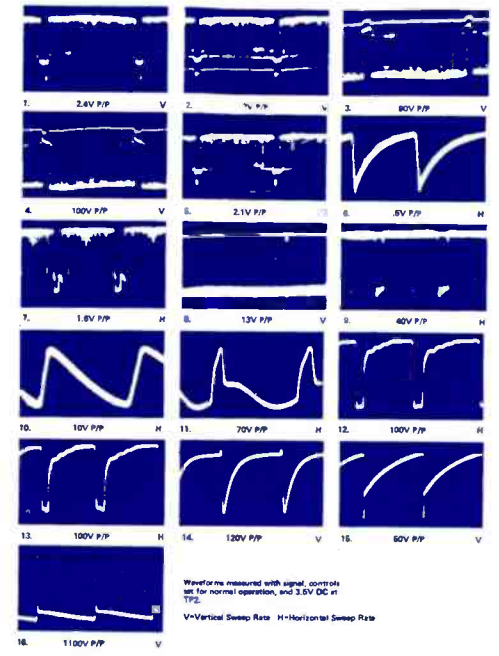
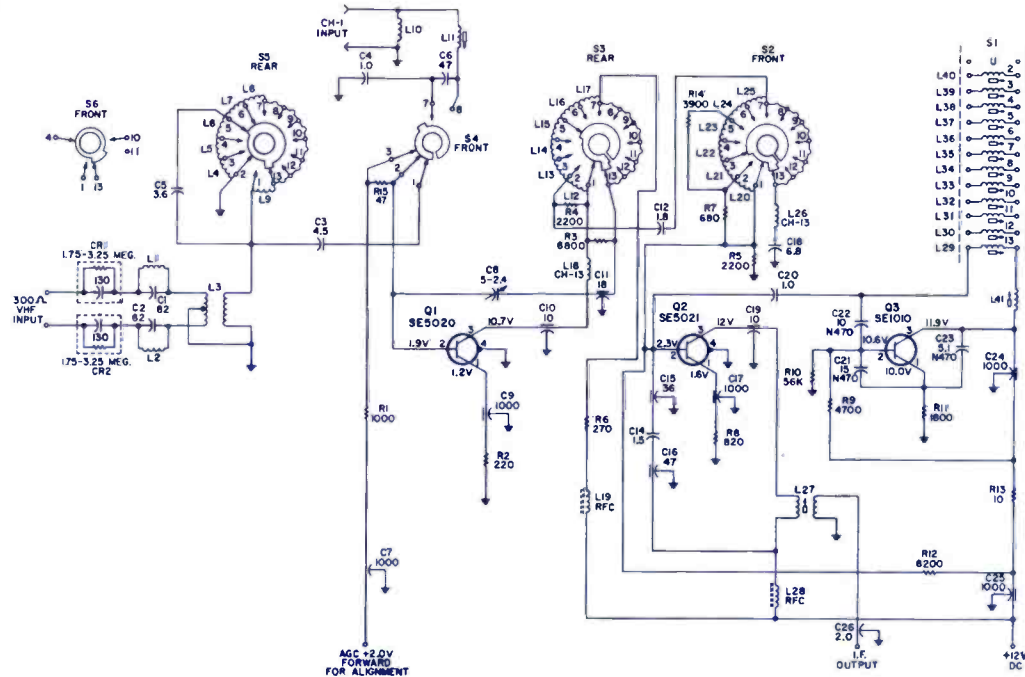
TV Chassis
T946 Series

ELECTRONIC TECHNICIAN/DEALER **TEKFAX**

SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L1	sound take-off coil	.361344-1
L2	sound interstage xformer	.361369-1
L3	quad coil	.360847-2
L16	4.5MHz trap coil	.360851-1
T1	audio output xformer	.320368-2
T2	vert output xformer	.320369-1
T3	horiz output xformer	.361373-1
	deflection yoke (used with 19VA CRT's)	.361377-1
	deflection yoke (used with 22VA CRT's)	.361377-2
C1	silver mica, 200pf, 20%, 500v	250366-537
C7	200, 200v; 400/40, 150v elect	270099-12
R6	thermistor	.230130-6
R91	64, 5%, 18w, WW	240088-10
R92	4.7, 10%, fusible	.240098-1
R93	880, 5%, 12w, WW	240088-11
R94	270, 5%, 10w, WW	240082-159
R9	vol w/switch, 1M (used in T946-01, 04, 71)	.220247-7008
R9	vol w/switch, 1M (used in T946-02, 03, 05, 06, 72, 73, 76)	.220260-39
R31	contrast, 600 (used in T946-02, 03, 72, 73)	.220255-8
R31	contrast, 600 (used in T946-06, 76)	.220255-11
R38	bright, 200K (used in T946-01, 04, 05, 71)	.220251-2
R38	bright, 200K (used in T946-02, 03, 72, 73)	.220255-7
R38	bright, 200K (used in T946-06, 76)	.220255-10
R60	vert lin, 3.5M	.220251-5
R68	height, 2M	.220251-4
R73	vert hold, 1M (used in T946-01, 02, 03, 04, 05, 71, 72, 73)	.220251-3
R73	vert hold, 1M (used in T946-06, 76)	.220255-9
VDR1	varistor	.230167-2
PC1	packaged circuit circuit breaker	.250377-1 180723-7003 or 180723-3

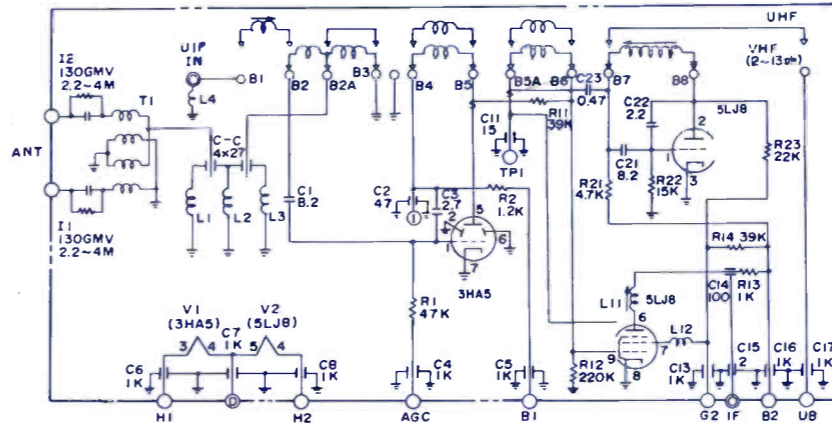


* MORE THAN ONE BASING MAY APPLY.



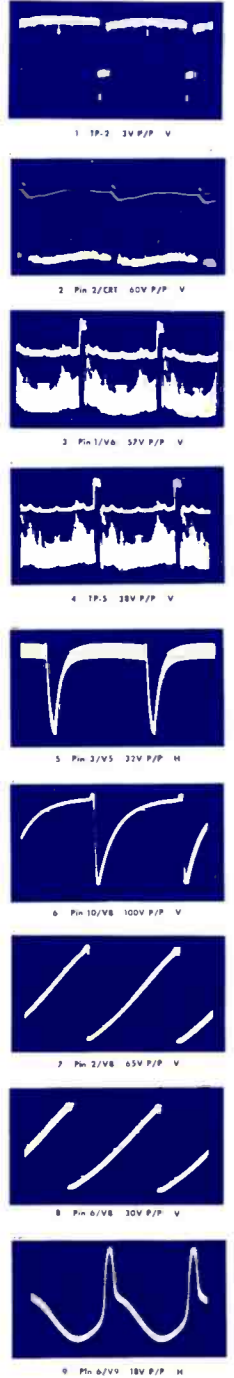
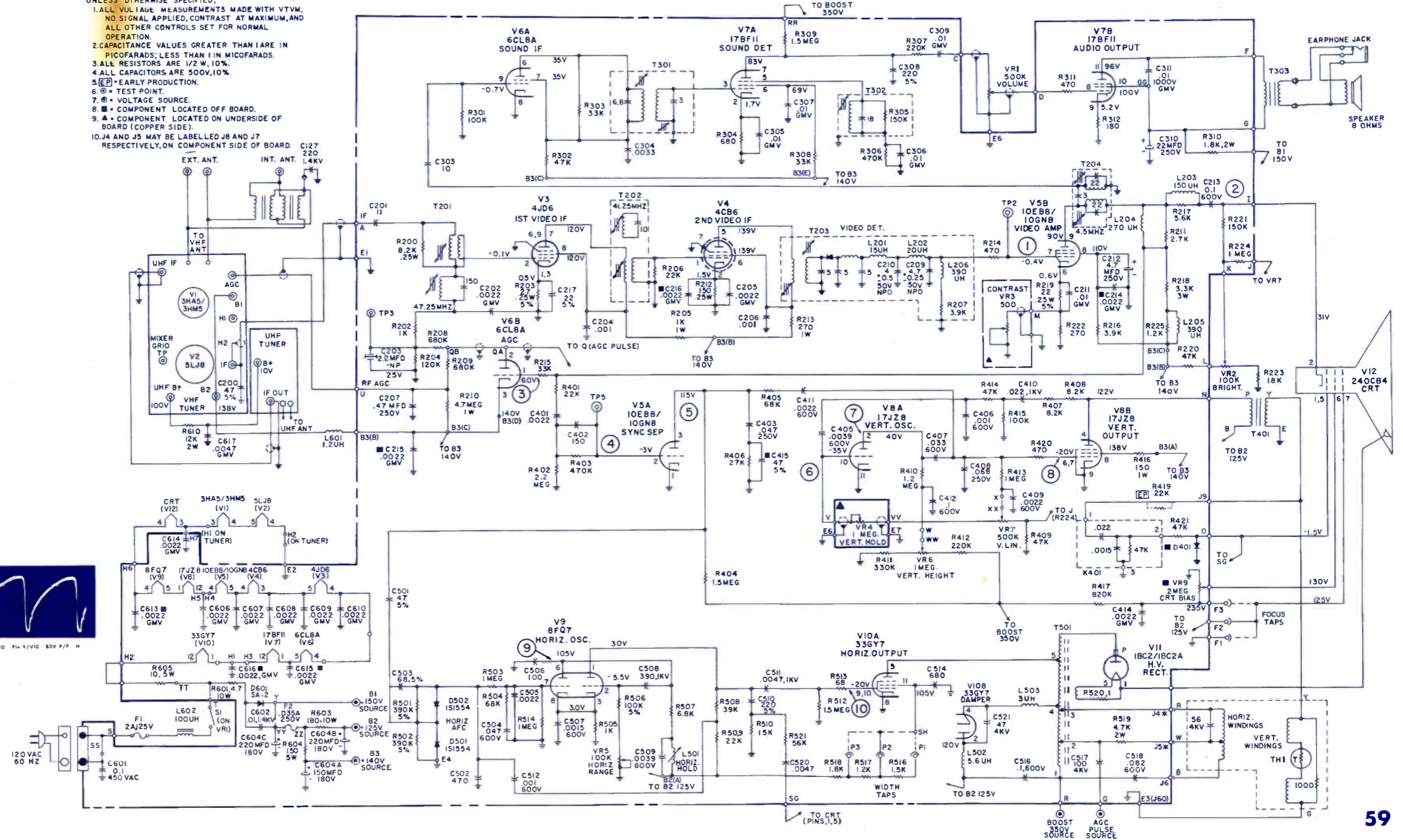
- NOTES:
- UNLESS OTHERWISE SPECIFIED
 - ALL CAPACITORS ARE 500V
 - ALL CAPACITORS ARE 20%
 - ALL CAPACITORS WITH VALUES OF LESS THAN 1 ARE IN P/P
 - ALL CAPACITORS WITH VALUES GREATER THAN 1 ARE IN MFD.
 - ALL RESISTORS ARE 1/2W, 10%.
 - Δ = OFF BOARD.
 8. Δ ON REAR OF VOLUME CONTROL.
 - VOLTAGE MEASURED WITH VTVM FROM POINT SHOWN TO GROUND. MEASUREMENTS TAKEN WITH NO SIGNAL INPUT, VOLUME CONTROL AT MINIMUM, NORMAL CONTRAST SET TO PRODUCE 100V P/P SIGNAL AT CRT CATHODE.
 - CIRCLED NUMBERS REFER TO WAVEFORMS OBTAINED USING AN ON-THE-AIR SIGNAL (TEST PATTERN). CONTRAST CONTROL SET TO PRODUCE 100V P/P SIGNAL AT CRT CATHODE.
 - USED IN TWO FUNCTION REMOTE VERSIONS.
 - USED IN WIRED REMOTE VERSIONS.
 - IN SOME VERSIONS, THE PILOT LAMP AND THE RESISTOR ARE PART OF AN ASSEMBLY. THE DIODE CATHODE WAS NOT USED IN EARLY PRODUCTION.
 - L20 IS NOT USED IN T946-06 AND 76 VERSIONS.

VHF TUNER SCHEMATIC



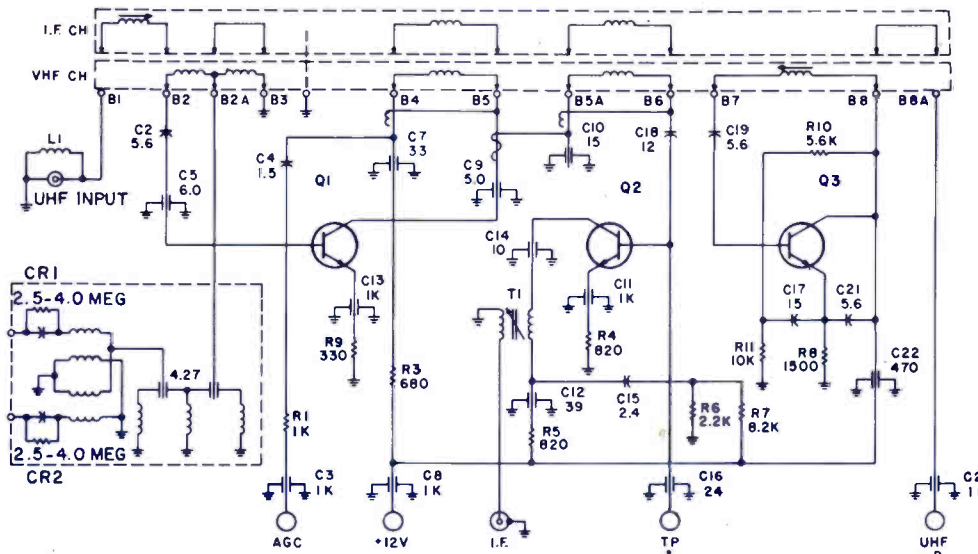
SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
T204	sound take-off xformer & 4.5MHz trap	36A040-26
T301	sound IF xformer	36A040-27
T302	quad coil	36A023-8
T303	audio output xformer	32A021-7
T401	vert output xformer	32A022-1
T501	horiz output xformer	32A021-8
	deflection yoke	36A040-22
VR1	500K, volume on/off	22A012-10
VR2	100K, bright	22A012-9
VR3	500n, contrast	22A012-3
VR4	1M, vert hold	22A012-7
VR5	100K, horiz range	22A012-5
VR6	1M, vert height	22A012-5
VR7	500K, vert lin	22A012-5
VR9	2M, CRT bias	22A012-6
F1	fuse 2a, 125v	18A008-1
F2	fuse, 0.35a, 250v	18A019-12
K401	vert retrace pac	25A019-1
	UHF tuner	34A008-4
	VHF tuner	34A008-3

- UNLESS OTHERWISE SPECIFIED:
1. ALL VOLTAGE MEASUREMENTS MADE WITH VTVM, NO SIGNAL APPLIED, CONTRAST AT MAXIMUM, AND ALL OTHER CONTROLS SET FOR NORMAL OPERATION.
 2. CAPACITANCE VALUES GREATER THAN 1 ARE IN PICOFARADS; LESS THAN 1 IN MICROFARADS.
 3. ALL RESISTORS ARE 1/2 W, 10%.
 4. ALL CAPACITORS ARE 500V, 10%.
 5. [Symbol] - EARLY PRODUCTION.
 6. [Symbol] - TEST POINT.
 7. [Symbol] - VOLTAGE SOURCE.
 8. [Symbol] - COMPONENT LOCATED OFF BOARD.
 9. [Symbol] - COMPONENT LOCATED ON UNDERSIDE OF BOARD (COPPER SIDE).
 10. J4 AND J5 MAY BE LABELLED J6 AND J7 RESPECTIVELY, ON COMPONENT SIDE OF BOARD.



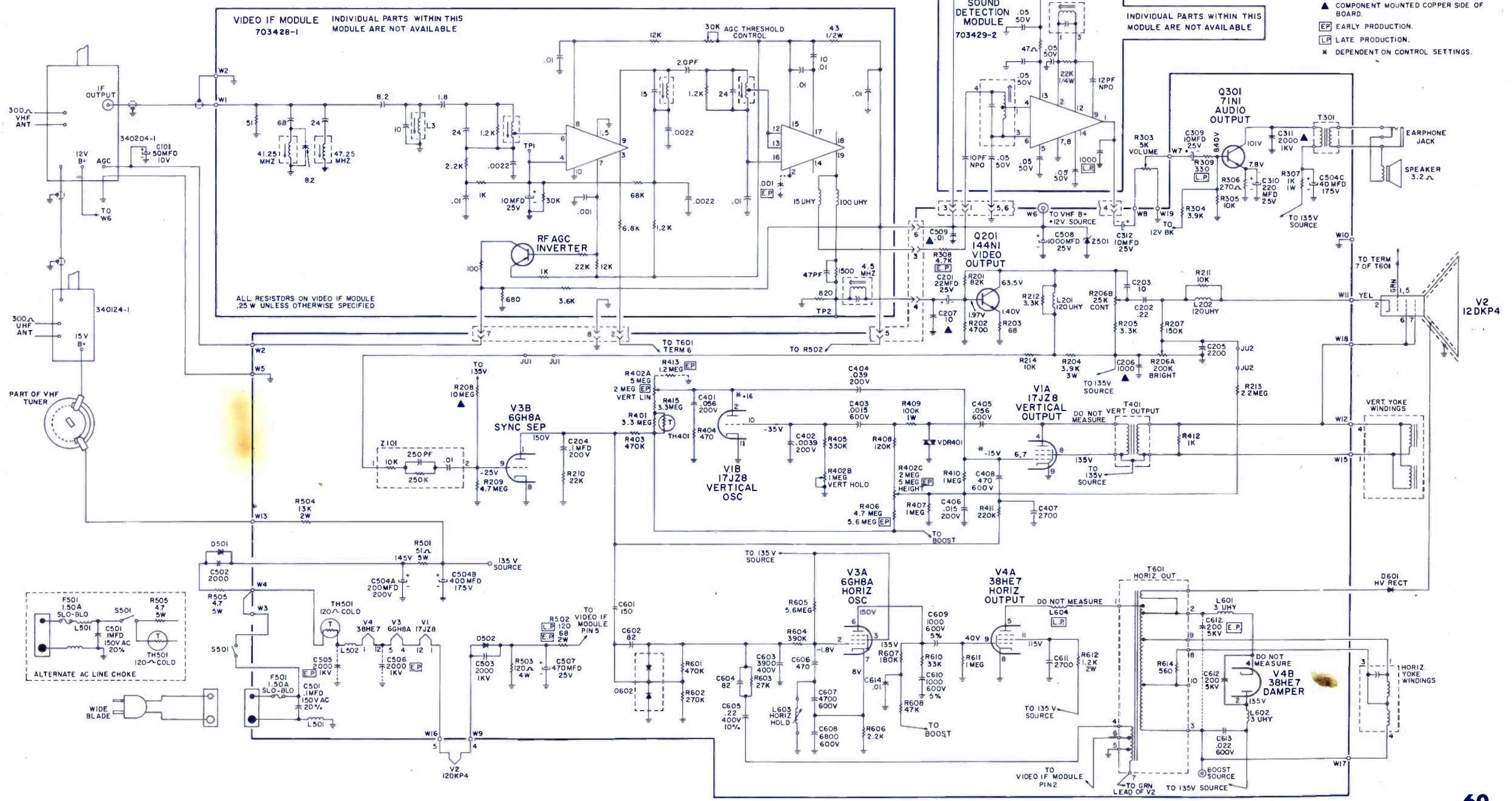
MAGNAVOX

TV Chassis
T960 Series



- NOTES:
UNLESS OTHERWISE SPECIFIED
1. ALL CAPACITORS ARE 500V.
 2. ALL CAPACITORS ARE 20%.
 3. ALL CAPACITORS WITH VALUES OF LESS THAN 1 ARE IN MFD.
 4. ALL CAPACITORS WITH VALUES GREATER THAN 1 ARE IN PF.
 5. ALL ELECTROLYTICS ARE IN MFD.
 6. ALL RESISTORS ARE 1/2 WATT, 10%.
 7. VOLTAGES MEASURED WITH VTVM FROM POINT SHOWN TO GROUND. MEASUREMENTS TAKEN WITH NO SIGNAL INPUT. VOLUME CONTROL AT MINIMUM, NORMAL CONTRAST AND BRIGHTNESS SETTINGS, AND 120V AC POWER.

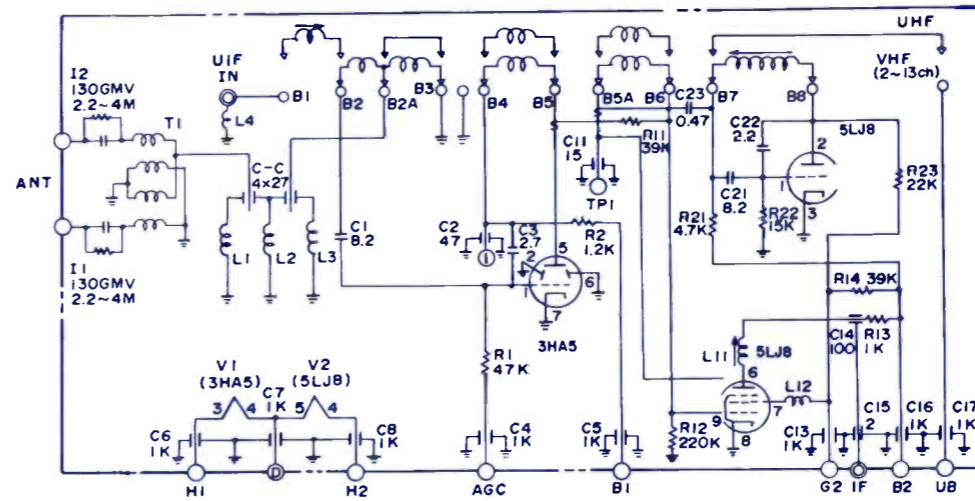
- ▲ COMPONENT MOUNTED COPPER SIDE OF BOARD.
- EP EARLY PRODUCTION.
- LP LATE PRODUCTION.
- * DEPENDENT ON CONTROL SETTINGS.



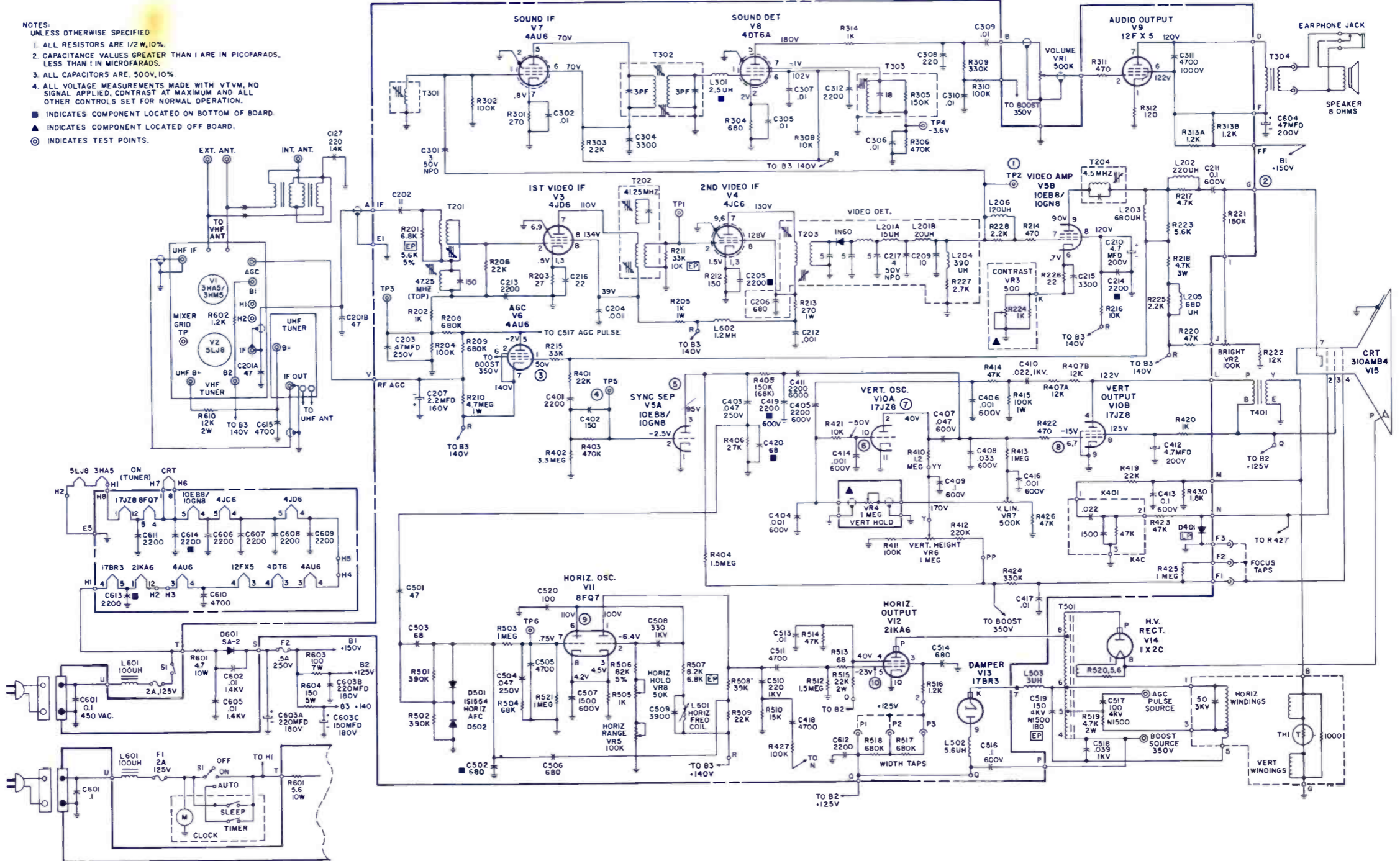
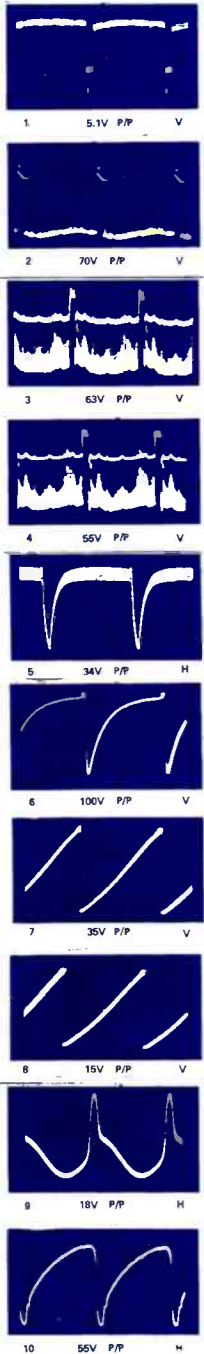
MAGNAVOX

TV Chassis
T961 Series

VHF TUNER SCHEMATIC

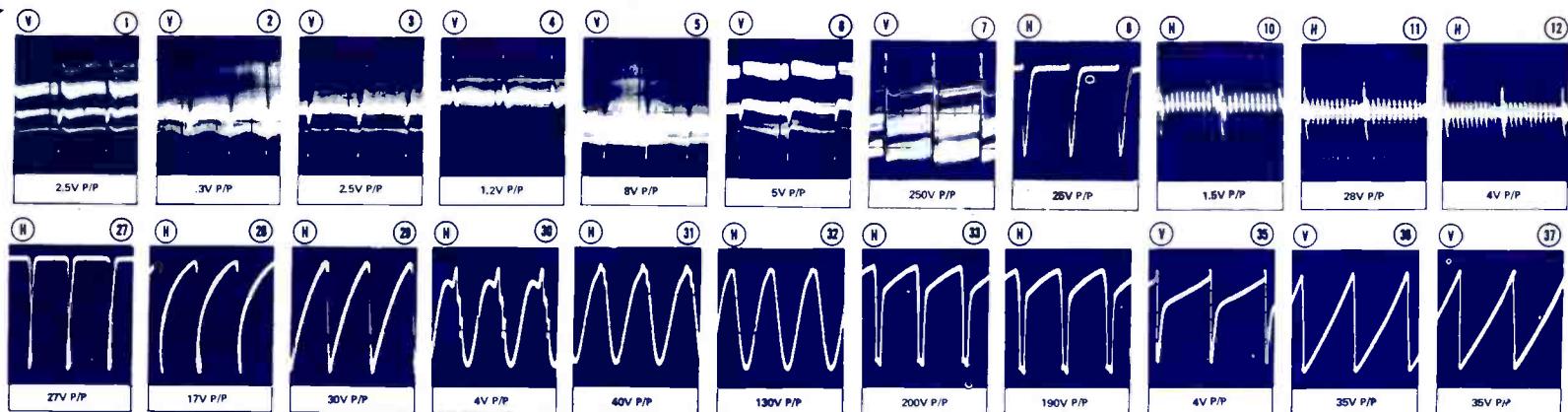


- NOTES:
UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE 1/2W, 10%.
 2. CAPACITANCE VALUES GREATER THAN 1 ARE IN PICOFARADS, LESS THAN 1 IN MICROFARADS.
 3. ALL CAPACITORS ARE .500V, 10%.
 4. ALL VOLTAGE MEASUREMENTS MADE WITH VTVM, NO SIGNAL APPLIED, CONTRAST AT MAXIMUM AND ALL OTHER CONTROLS SET FOR NORMAL OPERATION.
- INDICATES COMPONENT LOCATED ON BOTTOM OF BOARD.
 - ▲ INDICATES COMPONENT LOCATED OFF BOARD.
 - ⊙ INDICATES TEST POINTS.

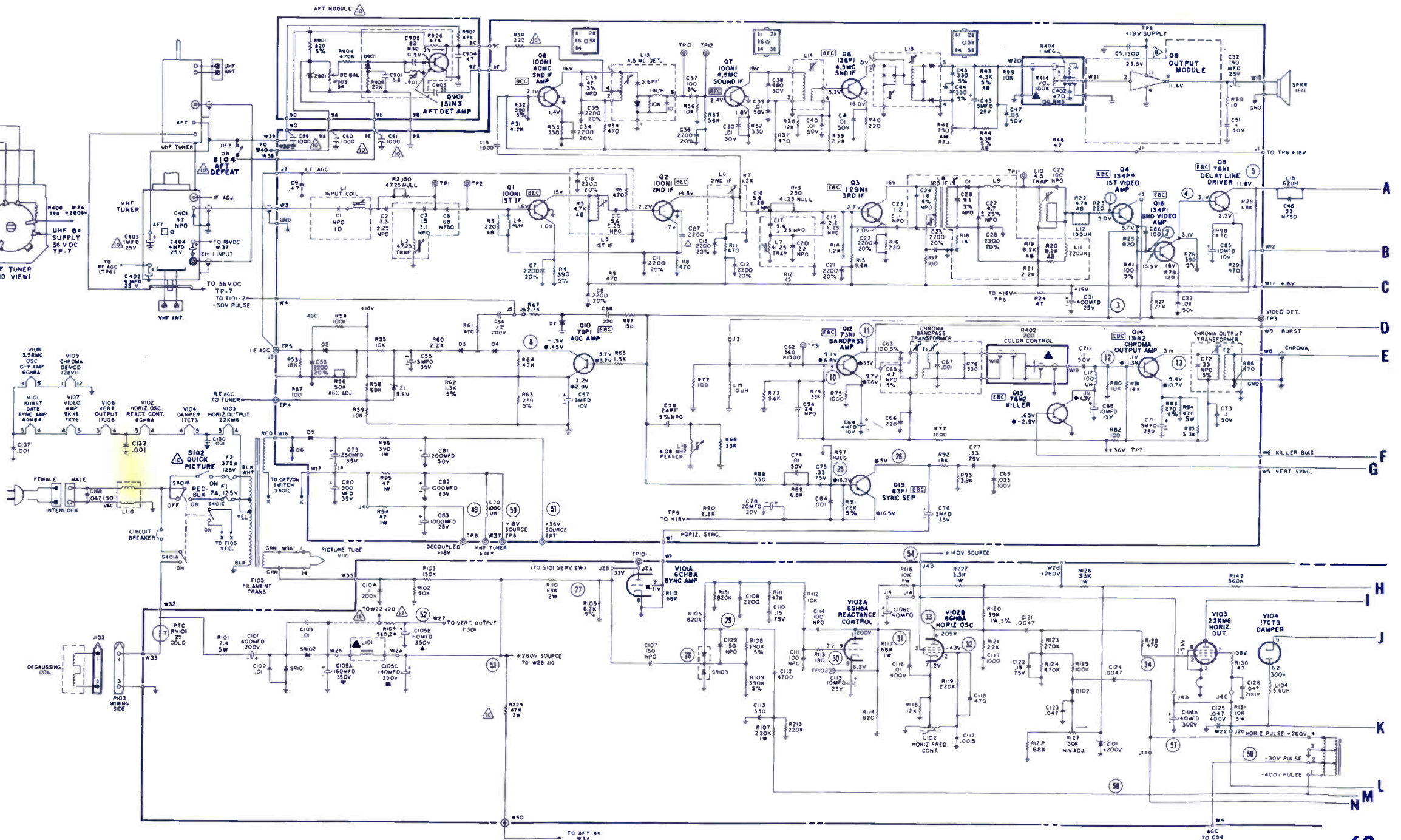
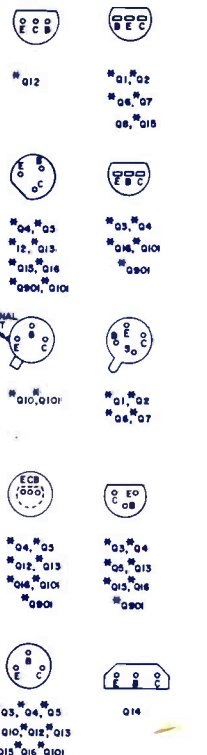


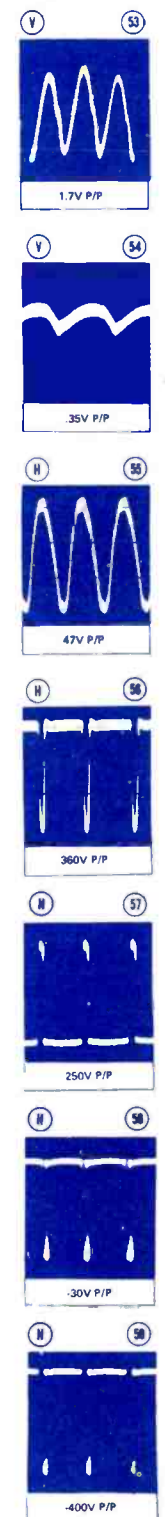
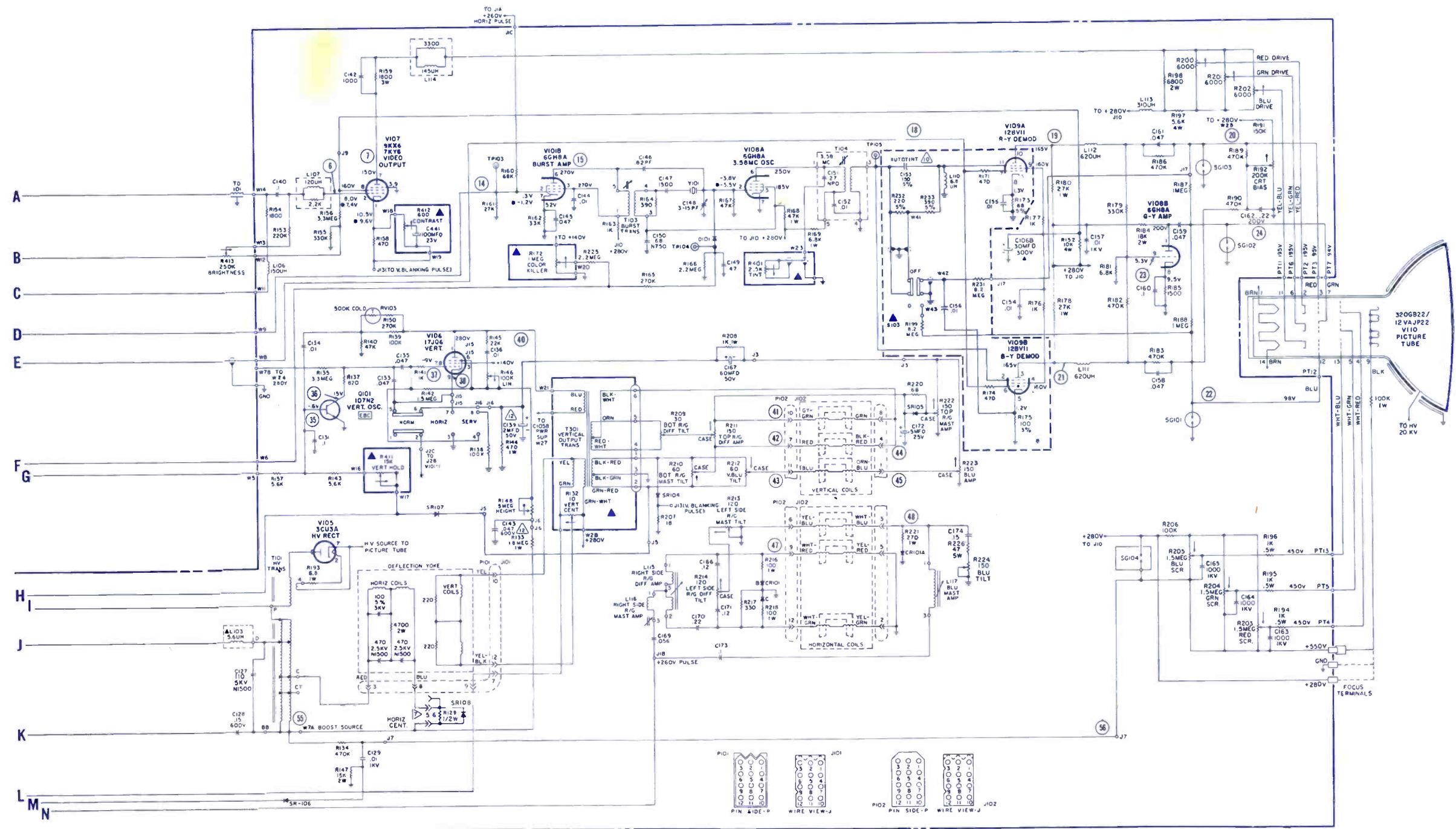
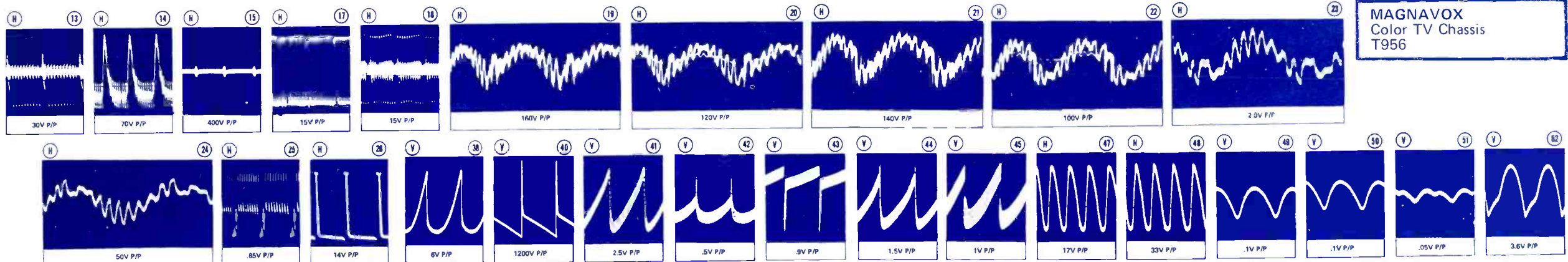
SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L13	4.5MHz sound detector coil	361336-2
L14	4.5MHz sound IF coil	361331-1
L15	ratio detector	361338-1
L102	horiz frequency coil	361269-1
L104	5.6 μh RF choke	360676-5
L111	620 μh peaking coil	360853-11
L118	line filter	361400-7
L901	discriminator coil (T956-01)	361405-1
T1	chroma bandpass xformer	361339-1
T2	chroma output xformer	361343-1
T101	horiz output xformer	361342-5 or 361376-2
T103	burst xformer	361296-1
T105	filament power xformer w/fast on (T956-01)	320353-5
T105	filament power xformer (T956-02)	320354-5
C105	electrolytic, 160/140/60 μf, 350v	270099-9
C106	electrolytic, 40/30/40 μf, 300v	270099-11
R56	50K, AGC threshold control	220220-18

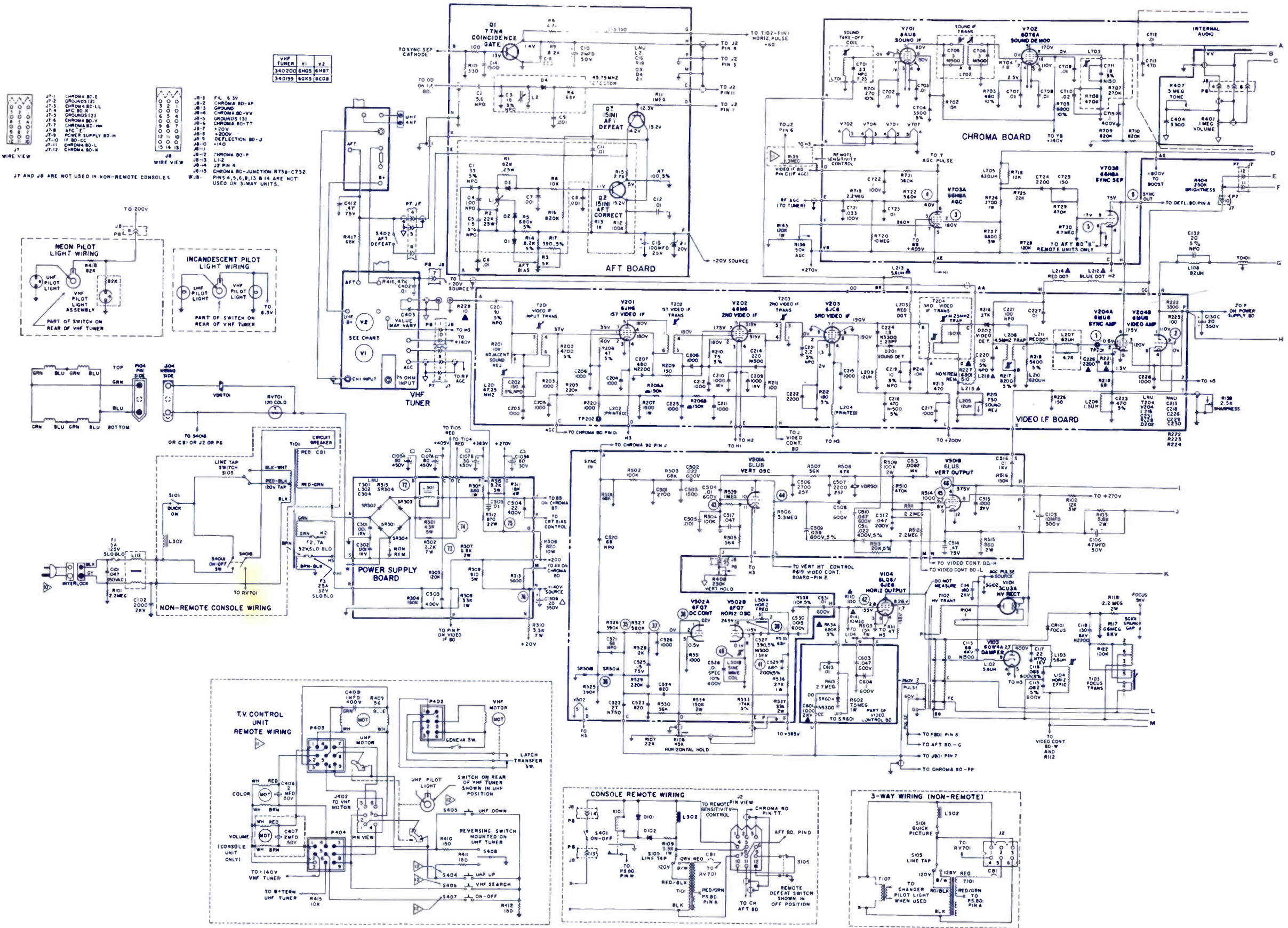
R127	50K, high voltage adjust control	220220-20
R132	10, vert centering control	220246-1
R146	100K, vert lin (Part of R132)	220246-1
R148	5M, vert height control	220220-19
R172	1M, color killer control	220208-45
R192	200, CRT bias adjust control	220220-21
R202	6K, blue drive control	220220-22
R401	2.5K, tint control (T956-01)	220255-16
R401	2.5K, tint control (T956-02)	220263-4
R411	15K, vert hold control	220-146-77
R412	600, contrast control	220146-75
R413	250K, bright control	220-146-76
R414	100K, vol w/switch S401 (T956-02)	220260-34
R414	100K, vol w/switch S401 (T956-01)	220261-10
R903	5K, dc balance (T956-01)	220217-16
RV101	thermistor (PTC) 25 cold; 5K hot	230207-1
RV103	thermistor (NTC) 500K cold	230130-6
TD101	delay line	360949-6
F1	fuse, 0.75a, 125v, slo-blo	181021-5075
F2	fuse, 0.4a, 125v, slo-blo	181021-5040
	1.3a circuit breaker	180723-5



TRANSISTOR BASING





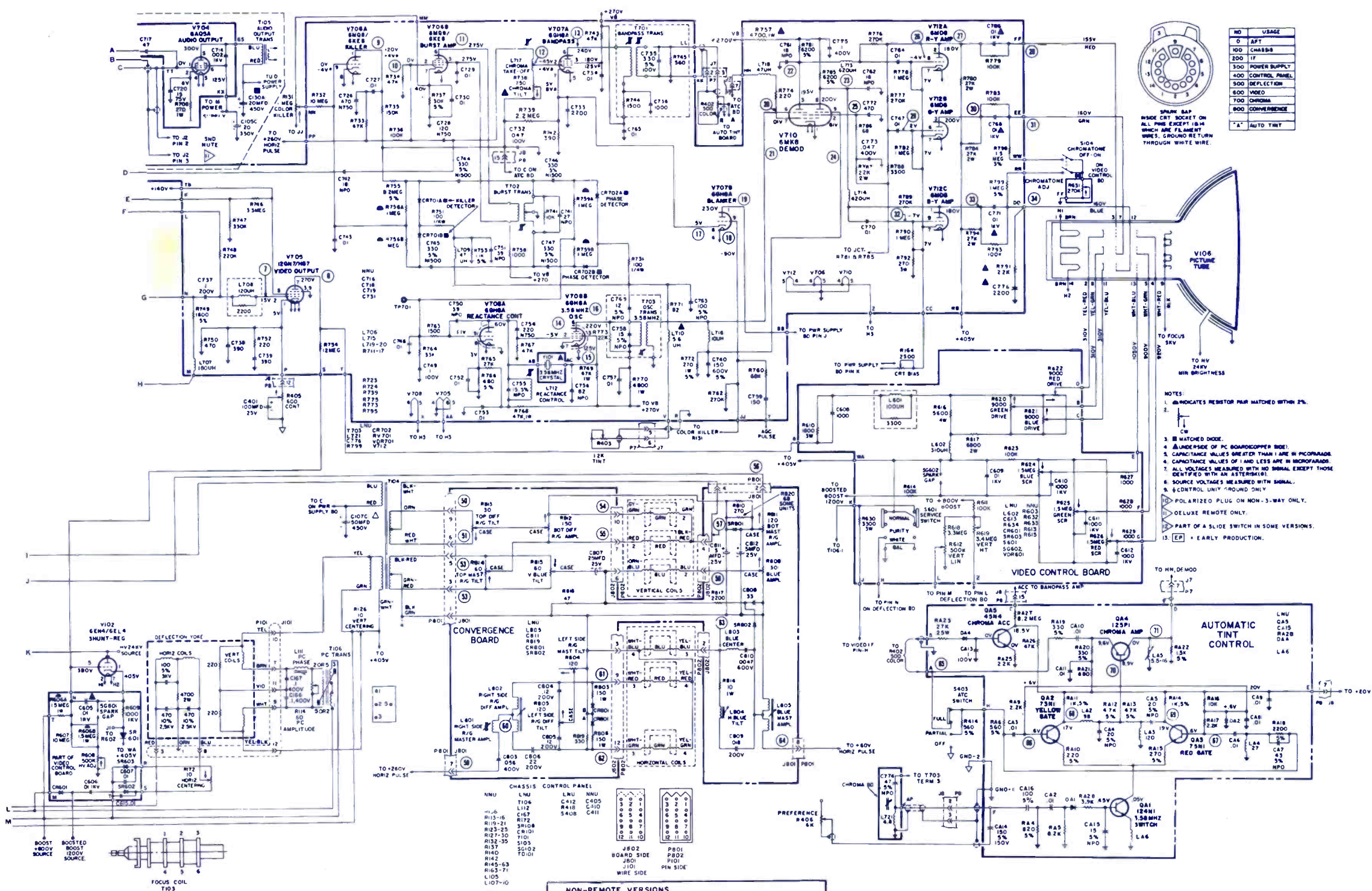


VHF TUNER	V1	V2
340200	8M05	6M87
340199	8GK5	6CGR

J7-1	CHROMA BD-E
2	CHROMA BD-LL
3	CHROMA BD-R
4	CHROMA BD-V
5	CHROMA BD-W
6	CHROMA BD-TT
7	CHROMA BD-MH
8	CHROMA BD-V
9	CHROMA BD-V
10	CHROMA BD-V
11	CHROMA BD-V
12	CHROMA BD-V
13	CHROMA BD-V
14	CHROMA BD-V
15	CHROMA BD-V

J8-1	CHROMA BD-P
2	CHROMA BD-P
3	CHROMA BD-P
4	CHROMA BD-P
5	CHROMA BD-P
6	CHROMA BD-P
7	CHROMA BD-P
8	CHROMA BD-P
9	CHROMA BD-P
10	CHROMA BD-P
11	CHROMA BD-P
12	CHROMA BD-P
13	CHROMA BD-P
14	CHROMA BD-P
15	CHROMA BD-P

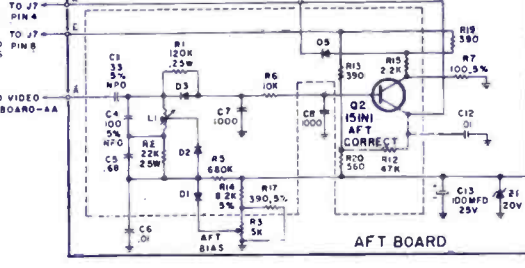
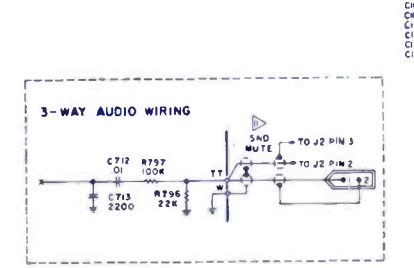
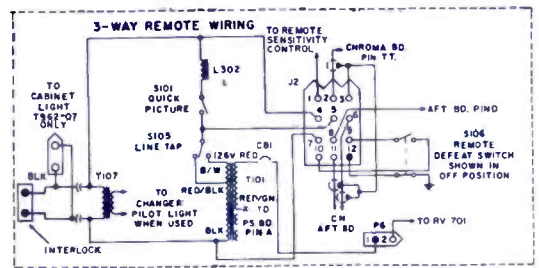
J7 AND J8 ARE NOT USED IN NON-REMOTE CONSOLES
 *J8- PINS 4, 5, 6, 13 & 14 ARE NOT USED ON 3-WAY UNITS.



NO	USAGE
0	AFT
100	CHASSIS
200	IF
300	POWER SUPPLY
400	CONTROL PANEL
500	DEFLECTION
600	VIDEO
700	CHROMA
800	CONVERGENCE
A	AUTO TINT

SPRING CAP
INSIDE CRT SOCKET ON
ALL PINS EXCEPT 14
WHICH ARE FILAMENT
WIRES. GROUND RETURN
THROUGH WHITE WIRE.

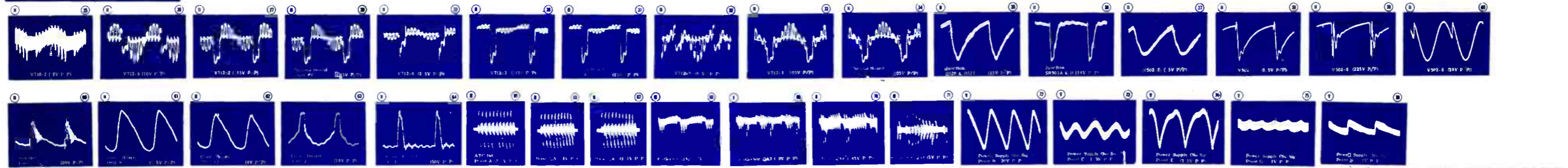
- NOTES:
1. Δ INDICATES RESISTOR PAIR MATCHED WITHIN 2%.
 2. \square MATCHED DIODE.
 3. \square BLANDED SIDE OF PC BOARD COPPER SIDE!
 4. CAPACITANCE VALUES GREATER THAN 1 ARE IN MICROFARADS.
 5. CAPACITANCE VALUES OF 1 AND LESS ARE IN PICOFARADS.
 6. ALL VOLTAGES MEASURED WITH NO SIGNAL EXCEPT THOSE IDENTIFIED WITH AN "A" SYMBOL.
 7. SOURCE VOLTAGES MEASURED WITH SIGNAL.
 8. \square CONTROL UNIT - GROUND ONLY.
 9. POLARIZED PLUG ON NON-3-WAY ONLY.
 10. DELUXE REMOTE ONLY.
 11. [EP] = EARLY PRODUCTION.



MAGNAVOX

Color TV Chassis
T958

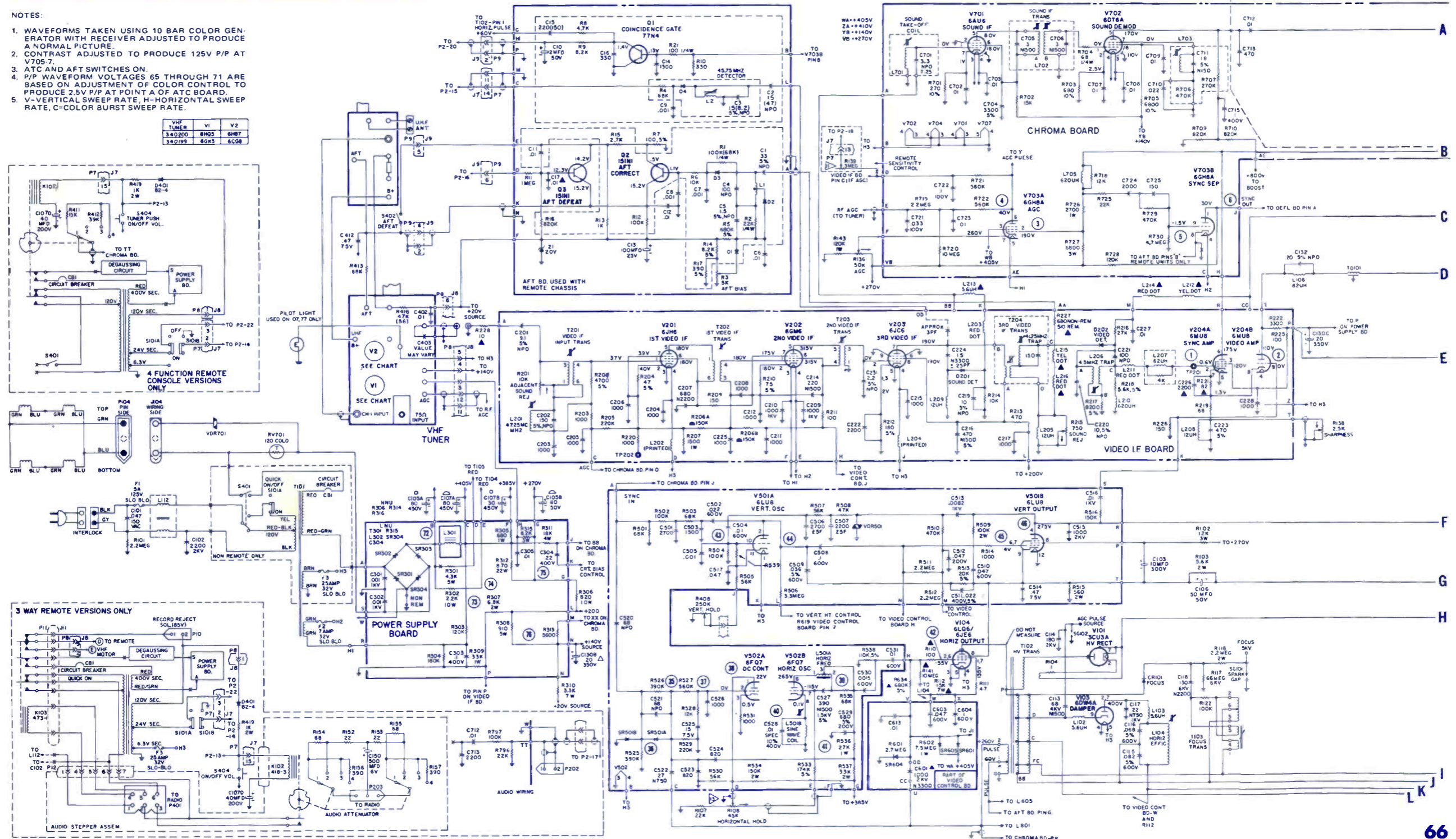
ELECTRONIC TECHNICIAN/DEALER TEKFAKX



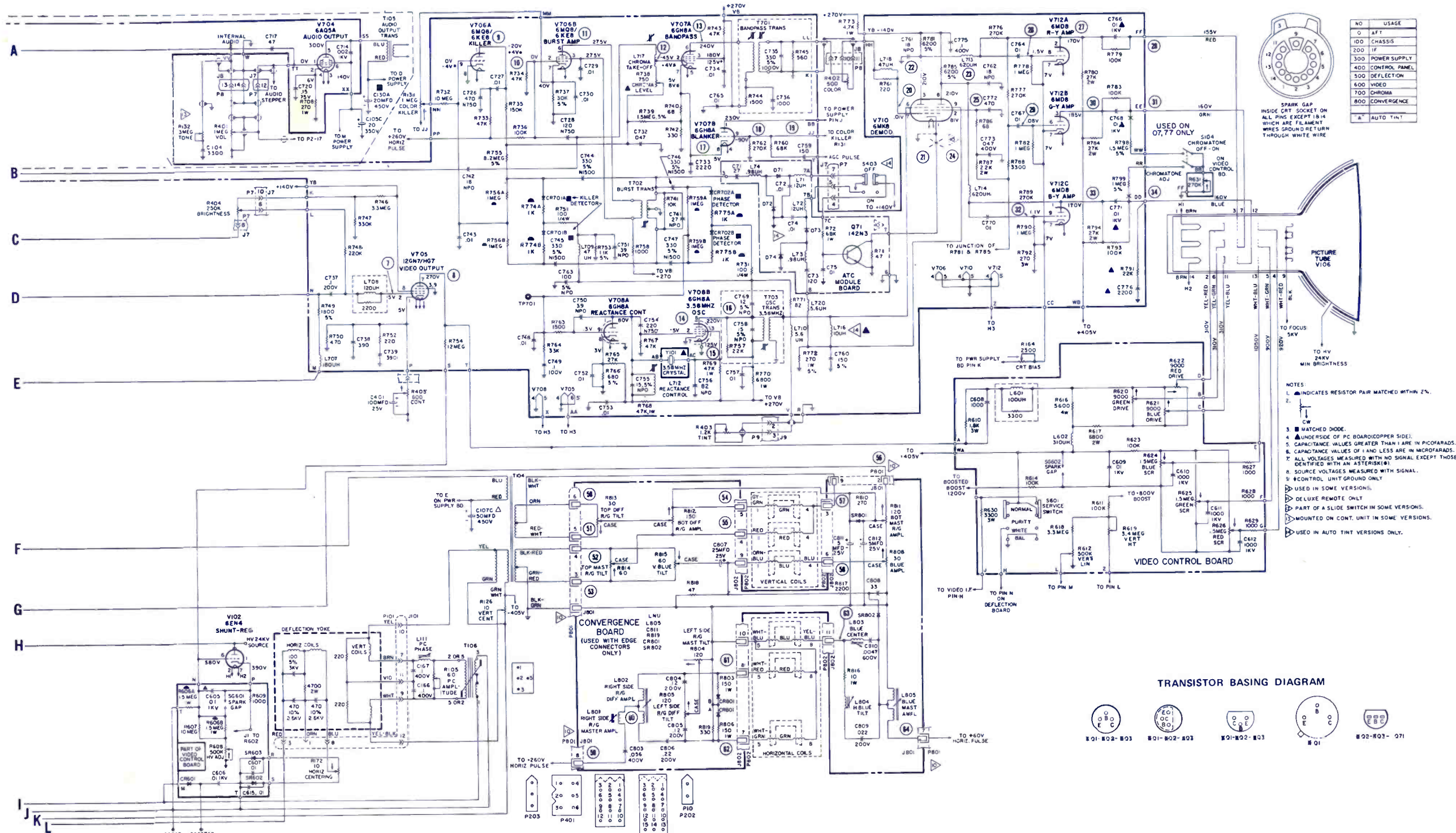
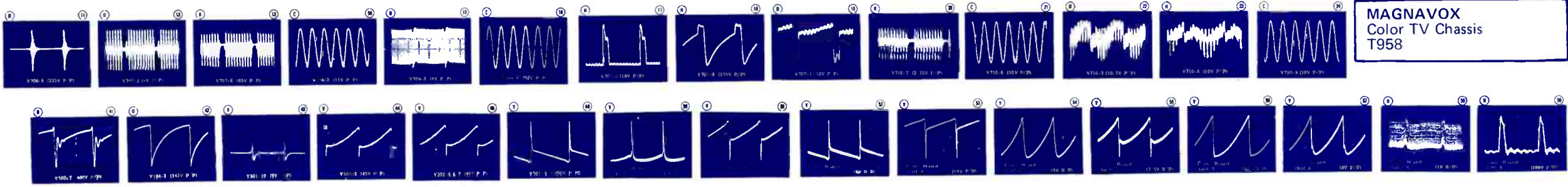
NOTES:

1. WAVEFORMS TAKEN USING 10 BAR COLOR GENERATOR WITH RECEIVER ADJUSTED TO PRODUCE A NORMAL PICTURE.
2. CONTRAST ADJUSTED TO PRODUCE 125V P/P AT V705-7.
3. ATC AND AFT SWITCHES ON.
4. P/P WAVEFORM VOLTAGES 65 THROUGH 71 ARE BASED ON ADJUSTMENT OF COLOR CONTROL TO PRODUCE 2.5V P/P AT POINT A OF ATC BOARD.
5. V=VERTICAL SWEEP RATE, H=HORIZONTAL SWEEP RATE, C=COLOR BURST SWEEP RATE.

VHF TUNER	V1	V2
340200	6H05	6H07
340199	60K5	6C08



MAGNAVOX
Color TV Chassis
T958



NO	USAGE
0	AFT
100	CHASSIS
200	IF
300	POWER SUPPLY
400	CONTROL PANEL
500	DEFLECTION
600	VIDEO
700	CHROMA
800	CONVERGENCE
A	AUTO TINT

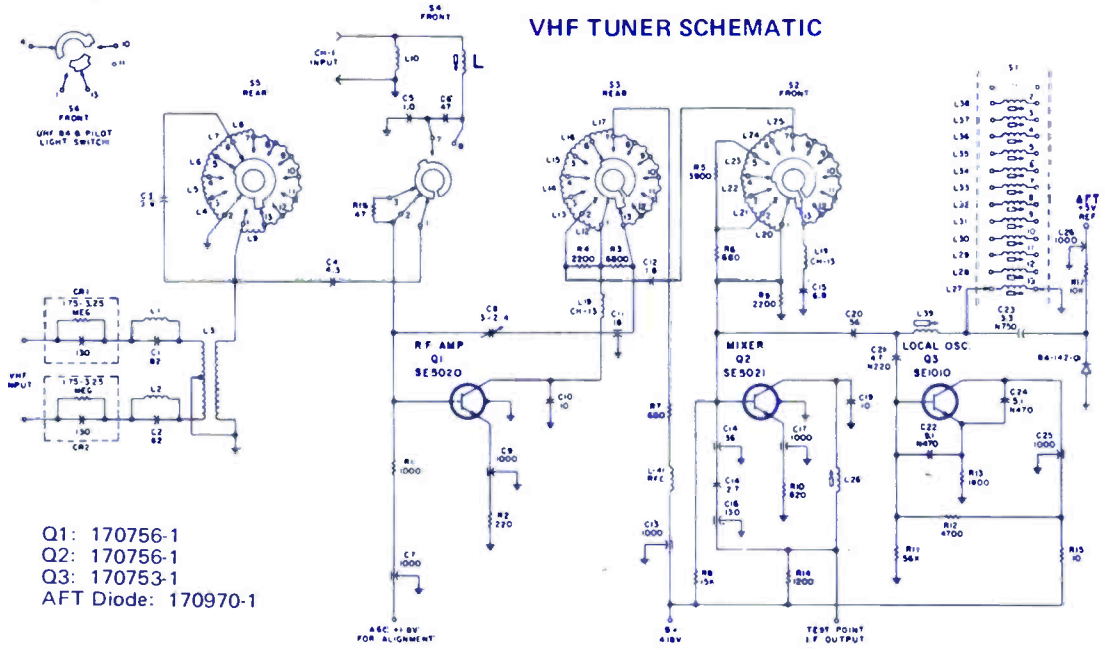
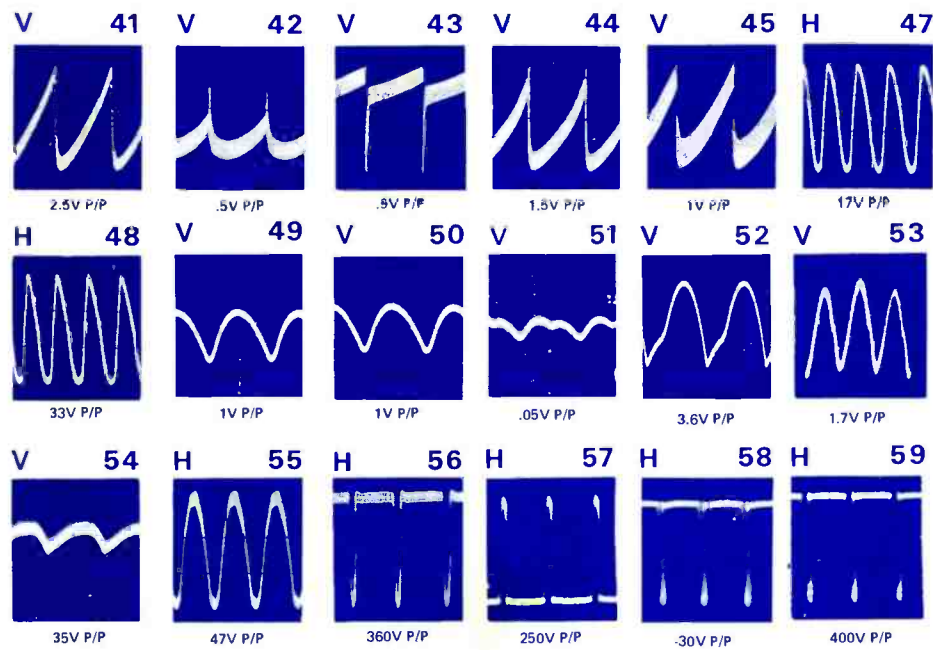


- NOTES:
- 1. L INDICATES RESISTOR PAIR MATCHED WITHIN 2%.
 - 2. CW
 - 3. MATCHED DIODE.
 - 4. UNDER SIDE OF PC BOARD/COPPER SIDE.
 - 5. CAPACITANCE VALUES GREATER THAN 1 ARE IN MICROFARADS.
 - 6. CAPACITANCE VALUES OF 1 AND LESS ARE IN PICOFARADS.
 - 7. ALL VOLTAGES MEASURED WITH NO SIGNAL EXCEPT THOSE IDENTIFIED WITH AN ASTERISK (*).
 - 8. SOURCE VOLTAGES MEASURED WITH SIGNAL.
 - 9. CONTROL UNIT GROUND ONLY.
 - 10. USED IN SOME VERSIONS.
 - 11. USED IN REMOTE ONLY.
 - 12. PART OF A SLIDE SWITCH IN SOME VERSIONS.
 - 13. MOUNTED ON CONT. UNIT IN SOME VERSIONS.
 - 14. USED IN AUTO TINT VERSIONS ONLY.

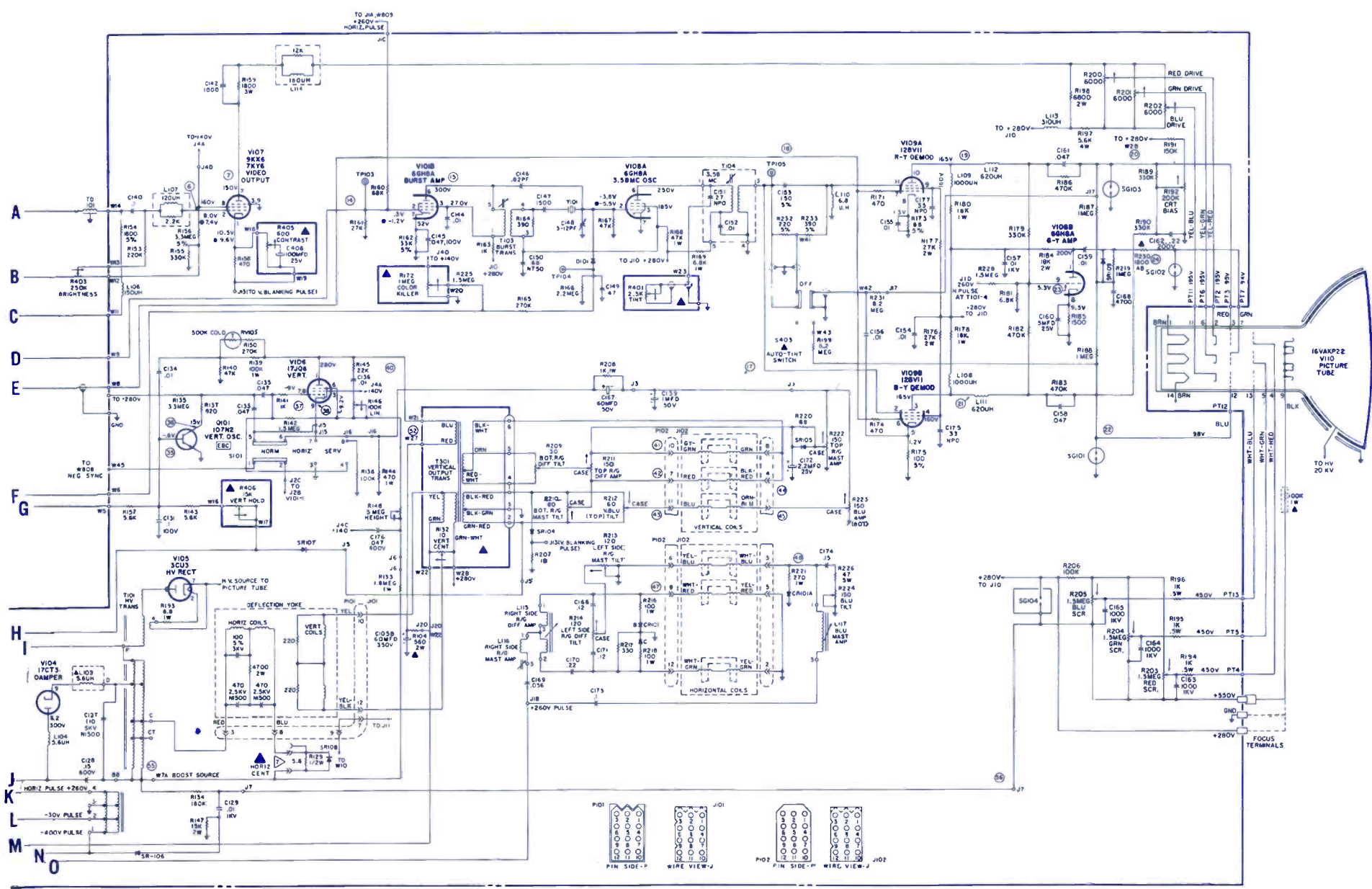
TRANSISTOR BASING DIAGRAM



ALL P, B, J NUMBERS RELATED TO REMOTE CHASSIS VERSIONS ONLY. J7 & J8 WIRE SIDE



SYMBOL	DESCRIPTION	MAGNAVOX PART NO.
L2	47.25MHz trap	.361332-1
L10	4.5MHz trap	.361298-1
L13	4.5MHz sound detect coil	.361336-2
L14	4.5MHz sound IF coil	.361331-1
L15	ratio detect xformer	.361338-1
L101	filter choke	.320355-2
L102	horiz freq coil	.361269-1
L118	line filter	.361400-1
L90T	discriminator coil	.361405-1
T1	chroma bandpass xformer	.361339-1
T2	chroma output xformer	.361343-1
T101	horiz output xformer	.361342-5
T103	burst xformer	.361296-1
T104	ECO xformer	.361198-1
T301	vert output xformer	.320377-1
	deflection yoke	.361395-3
C105	electrolytic, 160/140/160 μ f, 350v	.270099-9
C106	electrolytic, 40/30/40 μ f, 300v	.270099-11
R226	47, 10%, 5w WW	.240080-41
P2	150 n, 47.25MHz trap adjust	.220217-9
R13	250 n, 41.25MHz trap adjust	.220193-18
R42	750 n, AM reject	.220193-21
R56	50K, AGC threshold	.220220-20
R127	50K, high voltage adjust	.220220-20
R132	10 n, vert centering	.220246-1
R146	100K, vert lin	Part of R132
R148	5K, vert height	.220220-19
R172	1M, color killer	.220208-45
R922	200K, CRT bias adjust	.220220-21
RV101	thermistor (PTC) 25 cold; 5K hot	.230207-1
RV103	thermistor (NTC) 500K cold	.230130-6
TD101	delay line	.360949-6
	circuit breaker	.180723-8



- NOTES: UNLESS OTHERWISE SPECIFIED,
 1. \blacktriangle COMPONENT LOCATED OFF BOARD.
 2. CAPACITANCE VALUES OF 1 OR MORE ARE IN PICOFARADS.
 3. CAPACITANCE VALUES LESS THAN 1 ARE IN MICROFARADS.
 4. SOURCE VOLTAGES MEASURED WITH SIGNAL. ALL OTHERS MEASURED WITH NO SIGNAL EXCEPT THOSE IDENTIFIED WITH A DOT (•).
 5. CIRCLED NUMBERS REFER TO WAVEFORMS.
 6. WAVEFORMS OBTAINED USING 10 BAR COLOR GENERATOR, CONTRAST MAXIMUM CLOCKWISE AND BRIGHTNESS SET TO PRODUCE 150V AT PLATE OF V107 (PIN 7). COLOR CONTROL SET TO PRODUCE 4V P/P AT BASE OF Q14 AND TINT CONTROL ADJUSTED TO PRODUCE A NORMAL COLOR BAR DISPLAY (4T BAR MAGENTA).
 7. PARTS MAY BE CONNECTED IN EITHER DIRECTION OR SHORTED AS REQUIRED FOR HORIZ CENTERING.
 9. \blacktriangle UNDERSIDE OF P.C. BOARD (COPPER SIDE).
 \triangle T957-01.
 \triangle 1957-02.

MAGNAVOX

Color-TV
Chassis T974

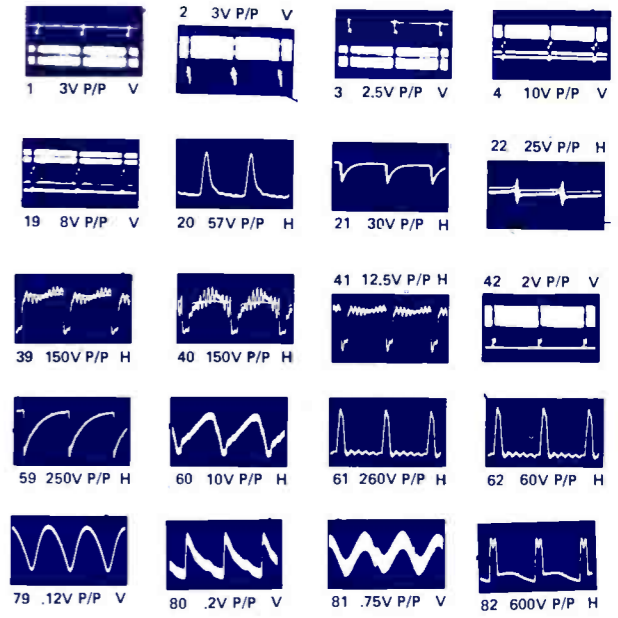
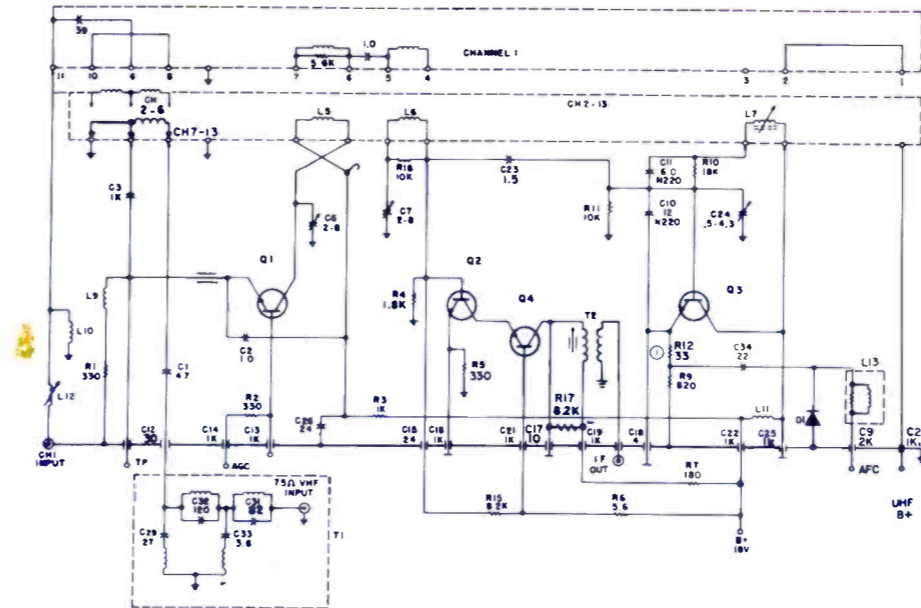
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL DESCRIPTION MAGNAVOX PART NO.

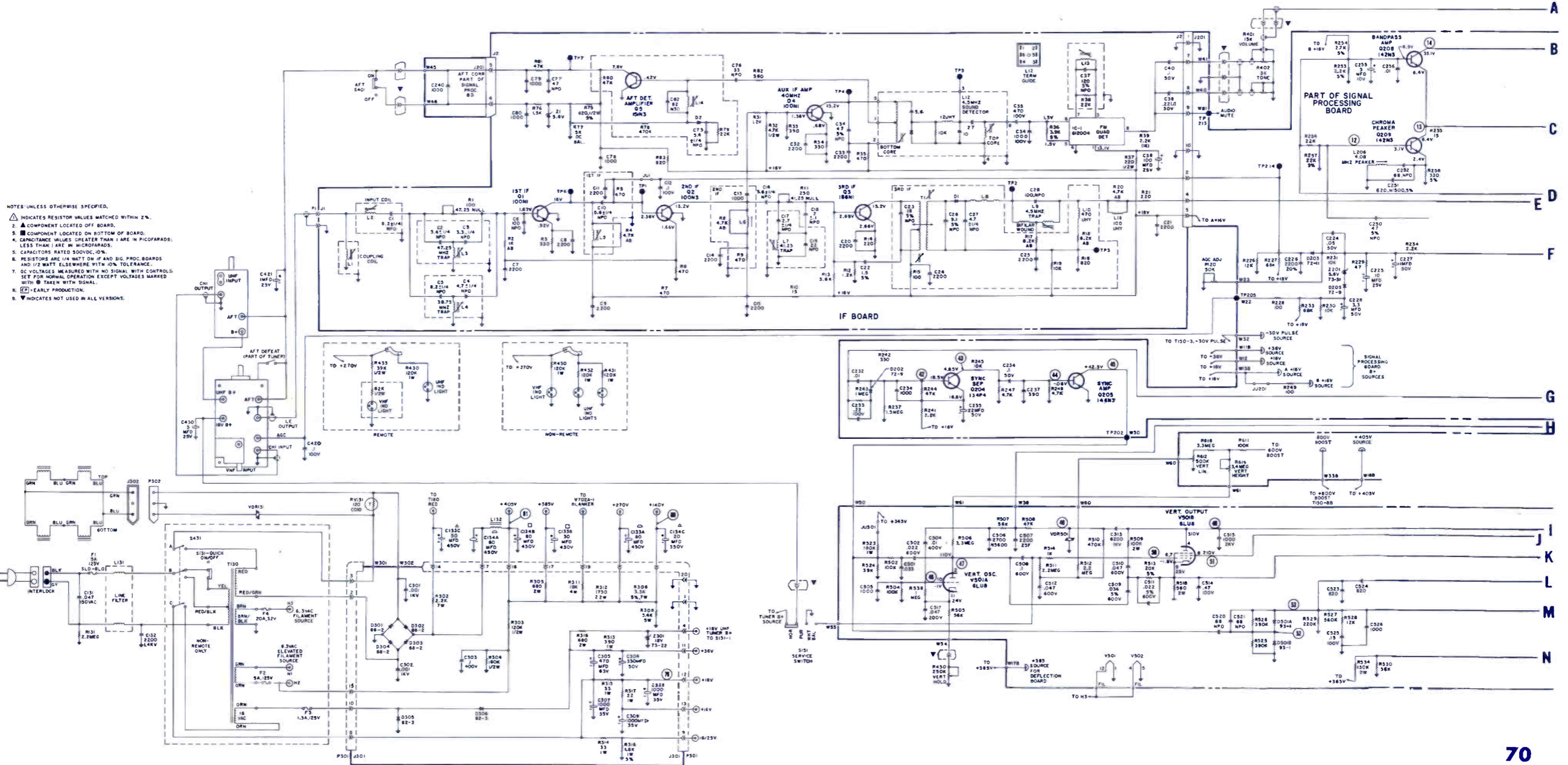
L12—sound detector coil assy. 4.5 MHz	361422-3
L13—quad coil, 4.5MHz	361389-2
L152—horiz efficiency coil	361022-5
L205—chroma xformer, ACC	360959-8
L501A,B—horiz frequency & sine wave	360960-3
L702—reactance coil	360963-3
T130—power xformer	300294-3
T150—high voltage xformer	361411-2
T151—focus coil	361306-1
T180—vert output xformer	320376-2
T201—chroma bandpass xformer	361339-1
T202—chroma output xformer	361343-1
T701—3.58MHz osc xformer	361198-2
T702—burst xformer	361094-2
deflection yoke	361380-5
C133A,B,C—electrolytic 80, 30, 50µf, 450v	270071-21
C134A,B,C—electrolytic 80-80µf, 450v, 20, 350v	270071-24
R154—metal oxide, 15K, 10%, 7W	230197-1539
R156—metal oxide, 1K, 5%, 5W	230196-1095
R157—carbon 66K, 20%, 6KV	230161-3
R306—wire wound 3300Ω, 5%, 7W	240081-165
R308—metal oxide 5600Ω, 10%, 5W	230195-5629
R1—47.25 null control, 100Ω	220193-23

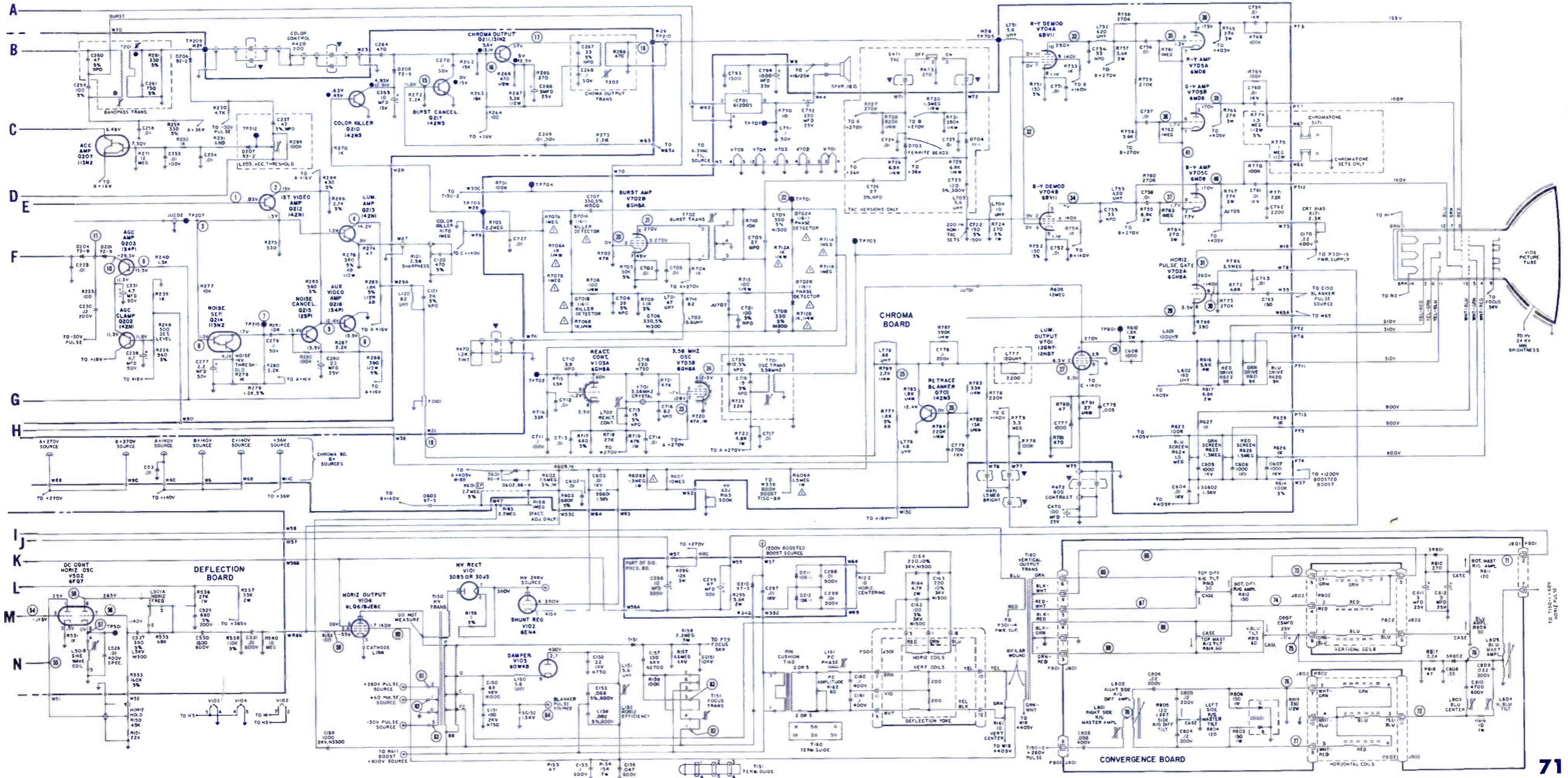
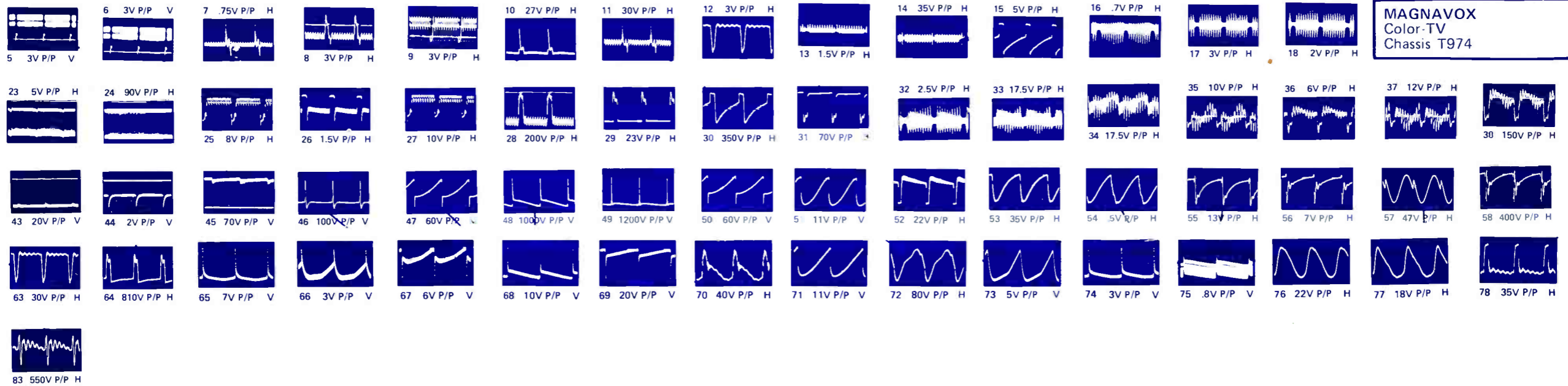
R11—41.25 null control, 250Ω	220193-18
R77—AFT DC balance control, 5K	220193-22
R120—AGC control, 50K	220208-33
R121—sharpness control, 2.5K	220146-84
R122—horiz centering control, 10Ω	220181-12
R161—vert centering control, 10Ω	220181-1
R163—high voltage adjust, 500K	220208-65
R166—hold down adjust, 1M	220208-34
R170—color killer control, 1M	220208-34
R171—CRT bias control, 2500Ω	220181-11
R150—horiz hold, 45K	220146-79
R246—detector level adjust, 500Ω	220193-11
R278—noise inverter threshold adjust, 1K	220193-13
R612—vert linearity, 500K	220220-31
R619—vert height, 3.4M	220220-33
RV131—thermistor	230170-5
VDR131—varistor	230175-1
VDR501—varistor	230167-7
F1—fuse, 5a, 125v, slo-blo	181021-5500
F2—fuse, 5a, 125v, slo-blo	181021-5500
F3—fuse, 1.5a, 125v, slo-blo	181021-5150
F4—fuse, 20a, 32v, slo-blo	181021-6020
F1 fuse holder	180997-1
F2 fuse holder	180947-2

VHF TUNER SCHEMATIC DIAGRAM



- NOTES UNLESS OTHERWISE SPECIFIED:
- INDICATES RESISTOR VALUES MATCHED WITHIN 2%.
 - COMPONENT LOCATED OFF BOARD.
 - COMPONENT LOCATED ON BOTTOM OF BOARD.
 - CAPACITANCE VALUES GREATER THAN 1 ARE IN PICOFARADS; LESS THAN 1 ARE IN MICROFARADS.
 - CAPACITORS RATED 500VDC, 50%.
 - RESISTORS ARE 1/4 WATT ON IF AND SIG. PROC. BOARDS AND 1/2 WATT ELSEWHERE WITH 10% TOLERANCE.
 - DC VOLTAGES MEASURED WITH NO SIGNAL; WITH CONTROLS SET FOR NORMAL OPERATION EXCEPT VOLTAGES MARKED WITH Ⓢ TAKEN WITH SIGNAL.
 - EARLY PRODUCTION.
 - ▽ INDICATES NOT USED IN ALL VERSIONS.

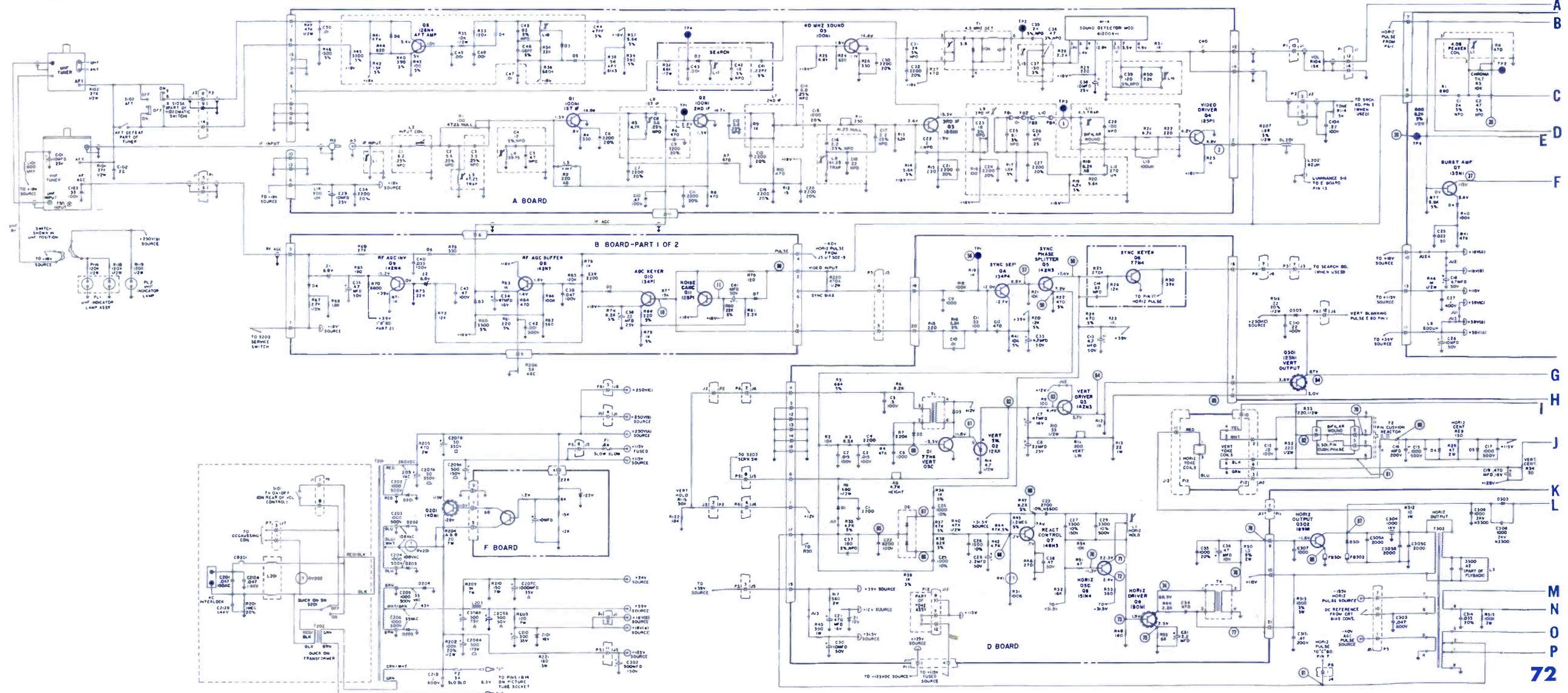
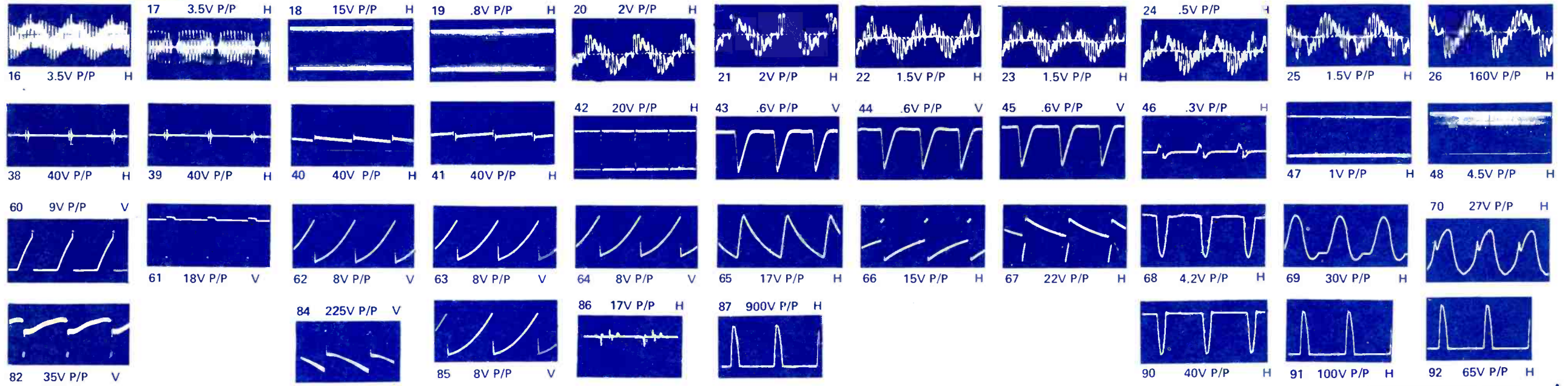


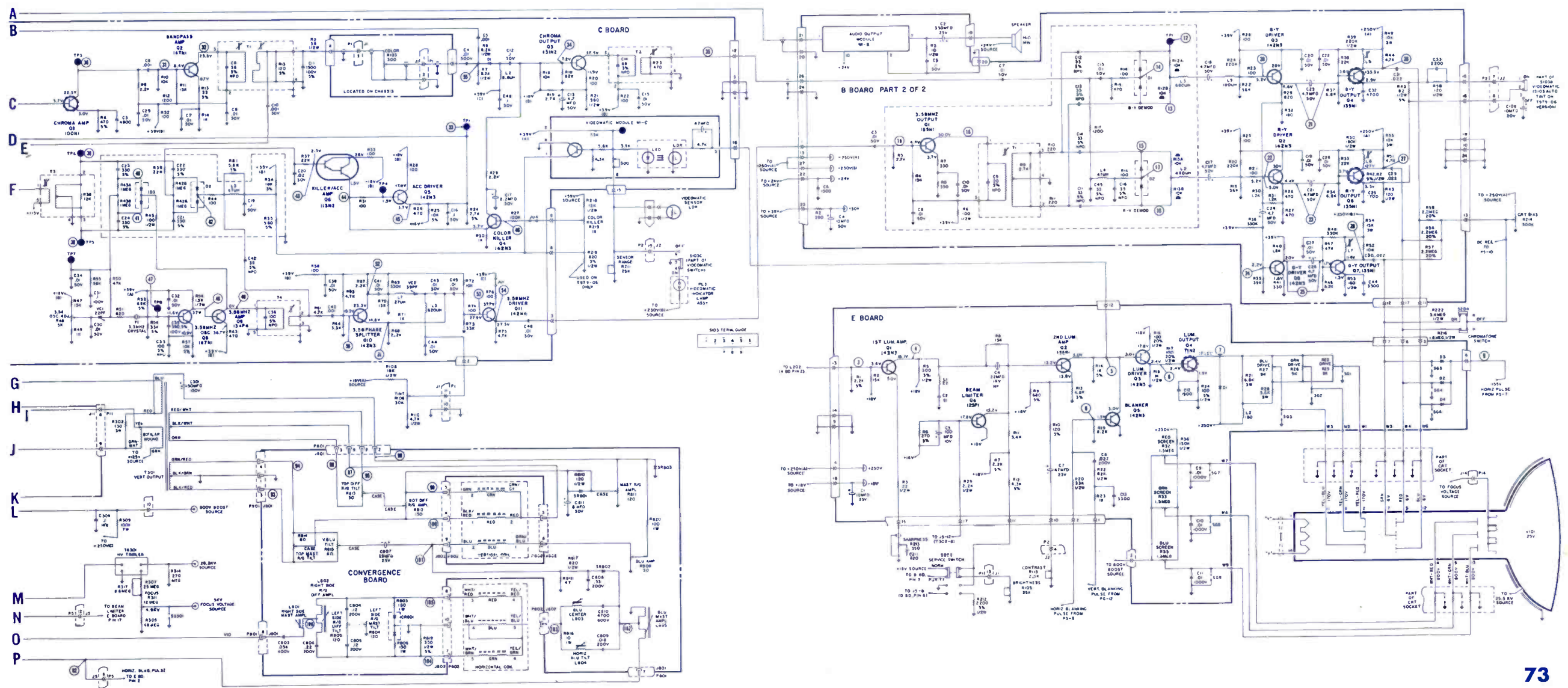
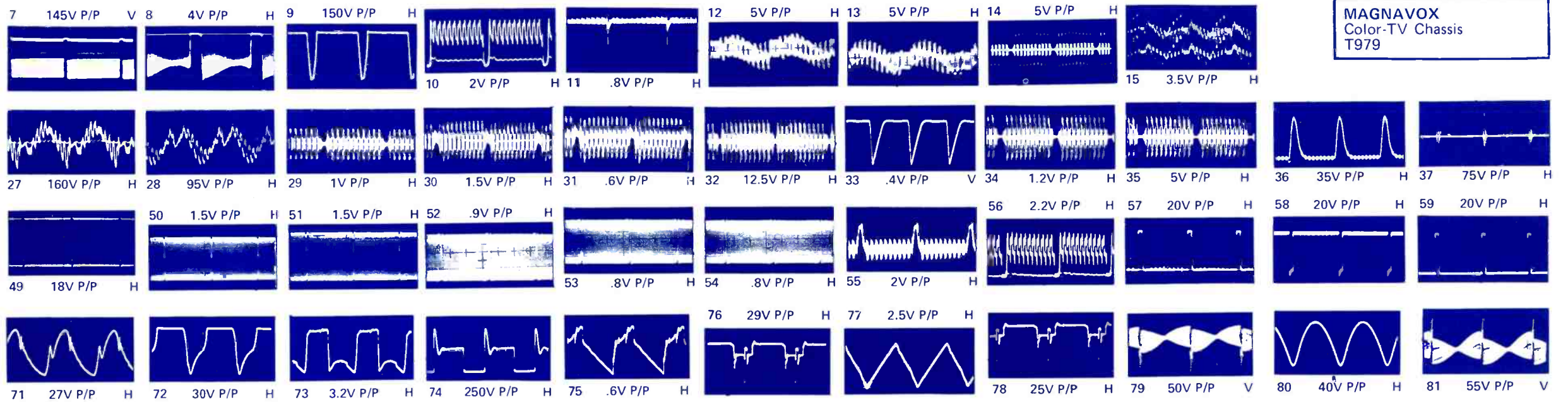


MAGNAVOX

Color-TV Chassis
T979

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

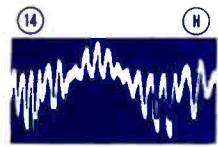




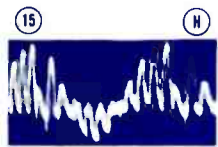
MAGNAVOX

Color-TV Chassis
T947

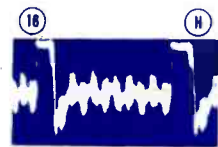
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**



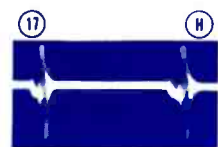
V702-9 (11V P/P)



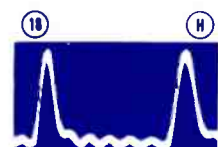
V702-1 (25V P/P)



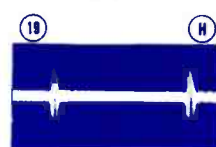
TR703-B (8V P/P)



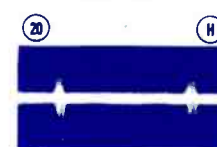
TR703-C (35V P/P)



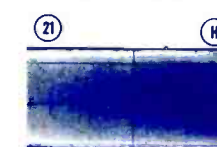
TP704 (56V P/P)



V701-6 (240V P/P)



PWC-139-G1 (70V P/P)



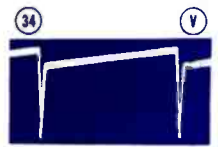
V702-6 (80V P/P)



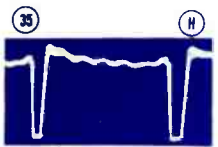
TP705 (18V P/P)



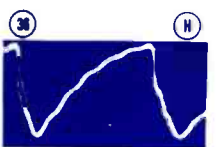
V704-7 (21V P/P)



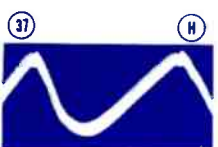
PWC-142-G (14V P/P)



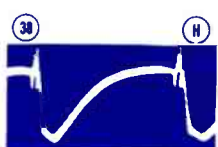
D501 Cathode (111V P/P)



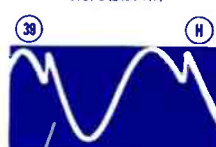
D501 Anode (20V P/P)



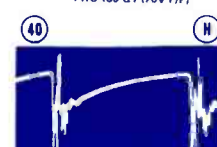
V501-7 (0.2V P/P)



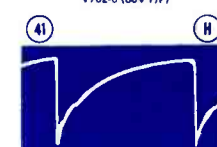
V501-6 (6V P/P)



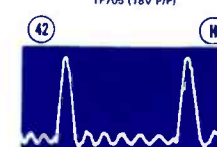
TP501 (30V P/P)



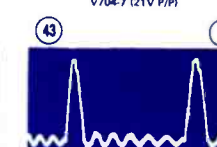
V501-1 (240V P/P)



V502-5 (150V P/P)



T501-2 (20V P/P)



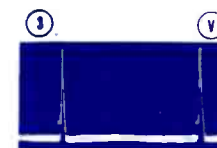
T501-9 (50V P/P)



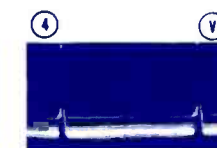
TP204 (1.5V P/P)



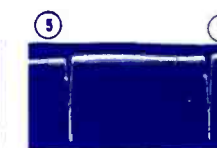
V201-9 (60V P/P)



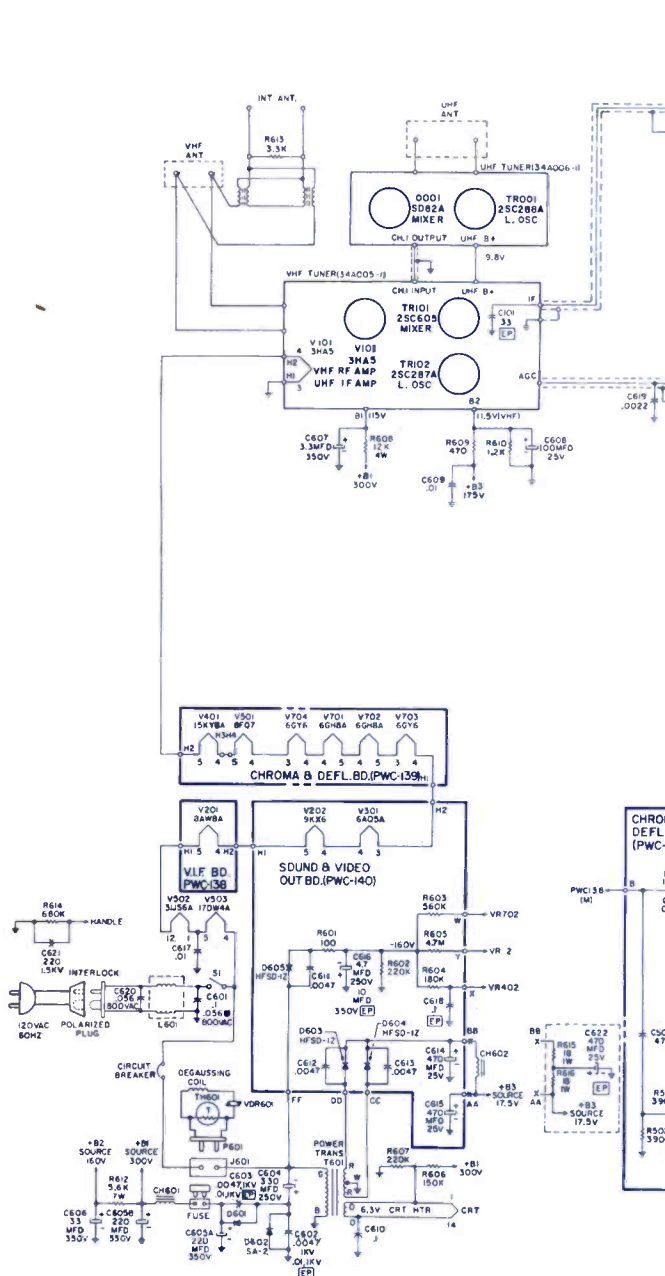
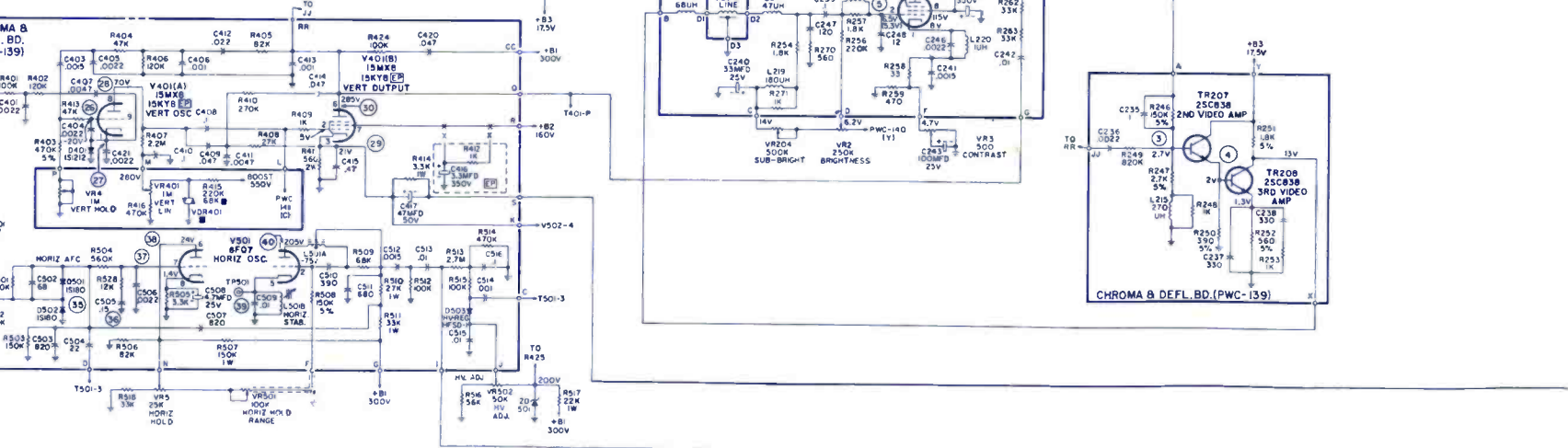
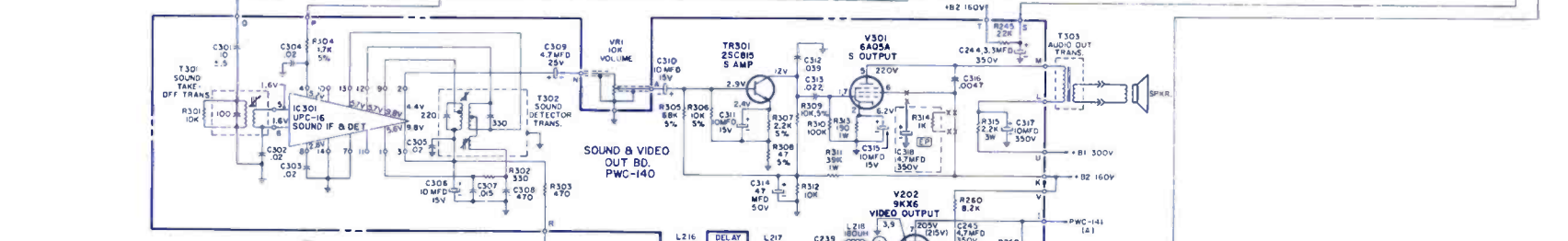
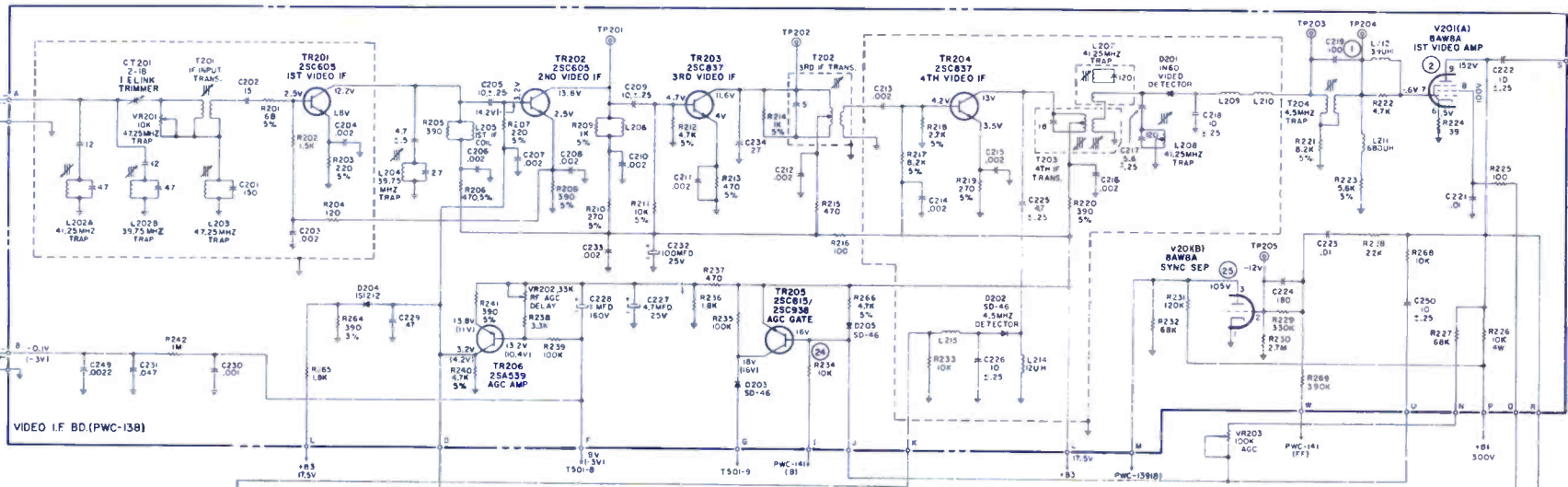
TR207-B (4.5V P/P)

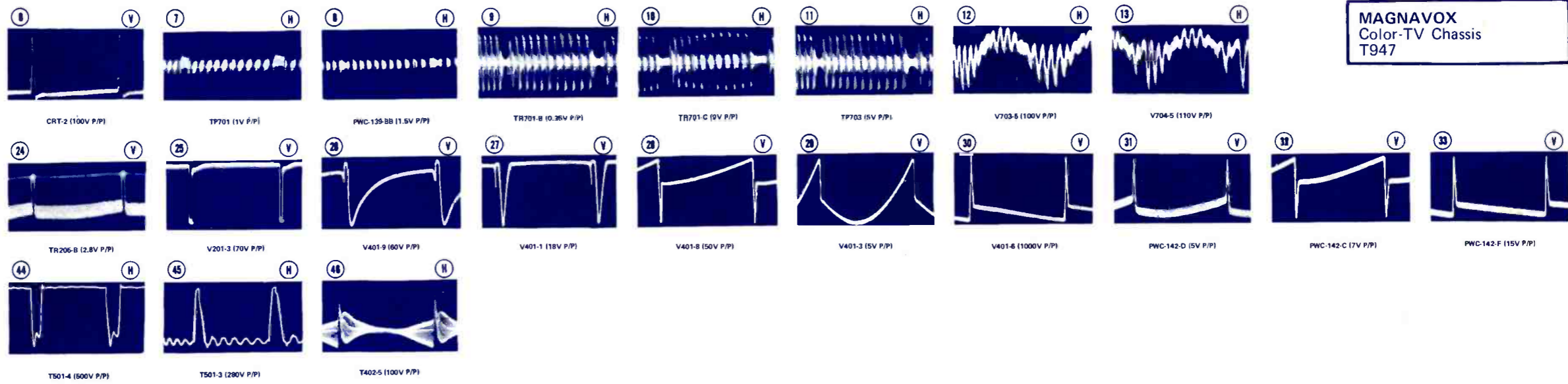


TR208-B (4.5V P/P)

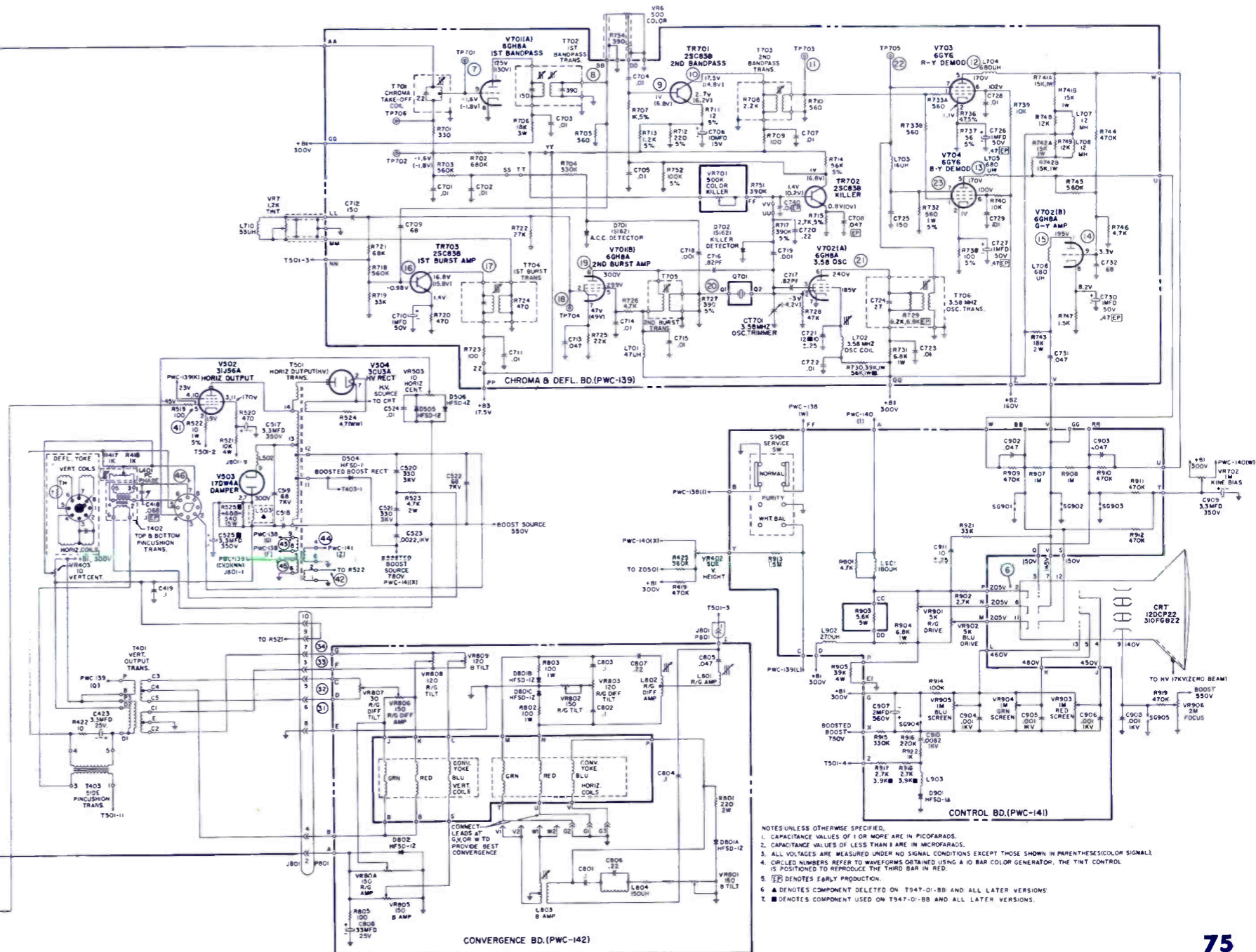


V202-2 (6V P/P)





A



B

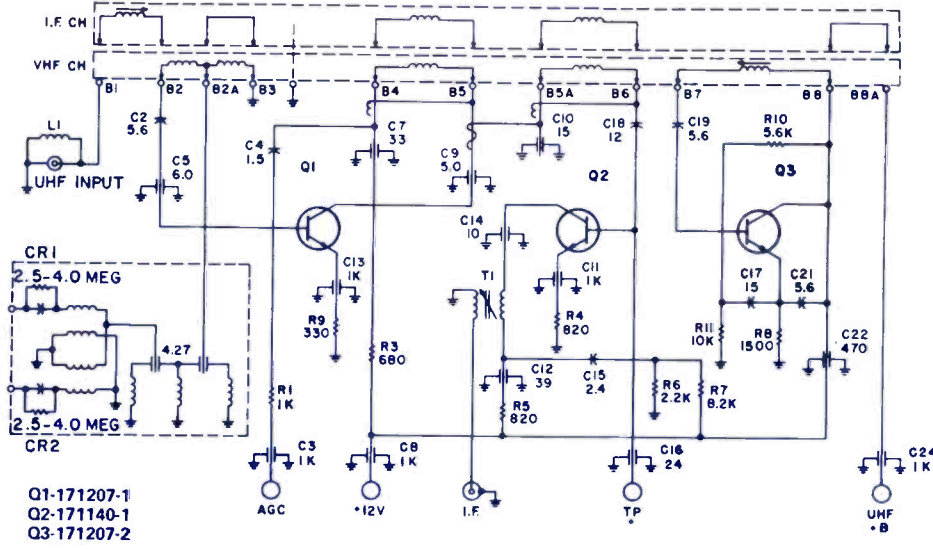
C

- NOTES UNLESS OTHERWISE SPECIFIED:
 1. CAPACITANCE VALUES OF 1 OR MORE ARE IN PICOFARADS.
 2. CAPACITANCE VALUES OF LESS THAN 8 ARE IN MICROFARADS.
 3. ALL VOLTAGES ARE MEASURED UNDER NO SIGNAL CONDITIONS EXCEPT THOSE SHOWN IN PARENTHESES/COLOR SIGNALS.
 4. CIRCLED NUMBERS REFER TO WAVEFORMS OBTAINED USING A 10 BAR COLOR GENERATOR. THE TINT CONTROL IS POSITIONED TO REPRODUCE THE THIRD BAR IN RED.
 5. \square DENOTES EARLY PRODUCTION.
 6. \blacktriangle DENOTES COMPONENT DELETED ON T947-01-BB AND ALL LATER VERSIONS.
 7. \blacksquare DENOTES COMPONENT USED ON T947-01-BB AND ALL LATER VERSIONS.

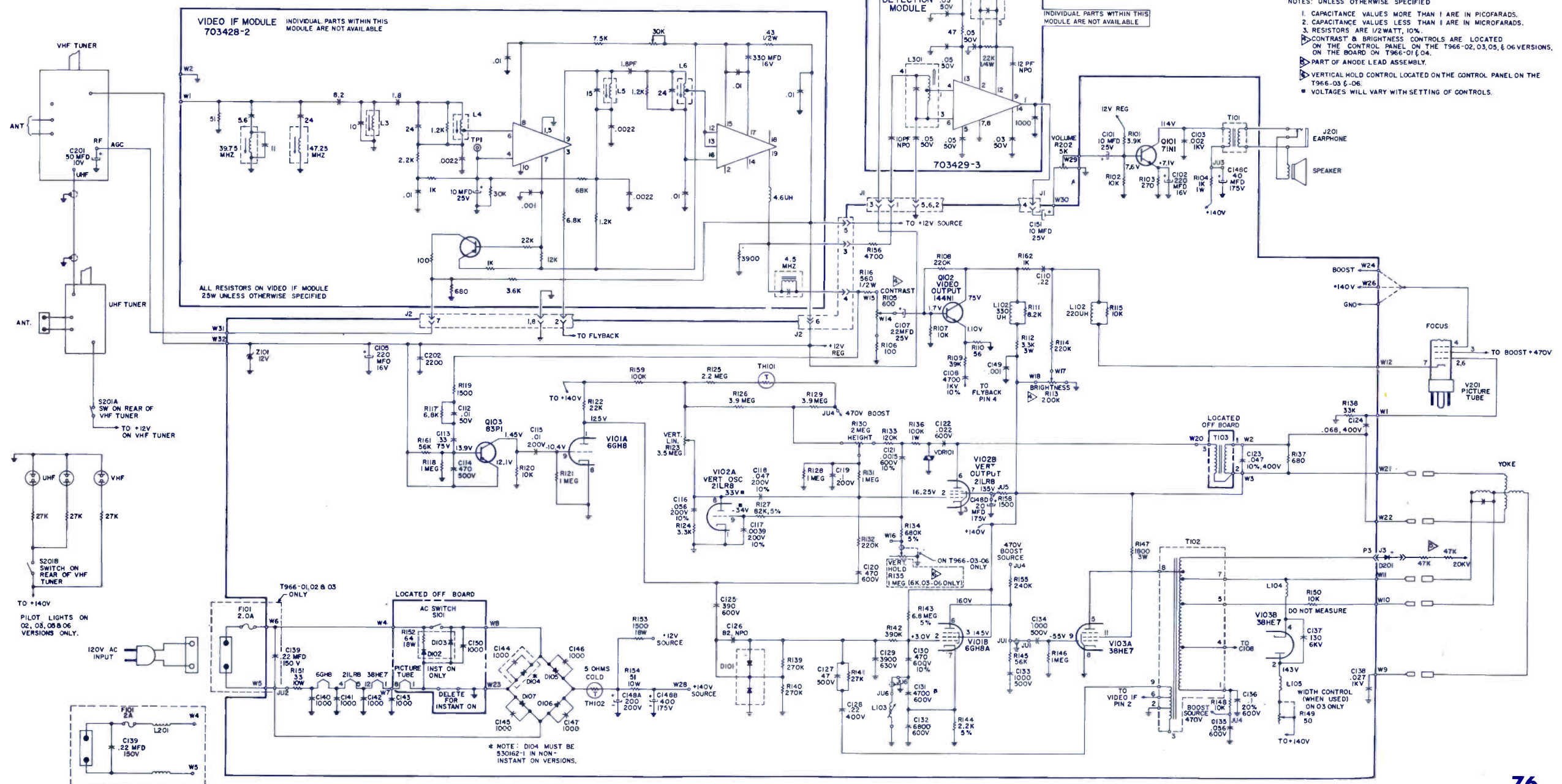
MAGNAVOX

TV Chassis
T966 Series

VHF TUNER SCHEMATIC



Q1-171207-1
Q2-171140-1
Q3-171207-2



NOTES: UNLESS OTHERWISE SPECIFIED
 1. CAPACITANCE VALUES MORE THAN 1 ARE IN PICOFARADS.
 2. CAPACITANCE VALUES LESS THAN 1 ARE IN MICROFARADS.
 3. RESISTORS ARE 1/2WATT, 10%.
 CONTRAST & BRIGHTNESS CONTROLS ARE LOCATED ON THE CONTROL PANEL ON THE T966-02, 03, 05, & 06 VERSIONS, ON THE BOARD ON T966-01 & 04.
 PART OF ANODE LEAD ASSEMBLY.
 VERTICAL HOLD CONTROL LOCATED ON THE CONTROL PANEL ON THE T966-03 & 06.
 VOLTAGES WILL VARY WITH SETTING OF CONTROLS.

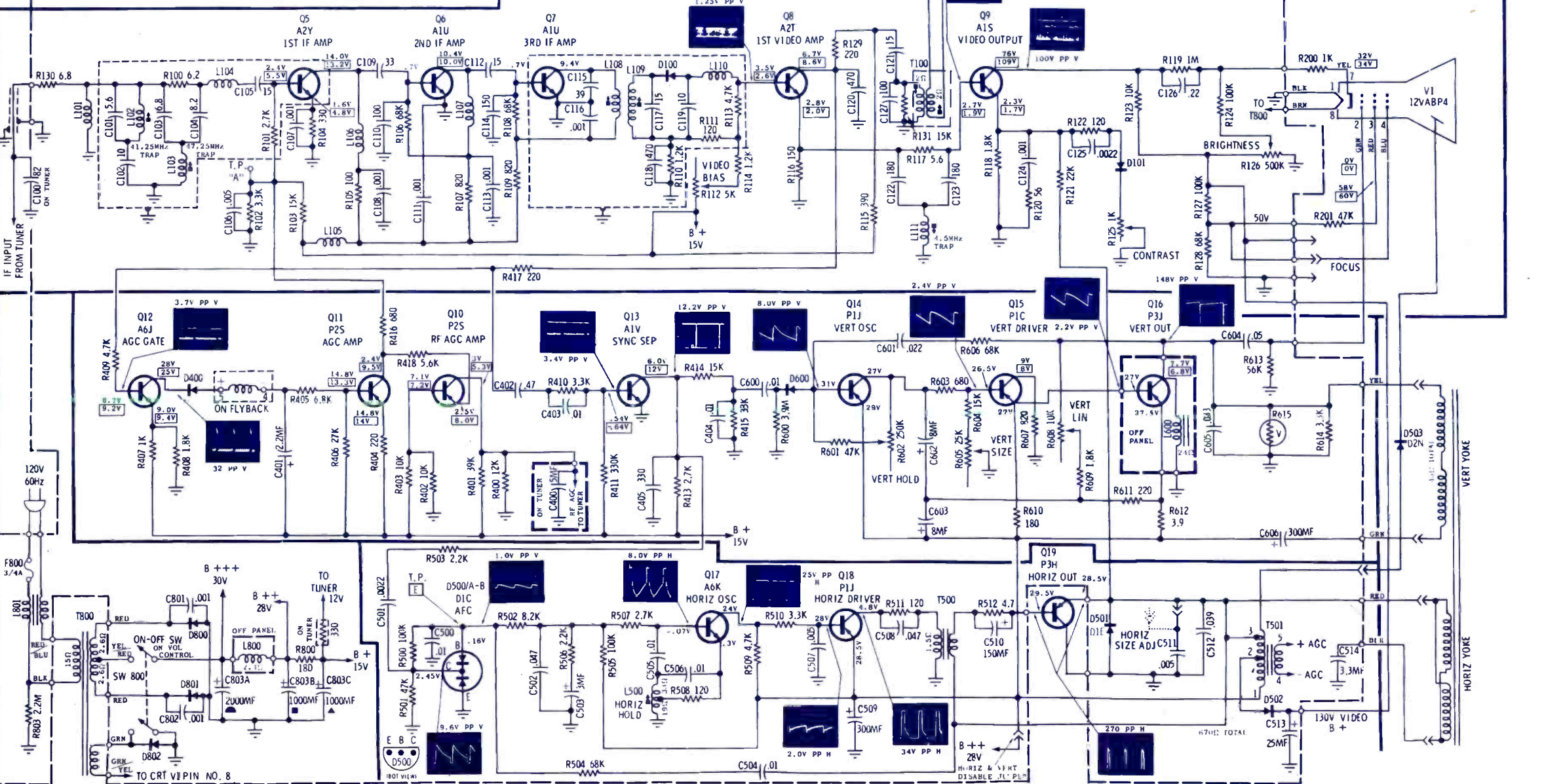
SYMBOL	DESCRIPTION	MOTOROLA PART NO.
C	803-2000 μ F/40v, 1000 μ F/35v	
F	800-fuse, 3/4a - 125v	23C69772A04
L	111-4.5MHz trap, incl core	65S136038
L	500-horiz osc, incl core	24D70374A01
L	700-yoke, deflect 114° (C12TS-467)	24D68822A09
L	801-choke, line	24D69978A04
R	112-video bias, 50K	18D66401A43
R	126-contrast, 1K	18D69773A02
R	126-brightness, 500K	18D69773A02

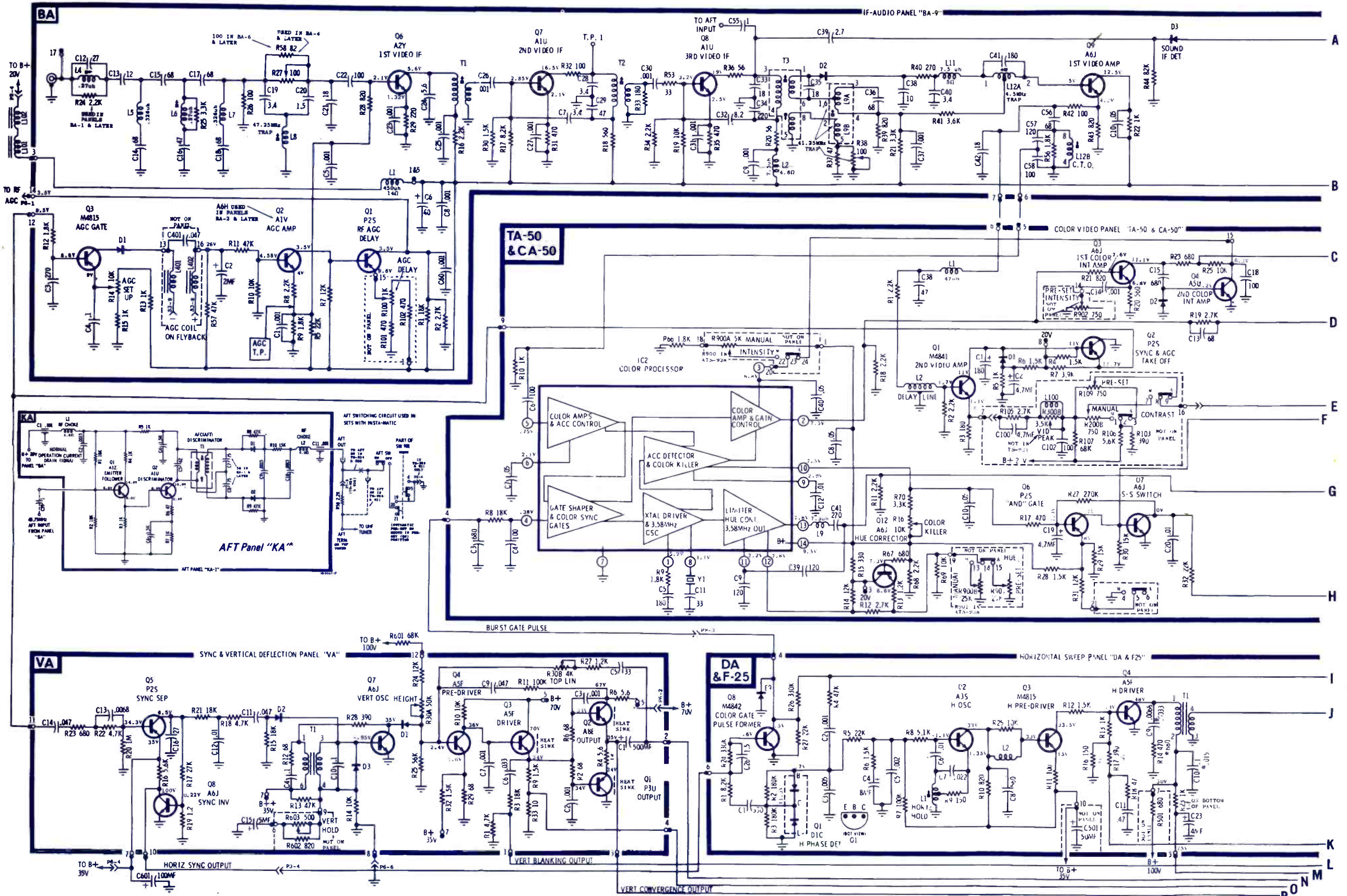
R	306-volume, 50K	18D69773A02
R	602-vert hold, 250K	18D67678B12
R	605-vert size, 25K	18D67678B12
R	608-vert lin, 10K	18D67678B12
R	615-varistor	6C66263A21
T	100-audio takeoff, incl cores	24D68822A09
T	300-4.5MHz ratio detector	24D68822A10
T	301-audio output	25D67552A26
T	500-horiz driver	25D67440A10
T	501-H.V. xformer, complete	24D69828A04
T	800-power (C12TS-467)	26D69498A06

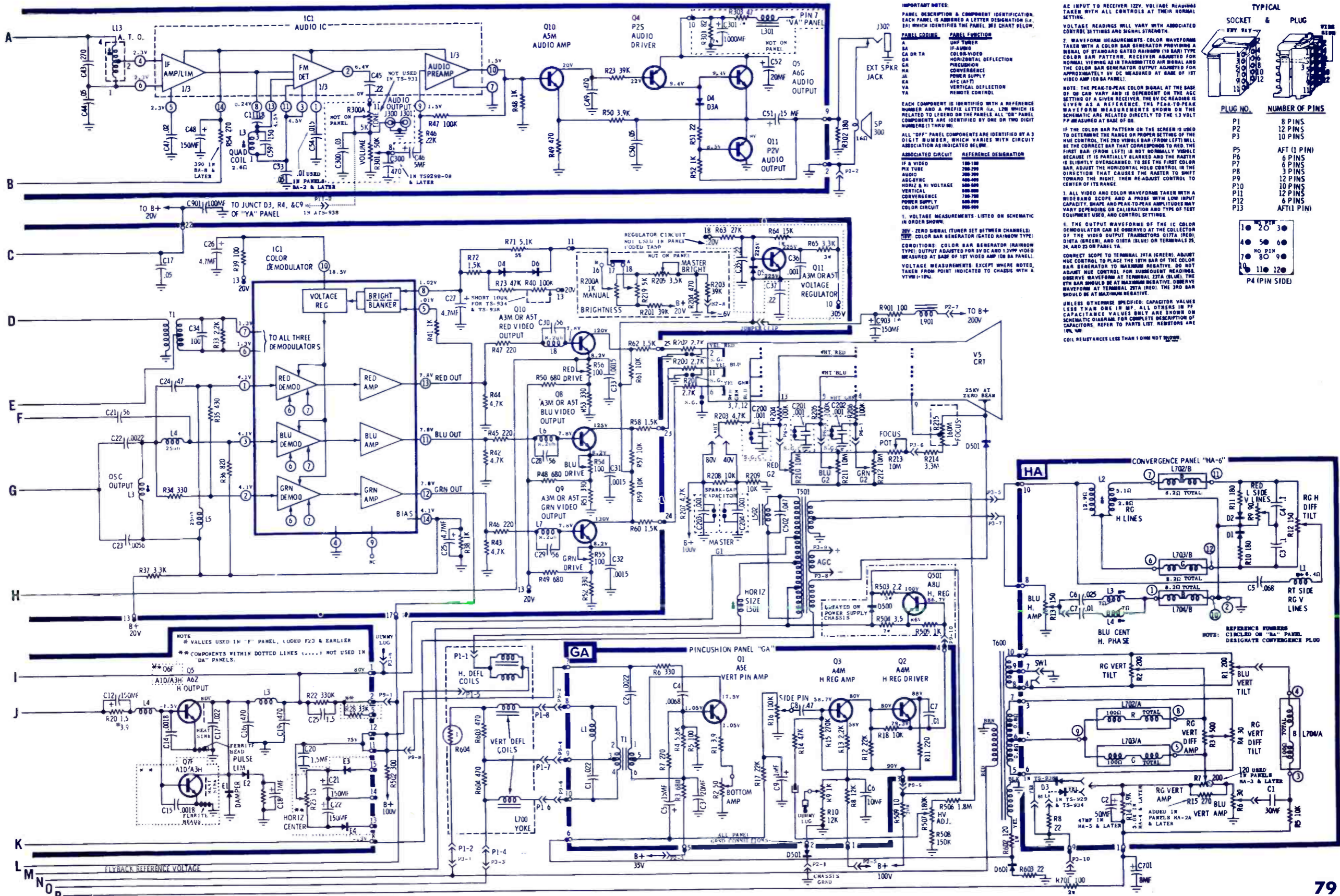
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

MOTOROLA
TV Chassis
TS-467

- NOTES:**
- VOLTAGE MEASUREMENTS**
- TAKEN FROM POINT INDICATED TO CHASSIS WITH A VTVM - $\pm 20\%$
 - LINE VOLTAGE MAINTAINED AT 120V AC.
 - TAKEN WITH CONTROLS IN NORMAL OPERATING POSITION.
 - WHERE TWO VOLTAGES ARE SHOWN, VOLTAGE ABOVE BOX - WITH NO SIGNAL INPUT, TUNER ON CHANNEL WITH LEAST NOISE AND ANTENNA TERMINALS SHORTED. VOLTAGE IN BOX - WITH TUNER ON STRONG STATION AND OUTSIDE ANTENNA.
- WAVEFORM MEASUREMENTS**
- TAKEN FROM POINT INDICATED TO CHASSIS WITH A WIDE-BAND OSCILLOSCOPE.
 - OSCILLOSCOPE SYNCED NEAR 1/2 SWEEP RATE INDICATED.
 - TAKEN WITH STRONG SIGNAL, CONTRAST CONTROL AT MAXIMUM. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION.
- *INDICATES VOLTAGE VARIES WITH CONTROL SETTINGS. UNLESS OTHERWISE SPECIFIED, CAPACITOR VALUES LESS THAN ONE IN MF, ALL OTHERS IN PF. CAPACITANCE VALUES ONLY ARE SHOWN ON SCHEMATIC DIAGRAM. REFER TO PARTS LIST.
- RESISTORS ARE 10% 1/2W. COIL RESISTANCES LESS THAN ONE OHM NOT SHOWN.
- INDICATES PRINTED CIRCUIT BOARD.







IMPORTANT NOTES:
PANEL DESCRIPTION & COMPONENT IDENTIFICATION. EACH PANEL IS IDENTIFIED BY A LETTER DESIGNATION (i.e., HA) WHICH IDENTIFIES THE PANEL SEE CHART BELOW.

PANEL CODES	PANEL FUNCTION
A	IF-LIM
BA	CONVERGENCE
CA	HORIZONTAL DEFLECTION
DA	VIDEO
EA	CONVERGENCE
FA	POWER SUPPLY
GA	PINCUSHION
HA	CONVERGENCE
IA	VERTICAL DEFLECTION
JA	REMOTE CONTROL

EACH COMPONENT IS IDENTIFIED WITH A REFERENCE NUMBER AND A PREFIX LETTER (i.e., L70) WHICH IS RELATED TO LEGEND ON PANELS. ALL "ON" PANEL COMPONENTS ARE IDENTIFIED BY ONE OR TWO DIGIT NUMBERS (1 THRU 9).

ALL "OFF" PANEL COMPONENTS ARE IDENTIFIED BY A 3 DIGIT NUMBER, WHICH VARIES WITH CIRCUIT IDENTIFICATION AS INDICATED BELOW.

ASSOCIATED CIRCUIT	REFERENCE DESIGNATION
IF & VIDEO	100-199
MIX TUBE	200-299
AUDIO	300-399
ASCATIC	400-499
HORIZ & HI VOLTAGE	500-599
VERTICAL	600-699
CONVERGENCE	700-799
POWER SUPPLY	800-899
COLOR CIRCUIT	900-999

1. VOLTAGE MEASUREMENTS LISTED ON SCHEMATIC IN ORDER SHOWN.

2. ZERO SIGNAL (TUNER SET BETWEEN CHANNELS); NO. 155 IN PANEL.

3. COLOR BAR GENERATOR (GATED RAINBOW TYPE); MASTER BRIGHTNESS CONTROL.

4. CONDITIONS: COLOR BAR GENERATOR (RAINBOW TYPE); OUTPUT ADJUSTED FOR 5V DC AND 1.3VPP VIDEO MEASURED AT BASE OF 1ST VIDEO AMP (ON HA PANEL).

5. VOLTAGE MEASUREMENTS EXCEPT WHERE NOTED, TAKEN FROM POINT INDICATED ON CHASSIS WITH A VTVM(1-10%).

6. THE OUTPUT WAVEFORMS OF THE IC COLOR DEMODULATOR CAN BE OBSERVED AT THE COLLECTOR OF THE VIDEO OUTPUT TRANSISTORS (Q17A (RED), Q17B (GREEN), AND Q17C (BLUE)) ON TERMINALS 21, 22, AND 23 ON PANEL TA.

7. CONNECT SCOPE TO TERMINAL 21A (GREEN), ADJUST HUE CONTROL TO MAXIMUM NEGATIVE. DO NOT ADJUST HUE CONTROL FOR SUBSEQUENT READINGS. OBSERVE WAVEFORM AT TERMINAL 21A (BLUE). THE 8TH BAR SHOULD BE AT MAXIMUM NEGATIVE. OBSERVE WAVEFORM AT TERMINAL 21A (RED). THE 3RD BAR SHOULD BE AT MAXIMUM NEGATIVE.

UNLESS OTHERWISE SPECIFIED: CAPACITOR VALUES LESS THAN ONE IN MF. ALL OTHERS IN PF. CAPACITANCE VALUES BUT ARE SHOWN ON SCHEMATIC DIAGRAM FOR COMPLETE DESCRIPTION OF CAPACITORS. REFER TO PARTS LIST. RESISTORS ARE 10% UNLESS OTHERWISE SPECIFIED.

COIL RESISTANCES LESS THAN 1 OHM NOT SHOWN.

AC INPUT TO RECEIVER 120V. VOLTAGE READINGS TAKEN WITH ALL CONTROLS AT THEIR NORMAL SETTING.

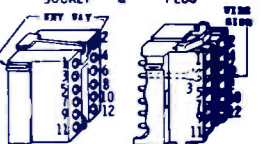
7. WAVEFORM MEASUREMENTS: COLOR WAVEFORMS TAKEN WITH A COLOR BAR GENERATOR PROVIDING A NORMAL STANDARD GATED RAINBOW (18 BAR) TYPE COLOR BAR PATTERN. RECEIVER ADJUSTED FOR NORMAL VIEWING AND TRANSMITTED AIR SIGNAL AND THE COLOR BAR GENERATOR OUTPUT ADJUSTED FOR APPROXIMATELY 5V DC MEASURED AT BASE OF 1ST VIDEO AMP (ON HA PANEL).

NOTE: THE PEAK-TO-PEAK COLOR SIGNAL AT THE BASE OF 80 CAN VARY AND IS DEPENDENT ON THE AGC SETTING OF A GIVEN RECEIVER. THE VOLTAGE READINGS GIVEN AS A REFERENCE. THE PEAK-TO-PEAK WAVEFORM MEASUREMENTS SHOWN ON THE SCHEMATIC ARE RELATED DIRECTLY TO THE 1.3 VOLT P-P MEASURED AT BASE OF 80.

IF THE COLOR BAR PATTERN ON THE SCREEN IS USED TO DETERMINE THE RANGE OR PROPER SETTING OF THE HUE CONTROL, THE 2ND VISIBLE BAR (FROM LEFT) WILL BE THE CORRECT BAR THAT CORRESPONDS TO RED. THE FIRST BAR (FROM LEFT) IS NOT NORMALLY VISIBLE BECAUSE IT IS PARTIALLY BLANDED AND THE PATTERN IS SLIGHTLY OVERCARRIED. TO SEE THE FIRST COLOR BAR, ADJUST THE HORIZONTAL HOLD CONTROL IN THE DIRECTION THAT CAUSES THE MASTER TO SHIFT TOWARD THE RIGHT. THEN RE-ADJUST CONTROL TO CENTER OF ITS RANGE.

1. ALL VIDEO AND COLOR WAVEFORMS TAKEN WITH A WIDE-BAND SCOPE AND A PROBE WITH LOW INPUT CAPACITY. SHAPE AND PEAK-TO-PEAK AMPLITUDES MAY VARY DEPENDING ON CALIBRATION AND TYPE OF TEST EQUIPMENT USED, AND CONTROL SETTINGS.

TYPICAL

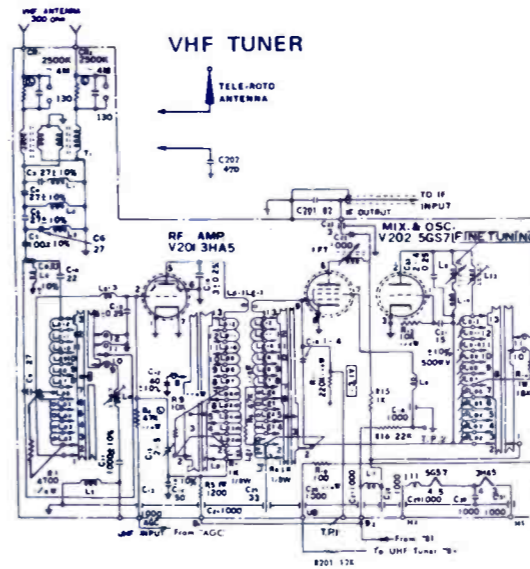


PLUG NO.	NUMBER OF PINS
P1	8 PINS
P2	12 PINS
P3	10 PINS
P5	AFT (1 PIN)
P6	6 PINS
P7	6 PINS
P8	3 PINS
P9	12 PINS
P10	10 PINS
P11	12 PINS
P12	6 PINS
P13	AFT(1 PIN)

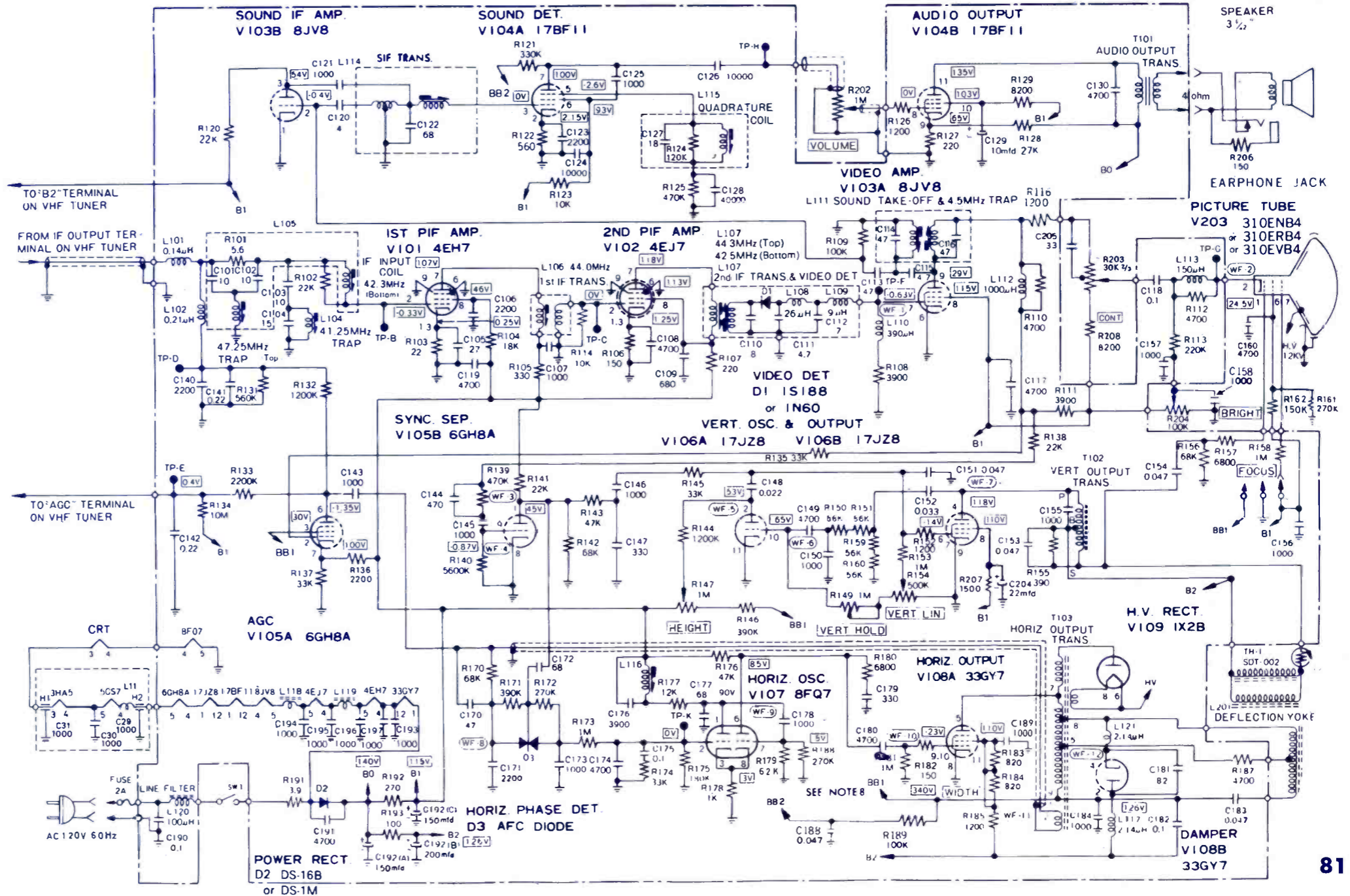
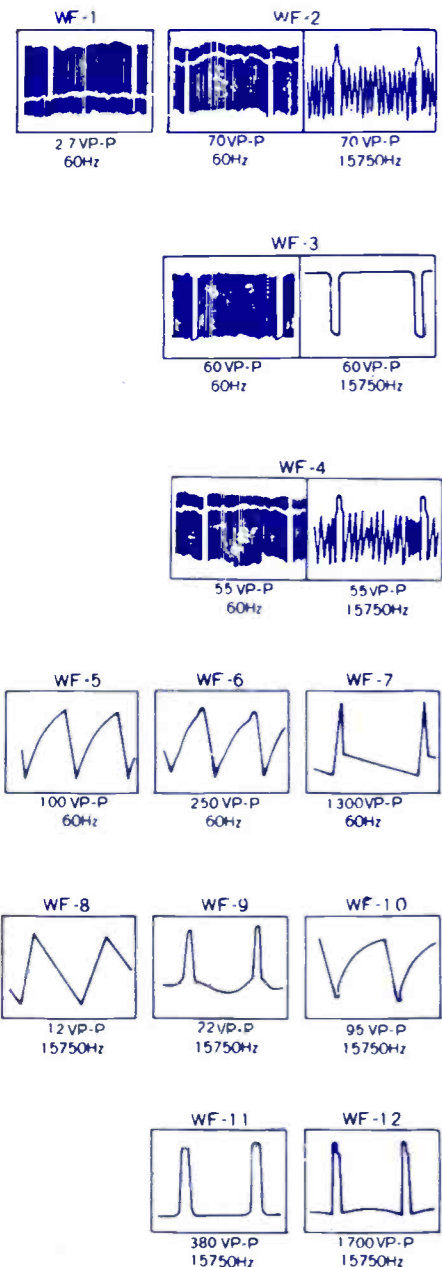


OLYMPIC

TV Chassis
3P70

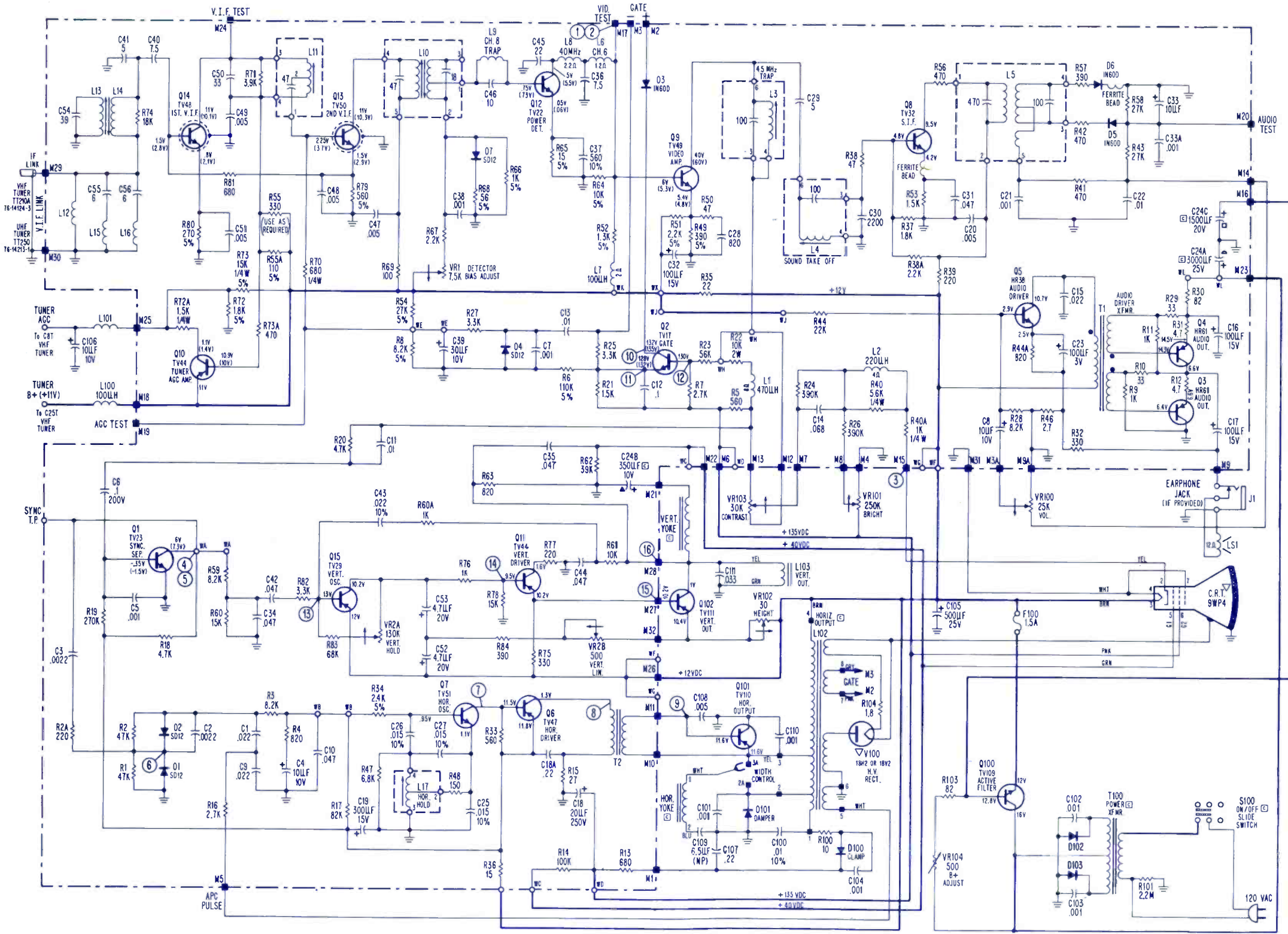
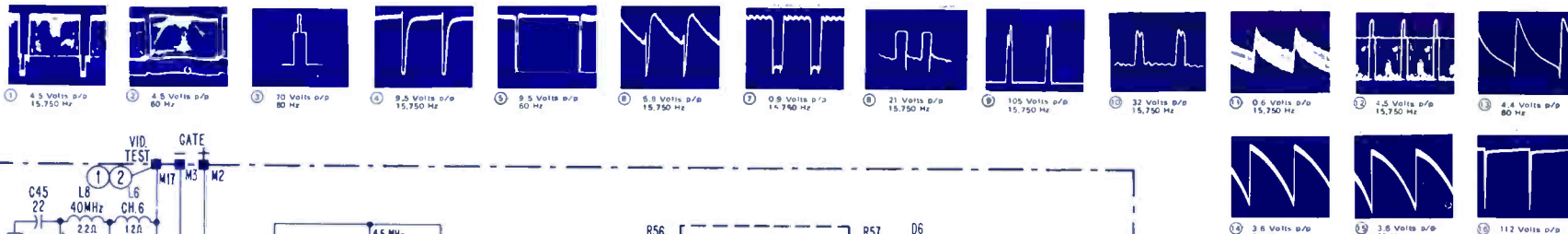


SYMBOL	DESCRIPTION	OLYMPIC PART NO.
C155	1000pf, 2kv	COJ70926
C192A	150 μf, 180v	
C192B	100 μf, 180v	COJ70144
C192C	150 μf, 180v	
L104	41.25MHz trap coil	CLJ70131
L111	sound IF & trap coil	TRJ70120
L114	sound IF xformer	TRJ70121
L115	quad coil	TRJ70122
L116	horiz stabilizer coil	CLJ70126
L201	deflection yoke	CLJ70916
T101	audio output xformer	TRJ70119
T102	vert output xformer	TRJ70917
T103	horiz output xformer	TRJ70915
R147	1M, vert height	
R149	1M, vert hold	PTJ70140
R154	500K, vert lin	
R202	1M, volume	PTJ70921
SW-1	with off/on switch	
R203	30K, contrast	PTJ70922
R204	100K, brite	PTJ70142
D3	horiz AFC diode	REJ70148
TH1	thermistor	REJ70932
	tuner, VHF	CLJ70912
	tuner, UHF	CLJ70913



SYMBOL	DESCRIPTION	PHILCO PART NO.
C24A, B-	3000 μ f/25v, 1500 μ f/20v	
C-	350 μ f/10v, active filter	30-2585-34
F100-	1.5a, fast blow, B+	45-2656-72
L3-	4.5MHz trap	32-4901-1
L4-	sound take-off	32-4901-1
L5-	ratio det	32-4906-1
L17-	coil, horiz osc	32-4938-2
LS1-	speaker, 3M, 12 Ω tuner, VHF (TT210A)	76-14124-3
	yoke	32-9748-2

S100-	ac, on/off (slide)	42-2173-8
T1-	audio driver	32-10108-1
T2-	horiz drive	32-10104-1
T100-	power	32-10159-1
VR2A/B-	130K, vert hold, 500 Ω vert lin	33-5627-4
VR100-	25K, volume	33-5624-16
VR101-	250K, brite	33-5624-15
VR102-	30 Ω , height	33-5620-9
VR103-	30K, contrast	33-5624-14
VR104-	500 Ω , B+ adjust	33-5624-17



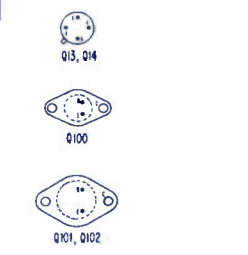
- NOTES
- VOLTAGES TAKEN UNDER NO SIGNAL CONDITIONS, ANTENNA REMOVED AND TUNER OFF CHANNEL. VOLTAGES IN PARENTHESIS ARE WITH A MODERATELY STRONG SIGNAL DEVELOPING +1.4V RF AGC AT TP M25.
 - VOLTAGES MEASURED WITH A V.T.V.M. (B.K. MODEL 175) FROM POINT INDICATED TO CHASSIS GROUND.
 - BALLOONS (1) (2) ETC. SHOWN ON SCHEMATIC INDICATE WAVEFORM TEST POINTS. (SWITCH RECEIVER ADJUSTED FOR SNOW-FREE PIX).
 - CONTROL SETTINGS: VOLUME-MINIMUM, CONTRAST-MAX, BRIGHTNESS-NEAR MAX. ALL OTHER CONTROLS SET FOR NORMAL OPERATION.
 - (3) CRITICAL SAFETY. (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST.)
 - (4) CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST) HIGH VOLTAGE COMPONENT.

TRANSISTOR BASINGS
BOTTOM VIEWS

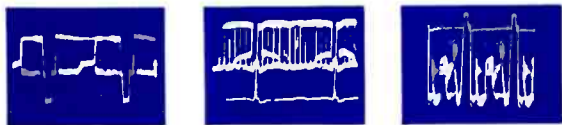
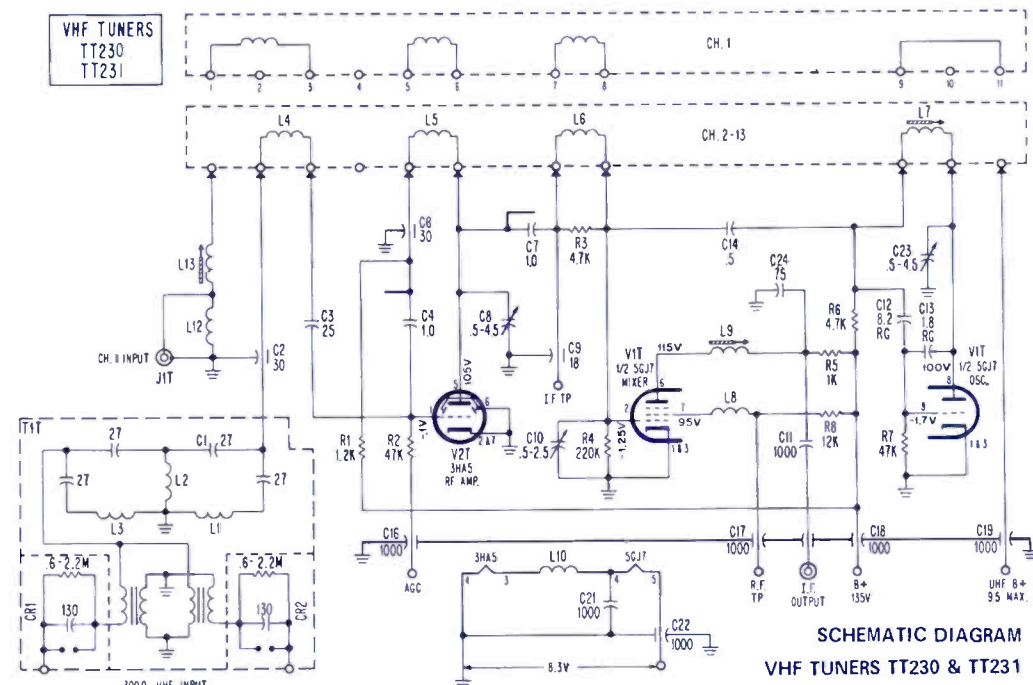
TYPE 1 (1) OR TYPE 2 (2)

Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q15

NOTE: TYPE 2 LEADS ARE PERFORMED TO FIT TYPE 1 HOLE CONFIGURATION IN P.W. BOARD.



VHF TUNERS
TT230
TT231



① 4 Volts p/p.
15.750 Hz
(max contrast)



② 4 Volts p/p.
60 Hz (max
contrast)



③ 90 Volts p/p.
15.750 Hz
(max contrast)



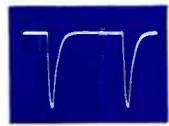
④ 80 Volts p/p.
15.750 Hz



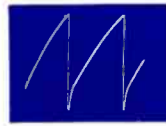
⑤ 80 Volts p/p.
60 Hz



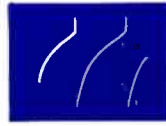
⑥ 50 Volts p/p.
60 Hz



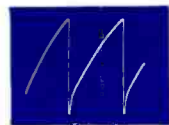
⑦ 50 Volts p/p.
15.750 Hz



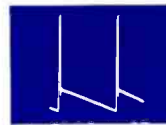
⑧ 48 Volts p/p.
60 Hz



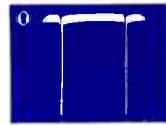
⑨ 60 Volts p/p.
60 Hz



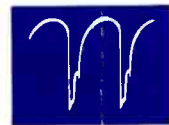
⑩ 45 Volts p/p.
60 Hz



⑪ 1000 Volts p/p
total, 180 Volts
p/p, sawtooth,
60 Hz



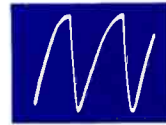
⑫ 55 Volts p/p.
60 Hz



⑬ 8 Volts p/p.
15.750 Hz



⑭ 11 Volts p/p.
15.750 Hz



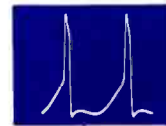
⑮ 14 Volts p/p.
15.750 Hz



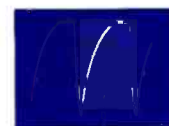
⑯ 11 Volts p/p.
15.750 Hz



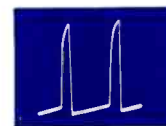
⑰ 45 Volts p/p.
15.750 Hz



⑱ 45 Volts p/p.
15.750 Hz



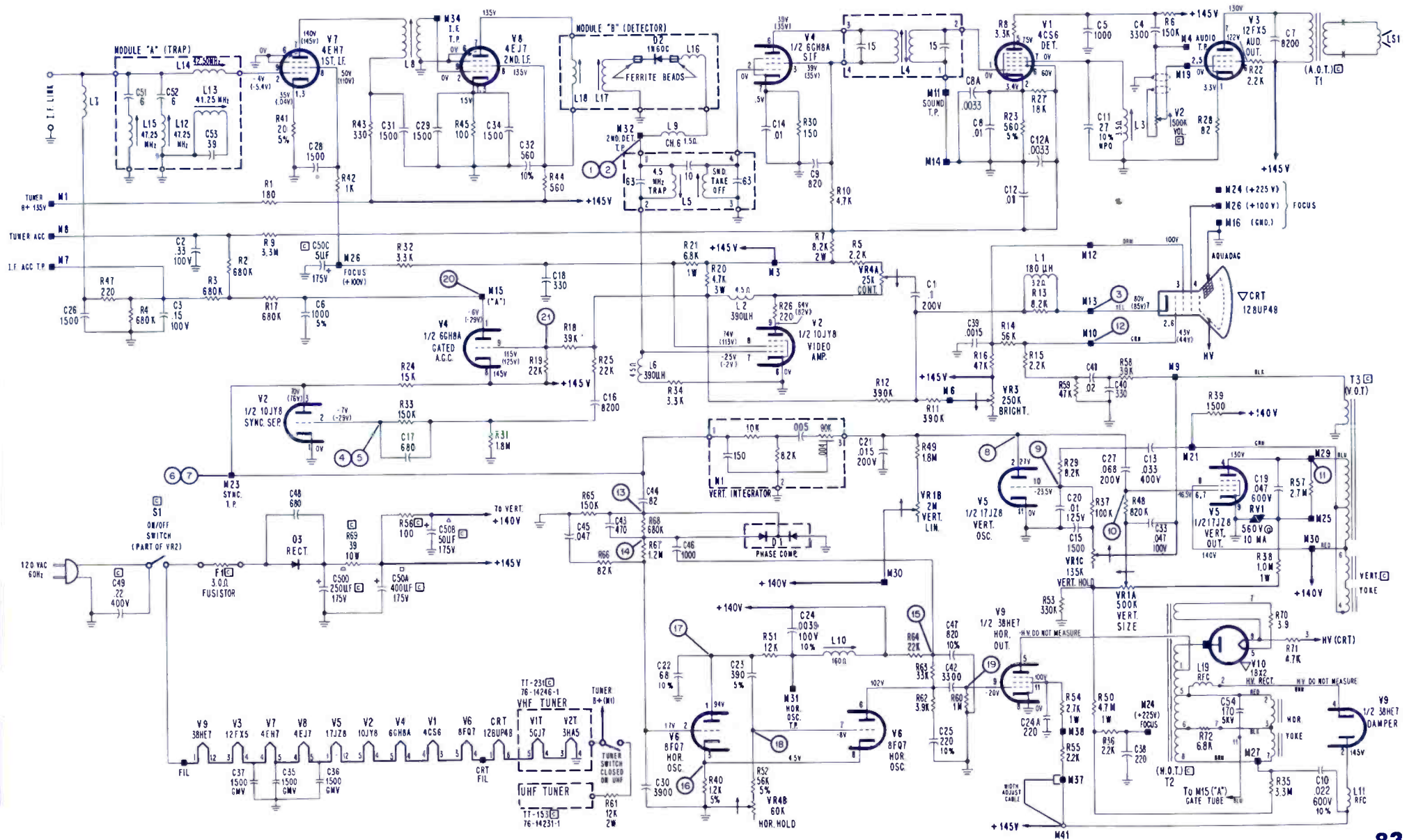
⑲ 86 Volts p/p.
15.750 Hz



⑳ 400 Volts p/p.
15.750 Hz

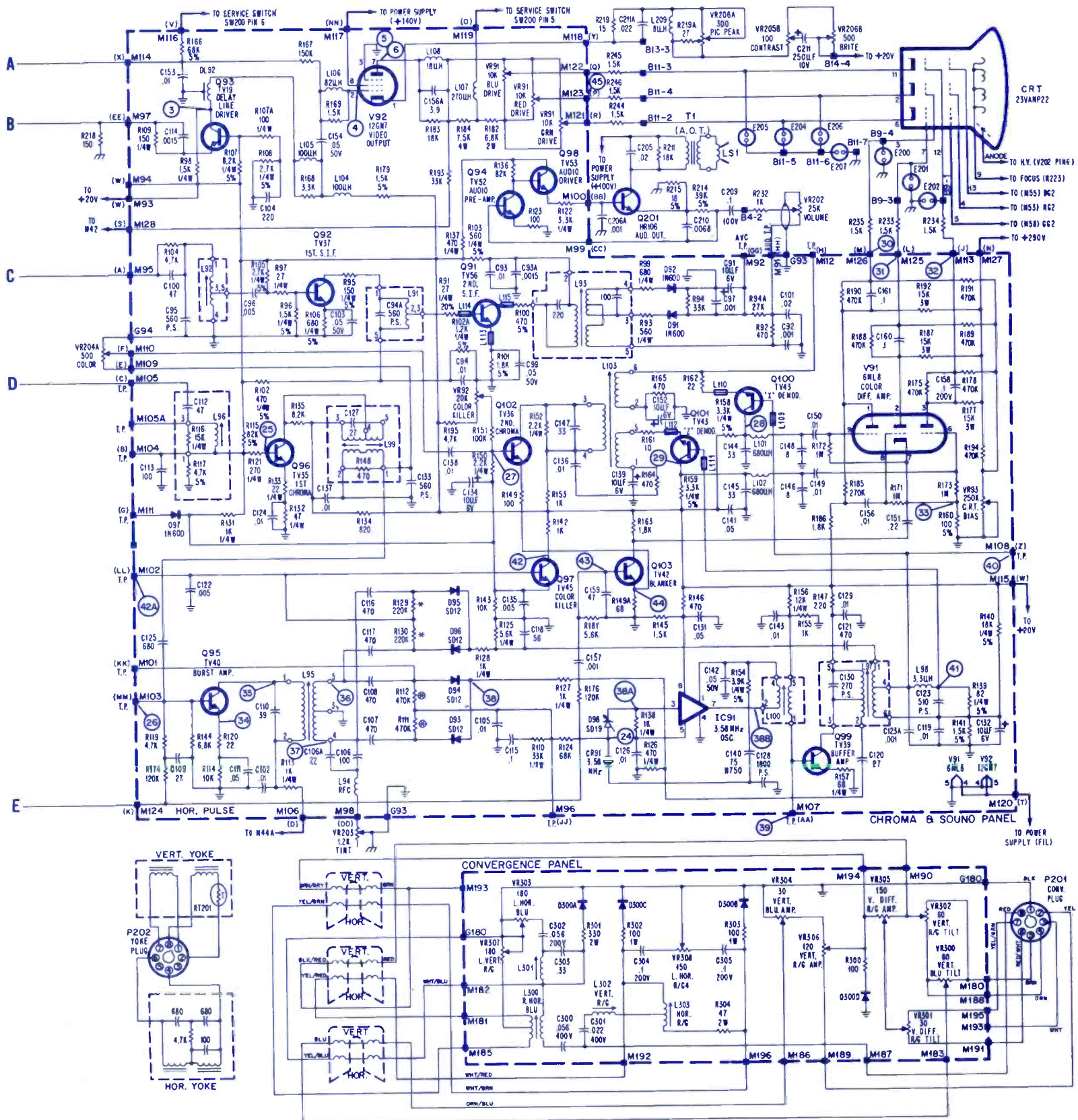


㉑ 50 Volts p/p.
15.750 Hz



VR205A & B 500n, horiz hold, 100 Ω contrast control 33-5636-16
 VR206A & B 300n, pix quality, 500 Ω bright control 33-5636-20
 VR207-vert centering control 33-5609-1
 VHF tuner 76-14099-5U
 UHF tuner 76-14099-5U
 yoke assembly 76-14236-1

PHILCO-FORD
 Color TV Chassis
 20QT75



- 30 8.5 VOLTS P/P, 15.750 HZ Q101 COLL.
- 31 45 VOLTS P/P, (CHROMA) 70V P/P, (SYNC) 15.750 HZ M126
- 32 17 VOLTS P/P, (CHROMA) 70V P/P, (SYNC) M125
- 33 50 VOLTS P/P, (CHROMA) 70V P/P, (SYNC) M113
- 34 2 VOLTS P/P, (CHROMA) 25V P/P, (SYNC) R160, R173 PIN 7 V91
- 35 0.7 VOLTS P/P, 15.750 HZ Q95 EMIT
- 36 EXPLODED VIEW OF BURST OF VIEW 34
- 37 70 VOLTS P/P, 15.750 HZ Q95 COLL.
- 38 12 VOLTS P/P, 15.750 HZ PIN 5 L95
- 39 0.8 VOLTS P/P, 3.58 MHZ PIN 3 IC91
- 40 12 VOLTS P/P, 15.750 HZ PIN 4 L95
- 41 6 VOLTS P/P, 3.58 MHZ D93, D94
- 42 1.0 VOLTS P/P, 3.58 MHZ PIN 4 L97 OR M108
- 43 1.0 VOLTS P/P, 3.58 MHZ L98-R139
- 44 16 VOLTS P/P, 3.58 MHZ PIN 7 IC91
- 45 1.6 VOLTS P/P, 3.58 MHZ M107
- 46 1.0 VOLTS P/P, 3.58 MHZ PIN 4 L97 OR M108
- 47 1.0 VOLTS P/P, 3.58 MHZ L98-R139
- 48 .55 VOLTS P/P, 60 HZ Q97 COLL.
- 49 0.65 VOLTS P/P, 60 HZ M102
- 50 12 VOLTS P/P, 15.750 HZ Q103 BASE
- 51 3.5 VOLTS P/P, 17.500 HZ Q103 EMIT.
- 52 90 VOLTS P/P, 15.750 HZ, CONT SET JUST BELOW POINT OF SYNC COMPRESSION M123
- 53 30 VOLTS P/P, 15.750 HZ Q5 COLL.
- 54 660 VOLTS P/P, 15.750 HZ M45
- 55 420 VOLTS P/P, 15.750 HZ M48

LINE VOLTAGE - 120 VAC
 AIR SIGNAL - FOR MONOCHROME SIGNALS
 COLOR BAR GEN. - B&K 1245 - FOR COLOR SIGNALS
 ACTIVE FILTER AT 20 VDC

SYMBOL DESCRIPTION PHILCO-FORD PART NO.

C8200	—power, ac	42-2136-10
F201	—4a	45-2656-36
CR91	—3.58MHz osc	34-8043-5
1C1	—Act	46-5002-6
1C91	—3.58MHz osc	46-5002-7
L4	—1st IF	32-4957-3
L5	—2nd IF	32-4957-2
L10	—41.25MHz trap	32-4959-8
L41	—horiz hold	32-4891-2
L92	—sound TO	32-4936-1
L93	—sound ratio det	32-4928-1
L94	—tint control	32-4112-63
L99	—chroma bandpass	32-4929-1

T200	—degaussing	33-1376-6
RV55	—horiz bias	33-1379-2
SW200	—normal service	42-2163-4
T1	—audio output xformer	32-10174-1
T2	—filter choke xformer	32-10155-1
T3	—vert output xformer	32-10157-1
T4	—horiz output xformer	32-10130-5
T5	—power xformer	32-10154-1
VR1	—3K, RF AGC amp emit	33-5628-14
VR91	—video drive	33-5632-1
VR92	—color killer	33-5628-6
VR93	—CRT bias	33-5628-12
VR201	—12M, focus adj	33-5631-24
VR202	—25K, volume (20QT80)	33-5648-11
VR203	—500n, color	33-5648-8
VR204	—500n, horiz hold	33-5642-23
VR205	—750K, vert hold	33-5642-22
VR207	—10n, vert control	33-5609-1
VR208	—500n, brightness	33-5642-25
VR209	—100n, contrast	33-5642-24
VR211	—100K, tone (20QT80) tuner, VHF (22QT79/80 LP) yoke assy.	76-14293-1 76-14236-1

TRANSISTOR VOLTAGES

W/COLOR BAR GEN.

TRANSISTOR	FUNCTION	E	B	C
Q95	BURST AMP	48	0	38
Q96	1ST CHROMA	.17	.90	16.5
Q97	COLOR KILLER	1	1.5	19.5
Q99	BUFF AMP	.65	1.3	17.5
Q100	X DEMOD	1.8	1.44	13
Q101	Z DEMOD	1.8	1.44	12
Q102	2ND CHROMA	.80	1.0	18.5
Q103	BLANKER	.68	-1.6	16.5

IC91 3.58 OSC.

W/COLOR BAR GEN.

PIN	VDC
1	11.4
2	-
3	1.5
4	0
5	1.55
6	-
7	11.4
8	12.0

B & K 1245 GEN. set at ch. 4
IF AGC set at mid-range
Approx. 1.6VDC at tuner AGC
Color bar gen. color amplitude set for 1.5VDC at M102
B & K meter 175
Line voltage 120VAC
Active filter 20VDC at M13

NOTES
CRT BIAS - MIN.
BRIGHTNESS - FULL CCW
CONTRAST - FULL CCW
CHROMA - FULL CCW
SERVICE SW. - NORMAL

PIN	VOLTAGE
2 R G1	380
3 R G1	380
4 R G2	380
5 G G2	460
6 R G1	380
7 B G1	380
8 B G1	380
9 B G2	480
10 B G2	480

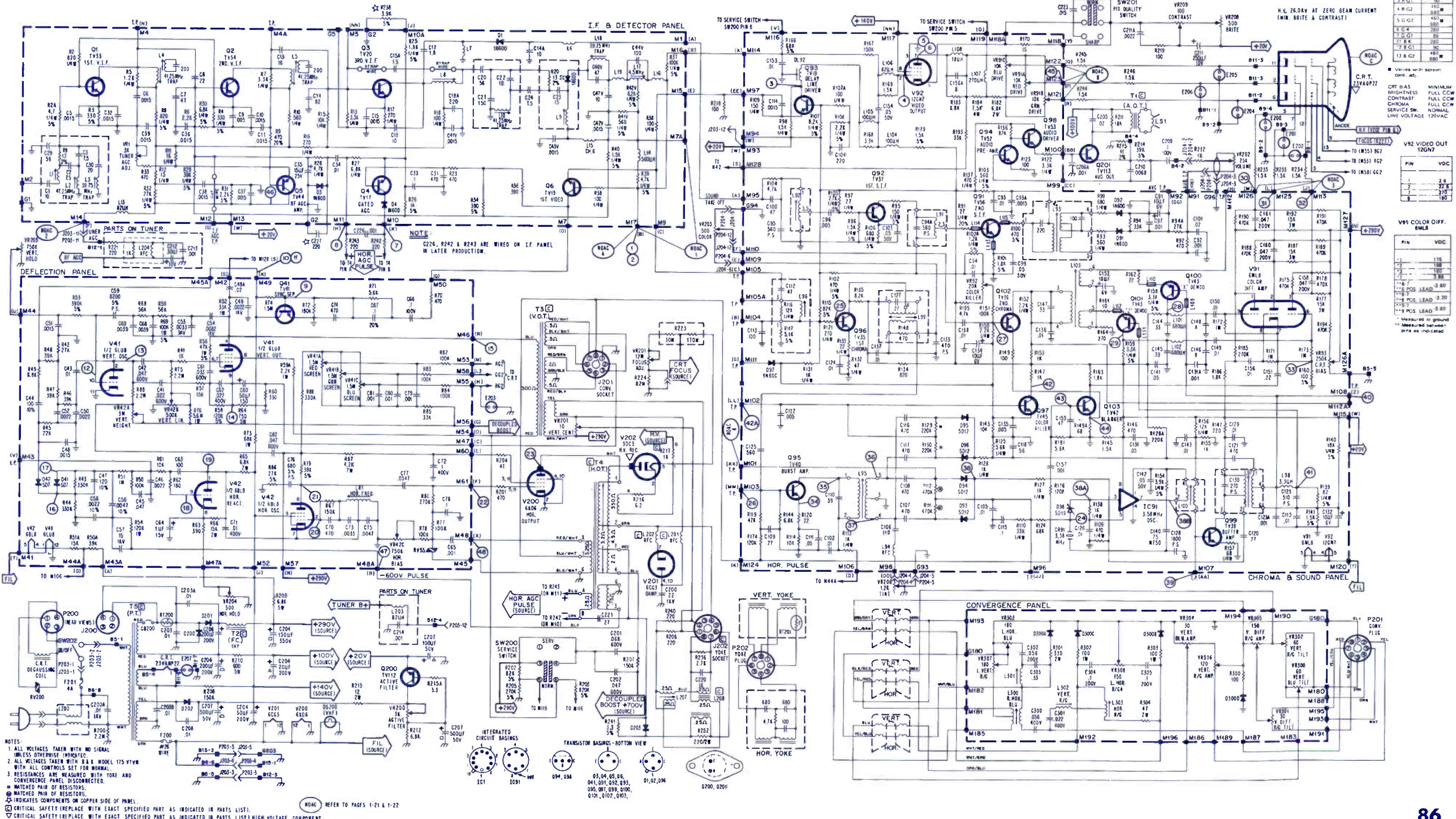
* Measured with screen cont. adj.

PIN	VDC
1	2.8
2	2.8
3	3.0
4	1.0

V92 VIDEO OUT 12GV7
TO (M5) B2
TO (M5) G2

PIN	VDC
1	175
2	180
3	180
4	180
5	2.80
6	2.80
7	2.80
8	2.80
9	2.80
10	2.80

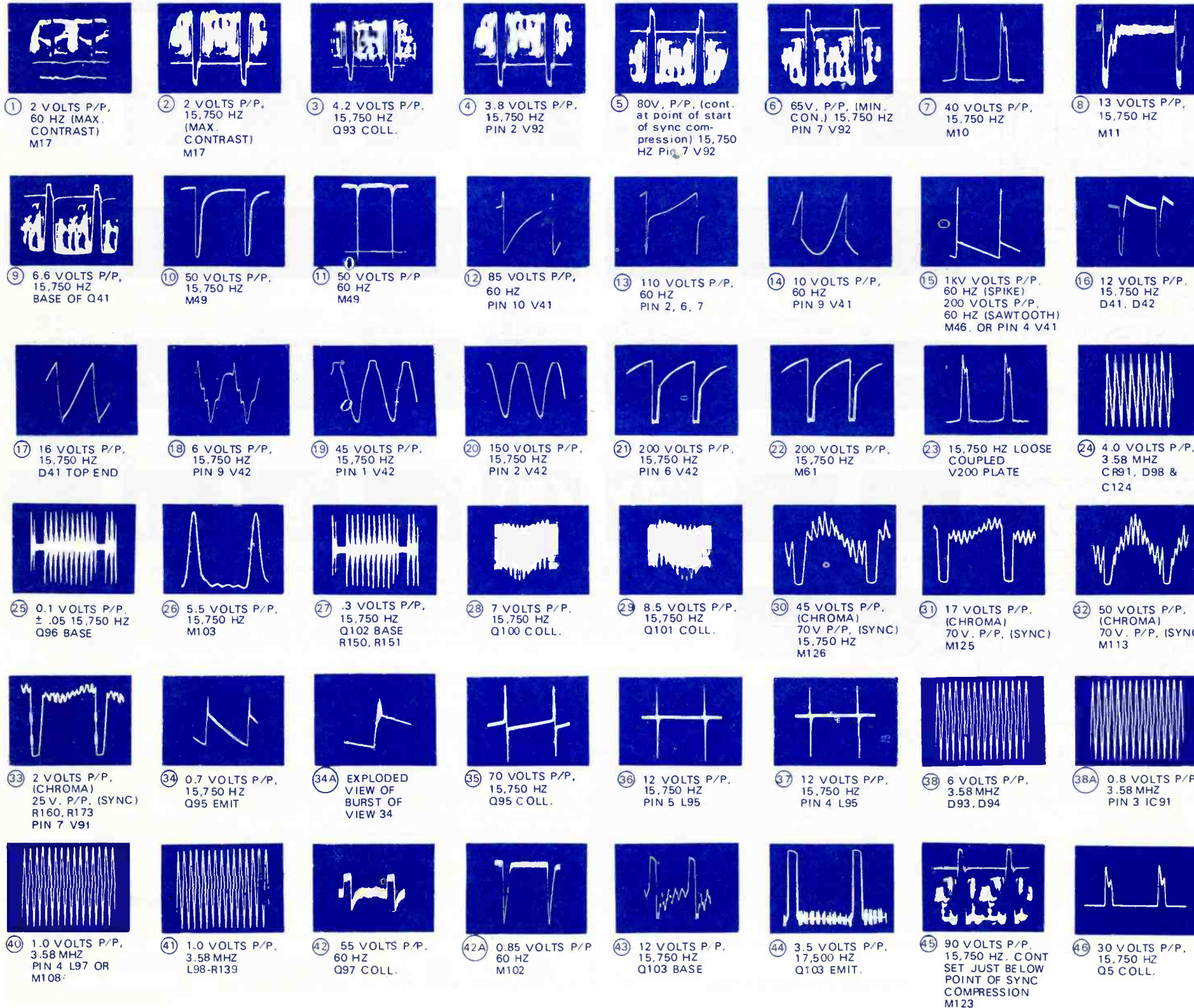
V93 COLOR OFF. 6MLB
* Measured to ground
* Measured between pins as indicated



OSCILLOSCOPE WAVEFORM PATTERNS

These waveforms were taken with the receiver AGC control adjusted for an approximate peak-to-peak output of two volts at the video detector, using an air signal. Do not reset AGC control when using color bar generator. All monochrome voltages taken with average air signal and all chroma voltages taken with a color bar generator connected to the antenna input terminals. The chroma peak-to-peak voltages were taken with the chroma control set for 0.3V peak-to-peak at center tap of chrome control or M110 and the tint control set for proper color bars (approximately mid-range), all other controls set for normal viewing. The frequencies shown are those of the waveforms...not the sweep rate of the oscilloscope. All voltages taken with a wide band scope having a 5 MHz bandwidth similar to B&K Model 1450. Line voltage, 120V.

LINE VOLTAGE - 120 VAC
AIR SIGNAL - FOR MONOCHROME SIGNALS
COLOR BAR GEN. - B&K 1245 - FOR COLOR SIGNALS
ACTIVE FILTER AT 20 VDC



TRANSISTOR RESISTANCES

Resistance measurements of transistors in circuit (power off) yoke & convergence not connected. All measurements are in ohms and taken with B & K Model 120 VOM with allowable tolerance ±20%. DC polarity switch in "REV" position. Transistor measurements (use X100 scale).

TRANS.	FUNCTION	E TO GRD.	B TO GRD.	C TO GRD.	C TO E (- +)	C TO B (- +)	B TO E (- +)
Q1	1ST V.I.F.	330	1150	1100	1450 (1250)	2300 (1500)	1500 (1300)
Q2	2ND V.I.F.	330	2100	1050	1400 (1350)	8.5K (1785)	1.8K (5.6K)
Q3	3RD V.I.F.	270	1700	875	950 (860)	3.1K (1.5K)	1.8K (2K)
Q4	GATED AGC	1100	1175	35K	25K (2K)	38K (1.4K)	1.4K (1.9K)
Q5	RF AGC	350	1500	1530	1875 (2.5K)	1.7K (3.6K)	1450 (1450)
Q6	1ST VIDEO	250	1K	1050	1.3K (1.3K)	4.5K (1.3K)	1.2K (1.8K)
Q41	SYNC SEP.	0	1475	25K	25K (22K)	130K (1350)	1450 (1700)
Q91	2ND S.I.F.	1.8K	450	1350	3.1K (3.2K)	1.5K (1.3K)	1.5K (2.4K)
Q92	1ST S.I.F.	680	1K	800	1375 (1375)	1575 (1375)	1.8K (1.8K)
Q93	DELAY & DRIVER	300	1475	1030	1350 (1350)	3K (1.4K)	1425 (2.3K)
Q94	AUD. PRE AMP	100	1725	2800	3K (18K)	*40K (1.5K)	1550 (42K)
Q95	BURST AMP	10K	4.5K	13K	8K (16K)	20K (1450)	1.5K (18K)
Q96	1ST CHROMA	85	1.9K	1050	1125 (1100)	4.6K (1725)	1225 (3.4K)
Q97	COLOR KILLER	2.9K	3.2K	1350	6K (4.4K)	*220K (1.4K)	1.5K (20K)
Q98	AUD. DRIVER	6K	2.8K	780	3.2K (7K)	19K (1.5K)	1550 (39K)
Q99	BUFF AMP	75	1175	450	550 (550)	1.4K (1350)	1125 (1125)
Q100	I DEMOD	470	1.2K	1450	4K (1.8K)	5K (1.3K)	1.3K (1350)
Q101	Z DEMOD	480	1.2K	3.6K	4K (2K)	4.8K (1.3K)	1375 (1350)
Q102	2ND CHROMA	182	2K	1350	1580 (1550)	10K (1725)	1750 (18.2K)
Q103	BLANK	82	1800	2750	2.8K (2K)	8K (1650)	1.7K (5.5K)
Q201	AUD. OUTPUT	16	1.3K	28K	29K (3.4K)	*40K (1.1M)	1100 (3.3K)
Q200	ACTIVE FILTER	245	1350	3.4K	3K (1450)	16K (1050)	1100 (3.4K)

*RX10000
RX100

TUBE RESISTANCES

TUBE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12
V41	VERT. OUT/OSC	F	*3.25M	-	17K	-	*2.5M	*2.5M	20K	1.6K	*800K	0	F
V42	HORIZ. DSC/REACT	10K	*1.85M	F	F	F	50K	0	580	*1.4M			
V91	COLOR DIFF. AMP.	30K	30K	30K	F	F	F	1.1M	150	*1.1M	*950K		
V92	VIDEO OUTPUT	700	*29K	750	F	F	F	22K	12K	75			
V200	HORIZ. OUTPUT	0	0	20K	0	*800K	-	-	-	*900K	0	20K	0
V201	DAMPER	0	-	-	15K	-	-	*800K	-	-	16K	-	0

*RX1000

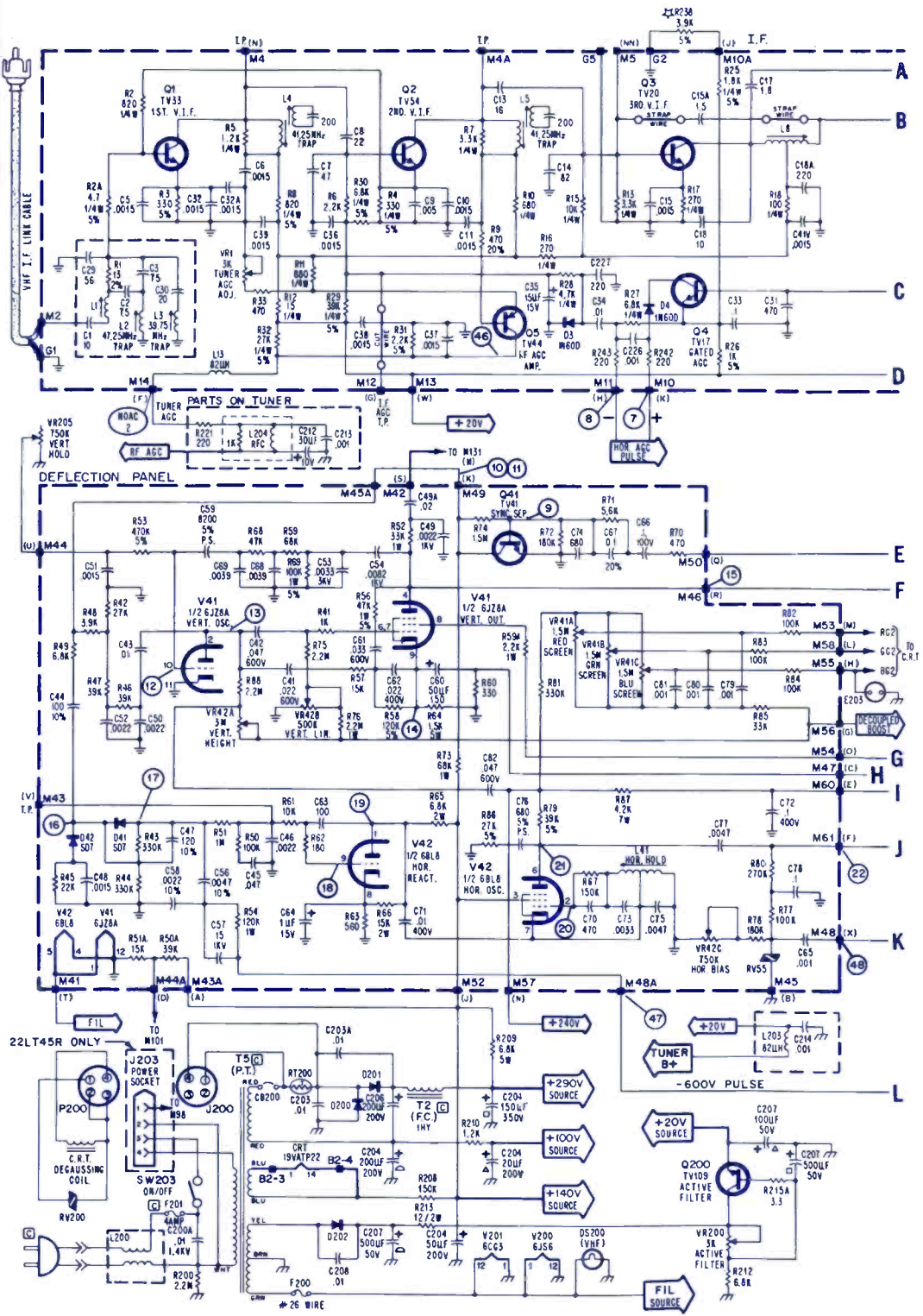
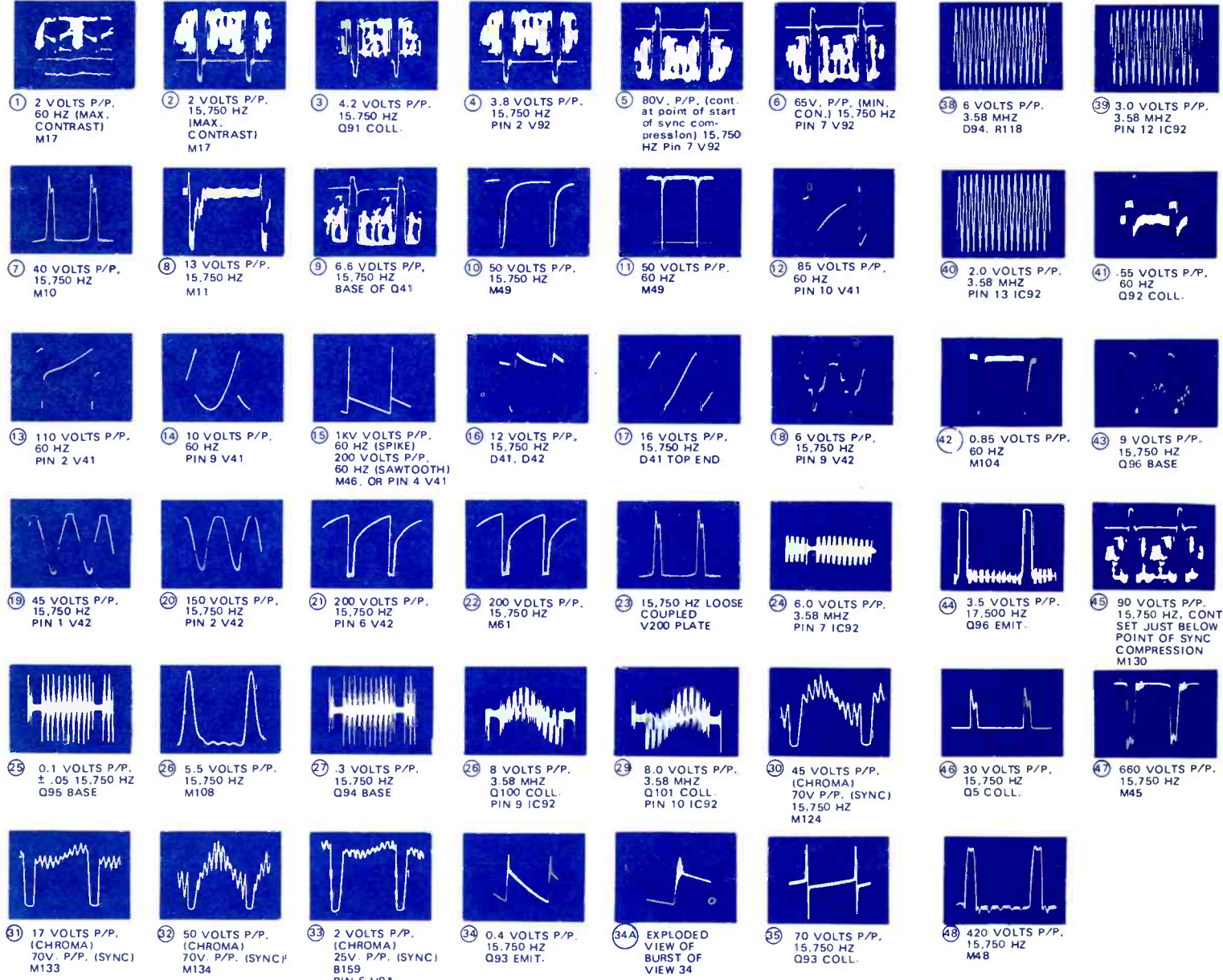
METER B&K 120
SCALE - RX100
SCALE - RX10000

TRANSISTOR	FUNCTION	E	B	C
Q1	1ST VIF	330	1150	1.2K
Q2	2ND VID	330	2K	950
Q3	3RD VID	270	1750	750
Q4	AGC GATE	1150	1300	25K
Q5	RF AGC	700	1350	1400
Q6	1ST VID.	225	900	1100
Q41	SYNC SEP.	0	1300	25K
Q91	DELAY LINE DRIVER	300	1300	1300
Q92	COLOR KILLER	2.9K	4K	1.6K
Q93	BURST AMP	47K	4.7K	13K
Q94	2ND CHROMA	125	2.1K	1.5K
Q95	1ST CHROMA	69	1.7K	1.4K
Q96	BLANKER	68	5.6K	2.8K
Q97	DEMOD DRIVER	450	1650	425
Q200	ACTIVE FILTER	245	1350	3.4K
Q201	AUD. OUTPUT	18	1.3K	28K

SYMBOL	DESCRIPTION	PHILCO-FORD PART NO.
C204A, B, C, D	—200µf/200, 150µf/350, 50µf/200, 20µf/200, B+ filter	30-2616-11
C207	—500µf/50, 500µf/50, 100µf/50, B+ filter	
CB200	—power ac	42-2136-6
1C91	—1C8 4.5MHz amp/demod	46-5002-8
1C92	—1C5 color osc/react/demod	46-5002-5
L4	—1st video IF	32-4957-2
L10	—41.25MHz trap	32-4959-18
L17	—4.5MHz trap	32-4869-3
L18	—39.75MHz trap	32-4959-9
L41	—horiz hold	32-4891-2
L92	—quad	32-4876-1
L93	—sound take off	32-4936-3
L94	—burst trans	32-4931-1
L95	—chroma take off	32-4878-3
L100	—3.58MHz osc	32-4932-2
L101	—chroma bandpass	32-4928-1
RT200	—degaussing	33-1376-6

RV201	—vert damping	323-0292
RV55	—horiz bias	33-1379-21
RV200	—degaussing	33-1379-8
T1	—audio output xformer	32-10156-1
T2	—filter choke xformer	32-10155-3
T3	—vert output xformer	32-10167-1
T4	—horiz output xformer	32-10111-6
T5	—power xformer	32-10171-1
VR1	—3K, tuner AGC adjust	33-5628-14
VR42	—A-height B-lin C-horiz bias	33-5627-3
VR93	—color killer	33-5628-8
VR93	—CRT bias	33-5628-12
VR201	—2.5K, tint	33-5648-18
VR202	—500Ω color	33-5648-8
VR203	—500Ω bright	33-5648-6
VR204	—100Ω contrast	33-5648-5
VR205	—750K, vert hold	33-5648-7
VR206	—2.5K, val	33-5648-10
VR207	—12M focus	33-5631-24
tuner VHF (ITT191 22LT45R)		76-14296-1
yoke		76-14303-3

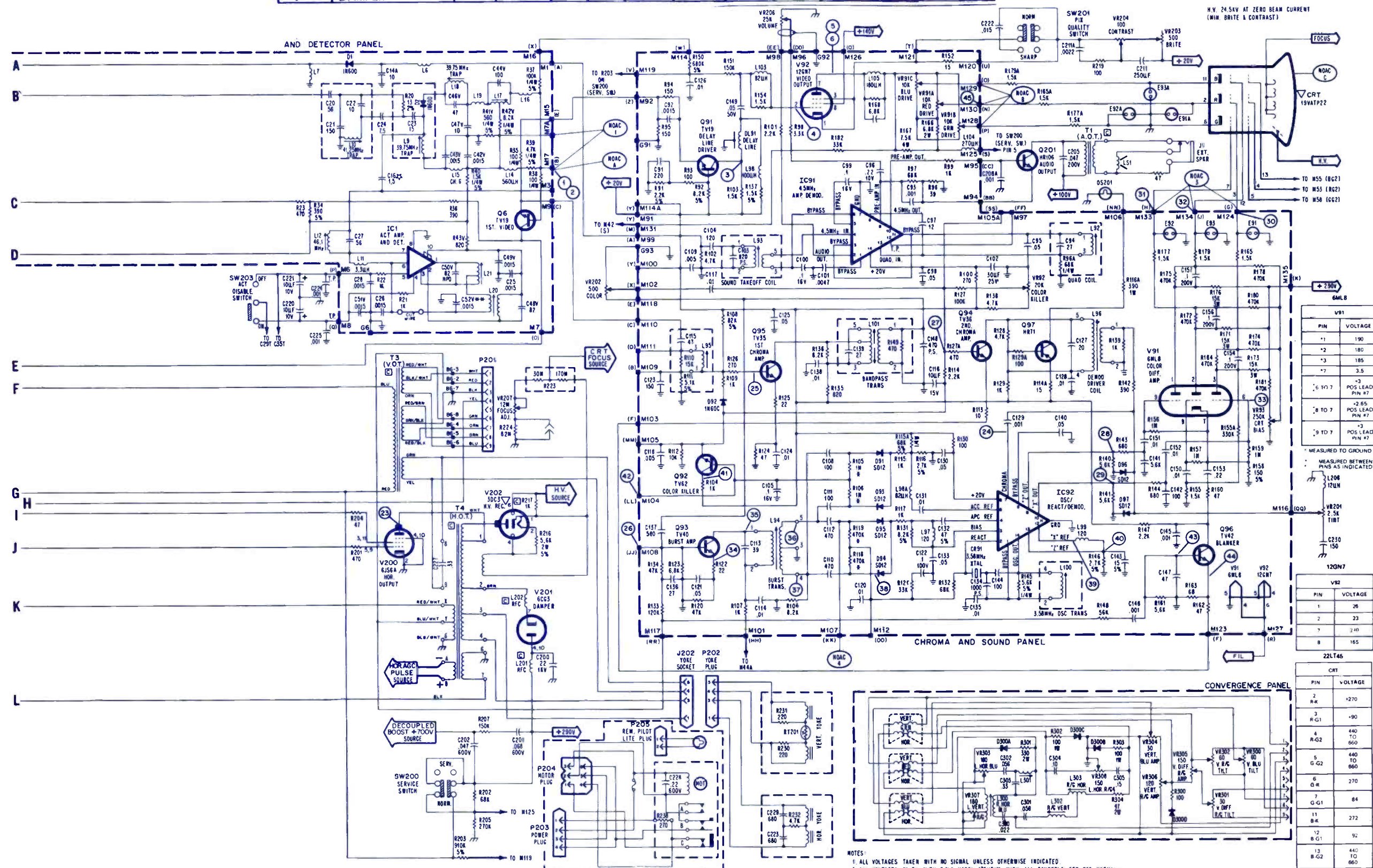
These waveforms were taken with the receiver AGC control adjusted for an approximate peak-to-peak output of two volts at the video detector, using an air signal. Do not reset AGC control when using color bar generator. All monochrome voltages taken with average air signal and all chroma voltages taken with a color bar generator connected to the antenna input terminals. The chroma peak-to-peak voltages were taken with the chroma control set for 0.3V peak-to-peak at center tap of chroma control or M102 and the tint control set for proper color bars (approximately mid-range), color bar generator output set for +1.5 VDC at M109, all other controls set for normal viewing. The frequencies shown are those of the waveforms. . . . not the sweep rate of the oscilloscope. All voltages taken with a wide band scope having a 5 MHz bandwidth similar to B&K Model 1450. Line voltage 120V.



TUBE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12
V41	VERT. OUT/OSC.	F	*3.75M	-	17K	-	*2.5M	*2.5M	20K	1.6K	*800K	0	F
V42	HORZ. OSC/REACT.	10K	*1.65M	12K	F	F	50K	0	580	*1.4M			
V91	COLOR DIFF. AMP.	30K	30K	30K	F	F	1.1M	150	*1.1M	*950K			
V92	VIDEO OUTPUT	700	*28K	700	F	F	F	22K	12K	725			
V200	HORZ. OUTPUT	0	0	20K	0	*800K	-	-	-	*900K	0	20K	0
V201	DAMPER	0	0	-	16K	-	-	-	*800K	-	-	16K	0

TUBE RESISTANCES

PHILCO-FORD
Color TV Chassis
22LT45/R



V91

PIN	VOLTAGE
*1	190
*2	180
*3	185
*7	3.5
*6 TO 7	-3
*8 TO 7	-2.65
*9 TO 7	-3

MEASURED TO GROUND
PINS AS INDICATED

V92

PIN	VOLTAGE
1	26
2	23
7	210
8	165

22LT45

PIN	VOLTAGE	
2	R-K	+270
3	R-G1	-90
4	R-G2	440 TO 660
5	G-G2	440 TO 860
6	G-R	270
7	G-G1	64
11	B-K	272
12	B-G1	92
13	B-G2	440 TO 660

- NOTES:
- ALL VOLTAGES TAKEN WITH NO SIGNAL UNLESS OTHERWISE INDICATED.
 - ALL VOLTAGES TAKEN WITH B & K MODEL 175VTV WITH ALL CONTROLS SET FOR NORMAL.
 - RESISTANCES ARE MEASURED WITH YOKE AND CONVERGENCE PANEL DISCONNECTED.
 - ASTERISK (*) INDICATES MATCHED PAIRS OF RESISTORS.
 - STAR (*) INDICATES COMPONENTS ON COPPER SIDE OF PANEL.
 - CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST).
 - DO NOT MEASURE VOLTAGES AT PINS OF IC91 & IC92. MEASURE VOLTAGES AT COMPONENT NEAREST PIN.
 - CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART INDICATED IN PARTS LIST) HIGH VOLTAGE COMPONENT.

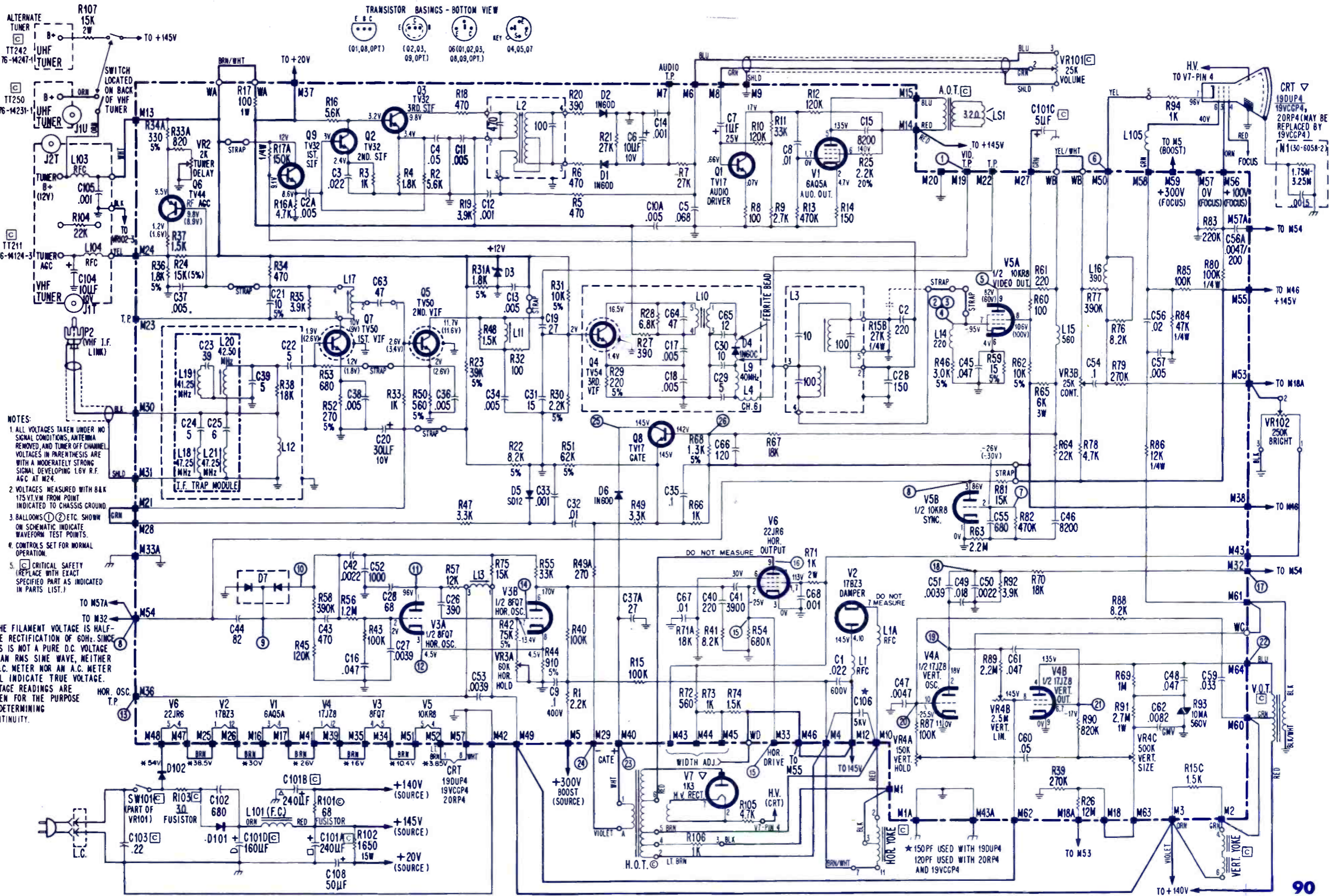
PHILCO-FORD

Color-TV Chassis
20ST30AV

ELECTRONIC TECHNICIAN/DEALER TEKFA X

SYMBOL	DESCRIPTION	PART NO.
C101-240/240/5/160µf.	@200v, B+ & video output G2	30-2601-33
L2	-ratio det coil	32-4906-1
L3	-sound take-off & 4.5MHz trap coil	32-4955-2
L13	-horiz stabilizer	32-4754-3
N1	-CRT network	30-6058-2
R93	-varistor, 560v @ 10ma, vert bias	33-1373-6
R103	-3n, fusistor	33-1381-5
AOT	-audio output xformer	32-10161-2

HOT	-horiz output xformer	32-10152-1
VOT	-vert output xformer	32-10160-3
VR2	-2K, tuner delay	33-5628-13
VR3A-B	-60K, horiz hold aux 25K contrast	33-5637-4
VR4A-B	-C-150K, vert hold, 2.5M, vert lin, 500K, vert size	33-5645-1
VR101	-25K, on/off volume, sw	33-5646-8
VR102	-250K, bright	33-5445-1
	tuner, VHF, TT211	76-14124-2
	yoke assembly	76-14309-1

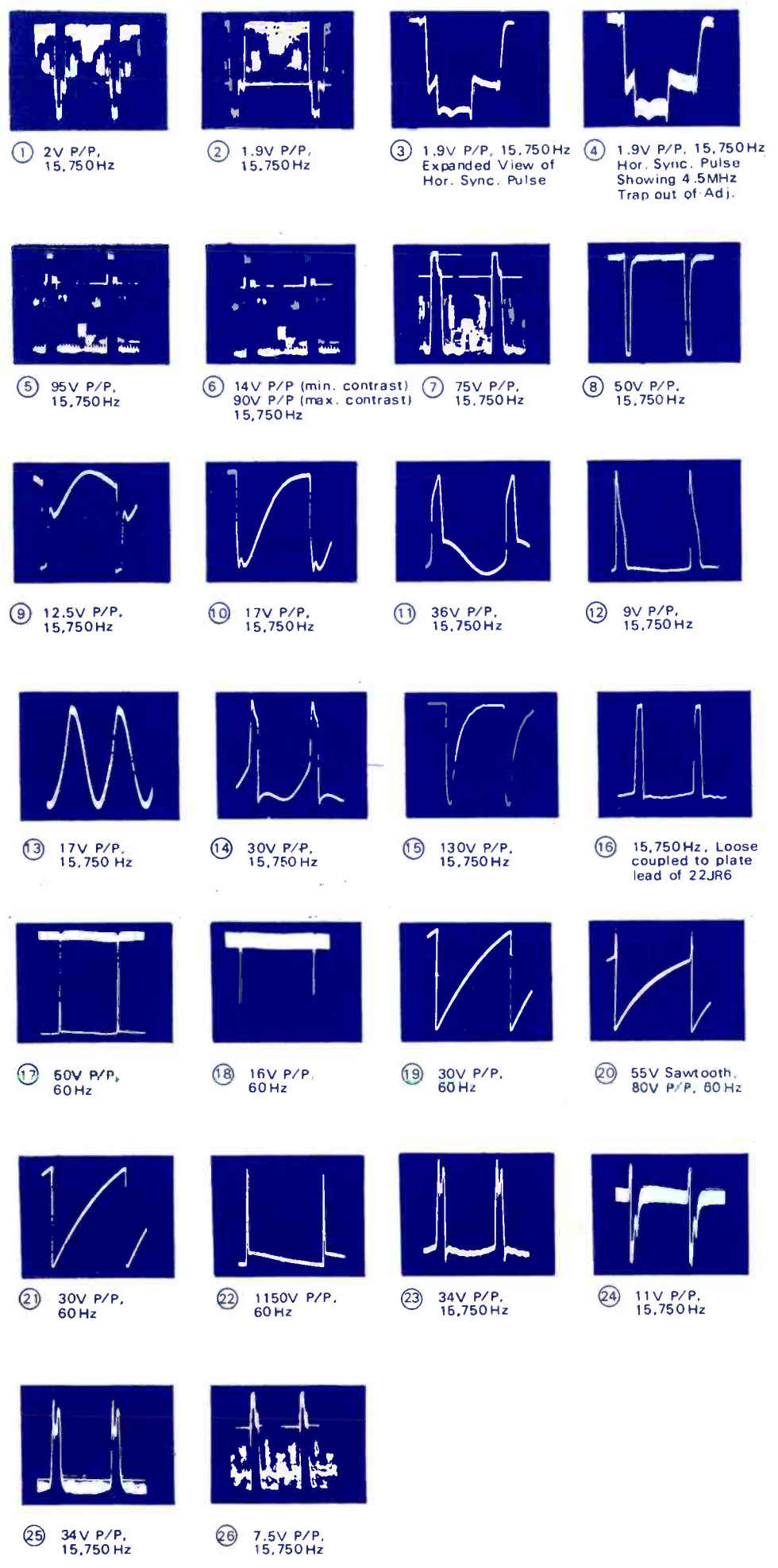


- NOTES:
1. ALL VOLTAGES TAKEN UNDER NO SIGNAL CONDITIONS, ANTENNA REMOVED, AND TUNER OFF CHANNEL. VOLTAGES IN PARENTHESES ARE WITH A MODERATELY STRONG SIGNAL DEVELOPING 1.6V R.F. AGC AT M24.
 2. VOLTAGES MEASURED WITH 8&K 175 V.T.M FROM POINT INDICATED TO CHASSIS GROUND.
 3. BALLOONS ① ② ETC. SHOWN ON SCHEMATIC INDICATE WAVEFORM TEST POINTS.
 4. CONTROLS SET FOR NORMAL OPERATION.
 5. CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST.)

* THE FILAMENT VOLTAGE IS HALF-WAVE RECTIFICATION OF 60Hz. SINCE THIS IS NOT A PURE D.C. VOLTAGE OR AN RMS SINE WAVE, NEITHER A D.C. METER NOR AN A.C. METER WILL INDICATE TRUE VOLTAGE. VOLTAGE READINGS ARE GIVEN FOR THE PURPOSE OF DETERMINING CONTINUITY.

TRANSISTOR & TUBE RESISTANCE CHARTS

All measurements are in ohms and taken with a B & K Model 120 volt-ohm-meter with an allowable tolerance of ±20%. DC polarity switch set in "REV" position. Resistance measurements of transistors and tubes taken in circuit with power off.



TRANSISTOR RESISTANCE CHART (USE X100 SCALE)

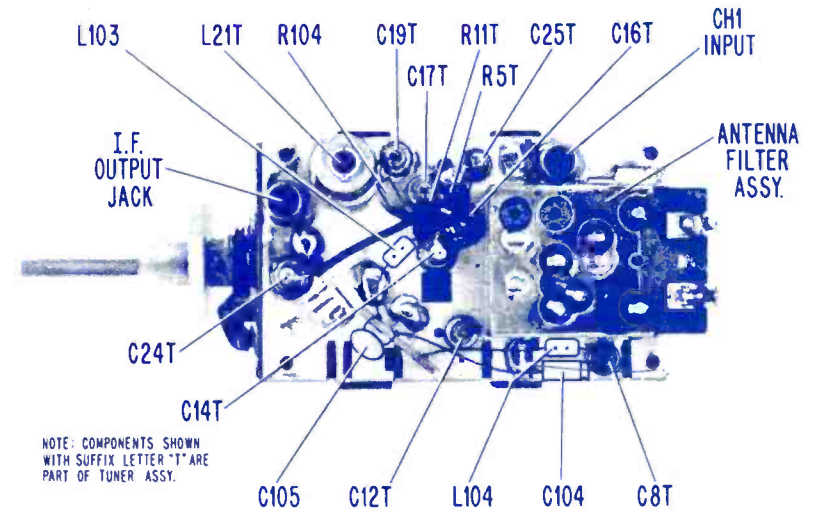
OHMMETER CONNECTION (NOTE POLARITY)	Q1 AUD. DR. TV17	Q2 2nd SIF TV32	Q3 3rd SIF TV32	Q4 3rd VIF TV54	Q5 2nd VIF TV50	Q6 RF AGC TV44	Q7 1st VIF TV50	Q8 GATE TV17	Q9 1st SIF TV32
Coll. - Gnd. + -	*22K	3.2K	5.5K	1.2K	800Ω	2.1K	1.2K	*400K	700Ω
Emit. - Gnd. + -	100Ω	1K	1.8K	220Ω	560Ω	750Ω	270Ω	3.1K	4.7K
Base - Gnd. + -	1.9K	2.6K	2.6K	1.7K	2.4K	1.2K	1.2K	3.4K	2.7K
Coll. - Emit. (-) (+) + -	17K 22K	*3.5K *2.3K	5.5K 7K	1.3K 1.3K	1.3K 1.4K	3.7K 2K	1.3K 1.4K	2.5K *400K	5K 2.8K
Coll. - Base (-) (+) + -	1.7K *70K	1.6K *7K	1.7K *7K	1.6K 2.8K	1.9K 5.5K	4K 1.7K	1.6K 2.4K	1.5K *400K	1.6K *20K
Base - Emit. (-) (+) + -	*27K 1.7K	8.5K 1.7K	4K 1.8K	2K 1.7K	5.5K 2K	**750 **750	*1.6K *1.2K	2.4K 1.5K	*13K 1.6K

*Use X1000 scale
 **VR2 max. clockwise.

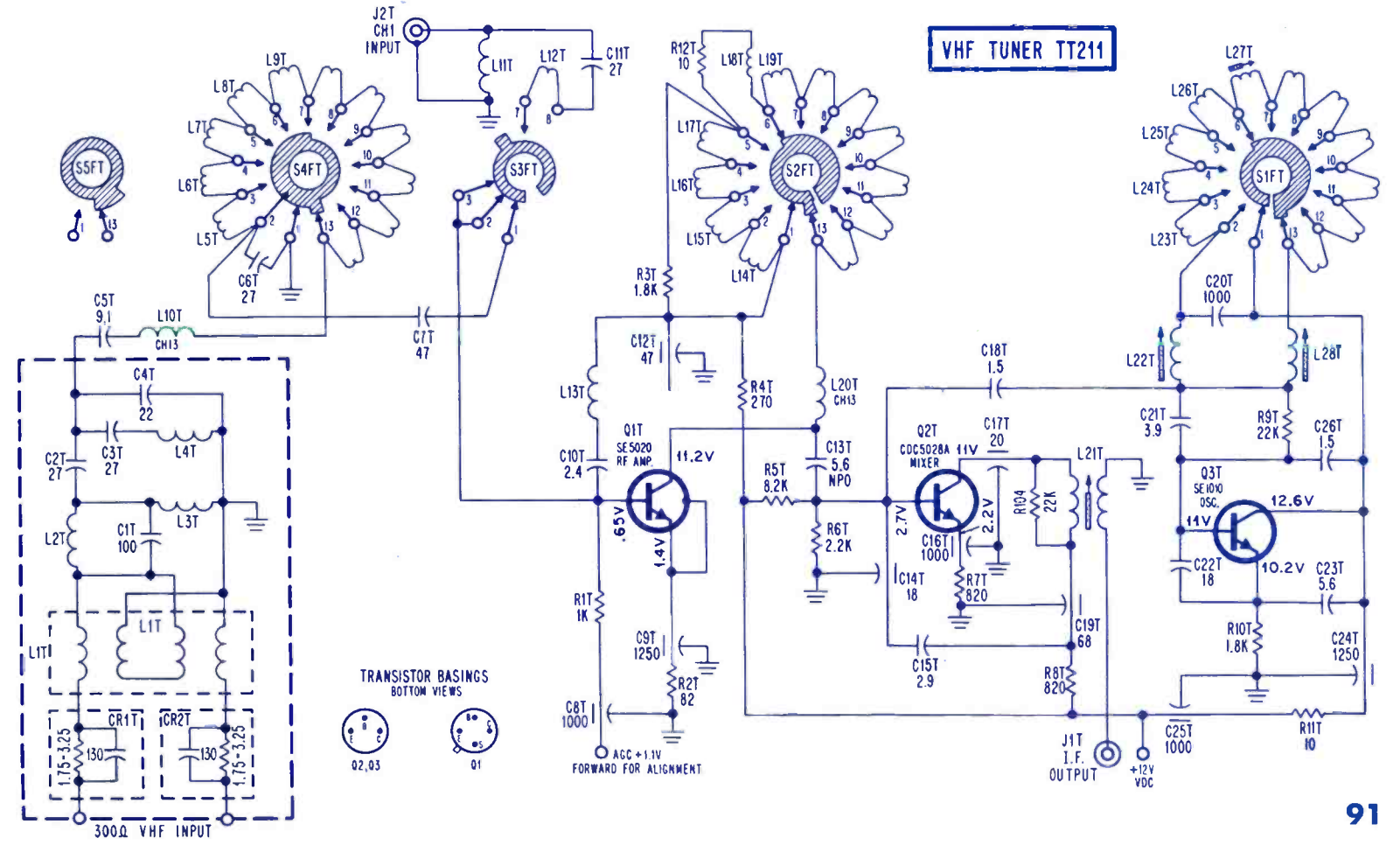
TUBE RESISTANCE CHART

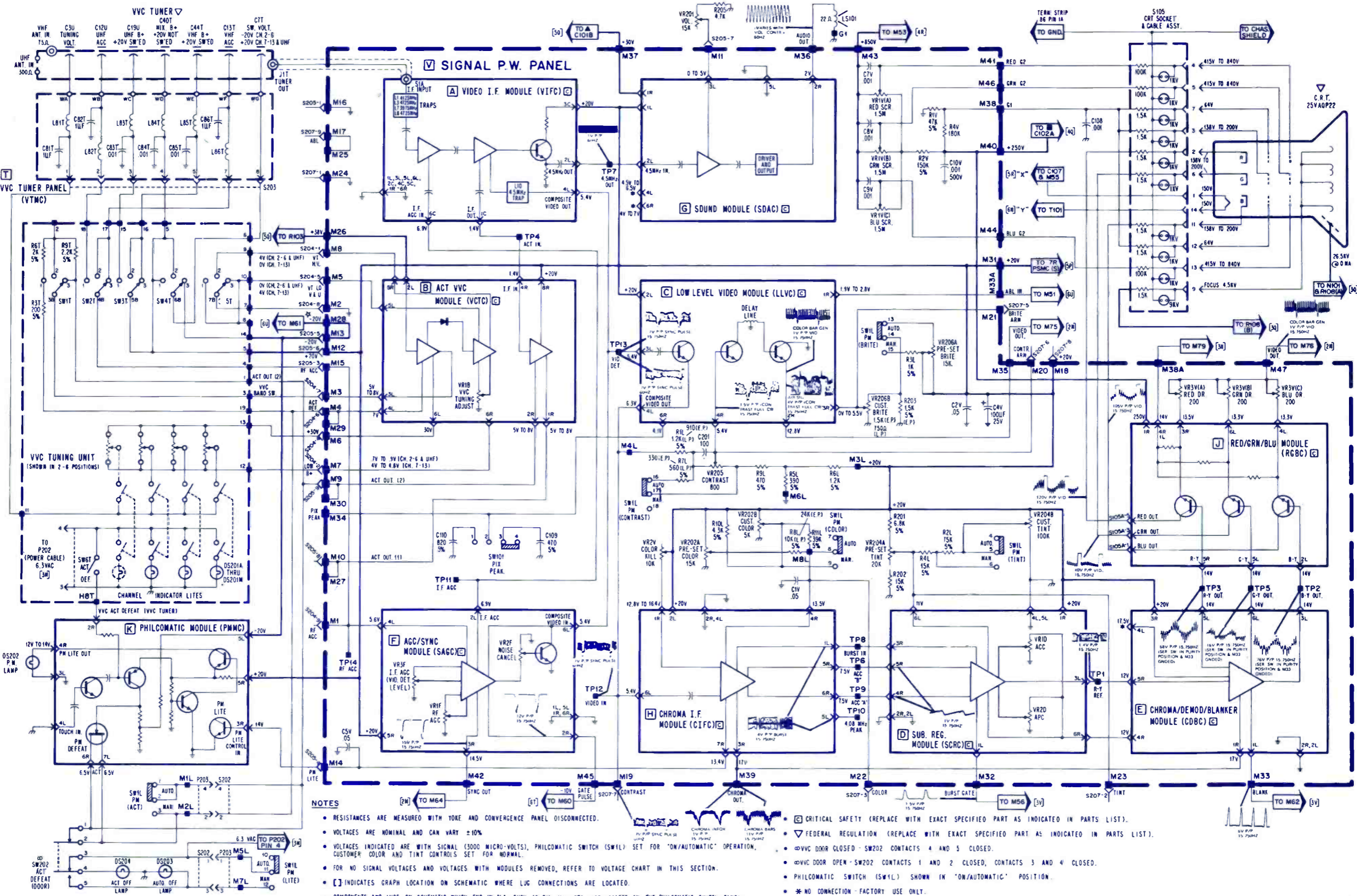
SYM-BOL	TUBE	FUNCTION	PIN NUMBERS											
			1	2	3	4	5	6	7	8	9	10	11	12
V1	6A05A	Audio Output	470K	150Ω	19Ω	17Ω	2.5K	4.2K	470K	-	-	-	-	-
V2	17B23	Damper	25Ω	25Ω	25Ω	2.1K	INF.	INF.	230K	INF.	INF.	2K	INF.	19Ω
V3	6FQ7A	Horiz. Osc.	14K	1.3M	910Ω	10Ω	7Ω	50K	110K	910Ω	INF.	-	-	-
V4	17J28	Vert. Osc. & Out.	17Ω	3M	INF.	2.2K	INF.	1.2M	1.2M	2.1K	0Ω	150K	0Ω	10Ω
V5	10KR8	Sync Sep.	0Ω	2.5M	9.5K	3Ω	7Ω	15Ω	3K*	12K	6K	-	-	-
V6	22JR6	Horiz. Out.	3K	880K	0Ω	25Ω	38Ω	21K	3K	INF.	260K	-	-	-

*Depends on meter polarity



COMPONENT LAYOUT-TOP VIEW-VHF TUNER

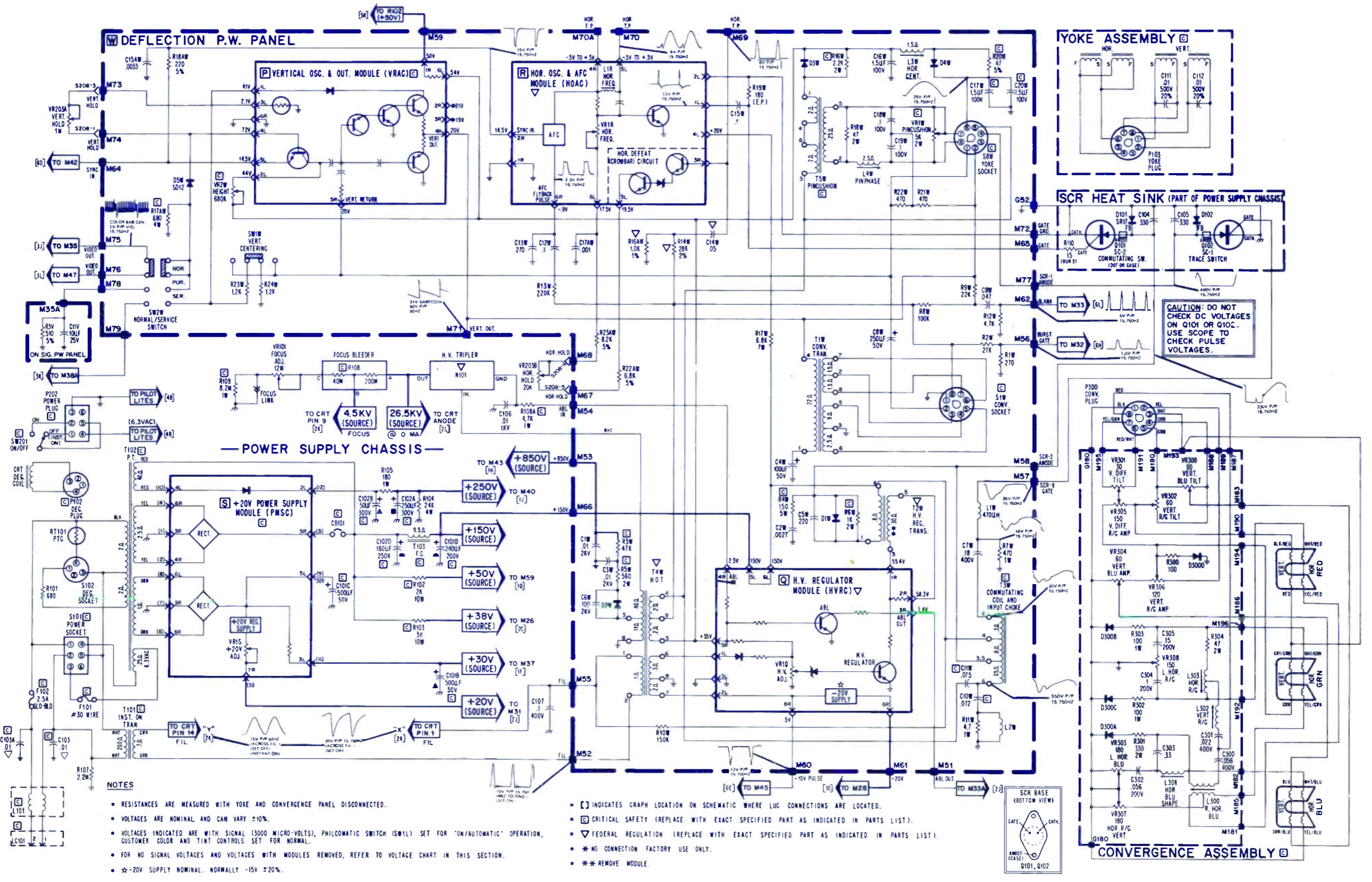




NOTES

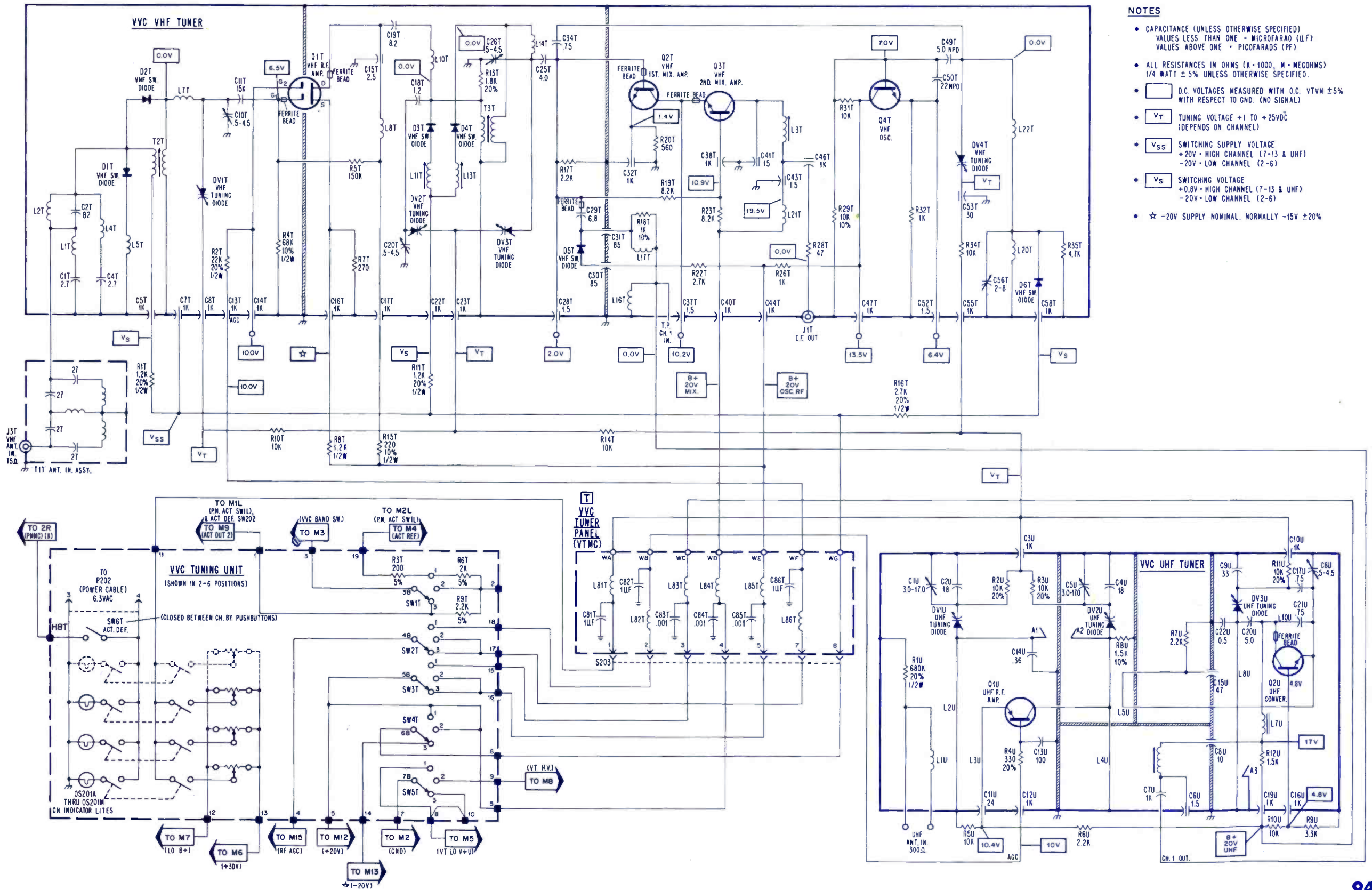
- RESISTANCES ARE MEASURED WITH YOKE AND CONVERGENCE PANEL DISCONNECTED.
- VOLTAGES ARE NOMINAL AND CAN VARY ±10%.
- VOLTAGES INDICATED ARE WITH SIGNAL (3000 MICRO-VOLTS), PHILCOMATIC SWITCH (SW1) SET FOR 'ON/AUTOMATIC' OPERATION, CUSTOMER COLOR AND TINT CONTROLS SET FOR NORMAL.
- FOR NO SIGNAL VOLTAGES AND VOLTAGES WITH MODULES REMOVED, REFER TO VOLTAGE CHART IN THIS SECTION.
- [] INDICATES GRAPH LOCATION ON SCHEMATIC WHERE LUG CONNECTIONS ARE LOCATED.
- COMPONENTS AND LUGS ON SCHEMATIC WHICH END IN 'L', SUCH AS R1L, M1L, ETC., ARE LOCATED ON THE PHILCOMATIC SWITCH PANEL.
- CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST).
- FEDERAL REGULATION (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST).
- VVC DOOR CLOSED - SW202 CONTACTS 4 AND 5 CLOSED.
- VVC DOOR OPEN - SW202 CONTACTS 1 AND 2 CLOSED, CONTACTS 3 AND 4 CLOSED.
- PHILCOMATIC SWITCH (SW1) SHOWN IN 'ON/AUTOMATIC' POSITION.
- * NO CONNECTION - FACTORY USE ONLY.
- 25 - 20V NOMINAL, NORMALLY -15V ±20%.

ADDITIONAL INFORMATION NEXT PAGE



- NOTES**
- RESISTANCES ARE MEASURED WITH YOKE AND CONVERGENCE PANEL DISCONNECTED.
 - VOLTAGES ARE NOMINAL AND CAN VARY ±10%.
 - VOLTAGES INDICATED ARE WITH SIGNAL (3000 MICRO-VOLTS), PHILCOOMATIC SWITCH (SW1) SET FOR 'ON/AUTOMATIC' OPERATION, CUSTOMER COLOR AND TINT CONTROLS SET FOR NORMAL.
 - FOR NO SIGNAL VOLTAGES AND VOLTAGES WITH MODULES REMOVED, REFER TO VOLTAGE CHART IN THIS SECTION.
 - ☆ -20V SUPPLY NOMINAL. NORMALLY -15V ±20%.
 - [] INDICATES GRAPH LOCATION ON SCHEMATIC WHERE LUG CONNECTIONS ARE LOCATED.
 - [] CRITICAL SAFETY (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST).
 - ▽ FEDERAL REGULATION (REPLACE WITH EXACT SPECIFIED PART AS INDICATED IN PARTS LIST).
 - * NO CONNECTION FACTORY USE ONLY.
 - ** REMOVE MODULE.

PHILCO-FORD
Color-TV Chassis
3CY91



- NOTES**
- CAPACITANCE (UNLESS OTHERWISE SPECIFIED) VALUES LESS THAN ONE = MICROFARAD (μF) VALUES ABOVE ONE = PICOFARADS (PF)
 - ALL RESISTANCES IN OHMS (K = 1000, M = MEGOHMS) 1/4 WATT ± 5% UNLESS OTHERWISE SPECIFIED.
 - V_T D.C. VOLTAGES MEASURED WITH O.C. VTVM ± 5% WITH RESPECT TO GND. (NO SIGNAL)
 - V_T TUNING VOLTAGE +1 TO +25VDC (DEPENDS ON CHANNEL)
 - V_{SS} SWITCHING SUPPLY VOLTAGE +20V - HIGH CHANNEL (7-13 & UHF) -20V - LOW CHANNEL (2-6)
 - V_S SWITCHING VOLTAGE +0.8V - HIGH CHANNEL (7-13 & UHF) -20V - LOW CHANNEL (2-6)
 - ☆ -20V SUPPLY NOMINAL. NORMALLY -15V ± 20%

PHILCO-FORD

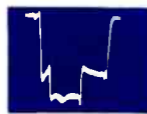
TV Chassis
21ST31V



1 2V P/P, 15.750Hz



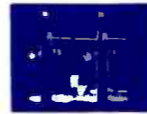
2 1.9V P/P, 15.750Hz



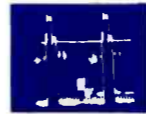
3 1.9V P/P, 15.750Hz Expanded View of Hor. Sync. Pulse



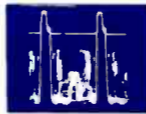
4 1.9V P/P, 15.750Hz Hor. Sync. Pulse Showing 4.5MHz Trap out of Adj.



5 95V P/P, 15.750Hz



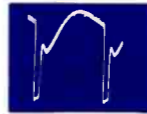
6 14V P/P (min. contrast) 90V P/P (max. contrast) 15.750Hz



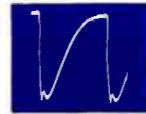
7 75V P/P, 15.750Hz



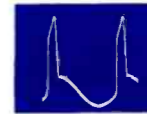
8 50V P/P, 15.750Hz



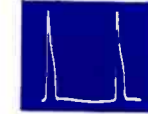
9 12.5V P/P, 15.750Hz



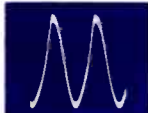
10 17V P/P, 15.750Hz



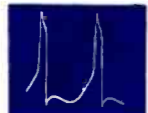
11 36V P/P, 15.750Hz



12 9V P/P, 15.750Hz



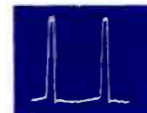
13 17V P/P, 15.750Hz



14 30V P/P, 15.750Hz



15 130V P/P, 15.750Hz



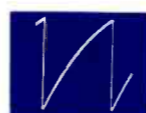
16 15.750Hz. Loose coupled to plate lead of 22J6



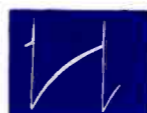
17 50V P/P, 60Hz



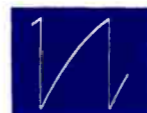
18 16V P/P, 60Hz



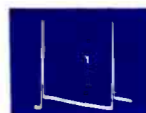
19 30V P/P, 60Hz



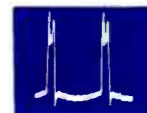
20 55V Sawtooth, 80V P/P, 60Hz



21 30V P/P, 60Hz



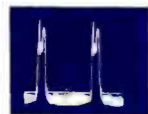
22 1150V P/P, 60Hz



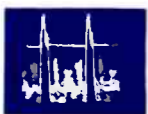
23 34V P/P, 15.750Hz



24 11V P/P, 15.750Hz



25 34V P/P, 15.750Hz



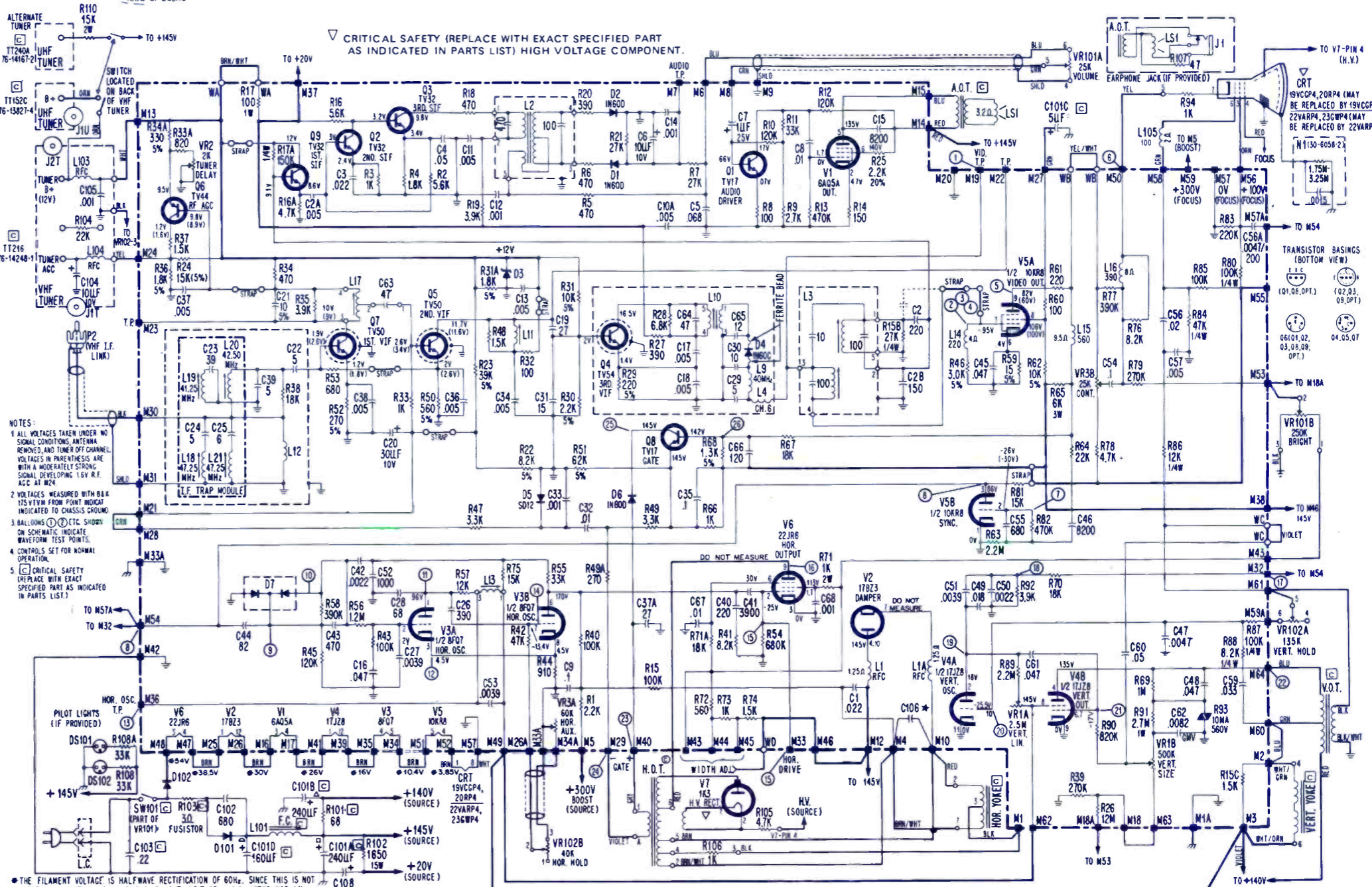
26 7.5V P/P, 15.750Hz

PANEL INTERCONNECTING LEADS

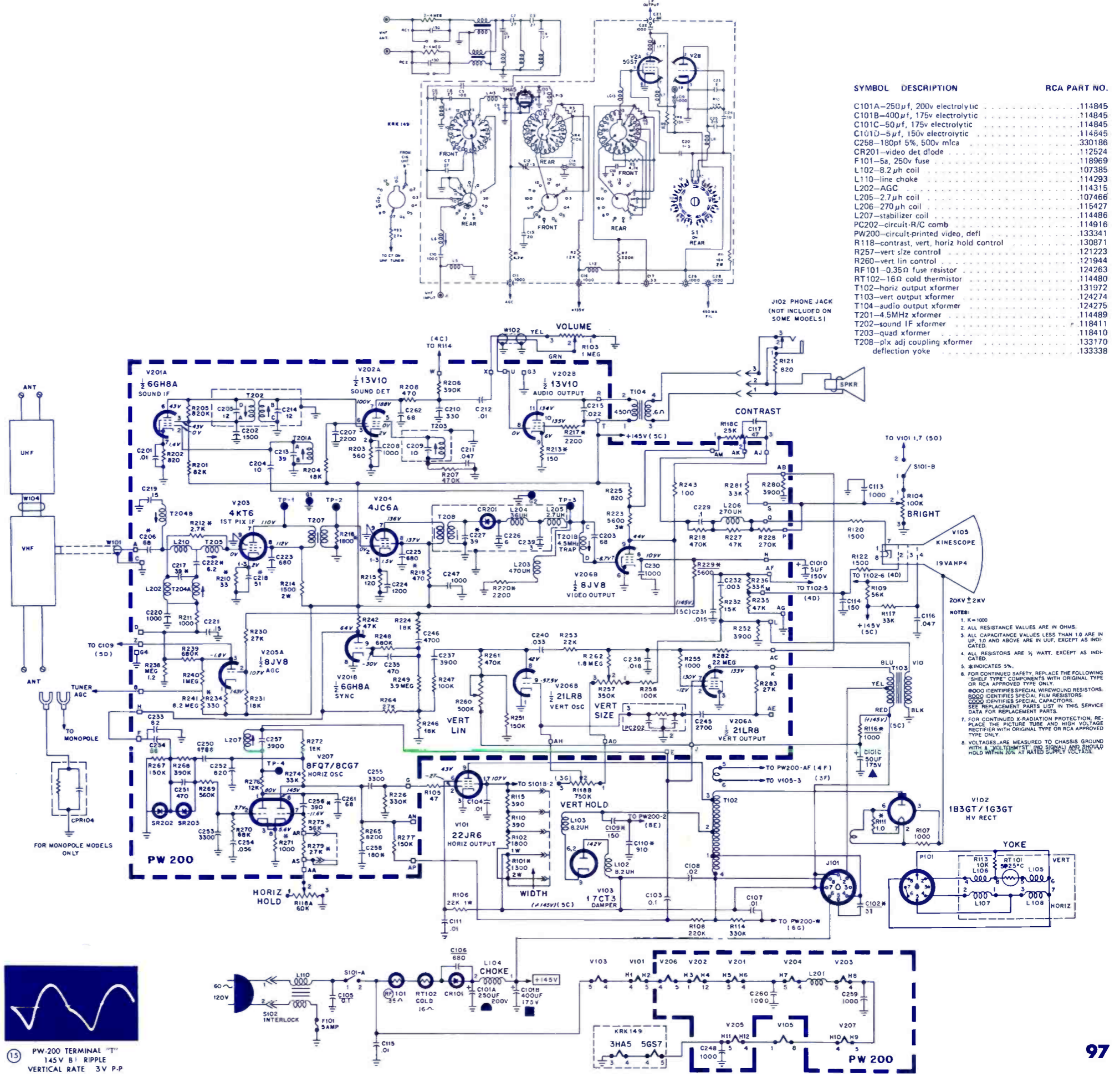
WA TO WA WC TO WC
WB TO WB WD (WIDTH ADJ. LINK)

SYMBOL DESCRIPTION PHILCO-FORD PART NO.

C101-240/240/5/160μ f. @200v, filter	30-2601-33
L3-sound take off, 4.5MHz trap coil	32-4955-2
L13-horiz stabilizer coil	32-4754-3
L18-47.25MHz trap	32-4652-78
L19-42.5MHz trap	32-4652-80
L101-filter choke	32-10162-1
N1-CRT network	30-6058-2
Q1-TV17, audio driver	34-6001-63
Q2-TV32, 2nd S1F	34-6015-12
Q3-TV32, 3rd S1F	34-6015-12
Q4-TV54, 3rd V1F	34-6015-37
Q5-TV50, 2nd V1F	34-6015-29
Q6-TV44, RF AGC	34-6016-15
Q7-TV50, 1st V1F	34-6016-29
Q8-TV17, gate	34-6001-63
Q9-TV32, 1st S1F	34-6015-12
R73-1K, width adj	
R74-1.5K, width adj	
R78-4.7K, contrast control	
R93-varistor, 560v @10ma., vert bias	33-1373-6
R103-3n, fusistor	33-1381-5
AOT-audio output xformer	32-10162-2
HOT-horiz output xformer	32-10152-1
VOT-vert output xformer	32-10160-3
VR1A-B-2.5M, vert lin, 500K, vert size	33-5645-2
VR3A-B-60K, horiz hold aux 25K contrast	33-5637-4
VR101A-B-25K, on-off volume, 250K, brite	33-5644-5
VR102A-B-40K, horiz hold, 150K, vert hold	33-5644-2
TT216 tuner, VHF TT216	76-14248-1
yoke assembly	76-14309-1



- ① TP-3 SECOND DETECTOR
VERTICAL RATE 4V P-P
- ② V205 PIN 9 VIDEO OUTPUT PLATE
VERTICAL RATE 100V P-P
- ③ C246 & C235 JUNCTION INPUT V201B
VERTICAL RATE 120V P-P
- ④ V201 PIN 1 SYNC PLATE
HORIZONTAL RATE 75V P-P
- ⑤ V205 PIN 2 AGC GRID
HORIZONTAL RATE 40V P-P
- ⑥ V205A PIN 3 AOC PLATE
HORIZONTAL RATE 900V P-P
- ⑦ V206 PIN 9 VERTICAL OSCILLATOR GRID
VERTICAL RATE 200V P-P
- ⑧ V206 PIN 2 VERTICAL OUTPUT GRID
VERTICAL RATE 30V P-P
- ⑨ PW-200, TERMINAL "L" VERTICAL OUTPUT TRANSFORMER
VERTICAL RATE 300V P-P
- ⑩ V105 PIN 2 PICTURE TUBE GRID
VERTICAL RATE 100V P-P
- ⑪ SR201 CATHODE JUNCTION HORIZONTAL PHASE DETECTOR
HORIZONTAL RATE 9V P-P
- ⑫ SR201 ANODE HORIZONTAL PHASE DETECTOR
HORIZONTAL RATE 20V P-P
- ⑬ TP-4 HORIZONTAL SINE WAVE
HORIZONTAL RATE 16V P-P
- ⑭ V101 PIN 2 HORIZONTAL OUTPUT GRID
HORIZONTAL RATE 150V P-P
- ⑮ PW-200 TERMINAL "T" 145V B¹ RIPPLE
VERTICAL RATE 3V P-P



SYMBOL	DESCRIPTION	RCA PART NO.
C101A	250µf, 200v electrolytic	114845
C101B	400µf, 175v electrolytic	114845
C101C	50µf, 175v electrolytic	114845
C101D	5µf, 150v electrolytic	114845
C258	180pf 5%, 500v mlca	330186
CR201	video det diode	112524
F101	5a, 250v fuse	118969
L102	8.2µh coil	107385
L110	line choke	114293
L202	AGC	114315
L205	2.7µh coil	107466
L206	270µh coil	115427
L207	stabilizer coil	114486
PC202	circuit-R/C comb	114916
PW200	circuit-printed video, defl	133341
R118	contrast, vert, horiz hold control	130871
R257	vert size control	121223
R260	vert lin control	121944
RF101	0.35Ω fuse resistor	124263
RT102	16Ω cold thermistor	114480
T102	horiz output xformer	131972
T103	vert output xformer	124274
T104	audio output xformer	124275
T201	4.5MHz xformer	114489
T202	sound IF xformer	118411
T203	quad xformer	118410
T208	pix adj coupling xformer	133170
	deflection yoke	133338

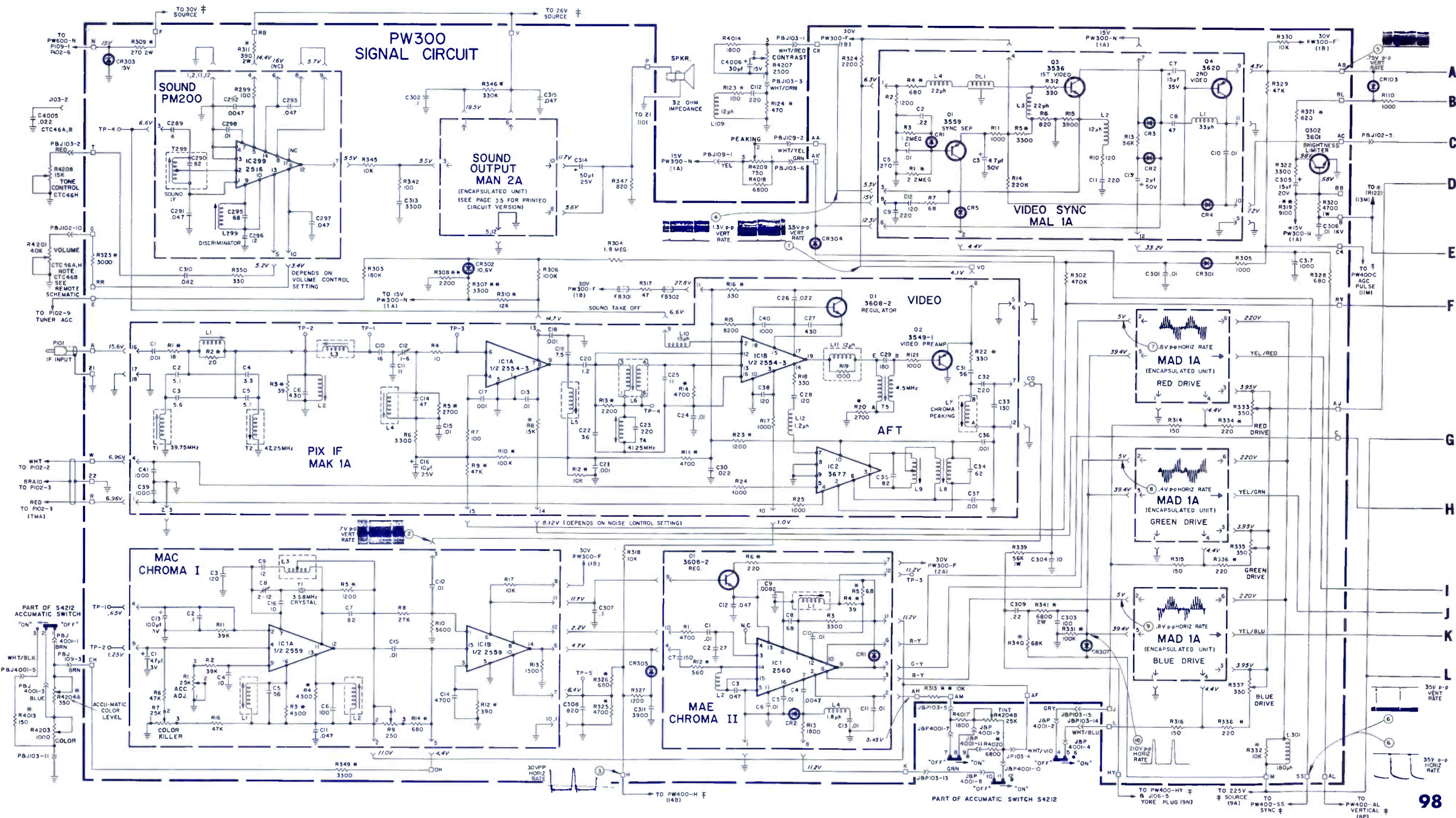
NOTES:
 1. K=1000
 2. ALL RESISTANCE VALUES ARE IN OHMS.
 3. ALL CAPACITANCE VALUES LESS THAN 1.0 ARE IN UF, 1.0 AND ABOVE ARE IN UUF, EXCEPT AS INDICATED.
 4. ALL RESISTORS ARE 1/2 WATT, EXCEPT AS INDICATED.
 5. *INDICATES 5%.
 6. FOR CONTINUED SAFETY, REPLACE THE FOLLOWING "SHELF TYPE" COMPONENTS WITH ORIGINAL TYPE OR RCA APPROVED TYPE ONLY:
 *0000 IDENTIFIES SPECIAL WIREWOUND RESISTORS.
 *0000 IDENTIFIES SPECIAL FILM RESISTORS.
 *0000 IDENTIFIES SPECIAL CAPACITORS.
 SEE REPLACEMENT PARTS LIST IN THIS SERVICE DATA FOR REPLACEMENT PARTS.
 7. FOR CONTINUED X-RADIATION PROTECTION, REPLACE THE PICTURE TUBE AND HIGH VOLTAGE RECTIFIER WITH ORIGINAL TYPE OR RCA APPROVED TYPE ONLY.
 8. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A MULTIMETER (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE.

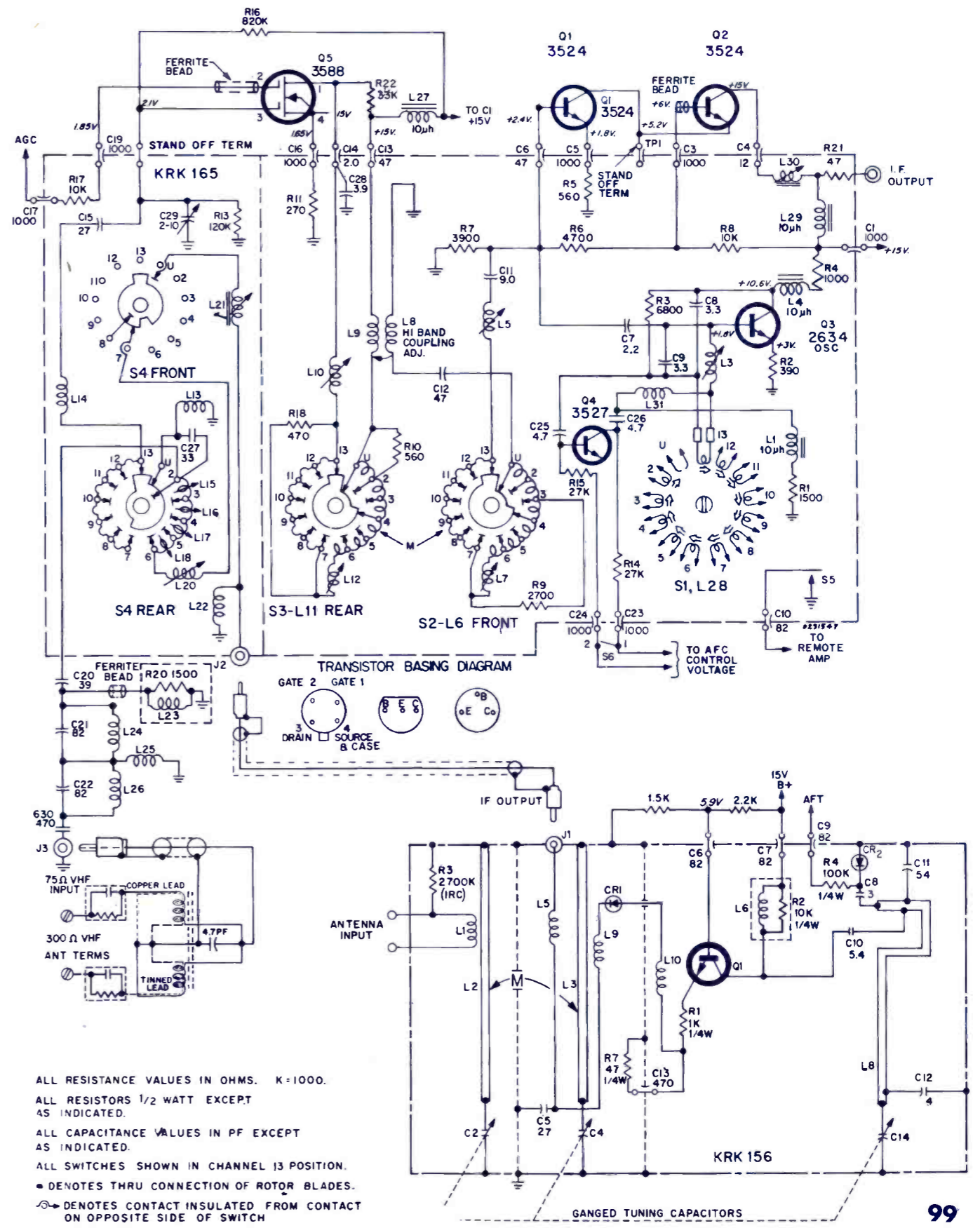
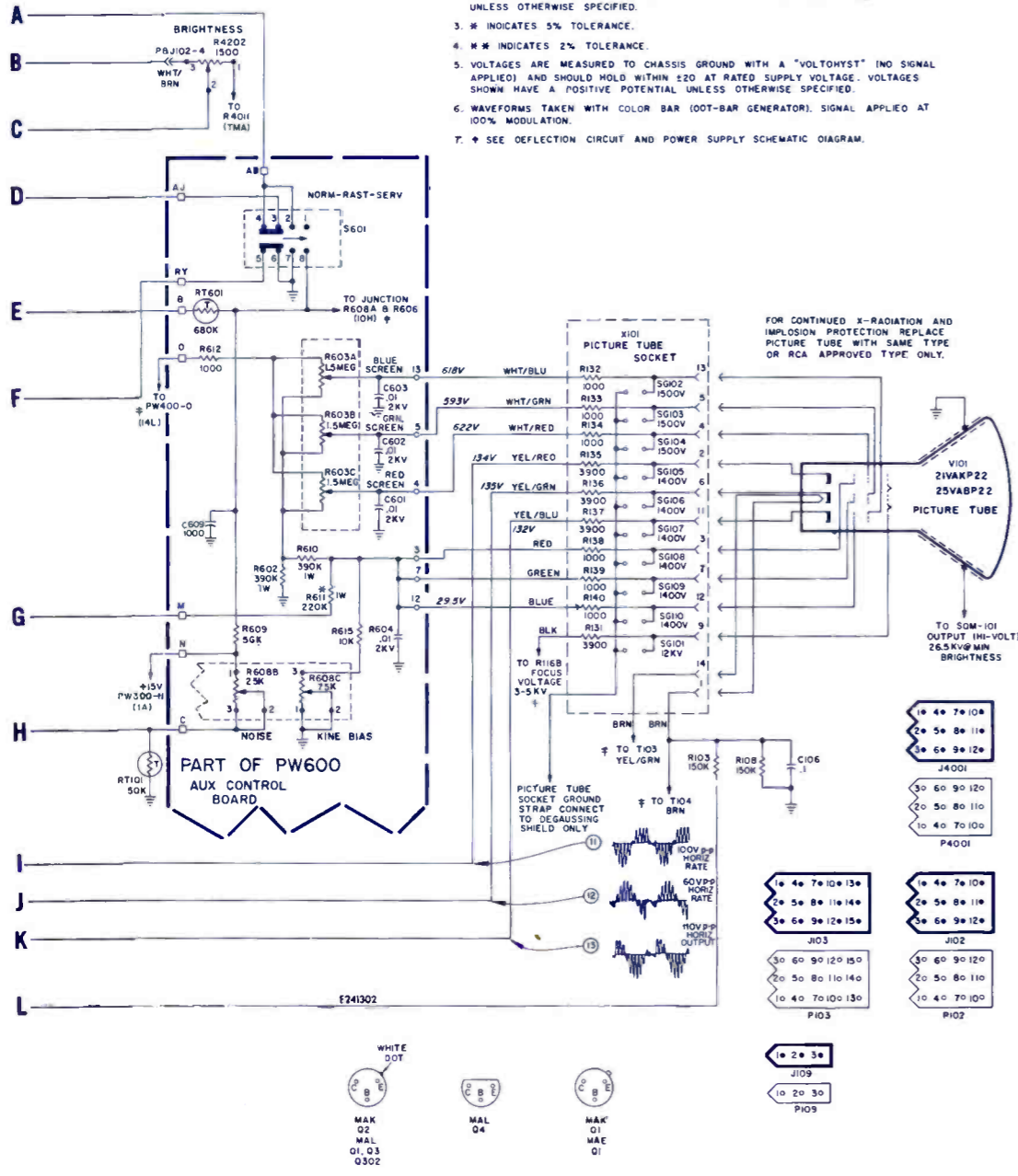
SYMBOL DESCRIPTION RCA PART NO.

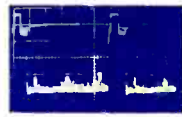
C103A-600 µf, 100v elect	133446
C103B-100 µf, 250v elect	133446
C103C-100 µf, 250v elect	133446
C104A-300 µf, 175v elect	133447
C104B-250 µf, 175v elect	133447
C105A-750 µf, 50v elect	133449
C105B-500 µf, 40v elect	133449
C105C-500 µf, 40v elect	133449
R116-control, focus	129925
R1-ACC adjust resistor	132170
R7-color killer resistor	132170
R9-250Ω variable resistor	133403
R15-variable, horiz freq resistor	132170

R412-control, hi voltage adjust resistor	133355
R608A-resistor-control, vert height/noise/kinescope bias	132381
RT101-thermistor-temp comp	116109
RT1-thermistor-temp comp	132503
IC1-circuit-integrated	132314
RT1-thermistor-50K cold	116109
DL1-line-delay	132840
IC299-circuit-integrated	130751
CR401-trace diode	131475
CR402-commutating diode	131475
RT601-thermistor-temp comp	134009
T103-xformer power	133443
T104-standby xformer, CTC46A,H	132595
T1-horiz, osc xformer	126729

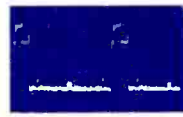
T2-47.25MHz trap	132157
T4-41.25MHz trap	132150
T5-4.5MHz trap	132135
T299-input xformer	130120
T402-regulator xformer	132622
T403-flyback xformer	134563
L1-34 µh coil	132137
L2-47 µh coil	132821
L2-coil 330 µh	126834
L3-1000 µh coil	126839
L1-47.25MHz, null adjust coil	132159
L6-IF xformer	132146
L1-33 µh coil	130023
L2-12 µh coil	126832
L299-discriminator coil	130121



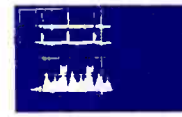




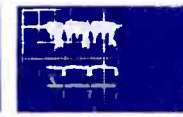
6 V202-9 Sync. Sep. Grid 46VPP Horiz. Rate



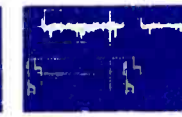
7 PW200-KK 2nd Video Plate 79VPP Horiz. Rate



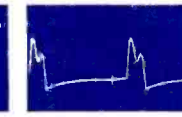
8 PW200-KK 2nd Video Plate 79VPP Vert. Rate



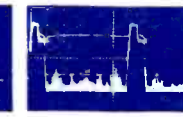
9 V203-9 2nd Video Grid 6.7VPP Vert. Rate



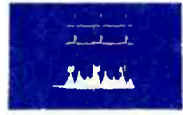
10 V203-9 2nd Video Grid 6.7VPP Horiz. Rate



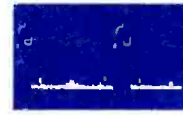
11 PW200-D AGC Keying Pulse 640VPP Horiz. Rate



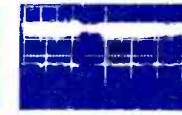
12 V203-2 AGC Grid 41VPP Horiz. Rate



1 TP201 2nd Detector 2VPP Vert. Rate



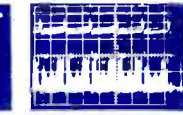
2 TP201 2nd Detector 2VPP Horiz. Rate



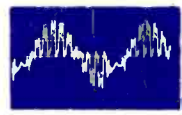
3 V202-1 Sync. Sep. Plate 64VPP Vert. Rate



4 V202-1 Sync. Sep. Plate 50VPP Horiz. Rate



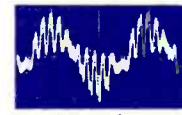
5 V202-9 Sync. Sep. Grid 46VPP Vert. Rate



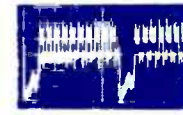
13 V701-9 (Color) G-Y Amplifier Grid 2.1VPP Horiz. Rate



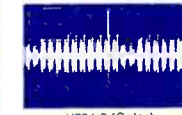
14 PW700-K Video 'Y' Signal (Color) 60VPP Horiz. Rate



15 PW700-3 Color 'R-Y' 92VPP Horiz. Rate



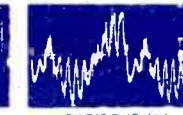
16 V707-2 (Color) 3rd Video Grid 4.8VPP Horiz. Rate



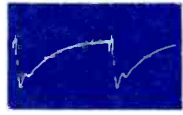
17 V704-9 (Color) 2nd Bandpass Grid 1VPP Horiz. Rate



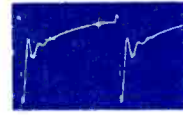
18 V701-2 (Color) 1st Bandpass Grid 3.8VPP Horiz. Rate



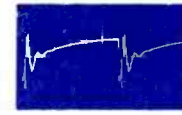
19 PW700-7 (Color) 'G-Y' 28VPP Horiz. Rate



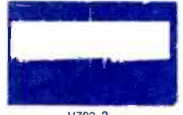
17 V204-1 (PW200-W) Horiz. Osc. Plate 17VPP Horiz. Rate



18 V204-7 Horiz. Osc. Grid 540VPP Horiz. Rate



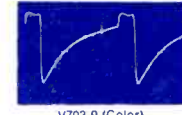
19 L215-C Horiz. Osc. Coil 320VPP Horiz. Rate



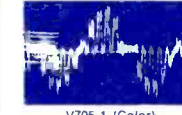
20 V703-2 Osc. Grid (Color) 12VPP Horiz. Rate



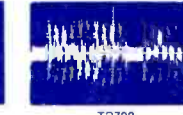
21 V702-5 Burst Plate 250VPP Horiz. Rate



22 V703-9 (Color) Blanking Grid 225VPP Horiz. Rate

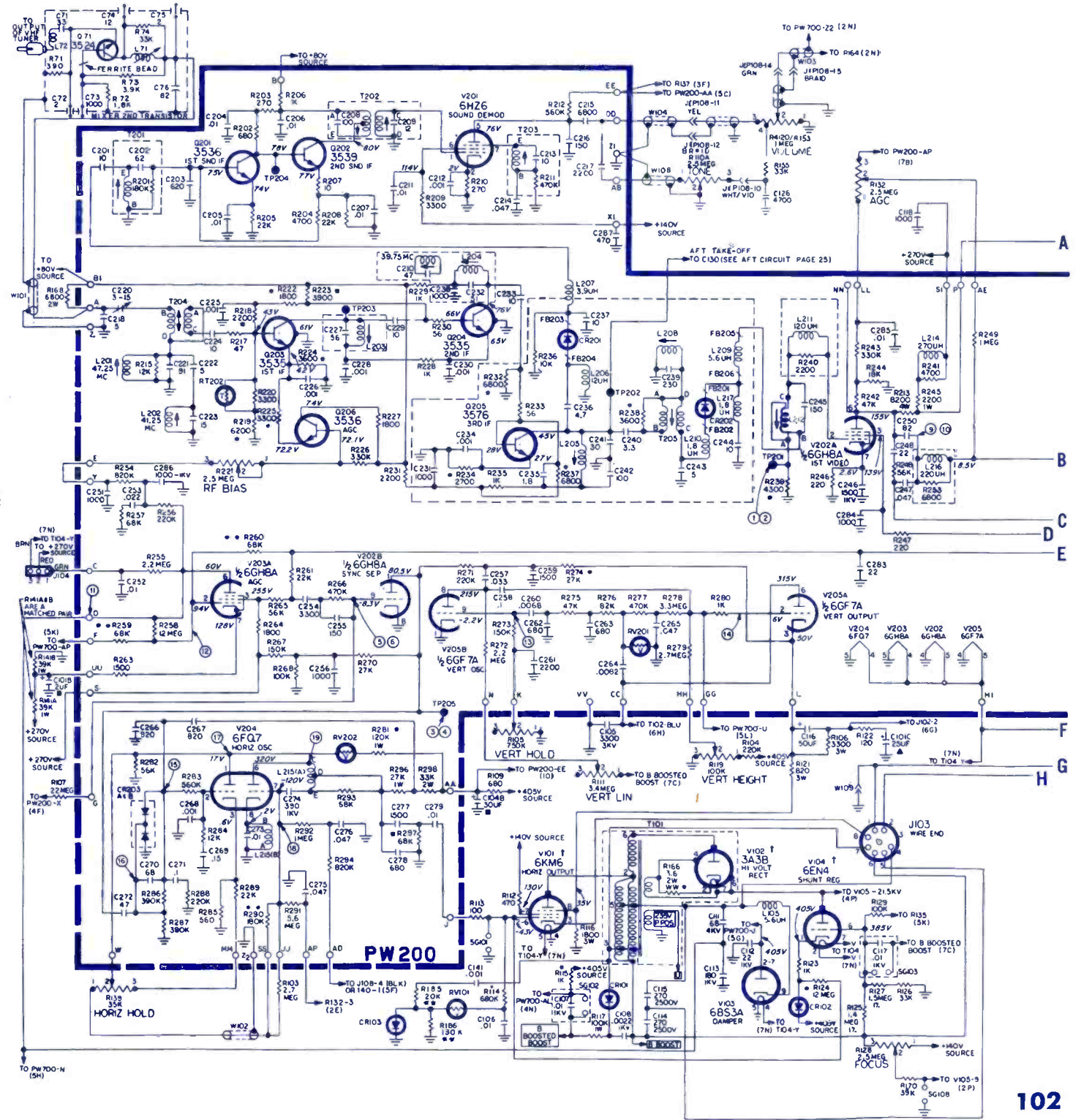
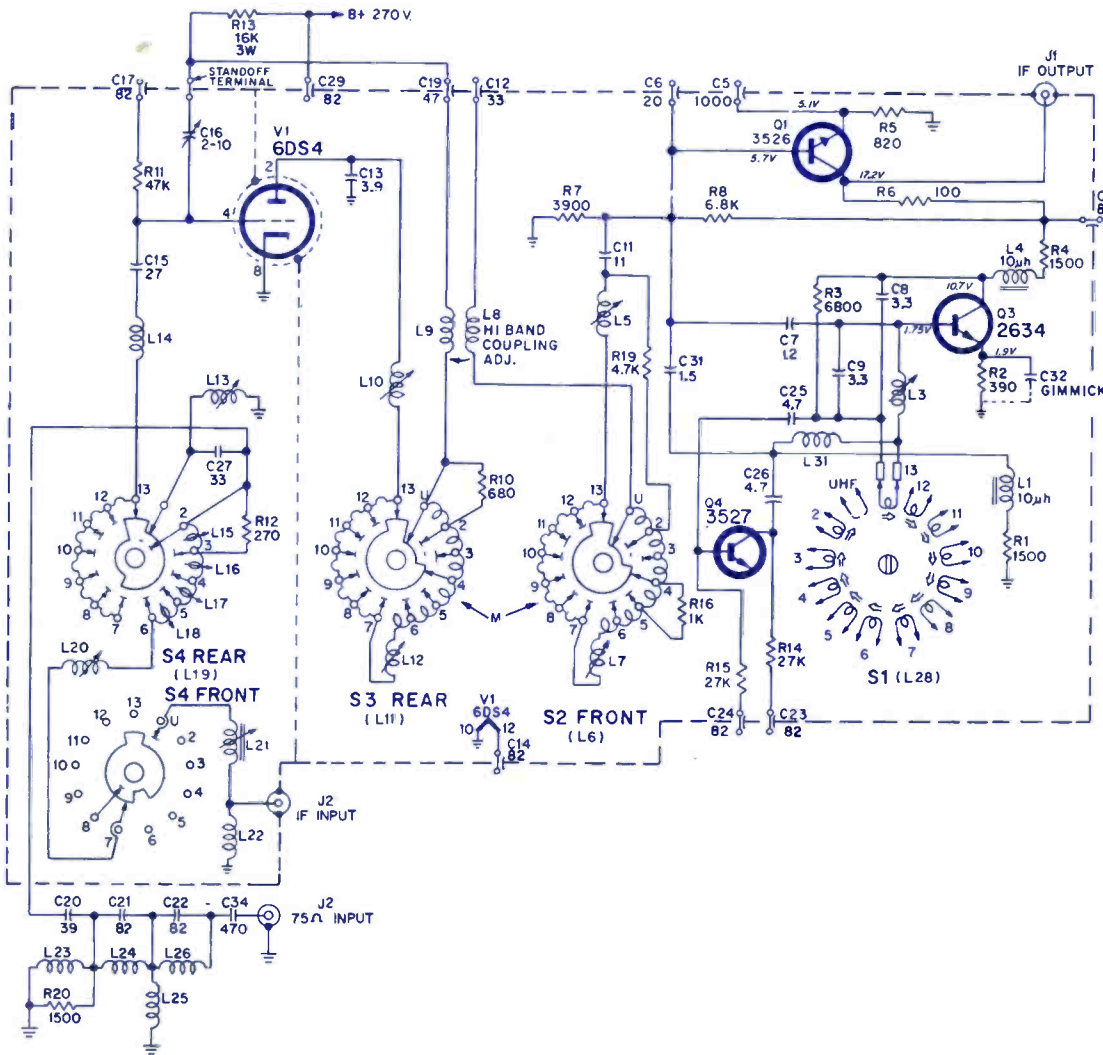


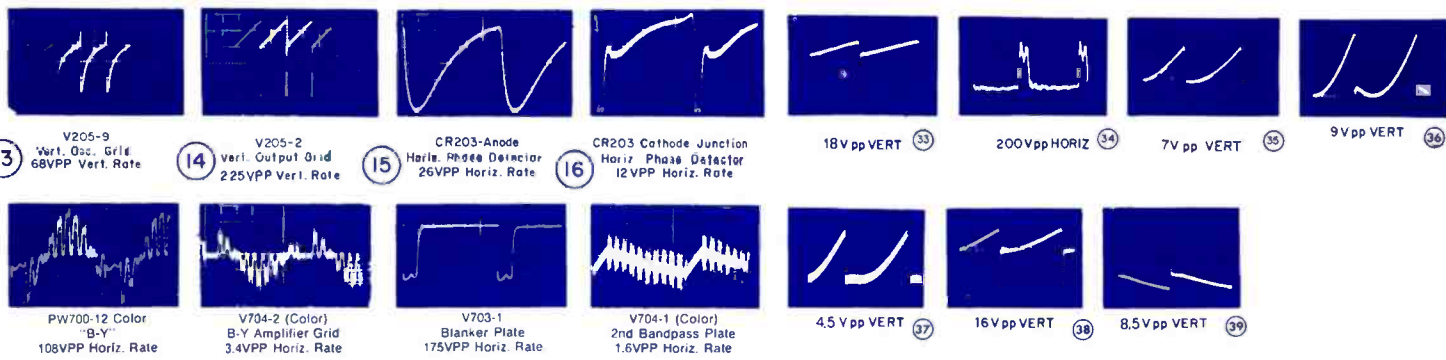
23 V705-1 (Color) R-Y Amplifier Grid 2.8VPP Horiz. Rate



24 TP702 2nd Bandpass 3.8VPP Horiz. Rate

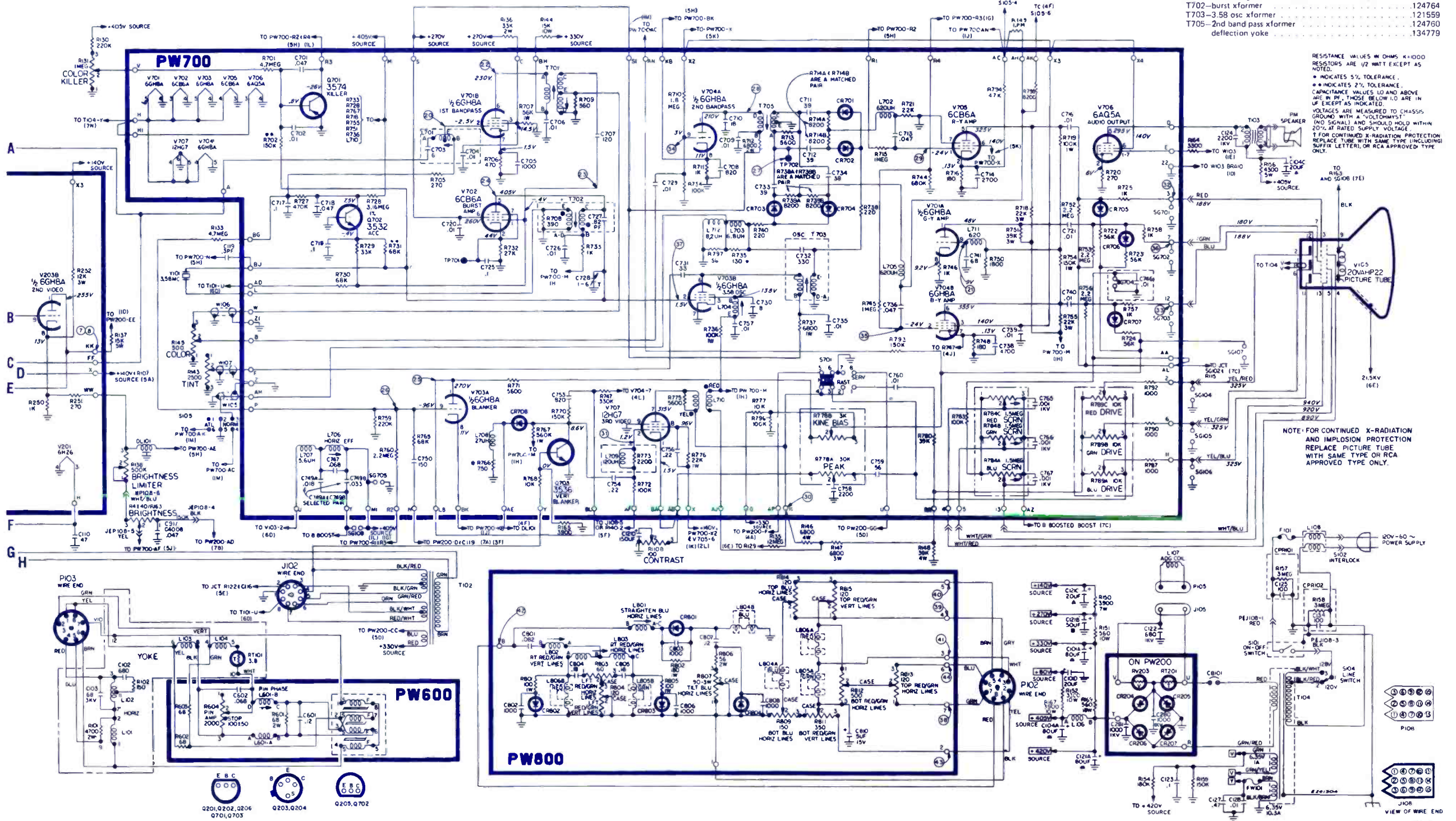
TUNER SCHEMATIC DIAGRAM

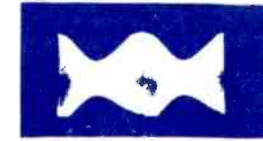




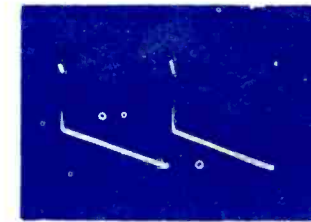
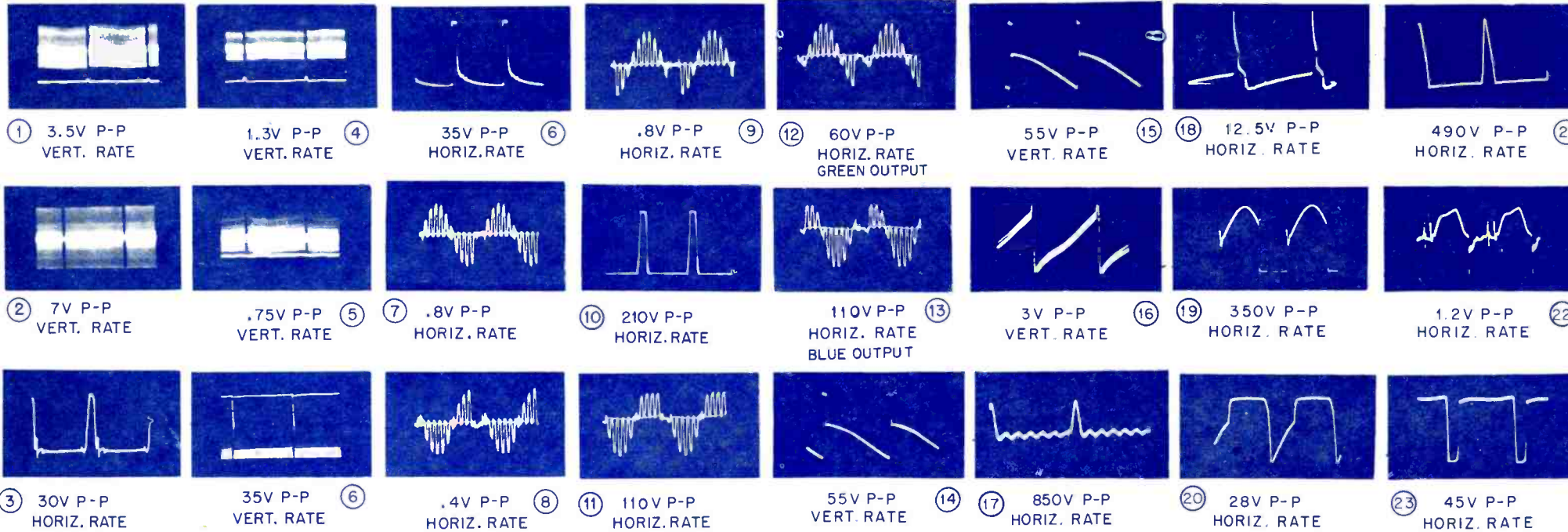
SYMBOL	DESCRIPTION	RCA PART NO.
C101A	80 μ f/450v elect	124665
C101B	2 μ f/350v elect	124665
C101C	25 μ f/25v elect	124665
C101D	20 μ f/150v elect	124665
C104A	80 μ f/450v elect	116503
C104B	30 μ f/450v elect	116503
C104C	20 μ f/450v elect	116503
C121A	80 μ f/450v elect	123491
C121B	50 μ f/450v elect	123491
C121C	20 μ f/250v elect	123491
C121D	150 μ f/25v elect	123491
CB101	1.75a circuit breaker	133066
DL101	delay line	128258
R105	750K vert hold control	127881
R110A	2.5M tone control	127879
R110B	100N contrast control	127879
R111	3.4M vert lin control	114020
R119	100K vert height control	122176
R128	2.5M focus control	131634
R131	1M color killer control	112841
R132	2.5M AGC control	124669
R138	500K bright limiter control	112842
R139	35K horiz hold control	127880
R143	2500 Ω tint control	131061
R145	500 Ω color control	115781
RV101	320, 10% varistor	118742
T101	HV xformer	132375
T102	vert output xformer	130092
T103	audio xformer	131370
T104	post-acc xformer	126489
L201	47.25MHz coil	124803
L202	47.25MHz coil	121564
L208	4.25MHz trap	124804
L212	4.5MHz trap	124810
L215	horiz sine wave	116506
R221	2.5M R.F. bias control	126667
RT201	102N cold thermistor	107191
RT202	4300N/25 $^{\circ}$ cold thermistor	124813
RV201	635v, 15% varistor	130147
RV202	110v/6ma varistor	114862
RV203	8v/15ma varistor	126424
T203	quad xformer	124709
L706	horiz eff coil	122918
R778	kine bias, peaking control	121588
R784	red/blue/green screen control	126763
R789	red/blue/green drive control	121575
T702	burst xformer	124764
T703	3.58 osc xformer	121559
T705	2nd band pass xformer	124760
	deflection yoke	134779

RCA SALES CORP.
Color TV Chassis
CTC50 Series

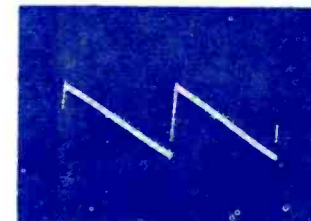




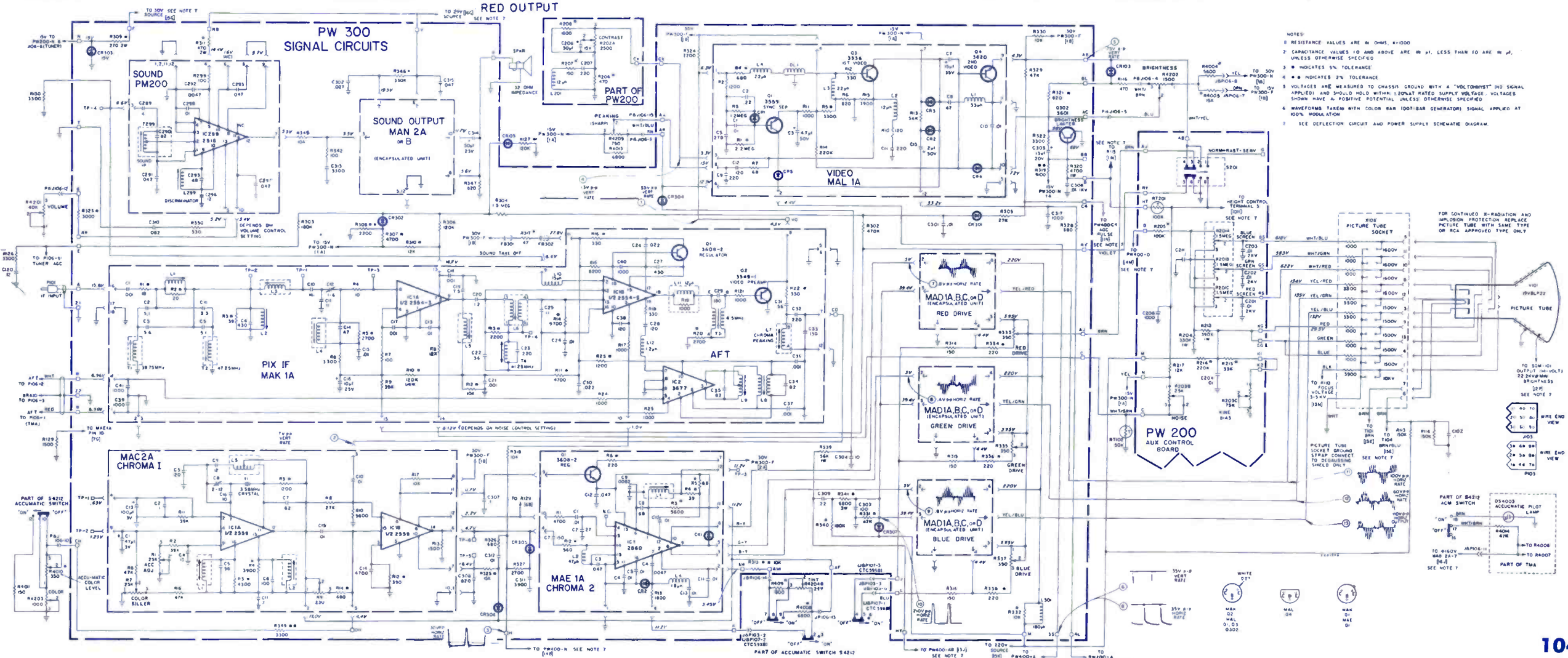
28V P-P HORIZ. RATE (24)



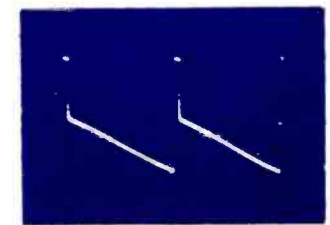
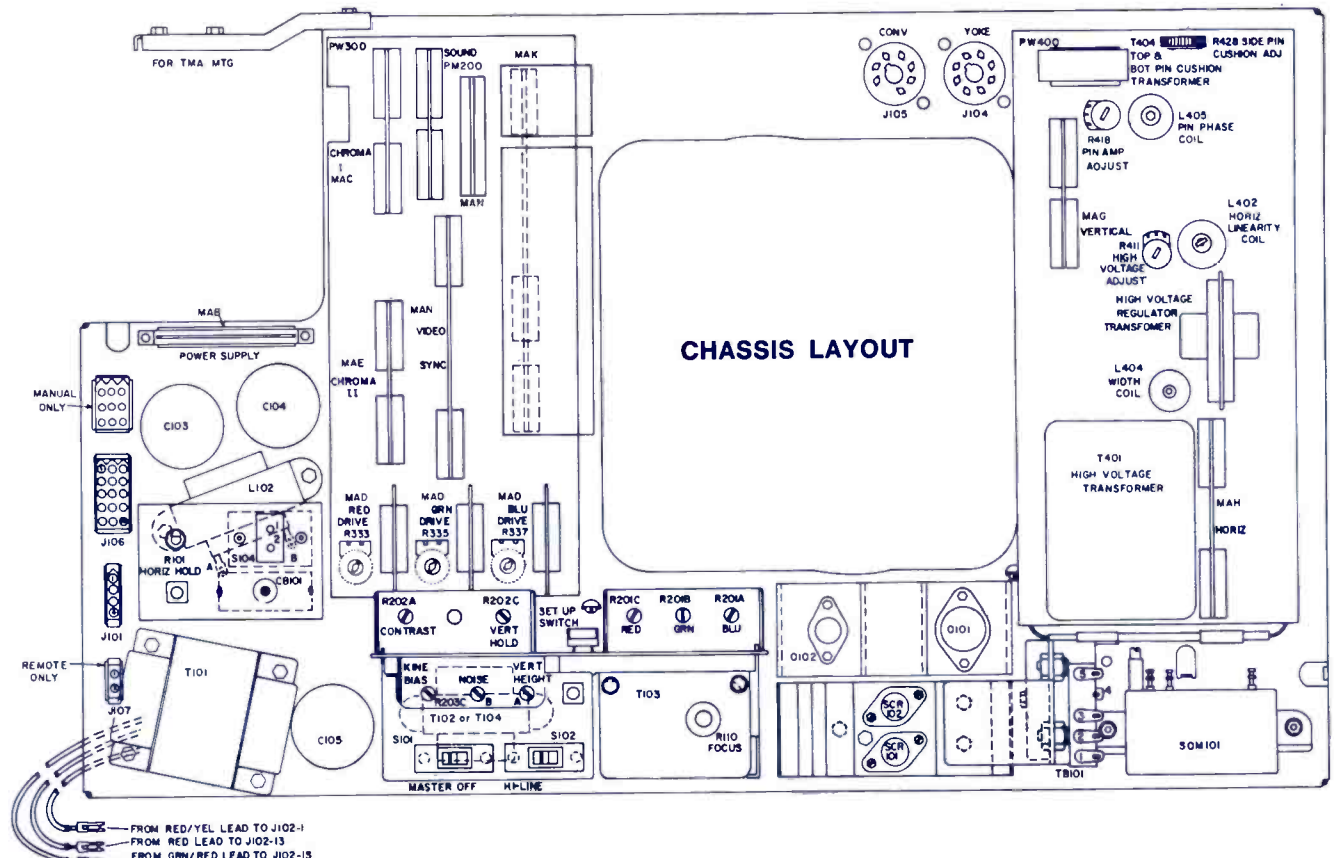
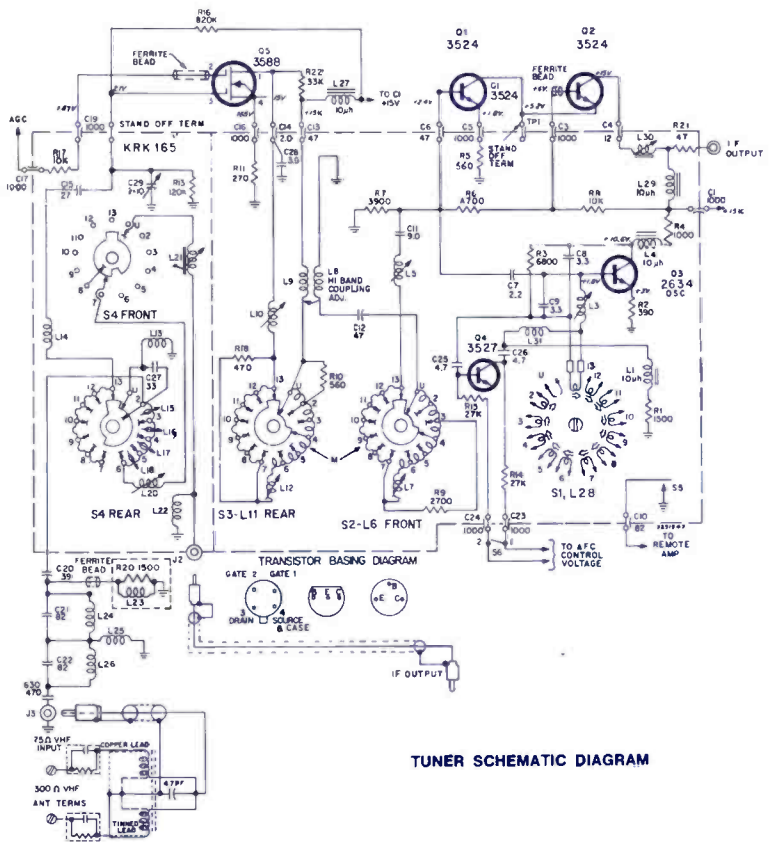
55 VPP VERTICAL RATE (25)



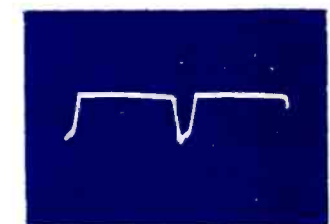
4 VPP VERTICAL RATE (26)



- NOTES:
 1. RESISTANCE VALUES IN OHMS, K=1000
 2. CAPACITANCE VALUES 10 AND ABOVE ARE IN PF. LESS THAN 10 ARE IN μ F.
 3. * INDICATES 5% TOLERANCE
 4. ** INDICATES 2% TOLERANCE
 5. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMIST" (NO SIGNAL APPLIED) AND SHOULD HOLD WITHIN $\pm 20\%$ AT RATED SUPPLY VOLTAGE. VOLTAGES SHOWN HAVE A POSITIVE POTENTIAL UNLESS OTHERWISE SPECIFIED.
 6. WAVEFORMS TAKEN WITH COLOR BAR (100% BAR GENERATOR) SIGNAL APPLIED AT 100% MODULATION.
 7. SEE DEFLECTION CIRCUIT AND POWER SUPPLY SCHEMATIC DIAGRAM.

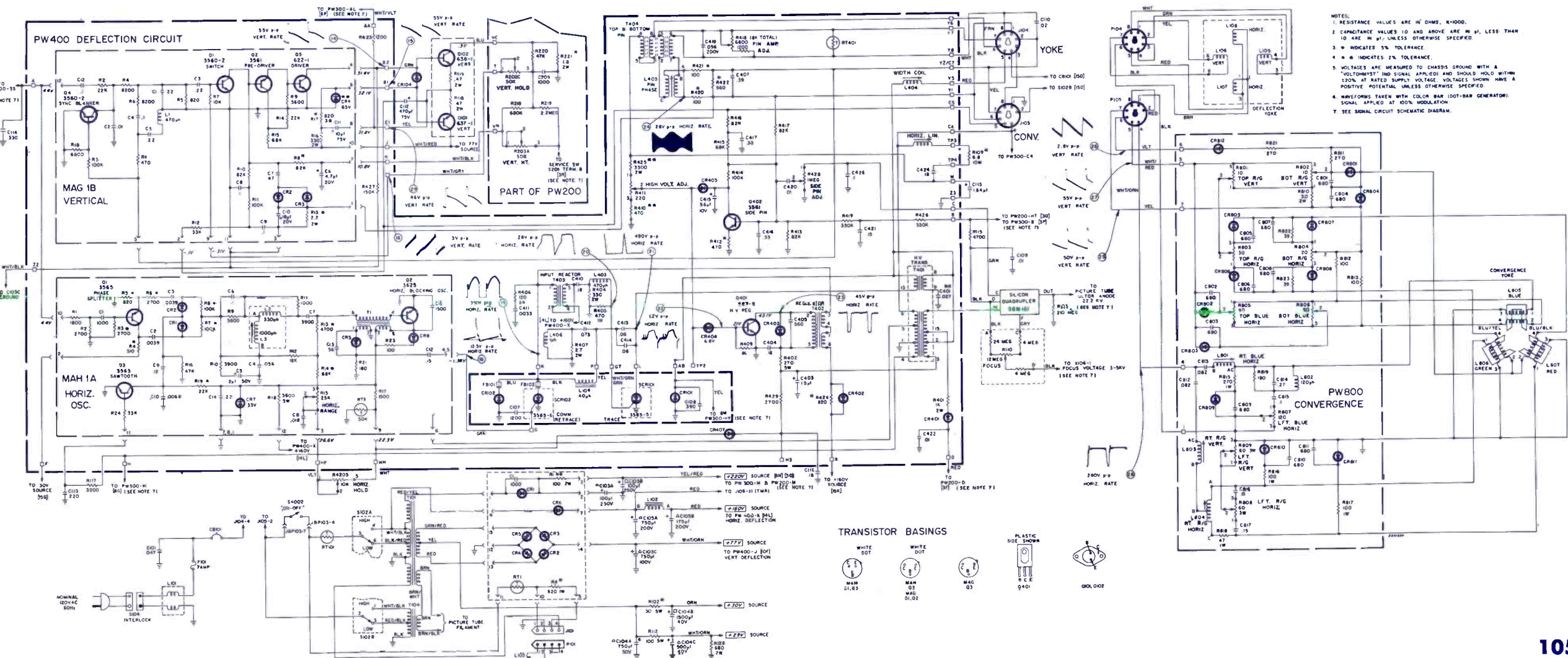


27 60 VPP VERTICAL RATE



28 250 VPP HORIZONTAL RATE

FROM RED/YEL LEAD TO J102-1
FROM RED LEAD TO J102-13
FROM GRN/RED LEAD TO J102-15

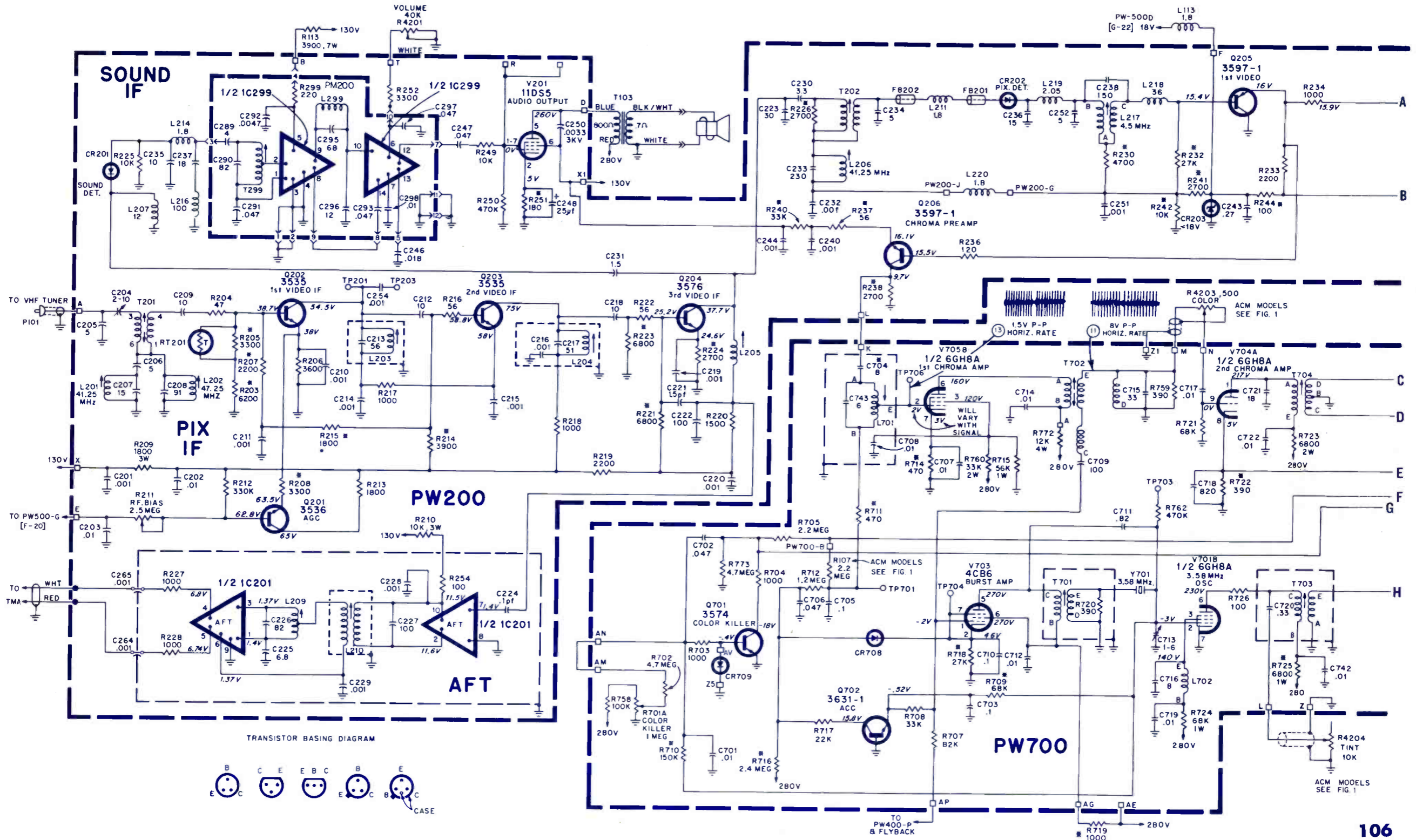


- NOTES:
1. RESISTANCE VALUES ARE IN OHMS, K=1000.
 2. CAPACITANCE VALUES 10 AND ABOVE ARE IN PF, LESS THAN 10 ARE IN PICO-UNLESS OTHERWISE SPECIFIED.
 3. # INDICATES 5% TOLERANCE.
 4. # # INDICATES 2% TOLERANCE.
 5. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMIST" INTO SIGNAL APPLIED AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE. VOLTAGES SHOWN HAVE A POSITIVE POTENTIAL UNLESS OTHERWISE SPECIFIED.
 6. WAVEFORMS TAKEN WITH COLOR BAR (DOT-BAR) GENERATOR; SIGNAL APPLIED AT 100% MODULATION.
 7. SEE SIGNAL CIRCUIT SCHEMATIC DIAGRAM.

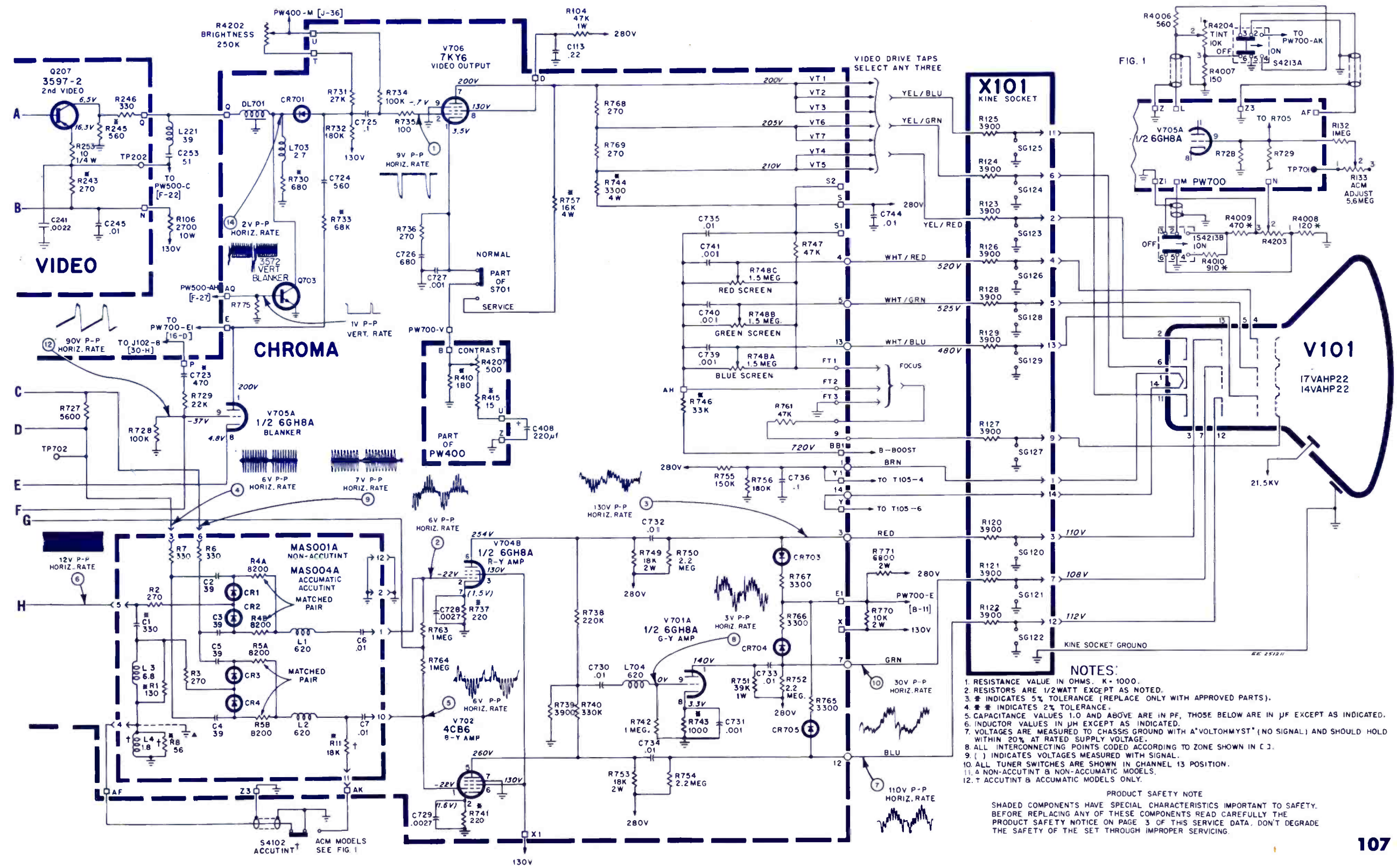
SYMBOL	DESCRIPTION	RCA PART NO.
C105A	special capacitor	132993
C105B	special capacitor	132993
C105C	special capacitor	132993
C106A	special capacitor	126340
C106B	special capacitor	126340
C8101	circuit breaker	135700
F101	fuse-5a	118969
R4202	var comp, tint CTC 51E	130621
R4202	var comp, tint CTC 51XU	133742
R4203	var comp, brite CTC 51E	130621
R4203	var comp, brite CTC 51XU	133742
R4204	var comp, color CTC 51E	130621
R4204	var comp, color CTC 51XU	133742
RT102	thermistor	127227
RT103	thermistor	136226

T102	x-former, CTC 52 series	133747
T102	x-former, CTC 51 series	133739
T104	x-former	130092
T105	x-former	135773
1C299	circuit, integrated	130751
L299	coil, discriminator	130121
T299	x-former, input	130120
1C201	circuit, integ aft	130130
RT11	var comp	130137
RT201	thermistor, 4300n, cold	124813
T201	x-former	130104
T202	x-former	124708
T703	x-former	121559
R4207	var comp	133180
RV401	varistor	133181
RV402	varistor	133137
TF401	fuse	135930

L501	coil	109947
R604	var comp	130995
T601	x-former	130589
DL701	delay line	133952
R701	var comp	130107
R701A	var comp killer	130107
R701B	var comp height	130107
R701C	var comp lin	130107
RV701	varistor	126424
T701	x-former	130104
T702	x-former	130100
T703	x-former	121559
T704	x-former	130101
	yoke, deflect assembly, CTC 52	135852
	yoke, deflect assembly CTC 51	136425
RT101	thermistor	114742

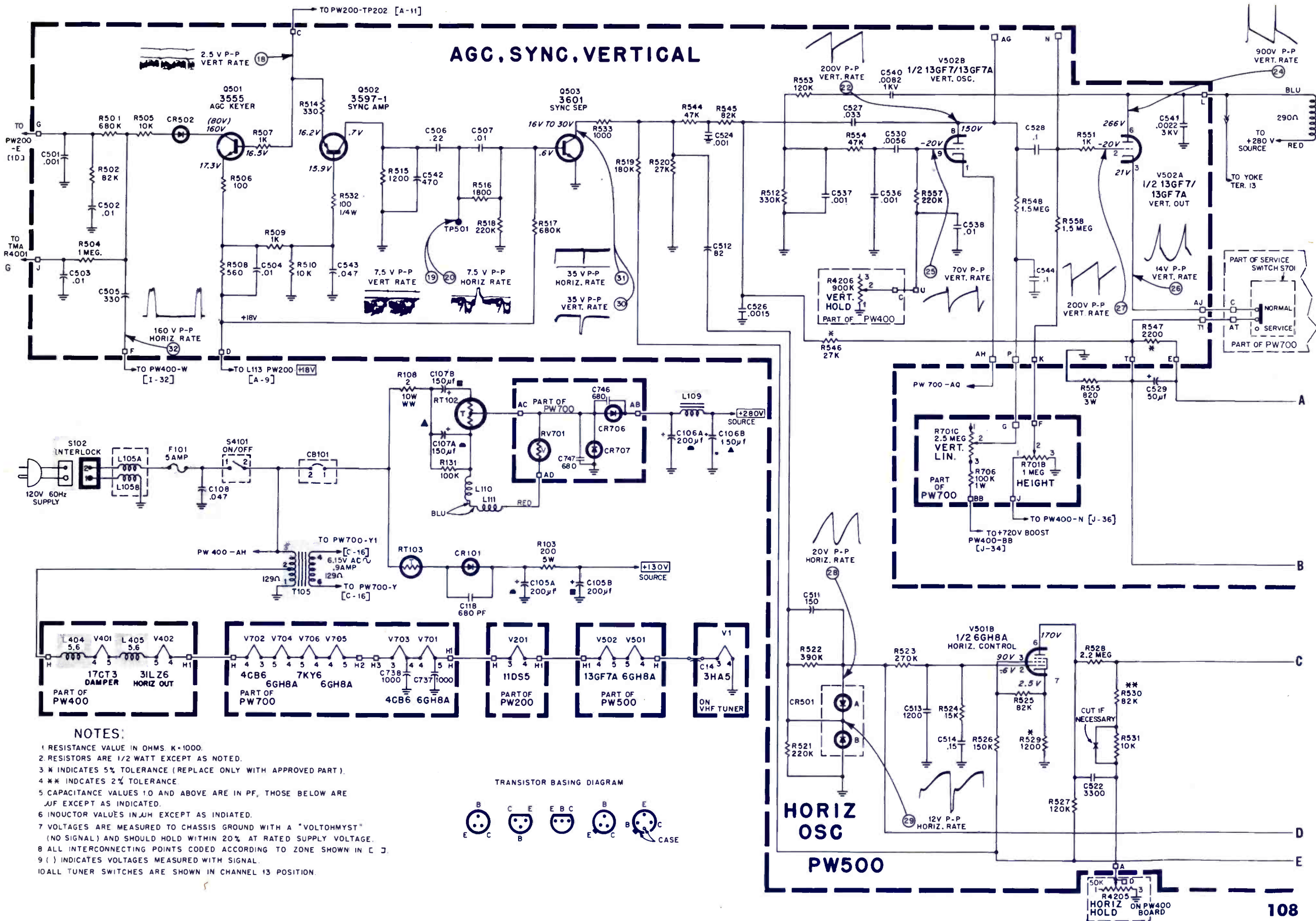


RCA CONTINUED NEXT PAGE



- NOTES:**
1. RESISTANCE VALUE IN OHMS. K=1000.
 2. RESISTORS ARE 1/2 WATT EXCEPT AS NOTED.
 3. * INDICATES 5% TOLERANCE (REPLACE ONLY WITH APPROVED PARTS).
 4. # INDICATES 2% TOLERANCE.
 5. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN PF, THOSE BELOW ARE IN μ F EXCEPT AS INDICATED.
 6. INDUCTOR VALUES IN μ H EXCEPT AS INDICATED.
 7. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMYST" (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE.
 8. ALL INTERCONNECTING POINTS CODED ACCORDING TO ZONE SHOWN IN C.J.
 9. () INDICATES VOLTAGES MEASURED WITH SIGNAL.
 10. ALL TUNER SWITCHES ARE SHOWN IN CHANNEL 13 POSITION.
 11. A NON-ACCUTINT & NON-ACCUMATIC MODELS.
 12. † ACCUTINT & ACCUMATIC MODELS ONLY.

PRODUCT SAFETY NOTE
SHADED COMPONENTS HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE ON PAGE 3 OF THIS SERVICE DATA. DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

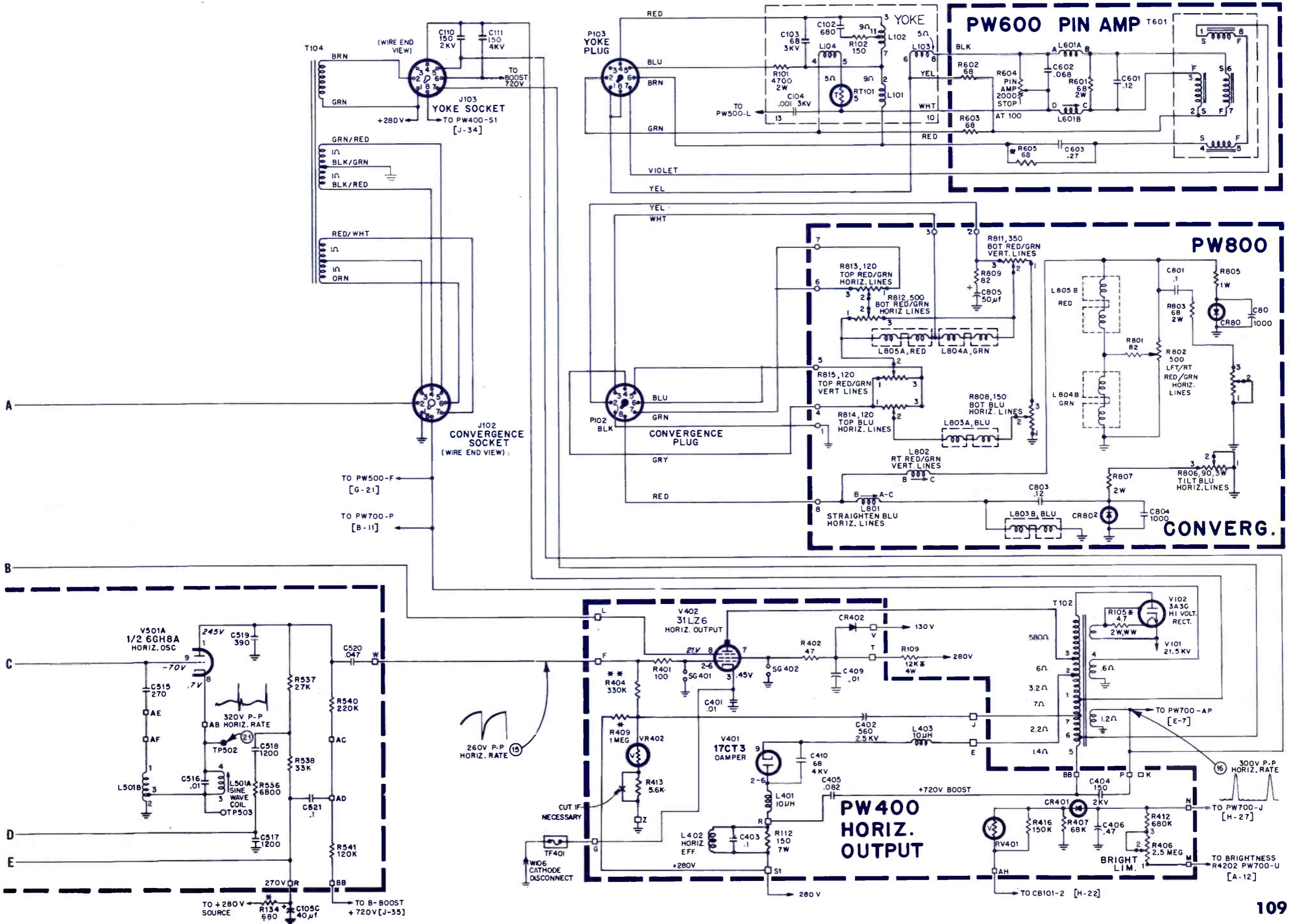


NOTES:

- 1 RESISTANCE VALUE IN OHMS, K=1000.
- 2 RESISTORS ARE 1/2 WATT EXCEPT AS NOTED.
- 3 * INDICATES 5% TOLERANCE (REPLACE ONLY WITH APPROVED PART).
- 4 ** INDICATES 2% TOLERANCE.
- 5 CAPACITANCE VALUES 10 AND ABOVE ARE IN PF, THOSE BELOW ARE μ F EXCEPT AS INDICATED.
- 6 INDUCTOR VALUES IN μ H EXCEPT AS INDICATED.
- 7 VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHMYST" (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE.
- 8 ALL INTERCONNECTING POINTS CODED ACCORDING TO ZONE SHOWN IN C 3.
- 9 () INDICATES VOLTAGES MEASURED WITH SIGNAL.
- 10 ALL TUNER SWITCHES ARE SHOWN IN CHANNEL 13 POSITION.

TRANSISTOR BASING DIAGRAM

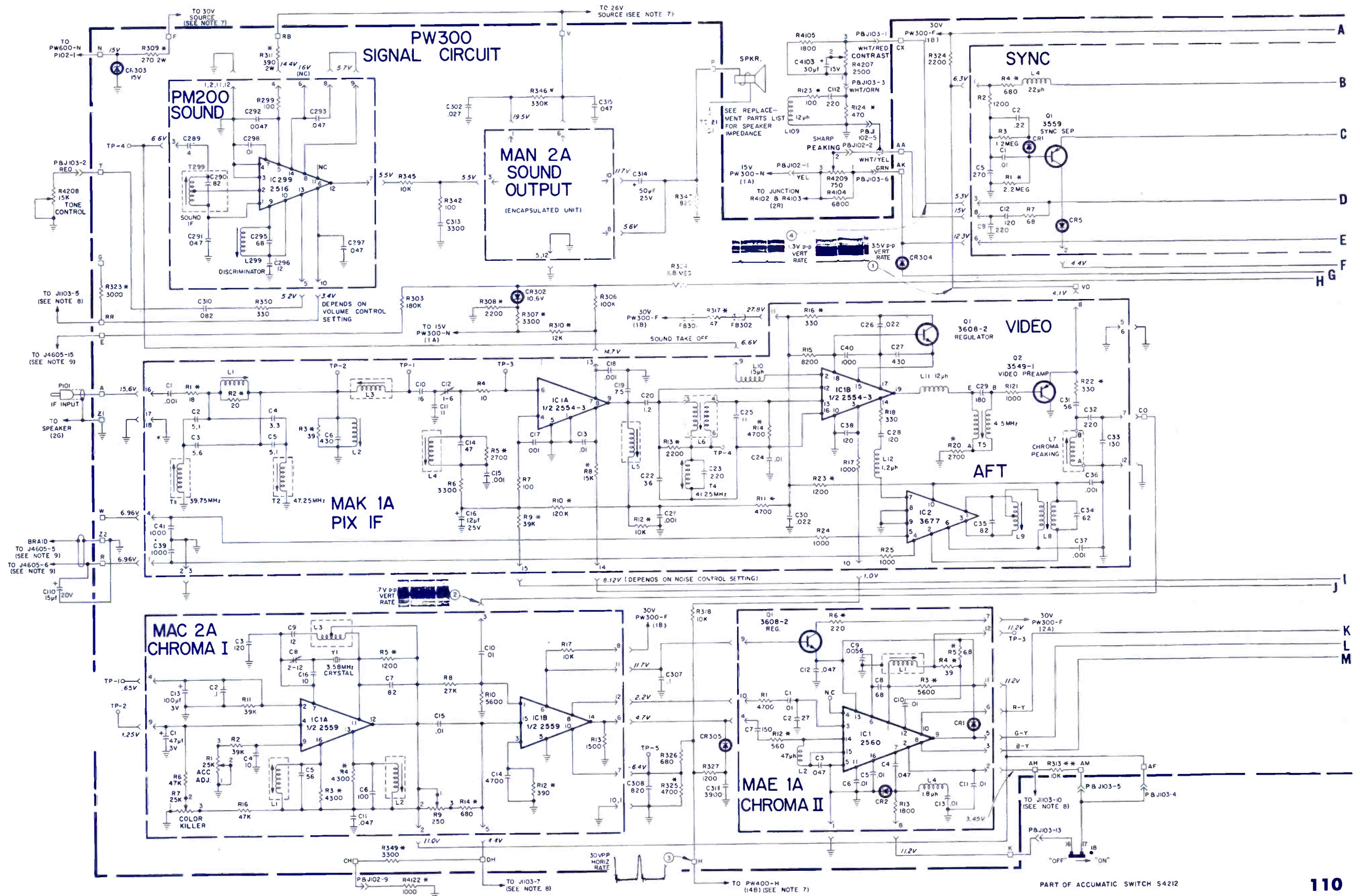




RCA SALES

Color-TV Chassis
CTC54 Series

ELECTRONIC TECHNICIAN/DEALER TEKFAK



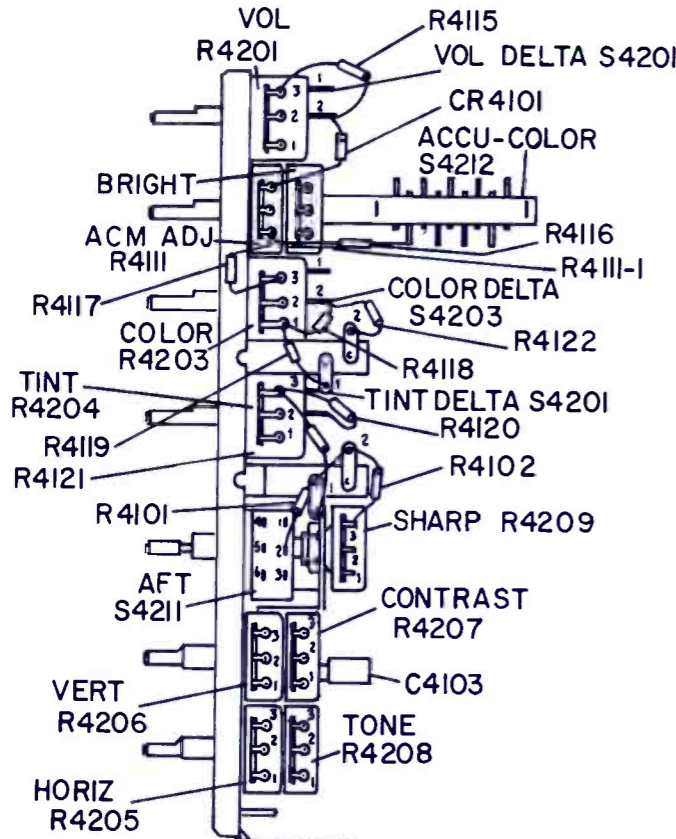
PART OF ACCUMATIC SWITCH 54212

SYMBOL	DESCRIPTION	RCA PART NO.
C103	3 section electrolytic	133446
C103A	600µf, 100v	133446
C103B	100µf, 250v	133446
C103C	100µf, 250v	133446
C105	3 section electrolytic	133449
C105A	750µf, 50v	133449
C105B	500µf, 40v	133449
C105C	500µf, 40v	133449
F101	fuse	120785
R116	control focus includes R119, R118, R117	129925
SQM101	quadrupler hi-voltage	130026
T103	xformer-power	133443

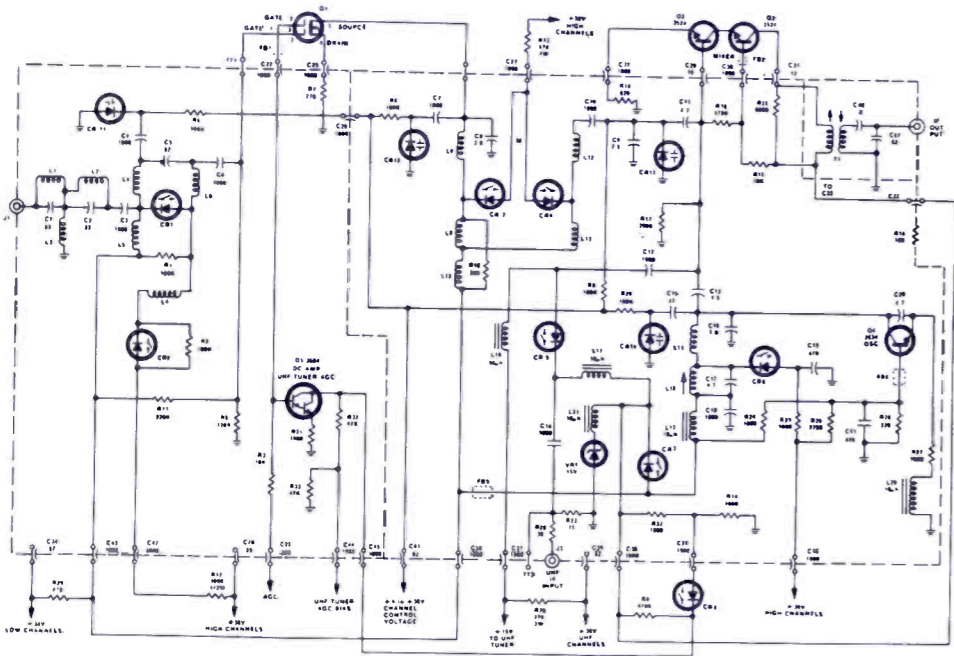
RT1	thermistor-temp comp	132503
IC1	circuit-integrated	132314
R1	control, ACC adj	132170
R7	color killer	132170
IC1	circuit-integrated	132315
R15	variable, horiz freq	132170
RT1	thermistor-50K cold	116109
T1	xformer-horiz osc	126729
IC1	circuit-integrated pix IF	132313
IC2	circuit-integrated AFT	130130
T5	4.5MHz trap	132135
IC299	circuit-integrated	130751
L299	coil-discriminator	130121

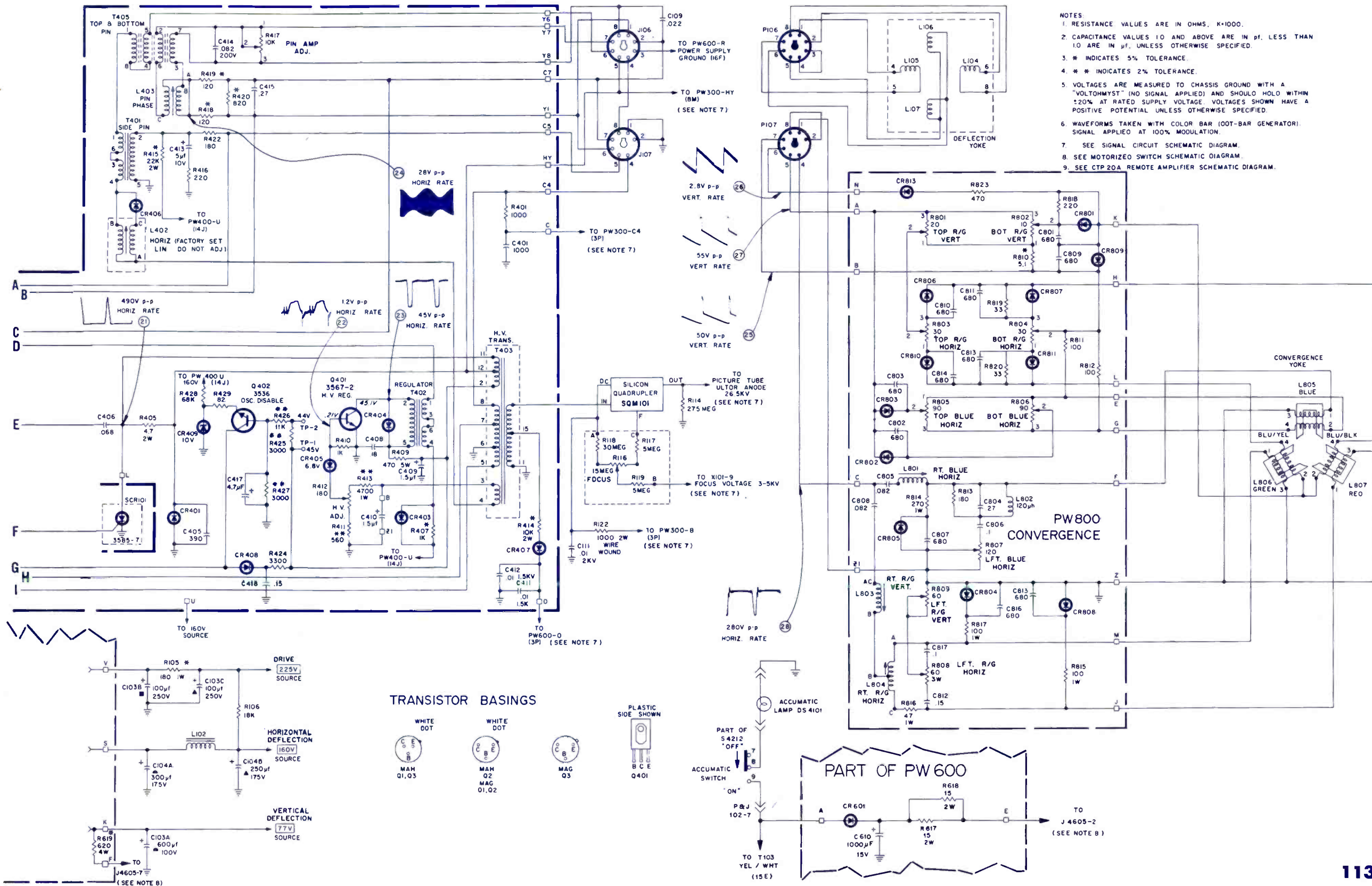
T299	xformer-input	130120
R412	control, hi voltage adj	133355
T402	xformer-regulator	132622
T403	xformer-flyback	135363
R4201	volume	134344
R4202	bright	135067
R4203	color	134344
R4204	sine	134344
R4205	horiz	133261
R4206	vert	133252
R4207	contrast	133252
R4208	tone	133261
R4209	sharp	134937

Auxiliary Control Panel



TUNER SCHEMATIC DIAGRAM



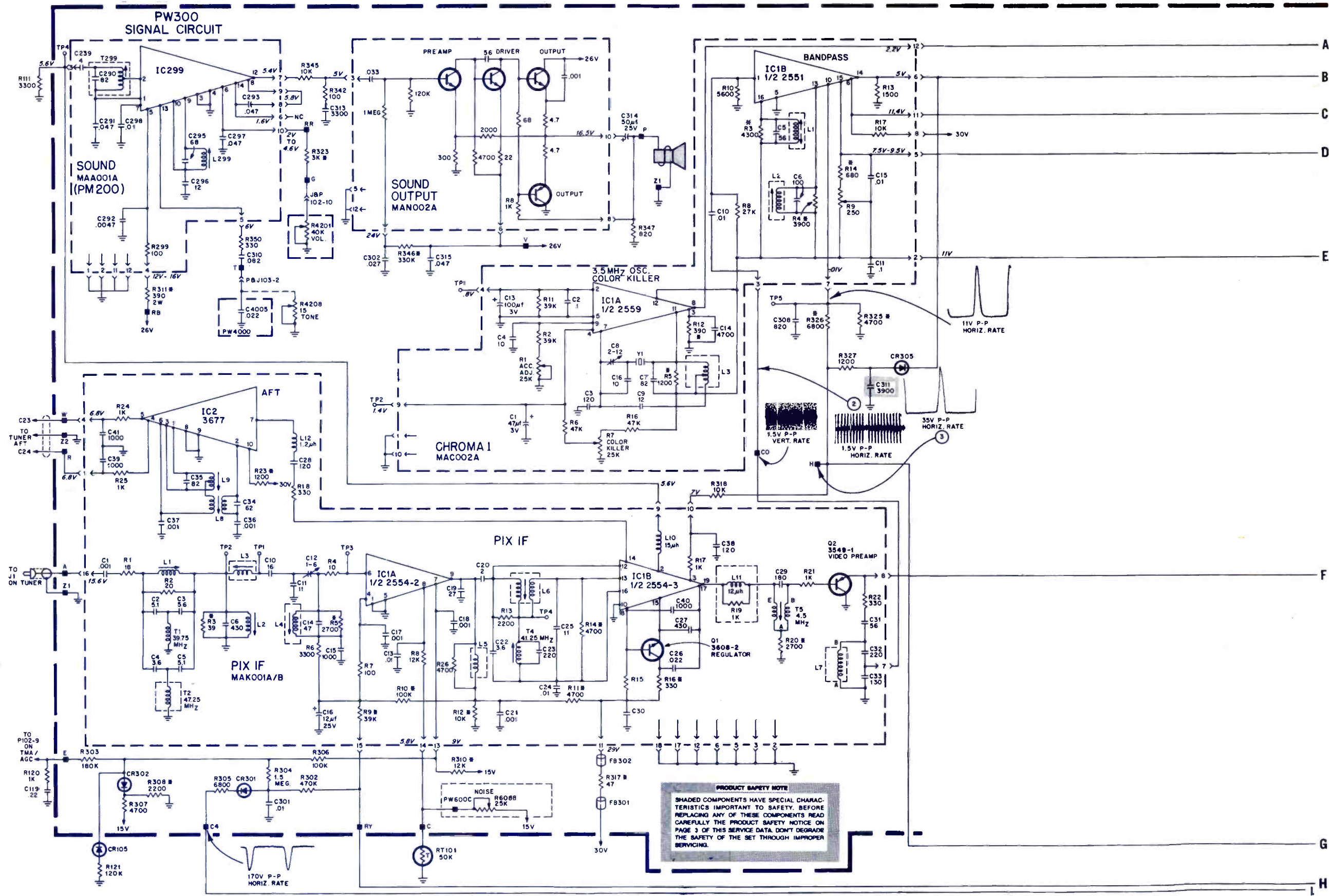


- NOTES
1. RESISTANCE VALUES ARE IN OHMS, K=1000.
 2. CAPACITANCE VALUES 10 AND ABOVE ARE IN μ F, LESS THAN 1.0 ARE IN μ F, UNLESS OTHERWISE SPECIFIED.
 3. * INDICATES 5% TOLERANCE.
 4. ** INDICATES 2% TOLERANCE.
 5. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHYMIST" (NO SIGNAL APPLIED) AND SHOULD HOLD WITHIN $\pm 20\%$ AT RATED SUPPLY VOLTAGE. VOLTAGES SHOWN HAVE A POSITIVE POTENTIAL UNLESS OTHERWISE SPECIFIED.
 6. WAVEFORMS TAKEN WITH COLOR BAR (OOT-BAR GENERATOR). SIGNAL APPLIED AT 100% MODULATION.
 7. SEE SIGNAL CIRCUIT SCHEMATIC DIAGRAM.
 8. SEE MOTORIZED SWITCH SCHEMATIC DIAGRAM.
 9. SEE CTP 20A REMOTE AMPLIFIER SCHEMATIC DIAGRAM.

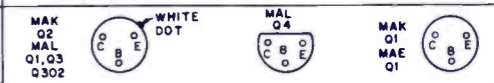
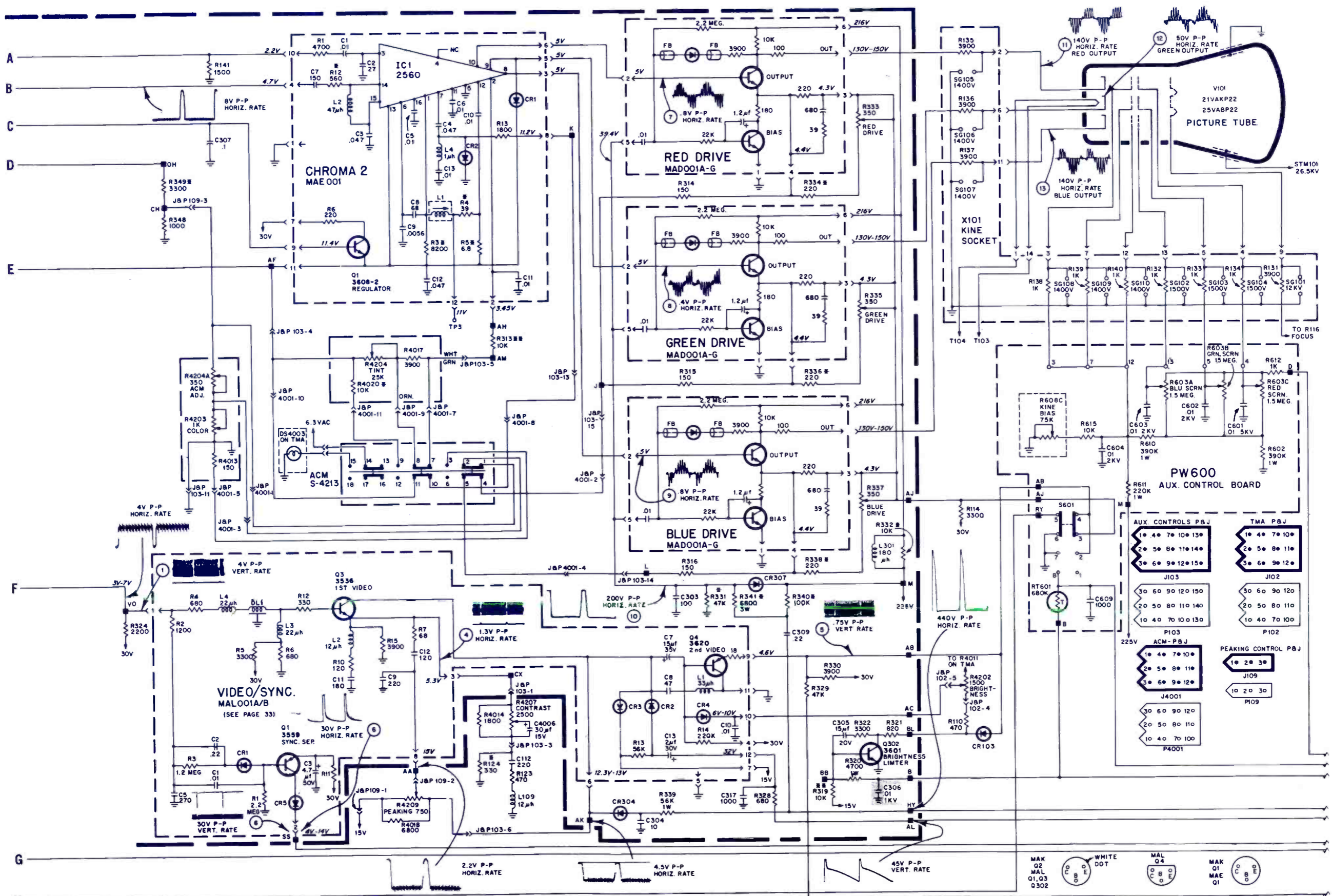
**RCA SALES
CORP.**

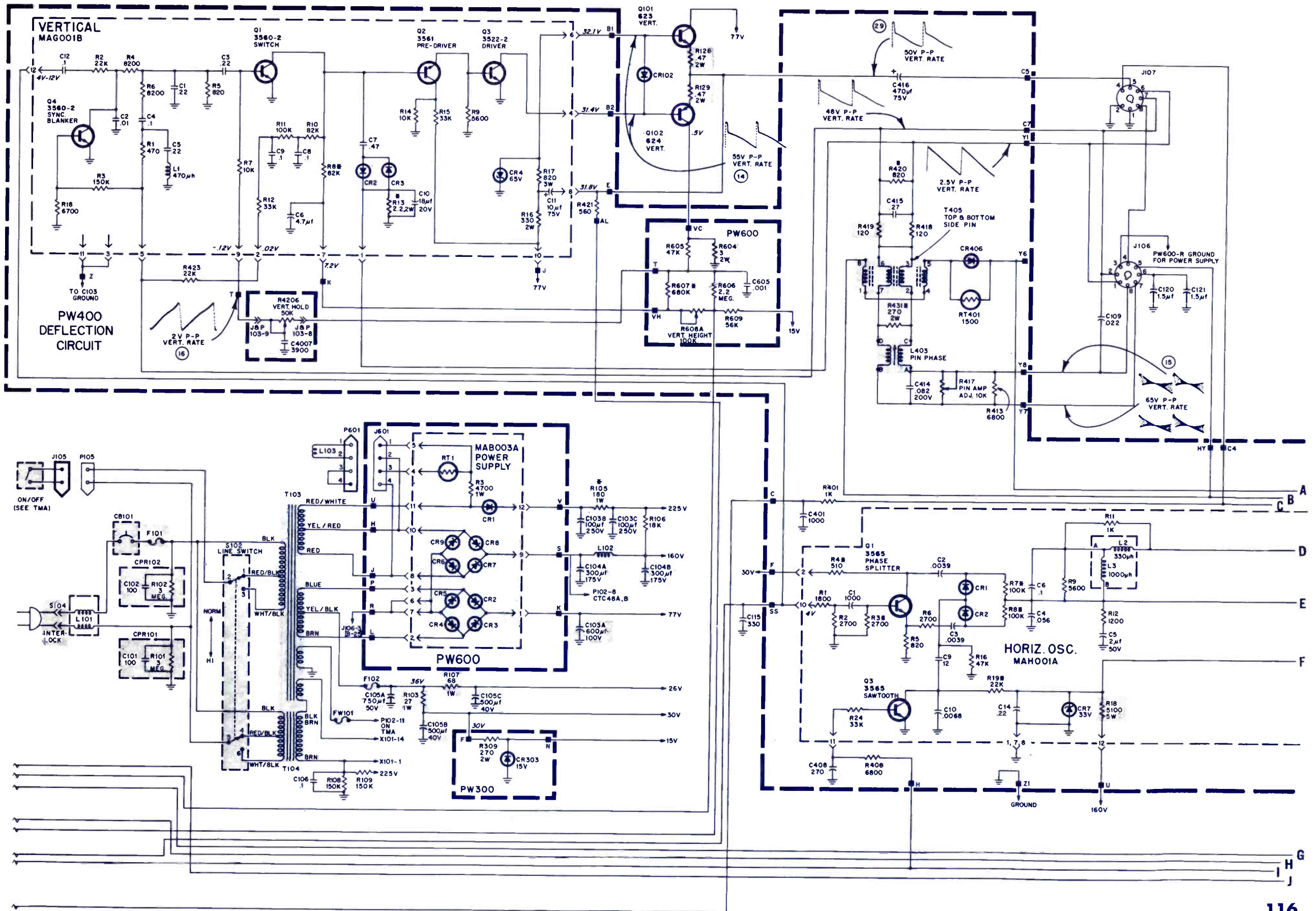
Color-TV Chassis
CTC48 Series

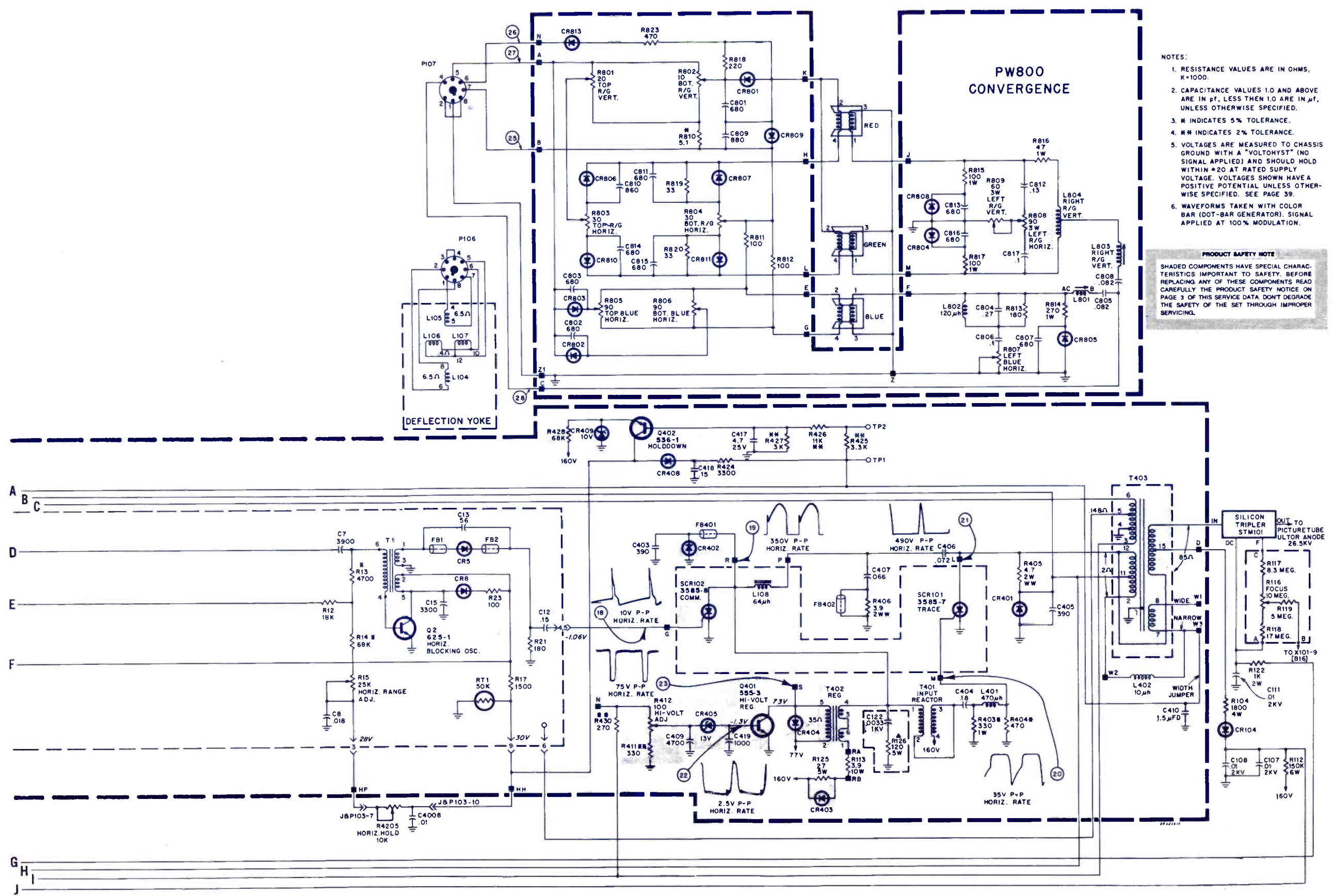
ELECTRONIC TECHNICIAN/DEALER *TEKFAK*



RCA CONTINUED NEXT PAGE



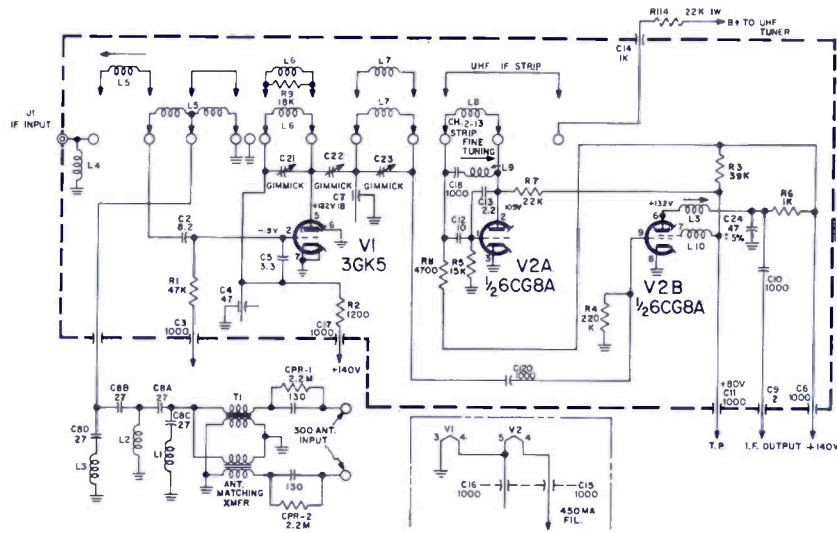




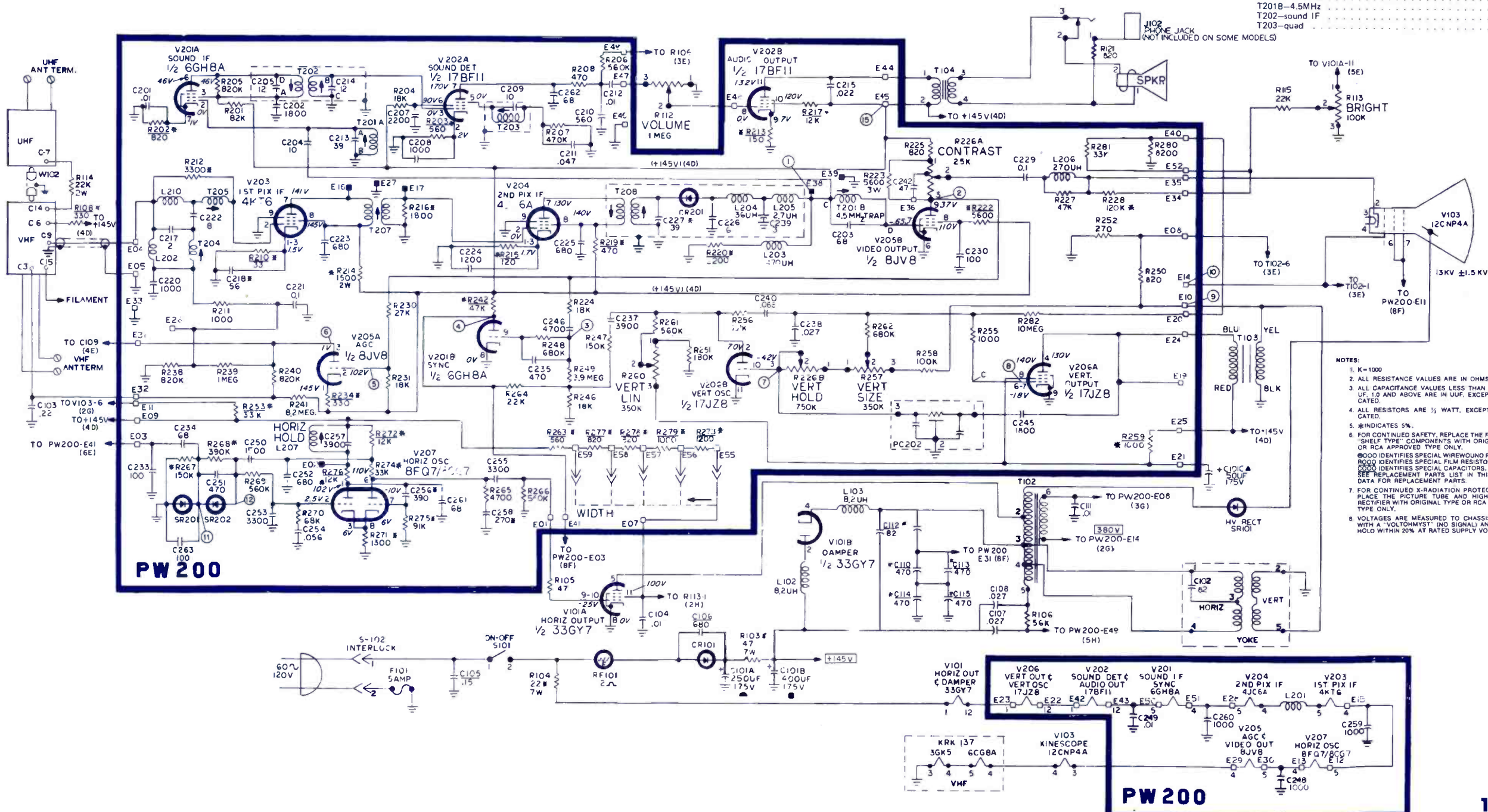
- NOTES:
1. RESISTANCE VALUES ARE IN OHMS, K=1000.
 2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN μ F, LESS THEN 1.0 ARE IN μ F, UNLESS OTHERWISE SPECIFIED.
 3. * INDICATES 5% TOLERANCE.
 4. ** INDICATES 2% TOLERANCE.
 5. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTOHYST" (NO SIGNAL APPLIED) AND SHOULD HOLD WITHIN ± 20 AT RATED SUPPLY VOLTAGE. VOLTAGES SHOWN HAVE A POSITIVE POTENTIAL UNLESS OTHERWISE SPECIFIED. SEE PAGE 39.
 6. WAVEFORMS TAKEN WITH COLOR BAR (DOT-BAR GENERATOR). SIGNAL APPLIED AT 100% MODULATION.

PRODUCT SAFETY NOTICE

SHADED COMPONENTS HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE ON PAGE 3 OF THIS SERVICE DATA DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.



SYMBOL	DESCRIPTION	RCA PART NO.
C101-3	section elec	133082
C101A	250 μ f/175v	
C101B	400 μ f/175v	
C101C	50 μ f/175v	
F101	fuse-5a, 150v	118969
R112	control volume	132956
R113	control bright	132957
RF101	fuse resistor, 2K	121086
S101	control, on/off	132956
T102	x-former, high voltage, horiz	132962
T103	x-former, vert output	132970
T104	x-former, audio output	124275
	yoke deflection	132971
L207	horiz hold	125129
R226A	control contrast/vert hold	133081
R226B	control contrast/vert hold	133081
R257	control vert size	121223
R260	control vert lin	121223
RV201	varistor	
T201A	4.5MHz	114489
T201B	4.5MHz	114489
T202	sound IF	118411
T203	quad	118410



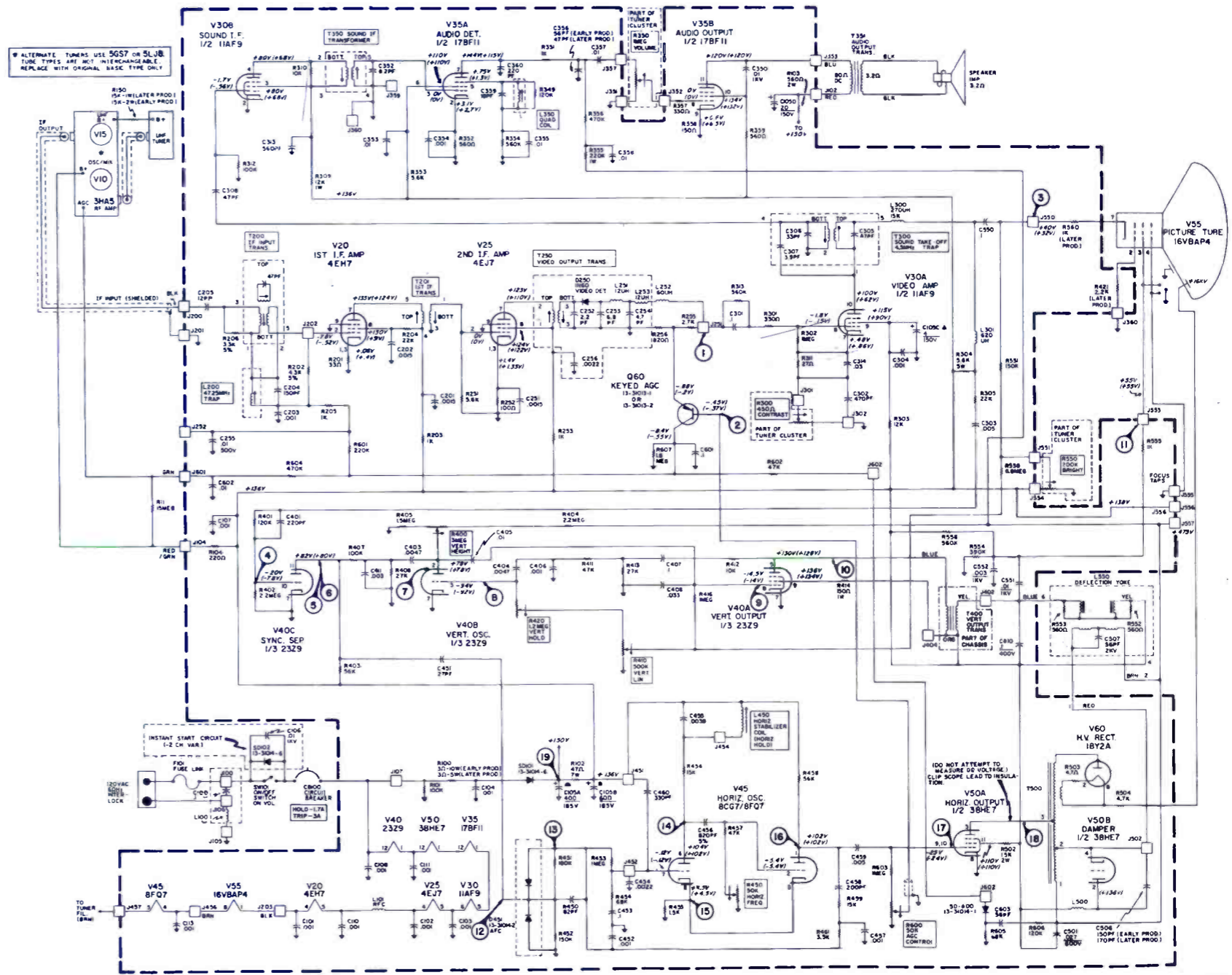
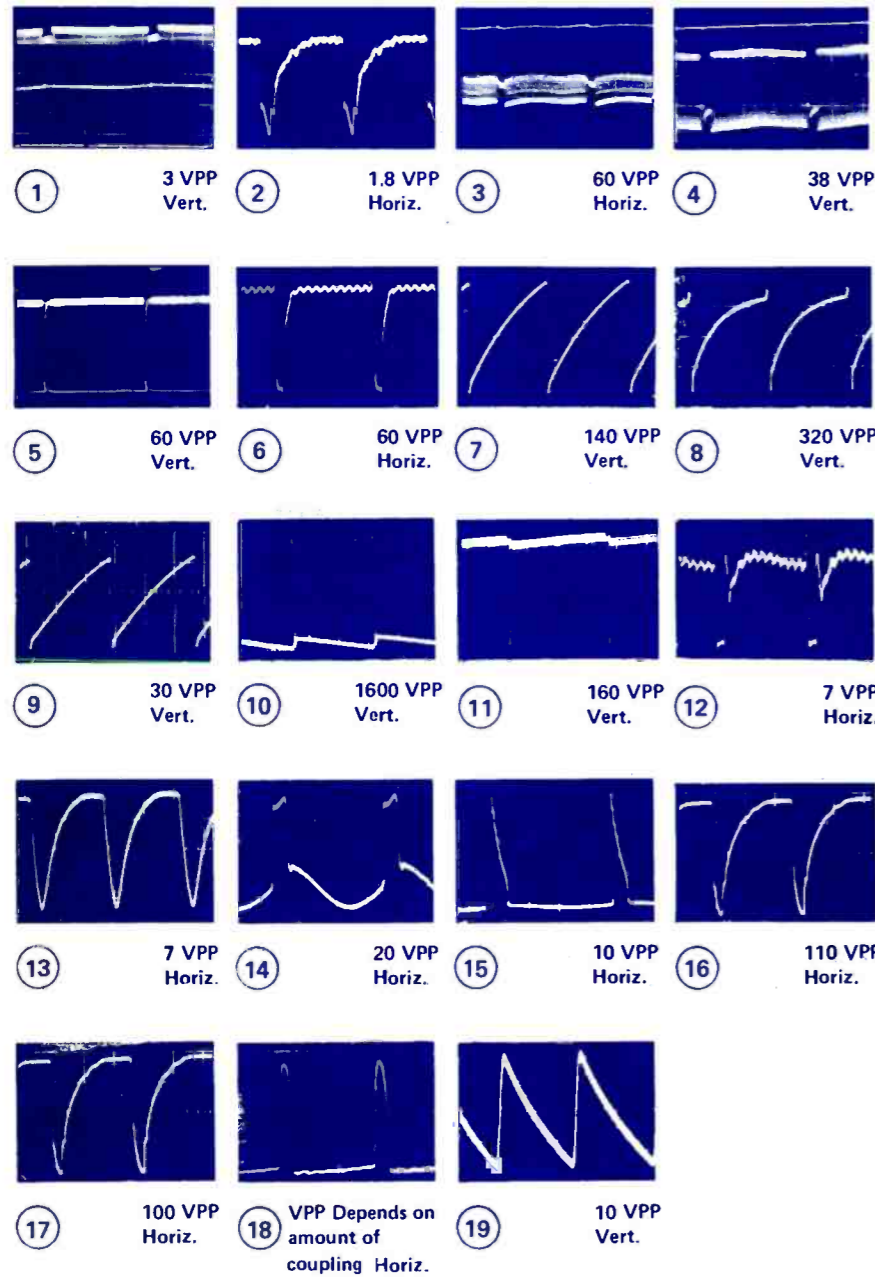
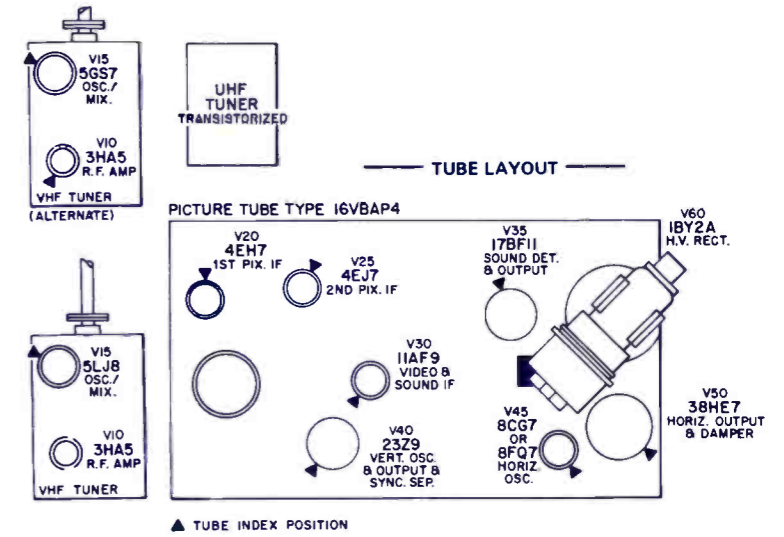
- NOTES:**
- K=1000
 - ALL RESISTANCE VALUES ARE IN OHMS.
 - ALL CAPACITANCE VALUES LESS THAN 1.0 ARE IN UF, 1.0 AND ABOVE ARE IN UUF, EXCEPT AS INDICATED.
 - ALL RESISTORS ARE 1/2 WATT, EXCEPT AS INDICATED.
 - *INDICATES 5%.
 - FOR CONTINUED SAFETY, REPLACE THE FOLLOWING "SHELF TYPE" COMPONENTS WITH ORIGINAL TYPE OR RCA APPROVED TYPE ONLY:
 ○○○○ IDENTIFIES SPECIAL WIREWOUND RESISTORS.
 □□□□ IDENTIFIES SPECIAL FILM RESISTORS.
 ○○○○ IDENTIFIES SPECIAL CAPACITORS.
 SEE REPLACEMENT PARTS LIST IN THIS SERVICE DATA FOR REPLACEMENT PARTS.
 - FOR CONTINUED X-RADIATION PROTECTION, REPLACE THE PICTURE TUBE AND HIGH VOLTAGE RECTIFIER WITH ORIGINAL TYPE OR RCA APPROVED TYPE ONLY.
 - VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH A "VOLTMYST" (NO SIGNAL) AND SHOULD HOLD WITHIN 20% AT RATED SUPPLY VOLTAGE.

SYLVANIA

TV Chassis
B15-1-2

SYMBOL DESCRIPTION SYLVANIA PART NO.

C105-4 section elect	41-31041-3
A-400/185v	
B-600/185v	
C-4/150v	
D-20/150v	
L100—choke-line radiation	50-31050-32
L200—45.25MHz trap	50-31050-7
L350—quadrature	50-31050-12
L450—horiz stabilizer (horiz hold)	50-31050-14
L550—deflection yoke	51-31051-1
T200—IF input	50-31050-8
T201—1st IF	50-31050-9
T250—video output	50-31050-10
T300—sound take-off/4.5 MHz trap	50-31050-30
T350—sound IF	50-31050-13
T351—audio output	56-31056-5
T400—vert output	56-31056-7
T500—horiz output	50-31050-31
R300—450 Ω contrast	37-31037-11
R350—1M, volume	37-31037-13
R400—3M, vert height	37-31037-1
R450—50K, horiz frequency	37-31037-2
R550—200K, brightness	37-31037-12
R600—50K, AGC	37-31037-3
CB100—circuit breaker	29-31029-3
F101—fuse link-No. 31, copper nickel, 1-1/4 in. long	
capristor	38-31038-2
VHF (-1 CH.)	54-31054-6
VHF (-2 CH.)	54-31054-4



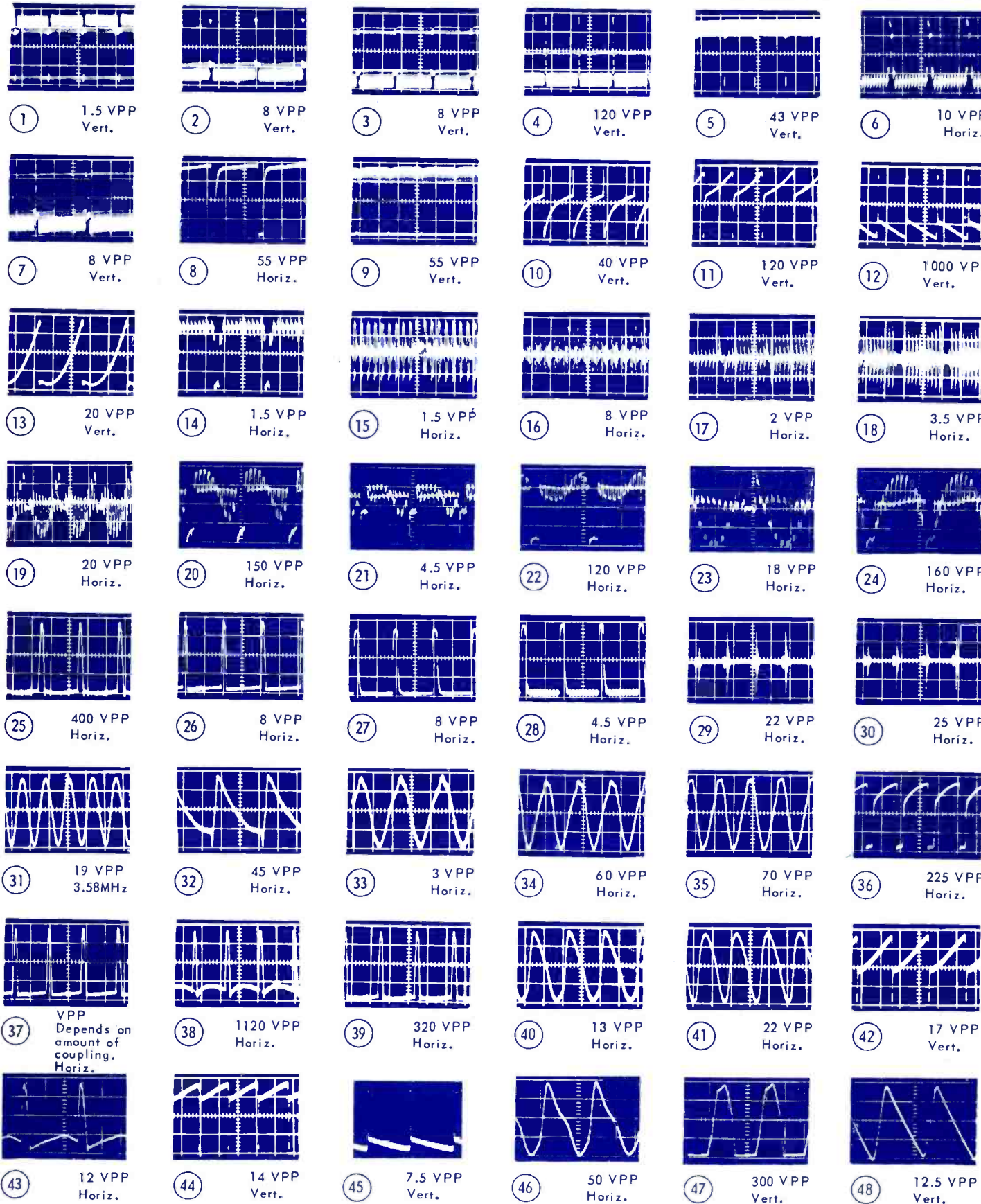
SYLVANIA

Color TV Chassis
D15-3, -5

ELECTRONIC TECHNICIAN/DEALER **TEKFAAX**

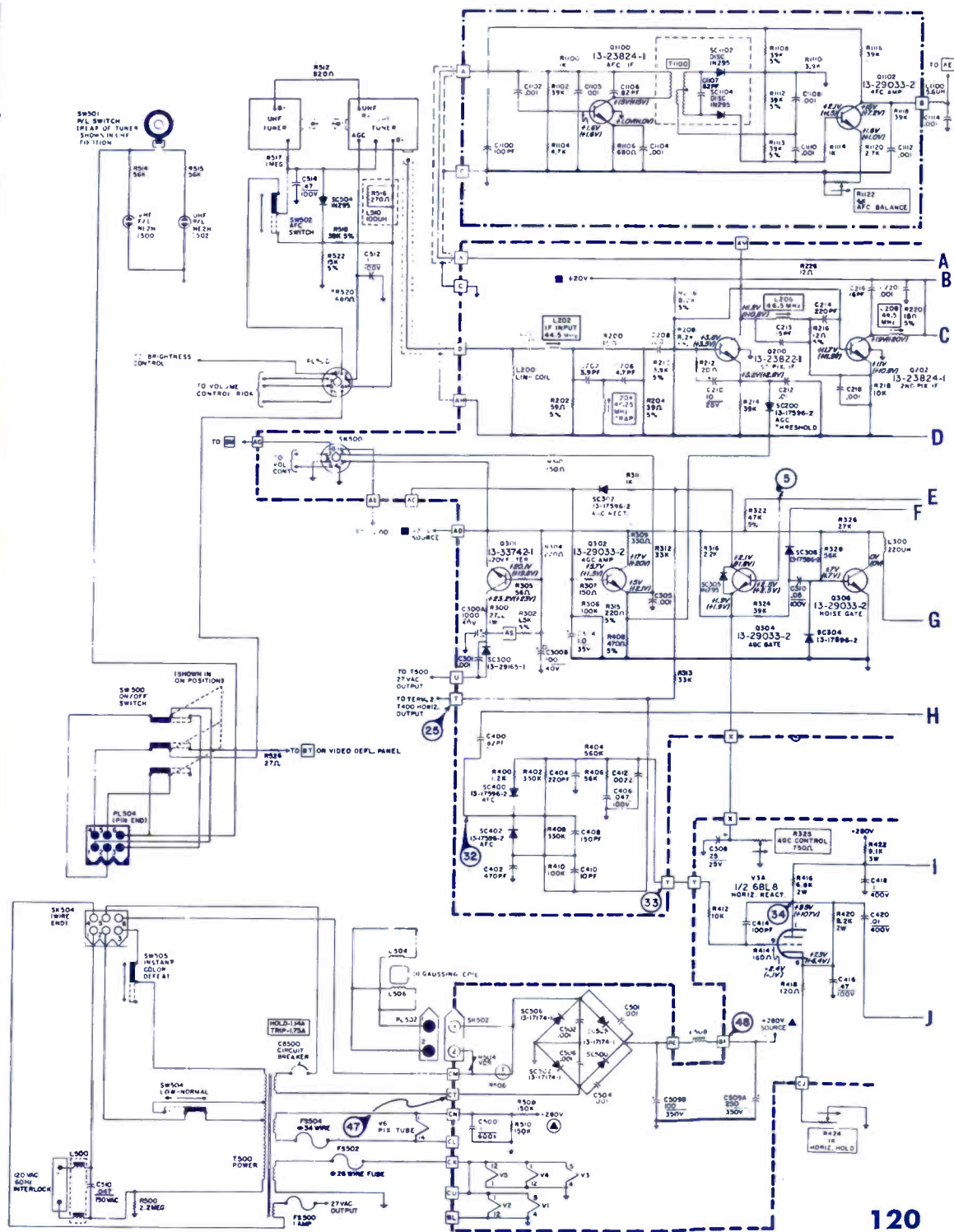
SYMBOL DESCRIPTION SYLVANIA PART NO.

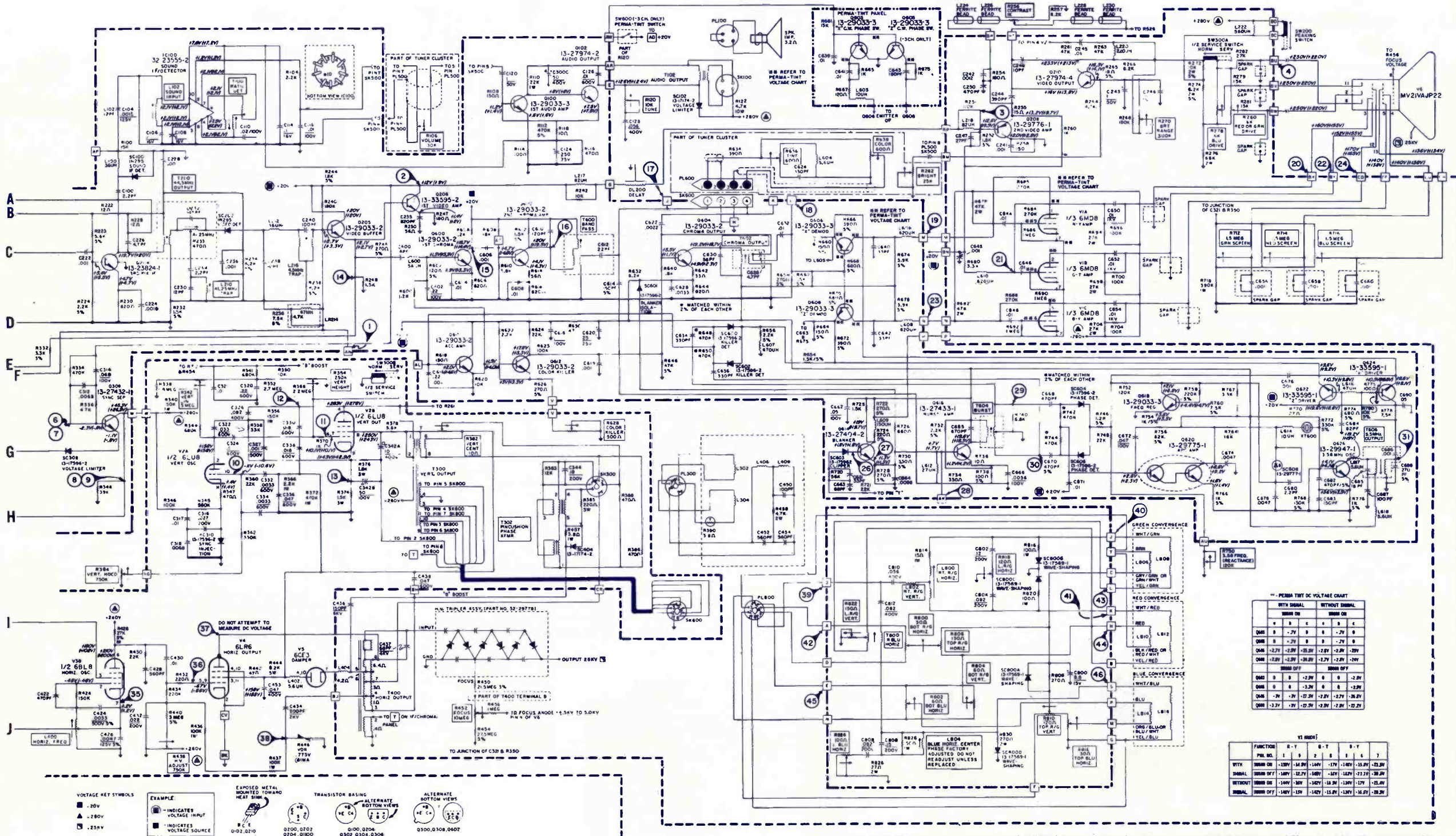
C300A-1000/40v elect	41-29788-1
C300B-100/40v elect	41-29788-1
C300C-50/400v elect	41-29788-1
C342A-10/400MHz trap	41-27344-1
C342B-50/100v elect	41-27344-1
C509A-250/350v elect	41-33341-1
C509B-100/350v elect	41-33341-1
R122-4.7K, 10w resistor	36-92898-54
R446-VDR, 1050v @ 1ma resistor (early production)	38-29959-1
R446-VDR, 775v @ 1ma resistor (later production)	38-29959-4



R504-VDR, 67ma @ 20v resistor	38-17072-2
R506-thermistor, 120 n, cold-1.25n hot	38-17071-4
L102-sound input coil	57-23832-2
L204-47.25MHz trap	57-23827-2
L206-44.5MHz	57-23827-3
L210-41.25MHz trap	57-23832-1
L216-4.5MHz	50-16238-5
L217-82 μh peaking	50-15318-7
L400-horiz freq	50-23508-1
L500-choke, power line	50-29833-1
T100-ratio detector xformer	57-23857-1
T102-audio output xformer	56-16018-11
T200-44.5MHz output xformer	57-23831-1
T300-vert output xformer	56-29826-1
T400-horiz output xformer	50-33636-1
T500-power xformer	55-33165-2
T600-bandpass xformer	50-27405-1
T602-chroma output xformer	50-29658-1
T604-burst xformer	50-27406-1
T606-3.58MHz output xformer	50-29784-1
IC100-sound IF/detector	32-23555-2
R106-30K, volume ON/OFF control	37-29779-5
R120-10K, tone/perma tint switch (-3 CH.)	37-33716-4

R120-10K, tone (-5 CH.)	37-27242-23
R256-1K, contrast control	37-27242-17
R262-25K, bright control	37-29783-2
R270-300K, bright range control	37-29755-7
R323-750 AGC control	37-29755-2
R342-5M, vert lin control	37-29832-1
R354-250K, vert height control	37-29832-1
R364-750K, vert hold control	37-27242-2
R382-10n, vert control	37-29831-1
R424-1K, horiz hold control	37-27242-1
R438-750K, H.V. adjust control	37-29755-2
R452-10M, focus control	37-17320-5
R628-500 n, color killer control	37-29755-2
R750-120K, reactance control	37-23063-5
R1122-4K, AGC balance control	37-14576-1
UHF tuner (early production)	54-29331-8
UHF tuner (later production)	54-29331-9
CB500-circuit breaker	2923918-1
DL200-delay line	32-16108-2
FS500-fuse, 1a pigtail	29-91256-13
FS502-No. 26 wire	
FS504-No. 36 wire	
tripler, high voltage deflection yoke	32-33057-3 51-29986-2





*** PERMA-TINT DC VOLTAGE CHART

		WITH SIGNAL				WITHOUT SIGNAL			
		B	C	E	F	B	C	E	F
0000	0	-2.0V	0	0	-2.0V	0	0	0	0
0000	0	-2.0V	0	0	-2.0V	0	0	0	0
0000	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V
0000	+2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V
0000	0	-2.0V	0	0	-2.0V	0	0	0	-2.0V
0000	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V
0000	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V
0000	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V	-2.0V

V1 (RED)

FUNCTION	B-Y	R-Y	G-Y	B-Y
WITH SIGNAL	-1.0V	-1.0V	-1.0V	-1.0V
SHALL	0.0V	0.0V	0.0V	0.0V
WITHOUT SIGNAL	-1.0V	-1.0V	-1.0V	-1.0V
SHALL	0.0V	0.0V	0.0V	0.0V

VOLTAGE KEY SYMBOLS

- -20V
- ▲ -280V
- -255V

EXAMPLE

- ⊖ INDICATES VOLTAGE INPUT
- ⊕ INDICATES VOLTAGE SOURCE

EXPOSED METAL MOUNTED TOWARD HEAT SINK

TRANSISTOR BASING

- VE CA
- VE CB
- VE CC

ALTERNATE BOTTOM VIEWS

- VE CA
- VE CB
- VE CC

SYLVANIA

Color TV Chassis
D19-1, -2, -3

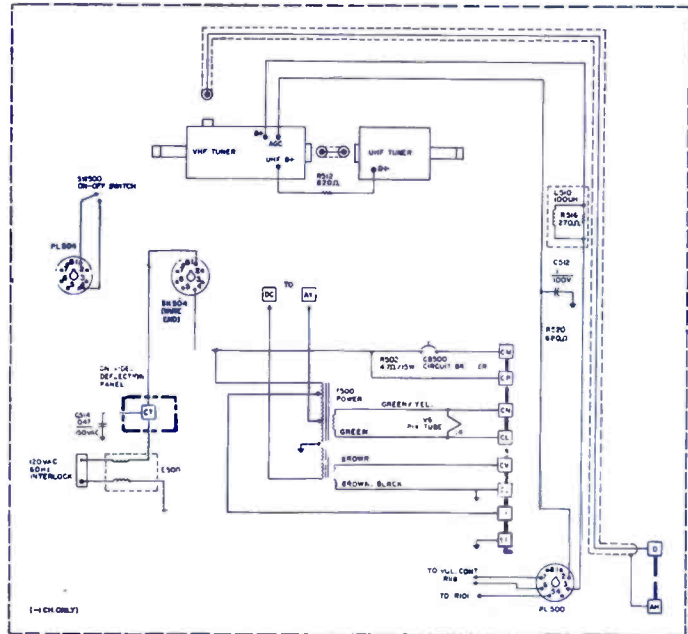
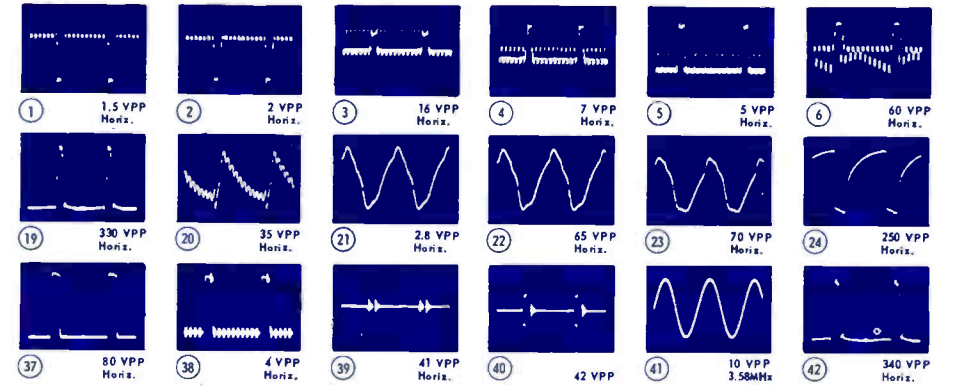
ELECTRONIC TECHNICIAN/DEALER *TEKFA*X

SYMBOL DESCRIPTION

SYMBOL DESCRIPTION	SYLVANIA PART NO.
C300A—2500/40v electrolytic	41-33942-1
C300B—500/40v electrolytic	41-33942-1
C300C—50/250v electrolytic	41-33942-1
C509A—250/350v electrolytic	41-33943-1
C509B—100/350v electrolytic	41-33943-1
R506—20 n cold thermistor	38-33206-1
L104—sound detector coil	50-33195-1

SYMBOL DESCRIPTION	SYLVANIA PART NO.
L400—horiz freq hold coil	50-33955-1
T100—audio output xformer	56-27824-2
T400—horiz output xformer	50-33927-1
T500—power xformer	50-33937-2
T600—bandpass xformer	50-27405-1
T602—chroma output xformer	50-29658-1
T604—burst phase xformer	50-27406-2
T606—3.58MHz output xformer	50-29784-1
T800—pincushion phase xformer	50-33900-1

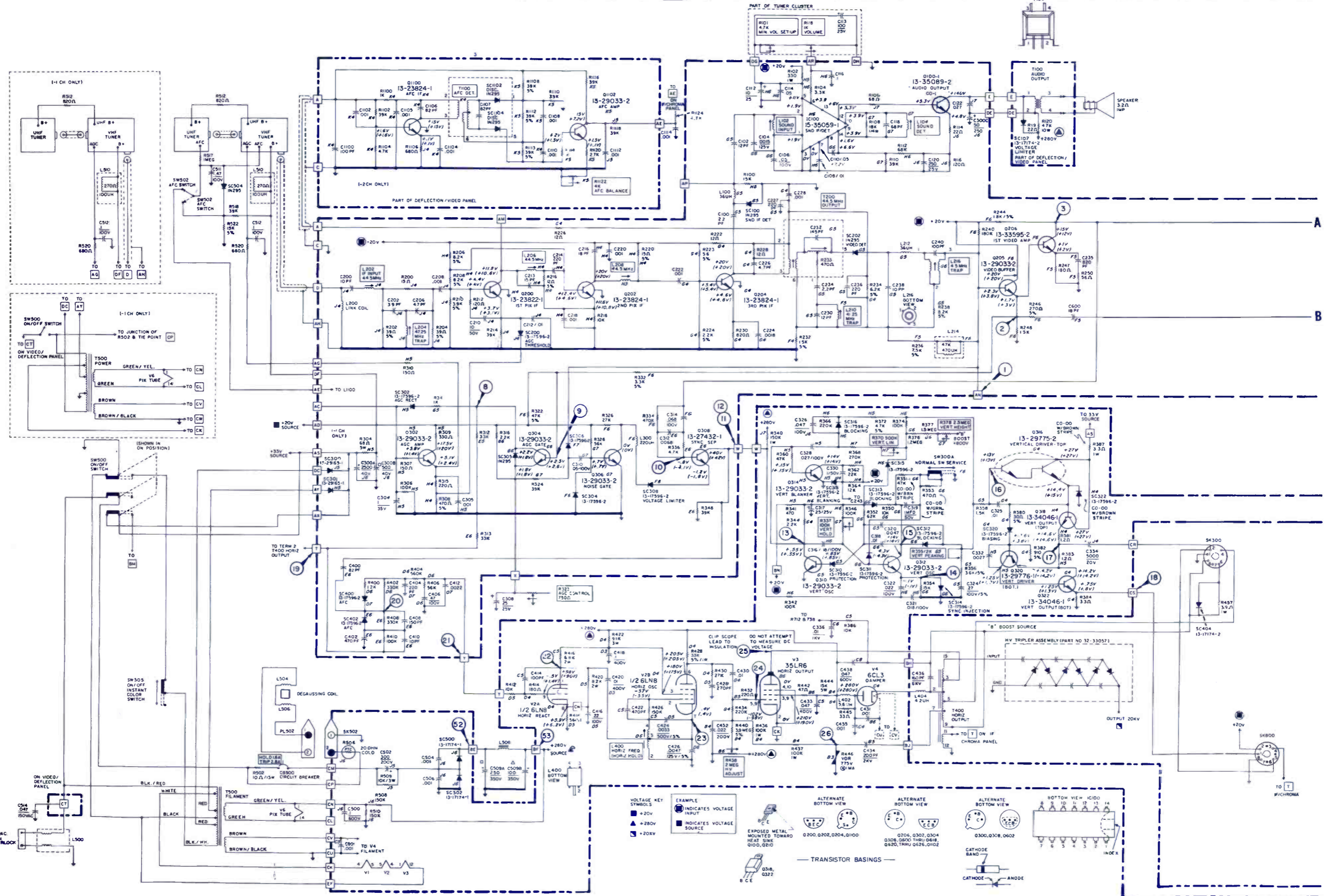
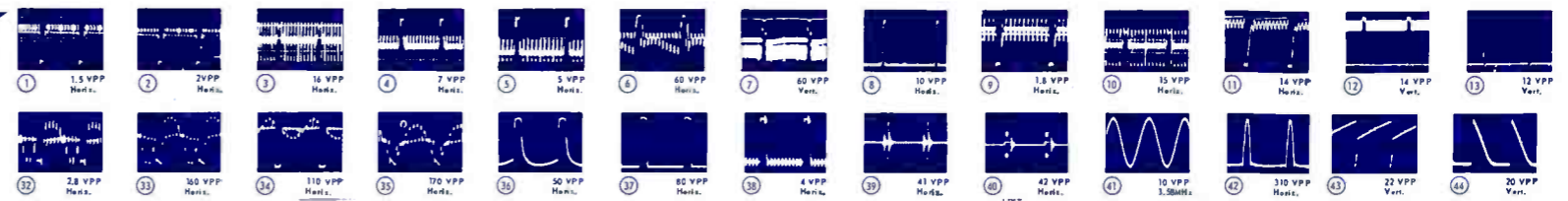
R118—1K volume control (-1)	37-27243-17
R118—1K volume control (-2)	37-27243-10
R256—1K contrast control	37-29783-14
R262—25K bright control	37-29783-13
R270—300K bright range control	37-29755-9
R323—750 n AGC control	37-17931-2
R337—100K vert hold control	37-33036-5
R355—2K vert peaking control	37-14576-14
R370—500K vert lin control	37-14576-12
R378—2.5M vert height control	37-33036-5
R438—2M HV adjust control	37-14576-9
R452—10M focus control	37-17320-6
R628—500 n color killer control	37-33036-5
R636—600 n color control	37-33097-3
R638—600 n tint control	37-33097-3
R848—20 n pincushion amplitude control	37-29831-2
R1122—4.7K AFC balance control	37-33717-3
CB500—circuit breaker	29-33346-5
I500, I502—pilot lamp, NE2H	30-33062-3
HV tripler	32-33057-3
deflection yoke	51-33657-2



SYLVANIA

Color-TV Chassis
D17-1-2

ELECTRONIC TECHNICIAN/DEALER **TEKFAX**



VOLTAGE KEY SYMBOLS

- +20V
- ▲ +280V
- +200V

EXAMPLE

INDICATES VOLTAGE INPUT

INDICATES VOLTAGE SOURCE

ALTERNATE BOTTOM VIEW

EXPOSED METAL MOUNTED TOWARD REAR SIDE Q100, Q210

Q200, Q202, Q204, Q100

Q308, Q500 THRU Q618, Q620, THRU Q626, Q102

Q300, Q308, Q602

TRANSISTOR BASINGS

Q308, Q312

B C E

CATHODE BAND

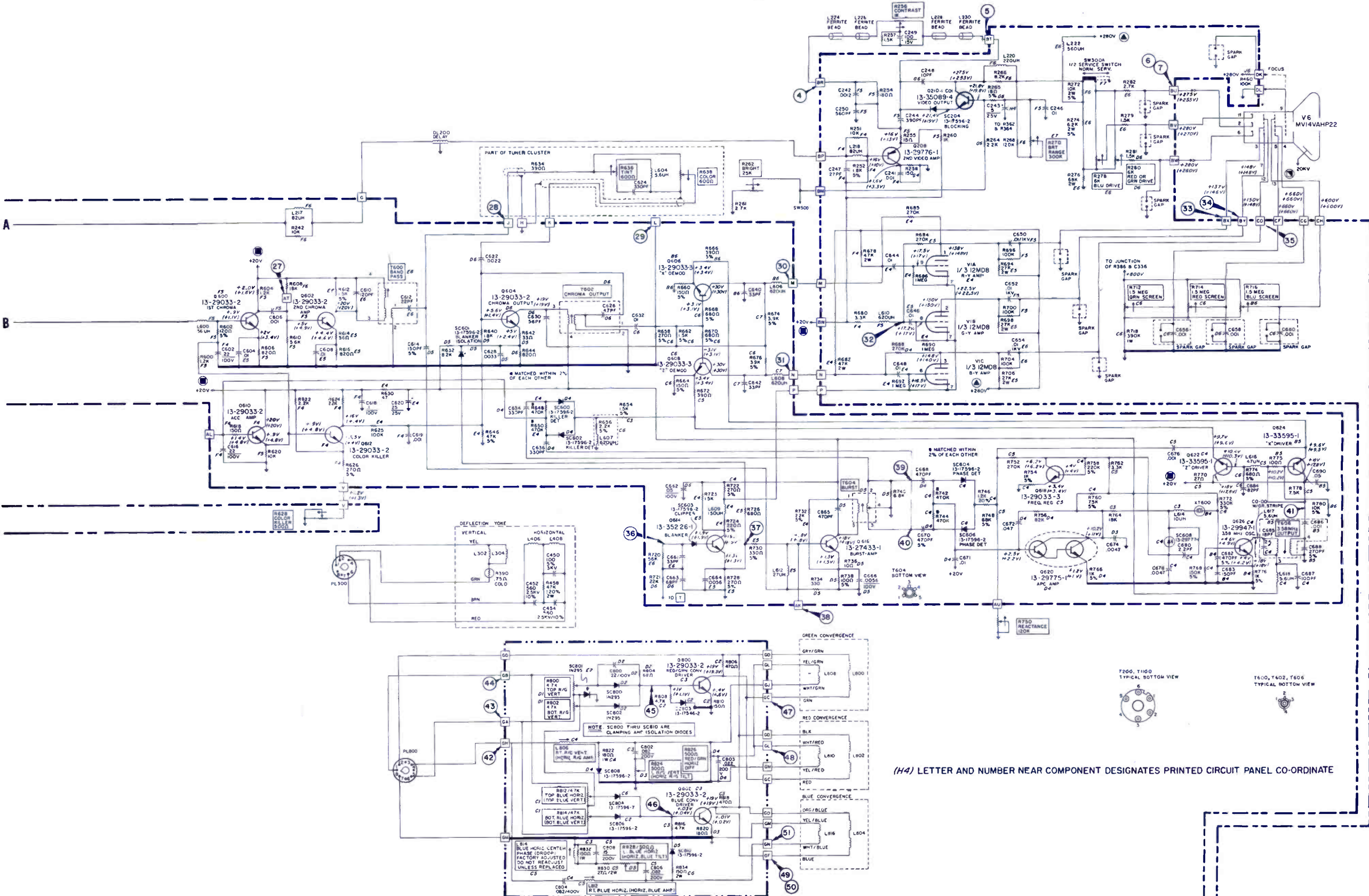
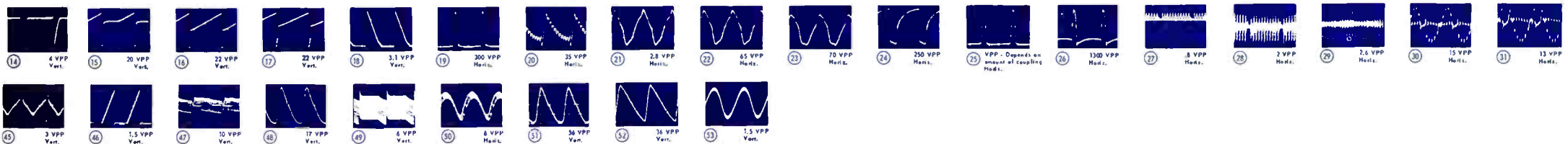
CATHODE - ANODE

BOTTOM VIEW

IC100

1 2 3 4 5 6 7 8 9 10 11 12 13 14

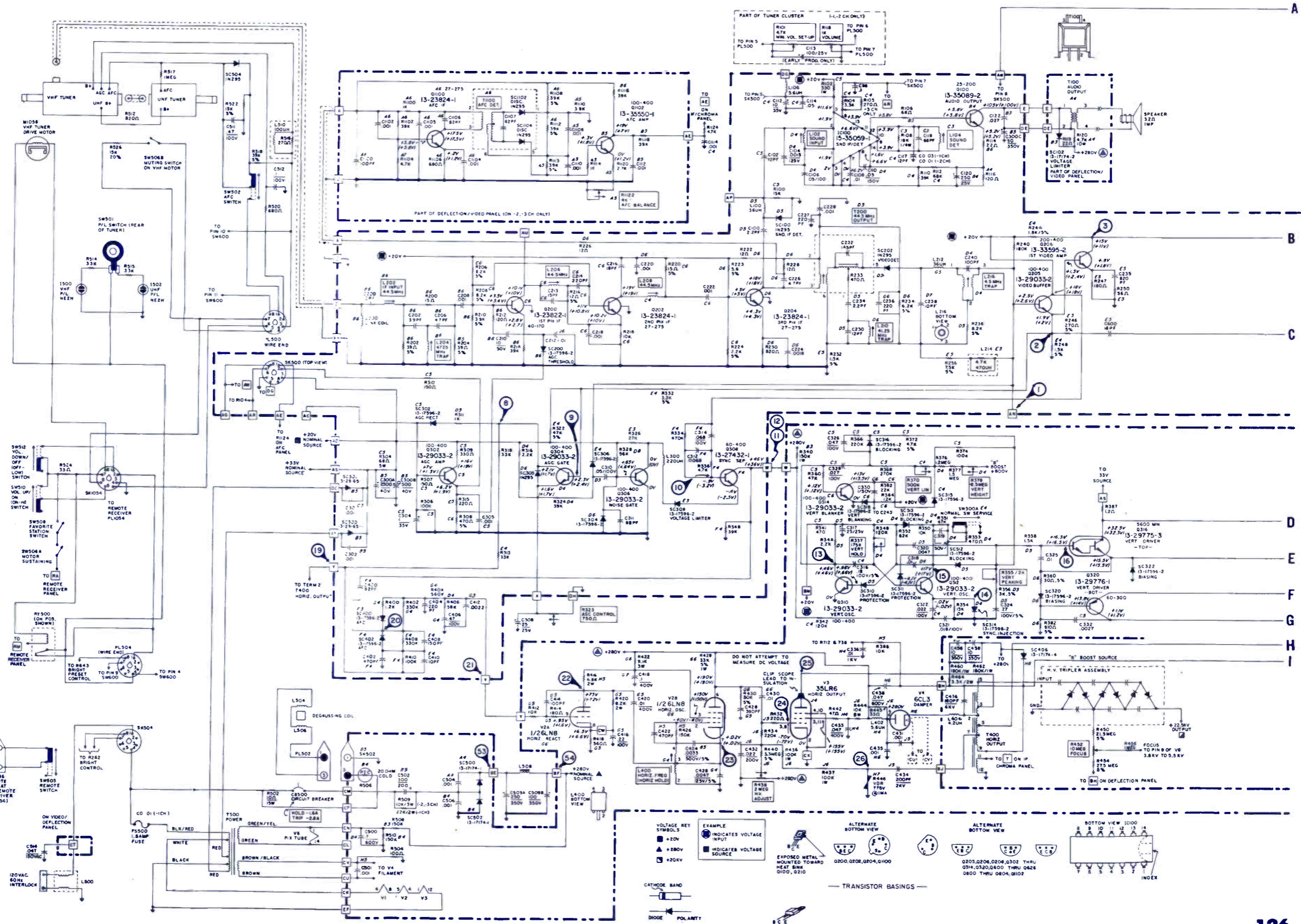
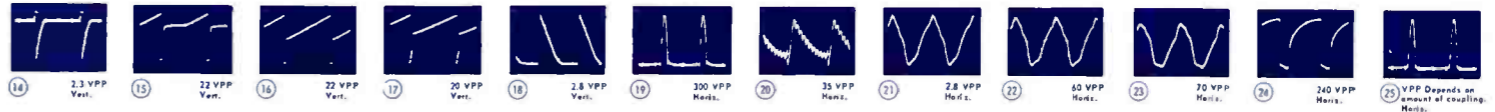
INDEX



SYLVANIA

Color-TV Chassis
D18-1, -2, -3

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X



VOLTAGE KEY
 ▲ +20V
 ▲ +280V
 ▲ +20KV

EXAMPLE
 INDICATES VOLTAGE INPUT
 INDICATES VOLTAGE SOURCE

ALTERNATE BOTTOM VIEW
 0205,0206,0208,0302 THRU 0314,0320,0400 THRU 0424 0800 THRU 0804,0802

BOTTOM VIEW (1000)
 1 2 3 4 5 6 7 8 9 10 11 12 13 14
 IN/EX

DO NOT ATTEMPT TO MEASURE DC VOLTAGE

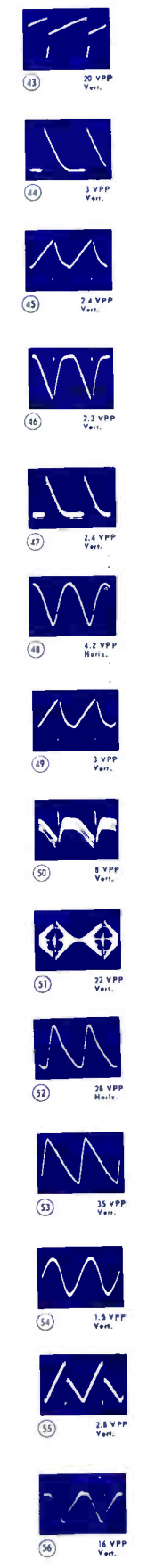
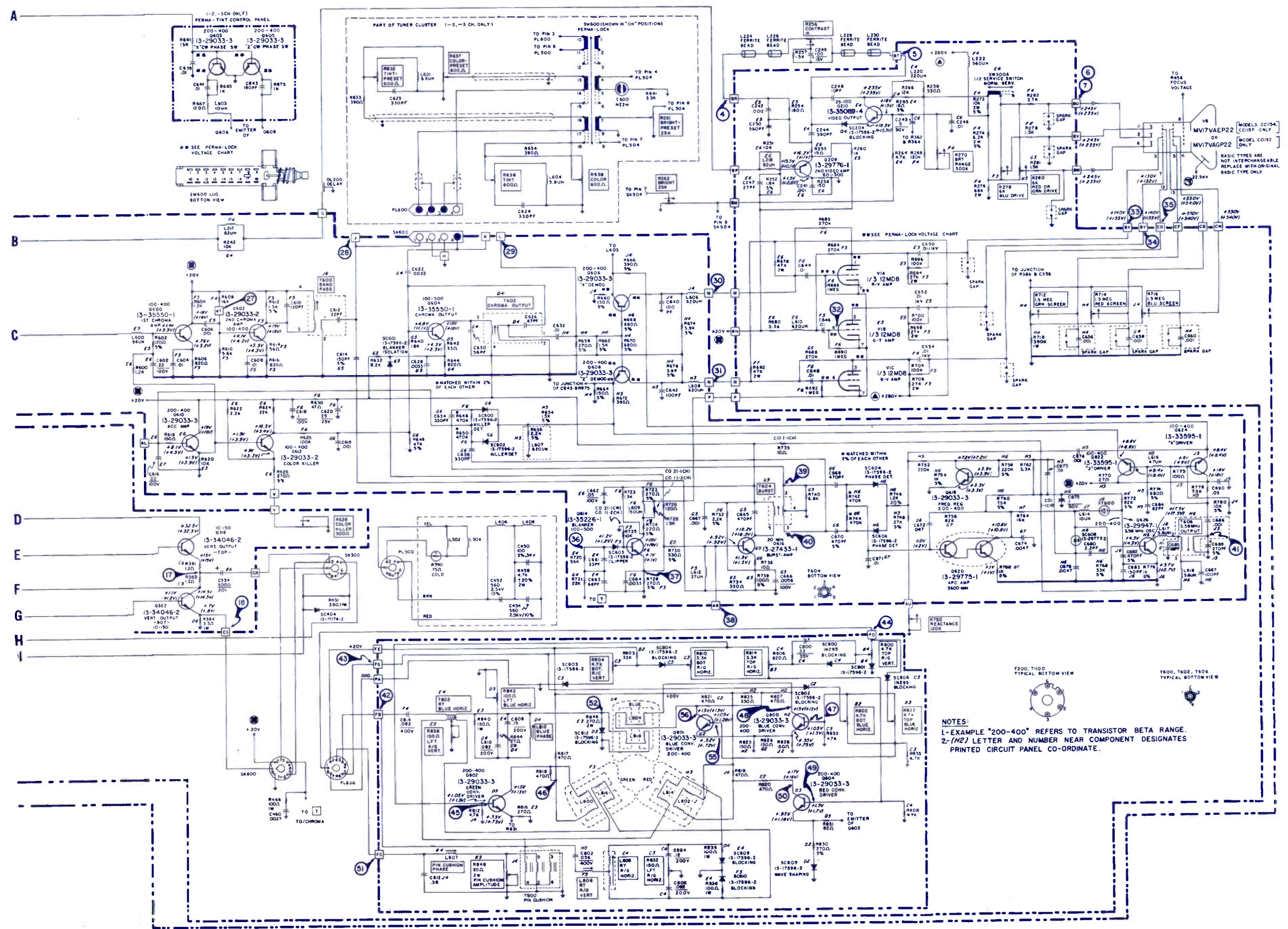
CLIP SCOPE LEAD TO INSULATOR

EXPOSED METAL MOUNTED TOWARD HEAT SINK
 0100, 0210

CATHODE BAND

DIODE POLARITY

TRANSISTOR BASINGS



NOTES:
1-EXAMPLE "200-400" REFERS TO TRANSISTOR BETA RANGE.
2-(H/Z) LETTER AND NUMBER NEAR COMPONENT DESIGNATES PRINTED CIRCUIT PANEL CO-ORDINATE.

SYLVANIA

Color-TV Chassis
E02-1, -2

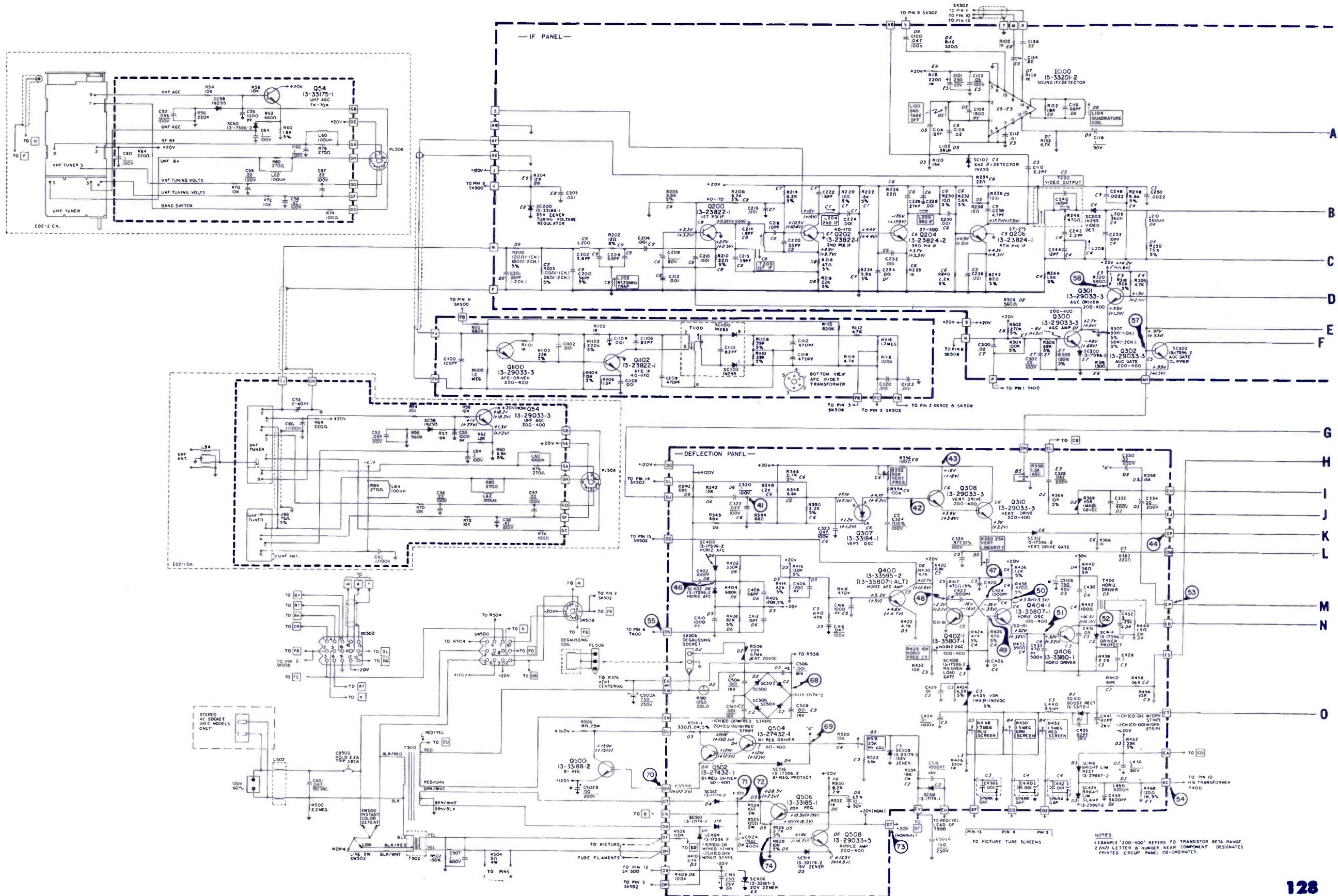
ELECTRONIC TECHNICIAN/DEALER **TEKFA**

SYMBOL DESCRIPTION SYLVANIA PART NO.

- C502—elect. 3 section 41-35568-1
- A—80/200v
- B—150/200v
- C—150/250v
- C512—elect. 2 section 41-33054-1
- A—1500/40v
- B—750/40v

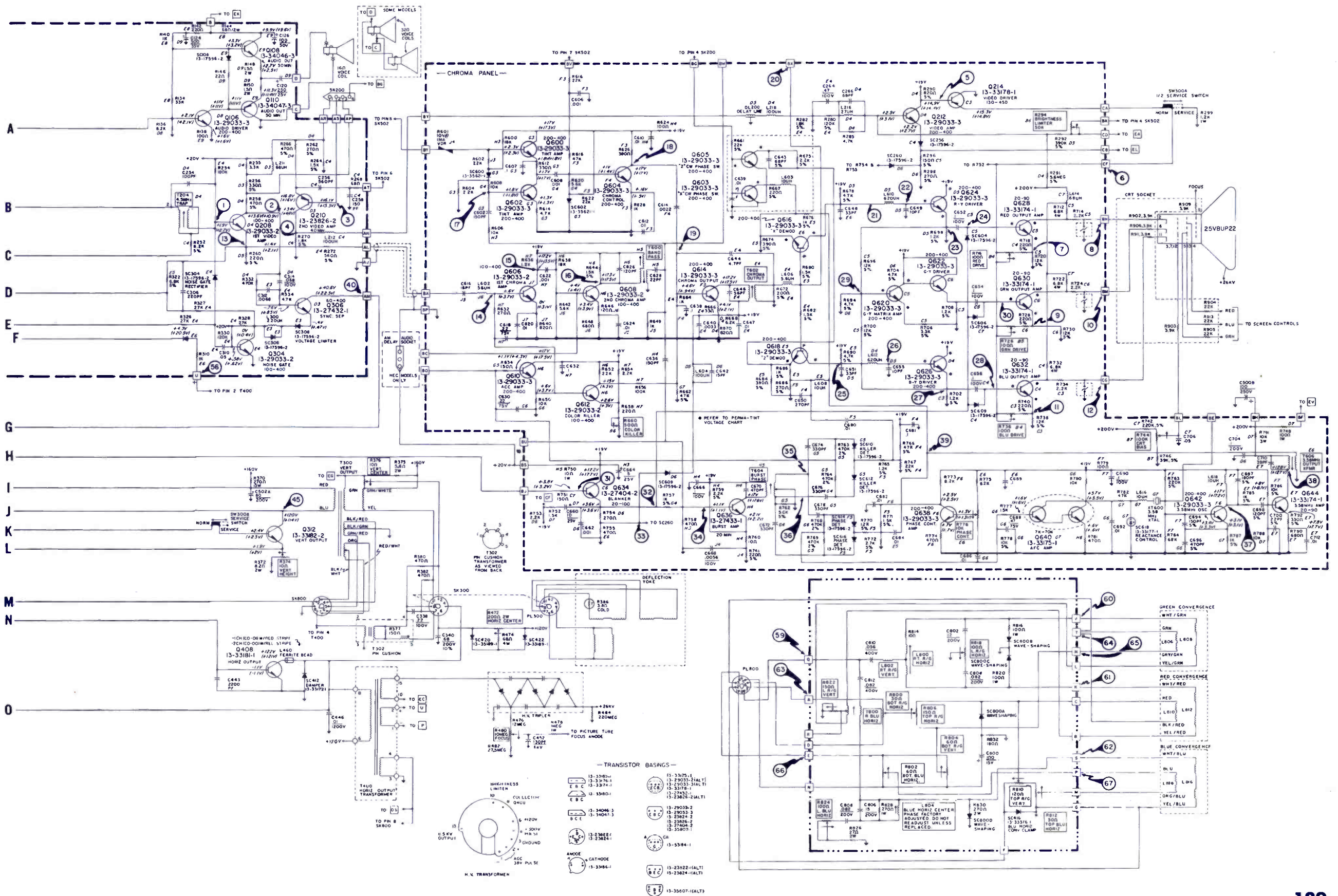
- R508—VDR, 67 ma @ 20vdc 38-17072-2
- R510—thermistor, Ω , cold 38-17071-4
- L100—sound take-off 57-23832-2
- L104—quadrature 50-33195-1
- L200—link 50-23828-1
- L202—47 25MHz trap 57-23827-6
- L204—2nd IF 57-23832-4
- L206—3rd IF 57-23832-5
- R18—100K, volume 37-33097-2
- R20—10K, color 37-33035-4

- R22—10K, tint 37-33035-4
- R24—2K, vert hold 37-33098-2
- R26—200K, bright 37-33035-8
- R28—2K, horiz hold 37-33035-3
- R30—1K, contrast 37-33035-2
- R32—20K, tone 37-33035-2
- R34—500 Ω , sharpness 37-33035-7
- R294—50K, brightness limiter 37-33036-6
- R352—50K, vert freq 37-23063-3
- R360—25K, vert lin part of R358



R374-10n, vert height	37-16021-26	T300-vert output	56-33088-2
R376-10n, vert cent	37-16021-26	T400-horiz output	50-33268-1
R428-10K, horiz freq	37-23063-4	T402-horiz drive	56-33038-1
R480-10M, focus	37-17320-7	T500-power	55-35577-1
R518-25K, HV adjust	part of R358	T600-bandpass	50-27405-1
R660-500Ω, color killer	part of R294	T602-chroma output	50-29658-1
R744-100K, CRT bias	part of R294	T604-burst phase	50-27406-2
R776-10K, phase control	37-23063-4	T606-3.5MHz output	50-33194-1
SC410-boost rectifier	13-33172 1	CB500-circuit breaker	29-33346-4
SC618-varactor, reactance cont.	13-33177-1	DL200-delay line	32-33673-1

SYLVANIA
Color-TV Chassis
EO2-1, -2



SYLVANIA

TV Chassis
A10-1

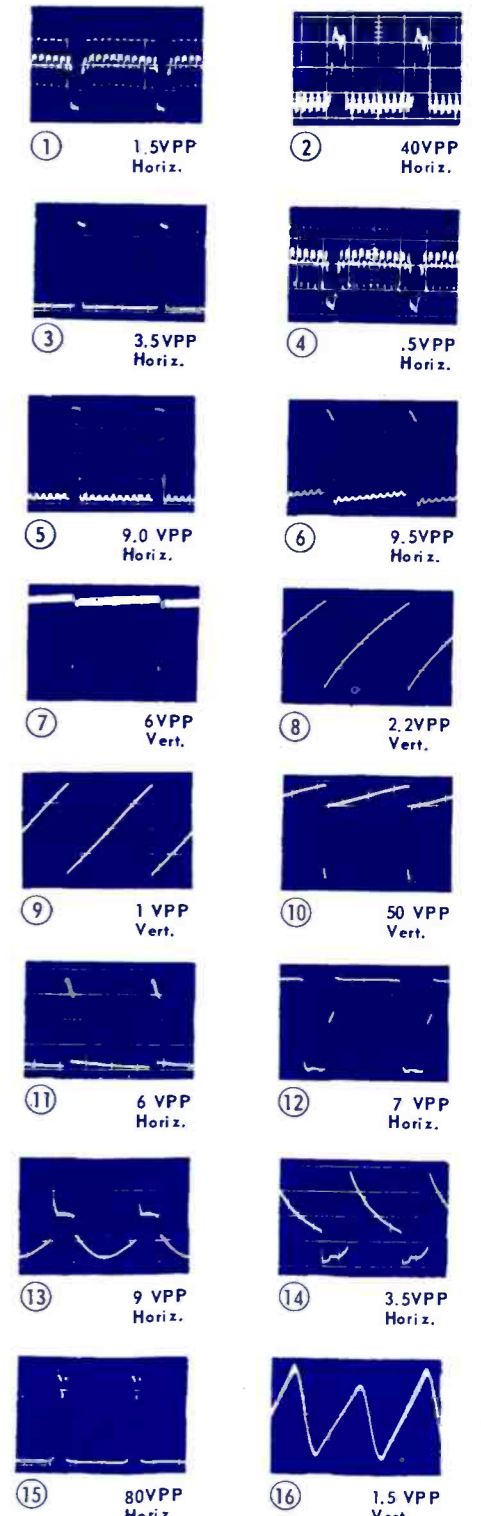
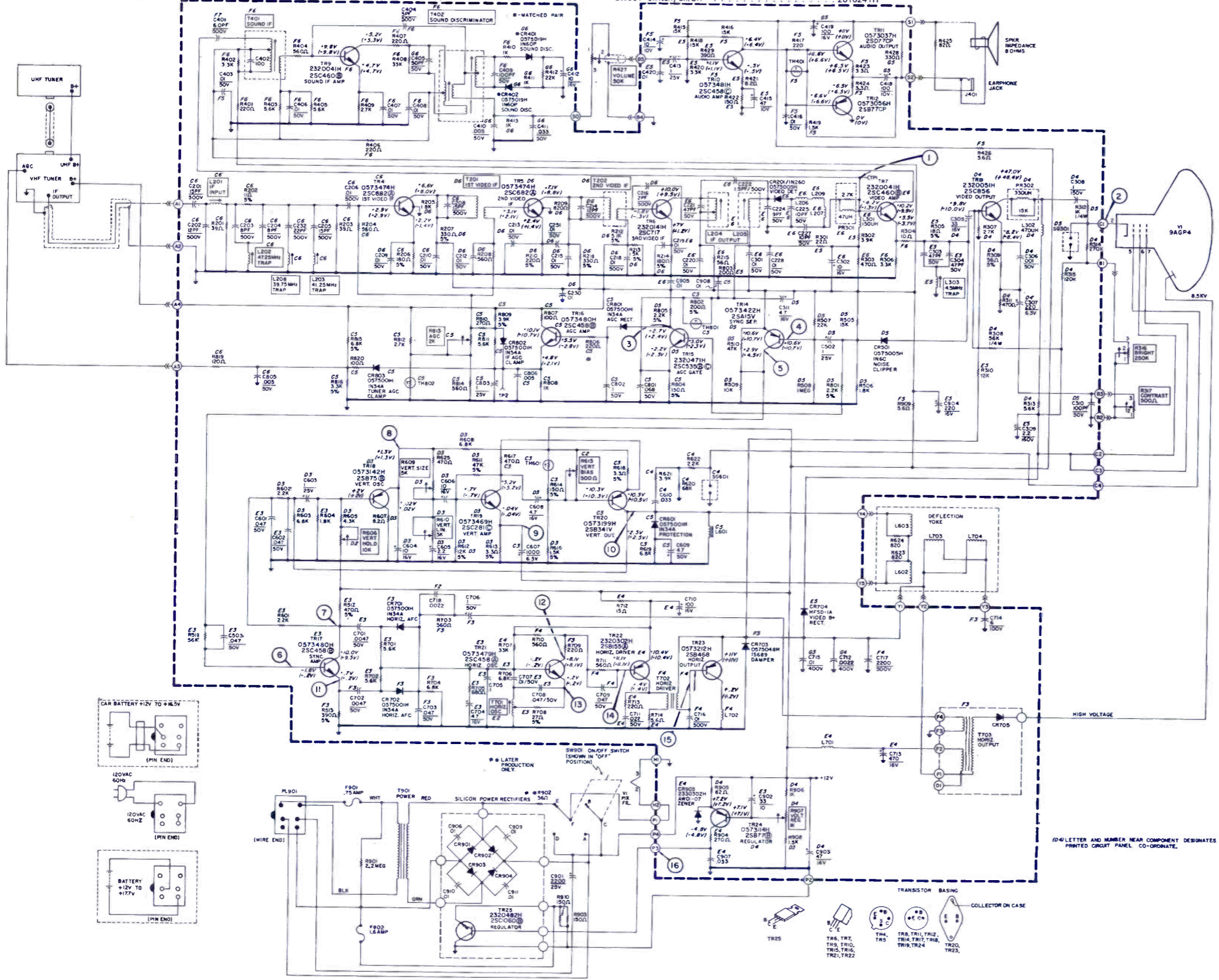
ELECTRONIC TECHNICIAN/DEALER **TEKFAAX**

R427-50K volume	0166613H
R606-10K vert hold	0153668H
R609-5K vert size	0151245H
R610-5K vert lin	0151245H
R615-500n, vert bias	0151248H
R813-2K AGC	0151246H
R907-1K voltage regulator	0151249H
L202-47.25MHz trap	2120197H
L203-41.25MHz trap	2120095H
L208-39.75MHz trap	2120197H
L303-4.5MHz trap	2120194H
L601-choke	2220031H
F901-fuse 75a	
F902-fuse 1.6a	059120711
DY-yoke deflect	2440152H
SW901-switch on/off	2610241H

TH401-thermistor	0576038H
TH601-thermistor	0576038H
TH801-thermistor	0576057H
tuner UHF	2420154H
tuner VHF	2420611H

SYMBOL	DESCRIPTION	SYLVANIA PART NO.
T201	1st video IF	2140651H
T202	2nd video IF	2140652H
T401	sound IF	0322315H
T402	sound disc	0326022H

T701-horiz osc	2160232H
T702-horiz driver	0390018H
T703-horiz output	2430271H
T901-power	2110023H
R316-250K, brightness	0153668H
R317-500n contrast	0153667H



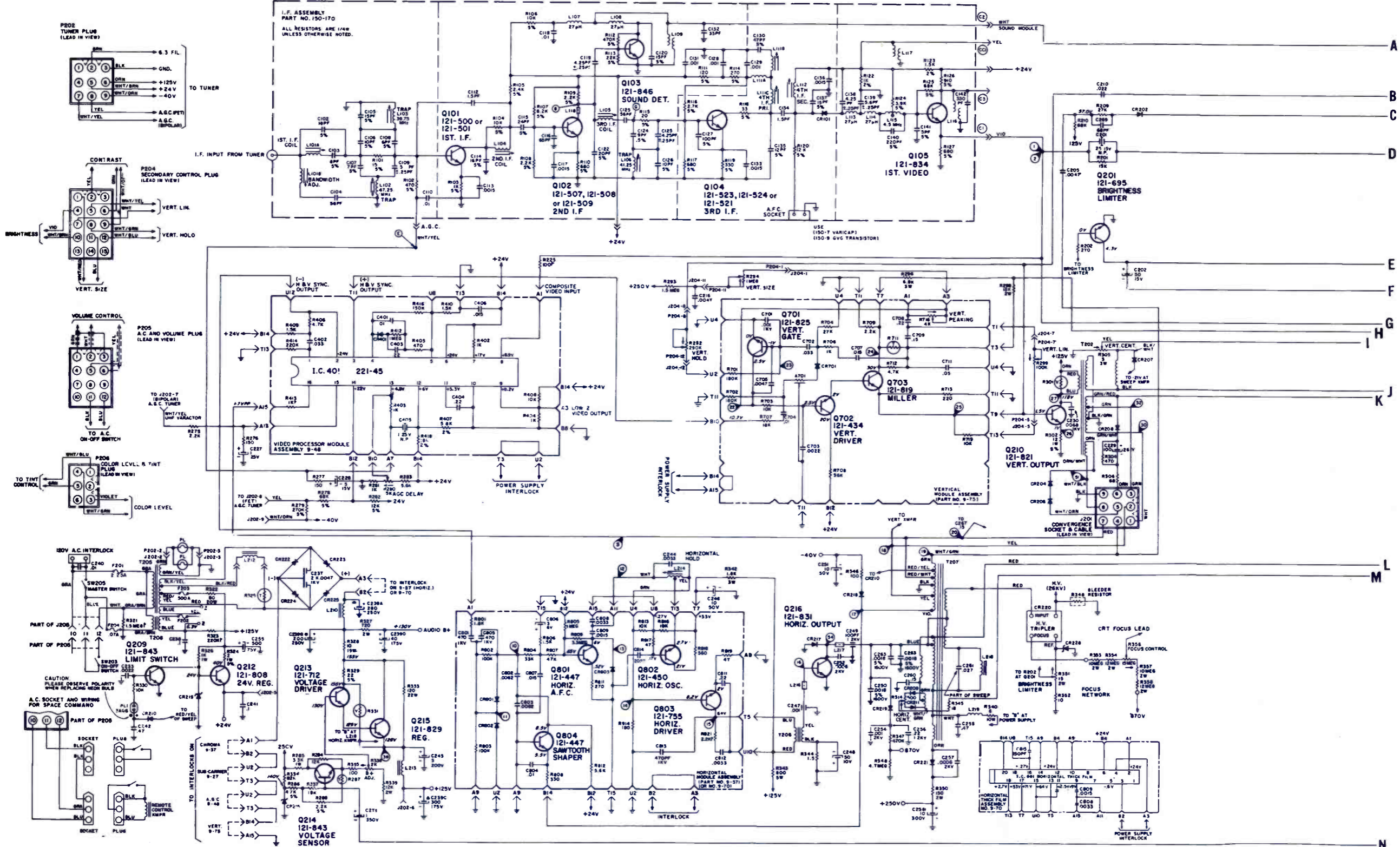
ZENITH
Color TV Chassis
25CC55

ELECTRONIC
TECHNICIAN/DEALER **TEKFAAX**

SYMBOL	DESCRIPTION	ZENITH PART NO.
C239A	—280 μ f/250v elect	22 6346
C239B	—200 μ f/250v elect	22 6346
C239C	—300 μ f/175v elect	22 6346
C239D	—40 μ f/175v elect	22 6346
R204	—1K contrast control	63-8006
R218	—300 Ω horiz centering control	63-8201
R222	—5K peak picture control	63-8204
R251	—100K tone control	63-8468
R280	—3K AGC delay control	63-8493
R287	—thermistor	63-9109

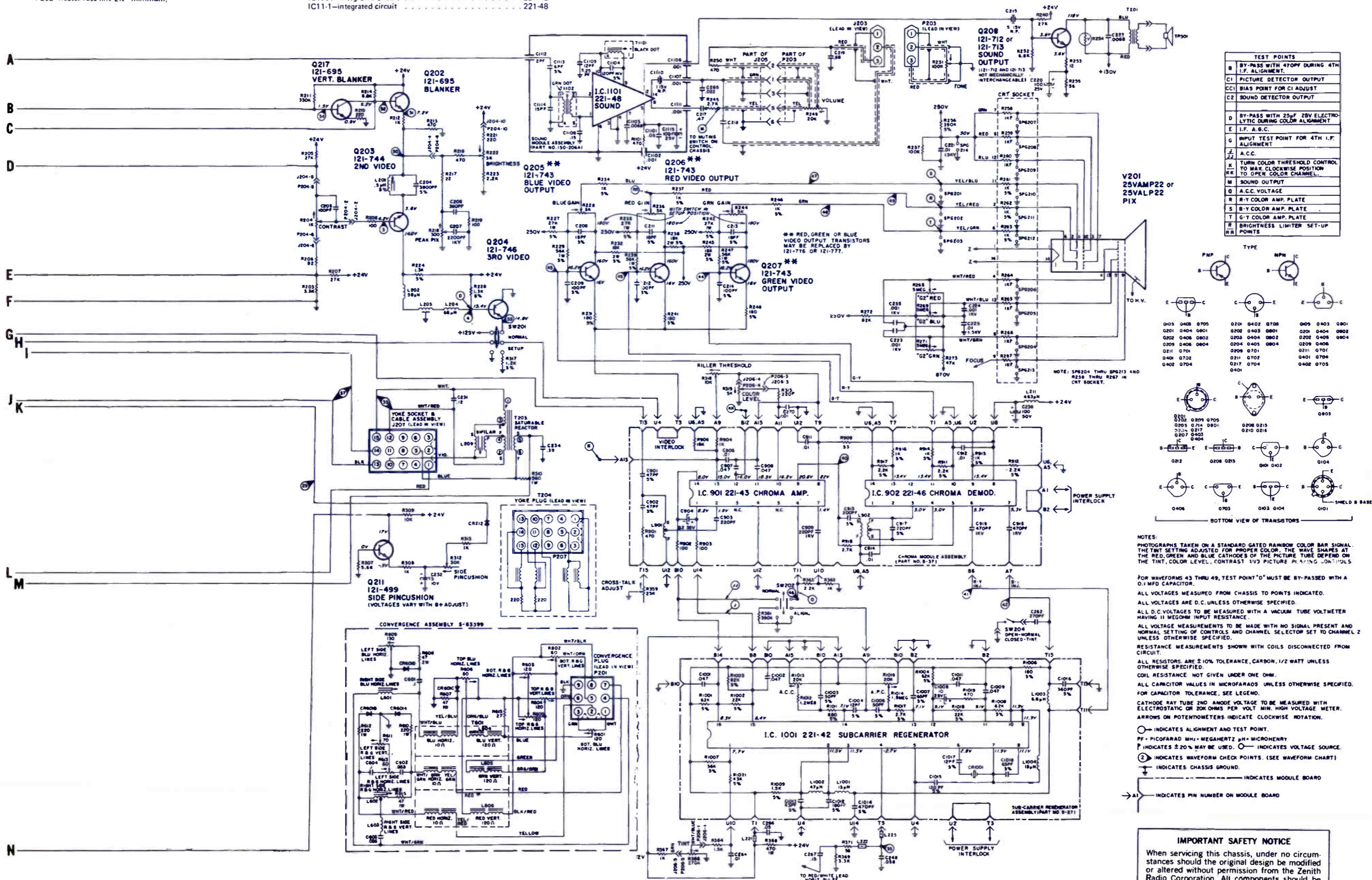
R294	—1M vert size control	63-8699
R299	—100K vert lin control	63-8700
R301	—VDR	63-5472
R303	—5 Ω vert center control	63-8475
R312	—30K side pin cushioning control	63-8495
R314	—500 Ω horiz centering control	63-8956
R318	—10K killer threshold control	63-8491
R319	—5K color level control	63-8201
R331	—VDR	63-5440
R338	—2K B+ adjust control	63-8498
R351	—15 Ω bright limiter control	63-8706

R356	—15M focus control	63-8703
R359	—25K cross talk control	63-8490
R711	—thermistor	63-8788
R716	—4K vert peaking control	63-8962
R1013	—20K ACC control	63-8476
L102	—47.25MHz trap	95-3409
L104	—2nd IF coil	95-3147
L106	—41.25MHz trap	20-3144
L203	—delay line	S-85998
L210	—filter choke	95-2925
L214	—horiz osc coil	S-56875

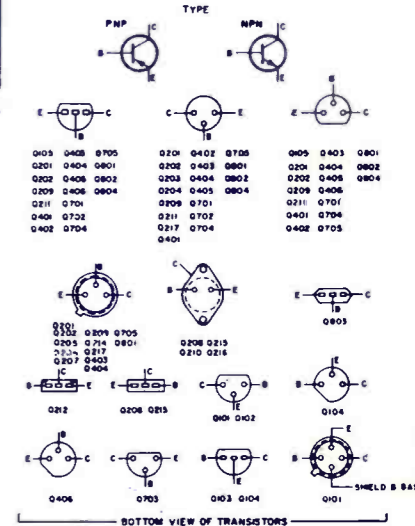


ZENITH
Color TV Chassis
25CC55

- | | | | |
|--------------------------------------|---------|---|---------|
| L901—chroma take-off coil | S-85761 | loop of No.24 aug. copper wire | 91-2061 |
| PL1—neon bulb (3AG-B) | 100-571 | F203—0.5a bel-fuse | 136-84 |
| T201—audio output xformer | 95-2883 | F204—0.07a bel-fuse | 136-90 |
| T202—vert output xformer | 95-2915 | SW205—master off switch | 85-1260 |
| T203—saturable reactor xformer | 95-2881 | CR220—HV tripler | 212-104 |
| T204—deflection yoke | 95-2880 | CR1001—3.58MHz osc crystal | 013-89 |
| T206—power xformer | 95-2954 | IC401—integrated circuit | 221-45 |
| T206—horiz driver xformer | 95-2895 | IC901—integrated circuit | 221-43 |
| T207—horiz sweep xformer | S-89430 | IC902—integrated circuit | 221-46 |
| T208—filament xformer | 95-2953 | IC801—horiz thick film (use on 9-70 only) | 223-4 |
| F202—heater fuse line 2 1/2" minimum | | IC1001—integrated circuit | 221-42 |
| | | IC11-1—integrated circuit | 221-48 |



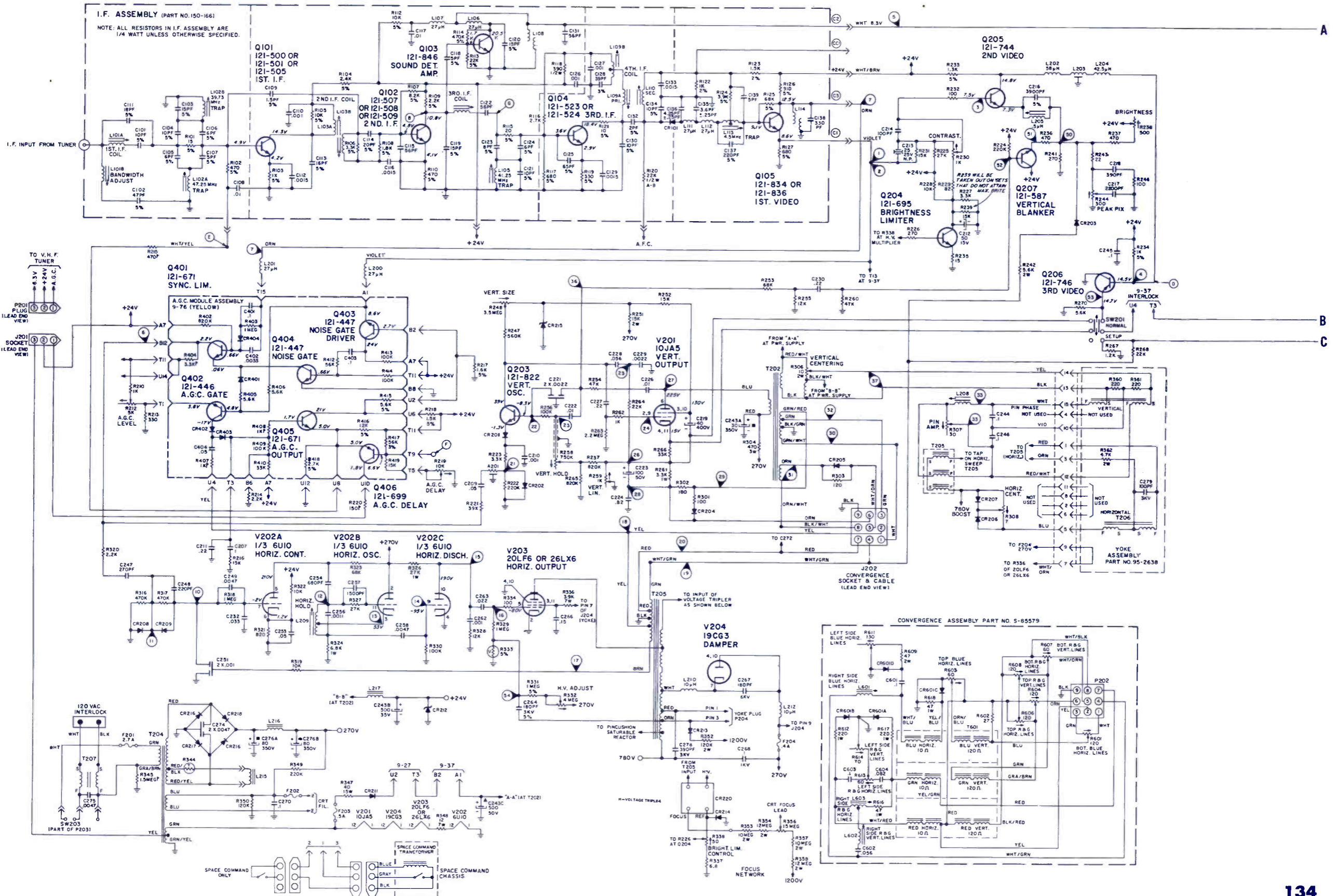
TEST POINTS	
B	BY-PASS WITH 470PF DURING 4TH I.F. ALIGNMENT.
C1	PICTURE DETECTOR OUTPUT
CC1	BIAS POINT FOR CI ADJUST
C2	SOUND DETECTOR OUTPUT
D	BY-PASS WITH 25PF 20V ELECTROLYTIC DURING COLOR ALIGNMENT.
E	I.F. A.B.C.
G	INPUT TEST POINT FOR 4TH I.F. ALIGNMENT
J	A.C.C.
K	TURN COLOR THRESHOLD CONTROL TO MAX CLOCKWISE POSITION TO OPEN COLOR CHANNEL.
M	SOUND OUTPUT
Q	A.C.C. VOLTAGE
R	R-Y COLOR AMP. PLATE
S	B-Y COLOR AMP. PLATE
T	G-Y COLOR AMP. PLATE
RR	BRIGHTNESS LIMITER SET-UP POINTS



ZENITH

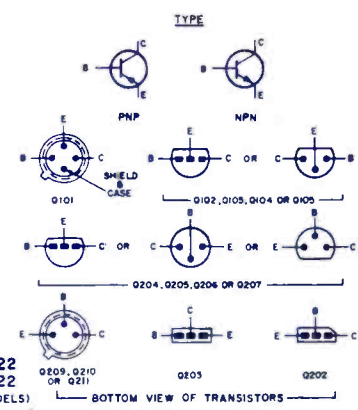
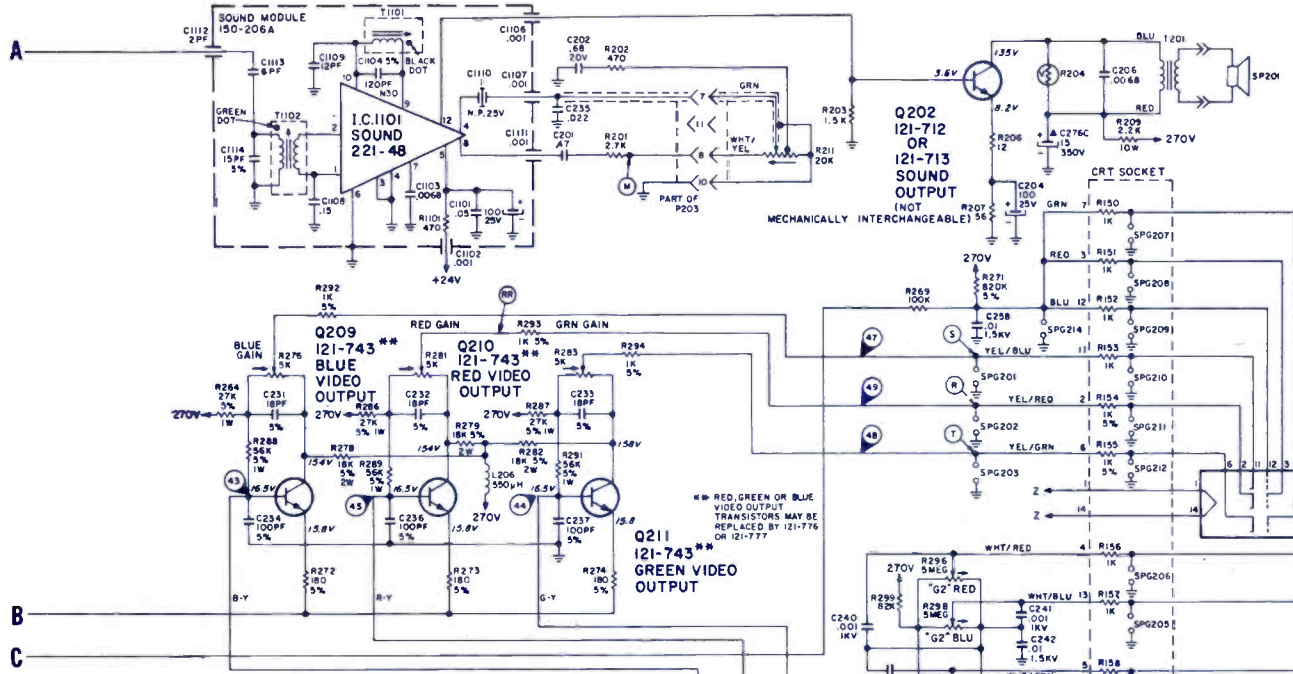
Color TV Chassis
19CC19

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X

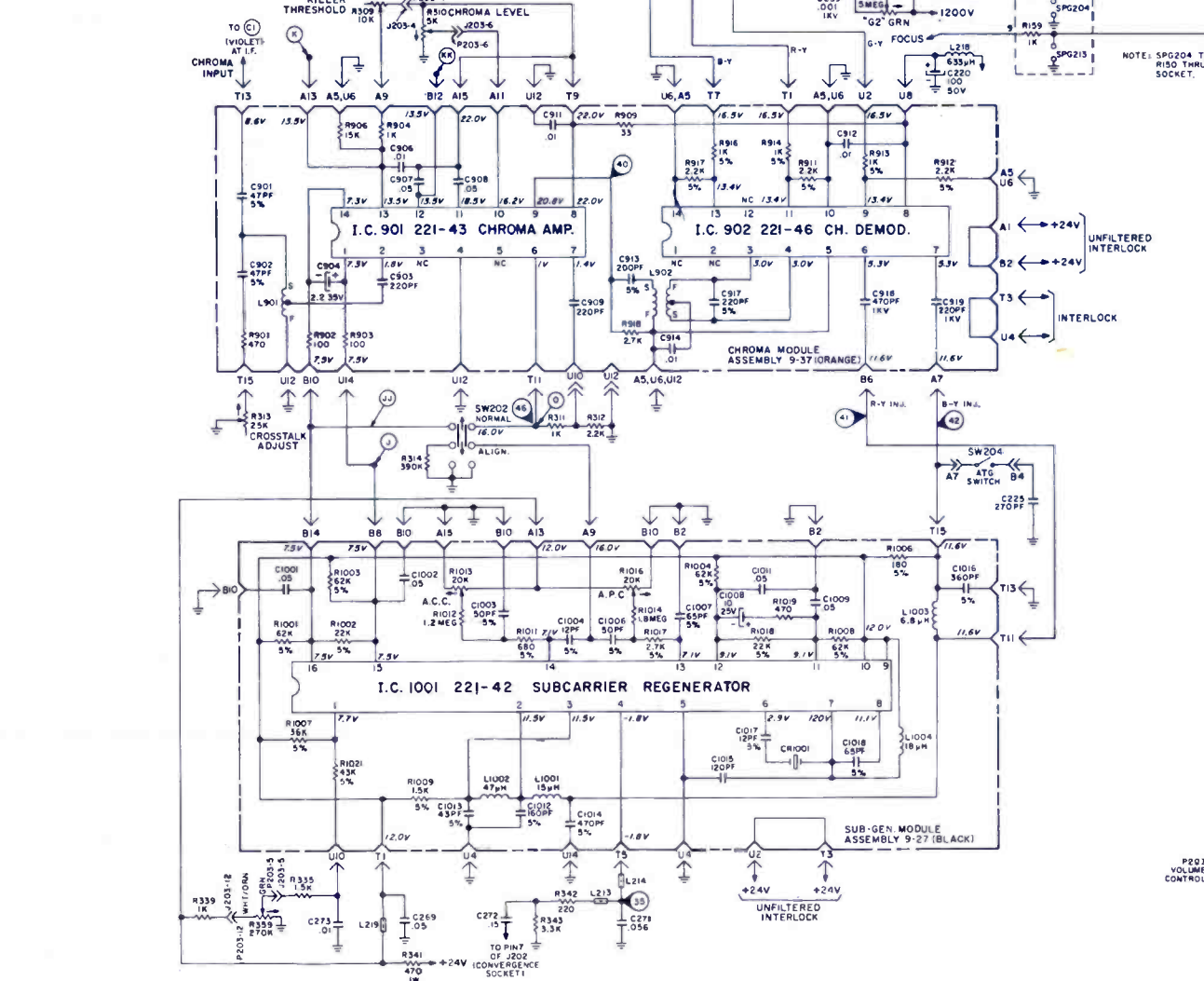


SYMBOL DESCRIPTION ZENITH PART NO.

C243A-30 μ f electro cap 350V	72-6071
C243B-900 μ f electro asp 35V	
C243C-500 μ f electro cap 50V	
C276A-80 μ f electro cap 350V	
C276B-80 μ f electro cap 350V	
C276C-15 μ f electro cap 350V	22-6073
R204-voltage dependent resistor	63-5440
R212-5K AGC level control	63-8492
R219-10K AGC delay control	63-8491
R230-contrast control	63-8979
R238-500 Ω bright control	63-8785
R244-300 Ω peak picture control	63-8496
R248-3.5M vert size control	63-8497
R258-750K vert hold control	63-8963
R259-1K vert lin control	63-8529
R306-10 Ω vert cent control 2W	63-7009
R308-7 Ω horiz center control	63-8474
R309-10K killer threshold control	63-8491
R333-voltage dependent resistor 5%	63-8688
R338-50 Ω bright limit control	63-8989
R344-thermistor	63-8687
R1013-20K ACC control	63-8576
R1016-20K APC control	63-8576
L102-39.75MHz & 47.25MHz traps	20-3396
L113-4.5MHz trap	20-3289
L203-delay line	S-85998
L209-horiz osc coil	S-86109
L901-chroma take-off coil	S-85761
L902-2nd chroma coil	S-86109
T201-sound output xformer	95-2854
T202-vert output xformer	95-2850
T203-saturable reactor	95-2867
T204-power xformer	95-2912
T205-horiz sweep xformer	S-86159
T206-deflection yoke	95-2638
T207-ac line choke	95-2920
T1102-4.5MHz input coil (part of 150-206)	95-2620
A201-integrator unit	87-4
F201-2.7a bel-fuse	136-76
F202-heater fuse link	91-2061
F203-.5a bel-fuse	136-84
F204-.5a slow blow fuse	136-89



TEST POINTS	
B	BY-PASS WITH 470PF DURING 4TH I.F. ALIGNMENT
C1	PICTURE DETECTOR OUTPUT
CC1	BIAS POINT FOR C1 ADJUST
C2	SOUND DETECTOR OUTPUT
C3	SYNC DETECTOR OUTPUT
D	BY-PASS WITH 25 μ F 25V ELECTROLYTIC DURING COLOR ALIGNMENT
E	I.F. A.G.C.
G	INPUT TEST POINT FOR 4TH ALIGNMENT
J	A.C.C.
K	TURN COLOR THRESHOLD CONTROL TO MAX. CLOCKWISE POSITION TO OPEN COLOR CHANNEL
KK	SOUND OUTPUT
M	SOUND OUTPUT
O	A.C.C. VOLTAGE
R	RED COLOR AMP. COLLECTOR
S	BLUE COLOR AMP. COLLECTOR
T	GREEN COLOR AMP. COLLECTOR
RR	BRIGHTNESS LIMITER SET-UP POINTS



NOTES:
PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. THE HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE CATHODES OF THE PICTURE TUBE DEPEND ON THE HUE, COLOR LEVEL (CHROMA LEVEL), CONTRAST (COLOR COMMANDER) AND PICTURE PEAKING CONTROLS.

FOR WAVEFORMS 43 THRU 49, TEST POINT "D" MUST BE BY-PASSED WITH A 0.1 MFD CAPACITOR.

ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.

ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.

RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.

COIL RESISTANCE NOT GIVEN UNDER ONE OHM.

ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.

FOR CAPACITOR TOLERANCE, SEE LEGEND.

CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHMS PER VOLT MIN HIGH VOLTAGE METER.

ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.

○ INDICATES ALIGNMENT AND TEST POINT.

PF = PICOFARAD MHZ = MEGAHERTZ μ H = MICROHENRY

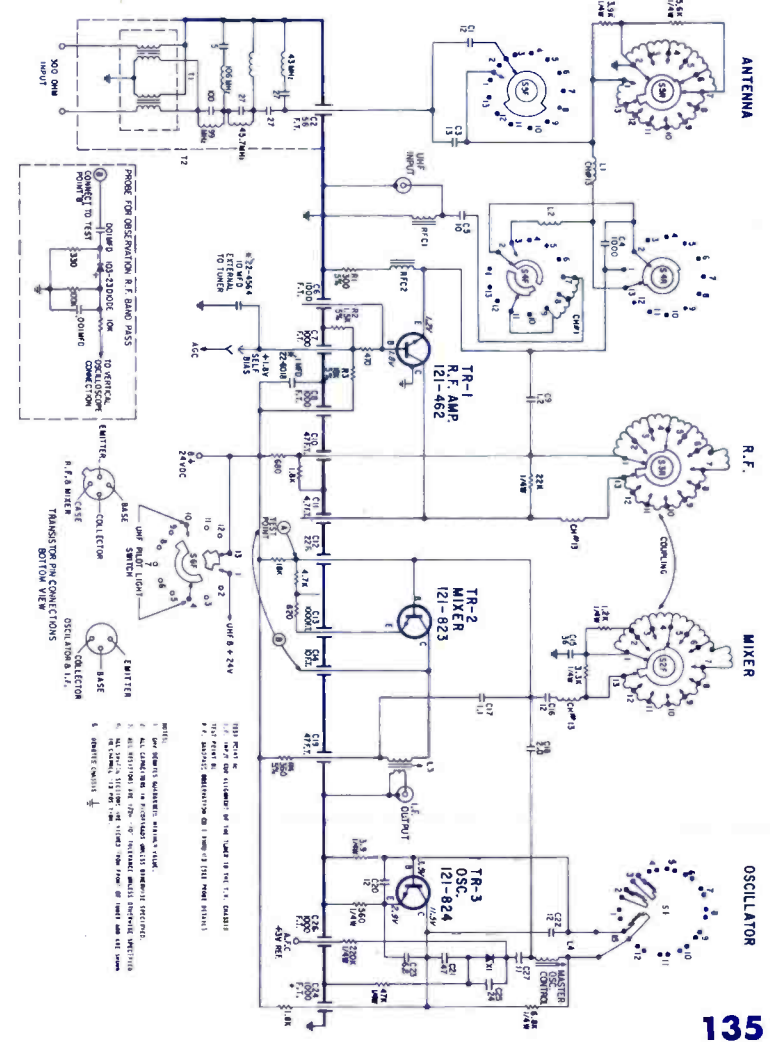
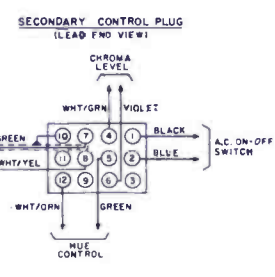
② INDICATES $\pm 20\%$ MAY BE USED. ○ INDICATES VOLTAGE SOURCE.

③ INDICATES WAVEFORM CHECK POINTS. (SEE WAVEFORM CHART)

⊕ INDICATES CHASSIS GROUND.

— INDICATES MODULE BOARD

A1— INDICATES PIN NUMBER ON MODULE BOARD



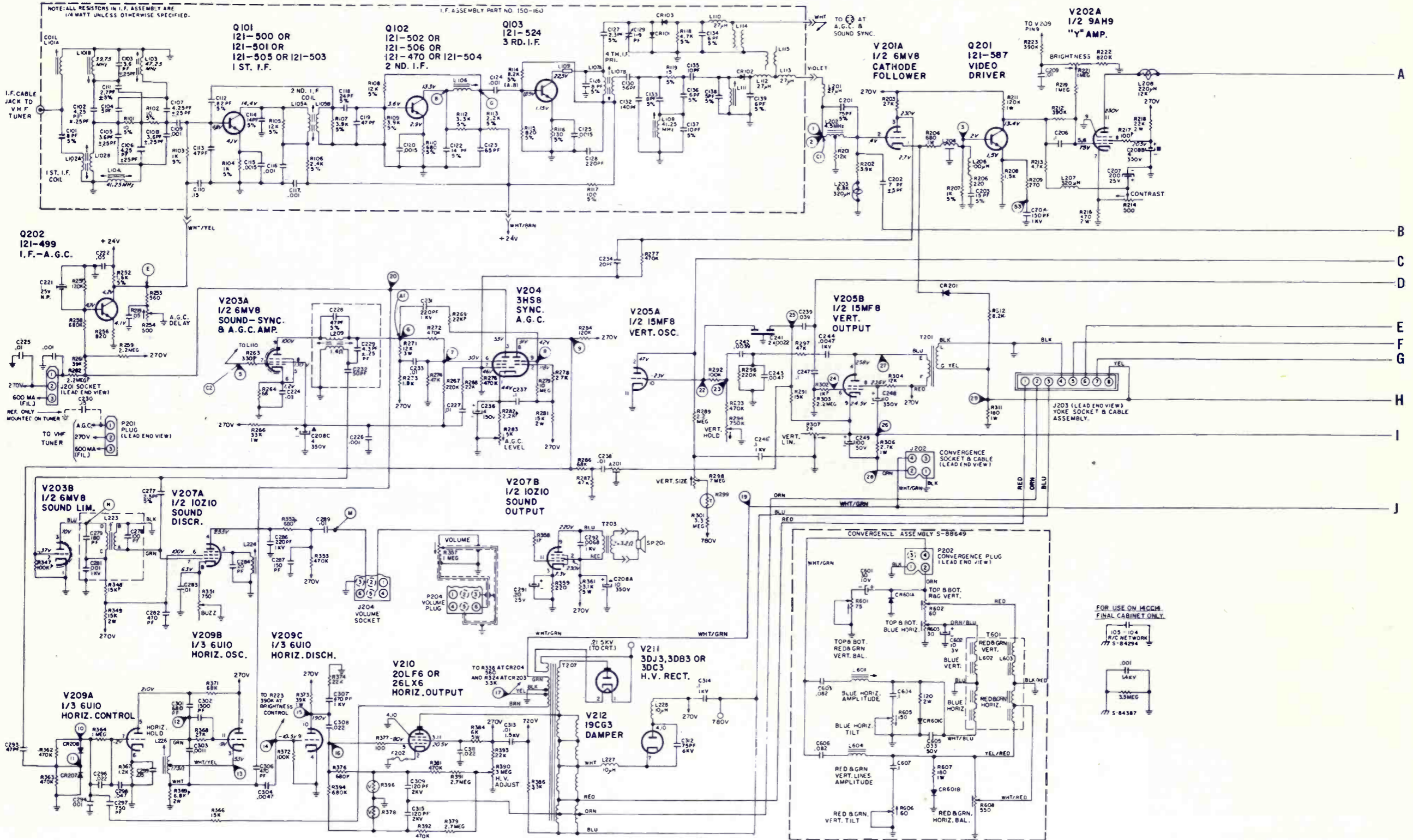
ZENITH

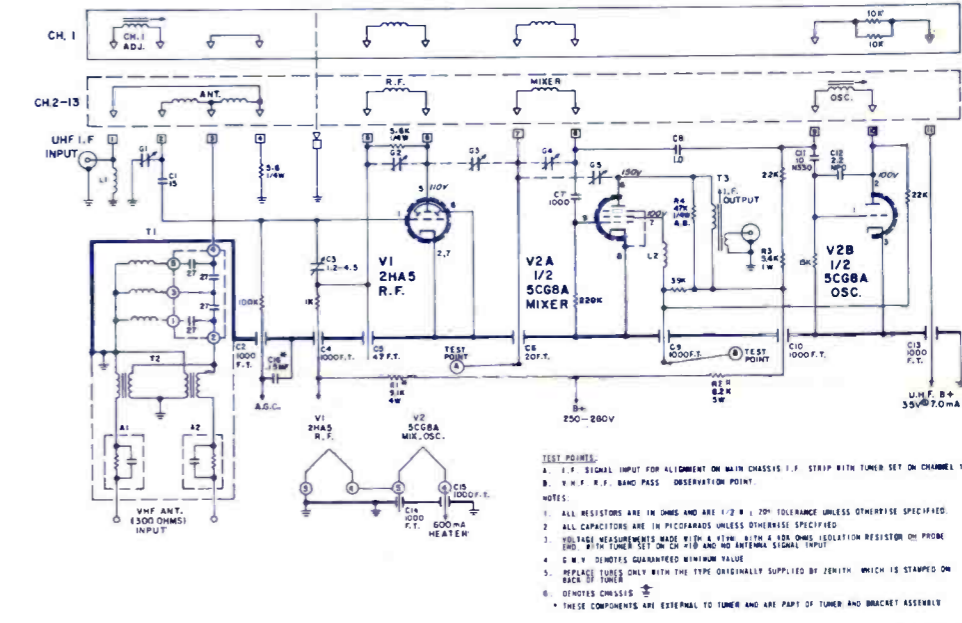
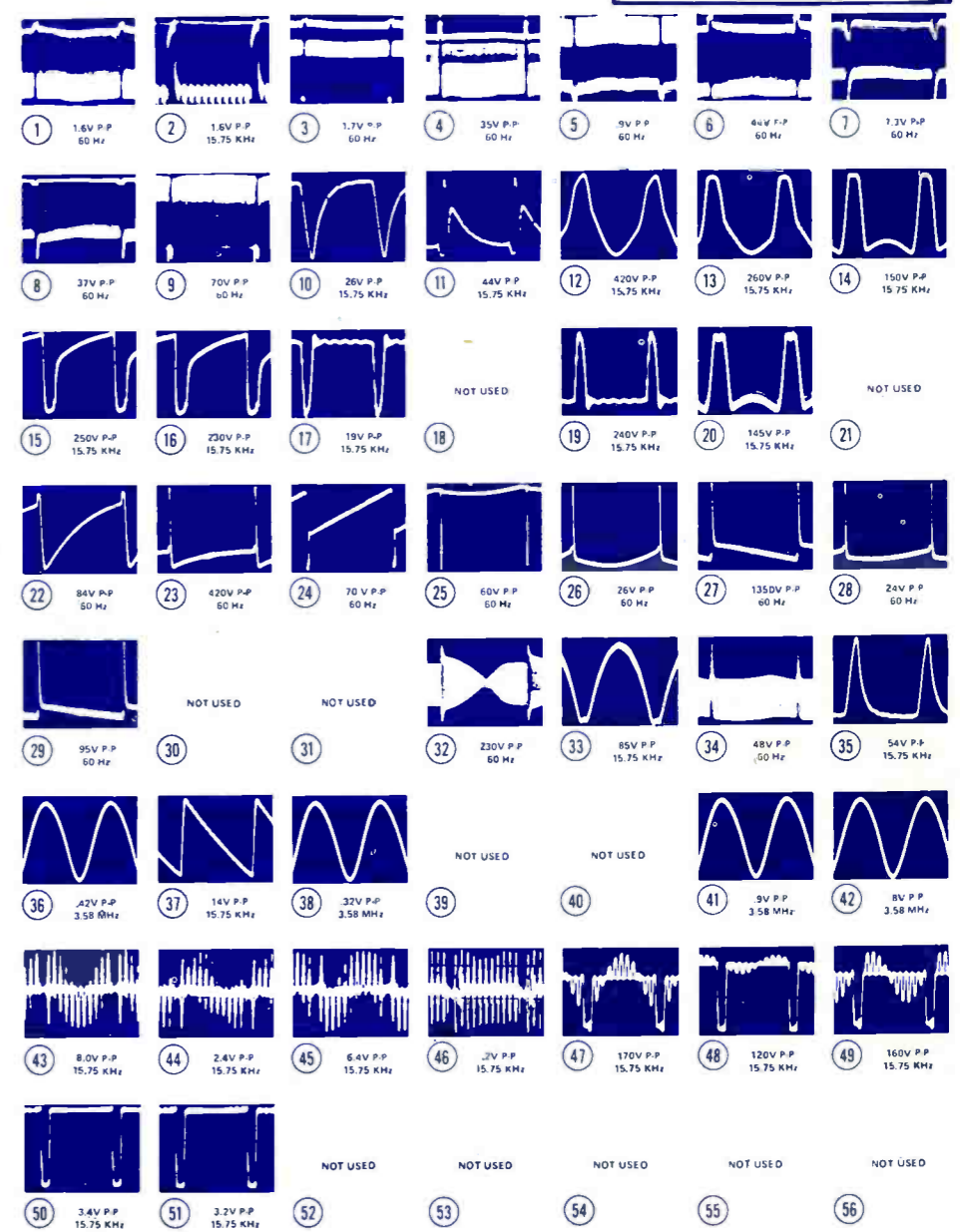
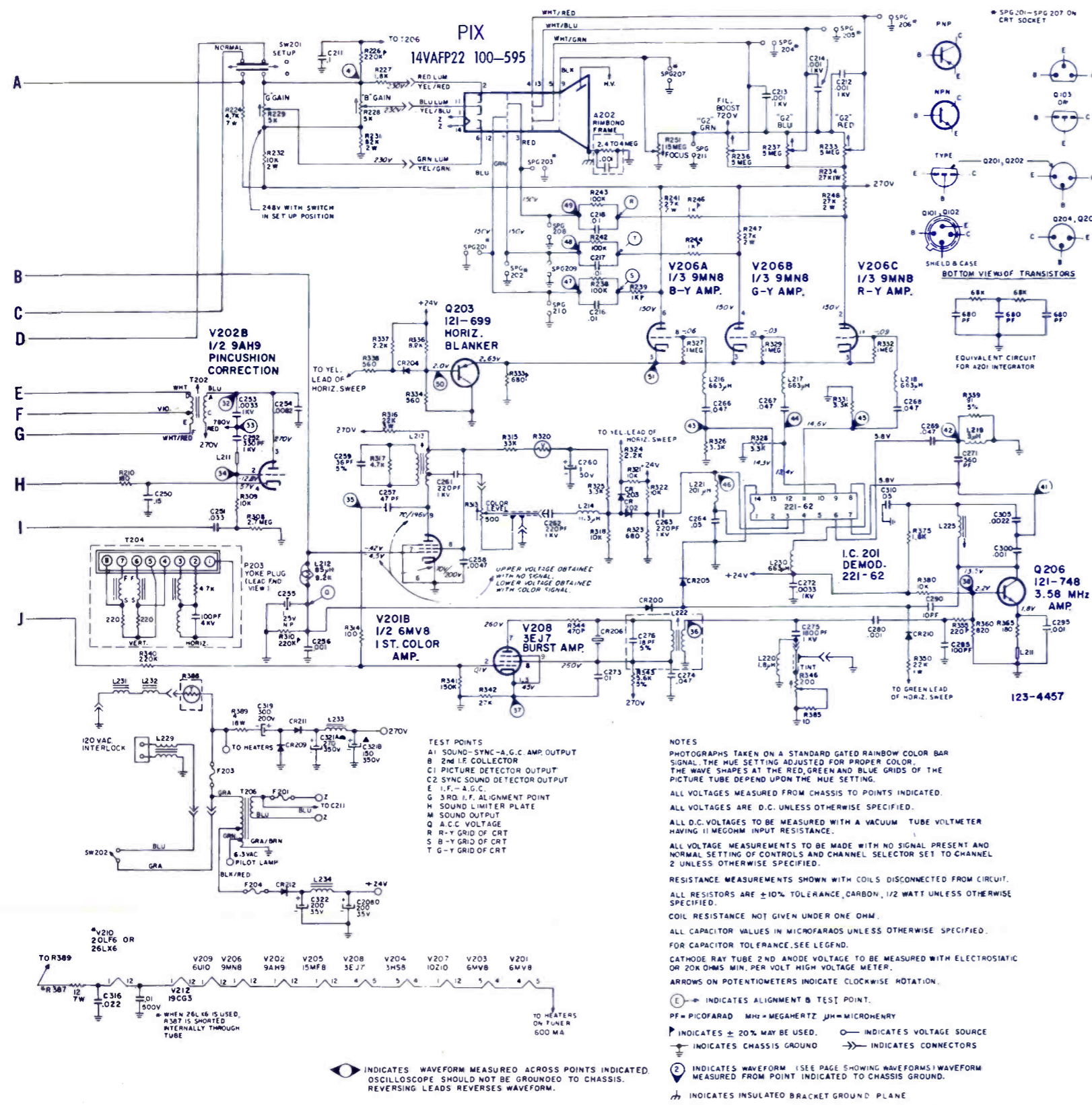
Color-TV Chassis
14CC14Z

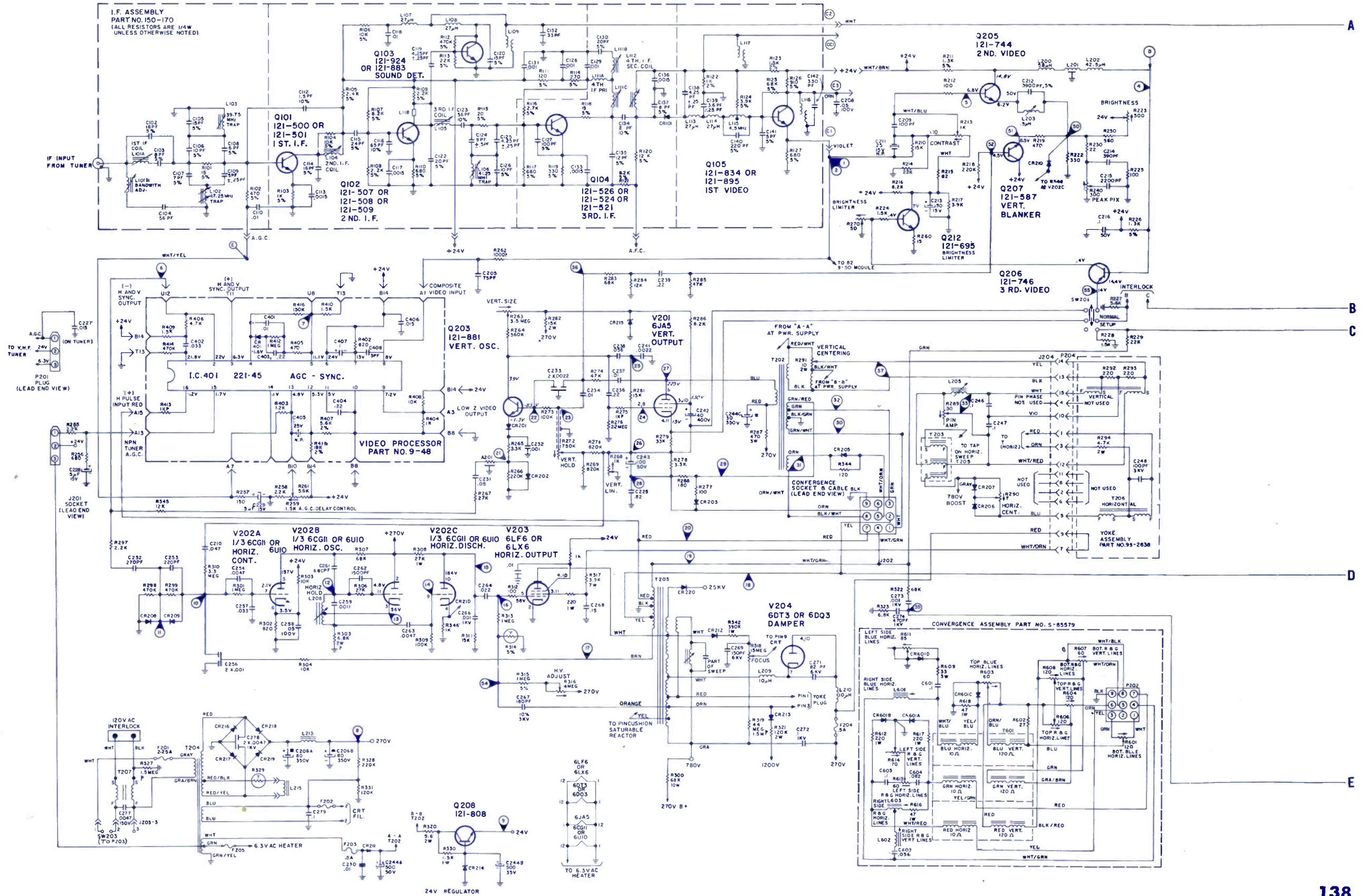
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	ZENITH PART NO.
C208A	10 μf electrolytic cap 350v	
C208B	4 μf electrolytic cap 350v	22-6312
C208C	4 μf electrolytic cap 350v	
C208D	200 μf electrolytic cap 35v	
C319	300 μf electrolytic cap 300v	22-5748
C321A	270 μf electrolytic cap 350v	
C321B	150 μf electrolytic cap 350v	22-5746
R221	1M bright control	63-7974
R251	15M focus control	63-9013
R254	500 n, AGC delay control	63-8543
R283	5K, AGC level control	63-7976
R294	750K, vert hold control	63-7973

R298	7M, vert size control	63-6433
R299	thermistor	63-6824
R307	2K, vert line control	63-7983
R320	voltage dependent resistor	63-7143
R351	750 n, buzz control	63-6487
R378	voltage dependent resistor	63-7658
R388	thermistor	63-8687
R390	3M, HV control	63-8460
R396	voltage dependent resistor	63-7658
L103	47.25MHz trap coil assembly	20-1669
L204	delay line	S-80475
L209	sound take off coil	S-77414
L224	quad coil	S-80480
L226	horiz osc coil	S56877
L234	filter choke	95-2733
T201	vert output xformer	95-2924
T203	sound output xformer	95-2688
T204	deflect yoke	95-2781
T206	filament xformer	95-2944
T207	horiz sweep xformer	S-85571
A201	integrator unit	87-7
A202	R/C network	105-104
F201	heater fuse link 2 1/2 in. min. loop of 24 lb AWG copper wire	91-2061
F202	50a bel-fuse	136-84
F203	2.7a bel-fuse	136-76
F204	35 bel-fuse	136-75
	VHF Tuner used in Model C351066	175-1402



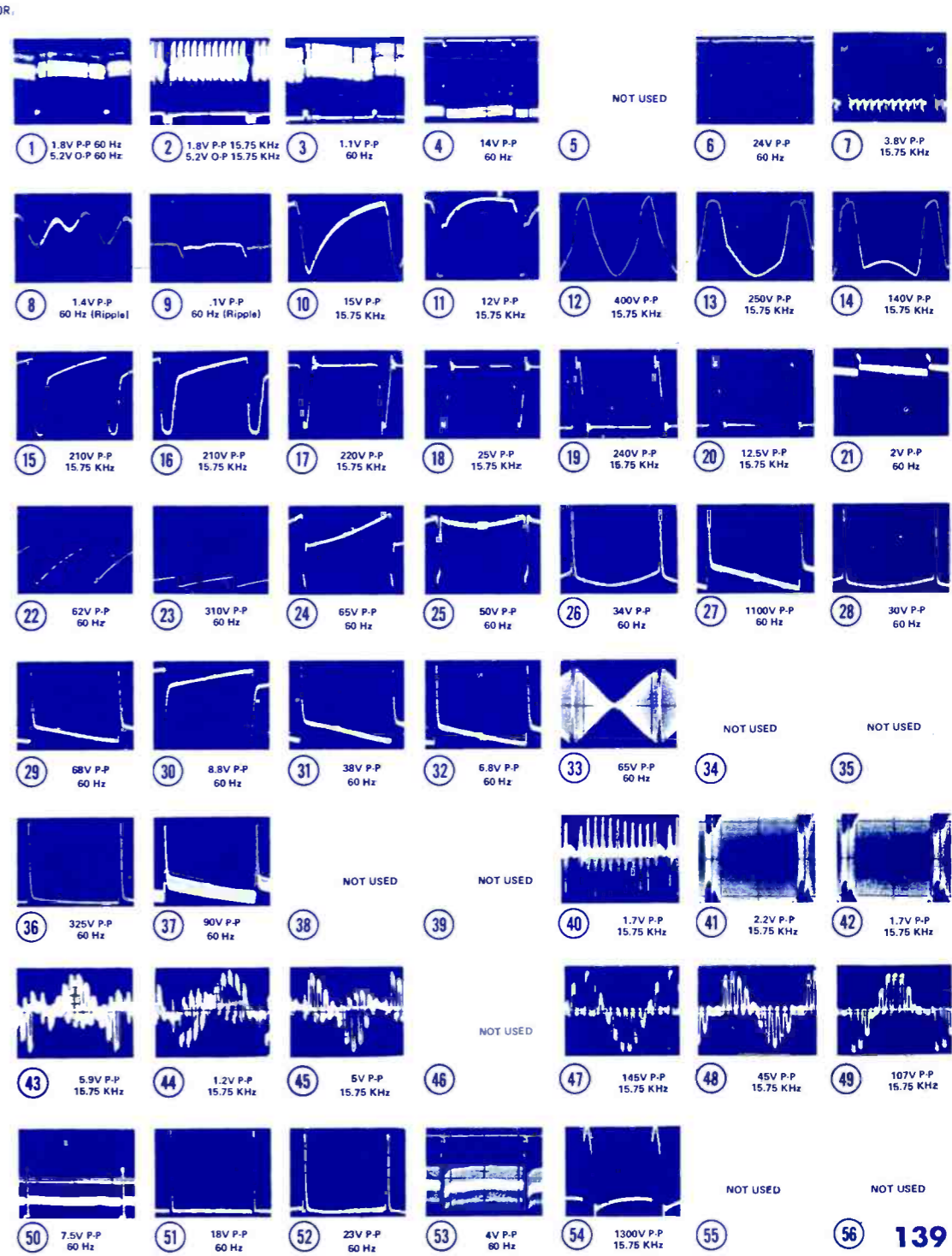
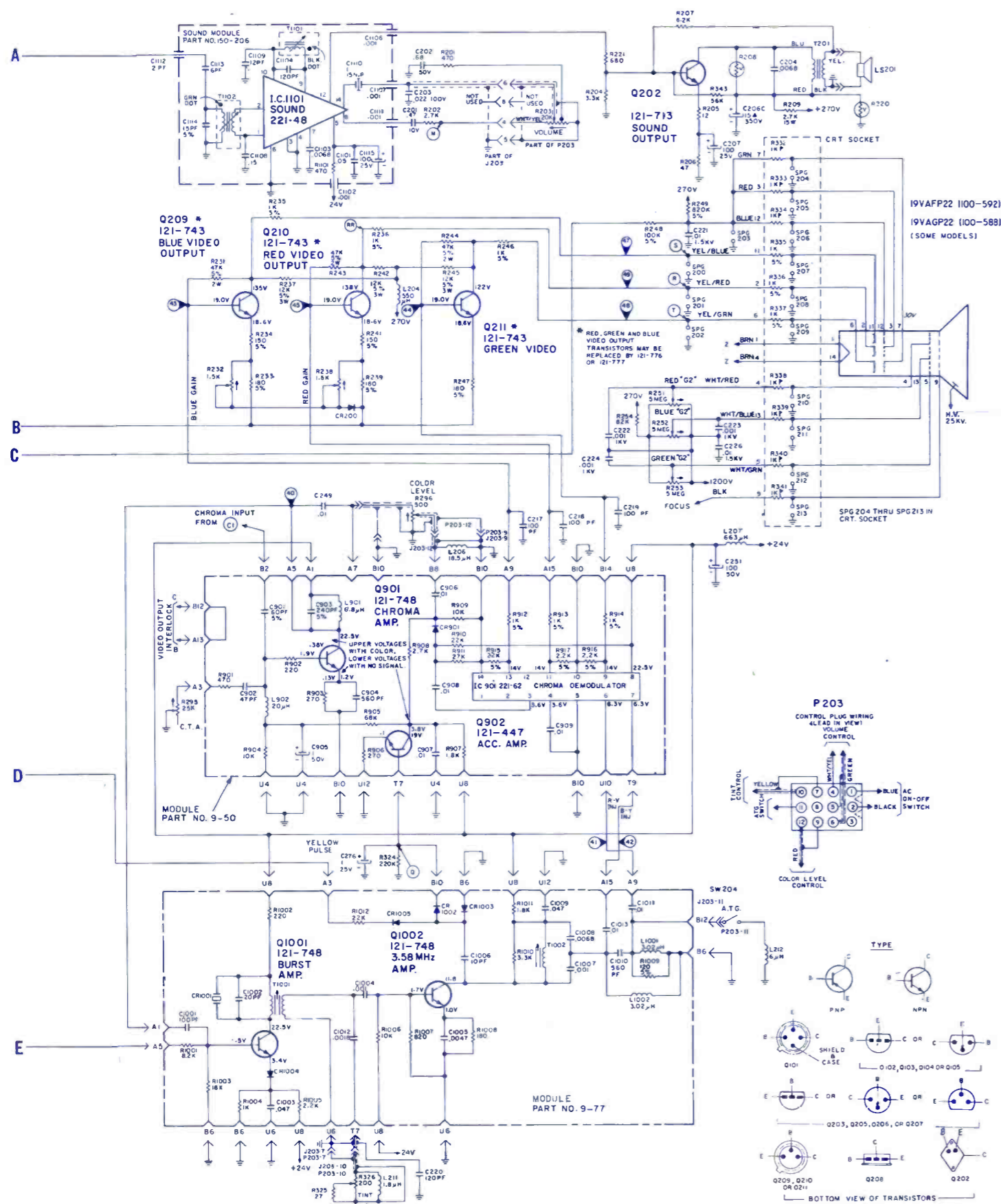




ZENITH
Color-TV Chassis
19DC20

SYMBOL	DESCRIPTION	ZENITH PART NO.
C206A	80 μf, electrolytic cap, 350v	22-6073
C206B	80 μf, electrolytic cap, 350v	22-6073
C206C	15 μf, electrolytic cap, 350v	22-6073
R203	20K, volume control	63-8609
R208	voltage dependent resistor	63-5440
R213	1K, contrast control	63-9193
R220	voltage dependent resistor	63-9184
R223	500Ω, brightness control	63-9192
R240	300Ω, peak pix control	63-9119
R259	1.5K, AGC delay control	63-9177
R263	3.5M, vert size control	63-9115
R268	1K, vert lin control	63-9066
R270	50Ω, brightness limiter	63-8989
R272	750K, vert hold control	63-9194
R290	70Ω, horiz centering	63-8474
R291	10Ω, vert center control 2w	63-7009
R295	25K, CTA control	63-9117
R296	500Ω, color level control	63-9308
R314	volt dependent resistor	63-8688
R316	4M, high volt adjust	63-9004
R318	15M, focus control	63-8709
R326	200Ω, tint control	63-9133
R329	thermistor	63-8687
L101A	1st IF coil	95-2941
L102	47.25MHz, trap coil	20-3409

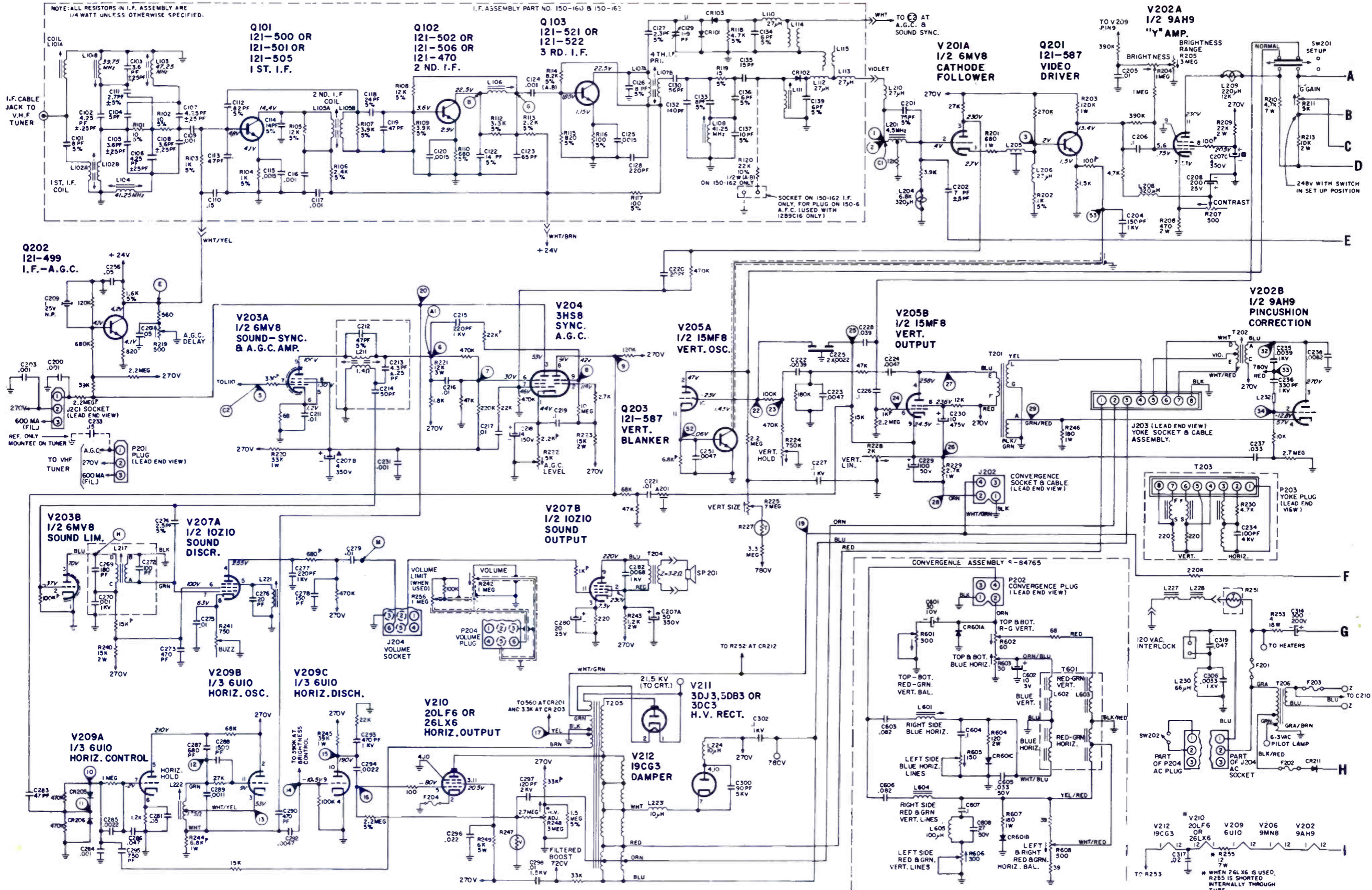
L103	39.75MHz, trap coil	20-3145
L115	4.5MHz, trap coil	95-2947
L201	delay line	S-91505
L203	3.58MHz, trap coil	20-1838
L208	horiz osc coil	S-56877
L213	filter choke	95-2917
T201	audio output xformer	95-2854
T202	vert output xformer	95-2983
T203	saturable reactor	95-3004
T204	power xformer	95-2970
T206	deflect yoke assembly	95-2638
A201	integrator unit	87-4
F201	2.25A, bel-fuse	136-92
F202	heater fuse link	91-2061
F203	5A, bel-fuse	136-84
F204	5A, bel-fuse	136-84
F205	heater fuse link	91-2061
CR212	focus diode	212-85



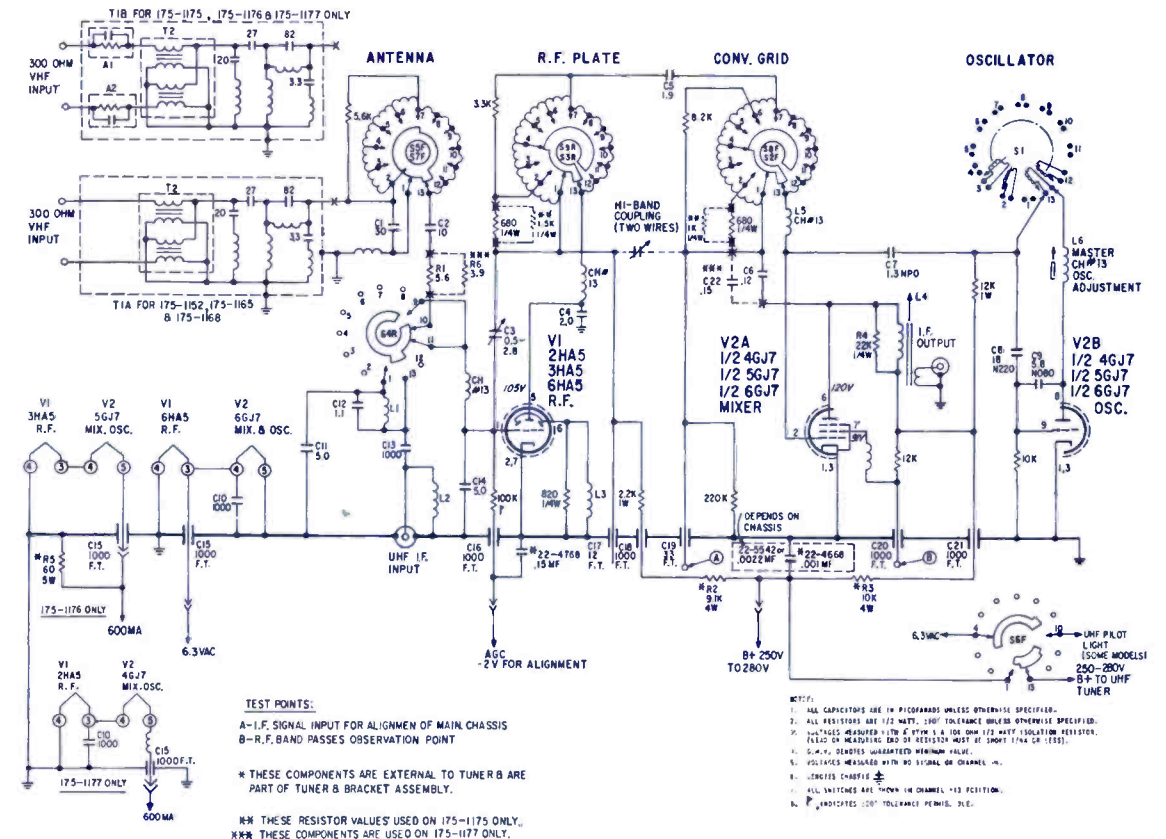
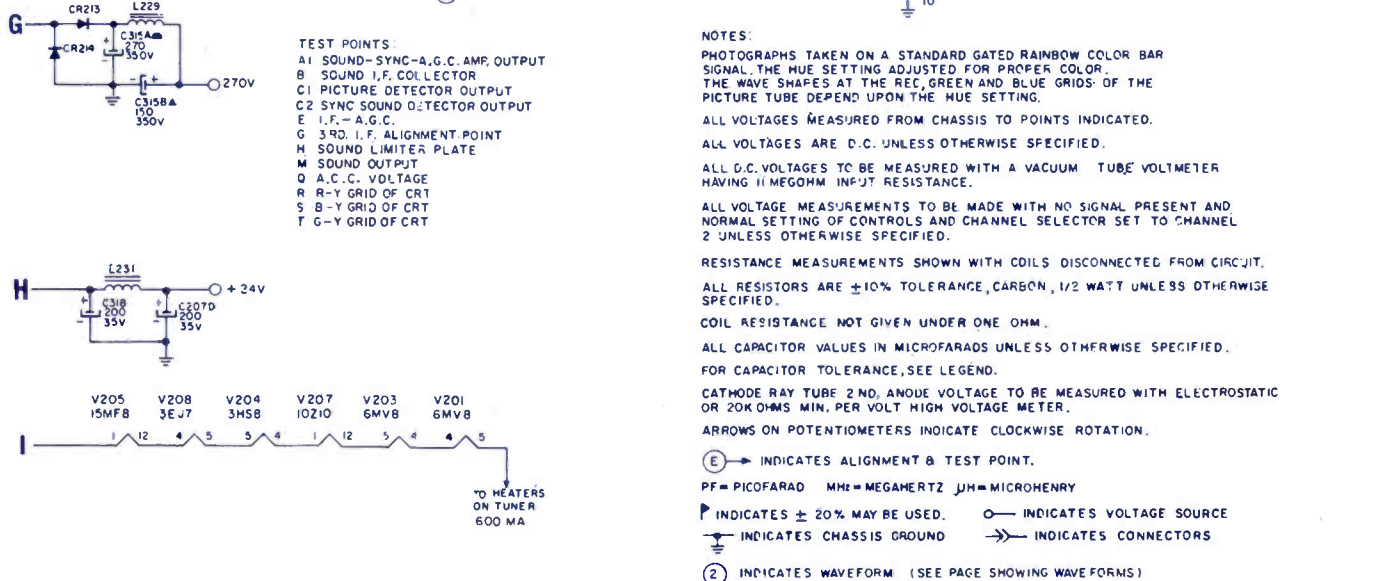
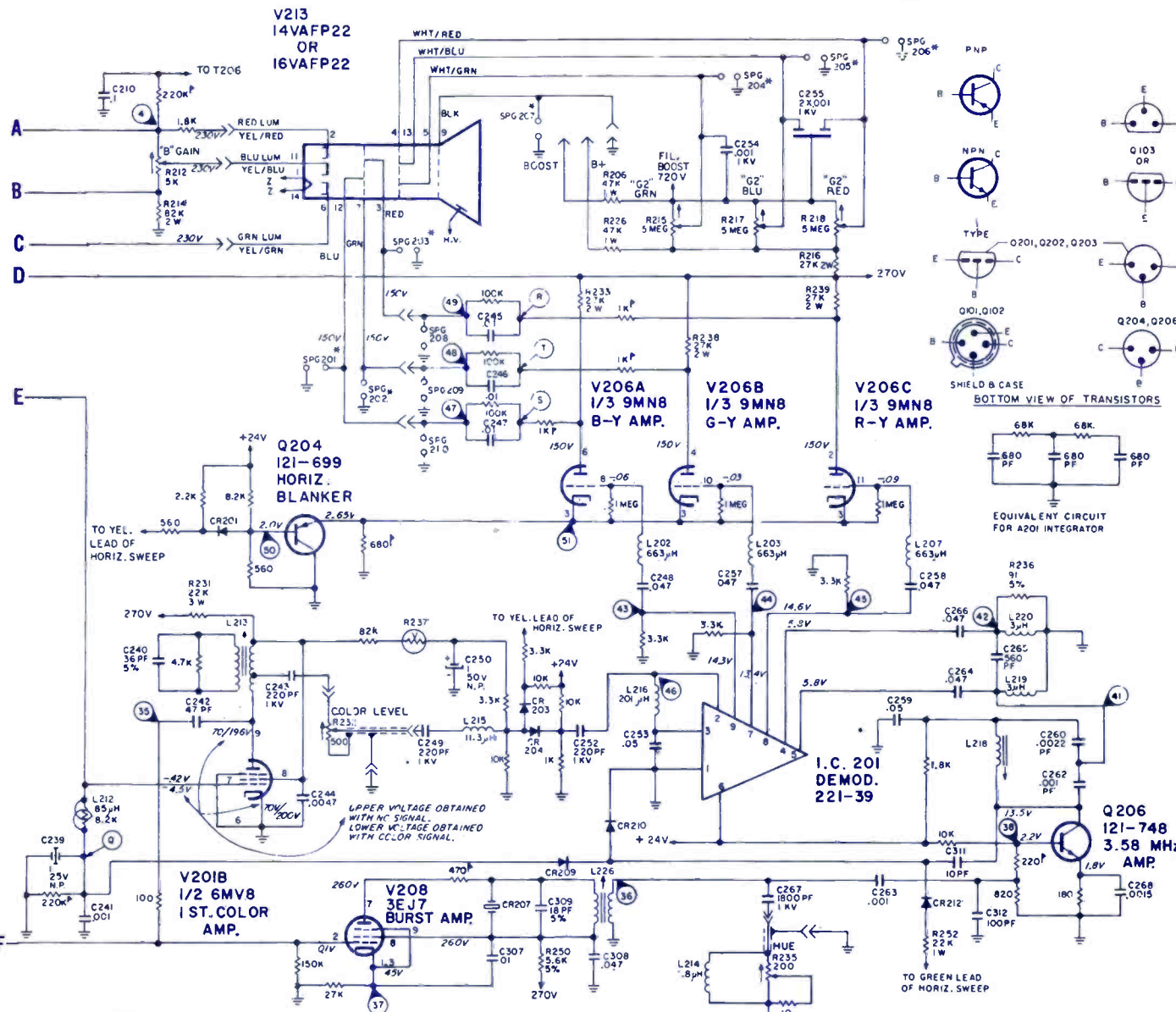
ZENITH

Color-TV Chassis
12B8C15, 12B9C16

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**



* SPG201-SPG207 ON CRT SOCKET



SYMBOL	DESCRIPTION	ZENITH PART NO.
1	1.5V P.P. 60 Hz	
2	1.0V P.P. 15.75 KHz	
3	1.5V P.P. 60 Hz	
4	35V P.P. 60 Hz	
5	8V P.P. 60 Hz	
6	44V P.P. 60 Hz	
7	7.5V P.P. 60 Hz	
8	27V P.P. 60 Hz	
9	10V P.P. 60 Hz	
10	21V P.P. 15.75 KHz	
11	20V P.P. 15.75 KHz	
12	42V P.P. 15.75 KHz	
13	200V P.P. 15.75 KHz	
14	180V P.P. 15.75 KHz	
15	250V P.P. 15.75 KHz	
16	220V P.P. 15.75 KHz	
17	18V P.P. 15.75 KHz	
18	8V P.P. 15.75 KHz	
19	24V P.P. 15.75 KHz	
20	145V P.P. 15.75 KHz	
21	10V P.P. 60 Hz	
22	84V P.P. 60 Hz	
23	420V P.P. 60 Hz	
24	70 V P.P. 60 Hz	
25	60V P.P. 60 Hz	
26	28V P.P. 60 Hz	
27	1300V P.P. 60 Hz	
28	24V P.P. 60 Hz	
29	8V P.P. 60 Hz	
30	11V P.P. 60 Hz	
31	84V P.P. 60 Hz	
32	230V P.P. 60 Hz	
33	85V P.P. 15.75 KHz	
34	48V P.P. 60 Hz	
35	84V P.P. 60 Hz	
36	8V P.P. 15.75 KHz	
37	14V P.P. 15.75 KHz	
38	8V P.P. 15.75 KHz	
39	NOT USED	
40	NOT USED	
41	8V P.P. 3.58 MHz	
42	8V P.P. 3.58 MHz	
43	8.2V P.P. 15.75 KHz	
44	3.4V P.P. 15.75 KHz	
45	4.8V P.P. 15.75 KHz	
46	2V P.P. 15.75 KHz	
47	170V P.P. 15.75 KHz	
48	120V P.P. 15.75 KHz	
49	160V P.P. 15.75 KHz	
50	3.4V P.P. 60 Hz	
51	3.2V P.P. 15.75 KHz	
52	12V P.P. 60 Hz	
53	24V P.P. 60 Hz	
54	NOT USED	
55	NOT USED	
56	NOT USED	

ZENITH

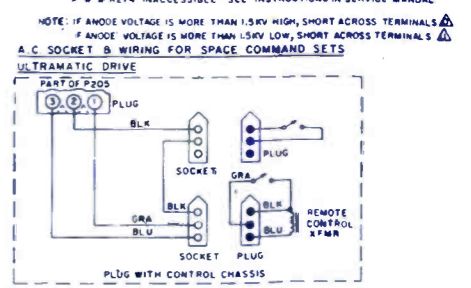
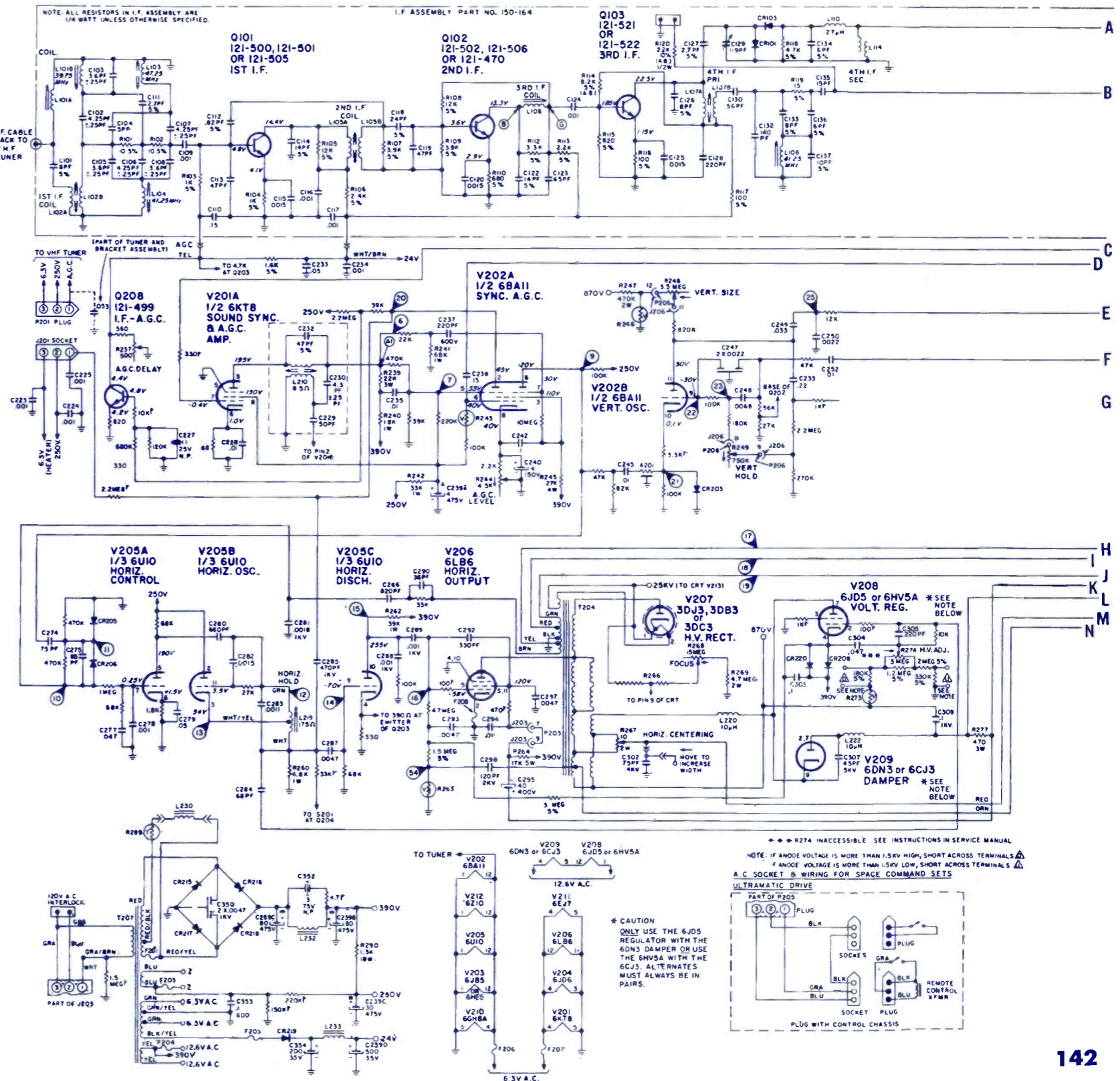
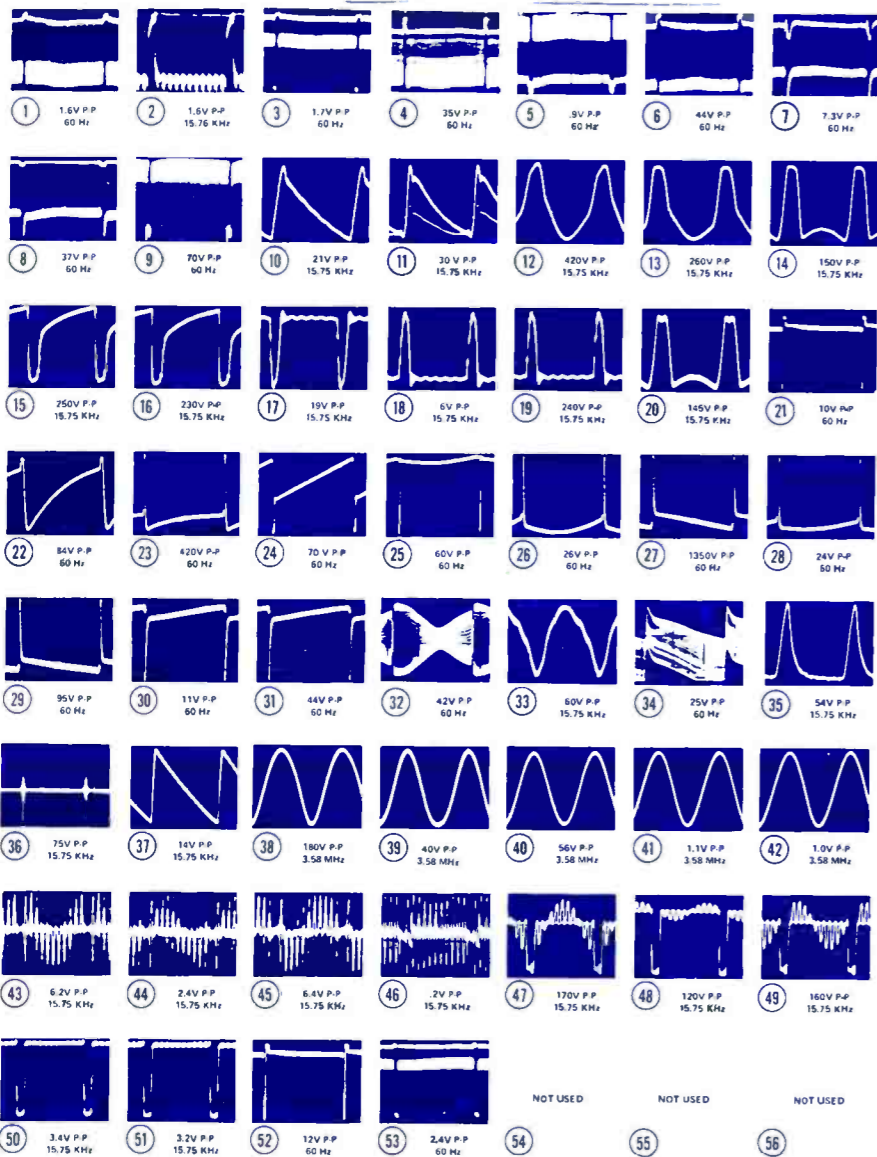
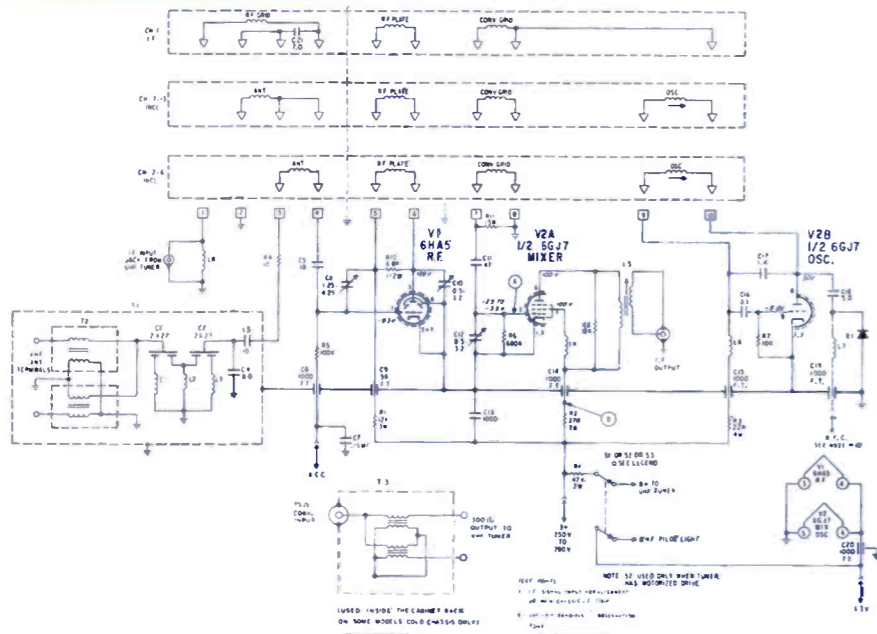
Color-TV Chassis
12B14C50

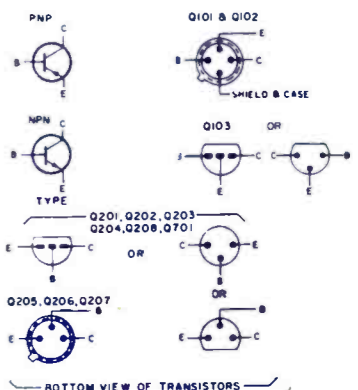
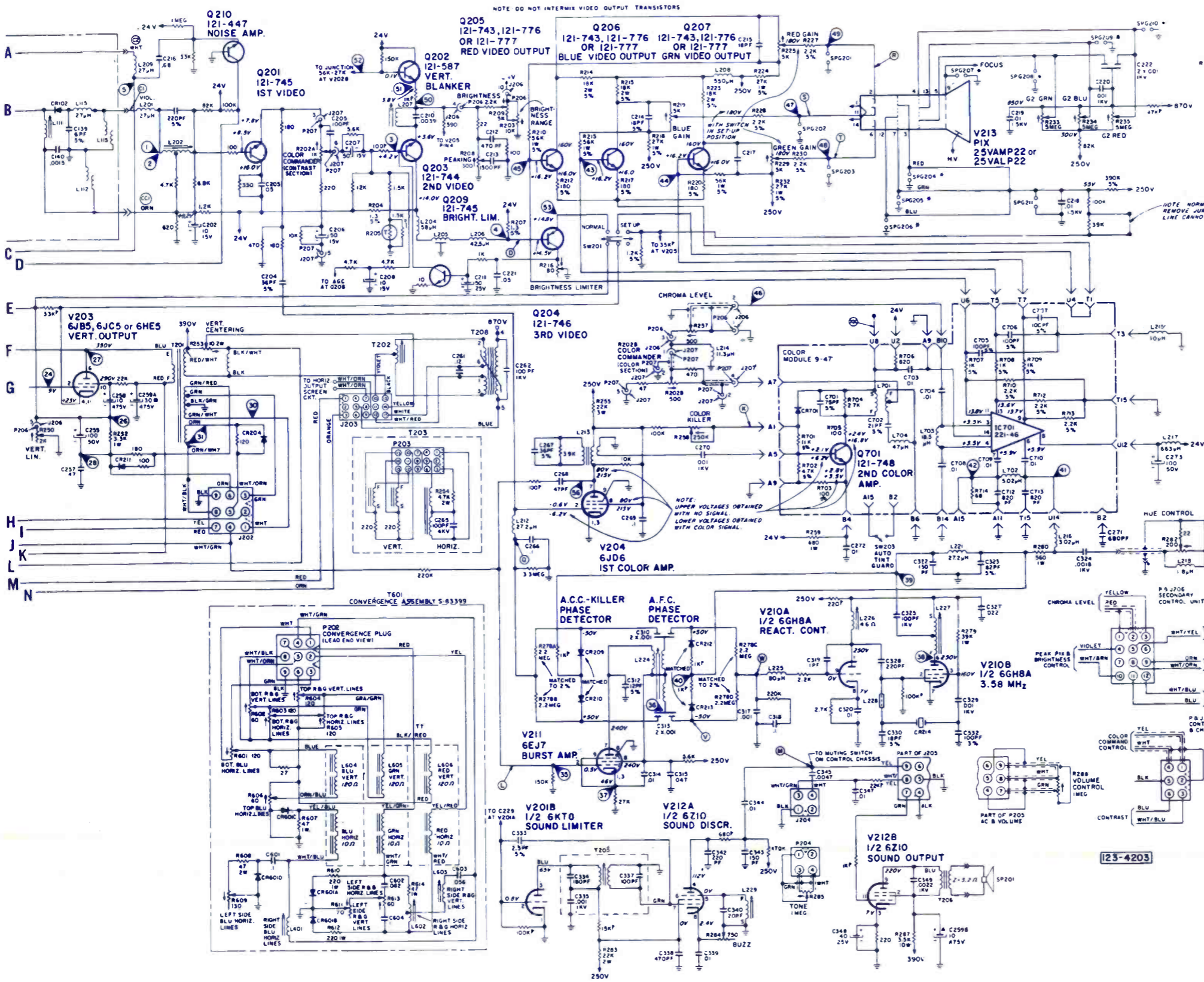
ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL	DESCRIPTION	ZENITH PART NO.
C239A	4 μf electrolytic cap 475v	
C239B	80 μf electrolytic cap 475v	22-5360
C239C	30 μf electrolytic cap 475v	
C259A	30 μf electrolytic cap 475v	
C259B	10 μf electrolytic cap 475v	22-5513
C259C	80 μf electrolytic cap 475v	
R203	10K brightness range control	63-8335
R205	thermistor	63-6848
R209	5K brightness control	63-8201
R216	80 n brightness limiter control	63-8707
R243	voltage dependent resistor	65-5327
R244	4.5K AGC level control	63-8682
R246	voltage dependent resistor	63-5314

R249	750K vertical hold control	63-8202
R250	2K vertical linearity control	63-8208
R253	10 n vertical centering control 2W	63-7009
R257	500 n color level control	63-8205
R258	250K color killer control	63-8449
R263	voltage dependent resistor	63-7658
R266	HV divider resistor	63-8676
R267	10 n horiz centering control 2W	63-7211
R268	15M focus control	63-7210
R273	voltage dependent resistor	63-8214
R274	3M high voltage adjust control	63-8460
R284	750K buzz control	63-6950
R285	1M tone control	63-8203
R289	thermistor	63-8687
L202	4.5MHz trap coil	S-83086

L207	3.58MHz trap coil	20-1838
L210	sound take-off coil	S-77414
L219	horiz osc coil	S-68877
L226	color frequency adjust coil	S-83168
L229	quad coil	S-80480
T201	vertical output xformer	95-2730
T203	deflection yoke	95-2887
T204	horiz sweep xformer	S-86950
T206	audio output xformer	95-2797
T207	power xformer	95-2847
A201	integrator unit	87-4
F201	1.2a bel-fuse	136-63
F205	.35a bel-fuse	136-75
F208	.5a fuse (plgtail)	136-83
1C701	integrated circuit unit	221-46





TEST POINTS	
A1	SYNC - AGC OUTPUT
B	SECOND I.F. COLLECTOR
C1	PICTURE DETECTOR OUTPUT
CC1	BIAS POINT FOR C1 ADJUSTMENT
C2	SYNC-SOUND DETECTOR OUTPUT
D	PF-RES WITH 25 MFD 35V ELECTROLYTIC DURING COLOR ALIGNMENT
E	I F AGC
G	3RD I.F. ALIGNMENT POINT
H	SOUND LIMITER PLATE
K	KILLER VOLTAGE-SHORT TEST POINT
KA	K TO KR TO OPEN COLOR CHANNEL
L	BURST GRID
M	SOUND OUTPUT
Q	A.C.C. VOLTAGE
R	R-Y COLOR AMP. COLLECTOR
S	B-Y COLOR AMP. COLLECTOR
T	G-Y COLOR AMP. COLLECTOR
V	COLOR (AFC) DETECTOR
W	COLOR AFC VOLTAGE

NOTES
PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. THE HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVE SHAPES AT THE RED, GREEN AND BLUE CATHODES OF THE PICTURE TUBE DEPEND ON THE HUE, COLOR LEVEL (CHROMA LEVEL), CONTRAST (COLOR COMMANDER) AND PICTURE PEAKING CONTROLS.

FOR WAVEFORMS 43 THRU 49, TEST POINT "D" MUST BE BY-PASSED WITH A 0.1 MFD CAPACITOR.

ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.

ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.

ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.

ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT AND NORMAL SETTING OF CONTROLS AND CHANNEL SELECTOR SET TO CHANNEL 2 UNLESS OTHERWISE SPECIFIED.

RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.

ALL RESISTORS ARE 10% TOLERANCE, CARBON, 1/2 WATT UNLESS OTHERWISE SPECIFIED.

COIL RESISTANCE NOT GIVEN UNDER ONE OHM.

ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED. FOR CAPACITOR TOLERANCE, SEE LEGEND.

CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHMS PER VOLT MIN. HIGH VOLTAGE METER.

ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.

⊙ INDICATES ALIGNMENT AND TEST POINT.

PF = PICOFARAD MMHz = MEGAHERTZ μH = MICROHENRY
INDICATES ±20% MAY BE USED. ⊕ INDICATES VOLTAGE SOURCE.

Ⓢ INDICATES WAVEFORM CHECK POINTS (SEE WAVEFORM CHART)

⊥ INDICATES CHASSIS GROUND.

— INDICATES MODULE BOARD

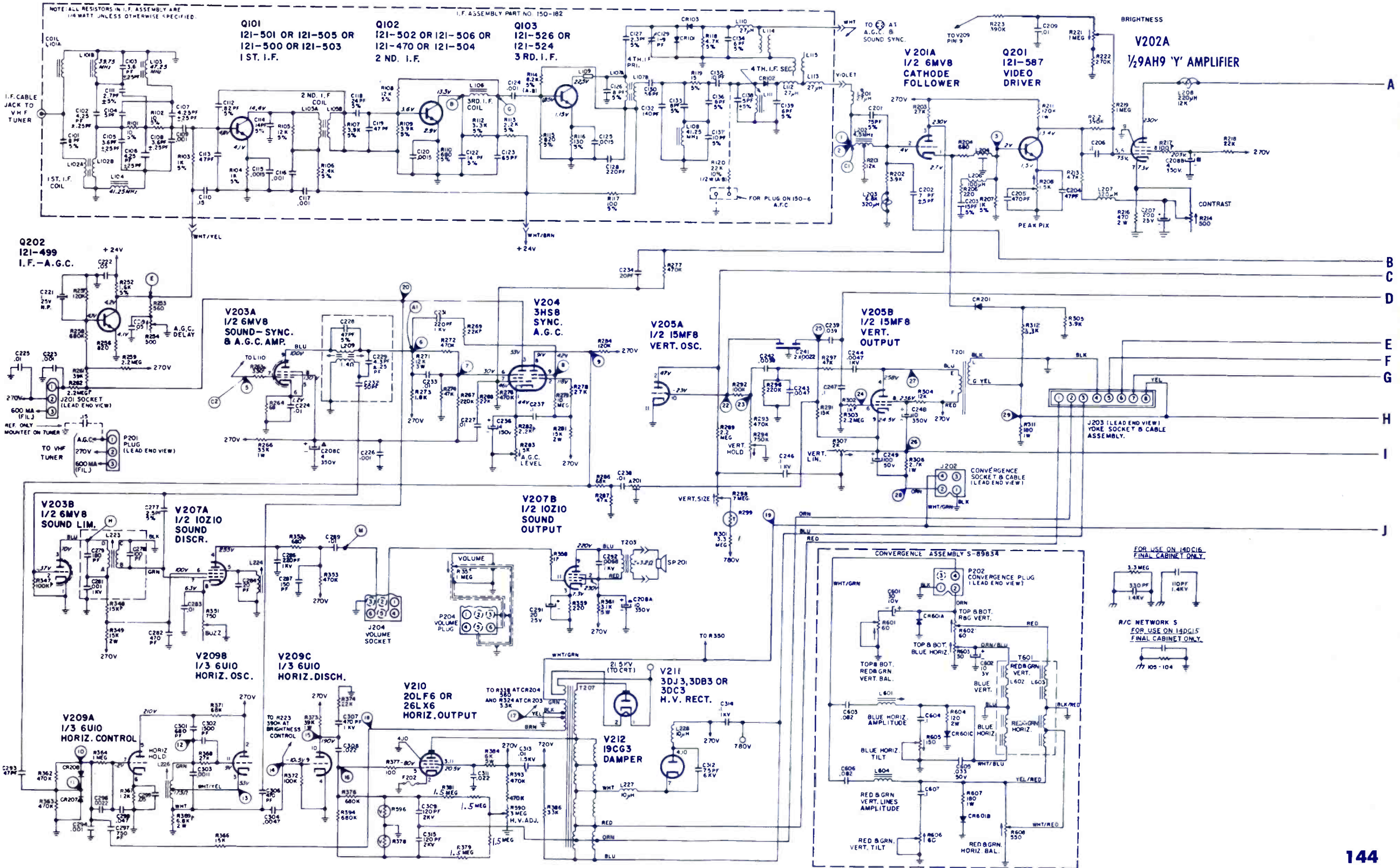
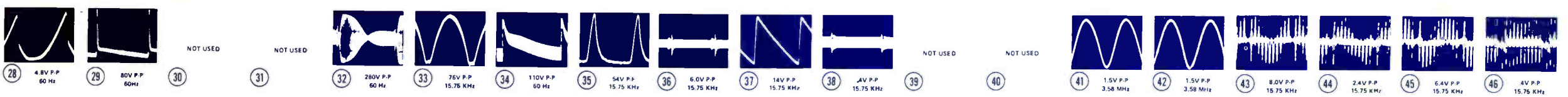
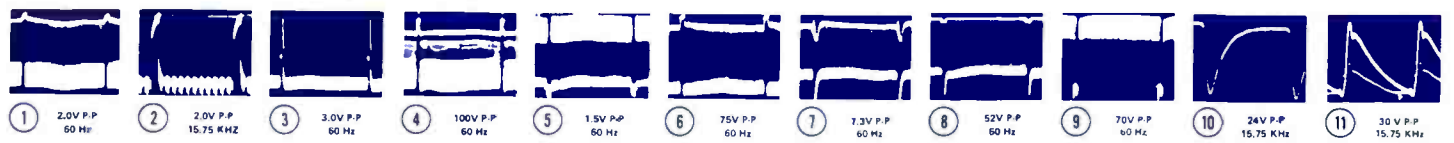
→ A1 INDICATES PIN NUMBER ON MODULE BOARD

⊖ INDICATES CONE CONNECTOR

ZENITH

Color-TV Chassis
14DC15, 16

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**



ZENITH

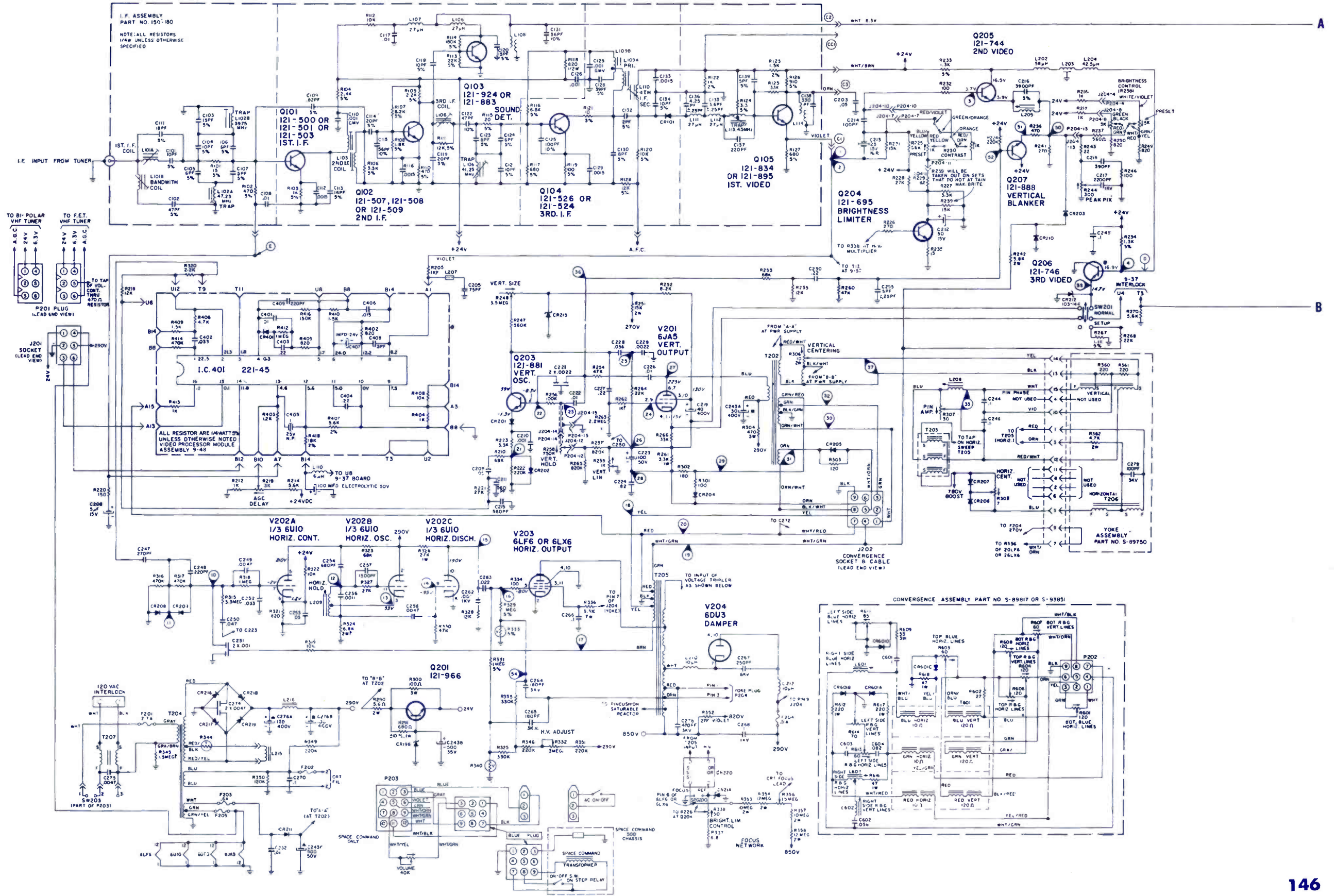
Color-TV Chassis
23DC14

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X

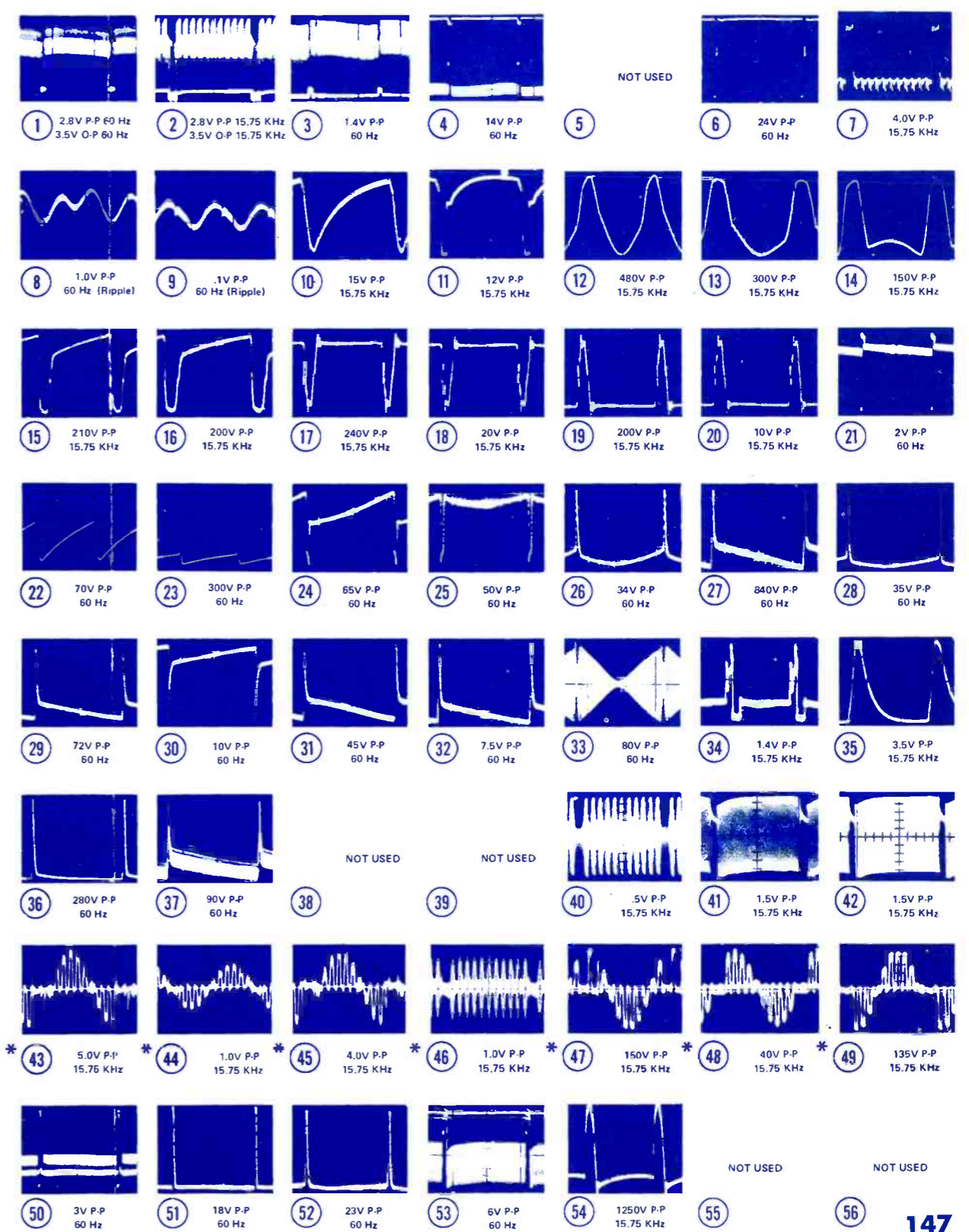
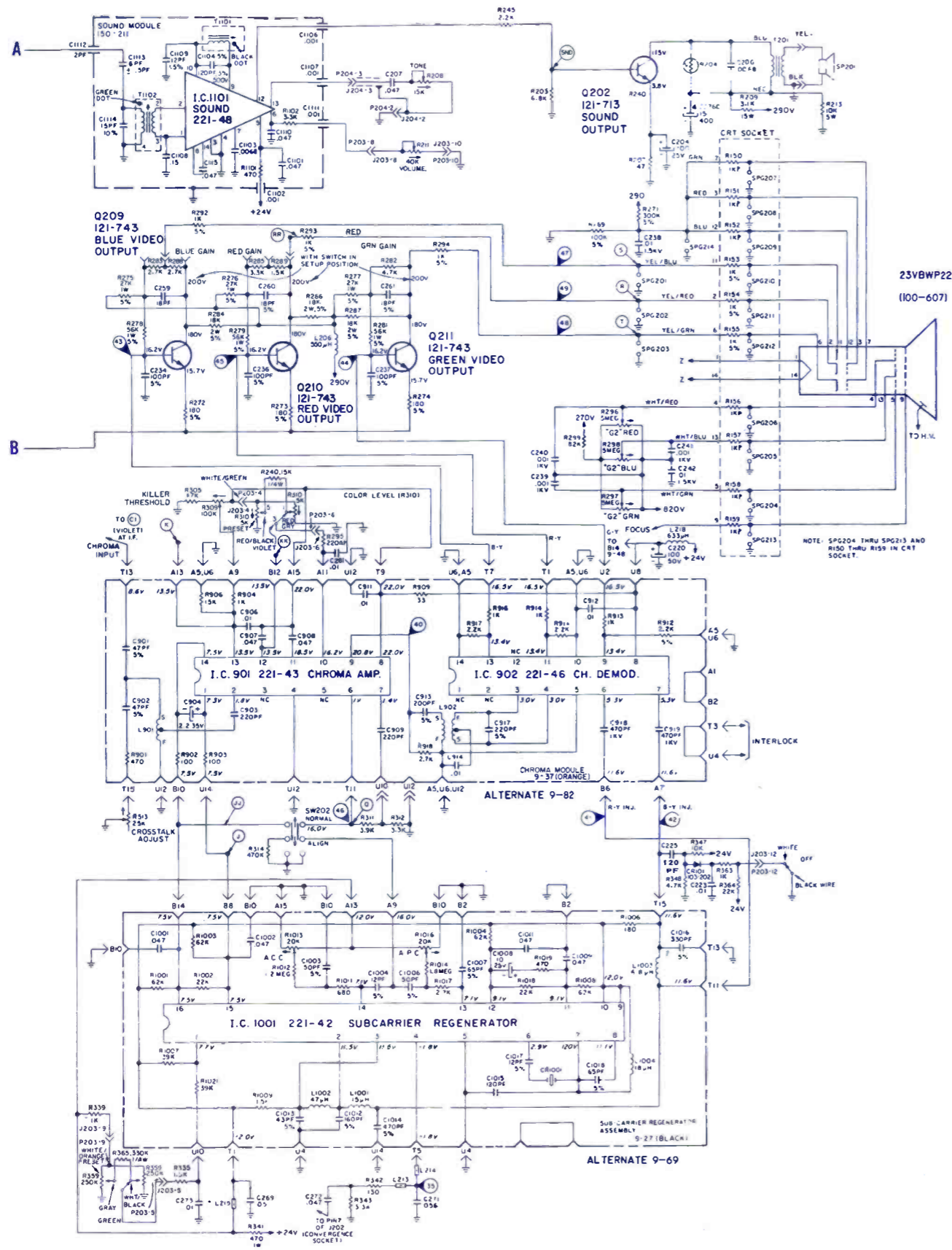
SYMBOL	DESCRIPTION	ZENITH PART NO.
C243A	30 μ f elect. cap 400v	22-6903
C243B	500 μ f elect. cap 35v	22-7066
C243C	500 μ f elect. cap 50v	
C276A	150 μ f elect. cap 400v	

C276B	100 μ f elect. cap 400v	22-6903
C276C	15 μ f elect. cap 400v	
R204	voltage dependent resistor	63-5440
R219	3K, AGC delay control	63-9116
R248	3.5M Ω vert. size control	63-9115
R259	1K vert. lin control	63-9066
R308	7 Ω horiz. centering control	63-8474

R309	100K, killer threshold control	63-8499
R310	5K, color level control	
R332	3M high voltage adjust	63-9882
R338	50 Ω , bright limiter control	63-8989
R340	voltage dependent resistor	63-8688
R344	thermistor	63-8687
R356	15M Ω , focus control	63-8709
R359	250K, tint control	
R1013	20K, ACC control	63-8576



R1016-20K, APC control 63-8576
 L113-4.5MHz trap coil 20-3289
 L209-horiz ocs coil 556877
 T204-power xformer 93-3039
 T205-horiz tweet xformer S-92510
 T206-deflection yoke S89750
 T1101-detector vformer 95-2789
 F203-.6 a bel-fuse 136-100
 F204-.5 a bel-fuse (pigtail) 136-89

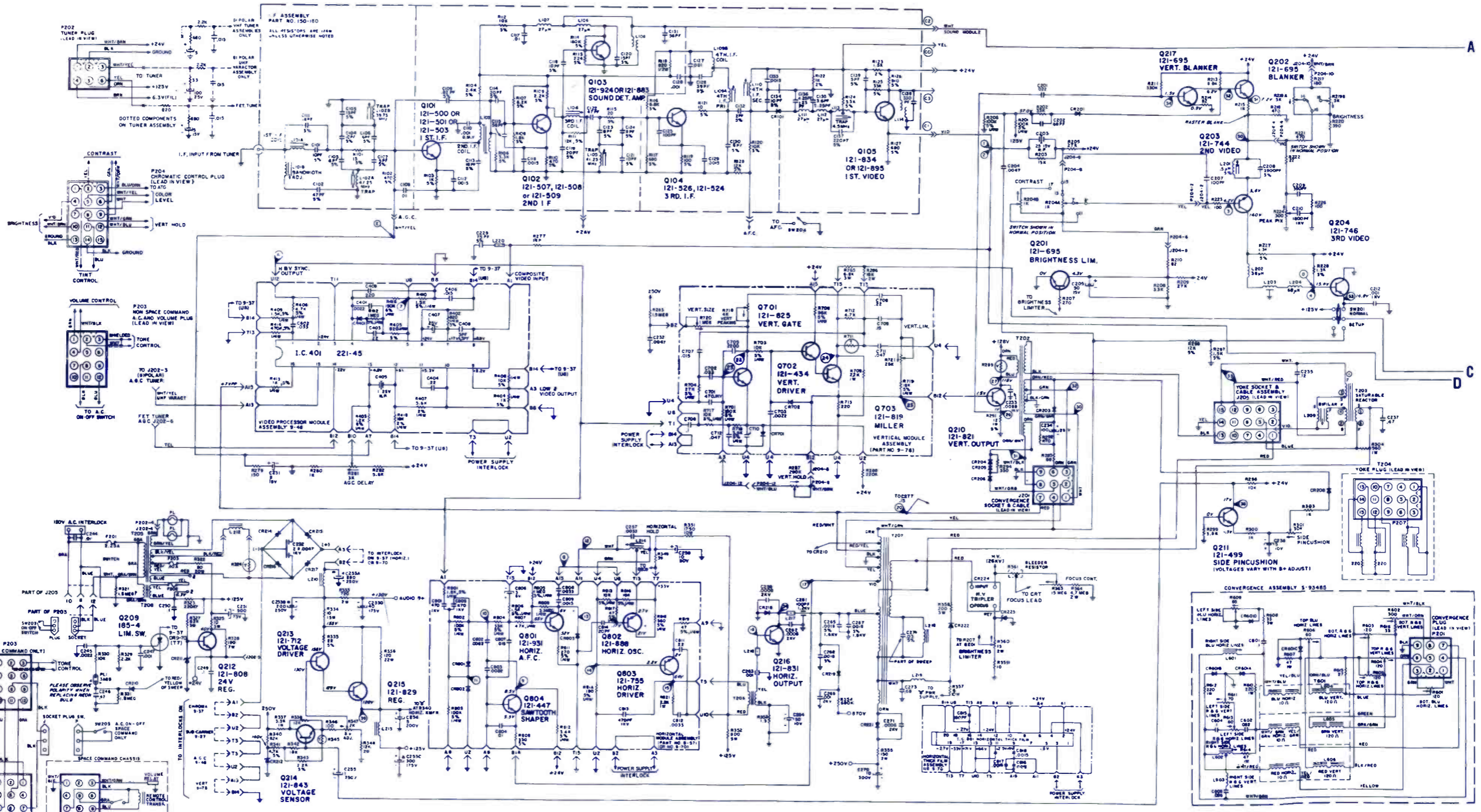
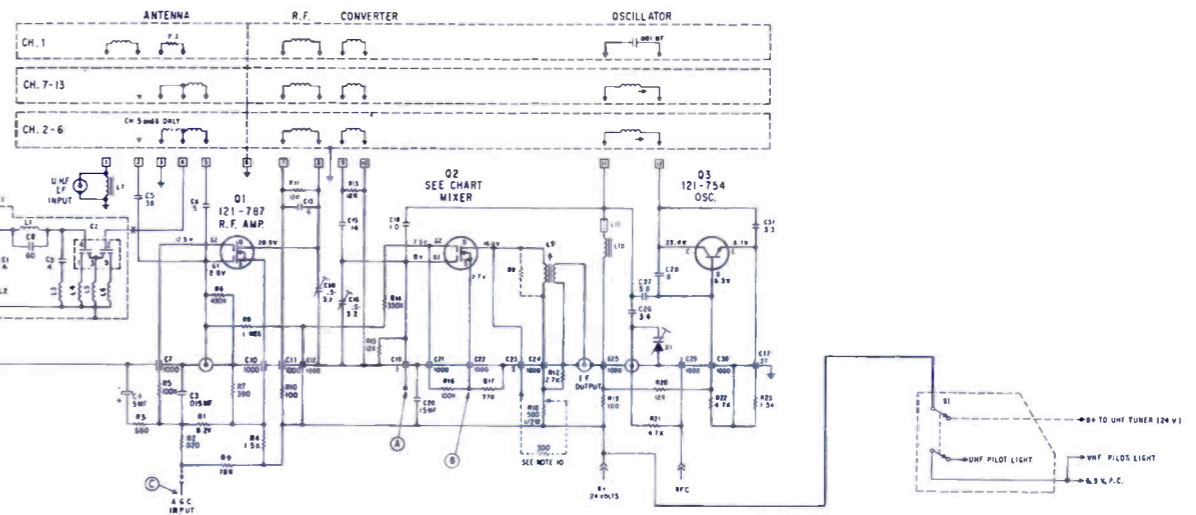
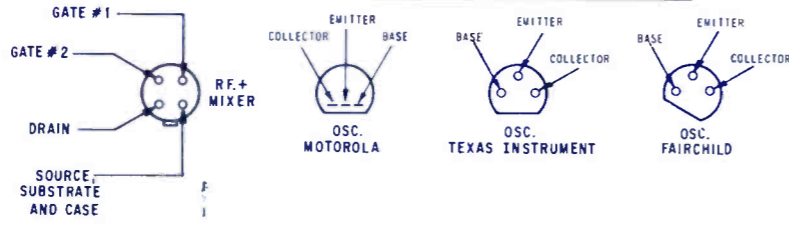


ZENITH

Color-TV Chassis
25DC57

ELECTRONIC TECHNICIAN/DEALER **TEKFA**X

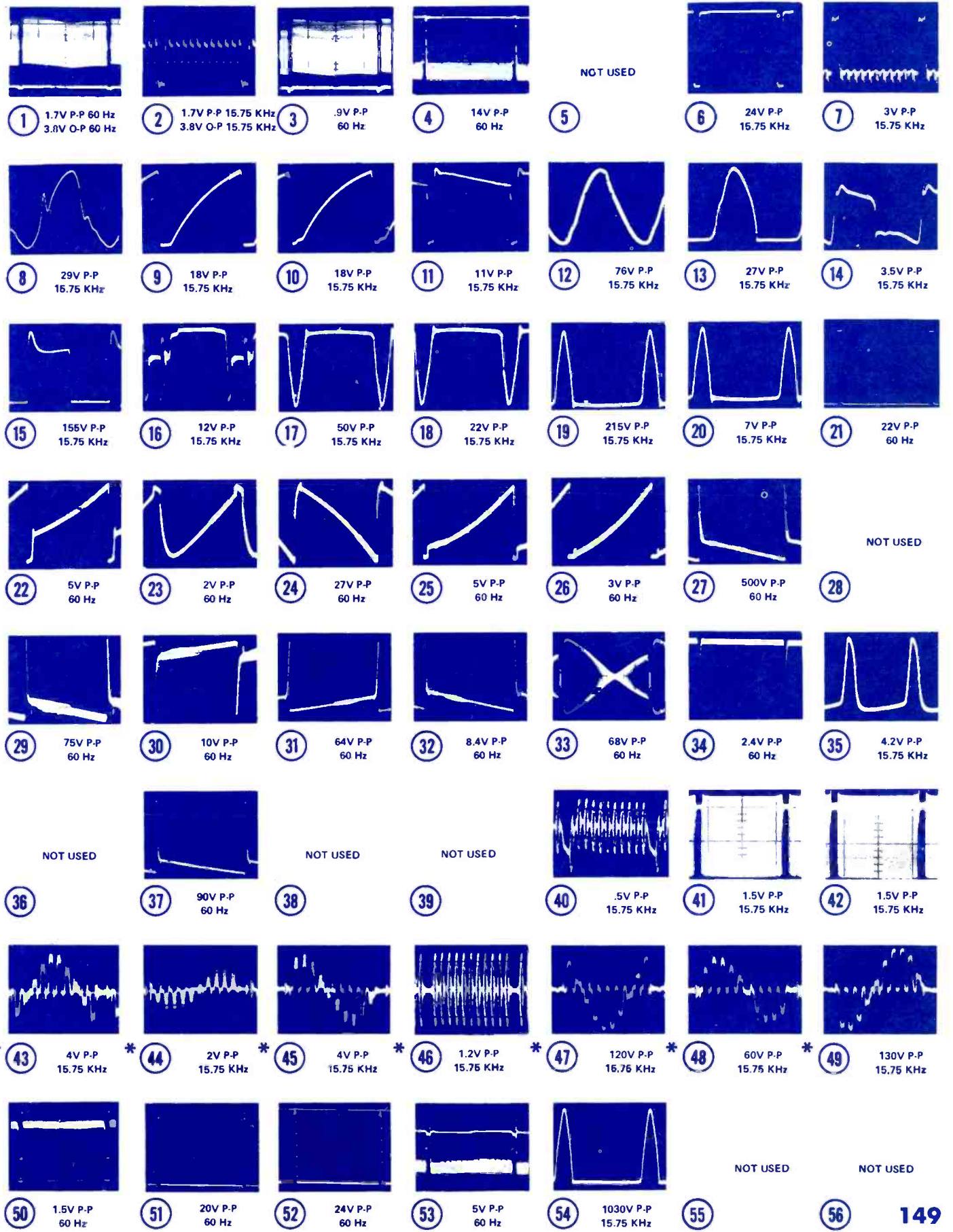
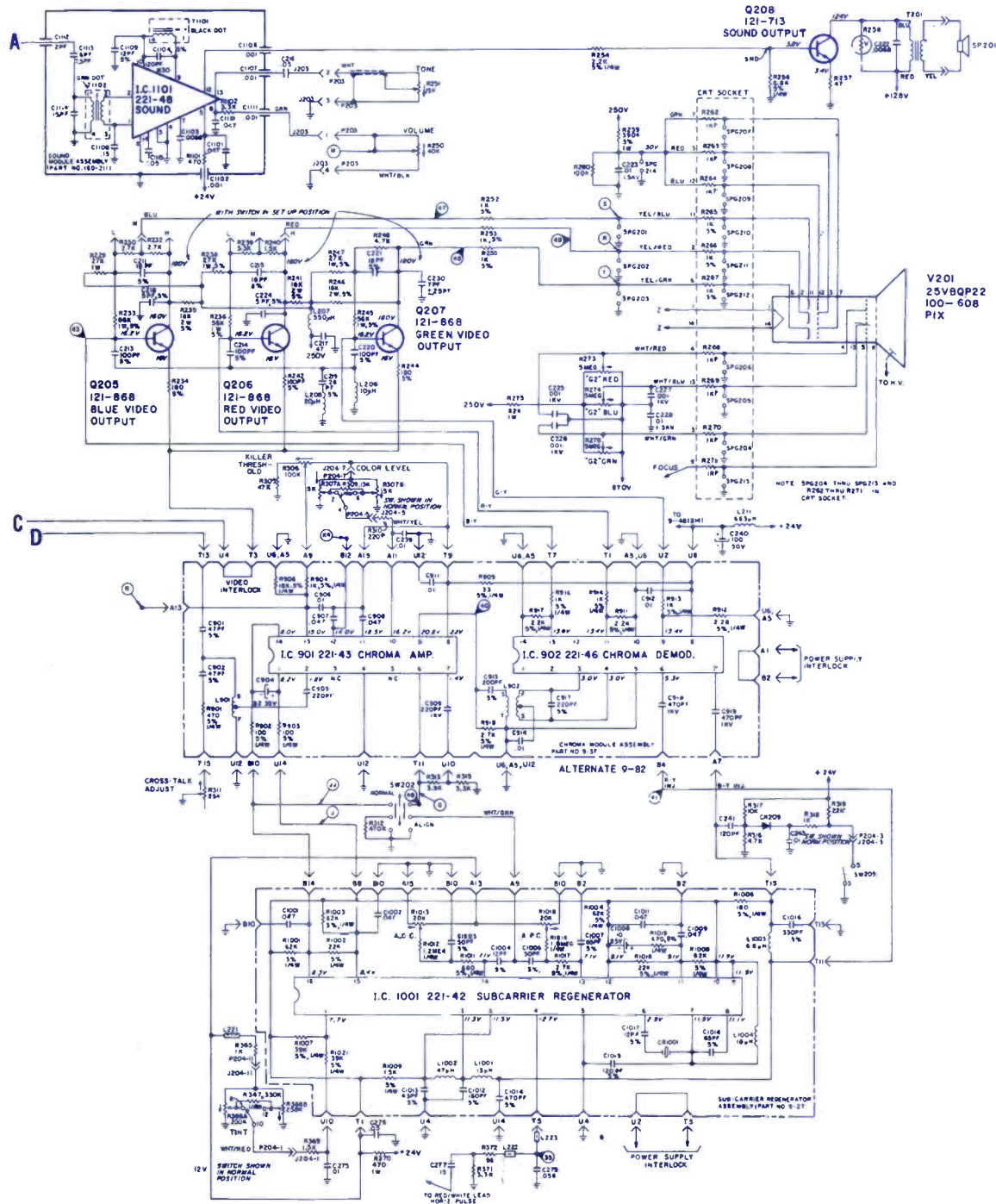
TRANSISTOR LEAD LOCATIONS



* FOR WAVEFORMS 43 THROUGH 49, BYPASS
TEST POINT "D" WITH 1.0 MF CAPACITOR.

SYMBOL	DESCRIPTION	ZENITH PART NO.
C263A	—280 µf electr cap 250 v	22-6346
C263B	—200 µf electr cap 250v	
C263C	—300 µf electr cap 175v	
C263D	—40 µf electr cap 175v	
R324	—thermistor	63-8687
R363	—15M, focus control	63-9967
R711	—thermistor	63-8788
R1013	—20K, A.C.C. control	63-8576
L105	—41.25MHz trap	20-3287
L-113	—4.5MHz trap	20-3289
L201	—3.58MHz trap coil	20-1838
L213	—filter choke (125v)	95-2894
L214	—horiz osc coil	S-56875

L901—chroma take-off coil	95-2982
T201—audio output xformer	95-2883
T202—vert output xformer	95-3072
T204—deflection yoke	95-2880 or S-93256 (not interchangeable)
T205—power xformer	95-2954
T207—horiz sweep xformer	S-93297
T208—filament xformer	95-2953-01
A701—integrator unit	87-11
F201—2.25 a bel-fuse	1-3892
F202—heater fuse link 2½ min. loop of No. 24 AWG copper wire	91-2061
F203—400 ma bel-fuse	138-99
VHF tuner	175-1810



ZENITH

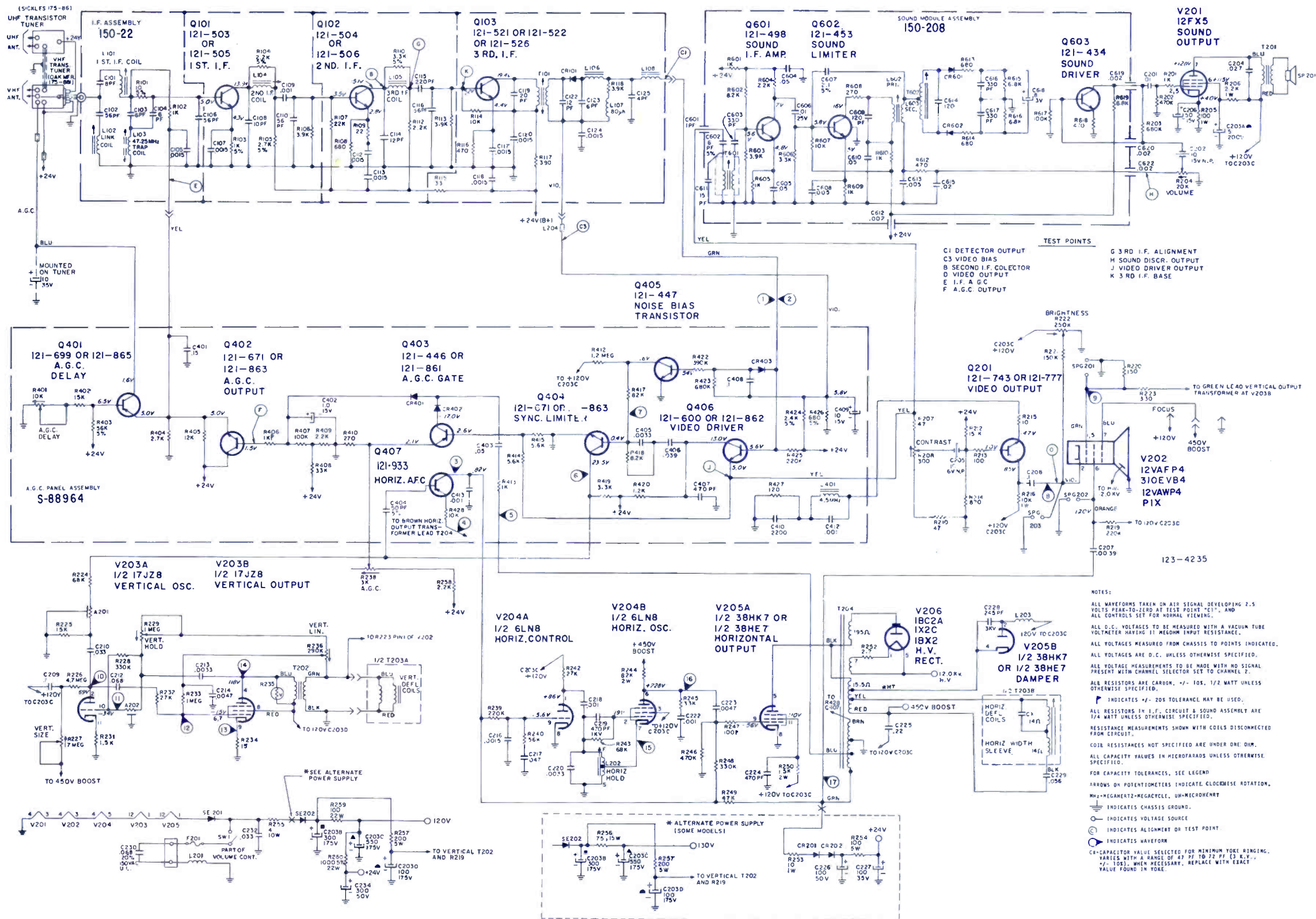
TV Chassis
12CB12X

ELECTRONIC TECHNICIAN/DEALER **TEKFAK**

SYMBOL DESCRIPTION ZENITH PART NO.

C203-A-5 μ f, electrolytic cap, 200v
 B-300 μ f electrolytic cap 175v
 C-550 μ f electrolytic cap 175v
 D-100 μ f, electrolytic cap, 175v
 R204-20K, volume control
 R208-300 Ω , contrast control
 R222-250K, bright control
 R227-7M, vert size control
 R229-1M vert hold control
 R235-voltage dependent resistor
 R236-290K, vert lin control

63-8893
 63-8791
 20-3100
 S89283
 95-3024
 95-2906
 S-87921
 S-88066
 136-79
 136-95
 87-11
 87-4



NOTES:
 ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 2.5 VOLTS PEAK-TO-ZERO AT TEST POINT "C1", AND ALL CONTROLS SET FOR NORMAL VIEWING.
 ALL D.C. VOLTAGES TO BE MEASURED WITH A VACUUM TUBE VOLTMETER HAVING 11 MEGOHM INPUT RESISTANCE.
 ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
 ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT WITH CHANNEL SELECTOR SET TO CHANNEL 2.
 ALL RESISTORS ARE CARBON. +/- 10% 1/2 WATT UNLESS OTHERWISE SPECIFIED.
 † INDICATES +/- 20% TOLERANCE MAY BE USED.
 ALL RESISTORS IN I.F. CIRCUIT & SOUND ASSEMBLY ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED.
 RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
 GRID RESISTANCES NOT SPECIFIED ARE UNDER ONE OHM.
 ALL CAPACITY VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 FOR CAPACITY TOLERANCES, SEE LEGEND.
 ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
 MHZ=MEGAHERTZ; MEGACYCLE, UM=MICROHENRY
 ⊥ INDICATES CHASSIS GROUND.
 ⊕ INDICATES VOLTAGE SOURCE
 ⊙ INDICATES ALIGNMENT OR TEST POINT
 ⊕ INDICATES WAVEFORM
 C1-CAPACITOR VALUE SELECTED FOR MINIMUM YOKE RINGING. VARIES WITH A RANGE OF 47 PF TO 72 PF (3 K.V., +/- 10%), WHEN NECESSARY, REPLACE WITH EXACT VALUE FOUND IN YOKE.



435 C