

TEKFAK 114

TV SCHEMATICS COVER 16 MANUFACTURERS • HUNDREDS OF CHASSIS & MODEL NUMBERS
PUBLISHED BY ELECTRONIC TECHNICIAN/DEALER MAGAZINE



HARCOURT BRACE JOVANOVIICH PUBLICATIONS • 1 EAST FIRST STREET • DULUTH, MINNESOTA 55802

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HARCOURT BRACE JOVANOVIĆ, INC.
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TEKFAH 114

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ADMIRAL

TV Chassis:	
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T5R3	.3
T6R2-1A, 2A	.4
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T5R3-1A/2A	.7
T21K8	.8
T35H4-2B	.9

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AIRLINE

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QUASAR

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ZENITH

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19FB14	.128
9FB1X	.129
12FB12X	.130
19FB13	.131
12FB22X	.132

B-W TV Chassis:

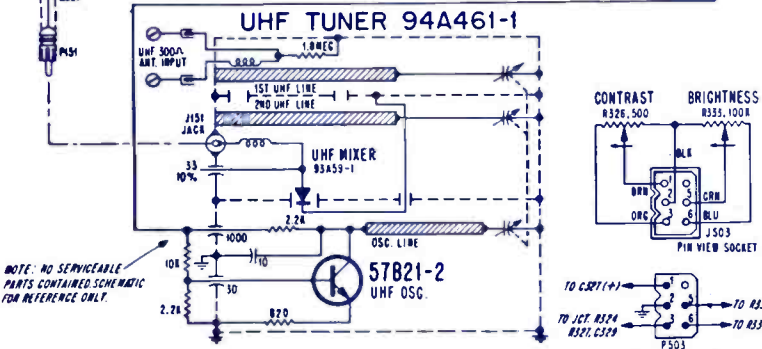
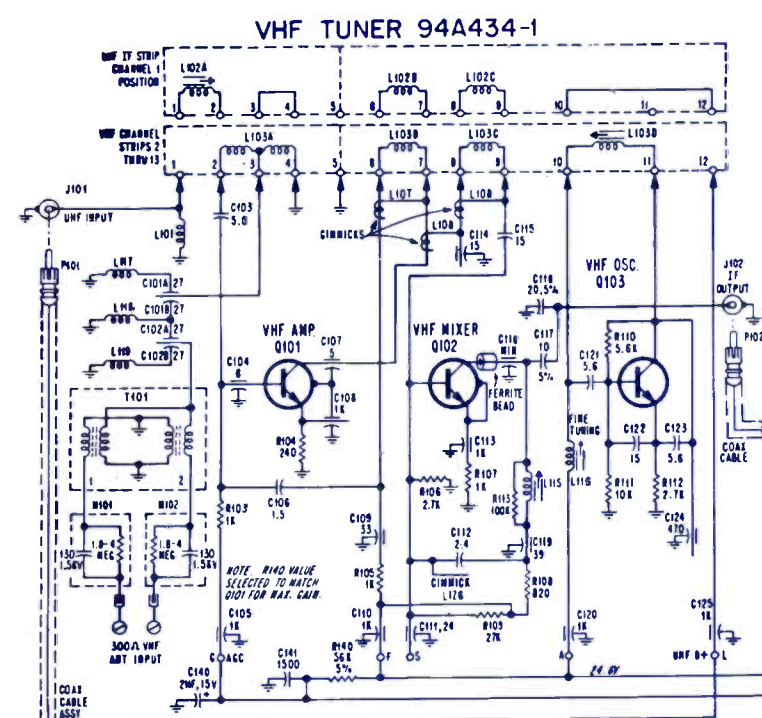
22FB12	.133
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Color TV Chassis:

19EC22	.134, 135
19FC45Z	.136, 137
25FC45	.138, 139
13GC10	.140, 141
17GC45	.142, 143

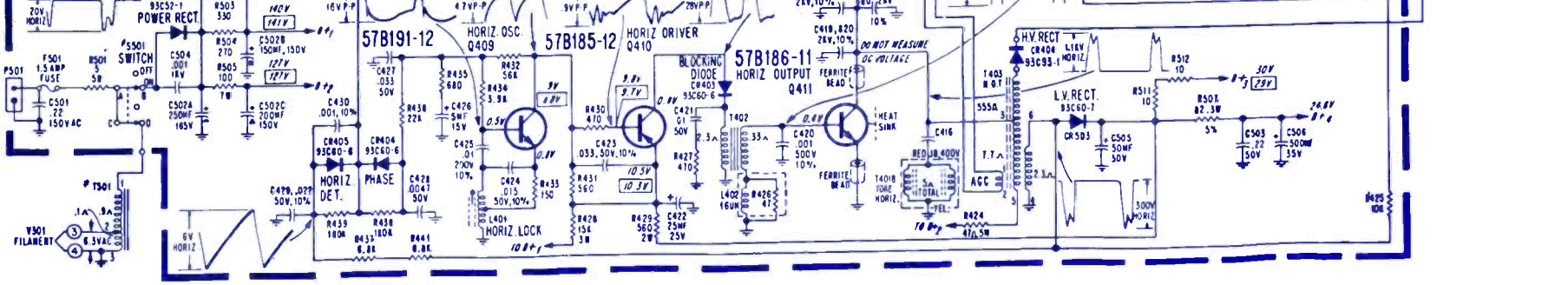
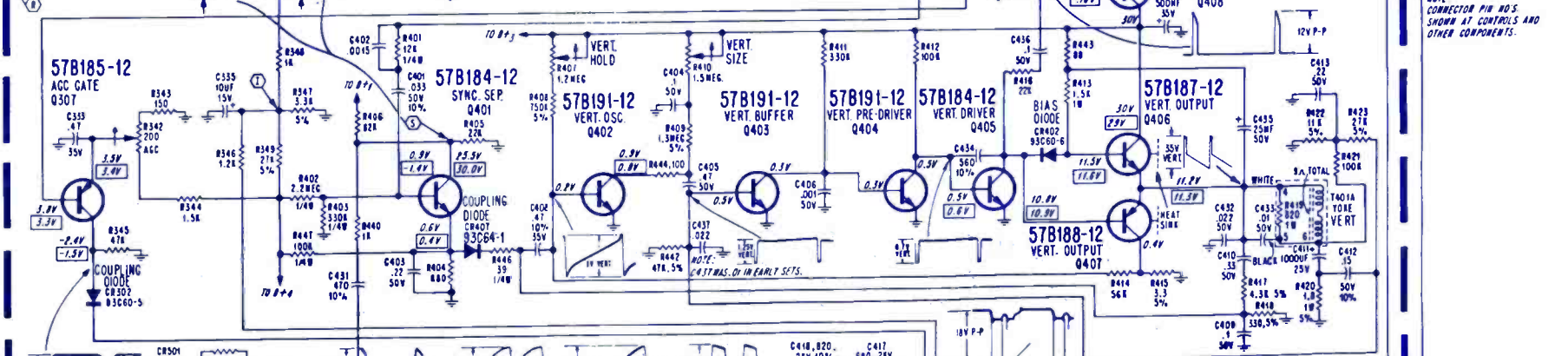
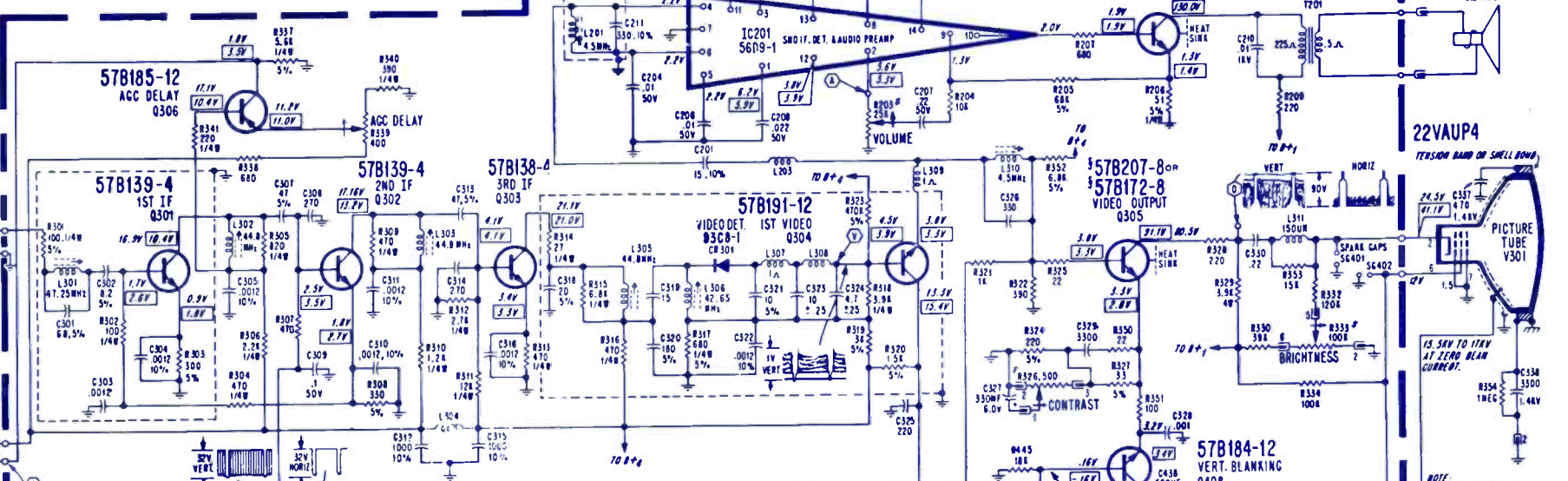
ADMIRAL
TV Chassis
T9K6

MODEL CHART						
MODEL	FINISH	CRT	VHF	UHF	CHASSIS	
16P640M	Black	16VARP4	94A434-1	94A461-1	T7K6-2B	
16P657CM	Walnut	16VARP4	94A434-1	94A461-1	T7K6-2B	
19P871M	Brown	19VBXP4	94A434-1	94A461-1	T8K6-2B	
19P897CM	Walnut	19VBXP4	94A434-1	94A461-1	T8K6-2B	
19P889CM	White	19VBXP4	94A434-1	94A461-1	T8K6-2B	
22T331CM	Walnut	22VAUP4	94A434-1	94A461-1	T9K6-2A	
22C341M	Walnut	22VAUP4	94A434-1	94A461-1	T9K6-2A	
22C345M	Maple	22VAUP4	94A434-1	94A461-1	T9K6-2A	
22C343M	Oak	22VAUP4	94A434-1	94A461-1	T9K6-2A	



SAFETY NOTICE

THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



SCHEMATIC NOTES: RESISTOR VALUES IN RATIO, 10%, CAPACITANCE VALUES IN PF., CAPACITANCE VALUES LESS THAN 1µF ARE IN nF.

VOLTAGE AND WAVEFORM NOTES: DC VOLTAGES TAKEN WITH VPM, WITH RESPECT TO COMMON GROUND - TAKEN FROM 100V AC LINE. WAVEFORMS AND P-P VOLTAGES TAKEN WITH OSC. VOLTAGE DIVIDER OR TEST EQUIPMENT AND VALUES TO BE USED ONLY WHEN TWO OSC. VOLTAGES ARE INDICATED. READINGS TAKEN WITH SIGNAL IN BLOCK, READING TAKEN WITH NO SIGNAL. SIGNAL WITHOUT BLOCK. OFF SIGNAL VOLTAGES TAKEN ON UNUSED CH. CHANNEL WITH ANTENNA TERMINALS SHORTED. VOLUME CONTROL, BRIGHTNESS, AND CONTRAST CONTROLS IN NORMAL POSITION. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. ON SIGNAL VOLTAGES AND WAVEFORMS, TAKEN WITH TERMINATED ANTENNA.

TRANSISTOR CAUTION: DO NOT TOUCH TO TRANSISTORS OR DO NOT ARE 2ND ANODE LEAD TO COMMON GROUND. DO NOT TURN SET ON WITH TRANSISTORS IN. TEST LEADS REMOVED OR UNCONNECTED. USE CAUTION TO PREVENT ACCIDENTAL SHORTS BETWEEN COMPONENT TERMINALS OR TO COMMON GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE 47VΩ OR HIGHER.

ACCAUTION: DO NOT DISURB FACTORY SETTING OF ACC. CONTROLS. IF ACC. ADJUSTMENT IS REQUIRED REFER TO SERVICE NOTES. IF NECESSARY TO DISURB ACC. ADJUSTMENT, MARK ROTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING. WAVEFORMS TAKEN WITH A 500-Ω TANTALUM OSCILLOSCOPE.

REPLACE WITH SAME PART NO. AS ORIGINAL

RUN CHANGES

Start of production

NOTE: CONNECTOR PIN NOS. SHOWN AT CONTROLS AND OTHER COMPONENTS.

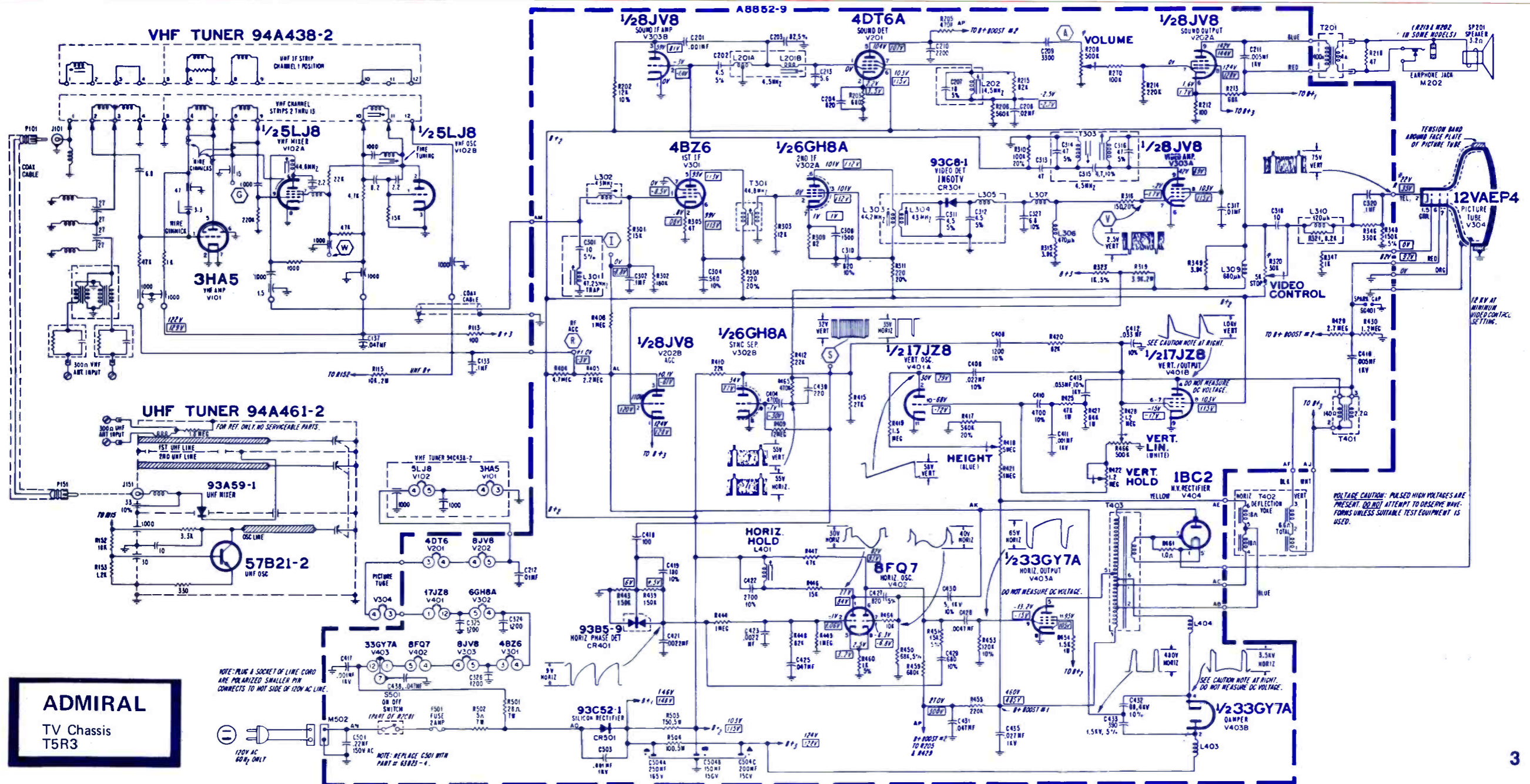


SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R208	— 500K vol. on/off switch	75A1-185
R320	— 30K, video contrast	75A112-13
R418	— height control	75A101-16
R422	— 1.2M vert hold control	75A100-8
R466	— vert lin control	75A101-17
R502	— 5.5 ohm, fuse type	61A48-1
C504A	— 150mf, 156v	67A30-11
C504B	— 150mf, 150v	67A30-11
C504C	— 200mf, 150v	67A30-11

L202	— quad coil	72A132-77
L401	— horiz lock coil	94A17-19
T201	— audio output xfmr	79A124-5
T303	— sound takeoff xfmr	72A185-5
T401	— vert output xfmr	79A139-4
T402	— deflect yoke assy	94A372-2
T403	— horiz output xfmr	79A138-30
CR301	— video detect	93A8-1
CR401	— horiz phase detect	93A5-10
CR501	— silicon rectifier	93A52-1
	VHF tuner	94A438-2

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 100V AC LINE. MAX. VIDEO CONTROL SETTING AND MIN. VOLUME. DC VOLTAGES IN BOX MEASURED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH. VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL. CHASSIS GROUND.
 ††† WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

MODEL CHART					
MODEL	FINISH	CRT	VHF	UHF	CHASSIS
12P647	Walnut	12VAEP4	94A363-2	94A465-2	T5R3-1A
12P647M	Walnut	12VAEP4	94A438-2	94A461-2	T5R3-2A



ADMIRAL
 TV Chassis
 T5R3

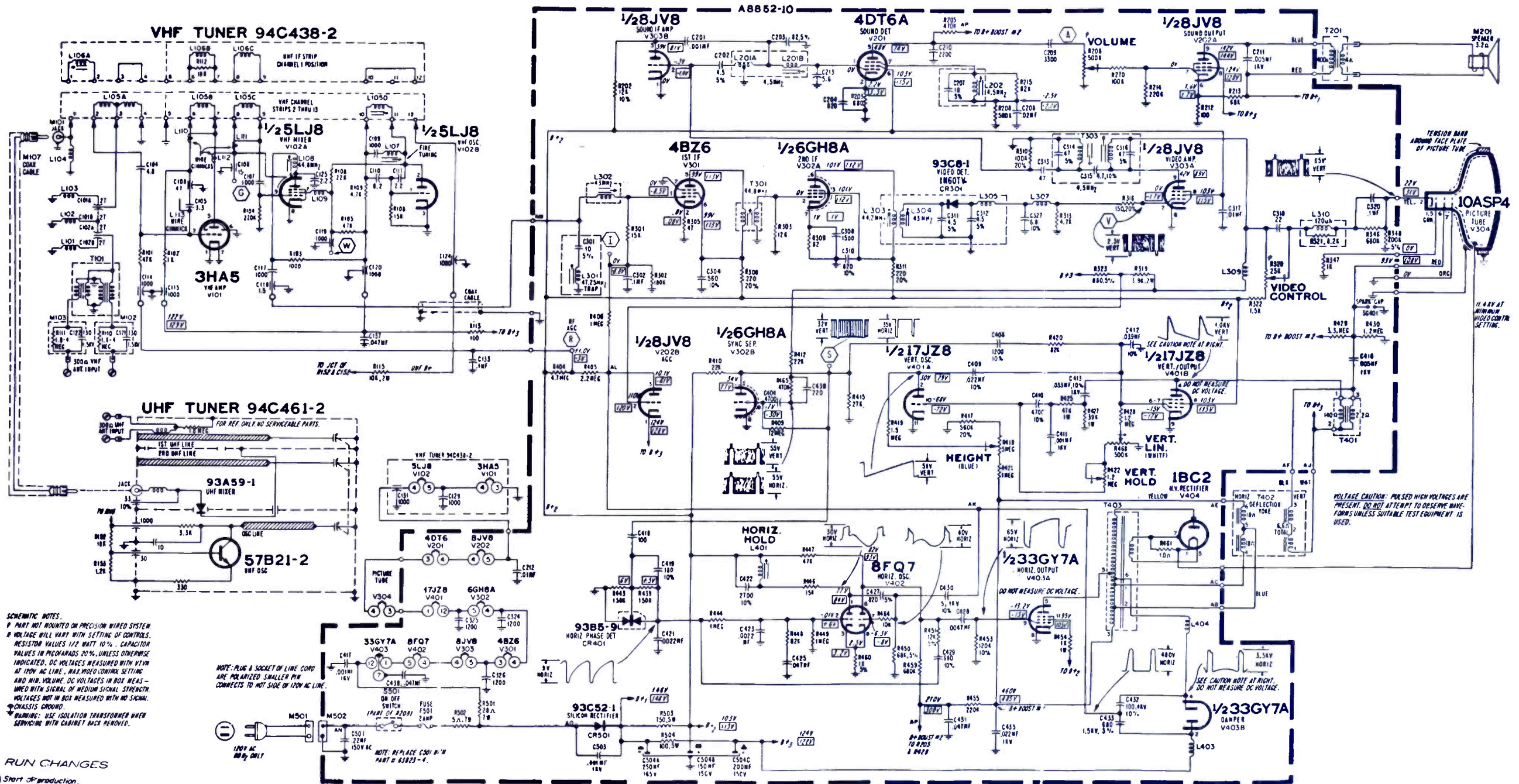
ADMIRAL

TV Chassis
T6R2-1A, 2A

SYMBOL DESCRIPTION ADMIRAL PART NO.

- R208 — 500K, vol con w/switch 75A148-2
- R320 — 25K, video con 75A101-16
- R418 — height con 75A101-16
- R422 — 1.2 M, vert hold con 75A100-8
- R466 — vert line con 75A101-17
- R502 — 5.5 ohm, fuse type 61A48-1
- C504A — 150mf, 165v 67A30-10
- C5048B — 150mf, 150v electro 72A132-77
- C504C — 200mf, 150v 72A296-7
- L202 — quad coil 94A17-19
- L303,304 — IF xformer 79A124-5
- L401 — horiz lock coil 79A139-4
- T201 — audio output xformer 94A372-1
- T303 — sound takeoff xformer 79A138-29
- T401 — vert output xformer 94A372-1
- T402 — deflect yoke Assy 79A138-29
- T403 — horiz output xformer 94A372-1
- F501 — 2a fuse, run 11 tuner, VHF 94A363-2

MODEL CHART					
MODEL	FINISH	CRT	VHF	UHF	CHASSIS
9P637	Brown	10ASP4	94A363-2	94A465-2	T6R2-1A
9P637M	Brown	10ASP4	94A438-2	94A461-2	T6R2-2A
SK9P667	Walnut	10ASP4	94A363-2	94A465-2	T6R2-1A
SK9P667M	Walnut	10ASP4	94A438-2	94A461-2	T6R2-2A



SCHEMATIC NOTES:
 1. PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 2. VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 3. RESISTOR VALUES 1/2 WATT 10% CAPACITOR VALUES IN MICROFARADS 20% UNLESS OTHERWISE INDICATED. DC VOLTAGES MEASURED WITH VVM AT 120V AC LINE. MAX. MODE CONTROL SETTING AND MIN. VOLUME. DC VOLTAGES IN BOX MEASURED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH. VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL. CHASSIS GROUND.
 4. WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

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

NOTE: REPLACE C501 IN PART # 63023-4.

RUN CHANGES

Start of production.

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

SEE CAUTION NOTE AT RIGHT. DO NOT MEASURE DC VOLTAGE.

DO NOT MEASURE DC VOLTAGE.

11.4 KV AT MINIMUM VIDEO CONTR. SETTING.

PICTURE TUBE V304

TENSION BAR AROUND FACE PLATE OF PICTURE TUBE

VIDEO CONTROL

HEIGHT (BLUE)

35V VERT

35V HORIZ

35V VERT

35V HORIZ

35V VERT

35V HORIZ

35V VERT

35V HORIZ

35V VERT

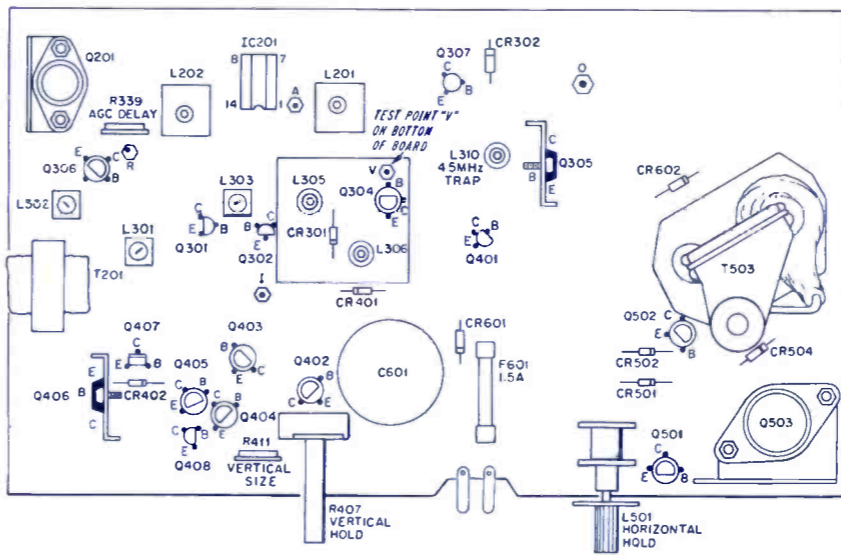
35V HORIZ

35V VERT

35V HORIZ

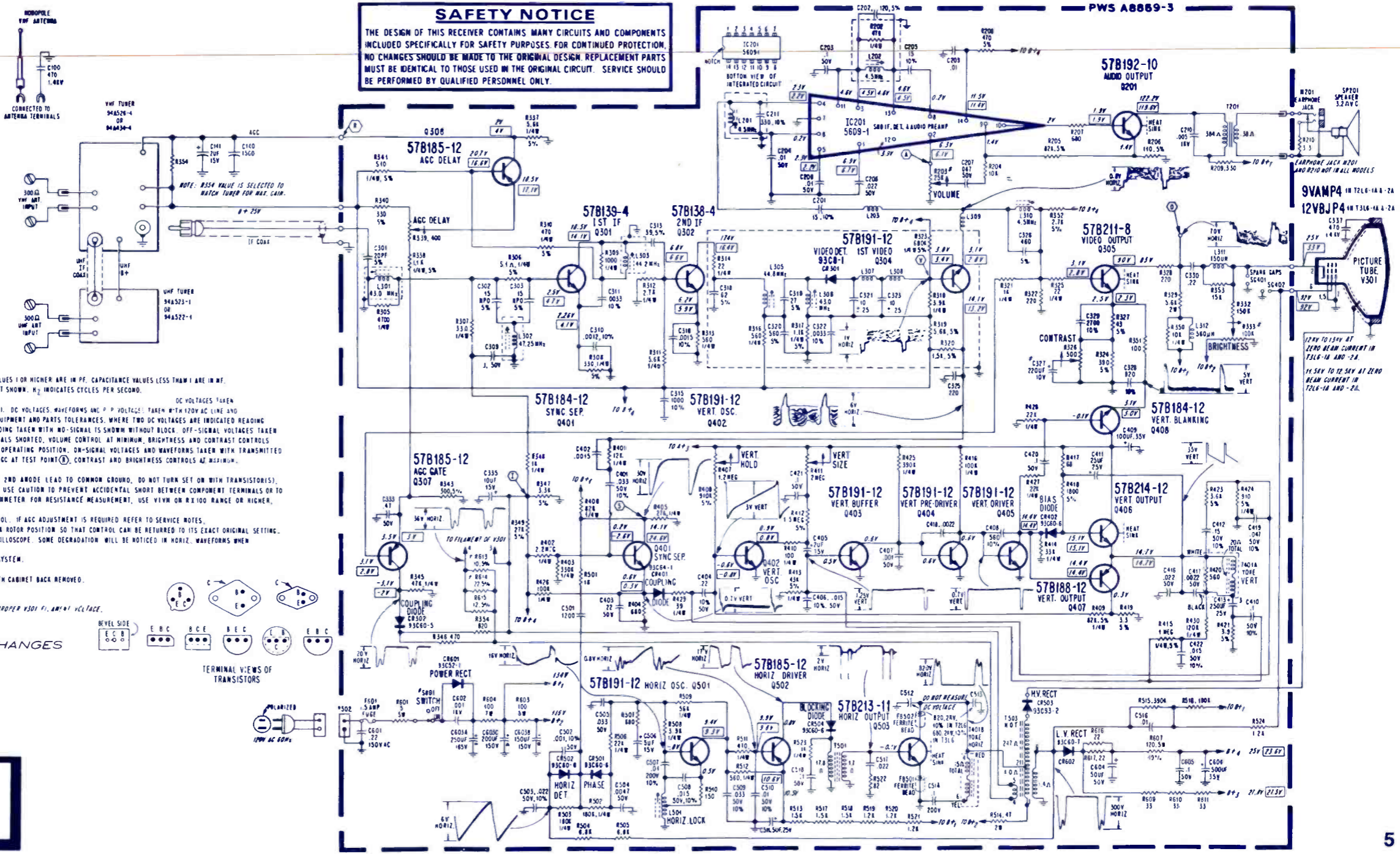
35V VERT

35V HORIZ



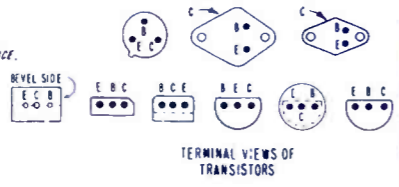
SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R333	100K, brightness control	75A1-212
R339	400 ohm AGC delay	75A101-36
L201	coil, 4.5MHz	72A317-1
L301	coil, 47.25MHz trap	72A415-8
L306	coil, det.	72A316-8
L310	coil, 4.5MHz, trap	72A317-9
L501	coil, horiz. lock	94A480-1
T201	xformer, audio output	79A172-1
T401	yoke deflect T2L6	94A372-3
T401	yoke deflect T3L6	93A372-4
T501	xformer, horiz. drive	79A166-4
T503	xformer, horiz. output	75A1-225
R203	25K, vol control w/Sw	75A1-225
R326	500 ohm, contrast control	75A1-212
R333	100K, brightness control	75A1-212
R339	400Ω, AGC delay	75A101-36
R411	2 M, vert size	75A101-61
R407	1.2 M, vert hold	75A191-3
F601	fuse, 1.5a	84A7-15

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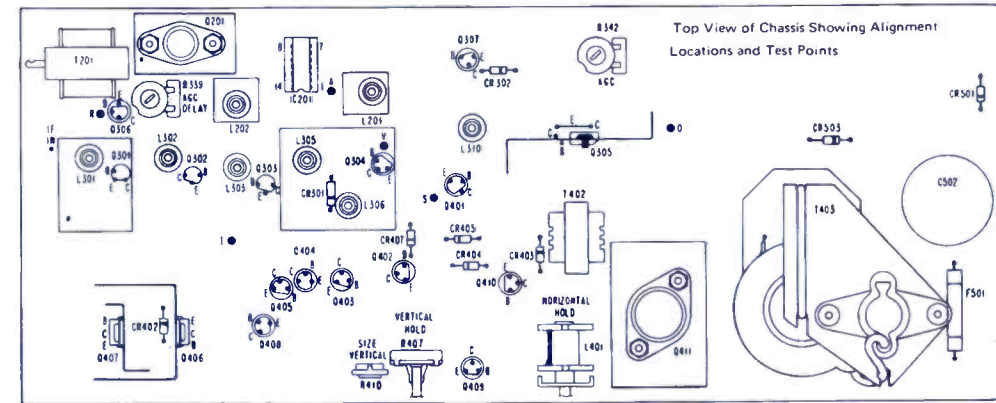
SCHEMATIC NOTES
 RESISTOR VALUES 1/2 WATT, 10%. CAPACITANCE VALUES 100 HIGHER ARE IN PF. CAPACITANCE VALUES LESS THAN 1 ARE IN MF. RESISTANCE VALUES OF COILS LESS THAN 1Ω IS NOT SHOWN. H₂ INDICATES CYCLES PER SECOND.
VOLTAGE AND WAVEFORM NOTES:
 DC VOLTAGES TAKEN WITH TVM WITH RESPECT TO COMMON GROUND (B-1). DC VOLTAGES, WAVEFORMS AND P-P VOLTAGES TAKEN WITH 120V AC LINE AND MAY VARY DEPENDING ON CALIBRATION OF TEST EQUIPMENT AND PARTS TOLERANCES. WHERE TWO DC VOLTAGES ARE INDICATED READING TAKEN WITH TV SIGNAL IS SHOWN IN BLOCK, READING TAKEN WITH NO-SIGNAL IS SHOWN WITHOUT BLOCK. OFF-SIGNAL VOLTAGES TAKEN ON UNUSED VHF CHANNEL WITH ANTENNA TERMINALS SHORTED, VOLUME CONTROL AT MINIMUM, BRIGHTNESS AND CONTRAST CONTROLS AT MAXIMUM. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. ON-SIGNAL VOLTAGES AND WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL PRODUCING 4 TO 5 VOLTS AGC AT TEST POINT (C). CONTRAST AND BRIGHTNESS CONTROLS AT MINIMUM.
TRANSISTOR CAUTION:
 TO AVOID DAMAGE TO TRANSISTORS, DO NOT ARC 2ND ANODE LEAD TO COMMON GROUND, DO NOT TURN SET ON WITH TRANSISTOR(S), TUBE(S) OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO COMMON GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT, USE 1VHM ON R-X100 RANGE OR HIGHER, AGC 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.
 * ALL WAVEFORMS TAKEN WITH A WIDE-BAND OSCILLOSCOPE. SOME DEGRADATION WILL BE NOTICED IN HORIZ. WAVEFORMS WHEN USING NARROW BANDPASS EQUIPMENT.
 * COMPONENT NOT MOUNTED ON PRECISION WIRED SYSTEM.
WARNING:
 USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.
 COMMON GROUND (B-1)
 * REPLACE WITH SAME PART NO. AS ORIGINAL
 * RESISTORS MAY BE REMOVED AT FACTORY FOR PROPER 150V P.P. ANODE VOLTAGE.

RUN CHANGES
 (10) Start of production.

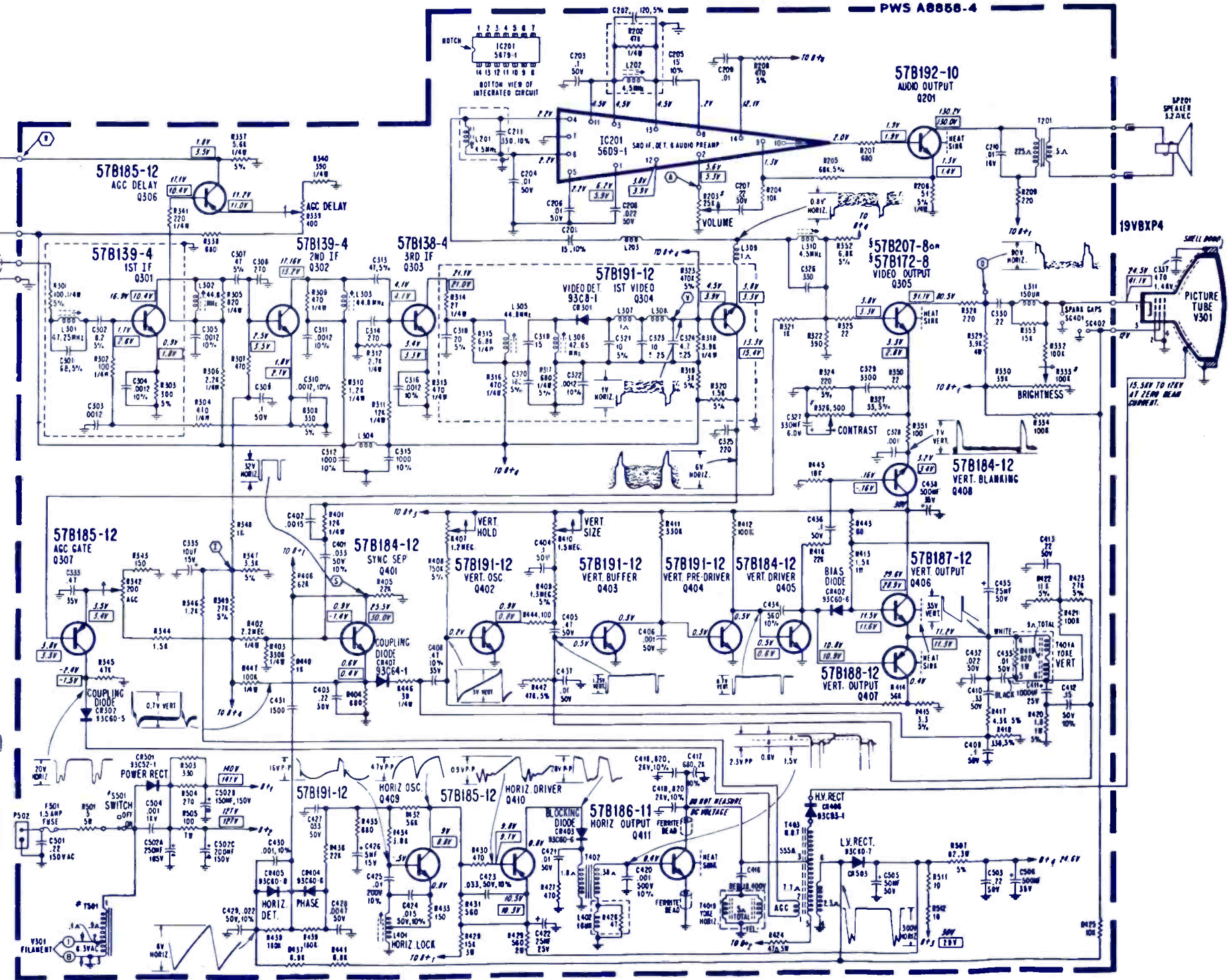
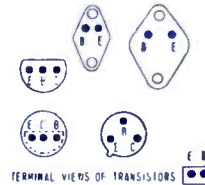


ADMIRAL
 TV Chassis TL6

ADMIRAL TV Chassis TK8



SCHEMATIC NOTES:
 UNLESS OTHERWISE INDICATED, RESISTOR VALUES $\pm 10\%$, $1/2W$ CAPACITANCE VALUES 1 OR HIGHER ARE IN P.F., CAPACITANCE VALUES LESS THAN 1 ARE IN MF $\pm 20\%$ UNLESS OTHERWISE INDICATED.
 RESISTANCE VALUES OF COILS LESS THAN 1 Ω IS NOT SHOWN. MF INDICATES CYCLES PER SECOND.
 VOLTAGE AND WAVEFORM NOTES:
 DC VOLTAGES TAKEN WITH WVM, WITH RESPECT TO COMMON GROUND; -DC VOLTAGES, WAVEFORMS & P-P VOLTAGES TAKEN WITH 120V AC LINE & MAY VARY DEPENDING ON CALIBRATION OF TEST EQUIPMENT AND PARTS TOLERANCES. WHEN TWO DC VOLTAGES ARE INDICATED READING TAKEN WITH TV SIGNAL IS SHOWN IN BLOCK, READING TAKEN WITH NO-SIGNAL IS SHOWN WITHOUT BLOCK. OFF-SIGNAL VOLTAGES TAKEN ON UNUSED VHF CHANNEL WITH ANTENNA TERMINALS SHORTED. VOLUME CONTROL AT MINIMUM. BRIGHTNESS AND CONTRAST CONTROLS AT MAXIMUM. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. ON-SIGNAL VOLTAGES AND WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL, PRODUCING A 10 V VOLTS AGC AT TEST POINT R. CONTRAST AND BRIGHTNESS CONTROLS AT MAXIMUM.
 TRANSISTOR CAUTION:
 TO AVOID DAMAGE TO TRANSISTORS DO NOT ARC 2ND ANODE LEAD TO COMMON GROUND. DO NOT TURN SET ON WITH TRANSISTORS/TUBE(S) OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO COMMON GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE VTM ON R & 100 RANGE OR HIGHER. AGC 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.
 * ALL WAVEFORMS TAKEN WITH A WIDE-BAND OSCILLOSCOPE. SOME DEGRADATION WILL BE NOTICED IN HORIZ. WAVEFORMS WHEN USING NARROW BANDPASS EQUIPMENT.
 * COMPONENT NOT MOUNTED ON PRECISION WIRED SYSTEM.
 WARNING:
 USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.
 (1) COMMON GROUND (B-1)
 (2) REPLACE WITH SAME PART NO AS ORIGINAL.
 RUN CHANGES
 (10) Start of production.

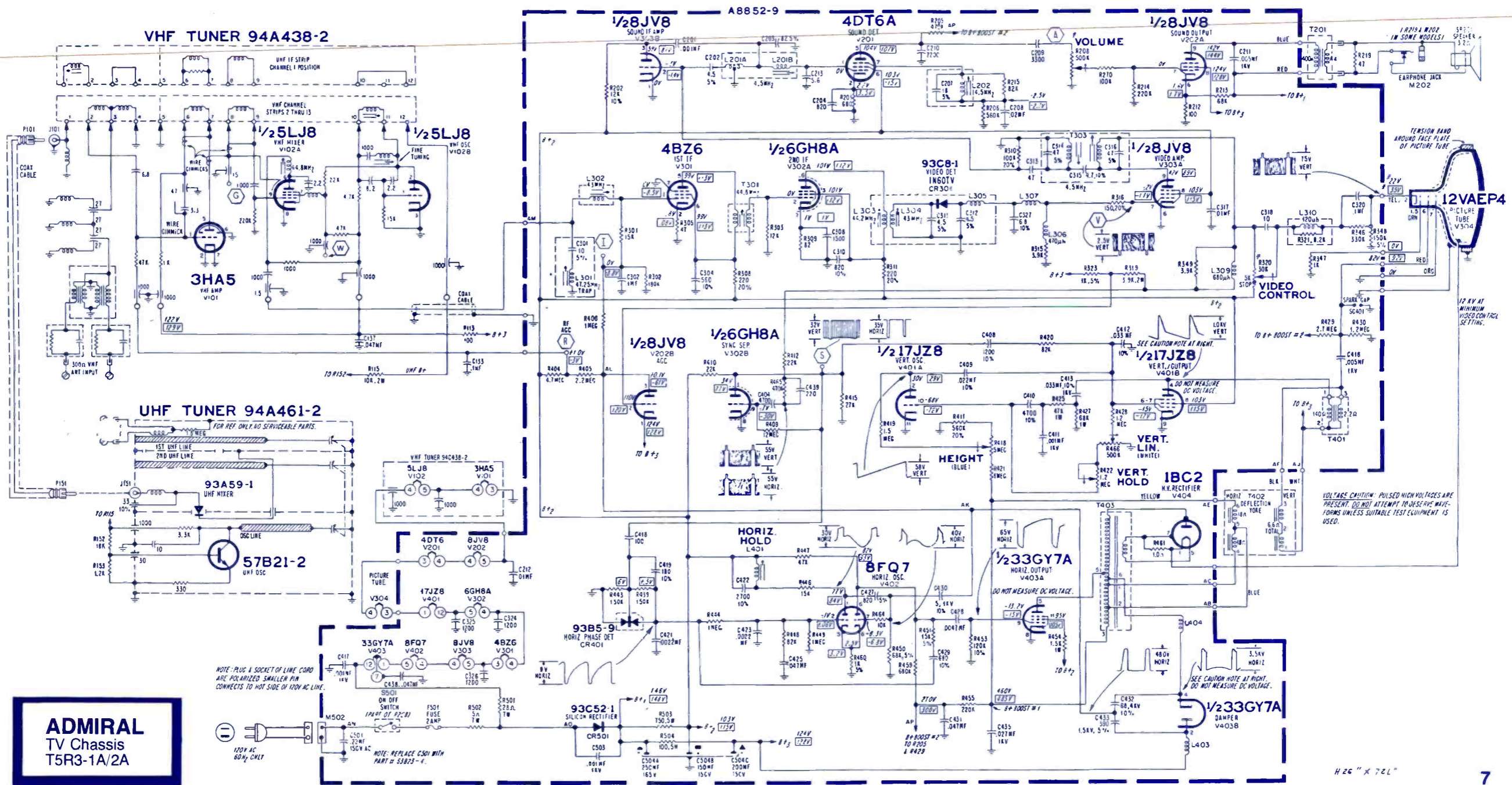


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SCHEMATIC NOTES:
 1. PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 2. VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 3. RESISTOR VALUES 1/2 WATT 10%. CAPACITOR VALUES IN MICROFARADS 50% UNLESS OTHERWISE INDICATED. DC VOLTAGES MEASURED WITH VTVM AT 120V AC LINE & MAX VOLUME. MIN. VOLUME & MIN. VOLUME DC VOLTAGES IN BOX MEASURED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH. VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL.
 4. CHASSIS GROUND.
 5. WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

SYMBOL	DESCRIPTION	ADMIRAL PART NO.		
R501	28 ohm, 5%, 7w	61A20-114	C432	68pf, 4K/v, 10%, cer disc
R502	5 ohm, 10%, 72	61A20-117		64A53-52
C302	.1mf, 200v, poly	64A41-74	F301	chassis support frame
C320	.1mf, 200v, poly	64A41-74		33A1363-3
				84A7-8
				A8852-9
				71A463-3

MODEL CHART					
MODEL	FINISH	CRT	VHF	UHF	CHASSIS
12P641	Brown	12VAEP4	94A363-2	94A465-2	T5R3-1A
12P641M	Brown	12VAEP4	94A438-2	94A461-2	T5R3-2A

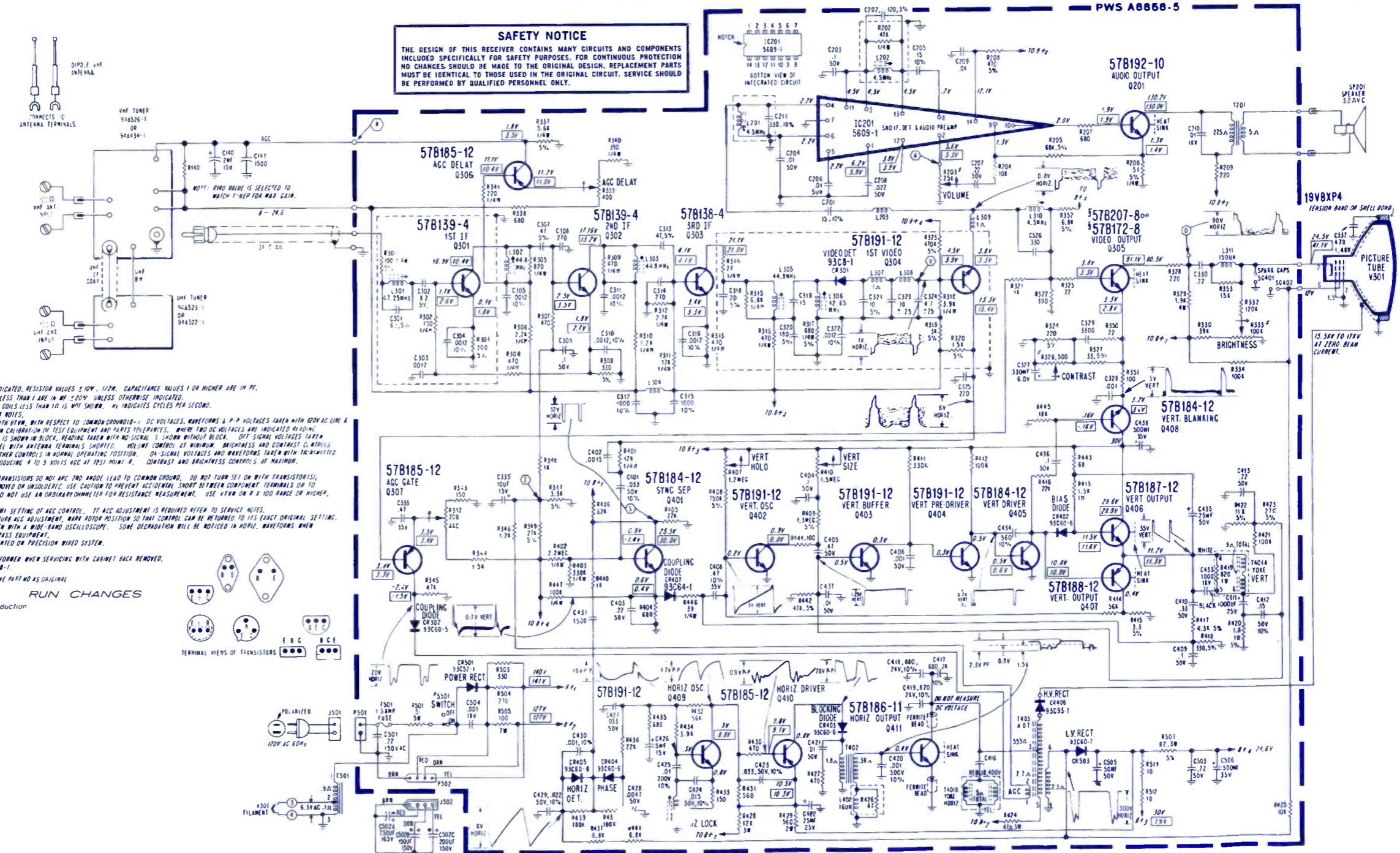


ADMIRAL
 TV Chassis
 T5R3-1A/2A

MODEL CHART

MODEL	FINISH	CRT	VHF	UHF	CHASSIS	CURRENT
SK19B667	White	19VBXP4	94A526-1	94A523-1	T21K8-1B	.70 Amps
SK19B667M	White	19VBXP4	94A434-1	94A522-1	T21K8-2B	@120VAC

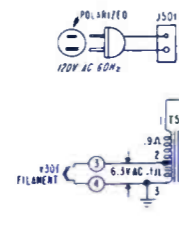
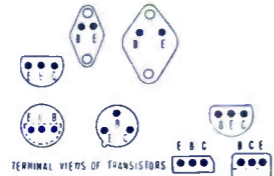
SAFETY NOTICE
THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUOUS PROTECTION NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



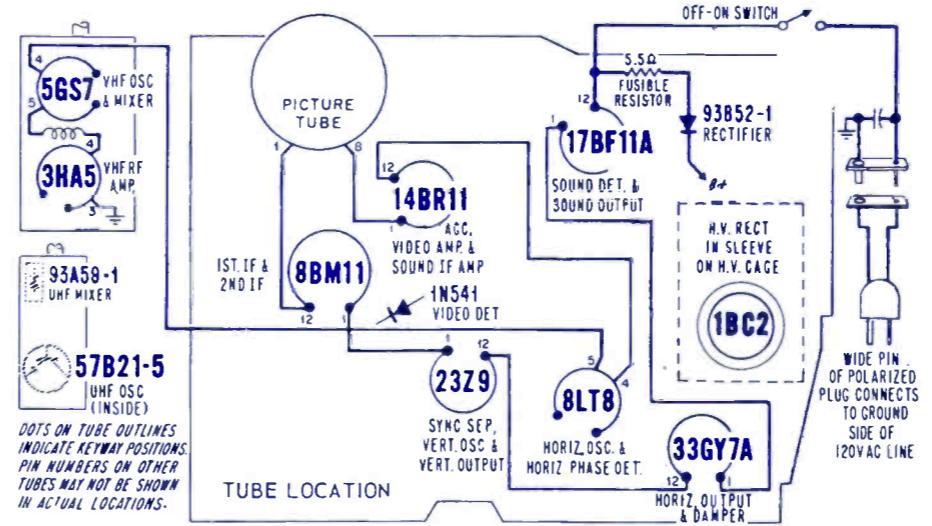
SCHEMATIC NOTES:
UNLESS OTHERWISE INDICATED, RESISTOR VALUES 1/10W, 1/2W, CAPACITANCE VALUES 1 OR HIGHER ARE IN PF, CAPACITANCE VALUES LESS THAN 1 ARE IN MF, 20M UNLESS OTHERWISE INDICATED.
RESISTANCE VALUE OF COILS LESS THAN 10 IS NOT SHOWN. M INDICATES CYCLES PER SECOND.
VOLTAGE AND WAVEFORM NOTES:
DC VOLTAGES TAKEN WITH VTVM, WITH RESPECT TO COMMON GROUND (-). DC VOLTAGES, WAVEFORMS & P-P VOLTAGES TAKEN WITH 120V AC LINE & MAY VARY DEPENDING ON CALIBRATION OF TEST EQUIPMENT AND PARTS TOLERANCES. WHEN TWO DC VOLTAGES ARE INDICATED BY 40V, TAKEN WITH TV SIGNAL IS SHOWN IN BLOCK, READING TAKEN WITH NO SIGNAL. S SHOWN WITHOUT BLOCK. OPT SIGNAL VOLTAGES TAKEN ON UNUSED VHT CHANNEL WITH ANTENNA TERMINALS SHORTED. VOLUME CONTROL AT MINIMUM, BRIGHTNESS AND CONTRAST CONTROLS AT MAXIMUM. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. ON-SIGNAL VOLTAGES AND WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL PRODUCING 4 TO 5 VOLTS ACC AT TEST POINT R. CONTRAST AND BRIGHTNESS CONTROLS AT MAXIMUM.
TRANSISTOR CAUTION:
TO AVOID DAMAGE TO TRANSISTORS DO NOT ARE 2ND ANODE LEAD TO COMMON GROUND. DO NOT TURN SET ON WITH TRANSISTORS; TUBES OR LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO COMMON GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE VTVM OR R X 100 RANGE OR HIGHER.
ACC CAUTION:
DO NOT DISTURB FACTORY SETTING OF ACC CONTROL. IF ACC ADJUSTMENT IS REQUIRED REFER TO SERVICE NOTES.
IF NECESSARY TO DISTURB ACC ADJUSTMENT, MARK ROTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING.
* ALL WAVEFORMS TAKEN WITH A HIGH-IMPEDANCE OSCILLOSCOPE. SOME DEGRADATION WILL BE NOTICED IN HORIZ. WAVEFORMS WHEN USING HARDBOARD HANDPASS EQUIPMENT.
* COMPONENT NOT MOUNTED ON PRECISION WIRED SYSTEM.
WARNING:
USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.
* COMMON GROUND (-).
* REPLACE WITH SAME PART NO. AS ORIGINAL.

RUN CHANGES

Start of production

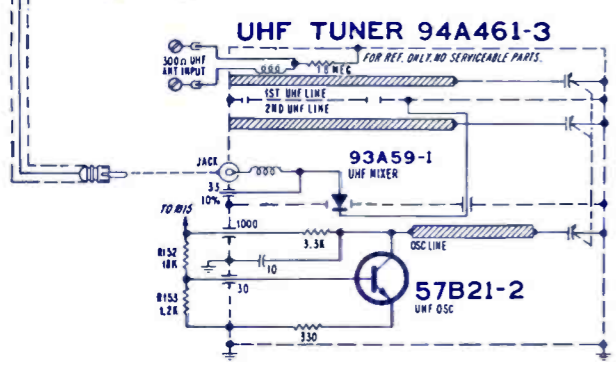
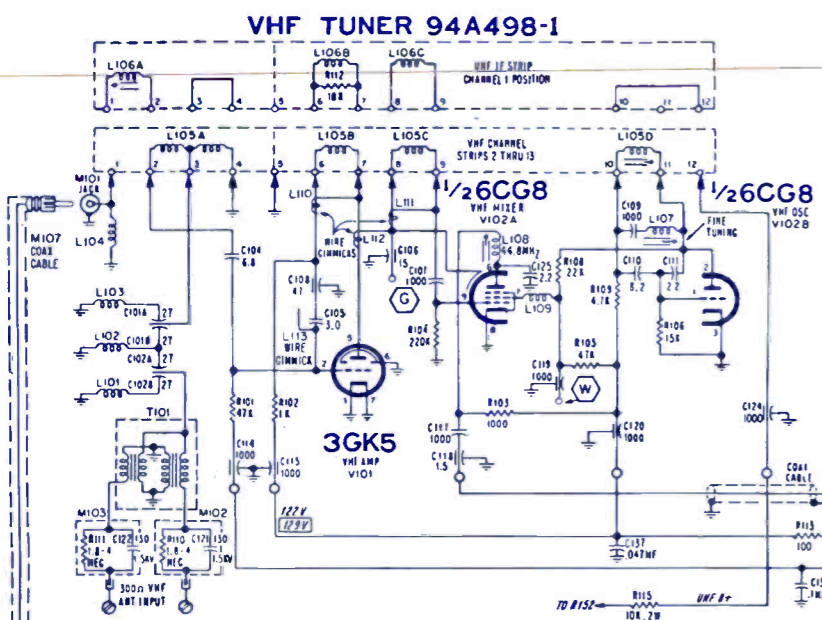


SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R208	1M volume, triple control w/switch	75A126-B
R311	25K contrast, triple control w/switch	75A126-B
R313	100K brite, triple control w/switch	75A126-B
R411	5M height control	75A101-16
R412	1M therm	61A41-2
R417	1.2M, vert hold control	75A100-8
R421	500K vert lin control	75A101-17
C503A	250µf, 165v electro	67A30-12
C503B	200µf, 150v electro	67A30-12
C503C	50µf, 150v electro	67A30-12
L202	quad coil	72A132-82
L301	47.25MHz trap	72A308-1
L307	video peak	73A5-40
L401	horiz lock coil	94A17-19
T201	audio output transformer	79A124-1
T401	vert output xformer	79A123-1
T403	horiz output diode	79A138-25
F501	2.5a fuse	93A8-1
		8AA7-14

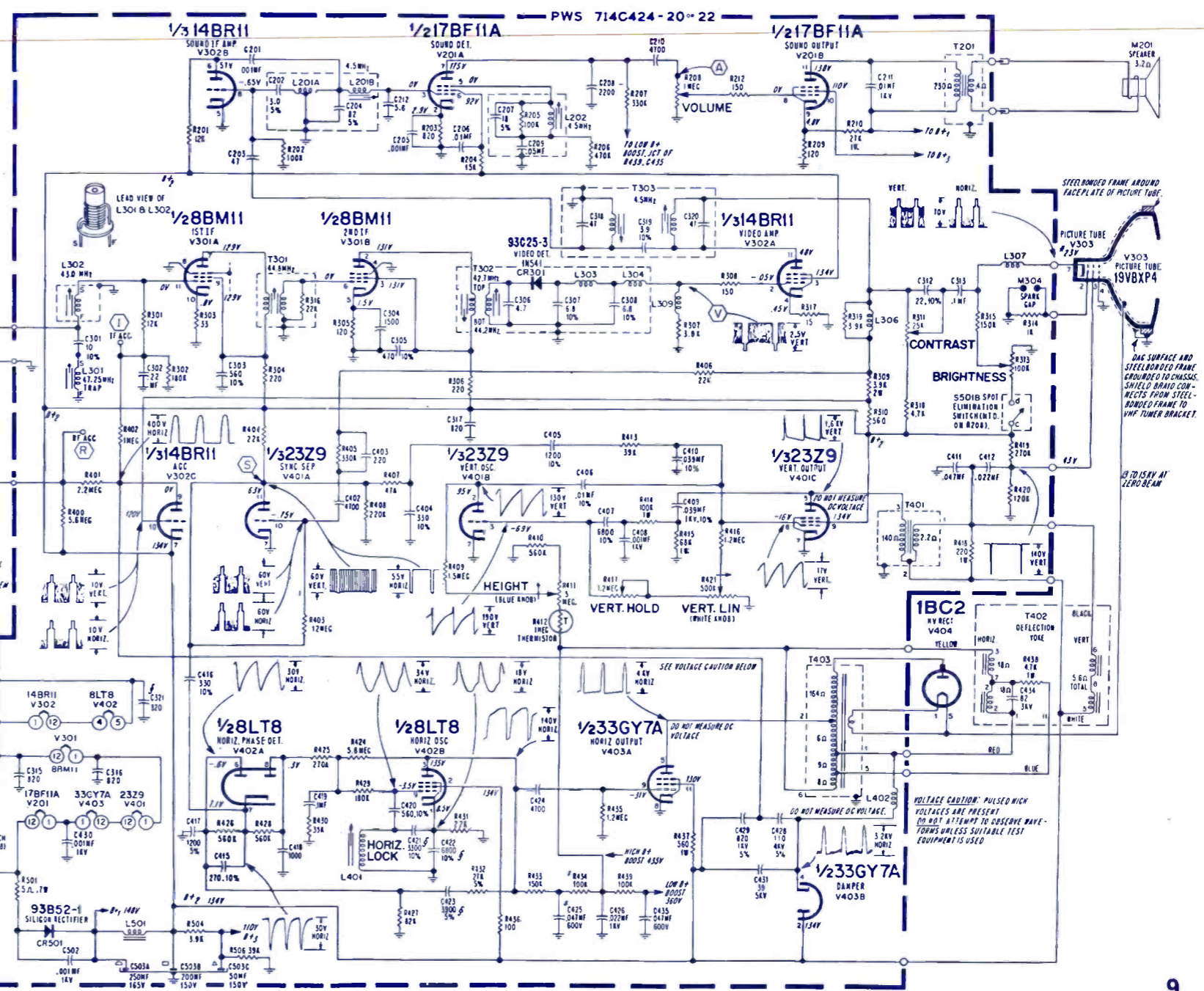


DOTS ON TUBE OUTLINES INDICATE KEYWAY POSITIONS. PIN NUMBERS ON OTHER TUBES MAY NOT BE SHOWN IN ACTUAL LOCATIONS.

RUN CHANGES.
 10 Start of production.



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 PICTORAGS UNLESS OTHERWISE INDICATED
 DC VOLTAGES MEASURED WITH VVM AT 100X AC LINE. NO SIGNAL
 MAX. CONTRAST & BRIGHTNESS & MIN. VOLUME
 COMPONENT MOUNTED AT UNDERSIDE OF PRECISION WIRED SYSTEM
 WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.

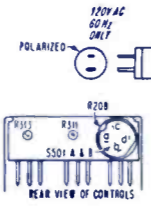


STEEL-BONDED FRAME AROUND FACEPLATE OF PICTURE TUBE.
 DMC SURFACE AND STEEL-BONDED FRAME GROUND TO CHASSIS. SHIELD Braid CONTACTS FROM STEEL-BONDED FRAME TO VHF-TUNER BRACKET.

TO 15V AT ZERO BEAM

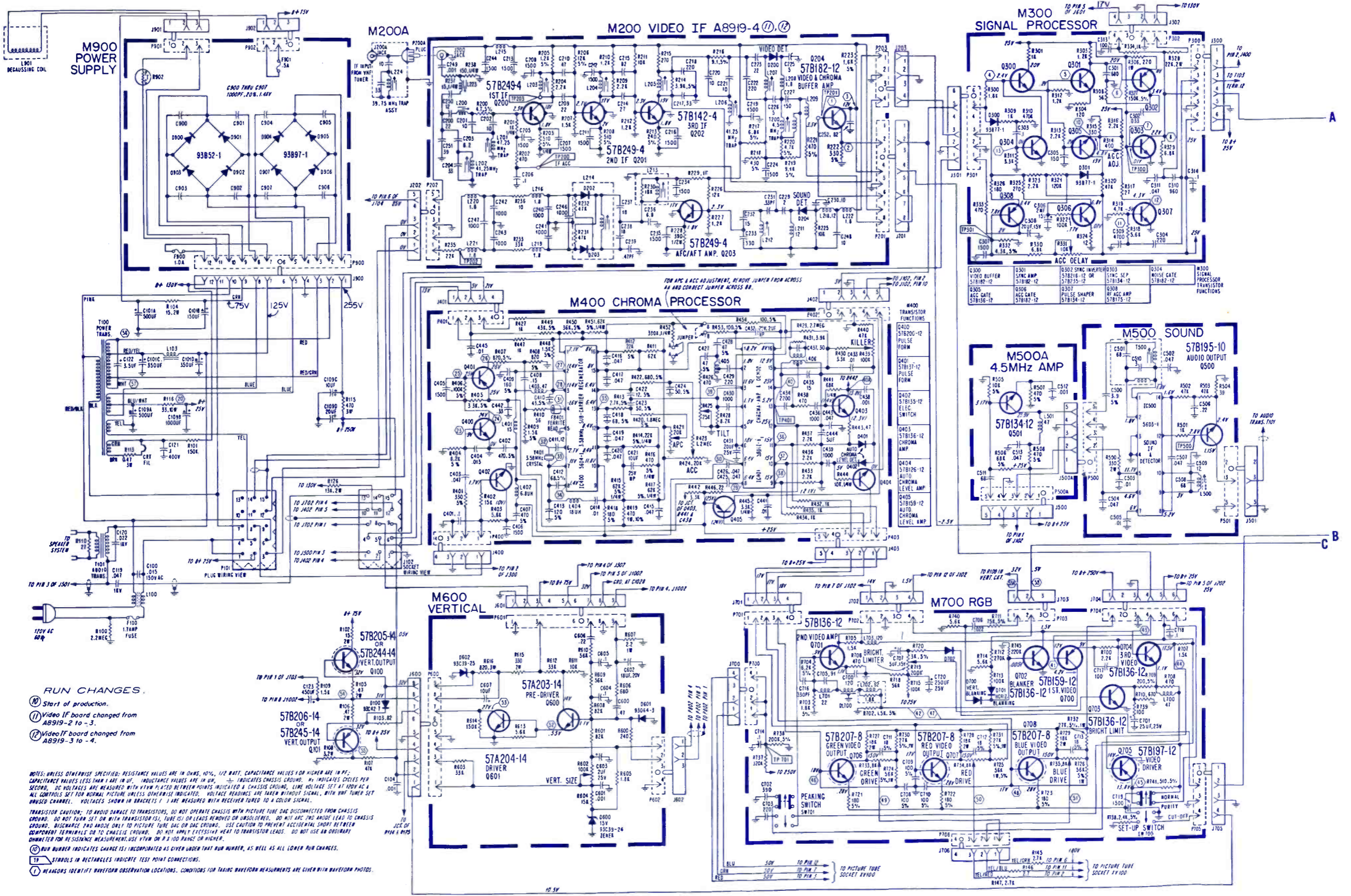
VOLTAGE CAUTION: PULSED HIGH VOLTAGES ARE PRESENT. DO NOT ATTEMPT TO OBSERVE WAVEFORMS UNLESS SUITABLE TEST EQUIPMENT IS USED.

ADMIRAL
 TV Chassis
 T35H4-2B



ADMIRAL

Color TV Chassis
1M30



- RUN CHANGES:**
- (M) Start of production.
 - (N) Video IF board changed from A8919-2 to -3.
 - (O) Video IF board changed from A8919-3 to -4.

NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2 WATT. CAPACITANCE VALUES FOR HIGH VOLTAGE ARE IN P.F.; CAPACITANCE VALUES LESS THAN 100 P.F. ARE IN P.F. INDUCTION VALUES ARE IN MH. * INDICATES CHASSIS GROUND. # INDICATES CYCLES PER SECOND. DC VOLTAGES ARE MEASURED WITH VMM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 100V AC & ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH VMT TUNER SET UNDESIGNED CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

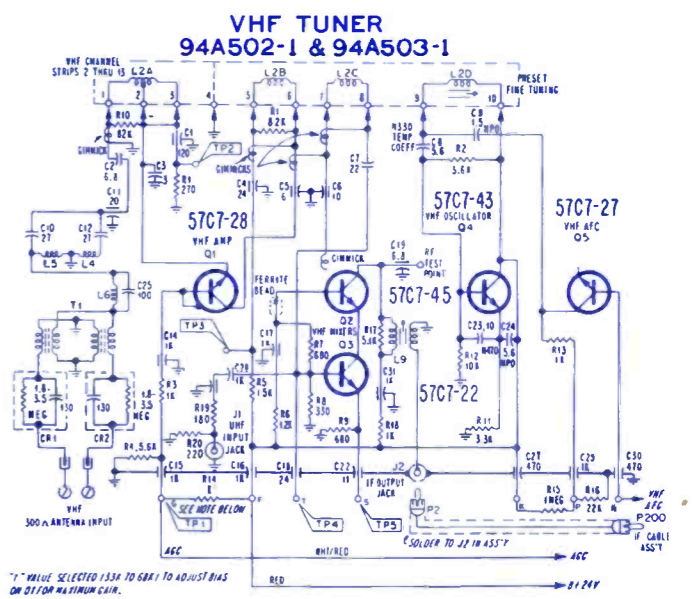
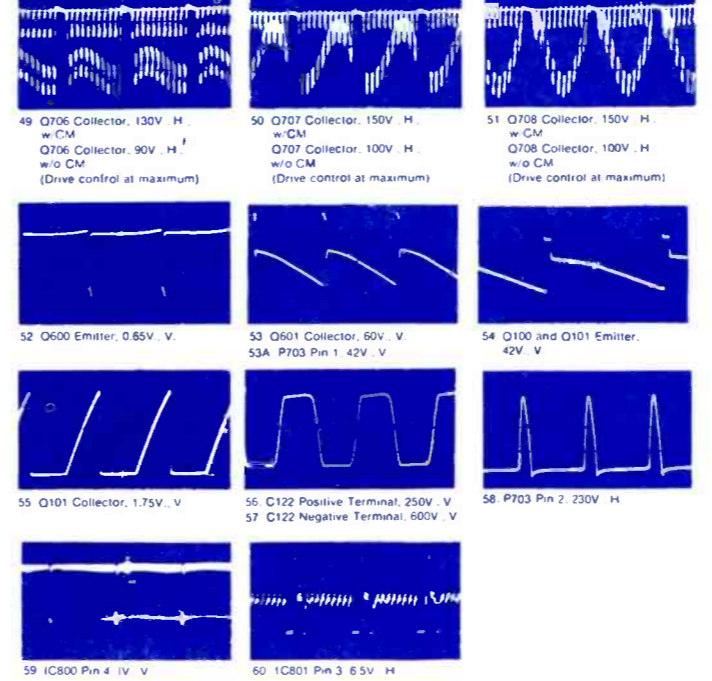
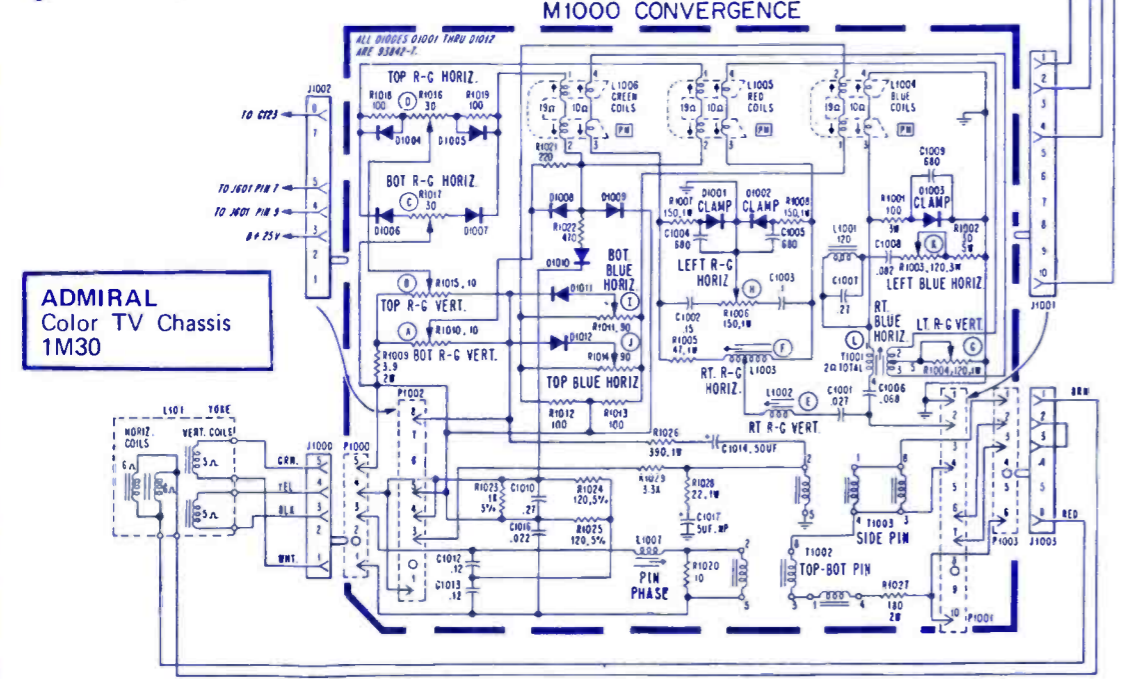
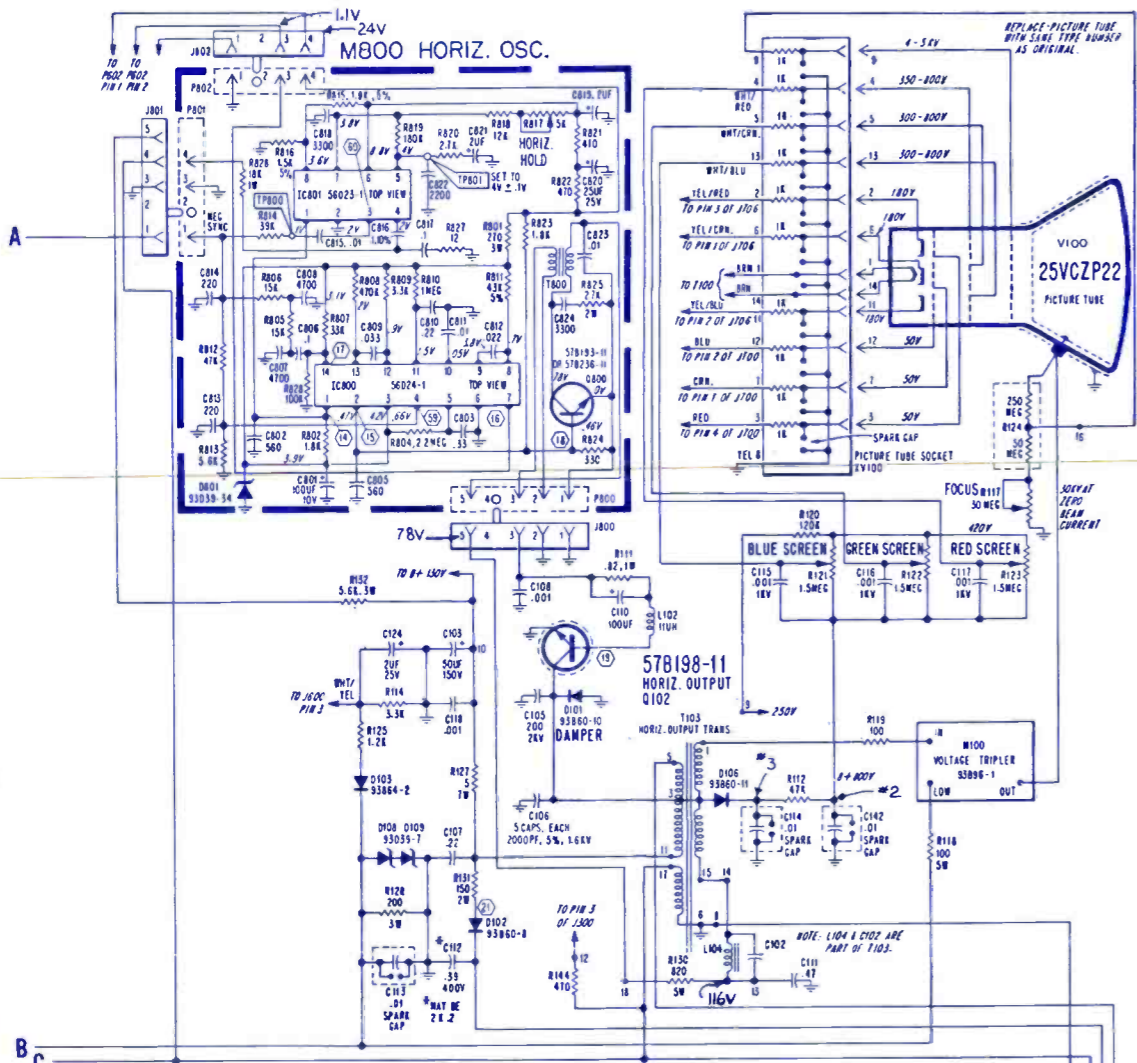
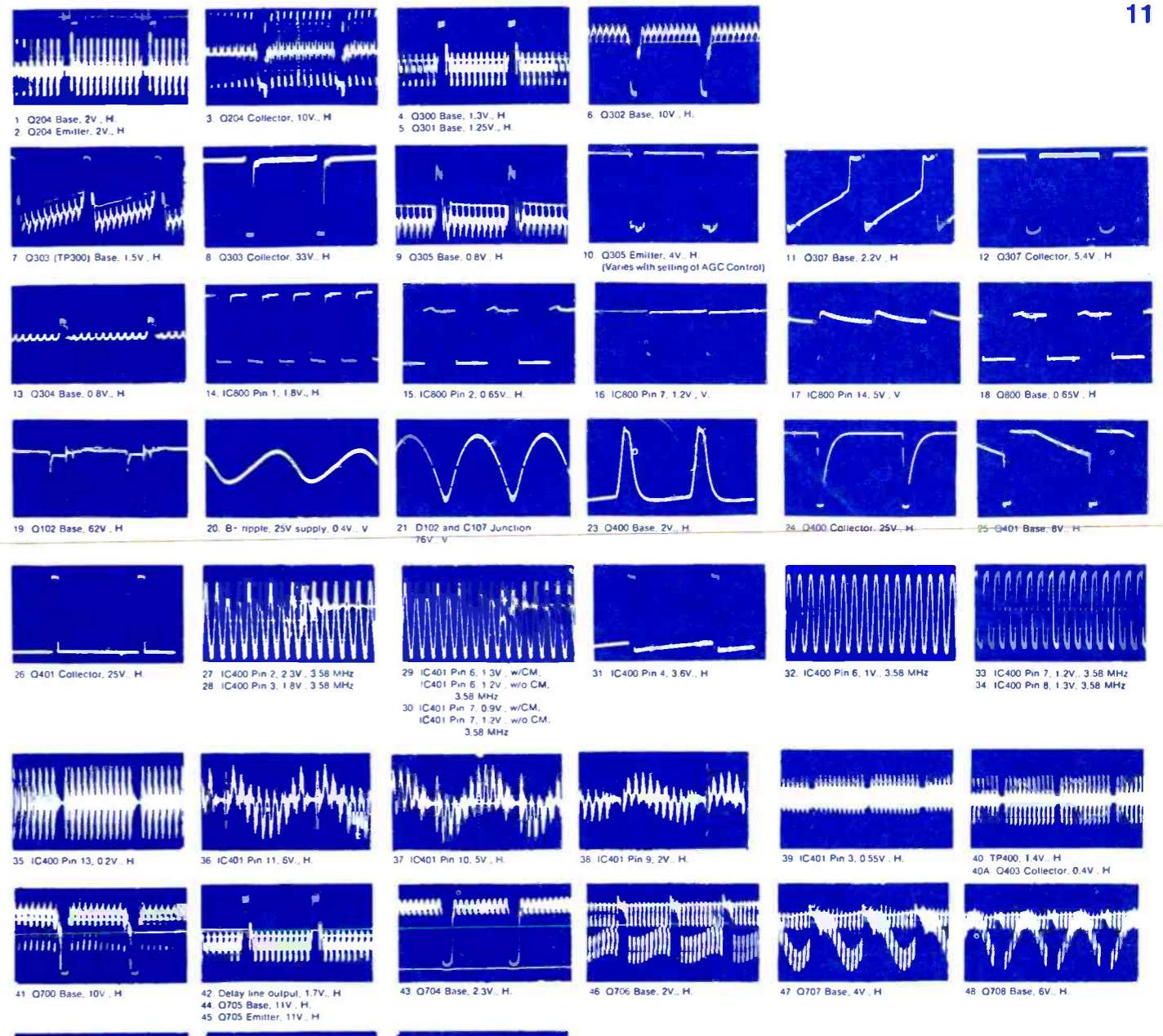
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE BAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET OR WITH TRANSISTOR (S), TUBE (S) OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC AND ANODE LEAD TO CHASSIS GROUND. DISCHARGE PAD ANODE ONLY TO PICTURE TUBE BAG OR DAG GROUND. USE CAUTION TO PREVENT ACCIDENTAL SHORTS BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENTS; USE VMM OR A 100 OHM RANGE OR HIGHER.

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

(T) SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

(C) HEADERS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

SYMBOL	DESCRIPTION	ADMIRAL PART NO.	
R124	— focus module	61A72-1	R117 — 30M, focus control
C101A, B	— 350µf/200v, 350µf/200v, 150µf/100v,		75A64-63
C, D	— 500µf/100v electro	67A15-421	R817 — 5K, horiz hold
C109A, B	— 500µf/500v, 1000µf/35v, 300µf/15v,		75A101-64
C, D	— electro	67A15-430	L406 — coil, chroma bandpass
R439	— 100K, color killer	75A101-63	L100 — choke, AC line
R719	— 200K, brite limiter	75A101-28	T100 — xformer, power
R602	— 100K, vert size	75A101-60	T101 — xformer, audio
			T103 — xformer, horiz output
			L500 — coil, quad
			F100 — fuse, 1.7a
			75A108-8
			73A31-22
			80A125-4
			79A141-1
			79A177-3
			72A329-1
			84A28-6

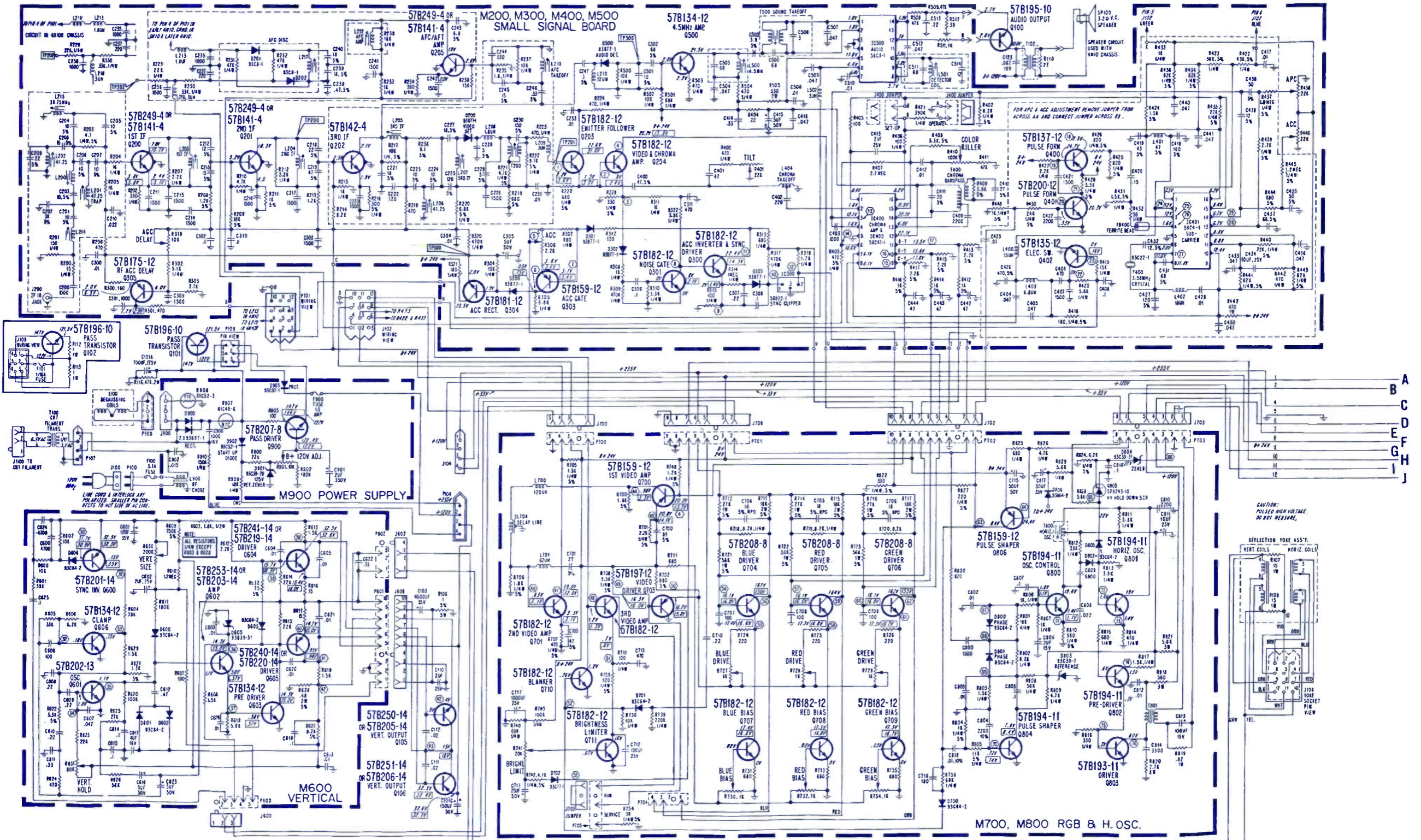


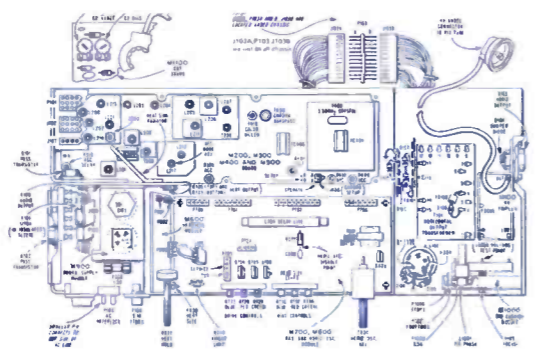
ADMIRAL
Color TV Chassis
1M30

*1" MEAS. SELECTED 1.5X TO GRAY TO ADJUST BIAS ON 57C7P MAXIMUM GAIN.

ADMIRAL

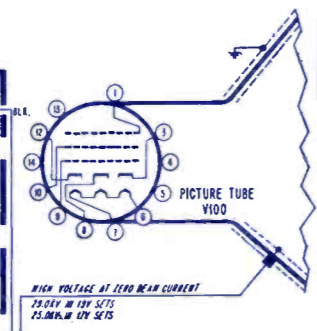
Color TV Chassis
3M10/4M10/4M10R



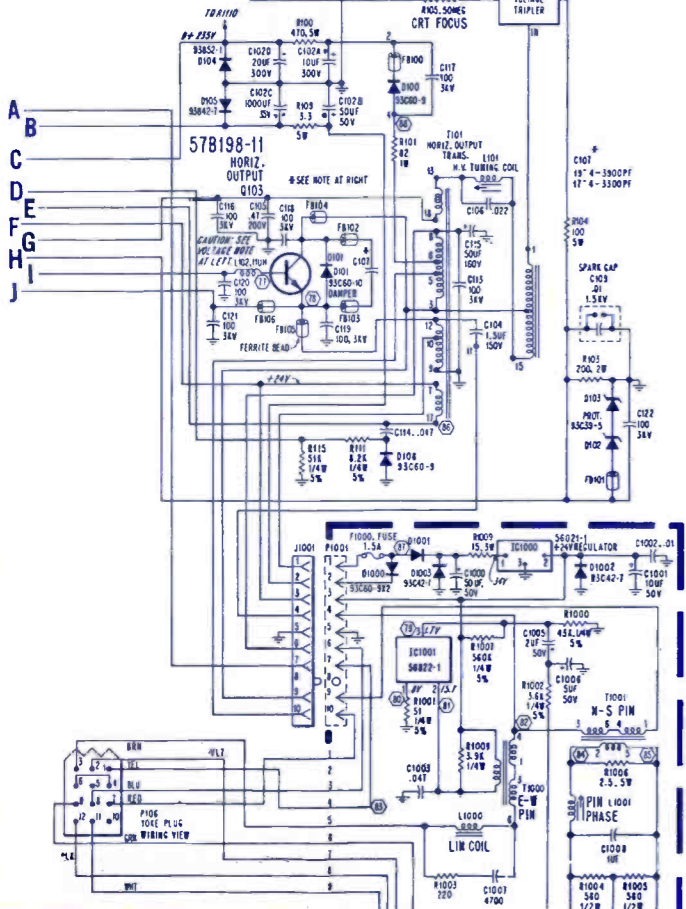
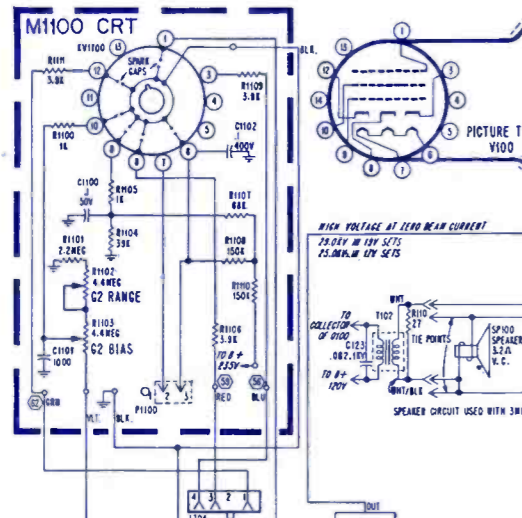
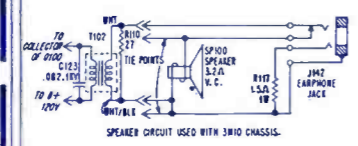


PIN TUBE SIZE	PICTURE TUBE TYPE	USED IN CHASSIS
17V	17VAYTC02	3M10
19V	19VEJTC02	4M10
19V	19VEJTC02	4M10R

- RUN CHANGES**
- (12) Start of 4M10 production.
 - (11) Small signal Board changed from A8954-2 to -3. Start of 3M10 production.
 - (12) M700, M800 RGB & H OSC Board changed from A8954-2 to -3. M1000 Power Supply Board changed from A8953-2 to -3.
 - (13) M1000 Pin Cushion Board changed from A8954-2 to -3. Connectors J1000 & P1000 were omitted. Start of 4M10R production.



HIGH VOLTAGE AT LEAD BEAN CURRENT
25.0KV IN I7M S75
25.0KV IN I7V S75



CAUTION: TO AVOID DAMAGE TO TCI000, DISCONNECT SOCKET J1001 WHEN APPLYING EXTERNAL PWR DURING ALIGNMENT OR SERVICING WITH SET TUNED UP.

NOTES:
UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, 10% TYP. CAPACITANCE VALUES 1 OR HIGHER ARE IN P.F., CAPACITANCE VALUES LESS THAN 1 ARE IN P.F., INDUCTANCE VALUES ARE IN UH.
- indicates CHASSIS GROUND. H indicates CYCLES PER SECOND.
DC VOLTAGES ARE MEASURED WITH PWR PLACED BETWEEN POINTS INDICATED. A CHASSIS GROUND. LINE VOLTAGE SET AT 100VAC. ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE GIVEN WITHOUT SIGNAL, WITH TUBES SET TO UNUSUAL CHANNEL. VOLTAGES SHOWN IN BOX ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

TRANSISTOR CAUTION:
TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE BAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTORS, TUBES OR LEADS REMOVED OR UNPLUGGED. DO NOT USE AN EXCESSIVE HEAT TO TRANSISTOR LEADS. DO NOT USE AN EXCESSIVE HEAT TO DISCONNECT MEASUREMENTS. USE PWR OR 2500 BASE IN HIGHER. 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 EXCESSIVE HEAT TO DISCONNECT MEASUREMENTS. USE PWR OR 2500 BASE IN HIGHER.

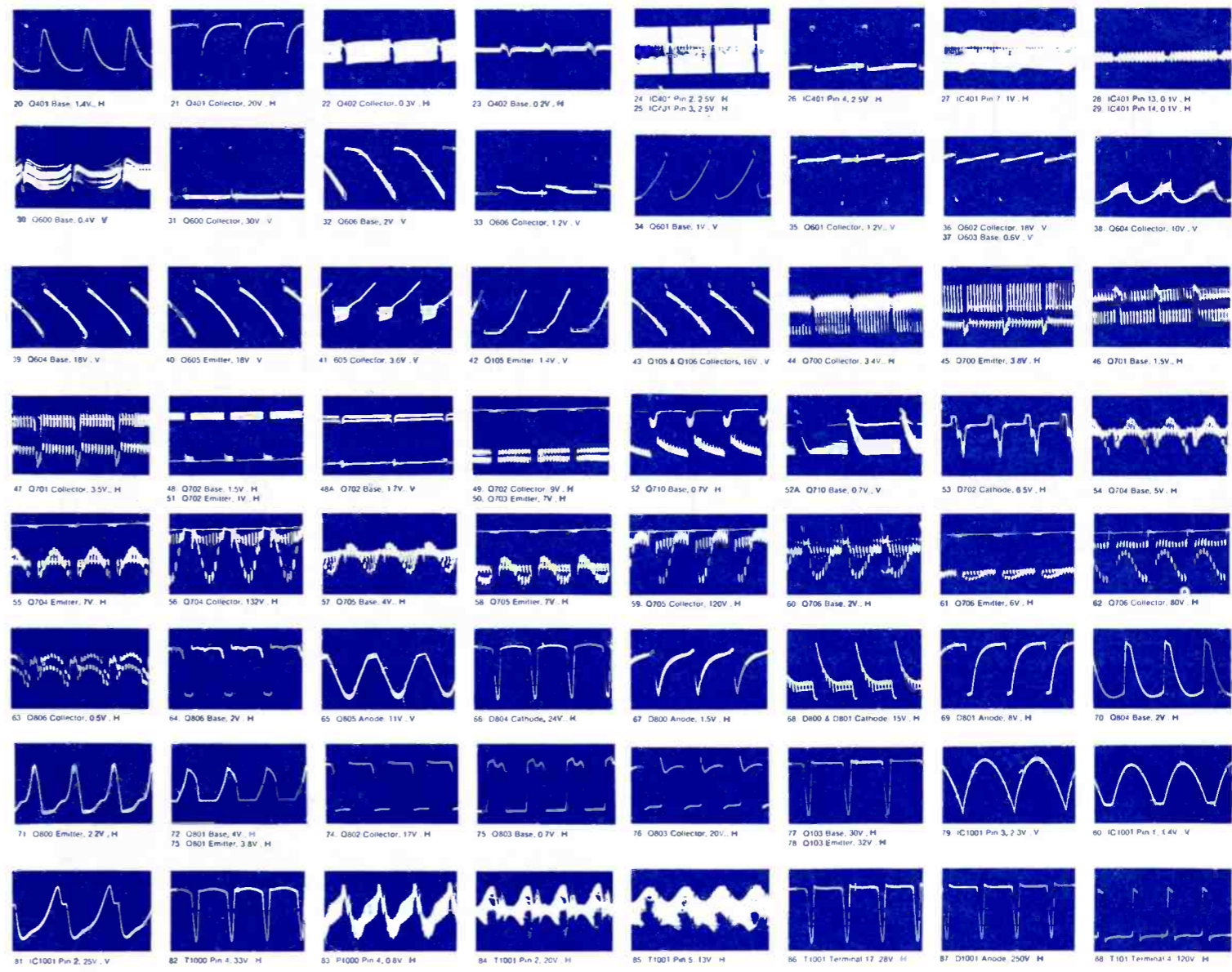
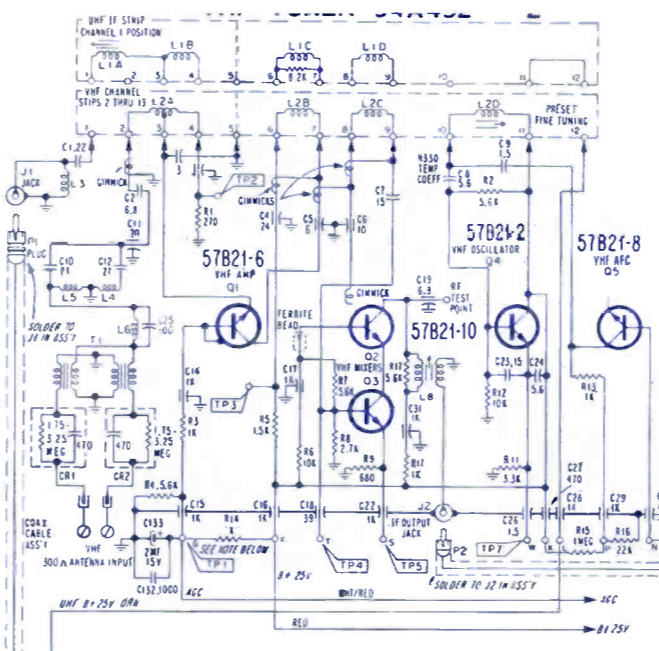
(12) RUN NUMBER INDICATES CHANGES INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.

(TP) SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

(R) RETARDERS INDICATE WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

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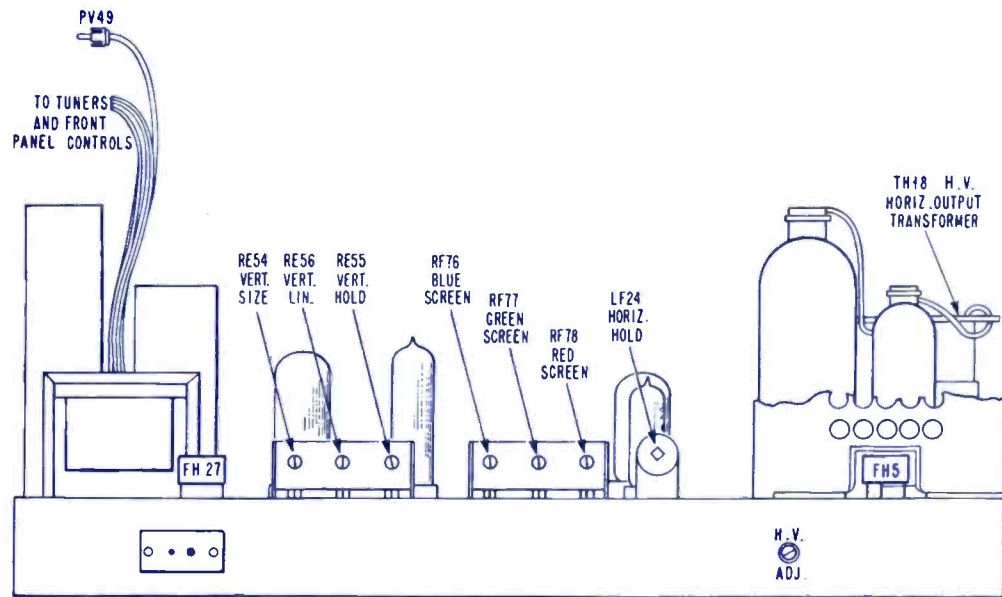
ADMIRAL
Color TV Chassis
BM10/4M10/4M10R

ADMIRAL

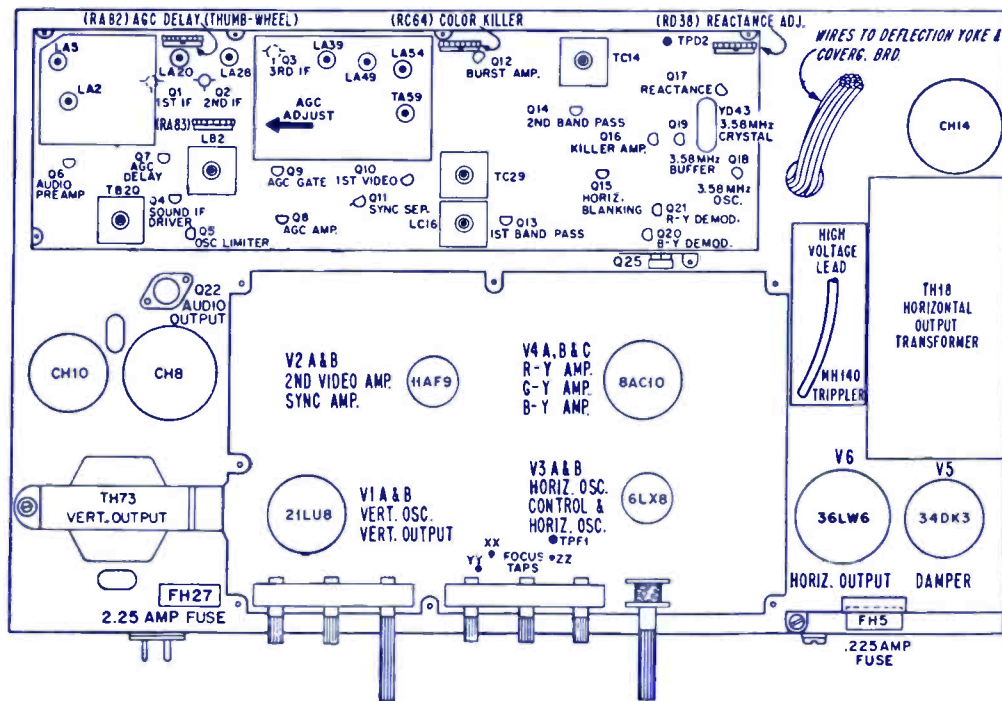
Color TV Chassis
T43K10, T44K10

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
RA83	— 2K AGC con	75A101-31
RC64	— 10K color kill con	75A101-18
RD38	— 400 ohm, react con	75A101-35
RE54	— vert size con	75A95-18
RE55	— vert hold triple control	75A95-18
RE56	— vert lin cont, 300K	75A95-18
RH28.34	— dual con-brite & tint	75A194-1
	T43K10-4A	75A194-1
RH29.39	— dual con-contrast & color	75A194-2
	T43K10-4A	75A194-2
RH34	— 500 ohm, slide tint con	75A140-17
	T44K10-4A	75A140-17
RH39	— 500 ohm, color slide con	75A140-17
	T44K10-4A	75A140-17
RH125	— high vol adj 5 M, con	75A135-57
CH10A	— 300mf, 350V	
CH10B	— 300mf, 350V	

CH10C	— 80mf, 350V	elect	67A15-415
CH10D	— 10mf, 350V		
LA20	— 1st IF xformer		72A316-8
LA28	— 2nd IF xformer		72A316-10
LA39	— 3rd IF xformer		72A316-12
LC16	— chroma input coil		72A329-1
LF24	— horiz hold con		94A351-1
TA59	— 4.5 MHz trap		72A216-7
TB20	— ratio xformer		72A318-1
TC14	— burst xformer		72A325-3
TC29	— bandpass xformer		72A327-1
TH4	— power xformer		80A108-14
TH18	— horiz output xformer		79A169-1
TH44	— audio output xformer		79A141-4
TH73	— vert output xformer		79A165-1
FH5	— 225a fuse		84A28-12
FH27	— 2.25a fuse		84A28-16
MH140	— tripler, H.V.		93A91-3



BACK DRAWING OF CHASSIS



NOTES: UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, KW, MW, OR KVAH. CAPACITANCE VALUES IN MICRO FARADS OR IN PF. CAPACITANCE VALUES LESS THAN 1000 IN PF. INDUCTANCE VALUES ARE IN MH. — INDICATES CHASSIS GROUND. @ INDICATES CYCLES PER SECOND. NO VALUES ARE MEASURED WITH TV SET PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 100V AC & ALL CONTROLS SET FOR NORMAL POSITION UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH THE TUNER SET AT UNDEMODULATED SIGNALS SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

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.

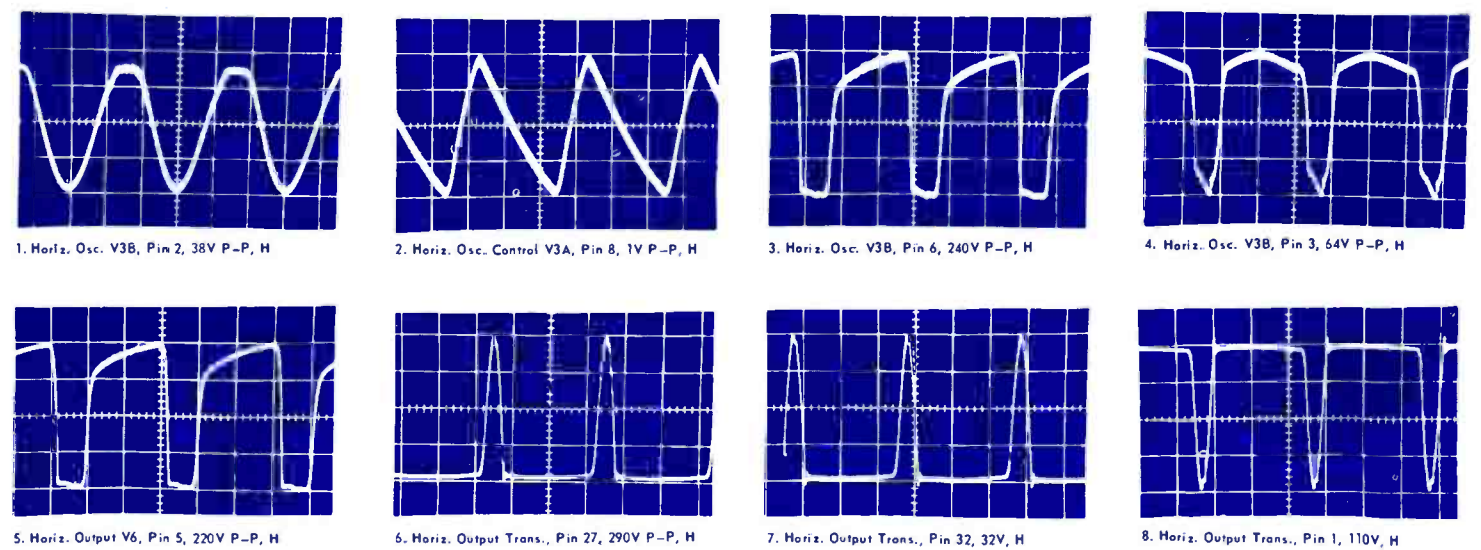
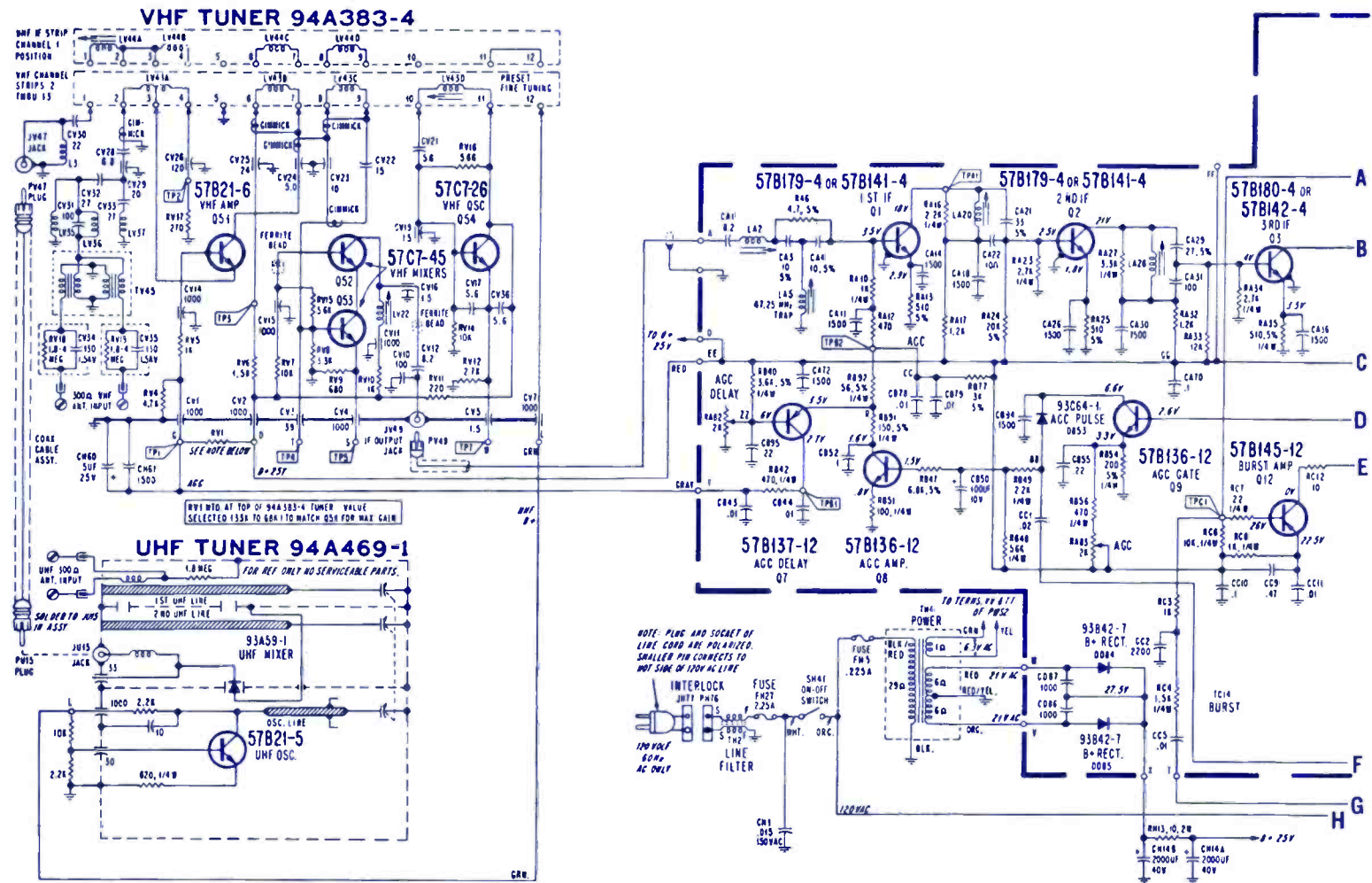
TRANSFORMER CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE BAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TUNE SET OR WITH TRANSISTOR (S), TUNE (S) OR LEADS HEATED OR DISCONNECTED. DO NOT APPLY 250 VOLT AC LEAD TO CHASSIS GROUND. DISCONNECT & DO NOT TOUCH PICTURE TUBE BAG OR GROUND. USE CAUTION TO PREVENT ACCIDENTAL SHORTS BETWEEN COMPONENT TERMINALS ON TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS. DO NOT USE AN ORDINARY DIAMETER FOR RESISTANCE MEASUREMENT, USE 1/16" OR 1/32" RANGE OR HIGHER.

① AND ② INDICATES CHANGE (S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.

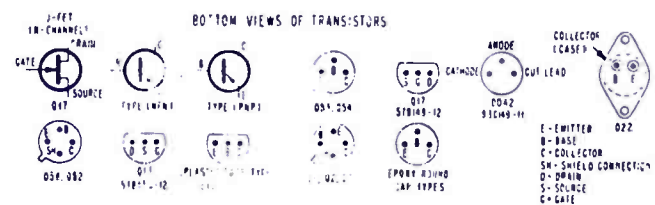
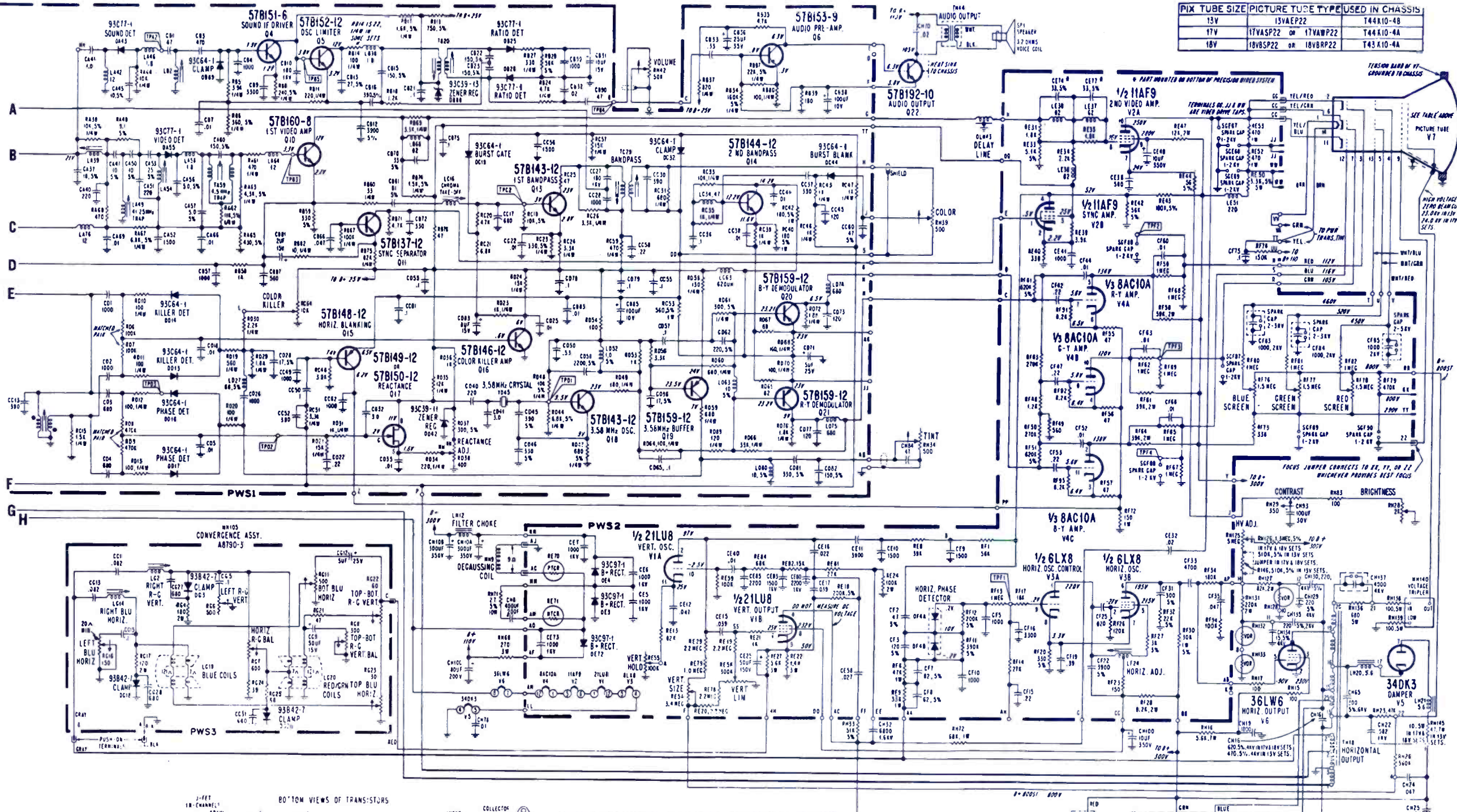
③ SYMBOLS INDICATE TEST POINT CONNECTIONS.

④ READINGS IDENTIFY UNIFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING UNIFORM MEASUREMENTS ARE GIVEN WITH UNIFORM PHOTOGRAPHS.

RUN CHANGES:
① START OF PRODUCTION



PIX TUBE SIZE	PICTURE TUBE TYPE USED IN CHASSIS	T44K10-4B
13V	13VAEP22	T44K10-4B
17V	17VAP22 OR 17VAMP22	T44K10-4A
18V	18VSP22 OR 18VBRP22	T43K10-4A



SAFETY NOTICE

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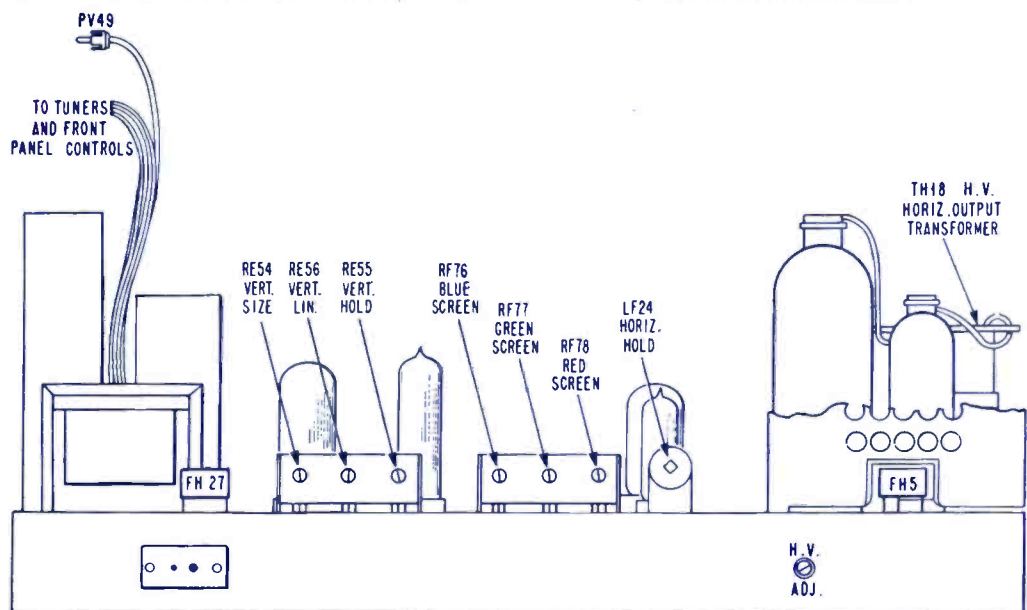
ADMIRAL
Color TV Chassis
T43K10, T44K10

ADMIRAL

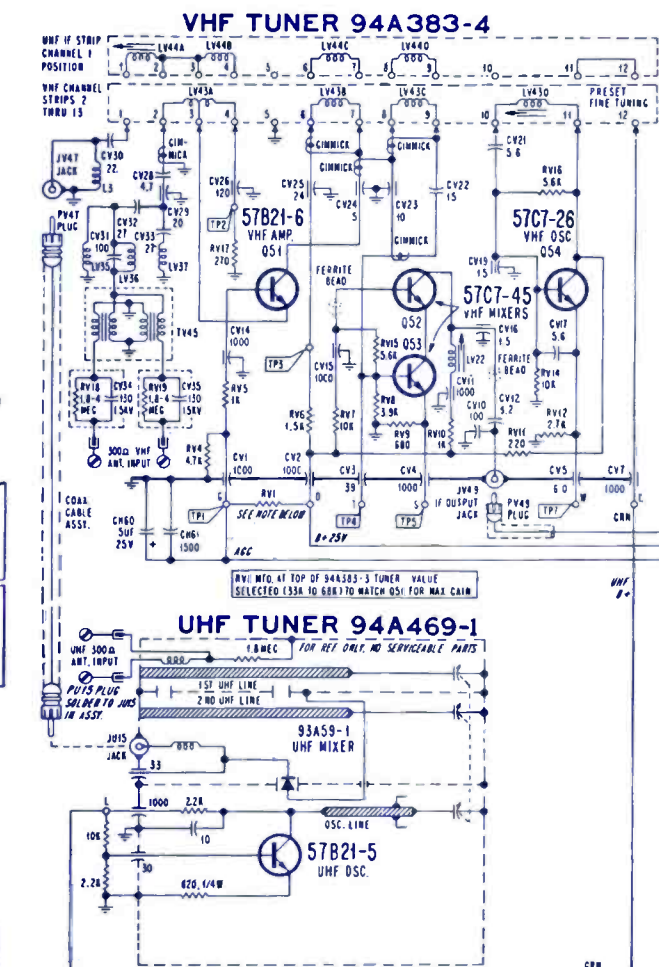
Color TV Chassis
T50K10-4B

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
CH10A	— 200mf, 35V	
CH10B	— 160mf, 35V	
CH10C	— 80mf, 35V	v elect . . . 67A15-403
CH10D	— 10mf, 35V	
LC16	— chroma input coil	. . . 72A329-1
LC34	— 47µh, 2nd bandpass coil	. . . 73A55-28
LF24	— horiz hold con	. . . 94A351-1
TA59	— 4.5MHz trap	. . . 72A216-7
TB20	— ratio xformer	. . . 72A318-1

TC14	— burst xformer	. . . 72A325-3
TC29	— bandpass xformer	. . . 72A327-1
TH2	— line choke	. . . 73A31-16
TH4	— power xformer	. . . 80A108-14
TH18	— horiz output xformer	. . . 79A158-3
TH44	— audio output xformer	. . . 79A141-4
TH73	— vertical output xformer	. . . 79A165-1
FH5	— .225a fuse	. . . 84A28-12
FH27	— 1.7a fuse	. . . 84A28-6
	tuner, VHF	. . . 94A383-4
	deflect yoke	. . . 94A379-13

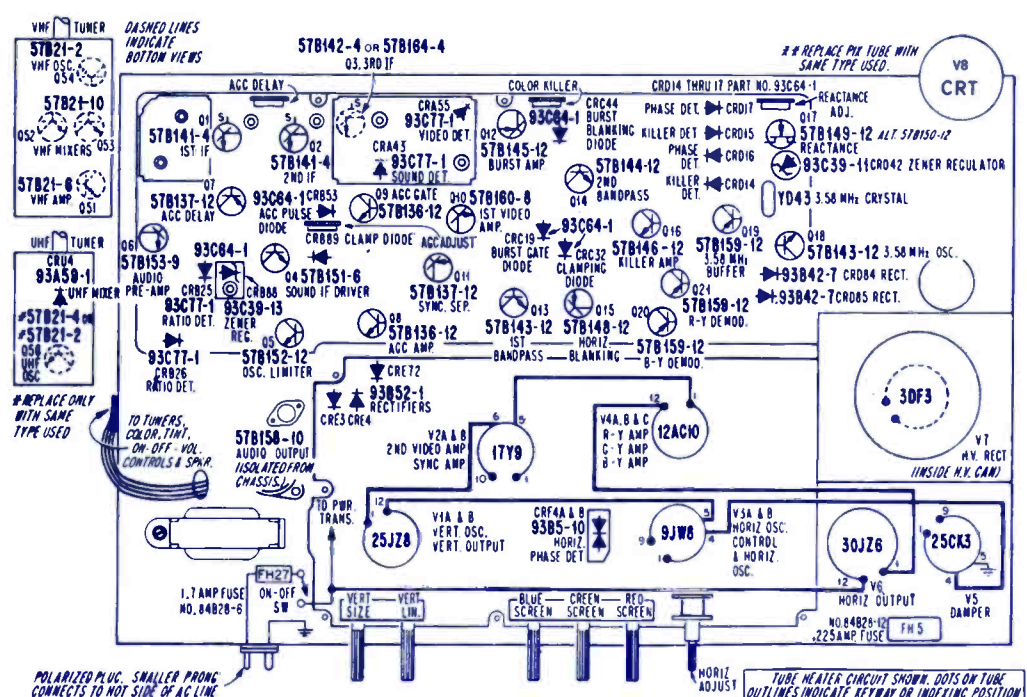
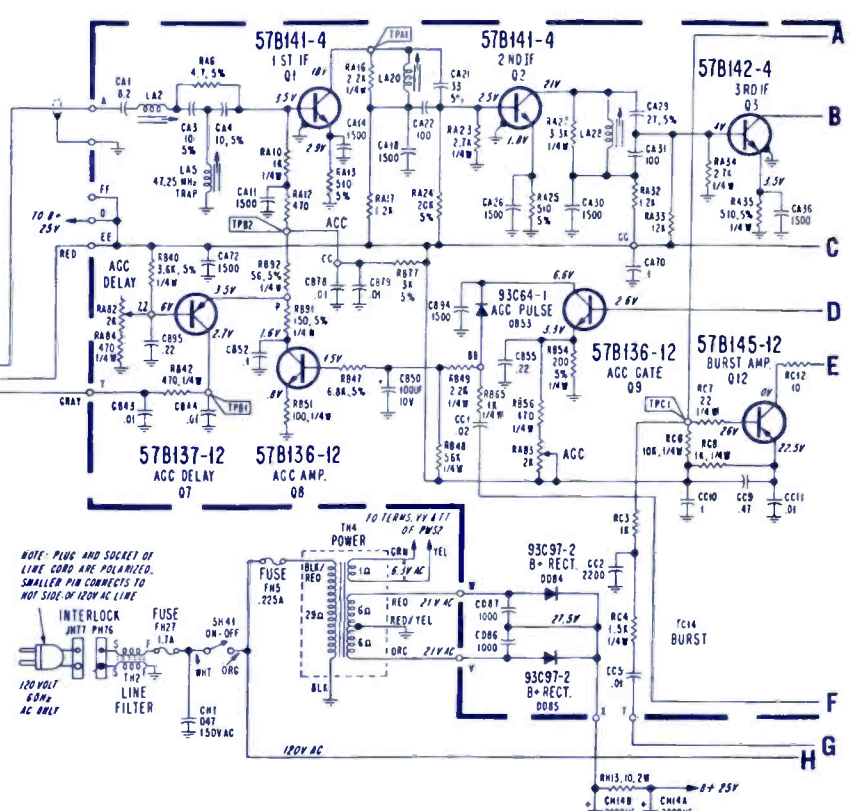


BACK DRAWING OF CHASSIS



RUN CHANGES

⑩ Start of production.



TOP DRAWING OF CHASSIS

SAFETY NOTICE

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NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10W, 1/2WATT. CAPACITANCE VALUES 1 OR HIGHER ARE IN PF, CAPACITANCE VALUES LESS THAN 1 ARE IN UF; INDUCTANCE VALUES ARE IN MH. — INDICATES CHASSIS GROUND; # INDICATES CYCLES PER SECOND. AC VOLTAGES ARE MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED A 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.

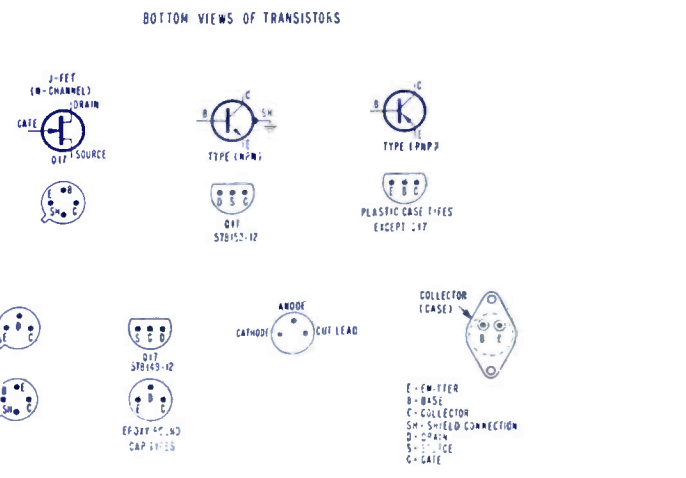
WARNING: CHASSIS IS CONNECTED DIRECTLY TO ONE SIDE OF AC POWER LINE. USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ACCIDENTAL ELECTRICAL SHOCK & DAMAGE TO TEST EQUIPMENT.

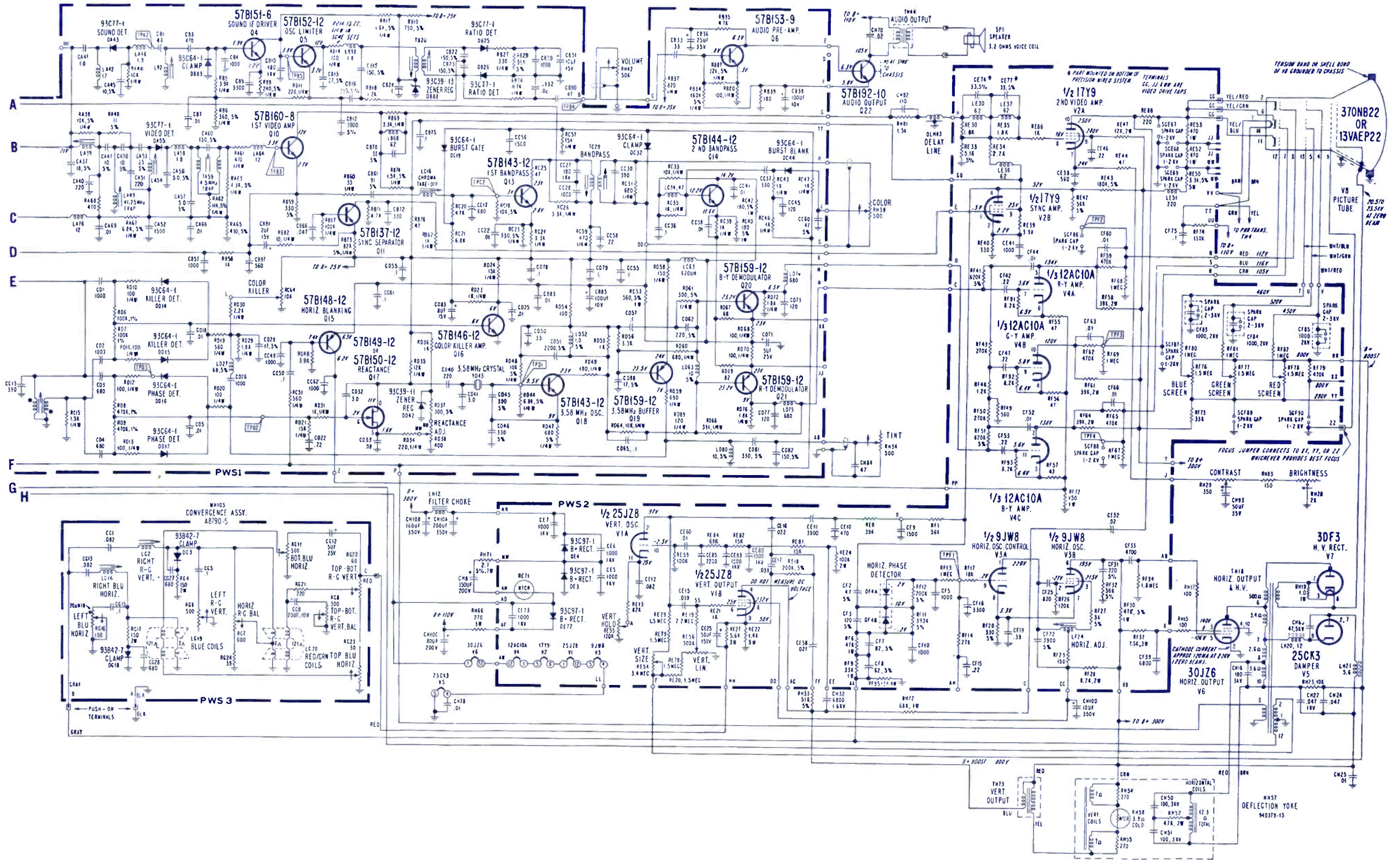
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DGC DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR TUBE(S) OR LEADS REMOVED OR UNSOLDERED. DO NOT USE 2ND ANGLE LEAD TO CHASSIS GROUND. DISCHARGE P/D ANODE ONLY TO PICTURE TUBE DGC OR GND. USE CAUTION TO PREVENT ACCIDENTAL SHORTS BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSISTOR LEADS. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE VTVM OR RAYO RANGE OHMMETER.

⑩ 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.

⑩ REGARDS INDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.



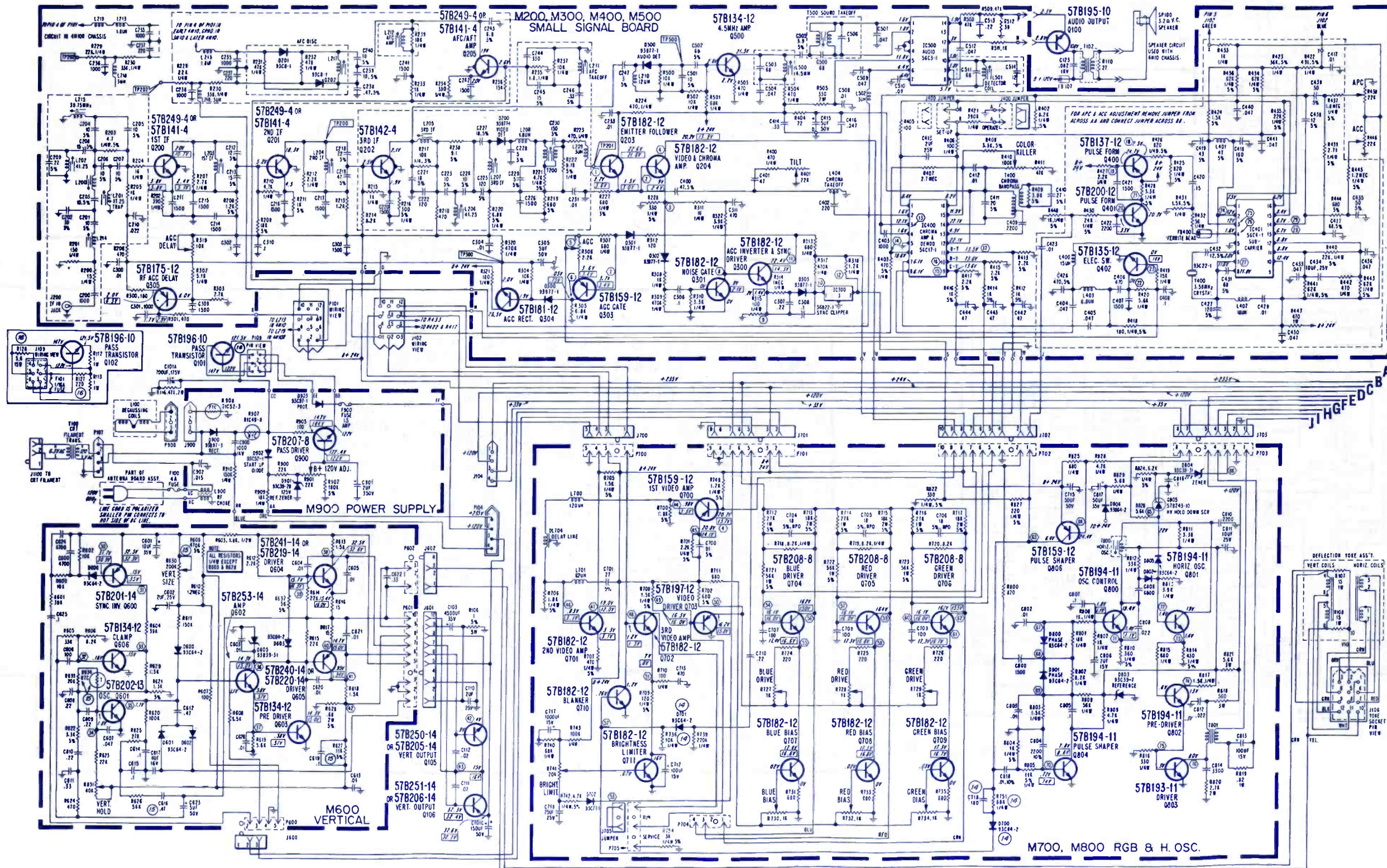


ADMIRAL
Color TV Chassis
T50K10-4B

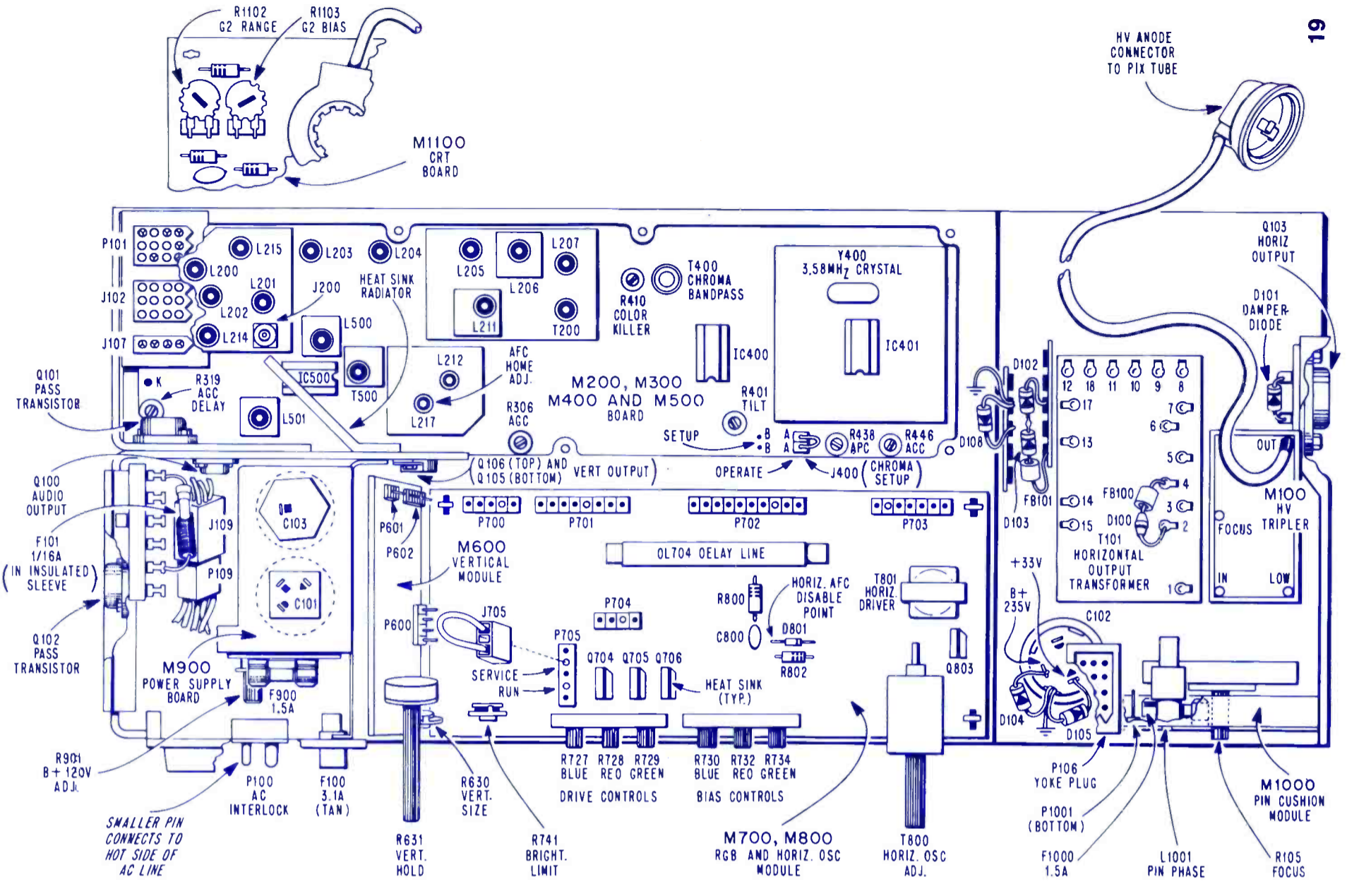
ADMIRAL

Color TV Chassis
4M10

MODEL	FINISH	CRT	TUNER CLUSTER	VHF	UHF	CHASSIS
19C618	Walnut	19VEJTC02	NC2800-1	94A492-2	94A462-1	4M10
			NC2808-1	94A493-2	or	
			NC2809-1	94A507-2	94A466-1	



CHASSIS LAYOUT



HV ANODE CONNECTOR TO PIX TUBE

SMALLER PIN CONNECTS TO HOT SIDE OF AC LINE

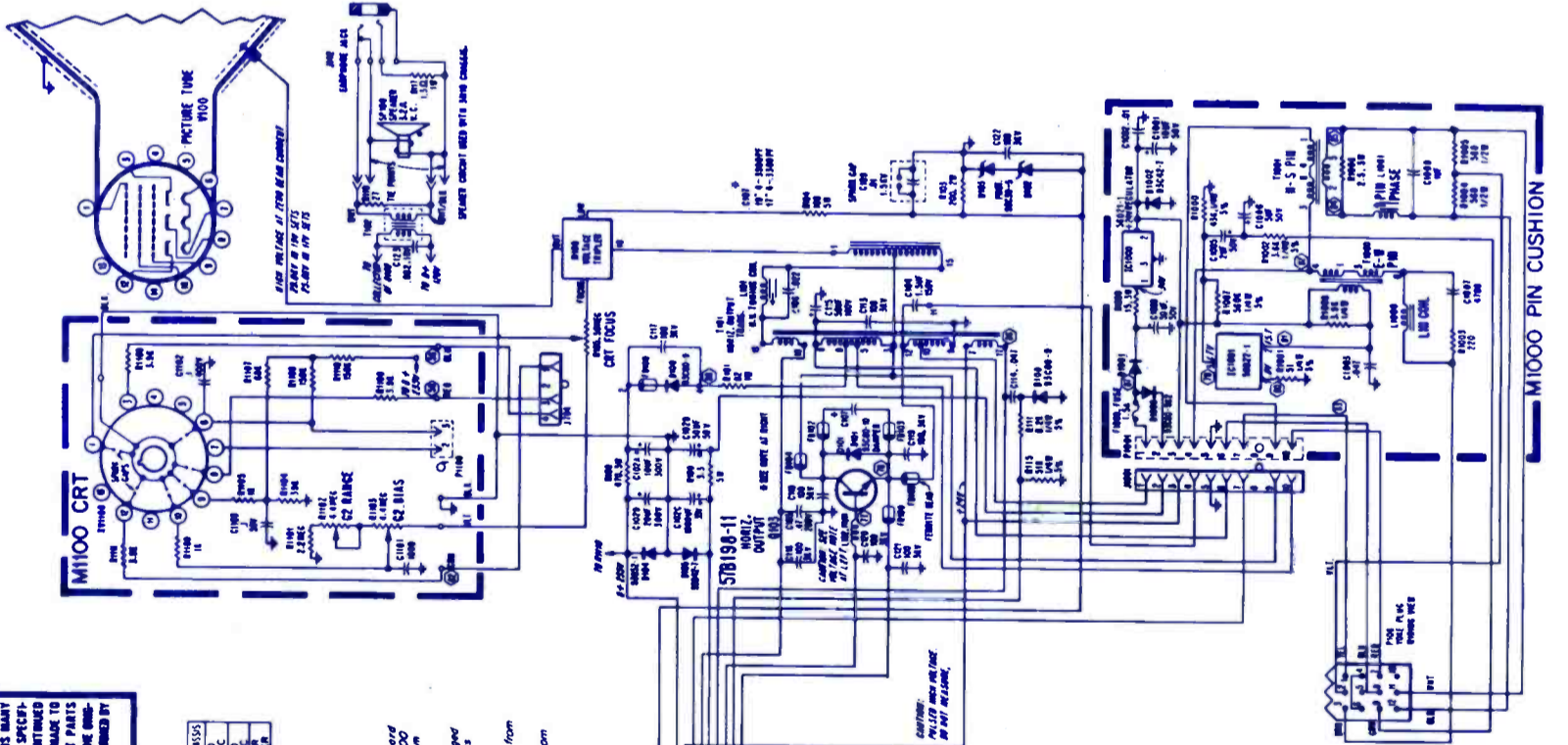
- 75A195-17
- 75A195-20
- 75A195-26
- 75A191-2
- 75A191-9
- 61A41-9
- 75A101-47
- 75A198-3
- 94A351-3

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
F800	— fuse, 1.5 amp	84A4-7
F1000	— fuse 1.5 amp	84A33-1
F1000	— fuse 1.5 amp	84A4-7
L800	— line choke	73A31-23
R155A,B	— 250K, dual trim control	75A195-21
R154A,B	— 5K, dual color control	75A195-20

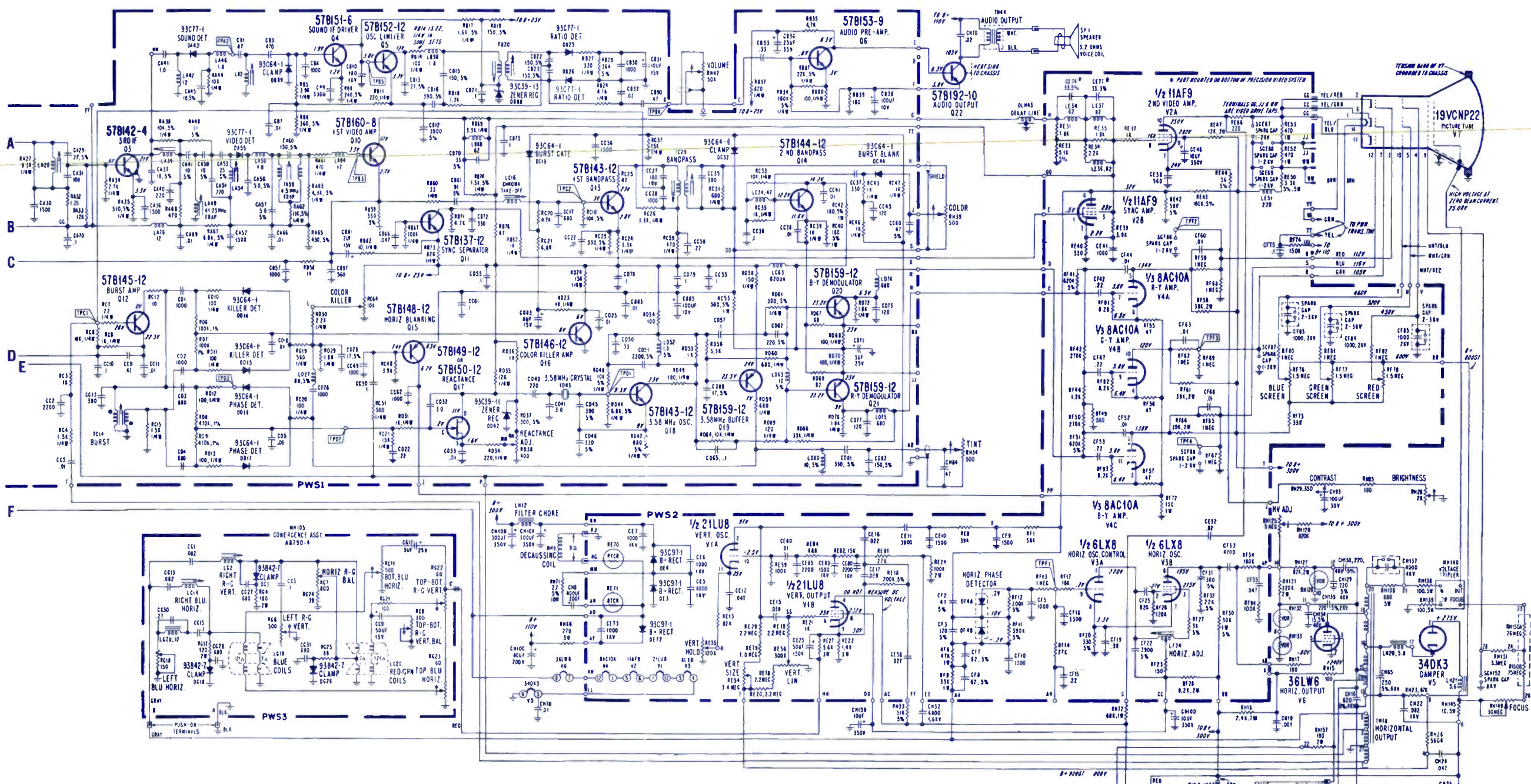
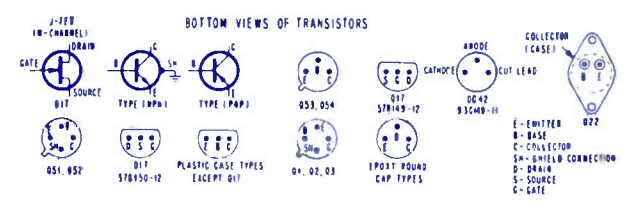
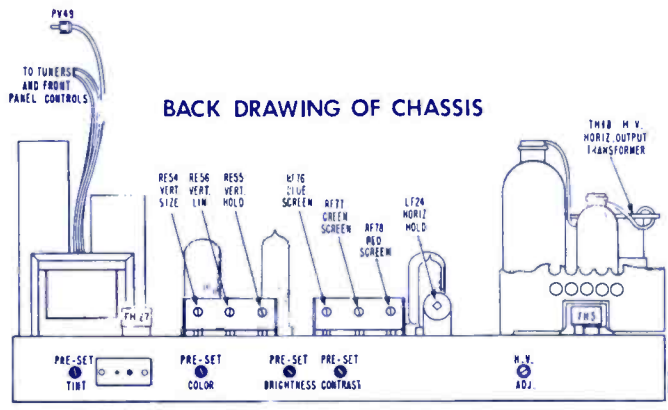
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LET	LINE SIZE	PICTURE LINE TYPE	USED IN CHASSIS
17V	17VAVT002	3M0C	3M0C
18V	18VVEJTC02	4M0C	4M0C
19V	19VVEJTC02	4M0C	4M0C

- RUN CHANGES**
- (1) Start of 4M10 production.
 - (2) Small signal Board changed from A8950-2 to -3. Start of 3M10 production.
 - (3) M700, M800 RGB & OSC Board changed from A8951-3 to -5. M900 Board changed from A8952-2 to -3.
 - (4) M1000 Pin Cushion Board changed from A8954-2 to -5. Connectors changed from A8954-2 to -5. Start of 4M10 production.
 - (5) M700, M800 Board changed from A8951-3 to -5.
 - (6) M600 Ver. Board changed from A8952-2 to -4.
 - (7) R126 and R127 added.



ADMIRAL
 Color TV Chassis 4M10



SAFETY NOTICE

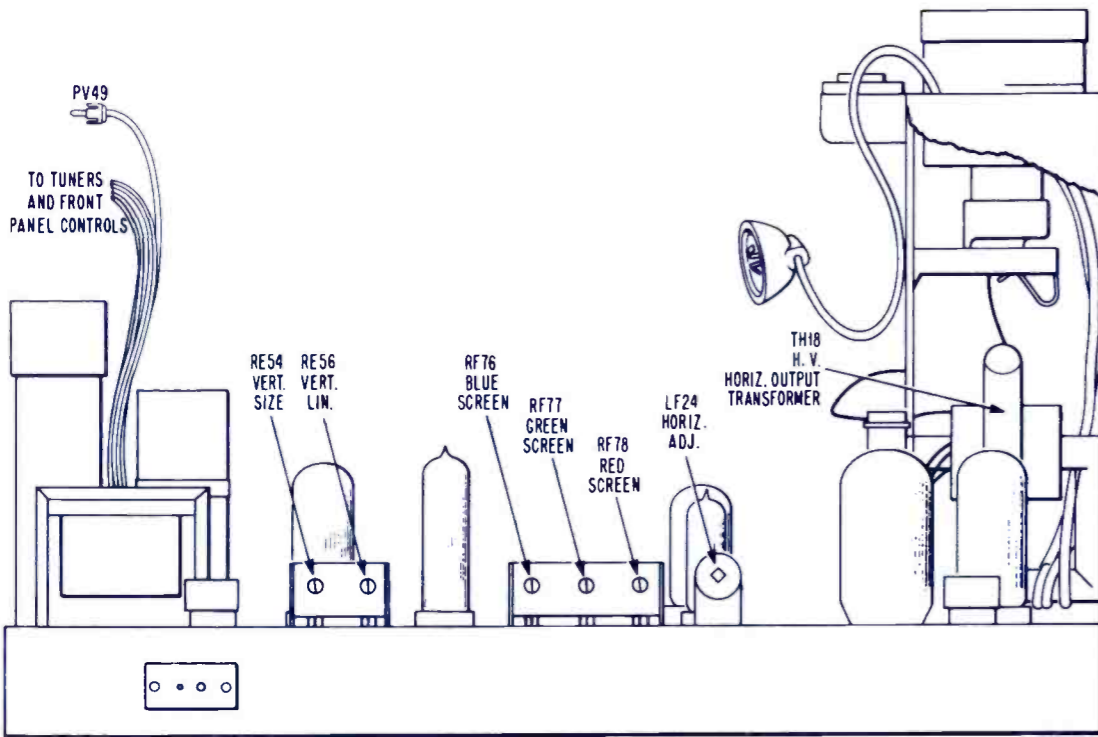
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ADMIRAL
Color TV Chassis
T47K10-1A/-4A

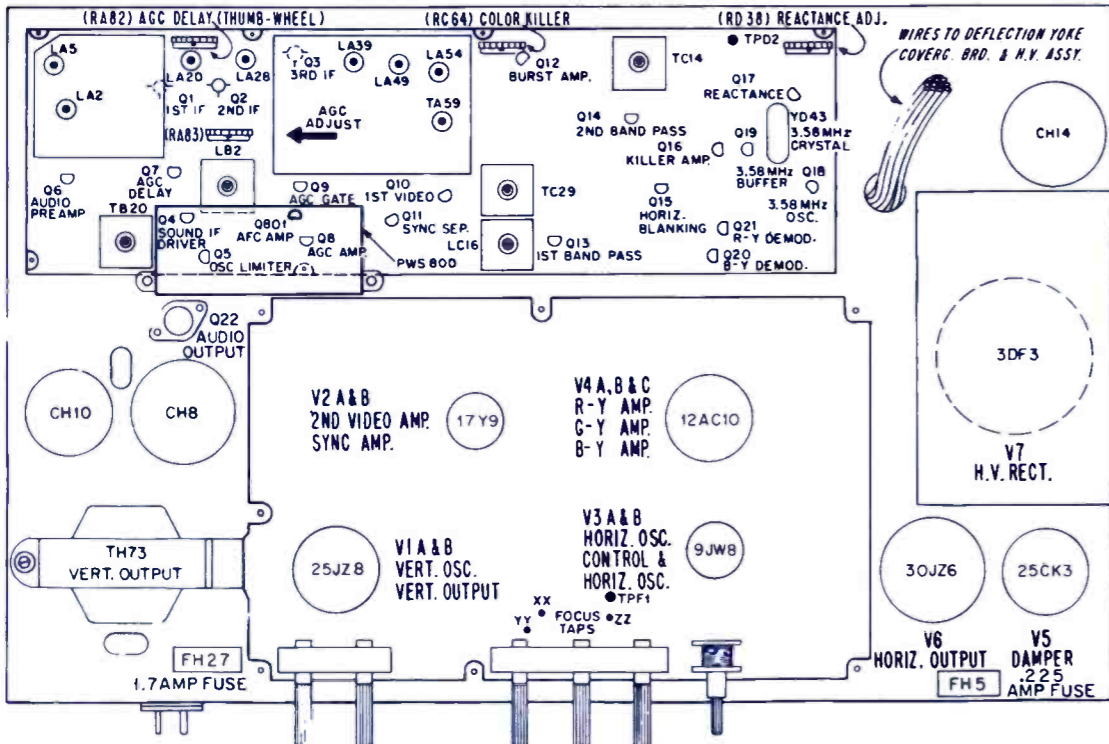
ADMIRAL

Color TV Chassis
T52K10

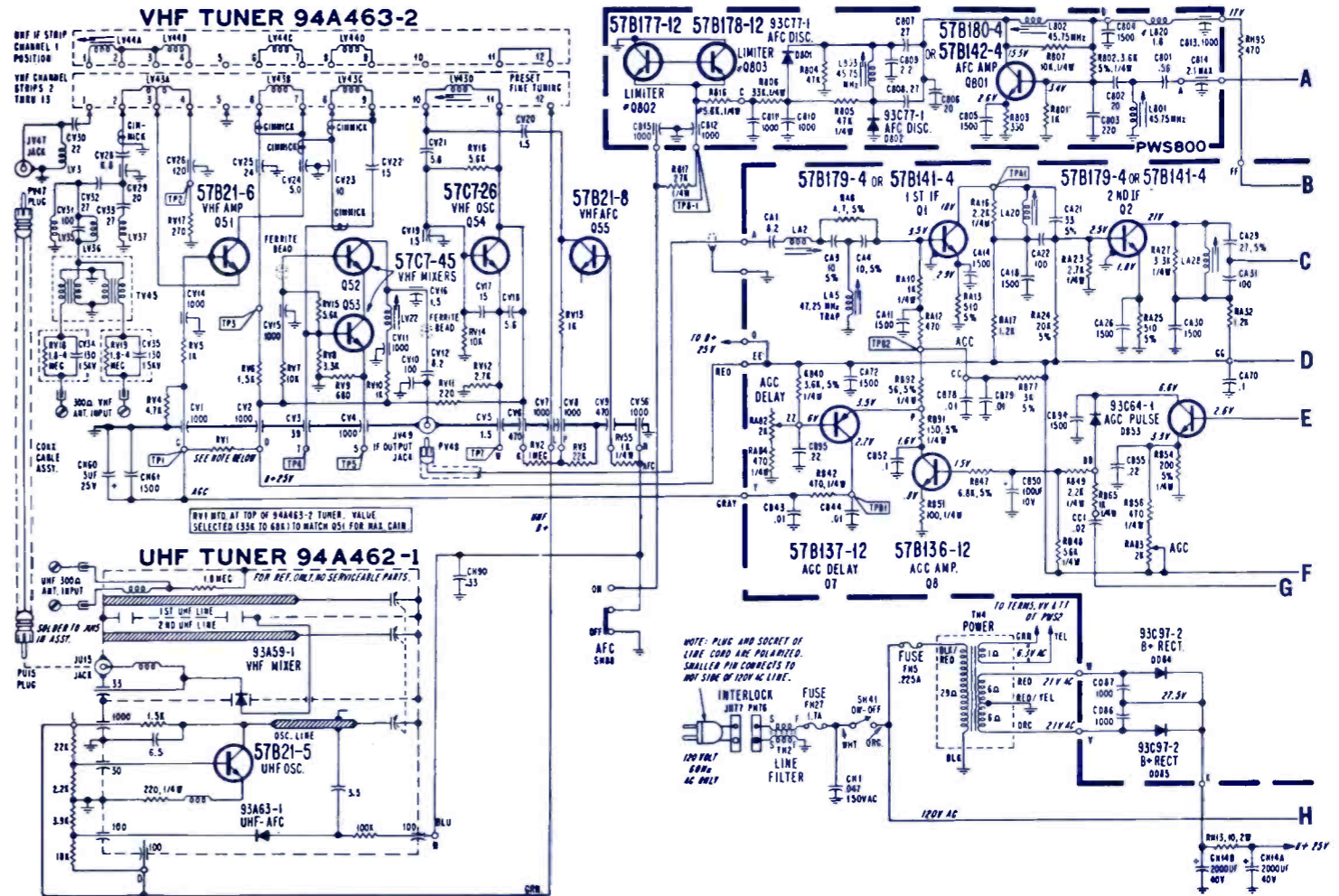
MODEL CHART					
MODEL	FINISH	CRT	VHF	UHF	CHASSIS
6267P	Walnut	16VAUP22 or 16VAXP22	94A463-2 or 94A392-1	94A462-1 or 94A466-1	T52K10-1A



BACK DRAWING OF CHASSIS



TOP DRAWING OF CHASSIS

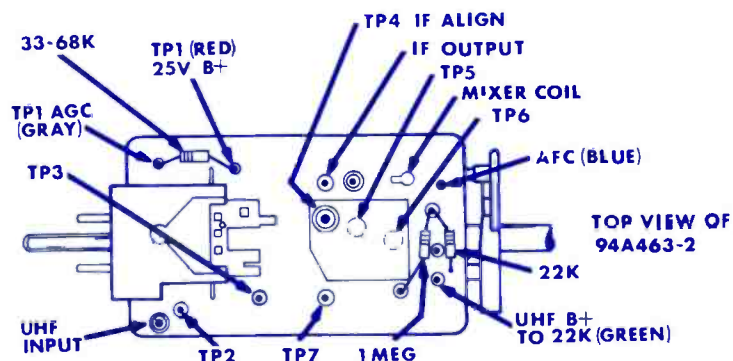
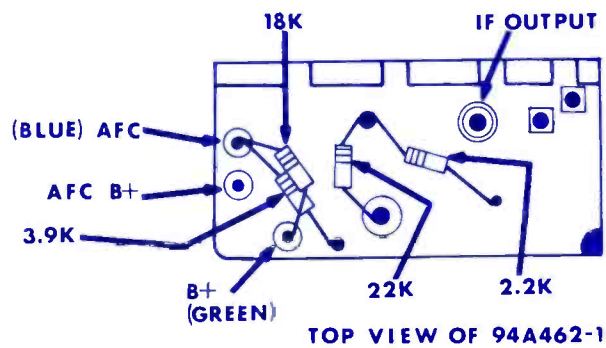


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NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2 WATT; CAPACITANCE VALUES 1 OR HIGHER ARE IN PF; CAPACITANCE VALUES LESS THAN 1 ARE IN UF; INDUCTANCE VALUES ARE IN OHM. * INDICATES CHASSIS GROUND; # INDICATES CIRCLES PER SECOND. DC VOLTAGES ARE MEASURED WITH VTRM PLACED BETWEEN POINTS INDICATED A 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 UN-USED CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.
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.
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE OR DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR IS. TUBE(S) OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC 2ND ANODE LEAD TO CHASSIS GROUND. DISCHARGE 2ND ANODE ONLY TO PICTURE TUBE OR TO GND 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 OHMMETER FOR RESISTANCE MEASUREMENT. USE VTRM OR R400 RANGE OR HIGHER.
① RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS COVER UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.
② SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.
③ HEXAGONS INDICATE WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.
④ COMPONENTS NOT MOUNTED ON PRECISION WAVED SYSTEM.

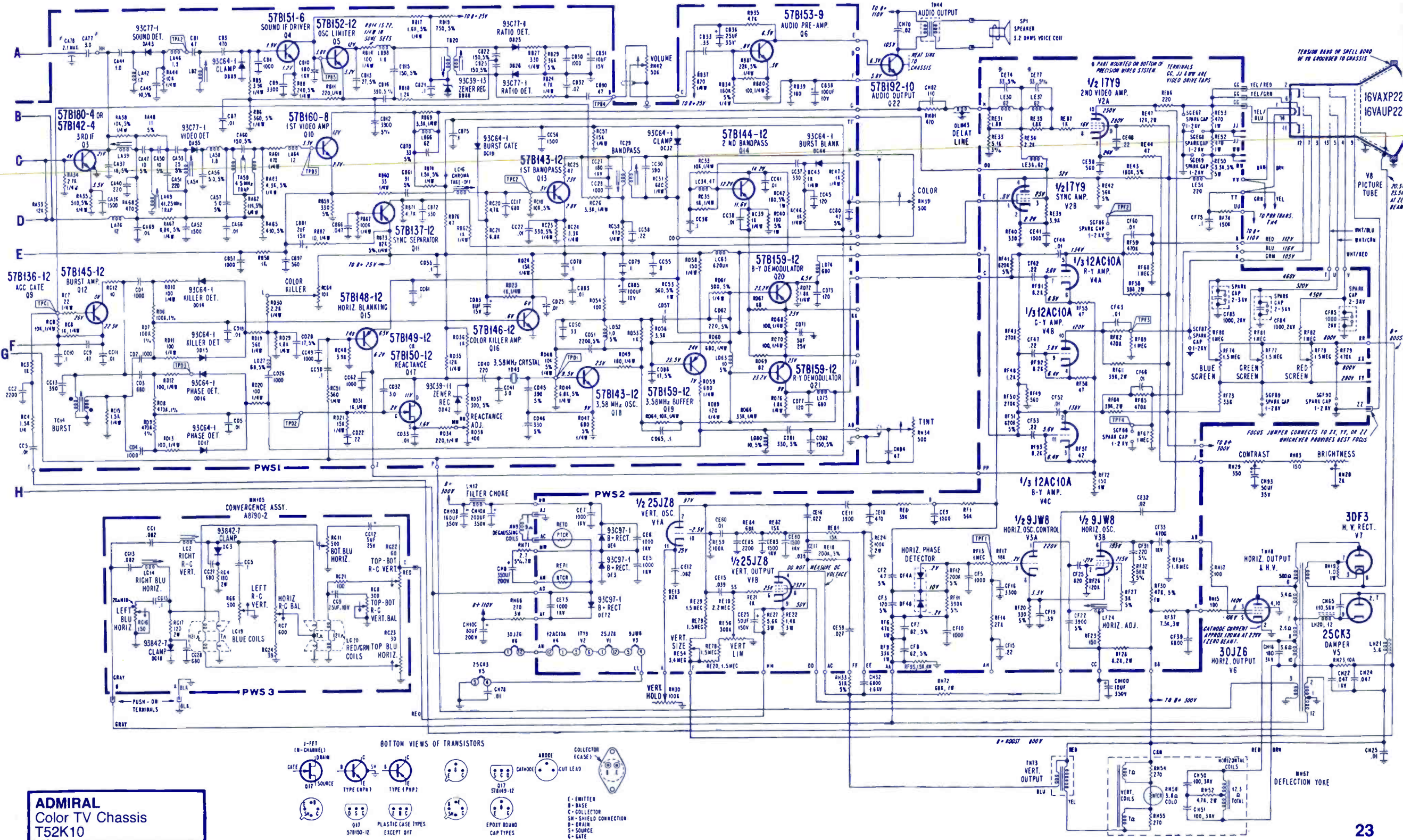
RUN CHANGES

① Start of production

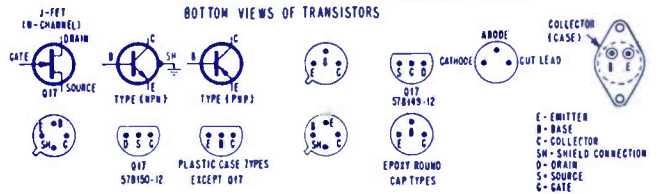


SYMBOL	DESCRIPTION	ADMIRAL PART NO.
CH10A, B,	C, D — 200ml/350v, 160ml/350v, 80ml/200v,	67A15-403
	10ml/350v, electrolytic	67A15-413
CH14A, B	— 2000ml/40v, 2000ml/40v electro	75A101-31
RA83	— 2K, AGC	75A101-18
RC64	— 10K, color kill	75A101-31
RE54	— 3.4M, vert size	75A107-4
RE56	— 300K, vert lin	75A107-4
RH28	— 2K, brite	75A140-25
RH29	— 350 ohm, contrast	75A140-26
RH30	— 100K, vert hold	75A140-27
RH34	— 500 ohm, tint	75A206-6
RH39	— 500 ohm, color	75A206-6
RH42,		
SH41	— 50K, vol w/on-off switch	75A206-5
LC16	— coil, chroma take-off	72A329-1
LF24	— coll, horiz adj	94A351-1
TA59	— xformer, 4.5MHz trap	72A216-7

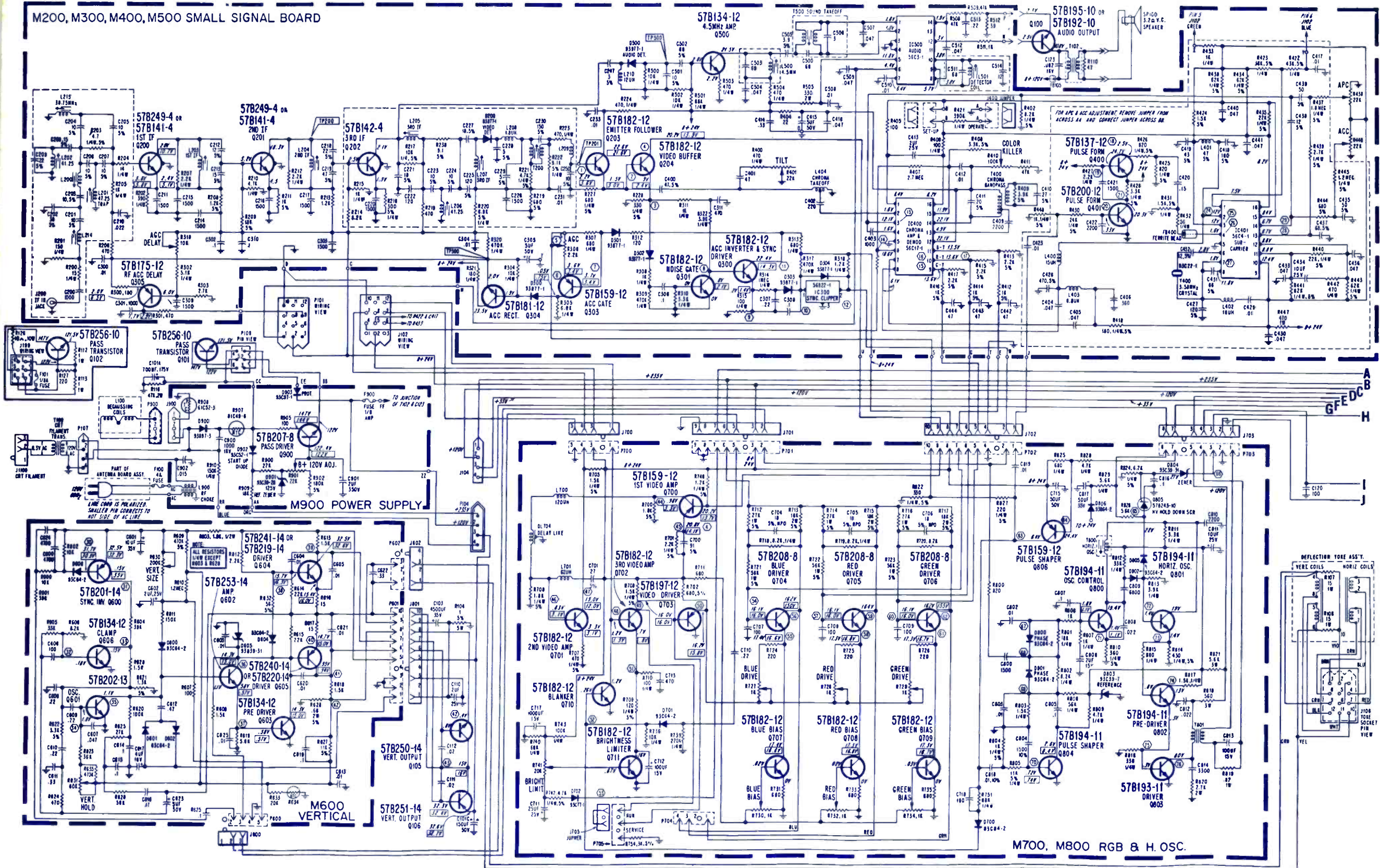
TB20	— xformer, ratio detect	72A318-1
TC14	— xformer, burst	72A325-3
TC29	— xformer, bandpae	72A327-1
TH2	— xformer, line choke	73A31-16
TH4	— xformer, power	80A108-14
TH8	— xformer, horiz output	79A158-3
TH44	— xformer, audio output	79A141-4
TH73	— xformer, vert output	79A165-1
FH5	— fuse, 225a chemical	84A28-12
FH27	— fuse, 1.7a chemical	84A28-6
	VHF tuner	94A463-2

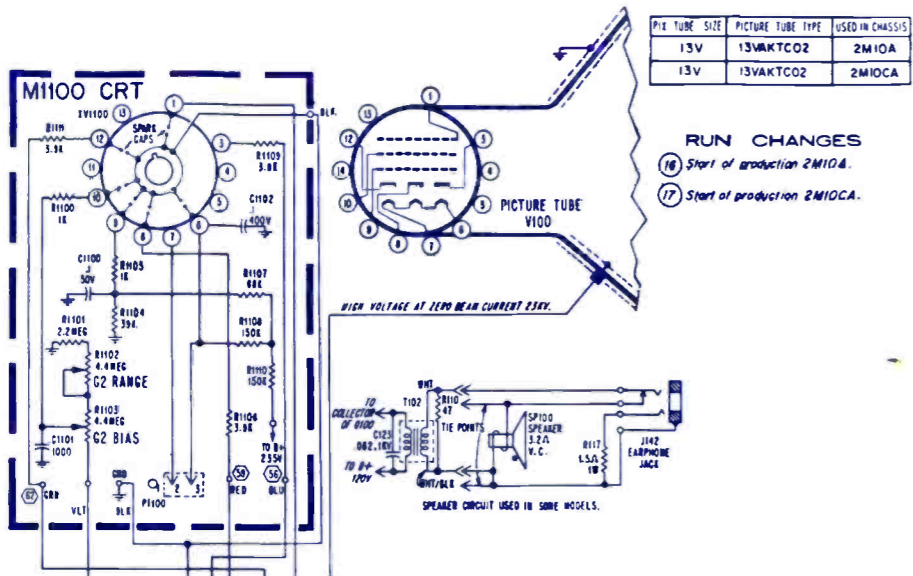


ADMIRAL
Color TV Chassis
T52K10



M200, M300, M400, M500 SMALL SIGNAL BOARD

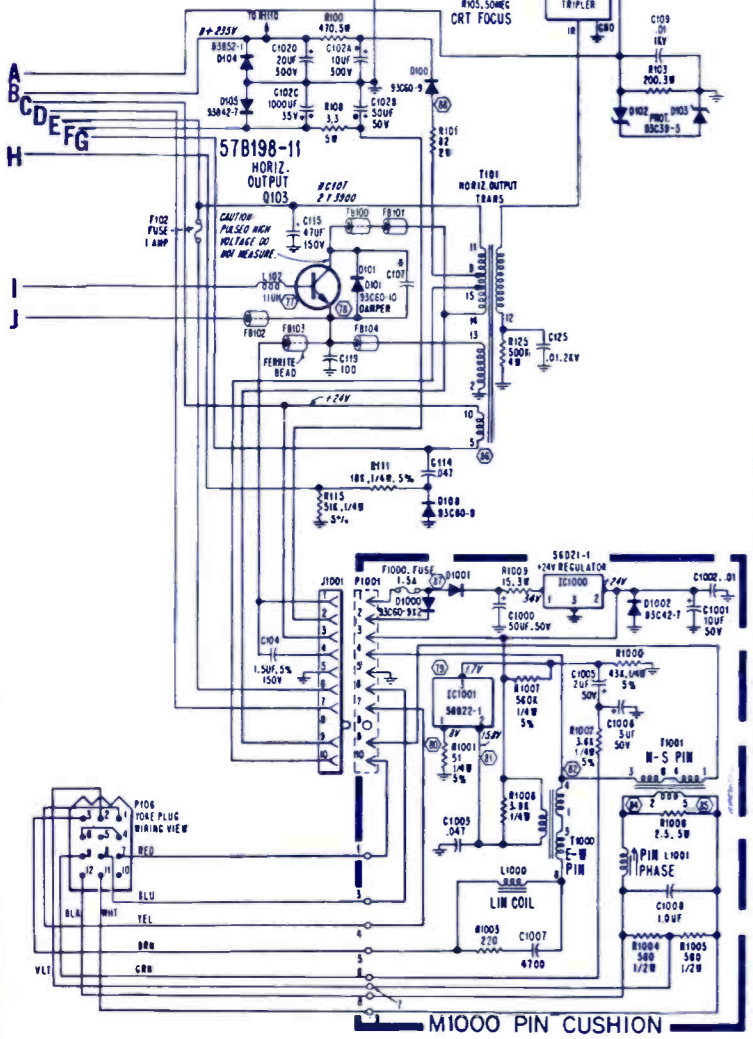




SYMBOL	DESCRIPTION	ADMIRAL PART NO.
R630	—200K, vert size	75A101-28
R631	—60K, vert hold	75A191-2
R741	—20K, brite, limit	75A101-47
Q805	—SCR, HV hold down	57A243-10
R907	—thermistor, NTC	61A49-6
R908	—thermistor, PTC	61A52-3
R901	—10K, B+ 120v. adj	75A109-2
F900	—fuse, 1/8a	84A4-1

M100	—voltage tripler	93A99-3
C101A,B	—700mf/175v, 500mf/125v	
C	—150mf/50v, electro	67A15-428
R105	—50M, focus	75A200-1
T100	—xformer, CRT filament	80A119-3
T101	—xformer, horiz output	79A189-1
T102	—xformer, audio output	79A141-5
F100	—fuse, 4.0a pigtail	84A7-25
F101	—fuse, 1/8a pigtail	84A7-22
F102	—fuse, 1.0a pigtail	84A7-5

MODEL	FINISH	CRT	TUNER CLUSTER	VHF	UHF	CHASSIS
13C628	Walnut	13VAKTC02	NC2820-1	94A496-2 or 94A497-2 or 94A506-2	94A516-1 or 94A517-1	2M10CA



CAUTION: TO AVOID DAMAGE TO T1000, DISCONNECT SOCKET J1001 WHEN ADJUSTING EXTERNAL TV DURING ALIGNMENT OR SERVICE WITH SET TURNED OFF.

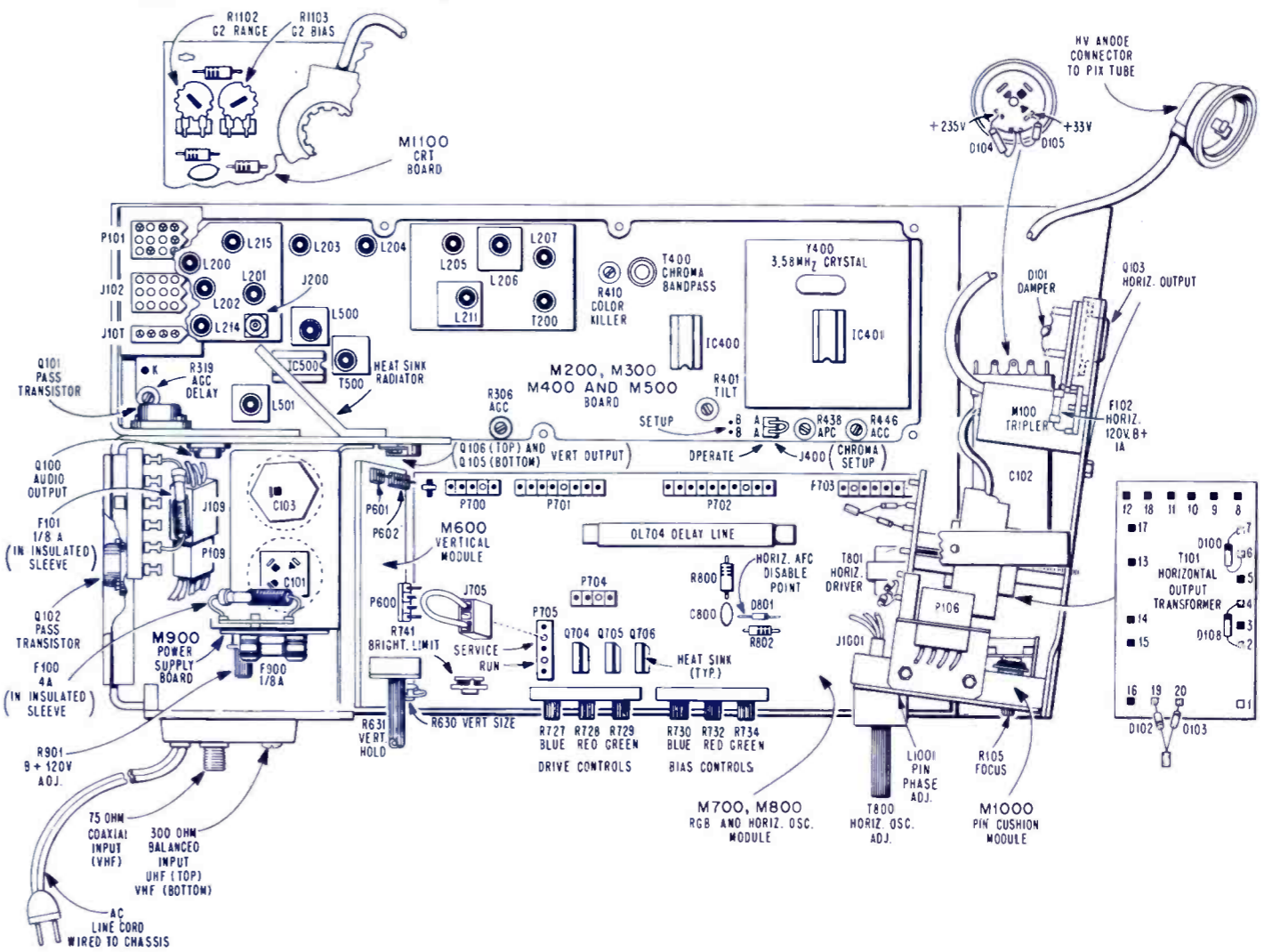
NOTES:
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 — INDICATES CHASSIS GROUND. — IN INDICATES CYCLES PER SECOND.
 DC VOLTAGES ARE MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED BY CHASSIS GROUND. LINE VOLTAGE SET AT 120V AC.
 ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED.
 VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL WITH TUNER SET TO UNUSED CHANNEL. VOLTAGES SHOWN IN BOX ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

TRANSISTOR CAUTION:
 TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE HAS DISCONNECTED FROM CHASSIS GROUND.
 DO NOT TURN SET ON WITH TRANSISTORS. TUBE S1 OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC PIV AND ANODE LEAD TO CHASSIS GROUND.
 DISCHARGE PIV AND ANODE SHUT TO PICTURE TUBE S4C OR S4C 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 OVERSIZED DIAPHRAGM FOR RESISTANCE MEASUREMENT. USE VTVM OR OHM-RANGE OHM METER.

(16) RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.
 (17) SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.
 (18) RECTANGLES IDENTIFY WAVEFORM OBSERVATION LOCATIONS.
 CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

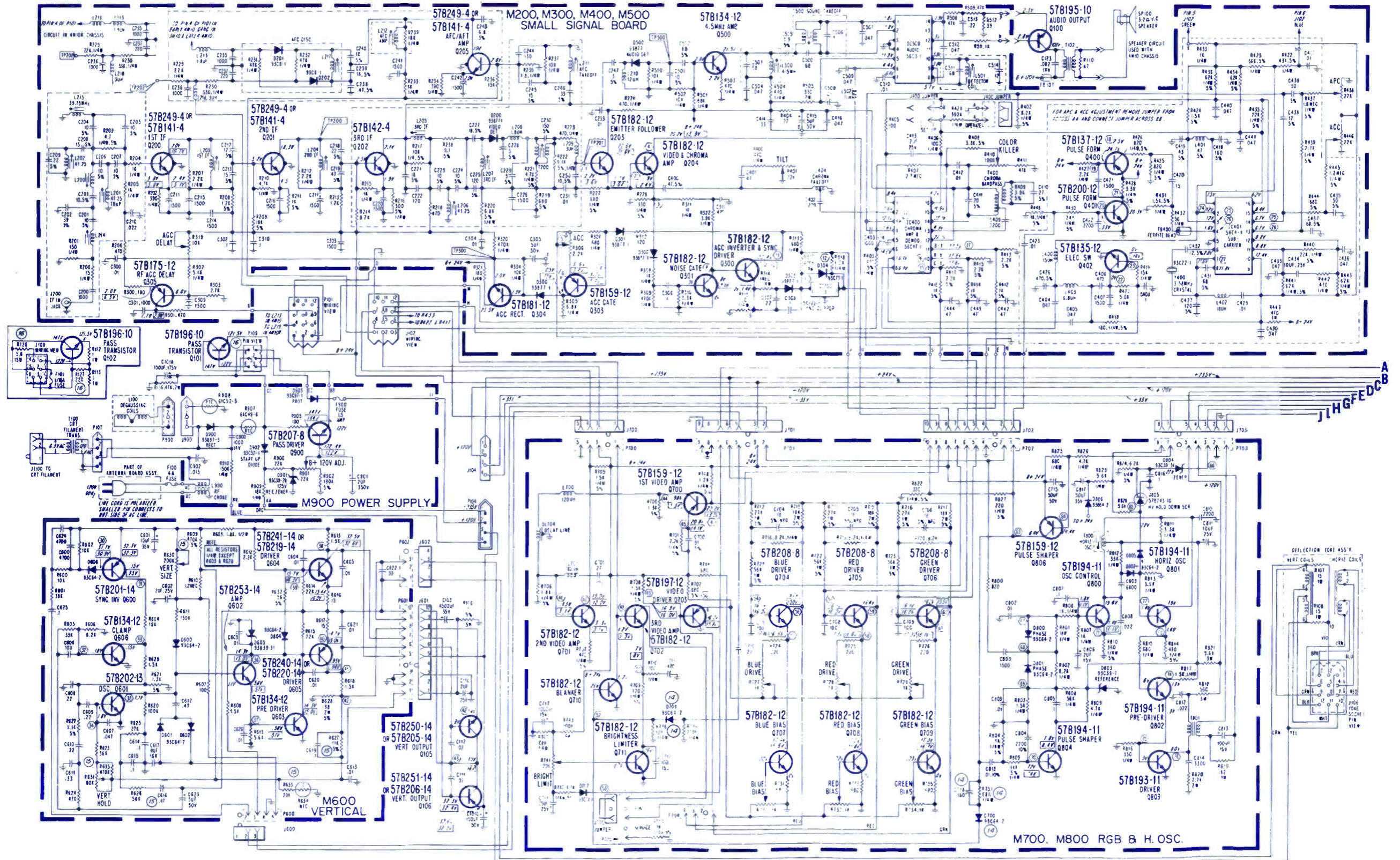
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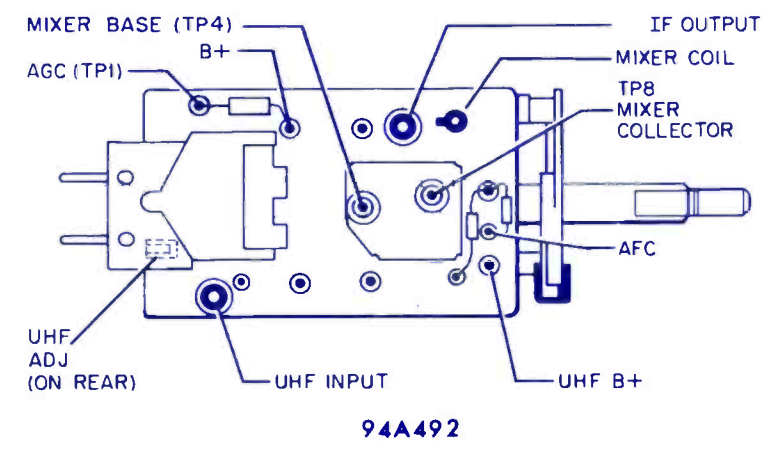
ADMIRAL
 Color TV
 Chassis 2M10CA

ADMIRAL
Color TV
Chassis M10C

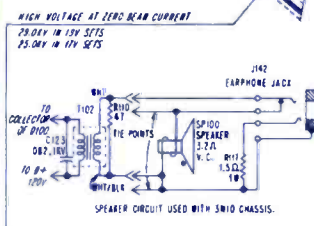
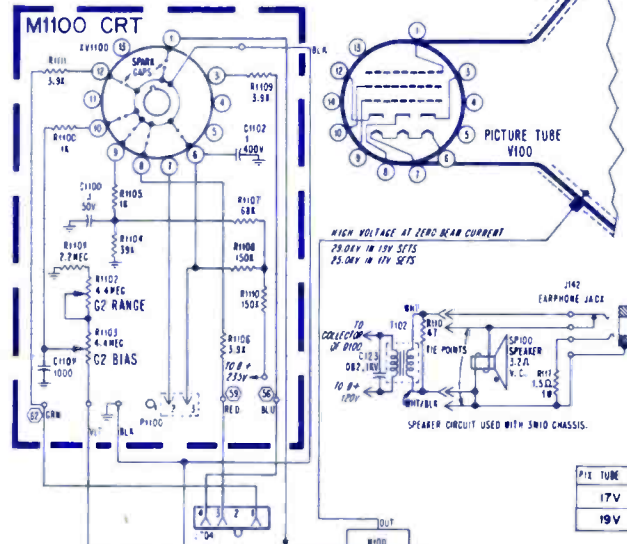
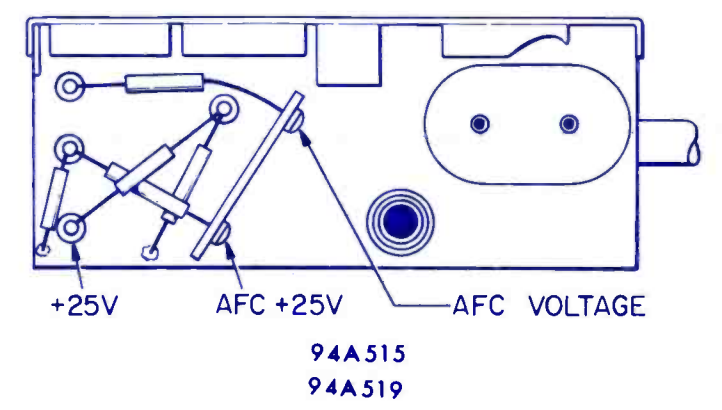
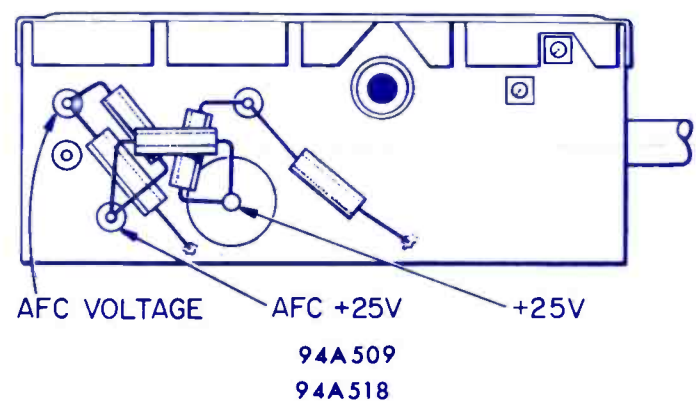


17C638	Walnut	17VAYTC02	NC2821-2	94A492-2	94A518-2 or 94A519-2	3M10C
19C657	White	19VEJTC02	NC2822-1	94A492-4	94A509-3 or 94A515-3	4M10C
19C658C	Walnut	19VEJTC02	NC2810-1	94A492-4	94A509-2 or 94A515-2	4M10C

TUNER TOP VIEWS



SYMBOL	DESCRIPTION	ADMIRAL PART NO.
F100	—fuse, 4.0a pigtail	84A7-25
F101	—fuse, 1/16a pigtail	84A7-20
	high voltage, tripler	93A96-3
R634	—thermistor, NTC	61A41-9
R630	—200K, vert size	75A101-28
R631	—60K, vert hold	75A191-2
R727, 728, 729	—1K, blue, red green drive	75A201-1
R730, 732, 734	—1K, blue, red, green bias	75A201-1
R741	—20K, brite, limit	75A101-47
L704	—delay line	72A418-1
T801	—driver xformer, horiz	79A167-2
R907	—thermistor, NTC	61A49-6
R908	—thermistor, PTC	61A52-3
R901	—22K, B+ 120v, adj	75A199-3
84A4-7	—fuse, 1.5a	84A4-7



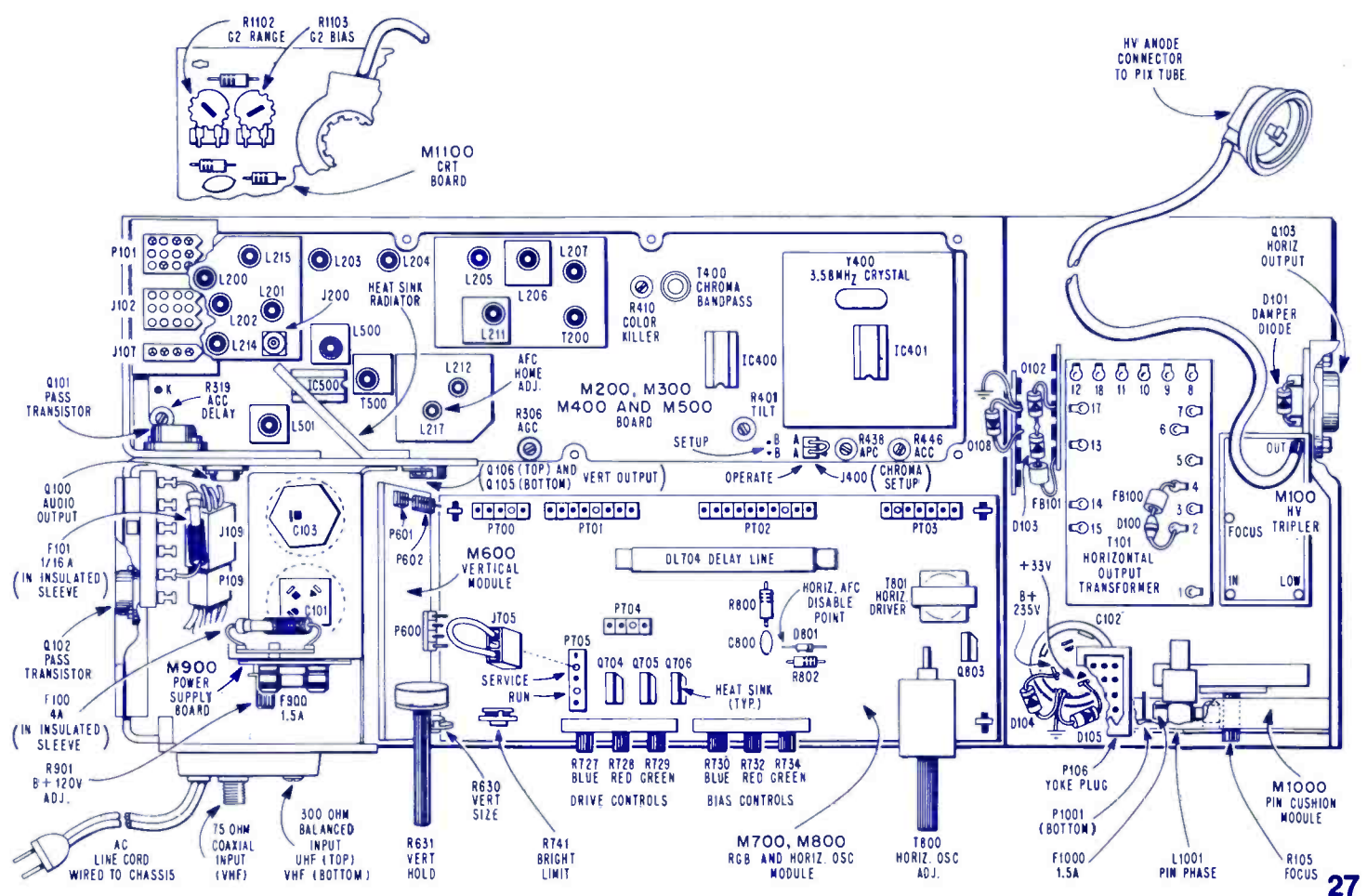
PIX TUBE SIZE	PICTURE TUBE TYPE	USED IN CHASSIS
17V	17VAYTC02	3M10
19V	19VEJTC02	4M10

- ### RUN CHANGES
- Start of 4M10 production.
 - Small signal Board changed from A8950-2 to -3. Start of 3M10 production.
 - M700, M800 RGB & H OSC Board changed from A8951-3 to -5. M900 Power Supply Board changed from A8953-2 to -3.
 - M1000 Pin Cushion Board changed from A8954-2 to -3. Connectors J1000 & P1000 were omitted. Start of 4M10 production.
 - M700, M800 Board changed from A8951-5 to -6.
 - M600 Vert. Board changed from A8952-2 to -4.
 - R126 and R127 added.
 - Start of 3M10C and 4M10C production.

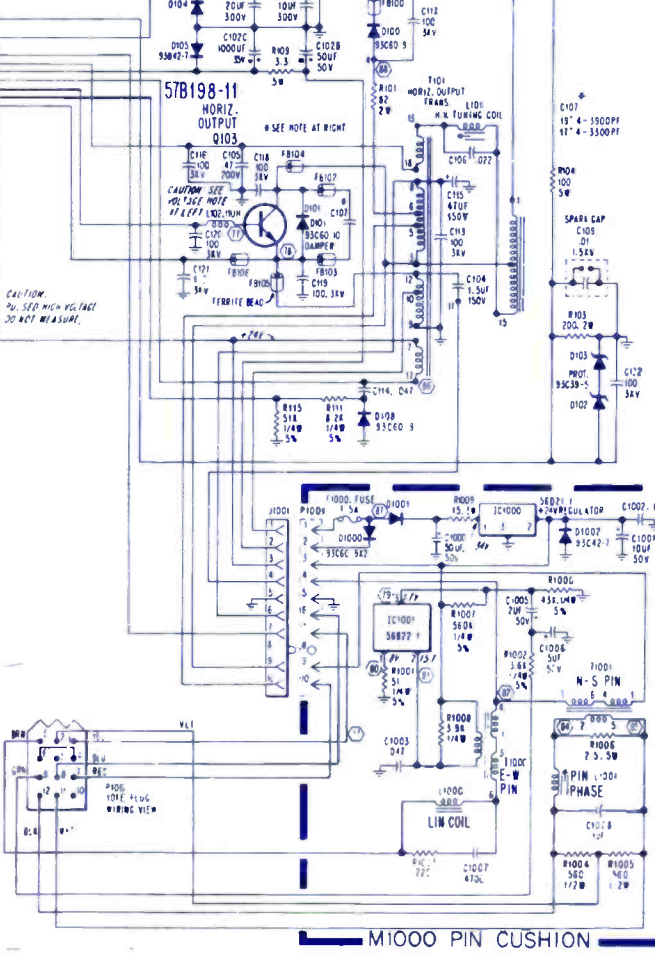
CAUTION: TO AVOID DAMAGE TO T800, DISCONNECT SOCKET J1001 WHEN APPLYING EXTERNAL 24V DURING ALIGNMENT OR SERVICING WITH SET TURNED OFF.

NOTES: UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, 10K, 100K, 1M, 10M, 100M, 1G. CAPACITANCE VALUES 1 OR HIGHER ARE IN PFC. CAPACITANCE VALUES LESS THAN 1 ARE IN UF. INDUCTANCE VALUES ARE IN MH. INDICATES CHASSIS GROUND. IN INDICATES CYCLES PER SECOND. DC VOLTAGES ARE MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 120VAC & ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH TUNER SET TO UNTESTED CHANNEL. VOLTAGES SHOWN IN BOX ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL. TRANSDUCER CAUTION: TO AVOID DAMAGE TO TRANSDUCERS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE BAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TUNE SET ON WITH TRANSDUCERS, FUSERS OR LEADS REMOVED OR UNSOLDERED. DO NOT USE ANY SHARPLY CHARACTERIZED DISCHARGE PNO ANODE ONLY TO PICTURE TUBE BAG OR BAG GROUND. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO CHASSIS GROUND. DO NOT APPLY EXCESSIVE HEAT TO TRANSDUCER LEADS. DO NOT USE AN SHARPLY CHARACTERIZED FOR RESISTANCE MEASUREMENT. USE KEYS ON BRIGHT RANGE OR HIGHER. RUN NUMBER INDICATES CHANNELS INCORPORATED AS GIVEN UNDER THAT RUN NUMBER AS WELL AS ALL LOWER RUN CHANGES. SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS. HEADINGS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

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A
B
C
D
E
F
G
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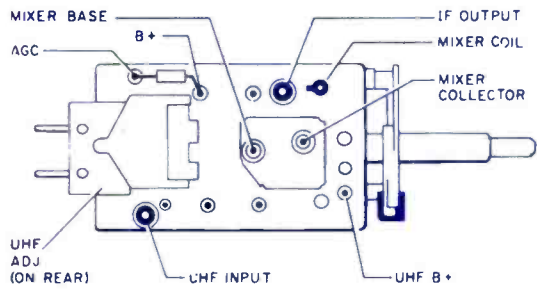


ADMIRAL
Color TV
Chassis M10C

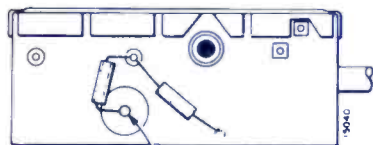
ADMIRAL Color TV Chassis 2M10CA

SYMBOL	DESCRIPTION	ADMIRAL PART NO.
M100	voltage trip	93A99-3
C101A, B		
C	700mfd/175v, 500 mfd/125v	67A14-428
	150mfd/50v, electro	
C102A-D	10mfd/300v, 50mfd/50v, 1000mfd/85v	67A15-422
	20mfd/300v, electro	
R105	50M, focus	75A200-1
T100	xformer, CRT fila	80A119-3
T101	xformer, horiz output	79A189-1
T102	xformer, audio output	79A141-5
F100	fuse, 4.0a pigtail	84A7-25
F101	fuse, 1/8a pigtail	84A7-22
F102	fuse, 1.0a pigtail	84A7-5
R153	250K, tint control	75A118-78
R154	5K, color control	75A118-77
R155	5K, brite control	75A118-76
R156	5K, contrast control	75A118-77
R161	50K, on/off vol control	75A189-20
R630	200K, vert size	94A496-2
R631	60K, vert hold	75A191-2
R741	20K, brite, limit	75A101-47
R901	22K, B+ 120v, adj	75A199-3

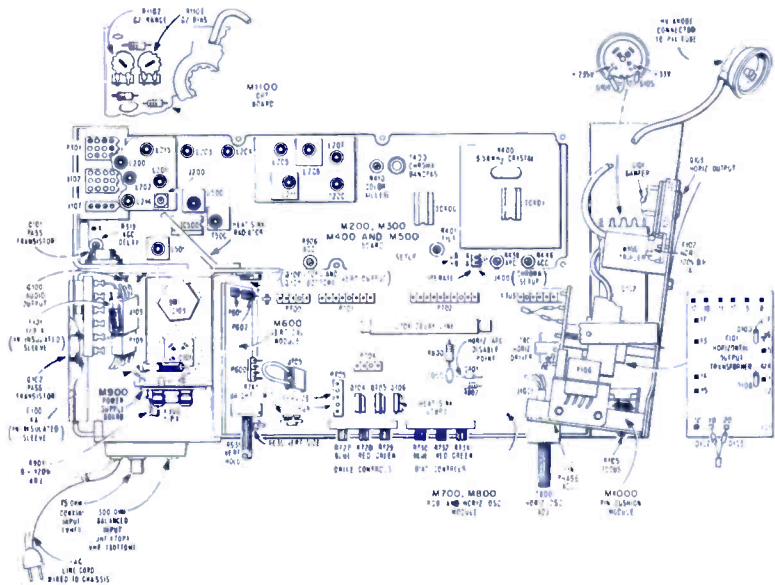
TUNER TOP VIEWS



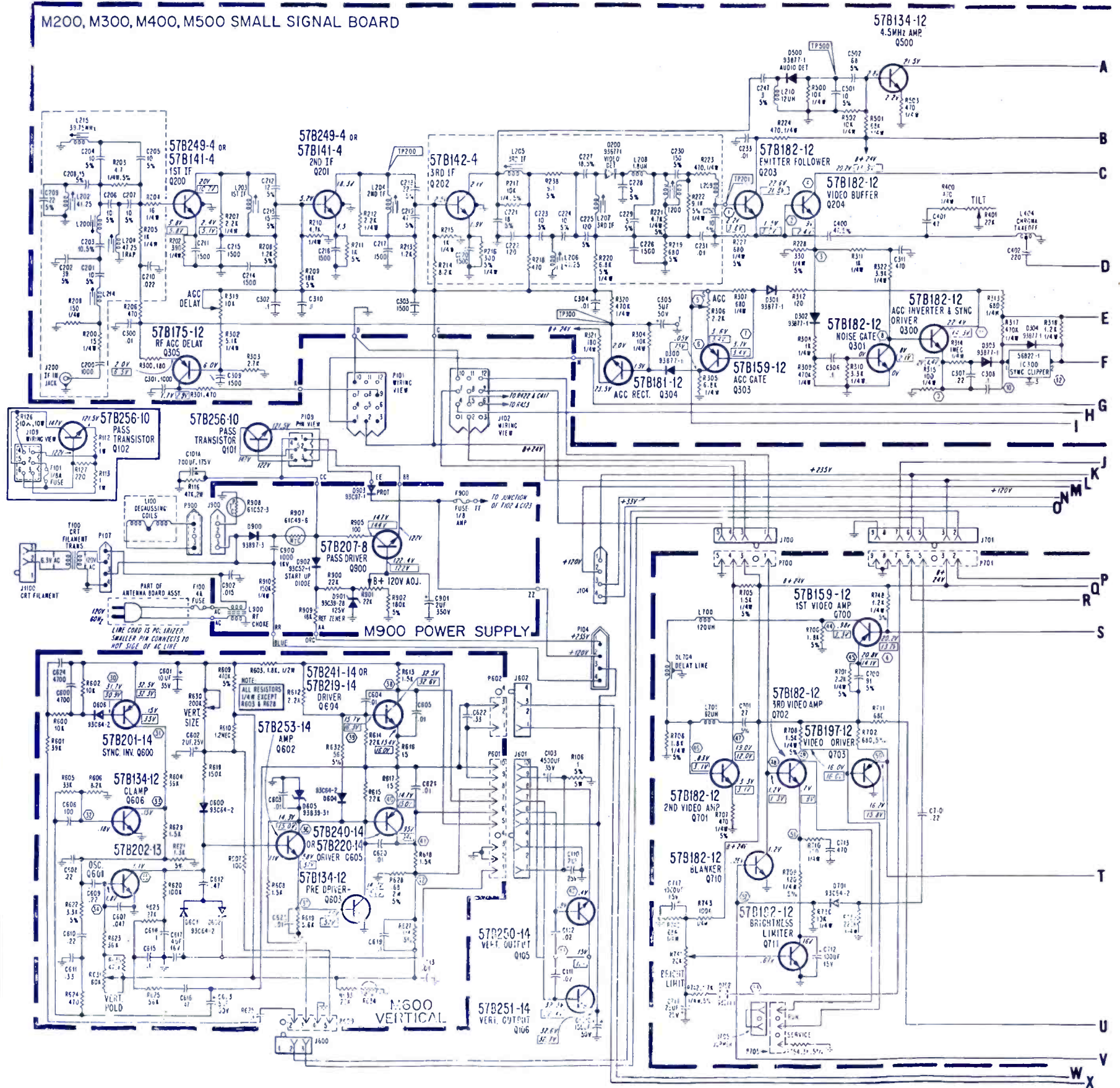
94A496



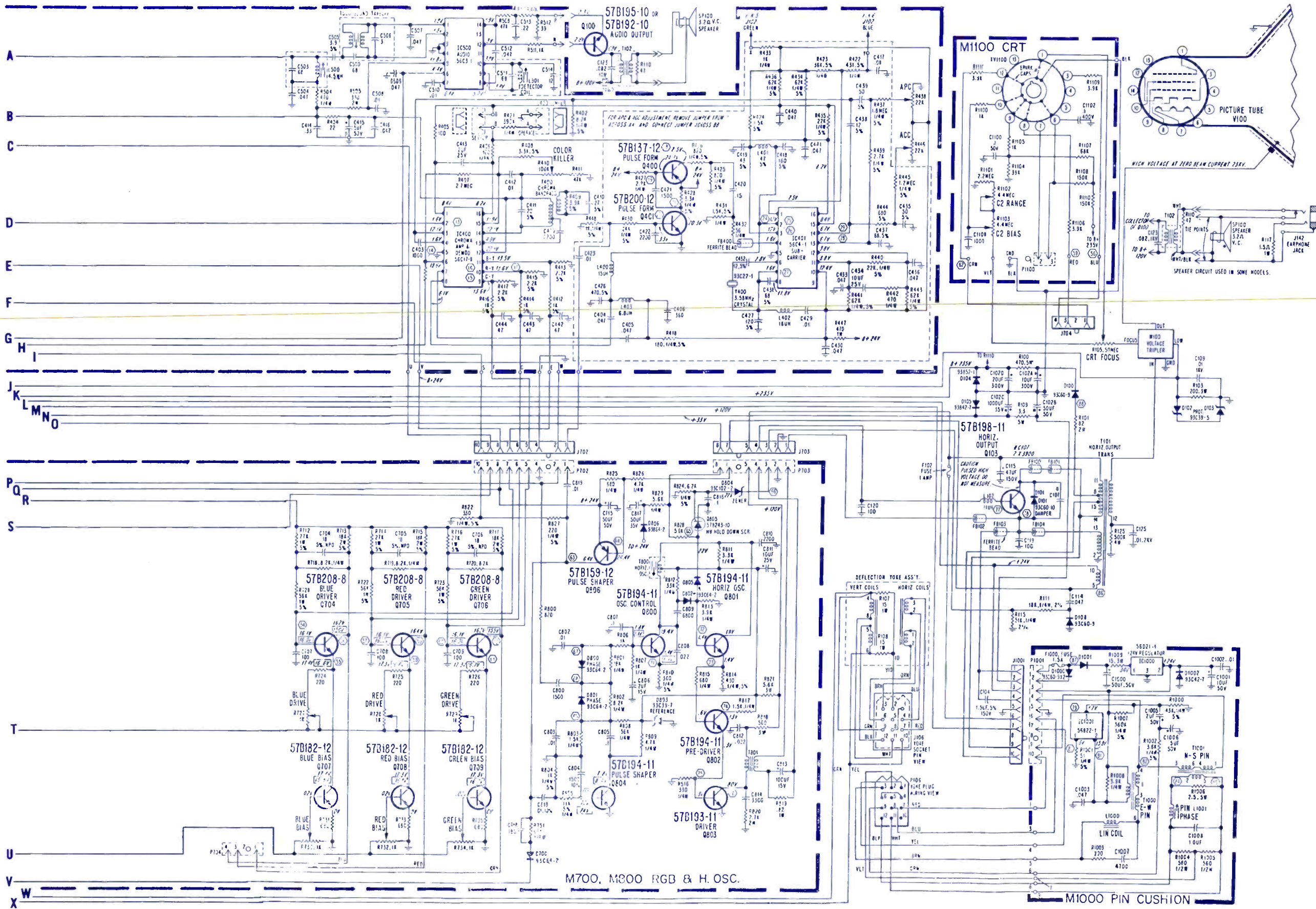
94A516



M200, M300, M400, M500 SMALL SIGNAL BOARD

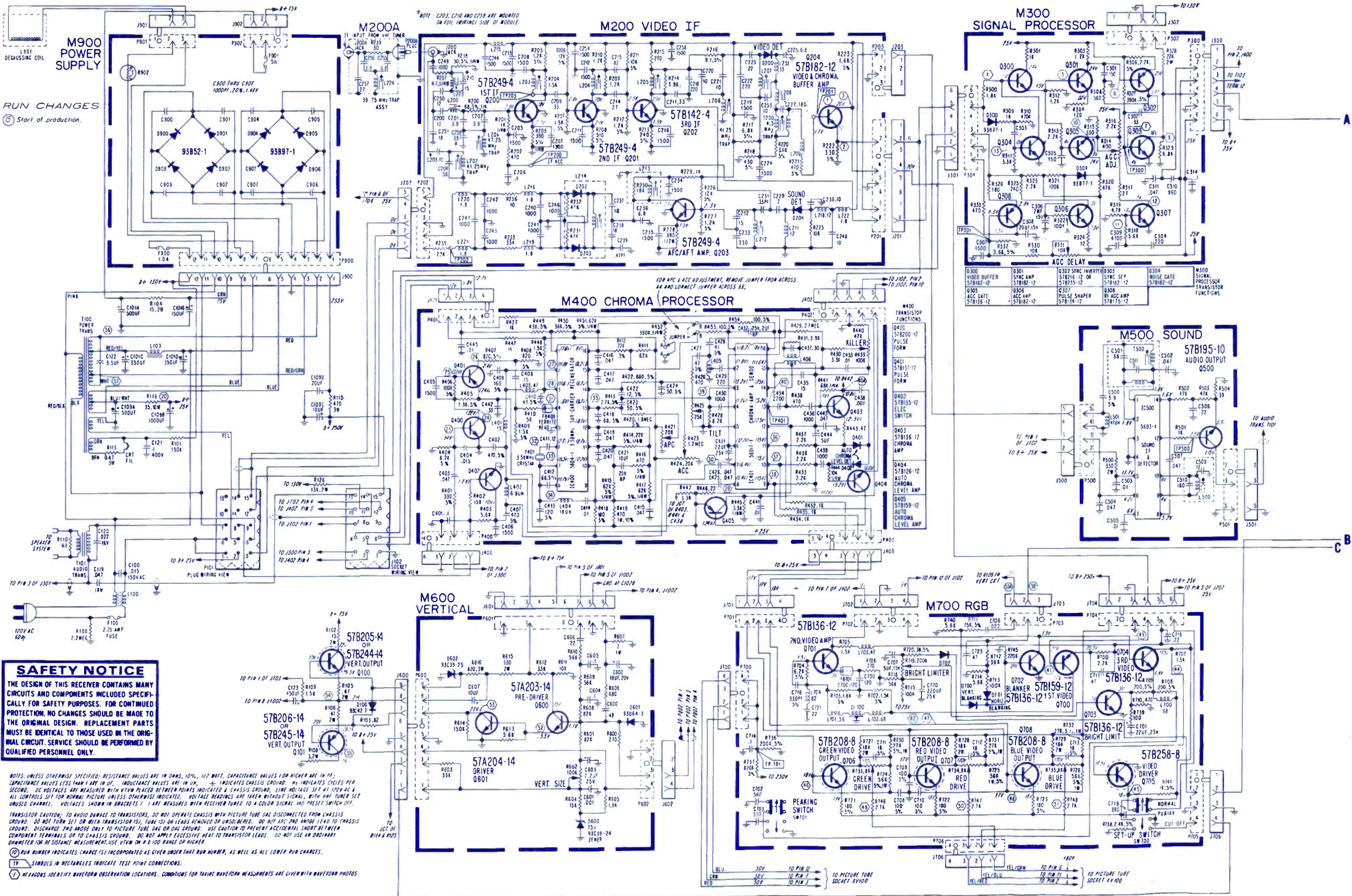


M600 VERTICAL



ADMIRAL
Color TV Chassis
2M10CA

ADMIRAL Color TV Chassis 1M30B



SAFETY NOTICE

THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.

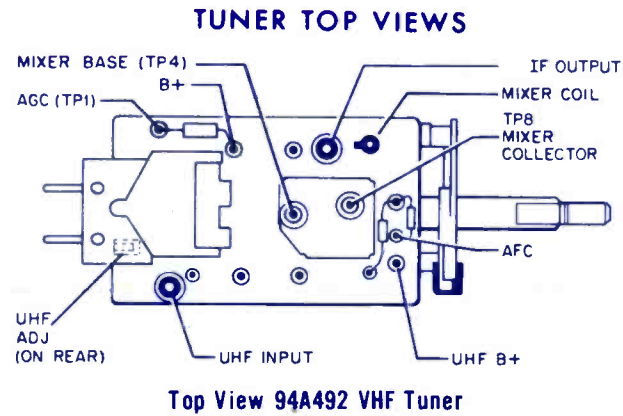
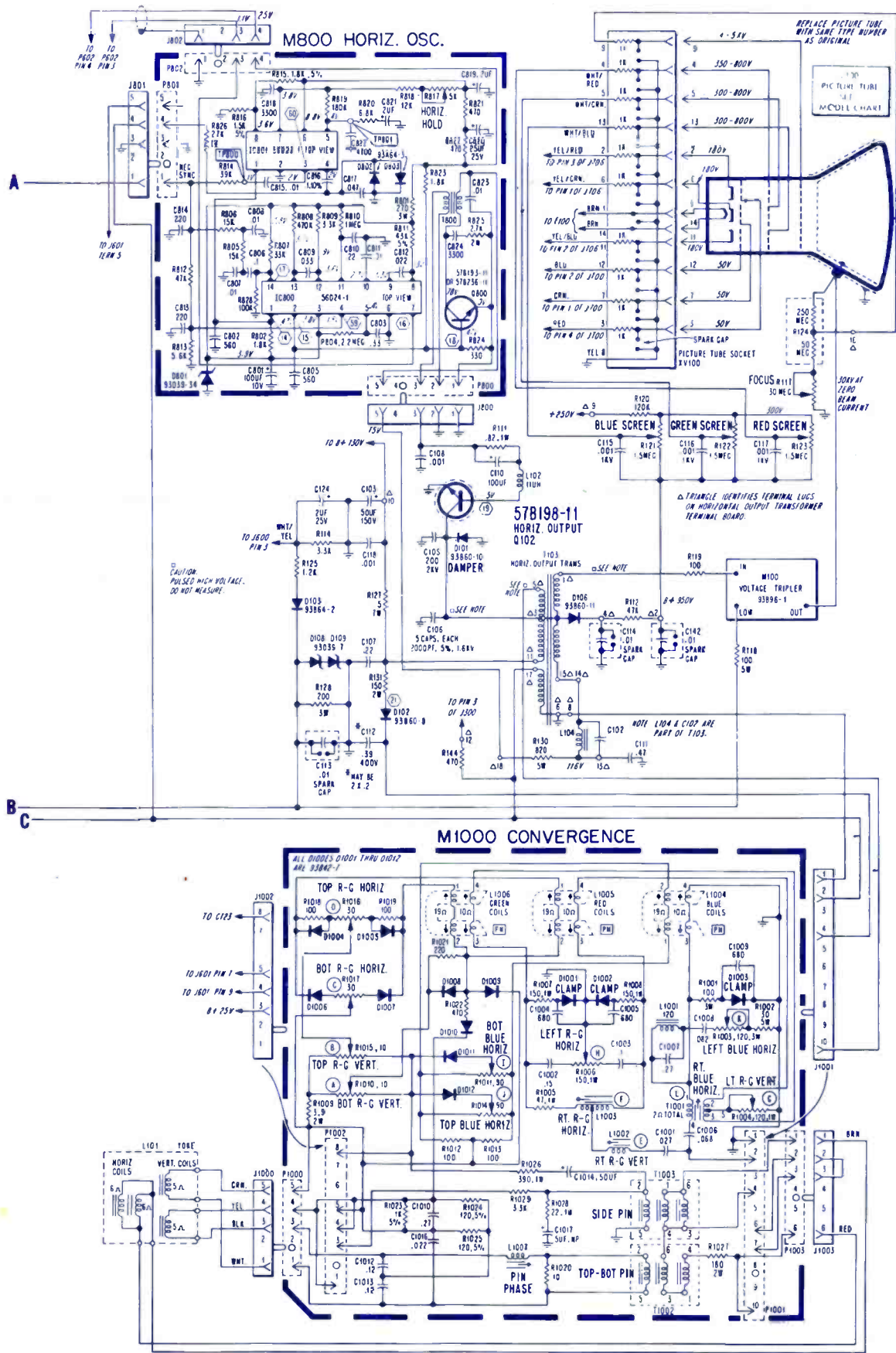
NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2 WATT, CAPACITANCE VALUES 100 HIGHER ARE IN PF. CAPACITANCE VALUES LESS THAN 1 ARE IN UF. INDUCTANCE VALUES ARE IN MH. INDICATES CHASSIS GROUND. M_n INDICATES CYCLES PER SECOND. DC VOLTAGES ARE MEASURED WITH METER PLACED BETWEEN 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 VHT TUNER SET UNUSUAL CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL AND PRESET SWITCH OFF.

TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE (AC DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET OR WITH TRANSISTOR (S), TUNE (S) OR LEADS REMOVED OR UNSUBSCRIBED. DO NOT ARC AND AND/OR LEAD TO CHASSIS GROUND. DISCHARGE AND AND/OR ONLY TO PICTURE TUBE (AC OR GND) 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 OHMMETER FOR RESISTANCE MEASUREMENT. USE VTM ON A 1000 OHM RANGE OF HIGHER.

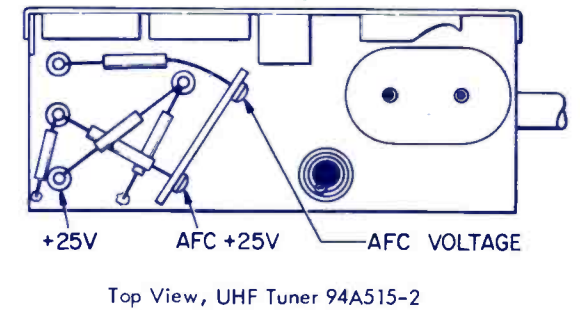
⑩ RUN NUMBER INDICATES CHANGE (S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.

⑪ SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

⑫ HEADINGS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.



SYMBOL	DESCRIPTION	ADMIRAL PART NO.
T500	xformer, 4.5MHz	.72A318-6
1C500	integ circuit, sound IF and detect	.56A3-1
R314	400 ohm, AGC adj	.75A101-53
R331	10K, AGC delay	.75A101-25
R719	200K, brite limiter	.75A101-28
R733, 734		
735	3 section, 8K, red, blue & green drive	.75A95-14
R817	5K, horiz hold	.75A101-64
1C800	integ circuit, countdown	.56A24-1
1C801	integ circuit, horiz osc & APC	.56A23-1

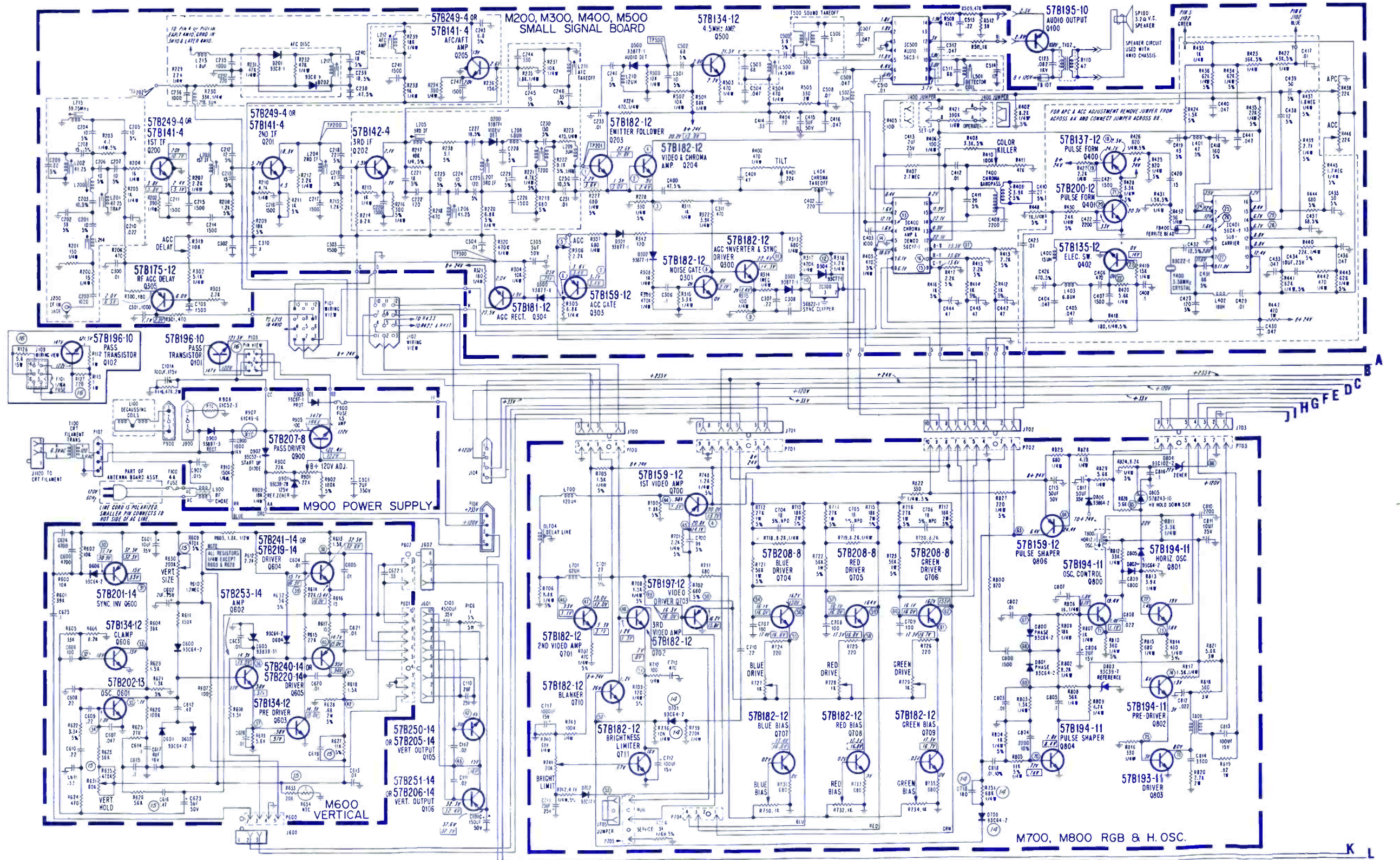


MODEL CHART

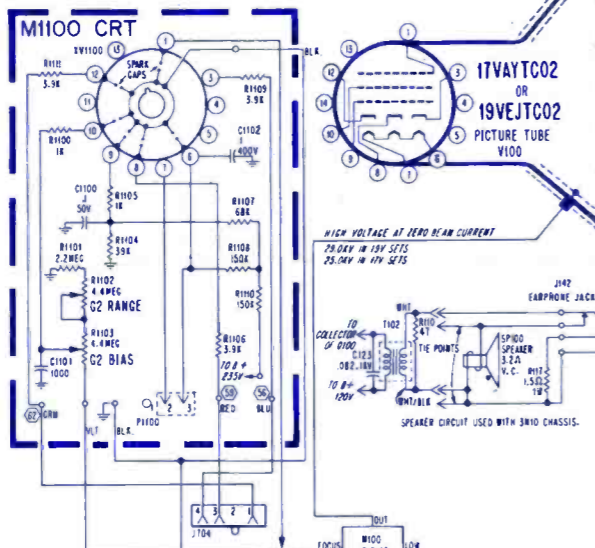
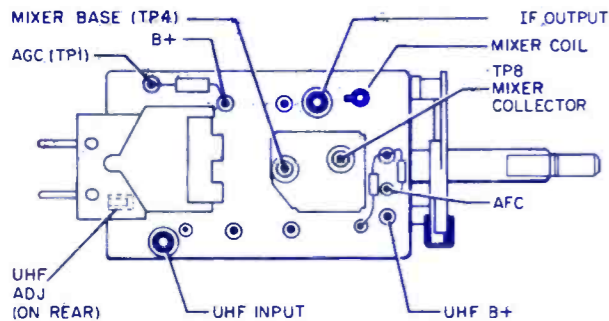
MODEL	FINISH	CRT	TUNER CLUSTER	VHF	UHF	CHASSIS	CURRENT
SK25C671	Walnut	25VCZP22 or 25VCNP22	NC2810-5	94A492-4	94A509-2 or 94A515-2	1M30B	1.8 Amp @ 120V
SK25C673	Oak	25VCZP22 or 25VCNP22	NC2810-5	94A492-4	94A509-2 or 94A515-2	1M30B	1.8 Amp @ 120V
SK25C676	Pine	25VCZP22 or 25VCNP22	NC2810-5	94A492-4	94A509-2 or 94A515-2	1M30B	1.8 Amp @ 120V
23C668	Pecan	23VCEP22	NC2824-1	94A492-4	94A509-2 or 94A515-2	1M30B	1.8 Amp @ 120V

ADMIRAL
Color TV Chassis
1M30B

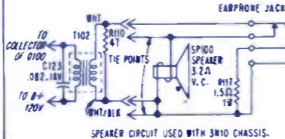
ADMIRAL
Color TV Chassis
4M10C/H



TUNER TOP VIEWS



HIGH VOLTAGE AT ZERO BEAM CURRENT
78.0KV IN 17V SETS
75.0KV IN 17V SETS



RUN CHANGES

- 10 Start of 4M10C production.
- 11 Small signal Board changed from AB950-2 to -3. Start of 3M10 production.
- 12 M700, M800 RGB & H.OSC Board changed from AB951-3 to -5. M900 Power Supply Board changed from AB953-2 to -3.
- 13 M1000 Pin Cushion Board changed from AB954-2 to -3. Connectors J1000 & P1000 were omitted. Start of 4M10C production.
- 14 M700, M800 Board changed from AB951-5 to -6.
- 15 M600 Vert. Board changed from AB952-2 to -4.
- 16 R126 and R127 added.
- 17 Start of 3M10C and 4M10C production.
- 18 M1000 Pin Cushion Board changed from AB954-3 to -6.

SYMBOL DESCRIPTION ADMIRAL PART NO.

C102A, B, -10µf/300v, 50µf/50v, 1000µf/85v	.....	67A15-422
C, D -20µf/300v electrolytic	.....	75A200-1
R105 -50M, focus	.....	80A119-3
T100 -xformer CRT fila	.....	79A187-1
T101 -xformer, horiz output	.....	79A141-5
T102 -xformer, audio output	.....	93A96-3
M100 -high voltage, tripler	.....	60A105-102
R150 -1K, 5%, 1/2w	.....	60A106-105
R151 -1M, 10%, 1/2w	.....	75A195-21
R153A, B -250K, dual tint control	.....	75A195-20
R154A, B -5K, dual color control	.....	75A195-17
R155A, B -10K, dual brite control	.....	75A195-20
R156A, B -5K, dual contrast control	.....	75A101-47
R741 -20K, brite limit	.....	94A351-3
T800 -coil osc adj	.....	75A199-3
R901 -22K, B+ 120v, adj	.....	75A101-28
R630 -200K, vert size	.....	75A191-2
R631 -60K, vert hold	.....

CAUTION: TO AVOID DAMAGE TO T800, DISCONNECT SOCKET J1001 WHEN APPLYING EXTERNAL PWD DURING ALIGNMENT OR SERVICING WITH SET TUNED UP!

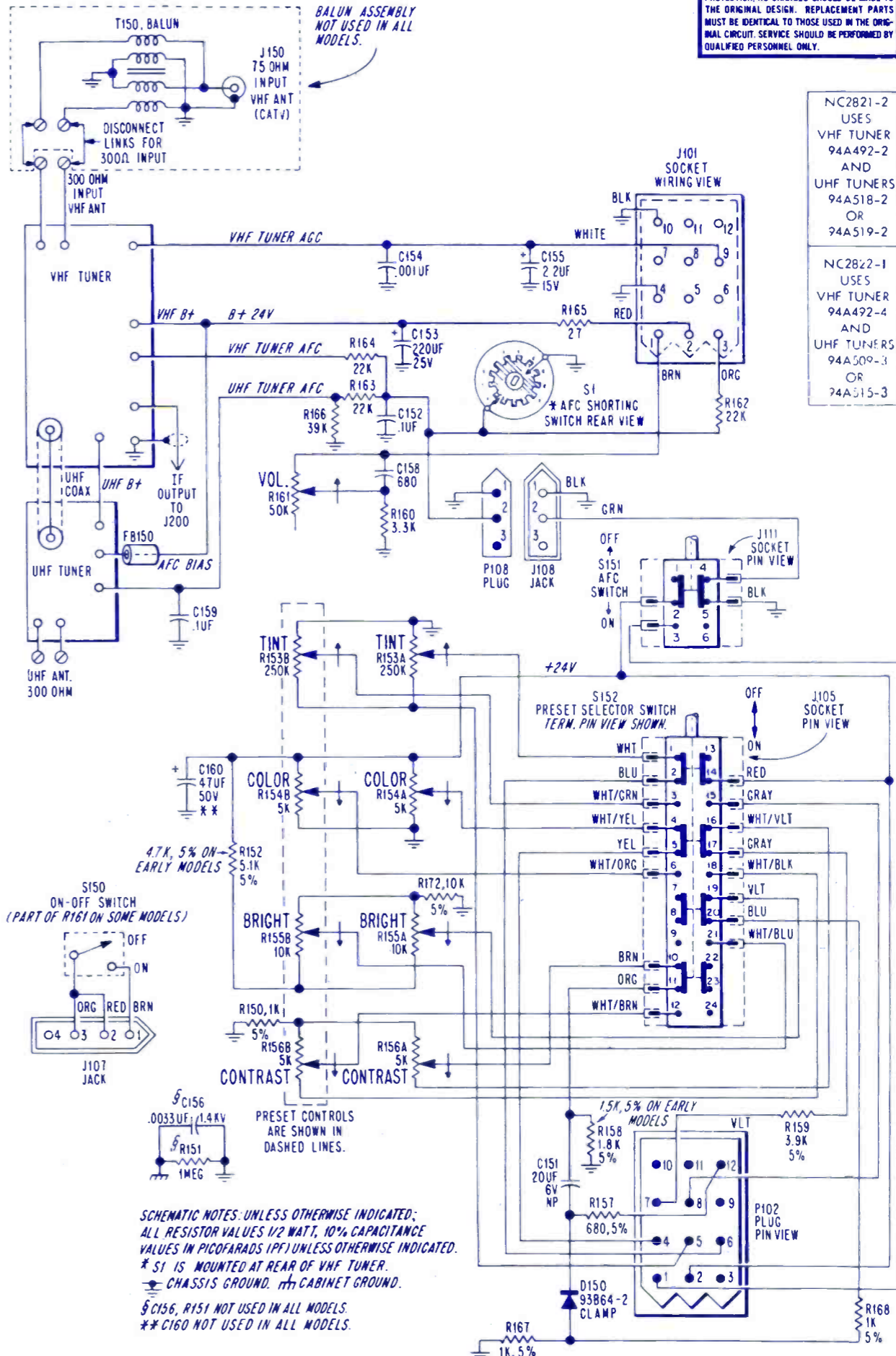
NOTES:
UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2 WATT. CAPACITANCE VALUES 1 OR HIGHER ARE IN P.F. CAPACITANCE VALUES LESS THAN 1 ARE IN U.F. INDUCTANCE VALUES ARE IN OHMS.
⊕ INDICATES CHASSIS GROUND. ⊕ INDICATES CYCLES PER SECOND.
V: VOLTAGES ARE MEASURED WITH VTVM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND. LINE VOLTAGE SET AT 100VAC & ALL CONTROLS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED.
VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH TUNER SET TO UNUSUAL CHANNEL. VOLTAGES SHOWN IN BOX ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.
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 TRANSISTORS, TUBES OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC PWD 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 OHMMETER FOR RESISTANCE MEASUREMENT. USE VTVM OR R100 RANGE OR HIGHER.
⑩ RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.
⊕ STRAIGHTS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.
⊕ HEADINGS IDENTIFY WAVEFORM OBSERVATION LOCATIONS.
CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

ADMIRAL Color TV Chassis 4M10C/H

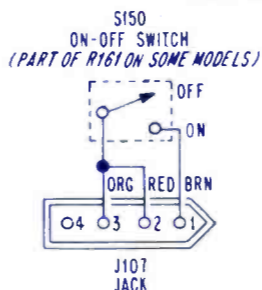
SAFETY NOTICE

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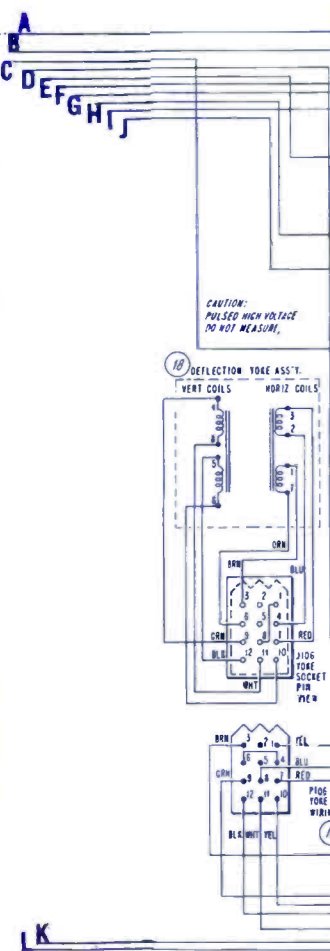
- NC2821-2 USES VHF TUNER 94A492-2 AND UHF TUNERS 94A518-2 OR 94A519-2
- NC2822-1 USES VHF TUNER 94A492-4 AND UHF TUNERS 94A509-3 OR 94A515-3



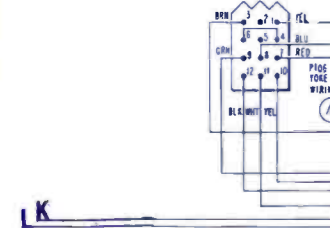
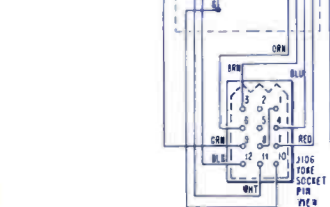
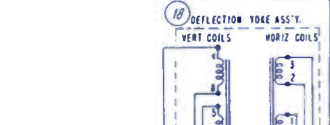
BALUN ASSEMBLY NOT USED IN ALL MODELS.



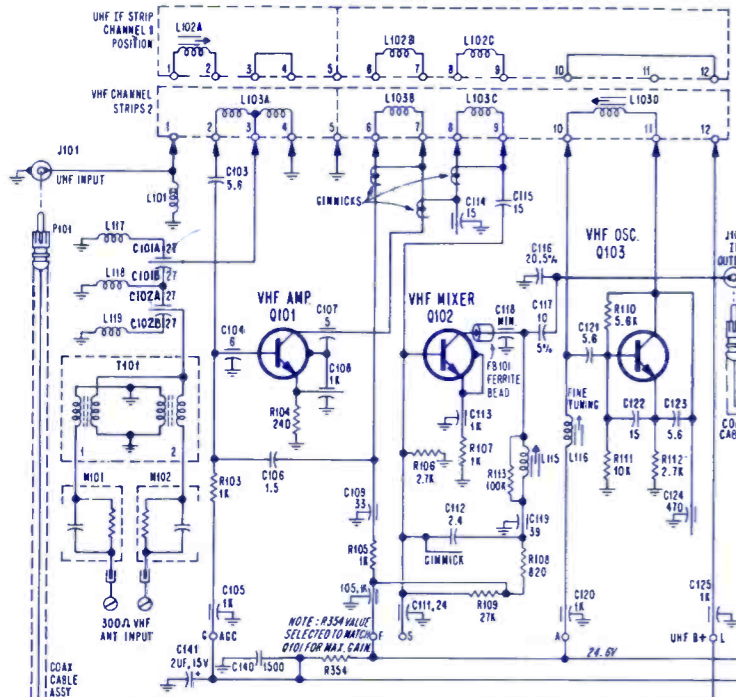
SCHEMATIC NOTES: UNLESS OTHERWISE INDICATED, ALL RESISTOR VALUES 1/2 WATT, 10% CAPACITANCE VALUES IN PICO FARADS (PF) UNLESS OTHERWISE INDICATED.
* S1 IS MOUNTED AT REAR OF VHF TUNER.
⊕ CHASSIS GROUND. ⊕ CABINET GROUND.
§ C156, R151 NOT USED IN ALL MODELS.
** C160 NOT USED IN ALL MODELS.



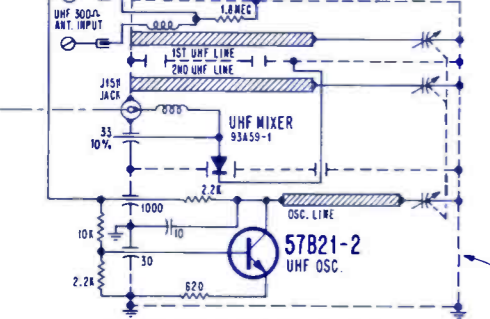
CAUTION: PULSED HIGH VOLTAGE DO NOT MEASURE!



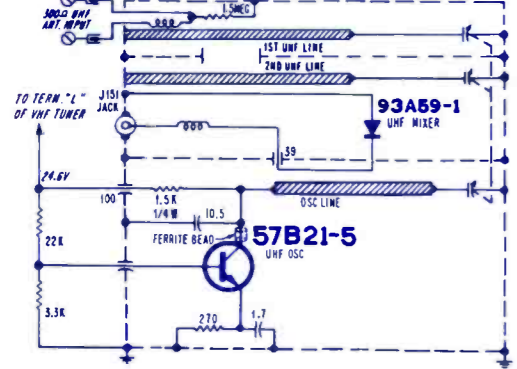
VHF TUNER 94A434-2 IN-2A CHASSIS



UHF TUNER 94A461-1

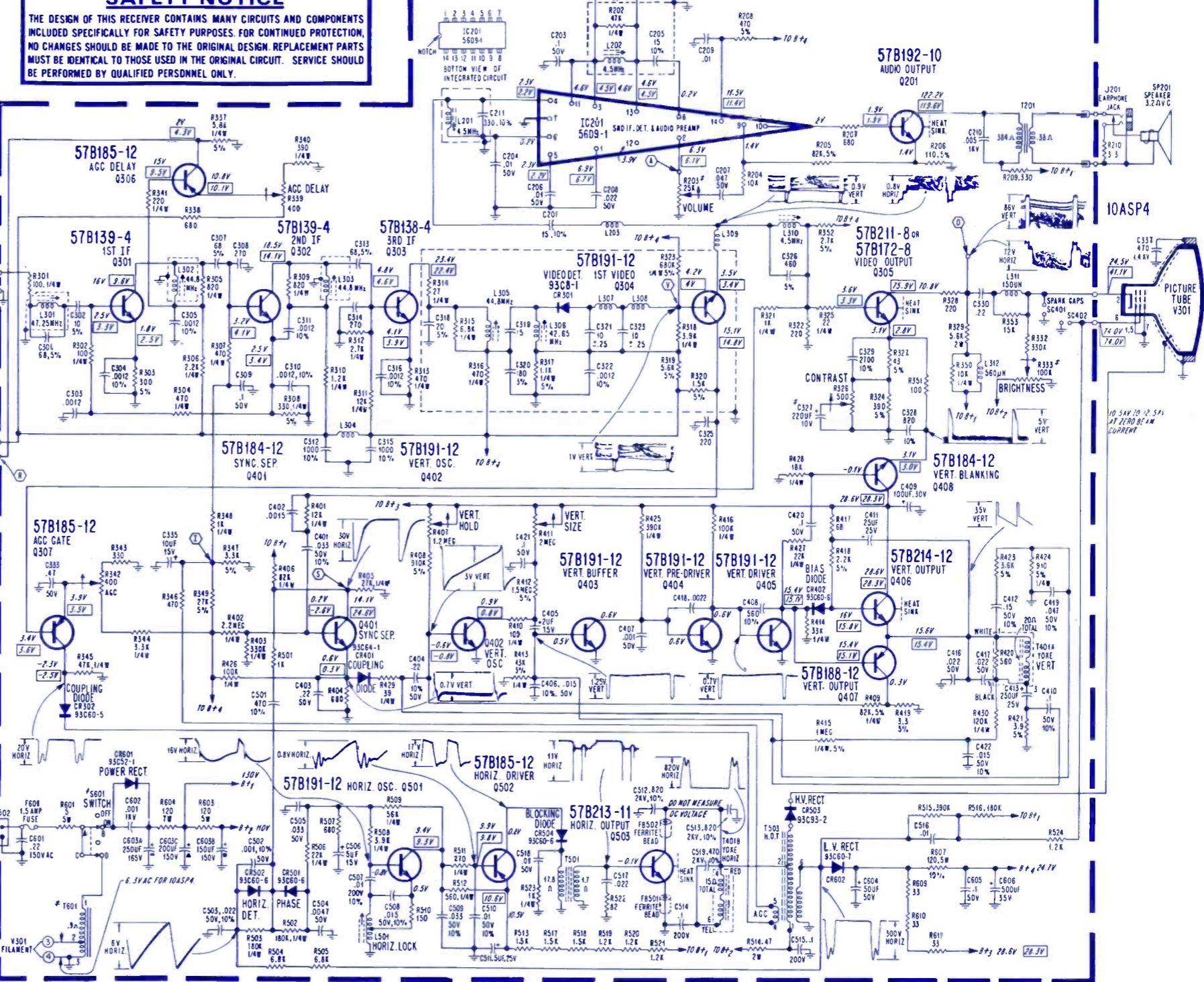


UHF TUNER 94A465-1



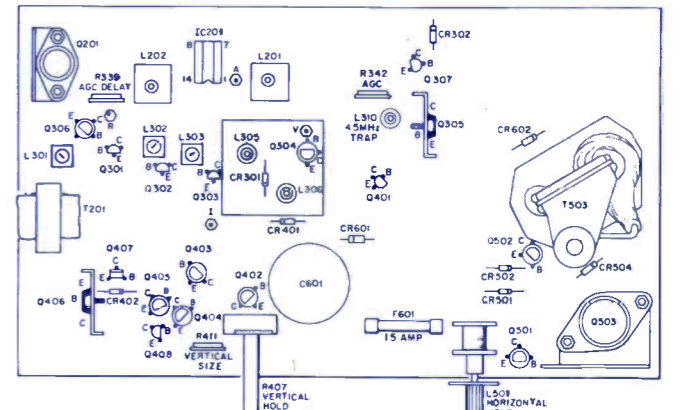
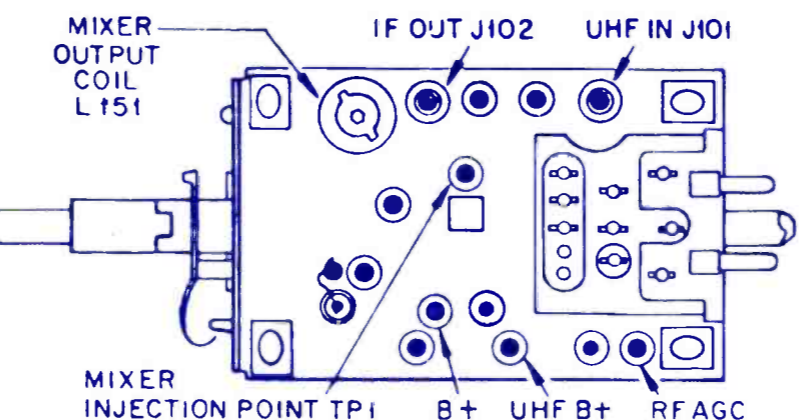
SAFETY NOTICE
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PWS A8859-1



SYMBOL	DESCRIPTION	AIRLINE PART NO.
C603	250/200/150µf, 165v. elect.	67A30-11
L301	coil 47.25MHz trap	72A415-2
L306	coil detect.	72A316-15
L310	coil 4.5MHz trap	72A317-9
L501	coil horiz lock	94A480-1
T201	x-former audio output	79A172-1
T401A, B	yoke deflect	94A372-3
T501	x-former, horiz driver	72A417-1
T503	x-former horiz output	79A186-2

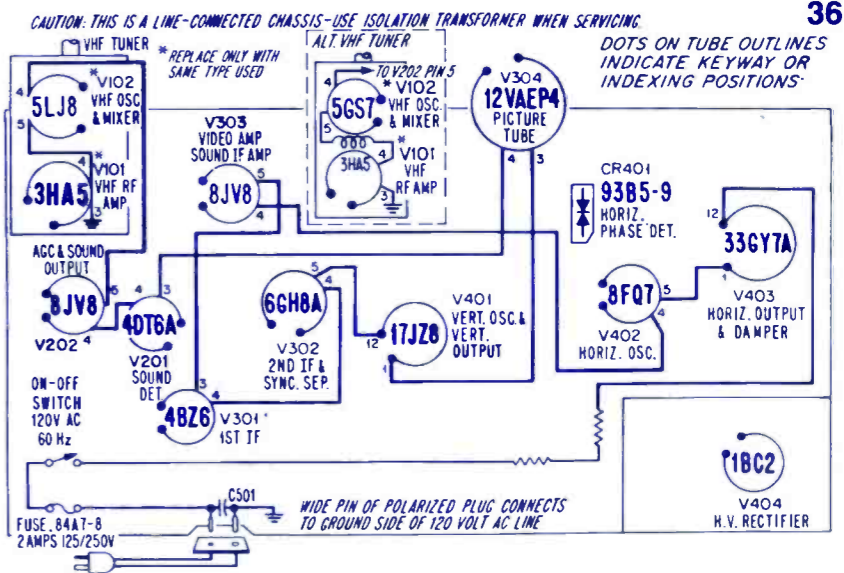
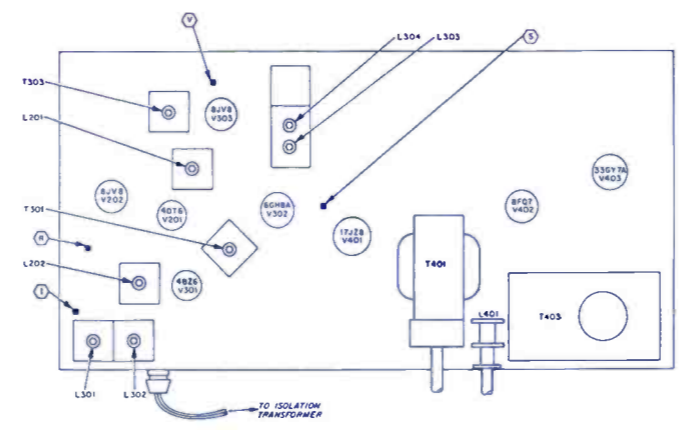
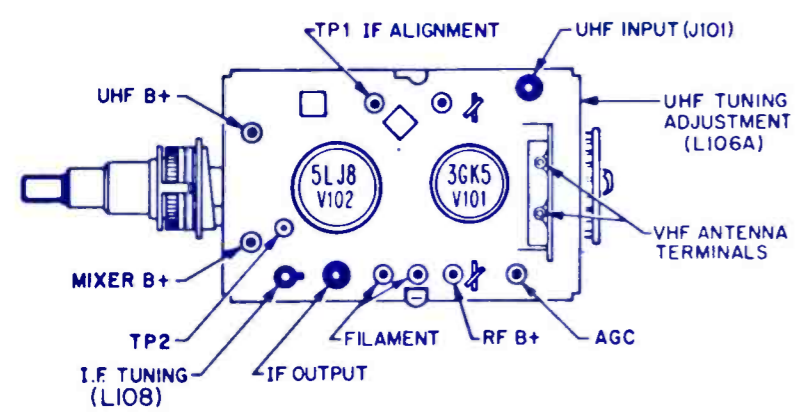
T601	x-former filament	80A117-6
R203	25K vol.	75A1-210
R326	500n contrast	75A1-211
R333	100K brite	75A1-212
R339	400n AGC delay	75A101-35
R342	400n AGC	75A101-35
R407	1.2M vert hold	75A191-1
R411	2M vert size	75A101-61
F601	fuse 1.5a	84A7-15
	tuner VHF GA1-11115A, GA1-11155A	94A433-2
	tuner VHF GA1-11115B, GA1-11155B	94A434-2



AIRLINE
TV Models
GAI-11115A,B
GAI-11155A,B

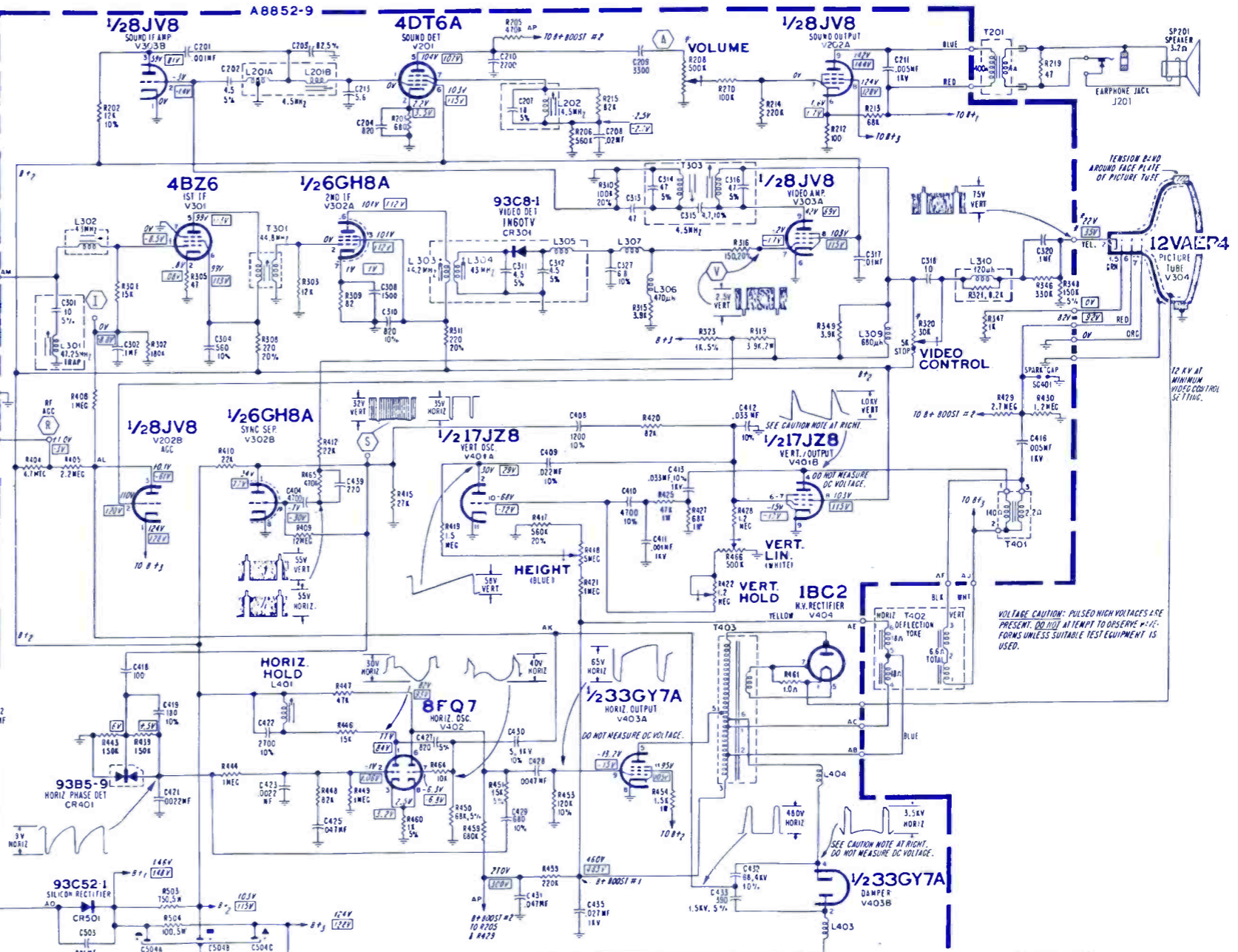
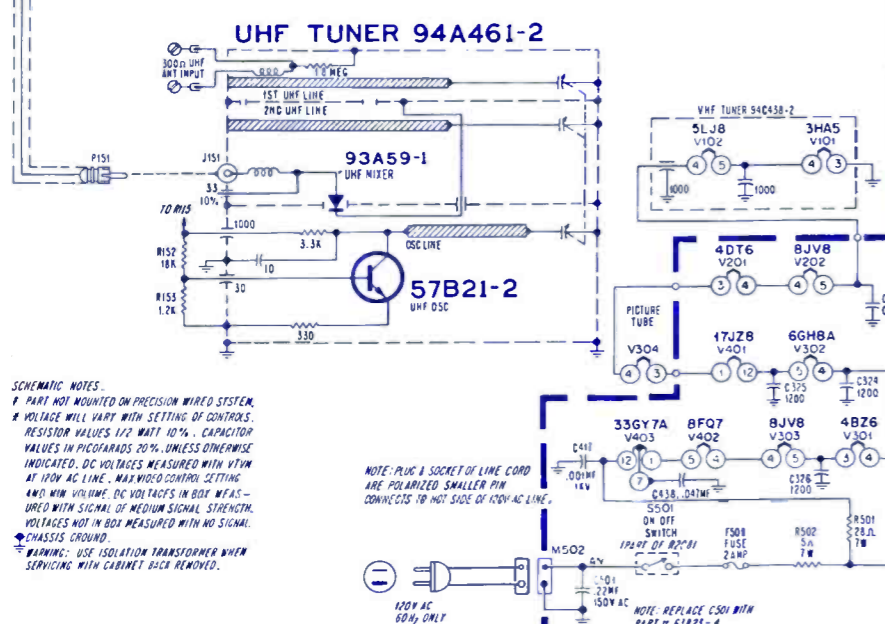
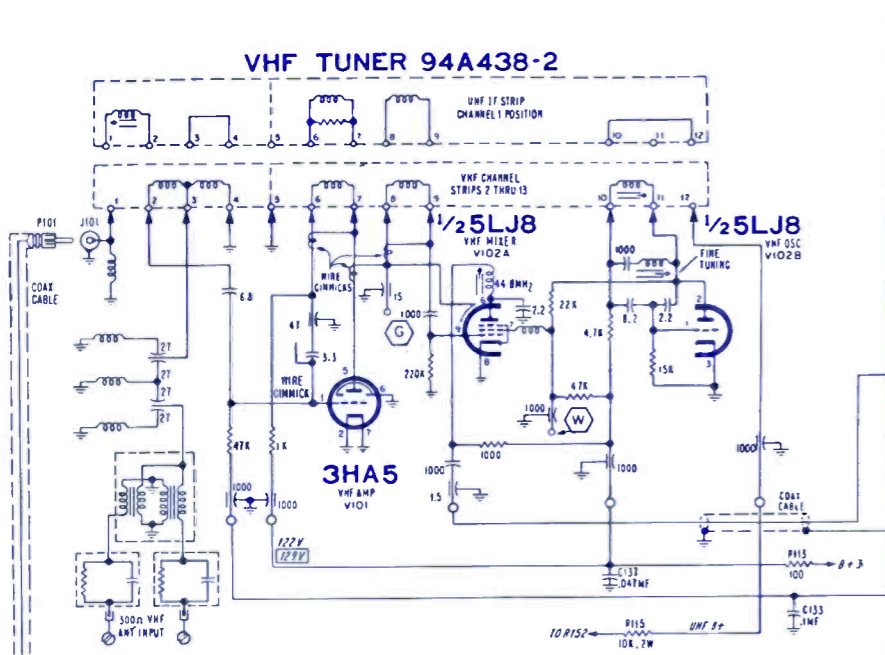
AIRLINE

TV Models
GAI-11235A/B



CAUTION: THIS IS A LINE-CONNECTED CHASSIS—USE ISOLATION TRANSFORMER WHEN SERVICING.

REPLACE ONLY WITH SAME TYPE USED
AL.T. VHF TUNER
DOTS ON TUBE OUTLINES INDICATE KEYWAY OR INDEXING POSITIONS

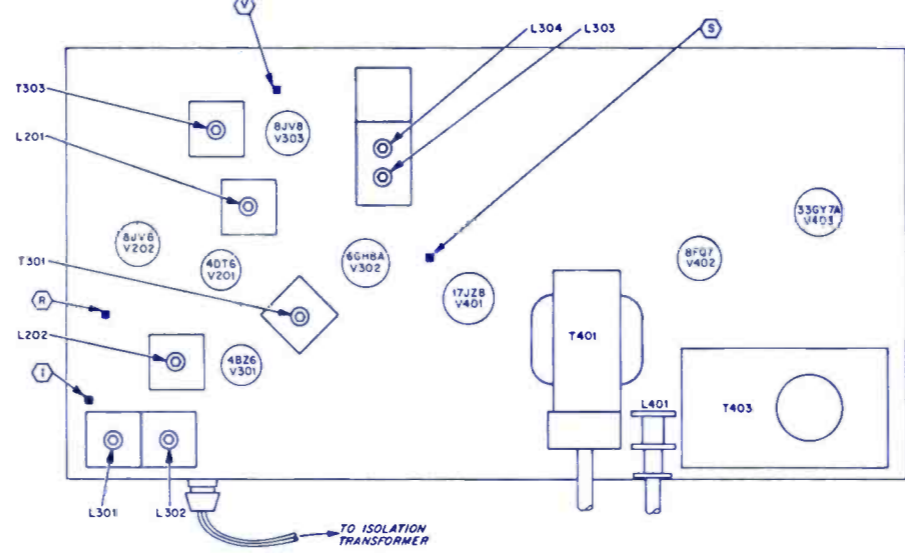


SCHEMATIC NOTES:
1. PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
2. VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
RESISTOR VALUES 1/2 WATT 10%. CAPACITOR VALUES IN MICROFARADS 20% UNLESS OTHERWISE INDICATED. DC VOLTAGES MEASURED WITH VTVM AT 100V AC LINE. MAX VIDEO CONTROL SETTING AND MIN VOLUME. DC VOLTAGES IN BOX MEASURED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH. VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL.
3. CHASSIS GROUND.
4. WARNING: USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BECH REMOVED.

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

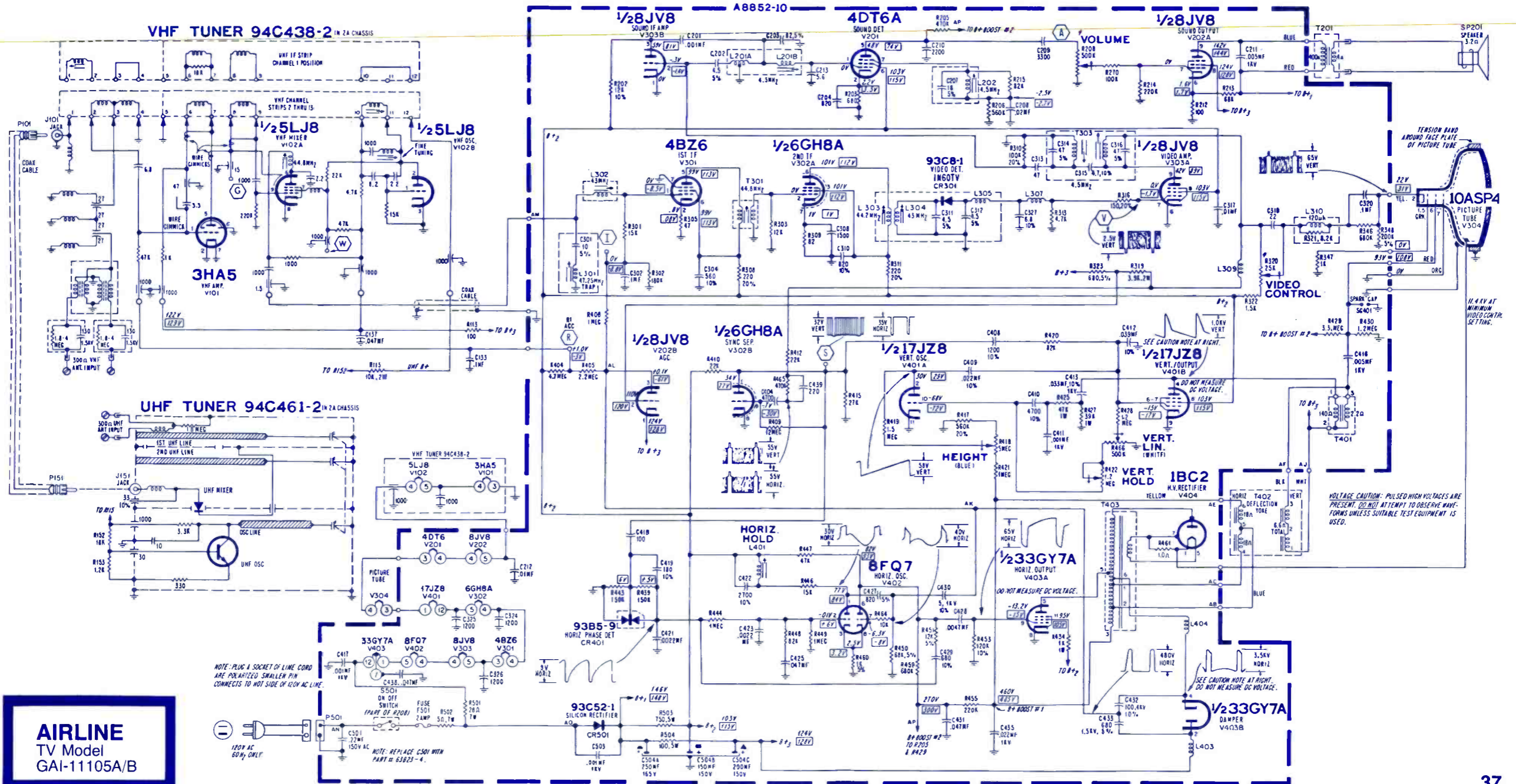
NOTE: REPLACE CS01 WITH PART # 61923-4.

NOTE: Tuner Schematic Diagrams Shown For Reference Only. See Parts List for Service Replaceable Parts.



SCHEMATIC NOTES:
 * PART NOT MOUNTED ON PRECISION WIRED SYSTEM.
 R VOLTAGE WILL VARY WITH SETTING OF CONTROLS.
 RESISTOR VALUES 1/2 WATT 10% - CAPACITOR
 VALUES IN PICO FARADS 20% UNLESS OTHERWISE
 INDICATED. DC VOLTAGES MEASURED WITH VTVM
 AT 120V AC LINE, MAX. VIDEO CONTROL SETTING
 AND MIN. VOLUME. DC VOLTAGES IN BOX MEAS-
 URED WITH SIGNAL OF MEDIUM SIGNAL STRENGTH.
 VOLTAGES NOT IN BOX MEASURED WITH NO SIGNAL.
 * CHASSIS GROUND.
WARNING: USE ISOLATION TRANSFORMER WHEN
 SERVICING WITH CABINET BACK REMOVED.

NOTE: Tuner Schematic Diagrams Shown For Reference Only.
 See Parts List For Service Replaceable Ports.



AIRLINE
 TV Model
 GAI-11105A/B

NOTE: PLUG A 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 WAVE-
 FORMS UNLESS SUITABLE TEST EQUIPMENT IS
 USED.

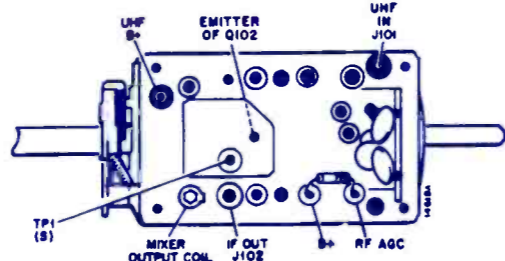
SEE CAUTION NOTE AT RIGHT.
 DO NOT MEASURE DC VOLTAGE.

DO NOT MEASURE DC VOLTAGE.

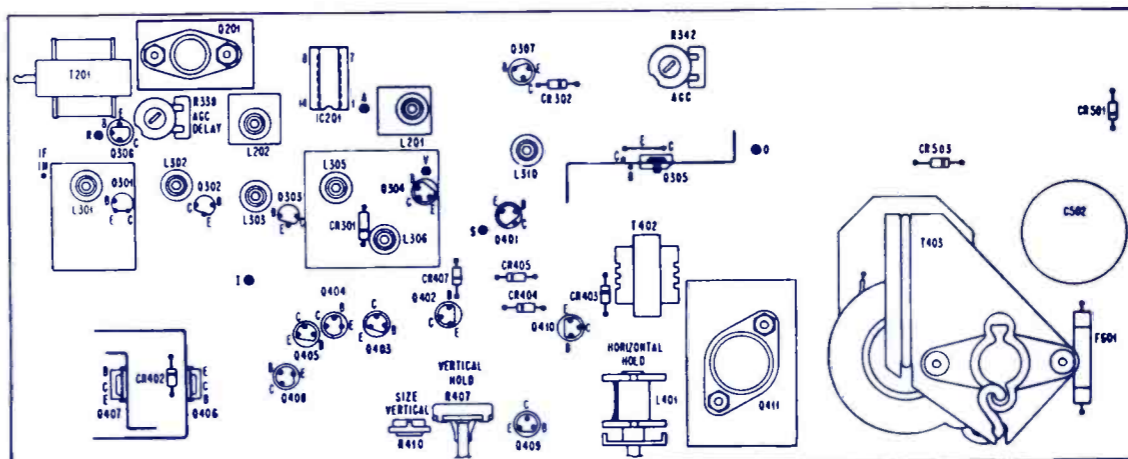
AIRLINE TV Model GAI-13145A/B

SYMBOL DESCRIPTION AIRLINE PART NO.

C502A, B	— 250mf/165v, 150mf/150v, 200mf/150v	
C	— electro	67A30-11
R203	— 25K, volume	75A167-9
R326	— 500 ohm, contrast	75A167-5
R333	— 100K, brite	75A167-4
R339	— 400 ohm, AGC delay	75A101-50
R342	— 200 ohm, AGC	75A101-49
R407	— 1.2M vert hold	75A191-1
R410	— 1.5M vert size	75A101-11
L201	— coil 4.5MHz, sound IF	72A317-7
L310	— coil, sound take-off	72A317-1
L401	— coil, horiz osc lock	94A480-1
T201	— xformer, audio output assm.	700A1035-5
T401A, B	— yoke, deflect	750A1089-15
T402	— xformer, horiz drive	79A167-1
T403	— xformer, horiz output	79A166-1
T501	— autotransformer, CRT filament	80A117-2
F501	— fuse, 1.5a	31801.5
77A221-2	— switch, on-off w/pushbutton	77A221-2
tuner, VHF, GAI-13145A		94A433-1
tuner, VHF, GAI-13145B		94A434-1



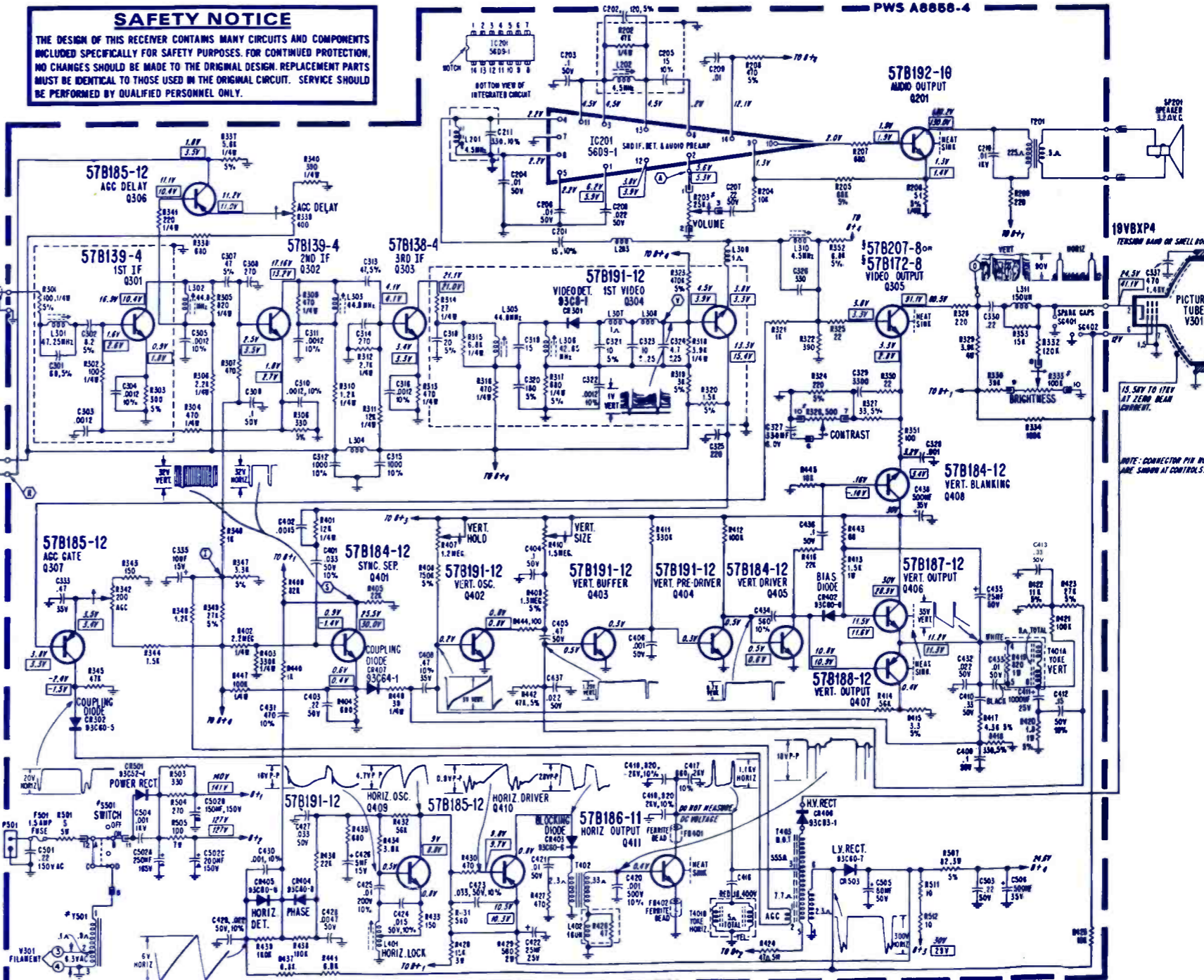
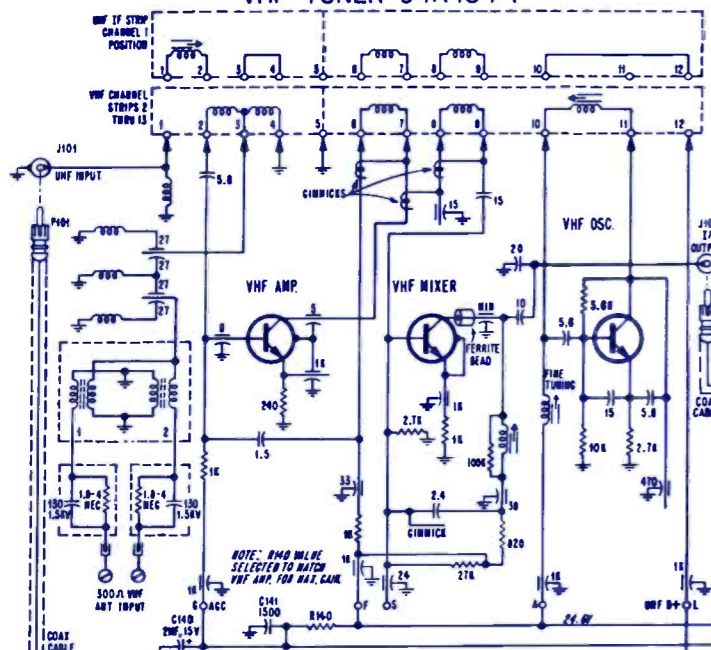
Top View of VHF Tuner (94A434-1) Showing Test Point and Alignment Locations



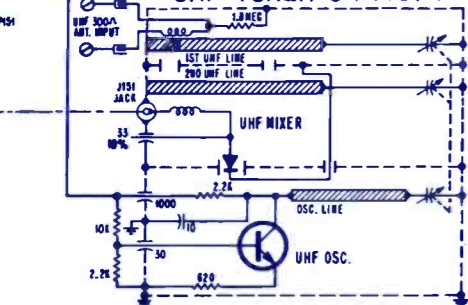
VHF TUNER 94A434-1

SAFETY NOTICE

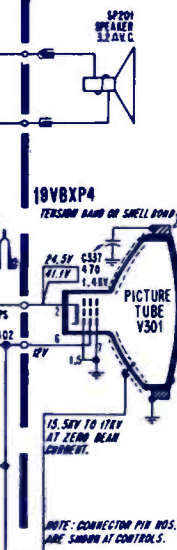
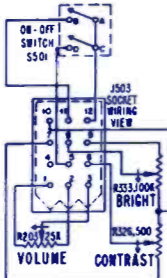
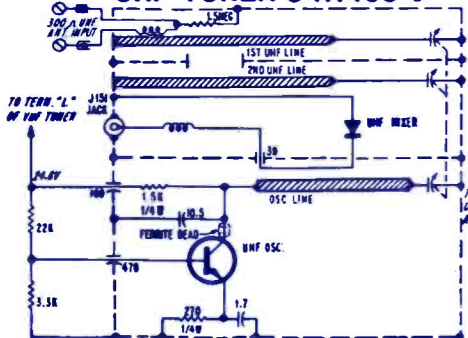
THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



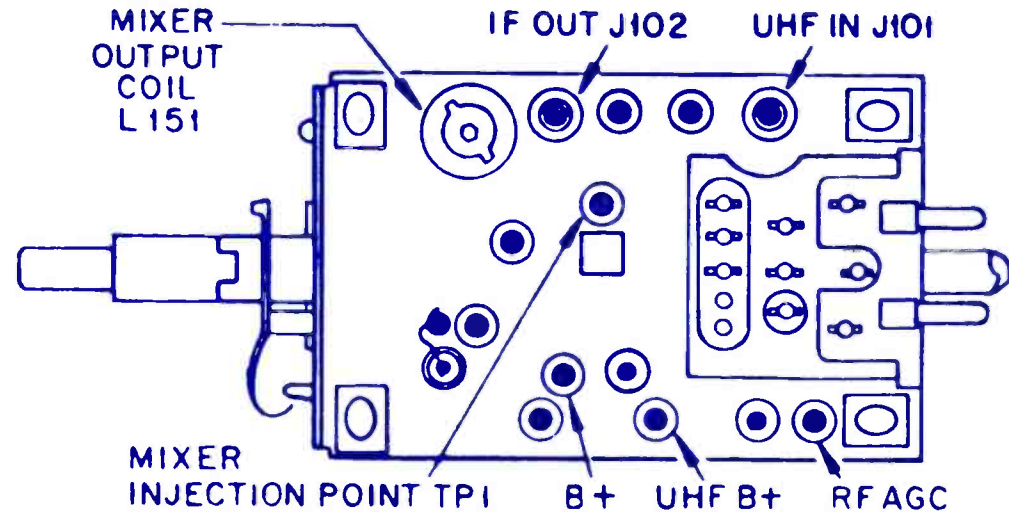
UHF TUNER 94A461-1



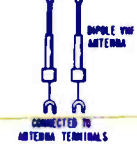
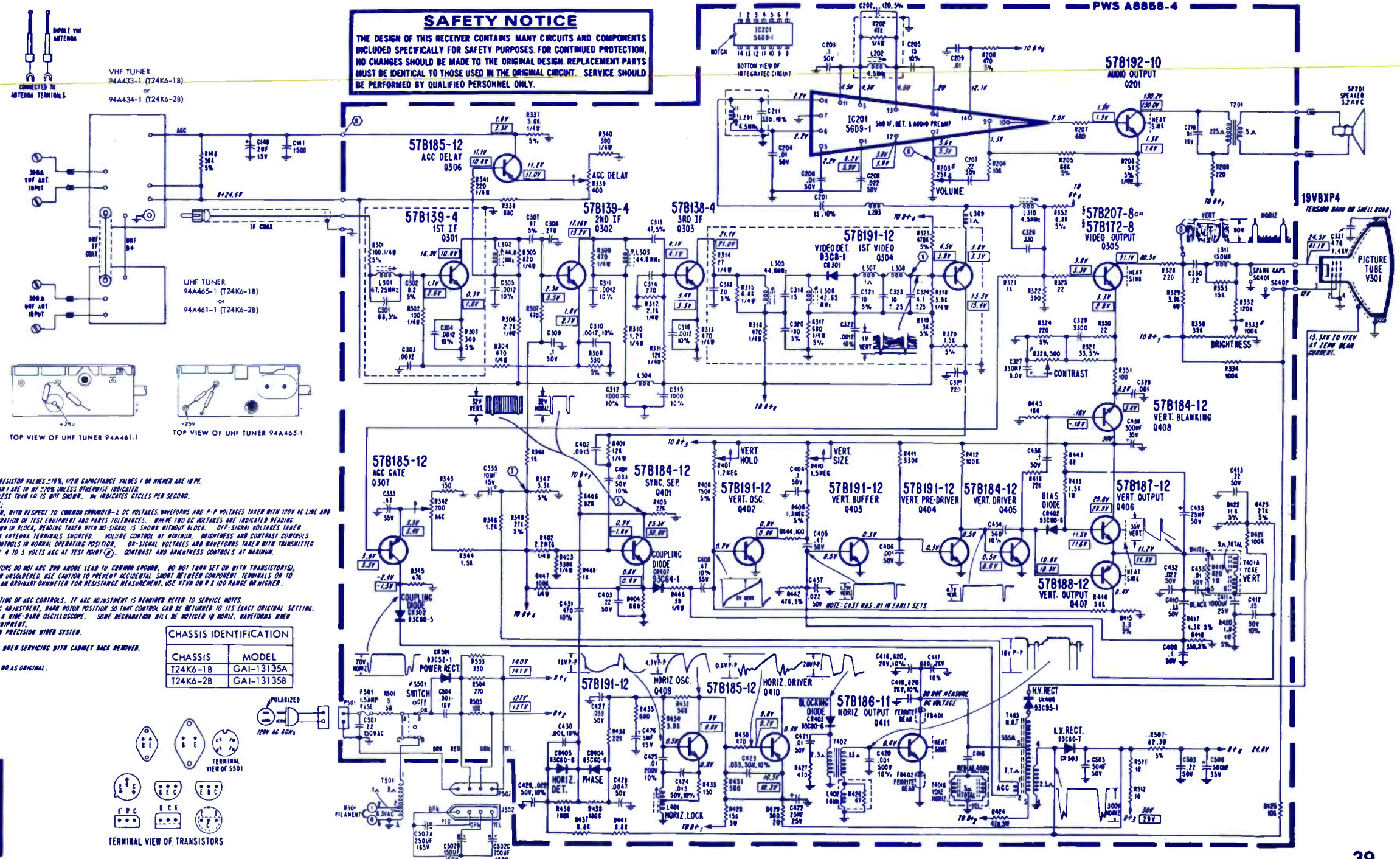
UHF TUNER 94A465-1



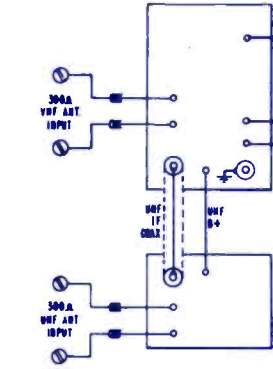
NOTE: CONNECTOR PIN NOS. ARE SHOWN ON CONTROLS.



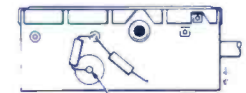
SAFETY NOTICE
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VHF TUNER
 94A433-1 (T24K6-1B)
 or
 94A434-1 (T24K6-2B)



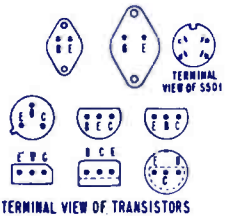
UHF TUNER
 94A465-1 (T24K6-1B)
 or
 94A461-1 (T24K6-2B)



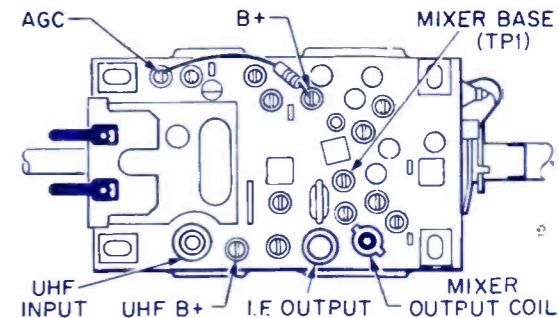
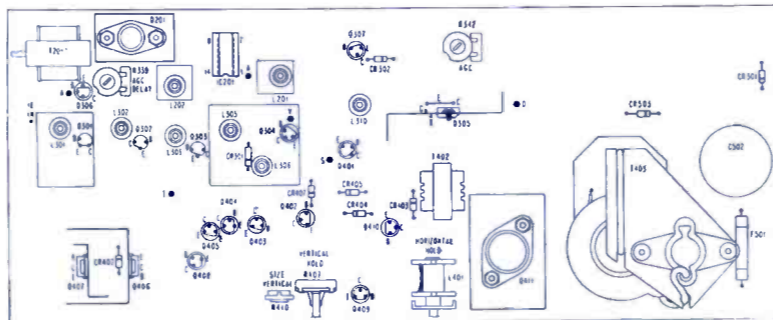
SCHEMATIC NOTES:
 UNLESS OTHERWISE INDICATED, RESISTOR VALUES $\leq 10K$, $10M$ CAPACITANCE VALUES 1 OR HIGHER ARE IN PF. CAPACITANCE VALUES LESS THAN 10 ARE IN NF. $\leq 20M$ UNLESS OTHERWISE INDICATED. RESISTANCE VALUES OF COILS LESS THAN 10 IS NOT SHOWN. ∞ INDICATES CYCLES PER SECOND.
VOLTAGE AND WAVEFORM NOTES:
 DC VOLTAGES TAKEN WITH VEH, WITH RESPECT TO COMMON GROUND—DC VOLTAGES, WAVEFORMS AND P-P VOLTAGES TAKEN WITH 100V AC LINE AND MAY VARY DEPENDING ON CALIBRATION OF TEST EQUIPMENT AND PARTS TOLERANCES. WHERE TWO DC VOLTAGES ARE INDICATED READING TAKEN WITH TV SIGNAL IS SHOWN IN BLOCK, READING TAKEN WITH NO-SIGNAL IS SHOWN WITHOUT BLOCK. OFF-SIGNAL VOLTAGES TAKEN ON UNBIASED VHF CHANNEL WITH ANTENNA TERMINALS SHORTED. VOLUME CONTROL AT MINIMUM. BRIGHTNESS AND CONTRAST CONTROLS AT MAXIMUM. ALL OTHER CONTROLS IN NORMAL OPERATING POSITION. ON-SIGNAL VOLTAGES AND WAVEFORMS TAKEN WITH TRANSMITTED NOISE FREE SIGNAL PRODUING 4 TO 5 VOLTS AGC AT TEST POINT (E). CONTRAST AND BRIGHTNESS CONTROLS AT MAXIMUM.
TRANSISTOR CAUTION:
 TO AVOID DAMAGE TO TRANSISTORS DO NOT ARC AND DO NOT LEAD TO COMMON GROUND. DO NOT TURN SET ON WITH TRANSISTORS. TURNS ON LEADS REMOVED OR UNSOLDERED. USE CAUTION TO PREVENT ACCIDENTAL SHORT BETWEEN COMPONENT TERMINALS OR TO COMMON GROUND. DO NOT USE AN ORDINARY OHMMETER FOR RESISTANCE MEASUREMENT. USE VITH OR R X 100 RANGE ON WYCHER.
AGC CAUTION:
 DO NOT DISTURB FACTORY SETTING OF AGC CONTROLS. IF AGC ADJUSTMENT IS REQUIRED REFER TO SERVICE NOTES.
 IF NECESSARY TO DISTURB AGC ADJUSTMENT, HARD MOTOR POSITION SO THAT CONTROL CAN BE RETURNED TO ITS EXACT ORIGINAL SETTING.
 ALL WAVEFORMS TAKEN WITH A BIRD-BAND OSCILLOSCOPE. SOME DEGRADATION WILL BE NOTICED IN HORIZ. WAVEFORMS WHEN USING BIRD-BAND EQUIPMENT.
 COMPONENT NOT MOUNTED ON PRECISION WIRED SYSTEM.
WARNING:
 USE ISOLATION TRANSFORMER WHEN SERVICING WITH CABINET BACK REMOVED.
 COMMON GROUND (B-1).
 REPLACE WITH SAME PART NO AS ORIGINAL.

CHASSIS IDENTIFICATION

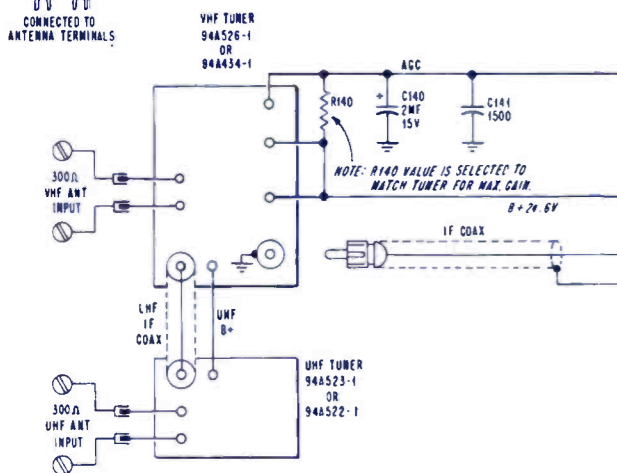
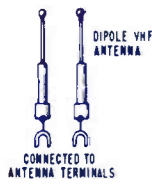
CHASSIS	MODEL
T24K6-1B	GA1-13135A
T24K6-2B	GA1-13135B



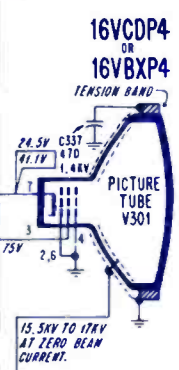
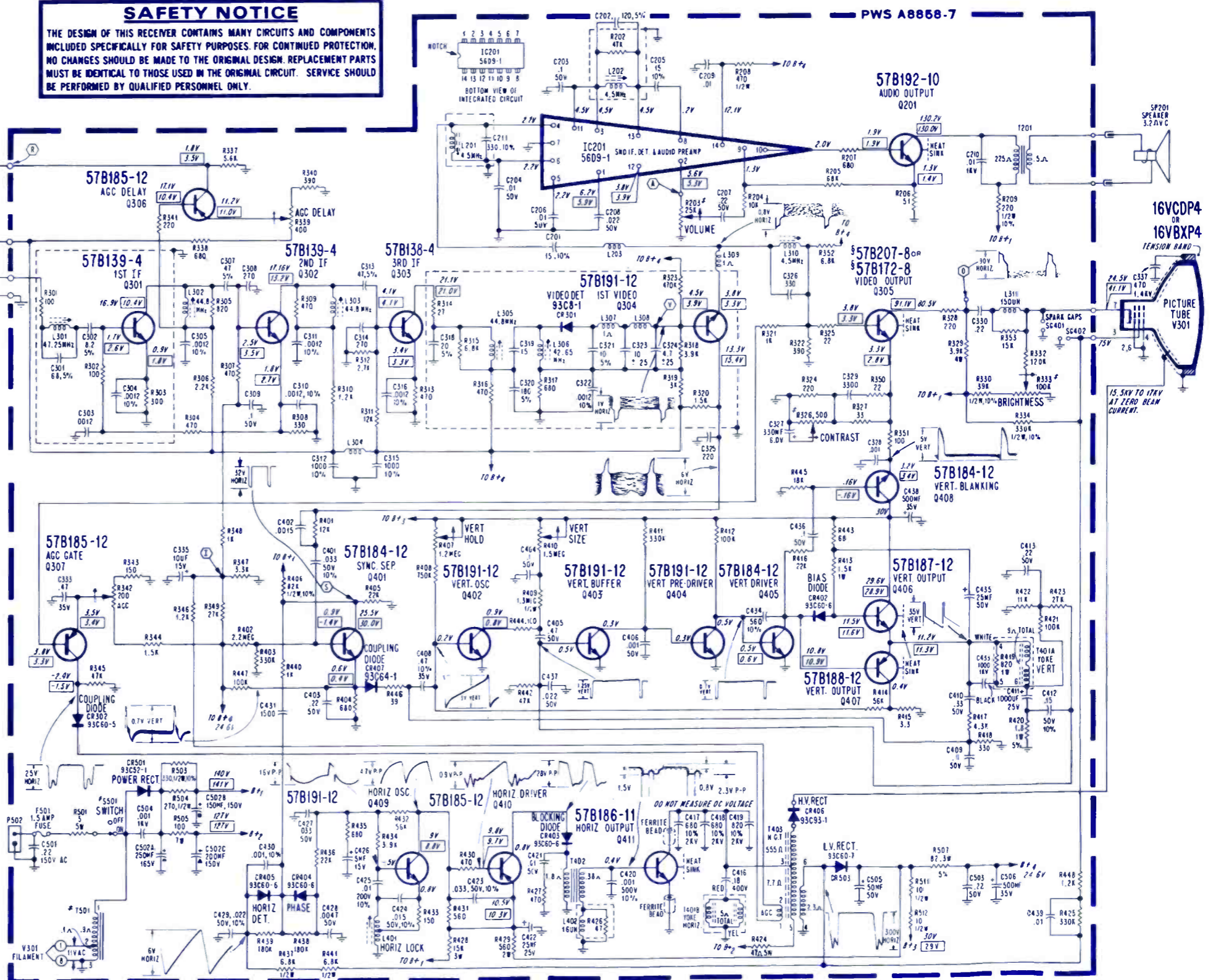
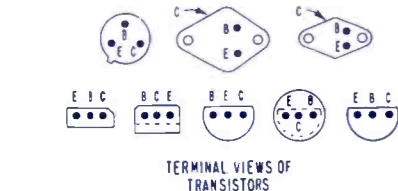
AIRLINE
 TV Model
 GAI-13135A/B

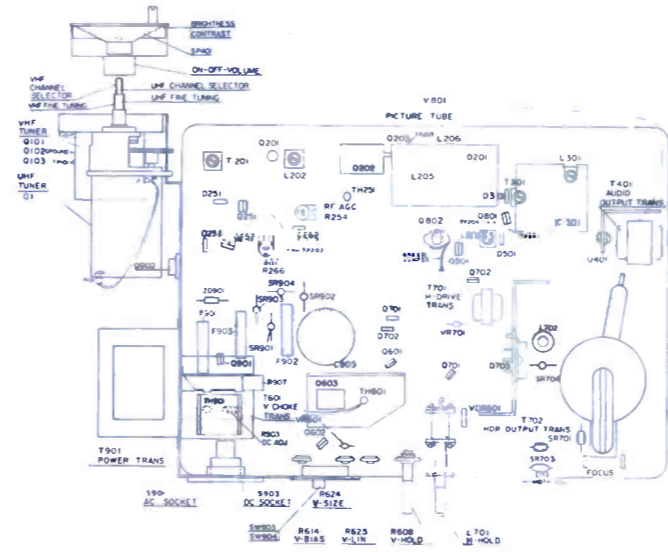


SAFETY NOTICE
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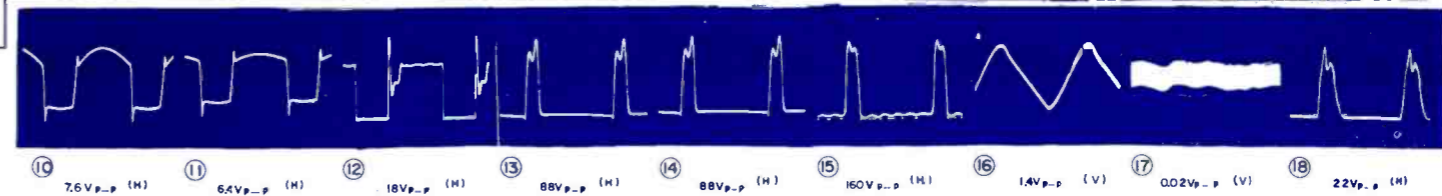
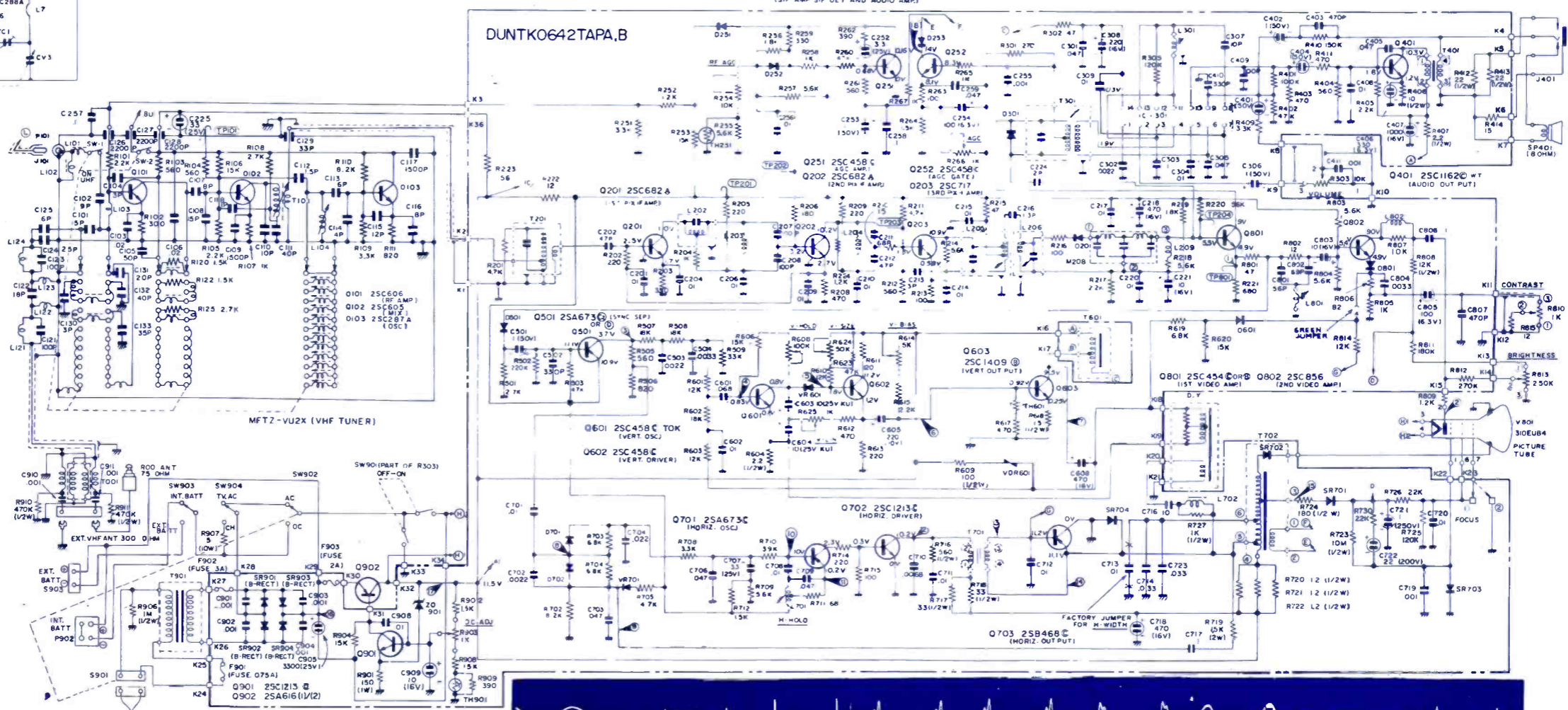
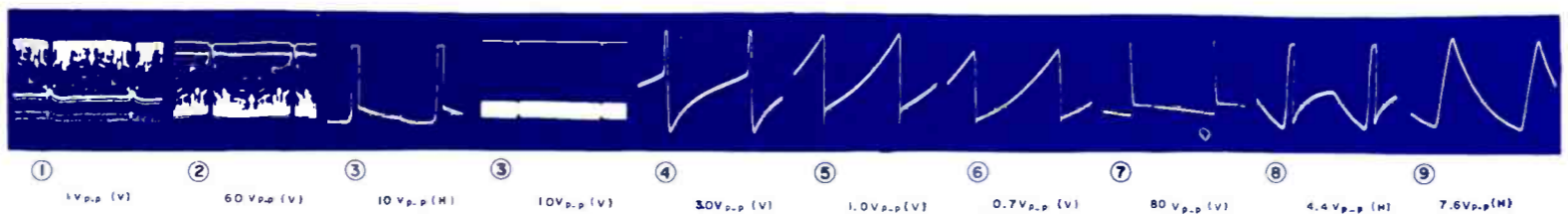
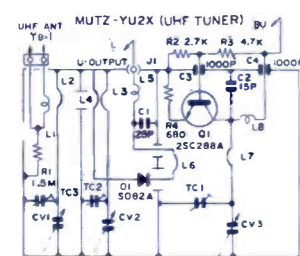


SYMBOL	DESCRIPTION	AIRLINE PART NO.
C502A	— 250mfd, 165v elect	67A30-11
C502B	— 150mfd, 150v elect	67A30-11
C502C	— 200mfd, 150v elect	67A30-11
R203/S501	— 25K, vol, on/off switch	75A1-226
R326	— 500 ohm, contrast	75A1-221
R333	— 100K, brite	75A1-221
R339	— 400 ohm, AGC delay	75A101-50
R342	— 200 ohm, AGC	75A101-49
R407	— 1.2M, vert hold	75A191-1
R410	— 1.5M, vert size	75A101-57
L202	— coil, 4.5MHz, sound detect	72A317-6
L310	— coil, 4.5MHz, trap	72A317-1
L401	— coil, horiz osc lock	94A480-1
T201	— xformer, audio output	79A124-7
T401A,B	— yoke, deflect assm	700A1089-15
T402	— xformer, horiz drive	79A167-1
T501	— autotformer, CRT filament	80A117-6
F501	— fuse, 1.5a, plgtail	31801-5





SYMBOL	DESCRIPTION	AIRLINE PART NO.
R254	10K pot RF AGC	J25635
R266	1K pot AGC	J25635
R303		
SW901	10K pot volume w/on-off switch	J25644
R608	100K pot vert hold	J25637
R614	5K pot vert bias	J25638
R624	50K pot vert size	J25639
R625	1K pot vert lin	J25640
R810	1K pot contrast	J25641
R813	250K pot brite	J25642
R903	1K pot DC adjust	J25643
L301	coil sound detect	J611143
L701	coil horiz hold	J611141
L801	coil 4.5MHz trap	TV62258
T401	x-former audio output	J62762
T601	x-former vert choke	TV11169
T702	x-former horiz output	J11430
T901	x-former power	J11431
M208	filter pix detect	J611140
SR701	diode focus rectifier	J241271
TH251	therm AGC	J241263
VDR601	volt dependent resistor	TV24250
VR601	varistor vert	J241261
VR701	varistor horiz	J241261
F901	fuse 0.75A 250v slo blo pigtail	J18512
F902	fuse 3A 125v slo blo pigtail	315003
F903	fuse 2a 125v slo blo pigtail	315002
	tuner VHF	J35446
	yoke deflect	J611147

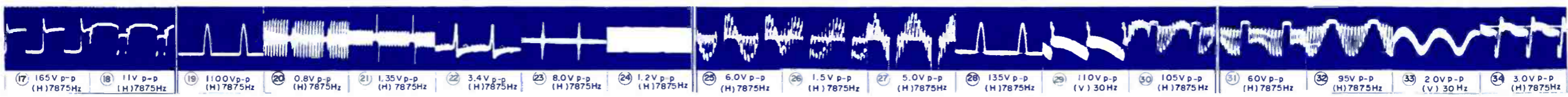


AIRLINE
TV Model
GEN-11765A

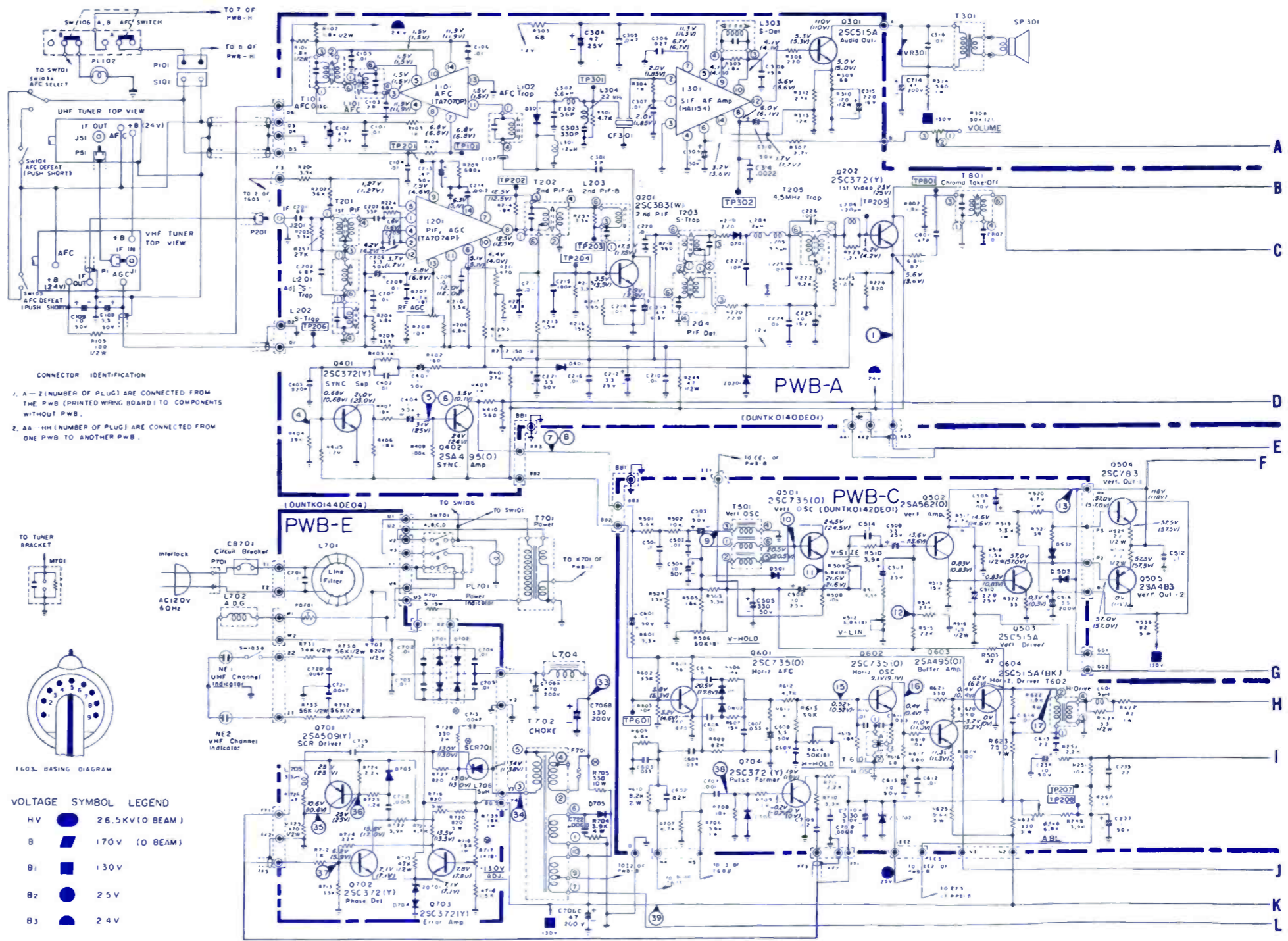
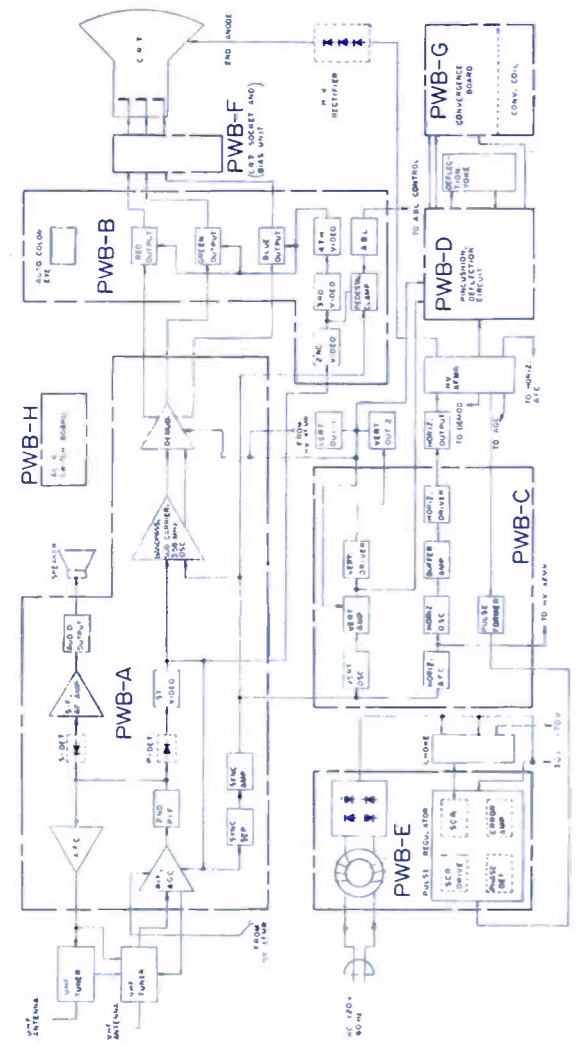
CAUTION
This circuit diagram is original one.
Therefore there may be a slight difference
from yours.

AIRLINE

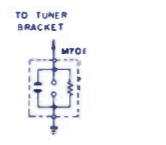
Color TV Model
GEN-12985A



BLOCK DIAGRAM



CONNECTOR IDENTIFICATION
 1. A-Z (NUMBER OF PLUG) ARE CONNECTED FROM THE PWB (PRINTED WIRING BOARD) TO COMPONENTS WITHOUT PWB.
 2. AA-HH (NUMBER OF PLUG) ARE CONNECTED FROM ONE PWB TO ANOTHER PWB.

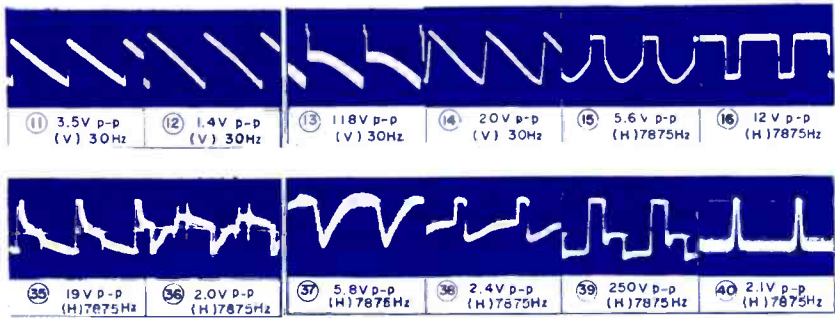


VOLTAGE SYMBOL LEGEND

HV		26.5KV(0 BEAM)
B		170V (0 BEAM)
B1		130V
B2		2.5V
B3		2.4V

TELEVISION ELECTRICAL SPECIFICATIONS

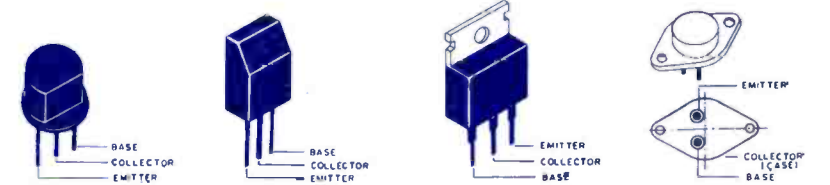
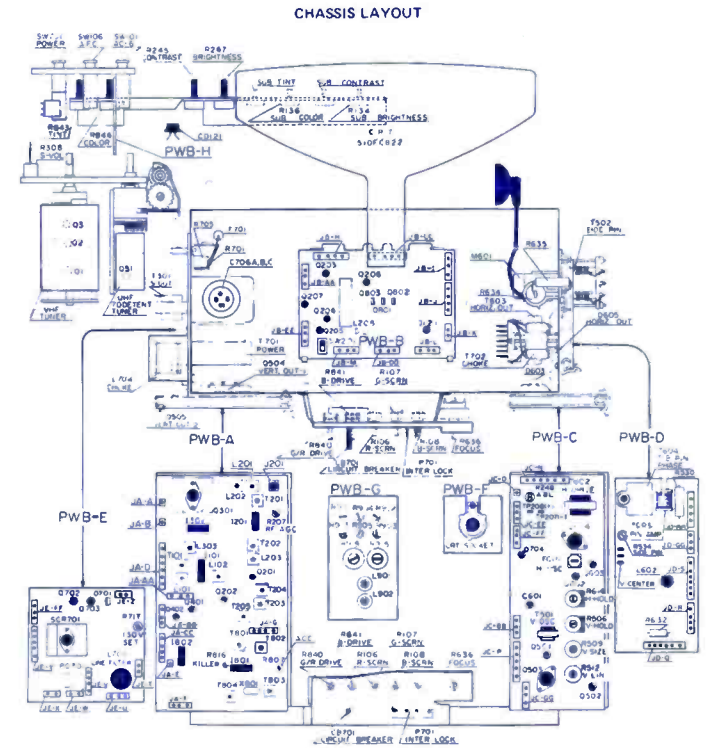
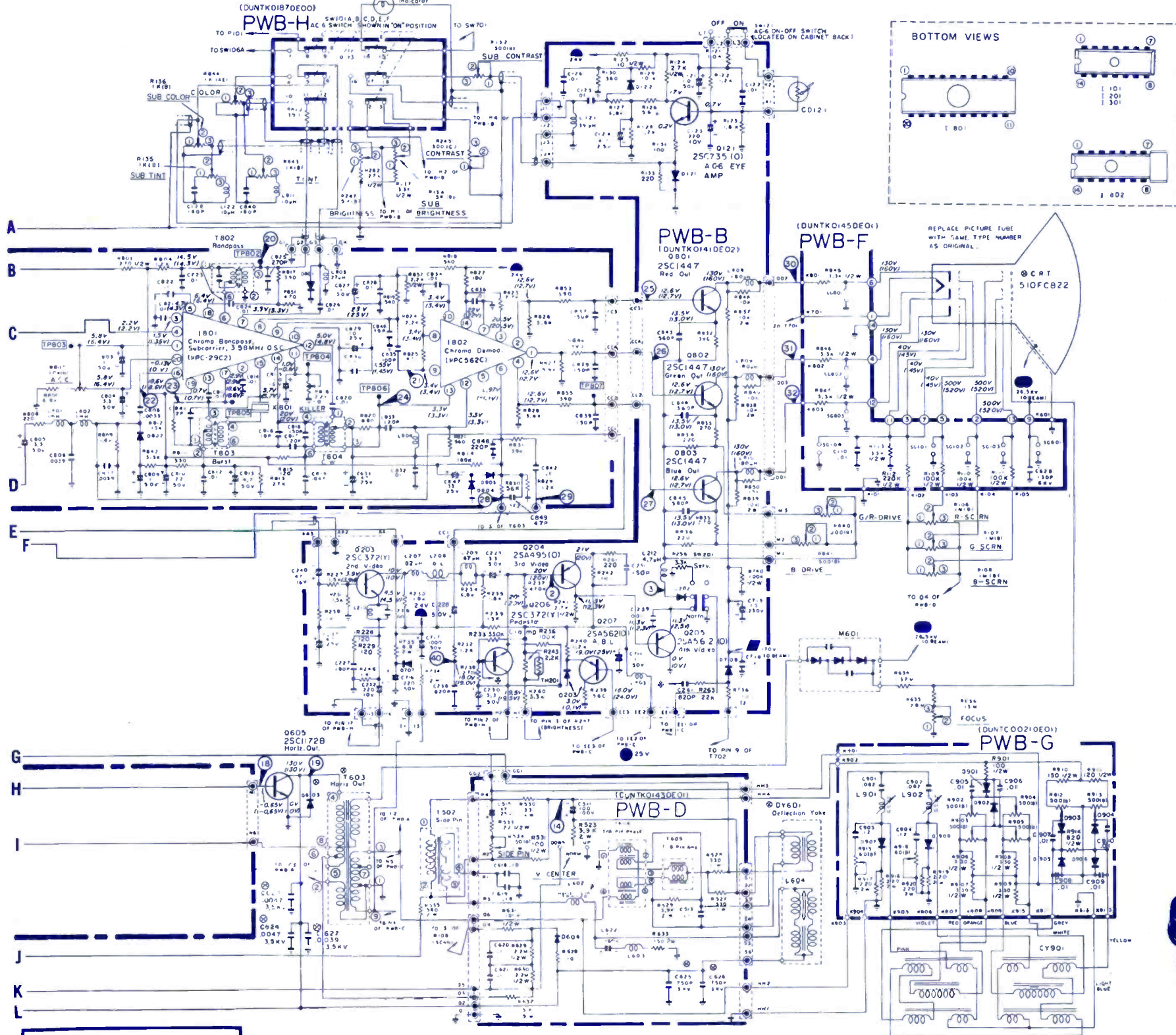
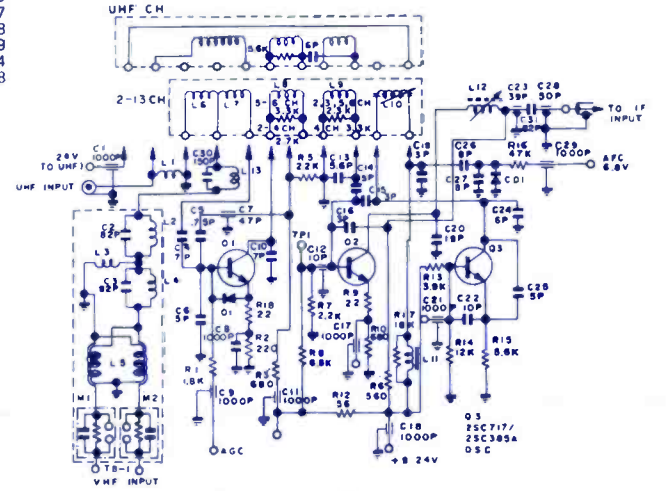
POWER INPUT	120 Volts AC, 60Hz
POWER CONSUMPTION	150 Watts
PICTURE SIZE	Approx. 185 sq. in.
SWEEP DEFLECTION	Magnetic
CONVERGENCE	Magnetic
FOCUS LENS	Bipotential
AUDIO POWER OUTPUT RATING	1.0 Watt @ 10% Distortion
SPEAKER SIZE	3 15/16" Dia., 1.0 oz Mag.
VOICE COIL IMPEDANCE	8.0 ohms @ 400 Hz
ANTENNA INPUT IMPEDANCE	300 ohms balanced
TELEVISION RF FREQUENCY RANGE	
All 12 television channels	54MHz to 88MHz
Any of 70 UHF channels	174MHz to 216MHz
INTERMEDIATE FREQUENCIES	470MHz to 890MHz
Picture IF Carrier Frequency	45.75MHz
Sound IF Carrier Frequency	41.25MHz
Color Sub-Carrier Frequency	42.17MHz (Nominal)



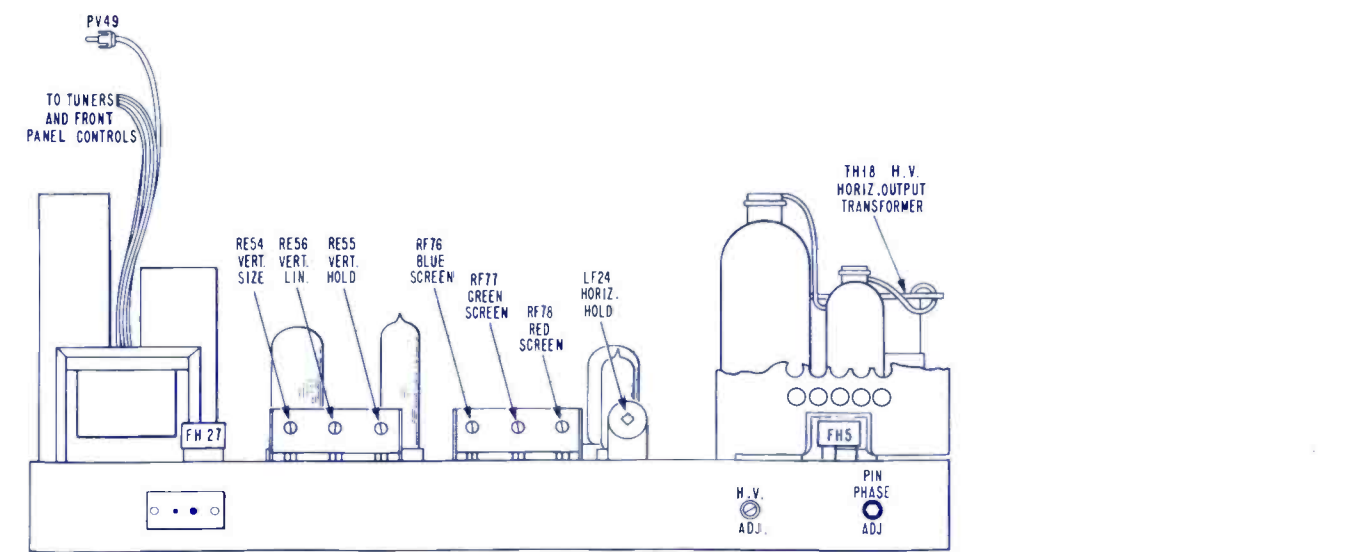
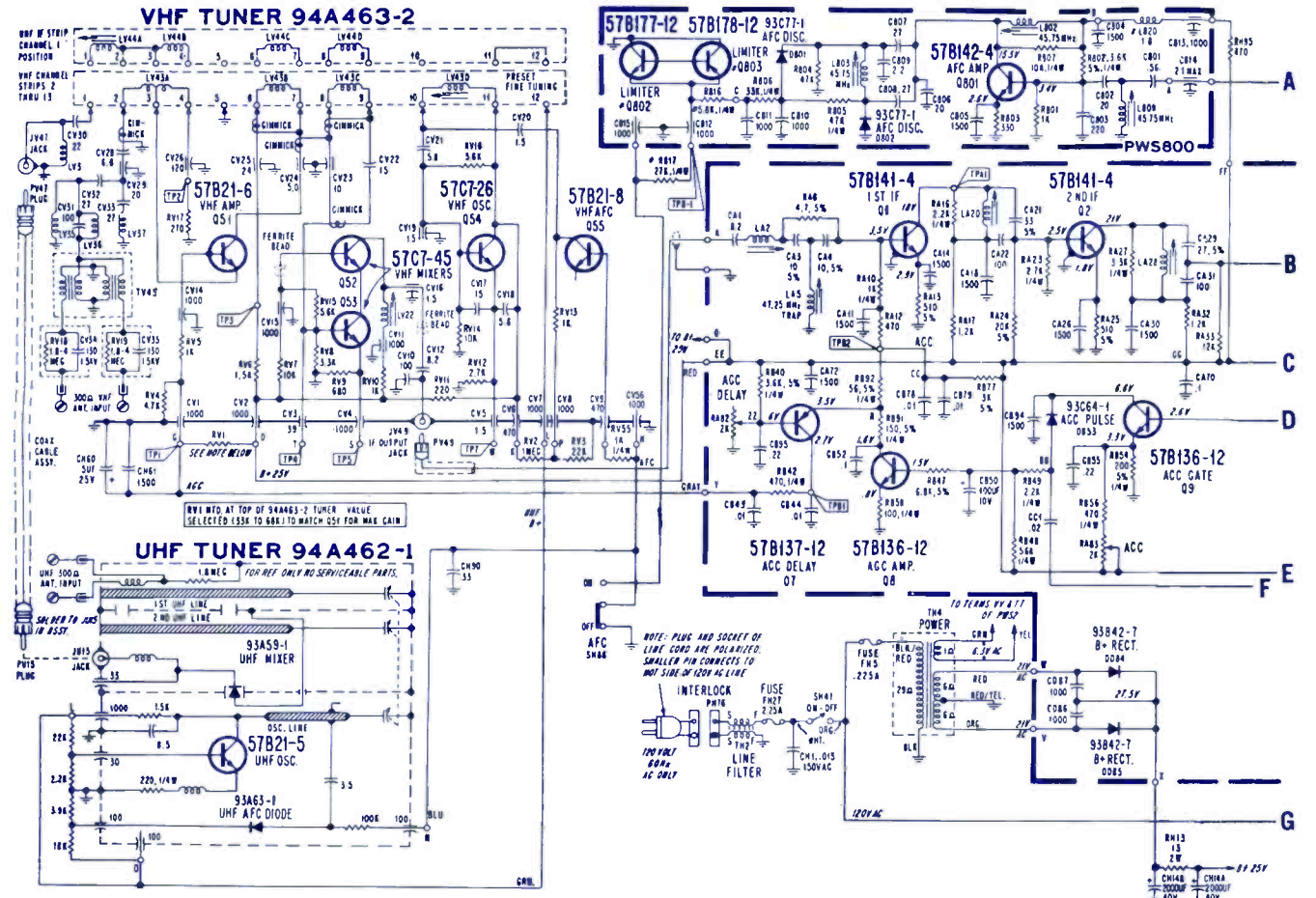
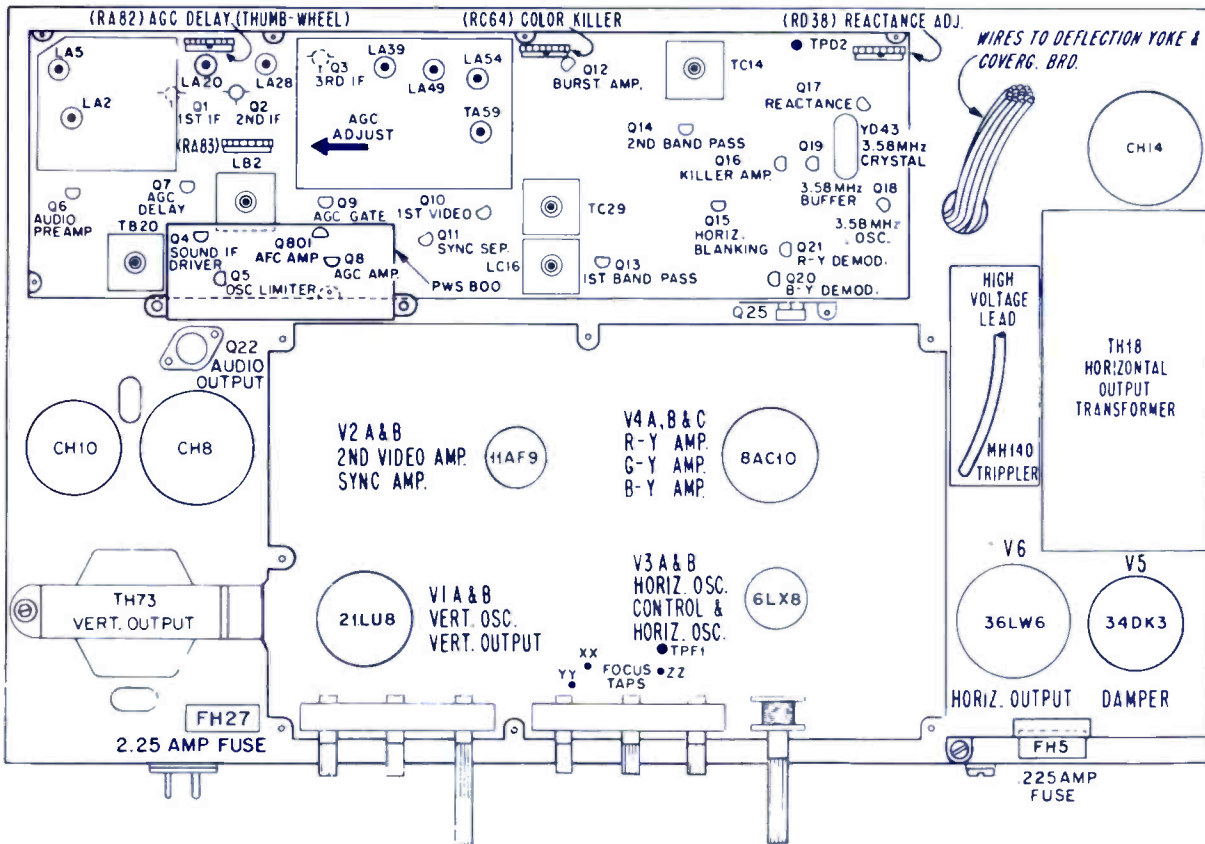
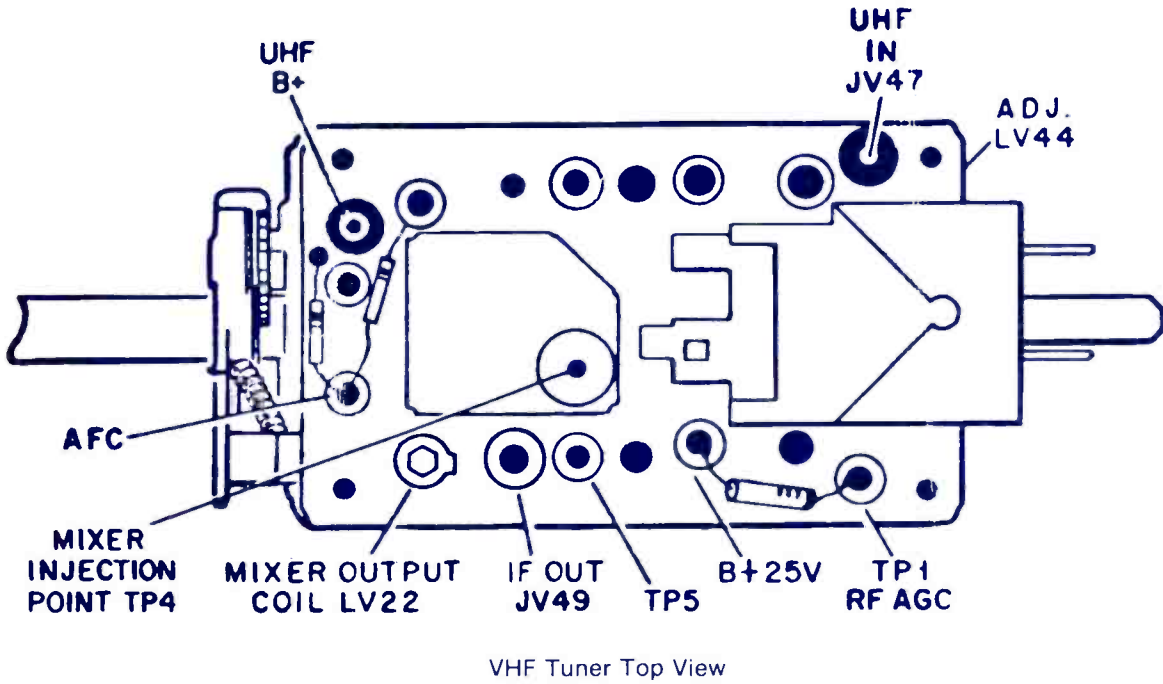
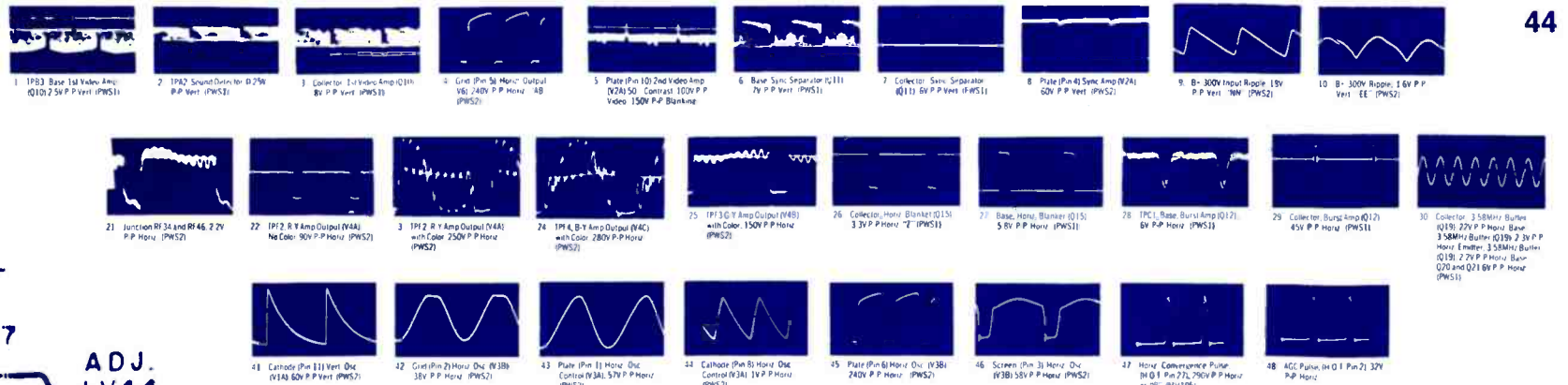
SYMBOL	DESCRIPTION	AIRLINE PART NO.
R207	4.7K, Pot., RF AGC	J25618
R807	10K, Pot., ACC	J25620
R816	22K, Pot., Color Killer	J25621
L303	Coil, sound detector	J611113
T303	x-former, sound trap	J611109
T801	x-former, chroma take-off	J611115
T802	x-former, bandpass	J611117
T803	x-former, burst	J611122
T804	x-former, C.W.	J611119
L208	Coil, delay line	J611123
TH201	Thermistor	J241227
R248	6.8K, Pot., auto brightness	J25619
R506	50K, Pot., vert. hold	J25624
R509	6.8K, Pot., vert. size	J25622
R614	50K, Pot., horiz. hold	J25624
T801	x-former, vert. oscillator	J11419
T801	x-former, horiz. oscillator	J611101
R717	1K, Pot., +130V adjustment	J25623

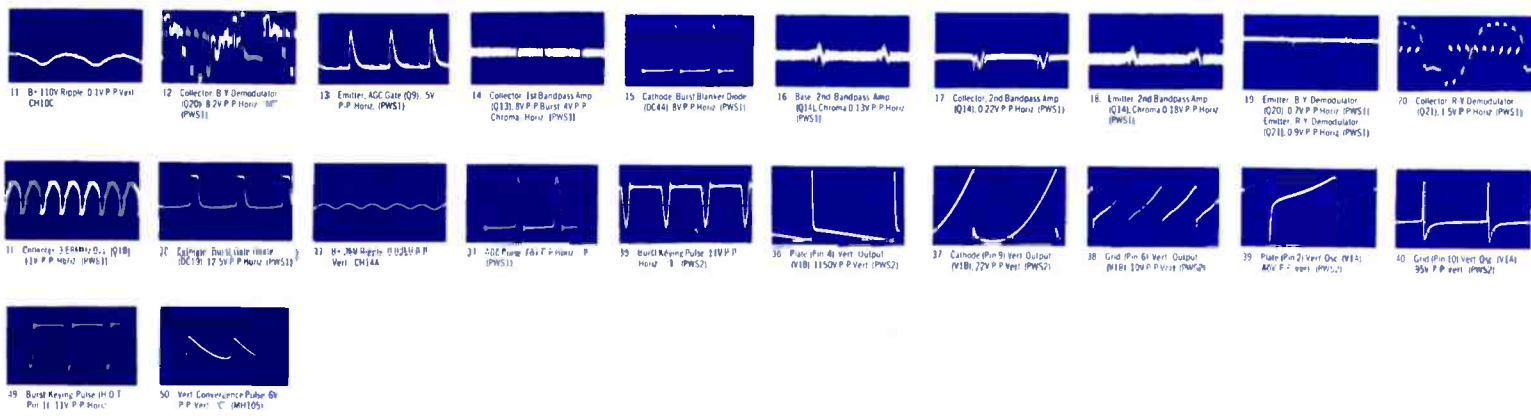
C706A	470 μ f @ 200V	J321064
C706B	330 μ f @ 200V, Electrolytic	
C706C	47 μ f @ 250V	
R132	500n, Pot., Sub. contrast	TV25523
R135	1K, Pot., Sub. tint	J25614
R136	1K, Pot., Sub. color	J25614
R245	500n, Pot., contrast	J25625
R247	5K, Pot., brightness	J25613
R308	50K, Pot., Volume (slide)	J25631
R636	15M, Pot., focus	J25612
R843	1K, Pot., tint	J25617
R844	1K, Pot., color	J25626
DY601	coil, deflection yoke	J611126
T301	x-former, audio output	J11421
T502	x-former, side pinchusion	J11420
T603	x-former, horiz. output	J11417
T701	x-former, power	J11418
T802	x-former, power choke	J11429
F701	fuse, 4a pigtail (slo blo) tuner, VHF	315004 J35428

VHF TUNER ASSEMBLY

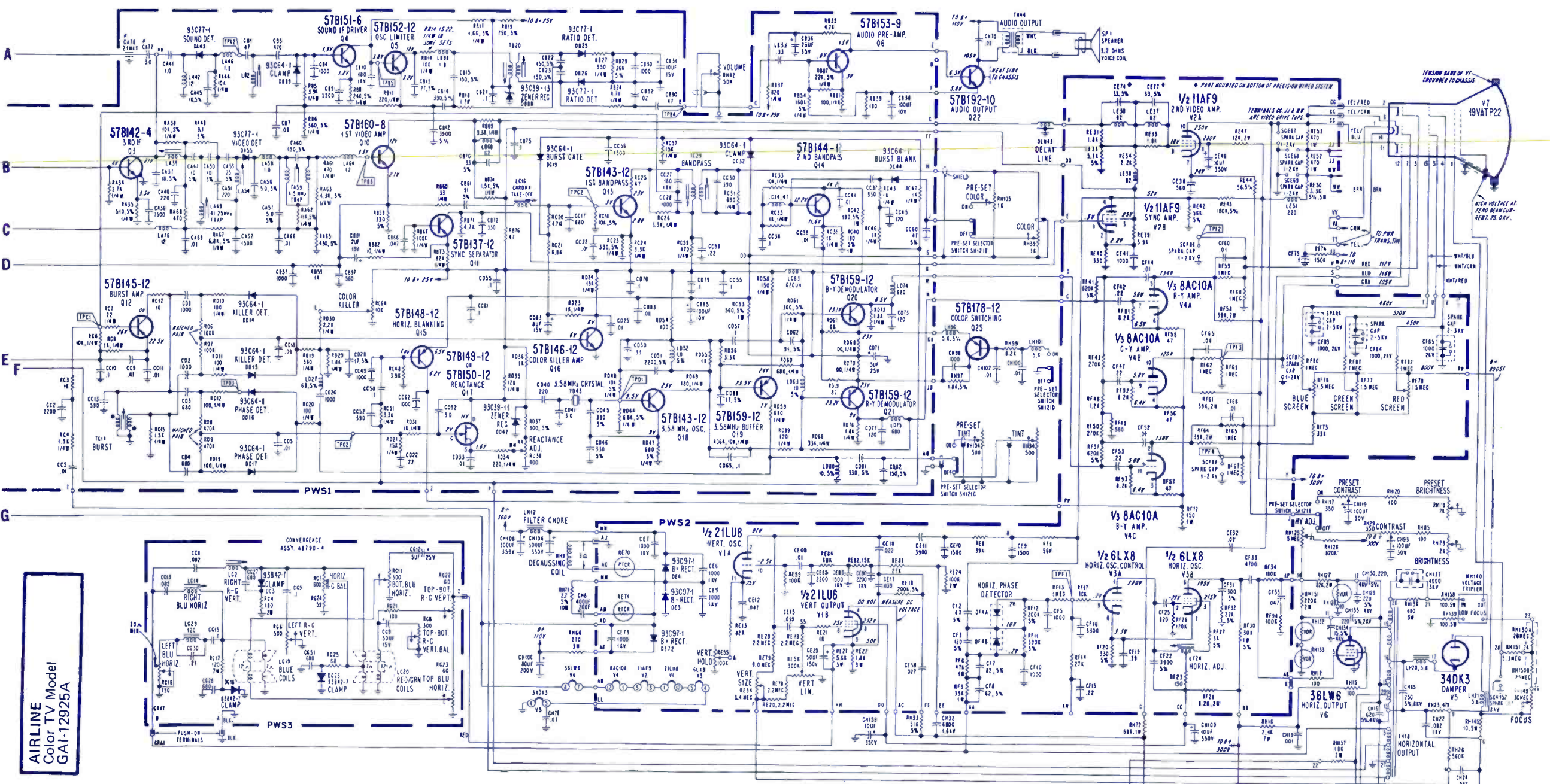


AIRLINE
Color TV Model
GEN-12985A

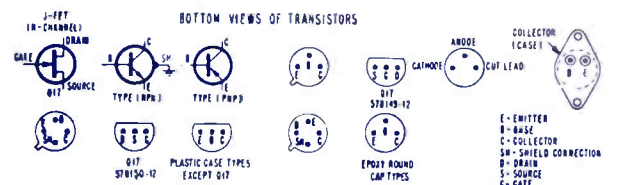




SYMBOL	DESCRIPTION	AIRLINE PART NO.
CH10A, B, C, D	300µf/350v, 300µf/350v, 80µf/200v, 10µf/350v elect	67A15-415
CH14A, B	2000µf/40v, 2000µf/40v elect	67A15-413
RH150A, B	bleeder focus module	61A71-1
RA82	2K AGC delay	75A101-31
RA83	2K AGC	75A101-31
RC64	10K color kill	75A101-18
RE54	3.4M vert size	
RE55	100K vert hold	75A95-18
RE56	300K vert lin	
RH28	2K brite	75A140-25
RH29	350n contrast	75A140-26
RH39	1K color	75A175-12
RH42	50K vol W/SH41	75A140-31
RH125	5M high volt adj	75A135-57
RH149	30M focus adj	75A108-8
LC16	coil chroma take-off	72A329-1
LD52	coil 1µh, 3.58MHz output	73A55-37
LF24	coil horiz adj	94A351-1
MH57	deflect yoke	94A571-2
TA59	x-former 4.5MHz trap	72A218-7
TB20	x-former ratio detect	72A318-1
TC14	x-former burst	72A325-3
TH2	x-former line choke	73A31-16
TH4	x-former power	80A108-14
TH8	x-former horiz output	79A169-3
TH44	x-former audio output	79A141-4
TH73	x-former vert output	79A165-1
FH5	fuse 225a chemical	84A28-12
FH27	fuse 2.25a chemical tuner VHF	84A28-16
		94A463-2



AIRLINE
Color TV Model
GAI-12925A



NOTES: UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, 10%, 1/2 WATT, CAPACITANCE VALUES 1% OR HIGHER ARE IN P.F. CAPACITANCE VALUES LESS THAN 1 µF ARE IN MICROFARADS. RESISTANCE VALUES ARE IN OHMS UNLESS OTHERWISE SPECIFIED. WAVEFORMS INDICATE CYCLES PER SECOND. NO VOLTAGES ARE MEASURED WITH V.T.M. PLACED BETWEEN POINTS INDICATED BY CHASSIS GROUND, LINE VOLTAGE SET AT 100V AC AT ALL CONDITIONS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE MEASUREMENTS MAY VARY WITHOUT SIGNAL, WITH V.T.M. SET AT AN INFER CHANNEL. VOLTAGES SHOWN IN BRACKETS 1/2 ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

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 OR DAMAGE TO TEST EQUIPMENT.

TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE OR DISCONNECTED FROM CHASSIS GROUND. DO NOT TAP SET OR WITH TRANSISTORS, TUBES OR LEADS REMOVED OR UNSOLDERED, DO NOT ARC AND AVOID LEAD TO CHASSIS GROUND. DISCONNECT PRO WIRE ONLY TO PICTURE TUBE OR SAC 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 DRAINER FOR RESISTANCE MEASUREMENTS, USE V.T.M. OR A HIGH DANCE OR METER.

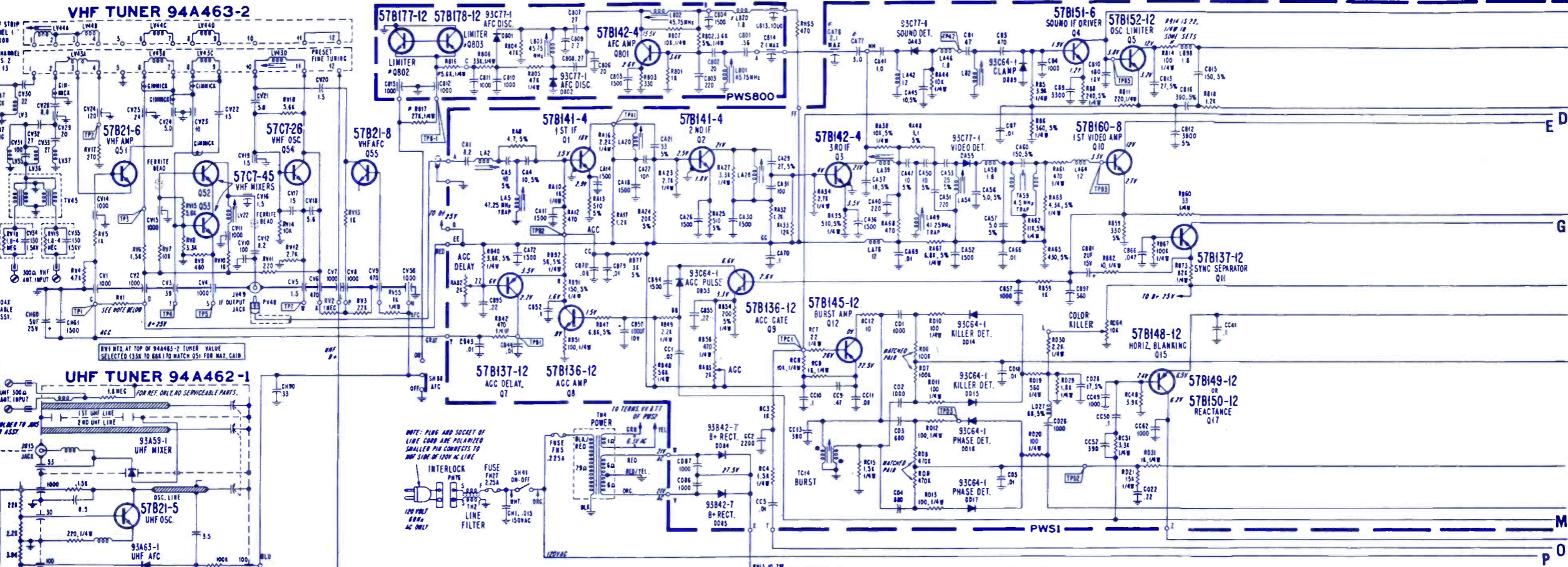
RUN CHANGES: RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LOWER RUN CHANGES.

STRINGS: IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

WAVEFORMS: IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.

AIRLINE

Color TV Model
GAI-12915A



NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, KW, MW, OR μ W; CAPACITANCE VALUES 1 OR HIGHER ARE IN PF; CAPACITANCE VALUES LESS THAN 1 ARE IN PPF; INDUCTANCE VALUES ARE IN MH. ∞ INDICATES CHASSIS GROUND. μ INDICATES MICROSECONDS PER SECOND. NO VOLTAGES ARE MEASURED WITH μ VM. PLACED BETWEEN POINTS INDICATED IN CHASSIS GROUND. LINE VOLTAGE SET AT 100V AC AT ALL COMPONENTS SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE MEASUREMENTS ARE TAKEN WITHOUT SIGNAL, WITH VHF TUNER SET AT UNDESIRABLE CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

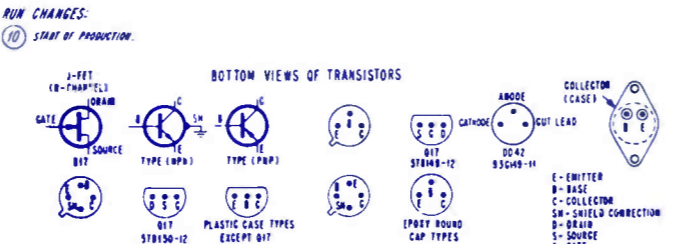
WARNING: CHASSIS IS CONNECTED DIRECTLY TO ONE SIDE OF AC POWER LINE. USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ACCIDENTAL ELECTRICAL SHOCK OR DAMAGE TO TEST EQUIPMENT.

TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT APPLY BIAS CHASSIS WITH μ VM. 100T BAG DISCONNECTED FROM CHASSIS GROUND. NO HOT IRON SET OR IRON TRANSDUCER IS TO BE USED ON LEADS. HEATED OR WELDED IRON TO LEAD TO CHASSIS GROUND. MISCHARGE AND AVOID ONLY TO PICTURE TUBE OR ON GND (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 DRAINER FOR RESISTANCE MEASUREMENT. USE μ VM ON 0-100 RANGE OF HIGHER.

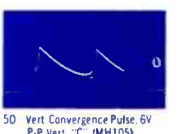
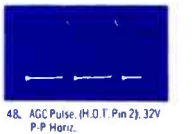
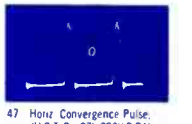
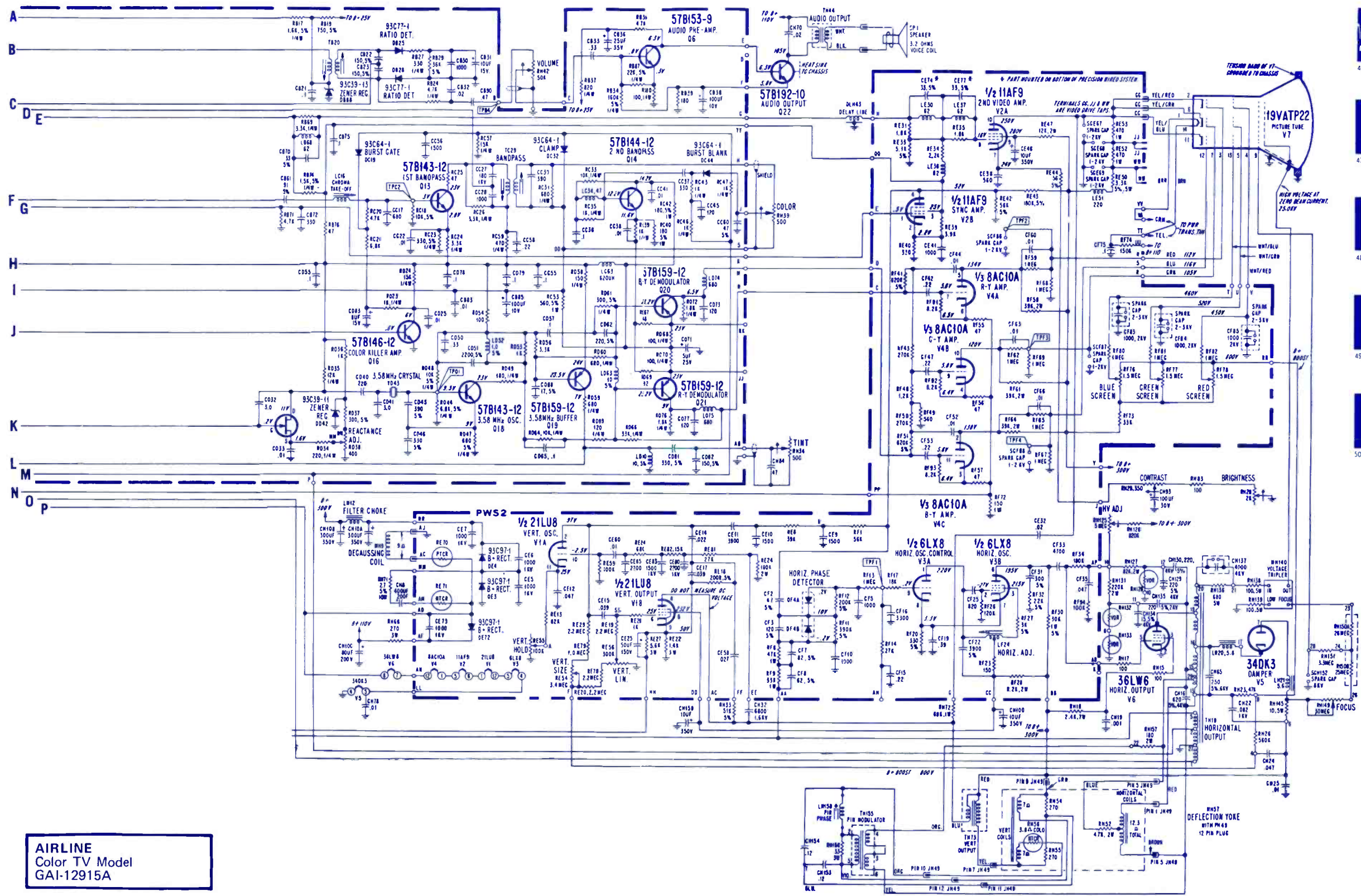
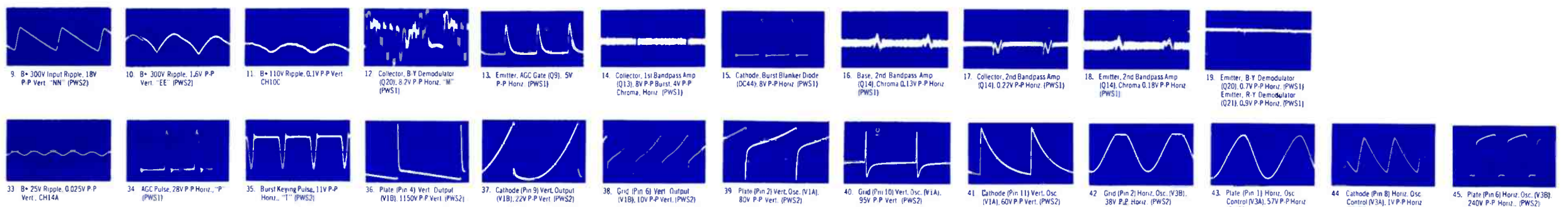
RESISTANCE: RESISTANCE INDICATED IN OHMS, KW, MW, OR μ W. USE ALL LOWER RUN CHANGES.

SYMBOLS: IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

READING: IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.



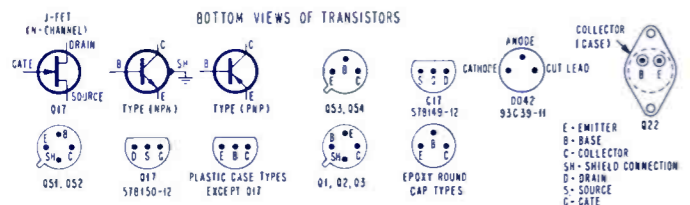
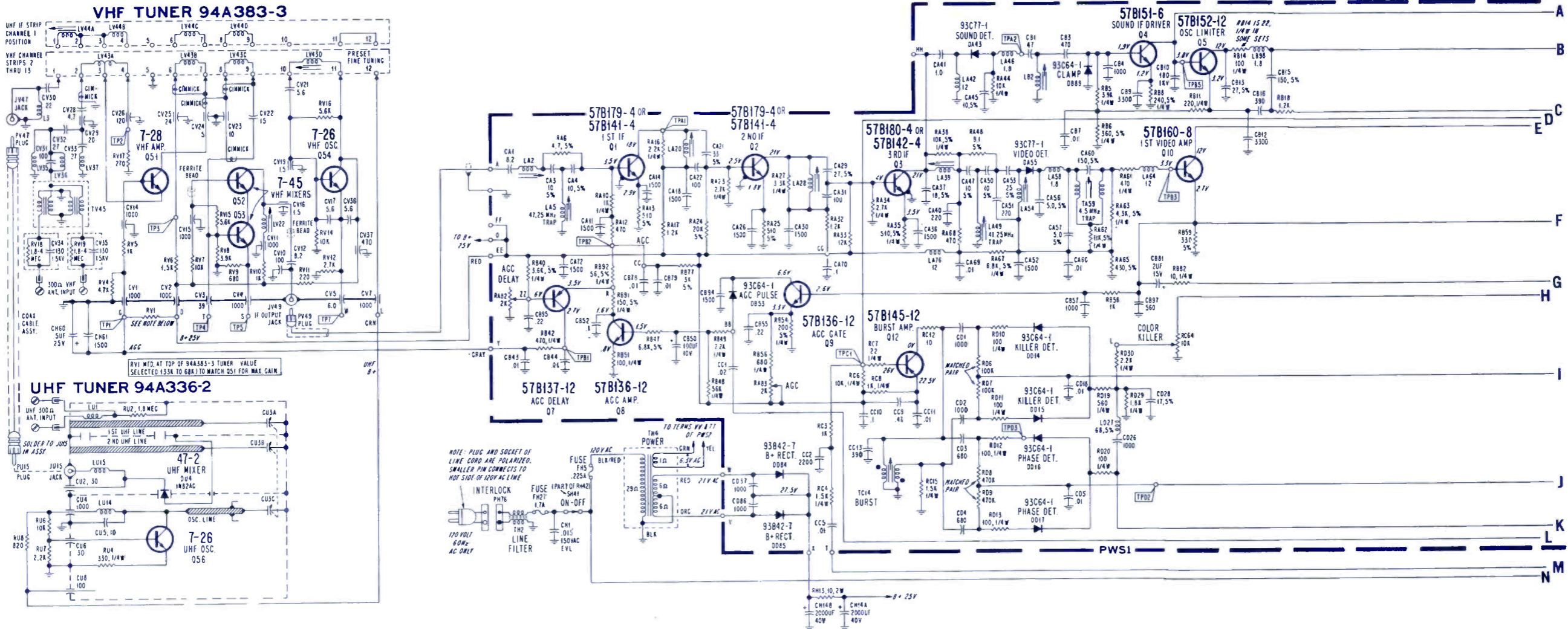
SYMBOL	DESCRIPTION	AIRLINE PART NO.
CH10A, B	RH29—350 ohm contrast	75A198-3
C, D—300mf/350v, 300mf/350v, 80mf/200v, 10mf/350v electro	RH34—500 ohm tint	75A198-2
CH14A, B—2000mf/40v, 2000mf/40v electro	RH39—500 ohm color	75A198-2
RH150A, B—bleeder focus module	RH42—50K volume w/SH41	75A140-21
RA82—2K AGC delay	RH125—5M high voltage adj	75A135-57
RA83—2K AGC	RH149—30M focus adj	75A108-8
RC64—10K color kill	LA5—coil 47.25MHz trap	72A316-12
RE54—3.4M vert size	LC16—coil chroma take off	72A329-1
RE55—100K vert hold	LD34—coil 47 UH 2nd bandpass	73A55-28
RE56—300K vert lin	LD52—coil 1 UH 3.58MHz output	73A55-8
	LD63—coil 10 UH demod	73A55-8
	LF24—coil horiz adj	94A351-1
	MH57—deflect yoke inc. PH49	94A571-2
	TA59—xformer 4.5MHz trap	72A216-7
	TB20—xformer ratio detect	72A318-2
	TC14—xformer burst	72A325-3
	TC29—xformer bandpass	72A327-1
	TH2—xformer line choke	73A31-16
	TH4—xformer power	80A108-14
	TH18—xformer horiz output	79A169-3
	TH44—xformer audio output	79A141-4
	TD73—xformer vert output	79A165-1
	FH5—fuse .225a chemical	84A28-12
	FH27—fuse 2.25a chemical	84A28-16
		94A462-1
		94A463-2



AIRLINE
Color TV Model
GAI-12915A

AIRLINE

Color TV Model
GAI-12103B



NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2WATT; CAPACITANCE VALUES 1 OR HIGHER ARE IN PF.; CAPACITANCE VALUES LESS THAN 1 ARE IN P.F.; INDUCTANCE VALUES ARE IN MH. ∞ INDICATES CHASSIS GROUND. Hz INDICATES 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 UN-USED CHANNEL. VOLTAGES SHOWN IN BRACKETS () ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

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.

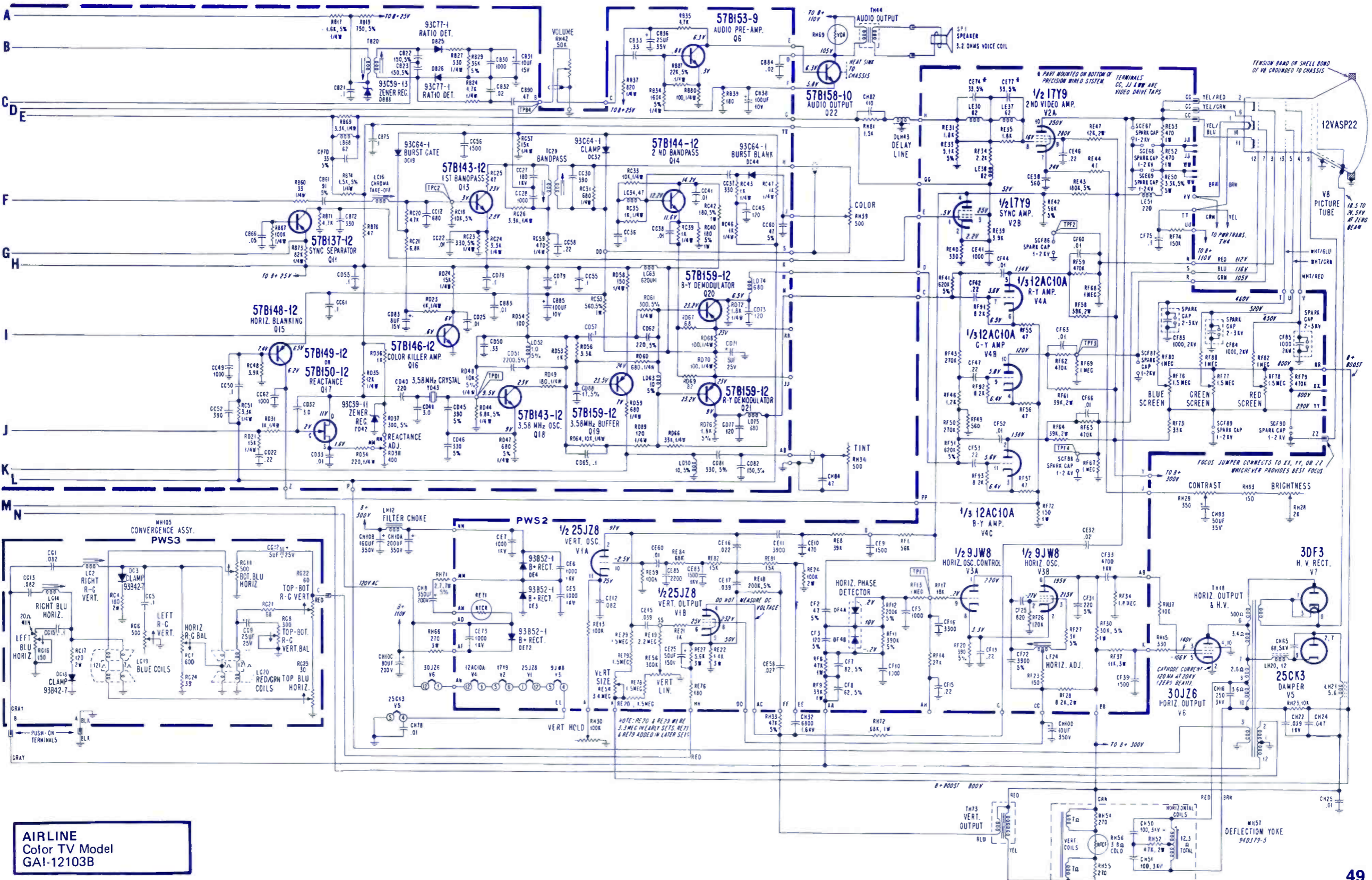
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DAG DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR (S), TUBES (S) OR LEADS REMOVED OR UNSOLDERED. DO NOT ARC 2ND ANODE LEAD TO CHASSIS GROUND. DISCHARGE 2ND ANODE ONLY TO PICTURE TUBE DAG 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 OHMMETER FOR RESISTANCE MEASUREMENT. USE VTVM ON R100 RANGE OR HIGHER.

TEST POINTS: SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

MEASUREMENTS: IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.

SYMBOL	DESCRIPTION	AIRLINE PART NO.
CH10A, B,		
C, D—	200µf/350v, 160µf/350v, 80µf/200v 10µf/350v elect.	67A15-403
CH14A, B—	2000µf/40v, 2000µf/40v, elect	67A15-413
RE71—	therm NTC	61A57-6
RH69—	VDR	61A46-7
RA82—	2K AGC delay	75A101-31
RA83—	2K AGC	75A101-31
RC64—	10K color kill	75A101-18
RE54—	3.4 M vert size	75A107-4
RE56—	300K vert lin	75A107-4
RF76—	1.5M blue screen	75A95-17
RF77—	1.5M green screen	75A95-17
RF78—	1.5M red screen	75A95-17
RH28—	2K brite	75A140-1
RH29—	350Ω contrast	75A140-3
RH30—	100K vert hold.	75A140-2
RH34—	500Ω tint	75A141-3
RH39—	500Ω color	75A141-3
SH41—	50K on/off volume	75A141-7

LA5—	coil 47.25MHz trap	72A316-12
LA49—	coil 41.25MHz trap	72A316-12
LC16—	coil chroma take-off	72A329-1
LC34—	coil 47µh 2nd band pass	73A55-28
LD52—	coil 1µh 3.58MHz output	73A55-37
LF24—	coil horiz adj	94A351-1
LH12—	coil filter choke	74A30-5
MH57—	deflect yoke	94A379-5
TA59—	x-former 4.5MHz trap	72A216-7
TB20—	x-former ratio detect	72A318-1
TC14—	x-former burst	72A325-3
TC29—	x-former bandpass	72A327-1
TH2—	x-former line choke	73A31-16
TH4—	x-former power	80A108-9
TH18—	x-former horiz output	79A158-2
TH44—	x-former audio output	79A141-1
TH73—	x-former vert output	74A131-1
	fuse .225a chemical	84A28-12
	fuse 1.7a chemical	84A28-6
	tuner VHF	94A383-3
	tuner UHF	94A383-2



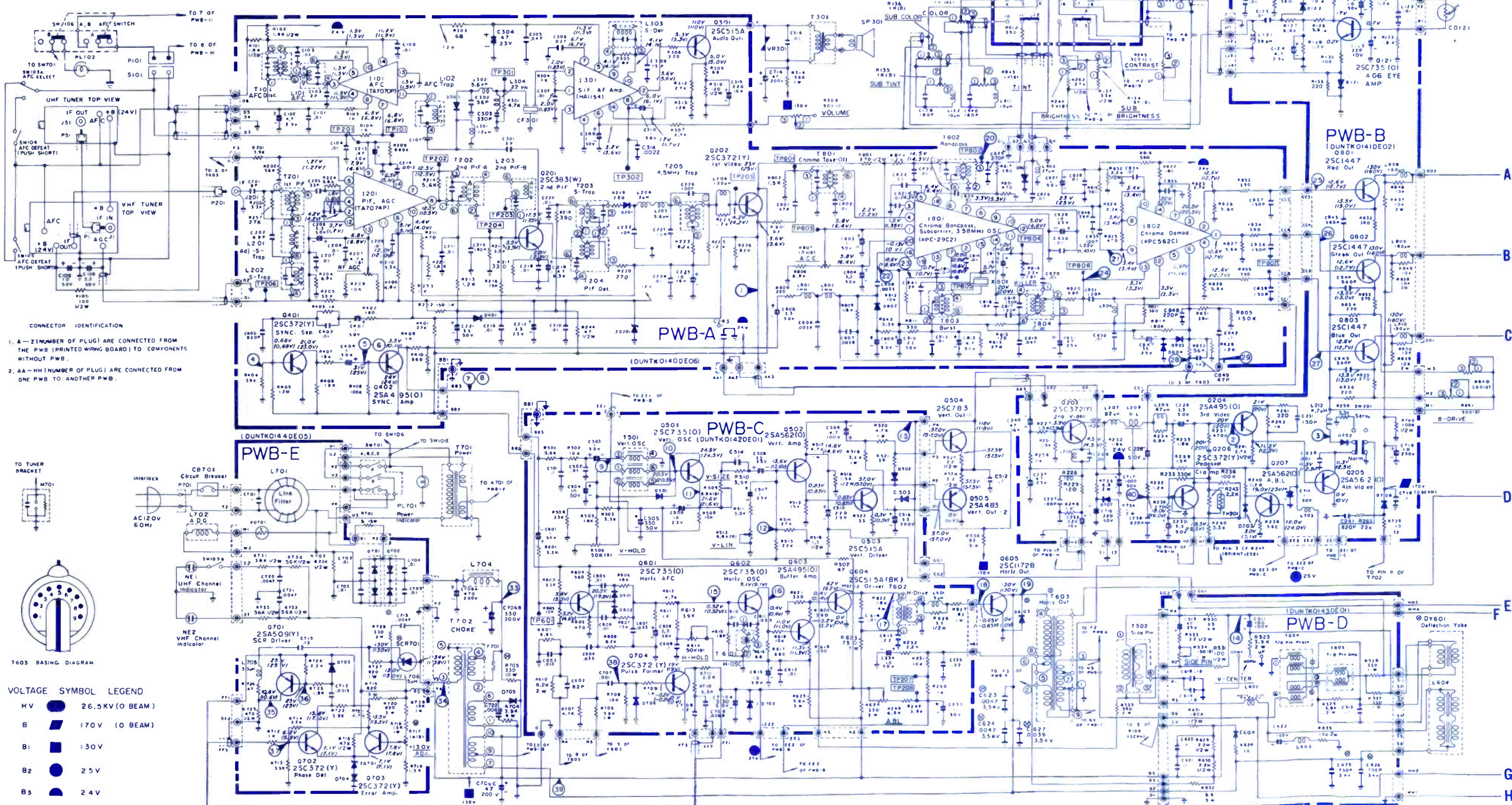
AIRLINE
Color TV Model
GAI-12103B

AIRLINE

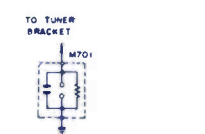
Color TV Model
GEN 12985B

SYMBOL	DESCRIPTION	AIRLINE PART NO.
R106	1M pot red screen	J25616
R107	1M pot green screen	J25616
R108	1M pot blue screen	J25616
R132	500 n, pot sub contrast	TV25523
R134	5K pot sub brite	J25615
R135	1K pot sub tint	J25614
R136	1K pot sub color	J25614
R245	500 n, pot contrast	J25625
R247	5K pot brite	J25613
R308	50K pot volume slide	J25631
R636	15M pot focus	J25612
R840	500 n, pot R/G drive	TV25523
R843	1K pot tint	J25617
R844	1K pot color	J25626
R614	50K, horiz hold	J25624

R512	6.8K vert lin	J25622
DY601	coil deflect yoke assm. incl. L604 & JD-S	J611126
T301	x-former audio output	J11421
T502	x-former side pinchion	J11420
T603	x-former horiz output	J11417
T701	x-former power	J11418
T702	x-former power choke	J11429
T602	x-former, horiz osc	J11422
M601	HV recifier module incl. CRT	J34150
M701	capristor	J34151
VR301	voltage dependent resist	J241238
CB701	circuit breaker	J18509
F701	fuse, 4a pigtail slo blo	J315004
	tuner, UHF w/indicator mechanism	J35431
	tuner, VHF	J35428



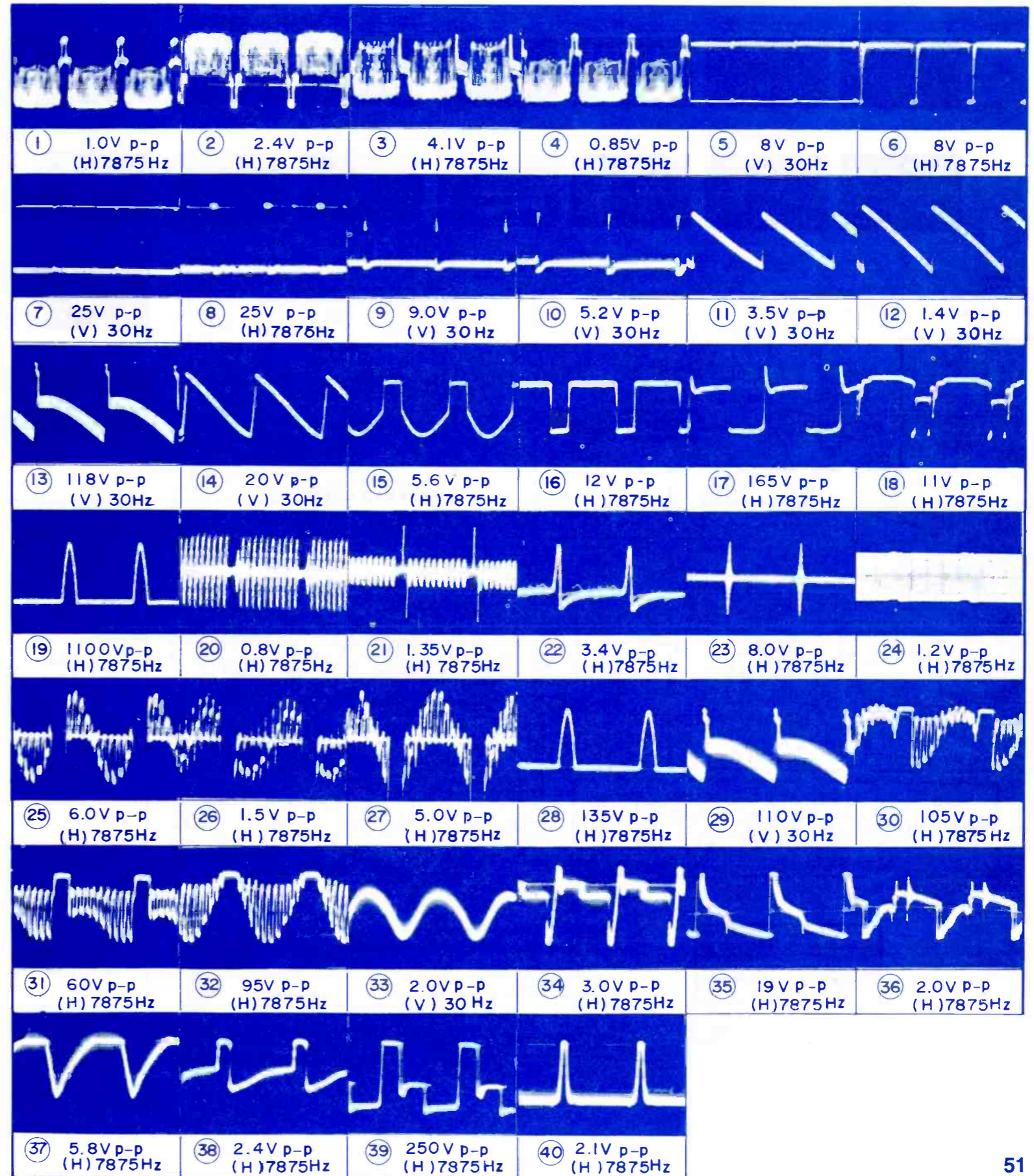
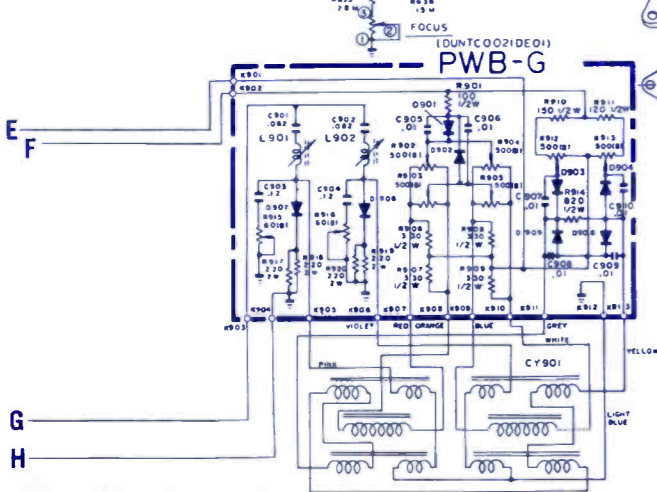
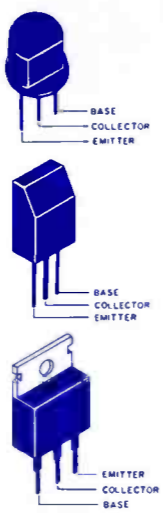
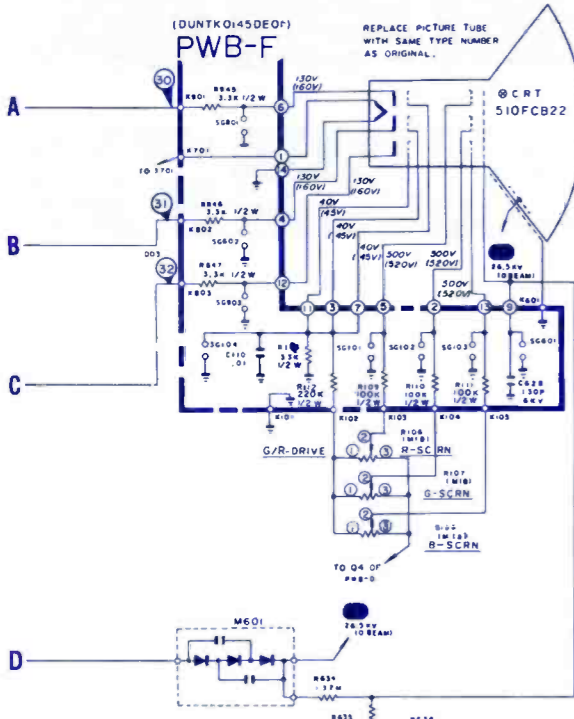
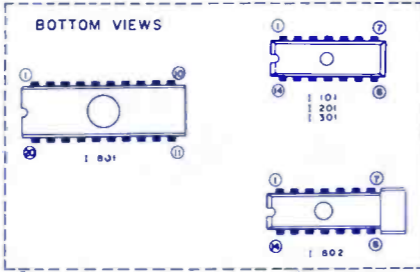
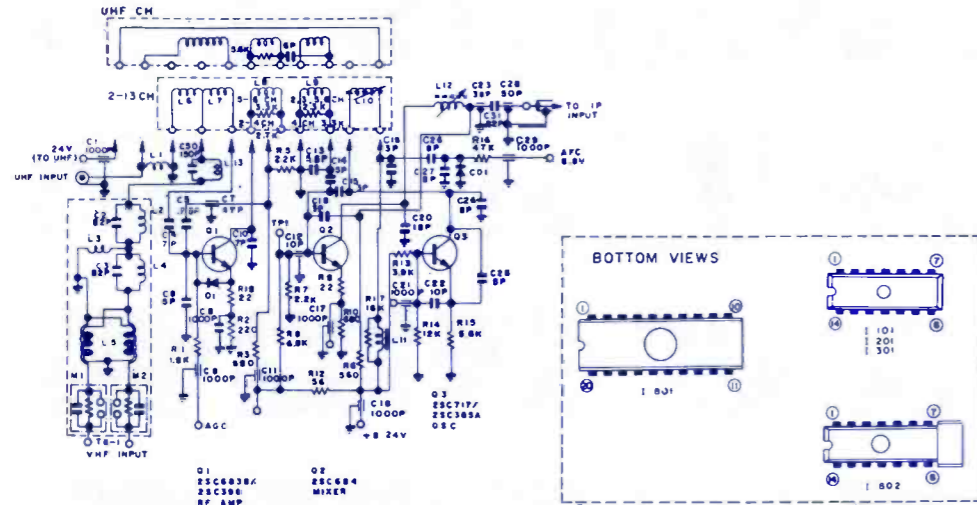
CONNECTOR IDENTIFICATION
 1. A-Z (NUMBER OF PLUG) IS CONNECTED FROM THE PWB (PRINTED WIRING BOARD) TO COMPONENTS WITHOUT PWB.
 2. AA-NH (NUMBER OF PLUG) ARE CONNECTED FROM ONE PWB TO ANOTHER PWB.



VOLTAGE SYMBOL LEGEND

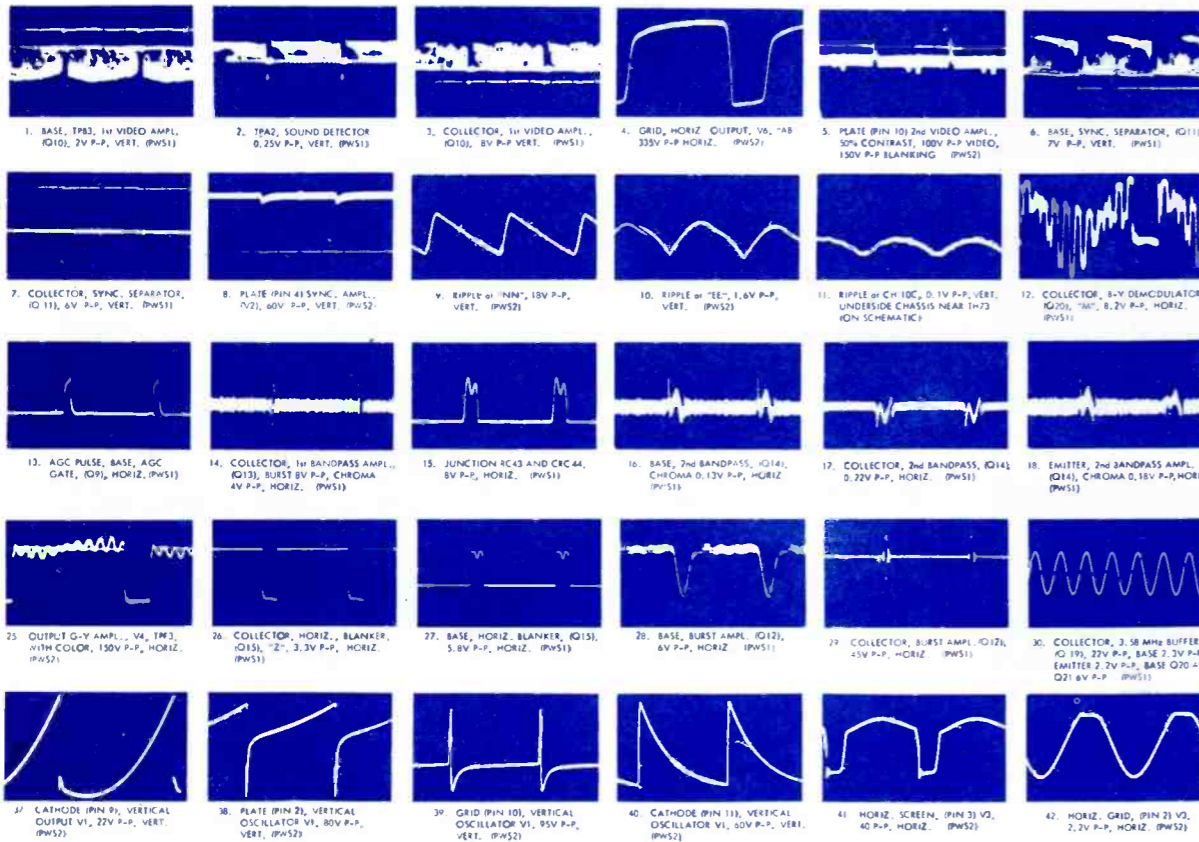
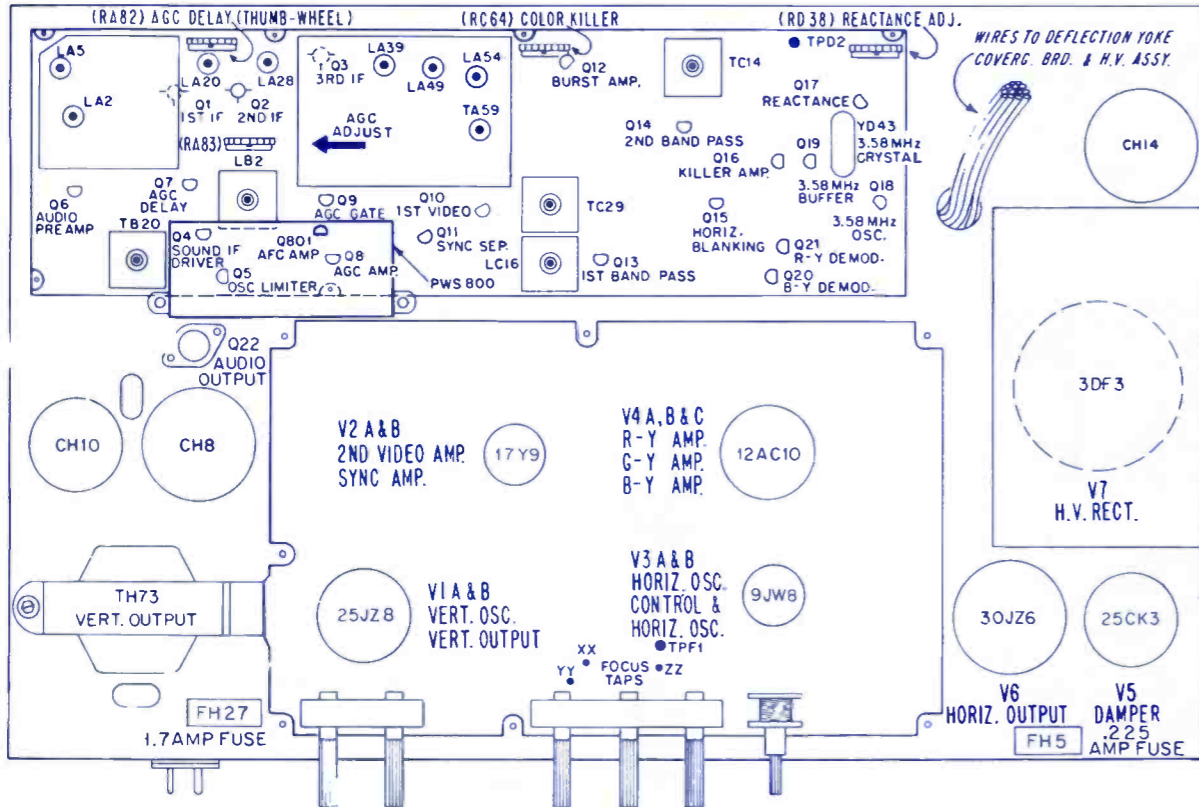
HV	26.5KV (O BEAM)
B	170V (O BEAM)
B1	130V
B2	2.5V
B3	2.4V

VHF TUNER ASSEMBLY



AIRLINE Color TV Model GEN 12985B

INSTALLATION AND SERVICE INSTRUCTIONS

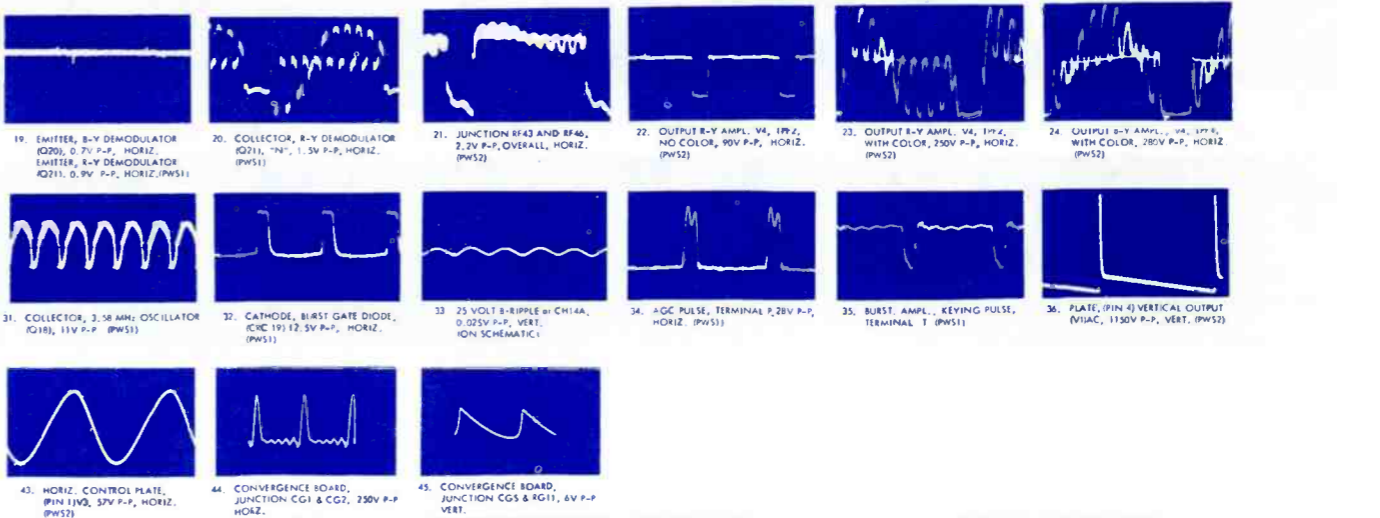
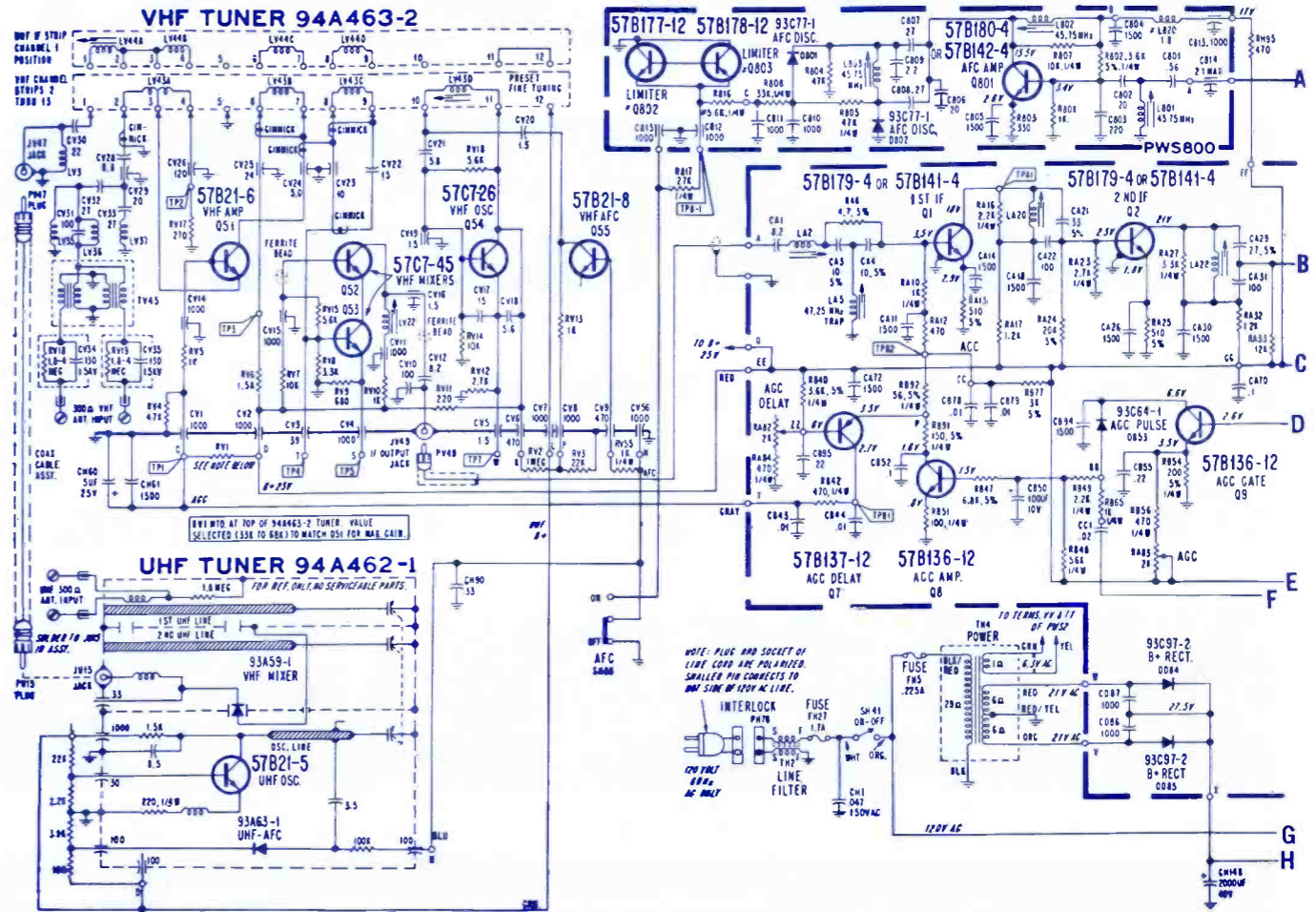


RUN CHANGES

Start of production

NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10M, 1/2WATT; CAPACITANCE VALUES 1 OR HIGHER ARE IN PF; CAPACITANCE VALUES LESS THAN 1 ARE IN UF. -∞ INDICATES CHASSIS GROUND; ∞ INDICATES OPEN CIRCUIT; C PER SECOND.
AC VOLTAGES ARE MEASURED WITH VIVM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND, LINE VOLTAGE SET AT 120V AC & ALL COMPONENTS 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.
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.
TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DISCONNECTED FROM CHASSIS GROUND. DO NOT TUNE SET OR WITH TRANSISTOR (S) TUNE (S) OR LEADS HUNG UP UNDISCONNECTED. DO NOT APPLY 240 VOLT AC TO CHASSIS GROUND. DISCHARGE 2ND ANODE BIAS TO PICTURE TUBE BAG OR GND. 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 UNORDINARY DIAMETER FOR RESISTANCE MEASUREMENT, USE VIVM OR R1000 RANGE OR HIGHER.
 (1) RUN NUMBER INDICATES CHANGE(S) INCORPORATED AS GIVEN UNDER THAT RUN NUMBER, AS WELL AS ALL LATER RUN CHANGES.
 (2) SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.
 (3) READINGS IDENTIFY WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS & COMPONENT NOT MOUNTED OR PRECISION WIRED SYSTEM.

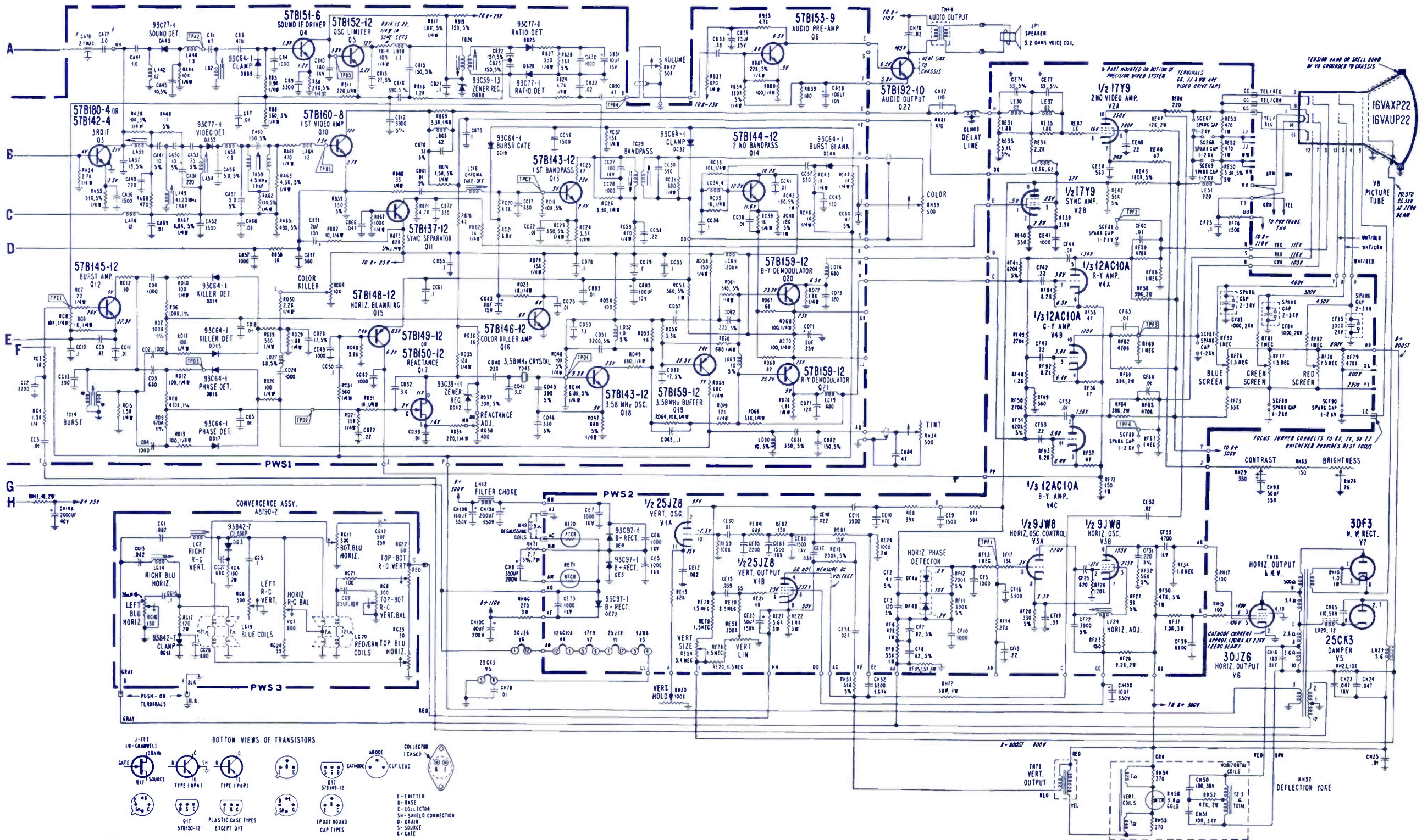
SAFETY NOTICE
 THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



SYMBOL DESCRIPTION AIRLINE PART NO.

CH10A,B,C,D	— 200mf/350v, 100mf/350v, 80mf/200v, 10mf/350v, elect	67A15-403
CH14A,B	— 200mf/40v, 2000mf/40v, elect	67A15-413
RA82	— 2K, AGC delay	75A101-31
RA83	— 2K, AGC	75A101-31
RC64	— 10K, color kill	75A101-18
RE54	— 3.4M, vert size	
RE56	— 300K, vert lin	75A107-4
RF76	— 1.5M, blue screen	
RF77	— 1.5M, green screen	75A95-17
RF78	— 1.6M, red screen	
RH28	— 2K, briteness	75A140-25
RH29	— 350 ohm, contrast	75A140-26
RH30	— 100K, vert hold	75A140-27
RH34	— 500 ohm, tint	75A206-6
RH39	— 500 ohm, color	75A206-6

RH42	— 50K, vol w/on-off switch	75A206-5
LB2	— coil, 4.5MHz	72A317-1
LC16	— coil, chroma takeoff	72A329-1
LF24	— coil, horiz adjust	94A351-1
MH57	— deflect yoke	94A379-13
TA59	— xformer, 4.5MHz trap	72A216-7
TB20	— xformer, ratio detect	72A318-1
TC14	— xformer, burst	72A325-3
TC29	— xformer, bandpass	72A327-1
TH4	— xformer, power	80A108-14
TH18	— xformer, horiz output	79A158-3
TH44	— xformer, audio output	79A141-4
TH73	— xformer, vert output	74A165-1
FH5	— fuse, 225a (chemical)	84A28-12
FH27	— fuse, 1.7a (chemical)	84A28-6
	tuner, VHF	94A463-2
	tuner, UHF	94A462-1



AIRLINE
Color TV Model
GAI-12635A

AIRLINE

Color TV Model
GAI-12335A

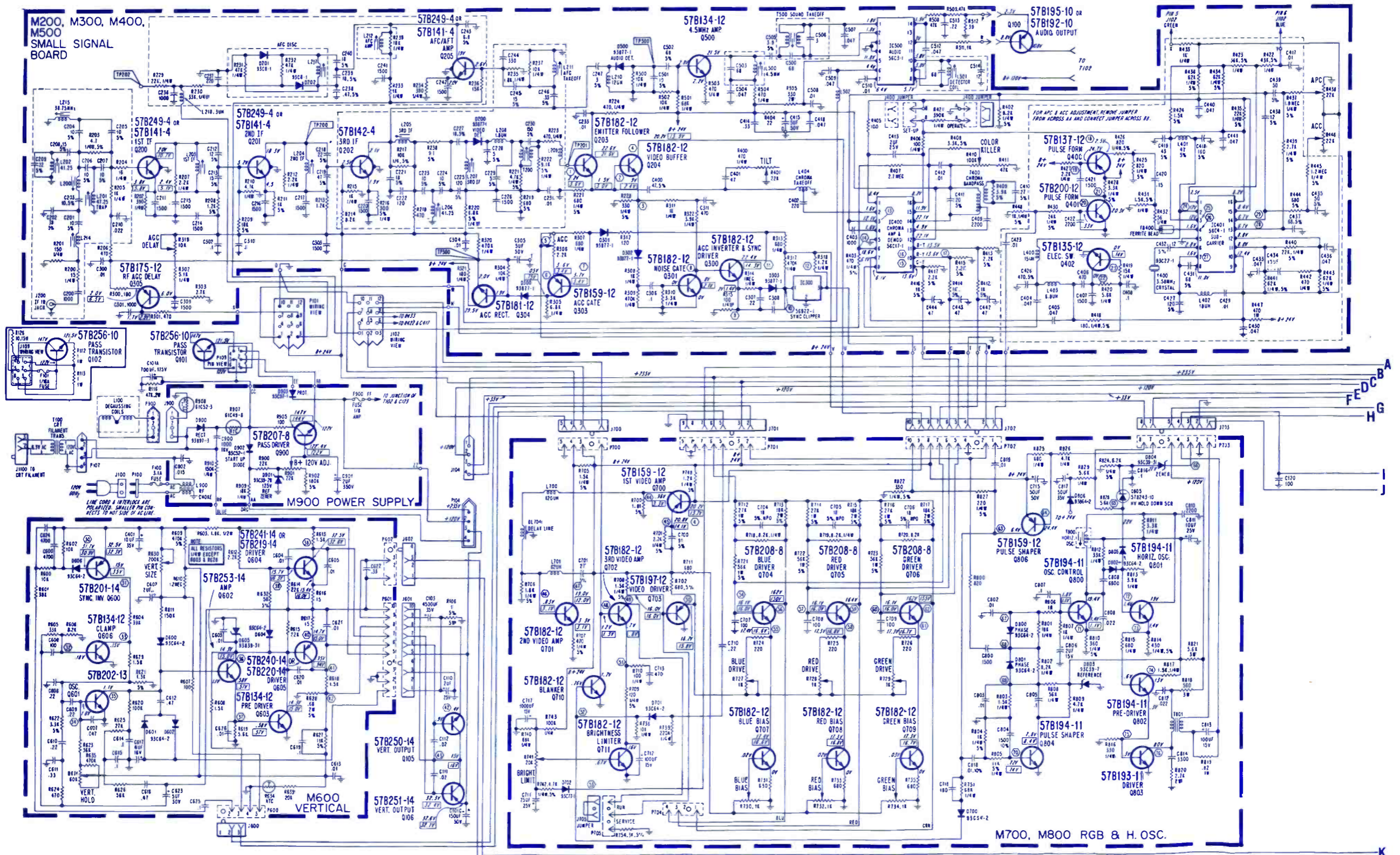
ELECTRICAL SPECIFICATIONS

SYMBOL	DESCRIPTION	AIRLINE PART NO.
R306	— 2.2K AGC	75A199-1
R319	— 10K AGC delay	75A199-2
R401	— 22K, tilt	75A199-3
R410	— 100K, color kill	75A199-4
L404	— coil, chroma take-off	73A135-3
L500	— coil, sound quad	72A329-4
L501	— coil, sound detect	72A329-4

T200	— xformer, 4.5MHz trap	72A216-8
T400	— xformer, chroma bandpass	73A137-1
T500	— xformer, 4.5MHz sound take-off	72A318-6
R741	— 20K, brite limit	75A101-47
T800	— xformer, horiz osc adj	94A351-3
R630	— 200K, vert size	75A101-28
R631	— 60K, vert hold	75A191-2
1C1000	— 1C, +24v regulator	56A21-1
F1000	— fuse, 1.5a	36201.5

POWER INPUT	120 Volts, 60 Hz
POWER CONSUMPTION	150 Watts Total
PICTURE SIZE	Approximately 90 sq. in.
FOCUS LENS	Bipotential
SWEEP DEFLECTION	Magnetic
CONVERGENCE	Magnetic
PIN CUSHION CORRECTION	Dynamic
AUDIO POWER OUTPUT RATING	2 Watts Max.
SPEAKER	3" x 3", 0.68 oz., Magnet
VOICE COIL IMPEDANCE	3.2 Ohms at 200 Hz
ANTENNA INPUT IMPEDANCE	300 Ohm Balanced

TELEVISION RF FREQUENCY RANGE:	
All 12 VHF Channels	54 MHz to 88 MHz
Any of 70 UHF Channels	and 174 MHz to 216 MHz
INTERMEDIATE FREQUENCIES:	
Picture IF Carrier Frequency	45.75 MHz
Sound IF Carrier Frequency	41.25 MHz
Color Subcarrier Frequency	42.17 MHz (Nominal)



OSCILLOSCOPE WAVEFORM INFORMATION

Oscilloscope waveform patterns shown have been taken at important observation points throughout the television chassis. Voltage given for each waveform observation point is in peak-to-peak voltage.

All waveforms were taken with a wideband scope using a low capacity probe to prevent loading.

Waveforms taken with a standard color bar generator with the Color control set to 100% or normal.

Receiver was adjusted with the AGC control for a 1 volt peak-to-peak waveform at TP201 using the standard color bar generator as the signal source. This corresponds to a 2 volt peak-to-peak

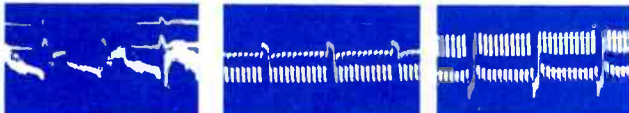
video waveform from an off-the-air station signal. The difference in signal amplitude is due to the lack of luminance information in the color bar signal when switched to the color bar pattern. All receiver controls set for normal picture.

Oscilloscope sweep was set at 30 Hertz or V position for vertical waveforms, and 7.875 Hertz or H position for horizontal and chroma waveforms.

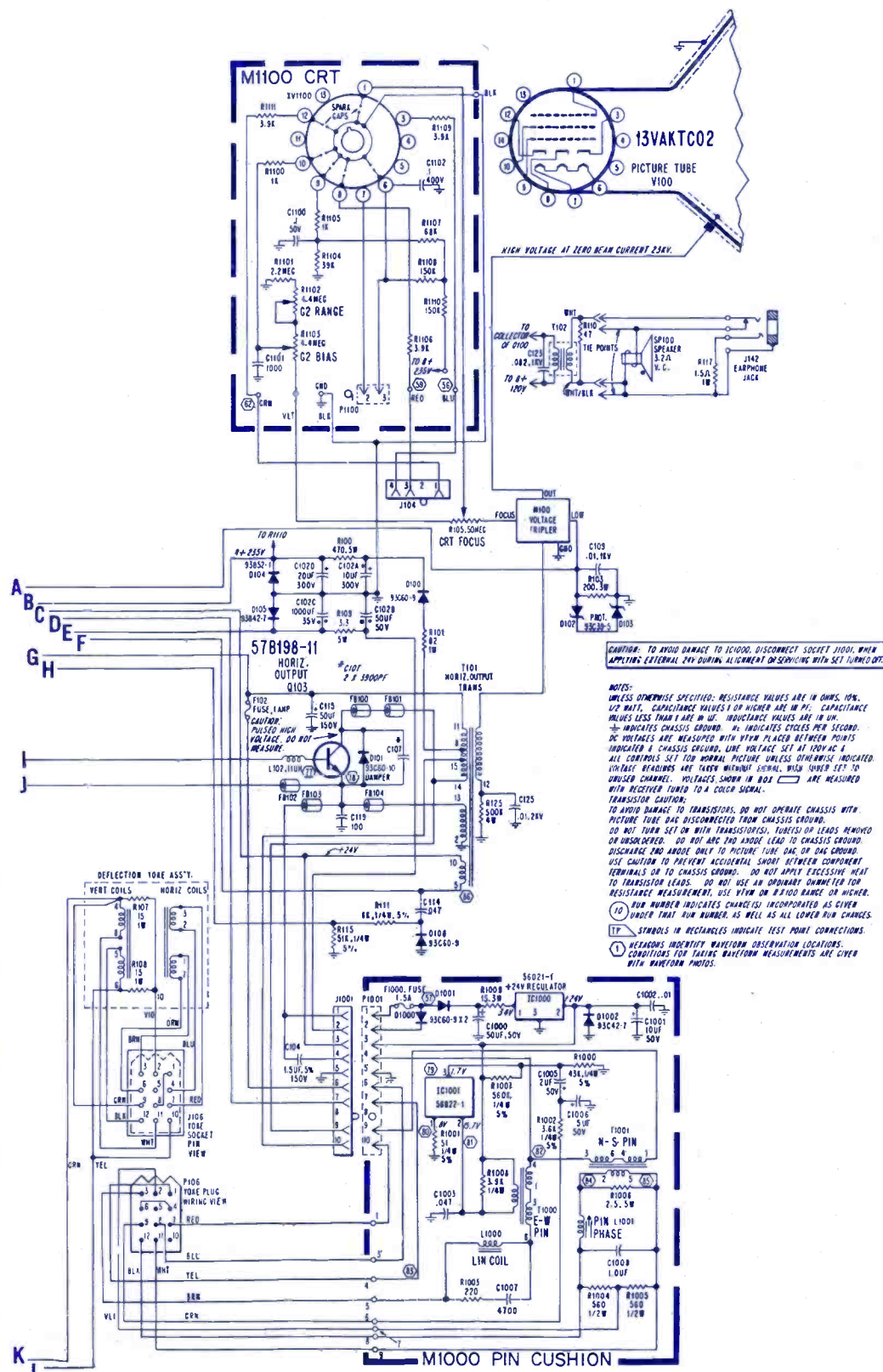
Shape of waveforms should resemble those given, depending upon bandwidth of oscilloscope used. Peak-to-peak voltages may vary, depending on calibration of test equipment, chassis parts tolerances and control settings.

SAFETY NOTICE

THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



1. Q203 Base (TP201), 2V V (station signal)
 1A. Q203 Base (TP201), 1V H (Color Bar Generator signal)
 2. Q204 Base, 0.8V H
 3. Q203 Emitter, 0.8V H
 4. Q204 Collector, 3V H
 Q700 Base, 3V H

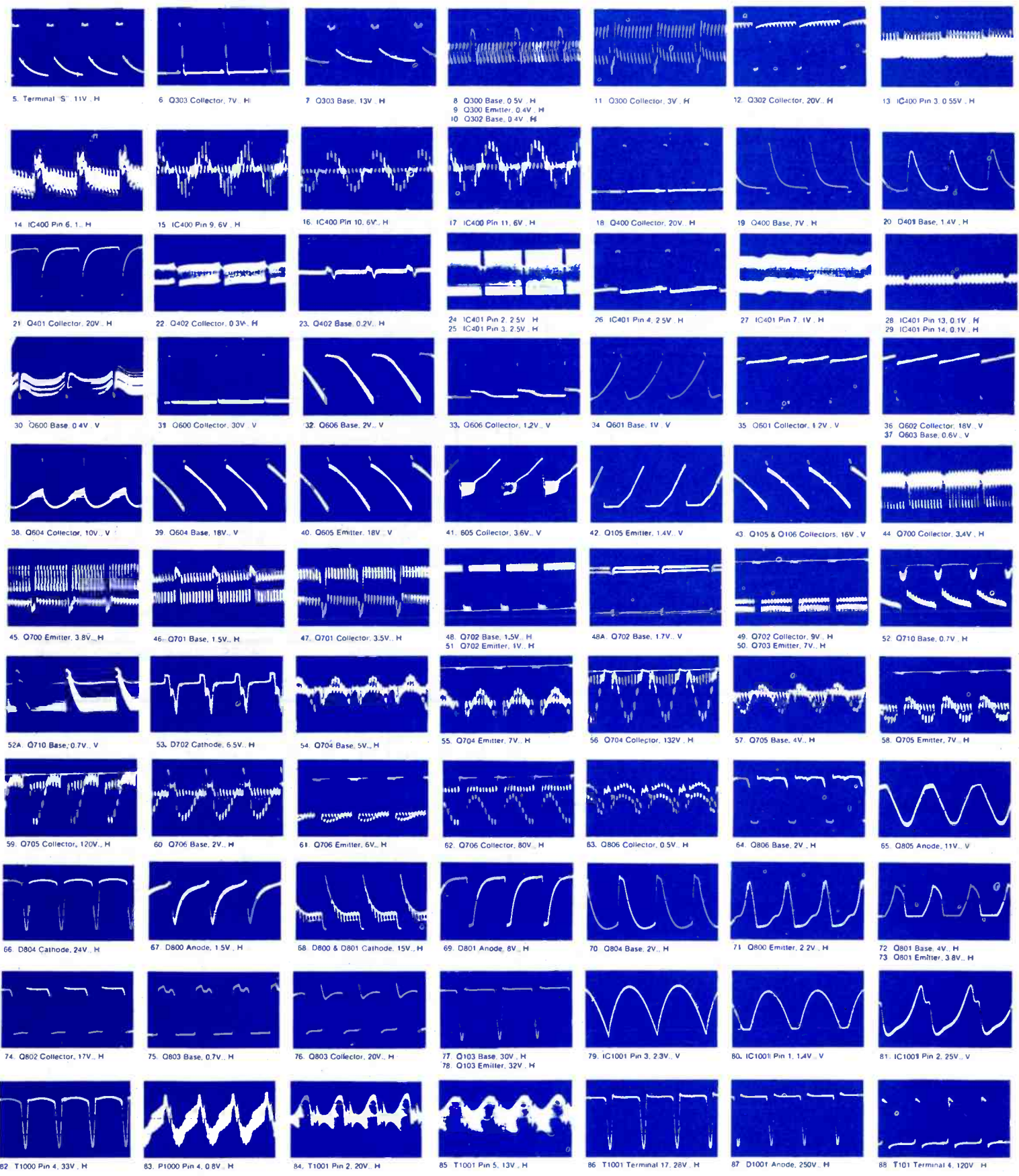


CAUTION: TO AVOID DAMAGE TO IC1000, DISCONNECT SOCKET J1001 WHEN APPLYING EXTERNAL 24V DURING ALIGNMENT OR SERVICING WITH SET TUNED OUT.

NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, 10%, 1/2W. CAPACITANCE VALUES 1 OR HIGHER ARE IN PF; CAPACITANCE VALUES LESS THAN 1 ARE IN UF. INDUCTANCE VALUES ARE IN MH. \square INDICATES CHASSIS GROUND. \square INDICATES CYCLES PER SECOND. DC VOLTAGES ARE MEASURED WITH VTM PLACED BETWEEN POINTS INDICATED & CHASSIS GROUND, LINE VOLTAGE SET AT 120VAC & ALL CONTROLS SET TO NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH SWR SET TO UNUSED CHANNEL. VOLTAGES SHOWN IN BOX \square ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL. TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTORS, TUBES OR LEADS REMOVED OR UNSOLDERED. DO NOT ADD TWO ANODE LEAD TO CHASSIS GROUND. DISCHARGE TWO ANODE ONLY TO PICTURE TUBE OR CHASSIS 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 CHARACTER FOR RESISTANCE MEASUREMENT. USE VTM ON R1100 RANGE OR HIGHER. \square FOR NUMBER INDICATES CHARACTER(S) INCORPORATED AS GIVEN UNDER THAT FOR NUMBER, AS WELL AS ALL LOWER FOR NUMBERS. \square SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS. \square HEXAGONS INDICATE WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOS.

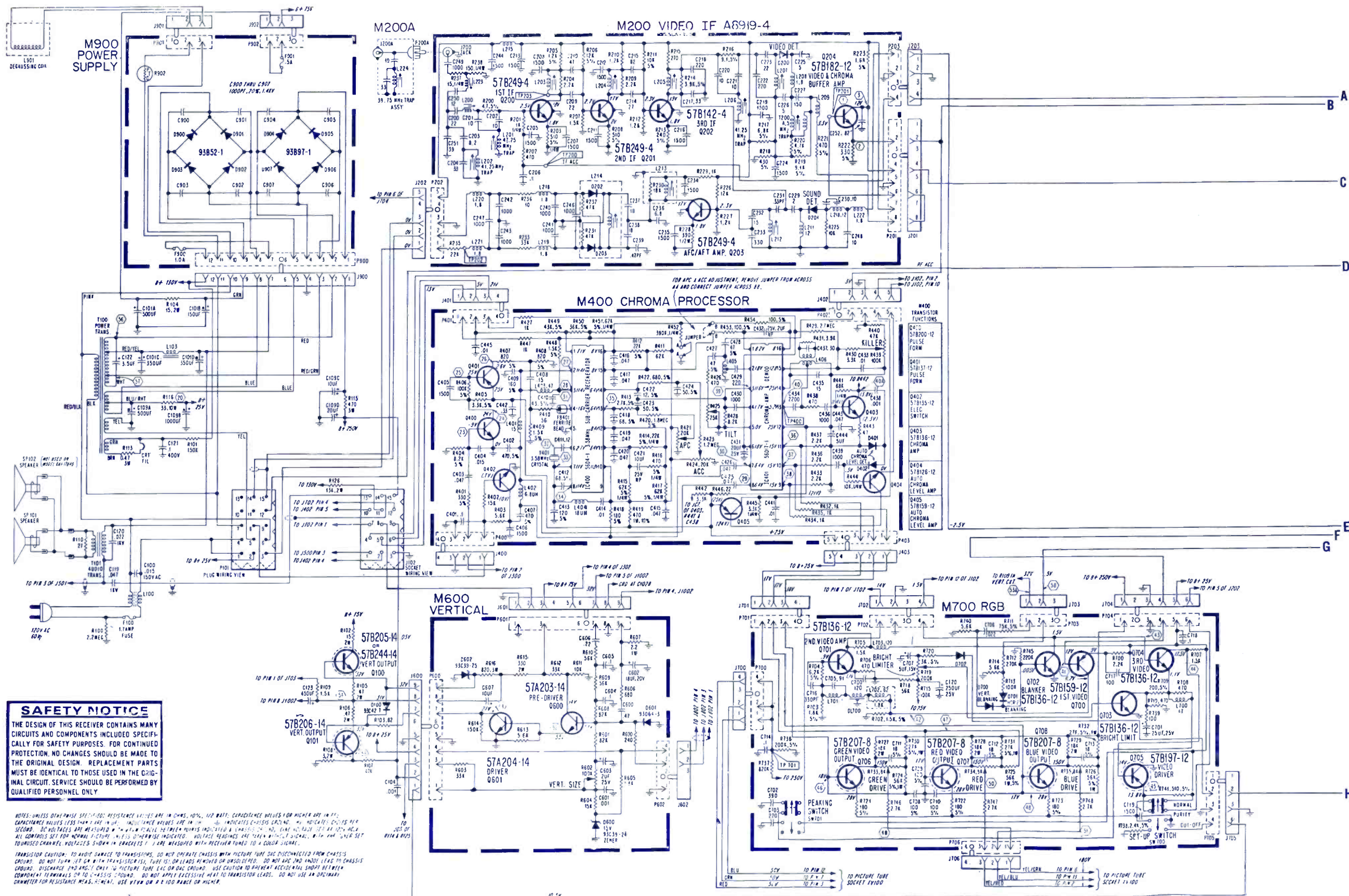
AIRLINE
 Color TV Model
 GAI-12335A

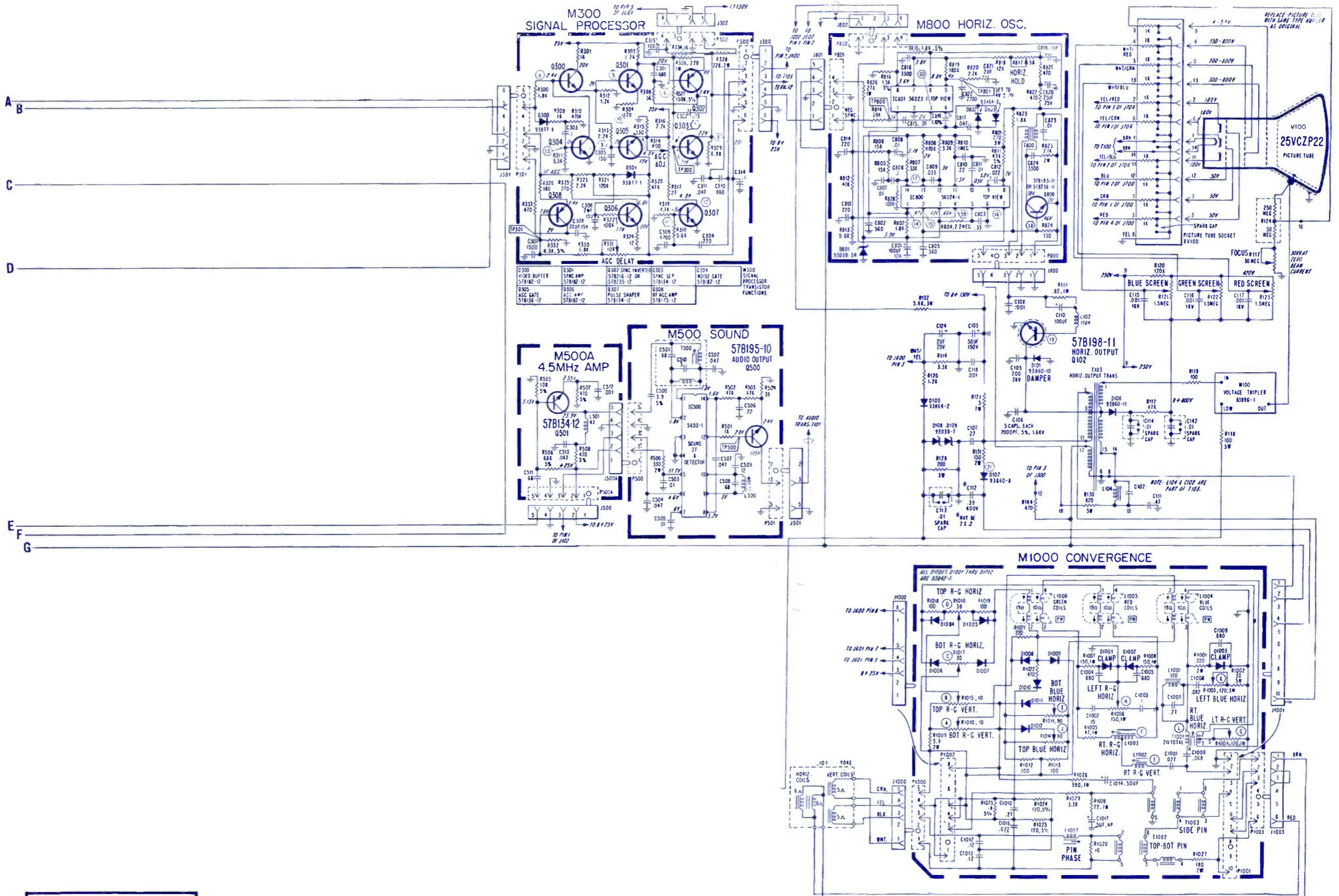
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AIRLINE

Color TV Models
GAI-17825C/
45B





AIRLINE
Color TV Models
GAI-17825C/45B

AIRLINE
Color TV Models
GAI-12936A/46A

SYMBOL	DESCRIPTION	AIRLINE PART NO.
R306	2.2K, AGC	75A199-1
R319	10K, AGC delay	75A199-2
R401	22K, tilt	75A199-3
R410	100K, color kill	75A199-4
R438	22K, APC	75A199-3
R446	22K, ACC	75A199-3
L206	coil, 41.25MHz trap	72A316-12
L404	coil, chroma take-off	73A135-3

L500	coil, sound quad	72A329-4
T200	xtormer, 4.5MHz trap	72A216-8
T400	xtormer, chroma bandpass	73A137-1
T500	xtormer, 4.5MHz sound take-off	72A318-6
R741	20K, brite limit	75A101-47
T800	xtormer, horiz osc adj	94A351-3
T801	xtormer, horiz drive	79A167-2
R901	22K, B+ 120v, adj	75A199-3
F900	fuse, 1.5a	36201.5
R630	200K, vert size	75A101-28
R631	60K, vert hold	75A191-2

OSCILLOSCOPE WAVEFORM INFORMATION

Oscilloscope waveform patterns shown have been taken at important observation points throughout the television chassis. Voltage given for each waveform observation point is its peak-to-peak voltage.

All waveforms were taken with a wideband scope using a low capacity probe to prevent loading.

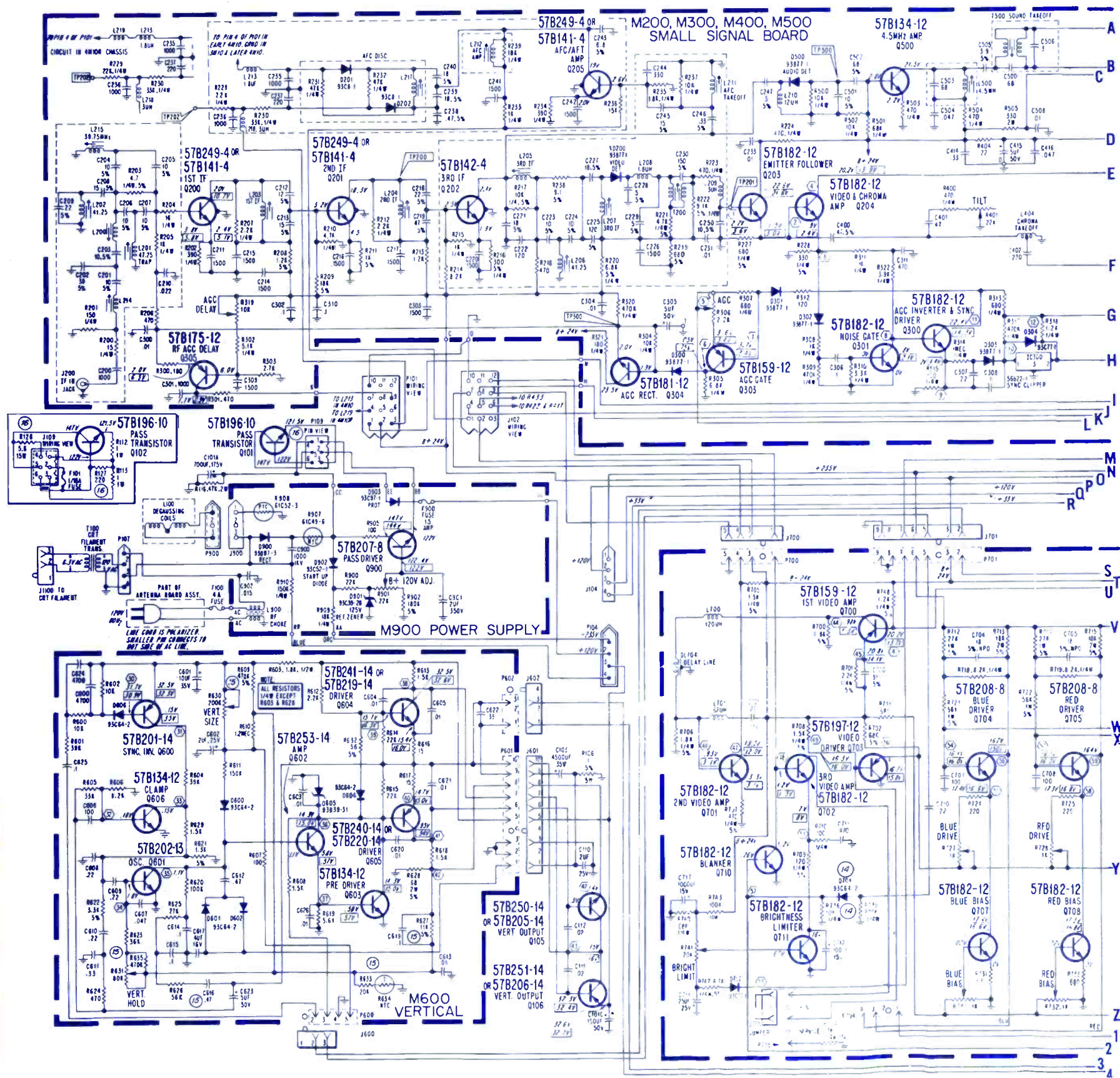
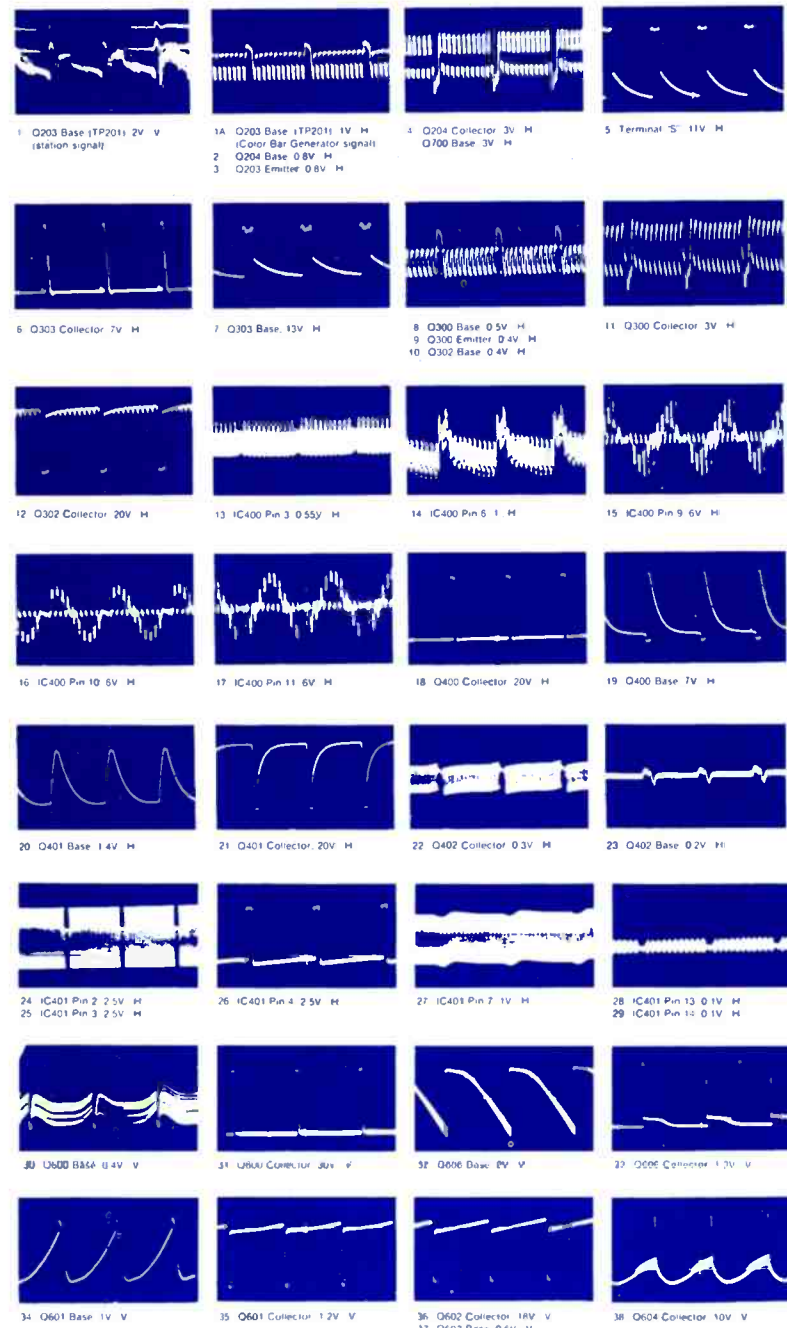
Waveforms taken with a standard color bar generator with the Color control set to 100% or normal.

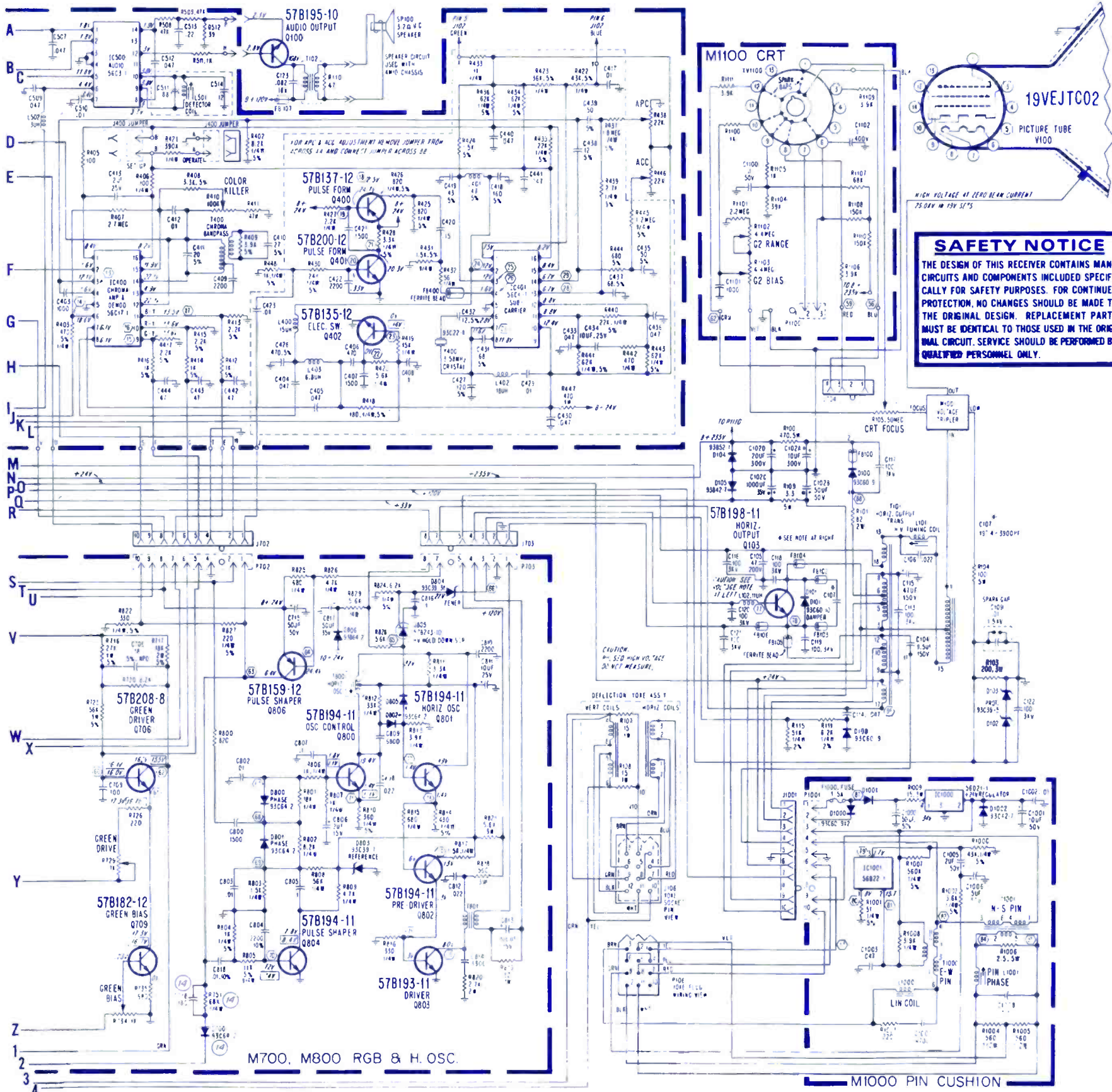
Receiver was adjusted with the AGC control for a 1 volt peak-to-peak waveform at TP201 using the standard color bar generator as the signal source. This corresponds to a 2 volt peak-to-peak

video waveform from an off-the-air station signal. The difference in signal amplitude is due to the lack of luminance information in the color bar signal when switched to the color bar pattern. All receiver controls set for normal picture.

Oscilloscope sweep was set in 30 Hertz or V position for vertical waveforms, and 7.875 Hertz or H position for horizontal and chroma waveforms.

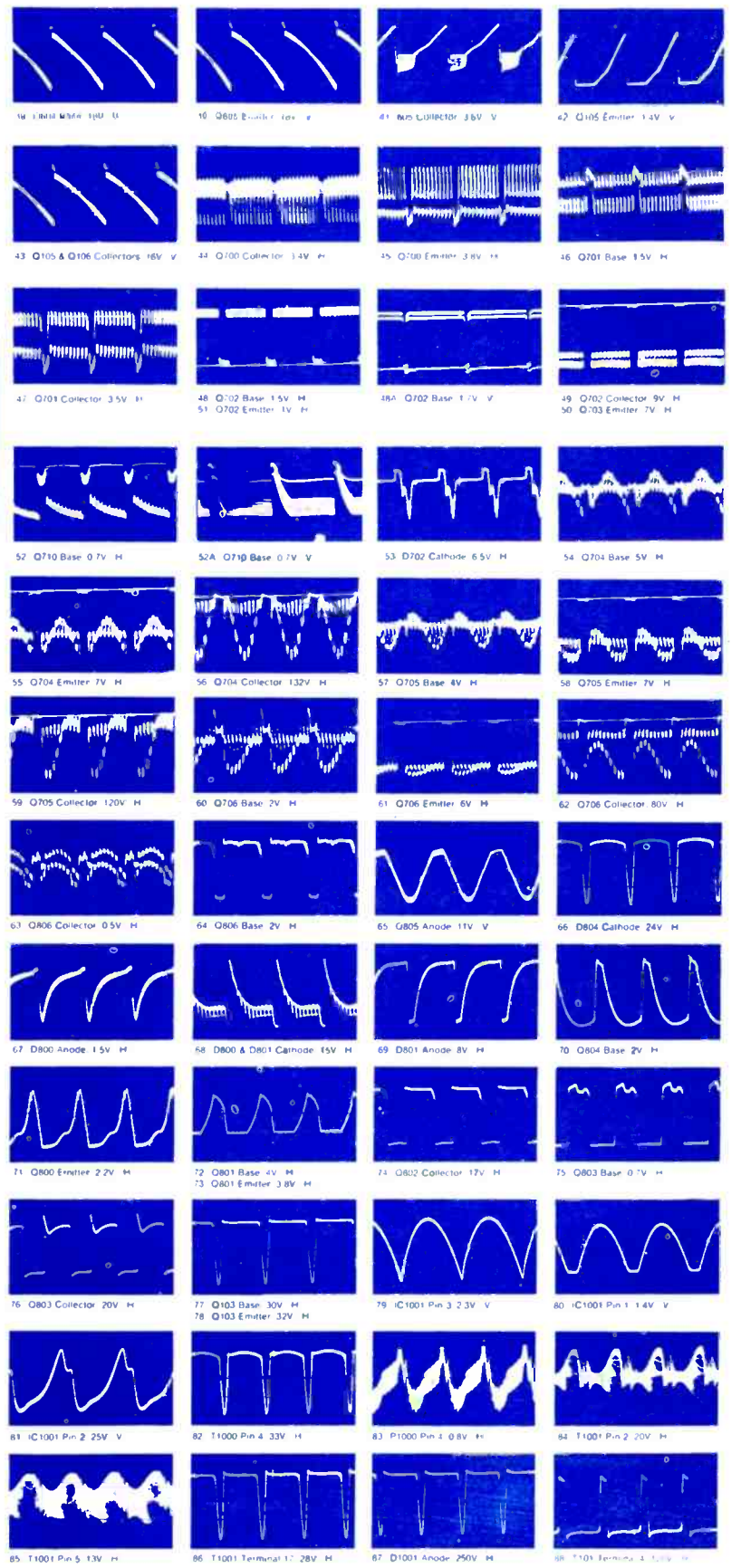
Shape of waveforms should resemble those given, depending upon bandwidth of oscilloscope used. Peak-to-peak voltages may vary depending on calibration of test equipment, chassis parts tolerances and control settings.



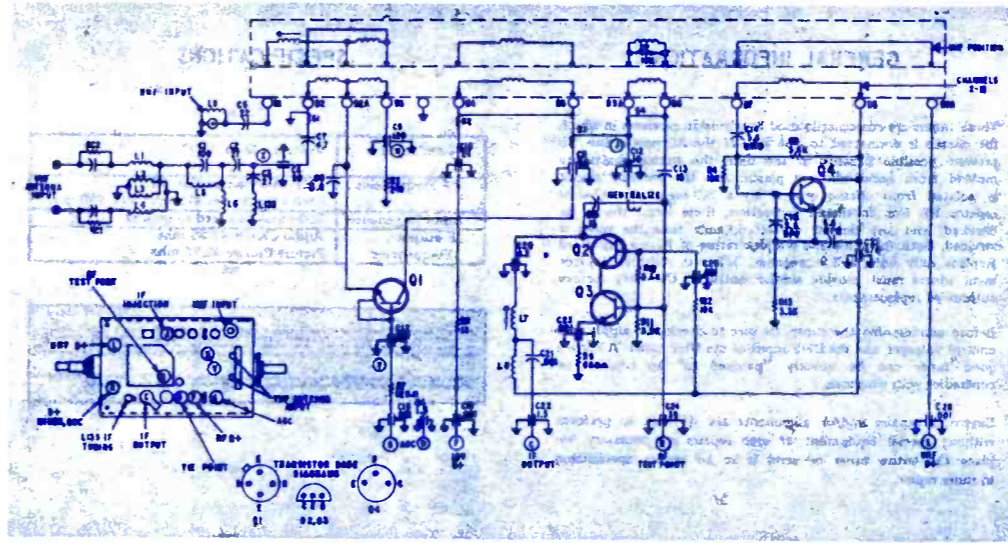


SAFETY NOTICE

THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



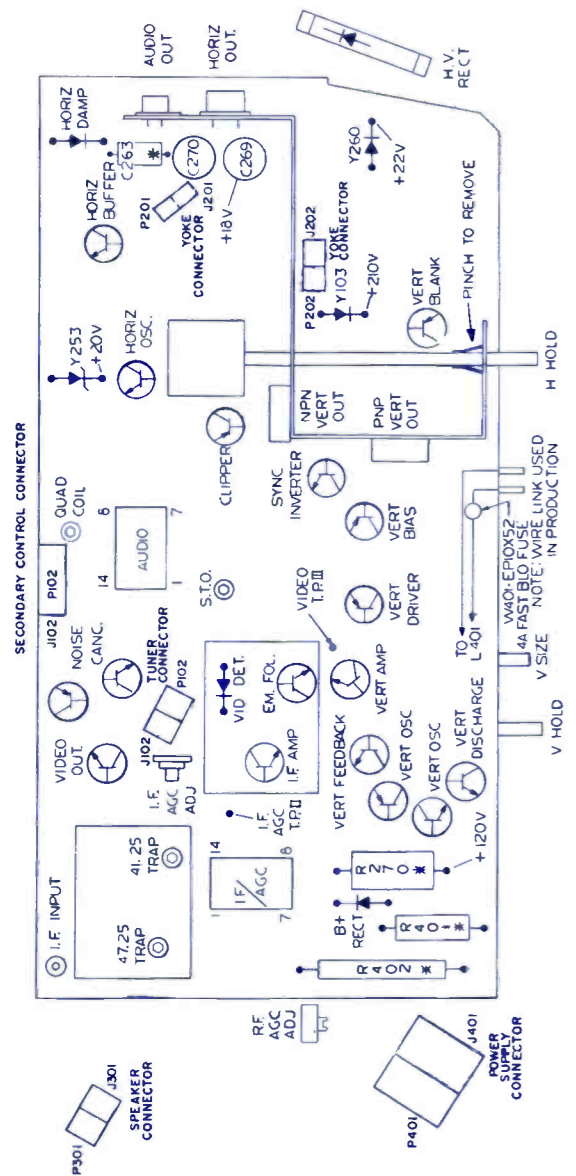
AIRLINE
Color TV Models
GAI-12936A/46A



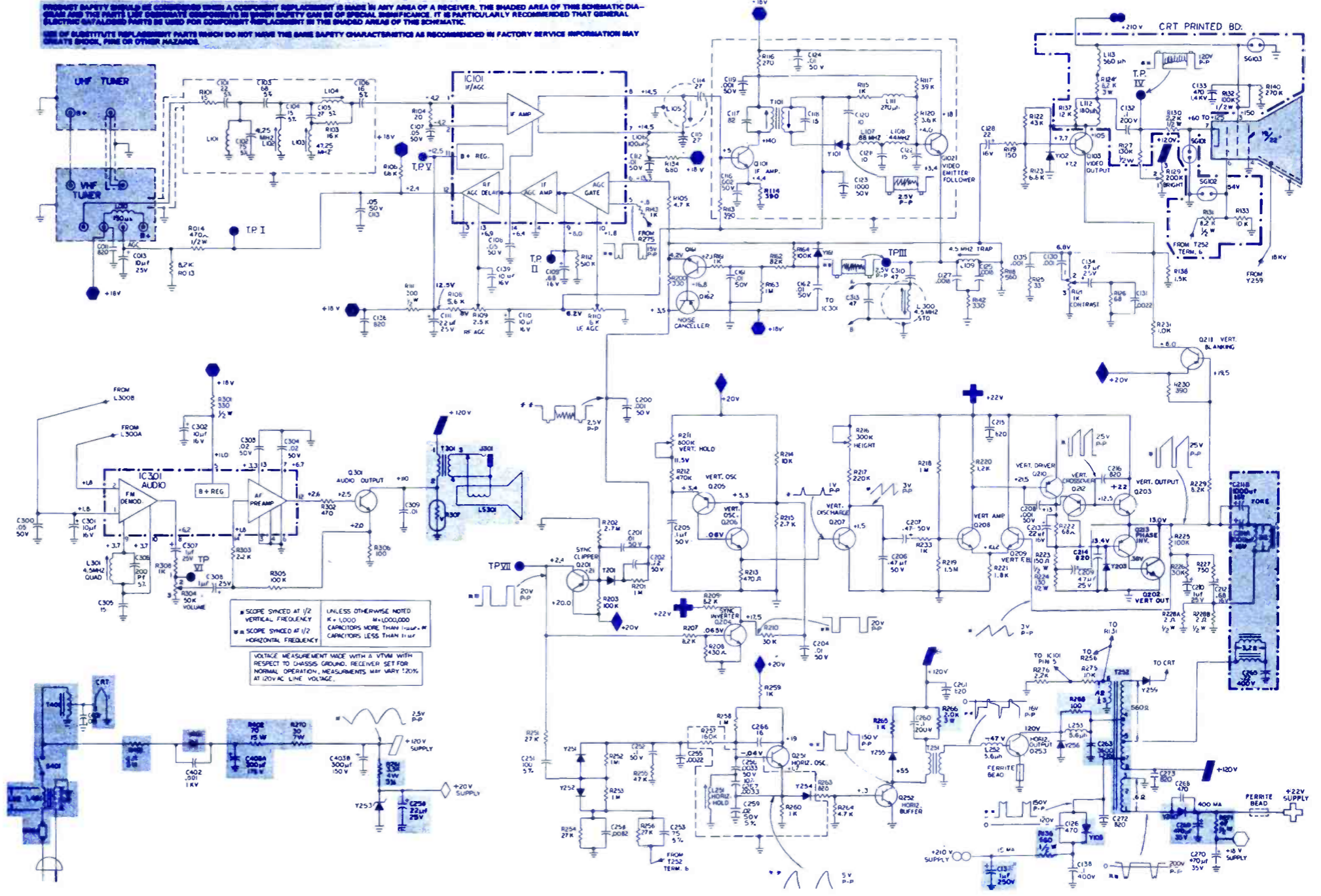
SCHEMATIC DIAGRAM

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING INFORMATION: WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER, THE SHADED AREA OF THE SCHEMATIC DIAGRAM AND THE PARTS LIST DESIGNATE COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. IT IS PARTICULARLY RECOMMENDED THAT GENERAL ELECTRIC QUALIFIED PARTS BE USED FOR COMPONENT REPLACEMENT IN THE SHADED AREAS OF THE 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.



CHASSIS LAYOUT



SYMBOL DESCRIPTION GENERAL ELECTRIC PART NO.

R109 — 2.5K, 20%, RF AGC
 — potentiometer, dual
 R211 — 800K, vert hold
 R216 — 400K, vert height
 C403A — 300mfd, 175v
 C403B — 300mfd, 150v
 — yoke asm 12 in.
 — yoke asm 15 in.
 L102 — coil 4.25
 L105 — coil

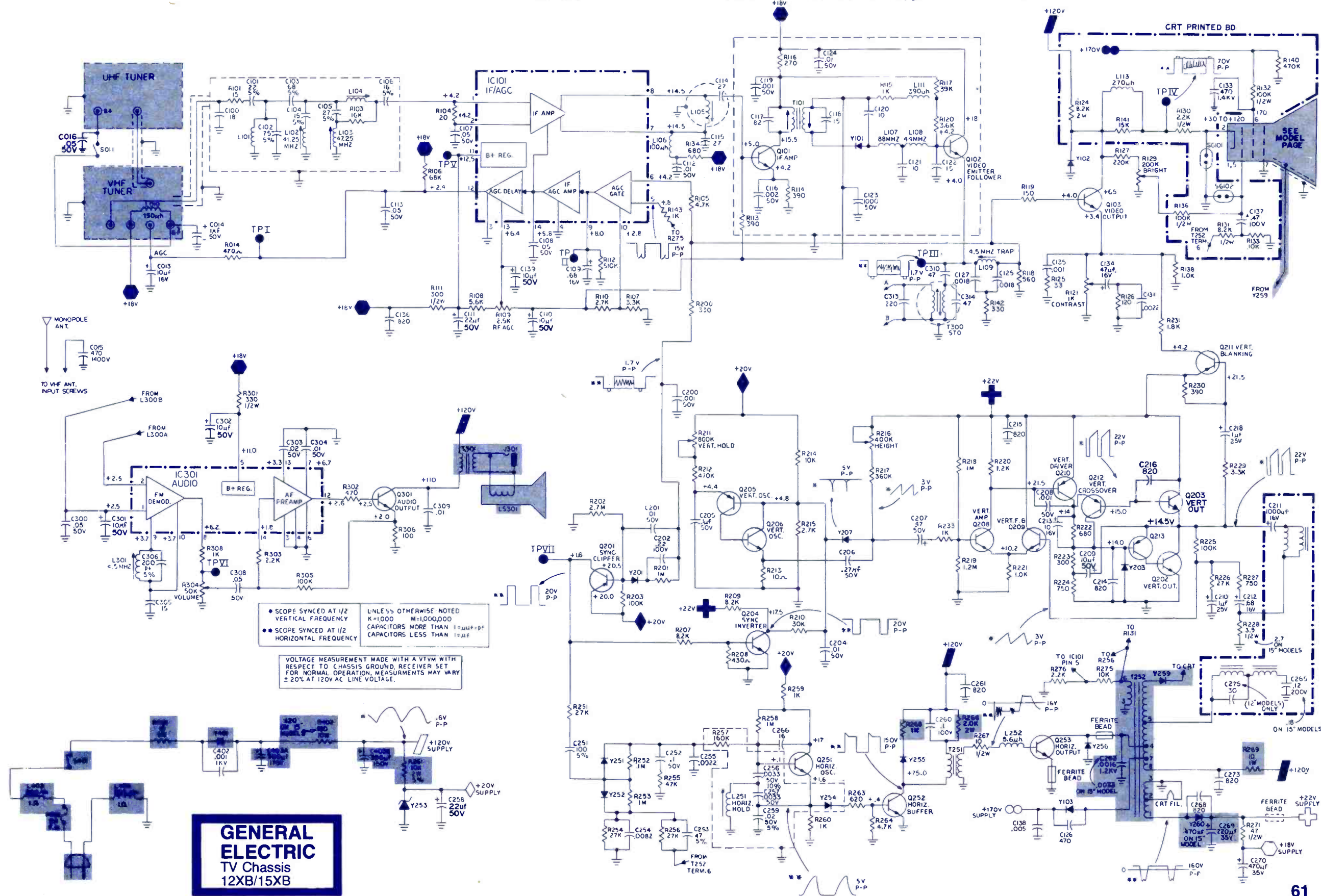
EP49X191
 ES49X106

ES31X50

ES76X16
 ES76X17
 ES36X83
 ES36X124

L106 — coil
 L109 — coil 4.5MHz
 L251 — coil horiz osc
 T252 — xformer HV
 T300 — coil sound take off
 T301 — audio output
 L402 — choke 800 μ h
 L403 — choke 800 μ h
 IC101 — IF/AGC
 IC301 — audio
 — fuse 2a, 250v fast blo pigtail

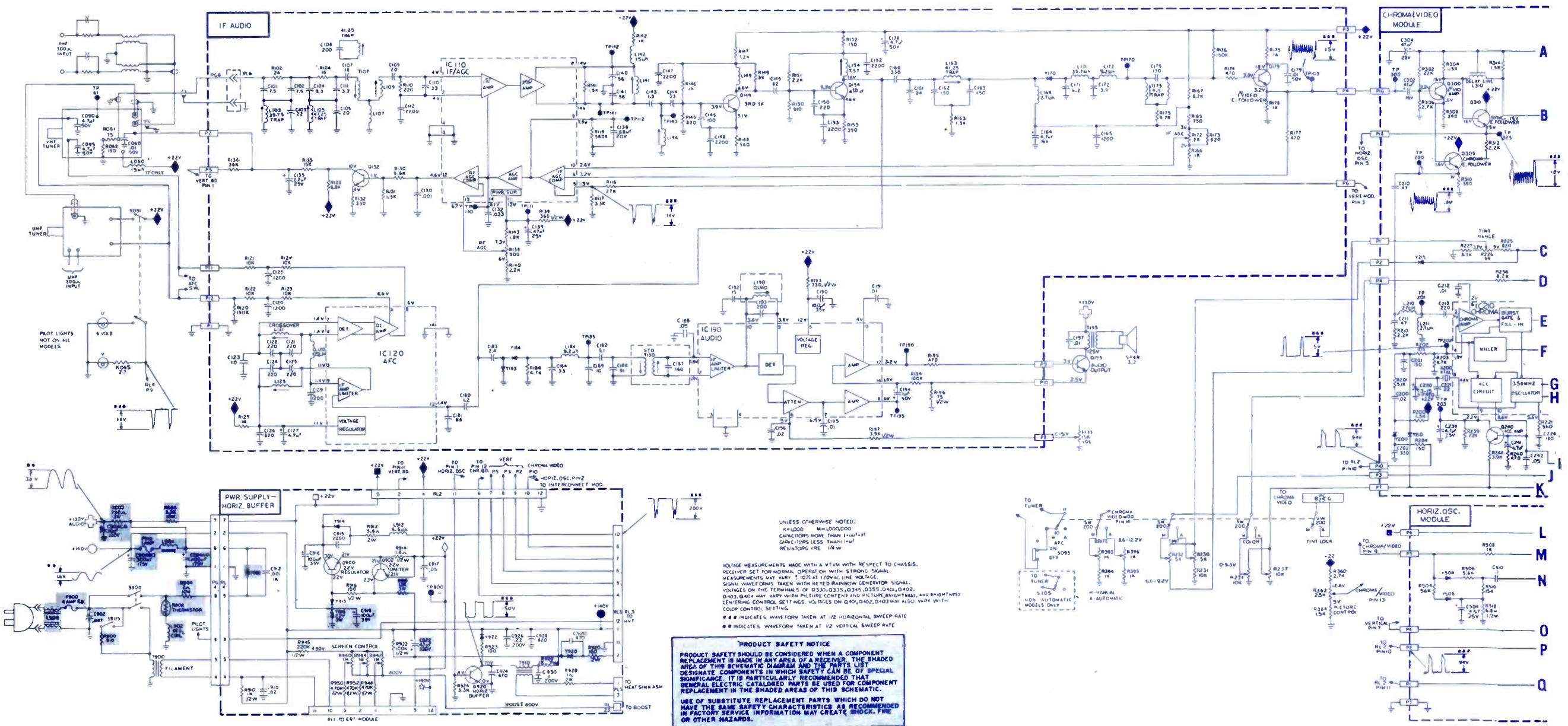
ES36X127
 ES36X123
 ES36X88
 ES77X22
 ES36X129
 ES64X13
 ES36X132
 ES36X132
 EP84X10
 EP84X2
 ES10X46



GENERAL ELECTRIC
 TV Chassis
 12XB/15XB

GENERAL ELECTRIC

Color TV Chassis YA

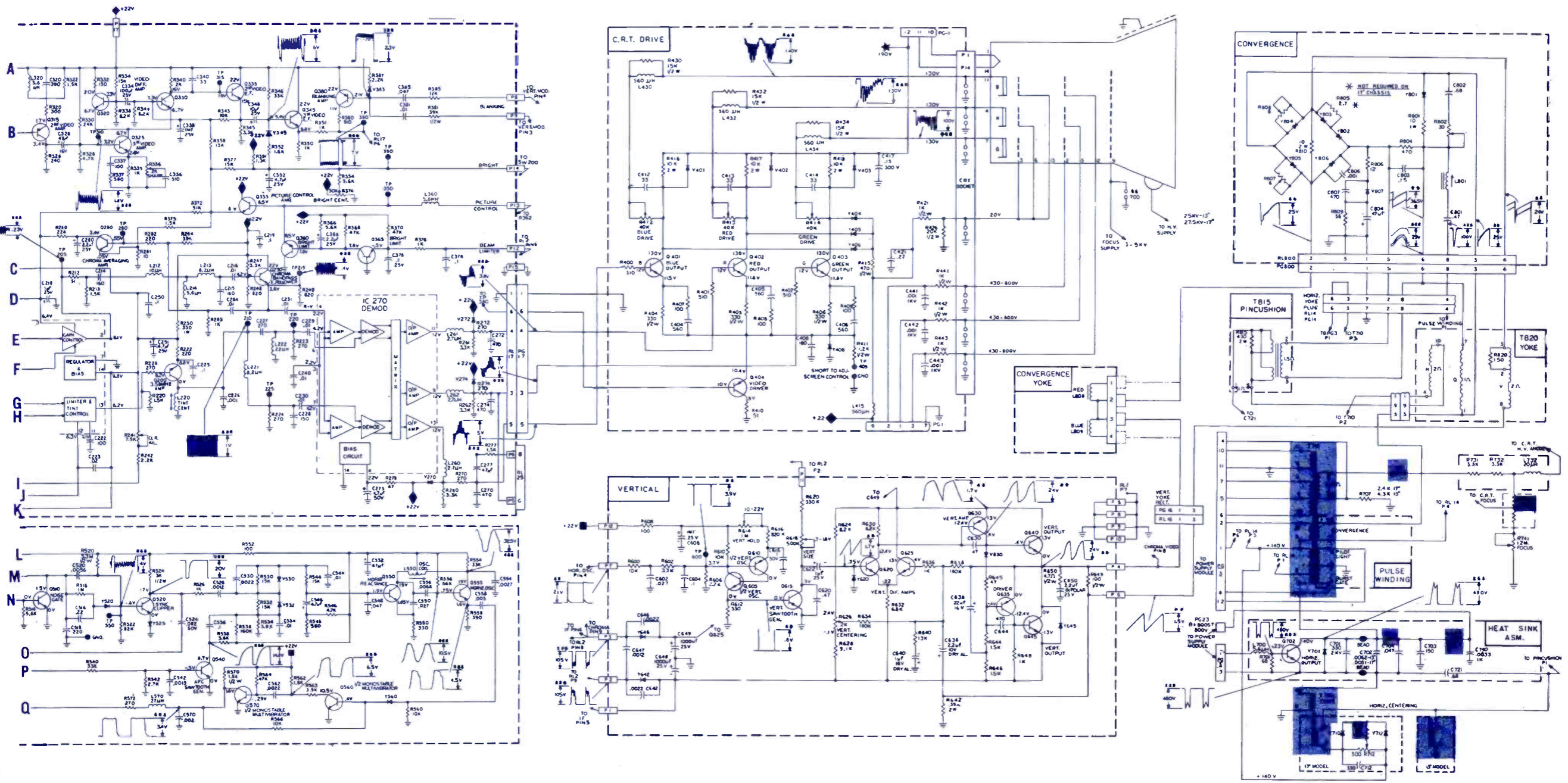


UNLESS OTHERWISE NOTED:
 K=1,000 M=100,000
 CAPACITORS MORE THAN 1μF MUST BE POLARIZED
 CAPACITORS LESS THAN 1μF MUST BE NON-POLARIZED
 RESISTORS ARE 1/4W

VOLTAGE MEASUREMENTS MADE WITH A VTVM WITH RESPECT TO CHASSIS.
 RECEIVER SET FOR NORMAL OPERATION WITH STRONG SIGNAL.
 MEASUREMENTS MAY VARY ±10% AT 120VAC LINE VOLTAGE.
 SIGNAL WAVEFORMS TAKEN WITH HETED RAINBOW GENERATOR SIGNAL.
 VOLTAGES ON THE TERMINALS OF Q350, Q355, Q356, Q401, Q402, Q403, Q404 MAY VARY WITH PICTURE CONTENT AND PICTURE BRIGHTNESS AND BRIGHTNESS CENTERING CONTROL SETTINGS. VOLTAGES ON Q401, Q402, Q403 MAY ALSO VARY WITH COLOR CONTROL SETTING.

••• INDICATES WAVEFORM TAKEN AT 1/2 HORIZONTAL SWEEP RATE
 ••• INDICATES WAVEFORM TAKEN AT 1/2 VERTICAL SWEEP RATE

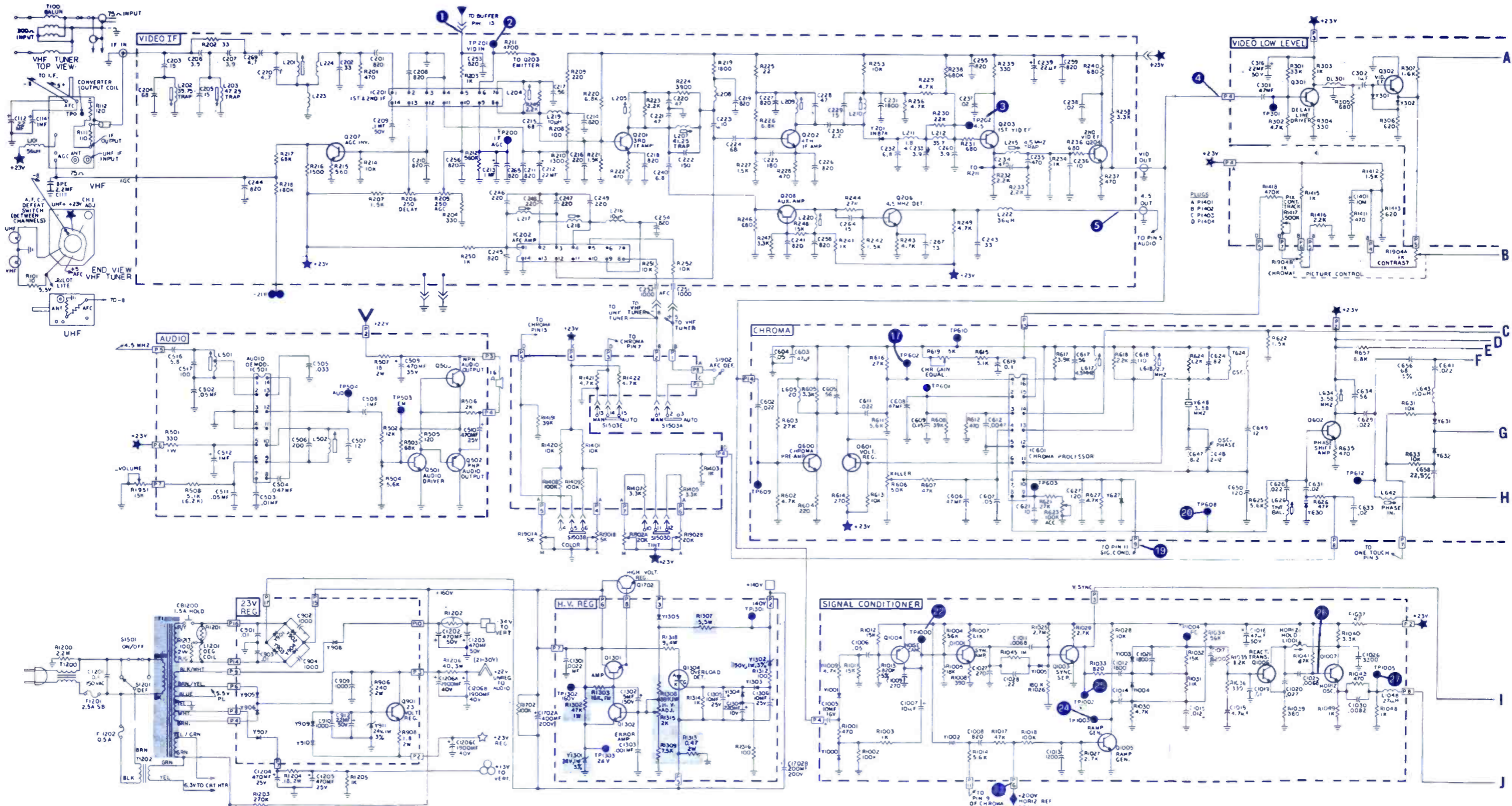
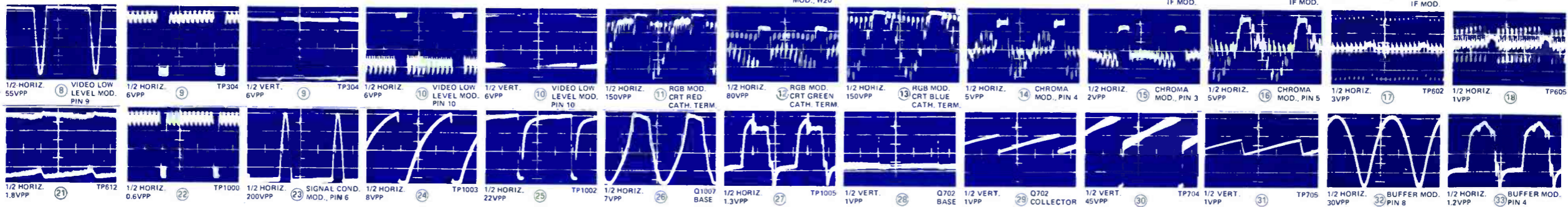
PRODUCT SAFETY NOTICE
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 USE OF SUBSTITUTE REPLACEMENT PARTS WHICH DO NOT HAVE THE SAME SAFETY CHARACTERISTICS AS RECOMMENDED IN FACTORY SERVICE INFORMATION MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.



GENERAL ELECTRIC
Color TV Chassis
YA

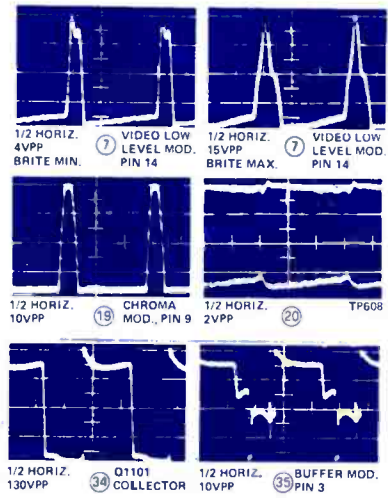
GENERAL ELECTRIC

Color TV Chassis
MB-75



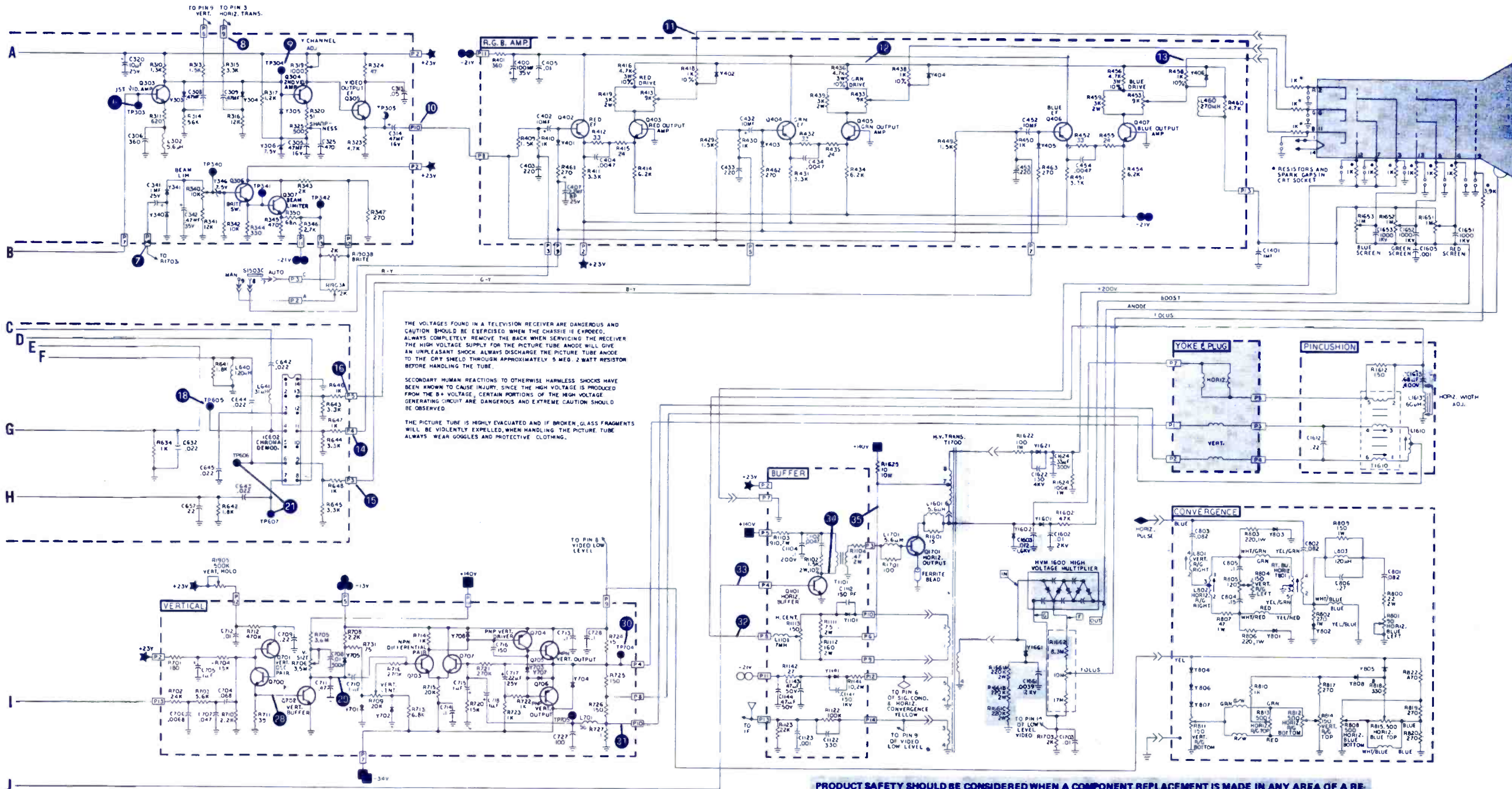
UNLESS OTHERWISE NOTED
K=1,000 M=1,000,000
CAPACITORS MORE THAN 1µF
CAPACITORS LESS THAN 1µF
RESISTORS ARE 1/2 WATT

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



SYMBOL	DESCRIPTION	GENERAL ELECTRIC PART NO.
R205	IF AGC 250n	EP49X142
R206	RF AGC 250n	EP49X142
R413	red drive	EP49X141
R433	green drive	EP49X141
R453	blue drive	EP49X141
R606	kill adj 50K	EU49X35
R619	chroma gain equal 5K	ES49X627
R623	ACC adj 100K	EP49X143
R706	vert size 3.5M	EP49X144
R709	vert center	EP49X144
R1113	horiz center 150n	EP49X147
R1315	HV adj 2K	EP49X90
R1662	focus pot asm	EP62X42
C1206A	1900µf, +100-10% 40v	EP31X42
C1206B	1900µf, +100-10% 40v	EP31X42
C1206C	1900µf, +100-10% 40v	EP31X42
C1702A	400µf, +100-10% 200v	EP31X40

C1702B	200µf, +100-10% 200v	EP31X40
L202	39.75MHz trap	EP36X108
L203	47.25MHz trap	EP36X13
L207	41.25MHz trap	EP36X92
L215	4.5MHz trap	EP36X111
L222	choke	ES36X751
DL301	delay line	EP36X105
L501	audio take off	EP36X106
L502	quad	EP36X107
L617	chroma 4.3MHz	EP36X112
L701	choke	EP36X119
L1001	horiz osc hold	EP35X2
T1201	power xformer	EP62X45
T1202	CRT filament	EP64X34
T1610	pincushion	EP51X2
T1700	high voltage	EP77X13
CB1201	circuit breaker 1.5a	ES10X18
F1201	fuse 2.5a 125v slo blo	EP10X13
F1202	fuse .5a 250v fast blo	ES10X43



THE VOLTAGES FOUND IN A TELEVISION RECEIVER ARE DANGEROUS AND CAUTION SHOULD BE EXERCISED WHEN THE CHASSIS IS EXPOSED. ALWAYS COMPLETELY REMOVE THE BACK WHEN SERVICING THE RECEIVER. THE HIGH VOLTAGE SUPPLY FOR THE PICTURE TUBE ANODE WILL GIVE AN UNPLEASANT SHOCK. ALWAYS DISCHARGE THE PICTURE TUBE ANODE TO THE GROUND THROUGH APPROXIMATELY 5 MEG. 2 WATT RESISTOR BEFORE HANDLING THE TUBE.

SECONDARY HUMAN REACTIONS TO OTHERWISE HARMLESS SHOCKS HAVE BEEN KNOWN TO CAUSE INJURY, SINCE THE HIGH VOLTAGE IS PRODUCED FROM THE B+ VOLTAGE. CERTAIN PORTIONS OF THE HIGH VOLTAGE GENERATING CIRCUIT ARE DANGEROUS AND EXTREME CAUTION SHOULD BE OBSERVED.

THE PICTURE TUBE IS HIGHLY EVALUATED AND IF BROKEN, GLASS FRAGMENTS WILL BE VIOLENTLY EXPELLED. WHEN HANDLING THE PICTURE TUBE ALWAYS WEAR GOGGLES AND PROTECTIVE CLOTHING.

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.

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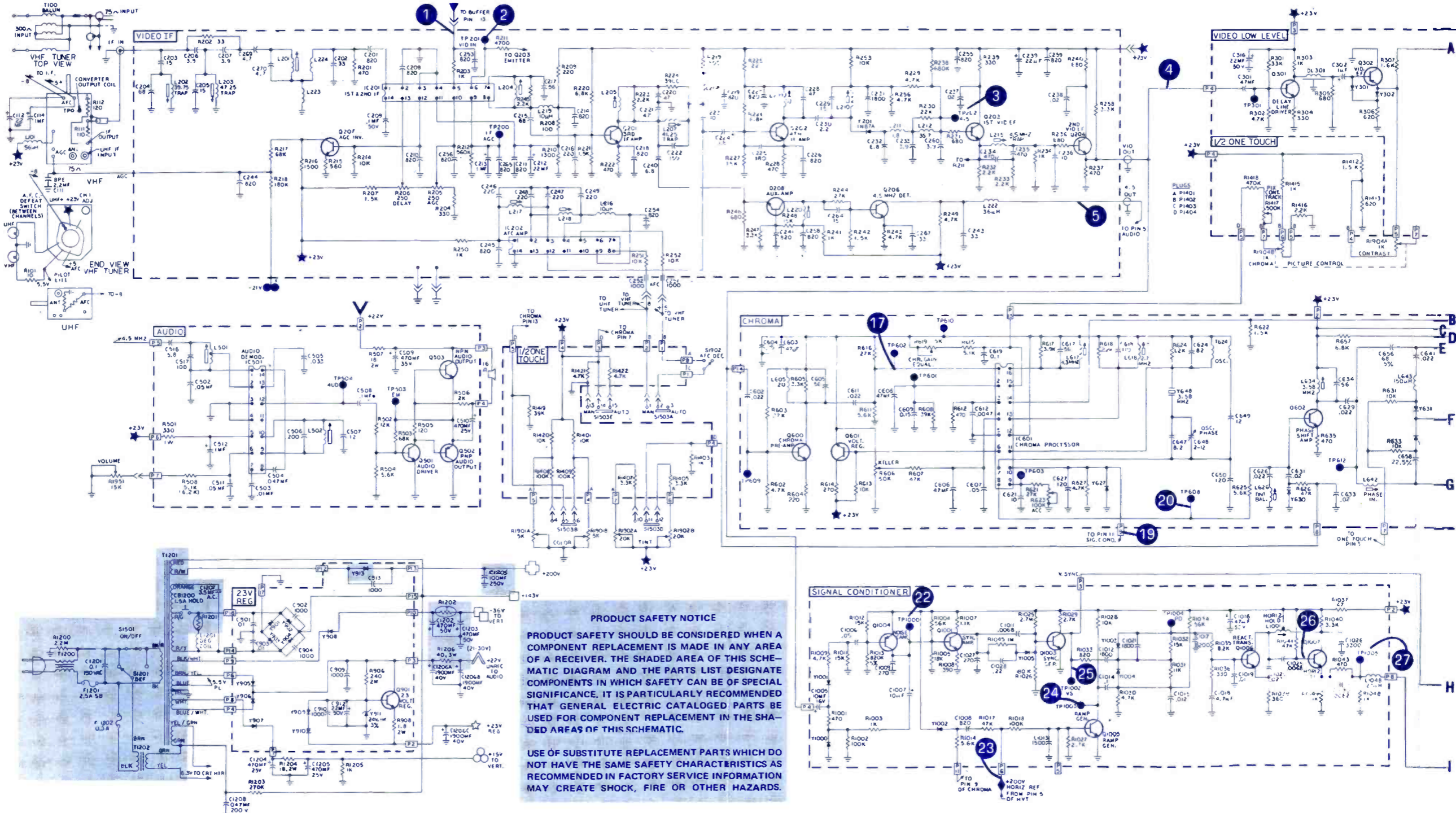
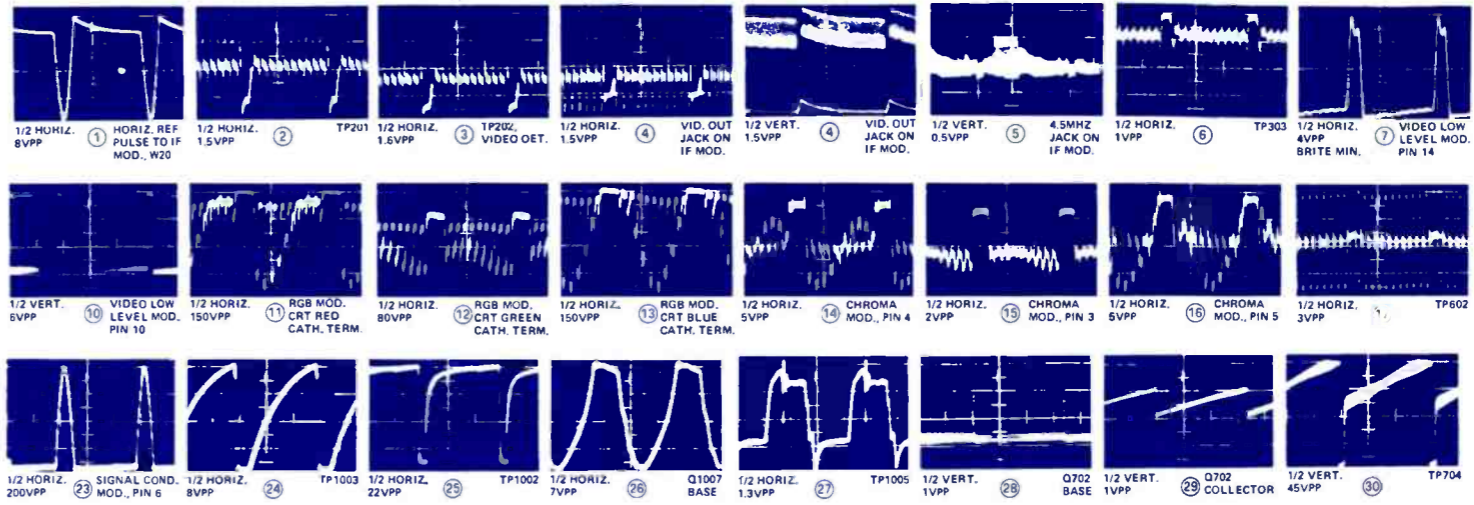
GENERAL ELECTRIC

Color TV Chassis
25MC

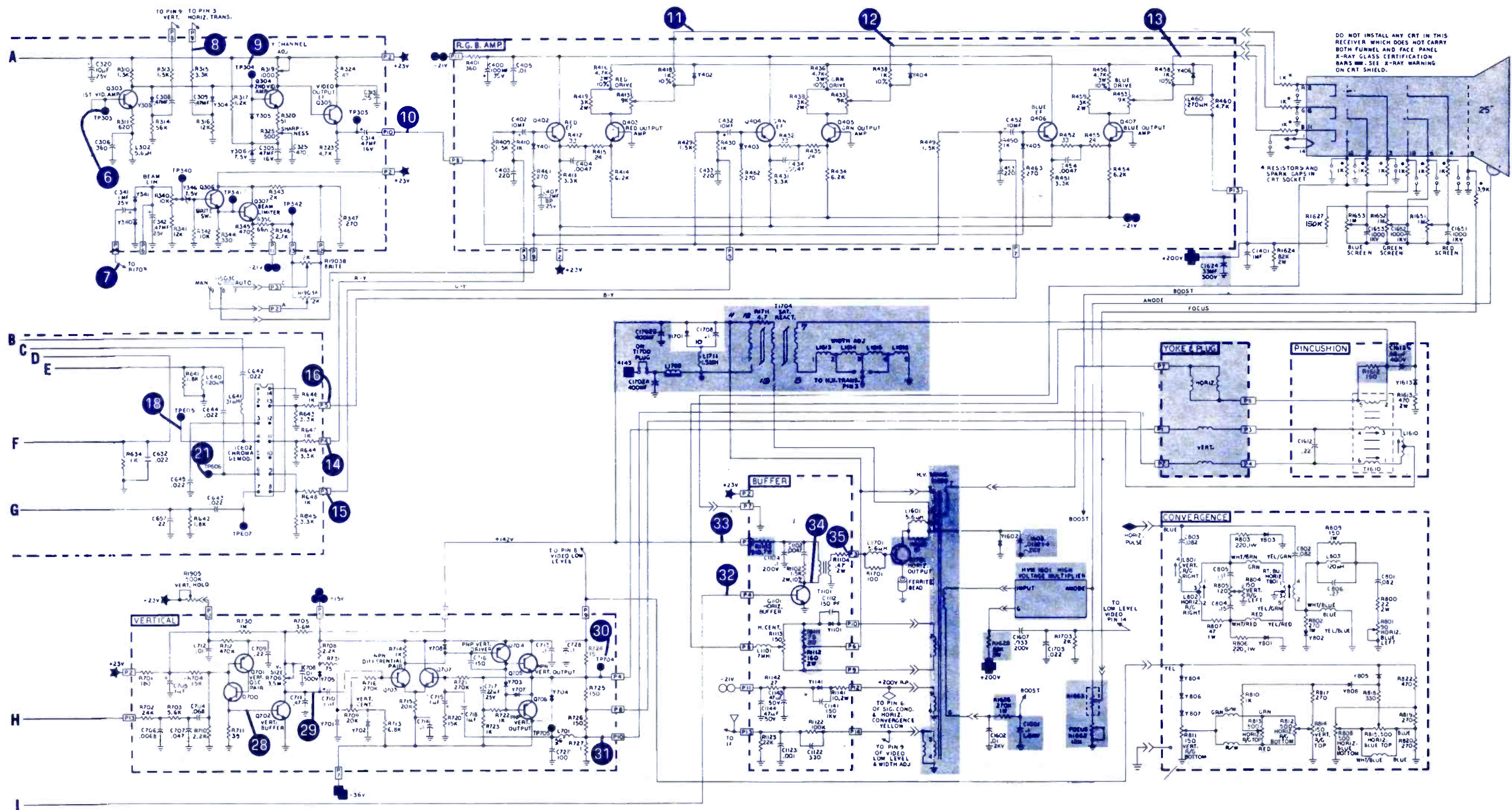
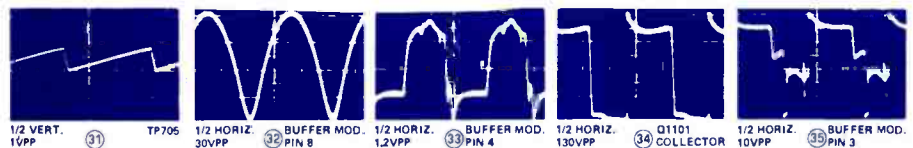
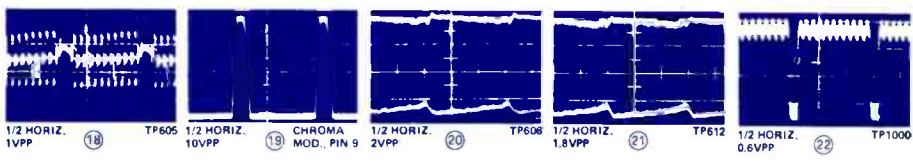
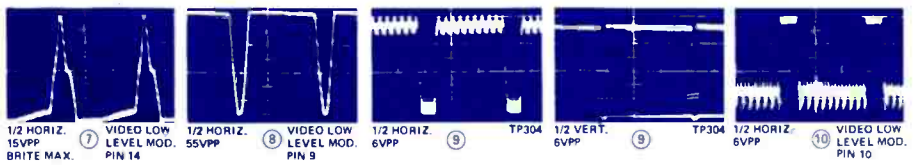
SYMBOL DESCRIPTION GENERAL ELECTRIC PART NO.

R1663—focus resist	EP14X84
R205—1F AGC, 250n	EP49X142
R325—sharpness, 500n	EP49X140
R340—brite limit, 10K	EP49X140
R413—red drive, 9K	EP49X141
R433—green drive, 9K	EP49X141
R453—blue drive, 9K	EP49X141
R606—killer adj, 50K	EU49X35
R619—chroma gain equal, 5K	ES49X627
R623—ACC adj, 100K	EP49X143
R706—vert size, 3.5M	EP49X144
R709—vert center, 2K	EP49X147
R1113—horiz center, 150n	EP49X147
R1662—focus pot, 18M	EP62X59
C1206A	EP31X42
B, C—1900µf, +100—10%, 40v	EP31X42
C1702A, B—400µf, +100—10%, 175v	EP31X58
DL301—delay line	EP36X105

L501—audio take off	EP36X106
L502—quad	EP36X107
L626—coil, tint bal adj	EP36X112
L634—phase, 3.58MHZ	EP36X112
L642—chroma phase	EP36X112
L1001—horiz osc hold	EP35X2
L1613—width coil assy	EP36X151
L1702—filter reactor	EP63X10
T624—3.58MHz osc	EP36X113
T1201—power xformer	EP62X54
T1700—high voltage xformer	EP77X24
Q1701—horiz output, NPN	EP15X45
Q1702—HV reg, NPN	EP15X29
circuit breaker 1.5a, CB1201	
fuse 2.5a 125v, slo blo, F1201	
fuse .5a, 250v, fast blo, F1202	
Quadrupler HV HVM 1601	
tuner VHF solid state	
yoke deflect	



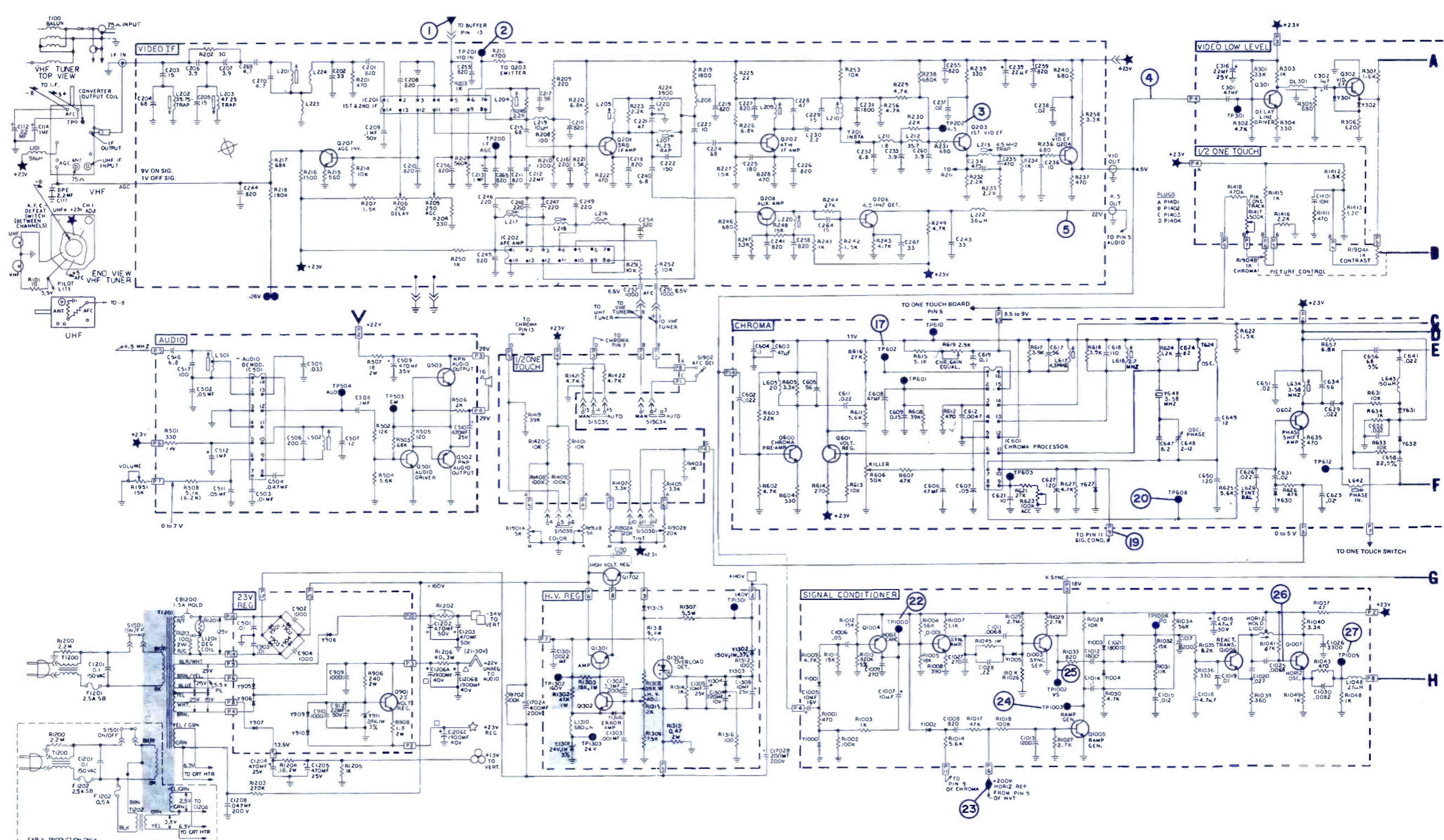
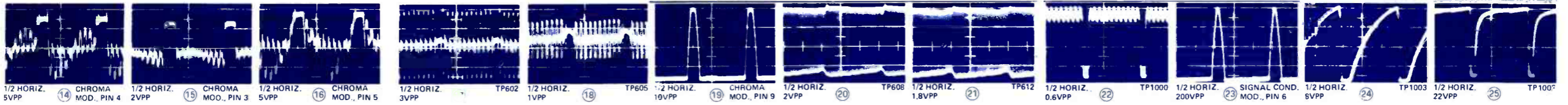
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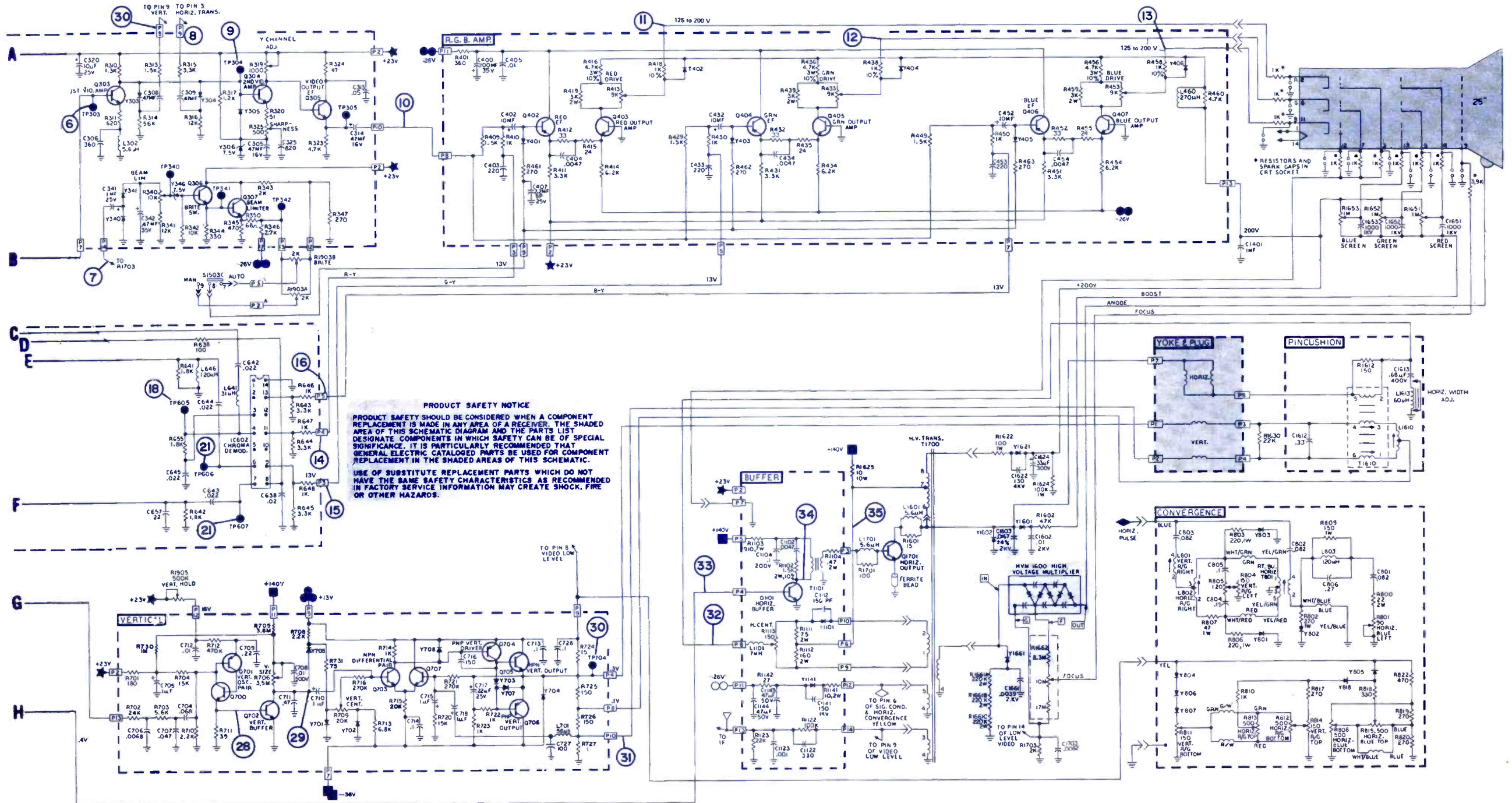
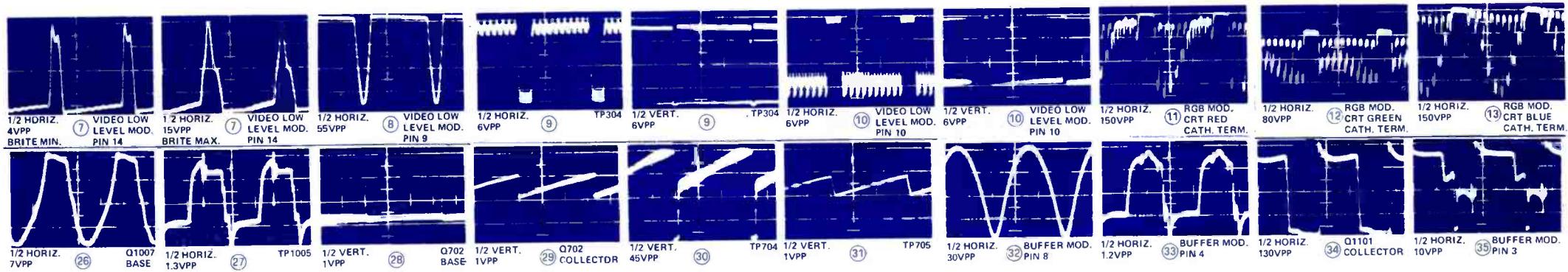


GENERAL ELECTRIC
Color TV Chassis
25MC

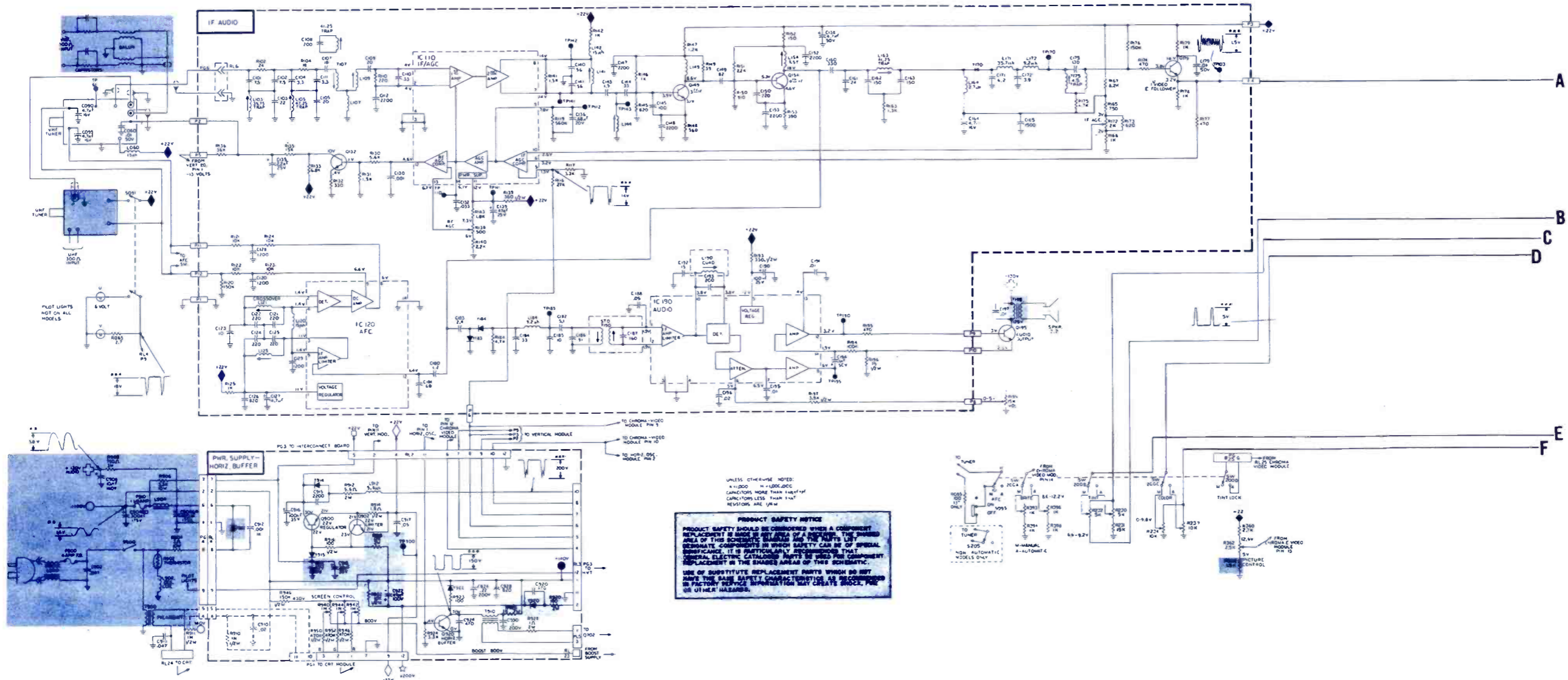
GENERAL ELECTRIC

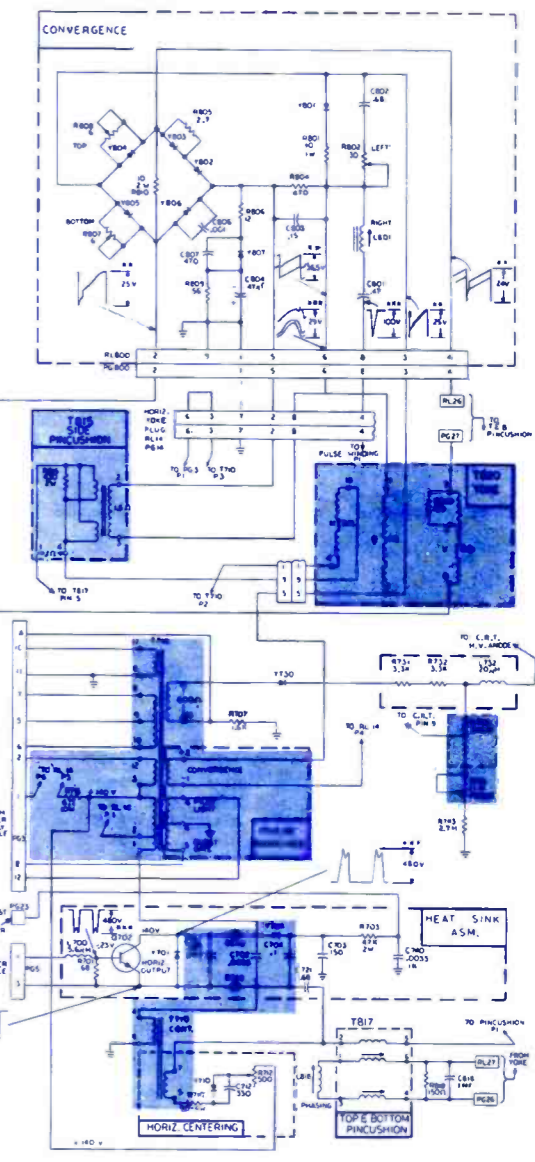
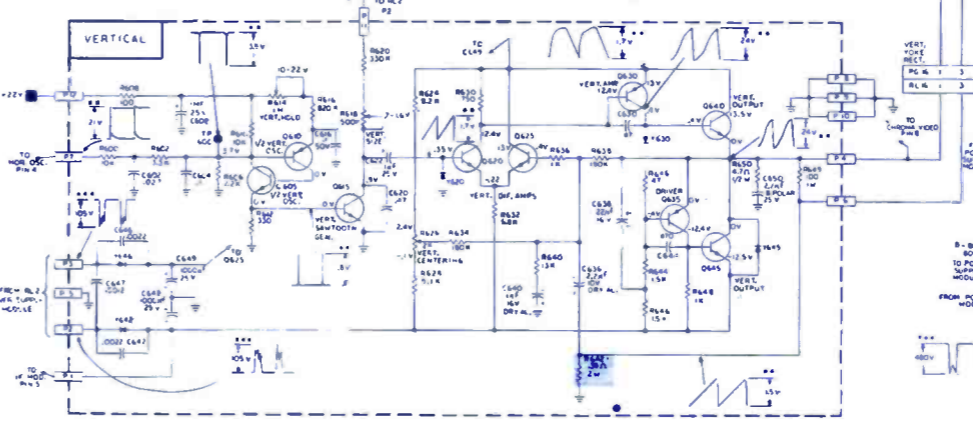
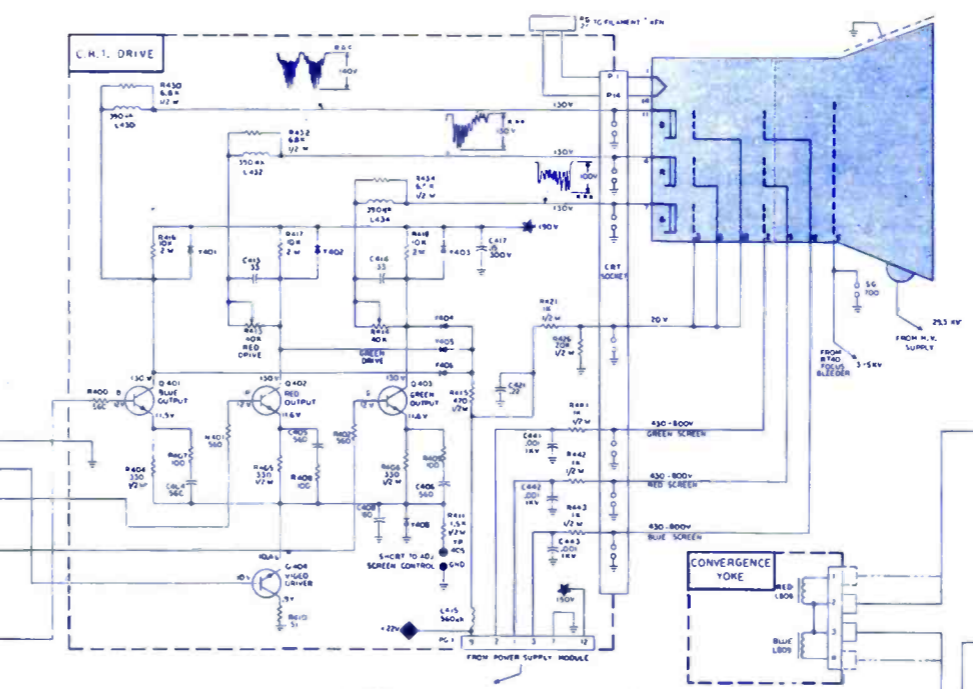
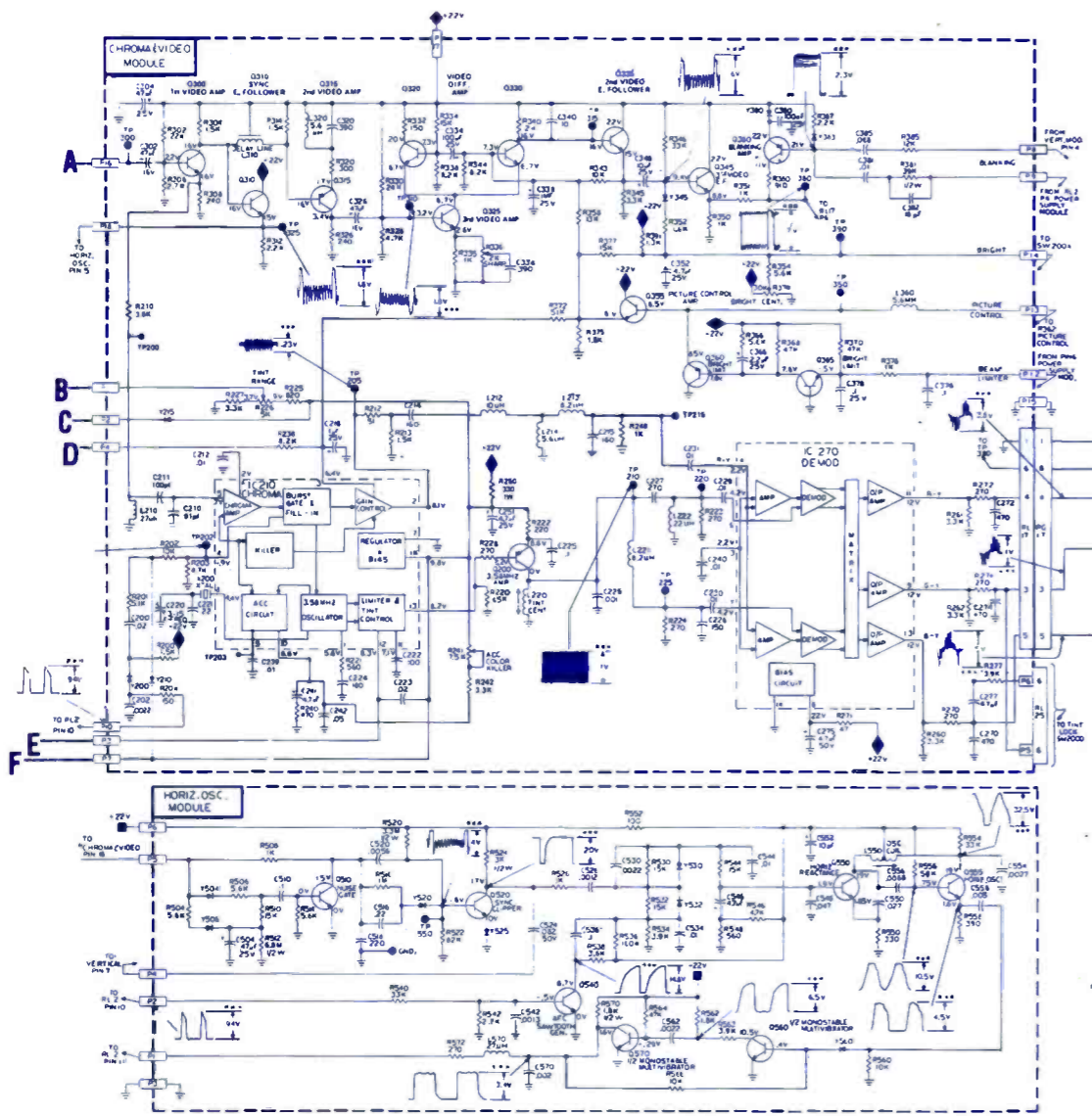
Color TV Chassis 25MB-2





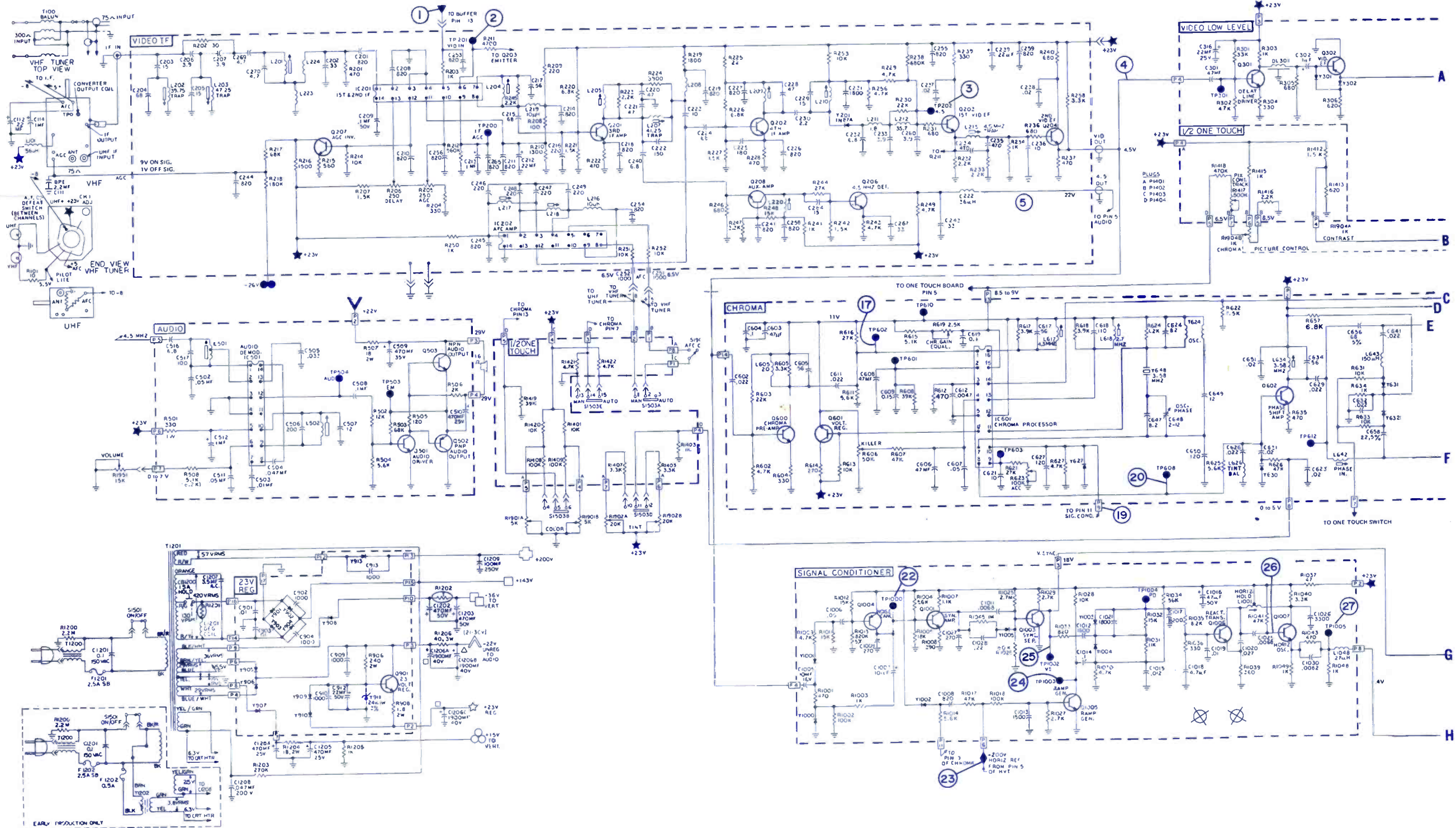
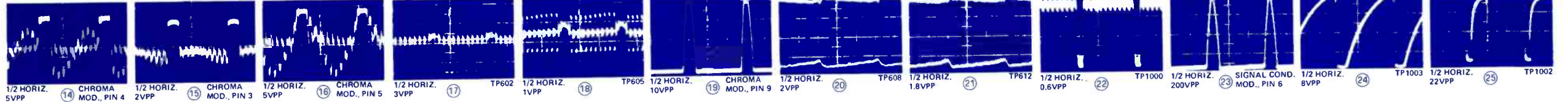
GENERAL ELECTRIC
 Color TV
 Chassis 19YC





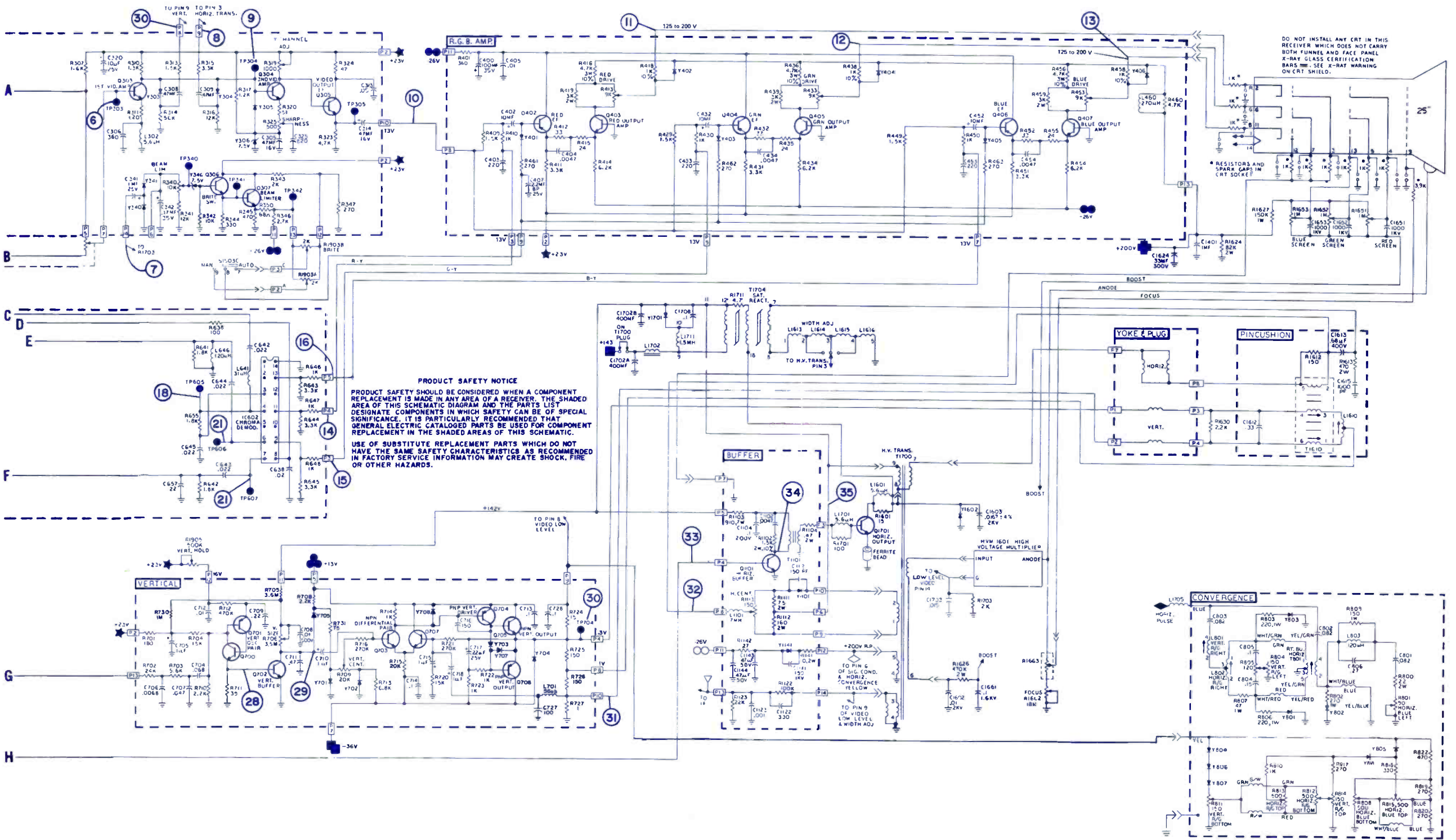
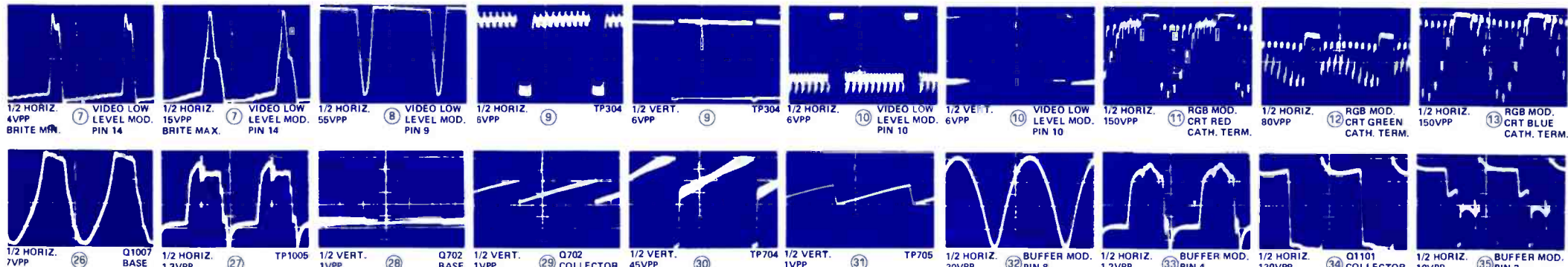
GENERAL ELECTRIC
Color TV
Chassis 19YC

GENERAL ELECTRIC
Color TV Chassis
25MC-2



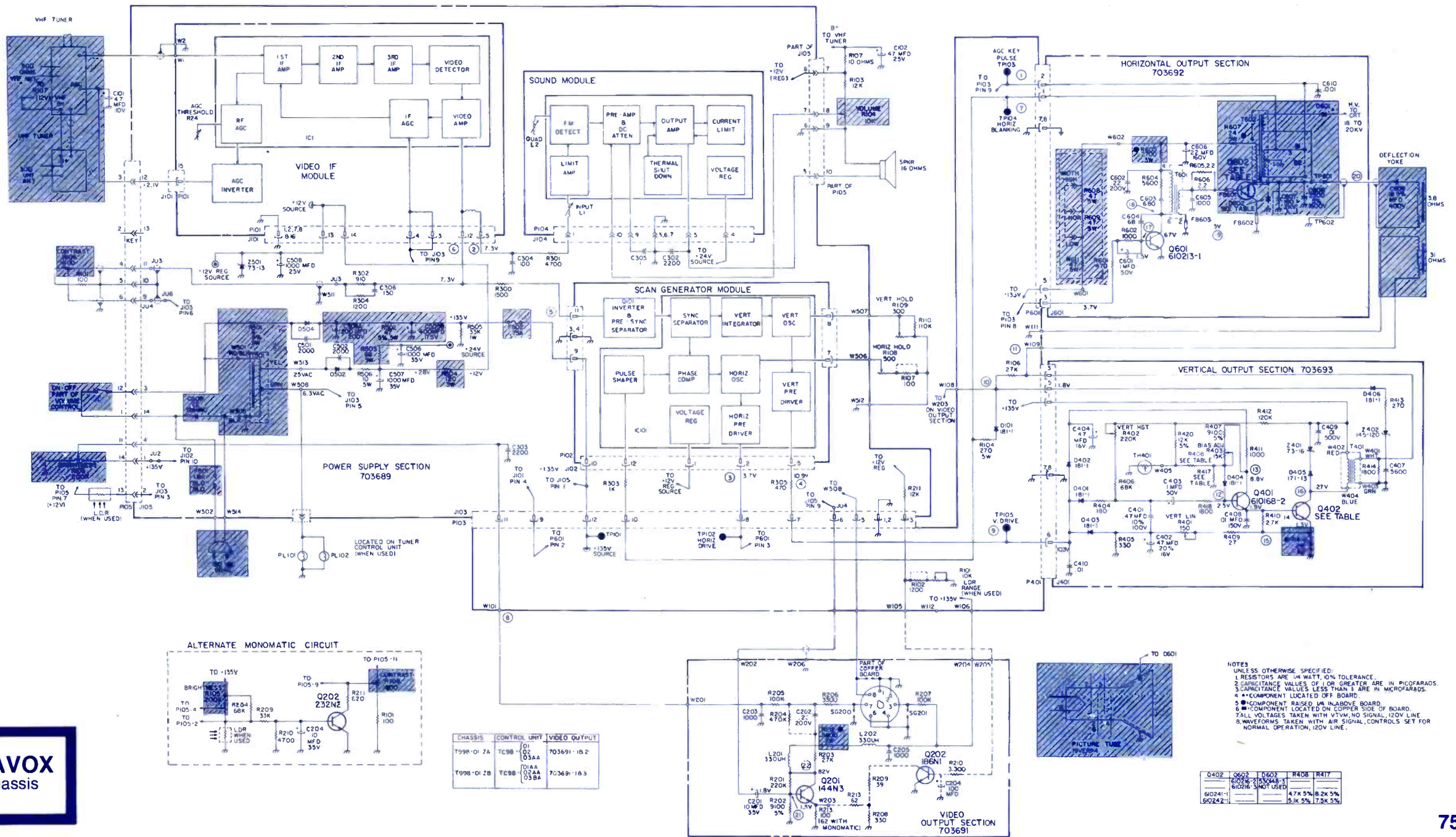
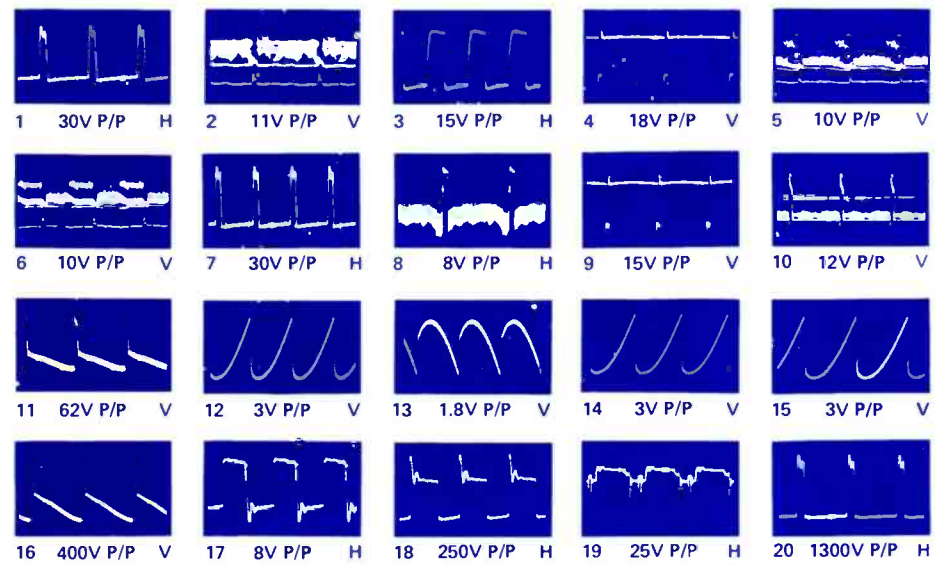
1/2 HORIZ. 8VPP ① HORIZ. REF PULSE TO IF MOD., W20
 1/2 HORIZ. 1.5VPP ② TP201
 1/2 HORIZ. 1.6VPP ③ TP202, VIDEO DET.
 1/2 HORIZ. 1.5VPP ④ VID. OUT JACK ON IF MOD.
 1/2 VERT. 1.5VPP ④ VID. OUT JACK ON IF MOD.
 1/2 VERT. 0.5VPP ⑤ 4.5MHZ JACK ON IF MOD.
 1/2 HORIZ. 1VPP ⑥ TP303
 1/2 HORIZ. 5VPP ⑭ CHROMA MOD., PIN 4
 1/2 HORIZ. 2VPP ⑮ CHROMA MOD., PIN 3
 1/2 HORIZ. 5VPP ⑯ CHROMA MOD., PIN 5
 1/2 HORIZ. 3VPP ⑰ TP602
 1/2 HORIZ. 1VPP ⑱ TP605
 1/2 HORIZ. 10VPP ⑲ CHROMA MOD., PIN 9
 1/2 HORIZ. 2VPP ⑳ TP608
 1/2 HORIZ. 1.8VPP ㉑ TP612
 1/2 HORIZ. 0.6VPP ㉒ TP1000
 1/2 HORIZ. 200VPP ㉓ SIGNAL COND. MOD., PIN 6
 1/2 HORIZ. 8VPP ㉔ TP1003
 1/2 HORIZ. 22VPP ㉕ TP1002

EARLY PRODUCTION ONLY



DO NOT INSTALL ANY CRT IN THIS RECEIVER WHICH DOES NOT CARRY BOTH FUNNEL AND FACE PANEL X-RAY GLASS CERTIFICATION BARS. SEE X-RAY WARNING ON CRT SHIELD.

GENERAL ELECTRIC
 Color TV Chassis
 25MC-2



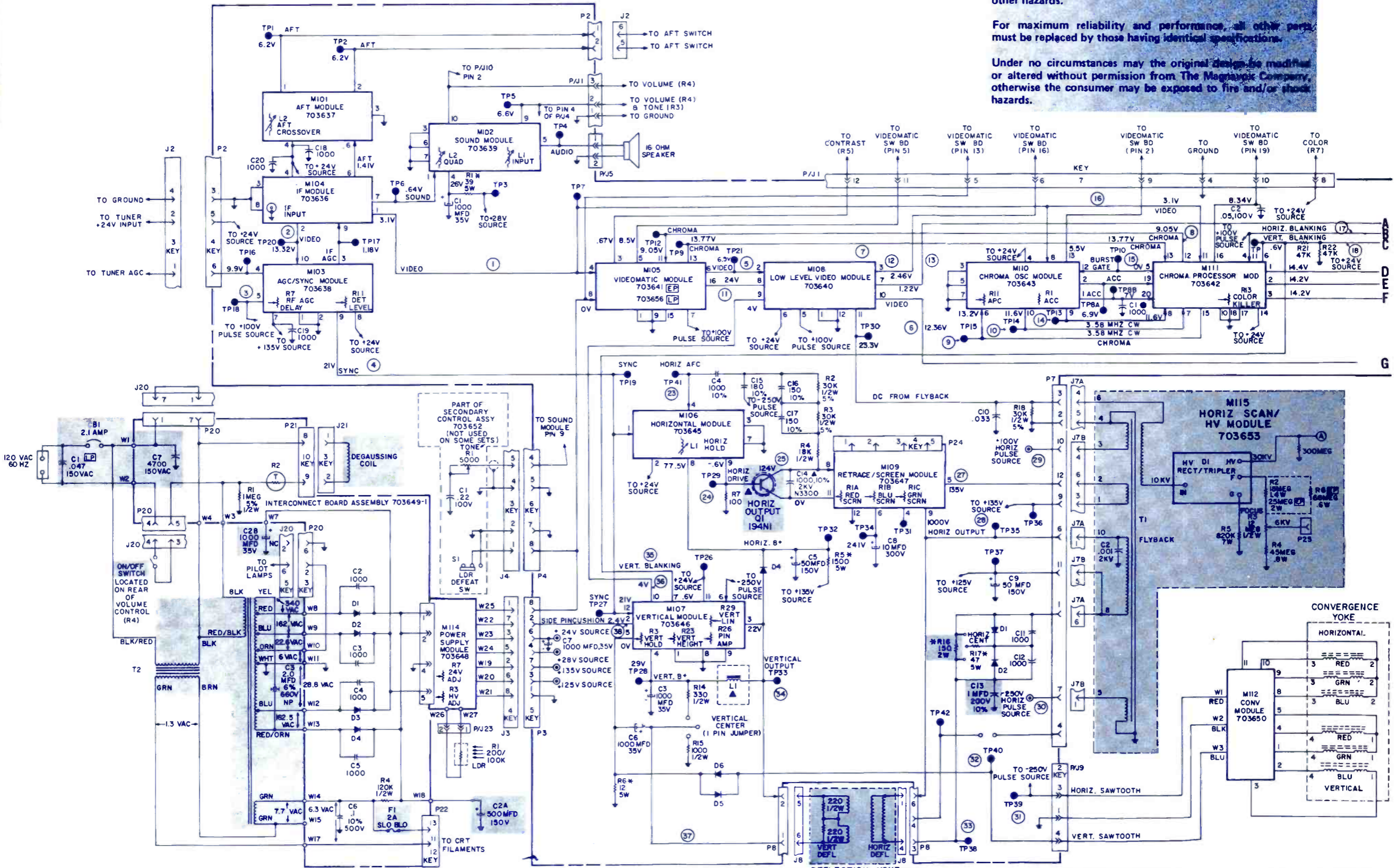
MAGNAVOX
B-W TV Chassis
T998

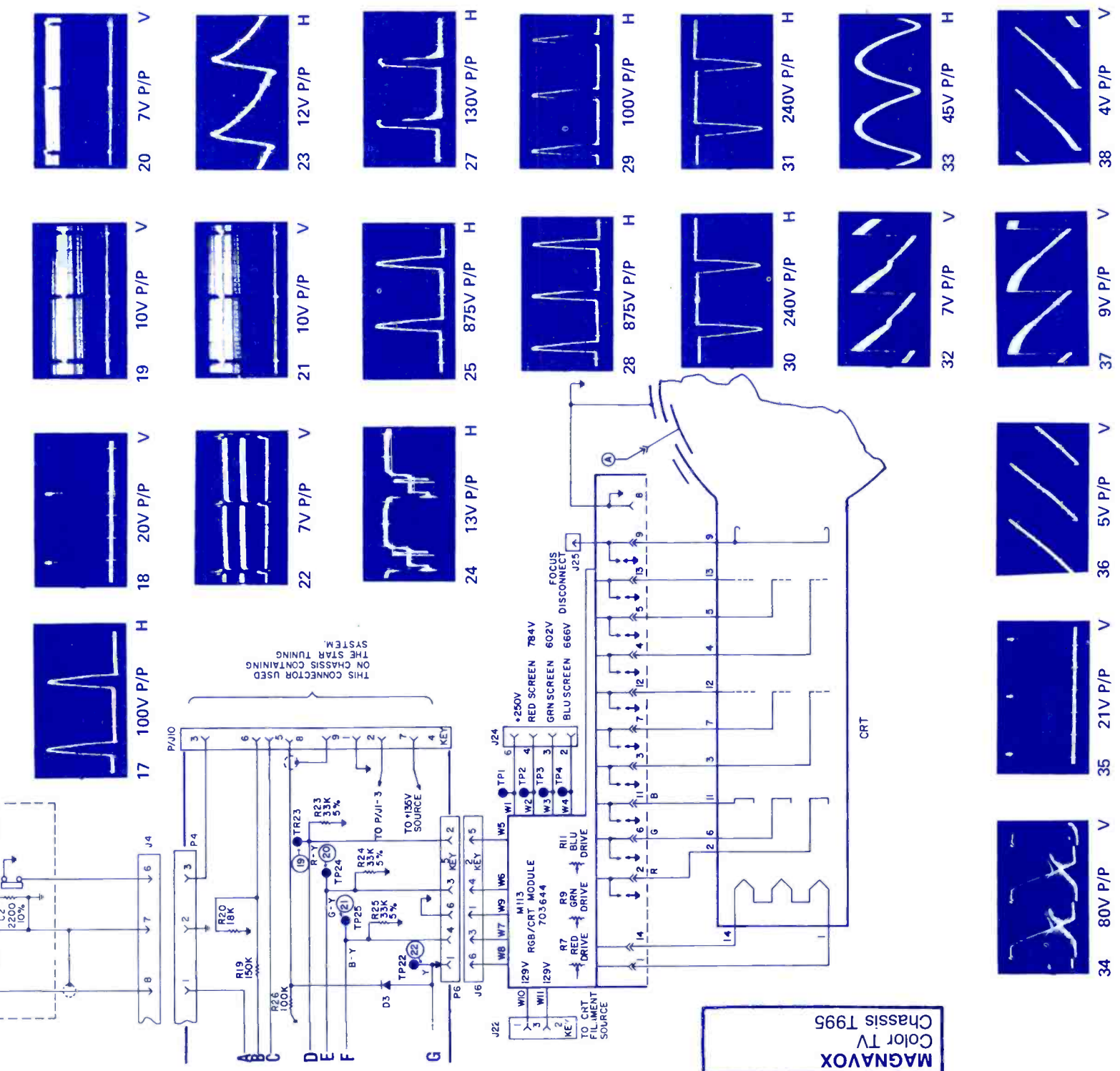
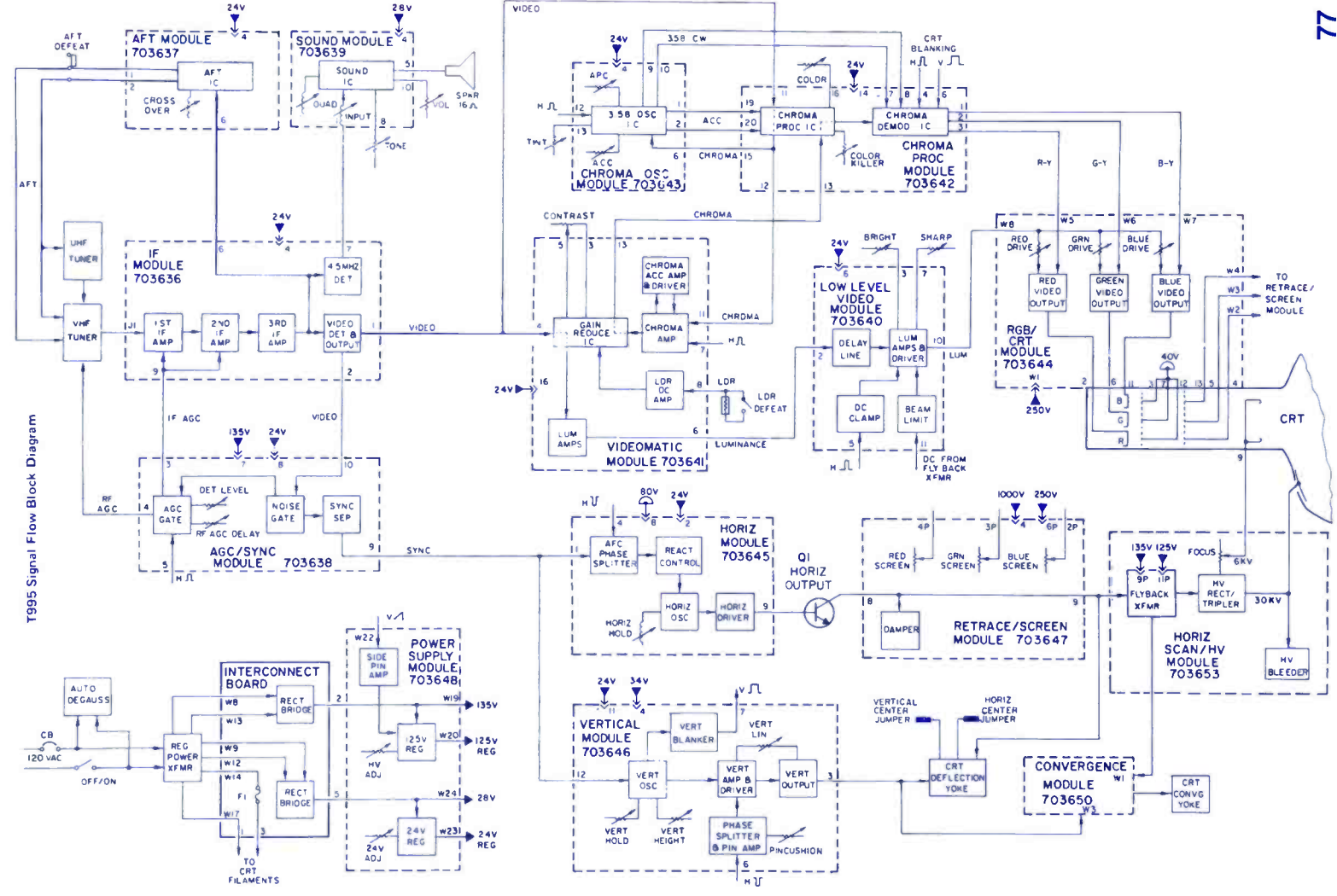
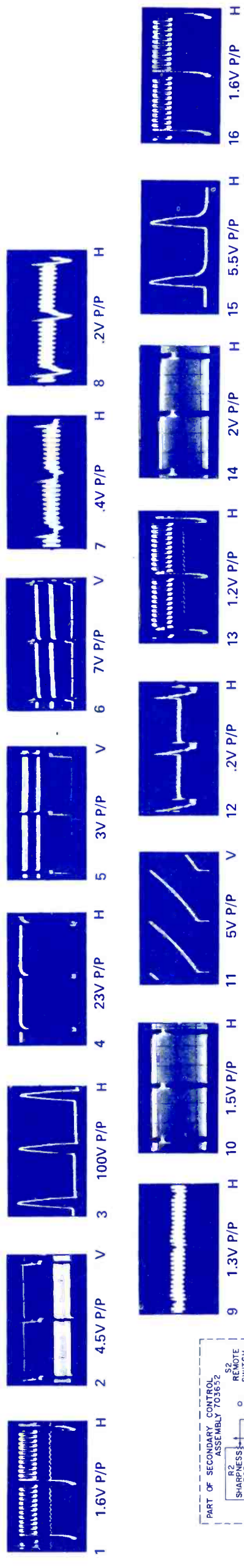
Magnavox Consumer Electronics Company is committed to marketing safe products which meet or exceed applicable safety standards of industry, government agencies and independent laboratories. It therefore uses parts in its products designed for maximum safety, reliability and performance.

For continued safety of this product, parts shown in the shaded areas of this schematic must be replaced with only those identified in the Parts List of this manual. Use of substitute replacement parts which do not have the same safety characteristics as specified, may create shock, fire or other hazards.

For maximum reliability and performance, all other parts must be replaced by those having identical specifications.

Under no circumstances may the original design be modified or altered without permission from The Magnavox Company, otherwise the consumer may be exposed to fire and/or shock hazards.





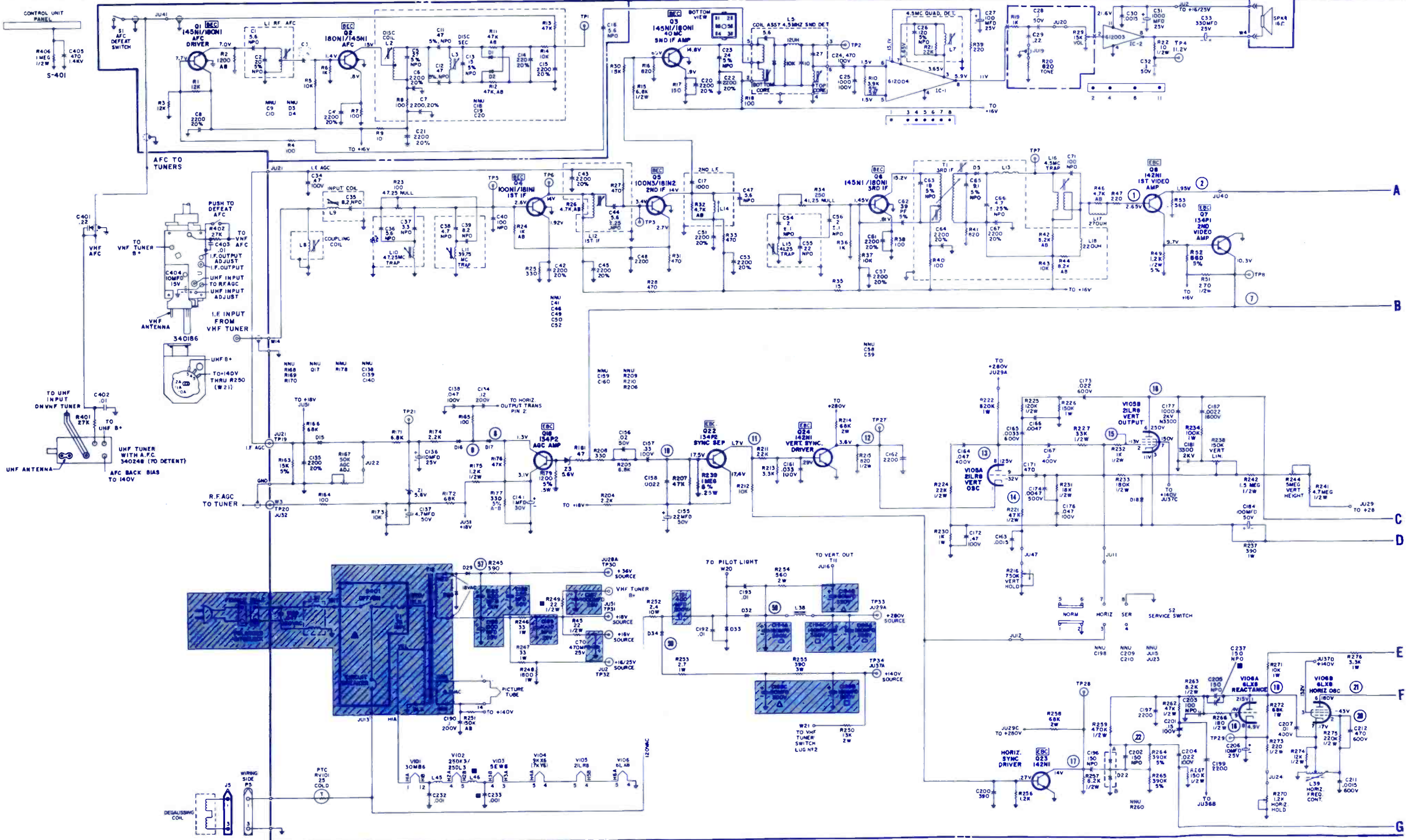
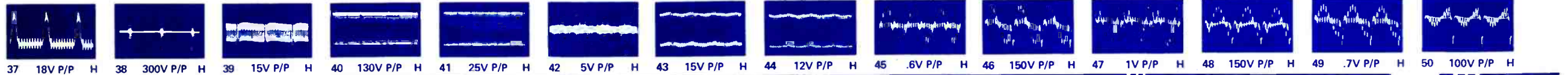
THIS CONNECTOR USED ON CHASSIS CONTAINING THE STAR TUNING SYSTEM.



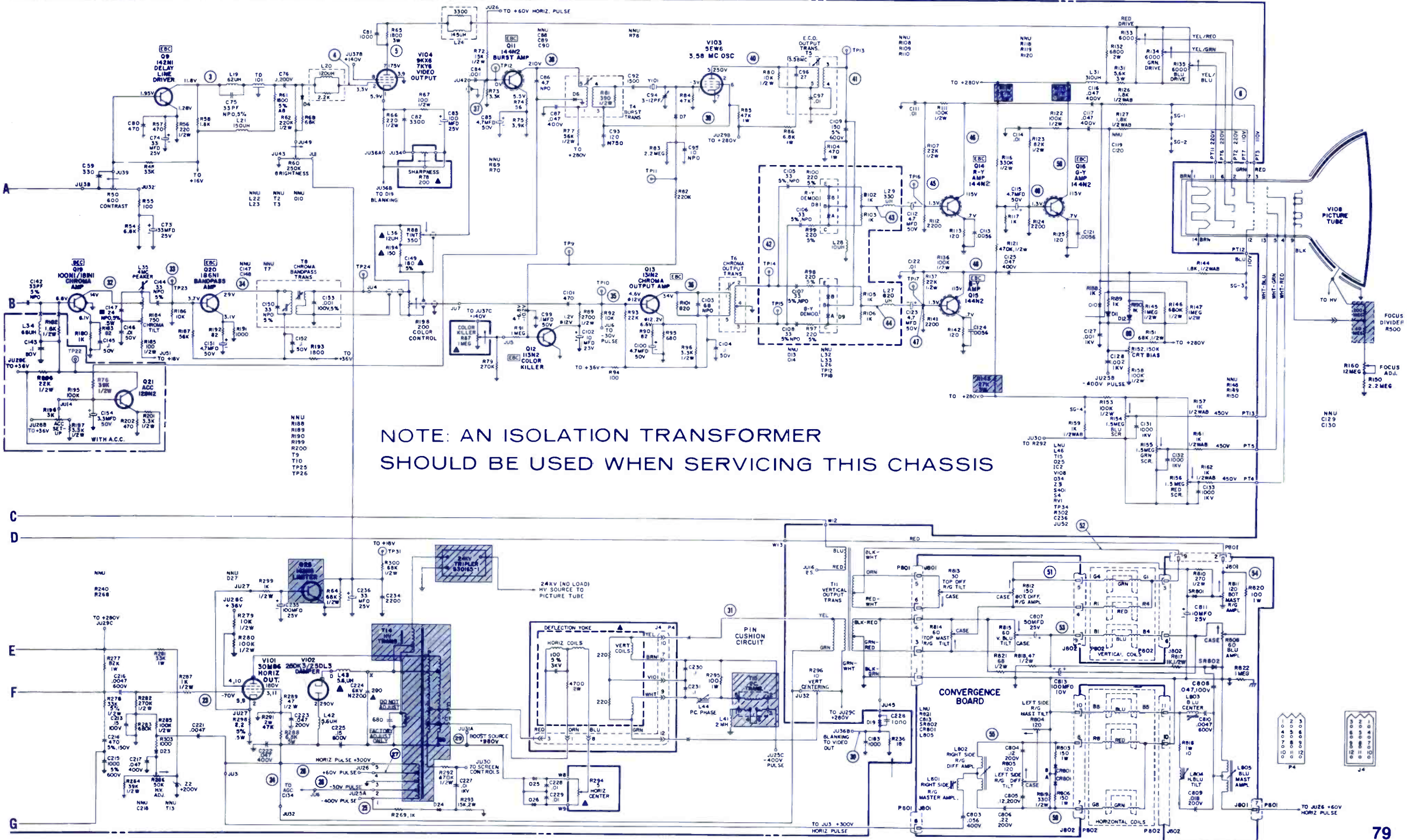
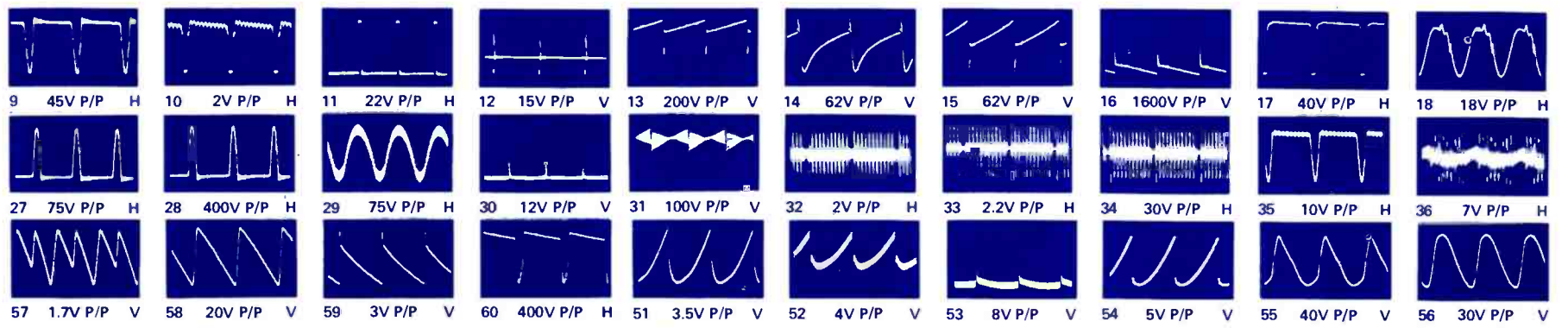
MAGNAVOX
Color TV
Chassis T995

MAGNAVOX

Color TV Chassis
T971



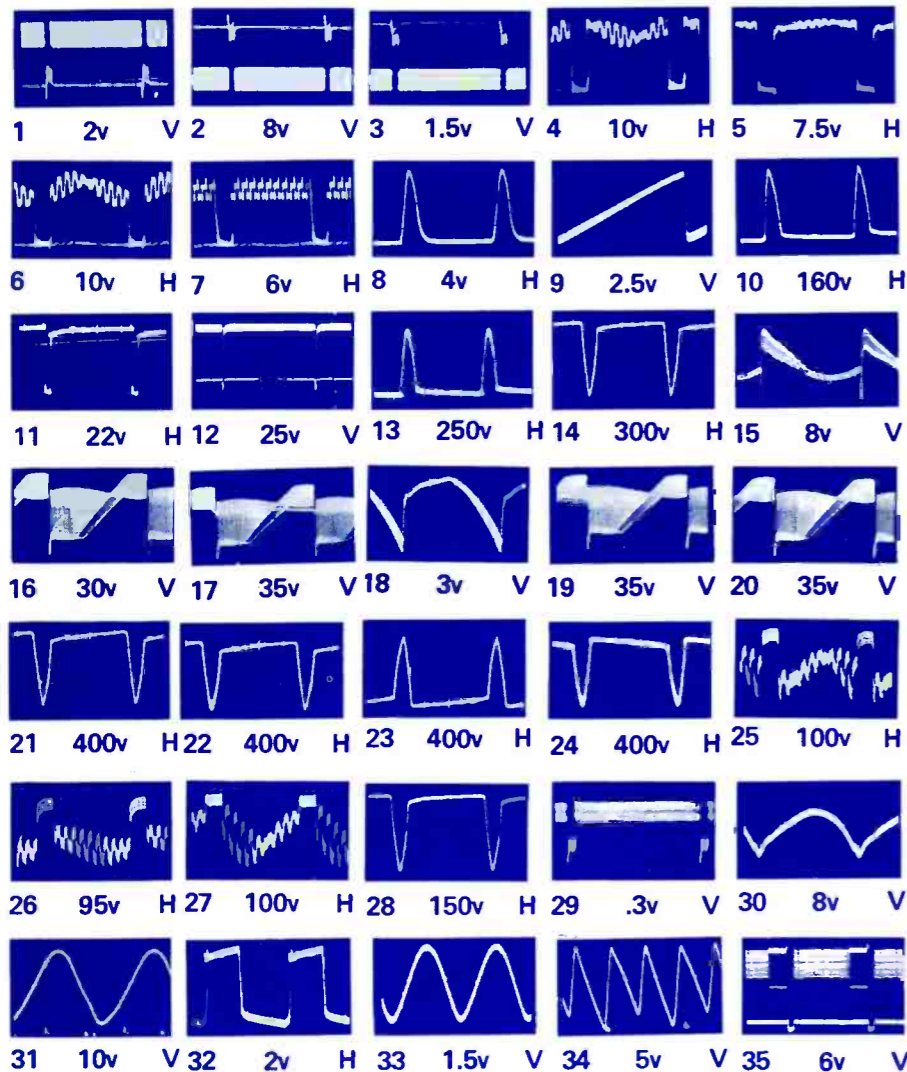
MAGNAVOX
Color TV Chassis
T971



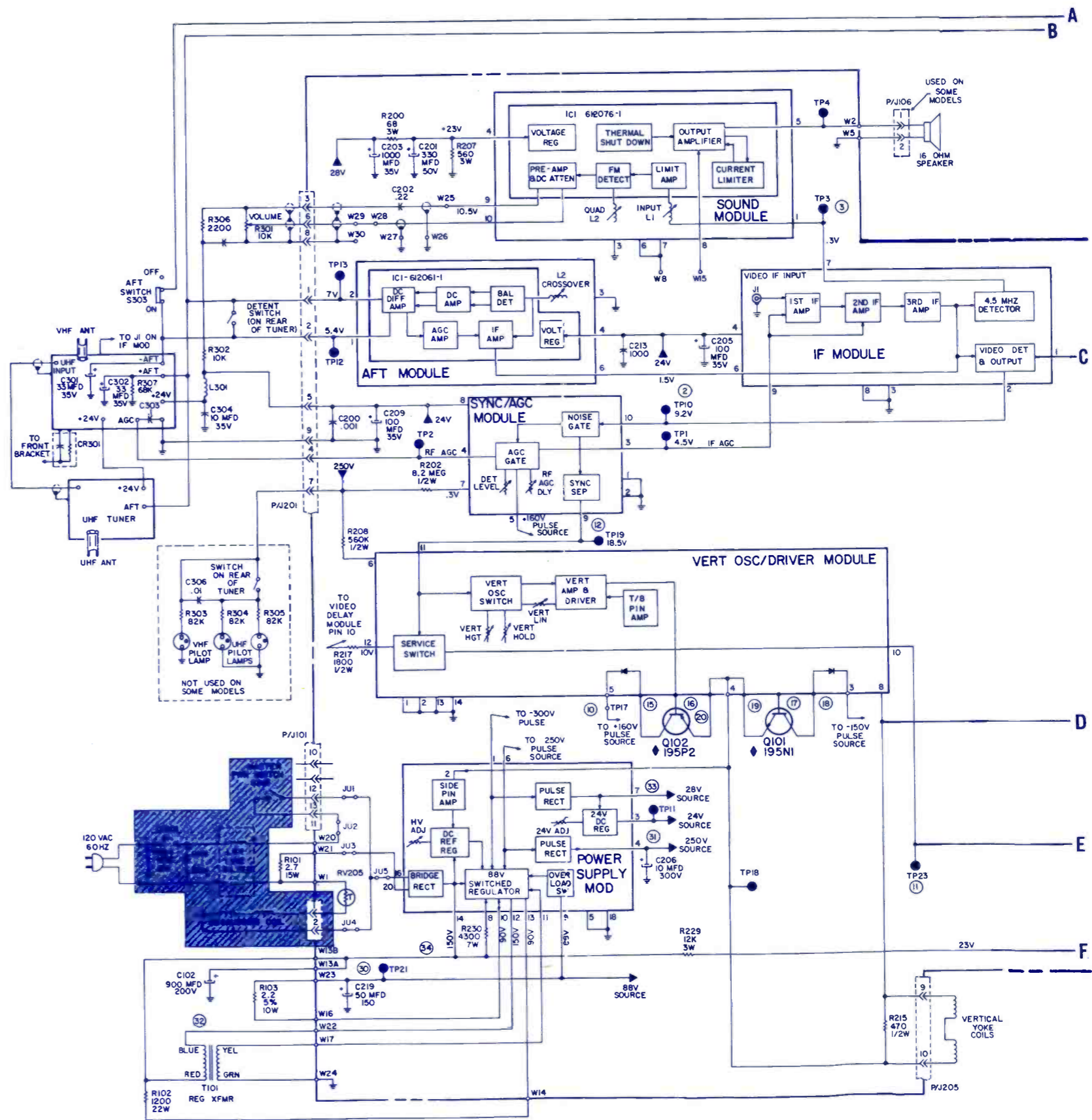
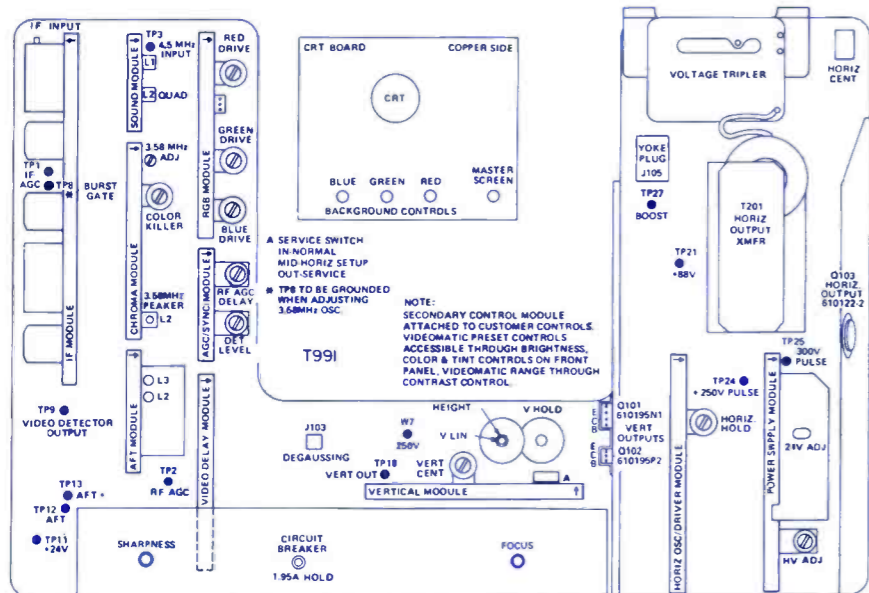
NOTE: AN ISOLATION TRANSFORMER SHOULD BE USED WHEN SERVICING THIS CHASSIS

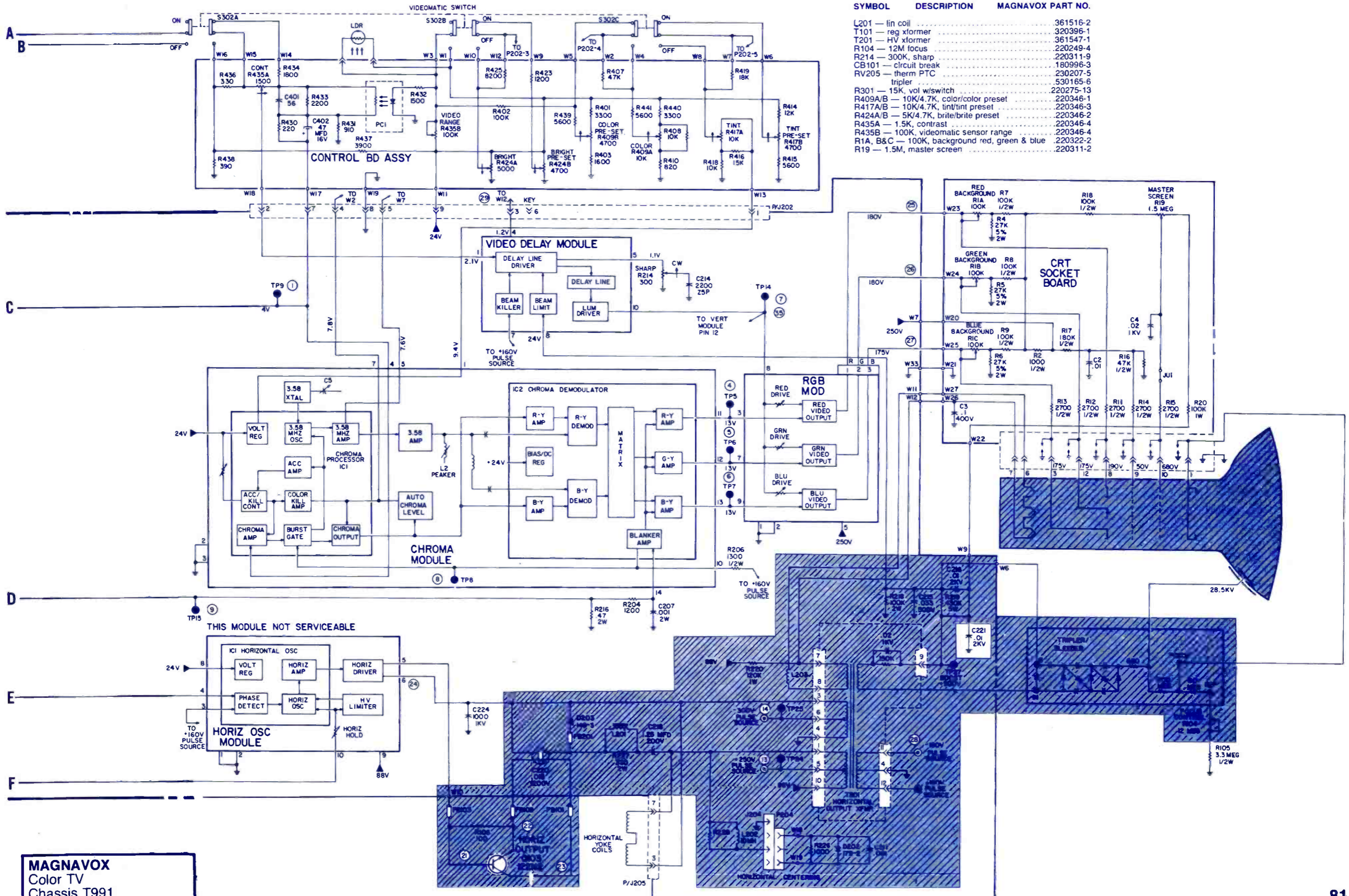
MAGNAVOX

Color TV
Chassis T991



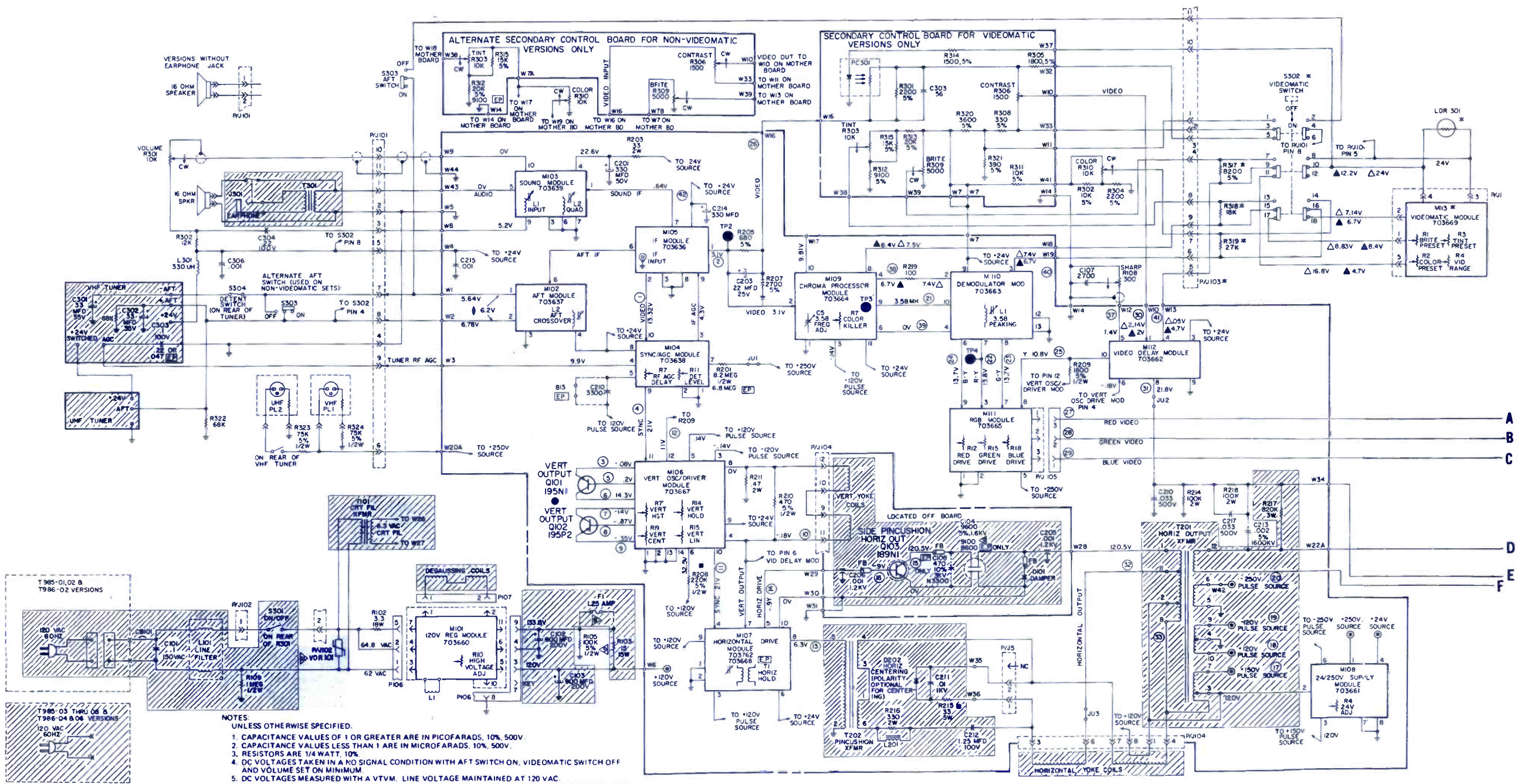
T991 CHASSIS LAYOUT





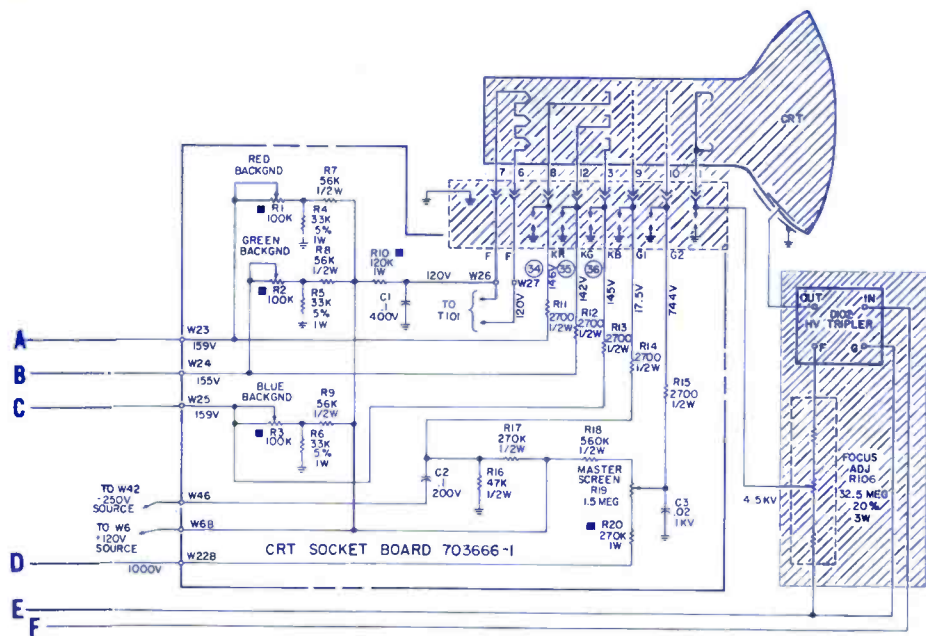
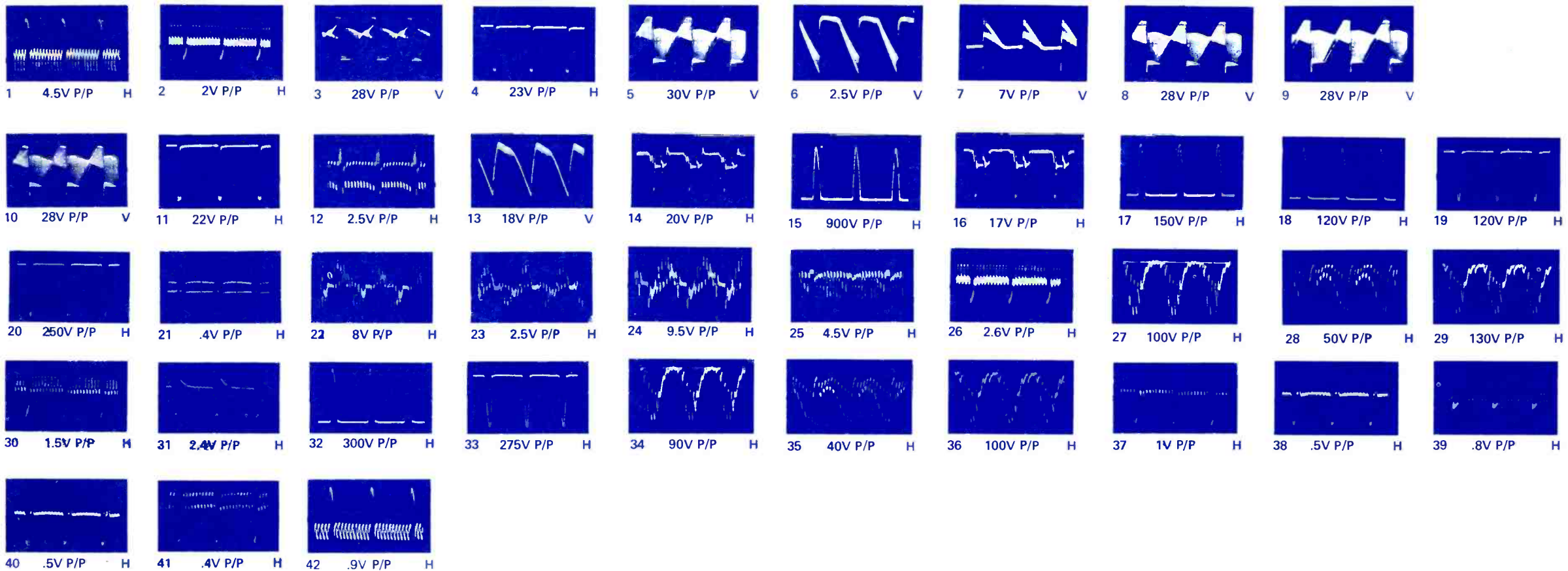
MAGNAVOX
Color TV
Chassis T991

MAGNAVOX
Color TV Chassis
T985/T986



- NOTES:**
UNLESS OTHERWISE SPECIFIED.
1. CAPACITANCE VALUES OF 1 OR GREATER ARE IN PICOFARADS, 10%, 500V.
 2. CAPACITANCE VALUES LESS THAN 1 ARE IN MICROFARADS, 10%, 500V.
 3. RESISTORS ARE 1/4 WATT, 10%.
 4. DC VOLTAGES TAKEN IN A NO SIGNAL CONDITION WITH AFT SWITCH ON, VIDEOMATIC SWITCH OFF AND VOLUME SET ON MINIMUM.
 5. DC VOLTAGES MEASURED WITH A VTVM, LINE VOLTAGE MAINTAINED AT 120 VAC.
 6. Q101 & Q102 ARE MOUNTED ON A HEAT SINK ON THE BASIC CHASSIS. THEY ARE NOT INCLUDED WITH A REPLACEMENT VERTICAL OSCILLATOR DRIVER MODULE.
 7. ▲ VOLTAGES TAKEN WITH VIDEOMATIC SWITCH ON. THESE VOLTAGES WILL VARY WITH THE SETTINGS OF THE SECONDARY CONTROLS & THE VIDEOMATIC PRE SETS.
 8. ◆ VOLTAGES TAKEN WITH AFT SWITCH OFF.

◆ USED ON T985 CHASSIS ONLY.
 10. * USED ON VIDEOMATIC SETS ONLY.
 ▲ VDR101, used on Early Production T985-07-88 Chassis Only, P.N. 230225-1.
 ◆ PART SHOULD BE ELEVATED 1/4 INCH ABOVE BOARD.



WARNING

Magnavox Consumer Electronics Company is committed to marketing safe products which meet or exceed applicable safety standards of industry, government agencies and independent laboratories. It therefore uses parts in its products designed for maximum safety, reliability and performance.

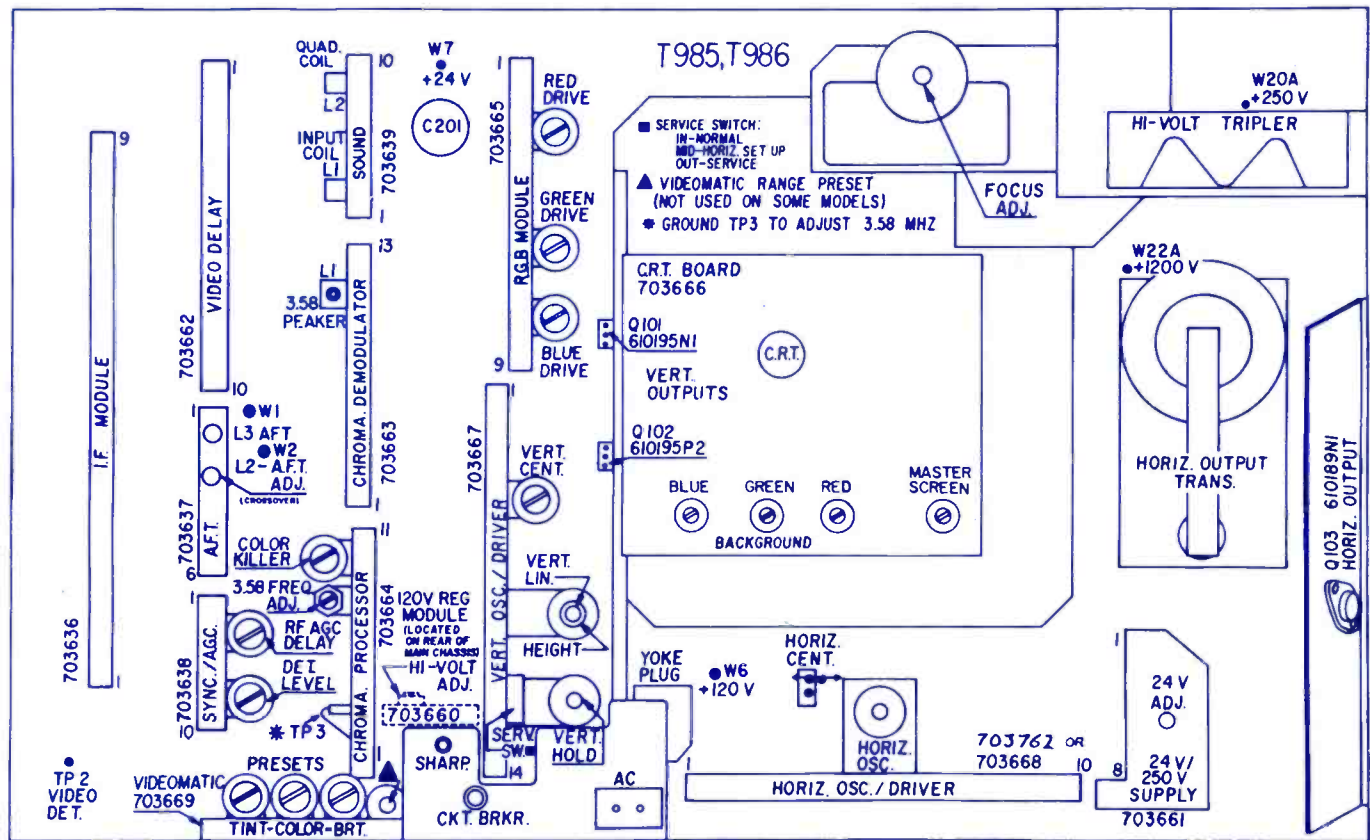
For continued safety of this product, parts shown in the shaded areas of this schematic must be replaced with only those identified in the Parts List of this manual. Use of substitute replacement parts which do not have the same safety characteristics as specified, may create shock, fire or other hazards.

For maximum reliability and performance, all other parts must be replaced by those having identical specifications.

Under no circumstances may the original design be modified or altered without permission from The Magnavox Company, otherwise the consumer may be exposed to fire and/or shock hazards.

MAGNAVOX
Color TV Chassis
T985/T986

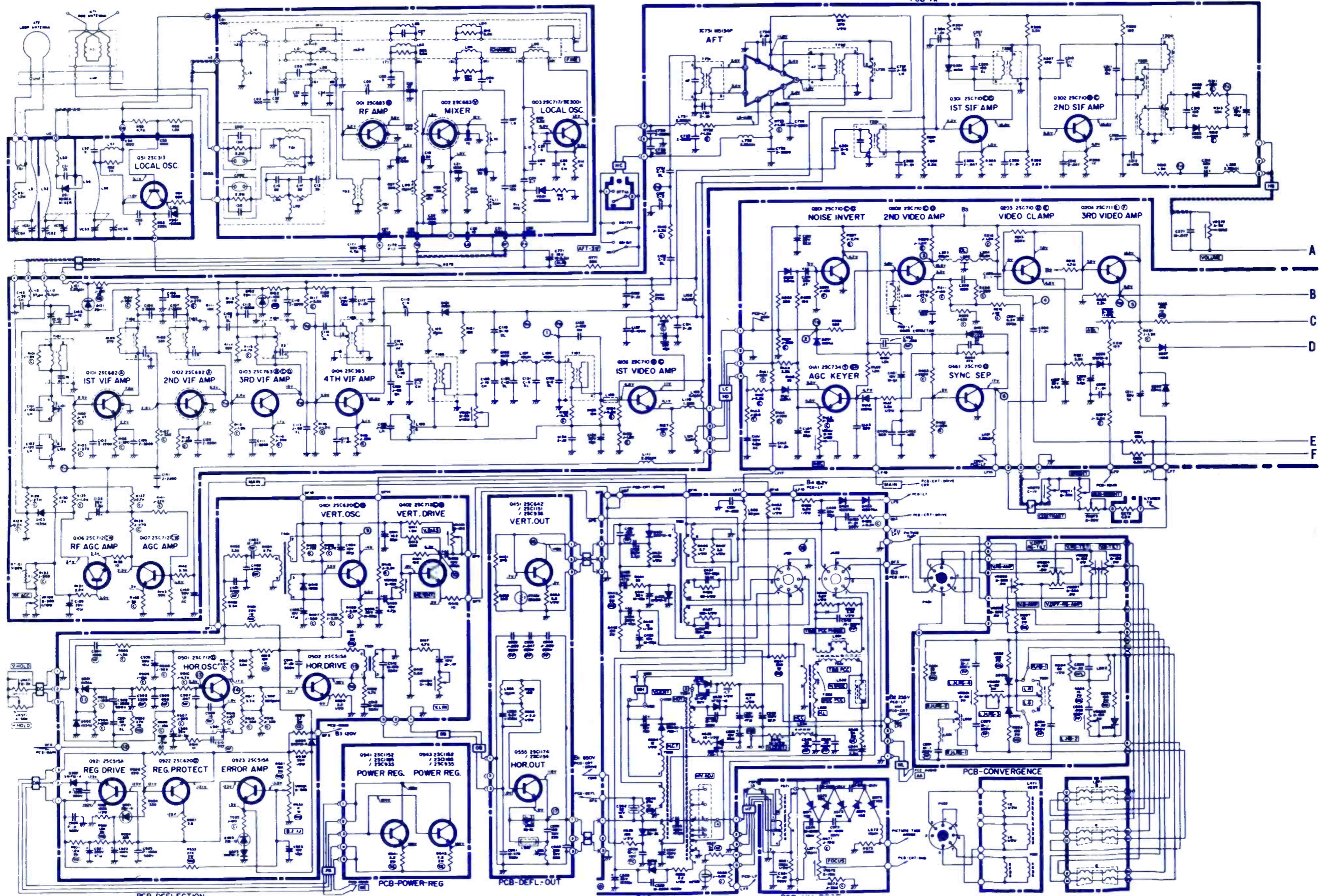
**T985/T986 CHASSIS LAYOUT
(FROM REAR OF SET)**

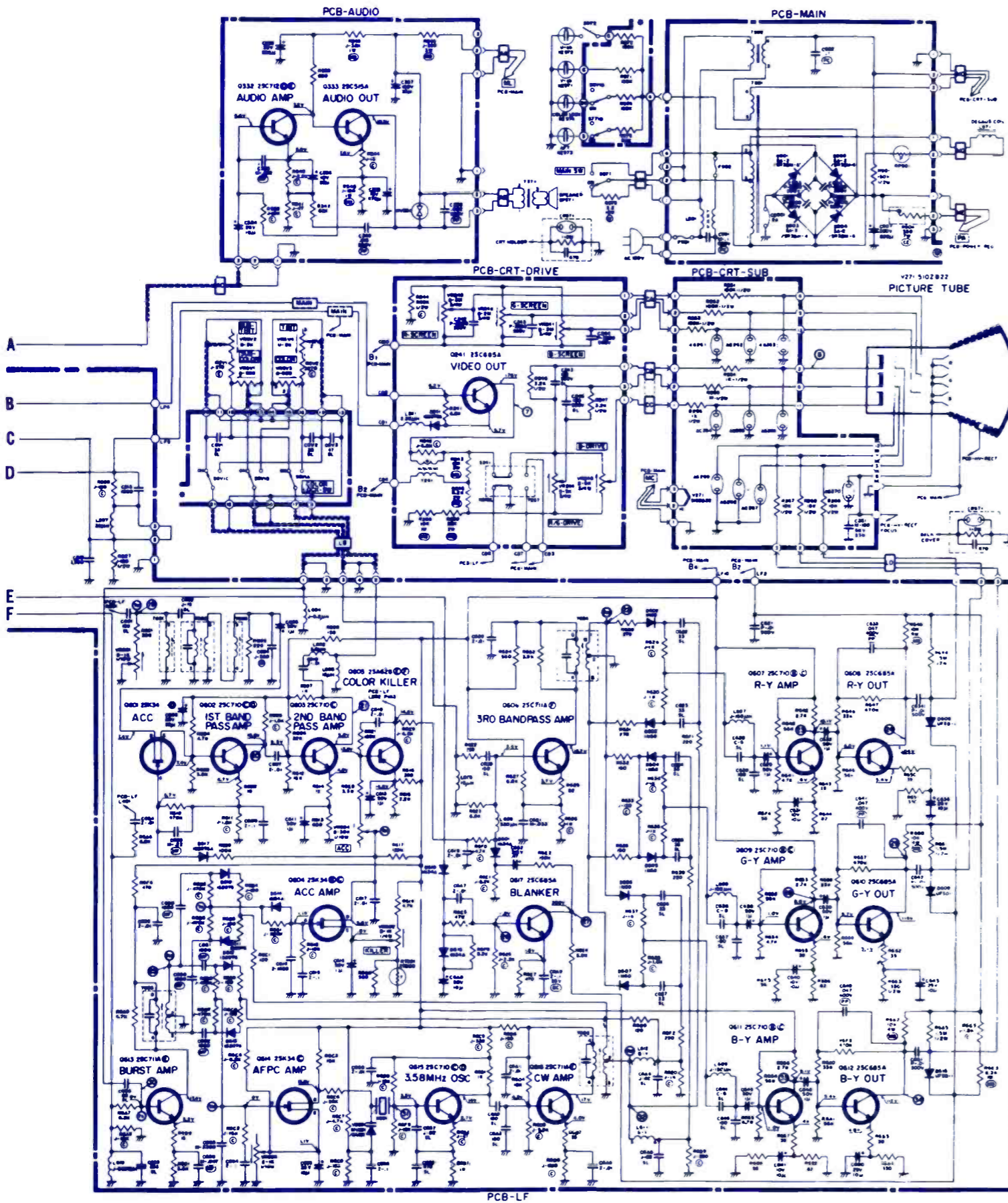


MGA
Color TV Model
CS-195

SYMBOL	DESCRIPTION	MGA PART NO.
T301	— sound IF	327P02002
T371	— audio output	352P01402
T401	— vert osc	328P00302
T431	— vert output	329C01901
T501	— horiz drive	336P00503
T533	— HCT	409B00401
T534	— HOT	336B00202
T571	— flyback	334P05802

T601	— chroma takeoff	349P03301	VR571	— double A- 50K horiz hold	122C15002
T604	— chroma output	349P03601	VR572	— double B- 15M focus	129P00401
T605	— chroma burst	349P03701	VR603	— semifixed B- 1K, 1/10w color	129D02503
T901	— power	350P03501	VR6V1	— slide B- 500 ohm sub-color	121C03001
L471	— deflect yoke	330P02903	VR6V2	— slide B- 500 ohm color	129C01901
VR271	— double B- 30K brite	122C15001	VR6V3	— E - 2K sub-tint	121C03507
VR272	— double C- 1K contrast	122C15002	VR6V4	— slide U- 2K tint	129C01908
VR372	— STD A- 5K vol UL	120C13104	CB901	— circuit breaker 2.0a	287C00202
VR471	— double B-2K vert hold	122C15001	F571	— fuse 1a	283D01801





NOTE 1:

- The unit of resistance "ohm" entirely omitted. Accordingly: K=1000 ohms, M=1000K ohms.
- The wattage of resistor, not specifically designated, is 1/4 watt.
- Resistors, not specifically designated, are: Fixed Composition resistors (Solid type)
- The marks of resistors are as follows:
 - Ⓢ Fixed carbon film resistor.
 - Ⓢ Cemented resistor.
 - Ⓢ Fusible resistor.
 - Ⓢ Fixed composition resistor, hermetic shield
 - Ⓢ Fixed carbon resistor (type HT)
 - Ⓢ Metal oxide film resistor (type A)
 - Ⓢ Metal oxide film resistor (type B)
 - Ⓢ Wire wound resistor.
- The tolerance of resistor value, not specifically designated, is: ±10%, J=±5% M=±20%

- The unit of capacitance, not specifically designated, is:
 - a) μF, for numbers less than 1
 - b) PF, for numbers more than 1
- Capacitors, not specifically designated are: Ceramic capacitors except electrolytic capacitors
- The marks of capacitors are as follows:
 - Ⓢ Cellulose film capacitor
 - Ⓢ Mica film capacitor
 - Ⓢ Polyester film capacitor
 - Ⓢ Metallized polyester film capacitor

- Ⓢ Fixed metalized paper capacitor
- Ⓢ Paper capacitor (type A)
- Ⓢ Paper capacitor (type C)
- Ⓢ Polypropylene film capacitor
- Ⓢ Polystyrene film capacitor
- Ⓢ Styrol capacitor
- Ⓢ Electrolytic capacitor

Mark a e indicate 1 block capacitor respectively.

- The DC work voltage of capacitor, not specifically designated is:
 - a) 400V for paper capacitors
 - b) 50V for other kinds of capacitors
- The tolerance of capacitor value, not specifically designated, except the electrolytic capacitor is: ±10% J=±5% M=±20% P=±10% C=±25PF D=±5PF F=±1PF
- Ceramic capacitors with the marks RH, UJ, SL etc. are temperature compensating types.

NOTE 2:

- DC voltages are measured from points indicated to the circuit ground with a VTVM. Line voltage at 120V AC on signal applied.
- Waveforms are taken with controls set for a normal picture.

SPECIFICATIONS

Power Input ----- AC 120V 60 Hz

Power Consumption --- 160 W

Channels ----- VHF ch 2 ~ ch 13
UHF ch14 ~ ch 83

Antenna ----- VHF Dipole Antenna, balanced 300 Ω
UHF Loop Antenna, balanced 300 Ω

Intermediate ----- Video 45.75 MHz
Frequency ----- Sound 41.25 MHz

Audio Output ----- 2W

Speaker ----- 4" Round Type

Picture Tube ----- 510ZB22A 19" 90° Deflection
Shell-bond Type

Semiconductor

Integrated Circuit ----- 1

Transistors ----- 50

Diodes ----- 68

Thermistors ----- 3

Posistor ----- 1

Varistor ----- 1

Cabinet Dimensions ----- 25 1/4"(W) x 21 1/2"(D) x
19 3/16"(H)

Weight ----- 78.7 lbs.

MGA
Color TV Model
CS-195

25C1446 25C1448	25C828 25C1360 25C1318	25A719 25A564 25A564A	25C962 25C563A	25D350	M21C	35F-11	25F248 25C1664
							T103, T104, T105, T106, T151, T201, T202, T603, T604, T902, T903 L106

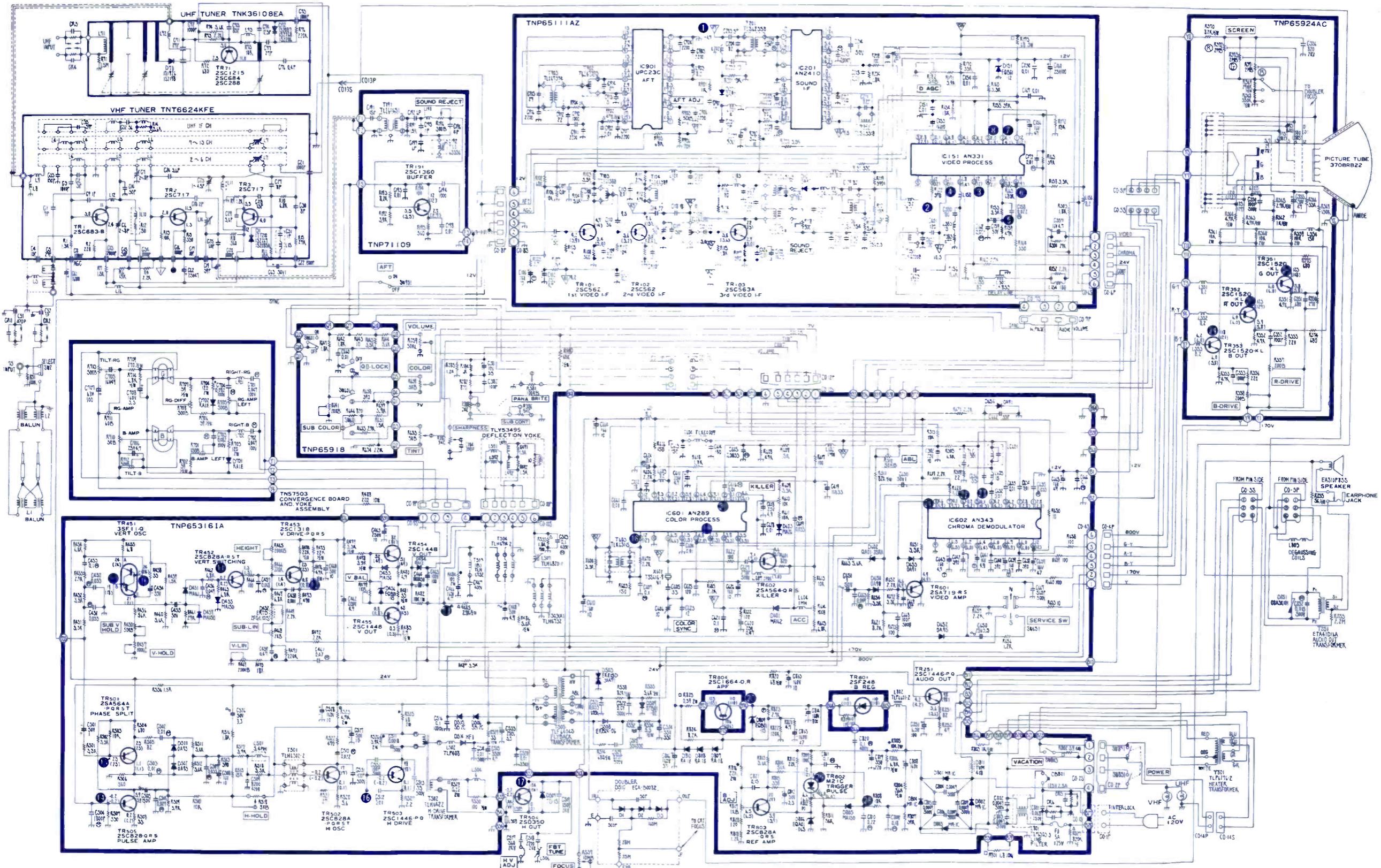
NOTICE

1. RESISTOR
All resistors are carbon film resistor, unless otherwise noted.
Note the following marks:
Unit of resistance is Ohm (Ω); K = 1,000; M = 1,000,000.
Solid resistor
Metal oxide resistor
Wire wound resistor
Thermistor
Fuse resistor

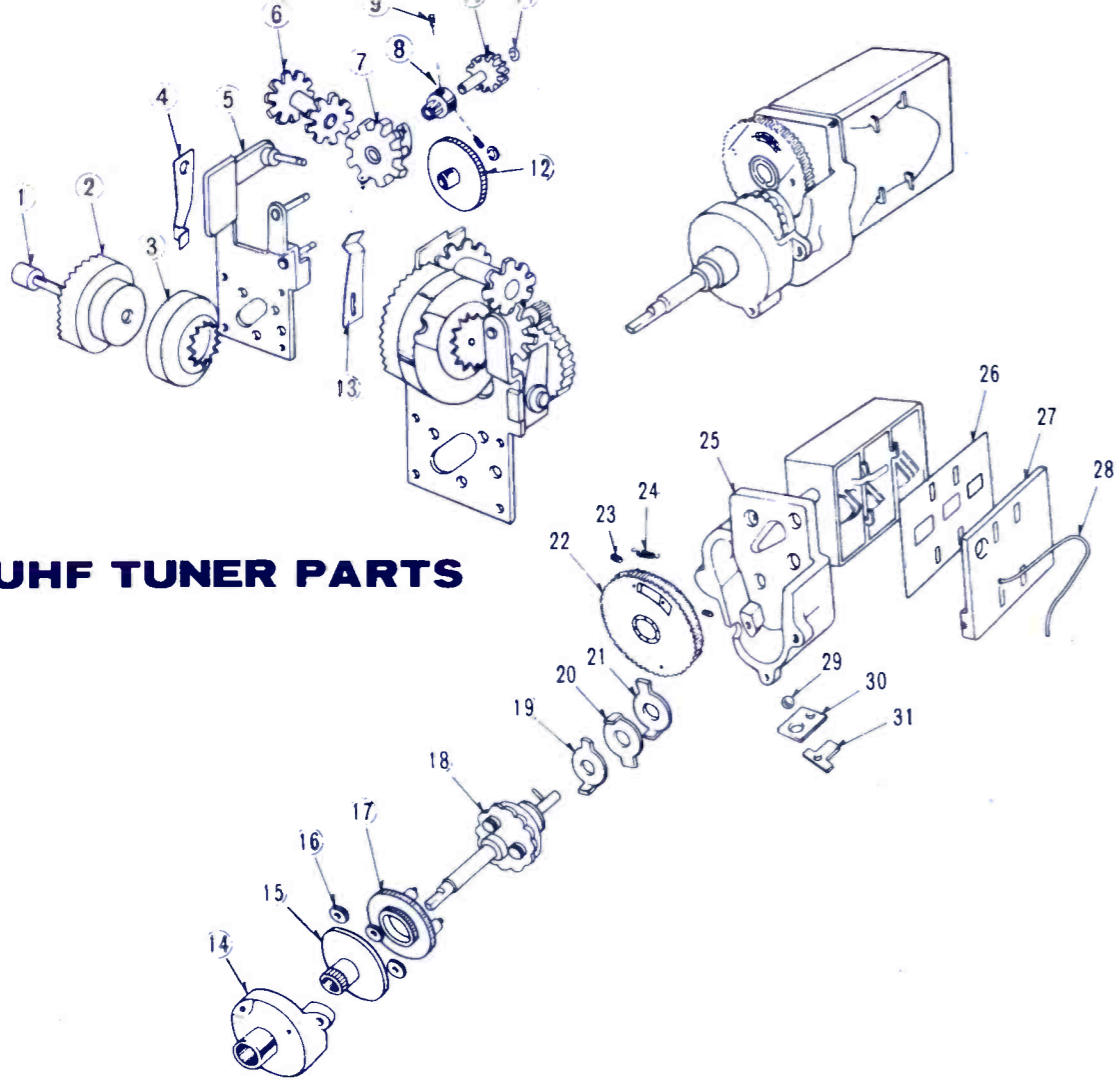
2. CAPACITOR
All capacitors are ceramic 50V capacitor, unless otherwise noted.
Note the following marks:
Unit of capacitance is pF, unless otherwise noted.
P = Polyester capacitor
S = Polystyrene capacitor
E = Electrolytic capacitor

3. COIL
Unit of inductance is μH
4. TEST POINT
Test point position: TP42
5. VOLTAGE MEASUREMENT
Voltage is measured by a 500Ω probe meter with DC 20K Ohm/V

receiving color bar signal when all controls are set to the maximum position.
Number in red circle indicates waveform number. See main manual.
When arrow mark is found connection is easily found along with the direction of an arrow.
When schematic diagram of a board is described in more than two places they are enclosed with dotted line.
This schematic diagram is the latest at the time of printing and subject to change without notice.



UHF TUNER PARTS

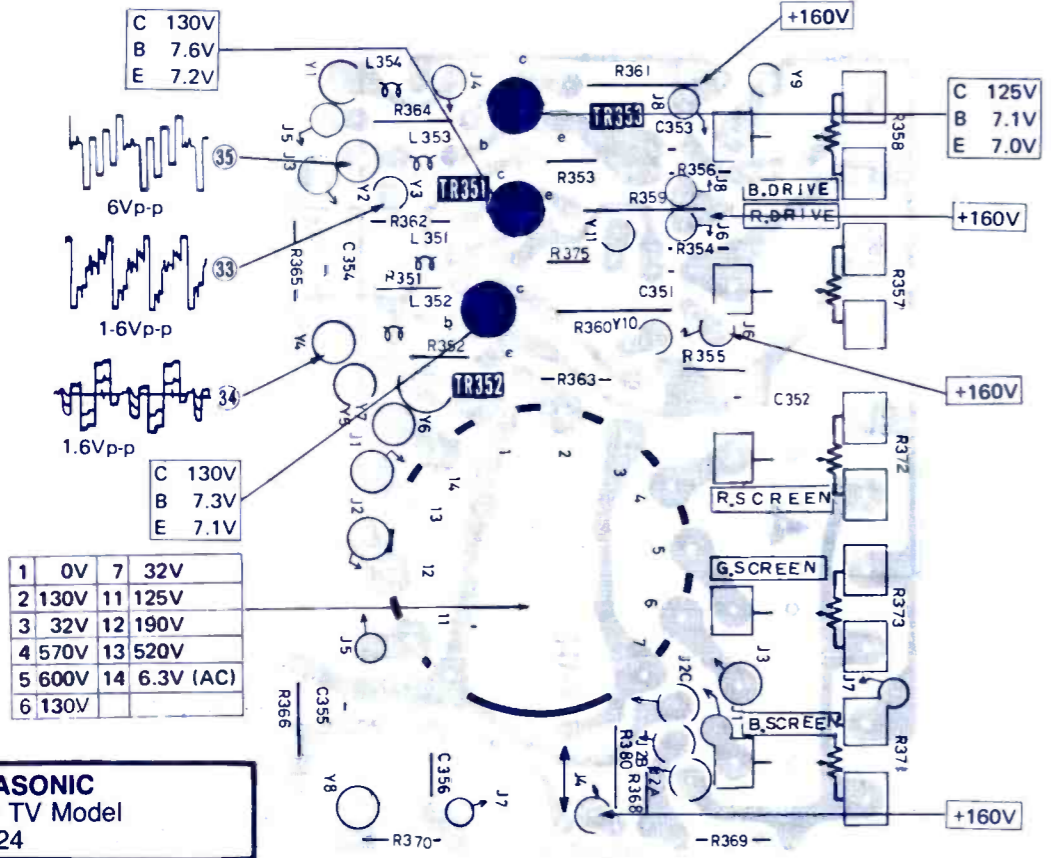
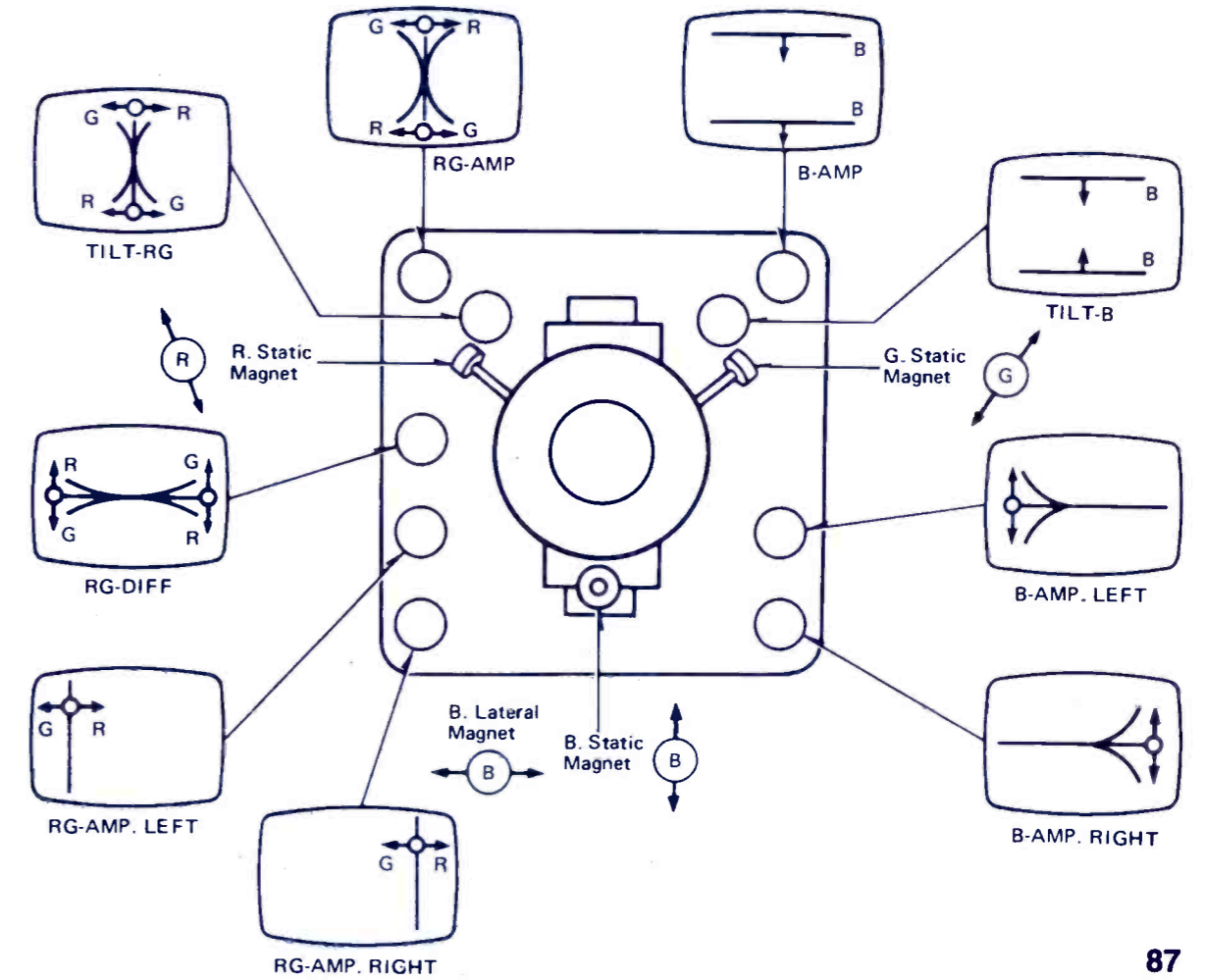


R118 — sound reject 500 ohm B	..... EVLR6BA00B52	R610 — kill 10 K B	..... EVTJOUS15B14
R182 — delayed AGC 5K B	..... EVTV0U00MB53	L502 — choke coil	..... TLP408
R903 — AFT adj. 50K B	..... EVLR6BA00B54	T505 — flyback xformer	..... TLF6404S
R820 — fuse resist 68 ohm ± 5%	..... ERQ12HJ680	FI — fuse	..... TSF35503
R450 — sub Vertical-hold 50K B	..... EVTS3BA00B54	R220 — sound control 50K L	..... EVA85A06A54L
R465 — height 200K B	..... EVTJOUS15B25	R259 — sound control 50K L	..... EVX59AF25550
R468 — sub Vertical-lin 2K B	..... EVTS3BA00B23	R380 — bana-brite 100K B	..... EVV58AF25C53
R469 — Vertical - lin, 200K B	..... EVTJOUS15B25	R381 — 2ohm C	..... EVV58AF25C53
R479 — Vertical-balance 1K B	..... EVTS3BA00B13	R386 — sub contrast control 5K C	..... EVV58AF25C53
R614 — ACC 10K B	..... EVTS3BA00B14	R387 — sharpness control 5K C	..... EVV85AF25C53

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
UHF TUNER (TNK36108EA) PARTS					
A		Indicator Ass'y DM-01B	15	DM01-0007-00	Indicator Shaft DM-01A
1	DM01-0051-00	Supporter DM-01A	16	DM01-0015-00	Pinion Gear DM-01B
2	DM01-0074-00	Indicator Drum DM-01D	17	DM01-0006-00	Indicator Gear DM-01A
3	DM01-0073-00	Indicator Drum DM-01C	18	DM05-0002-00	Shaft Assembly DM-01B
4	DM01-0044-00	Indicator Spring DM-01A	19	N8-827-07	Stopper 07
5	DM05-0005-00	Indicator Bracket Assembly CM-01B	20	DM01-0017-00	Stopper DM-01B
6	DM01-0046-00	Geneva Stop DM-01A	21	DM01-0018-00	Stopper DM-01C
7	DM01-0070-00	Idle Gear DM-01C	22	DM05-0013-00	Double Gear Assembly
8	DM01-0071-00	Hub Gear DM-01C	23	N15-812-11	Screws
9	N15-812-11	Screw	24	N9-814-02	Double Gear Spring 02
10	DM01-0071-00	Hub Gear DM-02C	25	DM01-0002-00	Housing DM-01B
11	N17-818-04	E-Ring	26	UY01-0047-00	Inner Cover UY-01A
12	DM01-0069-00	Idle Gear DM-02B	27	UY01-0026-00	Cover UY-01A
13	DM01-0045-00	Indicator Spring DM-01B	28	UY01-0027-00	Cover Spring UY-01A
B		Complete Tunern	29	N7-811-03	Ball 03
14	DM01-0001-00	Housing DM-01A	30	DM01-0062-00	Detent Spring DM-03A
			31	DM01-0063-00	Spring Retainer DM-01A

CONVERGENCE ALIGNMENT

Convergence board of CT-324 is different from that of CT-914. Proceed with the steps as shown



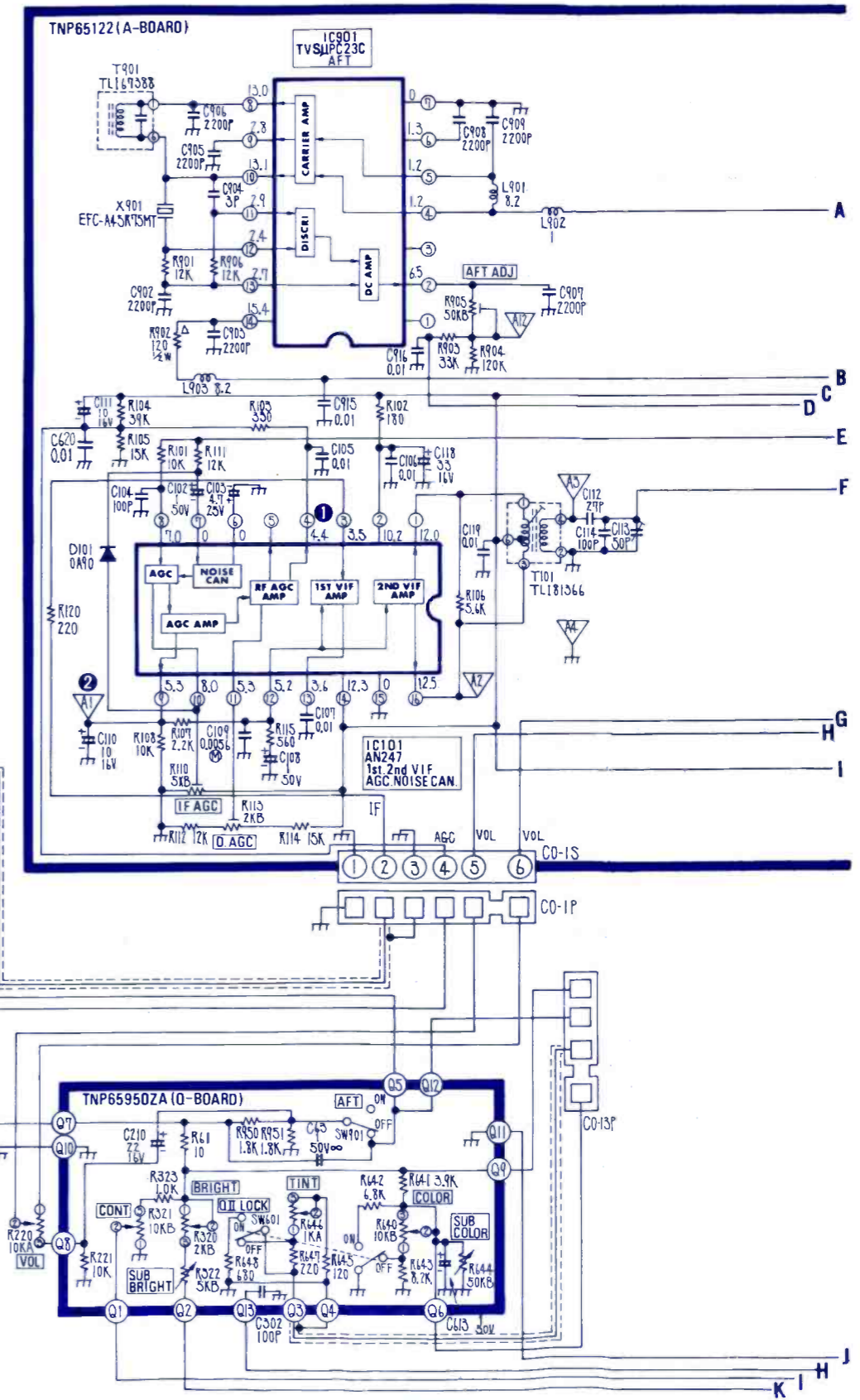
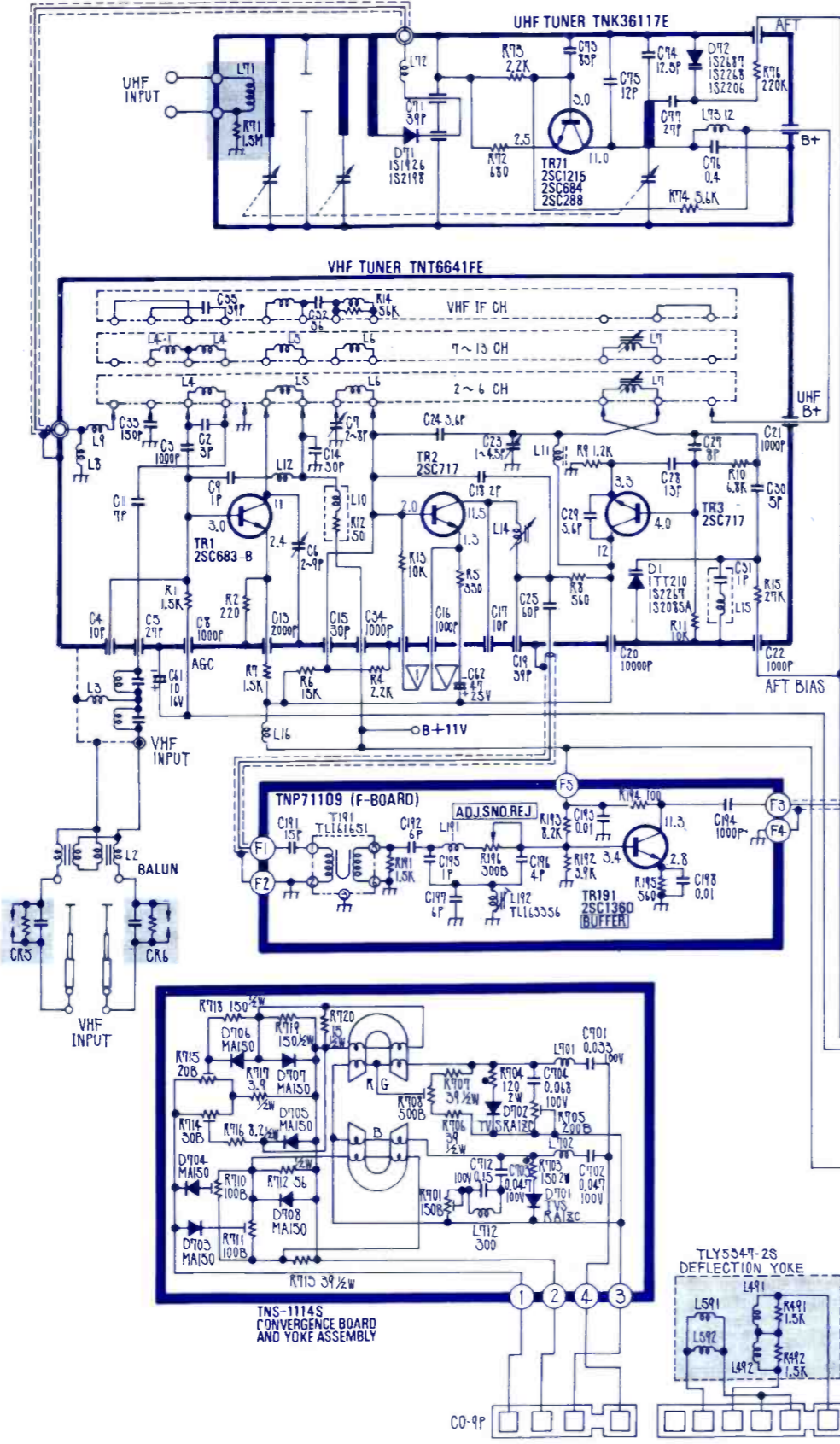
1	0V	7	32V
2	130V	11	125V
3	32V	12	190V
4	570V	13	520V
5	600V	14	6.3V (AC)
6	130V		

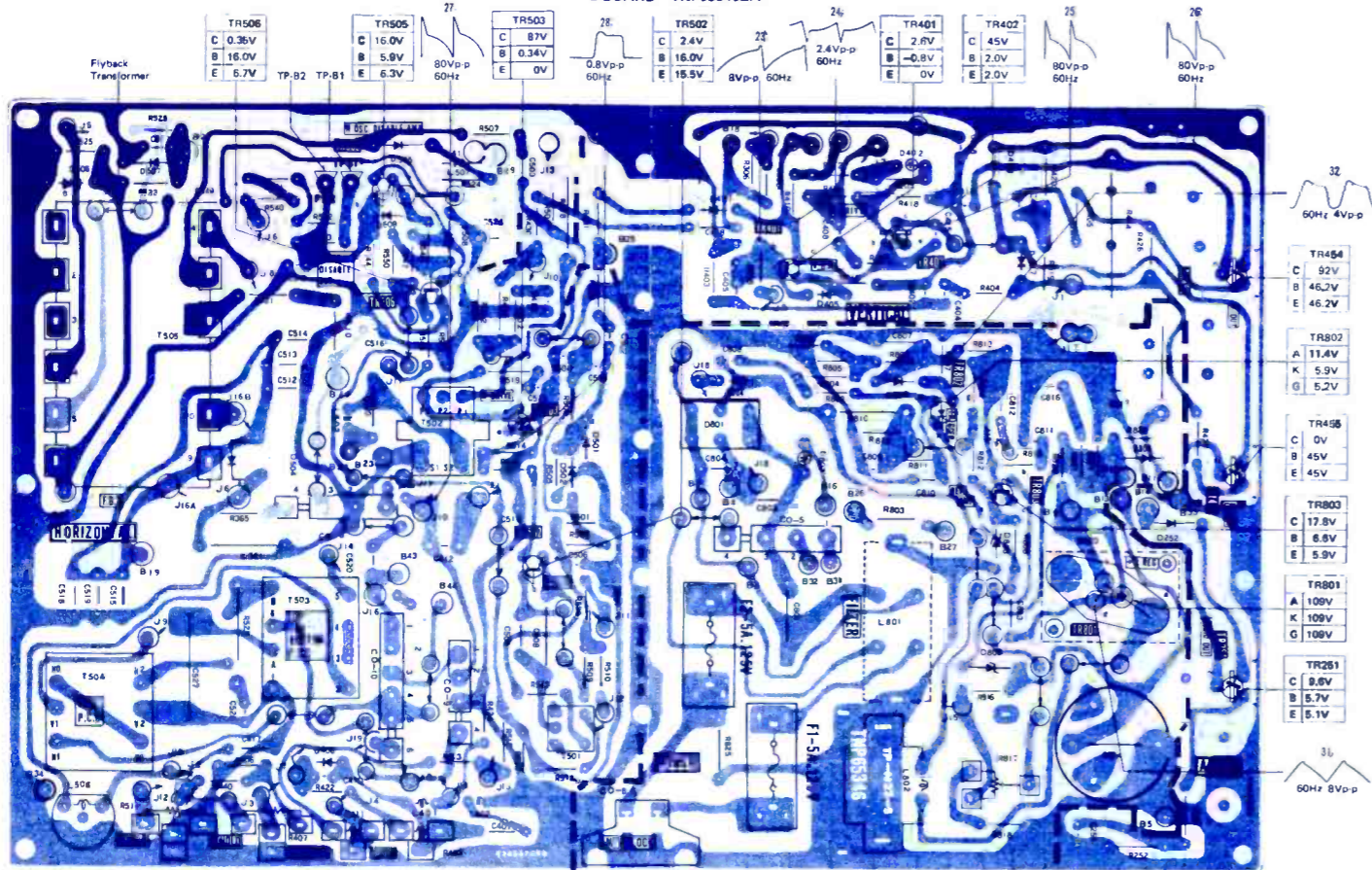
PANASONIC
Color TV Model
CT-324

PANASONIC

Color TV
Chassis
NMX-P3A

	L106 T103 T104 T105 T151 T201 T202 T603 T604 T902 T903		2SC1550 2SC1556
	T107		3SF11
	2SA564 2SA564A 2SA719 2SC828 2SC828A 2SC829 2SC1215 2SC1317 2SC1318 2SC1360 2SC1384 2SC1685 2SC1686 2SC1688		2SC1664 2SF248 2SF1168
	2SB547 2SC1446 2SC1448 2SC1507 2SD402		M21C
	2SA483 2SA766 2SC582 2SC647 2SC783 2SC1450 2SD198 2SD199 2SD201 2SD226A 2SD299 2SD334 2SD350 2SD380		M23C
	2SA636 2SC1226A 2SC1520		2SC717
	2SC562 2SC563A		2SC683
	2SA550A 2SC1012 2SC1012A		





TR506 C 0.35V B 16.0V E 6.7V	TR505 C 16.0V B 5.9V E 6.3V	TR503 C 8.7V B 0.34V E 0V	TR502 C 2.4V B 16.0V E 15.5V	TR401 C 2.8V B -0.8V E 0V	TR402 C 45V B 2.0V E 2.0V
---------------------------------------	--------------------------------------	------------------------------------	---------------------------------------	------------------------------------	------------------------------------

NOTICE

- RESISTOR**
All resistors are carbon 1/4W resistor, unless otherwise noted the following marks.
Unit of resistance is OHM Ω, K 1,000, M 1,000,000.
 - △ Solid resistor
 - Metal oxide resistor
 - Wire wound resistor
 - ⊖ Thermistor
 - ⊕ Fuse resistor
- CAPACITOR**
All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks. Unit of capacitance is uF, unless otherwise noted.
 - M Polyester capacitor
 - S Polystyrene capacitor
 - ⊖ Electrolytic capacitor
- COIL**
Unit of inductance is uH.

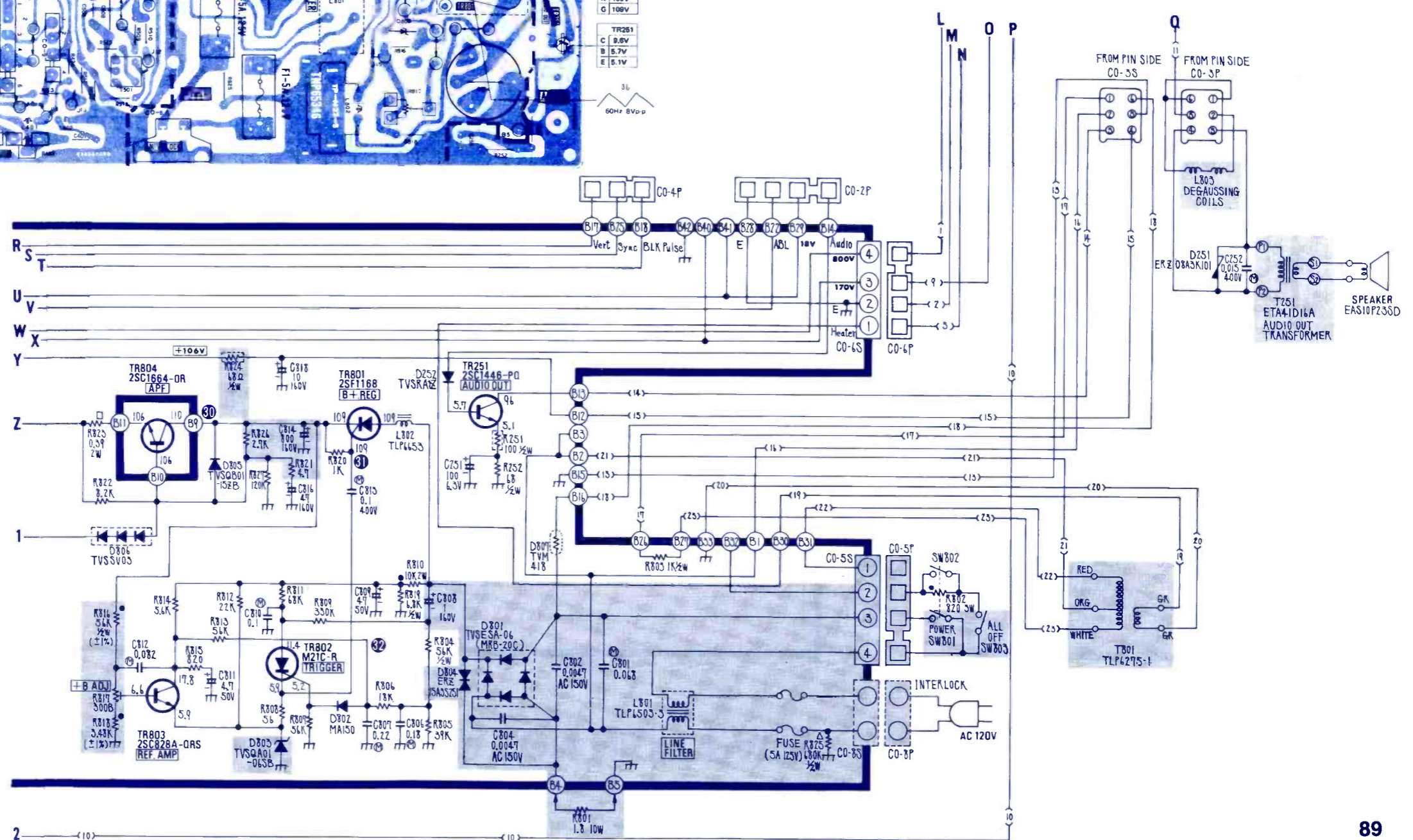
TEST POINT

Test point position: TPA2

- VOLTAGE MEASUREMENT**
Voltage is measured by a volt ohm meter with DC 20K OHM/V receiving color bar signal, when all controls are set to the maximum position.
- Number in red circle indicates waveform number. (See main manual.)
- When arrow mark ↗ is found, connection is easily found along with the direction of an arrow.
- When schematic diagram of a board is described in more than two places, they are encircled with dotted line.

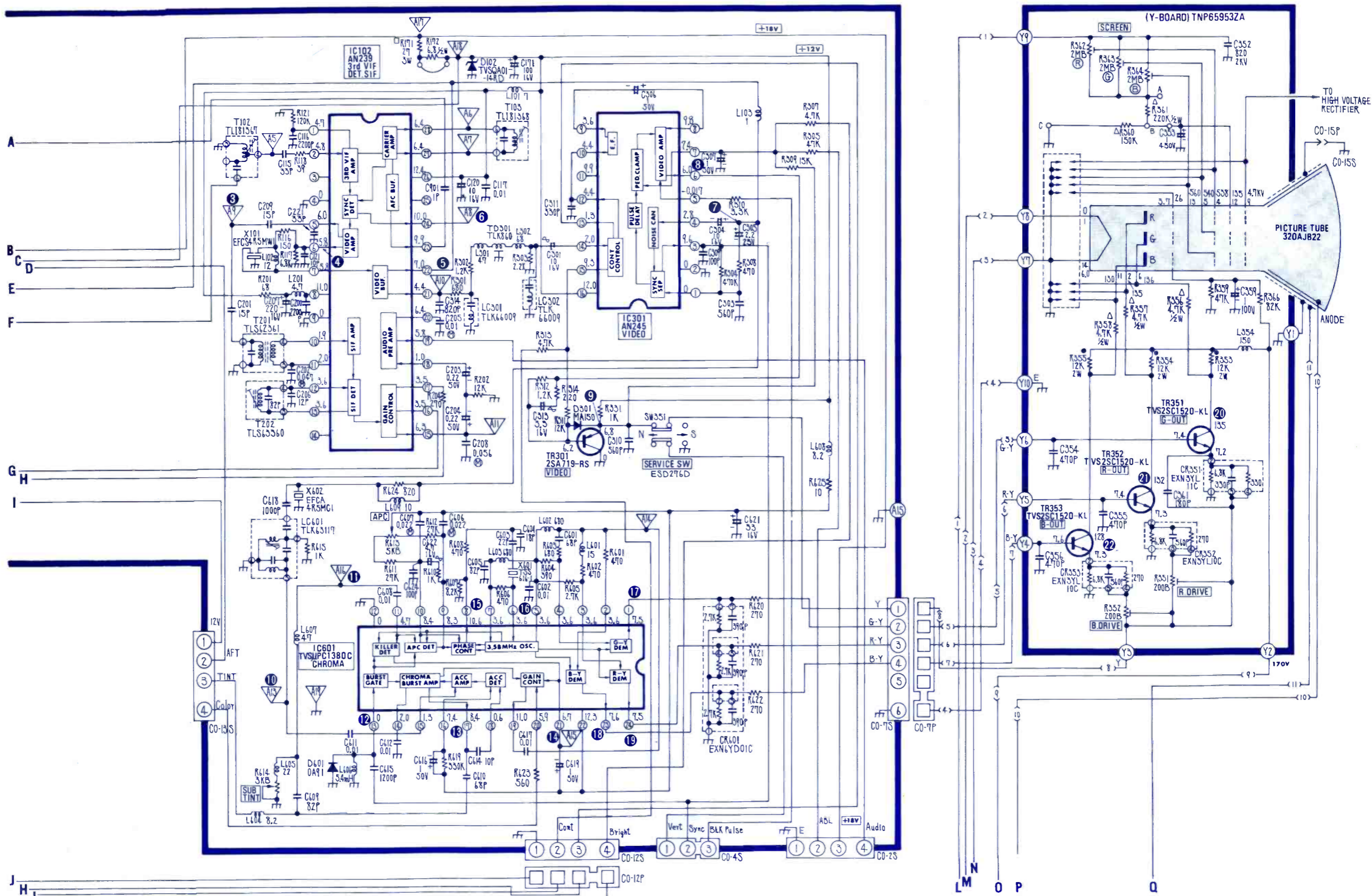
IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.



PANASONIC
Color TV Chassis
NMX-P3A

ADDITIONAL INFORMATION NEXT PAGE

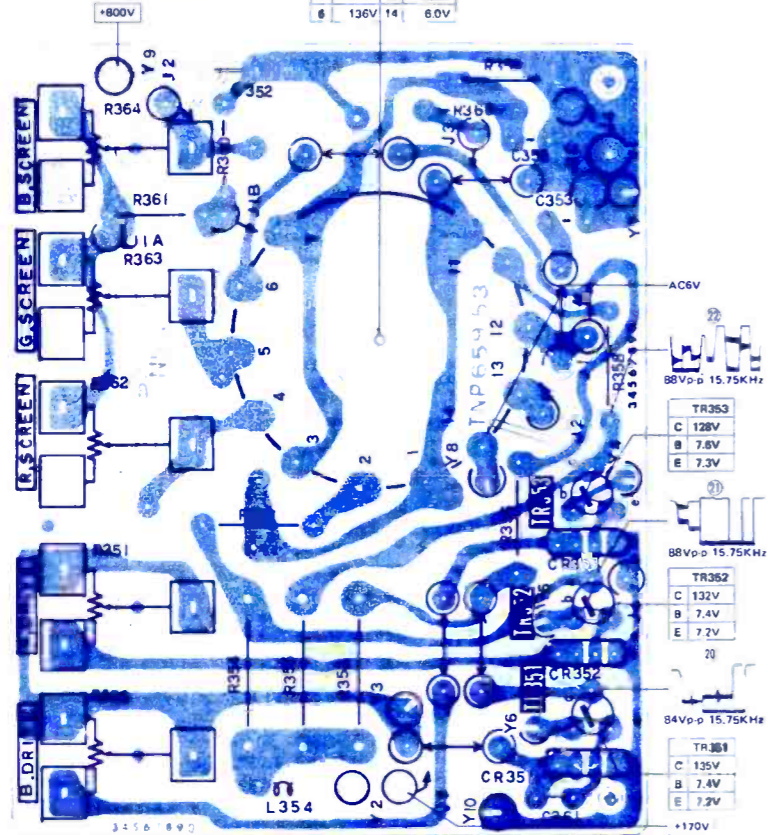


PANASONIC
Color TV Chassis
NMX-P3A

CRT Socket

1	0V	7	26V
2	135V	9	4.7Kv
3	26V	11	130V
4	538V	12	135V
5	540V	13	560V
6	136V	14	6.0V

Y-BOARD TNP65953ZA



IC001

1	8	13.0V	
2	6.5V	9	2.8V
3	10	13.1V	
4	1.2V	11	2.9V
5	1.2V	12	2.4V
6	1.3V	13	2.7V
7	0V	14	15.4V

IC101

1	12.0V	9	5.3V
2	10.2V	10	8.0V
3	3.5V	11	5.3V
4	4.4V	12	5.2V
5	13	3.6V	
6	0V	14	12.3V
7	0V	15	0V
8	7.0V	16	12.5V

IC102

1	4.7V	15	6.3V
2	4.8V	16	3.5V
3	17	3.5V	
4	0V	18	1.0V
5	6.0V	19	5.8V
6	5.8V	20	6.4V
7	5.8V	21	4.4V
8	11.0V	22	7.0V
9	0V	23	3.9V
10	1.9V	24	10.0V
11	2.0V	25	
12	3.6V	26	12.4V
13	3.6V	27	6.4V
14		28	6.4V

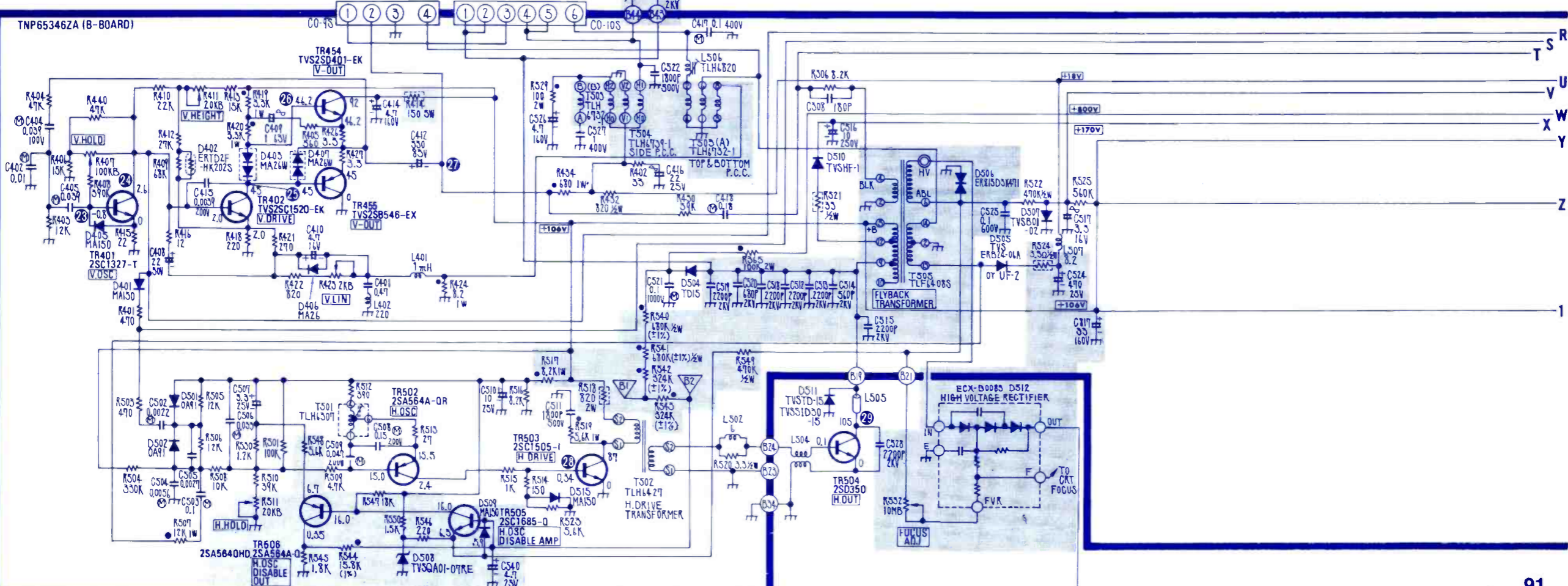
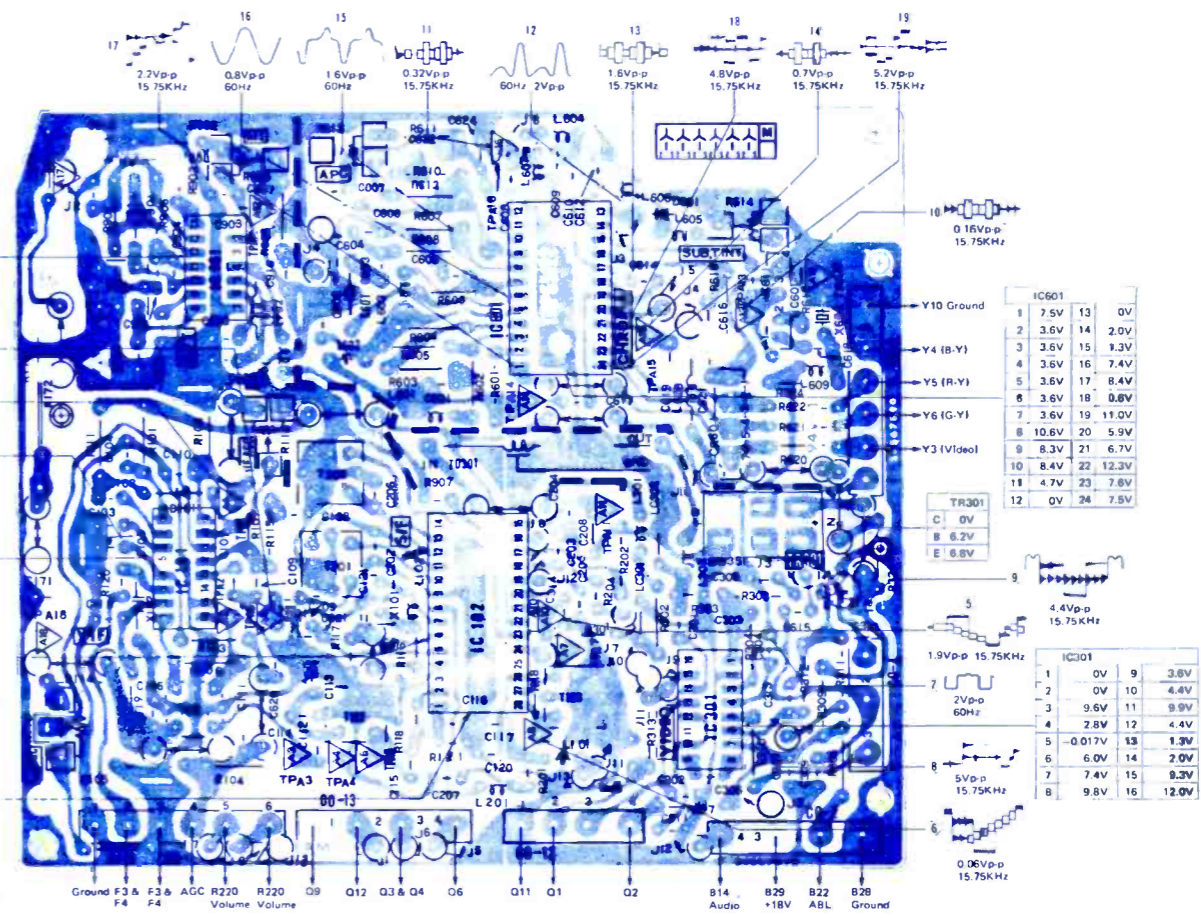
TR301

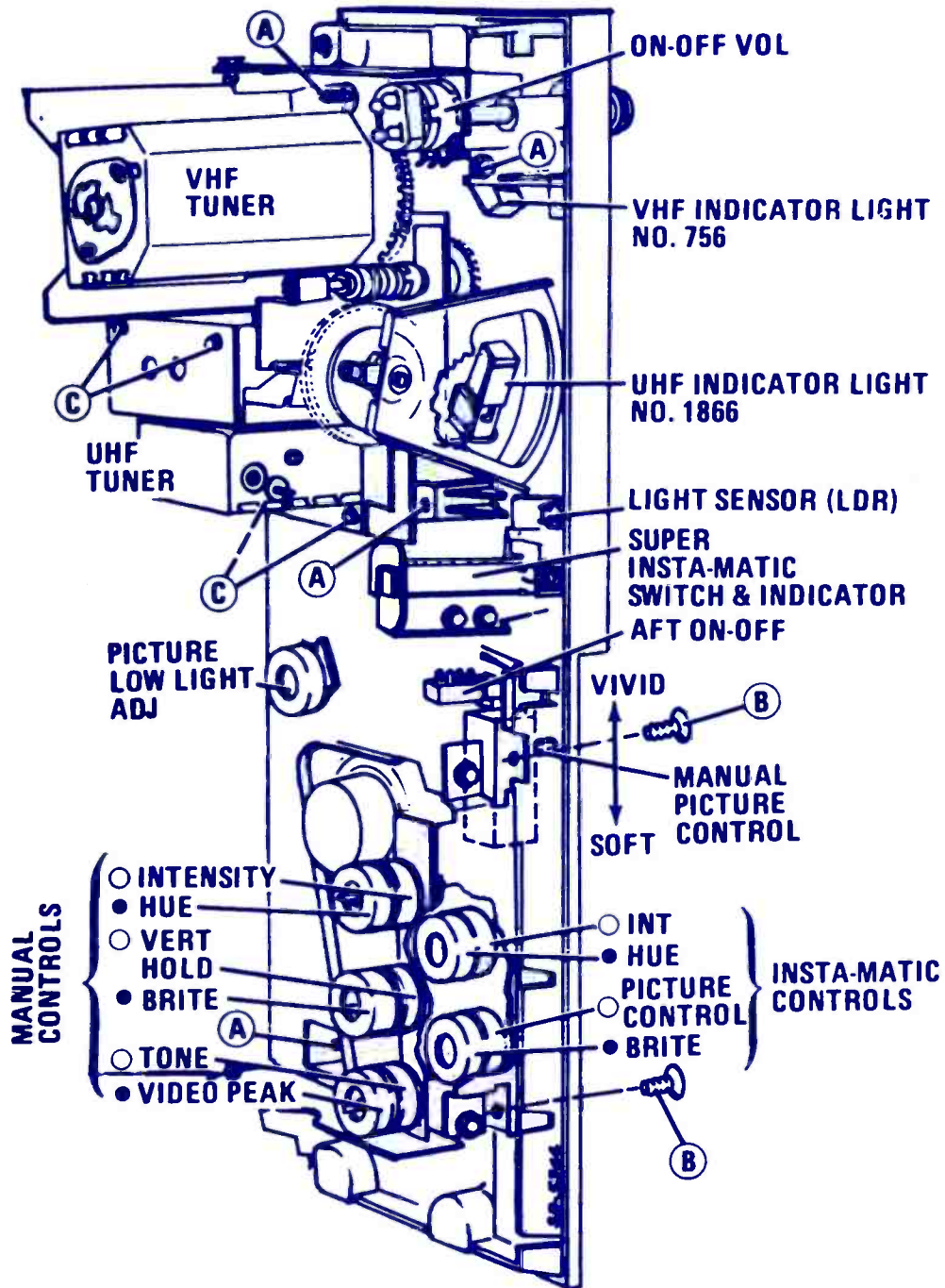
C	0V
B	6.2V
E	6.8V

IC301

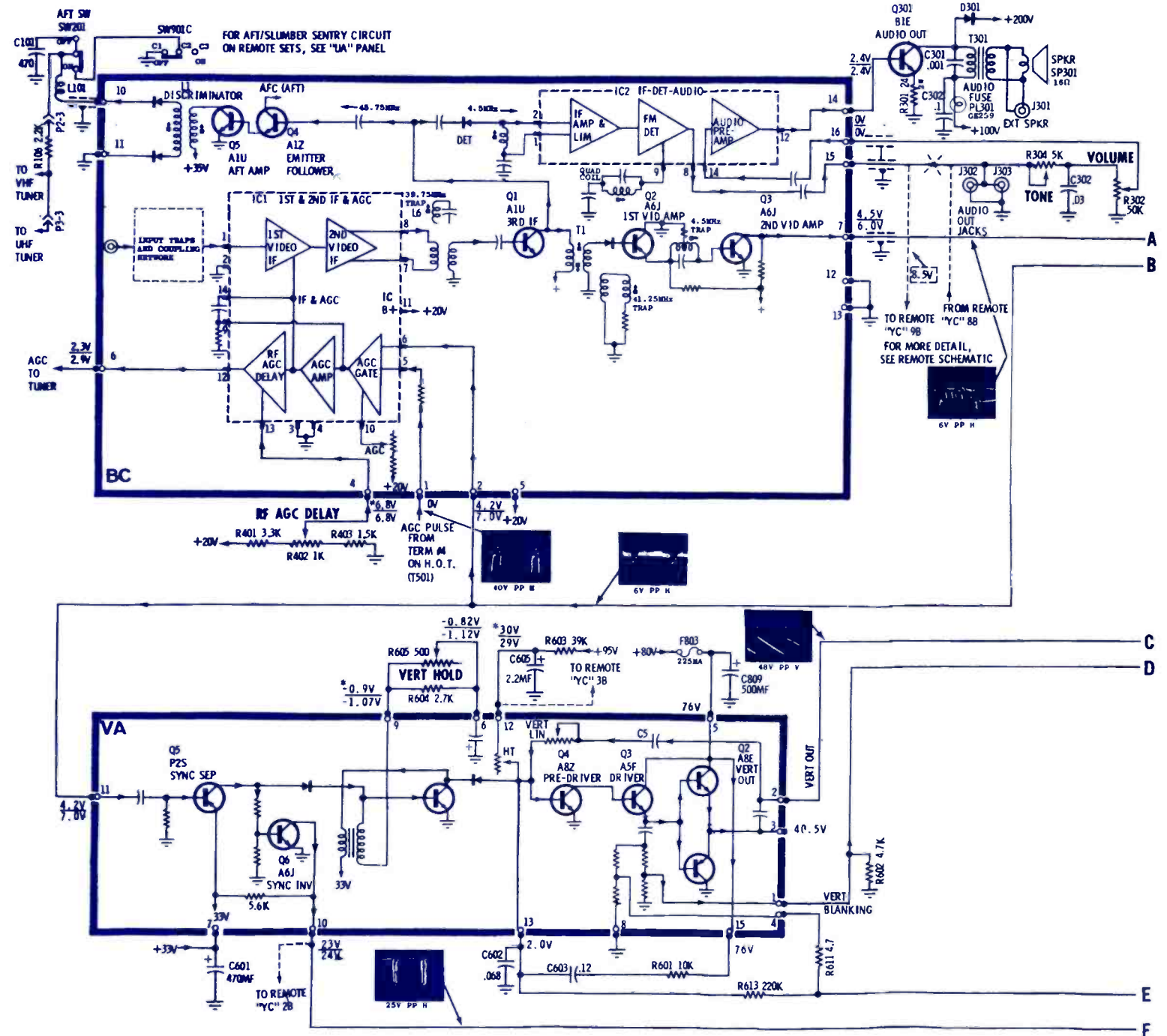
1	7.5V	13	0V
2	3.6V	14	2.0V
3	3.6V	15	9.3V
4	3.6V	16	7.4V
5	3.6V	17	8.4V
6	3.6V	18	0.6V
7	3.6V	19	11.0V
8	10.6V	20	5.9V
9	8.3V	21	6.7V
10	8.4V	22	12.3V
11	4.7V	23	7.8V
12	0V	24	7.5V

CONDUCTOR VIEW
A-BOARD TNP65122

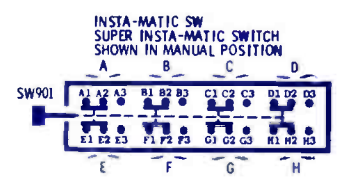




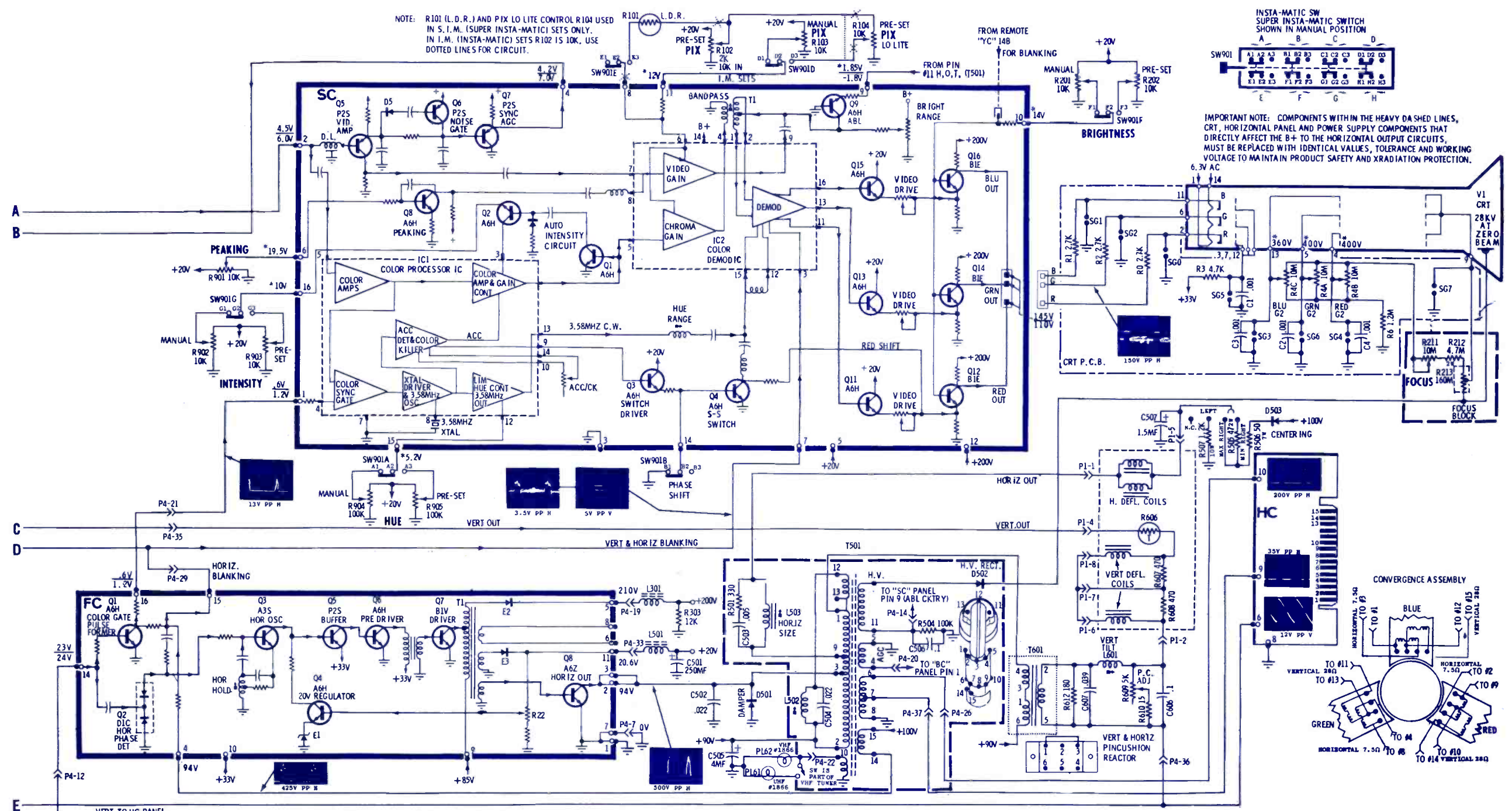
TS-942 Front Panel



NOTE: R101 (L.D.R.) AND PIX LO LITE CONTROL R104 USED IN S.I.M. (SUPER INSTA-MATIC) SETS ONLY. IN I.M. (INSTA-MATIC) SETS R102 IS 10K. USE DOTTED LINES FOR CIRCUIT.



IMPORTANT NOTE: COMPONENTS WITHIN THE HEAVY DASHED LINES, CRT, HORIZONTAL PANEL AND POWER SUPPLY COMPONENTS THAT DIRECTLY AFFECT THE B+ TO THE HORIZONTAL OUTPUT CIRCUITS, MUST BE REPLACED WITH IDENTICAL VALUES, TOLERANCE AND WORKING VOLTAGE TO MAINTAIN PRODUCT SAFETY AND XRADIATION PROTECTION.

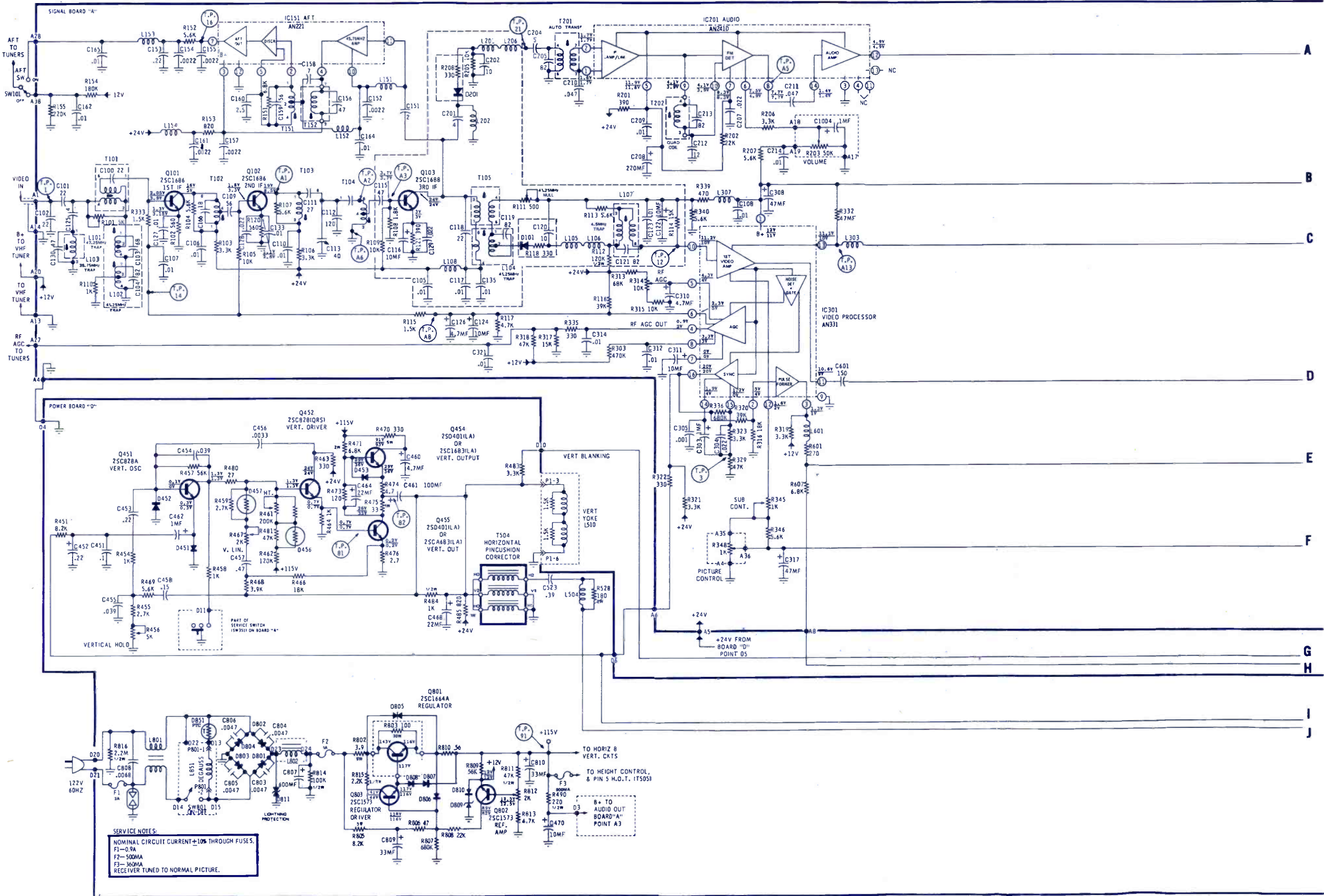


NOTE: ALL OFF PANEL CIRCUITS ARE SHOWN COMPLETE. ALL PANEL SCHEMATICS ARE SIMPLIFIED TO SHOW PANEL FUNCTIONS ONLY.

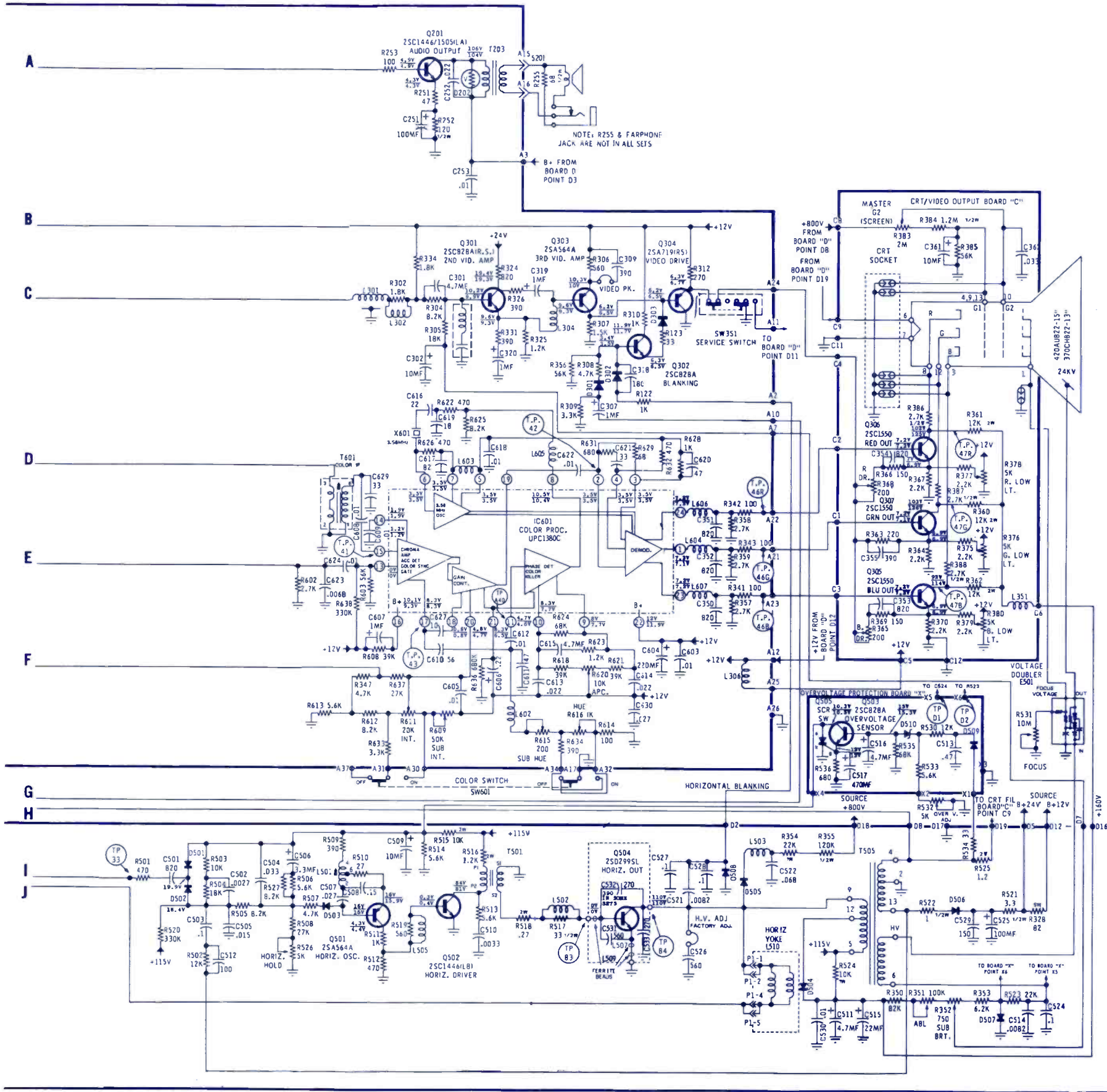
QUASAR
Color TV Chassis
ATS, CTS, TS-942

QUASAR

Color TV Chassis
TS-951

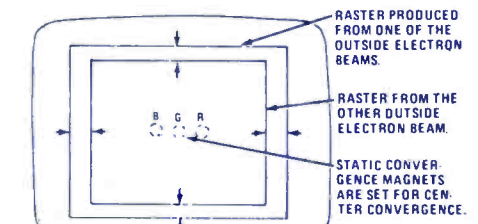
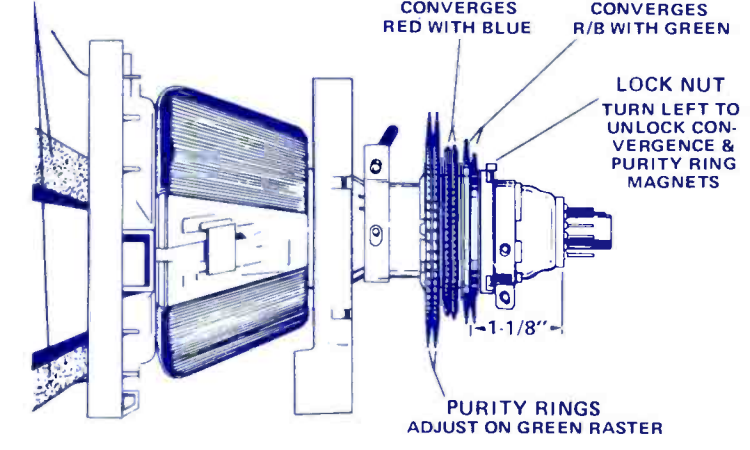


SERVICE NOTES:
 NOMINAL CIRCUIT CURRENT $\pm 10\%$ THROUGH FUSES.
 F1—0.9A
 F2—500MA
 F3—360MA
 RECEIVER TUNED TO NORMAL PICTURE.

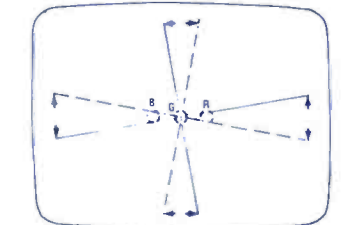


YOKE POSITIONING WEDGES FOR DYNAMIC CONVERGENCE

STATIC CONVERGENCE MAGNETS
 4-POLE - CONVERGES RED WITH BLUE
 6-POLE - CONVERGES R/B WITH GREEN



AS THE YOKE IS MOVED HORIZONTALLY, ONE RASTER GETS LARGER WHILE THE OTHER GETS SMALLER.

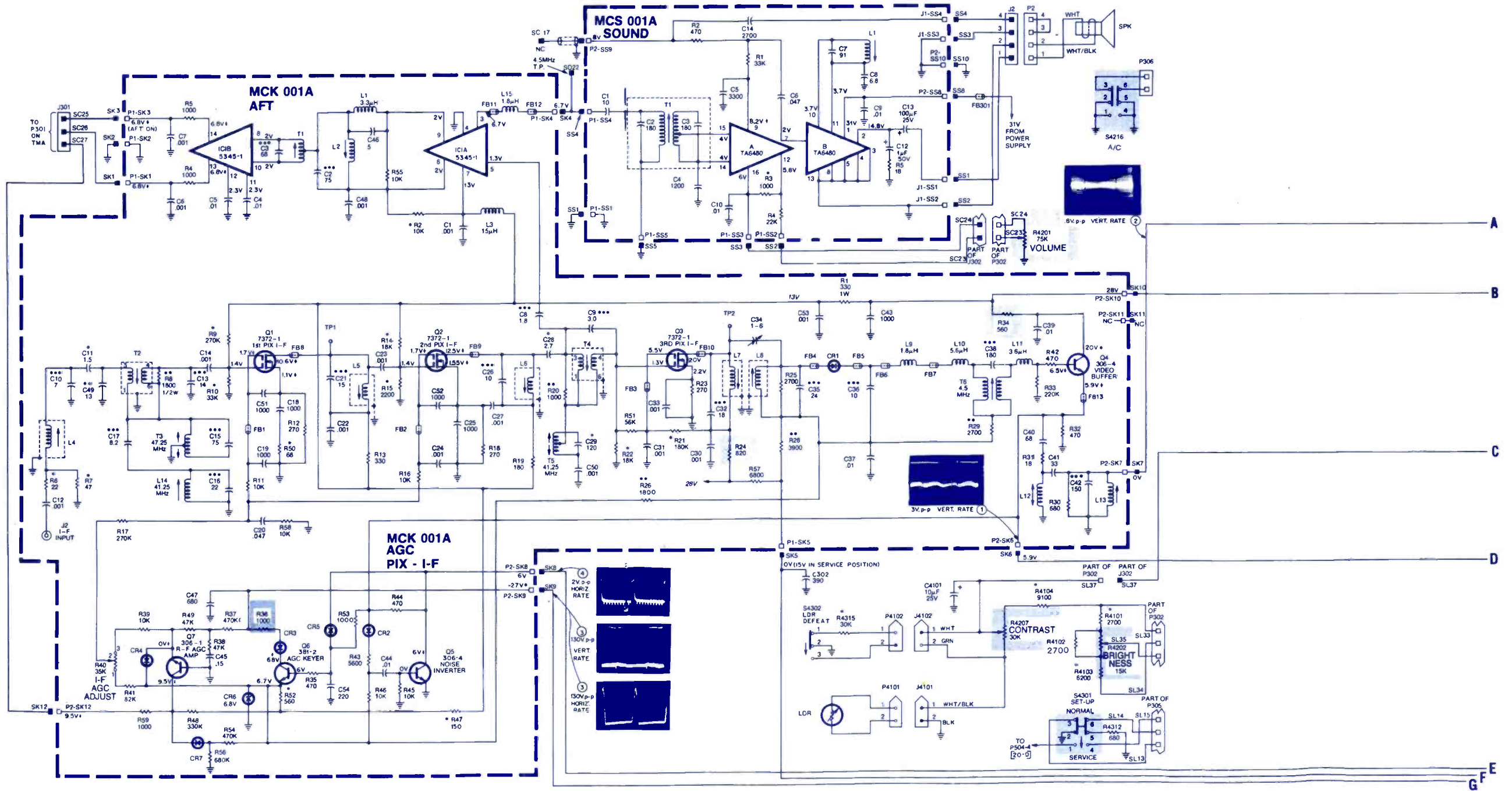


AS THE YOKE IS MOVED VERTICALLY, THE RASTERS PRODUCED BY THE OUTSIDE GUNS ROTATE IN OPPOSITE DIRECTIONS.

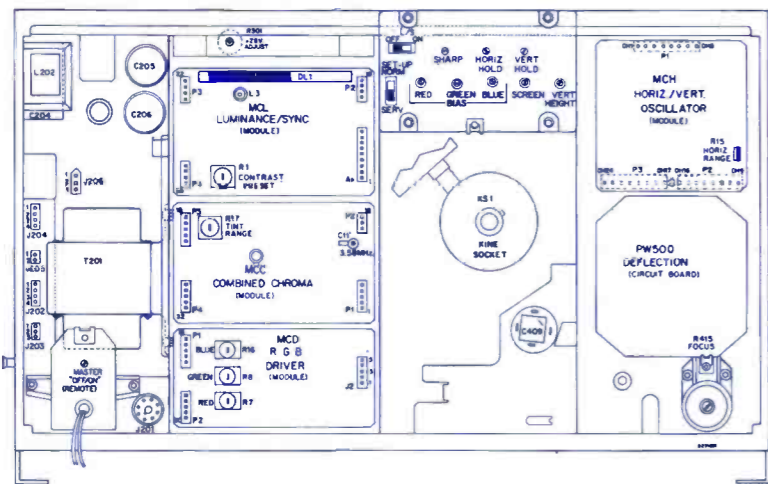
QUASAR
 Color TV Chassis
 TS-951

RCA
Color TV Chassis
CTC74 Series

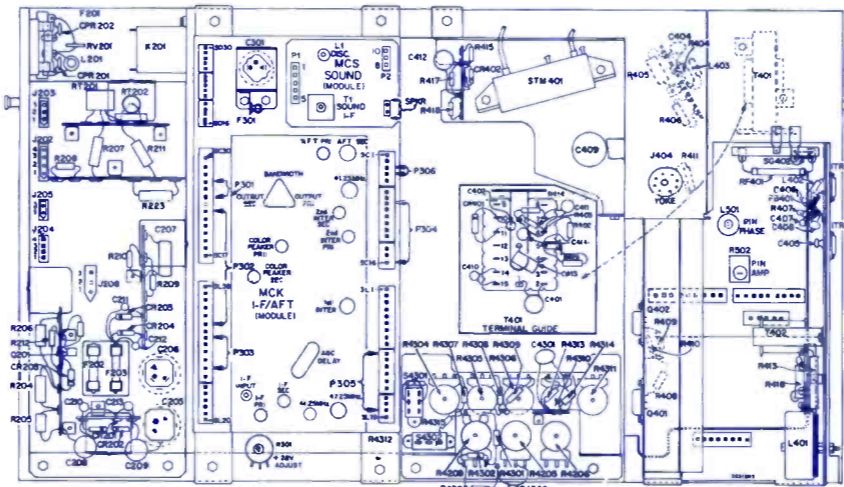
SYMBOL	DESCRIPTION	RCA PART NO.	RF401 — resis, fusible	141411
F1101	— fuse	141486	STM401 — tripler	141254
Q1101	— triac—778-2	137876	T401 — xformer, high volt	141252
T1101	— xformer	141416	T402 — xformer	141253
CPR201	— circuit encapsulated	109956	R4201 — control, vol	141311
CPR202	— circuit encapsulated	109956	R4203 — control, color	141313
F202	— fuse	111819	R4207 — control, contrast	141314
F203	— fuse	111819	R4205 — control, horiz hold	141356
RT201	— therm	141238	R4206 — control, vert hold	141357
RT202	— therm	141239	R4209 — control sharp	141357
F301	— fuse	98105	R4310 — control screen	141359
R412	— control, focus	138749	R4311 — control, vert height	141360
			S4301 — switch, LDR defeat	136246



CHASSIS LAYOUT

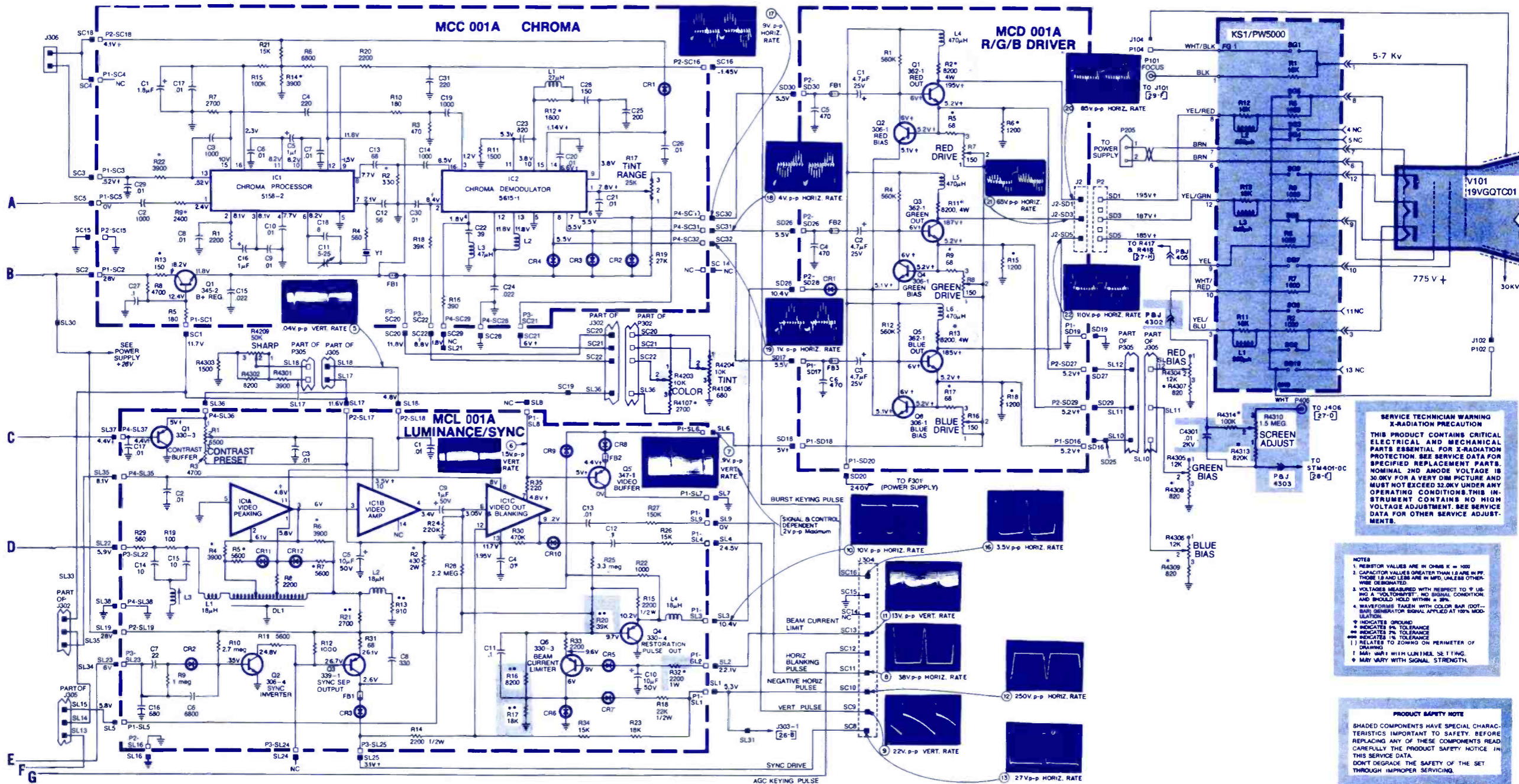


Rear View



Top View
(Service Position)

RCA CONTINUED
NEXT PAGE



**SERVICE TECHNICIAN WARNING
X-RADIATION PRECAUTION**

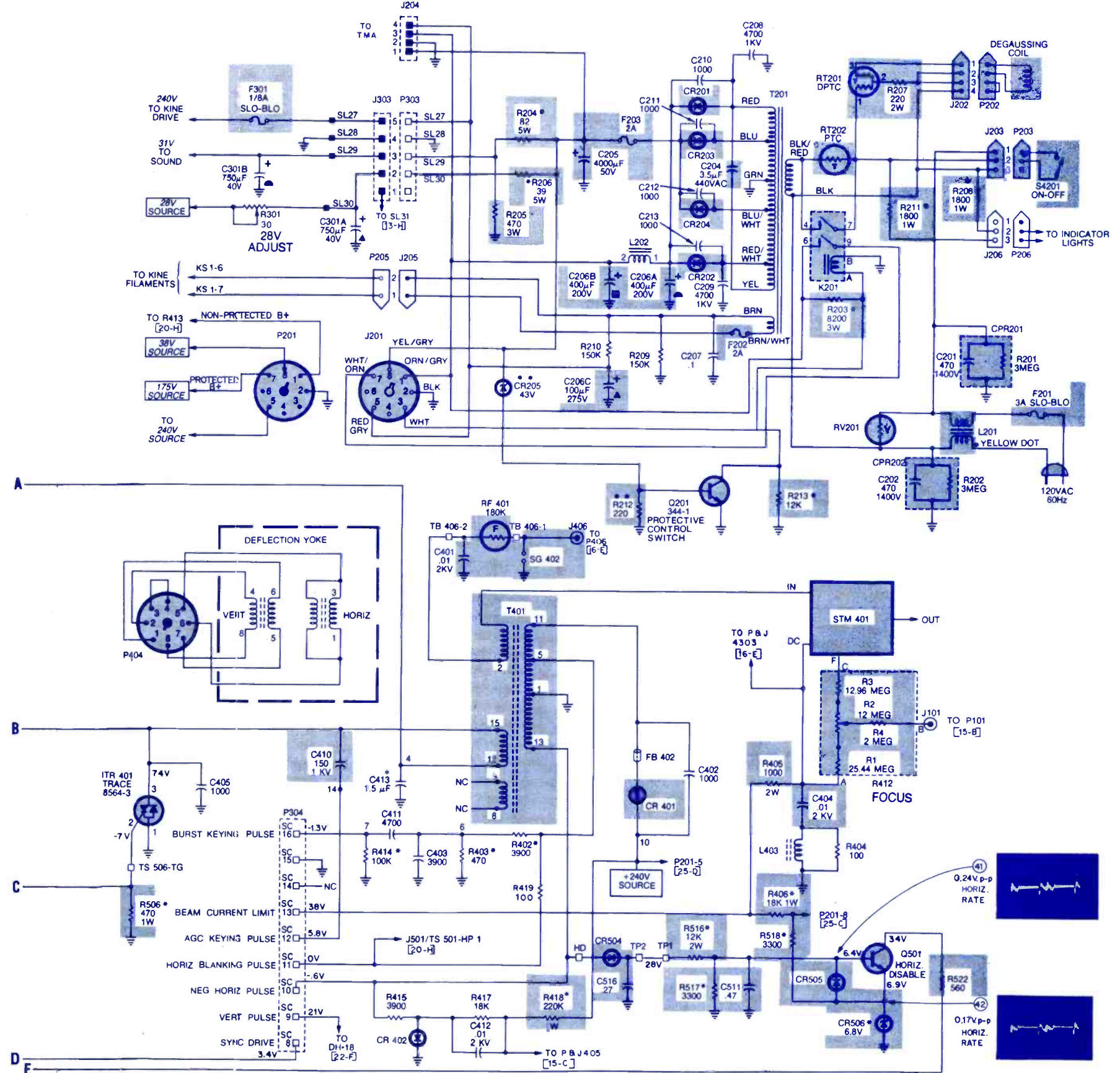
THIS PRODUCT CONTAINS CRITICAL ELECTRICAL AND MECHANICAL PARTS ESSENTIAL FOR X-RADIATION PROTECTION. SEE SERVICE DATA FOR SPECIFIED REPLACEMENT PARTS. NOMINAL 2ND ANODE VOLTAGE IS 30 KV FOR A VERY DIM PICTURE AND MUST NOT EXCEED 32.0KV UNDER ANY OPERATING CONDITIONS. THIS INSTRUMENT CONTAINS NO HIGH VOLTAGE ADJUSTMENT. SEE SERVICE DATA FOR OTHER SERVICE ADJUSTMENTS.

- NOTES**
1. RESISTOR VALUES ARE IN OHMS UNLESS OTHERWISE DESIGNATED.
 2. CAPACITOR VALUES GREATER THAN 1 μF ARE IN μF; THOSE 1 μF AND LESS ARE IN PFD, UNLESS OTHERWISE DESIGNATED.
 3. VOLTAGES MEASURED WITH RESPECT TO Φ UNLESS INDICATED OTHERWISE. NO SIGNAL CONDITION, AND SHOULD HOLD WITHIN ± 20%.
 4. WAVEFORMS TAKEN WITH COLOR BAR (DOT-BAR) GENERATOR SIGNAL APPLIED AT 100% MODULATION.
 5. * INDICATES 5% TOLERANCE
 6. ** INDICATES 1% TOLERANCE
 7. † INDICATES 1% TOLERANCE
 8. ‡ INDICATES TO ZOOMING ON PERIMETER OF DRAWING
 9. ††† MAY VARY WITH SIGNAL STRENGTH

PRODUCT SAFETY NOTE

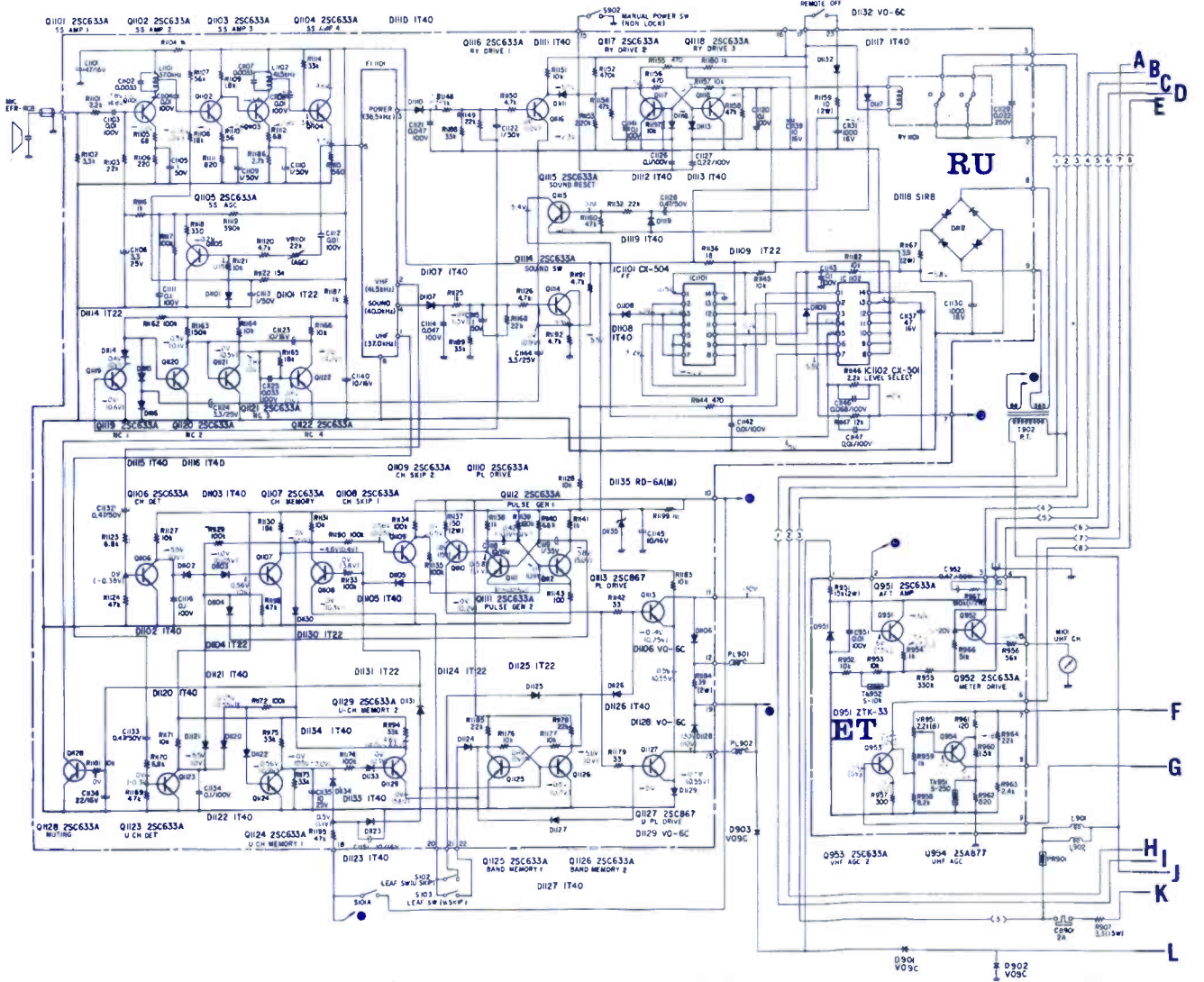
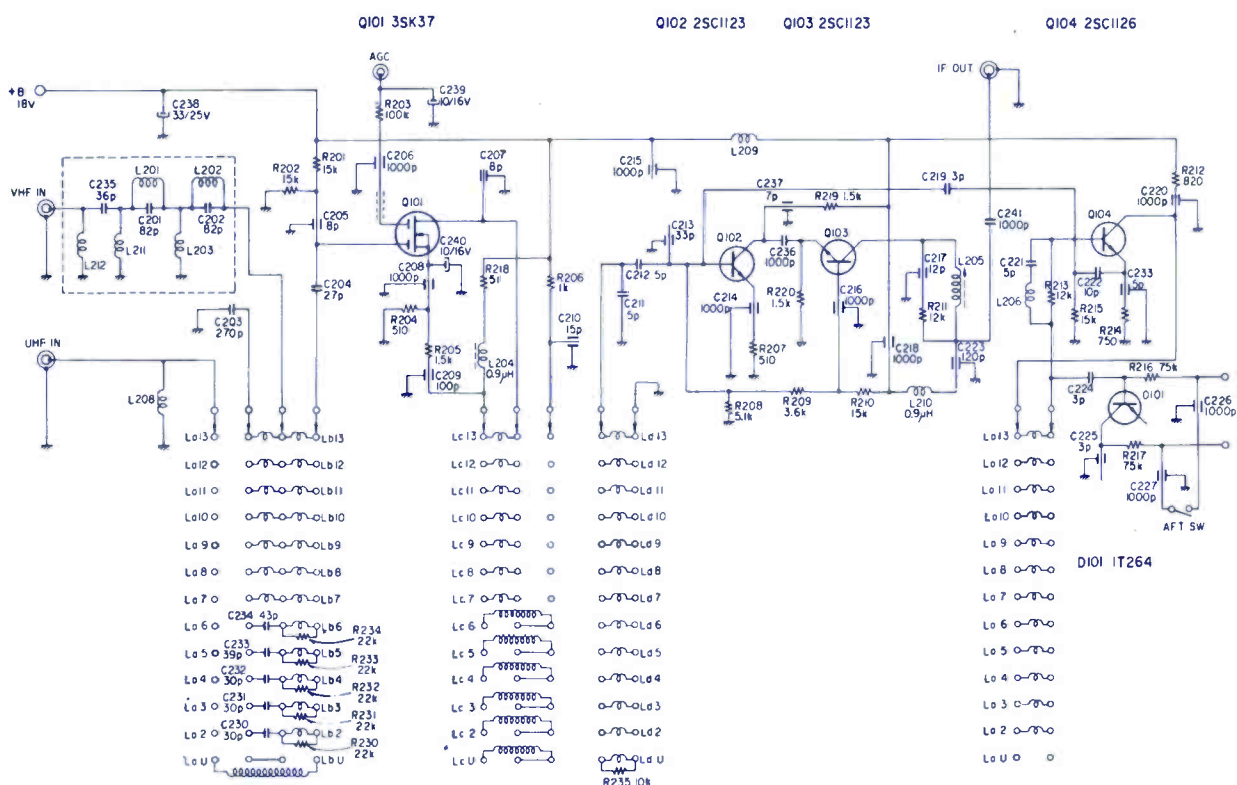
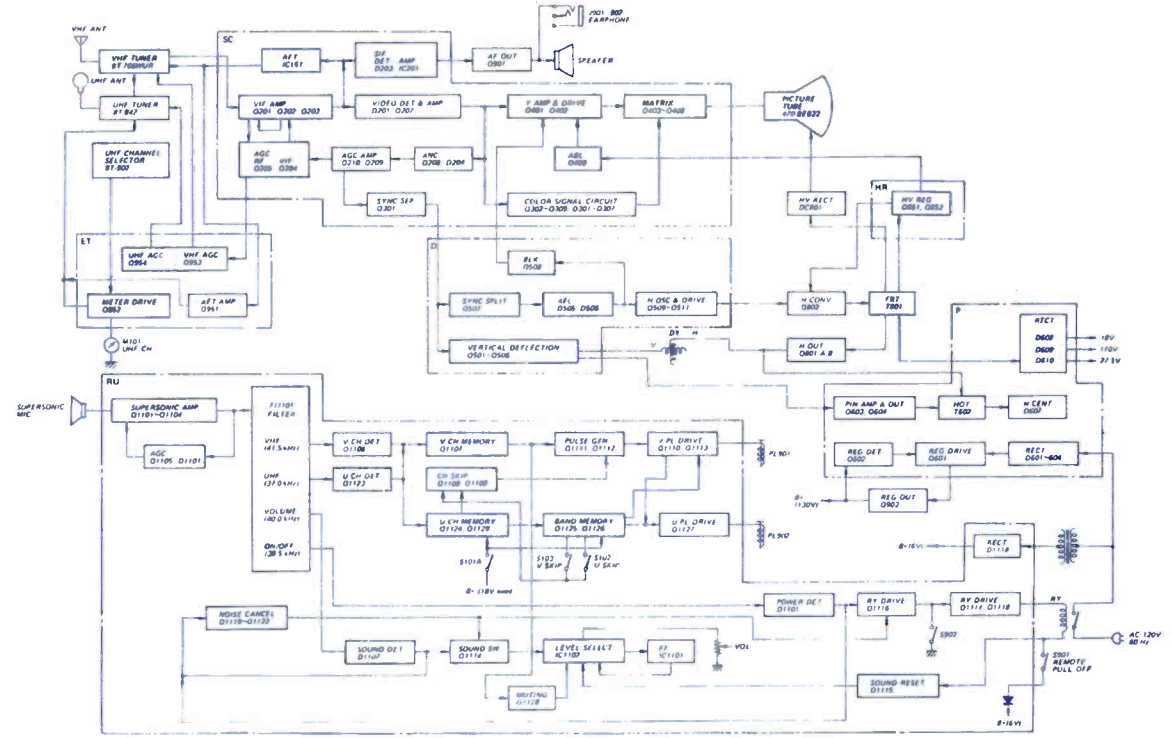
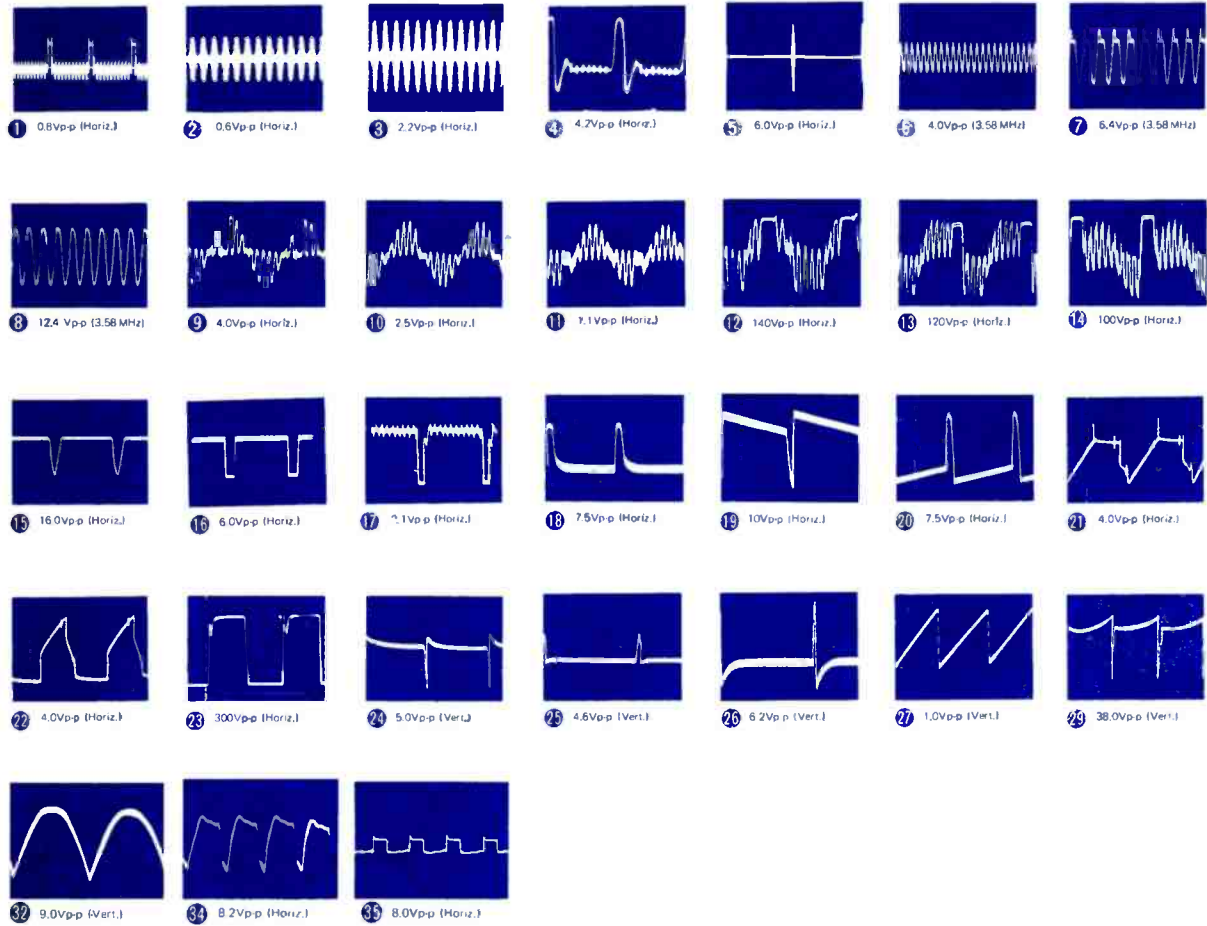
SHADED COMPONENTS HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

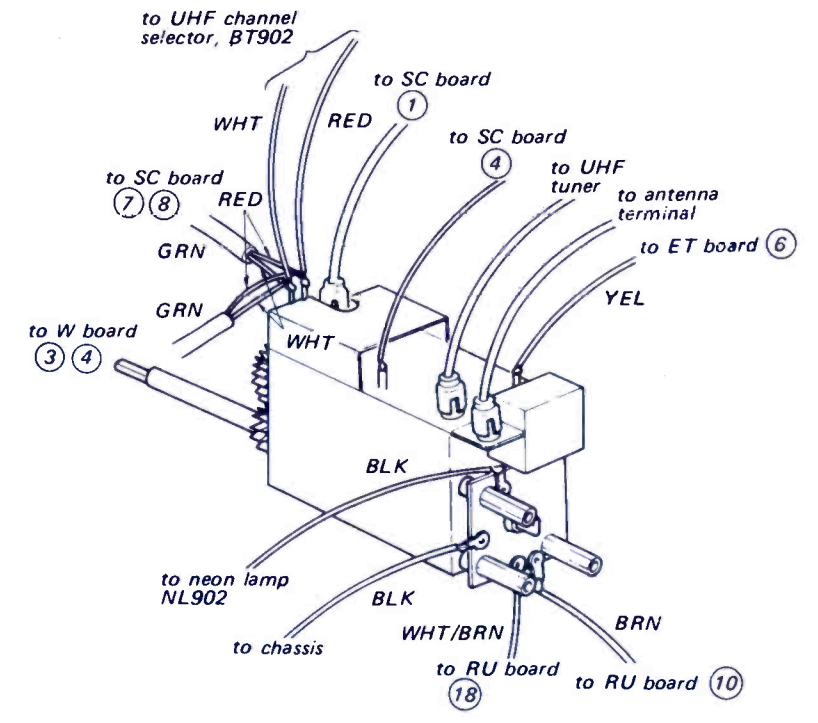
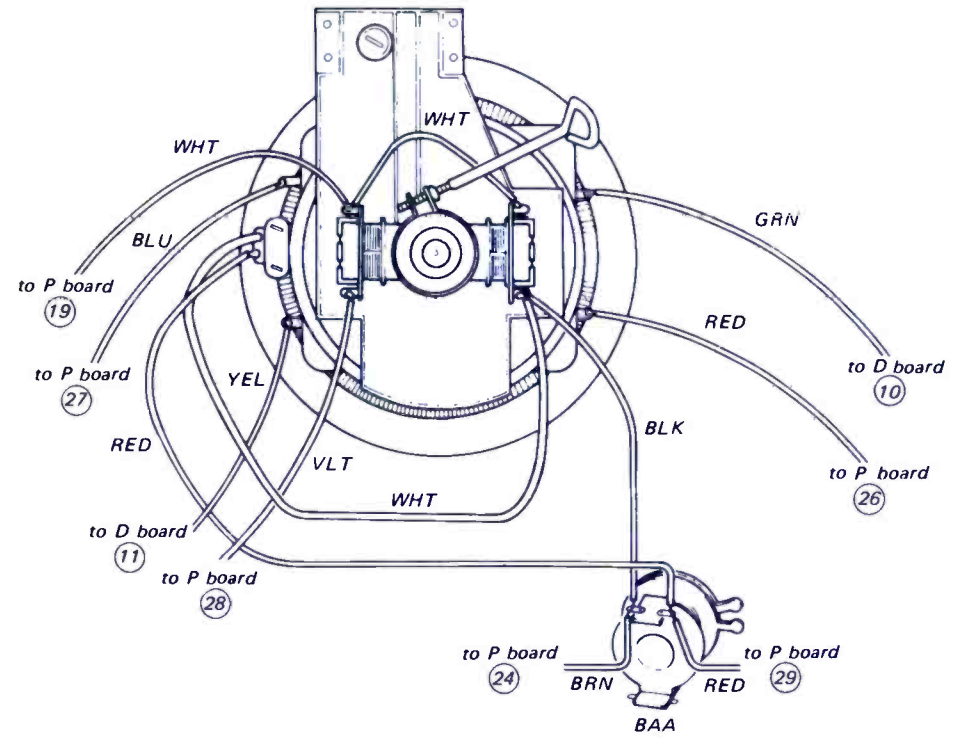
RCA
Color TV Chassis
CTC74 Series



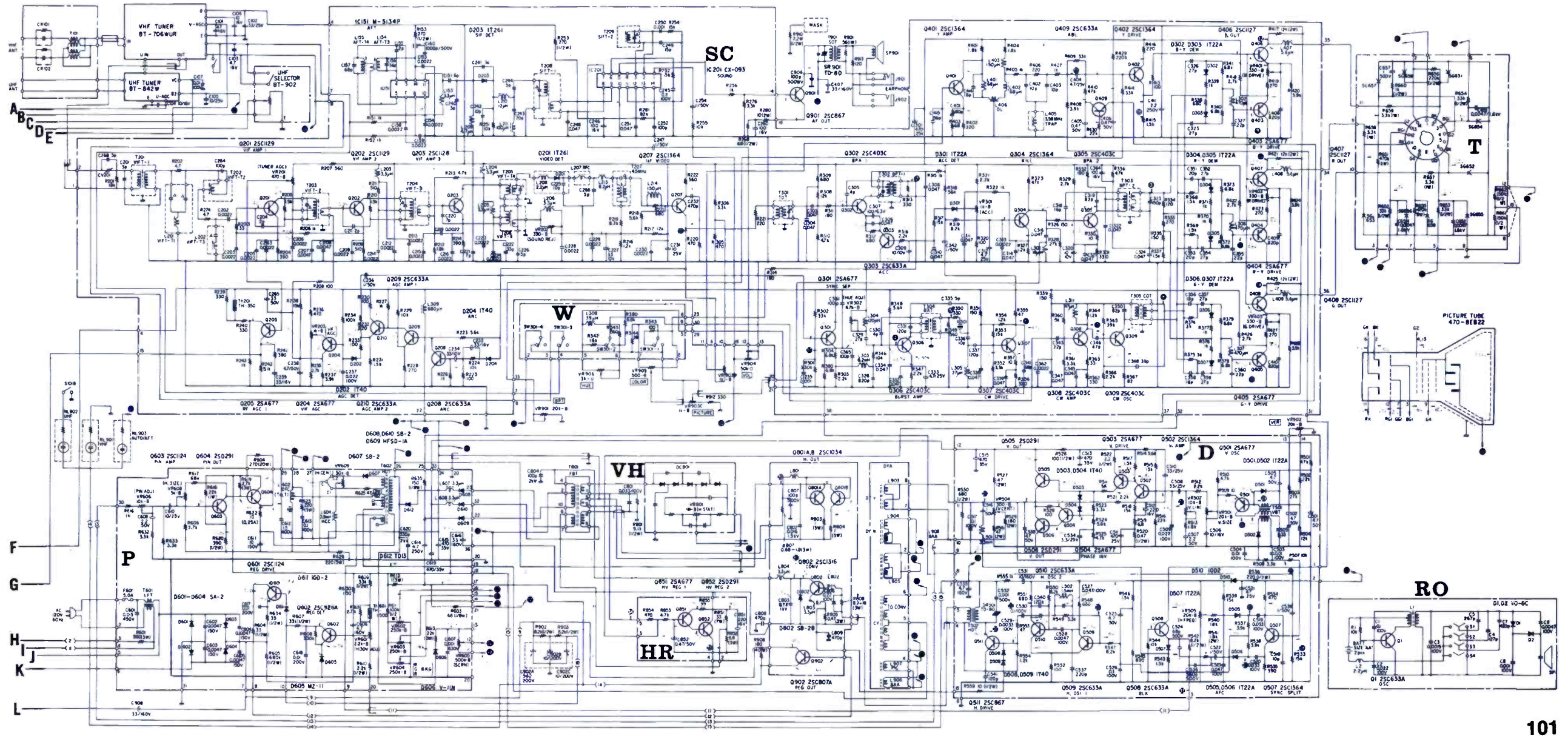
RCA
Color TV Chassis
CTC74 Series

SONY
Color TV Model
KV-1730R



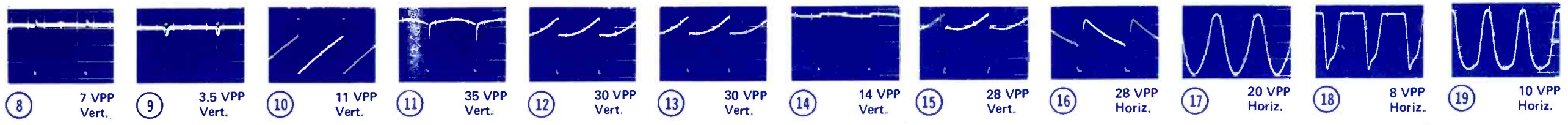


SYMBOL	DESCRIPTION	SONY PART NO.
L604	coil, horiz centering	1-459-056-00
L903	deflect yoke	1-451-069-63
T304	x-former, burst amp	1-405-372-00
T501	x-former, vertical osc	1-435-008-00
T502	x-former, horiz drive	1-437-028-00
T602	x-former, horiz output	1-439-078-00
T801	x-former assembly, flyback	1-439-120-13
T901	x-former, sound output	1-427-307-00
T902	x-former, power	1-442-020-00
VR902	20-k-B, vertical	1-222-388-00
VR903	1-k-B, picture	1-222-383-00
VR904	50-k-D volume	1-224-124-00
VR905	500-B color	1-222-386-00
VR906	3-k-U hue	1-222-387-00
VR951	2.2-k-B UHF AGC	1-222-785-00
VR1101	22-k-B SS AGC	1-222-786-00
CB901	circuit breaker	1-515-144-31
F601	fuse 5a	1-532-214-00



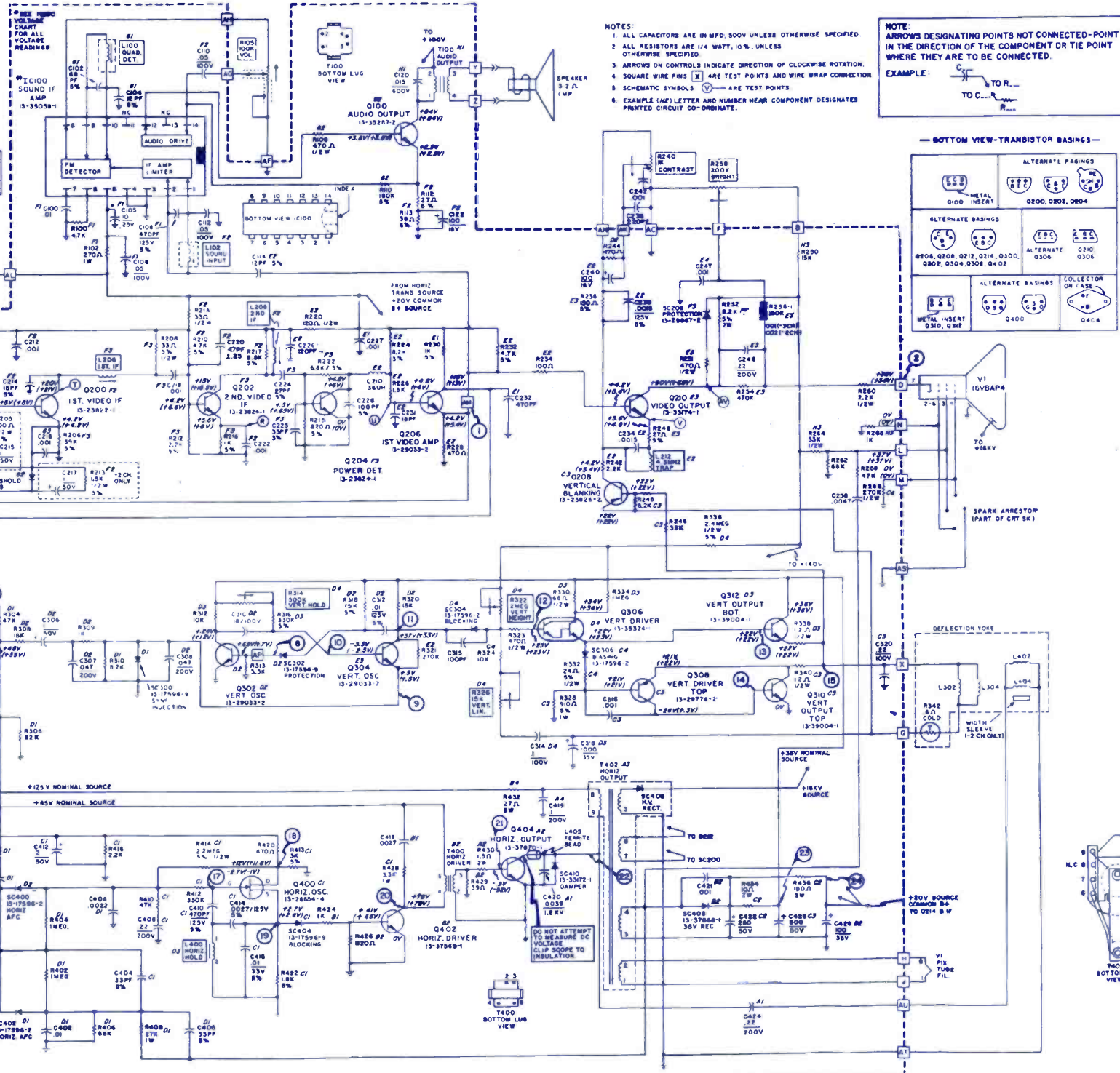
SYLVANIA

TV Chassis
A16-2,3



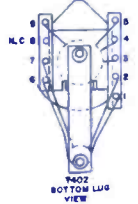
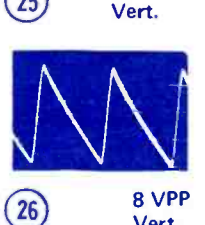
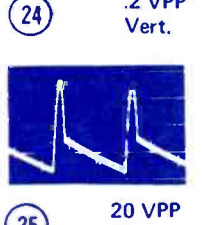
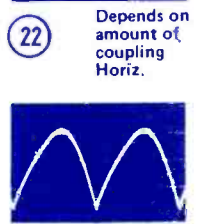
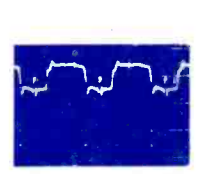
IC1000 VOLTAGE CHART

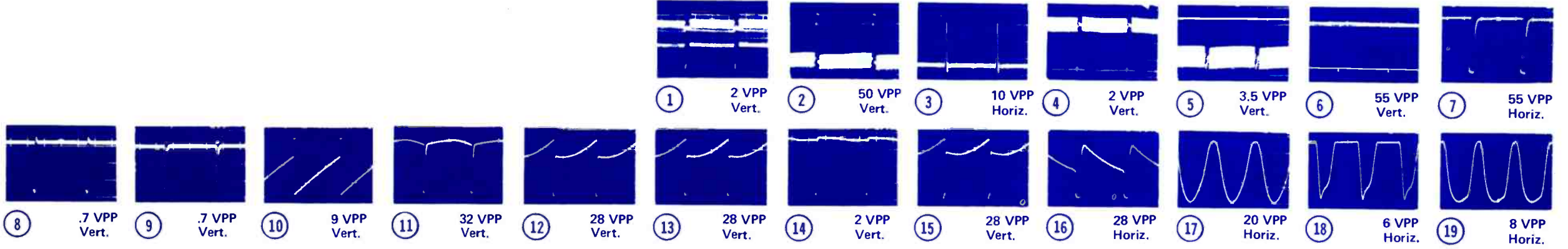
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC CHIP INSERTED	+1.9V (+1.9V)	+1.9V (+1.9V)	OV (OV)	+1.2V (+1.2V)	+2.6V (+2.6V)	+2.6V (+2.6V)	+8V (+8V)	+5.5V (+5.5V)	+3.8V (+3.8V)	+11.4V (+11.4V)	N.C. (N.C.)	+11.6V (+11.6V)	N.C. (N.C.)	+5.8V (+5.8V)
IC CHIP REMOVED	OV (OV)	OV (OV)	OV (OV)	+2.6V (+2.6V)	+2.6V (+2.6V)	OV (OV)	OV (OV)	OV (OV)	OV (OV)	OV (OV)	N.C. (N.C.)	+0.95V (+0.95V)	N.C. (N.C.)	OV (OV)



NOTES:
 1. ALL CAPACITORS ARE IN MFD. 500V UNLESS OTHERWISE SPECIFIED.
 2. ALL RESISTORS ARE 1/4 WATT, 10% UNLESS OTHERWISE SPECIFIED.
 3. ARROWS ON CONTROLS INDICATE DIRECTION OF CLOCKWISE ROTATION.
 4. SQUARE WIRE PINS [X] ARE TEST POINTS AND WIRE WRAP CONNECTIONS.
 5. SCHEMATIC SYMBOLS (V) ARE TEST POINTS.
 6. EXAMPLE (NE) LETTER AND NUMBER NEAR COMPONENT DESIGNATES PRINTED CIRCUIT CO-ORDINATE.

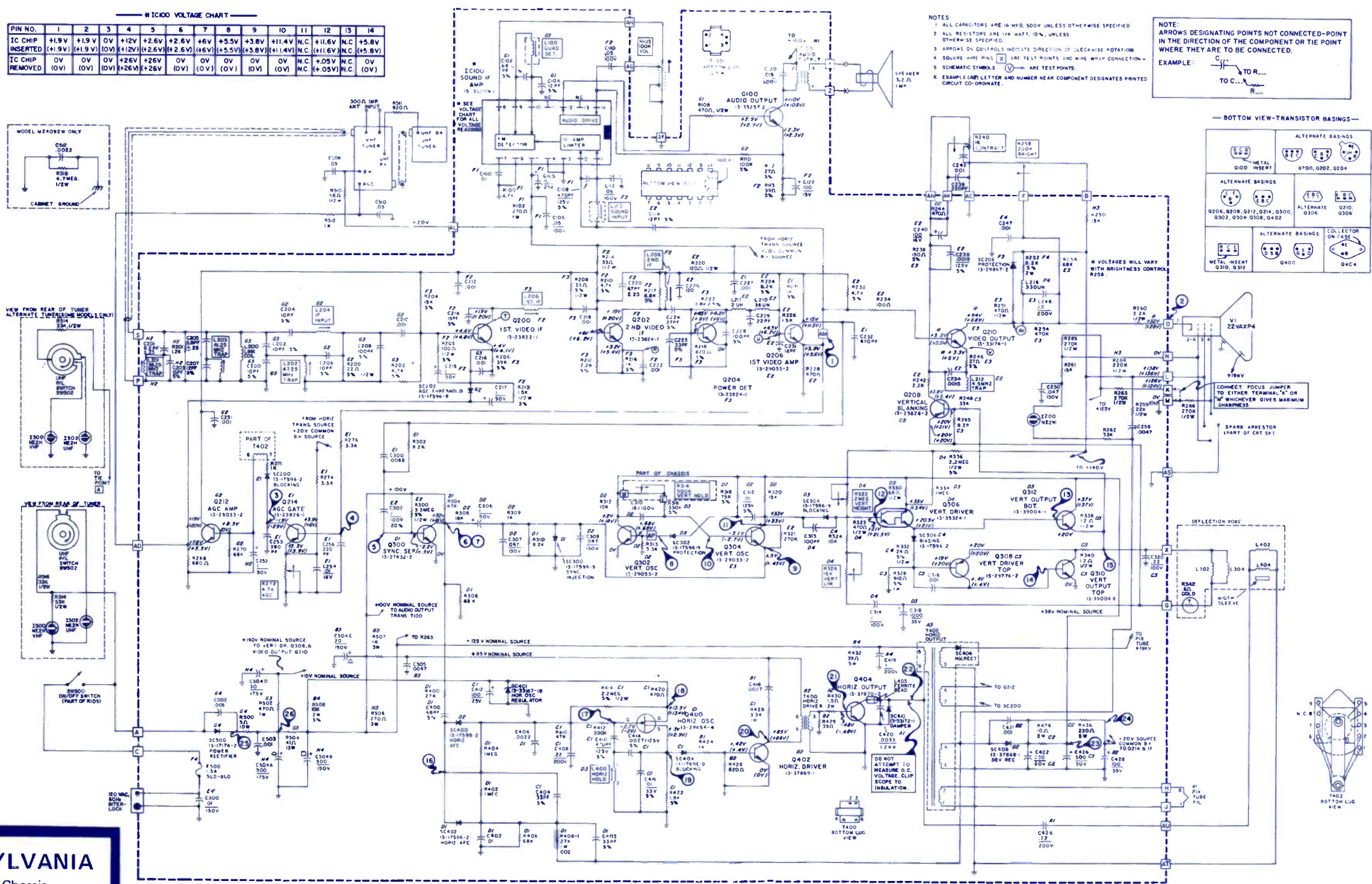
NOTE:
 ARROWS DESIGNATING POINTS NOT CONNECTED-POINT IN THE DIRECTION OF THE COMPONENT OR THE POINT WHERE THEY ARE TO BE CONNECTED.
 EXAMPLE:





— H IC100 VOLTAGE CHART —

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC CHIP INSERTED	+1.9V	+1.9V	OV	+12V	+2.6V	+2.6V	+6V	+5.5V	+3.8V	+11.4V	N.C.	+11.6V	N.C.	+5.8V
IC CHIP REMOVED	OV	OV	OV	+26V	+26V	OV	OV	OV	OV	OV	N.C.	+0.5V	N.C.	OV



NOTES

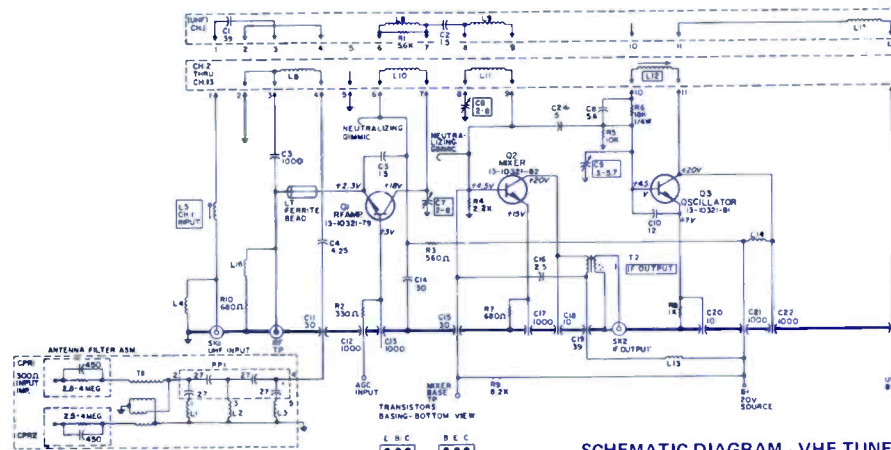
- ALL CAPACITORS ARE IN MFD. 500V UNLESS OTHERWISE SPECIFIED
- ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED
- ARROWS ON COILS INDICATE DIRECTION OF CLOCKWISE ROTATION
- SQUARE WIRE RINGS ARE TEST POINTS AND WIRE WRAP CONNECTIONS
- SCHEMATIC SYMBOLS ARE TEST POINTS
- EXAMPLE (A) LETTER AND NUMBER NEAR COMPONENT DESIGNATES PRINTED CIRCUIT CO-ORDINATE.

NOTE: ARROWS DESIGNATING POINTS NOT CONNECTED-POINT IN THE DIRECTION OF THE COMPONENT OR TIE POINT WHERE THEY ARE TO BE CONNECTED.

EXAMPLE: TO C... TO R...



SYLVANIA
TV Chassis
A22-1

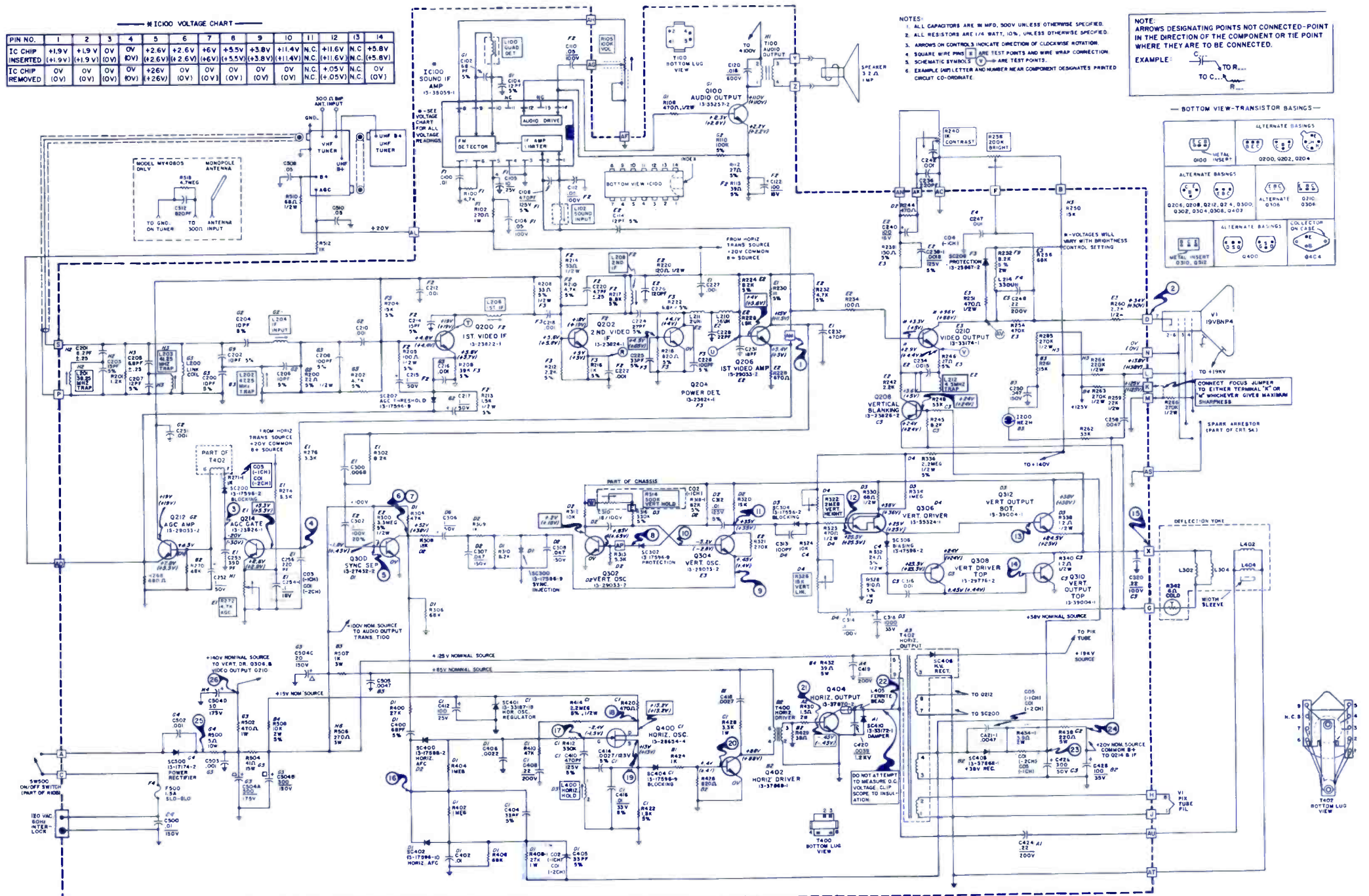


SCHEMATIC DIAGRAM - VHF TUNER

NOTES:
1. ALL RESISTORS ARE 1/2 WATT UNLESS OTHERWISE SPECIFIED.
2. ALL CAPACITORS ARE M.I.F.O. 500V UNLESS OTHERWISE SPECIFIED.
3. ALL VOLTAGES ARE TAKEN WITH NO SIGNAL APPLIED, MEASURED FROM GROUND WITH A VTVM.

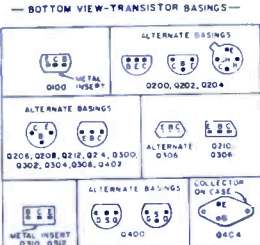
MICROVOLTAGE CHART

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC CHIP INSERTED	+1.9V (+1.9V)	+1.9V (+1.9V)	0V (0V)	+2.6V (+2.6V)	+2.6V (+2.6V)	+6V (+5.5V)	+5.5V (+5.5V)	+3.8V (+3.8V)	+11.4V (+11.4V)	N.C. (N.C.)	+11.6V (+11.6V)	N.C. (N.C.)	+5.8V (+5.8V)	
IC CHIP REMOVED	0V (0V)	0V (0V)	0V (0V)	+2.6V (+2.6V)	0V (0V)	0V (0V)	0V (0V)	0V (0V)	0V (0V)	N.C. (N.C.)	+0.5V (+0.5V)	N.C. (N.C.)	0V (0V)	



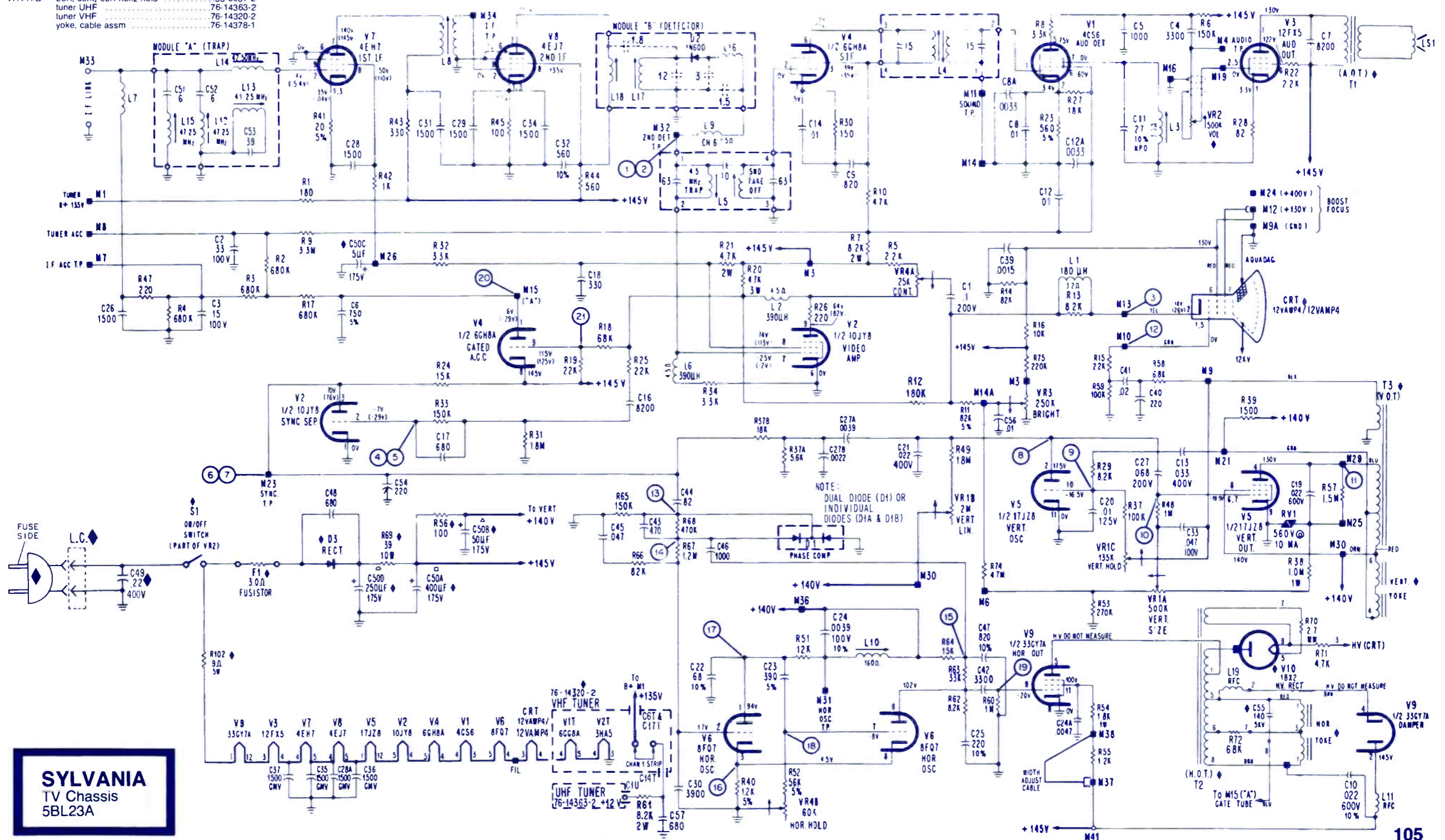
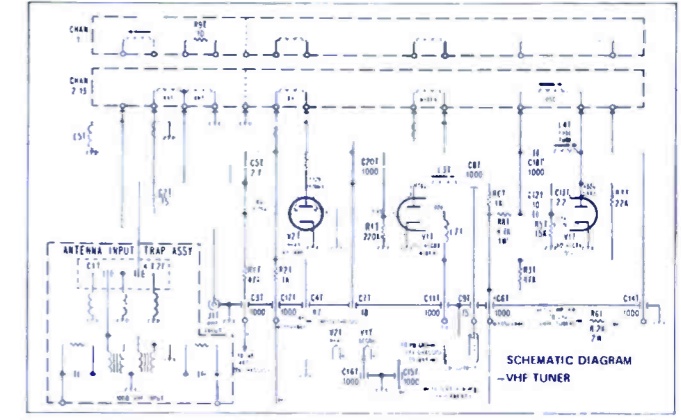
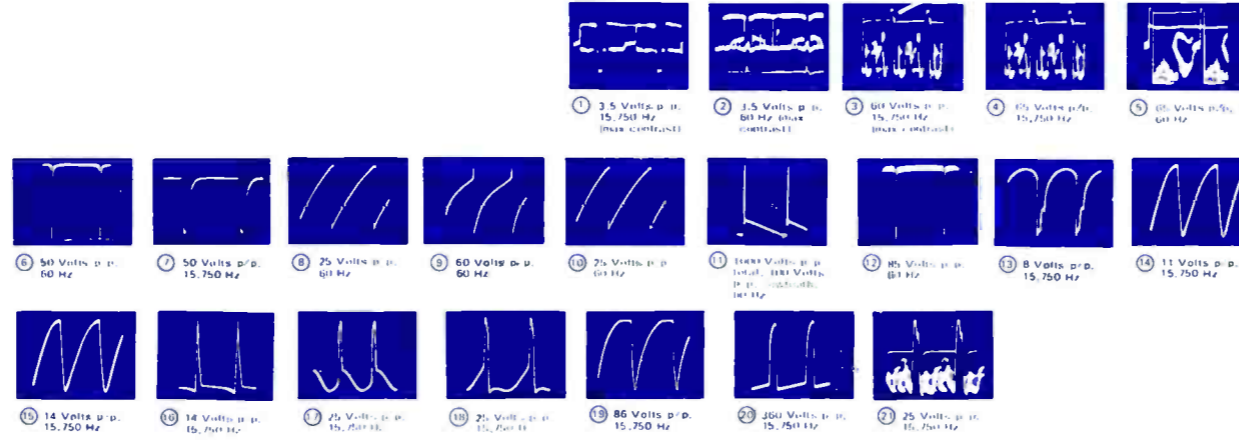
NOTES:
1. ALL CAPACITORS ARE M.I.F.O. 500V UNLESS OTHERWISE SPECIFIED.
2. ALL RESISTORS ARE 1/2 WATT, 10%, UNLESS OTHERWISE SPECIFIED.
3. ARROWS ON CONTROLS INDICATE DIRECTION OF CLOCKWISE ROTATION.
4. SQUARE WIRE PINS ARE TEST POINTS AND WIRE WRAP CONNECTION.
5. SCHEMATIC SYMBOLS ARE TEST POINTS.
6. EXAMPLE: (WIRE LETTER AND NUMBER NEAR COMPONENT DESIGNATES PRINTED CIRCUIT CO-ORDINATE).

NOTE: ARROWS DESIGNATING POINTS NOT CONNECTED-POINT IN THE DIRECTION OF THE COMPONENT OR THE POINT WHERE THEY ARE TO BE CONNECTED.
EXAMPLE:



SYMBOL DESCRIPTION SYLVANIA PART NO.

C50A-D	— 400, 60, 5, 250mfd, 175v	30-2628-1
F1	— 3.0 ohms, fusistor	33-1381-5
L3	— quad, snd, del	32-4876-1
L4	— sound IF	32-4745-12
L5	— 4.5MHz trap, sound TO	32-4688-13
R102	— 9 ohms, 5w	33-1363-181
RV1	— varistor, 560v @ 10 MA, vert out	33-1373-6
T1	— audio output	32-10161-1
T2	— horiz output	32-10177-2
T3	— vert output	32-10176-1
VR1	— 500K, vert size, 2M lin, 135K	
A-B-C	— hold	33-5637-1
VR2	— 500K, vol, on/off switch	33-5646-16
VR3	— 250K, brite	33-5631-13
VR4-A-B	— 25K, cont, 60K horiz hold	33-5637-2
	tuner UHF	76-14363-2
	tuner VHF	76-14320-2
	yoke, cable assm	76-14378-1



SYLVANIA
TV Chassis
5BL23A

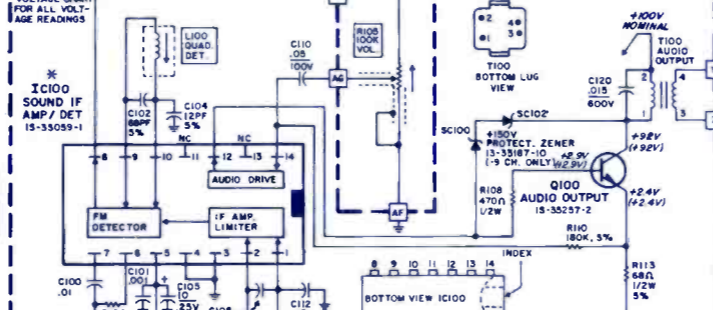
SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C504	4 section electro	41-37861-1
A	500-175v	
B	300-150v	
C	20-150v	
D	30-175v	
L100	coil, quad detect	50-33195-2
L102	coil, sound input	50-35989-1
L201	coil, 39.75MHz trap	57-23832-1
L202	coil, 47.25 MHz trap	50-37714-4
L212	coil, 4.5MHz trap	50-37713-3
L400	coil, horiz hold	50-39870-2

T100	xformer, audio output	56-37872-1
T400	xformer, horiz drive	56-37922-1
T402	xformer, horiz output	50-39871-1
SC100		
SC102	+150 protect zener, -9 ch	13-33187-10
SC410	damp	13-33172-1
R105	100K, vol	37-35105-10
R240	500 ohm, contrast	37-39237-10
R258	200K, brite	37-27242-57
R272	4.7K, AGC	37-23063-10
R314	500K, vert hold	37-33036-14
F500	fuse, 1.5a, slo-blo	29-37730-3
1C100	integ, sound IF/det	15-35059-1

*IC100 VOLTAGE CHART

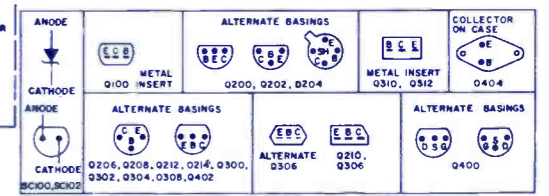
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC CHIP INSERTED	+2V	+2V	OV	+12V	OV	+6.8V	+6.2V	+4.2V	+4.2V	N.C.	+3.4V	N.C.	+1.8V	
IC CHIP REMOVED	OV	OV	OV	+27V	OV	OV	OV	OV	OV	N.C.	+3.4V	N.C.	+1.8V	

* SEE VOLTAGE CHART FOR ALL VOLTAGE READINGS



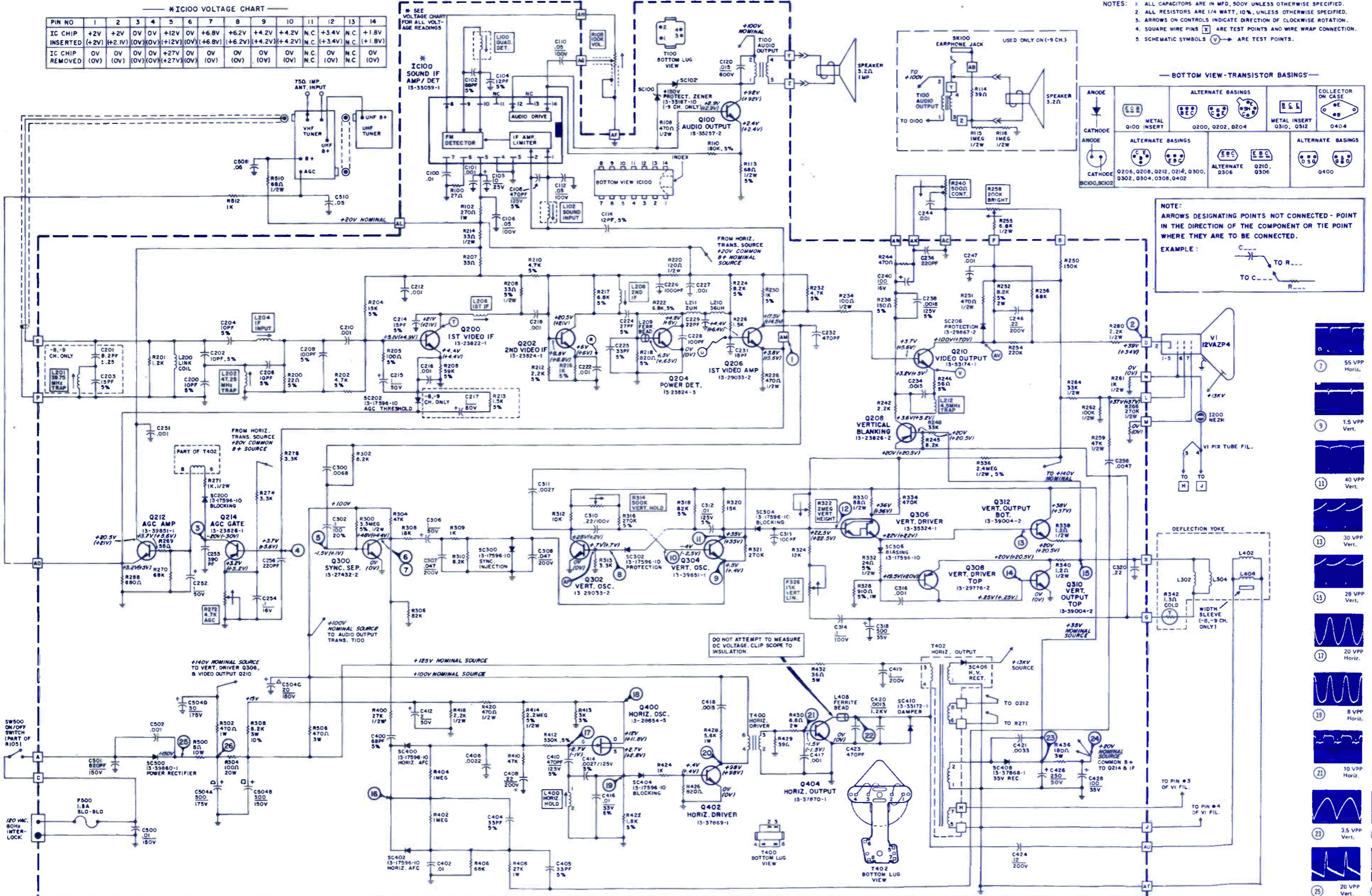
- NOTES:
- ALL CAPACITORS ARE IN MFD, 500V UNLESS OTHERWISE SPECIFIED.
 - ALL RESISTORS ARE 1/4 WATT, 10%, UNLESS OTHERWISE SPECIFIED.
 - ARROWS ON CONTROLS INDICATE DIRECTION OF CLOCKWISE ROTATION.
 - SQUARE WIRE PINS ARE TEST POINTS AND WIRE WRAP CONNECTION.
 - SCHEMATIC SYMBOLS ARE TEST POINTS.

— BOTTOM VIEW—TRANSISTOR BASINGS—



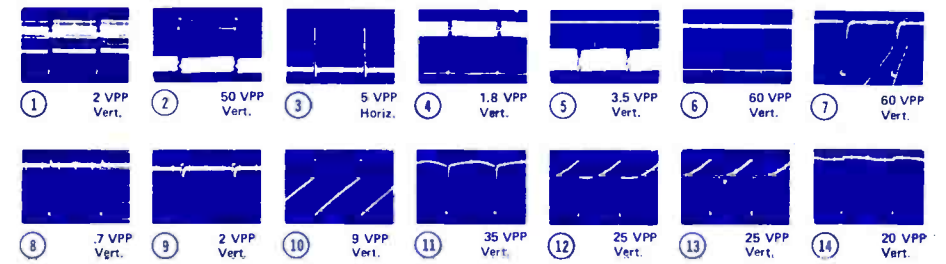
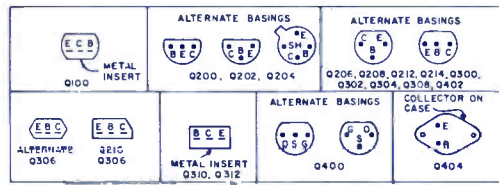
NOTE: ARROWS DESIGNATING POINTS NOT CONNECTED - POINT IN THE DIRECTION OF THE COMPONENT OR TIE POINT WHERE THEY ARE TO BE CONNECTED.

EXAMPLE:



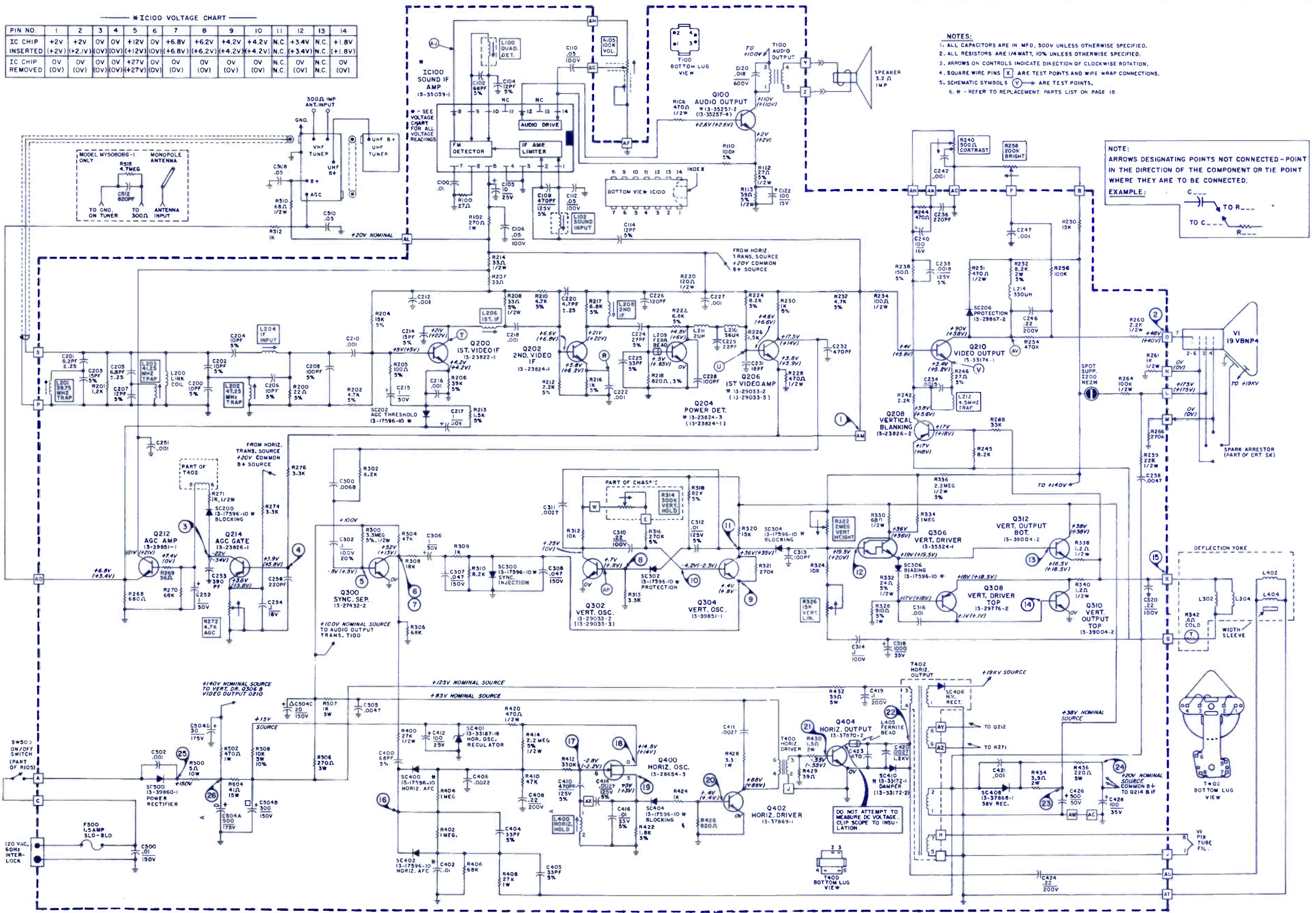
- 1 2 VPP Vert.
- 2 60 VPP Vert.
- 3 10 VPP Horiz.
- 4 1.5 VPP Vert.
- 5 3 VPP Vert.
- 6 55 VPP Vert.
- 7 55 VPP Horiz.
- 8 7 VPP Vert.
- 9 1.5 VPP Vert.
- 10 10 VPP Vert.
- 11 40 VPP Vert.
- 12 30 VPP Horiz.
- 13 30 VPP Vert.
- 14 14 VPP Vert.
- 15 28 VPP Vert.
- 16 28 VPP Horiz.
- 17 20 VPP Horiz.
- 18 6 VPP Horiz.
- 19 8 VPP Horiz.
- 20 210 VPP Horiz.
- 21 10 VPP Horiz.
- 22 Depends on amount of coupling Horiz.
- 23 3.5 VPP Vert.
- 24 3 VPP Vert.
- 25 20 VPP Vert.
- 26 6 VPP Vert.

BOTTOM VIEW-TRANSISTOR BASINGS



IC100 VOLTAGE CHART

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC CHIP INSERTED	+2V	+2V	OV	OV	+12V	OV	+6.8V	+6.2V	+4.2V	+4.2V	N.C.	+3.4V	N.C.	+1.8V
IC CHIP REMOVED	OV	OV	OV	OV	+27V	OV	OV	OV	OV	OV	N.C.	OV	N.C.	OV

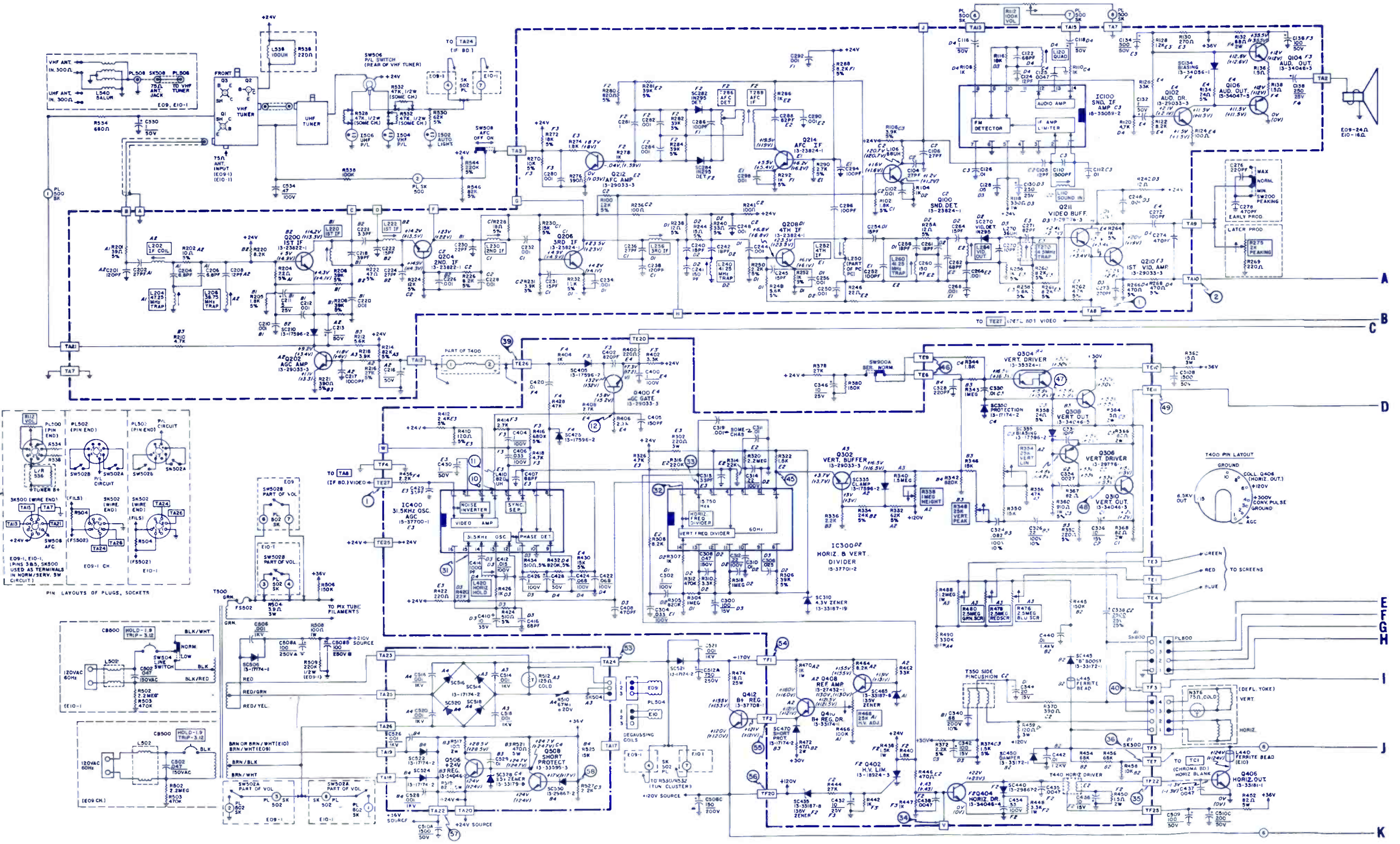


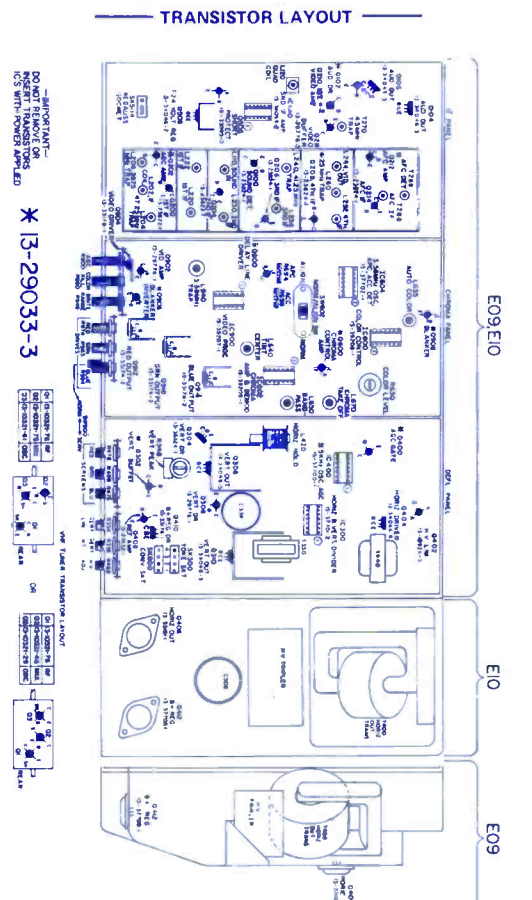
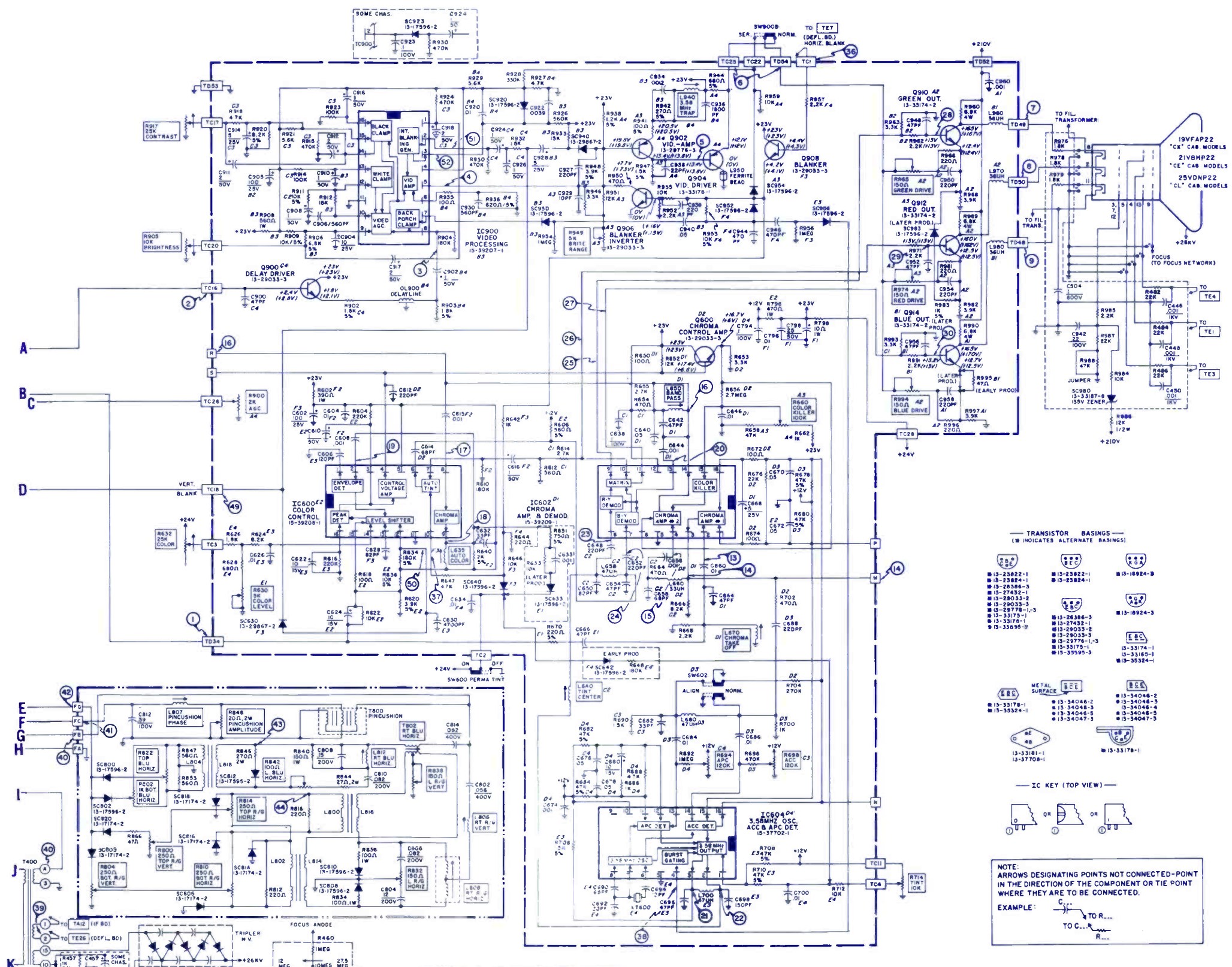
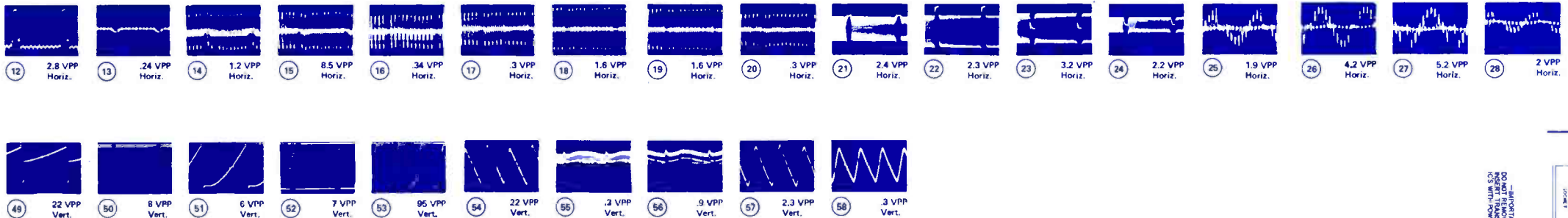
NOTES:
1. ALL CAPACITORS ARE IN MFD, 500V UNLESS OTHERWISE SPECIFIED.
2. ALL RESISTORS ARE 1/4WATT, 10% UNLESS OTHERWISE SPECIFIED.
3. ARROWS ON CONTROLS INDICATE DIRECTION OF CLOCKWISE ROTATION.
4. SQUARE WIRE PINS [X] ARE TEST POINTS AND WIRE WRAP CONNECTIONS.
5. SCHEMATIC SYMBOLS [Y] ARE TEST POINTS.
6. W - REFER TO REPLACEMENT PARTS LIST ON PAGE 18.

NOTE:
ARROWS DESIGNATING POINTS NOT CONNECTED - POINT IN THE DIRECTION OF THE COMPONENT OR TIE POINT WHERE THEY ARE TO BE CONNECTED.
EXAMPLE:
TO R ---
TO C ---

SYLVANIA

Color TV Chassis
E09-1, E10-1





SYMBOL DESCRIPTION SYLVANIA PART NO.

C508-3	section electrolytic	41-37720-1
A-100/250V		
B-100/250V		
C-150/200V		
C510-3	section electrolytic	41-37580-1
A-1500/50V		
B-1500/50V		
C-200/50V		
L120	quad early prod	50-33195-1
L120	quad later prod	50-33195-2
L420	horiz hold	50-37711-4
R112	100K volume E09-1, E10-1	37-35924-1
R112	100K volume E09-14	37-27242-41
R460	focus network	32-37705-1
R632	25K color E09-1, -14	37-27242-43
R632	25K color E10-1	37-27242-48
R905	10K brite E09-1, -14	37-27242-40
R905	10K brite E10-1	37-27242-45
R917	25K contrast E09-1, -14	37-27242-53
R917	25K contrast E10-1	37-27242-54
IC300	horiz vert divide early prod	15-37701-1
IC300	horiz vert divider later prod	15-37701-2
IC400	31.5kHz osc AGC	15-37700-1
IC600	color control	15-39208-1
IC602	chroma amp demod	15-39209-1
IC604	3.58MHz osc ACC APC	15-37702-1
IC900	video processing	15-39207-1
T270	4.5MHz trap	50-35309-1
T350	side pinchusion	50-37712-1
T400	horiz output	50-39287-1
T500	power E09-1, -14	55-37722-1
T500	power E10-1	55-37722-3
T502	low voltage E09-14	55-11121-1
C8500	circuit breaker	29-39696-13
PL300	plug deflect yoke tripler HV E09-1, -14	32-35894-3
	tripler HV E10-1	32-35894-7
	VHF E09-14	54-37851-2
	VHF E10-1	54-37851-1

TRANSISTOR BASINGS (W INDICATES ALTERNATE BASINGS)

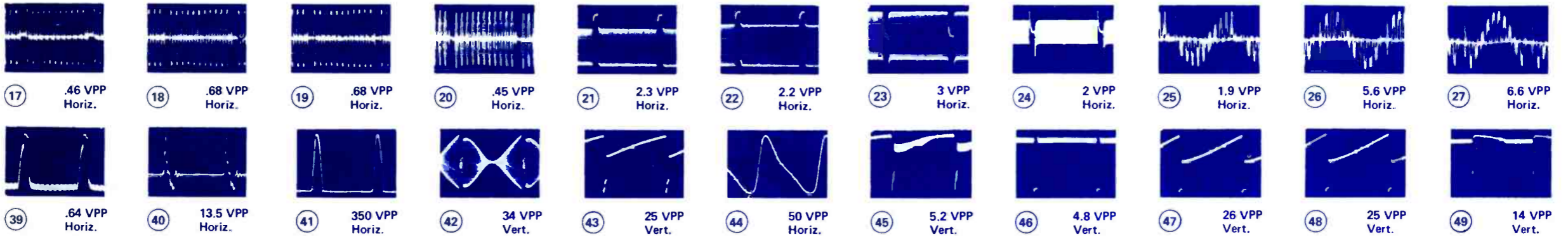
13-25822-1	13-25822-1	13-18924-3
13-25822-2	13-25822-2	13-18924-3
13-26386-3	13-26386-3	13-18924-3
13-27432-1	13-27432-1	13-33178-1
13-29033-2	13-29033-2	13-33178-1
13-29033-3	13-29033-3	13-33178-1
13-29033-4	13-29033-4	13-33178-1
13-31175-1	13-31175-1	13-33178-1
13-31175-2	13-31175-2	13-33178-1
13-31175-3	13-31175-3	13-33178-1
13-31175-4	13-31175-4	13-33178-1
13-31175-5	13-31175-5	13-33178-1
13-31175-6	13-31175-6	13-33178-1
13-31175-7	13-31175-7	13-33178-1
13-31175-8	13-31175-8	13-33178-1
13-31175-9	13-31175-9	13-33178-1
13-31175-10	13-31175-10	13-33178-1
13-31175-11	13-31175-11	13-33178-1
13-31175-12	13-31175-12	13-33178-1
13-31175-13	13-31175-13	13-33178-1
13-31175-14	13-31175-14	13-33178-1
13-31175-15	13-31175-15	13-33178-1
13-31175-16	13-31175-16	13-33178-1
13-31175-17	13-31175-17	13-33178-1
13-31175-18	13-31175-18	13-33178-1
13-31175-19	13-31175-19	13-33178-1
13-31175-20	13-31175-20	13-33178-1
13-31175-21	13-31175-21	13-33178-1
13-31175-22	13-31175-22	13-33178-1
13-31175-23	13-31175-23	13-33178-1
13-31175-24	13-31175-24	13-33178-1
13-31175-25	13-31175-25	13-33178-1
13-31175-26	13-31175-26	13-33178-1
13-31175-27	13-31175-27	13-33178-1
13-31175-28	13-31175-28	13-33178-1
13-31175-29	13-31175-29	13-33178-1
13-31175-30	13-31175-30	13-33178-1

IC KEY (TOP VIEW)

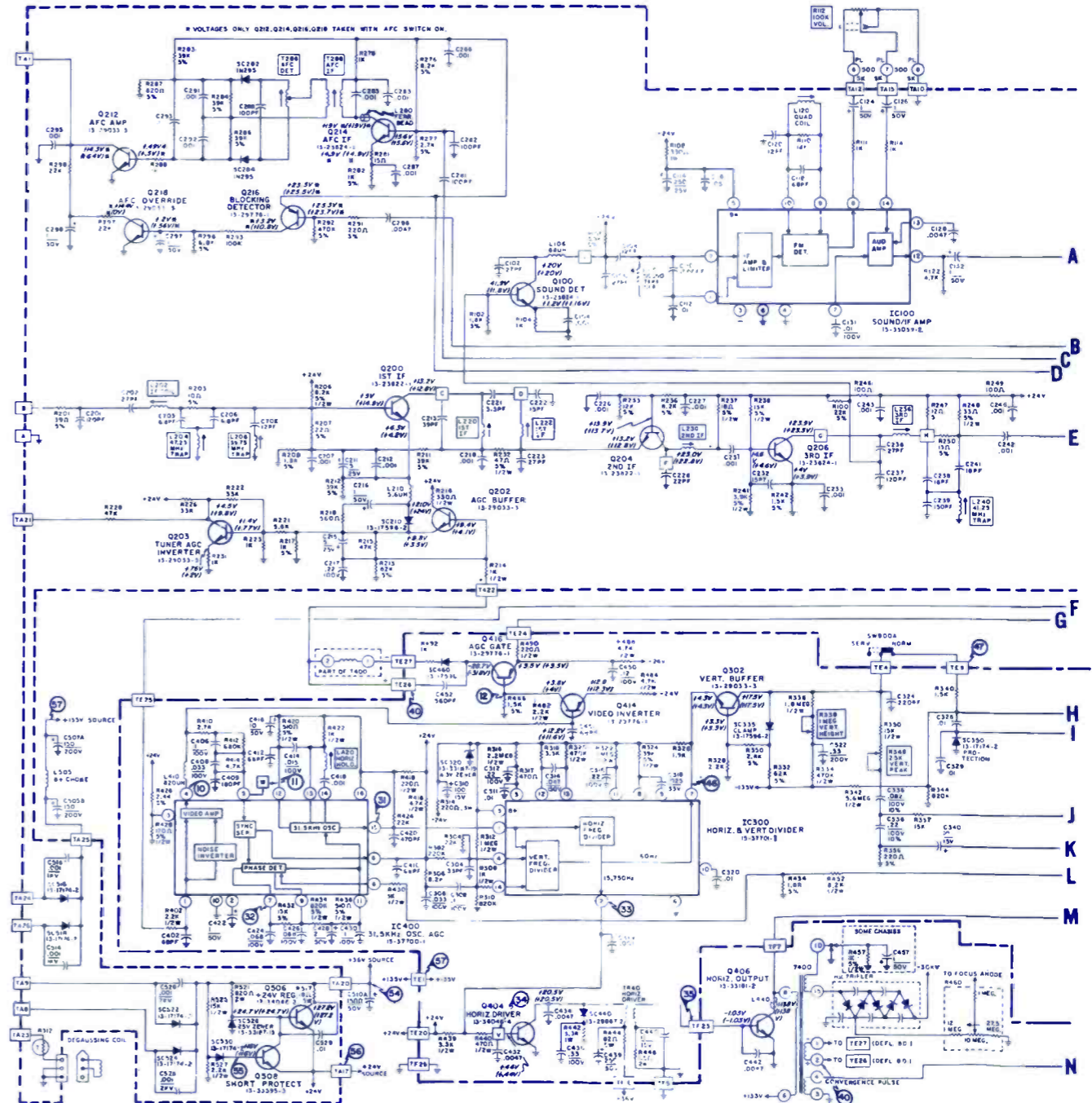
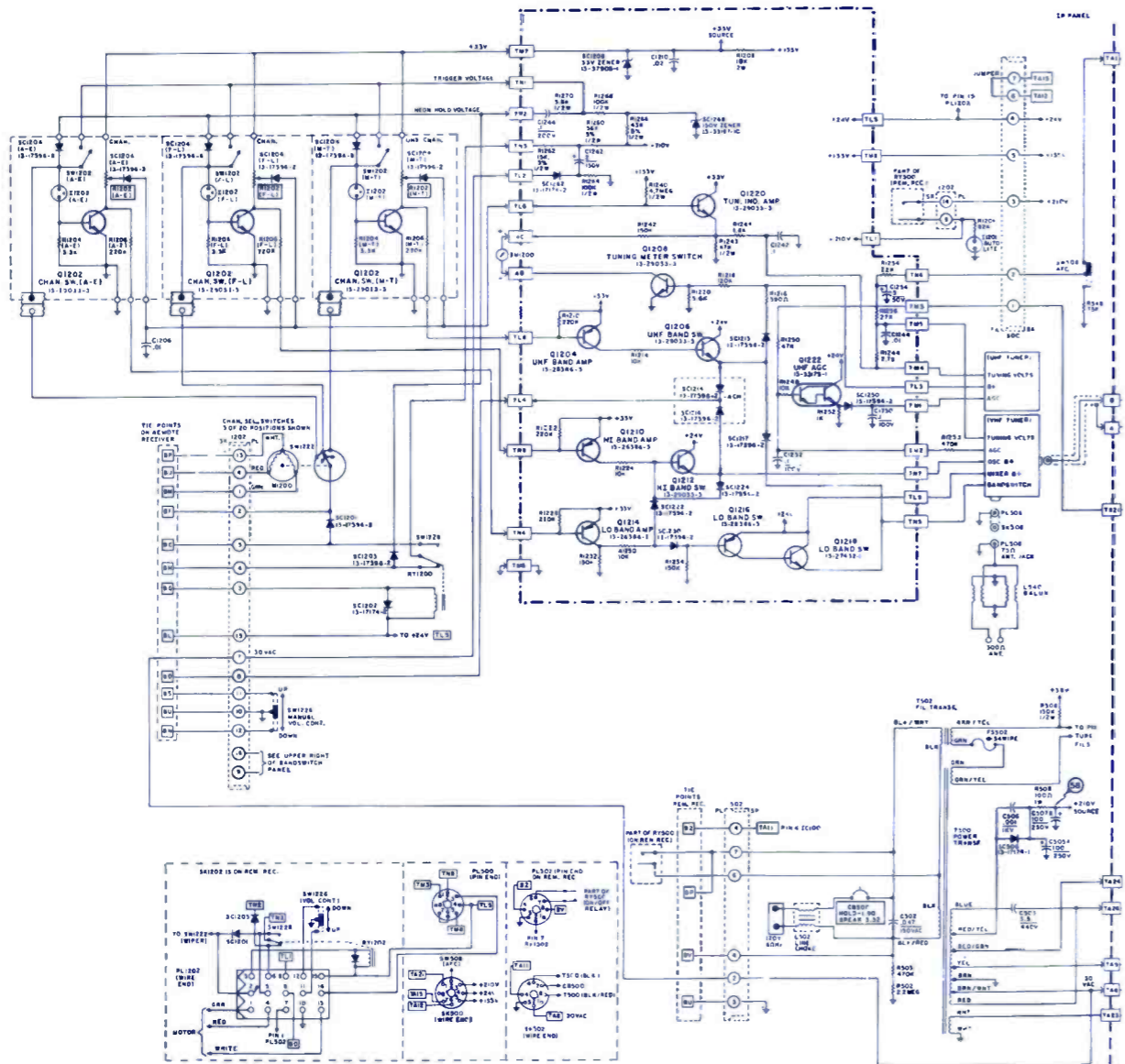
NOTE: ARROWS DESIGNATING POINTS NOT CONNECTED-POINT IN THE DIRECTION OF THE COMPONENT OR TIE POINT WHERE THEY ARE TO BE CONNECTED.

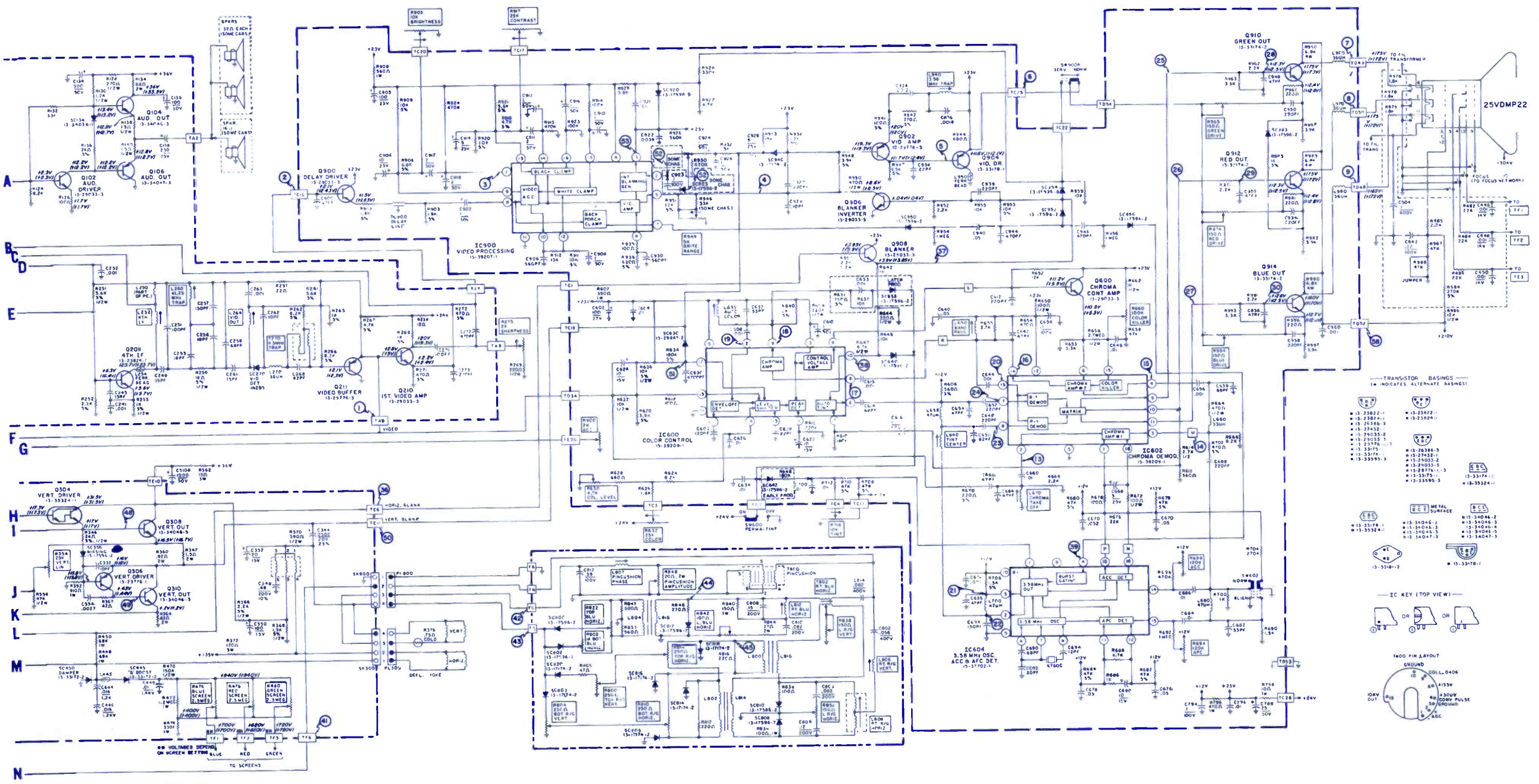
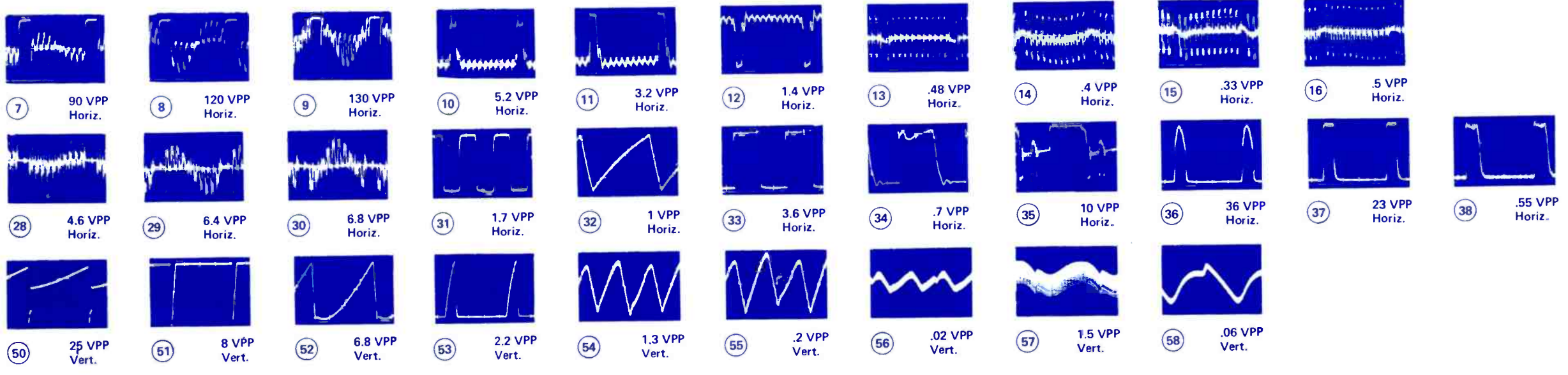
EXAMPLE: TO C... TO R...

SYLVANIA Color TV Chassis E09-1, E10-1

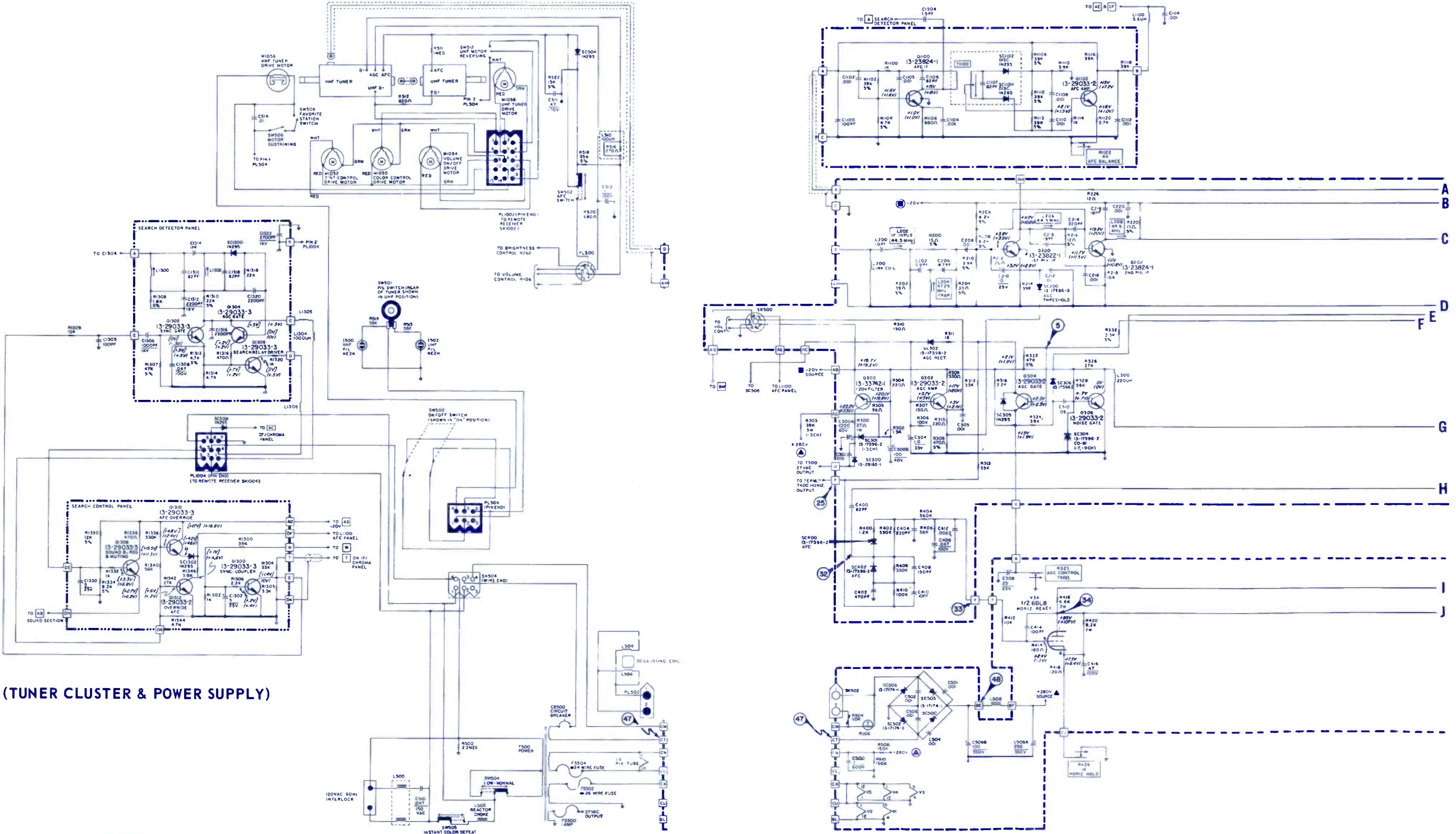
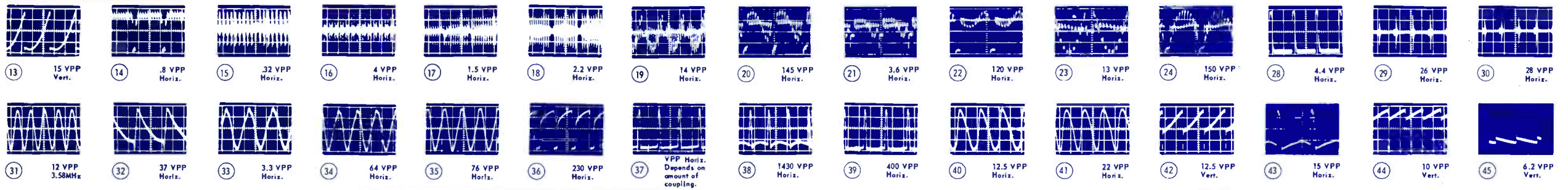


TUNER CLUSTER/POWER SUPPLY (E11-4)

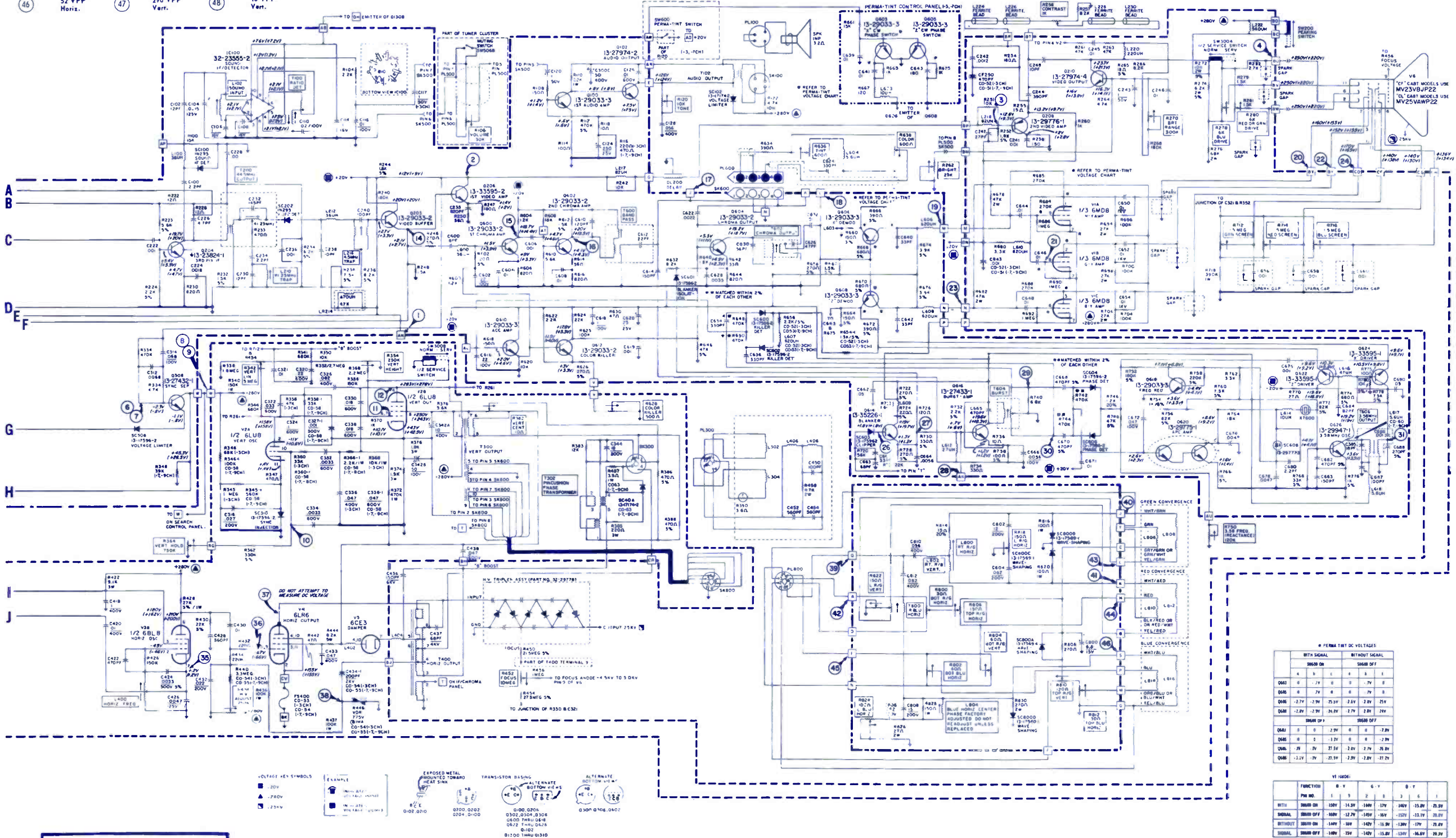
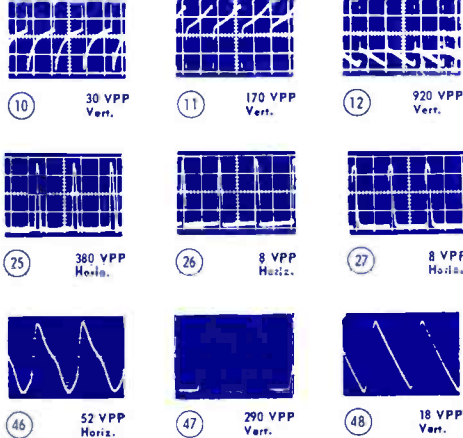




SYLVANIA
Color TV Chassis E11-1



(TUNER CLUSTER & POWER SUPPLY)



SYLVANIA
Color TV Chassis
D16-3 Thru -9

PERMA-TINT DC VOLTAGES

TEST POINT	WITH SIGNAL		WITHOUT SIGNAL	
	ON	OFF	ON	OFF
06A3	0	-2V	0	-7V
06A8	0	2V	0	7V
06A6	-2.7V	-2.9V	-2.6V	-2.9V
06A8	-2.9V	-2.9V	-1.7V	-2.9V
06A1	0	2.9V	0	-2.9V
06A8	0	-1.7V	0	-2.9V
06A1	-2.9V	-2.9V	-2.9V	-2.9V
06A8	-1.7V	-2.9V	-2.9V	-2.9V

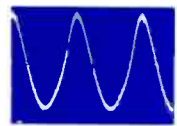
VI (500K)

FUNCTION	B-Y	G-Y	B-T
WITH SIGNAL	1.0V	1.1V	1.0V
WITHOUT SIGNAL	1.0V	1.1V	1.0V

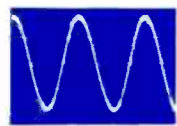
SYLVANIA

Color TV Chassis
E08-1

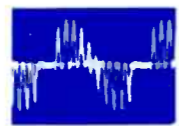
APRIL • 1975



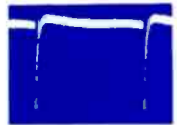
10 0.8 VPP
3.58MHz



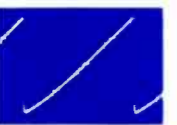
11 1 VPP
3.58MHz



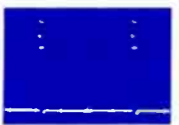
12 4.4 VPP
Horiz.



24 6.8 VPP
Vert.



25 4.4 VPP
Vert.



26 25 VPP
Vert.



27 4 VPP
Vert.



28 3 VPP
Vert.



29 2 VPP
Vert.



30 28 VPP
Vert.



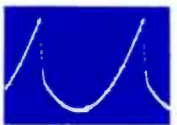
31 5 VPP
Horiz.



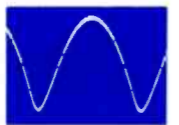
32 40 VPP
Horiz.



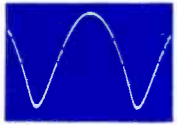
33 13 VPP
Vert.



34 4 VPP
Vert.



35 8 VPP
Vert.



36 10 VPP
Vert.



37 3.2 VPP
Horiz.



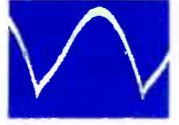
38 150 VPP
Horiz.



39 480 VPP
Horiz.



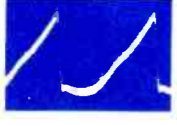
40 440 VPP
Horiz.



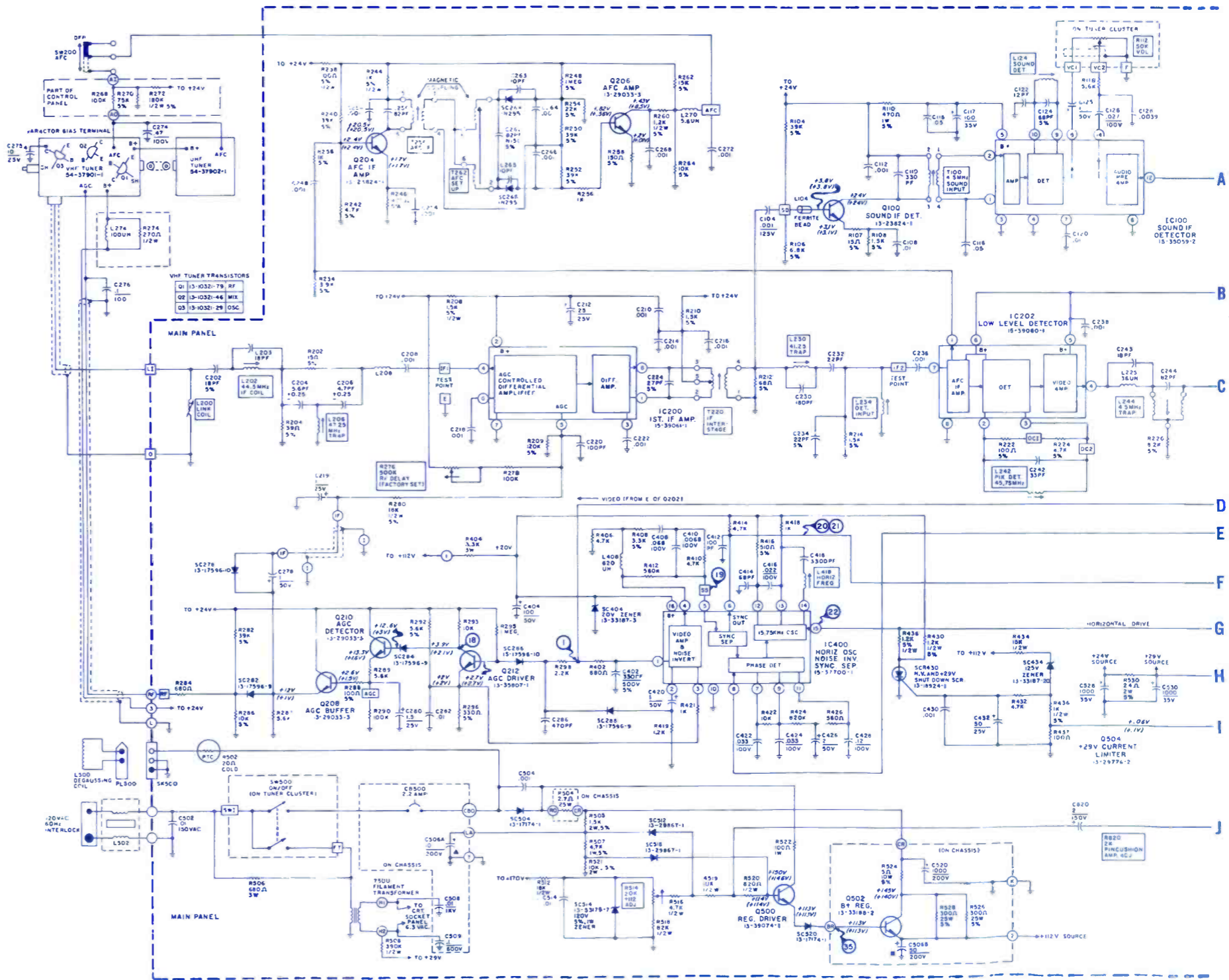
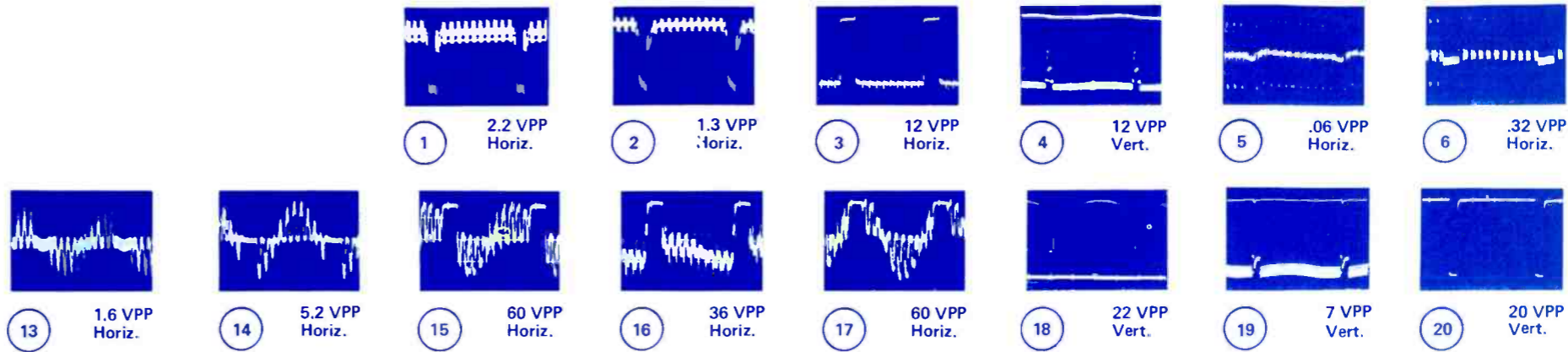
41 2.5 VPP
Vert.

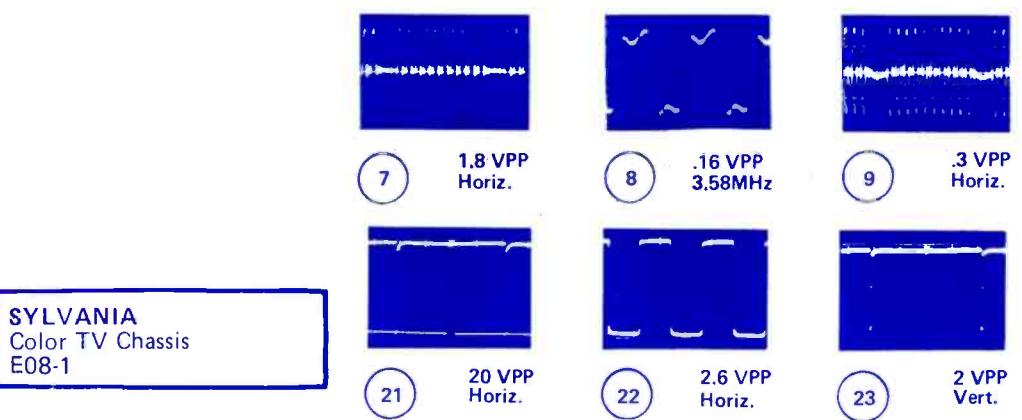
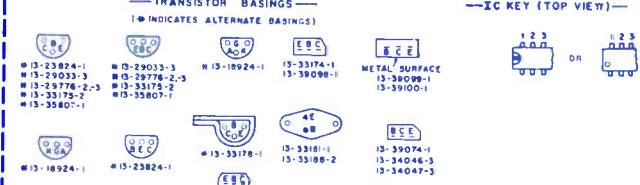
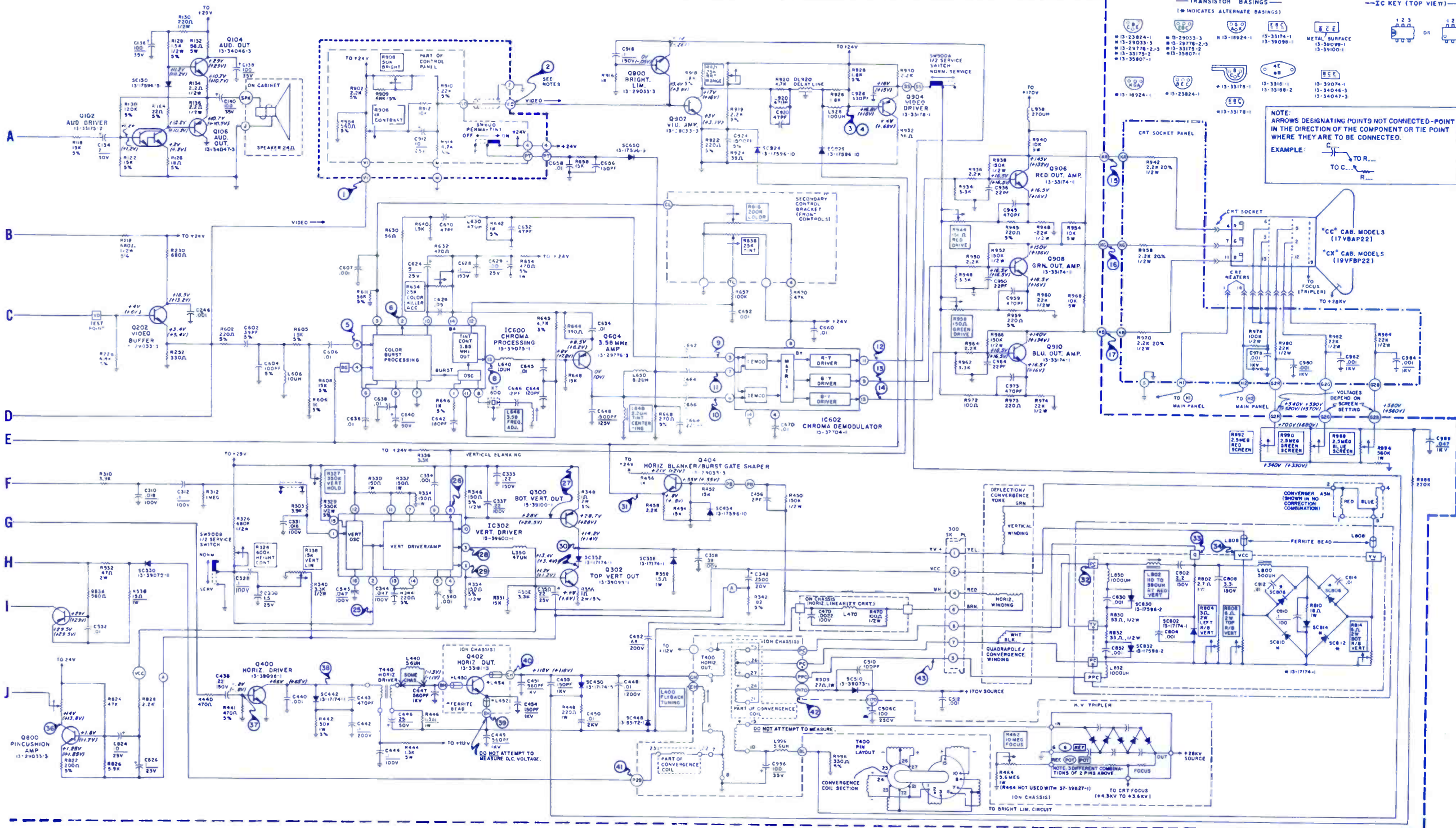


42 90 VPP
Horiz.

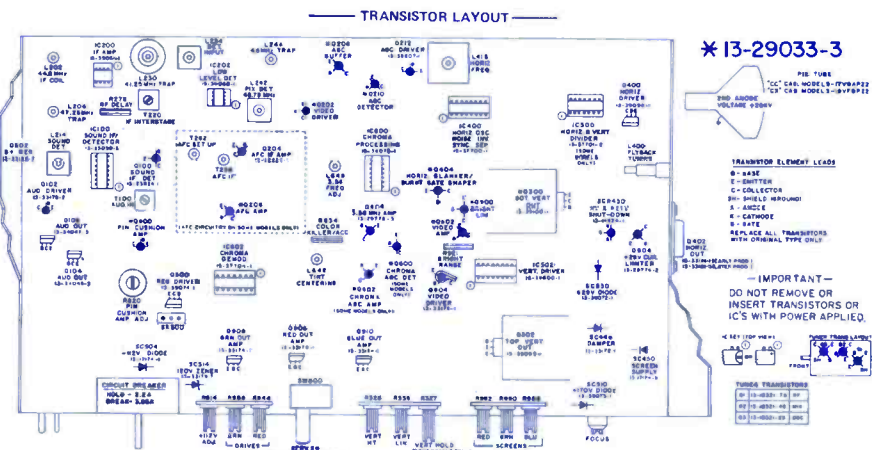


43 6.6 VPP
Vert.

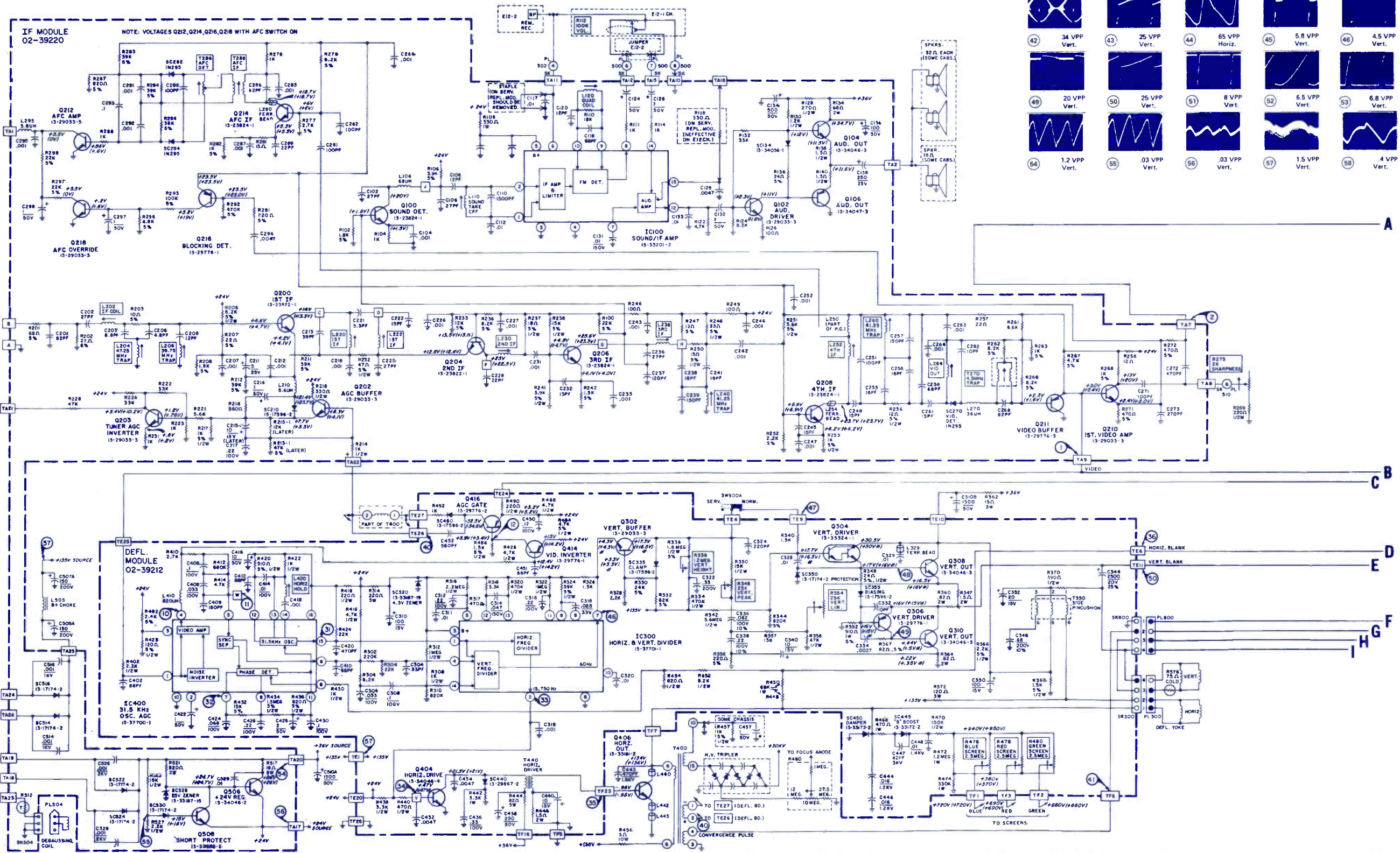
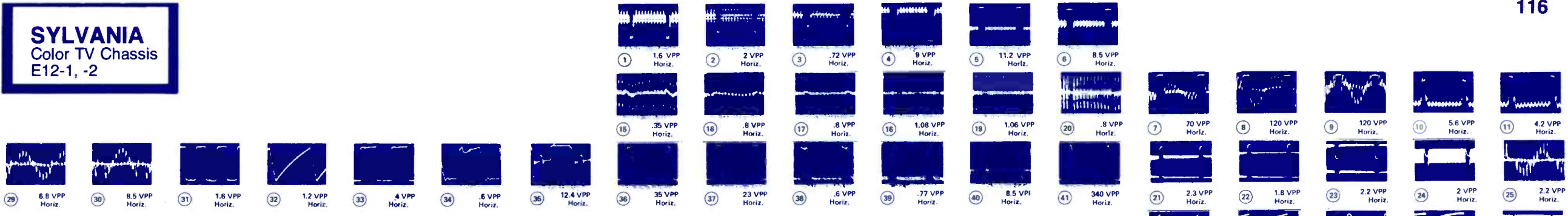


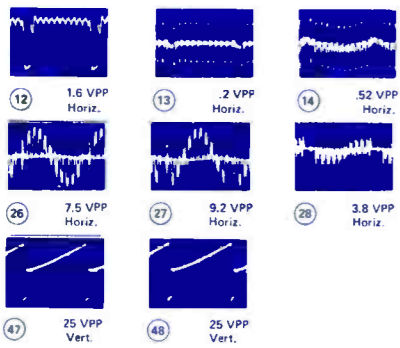


SYLVANIA
Color TV Chassis
E08-1



SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C506	three section electro	41-39071-1
A	10/200v	
B	50/200v	
C	100/250v	
L244	4.5MHz trap	50-35309-1
L418	horiz freq early prod	50-39121-1
L418	horiz freq later prod	50-39121-2
L648	tint center	50-39053-1
T100	4.5MHz sound input	50-39084-1
T400	HV	50-39234-1
T440	horiz drive	56-39101-1
T500	filament	55-39078-2
CB500	circuit breaker	29-39696-4
R276	500K RF delay	37-14576-12
R328	600K vert height -2 CH.	37-33036-17
R338	15K vert lin	part of R328
R514	20K, +112v adj.	37-33036-18
R616	200K color -1, -3 CH	37-29783-24
R616	5K color -2 CH	37-15902-4
R634	25K color kill	37-14576-19
R636	25K tint -2 CH	part of R616
R906	1K contrast	37-15902-5
R921	25K brite range	37-14576-19



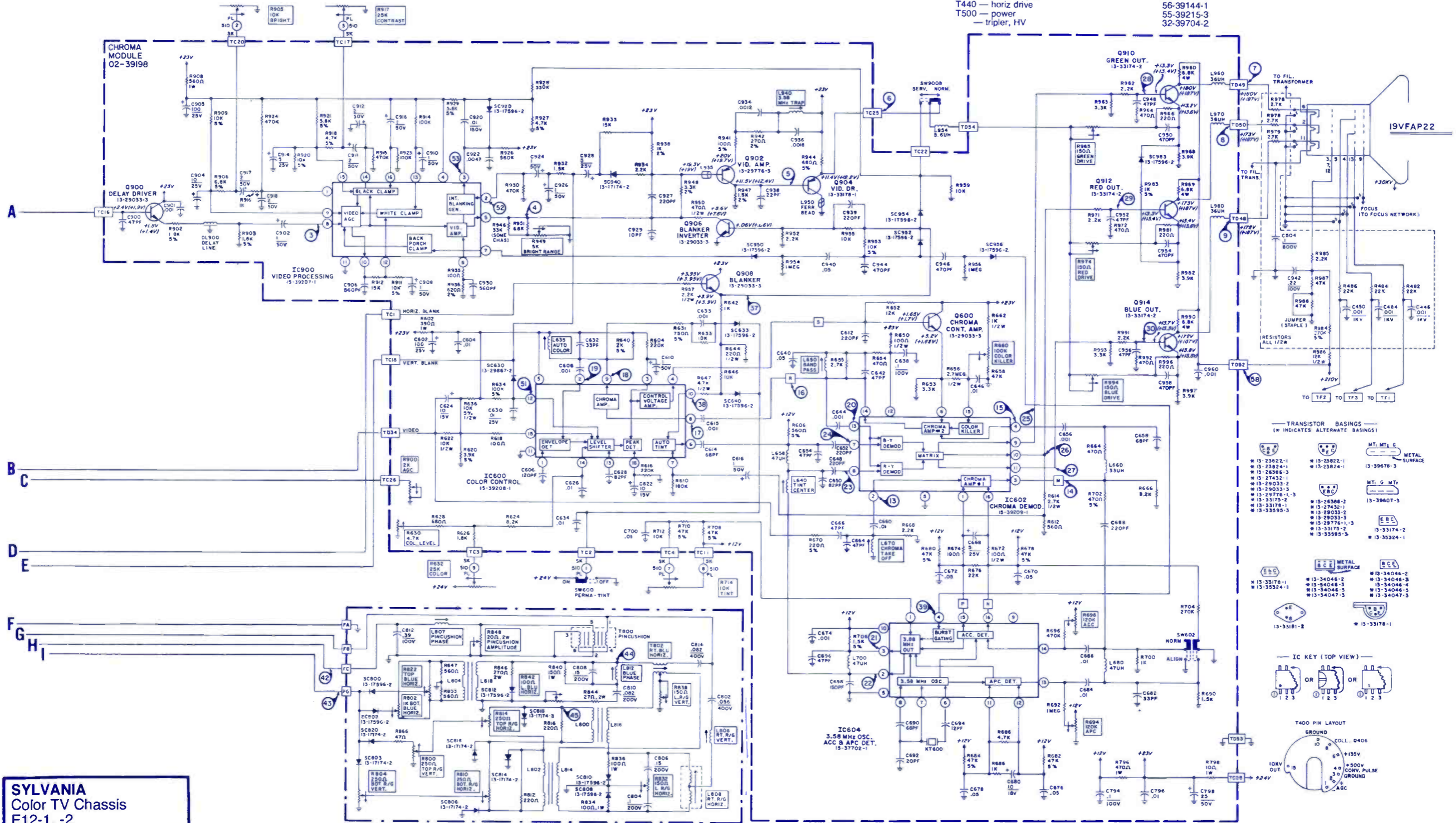


IC VOLTAGE CHART (TV CHASSIS)
(ALL IN VOLTS)

PIN NO.	IC100	IC300	IC400	IC600	IC602	IC604	IC900
1	(+1.8)	+7.8 (+7.8)	+2.8 (+2.4)	+5.1 (+5)	+8.8 (+8.9)	+7.3 (+7.3)	+4.5 (+4.9)
2	(+1.8)	+2 (+2)	+0.6 (+0.6)	+5.4 (+5.4)	+1.5 (+1.5)	+10.5 (+10.7)	-3.3 (-4)
3	(0)	+6.4 (+4.42)	+1.2 (+1.2)	+2.7 (+1.48)	+16.6 (+11.3)	+10.5 (+10.7)	+1.3 (+1.6)
4	(0)	+2.0 (+1.7)	+12.0 (+14.3)	+5.8 (+1.7)	+1.5 (+1.45)	-25 (-25)	+10 (+10)
5	(+11.9)	+3.2 (+1.2)	-1.9 (-1.2)	+10.1 (+10.1)	(0)	(0)	+8.4 (+7.4)
6	(+5)	(0)	+20.1 (+17.1)	+10.1 (+10.1)	+5.2 (+1.85)	+2.8 (+2.8)	+1.4 (+1.6)
7	(+6.1)	+4.3 (+4.3)	+6.6 (+6.6)	+5.7 (+5.8)	+6.0 (+6.0)	+11.0 (+10.6)	+0.5 (+0.9)

8	(+5.5)	+6.2 (+4.6)	+3 (+3)	+1.5 (+1.5)	+6.0 (+6.0)	+10.8 (+11.3)	+1.5 (+1.5)
9	(+3.9)	+4.2 (+4.2)	+6.6 (+6.6)	+10.1 (+10.1)	+12.7 (+12.8)		+4.7 (+4.7)
10	(+3.9)	+0.6 (+3)	(0)	+1.1 (+1.1)	+12.7 (+12.8)	+11.5 (+11.5)	+3.4 (+3.8)
11		+2.4 (+1.1)	+10.0 (+10.3)	(0)	+13.0 (+12.8)	+8.7 (+8.8)	(0)
12	(+5.4)	+8.2 (+8.2)	+2.1 (+2.1)	+6.3 (+6.3)	+19.8 (+20)	+8.7 (+8.8)	+3.4 (+3.8)
13	(+6.3)	+1.4 (+1.1)	+19.5 (+20.5)	+3.1 (+2.4)	+5 (+5)	+6.5 (+6.5)	+6.4 (+7.2)
14	(+1.6)	+4.3 (+1.9)	+3.4 (+3.4)	+8.2 (+8)	+19 (+20)	+6.5 (+6.5)	+2.8 (+2.7)
15		+7.8 (+7.8)	+3.1 (+3)	+9 (+9.8)	+8.4 (+8.5)	+3.8 (+3.8)	
16		+20.5 (+20.5)	+2.4 (+2.2)	+8.5 (+8.2)	+8.4 (+8.0)	+9.0 (+9.0)	

- SYMBOL DESCRIPTION**
C505A,B— two section electro 150/200V, 100/250V
- L110 — sound input
 - L120 — quad
 - L260 — 41.25MHz trap
 - L420 — horiz hold
 - L640 — tint center
 - L650 — band pass
 - L870 — chroma take-off
 - L940 — 3.58MHz trap
 - R112 — 100K vol -1 CH
 - R275 — 2K, sharp
 - R338 — 1.2M vert height
 - R460 — focus network
 - R630 — 4.7K color level
 - R632 — 25K color
 - R660 — 100K color kill
 - R694 — 120K, APC adj
 - R698 — 120K, ACC adj
 - R714 — 10K, tint
 - R905 — 10K, brite
 - R917 — 25K, contrast
 - T350 — side pincushion
 - T400 — horiz output
 - T440 — horiz drive
 - T500 — power
 - tripler, HV
- SYLVANIA PART NO.**
- 41-39282-1
 - 50-37714-3
 - 50-33195-2
 - 50-37715-2
 - 50-37711-4
 - 50-37716-2
 - 50-37716-2
 - 50-39217-1
 - 50-37714-3
 - 37-35924-5
 - 37-39669-1
 - 37-33036-25
 - 32-37705-1
 - 37-23063-10
 - 37-2742-62
 - 37-33036-21
 - 37-14576-11
 - 37-14576-11
 - 37-2742-61
 - 37-2742-61
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 - 50-37712-1
 - 50-39287-1
 - 56-39144-1
 - 55-39215-3
 - 32-39704-2



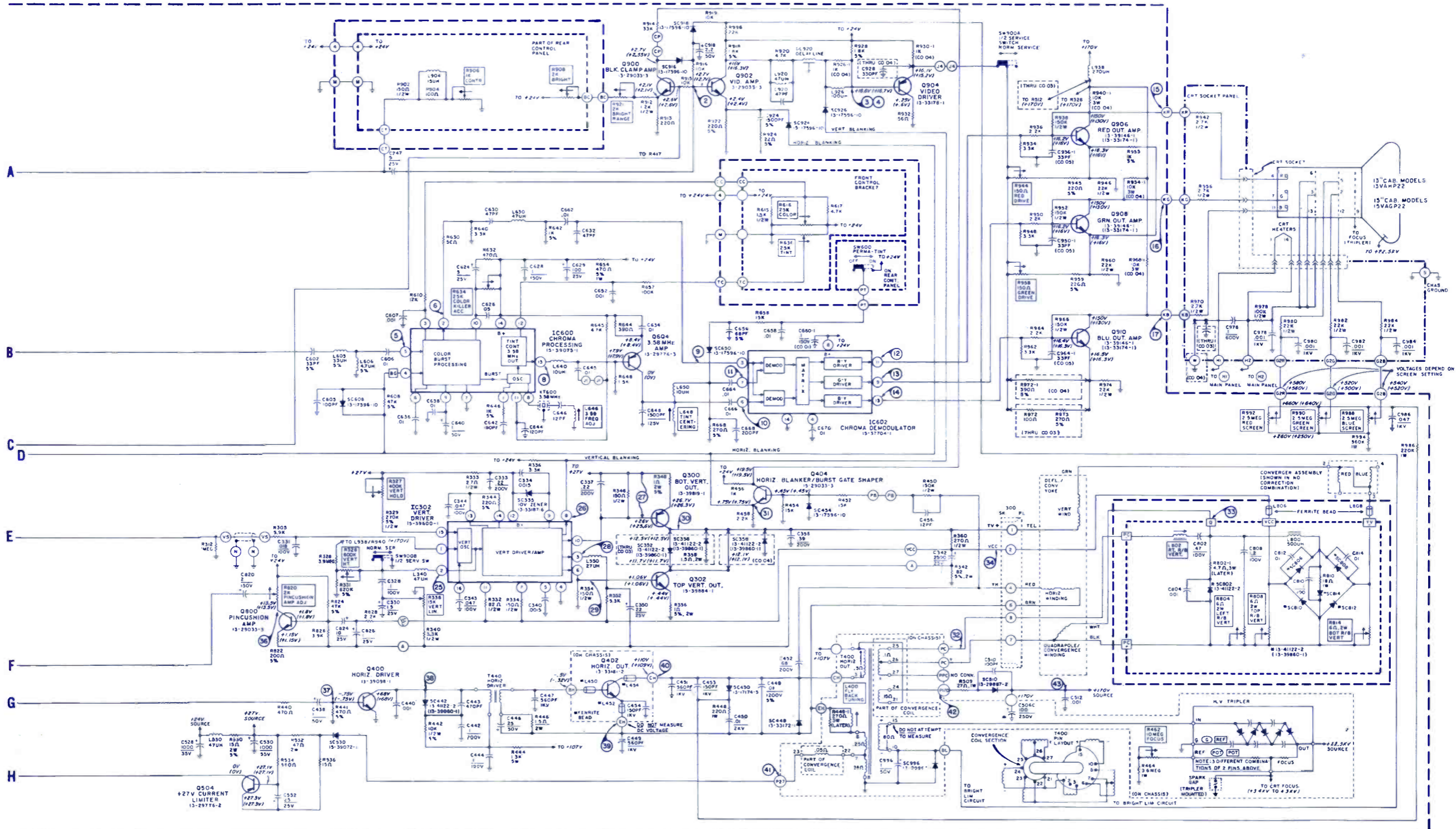
SYLVANIA
Color TV Chassis
E12-1, -2

IC VOLTAGE CHART
(ALL IN VOLTS)

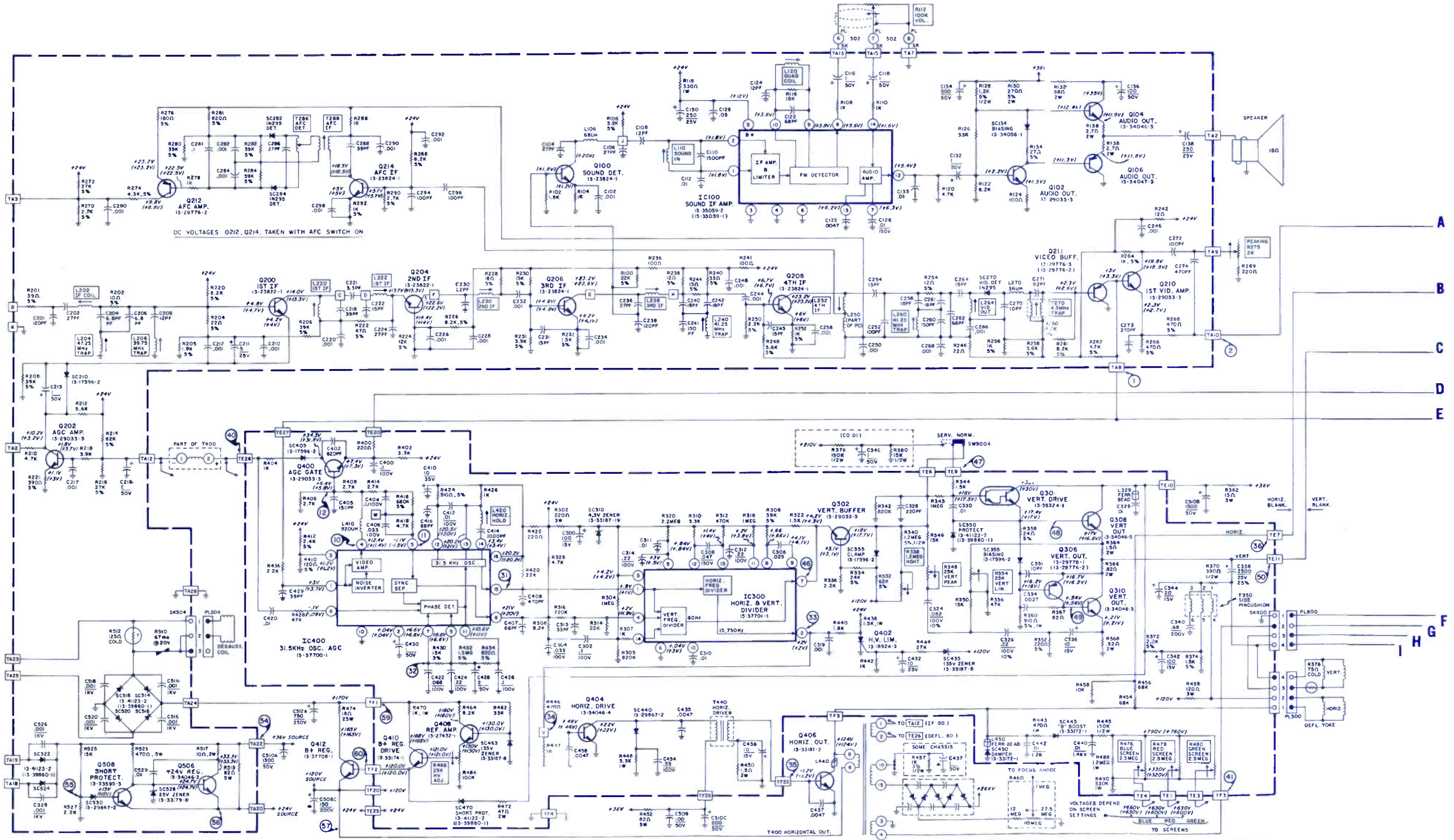
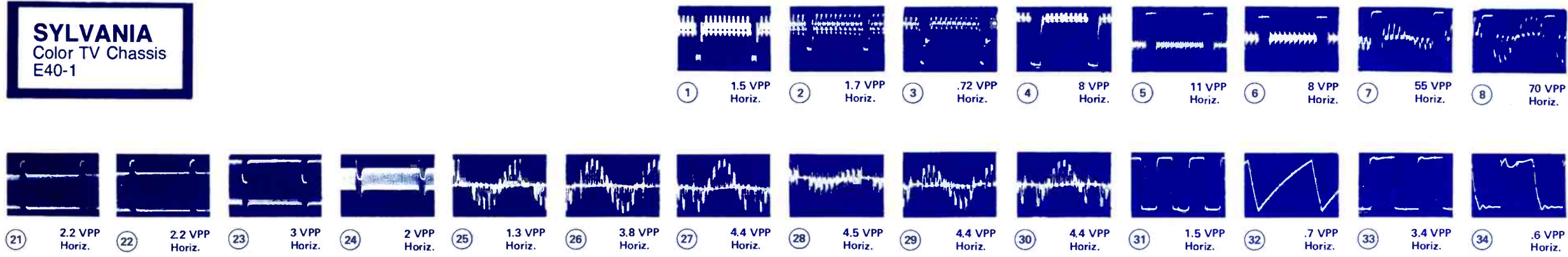
PIN NO.	IC100	IC200	IC202	IC300 (-3 CH.)	IC302 (-3 CH.)	IC400 (-3 CH.)	IC302 (-2 CH.)	IC400 (-2 CH.)	IC600	IC602
1	+16.5 (+16.3)	+6.9 (+6.7)	+1.6 (+1.6)	+1.7 (+1.7)	+3 (+3.3)	+4.3 (+4.3)	+3 (+3.3)	+5.4 (+5.36)		
2	+13 (+12.2)	+8.5 (+8.5)	+4.1 (+4.1)	+2.4 (+2.4)	+0.4 (+0.4)	+2.4 (+2.4)	+0.4 (+0.4)	+7.6 (+8)		
3	+2 (+1.9)	+8.5 (+8.5)	+4.3 (+4.3)	+11.4 (+11.4)	+1.75 (+1.75)	+11.4 (+11.4)	+1.75 (+1.75)	+6.6 (+6.4)	+3.6 (+3.6)	
4	+2.7 (+2.6)	+4.1 (+4.4)	+1.45 (+1.4)	0 (0)	+11 (+9.5)	0 (0)	+11 (+9.5)	+5.2 (+5.2)	+3.6 (+3.6)	

5	+5 (+4.6)	+17.2 (+17.2)	+2.8 (+2.8)	+2.8 (+2.8)	-2 (-1)	+2.8 (+2.8)	-2 (-1)	+7 (+7)		
6	0 (0)	+2.8 (+2.7)	+17.2 (+17.2)	0 (0)	+1.06 (+1.06)	+15.6 (+15.8)	+1.06 (+1.06)	+15.6 (+15.8)	+2 (+1.8)	+6.4 (+6.4)
7	0 (+6)	+4.1 (+4.1)	+2.4 (+2.35)	+10 (+10)	+4.8 (+4.8)	+10 (+10)	+4.8 (+4.6)	0 (0)	+6.4 (+6.4)	
8	+16.6 (+5.3)	0 (+17)	0 (0)	+65 (+65)	+1.1 (+1.0)	+75 (+79)	+1.1 (+1.0)	+75 (+75)	+4.2 (+4.4)	+24 (+24)
9	+3.7 (+3.7)			+4.1 (+4.1)	+24.2 (+24)	+5 (+4.6)	+24.2 (+24)	+5 (+4.6)	+2.8 (+1.8)	+14.4 (+14.2)
10	+3.7 (+3.7)			+0.3 (+2.6)	+26 (+25.6)	0 (0)	+26 (+25.6)	0 (0)	+7.4 (+8.2)	

11				+20 (+3.6)	+13.2 (+13.2)	+10.2 (+10.4)	+13.2 (+13.2)	+10.2 (+10.4)	+8.4 (+8.4)	+14.4 (+14.2)
12	+5.1 (+5.1)			+8 (+8)	+26.9 (+26.8)	+18.6 (+18.6)	+26.9 (+26.8)	+18.6 (+18.6)	+8.4 (+8.4)	
13	+5.8 (+5.8)			+1.4 (+4.2)	+12 (+12)	+18.2 (+18.5)	+12 (+12)	+18.2 (+18.5)	+8 (+8)	+14.5 (+14.3)
14	+1.7 (+1.7)			+3.5 (+1.8)	+12 (+12)	+3.3 (+3.3)	+12 (+12)	+3.3 (+3.3)	+9.4 (+9.4)	0 (0)
15					+0.2 (+0.1)	+1.6 (+1.6)	+19 (+19)	+4.2 (+4.3)		
16				+1.4 (+1.4)	+20 (+20)	+5 (+5)	+20 (+20)			

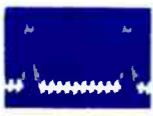


SYLVANIA Color TV Chassis E40-1

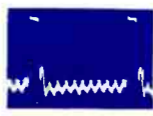




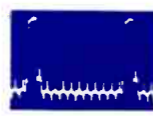
9 65 VPP Horiz.



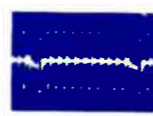
10 5 VPP Horiz.



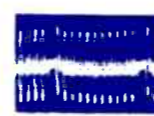
11 3.5 VPP Horiz.



12 2 VPP Horiz.



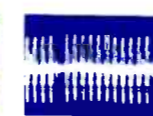
13 .24 VPP Horiz.



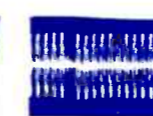
14 .35 VPP Horiz.



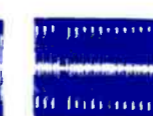
15 .26 VPP Horiz.



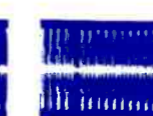
16 .3 VPP Horiz.



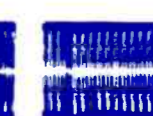
17 .3 VPP Horiz.



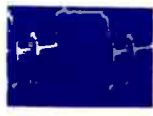
18 .37 VPP Horiz.



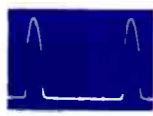
19 .37 VPP Horiz.



20 .3 VPP Horiz.



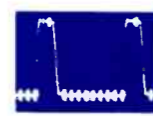
35 10 VPP Horiz.



36 32 VPP Horiz.



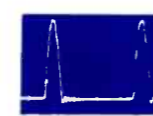
37 23 VPP Horiz.



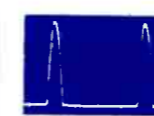
38 .52 VPP Horiz.



39 .54 VPP Horiz.



40 38 VPP Horiz.



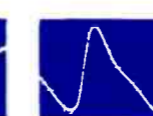
41 290 VPP Horiz.



42 26 VPP Vert.



43 23 VPP Vert.



44 44 VPP Horiz.



45 5 VPP Vert.



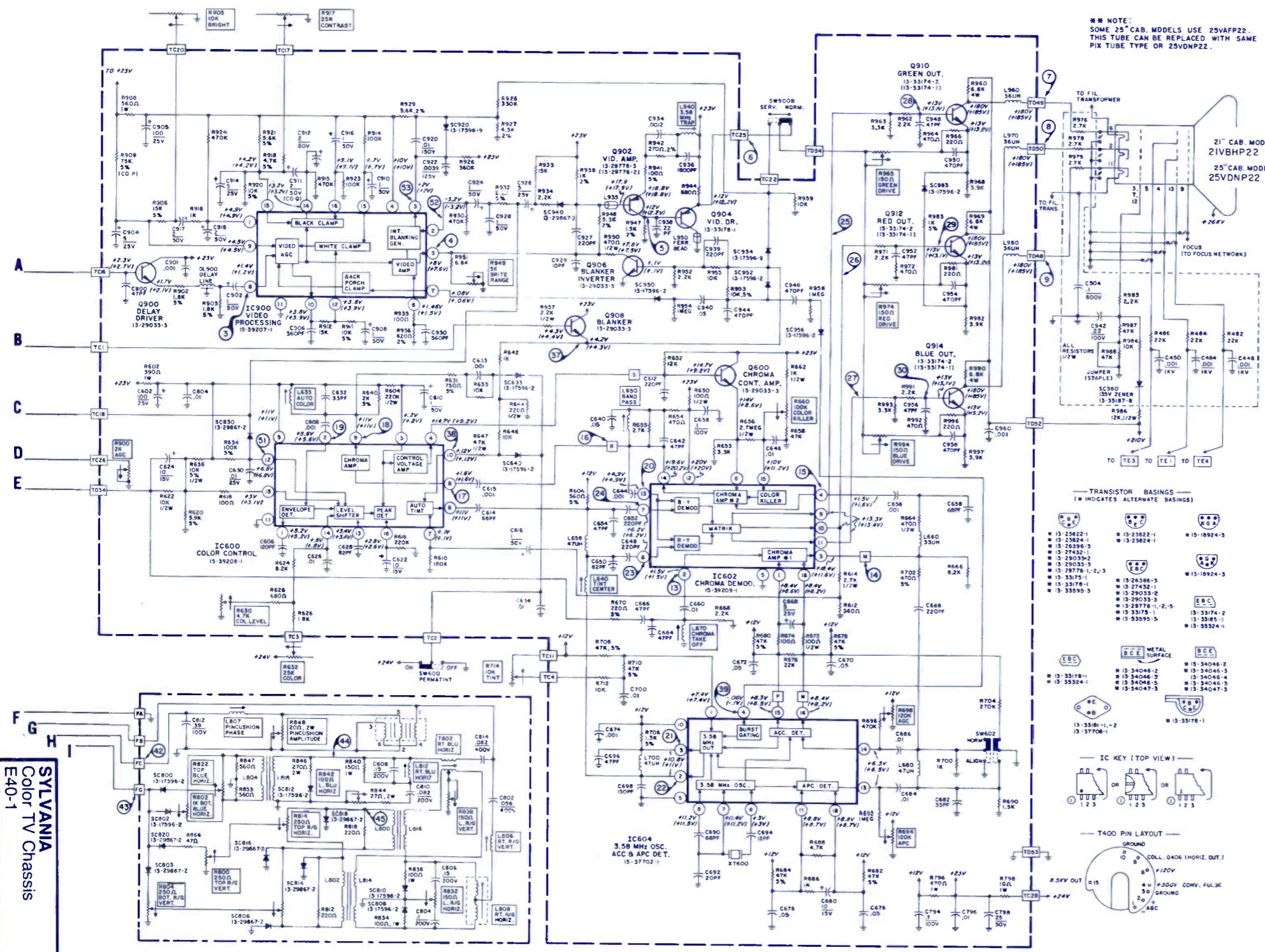
46 4 VPP Vert.



47 25 VPP Vert.



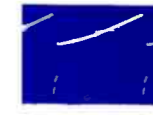
48 25 VPP Vert.



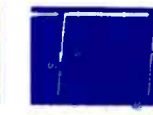
NOTE:
SOME 25" CAB. MODELS USE 25VAFP22.
THIS TUBE CAN BE REPLACED WITH SAME
PIX TUBE TYPE OR 25VDNP22.



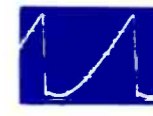
49 11 VPP Vert.



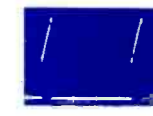
50 24 VPP Vert.



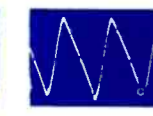
51 7.6 VPP Vert.



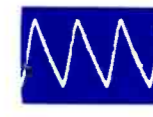
52 6 VPP Vert.



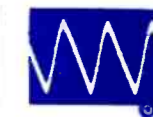
53 6.4 VPP Vert.



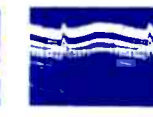
54 2.7 VPP Vert.



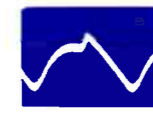
55 .32 VPP Vert.



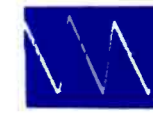
56 .03 VPP Vert.



57 .44 VPP Vert.



58 .4 VPP Vert.



59 1.7 VPP Vert.



60 .4 VPP Vert.

TRANSISTOR BASINGS
(# INDICATES ALTERNATE BASINGS)

Q900	Q901	Q902	Q903	Q904	Q905	Q906	Q907	Q908	Q909	Q910
13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2	13-2987-2

IC KEY (TOP VIEW)

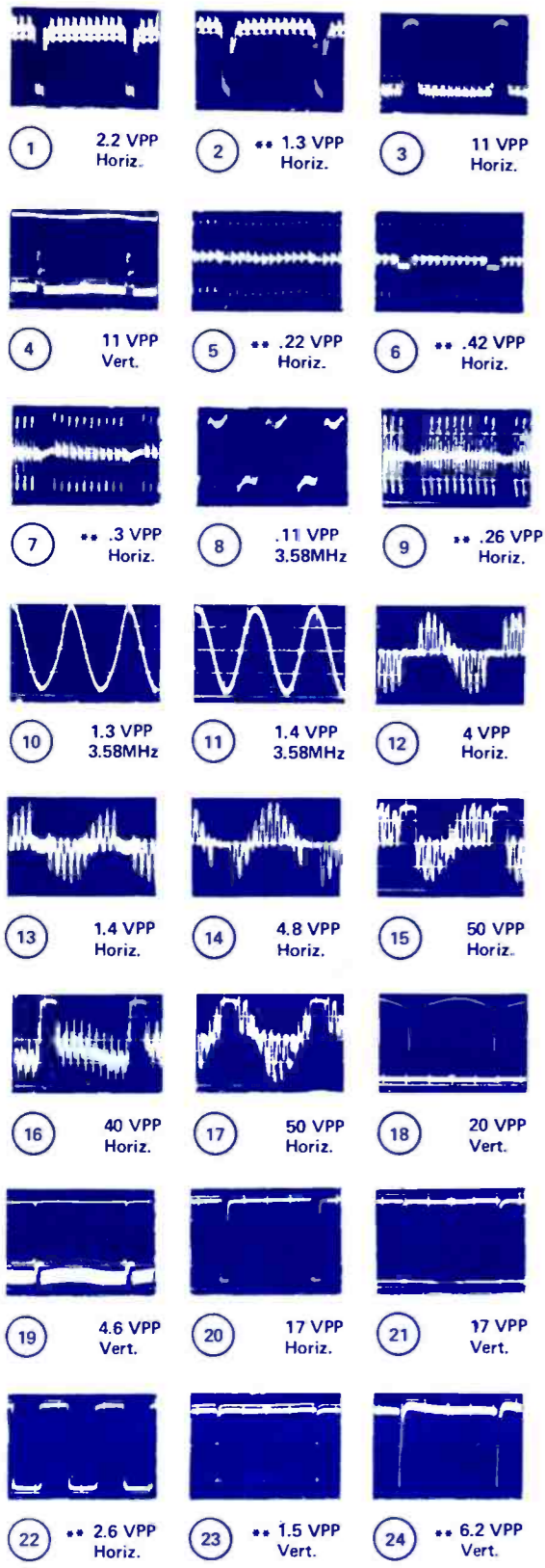
T400 PIN LAYOUT

SYMBOL	DESCRIPTION	SYLVANIA PART NO.
C510	three section electro	41-37580-1
L110	sound input	50-37714-3
L120	quad	50-33195-2
L240	41.25MHz trap	50-37715-2
L420	horiz hold	50-37711-4
L650	band pass	50-37716-2
L670	chroma take-off	50-39217-1
R112	100K, vol	37-35105-15
R338	1.2M, vert height	37-33036-25
R348	25K, vert peak	37-23063-2
R354	25K, vert lin	part of R338
R460	focus network	32-37705-1
R468	25K, HV adj	part of R338
R630	5K, color level	37-23063-10
R660	100K, color kill	37-33036-21
R714	10K, tint	37-27242-45
R905	10K, brite	37-27242-45
R917	25K, contrast	37-27242-54
R949	5K, brite range	part of R660
IC100	sound IF amp	15-35059-2
IC300	horiz & vert divider	15-37701-1
IC400	31.5K Hz osc. AGC	15-37700-1
IC600	color control	15-38208-1
IC602	chroma amp, demod	15-39209-1
IC604	3.58MHz osc. ACC, APC	15-37702-1
IC900	video processing	15-39207-1
T270	4.5MHz trap	50-35309-1
T400	horiz output	50-41122-2
T440	horiz driver	56-39144-1
T500	power	55-3722-3
T800	pin cushion	50-33900-3
T802	rt blue horiz	50-35498-2
CB500	circuit break tripler, HV	29-39696-13
		32-35894-7

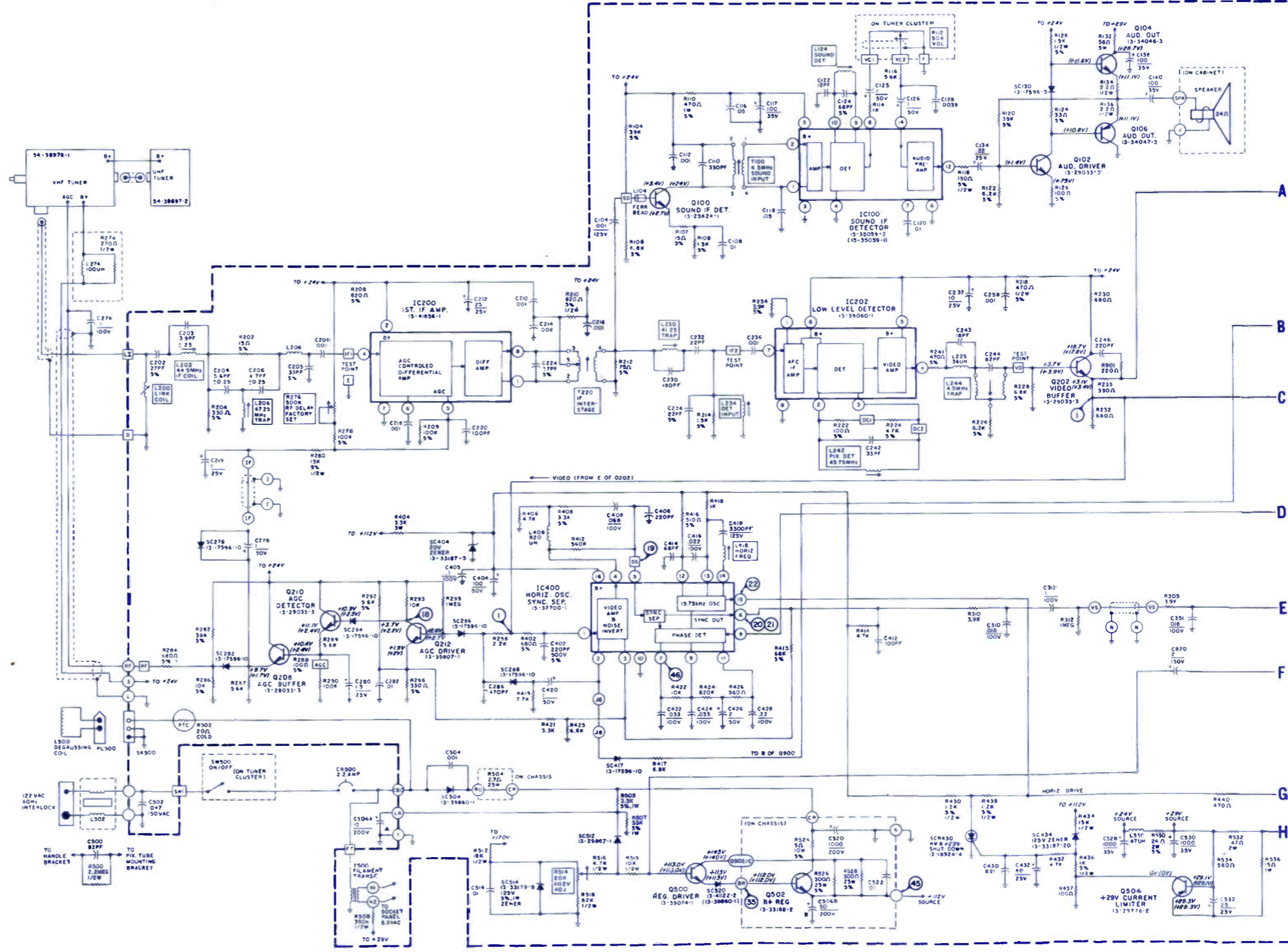
SYLVANIA
Color TV Chassis
E40-1

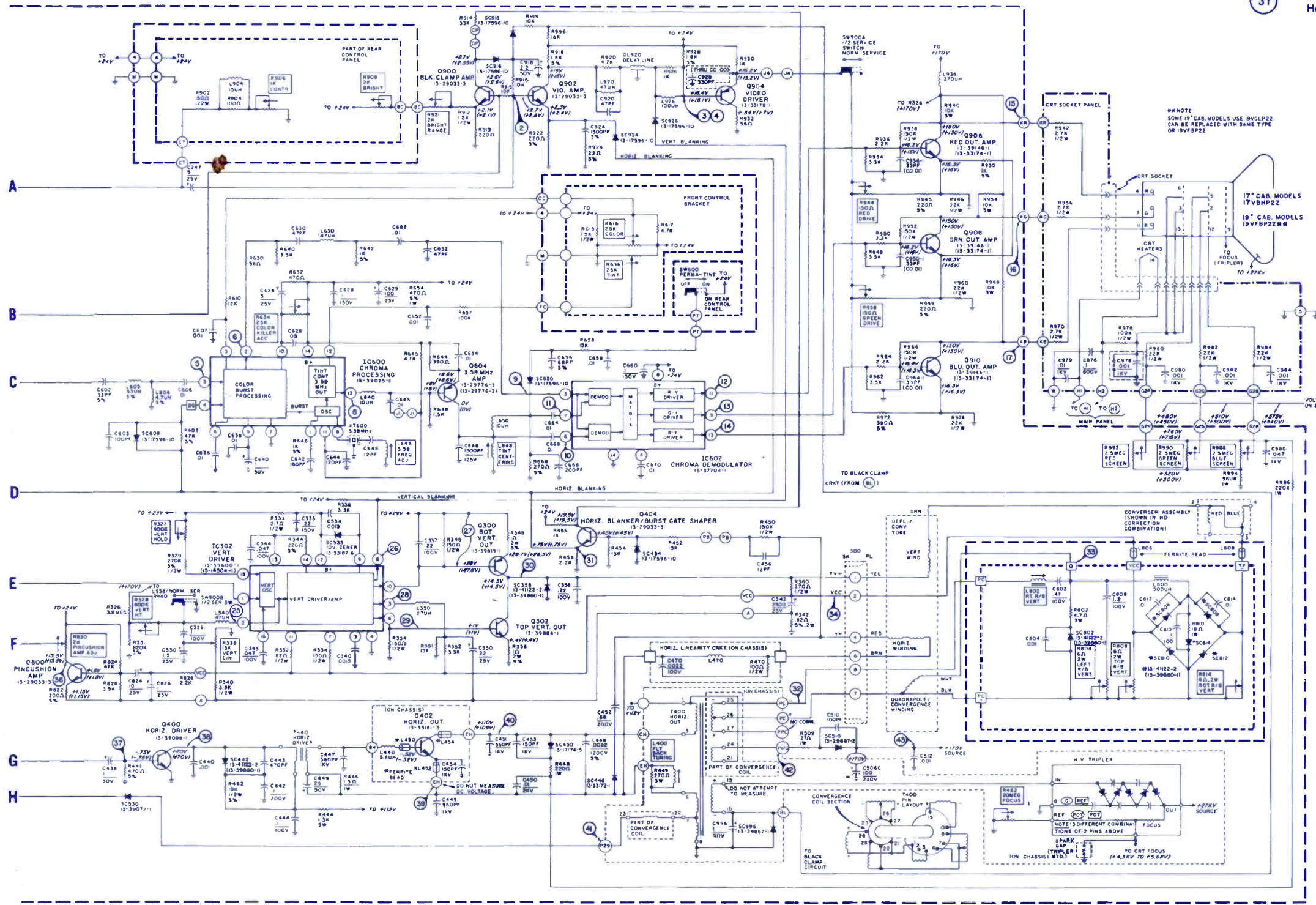
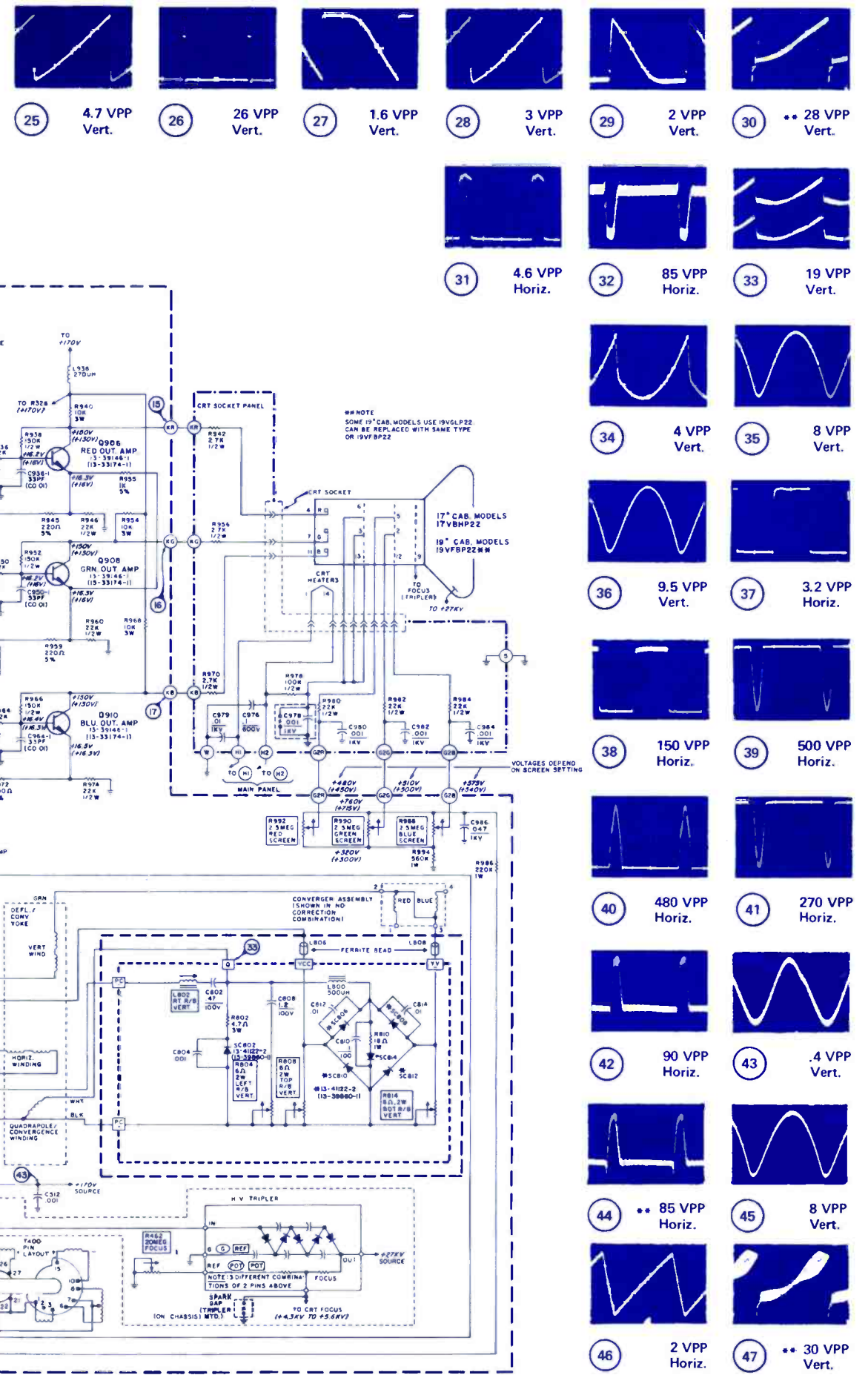
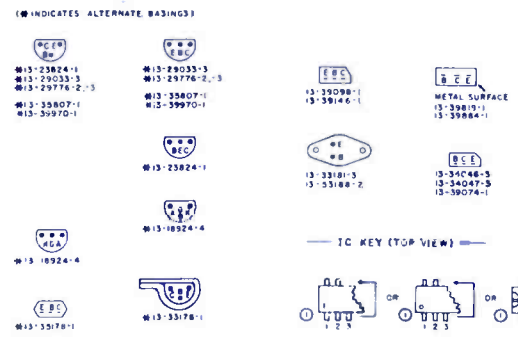
SYLVANIA

Color TV
Chassis
E 21-1



****NOTES:** WAVEFORM NUMBER 2, TAKEN WITH CONTRAST CONTROL AT MID-RANGE OF ROTATION.
WAVEFORM NUMBERS 5, 6, 7, 9, OSCILLOSCOPE GROUND CLIP AT NEAREST CHASSIS GROUND.
WAVEFORM NUMBER 22 MEASURES APPROXIMATELY 8.5 VPP ON -1,-2,-7 CH.
WAVEFORM NUMBER 27, OSCILLOSCOPE GROUND CLIP AT +29V.
WAVEFORM NUMBER 30, APPLIES TO E21-1 ONLY.
WAVEFORM NUMBERS 7, 23, 24, 44, 47 APPLY TO E21-2,-3,-6,-7 ONLY.





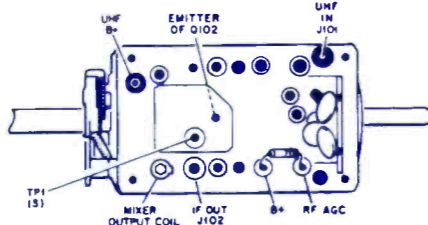
SYLVANIA
 Color TV Chassis
 E 21-1

TRAV-LER

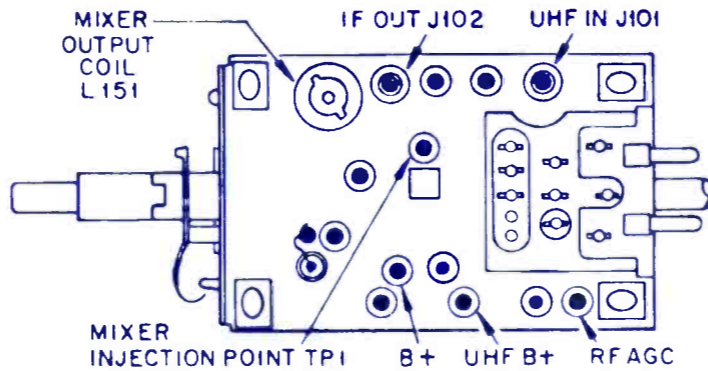
TV Chassis TL6/TL6

SYMBOL DESCRIPTION TRAV-LER PART NO.

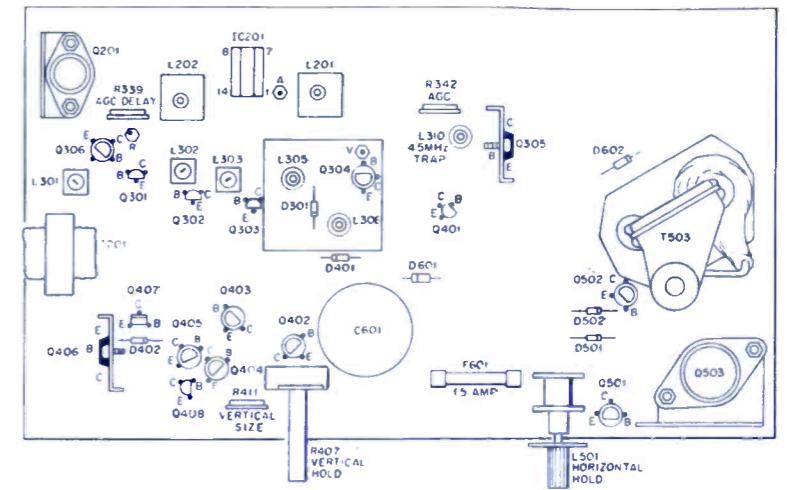
C603—250/200/150 µf, 165v electro	67A30-11
L201—coil 4.5MHz	72A317-1
L302—coil 1st video 1F	72A415-1
L303—coil 2nd video 1F	72A415-1
L310—coil 4.5MHz trap	72A317-9
L501—coil horiz lock	94A480-1
T201—xformer audio output	79A172-1
T401—yoke deflect TL6-1A-2A	94A372-3
T401—yoke deflect TL6-1A-2A	94A372-4
T502—xformer horiz output	79A166-3
R203—25K volume control	75A1-210
R326—500n, contrast control	75A1-211
R333—100K, brite control	75A1-212
R339—400n, AGC delay	75A101-35
R342—400n, AGC control	75A101-35
R411—2M, vert size	75A101-61
R407—1.2M vert hold	75A191-3
fuse, 1.5a	84A7-5



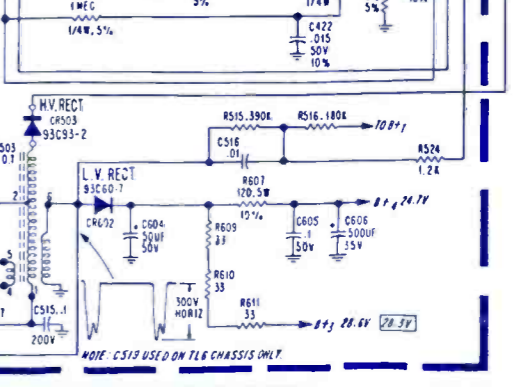
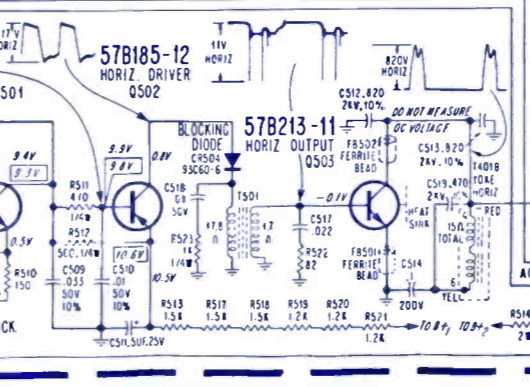
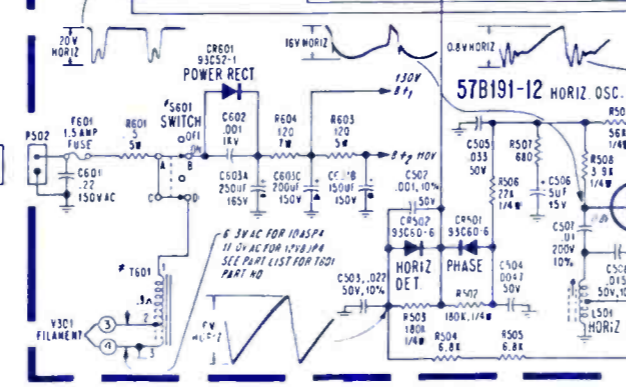
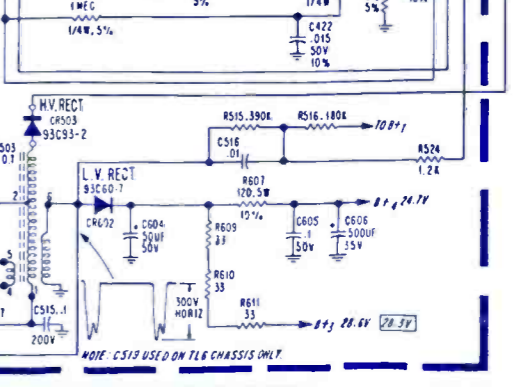
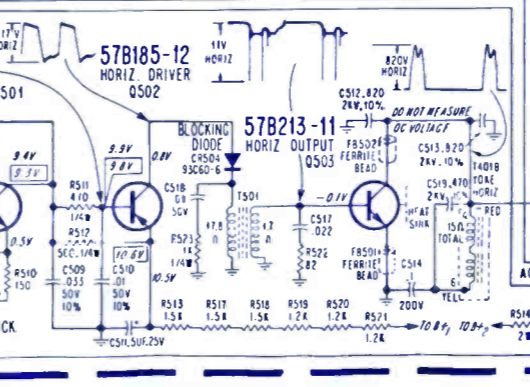
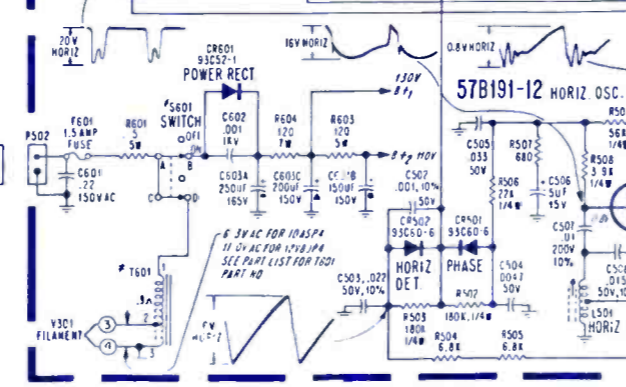
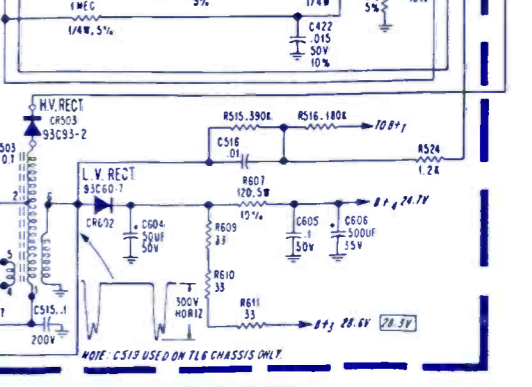
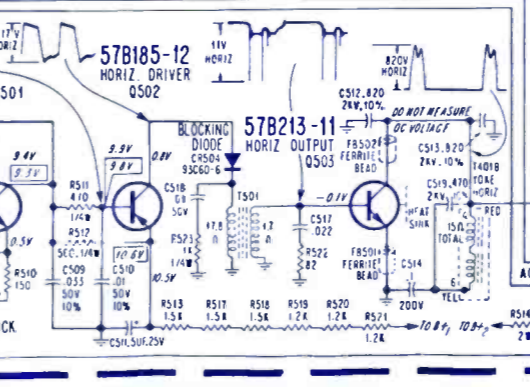
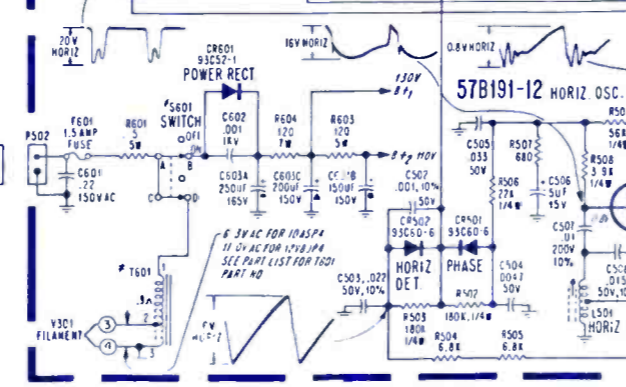
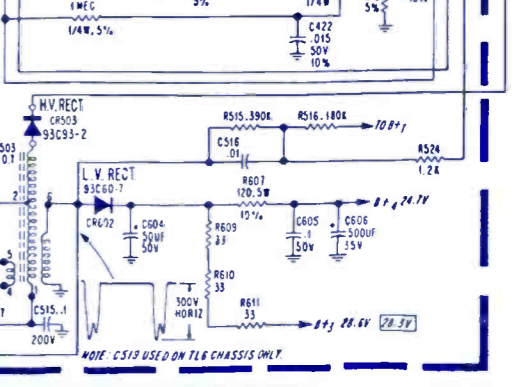
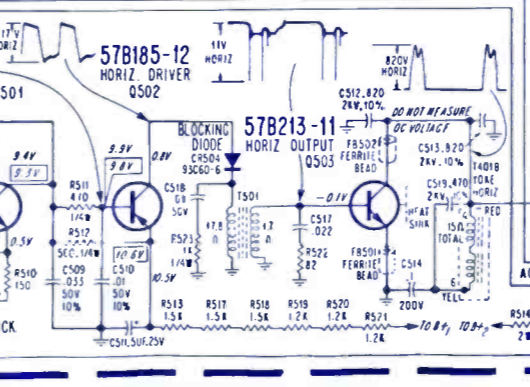
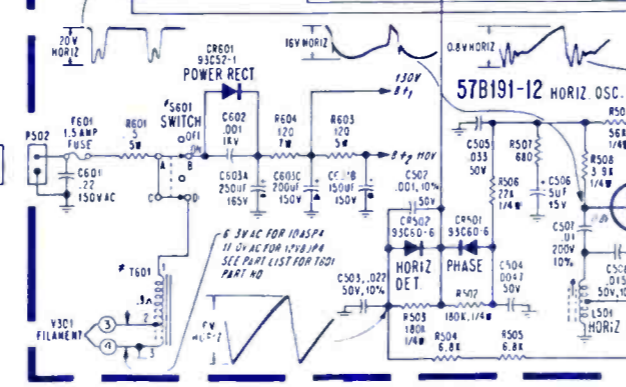
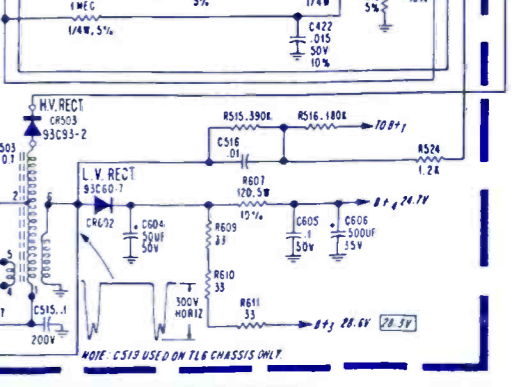
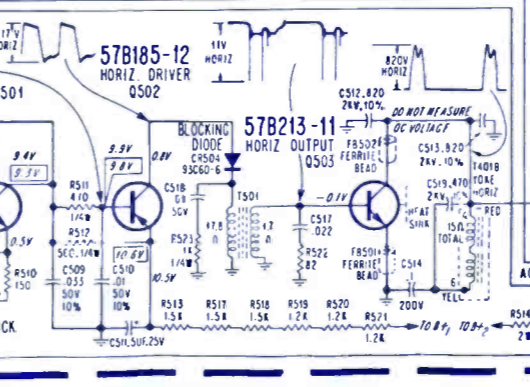
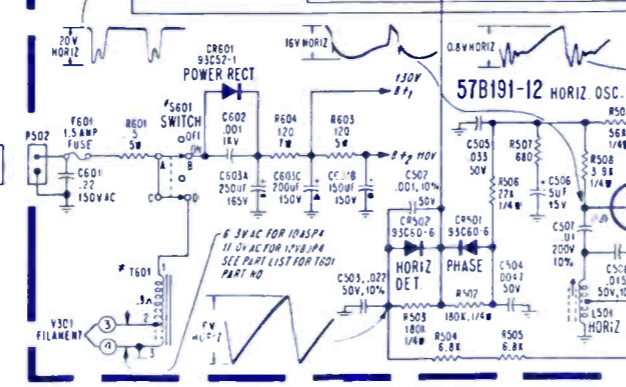
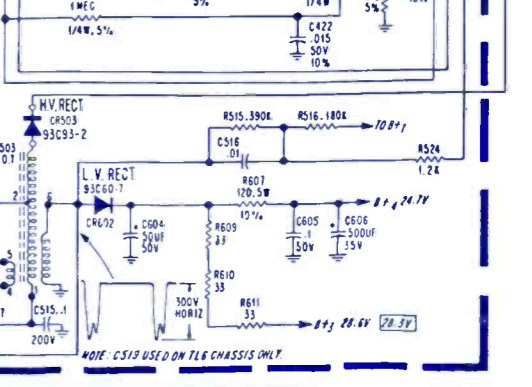
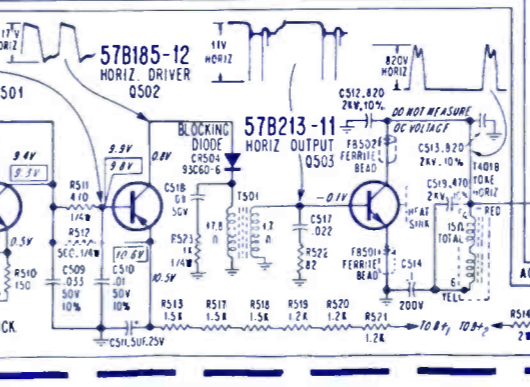
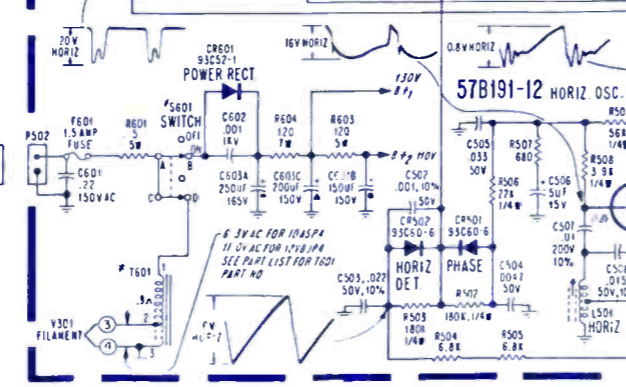
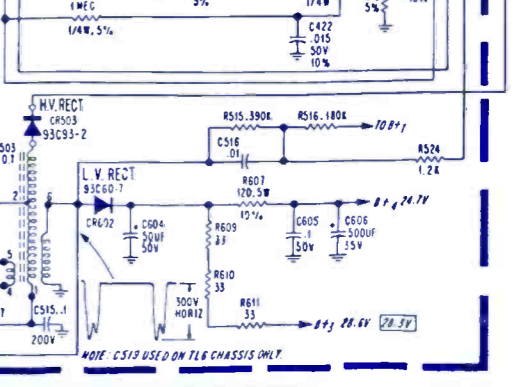
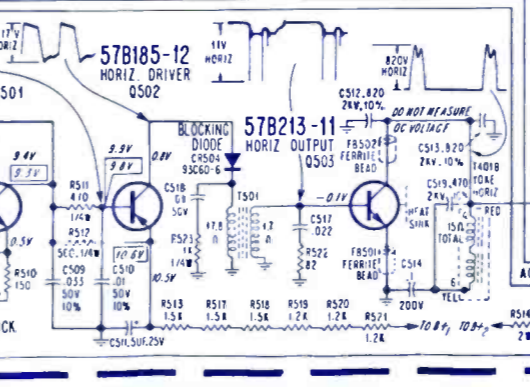
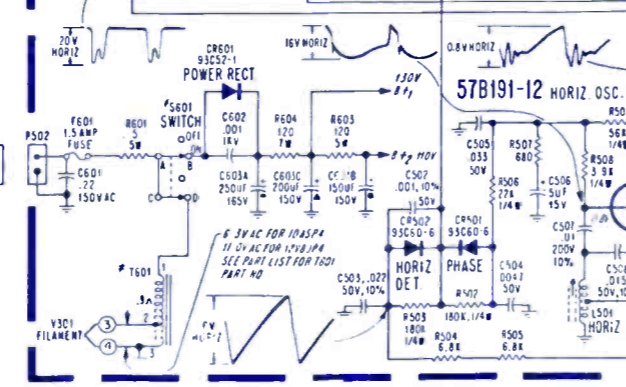
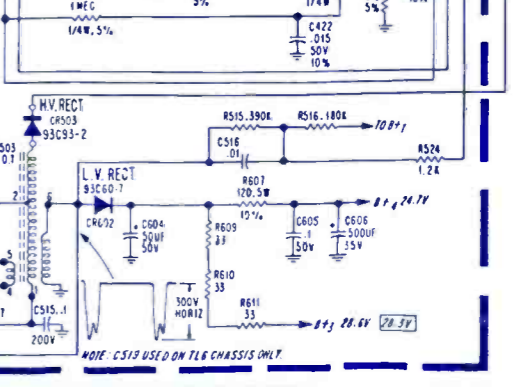
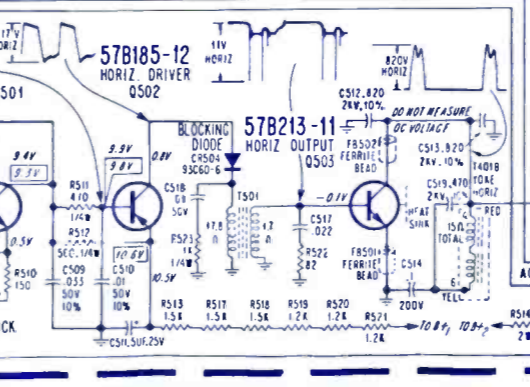
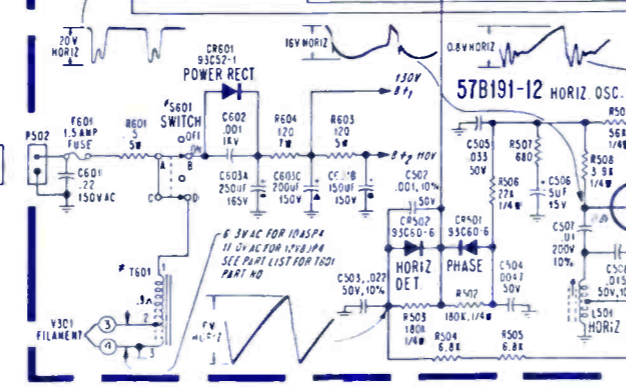
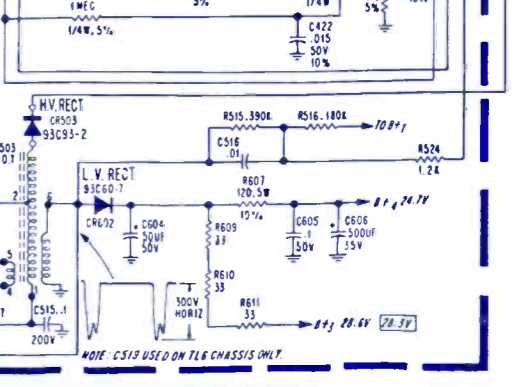
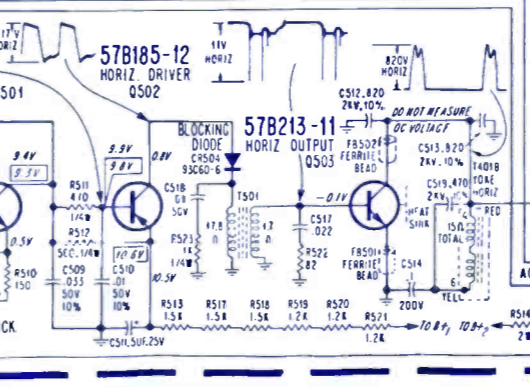
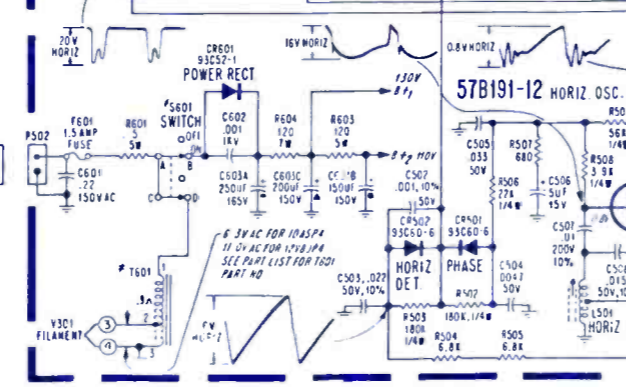
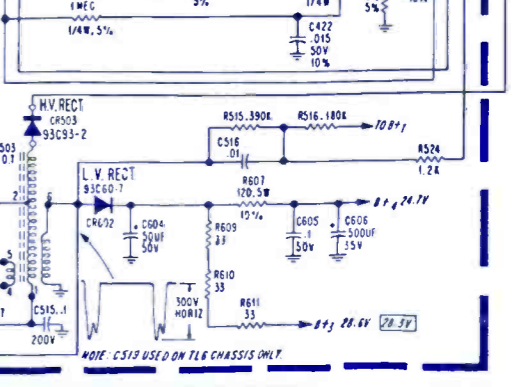
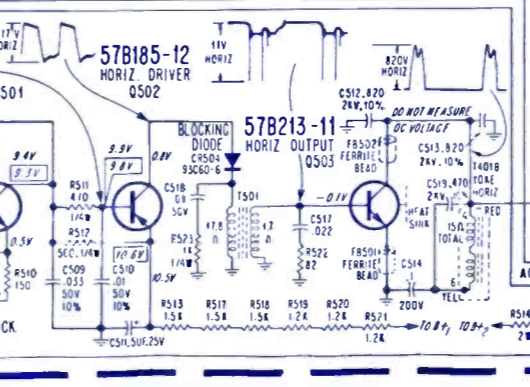
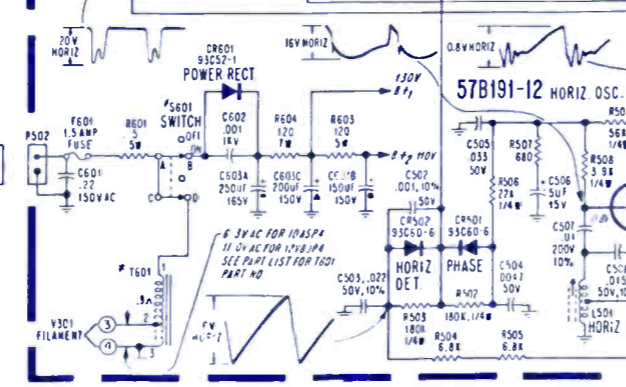
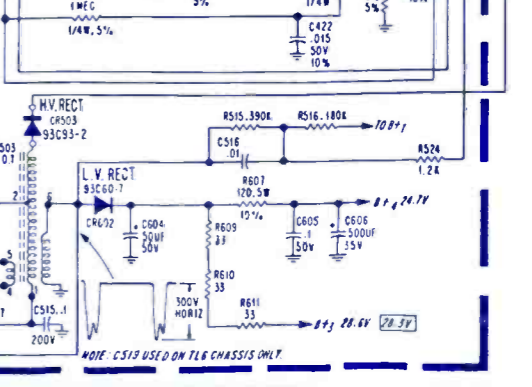
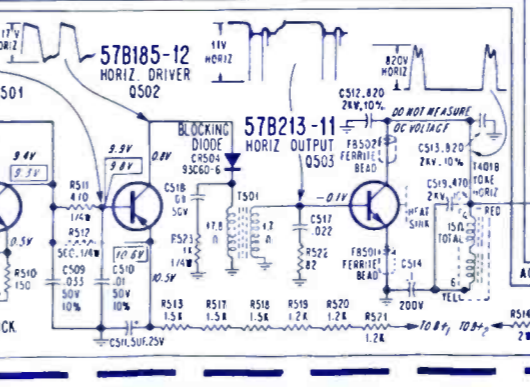
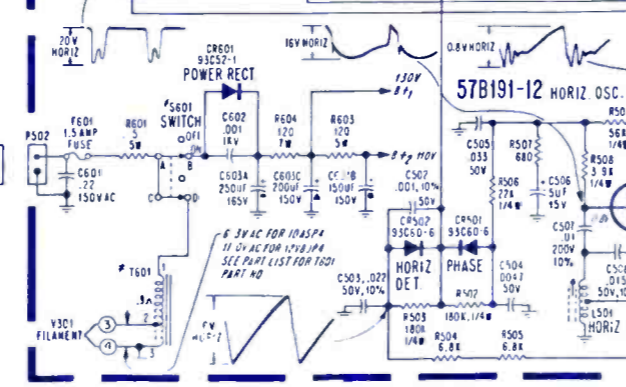
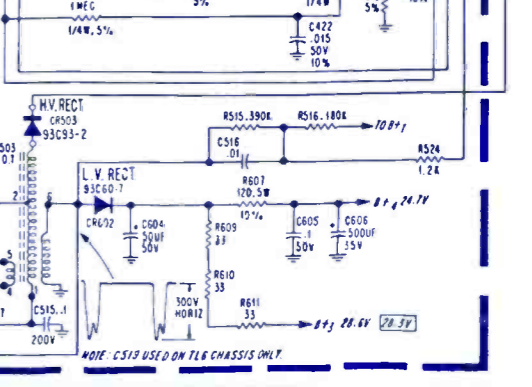
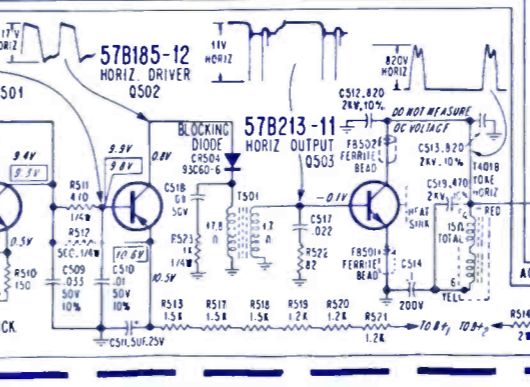
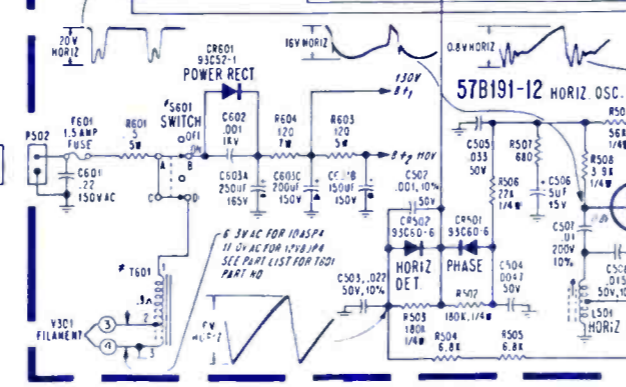
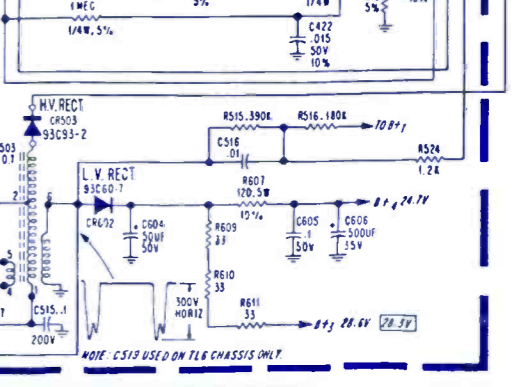
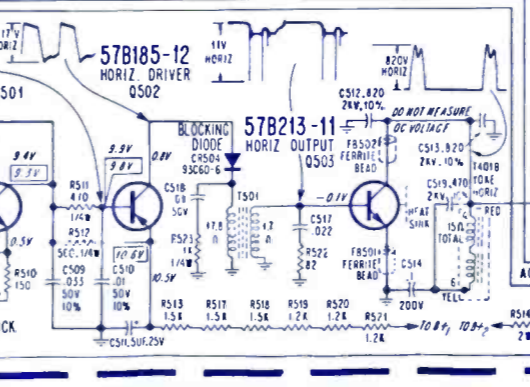
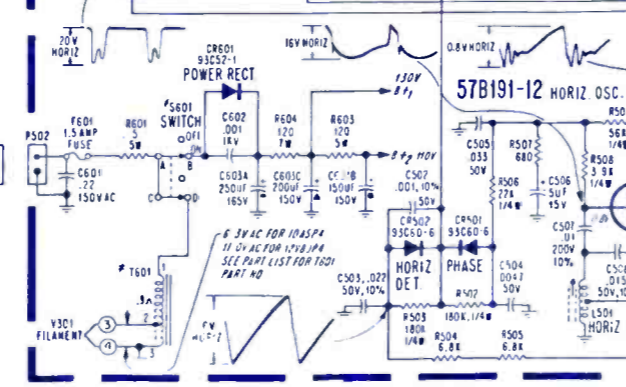
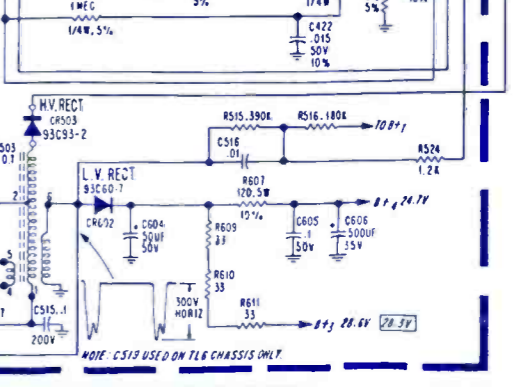
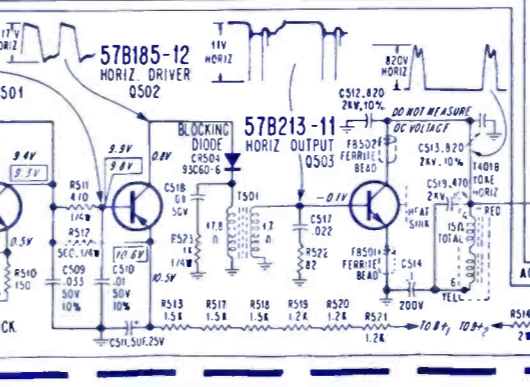
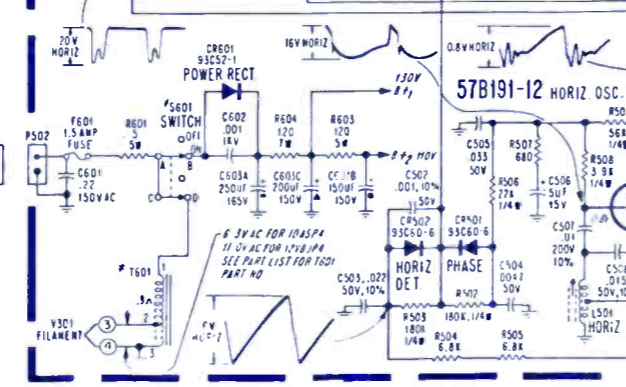
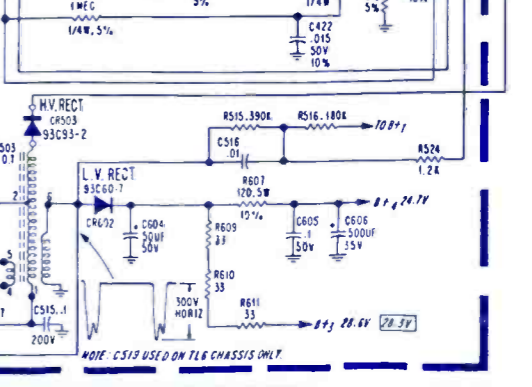
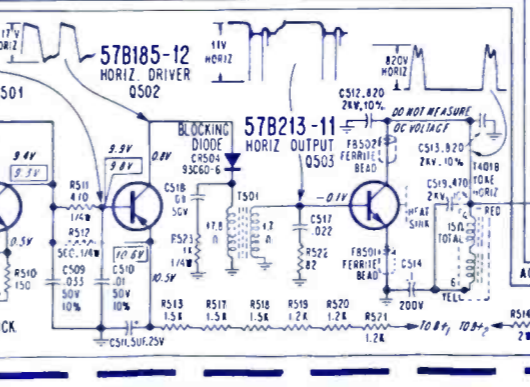
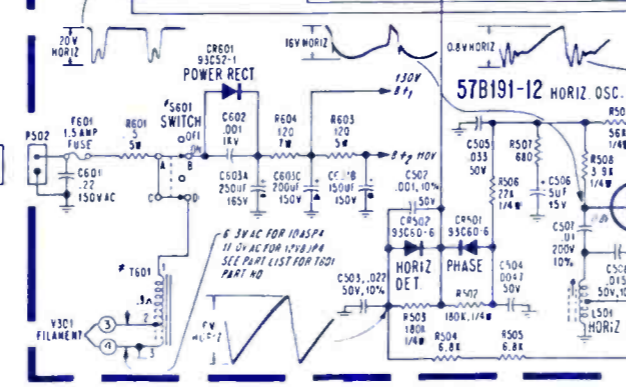
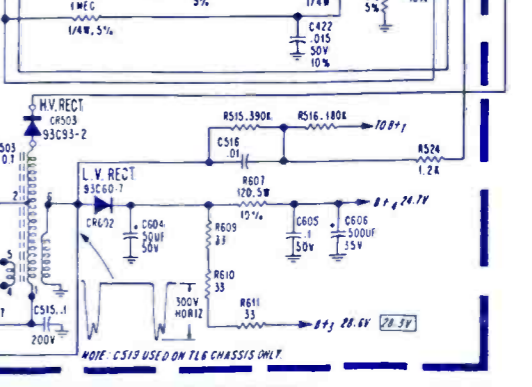
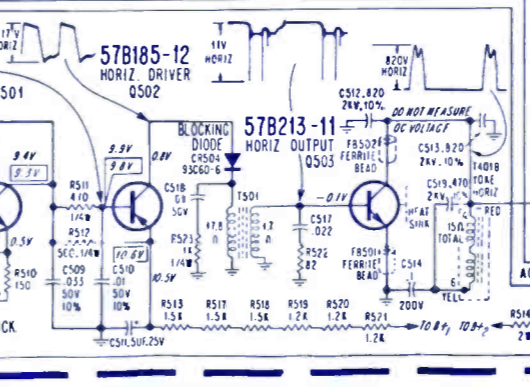
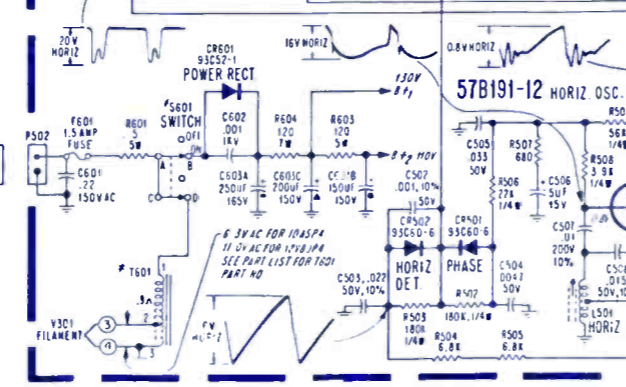
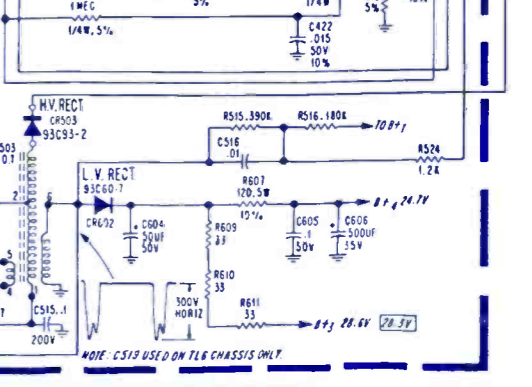
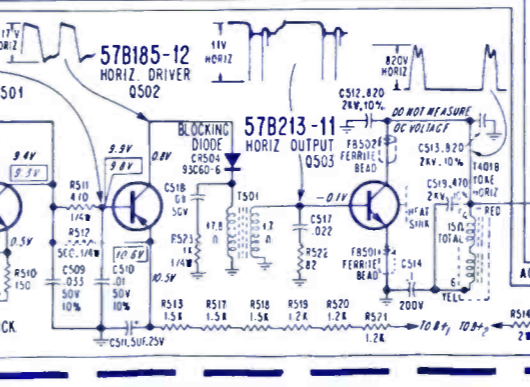
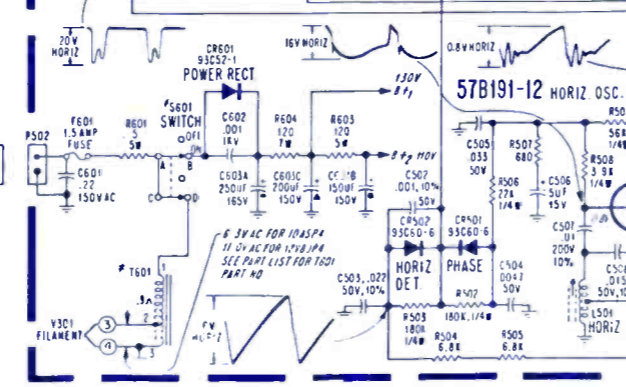
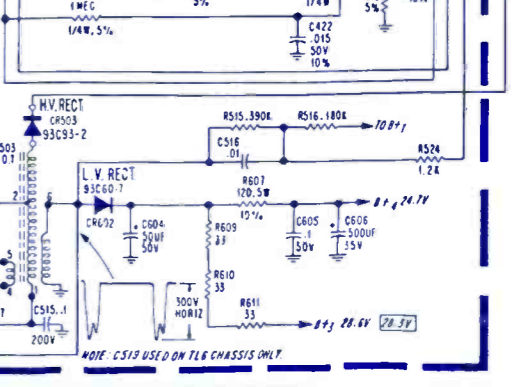
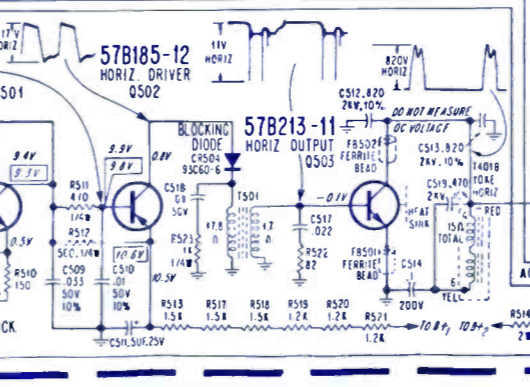
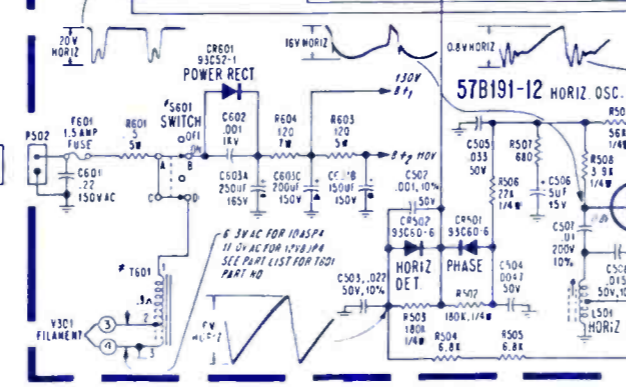
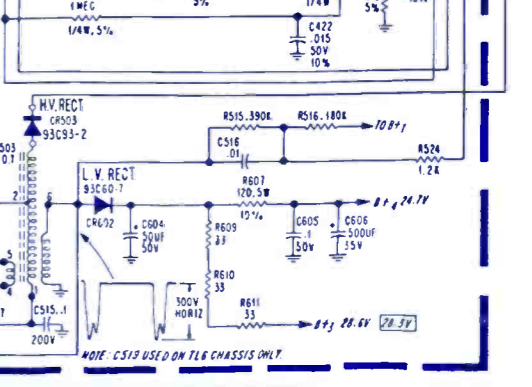
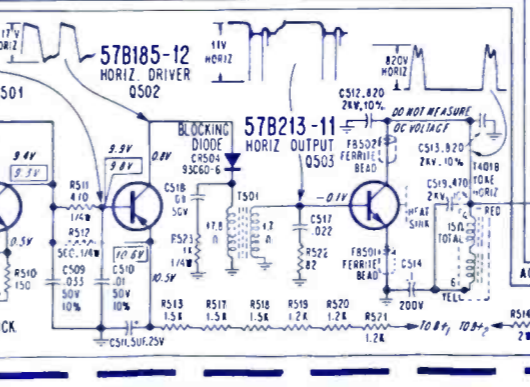
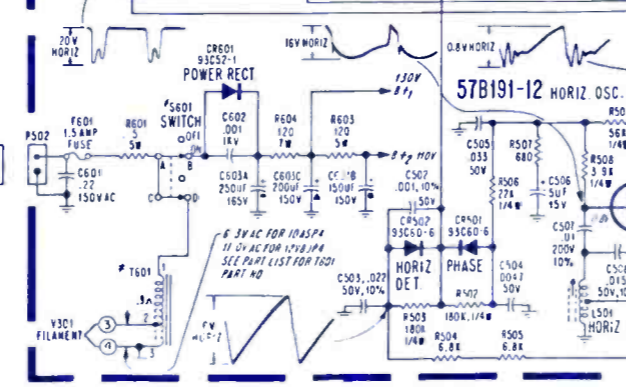
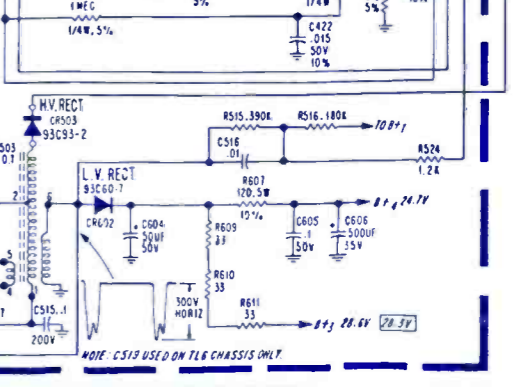
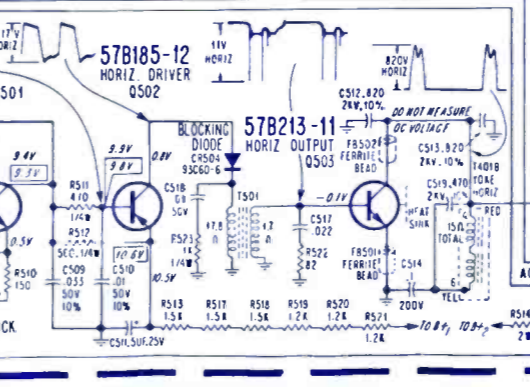
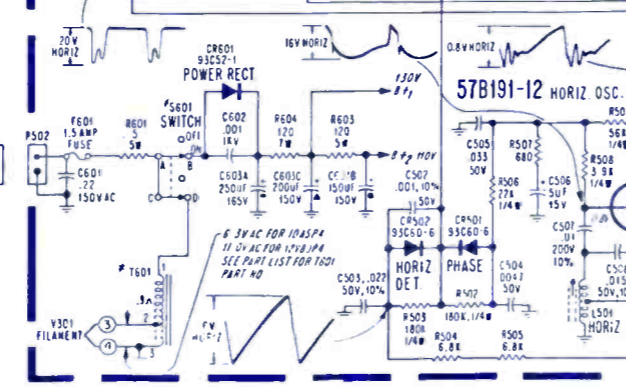
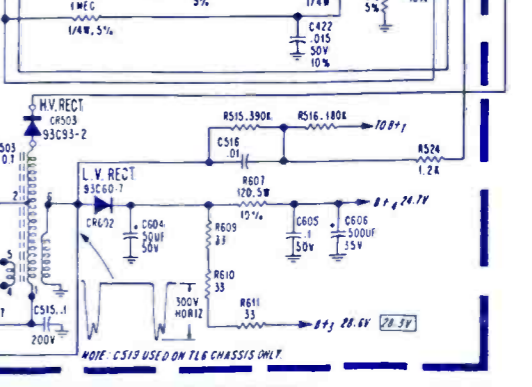
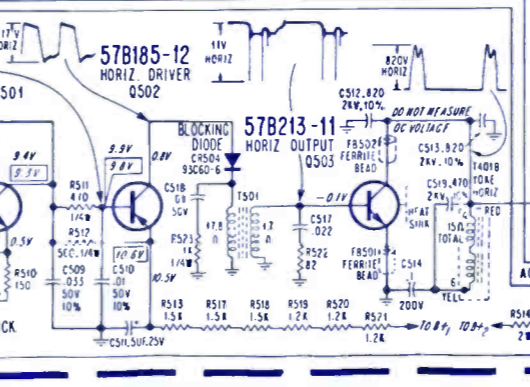
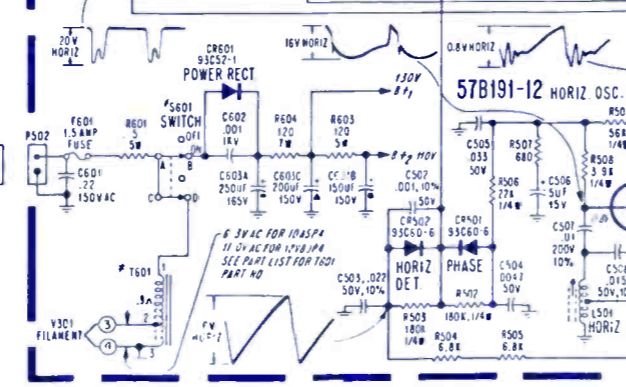
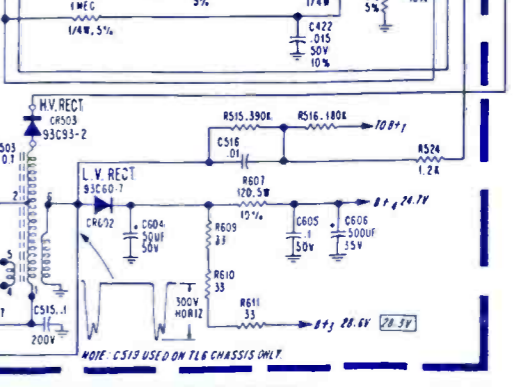
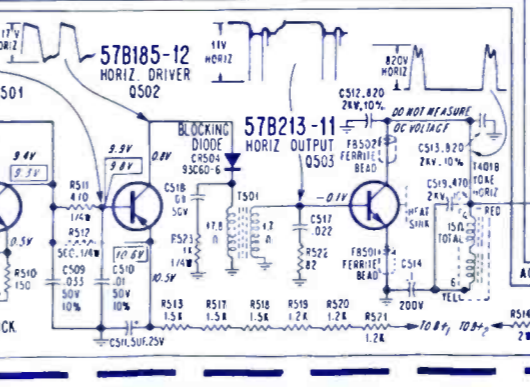
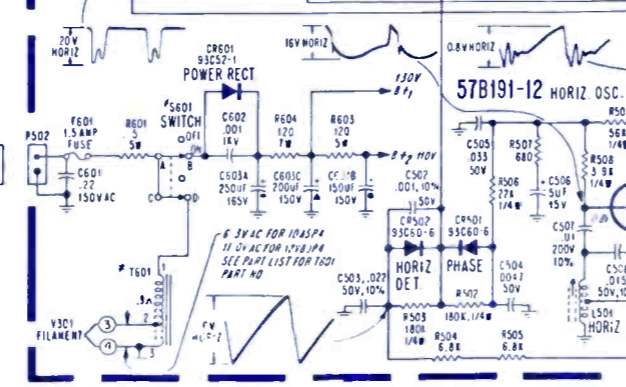
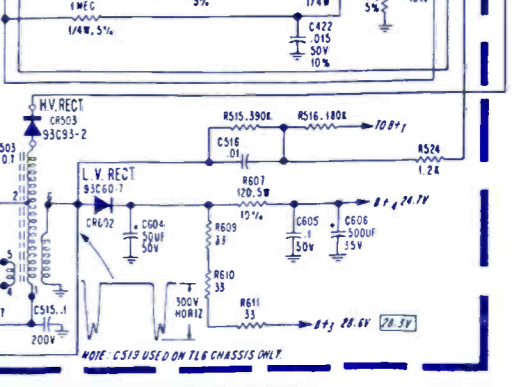
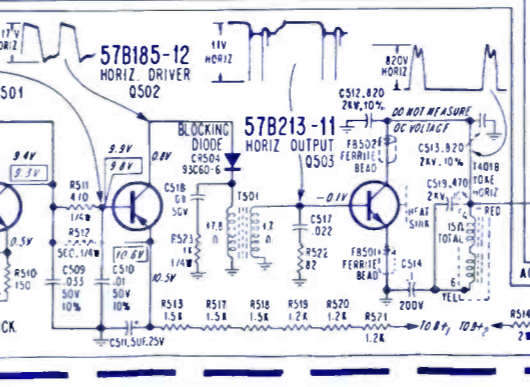
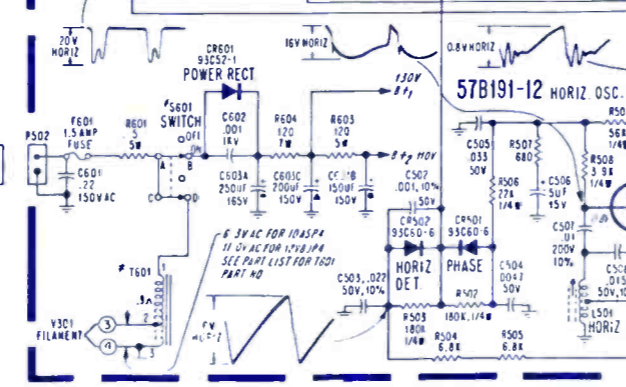
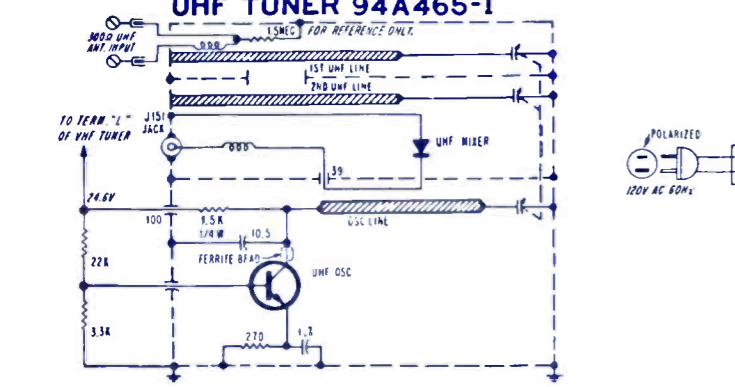
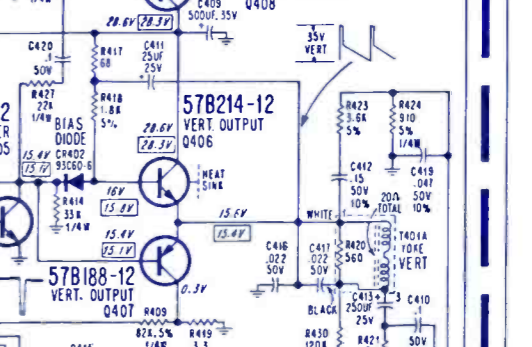
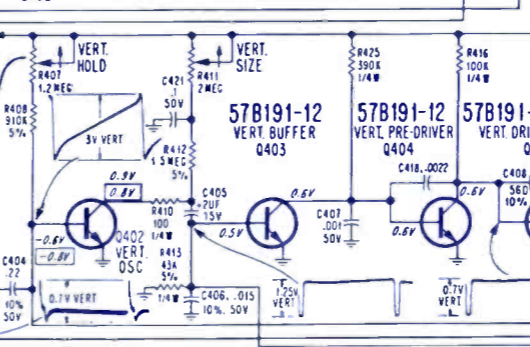
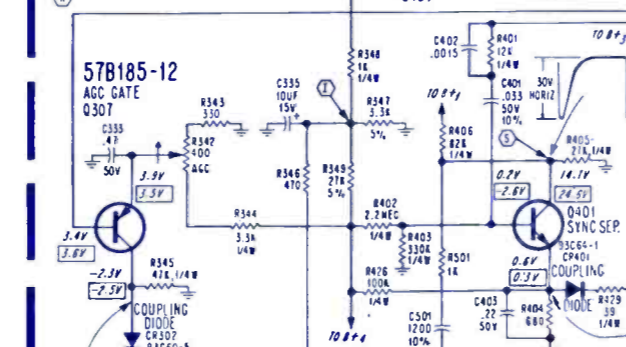
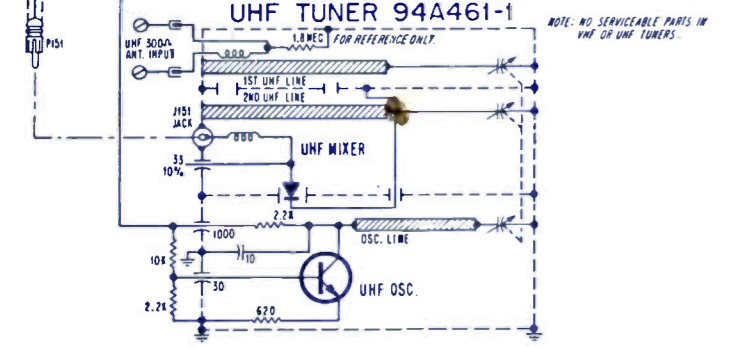
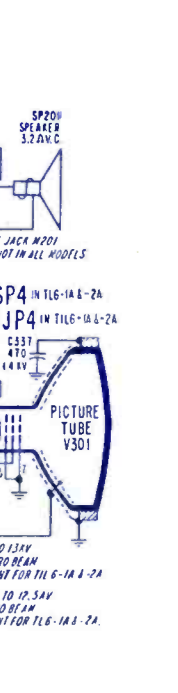
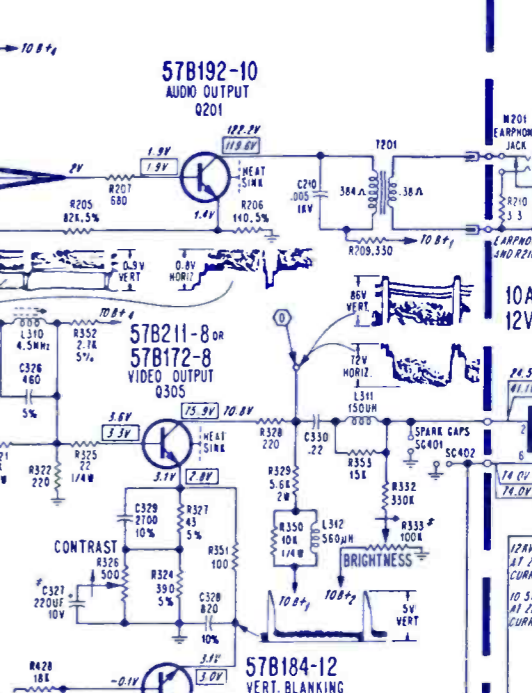
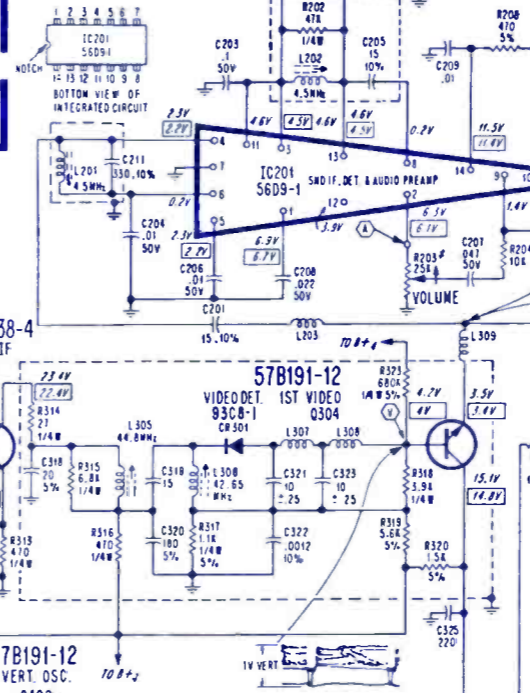
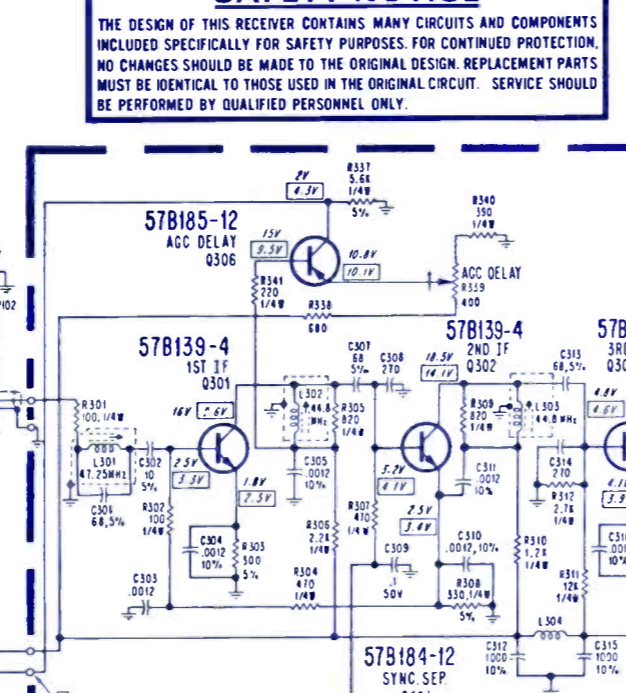
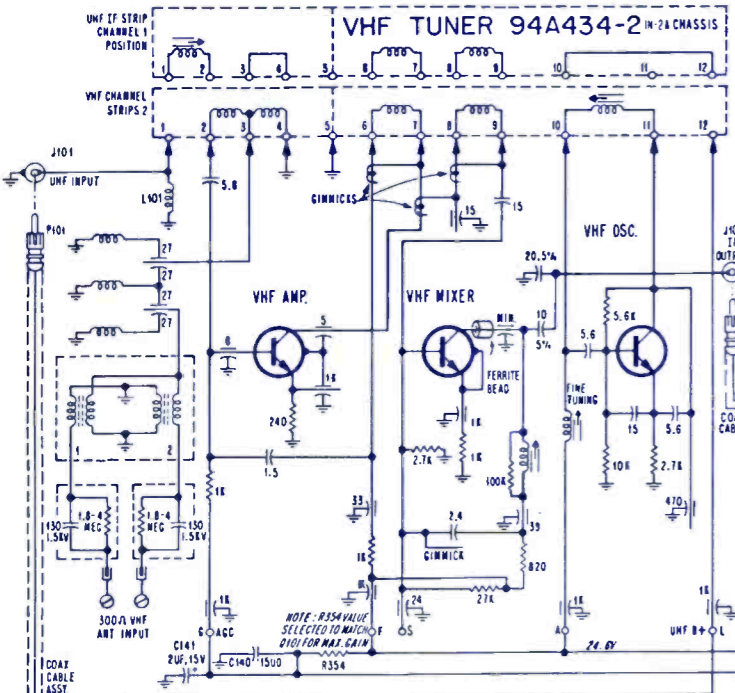
Top View of VHF Tuner (94A434-2) Showing Test Point and Alignment Locations

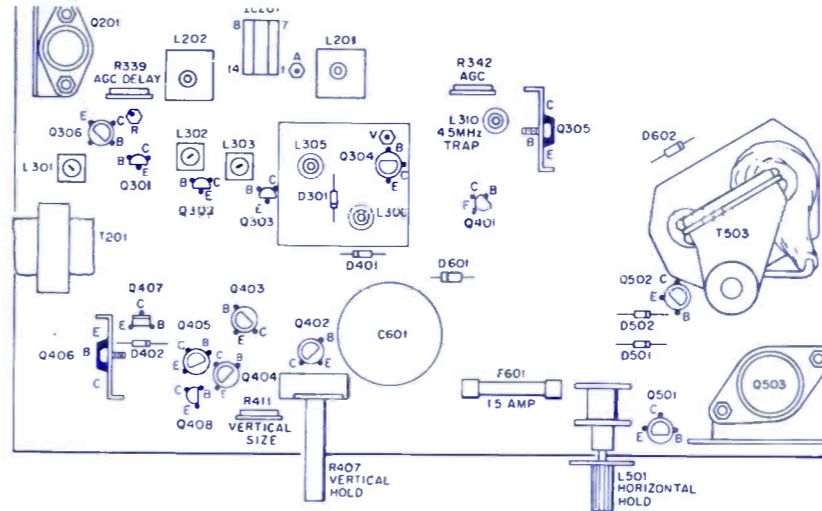


Top View of VHF Tuner (94A433-2) Showing Test Point and Alignment Locations



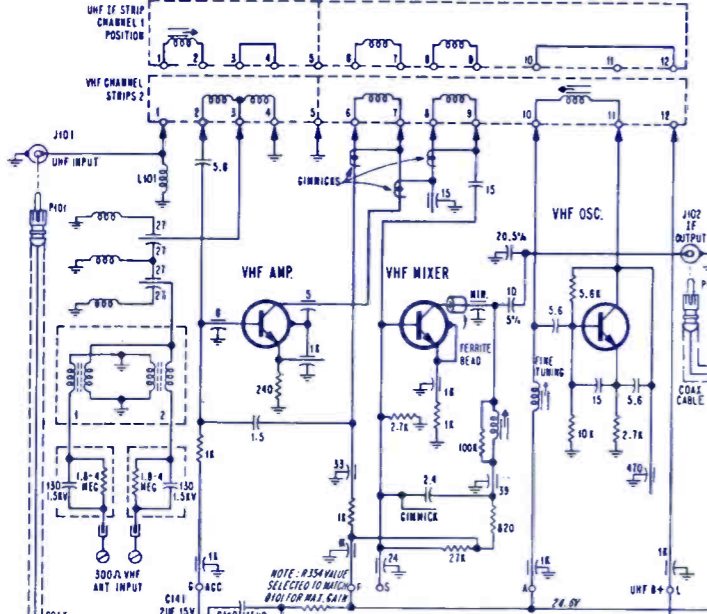
SAFETY NOTICE
 THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



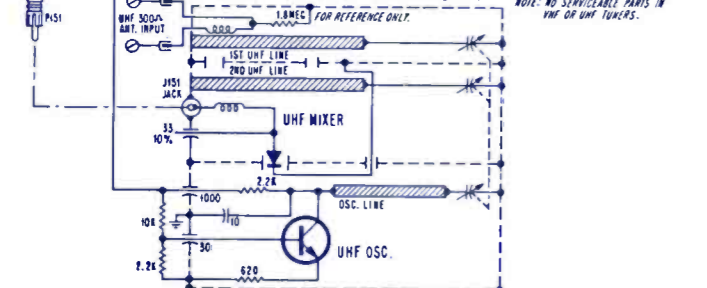


SYMBOL	DESCRIPTION	TRAV-LER PART NO.
C603	250/200/150 μ f, 165v electro	67A30-11
L201	coil 4.5MHz	72A317-1
L310	coil, 4.5MHz trap	72A317-9
L501	coil, horiz lock	94A480-1
T201	xformer audio output	79A172-1
T401	yoke deflect, TL6-1A-2A	94A372-3
T401	yoke deflect TL6-1A-2A	94A372-4
T501	xformer horiz drive	72A417-1
T503	xformer horiz output	79A166-3
R203	25K vol control	75A1-210
R326	500 Ω , contrast control	75A1-211
R333	100K brite control	75A1-212
R339	400 Ω , AGC delay	75A101-35
R342	400 Ω , AGC control	75A101-36
R411	2M vert size	75A101-61
R407	1.2M vert hold	75A191-3
	fuse 1.5a	84A7-5

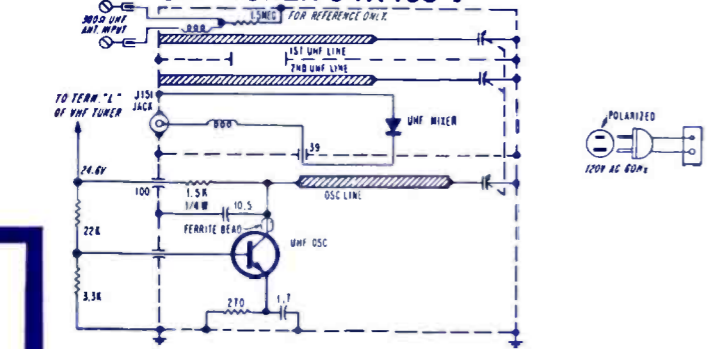
VHF TUNER 94A434-2 IN-24 CHASSIS



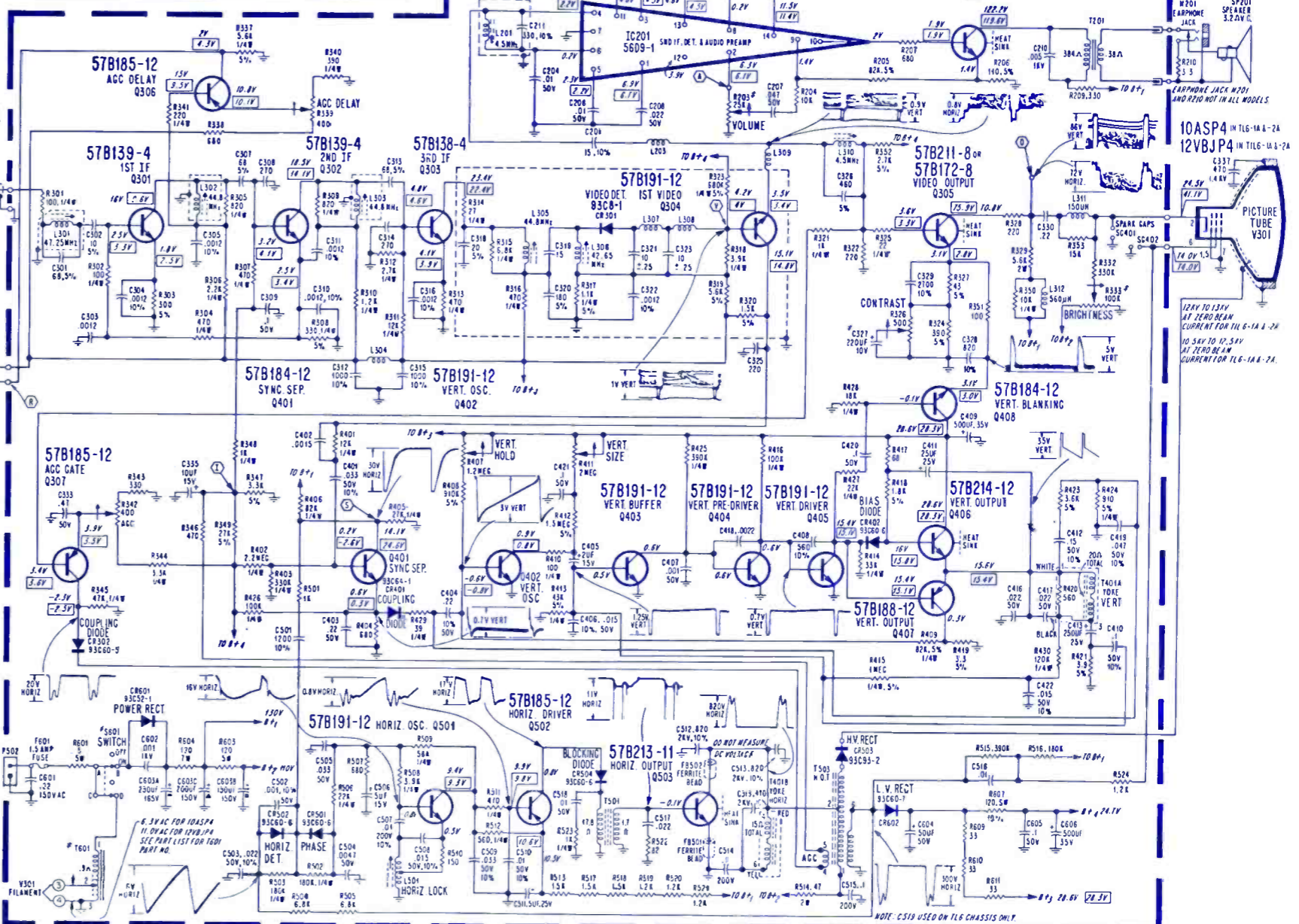
UHF TUNER 94A461-1



UHF TUNER 94A465-1



SAFETY NOTICE
 THE DESIGN OF THIS RECEIVER CONTAINS MANY CIRCUITS AND COMPONENTS INCLUDED SPECIFICALLY FOR SAFETY PURPOSES. FOR CONTINUED PROTECTION, NO CHANGES SHOULD BE MADE TO THE ORIGINAL DESIGN. REPLACEMENT PARTS MUST BE IDENTICAL TO THOSE USED IN THE ORIGINAL CIRCUIT. SERVICE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY.



PWS A8859-1

57B192-10 AUDIO OUTPUT Q201

57B211-8 or **57B172-8** VIDEO OUTPUT Q305

57B184-12 VERT. BLANKING Q408

57B214-12 VERT. OUTPUT Q406

57B188-12 VERT. OUTPUT Q407

57B185-12 ACC GATE Q307

57B184-12 SYNC SEP. Q401

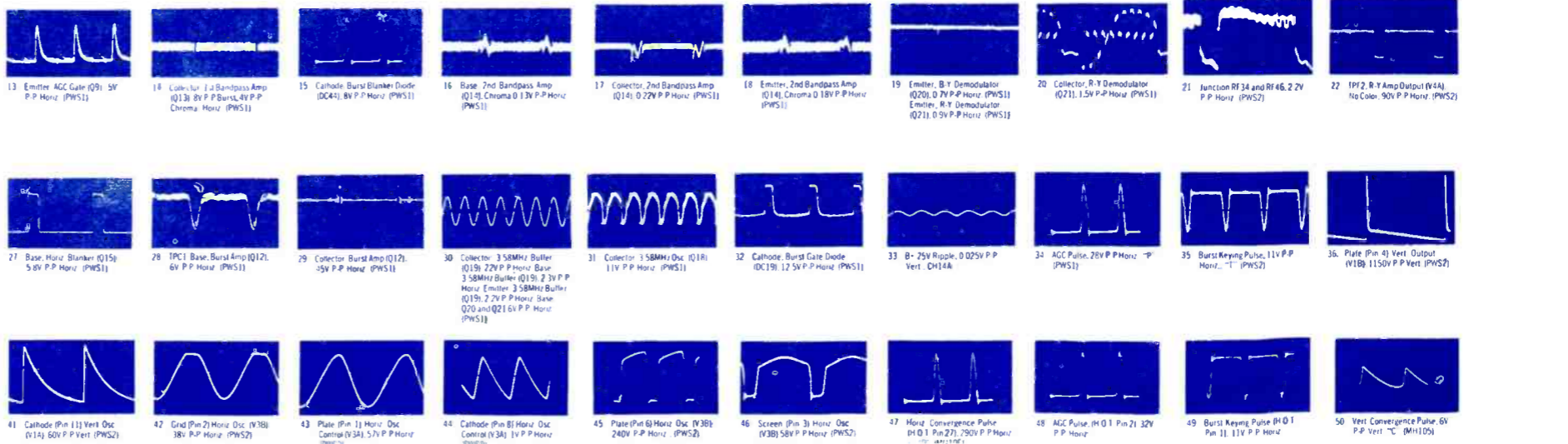
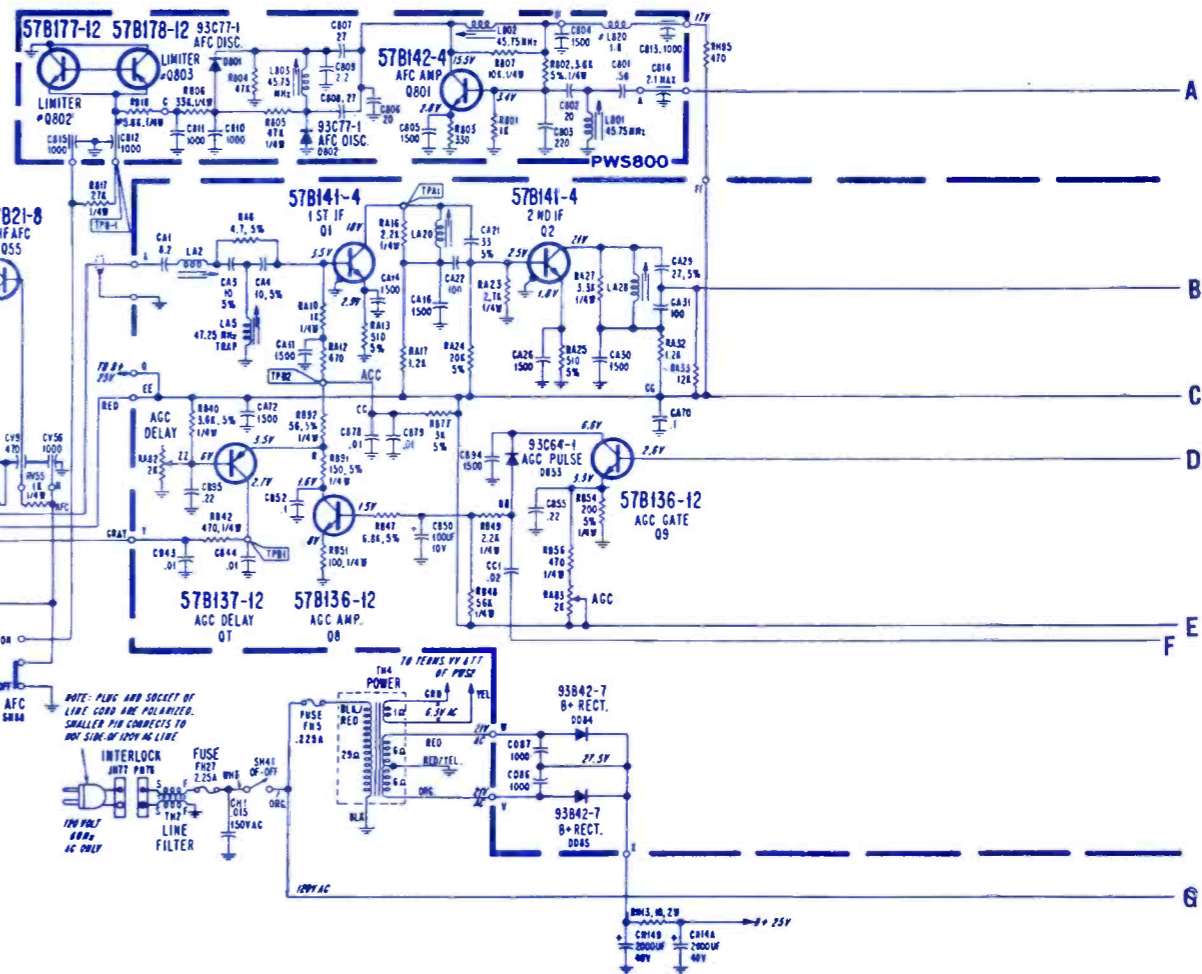
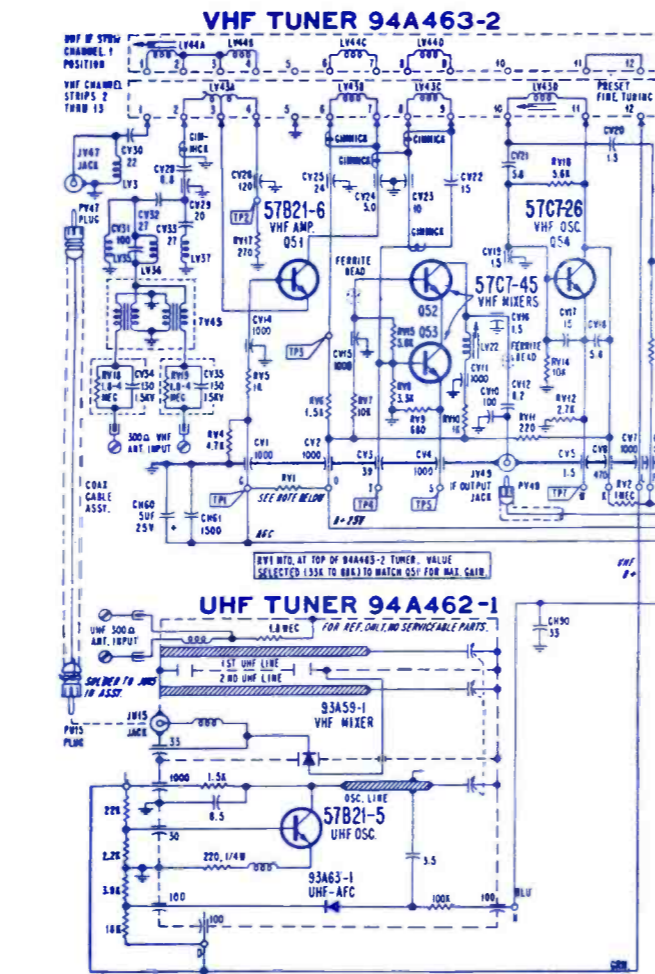
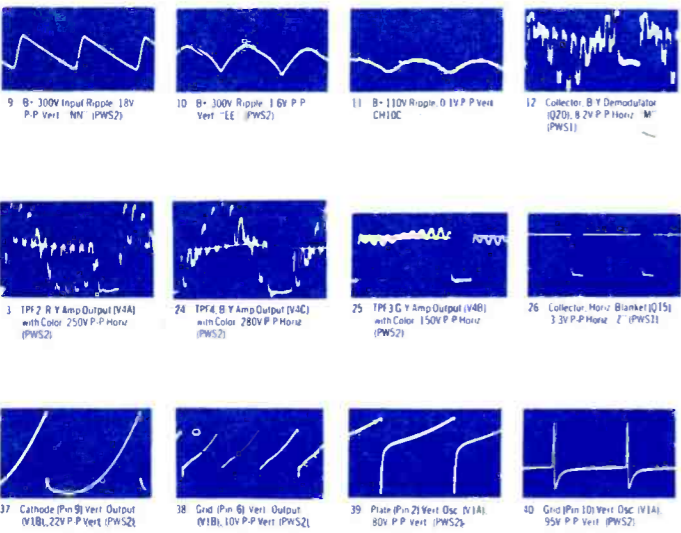
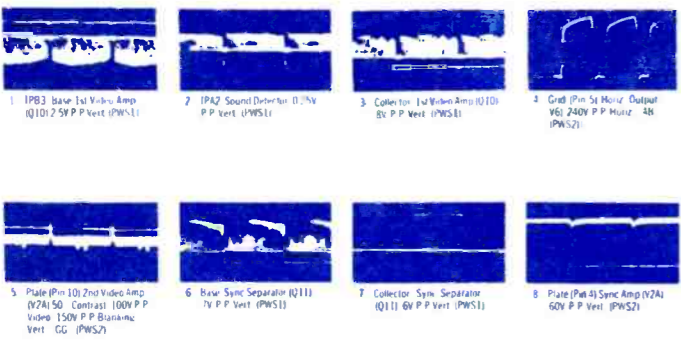
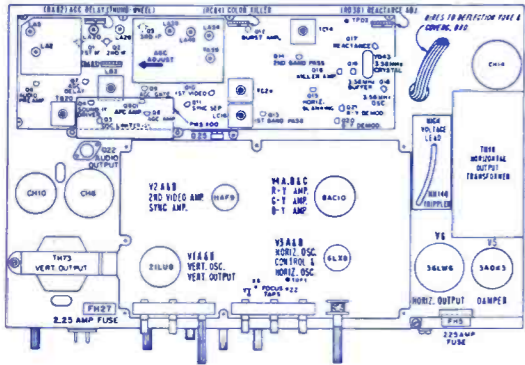
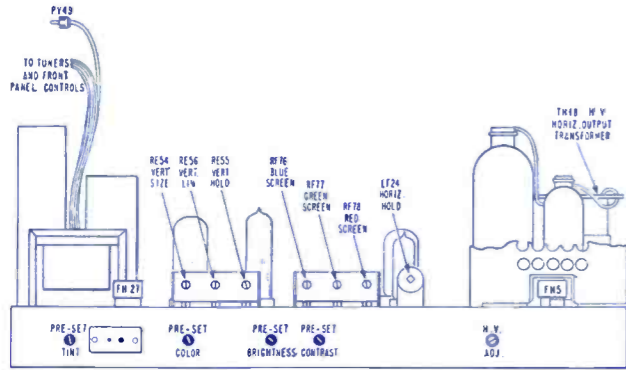
57B191-12 1ST VIDEO Q304

57B185-12 ACC DELAY Q306

TRAV-LER
 TV Chassis
 TL6-TL6

TRAV-LER

Color TV Chassis
T41K10-4A/B



SYMBOL	DESCRIPTION	TRAV-LER PART NO.
RA82	—2K AGC delay	75A101-31
RA83	—2K AGC	75A101-31
RC64	—10K color kill	75A101-18
RD38	—400 ohm react adj	75A101-35
RE54	—3.4M vert size	75A95-18
RE55	—100K vert hold	75A95-18
RE56	—300K vert lin	75A95-18
RH28	—2K brite	75A140-25
RH29	—350 ohm contrast	75A140-26
RH34	—500 ohm tint	75A140-17
RH39	—1K color	75A140-18
RH42	—50K vol/SH41 on/off switch	75A140-19
RH103	—1K preset color	75A135-52
RH104	—500 ohm preset tint	75A135-51
RH117	—350 ohm preset contrast	75A135-54
RH118	—2K preset brite	75A135-53

RH125	—5M high voltage adj	75A135-57
LB2	—coil 4.5MHz	72A317-1
LC16	—coil chroma takeoff	72A329-1
LF24	—coil horiz adj	94A351-1
MH57	—deflect yoke T13P857	94A379-8
	deflect yoke T17P877	94A379-9
TB20	—xformer ratio detect	72A318-1
TC14	—xformer burst	72A325-3
TC29	—xformer bandpass	72A327-1
TH2	—xformer line choke	73A31-16
TH4	—xformer power	80A108-13
TH18	—xformer horiz output	79A169-1
TH44	—xformer audio output	79A141-1
TH73	—xformer vert output	79A165-1
FH5	—fuse .225a chemical	84A28-12
FH27	—fuse 2.25a chemical	84A28-16
	tuner UHF	94A462-1
	tuner VHF	94A463-2

MODEL CHART

MODEL	COLOR	VHF	UHF	CHASSIS
T13P857	Walnut	94A463-2 or 94A392-1	94A462-1 or 94A466-1	T41K10-4B
T17P877	Walnut	94A463-2 or 94A392-1	94A462-1 or 94A466-1	T41K10-4A

NOTES: UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, KΩ, 100KΩ, 1MΩ; CAPACITANCE VALUES 1.0μF AND HIGHER ARE IN μF; CAPACITANCE VALUES LESS THAN 1.0μF ARE IN pF; INDUCTANCE VALUES ARE IN μH. ⊕ INDICATES CHASSIS GROUND. Hz INDICATES CYCLES PER SECOND. DO NOT CONNECT ANY HEADPHONE WITH 1500Ω IMPEDANCE TO THIS SET. HEADPHONE SHOULD BE CONNECTED TO CHASSIS GROUND. LINE VOLTAGE SET AT 100V AS A BUILT-IN PROTECTION SET FOR NORMAL PICTURE UNLESS OTHERWISE INDICATED. VOLTAGE READINGS ARE TAKEN WITHOUT SIGNAL, WITH VRT TUNER SET AT UNDESIRABLE CHANNEL. VOLTAGES SHOWN IN BRACKETS [] ARE MEASURED WITH RECEIVER TUNED TO A COLOR SIGNAL.

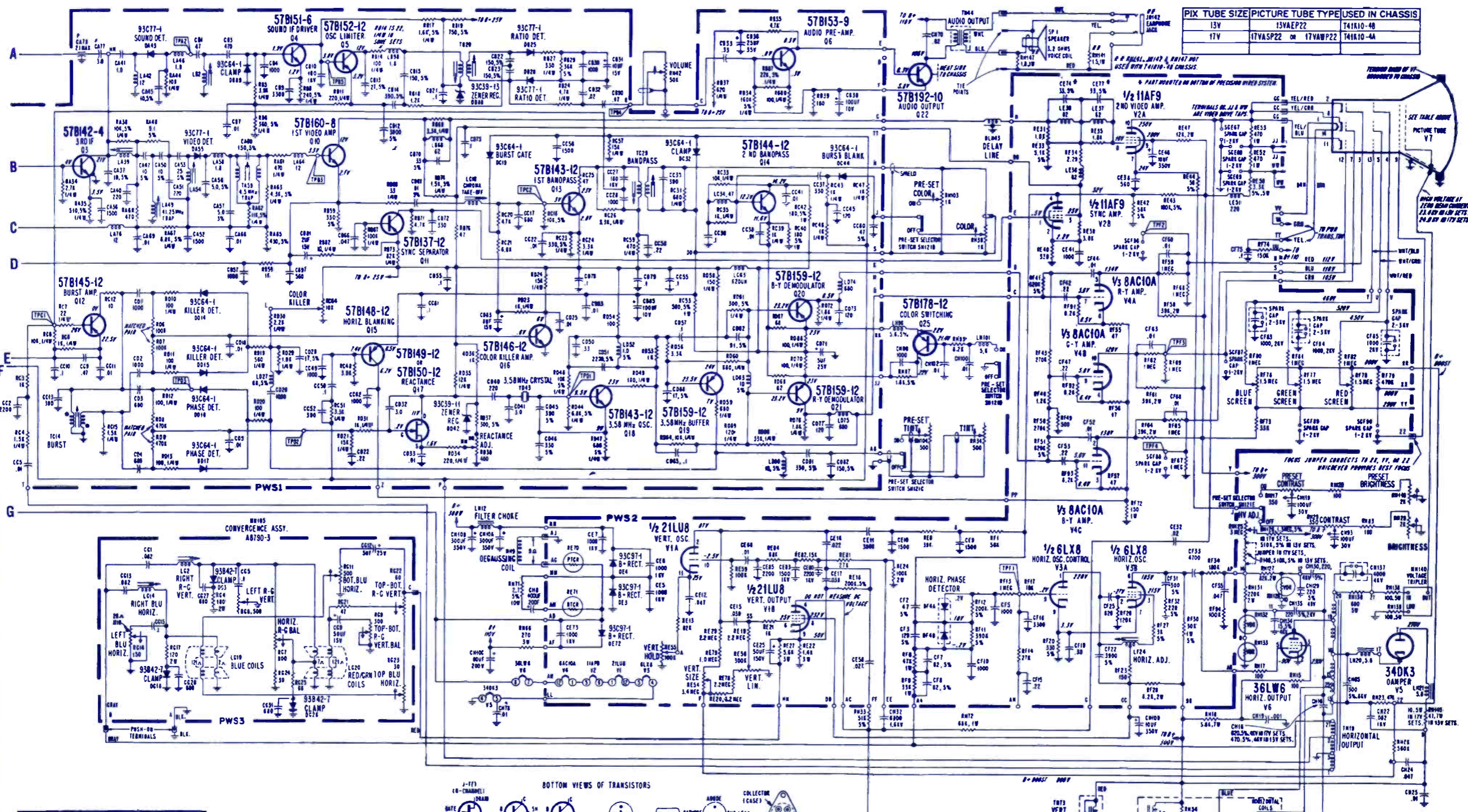
WARNING: CHASSIS IS CONNECTED DIRECTLY TO ONE SIDE OF AC POWER LINE. USE AN ISOLATION TRANSFORMER WHEN SERVICING TO AVOID THE POSSIBILITY OF ACCIDENTAL ELECTRICAL SHOCK OR BURN TO TEST EQUIPMENT.

TRANSISTOR CAUTION: TO AVOID DAMAGE TO TRANSISTORS, DO NOT OPERATE CHASSIS WITH PICTURE TUBE DISCONNECTED FROM CHASSIS GROUND. DO NOT TURN SET ON WITH TRANSISTOR ISOLATED. ALWAYS ISOLATE LEADS WHENEVER USED. DO NOT APPLY 200 VOLTS OR MORE TO CHASSIS GROUND. DISCONNECT 200 AMPERE BOLT TO PICTURE TUBE OAG OR SAC 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 OMEGA-OMEGA BURNER FOR RESISTANCE MEASUREMENT. USE 100Ω OR 810Ω RANGE OR HIGHER.

Ⓜ RUM NUMBER INDICATES CHANGE IS INCORPORATED AS GIVEN UNDER THAT RUM NUMBER, AS WELL AS ALL LOWER RUM NUMBERS.

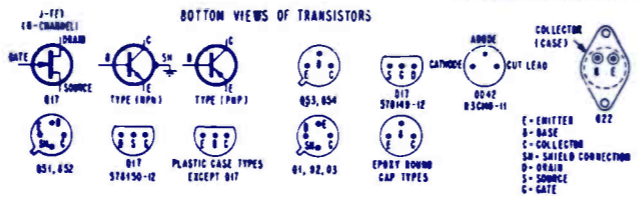
Ⓜ SYMBOLS IN RECTANGLES INDICATE TEST POINT CONNECTIONS.

Ⓜ READINGS INDICATE WAVEFORM OBSERVATION LOCATIONS. CONDITIONS FOR TAKING WAVEFORM MEASUREMENTS ARE GIVEN WITH WAVEFORM PHOTOGRAPHS.



PIX. TUBE SIZE	PICTURE TUBE TYPE USED IN CHASSIS
13V	13VAEP22
17V	17VAP22 or 17VAP22
	T41K10-4B
	T41K10-4A

TRAV-LER
Color TV Chassis
T41K10-4A/B

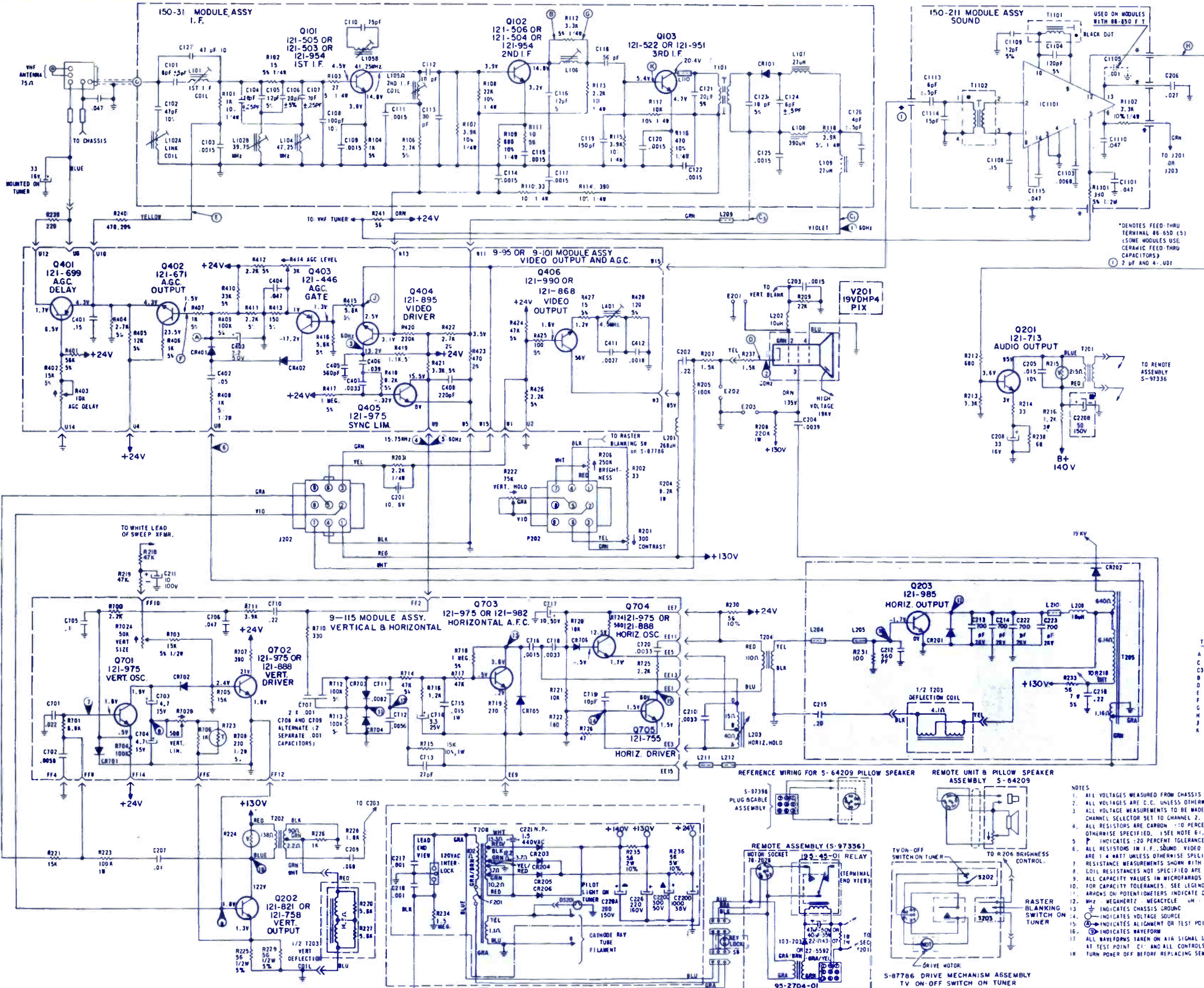


ZENITH

TV Chassis
19FB14

SYMBOL	DESCRIPTION	ZENITH PART NO.
C220A	—200mfd electro capacitor 150v	
C220B	—50mfd electro capacitor 150v	22-7314
C220C	—300mfd electro capacitor 50v	
C220D	—1000mfd electro capacitor 35v	
R215	—varistor	63-5440
R224	—varistor	63-10281
R414	—3K AGC level control	63-10148

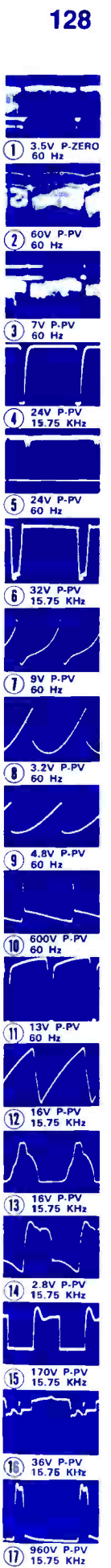
R702A	—50K rotary dual rotary control	63-10225-01
R702B	—500 ohm rotary	63-10225-01
R723	—thermistor	63-10290
T201	—audio output xformer	95-3120
T204	—horiz driver xformer	95-2895-03
T205	—sweep xformer	S-97079
T208	—power xformer	95-3141-01
T1102	—quad xformer	95-2620
F201	—fuse .6a bel fuse	136-100



TEST POINTS

A	A.G.C. OUTPUT
C	DETECTOR OUTPUT
D	VIDEO BIAS
E	SECOND I.F. COLLECTOR
F	VIDEO OUTPUT
G	I.F. A.G.C.
H	A.G.C. OUTPUT
I	3RD I.F. ALIGNMENT
J	SOUND DISCR. OUTPUT
K	VIDEO DRIVER OUTPUT
L	3RD I.F. BASE

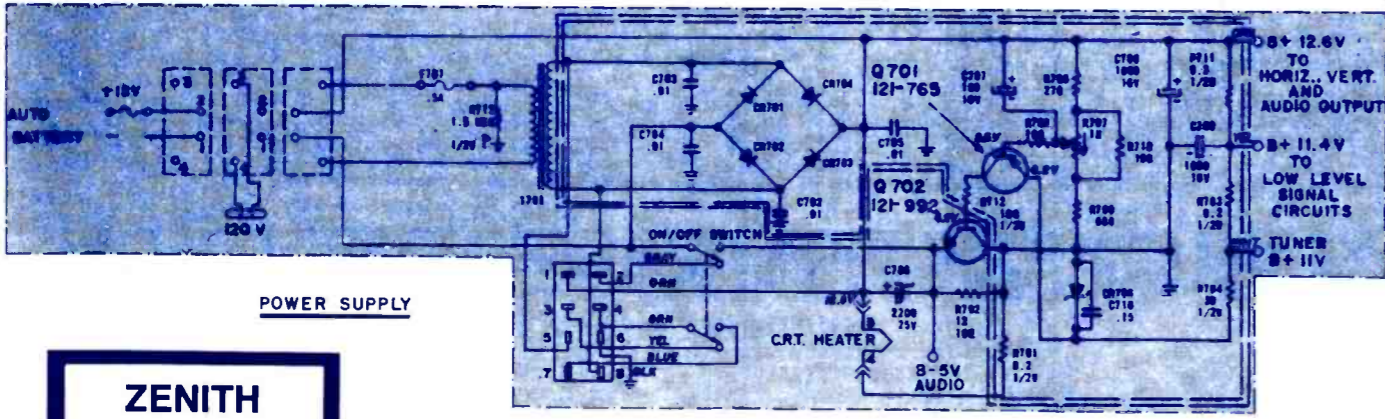
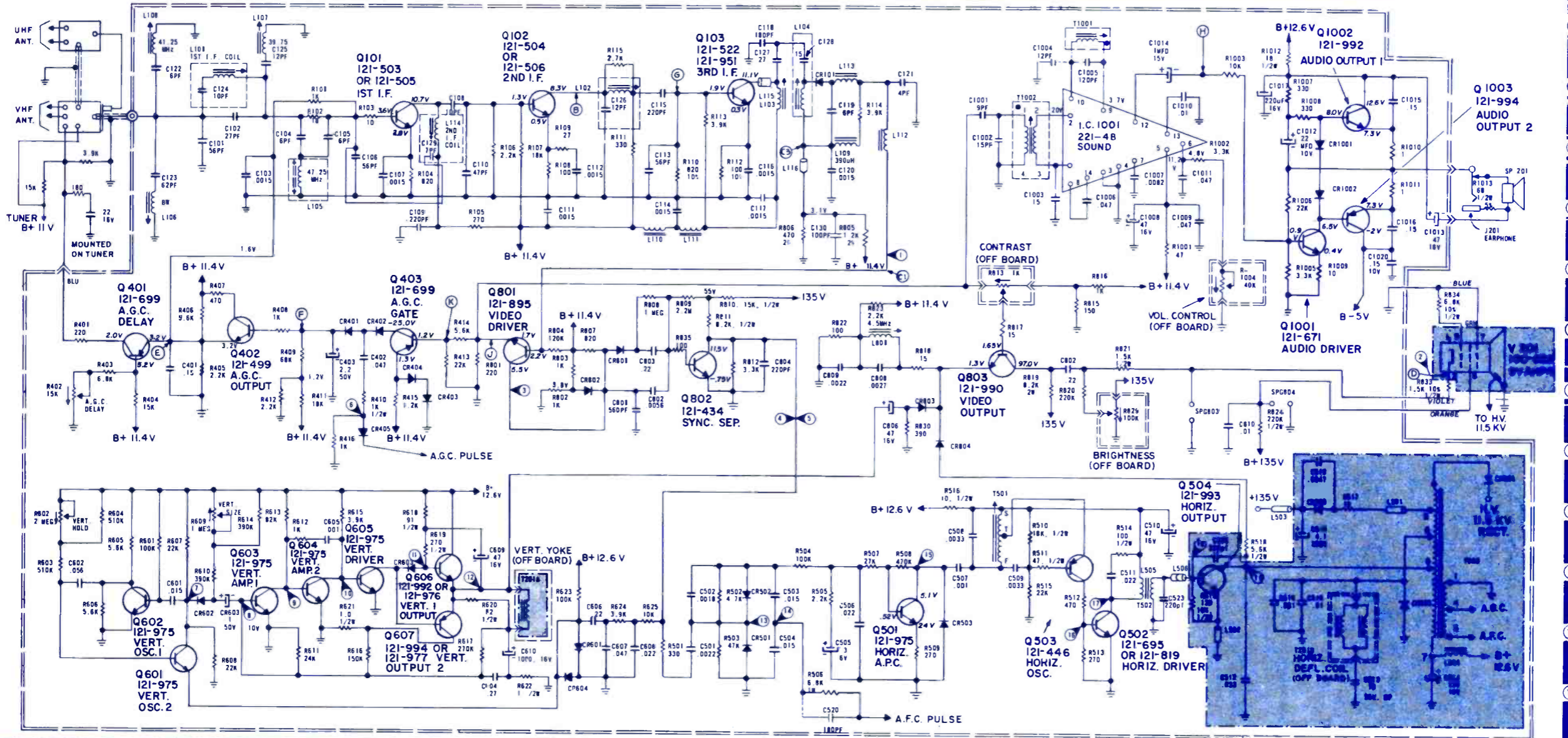
- NOTES
1. ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
 2. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 3. ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT WITH CHANNEL SELECTOR SET TO CHANNEL 2.
 4. ALL RESISTORS ARE CARBON .10 PERCENT TOLERANCE, 1/2 WATT UNLESS OTHERWISE SPECIFIED. 1 SEE NOTE 6.
 5. P INDICATES .20 PERCENT TOLERANCE MAY BE USED.
 6. ALL RESISTORS IN I.F., SOUND, VIDEO HORIZONTAL AND VERTICAL MODULES ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED.
 7. RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
 8. COIL RESISTANCES NOT SPECIFIED ARE UNDER ONE OHM.
 9. ALL CAPACITY VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 10. FOR CAPACITY TOLERANCES, SEE LEGEND.
 11. ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
 12. MHz MEGAHERTZ MEGACYCLES μm MICROMETER
 13. ⊕ INDICATES CHASSIS GROUND ⊖m MICROMETER
 14. ⊕ INDICATES VOLTAGE SOURCE
 15. ⊕ INDICATES ALIGNMENT OR TEST POINT
 16. ⊕ INDICATES WAVEFORM
 17. ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 2.5 VOLTS PEAK TO ZERO
 18. TURN POWER OFF BEFORE REPLACING SEMICONDUCTORS



IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL COMPONENTS ALSO ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED IN THIS DIAGRAM AND PARTS LIST FOR EASY IDENTIFICATION. IT IS IMPERATIVE THAT THE PROPER TYPE FUSE BE USED SO AS NOT TO CREATE A SAFETY HAZARD IN THE FUTURE DUE TO THE USE OF AN IMPROPER FUSE. PROPER FUSE VALUES AND PART NUMBERS ARE LISTED IN THE SERVICE MANUAL.

SYMBOL	DESCRIPTION	ZENITH PART NO.	...	...	...
R402	15K AGC delay control	63-10501	R1004	40K vol control	63-10504
R602	2M vert hold	63-10505	T201A	yoke vert	95-3135
R609	1M vert size	63-9227	T2018	horiz deflect coil	95-3136
R707	1K control rotary single resistor	63-9959	T502	horiz driver xformer	5-97473
R813	1K contrast control	63-10603-01	T503	sweep xformer assm	95-2769
R829	brile control	63-10502	T1001	quad xformer	95-2620
			T1002	4.5MHz input coil	95-2620
			F701	1/4W 5% 250V	136-84

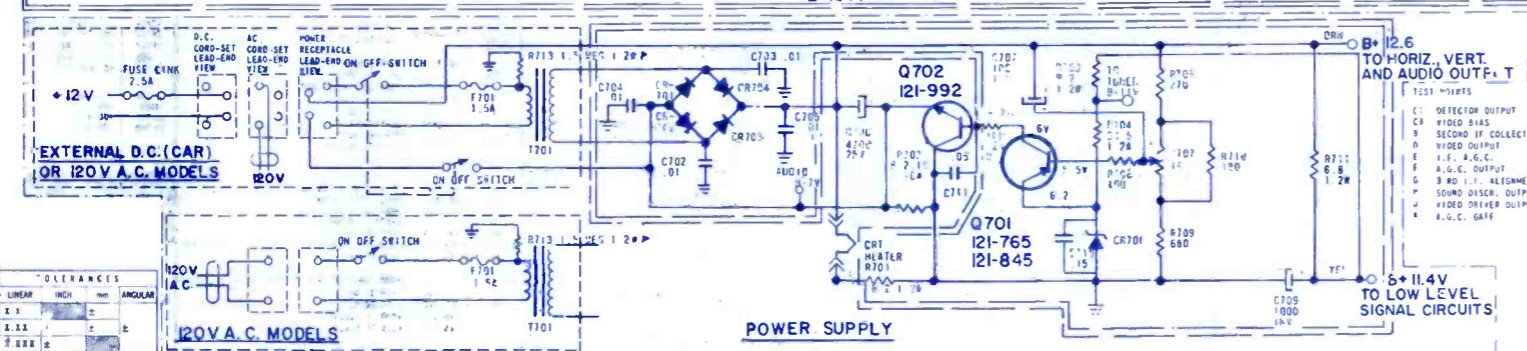
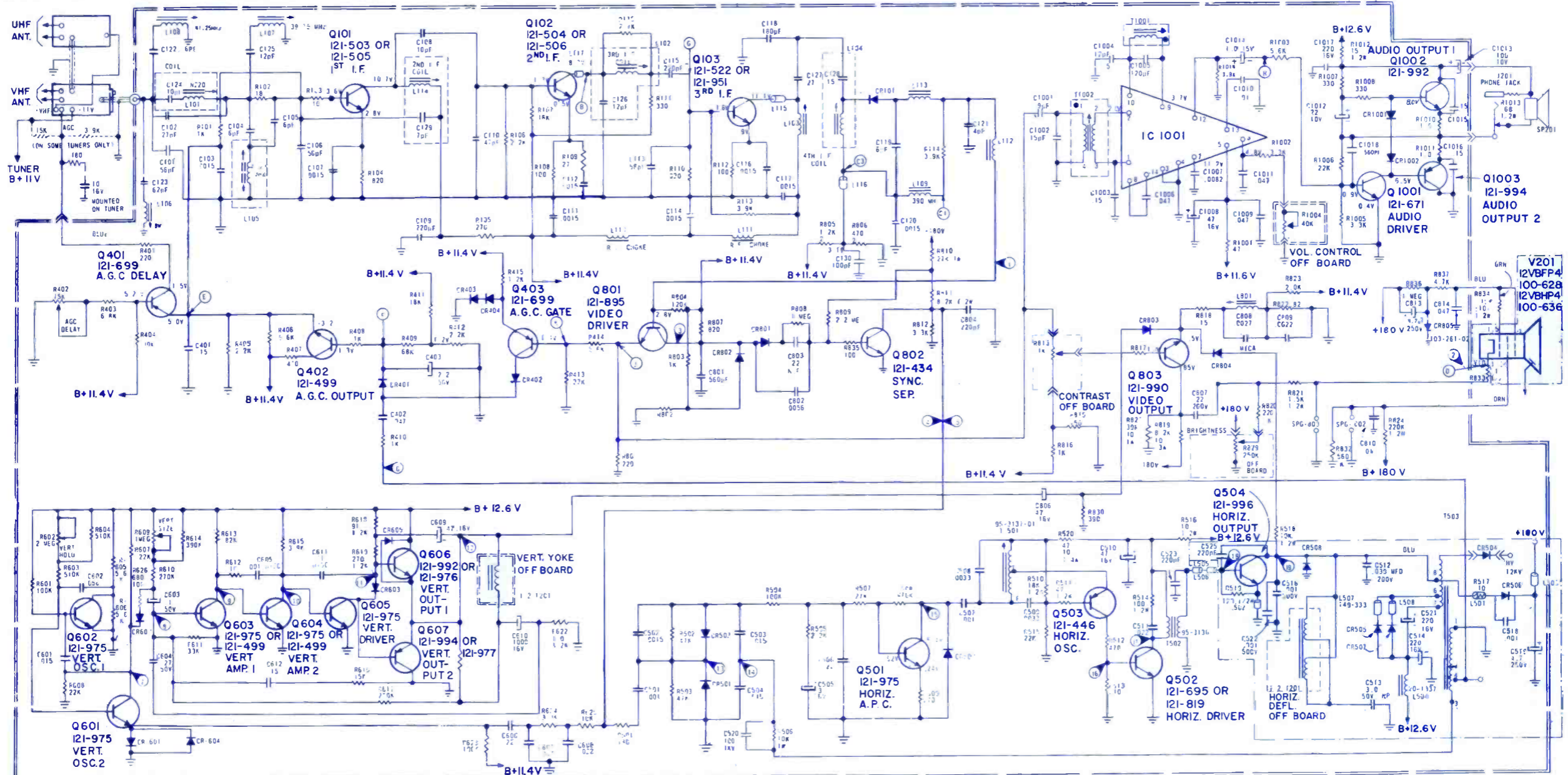


ZENITH
TV Chassis
9FB1X

- NOTES:**
- 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 FILM ±5 PERCENT TOLERANCE, 1/8 WATT UNLESS OTHERWISE SPECIFIED. (SEE NOTE 6.)
 - IMP INDICATES ±20 PERCENT TOLERANCE MAY BE USED.
 - RESISTANCE MEASURED SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
 - COIL 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 NOTATION.
 - MV = MEGAVOLT; μM = MICROHERTZ.
 - ⊕ INDICATES CHASSIS GROUND.
 - ⊖ INDICATES VOLTAGE SOURCE.
 - ⊗ INDICATES ALIGNMENT OF TEST POINT.
 - ⊙ INDICATES HORIZONTAL.
 - ALL WAVEFORMS TAKEN ON AIR SIGNAL DEVELOPING 2.5 VOLTS PEAK TO ZERO AT TEST POINT "C1" AND ALL CONTROLS SET FOR NORMAL VIEWING.
 - TURN POWER OFF BEFORE REPLACING SEMICONDUCTORS.

- TEST POINTS**
- C1 DETECTOR OUTPUT
 - C3 VIDEO BIAS
 - B SECOND IF COLLECTOR
 - D VIDEO OUTPUT
 - E I.F. A.C.C.
 - F A.C.C. OUTPUT
 - G 3RD I.F. ALIGNMENT
 - H SOUND DISCR. OUTPUT
 - I VIDEO DRIVER OUTPUT
 - K A.C. GATE

- 1 2.6V P-P 60 Hz
- 2 78V P-P 60 Hz
- 3 4V P-P 60 Hz
- 4 17V P-P 15.75 KHz
- 5 17V P-P 60 Hz
- 6 32V P-P 15.75 KHz
- 7 6.5V P-P 60 Hz
- 8 0.45V P-P 60 Hz
- 9 50MV P-P 60 Hz
- 10 0.65V P-P 60 Hz
- 11 9V P-P 60 Hz
- 12 9V P-P 60 Hz
- 13 9.2V P-P 15.75 KHz
- 14 12.4V P-P 15.75 KHz
- 15 11.2V P-P 15.75 KHz
- 16 1.1V P-P 15.75 KHz
- 17 27V P-P 15.75 KHz
- 18 7.2V P-P 15.75 KHz
- 19 100V P-P 15.75 KHz

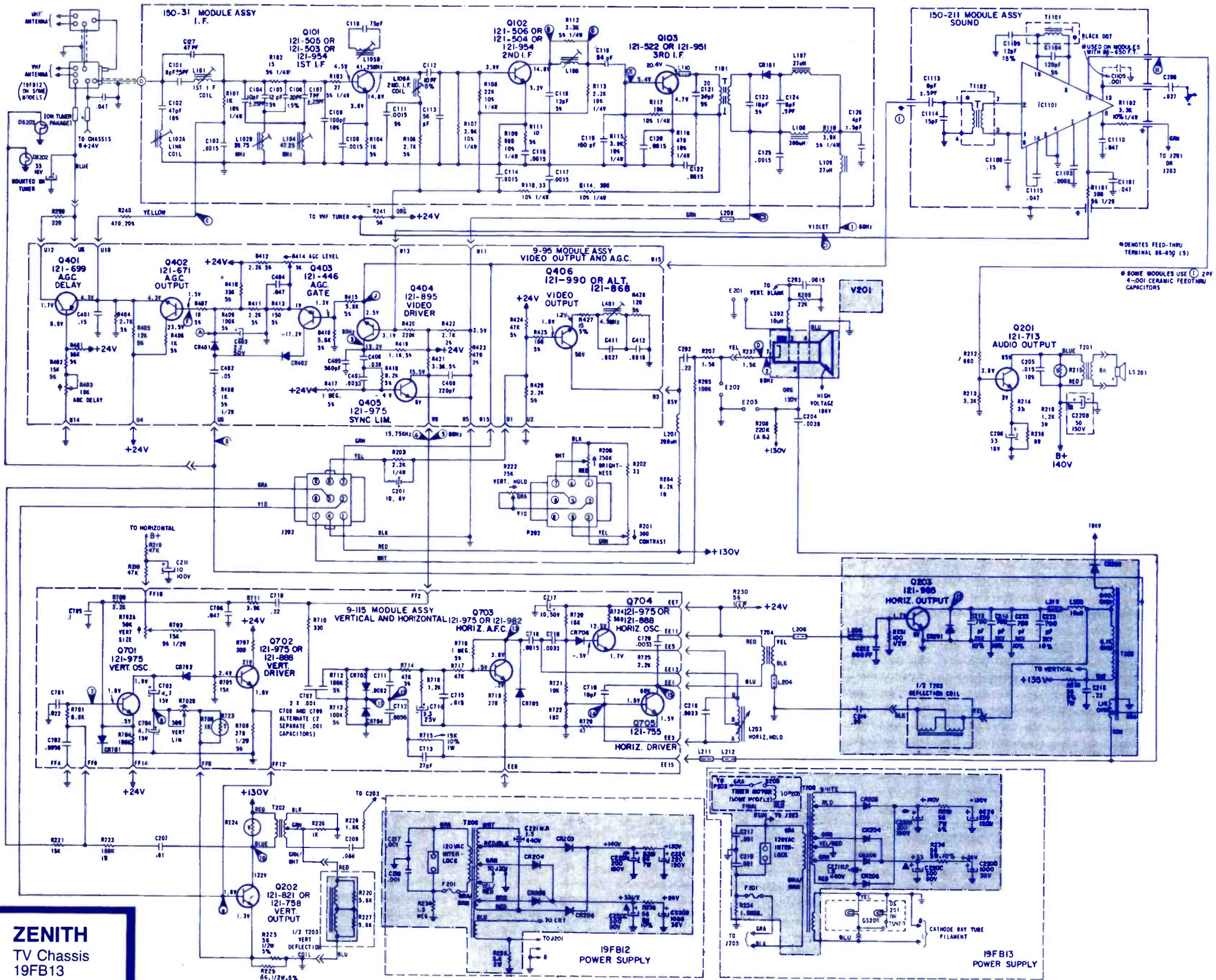


IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL COMPONENTS ALSO ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED IN THIS DIAGRAM AND PARTS LIST FOR EASY IDENTIFICATION. IT IS IMPERATIVE THAT THE PROPER TYPE FUSE BE USED SO AS NOT TO CREATE A SAFETY HAZARD IN THE FUTURE DUE TO THE USE OF AN IMPROPER FUSE. PROPER FUSE VALUES AND PART NUMBERS ARE LISTED IN THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL COMPONENTS ALSO ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED IN THIS DIAGRAM AND PARTS LIST FOR EASY IDENTIFICATION. IT IS IMPERATIVE THAT THE PROPER TYPE FUSE BE USED SO AS NOT TO CREATE A SAFETY HAZARD IN THE FUTURE DUE TO THE USE OF AN IMPROPER FUSE. PROPER FUSE VALUES AND PART NUMBERS ARE LISTED IN THE SERVICE MANUAL.



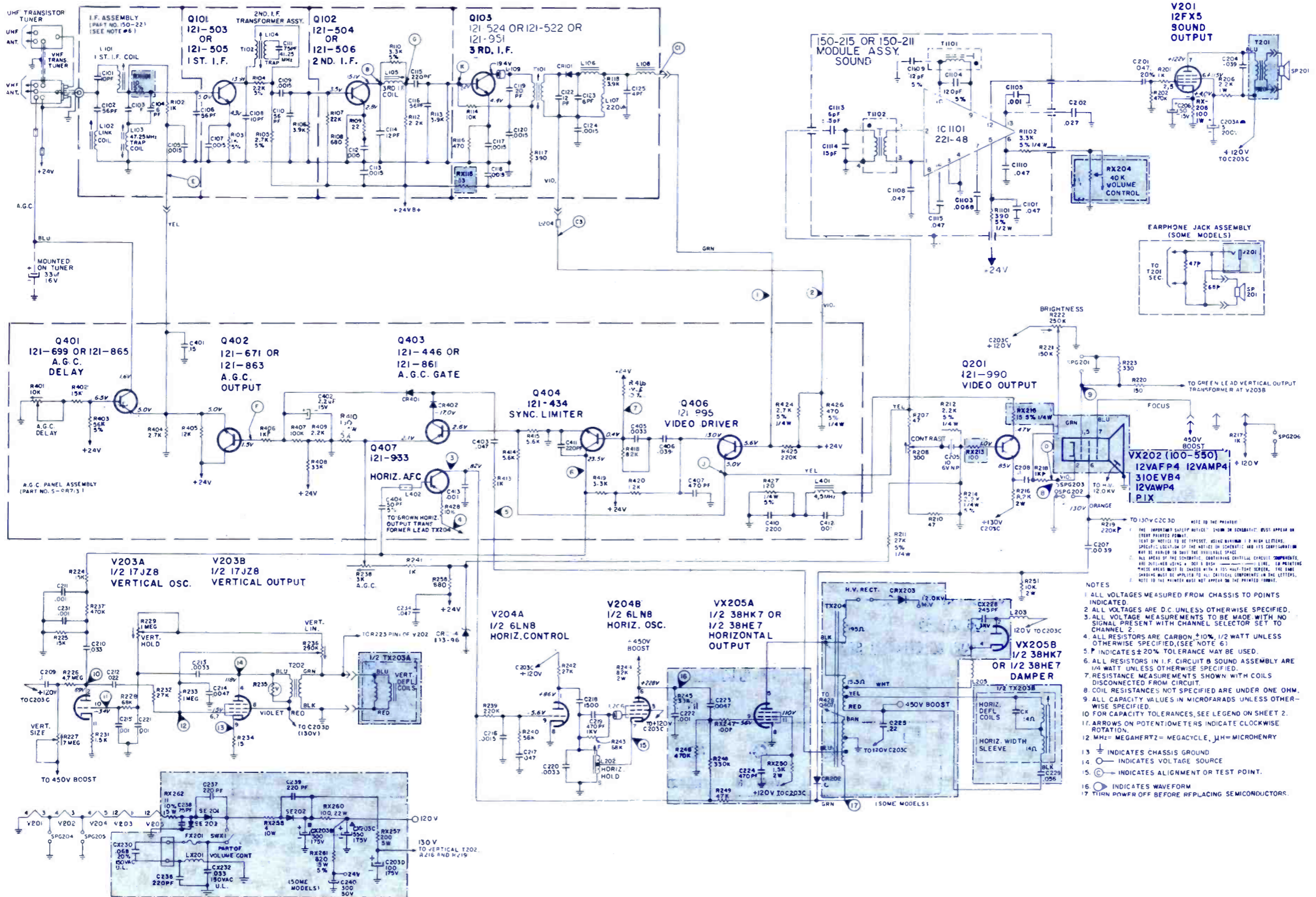
- 1 2.8V P.P. 60 Hz
- 2 80V P.P. 60 Hz
- 3 4.5V P.P. 60 Hz
- 4 15V P.P. 15.75 KHz
- 5 15V P.P. 60 Hz
- 6 23V P.P. 15.75 KHz
- 7 5.7V P.P. 60 Hz
- 8 0.8V P.P. 60 Hz
- 9 50MV P.P. 60 Hz
- 10 0.65V P.P. 60 Hz
- 11 11V P.P. 60 Hz
- 12 11.5V P.P. 60 Hz
- 13 8V P.P. 15.75 KHz
- 14 10V P.P. 15.75 KHz
- 15 12.2V P.P. 15.75 KHz
- 16 1.1V P.P. 15.75 KHz
- 17 25V P.P. 15.75 KHz
- 18 9V P.P. 15.75 KHz
- 19 180V P.P. 15.75 KHz

ZENITH
TV Chassis
19FB13

ZENITH
TV Chassis
12FB22X

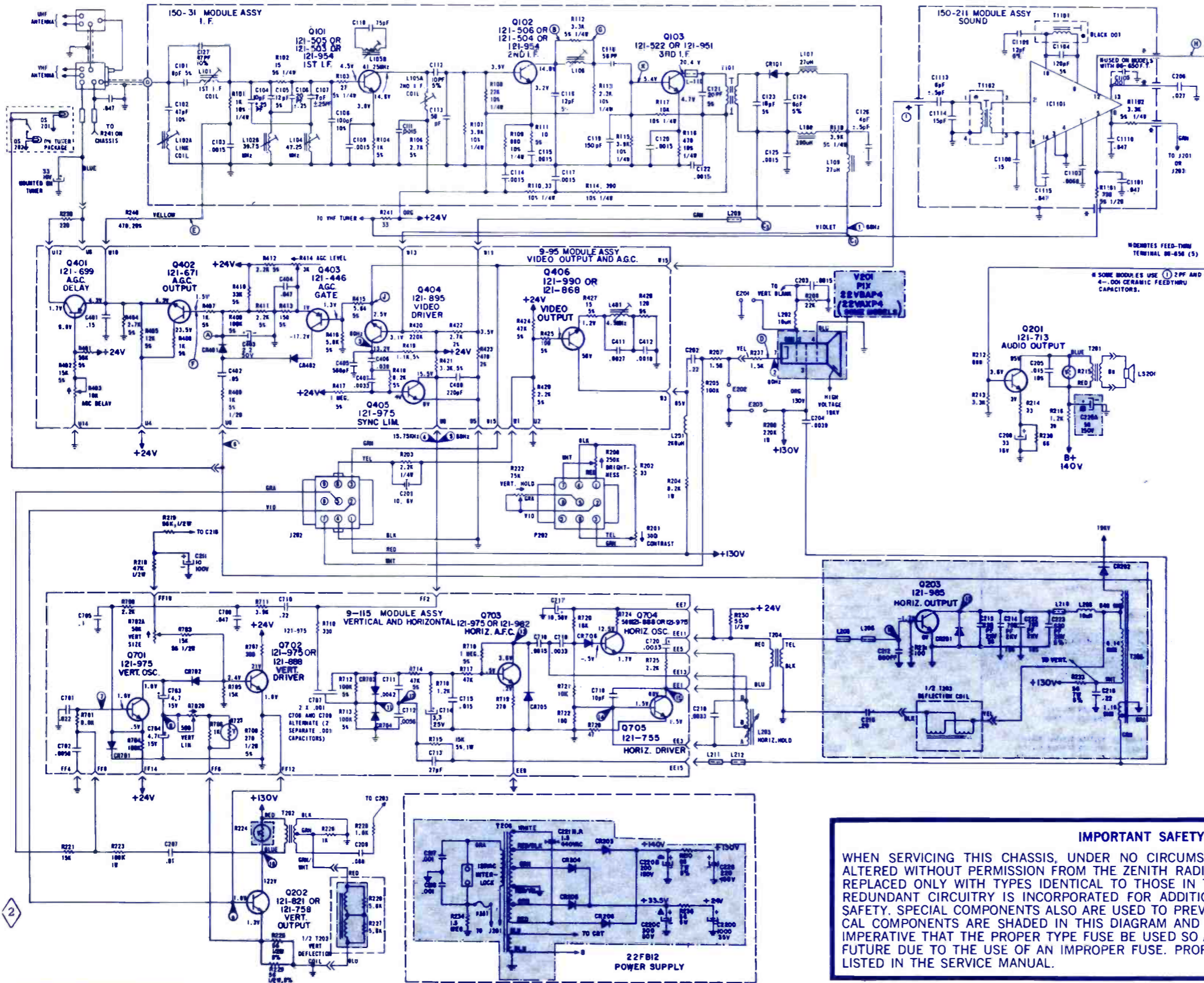
IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL COMPONENTS ALSO ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED IN THIS DIAGRAM AND PARTS LIST FOR EASY IDENTIFICATION. IT IS IMPERATIVE THAT THE PROPER TYPE FUSE BE USED SO AS NOT TO CREATE A SAFETY HAZARD IN THE FUTURE DUE TO THE USE OF AN IMPROPER FUSE. PROPER FUSE VALUES AND PART NUMBERS ARE LISTED IN THE SERVICE MANUAL.



NOTES
1. ALL VOLTAGES MEASURED FROM CHASSIS TO POINTS INDICATED.
2. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
3. ALL VOLTAGE MEASUREMENTS TO BE MADE WITH NO SIGNAL PRESENT WITH CHANNEL SELECTOR SET TO CHANNEL 2.
4. ALL RESISTORS ARE CARBON ±10% 1/2 WATT UNLESS OTHERWISE SPECIFIED, (SEE NOTE 6).
5. P INDICATES ±20% TOLERANCE MAY BE USED.
6. ALL RESISTORS IN I.F. CIRCUIT & SOUND ASSEMBLY ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED.
7. RESISTANCE MEASUREMENTS SHOWN WITH COILS DISCONNECTED FROM CIRCUIT.
8. COIL RESISTANCES NOT SPECIFIED ARE UNDER ONE OHM.
9. ALL CAPACITY VALUES IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
10. FOR CAPACITY TOLERANCES, SEE LEGEND ON SHEET 2.
11. ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
12. MHZ = MEGAHERTZ = MEGACYCLE, μH = MICROHENRY
13. ⊕ INDICATES CHASSIS GROUND
14. ⊖ INDICATES VOLTAGE SOURCE
15. ⊙ INDICATES ALIGNMENT OR TEST POINT.
16. ⊕ INDICATES WAVEFORM
17. TURN POWER OFF BEFORE REPLACING SEMICONDUCTORS.

- 1 2.5V P-ZERO 80 Hz
- 2 2.5V P-ZERO 15.75 KHz
- 3 34V P-P 15.75 KHz
- 4 15V P-P 15.75 KHz
- 5 27V P-P 15.75 KHz
- 6 24V P-P 60 Hz
- 7 7.0V P-P 60 Hz
- 8 75V P-P 15.75 KHz
- 9 95V P-P 60 Hz
- 10 150V P-P 60 Hz
- 11 170V P-P 60 Hz
- 12 30V P-P 60 Hz
- 13 2V P-P 60 Hz
- 14 120V P-P 60 Hz
- 15 30V P-P 15.75 KHz
- 16 220V P-P 15.75 KHz
- 17 275V P-P 15.75 KHz



- | | |
|-------------------------|---------------------------|
| 1 3.5V P-ZERO
60 Hz | 10 600V P-PV
60 Hz |
| 2 60V P-PV
60 Hz | 11 13V P-PV
60 Hz |
| 3 7V P-PV
60 Hz | 12 16V P-PV
15.75 KHz |
| 4 24V P-PV
15.75 KHz | 13 16V P-PV
15.75 KHz |
| 5 24V P-PV
60 Hz | 14 2.8V P-PV
15.75 KHz |
| 6 32V P-PV
15.75 KHz | 15 170V P-PV
15.75 KHz |
| 7 9V P-PV
60 Hz | 16 36V P-PV
15.75 KHz |
| 8 3.2V P-PV
60 Hz | 17 960V P-PV
15.75 KHz |
| 9 4.8V P-PV
60 Hz | |

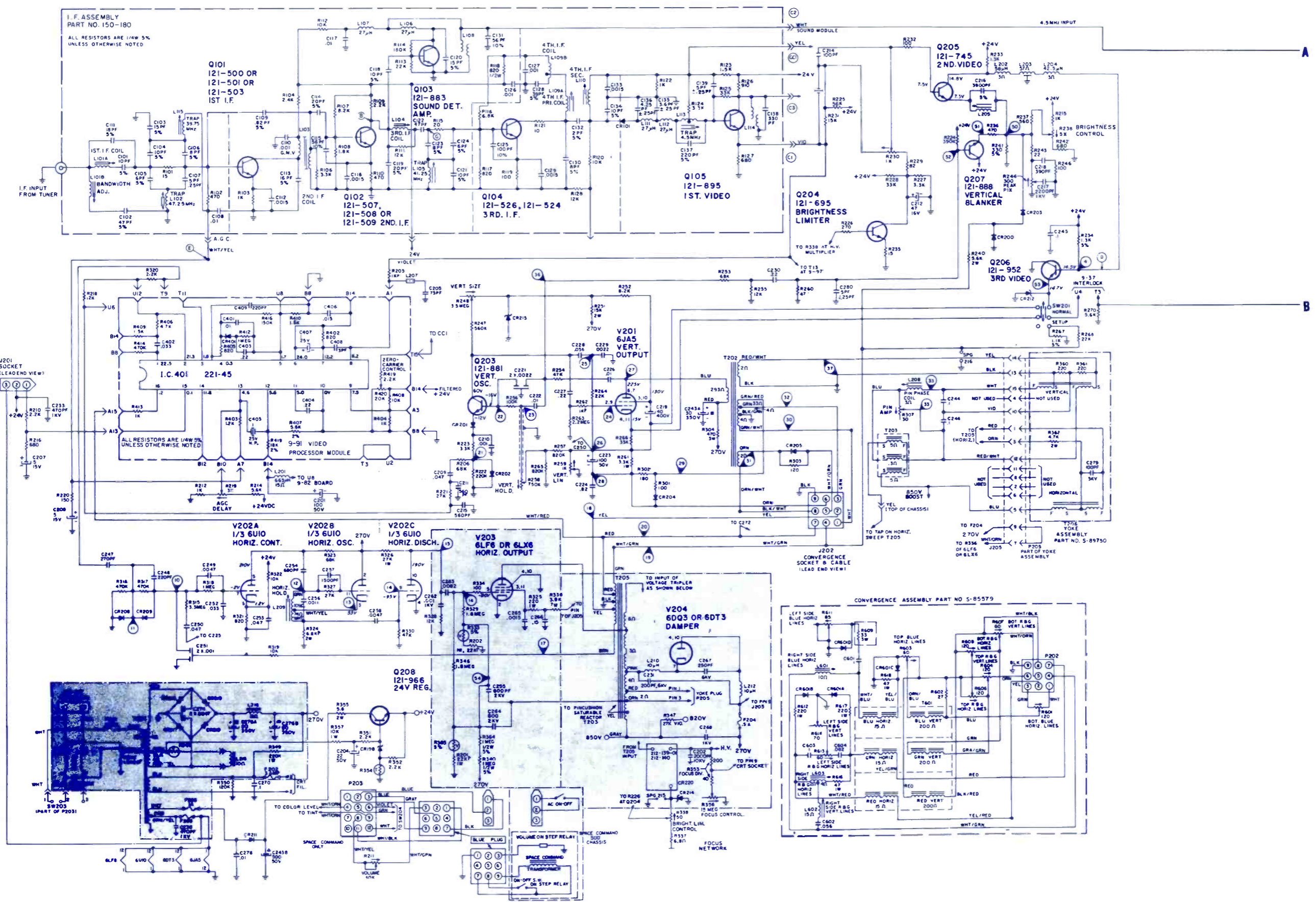
IMPORTANT SAFETY NOTICE

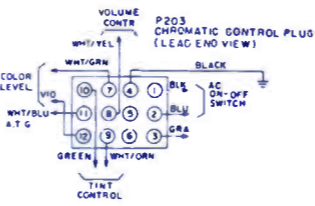
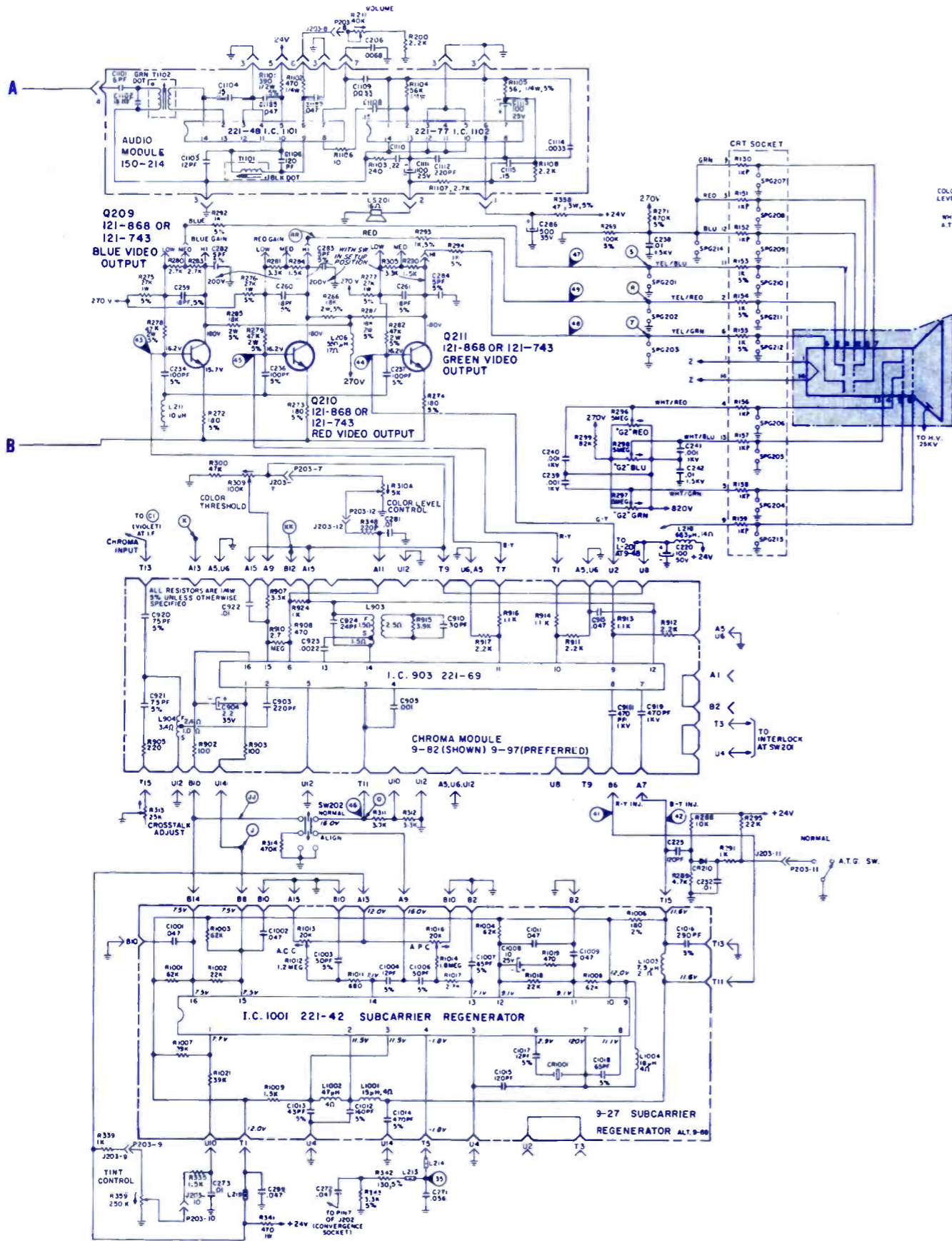
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X-RADIATION SAFETY. SPECIAL COMPONENTS ALSO ARE USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL COMPONENTS ARE SHADED IN THIS DIAGRAM AND PARTS LIST FOR EASY IDENTIFICATION. IT IS IMPERATIVE THAT THE PROPER TYPE FUSE BE USED SO AS NOT TO CREATE A SAFETY HAZARD IN THE FUTURE DUE TO THE USE OF AN IMPROPER FUSE. PROPER FUSE VALUES AND PART NUMBERS ARE LISTED IN THE SERVICE MANUAL.

ZENITH
B-W TV Chassis
22FB12

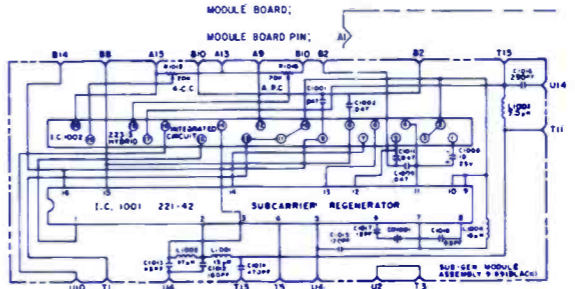
ZENITH

Color TV Chassis
19C22





PIX
AG/19VDZP22
100-606-02



NOTES

TURN POWER OFF BEFORE REPLACING SEMICONDUCTORS.

PHOTOGRAPHS TAKEN ON A STANDARD GATED RAINBOW COLOR BAR SIGNAL. HUE SETTING ADJUSTED FOR PROPER COLOR. THE WAVESHAPES AT THE RED, GREEN AND BLUE CATHODE GRIDS OF THE PICTURE TUBE DEPEND ON THE HUE, COLOR LEVEL, CONTRAST AND PICTURE PEAKING CONTROLS.

FOR WAVEFORMS 43 THRU 49, TEST POINT 'O' MUST BE BY-PASSED WITH A 1MFD. 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 WITH INPUT IMPEDANCE OF 10 MEGOHMS.

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

RESISTANCE MEASUREMENTS SHOWN WITH ADJACENT COILS DISCONNECTED FROM CIRCUIT.

ALL RESISTORS ARE $\pm 10\%$ CARBON, 1/2 WATT UNLESS OTHERWISE NOTED. COIL RESISTANCE UNDER DNE OHM NOT GIVEN.

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

CATHODE RAY TUBE 2ND ANODE VOLTAGE TO BE MEASURED WITH ELECTROSTATIC OR 20K OHM/VOLT (MINIMUM) HIGH VOLTAGE METER.

ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.

PF = PICOFARADS MHZ = MEGAHERTZ μ H = MICROHENRY

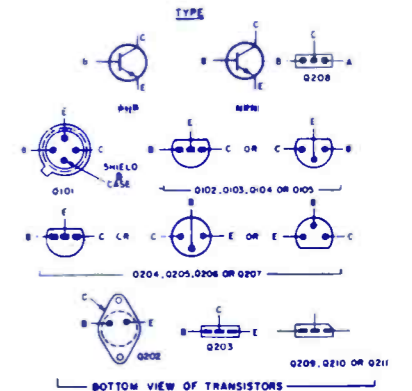
ALIGNMENT AND TEST POINT: CHASSIS GROUND; $\pm 20\%$ MAY BE USED;

VOLTAGE SOURCE: $\pm 20\%$ MAY BE USED;

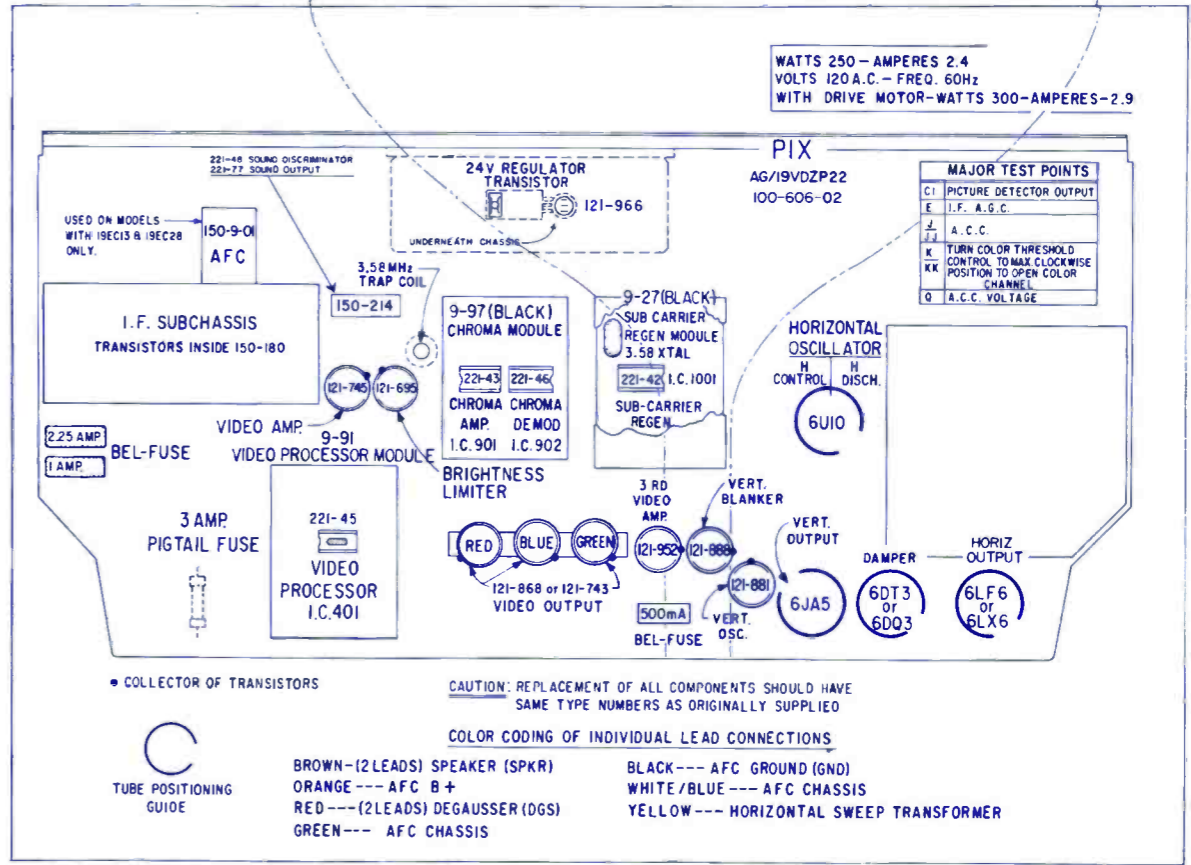
WAVEFORM CHECK POINT: MEASURED FROM POINT INDICATED TO CHASSIS GROUND.

WAVEFORM CHECK POINT: MEASURED ACROSS POINTS INDICATED (NOT TO CHASSIS GROUND). OCILSCOPE SHOULD NOT BE GROUNDED TO CHASSIS. REVERSING LEADS REVERSES WAVEFORM.

CHROMATIC SWITCH WIRING POSITION: $\pm 20\%$ MAY BE USED;



TEST POINTS	
B	BY-PASS WITH 470PF DURING 4TH I.F. ALIGNMENT.
C1	PICTURE DETECTOR OUTPUT
C2	BIAS POINT FOR C1 ADJUST
C3	SOUND 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
SHO	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



WATTS 250 - AMPERES 2.4
VOLTS 120 A.C. - FREQ. 60Hz
WITH DRIVE MOTOR - WATTS 300 - AMPERES - 2.9

MAJOR TEST POINTS	
C1	PICTURE DETECTOR OUTPUT
E	I.F. A.G.C.
J	A.C.C.
K	TURN COLOR THRESHOLD CONTROL TO MAX. CLOCKWISE POSITION TO OPEN COLOR CHANNEL
O	A.C.C. VOLTAGE

• COLLECTOR OF TRANSISTORS

CAUTION: REPLACEMENT OF ALL COMPONENTS SHOULD HAVE SAME TYPE NUMBERS AS ORIGINALLY SUPPLIED

COLOR CODING OF INDIVIDUAL LEAD CONNECTIONS

BROWN --- (2 LEADS) SPEAKER (SPKR)
ORANGE --- AFC B+
RED --- (2 LEADS) DEGAUSSER (DGS)
GREEN --- AFC CHASSIS

BLACK --- AFC GROUND (GND)
WHITE/BLUE --- AFC CHASSIS
YELLOW --- HORIZONTAL SWEEP TRANSFORMER

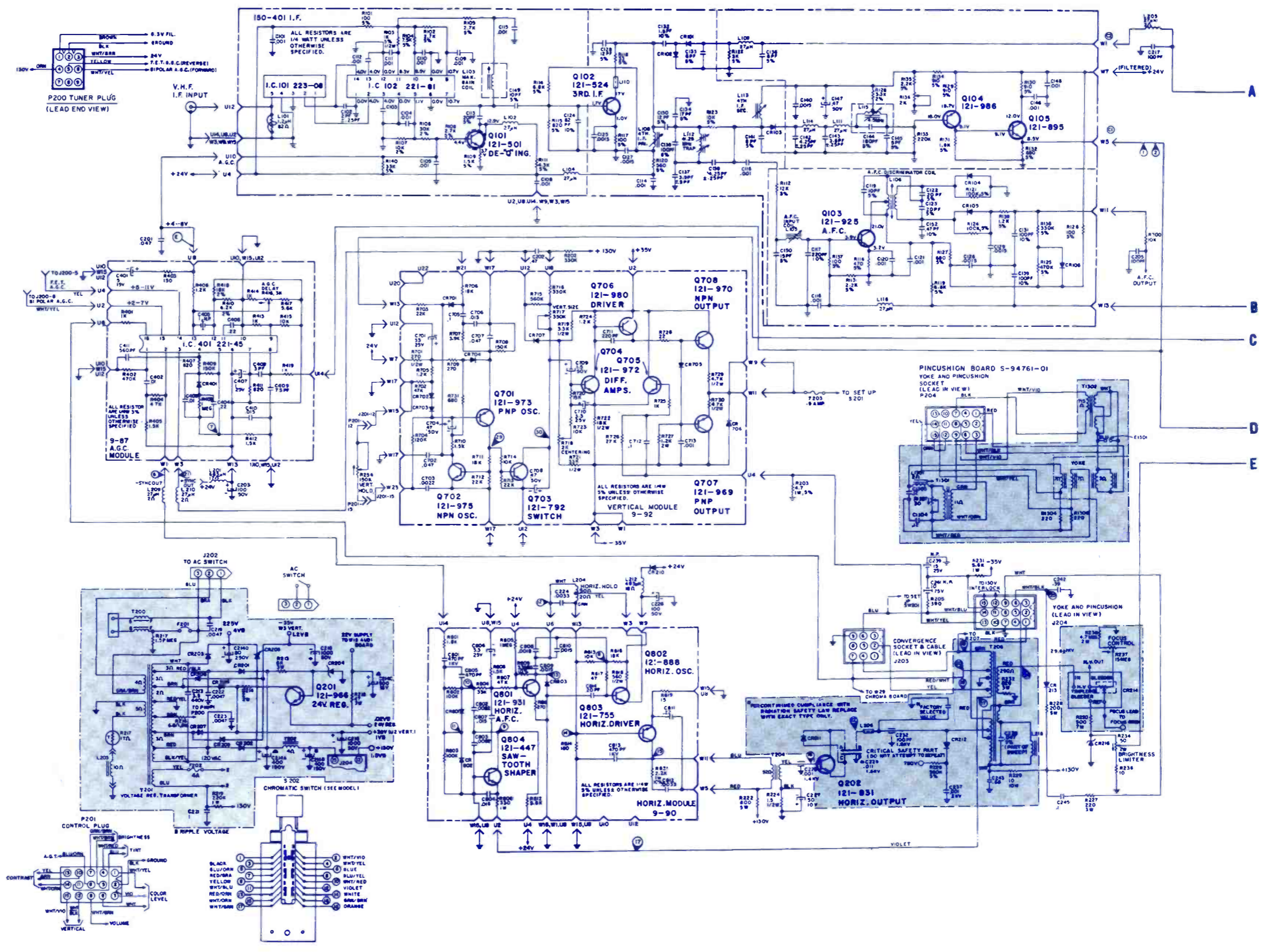
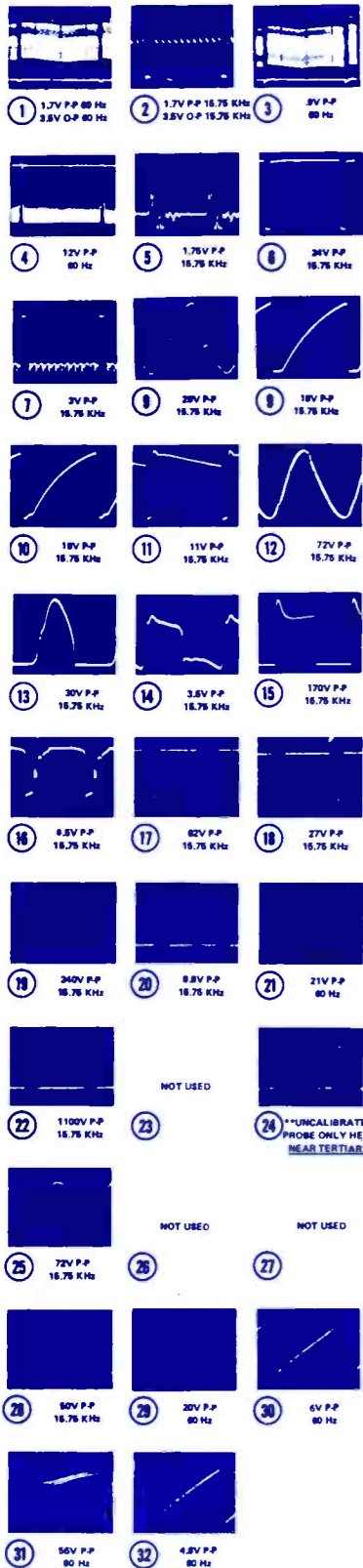
ZENITH
Color TV Chassis
19EC22

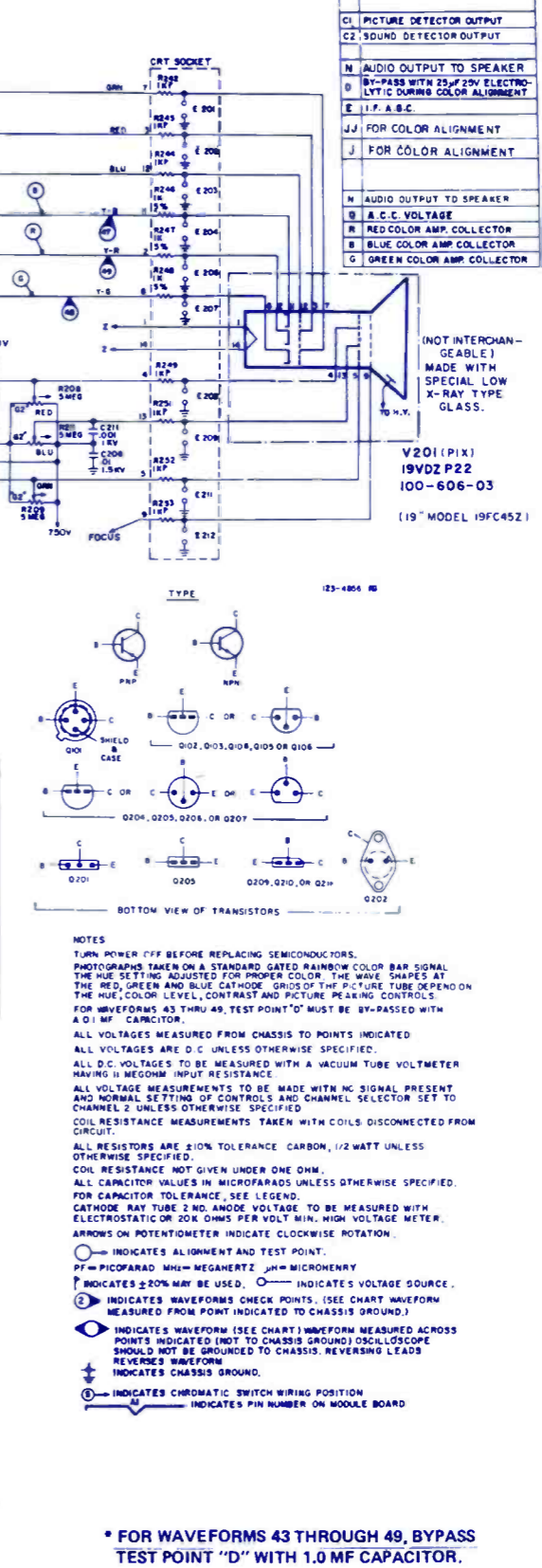
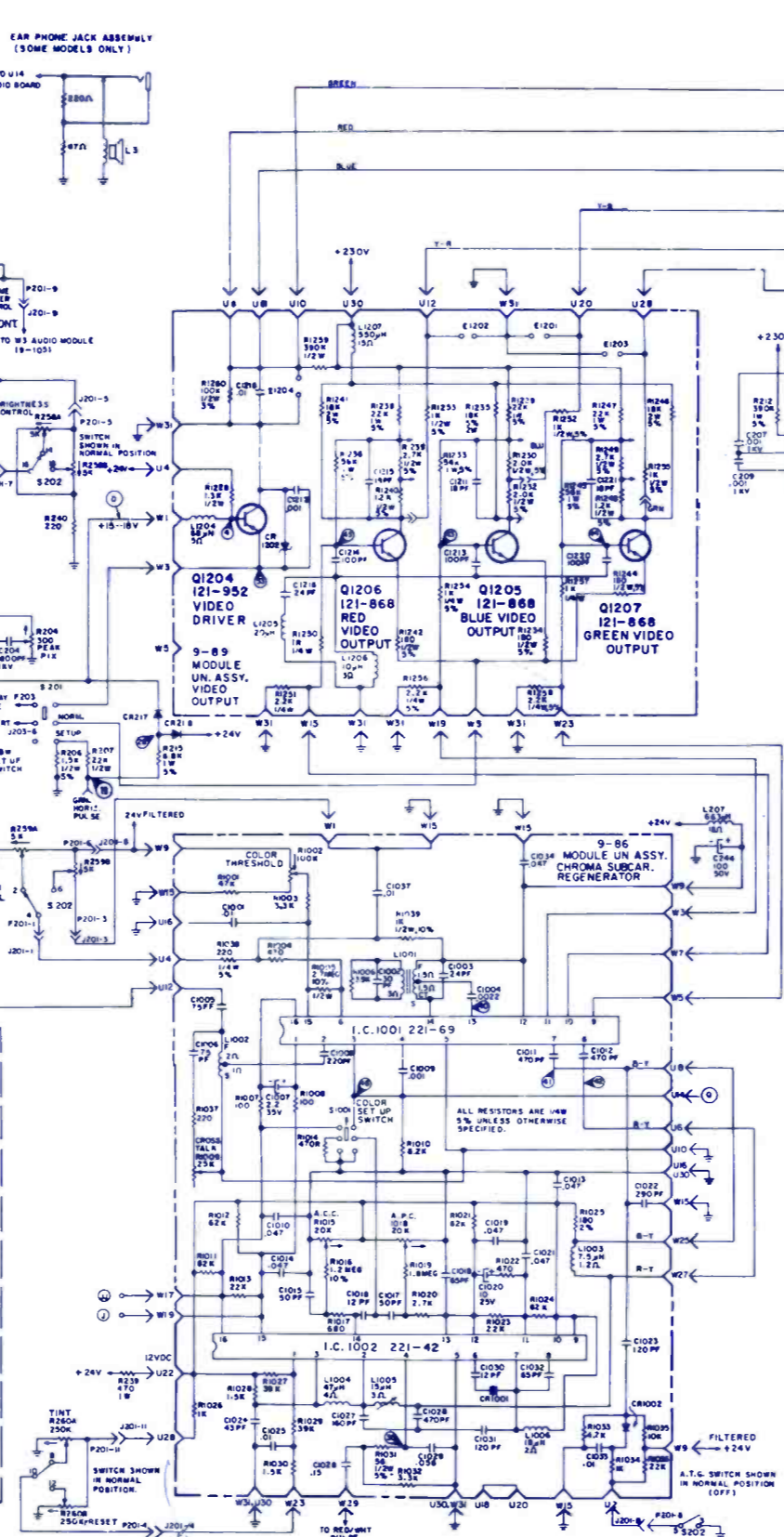
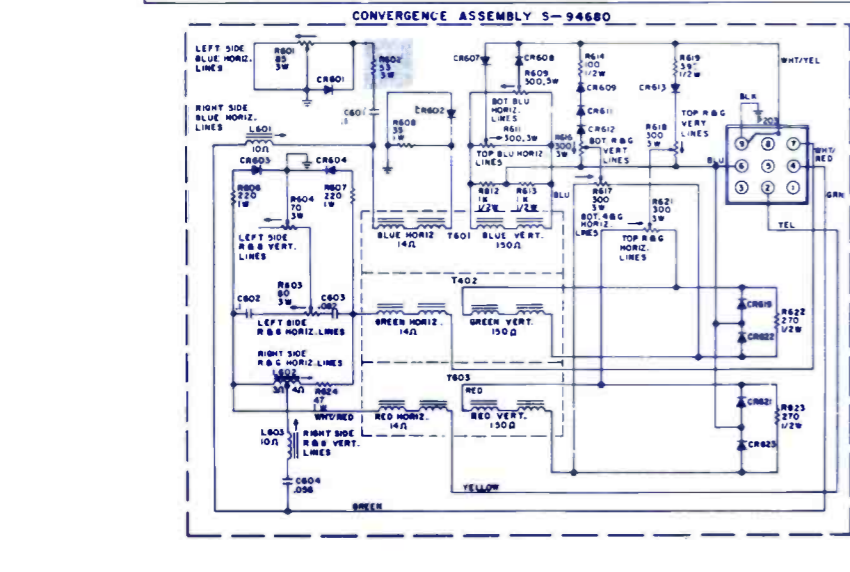
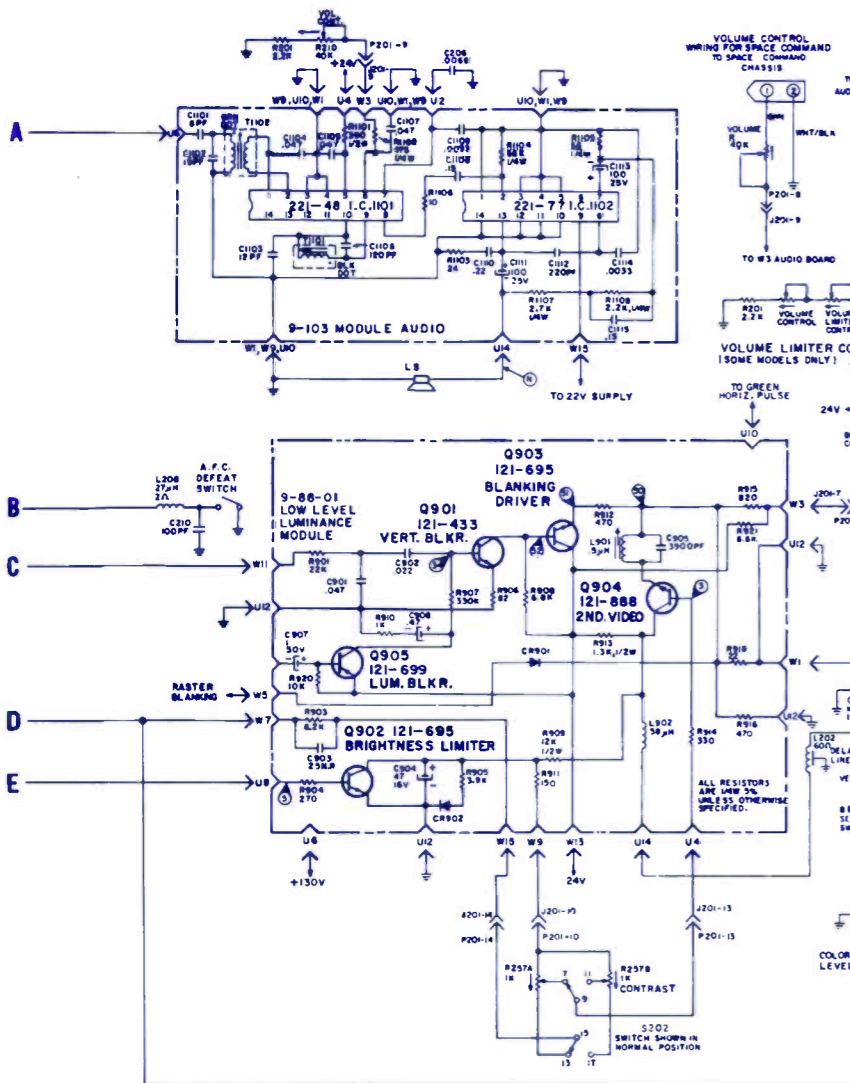
ZENITH

Color TV Chassis
19FC45Z

SYMBOL	DESCRIPTION	ZENITH PART NO.
R234	50 ohm brite limiter control	63-10141
P237	15M focus control	63-10276
R416	3K AGC delay	63-9697-01
R717	350K vert size	63-9697-05
R718	2K vert center	63-9697-06
R1002	100K color threshold	63-9228
R1015	20K auto color control	63-9697

R1018	20K auto phase control	63-9697
L204	horiz hold coil	S-56875
L1002	chroma take off coil	95-3080
T202	power choke	95-2925-02
T206	horiz output xformer 19FC45	S-96473-02
T1101	quad xformer	95-2789
F201	circuit breaker	85-976-02
F202	fuse	136-29
F203	fuse	136-87





TEST POINTS	
C1	PICTURE DETECTOR OUTPUT
C2	SOUND DETECTOR OUTPUT
N	AUDIO OUTPUT TO SPEAKER
D	BY-PASS WITH 25µF 25V ELECTROLYTIC DURING COLOR ALIGNMENT
E	I.F. A.B.C.
JJ	FOR COLOR ALIGNMENT
J	FOR COLOR ALIGNMENT
N	AUDIO OUTPUT TO SPEAKER
Q	A.C.C. VOLTAGE
R	RED COLOR AMP. COLLECTOR
B	BLUE COLOR AMP. COLLECTOR
G	GREEN COLOR AMP. COLLECTOR

33	NOT USED	34	3.0V P.P. 80 Hz
35	4.2V P.P. 16.76 KHz	36	NOT USED
37	NOT USED	38	NOT USED
39	NOT USED	40	4V P.P. 16.76 KHz
41	1.5V P.P. 16.76 KHz	42	1.5V P.P. 16.76 KHz
43	4V P.P. 16.76 KHz	44	2V P.P. 16.76 KHz
45	4V P.P. 16.76 KHz	46	1.2V P.P. 16.76 KHz
47	100V P.P. 16.76 KHz	48	80V P.P. 16.76 KHz
49	108V P.P. 16.76 KHz	50	3V P.P. 80 Hz
51	18.0V P.P. 80 Hz	52	23V P.P. 80 Hz
53	5V P.P. 80 Hz	54	NOT USED
55	NOT USED	56	NOT USED

NOTES

TURN POWER OFF BEFORE REPLACING SEMICONDUCTORS.

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 CATHODE GRIDS OF THE PICTURE TUBE DEPEND ON THE HUE, COLOR LEVEL, CONTRAST AND PICTURE PEAKING CONTROLS.

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

COIL RESISTANCE MEASUREMENTS TAKEN 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 POTENTIOMETER INDICATE CLOCKWISE ROTATION.

○ INDICATES ALIGNMENT AND TEST POINT.

PF = PICOFARAD, MHz = MEGAHERTZ, µH = MICROHENRY

⊕ INDICATES 20% MAY BE USED. ⊖ INDICATES VOLTAGE SOURCE.

⊙ INDICATES WAVEFORMS CHECK POINTS. (SEE CHART WAVEFORM MEASURED FROM POINT INDICATED TO CHASSIS GROUND.)

⊕ INDICATES WAVEFORM (SEE CHART) WAVEFORM MEASURED ACROSS POINTS INDICATED (NOT TO CHASSIS GROUND) OSCILLOSCOPE SHOULD NOT BE GROUND TO CHASSIS. REVERSING LEADS REVERSES WAVEFORM.

⊕ INDICATES CHASSIS GROUND.

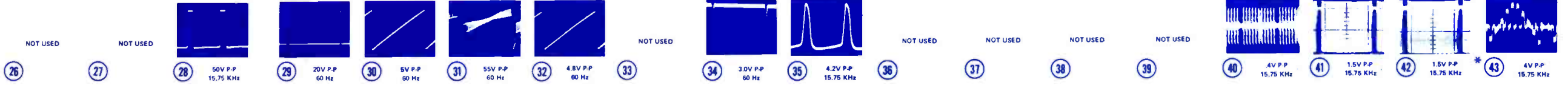
⊕ INDICATES CHROMATIC SWITCH WIRING POSITION

⊕ INDICATES PIN NUMBER ON MODULE BOARD

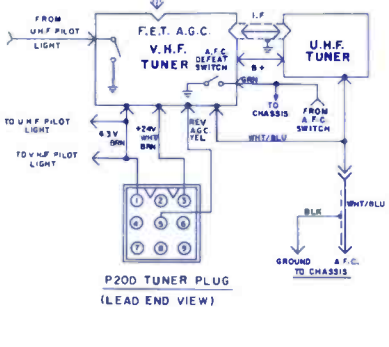
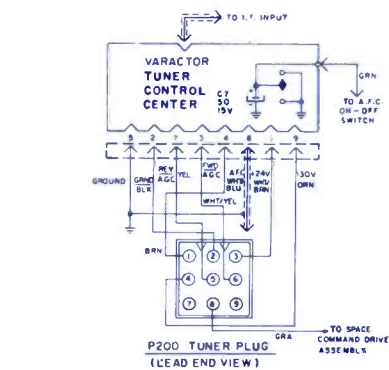
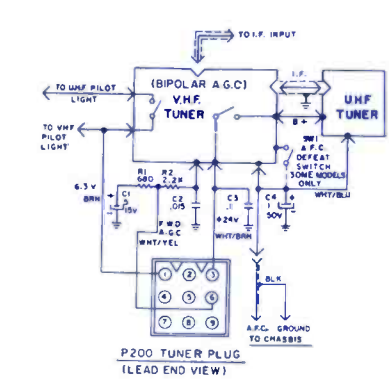
* FOR WAVEFORMS 43 THROUGH 49, BYPASS TEST POINT "D" WITH 1.0 MF CAPACITOR.

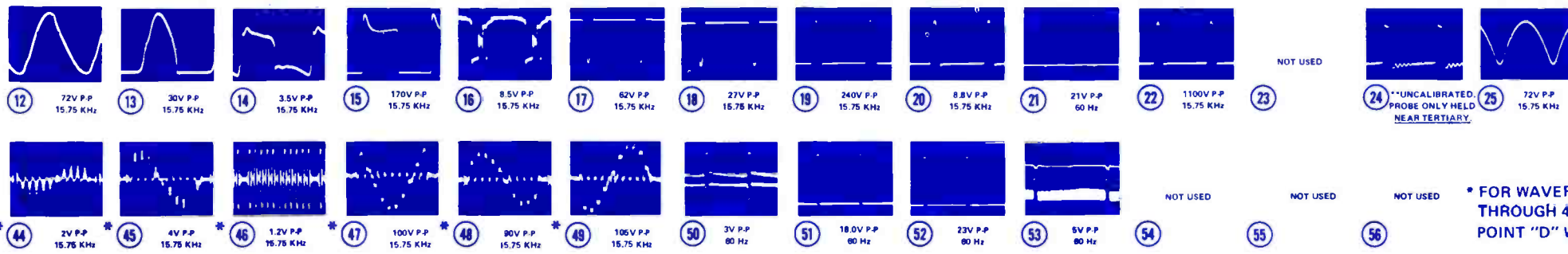
ZENITH
Color TV Chassis
19FC45Z

ZENITH
Color TV Chassis
25FC45

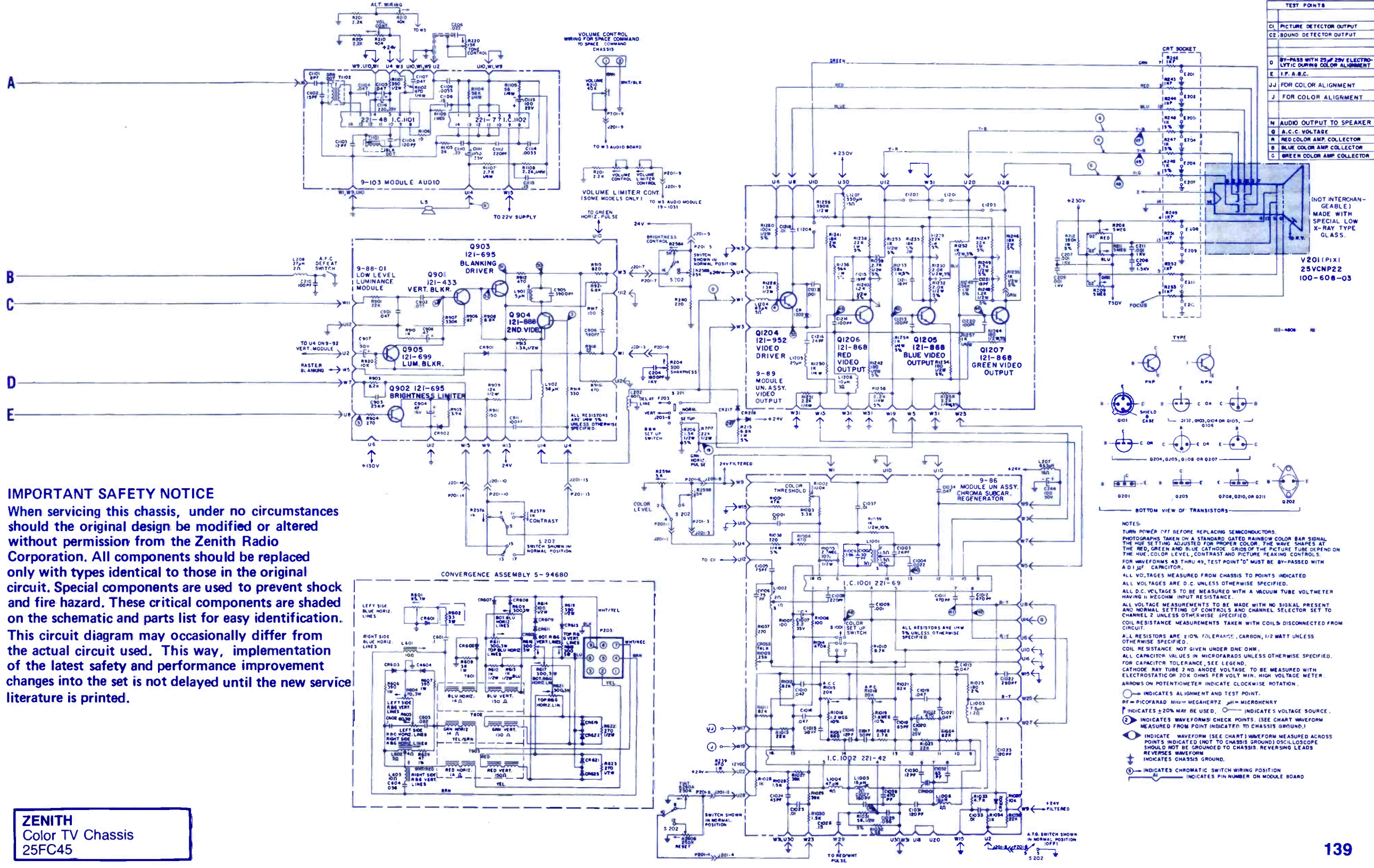


P200 TUNER PLUG (LEAD END VIEW)
SEE CIRCUIT BELOW FOR SPECIFIC
TUNER CONNECTIONS.





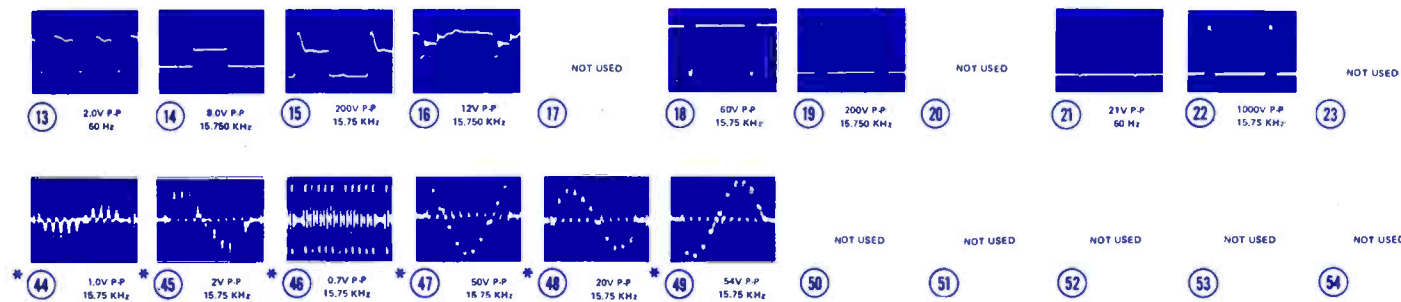
* FOR WAVEFORMS 43 THROUGH 49, BYPASS TEST POINT "D" WITH 1.0 MF CAPACITOR.



TEST POINTS	
C1	PICTURE DETECTOR OUTPUT
C2	SOUND DETECTOR OUTPUT
D	BY-PASS WITH 25µF 20V ELECTROLYTIC DURING COLOR ALIGNMENT
E	I.F. A.B.C.
JJ	FOR COLOR ALIGNMENT
J	FOR COLOR ALIGNMENT
N	AUDIO OUTPUT TO SPEAKER
Q	A.C.C. VOLTAGE
R	RED COLOR AMP. COLLECTOR
B	BLUE COLOR AMP. COLLECTOR
G	GREEN COLOR AMP. COLLECTOR

IMPORTANT SAFETY NOTICE
 When servicing this chassis, under no circumstances should the original design be modified or altered without permission from the Zenith Radio Corporation. All components should be replaced only with types identical to those in the original circuit. Special components are used to prevent shock and fire hazard. These critical components are shaded on the schematic and parts list for easy identification. This circuit diagram may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

ZENITH
 Color TV Chassis
 25FC45



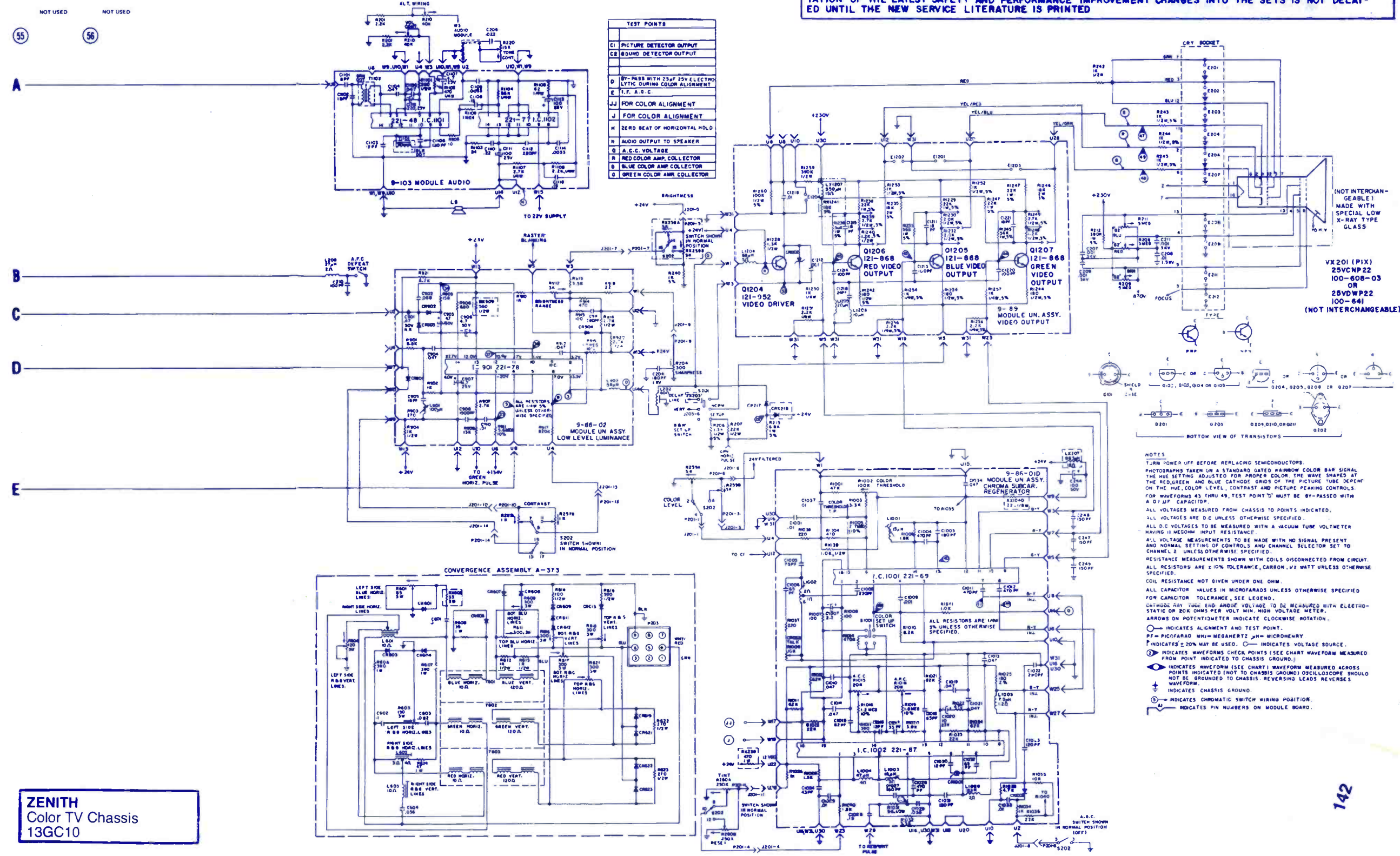
* FOR WAVEFORMS 43 THROUGH 49, BYPASS TEST POINT "D" WITH 1.0 MF CAPACITOR.

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE ZENITH RADIO CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT, AND THEIR PHYSICAL LOCATION, WIRING AND LEAD DRESS MUST CONFORM TO ORIGINAL LAYOUT UPON COMPLETION OF REPAIRS.

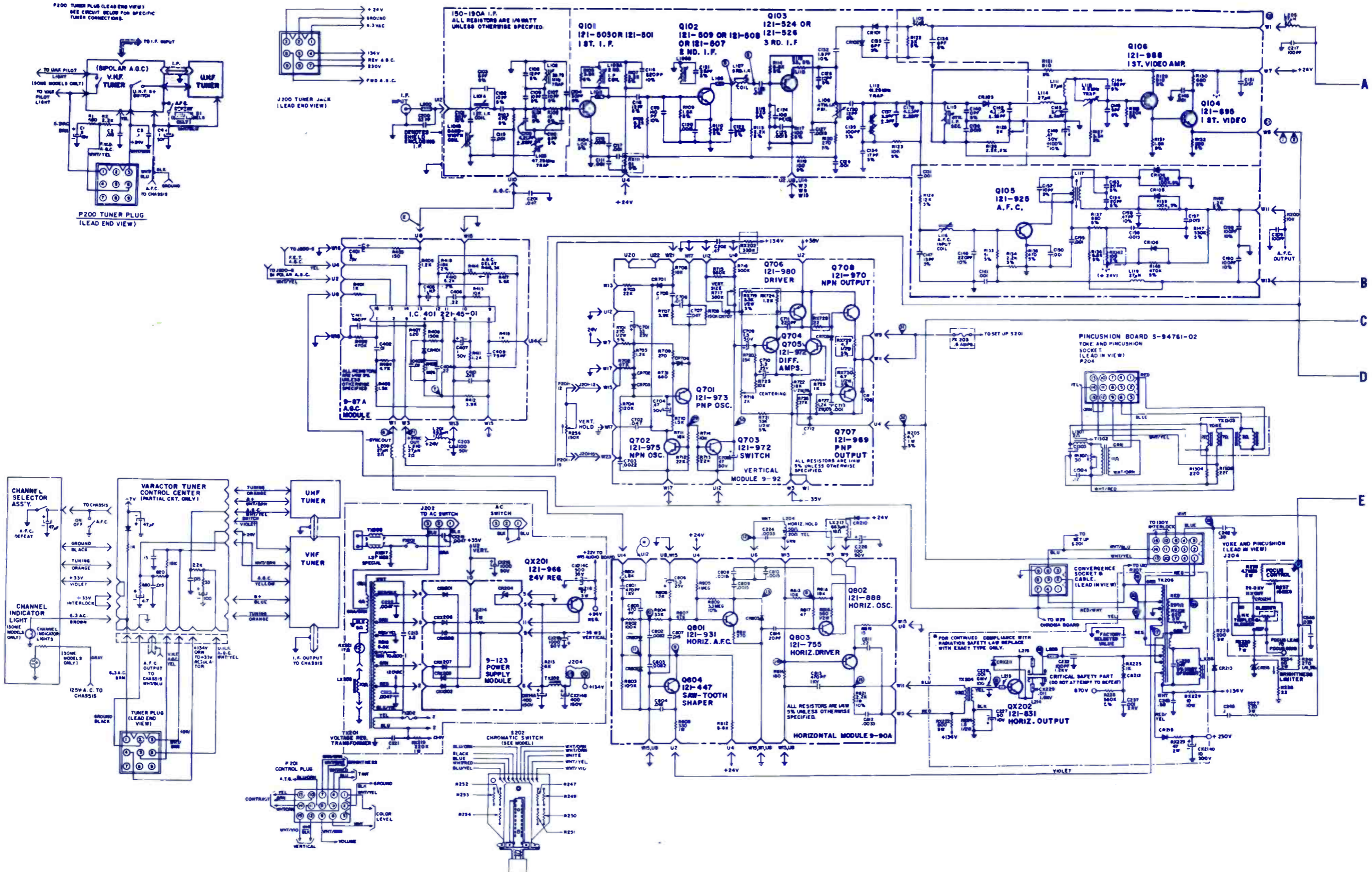
IN SOME INSTANCES REDUNDANT CIRCUITRY IS INCORPORATED FOR ADDITIONAL CIRCUIT PROTECTION AND X RADIATION SAFETY SPECIAL CIRCUITS ARE ALSO USED TO PREVENT SHOCK AND FIRE HAZARD. THESE CRITICAL AREAS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THE LETTER "X" INCLUDED IN THE ITEM NUMBER DESIGNATES SPECIAL FAIL SAFE COMPONENTS IN THESE AREAS (SEE PERTINENT NOTE) WHICH ARE REQUIRED TO MAINTAIN SAFE PERFORMANCE. NO DEVIATIONS ARE ALLOWED WITHOUT PRIOR APPROVAL BY THE PRODUCT SAFETY ENGINEERING DEPARTMENT.

CAUTION:
THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SETS IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED



ZENITH
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13GC10

ZENITH
Color TV Chassis
17GC45



P200 TUNER PLUG (LEAD END VIEW)
SEE CIRCUIT BELOW FOR SPECIFIC
TUNER CONNECTIONS.

