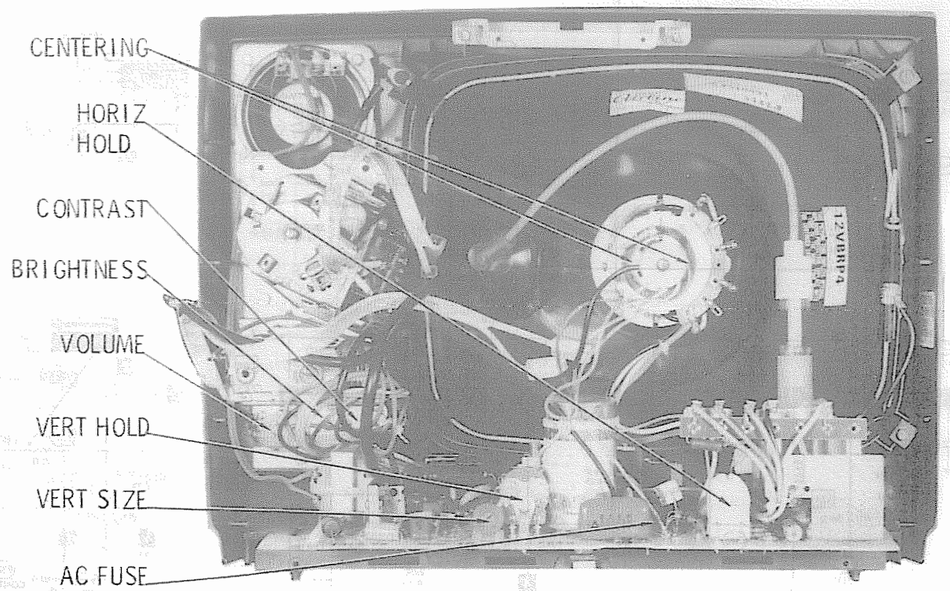


CABINET—REAR VIEW

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE DEVICES

A 1.5-amp fuse is used for AC line protection. (See photo, Cabinet-Rear View.)

VHF TUNER

Set fine tuning at the center of its range and adjust oscillator slug (one for each channel) for best sound and picture.

UHF TUNER

The UHF tuner employs a detent mechanism for channel selection. Fine tuning is adjusted by rotating the fine tuning knob.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horiz Hold Coil. (See photo, Cabinet-Rear View.)

AGC

The AGC may be varied by an AGC Delay control

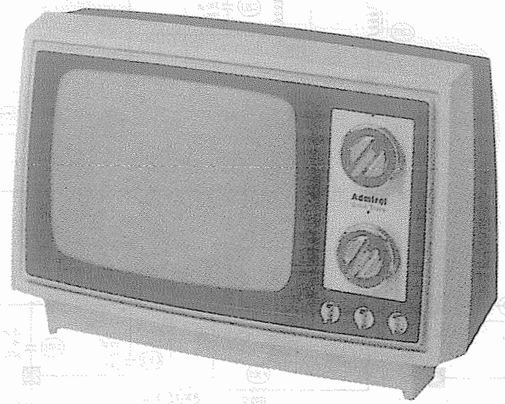
CENTERING

Centering is accomplished by proper adjustment of two magnetic rings located on the yoke rear cover. (See photo, Cabinet-Rear View.)

PHOTOFACT® Folder with CIRCUITRACE

For Supplier Address See PHOTOFACT Index

MODEL	CHASSIS
9B618	T2L6-1A
9B618M	T2L6-2A
9B622	T2L6-1A
9B622M	T2L6-2A
9B638P	T2L6-1A
9B638PM	T2L6-2A
12B618	T3L6-1A
12B618M	T3L6-2A
12B627	T3L6-1A
12B627M	T3L6-2A
12B632	T3L6-1A
12B632M	T3L6-2A
12B648P	T3L6-1A
12B648PM	T3L6-2A
12B666	T3L6-1A
12B666M	T3L6-2A



MODEL 9B618 (T2L6-1A)

SAFETY PRECAUTIONS

See page 5

INDEX

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

6PC1552R
10 9 8 7 6 5 4 3
DATE 6-76 SET 1573 FOLDER 1

ADMIRAL CHASSIS T2L6-1A/-2A, T3L6-1A/-2A
SET 1573 FOLDER 1

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove six screws holding cabinet. While removing cabinet back it is necessary to disconnect antenna leads from inside back.

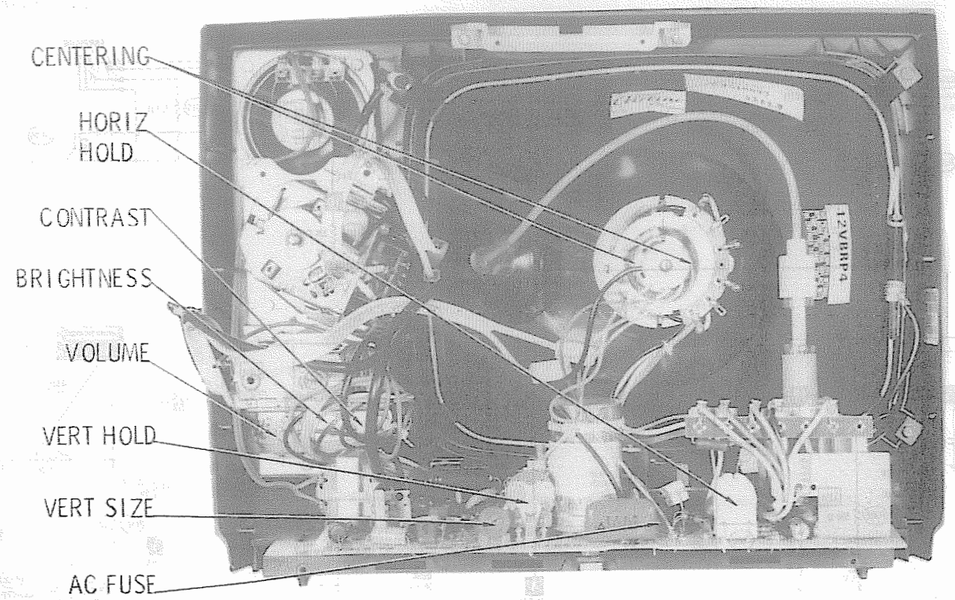
Note: Most components can now be serviced without chassis removal.

Remove all knobs and lay set face down on a soft protective surface.

Disconnect CRT socket, HV anode lead, speaker wire and ground wire. Loosen and remove deflection yoke. Remove four screws holding tuner assembly and one screw holding printed circuit board. Lift printed circuit, tuner assembly and deflection yoke from cabinet front.

CRT REMOVAL

Follow "Chassis Removal" procedure. Loosen bolt holding CRT retaining wire. Remove four screws holding retaining wire brackets and remove wire and brackets. Lift CRT from cabinet. Do not lift CRT by the neck.



CABINET–REAR VIEW

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

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A 1.5-amp fuse is used for AC line protection. (See photo, Cabinet-Rear View.)

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The UHF tuner employs a detent mechanism for channel selection. Fine tuning is adjusted by rotating the fine tuning knob.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horiz Hold Coil. (See photo, Cabinet-Rear View.)

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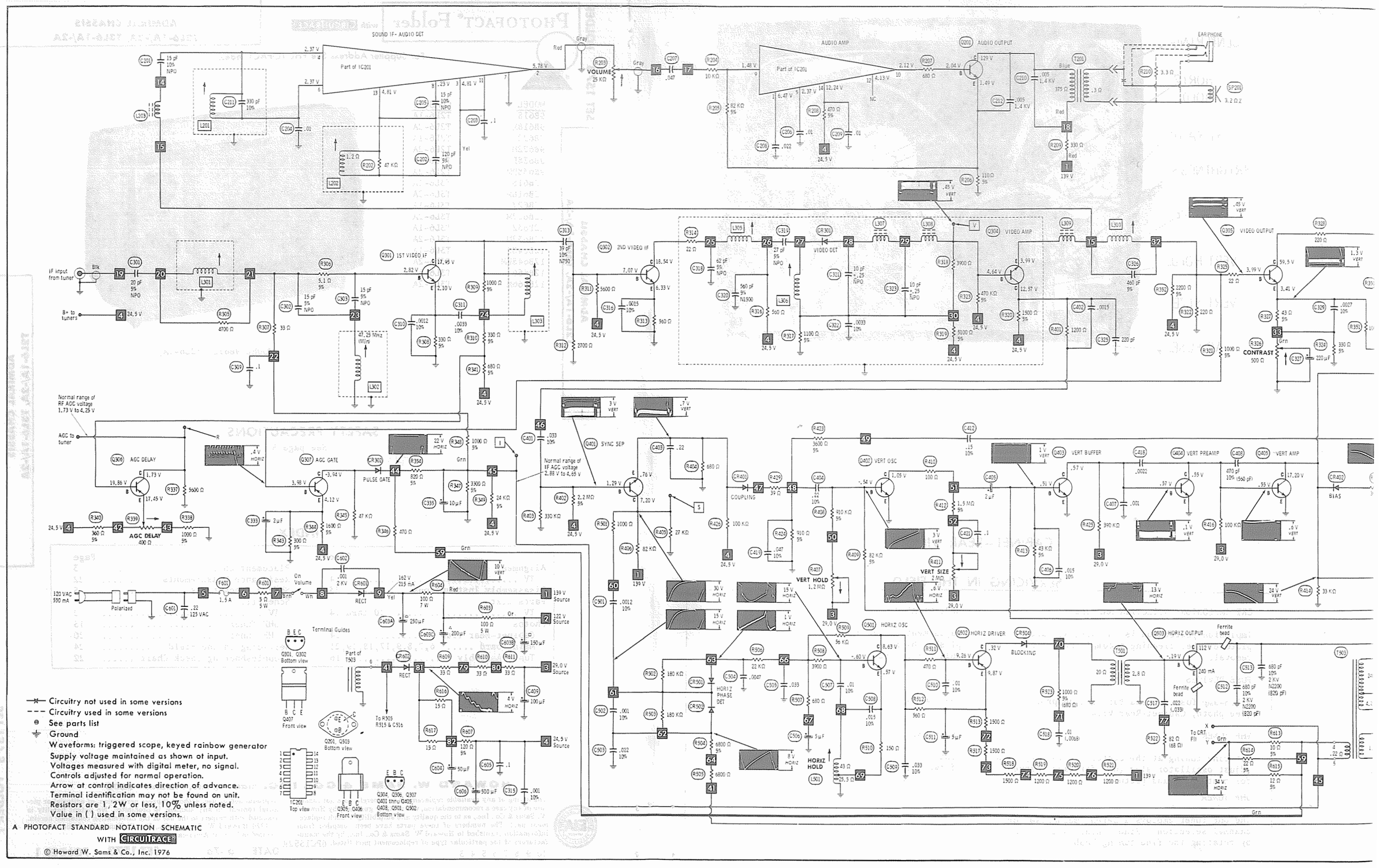
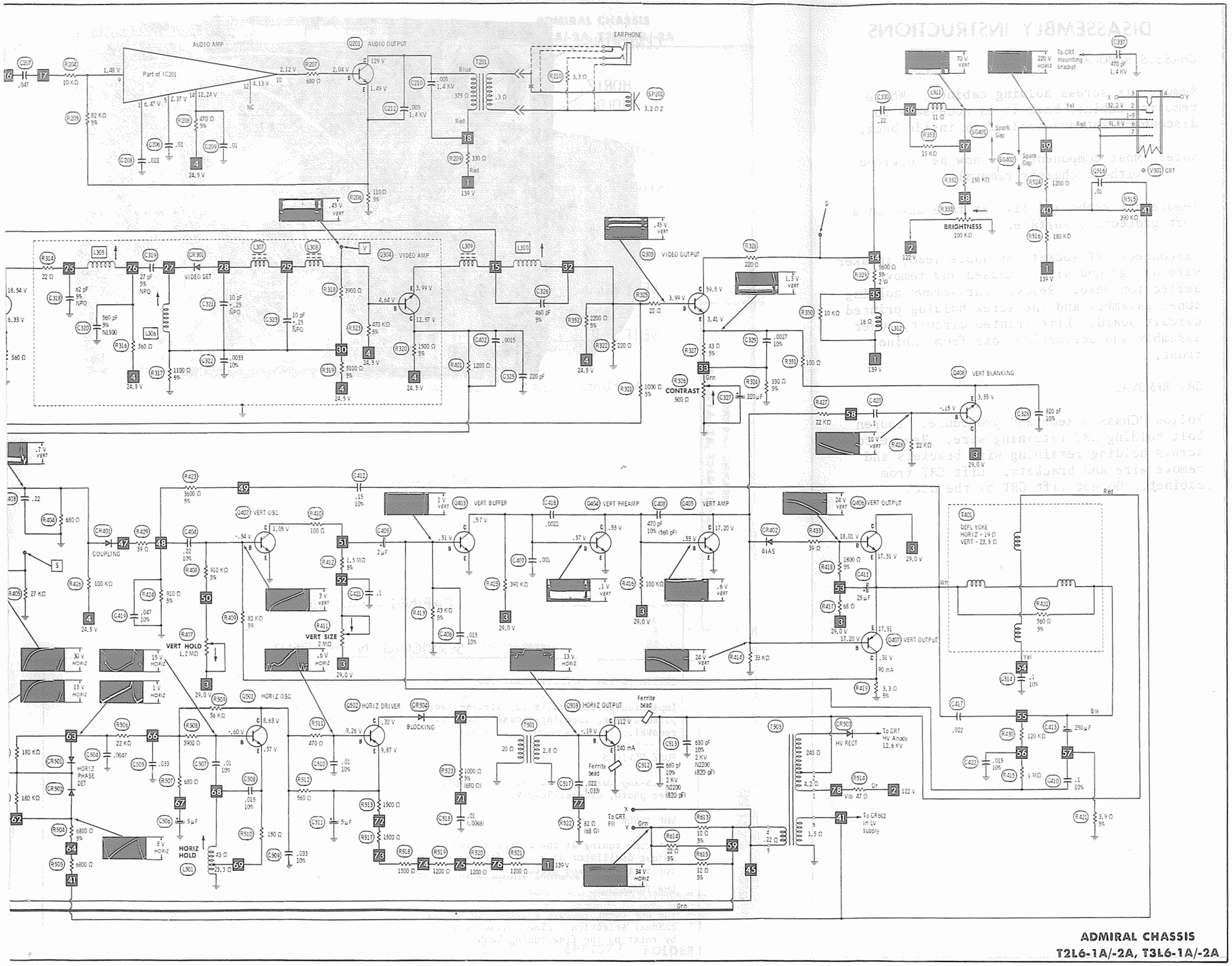
The AGC may be varied by an AGC Delay control

CENTERING

Centering is accomplished by proper adjustment of two magnetic rings located on the yoke rear cover. (See photo, Cabinet-Rear View.)



A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE


AUDIO AMP
Part of IC201
Q201 AUDIO OUTPUT
EARPHONE
SP201
3.2 Ω Z
T201
Blue
Red
VERT BLANKING
VIDEO AMP
VIDEO DET
VIDEO OUTPUT
CONTRAST
500 Ω
BRIGHTNESS
100 KΩ
Spark Gap
To CRT mounting bracket
V301 CRT
VERT OSC
VERT BUFFER
VERT PREAMP
VERT AMP
VERT OUTPUT
COUPLING
BIAS
VERT HOLD
1.2 MΩ
VERT SIZE
2 MΩ
DEFL YOKE
HORIZ = 19 Ω
VERT = 23.5 Ω
HORIZ OSC
HORIZ DRIVER
BLOCKING
HORIZ OUTPUT
HORIZ PHASE DET
HORIZ HOLD
HV RECT
To CRT HV Anode 12.6 KV
To CR602 in LV supply
To CRT FII
Ferrite bead
Grn
Yel
Wht
Blk
Red
Vio
Gr
ADMIRAL CHASSIS
T2L6-1A/-2A, T3L6-1A/-2A

RESISTANCE MEASUREMENTS

MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS

ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
V301	0	180K	FIL	FIL	0	150K	0							
IC201	12K	4400	4000	INF	4400	INF	0	50	82K	INF	4000	2500	4000	1000

ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q201	110	INF	50K (1)		Q307	270	1200	47K		Q406	INF (2)	2700	750	
Q301	330	4000	1500		Q401	680	330K	25K		Q407	INF (2)	33K	3.3	
Q302	560	2000	1100		Q402	0	80K	2M		Q408	340	22K	750	
Q304	220	3700 (2)	2000		Q403	0	43K	390K		Q501	175	110K	50K (1)	
Q305	240	230	55K (1)		Q404	0	390K	100K		Q502	50K (1)	50K (1)	INF (2)	
Q306	600	1200	5600		Q405	0	100K	33K		Q503	0	2.8	50K (1)	

(1) This reading will vary depending upon the condition of the electrolytic in the circuit.
(2) Reading depends upon polarity of meter connections.

TROUBLESHOOTING CHECK CHART

The following chart lists component failures most likely to produce the indicated symptom.

SWEEP

No raster, has sound: HV Rect, CRT

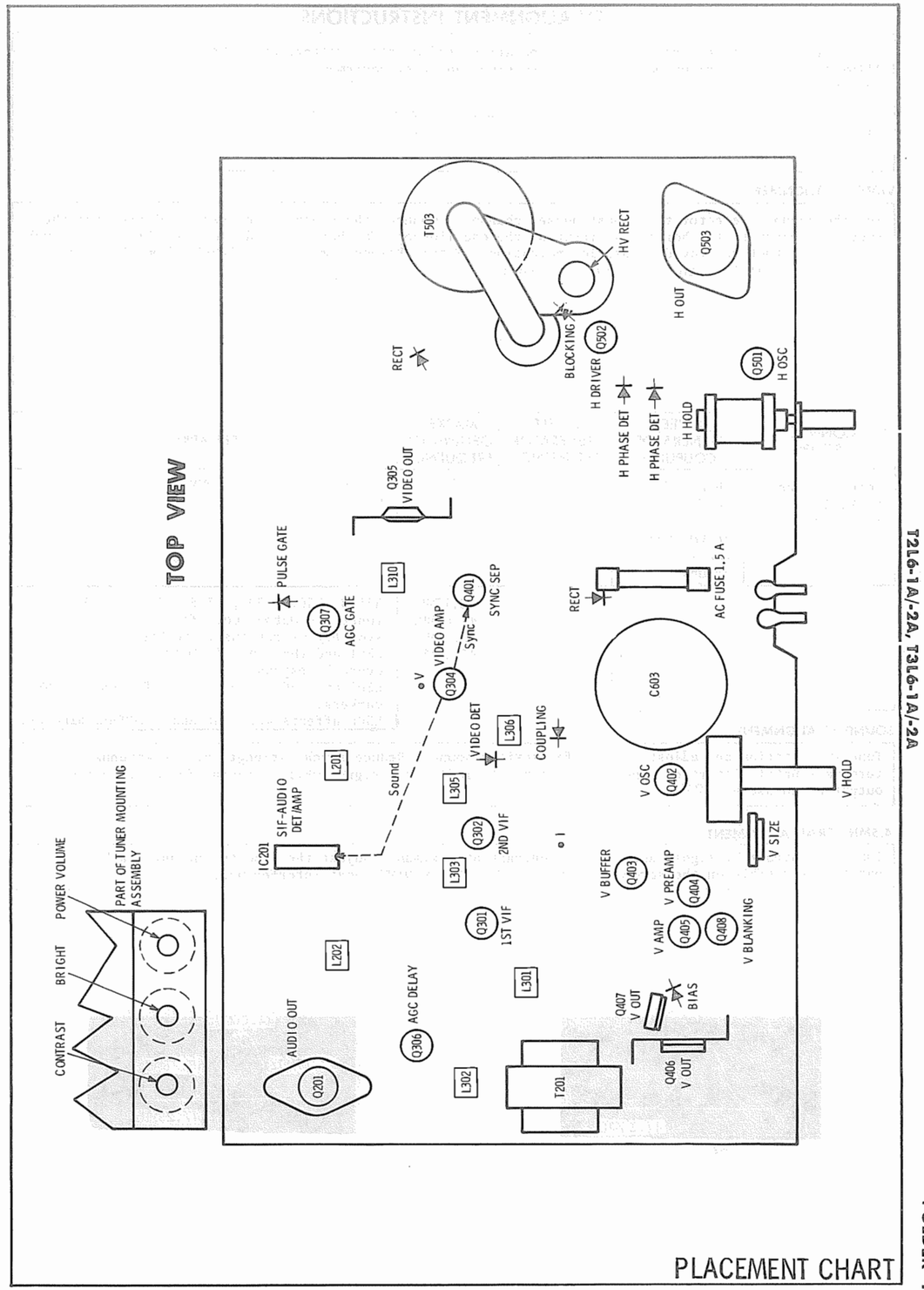
No vert deflection: Vert Osc/Buffer/Driver/Output
Poor vert lin or foldover: Vert Osc/Buffer/Driver/Output
Poor horiz lin or foldover: Horiz Driver/Output
Narrow picture: LV Rect, Horiz Driver/Output
Vert off freq: Vert Osc/Buffer
Horiz off freq: Horiz Osc/Phase Det

SYNC

No vert sync: Sync Sep. Vert Osc
No horiz sync: Sync Seps Horiz Phase Det/Osc
No vert/horiz sync: Sync Sep

PICTURE or SOUND

No pic, no sound, no raster: Fuse, LV Rect, Horiz Osc/Driver/Output
No pic, no sound, has raster: Tuner AGC, Video IFs/Det/Amp
No pic, no sound, has snow: Tuner, AGC, 1st Video IF
No pic, has sound, no raster: Video Output, Blanking, CRT
No pic, has sound, has raster: Video Det/Amp/Output, CRT
Has pic, no sound: Sound Det, Audio Amp/Output
Overloaded picture: AGC, Video Det

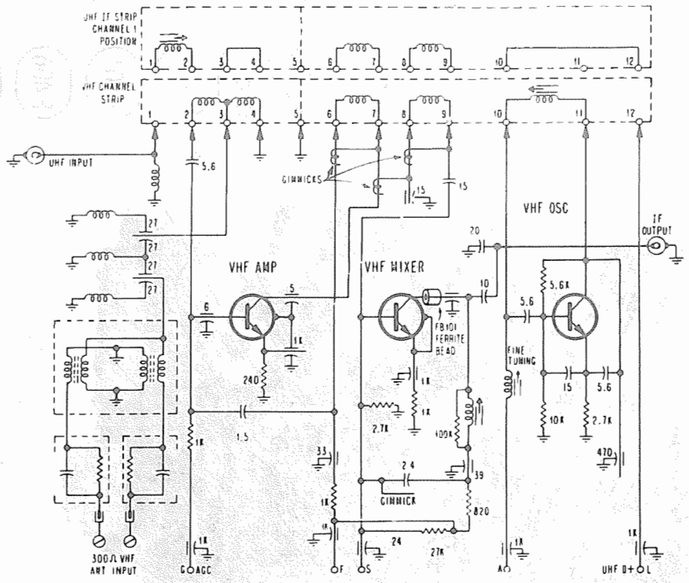


PLACEMENT CHART

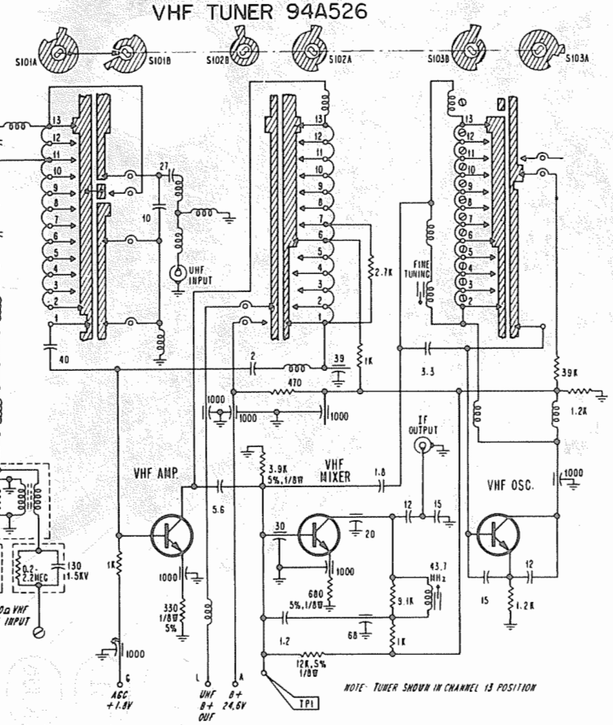
ADMIRAL CHASSIS T2L6-1A/-2A, T3L6-1A/-2A

FOLDER 1

VHF TUNER 94A434



VHF TUNER 94A526



Courtesy of the Manufacturer

SAFETY PRECAUTIONS

IMPORTANT SERVICE NOTES

Operation of receiver outside of cabinet or with back removed involves a shock hazard. Work on these models should only be performed by those who are thoroughly familiar with precautions necessary when working on high voltage equipment.

Exercise care when servicing this chassis with power applied. Many B plus and high voltage RF terminals are exposed which, if carelessly contacted, can cause serious shock or result in damage to the chassis. Maintain interconnecting ground lead connections between chassis escutcheon, picture tube dag and tuner cluster when operating chassis.

These receivers have a "polarized" AC line cord and interlock. The AC plug is designed to fit into standard AC outlets in one direction only. The wide blade connects to the "ground side" and the narrow blade connects to the "hot side" of the AC line. This assures that the TV receiver is properly grounded to the house wiring. If an extension cord must be used, make sure it is of the "polarized" type.

Since the chassis of these receivers are connected to one side of the AC supply during operation, service should not be attempted by anyone not familiar with the precautions necessary when working on this type of equipment.

When it is necessary to make measurements or tests with AC power applied to the receiver chassis, an Isolation Transformer must be used as a safety precaution and to prevent possible damage to transistors. The Isolation Transformer should be connected between the TV line cord plug and the AC power outlet.

Certain HV failures can increase X-ray radiation. Receivers should not be operated with HV levels exceeding the specified rating for their chassis type. The maximum operating HV specified for the chassis used in these receivers is 12.5KV±.5KV at zero beam current with a line voltage of 120V AC. Higher voltage may also increase possibility of failure in HV supply.

It is important to maintain specified values of all components in the horizontal and high voltage circuits and anywhere else in the receiver that could cause a rise in high voltage, or operating supply voltages. Refer to the Parts List and use ONLY exact replacement parts; especially picture tubes, semiconductor devices, transformers, coils, fuses and circuit breakers.

To determine the presence of high voltage, use an accurate, high impedance, HV meter connected between second anode lead and metal chassis frame only. When servicing the High Voltage System, remove static charge from it by connecting a 10K ohm resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord disconnected from chassis.)

The picture tube used in this receiver employs integral implosion protection. Replace with tube of the same type number for continued safety. Do not lift picture tube by the neck. Handle the picture tube only when wearing shatter-proof goggles and after discharging the high voltage completely. Keep others without shatter-proof goggles away.

When removing springs or spring mounting parts from tuner, tuner cluster or chassis, shatter-proof goggles must be worn. Keep others without shatter-proof goggles away.

Some leads in the receiver have been secured with wire ties that are required for safe operation and/or correct performance. If any ties are removed for servicing, it is mandatory that the ties are replaced to secure the leads as originally manufactured. Non-reusable ties should be replaced with approved Part No. 50A102-1. Do not replace with other types.

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.

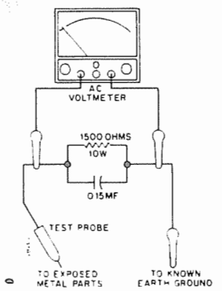
2. Replace all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.

3. To be sure that no shock hazard exists, check for leakage current in the following manner.

Plug the AC line cord into a polarized adaptor (Admiral Part No. 89A116-1). Plug the adaptor into a 120 Volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 ohm, 10 watt resistor paralleled by a .15mf capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher, sensitivity to measure the AC voltage drop across the resistor. (See Diagram). Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

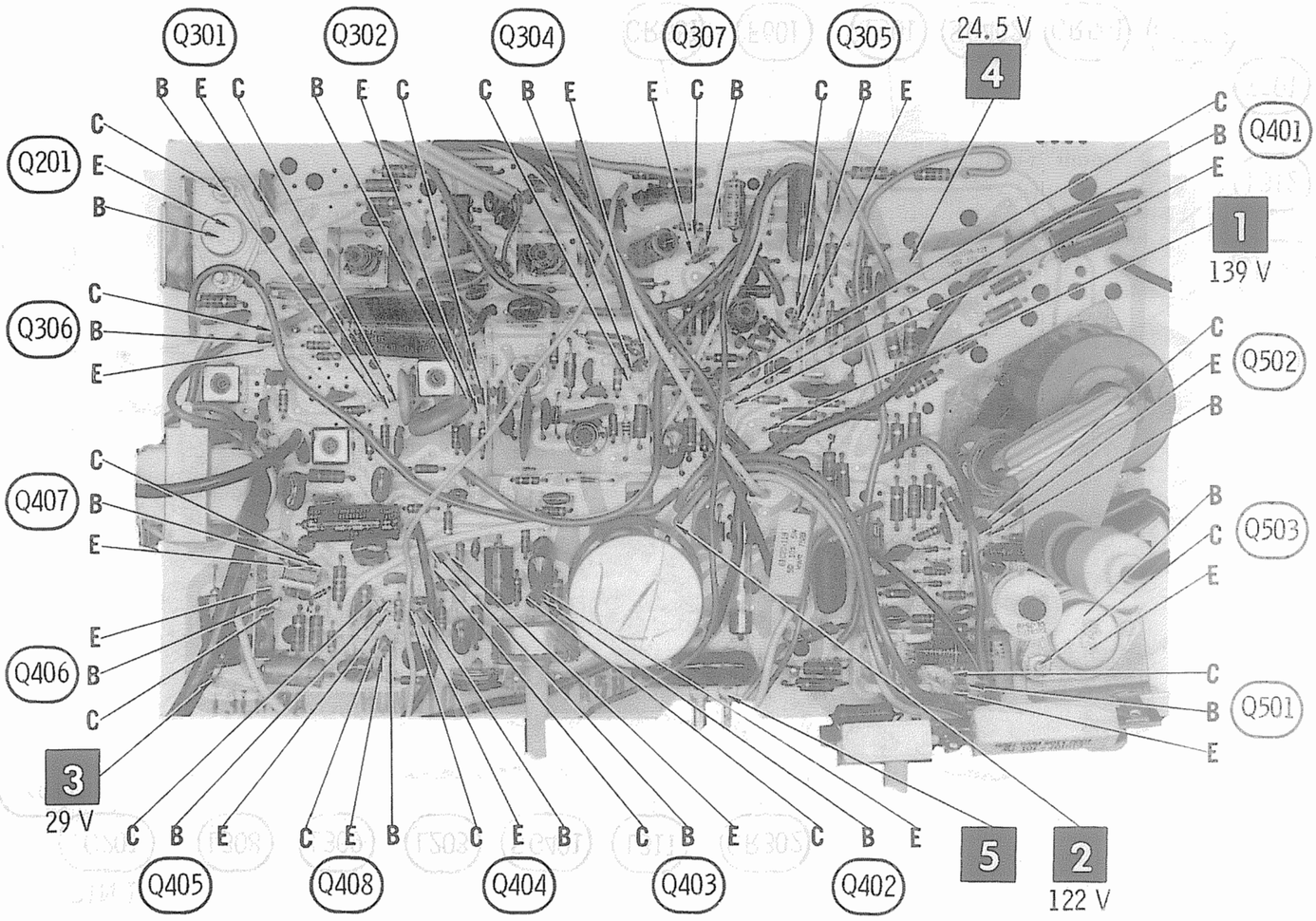
Any reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the receiver to the owner.

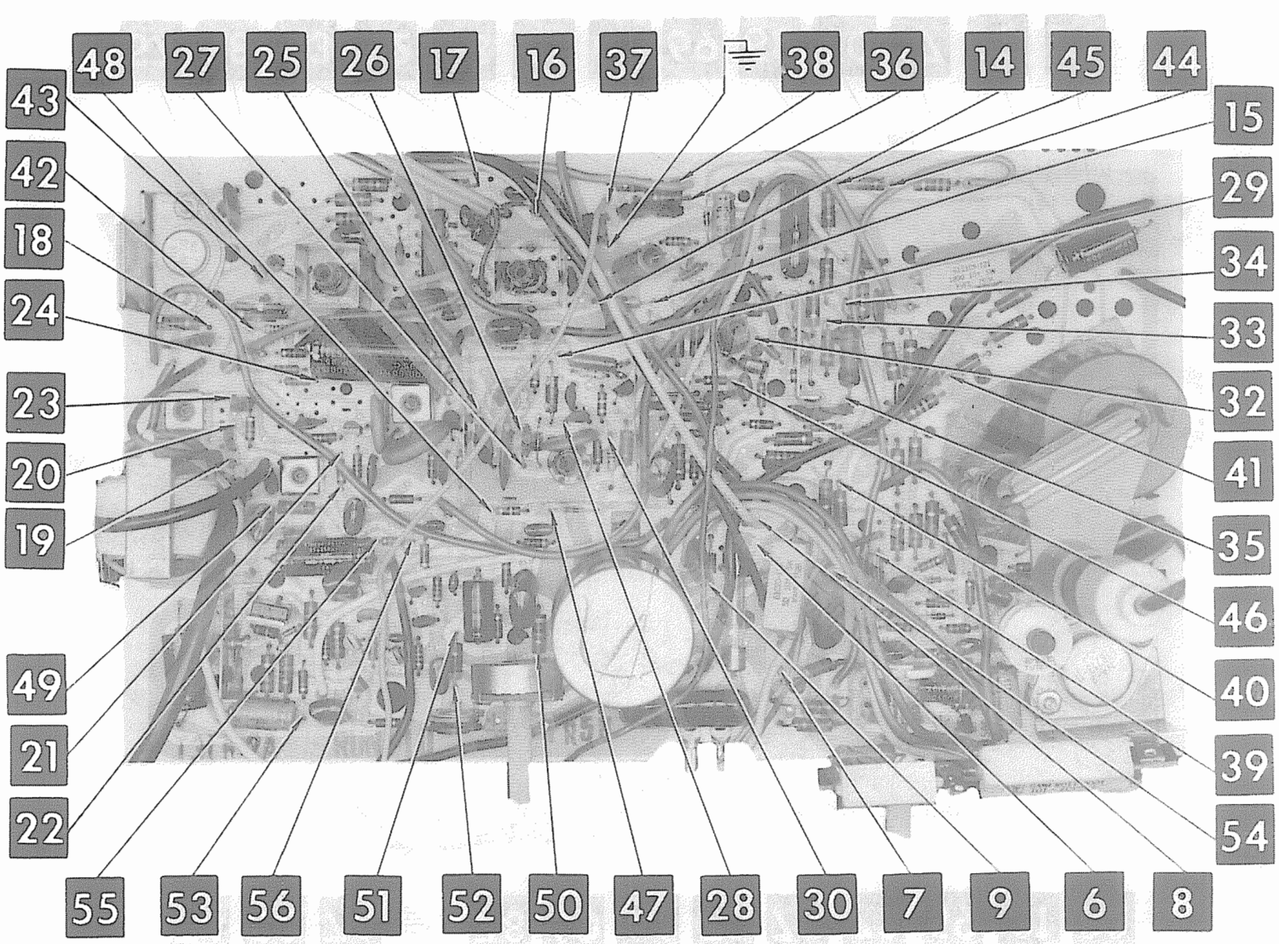
Reverse adaptor in the AC receptacle and repeat the above test.



Courtesy of the Manufacturer

MAIN BOARD





ADMIRAL CHASSIS
T21G-1A/-2A, T31G-1A/-2A
FOLDER 1

MAIN BOARD

TUNER ASSEMBLY

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
	VHF Antenna	69A344-2	
	UHF Antenna	69A304-3	
	AC Power Cord	89A122-31	Polarized
	UHF Tuner	94A523-1	
	UHF Tuner	94A522-1	
	VHF Tuner	94A434-4	
	VHF Tuner	94A526-4	
SG401	Spark Gap	62A2-5	
SG402	Spark Gap	62A2-5	
	Lead	88A106-14	Lead, CRT Anode (Inc. CRT anode and CR503 cathode connectors.)
	Socket	87A164-3	CRT
	Socket	87A168-1	IC201

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	9B618	9B618M	9B622	9B622M	9B638P	9B638PM	12B618	12B618M	12B627	12B627M	12B632	12B632M	12B648P	12B648PM	12B666	12B666M
Cabinet Back	33A1869-7			X	X												
Cabinet Back	33A1869-4	X	X			X	X										
Cabinet Back	33A1868-2											X	X				
Cabinet Back	33A1868-3							X	X					X	X		
Cabinet Back	33A1868-5									X	X						
Cabinet Back	33A1868-24															X	X
Cabinet Front (Less Insert)	34A368-4					X	X										
Cabinet Front (Less Insert)	34A368-12	X	X														
Cabinet Front (Less Insert)	34A368-13			X	X												
Cabinet Front (Less Insert)	34A367-6													X	X		
Cabinet Front (Less Insert)	34A367-13							X	X								
Cabinet Front (Less Insert)	34A367-14									X	X						
Cabinet Front (Less Insert)	34A367-15											X	X				
Cabinet Front (Less Insert)	34A367-22															X	X
Knob, On-Off, Vol., Cont., Bright.	33A1639-4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knob, UHF Channel Selector	33A1973-5					X	X							X	X	X	X
Knob, UHF Channel Selector	33A1973-16	X	X	X	X			X	X	X	X	X	X				
Knob, VHF Channel Selector	33A2069-1					X	X							X	X	X	X
Knob, VHF Channel Selector	33A2069-5	X	X	X	X			X	X	X	X	X	X				
Knob, UHF Fine Tuning	33A2068-2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knob, VHF Fine Tuning	33A2070-1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knob, UHF Indicator	21A305-2	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Earphone	58A4-10	

PARTS LIST AND DESCRIPTION (CONTINUED)
(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA: MFGR. PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C327	220 10V	67A200-221-2	EP15-250	PC250-10	VTT220F10	EV-1140
C333	2 15V	67A200-209-3	EA30-2	WBR2-50	TT15X2	TVA-1141
C335	10 15V	67A200-100-3	EA15-10	WBR10-25	TT15X10	TVA-1145
C405	2 15V	67A200-209-3	EA30-2	WBR2-50	TT15X2	TVA-1141
C409	100 35V	67A200-101-6	EA50-100	WBR100-50	TC35010	TVA-1310
C411	25 25V	67A200-250-4	EA30-25	WBR25-25	TC26C	TVA-1205
C413	250 25V	67A200-251-4	EA30-250	WBR250-25	TC25025B	TVA-1208
C506	5 15V	67A200-509-3	EA15-5	WBR5-50	TT15X5	TVA-1144
C511	5 25V	67A200-509-4	EA30-5	WBR5-50	TT25X5	TVA-1203
C603A	250 165V	67A30-11		CC0129.7A	PFP318.67	PCL-3454.8
B	150 150V					
C	200 150V					
C604	50 50V	67A200-500-7	EA50-50	WBR50-50	MTA50E50	TVA-1308
C606	500 35V	67A200-501-6	EA50-500	WBR500-50	MTA500G50	TVA-1315

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA: CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	15 NPO 10%		DTZ-15	NPO15	CN0415	10TCC-Q15
C202	120 NPO 5%		DTZ-120		CN0312	10TCC-T12
C203	.1 50V			DPMS2P1	EWF1AC10	1PB-P10
C204	.01 50V		CPJ-103	DPMS4S1	EWF1A11C	1PB-S10
C205	15 NPO 10%		DTZ-15	NPO15	CN0415	10TCC-Q15
C206	.01 50V		CPJ-103	DPMS4S1	EWF1A11C	1PB-S10
C207	.047 50V			DPMS2S47	EWF1A147	1PB-S47
C208	.022 50V		CPJ-223	DPMS2S22	EWF1A122	1PB-S22
C209	.01					10TS-S10
C210	.005 1.4KV		DD16-502	HV3-5000		30GA-D50
C211	330 10%		DD-331	GP330	GP333	10TS-T33
C212	.005 1.4KV		DD16-502	HV3-5000		30GA-D50
C301	20 NPO 5%		DTZ-20	NP020	CN0420	10TCC-Q2C
C302	15 NPO 5%		DTZ-15	NP015	CN0415	10TCC-Q15
C303	15 NPO 5%		DTZ-15	NP015	CN0415	10TCC-Q15
C309	.1 50V			DPMS2P1	EWF1A010	1PB-P10
C310	.0012 10%		DD-122		GP212	10TS-D12
C311	.0033 10%					10TS-D33
C313	39 M750 10%				CM7439	10TCW-Q39
C315	.001 10%		DD-102		GP210	10TS-D10
C316	.0015 10%		DD-152		GP215	10TS-D15
C318	62 NPO 5%		DTZ-62	NP062	CN0462	10TCC-Q6B
C319	27 NPO 5%				CN0427	10TCC-Q27
C320	560 M1500 5%		DTX-561		CM15-356	10TCW-T56
C321	10 NPO ±.25	65A402-100-1				10TS-D33
C322	.0033 10%					
C323	10 NPO ±.25	65A402-100-1				
C325	220		DD-221		GP322	10TS-T22
C326	460 5%			CD15FD471J03	SX347	424ME4700J501
C328	820 10%		DD-821	GP320	GP332	10TS-T82
C329	.0027 10%				GP227	10TS-D27
C330	.22 200V			DPMSGP22	EWF6022	6PS-P22
C337	470 1.4KV		DD30-471	HV3-470	3HV347	30GA-T47
C401	.033 50V 10%			DPMS6S33	EWF6133	6PS-S33
C402	.0015		DD-152		GP215	10TS-D15
C403	.22 50V			DPMS2P22	EWF1A022	1PB-P22

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

CAPACITORS (cont)

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C404	.22 50V 10%			DPMS2P22	EWF1A022	1PB-P22
C406	.015 50V 10%		CPJ-153	DPMS4S15	EWF1A115	1PB-S15
C407	.001		DD-102		GP210	10TS-D10
C408	470 10%		DD-471	GP470	GP347	10TS-T47
C410	.1 50V 10%			DPMS2P1	EWF1A010	1PB-P10
C412	.15 50V 10%			DPMS2P15	EWF1A015	1PB-P15
C417	.022 50V			DPMS2P22	EWF1A022	1PB-P22
C418	.0022 50V			DPMS6D22	EWF6222	6PS-D22
C419	.047 50V 10%			DPMS2S47	EWF1A147	1PB-S47
C420	.1 50V			DPMS2P1	EWF1A010	1PB-P10
C421	.1 50V			DPMS2P1	EWF1A010	1PB-P10
C422	.015 50V 10%			DPMS2P15	EWF1A015	1PB-P15
C501	.0012 10%		DD-122		GP212	10TS-D12
C502	.001 50V 10%		CPJ-102	DPMS6D1	EWF1A210	1PB-D10
C503	.022 50V 10%		CPJ-223	DPMS2S22	EWF1A122	1PB-S22
C504	.0047 50V		DD-472	GP4700	GP247	2SS-D47
C505	.033 50V			DPMS6S33	TWF6133	6PS-S33
C507	.01 200V 10%			CD20FD103J03	SX110	
C508	.015 50V 10%		CPJ-153	DPMS4S15	EWF1A115	1PB-S15
C509	.033 50V 10%			DPMS6S33	EWF6133	6PS-S33
C510	.01 50V 10%		CPJ-103	DPMS4S1	EWF1A110	1PB-S10
C512	680 M2200 2KV 10%	65A110-453				
C513	680 M2200 2KV 10%	65A110-453				
C514	.1 200V 10%			DPMS2P1	EWF2010	2PB-P10
C516	.01					10TS-S10
C517	.022 50V		CPJ-223	DPMS2S22	EWF1A122	1PB-S22
C518	.01 50V		CPJ-103	DPMS4S1	EWF1A110	1PB-S10
C601	.22 125VAC	63A100-9				
C602	.001 2KV	65A131-11 (1)	DD30-102	HV3-100C	3HV210	30GA-D10
C605	.1 50V			DPMS2P1	EWF1A010	1PB-P10

(1) Spark Gap

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
R203	Volume/Switch	25K	75A1-225				
R326	Contrast	500	75A1-211	F5-500,SN100	NP-500-V, NML-A-300,TT-2	RU52R,SL37,SN750 or [UA52R,SN750]	BU11,CF50,SS6A
R333	Brightness	100K	75A1-212	F3-100K,SN100		UA15R,SN750	BU11,CF94,SS6A
R339	AGC Delay	400	75A101-35	TSV-500 or T-500	C-501	MTC52L1	X201R501B
R407	Vert Hold	1.2meg	75A191-3	F1-1.5Meg (18), SNK200	A47-1.5Meg (18), RM-3 or [NP-1.5Meg-S (18), NML-A-300]	UA155L (18), SN2000 or [RU155L (18), SN2000] or PTA1254L (18)	BU11,CF18,SS6A
R411	Vert Size	2meg	75A101-61	T-2Meg or TSV-2.2M		MTC26L1	X201R205B

(18) Use original mounting bracket.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R601	5 10% 5W WW	5W-SQ-5	61A20-118
R603	100 10% 5W WW	5W-SQ-100	61A105-101

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R604	100 10% 7W WW	10W-SQ-100	61A107-101
R607	120 10% 5W WW	5W-SQ-125	61A105-121

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L201	Sound Input IF	72A317-1		23A225RPC	
L202	Quadrature	72A317-6			
L203	RF Choke	73A31-19			
L301	Video Input IF	72A415-8			
L302	47.25MHz Trap	72A415-5			
L303	1st Video IF	72A415-5			
L305	2nd Video IF	72A316-4		49A167MPC	
L306	Video Output IF	72A316-8		49A537MPC	
L307	RF Choke	73A31-19			
L308	RF Choke	73A31-20			
L309	RF Choke	73A31-21			
L310	4.5MHz Trap	72A317-9			
L311	Peaking	73A55-13		72F154AP	
L312	Peaking	73A55-25			

COILS & TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				
		MFGR. PART No.	OTHER IDENTIFICATION	MILLER PART No.	THORDARSON PART No.	TRIAD PART No.
L501	Horiz Osc (Hold)	94A480-1	94C480-1			
T401	Yoke 65° Horiz 6.9mH	94A372-4	94C372-4			
	Vert 22.5mH	94A372-4 (1)				
T501	Horiz Driver	72A417-1	72C417-1			
T503	Horiz Output	79A166-4	79D166-4			

(1) Part No. 94A372-3 used with 9" CRT.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	8000	3.2	79A172-1 T79C172-1-B (1)			(1) Number on unit

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP201	3" PM 3.2 ohms	78A211-2	30A05	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F601	Quick-acting Pigtail 1.5A @ 250V	84A7-15		GJV-1 1/2		31801.5		

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

High Voltage Lead	Use BELDEN No. 8869 (17 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor) 8208 (Two-Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8528 (Solid) Available in 12 Colors 8522 (Stranded) Available in 12 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
300-Ohm Antenna Lead-in	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor 8485 (Round) 5-Conductor 8488 (Round) 8-Conductor

PICTURE TUBE

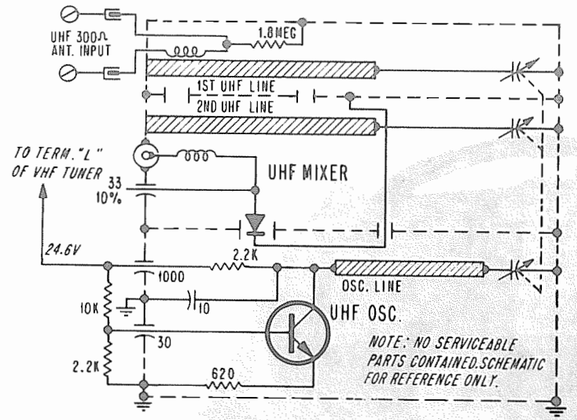
ITEM No.	REPLACEMENT DATA				NOTES
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V301	9VAMP4 12VBJP4		12VBJP4	12VBJP4	Chassis T2L6 Chassis T3L6

SEMICONDUCTORS (Select replacement transistor for best results)

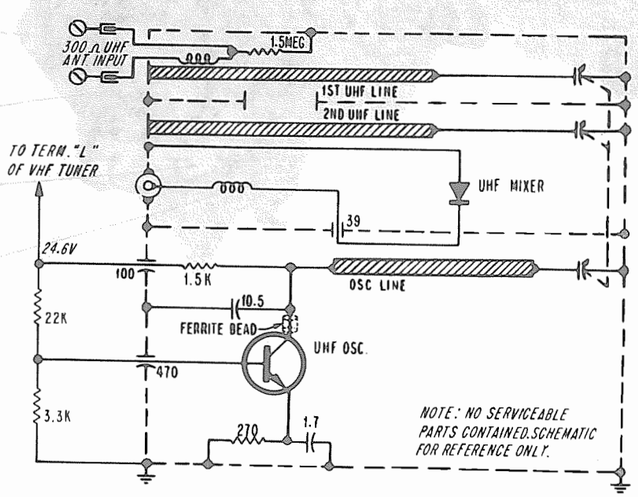
ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
CR301		93A8-1	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR302		93A60-5	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR401		93A64-1	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR402		93A60-6	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR501		93A60-6	GE-300(7)	D200MP(6)	PTC214M(6)	HEPR0602(7)	RE 52(7)	SK3100(7)	RT-218(7)	ECG178MP(6)
CR502		93A60-6								
CR503		93A93-2	GECR-5	JJ1300	PTC211			SK3068	RT-229	ECG503
CR504		93A60-6	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR601		93A52-1	GE-504A	8D4	PTC201	HEPR0053	RE 49	SK3016	RT-215	ECG116
CR602		93A60-7	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-214	ECG116
IC201		56A9-1	GEIC-26		PTC745	HEPS6060P			TVCM-41	ECG748
Q201		57A192-10	GE-12	TR-81	PTC104	HEPS5011	PE 14	SK3131	RT-128	ECG124
Q301		57A139-4	GE-20	TR-24	PTC121	HEPS0020	RE 28	SK3117	RT-187	ECG161
Q302		57A136-4	GE-20	TR-24	PTC121	HEPS0024	RE 10	SK3117	RT-187	ECG108
Q304		57A191-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107	ECG123A
Q305		57A172-8	GE-27	TR-79	PTC110	HEPS3019	RE 44	SK3103	RT-159	ECG190
		57A211-8	GE-27	TR-79	PTC110	HEPS3019	RE 44	SK3103	RT-159	ECG190
Q306		57A185-12	GE-21	TR-20	PTC103	HEPS0019	RE 26	SK3138	RT-126A	ECG159
Q307		57A185-12	GE-21	TR-20	PTC103	HEPS0019	RE 26	SK3138	RT-126A	ECG159
Q401		57A184-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107A	ECG123A
Q402		57A191-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107	ECG123A
Q403		57A191-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107	ECG123A
Q404		57A191-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107	ECG123A
Q405		57A184-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107A	ECG123A
Q406		57A214-12(5)	GE-57	TR-76	PTC167	HEPS5000	RE 21	SK3054	RT-154	ECG291
Q407		57A188-12(5)	GE-58	TR-77	PTC166	HEPS5006	RE 22	SK3083	RT-155	ECG292
Q408		57A184-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107A	ECG123A
Q501		57A191-12	GE-20	TR-33	PTC121	HEPS0015	RE 13	SK3137	RT-107	ECG123A
Q502		57A185-12	GE-21	TR-20	PTC103	HEPS0019	RE 26	SK3138	RT-126A	ECG159
Q503		57A213-11	GE-36	TR-61	PTC146	HEPS5020	RE 29	SK3115	RT-140	ECG163

(5) Half of complementary pair (Q406 and Q406).
(6) Matched pair.
(7) Two required - select matched pair.

UHF TUNER 94A522-1 (Sarkes Tarzian)



UHF TUNER 94A523-1 (GI)

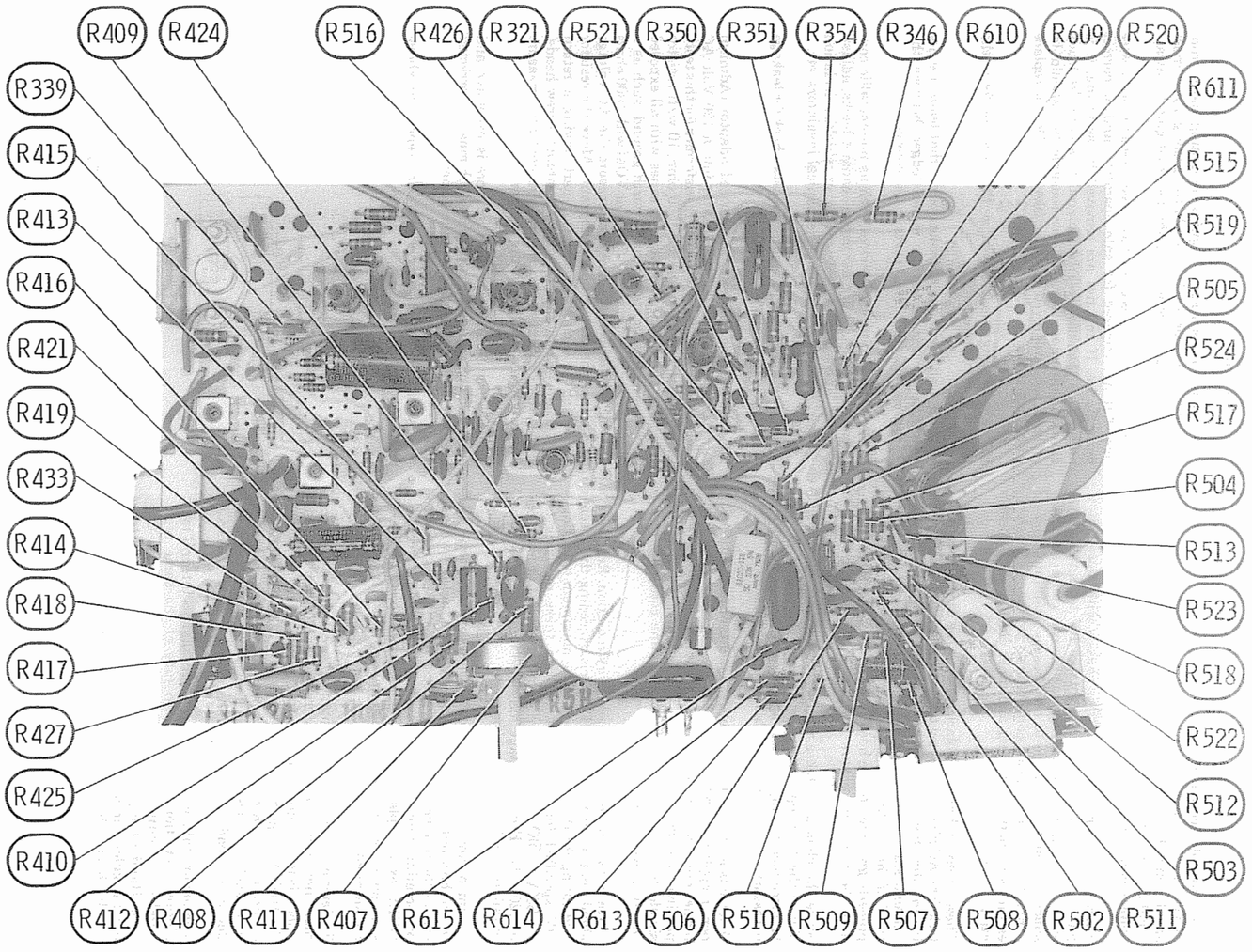


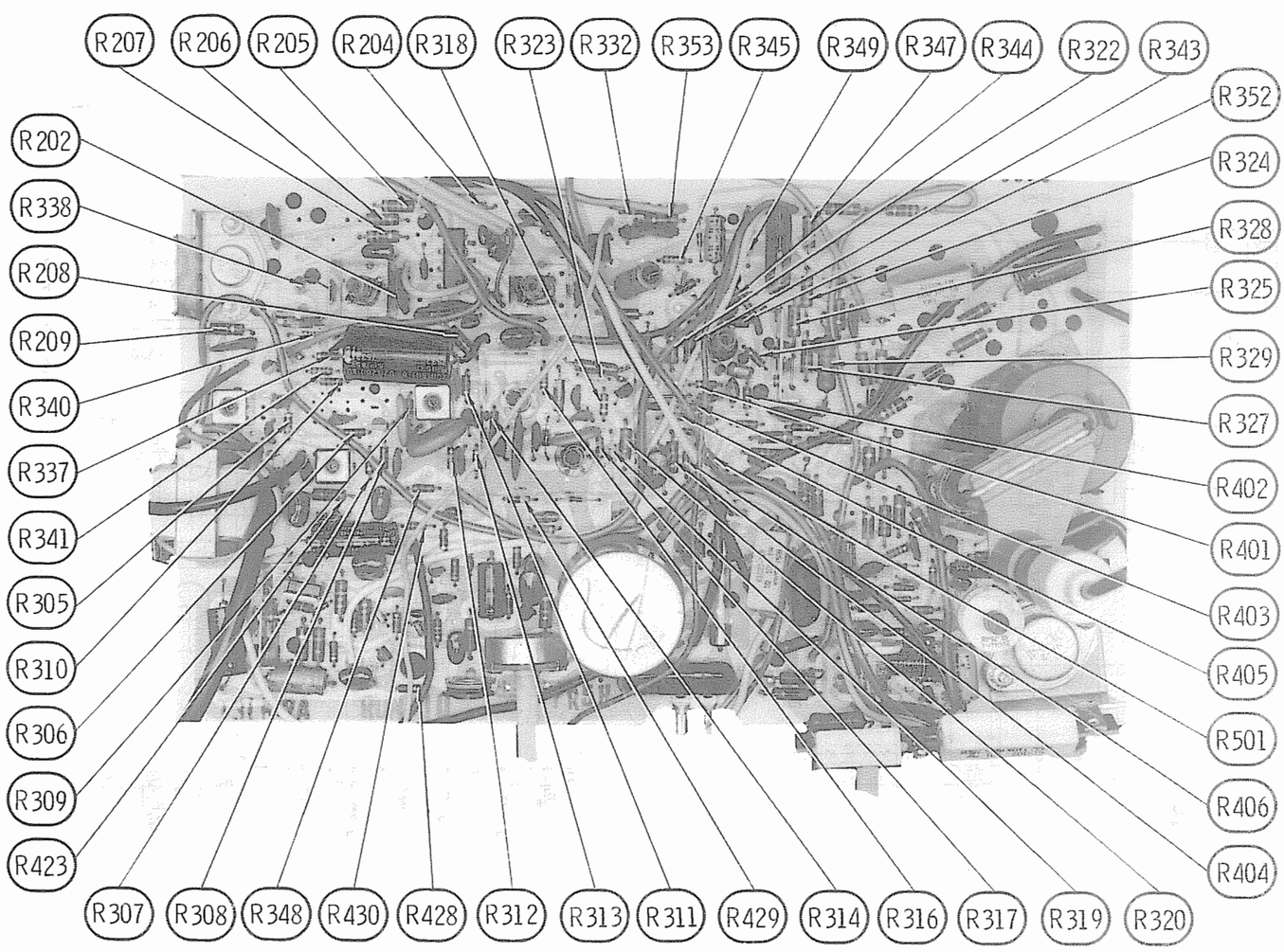
Courtesy of the Manufacturer

MAIN BOARD

MAIN BOARD A Howard W. Sams CIRCUITRACE Photo

MAIN BOARD





MAIN BOARD

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain voltage at 120VAC.
Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: GC ELECTRONICS

L305, L306, L310, L201, L202, VHF Tuner IF Output Coil.9296,9297,9300
L301, L302, L303 9440

VIDEO IF ALIGNMENT

Set the channel selector to highest unused channel. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown. Connect a 3 volt bias to 1, low side to ground.

CONNECT SCOPE	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
Vertical input to V, low side to ground.	Thru .001uF to TP1 or point S on VHF tuner, low side to ground.	44MHz (10MHz Sweep)	47.25MHz	Adjust L302 for MINIMUM. See Fig. 1
"	"	"	42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust L301, L303, L305, L306, and VHF Tuner, IF Output Coil for maximum gain and symmetry of response. See Fig. 2 L301 and VHF Tuner IF Output Coil affects overall response. L303 and L305 affects 44.00MHz and 45.75MHz markers. L306 affects 42.17MHz and 44.00MHz markers.

SOUND IF ALIGNMENT

Tune in a station and adjust L201 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting L202.

4.5MHz TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust L310 for MINIMUM beat interference.

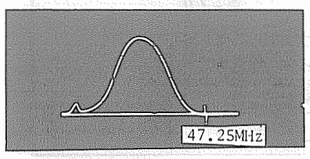


Fig. 1

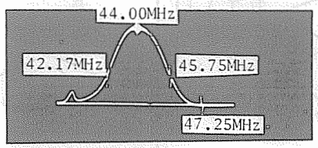


Fig. 2