

The PHOTOFACT[®] Servicer

SET 666



Published for all users of Howard W. Sams' Photofact Folders



NOV 1963

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This Servicer provides you with essential data on other models or special equipment not covered in standard PHOTOFACT folders. The schematics and supplementary data included here will be of valuable help to you in servicing this equipment.

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AUTOMATIC MODEL

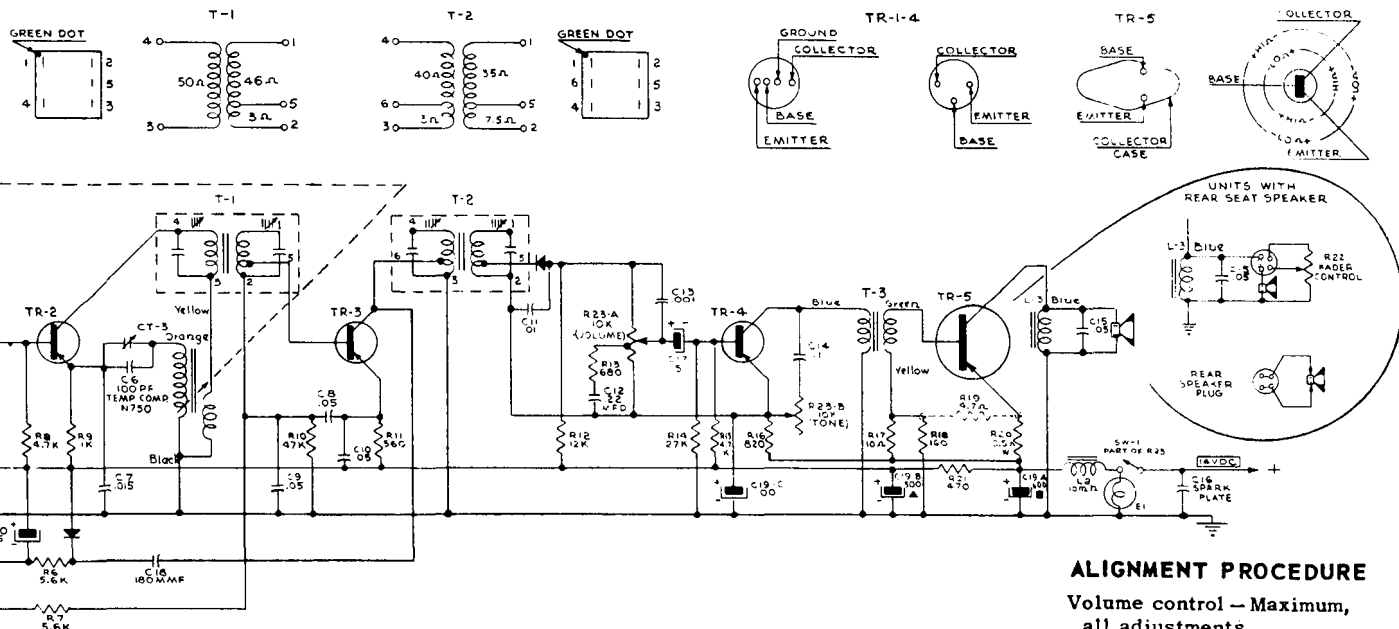
RP-902AT

(FOR 1962 RAMBLER)



Note

1. ALL CONDENSER VALUES IN MFD. UNLESS OTHERWISE NOTED.
2. ALL RESISTORS 1/2 WATT UNLESS OTHERWISE NOTED.
3. R19 USED IN PLACE OF R17 IN SOME MODELS.
4. L-2 ON OUTPUT SIDE 3W-1 IN SOME MODELS.
5. C10 BYPASS TO GROUND IN SOME MODELS.



ALIGNMENT PROCEDURE

Volume control — Maximum, all adjustments.
No signal applied to antenna.
Power input — 14 Volts.
Connect dummy antenna in series with output lead of signal generator.
Connect ground lead of signal generator to chassis.
Repeat alignment procedure as a final check.

The following equipment is necessary for proper alignment:

- Signal generator that will provide the test frequencies as listed, modulated 400 cycles, 30%.
- Non-metallic screwdriver.
- Output meter, (1.8 volt for 1 watt output.)
- Dummy antennas — .1 MFD. 30-30 MMFD.
- For alignment points refer to Schematic Diagram.

Dial Setting	Generator Frequency	Dummy Amt.	Generator Connection	Trimmer Reference	Trimmer Adjustment	Trimmer Function
1) 1610 KC	Push-Button 265 KC	.1 MFD	TR-2 Base	T2 Top & bottom	Maximum	Output I.F.
2) 1610 KC	Push-Button 265 KC	.1 MFD	TR-2 Base	T1 Top & bottom	Maximum	Input I.F.
3) 1610 KC	1610 KC	.1 MFD	TR-2 Base	CT-3	Maximum	Oscillator
4) Tune in signal from generator	1610 KC	30 MMFD to Ground 30 MMFD in Series	Ant. lead	CT-2	Maximum	RF Stage
5) Tune in signal from generator	1610 KC	30 MMFD to Ground 30 MMFD in Series	Ant. lead	CT-1	Maximum	Antenna

Note: After installing radio in car, re-trim Antenna Compensator CT-1 for Maximum Sensitivity.

COURTESY OF
AUTOMATIC RADIO MFG. CO., INC.

AUTOMATIC MODEL RP-902AT

**IMPORTANT FILING NOTICE**

The TV Folder for this envelope will be found among the first folders in this complete Set of folders.

Merely insert the corresponding folder on this model in this envelope to retain proper filing and indexing order.

ADMIRAL
CHASSIS 21T3UADMIRAL
CHASSIS 21T3U

MODEL STF33T41

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed.

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DATE 11-63

SET 666 FOLDER 1



PHOTOFACT® Folder

with CIRCUITRACE™

ADMIRAL
CHASSIS 21T3U

MODEL STF33T41

IMPORTANT FILING NOTICE

Some models covered by this PHOTOFACT Folder employ chassis in addition to the TV chassis. PHOTOFACT Folders covering these additional chassis are packaged immediately behind this Folder and should be filed with this Folder in the yellow filing jacket provided. For specific coverage see index below.

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AM-FM Ch. 9M1 SET 666, FOLDER 1-A

TRADE NAME	ADMIRAL	Models	Chassis	AM-FM Radio Chassis
		STF33T11, 12, 29, 31, 41, 49	21T3U	9M1 Run 10 thru 12
MANUFACTURER	Admiral Corp. National Service Div., 903 Morrissey Drive, P.O. Box 845, Bloomington, Illinois			
TYPE SET	Television Receiver with AM-FM Tuner with Multiplex			
TUBES	VHF - Seventeen, UHF - Eighteen			
POWER SUPPLY	110-120 Volts AC, 60 Cycles			
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)			
			RATING	170 Watts, 1.6 Amp. @ 117 Volts AC

FOR SERVICE INFORMATION ON RECORD CHANGER V-M 1587 — SEE SIMILAR UNIT — PHOTOFACT SET 527
FOLDER 14

SERVICING IN THE FIELD

SAFETY GLASS

The safety glass is an integral part of the picture tube.

FUSE OR FUSE DEVICE

A 1" #26 fuse wire is used for filament protection. (For location, see M2 in photo "Chassis - Bottom View".)

A Circuit Breaker is used for low voltage power supply protection, and may be reset by depressing the reset button. (See "Tube Placement Chart" for location.)

VHF OSCILLATOR ADJUSTMENT

The fine tuning mechanically engages osc. slug for adjustment (one slug for each channel).

AGC

The AGC may be varied by means of an AGC control. (See "Tube Placement Chart" for location.)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal Stabilizer Coil. (See "Tube Placement Chart" for location.)

WIDTH

The width may be varied by adjusting a metallic sleeve, located between the yoke and the picture tube neck in or out of the yoke.

FOCUS

The focus may be varied by connecting the lead from pin 6 of the picture tube to various voltage points. (For location, see "Cabinet - Rear View".)

CENTERING

Centering is accomplished by 2 magnetic rings located on yoke rear cover.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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MA316 10 9 8 7 6 5 4 3 2 1 0

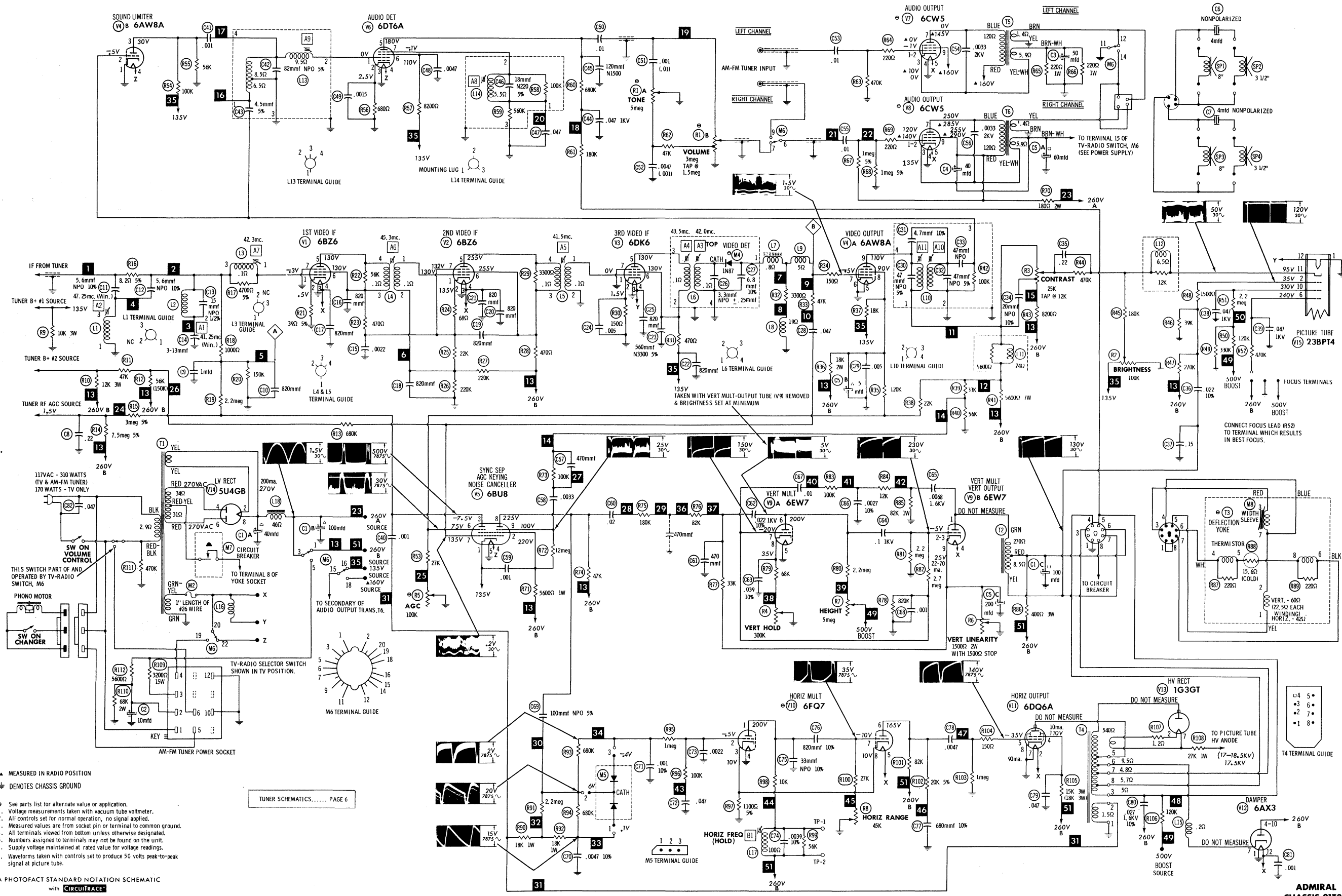
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DATE 11-63

SET 666 FOLDER 1





▲ MEASURED IN RADIO POSITION
 ▼ DENOTES CHASSIS GROUND

See parts list for alternate value or application.
 1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal to common ground.
 4. All terminals viewed from bottom unless otherwise designated.
 5. Numbers assigned to terminals may not be found on the unit.
 6. Supply voltage maintained at rated value for voltage readings.
 7. Waveforms taken with controls set to produce 50 volts peak-to-peak signal at picture tube.

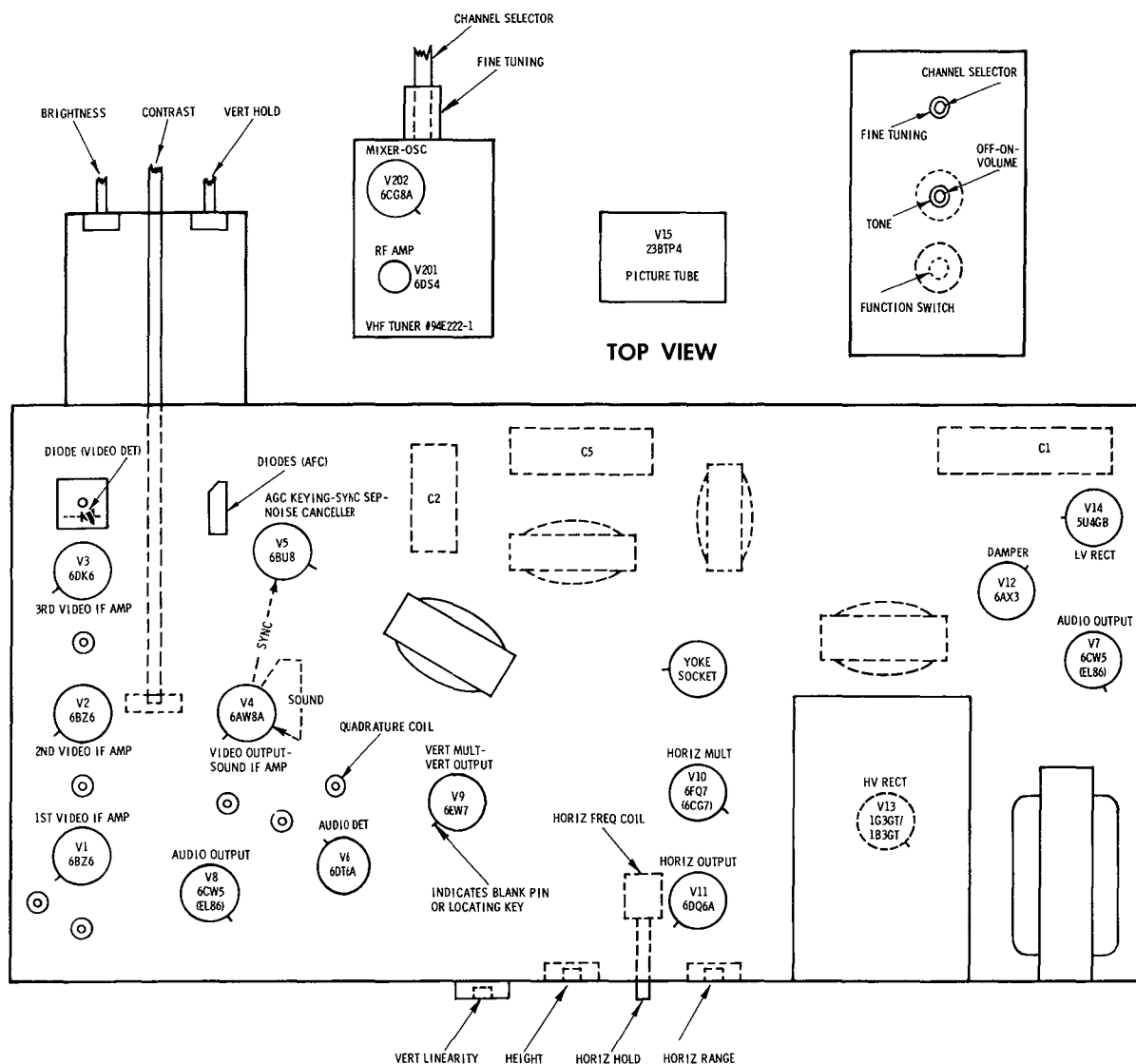
A PHOTOFAC STANDARD NOTATION SCHEMATIC
 with CIRCUTRACE

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TUNER SCHEMATICS..... PAGE 6

ADMIRAL
CHASSIS 21T3U

TUBE PLACEMENT CHART



ADMIRAL
CHASSIS 21T3U

TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

POWER SUPPLY FAILURE

No raster, no sound Filament Fuse M2, Circuit Breaker M7, V14

SWEEP FAILURE

No raster, has sound V10, V11, V12, V13, V15

No vertical deflection V9

Poor vert. linearity or foldover V9

Poor horiz. linearity or foldover V10, V11, V12

Narrow picture V10, V11, V12, V14

Vert. off freq. V9

Horiz. off freq. AFC Diode M5, V10

LOSS OF PICTURE OR SOUND

No pic, no sound, has raster V1, V2, V3, Video Det. M4, V4

No pic, no sound, has snow V201, V202, V1

No pic, has sound, has raster V4, V15

Has pic, no sound V4, V6, V7, V8

Overloaded picture V5

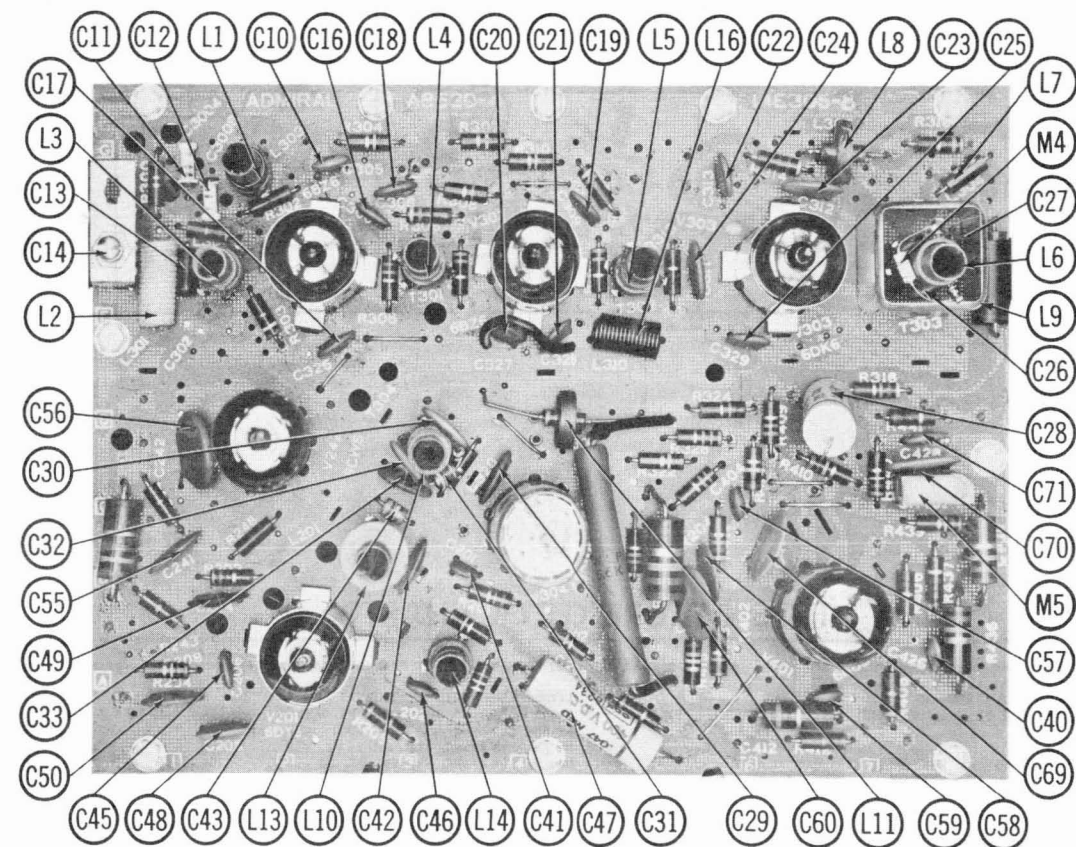
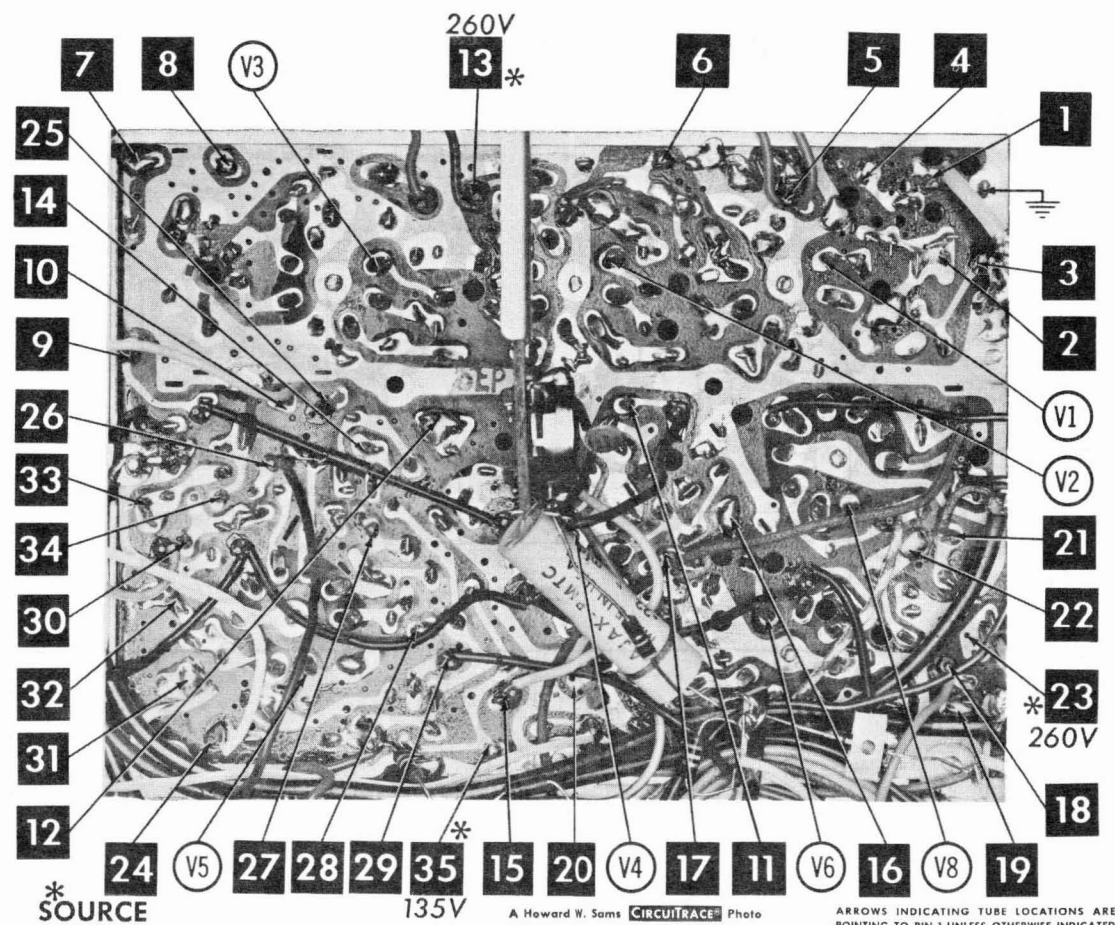
SYNC FAILURE

No vert. sync V5

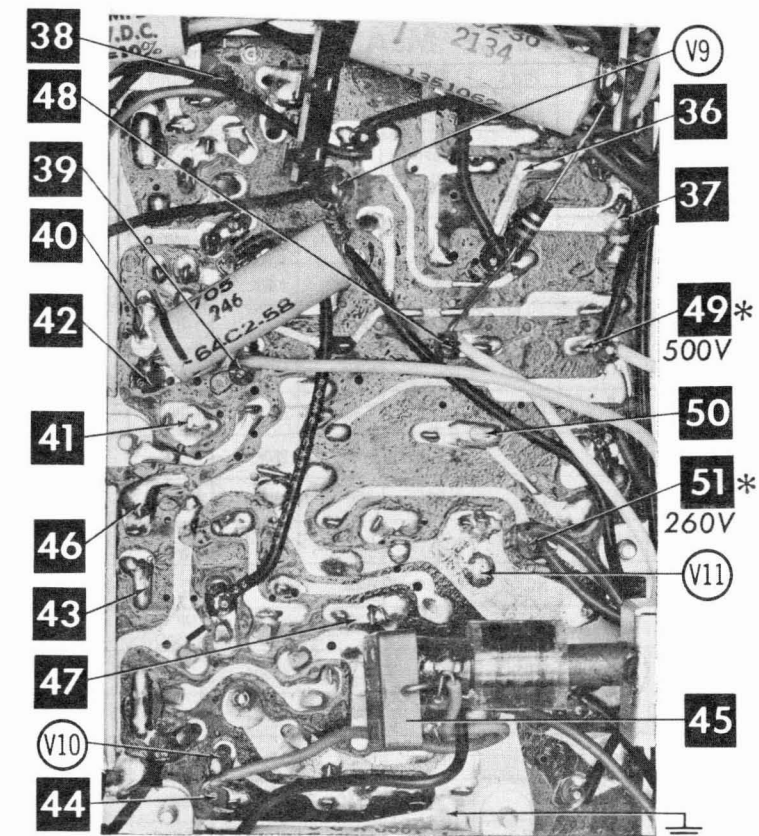
No horiz. sync V5

No vert. or horiz. sync V5

FOLDER 1



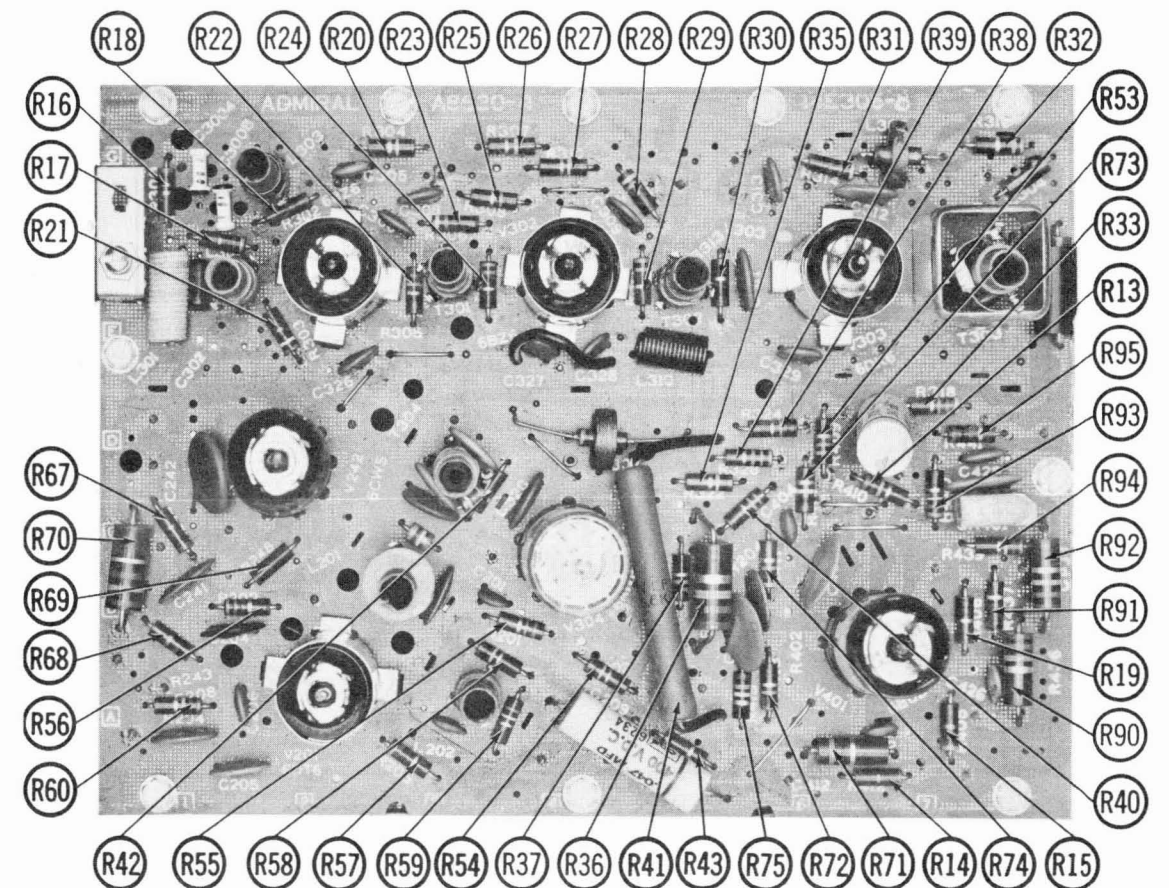
MAIN PRINTED BOARD



*SOURCE

A Howard W. Sams **CircuitTrace**® Photo
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

SWEEP PRINTED BOARD



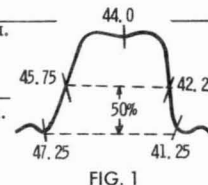
ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 GENERAL CEMENT #9087, 8290, 8868 WALSCO #2525, 2528, 2587
A2 thru A11 GENERAL CEMENT #9302, 8606L, 8869 WALSCO #2511, 2544, 2588
Mixer Plate Coil .. GENERAL CEMENT #9302, 9296, 9297 WALSCO #2511, 2546, 2547

VIDEO IF ALIGNMENT

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 those shown. Connect a variable bias supply to the IF AGC line (point A) and adjust to obtain a response curve which shows no indication of overload. Disable Oscillator section of Mixer-Osc. Set the Channel Selector to any non-interfering channel.

INDICATOR	GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
1. Connect DC probe of a VTVM thru a 47K resistor to point B. Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		41.25MC 47.25MC	A1 A2	Adjust for MINIMUM.
2. Connect DC probe of a VTVM thru a 47K resistor to point B. Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		42.0MC 43.5MC 41.5MC 45.3MC 42.3MC 45.75MC	A3, A4, A5, A6, A7, Mixer Plate Coil	Adjust for maximum.
3. Connect vertical input of a scope to point B. Low side to ground.	Connect high side to pin (grid) of V. Low side to ground.	44MC (10MC Sweep)			Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
3. Connect vertical input of a scope to point B. Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	41.15MC 42.25MC 44.0MC 45.75MC 47.25MC		Check for maximum gain and symmetry of response with markers as shown in Figure 1. In order to obtain a proper response, it may be necessary to slightly retouch A3, A4, A5, A6, A7, and Mixer Plate Coil.

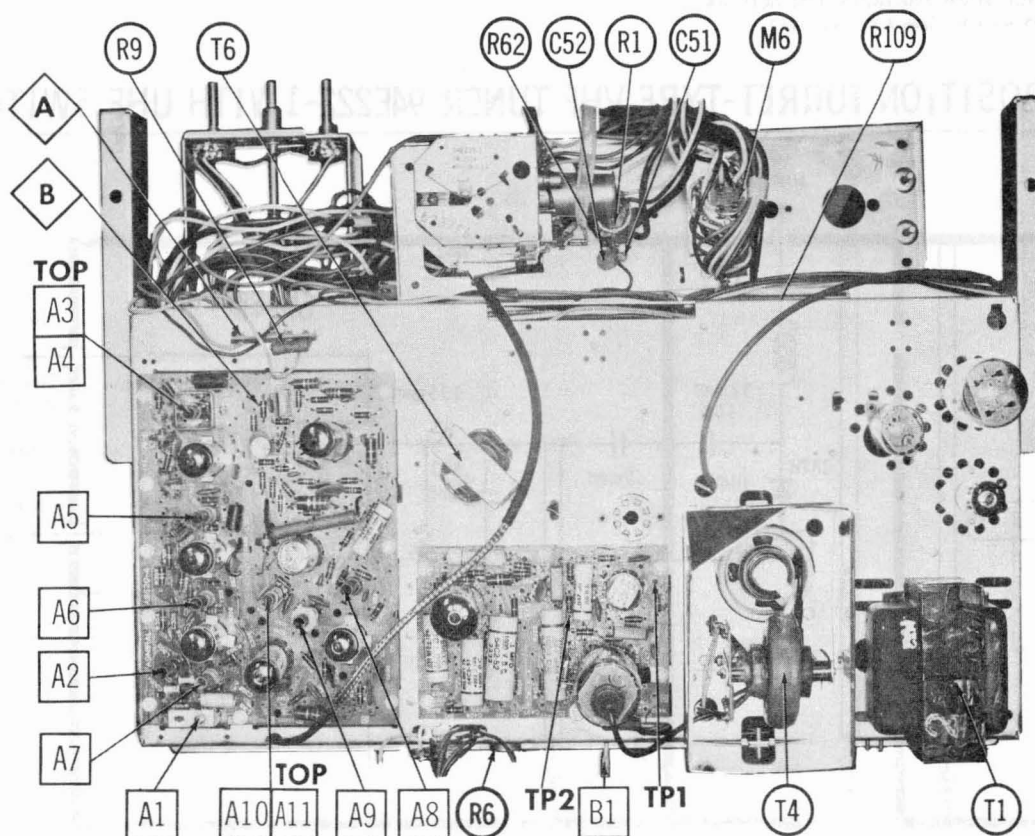


SOUND IF ALIGNMENT

Tune in a station and adjust A8 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce signal while aligning for undistorted output by adjusting A8, A9, and A10.

4.5 MC 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 A11 for MINIMUM beat interference.



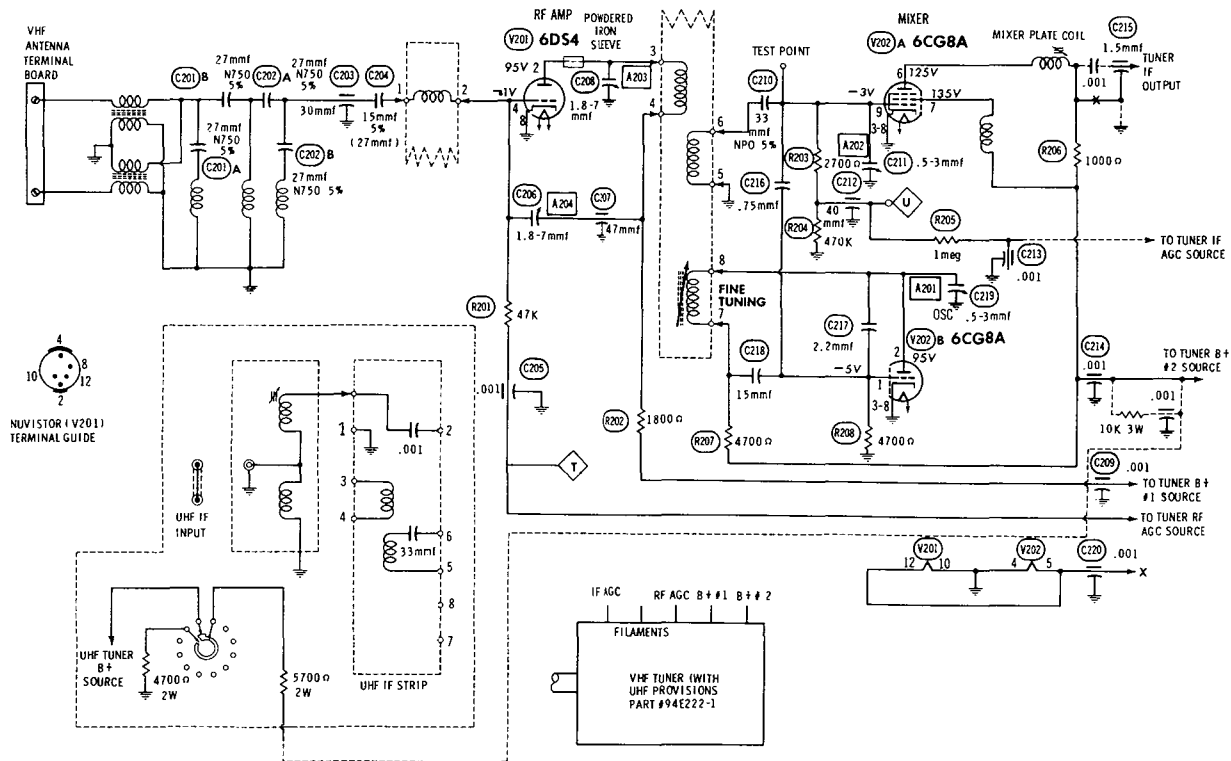
TP1 HORIZ STABILIZER COIL (PLATE SIDE)
TP2 HORIZ STABILIZER COIL (B+ SIDE)

CHASSIS—TOP VIEW

SET 666 FOLDER 1

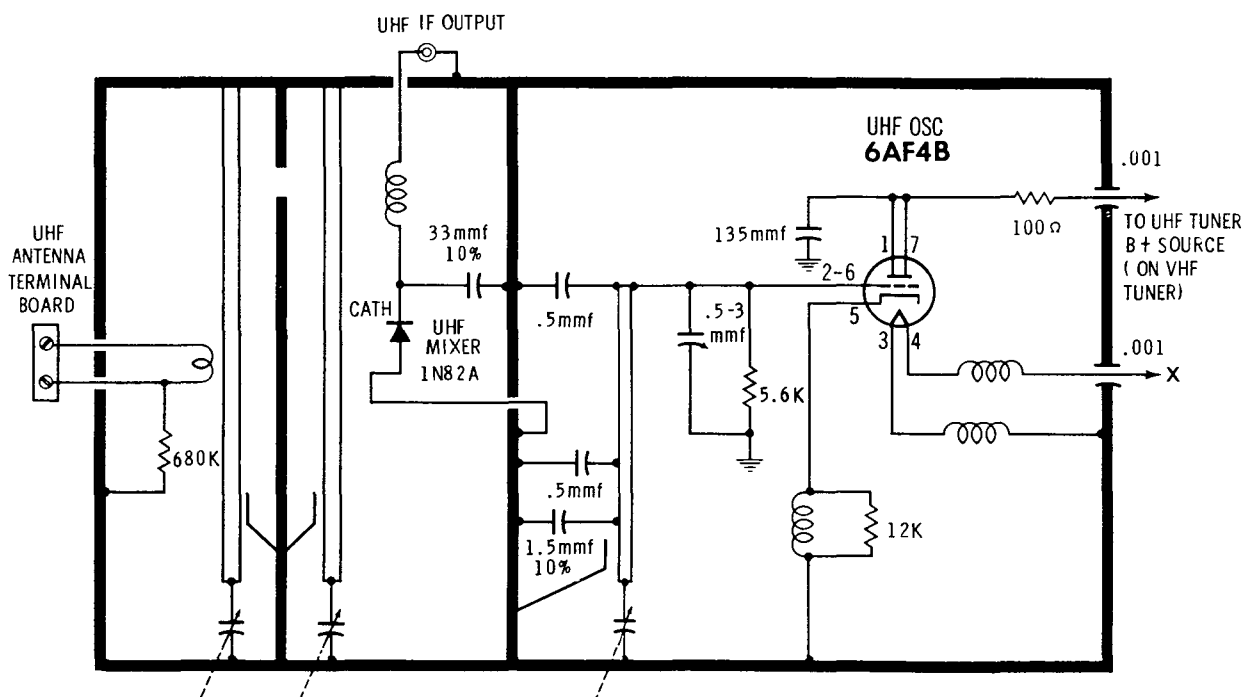
ADMIRAL
CHASSIS 21T3U

FOLDER 1



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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13 POSITION TURRET-TYPE VHF TUNER 94E222-1 WITH UHF SWITCH



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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UHF TUNER 94D204-3

PARTS LIST 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.

TUBES

◆ AMPEREX ◆			◆ GENERAL ELECTRIC ◆			◆ RCA ◆			◆ RAYTHEON ◆			◆ SYLVANIA ◆				
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE			ITEM No.	USE		TYPE	
V1	1st Video IF Amp.		6BZ6			V7	Audio Output		6CW5 (EL86) *			V11	Horiz. Output		6DQ6A	
V2	2nd Video IF Amp.		6BZ6			V8	Audio Output		6CW5 (EL86) *			V12	Dampers		6AX3	
V3	3rd Video IF Amp.		6DK6			V9	Vert. Mult. - Vert. Output		6EW7			V13	HV Rectifier		1G3GT/1B3GT	
V4	Video Output - Sound IF Amp.		6AW8A			V10	Horiz. Mult.		6FQ7 (6CG7) *			V14	LV Rectifier		5U4GB	
V5	AGC Keying - Sync Sep. - Noise Canceller		6BU8			V11	Horiz. Output		6DQ6A							
V6	Audio Detector		6DT6A			V12	Dampers		6AX3							

PICTURE TUBE

ITEM No.	REPLACEMENT DATA					NOTES
	ADMIRAL PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V15	23BTP4	23BTP4/XP4/YP4 ①	23BTP4 ①	23BRP4 ①	23BTP4 ②	① Aluminized ② Silver Screen "85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ADMIRAL PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MAILORY PART No.	SPRAGUE PART No.
C1A	40	400	6TD15-345	AFH4-08-50	B0483	XC4-42	TMD-2700	WP-4227	TV18-3699 *
B	100	400			BR100-45Q		TD-100-45Q	TC-795	
C	100	400							
C2	10	400	6TD4-58	PRS1720	BR10-450	QT1-6	TD-10-450	TC72	TVA-1705
C3	50	15	6TC49-3	PTT-72	BR50-25	QT1-15	TD-50-25	TC29	TVA-1206
C4	40	200	6TD4-21	PRS1580	BR40-250	QT1-14	TD-40-250	TC58	TVA-1511
C5A	80	200	6TD15-351	AFH3-84-85	C0636	XC3-5.1	TMD-2280	FP315.1	TV18-3469 *
B	5	200			BR200-15Q		TD-200-15Q		
C	200	50							
C6	4	16 NP	6TC40-2	PRS7405	BBR4-150	NPQT-1		TCN504	TVANB1202.2*
C7	4	16 NP	6TC40-2	PRS7405	BBR4-150	NPQT-1		TCN504	TVANB1202.2*

* Not normally in distributor's Stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA					
				AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART No.	MAILORY PART No.	SPRAGUE PART No.
C8	.22	200V		P288N-22		PM2P22	2DP-4-224	GEM-2022	2TM-P22
C9	1mfd	100V		P288N-1.0		WMF1W1	1DP-5-105	PVC11	2TM-M1
C10	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C11	5.6	NPO 10%	#65D8-164						10TCC-V56
C12	5.6	NPO 10%	#65D8-164						10TCC-V56
C13	15	NPO 2 1/2%	#65D8-140						
C14	3-13		#68A38-7						
C15	.0022			BPD-0022	DD-222	LA10D22-C4	CCD-222	B-222	10TS-D22
C16	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C17	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C18	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C19	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C20	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C21	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C22	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C23	560	N3300 5%	#65D10-159						
C24	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C25	820			DI-820	DD-821	LA10T82-C4	CCD-821	B-382	10TS-T82
C26	3.3	NPO ±.25mmf			TCZ-3R3			CNO-533	10TCC-V33
C27	6.8	10%	#65B41-141						
C28	.047	400V		P488N-047	DD-503	CUB4847	4DP-3-473	GEM-4147	4TM-847
C29	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C30	47	NPO 5%			DTZ-47	C10Q47C		CNO-447	10TCC-Q47
C31	4.7	10%							
C32	47	NPO 5%			DTZ-47	C10Q47C		CNO-447	10TCC-Q47
C33	47	NPO		NPO-DI 47	DTZ-47	C10Q47C	CCTO-470	CNO-447	10TCC-Q47
C34	20	NPO 10%		NPO-DI 20	DTZ-20	C10Q20C	CCTO-200	CNO-422	10TCC-Q20
C35	.22	400V		P488N-022		PM4P22	4DP-5-224	GEM-4022	4TM-P22
C36	.022	800V 10%		BE6822		PM6S22	6DP-2-223	PVC6122	6TM-S22
C37	.15	800V		P688N-15		PM6P15	6DP-5-154	GEM-6015	6TM-P15
C38	.047	1000V		PI088N-047	DD-503	PKM10S47	16DP-5-473	GEM-10147	10TM-S47
C39	.047	1000V		PI088N-047	DD-503	PKM10S47	16DP-5-473	GEM-10147	10TM-S47
C40	.001	1000V		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C41	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C42	82	NPO 5%			DTZ-82			CNO-482	10TCC-Q82
C43	4.5	5%	#65B40-57						
C44	.047	1000V		PI088N-047	DD-503	PKM10S47	16DP-5-473	GEM-10147	10TM-S47

SET 666 FOLDER 1

PARTS LIST AND DESCRIPTION (CONTINUED)

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.

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C45	120 N1500	#65D-110-211							
C46	18 N220 5%	#65D10-140							
C47	.047 400V		P488N-047	DD-503	CUB4547	4DP-3-473	GEM-4147	10TCR-Q18	
C48	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	4TM-S47	
C49	.0015		BPD-0015	DD-152	LA10D15-C4	CCD-152	B-215	5HK-D47	
C50	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	10TS-D15	
C51	.001	(.01) †	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-S10	
C52	.0047	(.001) †	BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D10	
C53	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C54	.0033 2000V		HVD-30-3300	DD30-332			2HV-233	30GA-D33	
C55	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C56	.0033 2000V		HVD-30-3300	DD30-332			2HV-233	30GA-D33	
C57	.470		BPD-0047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47	
C58	.0033		BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33	
C59	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C60	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20	
C61	.470		BPD-0047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47	
C62	.022 1000V 10%								
C63	.039 600V 10%								
C64	.1 1000V								
C65	.0088 1600V								
C66	.0027 10%								
C67	.01 600V								
C68	.001								
C69	100 NPO 5%								
C70	.0047 10%								
C71	.001 10%								
C72	.047 200V								
C73	.0022								
C74	.0039	10%							
C75	33 NPO 10%								
C76	820 10%								
C77	680 10%								
C78	.0047								
C79	.047 400V								
C80	.027 1600V 10%								
C81	.001								
C82	.047 600V								

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

Admiral Part Number

† Alternate Part Number

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			ADMIRAL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	5meg	75C45-11 ①	F2-5meg,			
B	Volume, Switch	3meg, 1.5meg Tap		R16-3meg, FF8012, RP111 ②			
R2	Brightness	100K	75D13-110	AB-36, AK-33 or (F3-100K, SFS212)	A47-75K-V RS-3/16	B17-128, SK9	UA15R, SD3600 or (U40, DS-37)
R3	Contrast	25K, 12K Tap	75D20-128				
R4	Vertical Hold	300K	75D13-111	AB-50, AK-33 or (F1-250K, SFS212)	A47-300K-S, RS-3/16	B11-131, SK9	UA254L, SD3500 or (RU35L, SL38, IS1437) or (U48, DS-37)
R5	AGC	100K	75D20-118	TT-40 or (F3-100K, SN010, AK-38)	B47-100K-S	B17-128, TM4	PTA15L or (TA15L) or (UA15R, SN1000)
R6	AGC	200K	75D20-143 ③	TT-46 or (F3-250K, SN010, AK-38)	B47-200K-S	B11-129, TM4 or (BU11, CF14, SS6) *	TA184L or (RU25L, SL37, SN1000) or (UA254R, SN1000)
R7	Vertical Linearity	1500Ω 300Ω Stop (2W)	75B81-1	WN-152 ④ or WW-152	39-1500 ④	112-1500 ④	R1500L ④ or (VW1P5K ④) or (FL-2K ④)
R8	Height	5meg	75D20-119	TT-87 or (F1-5meg, SN010, AK-38)	B47-5meg-S	HLC-5	PTA56L or (TA56L) or (RU56L, SL37, SN1000)
R9	Horizontal Range	45K	75D20-13	TT-31 or (F1-60K, SN010, AK-38)	B47-50K-S	B11-123, TM4 or (BU11, CF12, SS6) *	PTA54L or (TA54L) or (RU54L, SL37, SN1000)

① Some models may use Part #75B45-11.

② Cut shaft to proper length.

* "SNAPTROL"

③ "CONCENTRIK" Equivalent: K-16 Kit with Base Elements and Shafts:

B13-141, P17-024 (Panel)

B18-140X, R24-109 (Rear)

"SNAPTROL" Equivalent: BU5, CF29, CR38T, SF3, K

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R9	10K 3W		3G-10K		R86	400Ω 3W	PW3-400	3G-400	
R10	12K 3W		3G-12K		R105	15K 3W		3G-15K	
R41	5600Ω 7W	PW7-5600	7W-SQ-5600		R109	3200Ω 15W	PW15-3200	15W-SQ-3200	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		ADMIRAL PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.		
L1	47.25MC Trap	73B132-55						
L2	41.25MC Trap	73B37-3	BC-562	4804	RTC-8516	T856		
L3	1st Video IF	72C132-43		7506-A		TB204		
L4	2nd Video IF	72C132-39		7502-A		TB203		
L5	3rd Video IF	72C132-39						
L6	4th Video IF	72B191-7						
L7	RF Choke (12uh)	73B31-4	BC-566	74125AP	RTC-8523	T985		
L8	Peaking (730uh)		TV-206	6148	RTC-8563	T327		
L9	RF Choke (28uh)	73B31-2	TV-192	72F275AP	RTC-8525	T984		
L10	Sound Takeoff - 4.5MC Trap	72C185-2	TV-236	1471-A		T277		① Wound on 5.6K resistor.
L11	Peaking (900uh)	73C5-45 ①	TV-201 *	6157 *	RTC-8589 *	T329 *		* Shunt with 5.6K resistor.
L12	Peaking (191uh)	73C5-40 ②	TV-194 *	6154 *	RTC-8597 *	T372 *		
L13	Sound IF Interstage	72C208-2		7116-A		TB248		② Wound on 12K resistor.
L14	Quadrature	72C132-52	TV-248	7117-A		TA-281		* Shunt with 12K resistor.
L15	RF Choke (2.4uh)	73B31-8	BC-563	4606	RTC-8517	T857		
L16	Flt. Choke (1.4uh)	73B37-2	BC-562	4604	RTC-8516	T856		

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA								NOTES
		ADMIRAL PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	Workman PART No.		
L17	Horiz. Stabilizer (Hold)	94C17-7	TV-163 ① ③	6210 ① ③	RTC-8622 ① ③	HS-5 ③	WLC-25 ② ③	T103 ③		

① Enlarge mounting hole.

② Disregard Tap.

③ Install plastic sleeve on adjustment screw.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	ADMIRAL PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.		
L18	.2 ADC	46Ω	.8 Hy.	74C18-42	C-4115	C-2343	28C77	C-27X		

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						NOTES
	PRI.	SEC. 1	SEC. 2	ADMIRAL PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.		
T1	117VAC ① 1.6A	540VCT ② .2 A DC	5VAC ③ 3A	80D78-2	P-2885	P-8356	26R53	R-75BA		
	SEC. 3	SEC. 4	SEC. 5							
	8.3VAC ④ 8.5A									

* TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		ADMIRAL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.		
T2	Vert. Output Yoke (Horiz. 20MH) 92° (Vert. 28.5MH)	79D43-24 94D205-3	A-2828 ① MDF-92 & M-238 ② ③	VO-102 ① DY-16A ② ③	28S29	Y-16 ② ③		① Drill new mounting hole(s).
T3	Alternate Yoke Width Sleeve Yoke Socket	750C305-14 750C344-1 87B84-2 79E77-15						② Use original vertical damping network if necessary. Remove horiz. damping network if necessary.
T4	Horiz. Output		HVO-206	HO-351	FLY-243	D-191		③ Use original width sleeve.

SEE NEXT COLUMN FOR COMPONENT CONNECTION DATA (VERT OUTPUT TRANSFORMER, YOKE, & HORIZ OUTPUT TRANSFORMER)

* COMPONENT CONNECTION DATA

ORIGINAL →	HV TRANSFORMER								VERTICAL OUTPUT				YOKE								YOKE PLUG							
	Original Connections								Original Connections				Original Connections								TO YOKE TERMINAL							
REPLACEMENT ↓	1	2	3	4	5	6	7	8	Green	Red	Yel.		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
MERIT	1	2	3		5	6	7	8	Blue	Black	Red		1	2	3	4	5	6	7	8			3	7	1	4	6	†
STANCOR	1	2	3		5	6	7	8	Blue	Black	Red		1	2	3	4	5	6	7	8			3	7	1	4	6	†
THORDARSON	1	2	3		5	6	7	8	Blue	Red	Yel.		1	2	3	4	5	6	7	8			3	7	1	4	6	†
TRIAD	1	2	8		5	6	7		Blue	Red	Yel.		1	2	3	4	5	6	7	8			3	7	1	4	6	†

† Jumper Yoke Plug Pins #1 and #8.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC. 1	ADMIRAL PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.		
T5	2000Ω	3-4Ω	79D99-1						
		SEC. 2							
		Feedback winding DC Resis. 5.9Ω							
		SEC. 1							
		3-4Ω							
T6	2000Ω	3-4Ω	79D99-1						
		SEC. 2							
		Feedback winding DC Resis. 5.9Ω							

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			ADMIRAL PART No.	QUAM PART No.	
SP1	8"	PM 3-4Ω	78C151-5	8A21	
SP2	3 1/2"	PM 3-4Ω	78C148-7	3A15T24	
SP3	8"	PM 3-4Ω	78C151-5	8A21	
SP4	3 1/2"	PM 3-4Ω	78C148-7	3A15T24	

PARTS LIST AND DESCRIPTION (CONTINUED)

MISCELLANEOUS

ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M3	VHF Tuner	94E229-1	STANDARD COIL REPLACEMENT GGS4291A
M4	UHF Tuner	94D204-3	
M5	Diode	1N87	Some versions use 1N87A, Video Detector
M6	Diode	93B5-6	
M7	Switch	76D48-5	Dual Selenium, Horiz. AFC
M8	Circuit Breaker	84B17-2	
	Width Sleeve	750C344-1	Function Radio TV
	Printed Board	14E305-4	
	Printed Board	14E257-11	Video Sound Sweep

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Channel Selector	A9344	Knob, Bass, TV, Treble	33D432-15
Knob, Fine Tuning	33C514-3	Knob, Radio Tuning, Loudness, Balance,	33D432-10
Knob, Channel Indicator	33D515-4	Bass, Treble, Function	33D432-23
Knob, Brightness, Contrast, Vertical	33C425-3		
Knob, On-Off, Volume, Function	33D431-8		

WIRING DATA

High Voltage Lead	Use BELDEN No. 8868 (17KV) or 8868 (25KV)
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor)
	8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
300Ω Tuner Input Lead	Use BELDEN No. 8225
300Ω 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

VHF TUNER PARTS LIST AND DESCRIPTION

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6DS4	V202	Mixer - Osc.	6CG8A

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELAMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201A	27 N750 5%	(27) *	EF-001	TCN-27	C10Q27U	CCF-102	CN7-427	10TCU-Q27
B	27 N750 5%			TCN-27	C10Q27U		CN7-427	10TCU-Q27
C202A	27 N750 5%			TCN-27	C10Q27U		CN7-427	10TCU-Q27
B	27 N750 5%			TCN-27	C10Q27U		CN7-427	10TCU-Q27
C203	30							
C204	15 5%			DTZ-15	C10Q15C		CNO-415	10TCC-Q15
C205	.001			MFT-1000			CT280A	
C206	1.8-7.0			829-7				
C207	47							
C208	1.8-7.0			829-7			CCF-102	CT280A
C209	.001			MFT-1000			CCF-102	CT280A
C210	33 NPO 5%			TCZ-33	C10Q33C		CNO-433	10TCC-Q33
C211	.5-3.0			829-3			CV-1	CT565
C212	40						CCF-102	CT280A
C213	.001			MFT-1000			CCF-102	CT280A
C214	.001			MFT-1000				
C215	1.5							
C216	.75							
C217	2.2			NPO-DI 2.2	TCZ-ZR2		CCTO-ZR2	CNO-522
C218	15			DI-15	DD-150		CCD-150	GP415
C219	.5-3.0				829-3		CV-1	CT565
C220	.001			EF-001	MFT-1000		CCF-102	CT280A

* Alternate Value

VHF TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

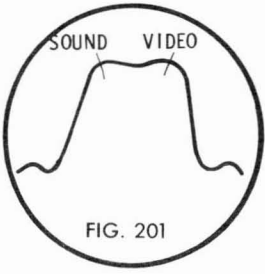
Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: GENERAL CEMENT #9087, 8390, 8868; WALSCO #2525, 2528, 2587

OSCILLATOR ALIGNMENT

The oscillator on each channel is preset by means of a Fine Tuning control. Adjust Fine Tuning for best picture and sound on each active channel. If any channel cannot be properly tuned in with Fine Tuning, adjust overall oscillator adjustment, A201. Recheck all active channels.

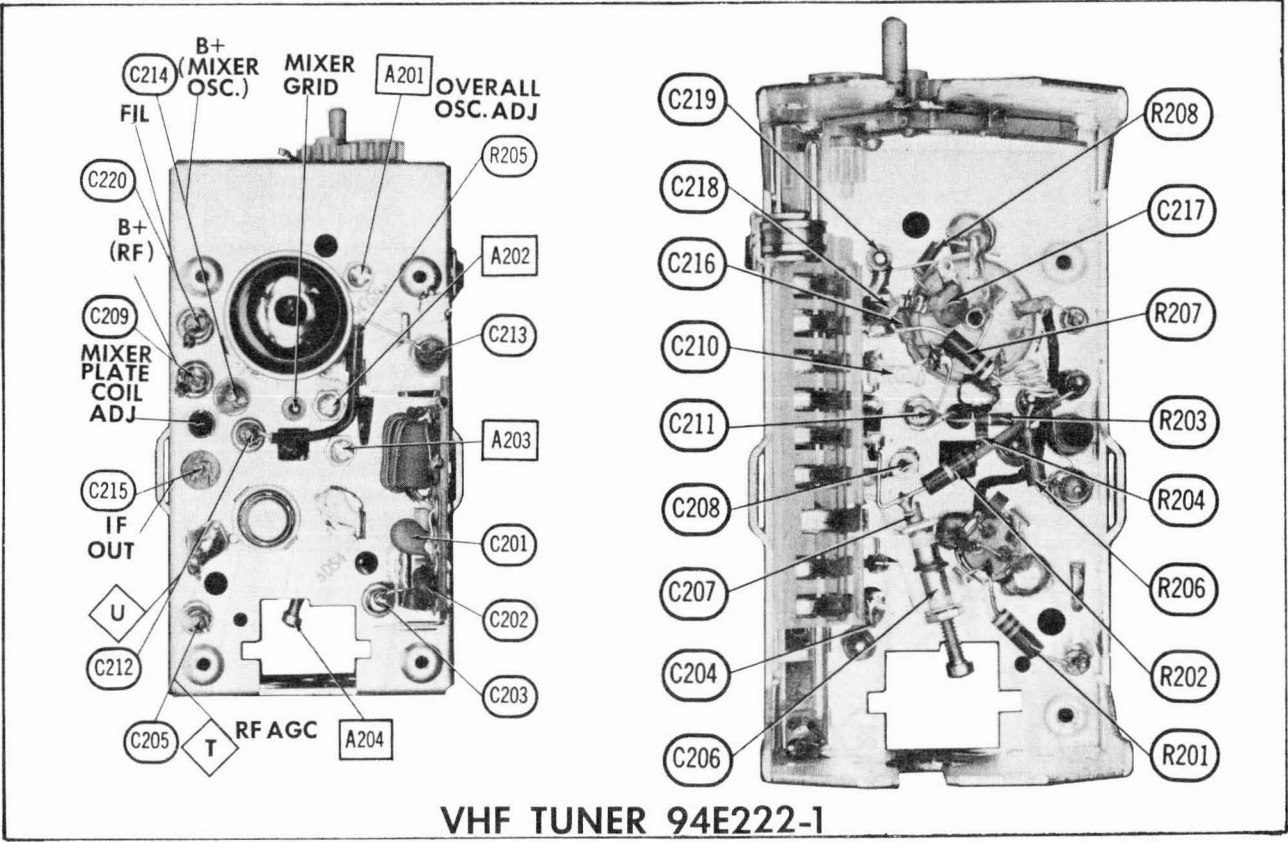
VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect variable bias to RF AGC line at point U. Adjust bias to obtain response curve which shows no indication of overloading.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Across antenna terminals with 120Ω in each lead.	213MC	211. 25MC 215. 75MC	13	Vert. Input to point U. Low side to ground.	A202, A203	Adjust for response curve similar to Figure 201.
2.	"	195MC	193. 25MC 197. 75MC	10	Across Video Det. load resistor.	A204	Increase bias to -15V and adjust for MINIMUM amplitude of response curve.
3.	"	207MC	205. 25MC 209. 75MC	12	Vert. Input to point U. Low side to ground.		Check response on all channels and make compromise adjustments of A201 and A202 if required. 
		201MC	199. 25MC 203. 75MC	11			
		189MC	187. 25MC 191. 75MC	9			
		183MC	181. 25MC 185. 75MC	8			
		177MC	175. 25MC 179. 75MC	7			
		85MC	83. 25MC 87. 75MC	6			
		79MC	77. 25MC 81. 75MC	5			
		69MC	67. 25MC 71. 75MC	4			
		63MC	61. 25MC 65. 75MC	3			
		57MC	55. 25MC 59. 75MC	2			

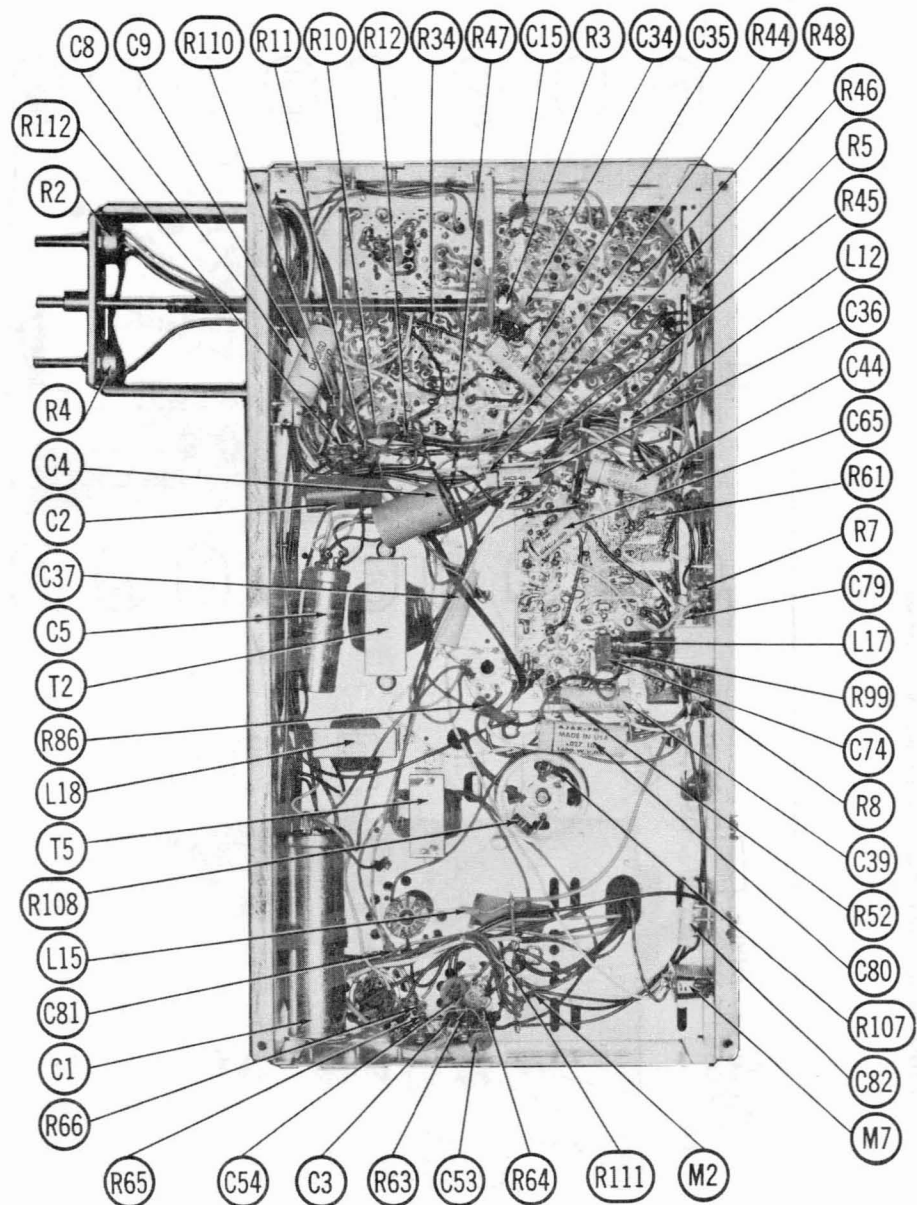
Tune in a UHF Station and adjust UHF IF Input Coil for best picture and sound.

ADMIRAL
CHASSIS 21T3U

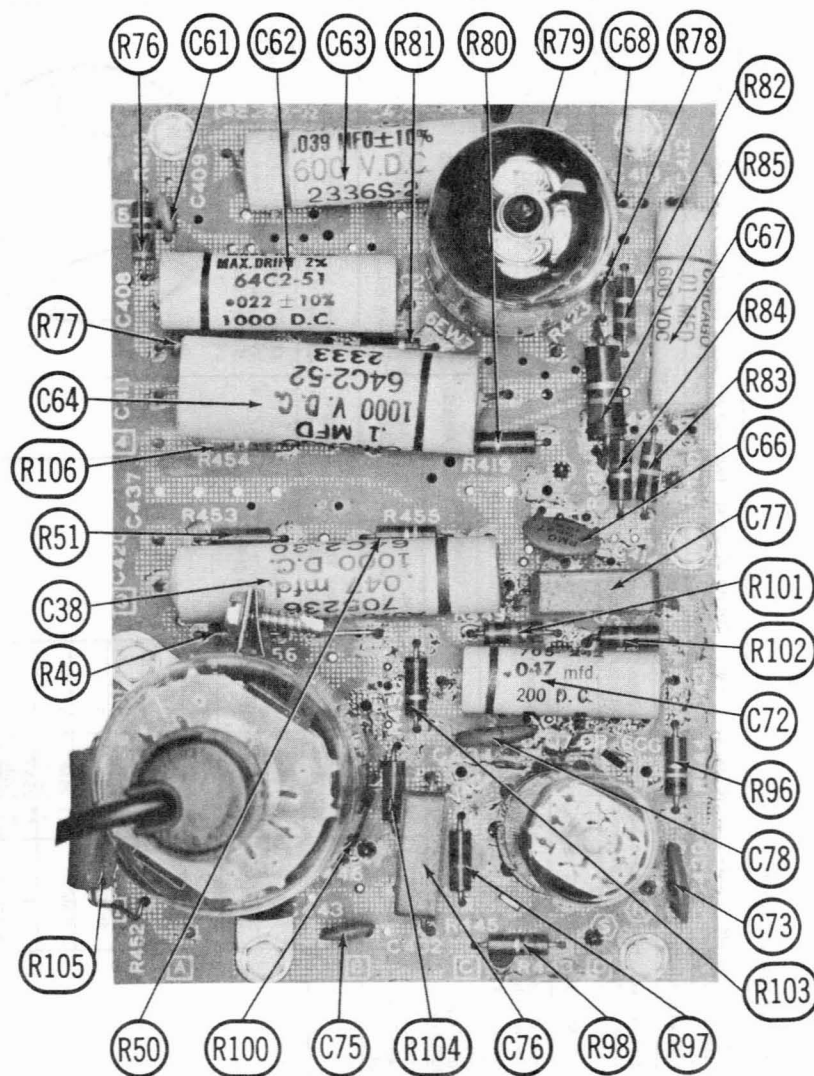


VHF TUNER 94E222-1

FOLDER 1



CHASSIS - BOTTOM VIEW

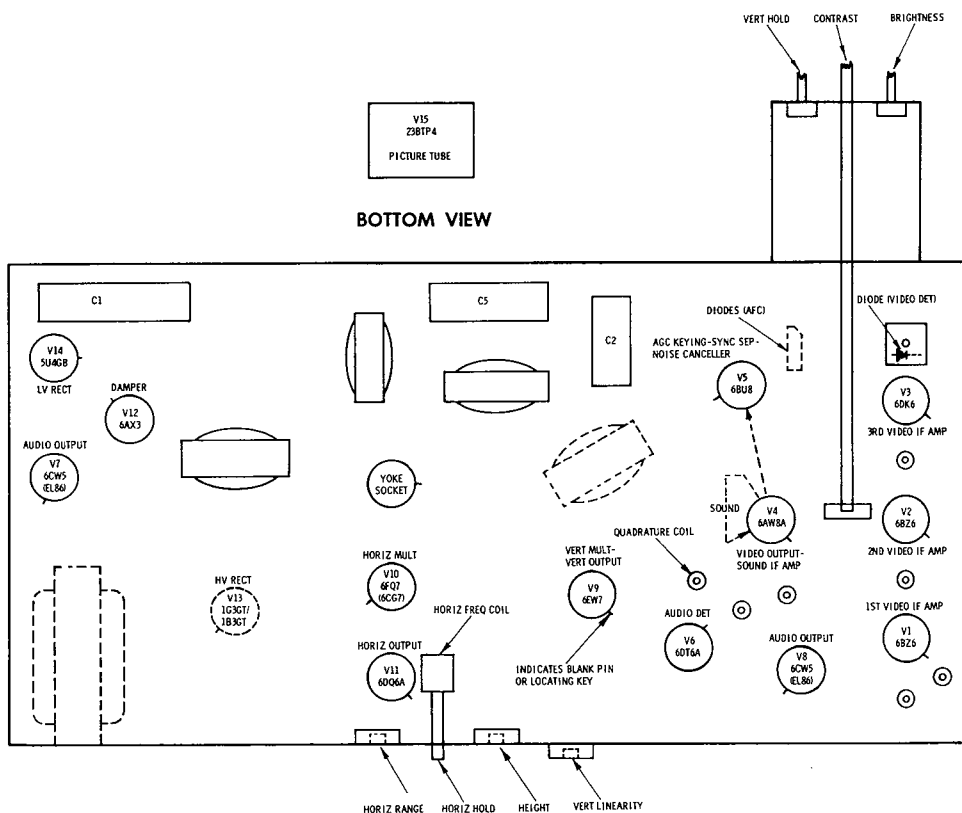


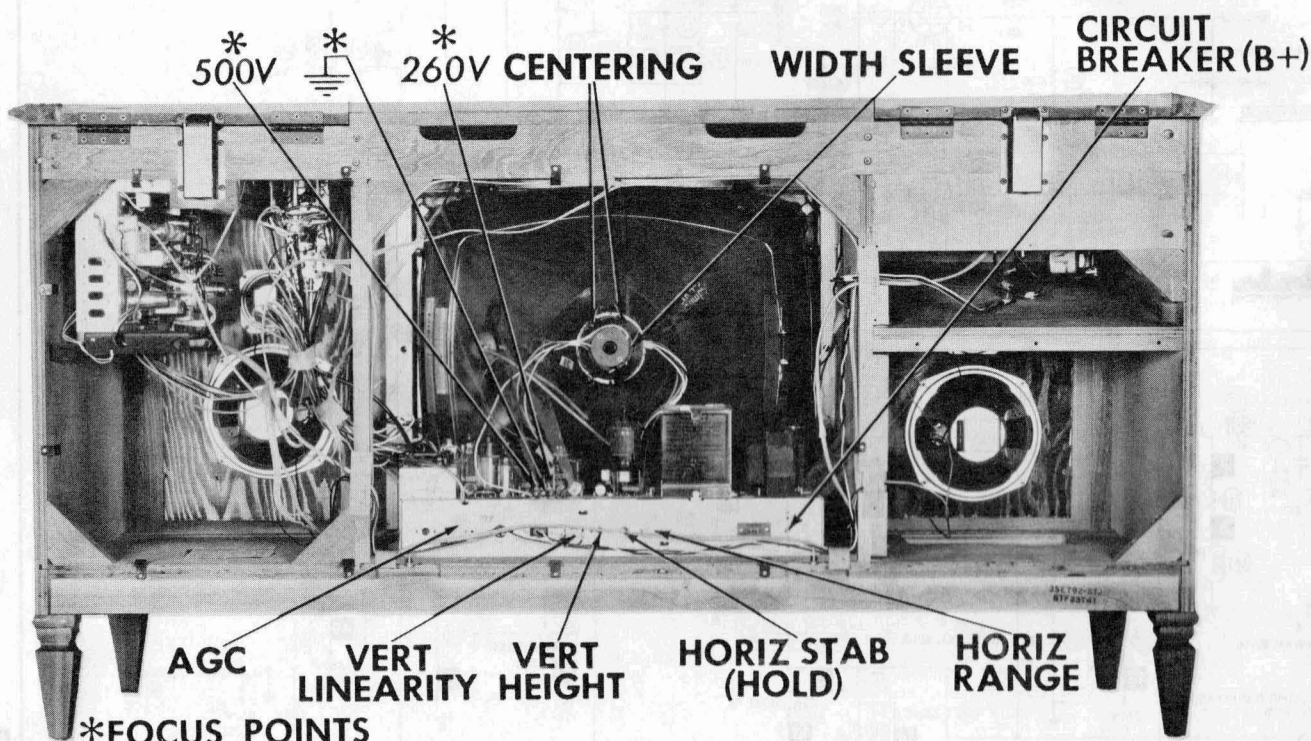
SWEEP PRINTED BOARD

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	6BZ6	130K	39Ω	FIL	FIL	♦ 538Ω	♦ 538Ω	0Ω					
V2	6BZ6	♦ 22K	140K	FIL	FIL	†515Ω	†515Ω	♦ 68Ω					
V3	6DK6	.1Ω	150Ω	FIL	FIL	▲470Ω	▲470Ω	0Ω					
V4	6AW8A	0Ω	100K	▲38K	FIL	FIL	0Ω	● 1100Ω	▲ 12K	†4400Ω			
V5	6BU8	▲ 5.9K	†5600Ω	2meg	FIL	FIL	22K	†830K	†47K	†12meg			
V6	6DT6A	18Ω	68Ω	FIL	FIL	† 860K	†8200Ω	560K					
V7	6CW5	NC	470K	110Ω	FIL	FIL	NC	▲20K	NC	▲ 5.9Ω			
V8	6CW5	NC	500K	# 200K	FIL	FIL	NC	†345Ω	NC	†180Ω			
V9	6EW7	† 715Ω	NC	1.5meg	FIL	FIL	† 2.4meg	750K	260K	850Ω			
V10	6FQ7	† 10K	2.4meg	1100Ω	FIL	FIL	† 82K	47K	1100Ω	0Ω			
V11	6DQ6A	NC	FIL	NC	†18K	1meg	NC	FIL	0Ω	TOP CAP † 9.7Ω			
V12	6AX3	FIL	NC	NC	†46Ω	NC	NC	640K	NC	NC	NC	NC	FIL
V13	1G3GT/ 1B3GT	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP † 550Ω			
V14	5U4GB	NC	# 50K	NC	34Ω	NC	38Ω	NC	# 50K				
V15	23BTP4	NC	40K	NC	NC	NC	†600K	NC	NC	NC	† 2.5meg	155K	FIL
V201	6DS4	NC	†13K	NC	3.6meg	NC	NC	NC	0Ω	NC	FIL	NC	FIL
V202	6CG8A	4700Ω	▲ 5700Ω	0Ω	FIL	FIL	▲ 1000Ω	▲ 5Ω	0Ω	475K			
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12

THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 † MEASURED FROM PIN 2 OF V14. ‡ MEASURED FROM PIN 7 OF V12.
 ♦ MEASURED FROM PIN 2 OF V2. • MEASURED IN "RADIO" POSITION.
 ● READING DEPENDS ON POLARITY OF METER CONNECTIONS. * VHF TUNER 94E222-1.
 ▲ MEASURED FROM PIN 3 OF V8. NC NO CONNECTION





CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Place a jumper across the Horizontal Stabilizer Coil (L17). Tune in a TV station and adjust the Horizontal Range Control (R8) until the picture floats back and forth. Remove the jumper and adjust the Horizontal

Stabilizer Frequency (B1) until the picture is in sync. Change channels to see that the picture remains in sync.

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove all knobs. Disconnect antenna leads. Remove cabinet back held by 11 clips. Remove ground strap from tuner to bezel.
2. Remove tuner and control assembly held by 4 nuts. Unplug picture tube, yoke and high voltage lead, and radio power plug. Unplug compartment light and speaker leads on rear of TV chassis.
3. Remove 3 bolts from bottom of chassis and 4 bolts from sides holding bezel to cabinet. Slide picture tube, tuner, control assembly, and chassis from front of cabinet.

4. Place cabinet face down on soft protective surface and remove 6 screws holding chassis to front bezel.

PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" instructions. Loosen bolt on retaining wire around picture tube.
2. Remove 4 screws (one at each corner of picture tube. Remove picture tube.