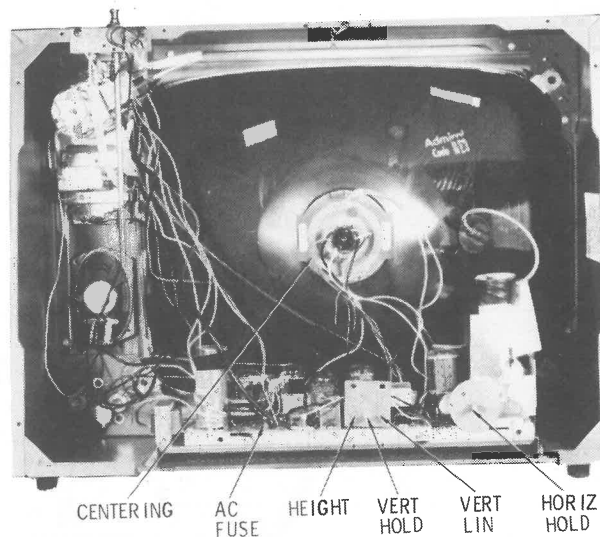


TUNER ASSEMBLY



CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove six screws holding back and remove back. Remove all knobs and disconnect antenna leads.

Disconnect picture-tube socket, high-voltage anode lead and remove deflection yoke from picture-tube neck. Disconnect ground wire and speaker leads.

Remove three screws holding control assembly, five screws holding UHF tuner, three screws holding VHF tuner and two screws holding power switch.

Remove four screws holding chassis and remove chassis, tuners and control assembly from the cabinet.

PICTURE TUBE REMOVAL

Follow Chassis Removal procedure and lay set face down on a soft protective surface.

Remove four screws holding picture tube and lift picture tube from the cabinet. Do not lift picture tube by the neck.

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

VHF TUNER

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

HORIZONTAL OSCILLATOR

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

WIDTH

The width may be varied by a jumper lead (used in some versions).

FOCUS

The focus may be varied by connecting the lead from pin 4 of CRT to various voltage points.

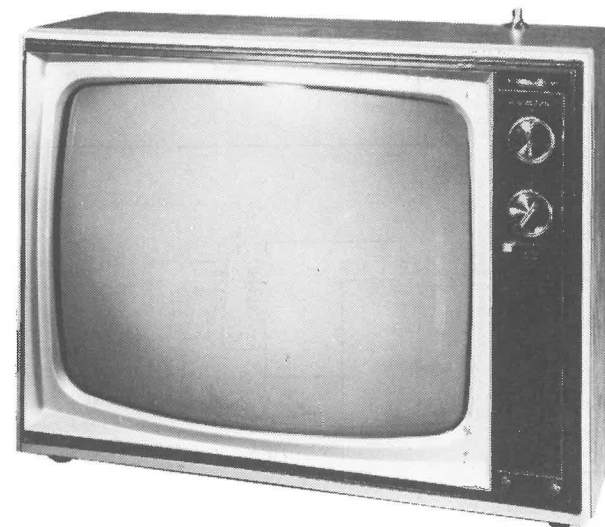
CENTERING

Centering is accomplished by proper adjustment of two magnetic rings located on the yoke rear cover.

PHOTOFACT® Folder with CIRCUITRACE™

For Supplier Address See PHOTOFACT Index

ADMIRAL



MODEL 22T201CMW

MODEL	CHASSIS
16P57CM	T3K3-1A
16P287CW	T9K3-1A
16P287CWM	T9K3-2A
16P440M	T9K3-2A
16P617	T28K3-1A
19P639C	T15K3-1B
19P639CM	T15K3-2B
19P647C	T15K3-1B
19P647CM	T15K3-2B
19P807	T29K3-1B
22T201CM	T16K3-2A
22T201CMW	T26K3-2A
22C211M	T16K3-2A
22C211MW	T26K3-2A
22C215M	T16K3-2A
22C215MW	T26K3-2A
SK16P297CM	T3K3-2A
SK16P437C	T24K3-1A
SK16P437CM	T24K3-2A
SK19P667C	T15K3-1B
SK19P837C	T29K3-1B

SAFETY PRECAUTIONS

Make sure line voltage does not exceed rating of set. Check high-voltage regulation and adjust to correct value.

Be sure shields and rear cover are in place and secure.

Beware of shock from high voltage or AC line. Discharge high voltage to HV cage only.

Use extreme care when handling picture tube. Do not bump, scratch, or exert undue strain.

CAUTION: One side of AC line connected to chassis. Use isolation transformer for servicing. Make certain isolation networks are in place and exposed metal is safe to touch before returning set to customer.

INDEX

	Page		Page
Alignment		Photos (Continued)	
Tuner	7,15	UHF Tuner	8,9
TV	5	VHF Tuner	6,7,14,15
Disassembly	20	Resistance Measurements	18
Parts List		Schematics	
TV	10,11	TV	2
UHF Tuner	8,12,13,16	UHF Tuner	8,9,13
VHF Tuner	16,18	VHF Tuner	6,14
Photos		Servicing in the Field	20
Cabinet-Rear View	20	Troubleshooting Check Chart	3
Printed Board	4,5,17	Tube Placement Chart	3
Tuner Assembly	20	UHF Tuner Exploded View	8,12,13

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

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. 4PA958

Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1974 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America

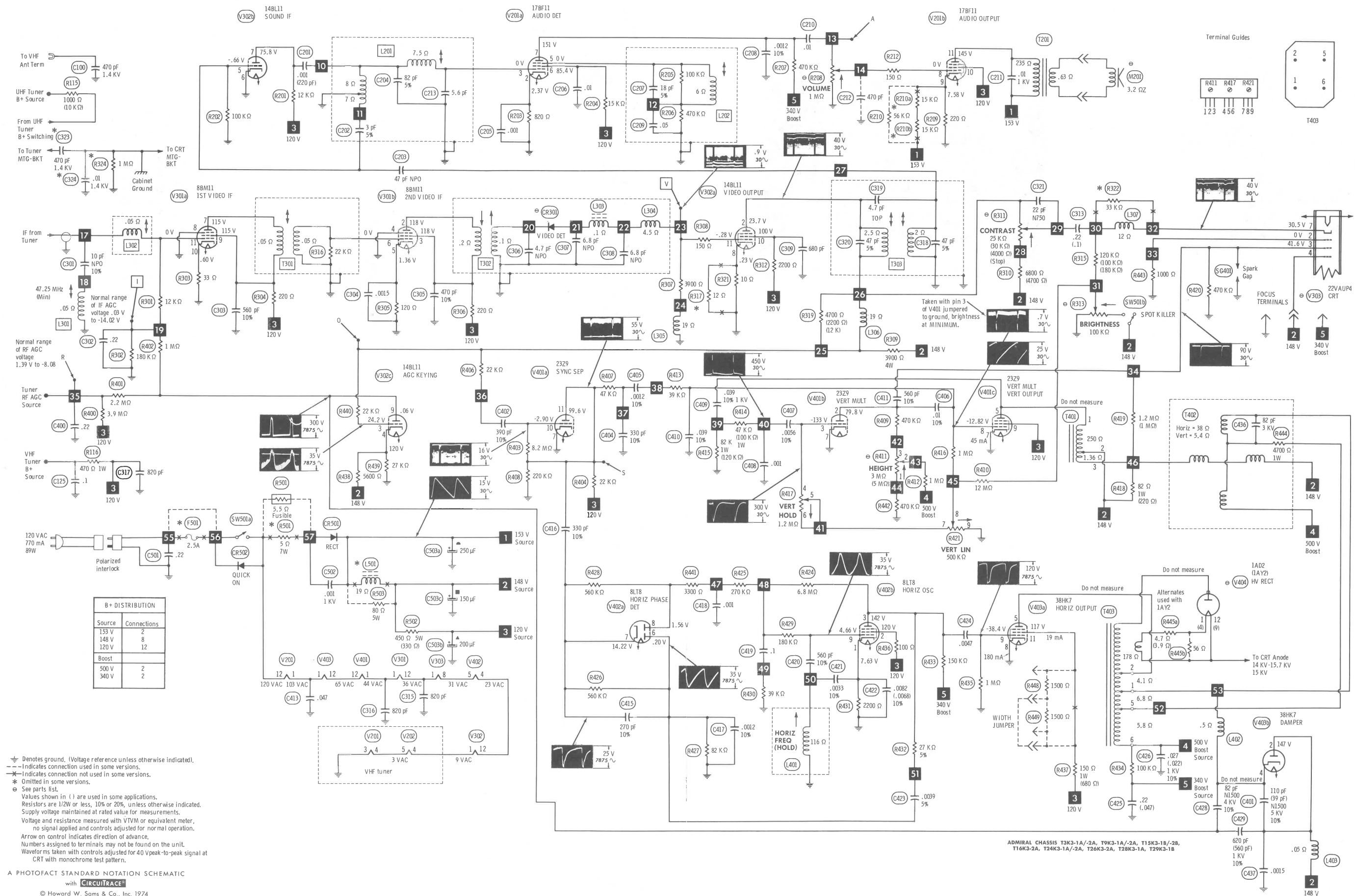
DATE 5-74

SET 1396 FOLDER 1

10 9 8 7 6 5 4 3 2 1 0

ADMIRAL CHASSIS T3K3-1A/-2A, T9K3-1A/-2A, T15K3-1B/-2B, T16K3-2A, T24K3-1A/-2A, T26K3-2A, T28K3-1A, T29K3-1B

SET 1396 FOLDER 1



RESISTANCE MEASUREMENTS

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	TOP CAP
V201 VHF (1)	0 Ω	1.8 MΩ	0 Ω	1 Ω	1600 Ω †	0 Ω	0 Ω							
V202 VHF (1)	15 KΩ	4700 Ω †	0 Ω	3 Ω	1 Ω	1600 Ω †	19 KΩ †	0 Ω	220 KΩ					
V201	30 Ω	820 Ω	16 Ω	NC	470 KΩ	15 KΩ †	550 KΩ †	250 KΩ	220 Ω	450 Ω †	235 Ω †	35 Ω		
V301	15 Ω	670 Ω †	670 Ω †	0 Ω	120 Ω	.05 Ω	670 Ω †	0 Ω	670 Ω †	33 Ω	180 KΩ	12 Ω		
V302	3 Ω	3500 Ω †	28 KΩ †	5000 Ω †	100 KΩ	0 Ω	12 KΩ †	6 Ω	1 MΩ	2700 Ω †	500 Ω *	7.5 Ω		
V303	12 Ω	1000 Ω	330 KΩ	470 KΩ †	NC	NC	150 KΩ †	10 Ω						
V401	15 Ω	4 MΩ	1 MΩ	NC	260 Ω †	NC	0 Ω	1.1 MΩ	450 Ω †	8.2 MΩ †	22 KΩ †	21 Ω		
V402	2200 Ω	520 Ω †	220 KΩ †	7.5 Ω	10 Ω	82 KΩ	642 KΩ	1.1 MΩ	1.5 MΩ					
V403	30 Ω	19 Ω †	NC	2.2 MΩ	4.1 Ω †	NC	NC	0 Ω	1 MΩ	NC	600 Ω †	21 Ω		
V404				PINS 1 THRU 12 HAVE INFINITE RESISTANCE										182 Ω †

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

ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q301 UHF	330 Ω	2000 Ω	8500 Ω											

* READING DEPENDS UPON POLARITY OF METER CONNECTIONS.
(1) VHF Tuner 94A438-1.

† MEASURED FROM CATHODE OF CR501.
‡ MEASURED FROM PIN 4 OF V403.

94A347-1.94A438-1/-2 VHF TUNER PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp	3GK5 (3HA5) *	V202	Mixer - Oscillator	6CG8A (5LJ8) *						

* Used in 94A438-1/-2.

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			ARCO/ELMENCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	6.8 N3300						
C202	3.3						
C203	.001	65A102-1					
C204	47	65A103-470					
C205	18	65A122-180					
C206	.001						
C207	.001						
C208	8.2						
C209	2.2						
C210	.001	65A144-1					
C211	.001	65A102-1					
C212	2.5						
C213	.001	65A102-1					
C214	.001	65A102-1					
C215	.001	65A102-1					
C216	.001	65A102-1					
C217	.001	65A102-1					
C218a	27	65A100-1					
b	27						
c	27						
d	27						

COILS (RF-IF)

ITEM No.	USE	MFR. PART No.	NOTES	ITEM No.	USE	MFR. PART No.	NOTES
L201	UHF Input	72A309-11 (1)		L210	Ant, RF, Osc, Mixer	73A83-518 (1)	Channel 10
L202	Ant, RF, Osc, Mixer	73A75-518 (1)	Channel 2	L211	Ant, RF, Osc, Mixer	73A83-524 (2)	Channel 10
L203	Ant, RF, Osc, Mixer	73A75-524 (2)	Channel 2	L212	Ant, RF, Osc, Mixer	73A84-518 (1)	Channel 11
L204	Ant, RF, Osc, Mixer	73A76-518 (1)	Channel 3	L213	Ant, RF, Osc, Mixer	73A84-524 (2)	Channel 11
L205	Ant, RF, Osc, Mixer	73A76-524 (2)	Channel 3	L214	Ant, RF, Osc, Mixer	73A85-518 (1)	Channel 12
L206	Ant, RF, Osc, Mixer	73A77-518 (1)	Channel 4	L215	Ant, RF, Osc, Mixer	73A85-524 (2)	Channel 12
L207	Ant, RF, Osc, Mixer	73A77-524 (2)	Channel 4	L216	Ant, RF, Osc, Mixer	73A86-518 (1)	Channel 13
L208	Ant, RF, Osc, Mixer	73A78-518 (1)	Channel 5	L217	Ant, RF, Osc, Mixer	73A86-524 (2)	Channel 13
L209	Ant, RF, Osc, Mixer	73A78-524 (2)	Channel 5	M201	UHF Strip	73A91-523 (1)	Channel 1
					UHF Strip	73A91-545 (2)	
					Fine Tuning	72A256-512 (1)	
					Fine Tuning	(2)	
					Mixer Screen	72A283-8 (1)	
					Mixer Screen	(2)	
					Mixer Plate	72A291-519 (1)	
					Mixer Plate	(2)	
					VHF Input Balun	700A638-539 (1)	
						700A638-580 (2)	

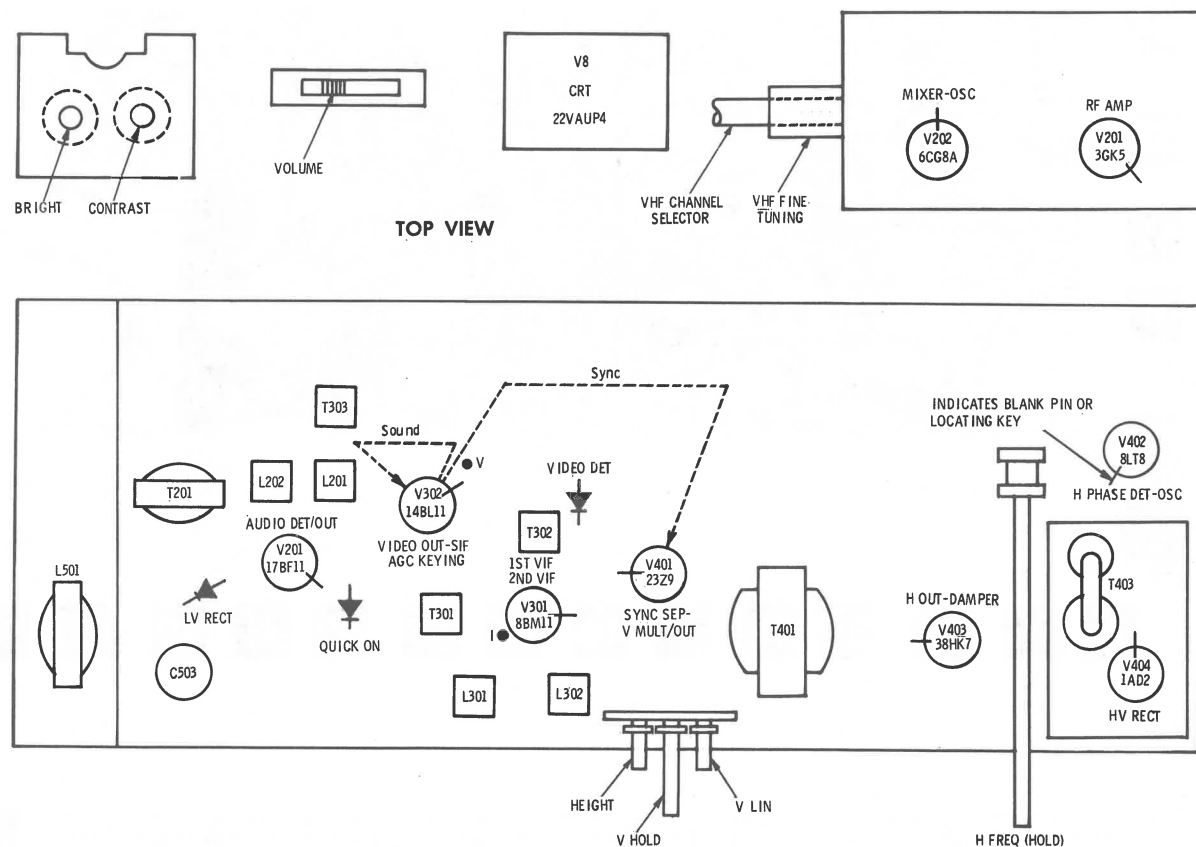
(1) Used in VHF Tuner 94A347-1.

(2) Used in VHF Tuner 94A438-1.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M201	Antenna Input Ass'y	700A638-539	
PC201	Antenna Isolation	63A22-1	Includes Balun, C218, PC201, and PC202.
PC202	Antenna Isolation	63A22-1	

TUBE PLACEMENT CHART



TROUBLESHOOTING CHECK CHART

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

SWEEP

No raster, has sound: Horiz Osc/Output, Damper, HV Rect, CRT
No vert deflection: Vert Mult/Output
Poor vert lin or foldover: Vert Mult/Output
Poor horiz lin or foldover: Horiz Output, Damper
Narrow picture: LV Rect, Horiz Osc/Output, Damper

Vert off freq: Vert Mult
Horiz off freq: Horiz Phase Det/Osc

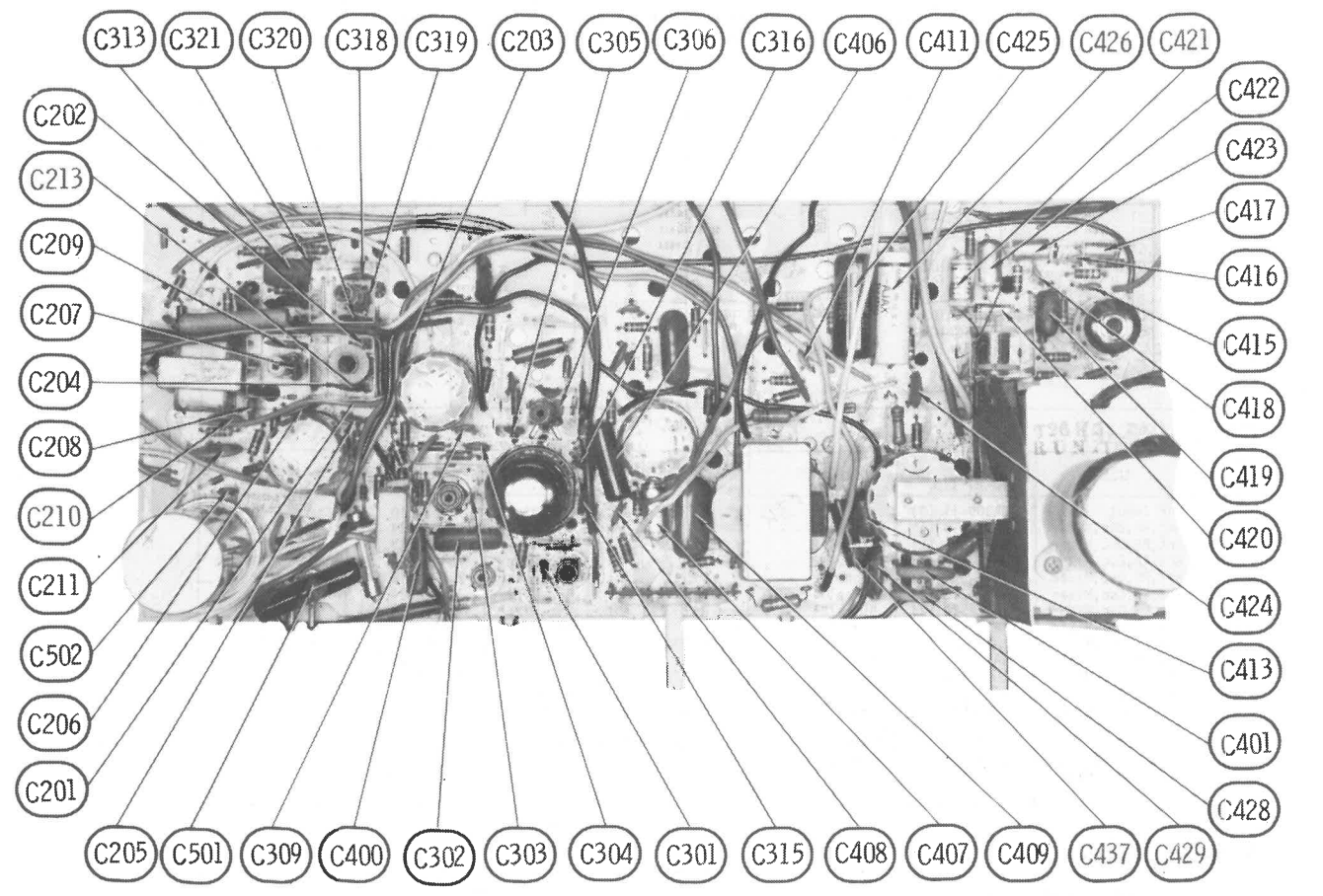
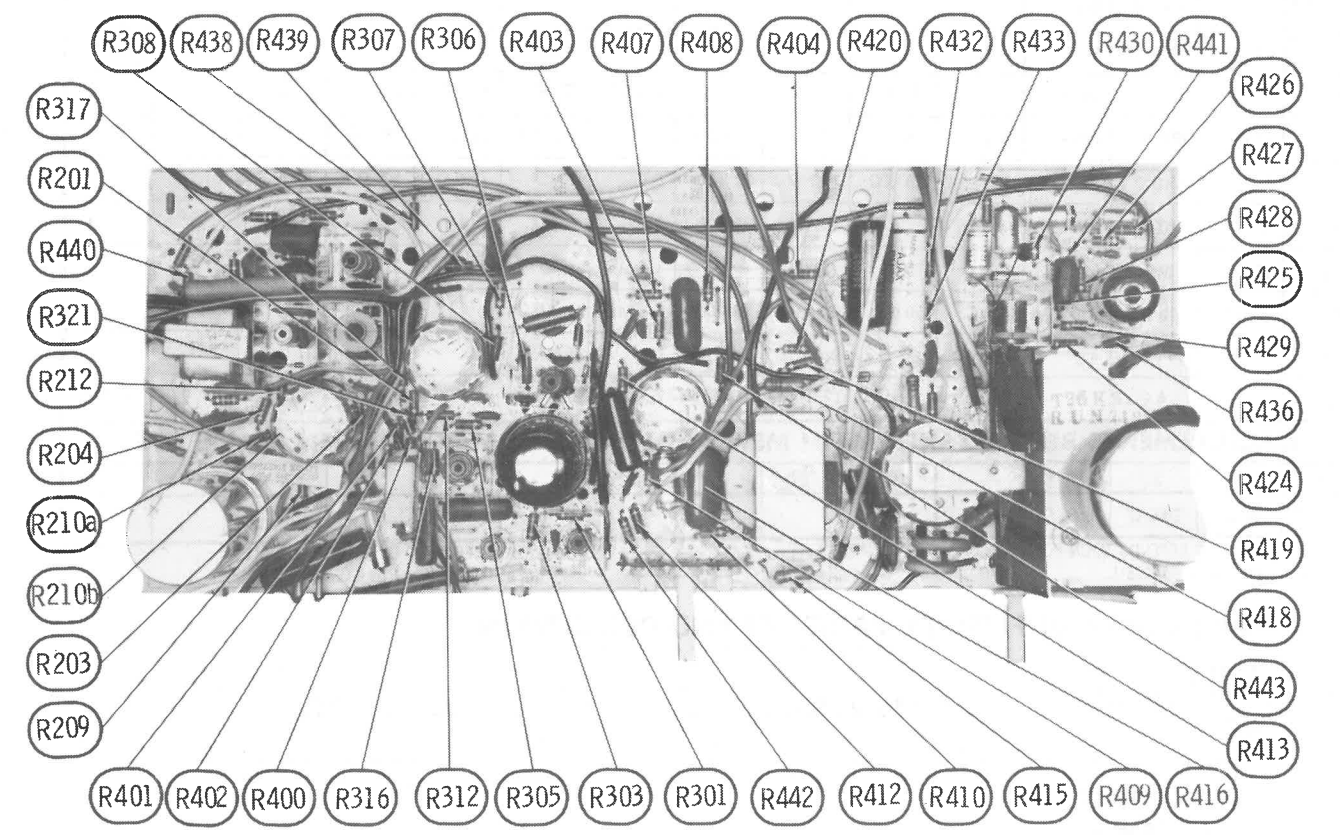
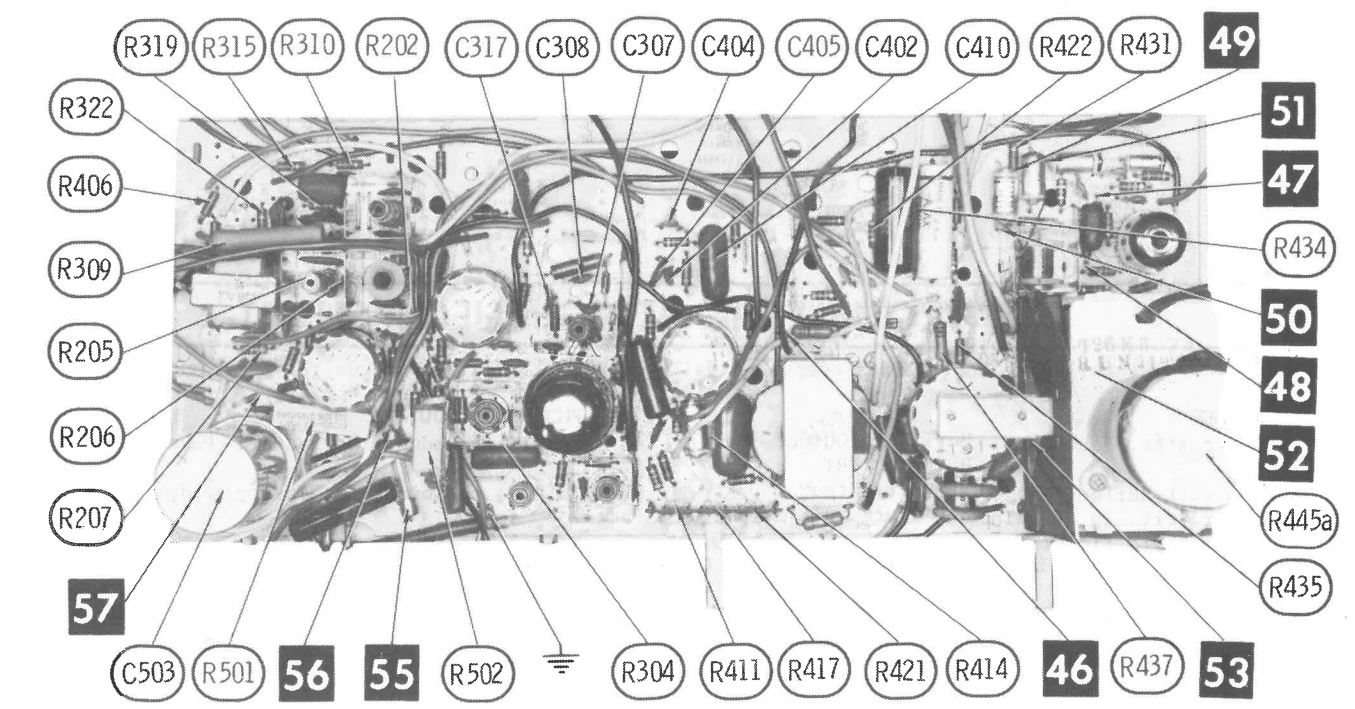
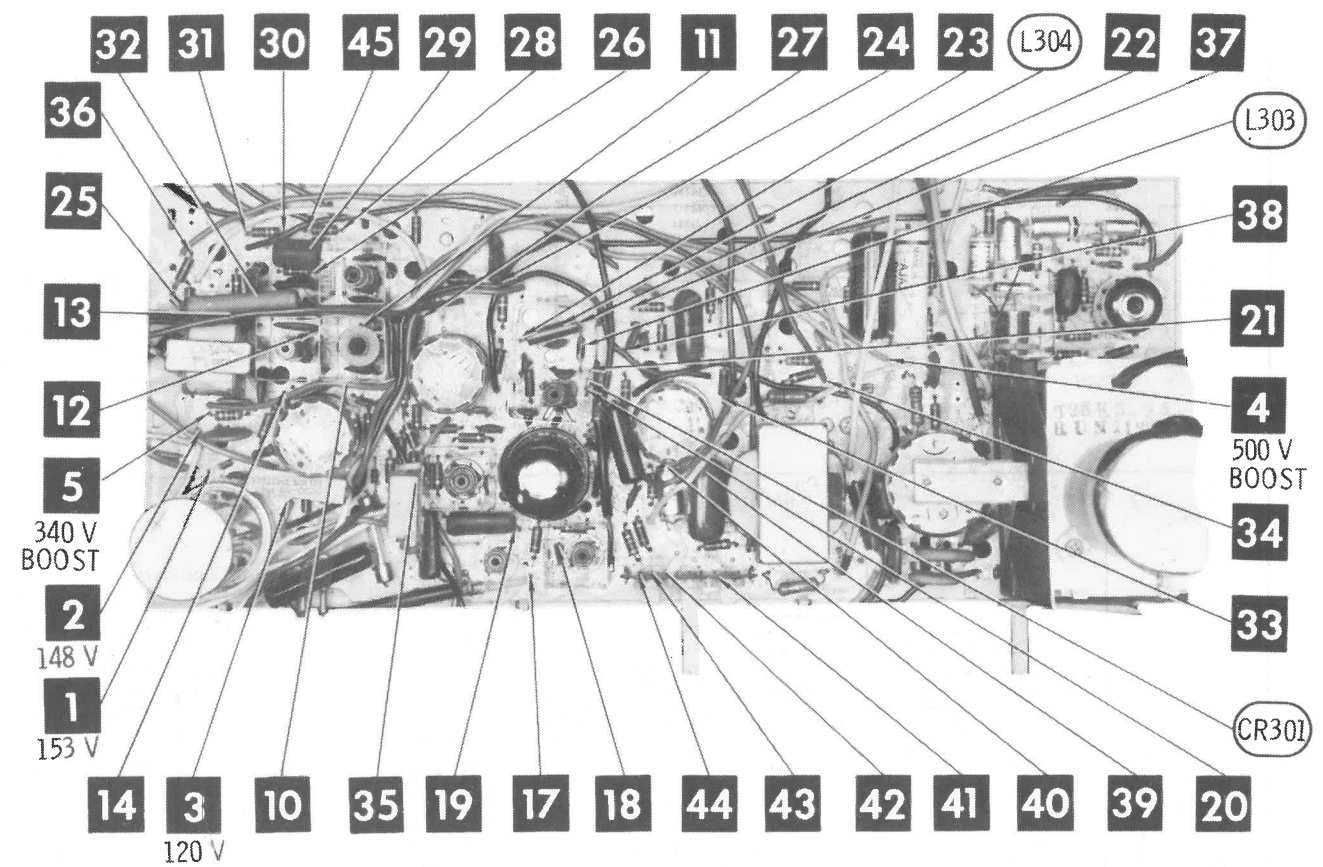
SYNC

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

PICTURE or SOUND

No pic, no sound, no raster: Fuse, LV Rect
No pic, no sound, has raster: Video IFs, Tuner Mixer
No pic, no sound, has snow: Tuner RF/Mixer/Osc
No pic, has sound, no raster: Video Output, CRT
No pic, has sound, has raster: Video Output
Has pic, no sound: Sound IF, Audio Det/Output
Overloaded picture: AGC, Video Det

A series filament circuit is used; an open filament in any tube will cause the set to be inoperative.



ADMIRAL CHASSIS T3K3-1A/-2A, T9K3-1A/-2A, T15K3-1B/-2B, T16K3-2A, T24K3-1A/-2A, T26K3-2A, T28K3-1A, T29K3-1B

FOLDER 1

TUBES

AMPEREX			GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	TYPE	USE	TYPE	ITEM No.	TYPE
V201	RF Amp	3H45	V202	Mixer - Oscillator		56S7		

CAPACITORS

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA			
			ARCO/ELMENDO PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	100		CC10-101	NP0100	CN0310	TOTCC-T10
C202	27		CC10-220	NP022	CN0422	TOTCC-102
C203	27		CC10-270	NP027	CN0427	TOTCC-102
C204	27		CC10-270	NP027	CN0427	TOTCC-102
C205	5		CC10-270	NP027	CN0427	TOTCC-102
C206	27		CC10-270	NP027	CN0427	TOTCC-102
C207	40	10%	TCT-39	NP033	CN0439	TOTCC-V50
C208	3		TCT-39	NP033	CN0439	TOTCC-V50
C209	3		TCT-39	NP033	CN0439	TOTCC-V50
C210	3		TCT-39	NP033	CN0439	TOTCC-V50
C211	50		D1Z-50	NP050	CN0450	TOTCC-V30
C212	1.5		CCD-102	GP1000	GP210	TOTS-010
C213	1.5		CCD-102	GP1000	GP210	TOTS-010
C214	1.5		CCD-102	GP1000	GP210	TOTS-010
C215	1.5		CCD-102	GP1000	GP210	TOTS-010
C216	3		CCD-102	GP1000	GP210	TOTS-010
C217	.001		CCD-102	GP1000	GP210	TOTS-010
C218	.001		CCD-102	GP1000	GP210	TOTS-010
C219	.001		CCD-102	GP1000	GP210	TOTS-010
C220	.001		CCD-102	GP1000	GP210	TOTS-010
C221	.001		CCD-102	GP1000	GP210	TOTS-010
C222	2.7		CCD-102	GP1000	GP210	TOTS-010
C223	30		CCD-102	GP1000	GP210	TOTS-010
C224	.001		CCD-102	GP1000	GP210	TOTS-010
C225	.001		CCD-102	GP1000	GP210	TOTS-010
C226	.001		CCD-102	GP1000	GP210	TOTS-010
C227	1		CCD-102	GP1000	GP210	TOTS-010

COILS (RF-IF)

ITEM No.	USE	MFG. PART No.	ITEM No.	USE	MFG. PART No.	NOTES
L201	Balun	750A1303-2	L207	Oscillator	72A344-1	
L202	UHF IF Input	72A343-3	L208	Mixer Plate	72A342-1	
L203	UHF IF RF Choke		L209	RF Choke		
L204	Antenna		L210	RF Fine Tuning		
L205	RF		L211	RF Choke		
L206	Mixer		L212	RF Choke		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	ITEM No.	USE	MFG. PART No.	NOTES
PC201	Antenna Isolation	65A168-1				
PC202	Antenna Isolation	65A168-1				
PC203	Trap Network	65A169-1				
PC204	Trap Network	65A169-1				

94A36-2 UHF TUNER PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS

ITEM No.		TYPE / MFG. No. / PART No.		REPLACEMENT DATA			
				GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.
Q301	57421-2			GE-11	1RTR-83	PTC133	HEP720
X301	93A59-1			1N82A	1N82A6	PTC17	HEP700

CAPACITORS

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA			
			ARCO/ELMENDO PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	30 pF					
C302	.47 pF					
C303	10 pF					
C304	100 pF					
C305	30 pF					

COILS (RF-IF)

ITEM No.	USE	MFG. PART No.	ITEM No.	USE	MFG. PART No.	NOTES
L301	UHF Ant. Input		L303	UHF Oscillator		
L302	UHF IF Output					

94A361-2 UHF TUNER PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS

ITEM No.		TYPE / MFG. No. / PART No.		REPLACEMENT DATA			
				GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.
Q301	57421-5			GE-11	1RTR-83	PTC133	HEP720
X301	1N82A6/93A59-1			1N82A	1N82A6	PTC17	HEP700

CAPACITORS

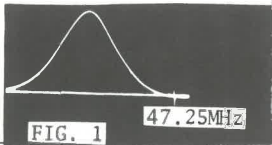
ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA			
			ARCO/ELMENDO PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	30 pF					
C302	.47 pF					
C303	10 pF					
C304	100 pF					

COILS (RF-IF)

ITEM No.	USE	MFG. PART No.	ITEM No.	USE	MFG. PART No.	NOTES
L301	RF Choke	72A346-48				

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: VHF IF Output (L108) 9296, 9297, 9300 L201, L202, L301, L302, T301, T302, T303 .. 8606, 8606L, 8869



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 -6 volt bias to I, high side to ground.

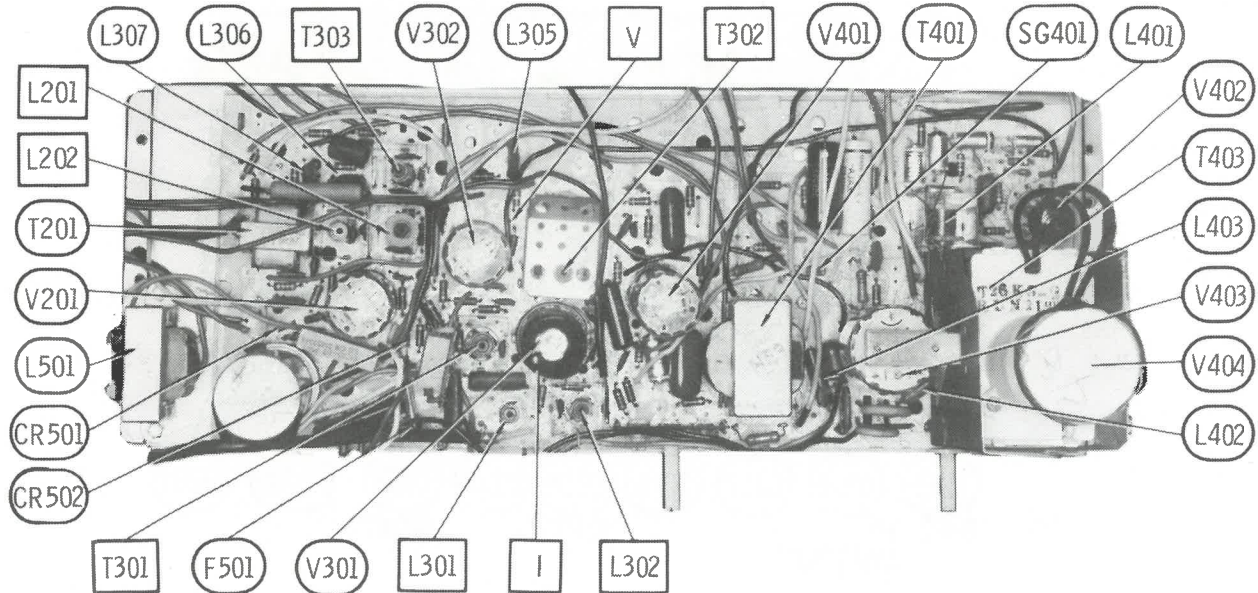
CONNECT SCOPE	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
Vertical input to V, low side to ground.	Thru .001mfd to W or U on VHF tuner, low side to ground.	44MHz (10MHz Sweep)	47.25MHz	Adjust L301 for MINIMUM. See Figure 1.
"	"	"	42.17MHz 44.00MHz 47.75MHz 47.25MHz	Adjust T302 (Top) for placement of 41.25MHz marker. Adjust T302 (Bottom) for proper tilt. Adjust T301 for maximum at 44.00MHz. Adjust L302 for placement of 45.75MHz marker. Adjust L301 for placement of 47.25MHz marker. Adjust VHF IF Output for overall. See Figure 2.

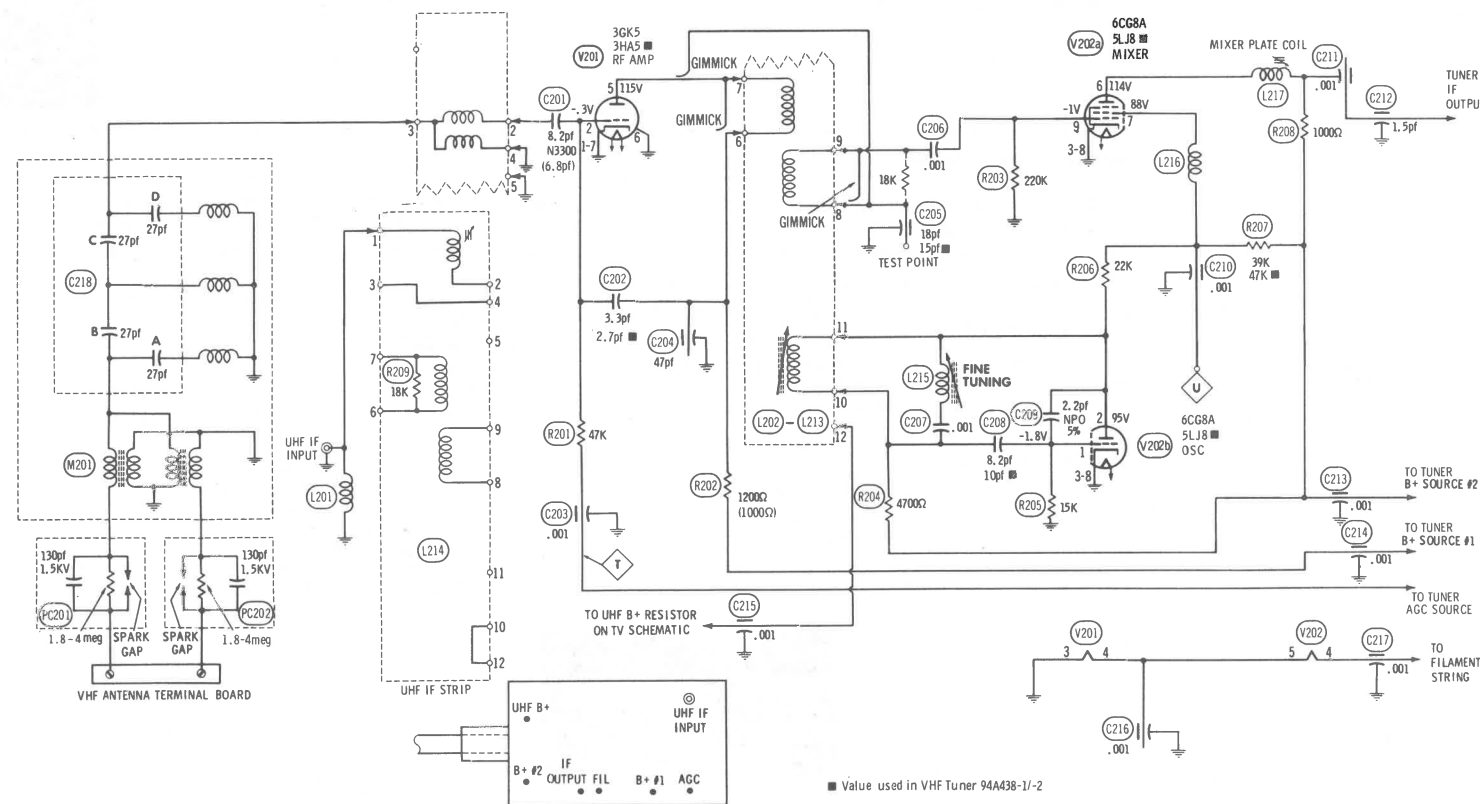
SOUND IF ALIGNMENT

Tune in a station and adjust L202 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 L201 and T303 (Bottom).

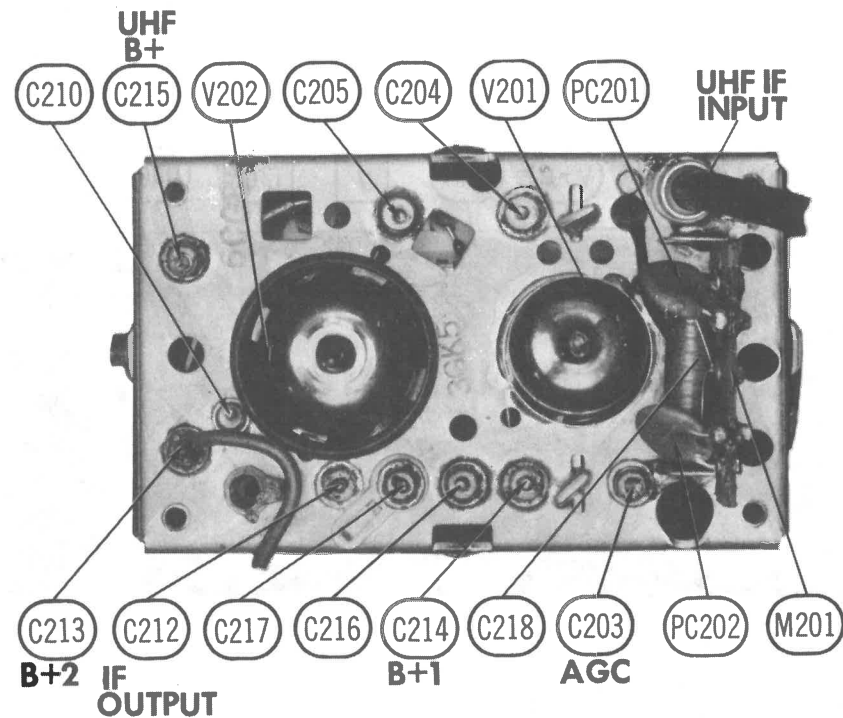
4.5MHz TRAP ALIGNMENT

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 T303 (Top) for MINIMUM beat interference.





A PHOTOFAC STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1974



VHF TUNER 94A347-1, 94A438-1/-2

VHF TUNER ALIGNMENT INSTRUCTIONS

OSCILLATOR ADJUSTMENTS

Individual oscillator slugs are accessible through a hole in the front of the tuner. Set the fine tuning at mid-range. Starting with the highest active channel, adjust the appropriate slugs, in descending order, for the best picture and sound.

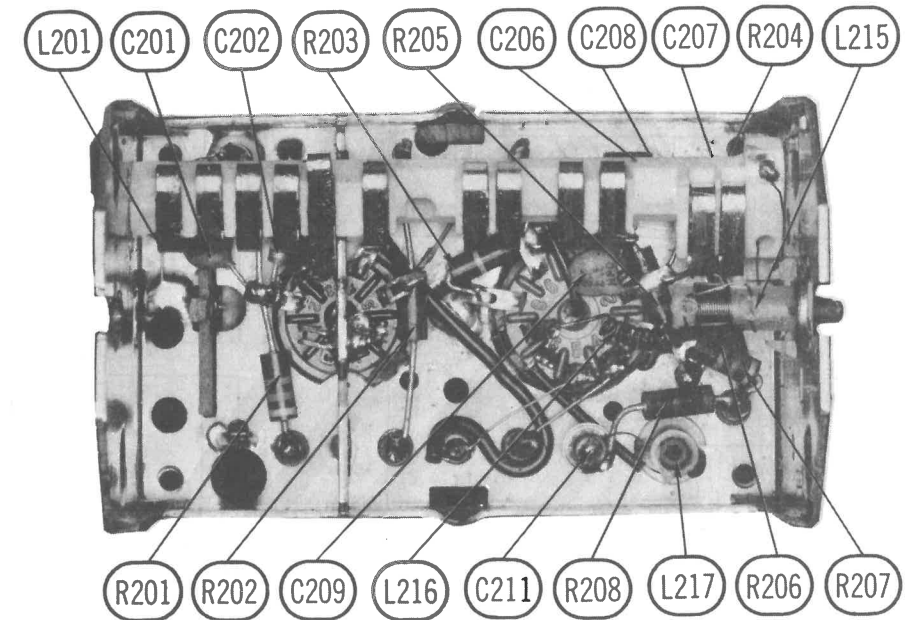
RF AND MIXER ADJUSTMENTS

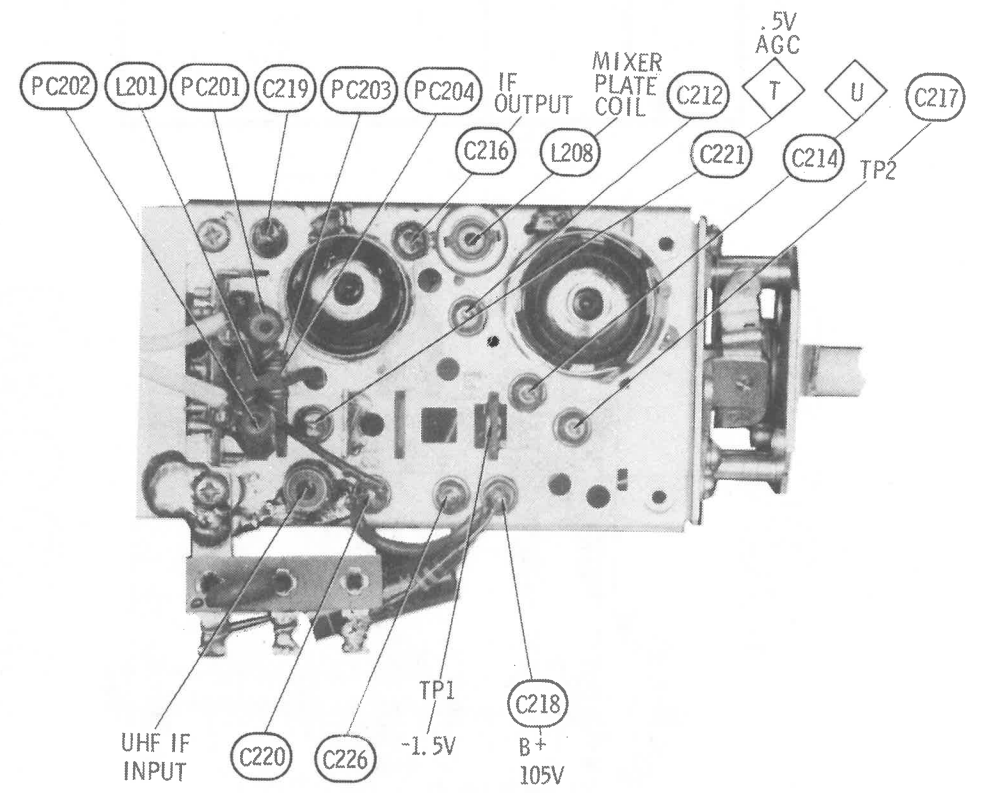
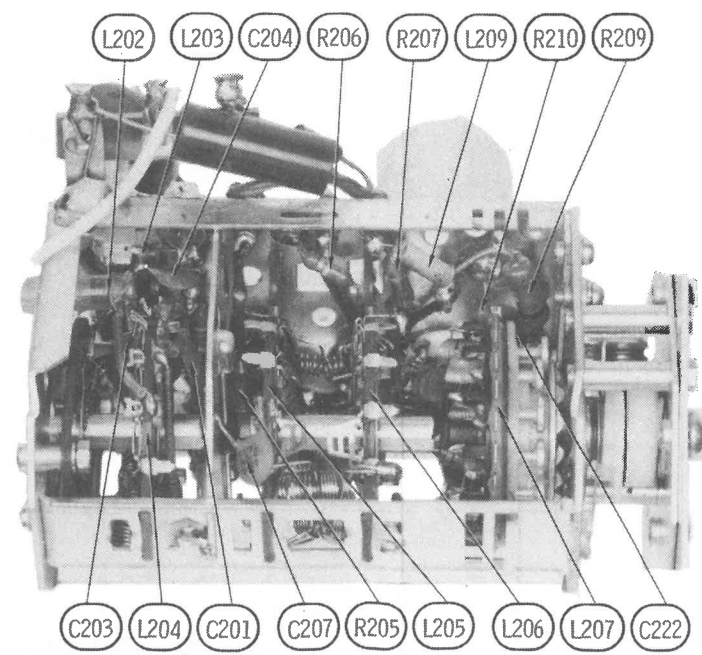
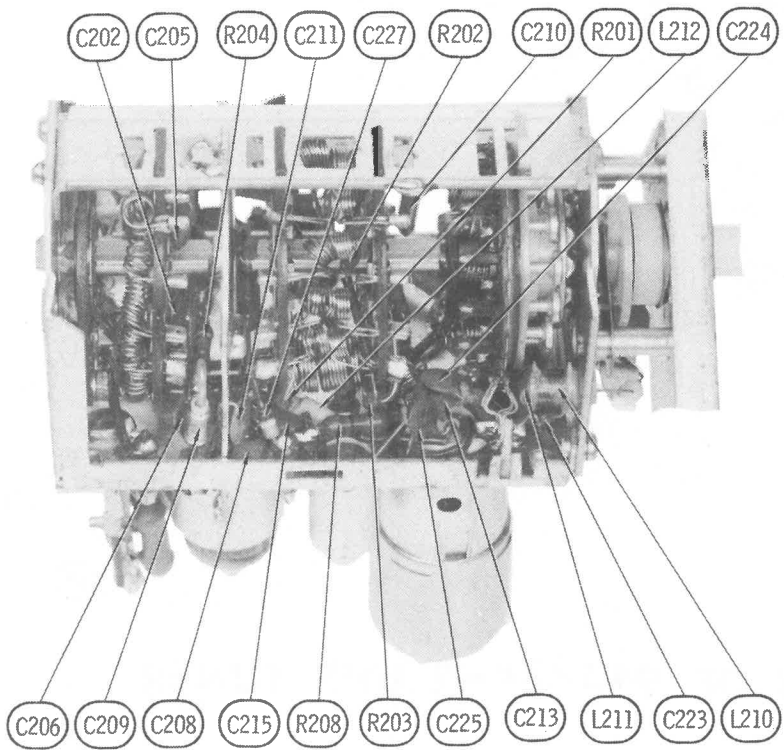
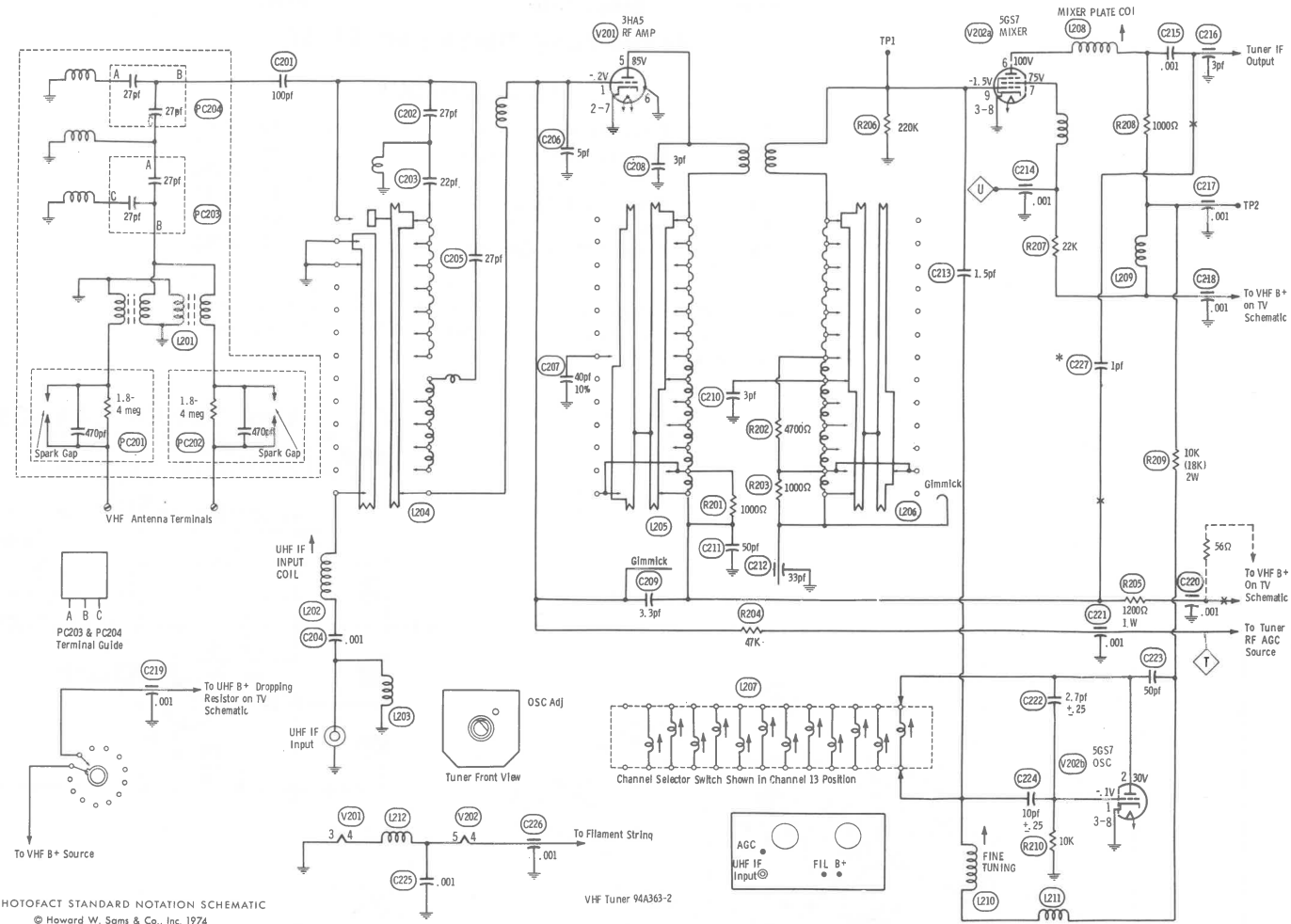
Connect the sweep generator across antenna terminals with 120-ohm carbon resistor in each lead. Refer to chart below for generator frequencies. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the scope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect a variable bias to the RF AGC line at Point \diamond . Adjust bias to obtain response curve showing no overload.

CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point \diamond , low side to ground.	Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
12 thru 2	Vertical input to Point \diamond , low side to ground.	Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.

GENERATOR FREQUENCY Numbers in () indicate channel number					
SWEEP	MARKER	SWEEP	MARKER	SWEEP	MARKER
(2) 57MC	55.25MC	(6) 85MC	83.25MC	(10) 195MC	193.25MC
	59.75MC		87.75MC		197.75MC
(3) 63MC	61.25MC	(7) 177MC	175.25MC	(11) 201MC	199.25MC
	65.75MC		179.75MC		203.75MC
(4) 69MC	67.25MC	(8) 183MC	181.25MC	(12) 207MC	205.25MC
	71.75MC		185.75MC		209.75MC
(5) 79MC	77.25MC	(9) 189MC	187.25MC	(13) 213MC	211.25MC
	81.75MC		191.75MC		215.75MC

FIG. 201





VHF TUNER ALIGNMENT INSTRUCTIONS

OSCILLATOR ADJUSTMENTS

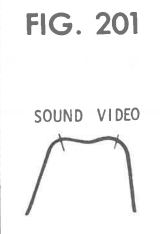
The oscillator slug for each channel is preset with the fine tuning control. Adjust the fine tuning for best picture and sound.

RF AND MIXER ADJUSTMENTS

Connect the sweep generator across antenna terminals with 120-ohm carbon resistor in each lead. Refer to chart below for generator frequencies. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the scope for horizontal deflection. Use 10MHz sweep unless otherwise noted. Connect a variable bias to the RF AGC line at Point T. Adjust bias to obtain response curve showing no overload.

CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to point W or U low side to ground.	Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
12 thru 2	Vertical input to point W or U low side to ground.	Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.

GENERATOR FREQUENCY					
Numbers in () indicate channel number					
SWEEP	MARKER	SWEEP	MARKER	SWEEP	MARKER
(2) 57MHz	55.25MHz	(6) 85MHz	83.25MHz	(10) 195MHz	193.25MHz
(3) 63MHz	59.75MHz	(7) 177MHz	87.75MHz	(11) 201MHz	197.75MHz
(4) 69MHz	61.25MHz	(8) 183MHz	175.25MHz	(12) 207MHz	199.25MHz
(5) 79MHz	65.75MHz	(9) 189MHz	179.75MHz	(13) 213MHz	203.75MHz
	67.25MHz		181.25MHz		205.25MHz
	71.75MHz		185.75MHz		209.75MHz
	77.25MHz		187.25MHz		211.25MHz
	81.75MHz		191.75MHz		215.75MHz

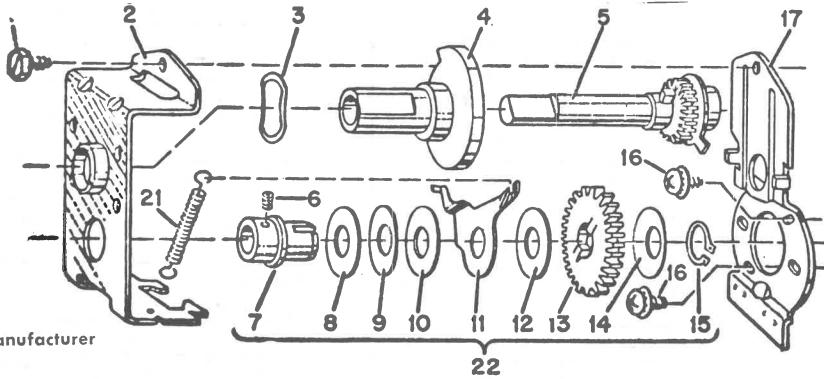


ADMIRAL CHASSIS T3K3-1A/-2A, T9K3-1A/-2A, T15K3-1B/-2B, T16K3-2A, T24K3-1A/-2A, T26K3-2A, T28K3-1A, T29K3-1B

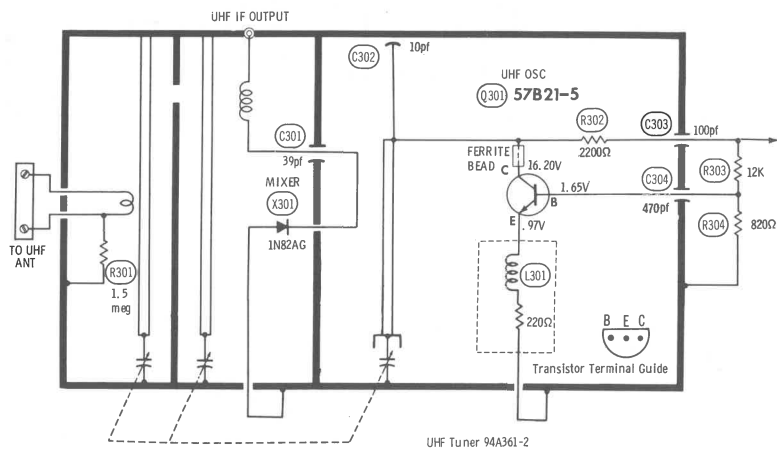
FOLDER 1

EXPLODED VIEW OF 94A361-2 UHF TUNER

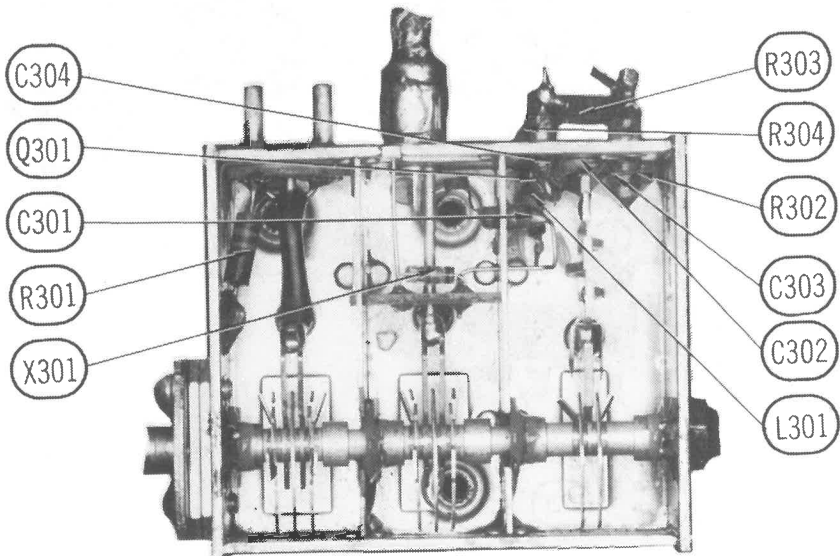
- | | | |
|----|---|------------|
| 3 | Washer, Wave | 4A51-8 |
| 4 | Sleeve, Fine Tuning | 33A1422-1 |
| 5 | Shaft & Gear Assembly | 700A1367-1 |
| 6 | Screw, Set | 1A349-1 |
| 19 | Jack, Coax | 88A101-1 |
| 21 | Spring, Tension | 19A368-1 |
| 22 | Hub, Gear & Clutch (Includes Parts 6-15) | 700A1368-1 |
| | Antenna Board Assembly (Includes L151) | 700A1373-1 |



Courtesy of the Manufacturer



A PHOTOFAC STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1974



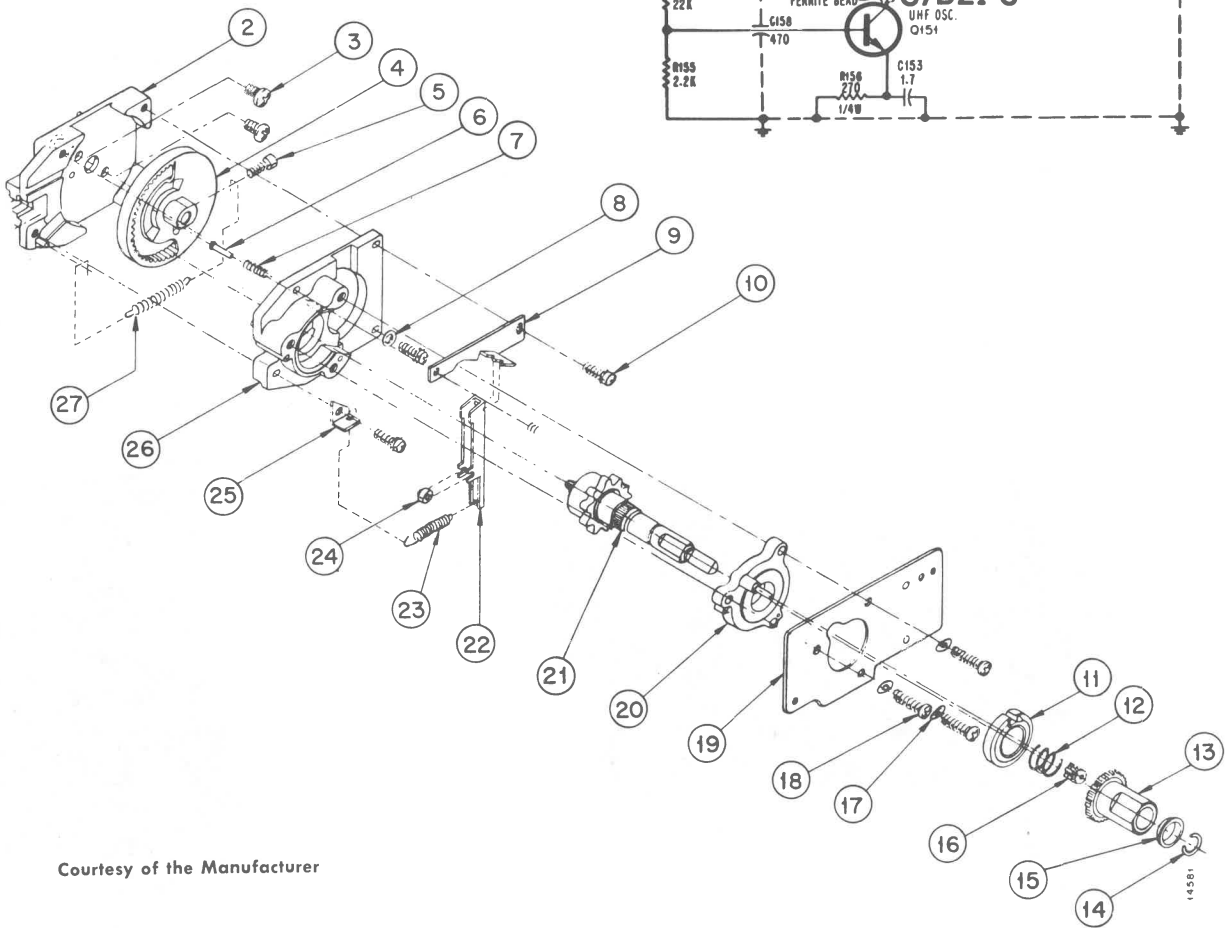
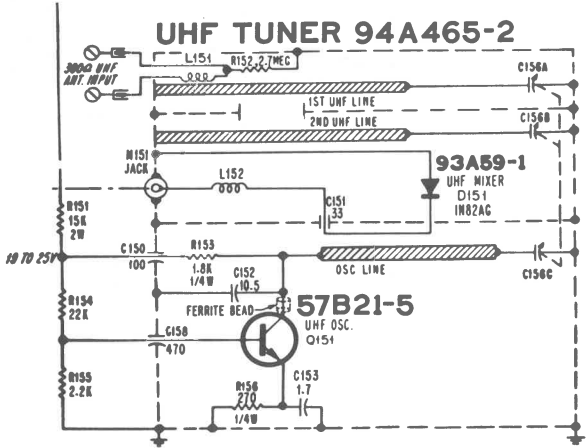
UHF TUNER 94A361-2

SYM. DESCRIPTION PART NO.
94A465-2 UHF TUNER PARTS LIST

MISCELLANEOUS

- | | | |
|----|----------------------|----------|
| 11 | Gear Decade | 93A40-77 |
| 12 | Compression Spring | 98A40-78 |
| 13 | Sleeve, Dial | 98A40-79 |
| 14 | Ring, Retaining | 98A40-80 |
| 15 | Guide | 98A40-81 |
| 16 | Gear, Pinion Counter | 98A40-82 |

Due to the complexity of this tuner, defects requiring other parts than those listed must be corrected by replacing the complete tuner.



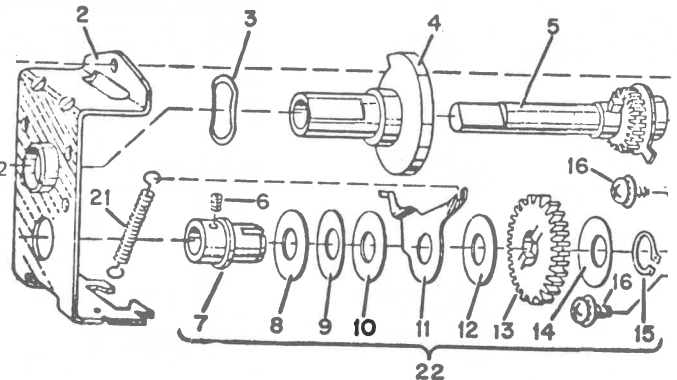
Courtesy of the Manufacturer

EXPLODED VIEW OF 94A465-2 UHF TUNER

3
4
5
19
21
22

94A336-2 TUNER PARTS LIST

Washer, Spring	4A34-11
Shaft, Knob	28A332-2
Shaft, Dial	28A331-3
Jack, Phono	88A74-2
Spring, Return	19A231-4
Clutch Assy.	700A598-512

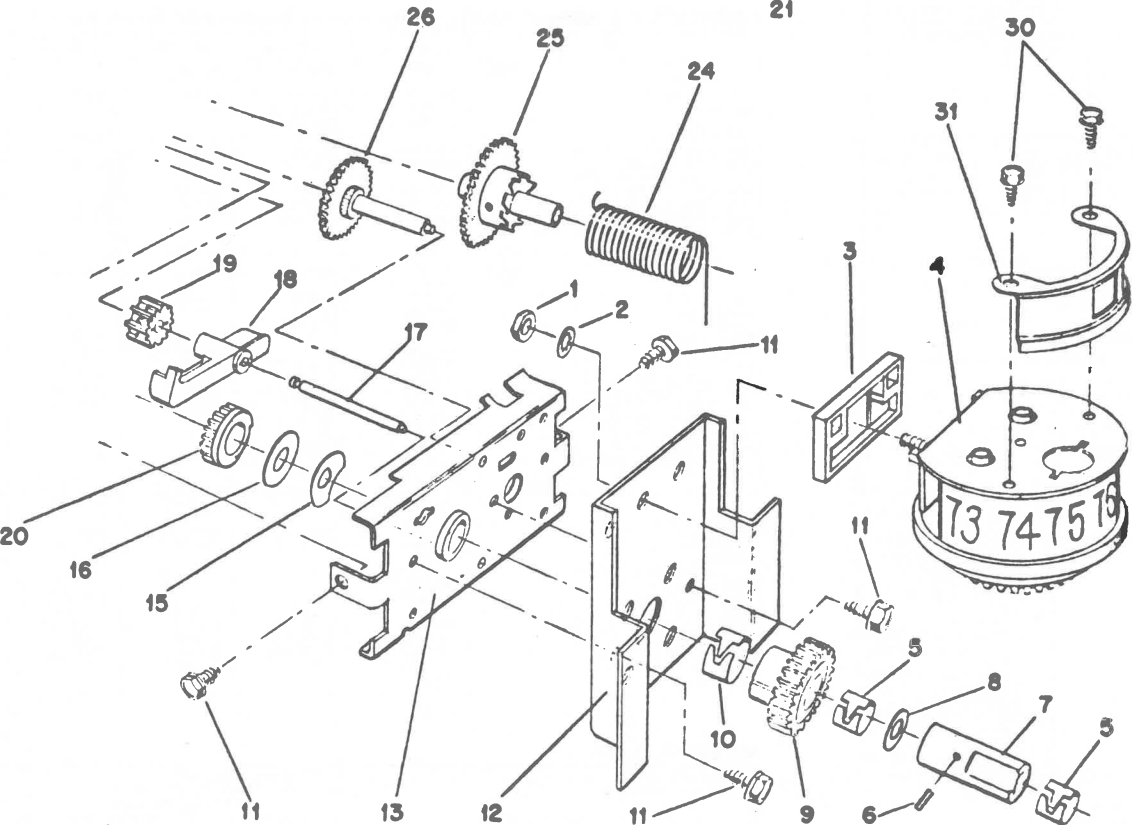
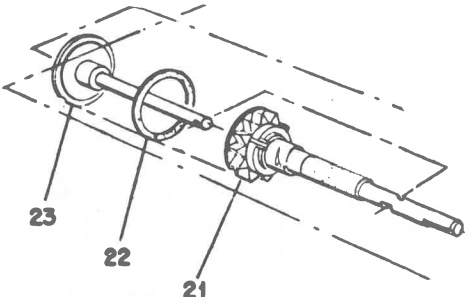


EXPLODED VIEW OF 94A336-2 UHF TUNER

1
2
3
4
5
6
7
8
9
10
11
14
15
16
17
18
19
20
21
22
23
24
25
26

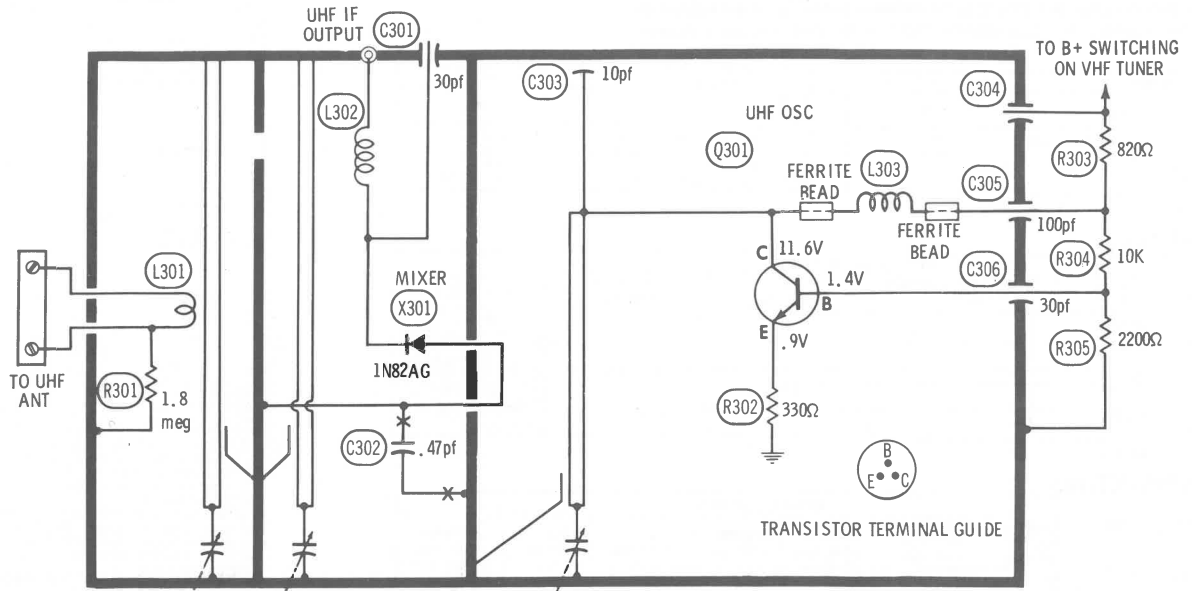
94A439-1 UHF TUNER PARTS LIST

Nut, Hex	2A118-14
Lockwasher	3A18-2
Spacer, Drum	33A1735-2
Film Readout Assy.	
Ring	18A509-3
Roll Pin	8A24-6
Shaft, Fine Tune (Front)	28A354-2
Washer	3A9-111
Gear, Channel Drive	30A100-5
Ring	18A509-9
Screw	1A287-1
Spring, Detent	19A424-1
Washer, Bowd	4A34-14
Washer, Thrust	3A9-112
Shaft, Pinion	28A353-3
Lever, Stop	20A141-1
Gear, Counter Pinion	30A99-1
Gear, Stop Arming	30A98-1
Shaft, Assy., Detent Selector	700A1646-501
Washer, Friction	3A9-109
Shaft Assy, Fine Tuning	700A1645-501
Spring, Antilash	19A423-1
Gear, Rotor Assy	700A1644-1
Gear, Intermediate	30A97-1

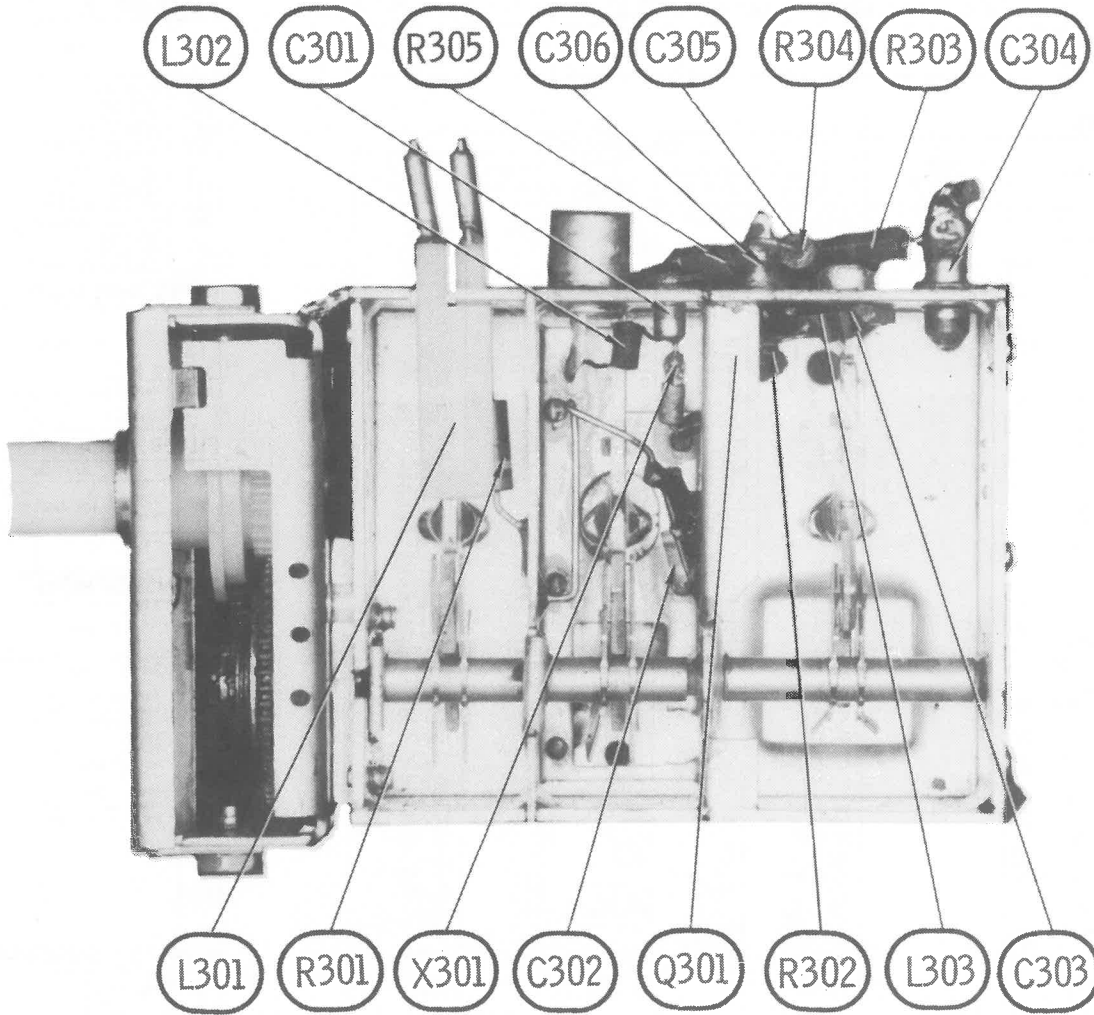


EXPLODED FIEW OF 94A439-1 UHF TUNER

Courtesy of the Manufacturer



A PHOTOFAC STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1974



UHF TUNER 94A336-2, 94A439-1

ADMIRAL CHASSIS T3K3-1A/-2A, T9K3-1A/-2A, T15K3-1B/-2B, T16K3-2A, T24K3-1A/-2A, T26K3-2A, T28K3-1A, T29K3-1B

FOLDER 1

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.

TUBES

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V201	Audio Detector-Audio Output	17BF11		V401	Sync Sep-Vert Mult-Vert Out	2329	
V301	1st - 2nd Video IF	8BM11		V402	Horiz Phase Det - Horiz Osc	8L18	
V302	AGC Keying - Sound IF - Video Output	14BL11		V403	Horiz Output - Damper	38HK7	
				V404	High Voltage Rectifier	1AY2 (1AD2) *	

* Not interchangeable -- see schematic.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES USED IN MODELS:
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V303	22VAUP4				22T201CM/CMW, 22C211MM/MW, 22C215M/MW
	19V8XP4				19P639C/CM, 19P647C/CM, 19P807, SK19P667C/837C
	17ELP4		17ELP4 (1)		16P57CM, SK16P297CM, 16P287CM, 16P440M, SK16P437C
	16VALP4		16VAGP4		16P617, 16P287CM, SK16P437CM
	16VARP4			16VBP5	

(1) Silver Screen 85.

SEMICONDUCTORS

ITEM No.	TYPE / MFGR. No./PART No.	REPLACEMENT DATA					
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RCA PART No.	SPRAGUE PART No.
CR301	93AB-1	1N60	1N60	PTC206	HEP135	SK3088	ECG 109
	93AB25-3 (1)	1N60	1N60	PTC206	HEP135	SK3088	ECG 109
CR501	93A52-1	GE-300	D200	PTC214	HEP80602	SK3100	ECG 177
	93A52-1	GE-300	D200	PTC214	HEP80602	SK3100	ECG 177

(1) Used in Models 16P57CM & SK16P297CM.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		MFGR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C503a	250 165 V	67A30-11			CC0129.3A	PPF318.87	PCL-3454-8
b	200 150 V						
c	150 150 V						

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA				
			ARCO/ELMenco PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C100	470 1.4 KV		3CCD-471	DD30-471	HV3-470	6HV347	30GA-147
C125	.1 200 V		ZDP-3-104		DPMS2P1	EW2010	2PS-10
C202	.001		CCD-102	DD-102	GP1000	GP210	10TS-D10
C203	47 NPO		CCTO-470	DTZ-47	NP047	CN0447	10TCC-Q47
C204	82		CCTO-820	DTZ-82	NP082	CN0482	10TCC-Q82
C205	.001		CCD-102	DD-102	GP1000	GP210	10TS-D10
C206	.01		CCD-103	DD-103	GP1000	GP210	10TS-D10
C207	18 5X		CCTO-180	DTZ-180	NP018	CN0418	10TCC-Q18
C208	.0012		CCD-122	DD-122	GP1200	GP212	10TS-D12
C209	.05		CCD-503	CK-503	MGPO5	TA150	T6-S50
C210	.01		CCD-103	DD-103	GP1000	GP210	10TS-D10
C211	.01 1 KV		CCD-103	DD-103	GP1000	GP210	10TS-D10
C212	470 N750	65A131-6					
C213	5.6						
C301	10 NPO		CCTO-100	DTZ-10	NP010	CN0410	10TCC-Q10
C302	.22 200 V		4DP-5-224		DPMS4P22	EW4022	4PS-P22
C303	560		CCD-561	DD-561	GP560	GP360	10TS-T56
C304	.0015		CCD-152	DD-152	GP152	GP215	10TS-D15
C305	470		CCD-471	DD-471	GP470	GP347	10TS-T47
C307	4.7 NPO			DTZ-47	NP047	CN0547	10TCC-Q47
C308	6.8 NPO			DTZ-68	NP068	CN0568	10TCC-Q68
C309	6.8 NPO			DTZ-68	NP068	CN0568	10TCC-Q68
C313	82 200 V		CCD-681	DD-681	GP680	GP368	10TS-T68
C315	820		4DP-5-224		DPMS4P22	EW4022	4PS-P22
C316	820		CCD-821	DD-821	GP820	GP382	10TS-T82
C317	820		CCD-821	DD-821	GP820	GP382	10TS-T82
C318	47		CCD-821	DD-821	GP820	GP382	10TS-T82
C319	4.7		CCTO-470	DTZ-47	NP047	CN0447	10TCC-Q47
C320	47		CCTO-470	DTZ-47	NP047	CN0447	10TCC-Q47
C321	22 N750		CCTN-220	DTN-22	N22	CN7422	10TCU-Q22
C323	470 1.4 KV		3CCD-471	DD30-471	HV3-470	6HV347	30GA-147
C324	.01 1.4 KV			DD16-103		ZHV110	
C400	.22 200 V		4DP-5-224		DPMS4P22	EW4022	4PS-P22
C401	110 N1500/5 KV	65A239-5					
C402	390		CCD-391	DD-391	GP390	GP339	10TS-T39
C403	390		CCD-331	DD-331	GP330	GP333	10TS-T33
C404	.0012		CCD-122	DD-122	GP1200	GP212	10TS-D12
C405	.01 600 V		6DP-2-103	CPR-10000J	DPMS6S1	EW6F110	6PS-S10
C407	.0056		DM-30-562J	CPR-5600J	GP560	GP256	424ME5600J301
C408	.001		CCD-102	DD-102	GP1000	GP210	10TS-D10
C409	.039 1 KV	64A31-170			DPMS20539	PVC6139	10PS-S39
C410	.039 600 V		6DP-3-393		DPMS6S39	GP356	6PS-S39
C411	560		CCD-561	DD-561	GP560	GP360	10TS-T56
C413	.047 400 V		4DP-3-473		DPMS6547	EW4F147	4PS-S47
C415	270		CCD-270	DD-271	GP270	GP327	10TS-T27
C416	330		CCD-331	DD-331	GP330	GP333	10TS-T33
C417	.0012 500 V		DM-20-122J	CPR-1200J	GP1200	GP212	424ME1201J501
C418	.001		CCD-102	DD-102	GP1000	GP210	10TS-D10
C419	.1 200 V		ZDP-3-104		DPMS2P1	EW2010	2PS-P10
C420	560		DM-18-561J	CPR-560J	CD19FD561J03	SK356	424ME5600J501
C421	.0033 500 V		DM-20-332J	CPR-3300J	CD19FD332J03	SK233	424ME3301J501
C422	.0082		DM-30-822J	CPR-8200J	CD19FD32J03	SK282	
C423	.0039		DM-20-392J	CPR-3900J	GP3900	GP239	424ME3901J501
C424	.0047		CCD-472	DD-472	GP4700	GP247	10TS-D47
C425	.027 1 KV	64A33-46			DPMS6P22	EW6F022	6PS-P22
C426	.027 1 KV	65A239-15			DPMS20527		20PS-S27
C428	82 N1500/4 KV			DD-601		GP360	
C429	620 1 KV						
C436	82 N750/3 KV	(2)					
C437	.0015		CCD-152	DD-152	GP215	GP215	10TS-D15
C501	.22 150 VAC	63A23-4					
C502	.001 1 KV		CCD-102	DD-102	GP1000	GP210	10TS-D10

(2) Part of deflection yoke.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R208	Volume (Slider Type)	1 Meg	75A167-7				
	Volume/Switch	1 Meg	75C167-7 (4)				
	Volume (Slider Type)	1 Meg	75A1-106 (5)				
	Contrast	25 K	75A149-10 (6)	F1-25K, SFS212	A47-25K-S, RS-3/16 or [NP-25K-S, SE-F-400]	BU1,CF11, SS4,DC1 *	RU253L,SL35,IS2750 or [UA253L,SD3500] or [P253L,3014, SF3062]
			75A118-41 (6)		B47-25K-S (1)(2), or [NP-25K-S, NML-A-300]	BU11,CF11 (1), SS6A	RU253L (1)(2), SN875 or [UA253L (1)(2), SN875]
			75D118-41 (4)				
	Contrast	30 K	75A112-13	F1-25K (1)(2), SN100			
		4000 Stop	75C112-13 (4)				
			75A149-9 (6)				
	Contrast (Slider Type)	25 K	75A167-8 (7)				
		100 K	75A118-40	F1-100K, SFS212	A47-100K-S, RS-3/16 or [NP-100K-S, SE-F-400]	BU1,CF13, SS4,DC1	RU15L,SL35,IS2750 or [UA15L,SD1500] or [P15L,3014, SF3062]
			75D118-40 (4)				
	Brightness	100 K	75A111-13	F1-100K, SN100	B47-100K-S or [NP-100K-S, NML-A-300,TT-2]	BU11,CF13,SS6A	PTA15L or [RU15L, SL37,SN875] or [UA15L,SN875]
			75C111-13 (4)				
			75A149-8 (6)				
	Brightness (Slider Type)	100 K	75A167-4 (8)				
		100 K	75A167-11 (9)				
	Brightness	(3)3 Meg "a"	74A129-3 (10)				
	Height	1.2Meg "b"	75C129-3 (4)				
R411	Vert Hold						
R417	Vert Linearity						
R421							

- (1) Connect a 4700-ohm resistor in series with the left-hand terminal of the control to the same terminal of the original control (control viewed from shaft end terminals down).
(2) Use original nylon tab mount.
(3) 5 Meg may be used in some versions.
(4) Number on unit.
(5) Used in Models 16P57CM and SK16P297CM.
(6) Used in Models 16P287CM/CMW, 16P440M, 16P617, SK16P437C/CM.
(7) Used in Models 19P639C/CM, 19P647C/CM, 19P807, 22C211MM, 22C215MM, SK19P667C, SK19P837C and some versions of 22T201CMW.
(8) Used in Models 19P639C/CM, 19P647C/CM, 22C211MM, 22C215MM, SK19P667C and some versions of Model 22T201CMW.
(9) Used in Models 19P807 and SK19P837C.
(10) Includes R411, R417 and R421.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R309	3900 4W, Film	4G-3.9K	61A24-439	R502	450 5W, WW	5W-SQ-450	61A20-87
R445a	4.7 1/2W, Carbon		(1)		330 5W, WW		61A20-66 (1)
	3.9 1/2W, Carbon		61A20-117	R503	80 5W, WW		61A20-101 (1)
R501	5.5 Fusible		61A48-1 (2)				

(1) Used in some versions. (2) Used when F501 is not present.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	REMARKS
L201	Sound IF	72A301-4			(1) Remove unused terminal.
L202	Quadrature	72A132-82			(2) Part No. 73A55-30 used in Models 16P57CM, 16P287CM, 16P440M, 16P617, 19P807, SK16P297CM, SK16P437CM, SK19P837C.
L301	47.25 MHz Trap	72A308-8			
L302	Video IF Input	72A308-1		7537	
L303	RF Choke (5.6 uH)	73A53-243			
L304	RF Choke (28 uH)	73A31-3		72F275AP	
L305	Peak (370 uH)	73A55-51 (2)			(3) Part No. 73A55-26 used in Models 16P57CM, 16P287CM, 16P440M, 16P617, 19P807, SK16P297CM, SK16P437CM, SK19P837C.
L306	Peak (370 uH)	73A55-51 (2)			
L307	Peak (180 uH)	73A5-12 (3)			
L402	RF Choke (5.6 uH)	73A31-11			
L403	RF Choke (28 turns)	73A37-17	19-1001	74F186AP	
L301	1st Video IF	72A308-2			
L302	2nd Video IF	72A310-1	17-3414 (1)	7526	
L303	4.5 MHz Trap-Sound Take-off	72A185-7			

COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA				
		MFGR. PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.
L401	Horizontal Freq. (Hold)	94A17-19				
		94D17-19 (1)				
	Horizontal Freq. (Hold)	94A17-21 (2)				

FILTER CHOKE

(1) Number on unit. (2) Used in Models 16P57CM, SK16P297CM.

ITEM No.	RATINGS		REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	
L501	.23 ADC	19	620 mH	74A18-63	C-2343	26C77	(1) Number on unit.
				T74D18-53 (1)			

TRANSFORMERS (Sweep Circuits)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T401	Vertical Output	79A139-5				(1) Number on unit.
		7790139-5P (1)				(2) Used in Models 16P57CM, SK16P