

CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a TV station and set all controls for normal operation. Adjust Horizontal Hold to a point where it is virtually impossible to lose horizontal sync while switching from channel to channel.

DISASSEMBLY INSTRUCTIONS

TV CHASSIS REMOVAL

1. Remove 6 screws holding back cover. Remove all knobs and disconnect antenna lead.
2. Remove picture-tube socket, yoke, and speaker leads.
3. Remove 1 screw holding tuners and ground lead. 1 screw holding chassis, and slide out.

PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" procedure. Lay set face down on a soft protective surface.
2. Remove 4 screws holding picture-tube bracket, and lift out. Do not lift out by the neck of the tube.

ADMIRAL CHASSIS T2H3-1A,
T3/T11/T12/T13/T16H4-1A, TH3/TH4-1A

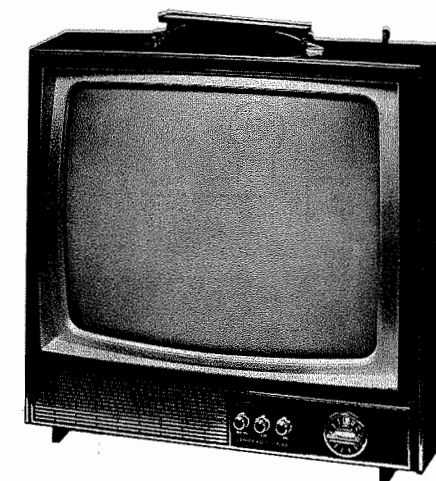
SET 1068 FOLDER 1

PHOTOFACT® Folder

with CIRCUITRACE™

For Supplier Address See PHOTOFACT Index

ADMIRAL CHASSIS T2H3-1A,
T3/T11/T12/T13/T16H4-1A, TH3/TH4-1A



MODEL C1657FPM

CHASSIS	MODELS
T2H3-1A ...	AC1660FP, AC1667FP, C1634FP, C1657FP
TH3-1A	AC1660FPM, C1634FPM, C1657FPM
T12H4-1A ..	AC1987FP, C1953FP, C1955FP
T3H4-1A ...	AC1987FPM, C1953FPM, C1955FPM
T16H4-1A ..	AC1837FP
T13H4-1A ..	AC1990FP, C1977FP
TH4-1A	C18P28FPM, C1881FPM, C1897FPM
T11H4-1A ..	C1881FP, C1897FP
TH3-1A	X16P18FM, 16P18CFM, 19P11CFM
TH4-1A	X18P28FM, X1881FPM, 18H19M, 18P28FM, 1881FPM
T2H3-1A ...	16P18CF
T11H4-1A ..	18H19, 18P28F, 1881FP
T12H4-1A ..	19P11CF, 19P11F, 19P15CF, 19P15F
T3H4-1A ...	19P11CFM, 19P15CFM
T13H4-1A ..	19P27CF
T8H4-1A ...	19P27CFM

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.

SERVICING IN THE FIELD

SAFETY GLASS

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

FUSE OR FUSE DEVICE

A 5.5Ω fusible resistor is used for low-voltage power supply protection.

VHF OSCILLATOR ADJUSTMENT

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

AGC

No provision is made to vary the AGC on this receiver.

CENTERING

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

REMEMBER TO ASK— "What else needs fixing?"

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

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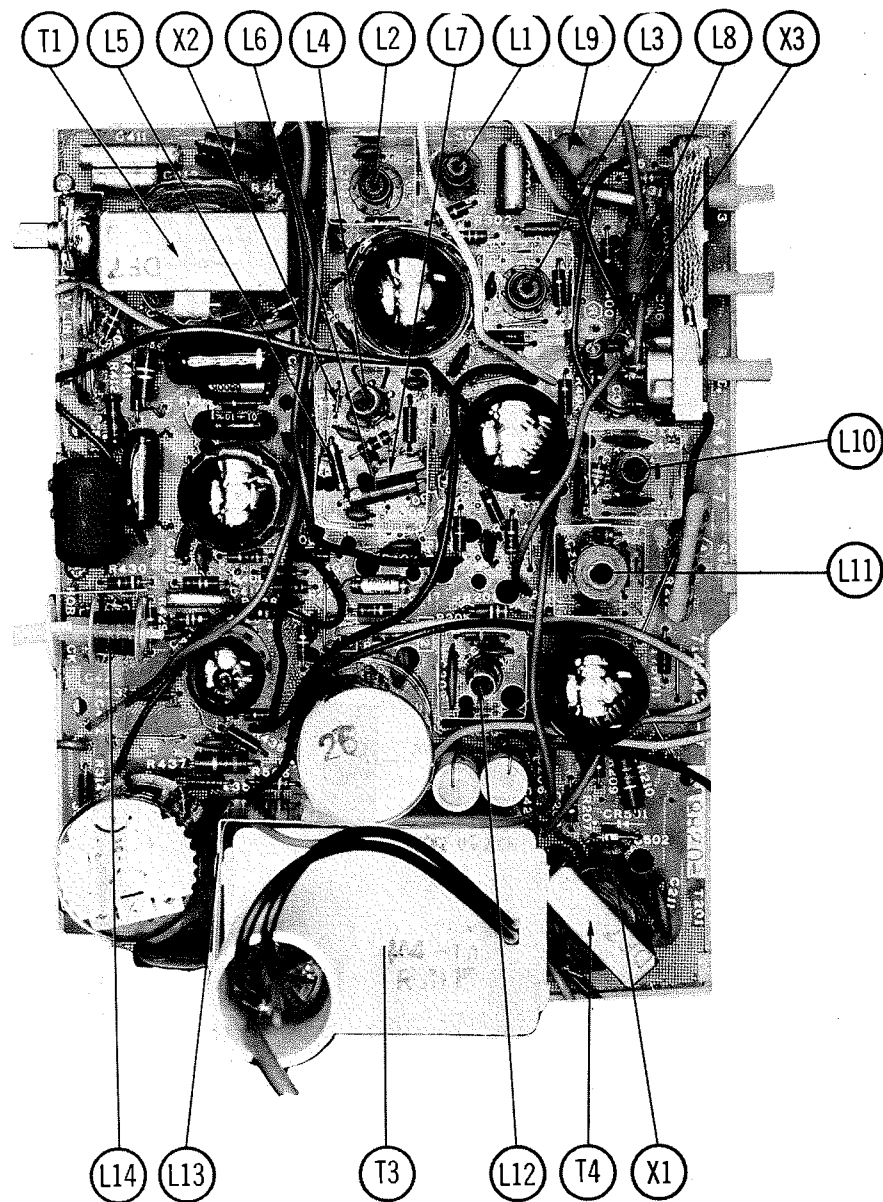
ADMIRAL CHASSIS T2H3-1A,
T3/T11/T12/T13/T16H4-1A, TH3/TH4-1A

SET 1068 FOLDER 1

RESISTANCE MEASUREMENTS

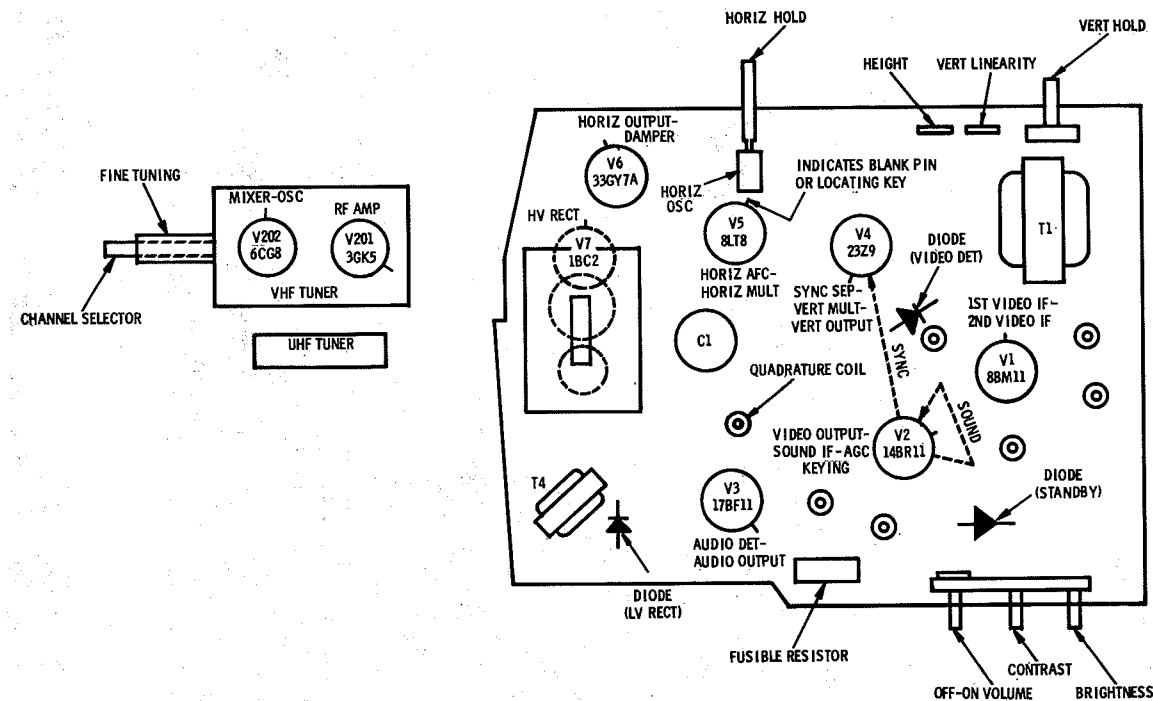
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	8BM11	16Ω	250Ω †	250Ω †	0Ω	120Ω	0Ω	250Ω †	0Ω	250Ω †	33Ω	220K	13Ω
V2	14BR11	11Ω	350Ω *	35Ω †	15Ω	0Ω	47K †	35Ω †	100K	1.1meg	700Ω †	4500Ω †	6Ω
V3	17BF11	35Ω	820Ω	16Ω	TP	470K	15K †	350K †	250K	120Ω	3900Ω †	200Ω †	40Ω
V4	23Z9	16Ω	3meg †	600K	NC	250Ω †	NC	0Ω	1.6meg	250Ω †	12meg	21K †	24Ω
V5	8LT8	2200Ω	350Ω †	250K †	6Ω	3.5Ω	100K	600K	1meg	1.5meg			
V6	33GY7	35Ω	100Ω †	NC	5.2meg	6.8Ω †	NC	NC	0Ω	1.2meg	NC	660Ω †	24Ω
V7	1BC2	PINS 1 THRU 9 HAVE INFINITE RESISTANCE											TOP CAP 174.8Ω †
V8	17ELP4	13Ω	1000Ω	90K	0Ω	NC	NC	200K	11Ω				
V201	3GK5	0Ω	2.2meg	0Ω	1Ω	2000Ω †	0Ω	0Ω					
V202	6CG8A	15K	5200Ω †	0Ω	3.5Ω	1Ω	1700Ω †	18K †	0Ω	220K			
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

* READING DEPENDS ON POLARITY OF METER CONNECTIONS.
 NC NO CONNECTION TP TIE POINT † MEASURED FROM CATHODE OF X1.
 ‡ MEASURED FROM PIN 4 OF V6.



PRINTED BOARD

TUBE PLACEMENT CHART



ADMIRAL CHASSIS T2H3-1A,
 T3/T1/T2/T3/T6H4-1A, TH3/TH4-1A

TROUBLESHOOTING CHECK CHART

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

SWEEP

No raster, has sound V5, V6, V7
 No vert. deflection V4
 Poor vert. lin. or foldover V4
 Poor horiz. lin. or foldover V5, V6
 Narrow picture V5, V6
 Vert. off freq. V4
 Horiz. off freq. V5

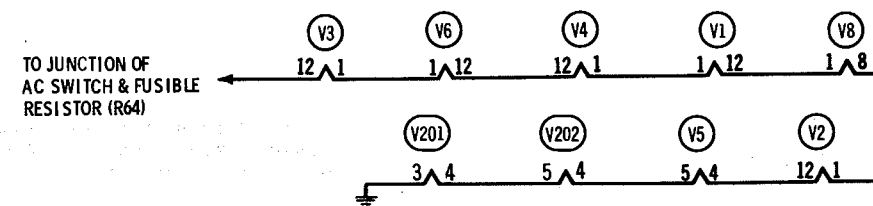
PICTURE OR SOUND

No pic, no sound, no raster X1, R64 (Fusible) Res., V6
 No pic, no sound, has raster V201, V202, V1, V2
 No pic, no sound, has snow V201, V202, V1
 No pic, has sound, no raster V8
 No pic, has sound, has raster X2, V2, V8
 Has pic, no sound V2, V3
 Overloaded picture V2, X2

SYNC

No vert. sync V4
 No horiz. sync V5
 No vert. or horiz. sync V4

This receiver employs tubes used in a series filament network; an open filament in any tube will cause the set to be inoperative. (See circuit below.)



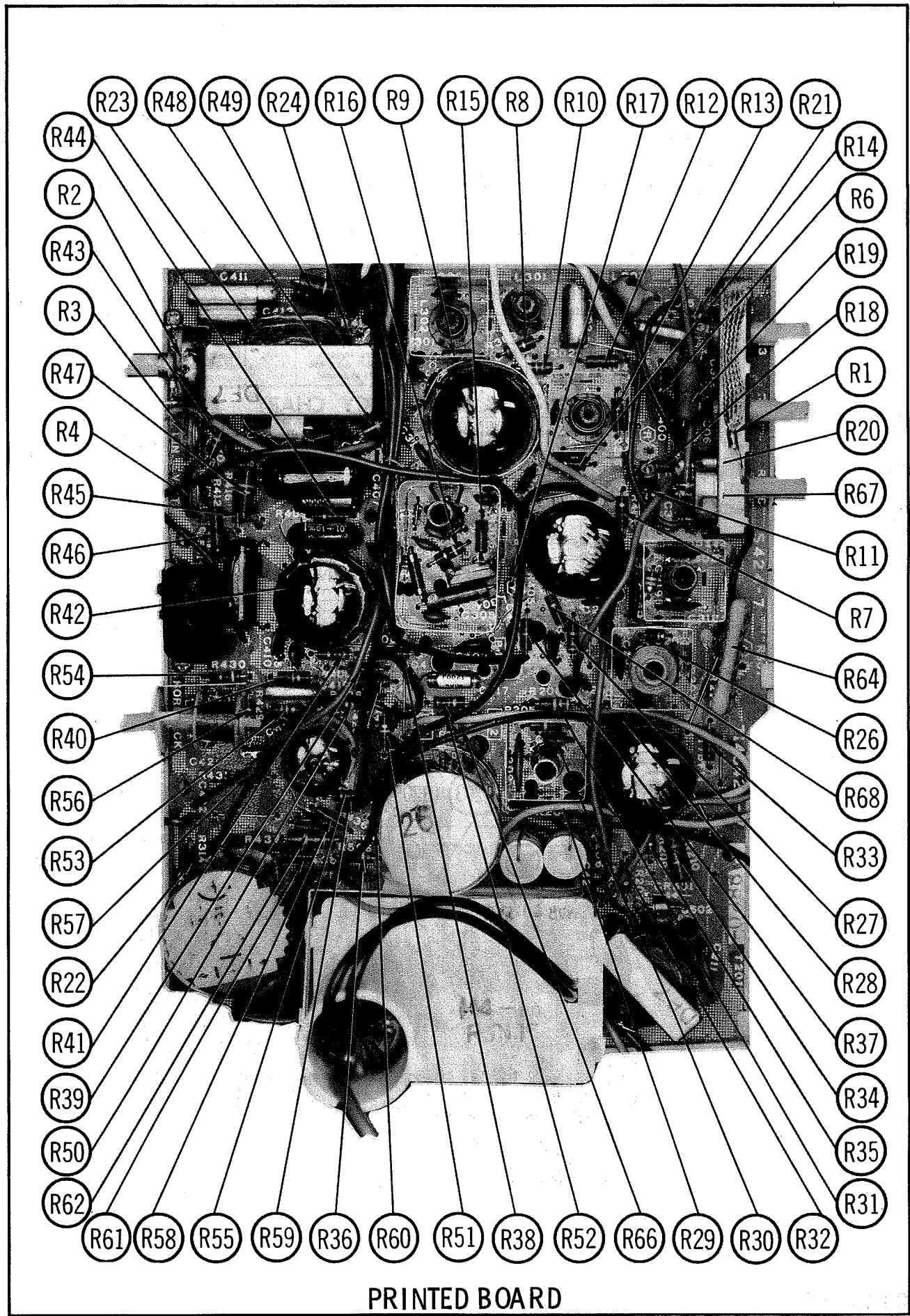
SET 1068 FOLDER 1

ARROWS INDICATING TUBE LOCATIONS ARE
POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

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**ADMIRAL CHASSIS T2H3-1A,
T3/T11/T12/T13/T16H4-1A, TH3/TH4-1A**

FOLDER 1



PRINTED BOARD

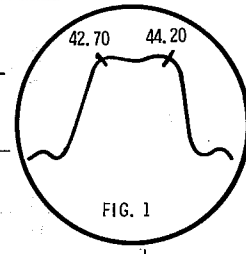
ALIGNMENT INSTRUCTIONS

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 thru A9 GENERAL CEMENT #8606, 8606L, 8669 ... WALSCO #2543, 2544, 2588
Mixer Plate Coil ... GENERAL CEMENT #9296, 9297, 9300 WALSCO #2510, 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 \diamond) 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 \diamond . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		47.25MC	A1	Adjust for MINIMUM.
2. Connect DC probe of a VTVM thru a 47K resistor to point \diamond . Common to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.		42.7MC 44.2MC 44.8MC 43.0MC 44.8MC	A2 A3 A4 A5 Mixer Plate Coil	Adjust for maximum.
3. Connect vertical input of a scope to point \diamond . Low side to ground.	Connect high side to pin 6 (grid) of V1. Low side to ground.	44MC (10MC Sweep)	42.7MC 44.2MC	A2 A3	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
4. Connect vertical input of a scope to point \diamond . Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	42.7MC 43.0MC 44.2MC 44.8MC 47.25MC	A4 A5 Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A 2 and A3.

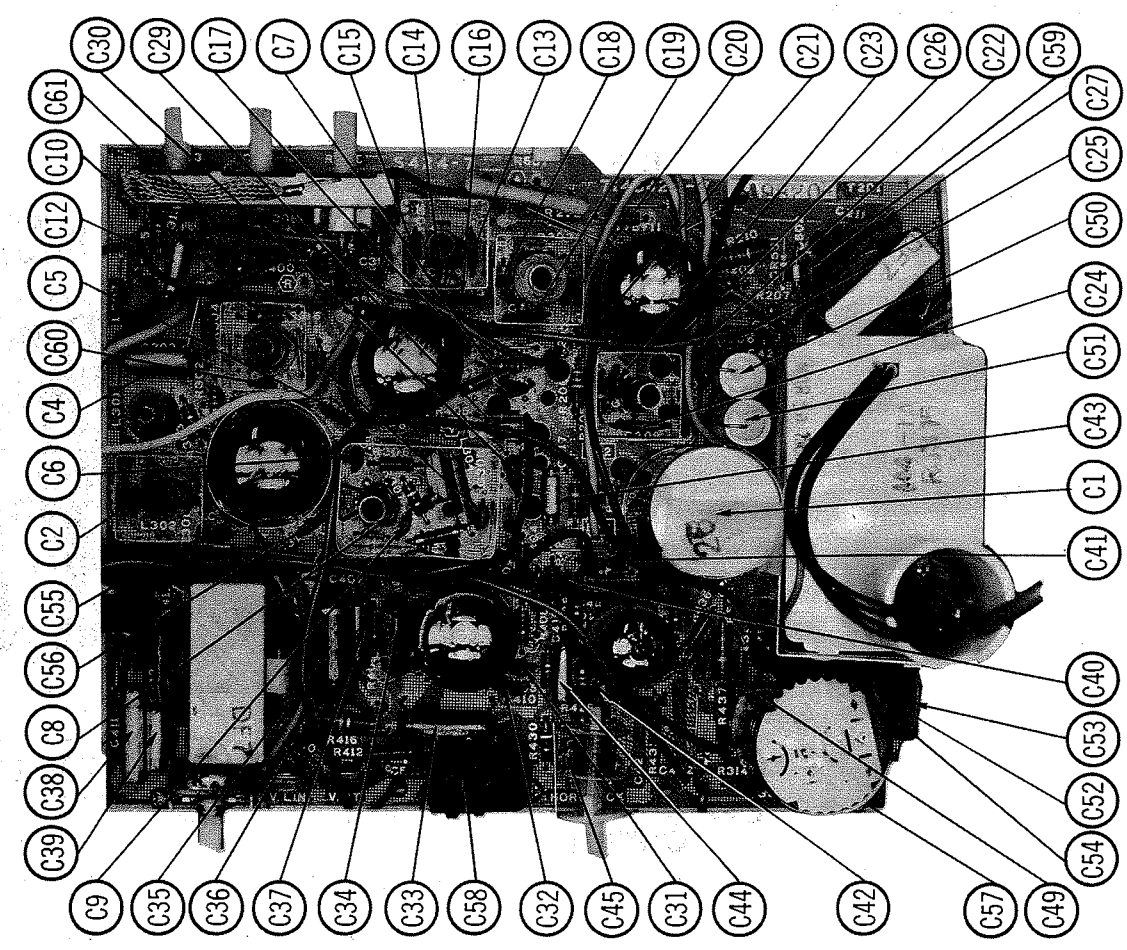
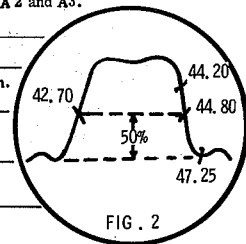


4.5 MC TRAP ALIGNMENT

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 A9 for MINIMUM beat interference.

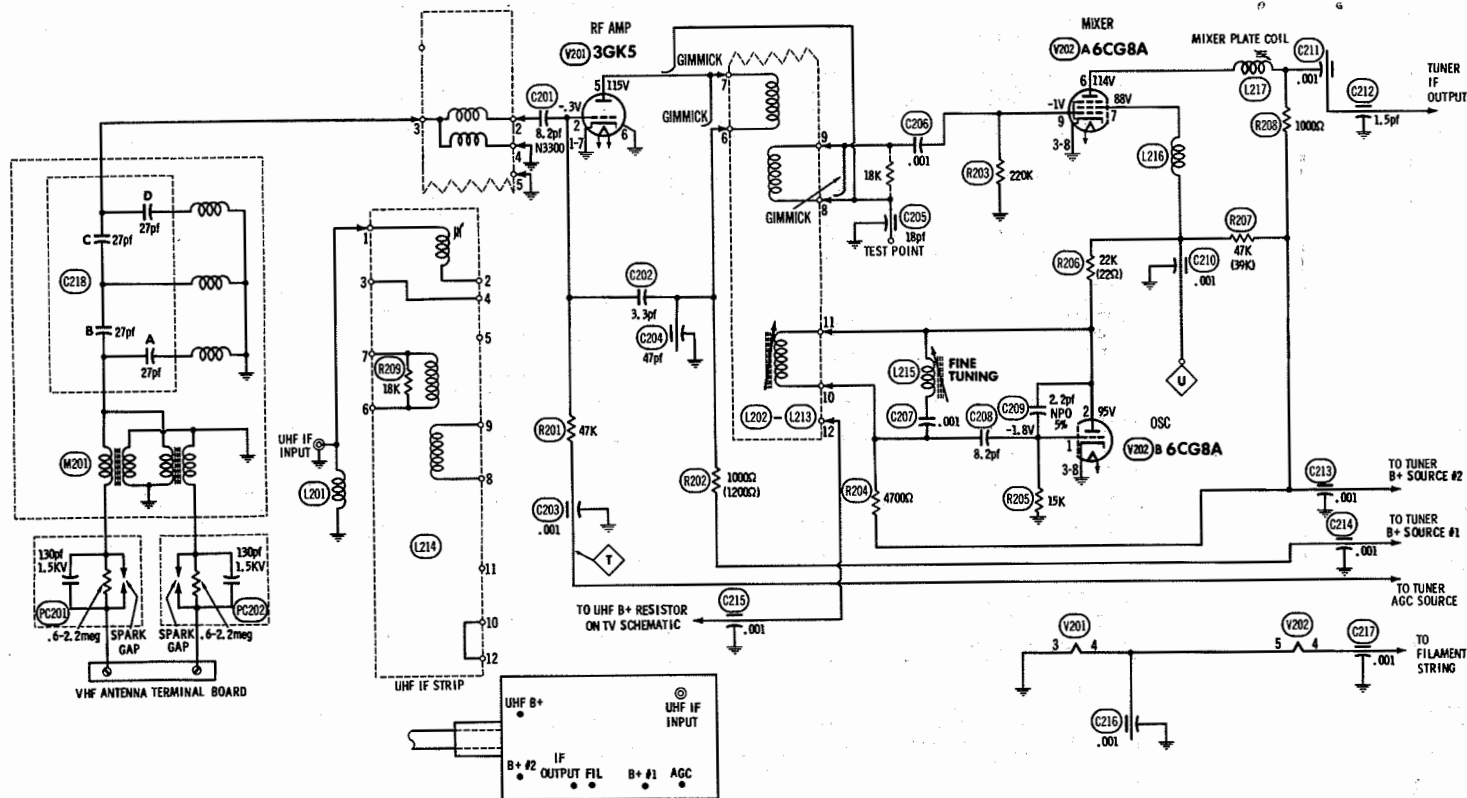
SOUND IF ALIGNMENT

Tune in a station and adjust A 6 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce signal while aligning for undistorted output by adjusting A7 and A8.

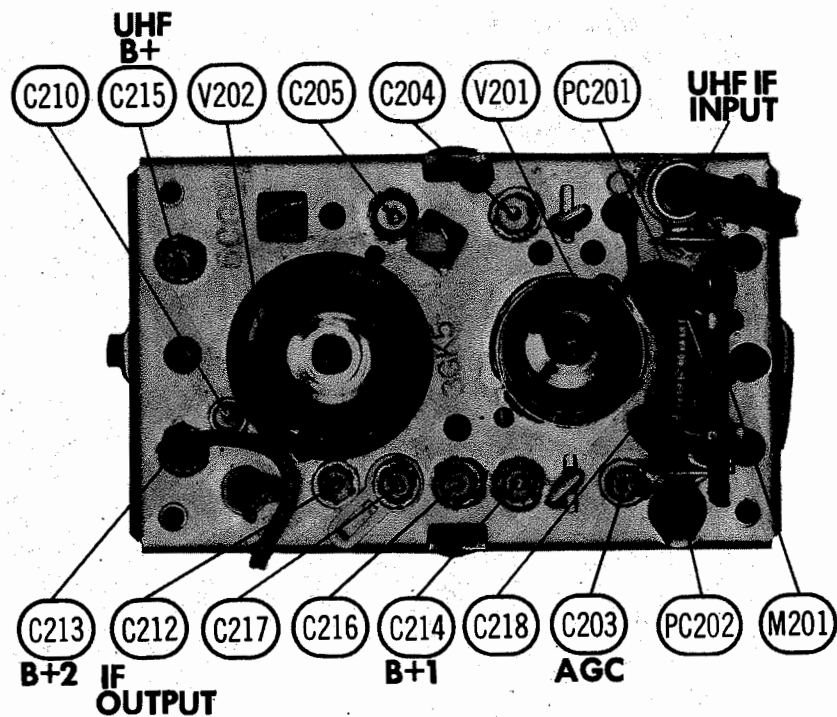


PRINTED BOARD

ADMIRAL CHASSIS 12H3-1A, TH3/TH4-1A



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VHF TUNER 94C281-7

VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: UHF Input Coil ... GENERAL CEMENT #8968, 8987, 9089 ... WALSCO #2531-X, 2541, 2587

OSCILLATOR ADJUSTMENTS

The individual oscillator slugs are accessible through a hole in the front of the tuner. Set the fine tuning to the center of its range. Starting with the highest channel in the area, adjust the appropriate oscillator slugs in descending order for best picture and sound.

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 a variable bias to the RF AGC line at point \diamond . 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 120 Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. 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.
2. "	See Chart	See Chart	12 thru 2	Vert. Input to Point \diamond , low side to ground.		Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.

CHANNEL & FREQUENCY CHART

SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL
57MC	55.25MC 59.75MC	2	85MC	83.25MC 87.75MC	6	185MC	183.25MC 187.75MC	10
63MC	61.25MC 65.75MC	3	177MC	175.25MC 179.75MC	7	201MC	199.25MC 203.75MC	11
69MC	67.25MC 71.75MC	4	183MC	181.25MC 185.75MC	8	207MC	205.25MC 209.75MC	12
75MC	73.25MC 77.75MC	5	189MC	187.25MC 191.75MC	9	213MC	211.25MC 215.75MC	13

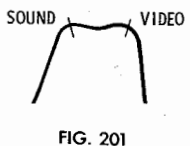
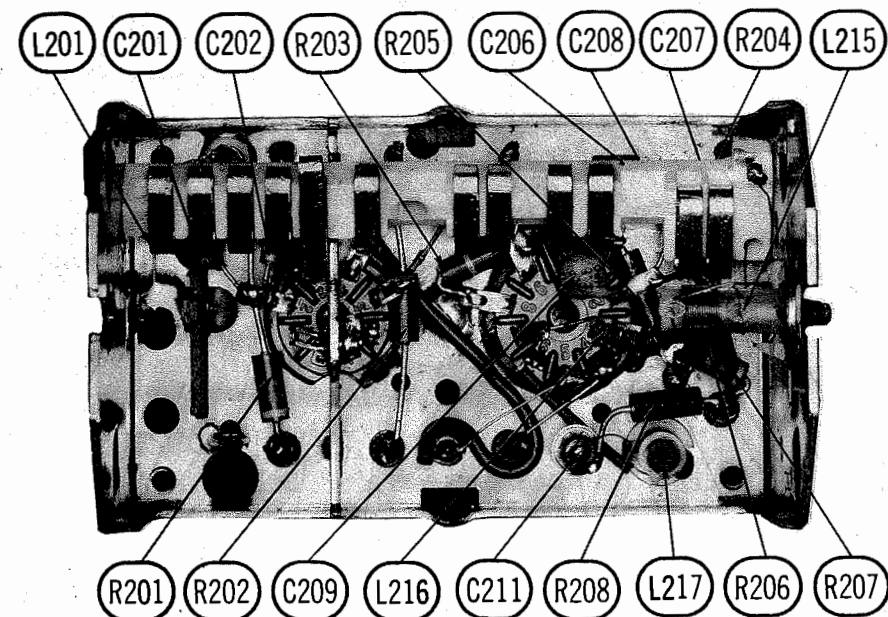


FIG. 201

UHF TUNER ALIGNMENT INSTRUCTIONS

Tune to a UHF station and adjust UHF IF Input Coil for best picture and sound.



ADMIRAL CHASSIS T2H3-1A,
T3/T11/T12/T13/T16H4-1A, TH3/TH4-1A

FOLDER 1

VHF TUNER
94C281-7

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE		
V201	RF Amp.	3GK5	V202	Mixer - Oscillator	6CG8A		

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALA8 PART No.	CORNELL- DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C201	8.2	N3300	#65A129-829						
C202	3.3								
C203	.002								
C204	.47								
C205	18								
C206	.001								
C207	.001								
C208	8.2								
C209	2.2								
C210	.001								
C211	.001								
C212	2.5								
C213	.001								
C214	.001								
C215	.001								
C216	.001								
C217	.001								
C218A	27								
B	27								
C	27								
D	27								

Admiral Part Number

ITEM No.	USE	MFGR. PART No.	NOTES	ITEM No.	USE	MFGR. PART No.	NOTES
L201	UHF IF o			L210	Ant, RF,		IF
L202	Ant., RF,			L211	Mixer, Osc.	73C83-512	Channel 10, Strip
	Mixer, Osc.	73C75-512	Channel 2, Strip	L212	"	73C84-512	" 11 "
L203	"	73C76-512	" 3 "	L213	"	73C85-512	" 12 "
L204	"	73C77-512	" 4 "	L214	Ant., RF, Mixer	73C86-512	" 13 "
L205	"	73C78-512	" 5 "	L215	Fine Tuning	73C74-520	UHF, IF Strip
L206	"	73C79-512	" 6 "	L216	Choke	72B256-508	
L207	"	73C80-512	" 7 "	L217	Mixer Plate		
L208	"	73C81-512	" 8 "				
L209	"	73C82-512	" 9 "				

ITEM No.	PART NAME	PART No.	NOTES
M201 PC201 PC202	Antenna Input Ass'y Antenna Isolation Antenna Isolation	700B636-503	Includes Balun, C218, PC201, and PC202. .6-2.2meg, 130pf, 1.5KV (With Spark Gap) .6-2.2meg, 130pf, 1.5KV (With Spark Gap)

UHF TUNER
94C296-4

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA						
			MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q301		UHF Oscillator	57B21-2		GE-11	TR-24	HEP56	SK-3019	ECG 108

ITEM No.	MFG. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS		NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	SARKIS TARZIAN PART No.	
X301	93B59-1 (1N82AG)	1N82A	1N82AG	ECG 112			

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUO PART No.
C301	30							
C302	10							
C303	30							
C304	100							

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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UHF TUNER PART# 94C361-1

(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.

High Voltage Lead	Use Belden No. 8869 (17KV)
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
3006 Tuner Input Lead	Use Belden No. 8285
3006 Antenna Lead-in	Use Belden No. 8230 or 8275
Antenna Rotor Cable	Use Belden No. 8484 (Flat) or 8484 (Round) - 4 Conductor
	8485 (Round) - 5 Conductor
	8488 (Round) - 8 Conductor

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
Q301	UHF Oscillator (Transistor)			V3	Audio Det. - Audio Output		17BF11
V201	RF Amp.	3GK5		V4	Sync Sep. - Vert. Mult.		
V202	Mixer - Oscillator	6CG8A			Vert. Output		23Z9
V1	1st Video IF - 2nd Video IF	8BM11		V5	Horiz. AFC - Horiz. Osc.		8LT8
V2	Video Output - Sound IF - AGC Keying	14BR11		V6	Horiz. Output - Dampner		33GV7A
				V7	HY Rectifier		1BC2

ITEM No.	REPLACEMENT DATA				NOTES
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V6	17ELP4 19FBP4 20AFP4	19FBP4 ①		17ELP4 ② 19FBP4 ②	① Aluminized ② Silver Bright "B"

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS		NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X1	93B52-1	GE-504A	8D4 or 5A4-D 1N541	ECG 116 or ECG 117 ECG 109	SK-3031 or SK-3017A		
X2	93B25-3 (1N541)	1N80					
X3	93B52-1	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK-3031 or SK-3017A		

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A B C	250, 165V 200, 150V 50 150V	67C30-12	AFB3-13-92		CC0129, 7A	XCS-47 ①	FP318, 85A ①	TVL-345 ①

① Use Printed Circuit Adapter Kit.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX Part No.	CENTRALAB Part No.	CORNELL DUBILIER Part No.	ELEMENCO Part No.	MALLORY Part No.	SPRAGUE Part No.
C2	6.8 NFO ±5		NFO-DI 6.8	DTZ-6R8	CZ601CH6R8D		CNO568	10TCC-
C3	4.70 1.4KV			CI-471			UAC347	
C4	.22 200V		V1612P22		DMF2P22	2DP-4-224	PVC2022	2PS-P22
C5	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D
C6	470 10%		GPD X5F471K	DD-471	JBZ601YF471K	CCD-471	GP347	10TS-T
C7	820		GPD X5F821K	DD-821	JB7601YF821K	CCD-821	GP382	10TS-T
C8	4.7 NFO ±25		NFO-DI 4.7	DTZ-4R7			CNO547	10TCC-
C9	6.8 NFO 10%		NFO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-
C10	6.8 NFO 10%		NFO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-
C11	1.1 200V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P1
C12	1 200V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P1
C13	47 NFO		NFO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CNO447	10TCC-
C14	3.9 NFO 10%							10TCC-
C15	47 NFO		NFO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CNO447	10TCC-
C16	47 NFO		NFO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CNO447	10TCC-
C17	220		GPD X5F221K	DD-221	JBZ601YF221K	CCD-221	GP322	10TS-T
C18	3 5%		NFO-DI 3.0					10TCC-
C19	82 NFO 5%			DTZ-82				10TCC-
C20	.001		GPD X5F102K	DD-102	JB8601YF102K	CCD-102	GP210	10TS-D
C21	5.6 NFO 5%			DD-108	YBY601ZU103P	CCD-103	GF110	10TCC-
C22	.01		GPD X5S103K					10TS-T
C23	.05 N220 5%			CK-503	H0V101ZV503Z	CCD-503	TA150	10TCR-
C24	.05 50V		TTP-.05	DD-222	JBX801YF222K	CCD-222	GP222	10TS-D
C25	.0022		GPD X5R472K	DD-472G	JB7601YF472K	CCD-472	JF247	10TS-D
C26	.0047		GPD X5S103K	DD-103	YBY601ZU103P	CCD-103	GF110	10TS-T
C27	.01 1KV		V1612P22	DD-222	DMF2P22	2DP-4-224	PVC2022	2PS-P22
C28	.22 200V		GPD X5F221K	DD-221	JB7601YF221K	CCD-221	GP322	10TS-T
C29	.0047		GPD X5R472K	DD-472G	JB7601YF472K	CCD-472	JF247	10TS-D
C30	220		GPD X5F331K	DD-331	JBZ601YF331K	CCD-331	GP333	10TS-T
C31	330 10%		GPD X5F122K	DD-122	JB8601YF122K	CCD-122	GP212	10TS-D

UHF IF OUTPUT

TO UHF ANT

1.5 mho

R301

30pf

C301

L302

10pf

C302

MIXER

IN2AG

CATH

UHF OSC

16.5V

1.9V

1.6V

330Ω

R302

Ferrite Bead

100pf

C304

10K

R304

2200Ω

R303

30pf

C303

TO B+ DROPPING RESISTOR ON TV SCHEMATIC

TRANSISTOR TERMINAL GUIDE

E

B

C

UHF TUNER PART# 94C296-4, 94E296-4

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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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 COUNTERFACTS® for the most up-to-date replacement.

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C33	.039 600V 10%		DBE6S39		DPMS6S39	6DP-3-393	PVC6139	6PS-539
C34	.01 10%		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C35	.039 1KV 10%		BE10S39					
C36	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C37	.0068 5%				CD30F682J500	DM-30-682J	SK269	MS-268
C38	.047 600V		DBE6S22		DMF6S47	6DP-3-473	PVC6147	6PS-547
C39	.022 600V 10%				DMF6S22	6DP-3-223	PVC6122	6PS-S22
C40	.330 10%		GPD X5F331K	DD-331	JBS601YP331K	CCD-331	GP333	10TS-T33
C41	.270 10%		GPD X5F271K	DD-271		CCD-271	GP327	10TS-T27
C42	.001 5%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C43	.0012 5%			CPR-1200J	CD19F122J500	DM-19-122J	SK212	MS-212
C44	.1 200V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C45	.560 10%		GPD X5F561K	DD-561	JBY601YP561K	CCD-561	GP356	10TS-T56
C46	.0033 10%		GPD X5R332K	DD-332	JBY601YP332K	CCD-332	JF233	10TS-D33
C47	.0068 5%			CPR-6800J	CD30F682J500	DM-30-682	SK268	MS-268
C48	.0039 5%			CPR-3900J	CD19F392J500	DM-19-392J	SK239	MS-239
C49	.0047 5%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C50	.047 600V		DBE6S47		DMF6S47	6DP-3-473	PVC6147	6PS-547
C51	.022 1KV 10%		BE10S22		DPMS16S22	16DP-5-223	PVC16122	16PS-S22
C52	47 N1500/5KV/10%					*	*	10TCW-T82
C53	820 N1500/1KV/5%					*	*	
C54	110 N1500/4KV/5%					*	*	
C55	820		GPD X5F821K	DD-821	JBY601YP821K	CCD-821	GP382	10TS-T82
C56	820		GPD X5F821K	DD-821	JBY601YP821K	CCD-821	GP382	10TS-T82
C57	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C58	.22 600V		DBE6P22		DPMS6P22	6DP-5-224	PVC6022	
C59	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C60	.560 10%		GPD X5F561K	DD-561	JBY601YP561K	CCD-561	GP356	10TS-T56

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFG. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Volume/Switch	1meg	75C126-2			H8 (A-E28L-A2)	
B	Contrast	25K	(75D126-2)			(B-E9, A1)	
C	Brightness	100K				(C-E12, A1)	
R2	Vert. Hold	1.2meg	75C100-8	F1-1.5meg, SNK108	A47-1.5meg-S, RN-3 or (NP-1.5meg-S, NML-A-300)	B11-138, TM4 or (BU11, CF18, SS6) *	RU155L, SL37, SN2000 or (UA155L, SN2000)
R3	Vert. Linearity	500K	75C101-17	T-500K		X201R504B	MTC55L1
R4	Height	5meg	75C101-16	T-5meg			

① To establish section identification of side-by-side controls, view controls with shaft ends facing you, terminals down.
On 3-section controls, left-hand section is "A", middle section is "B", right-hand section is "C".

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFG. PART No.			IRC PART No.	WORKMAN PART No.	MFG. PART No.
R46	Thermistor (1meg, Cold)		FS-313	61C41-2	R84	5.5Ω Fusible	FR 5.6	F-5.6	61C48-1

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	47.25MC Trap	72C308-1 ②			
L2	1st Video IF	72C308-1 ③		7537	TA292
L3	2nd Video IF	72C308-2	17-3414	7526	TA258
L4	3rd Video IF	72C310-1			
L5	RF Choke (5.6uh)	73C45-243 (73C53-243)	19-1008	4609	T820
L6	RF Choke (28uh)	73C31-3		72F275AP	T984
L7	Peaking (470uh)	73C35-30		6138	T352
L8	Peaking (750uh)	73D5-46 ④	19-2031 *	6156 *	T328 *
L9	Peaking (191uh)	73C5-40 ⑤	19-4201 A	6154 A	T372 A
L10	Sound Take-off/4.5MC Trap	72C185-7			
L11	Sound Interstage	72C301-4			
L12	Quadrature	72C132-82	20-1051 †	7127	TA291 †
L13	RF Choke (16 turns)	73C37-20 ①			

① Part No. 73C45-239 used in T3H4-1A, T8H4-1A, T12H4-1A, T13H4-1A, † Shunt with 18pf Capacitor and 100K Resistor.
② Part No. 72C308-8 used in some versions.

③ Part No. 73C308-6 used in T11H4-1A, T12H4-1A, T13H4-1A, T16H4-1A, T2H3-1A.

④ Part No. 72C132-90 used in TH4-1A, T3H4-1A, T8H4-1A.

⑤ Wound on 3900Ω Resistor. * Shunt with 3900Ω Resistor.
⑥ Wound on 12K Resistor. A Shunt with 12K Resistor.

COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA						
		MFG. PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L14	Horiz. Osc. (Hold) Rod, Horiz. Adjust	94D17-19 33C934-1						

FILTER CHOKE

ITEM No.	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	REPLACEMENT DATA					NOTES
				MFG. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L15	.26A DC	33Ω	.65 H	74D18-60 (74C18-60)	C-4125	C-2343	26C77	C-27X	

TRANSFORMERS (Sweep Circuits)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MFG. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	Vert. Output	79D123-1 (79C123-1)					
T2	Yoke (Horiz. 25mh) 110° (Vert. 14mh) Yoke Assembly	750C1089-3 700C1089-3 (700B1089-3) 79D136-2	MDF-142	DY-61AT	Y-88	YT-102-2	
T3	Horiz. Output			HO-405			

* COMPONENT CONNECTION DATA

ORIGINAL →	HV TRANSFORMER					VERTICAL OUTPUT					YOKE					YOKE PLUG							
REPLACEMENT	Original Connections					Original Connections					Original Connections					1	2	3	4	5	6	7	8
↓	1	2	5	6							1	2	3	4	5	6	7	8	10	11	TO YOKE TERMINAL		
MERIT											2	1	7	*	4	6	3	8, 5	†	▲			
STANCOR	EXACT REPLACEMENT										1	2	3	†	4	6	7	5, 8	† ▲	9			
THORDARSON											2	1	7	*	4	6	3	8, 5	†	▲			
TRIAD											2	1	7	*	4	6	3	8, 5	†	▲			

* Install 4700Ω, 1-watt Resistor and a lead from Yoke Terminals #1 and #3 to Terminal #5 of horizontal output transformer.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PR1	SEC.	MFG. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T4	2700Ω	3.2Ω	79C124-1 (79D124-1)					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFG. PART No.	QUAM PART No.	
SPI	3" x 5" PM 3.2Ω	78C158-13	35A05	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	VHF Tuner	94C281-7	
	VHF Tuner	94E281-7	
	VHF Tuner	94D281-7	
M2	UHF Tuner	94C363-1	
	UHF Tuner	94C298-4	
	UHF Tuner	94E298-4	
M3	VHF Antenna	94C361-1	
	VHF Antenna	69C318-4	JFD Replacement TA406
M4	VHF Antenna	69C338-1	Alternate used in some 19" Models only.
M5	Spark Gap	69C304-2	JFD Replacement TA544
		62A2-1	

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

ITEM	PART No.	ITEM	PART No.
Models 1881FP, 1881FPM, C1881FP, C1881FPM, X1881FPM		Models C1953FP, C1953FPM, C1955FP, C1955FPM, AC1990FP	
Knob - VHF Channel Selector	33C1023-23	Knob - VHF Channel Selector	33C1023-21
Knob - Fine Tuning	33C848-27	Knob - Fine Tuning	33C848-26
Knob - Brightness, Vert. Hold, Contrast	33C1031-13	Knob - Brightness, Vert. Hold, Contrast	33C1031-12
Knob - UHF Indicator	33C846-4	Knob - UHF Indicator	33C846-5
Handle	37D248-56	Handle	37D248-54
Cabinet	34E315-22	Handle	37D248-55
Cabinet Rear	799A2521	Handle	37D248-63
Models 19P11F, 19P11CF, 19P11CFM		Cabinet Models C1953FP/FPM	799A2808
Knob - VHF Channel Selector	33C1023-21	Cabinet Models C1955FP/FPM	799A2809
Knob - Fine Tuning	33C848-26	Cabinet Model AC1990FP	799A2810
Knob - Brightness, Vert. Hold, Contrast	33C1031-12	Cabinet Rear Models C1953FP/FPM	799A2810
Knob - UHF Indicator	33C846-5	Cabinet Rear Models C1955FP/FPM	799A2809
Handle	37D248-66	Cabinet Rear Model AC1990FP	799A2561
Cabinet	799A2835	Models 19P15F, 19P15CF, 19P15CFM	
Cabinet Rear	799A2836	Knob - VHF Channel Selector	33C1023-21
Models C18P28FM, 18P28F, 18P28FPM, X18P28FPM		Knob - Fine Tuning	33C848-26
Knob - VHF Channel Selector	33C1023-23	Knob - Brightness, Vert. Hold, Contrast	33C1031-12
Knob - Fine Tuning	33C848-27	Knob - UHF Indicator	33C846-5
Knob - Brightness, Vert. Hold, Contrast	33C1031-13	Handle	37D248-55
Knob - UHF Indicator	33B846-4	Cabinet	799A2813
Handle	37D248-65	Cabinet Rear	799A2697
Cabinet	34E315-31	Models 19P27CF, 19P27CFM, C1977FP, AC1987FP, AC1987FPM	
Cabinet Rear	799A2837	Knob - VHF Channel Selector	33C1023-22
Models 16P18CF, 16P18CFM, X16P18FPM		Knob - Fine Tuning	33C848-26
Knob - VHF Channel Selector	33C1023-24	Knob - Brightness, Vert. Hold, Contrast	33C1031-12
Knob - Fine Tuning	33C1024-12	Knob - UHF Indicator	33C846-5
Knob - Brightness, Vert. Hold, Contrast	33C1031-17	Handle	37D263-5
Knob - UHF Indicator	33B919-5	Handle	37D248-63
Handle	37D248-65	Cabinet Models 19P27CF/FPM, C1977FP	799A2806
Cabinet	34E314-31	Cabinet Models AC1987FP/FPM	799A2807
Cabinet Rear	799A2812	Cabinet Rear Models C1977FP	799A2561
Models C1657FP, C1657FPM, AC1660FP, AC1667FP		Cabinet Rear Models AC1987FP/FPM	799A2523
Knob - VHF Channel Selector	33C1023-25	Models C1897FP, C1897FPM, AC1837FP	
Knob - Fine Tuning	33C1024-12	Knob - VHF Channel Selector	33C1023-33
Knob - Brightness, Vert. Hold, Contrast	33C1031-18	Knob - Fine Tuning	33C848-27
Knob - UHF Indicator	33B919-5	Knob - Brightness, Vert. Hold, Contrast	33C1031-19
Handle	37D263-5	Knob - UHF Indicator	33C846-4
Handle	37D248-63	Handle	37D248-63
Cabinet	799A2826	Cabinet	799A2805
Cabinet Models C1657FP/FPM	799A2826	Cabinet Rear Models C1897FP/FPM	799A2523
Cabinet Models AC1660FP/FPM	799A2787	Cabinet Rear Model AC1837FP	799A2561
Cabinet Model AC1667FP	799A2788	Models C1634FP, C1634FPM	
Cabinet Model C1657FPM	799A2785	Knob - VHF Channel Selector	33C1023-24
Cabinet Rear	799A2519	Knob - Fine Tuning	33C1024-12
Models 18H19, 18H19M		Knob - Brightness, Vert. Hold, Contrast	33C1031-17
Knob - VHF Channel Selector	33C1023-23	Knob - UHF Indicator	33B919-5
Knob - Fine Tuning	33C848-27	Handle	37D248-57
Knob - Brightness, Vert. Hold, Contrast	33C1031-13	Cabinet	34E314-22
Knob - UHF Indicator	33C846-4	Cabinet Rear	799A2691
Cabinet	34E315-24		
Cabinet Rear	799A2800		