

**CABINET—REAR VIEW**

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune to a TV station and set all controls for normal operation. Connect a clip lead from point  $\odot$  to ground. Set the Horizontal Hold Control, R5A, to the center of its range. Adjust the Horizontal Stabilizer Coil

slug B1 until the picture tends to float slowly across the screen or to stand still. Remove clip lead from point  $\odot$ .

## DISASSEMBLY INSTRUCTIONS

### CHASSIS REMOVAL

1. Remove rear cover and all control knobs. Remove nut on earphone jack.
2. Disconnect picture tube socket, high voltage anode lead. Loosen clamp on yoke and remove yoke.
3. Remove the 4 Phillips chassis screws from bottom of cabinet and 2 screws from top of chassis.

4. Remove 2 Phillips screws from neon light mounting bracket and remove chassis.

### PICTURE TUBE REMOVAL

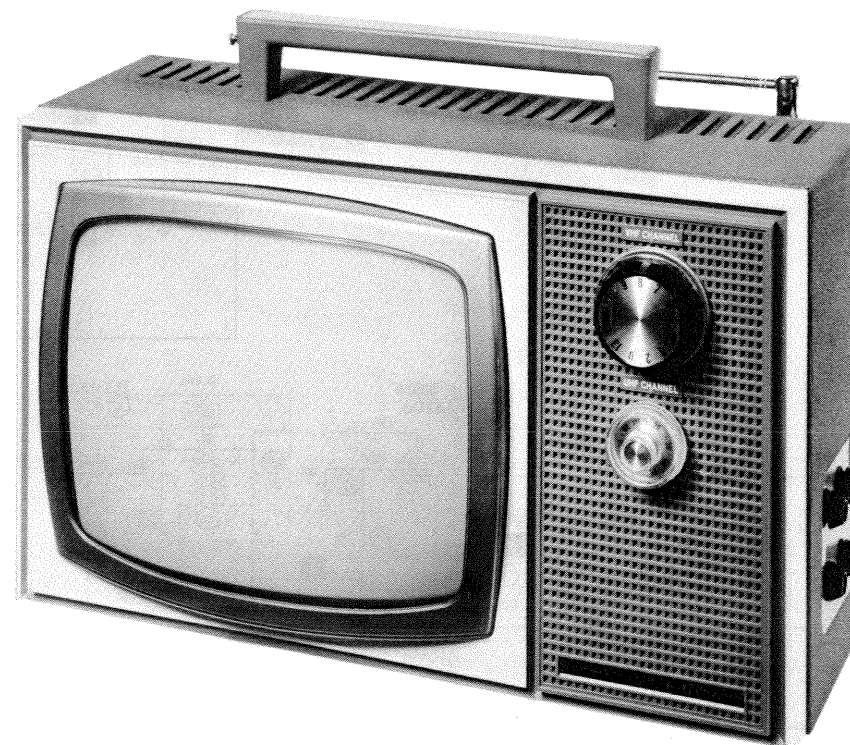
Follow "Chassis Removal" instructions, remove 4 Phillips screws from plastic mounting, and remove picture tube.

SET 764 FOLDER 1

AIWA  
MODEL 11T-04



**AIWA  
MODEL 11T-04**



AIWA  
MODEL 11T-04

## CAUTION

ONE SIDE OF AC LINE CONNECTED TO CHASSIS

MODEL 11T-04

TRADE NAME	Aiwa Model 11T-04
SUPPLIER	For current address, see Master Index.
TYPE SET	Television Receiver
TUBES	VHF - Eleven, UHF - Twelve
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 95 Watts, .9 Amp. @ 117 Volts AC

## SERVICING IN THE FIELD

### SAFETY GLASS

For picture tube and safety glass cleaning, it is necessary to remove the chassis. (See "Disassembly Instructions".)

by the proper setting of the Horizontal Stabilizer Coil, L18. (See "Tube Placement Chart" for location.)

### FUSE OR FUSE DEVICE

A 2 Amp. fuse is used for low voltage power supply protection. (See "Tube Placement Chart" for location.)

### FOCUS

The focus may be varied by connecting the lead from pin 4 of the picture tube to various voltage points. (For location, see photo "Chassis - Top View".)

### VHF OSCILLATOR ADJUSTMENT

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

### CENTERING

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

### HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished

**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. NA296R NA421 10 9 8 7 6 5 4 3 2 1 0

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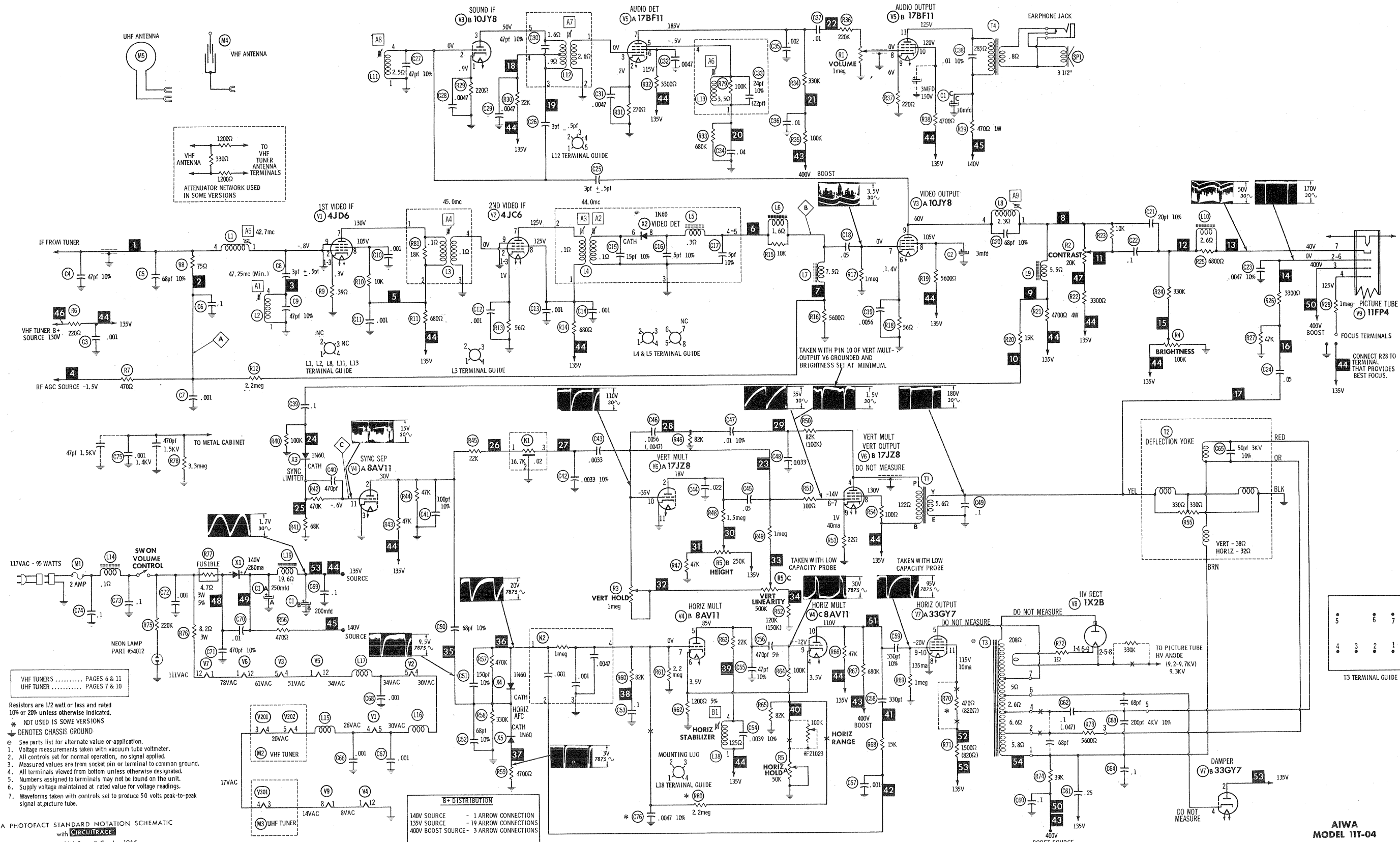
DATE 7-65

SET 764 FOLDER 1

SET 764 FOLDER 1

- VHF TUNERS ..... PAGES 6 & 11  
UHF TUNER ..... PAGES 7 & 10
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.  
\* NOT USED IN SOME VERSIONS  
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 CIRCUITAGE  
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AIWA  
MODEL 11T-04

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FOLDER 1

## RESISTANCE MEASUREMENTS

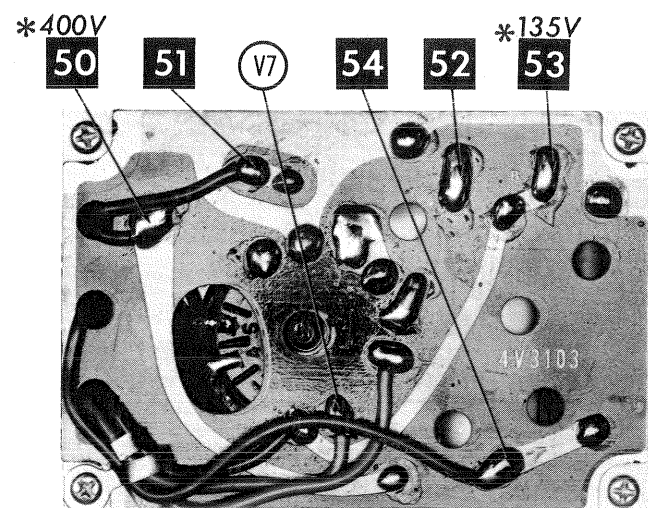
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	4JD6	39Ω	2.2meg	39Ω	13Ω	15Ω	0Ω	700Ω †	10K †	0Ω			
V2	4JC6	56Ω	.1Ω	56Ω	15Ω	17Ω	0Ω	700Ω †	700Ω †	0Ω			
V3	10JY8	220Ω	2.5Ω	22K †	25Ω	30Ω	56Ω	1meg	5620Ω †	4700Ω †			
V4	8AV11	4Ω	24K †	0Ω	1200Ω	22K †	1200Ω	600K	0Ω	100K	47K †	480K	0Ω
V5	17BF11	25Ω	270Ω	2.6Ω	0Ω	680K	3320Ω †	469K †	50K	220Ω	4720Ω †	755Ω †	17Ω
V6	17JZ8	38Ω	1.7meg	NC	142Ω †	NC	1.5meg	1.5meg	120Ω †	22Ω	1.2meg	0Ω	30Ω
V7	33GY7	38Ω	19.6Ω †	NC	900K	5Ω †	NC	NC	0Ω	1meg	1meg	2000Ω †	54Ω
V8	1X2B	PINS 1 THRU 9 HAVE INFINITE RESISTANCE											TOP CAP 213Ω †
V9	11FP4	4Ω	50K	39K †	1meg	NC	NC	375K	7Ω				
V10	3GK5	0Ω	2.2meg	8.5Ω	10Ω	1440Ω †	0Ω	0Ω					
V201	6CG8	10K	10K †	0Ω	13Ω	10Ω	1440Ω †	22K †	0Ω	224K			
V202	3DZ4	5940Ω †	5600Ω	7Ω	8.5Ω	.0Ω	5600Ω	5940Ω †					

† MEASURED FROM OUTPUT OF X1.

‡ MEASURED FROM PIN 4 OF V7.

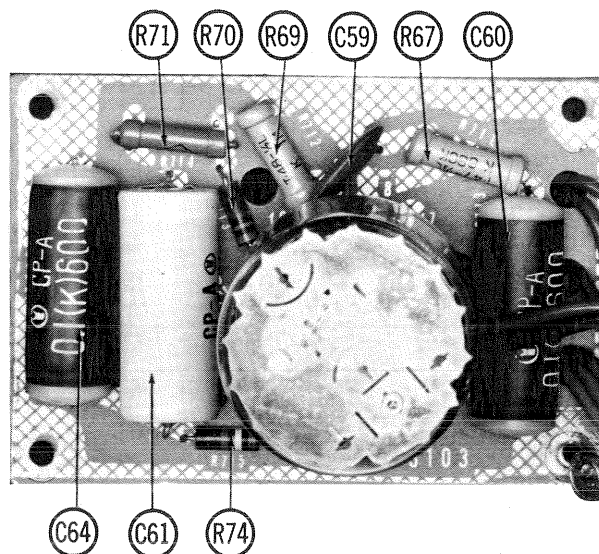
NC NO CONNECTION

A Howard W. Sams **CIRCUITRACE**® Photo



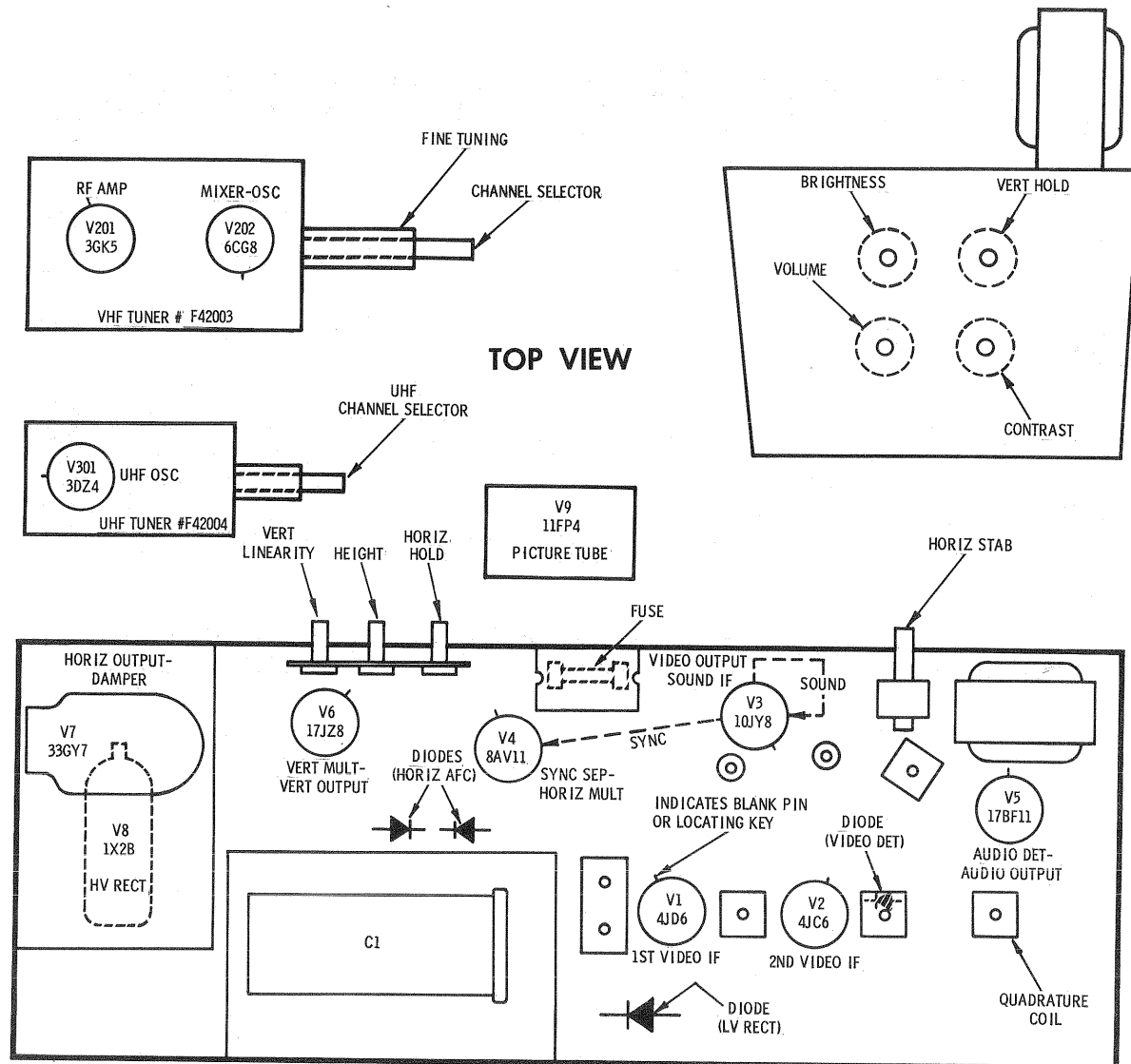
\*SOURCE

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



HORIZ OUTPUT, DAMPER PRINTED BOARD

## TUBE PLACEMENT CHART



## 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 M1 (Line Fuse), X1

### SWEEP FAILURE

No raster, has sound V4, V7, V8, V9

No vertical deflection V6

Poor vert. linearity or foldover V6

Poor horiz. linearity or foldover V4, V7

Narrow picture V4, V7, X1

Vert. off freq. V6

Horiz. off freq. X4, X5 (Horiz. AFC Diodes), V4

### LOSS OF PICTURE OR SOUND

No pic, no sound, has raster V1, V2, X2 (Video Det. Diode), V3

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

No pic, has sound, has raster V3, V9

Has pic, no sound V3, V5

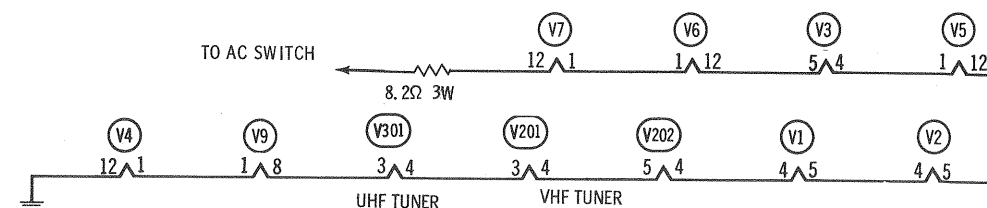
### SYNC FAILURE

No vert. sync V4, X3

No horiz. sync V4, X3

No vert. or horiz. sync V4, X3

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.)

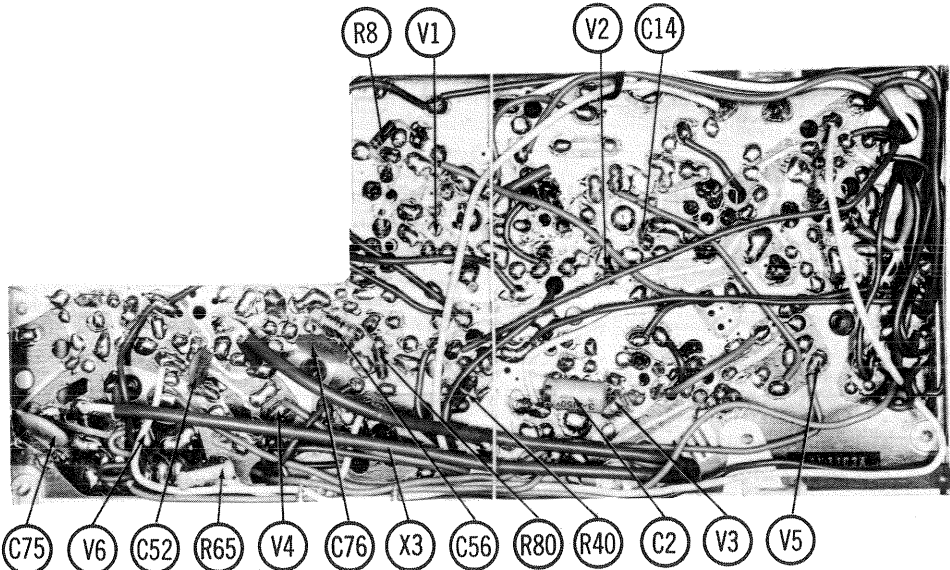
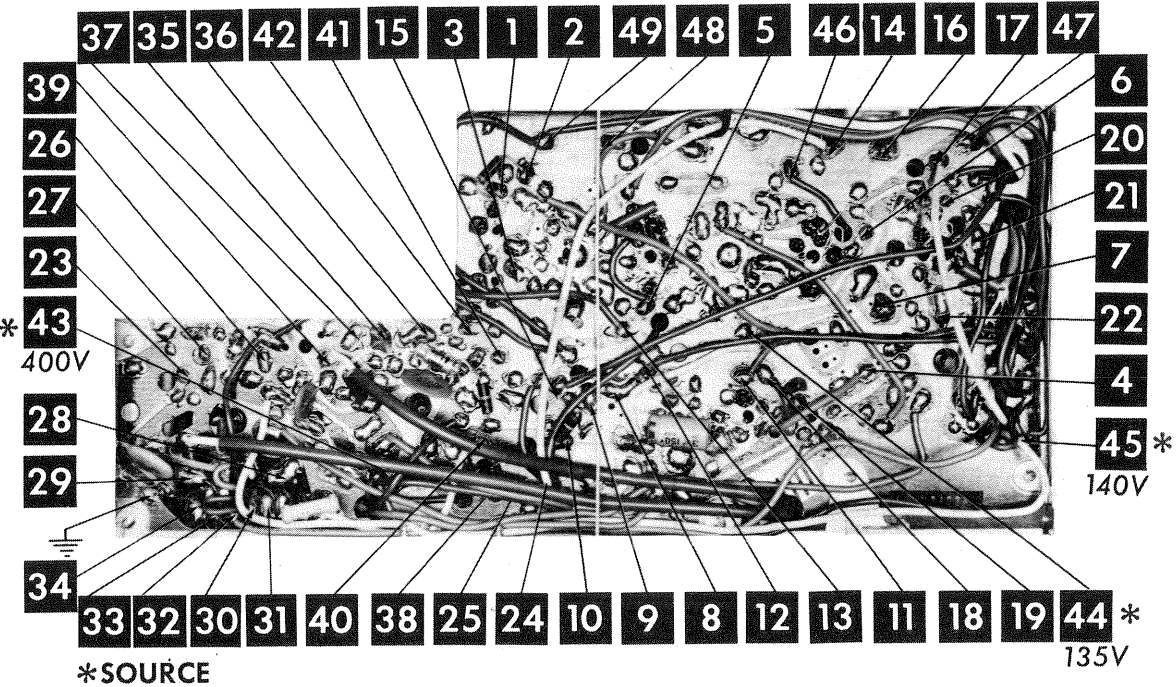


AIWA  
MODEL TIT-04

FOLDER 1



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



MAIN 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, 8889, 9302 ... WALSCO #2511, 2543, 2588  
Mixer Plate Coil ... GENERAL CEMENT #9296, 9300, 9302 ... WALSCO #2510, 2511, 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.		44.0MC 45.0MC 42.7MC	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 2 (grid) of V2. Low side to ground.	44MC (10MC Sweep)	42.75MC 45.75MC	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)	42.75MC 44.25MC 45.75MC 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 A2 and A3.

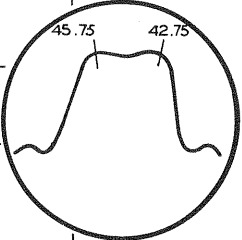


FIG. 1

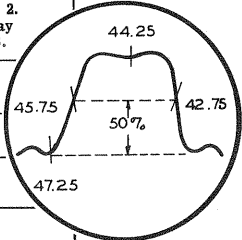


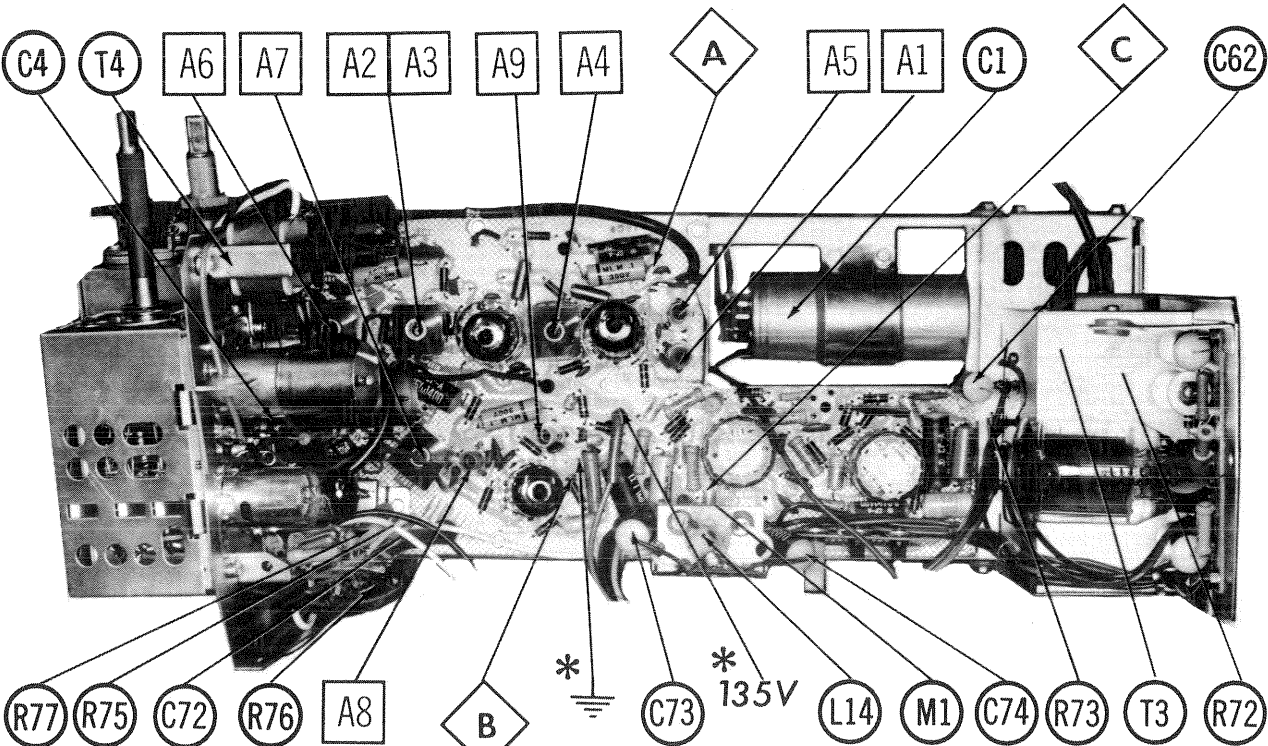
FIG. 2

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.

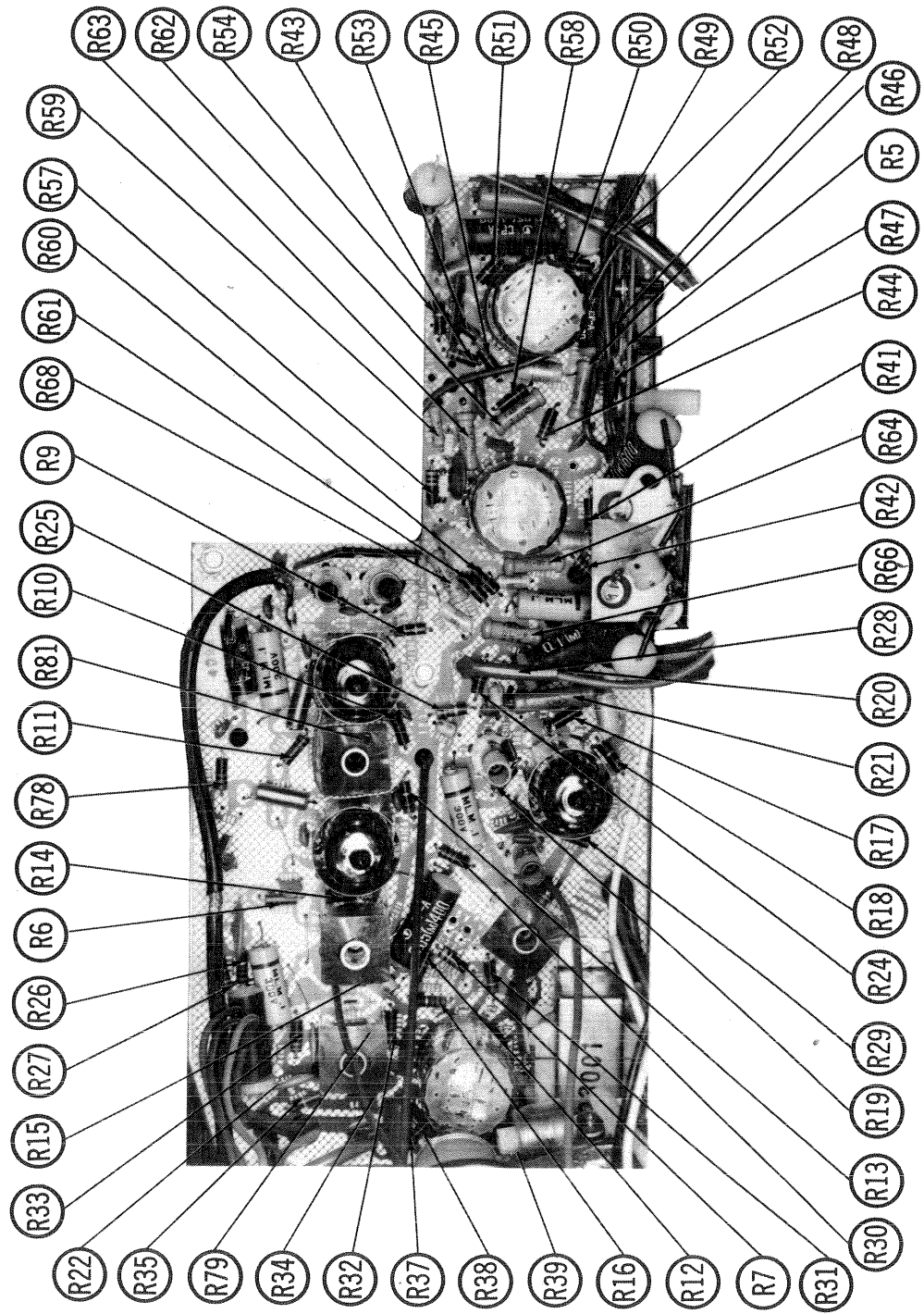
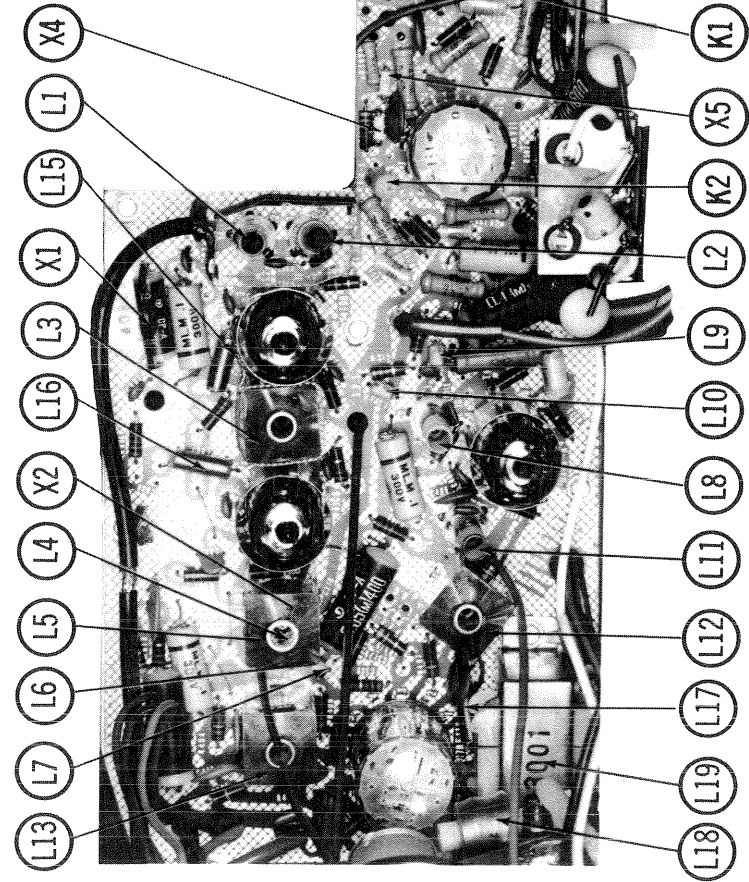
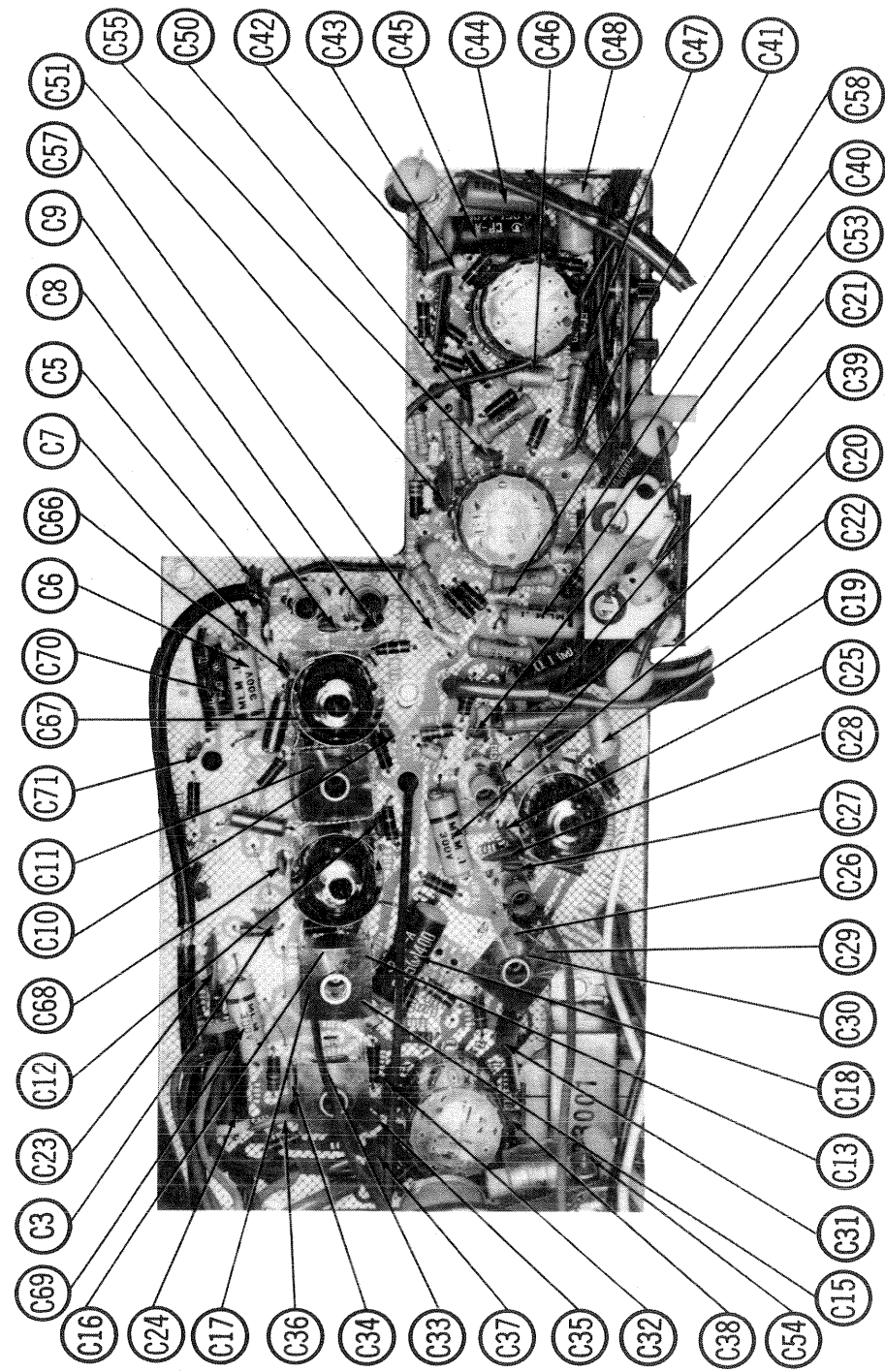
SOUND IF ALIGNMENT

Tune in a station and adjust A6 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.



\*FOCUS POINTS

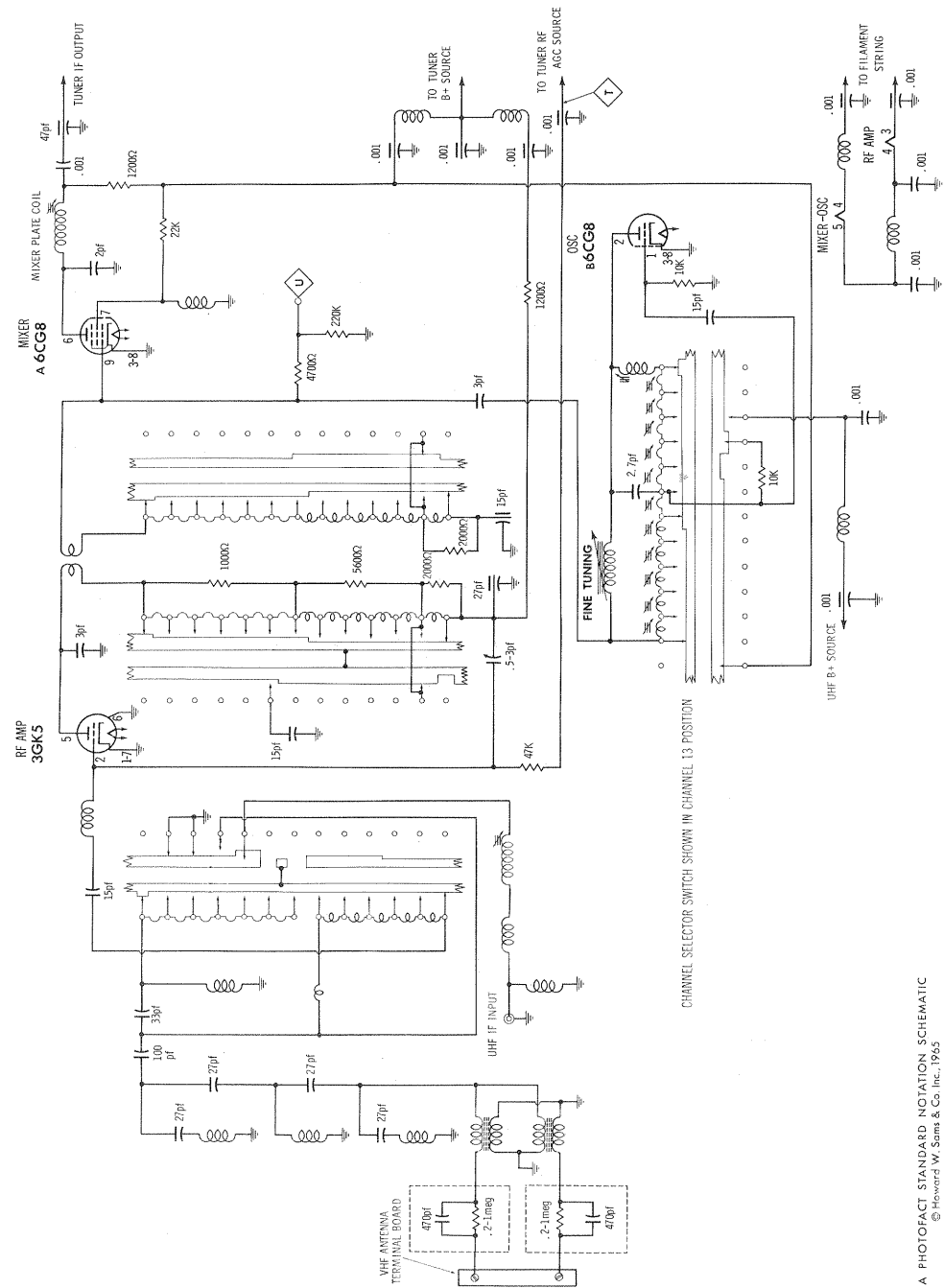
CHASSIS—TOP VIEW



# MAIN PRINTED BOARD

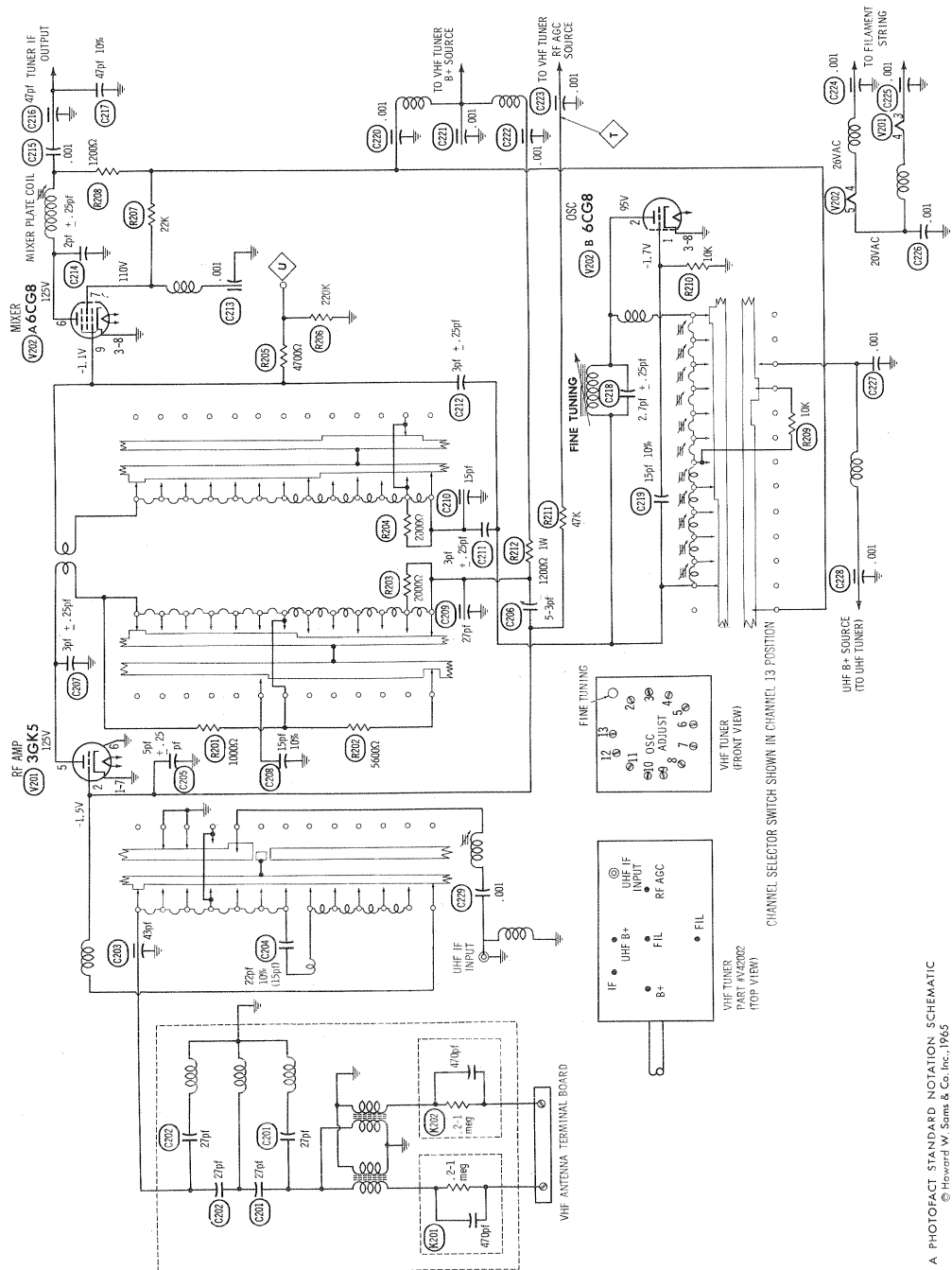
AIWA  
MODEL 11T-04



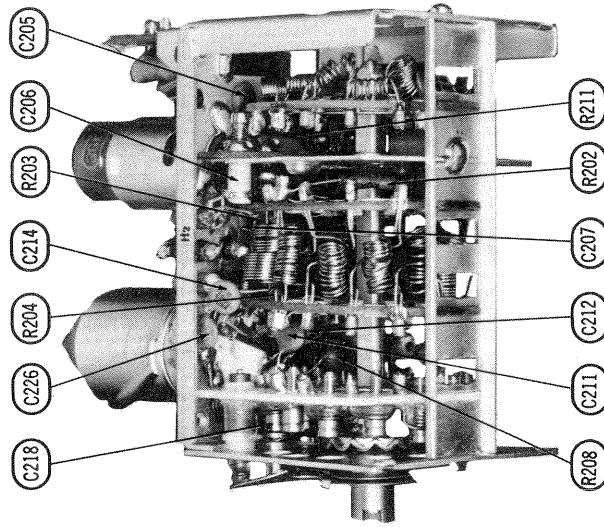
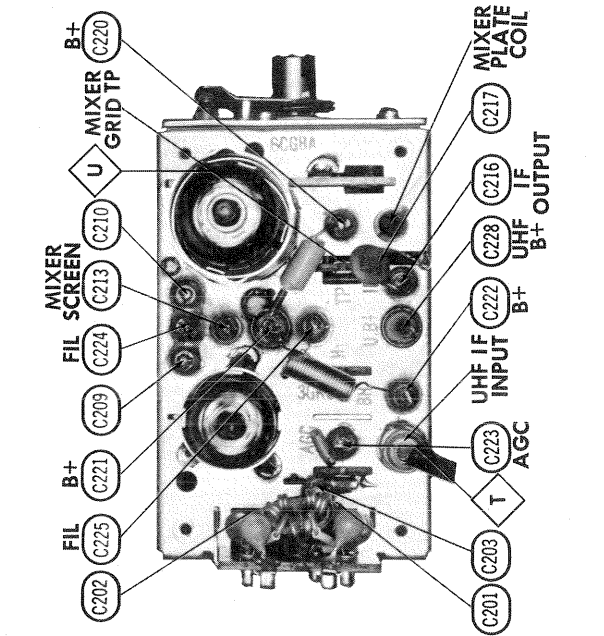
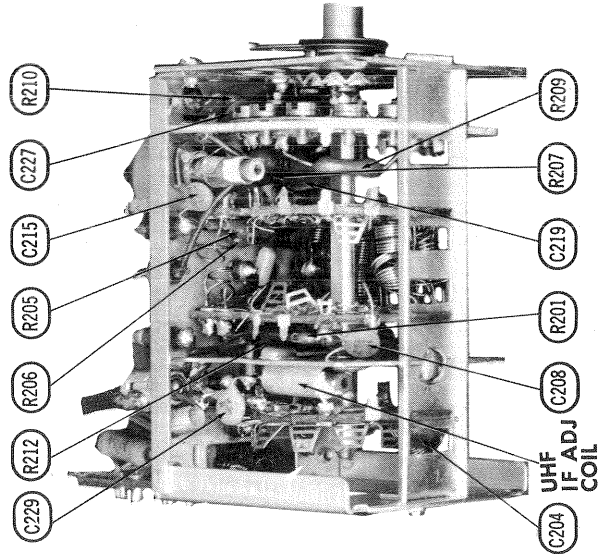


A PHOTOFACT STANDARD NOTATION SCHEMATIC  
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## 13 POSITION SWITCH-TYPE VHF TUNER



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## 13 POSITION SWITCH-TYPE VHF TUNER F42003

**MODEL TT-04**

AIWA  
DEI 17

**FOLDER 1**

VHF TUNER PARTS LIST AND DESCRIPTION

VHF TUNER ALIGNMENT INSTRUCTIONS

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		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	3GK5	V202	Mixer - Osc.	6CG8

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201A	27	(15) †	DI-27	DD-270	LA10Q27-SL	CCD-270	GP427	10TS-Q27
B	27		DI-27	DD-270	LA10Q27-SL	CCD-270	GP427	10TS-Q27
C202A	27		DI-27	DD-270	LA10Q27-SL	CCD-270	GP427	10TS-Q27
B	27		DI-27	DD-270	LA10Q27-SL	CCD-270	GP427	10TS-Q27
C203	43		DI-15	DD-150	LA10Q15-SL	CCD-150	GP415	10TCC-V30
C204	22							
C205	5							
C206	5-3							
C207	3							
C208	15							
C209	27							
C210	15							
C211	3							
C212	3							
C213	.001	2	EF-001	MFT-1000	BYA10D1	CCF-102	CT280A	10TCC-V30
C214	2		TCZ-2R2	DD-102				
C215	.001		BPD-001	DD-102				
C216	47		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TCC-V27
C217	47							
C218	2.7							
C219	15							
C220	.001		DI-15	DD-150				
C221	.001		EF-001	MFT-1000				
C222	.001		EF-001	MFT-1000				
C223	.001		EF-001	MFT-1000				
C224	.001		EF-001	MFT-1000				
C225	.001		EF-001	MFT-1000				
C226	.001	BPD-001	BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C227	.001		BPD-001	DD-102				
C228	.001		EF-001	MFT-1000				
C229	.001		BPD-001	DD-102				

Suggested Alignment Tools: A201 ... GENERAL CEMENT #8868, 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.

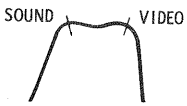
RF AND MIXER ALIGNMENT

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 Ⓢ. Adjust bias to obtain response curve which shows no indication of overloading.

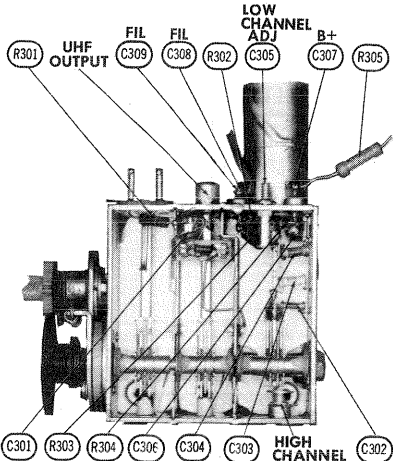
SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point Ⓢ, low side to ground		Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
2. "	195MC	193.25MC 197.75MC	10	Across Video Det. load resistor.	A201	Increase bias to -15 volts and adjust for MINIMUM amplitude of response.
3. "	See Chart	See Chart	12 thru 2	Vert. Input to Point Ⓢ, low side to ground.		Decrease bias. Check all channels and make compromise adjustments by expanding or compressing appropriate coils.

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	195MC	193.25MC 197.75MC	10
63MC	61.25MC 65.75MC	3	177MC	175.25MC 179.75MC	7	201MC	198.25MC 205.75MC	11
69MC	67.25MC 71.75MC	4	183MC	181.25MC 185.75MC	8	207MC	205.25MC 209.75MC	12
79MC	77.25MC 81.75MC	5	189MC	187.25MC 191.75MC	9	213MC	211.25MC 215.75MC	13



Tune to a UHF station and adjust UHF IF Input Coil for best picture and sound. Tune UHF Channel Selector to the lowest UHF channel operating in the area (low end of the dial). Adjust UHF Low Channel Oscillator Trimmer for best picture and sound.



UHF TUNER PARTS LIST AND DESCRIPTION

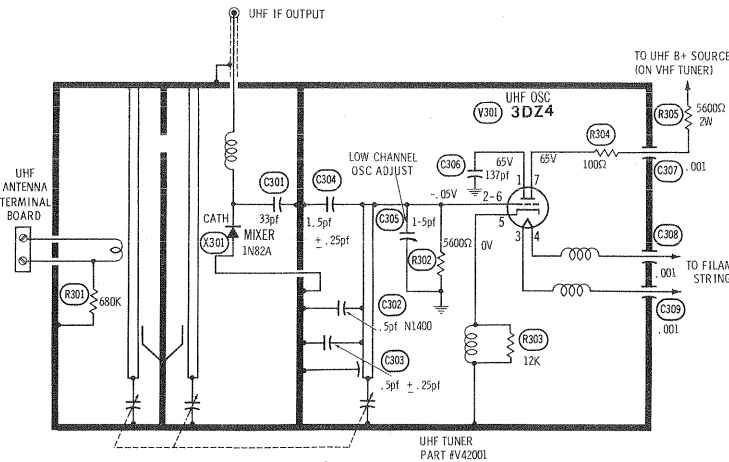
TUBES					
AMPEREX			GENERAL ELECTRIC		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V301	UHF Oscillator	3DZ4			

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X301		SD82					1N82A

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	33		EF-001	MFT-1000		CV-3	CT552	
C302	.5pf							
C303	.5pf							
C304	1.5							
C305	1-5							
C306	137							
C307	.001							
C308	.001							
C309	.001							



UHF TUNER V42004

TUBES					
AMPEREX			GENERAL ELECTRIC		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	1st Video IF	4JD6	V5	Audio Det. - Audio Output	17BF11
V2	2nd Video IF	4JC6	V6	Vert. Mult. - Vert. Output	17JZ8
V3	Video Output - Sound IF	10JY8	V7	Horiz. Output - Damper	33GY7
V4	Sync Sep. - Horiz. Mult	8AV11	V8	RV Rectifier	1X2B

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	AIWA PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V9	11FP4				

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X1	.28A	F27002	GE-504 or 1N1895	1N540 or 1N2070	1N1763 or 1N2862	40H or F-4	
X2		1N80					1N80
X3		1N80					1N80
X4		1N80P					6GC1
X5		1N80P					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	AIWA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.
C1A	250	200	F15020	AFHS3-13-90	CC0129.5	XC3-20	TMD-2260	FP318.8A
B	200	150					TD-10-150	
C	10	150						
C2	3	150	F15021	CRE952A	NLW3-150	MT1-4	MLV5-150	TT150X3

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C4	47		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TS-Q47
C5	68		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TS-Q47
C6	.1		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C7	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C8	3		NPO-DI 3	DD-3R3	LA10V33-SL	CCTO-3R3	GP533	10TCC-V30
C9	47		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TS-Q47
C10	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C11	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C12	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C13	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C14	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C15	15		DI-15	DD-150	LA10Q15-SL	CCD-150	GP415	10TS-Q15
C16	5		DI-5	DD-050	LA10V5-SL	CCD-050	GP550	10TS-V50
C17	5		DI-5	DD-050	LA10V5-SL	CCD-050	GP550	10TS-V50
C18	.05		P488N-05	DF-503	PM4P1	4DP-3-503	GEM415	4TM-S50
C19	.0056							
C20	68		DI-68	DD-680	LA10Q68-S3	CCD-680	GP468	10TS-Q68
C21	20		DI-20	DD-200	LA10Q2-SL	CCD-200	GP420	10TS-Q20
C22	.1		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C23	.0047		DI-4700	CF-472	JB6D47	CCD-472	JF247	10TS-D47
C24	.05		P488N-05	DF-503	PM4P1	4DP-3-503	GEM415	4TM-S50
C25	3		NPO-DI 3	DD-3R3	LA10V33-SL	CCTO-3R3	GP533	10TCC-V30
C26	3		NPO-DI 3	DD-3R3	LA10V33-SL	CCTO-3R3	GP533	10TCC-V30
C27	.0047		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TS-Q47
C28	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C29	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C30	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C31	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C32	.0047	(22) †	BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C33	24		DI-25	DD-403	LA10Q25-SL	CCD-250	GP425	10TS-Q25
C34	.04		TTD-05	CK-503	H5	CCD-403	GP140	5GA-S40
C35	.002		BPD-002	DD-202	BYA10D2	CCD-202	B220	5HK-D20
C36	.01		BPD-01	DD-103	BYA10S1	CCD-103	B110	5HK-S10
C37	.01		P688N-01	DD-103	PM6S1	8DP-2-103	GEM611	6TM-S10
C38	.01		BE4S1	DD-103	PM6S1	8DP-2-103	GEM411	4TM-S10

## 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<sup>®</sup> for the most up-to-date replacement.

## FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMenco PART No.	MALLORY PART No.	SPRAGUE PART No.
C39	.1 300V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C40	470 250V			CPR-470J	JB6T47	CCD-474	JF347	10TS-T47
C41	100 10%		DI-100	DD-101	LA10T1-S3	CCD-101	GP310	10TS-T10
C42	.0033 10%		DI-3300	CF332	JB6D33	CCD-332	JF233	10TS-D33
C43	.0033 125V			CPR-3300J	WMF2D33	6DP-1-332	PVC4233	6TM-D33
C44	.022 400V		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22
C45	.05 400V		P488N-05	DF-503	PM4S5	4DP-3-503	GEM415	4TM-S50
C46	.0056 125V			CPR-5600J	PKM4D56	6DP-1-562	PVC4256	6TM-D56
C47	.01 400V 10%	(.0047) †	BE4S1	CPR-10000J	PM4S1	4DP-1-103	GEM411	4TM-S10
C48	.0033 500V			CPR-3300J	PM6D33	6DP-1-332	PVC4233	6TM-D33
C49	.1 400V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C50	68 10%		DI-68	DD-680	LA10Q68-S3	CCD-680	GP468	10TS-Q68
C51	150 10%		DI-150	DD-151	LA10T15-S3	CCD-151	GP315	10TS-T15
C52	68 10%		DI-68	DD-680	LA10Q68-S3	CCD-681	GP468	10TS-Q68
C53	.1 300V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C54	.0039 500V 10%			CPR-3900J	PM6D39	6DP-1-392	PVC6239	6TM-D39
C55	47 10%		DI-47	DD-470	LA10Q47-S3	CCD-470	GP447	10TS-Q47
C56	470 500V 5%			CPR-470J	CD19F471J	DM-19-471J	MS-347	
C57	.001 125V			CPR-1000J	WMF2D1	6DP-1-102	GEM621	4TM-D10
C58	330 250V			CPR-330J	JB6T33	CCD-331	JF333	10TS-T33
C59	330 10%		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C60	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C61	.25 400V		P488N-25		PKM4P25	4DP-5-225	PVC4025	4TM-P25
C62	.1 400V	(.047) †	P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C63	200 4KV							
C64	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C65	50 3KV 10%							
C66	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C67	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C68	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C69	.1 300V		P288N-1	DF-104	PKM2P1	2DP-3-104	GEM201	2TM-P10
C70	.01 600V		P688N-01	DD-103	PM6S1	6DP-2-103	GEM611	6TM-S10
C71	470 10%		DI-470	DD-471	JB6T47	CCD-471	GP347	10TS-T47
C72	.001		BPD-001	DD-102	BYA10D1	CCD-102	B210	5HK-D10
C73	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C74	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C75	.001 1.4KV		HVD-151000	CI-102	HVB16D1	3CCD-102	UAC210	125L-D10
C76	.0047 10%		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47

† Alternate Value

## CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			AIWA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume, Switch	1meg	F21018	F2-1meg ① SNK014 ②, KR-1	A47-1meg-Z ① RN-3 ②, SWE-12	(BU1 ①, CF26, SS6 ②, GC) *	UA16A ①, SN1000 ②, US41 or (RU16A ①, SL38, SN1000 ②, US41)
R2	Contrast	20K	F21019	F1-25K ①, SNK014 ② or (AB-22 ①, AK-19 ②)	A47-20K-S ① RN-3 ②	B11-119 ①, SK6 ② or (BU1 ① CF62, SS6 ②) *	UA24L ①, SN1000 ② or (RU253L ①, SL38, SN1000 ②)
R3	Vert. Hold	1meg	F21021	F1-1meg ①, SNK014 ② or (AB-69 ①, AK-19 ②)	A47-1meg-S ① RN-3 ②	B11-137 ①, SK6 ② or (BU1 ① CF17, SS6 ②) *	UA16L ①, SN1000 ② or (RU16L ①, SL38, SN1000 ②)
R4	Brightness	100K	F21020	F1-100K ①, SNK014 ② or (AB-40 ①, AK-19 ②)	A47-100K-S ① RN-3 ②	B11-128 ①, SK6 ② or (BU1 ① CF13, SS6 ②) *	UA15L ①, SN1000 ② or (RU15L ①, SL38, SN1000 ②)
R5A B C	Horiz. Hold Height Vert. Linearity	50K 250K 500K	F21022				

① Enlarge mounting hole.

② File flat.

\* "SNAPTROL"

## 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
R21	4700Ω 4W	MR4-4.7K	4G-4700	#F25003	R76	8.2Ω 3W	MR2-8.2		#F24004
R72	1Ω 1/3W	BWH-1	WS-1	#F24002	R77	4.7Ω 3W Fusible	FR 5	F 4.7	#F29001

# Aiwa Part Number

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		AIWA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	1st Video IF	F08001					
L2	47.25MC Trap	F08005					
L3	2nd Video IF	F08006					
L4	3rd Video IF/Detector	F08007					
L5	RF Choke (13uh)		19-1006		74F125AP	RTC-8524	TA822
L6	Peaking (91uh)	F05009	19-3093	TV-181	6177	RTC-8594	T340
L7	Peaking (510uh)	F05012	19-3500	TV-204	6174	RTC-8592	T353
L8	4.5MC Trap	F05004					
L9	Peaking (390uh)	F05011	19-2028	TV-201	73F394AF	RTC-8578	T350
L10	Peaking (180uh)	F05010	19-3180	TV-184	73F184AF	RTC-8597	T344
L11	Sound Takeoff	F08004					
L12	Sound Interstage	F08002A					
L13	Quadrature	F08003					
L14	Line Choke (91uh)	F03003			5250		
L15	Fil. Choke (24 turns)	F05006					
L16	Fil. Choke (24 turns)	F05006					
L17	Fil. Choke (24 turns)	F05006					

## COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA						
		AIWA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L18	Horiz. Stabilizer	F06005						

## FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AIWA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L19	.26 ADC	19.6Ω	.7 Hy.	F03002	C-4125				

## \* TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AIWA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	Vert. Output	F02003			VO-114	26S70	① Use original vertical damping network and install approximately 82pf, 6KV capacitor between yoke terminals #2 and #7.
T2	Yoke (Horiz. 18.8MH) 114 <sup>9</sup> (Vert. 50MH)	V07601	MDF-153 ①			A-117X YT-103-1 ①	
T3	Horiz. Output	V05009					

## \* COMPONENT CONNECTION DATA

ORIGINAL → REPLACEMENT ↓	HV TRANSFORMER				VERTICAL OUTPUT				YOKE				YOKE PLUG			
	Original Connections				Original Connections				Original Connections				TO YOKE TERMINAL			
MERIT					P	B	Y	E	1	2	3	4	5	6	7	8
STANCOR																
THORDARSON					Blue	Red	Yellow	Green								
TRIAD					Blue	Red	Green	Yellow	1	2	3	4	5	6	7	8

▲ Remove Orange lead.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			AIWA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T4	3700Ω	6-8Ω	F02004	A-4103 ①	A-3856 ①	22S61	S-62X	① Drill new mounting holes.

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AIWA PART No.	QUAM PART No.	
SP1	3½" PM 6-8Ω	F48003	3A05Z8	

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AIWA PART NO.	REPLACEMENT DATA
K1	Vertical Integrator	16.7K, .02mfd	F28001	Mallory MS-130
K2	Horizontal AFC Network	1meg, .001mfd, .0047mfd	F28002	

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			AIWA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
			F35008	F33007	312002. (3AG, 2A, 250V)	357001	AGC 2	4405

## MISCELLANEOUS

ITEM No.	PART NAME	AIWA PART No.	NOTES
M2	VHF Tuner	F42003	STANDARD KOLLSMAN Replacement 41S13 (450MA Filament)
M3	UHF Tuner	F42004	
M4	VHF Antenna	F43002	
M5	UHF Antenna	F43001	JFD Replacement TA432

## CABINETS &amp; CABINET PARTS

(When Ordering Specify Model, Chassis &amp; Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	1V03001	Cabinet Front	1V03002A
Safety Glass	1V03004	Cabinet Back	1V03005
Knob - VHF Channel Selector	V07005	Handle	V07002
Knob - VHF Fine Tuning	V07007		

## WIRING DATA

High Voltage Lead .....	Use BELDEN No. 8869 (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

AIWA  
MODEL ITT-04

FOLDER 1