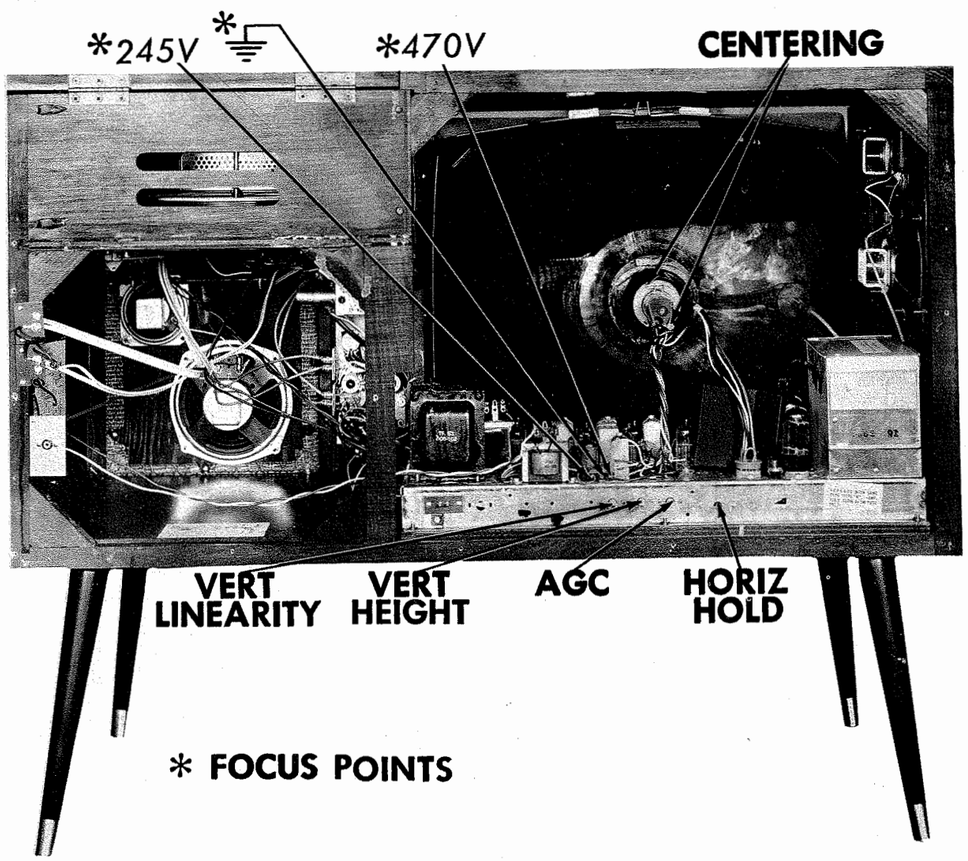


* FOCUS POINTS

CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern.

Set the Brightness and Contrast for a normal picture.

Turn the Horizontal Hold clockwise until the picture loses sync. It may be necessary to switch off channel and back again for picture to lose sync.

Turn the Horizontal Hold slowly counterclockwise until the picture just falls into sync.

DISASSEMBLY INSTRUCTIONS

TV CHASSIS REMOVAL

1. Remove 10 push-on type knobs on front panel.
2. Remove 12 wood screws in rear cover. Remove rear cover.
3. Remove 6 chassis bolts.
4. Remove 4 nuts holding control panel. Note: It is necessary to remove panel at front of record changer for access to one of the nuts holding control panel. This may be done by removing 2 wood screws in panel.
5. Unsolder speaker leads, antenna leads, and remove plugs from control bracket.
6. Remove picture tube socket, yoke plug, power plug from FM-AM tuner, and hi voltage lead.
7. Remove chassis.

FM-AM TUNER REMOVAL

1. Remove panel cover over tuner (by removing 2 wood screws).
2. Remove 2 bolts at bottom edge of tuner mounting board.
3. Tuner must be removed by pulling up through top.

PICTURE TUBE REMOVAL

It is necessary to remove TV chassis for picture tube removal.

TRAV-LER MODELS 23FMSP 6195B, M, W (Ch. 1062-91, AM-FM1)

TRAV-LER MODELS 23FMSP 6195B, M, W (Ch. 1062-91, AM-FM1)

MODEL 23FMSP6195

TRADE NAME	Trav-Ler Model 23FMSP6195B, M, W (TV Chassis 1062-91); FM-AM Tuner (Chassis AM-FM 1)
MANUFACTURER	Trav-Ler Radio & Television Corp., 571 West Jackson Blvd., Chicago 6, Illinois
TYPE SET	Television Receiver (With Dual Channel Audio Amp., FM-AM Tuner, and 4 Speed Automatic Record Changer *)
TUBES	TV - Eighteen FM-AM Tuner - Six
POWER SUPPLY	110-120 Volts AC, 60 Cycle
RATING	TV: 215 Watts, 1.8 Amp. @ 117 Volts AC 150 Watts, 1.3 Amp. @ 117 Volts AC (Selector Switch in Radio Position) 125 Watts, 1.1 Amp. @ 117 Volts AC (Selector Switch in Phono Position, Less Motor)
TUNING RANGE	TV: Channels 2 thru 13 VHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier) FM-AM Tuner: BC - 540 to 1600KC (455KC IF) FM - 88 to 108MC (10.7MC IF)

* FOR SERVICE INFORMATION ON RECORD CHANGER - SEE SIMILAR UNIT - PHOTOFACT SET 465 FOLDER 2

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL

Remove 3 screws holding the trim strip at the top edge of the safety glass. Tilt glass out and remove.

FUSE

A 3/4 Amp. fuse is used for LV power supply protection. (See "Tube Placement Chart" for location.)

A fuse wire is used for filament protection. (For location, see M2 in photo, page 17.)

TUNER OSCILLATOR ADJUSTMENT

To touch up the VHF Oscillator, remove Channel Selector and Fine Tuning knobs.

AGC

The AGC may be varied by means of an AGC Control. (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 "Cabinet - Rear View".)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

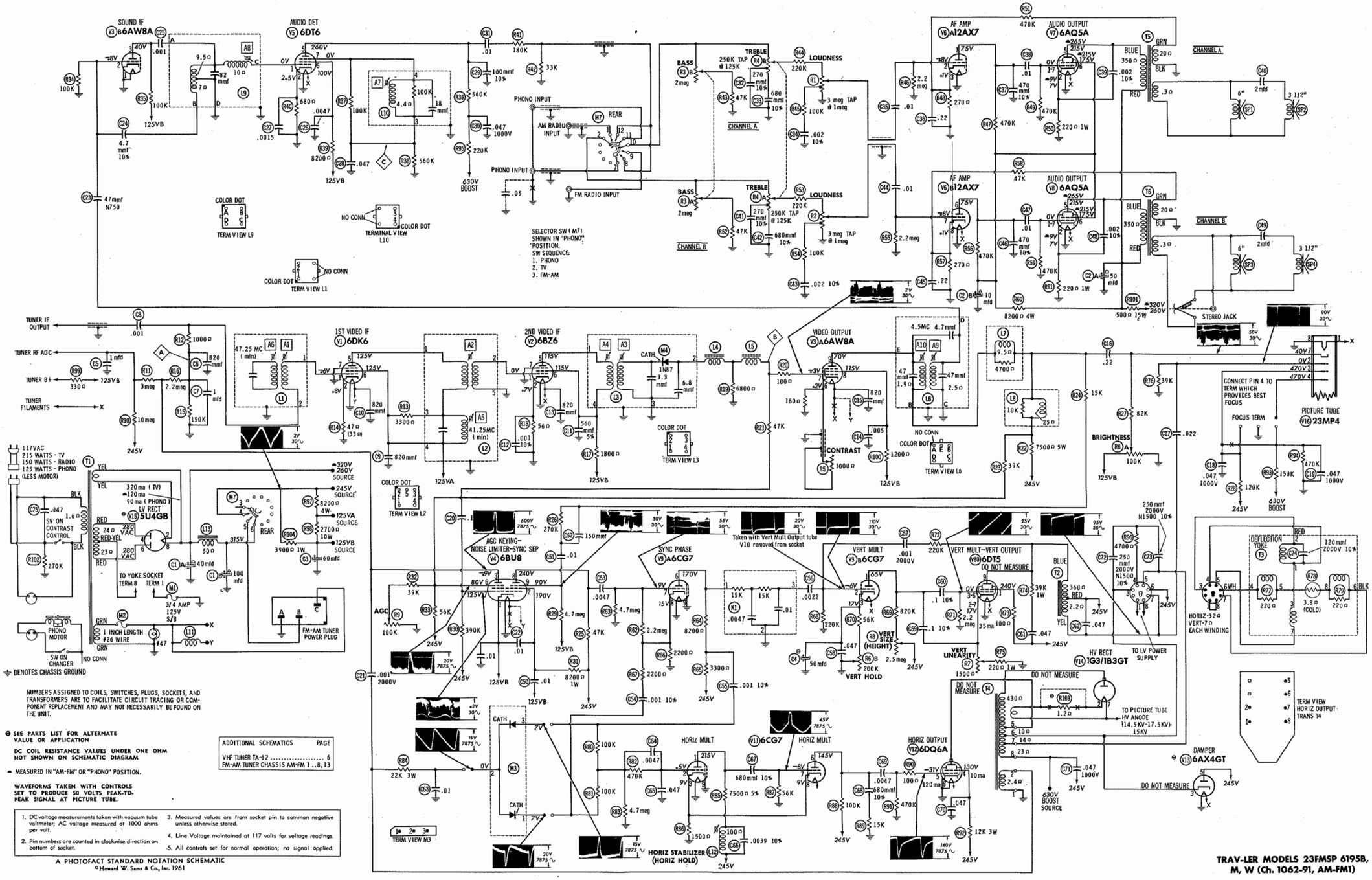
The Horizontal Frequency Slug is used for the Horizontal Hold. (For location, see "Tube Placement Chart".)

CENTERING

Centering is accomplished by 2 magnetic rings, located behind the yoke, on the neck of the picture tube.

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

SET 556 FOLDER 2



NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

❶ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

▲ MEASURED IN "AM-FM" OR "PHONO" POSITION.

WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.

ADDITIONAL SCHEMATICS	PAGE
VHF TUNER TA-62	6
FM-AM TUNER CHASSIS AM-FM 1 ..8,13	

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1000 ohms per volt.
2. Pin numbers are counted in clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line Voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

TRAV-LER MODELS 23FMSP 6195B, M, W (Ch. 1062-91, AM-FM1)

TV RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6DK6	150K	47Ω	FIL	FIL	†3800Ω	†3800Ω	0Ω		
V2	6BZ6	.1Ω	56Ω	FIL	FIL	†4000Ω	†4000Ω	0Ω		
V3	6AW8A	0Ω	100K	†100K	FIL	FIL	•10Ω	6900Ω	†3600Ω	†7500Ω
V4	6BU8	†2400Ω	†8200Ω	2meg	FIL	FIL	•40K	†390K	†47K	†4.7meg
V5	6DT6	20Ω	680Ω	FIL	FIL	†780K	†11K	560K		
V6	12AX7	†480K	2.2meg	270Ω	FIL	FIL	†480K	2.2meg	270Ω	FIL
V7	6AQ5A	470K	220Ω	FIL	FIL	†850Ω	†8700Ω	NC		
V8	6AQ5A	NC	220Ω	FIL	FIL	†850Ω	†8700Ω	470K		
V9	6CG7	•†1.5meg	220K	¶ 120K	FIL	FIL	†11K	1.6meg	2200Ω	0Ω
V10	6DT5	†150Ω	NC	2.2meg	FIL	FIL	NC	•400Ω	NC	†410Ω
V11	6CG7	†7600Ω	1.8meg	1500Ω	FIL	FIL	†100K	56K	1500Ω	0Ω
V12	6DQ6A	NC	FIL	NC	†12K	470K	TP	FIL	0Ω	TOP CAP †10Ω
V13	6AX4GT	NC	NC	620K	NC	†50Ω	NC	FIL	FIL	
V14	1G3/1B3GT	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP †440Ω
V15	5U4GB	NC	¶ 30K	NC	24Ω	NC	23Ω	NC	¶ 30K	
V16	23MP4	FIL	39K	†150K	†150K	NC	NC	•100K	FIL	
V201	6GK5	0Ω	¶ 3meg	FIL	FIL	†3900Ω	0Ω	0Ω		
V202	6CG8A	4700Ω	†7400Ω	0Ω	FIL	FIL	†3700Ω	†2700Ω	0Ω	222K
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

ALL MEASUREMENTS MADE WITH SELECTOR IN "TV" POSITION.

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.

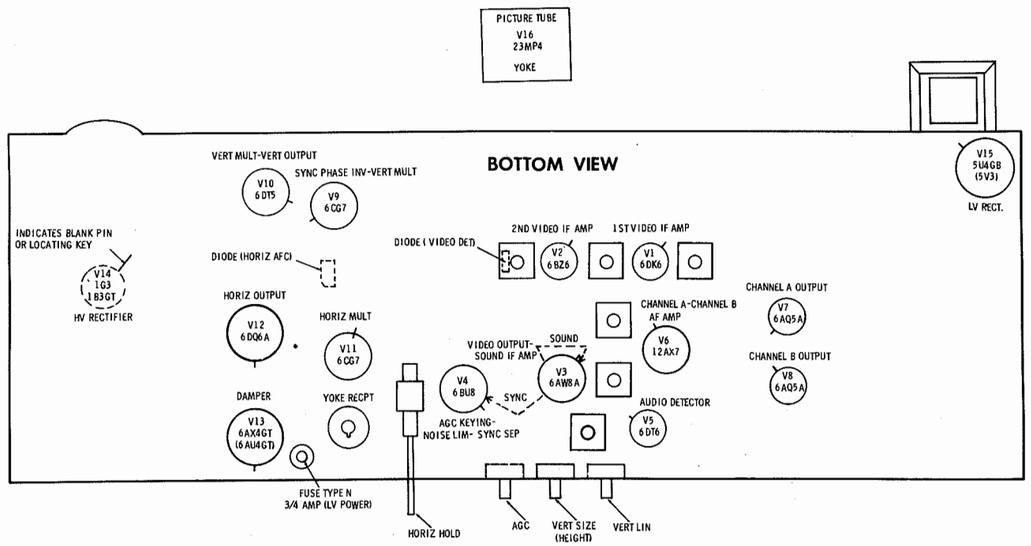
• THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.

† MEASURED FROM PIN 8 OF V15.

† MEASURED FROM PIN 3 OF V13.

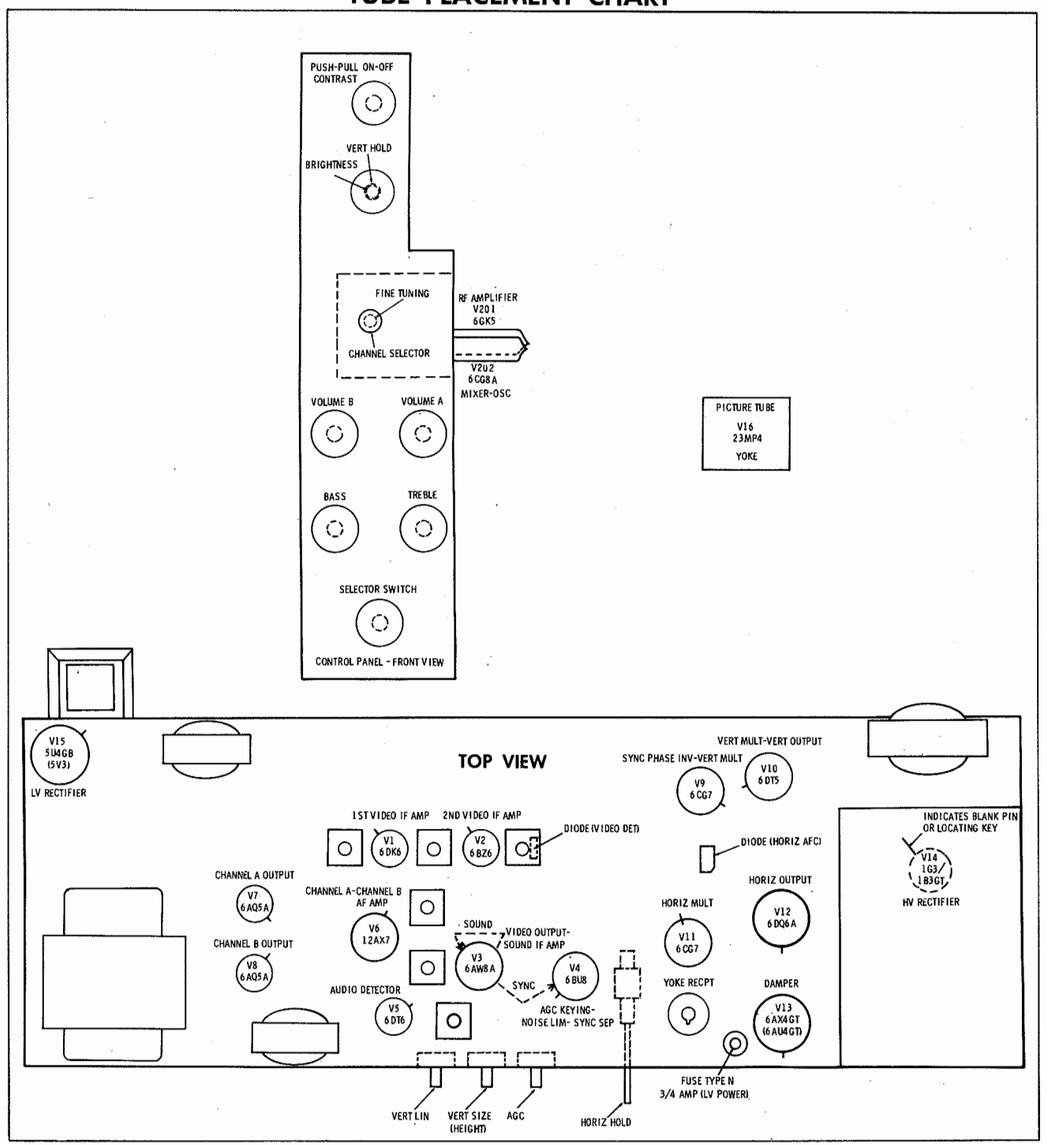
NC NO CONNECTION

TP TIE POINT



TUBE PLACEMENT CHART

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 V15, Fuse Wire (Fil.), Fuse (LV Power)

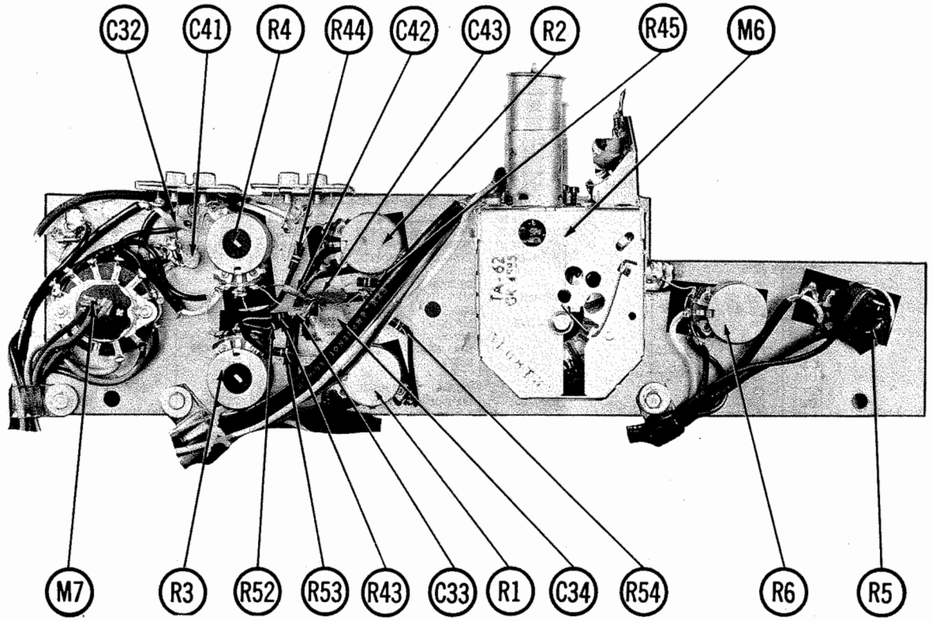
SWEEP FAILURE
No raster, has sound V11, V12, V13, V14, V16
No vertical deflection V9, V10
Poor vert. linearity or foldover V9, V10
Poor horiz. linearity or foldover V11, V12, V13
Narrow picture V11, V12, V13, V15
Vert. off freq. V9, V10
Horiz. off freq. Diode (Horiz. AFC), V11

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, Diode (Video Det.), V3
No pic, no sound, has snow V201, V202
No pic, has sound, has raster V3, V16
Has pic, no sound V3, V5, V6, V7 & V8
Overloaded picture V4

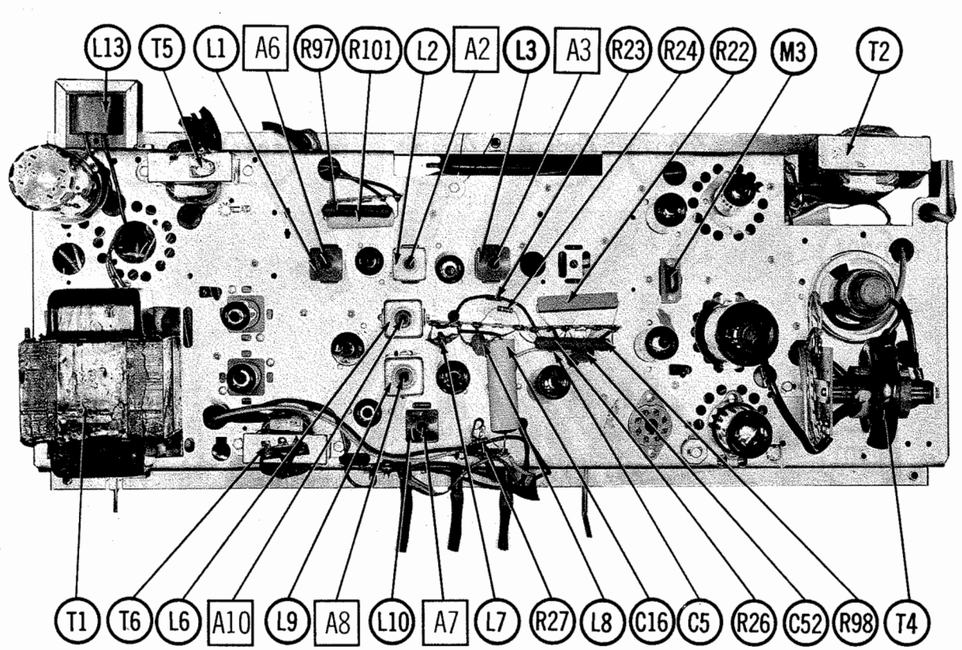
SYNC FAILURE
No vert. sync V4, V9
No horiz. sync V4, V9, Diode (Horiz. AFC)
No vert. or horiz. sync V4, V9

TV CHASSIS BOTTOM VIEW - RESISTOR, INDUCTOR IDENT.

TV CHASSIS BOTTOM VIEW - ALIGN., CAPACITOR, MISC. IDENT.



VHF TUNER, CONTROL PANEL



TV CHASSIS - TOP VIEW

ALIGNMENT INSTRUCTIONS
TV

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 thru A4, A7 thru A10 ... GENERAL CEMENT #8606, 8606L, 8282, 9295
WALSCO #2526, 2543, 2544, 2545
A5, A6 ..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520
Mixer Plate Coil ..... GENERAL CEMENT #9296, 9297
WALSCO #2546, 2547

VIDEO IF ALIGNMENT

Set Contrast fully clockwise and AGC fully counterclockwise.
Connect the negative lead of a 3 volt bias supply to point (A). Positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
Use only enough sweep generator output to provide a usable pattern on scope.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Direct	Place a thin insulated metal strip between the Mixer-Osc. tube (V202), and tube shield. Connect the high side of sweep generator to the metal strip. Low side to chassis.	44.0MC (10MC Swp)	41.25MC 45.75MC 47.25MC	Any non-interfering channel	Vert. Amp. thru 10K to point (B). Low side to chassis. (Across Video Det. load)	A1, A2, A3, A4, & Mixer Plate Coil	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Adjust Mixer Plate Coil and A2 to place 45.75MC marker at 50% on curve, A1 to correct low frequency side of curve, A3 for MINIMUM dip and A4 for proper tilt.
2.	"	"	"	41.25MC 47.25MC	"	"	A5, A6	Adjust A5 to place 41.25MC marker in proper trap notch. Adjust A6 to place 47.25MC marker in other trap notch.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
3.	.05mfd	High side to point (B). Low side to chassis.	4.5MC (15KC Swp)	Any non-interfering channel	Across voice coil. Connect DC probe of VTVM to point (C). Common to chassis.	A7	Use high signal input. Set Volume for audible level. Adjust A7 for maximum audio on scope. If two peaks occur, select the one giving the highest meter reading.
4.	"	"	"	"	"	A8, A9	Reduce the signal level to the point where the audio on the scope starts to break up. Adjust A8 and A9 for cleanest maximum audio output on scope. Reduce the signal level still farther. Retouch A8 and A9 for cleanest maximum audio on scope.

SOUND IF ALIGNMENT USING AIR SIGNAL AND VTVM

Set the Contrast fully clockwise and tune in an air signal.
Connect the positive lead of the VTVM to point (C), negative lead to chassis.
Preset A7 fully counterclockwise. Next, turn A7 clockwise until a peak is obtained on the meter. The point of maximum undistorted sound as judged by listening, will occur slightly past this peak and will be between 2.5 and 3.5 volts on the meter. Tune A7 for maximum undistorted sound and not peak voltage.
Reduce the signal by disconnecting the antenna or detuning the Fine Tuning until the sound is distorted. Adjust A8 and A9 for maximum undistorted sound. Further reduce the sound and retouch A8 and A9. Continue reducing the signal and retouching A8 and A9 until optimum results are obtained. It may be necessary in some cases to retouch A7 for MINIMUM buzz at strong signal levels and A9 for cleanest sound at weak signal levels.

4.5MC TRAP ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
5.	.05mfd	High side to point (B). Low side to chassis.	4.5MC (Unmod)	Any non-interfering channel	DC probe thru diode det. (Fig. 2) to pin 7 (cathode) of picture tube. Common to chassis.	A10	Adjust for MINIMUM deflection.

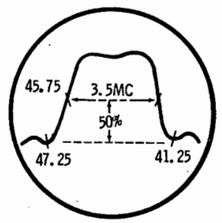


FIG. 1

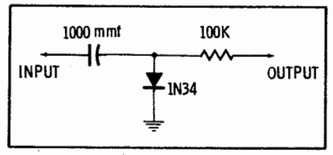
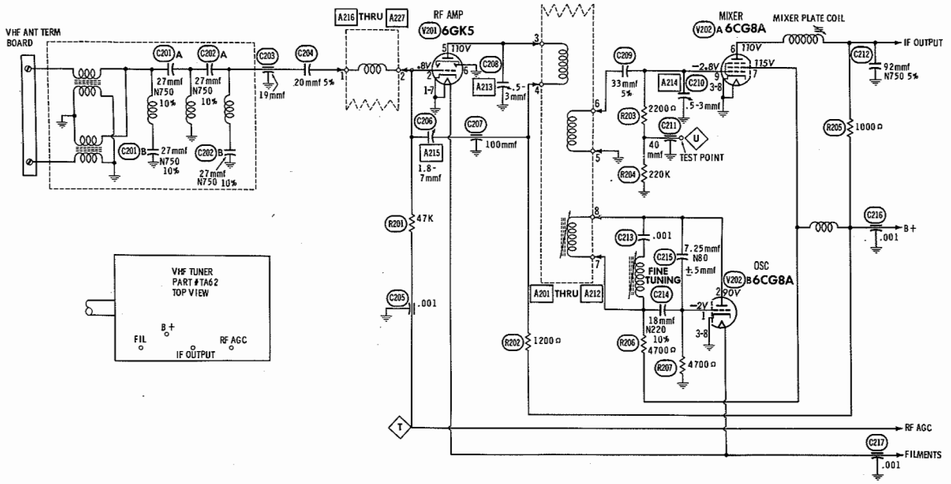


FIG. 2

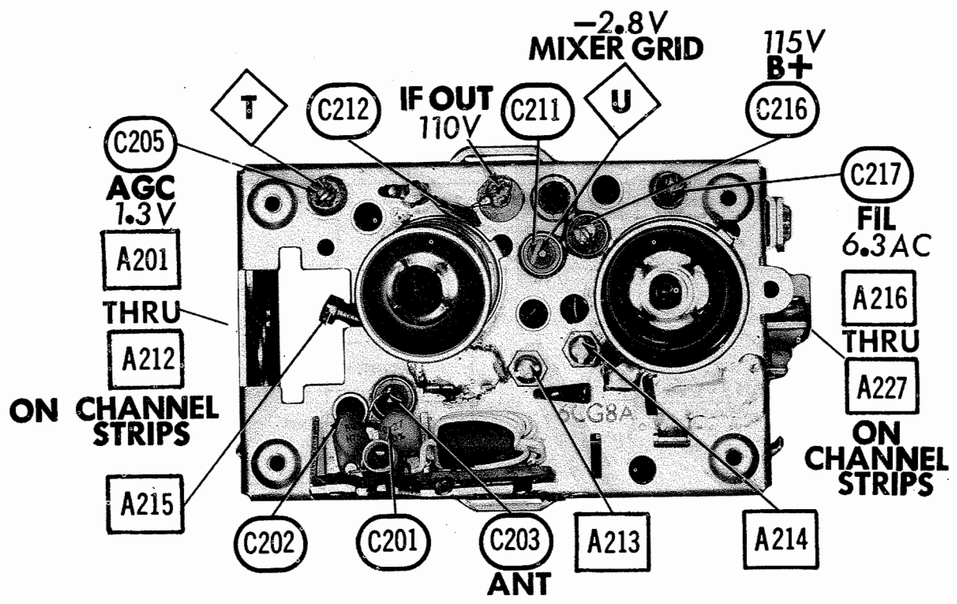
ALIGNMENT IDENT. PHOTO PAGES 16, 17

SET 556 FOLDER 2



A PHOTOFACT STANDARD NOTATION SCHEMATIC

VHF TUNER TA-62



VHF TUNER - TOP VIEW

VHF TUNER PARTS LIST AND DESCRIPTIONS

TUBES

◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆					
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6GK5	V202	Mixer - Osc.	6CG8A

FIXED CAPACITORS

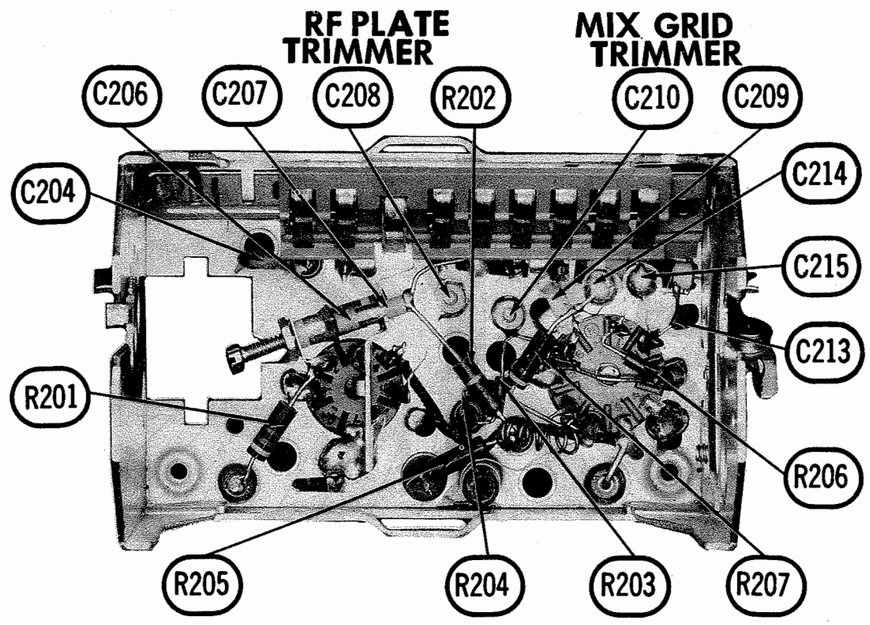
ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201A	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
B	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C202A	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
B	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C203	19							
C204	20 5%			DTZ-20	C10Q20C	CCTO-200		10TCC-Q20
C205	.001		EF-001	MFT-1000		CCF-102	CNO-422	
C206	1.8-7			829-7			CT280A	
C207	100		EF-0001	MFT-100				
C208	.5-3			829-3		CV-1	CT565	
C209	33 5%			NPO-SI 33	C10Q33C		CNO-433	10TCC-Q33
C210	.5-3			829-3		CV-1	CT565	
C211	40							
C212	92 N750 5%			TCN-91	C10Q92U			
C213	.001		BPD-001	MFT-1000		CCF-102	CT280A	
C214	18 N220 10%					*		10TCP-Q18
C215	7.25 N80 ±.5mmf					*		
C216	.001		EF-001	MFT-1000		CCF-102	CT280A	
C217	.001		EF-001	MFT-1000		CCF-102	CT280A	

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

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R201	47K				R205	1000Ω			
R202	1200Ω				R206	4700Ω			
R203	2200Ω				R207	4700Ω			
R204	220K								



VHF TUNER—BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools:
- All thru A14, A16, A18, A19, A20, A23 .... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440; WALSCO #2526, 2543, 2544, 2545
- A15, A17 ..... GENERAL CEMENT #5004, 5008, 5009; WALSCO #2520
- A21, A22 ..... GENERAL CEMENT #9440
- A24, A25 ..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089; WALSCO #2512, 2525, 2528

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .05mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400∿ 30% AM)	(AM) Tuning gang fully open.	Across voice coil.	A11, A12, A13, A14	Adjust for maximum output.
2.	Loop	1670KC	"	"	A15	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	600KC	600KC	"	A16	"
4.	"	1400KC	1400KC Signal.	"	A17	Adjust for maximum output. Repeat Steps 2, 3 and 4.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5.	Across FM antenna terminals.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point (D). Common to chassis.	A18, A19, A20, A21, A22, A23, A24	Adjust for maximum deflection.
6.	"	"	"	DC probe to point (E). Common to chassis.	A25	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE—SELECTOR IN FM POSITION

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
5.	Across FM antenna terminals.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. amp. to point (D). Low side to chassis.	A18, A19, A20, A21, A22, A23, A24	Disconnect Stabilizing Capacitor C77. Adjust for maximum gain and symmetry of response similar to Fig. 3 with markers as shown. Reconnect C77.
6.	"	"	"	Vert. amp. to point (E). Low side to chassis.	A25	Adjust to place marker at the center of crossover lines similar to Fig. 4. SLIGHTLY retouch A18 for maximum amplitude and straightness of cross-over lines.

FM RF ALIGNMENT — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
7.	Across FM antenna terminals with 150Ω in each lead.	108.5MC (Unmod.)	(FM) High end stop.	DC probe to point (D). Common to chassis.	Idler Tension Screw, and A26	Adjust for maximum deflection.
8.	"	100MC	100MC	"		Retouch Idler Tension screw for maximum deflection.
9.	"	100MC	"	"	A27	Adjust for maximum deflection.

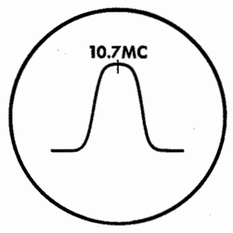


FIG. 3

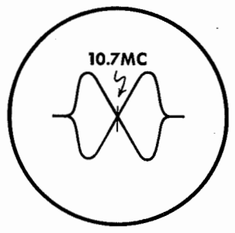


FIG. 4

ALIGNMENT IDENT. PHOTOS PAGES 9, 12

TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools:
- A201 thru A212 ..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8987; WALSCO #2531
- A213, A214, A215 ..... GENERAL CEMENT #5000, 5003, 8276, 8290; WALSCO #2512, 2525

VHF OSCILLATOR ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Use 10MC sweep unless otherwise noted.
Connect variable bias to IF AGC line. Adjust bias to obtain response curve which shows no indication of overloading.
Set the Fine Tuning to the center of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru 47K across Video Det. load.	A201	Adjust to place sound marker in trap notch as in Fig. 201. Video marker should fall at 50%.
			207MC	205.25MC 209.75MC	12		A202	
			201MC	199.25MC 203.75MC	11		A203	
			195MC	193.25MC 197.75MC	10		A204	
			189MC	187.25MC 191.75MC	9		A205	
			183MC	181.25MC 185.75MC	8		A206	
			177MC	175.25MC 179.75MC	7		A207	
			85MC	83.25MC 87.75MC	6		A208	
			79MC	77.25MC 81.75MC	5		A209	
			69MC	67.25MC 71.75MC	4		A210	
			63MC	61.25MC 65.75MC	3		A211	
			57MC	55.25MC 59.75MC	2		A212	

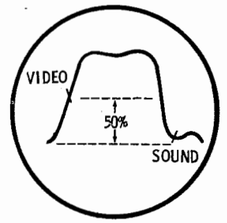


FIG. 201

VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Use 10MC sweep unless otherwise noted.
Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.
Connect the negative lead of a 4.5 volt bias supply to point (T). Positive to chassis.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
2.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	195MC	193.25MC 197.75MC	10	Vert. Amp. thru 10K to point (U). Low side to chassis.	A213, A214, A215	Adjust A213 and A214 for maximum amplitude and symmetry with markers as shown in Fig. 202. Increase bias for MINIMUM amplitude of response curve. Without changing the bias adjust A215 to obtain MINIMUM response on the scope. Restore bias.
3.	"	"	213MC	211.25MC 215.75MC	13	"	A216	Adjust for maximum amplitude of response similar to Fig. 202. Adjust by compressing or expanding coil turns.
			207MC	205.25MC 209.75MC	12		A217	
			201MC	199.25MC 203.75MC	11		A218	
			195MC	193.25MC 197.75MC	10		A219	
			189MC	187.25MC 191.75MC	9		A220	
			183MC	181.25MC 185.75MC	8		A221	
			177MC	175.25MC 179.75MC	7		A222	
			85MC	83.25MC 87.75MC	6		A223	
			79MC	77.25MC 81.75MC	5		A224	
			69MC	67.25MC 71.75MC	4		A225	
			63MC	61.25MC 65.75MC	3		A226	
			57MC	55.25MC 59.75MC	2		A227	

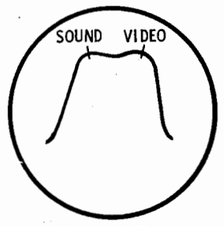
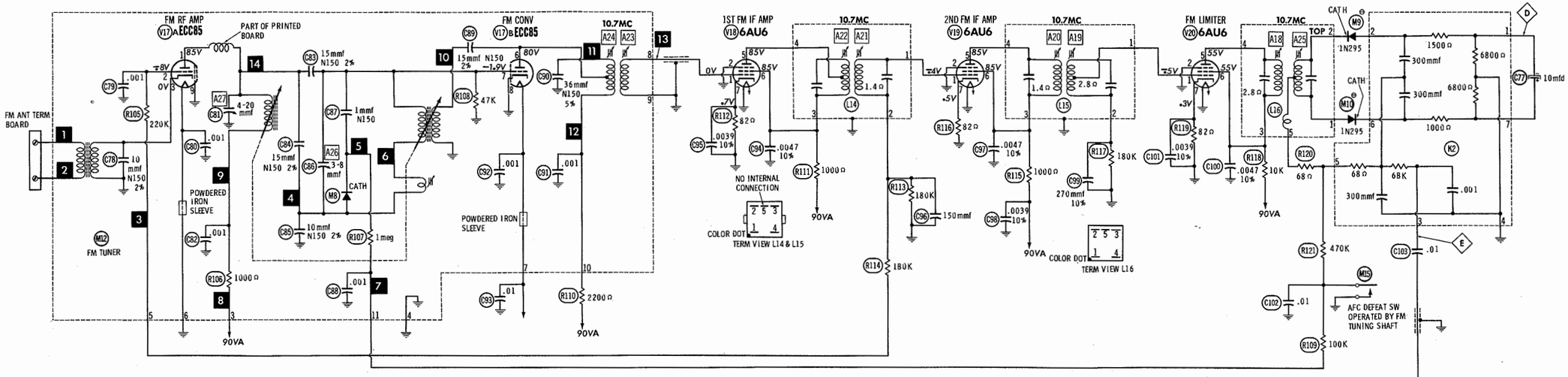
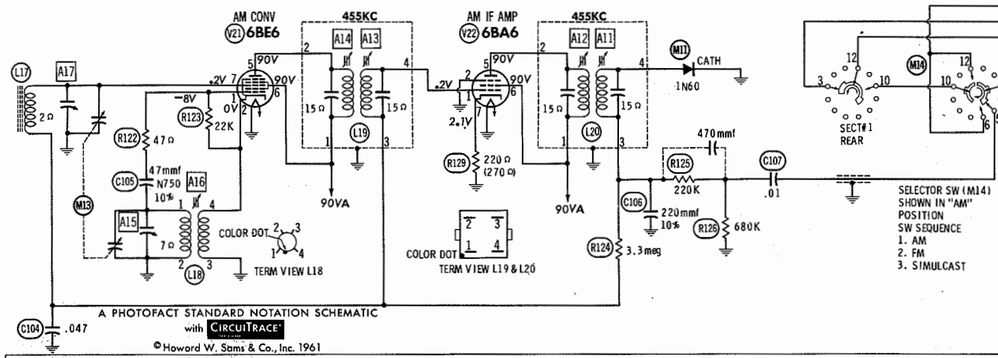


FIG. 202



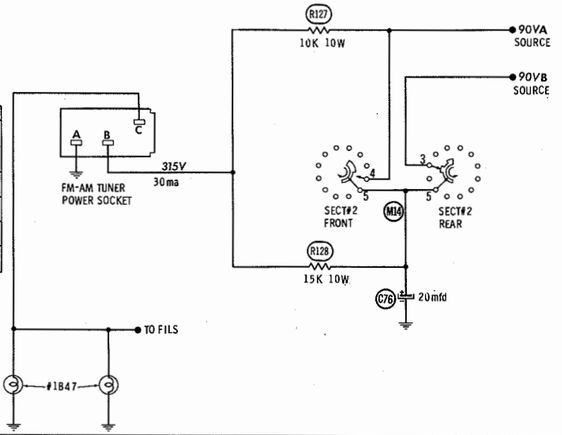


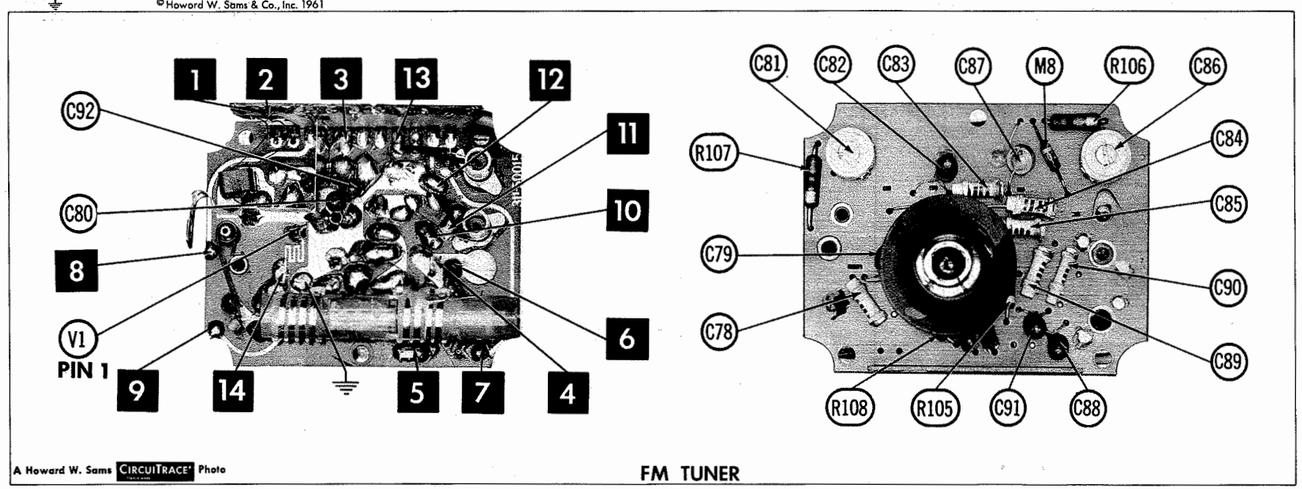
A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

RESISTANCE READINGS

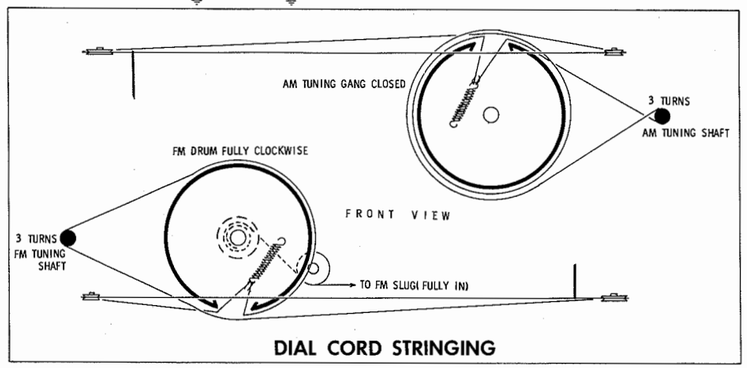
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V17	ECC85	†7000Ω	580K	.1Ω	FIL	FIL	†8200Ω	47K	0Ω	0Ω
V18	6AU6	.1Ω	0Ω	FIL	FIL	†7000Ω	†7000Ω	82Ω		
V19	6AU6	180K	0Ω	FIL	FIL	†7000Ω	†7000Ω	82Ω		
V20	6AU6	180K	0Ω	FIL	FIL	†16K	†16K	82Ω		
V21	6BE6	22K	.4Ω	FIL	FIL	†6000Ω	†6000Ω	3.3meg		
V22	6BA6	3.3meg	0Ω	FIL	FIL	†6000Ω	†6000Ω	220Ω		

ALL MEASUREMENTS MADE IN "AM-FM SIMULCAST" POSITION.
† MEASURED FROM PIN 8 OF V15.





FM TUNER



DIAL CORD STRINGING

FM-AM TUNER CHASSIS AM-FM 1

TV PARTS LIST AND DESCRIPTIONS (Continued)

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	TRAV-LER PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M5			17	N41 *	26S	2604 * / 2605 * (78RPM)	8TA4-S	N-8TA-S	

MISCELLANEOUS

ITEM No.	PART NAME	TRAV-LER PART No.	NOTES
M6	Tuner	TA-62	VHF STANDARD COIL REPLACEMENT #GG-4220A
M7	Switch		Function Selector, Rotary Type

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

WIRING DATA

High Voltage Lead	Use BELDEN No.	8869
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 Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No.	8874
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

FM—AM TUNER PARTS LIST AND DESCRIPTIONS

TUBES

◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆					
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V17	FM RF Amp. - FM Conv.	ECC85	V20	FM Limiter	6AU6
V18	1st FM IF Amp.	6AU6	V21	AM Converter	6BE6
V19	2nd FM IF Amp.	6AU6	V22	AM IF Amp.	6BA6

FM—AM TUNER PARTS LIST AND DESCRIPTIONS (Continued)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TRAV-LER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C76	20	300	EC-70	PRS1660	BR2035	QT1-9	TC65	TD-20-350	TVA-1608
C77	10	10	EC-83	PTT39	NLW10-15	MT1-5	TC22	MLV10-10	TE-1114

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.
C78	10	N150	2%					*		
C79	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C80	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C81	4-20									
C82	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C83	15	N150	2%					*		
C84	15	N150	2%					*		
C85	10	N150	2%					*		
C86	3-8									
C87	1	N150						*		
C88	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C89	15	N150	2%					*		
C90	36	N150	5%					*		
C91	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C92	.001				BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C93	.01				BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C94	.0047		10%		DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C95	.0039		10%		DI-4000		DPMS6D39	CCD-392	JL-239	10TS-D39
C96	150				DI-150	DD-151	L10T15	CCD-151	GP315	10TS-T15
C97	.0047		10%		DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C98	.0039		10%		DI-4000		DPMS6D39	CCD-392	JL-239	10TS-D39
C99	270		10%		DI-270	DD-271	L10T27	CCD-271	GP327	10TS-T27
C100	.0047		10%		DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C101	.0039		10%		DI-4000		DPMS6D39	CCD-392	JL-239	10TS-D39
C102	.01				BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C103	.01				BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C104	.047	200V			P488N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C105	47	N750	10%		N750-DI 47	DTN-47	C10Q47U	CCTN-470	CN7-447	10TCU-Q47
C106	220		10%		DI-221	DD-222	L10T22	CCD-221	GP322	10TS-T22
C107	.01				BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10

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

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	TRAV-LER PART No.	REPLACEMENT DATA
K2	Ratio Detector Network	300mmf, 300mmf, 300mmf, .001mfd, 68Ω, 1000Ω, 1500Ω, 6800Ω, 6800Ω, 88K	MC-61	Aerovox PA-694 Centralab PC-342 Sprague C-12

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R105	220K				R118	10K			
R106	1000Ω				R119	82Ω			
R107	1meg				R120	68Ω			
R108	47K				R121	470K			
R109	100K				R122	47Ω			
R110	2200Ω				R123	22K			
R111	1000Ω				R124	3.3meg			
R112	82Ω				R125	220K			
R113	180K				R126	680K			
R114	180K				R127	10K 10W	PW10-10K	10W-SQ-10K	
R115	1000Ω				R128	15K 10W	PW10-15K	10W-SQ-15K	
R116	82Ω				R129	220Ω			(270Ω) *
R117	180K								

* Alternate Value

COILS (RF-IF)

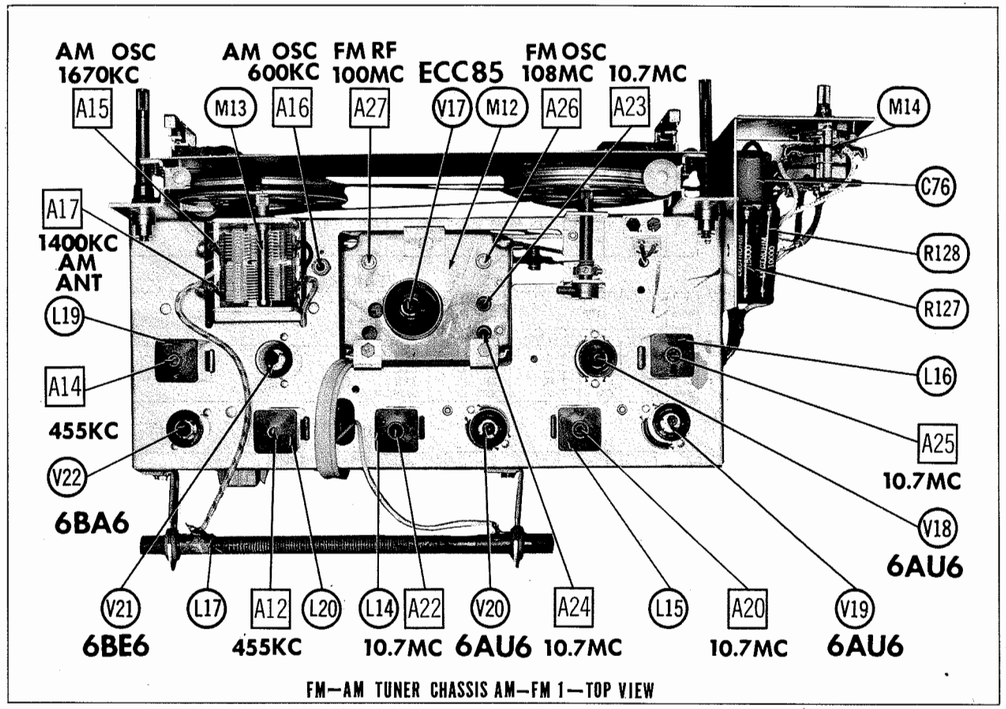
ITEM No.	USE	REPLACEMENT DATA					NOTES
		TRAV-LER PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L14	2nd FM IF	LI-32					
L15	3rd FM IF	LI-33					
L16	Ratio Detector	LI-34	FM-255	1465	RTC-8600	T635	
L17	Loopstick	LI-60	BC-419	705-A		T532	
L18	AM Osc.	LO-26	BC-393	71-OSC	RTC-8646	T502	
L19	1st AM IF	LI-19	BC-352	12-C1	RTC-8632	T607	
L20	2nd AM IF	LI-19	BC-353	12-C2	RTC-8633	T608	

SIGNAL DIODES

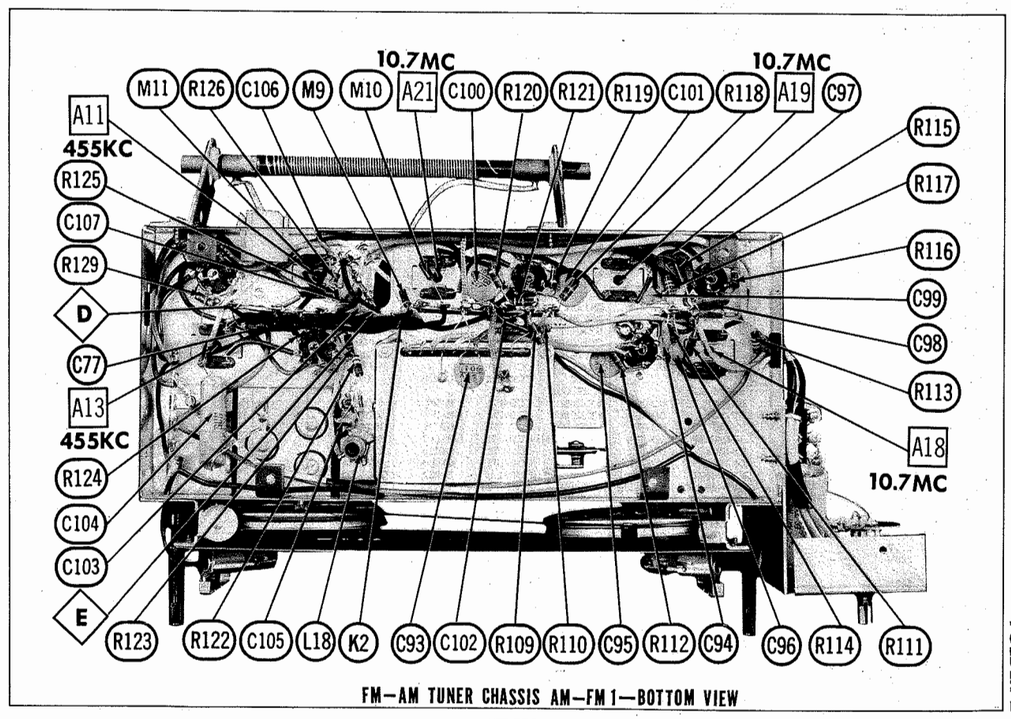
ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		TRAV-LER PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M8		*			* Special AFC Diode, (Part of FM Tuner TA-105)
M9	1N295 †			1N295	FM Detector / Matched
M10	1N295 †			1N295	FM Detector / Pair
M11	1N60			1N60	AM Detector
					† 1N542A or B Alternate.

MISCELLANEOUS

ITEM No.	PART NAME	TRAV-LER PART No.	NOTES
M12	Tuner	TA-105	FM Complete
M13	Tuning Cap		AM, 2 Gang, (Ant. 18-345mmf, Osc. 19-143mmf)
M14	Switch		Function Selector, Rotary Type
M15	Switch		AFC Defeat



FM—AM TUNER CHASSIS AM—FM 1—TOP VIEW



FM—AM TUNER CHASSIS AM—FM 1—BOTTOM VIEW

SET 556 FOLDER 2

TRAV-LER MODELS 23FMSP 6195B, M, W (Ch. 1062-91, AM-FM1) FOLDER 2

TV PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	1st Video IF Amp.	6DK6	V8	Channel B Output	6AQ5A
V2	2nd Video IF Amp.	6BZ6	V9	Sync Phase Inverter - Vert. Mult.	6CG7
V3	Video Output - Sound IF Amp.	6AW8A	V10	Vert. Mult. - Vert. Output	6DT5
V4	AGC Keying - Sync Sep. - Noise Limiter	6BU8	V11	Horiz. Mult.	6CG7
V5	Audio Detector	6DT6	V12	Horiz. Output	6DQ6A
V6	Channel A - Channel B AF Amp.	12AX7	V13	Damper	6AX4GT (6AU4GT)*
V7	Channel A Output	6AQ5A	V14	HV Rectifier	1G3/1B3GT
			V15	LV Rectifier	5U4GB (5V3)*

GENERAL ELECTRIC • RAYTHEON • SYLVANIA •

* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA					NOTES
	TRAV-LER PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V16	23MP4	23MP4 ①			23MP4 ②	① Aluminized ② Silver Screen "85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA TRAV-LER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲40	350	EC-115	AFH2-64-25	B0483	XC2-28	FP247	TMD-2700	TVL-2780
B	▲100	350							
C2A	■50	350	EC-116A	AFH3-28-30	A0390 BR1045	XC2-10	FP230.5	TMS-1630 TD-10-450	TVL-1622 TVA-1604
B	▲10	350							
C3	60	200	EC-131	PRS1590	BR6025	QT1-18	TC68	TD-60-250	TVA-1513
C4	50 ①	50	EC-130 ①	PRS1350	BR505	QT1-15	TC39	TD-50-50	TVA-1308

① Some versions may use 10mfd ⓟ 50V (Part #EC-129).

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.
C5	1.0	100V		P288N-1.0		CUB2W1	1DP-5-105	GEM-21	2TM-P10
C6	820			DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C7	1.0	100V		P288N-1.0		CUB2W1	1DP-5-105	GEM-21	2TM-P10
C8	.001			BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C9	820			DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C10	820			DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C11	560	5%				5R5T56	CM-19B-561J	MCJ247	MS-356
C12	.001	10%		DI-1000	DD-102	5R5D1	CCD-102	GP210	5HK-D10
C13	820			DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C14	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C15	820			DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C16	.22	400V		P488N-22		CUB4P22	4DP-5-224	GEM-4022	4TM-P22
C17	.022	600V		P688N-022	DD-203	CUB6S22	6DP-2-223	GEM-6122	6TM-S22
C18	.047	1000V		P1088N-047		CUB10S47	16DP-5-473	GEM-10147	10TM-S47
C19	.047	1000V		P1088N-047		CUB10S47	16DP-3-473	GEM-10147	10TM-S47
C20	.1	600V		P688N-1	DF-104	CUB8P1	6DP-4-104	GEM-601	6TM-P10
C21	.001	2000V		HVB-30-1000	DD30-102	HVB20D1	3CCD-102	2HV-210	BL-D20
C22	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C23	47	N750		N750-DI 47	DTN-47	C10Q47U	CCTN-470	CN7-447	10TCU-Q47
C24	4.7	10%		NPO-SI 4.7	TCZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C25	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C26	.0047			BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C27	.0015			BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C28	.047	200V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C29	100	10%		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C30	.047	1000V		P1088N-047		CUB10S47	16DP-3-473	GEM-10147	10TM-S47
C31	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C32	270	10%		DI-270	DD-271	L10T27	CCD-271	GP327	10TS-T27
C33	680	10%		DI-680	DD-681	5R5T68	CCD-681	GP368	10TS-T68
C34	.002	10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C35	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C36	.22	100V		P288N-22		CUB2P22	1DP-3-224	GEM-2022	2TM-P22
C37	470	10%		DI-470	DD-471	5R5T47	CCD-471	GP347	10TS-T47
C38	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C39	.002	10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C40	2mfd	100V		P282Z-2.0		WMF1W2E			
C41	270	10%		DI-270	DD-271	L10T27	CCD-271	GP327	10TS-T27
C42	680	10%		DI-680	DD-681	5R5T68	CCD-681	GP368	10TS-T68
C43	.002	10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C44	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-D20
C45	.22	100V		P288N-22		CUB2P22	1DP-3-224	GEM-2022	2TM-P22
C46	470	10%		DI-470	DD-471	5R5T47	CCD-471	GP347	10TS-T47
C47	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C48	.002	10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C49	2mfd	100V		P282Z-2.0		WMF1W2E			
C50	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C51	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C52	150			DI-150	DD-151	L10T15	CCD-151	GP315	10TS-T15
C53	.0047			BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C54	.001	10%		DI-1000	DD-102	5R5D1	CCD-102	GP210	10TS-D10
C55	.001	10%		DI-1000	DD-102	5R5D1	CCD-102	GP210	10TS-D10
C56	.0022			BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C57	.001	2000V		HVB-30-1000	DD30-102	HVB20D1	3CCD-102	2HV-210	BL-D20
C58	.047	200V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C59	.1	600V	10%	V84C6D1-10%		PM6P1	6DP-4-104	GEM-1001	6TM-P10
C60	.1	600V	10%	V84C6D1-10%		PM6P1	6DP-4-104	GEM-1001	6TM-P10
C61	.047	600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C62	.047	600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C63	.01	600V		P688N-01	D6-103	CUB6S1	6DP-3-103	GEM-611	6TM-S10
C64	.0047			BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C65	.047	600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C66	.0039		10%	DI-4000		1R5D39	CM-19B-392K	JL-239	MS-239
C67	680		10%	DI-680	DD-681	5R5T68	CM-19B-681K	GP368	MS-368
C68	680		10%	DI-680	DD-681	5R5T68	CM-19B-681K	GP368	MS-368
C69	.0047			BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C70	.047	600V		P888N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C71	.047	1000V		P1088N-047		CUB10S47	16DP-5-473	GEM-10147	10TM-S47
C72	250	2000V N1500	10%						
C73	250	2000V N1500	10%						
C74	120	2000V	10%						
C75	.047	600V		P688N-047	DD-503	CUB8S47	8DP-3-473	GEM-6147	6TM-S47

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA TRAV-LER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1	3meg	½	VC-244			Q13-140X	UT-457	Loudness, Channel A
	1meg Tap							
R2	3meg	½	VC-244			Q13-140X	UT-457	Loudness, Channel B
	1meg Tap							
R3A	2meg	½	VC-248	B-75	AD47-2meg-S		FA26L	Bass, Channel B
B	2meg			SR-75	Not Req.		RU26L	Bass, Channel A
C	Shaft			Not Req.	KSS-3		CS3500	
R4A	250K	½	VC-247	BT-56			FA254T1253	Treble, Channel B
	125K Tap							
B	250K	½		STR-56			RU254T1253	Treble, Channel A
	125K Tap							
C	Shaft			Not Req.			CS3500	
R5A	1000Ω	½	VC-245			B17-108	PP13R	Contrast
B	Switch					SK7	Not Req.	Push-Pull Off-On
R6A	100K	½	VC-246	F1-31				Brightness
B	200K	½		R2-33		†QJ-1557	■	Vert. Hold
R7A	1500Ω	½	VC-85A	TT-511	B47-1500-b	Bll-109	PTA152L	Vert. Linearity
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	
R8	2.5meg	½	VC-78	TT-83	B47-2.5meg-S	HLC-2	SU-565	Vert. Size (Height)
R9A	100K	½	VC-84	TT-40	B47-100K-S	Bll-128	PTA15L	AGC
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	

† "CONCENTRIKIT" Equivalent: K-6 Kit with Base Elements and Shafts: Bll-128, P17-112 (Panel) (Not available as a factory assembled unit). Bll-129, R1-126 (Rear)

■ "STA-LOC" Equivalent: FA15L, RU25L, OF1375, IS1875.

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R10	10meg			
R11	3meg			
R12	1000Ω			(33Ω) *
R13	3300Ω			
R14	47Ω			
R15	150K			
R16	2.2meg			
R17	1800Ω			
R18	56Ω			
R19	6800Ω			
R20	100Ω			
R21	47K			
R22	7500Ω 5W	PW5-7500	5W-SQ-7500	
R23	39K			
R24	15K			
R25	47K			
R26	270K			
R27	82 K			
R28	120K			
R29	4.7meg			
R30	390K			
R31	8200Ω 1W			
R32	39K			
R33	56K			
R34	100K			
R35	100K			
R36	560K			
R37	100K			
R38	560K			
R39	8200Ω			
R40	680Ω			
R41	180K			
R42	33K			
R43	47K			
R44	220K			
R45	100K			
R46	2.2meg			
R47	470K			
R48	270Ω			
R49	470K			
R50	220Ω 1W			
R51	470K			
R52	47K			
R53	220K			
R54	100K			
R55	2.2meg			
R56	470K			
R57	270Ω			

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R58	47K			
R59	470K			
R60	8200Ω 4W	PW4-8200	4G-8200	
R61	220Ω 1W			
R62	2.2meg			
R63	4.7meg			
R64	8200Ω			
R65	3300Ω			
R66	2200Ω			
R67	2200Ω			
R68	220K			
R69	820K			
R70	56K			
R71	2.2meg			
R72	220K			
R73	100Ω			
R74	39K 1W			
R75	220Ω 1W			
R76	39K			
R77	220Ω			
R78	3.8Ω (Cold)			
R79	220Ω			
R80	100K			
R81	100K			
R82	470K			
R83	4.7meg			
R84	22K 3W	PW3-22K	3G-22K	
R85	7500Ω 5%			
R86	1500Ω			
R87	56K			
R88	100K			
R89	15K			
R90	100Ω			
R91	470K			
R92	12K 3W	PW3-12K	3G-12K	
R93	150K			
R94	470K			
R95	220K			
R96	4700Ω			
R97	8200Ω 4W	PW4-8200	5W-SQ-8200	
R98	2700Ω 10W	PW10-2700	10W-SQ-2700	
R99	330Ω			
R100	1200Ω			
R101	500Ω 15W	PW15-500	15W-SQ-500	
R102	270K			
R103	1.2Ω			Note 1
R104	3900Ω 1W			

* Alternate Value

Note 1. May not be used in some versions.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	TRAV-LER PART No.	REPLACEMENT DATA
K1	Vert. Integrator	.0047mfd, .01mfd, 15K, 15K	CC-120	Centralab PC-392

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Miller PART No.	Stoncor PART No.	Workman TV PART No.	NOTES
L1A	1st Video IF	L-179	TV-129	6233 ▲	RTC-8561 ▲	T210 ▲	①Includes Complete Assy. ②Wound on 4700Ω Resistor. ③Wound on 10K Resistor. ④Includes 100K Resistor, 18mmf Capacitor. ▲ Disregard Secondary. † Parallel with 4700Ω Resistor. ▲ Parallel with 10K Resistor. * Parallel with 100K Resistor.
B	47.25MC Trap						
L2A	2nd Video IF	L-103	TV-127	6232	RTC-8559	T209	
B	41.25MC Trap						
L3	3rd Video IF	L-152 ①				T276	
L4	RF Choke (10uh)	L-160	BC-566	4612	RTC-8522	T860	
L5	RF Choke (27uh)	L-158	TV-192	4515	RTC-8525	T863	
L6A	4.5MC Trap	L-154		1482 IFT	RTC-9056	T253	
B	Sound Takeoff						
L7	Peaking (180uh)	L-182 ②	TV-184 †	6180 †	RTC-8597 †	T359	
L8	Peaking (950uh)	L-163 ③	TV-208 ▲	6157 ▲	RTC-8598 ▲	T361	
L9	Sound IF	L-167				TA232	
L10	Quadrature	L-110-A ④	TV-154 *	1481 *	RTC-8606 *	T248 *	
L11	Fil. Choke (1.5uh)	L-184	BC-562	4604	RTC-8516	T856	

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Miller PART No.	Stoncor PART No.	Thordarson PART No.	Triad PART No.	Workman TV PART No.	NOTES
L12	Horiz. Stabilizer (Horiz. Hold)	L-156	TV-163	6210	RTC-8622	HS-5	WLC-25	T103	

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Stoncor PART No.	Thordarson PART No.	Triad PART No.	NOTES
L13	.255A	50Ω	1.1 Hy.	FC-5	C-2994	C-2343	28C44	C-34X	

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Stoncor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	117V ⓟ 1.8A	560VCT ⓟ .320A DC	5V ⓟ 3.8A	TR-63					
	SEC. 3	SEC. 4	SEC. 5						
	6.3V ⓟ 10.5A								

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Stoncor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	Vert. Output	TR-50A			26S14	A-140X	
T3	Yoke (Horiz. 18.6MH) (114°) (Vert. 12.8MH)	L-174C	MDF-120①	DY-27A②	Y-52 ②	Y-60-1	
T4	Horiz. Output	TR-51	HVO-152 *	HO-304 *	FLY-137 *	D-151R *	

①Connect Yoke Terminal #5 to Yoke Plug Pin #3; Yoke Terminals #4 and #6 to Yoke Plug Pin #4; Yoke Terminal #8 to Yoke Plug Pin #5. ②Requires new rear cover and centering device.

*HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

ORIGINAL TERMINAL CONNECTIONS	Merit Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
2	2	2	1	2
1	1	1	2	1

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC. 1	REPLACEMENT DATA TRAV-LER PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T5	9500Ω	3-4Ω	AT-47					
		SEC. 2						
		170Ω						
T6	9500Ω	SEC. 1	AT-47					
		3-4Ω						
		SEC. 2						
		170Ω						

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA TRAV-LER PART No.	QUAM PART No.	NOTES
SP1	6"	PM	3-4Ω	SPK-62	6A31	
SP2	3½"	PM	3-4Ω	SPK-28	3A15TZ4.7	
SP3	6"	PM	3-4Ω	SPK-62	6A31	
SP4	3½"	PM	3-4Ω	SPK-28	3A15TZ4.7	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA TRAV-LER PART No. FUSE	TRAV-LER PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	N	3/4A 125V S/B	F13		333.750 (N 3/4A 125V S/B)	346010	N 3/4	HN 1/2 to 3/4
M2	1 inch length		#26 wire					

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA TRAV-LER PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	NOTES
M3		SR-15 *	6GD1 *		* Horizontal AFC Diode, Dual Selenium, Series Connected
M4	1N87	1N87 †		1N87 †	† Video Detector (Part of Detector Assembly)