

## DISASSEMBLY INSTRUCTIONS

### CHASSIS REMOVAL

Remove seven screws and turn plastic tabs holding back cover. Disconnect antenna leads and remove all TV control knobs from front panel.

Remove picture-tube socket, HV anode lead, yoke connector, convergence-yoke connector, deguassing connector, remote-receiver connectors, tuner assembly connectors, record-changer pilot-light connectors. Unsolder IF cable plug.

Remove three screws securing chassis. Slide chassis straight back for removal from cabinet.

### TV TUNER REMOVAL

Removal four nuts securing tuner assembly. Tuner assembly may be removed.

### REMOTE RECEIVER REMOVAL

Remove one screw securing remote receiver unit.

### AM/FM TUNER REMOVAL

Remove all knobs from front panel and disconnect all connectors to tuner. Remove four countersunk nuts on controls securing front tuner panel and two plastic retainers on top inside of tuner panel. Panel may be removed now.

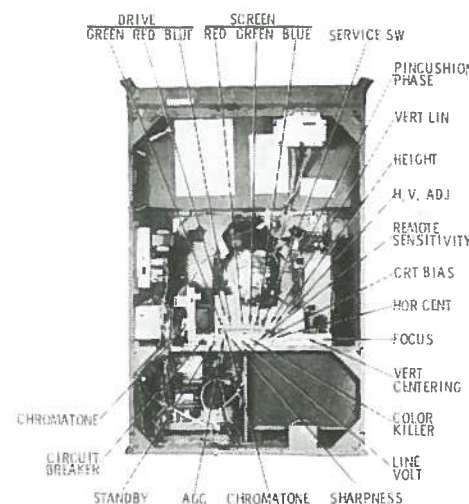
Remove one countersunk nut securing speaker selector switch and two screws holding tuner. Tuner may be removed now by sliding chassis forward.

### PICTURE TUBE REMOVAL

See "Chassis Removal" instructions. Lay set face down on a soft protective surface.

Remove purity rings and blue lateral assembly, convergence assembly, and deflection yoke.

Remove four springs supporting deflection yoke mounting bracket. Remove four screws securing deguassing shield. Loosen nut and bolt securing retaining wire. Remove all picture-tube mounting brackets and remove picture tube.



## SERVICING IN THE FIELD CABINET-REAR VIEW

### CRT-IMPLOSION PROTECTION AND CLEANING

Implosion Protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

### FUSE/FUSE DEVICE

A circuit breaker is used for low-voltage power-supply protection. (See "Cabinet Rear View Photo" for location).

A 32-volt, 10-amp fuse is used for low-voltage power-supply protection. Fuse used only on Chassis #T940-31 and higher.

A 5-amp fuse is used for AC line protection. Fuse used only on Chassis #T940-31 and higher.

A 20-amp, 32-volt fuse is used for filament protection. Fuse used only on Chassis #T940-31 and higher.

A 2-1/2 inch fuse wire is used for filament protection. (See "Chassis Top View Photo" for location).

### VHF TUNER

For programming of VHF Tuning, refer to "Miscellaneous Adjustment Alignment Instructions". The Fine Tuning mechanically engages oscillator slug for adjustment (one slug for each channel).

### UHF TUNER

For programming of UHF Tuning, refer to "Miscellaneous Adjustment Alignment Instructions".

### HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal Hold control. (See "Tube Placement Chart" for location).

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

### HORIZONTAL LINEARITY

For Horizontal Linearity (Efficiency) Adjustment, refer to "Miscellaneous Adjustments".

### WIDTH

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

### FOCUS

The focus may be varied by means of a focus coil. (See "Cabinet Rear View Photo" for location).

### AGC

The AGC may be varied by means of an AGC control. (See "Cabinet Rear View Photo" for location).

### CENTERING

Horizontal Centering is accomplished by proper adjustment of the Horizontal Centering control. (See "Tube Placement Chart" for location).

Vertical Centering is accomplished by proper adjustment of the Vertical Centering control. (See "Tube Placement Chart" for location).

## PHOTOFACT® Folder

with CIRCUITRACE

For Supplier Address See PHOTOFACT Index

MAGNAVOX CHASSIS  
T-940 SERIES

COLOR TV

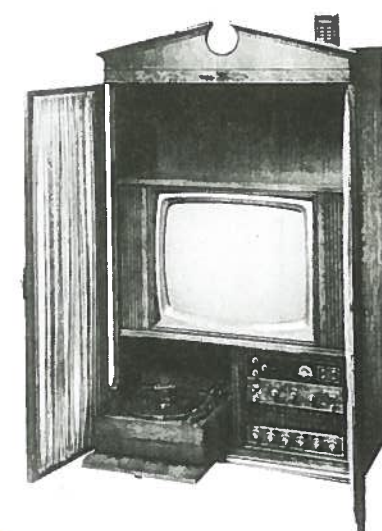
### IMPORTANT FILING NOTICE

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

### INDEX

Remote Controls:  
Receiver 704054-2,  
Transmitter 704041-2, SET 1144, FOLDER 1-A  
Receiver 704054-1,  
Transmitter 704041-1, SET 1144, FOLDER 1-B  
AM-FM Radio  
R228-01-BA . SET 1144, FOLDER 1-C  
Amp A576-03-BA . . . . SET 1144, FOLDER 1-D

TV CHASSIS	TV CHASSIS	TV CHASSIS	TV CHASSIS
T940-01-AA	T940-07-AA	T940-18-AB	T940-36-AD
T940-02-AA	T940-07-AB	T940-18-AC	T940-39-AD
T940-02-AB	T940-07-AC	T940-19-AD	T940-39-CD
T940-02-AC	T940-07-AD	T940-19-BD	T940-39-DD
T940-02-AD	T940-08-AC	T940-19-DD	T940-40-BD
T940-03-AA	T940-08-BA	T940-20-AD	T940-40-CD
T940-03-AB	T940-08-BB	T940-21-AD	T940-40-DD
T940-03-BA	T940-08-BC	T940-23-AD	T940-41-AD
T940-03-BB	T940-09-AA	T940-23-BD	T940-42-AD
T940-03-CC	T940-09-AB	T940-23-DD	T940-44-AD
T940-03-DB	T940-09-AC	T940-24-BD	T940-44-CD
T940-04-AA	T940-09-AD	T940-24-DD	T940-44-DD
T940-04-AB	T940-10-BB	T940-25-BD	T940-45-AD
T940-04-AD	T940-11-AB	T940-25-DD	T940-45-BD
T940-05-AA	T940-12-DB	T940-26-AD	T940-45-DD
T940-05-BA	T940-13-AC	T940-26-BD	T940-46-AD
T940-05-BB	T940-13-DA	T940-26-CD	T940-46-BD
T940-05-BC	T940-13-DB	T940-27-CD	T940-46-CD
T940-05-DB	T940-14-AA	T940-29-AD	T940-46-DD
T940-05-DC	T940-14-AB	T940-29-BD	T940-47-AD
T940-06-AA	T940-14-AC	T940-29-DD	T940-47-BD
T940-06-BA	T940-14-AD	T940-30-BD	T940-47-CD
T940-06-BB	T940-15-AA	T940-31-AD	T940-47-DD
T940-06-BC	T940-15-AB	T940-32-AD	T940-50-AD
T940-06-DB	T940-15-AC	T940-33-AD	T940-50-CD
T940-06-DC	T940-17-AA	T940-34-AD	T940-50-DD
	T940-17-AB	T940-35-AD	T940-51-BD
RADIO CHASSIS	AMP CHASSIS	REMOTE TRANSMITTER	T940-79-CD
R228-01-BA	A576-03-BA		T940-80-CD
REMOTE RECEIVER		704041-1	T940-84-CD
		704041-2	T940-85-CD
			T940-86-CD
			T940-87-CD
			T940-91-CD



REPRESENTATIVE MODEL USING  
CHASSIS T940-21-AD

### 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.

REMEMBER TO ASK— "What else needs fixing?"

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

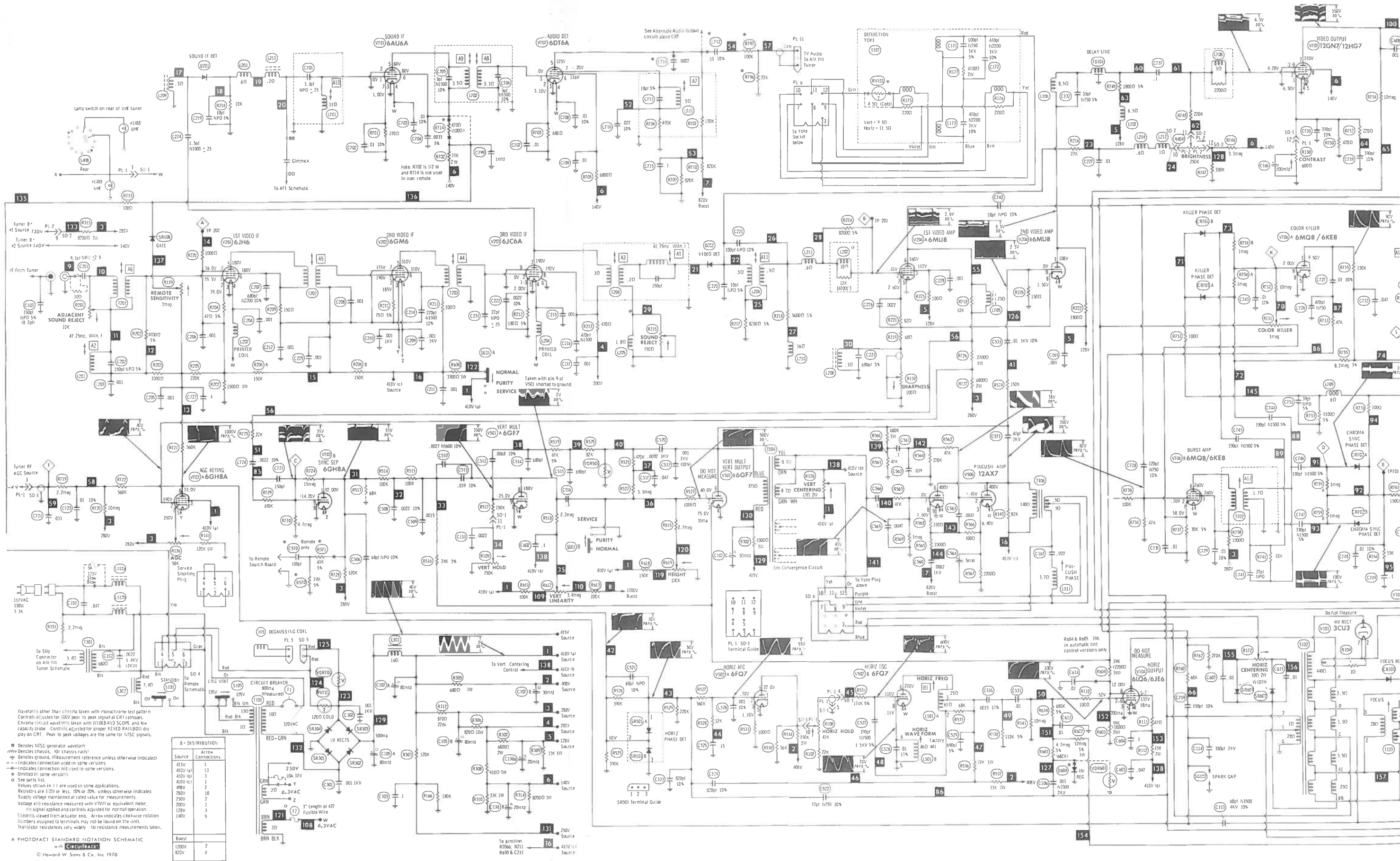
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W.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

UB708

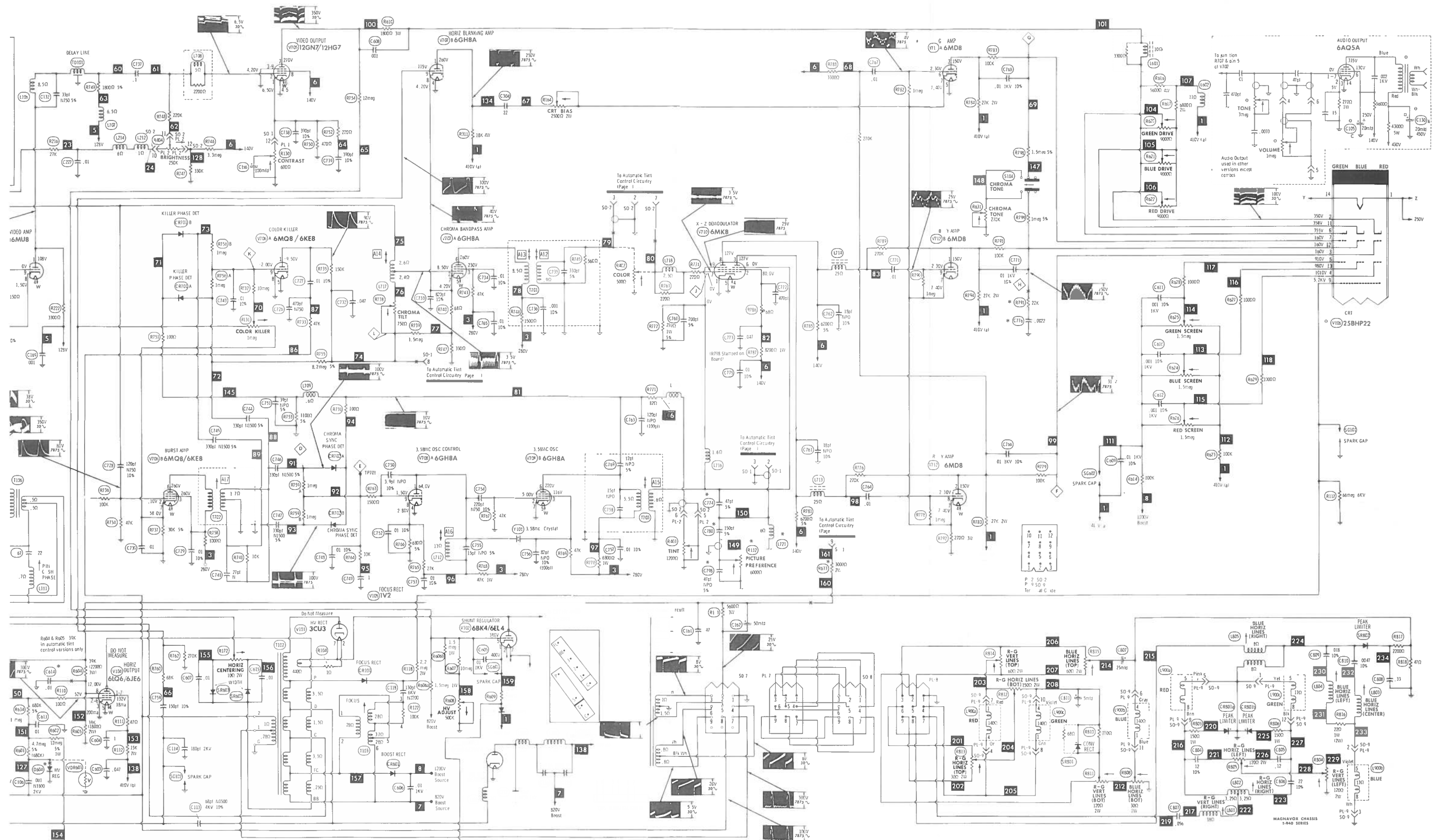
Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1970 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America.

DATE 12-70

SET 1144 FOLDER 1



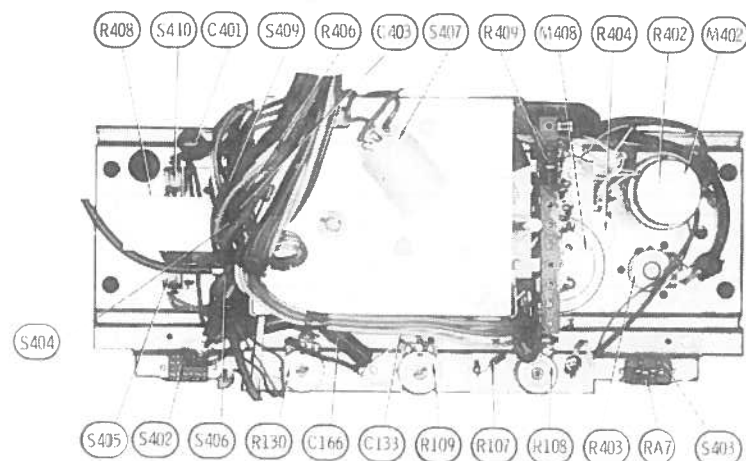




## RESISTANCE MEASUREMENTS

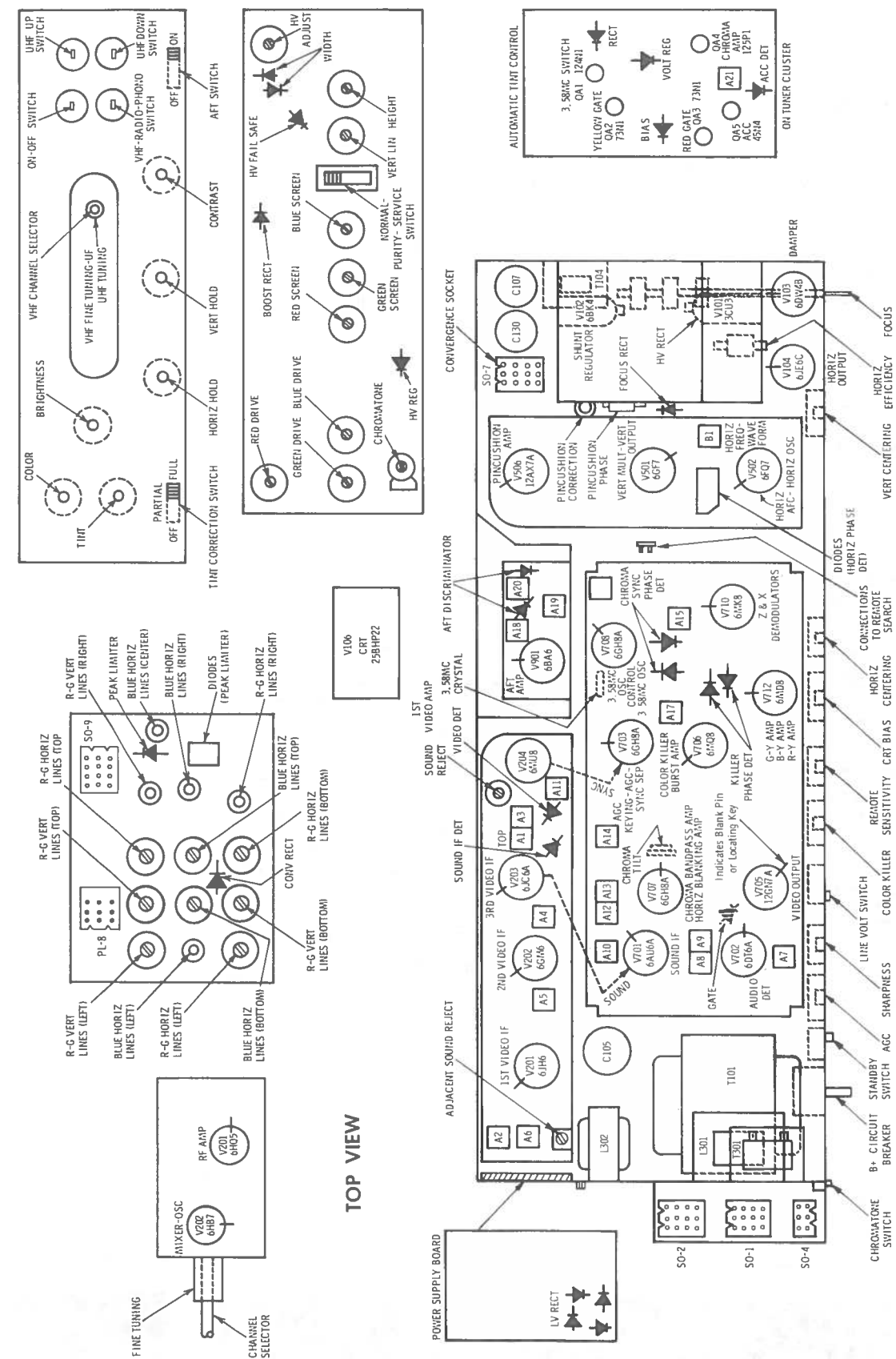
ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	TOP CAP
V101	3CU3A	PINS 1			THRU 8		HAVE		INFINITE RESISTANCE					400Ω††
V102	6BK4/ 6EL4	2000Ω†*	FIL	NC	NC	1.5meg	NC	FIL	NC					INFINITE
V103	6DW4B	NC	20Ω†	NC	FIL	FIL	NC	20Ω†	NC	1.2meg				
V104	6LQ6/ 6JE6C	15K†	4meg *	0Ω	FIL	FIL	4meg *	15K†	20K	NC				3Ω††
V106	25BHP22	FIL	1meg†	1.2meg†	1.7meg†	1.7meg†	1meg†	1.2meg†	NC	66meg	NC	1meg†	1.2meg†	
V106	CONTINUED											PIN 13 1.7meg†	PIN 14 FIL	
V201	6JH6	220K	1547Ω	FIL	FIL	225Ω ■	225Ω ■	1500Ω						
V202	6GM6	75K	INFINITE	FIL	FIL	2000Ω†	2000Ω†	INFINITE						
V203	6JC6A	180Ω	.5Ω	FIL	FIL	180Ω	0Ω	2200Ω†	2200Ω†	0Ω				
V204	6MU8	10K†	360Ω	8500Ω†	FIL	FIL	11K†	150Ω	68Ω	150Ω				
V501	6GF7	0Ω	2.7meg	FIL	FIL	FIL	1400Ω †	NC	4meg †	320K				
V502	6FQ7	25K	850K	1000Ω	FIL	FIL	65K†	240K	50Ω	0Ω				
V506	12AX7A	150Ω†	260K	2200Ω	FIL	FIL	150Ω†	1meg	2600Ω	FIL				
V701	6AU6A	.5Ω	0Ω	FIL	FIL	20K†	20K†	270Ω						
V702	6DT6A	.5Ω	680Ω	FIL	FIL	1.1meg	9500Ω†	470K						
V703	6FH8A	40K†	8000Ω†	15Ω†	FIL	FIL	800K	14K†	0Ω	4.7meg				
V705	12GN7/ 12HG7	260Ω	400K†	0Ω	FIL	FIL	FIL	6000Ω†	2600Ω†	0Ω				
V706	6MQ8	1.6meg	47K	2000Ω†	FIL	FIL	2000Ω†	30K	0Ω	1.5meg				
V707	6GH8A	18K†	1.5meg	50K†	FIL	FIL	2700Ω†	398Ω	398Ω	270K				
V708	6GH8A	20K†	47K	48K	FIL	FIL	7600Ω†	0Ω	680Ω	1.5meg				
V710	6MK8	0Ω	10K†	8000Ω†	FIL	FIL	.5Ω	220Ω	8500Ω†	1Ω				
V712	6MD8	30K†	30K†	30K†	FIL	FIL	1meg	270Ω	1meg	1meg				
V901	6BA6	1Ω	0Ω	FIL	FIL	17K†	17K†	120Ω						
TUNER V201	6HQ5	313meg	0Ω	FIL	FIL	11K†	0Ω	0Ω						
TUNER V202	6HB7	0Ω	220K	0Ω	FIL	FIL	2600Ω†	26K†	8000Ω†	10K				
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	TOP CAP

†	MEASURE FROM THE CATHODE OF SR303 AND SR302.	■	MEASURE FROM PIN 2 OF V202, ITV1
††	MEASURE FROM PIN 9 OF V103.	TP	TIE POINT
*	READING DEPENDS ON POLARITY OF METER CONNECTIONS.	NC	NO CONNECTION



## CONTROL MOTOR MOUNTING BRACKET

## TUBE PLACEMENT CHART





## TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 117VAC. Allow a 20-minute warm-up period for the receiver and test equipment.

Suggested Alignment Tools:

	GENERAL CEMENT	WALSCO
A1 thru A19 .....	8606, 8606L, 8869 .....	2543, 2544, 2588
A20, Tuner IF Output coil .....	9296, 9297, 9300 .....	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 that shown.

Connect a variable bias supply to the IF AGC line (Point A) and adjust to obtain a response curve which shows no indication of overload. Disable oscillator section of mixer-oscillator. Set the channel selector to any non-interfering channel.

INDICATOR	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
DC probe of VTVM thru 47K to Point B, common to ground.	High side to ungrounded tube shield over Mixer-Osc., low side to ground.		41.25MC 47.25MC	A1, R215 A2, R201	Adjust for MINIMUM.
Vertical input of scope to Point B, low side to ground.	High side to ungrounded tube shield over Mixer-Osc., low side to ground.	44MC (10MC Sweep)	41.25MC 42.17MC 44.00MC 45.75MC 47.25MC	A3, A4, A5, A6, Tuner IF Output Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 1.

NOTE: It is convenient to perform AFT Alignment before continuing.

### SOUND IF ALIGNMENT

Tune in a station and adjust A7 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting A8, A9 and A10.

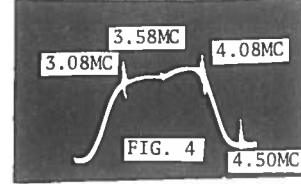
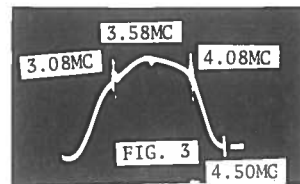
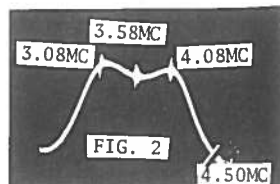
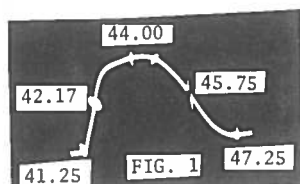
### 4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust A11 for MINIMUM beat interference.

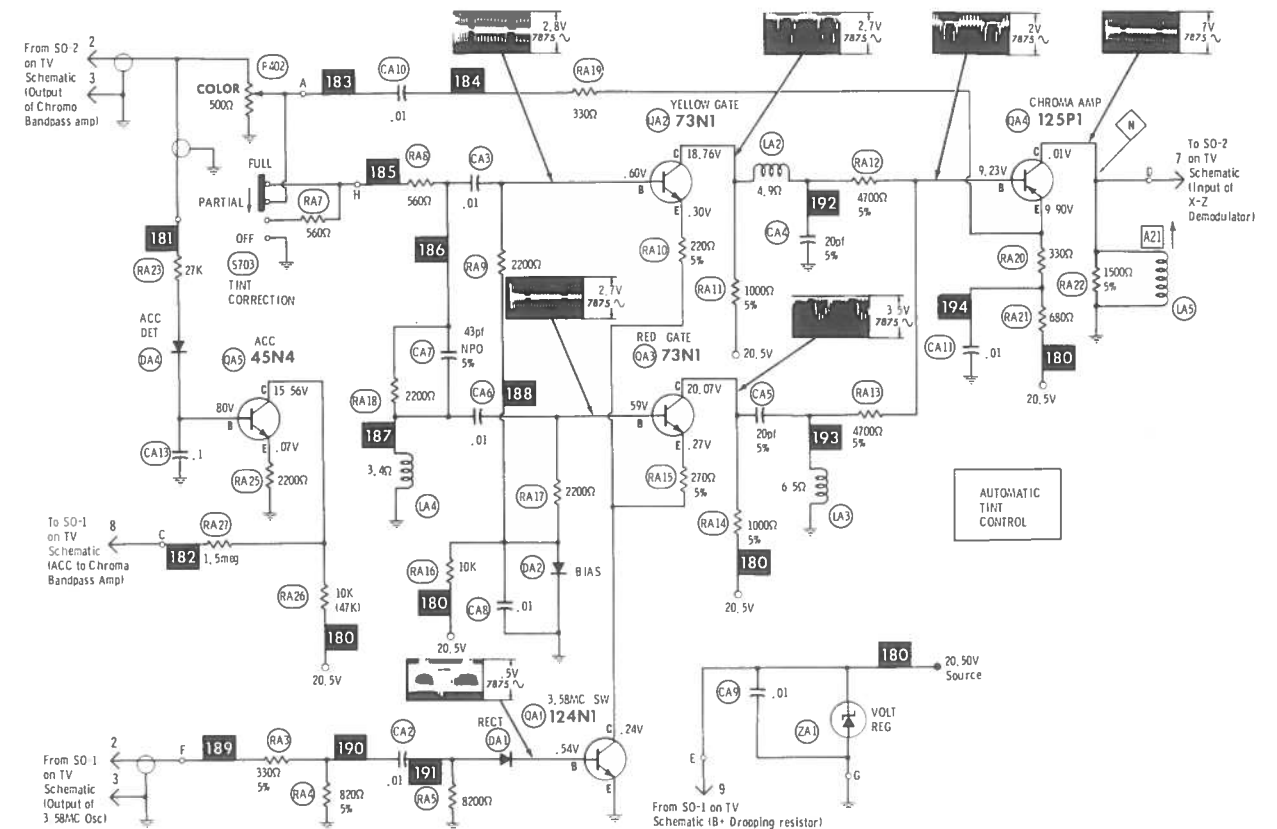
### CHROMA BANDPASS ALIGNMENT

The following alignment will require the use of an RF Modulator (RCA WG304B or equivalent). Switch Automatic Tint control to Off position. Connect a -40 volt supply to Point K, a -2 volt supply to Point L, and a -15 volt supply to Point T, positive of all supplies to ground. Connect a variable bias supply to IF AGC Point A and adjust to obtain a response curve which shows no indication of overload. Turn the color intensity to maximum. Remove the horizontal output tube and connect a 1500-ohm, 100W resistor from 410V source to ground. Set Chroma Tilt control, R738, to position of maximum resistance. Use any non-interfering channel.

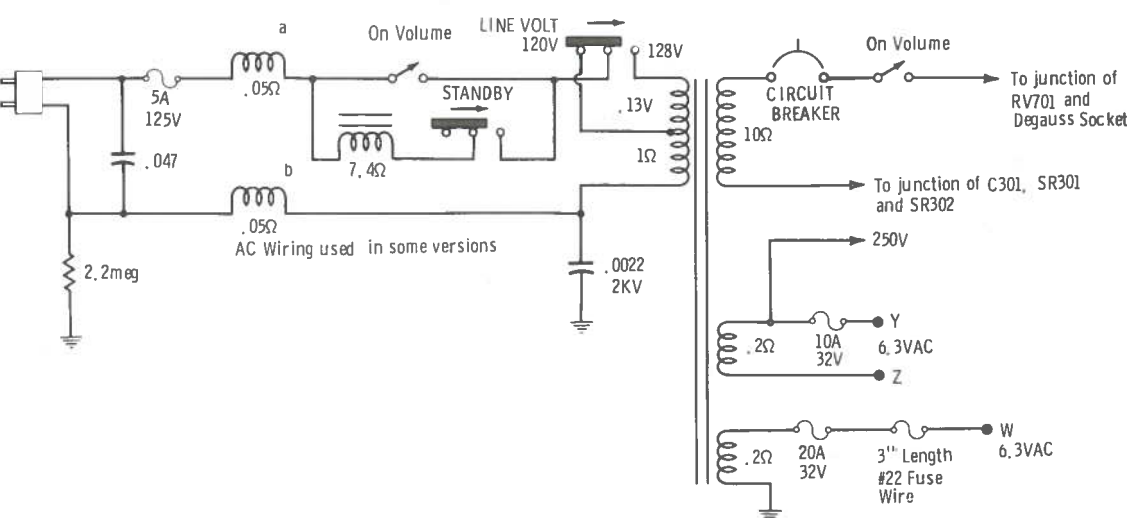
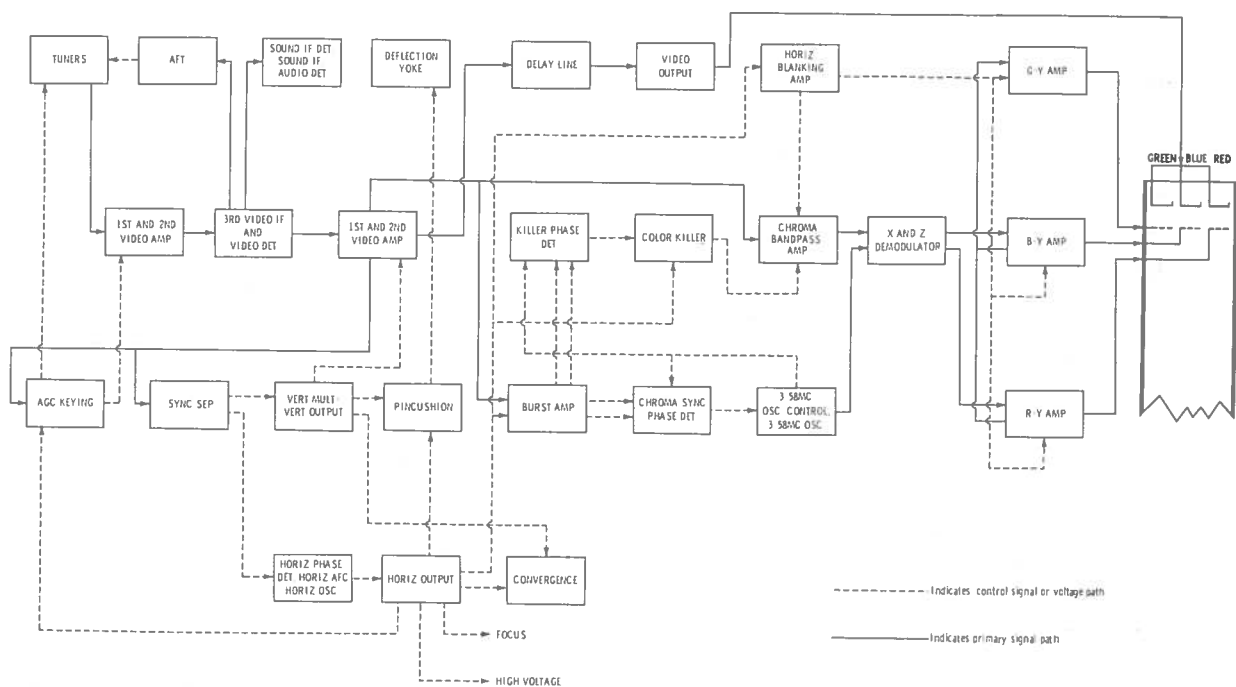
SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CONNECT SCOPE	REMARKS
High side thru .1mfd to grid of Bandpass Amp., V707, low side to ground.	3.58MC (3-5MC Sweep)	3.08MC 3.58MC 4.08MC 4.50MC	Vert. amp thru detector probe to Pin 7 of demodulators, Point J, low side to ground.	Adjust A12 and A13 for response curve similar to Fig. 2. Adjust A11 while watching 4.5MC marker. See Fig. 2.
High side of sweep generator to video sweep input of RF modulator. High side of signal gen. (set at 45.75MC) to picture carrier input. Output of RF modulator to mixer grid test point on tuner, low side to ground.	Sweep Generator to 3MC (6MC Sweep)	3.08MC (42.67MC) 3.58MC (42.17MC) 4.08MC (41.67MC) 4.50MC (41.25MC)	"	Adjust A14 for response curve similar to Fig. 3. If necessary retouch A12 to flatten top of response. Adjust Chroma Tilt control, R738, for final tilt and to help flatten and activate ATC. Check for Fig. 4 response.



## AUTOMATIC TINT CONTROL WIRING



BLOCK DIAGRAM

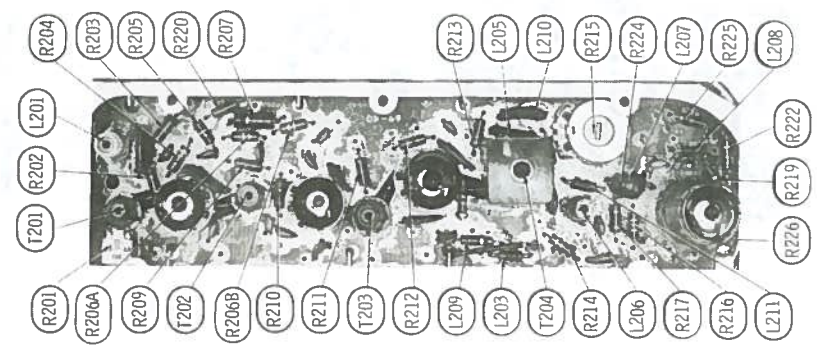


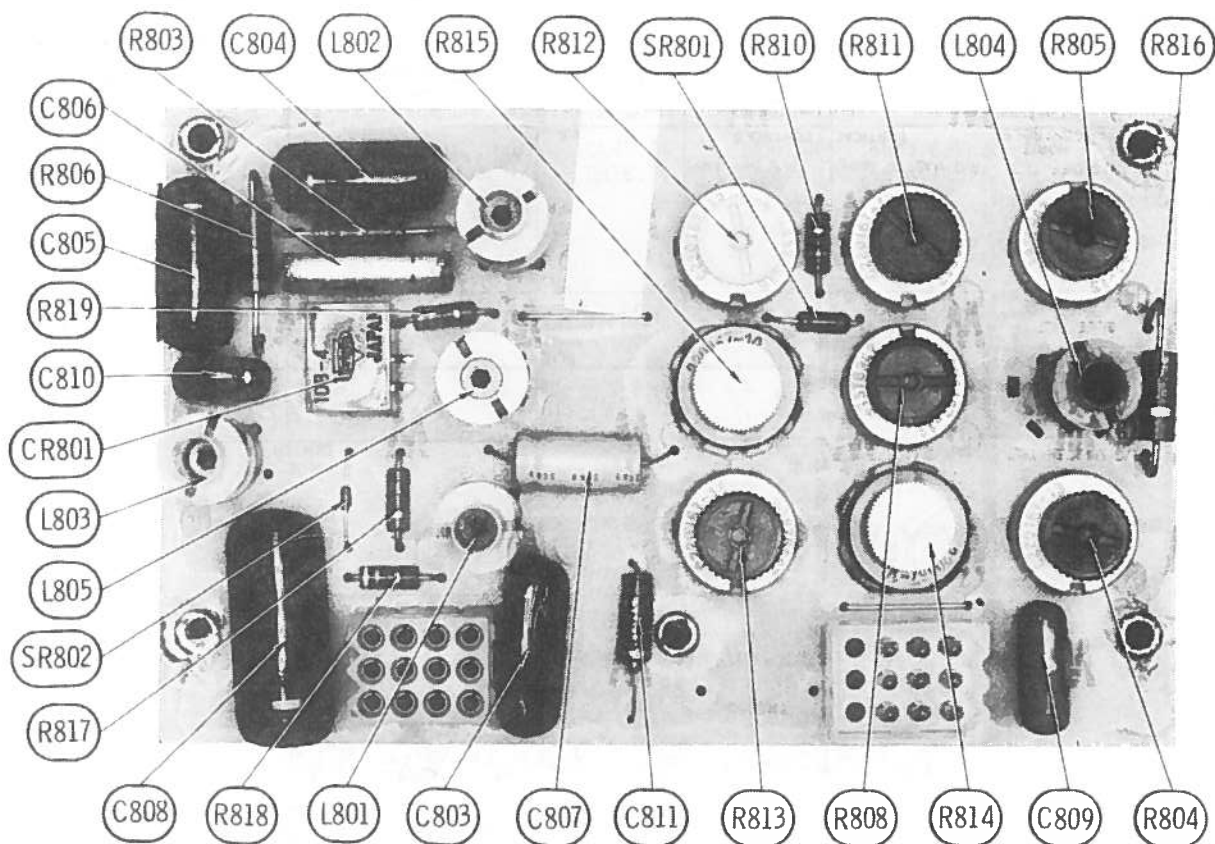
AC ALTERNATE WIRING

AFT ALIGNMENT

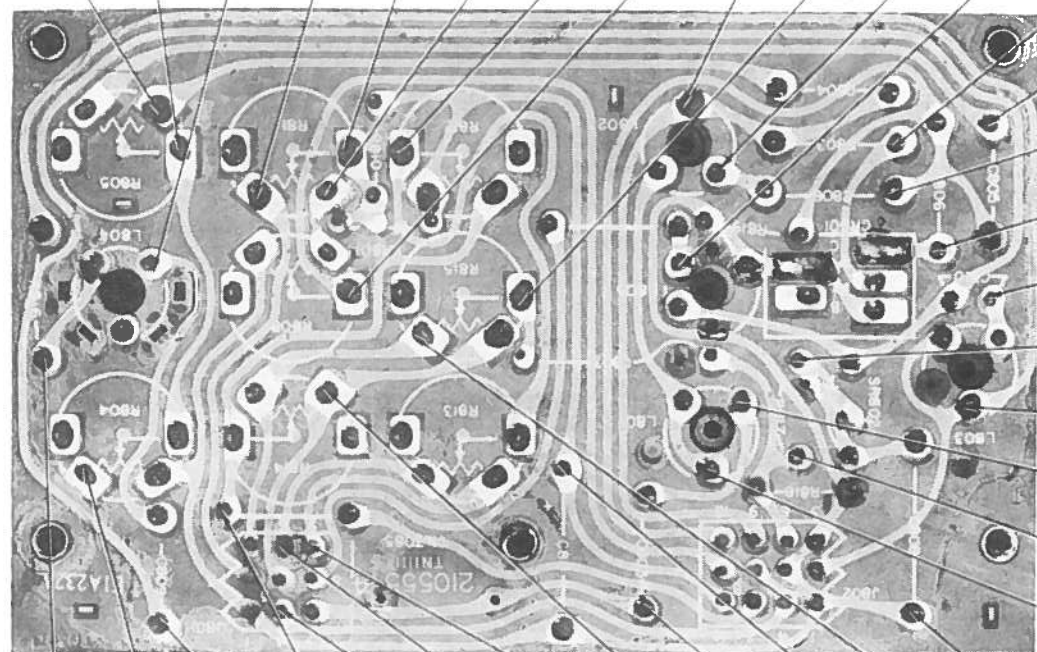
TV ALIGNMENT INSTRUCTIONS

AFT must be in On position.				
SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CONNECT SCOPE	REMARKS
High side to ungrounded tube shield over mixer-oscillator, low side to ground.	44.00MC (4-5MC Sweep)	45.75MC 47.25MC	Vert. input to Point M, low side to ground.	Detune A20 by backing slug out. Adjust maximum gain between 45.75MC and 47.25MC markers. Slug should be nearest board.
" 45.75MC	"	45.75MC	"	Adjust A19 for maximum response at 45.75MC
"	"	45.75MC	"	Adjust A20 for marker at crossover point - Fig.5.



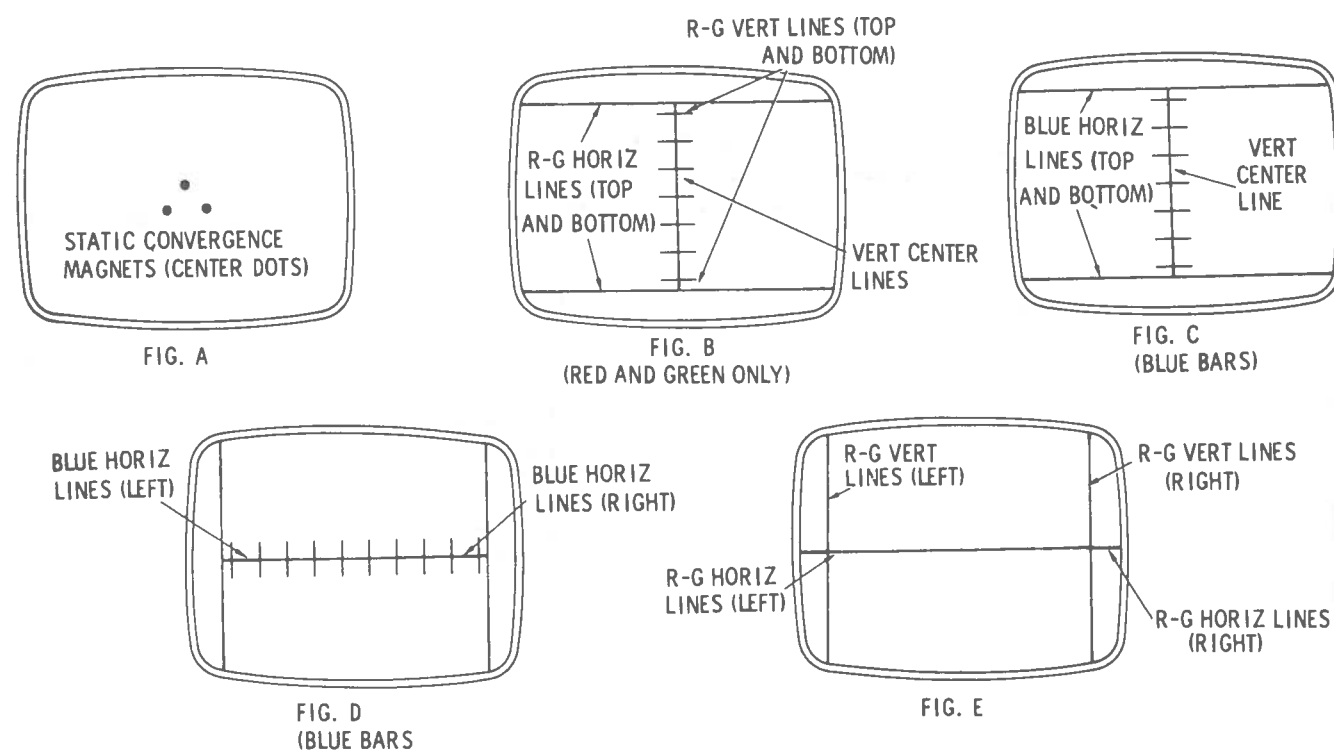


221 228 230 209 210 212 204 213 216 214 223 215



## CONVERGENCE ADJUSTMENTS

Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform Center Dot Convergence using convergence magnets. See Fig. A.
2.	R-G Vertical Lines, Top R814	Red and Green Vertical bars at top of screen.	Touch up both controls for best convergence from top to bottom along vertical center line (Fig. B).
3.	R-G Vertical Lines, Bottom R811	Red and Green Vertical bars at bottom of screen.	
4.	R-G Horizontal Lines, Top R813	Red and Green Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. B).
5.	R-G Horizontal Lines, Bottom R812	Red and Green Horizontal bars at bottom of screen.	
6.	Blue Horizontal Lines, Top R815	Blue Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. C).
7.	Blue Horizontal Lines, Bottom R808	Blue Horizontal bars at bottom of screen.	
8.	Center Horizontal Blue Lines L803 (Blue Center)	Blue Horizontal lines at center of screen.	Adjust for slight upward movement (1/8") approximately. It may be necessary to go through the entire range of the coil to find the correct setting.
9.			Perform Center Dot Static Convergence (Fig. A).
10.	Blue Horizontal Lines, Right L805	Blue Horizontal bars at right side of screen.	Touch up both controls for best convergence along horizontal center line (Fig. D).
11.	Blue Horizontal Lines, Left L804	Blue Horizontal bars at left side of screen.	
12.	R-G Vertical Lines, Right L801	Red and Green Vertical bars at right side of screen.	(Fig. E)
13.	R-G Horizontal Lines, Right L802	Red and Green Horizontal bars at right side of screen.	Use control to converge blue bar with red and green bars on right side of screen (Fig. E).
14.	R-G Vertical Lines, Left R804	Red and Green Vertical bars at left side of screen.	(Fig. E)
15.	R-G Horizontal Lines, Left R805	Red and Green Horizontal bars at left side of screen.	Use control to converge blue bar with red and green bars at left side of screen (Fig. E).





## MISCELLANEOUS ADJUSTMENTS

NOTE: Automatic Tint control and Chromatone switches in Off position for these adjustments.

### HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect:

A 0-500ma meter in series with the cathode lead of horizontal output tube.  
A .47mfd capacitor across meter.  
A 0-1500 microammeter in series with the cathode lead of the HV regulator tube.  
A VTVM through a high-voltage probe to picture-tube anode connector.  
Point  $\diamond$  to ground.  
A short across horizontal oscillator coil (pin 8 to ground).

Tune in a TV station and set all controls for normal operation. Adjust the horizontal hold control until the picture floats with the blanking bars vertical. Remove the short from the horizontal oscillator cathode and adjust B1 until the picture floats horizontally. Remove the short from Point  $\diamond$ . Adjust the horizontal linearity coil for MINIMUM current in the horizontal output tube (current should not exceed 210ma).

Adjust the high voltage control for 24KV on picture tube anode with normal brightness. Check the high voltage regulator current. The current should not be less than 600 microamperes. If current is less than 600 microamperes, turn the horizontal linearity slug one-half turn clockwise. Check to see that horizontal output current does not exceed 210ma. If foldover occurs in picture, adjust horizontal linearity clockwise to eliminate foldover while checking to make sure horizontal output current does not exceed 210ma.

Adjust focus, height and vertical linearity controls.

### AGC ADJUSTMENT

Set contrast control to maximum clockwise position. Tune in a strong TV station and advance the AGC control until instability appears in the picture (pulling, jitter, overload, etc.). Reduce the control to the point just below the instability and for a small amount of video drive reserve as seen in the contrast level. Set contrast control for normal picture and check all available stations for proper AGC action.

### COLOR AFC ALIGNMENT

Suggested Alignment Tools: A15, A16, and A17  
GENERAL CEMENT 8606, 8606L, 8869  
WALSCO ..... 2543, 2544, 2588

Set the killer threshold control fully counterclockwise. Set the tint control to the center of its range. Connect a color-bar generator to the antenna terminals. Adjust receiver for normal color reception. Short Pin 2 of V706 to ground.

Connect DC probe of VTVM through 470K to Point  $\diamond$ , low side to ground. Adjust A15 for maximum deflection on VTVM. If no reading is obtained, oscillator is not operating. Adjust A16 to start

oscillator, then adjust A15 for maximum. Remove the short from Point  $\diamond$ . Adjust A16 for maximum deflection on VTVM. Make sure the oscillator is running and locked in.

Short Point  $\diamond$  to ground. Remove VTVM. Adjust A17 until color bars stand still or drift slowly. Remove the short from Point  $\diamond$  and check to see that the color bars will sync with a low-level input signal. If necessary, retouch A17 for best hold.

Connect the vertical input of a scope to Point  $\diamond$ . Check for proper waveform with the color-bar generator being used. See waveform on schematic for pattern obtained from a standard keyed rainbow generator. Check the range of the tint control. The bars should move 30° either side of proper signal. If necessary, retouch A17 for proper range of control.

Check for proper waveform at G-Y and B-Y outputs: Points  $\diamond$  and  $\diamond$ . Tune in a weak signal or reduce the signal at the antenna terminals to obtain a snowy picture. Adjust the killer threshold control to eliminate the color in the snow. Check with a color signal to make sure the killer is not eliminating picture coloring.

### PURITY ADJUSTMENTS

Perform Step 1 of "Convergence Adjustments". If the picture tube appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets.

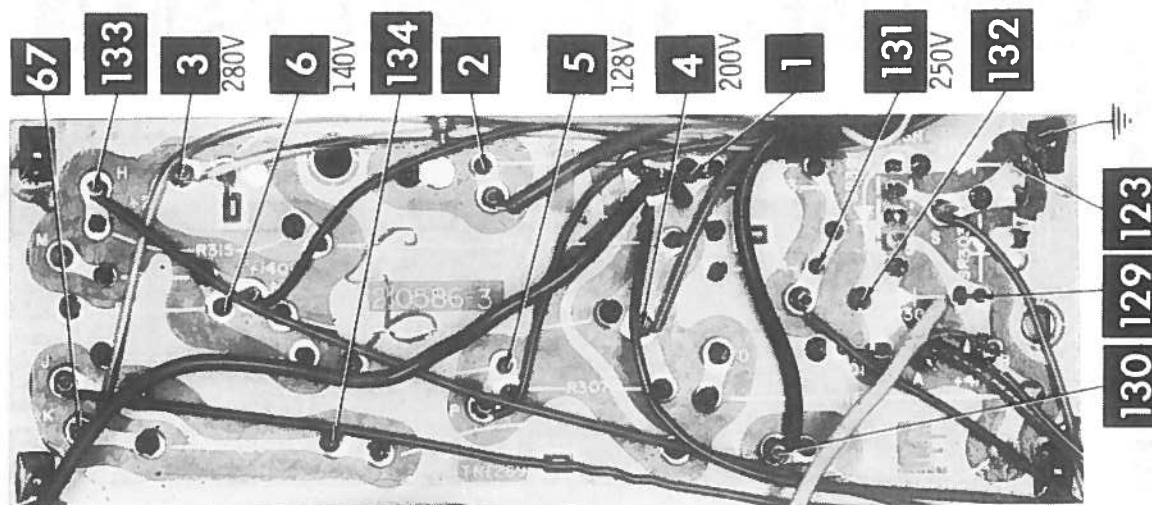
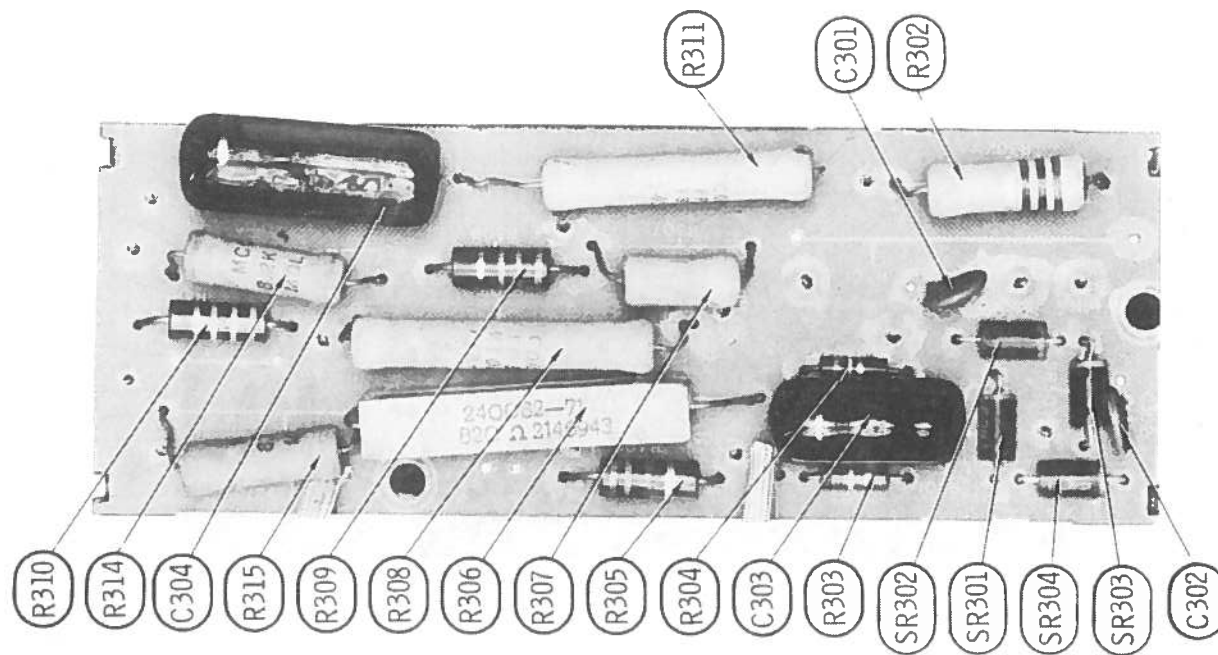
Connect the blue and green grids of the picture tube through individual 100K resistors to ground. Loosen the deflection yoke and move it rearward until it is against the convergence-yoke assembly.

Adjust the tabs on the purity magnet and rotate the assembly until a red spot appears at the center of the picture tube. Slide the deflection yoke forward to obtain a uniform red over entire picture-tube face. A low-power microscope is useful to observe the beam landings.

### GRAY SCALE ADJUSTMENTS

Turn red, blue and green drive controls at/or near maximum clockwise position. Tune in a black and white picture or a color picture with the color control set to MINIMUM. Turn brightness and CRT bias controls fully counterclockwise. Slide service switch to Service position. Advance the screen controls one at a time until each produces a barely visible line.

If one or more controls fail to produce a line, leave that screen control at maximum and advance the CRT bias control until a barely visible line appears. Then readjust the other two screen controls for a barely visible line. Slide the Service switch to Normal position and the brightness control for normal brightness. Reduce or vary the red, blue and green drive controls to eliminate coloring in light and dark areas of the picture. (Drive controls should be left at or near maximum clockwise position.)



**MISCELLANEOUS ADJUSTMENTS (CONTINUED)**

### AUTOMATIC TINT CONTROL ADJUSTMENT

Suggested Alignment Tools:  
A21 .. GENERAL CEMENT 8606, 8606L, 8869  
WALSCO ..... 2543, 2544, 2588

Connect a color-bar generator to the antenna terminals (85% modulated). Adjust receiver for normal color reception. Slide ATC switch to Off position. Connect a VTVM through a detector probe in series with a 10K resistor to Point N Adjust A21 for maximum voltage. Tune in a color program activating ATC and adjust for proper flesh tones.

Note: Picture Preference control has almost equal tint control action (as compared to tint control) with ATC switch in full On position and has limited control when in Partial position.

### REMOTE CONTROL SENSITIVITY ADJUSTMENT

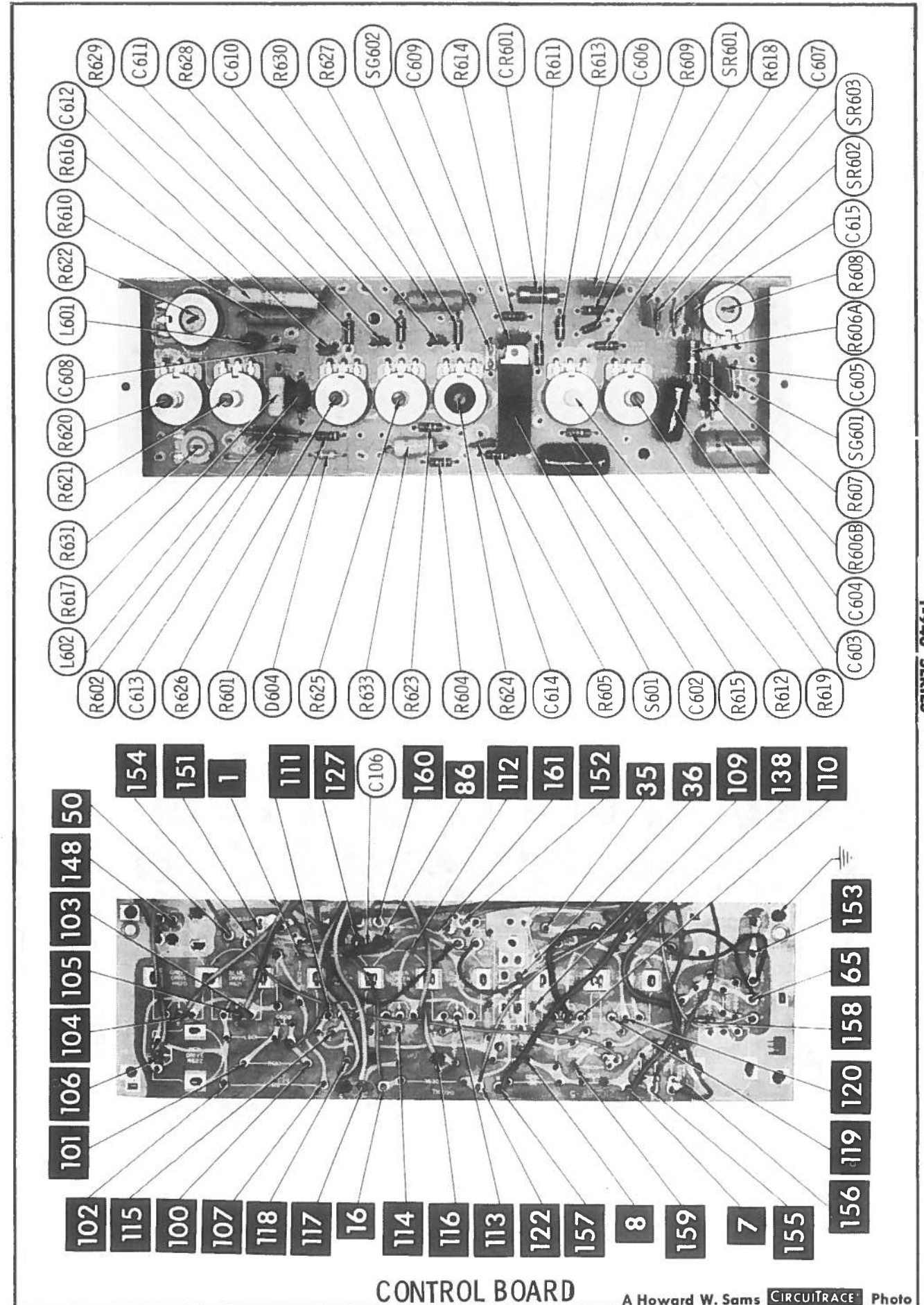
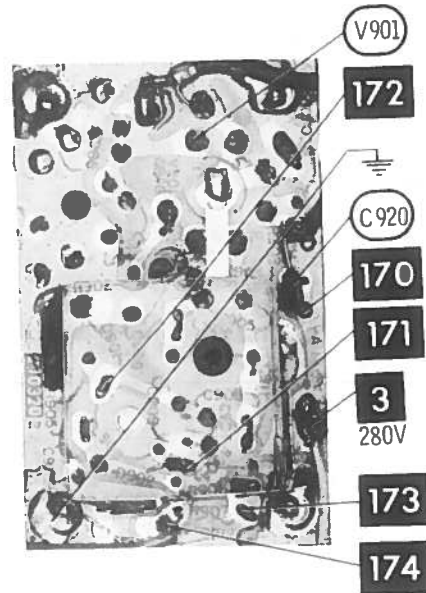
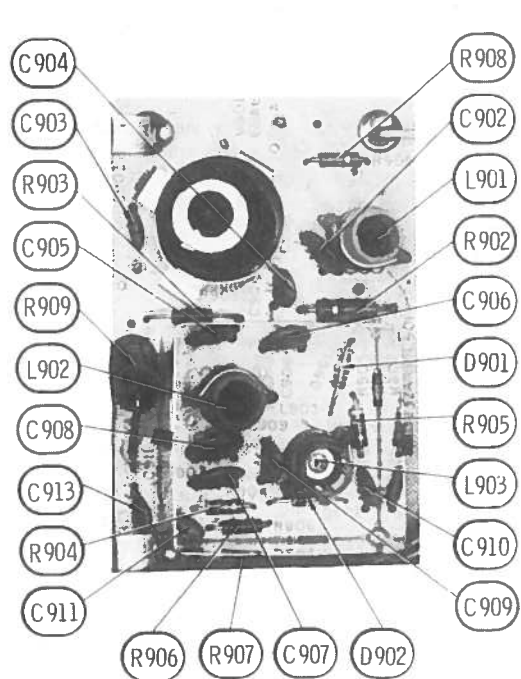
This adjustment properly set keeps the remote search unit from stopping on unwanted image signals by reducing IF gain while searching. Turn control to mid-mechanical position. Check UHF and VHF for proper lockin of desired known weakest channel. Turn clockwise for increasing sensitivity and counterclockwise for decreasing sensitivity.

Turn brightness and contrast controls to maximum (fully clockwise). Adjust the CRT bias control until the picture blooms (distorts), then reduce the control to the point just below where the picture returns to normal. Adjust brightness and contrast as desired.

## DYNAMIC PINCUSHION ADJUSTMENTS

The side pincushion is a fixed correction and no adjustments are provided on this chassis. Top and bottom pincushion is factory adjusted and re-adjustment is seldom needed. If necessary, top and bottom pincushion may be corrected by adjusting for straight horizontal lines at the top and bottom of the screen.

Connect a crosshatch generator to the antenna terminals and adjust the set for a normal cross-hatch pattern. Adjust the Pincushion Phase coil (L111) for straight horizontal lines at top and bottom of the screen. Repeat above steps if necessary.





# TROUBLESHOOTING CHECK CHART

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

## SWEEP

No raster, has sound SR107, V101 thru V106,V502  
No vert. deflection V501  
Poor vert. lin. or foldover V501  
Poor horiz. lin. or foldover V103, V104  
Narrow picture SR101 thru SR104,V103,V104,V502  
Vert. off freq. V501  
Horiz. off freq. SR501, V502

## RASTER

Yellow - no blue V106, V712  
Cyan - no red V106, V712  
Magenta - no green V106, V712

## PICTURE or SOUND

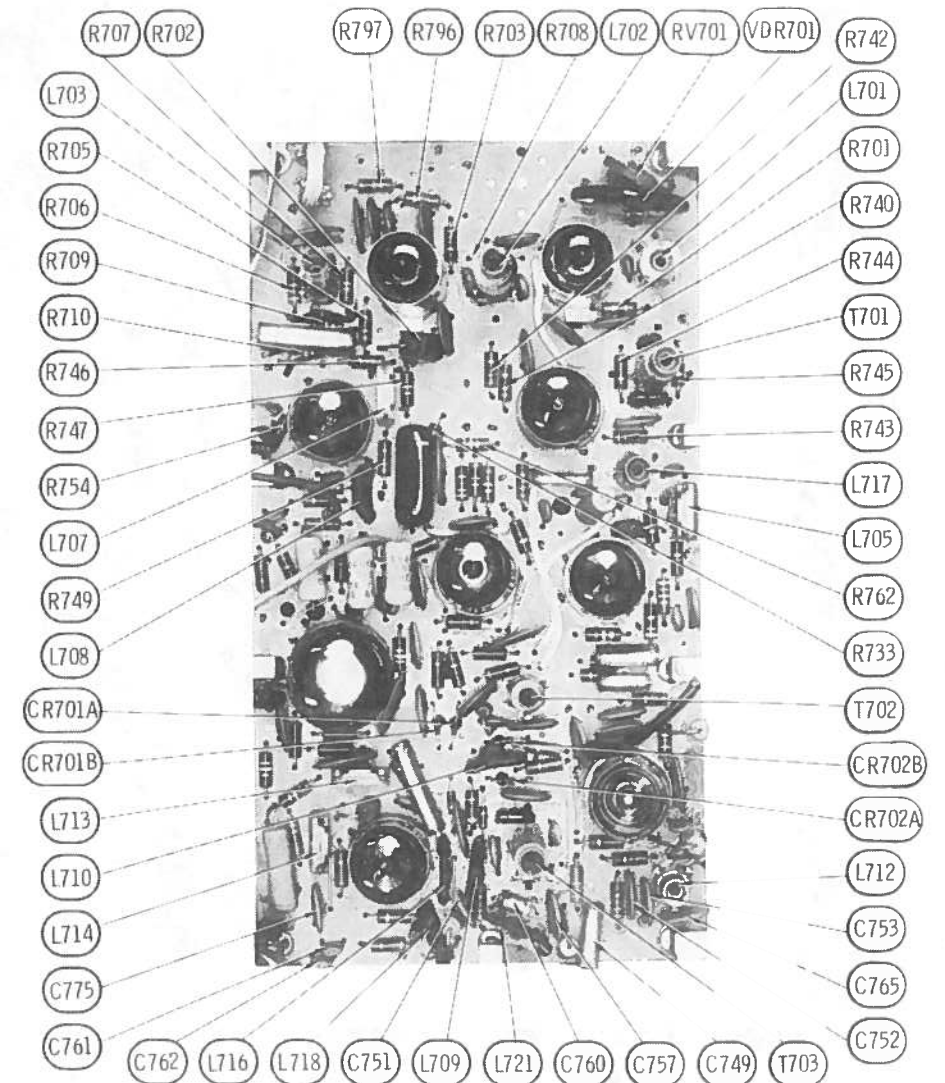
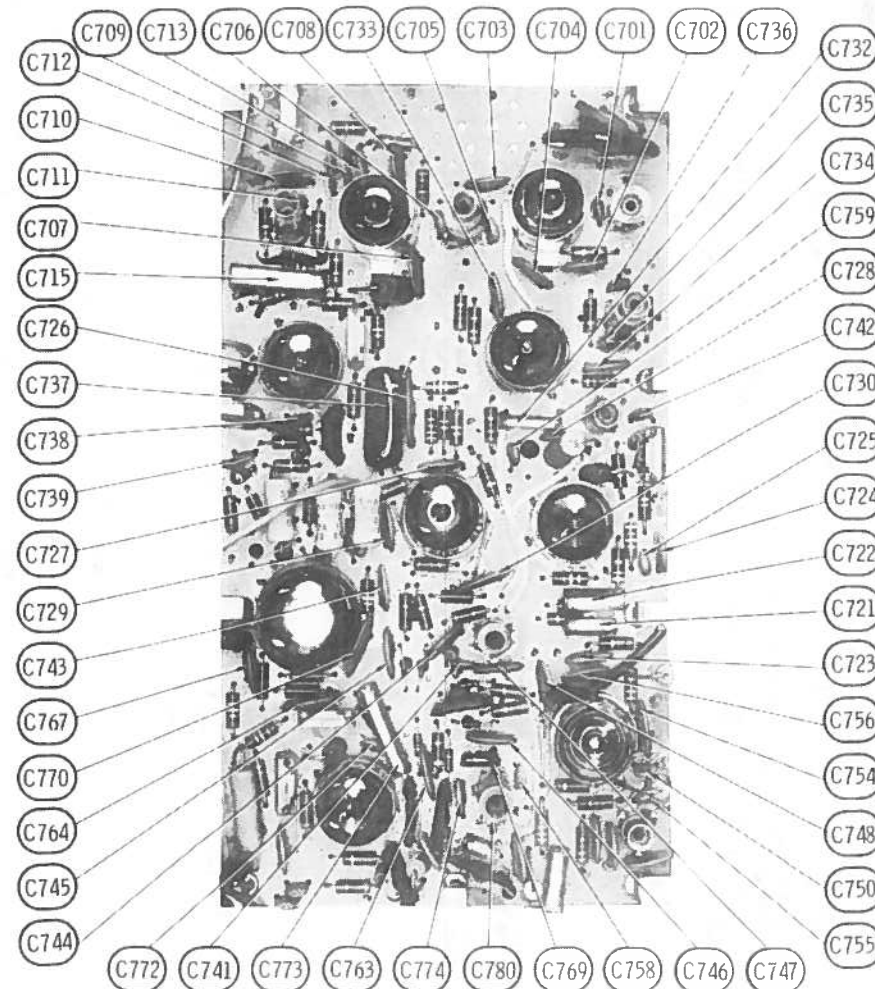
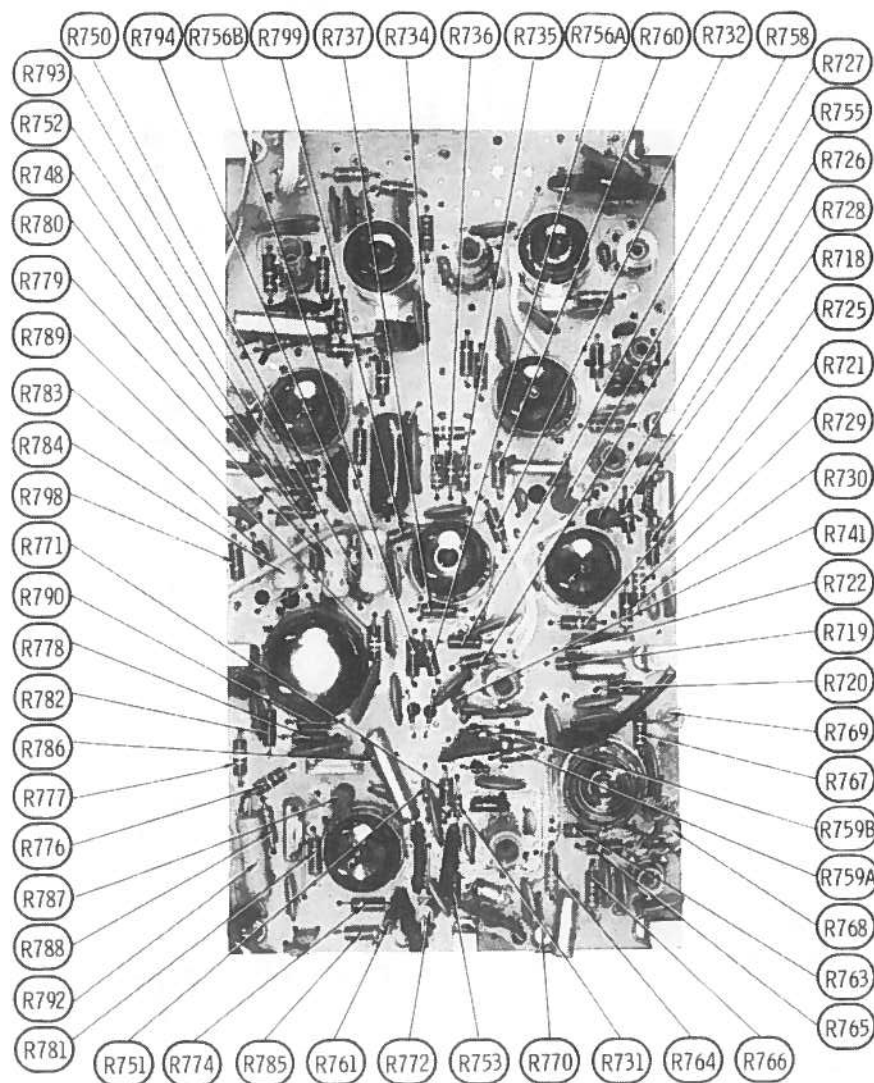
No pic, no sound, no raster F1, F2 and  
No pic, no sound, has raster V201,V202; V202 (Tuner).  
No pic, no sound, has snow V201, V202 (Tuner)  
No pic, has sound, no raster V106, V705  
No pic, has sound, has raster D202, V204, V705  
Has pic, no sound D701, V701, V702, V704  
Overloaded picture V703  
Low or excessive brightness V705, V707  
Poor focus CR101

## COLOR (B/W operating normally)

No color CR701,CR702,V706,V707  
Weak color CR701,CR702,V706,V707  
No color sync CR701, V706,V708  
No blue V710, V712  
No red V710, V712  
Incorrect hue (tint) CR701,CR702,  
V706, V710.

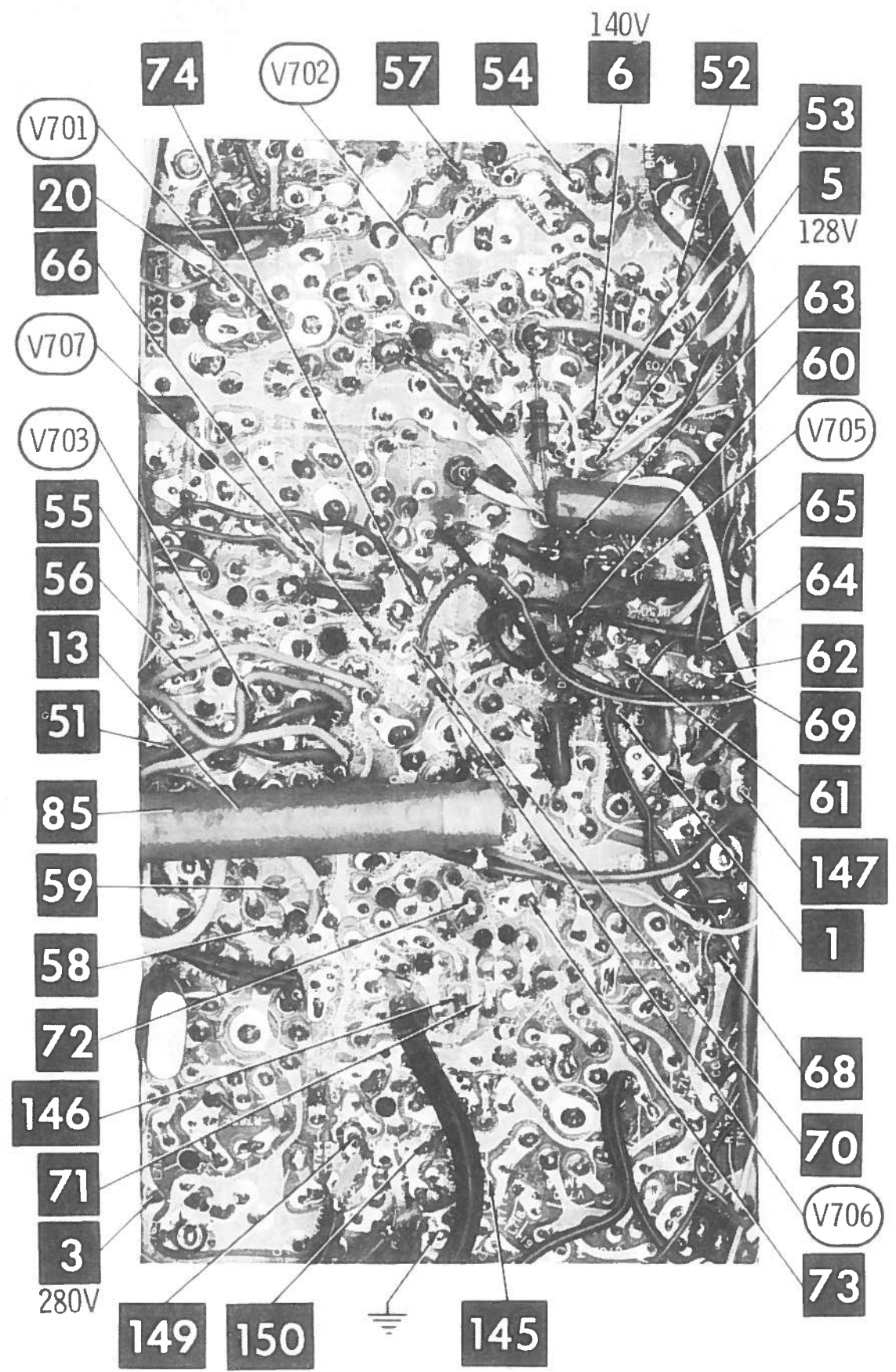
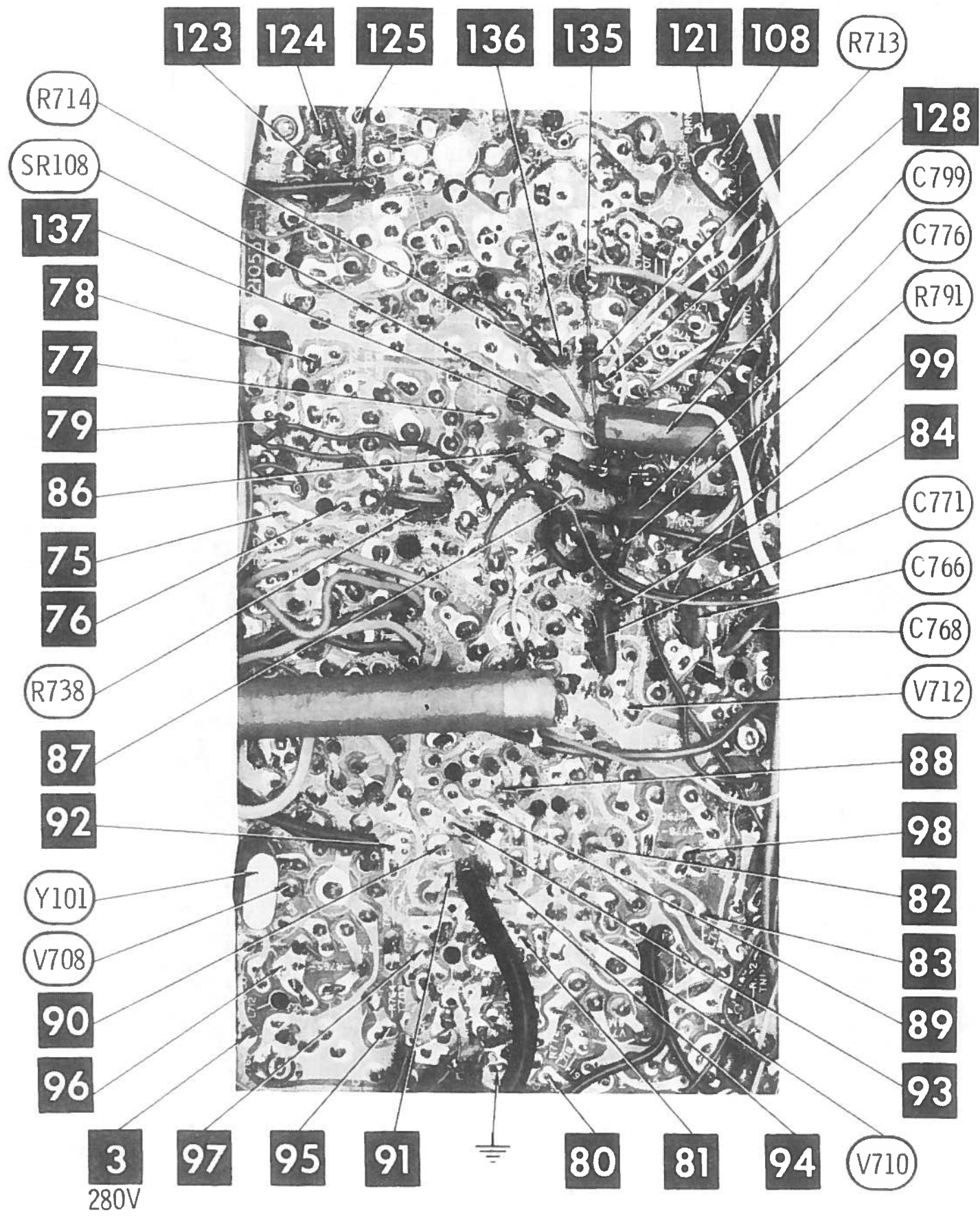
## SYNC

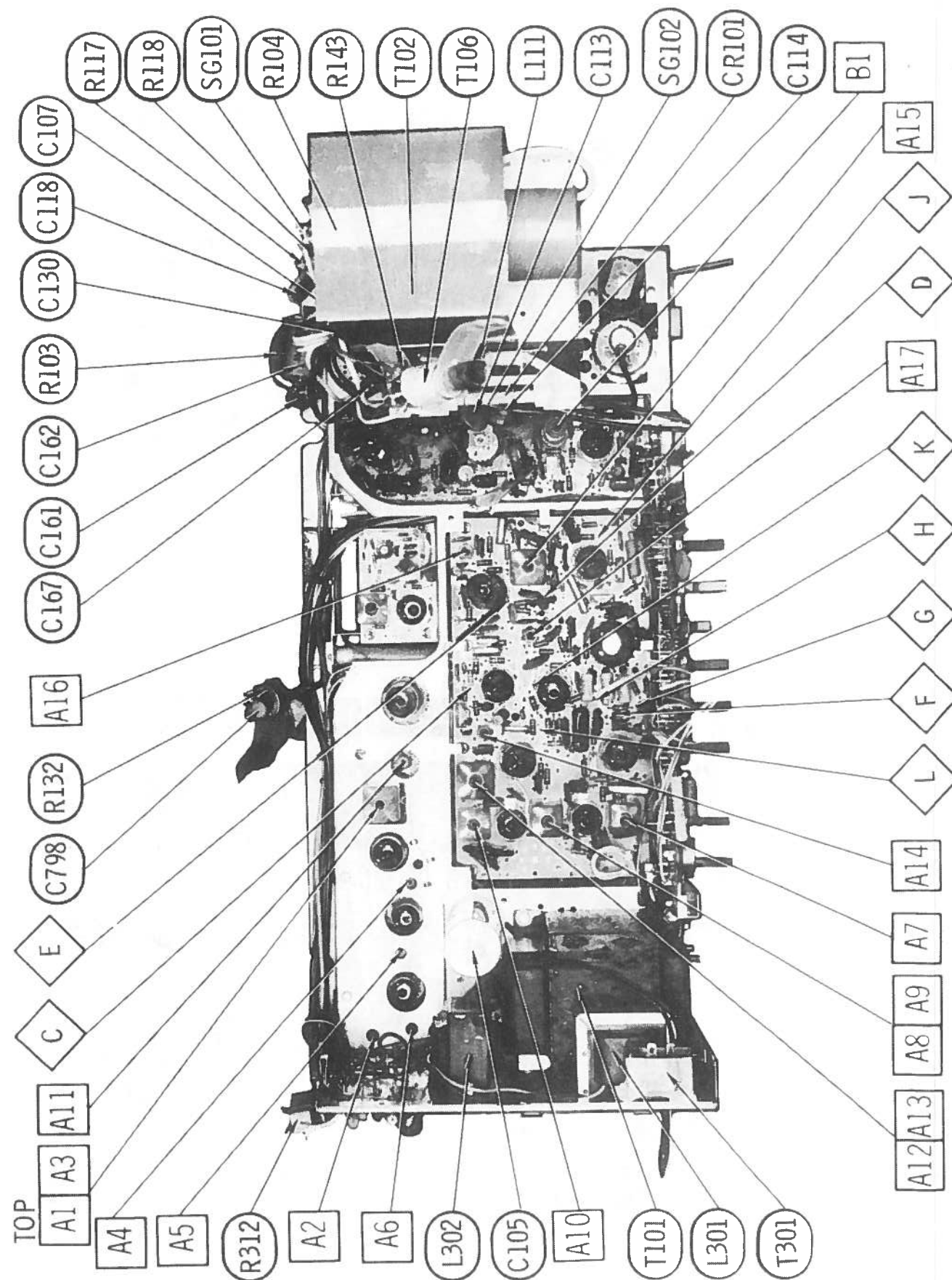
No vert. sync V501  
No horiz. sync SR501, V502  
No vert. or horiz. sync V703



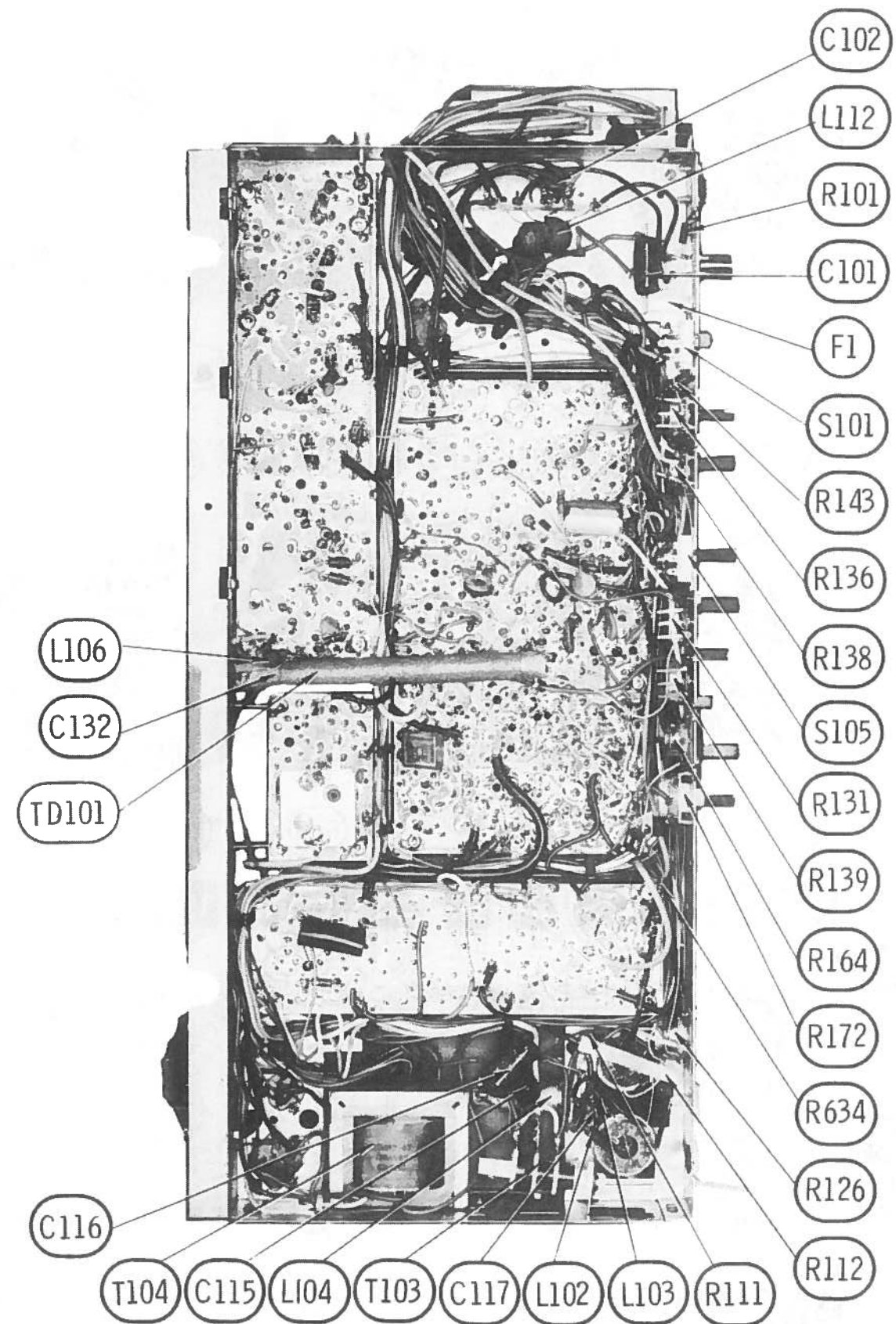
CHROMA BOARD





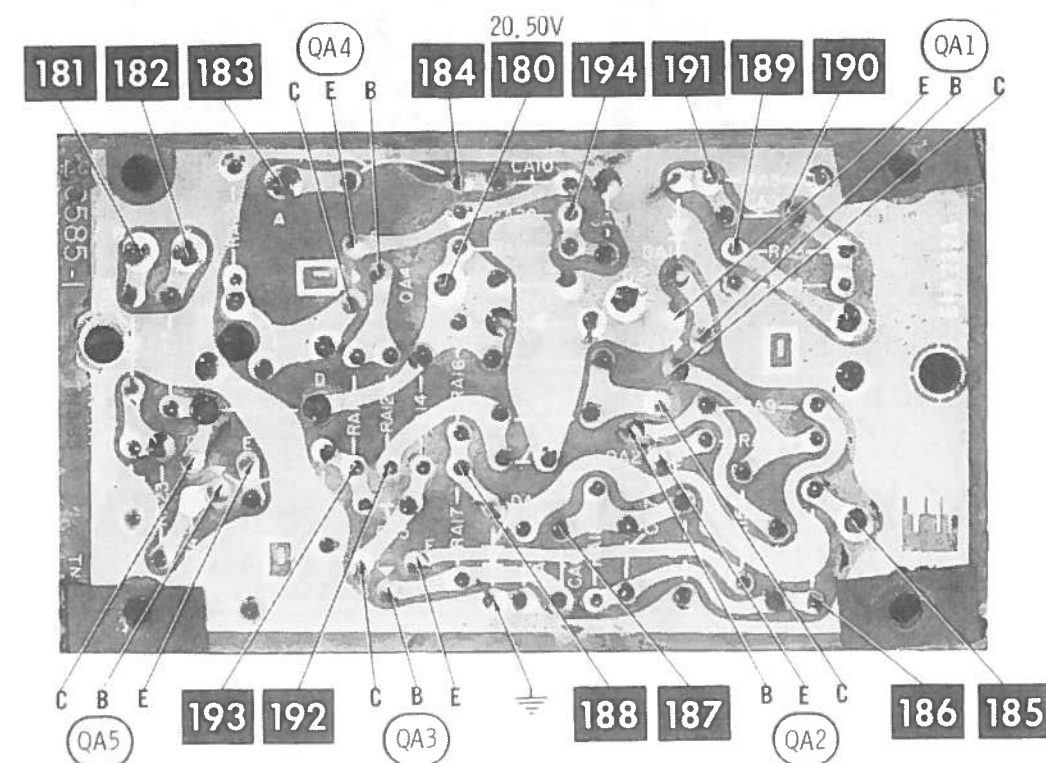
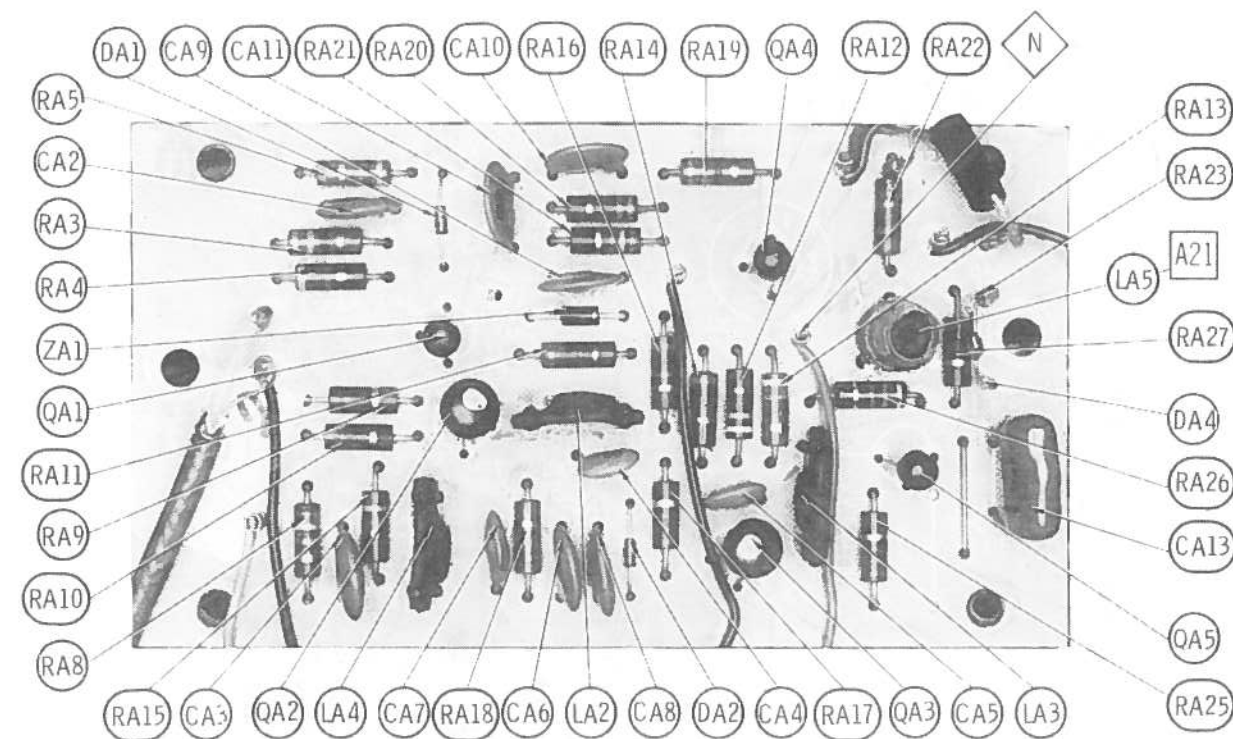
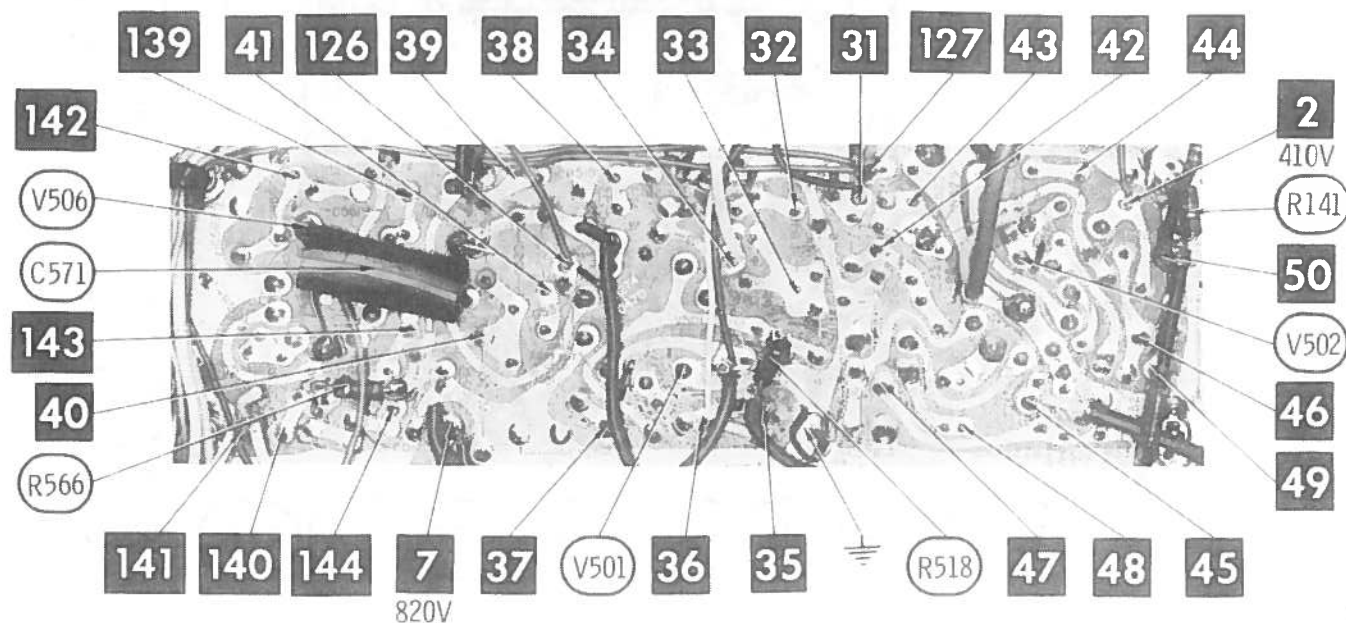
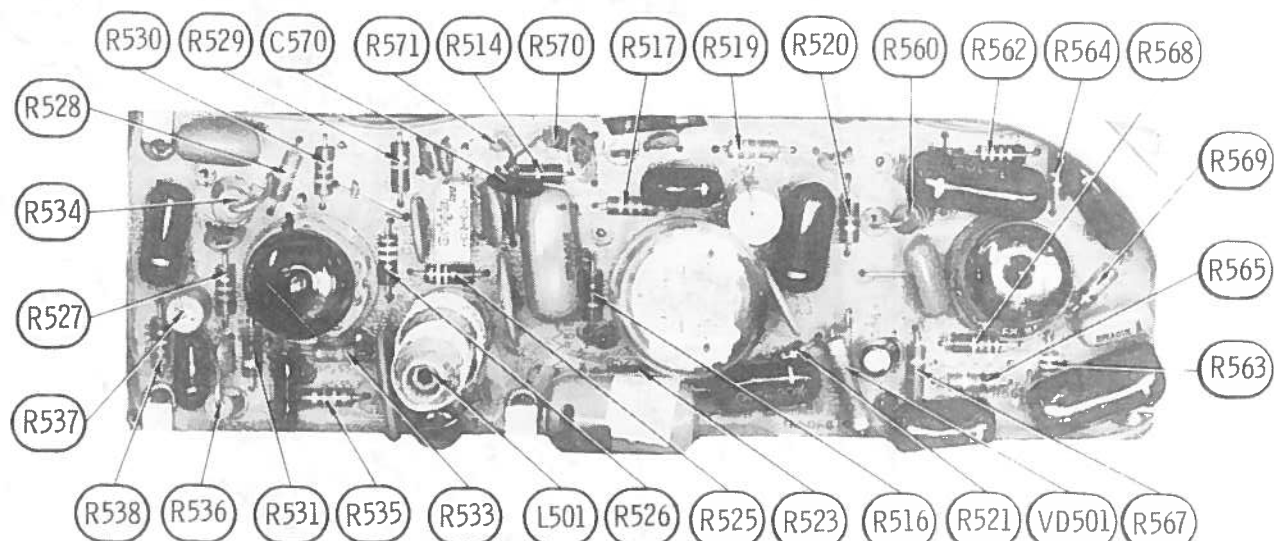
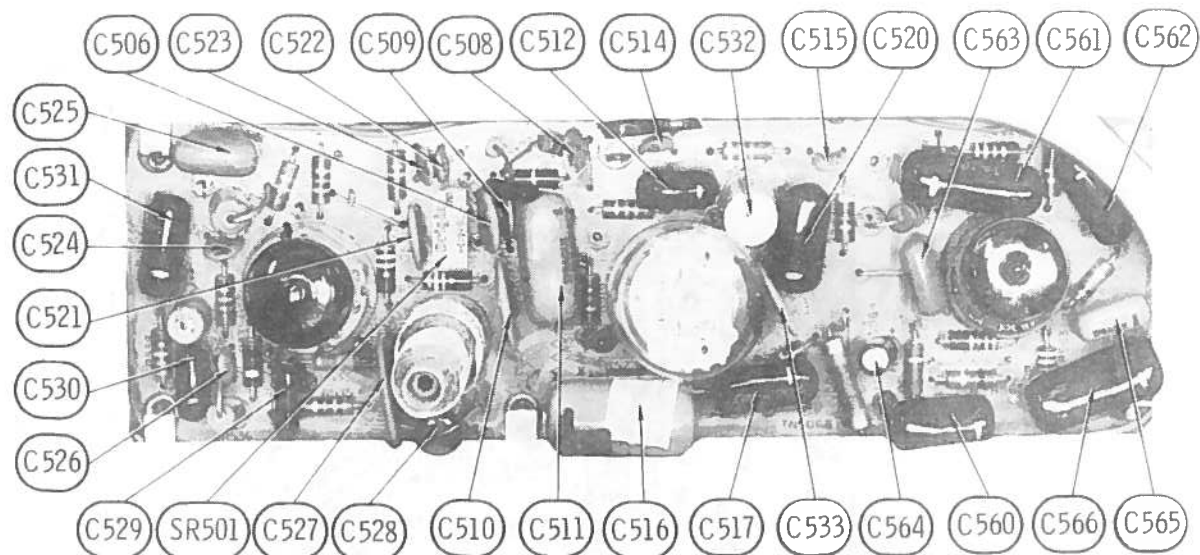


CHASSIS-TOP VIEW

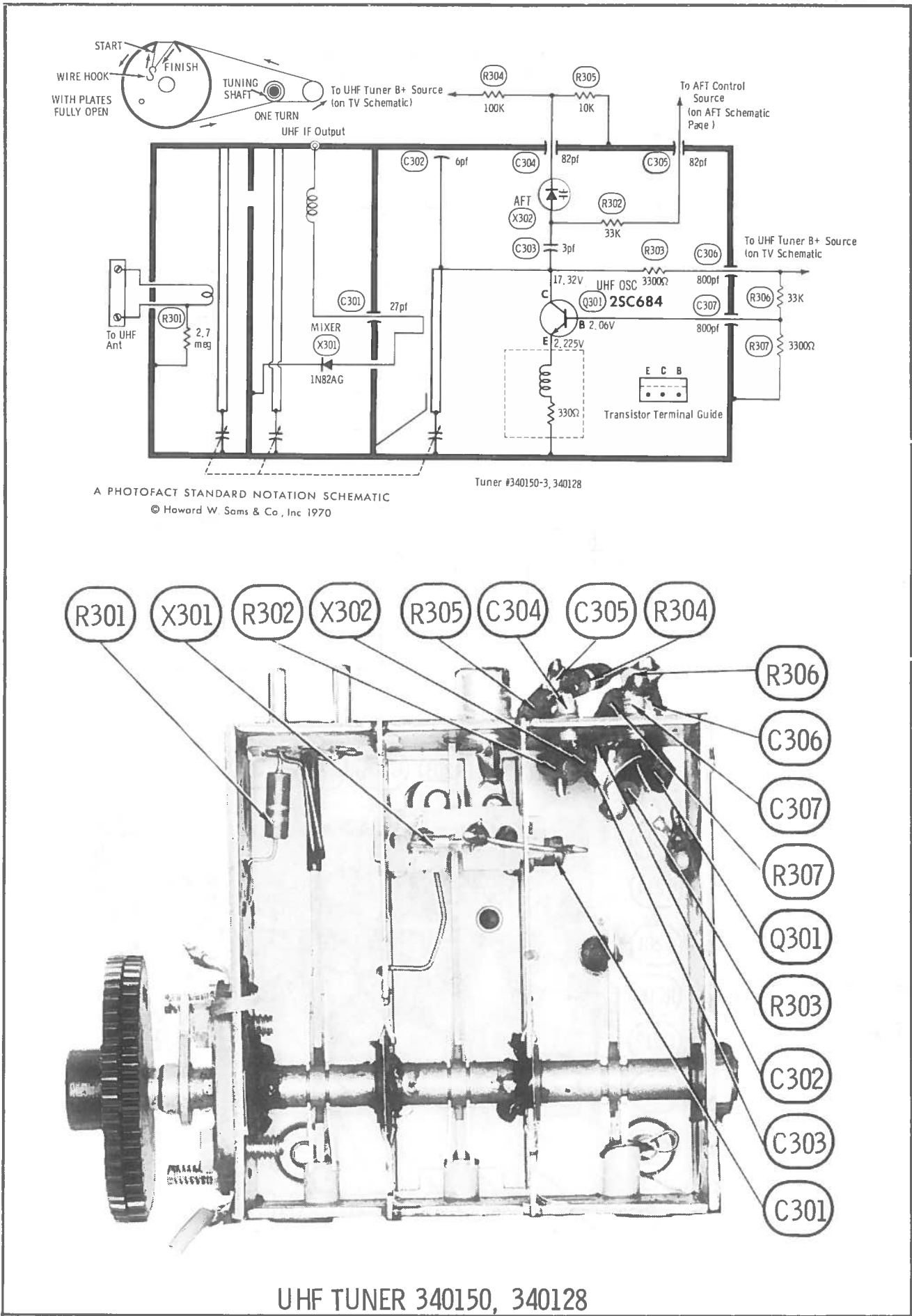


CHASSIS-BOTTOM VIEW









VHF TUNER PARTS LIST AND DESCRIPTION  
(When ordering parts, state Model, Part Number, and Description.)

TUBES					
AMPEREX			GENERAL ELECTRIC		
			RCA		
			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp	6HQ5	V202	Mixer - Oscillator	6HB7

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X201	170966-1					

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			DD-270		CCD-270	GP427	10TS-Q27
B	27			DD-270		CCD-270	GP427	10TS-Q27
C	27			DD-270		CCD-270	GP427	10TS-Q27
D	27			DD-270		CCD-270	GP427	10TS-Q27
C202	15			DD-150	NP015	CCD-150	GP415	10TS-Q15
C203	15pf			DD-150	NP015	CCD-150	GP415	10TS-Q15
C204	.5-4.5							
C205	30							
C206	.001							
C207	.5-4.5							
C208	1.2							10TCC-V12
C209	18							
C210	1.2pf							
C211	.5-4.5							
C212	.001							
C213	6.8 NPO		NP0-DI 6.8	DTZ-6R8	NP06P8	CCT0-6R8	CN0568	10TCC-V68
C214	.001							
C215	8.2 N470							
C216	.001							
C217	.001							
C218	.001							
C219	.001							
C220	.001							
C221	.001							
C222	3		NP0-DI 3.0	DTZ-3R3	GP1000	CCT0-3R3	CN0533	10TCC-V30
C223	.001		GPD X5F102K	DD-102		CCD-102	GP210	10TS-D10

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

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M201	Fine Tuning Shaft	170965-1	
M202	Fine Tuning Cone And Drive Gear	170811-3	
M203	Preset Slide Assembly	170812-3	

UHF TUNER PARTS LIST AND DESCRIPTION  
(When ordering parts, state Model, Part Number, and Description.)

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q301	2SC684 (S2020)	UHF Oscillator	(170906-1) /	GE-11	TR-24	HEP56	SK3019	ECG 107

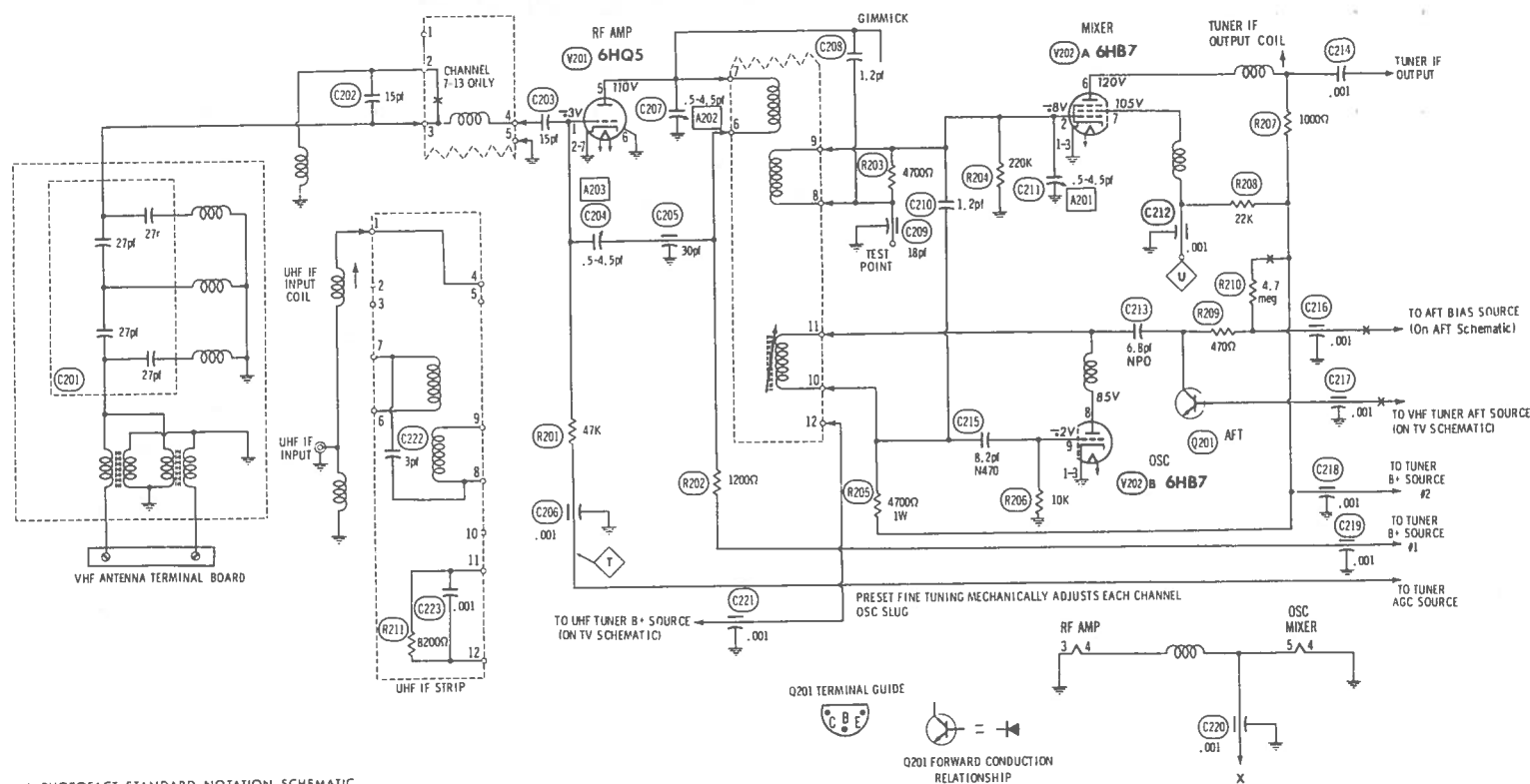
/ Alternate used in some versions.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X301	1N82AG	1N82A	1N82AG	1N82A	ECG 112	Varactor
X302	170967-1					

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	27pf							
C302	6pf							
C303	3pf							
C304	82pf							
C305	82pf							
C306	800pf							
C307	800pf							



### VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: GENERAL CEMENT WALSCO  
A201, A202, A203, UHF Input ... 8868, 8987, 9089 ..... 2531X, 2541, 2587  
Coil

#### OSCILLATOR ADJUSTMENTS

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

#### RF AND MIXER ADJUSTMENTS

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

CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point $\nabla$ , low side to ground.	Adjust A201 and A202 for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
10	Across video detector load resistor.	Increase bias to -15 volts and adjust for MINIMUM amplitude or response. (A203)
12 thru 2	Vertical input to Point $\nabla$ , low side to ground.	Decrease bias. Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.

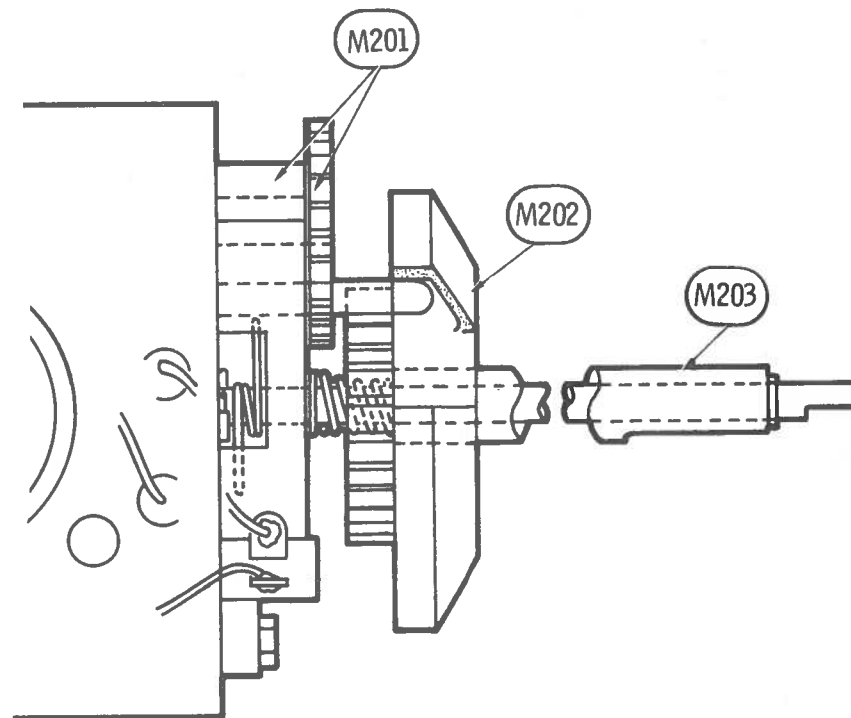
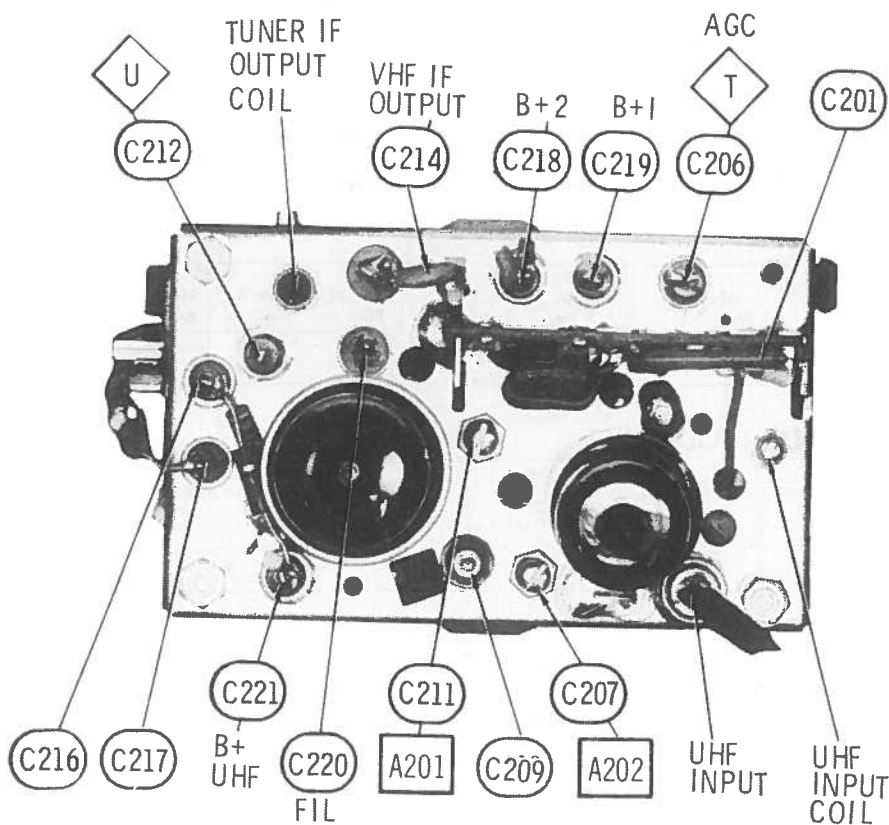
#### GENERATOR FREQUENCY

Numbers in ( ) indicate channel number

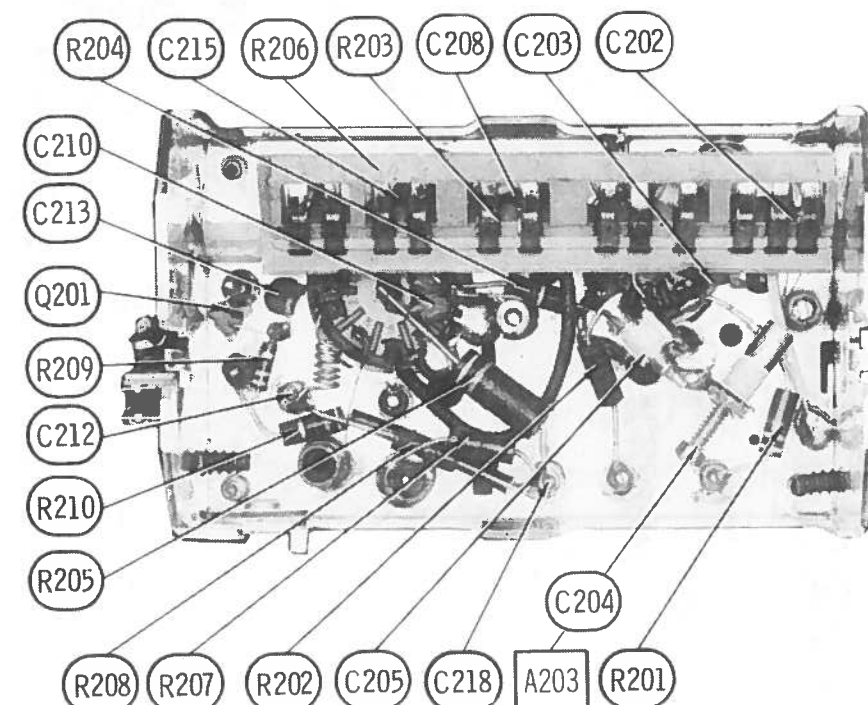
SWEEP	MARKER	SWEEP	MARKER	SWEEP	MARKER
(2) 57MC	55.25MC	(6) 85MC	83.25MC	(10) 195MC	193.25MC
	59.75MC		87.75MC		197.75MC
(3) 63MC	61.25MC	(7) 177MC	175.25MC	(11) 201MC	199.25MC
	65.75MC		179.75MC		203.75MC
(4) 69MC	67.25MC	(8) 183MC	181.25MC	(12) 207MC	205.25MC
	71.75MC		185.75MC		209.75MC
(5) 79MC	77.25MC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

FIG. 201

SOUND VIDEO



VHF TUNER 340156



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

### SWEEP COMPONENT CONNECTION DATA

## FUSE DEVICES

(1) Used in late versions.

ITEM No.	PART NAME	PART No.	NOTES
	VHF Tuner	340156-1	
	VHF Tuner	340156-2	
	VHF Tuner	340156-3	
	VHF Tuner	340137-3	
	UHF Tuner	340150-3	
	UHF Tuner	340128-3	
	UHF Tuner	340128-4	
	UHF Tuner	340129-2	
M5	Degaussing Coil	361266-3	(2 Used)
M402	Motor	500225-3	Color (Used in Chassis T940-01-AA; 02-AA/AB/AC/AD; 07-AA/AB/AC/AD; 09-AA/AB/AC/AD; 31-AD)
	Motor	500225-10	Color (Used in Chassis T940-04-AA/AB/AD; 32-AD; 33-AD; 34-AD; 35-AD)
	Motor	500225-14	Color (Used in Chassis T940-14-AA/AB/AC; 15-AA/AB/AC; 17-AA/AB; 21-AD; 36-AD; 41-AD; 42-AD)
M407	Motor	500222-8	VHF (Used in Chassis T940-01-AA; 02-AA/AB/AC/AD; 04-AA/AB/AD; 07-AA/AB/AC/AD; 09-AA/AB/AD; 15-AA/AB/AC; 21-AD; 31-AD; 32-AD; 33-AD; 34-AD; 35-AD; 42-AD)
	Motor	500222-7	VHF (Used in Chassis T940-14-AA/AB/AC/AD; 17-AA/AB; 36-AD; 41-AD)
M408	Motor	500221-2	UHF (Used in some versions of Chassis T940-21-AD)
	Motor	500221-3	UHF (Used in Chassis T940-14-AA/AB/AC/AD; 17-AA/AB; 36-AD; 41-AD)
	Motor	500221-4	UHF (Used in Chassis T940-20-AA/AB/AC/AD; 04-AA/AB/AD; 07-AA/AB/AC/AD; 09-AA/AB/AC/AD; 11-AB; 15-AA/AB/AC/AD; 21-AD; 31-AD; 32-AD; 33-AD; 34-AD; 42-AD)
	Motor	500227-9	Volume Drive (Used in Chassis T940-02-AA/AB/AC/AD; 07-AA/AB/AC/AD; 09-AA/AB/AC/AD; 31-AD)
	Motor	500222-11	Volume Drive (Used in Chassis T940-04-AA/AB/AD; 32-AD; 33-AD; 34-AD; 35-AD)
	Motor	500222-13	Volume Drive (Used in Chassis T940-11-AB)
S101	Switch	160370-7	Fast-ON
		160370-3	Fast ON (Used in some versions)
S104	Switch	160370-7	Chromatone (On-Off)
S105	Switch	160370-12	Line Voltage
S402	Switch	160370-16	AFT Defeat (Gold) Slide
		160370-13	AFT Defeat (Silver) Slide
		160370-7	AFT Defeat (Black) Slide
S403	Switch	160370-14	Manual VHF Channel Selector (Silver)
	Switch	160370-15	Manual VHF Channel Selector (Gold)
S404	Switch	170960-1	AFT Defeat
S405	Switch	160393-1	Manual UHF Down (Microswitch)
S406	Switch	160393-1	UHF Automatic Reverse (Microswitch)
S407	Switch	170975-1	Hold Program (Leaf)
S408	Switch	170917-1	VHF Defeat and Lamp VHF & UHF (Tuner 340137)
	Switch	170696-2	VHF Defeat and Lamp VHF & UHF (Tuner 340156-2)
	Switch	170696-3	VHF Defeat and Lamp VHF & UHF (Tuner 340156-3)
S409	Switch	160393-1	Manual (On-Off) Microswitch
S410	Switch	160393-1	Manual (UHF Up) Microswitch
SG101	Spark Gap	180832-3	
SG102	Spark Gap	180832-3	
SG601	Spark Gap	180832-3	
SG602	Spark Gap	180832-3	
TD101	Delay Line	360949-5	(Used in Non-automatic tint versions)
	Delay Line	361364-1	(Used in Automatic tint versions)
Y101	Crystal Socket	530089-2	3.58MC
		180668-6	High Voltage Rect

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

## TUBES

\* Alternates

## TRANSISTORS

## POWER RECTIFIERS & SIGNAL DIODES

SET 1144 FOLDER 1



## 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 COUNTER FACTS® for the most up-to-date replacement.

## ELECTROLYTIC CAPACITORS

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.
C105A	80 450V	270071-13 (1)	AFH2-64-15		BB0489.5A	XC2-35	FP245.5	TVL-2779
B	80 450V							
C107A	80 450V	270071-7	AFH3-46		CC0370.5A	XC3-32	FP378.1	TVL-2793.3
B	30 450V							
C	50 450V							
C130A	20 450V	270023-43 (2)	AFH2-51		BB0400A	XC2-14	FP234A	TVL-2755
B	20 350V							
C162	50 150V	270027-39	PRS1480		BR50-150	QT1-17	TC49A	TVA-1414
C166	100 25V	270082-617	CRE623A	EA30-100	NLW100-25	MT1-20	MTA100F35	TE-1211
C564	5 25V	270068-603	MCD-50	EP30-5	PC5-100	MT1-3	MTV5CB50	TE-1202
C807	25 25V	270082-2610	PTT82	EA30-25	WBR25-50	MT1-11	MTA25E35	TE-1207
C811	5 25V	270082-603	CRE604A	EA30-5	WBR5-150	MT1-3	MTA5D50	TE-1202

(1) Some versions may use 80mfd, 80mfd @ 450V, 20mfd @ 350V Part #270071-12 in this application.

(2) Some versions may use 20mfd @ 450V, 20mfd @ 350V, 20mfd @ 350V, Part #270023-42 in this application.

## 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.
CA2	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA3	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA4	20pf NPO	5%		DTZ-20	NP020	CND420	CND420	10TCC-Q20
CA5	20pf NPO	5%		DTZ-20	NP020	CND420	CND420	10TCC-Q20
CA6	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA3	43pf NPO	5%		DTZ-47	CND447	CND447	CND447	10TCC-Q47
CA8	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA9	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA10	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA11	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
CA13	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C101	.047 600V		DBE6S47		DPMS6S47	6DP-3-473	PVC6147	6PS-S47
C102	.0022 1.4KV		HVD-152200	DD30-222		3CCD-202	2HV222	30GA-D22
C106	.0047 1KV		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C113	68 N1500 4KV 10%	#250475-24						
C114	180 2KV		HVD-30180	DD30-181	HV6-180	3CCD-181		30GA-T18
C115	.082 600V 5%	#250451-2774						
C116	.068 600V 5%	#250451-2773						
C117	22 N750 1KV				N22	CCTH-220	CN7422	10TCU-Q22
C118	130 N2200 6KV	#250475-11						
C120	.01 1KV		GPD X5S103K	DD-103	GP1000	CCD-103	JF110	10TS-S10
C132	33 N750 5%			DTN-33	NP033	CN7433	CN7433	10TCU-Q33
C133	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C161	.47 200V		DBE2P47		DPMS2P47	2DP-5-474	PVC2047	2PS-P47
C167	.022		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C169	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C171	470 N2200 3K 10%						*	10TCY-T47
C172	470 N2200 3KV 10%						*	10TCY-T47
C173	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C198	47 NPO		NPO-D1 47		NP047	CCTO-470		
C201	9.1 NPO	#250546-9197						
C202	150 NPO	5%						
C203	.001		GPD X5F102K	DTZ-150	GP1000	CCD-102	CN0315	10TCC-T15
C204	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C205	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C206	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C207	680 N220 10%						*	10TCY-T68
C208	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C209	.001 1KV		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C210	.001 1KV		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C211	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C212	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C214	220 N1500 10%						*	10TCW-T22
C215	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C216	470 N1500						*	10TCW-T47
C217	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C219	10 NPO	5%		DTZ-10	NP010	CND410	CND410	10TCC-Q10
C220	10 NPO	5%		DTZ-10	NP010	CND410	CND410	10TCC-Q10
C221	100 NPO	10%		DTZ-100	NP0100	CND310	CND310	10TCC-T10
C222	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C223	680	#250551-6815						
C224	1.5 N3300 ±.25	#250088-186						
C225	.001					*	*	
C226	.0022		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C227	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C228	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C231	2.2 NPO ±.25		NPO-D1 22	DTZ-2R2	NP02P2	CCTO-2R2	CND522	10TCC-Y22
C301	.001 1KV		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C302	.001 1KV		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C303	.1 400V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C304	.22 400V		DBE6P22		DPMS4P22	4DP-5-224	PVC4022	4PS-P22
C401	.22 200V		DBE6P22		DPMS4P22	4DP-5-224	PVC4022	4PS-P22
C403	33 NPO	5%					CND433	10TCC-Q33
C406	72 Max.	#260189-19		DTZ-33				
C506	68 NPO	10%	NPO-D1 68	DTZ-68	NP068	CCTO-680	CND468	10TCC-Q68
C508	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C509	.0015		GPD X5F152K	DD-152	GP215	CCD-152	GP215	10TS-D15
C510	.0027 N5600	10%				*		
C511	.039 600V	10%	DBE6S39		DPMS6S39	6DP-3-393	PVC6139	6PS-S39
C512	.0068 400V	10T	V1614068	CPR-6800J		6DP-1-682	PVC6268	6PS-D68
C514	680		GPD X5F681K	DD-681	GP680	CCD-681	GP368	10TS-T68

## 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 COUNTER FACTS® for the most up-to-date replacement.

## COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA					
		MFGR. PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L104	Horiz Efficiency	361022-5					
L111	Pincushion Phase	361135-1	6318	WC-7	WC-23 (1)	WLC-23	T124
L501	Horiz Oscillator	360960-3					
L801	Right R-G Vert Lines (R/G Master Ampl.)	361092-8					
L802	Right R-G Horiz Lines (R/G Diff. Ampl.)	361092-3	6348				
L803	Blue Horiz Lines (Center)	361092-1	6347		WC-41		T149
L804	Blue Horiz Lines (Left) (Tilt)	361188-1	H-138				
L805	Blue Horiz Lines (Right) (Master Ampl.)	361092-5					
L900	Convergence Yoke						
A	Red Section	171018-1					
B	Blue Section	171018-1					
C	Green Section	171018-1					
	Convergence Yoke Alt. Red	170745-2					
	Blue	170745-1					
	Green	170745-3					
	Convergence Yoke Alt. Red	170800-2					
	Blue	170800-1					
	Green	170800-3					
T103	Focus	361306-1					

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L301	.425A	16	.500H	320124-9				
L302	.62A	7.4	.18H	320232-4	C-2708	20C137	C-40X	

## TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T101	117VAC(1) @ 3.3AAC	320VAC @ 1AAC	6.3VAC @ 2AAC	300251-5(M)	P-9003C		R-303A	(1) Primary has 128VAC Tap. For use when line voltage is high.
	SEC. 3	SEC. 4	SEC. 5					
	6.3VAC @ 10AAC							

## TRANSFORMER

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T301	117VAC @ .015AAC	6.3VAC @ .185AAC	320362-4(D)				

## WIRING DATA

High Voltage Lead ..... Use BELDEN No. 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  
300-Ohm Tuner Input Lead ..... Use BELDEN No. 8225  
300-Ohm Antenna Lead-in ..... Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)  
Antenna Rotor Cable ..... Use BELDEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor  
8485 (Round) - 5 Conductor  
8488 (Round) - 8 Conductor

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

## TRANSFORMERS (Sweep Circuits)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T102	Horiz Output	361353-1(B)				
T104	Vert Output	320317-8(T) (1)	H0-647CF	26S86	A-305X	(1) Used in Chassis T940-01 thru -30.
	Vert Output	320317-10 (2)	V0-700C			(2) Used in Chassis T940-31 and later.
	Vert Output Alternate	320317-6				
T106	Pincushion Correction	361134-3				
T107	Yoke Horiz = 11.5mh	361348-1	DY-92AC	Y110	YC-311-2	
	90° Vert = 24.5mh					
	Yoke Alternate	361348-6				

## 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 COUNTER FACTS® for the most up-to-date replacement.

## CONTROLS (cont)

- (6) For horizontal mount, bend the two outside terminals to fit "PC" board. Use jumper to connect center terminal to "PC" board.
- (7) Alternate part used in all chassis except T940-15AA/AB/AC, T940-21-AD and T940-42AD.
- (8) Alternate part used in Non-Combination Models.
- (9) Alternate part used in chassis T940-01-AA, T940-06-AA/BA/BB/BC/DB/DC, T940-08-AC/BA/BB/BC, T940-10-BB, T940-18-AB/AC, T940-25-BD/DD, T940-26-AD/BD/CD, T940-27-CD, T940-30-BD, T940-39-AD/CD/DD, T940-46-AD/BD/CD/DD, T940-47-AD/BD/CD/DD and T940-51-BD.
- (10) Alternate part used in chassis T940-03-AA/AB/BA/BB/CC/DB, T940-04-AD, T940-05-AA/BA/BB/BC/DB/DC, T940-23-AD/BD, T940-24-BD/DD, T940-44-AD/CD/DD, T940-45-AD/BD and T940-45-DD.
- (11) Alternate part used in chassis T940-79-CD, T940-86-CD, T940-87-CD and T940-91-CD.
- (12) Alternate part used in chassis T940-84-CD and T940-85-CD.
- (13) Alternate part used in chassis T940-02-AA/AB/AC/AD, T940-07-AA/AB/AC/AD, T940-09-AA/AB/AC/AD, T940-11-AB and T940-31-AD.
- (14) Alternate part used in chassis T940-04-AA/AB, T940-32-AD, T940-33-AD, T940-34-AD and T940-35-AD.
- (15) Alternate part used in chassis T940-04-AA/AB/AD, T940-23-AD/BD/DD, T940-24-BD/DD, T940-32-AD, T940-33-AD, T940-34-AD, T940-35-AD, T940-44-AD/CD/DD, T940-45-AD/BD and T940-45-DD.
- (16) Alternate part used in chassis T940-03-AA/AB/BA/BB/CC/DB, T940-05-AA/BA/BB/BC/DB/DC, T940-84-CD and T940-85-CD.
- (17) Alternate part used in chassis T940-01-AA, T940-06-AA/BA/BB/BC/DB/DC, T940-08-AC/BA/BB/BC, T940-10-BB, T940-12-DB, T940-13-AC/DA/DB, T940-18-AB/AC, T940-19-AD/BD/DD, T940-20-AD, T940-25-BD/DD/AD, T940-26-BD/CD, T940-27-CD, T940-29-AD/BD/DD, T940-30-BD/-39-AD/CD/DD, T940-40-BD/CD/DD, T940-46-AD/BD/CD/DD, T940-47-AD/BD/CD/DD, T940-50-AD/CD/DD, T940-51-BD, T940-79-CD, T940-80-CD, T940-86-CD, T940-87-CD and T940-91-CD.
- (18) Alternate part used in chassis T940-03-AA/AB/BA/BB/CC/DB, T940-04-AA/AB/AD, T940-05-AA/BA/BB/BC/DB/DC, T940-23-AD/BD/DD, T940-24-BD/DD, T940-32-AD, T940-33-AD, T940-34-AD, T940-35-AD, T940-44-AD/CD/DD, T940-45-AD/BD/DD, T940-84-CD and T940-85-CD.

## RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
R103	5600 3W	3G-5.6K	230193-5629	R610	1800 3W	3G-2.2K	230193-1829
R112	15K 7W	7G-15K	230197-1539	R616	5600 4W	4G-5.6K	230194-5629
R117	66meg,6KV	66M	230161-3	R630	3300 3W	3G-3.3K	230193-3329
R302	1000 3W	3G-1K	230193-1029	R727	6800 3W	3G-6.8K	230193-6829
R306	820 10W	10W-SQ-850	240082-71	RV101	Thermistor (4.5 Cold)	FR 4.5	
R308	910 5W	5W-SQ-900	230195-9199	RV701	Thermistor (120 Cold)	FR 191	230170-2 (230170-3) *
R311	18K 4W	4G-18K	230194-1839	VDR501	VDR		230167-5
R312	870 22W		240088-7	VDR701	VDR		230175-2
R314	8200 3W	3G-8.2K	230193-8229				
R315	8200 3W	3G-8.2K	230193-8229				

\* Alternate

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
LA2	Peaking (56uh)	361365-5601		72F565AP	
LA3	Peaking (120uh)	361324-121	19-3125	72F124AP	T307
LA4	RF Choke (27uh)	361365-2701		72F275AP	
LA5	Bandpass (12-35uh)	360963-5			
L102	RF Choke (5.6uh)	360676-5	19-1008	74F566AP	T820
L103	RF Choke (5.6uh)	360676-5	19-1008		T820
L106	Peaking (62uh)	361091-2		6110	T338
L112	Line Choke (65uh/65uh))	361250-1	19-3060	5248	
L201	47.25MC Trap	360951-4		7553	TA260
L202	Printed Coil				
L203	RF Choke (.9uh)	360852-11	19-1000	74F106AP	T805
L204	Printed Coil				
L205	RF Choke (12uh)	361365-1201	19-2016	72F125AP	T862
L206	4.5MC Trap	360953-2	20-1057	7142	TA264
L207	Peaking (62uh)	361091-11	19-2022 (3)	6110 (3)	T302 (3)
L208	RF Choke (8.2uh)	360676-11	19-2015	74F826AP	T822
L209	RF Choke (12uh)	360676-1	19-1006	72F125AP	TA820
L210	Peaking (62uh)	361324-621	19-2030	4650	T871
L211	RF Choke (.9uh)	360852-11	19-1000	74F106AP	T805
L212	RF Choke (1.5uh)	360852-9	19-1001	74F156AP	T808
L213	RF Choke (5.6uh)	360676-7	19-1008	72F566AP	T820
L214	RF Choke (1uh)	360852-10	19-1000	74F106AP	T805
L601	Peaking (145uh)	361091-3	19-2026 (2)	72F154AP (2)	TA347 (2)
L602	Peaking (310uh)	361091-4	19-3300	6155	T318
L701	Sound Takeoff				
L702	Sound IF	360846-3	17-1048	SI-144	
L703	Quadrature	360847-2	20-1008	Q-113	T8272
L705	Peaking (620uh)	360853-11	19-2030	6146	T355
L707	Peaking (150uh)	360853-5	19-2026	72F154AP	T343
L708	Peaking (120uh)	360853-4	19-3125 (1)	6153 (1)	T342 (1)
L709	Peaking (47uh)	361324-470	19-7047	72F475AP	
L710	RF Choke (5.6uh)	361323-569	19-1008	74F566AP	T820
L712	3.5BMC Control	360963-4	17-6022	6057 (5)	
L713	Peaking (620uh)	360853-11	19-2080	6146	T355
L714	Peaking (620uh)	360853-11	19-2030	6146	T355
L716	RF Choke (10uh)	361365-1001	19-2016	72F105AP	T823
L717	Chroma Takeoff	360959-5	17-6028	6039 (4)	
L718	Peaking (47uh)	361324-470	19-7047	72F475AP	
L721	RF Choke (6.8uh)	361323-689		74F686AP	T851
L901	Input Coil AFT	361080-1		23A337RPC *	
L902	AFT Discriminator (Pri.)	361080-2		23A477RPC *	
L903	AFT Discriminator (Sec.)	361080-5		23A156RPC *	
T201	1st Video IF	360951-1	17-3418	7549	T272
T202	2nd Video IF	360951-6	17-3419	7552	T8644
T203	3rd Video IF	360951-5	17-3414	7526	TA258
T204	4th Video IF/41.25MC Trap	360952-2	17-3420	6037	TF278
T701	Chroma Bandpass	361093-2	17-6027	6042	TA179
T702	Burst	361094-2	17-6023	6043	
T703	3.5BMC Oscillator	361198-2	17-6020	6041	

Remove original 18pf capacitor from set.

(1) Shunt with 2200 ohms resistor.

(2) Shunt with 3300 ohms resistor.

\* Clip unused pin.

(3) Shunt with 4700 ohms resistor.

(4) Position in P.C. Board for proper circuit connections.

(5) Duplicate original circuit. Remove unused pin.

## 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 COUNTER FACTS® 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.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C515	680	#250569-3	GPD X5F681K	DD-681	GP680	CCD-681	GP368	10TS-T68	
C516	.1 600V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10	
C517	.047 200V		V1612S47		DPMS6S47	1DP-2-473	PVC1147	225P47391WD3	
C520	.0082 1KV				DPMS20D82	16DP-3-822	PVC16282		
C521	68 NPO 10%		NPO-D1 68	DTZ-68	NP068	CCCT0-680	CN0468	10TCC-Q68	
C522	27 N750 10%		N750-D1 25	TCN-27		CCTN-270	CN7427	10TCU-Q27	
C523	820 10%		GPD X5F821K	DD-821	GP820	CCD-821	GP382	10TS-T82	
C524	820 10%		GPD X5F821K	DD-821	GP820	CCD-821	GP382	10TS-T82	
C525	.15 75V		V1612P15			1DP-3-154	PVC1015	225P15495R75	
C526	.001 10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C527	390 N1500 1.5KV 5%	#250290-15							
C528	.01 400V 10%		V1614S1	CPR-10000J	DPMS6S1	4DP-1-103	PVC411	4PS-S10	
C529	680 5%		ADM-20-681	CPR-680J	CD19F681J500	DM-16-681J	SX368	MS-368	
C530	.0015 600V 10%		DBE6D15			6DP-1-152	PVC6215	6PS-D15	
C531	.01 600V		DBE6S1			6DP-2-103	PVC611	6PS-S10	
C532	.001 2KV 10%								
C533	.01 1KV 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C560	.0082		GPD X5R822K	DD-822		CCD-822		10TS-D82	
C561	.1 200V 10%		DBE2P1		DPMS2P1	2DP-3-104	PVC201	2PS-P10	
C562	.039 200V 10%								
C563	.0047 600V 10%	GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47		
C565	.0047 600V 10%	GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47		
C566	.1 400V	DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10		
C570	100 3KV 10%	GPD X5F101K	DM-101	GP100	CCD-101	GP310	10TS-T10		
C571	47 2KV	HVD-3047	DD30-470	HV3-47	3CCD-470		30GA-Q47		
C601	.001 N3300 2KV				*	*			
C602	.1 600V	#250551-3325	DBE6P1		DPMS6P1	6DP-4-104	PVC601	6PS-P10	
C603	.047 600V		DBE6S47		DPMS6S47	6DP-3-47	PVC6147	6PS-S47	
C604	.1		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10	
C605	.01 1KV		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C606	.01 1KV		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C607	.01 1KV 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C608	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C609	.01 1KV		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C610	.001 10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C611	.001 10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C612	.001 10%	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10		
C613	.01	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C614	.01	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C615	.01	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C701	3.3 NPO ±.25	#250551-3325	NPO-D1 3.3	DTZ-3R3	NP03P3		CN0533	10TCC-V33	
C702	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C703	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C704	.0033 5%					*	*		
C705	3 N1500 10%					*	*		
C706	3 N1500 10%		#250529-3099						
C707	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C708	.01 10%			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C709	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C710	.022 10%			GPD Z5U203P	DD-203		CCD-203	GP120	10TSS-S22
C711	18 5%			TCZ-18	NP018		CN0418	10TCC-Q18	
C712	.01 10%	GPD X5S103K		DD-103	GP10000	CCD-103	JF110	10TS-S10	
C713	220	GPD X5F221K		DD-221	GP220	CCD-221	GP322	10TS-T22	
C715	.1 400V	DBE4P1			DPMS4P1	4DP-3-104	PVC401	4PS-P10	
C721	.033 100V	V1612S33				1DP-1-333	PVC1133	225P33391	
C722	.1 100V	DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3		
C723	.01 10%	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C724	.0022 10%	GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22		
C725	150	GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15		
C726	470 N750		TCN-470						
C727	.01 10%	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C728	120 N750 10%		TCN-120	NP0120		CN7312	10TCU-T12		
C729	.01 10%	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C730	.01	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C732	.047 100V	V1612S47		DPMS6S47	1DP-2-473	PVC1147	225P47391WD3		
C733	820 10%	GPD X5F821K	DD-821	GP820	CCD-821	GP382	10TS-T82		
C734	.01 10%	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10		
C735	330 5%	GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33		
C736	.001 10%	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10		
C737	.1 200V	V1612S47		DPMS6S47	1DP-2-473	PVC1147	225P47391WD3		
C738	390 10%	#250546-3999	GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39	
C739	390 10%		GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39	
C741	27 NPO 5%			TCZ-27			CN0427	10TCC-Q20	
C742	18 NPO 10%			TCZ-18			CN0418	10TCC-Q18	
C743	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C744	330 N1500 5%					*	*	10TCH-T33	
C745	330 N1500 5%					*	*	10TCH-T33	
C746	330 N1500 5%					*	*	10TCH-T33	
C747	330 N1500 5%					*	*	10TCH-T33	
C748	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C749	.1 100V	DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3		
C750	3.9 NPO 10%	#250546-3999							
C751	39 NPO 5%			TCZ-39			CN0439	10TCC-Q39	
C752	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C753	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C754	220 N750 10%		N750-D1 220	DTN-220	H220	CCTH-221	CN7322	10TCU-T22	
C755	15 NPO 5%			DTZ-15	NP015		CN0415	10TCC-Q15	
C756	82 NPO 10%			DTZ-82	NP082		CN0482	10TCC-Q82	
C757	.01 10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C758	15 NPO 10%		NPO-D1 15	DTZ-15	NP015	CCTO-150	CN0415	10TCC-Q15	
C759	150 10%		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15	
C760	200	GPD X5F201K	DD-201	GP200	CCD-201	GP320	10TS-T20		
C761	18 NPO 10%		TCZ-18			CN0418	10TCC-Q18		
C762	18 NPO 10%		TCZ-18			CN0418	10TCC-Q18		
C763	100 NPO 5%		DTZ-100			CN0310	10TCC-T10		



## 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 COUNTER FACTS\* 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.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C764	.01		GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C765	.01	1KV 10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C766	.01	1KV 10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C767	.01	1KV 10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C768	.01	1KV 10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C769	.12	NPO 5%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C770	.01	NPO 5%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C771	.01	1KV 10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C772	.470	100V	GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C773	.047	100V	V1612S47		DPMS6S47	1DP-2-473	PVC1147	225P47391WD3
C774	.47	NPO 5%		DTZ-47			CN0447	10TCC-Q47
C775	.01	10%	GPD X55103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C776	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C778	.47	NPO 5%		DTZ-47			CN0447	10TCC-Q47
C780	.150	NPO 5%		DD-151	GP150	CCD-151	GP315	10TS-T15
C799	1	400V	GPD X5F151K					
C803	.056	400V 10%	V1614W1			4DP-3-563	PVC6156	4PS-S56
C804	.12	200V 10%	DBE6S56					
C805	.12	200V 10%						
C806	.22	200V 10%	V1612P22		DPMS2P22	2DP-4-224	PVC2022	2PS-P22
C808	.33	200V	V1612P33		DPMS2P33	2DP-5-334	PVC2033	2PS-P33
C809	.018	20V 10%						
C810	.0047	600V 10%	DBE6D47		DPMS6D47	6DP-1-472	PVC6247	6PS-D47
C902	.27	NPO 5%		TCZ-27			CN0427	10TCC-Q27
C903	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C904	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C905	.27	NPO 5%		TCZ-27			CN0427	10TCC-Q27
C906	.680		GPD X5F681K	DD-681	GP680	CCD-681	GP368	10TS-T68
C907	.47	NPO 5%		DTZ-47			CN0447	10TCC-Q47
C908	.47	NPO 5%		DTZ-47			CN0447	10TCC-Q47
C909	.12	NPO 5%		TCZ-12	NP012		CN0412	10TCC-Q12
C910	.220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C911	.100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C913	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C916	100 N750 3KV	5%		DTN-100			CN7310	10TCU-710

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

# Magnavox Part Number.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R108	Horz. Hold	45K	220232-22	F1-50K, SN200, BA006, CA005		QCB2 (1), B11-123, TM5, QCN or [BU3, CF12, SS1, DC1, QCN]*	RU54L, SL41 (2), SN1625 or [P54L, 3012, SF3000]
	Horz. Hold	45K	220146-69(7)	TT-31 or [F1-50K, SNK010]	B47-50K-S or [NP-50K-S, NML-A-300, TT-2]	B11-123, TM4 or [BU11, CF12, SS6]*	PTA54L or [RU54L, SL37, SN1000] or [UA54L, SN1000]
R109	Vert. Hold	750K	220232-23	F1-750K, SN200, BA006, CA005		QCB2 (1), B11-136, TM5, QCN or [BU3, CF64, SS1, DC1, QCN]*	RU754L, SL41 (2), SN1625 or [P754L, 3012, SF3000]
	Vert. Hold	750K	220146-50(7)	TT-66 or [F1-750K, SNK010]	A47-750K-S, RN-3, TT-2 or [NP-750K-S, NML-A-300, TT-2]	B11-136, TM4 or [BU11, CF64, SS6]*	PTA754L or [RU754L, SL37, SN1000] or [UA16L, SN1000]
R126	Vert Centering	10 2W	220181-1	WT-10 or WB-10	U39-10 (3) or [NPW-10, NML-A-300, TT-2]	P115R100A or [W11-010, SK5] or [BU1, WF16, SS6]*	MR10T or MR10B or VW10
R130	Contrast	600	220232-24	F1-750, SN200, BA006, CA005		QCB2 (1), B11-105, TM5, QCN or [BU3, CF5, SS1, DC1, QCN]*	RU751L, SL41 (2), SN1625 or [P62L, 3012, SF3000]
	Contrast	600	220146-29(7)	TT-411 or [F1-750, SNK010]	B47-750-S or [NP-750-S, NML-A-300, TT-2]	B11-105, TM4 or [BU11, CF5, SS6]*	PTA751L or [RU751L, SL37, SN1000] or [UA13L, SN1000]
R131	Color Killer	1meg	220208-34	TT-69 or [F1-1meg, SNK010]	B47-1meg-S or [NP-1meg-S, NML-A-300, TT-2]	B11-137, or [BU11, CF17, SS6]*	PTA16L or [RU16L, SL37, SN281] or [UA16L, SN281]
R132	Preference	6000	220146-74	F2-5000, SNK010		B13-114, TM4 or [BU11, CF60, SS6]*	RU73A, SL37, SN1000 or [UA53A, SN1000]
R136	AGC	50K	220208-33	TT-31 or [F1-50K, SNK010]	B47-50K-S or [NP-50K-S, NML-A-300, TT-2]	B11-123, TM4 or [BU11, CF12, SS6]*	PTA54L or [RU54L, SL37, SN281] or [UA541, SN281]
R138	Sharpness	100	220208-58	F1-100, SNK010		B11-084, TM4 or [BU11, CF1, SS6]*	RU12L, SL37, SN1000 or [UA12L, SN1000]
R139	Remote Control Sensitivity	3meg	220208-51	F2-3meg, SNK010	A47-3meg-Z, RN-3, TT-2 or [NP-3meg-Z, NML-A-300, TT-2]	B13-140, TM4 or [BU11, CF28, SS6]*	RU36A, SL37, SN281 or [UA36A, SN281]
	Tone	3meg	220146-26(8)	F2-3meg, SNK010	A47-3meg-Z, RN-3, TT-2 or [NP-3meg-Z, NML-A-300, TT-2]	B13-140, TM4 or [BU11, CF28, SS6]*	RU36A, SL37, SN1000 or [UA36A, SN1000]

## 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 COUNTER FACTS\* for the most up-to-date replacement.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R164	CRT Bias	25000 2W	220181-11	WT-2.5K or WB-2.5K	U39-3000 or [NPW-3000, NML-A-300, TT-2]	P115R252A or [BU1, WF6, SS6]*	MR2500T or MR2500B or VW2P5K
R172	Horz. Centering	10 2W	220181-12	WP-15 (4) or V-10 (5)	U39-15 (5)	P115R100A (4)	MR15P (4)
R201	Adjacend Sound Reject	10K	220182-5				
R215	Sound Reject	750	220166-4	F1-750, SNK010, AK-40	NP-750-S, UP-N-007, TT-3	B11-105, TM9 or [BU11, CF5, SS6, DC2]*	TRS751L
	Volume	1meg	220135-36(9)				
	Volume	1meg	220135-47 (10)				
	Volume	1meg	220135-7036 (11)				
	Volume	1meg	220135-7047 (12)				
	Volume	1meg	220232-36 (13)				
	Volume	1meg	220232-41 (14)				
R402	Color, Motor Driven Color	500 500	220232-43 (15)				
	Color	500	220232-25 (16)				
	Color	500	220232-40 (17)				
R403	Tint	1200	220232-34	F5-1500, SN200	NP-1200-V, UP-B-400	B17-208, SK1 or [BU1, CF53, SS1, DC1]*	RU122R, SL38, SN1250 or [UA152R, SN1250] or U5
	Tint	1200	220232-42 (18)				
R404	Brightness	250K	220232-19	F1-250K, SN200	A47-250K-S, FS-3 or [NP-250K-S, UP-B-400]	Q11-130 or [BU1, CF15, SS1, DC1]*	UA254L, SN1250 or [RU254L, SL38, SN1250] or U46
	Brightness	250K	220232-39 (18)				
R608	High Voltage Adjust	500	220166-26	F1-500K, SNK010, AK-40	NP-500K-S, UP-N-007, TT-3	B11-133, TM9 or [BU11, CF16, SS6, DC2]*	TRS55L
R612	Vert. Linearity	3.4meg	220166-19	F1-4meg, SNK104, AK-40		B11-140, TM9 or [BU11, CF21, SS6, DC2]*	TRS36L
R619	Height	100K	220166-20	F1-100K, SNK104, AK-40	NP-100K-S, UP-N-102, TT-3	B11-128, TM9 or [BU1, CF13, SS6, DC2]*	TRS15L
R620	Green Drive	9000	220166-23	F1-10K, SNK100, AK-40	NP-10K-S, UP-N-100, TT-3	B11-116, TM9 or [BU11, CF9, SS6, DC2]*	
R621	Blue Drive	9000	220166-24	F1-10K, SNK100, AK-40	NP-10K-S, UP-N-100, TT-3	B11-116, TM9 or [BU11, CF9, SS6, DC2]*	
R622	Red Drive	9000	220166-25	F1-10K, SNK010, AK-40	NP-10K-S, UP-N-007, TT-3	B11-116, TM9 or [BU11, CF9, SS6, DC2]*	
R624	Blue Screen	1.5meg	220166-17	F1-1.5meg, SNK104, AK-40		B11-138, TM9 or [BU11, CF18, SS6, DC2]*	TRS26L
R625	Green Screen	1.5meg	220166-16	F1-1.5meg, SNK104, AK-40		B11-138, TM9 or [BU11, CF18, SS6, DC2]*	TRS26L
R626	Red Screen	1.5meg	220166-18	F1-1.5meg, SNK104, AK-40		B11-138, TM9 or [BU11, CF18, SS6, DC2]*	TRS26L
R631	Chromatone	270K	220193-24	TSV-250K (6) or T-250K (6)		U201R254B	MTC254L4
R738	Chroma Tilt	750	220217-10	TSV-1K or T-750		X201R751B	MTC751L1
R804	R-G Vert. Lines, Left (R-G Master Tilt) Left	120 2W	220167-13 (C220167-13)	WCP-120 or V-120	U39-125	110C120	MRC120P
R805	R-G Horz. Lines, Left (R/G Diff Tilt), Left	120 2W	220167-13 (C220167-13)	WCP-120 or V-120	U39-125	110C120	MRC120P
R808	Blue Horz. Lines, Bot (Blue Ampl.)	30 2W	220167-11 (C220167-11)	WCP-30 or V-30	U39-50	110C30	MRC30P
R811	R-G Vert. Lines, Bot (R/G Master Ampl.), Bottom	120 2W	220167-13 (C220167-13)	WCP-120 or V-120	U39-125	110C120	MRC120P
R812	R-G Horz. Lines, Bot (R/G Diff Ampl) Bottom	150 2W	220167-12 (C220167-12)	WCP-150 or V-150	U39-150	110C150	MRC150P
R813	R-G Horz. Lines, Top (R/G Diff Tilt), Top	30 2W	220167-11 (C220167-11)	WCP-30 or V-30	U39-50	110C30	MRC30P
R814	R-G Vert. Lines, Top (R/G Master Tilt), Top	60 2W	220167-10	WCP-60 or V-60	U39-75	110C60	MRC60P
R815	Blue Horz. Lines, Top (Blue Vert. Tilt)	60 2W	220167-10	WCP-60 or V-60	U39-75	110C60	MRC60P

(1) Use QCB2 bushing instead of Tab Mount Plate in TM5 kit.

(2) Alter bushing to meet requirements.

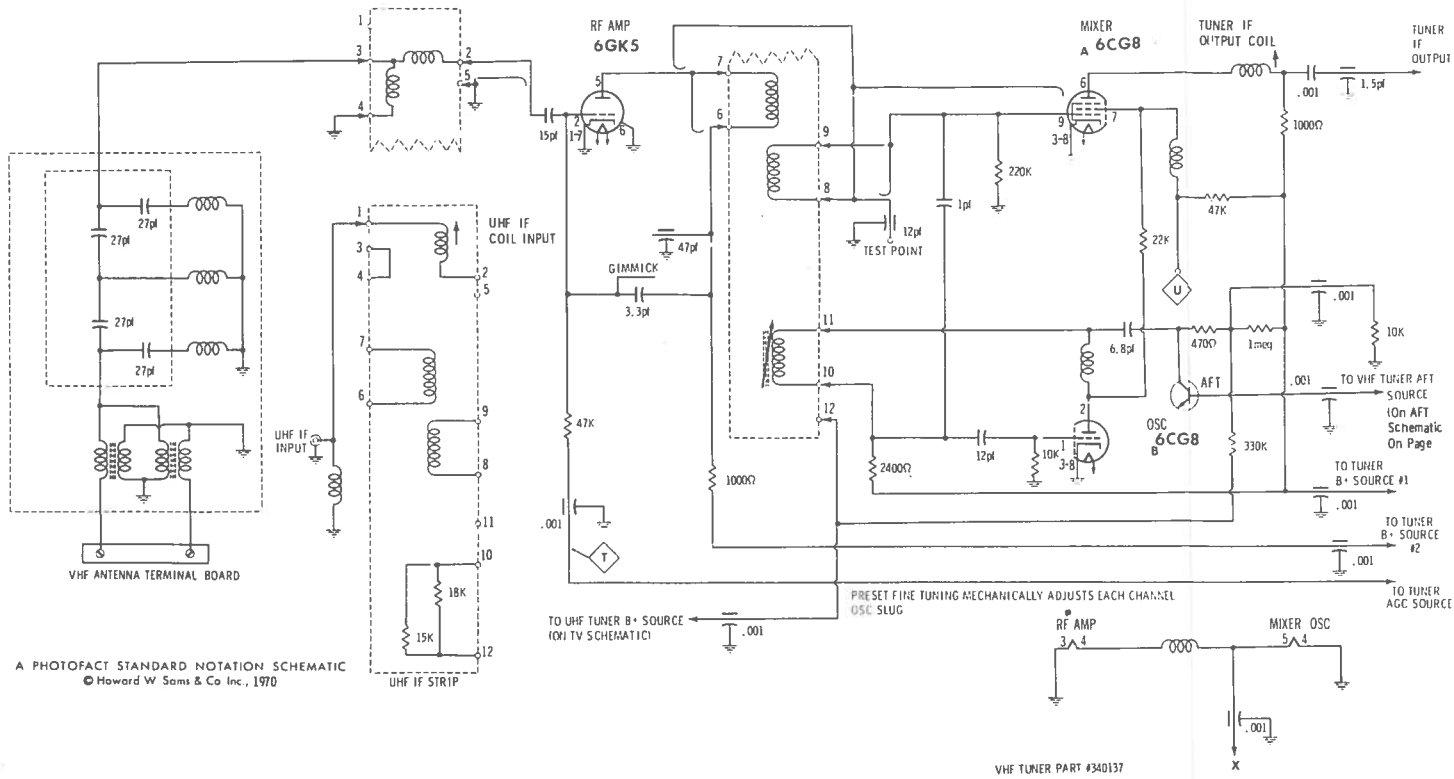
(3) Insulate control from chassis and solder original center terminal lead to metal case of control.

(4) Use original Nylon Tab Mount.

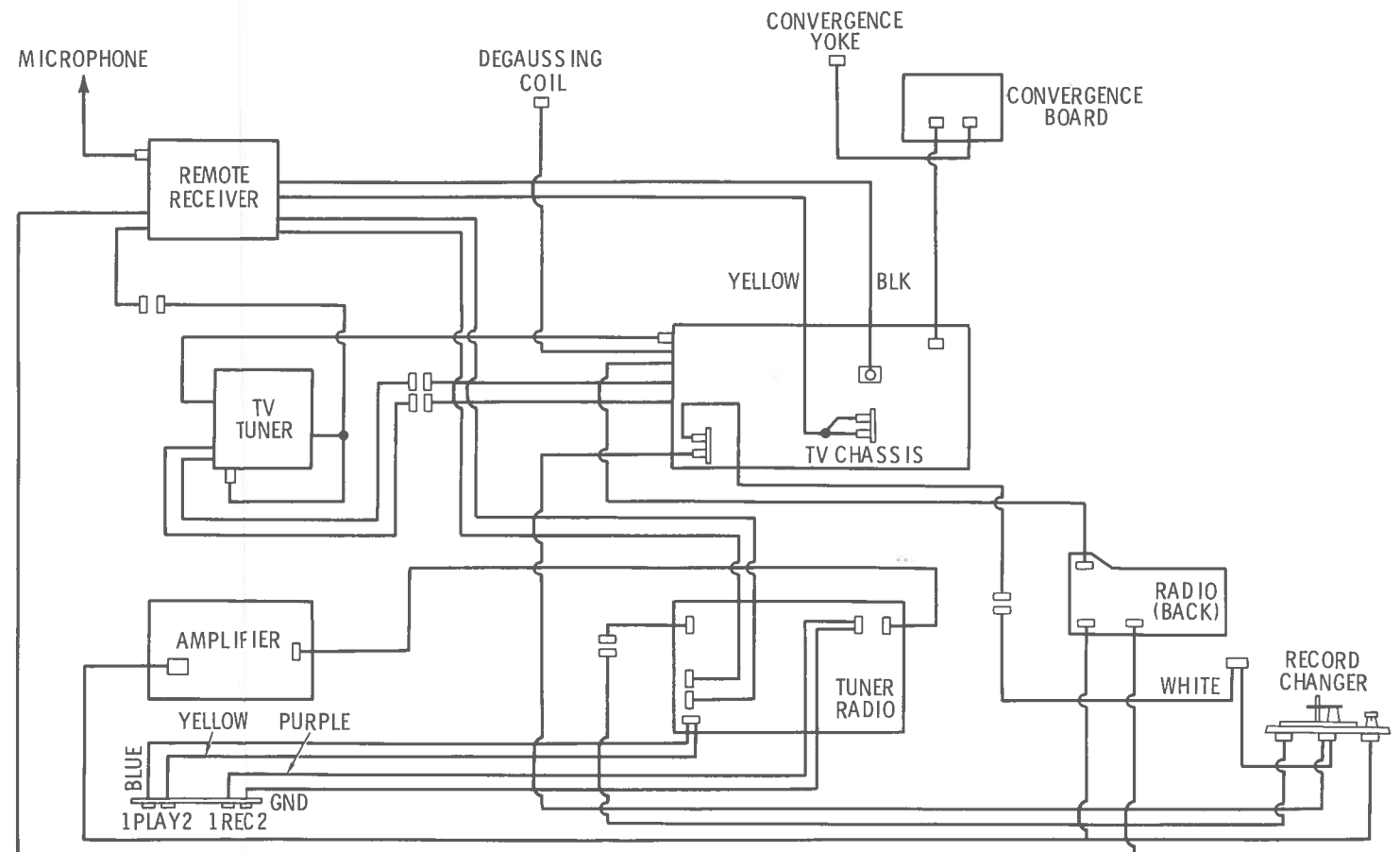
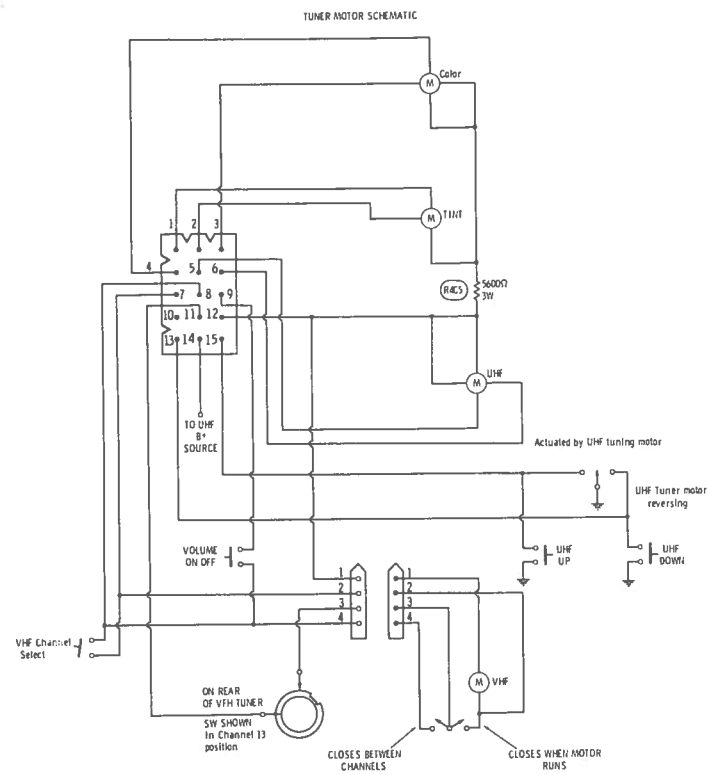
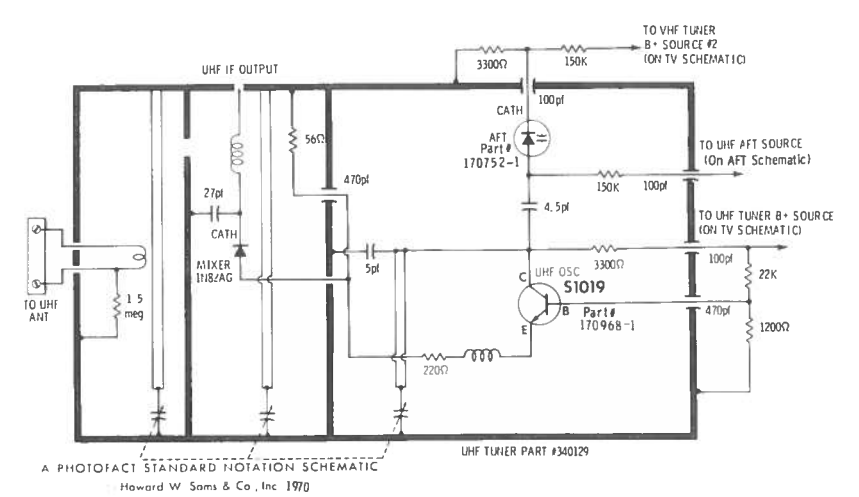
(5) Use original Nylon Tab Mount and solder center Terminal Lead to case of control.

\* "SNAPTROL"

VHF TUNER 340137



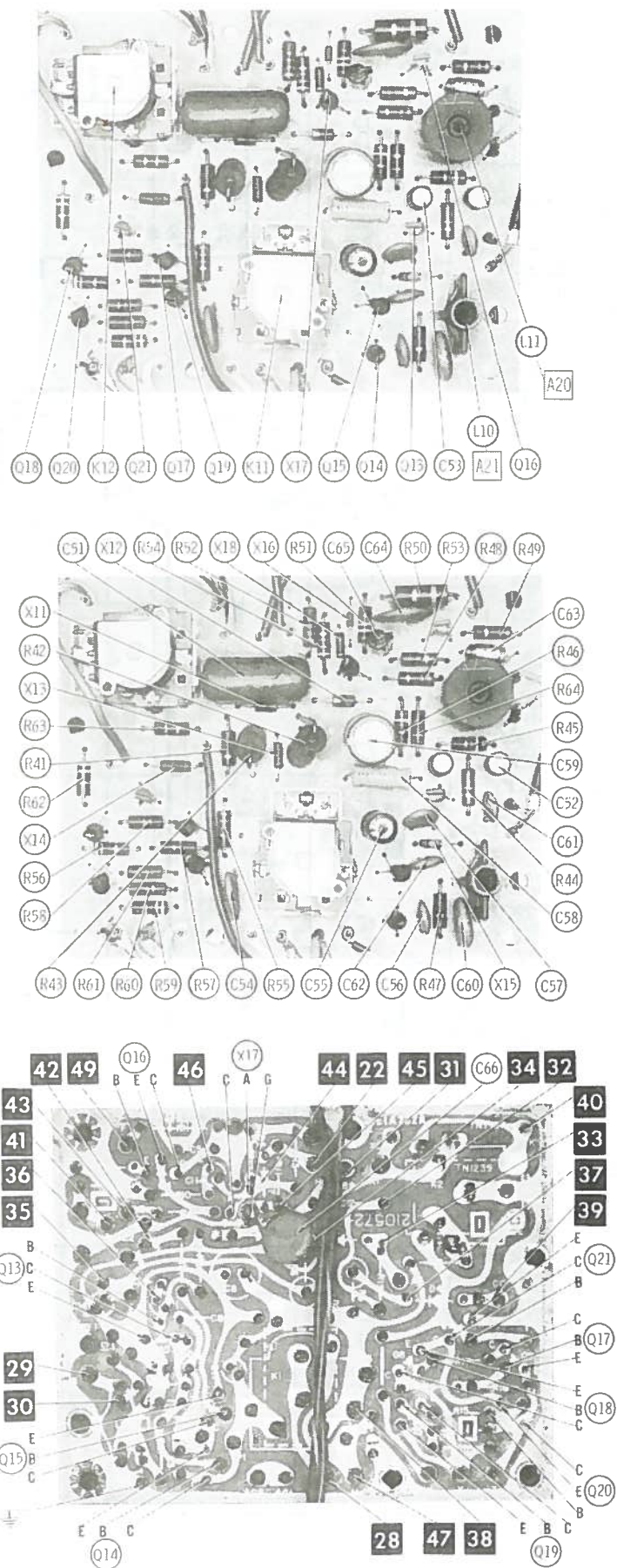
## UHF TUNER 340129



## REMOTE WIRING USED WITH RECEIVER 704054-1

## CABLING DIAGRAM

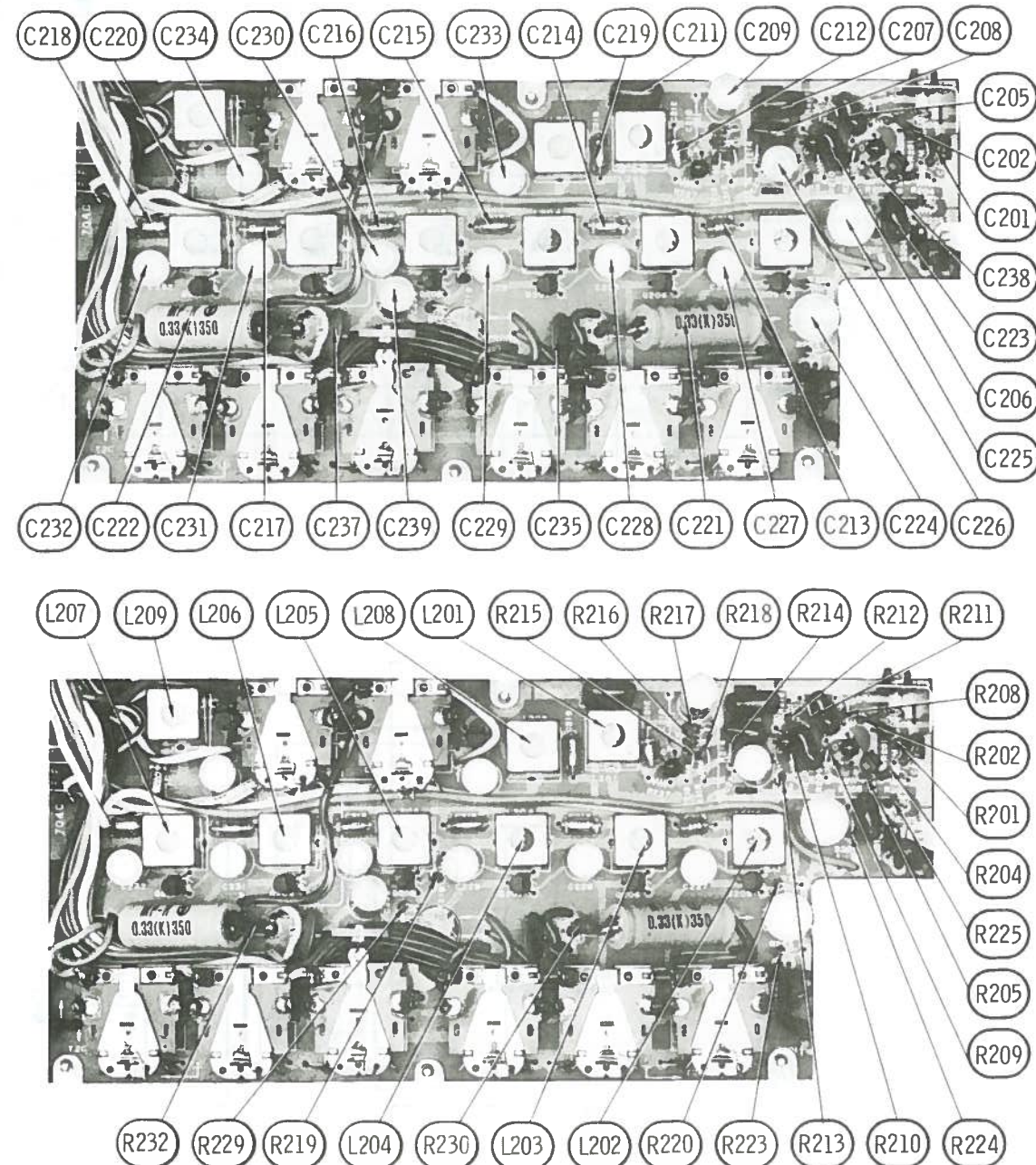




IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1144 FOLDER 1. File this Folder with the TV Folder in the yellow filing jacket provided.

MAGNAVOX REMOTE CONTROL  
RECEIVER 704054-2, TRANSMITTER 704041-2



MAGNAVOX REMOTE CONTROL  
RECEIVER 704054-2, TRANSMITTER 704041-2

SET 1144 FOLDER 1-A

REMEMBER TO ASK— "What else needs fixing?"

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

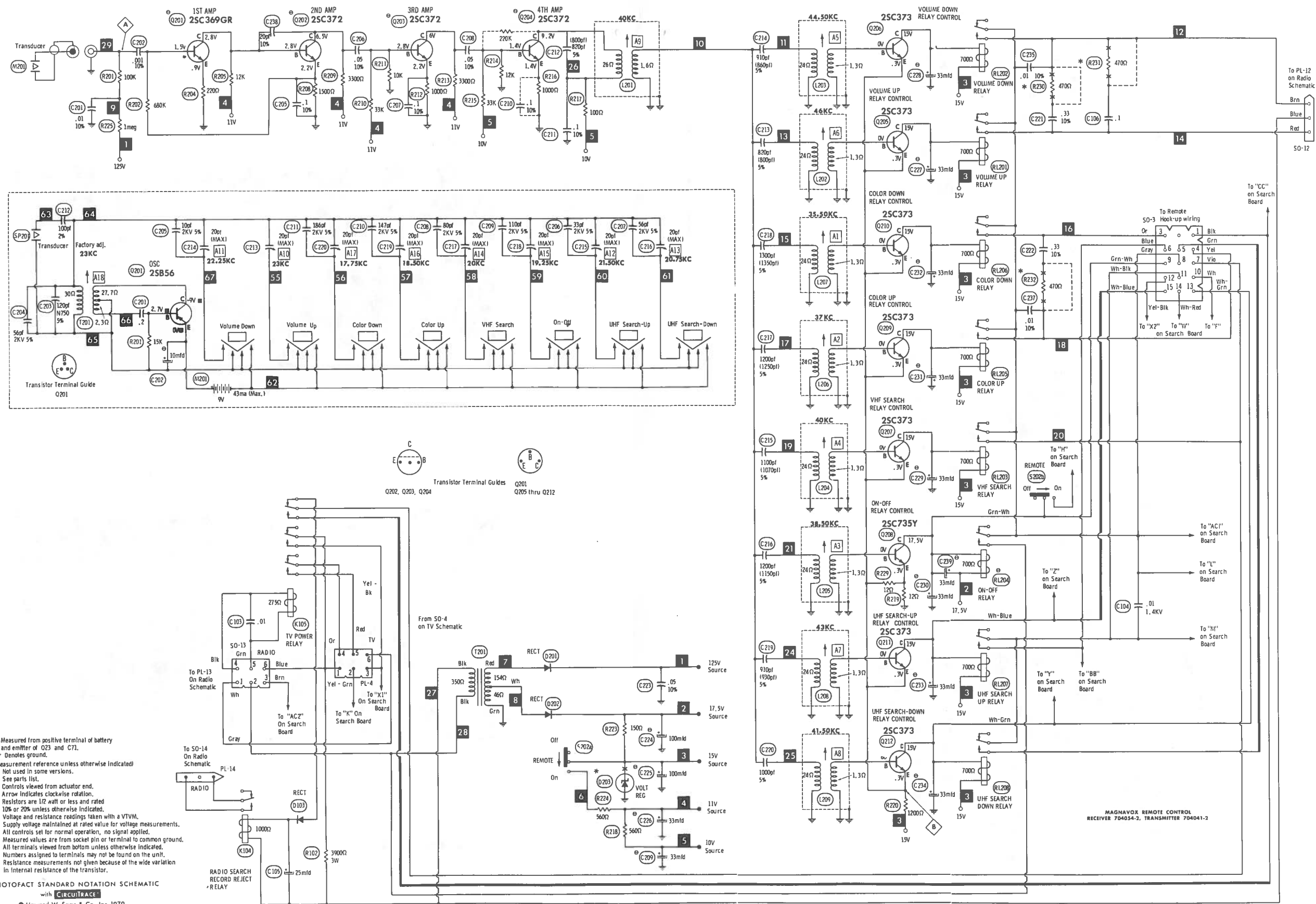
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UB708

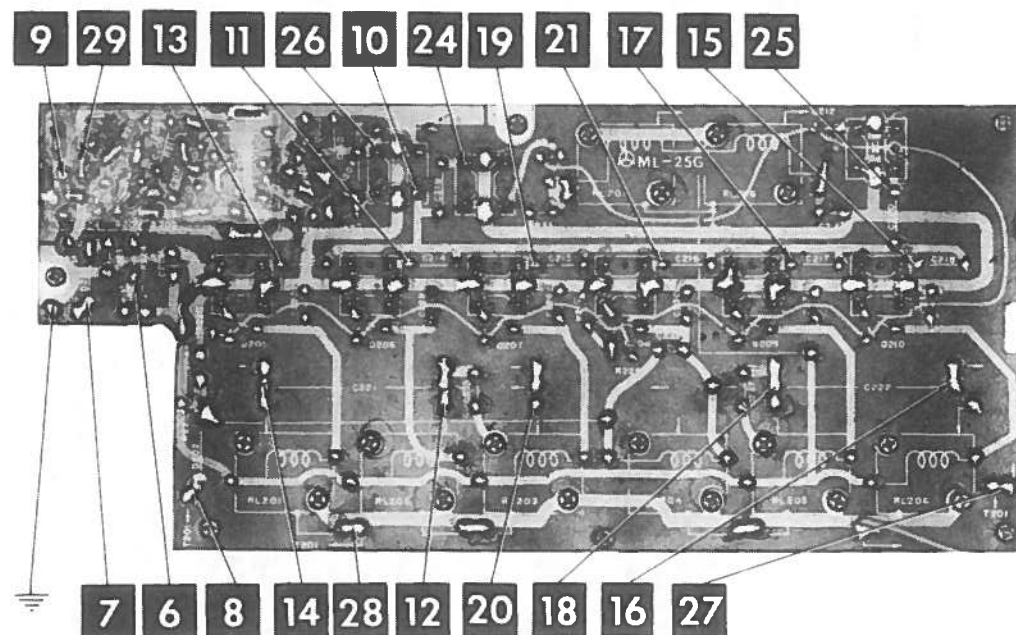
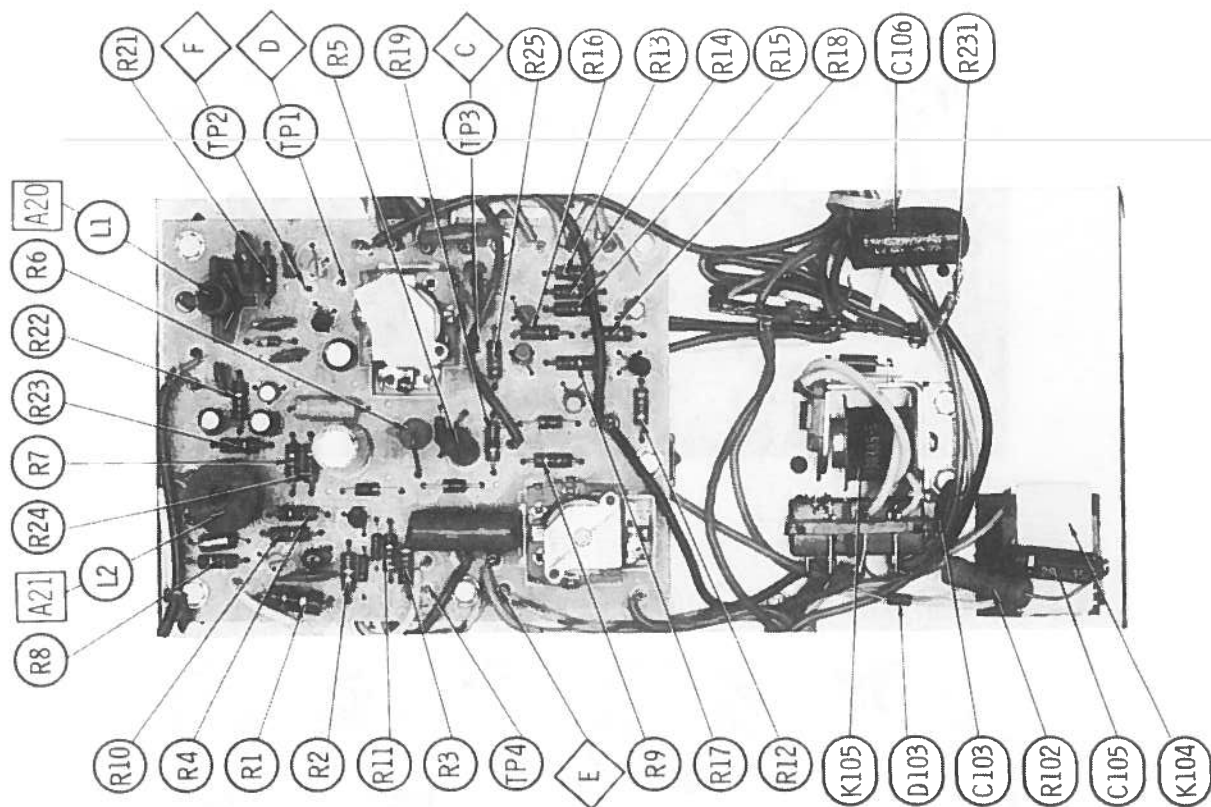
Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1970 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America.

DATE 12-70

SET 1144 FOLDER 1-A







## REMOTE CONTROL RECEIVER ALIGNMENT

Use a signal generator or depress button on a good transmitter.  
Suggested Alignment Tools: GENERAL CEMENT-WALSCO  
A1 thru A9 ..... 9293, 9294 ... 2534X, 2535X  
Connect high side thru .01mfd to Point  $\diamond$  A, low side to ground.  
Connect VTVM across DC probe to Point  $\diamond$  B, low side to ground.

DEPRESS SOME MODELS	GENERATOR FREQUENCY	DEPRESS SOME MODELS	ADJUST	REMARKS
Color Down Button	35.50KC	Color Down Button	A1	Adjust for maximum.
Color Up Button	37.00KC	Color Up Button	A2	" " "
Off-On Button	38.50KC	Volume Off Button	A3	" " "
VHF Search Button (1)	40.00KC	VHF Search Button (1)	A4	" " "
Volume Down Button	44.50KC	Tint Red Button	A5	" " "
Volume Up Button	46.00KC	Tint Green Button	A6	" " "
UHF Search Button Up	43.00KC	UHF Search Button Up	A7	" " "
UHF Search Button Down	41.50KC	UHF Search Button Down	A8	" " "
Broadband Output	40.00KC	Broadband Output	A9	" " "

(1) For station selection and record rejection, push VHF Search button.

## REMOTE CONTROL TRANSMITTER ALIGNMENT

With transmitter approximately 8 feet from receiver, connect DC probe to Point  $\diamond$  B in a remote receiver known to be operating correctly, low side to ground.  
Suggested Alignment Tools: GENERAL CEMENT WALSCO  
A10 thru A17 .. 8275 ..... 8275  
A18 ..... 8606, 8606L, 8869 .. 2543, 2544, 2588

DEPRESS SOME MODELS	DEPRESS SOME MODELS	ADJUST	REMARKS
Volume Up Button	Tint Green	A10, A18 *	Adjust for maximum voltage.
Volume Down Button	Tint Red	A11	" " " "
UHF - Up Button	UHF - Up	A12	" " " "
UHF - Down Button	UHF - Down	A13	" " " "
VHF Button (1)	VHF (1)	A14	" " " "
Off-On Button	Volume Off	A15	" " " "
Color - Up Button	Color - Up	A16	" " " "
Color - Down Button	Color - Down	A17	" " " "

(1) For station selection and record rejection, push VHF Search button.

\* Factory adjustment

## SEARCH ALIGNMENT

Disconnect 4-pin plug P403 from Search Board. 45.75MC sync input link and connector must be in place. Tune in a TV station.  
Suggested Alignment Tools: GENERAL CEMENT WALSCO  
A20, A21 .. 8606, 8606L, 8869 .. 2543, 2544, 2588

CONNECT VTVM (ON RECEIVER)	TRANSMITTER BUTTON	ADJUST	REMARKS
DC probe to Point $\diamond$ C, low side to Point $\diamond$ D. Jumper Point $\diamond$ E to Point $\diamond$ F.	Depress VHF on TV or on Transmitter	A20	Adjust for maximum.
Remove jumper from Point $\diamond$ E and $\diamond$ F. Connect jumper from Point $\diamond$ D to Point $\diamond$ F.	Depress VHF on TV or on Transmitter	A21	Adjust for maximum.





TRANSMITTER PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
T201	Oscillator	36J003			

BATTERIES

ITEM No.	VOLTAGE	MFG. PART No.	REPLACEMENT DATA		NOTES
			EVEREADY	MALLORY	
M201	9V		206	M-1611	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
SP201	Transducer	58J001-1	
	Pushbutton Springs	16J003-1	8 used
	Pushbutton Contacts	16J004-1	8 used
	Transmitter Case	14J001-1	Top
	Transmitter Case	14J002-1	Bottom
	Transmitter Case	14J003-1	Front
	Pushbuttons	14J004-1	8 used
	Pushbutton Holder	73J009-1	

RECEIVER PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFG. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q201	2SC369GR (2SC371)(1)	1st Amp		GE-17	TR-51	HEP50	SK3018	ECG 123A
Q202	CDC12000-1C (2SC372)(1)	2nd Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q203	CDC12000-1C (2SC372)(1)	3rd Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q204	CDC12000-1C (2SC372)(1)	4th Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q205	2SC373	Relay Control, Volume Up		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q206	2SC373	Relay Control, Volume Down		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q207	2SC373	Relay Control, VHF Search		GE-10	TR-21	HEP53	SK3020	ECG 123A
Q208	2SC735Y	Relay Control, On-Off		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q209	2SC373	Relay Control, Color Up		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q210	2SC373	Relay Control, Color Down		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q211	2SC373	Relay Control, UHF Search Up		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q212	2SC373	Relay Control, UHF Search Down		GE-17	TR-51	HEP55	SK3020	ECG 123A

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFG. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
D103	530082-4	GE-504A	8D6 or 5A6-D	SK3017A or SK3032	ECG 116 or ECG 117	
D201	53J001-1 (SD-1)	GE-504A	8D6 or 5A6-D	SK3017A or SK3032	ECG 116 or ECG 117	
D202	53J002-1 (SH-1)	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D203		GEZD-15	1ZM15-T10 or Z-1114		ECG 145	Zener

ELECTROLYTIC CAPACITORS

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.
C105	25 35V	(1)	PTT86	EA50-25	BR25-50	MT1-17	MTA25E35	TE-1305.5
C209	33 35V	(2)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C224	100 25V	27J001-1 (2)	PTT137	EA50-100	BR100-50		MTV100DE35	TE-1309
C225	100 25V	27J001-1 (2)	PTT137	EA50-100	BR100-50		MTV100DE35	TE-1309
C226	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C227	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C228	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C229	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C230	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C231	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C232	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C233	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C234	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306
C239	33 35V	(3)	MCD-120	EP50-25	PC30-35	MT1-14	MTV25CB35	TE-1306

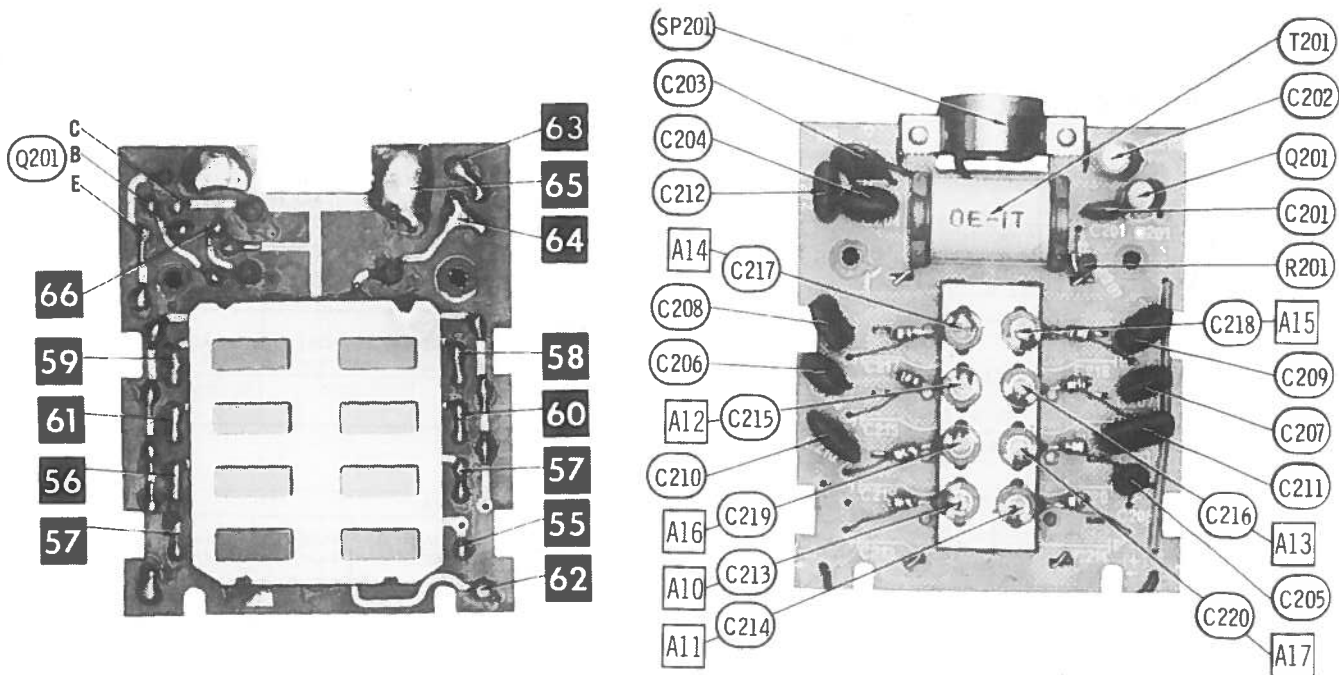
- (1) Alternate value 25mfd @ 25V, Part #270082-610 used in some versions.  
(2) Alternate used in some versions.  
(3) Alternate value 30mfd @ 25V, Part #27J001-2 used in some versions.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C103	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C104	.01 1.4K			CI-103	AC-10000		UAC110	12SL-S10
C106	.1 600V		DBE6P1		DPMS-6P1	6DP-4-104	PVC601	6PS-P10
C201	.01 10%		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C202	.001 10%		DBE6D1	CPR-1000J	DPMS6D1	6DP-1-102	PVC621	225P10291WD3
C205	.15 50V 10%		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C206	.05 10%		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C207	.1 10%		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C208	.05 50V 10%		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C211	.1 10%		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C212	820pf 350V 5%	#25J015-1						
C213	820pf 350V 5%	#25J015-1						
C214	910pf 350V 5%	#25J015-2						
C215	1100pf 350V 5%	#25J015-5						
C216	1200pf 350V 5%	#25J015-6						
C217	1200pf 350V 5%	#25J015-7						
C218	1300pf 350V 5%	#25J015-8						
C219	910pf 350V 5%	#25J015-3						
C220	1000pf 50V 5%	#25J003-4						
C221	.33 350V 10%		V1614P33		DPMS4P33	4DP-5-334	PVC6033	
C222	.33 350V 10%		V1614P33		DPMS4P33	4DP-5-334	PVC6033	
C223	.05 10%		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C235	.01 10%		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C237	.01 10%		V1612S1	DTZ-20	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C238	20 10%		NP0-D1 20		NP020	CCT0-200	CN0420	10TCC-Q20

# Manufacturer's Part Number.

SET 1144 FOLDER 1-A



## RECEIVER PARTS LIST AND DESCRIPTION (CONTINUED)

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

### RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R201	3900 3W	3G-3.9K					

### COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L201	Broad Band Output	36J001-1			
L202	Volume Up	36J002-1			
L203	Volume Down	36J002-1			
L204	VHF Search	36J002-1			
L205	On-Off	36J002-1			
L206	Color Up	36J002-1			
L207	Color Down	36J002-1			
L208	UHF Search Up	36J002-1			
L209	UHF Search Down	36J002-1			

### TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	117VAC @ .027AAC	95VAC @ .001ADC Tap @13.5VAC @ .028ADC	32J001-1				

### MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K104	Relay	160413-10	
K105	Relay	160435-5	
M201	Transducer		Radio Search, Record Reject
RL201	Relay	16J001-1	TV Power
RL202	Relay	16J001-1	Volume Up or Tint Relay
RL203	Relay	16J005-1	Volume Down or Tint Relay
RL204	Relay	16J005-2	VHF Search
		16J001-1	On-Off
		16J001-1	On-Off used in 704054-1 & 5.
RL205	Relay	16J001-1	Color Up
RL206	Relay	16J001-1	Color Down
RL207	Relay	16J001-1	UHF Search Up
RL208	Relay	16J001-1	UHF Search Down
S202	Switch	16J006-1	Remote (On-Off)

## SEARCH PARTS LIST AND DESCRIPTION

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

### TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	113N2	Relay Control	610113-2	GE-18		HEP59100		ECG 172
Q3	77N1	Switching	610077-1	GE-18	TR-25	HEP721	SK3020	ECG 123A
Q4	70N3	Automatic Off	610070-3	GE-18	TR-25	HEP721	SK3020	ECG 123A
Q5	120P1	1st Latch Up Amp	610120-1 34	GE-21	TR-30	HEP242	SK3025	ECG 129
Q6	77NSAA	2nd Latch Up Amp	610077-5	GE-18	TR-25	HEP721	SK3020	ECG 123A
Q7	120P1	1st Latch Down Amp	610120-1 34	GE-21	TR-30	HEP242	SK3025	ECG 129
Q8	77NSAA	2nd Latch Down Amp	610077-5	GE-18	TR-25	HEP721	SK3020	ECG 123A
Q9	77NSAA	Latch Gate	610077-5	GE-18	TR-25	HEP721	SK3020	ECG 123A
Q10	77NSAA	Turn On Delay	610077-5	GE-18	TR-25	HEP721	SK3020	ECG 123A

### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
D1	530082-4	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D2	530072-14	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D3	530082-4	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D4	530082-4	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D5	530072-6	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or ECG 117	
D6	530065-2	1N34AS	5A4-D	SK3031	ECG 117	
D7	530072-14	GE-504A	1N34A	SK3030 or SK3031	ECG 109 or ECG 116 or ECG 117	
Q2	610121-1		5A4-D	SK3502		Silicon Control Rectifier

## SEARCH PARTS LIST AND DESCRIPTION (CONTINUED)

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

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		MAGNAVOX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	2 50V	270082-701	PTT88	EA50-2	AL2-50	MT1-1	MTA2D50	TE-1301
C8	100 25V	270068-619	MCD-180	EA30-100	PC100-25	MT1-21.5	MTV100CK25	TE-1211
C11	22 15V	270090-1329			TYR13BF226		TAS226K015POC	1960226X0020 FB
C14	5 25V	(1)	MCD-50	EP30-5	PC5-100	MT1-3	MTV5CB50	TE-1202
C15	4 25V	270068-702	MCD-50	EP30-5	PC5-100	MT1-3	MTV5CB50	TE-1202
C17	5 25V	(1)	MCD-70	EP30-10	PC10-50	MT1-5	MTV10CB50	TE-1204
	10 25V	(1)						
	8 25V	270082-605						

(1) Alternate used in some versions.

### 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.
C1	20 NPO 5%		NPO-D1 20	DTZ-20	HP020	CCT0-200	CN0420	10TCC-Q20
C2	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C3	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C4	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C5	.05 50V 5%		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C7	.001							
C9	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C12	1mfd		V1612M1		DMF1W1	10P-5-105	PVC61	
C16	.001 1.4KV			CI-102	AC-1000	CCD-102	UAC210	125L-D10
C18	.01		GPD X5F102K	DD-102	GP1000		GP210	10TS-D10

### COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	45.75MC Input	361321-2			
L2	31.5KC Sync Input	361300-2			

### MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	160413-6	
K2	Relay	160413-2	Search Mute - UHF Latch

## TRANSMITTER PARTS LIST AND DESCRIPTION

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

### TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA				
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	SYLVANIA PART No.
Q201	2SB56	Oscillator	61J004-1	GE-2	TR-14	HEP632	SK3004

### ELECTROLYTIC CAPACITORS

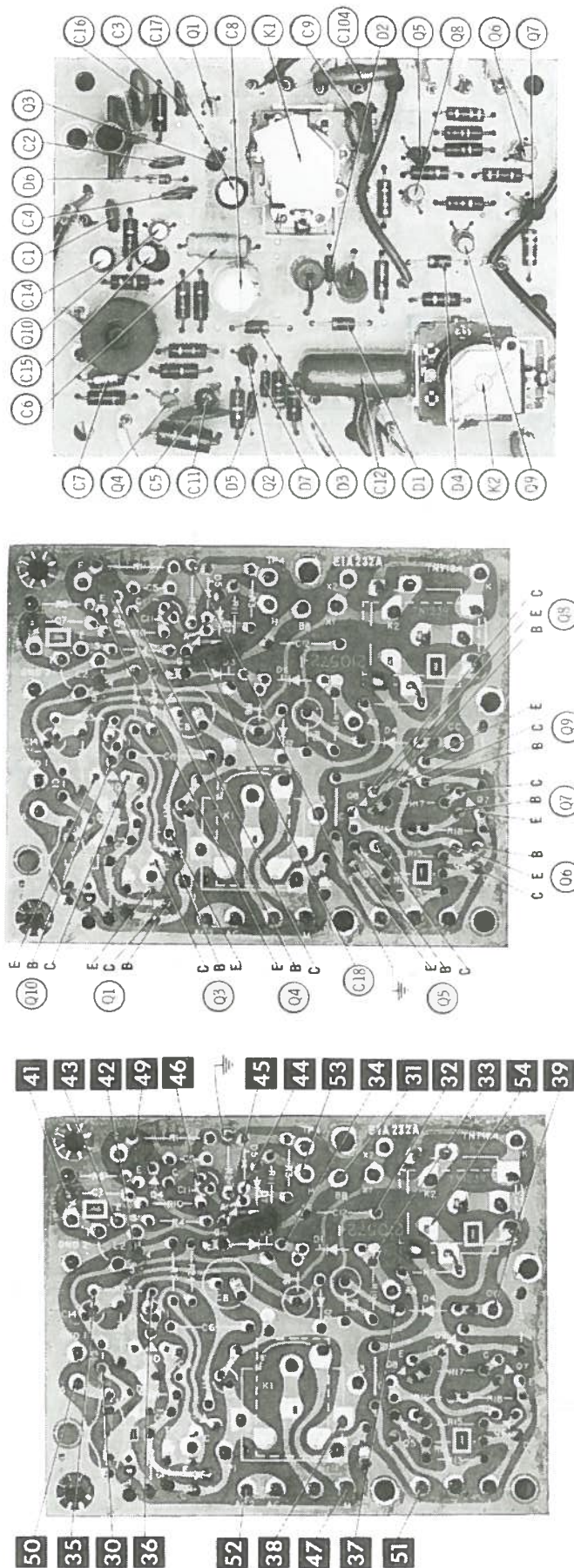
ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C202	10 16V		MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
	10 10V	27J002-1 (1)						

(1) Alternate used in some versions.

### 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.
C201	.2 12V							
C203	120pf N750 5%							
C204	56pf 2000V 5%	#25J004-6				VCM-20-560		
C205	10pf 2000V 5%	#25J004-8				VCM-20-100		
C206	33pf 2000V 5%	#25J004-7				VCM-20-330		
C207	56pf 2000V 5%	#25J004-6				VCM-20-560		
C208	80pf 2000V 5%	#25J004-5						
C209	110pf 2KV 5%	#25J004-3				VCM-20-111		
C210	147pf 2KV 5%	#25J004-2						
C211	186pf 2KV 5%	#25J004-1						
C212	100pf 2KV 5%	#25J004-4				VCM-20-101		
C213	20pf	#25J005-1						
C214	20pf	#25J005-1						
C215	20pf	#25J005-1						
C216	20pf	#25J005-1						
C217	20pf	#25J005-1						
C218	20pf	#25J005-1						
C219	20pf	#25J005-1						
C220	20pf	#25J005-1						

# Manufacturer's part number.



SET 1144 FOLDER 1-B

MAGNAVOX REMOTE CONTROL RECEIVER  
704054-1, TRANSMITTER 704041-1

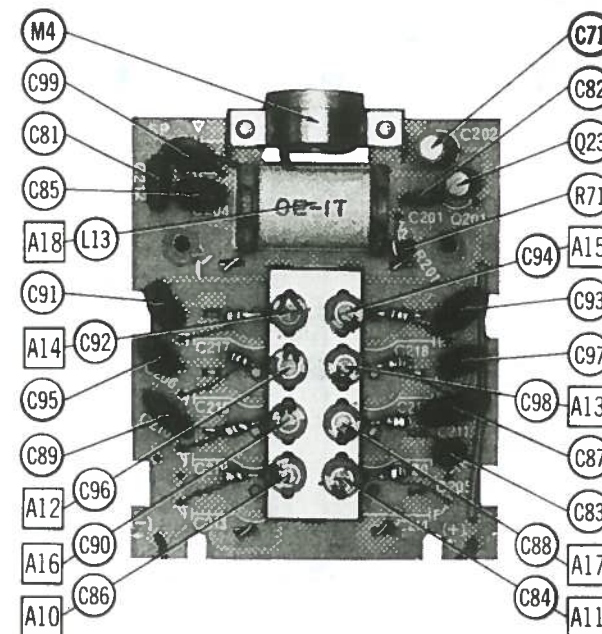
PHOTOFACT® Folder

with CIRCUITRACE

MAGNAVOX REMOTE CONTROL RECEIVER  
704054-1, TRANSMITTER 704041-1

#### IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1144 FOLDER 1. File this Folder with the TV Folder in the yellow filing jacket provided.



#### REMOTE TRANSMITTER ALIGNMENT

With Transmitter approximately 8 feet from a receiver known to be aligned properly, depress buttons shown below.

DEPRESS	CONNECT VTVM	ADJUST	REMARKS
Tint - Green Button	DC probe to Point $\Phi$ on receiver, low side to ground.	A10	Adjust for maximum.
Tint - Red Button	"	A11	" " "
UHF - Up Button	"	A12	" " "
UHF - Down Button	"	A13	" " "
VHF Button	"	A14	" " "
Volume - Off Button	"	A15	" " "
Color - Up Button	"	A16	" " "
Color - Down Button	"	A17	" " "

REMEMBER TO ASK— "What else needs fixing?"

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



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UB708

Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1970 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America.

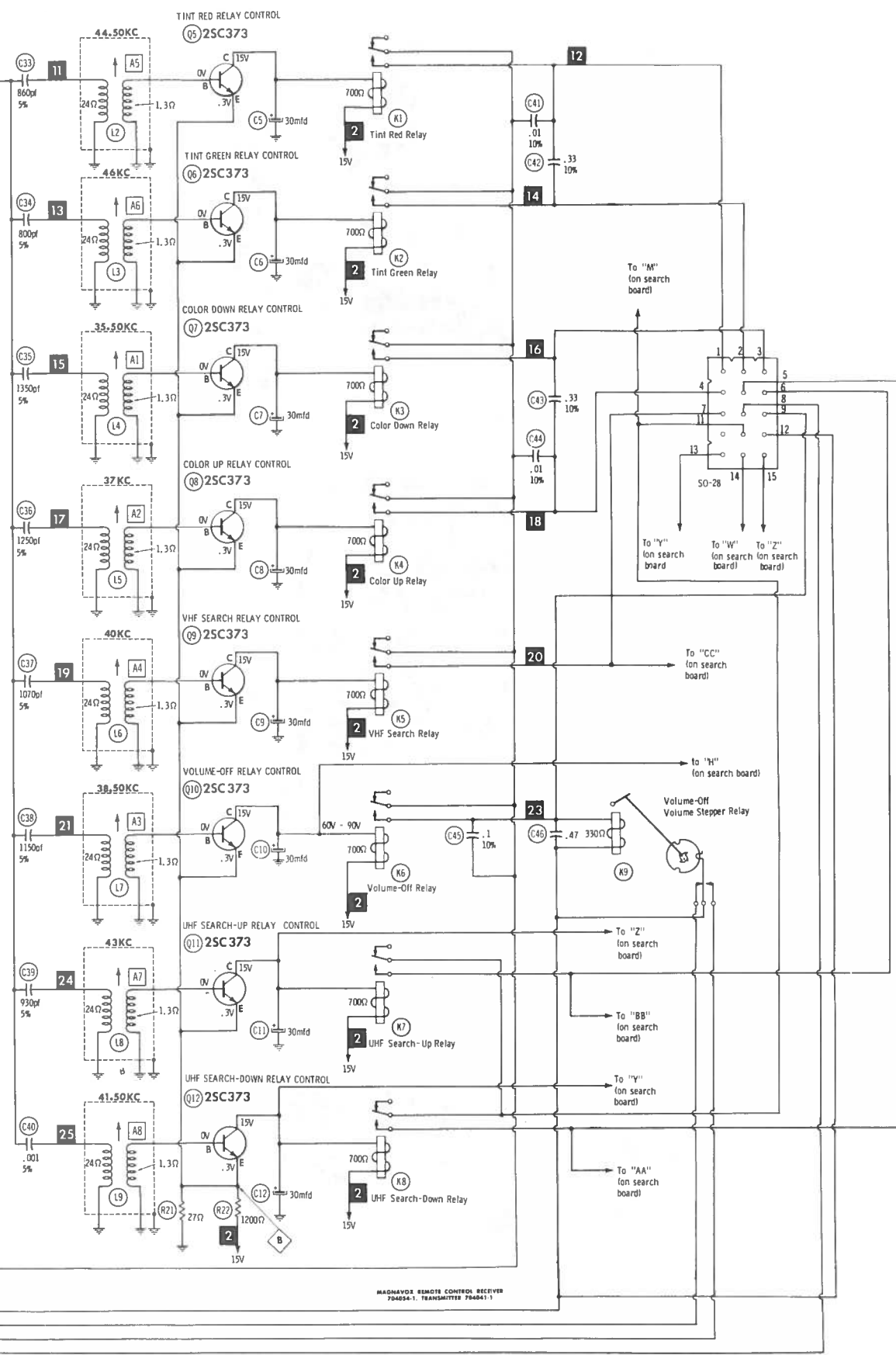
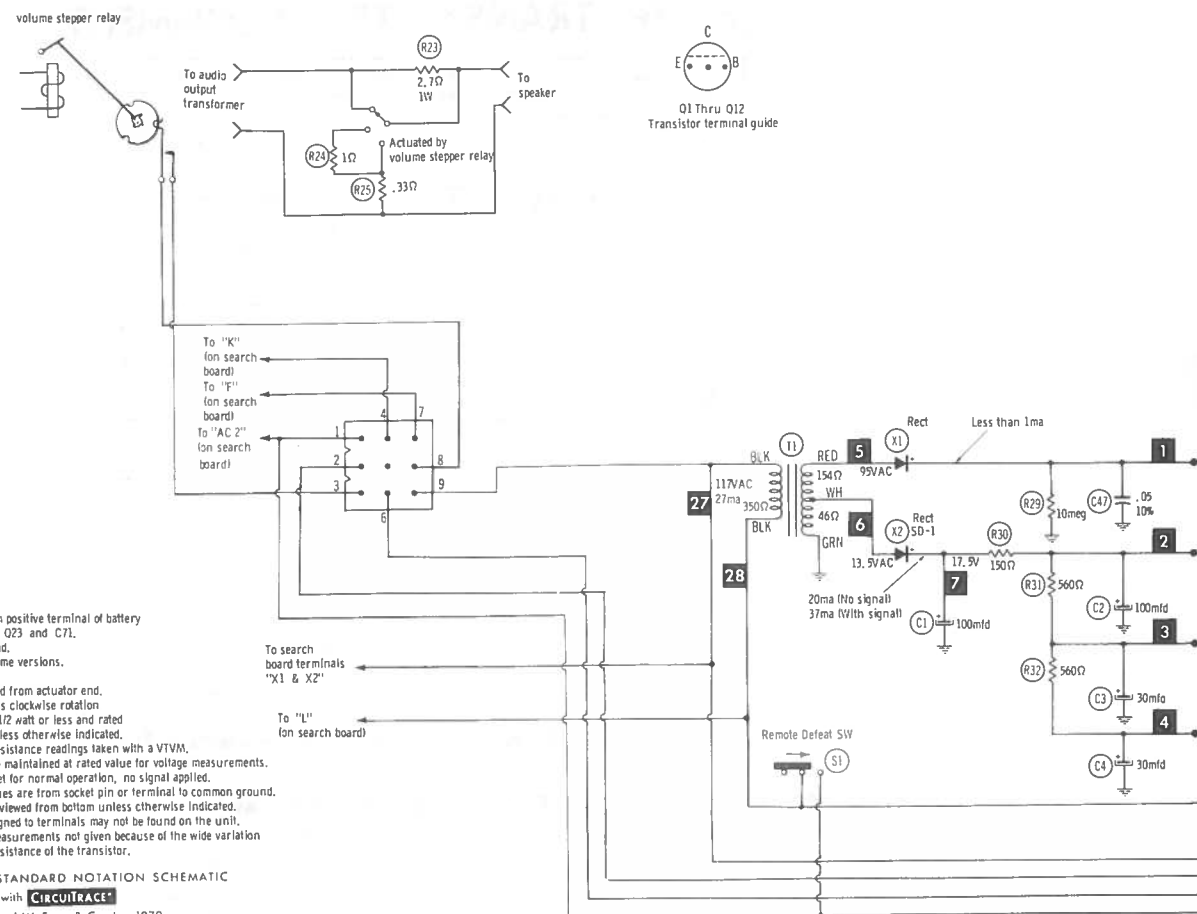
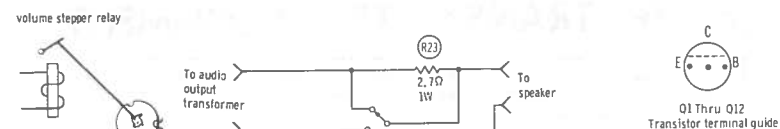
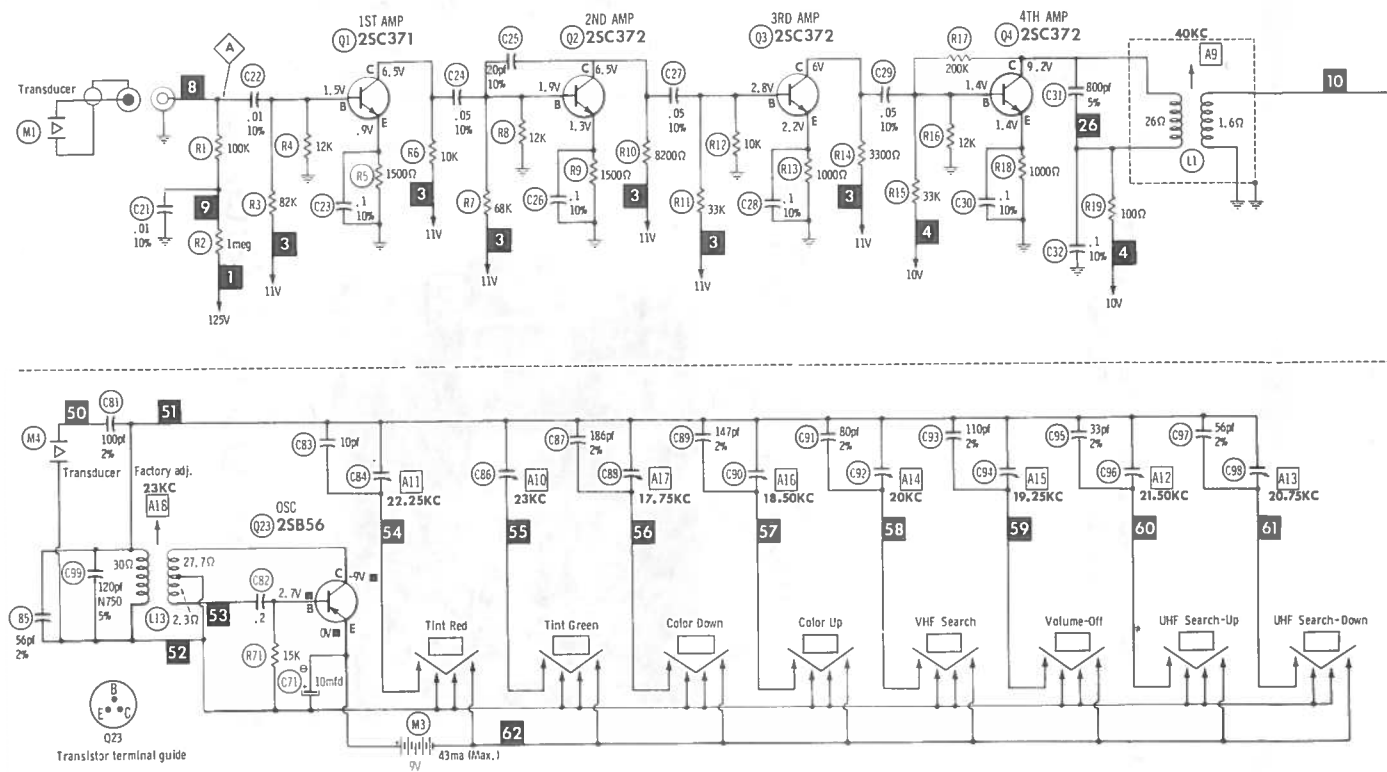
DATE 12-70

SET 1144 FOLDER 1-B

MAGNAVOX REMOTE CONTROL RECEIVER  
704054-1, TRANSMITTER 704041-1

SET 1144 FOLDER 1-B





- Measured from positive terminal of battery and emitter of Q23 and C71.
- ⚡ Denotes ground.
- \* Not used in some versions.
- Ⓢ See parts list.
- 1. Controls viewed from actuator end.
- 2. Resistor values are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- 3. Voltage and resistance readings taken with a VTVM.
- 4. Supply voltage maintained at rated value for voltage measurements.
- 5. All controls set for normal operation, no signal applied.
- 6. Measured values are from socket pin or terminal to common ground.
- 7. All terminals viewed from bottom unless otherwise indicated.
- 8. Numbers assigned to terminals may not be found on the unit.
- 9. Resistance measurements not given because of the wide variation in internal resistance of the transistor.

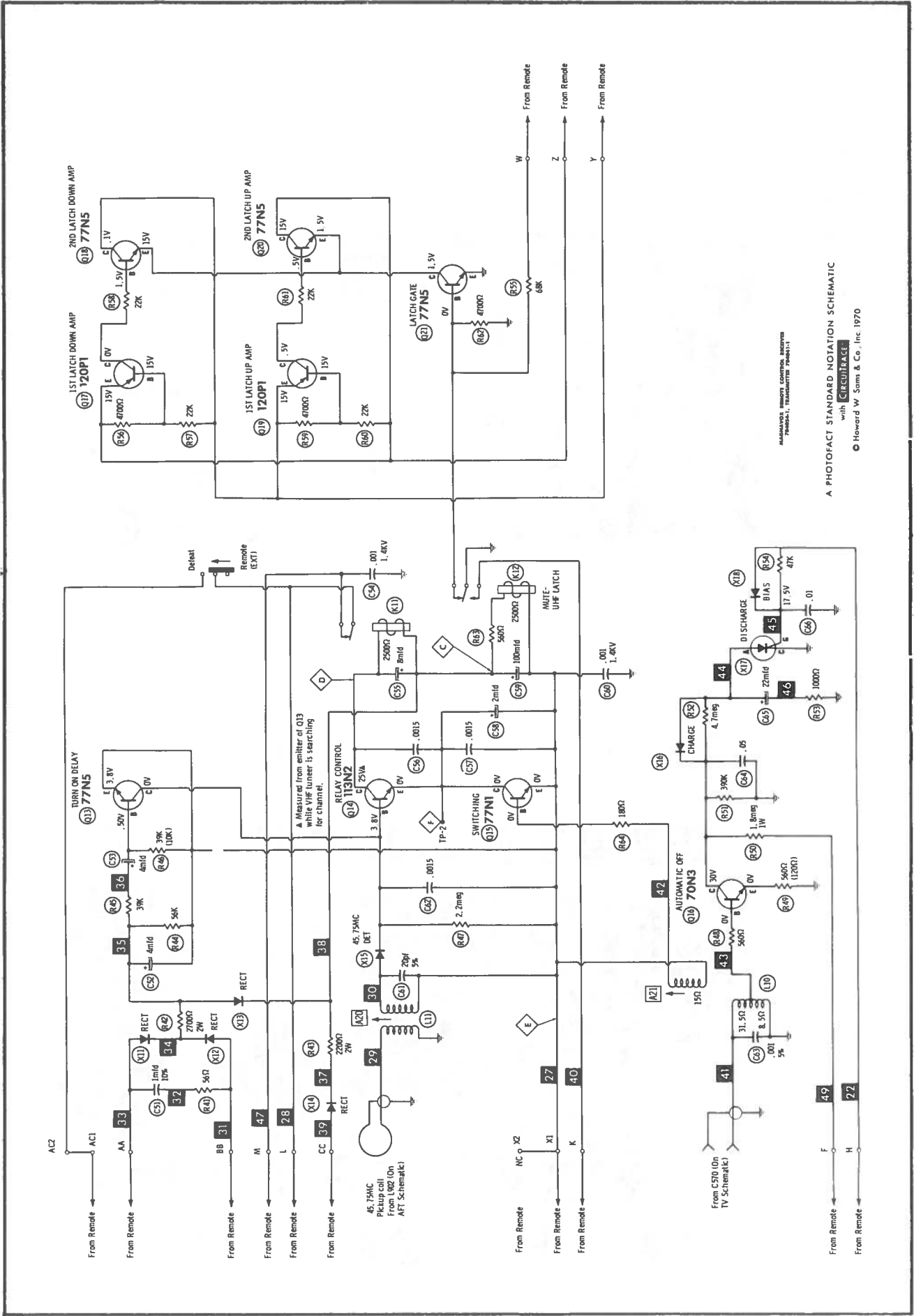
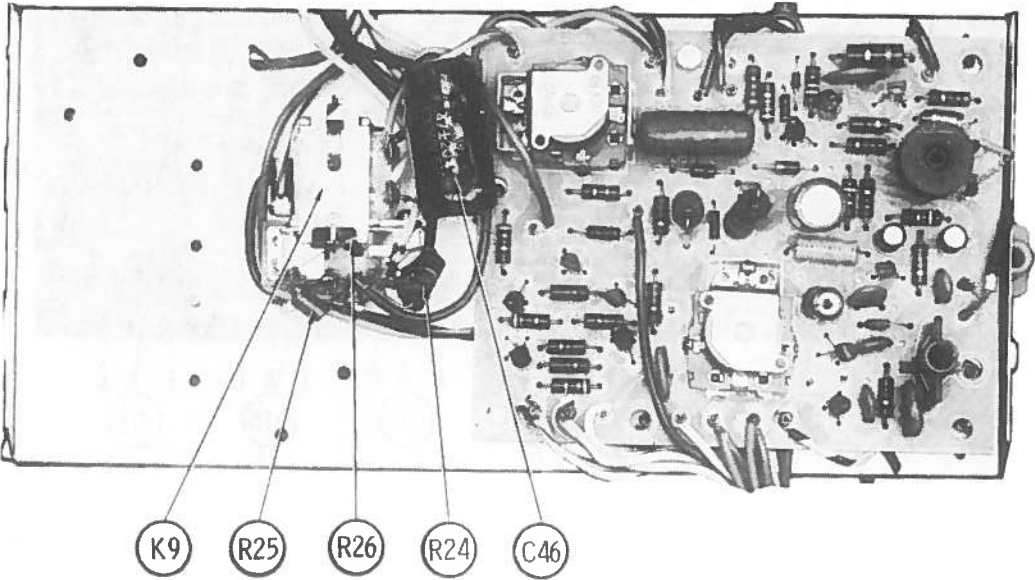
A PHOTOFAC STANDARD NOTATION SCHEMATIC  
with **CIRCUITRACE**  
© Howard W. Sams & Co., Inc. 1970

REMOTE CONTROL RECEIVER ALIGNMENT

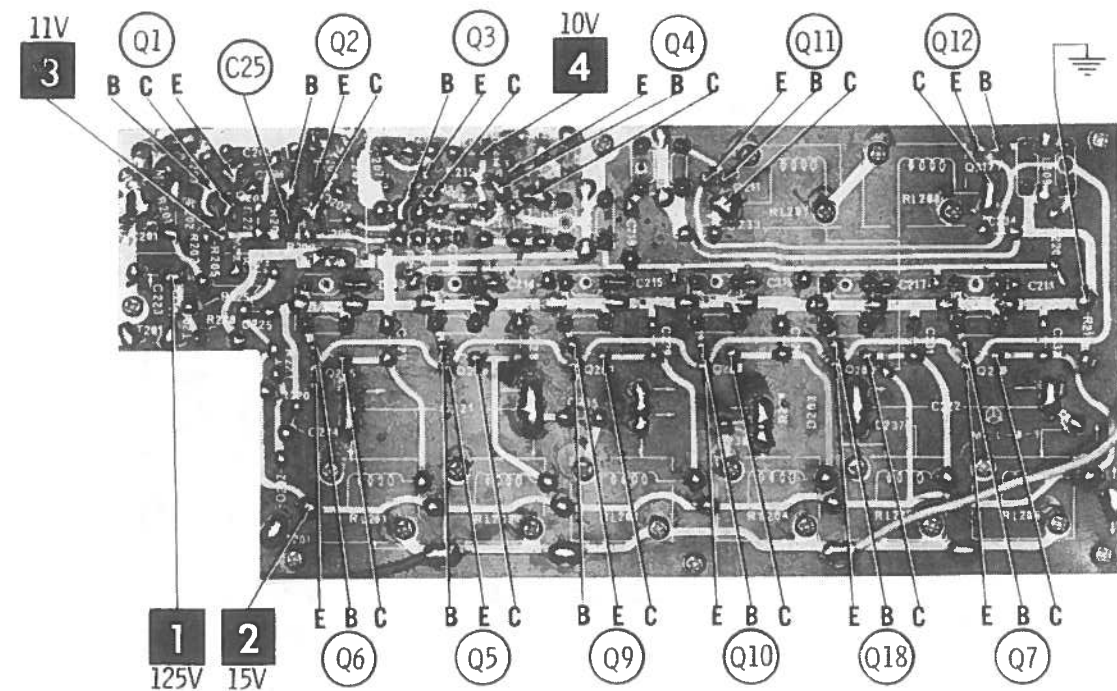
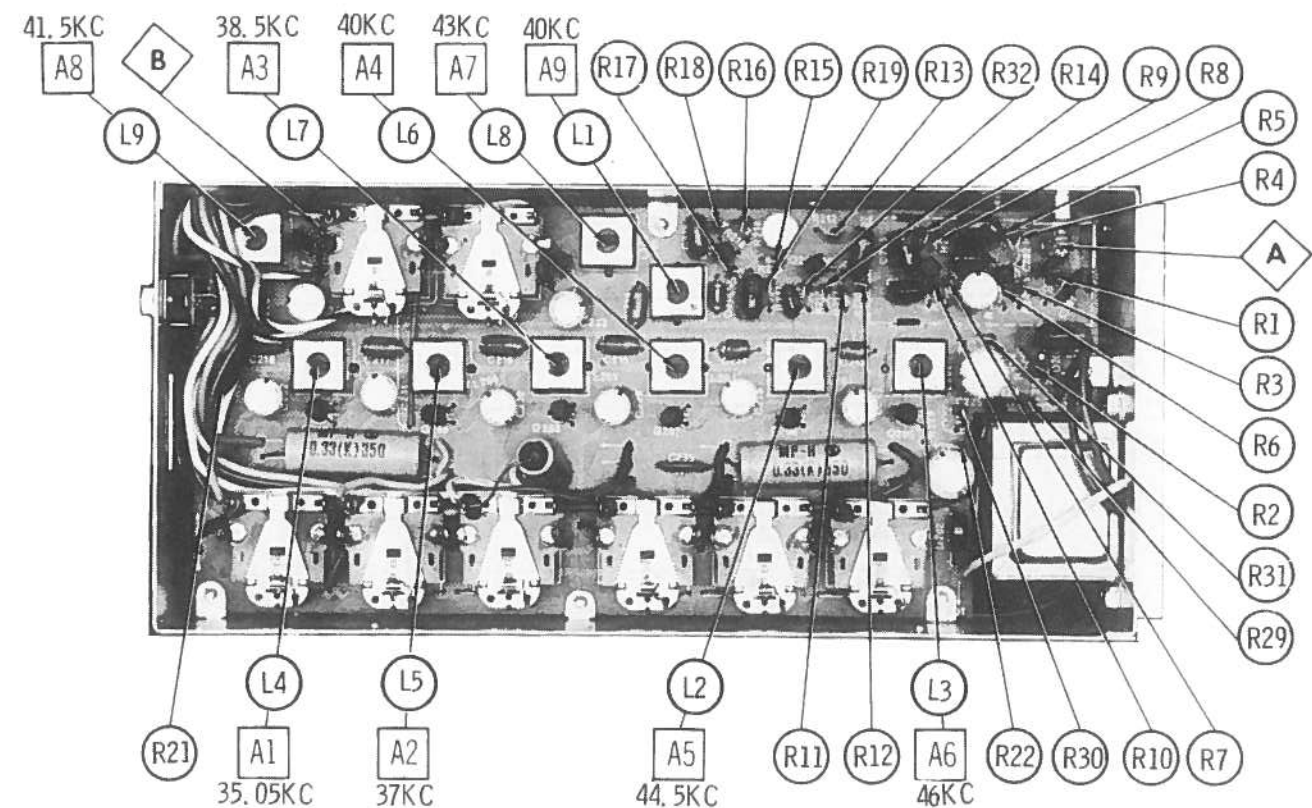
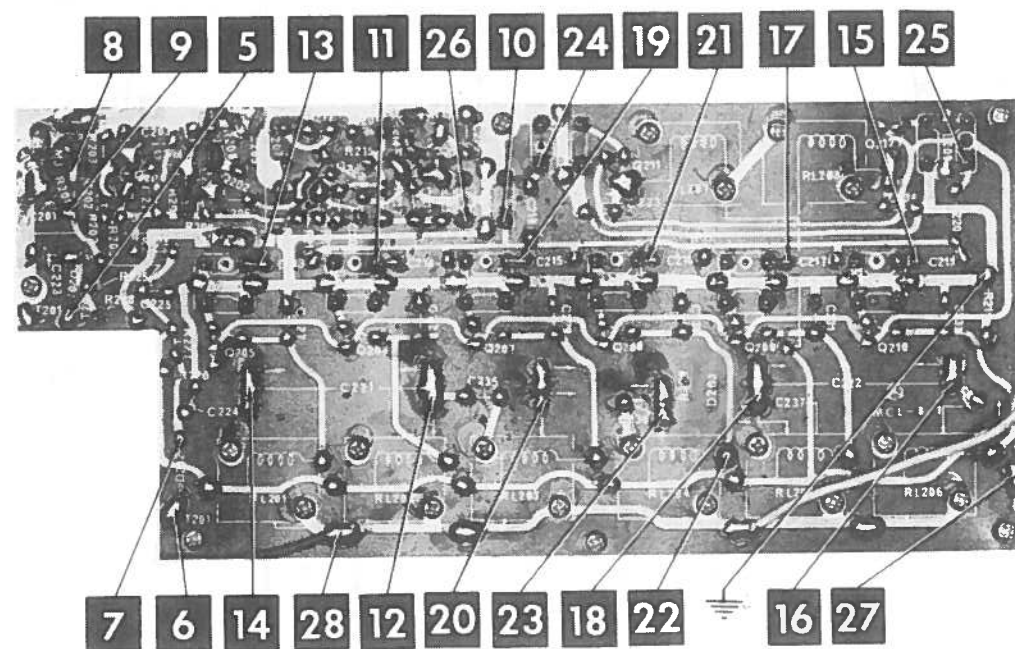
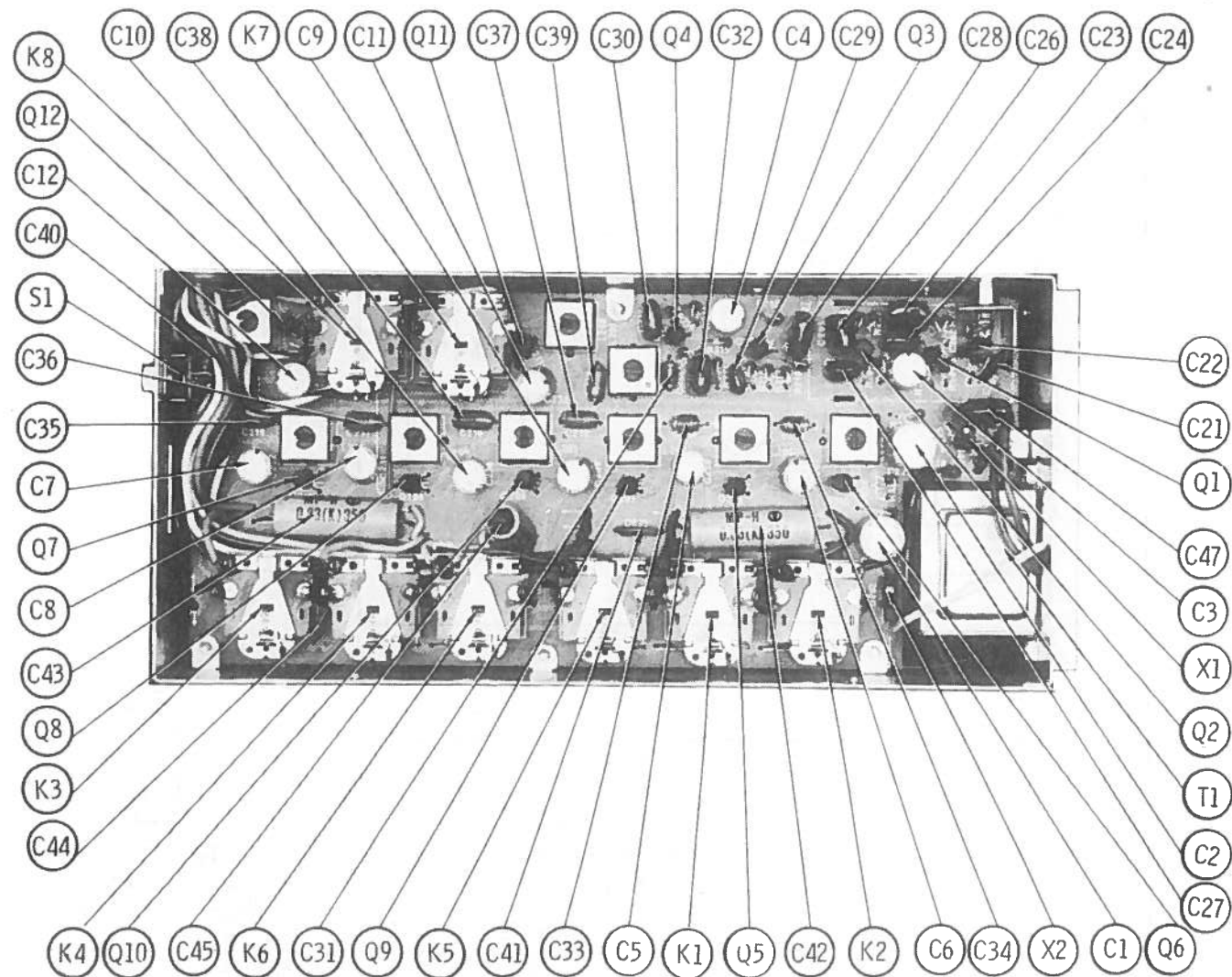
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	DEPRESS	CONNECT VTVM	ADJUST	REMARKS
Connect high side thru .01mfd to Point ①, low side to ground.	35.50KC	Color - Down	DC probe to Point ①, low side to ground.	A1	Adjust for maximum.
"	37.00KC	Color - Up	"	A2	" " "
"	38.50KC	Volume - Off	"	A3	" " "
"	40.00KC	VHF - Search	"	A4	" " "
"	44.50KC	Tint - Red	"	A5	" " "
"	46.00KC	Tint - Green	"	A6	" " "
"	43.00KC	UHF - Search Up	"	A7	" " "
"	41.50KC	UHF - Search Down	"	A8	" " "
"	40.00KC	Broadband Output	"	A9	" " "

SEARCH ALIGNMENT

Disconnect 4-pin plug PL-10 from Search Board.			
DEPRESS	CONNECT VTVM	ADJUST	REMARKS
VHF Button	DC probe to Point ①, low side to Point ②. Jumper Point ② to Point ③.	A20	Adjust for maximum.
VHF Button	Remove jumper from Point ② and ③. Connect jumper from Point ① to Point ④.	A21	Adjust for maximum.



A PHOTOFACT STANDARD NOTATION SCHEMATIC  
with **CIRCUITRY**  
© Howard W. Sams & Co., Inc. 1970





**PARTS LIST AND DESCRIPTION**  
(When ordering parts, state Model, Part Number, and Description.)

**TRANSMITTER**

**TRANSISTORS**

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q22	2SB56	Oscillator	61J004-1	GE-2	TR-14	HEP632	SK3004	ECG 102

**ELECTROLYTIC CAPACITORS**

ITEM No.	RATING	PART No.	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C71	10 16V	27J002-1	MC0-70	EP15-10	PC10-50	MT1-5	MTV10C850	TE-1155

**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.
C81	100 .2mfd 12V	2%	ADM-15-100	ADM-15-100	CD15C100J500	DM-15-100J	SX310	MS-41
C82	10	2%						
C83	20	2%						
C84	56	2%						
C85	20	2%						
C86	186	2%						
C87	20	2%						
C88	147	2%						
C89	20	2%						
C90	80	2%						
C91	20	2%						
C92	110	2%						
C93	20	2%						
C94	33	2%						
C95	20	2%						
C96	56	2%						
C97	20	2%						
C98	120 N750	5%						
C99				TCN-120			CN7312	10TCU-T12

# Magnavox Part Number.

**COILS (RF-IF)**

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L13	Oscillator	36J003			

**BATTERIES**

ITEM No.	VOLTAGE	MFGR. PART No.	REPLACEMENT DATA		NOTES
			EVEREADY	MALLORY	
M3	9V		206	M-1611	

**MISCELLANEOUS**

ITEM No.	PART NAME	PART No.	NOTES
M4	Transducer	57J001-1	
	Pushbutton Springs	16J003-1	8 used
	Pushbutton Contacts	16J004-1	8 used
	Transmitter Case	14J001-1	Top
	Transmitter Case	14J002-1	Bottom
	Transmitter Case	14J003-1	Front
	Pushbuttons	14J004-1	8 used
	Pushbutton Holder	73J009-1	

**PARTS LIST AND DESCRIPTION**  
(When ordering parts, state Model, Part Number, and Description.)

**REMOTE RECEIVER**

**TRANSISTORS**

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SC371	1st Amp		GE-17	TR-51	HEP50	SK3018	ECG 123A
Q2	2SC372	2nd Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q3	2SC372	3rd Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q4	2SC372	4th Amp		GE-10	TR-51	HEP55	SK3018	ECG 123A
Q5	2SC373	Tint Red Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q6	2SC373	Tint Green Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q7	2SC373	Color Down Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q8	2SC373	Color Up Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q9	2SC373	VHF Search Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q10	2SC373	Volume Off Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q11	2SC373	UHF Search Up Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A
Q12	2SC373	UHF Search Down Relay Control		GE-17	TR-51	HEP55	SK3020	ECG 123A

**POWER RECTIFIERS & SIGNAL DIODES**

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	53-J001-1	GE-504A	804 or 5A4-0	ECG 116 or ECG 117	SK3031 or SK3017A	
X2	53-J002-1 (S0-1)	GE-504A	804 or 5A4-0	ECG 116 or ECG 117	SK3031 or SK3017A	

**ELECTROLYTIC CAPACITORS**

ITEM No.	RATING	PART No.	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	100 25V	27J001-1	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C2	100 25V	27J001-1	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C3	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C4	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C5	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C6	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C7	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C8	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C9	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C10	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C11	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5
C12	30 25V	27J001-2	MC0-110	EP30-25	PC30-35	MT1-13.5	MTV30CB25	TE-1207.5

**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.
C21	.01 400V 10%		V1614S1	CPR-10000J	OMF4S1	40P-1-103	PVC411	4PS-S10
C22	.01 400V 10%		V1614S1	CPR-10000J	OMF4S1	40P-1-103	PVC411	4PS-S10
C23	.1 50V 10%		OBE2P1		DMF1P1	10P-2-104	PVC101	225P10491
C24	.05 50V 10%		V161285		WMF1S5	10P-2-503	PVC215	2PS-S50
C25	.20 50V 10%		NPO-DI 20	DTZ-20	CCO-200	CCTO-200	CNO420	10TCC-Q20
C26	.1 50V 10%		DBE2P1		OMF1P1	10P-2-104	PVC101	225P10491
C27	.05 50V 10%		V1612S5		WMF1S5	10P-2-503	PVC215	2PS-S50
C28	.1 50V 10%		OBE2P1		OMF1P1	10P-2-104	PVC101	225P10491
C29	.05 50V 10%		V1612S5		WMF1S5	10P-2-503	PVC215	2PS-S50
C30	.1 50V 10%		OBE2P1		DMF1P1	10P-2-104	PVC101	225P10491
C31	.800 50V 5%			CPR-820J	OM-19F821J500	OM-19-821J	SX382	MS-382
C32	.1 50V 10%		DBE2P1		OMF1P1	10P-2-104	PVC101	225P10491
C33	.860 50V 5%			CPR-820J	CO19F821J500	OM-19-821J	SX382	MS-382
C34	.800 50V 5%			CPR-820J	CO19F821J500	OM-19-821J	SX382	MS-382
C35	1350 50V 5%			CPR-1300J	CO19F132J500	DM-19-132J	SX213	MS-213
C36	1250 50V 5%			CPR-1200J	CO19F122J500	DM-19-122J	SX212	MS-212
C37	1070 50V 5%			CPR-1000J	CO19F102J500	DM-19-102J	SX210	MS-21
C38	1150 50V 5%			CPR-1000J	CO19F102J500	DM-19-102J	SX210	MS-21
C39	.930 50V 5%			CPR-910J	CO19F911J500	OM-19-911J	SX391	MS-391
C40	.001 50V 5%			CPR-1000J	CO19F102J500	DM-19-102J	SX210	MS-21
C41	.01 400V 10%		GPO X5S103K	00-103	GP10000	CCD-103	JF110	10TS-S10
C42	.33 400V 10%		V1614P33		PKM4P33	40P-5-334	PVC6033	4PS-P10
C43	.33 400V 10%		V1614P33		PKM4P33	40P-5-334	PVC6033	4PS-P10
C44	.01 400V 10%		GPO X5S103K	00-103	GP10000	CCD-103	JF110	10TS-S10
C45	.1 400V 10%		DBE4P1		OPMS4P47	40P-3-104	PVC401	4PS-P10
C46	.47 400V 10%		V1614P47		OPMS4S5	40P-6-474	PVC407	4PS-S50
C47	.05 400V 10%		V1614S5		OPMS4S5	PVC415	4PS-S50	

MAGNAVOX REMOTE CONTROL RECEIVER  
704054-1, TRANSMITTER 704041-1

FOLDER 1-B

**PARTS LIST AND DESCRIPTION**  
(When ordering parts, state Model, Part Number, and Description.)

**COILS (RF-IF) REMOTE RECEIVER (CONTINUED)**

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Broad Band Output	36J001-1			
L2	Tint Red	36J002-1			
L3	Tint Green	36J002-1			
L4	Color Down	36J002-1			
L5	Color Up	36J002-1			
L6	VHF Search	36J002-1			
L7	Volume Off	36J002-1			
L8	UHF Search-Up	36J002-1			
L9	UHF Search-Down	36J002-1			

**TRANSFORMER (Power)**

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .027A AC	95VAC @ .001A DC Tap @ 13.5V AC @ .028A DC	32J001-1 (12Q9Z)					

**MISCELLANEOUS**

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	16J001-1	Tint Red
K2	Relay	16J001-1	Tint Green
K3	Relay	16J001-1	Color Down
K4	Relay	16J001-1	Color Up
K5	Relay	16J005-1	VHF Search
K6	Relay	16J001-1	Volume - Off
K7	Relay	16J001-1	UHF Search - Up
K8	Relay	16J001-1	UHF Search - Down
K9	Relay	160418-6	Volume - Stepper
M1	Transducer	58J001-1	
S1	Switch	16J002-1	Remote Defeat

**REMOTE SEARCH**

**TRANSISTORS**

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q13	77N5	Turn on Delay	610077-5	GE-20	TR-21	HEP54	SK3018	ECG 123
Q14	113N2	Relay Control	610113-2					
Q15	77N1	Switching	610077-1	GE-20	TR-21	HEP721	SK3018	ECG 123
Q16	70N3	Automatic Off	610070-3					ECG 128
Q17	120P1	1st Latch Down Amp	610120-1	GE-22	TR-19	HEP52		ECG 106
Q18	77N5	2nd Latch Down Amp	610077-5	GE-20	TR-21	HEP54	SK3018	ECG 123
Q19	120P1	1st Latch Up Amp	610120-1	GE-22	TR-19	HEP52		ECG 106
Q20	77N5	2nd Latch Up Amp	610077-5	GE-20	TR-21	HEP54	SK3018	ECG 123
Q21	77N5	Latch Gate	610077-5	GE-20	TR-21	HEP54	SK3018	ECG 123

**POWER RECTIFIERS & SIGNAL DIODES**

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X11	530082-4	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	
X12	530082-4	GE-504A	8D4 or 5A4-0	ECG 116 or ECG 117	SK3030 or SK3031	
X13	530072-14	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	
X14	530082-4	GE-504A	8D4 or 5A4-0	ECG 116 or ECG 117	SK3030 or SK3031	
X15	530065-2	GE-504A	8D4 or 5A4-0	ECG 116 or ECG 117	SK3030 or SK3031	
X16	530072-6	GE-504A	804 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	
X17	610121-1					
X18	530072-14	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	Silicon Controlled Switch

**PARTS LIST AND DESCRIPTION**  
(When ordering parts, state Model, Part Number, and Description.)

**REMOTE SEARCH (CONTINUED) ELECTROLYTIC CAPACITORS**

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.
C52	4 25V	270068-702	MCD-50	EP30-5	PC5-100	MT1-3	MTV4CB50	TE-1201.2
C53	4 25V	270068-702	MCD-50	EP30-5	PC5-100	MT1-3	MTV4CB50	TE-1201.2
C55	10 35V		PRS1320	EP50-10	BR10-50	MT1-6	MTV10CB50	TE-1304
	10 25V	270082-605	PRS1320	EP50-10	BR10-50	MT1-6	MTV10CB50	TE-1304
C58	2 50V	270082-701	PTT88	EA50-2	AL2-50	MT1-1	MTA2D50	TE-1301
C59	100 35V		PRS1360	EA50-100	BR100-50	MT1-20.5	MTV100DE35	TE-1309
	100 25V	270068-619	PRS1360	EA50-100	BR100-50	MT1-20.5	MTV100DE35	TE-1309
C65	22 15V	270090-1329	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1157

**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.
C51	1 400V 10%	#250600-2	V1614W1	AC-1000			UAC210	125L-D10
C54	.001 1.4KVDC		CI-102	DD30-1500				30GA-D15
C56	.0015		HVD-15-1500	DD30-152				30GA-D15
C57	.0015		HVD-15-1500	AC-1000			UAC210	125L-D10
C60	.001 1.4KV		CI-102	DTZ-20	HP020		CH0420	10TCC-Q20
C61	20 5%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C62	.0015			CPR-1000J	CD19F102J500	DM-19-102	SK210	MS-21
C63	.001		GPD Z5V503P	DD-503			GP150	
C64	.05		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C66	.01							

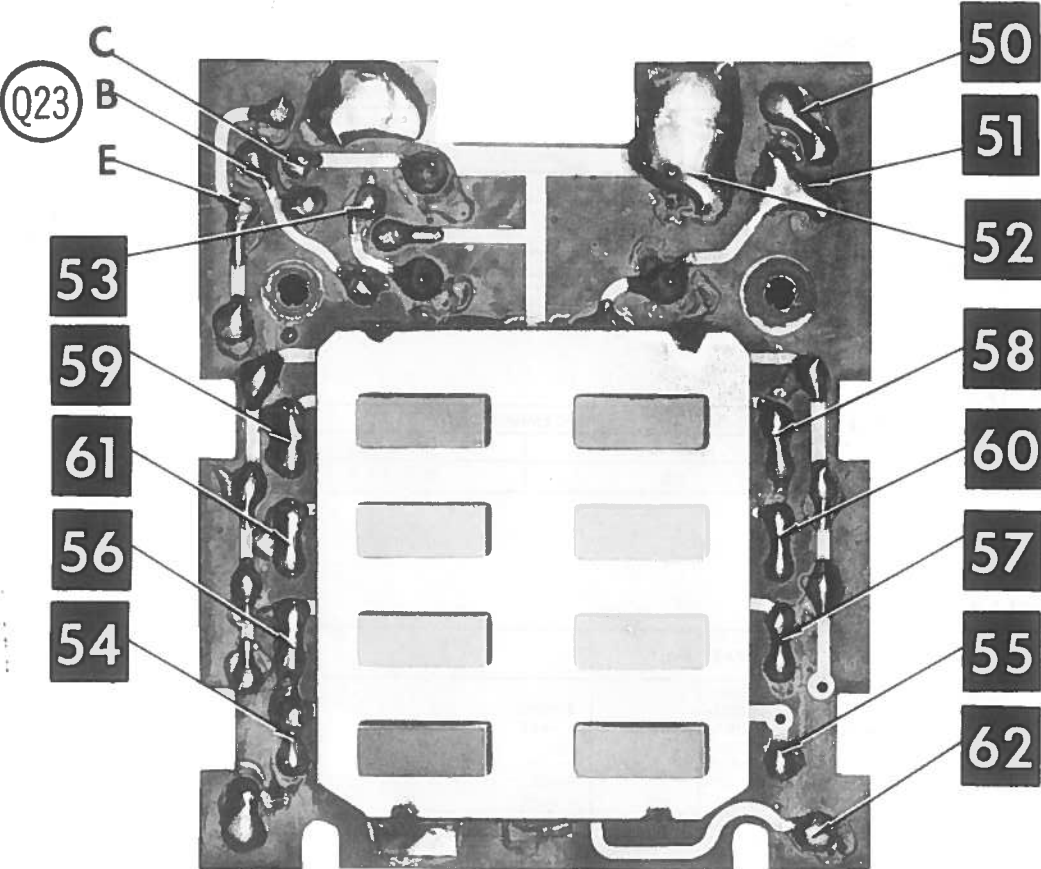
**COILS (RF-IF)**

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L10	31.5KC Sync Input	361300-2			
L11	45.75MC Input	361321-2			

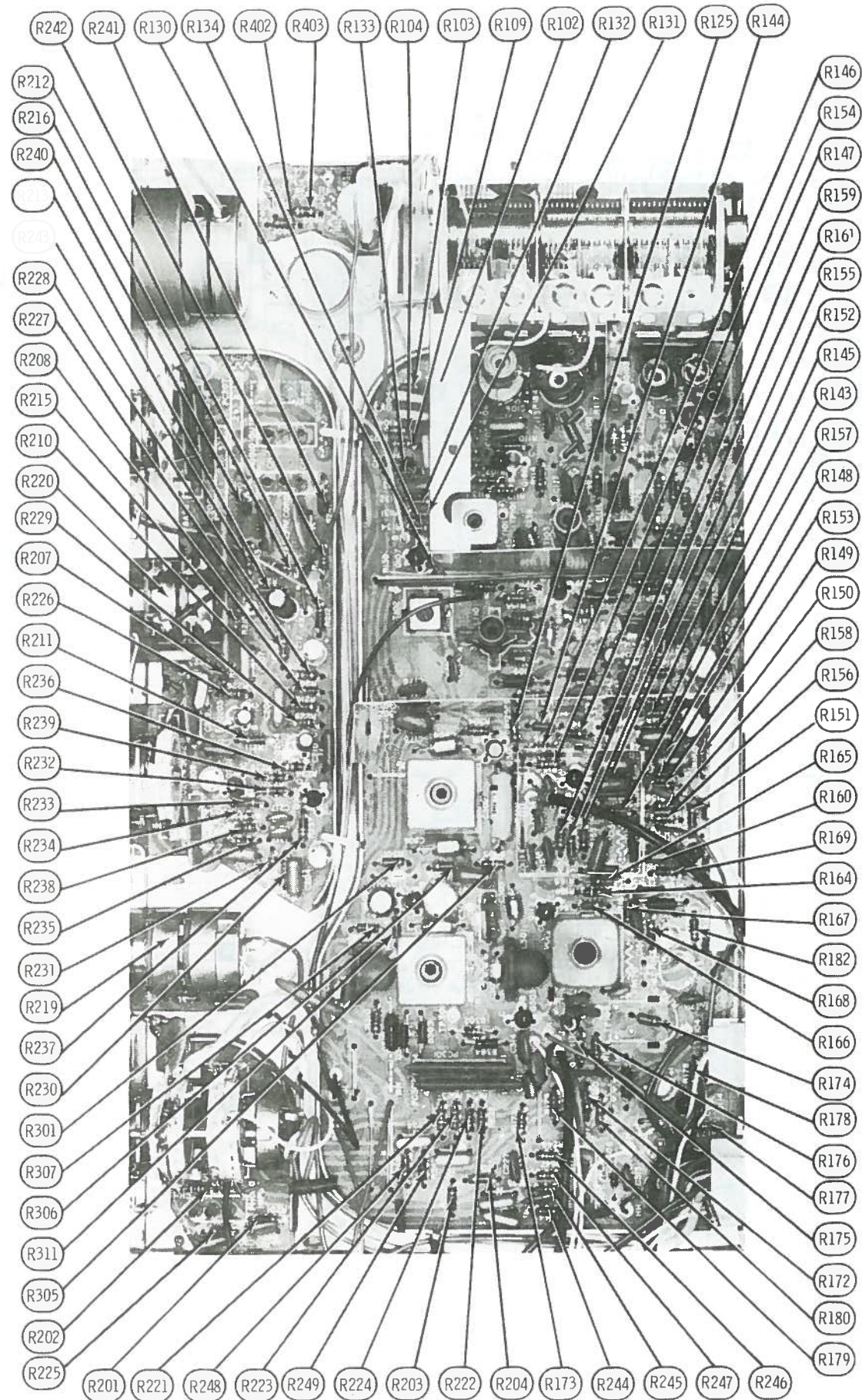
**MISCELLANEOUS**

ITEM No.	PART NAME	PART No.	NOTES
K11	Relay	160413-6	
K12	Relay	160413-2	Search Audio Mute and UHF Latch Relay

A Howard W. Sams CIRCUITRACE™ Photo







# PHOTOFACT® Folder

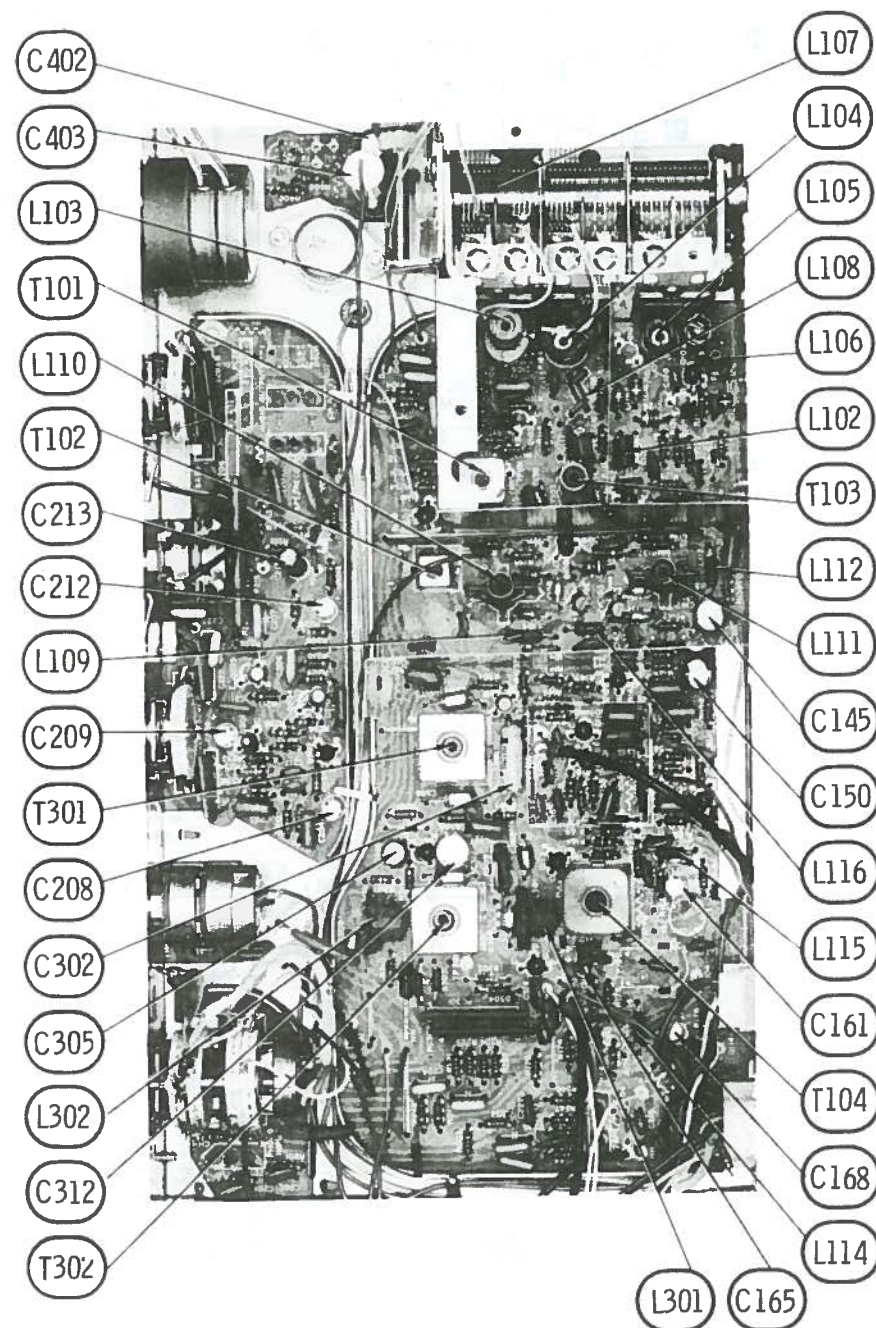
with CIRCUITRACE®

**MAGNAVOX AM-FM  
CHASSIS R228-01-BA**

## IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1144 FOLDER 1. File this Folder with the TV Folder in the yellow filing jacket provided.

**MAGNAVOX AM-FM  
CHASSIS R228-01-BA**



**MAGNAVOX AM-FM  
CHASSIS R228-01-BA**

**REMEMBER TO ASK— "What else needs fixing?"**

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



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UB708

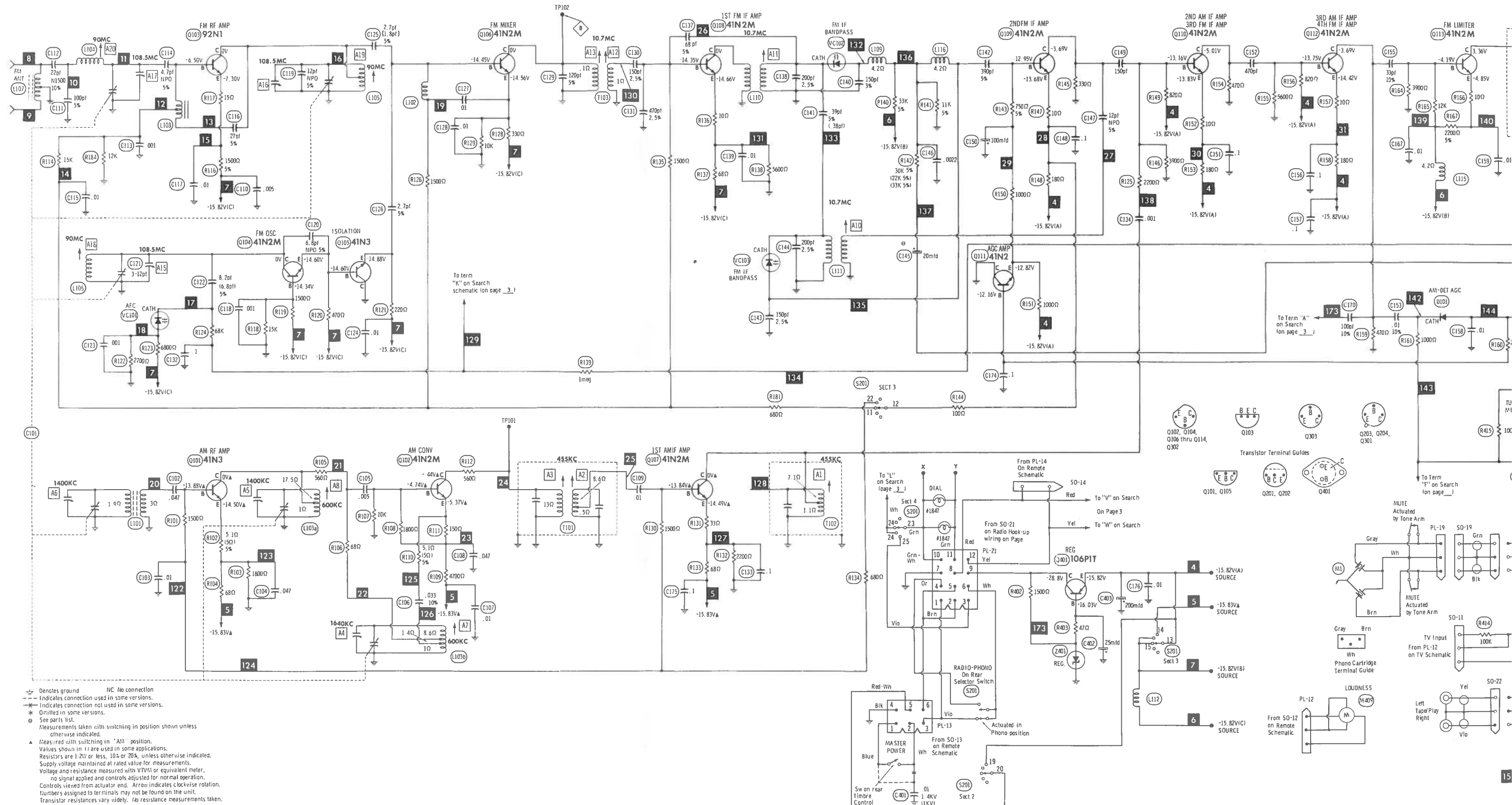
Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1970 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America.

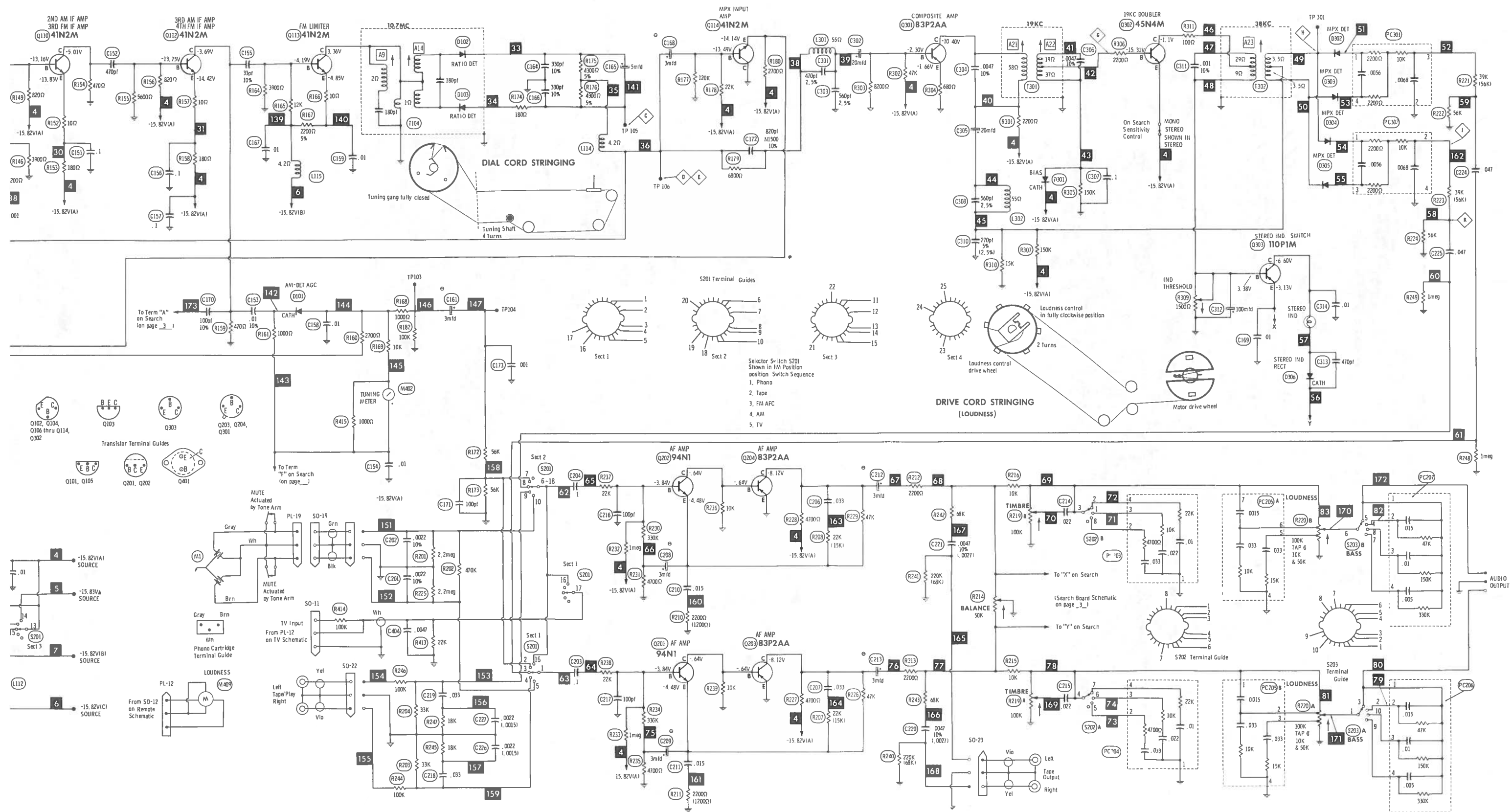
**DATE 12-70**

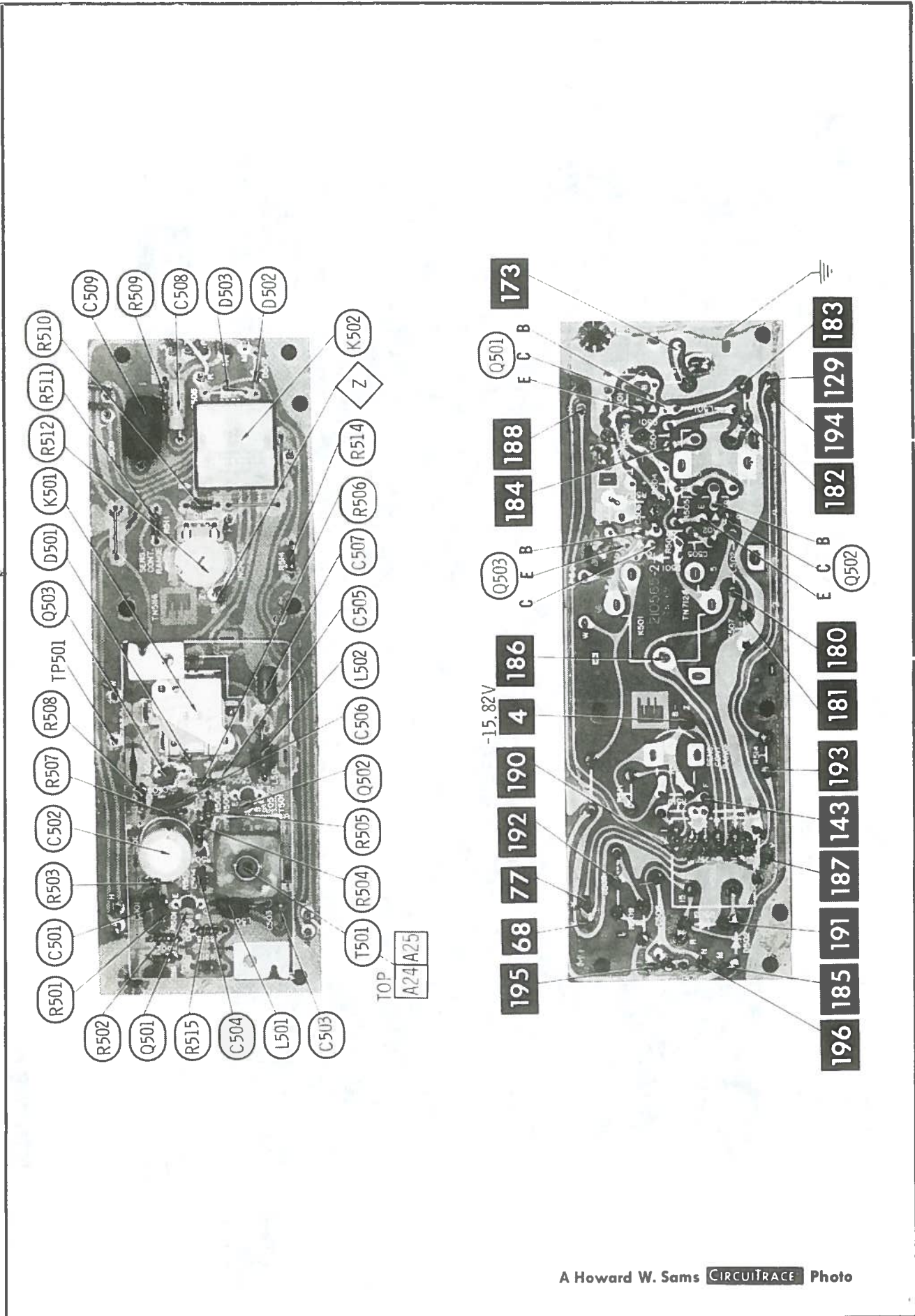
**SET 1144 FOLDER 1-C**

**SET 1144 FOLDER 1-C**

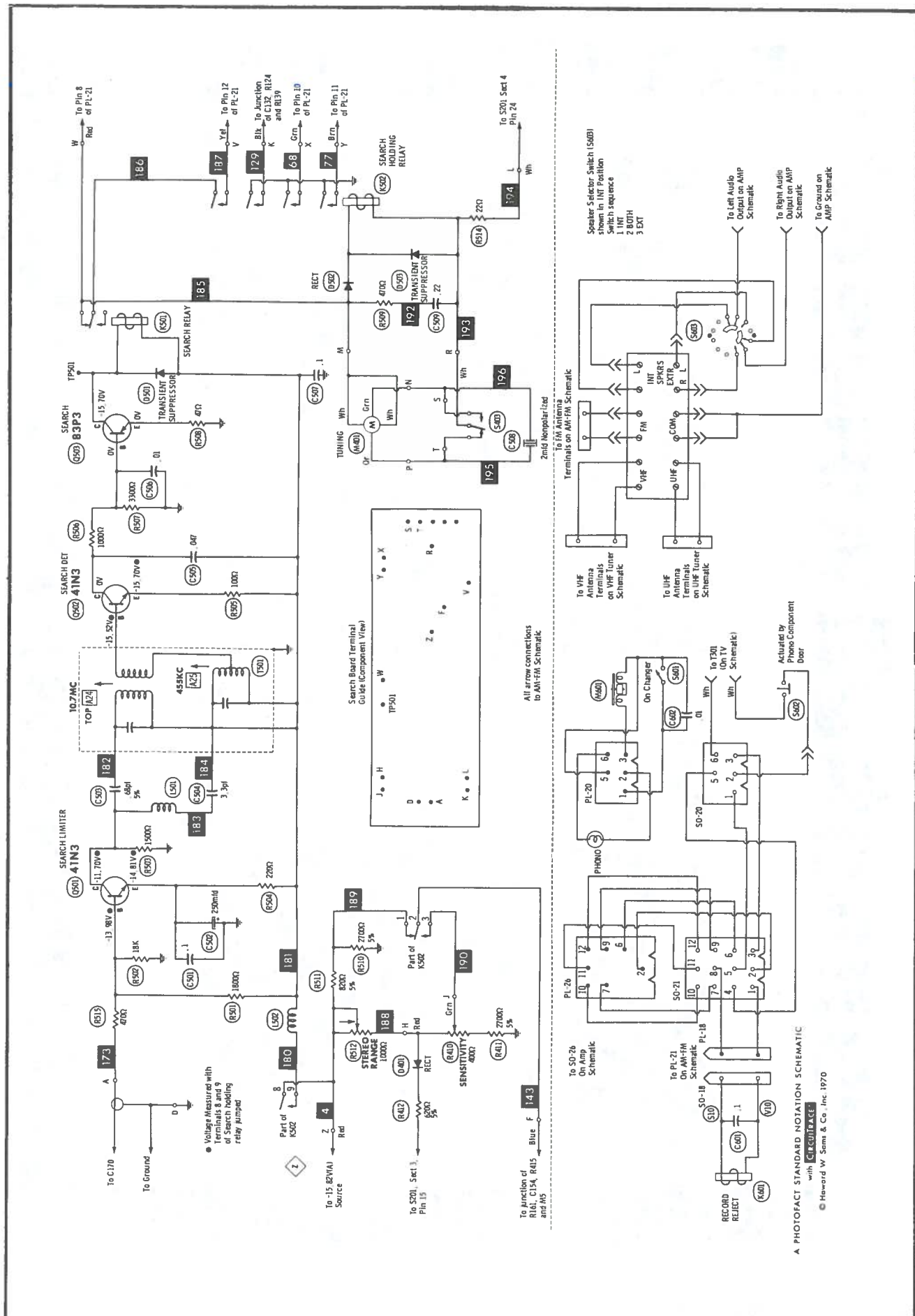






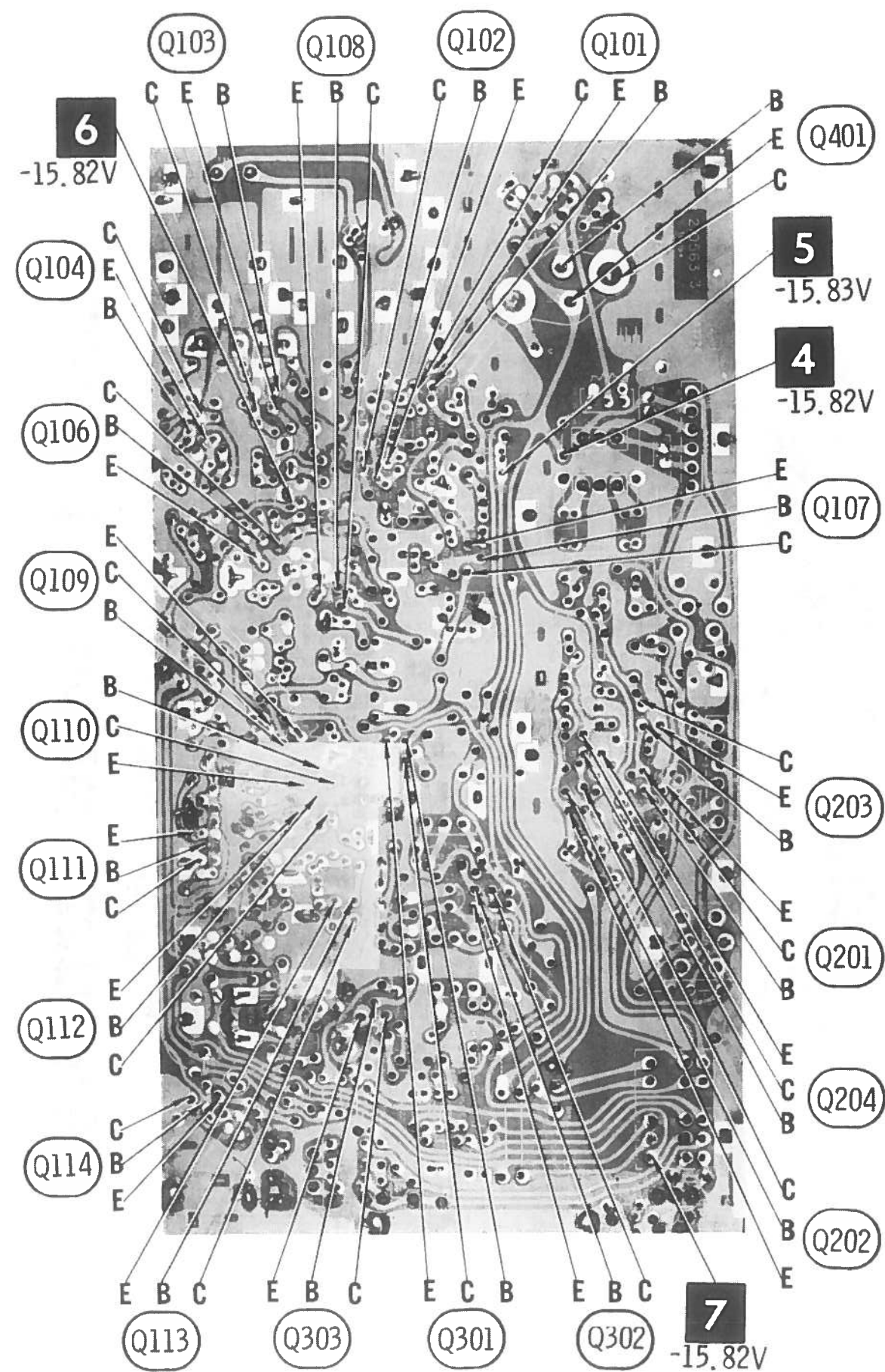
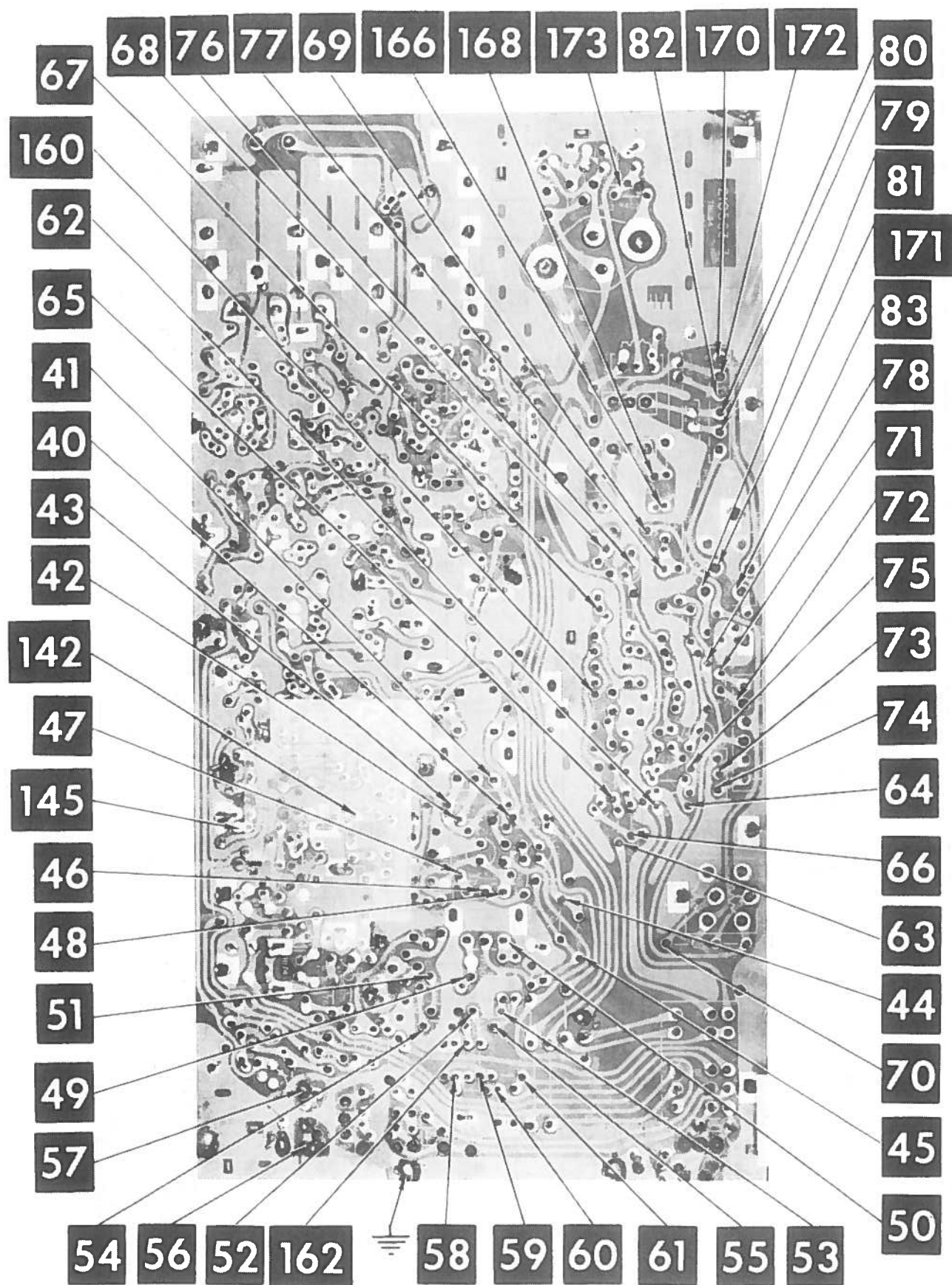


A Howard W. Sams **CIRCUITRACE** Photo

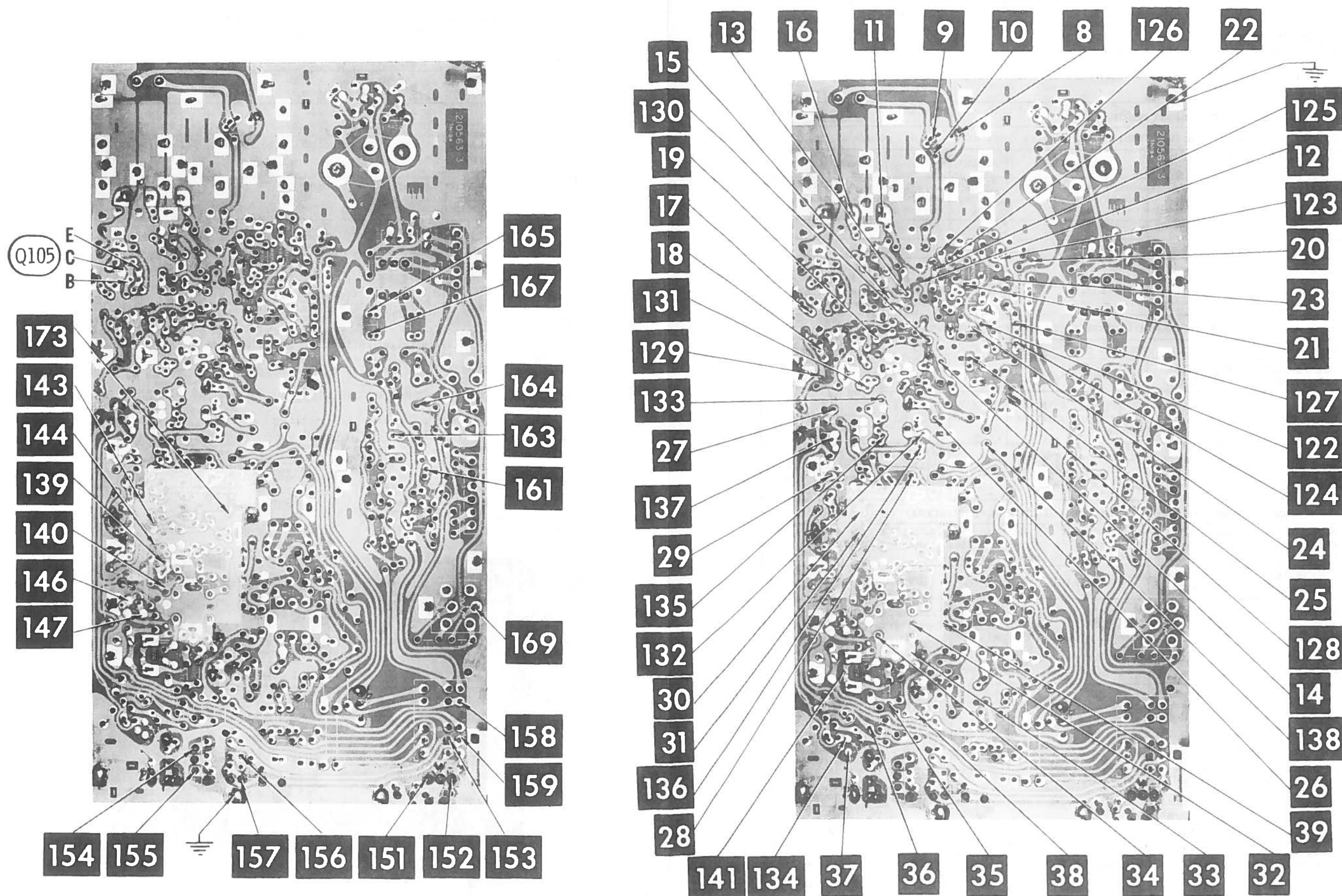


A PHOTOFACT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE** © Howard W. Sams & Co., Inc. 1970









## ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment.  
Maintain line voltage at 117VAC. Allow a 15-minute warm-up period.  
Use only enough generator output to obtain a suitable indication.

Suggested Alignment Tools:

GENERAL CEMENT

WALSCO

	GENERAL	GENERAL	WASCO
A1, A4 thru A6, A15 thru A17 ....	8868, 8987, 9089 .....	2531X, 2541, 2587	
A2, A3, A18 .....	9296, 9297, 9300 .....	2510, 2546, 2547	
A7 thru A14, A19, A20 thru A23 ..	8606, 8606L, 8869 .....	2543, 2544, 2588	

### AM ALIGNMENT—SELECTOR IN AM POSITION

Connect generator across loop fashioned of several turns of wire. Set volume at maximum.

	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	455KC 400 cycle modulation	Tuning gang fully open.	Output Meter across voice coil.	A1,A2, A3	Adjust for maximum. Repeat until no further improvement can be made.
2.	1640KC	"	"	A4	Adjust for maximum.
3.	1400KC	Tune to signal	"	A5,A6	"
4.	600KC	"	"	A7,A8	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.

### FM IF ALIGNMENT USING AM SIGNAL GENERATOR—SELECTOR IN FM POSITION

High side of generator thru .001mfd to point **B**, low side to ground.

	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC Unmodulated	Point of non-interference	DC probe of VTVM to point $\diamond$ , common to ground.	A9,A10, A11,A12, A13	Adjust for maximum.
6.	"	"	DC probe of VTVM to point $\diamond$ , common to ground.	A14	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.






FIG. 1


### FM IF ALIGNMENT USING FM SIGNAL GENERATOR—SELECTOR IN FM POSITION


High side of generator thru .001mfd to point **B**, low side to ground. Use only enough marker signal for indication. Use 60 cycle frequency modulated signal with 450KC sweep. Use 60 cycle sawtooth voltage in scope for horizontal deflection.

	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC 450KC Sweep	Point of non- interference	Vert. amp of scope to point  , low side to ground.	A9,A10, A11,A12, A13	Disconnect stabilizing capacitor C165. Adjust for maximum gain and symmetry of response similar to Fig.1 with marker as shown. Reconnect C165.
6.	"	"	Vert. amp of scope to point  , low side to ground.	A14	Adjust A14 (secondary) to place marker at center of "S" curve similar to Fig. 2. Readjust A9 (primary) for maximum amplitude and straightness of line.

### FM RF ALIGNMENT—SELECTOR IN FM POSITION

Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead.

	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
7.	108.5MC	High freq. end	DC probe of VTVM to point  , common to ground.	A15, A16, A17	Adjust for maximum.
8.	90MC Unmodulated	Tune to signal.	"	A18, A19, A20	Rock tuning and adjust for maximum. Repeat steps 7 and 8 until no further improvement can be made.







10.7MC

FIG. 2

### ALIGNMENT INSTRUCTIONS (Continued)

High side of generator thru 47K to point **D**, low side to ground.

	GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
9.	19KC	Vert. amp of scope thru 47K to point  , low side to ground.	A21,A22	Adjust for maximum.
10.	"	Vert. amp of scope thru 47K to point  , low side to ground.	A23	Adjust for maximum 38KC response.
11.	Modulated Left Channel	Vert. amp of scope to point  , low side to ground.	A21,A22, A23	Adjust for MINIMUM. This step should require only slight adjustment.
12.	Modulated Right Channel	Vert. amp of scope to point  , low side to ground		Check for MINIMUM. If necessary make compromise adjustment of A21,A22 & A23.

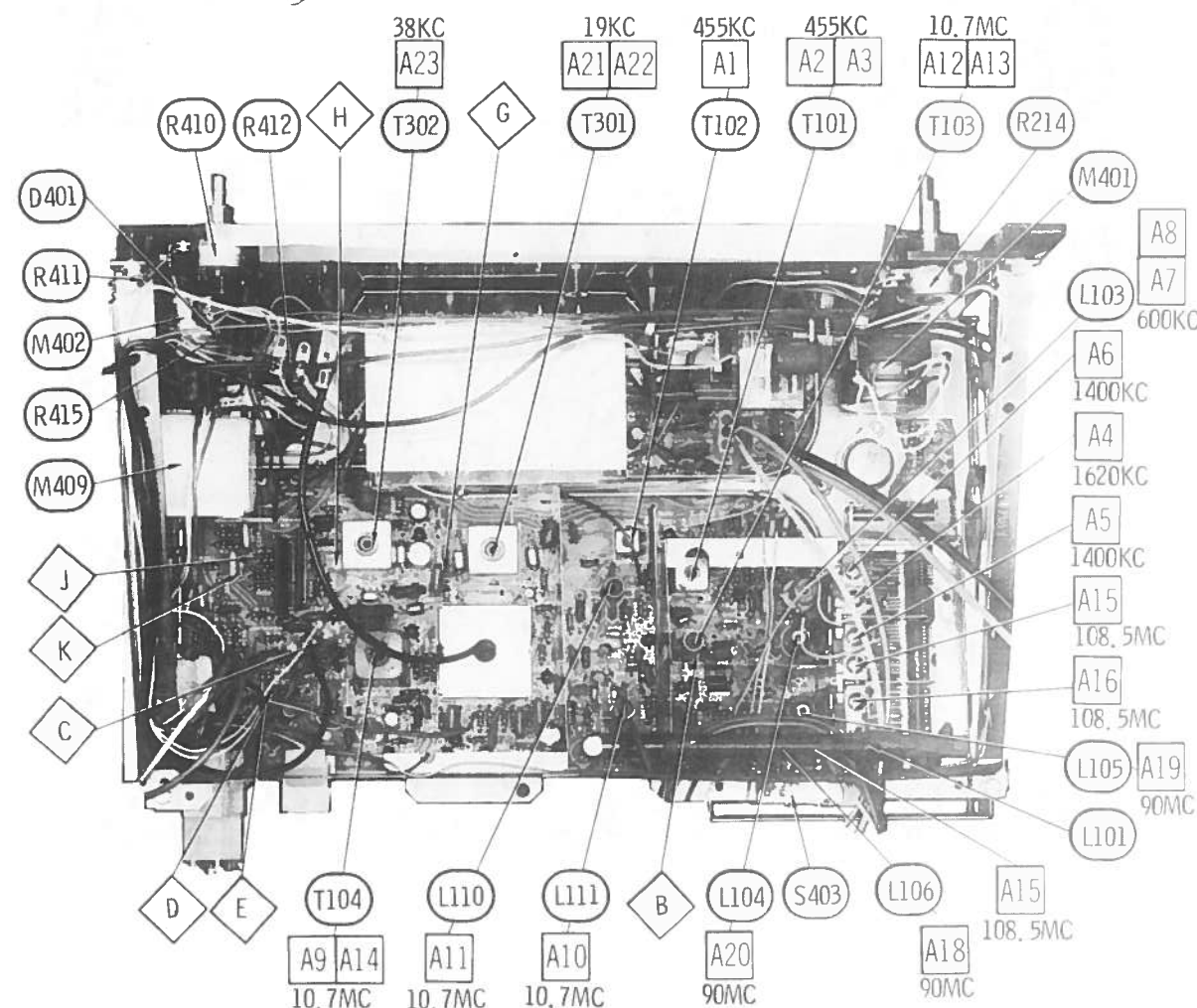
## AM AND FM SEARCH ALIGNMENT AND ADJUSTMENTS

Attach a jumper from either side of L502 to Point  $\textcircled{Z}$ . Connect a VTVM between TP501 and ground. Tune in a weak AM station and adjust A14 for MINIMUM meter indication. Tune in a weak AM station and adjust A14 for MINIMUM meter indication. When tuning in stations, make sure you have a maximum VU meter indication.

Remove jumper from L502 and Point  $\textcircled{Z}$ . Reconnect the VTVM between Terminal F and ground. Turn station Sensitivity control (R140) fully clockwise. Adjust the Range control (R512) until the VTVM indication is the same both on station and during search cycle. With R410 turned fully counterclockwise, radio should lock in on only the very strongest signals. If not, R512 may need additional touch-up adjustment. Disconnect VTVM after adjustments have been completed.

## FM STEREO INDICATOR THRESHOLD ADJUSTMENT (R309)

Tune across dial (with AFC off) noting operation of stereo indicator lamp.  
Adjust R309 until lamp glows on weak stereo stations but does not glow on noise pulses.





PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L101	Loopstick	361165-1		7789	T559
L102	10.7MC Trap	360996-2			
L103	AM RF/AM Oscillator	361195-1			
L104	FM RF	361080-6			
L105	FM Mixer	361235-1			
L106	FM Oscillator	361101-2			
L107	FM Antenna	361108-1			
L108	Neutralizing	361108-2			
L109	Choke (100uh)	361277-1	19-2025	72F104AP	
L110	FM Interstage IF	361321-1			
L111	FM Interstage IF	361321-1			
L112	Choke (100uh)	361277-1			
L114	Choke (100uh)	361277-1	19-2025	72F104AP	
L115	Choke (100uh)	361277-1	19-2025	72F104AP	
L116	Choke (100uh)	361007-1	19-2025	72F104AP	
L301	Choke (10mh)	361007-2	19-1046		T882
L302	Choke (10mh)	361007-2	19-1046		T882
L501	RF Choke (265uh)	361066-1	19-3275	72F274AP	T316
L502	RF Choke (265uh)	361066-1	19-3275	72F274AP	T316
T101	AM Input IF	361316-1			
T102	AM Output IF	361320-1			
T103	FM Input IF	361318-1			
T104	Ratio Detector	361317-1			
T301	19KC Input	361147-1			
T302	38KC Output	360993-4			
T501	AM/FM Auto. Tuning	361106-1			

PHONO CARTRIDGE & NEEDLES

ITEM No.	REPLACEMENT DATA						NOTES
	MFGR. PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		
	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1	560345-1				275D	2644DS	
M2		560344-2		FOC2SD		FOC2644DS	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K501	Relay	160405-1	Search
K502	Relay	160431-1	Search Holding
K601	Solenoid	701314-3	Record Reject Assembly
M401	Motor	500228-1	Tuning
M402	Meter	701263-6	Tuning
M409	Motor	500233-1	Loudness
M601	Motor		Phono (On Changer)
PC203	Component Combination	250456-2	Treble (.033, .022, .01, 4700 ohms, 10K, 22K)
PC204	Component Combination	250465-2	Treble (.033, .022, .01, 4700 ohms, 10K, 22K)
PC205	Component Combination	250457-2	Loudness (.0015, .0015, .0033, .0033, 10K, 15K, 15K)
		250457-3	Alternate Loudness
PC206	Component Combination	250455-2	Bass (.015, .005, .01, 150K, 330K, 47K)
PC207	Component Combination	250455-2	Bass (.015, .005, .01, 150K, 330K, 47K)
PC301	Component Combination	250538-1	MPX Detector Filter (2200, 5600, 10K, 6800)
PC303	Component Combination	250538-1	MPX Detector Filter (5600, 2200, 2200, 10K, 6800)
S201	Switch	160440-4	Function (Stereo Phono, Tape Play, FM AFC, AM, TV)
S202	Switch	160416-1	Treble
S203	Swotch	160416-2	Bass
S403	Switch	160406-2	Motor Reversing
S601	Switch		On-Off (On Changer)
S602	45 RPM Adapter	523717-2	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord	Use BELDEN No. 8524 (Stranded) Available in 12 Colors
	17106 (Plastic) or 17126 (Rubber) - 6 Feet
	17109 (Plastic) or 17129 (Rubber) - 9 Feet
Low-loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor-Unshielded)
	8429 (Two Conductor-Shielded)
	8419 (Three Conductor-Shielded)

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q101	41N3	AM RF Amp	610041-3	GE-20	TR-21	HEP729	SK3018	ECG 108
Q102	41N2M	AM Converter	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q103	92N1	FM RF Amp	610092-1	GE-17	TR-21	HEP56	SK3018	ECG 108
Q104	41N2M	FM Oscillator	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q105	41N3	Isolation	610041-3	GE-20	TR-21	HEP729	SK3018	ECG 108
Q106	41N2M	FM Mixer	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q107	41N2M	1st AM IF Amp	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q108	41N2M	1st FM IF Amp	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q109	41N2M	2nd FM IF Amp	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q110	41N2M	2nd AM IF Amp -	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
		3rd FM IF Amp						
Q111	41N2M	AGC Amp	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q112	41N2M	3rd AM IF Amp -	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
		4th FM IF Amp						
Q113	41N2M	FM Limiter	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q114	41N2M	MPX Input Amp	610041-2	GE-20	TR-21	HEP729	SK3018	ECG 108
Q201	94N1	AF Amp	610094-1	GE-20	TR-21	HEP56	SK3020	ECG 123A
Q202	94N1	AF Amp	610094-1	GE-20	TR-21	HEP56	SK3020	ECG 123A
Q203	84P2AA	AF Amp	610083-2	GE-22	TR-19	HEP57	SK3025	ECG 159
Q204	83P2AA	AF Amp	610083-2	GE-22	TR-19	HEP57	SK3025	ECG 159
Q301	83P2AA	Composite Amp	610083-2	GE-22	TR-19	HEP57	SK3025	ECG 159
Q302	45N4M	19KC Doubler	610045-4	GE-10	TR-21	HEP54	SK3020	ECG 123A
Q303	110P1M	Stereo Indicator Sw.	610110-1	GE-22	TR-19	HEP51	SK3025	ECG 159
Q401	106P1T	Voltage Regulator	610106-1	GE-3	TR-01	HEP232	SK3034	ECG 104
Q501	41N3	Search Limiter	610041-3	GE-20	TR-21	HEP729	SK3018	ECG 108
Q502	41N3	Search Detector	610041-3	GE-20	TR-21	HEP729	SK3018	ECG 108
Q503	83P3B	Search	610083-3	GE-22	TR-19	HEP57	SK3025	ECG 159

POWER RECTIFIERS & SIGNAL DIODES

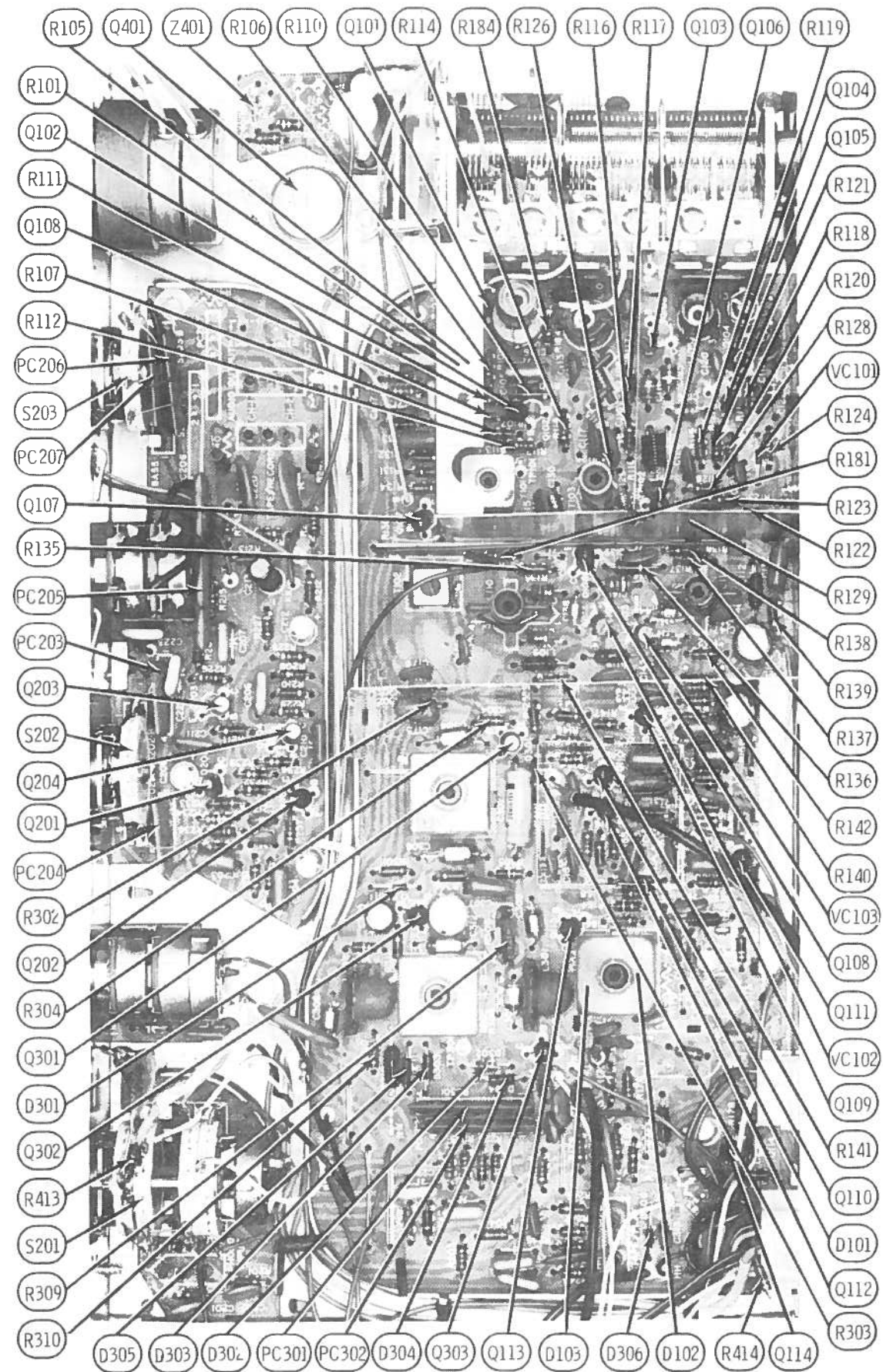
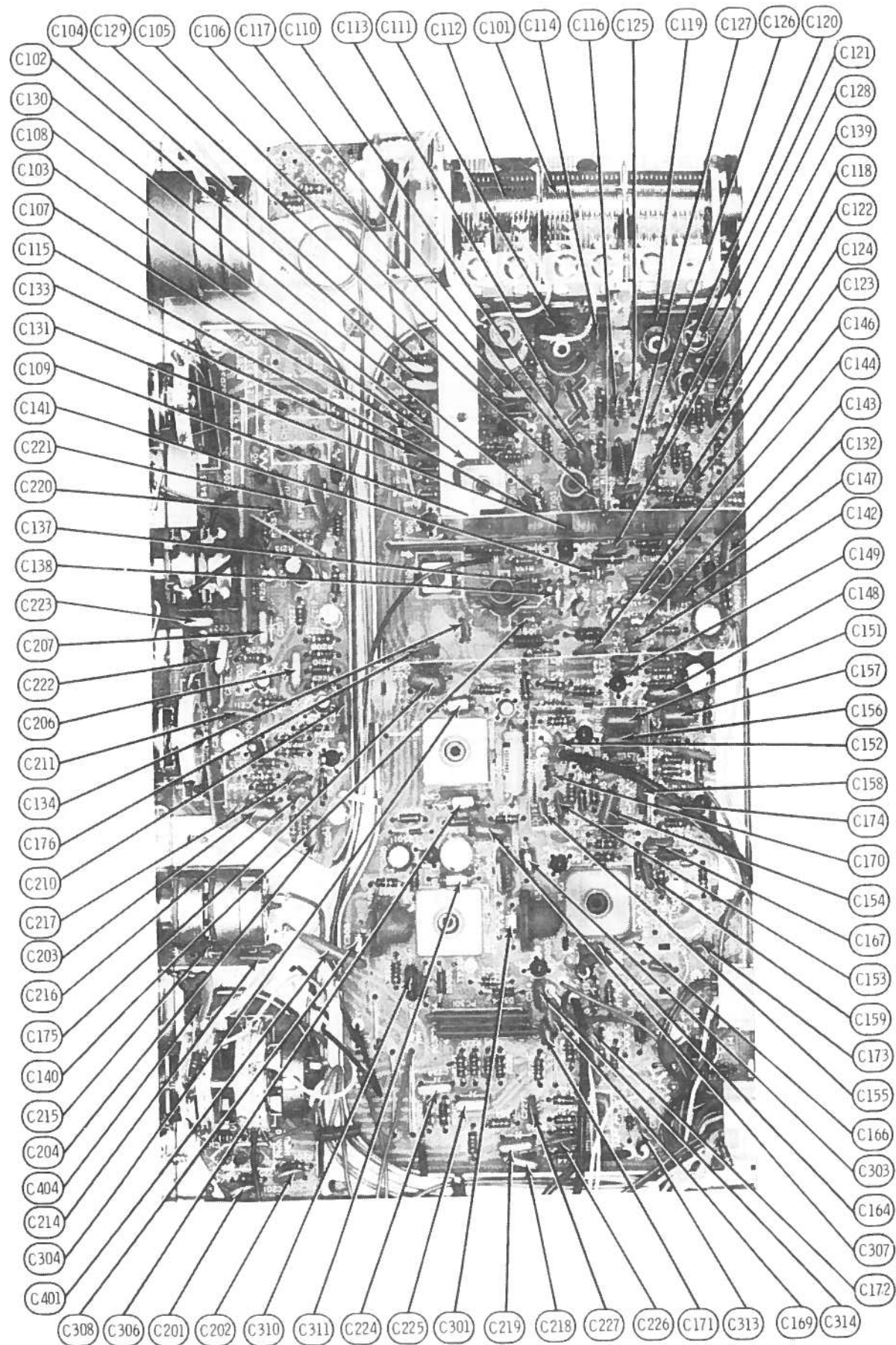
ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
D101	530092-1001	1N60	1N60	1N60	ECG 109	(4) Matched pair.
D102	530092-1001	1N60	1N60	1N60	ECG 110 (4)	
D103	530092-1001	1N60	1N60	1N60	ECG 116 or	
D301	530072-1015	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 117	
D302	530092-1001	1N60	1N60	1N60	ECG 110 (4)	Varactor Varactor Varactor Zen
D303	530092-1001	1N60	1N60	1N60	ECG 110 (4)	
D304	530092-1001	1N60	1N60	1N60	ECG 110 (4)	
D305	530092-1001	1N60	1N60	1N60	ECG 110 (4)	
D306	530072-1008	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 177	Varactor Varactor Varactor Zen
D401	530072-1008	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 177	
D501	530072-1008	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 177	
D502	530072-1011	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 116 or	
D503	530072-1011	GE-504A	8D4 or 5A4-D	SK3030 or SK3031	ECG 117	Varactor Varactor Varactor Zen
VC101	530104-1001				ECG 116 or	
VC102	530140-1				ECG 117	
VC103	530140-1				ECG 116 or	
Z401	530073-1017				ECG 117	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		MAGNAVOX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C145	20 35V		MCD-100	EP50-25	PC20-50	MT1-12	MTV20CD50	TE-1305
	20 20V		MCD-90	EP30-25	PC20-50	MT1-11	MTV20CD50	TE-1206
C150	100 15V	270068-508	MCD-180	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C161	3 25V	270068-419	MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 50V	270109-3050						
C165	5 25V	270082-603	CRE604A	EA30-5	WBR5-150	MT1-3	MTA5D50	TE-1202
C168	3 25V		MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 50V	270109-3050						
C208	3 25V		MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 50V	270109-3050						
C209	3 25V		MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 50V	270109-3050						
C212	3 25V		MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 25V	270109-3050						
C213	3 25V		MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
	3.3 25V	270109-3050						
C302	20 15V	270082-409	CRE461A	EA15-25	AL20-16	MT1-9	MTA20E50	TL-1157
C305	20 15V	270068-408	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1157
C312	100 10V	270068-319	MCD-180	EP15-100	PC100-16	MT1-19	MTV100CD10	TE-1135
C402	25 25V	270068-609	MCD-90	EP30-25	PC30-35	MT1-11	MTV25CB35	TE-1207
C403	200 20V	270068-523	PTT123	GA30-250	BR250-25	MT1-23.5	MTV200DJ25	TL-1185
C502	250 25V	270068-624	PRS1280	EA30-250	PC250-25	QTI-28	MTV250DN25	TL-1214
C508	2 NP 50V	270070-702	PRS7400		BRNP2-50		TCN502	TVAN-1301.1









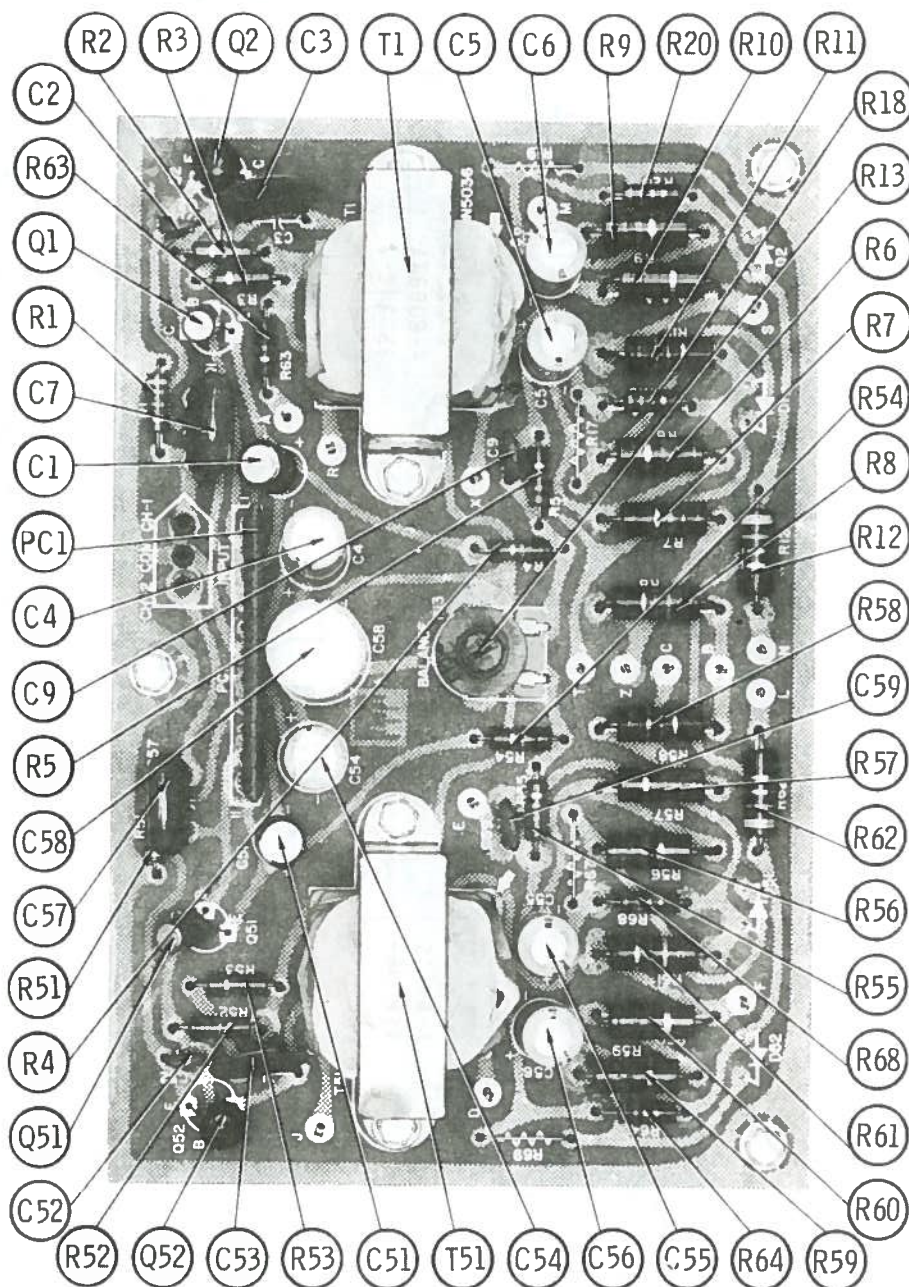
## PHOTOFACT® Folder

with CIRCUITRACE

MAGNAVOX AMP  
CHASSIS A576-03-BA

## IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1144 FOLDER 1. File this Folder with the TV Folder in the yellow filing jacket provided.

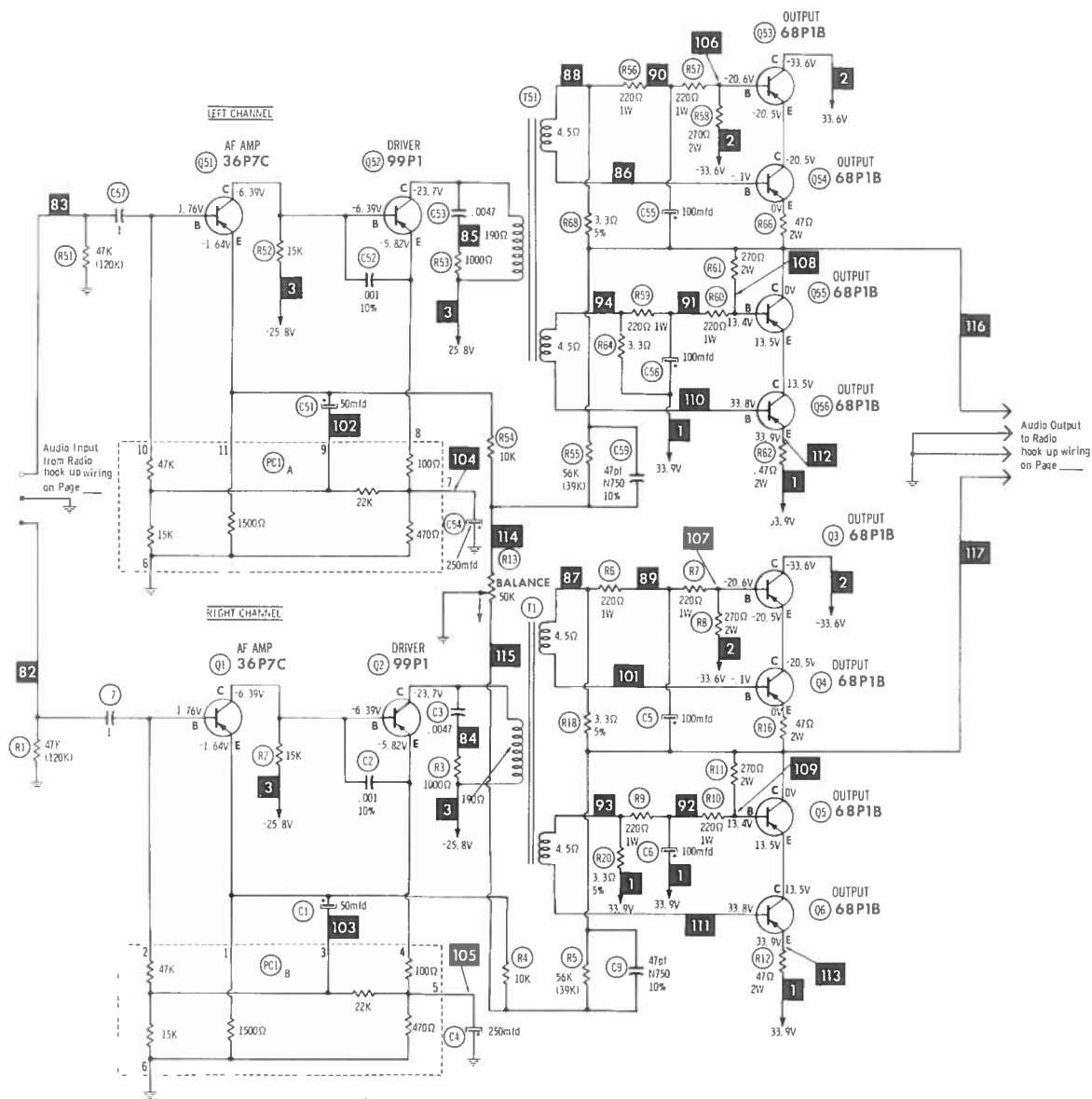
MAGNAVOX AMP  
CHASSIS A576-03-BAMAGNAVOX AMP  
CHASSIS A576-03-BA**REMEMBER TO ASK— “What else needs fixing?”****HOWARD W. SAMS & CO., INC.** Indianapolis, Indiana 46206

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UB708

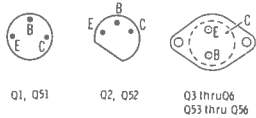
Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1970 Howard W. Sams & Co., Inc., Indianapolis, Indiana 46206. Printed in U. S. of America.

DATE 12-70

SET 1144 FOLDER 1-D



Transistor Terminal Guides

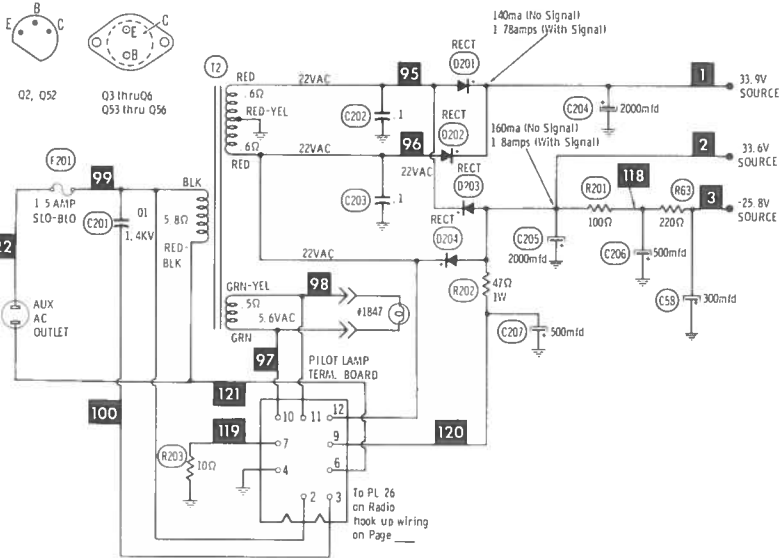


+ De cles gr indit measurement reference unless otherwise indicated  
 --- Indicates connection used in some versions.  
 \* Indicates connection not used in some versions.  
 \* Or fitted in some versions.  
 e See parts list.  
 Values sh at 1 are sed in s te applications.  
 Res stors are 1 2W r less, 10% r 20% unless otherwise indicated.  
 S apply v llage maintained at rated value for measurements  
 Voltage and resistance measured with VTVM or equivalent meter,  
 no signal applied and controls adjusted for normal operation.  
 Controls viewed from actuator end. Arrow indicates clockwise rotation.  
 Numbers assigned to terminals may not be found on the unit.  
 Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

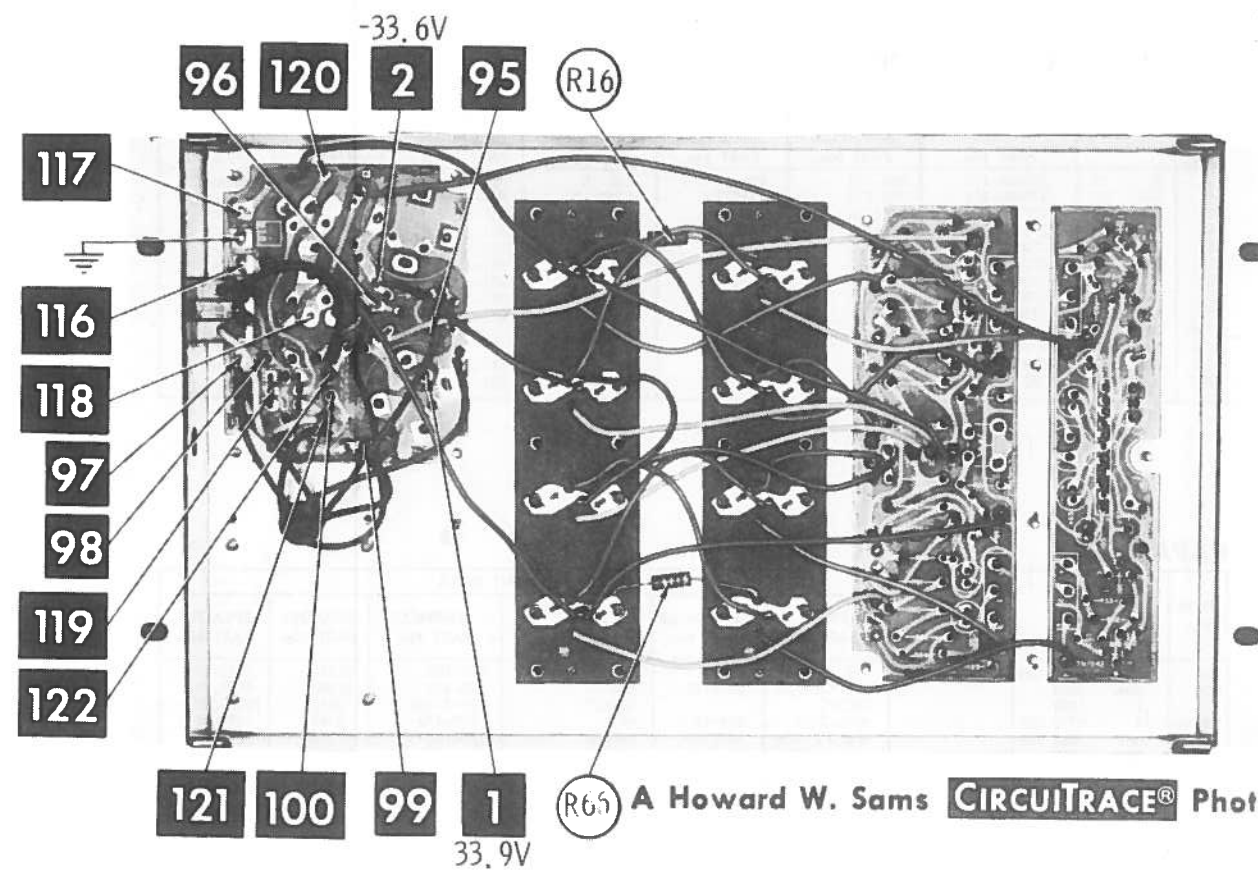
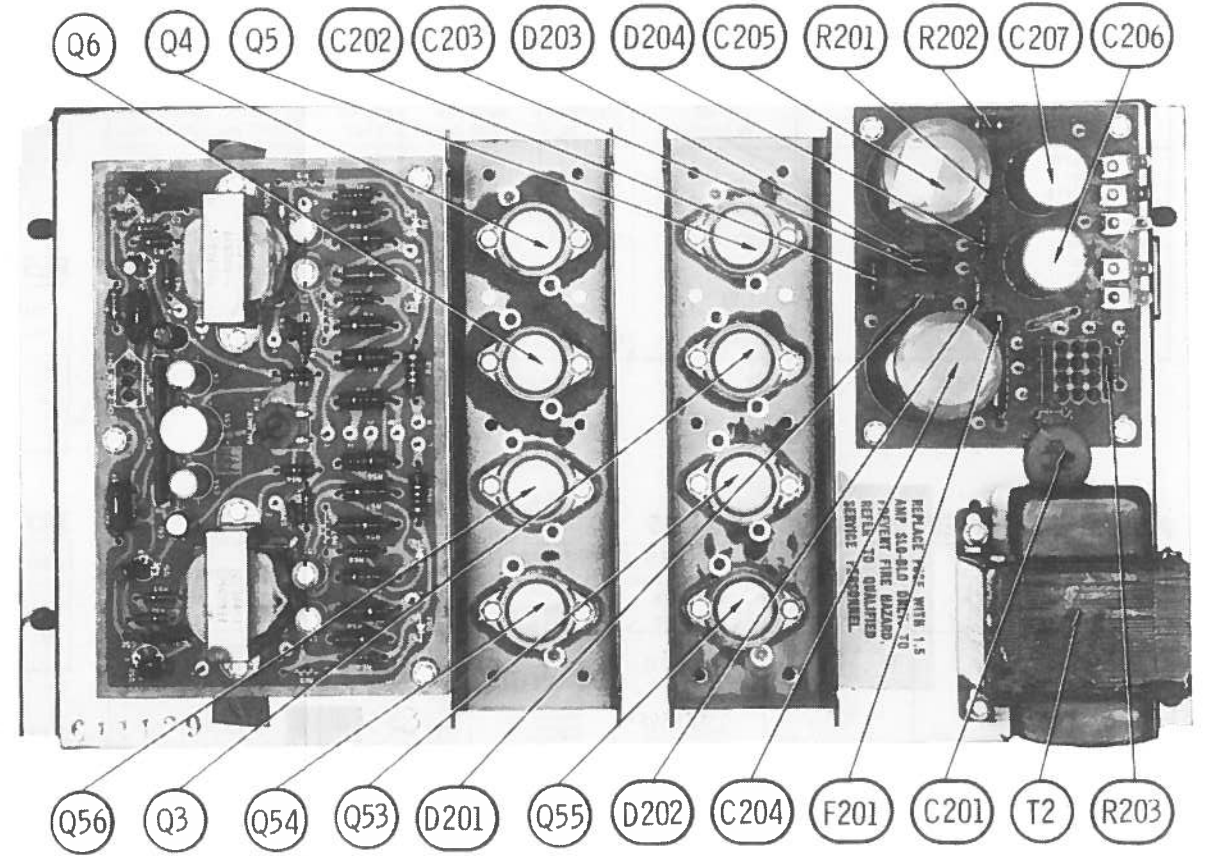
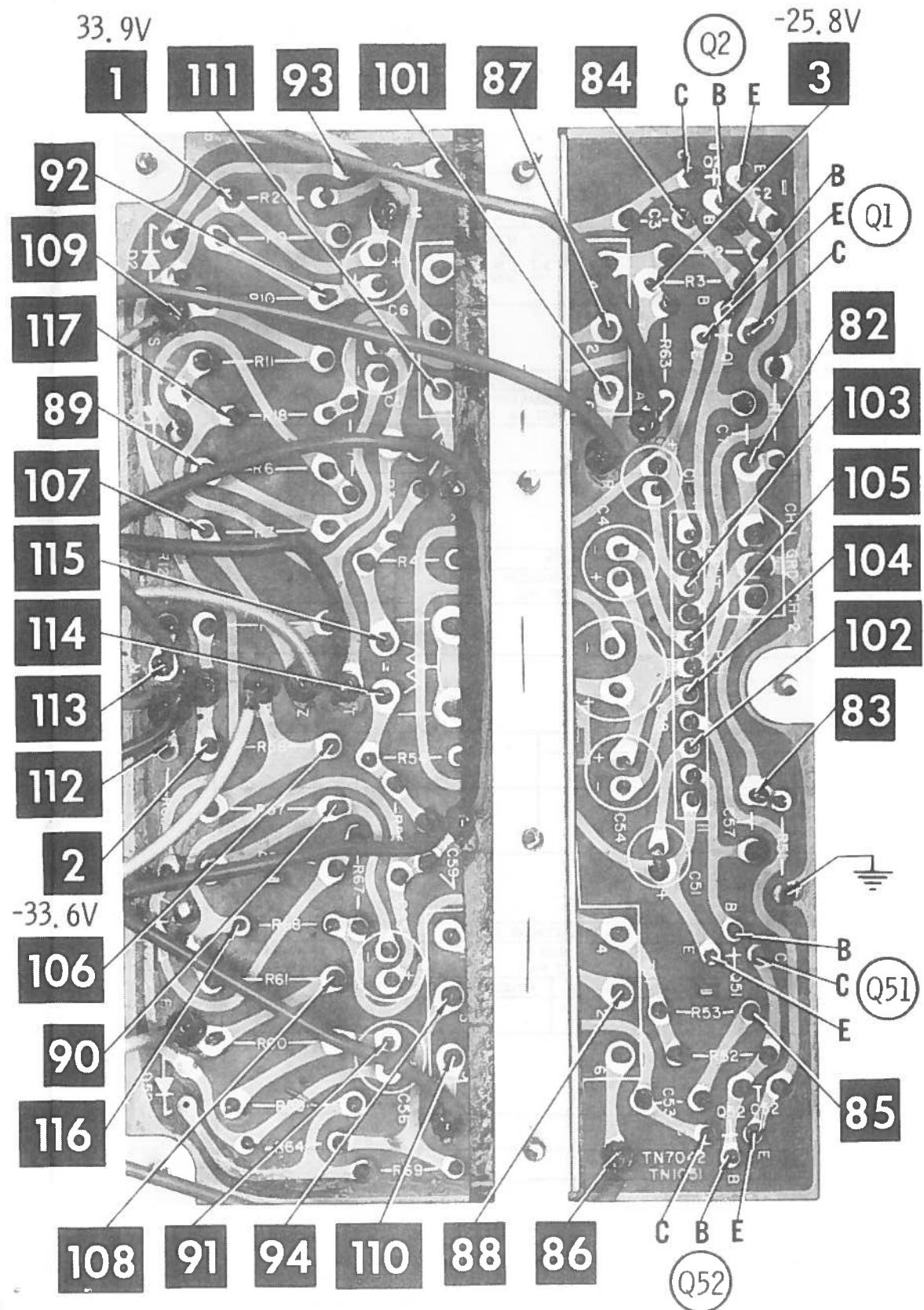
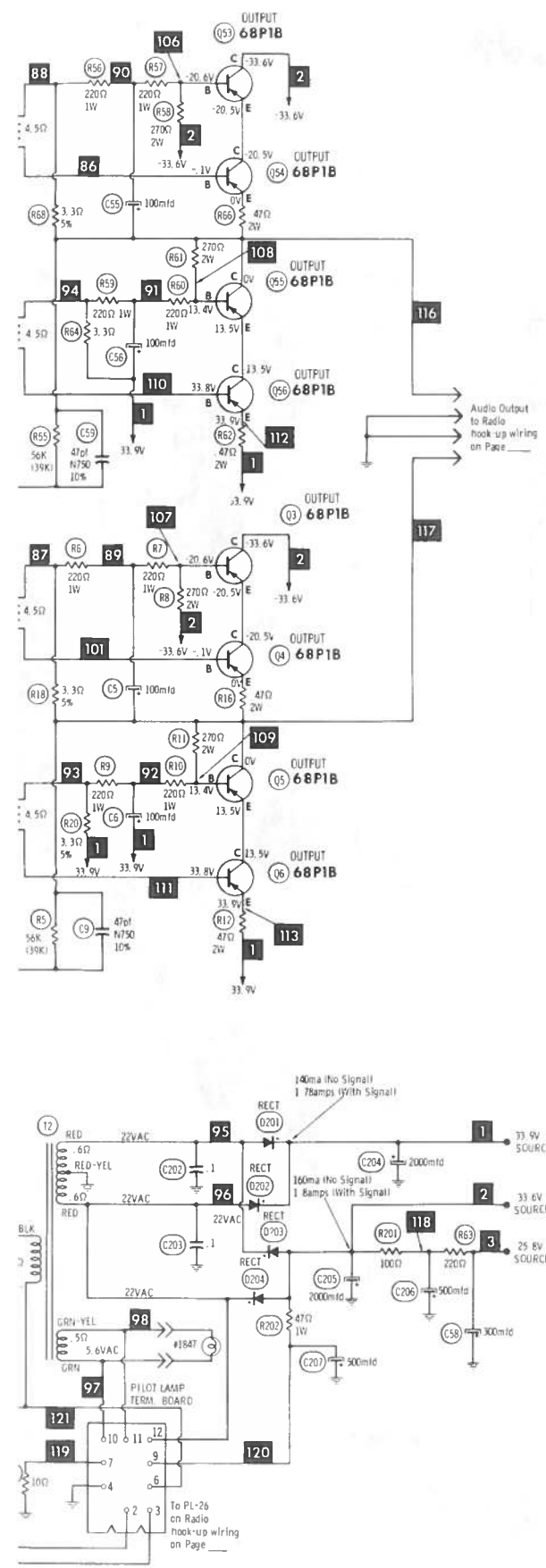
with CIRCUITRACE

© Howard W. Sams & Co., Inc. 1970



3  
 92  
 109  
 117  
 89  
 107  
 115  
 114  
 113  
 112  
 2  
 -33.6V  
 106  
 90  
 116  
 10





A Howard W. Sams CIRCUITRACE® Photo



## PARTS LIST AND DESCRIPTION

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

### TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	36P7C	AF Amp	610036-7	GE-2	TR-14	HEP254	SK3004	ECG 102
Q2	99P1	Driver	610099-1	GE-21	TR-19	HEP51	SK3025	ECG 129
Q3	68P1B	Output	610068-1	GE-3	TR-01	HEP232	SK3009	ECG 104
Q5	68P1B	Output	610068-1	GE-3	TR-01	HEP232	SK3009	ECG 104
Q4	68P1B	Output						
Q6	68P1B	Output	170666-1 (1)	GE-13MP (1)		HEP232 (1)	SK3013(1)	ECG 121MP(1)
Q51	36P7C	AF Amp	610036-7	GE-2	TR-14	HEP254	SK3004	ECG 102
Q52	99P1	Driver	610099-1	GE-21	TR-19	HEP51	SK3025	ECG 129
Q53	68P1B	Output	610068-1	GE-3	TR-01	HEP232	SK3009	ECG 104
Q55	68P1B	Output	610068-1	GE-3	TR-01	HEP232	SK3009	ECG 104
Q54	68P1B	Output						
Q56	68P1B	Output	170666-1 (1)	GE-13MP (1)		HEP232 (1)	SK3013(1)	ECG 121MP(1)

(1) Matched Pair

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R13	Balance	50K	220193-16	TSV-50K (1) or T-50K (1)		U201R503B	MTC54L4

(1) For horizontal mount, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.

### RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R12	.47 2W	WS-.47	230164-46
R16	.47 2W	WS-.47	230164-46
R18	3.3 1/2W 5%		230144-447
R20	3.3 1/2W 5%		230144-447
R62	.47 2W	WS-.47	230164-46

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R64	3.3 1/2W 5%		230144-447
R66	.47 2W	WS-.47	230164-46
R68	3.3 1/2W 5%		230144-447
R203	10 1/2W	CA-10	230144-38

### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
D201	530071-2	GE-504A	8D4 or 18DC2A (3)	SK3030 or SK3031	ECG 116 or ECG 117	(3) A single unit replacement for both rectifiers.
D202	530071-2	GE-504A	8D4 or 18DC2A (3)	SK3030 or SK3031	ECG 116 or ECG 117	
D203	530071-2	GE-504A	8D4 or 18DJ2A (3)	SK3030 or SK3031	ECG 116 or ECG 117	
D204	530071-2	GE-504A	8D4 or 18DJ2A (3)	SK3030 or SK3031	ECG 116 or ECG 117	

### TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1 T51	4 4	1 1	1 1	320344-1 320344-1				

### TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	117VAC @ .3AAC	44VAC, CT @ 2.38A DC	5.6VAC @ .37AAC	300257-1				

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		MAGNAVOX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	50 3V	270068-113	MCD-130	EP6-50	PC50-16	MT1-15	MTV50CB15	TE-1058
C4	250 10V	270068-324	PRS1210	EA15-250	PC250-10	MT1-25	MTV250CK10	TE-1138
C5	100 20V	270068-519	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C6	100 20V	270068-519	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C51	50 3V	270068-113	MCD-130	EP6-50	PC50-16	MT1-15	MTV50CB15	TE-1058
C54	250 10V	270068-324	PRS1210	EA15-250	PC250-10	MT1-25	MTV250CK10	TE-1138
C55	100 20V	270068-519	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C56	100 20V	270068-519	CRE623A	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C58	300 25V	270068-825	PRS1540		WBR300-35	QT1-31	TC499A	TL-1314
C204	2000 40V	270099-5	PRS1397		BR2000-50		FP070A	
C205	2000 40V	270099-5	PRS1397		BR2000-50		FP070A	
C206	500 35V	270068-828	PRS1390	EA50-500	WBR500-50	QT1-31	TC50050A	TL-1316
C207	500 35V	270068-828	PRS1390	EA50-500	WBR500-50	QT1-31	TC50050A	TL-1316

### 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.
C2	.001 500V 10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C3	.0047 500V		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C7	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C9	.47 N750 10%		N750-D147	DTN-47	N47	CCTN-470	CN7447	10TCU-Q47
C52	.001 500V 10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C53	.0047 500V		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C57	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C59	.47 N750 10%		N750-D1 47	DTN-47	N47	CCTN-470	CN7447	10TCU-Q47
C201	.01 1.4KV			CI-103	AC-10000		UAC110	125L-S10
C202	.1 250V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C203	.1 250V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10

### MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
PC1	Component Combination	250488-2	AF Amp Bias

### WIRING DATA

General-use Unshielded Hook-up Wire .....	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord .....	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Feet 17109 (Plastic) or 17129 (Rubber) - 9 Feet
Low-loss Shielded Lead (Interconnecting) .....	Use BELDEN No. 8401 or 8421