

GUIDES AND NOTES

PHOTO CIRCUITTRACE = **11**  
SCHEMATIC CIRCUITTRACE = **11**

SET 2427 FOLDER 2

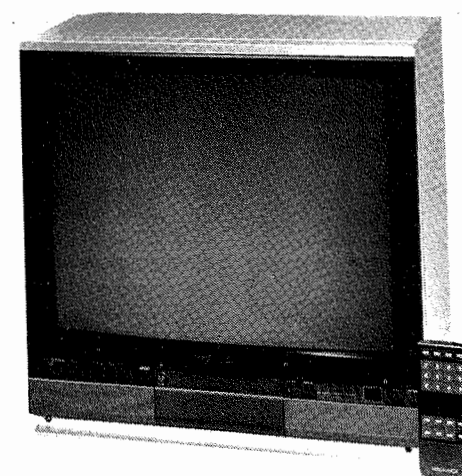
MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

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**PHOTOFACT**

For Supplier Address See PHOTOFACT Index

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03



Model RF4378SL03

### SAFETY PRECAUTIONS

See page 4.

### INDEX

	Page		Page
Alignment		Photos (Continued)	
TV.....	6,83	Remote Transmitter.....	35,54,76
Convergence Adjustments.....	8	Secondary Controls.....	27,37
Disassembly Instructions.....	79	Shield Location.....	64
GridTrace Location Guide		Standby Power Supply.....	32,57
A/V Jack Panel.....	26	Stereo Decoder.....	12,77
CRT Socket Board.....	28	SVM.....	30,81
Interface Board.....	31	TS-9,10 Remote Tuning.....	10,53,68
Main Board.....	18,71	Quick-Checks Troubleshooting	
Secondary Control.....	27	CRT Socket Board.....	34
Standby Power Supply.....	32	Jack Panel.....	56
Stereo Decoder.....	12	Main Board.....	17,72
SVM.....	30	Standby Power Supply.....	55
IC Functions.....	14,15,74,75	Safety Precautions.....	4
Miscellaneous Adjustments.....	8	Schematics	
Parts List		Antenna Switch.....	60
Antenna Switch.....	60	Audio/SVM.....	5,84
A/V Jack Panel.....	25,51	A/V Jack Panel.....	9,51,86
CRT Socket Board.....	52	CRT Socket.....	3,52
Keyboard.....	50	Interface Panel.....	11,36,78
LED Indicators.....	50	Keyboard.....	13,50
Remote Receiver.....	59	LED Boards.....	50
Remote Transmitter.....	35,76	Power Supply.....	87,88,89
Secondary Controls.....	37	Remote Receiver.....	59
TS-9,10 Remote Tuning.....	21,23,53,66	Remote Transmitter.....	35,54,76
TV.....	39 thru 49	Secondary Controls.....	37
UHF/VHF Tuner.....	25	Stereo Decoder.....	7,82
Photos		Terminal Guides and Notes.....	85
A/V Jack Panel.....	26,38,86	TS-9,10 Remote Tuning... ..	20,22,67,69
Cabinet-Rear View.....	79	TV.....	2
CRT Neck Assembly.....	81	UHF/VHF Tuner.....	24,65
CRT Socket Board.....	28,29,52	Servicing in the Field.....	79
Interface Panel.....	31,58	Test Equipment.....	6
Jack Panel.....	33	Test Jig Hookup.....	62
Main Board.....	16,19,70,73	Troubleshooting.....	62,63,64
Remote Receiver.....	59	Troubleshooting Aid.....	61

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Howard W. Sams & Co.

4300 West 62nd Street, P.O. Box 7092, Indianapolis, Indiana 46206 U.S.A.

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.

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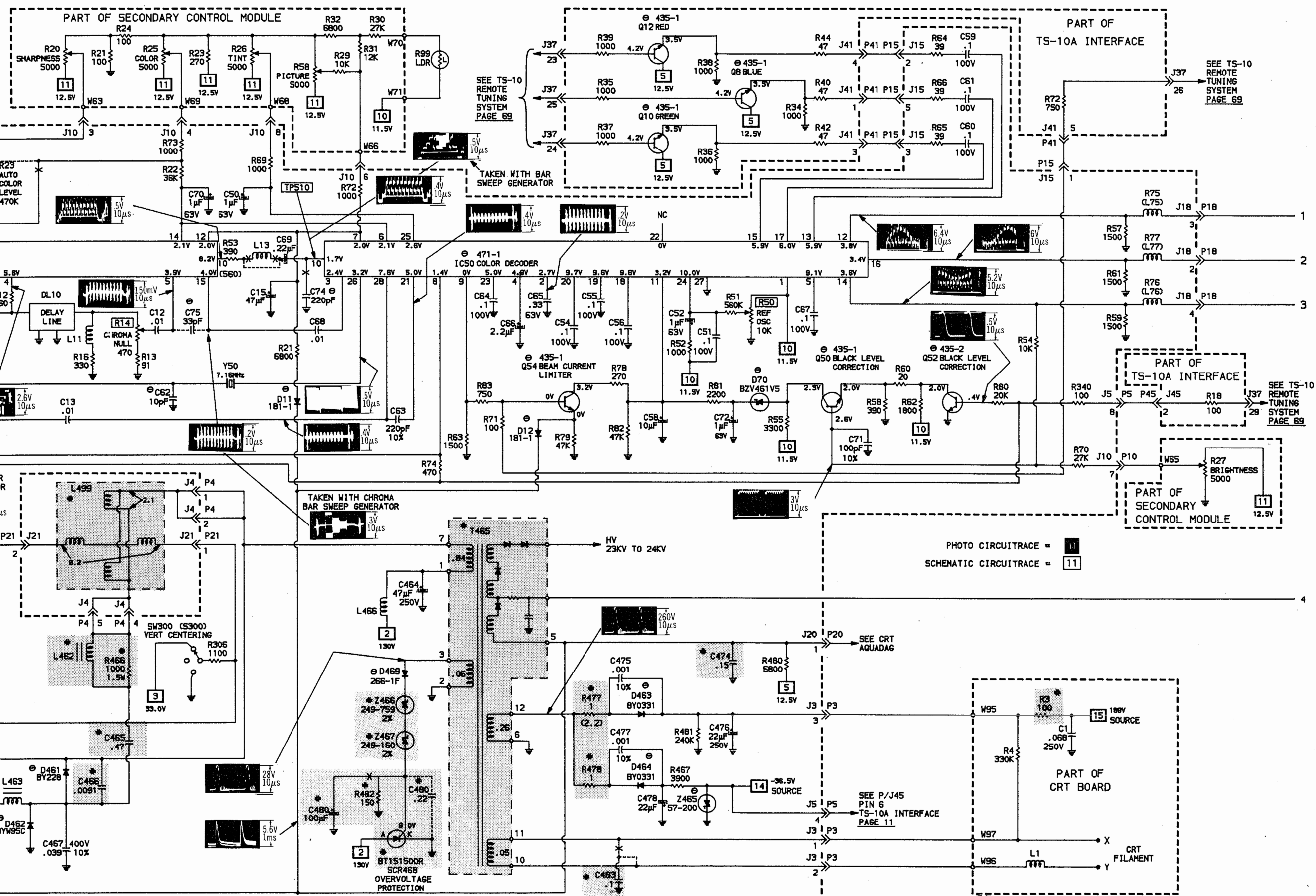
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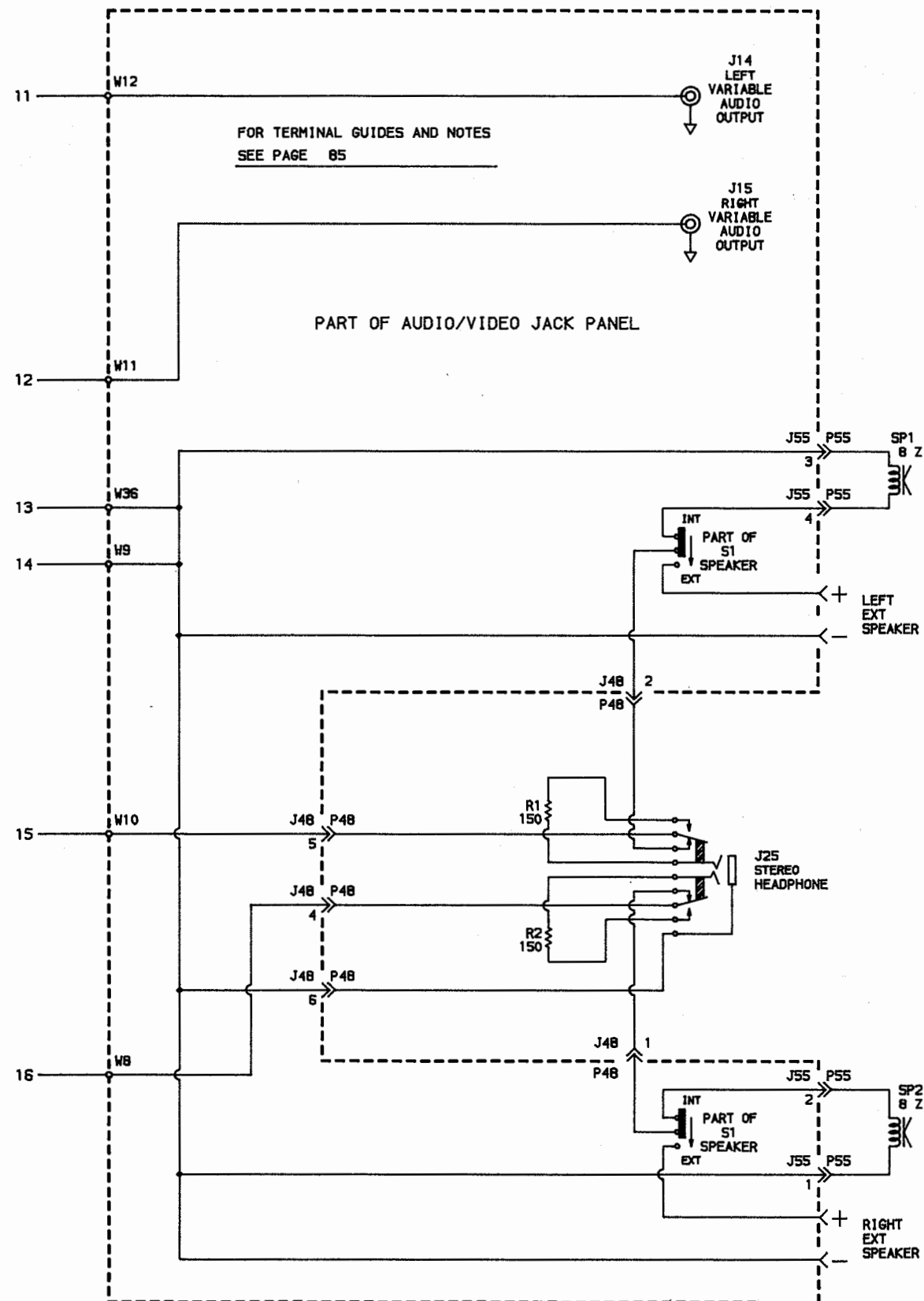
SET 2427 FOLDER 2





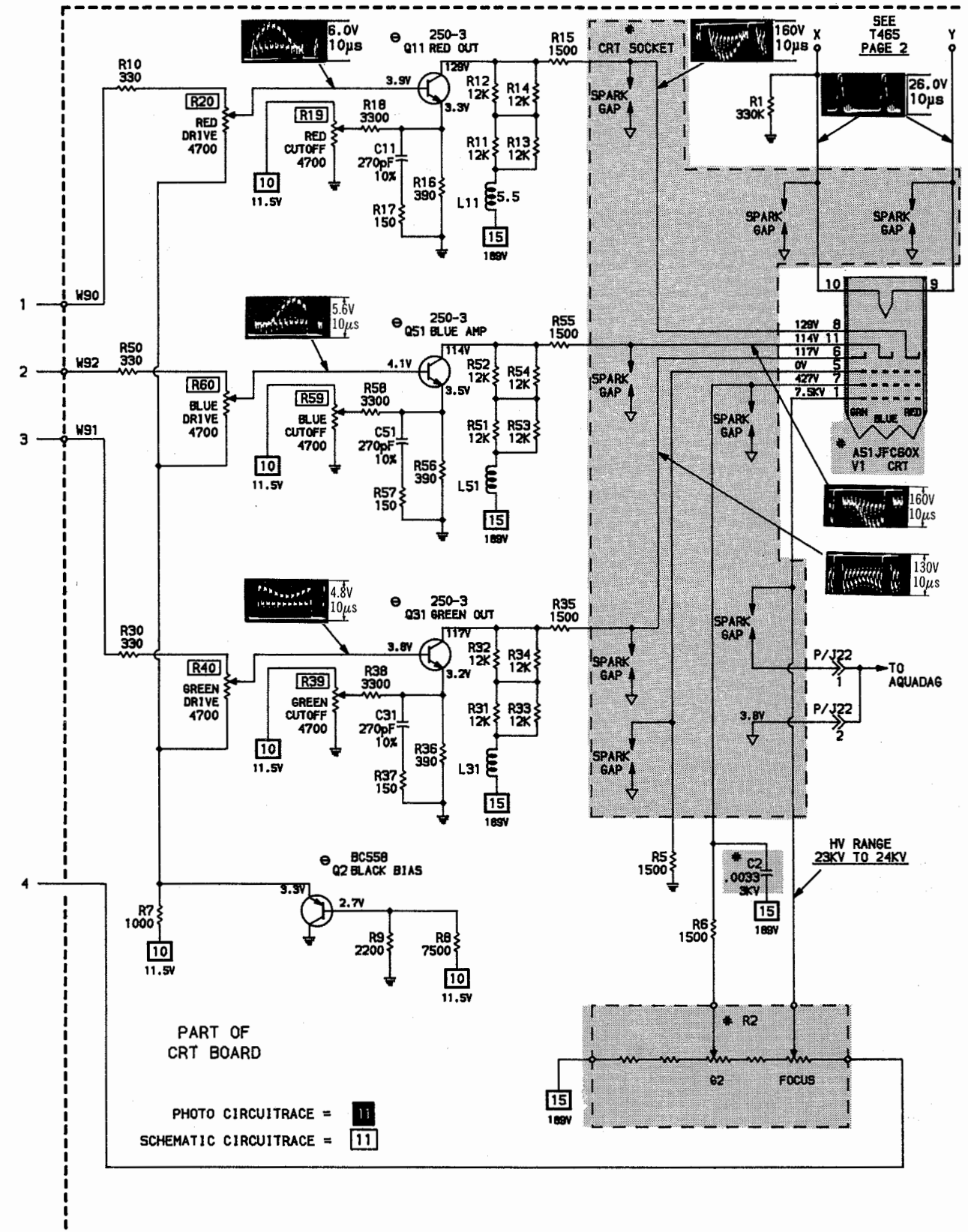






A/V JACK PANEL

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CRT SOCKET SCHEMATIC

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FOLDER 2

SAFETY PRECAUTIONS

NAPCEC SAFETY GUIDELINES FOR THE PROFESSIONAL SERVICE TECHNICIAN

Safety Checks

After the original service problem has been corrected, a complete safety check should be made. Be sure to check over the entire set, not just the areas where you have worked. Some previous service may have left an unsafe condition, which could be unknowingly passed on to your customer. Be sure to check all of the following:

Fire and Shock Hazard

1. Be sure all components are positioned in such a way as to avoid the possibility of adjacent component shorts. This is especially important on those chassis which are transported to and from the service shop.
2. Never release a repaired receiver unless all protective devices such as insulators, barriers, covers, strain reliefs, and other hardware have been installed according to the original design.
3. Soldering and wiring must be inspected to locate possible cold solder joints, solder splashes, sharp solder points, frayed leads, pinched leads, or damaged insulation (including ac cord). Be certain to remove loose solder balls and all other loose foreign particles.
4. Check across-the-line components and other components for physical evidence of damage or deterioration and replace if necessary. Follow original layout, lead length and dress.
5. No lead or component should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces or edges must be avoided.
6. Critical components having special safety characteristics are identified with an S by the Ref. No. in the parts list and enclosed within a broken line\* along with the safety symbol  $\#$  on the schematics. Replacement parts without the same safety characteristics may create shock, fire or other hazards.
7. When servicing any receiver, always use a separate isolation transformer for the chassis. Failure to use a separate isolation transformer may expose you to possible shock hazard, and may cause damage to servicing instruments.
8. Many receivers use a polarized line cord (one wide pin on the plug). Defeating this safety device may create a potential hazard to the service and the user. Extension cords which do not incorporate the polarizing feature should never be used.
9. After re-assembly of the set, always perform an ac leakage test or resistance test from the line cord to all exposed metal parts of the cabinet. Also, check all metal control shafts (with knobs removed), antenna terminals, handles, screws, etc. to be sure the set is safe to operate without danger of electrical shock.

\* Broken line: — — — — —

Implosion

1. All picture tubes used in current model receivers are equipped with an integral implosion system. Care should always be used, and safety glasses worn, whenever handling any picture tube. Avoid scratching or otherwise damaging the picture tube during installation.
2. Use only replacement tubes as specified by the manufacturer.

X-radiation

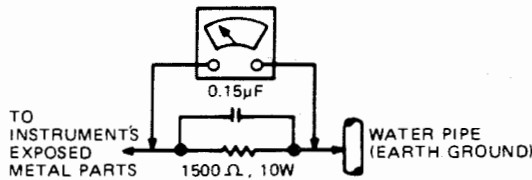
1. Be sure procedures and instructions to all your service personnel cover the subject of X-radiation. Potential sources of X-rays in TV receivers are the picture tube and the high voltage circuits. The basic precaution which must be exercised is to keep the HV at the factory recommended level.
2. To avoid possible exposure to X-radiation and electrical shock, only the manufacturer's specified anode connectors must be used.
3. It is essential that the service technician has available at all times an accurate HV meter. The calibration of this meter should be checked periodically against a reference standard.
4. When the HV circuitry is operating properly there is no possibility of an X-radiation problem. High voltage should always be kept at the manufacturer's rated value — no higher — for optimum performance. Every time a color set is serviced, the brightness should be run up and down while monitoring the HV with a meter to be certain that the HV does not exceed the specified value and that it is regulated correctly. We suggest that you and your service technicians review test procedures so that HV and HV regulation are always checked as a standard servicing procedure, and the reason for this prudent routine be clearly understood by everyone. It is important to use an accurate and reliable HV meter. It is recommended that the HV reading be recorded on each customers' invoice, which will demonstrate a proper concern for the customers' safety.
5. When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, reduce the line voltage by

means of a Variac to bring the HV into acceptable limits while troubleshooting. Do not operate the chassis longer than necessary to locate the cause of the excessive HV.

6. New type picture tubes are specifically designed to withstand higher operating voltages without creating undesirable X-radiation. It is strongly recommended that any shop test fixture which is to be used with the new higher voltage chassis be equipped with one of the new type tubes designed for this service. Addition of a permanently connected HV meter to the shop test fixture is advisable. The CRT types used in these new sets should never be replaced with any other types, as this may result in excessive X-radiation.
7. It is essential to use the specified picture tube to avoid a possible X-radiation problem.
8. Most TV receivers contain some type of emergency "Hold Down" circuit to prevent HV from rising to excessive levels in the presence of a failure mode. These various circuits should be understood by all technicians servicing them, especially since many hold down circuits are inoperative as long as the receiver performs normally.

Leakage Current Cold Check

1. Unplug the ac line cord and connect a jumper between the two prongs of the plug.
2. Turn on the power switch.
3. Measure the resistance value between the jumpered ac plug and all exposed cabinet parts of the receiver, such as screw heads, antennas and control shafts. When the exposed metallic part has a return path to the chassis, the reading should be between 1 megohm and 5.2 megohms. When the exposed metal does not have a return path to the chassis, the reading must be infinity. Remove the jumper from the ac line cord.



Leakage Current Hot Check

1. Do not use an isolation transformer for this test. Plug the completely re-assembled receiver directly into the ac outlet.
2. Connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor between each exposed metallic cabinet part and a good earth ground such as a water pipe, as shown above.
3. Use an ac voltmeter with at least 5000 ohms/volt sensitivity to measure the potential across the resistor.
4. The potential at any point should not exceed 0.75 volts. A leakage current tester may be used to make this test; leakage current must not exceed 0.5 milliamps. If a measurement is outside the limits specified, there is a possibility of shock hazard. The receiver should be repaired and re-checked before returning it to the customer.
5. Repeat the above procedure with the ac plug reversed. (Note: An ac adapter is necessary when a polarized plug is used. Do not defeat the polarizing feature of the plug.)

Picture Tube Replacement

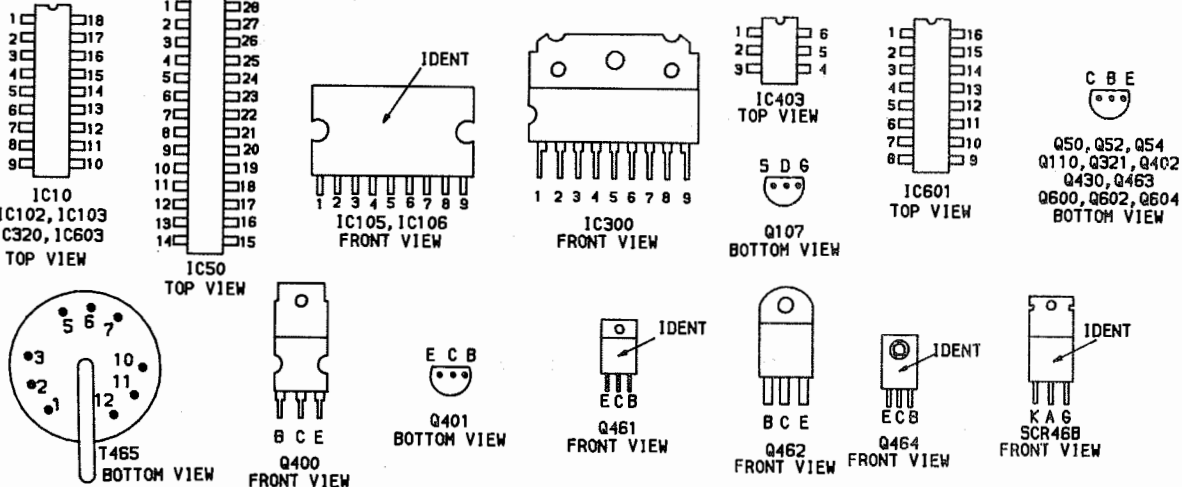
The primary source of X-radiation in this television receiver is the picture tube. The picture tube utilized in this chassis is specially constructed to limit X-radiation emissions. For continued X-radiation protection, the replacement tube must be the same type as the original, including suffix letter, or an N.A.P. Consumer Electronics Corp. (NAPCEC) approved type.

Parts Replacement

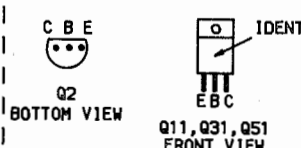
Many electrical and mechanical parts in NAPCEC television sets have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. The use of a substitute part which does not have the same safety characteristics as the NAPCEC recommended replacement part shown in this service manual may create shock, fire or other hazards.

TERMINAL GUIDES

MAIN BOARD



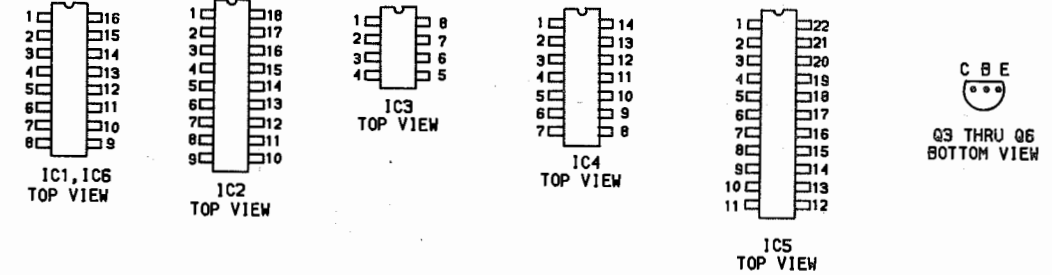
CRT BOARD



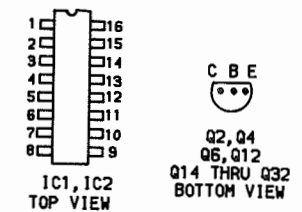
SVM MODULE



STEREO DECODER



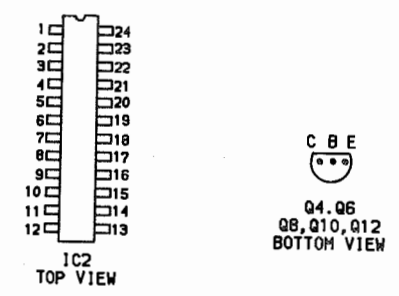
AUDIO/VIDEO JACK PANEL BOARD



STANDBY POWER SUPPLY



INTERFACE MODULE



# For SAFETY use only equivalent replacement part, see parts list.

- Circuitry not used in some versions
- Circuitry used in some versions
- Waveforms and voltages are taken from ground, unless noted otherwise.
- Waveforms: triggered scope, keyed rainbow generator.
- Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltages maintained as shown at input.

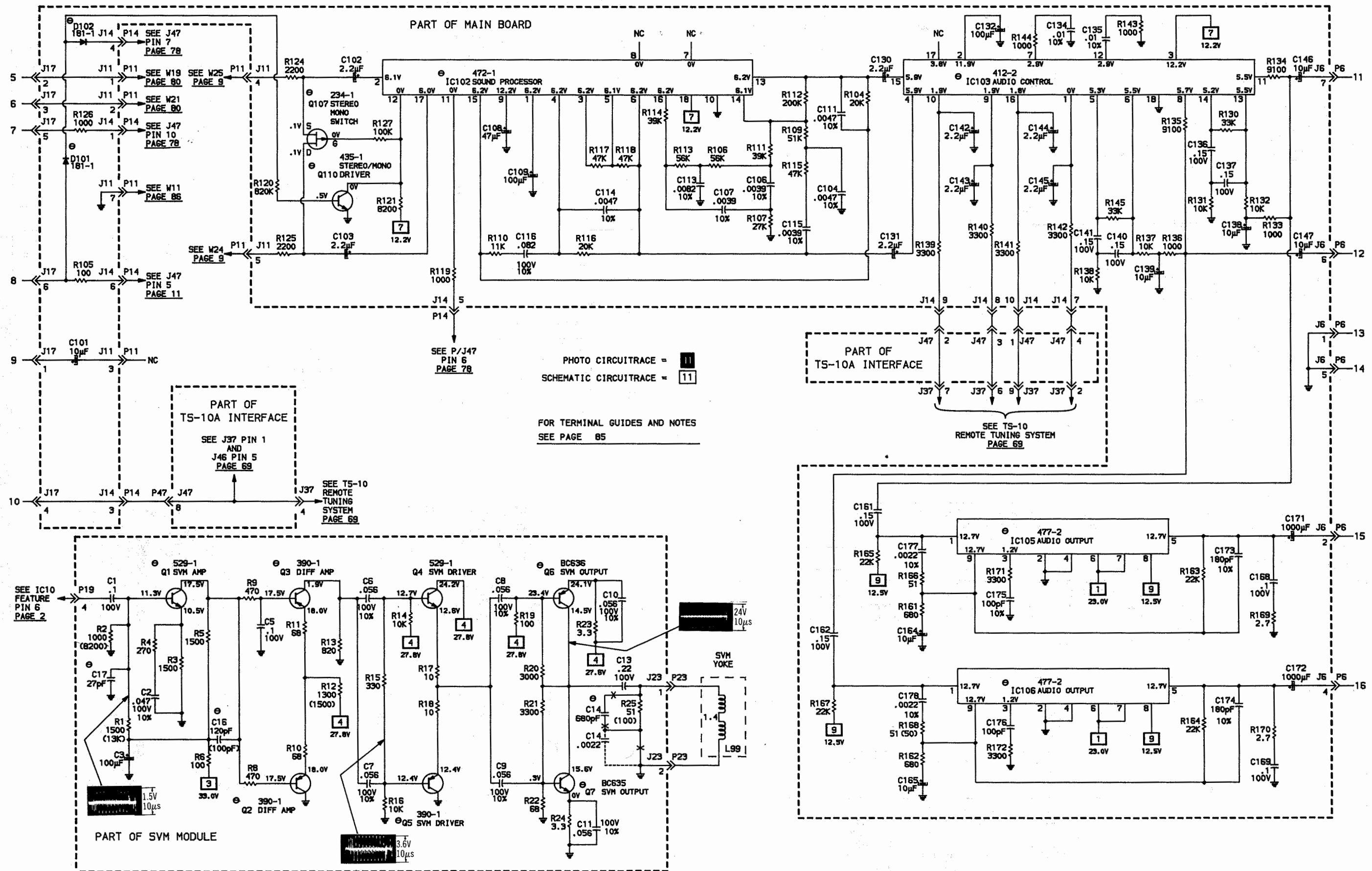
Voltages measured with digital meter, no signal. Controls adjusted for normal operation. Terminal identification may not be found on unit. Capacitors are 50 volts or less, 5% unless noted. Electrolytic capacitors are 50 volts or less, 20% unless noted. Resistors are 1/2W or less, 5% unless noted. Value in ( ) used in some versions.

- ⊕ See parts list
- ⊥ Ground
- ⊥ Chassis
- ▽ Common tie point

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

Courtesy of the Manufacturer



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

TEST EQUIPMENT

Test Equipment listed by Manufacturer illustrates typical or equivalent equipment used by SAMS' Engineers to obtain measurements and is compatible with most types used by field service technicians.

Equipment Name	B & K Precision Equipment No.	Sencore Equipment No.
OSCILLOSCOPE	1560	SC61
GENERATORS		
RGB	1260	
MULTIBURST SIGNAL	1260	VA62
COLOR BAR	1211A,1248,1251,1260	VA62, CG25
ANALOG VOM	277	
DIGITAL VOM	2830	DVM37,DVM56,SC61
FREQUENCY METER	1803,1805	FC71,SC61
HI-VOLTAGE PROBE VOM/DMM Accessory probes	HV-44	HP200
ISOLATION TRANSFORMER	TR110,1604,1653,1655	PR57
CAPACITANCE ANALYZER	820	LC53
CRT ANALYZER	467,470	CR70
TEMPERATURE PROBE	TP-28	
AC LEAKAGE TESTER	1655	PR57
ILLUMINATION METER		
LOGIC PROBE	DP51	
LOGIC PULSER	DP101	
INDUCTANCE ANALYZER		LC53
FLYBACK YOKE TESTER		LC53,VA62

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 120VAC. Allow a 20-minute warm-up period for receiver and test equipment.  
Suggested Alignment Tools: GC ELECTRONICS

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Set scope sweep to external. Connect scope vertical input to scope vertical input on sweep/marker generator. Connect scope external horizontal input to scope horizontal input on sweep/marker generator. Ground test equipment to TV chassis unless specified otherwise. Use only enough generator output to provide a usable indication.  
Note: Response may vary slightly from that shown.  
Disconnect IF Cable at J7.  
Connect a 8.0V DC Bias to TP614 (Pin 14 of IC601).

VIDEO IF ALIGNMENT (SWEEP MARKER GENERATOR)

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TP601 (Pin 1 of J9 J9 Connector)	To J7	44MHz (10MHz Sweep)	47.25MHz	Adjust L600 for MINIMUM. See Figure 1.
To TP601	To J7	"	41.25MHz 42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust L608 to position the 45.75MHz marker as high as possible on the response curve without lowering the amplitude of the response curve. See Figure 2. Note: Reconnect IF Plug.

TV ALIGNMENT INSTRUCTIONS (Continued)

VIDEO IF ALIGNMENT (BAR SWEEP GENERATOR)

BAR SWEEP GENERATOR	SCOPE INPUT	REMARKS
To Antenna Terminal	To TP601	Perform Video IF Adjustments per SWEEP/MARKER GENERATOR instructions above. See Figure 3.

4.5MHz TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust T610 for MINIMUM beat interference.

SOUND IF ALIGNMENT

Tune in a station and adjust L611 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 L612.

AUTOMATIC FINE TUNING ALIGNMENT

Connect as explained in preliminary instructions unless specified otherwise.				
DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TP602 (Pin 2 of J8 Connector)	To J7 (IF Input)	44MHz (10MHz Sweep)	45.75MHz	Adjust L609 to place 45.75MHz marker as shown. See Figure 4.

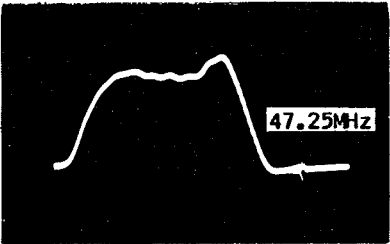


Figure 1

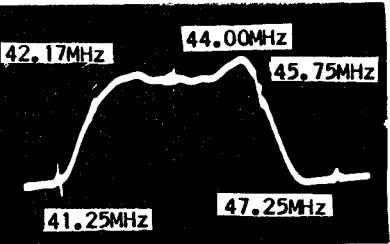


Figure 2



Figure 3

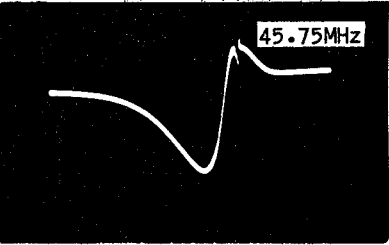


Figure 4

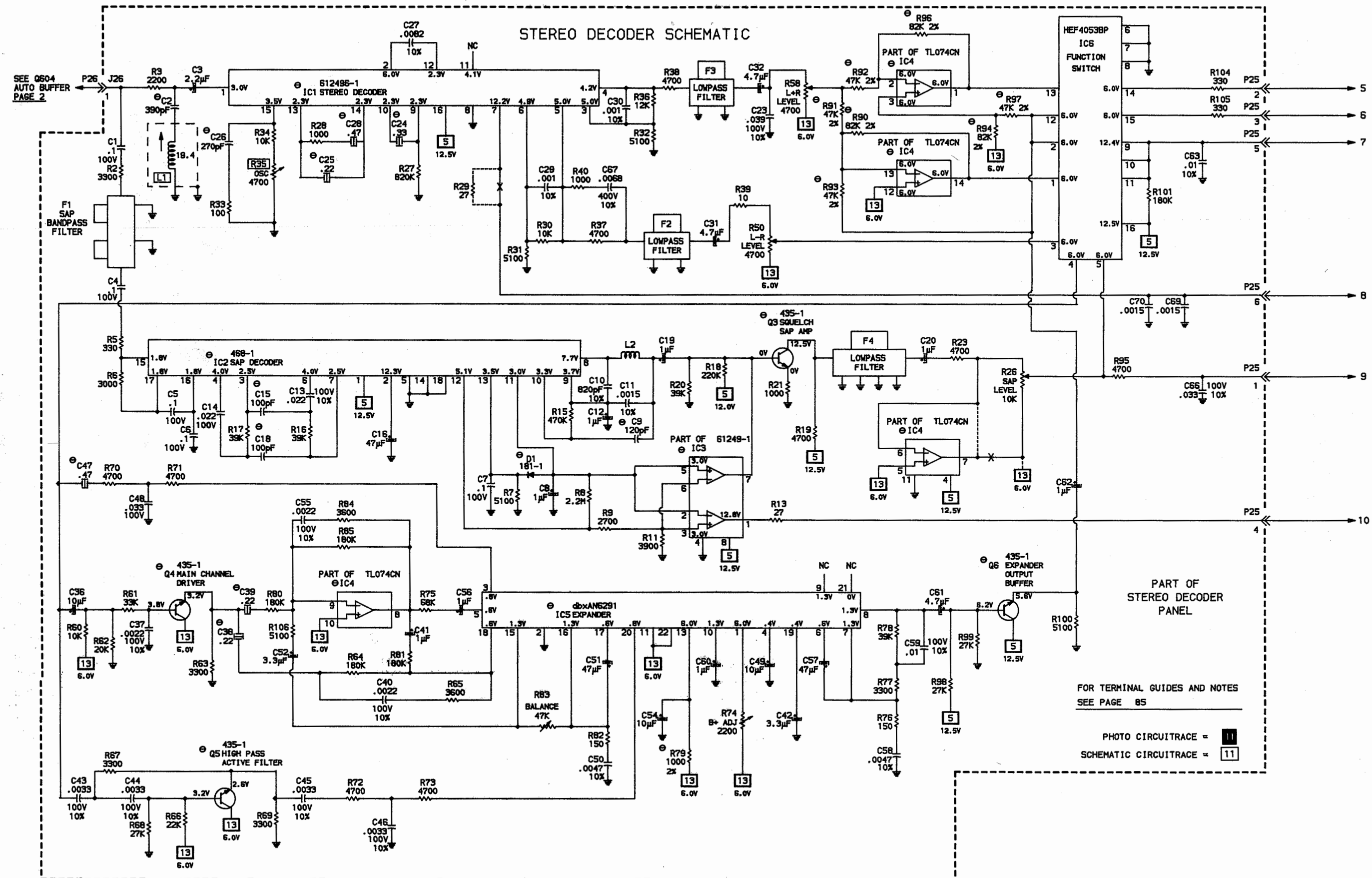
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FOLDER 2



SEE Q604  
AUTO BUFFER  
PAGE 2

# STEREO DECODER SCHEMATIC



FOR TERMINAL GUIDES AND NOTES  
SEE PAGE 85

PHOTO CIRCUITRACE = 11  
SCHEMATIC CIRCUITRACE = 11

A PHOTOFACT STANDARD NOTATION SCHEMATIC  
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FOLDER 2

## MISCELLANEOUS ADJUSTMENTS

### PRETUNING

1. Connect antenna.
2. Turn power On.
3. Open secondary control access door.
4. Set SCAN/PROGRAM Switch to SCAN.
5. Select channel to be pretuned.
6. Momentarily depress ADD button.
7. Follow steps 5 and 6 for each channel to be pretuned.

### Removing Channels

8. Follow steps 1-3.
9. Set SCAN/PROGRAM Switch to PROGRAM.
10. Select channel to be removed.
11. Momentarily depress DELETE button.
12. Follow steps 10 and 11 for each channel to be removed.
13. After pretuning, close secondary control access door.

### 130V B+ ADJUSTMENT

Allow a 15 minute warm up time. Set Brightness Control to MINIMUM. Connect DC voltmeter to TP4, low side to ground. Adjust 130V DC Adjust (R442) for 130V  $\pm 1.0V$  DC.

### AUDIO LEVEL ADJUSTMENT

Tune in a strong station. Set volume to MINIMUM. Adjust Audio Level Control (R617) to a point where sound is just audible.

### RF AGC ADJUSTMENT

Tune in a station. Turn RF AGC Control (R618) fully clockwise and then counterclockwise until snow (noise) just disappears. Check all active channels and adjust slightly if necessary.

### COMB FILTER ADJUSTMENT

Tune in a color bar pattern. Connect oscilloscope to TP510 (Pin 10 of IC50). Adjust Chroma Null Control (R14) and Comb Phase Control (L10) for MINIMUM chroma component of waveform.

### HORIZONTAL FREQUENCY ADJUSTMENT

Tune in a color bar signal. Place a jumper from TP325 to ground. Adjust Horizontal Frequency Control (R331) until the color bars stop or slowly float across the screen. Remove jumper and check sync on all channels.

### HORIZONTAL WIDTH AND CENTERING

Tune in a crosshatch pattern. Adjust Horizontal Centering Control (R333) to place pattern in the center of the screen. Adjust Horizontal Width Control (R471) for proper horizontal overscan at right and left sides of the screen.

### VERTICAL CENTERING AND HEIGHT ADJUSTMENTS

Tune in a crosshatch pattern. Place Vertical Centering Switch (S300) in one of its three positions to center the pattern on the screen. Adjust Vertical Amplitude Control (R321) for a

slight overscan of the screen at the top and bottom.

### COLOR TEMPERATURE ADJUSTMENTS

Disconnect the IF Cable at J7 to obtain a blank raster. Set Brightness, Picture and Color Controls fully counterclockwise. Set Sharpness and Tint Controls to midrange. Set G2 Control, Red Cutoff (R19), Green Cutoff (R39), and Blue Cutoff (R59) Controls fully counterclockwise. Set Red (R20), Green (R40) and Blue (R60) Drive Controls fully clockwise. Disconnect Vertical Yoke Plug (J21). Advance G2 Control until a horizontal line of one color is just visible. Adjust the Cutoff Controls of the remaining two colors to produce a low level white line. Reconnect Vertical Yoke Plug (J21) and IF Cable (J7) and tune in a picture. Adjust Drive Controls for best white in the highlights of the picture.

### COLOR PURITY ADJUSTMENTS

Allow a 15 minute warm up and degauss the picture tube if necessary. Disconnect IF Plug (J7). Set Picture Control to Maximum and Brightness to midrange. Remove the rubber wedges and slide the yoke forward against the bell of the picture tube. Place the purity tabs together and at the 12 o'clock position, and the 6 pole magnets at the 10 o'clock position. Adjust the Green (R39) and Blue (R59) Cutoff Controls fully counterclockwise and the Red (R19) Cutoff Control fully clockwise. Spread and rotate the purity tabs to center the red band on the screen. Slide the deflection yoke back to produce a uniform red raster. Tighten the yoke clamp. Reconnect IF Cable at J7.

### CONVERGENCE ADJUSTMENTS

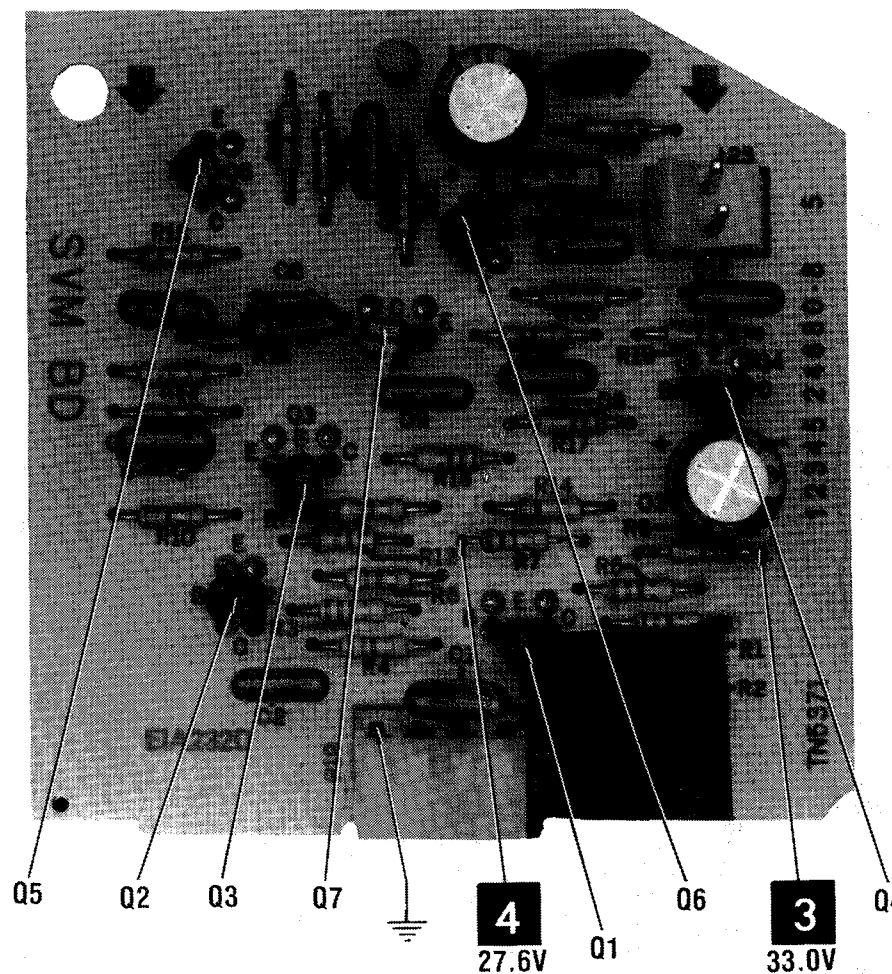
Allow a 15 minute warm up time and tune in a crosshatch pattern. Spread and rotate the tabs of the 4 pole magnets to converge the red and blue vertical and horizontal lines at the center of the screen. Spread and rotate the tabs of the 6 pole magnets to converge red/blue vertical and horizontal lines with the green lines at the center of the screen. Loosen the deflection yoke and remove the rubber wedges. Tilt the yoke vertically and horizontally to converge the edges of the screen. Replace wedges and tighten yoke clamp.

### DISPLAY POSITION ADJUSTMENT

Tune in a color bar pattern. Press and hold the + or - buttons of the Bass, Treble or Balance Controls. Use the bar pattern to center the display by adjusting Display Position Control (R528) (on Tuner Control Board).

### COLOR SYNC ADJUSTMENT

Tune in a color bar pattern. Change from channel to channel and check the color lock in. If color is slow to lock in, make slight adjustment of Color Sync Control (R50). Repeat procedure until color sync locks in quickly.

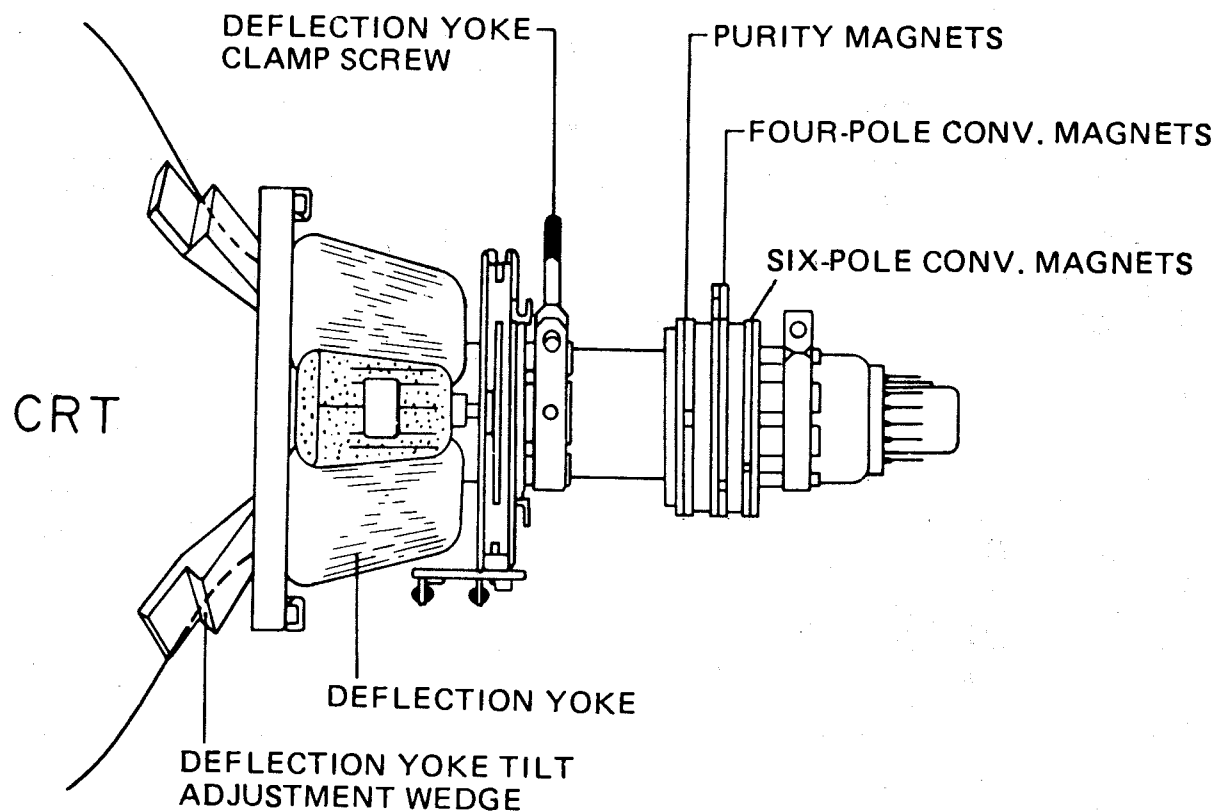


A Howard W. Sams CIRCUITRACE® Photo

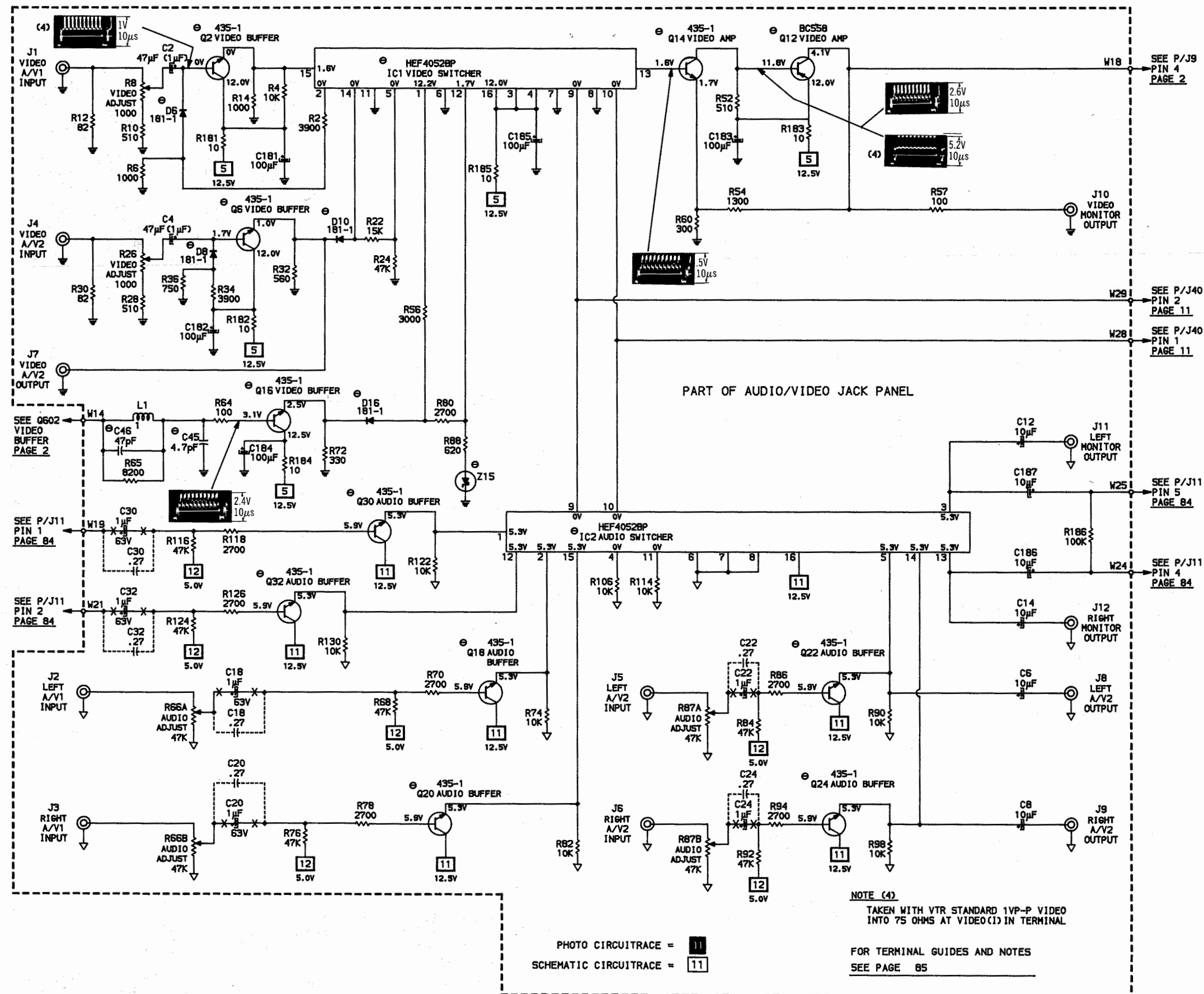
S.V.M. MODULE

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FOLDER 2



CRT NECK ASSEMBLY



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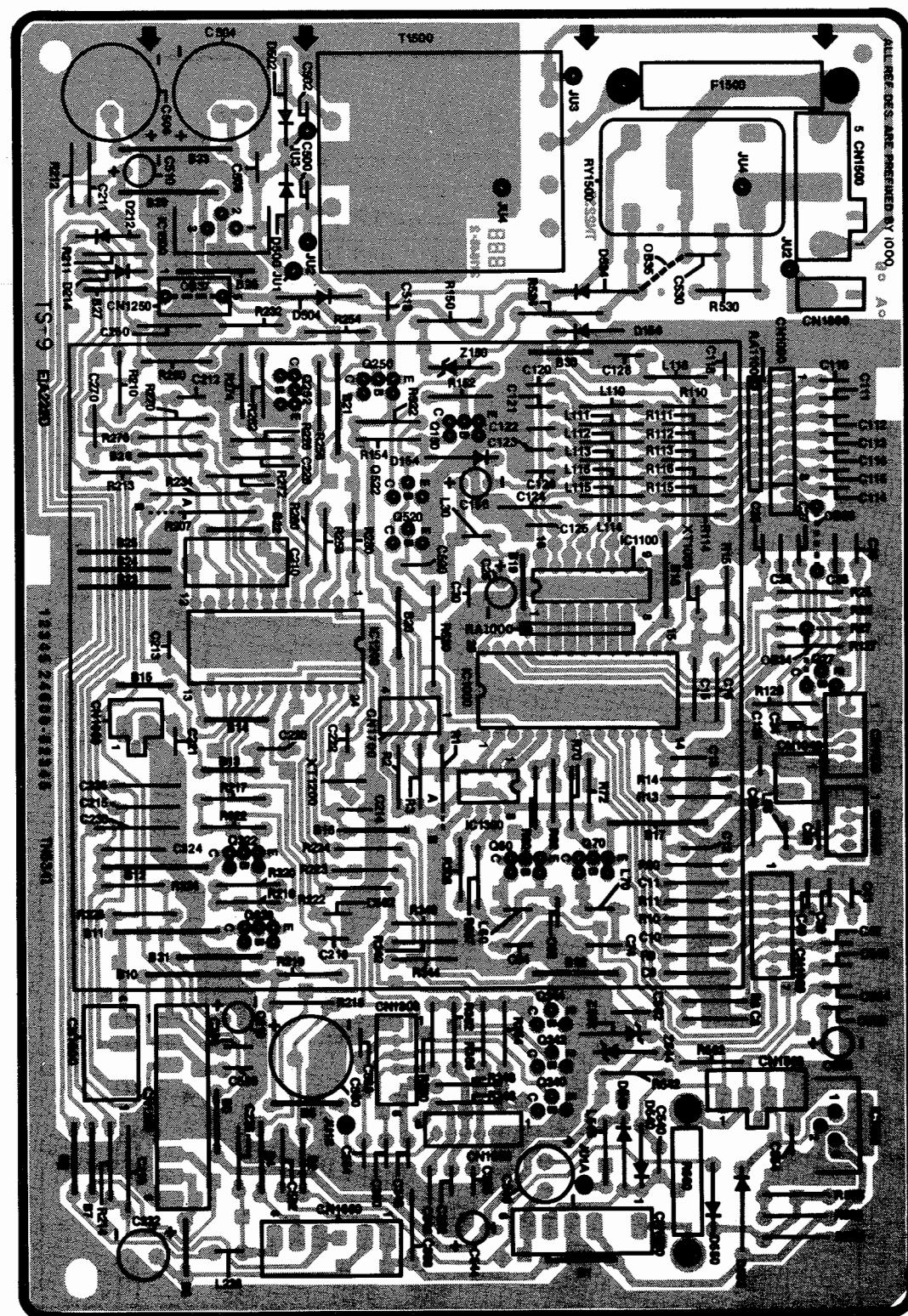
FOLDER 2

A/V JACK PANEL

A/V JACK PANEL

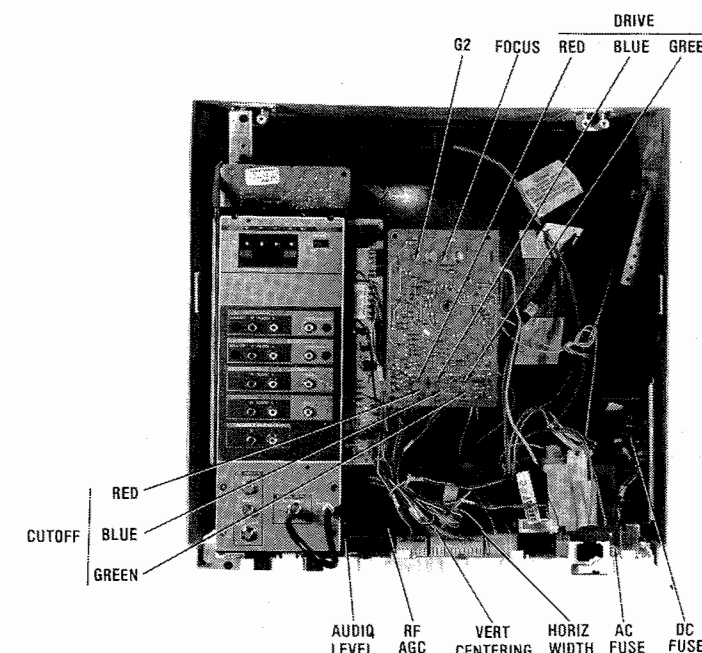


TS-9 TUNER CONTROL MODULES  
P.C. BOARD OVERLAY  
(VIEWED FROM THE COMPONENT SIDE)



Courtesy of the Manufacturer

TS-9 TUNER CONTROL MODULE



CABINET-REAR VIEW

## DISASSEMBLY INSTRUCTIONS

### CHASSIS REMOVAL

Remove eight screws holding cabinet back and remove back. Disconnect speaker and antenna connectors. Disconnect HV anode, CRT socket, deflection yoke connectors, degaussing coil connector and ground leads. Remove three screws holding main board assembly to cabinet bottom and remove assembly from cabinet. Remove four screws holding remote receiver tuning selector panel assembly to cabinet front and remove assembly from cabinet.

### CRT REMOVAL

Follow "Chassis Removal" procedure and lay set facedown on a soft protective surface. Loosen and remove CRT neck assemblies. Remove four screws holding CRT to cabinet front and lift CRT out of cabinet. Do not lift CRT by the neck.

## SERVICING IN THE FIELD

### CRT IMPLSION PROTECTION AND CLEANING

Implsion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

### FUSE DEVICES

A 1/8-amp fuse is used for standby power-supply protection. (See photo, Cabinet - Rear View.)

A 4-amp fuse is used for AC line protection. (See photo, Cabinet - Rear View.)

### VHF/UHF TUNER

See Miscellaneous Adjustments.

Channel (up) and (down) buttons are provided for channel scanning.

Ten numbered buttons on the remote are provided for two digit entry channel selection with scan (up) and (down) buttons provided for channel scanning.

SCAN/PROGRAM switch and ADD and DELETE buttons are provided for pretuning.

Fine Tuning is automatic.

### HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal frequency.

### WIDTH

The width may be varied by adjusting the width control.

### FOCUS

The focus may be varied by a focus control. (See photo, Cabinet - Rear View.)

### AGC

The AGC may be varied by an AGC Delay control.

### CENTERING

Horizontal centering is accomplished by proper adjustment of the horizontal centering control.

Vertical centering is accomplished by proper adjustment of the vertical centering control. (See photo, Cabinet - Rear View.)

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



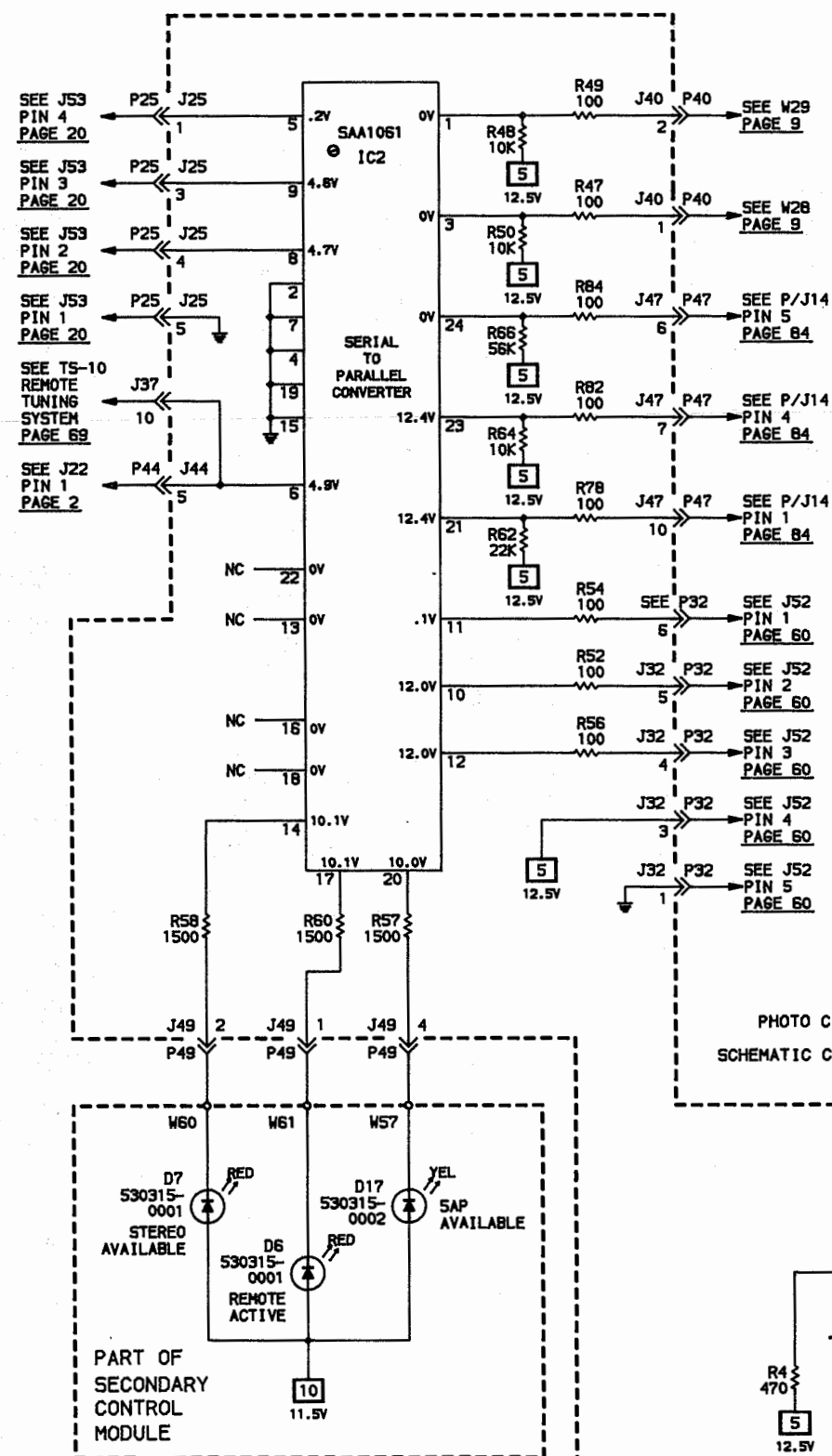
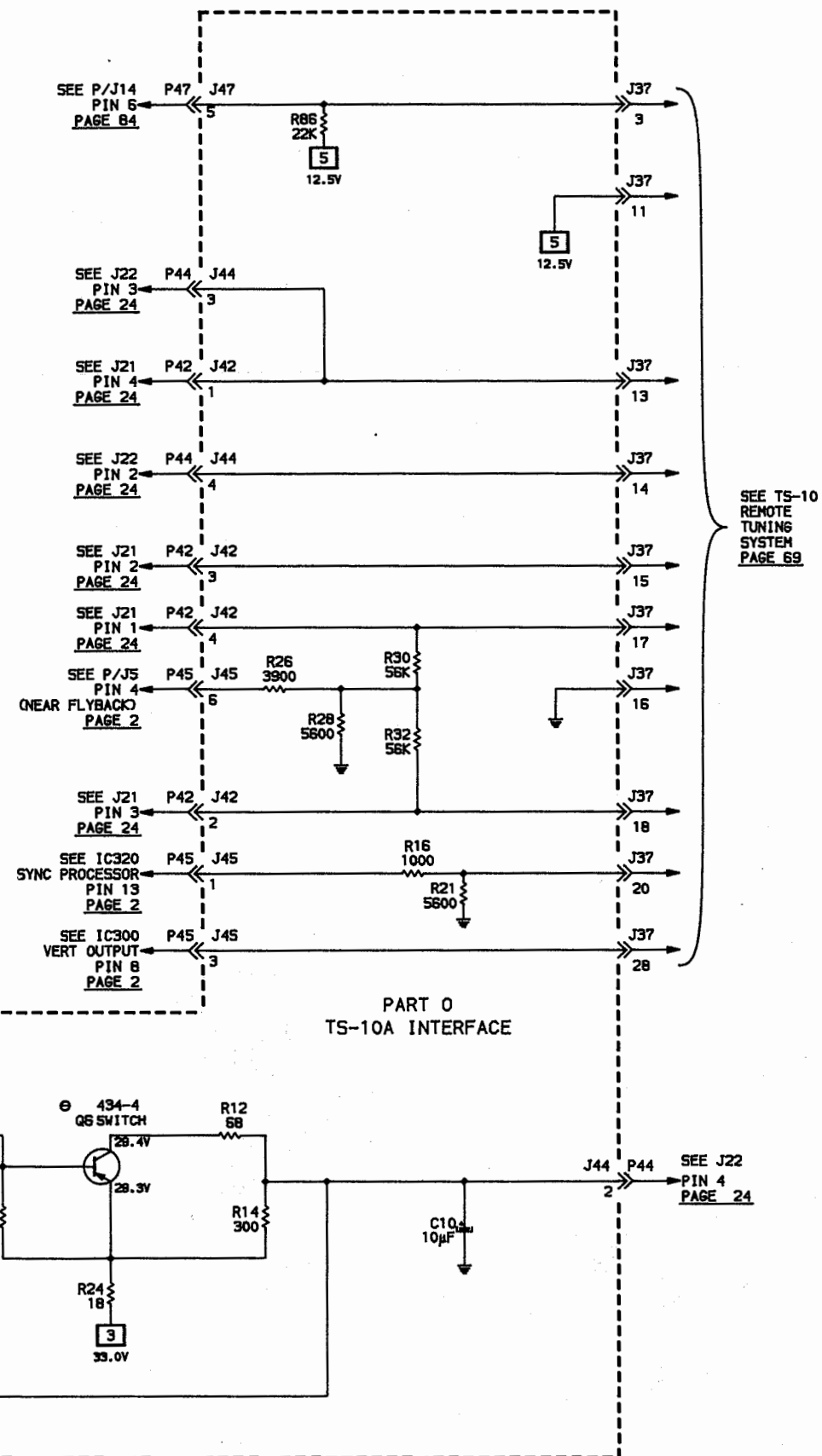


PHOTO CIRCUITRACE = 11  
SCHEMATIC CIRCUITRACE = 11



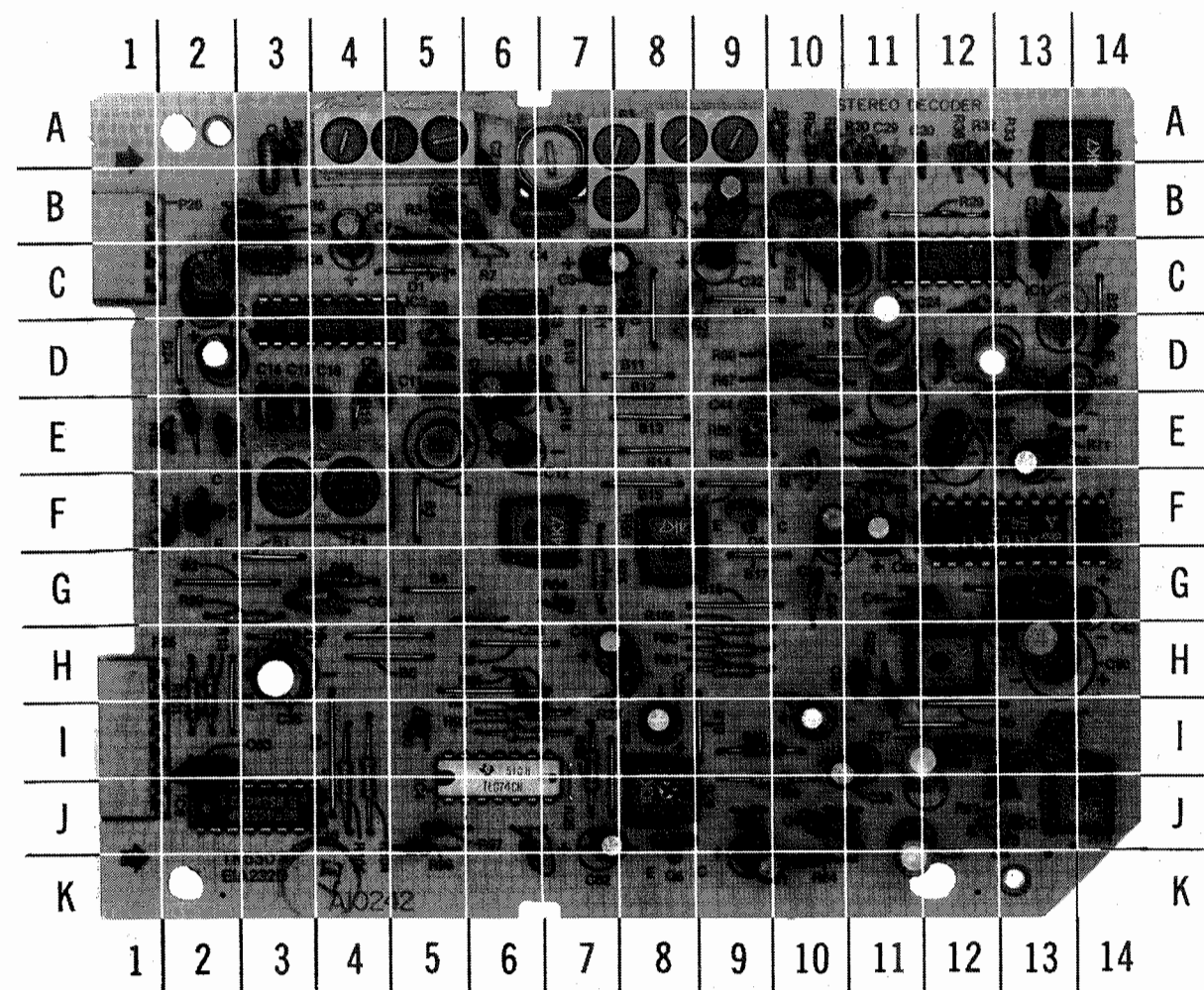
SEE TS-10  
REMOTE  
TUNING  
SYSTEM  
PAGE 69

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

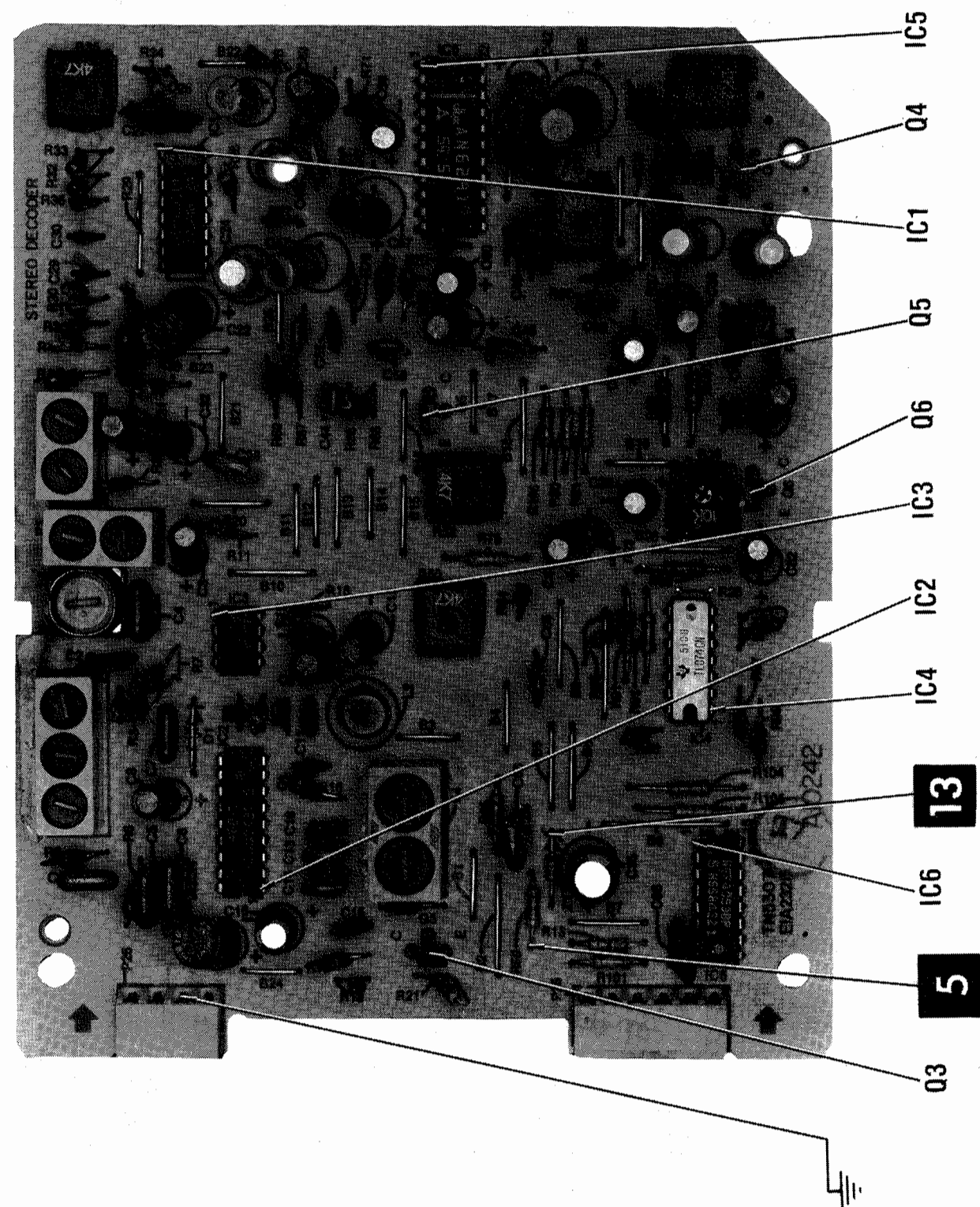
# STEREO DECODER-GridTrace LOCATION GUIDE

C1	A-3	C35	H-3	C69	D-14	R18	D-7	R69	D-10
C2	B-6	C36	I-11	C70	B-11	R19	E-2	R70	E-13
C3	C-7	C37	I-13	D1	C-5	R20	F-3	R71	E-13
C4	B-7	C38	J-11	F1	A-5	R21	F-2	R72	G-11
C5	B-3	C39	I-12	F2	A-9	R23	H-8	R73	G-13
C6	C-3	C40	J-10	F3	A-8	R26	J-8	R74	J-14
C7	B-5	C41	H-7	F4	F-3	R27	D-12	R75	G-7
C8	B-4	C42	G-13	IC1	C-12	R28	C-12	R76	E-11
C9	E-6	C43	D-10	IC2	D-4	R30	A-11	R77	E-11
C10	D-4	C44	E-9	IC3	C-6	R31	A-10	R78	F-11
C11	D-5	C45	G-10	IC4	J-6	R32	A-12	R79	F-12
C12	E-6	C46	G-12	IC5	F-13	R33	A-13	R80	H-9
C13	E-3	C47	D-11	IC6	J-3	R34	B-14	R81	H-9
C14	E-3	C48	D-13	L1	A-7	R35	A-14	R82	H-11
C15	E-2	C49	D-14	L2	E-5	R36	A-12	R83	H-12
C16	D-2	C50	H-11	Q3	F-2	R37	A-10	R84	G-7
C17	C-2	C51	G-13	Q4	J-13	R38	B-8	R85	H-6
C18	E-4	C52	I-10	Q5	F-9	R39	B-10	R90	I-5
C19	D-6	C54	F-10	Q6	J-8	R40	A-10	R91	I-6
C20	I-8	C55	G-6	R2	A-3	R50	F-7	R92	I-7
C22	C-11	C56	E-13	R3	B-5	R58	F-8	R93	I-6
C23	C-9	C57	E-12	R5	B-5	R59	G-3	R94	J-6
C24	C-11	C58	E-10	R6	B-3	R60	J-12	R95	G-4
C25	D-13	C59	E-10	R7	B-6	R61	J-13	R96	J-5
C26	B-13	C60	F-11	R8	C-5	R62	I-12		
C27	B-13	C61	K-9	R9	D-5	R63	I-12		
C28	C-13	C62	J-7	R11	C-8	R64	K-10		
C29	A-11	C63	I-2	R13	H-2	R65	J-10		
C30	A-12	C66	G-4	R15	D-5	R66	E-9		
C31	B-9	C67	B-10	R16	D-4	R67	D-10		
C32	B-9	C68	H-13	R17	E-2	R68	E-9		



STEREO DECODER

A Howard W. Sams GRIDTRACE™ Photo



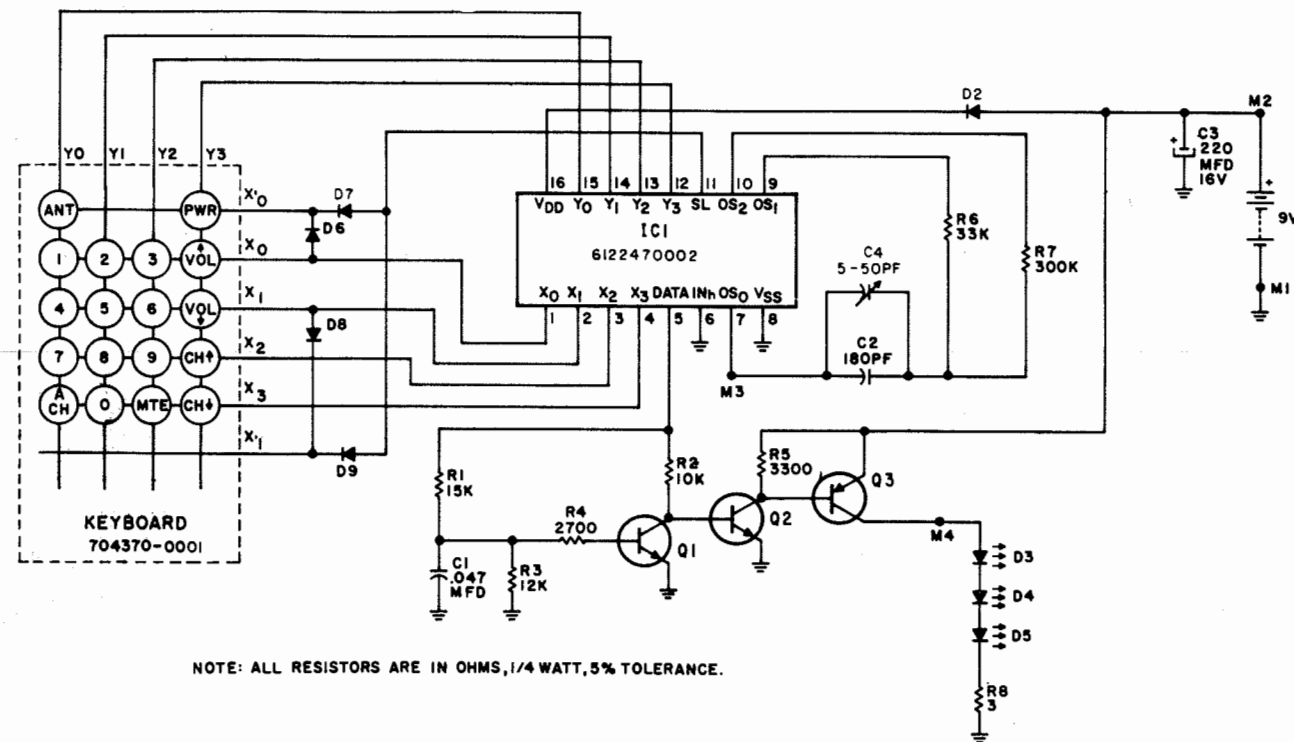
A Howard W. Sams CIRCUITTRACE® Photo

STEREO DECODER

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03  
DET ON SS37IN 1 NID ELAVICINI S.CI NO SMORRY :ETON

FOLDER 2

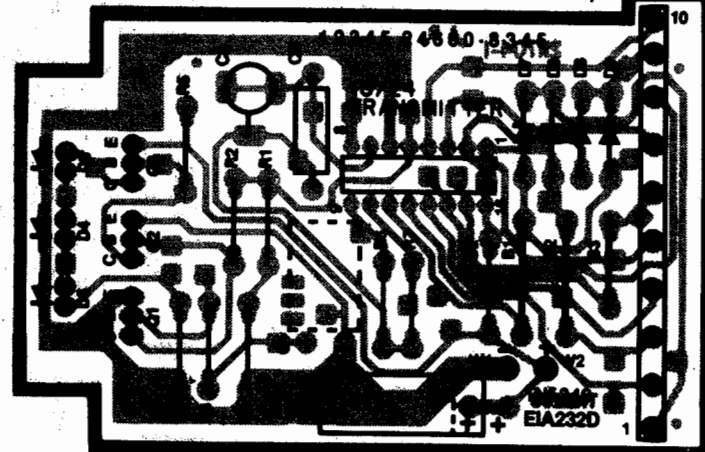
# T185BB REMOTE TRANSMITTER SCHEMATIC DIAGRAM (Incorporated with TS-9 Tuning Systems)



NOTE: ALL RESISTORS ARE IN OHMS, 1/4 WATT, 5% TOLERANCE.

\*Note: This Key is referred to as "Quick View" on Sylvania transmitters, "Adjacent Channel" on Magnavox and "Review" on Philco.

## T185BB TRANSMITTER P.C. BOARD OVERLAY (VIEWED FROM THE COMPONENT SIDE)



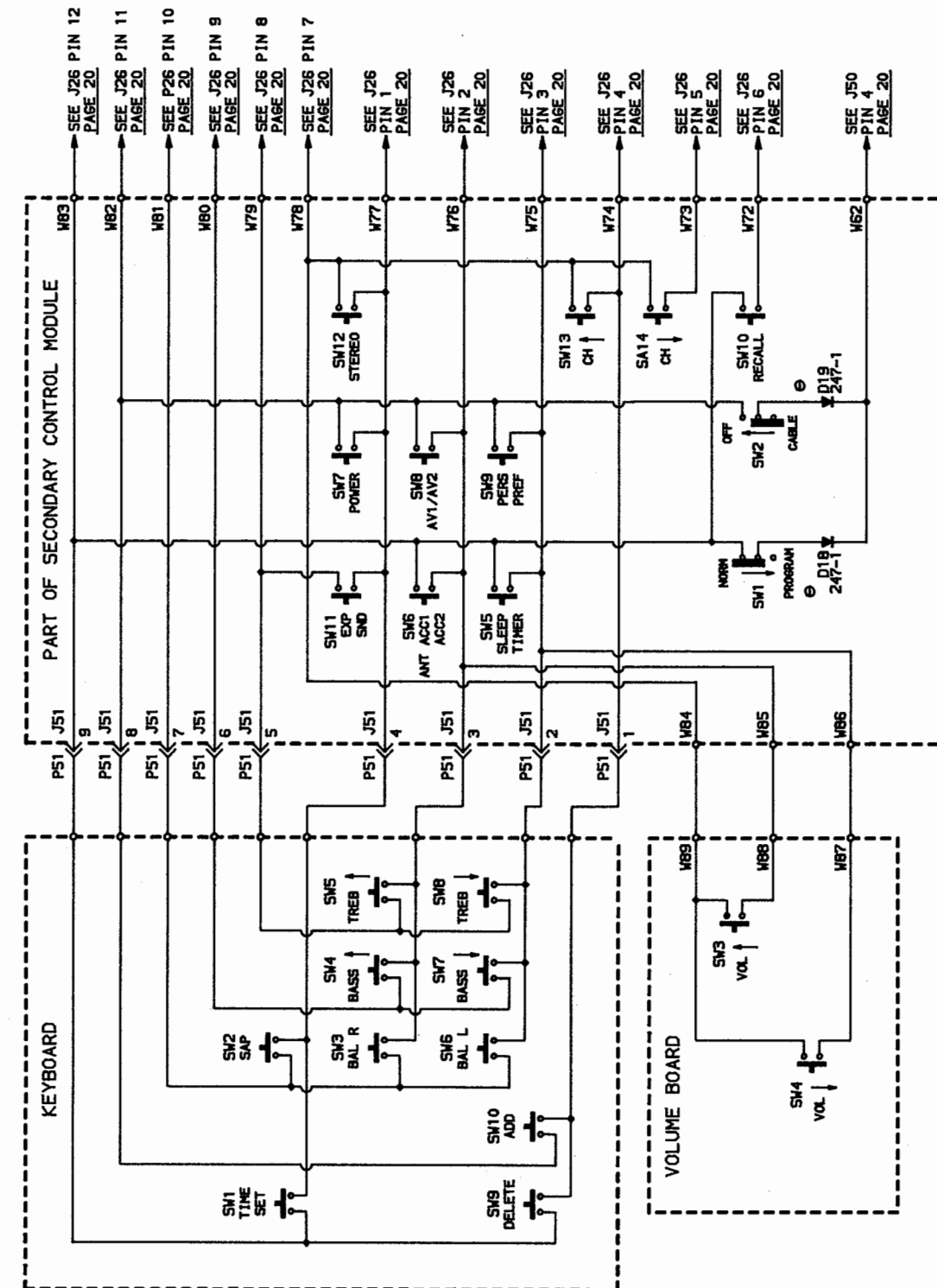
FUNCTION	BCD CODE	HEX CODE	KEY MATRIX		
			SL	X	Y
1	001100	06	0	0	0
2	000100	02	0	0	1
3	001000	04	0	0	2
VOL ▲	000000	00	0	0	3
5	010010	0A	0	1	1
6	011000	00	0	1	2
VOL ▼	010000	08	0	1	3
7	001111	07	0	2	0
8	000011	03	0	2	1
9	001011	05	0	2	2
CH ▲	000011	01	0	2	3
4	011110	0E	0	1	0
* A/CH	011111	0F	0	3	0
0	010011	0B	0	3	1
MUTE	011011	0D	0	3	2
CH ▼	010011	09	0	3	3
POWER	100000	10	1	0	3
ANT	101110	16	1	0	0

## T185BB-MA01, -SA01 & -PA01 18 BUTTON REMOTE TRANSMITTER REPLACEMENT PARTS LIST

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>CAPACITORS</b>					
C1	.047uF., 20%, 100V, Polyester	2508804730	D2	Silicon Diode	5301811001
C2	180pF., Polypropylene	2507191812	D3	Infrared Emitting	5302740001
C3	220uF., 16V, Electrolytic	2702032216	D4	Infrared Emitting	5302740001
C4	50pF., Trimmer	2602200003	D5	Infrared Emitting	5302740001
<b>RESISTORS</b>					
(All are 5% Carbon Film unless otherwise specified.)					
R1	15k	2302811535	D6	Silicon Diode	5301811001
R2	10k	2302811035	D7	Silicon Diode	5301811001
R3	12k	2302811235	Q1	NPN Silicon Transistor	6102240001
R4	2700 ohm	2302812725	Q2	NPN Silicon Transistor	6102240001
R5	3.3k	2302813325	Q3	PNP Silicon Transistor	6101580003
R6	33k	2302813335	IC1	Remote Transmitter IC	6122470002
R7	300k	2302813045	<b>CONTROLS &amp; SWITCHES</b>		
R8	3 ohm	2302813095	Pressure Pad Keyboard		
			7043700001		

REMOTE TRANSMITTERS

Courtesy of the Manufacturer



A PHOTOFAC STANDARD NOTATION SCHEMATIC  
WITH CIRCUITRACE  
© Howard W. Sams & Co., Inc. 1986

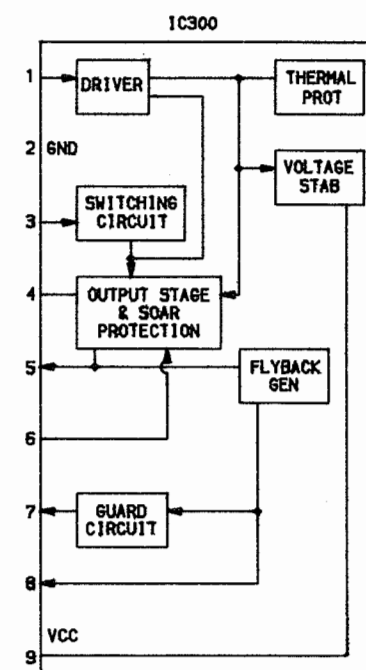
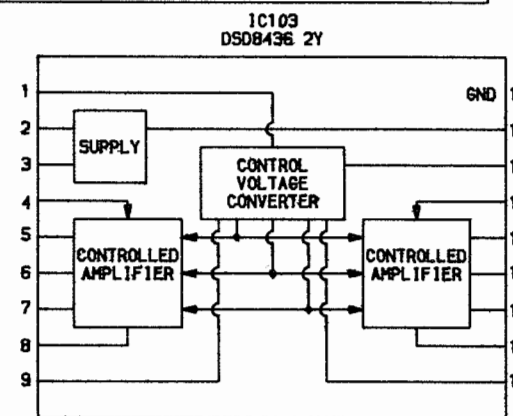
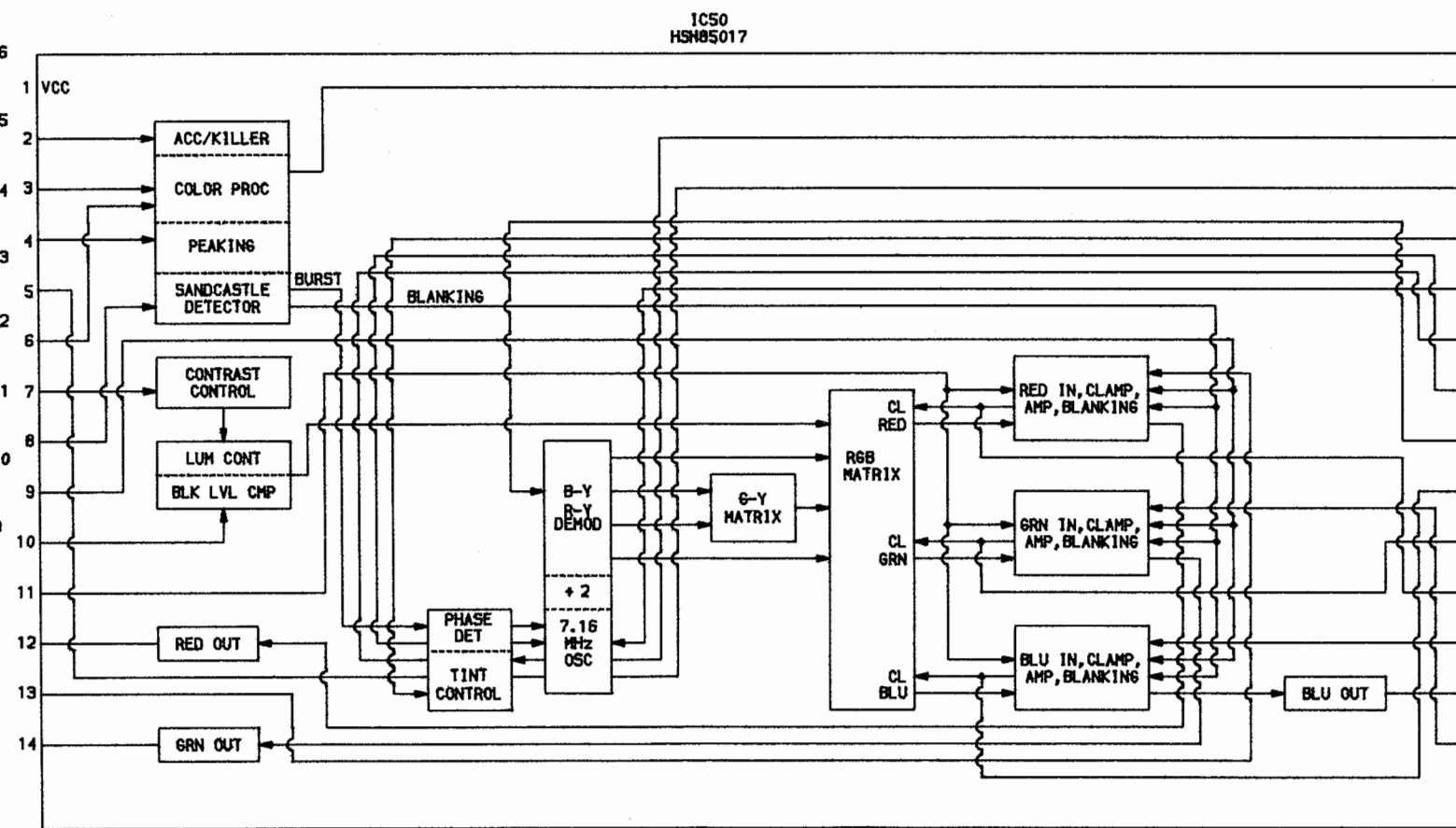
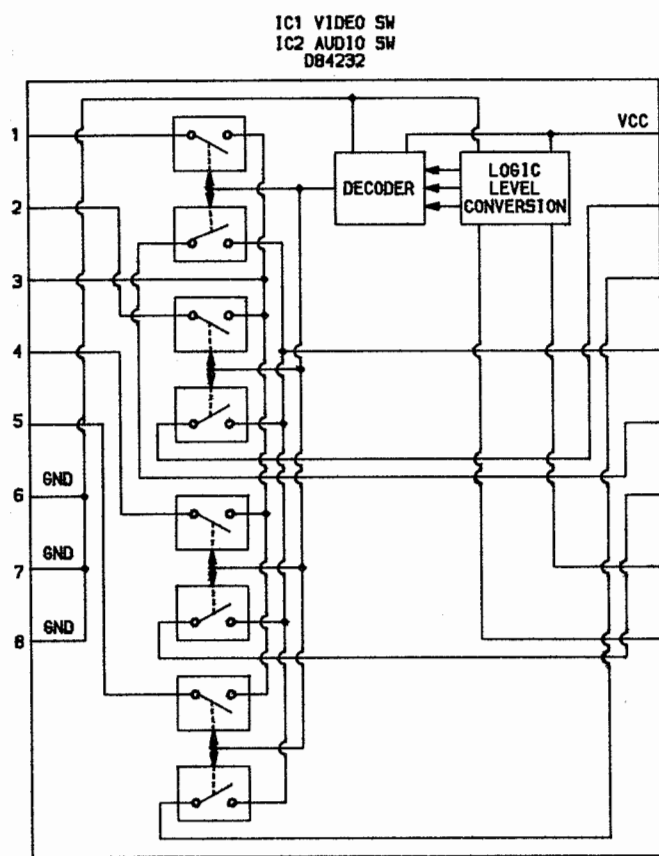
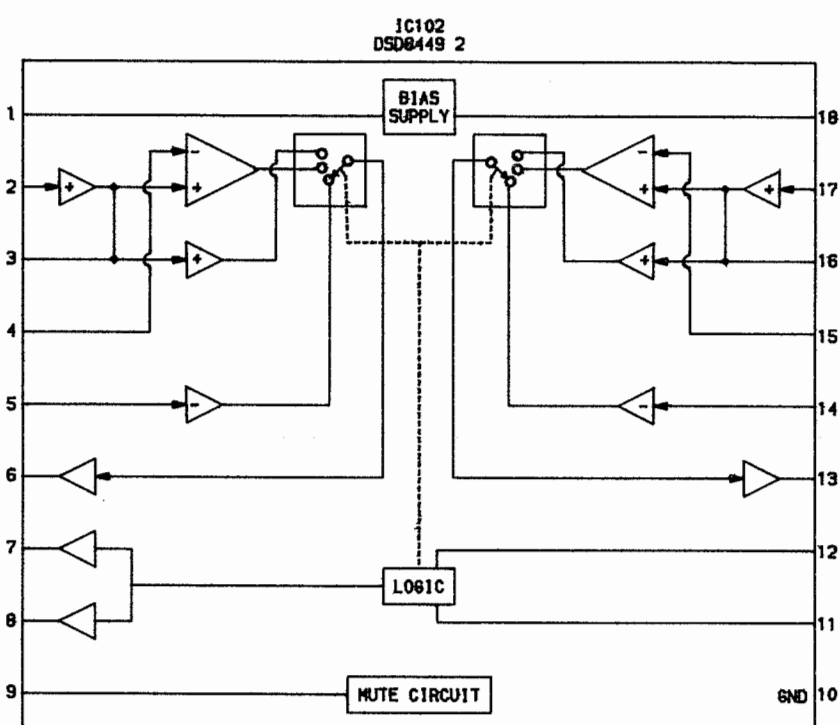
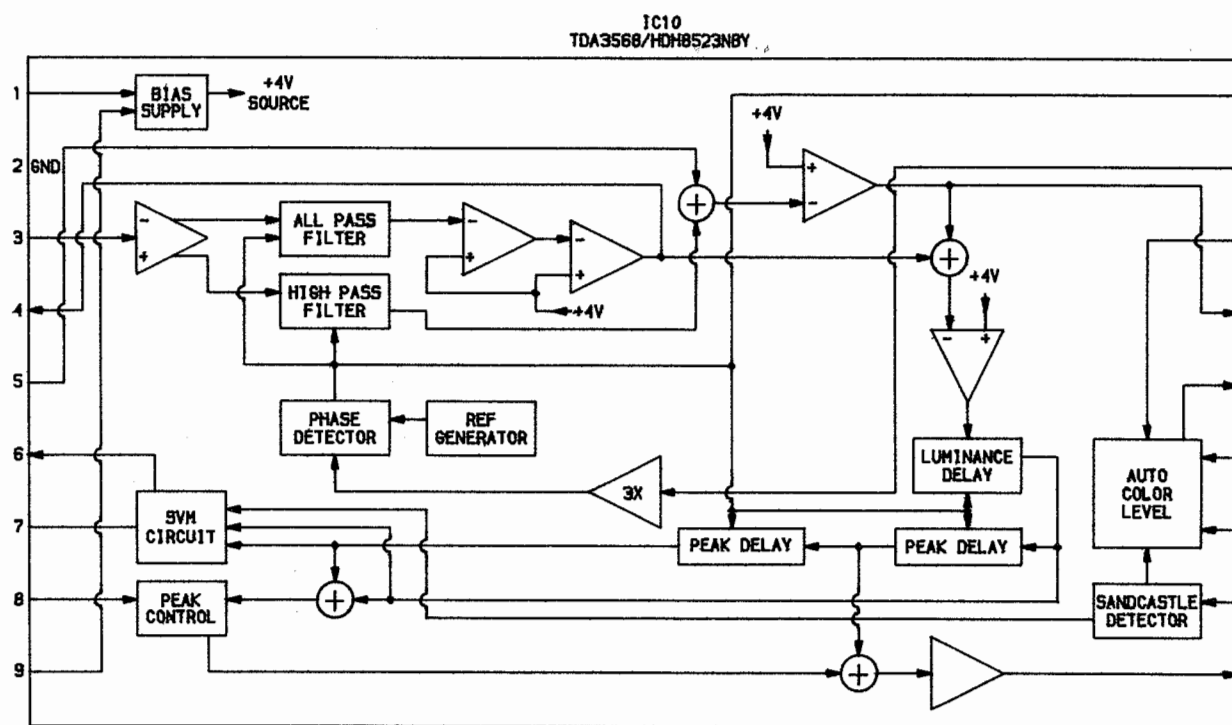
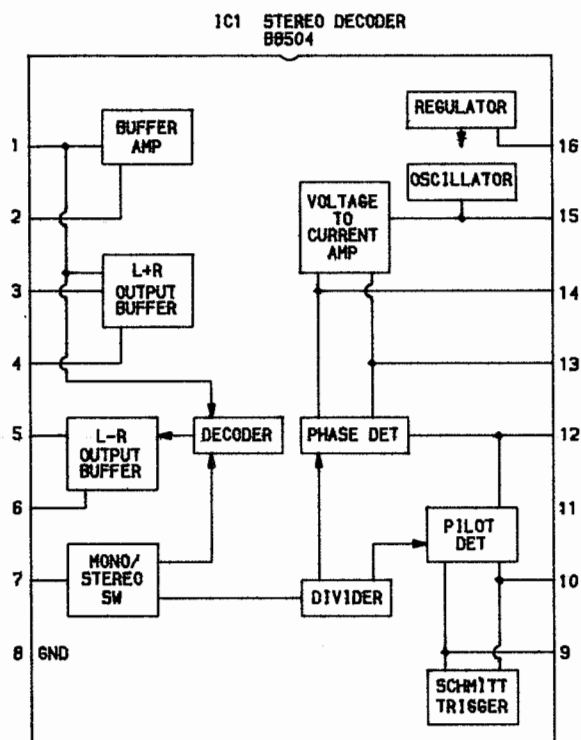
KEYBOARD SCHEMATIC

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

SET 2427 FOLDER 2

13



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

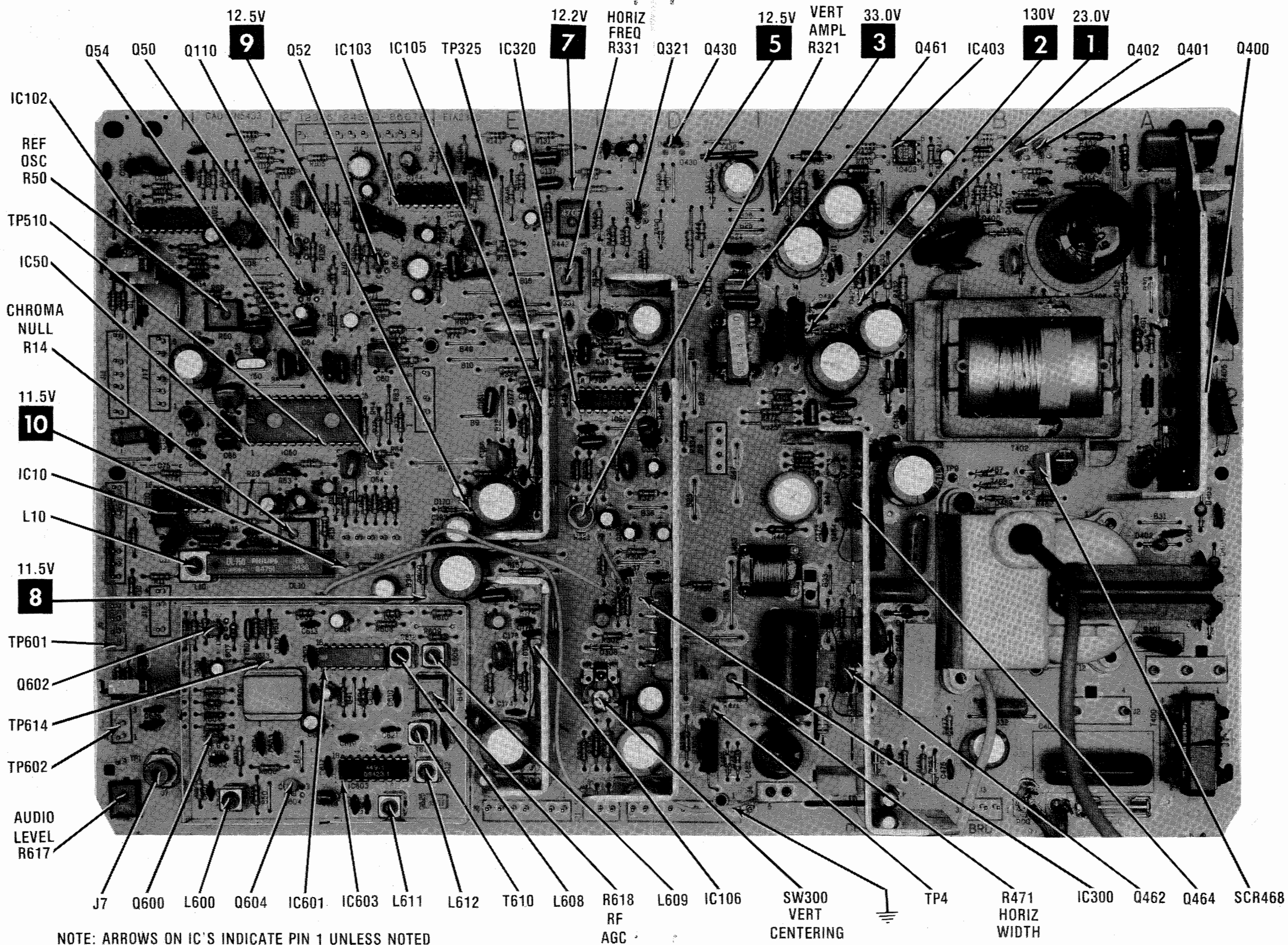
## FOLDER 2

## IC FUNCTIONS

## IC FUNCTIONS



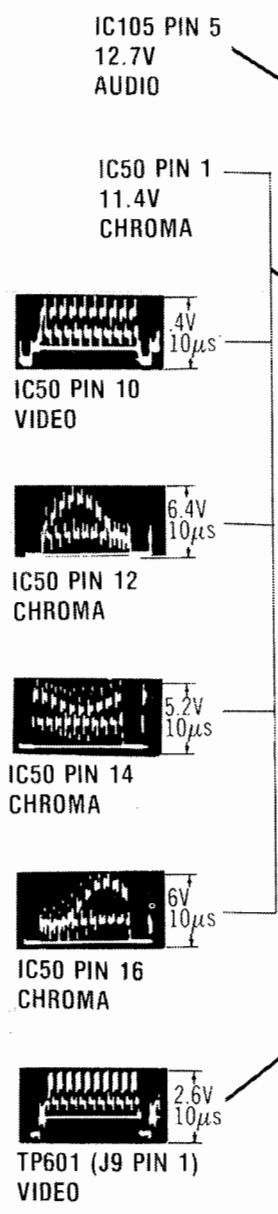
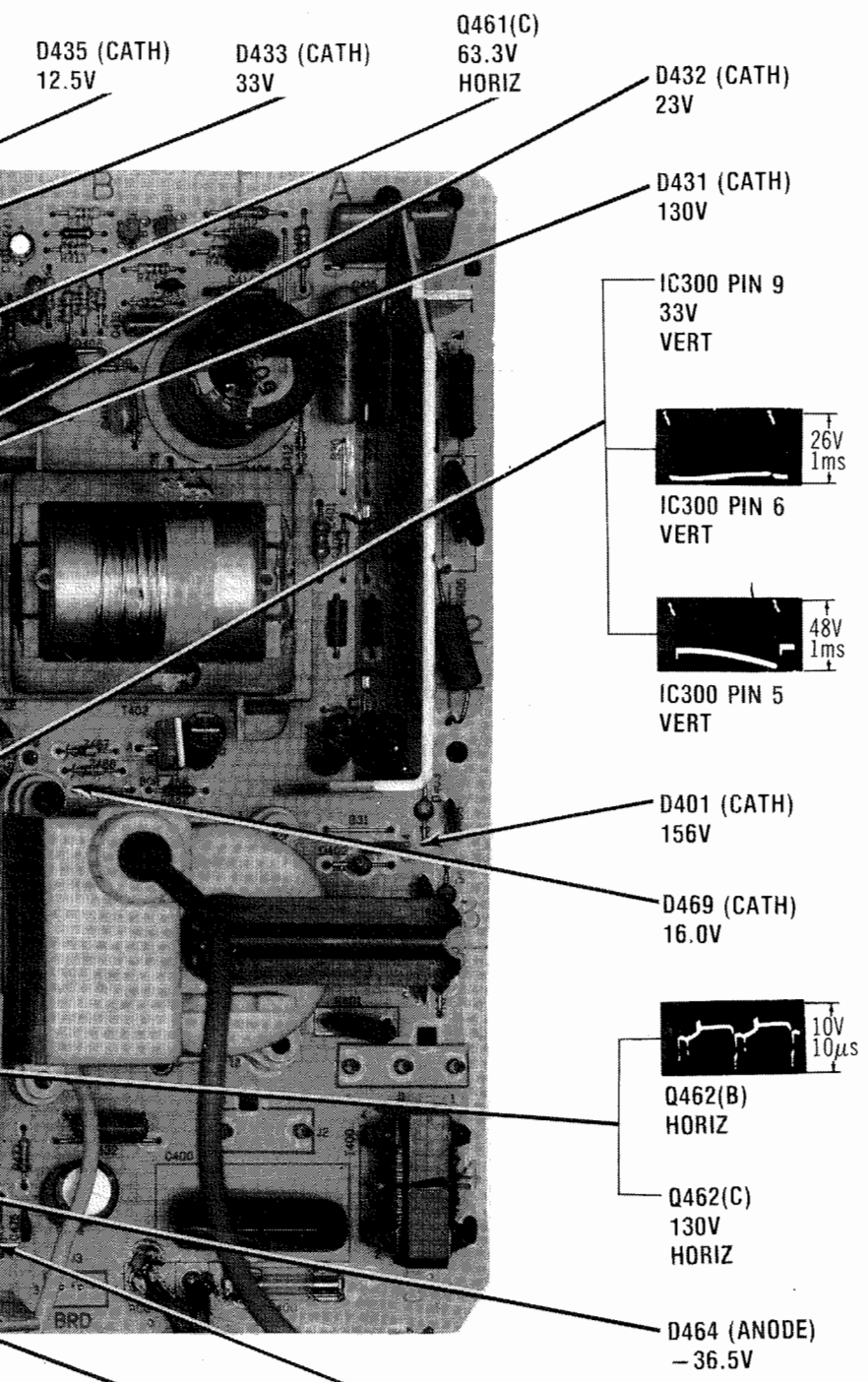
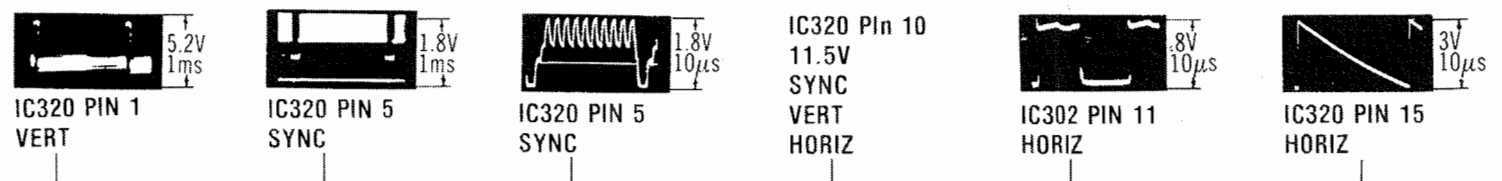




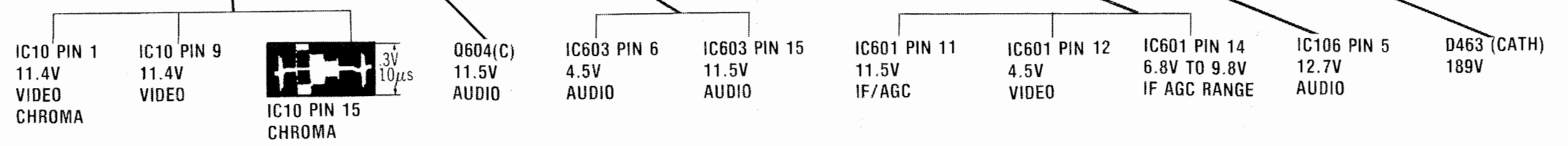
MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2





TP1  
(R620)  
5.6V TO 11.2V  
RF AGC RANGE



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

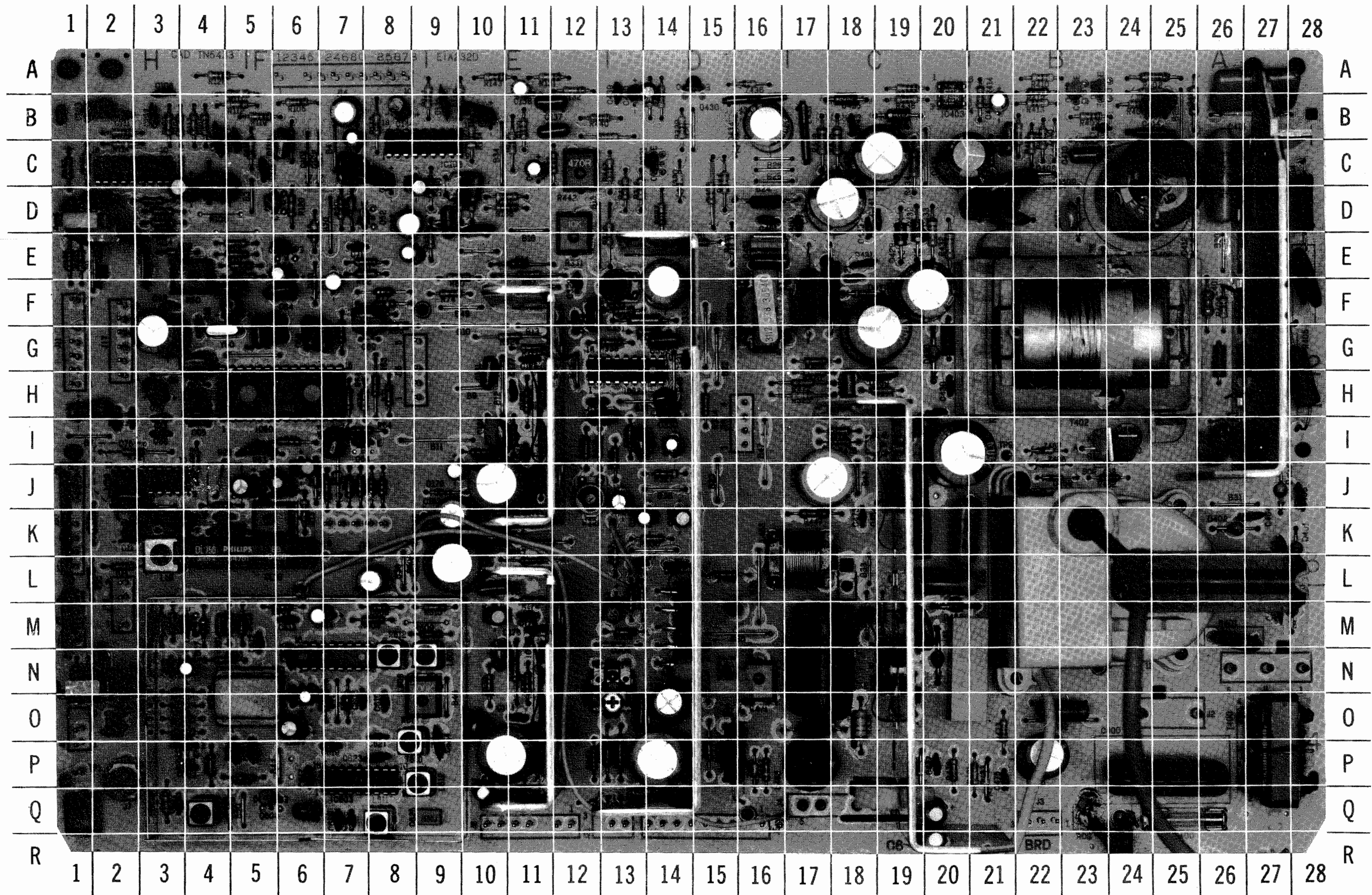
# MAIN BOARD-GridTrace LOCATION GUIDE

C11	K-2	C170	L-9	C465	N-17	FB1	G-20	R57	J-7	R170	N-10	R464	F-17
C12	K-4	C171	J-10	C466	N-21	FB2	H-27	R58	D-6	R171	G-11	R466	Q-17
C13	H-3	C172	P-10	C467	L-20	FB3	D-27	R59	J-7	R172	L-11	R467	P-16
C14	J-2	C173	I-11	C469	H-19	FB4	G-26	R60	D-7	R300	K-14	R469	Q-17
C15	J-5	C174	O-11	C470	I-19	FB5	O-19	R61	G-7	R301	L-13	R470	H-17
C16	F-4	C175	G-11	C471	H-18	FB6	M-18	R62	D-7	R302	M-13	R471	N-16
C17	H-2	C176	M-11	C472	J-17	FB7	G-27	R63	F-8	R303	P-12	R472	H-17
C18	H-2	C177	H-11	C473	K-18	IC10	J-3	R64	I-7	R304	L-13	R473	H-19
C50	F-5	C178	M-11	C474	K-20	IC50	H-6	R65	F-8	R305	P-13	R474	I-18
C51	F-5	C300	L-14	C475	P-21	IC102	C-2	R66	F-8	R306	P-13	R475	H-19
C52	E-6	C301	L-13	C476	P-22	IC103	C-9	R67	E-11	R307	K-13	R476	I-18
C54	G-5	C302	O-3	C477	P-20	IC105	H-11	R68	J-3	R309	P-15	R477	O-21
C55	F-6	C303	P-14	C478	Q-20	IC106	N-11	R69	E-30	R318	C-13	R478	P-20
C56	G-6	C304	M-13	C480	I-24	IC300	M-14	R70	E-5	R320	P-15	R479	M-19
C57	G-3	C305	Q-12	C483	Q-23	IC320	G-13	R71	H-8	R321	J-12	R480	L-15
C58	J-6	C320	M-6	O600	M-6	IC403	B-20	R72	I-2	R322	I-12	R481	P-21
C59	I-7	C321	G-14	C601	Q-3	IC601	N-7	R73	K-2	R323	H-17	R482	J-24
C60	F-8	C322	F-12	O602	P-4	IC603	P-7	R74	F-9	R324	G-11	R600	L-9
C61	G-7	C323	K-14	O603	P-5	J7	P-2	R75 (L75)	J-8	R325	I-13	R601	Q-3
C62	F-3	C324	J-13	O604	P-5	L10	K-3	R76 (L76)	J-8	R326	I-13	R602	Q-4
C63	G-4	C325	I-13	O605	N-6	L11	K-5	R77 (L77)	F-8	R327	J-14	R603	O-3
C64	F-6	C326	K-14	O606	Q-6	L13	I-5	R78	H-7	R329	I-12	R604	O-3
C65	H-4	C327	I-14	O607	Q-6	L14	E-11	R79	J-7	R330	E-13	R605	N-3
C66	H-4	C328	F-12	O608	Q-7	L15	J-4	R80	E-10	R331	E-12	R606	P-5
C67	G-4	C329	F-12	O609	Q-6	L401	F-26	R81	E-8	R332	F-13	R607	O-7
C68	I-3	C330	H-14	C610	Q-8	L403	B-25	R82	E-8	R333	F-13	R608	M-8
C69	J-5	C331	F-14	C611	N-3	L431	B-17	R83	H-8	R334	H-15	R610	M-9
C70	H-3	C332	G-14	C612	M-5	L432	B-16	R104	B-2	R335	G-14	R611	P-4
C71	E-7	C333	F-14	C613	M-6	L461	N-18	R105	B-6	R336	O-18	R612	M-9
C72	F-7	C334	N-15	C614	M-6	L462	P-17	R106	B-3	R337	D-14	R613	N-4
C73	K-3	C335	H-13	C616	N-3	L463	L-17	R107	B-3	R338	G-13	R614	M-5
C74	J-6	C400	P-25	C617	P-6	L466	K-20	R109	B-4	R339	B-14	R615	M-4
C101	H-1	C402	M-27	C618	Q-6	L600	Q-4	R110	C-1	R340	Q-12	R616	M-3
C102	D-2	C403	K-27	C619	P-7	L602	O-3	R111	A-5	R400	E-28	R617	Q-1
C103	B-2	C404	K-27	C620	Q-7	L604	O-7	R112	B-5	R401	M-26	R618	O-9
C104	B-5	C405	J-28	C621	Q-8	L605	M-6	R113	B-4	R402	A-25	R619	N-1
C106	A-3	C406	C-25	C622	Q-7	L606	M-8	R114	C-2	R403	B-24	R620	N-1
C107	B-3	C407	C-26	C623	P-8	L607	M-4	R115	C-5	R404	D-28	R671	M-3
C108	C-4	C408	I-26	C624	P-9	L608	N-8	R116	D-3	R405	H-28	SCR468	I-23
C109	C-4	C409	F-27	C625	Q-9	L609	N-9	R117	D-3	R406	F-26	SF600	O-5
C110	B-7	C410	C-23	C626	Q-2	L611	Q-8	R118	D-3	R407	D-27	SW300	O-13
C111	B-2	C411	B-21	C627	O-2	L612	P-9	R119	B-5	R408	E-24	T400	P-27
C112	C-6	C412	B-21	D11	J-6	Q50	E-6	R120	D-6	R409	B-23	T402	G-23
C113	B-4	C413	D-23	D12	J-7	Q52	D-7	R121	B-6	R410	A-22	T460	F-16
C114	D-3	C414	B-25	D70	F-6	Q54	I-7	R123	B-13	R411	C-21	T465	M-25
C115	C-5	C415	A-27	D101	C-6	Q107	D-1	R124	E-1	R412	B-22	R610	P-8
C116	D-2	C416	C-28	D102	C-6	Q110	D-5	R125	E-1	R413	B-22	TP4	O-15
C130	B-7	C417	H-27	D170	J-9	Q321	C-14	R126	A-4	R414	B-21	TP325	G-11
C131	C-9	C418	H-27	D300	N-15	Q400	G-27	R127	C-1	R415	B-22	TP510	I-6
C132	D-8	C419	I-27	D308	M-13	Q401	A-23	R130	B-11	R416	C-22	TP601	M-1
C133	C-7	C420	D-21	D400	K-28	Q402	A-23	R131	A-11	R419	D-21	TP602	O-1
C134	D-10	C421	E-18	D401	K-26	Q430	A-15	R132	A-12	R420	B-25	TP614	N-5
C135	B-9	C422	C-27	D402	J-27	Q461	E-16	R133	C-12	R421	B-22	Y50	G-4
C136	B-12	C423	B-23	D403	D-27	Q462	N-19	R134	B-10	R428	C-17	Y601	M-4
C137	B-12	C429	H-20	D405	I-18	Q463	I-18	R135	D-11	R429	P-15	Z320	C-14
C138	A-11	C430	H-20	D406	I-27	Q464	J-19	R136	D-11	R430	F-18	Z404	A-25
C139	E-8	C431	E-18	D408	C-22	Q600	P-3	R137	D-10	R431	E-15	Z407	C-23
C140	C-10	C432	F-19	D409	C-23	Q602	M-3	R138	E-9	R432	E-20	Z410	B-22
C141	D-9	C433	D-18	D411	D-23	Q604	Q-5	R139	A-10	R433	D-20	Z436	A-16
C142	B-10	C434	F-20	D412	E-25	R10	L-2	R140	B-11	R434	C-19	Z465	P-16
C143	C-11	C435	C-19	D429	E-19	R11	L-2	R141	B-9	R435	B-18	Z466	I-22
C144	B-8	C436	D-18	D430	G-20	R12	K-3	R142	B-8	R436	A-19	Z467	I-22
C145	C-8	C437	C-21	D431	F-18	R13	K-6	R143	A-10	R437	B-14		
C146	K-9	C438	B-16	D432	D-19	R14	K-5	R144	D-10	R438	B-19		
C147	Q-10	C439	A-13	D433	B-19	R16	K-4	R145	C-9	R439	C-13		
C161	H-10	C440	A-13	D434	B-16	R21	I-6	R161	I-10	R440	B-13		
C162	L-10	C441	D-19	D435	B-18	R22	I-4	R162	N-11	R441	B-14		
C163	K-9	C442	B-19	D461	N-20	R50	E-4	R163	J-11	R442	C-12		
C164	J-9	C443	B-18	D462	M-20	R51	E-5	R164	P-11	R443	C-13		
C165	M-10	C460	D-17	D463	P-21	R52	E-5	R165	H-11	R444	C-15		
C166	I-10	C461	D-16	D464	P-19	R53	I-5	R166	I-11	R447	K-17		
C167	N-10	C462	E-16	D469	J-22	R54	H-7	R167	L-11	R461	E-15		
C168	K-10	C463	M-20	DL10	K-5	R55	E-5	R168	N-11	R462	D-15		
C169	O-10	C464	I-20	F400	Q-25	R56	L-7	R169	K-11	R463	D-16		

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02,RF4378SL01,RF4378SL02,RF4378SL03

FOLDER 2

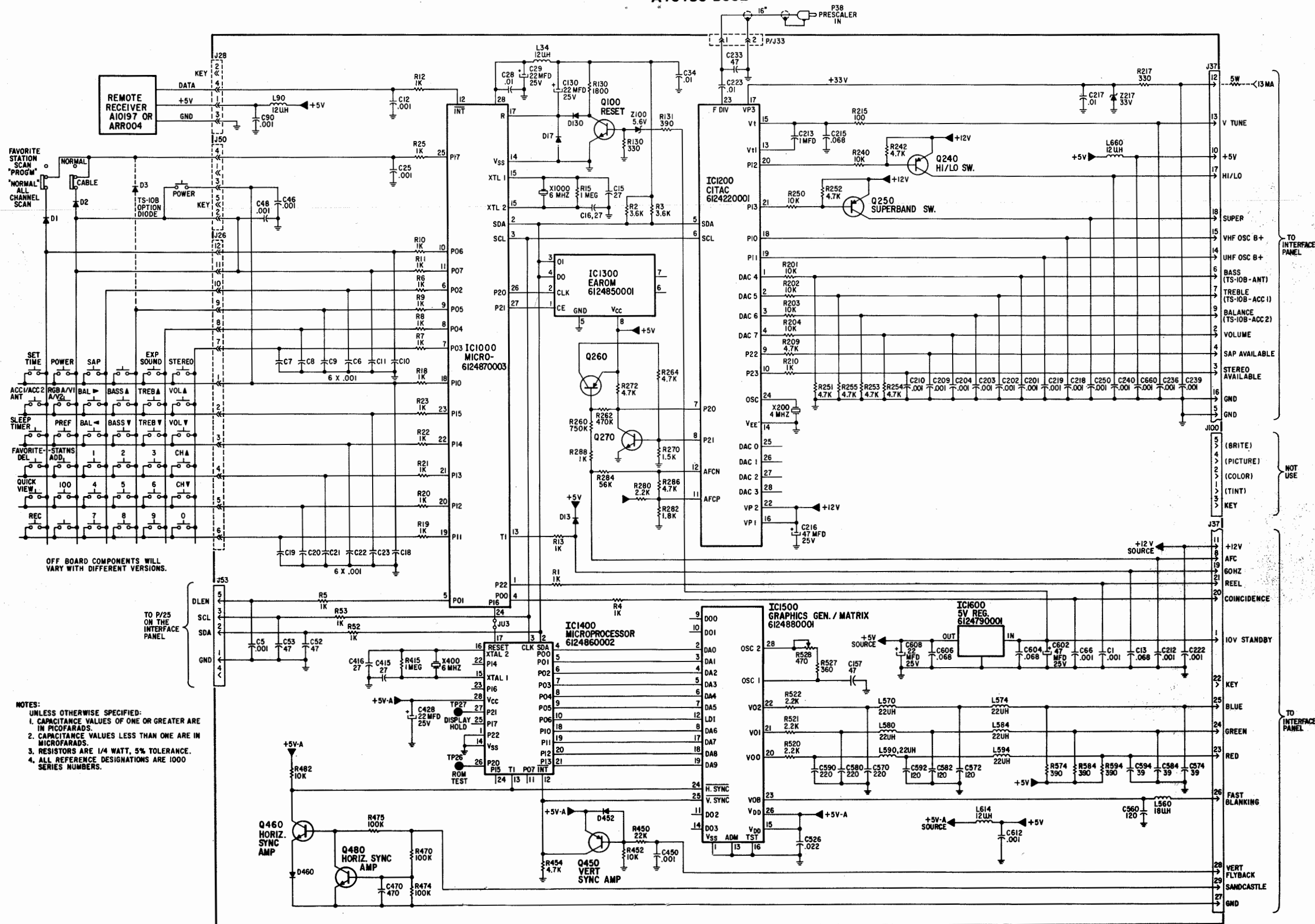




MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

**TS-10 REMOTE TUNING SYSTEM SCHEMATIC DIAGRAM**  
**A10180-B002**



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

**FOLDER 2**



CAD TN5375



**Courtesy of the Manufacturer**

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>CAPACITORS</b> (All are 10%, 50V, Ceramic Disc unless otherwise specified)			<b>RESISTORS (Continued)</b>		
C1001	1000pF.	2508311029	R1130	1800 ohm	2302141825
C1005	470pF., 5%	2508444715	R1131	390 ohm	2302143915
C1006	1000pF.	2508311029	R1132	330 ohm	2302143315
C1007	1000pF.	2508311029	R1052	1k	2302141025
C1008	1000pF.	2508311029	R1053	1k	2302141025
C1009	1000pF.	2508311029	R1201	10k	2302811035
C1010	1000pF.	2508311029	R1202	10k	2302811035
C1011	1000pF.	2508311029	R1203	10k	2302811035
C1012	1000pF.	2508311029	R1204	10k	2302811035
C1013	.01uF.	2508311029	R1209	4.7k	2302814725
C1015	27pF., 5%, NPO, Tubular	2507392705	R1210	1k	2302141025
C1016	27pF., 5%, NPO, Tubular	2507392705	R1215	100 ohm	2302141015
C1018	1000pF.	2508311029	R1217	330 ohm	2302143315
C1019	1000pF.	2508311029	R1240	10k	2302811035
C1020	1000pF.	2508311029	R1242	4.7k	2302814725
C1021	1000pF.	2508311029	R1250	10k	2302811035
C1022	1000pF.	2508311029	R1251	4.7k	2302814725
C1023	1000pF.	2508311029	R1252	4.7k	2302814725
C1025	1000pF.	2508311029	R1253	4.7k	2302814725
C1028	.01uF.	2508311039	R1254	4.7k	2302814725
C1029	22uF., 25V, Electrolytic	2701592125	R1255	4.7k	2302814725
C1034	1000pF.	2508311029	R1260	750k	2302817545
C1046	1000pF.	2508311029	R1262	470k	2302814745
C1048	1000pF.	2508311029	R1264	4.7k	2302814725
C1052	47pF., 5%, NPO	2508414705	R1270	1500 ohm	2302141525
C1053	47pF., 5%, NPO	2508414705	R1272	4.7k	2302814725
C1066	1000pF.	2508311029	R1280	2200 ohm	2302142225
C1090	1000pF.	2508311029	R1282	1800 ohm	2302141825
C1130	22uF., 25V, Electrolytic	2701592125	R1284	56k	2302815635
C1157	47pF., 5%, NPO, Tubular	2507394705	R1286	4.7k	2302814725
C1201	1000pF.	2508311029	R1288	1k	2302141025
C1202	1000pF.	2508311029	R1415	1 megohm	2302851055
C1203	1000pF.	2508311029	R1450	22k	2302852235
C1204	1000pF.	2508311029	R1452	10k	2302811035
C1209	1000pF.	2508311029	R1454	4700 ohm	2302854725
C1210	1000pF.	2508311029	R1470	100k	2302851045
C1212	1000pF.	2508311029	R1474	100k	2302851045
C1213	1uF., 100V, Polypropylene	2506000011	R1475	100k	2302811045
C1215	.068uF., 100V, Polypropylene	2508456839	R1482	10k	2302811035
C1216	47uF., 25V, Electrolytic	2701595125	R1520	2200 ohm	2302142225
C1217	.01uF.	2508311039	R1521	2200 ohm	2302142225
C1218	1000pF.	2508311029	R1522	2200 ohm	2302142225
C1219	1000pF.	2508311029	R1527	360 ohm	2302143615
C1222	1000pF.	2508311029	R1528	470 ohm, 20% (Osc. Adj.)	2204164712
C1223	.01uF.	2508311039	R1574	1800 ohm	2302141825
C1233	47pF., 5%, NPO	2508414705	R1584	1800 ohm	2302141825
C1236	1000pF.	2508311029	R1594	1800 ohm	2302141825
C1237	1000pF.	2508311029			
C1240	1000pF.	2508311029			
C1250	1000pF.	2508311029			
C1415	27pF., 5%, NPO	2508412705			
C1416	27pF., 5%, NPO	2508412705			
C1428	22uF., 25V, Electrolytic	2701682125			
C1450	1000pF.	2508311029			
C1470	470pF., 5%	25			

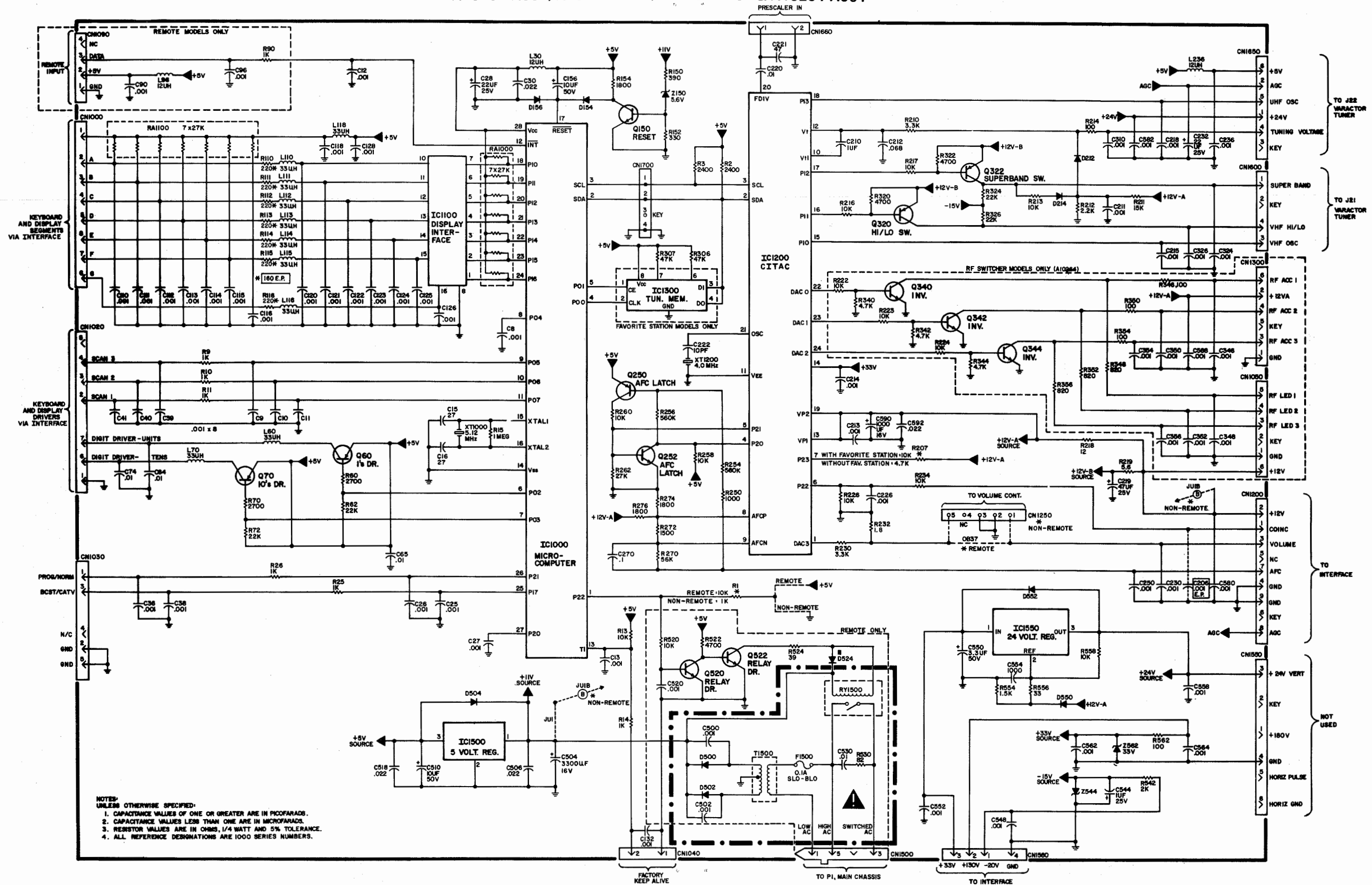
**Courtesy of the Manufacturer**

## TS-10 TUNER CONTROL PARTS LIST

**MAGNAVox MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03**

## FOLDER 2

TS-9 REMOTE TUNING SYSTEM SCHEMATIC DIAGRAM  
A10261-A001, A10262-A001, A10263-A001 & A10264-A001



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



# TS-9 TUNER CONTROL MODULES REPLACEMENT PARTS LIST

(A10261-A001 Non-Remote Version)  
(A10262-A001 Remote Version)  
(A10263-A001 Non-Remote Version, With Favorite Station)  
(A10264-A001 Remote Version, With Favorite Station)

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>COILS &amp; TRANSFORMERS</b>			<b>CAPACITORS (Continued)</b>		
L1030	Peaking Coil, 12uH.	3619551209	C1548	1000pF.	2508311029
L1060	Peaking Coil, 33uH.	3619553309	C1550	3.3uF., Electrolytic	2701683050
L1070	Peaking Coil, 33uH.	3619553309	C1552	1000pF.	2508281029
L1096	Peaking Coil, 12uH. (Remote only)	3619551209	C1554	1000pF.	2508281029
L1110	Peaking Coil, 33uH.	3618353309	C1558	.001uF.	2507481020
L1111	Peaking Coil, 33uH.	3618353309	C1562	1000pF.	2508311029
L1112	Peaking Coil, 33uH.	3618353309	C1564	1000pF.	2508311029
L1113	Peaking Coil, 33uH.	3618353309	C1580	1000pF.	2508311029
L1114	Peaking Coil, 33uH.	3618353309	C1582	.001uF.	2507481020
L1115	Peaking Coil, 33uH.	3618353309	C1588	1000pF.	2508311029
L1116	Peaking Coil, 33uH.	3618353309	C1590	1000uF., 16V, Electrolytic	2701681316
L1118	Peaking Coil, 33uH.	3618353309	C1592	.022uF., 100V, Polyester	2508452239
L1236	Peaking Coil, 12uH.	3619551209	<b>RESISTORS</b>		
S T1500	Power Transformer (Remote only)	3004000002	(All are Carbon Film, 5%, 1/4W, unless otherwise specified)		
<b>CAPACITORS</b>			RA1000	27k ohm x7 (Resistor Array)	2540032735
(All are 10%, 50V, Ceramic Disc unless otherwise specified)			R1001	1k (Non-Remote)	2302811025
C1008	.001uF.	2507481020	R1001	10k (Remote)	2302811035
C1009	.001uF.	2507481020	R1002	2.4k	2302812425
C1010	.001uF.	2507481020	R1003	2.4k	2302812425
C1011	.001uF.	2507481020	R1009	1k	2302811025
C1012	1000pF.	2508311029	R1010	1k	2302811025
C1013	1000pF.	2508311029	R1011	1k	2302811025
C1015	27pF., 5%, NPO	2507392705	R1013	10k (Remote only)	2302811035
C1016	27pF., 5%, NPO	2507392705	R1014	1k	2302811025
C1025	1000pF.	2508311029	R1015	1megohm	2302811015
C1026	1000pF.	2508311029	R1025	1k	2302811025
C1027	1000pF.	2508311029	R1026	1k	2302811025
C1028	22uF., 25V, Electrolytic	2701682125	R1060	2.7k	2302811025
C1030	.022uF., 100V, Polyester	2508452239	R1062	22k	2302812725
C1036	1000pF.	2508311029	R1070	2.7k	2302812235
C1038	1000pF.	2508311029	R1072	22k	2302812725
C1039	1000pF.	2508311029	R1090	1k (Remote only)	2302812235
C1040	1000pF.	2508311029	RA1100	27k ohm x7 (Resistor Array)	2540032735
C1041	1000pF.	2508311029	R1110	160 ohm (E.P.)	2302811615
C1064	.01uF., 100V, Polyester	2508451039	R1110	220 ohm (L.P.)	2302812215
C1065	.01uF.	2508311039	R1111	160 ohm (E.P.)	2302811615
C1074	.01uF., 100V, Polyester	2508451039	R1111	220 ohm (L.P.)	2302812215
C1090	1000pF. (Remote only)	2508281029	R1112	160 ohm (E.P.)	2302811615
C1096	1000pF. (Remote only)	2508281029	R1112	220 ohm (L.P.)	2302812215
C1110	1000pF.	2508311029	R1113	160 ohm (E.P.)	2302811615
C1111	1000pF.	2508311029	R1113	220 ohm (L.P.)	2302812215
C1112	1000pF.	2508311029	R1114	160 ohm (E.P.)	2302811615
C1113	1000pF.	2508311029	R1114	220 ohm (L.P.)	2302812215
C1114	1000pF.	2508311029	R1115	160 ohm (E.P.)	2302811615
C1115	1000pF.	2508311029	R1115	220 ohm (L.P.)	2302812215
C1116	1000pF.	2508311029	R1116	160 ohm (E.P.)	2302811615
C1118	1000pF.	2508311029	R1116	220 ohm (L.P.)	2302812215
C1120	1000pF.	2508311029	R1150	390 ohm	2302813915
C1121	1000pF.	2508311029	R1152	330 ohm	2302813315
C1122	1000pF.	2508311029	R1154	1.8k	2302811825
C1123	1000pF.	2508311029	R1207	4.7k (without Favorite Station)	2302814725
C1124	.001uF.	2507481020	R1207	10k (with Favorite Station)	2302811035
C1125	1000pF.	2508281029	R1210	3.3k	2302813325
C1126	1000pF.	2508311029	R1211	15k	2302811535
C1128	1000pF.	2508311029	R1212	2.2k	2302812225
C1132	1000pF.	2508281029	R1213	10k	2302811035
C1156	10uF., Electrolytic	2701591150	R1214	100 ohm	2302811015
C1210	1uF., 100V	2506000011	R1216	10k	2302811035
C1211	.001uF.	2507481020	R1217	10k	2302811035
C1212	.068uF., 100V, Polyester	2508456839	R1218	12 ohm	2302811205
C1213	1000pF.	2508311029	R1219	5.6 ohm	2302815695
C1214	1000pF.	2508311029	R1222	10k (A10264 only)	2302811035
C1215	.001uF.	2507481020	R1223	10k (A10264 only)	2302811035
C1218	1000pF.	2508311029	R1224	10k (A10264 only)	2302811035
C1219	47uF., 25V, Electrolytic	2701595125	R1226	10k	2302811035
C1220	.01uF.	2508311039	R1230	3.3k	2302813325
C1221	47pF., 5%, NPO	2508414705	R1232	1.8k	2302811825
C1222	10pF.	2508371008	R1234	10k	2302811035
C1226	.001uF.	2507481020	R1250	1k	2302811025
C1230	.001uF.	2507481020	R1254	560k	2302815645
C1232	22uF., 25V, Electrolytic	2701682125	R1256	560k	2302815645
C1236	.001uF.	2507481020	R1258	10k	2302811035
C1250	.001uF.	2507481020	R1260	10k	2302811035
C1270	.1uF., 100V, Polyester	2508451049	R1262	27k	2302812735
C1310	.001uF.	2507481020	R1270	56k	2302815635
C1324	.001uF.	2507481020	R1272	1.5k	2302811525
C1326	.001uF.	2507481020	R1274	1.8k	2302811825
C1346	1000pF. (A10264 only)	2508281029	R1276	1.8k	2302811825
C1348	1000pF. (A10264 only)	2508281029	R1306	47k	2302814735
C1350	1000pF. (A10264 only)	2508281029	R1307	47k	2302814735
C1352	1000pF. (A10264 only)	2508281029	R1320	4.7k	2302814725
C1354	1000pF. (A10264 only)	2508281029	R1322	4.7k	2302814725
C1356	1000pF. (A10264 only)	2508281029	R1324	22k	2302812235
S C1500	1000pF. (Remote only)	2508281029	R1326	22k	2302812235
S C1502	1000pF. (Remote only)	2508281029	R1340	4.7k (A10264 only)	2302814725
C1504	3300uF., 16V, Electrolytic	2701683316	R1342	4.7k (A10264 only)	2302814725
C1506	.022uF., 100V, Polyester	2508452239	R1344	4.7k (A10264 only)	2302814725
C1510	10uF., Electrolytic	2701591150	R1346	100 ohm (A10264 only)	2302811015
C1518	.022uF., 100V, Polyester	2508452239	R1348	820 ohm (A10264 only)	2302818215
C1520	1000pF. (Remote only)	2508281029	R1350	100 ohm (A10264 only)	2302811015
S C1530	.01uF., +80 -20% (Remote only)	2506260017			
C1544	1uF., Electrolytic	2701591050			

PARTS LIST

Courtesy of the Manufacturer

# TS-9 TUNER CONTROL MODULES REPLACEMENT PARTS LIST

(A10261-A001 Non-Remote Version)  
(A10262-A001 Remote Version)  
(A10263-A001 Non-Remote Version, With Favorite Station)  
(A10264-A001 Remote Version, With Favorite Station)

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>RESISTORS (Continued)</b>			<b>SEMICONDUCTORS (Continued)</b>		
R1352	820 ohm (A10264 only)	2302818215	Q1344	NPN Transistor (A10264 only)	6102320002
R1354	100 ohm (A10264 only)	2302811015	Q1520	NPN Transistor (Remote only)	6102320002
R1356	820 ohm (A10264 only)	2302818215	Q1522	Silicon Transistor (Remote only)	6102240001
R1520	10k (Remote only)	2302811035	<b>MISCELLANEOUS</b>		
R1522	4.7k (Remote only)	2302814725	CN1000	8 Pin Contact Wafer	1814920008
R1524	39 ohm (Remote only)	2302813905	CN1020	7 Pin Contact Wafer	1814920007
S R1530	82 ohm (Remote only)	2302818205	CN1030	5 Pin Contact Wafer	1814920005
R1542	2k	2302812025	CN1050	6 Pin Contact Wafer (A10264 only)	1814920106
R1554	1.5k	2302811525	CN1090	4 Pin Contact Wafer (Remote only)	1814920004
R1556	33 ohm	2302813305	CN1300	6 Pin Contact Wafer (A10264 only)	1814920506
R1558	10k	2302811035		28 Pin DIP Socket f/IC1000	1815220028
R1562	100 ohm	2302811015		16 Pin DIP Socket f/IC1100	1815220016
<b>SEMICONDUCTORS</b>				24 Pin DIP Socket f/IC1200	1815220024
Z1150	Zener Diode, 5.6V	5301571569		8 Pin DIP Socket f/IC1300 (Favorite Station only)	1815220008
D1154	Silicon Diode	5301811001	XT1000	Crystal, 5.12MHz	5604440002
D1156	Schottky Diode	5302471001	XT1200	Crystal, 4.000MHz	5604170005
D1212	Silicon Diode	5301811001	S F1500	Fuse - Slow Blow (Remote only)	1808655010
D1214	Silicon Diode (Remote only)	5301711002		Heat Sink f/IC1500 & IC1550 (2 used)	7316650002
S D1500	Silicon Diode (Remote only)	5301711002	S RY1500	Relay Power Switch (Remote only)	1607230005
S D1502	Silicon Diode (Remote only)	5301711002		Wrap Shield f/TS9	7347050001
D1504	Silicon Diode	5301711002		Cover f/IF	7347060002
D1524	Silicon Diode (Remote only)	5301711002		Cover f/IF Bottom	7347520004
D1550	Schottky Diode	5302471001			
D1552	Silicon Diode (Remote only)	5301711002			
Z1544	Zener Diode, 15V	5301571150			
Z1562	Zener Diode, 33V	5301921330			
IC1000	Microcomputer	6124980001			
IC1100	Display Driver	6124920001			
IC1200	Tuner Interface	6124240001			
IC1300	Tuning Memory (Favorite Station only)	6124850001			
IC1500	5V Regulator	6124790001			
IC1550	24V Regulator	6124790004			
Q1060	Silicon Transistor	6102230001			
Q1070	Silicon Transistor	6102230001			
Q1150	NPN Transistor	6102320002			
Q1250	PNP Transistor	6100830001			
Q1252	NPN Transistor	6102320002			
Q1320	Silicon Transistor	6102230001			
Q1322	Silicon Transistor	6102230001			
Q1340	NPN Transistor (A10264 only)	6102320002			
Q1342	NPN Transistor (A10264 only)	6102320002			

## T325AD-MA01, -SA01 (32 BUTTON REMOTE TRANSMITTER) REPLACEMENT PARTS LIST (Schem. - Pg. 42)

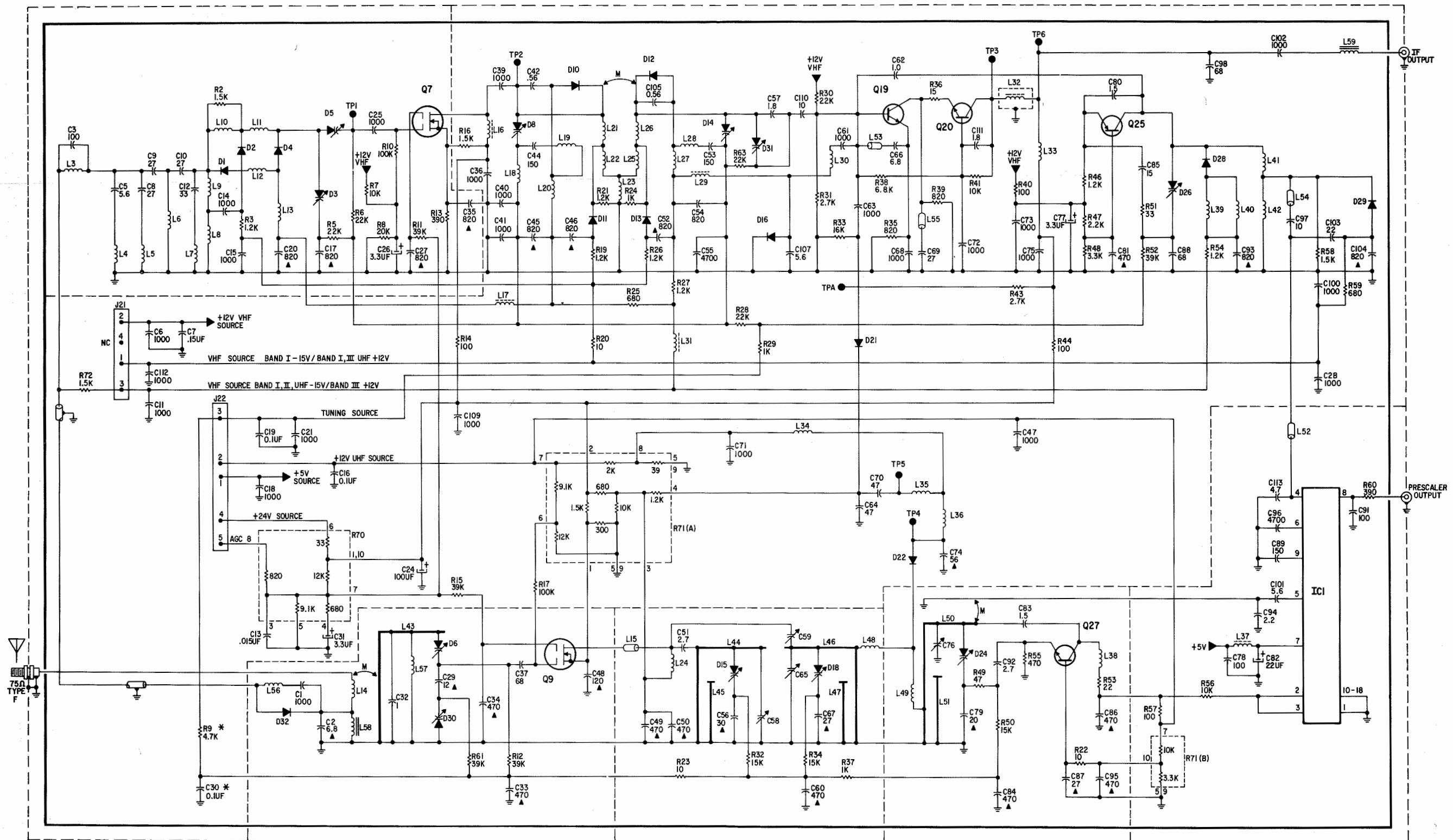
Ref.	Description	Part No.	Ref.	Description	Part No.
<b>CAPACITORS</b>			<b>SEMICONDUCTORS (Continued)</b>		
C1	600uF., 8V, Electrolytic	2701460003	Q2	PNP Silicon Transistor	6101580003
<b>RESISTORS</b>			IC1	Remote Transmitter IC	6124830001
(All are 5% Carbon Film unless otherwise specified.)			<b>MISCELLANEOUS</b>		
R1	10k	2302811035	Y1	Ceramic Resonator	3620200001
R2	5.6k	2302815625		14 Pin Flex Connector	1813090014
R3	3k	2302813025		Case Top (Magnavox)	1456720001
R4	1k	2302811025		Case Top (Sylvania)	1456720002
R5	100 ohm	2302811015		Case Bottom (Magnavox)	1456730001
R6	1 ohm	2302811095		Case Bottom (Sylvania)	1456730002
R7	1 ohm	2302811095		Battery Cover (Magnavox)	1456740001
R8	100 ohm	2302811015		Battery Cover (Sylvania)	1456740002
<b>CONTROLS &amp; SWITCHES</b>				Plastic Pad	4419200027
	Pressure Pad Keyboard	7027760001		Support Bracket f/P.C. Bd.	7347150002
<b>SEMICONDUCTORS</b>				Window f/Infrared Transmission	1456750001
D1	Infrared Emitting	5302740001		Positive Terminal Clip	7347070001
D2	Infrared Emitting	5302740001		Negative Terminal Clip	7347070002
Q1	NPN Silicon Transistor	6102240001		Pushbutton Array (Magnavox)	1459820001
				Inlay f/Case Top (Magnavox)	1520450001
				Pushbutton Array (Sylvania)	1459820002
				Inlay f/Case Top (Sylvania)	1520450002

Courtesy of the Manufacturer

PARTS LIST

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02

# 3402910001 VARACTOR TUNER MODULE SCHEMATIC DIAGRAM



- NOTES:
1. ALL RESISTORS ARE IN OHMS, 1/4W, 5% TOLERANCE.
  2. CAPACITANCE VALUES ARE IN PICOFARADS.
  3. ▲ = TRAPEZOIDAL CAPACITORS.
  4. \* = FOR TUNER 340296 (a) REPLACE R9 WITH JUMPER, (b) DELETE C30

Courtesy of the Manufacturer

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

TROUBLESHOOTING (Continued)

check the voltages and components associated with pin 16 of IC50 and Blue Output Transistor (Q51). If the raster has a keystone shape, check the Deflection Yoke (L499). If the raster has height or width problems, refer to the "Vertical" or "Horizontal" sections of this Troubleshooting guide.

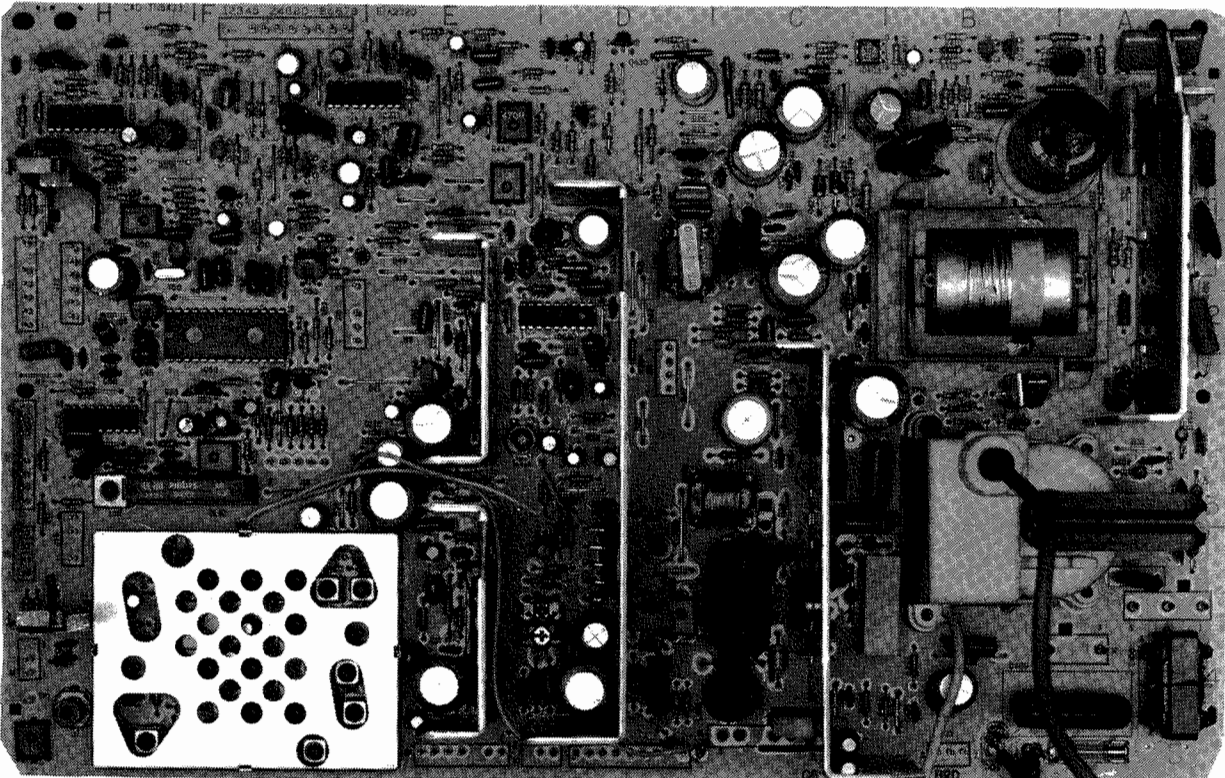
CHROMA

Check for a chroma waveform at pin 15 of Feature IC (IC10). If this waveform is missing, check the voltages, waveforms and components associated with pins 4, 5, and 11 thru 16 of IC10. If the chroma waveform is present at pin 15 of IC10, check for the proper chroma waveforms at pins 12, 14 and 16 of Color Decoder IC (IC50). If missing, check the voltages, waveforms and components associated with pins 2 thru 6, 8, 9 and 12 thru 28 of IC50. Check the 7.16MHz oscillator at pins 24 and 26 of IC50. If there is no color sync, check the voltages, waveforms and components associated

with pin 8 of IC50 and 7.16MHz Oscillator Adjust Control (R50). If there is inadequate tint range, check the voltages and components associated with pin 25 of IC50. If the proper chroma waveforms are present at pins 12, 14 and 16 of IC50, refer to the "Raster" section of this Troubleshooting guide.

S.V.M.

The purpose of the S.V.M. circuit (Sweep Velocity Modulation) is to improve the video detail in the areas around the sides, top and bottom of the CRT in comparison with the middle. It accelerates and decelerates the electron beam as it travels toward the face of the CRT, to produce a more faithful rendition of detail across the entire face of the CRT. If the circuit is suspected of being defective, check for the proper waveform at the output. If this waveform is missing, check the voltages, waveforms and components associated with the S.V.M. circuit.



MAIN BOARD—SHIELD LOCATION

340291 TUNER MODULE  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.
SEMICONDUCTORS ONLY		
D1	Diode	5303131002
D2	Diode	5303131001
D3	Diode, Varactor	5302301003
D4	Diode	5303131001
D5	Diode	5301881005
D6	Diode, Varactor	5302301003
D8	Diode, Varactor	5302301003
D10	Diode	5303131001
D11	Diode	5303131001
D12	Diode	5303131001
D13	Diode	5303131002
D14	Diode, Varactor	5302301003
D15	Diode, Varactor	5302301003
D16	Diode	5303131002
D18	Diode, Varactor	5302301003
D21	Diode	5303131002
D22	Diode, Schottky Bar	5301941003
D24	Diode, Varactor	5302301003
D26	Diode, Varactor	5302301003
D28	Diode	5303131001
D29	Diode	5303131001
D30	Diode	5301881005
D31	Diode, Varactor	5301951005
D32	Diode	5303131001
Q7	Transistor MOSFET	6105040001
Q9	Transistor, Type BF980	6105190001
Q19	Transistor	6105020001
Q20	Transistor	6105030001
Q25	Transistor	6102460001
Q27	NPN Transistor	6104190003
IC1	IC, Type SP4552	6124840001

A10298-A001 AUDIO/VIDEO JACK PANEL  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.	Ref.	Description	Part No.
COILS			RESISTORS (Continued)		
L1	22uH., 5%, Coil	3619552205	R56	1 meg	2302811055
CAPACITORS			R58	7.5k	2302817525
(All are 10%, 50V, Ceramic unless otherwise specified.)			R62	1 meg	2302811055
C1	47pF., 5%, NPO	2508414705	R63	1k	2302811025
C2	47pF., 5%, NPO	2508414705	R64	1 meg	2302811055
C3	4.7pF., NPO	2508414797	R65	1k	2302811025
C4	470 uF., 16V, Electrolytic	2702035216	R66	47k	2302814735
C5	.01uF., 20%	2508321030	R67	10k	2302811035
C6	1uF., Electrolytic	2701591050	R68	5100 ohm	2302815125
C8	10uF., Electrolytic	2701591150	R69	1k	2302811025
C9	10uF., Electrolytic	2701591150	R70	1 meg	2302811055
C12	.1uF., 20%, 100V, Polyester	2509591040	R74	1k	2302811025
C14	.1uF., 20%, 100V, Polyester	2509591040	R76	1k	2302811025
C18	10uF., Electrolytic	2701591150	R78	100k	2302811045
C19	10uF., Electrolytic	2701591150	R81	10 ohm	2302811005
C20	.1uF., 20%, 100V, Polyester	2509591040	R82	10 ohm	2302811005
C22	.1uF., 20%, 100V, Polyester	2509591040	R83	10 ohm	2302811005
C27	10uF., Electrolytic	2701591150	R84	10 ohm	2302811005
C28	1uF., Electrolytic	2701591050	SEMICONDUCTORS		
C29	1uF., Electrolytic	2701591050	D2	Diode, Silicon	5301811001
C81	100uF., 25V, Electrolytic	2701681225	D4	Diode, Silicon	5301811001
C82	100uF., 25V, Electrolytic	2701681225	D6	Diode, Silicon	5301811001
C83	100uF., 25V, Electrolytic	2701681225	Q2	PNP Transistor (Video Output Driver)	6102230001
C84	100uF., 25V, Electrolytic	2701681225	Q4	NPN Transistor (Aux. Mode Sw.)	6102230002
RESISTORS			Q6	NPN Transistor (TV Video Buffer)	6102230002
(All are 5%, 1/4W, Carbon Film unless specified otherwise.)			Q8	NPN Transistor (Aux. Video Buffer)	6102230002
R1	100 ohm	2302811015	Q10	NPN Transistor (TV Mode Sw.)	6102230002
R3	8.2k	2302818225	Q12	PNP Transistor (Video Output Buffer)	6102230001
R6	330 ohm, 1/2W	2302813315	Q14	NPN Transistor (Aux. Video Amp.)	6102230002
R8	75 ohm	2302817505	Q16	PNP Transistor (Aux. Video Amp.)	6102230001
R9	2.2k	2302812225	Q22	NPN Transistor (Left Ch. Buffer)	6102230002
R10	1k	2302811025	Q24	NPN Transistor (Right Ch. Buffer)	6102230002
R12	10k	2302811035	IC1	Audio Switch I.C.	6121860001
R14	1k	2302811025	CONTROLS & SWITCHES		
R15	180 ohm	2302811815	VR2	1k (Aux. Video Level Adj. - E.P.)	2204130015
R16	1k	2302811025	VR4A, 8	100k (Aux. Audio Level Adj. - E.P.)	2204220008
R18	10k	2302811035	S1	Int./Ext. Speaker On-Off Sw.	1605460010
R20	1k	2302811025	MISCELLANEOUS		
R26	82 ohm, 1/2W	2302828205	Terminal Connect Board f/Ext. Speakers		
R28	100 ohm	2302811015	J1 & 2	Phono Jack Asm. (Yellow - 2 used)	1816320004
R30	2.2k	2302812225	J3 & 4	Phono Jack Asm. (White - 2 used)	1816320003
R31	9100 ohm	2302819125	J5 & 6	Phono Jack Asm. (Red - 2 used)	1816320002
R32	560 ohm	2302815615	P6	7 Pin Connector w/contacts	1816500007
R33	1k	2302811025	P9	Polarizing Key f/P6	1816510001
R34	1k	2302811025	P11	4 Pin Connector w/contacts	1816500004
R48	1 meg	2302811055		7 Pin Connector w/contacts	1816500007
R49	1k	2302811025		Polarizing Key f/P6	1816510001
R50	1 meg	2302811055			
R51	5100 ohm	2302815125			
R52	47k	2302814735			

Courtesy of the Manufacturer

PARTS LIST

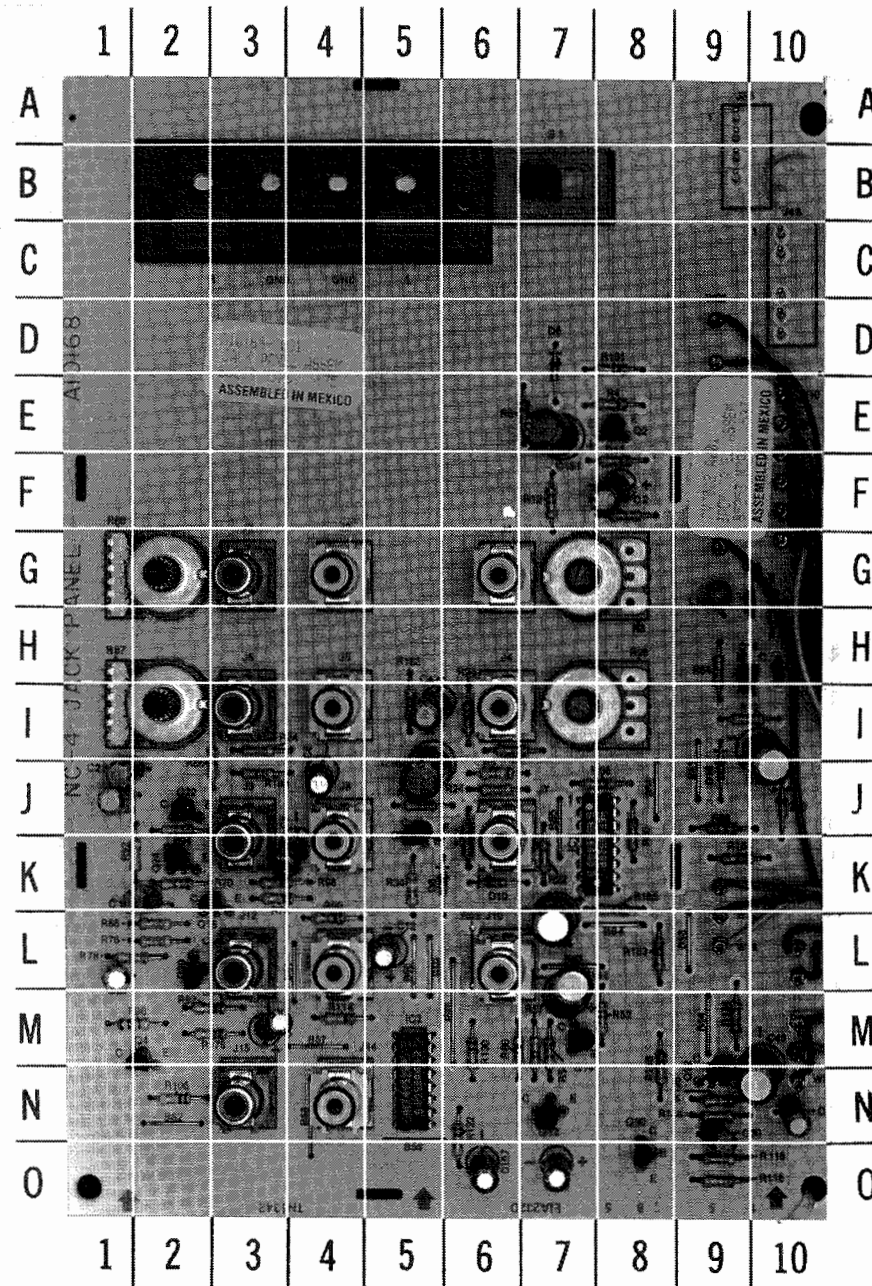
MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



# A/V JACK PANEL-GridTrace LOCATION GUIDE

C2	F-8	R56	J-8	R84	I-3	R124	N-9
C4	I-5	R57	M-7	R86	J-3	R126	N-9
C6	J-4	R60	M-7	R87	I-2	R130	M-6
C8	K-4	R64	H-9	R88	J-9	R134	M-9
C12	L-5	R65	H-10	R90	L-4	R178	M-3
C14	M-3	R66	G-2	R92	K-2	R180	J-3
C18	K-2	R68	L-2	R94	J-2	R181	D-8
C20	L-1	R70	K-2	R96	M-2	R182	I-5
C22	J-1	R72	I-10	R98	K-3	R183	L-8
C24	J-1	R74	K-3	R106	N-2	R184	K-9
C30	N-9	R76	L-2	R114	M-4	R185	K-8
C32	N-10	R78	L-1	R116	O-9	R186	N-8
C42	N-10	R80	J-8	R118	O-9	S1	B-7
C45	H-10	R82	M-2	R122	N-6	Z15	J-10
C46	G-10						
C181	E-7						
C182	J-5						
C183	L-7						
C184	I-10						
C185	L-7						
C186	O-7						
C187	O-6						
D6	D-7						
D8	K-6						
D10	K-6						
D16	J-9						
IC1	K-8						
IC2	N-5						
J1	G-6						
J2	G-4						
J3	G-3						
J4	I-6						
J5	I-4						
J6	I-3						
J7	K-6						
J8	K-4						
J9	K-3						
J10	L-6						
J11	L-4						
J12	L-3						
J14	N-4						
J15	N-3						
J48	C-10						
J55	A-9						
L1	G-9						
Q2	E-8						
Q4	M-2						
Q6	J-5						
Q12	N-7						
Q14	M-7						
Q16	H-9						
Q18	K-3						
Q20	L-2						
Q22	J-2						
Q24	K-2						
Q30	O-8						
Q32	N-9						
R2	J-6						
R4	E-8						
R6	E-7						
R8	G-8						
R10	F-8						
R12	F-7						
R14	F-8						
R22	K-7						
R24	J-6						
R26	I-8						
R28	I-6						
R30	I-6						
R32	K-6						
R34	K-5						
R36	J-5						
R52	M-8						
R54	M-7						



## TROUBLESHOOTING (Continued)

### IF-AGC

Inject an IF signal at the IF Input and check for video on the CRT. If video is present, check the Tuner, Tuner Control, Tuner AFT and AGC circuits. If there is no video on the CRT, check for a video waveform at the emitter of Video Buffer Transistor (Q602). If video is present, refer to the "Video" section of this Troubleshooting guide. If there is no video at the emitter of Q602, apply AGC bias to pin 14 of VIF/SIF/AFT/AGC IC (IC601). If video is now present at the emitter of Q602, check the components associated with pins 3, 4 and 14 of IC601. If video is missing, check the voltages, waveforms and components associated with the IF Preamp Transistor (Q600), Transistor Q602 and pins 1, 2, 5 thru 12, 15 and 16 of IC601. A defective AGC circuit may cause an overloaded picture, excessive snow or loss of picture and sound. See AGC Voltage Chart for AGC voltages with signal.

IC601	
Pin 3	.69V
Pin 4	4.7V
Pin 14	7.0V

### AUDIO

Select a station that is transmitting stereo and SAP signals and check for an audio waveform at pin 6 of SIF/FM Det/Amp IC (IC603). If there is no audio, check the voltages, waveforms and components associated with IC603. If there is an audio waveform at pin 6 of IC603, check for an audio waveform at the base of Squelch SAP Amp Transistor (Q3) and pins 5 and 4 of Stereo Decoder IC (IC1). If there is no audio at the base of Q3, check the voltages, waveforms and components associated with SAP Decoder IC (IC2) and Comparator IC (IC3). If there is no audio at pins 4 and 5 of IC1, check the voltages waveforms and components associated with IC1. There will be no audio at pin 5 of IC1 when a mono signal is being received. If there is audio at the base of Q3 and pins 4 and 5 of IC1, check for an audio waveform at pins 2 and 3 of Plug P25 and pins 2 and 12 of Function Switch IC (IC6). If there is no audio, check the voltages, waveforms and components associated with IC6, L-R/L+R Amp IC (IC4), Expander IC (IC5), Expander Output Buffer Transistor (Q6), High Pass Active Filter Transistor (Q5), Main Channel Driver Transistor (Q4) and Transistor Q3. If there is audio at pins 2 and 3 of Plug P25 in Stereo, Mono and SAP, check for an audio waveform at pins 6 and 13 of Sound Processor IC (IC102). If there is no audio, check the voltages, waveforms and components associated with IC102 and pins 1, 3, 9, 10, 12, 13 of Audio Switcher IC (IC2) on Audio Video Board. If there is audio at pins 6 and 13 of IC102, check the voltages, waveforms and components associated with Audio Control IC (IC103) and Audio Output IC (IC5, IC6). Check the voltage at pin 1 of IC103, it should measure .2V at Mute and 3.4V at Maximum volume. If there is no audio at the Audio Output Jacks or the Speaker in EXT Audio Mode, check the voltages, waveforms and components associated with Audio Buffer Transistors (Q18, Q20, Q23, Q24, Q30, Q32), Transistor Q4 and IC2.

### VIDEO

Inject a video signal at the emitter of Video Buffer Transistor (Q602) and check for video on the CRT. If video is present, refer to the "IF-AGC" section of this Troubleshooting guide. If there is no video on the CRT, check for a video waveform at pin 3 of Feature IC (IC10). If there is no video at pin 3, check the voltages, waveforms and components associated with Video Buffer Transistor (Q16), Video Amp Transistors (Q12, Q14) and pins 1, 3, 4, 9, 10, 12 and 16 of Video Switch IC (IC1). If there is video at pin 3 of IC10, check for a video waveform at pin 10 of Color Decoder IC (IC50). If there is no video, check the voltages, waveforms and components associated with IC10. Check the voltages and components associated with pins 1, 3, 8, 9, 10, 12 of IC10. If there is video at pin 10 of IC50, check for a video waveform at pins 12, 14 and 16 of IC50. If there is no video, check the voltages, waveforms and components associated with pins 1, 7, 9, 10, 11, 12, 14 and 16 of IC50. If there is video at pins 12, 14 and 16 of IC50, check the CRT and the voltages, waveforms and components associated with Output Transistors (Q11, Q31 and Q51). If the brightness is inadequate or can't be controlled, check the voltages and components associated with Beam Limiter Transistor (Q354), Black Level Correction Transistors (Q50, Q52), Black Bias Transistor (Q2) and pin 7 of the CRT. If there is no video on the CRT in EXT Video Mode, check the voltages, waveforms and components associated with Video Buffer Transistors (Q2, Q6) and pins 2, 3, 4, 5, 13, 14 and 15 of Video Switch IC (IC1).

### VERTICAL

Inject a vertical drive signal at pin 1 of Sync Processor (IC320). If vertical deflection is now present, check the voltages, waveforms and components associated with pins 1 thru 4 of IC320. If there is no vertical sweep, check the voltages, waveforms and components associated with Vertical Output IC (IC300). Check for the B+ voltages on pins 6 and 9 of IC300. Vertical linearity or height problems may be caused by the vertical feedback and bias circuits, check Electrolytics C303, C304 and C305 for defects.

### SYNC

Check for a video waveform at pin 5 of Sync Processor (IC320). If this waveform is missing, check the components associated with pin 5. If there is no vertical sync, check the voltages, waveforms and components associated with pins 6 and 7 of IC320. If there is no horizontal sync, check the voltages, waveforms and components associated with pins 6, 7, 8, 14 and 15 of IC320.

### RASTER

Check the CRT and CRT voltages. If there is no red, check the voltages and components associated with pin 12 of Color Decoder IC (IC50) and Red Output Transistor (Q11). If there is no green, check the voltages and components associated with pin 14 of IC50 and Green Output Transistor (Q31). If there is no blue,

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



TEST JIG HOOKUP

FUNCTION	Chek-A-Color ADAPTER NO.	RCA / TeleMatic ADAPTER NO.	ZENITH ADAPTER NO.
CRT YOKE YOKE SETTING	B239  YP1 Focus Tap	10J683 10J761 Horiz 1.9, Vert 8 FVS-3950 Focus Voltage Supply	852-441  Horiz 1.8, Vert 8 Focus Tap

TROUBLESHOOTING

POWER SUPPLY

Check the AC Fuse (F400) and Thermistor (R400). If F400 is open, check Capacitors C400 thru C403 and C405, and Diodes D400 thru D403. If R400 is open, check Switch Mode Transformer (T402), Duty Cycle Control Transistor, (Q402), Switch Mode Regulator (Q400), and horizontal Output Transistor (Q462). Apply 120V AC, depress the Power Switch and check for 160V\* at the cathode of D401. If this voltage is missing, check Transformer T901, Relay RL901, Relay Drive Transistors (Q901, Q902) and associated components. Check the voltages and components associated with pins 1, 11, 18, 28 of Microprocessor IC (IC1000) and Regulator IC (IC1600). If 160V\* is present at the cathode of D401, check for 130V at TP4, 33V at the cathode of Diode D433, 23V at the cathode of D432, 12V at the cathode of Diode D435 and 8.8V at the collector of Start Up Transistor (Q321). If none of these voltages are present, check the voltages, waveforms and components associated with Differential Transistor (Q430), Transformer T402, Transistor Q400, Duty Cycle Control Transistors (Q401, Q402), IC403 and Transistor Q462. If the proper voltage is present at TP4 and all sources fed by Transformer T402, refer to the "Horizontal" section of this Troubleshooting guide. If the voltage on the collector of Q400 is 177V\* and a very high frequency sound comes from the set, the TV may be in shutdown, refer to the "Horizontal" and "High Voltage Shutdown" sections of this Troubleshooting guide. The above described condition may also be produced by a defect in the Power Supply.

\*With respect to isolated ground.

HORIZONTAL

Determine if the TV is in shutdown, refer to the "High Voltage Shutdown" section of this Troubleshooting guide. If the TV is not in shutdown, inject a horizontal signal at the base of the Horizontal Output Transistor (Q462). If there is horizontal deflection,

check the voltages, waveforms and components associated with pins 10 thru 18 of Sweep Processor (IC320) and Horizontal Driver Transistor (Q461). If there is no horizontal sweep, check the voltages, waveforms and components associated with Transistor Q462 and Horizontal Output Transformer (T465). Check Rectifier Diodes D463, D464, D469 and associated components for defects. The High Voltage Rectifier is part of Transformer T465 and if defective, it will affect the performance of the horizontal circuits. Horizontal linearity or width problems may be caused by Transistors Q463, Q464, Coil L463 and associated components being defective.

HIGH VOLTAGE SHUTDOWN

The high voltage is monitored by Diode D469 rectifying pulses from the Horizontal Output Transformer (T465). Should the high voltage increase, the rectified voltage at the cathode D469 will also increase and trigger Zener Diode (Z466, Z467) into conduction. This action turns on SCR468 which shuts down the set. To troubleshoot, remove D469 from the set, disconnect the HV lead and check for 130V at the collector of Transistor Q462. If this voltage is greater than 130V, refer to the "Power Supply" section of Troubleshooting guide. If the voltage on the collector of Q462 is 130V, check the voltages and components associated with Diodes Z466, Z467, D469 and SCR468 and Transformer T465.

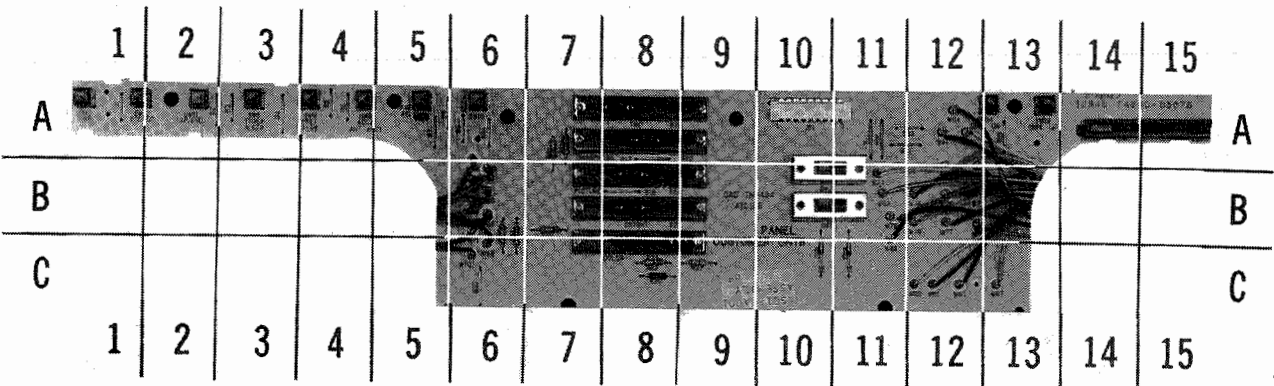
NOTE: Care should be taken in defeating the High Voltage Shutdown circuit as this may cause excessive X-ray radiation from and damage to the CRT, Transformer T465 and associated components. Monitor the high voltage and troubleshoot.

Voltages taken in shutdown

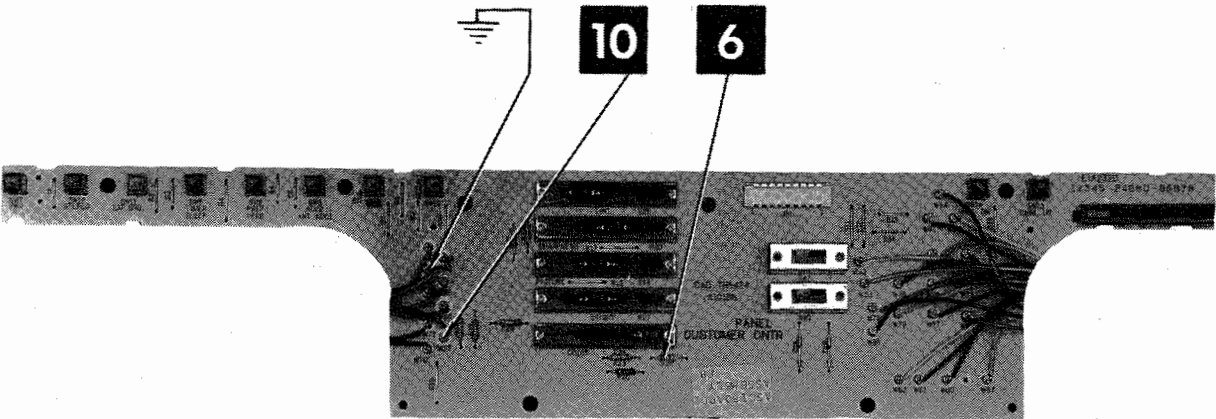
SCR468	TP4
K 0V	0V
G .70V	
A 0V	

SECONDARY CONTROL MODULE-GridTrace LOCATION GUIDE

D6	A-15	R22	C-9	R31	B-6	SW8	A-5
D7	A-14	R23	C-8	R32	B-6	SW9	A-4
D17	A-14	R24	A-7	R58	B-8	SW10	A-6
D18	C-10	R25	C-8	SW1	B-10	SW11	A-2
D19	C-11	R26	A-8	SW2	B-10	SW12	A-1
J51	A-10	R27	B-8	SW5	A-3	SW13	A-13
R20	A-8	R29	B-7	SW6	A-4	SW14	A-13
R21	A-7	R30	C-8	SW7	A-1		



A Howard W. Sams GRIDTRACE™ Photo

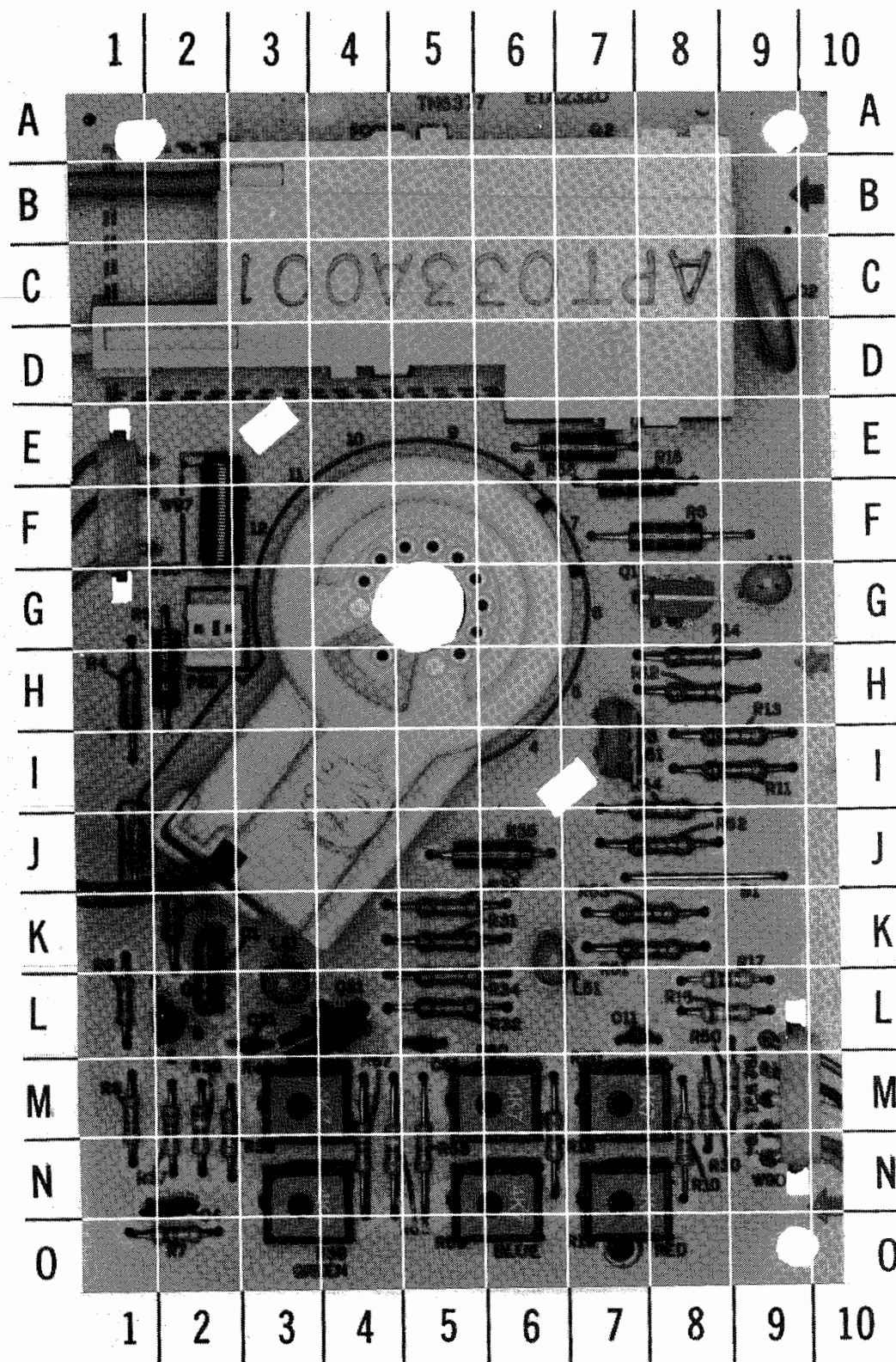


A Howard W. Sams CIRCUITTRACE® Photo

SECONDARY CONTROL MODULE

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02,RF4378SL01,RF4378SL02,RF4378SL03

FOLDER 2



# **CRT SOCKET MODULE- GridTrace LOCATION GUIDE**

C1	K-2
C2	C-9
C4	N-2
C11	L-7
C31	L-3
C51	L-5
L1	F-2
L11	G-9
L31	L-3
L51	K-6
Q2	L-2
Q11	G-8
Q31	L-4
Q51	I-7
R1	K-2
R3	J-1
R4	H-1
R5	H-2
R6	F-8
R7	O-2
R8	M-1
R9	L-1
R10	N-8
R11	I-9
R12	H-8
R13	I-9
R14	H-8
R15	E-8
R16	L-8
R17	L-9
R18	N-6
R19	N-7
R20	M-7
R30	M-8
R31	K-5
R32	L-5
R33	K-5
R34	L-5
R35	J-6
R36	M-2
R37	M-2
R38	M-2
R39	N-3
R40	M-3
R50	M-9
R51	K-8
R52	J-8
R53	K-8
R54	J-8
R55	E-7
R56	N-4
R57	N-4
R58	N-5
R59	N-6
R60	M-6

## **TROUBLESHOOTING AID**

Note: Waveforms taken with triggered scope, Keyed-Rainbow generator. Schematic voltages measured with digital meter, no signal. Controls adjusted for normal operation.

### **PICTURE or SOUND**

NO PIC, NO SOUND, NO RASTER: Check AC power supply and sources generated from Horizontal Output Transformer (T465). Refer to "Troubleshooting" Power Supply and Horizontal circuits.

NO PIC, NO SOUND, HAS RASTER: Check IF-AGC and source voltages from Horizontal Output Transformer (T465). Refer to "Troubleshooting" IF-AGC and Horizontal circuits.

NO PIC, HAS SOUND, NO RASTER: Check Horizontal Output Transformer (T465) sources and Video circuit. Refer to "Troubleshooting" Horizontal and Video circuits.

NO PIC, HAS SOUND, HAS RASTER: Refer to "Troubleshooting" Video circuit.

HAS PIC, NO SOUND: Refer to "Troubleshooting" Audio circuit.

OVERLOADED PICTURE: Refer to "Troubleshooting" IF-AGC circuit.

LOW OR EXCESSIVE BRIGHTNESS: Check Video and Luminance circuits. Refer to "Troubleshooting" Video circuit.

### **SWEEP**

NO RASTER, HAS SOUND: Check HV rectifier, Part of Horizontal Output Transformer (T465). Refer to "Troubleshooting" Horizontal circuit.

NO RASTER, NO SOUND: Refer to "Troubleshooting" Horizontal circuit.

NO VERT DEFLECTION: Refer to "Troubleshooting" Vertical circuit.

POOR VERT LIN OR FOLDOVER: Refer to "Troubleshooting" Vertical circuit.

POOR HORIZ LIN OR FOLDOVER: Refer to "Troubleshooting" Horizontal circuit.

NARROW PICTURE: Refer to "Troubleshooting" Horizontal circuit.

VERT OFF FREQUENCY: Refer to "Troubleshooting" Vertical circuit.

HORIZ OFF FREQUENCY: Refer to "Troubleshooting" Horizontal circuit.

### **SYNC**

NO VERT/HORIZ SYNC: Refer to "Troubleshooting" Sync circuit.

### **RASTER**

YELLOW (NO BLUE): Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

CYAN (NO RED): Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

MAGENTA (NO GREEN): Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

### **COLOR (B/W operating normally)**

NO COLOR: Refer to "Troubleshooting" Chroma circuit.

WEAK COLOR: Refer to "Troubleshooting" Chroma circuit.

NO COLOR SYNC: Refer to "Troubleshooting" Chroma circuit.

NO GREEN: Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

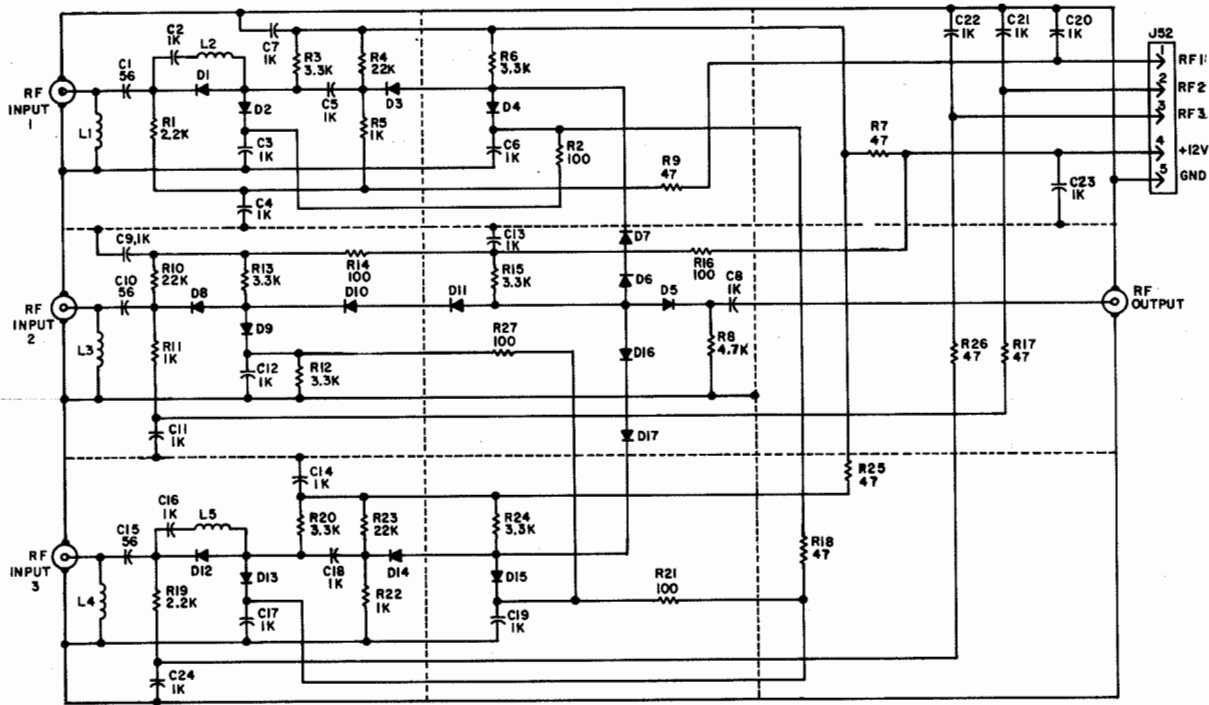
NO BLUE: Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

NO RED: Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

INCORRECT HUE (TINT): Refer to "Troubleshooting" Chroma circuit.



A10295 & RFS002 ANTENNA SWITCH MODULE  
SCHEMATIC DIAGRAM



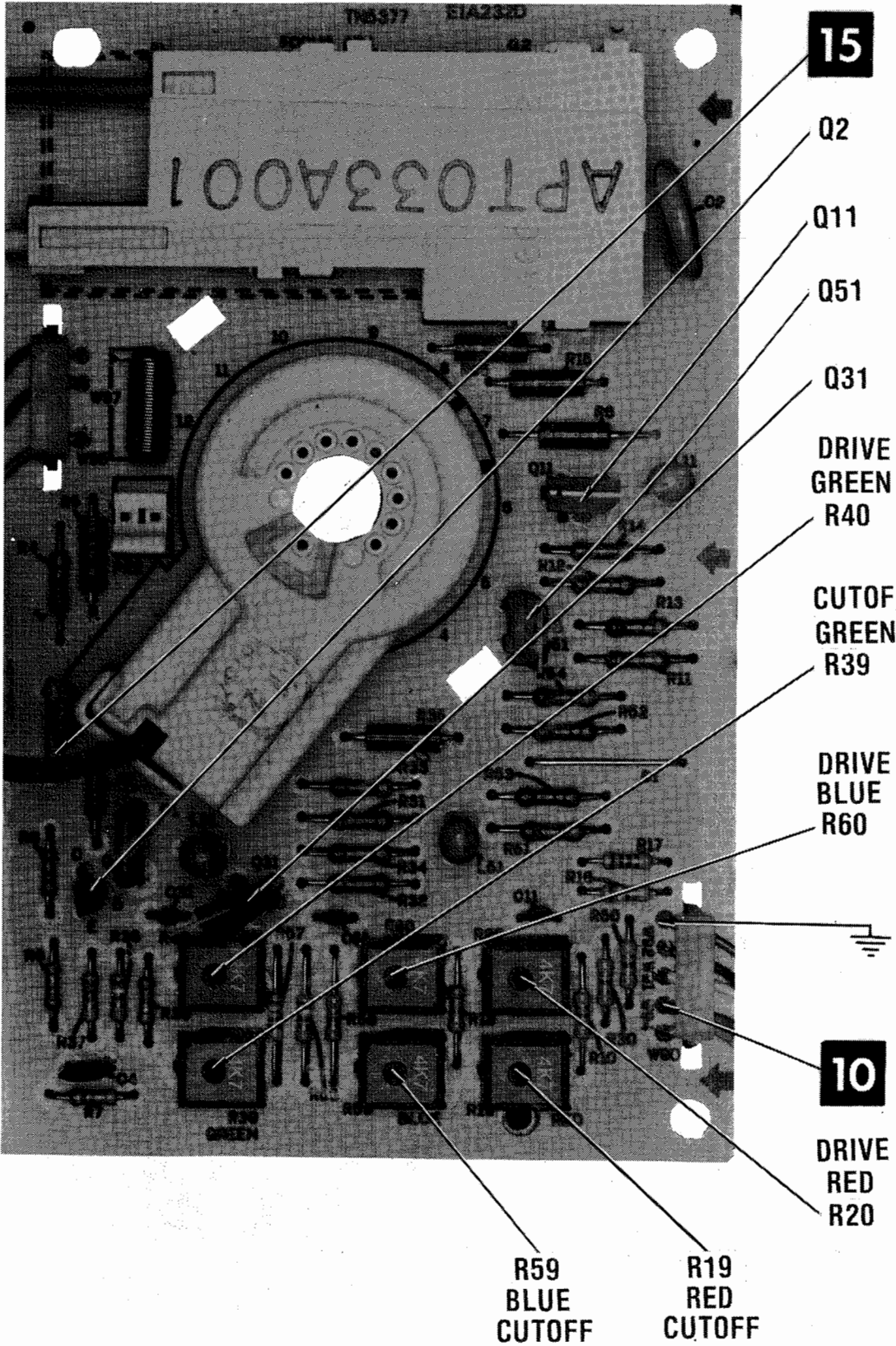
A10295-A001 & RFS002-A001 RF ANTENNA  
SWITCH MODULE (Continued)

A10295-A001 & RFS002-A001  
RF ANTENNA SWITCH MODULE  
REPLACEMENT PARTS LIST

(Note: These modules contain "chip" type components.  
Special equipment may be required to service.)

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>CAPACITORS</b> (All are 10%, 50V, Ceramic unless specified otherwise.)			<b>RESISTORS (Continued)</b>		
C1	56pF., 5%, NPO	2530015605	R18	47 ohm	2310014795
C2 thru			R19	2.2k	2310012225
C9	1000pF., (8 used)	2530071029	R20	3.3k	2310013325
C10	56pF., 5%, NPO	2530015605	R21	100 ohm	2310011015
C11 thru			R22	1k	2310011025
C14	1000pF., (4 used)	2530071029	R23	22k	2310012235
C15	56pF., 5%, NPO	2530015605	R24	3.3k	2310013325
C16 thru			R25	47 ohm	2310014795
C24	1000pF., (9 used)	2530071029	R26	47 ohm	2310014795
<b>RESISTORS</b> (All are 5%, 1/4W, Carbon Film unless otherwise specified.)			R27	100 ohm	2310011015
R1	2.2k	2310012225	<b>SEMICONDUCTORS</b>		
R2	100 ohm	2310011015	D1-D6	Diode (6 used)	5303046001
R3	3.3k	2310013325	D8-D16	Diode (9 used)	5303046001
R4	22k	2310012235	D7	Diode, Bandswitch	5302051003
R5	1k	2310011025	D17	Diode, Bandswitch	5302051003
R6	3.3k	2310013325	<b>COILS &amp; TRANSFORMERS</b>		
R7	47 ohm	2310014795	L1	Coil, 11.5T	-----
R8	4.7k	2310014725	L2	Coil, 6.5T	-----
R9	47 ohm	2310014795	L3	Coil, 11.5T	-----
R10	22k	2310012235	L5	Coil, 6.5T	-----
R11	1k	2310011025	L14	Coil, 11.5T	-----
R12	3.3k	2310013325	<b>MISCELLANEOUS</b>		
R13	3.3k	2310013325	J52	5 Pin Connector	1817180005
R14	100 ohm	2310011015		Cover, Top & Bottom (2 used)	7345950001
R15	3.3k	2310013325		"F" Type Female Connector	1813841006
R16	100 ohm	2310011015		f/Inputs (3 used)	
R17	47 ohm	2310014795		Male F Connector, RF Output	1813860003

Note: ----- Indicates a not normally stocked item.



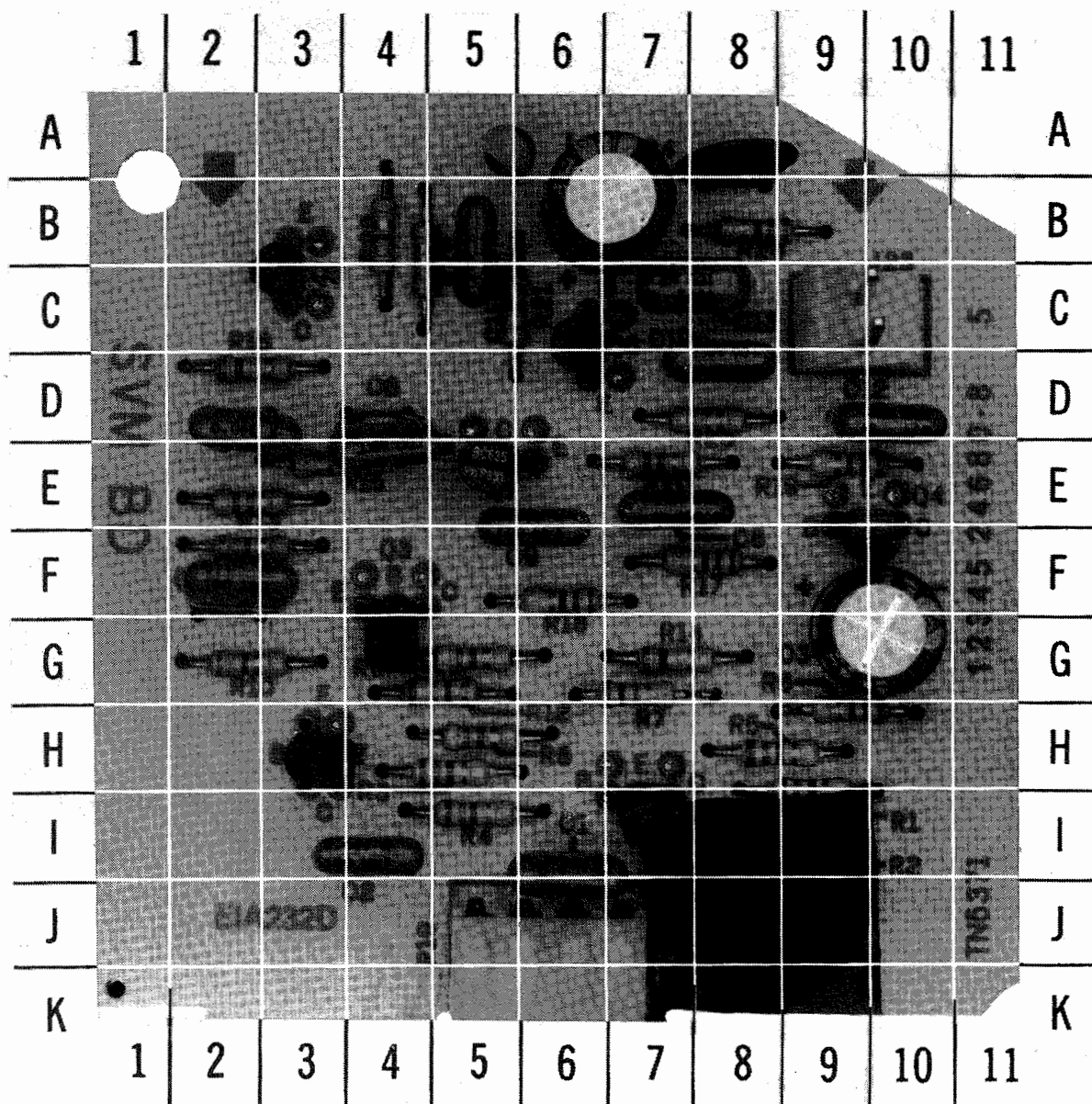
MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



# SVM MODULE-GridTrace LOCATION GUIDE

C1	I-16	C13	C-8	R2	I-9	R14	G-7
C2	I-4	C14	A-8	R3	H-5	R15	E-3
C3	G-10	C16	J-7	R4	I-5	R16	D-2
C4	B-7	C17	I-9	R5	H-9	R17	F-8
C5	F-2	Q1	I-7	R6	H-9	R18	F-6
C6	E-4	Q2	H-3	R7	G-7	R19	E-9
C7	D-2	Q3	G-4	R8	H-5	R20	E-7
C8	E-7	Q4	F-10	R9	G-5	R21	C-6
C9	F-6	Q5	C-3	R10	G-2	R22	B-4
C10	D-8	Q6	C-6	R11	F-2	R23	D-8
C11	B-5	Q7	E-5	R12	G-5	R24	B-4
C12	D-10	R1	I-9	R13	E-2	R25	B-8

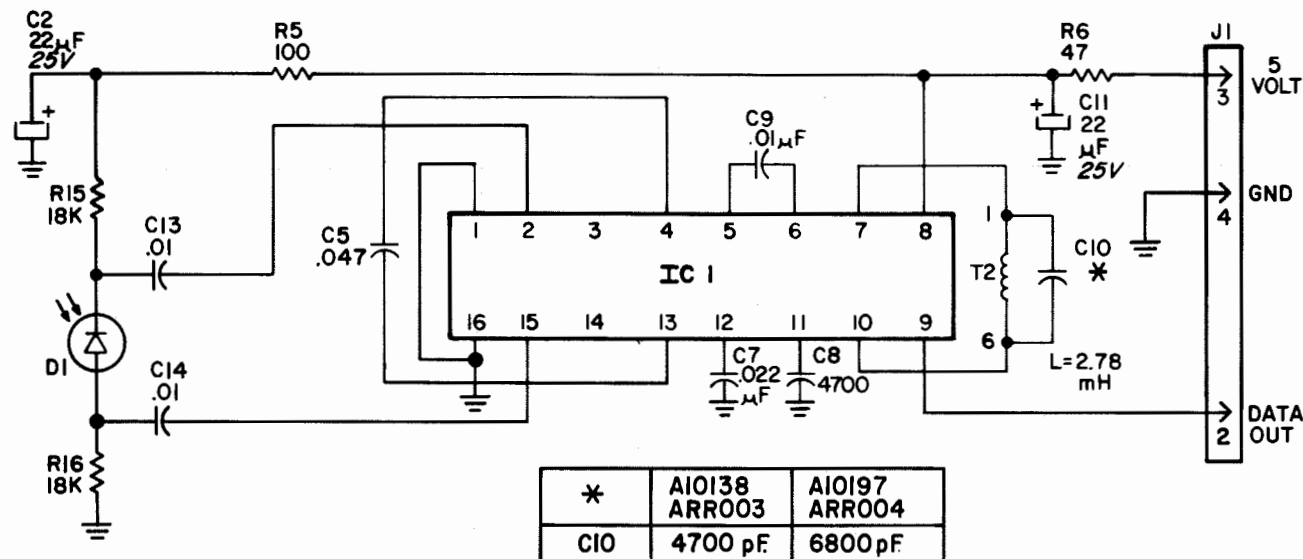


## REMOTE RECEIVER INFORMATION

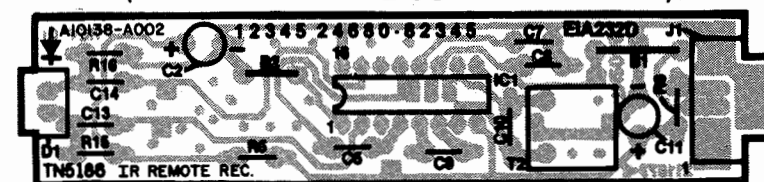
Note: The A10138 & ARR003 Remote Receiver Modules are incorporated on the C6 Chassis featuring TS-9 Tuning Systems.

The A10197 & ARR004 Remote Receiver Modules are incorporated on the C6 Chassis featuring TS-10 Tuning Systems.

## A10138-A002, -B003 & ARR003-A001 A10197-A002, -B003 & ARR004-A001 REMOTE RECEIVER MODULES SCHEMATIC DIAGRAM



## A10138-A002, -B003 & ARR003-A001 A10197-A002, -B003 & ARR004-A001 REMOTE RECEIVER MODULES P.C. BOARD OVERLAY (VIEWED FROM THE COMPONENT SIDE)



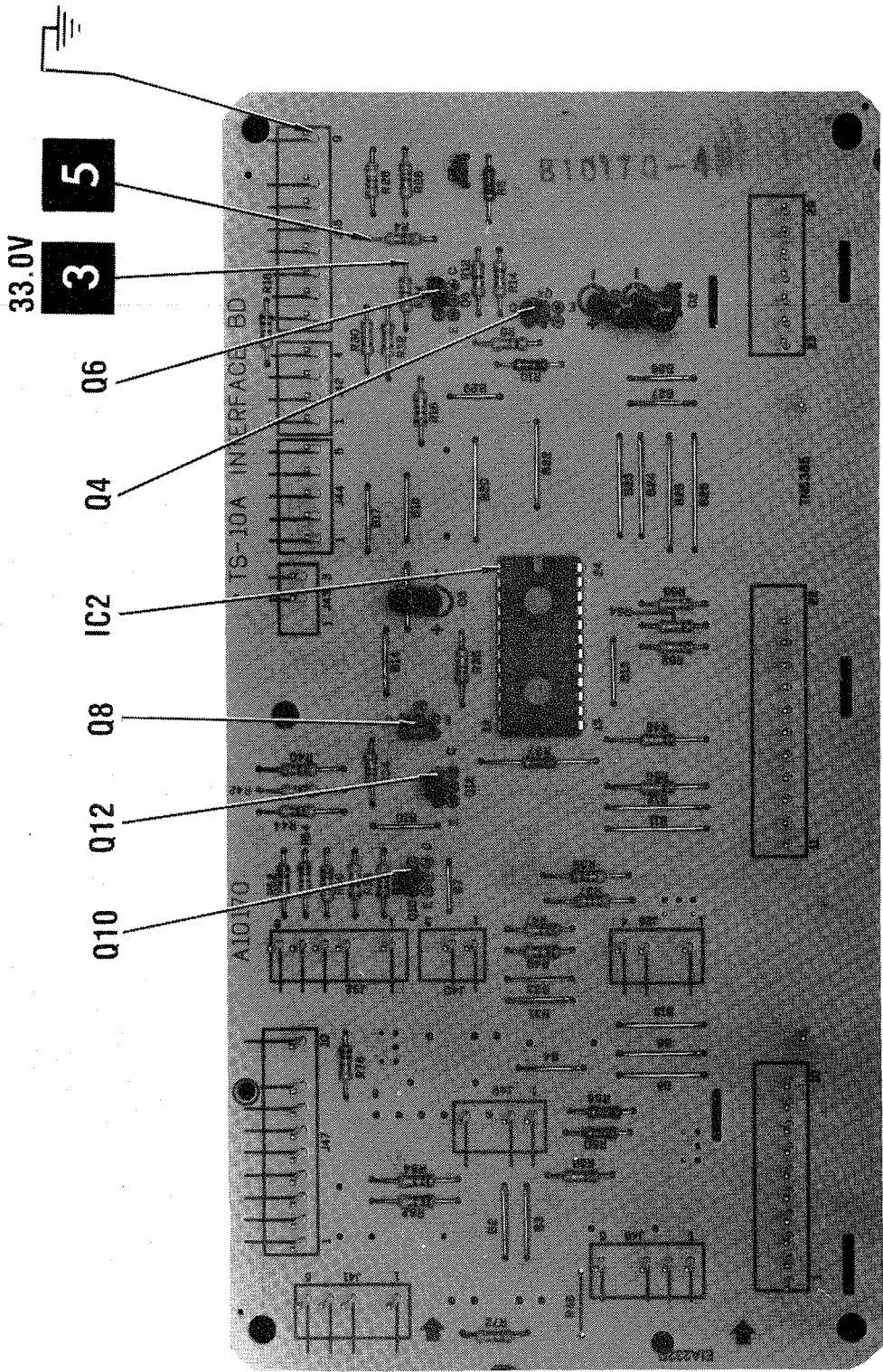
## A10138-A002 & -B003 ARR003-A001 REMOTE RECEIVER MODULE REPLACEMENT PARTS LIST

Ref.	Description	Part No.
<b>TRANSFORMERS</b>		
T2	Inductor	3619870001
<b>CAPACITORS</b>		
(All are 10%, 50V, Ceramic Disc unless specified otherwise.)		
C2	22uF., 25V, Electrolytic	2701592125
C5	.047uF., +80-20%	2508334738
C7	22000pF., +80-20%	2508332238
C8	4700pF.	2508314729
C9	.01uF.	2508311039
C10	4700pF.	2508314729
C11	22uF., 25V, Electrolytic	2701592125
C13	.01uF.	2508311039
C14	.01uF.	2508311039
<b>RESISTORS</b>		
(All are 5%, 1/4W, Carbon Film unless specified otherwise.)		
R5	100 ohm	2302851015
R6	47 ohm	2302854705
R15, 16	18k. (2 used)	2302851835
<b>SEMICONDUCTORS</b>		
D1	Photo Diode, Silicon	5302350001
IC1	Remote Receiver IC	6124500001

## A10197-A002 & -B003 ARR004-A001 REMOTE RECEIVER MODULE REPLACEMENT PARTS LIST

Ref.	Description	Part No.
<b>TRANSFORMERS</b>		
T2	Inductor	3619870001
<b>CAPACITORS</b>		
(All are 10%, 50V, Ceramic Disc unless specified otherwise.)		
C2	22uF., 25V, Electrolytic	2701592125
C5	.047uF., +80-20%	2508334738
C7	22000pF., +80-20%	2508332238
C8	4700pF.	2508314729
C9	.01uF.	2508311039
C10	6800pF.	2508316829
C11	22uF., 25V, Electrolytic	2701592125
C13	.01uF.	2508311039
C14	.01uF.	2508311039
<b>RESISTORS</b>		
(All are 5%, 1/4W, Carbon Film unless specified otherwise.)		
R5	100 ohm	2302851015
R6	47 ohm	2302854705
R15, 16	18k. (2 used)	2302851835
<b>SEMICONDUCTORS</b>		
D1	Photo Diode, Silicon	5302350001
IC1	Remote Receiver IC	6124500001

Courtesy of the Manufacturer

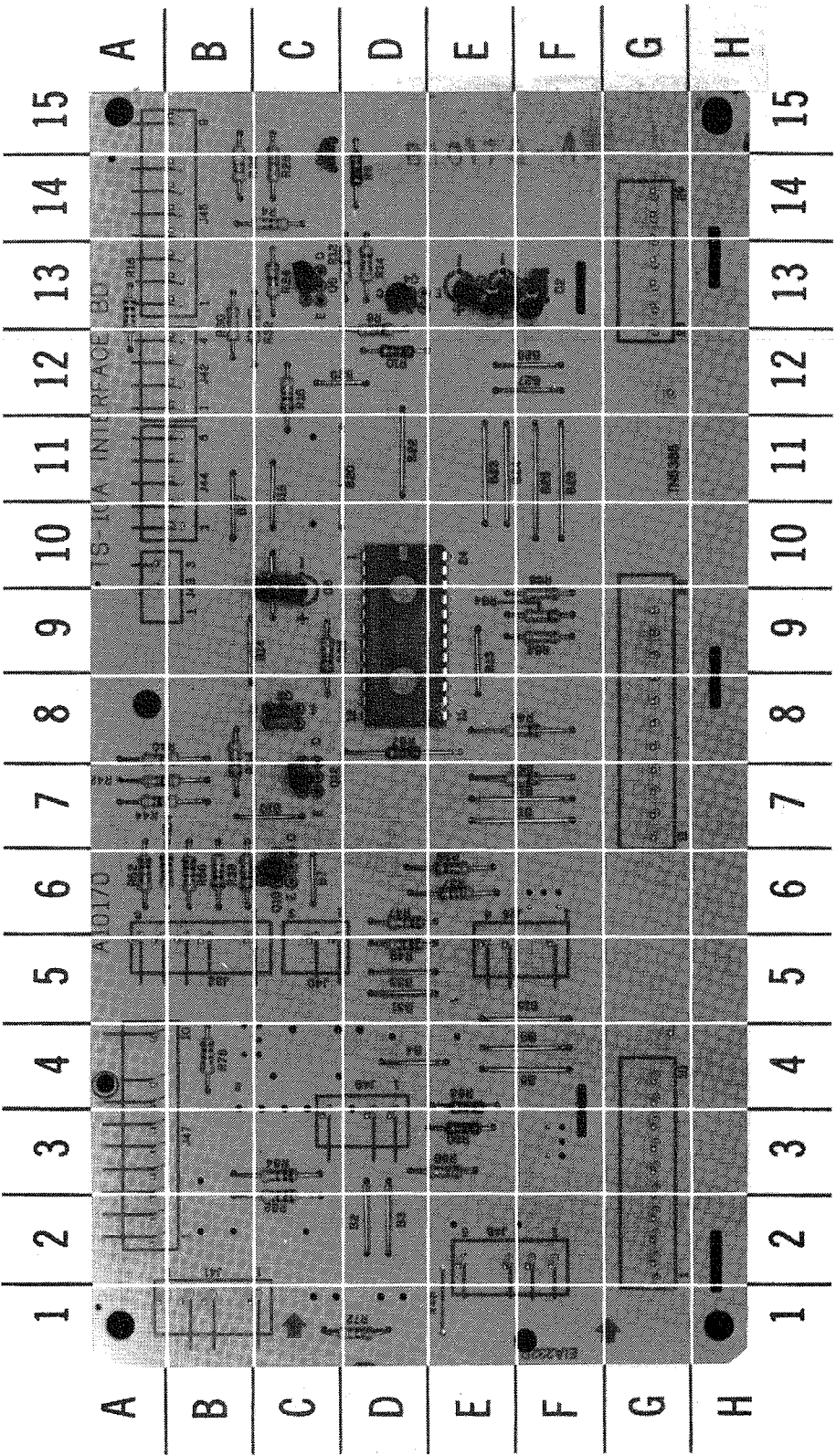


NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED

INTERFACE BOARD-GridTrace LOCATION GUIDE

C2	F-13	Q10	C-6	R20*	G-2	R36	B-6	R49	D-5	R62	F-9
C4	F-13	Q12	C-7	R21*	G-9	R37	E-6	R50	F-7	R64	F-9
C6	C-9	R4	C-14	R24	C-13	R38	B-6	R52	A-6	R72	F-9
C8	C-15	R6	D-13	R26	B-14	R39	E-6	R54	A-6	R78	D-1
C10	E-13	R8	D-14	R28	C-14	R40	A-8	R56	B-6	R84	B-4
IC2	D-9	R10	D-12	R30	B-13	R42	A-7	R57	D-8	R86	C-2
Q4	D-13	R12	C-13	R32	B-13	R44	A-7	R58	E-4		C-3
Q6	C-13	R14	D-13	R34	B-8	R47	D-6	R60	E-3		E-3
Q8	C-8	R16	C-12	R35	C-9	R48	F-8				

\* On Bottom of Board

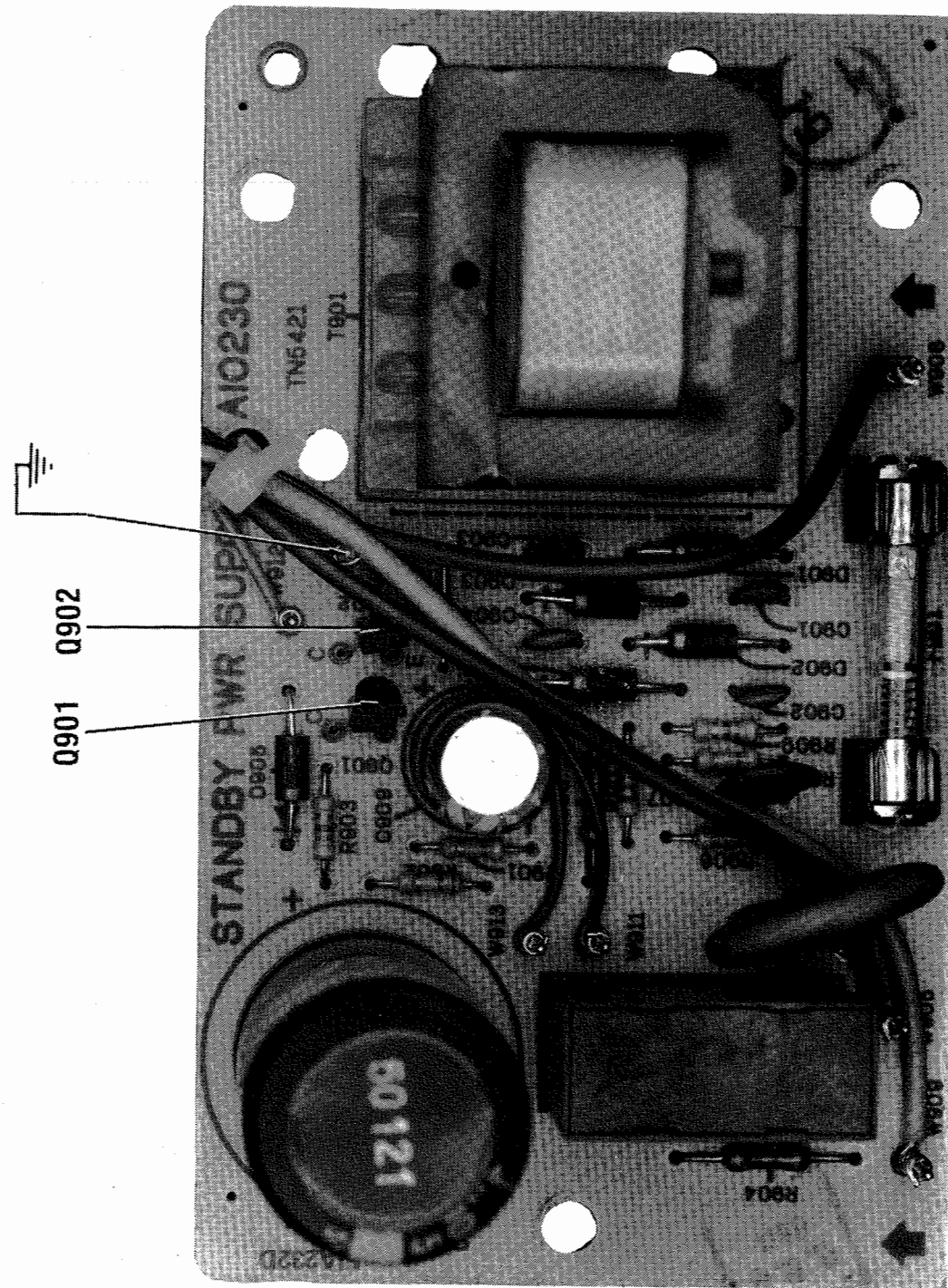
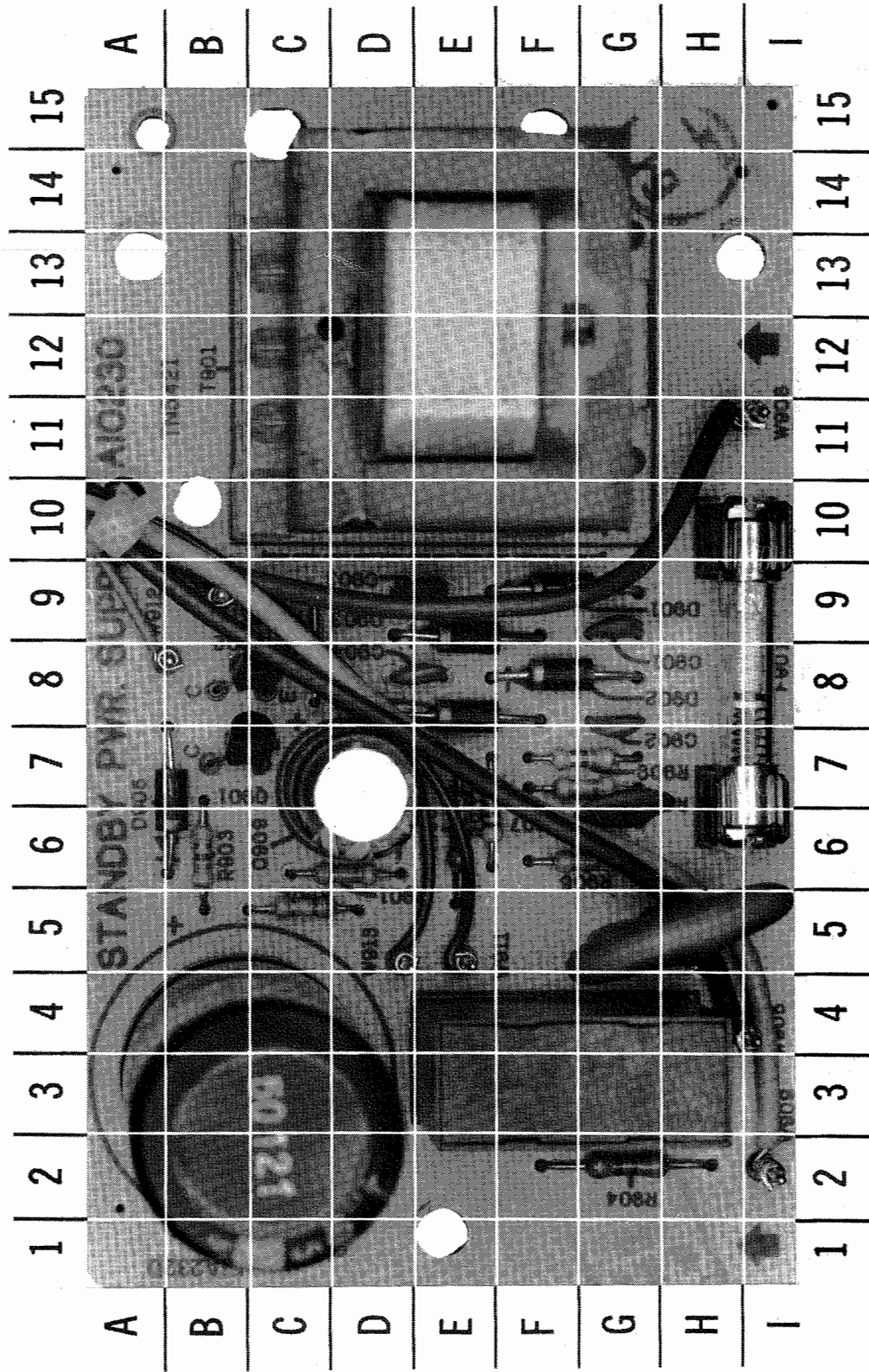


MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

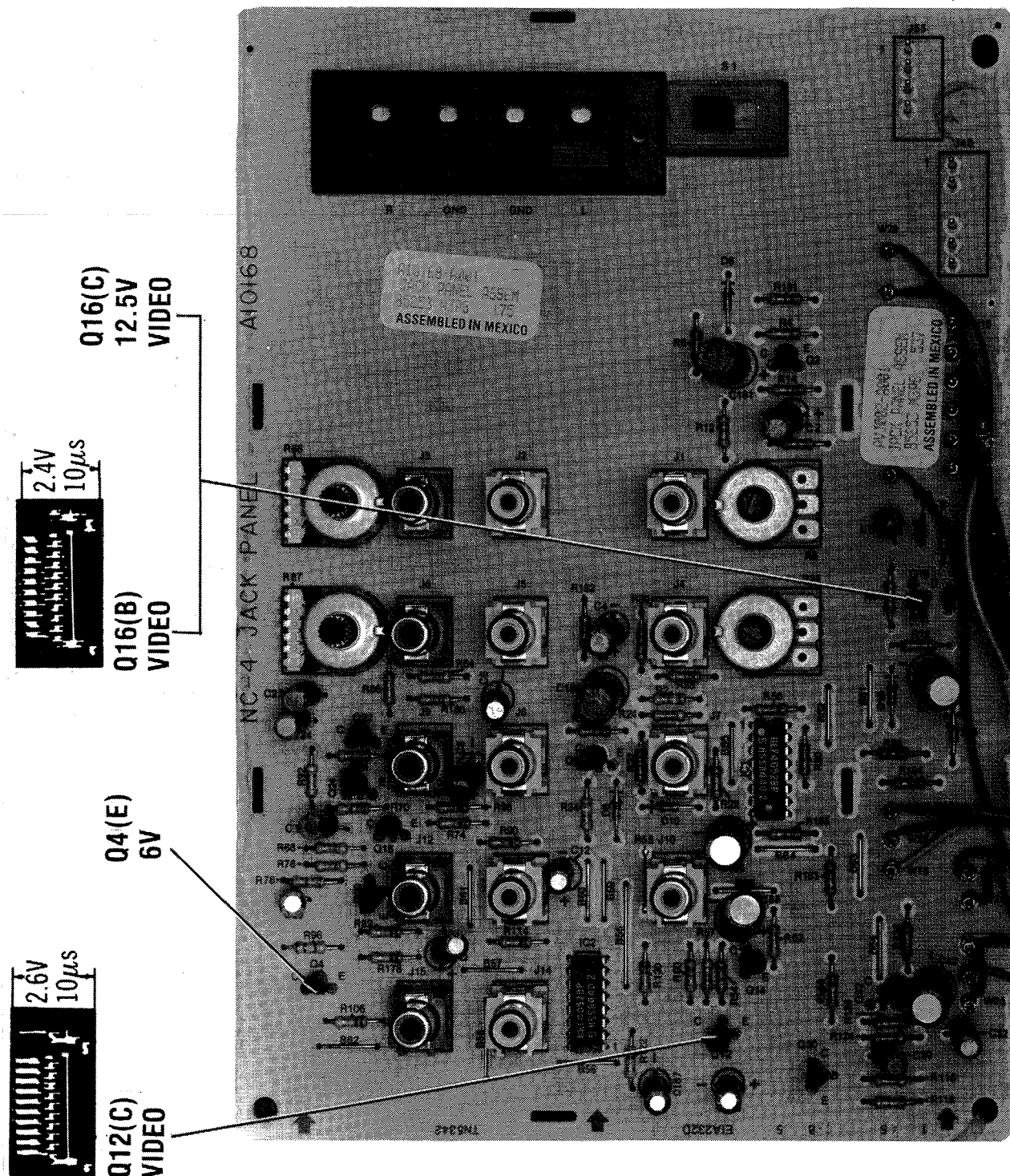


STAND-BY POWER SUPPLY MODULE-GridTrace LOCATION GUIDE

C901	C906	H-5	D903	E-9	Q902	C-8	R904	G-2	R908	E-6
C902	G-9	G-6	D904	E-8	R901	D-6	R905	G-7	R909	G-7
C903	G-7	D-7	D905	B-7	R902	C-5	R906	G-6	RL901	F-3
C904	E-8	F-9	F901	I-8	R903	B-6	R907	E-6	T901	E-13
C905	B-2	F-8	Q901	B-7						

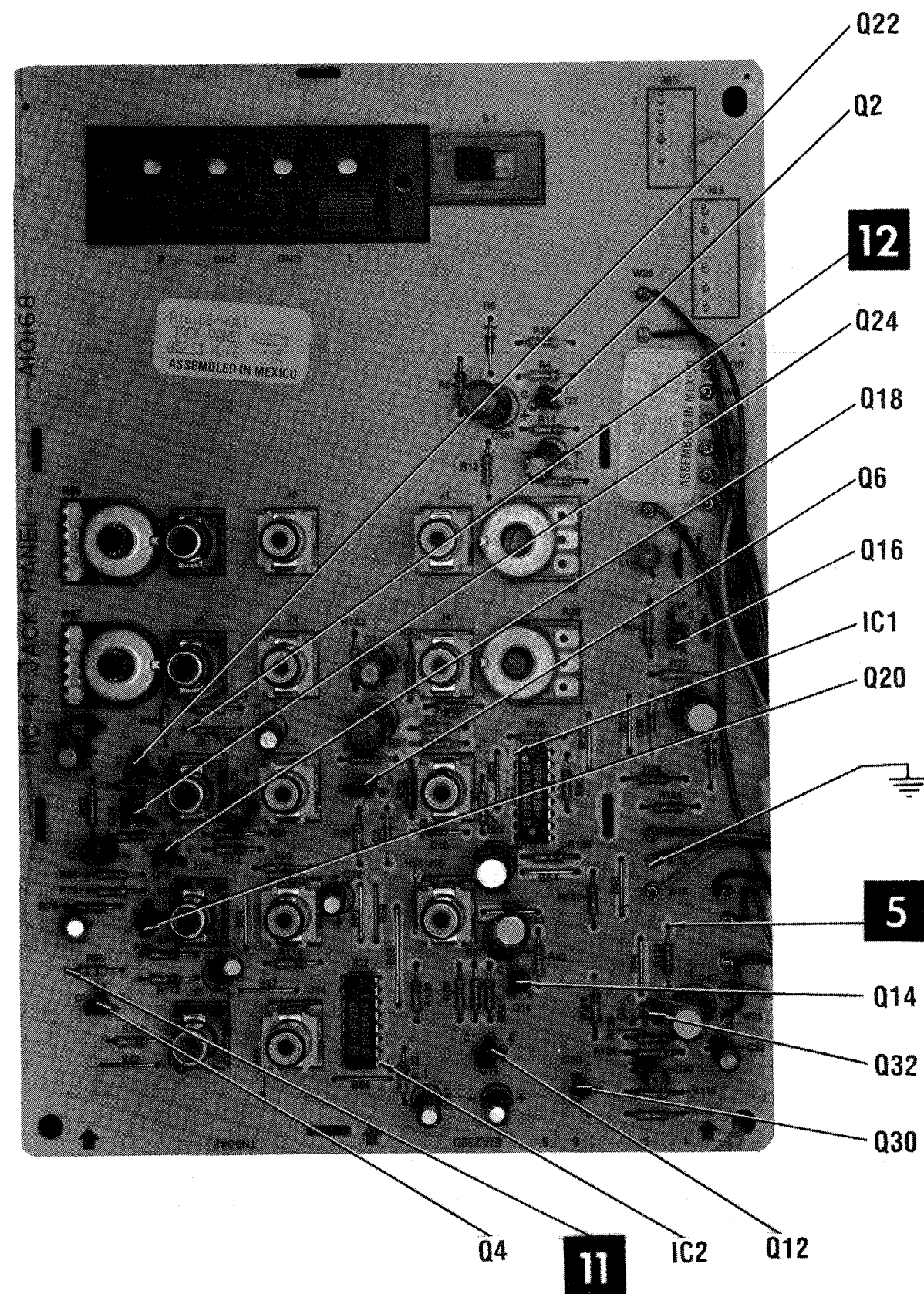






JACK PANEL

A Howard W. Sams **QUICK-CHECKS™** Photo



MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

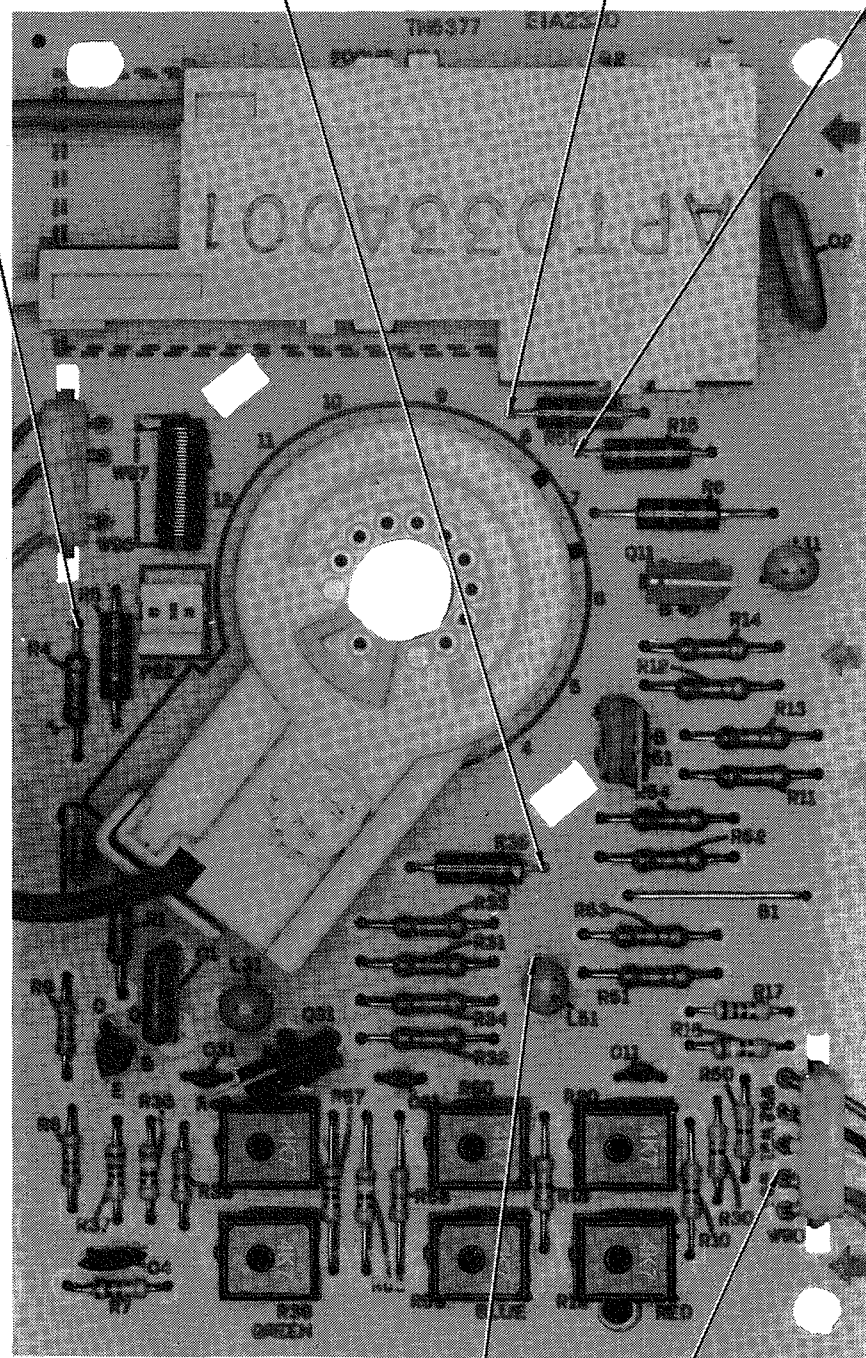
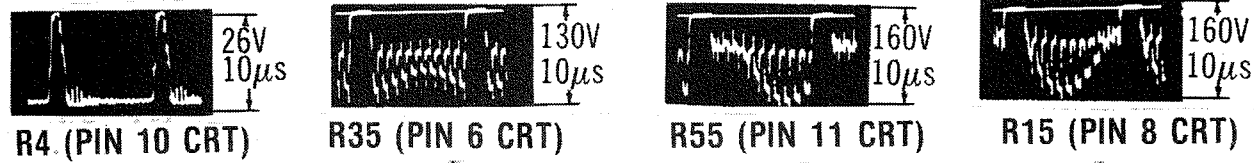
JACK PANEL

FOLDER 2

NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED

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



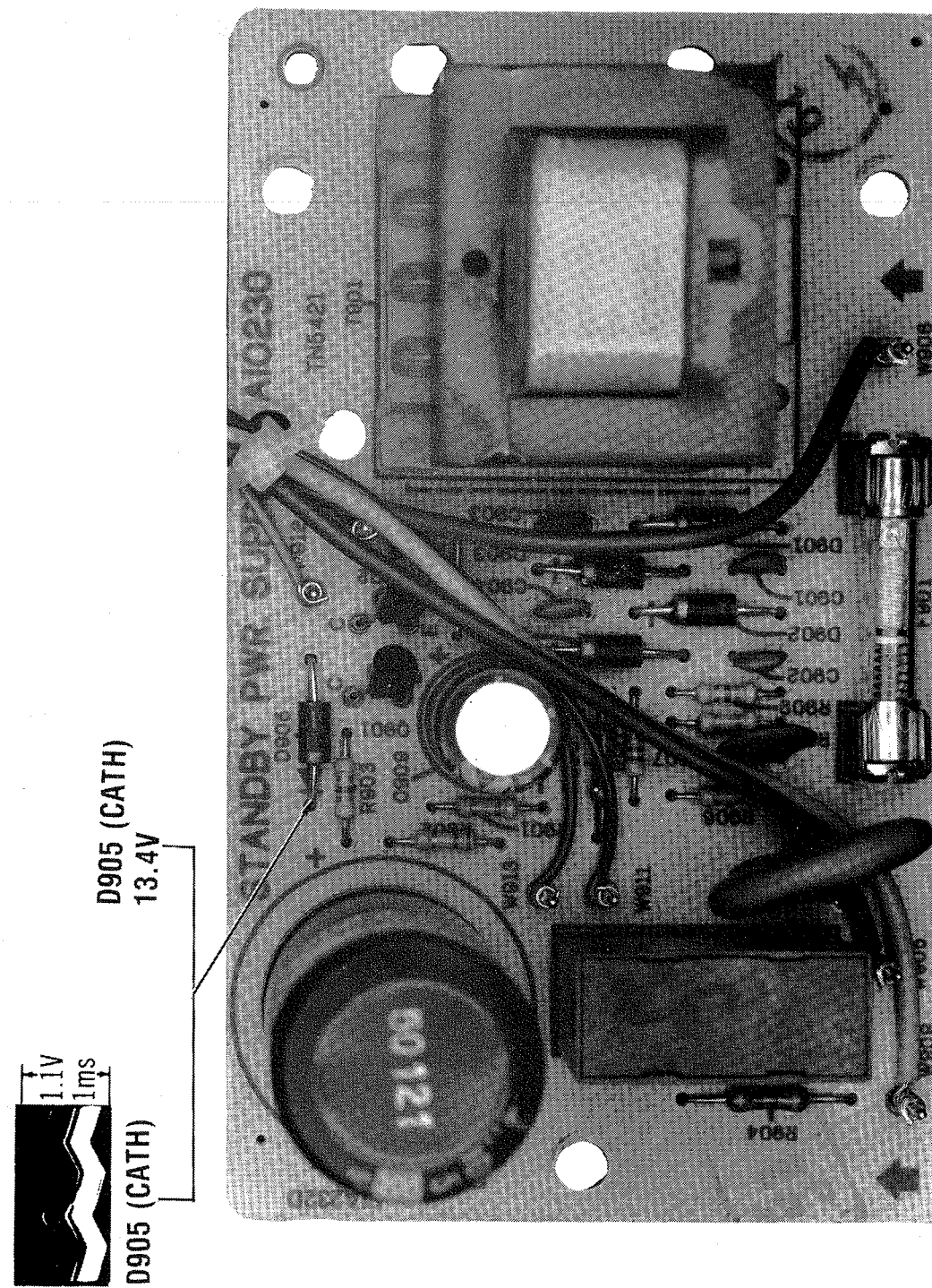


L51  
189V

W94  
11.5V

CRT SOCKET MODULE

A Howard W. Sams **QUICK-CHECKS™** Photo



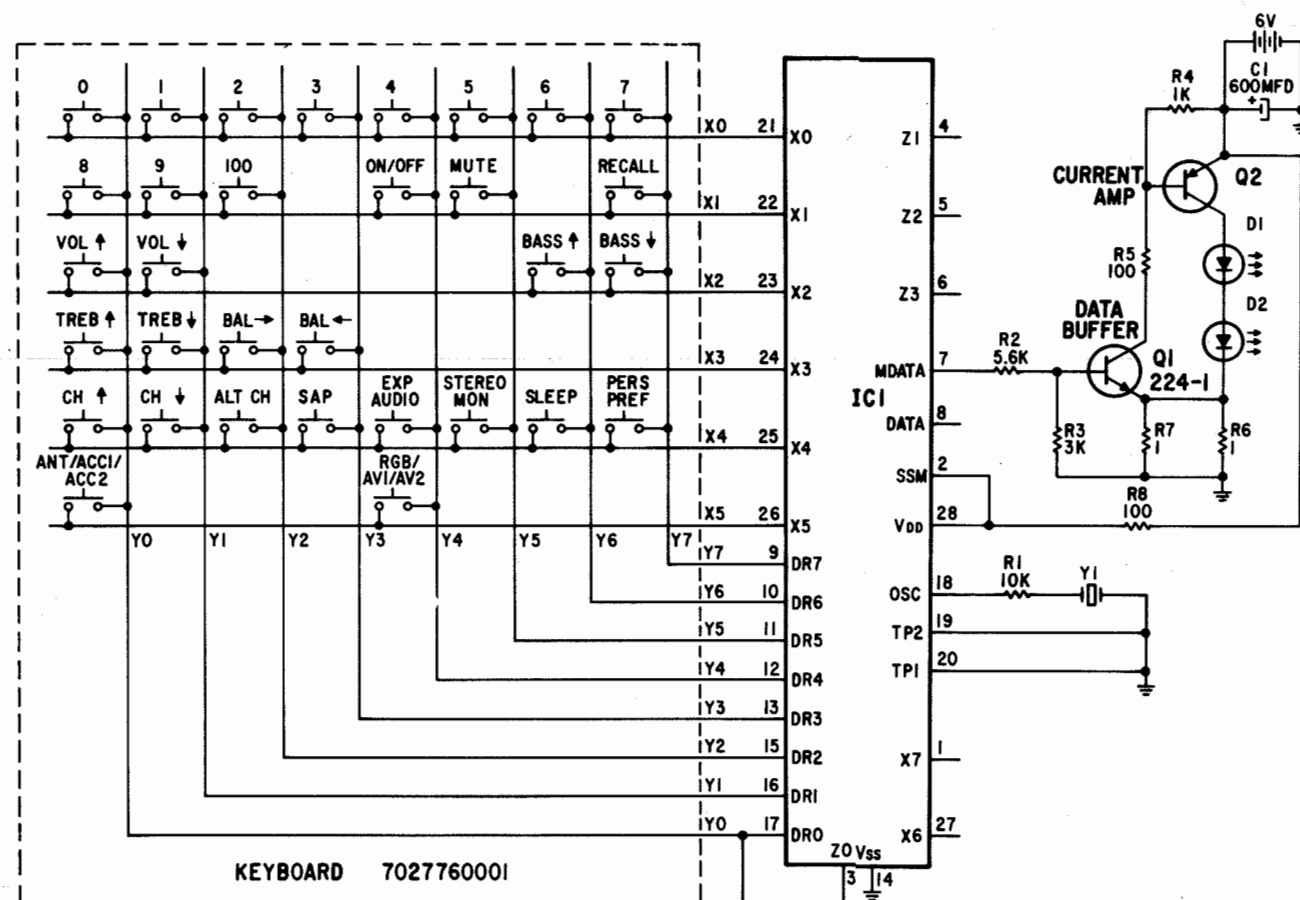
MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

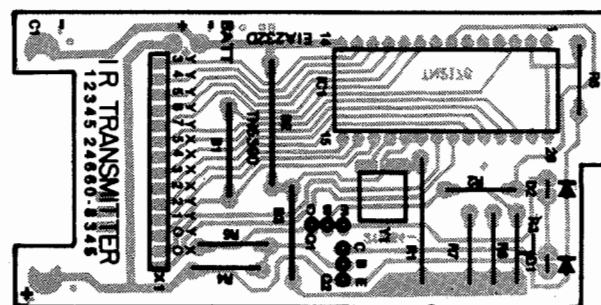
STAND-BY POWER SUPPLY MODULE

A Howard W. Sams **QUICK-CHECKS™** Photo

# T205AD & T325AD REMOTE TRANSMITTERS SCHEMATIC DIAGRAM (Incorporated with TS-10 Tuning Systems)



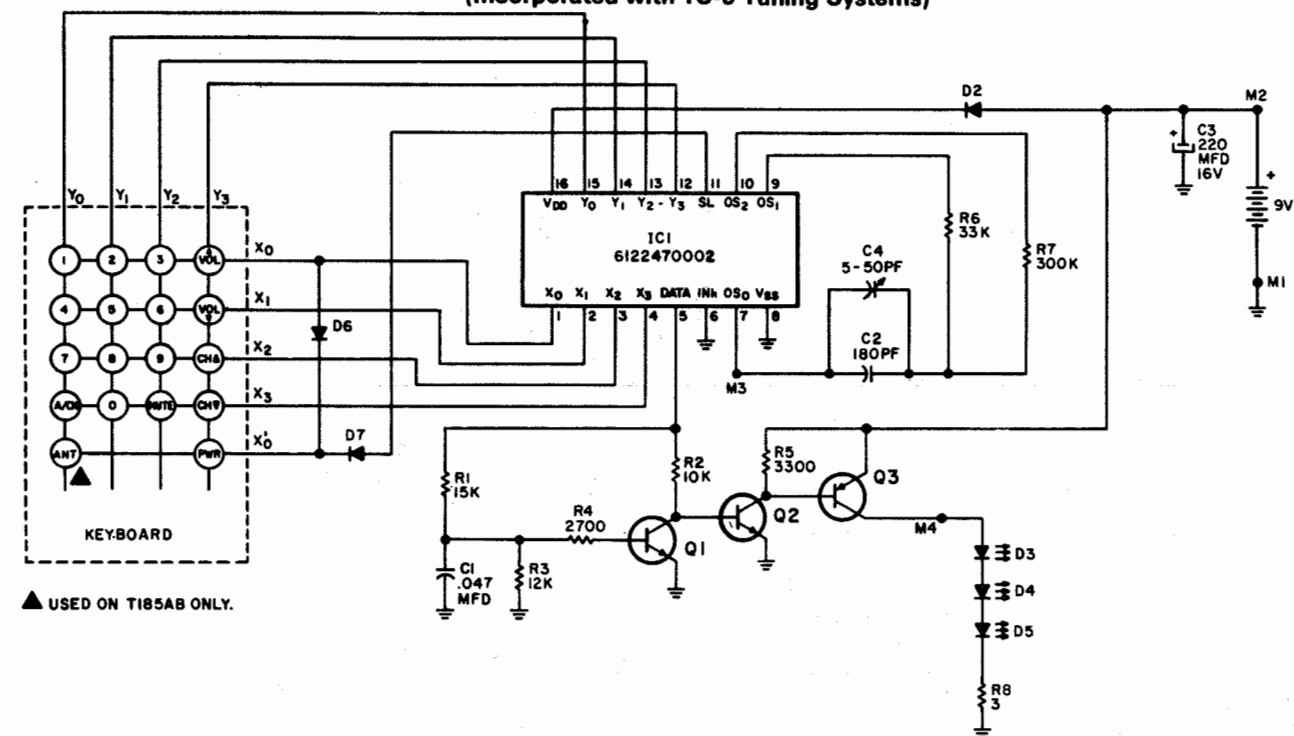
T205AD & T325AD TRANSMITTER P.C. BOARD OVERLAY  
(VIEWED FROM THE COMPONENT SIDE)



Courtesy of the Manufacturer

REMOTE TRANSMITTERS

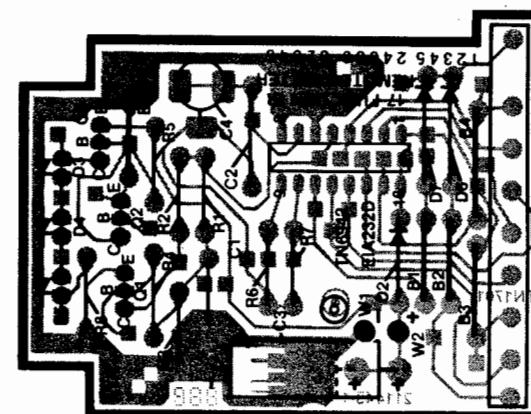
# T174AB & T185AB REMOTE TRANSMITTERS SCHEMATIC DIAGRAM (Incorporated with TS-9 Tuning Systems)



▲ USED ON T185AB ONLY.

\*Note: This Key is referred to as "Quick View" on Sylvania transmitters, "Adjacent Channel" on Magnavox and "Review" on Philco.

T174AB & T185AB TRANSMITTER P.C. BOARD OVERLAY  
(VIEWED FROM THE COMPONENT SIDE)



FUNCTION	BCD CODE	HEX CODE	KEY MATRIX		
			SL	X	Y
1	0 0 1 0	06	0	0	0
2	0 0 0 1	02	0	0	1
3	0 0 1 0	04	0	0	2
VOL▲	0 0 0 0	00	0	0	3
5	0 1 0 1	0A	0	1	1
6	0 1 1 0	0C	0	1	2
VOL▼	0 1 0 0	08	0	1	3
7	0 0 1 1	07	0	2	0
8	0 0 0 1	03	0	2	1
9	0 0 1 0	05	0	2	2
CH▲	0 0 0 1	01	0	2	3
4	0 1 1 1	0E	0	3	0
* A/CH	0 1 1 1	0F	0	3	0
0	0 1 0 1	0B	0	3	1
MUTE	0 1 1 0	0D	0	3	2
CH▼	0 1 0 1	09	0	3	3
POWER	1 0 0 0	10	1	0	3
▲ ANT	1 0 1 0	16	1	0	0

## REPLACEMENT PARTS LIST

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>CAPACITORS</b>			<b>SEMICONDUCTORS (Continued)</b>		
C1	.047uF., 20%, 250V, Polyester	2506554730	Q1	NPN Silicon Transistor	6102240001
C2	180pF., Polypropylene	2507191812	Q2	NPN Silicon Transistor	6102240001
C3	220uF., 16V, Electrolytic	2702032216	Q3	PNP Silicon Transistor	6101580003
C4	50pF., Trimmer	2602200003	IC1	Remote Transmitter IC	6122470002
<b>RESISTORS</b> (All are 5% Carbon Film unless otherwise specified.)			<b>SEMICONDUCTORS</b>		
R1	15k	2302811535	D2	Silicon Diode	5301811001
R2	10k	2302811035	D3	Infrared Emitting	5302740001
R3	12k	2302811235	D4	Infrared Emitting	5302740001
R4	2700 ohm	2302142725	D5	Infrared Emitting	5302740001
R5	3.3k	2302813325	D6	Silicon Diode	5301811001
R6	33k	2302813335	D7	Silicon Diode	5301811001
R7	300k	2302813045			
R8	3 ohm	2302813095			
<b>CONTROLS &amp; SWITCHES</b>					
	Pressure Pad Keyboard	7028641001			

Courtesy of the Manufacturer

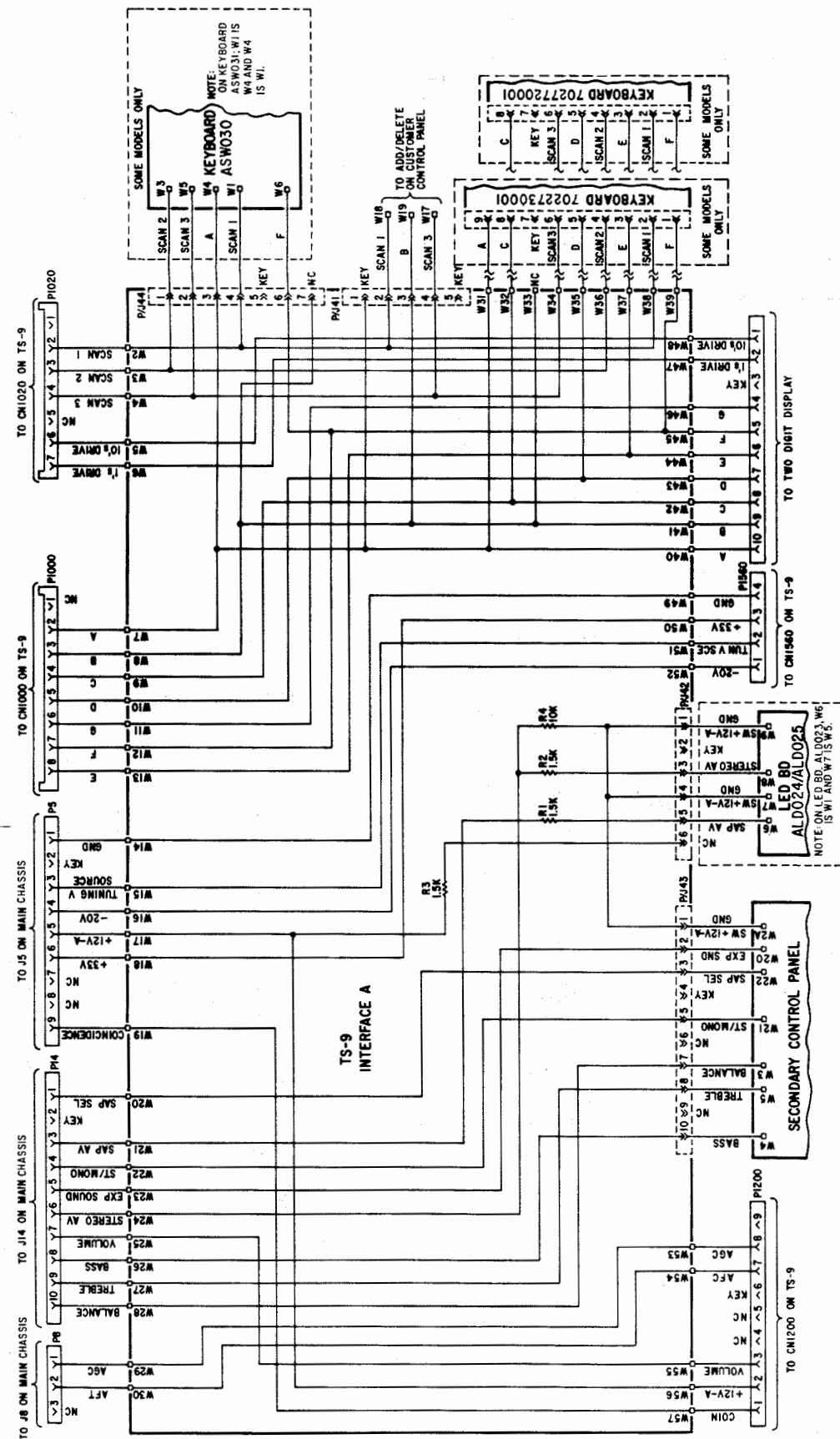
REMOTE TRANSMITTERS

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2



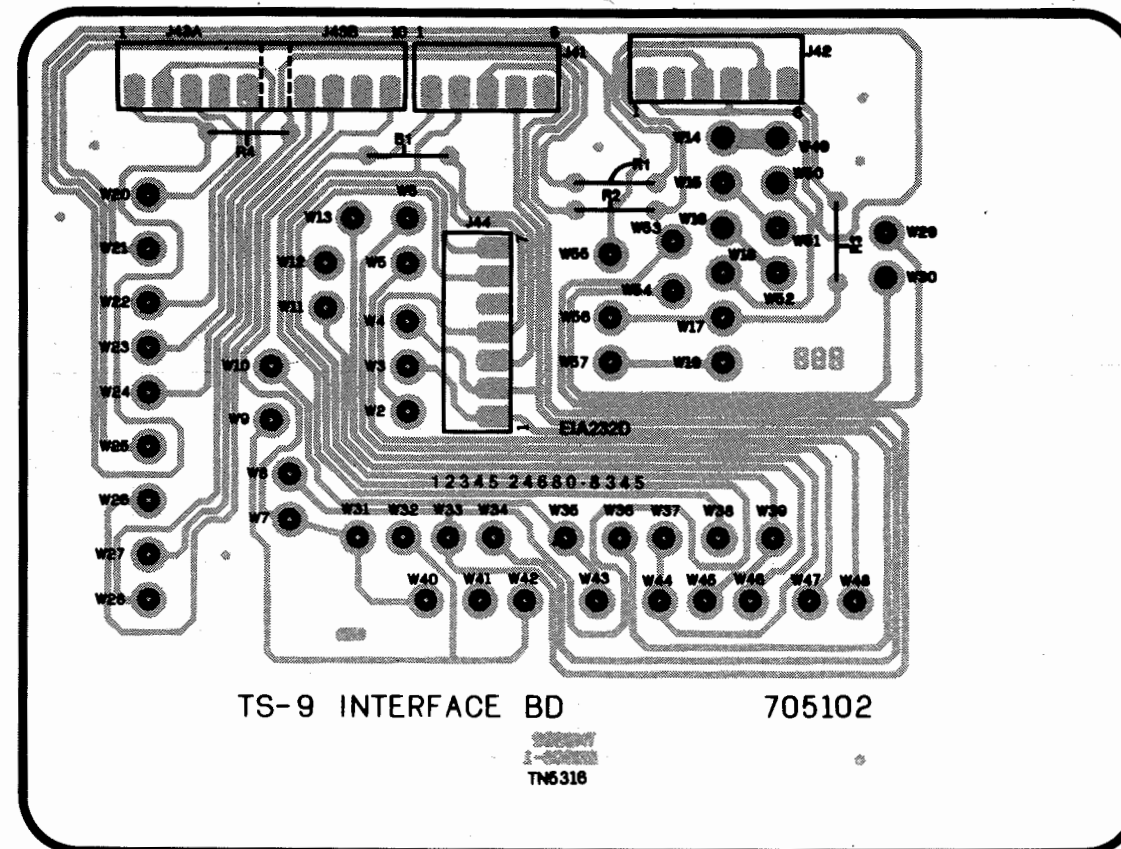
# 7051020002 & 7051020003 TS-9 INTERFACE PANEL SCHEMATIC DIAGRAM



INTERFACE PANEL

Courtesy of the Manufacturer

## 7051020002 & 7051020003 TS-9 INTERFACE PANEL P.C. BOARD OVERLAY (VIEWED FROM THE COMPONENT SIDE)



### TS-9 INTERFACE MODULES 7051020002, 7051020003 REPLACEMENT PARTS LIST

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>RESISTORS</b>			<b>MISCELLANEOUS (Continued)</b>		
R1	1.5k, 5%, 1/4W, Carbon Film	2302811525	P8	3 Pin Connector w/Contacts	1816500003
R2	1.5k, 5%, 1/4W, Carbon Film	2302811525		10 Pin Connector w/Contacts (to Display)	1816520010
R3	1.5k, 5%, 1/4W, Carbon Film	2302811525	P14	Polarizing Key f/Display Connector	1816510003
R4	10k, 5%, 1/4W, Carbon Film	2302811035		10 Pin Connector	1816500010
<b>MISCELLANEOUS</b>				Polarizing Key f/P14	1816510003
	10 Pin Connector w/Contacts (for Display)	1816520010	P1000	8 Pin Connector w/Contacts	1816520008
	Polarizing Key f/Display Connector	1816510003	P1020	7 Pin Connector w/Contacts	1816520007
	9 Pin Connector w/Contacts (to Keyboard, 0002 Interface Board)	1816520009	P1200	9 Pin Connector	1816500009
P5	9 Pin Connector	1816500009		Polarizing Key f/P1200	1816510001
	Polarizing Key f/P5	1816510001	P1560	4 Pin Housing Connector	1812101004
				Terminal Contacts f/P1560 (4 used)	1810110001
				Square Wire Pins (78 used)	1811580101

Courtesy of the Manufacturer

TS-9 INTERFACE MODULE 2

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

**NOTE:**  
UNLESS OTHERWISE SPECIFIED:  
1. CAPACITANCE VALUES OF ONE OR GREATER ARE IN PICOFARADS.  
2. CAPACITANCE VALUES LESS THAN ONE ARE IN MICROFARADS.  
3. RESISTORS ARE 1/4 WATT, 5% TOLERANCE.

Ref.	Description	Part No.
<b>CONTROLS</b>		
R228	2.2k, 20%, Red Cut-Off Control	2204722222
R229	4.7k, 20%, Red Drive Control	2204724722
R233	2.2k, 20%, Green Cut-Off Control	2204722222
R241	4.7k, 20%, Green Drive Control	2204724722
R245	2.2k, 20%, Blue Cut-Off Control	2204722222

Ref.	Description	Part No.
<b>CONTROLS</b>		
R228	2.2k, 20%, Red Cut-Off Control	2204722222
R229	4.7k, 20%, Red Drive Control	2204724722
R233	2.2k, 20%, Green Cut-Off Control	2204722222
R241	4.7k, 20%, Green Drive Control	2204724722
R245	2.2k, 20%, Blue Cut-Off Control	2204722222
R248	4.7k, 20%, Blue Drive Control	2204724722
S R2/G2	Focus/G2 Control Asm.	2204620005
<b>SEMICONDUCTORS</b>		
Q226	NPN Transistor, Red Output	6102500003
Q235	PNP Transistor, Black Bias	6104340001
Q240	NPN Transistor, Green Output	6102500003
Q247	NPN Transistor, Blue Output	6102500003

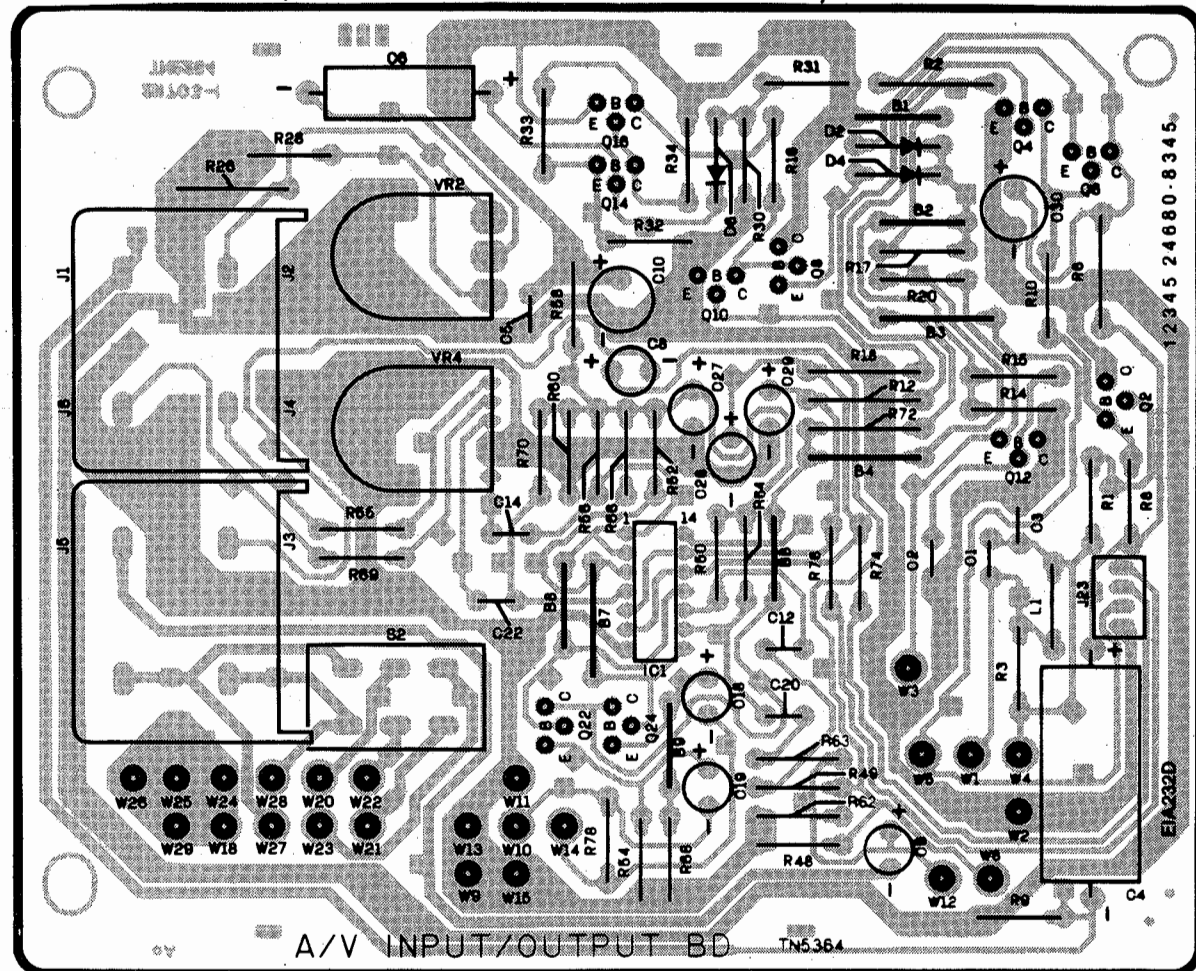
## CRT SOCKET MODULE

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>RESISTORS</b>			<b>CONTROLS &amp; SWITCHES (Continued)</b>		
(All are 5%, 1/4W, Carbon Film unless otherwise specified.)					
R1	7.5k	2302817525	VR8	10k, 20%, Sharpness Control	2204590016
R2	100 ohm	2302811015	S1	Add Switch	1606680002
R3	220 ohm	2302812215	S1	Delete Switch	1606680002
R4	10k	2302811035	S3	Cable/Normal Switch	1607100001
R5	6.8k	2302816825	S4	Audio/Video Switch	1607100001
R7	12k	2302811235	S5	Mono/Stereo/SAP Switch	1607110001
R8	100 ohm	2302811015	S8	Expanded Sound	1607110001
R9	680 ohm	2302816815			
R11	27k	2301812735	<b>MISCELLANEOUS</b>		
R13	3k	2302813025	J102	2 Pin Female Housing Connector	1808330002
R14	430 ohm	2302814315		Male Contact f/J102	1807260002
<b>CONTROLS &amp; SWITCHES</b>			P10	8 Pin Connector	1816500008
VR1	50k, 20%, Balance Control	2204590011		Polarizing Key f/P10	1816510001
VR2	50k, 20%, Bass Control	2204590011	P23	4 Pin Connector w/Contacts	1816520004
VR3	50k, 20%, Treble Control	2204590011	P41	5 Pin Connector	1816500005
VR4	10k, 20%, Color Control	2204590001		Polarizing Key f/P41	1816510001
VR5	10k, 20%, Tint Control	2204590001	P43	10 Pin Connector	1816500010
VR6	10k, 20%, Picture Control	2204590001		Polarizing Key f/P43	1816510001
VR7	10k, 20%, Brightness Control	2204590001	P1030	5 Pin Connector w/Contacts	1816520005
				Square Wire Pin (24 used)	1811580001

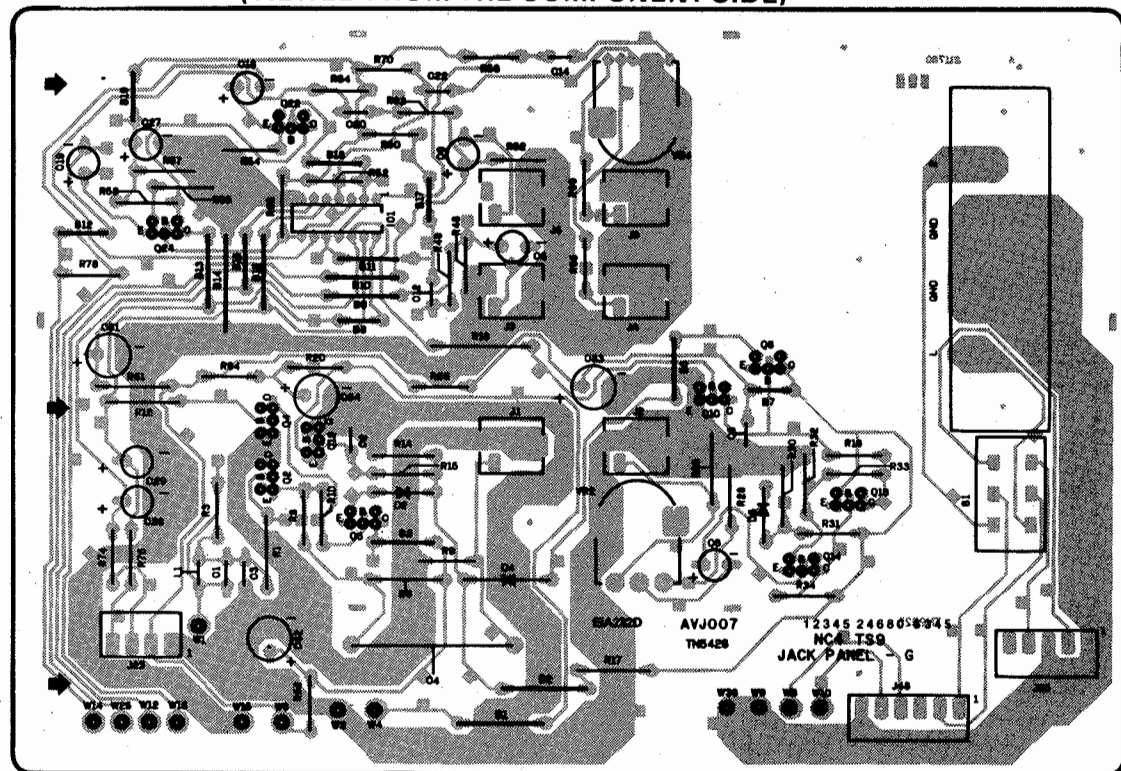
## SECONDARY CONTROL MODULE

**FOLDER 2**

AVJ004 & AVJ013 AUDIO/VIDEO JACK PANEL P.C. BOARD OVERLAY  
(VIEWED FROM THE COMPONENT SIDE)



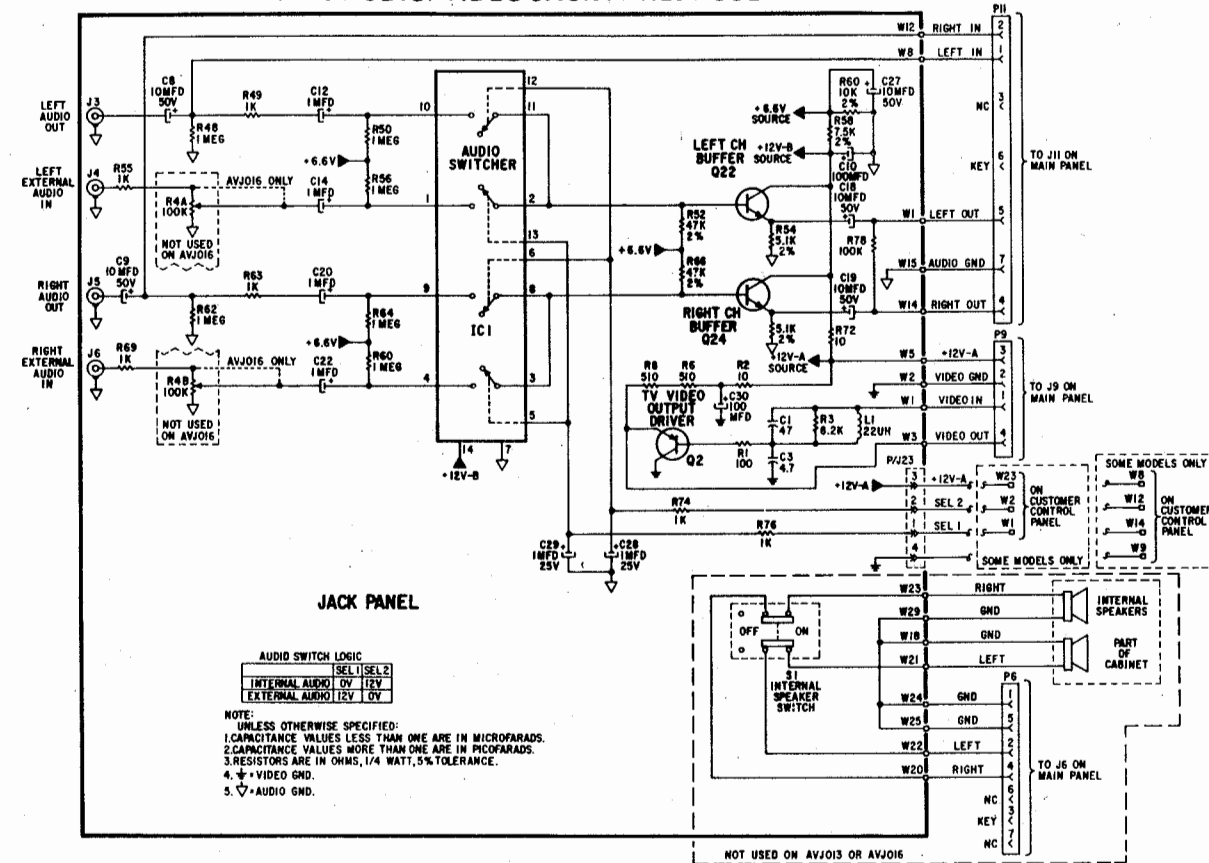
A10298-A001 AUDIO/VIDEO JACK PANEL P.C. BOARD OVERLAY  
(VIEWED FROM THE COMPONENT SIDE)



A/V JACK PANEL

Courtesy of the Manufacturer

AVJ004 & AVJ013 AUDIO/VIDEO JACK PANEL ASSEMBLY SCHEMATIC DIAGRAM



AVJ004-A001 & AVJ013-A001  
AUDIO IN/OUT JACK PANEL  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.	Ref.	Description	Part No.
<b>COILS</b>			<b>RESISTORS (Continued)</b>		
L1	22uH., 5%, Coil	3618132205	R62	1 Meg	2302811055
<b>CAPACITORS</b>			R63	1k, Carbon Composition	2302811025
(All are 10%, 50V, Ceramic unless specified otherwise.)			R64	1 Meg	2302811055
C1	47pF., 5%, NPO	2508414705	R66	47k	2302814735
C3	4.7pF., NPO	2508414797	R68	5100 ohm	2302815125
C8	10uF., Electrolytic	2701591150	R69	1k, Carbon Composition	2302811025
C9	10uF., Electrolytic	2701591150	R70	1 Meg	2302811055
C10	100uF., 16V, Electrolytic	2701591215	R72	10 ohm	2302811005
C12	.27uF., Polyester	2509592740	R74	1k, Carbon Composition	2302811025
C14	.27uF., Polyester	2509592740	R76	1k, Carbon Composition	2302811025
C18	10uF., Electrolytic	2701591150	R78	100k	2302811045
C19	10uF., Electrolytic	2701591150	<b>CONTROLS &amp; SWITCHES</b>		
C20	.27uF., Polyester	2509592740	VR4A, B	100k (Aux. Audio Level Adj.)	2204220008
C22	.27uF., Polyester	2509592740	S2	Internal Speaker On-Off Sw. (AVJ004 only)	1605460010
C27	10uF., Electrolytic	2701591150	<b>SEMICONDUCTORS</b>		
C28	1uF., Electrolytic	2701591050	IC1	Quad Sw.	6121860001
C29	1uF., Electrolytic	2701591050	Q2	PNP Transistor (Video Output Driver)	6102230001
C30	100uF., 16V, Electrolytic	2701591215	Q22	NPN Transistor (Left Ch. Buffer)	6102320002
<b>RESISTORS</b>			Q24	NPN Transistor (Right Ch. Buffer)	6102320002
(All are 5%, 1/4W, Carbon Film unless specified otherwise.)			<b>MISCELLANEOUS</b>		
R1	100 ohm	2302811015	J23	4 Pin Wafer Connector (P.C. Bd. Mtg.)	1814920004
R2	10 ohm	2302811005	P6	7 Pin Connector w/contacts	1816500007
R3	8.2k	2302818225	P11	Polarizing Key f/P6	1816510001
R6	510 ohm	2302815115	P9	7 Pin Connector w/contacts	1816500007
R8	510 ohm	2302815115	J3 thru	4 Pin Connector w/contacts	1816500004
R48	1 Meg	2302811055	J6	Phono Jack Asm.	1814780022
R49	1k, Carbon Composition	2302811025		Locking Terminal Clips f/Speakers (4 used)	2005590001
R50	1 Meg	2302811025			
R52	47k	2302811055			
R54	5100 ohm	2302814735			
R55	1k, Carbon Composition	2302811025			
R56	1 Meg	2302811055			
R58	7.5k	2302817525			
R60	10k	2302811035			

Courtesy of the Manufacturer

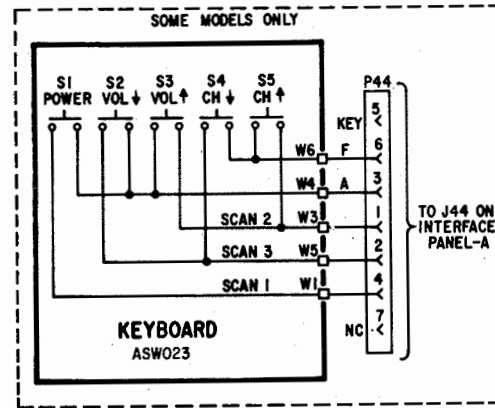
A/V JACK PANEL ASSEMBLY

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

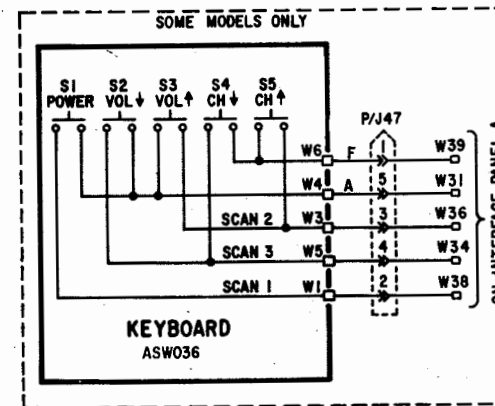
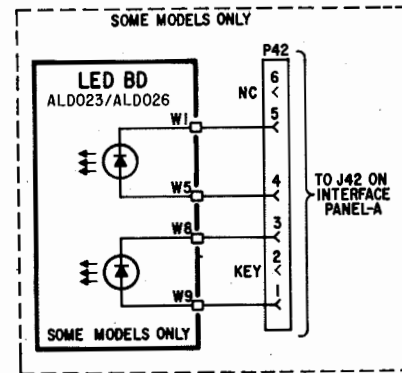
FOLDER 2



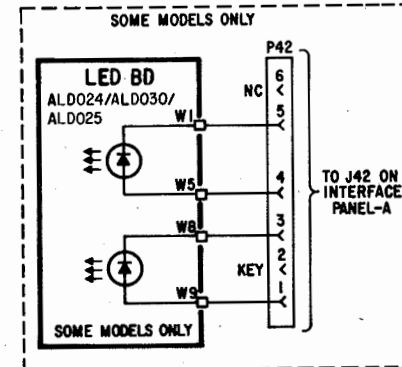
KEYBOARDS AND LED MODULE



NOTE: ON KEYBOARD 211609 W1 IS W4 AND W4 IS W1.



NOTE: KEYBOARDS 7027730001 OR 7027720001 ARE USED ON SOME MODELS ONLY.



ALD026-A001 LED INDICATOR MODULE  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.
<b>MISCELLANEOUS</b>		
P42	6 Pin Connector w/ Contacts	1816500006
	Key f/ P42	1816510001
	2 Pin Socket f/ LED (2 used)	1815329002
	Amber Square LED (S.A.P.)	5301890002
	Red Square LED (Stereo)	5301890001
	Strain Relief Terminal (4 used)	1812110005

ALD030-A001 LED INDICATOR MODULE  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.
<b>MISCELLANEOUS</b>		
P42	6 Pin Connector w/ Contacts	1816500006
	Key f/ P42	1816510001
	2 Pin Socket f/ LED (2 used)	1815329002
	Amber Square LED (S.A.P.)	5302970002
	Red Square LED (Stereo)	5302970003
	Strain Relief Terminal (4 used)	1812110005

ASW036-A001 FIVE FUNCTION SCAN MODULE  
REPLACEMENT PARTS LIST

Ref.	Description	Part No.
<b>CONTROLS &amp; SWITCHES</b>		
S1	Pushbutton Switches f/ Power (2 used)	1606880004
S2-5	Pushbutton Switches f/ Channel Up-Down, Volume Up-Down (4 used)	1606880004
<b>MISCELLANEOUS</b>		
J47	5 Pin Female Connector	1812450002
	Male Contacts f/ J47 (5 used)	1807260002
	Square Wire Pin (5 used)	1811580006

Courtesy of the Manufacturer

PARTS LIST AND DESCRIPTION

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA				NOTES
			NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
D11,12 D70	MAIN BOARD 181-1 BZV461V5	5301811001 5303011002	NTE177	ECG177	SK9091/177	103-131	
D101,102 D170	SAME AS D11 SAME AS D11						
D300	171-1	5301571001	NTE552	ECG552	SK9000/552	103-287	
D308	SAME AS D11						
D400 thru D403	1N5062	5302621001	NTE125	ECG125	SK3081/125	903-334	
D405,406	260-2	5302601002	NTE552	ECG552	SK9000/552	103-287	
D408	BY0331	5303101003	NTE580	ECG580	SK5036/580	103-316-04	
D409,411, D412 D429	SAME AS D11 SAME AS D405		NTE580	ECG580	SK5036/580	103-316-04	
D430	BY1495C						
D431	SAME AS D408	5303051003	NTE580	ECG580	SK5036/580	103-316-04	
D432,433 D434	SAME AS D405 SAME AS D11		NTE580	ECG580	SK5036/580	103-316-04	
D435 D461	SAME AS D405 BY228	5303121001					
D462	SAME AS D430						
D463,464 D469 IC10	SAME AS D408 266-1F TDA3568	5302661001 6124730001	NTE177	ECG177	SK9091/177	103-131	

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

FOLDER 2

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA				NOTES
			NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
IC50	471-1(1C)	6124710001	NTE3041 NTE3041	ECG3041 ECG3041	SK2041/3041 SK2041/3041 SK7635		
IC102	472-1	6124720001					
IC103	412-2	6124120002					
IC105,106	477-2	6124770002					
IC300	444-1(1C)	6124440001					
IC320	TDA2579	6124760001	NTE123AP+ NTE123AP+ NTE123AP+ NTE123AP+	ECG123AP+ ECG123AP+ ECG123AP+ ECG123AP+	SK3854/123AP+ SK3854/123AP+ SK3854/123AP+ SK3854/123AP+	121-Z9000A+ 121-Z9000A+ 121-Z9000A+ 121-Z9000A+	
IC403	PS2021	5302980001					
IC601	126-1	6121260001					
IC603	449-1	6124490001					
Q50	435-1	6104350001					
Q52	435-2	6104350002	NTE159+ NTE159+	ECG159+ ECG159+	SK3466/159+ SK3466/159+	121-Z9003+ 121-Z9003+	
Q54	SAME AS Q50	6102340001					
Q107		6102349001					
Q110	SAME AS Q50	6104340001					
Q321		6104349001					
Q400	BU808	6105320001	NTE123AP+ NTE123AP+ NTE123AP+ NTE123AP+ NTE123AP+	ECG123AP+ ECG123AP+ ECG123AP+ ECG123AP+ ECG123AP+	SK3854/123AP+ SK3854/123AP+ SK3854/123AP+ SK3854/123AP+ SK3854/123AP+	121-Z9000A+ 121-Z9000A+ 121-Z9000A+ 121-Z9000A+ 121-Z9000A+	
Q401	526-1	6105260001					
Q402	500-1	6105269001					
Q430	435-2	6105000001					
Q461		6105009001					
	BF819	6105000004	NTE198+ NTE198+	ECG198+ ECG198+	SK3220/198+ SK3220/198+	121-Z9028+ 121-Z9028+	
		6105310001					

#

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
Y50 Y600 Y601	Filter Filter Filter Antenna Antenna	5604450002 3619880001 3617560001 7012090003 7043890005	Crystal 7.1590MHz. SAW Trap 4.5MHz UHF RUSSELL Replacement BOW-4H VHF RUSSELL Replacement POR-12H RUSSELL Replacement Rod SIM-4H (2 Used)
	Board Board Board Board Board Magnet Magnet Wedges	EMC605 EMC607 AVJ004 AVJ013 A10168 3619720001 3615730008 6448670001	Main Chassis 20C601 Main Chassis 19C602 Audio/Video Jack Panel Early Prod Ch. 19C602 Audio/Video Jack Panel Late Prod Ch. 19C602 Audio/Video Jack Panel Ch. 20C601 Convergence & Purity ch. 20C601 Convergence & Purity ch. 19C602 3 Used

# For SAFETY use only equivalent replacement part.

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

ITEM	PART No.	PART No.	PART No.	PART No.
MODEL	RF 4254	RF 4378		
Cabinet-Back	1458050002	1456460001		
Bezel-Control	1455330005			
Bezel-R.H. Control		1456860001		
Bezel-L.H. Control		1456860003		
Back-Secondary Controls		1456850001		
Button Strip-Control		1456500007		
Door-Secondary Controls	1454210004	1456480001		
Grille Frame-L.H.		1457950001		
Grille Frame-R.H.		1457950002		
Hinge Door-(2 Used)	1454970003			
Key Pad-Secondary Controls		1456890001		
Mask	1454200014	1456440001		
Overlay-Secondary Controls	1519750008			
Overlay-Speakers (2 Used)	1519760005			
Push Button-Channel Down	1455370004			
Push Button-Channel Up	1455370003			
Push Button-On/Off Volume	1453370005			
Push Button-Volume Down	1455370002			
Push Button-Volume Up	1455370001			
Push Button-Secondary Control Door Release		1456490001		
Spring-Door		7346980001		
Spring-Door Button		7347040001		

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

MODULES (PLUG-IN BOARDS)

ITEM No.	PART NAME	REPLACEMENT DATA		NOTES
		MFGR. PART No.	PTS PART No.	
	Secondary Control Module	ASC169		Chassis 19C602
	Secondary Control Module	ASC180		Chassis 20C601
	Stand-by Power Supply Module	APM001		Chassis 20C601
	Stereo Decoder Module	A10242		
	Stereo/SAP Indicator Module	ALD030		Chassis 19C602
	SVM Module	A10178		Chassis 20C601
	Switch Board Module	ASW036		Chassis 19C602
	TS-9 Control Module	A10264		Chassis 19C602
	TS-9 Control Module	A10180		Chassis 20C601
	UHF/VHF Tuner Module	340291		

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
F1	Filter	3620180001	S.A.P. Band-Pass
F2	Filter	3620150001	Main Low-Pass
F3	Filter	3620150001	Main Low-Pass
F4	Filter	3620140001	S.A.P. Low-Pass
FB1	Ferrite Bead	3640460001	
FB2	Ferrite Bead	3640460001	
FB3	Ferrite Bead	3640460001	
FB4	Ferrite Bead	3640460001	
J1	Video A/V1 Input	1816320004	
J2	Left A/V1 Input	1816320003	
J3	Right A/V1 Input	1816320002	
J4	Video A/V2 Input	1816320004	
J7	Video A/V2 Output	1816320004	
J8	Left A/V2 Output	1816320003	
J9	Right A/V2 Output	1816320002	
J10	Video Monitor Output	1816320004	
J11	Left Monitor Output	1816320003	
J12	Right Monitor Output	1816320002	
J14	Left Variable Audio Output	1816320003	
J15	Right Variable Audio Output	1816320002	
# P400	Cord	4614070001	AC Power, Polarized
S1	Switch	1606680002	Add Chassis 19C602
S1	Switch	1606680002	Delete Chassis 19C602
S1	Switch	1607100003	Normal/Program
S2	Switch	1607100003	Cable/Normal
S3	Switch	1606880004	Volume Up
S3	Switch	1607100001	Cable/Normal Chassis 19C602
S4	Switch		Cable Down
S4	Switch	1607100001	Audio/Video Chassis 19C602
S5	Switch	1606880004	Sleep Timer
S5	Switch	1607110001	Mono/Stereo Chassis 19C602
S6	Switch	1606880004	Ant/ACC1/ACC2
S7	Switch	1606880004	Power
S8	Switch	1606880004	AV1/AV2
S8	Switch	1607110001	Expander Chassis 19C602
S9	Switch	1606880004	Personal Preference
S10	Switch	1606880004	Recall
S11	Switch	1606880004	Expander Sound
S12	Switch	1606880004	Stereo
S13	Switch	1606880004	Channel Up
S14	Switch	1606880004	Channel Down
SW300	Switch	1606720001	Vertical Centering 3 Way
# V1	CRT	A51 JFC60X or CBA48AAN01	Model RF4254WA01, WA02

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA				NOTES
			NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
Q462	BU508V	6104330003	NTE2300 NTE2300	ECG2300 ECG2300	SK9476/2300 SK9476/2300		
Q463	SAME AS Q50		NTE185	ECG185	SK3191/185	121-Z9002	
Q464	BD136	6105280001	NTE374	ECG374	SK9042/374	121-Z9105*	
Q600	390-1	6103900001 6103909001	NTE395+ NTE395+	ECG395+ ECG395+	SK9434+ SK9434+		
Q602,604	SAME AS Q50		NTE5456	ECG5457	SK3598/5457	185-Z9010	
# SCR468	BT151500R	6110180001	NTE5456	ECG5457	SK3598/5457	185-Z9010	
Z320	57-439	5301571439	NTE5008A	ECG5008A	SK4A3/5008A	103-279-08	
Z404	57-220	5301571220	NTE5030A	ECG5030A	SK22A/5030A	103-144	
Z407	57-249	5301571249	NTE5000A	ECG5000A	SK2A4/5000A		
Z410	57-110	5301571110	NTE5020A	ECG5020A	SK11A/5020A	103-279-20	
Z436	249-629	5302491629	NTE5013T1	ECG5013T1			
Z465	57-200	5301571200	NTE5029A	ECG5029A	SK20A/5029A	103-Z9023	
Z466	249-759	5302491759					
# Z467	249-160	5302491160					
Q2	CRT BOARD						
	(B) C558		NTE159+	ECG159+	SK3466/159+	121-Z9003+	
		6104390001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
Q1,1,51	250-3	6102500003	NTE171	ECG171	SK3201/171	121-822	
	SCAN VELOCITY MODULATION (SVM) MODULE						
Q1	529-1	6105292001	NTE229+	ECG229+	SK3246A/229+	121-Z9021+	
Q2,3	390-1	6103902001	NTE395+	ECG395+	SK9434+		
Q4	SAME AS Q1						
Q5	SAME AS Q2						
Q6	(B) C636	6105272001	NTE383 NTE383	ECG383 ECG383	SK9138/383 SK9138/383	921-1115 921-1115	

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03



42 PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA				NOTES
			NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
Q7	B0635	6105352001	NTE382 NTE382	ECG382 ECG382	SK9137/382 SK9137/382	921-1114 921-1114	
D1	STEREO DECODER						
IC1	181-1	5301811001	NTE177	ECG177	SK9091/177	103-131	
IC2	612496-1	6124960001	NTE1655	ECG1655	SK7687/1655		
IC3	468-1	6124680001					
	61249-1	6124940001	NTE778A	ECG778A	SK3465/778A	221-Z9034	
IC4	TL074CN		NTE859	ECG859			
IC5	dbxAN6291	6125350001	NTE859	ECG859			
		6124890001					
IC6	HEF4053BP		NTE4053B	ECG4053B	SK4053B	905-354	
Q3 thru Q6	435-1	6124930001	NTE4053B	ECG4053B	SK4053B	905-354	
Z1	57-629	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
		5301571629	NTE5013A	ECG5013A	SK6A2/5013A	103-Z9008	
D6,7	SECONDARY CONTROL BOARD						
D17		5303150001					
D18,19	247-1	5303150002	NTE112	ECG112	SK3089/112	103-61	
	AUDIO/VIDEO JACK PANEL BOARD						
D6,8,10,16	181-1	5301811001	NTE177	ECG177	SK9091/177	103-131	
IC1,2	HEF4052BP		NTE4052B	ECG4052B	SK4052B	905-381	
		6124740001	NTE4052B	ECG4052B	SK4052B	905-381	
Q2,4,6	435-1	6104350001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
Q12	(B)C558	6104340001	NTE159+	ECG159+	SK3466/159+	121-Z9003+	
			NTE159+	ECG159+	SK3466/159+	121-Z9003+	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

COILS & TRANSFORMERS

ITEM No.	FUNCTION	MFGR. PART No.	OTHER IDENTIFICATION	NOTES
# DY1	Yoke Horiz 1.72mH 90° Vert 19.6mH	7050730007 (2)	362051-1 (1)	
# DY1	Yoke Horiz Vert	3620330001 (3)		
# SVM	Yoke 2.9uH Part of Conv/Purity Assembly	3619720001 (2)	361972-1 (1)	
# SVM	Yoke Part of Conv/Purity Assembly	3615730008 (3)		
# T402	Mode Switch	3620070001	362007-1 (1)	
# T460	Horiz Driver	3204030003	311233830540 (1)	
# T465	Horiz Output	3619941001	361994-2001 (1)	
T901	Stand-by		300400-1 (1)	

# For SAFETY use only equivalent replacement part.  
(1) Number on unit.  
(2) Used in Chassis 20C6  
(3) Used in Chassis 19C6

FUSE DEVICES

ITEM NO.	DESCRIPTION	MFGR. PART NO.		NOTES
		DEVICE	HOLDER	
# F400	MAIN BOARD 4 Amp @ 125V Fast Acting	1815205400		
# F901	REMOTE POWER SUPPLY (STANDBY) .125 Amp @ 250V Slow Blow	1810215012	1810070001 (1)	

# For SAFETY use only equivalent replacement part.  
(1) Two used for each fuse.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2 1/4" X 3 1/2" PM 8 Ohm	5823011002		On Model #RF4378SL01/02/03
SP2	2 1/4" X 3 1/2" PM 8 Ohm	5823011002		On Model #RF4378SL01/02/03
	3" X 5"	5835091002		On Model #RF4254WA01/02
	3" X 5"	5835091002		On Model #RF4254WA01/02

MODULES (PLUG-IN BOARDS)

ITEM No.	PART NAME	REPLACEMENT DATA		NOTES
		MFGR. PART No.		
	Antenna Sw. Module	A10295		Chassis 20C601 (Early prod.)
	Antenna Sw. Module	RFS002		Chassis 20C601 (Early prod.)
	CRT Socket Module	ASC169		Chassis 19C602
	CRT Socket Module	APT027		Chassis 20C601
	Remote Receiver Module	A10138		Chassis 19C602
	Remote Receiver Module	A10197		Chassis 20C601

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02,RF4378SL01,RF4378SL02,RF4378SL03

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	WORKMAN PART No.
# R432	1 5% 1/2W Metal Film	2302271085	HW1D0	
# R433	1 5% 1/2W Metal Film	2302271085	HW1D0	
# R434	1 5% 1/2W Metal Film	2302271085	HW1D0	
# R435	1 5% 1/2W Metal Film	2302271085	HW1D0	
R437	20K 1% 1/4W Carbon Film	2302752003		
R440	4320 1% 1/4W Carbon Film	2302754322		
# R466	1000 5% 1.6W Metal Film	2303091025		
# R477	1 5% 1/3W Metal Film			
	2.2 5% 1/3W Metal Film	2302682285		
# R478	1 5% 1/3W Metal Film	2302681085		
# R482	150 5% 1/4W Carbon Film	2302811515	QW115	22-1076
	REMOTE POWER SUPPLY (STANDBY)			
# R904	82 5% 1/2W Carbon Film	2302828205	HW082	22-2070
	STEREO DECODER			
R79	1000 2% 1/4W Carbon Film	2302851022	QW210	
R90	82K 2% 1/4W Carbon Film	2302858232	QW382	
R91	47K 2% 1/4W Carbon Film	2302814732	QW347	
R92	47K 2% 1/4W Carbon Film	2302814732	QW347	
R93	47K 2% 1/4W Carbon Film	2302814732	QW347	
R94	82K 2% 1/4W Carbon Film	2302858232	QW382	
R96	82K 2% 1/4W Carbon Film	2302858232	QW382	
R97	47K 2% 1/4W Carbon Film	2302858232	QW347	

# For SAFETY use only equivalent replacement part.

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.
L11	RF Choke	3619553319
L31	RF Choke	3619553319
L51	RF Choke	3619553319
	MAIN BOARD	
DL10	Delay Line	3615790006
L10	Phase Null	3619660001
L11	RF Choke (15uH)	3618131509
L15	RF Choke (15uH)	3619131509 (1)
L75	Peaking (3.3uH)	3619133395 (1)
L76	Peaking (3.3uH)	3618133395 (1)
L77	Peaking (3.3uH)	3618133395 (1)
L401	Peaking (3.3uH)	3618353395
L403	RF Choke (.5uH)	3620420001
L431	RF Choke (12uH)	3620410001
L432	RF Choke (12uH)	3620410001
L461	Peaking (2.2uH)	3620410003

ITEM No.	FUNCTION	MFGR. PART No.
L463	Bridge (314uH)	3619100006
L464	(12uH)	3620410001
L466	RF Choke (4.2uH)	3620440003
L600	Trap 47.25MHz	3620090001
L602	Peaking (1.2uH)	3618131290
L604	Peaking (2.2uH)	3618132290
L605	Peaking (2.2uH)	3618132290
L606	RF Choke (.33uH)	3618130330
L607	Peaking (10uH)	3618131009
L608	Detector 45.75MHz	3620090003
L611	Discriminator 4.5MHz	3620100001
L612	Detector 45.75MHz	3620090002
T400	Line Choke	3619840001
T610	Filter 4.5MHz	3620110001
Y601	Trap 4.5MHz	3617560001
	STEREO DECODER MODULE	
L1	S.A.P. Trap (10mH)	3619870004
L2	Peaking (22mH)	3620252239

# For SAFETY use only equivalent replacement part.  
(1) Late production change.

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

SEMICONDUCTORS (Select replacement for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA				NOTES
			NTE PART No.	ECG PART No.	RCA PART No.	ZENITH PART No.	
Q14 thru Q32 Z15	SAME AS Q2 BZV461V5	5303011002	NTE552	ECG552	SK9000/552	103-287	
D901 thru D905 Q901,902	STANDBY POWER SUPPLY 171-1 435-1	5301711001 6104352001	NTE123AP+	ECG123AP+	SK3854/123AP+	121-Z9000A+	
IC2	INTERFACE MODULE SAA1061 478-1 435-1 434-4	6124780001 6104350001 6104340004	NTE123AP+ NTE159+	ECG123AP+ ECG159+	SK3854/123AP+ SK3466/159+	121-Z9003+	
Q4 Q6 Q8,10,12	SAME AS Q4						

# For SAFETY use only equivalent replacement part.  
\* Lead configuration may vary from original.

+ Rotate 180° to conform with original lead configuration.  
(B) Prefix = Europe

WIRING DATA

High Voltage Lead	Use BELDEN No. 9867 (30 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor)
General-use Unshielded Hook-up Wire	8208 (Two-Conductor)
	8529 (Solid) Available in 13 Colors
	8522 (Stranded) Available in 13 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
75-Ohm Tuner Input Lead	Use BELDEN No. 8241
300-Ohm Antenna Lead-In	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	8464 (Flat) or 8484 (Round) 4-Conductor
	8485 (Round) 5-Conductor
	8488 (Round) 8-Conductor

MAGNAVOX MODELS RF4254WA01, RF4254WA02, RF4378SL01, RF4378SL02, RF4378SL03

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFGR. PART No.	ITEM No.	RATING	MFGR. PART No.
# C304 C480	MAIN BOARD		C24 C25 C28 C38 C39 C47	STEREO DECODER BOARD	
	1.5 50V 10%	2701601559		.33 50V NP	2701623950
	100 25V			.22 50V NP	2701622950
	.22 100V 20%	2509592240		.47 50V NP	2701625950
				.22 50V NP	2701622950
				.22 50V NP	2701622950
				.47 50V NP	2701622950
				.47 50V NP	2701625950

# For SAFETY use only equivalent replacement part.  
Items Not Listed Are Normally Available At Local Distributors.

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	ITEM No.	RATING	MFGR. PART No.
C45 C46	AUDIO/VIDEO PANEL		C601 C616 C621	10 NPO 50V 5%	2508411008
	4.7 NPO 50V 5%	2508414797		33 NPO 50V 5%	2508413305
	47 NPO 50V 5%	2508414705		33 NPO 50V 5%	2508413305
# C2	CRT BOARD			REMOTE POWER SUPPLY (STANDBY)	
	.0033 3KV 20%	2508840005		.01 125VAC	2506260017
	MAIN BOARD		C906	SCAN VELOCITY (SYM) MODULE	
C16	3.3 NPO 50V 5%	2508413397		120 NPO 50V 5%	
C18	22 NPO 50V 5%	2508412205		100 NPO 50V 5%	2508311019
C62	10 NPO 50V 5%	2508411008		27 NPO 50V 5%	
C74	220 NPO 50V 5%			STEREO DECODER PANEL	
C75	68 NPO 50V 5%	2508416805		C2	390 N750 50V 5%
C322	33 NPO 50V 5%	2508413305		C9	120 NPO 50V 5%
C400	68 NPO 50V 5%	2508416805		C15	100 NPO 50V 5%
# C420	.22 125VAC 20%	2509842240		C18	100 NPO 50V 5%
# C463	.0047 50V 20%	2509860001		C26	270 N750 50V 5%
# C465	680 2KV 10%	2508850015			
	.47 400V 5%	2508050002			
	.51 400V 5%	2508050008			
# C466	.0091 2KV 5%	2508189125			
# C474	.15 100V 10%				
	.15 100V 20%	2508591540			
# C483	.1 400V 20%	2509581040			

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Items Not Listed Are Normally Available At Local Distributors.

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

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
R8 R26 R66A,B R87A,B	AUDIO/VIDEO PANEL			
	Video Level Adj	1000	2204130015	
	Video Level Adj	1000	2204130015	
	Audio Level Adj	47K	2204220007	
	Audio Level Adj	47K	2204220007	
R19 R20	CRT BOARD			
	Red Cut-Off	4700	2204724722	
	Red Drive	4700	2204724722	

PARTS LIST AND DESCRIPTION (Continued)

When ordering parts, state Model, Part Number, and Description

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

ITEM NO.	FUNCTION	RESISTANCE	MFGR. PART NO.	NOTES
R39 R40 R59 R60 # R2/G2	Green Cut-Off Green Drive Blue Cut-Off Blue Drive Focus/G2 Control	4700 4700 4700 4700	2204724722 2204724722 2204724722 2204724722 2204620005	
R14 R23 R50 R321 R331 R333 R442 R471 R617 R618	MAIN BOARD			
	Chroma Null	470	2204714712	
	Auto Color Level	470K	2204714742	
	Ref Osc	10K	2204711032	
	Vert Amplitude	470K	2204164742	
	Horiz Frequency	10K	2204711032	
	Horiz Center	10K	2204161032	
	130V B+ Adj	470	2204714712	
	Horiz Width	10K	2204711032	
	Audio Level	1000	2204711022	
	RF AGC	100K	2204711042	
	SECONDARY CONTROLS			
	Sharpness	5000	2204320003	
	(VR8) Sharpness	10K	2204590016 (1)	
R25 (VR4) R26 (VR5) R27 (VR7) R58 (VR6) VR1 VR2 VR3	Color	5000	2204320003	
	Color	10K	2204320001 (1)	
	Tint	5000	2204320003	
	Tint	10K	2204590001 (1)	
	Brightness	5000	2204320003	
	Brightness	10K	2204590001 (1)	
	Picture	5000	2204320003	
	Picture	10K	2204590001 (1)	
	Balance	50K	2204590011 (1)	
	Bass	50K	2204590011 (1)	
	Treble	50K	2204590011 (1)	
	STEREO DECODER PANEL			
	SAP Level Adj	10K	2204721032	
	Osc Adj	4700	2204724722	
R50 R58 R74 R83	L-R Level Adj	4700	2204724722	
	L+R Level Adj	4700	2204724722	
	B+ (Timing Adj)	2200	2204722222	
	Balance (8kHz Adj)	47K	2204724732	

# For SAFETY use only equivalent replacement part.  
(1) Used In Models ASC169-A001

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	NTE PART No.	WORKMAN PART No.
# R3	CRT BOARD			
	100 5% 1/3W Carbon Film	2302681015		
# R400 R401 R405 R413 R415 # R429 # R429 R431	MAIN BOARD			
	NTC 16.1 Cold	2303240001		FR1010
	PTC 11.6 Cold	2302070008		FR605
	56 5% 5W WW	2401215695		
	4300 2% 1/4W Carbon Film	2302814332	5W056	
	1100 2% 1/4W Carbon Film	2302811122	QW243	
	1 5% 1/2W Metal Film	2302271085	QW211	
	10K 5% 2.5W Metal Film	2303101035	HW1D0	
	61900 1% 1/4W Carbon Film	2302756193		

MAGNAVOX MODELS RF4254WA01,  
RF4254WA02,RF4378SL01,RF4378SL02,RF4378SL03