

Servicing SYLVANIA for 1974-1975

by Stan Prentiss

R75-3 excerpt Sv2

Errata:

Schematic page F-18A is marked for the R74-3 chassis. This is incorrect, F-18A and F-19A are reversed in the book causing this issue.

THEODORE AUDEL & CO.

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HOWARD W. SAMS & CO., INC.
4300 West 62nd Street
Indianapolis, Indiana 46268

Stereo Component Receivers and Amplifiers (Chassis R53, R66, R73, R74, R75)

Stereo component receivers and their combined sound-reproducing mechanisms covered in this chapter are collected in five groups, two of which are similar, and the remainder dissimilar. Although R74-3 and R75-3 appear virtually identical, there are minor variations in parts and hardware, and the outputs are 25 watts and 50 watts, respectively, per channel.

Workhorse of the group is the R53-3, -4, -7, -8 tuner and amplifier (Fig. 9-1) used in the following four modes:

- R53-3—Designed for components with switch-selected ceramic or magnetic phonograph cartridge inputs. Phono separate.
- R53-4—For modular stereo units, but does not contain phono switch selector. Phono mounted on top.
- R53-7—Same as R53-4 version, but used in modular tape units (11-34423-1).
- R53-8—Has same phono as R53-7 type and tape mechanism 11-34422-1.

Music output rating for the R53 series is approximately 15 watts. Models listed are: ACS16, CR2741, MS2722, MST-2736, MST2738, MS3722, MST3736, ACS26, MST2736-3736. Information on the tape cassette 11-34423-1 and deck mechanism is included.

The R66-3 (Fig. 9-2) amounts to an RS4743 receiver, two

AS3710 speakers, and a turntable identified as model ACS39. It is a 30-watt/channel system with 8-ohm loads and self-contained amplifiers. Maximum distortion at 20 kHz is only 0.25%. In the service information, a transistor cross-reference chart is provided, in addition to layout and block diagrams. Parts lists for all receivers and peripherals immediately follow the service information.

Receiver-amplifier R73-3 (Fig. 9-3) delivers 15 watts at 20 kHz and can select magnetic phonograph pickup, tape input, and an auxiliary input. Typical hum levels for phonograph auxiliary input, and tape input are 15 mV, and 2 mV rms (auxiliary and tape), respectively. Dial stringing instructions, amplifier block diagram, and code changes are included as well as a full parts list. Schematics for this receiver and all others in Chapter 9 will be found in the foldout section. The model number is RQ3746.

Receiver-amplifiers R74-3 and R75-3 (Figs. 9-4, 9-5) appear, at first glance, to be mirror images of one another, but there are some differences. For instance, R74-3 (Model RQ3747) is rated at 25 watts/channel, while R75-3 (Model RQ3748) is specified at 50 watts/channel. There are also some differences in front-panel controls, chassis heat sinks, and hardware. Both have low-hum, low-distortion amplifiers with high-sensitivity receivers. Transistor replacement charts, full alignment information, and complete parts lists for both sets are included.

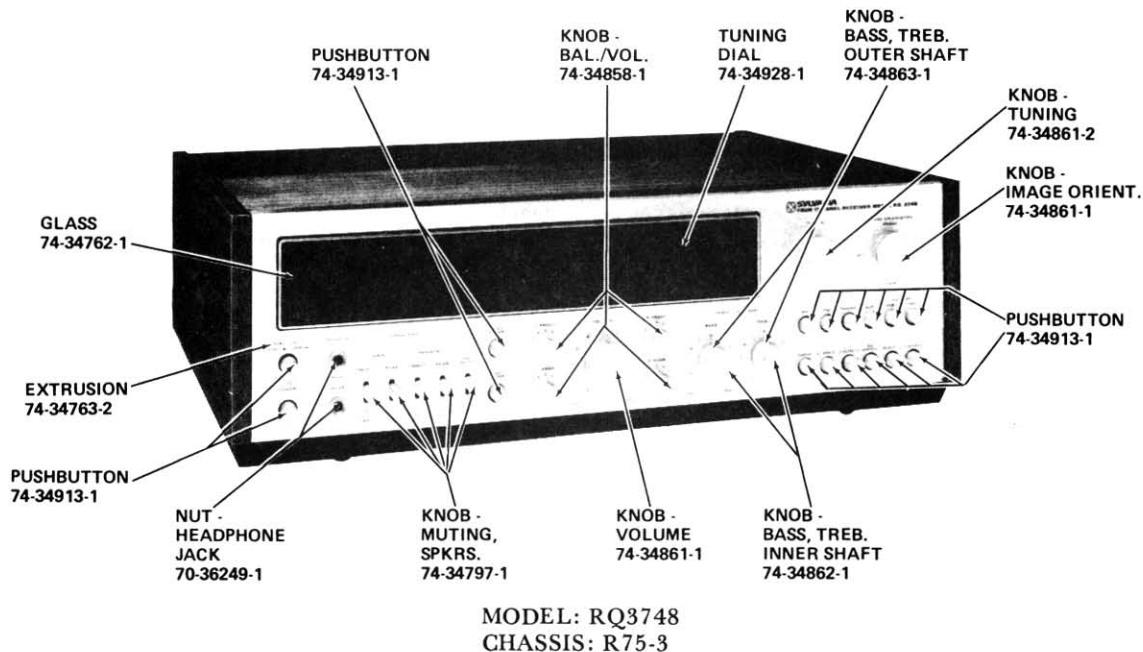


Fig. 9-5. R75-3 looks like R74-3, but among the differences is a 50-watt output.

R75 CABINET PARTS LIST

<u>DESCRIPTION</u>	<u>SERVICE PART NO.</u>
ANTENNA	
FM Dipole	27-14926-2
BEZEL	
Clip, Bezel-to-Escutcheon	70-34933-1
Dial - Tuning	74-34928-1
Extrusion	74-34763-2
Glass	74-34762-1
Glass Retaining Clip	70-26679-1
Nut - Headphone Jack	70-32649-1
CABINET	
Base	74-34766-1
Bottom Pad, Non-Skid	86-28719-5
Bottom Vent	74-34761-1
KNOBS	
Balance/Volume Control (1/2" Dia.)	74-34858-1
Bass or Treble (Inner Shaft)	74-34862-1
Bass or Treble (Outer Shaft)	74-34863-1
FM Muting or Speaker Switch	74-34797-1
Image Orientation Control	74-34861-1
Tuning	74-34861-2
PUSHBUTTON	
Filter, Function, Lamp, Mode or Power Switch	74-34913-1
Guide - Filter, Lamp or Power Switch buttons	74-34929-2
Guide - Function or Mode Switch buttons	74-34929-1

R75-3 PERFORMANCE ANALYSIS

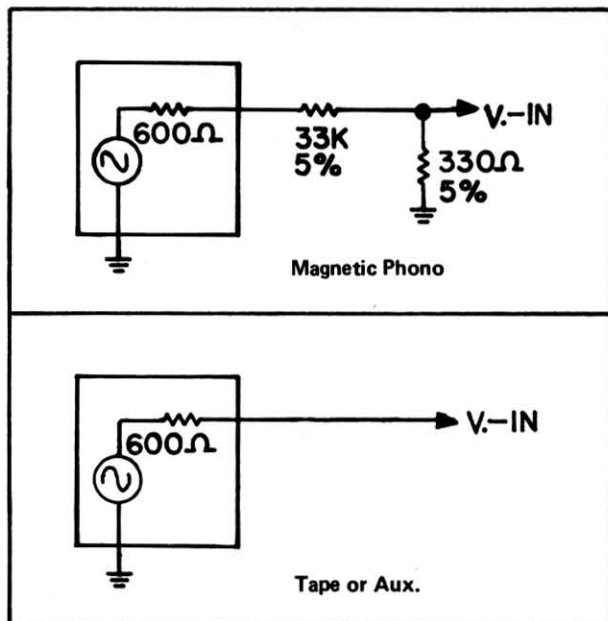
Amplifier idle current is to be measured and adjusted with the chassis cold, no signal input and NO OUTPUT LOADS.

Adjust R658A, B, C, D (Bias Adj. Pots.) while monitoring idle current (voltage) across test points AC-AD, BC-BD, CC-CD, DC-DD.

Maintain 120VAC, 60Hz line. Adjust each channel separately. Acceptable idle current range is from 22mV. (7mA.) minimum, to 70mV. (22mA.) maximum.

Use a 50 watt, 8 ohm, non-inductive load across each channel output while checking amplifier performance, unless otherwise specified.

SIGNAL SOURCES:



HUM and NOISE: Fig. 9-58. Signal sources.

Switch Hi Filter, Lo Filter and Loudness Compensation OFF.

Mechanically center Tone controls; Adjust Level controls to MAX.

Select Discrete Mode.

Load Phono Inputs with 330 ohm resistors.

Load Aux. and Tape inputs with 4.7K resistors.

Orient AC power plug for minimum hum, and read voltage across 8 ohm output load resistors.

Select functions as indicated in chart.

FUNCTION	VOLUME CONTROL SETTING	TYPICAL HUM LEVEL
PHONO	MINIMUM	1.5mV.
PHONO	MAXIMUM	20mV.
TAPE	MAXIMUM	3mV.
AUX.	MAXIMUM	3mV.

SENSITIVITY:

Use same set-up as for hum and noise - remove loads from inputs.

Drive all channels simultaneously with a 1kHz input signal.

Adjust Loudness control to MAX. position.

Select functions as indicated in chart.

Input voltages shown should drive amplifier to rated output - 50 watts (20V. - RMS, measured across 8 ohm load resistors).

PHONO	AUX.	TAPE
2.5mV.	150mV.	150mV.
Tolerance, +/-3dB		

Maximum allowable CHANNEL UNBALANCE is 4dB with Loudness control on tap.

Maximum allowable TOTAL HARMONIC DISTORTION is .5% at full rated output from 18Hz to 20kHz.

TONE CONTROL RANGE:

Operate amplifier in four channel mode with Volume Control at tap.

Drive four channels with a 1kHz signal to the AUX. input jacks for an amplifier output of 1 Watt (2.83V - RMS, across 8 ohm output load resistors).

BASS and TREBLE controls in the FLAT (center) position for reference output levels.

CONTROL GEN. FREQ.	CUT (FULL CCW)	BOOST (FULL CW)
BASS - 100Hz	-10dB, +/-4dB	+10dB, +/-4dB
TREBLE - 10kHz	-12dB, +/-4dB	+12dB, +/-4dB

This amplifier will deliver a FLAT (+/-1.5dB) output from 18Hz to 20kHz with tone controls in the center (flat) position.

LOUDNESS BOOST is 7dB (+/-4dB) at 100Hz (ref. to 1kHz) when the LOUDNESS mode switch is activated - Tone controls in center (flat) position.

CHANNEL SEPARATION:

With LOUDNESS control on tap, drive ONE AUX. input with the charted frequency for an output of 1 Watt (2.83V - RMS, measured across 8 ohms load resistor). Terminate other three AUX. inputs with 4.7K resistors. Measure UNDRIVEN outputs in reference to DRIVEN output.

FREQUENCY	CROSSTALK
100Hz	-55dB, Typical
1kHz	-55dB, Typical
10kHz	-40dB, Typical

PERFORMANCE ANALYSIS (CONTINUED)

SQ 4-CHANNEL MATRIX DECODER

Switch High Filter, Low Filter and Loudness OFF.

Mechanically center Balance and Tone controls.

Adjust Volume control to MAX. (Full CW) position.

Select DISCRETE mode and AUX. functions.

Drive all four AUX. inputs with a 1kHz signal for an output of about 1 Watt (2.83V - RMS, measured across 8 ohm load resistors).

Note the exact output level of each channel. This is the "reference level".

TEST CONDITIONS

- 1 Select SQ MATRIX mode and remove left and right rear inputs.
- 2 Phase shift inputs so that Right Front input signal = Left Front input signal 90 degrees.
- 3 Remove Right Front input signal.
- 4 Select SQ BLDNE mode.

90 DEGREE PHASE SHIFTING NETWORK (STEP 2)

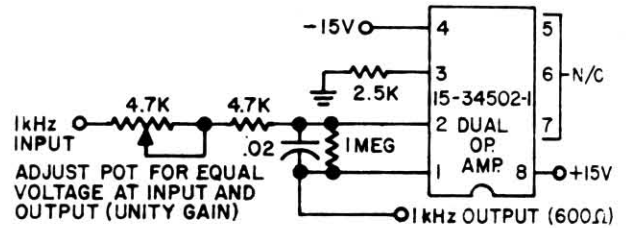


Fig. 9-59. Ninety degree phase-shifting network.

dB from Reference Level			
LEFT FRONT	RIGHT FRONT	LEFT REAR	RIGHT REAR
0+/-1.5	0+/-1.5	0+/-1.5	0+/-1.5
0+/-1.5	0+/-1.5	-14+/-0	+3+/-1.5
0+/-1.5	-30+/-0	-3+/-1.5	-3+/-1.5
0+/-2	-20+/-2	-5.5+/-1.5	-5.5+/-1.5

TRANSISTOR CROSS-REFERENCE CHART

SYLVANIA PART NUMBER	DESCRIPTION (ALL SILICON)	APPLICATION	DC CURRENT GAIN	EMITTER - COLLECTOR (DRAIN - SOURCE) VOLTAGE (MAX.) AT 25 DEG. C AMBIENT	EMITTER - BASE (GATE - SOURCE) VOLTAGE (MAX.) AT 25 DEG. C AMBIENT	MAXIMUM POWER DISSIPATION AT 25 DEG. C AMBIENT	IC (GATE CURRENT) MAX.	BASING
13-23824-1	NPN	Q8, Q10, Q12 - FM IF Amplifier.	27-275	35V	3V	180mW	N/A	1, 2, 3
13-26386-2	PNP	Q20 - AM Converter.	100-350	15V	4V	200mW	100mA	3, 4
13-28392-1	NPN	Q614 - Current Limiter.	90-270	45V	4V	500mW	500mA	4, 5, 6
13-28393-1	PNP	Q616 - Current Limiter.	90-270	45V	4V	500mW	500mA	4, 5, 6
13-29033-3	NPN	Q16 - Noise Amplifier. Q24 - AM Filter & Meter Driver. Q612 - Bias Regulator.	200-400	45V	4V	200mW	N/A	3, 4
13-34045-2	NPN	Q22 - AM IF Amplifier.	4-18	12V	3V	250mW	30mA	3
13-34046-1	NPN	Q502 - Regulator Amplifier.	10-150	40V	4V	2.1W	1.5A	11
13-34367-3	PNP	Q606, Q608 - Matched Differential Input.	See Below	50V	4V	300mW	100mA	3, 4, 12
13-34369-1	PNP	Q6 - FM Oscillator.	20	20V	.85V	N/A	N/A	1
13-34371-1	NPN	Q610 - Pre-Driver.	90-270	110V	4V	500mW	500mA	4, 8
13-34372-1	NPN	Q618 - Driver.	50-150	95V	N/A	2W	1A	7, 9, 11
13-34373-1	PNP	Q620 - Driver.	50-150	95V	N/A	2W	1A	7, 9, 11
13-34375-1	N-CHAN. FET	Q4 - FM Mixer.	N/A	N/A	25V	200mW	10mA	13, 14
13-34378-1	N-CHAN. FET	Q2 - FM RF Amplifier.	N/A	±20V	-10V	250mW	N/A	13, 15
13-34381-1	NPN	Q602 - Tone Amplifier.	225-460	30V	4V	200mW	50mA	3, 4
13-34684-1	NPN	Q604 - Active Filter.	25-100	95V	N/A	20W	20A	10
13-34940-1	NPN	Q622, Q624 - Power Output. Q18 - AM RF Amplifier.	50-150	30V	4V	200mW	50mA	3, 4
*13-34367-3	D.C. Current Gain	- Brown Dot 100-160 - Red Dot 150-210 - Orange Dot 200-260 - Yellow Dot 250-310 - Green Dot 300-360						

TRANSISTOR BASING DIAGRAMS

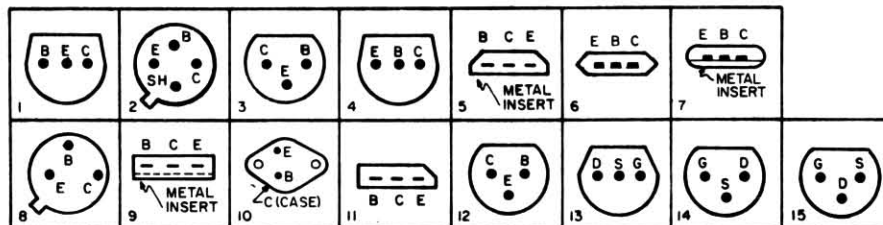


Fig. 9-60. R75 transistor basing diagrams.

— PARTS IDENTIFICATION (CONTINUED) —

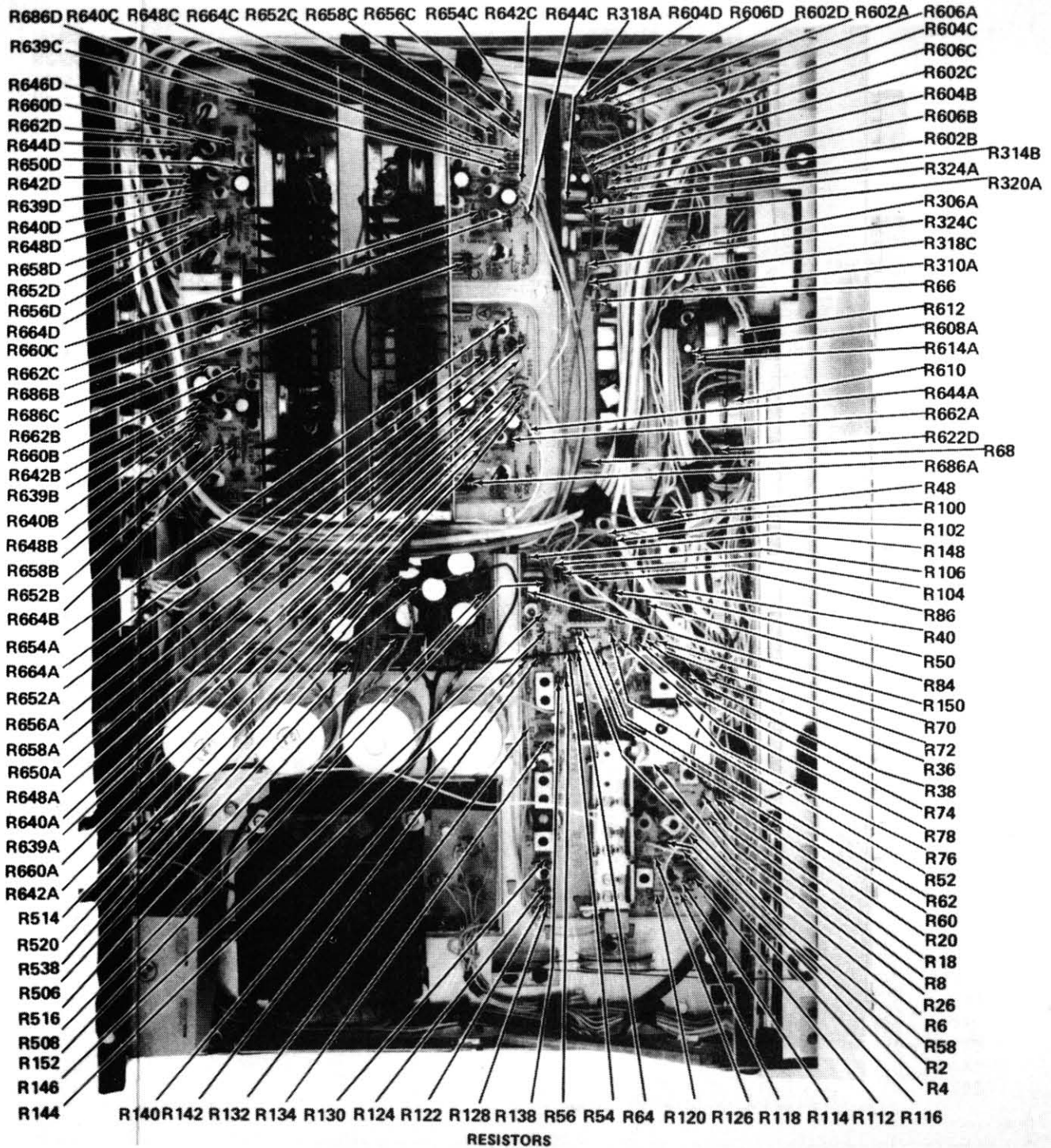


Fig. 9-63. R75 resistors.

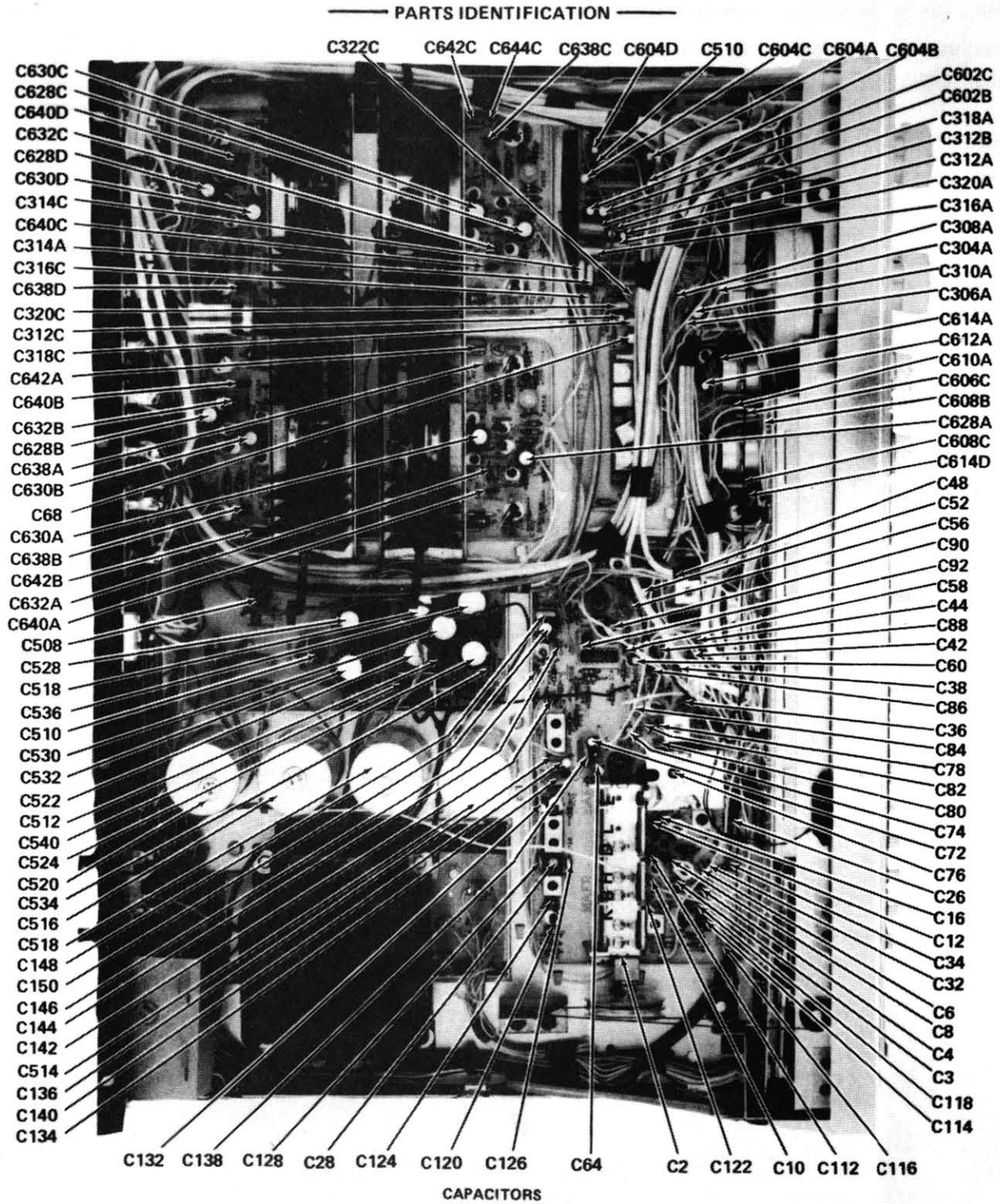


Fig. 9-64. R75 capacitors.

R74, R75 ALIGNMENT PROCEDURE

This receiver has been factory aligned with precision laboratory equipment. The circuits are quite stable, and not normally subject to frequency drift. Therefore, check all circuits for malfunctions before attempting realignment. Realign ONLY when absolutely necessary.

Maintain line voltage at 120V, 60Hz during alignment.

All RF shields must be in place during alignment.

Four 50 watt, 8 ohm, non-inductive loads are required for four-channel amplifier output terminals if speaker systems are disconnected during alignment.

ALWAYS KEEP SIGNALS AT THE LOWEST USEABLE LEVEL DURING ALIGNMENT, UNLESS OTHERWISE NOTED. Note the signal generator output attenuator setting at which further input signal does not increase output signal. Keep the input signal level below this point.

Set tuning dial indicator at zero (0) on the logging scale with tuning capacitor (C2) set at maximum capacity. Readjusting tuning dial indicator after AM or FM RF alignment will make RF realignment (AM & FM) necessary for correct station calibration.

FM RF and IF sections must be properly aligned before beginning FM Multiplex alignment.

EQUIPMENT REQUIRED:

AM:

AM signal generator capable of 400Hz, 30% modulated accurate signals from 455kHz to 1610kHz.

General purpose scope.

FM:

FM signal generator capable of accurate modulated signals from 87.9MHz to 108.5MHz, and 10.6MHz to 10.8MHz.

General purpose scope.

MULTIPLEX FM:

Multiplex generator with the following capabilities:

1. Standard multiplex signal, 1kHz modulation.
2. Single channel modulation.

OSCILLOSCOPE - preferably dual trace.

— AM ALIGNMENT —

STEP	TUNING INDICATOR SETTING	TEST EQUIPMENT HOOK-UP	GENERATOR FREQUENCY	ADJUSTMENT POINT	ADJUST FOR
IF CIRCUITS Switch receiver on, select AM function and check +12V at pin[V]. Tune receiver to no signal area near 600kHz.					
1	Near 600kHz, as above.	Radiate RF signal from generator. Scope to pin[Z]. AM audio output.	455kHz, 30% 400Hz modulation.	T10 T8	MAXIMUM 400Hz output.
Repeat for maximum output SENSITIVITY AND BAND SET					
2	1400kHz	Same as step 1, or monitor tuning meter.	1400kHz, 30% 400Hz modulation.	C2H Trimmer C2J Trimmer C28 Trimmer	MAXIMUM 400Hz or MAX. meter deflection and correct dial calibration.
3	600kHz		600kHz, 30% 400Hz modulation.	L36 L34 L30 Tuning Slug	

Reduce input signal level and repeat steps 2 and 3 until maximum sensitivity and correct dial calibration are achieved.

When correctly aligned, this receiver will tune through a signal at 540kHz and 1610kHz.

— FM ALIGNMENT —

STEP	TUNING INDICATOR SETTING	TEST EQUIPMENT HOOK-UP	GENERATOR FREQUENCY	ADJUSTMENT POINT	ADJUST FOR
IF CIRCUITS Switch receiver on, select FM function and check +12V at [V] . Switch MUTING off.					
1	Near 98MHz, at off-station spot.	Signal generator to FM Antenna Terminals. Scope to pin [Q] - Use detector or low-capacity probe.	Approx. 10.7 MHz. Tune to receiver. Use 400Hz, 100% modulation.	[T12]	MAXIMUM response.
Adjust [T4] for HIGHEST PEAK - do NOT adjust for best looking response. SENSITIVITY AND BAND SET					
2	106MHz	Signal generator - FM Antenna Terminals. Scope to pin [T] - Use de-emphasis or low capacitor probe.	106MHz, 100% modulation.	[C2B] Trimmer [C2D] Trimmer [C76] Trimmer [L18]	MAXIMUM response.
3	106MHz	As above. Reduce signal level.		[C2B] Trimmer [C2D] Trimmer [C16] Trimmer	MAXIMUM response at 106MHz.
4	90MHz		90MHz, 100% modulation.	[L6] [L8] [L12]	MAXIMUM response at 90MHz.

Continue to reduce signal level while repeating steps 3 and 4 until maximum sensitivity and correct dial calibration are achieved.

Tune receiver to very weak signal to ensure accurate tuning (90 or 106MHz) - then increase signal input level for 180mV (Approx.) at pin G. Use 100% modulation. Adjust L18 for minimum distortion at pin T.

Tune receiver to off-station around 100MHz. Adjust R46 for tuning meter center zero.

When correctly aligned, this receiver will tune through a signal at 87.9MHz and 108MHz.

— MULTIPLEX ALIGNMENT —

Switch receiver on, select FM and Stereo functions. Switch MUTING off. Check +12V at [V] and pin [C] . Check -12V at [ZD] .					
1	Tune to generator. (Zero center tuning meter indication.)	Multiplex generator to FM Antenna Terminals. Scope to pin [W] .	Use Stereo signal, 1kHz modulation, Left channel only.	[T4] [T6]	MAXIMUM 38kHz.
Switch generator OFF. If necessary, retune receiver to nearest off-station spot on dial. Switch multiplex generator on and tune generator to receiver for zero center tuning meter indication.					
2	As above.	Multiplex generator - as above. Scope to pin [L] (Left channel output).	As above.	[T4] [T6]	MAXIMUM audio output.
3	As above.	Multiplex generator - as above. Scope to pin [R] (Right channel output).	As above.	[R54]	MINIMUM audio output.

Channel separation between pins **[L]** and **[R]** is typically 40db when multiplex circuit is correctly aligned.

R75-3 CODE CHANGES

CODE 00:

Initial Production.

CODE 01:

REASON: Power Amplifier oscillation prevention.

DESCRIPTION: The following change was made:

33PF, N150 capacitors added from Base to Collector of Q606A,B,C,D, on copper side of PC panel.

CODE 02:

In order to provide a means of identifying finished goods previously built with SQ chips (Sylvania part number 15-34906-1) - date codes 7331 and 7332.

CODE 02 W/RED STRIPE:

REASON: To comply with IHF and industry standards.

DESCRIPTION: The following change was made:

Reverse BLUE/WHITE, RED/WHITE, BLUE and RED leads on headphone jacks.

The industry standard is for LEFT channel input to the TIP of the phone jack, and RIGHT channel input to the RING.

CODE 03:

REASON: To comply with IHF and industry standards.

DESCRIPTION: The following change was made:

Reverse BLUE/WHITE, RED/WHITE, BLUE and RED leads on headphone jacks.

The industry standard is for LEFT channel input to the TIP of the phone jack, and RIGHT channel input to the RING.

CODE 04:

REASON 1: To reduce RF pickup in Phono Preamp.

DESCRIPTION: The following changes were made:

1. C304A, C (47PF, N150) removed.

2. C346A (1000PF, Z5P) added between pins 2 and 3 of IC504.

3. C346C (1000PF, Z5P) added between pins 5 and 6 of IC504.

REASON 2: To eliminate pop when switching from FM to AM radio.

DESCRIPTION: The following changes were made:

1. C46 (330PF) removed.

2. R302A, C (10 ohm) removed.

3. R326A, C (47K) changed to 100K.

4. R63 (100K, 5%) added from wire hole L1 to ground.

5. R65 (100K, 5%) added from wire hole R1 to ground.

6. R149 (100K, 5%) added from square wire pin Z to ground.

7. R301A (100K, 5%) added from "+" side of C301A to ground.

8. R301C (100K, 5%) added from "+" side of C301 to ground.

REASON 3: To eliminate pop when switching from FM radio to Phono.

DESCRIPTION: The following changes were made:

1. C72 (5MFD., 25V) changed to 1MFD., 50V Electrolytic.

2. C74 (5MFD., 25V) changed to 1MFD., 50V Electrolytic.

REASON 4: To facilitate board assembly.

DESCRIPTION: The following changes were made:

1. Q604A,B,C & D Transistor changed to part number 13-29775-1.

2. C108 (10MFD., 15V Electrolytic) added from junction of R112, R114 to ground.

REASON 5: To reduce switch pop.

DESCRIPTION: The following changes were made:

1. C604A,B,C & D (5MFD., 25V) changed to 2MFD., 50V.

2. R314A,B,C & D (560K, 5%) changed to 47K, 5%.

3. R620A,B,C & D (560K, 5%) changed to 470K, 5%.

4. R634A,B,C & D (10K, 5%) changed to 3.3K, 5%.

5. R607A,B,C & D (6.8K, 5%) changed to 5.6K, 5%.

— DIAL STRINGING —

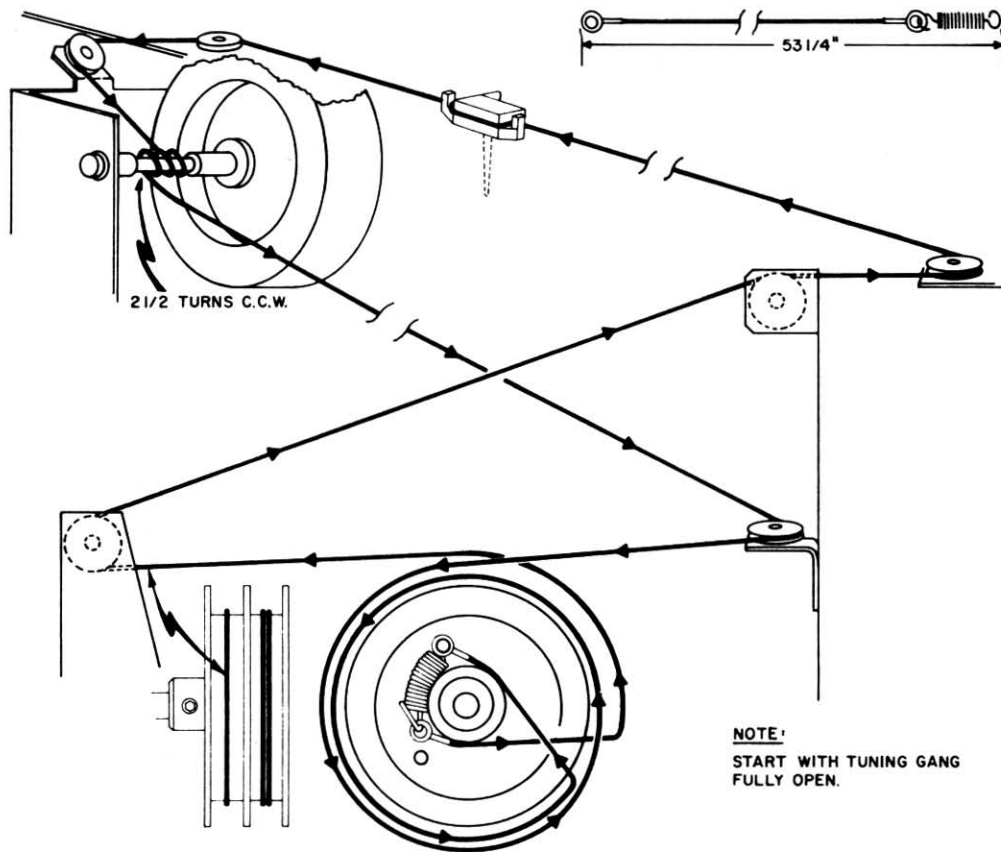


Fig. 9-65. R74-R75 dial-stringing instructions.

R75 REPLACEMENT PARTS LIST

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
CAPACITORS (All in MFD, unless otherwise specified)		
C2	42-34768-1	Main Tuning Gang
C3		330PF, Z5P
C4		330PF, Z5P
C6		330PF, Z5P
C8		330PF, Z5P
C10		10PF, NPO
C12		15PF, NPO
C14		18PF, N220
C16		.01, 100V
C18		3.3PF, NPO
C20		330PF, Z5P
C22		3.3PF, NPO
C24		.01, 100V
C26		.01, 100V
C28	42-34941-1	1-15PF, AM Osc. Trimmer
C30		.01, 100V
C32		.01, 100V
C34		.01, 100V
C36		33PF, N150
C38		.02, 100V
C40		.02, 100V
C42		.01, 100V
C44		.01, 100V
C46		330PF, Z5P
C47		.02, 100V
C48		100PF, Z5P
C50		.01, 100V
C52		330PF, Z5P
C54	41-32477-46	5/25V Electrolytic
C56	40-28121-1	10,000PF
C58		820PF, Z5P
C60	41-32477-46	5/25V Electrolytic
C62		.01, 100V
C64	40-28121-4	2500PF/50V
C68	40-10285-13	3300PF/125V
C70	40-10285-13	3300PF/125V
C72	41-32477-46	5/25V Electrolytic
C74	41-32477-46	5/25V Electrolytic
C76	42-18146-1	Ceramic Trimmer, 1-6PF
C78		.01, 100V
C80		.01, 100V
C82		10PF, NPO
C84		.01, 100V
C86		100PF, Z5P
C88		.05, 50V
C90	41-32477-46	5/25V Electrolytic
C92	41-32477-85	1/50V Electrolytic
C94		.05, 50V
C96		.01, 100V
C98		.01, 100V
C100		100PF, Z5P
C102		.05, 50V
C104		330PF, Z5P
C106		.01, 100V
C108	41-32477-3	10/15V Electrolytic
C112		4.7PF, N150
C114		.005, Z5U
C116		.05, 50V
C118		.02, 100V
C120		.01, 100V
C122		18PF, NPO
C124		.01, 100V
C126	40-10285-50	390PF
C128		22PF, NPO
C132	41-32477-47	10/25V Electrolytic
C134		.05, 50V
C136		33PF, N150
C138		.05, 50V
C140	41-32477-86	2/50V Electrolytic
C142		180PF, Z5P
C144		560PF
C146		270PF, Z5P
C148		.047, 150V

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
CAPACITORS (CONTINUED)		
C150	41-32477-9	100/6V Electrolytic
C302		100PF, Z5P
C304		47PF, N150
C306		.0082
C308		.022, 250V
C310	41-32477-9	100/6V Electrolytic
C312	41-32477-86	2/50V Electrolytic
C314		.047, 150V
C316A		.039
C316C		.0068
C318A		.22, 150V
C318C		.039
C320A		.0068
C320C		.039
C322A		.039
C322C		.22, 150V
C324		.01
C326		.01
C342	41-32477-85	1/50V Electrolytic
C344		.01
C402		.1, 150V
C502	43-98665-6	.005, 150VAC
C506	43-98665-6	.005, 150VAC
C508		.047, 150V
C510		.047, 150V
C512		.047, 150V
C514	41-34634-1	4000/50V Electrolytic
C516	41-34634-1	4000/50V Electrolytic
C518	41-34634-1	4000/50V Electrolytic
C520	41-34634-1	4000/50V Electrolytic
C522	41-32477-67	500/35V Electrolytic
C524	41-32477-67	500/35V Electrolytic
C527		.01, 100V
C528	41-32477-93	100/50V Electrolytic
C530	41-32477-67	500/35V Electrolytic
C532	41-32477-95	500/50V Electrolytic
C534		.047, 150V
C536	41-32477-67	500/35V Electrolytic
C538	41-32477-67	500/35V Electrolytic
C540		.01, 100V
C544	41-23765-5	5/25V Electrolytic
C602	41-32477-34	25/15V Electrolytic
C603		.01
C604	41-32477-86	2/50V Electrolytic
C606		.022, 100V
C608		.022, 100V
C610		820PF, Z5P
C612	41-32477-86	2/50V Electrolytic
C614		33PF, N150
C616	41-32477-86	2/50V Electrolytic
C618		.1, 150V
C620		.1, 150V
C622		1200PF, Z5P
C624		560PF
C625		.01, 100V
C626	41-32477-86	2/50V Electrolytic
C627		.01, 100V
C628	41-32477-50	50/25V Electrolytic
C630	41-32477-51	100/25V Electrolytic
C632		10PF, NPO
C634		.01, 100V
C636		.01, 100V
C638		330PF, Z5P
C640		330PF, Z5P
C642		.1, 150V
C644		.01, 100V

RESISTORS (All carbon, 1/4 Watt, 10% unless otherwise specified)

R2	560 ohm
R4	10K
R6	1K
R8	1K

Stereo Component Receivers and Amplifiers (Chassis R53, R66, R73, R74, R75)

REPLACEMENT PARTS LIST (CONTINUED)

SCHEMATIC SERVICE
CODING PART NO. DESCRIPTION

RESISTORS (CONTINUED)

R10		4.7K
R12		270 ohm
R14		22K
R16		10K
R18		10K
R20		22K
R22		330 ohm
R24		1K
R26		100 ohm
R28		5.6K
R30		270 ohm
R32		180 ohm
R34		820 ohm
R36		15K
R38		330 ohm
R40		390 ohm
R42		15K
R44		1K
R46	37-14576-5	1K Variable - FM Meter Zero
R48		1.5K
R50		150 ohm
R52		4.7K
R54	37-14576-15	330 ohm Variable - Separation
R56		220 ohm, 5%
R58		3.9K
R60		3.9K
R62		470 ohm
R64		470 ohm
R66		33K
R68		33K
R70		22K
R72		10K
R74		2.2K
R76		100 ohm
R78		56K
R80		100K
R82		330K
R84		10K
R86		120K
R88		100K
R90		120K
R92		100K
R94		56K
R96		33K
R98		1K
R100		10K
R102		22K
R104		1K
R106		150 ohm, 1/2 Watt
R112		1K
R114		22K
R116		82K
R118		1.8K
R120		560 ohm
R122		10K
R124		22K
R126		120K
R128		4.7K
R130		33 ohm
R132		150K
R134		33K
R136		470 ohm
R138		3.3K
R140		10K
R142		150K
R144		100K
R146		100K
R148		10K
R150		18K
R152		4.7K
R302		10 ohm
R304		10K
R306		10K, 5%

SCHEMATIC SERVICE
CODING PART NO. DESCRIPTION

RESISTORS (CONTINUED)

R308		120K, 5%
R310		220 ohm, 5%
R312		820 ohm, 5%
R314		560K
R316		4.7K
R318		3.6K, 5%
R320		4.3K, 5%
R322		3.6K, 5%
R324		7.5K, 5%
R326		47K, 1/2 Watt
R328		10K
R402	37-34611-3	50K Variable - 4 Section Volume
R404		4.7K
R502		3.3 meg, 1/2 Watt
R504		150 ohm
R506		68 ohm
R508		330 ohm, 1 Watt
R512		1 ohm, 1/2 Watt
R514		3.9K, 5%
R516		2.2K, 5%
R518		220 ohm, 1/2 Watt
R520		220 ohm, 1/2 Watt
R602		180K
R604		27K, 5%
R606		3.3K, 5%
R608		10K
R610	37-34651-1	100K Variable - 4 Section Bass
R612	37-34651-1	100K Variable - 4 Section Treble
R614		15K
R616		39K
R618		10K
R620		560K
R622		3.3K
R624		15K
R626		10 meg
R628		33K
R630		27K
R632		27K
R634		10K
R636		5.6K
R368	37-22053-2	50K Variable - Level Control
R639		100K
R640		10K
R642		33K
R644		330 ohm, 5%
R646		10K, 5%
R648		1K
R650		10K, 5%
R652		3.3K, 1/2 Watt
R654		820 ohm
R646		270 ohm
R658	37-33717-6	330 ohm Variable - Bias Adjust.
R660		100 ohm
R662		10 ohm
R664		3.3K, 1/2 Watt
R668		150 ohm
R672		2.7 ohm, 1/2 Watt
R684		150 ohm
R686		2.7 ohm, 1/2 Watt
R688	36-34726-4	.18 ohm, 2 Watt, W/W
R690	36-34726-4	.18 ohm, 2 Watt, W/W
R692		10 ohm, 1 Watt
R694		220 ohm, 1/2 Watt

COILS & TRANSFORMERS

L2	22-28072-3	Ferrite Bead
L4	50-11378-5	3.3UH Filter
L6	50-34409-4	FM RF Coil
L8	50-34409-8	FM Mixer Coil
L10	50-34409-7	FM Oscillator Coil
L12	22-28072-3	Ferrite Bead
L16	50-34939-6	27MH Peaking Coil

REPLACEMENT PARTS LIST (CONTINUED)

SCHEMATIC CODING	SERVICE PART NO.	DESCRIPTION
COILS AND TRANSFORMERS (CONTINUED)		
L18	50-34411-1	Quadrature Detector Coil
L20, L22	50-34939-6	27MH Peaking Coil
L24	22-28072-2	Ferrite Bead
L26	50-34411-1	10.7MHz Coil
L28	50-18789-3	5.7MH Choke
L30	27-34851-1	Iron Core AM Antenna
L32	22-28072-2	Ferrite Bead
L34	50-34938-1	AM RF Coil
L36	50-34936-1	AM Oscillator Coil
L38, L40	22-28072-2	Ferrite Bead
L42, L50	22-28072-2	Ferrite Bead
L602	50-34404-2	3.4UH Filter
L604	22-28072-2	Ferrite Bead
L606	22-28072-2	Ferrite Bead
L608	22-28072-2	Ferrite Bead
L610	22-28072-2	Ferrite Bead
L612	22-28072-2	Ferrite Bead
L614	22-28072-2	Ferrite Bead
T2	50-89962-6	FM Balun
T4	50-34407-1	19kHz Coil
T6	50-34407-1	38kHz Coil
T8, T10	50-34937-1	455kHz Transformer
T12	50-34952-1	FM Mixer
T502	55-34903-2	Power Transformer

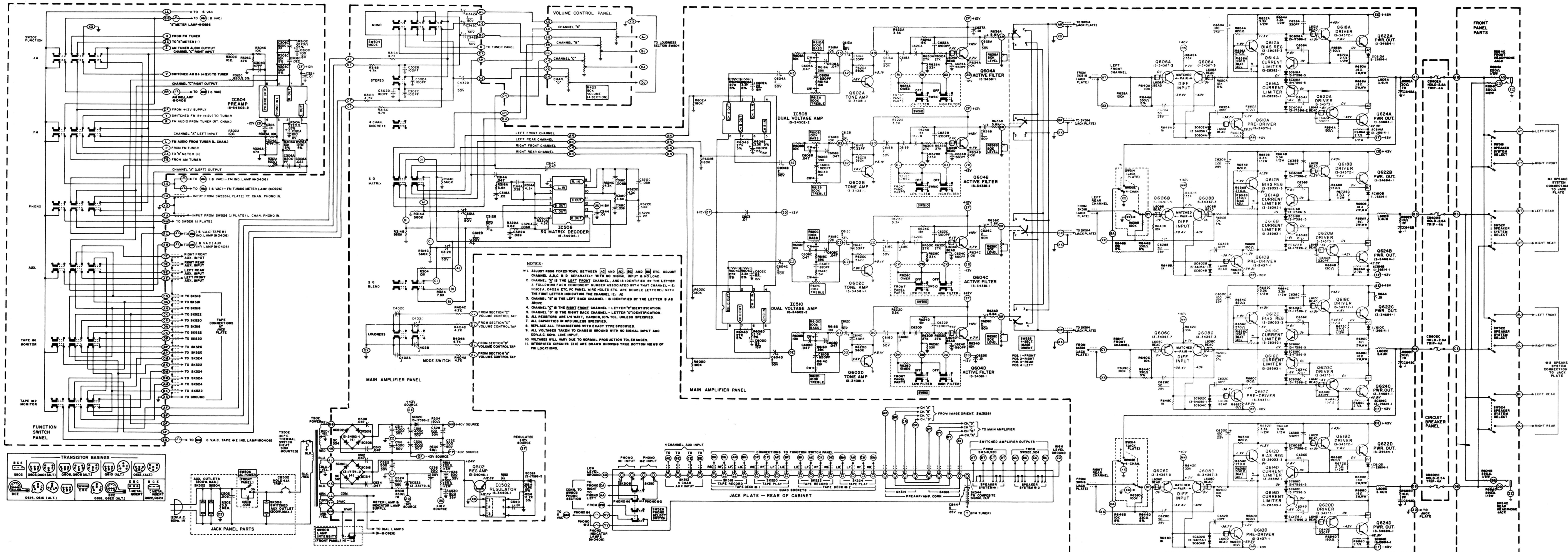
SOLID STATE DEVICES

FL2, FL4	26-34156-101	Ceramic Filter - BLACK DOT
	26-34156-102	Ceramic Filter - BLUE DOT
	26-34156-103	Ceramic Filter - RED DOT
	26-34156-104	Ceramic Filter - ORANGE DOT
	26-34156-105	Ceramic Filter - WHITE DOT
FL6	50-36216-1	Dual Multiplex Filter
IC2	15-34452-1	FM Limiter/Detector
IC4	15-34379-1	Multiplex Decoder
IC502	15-34401-1	Voltage Regulator
IC504	15-34502-2	Dual Operational Amp
IC506	15-34906-1	S-Q Decoder
IC508	15-34502-2	Dual Voltage Amp
IC510	15-34502-2	Dual Voltage Amp
L2, L12	22-28072-3	Ferrite Bead
L24, L30	22-28072-2	Ferrite Bead
L32, L38	22-28072-2	Ferrite Bead
L40, L42	22-28072-2	Ferrite Bead
L50	22-28072-2	Ferrite Bead
L604	22-28072-2	Ferrite Bead
L606	22-28072-2	Ferrite Bead
L608	22-28072-2	Ferrite Bead
L610	22-28072-2	Ferrite Bead
L612	22-28072-2	Ferrite Bead
L614	22-28072-2	Ferrite Bead
Q2	13-34378-1	FM RF Amplifier - F.E.T.
Q4	13-34375-1	FM Mixer - F.E.T.
Q6	13-34369-1	FM Oscillator
Q8	13-23824-1	First FM IF
Q10	13-23824-1	Second FM IF
Q12	13-23824-1	Third FM IF
Q14	13-23824-1	Meter, AGC Amplifier
Q16	13-29033-3	Noise Amplifier
Q18	13-34940-1	AM RF Amplifier
Q20	13-26386-2	AM Converter
Q22	13-34045-2	AM IF Amplifier
Q24	13-29033-3	AM Filter, Meter Driver
Q502	13-34046-1	Regulator Amplifier
Q602	13-34381-1	Tone Amplifier
Q604	13-34381-1	Active Filter
Q606	13-34367-3	Matched Differential Input
Q608	13-34367-3	Matched Differential Input
Q610	13-34371-1	Pre-Driver
Q612	13-29033-3	Bias Regulator
Q614	13-28392-1	Current Limiter
Q616	13-28393-1	Current Limiter
Q618	13-34372-1	Driver

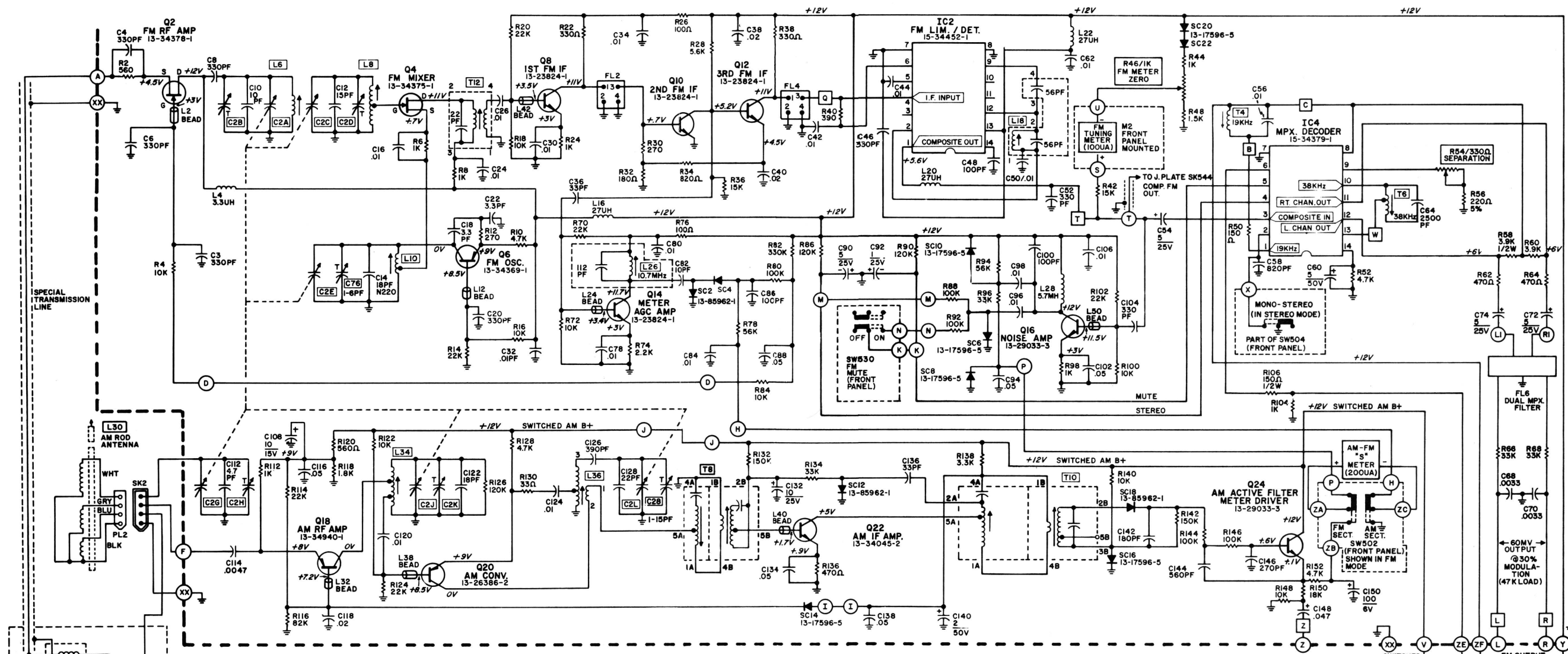
SCHEMATIC CODING	SERVICE PART NO.	DESCRIPTION
SOLID STATE DEVICES (CONTINUED)		
Q620	13-34373-1	Driver
Q622	13-34684-1	Power Output
Q624	13-34684-1	Power Output
SC2, SC4	1N295	Diode
SC6, SC8	13-17596-5	Diode
SC10	13-17596-5	Diode
SC12	1N295	Bias Diode
SC14, SC16	13-17596-5	Diode
SC18	1N295	AM Detector
SC20, SC22	13-17596-5	Bias Diode
SC502	13-34901-1	Silicon Rectifier
SC504	13-34901-1	Silicon Rectifier
SC506	13-34901-1	Silicon Rectifier
SC508	13-34901-1	Silicon Rectifier
SC510	13-17174-2	Silicon Rectifier
SC512	13-17174-2	Silicon Rectifier
SC514	13-17174-2	Silicon Rectifier
SC516	13-17174-2	Silicon Rectifier
SC520	13-17596-2	Bias Diode
SC522	13-33179-6	Zener Diode, 12 Volt
SC524	13-17596-5	Bias Diode
SC602	13-34056-1	Diode
SC604	13-34056-1	Diode
SC606	13-17596-2	Diode
SC608	13-17596-2	Diode
SC610	13-26614-1	Diode
SC614	13-26614-1	Diode
SC616	13-17596-5	Diode
SC618	13-17596-5	Diode
	82-18189-2	Heat Sink - Power Transistor
	86-14608-1	Mica Insulator - Power Transistor
	72-34063-5	Socket - IC, 8 pin Stagger Base
	72-34063-1	Socket - IC, 14 pin Stagger Base
	72-34063-2	Socket - IC, 16 pin Stagger Base
	72-28852-1	Socket - Transistor, In-Line 3 pin
	72-27200-7	Socket - Transistor, Large 3 pin
	72-14607-2	Socket - Transistor, Power
	72-27200-5	Socket - Transistor, Small 3 pin

MISCELLANEOUS PARTS

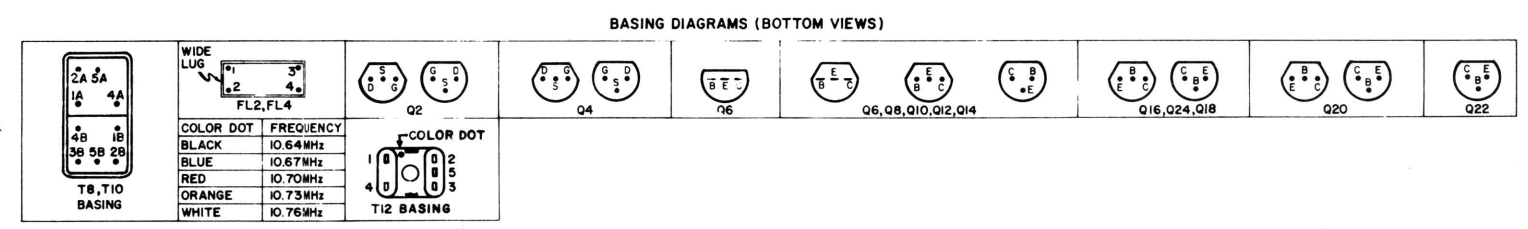
CB502	29-34899-2	Circuit Breaker, 4.1 Amp
CB602	29-34946-1	Circuit Breaker, Amp Output
PL2	73-10302-37	AM Antenna Connector (At Jack Plate)
SK2	73-10302-39	AM Antenna Conn. (part of Rod Ant.)
SK502, SK504	74-34307-2	Polarized AC Outlet
SK506	74-34307-2	Polarized AC Outlet
SK508	73-34786-1	Dual PHONO No. 1 Jack
SK510	73-34786-1	Dual PHONO No. 2 Jack
SK512	73-34786-2	Quad. AUX. INPUT Jack
SK514	73-34786-2	Quad. PREAMP OUT Jack
SK516	73-34786-2	Quad. AMP INPUT Jack
SK518	73-34786-2	Quad. TAPE NO. 1 RECORD Jack
SK520	73-34786-2	Quad. TAPE NO. 1 PLAY Jack
SK522	73-34786-2	Quad. TAPE NO. 2 RECORD Jack
SK524	73-34786-2	Quad. TAPE NO. 2 PLAY Jack
SK540	73-26338-3	FRONT PHONE Jack
SK542	73-26338-3	REAR PHONE Jack
	70-32649-1	Phone Jack Mtg. Nut
SK544	73-87162-3	FM COMPOSITE OUTPUT Jack
SW502	33-34723-1	Complete Function Switch Asm.
	33-35745-6	AM, FM, PHONO or AUX. Switch Section only
	33-35745-3	TAPE 1 MONITOR or TAPE 2 MONITOR Switch Section only
	74-34929-1	Pushbutton Guide for SW502
SW504	33-34724-1	Complete Mode Switch Asm.
	33-35745-6	MONO Switch Section only
	33-35745-4	STEREO or 4 CHAN. DISCRETE Switch Section only
	33-35745-5	S Q MATRIX Switch Section only
	33-35745-2	S Q BLEND or LOUDNESS Switch Section only



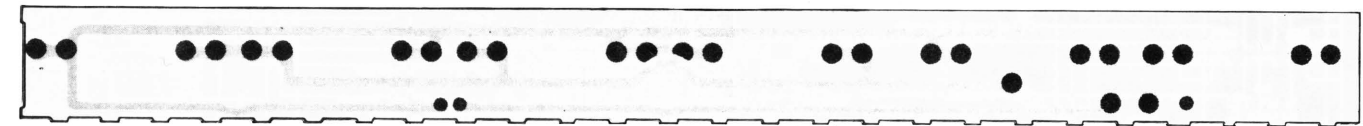
R74-3 AMPLIFIER SCHEMATIC DIAGRAM.



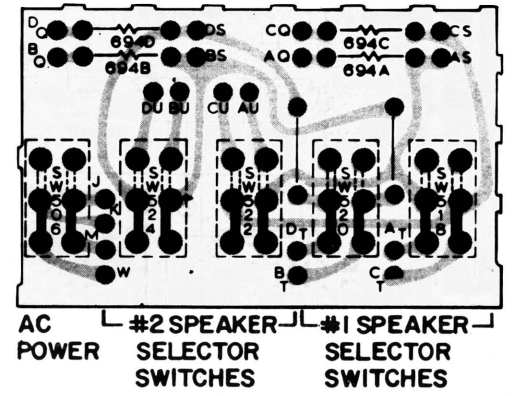
- NOTES:
1. ALL CAPACITANCES ARE IN MFD UNLESS SPECIFIED.
 2. ALL RESISTORS ARE CARBON, 1/4 WATT, 10% UNLESS SPECIFIED.
 3. MAINTAIN LINE AT 120V, 60Hz, FOR ALL MEASUREMENTS.
 4. TUNE RECEIVER TO OFF-STATION FOR VOLTAGE MEASUREMENTS.
 5. SELECT FM FUNCTION FOR FM VOLTAGES.
 6. SELECT AM FUNCTION FOR AM VOLTAGES.
 7. ALL VOLTAGES READ TO CHASSIS GROUND.
 8. VOLTAGES WILL VARY DUE TO NORMAL PRODUCTION TOLERANCES.
 9. SQUARE WIRE PINS (Z) ARE TEST POINTS AND/OR WIRE WRAP CONNECTIONS.
 10. ROUND CONNECTIONS (O) ARE WIRE HOLES IN P/C PANEL.
 11. INTEGRATED CIRCUIT DRAWINGS (IC'S) SHOW BOTTOM VIEW.
 12. SWITCHES ARE DRAWN AT REST (OFF) POSITION UNLESS SPECIFIED.



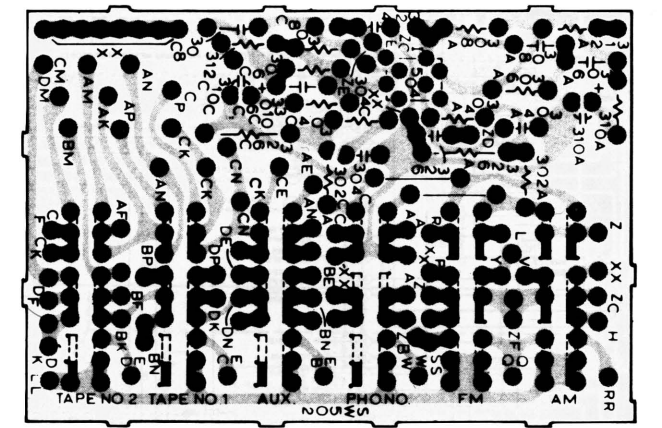
R75-3 DIAL-LAMP PANEL.



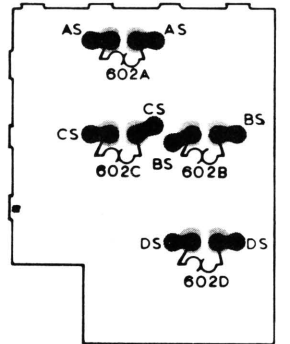
AC POWER & SPKR. SWITCH PANEL (FRONT PANEL MOUNTED)



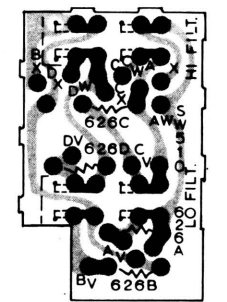
FUNCTION SWITCH PANEL



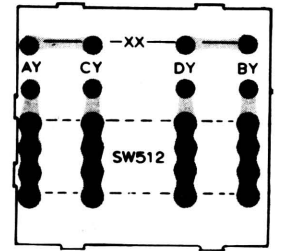
OUTPUT CIRCUIT BREAKER PANEL



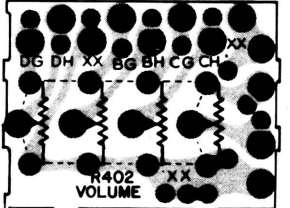
RUMBLE & SCRATCH FILTER PANEL (FRONT PANEL MOUNTED)



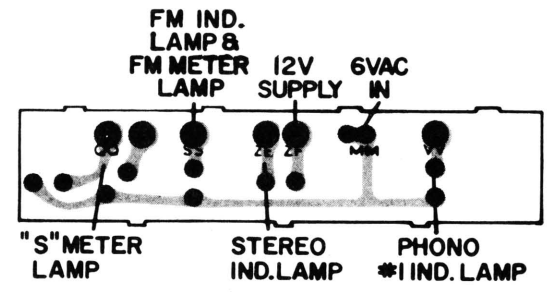
SPEAKER ORIENTATION SWITCH PANEL



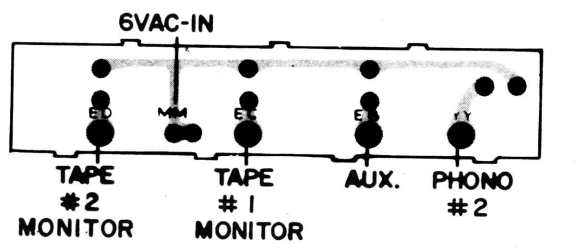
VOLUME CONTROL PANEL (FRONT PANEL MOUNTED)



INDICATING LAMPS

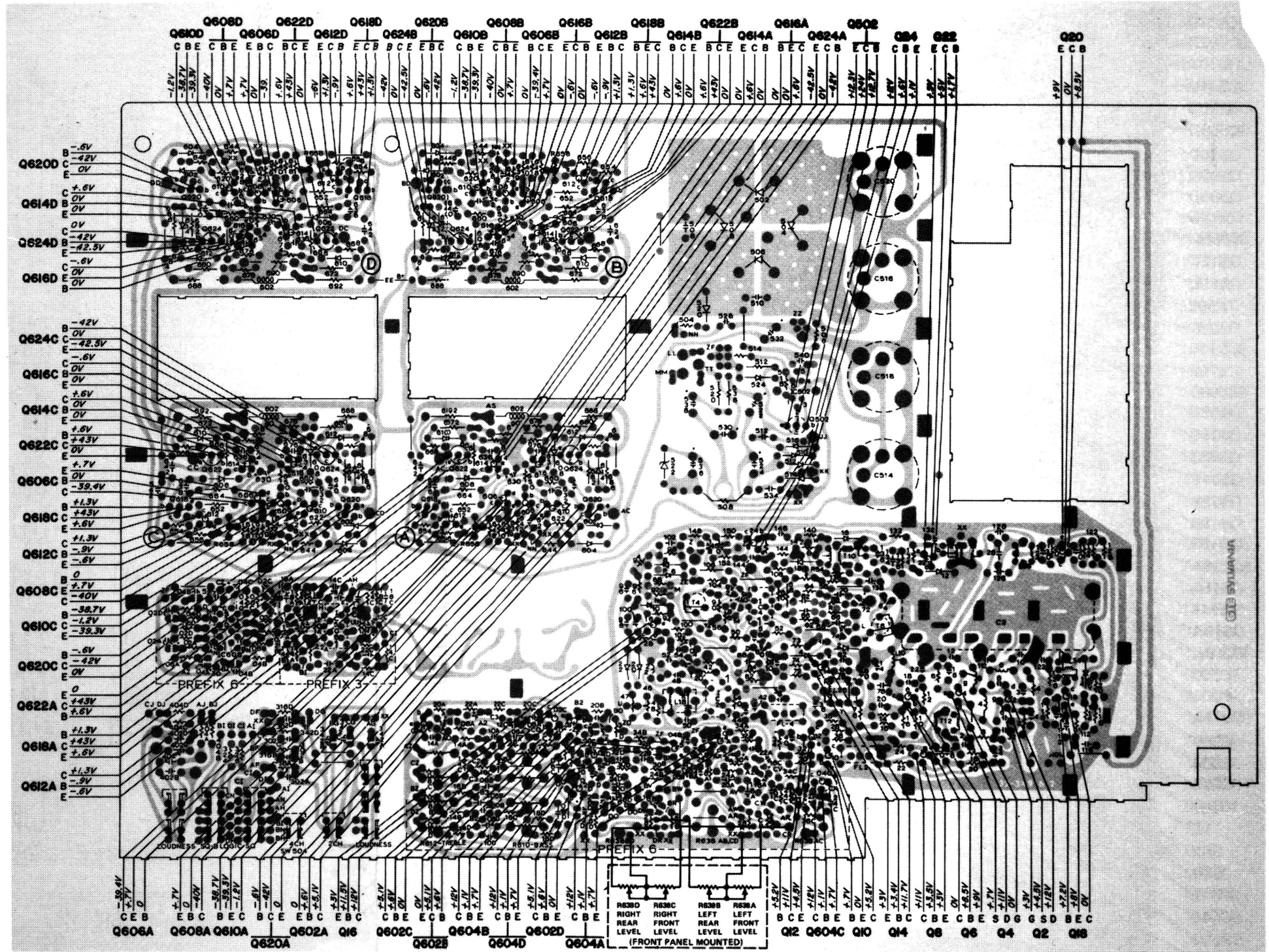
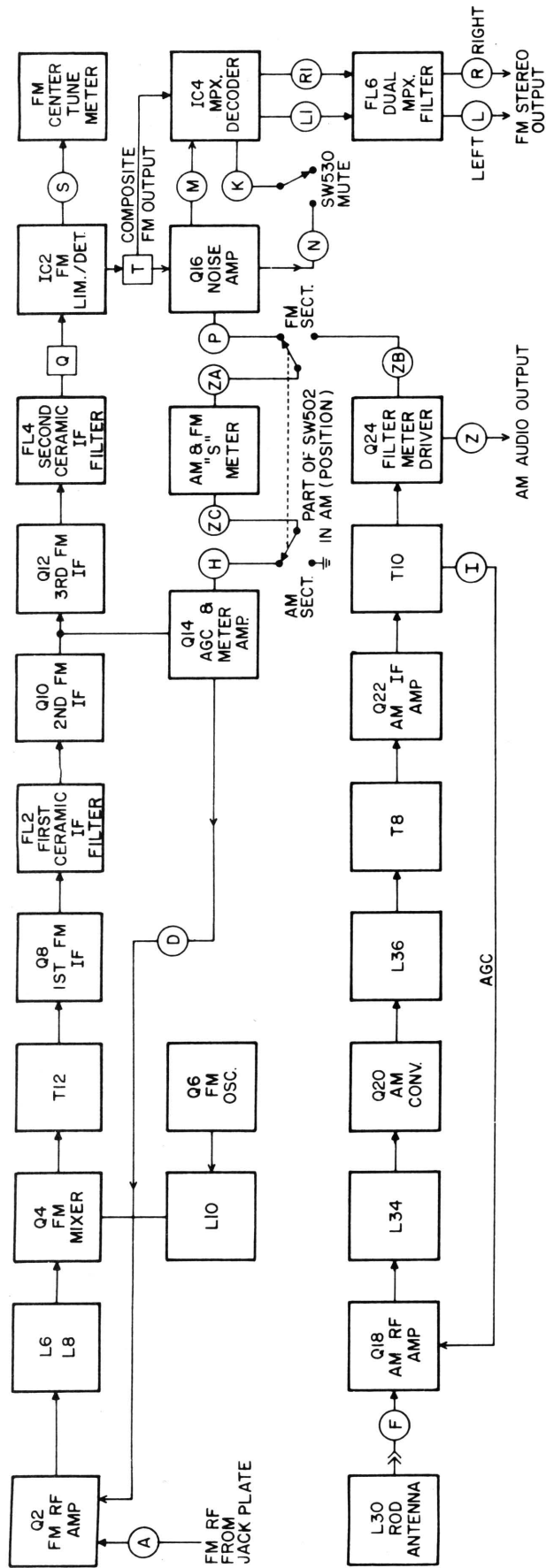


FUNCTION INDICATING LAMP PANELS



R75-3 TUNER SCHEMATIC DIAGRAM.

R75-3 AMPLIFIER BLOCK DIAGRAM.



R75-3 PARTS IDENTIFICATION.

