

# GTE SYLVANIA

## FACTORY PREPARED TECHNICAL SERVICE DATA

STEREO HI-FI  
SUPPLEMENT 2 TO  
BULLETIN: R75-3

CHASSIS: R75-4  
MODEL: RQ4748

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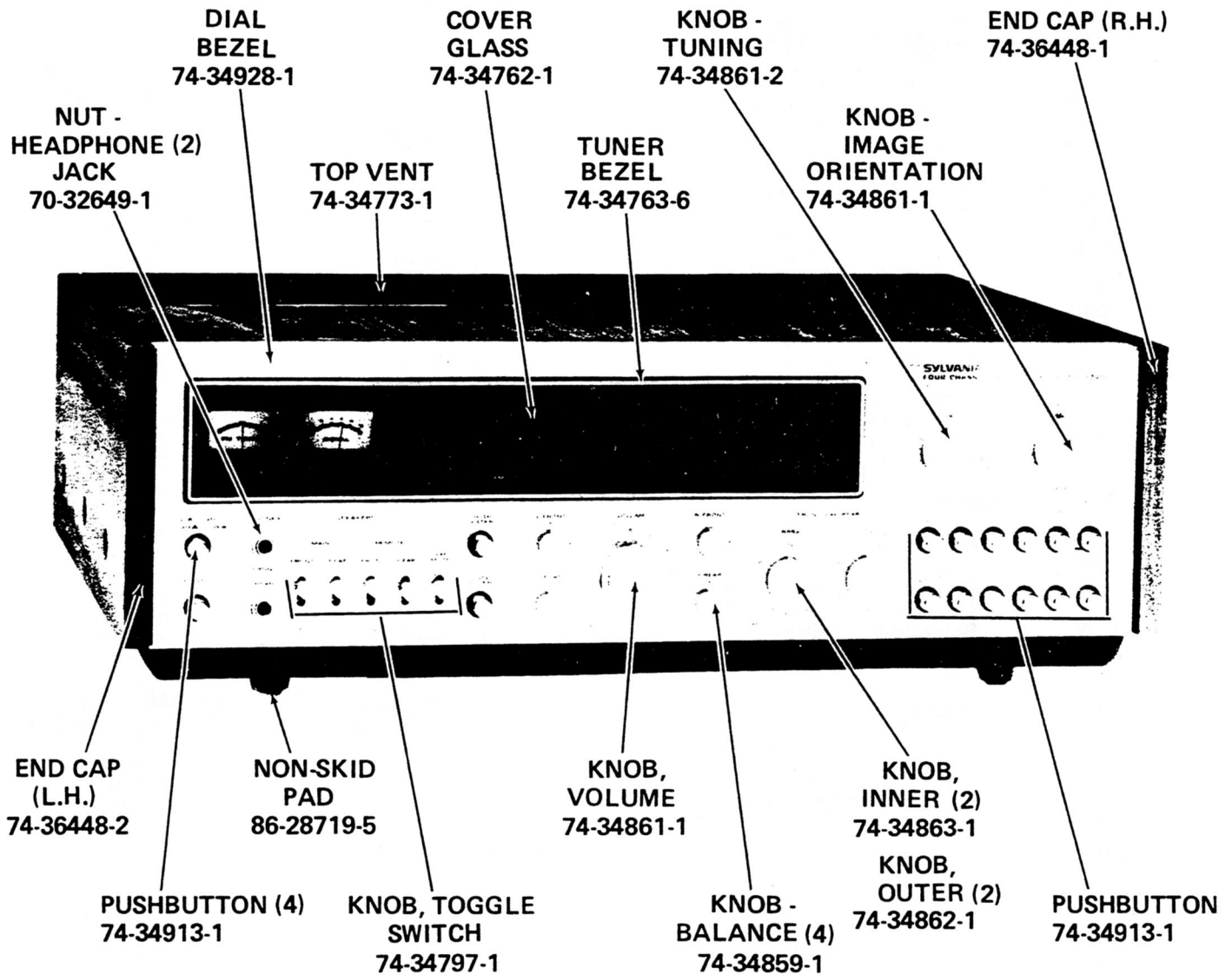
SERVICE PUBLICATIONS DEPARTMENT

Entertainment Products Group

700 Ellicott Street - Batavia, N.Y.

This Supplement introduces the R75-4 chassis and model RQ4748.

The R75-4 chassis is similar to the R75-3, with a built-in CD4 demodulator circuit and an added audio mute circuit. Complete schematics and parts lists for the R75-4 chassis are given in this Supplement.



MODEL: RQ4748  
CHASSIS: R75-4

IMPORTANT: Always use genuine Sylvania replacement parts and tubes.

REPLACEMENT PARTS LIST

SCHEMATIC    SERVICE  
CODING        PART NO.        DESCRIPTION

**ELECTROLYTIC CAPACITORS**  
(Values are shown as: MFD/Working Voltage)

C54	41-32477-46	5/25V
C60	41-32477-46	5/25V
C72	41-32477-85	1/50V
C74	41-32477-85	1/50V
C90	41-32477-46	5/25V
C92	41-32477-85	1/50V
C108	41-32477-33	10/15V
C132	41-32477-47	10/25V
C140	41-32477-86	2/50V
C150	41-32477-9	100/6V
C151	41-32477-33	10/15V
C301	41-23765-16	1/50V
C310	41-32477-9	100/6V
C312	41-32477-86	2/50V
C342	41-32477-85	1/50V
C514	41-36384-1	5000/50V
C516	41-36384-1	5000/50V
C518	41-36384-1	5000/50V
C520	41-36384-1	5000/50V
C522	41-32477-67	500/35V
C524	41-32477-67	500/35V
C528	41-32477-95	500/50V
C530	41-32477-67	500/35V
C532	41-32477-95	500/50V
C536	41-32477-67	500/35V
C538	41-32477-67	500/35V
C544	41-32765-5	5/25V
C560	41-23762-54	100/15V
C562	41-23762-54	100/15V
C602	41-32477-34	25/15V
C604	41-23765-17	2/50V
C612	41-32477-86	2/50V
C616	41-32477-86	2/50V
C626	41-23765-17	2/50V
C628	41-32477-50	50/25V
C630	41-32477-51	100/25V

**POLYSTYRENE CAPACITORS**

C56	40-28121-1	10,000PF - 50V
C64	40-28121-4	2500PF - 50V
C68	40-10285-13	3300PF - 125V
C70	40-10285-13	3300PF - 125V
C126	40-10285-50	390PF

**CAPACITORS (All values 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
C14		18PF, NPO
C16		.01, 100V
C18		3.3PF, NPO
C20		330PF, Z5P
C22		3.3PF, NPO
C24		.01, 100V
C26		.01, 100V
C28	42-34941-1	15PF 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		.02, 100V
C48		100PF, Z5P

SCHEMATIC    SERVICE  
CODING        PART NO.        DESCRIPTION

**CAPACITORS (CONTINUED)**

C50		.01, 100V
C52		330PF, Z5P
C58		820PF, Z5P
C63		.01, 100V
C76	42-18146-1	Ceramic Trimmer
C78		.01, 100V
C80		.01, 100V
C82		10PF, NPO
C84		.01, 100V
C86		100PF, Z5P
C88		.05, 50V
C94		.05, 50V
C96		.01, 100V
C98		.01, 100V
C100		100PF, Z5P
C102		.05, 50V
C104		330PF, Z5P
C106		.01, 100V
C112		4.7PF, N150
C114		4700PF, Z5U
C116		.05, 50V
C118		.02, 100V
C120		.01, 100V
C124		.01, 100V
C128		22PF, NPO
C134		.05, 50V
C136		33PF, N150
C138		.05, 50V
C142		180PF, Z5P
C144		560PF, Z5P
C146		270PF, Z5P
C148		.047, 150V
C302		100PF, Z5P
C306		.0082
C308		.022, 250V
C314		.047, 150V
C316		.039
C318A		.22, 150V
C318C		.039
C320A		.0068
C320C		.039
C322A		.039
C322C		.22, 150V
C324		.01, 100V
C326		.01, 100V
C344		.01, 100V
C346		220PF, Z5P
C402		.1, 150V
C502		.005, 150V
C506		.005, 150V AC
C508		.1, 150V
C510		.1, 150V
C512		.1, 150V
C534		.1, 150V
C540		.01, 100V
C603		.01, 100V
C606		.047, 150V
C608		.047, 150V
C610		820PF, Z5P
C614		33PF, N150
C618		.1, 150V
C620		.1, 150V
C622		1200PF, Z5P
C624		560PF, Z5P
C625		.01, 100V
C627		.01, 100V
C629		5.6PF
C632		10PF, NPO
C634		.01, 100V
C636		.01, 100V
C638		330PF, Z5P
C640		330PF, Z5P
C642		.1, 150V
C644		.01, 100V

**REPLACEMENT PARTS LIST (CONTINUED)**

SUPP. 2 TO R75-3

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>RESISTORS (All 1/4W, Carbon, 5%, unless otherwise specified)</b>		
R2		560 ohm
R4		10K
R6		3.3K
R8		1K
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 Adj.
R56		220 ohm
R58		3.9K
R60		3.9K
R62		470 ohm
R63		100K
R64		470 ohm
R65		100K
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		5.6K
R96		33K
R98		1K
R100		10K
R102		22K
R104		1K
R106		150 ohm, 1/2W, 10%
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

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>RESISTORS (CONTINUED)</b>		
R148		10K
R149		100K
R150		18K
R152		4.7K
R301		100K
R304		10K
R306		10K
R308		120K
R310		220 ohm
R312		820 ohm
R314		47K
R315		47K
R316		4.7K
R318		3.6K
R320		4.3K
R322		3.6K
R324		4.3K
R326		100K, 1/2W, 10%
R402	37-34611-3	50K Variable - Quad. Vol. Control
R404		4.7K
R502		3.3 meg, 1/2W, 10%
R504		68 ohm
R506		68 ohm
R508		330 ohm, 1W, 10%
R512		1 ohm, 1/2W, 10%
R514		3.9K
R516		2.2K
R518		220 ohm, 1W, 10%
R520		220 ohm, 1/2W, 10%
R570	37-22053-3	5K Variable - CD4 Separation
R572	37-22053-3	5K Variable - CD4 Separation
R602		180K
R604		33K
R606		3.3K
R607		5.6K
R608		10K
R609		4.7K
R610	37-34651-1	100K Variable - Quad. Bass Control
R612	37-34651-1	100K Variable - Quad. Treble Control
R614		15K
R616		39K
R618		10K
R620		470K, 10%
R622		3.3K
R624		15K
R626		10 meg, 10%
R628		33K
R630		27K
R632		27K
R634		3.3K
R636		5.6K
R638	37-22053-2	50K Variable - Level Control
R639		100K
R640		82K
R642		18K
R644		330 ohm
R646		10K
R648		1K
R650		10K
R652		3.3K, 1/2W, 10%
R654		820 ohm
R656		270 ohm
R658	37-33717-6	330 ohm - Bias Adjust
R660		100 ohm
R662		10 ohm
R664		3.3K, 1/2W, 10%
R668		150 ohm
R672		2.7 ohm, 1/2W, 10%
R684		150 ohm
R686		2.7 ohm, 1/2W, 10%
R688	36-34726-4	18 ohm, 2W, W/W, 10%
R690	36-34726-4	18 ohm, 2W, W/W
R692		10 ohm, 1W, 10%

**REPLACEMENT PARTS LIST (CONTINUED)**

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>RESISTORS (CONTINUED)</b>		
R694		220 ohm, 1/2W, 10%
<b>COILS AND TRANSFORMERS</b>		
FL6	50-36216-1	Dual Multiplex Filter Module
L2	22-28072-2	Bead - Ferrite
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	Bead - Ferrite
L16	50-34939-6	27UH Peaking Coil
L18	50-34411-1	Quadrature Detector Coil
L20	50-34939-6	27UH Peaking Coil
L22	50-34939-6	27UH Peaking Coil
L24	22-28072-2	Bead - Ferrite
L26	50-34411-1	10.7MHz Coil
L28	50-18789-3	5.7MH Choke
L30	27-34851-1	AM Rod Antenna
	86-34777-1	Rod Antenna Adaptor
	86-34774-1	Rod Antenna Holder
L32	22-28072-2	Bead - Ferrite
L34	50-34938-1	AM RF Coil
L36	50-34936-1	AM Oscillator Coil
L38	22-28072-2	Bead - Ferrite
L40	22-28072-2	Bead - Ferrite
L42	22-28072-2	Bead - Ferrite
L50	22-28072-2	Bead - Ferrite
L560	50-15318-1	27UH Choke
L602	50-36389-2	3.4UH Choke
L604	22-28072-2	Bead - Ferrite
L606	22-28072-2	Bead - Ferrite
L608	22-28072-2	Bead - Ferrite
L610	22-28072-2	Bead - Ferrite
L612	22-28072-2	Bead - Ferrite
L614	22-28072-2	Bead - Ferrite
T2	50-89962-6	FM Balun
T4	50-34407-2	19kHz Multiplex Coil
T6	50-34407-2	38kHz Multiplex Coil
T8	50-34937-1	First AM IF Transformer
T10	50-34937-1	Second AM IF Transformer
T12	50-34952-1	FM Mixer Transformer
<del>T102</del>	<del>55-34903-2</del>	<del>Power Transformer</del>

**SOLID STATE DEVICES**

FL2	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
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
IC2	15-34452-1	Int. Ckt. - FM Limiter/Detector
IC4	15-34379-3	Int. Ckt. - Mpx. Decoder (Early Prod.)
IC4	15-34379-1	Int. Ckt. - Mpx. Decoder
IC502	15-34401-1	Int. Ckt. - Regulator
IC504	15-34502-2	Int. Ckt. - Pre Amplifier
IC506	15-34906-1	Int. Ckt. - SQ Decoder
IC508	15-34502-2	Int. Ckt. - Dual Voltage Amplifier
IC510	15-34502-2	Int. Ckt. - Dual Voltage Amplifier
	72-34063-5	Int. Ckt. - Socket, 8 pin, Stagger Base
	72-34063-1	Int. Ckt. - Socket, 14 pin Stagger Base
	72-34063-2	Int. Ckt. - Socket, 16 pin Stagger Base
L2	22-28072-3	Bead - Ferrite
L12	22-28072-3	Bead - Ferrite
L24	22-28072-2	Bead - Ferrite
L30	22-28072-2	Bead - Ferrite
L32	22-28072-2	Bead - Ferrite
L38	22-28072-2	Bead - Ferrite

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>SOLID STATE DEVICES (CONTINUED)</b>		
L40	22-28072-2	Bead - Ferrite
L42	22-28072-2	Bead - Ferrite
L604	22-28072-2	Bead - Ferrite
L606	22-28072-2	Bead - Ferrite
L608	22-28072-2	Bead - Ferrite
L610	22-28072-2	Bead - Ferrite
L612	22-28072-2	Bead - Ferrite
L614	22-28072-2	Bead - Ferrite
Q2	13-34378-1	FET - FM RF Amplifier
Q4	13-34375-1	FET - FM Mixer
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 Active Filter, Meter Driver
Q502	13-34046-1	Regulator Amplifier
Q602	13-34381-1	Tone Amplifier
Q604	13-29775-1	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 (Early Prod.)
Q618	13-34372-3	Driver
Q620	13-34373-1	Driver (Early Prod.)
Q620	13-34373-3	Driver
Q622	13-34684-1	Power Output
Q624	13-34684-1	Power Output
	86-14608-1	Mica Insulator - Output Transistor
	72-28852-2	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
SC2	1N295	Diode
SC4	1N295	Diode
SC6	13-17596-5	Diode - D6726
SC8	13-17596-5	Diode - D6726
SC10	13-17596-5	Diode - D6726
SC12	1N295	Diode
SC14	13-17596-5	Diode - D6726
SC16	13-17596-5	Diode - D6726
SC18	1N295	Diode
SC20	13-17596-5	Diode - D6726
SC22	13-17596-5	Diode - D6726
SC502	13-34901-1	Diode - Rectifier
SC504	13-34901-1	Diode - Rectifier
SC506	13-34901-1	Diode - Rectifier
SC508	13-34901-1	Diode - Rectifier
SC510	13-17174-2	Diode - Rectifier
SC512	13-17174-2	Diode - Rectifier
SC514	13-17174-2	Diode - Rectifier
SC516	13-17174-2	Diode - Rectifier
SC520	13-17596-9	Diode
SC522	13-33179-6	Diode - Zener
SC524	13-17596-5	Diode - D6726
SC602	13-34056-1	Diode
SC604	13-34056-1	Diode
SC606	13-17596-9	Diode - Bias
SC608	13-17596-9	Diode - Bias
SC610	13-26614-1	Diode
SC614	13-26614-1	Diode
SC616	13-17596-5	Diode - D6726
SC618	13-17596-5	Diode - D6726
<b>MISCELLANEOUS PARTS</b>		
PL2	73-10302-37	Connector - Rod Ant. at Jack Plate

**REPLACEMENT PARTS LIST (CONTINUED)**

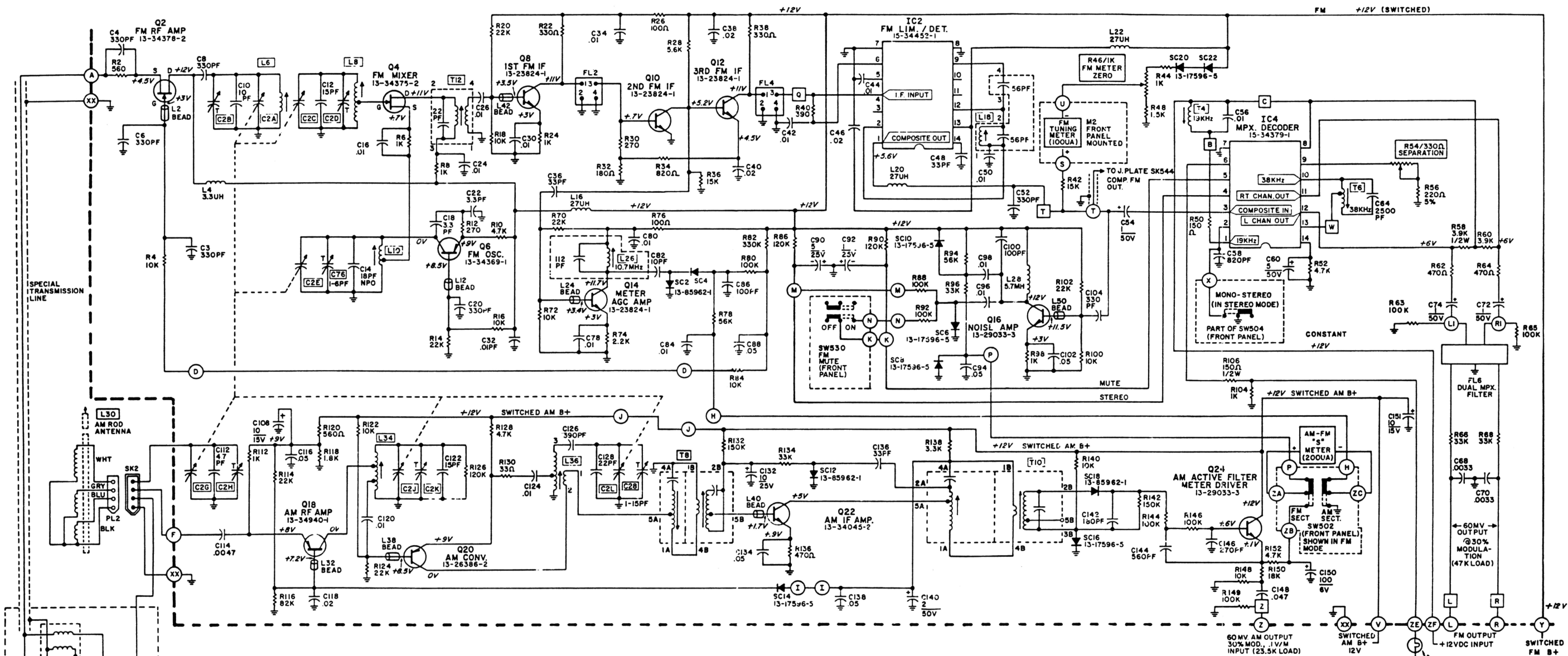
<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>MISCELLANEOUS PARTS (CONTINUED)</b>		
CB502	29-34899-2	Circuit Breaker - 4.1 Amp
SK2	73-10302-39	Connector - Rod Antenna
SK100	73-10302-55	CD4 Connector Kit - 5 pin
SK102	73-10302-54	CD4 Connector Kit - Left Input
SK104	73-10302-54	CD4 Connector Kit - Left Output
SK202	73-10302-54	CD4 Connector Kit - Right Input
SK204	73-10302-54	CD4 Connector Kit - Right Output
	73-29945-2	CD4 Terminal
SK502	73-34307-2	Aux. Outlet - Polarized
SK504	73-34307-2	Aux. Outlet - Polarized
SK506	73-34307-2	Aux. Outlet - Polarized
SK508	73-34786-1	Dual Phono Socket - PHONO NO. 1 IN
SK510	73-34786-1	Dual Phono Socket - PHONO NO. 2 IN
SK514	73-34786-2	Quad Phono Socket - PREAMP OUT
SK516	73-34786-2	Quad Phono Socket - AMPLIFIER IN
SK518	73-34786-2	Quad Phono Socket - TAPE NO. 1 RECORD
SK520	73-34786-2	Quad Phono Socket - TAPE NO. 1 PLAY
SK522	73-34786-2	Quad Phono Socket - TAPE NO. 2 RECORD
SK524	73-34786-2	Quad Phono Socket - TAPE NO. 2 PLAY
SK540	73-26338-3	Headphone Jack - FRONT CHANNELS
SK542	73-26338-3	Headphone Jack - REAR CHANNELS
SK544	73-87162-3	FM COMPOSITE OUTPUT Jack
SW502	33-34723-2	FUNCTION Switch Asm.
	33-34756-6	AM, FM, PHONO NO. 1 or PHONO NO. 2 Section only
	33-35745-13	Mute Section only (NOT a function)
	33-35745-3	TAPE NO. 1 MON. or TAPE NO. 2 MON. Section only
SW504	33-34724-1	MODE Switch Asm.
	33-35745-6	MONO Section only
	33-35745-2	SQ BLEND or LOUDNESS Section only
	33-35745-5	SQ MATRIX Section only
	33-35745-4	STEREO or 4 CH. DISCRETE Section only
SW506	33-34917-2	AC POWER Switch
SW508	33-35548-1	DIAL LIGHT DIM. Switch Asm.
	33-35745-1	Switch Section only
SW510	33-34722-1	HIGH & LOW FILTER Switch Asm.
	33-35745-2	HIGH or LOW Section only
SW512	33-34857-1	IMAGE ORIENTATION Switch Asm.
SW514	33-27623-2	2 CHAN/4 CHAN BRIDGE Switch (Jack Plate)
SW518	33-34214-1	MAIN FRONT Speaker Switch
SW520	33-34214-1	MAIN REAR Speaker Switch
SW522	33-34214-1	REMOTE FRONT Speaker Switch
SW524	33-34214-1	REMOTE REAR Speaker Switch
SW530	33-34214-1	FM MUTE Switch
	70-34627-2	Mounting Screw, SW518/SW530
TS602	29-34849-1	Thermal Switch (Heat Sink Mtd.)
	73-33071-41	AC Power Cord
	27-34851-1	AM Rod Antenna
	86-34774-1	Rod Antenna Holder (at Jack Plate)
	86-34777-1	Rod Antenna Adaptor (on Rod)
	73-34927-2	Antenna Terminal
	86-34386-3	Antenna Insulator
	74-34766-2	Cabinet Base
	70-98939-1	Dial - Cord Pulley
	77-41699-4	Dial - Cord Tension Spring
	86-34757-1	Dial - Drive Pulley
	83-34756-1	Dial - Drive Pulley Bushing
	30-34803-1	Dial - Function Ind. Lamp (No. 0406)
	74-34789-2	Dial - Function Overlay
	30-34665-1	Dial - Lamp (No. 0926)
	86-34758-2	Dial - Lamp Mask
	73-34532-1	Dial - Lamp Terminal
	81-34749-1	Dial - Light Box

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>MISCELLANEOUS PARTS (CONTINUED)</b>		
	74-34787-1	Dial - Overlay
	74-34769-1	Dial - Pointer (Lighted)
	85-34844-1	Dial - Pointer Carriage Cover
	30-34803-1	Dial - Pointer Lamp (No. 0406)
	89-34801-1	Dial - Tuning Shaft & Flywheel Asm.
	70-14098-1	Dial - Tuning Shaft Nylon Bearing
	82-18189-2	Heat Sink - Extruded
	74-34767-3	Jack Plate
	85-34911-1	Jack Plate - AC Barrier
	85-34951-3	Jack Plate - Cover
	85-34848-2	Jack Plate - Insulator (Phono sockets-to-plate)
	83-34776-1	Jack Plate - Jumper (Preamp Out to Amp In)
	70-34912-1	Jack Plate - Plastic Mounting Spacer
	73-34959-1	Jack Plate - Speaker Conn. (Quad Push Term.)
	30-34665-1	Lamp - Dial & Meter (No. 0926)
	73-34532-1	Lamp - No. 0926 (Dial) Terminal
	30-34803-1	Lamp - Function Indicator, Pointer (No. 0406)
	25-34802-1	Tuning Meter - Center Tune (FM)
	25-34802-2	Tuning Meter - Signal Strength (AM & FM)
	74-34759-1	Tuning Meter - Bezel
	74-34788-1	Tuning Meter - Filter
	70-26679-1	Tuning Meter - Mounting Clip

**CABINET PARTS LIST**

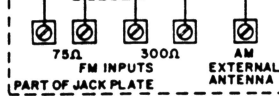
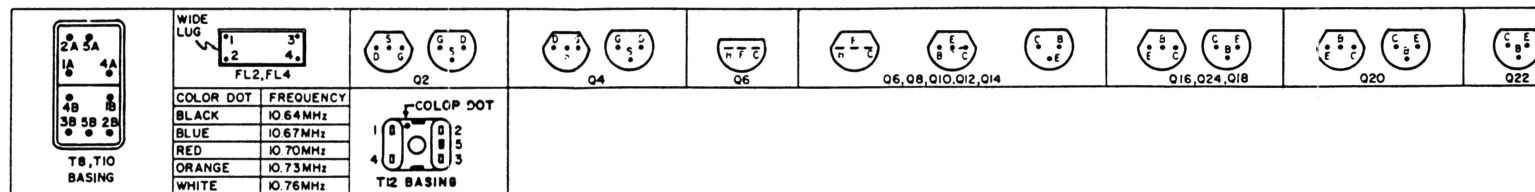
<u>DESCRIPTION</u>	<u>SERVICE PART NO.</u>
FM Antenna	27-14926-2
<b>BEZEL</b>	
Cover Glass	74-34762-1
Dial	74-34928-1
Knob - Balance Control	74-34859-1
Knob - Bass, Treble (Inner Shaft)	74-34862-1
Knob - Bass, Treble (Outer Shaft)	74-34863-1
Knob - Image Orientation	74-34861-1
Knob - Toggle Switch	74-34797-1
Knob - Tuning	74-34861-2
Knob - Volume	74-34861-1
Nut - Headphone Mounting	70-32649-1
Pushbutton	74-34913-1
Pushbutton Guide - 2 Button	74-34929-2
Pushbutton Guide - 6 Button	74-34929-1
Speed Clip - Dial Bezel to Escutcheon	70-34933-1
Speed Clip - Glass to Bezel	70-26679-1
Tuner	74-34763-6
<b>CABINET</b>	
End Cap - Left Hand	74-36448-2
End Cap - Right Hand	74-36448-1
Non Skid Pad, Cabinet Bottom	86-28719-5
Vent - Cabinet Bottom	74-34761-1
Vent - Cabinet Top	74-34773-1





- 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 (Q) 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.

BASING DIAGRAMS (BOTTOM VIEWS)



TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

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TO J. PLATE SK544

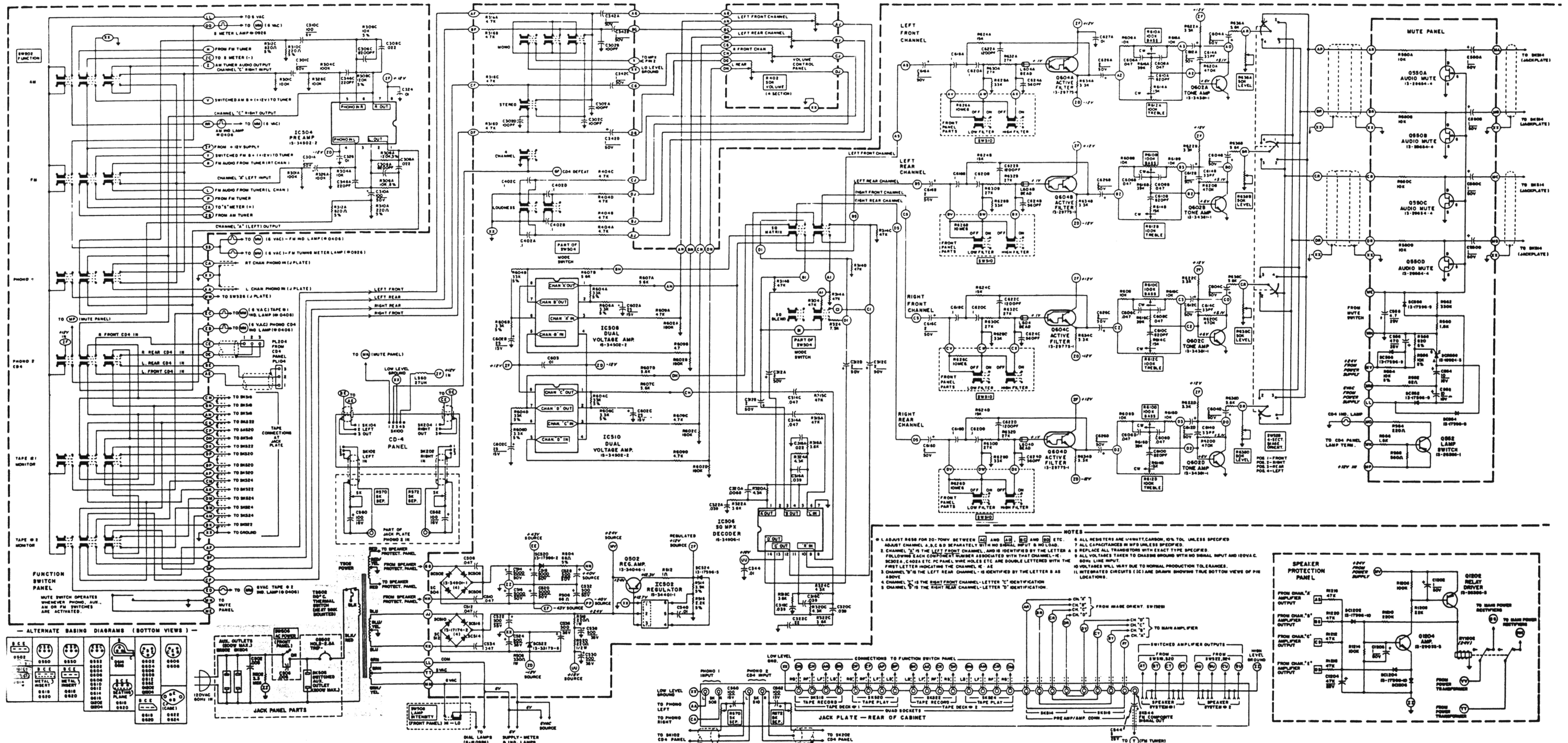
TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544

TO J. PLATE SK544



**NOTES**

1. ABOUT 95% FOR 20-TONE BETWEEN 100 AND 1000 HZ AND 1000 HZ ETC.
2. ALL RESISTORS ARE 1/4WATT CARBON 10% UNLESS SPECIFIED OTHERWISE.
3. ALL CAPACITORS ARE MFD UNLESS SPECIFIED.
4. REPLACE ALL TRANSISTORS WITH EXACT TYPE SPECIFIED.
5. ALL VOLTAGE TAKES TO CHASSIS GROUND WITH NO SIGNAL INPUT AND 100% C.W. LINE INPUT.
6. VOLTAGES WILL VARY DUE TO NORMAL PRODUCTION TOLERANCES.
7. WIRE MOUNTED CIRCUITS (IC AND SHOWN) SHOW TRUE BOTTOM VIEW OF PIN LOCATIONS.

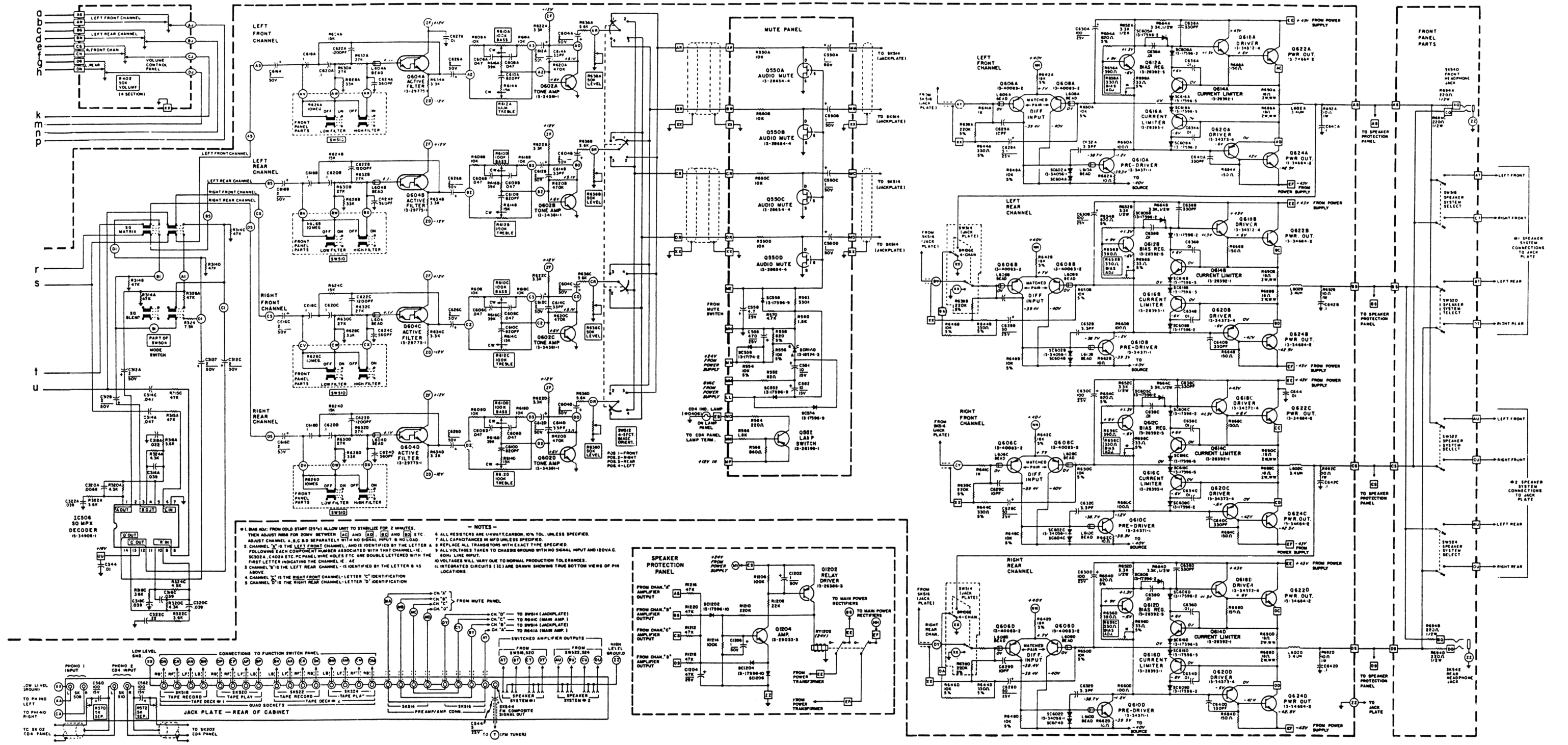
**PRODUCT SAFETY NOTES**

COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC AND PARTS LIST ARE CONSIDERED TO BE SPECIAL COMPONENTS. THE SPECIAL CHARACTERISTICS OF THESE COMPONENTS ARE VERY IMPORTANT TO THE SAFETY OF THE UNIT.

DO NOT REPLACE THESE COMPONENTS WITH ANY OTHER PARTS OTHER THAN THOSE SPECIFIED. USE OF SUBSTITUTE REPLACEMENT PARTS MAY CREATE SHOCK, FIRE OR OTHER HAZARDS.



**SCHEMATIC DIAGRAM (R75-4 AMP)**



- NOTES**
1. BIAS ADJ. FROM COLD START (25°C) ALLOW UNIT TO STABILIZE FOR 2 MINUTES. THEN ADJUST BIAS FOR 50W BETWEEN (A) AND (B) AND (C) AND (D) ETC. ADJUST CHANNEL A, B, C, D SEPARATELY WITH NO SIGNAL INPUT & NO LOAD.
  2. CHANNEL "C" IS THE LEFT FRONT CHANNEL, AND IS IDENTIFIED BY THE LETTER "A" FOLLOWING EACH COMPONENT NUMBER ASSOCIATED WITH THAT CHANNEL. IE. SC20A, C02A ETC. PC PANEL WIRE HOLES ETC. ARE DOUBLE LETTERED WITH THE FIRST LETTER INDICATING THE CHANNEL, IE. A-C.
  3. CHANNEL "B" IS THE LEFT REAR CHANNEL, IS IDENTIFIED BY THE LETTER "B" AS ABOVE.
  4. CHANNEL "D" IS THE RIGHT FRONT CHANNEL, LETTER "C" IDENTIFICATION.
  5. CHANNEL "C" IS THE RIGHT REAR CHANNEL, LETTER "D" IDENTIFICATION.
  6. ALL RESISTORS ARE 1/4WATT, CARBON, 5% TOL. UNLESS SPECIFIED.
  7. ALL CAPACITORS ARE MFD UNLESS SPECIFIED.
  8. REPLACE ALL TRANSISTORS WITH EXACT TYPE SPECIFIED.
  9. ALL VOLTAGES TAKEN TO CHASSIS GROUND WITH NO SIGNAL INPUT AND 120VAC, 60Hz. LINE INPUT.
  10. VOLTAGES WILL VARY DUE TO NORMAL PRODUCTION TOLERANCES.
  11. INTEGRATED CIRCUITS (IC) ARE DRAWN SHOWING TRUE BOTTOM VIEWS OF PIN LOCATIONS.



## CD4 PANEL REPLACEMENT PARTS

SCHEMATIC CODING	SERVICE PART NO.	DESCRIPTION
<b>CAPACITORS (All values in MFD, unless otherwise specified)</b>		
C102	41-32477-46	5/25V Electrolytic
C104		.0047, 150V
C106		.0068
C108	40-10285-50	390PF Polystyrene
C110		.01, 150V
C112	40-10285-55	1200PF Polystyrene
C114		5600PF
C116	41-32477-46	5/25V Electrolytic
C118	41-32477-38	250/15V Electrolytic
C119		.01, 100V
C120		3300PF
C122		2200PF
C124		680PF, Z5P
C126	41-32477-34	25/15V Electrolytic
C127		220PF
C128	41-32477-38	250/15V Electrolytic
C130		3300PF
C138		1000PF
C142		3300PF
C144	41-34346-2	.22/25V Electrolytic
C146	41-39324-149	.68/35V Electrolytic
C148	40-10285-44	.0027, 5% - Polystyrene
C150	41-32477-46	5/25V Electrolytic
C152		2200PF
C154	41-39148-64	.47/50V Electrolytic
C156	41-39148-64	.47/50V Electrolytic
C158		47PF
C160		.01, Z5U
C162		47PF
C164		.0082
C166		.0068
C168	40-10285-50	390PF Polystyrene
C170		.01, 150V
C172	40-10285-55	1200PF Polystyrene
C174		5600PF
C176	41-32477-46	5/25V Electrolytic
C178		.01, Z5U
C180	41-32477-46	5/25V Electrolytic
C182	41-32477-46	5/25V Electrolytic
C184	41-32477-46	5/25V Electrolytic
C186	41-32477-38	250/15V Electrolytic
C202	41-32477-46	5/25V Electrolytic
C204		.0047, 150V
C206		.0068
C208	40-10285-50	390PF Polystyrene
C210		.01, 150V
C212	40-10285-55	1200PF Polystyrene
C214		5600PF
C216	41-32477-46	5/25V Electrolytic
C218	41-32477-38	250/15V Electrolytic
C219		.01, 100V
C220		3300PF
C222		2200PF
C224		680PF, Z5P
C226	41-32477-34	25/15V Electrolytic
C227		220PF
C228	41-32477-38	250/15V Electrolytic
C230		3300PF
C238		1000PF
C242		3300PF
C244	41-34346-2	.22/25V Electrolytic
C246	41-39324-149	.68/35V Electrolytic
C248	40-10285-44	.0027, 5% - Polystyrene
C250	41-32477-46	5/25V Electrolytic
C252		2200PF
C254	41-39148-64	.47/50V Electrolytic
C256	41-39148-64	.47/50V Electrolytic
C258		47PF
C260		.01, Z5U
C262		47PF
C264		.0082
C266		.0068

SCHEMATIC CODING	SERVICE PART NO.	DESCRIPTION
<b>CAPACITORS (CONTINUED)</b>		
C268	40-10285-50	390PF Polystyrene
C270		.01, 150V
C272	40-10285-55	1200PF Polystyrene
C274		5600PF
C276	41-32477-46	5/25V Electrolytic
C278		.01, Z5U
C282	41-32477-46	5/25V Electrolytic
C284	41-32477-46	5/25V Electrolytic

**RESISTORS (All 1/4W, Carbon, 5% unless otherwise specified)**

R101		470K
R102		47K
R104		18K
R106		2.2K
R108		2.2K
R110		1 meg
R112		12K
R114		100K
R116		180 ohm
R118		330 ohm
R120		100K
R122		47K
R124		10K
R126		2.7K
R127		100 ohm
R128		220 ohm
R129		1.5K
R132		6.8K
R134	37-14576-16	4.7K Variable - V.C.O. Adjust
R136		8.2K
R138		3.3K
R140		100K
R142		15K
R144		15K
R146		100K
R148		22K
R150		3.6K
R152		2.2K
R156		2.2K
R158		330 ohm
R160		100K
R162		150K
R164		2.7K
R166		47K
R168		47K
R201		470K
R202		47K
R204		18K
R206		2.2K
R208		2.2K
R210		1 meg
R212		12K
R214		100K
R216		180 ohm
R218		330 ohm
R220		100K
R222		47K
R224		10K
R226		2.7K
R227		100 ohm
R228		220 ohm
R229		1.5K
R232		6.8K
R234	37-14576-16	4.7K Variable - V.C.O. Adjust
R236		8.2K
R238		3.3K
R240		100K
R242		15K
R244		15K
R246		100K
R248		22K

**CD4 PANEL REPLACEMENT PARTS (CONTINUED)**

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>RESISTORS (CONTINUED)</b>		
R250		3.6K
R252		2.2K
R256		2.2K
R258		330 ohm
R264		2.7K
R266		47K
R268		47K

**SOLID STATE DEVICES**

IC100	15-36647-1	Left Channel Decoder
IC200	15-36647-1	Right Channel Decoder
	72-36686-1	28 pin IC Socket
SC102	13-17596-2	Diode
SC202	13-17596-2	Diode

**COILS**

L102	50-36692-4	32MH - Adjustable
L104	50-36692-3	23.5MH - Adjustable

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
<b>COILS (CONTINUED)</b>		
L106	50-36694-25	100MH
L108	50-36693-25	10MH
L114	50-36693-25	10MH
L116	50-36692-4	32MH - Adjustable
L118	50-36692-3	23.5MH - Adjustable
L202	50-36692-4	32MH - Adjustable
L204	50-36692-3	23.5MH - Adjustable
L206	50-36694-25	100MH
L208	50-36693-25	10MH
L214	50-36693-25	10MH
L216	50-36692-4	32MH - Adjustable
L218	50-36692-3	23.5MH - Adjustable

**MISCELLANEOUS PARTS**

SK100	73-36679-5	Connector - 5 pin
SK102	73-36679-3	Connector - Left Channel Input
SK104	73-36679-3	Connector - Left Channel Output
SK202	73-36679-3	Connector - Right Channel Input
SK204	73-36679-3	Connector - Right Channel Output
	72-36686-1	Socket - Integrated Circuit

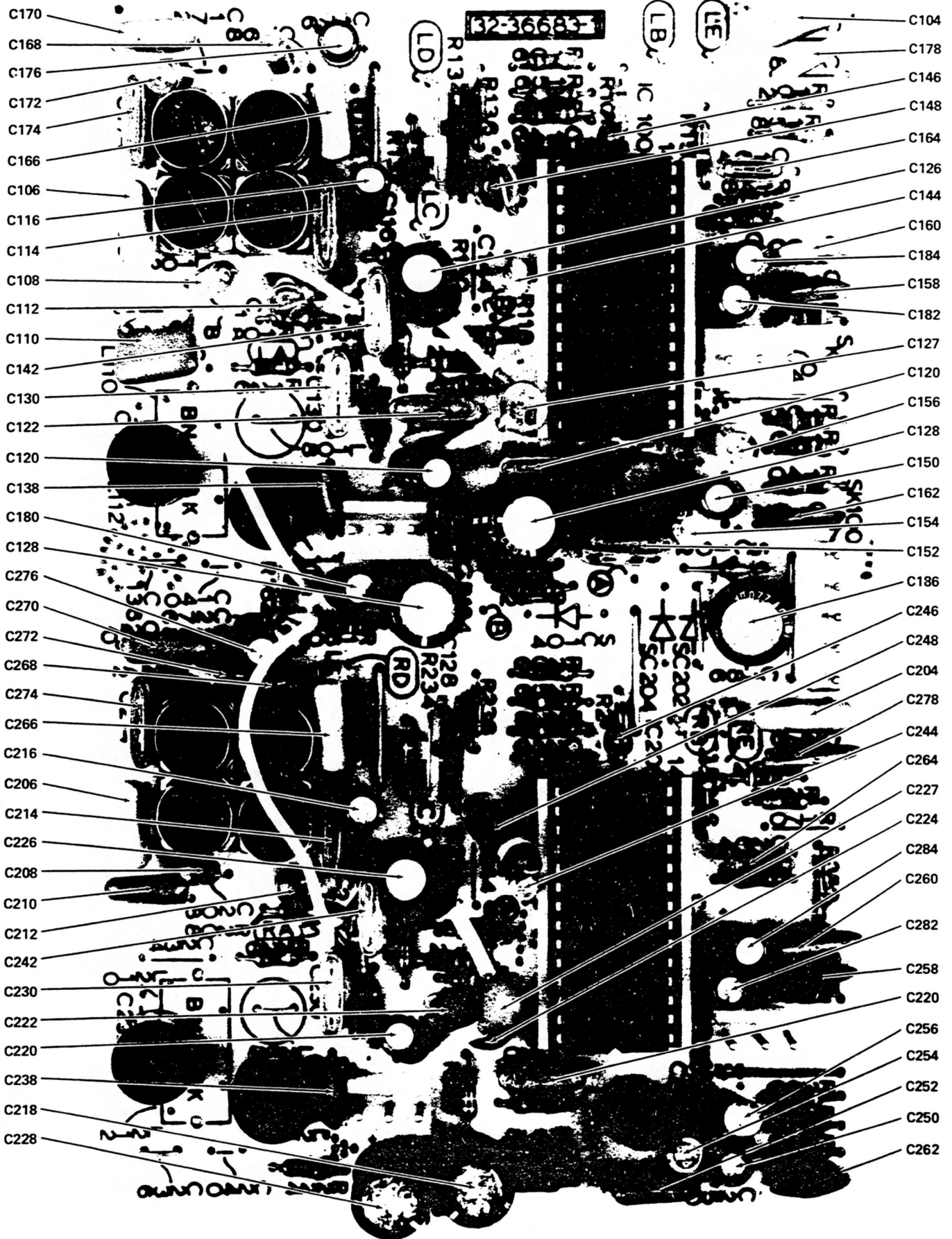
**AUDIO MUTE PANEL  
REPLACEMENT PARTS**

<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
C550	41-32477-85	1MFD, 50V Electrolytic Capacitor
C552	41-32477-33	10MFD, 15V Electrolytic Capacitor
C554	41-32477-33	10MFD, 15V Electrolytic Capacitor
C556	41-32477-53	500MFD, 25V Electrolytic Capacitor
C558	41-32477-46	5MFD, 25V Electrolytic Capacitor
Q550	13-28654-4	Transistor
Q552	13-26386-1	Transistor
R550		10K, 1/4W, 5%, Carbon Resistor
R552		82 ohm, 1/4W, 5%, Carbon Resistor
R554		10K, 1/4W, 5%, Carbon Resistor
R556		10K, 1/4W, 5%, Carbon Resistor
R558		820 ohm, 1/4W, 5%, Carbon Resistor
R560		1.8K, 1/4W, 5%, Carbon Resistor
R562		330K, 1/4W, 5%, Carbon Resistor
R564		220 ohm, 1/4W, 5%, Carbon Resistor
R566		1.8K, 1/4W, 5%, Carbon Resistor
R568		560 ohm, 1/4W, 5%, Carbon Resistor
SC552	13-17596-9	Diode
SC554	13-17596-9	Diode
SC556	13-17596-9	Diode
SC558	13-17596-9	Diode
SCR550	13-18924-3	SCR
	72-27200-5	Transistor Socket (small 3-pin)

**SPEAKER PROTECTION CIRCUIT  
REPLACEMENT PARTS**

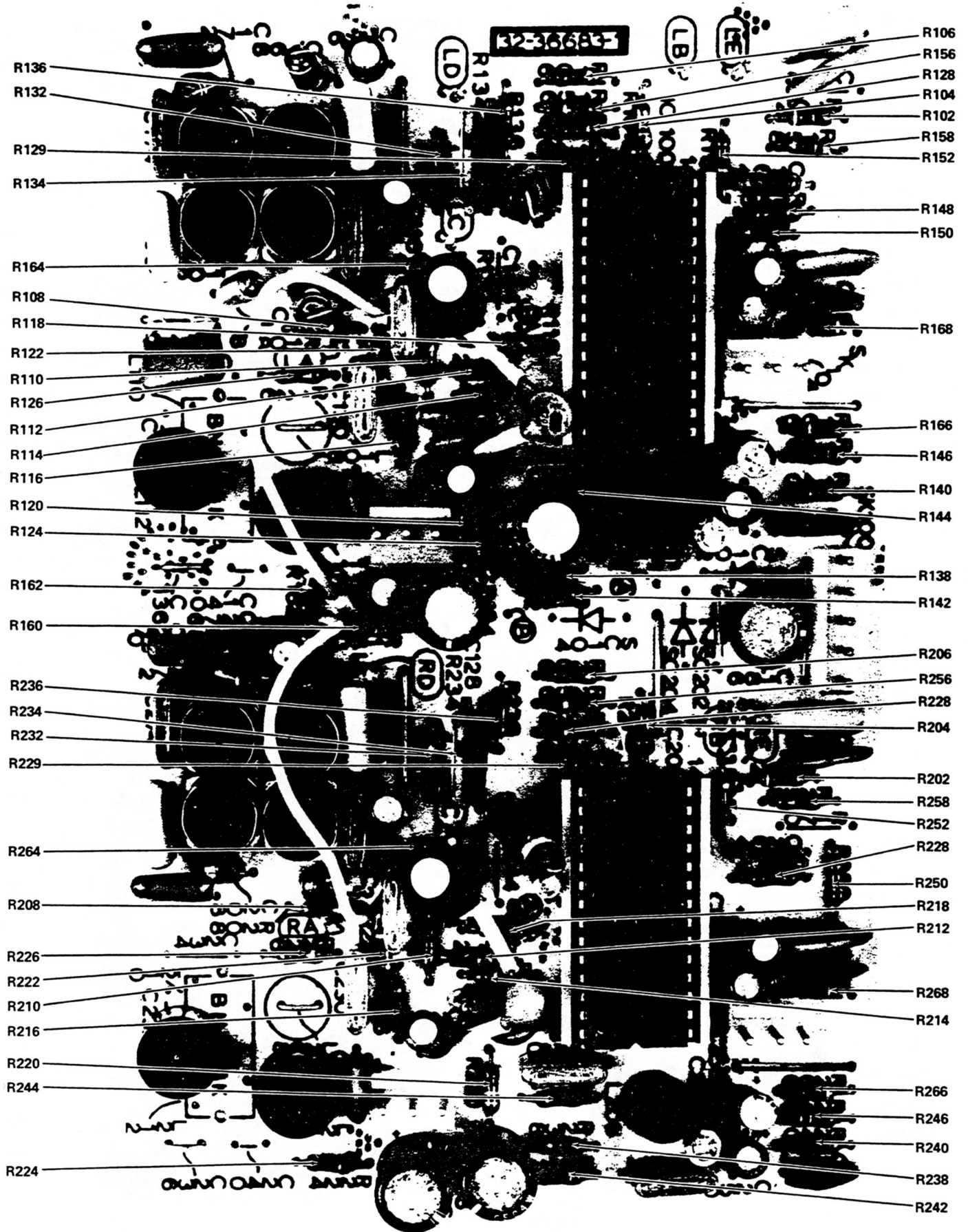
<u>SCHEMATIC CODING</u>	<u>SERVICE PART NO.</u>	<u>DESCRIPTION</u>
C1202	41-32477-85	1MFD, 50V Electrolytic
C1204	41-32477-50	50MFD, 25V Electrolytic
C1206	41-32477-85	1MFD, 25V Electrolytic
Q1202	13-26386-3	Transistor - Relay Driver
Q1204	13-29033-3	Transistor - Voltage Amp
R1206		Resistor - 100K, 1/4W, 5% - Carbon
R1208		Resistor - 22K, 1/4W, 5% - Carbon
R1210		Resistor - 220K, 1/4W, 5% - Carbon
R1212		Resistor - 47K, 1/4W, 5% - Carbon
R1214		Resistor - 100K, 1/4W, 5% - Carbon
R1216		Resistor - 47K, 1/4W, 5% - Carbon
R1218		Resistor - 47K, 1/4W, 5% - Carbon
R1220		Resistor - 47K, 1/4W, 5% - Carbon
RY1202	31-39947-2	Relay
SC1202	13-17596-10	Diode
SC1204	13-17596-10	Diode
SC1206	13-17596-10	Diode
	72-27200-5	Small 3-pin Transistor Socket

CD4 PANEL



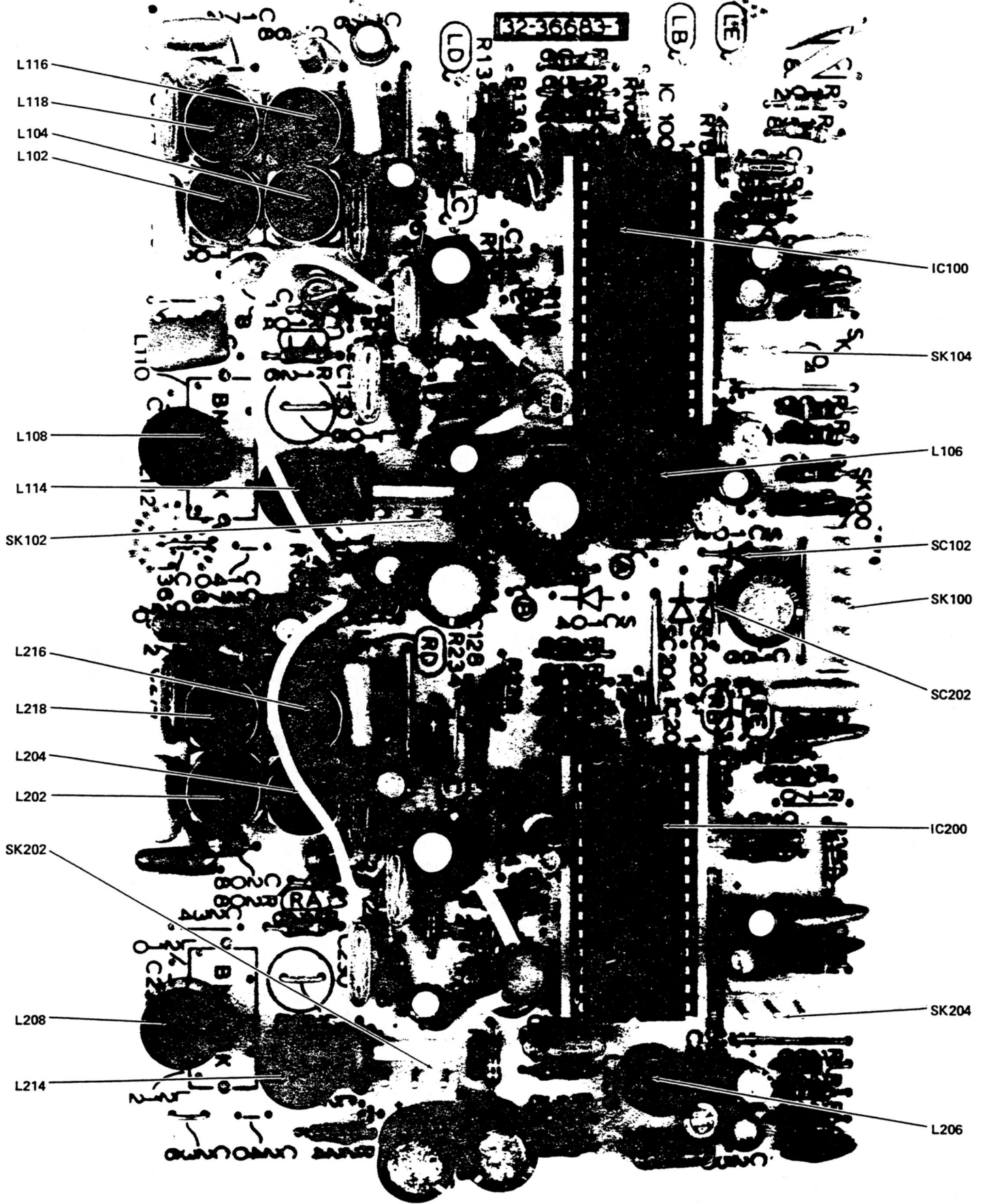
CAPACITORS

CD4 PANEL (CONTINUED)



RESISTORS

CD4 PANEL (CONTINUED)



MISCELLANEOUS





PRODUCT SAFETY GUIDELINES FOR ALL PRODUCTS

**CAUTION: Do NOT modify any circuit. Service work should be performed only after you are thoroughly familiar with all of the following safety checks. Risk of potential hazards and injury to the user increases if safety checks are not adhered to.**

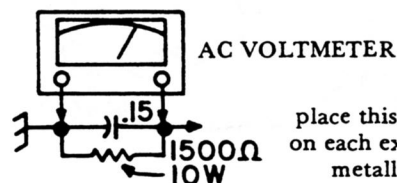
SAFETY CHECKS

**SUBJECT: Fire & Shock Hazard**

1. Be sure that all components are positioned in such a way to avoid possibility of shorts to adjacent components. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a set.
3. Check for damaged insulation on wires including the AC cord.
4. Check across-the-line components for damage and replace if necessary.
5. After re-assembly of the set, always perform an AC leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminals, etc. to be sure the set is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this test. Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:  
Connect a 1500 ohm 10 watt resistor, paralleled by

.15MFD AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination 1500 ohm resistor and .15MFD capacitor. Reverse the AC plug on the set and repeat AC voltage measurements again for each exposed metallic part. Voltage measured must not exceed .3 volts R.M.S. This corresponds to 0.2 milliamp AC.

Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



TRANSISTOR REPLACEMENT GUIDE

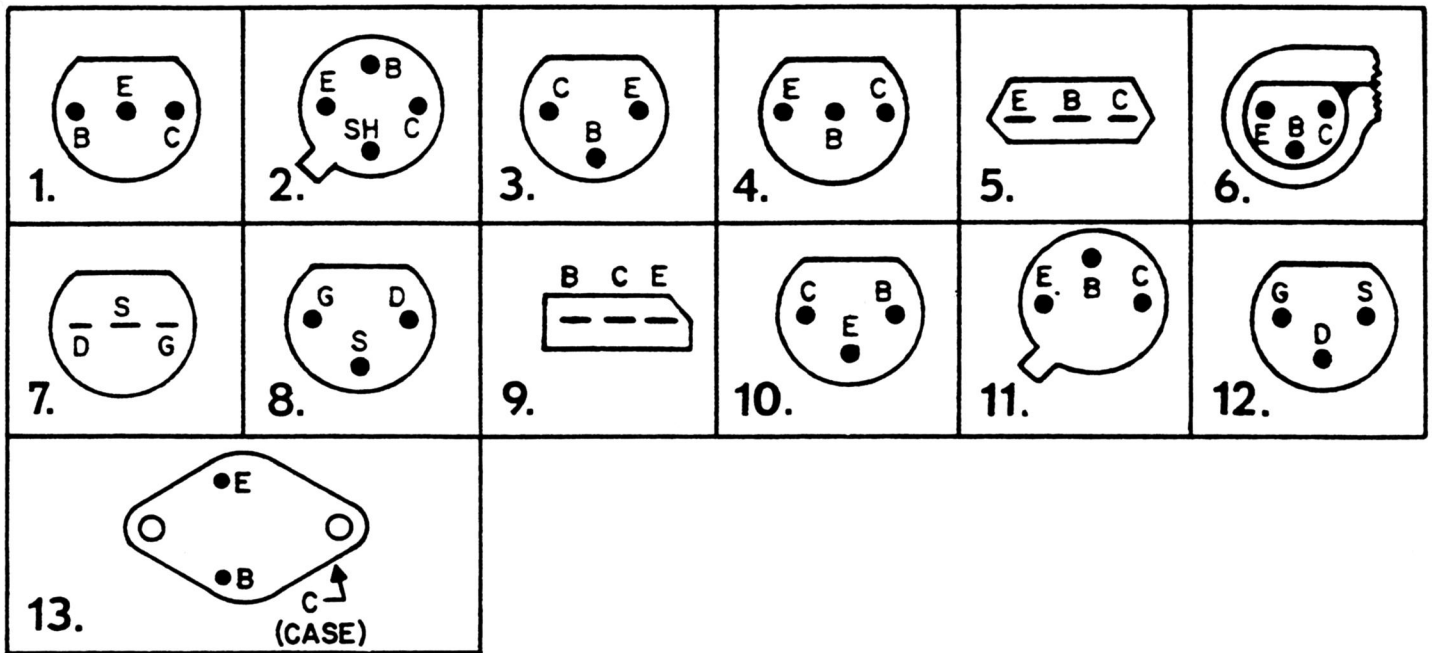
SYLVANIA PART NUMBER	TYPE (ALL SILICON)	APPLICATION	DC CURRENT GAIN	EMITTER - COLLECTOR (DRAIN - SOURCE) VOLTAGE (MAX.) @ 25 DEG. C AMBIENT	EMITTER - BASE (GATE - SOURCE) VOLTAGE (MAX.) @ 25 DEG. C AMBIENT	MAXIMUM POWER DISSIPATION @ 25 DEG. C (AIR)	IGBO CUTOFF CURRENT MAX.	BASING FIGURES
13-23824-1	NPN	Q8 - First FM IF. Q10 - Second FM IF. Q12 - Third FM IF.	27-275	35V	3V	180mW	1uA	1, 2, 3
13-26386-1	PNP	Q552 (MUTE Panel) - Lamp Switch.	100-350	32V	4V	200mW	.25uA	3, 4
13-26386-2	PNP	Q20 - AM Converter.	100-350	15V	4V	200mW	.25uA	3, 4
13-28392-1	NPN	Q614 - Current Limiter.	90-270	45V	4V	500mW	100nA	4, 5, 6
13-28393-1	PNP	Q616 - Current Limiter.	90-270	45V	4V	500mW	100nA	4, 6
13-28654-4	N-CH. FET	Q550 (MUTE Panel) - Audio Mute.	N/A	30V	30V	200mW	N/A	7, 8
13-29033-3	NPN	Q16 - Noise Amplifier. Q24 - AM Filter, Meter Driver. Q612 - Bias Regulator.	200-400	45V	4V	200mW	.05uA	3, 4
13-29775-1	NPN	Q604 (DARLINGTON) - Active Filter.	5600 MIN.	25V	10V	200mW	100nA	3, 4
13-34045-2	NPN	Q22 - AM IF Amplifier.	80-200	12V	3V	250mW	100nA	3
13-34046-1	NPN	Q502 - Regulator Amplifier.	10-150	40V	4V	2.1W	100uA	9
13-34367-3	PNP	Q606 - MATCHED Differential Input. Q608 - MATCHED Differential Input.	SEE BELOW	50V	4V	300mW	10uA	3, 4, 10
13-34369-1	PNP	Q6 - FM Oscillator.	20 MIN.	20V	.85V	N/A	100nA	1
13-34371-1	NPN	Q610 - Pre Driver.	90-270	110V	4V	500mW	100nA	4, 11
13-34372-1 (EARLY PROD.)	NPN	Q618 - Driver.	50-360	95V	N/A	1W (50 deg. C)	100uA	5
13-34372-3 (LATER PROD.)	NPN	Q618 - Driver.	50-360	95V	N/A	1W (50 deg. C)	100uA	9
13-34373-1 (EARLY PROD.)	PNP	Q620 - Driver.	50-360	95V	N/A	1W (50 deg. C)	100uA	5?
13-34373-3 (LATER PROD.)	PNP	Q620 - Driver.	50-360	95V	N/A	1W (50 deg. C)	100uA	9
13-34375-1	N-CH. FET	Q4 - FM Mixer.	N/A	N/A	25V	200mW	N/A	7, 8
13-34378-1	N-CH. FET	Q2 - FM RF Amplifier.	N/A	20V	10V	250mW	N/A	7, 12
13-34381-1	NPN	Q602 - Tone Amplifier. Q604 - Active Filter.	225-450	30V	4V	200mW	.25uA	3, 4
13-34684-1	NPN	Q622 - Power Output. Q624 - Power Output.	25-100	95V	N/A	200W	250uA	13
13-34940-1	PNP	Q18 - AM RF Amplifier.	50-150	30V	4V	200mW	100nA	3, 4

DC CURRENT GAIN  
13-34367-3

BROWN DOT 100-160  
RED DOT 150-210  
ORANGE DOT 200-260

YELLOW DOT 250-310  
GREEN DOT 300-360

———— BASING DIAGRAM ————



———— INDEX ————

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