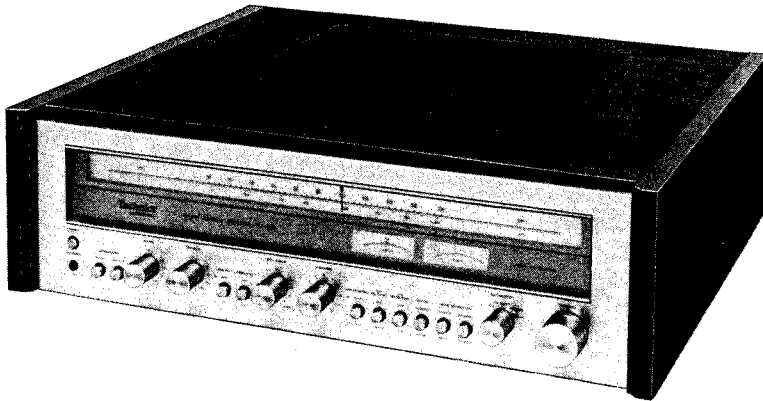


Service Manual

FM/AM STEREO RECEIVER

SA-5570

(M), (MC)



- The model SA-5570 (M) is available in America only.
- The model SA-5570 (MC) is available in Canada only.

Simulated wood cabinet

TECHNICAL SPECIFICATIONS

(Specifications are subject to change without notice for further improvement.)

AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz
both channels driven
0.1% total harmonic distortion
85W per channel (8 ohms)

20Hz~20kHz continuous power output
both channels driven
0.1% total harmonic distortion
90W per channel (4 ohms)

1 kHz continuous power output
both channels driven 93W per channel (8 ohms)
0.1% total harmonic distortion 108W per channel (4 ohms)

Total harmonic distortion

0.1% at rated power (20 Hz~20 kHz)
0.08% at half power (20 Hz~20kHz)
0.05% at half power (1 kHz)

Intermodulation distortion

Damping factor 55 (8 ohms)

Input sensitivity and impedance

PHONO 2.5mV/47kilohms
AUX 150mV/35kilohms
TAPE 1, 2 PLAYBACK 150mV/35kilohms
PHONO maximum input voltage (1 kHz, RMS) 150mV

S/N (IHF,A)

PHONO 78 dB
AUX 95 dB

Frequency response

PHONO RIAA standard curve ± 0.2 dB
AUX 20 Hz~20 kHz, ± 0.5 dB

Tone controls

BASS 50 Hz, +13 dB~-13 dB
TREBLE 10 kHz, +12 dB~-12 dB
Loudness control (volume at -30 dB) 50 Hz, +9 dB
High filter 7 kHz, -6 dB/oct.
Low filter 100Hz, -6 dB/oct.

Output voltage

TAPE 1, 2 REC OUT 150mV

Load impedance

MAIN or REMOTE 4~16 ohms
MAIN + REMOTE 8~16 ohms

FM TUNER SECTION

Frequency range 88~108 MHz
Sensitivity 10.3dBf
1.8 μ V (IHF '58)

50 dB quieting sensitivity
MONO 13.2 dB f, 2.5 μ V (IHF '58)
STEREO 36.2 dB f, 35.4 μ V (IHF '58)

Total harmonic distortion
MONO 100 Hz 0.15%, 1kHz 0.15%, 6kHz 0.3%
STEREO 100Hz 0.25%, 1kHz 0.25%, 6 kHz 0.4%

S/N MONO 75 dB
STEREO 72 dB

Frequency response 20 Hz~15 kHz, $+0.2$ dB, -0.3 dB

Alternate channel selectivity

Capture ratio 70 dB

Image rejection at 98 MHz

53 dB

IF rejection at 98 MHz

80 dB

Spurious response rejection at 98 MHz

78 dB

AM suppression

55 dB

Stereo separation

1 kHz 45 dB

10 kHz 35 dB

Leak carrier -6 dB

AM TUNER SECTION

Frequency range 525~1605kHz

Sensitivity 30 μ V, 260 μ V/m

Selectivity 21 dB

Image rejection at 1000 kHz 47 dB

IF rejection at 1000 kHz 40 dB

GENERAL

Power consumption 270W (only for America)

590VA (only for Canada)

Power supply AC 120V 60Hz

Dimensions (W x H x D) 21 $\frac{1}{8}$ " x 6 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "

(541 x 155 x 420) mm

Weight 38.9 lb. (17.7 kg)

Weights and dimensions shown are approximate.

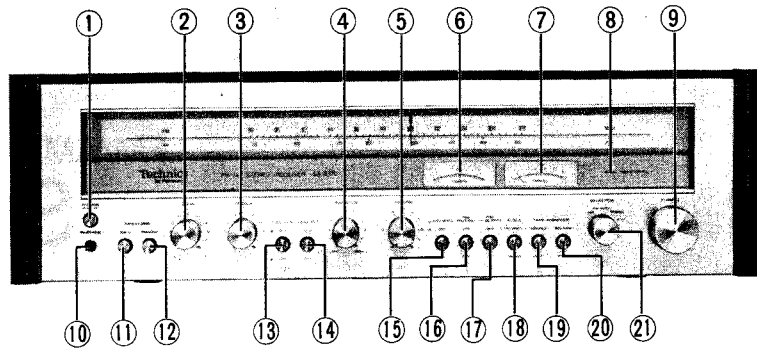
Technics
by Panasonic

Panasonic Company
Division of Matsushita Electric
Corporation of America
One Panasonic Way, Secaucus,
New Jersey 07094

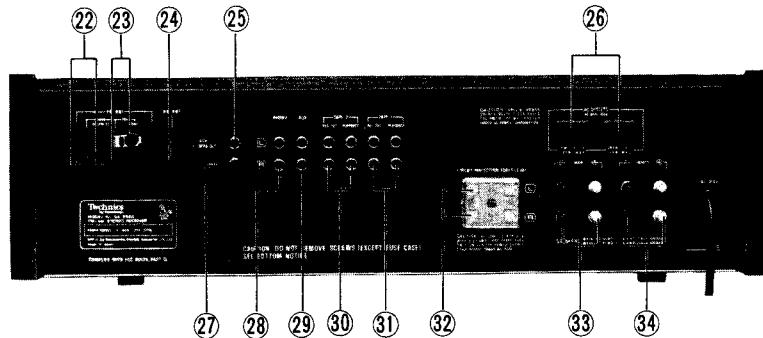
Matsushita Electric of Hawaii, Inc.
320 Waiakamilo Road, Honolulu,
Hawaii 96817

Matsushita Electric of Canada Ltd.
40 Ronson Drive, Rexdale,
Ontario, Canada M9W 1B5

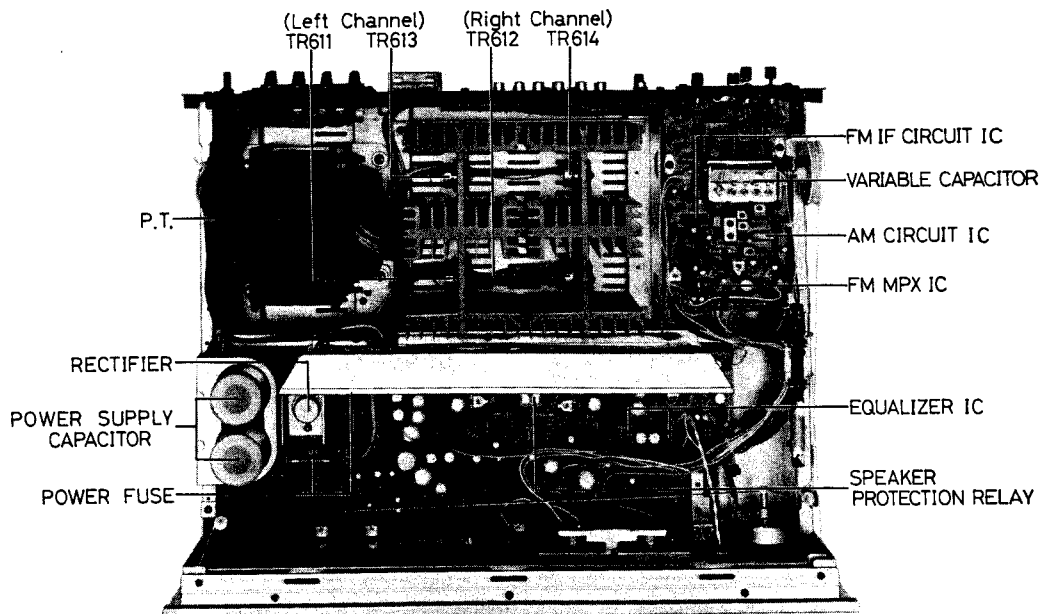
■ LOCATION OF CONTROLS



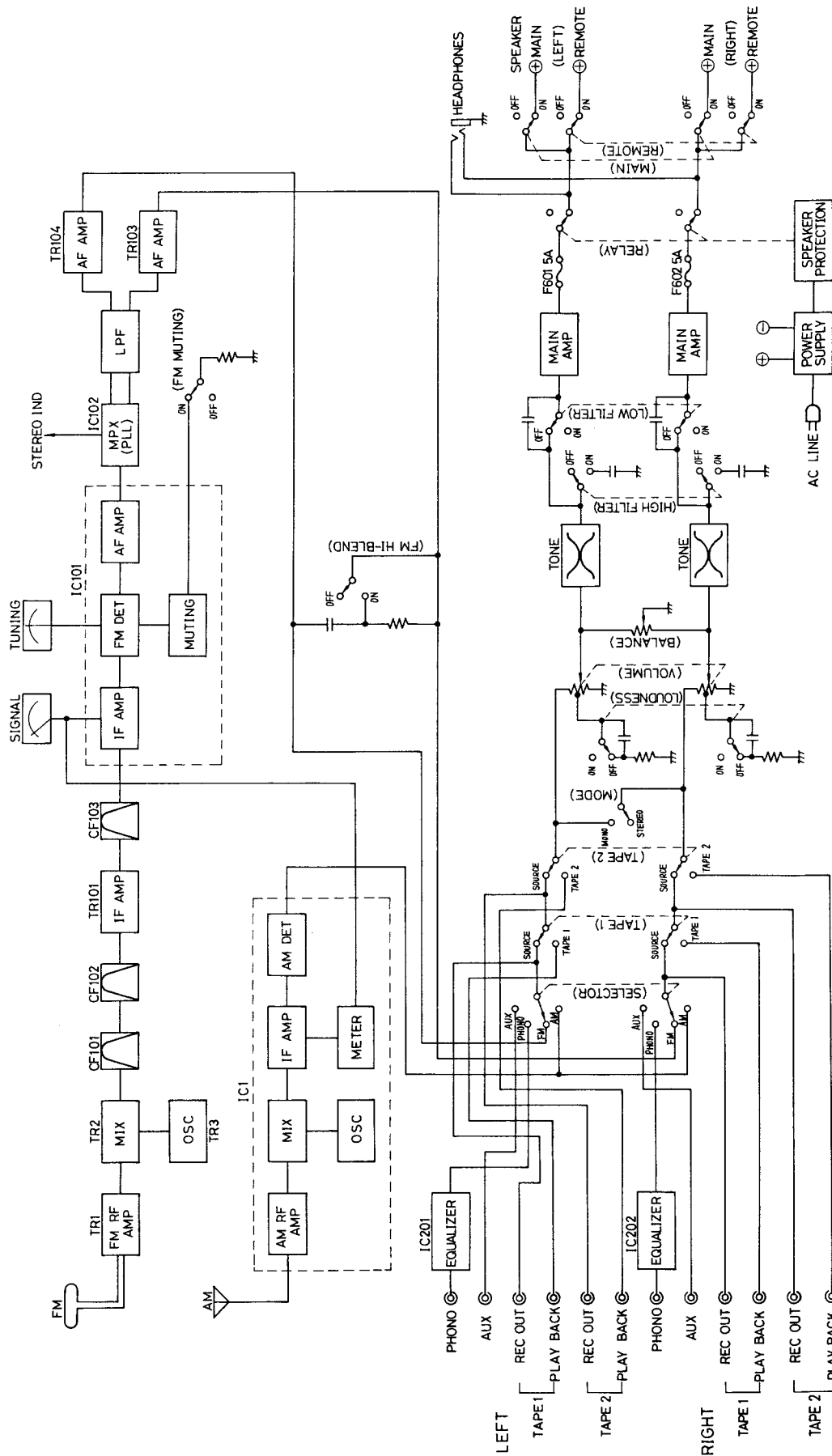
- | | | |
|----------------------|-------------------------|--------------------------------|
| ① POWER SWITCH | ⑧ FM STEREO INDICATOR | ⑮ LOUDNESS SWITCH |
| ② BASS CONTROL | ⑨ TUNING CONTROL | ⑯ FM MUTING SWITCH |
| ③ TREBLE CONTROL | ⑩ HEADPHONES JACK | ⑰ FM HI-BLEND SWITCH |
| ④ BALANCE CONTROL | ⑪ MAIN SPEAKER SWITCH | ⑱ MODE SWITCH |
| ⑤ VOLUME CONTROL | ⑫ REMOTE SPEAKER SWITCH | ⑲ TAPE MONITOR (TAPE 1) SWITCH |
| ⑥ FM TUNING METER | ⑬ LOW FILTER SWITCH | ⑳ TAPE MONITOR (TAPE 2) SWITCH |
| ⑦ FM/AM SIGNAL METER | ⑭ HIGH FILTER SWITCH | ㉑ SELECTOR SWITCH |



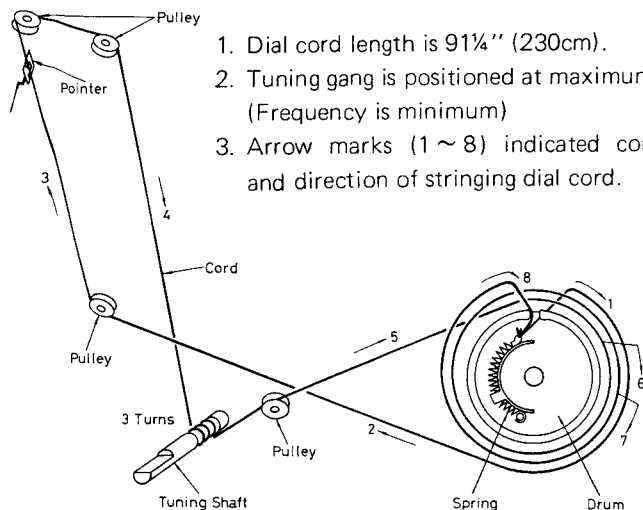
- | | | |
|-------------------------------|------------------------------------|------------------------------------|
| ⑳ FM ANTENNA TERMINALS (300Ω) | ㉑ GROUND TERMINAL | ㉒ SPEAKER CIRCUIT PROTECTION FUSES |
| ㉓ FM ANTENNA TERMINALS (75Ω) | ㉒ PHONO INPUT TERMINALS | ㉓ MAIN SPEAKER TERMINALS |
| ㉔ AM ANTENNA TERMINAL | ㉓ AUX INPUT TERMINALS | ㉔ REMOTE SPEAKER TERMINALS |
| ㉕ 4CH MPX OUTPUT TERMINAL | ㉔ TAPE DECK 2 CONNECTION TERMINALS | |
| ㉖ AC OUTLETS | ㉕ TAPE DECK 1 CONNECTION TERMINALS | |



■ BLOCK DIAGRAM

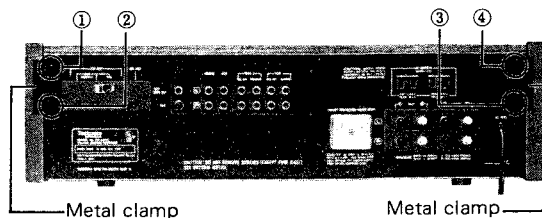


■ DIAL CORD INSTALLATION GUIDE



■ TO REMOVE CABINET

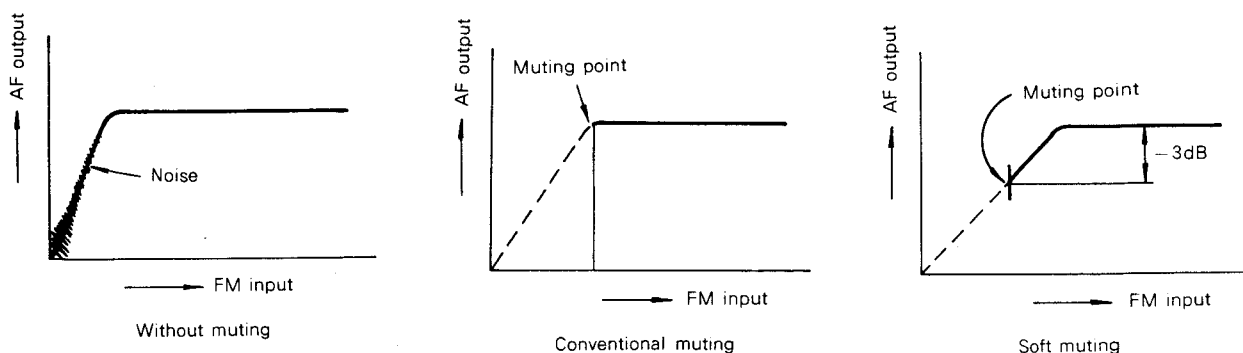
1. Remove metal clamp-mounting screws (nos.①~④) from rear panel.
2. Remove metal clamp.
3. Remove four (4) cabinet mounting screws. (Right and left side)
4. Remove cabinet from chassis.
5. To reassemble, reverse above procedure.



■ SERVICE AID

● FM soft muting

When moving the tuning point away from the point of maximum output (optimum tuning) the signal output gradually decreases until it reaches zero output. (between stations.) In conventional muting circuits a sharp "popping" noise is heard when tuning, due to the sudden (switch-like) action of the muting circuit from zero signal to full output. This "Soft muting" circuit lets the sound fade more gradually, making it more natural and pleasant to listen to.



● Circuitry principles

This circuit makes use of the VBE characteristics of TR102 (2SC828). (Refer to fig. 1.) The detected voltage from the FM IF input signal is applied to the base of TR102. When the FM input signal increases this voltage increases, causing the emitter current, to increase, which, in turn, decreases the collector voltage of TR102, making the collector voltage approach ground potential. Because the collector of TR102 is connected to the IC101 IF amplifier through the muting switch, a change in the collector voltage will control the output of the IC101 IF amplifier. When the FM input signal increases to the point that the base voltage of TR102 reaches its operating point (about 0.6V), the output of IC101 reaches maximum.

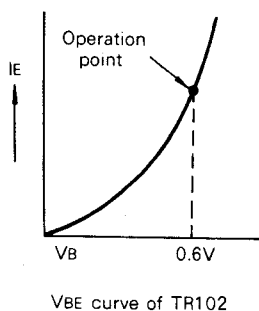
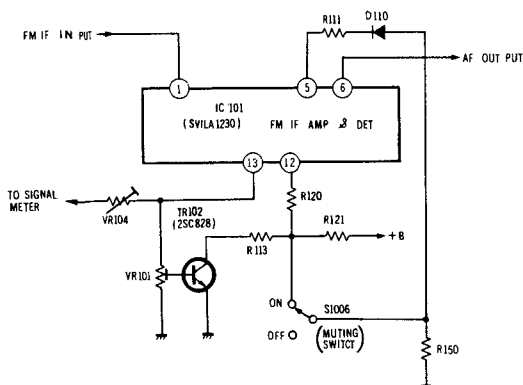


Fig. 1.

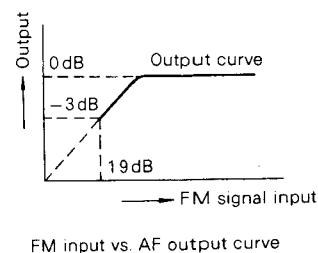


Fig. 2

ALIGNMENT INSTRUCTIONS

MAIN AMP (ICQ) ALIGNMENT						
Notes: 1. The "Icq" adjustment should be started about 5 minutes after setting the power switch to the ON position. 2. Speakers switch to OFF position.						
1 Connect DC VTVM between TP602 and TP603 (Left channel), TP604 and TP605 (Right channel) 2 Adjust VR601 (Left channel) and VR602 (Right channel) to 12mV on DC VTVM indication.						
Notes: 1. Muting switch OFF 2. Band selector switch.....AM/FM AUTO (FM, RF, FM-IF) 3. 300Ω FM dummy antenna.....Refer to fig. 1 4. Speaker switch.....ON 5. Mode switch..... MONO 6. Maintain line voltage at 120 volts. 7. Output of signal generator should be no higher than necessary to obtain an output reading.						
SIGNAL GENERATOR or SWEEP GENERATOR	DIAL SETTING [DISTANCE]	INDICATOR (VTVM or SCOPE) (DISTORTION METER)	ADJUSTMENT POINTS	REMARKS		
CONNECTION	FREQUENCY					
AM ALIGNMENT						
2	High side through 0.001μF to AM antenna trimmer terminal. Common to chassis.	455kHz	Point of non-interference	Connect vertical amplifier of scope to TP1 through 0.1μF.	T1 (1st IFT) (P) T2 (2nd IFT) (S) T3 (IF Trap)	Adjust for maximum output.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner.	600kHz (30% Mod. with 400Hz)	600kHz [1½" (31.5mm)]	Connect VTVM or scope to speaker terminal of receiver.	L6 (OSC Coil) L8 (ANT Coil)	Adjust for maximum output. Adjust L8 by moving coil bobbin along ferrite core.
4	Fashion loop of several turns of wire and radiate signal into loop of tuner.	1500kHz (30% Mod. with 400Hz)	1500kHz [7½" (180.1mm)]	Connect VTVM or scope to speaker terminal of receiver.	CT5 (OSC Trimmer) CT4 (ANT Trimmer)	Adjust for maximum output. Repeat steps (3) and (4).
FM-IF ALIGNMENT						
5	No Signal	Point of non-interference.	Tuning meter of set.		T101 (DISCRI IFT)(A) Orange Core	Adjust for center position of tuning meter.
FM-RF ALIGNMENT						
6	Connect to FM antenna terminal through FM dummy antenna.	90MHz (100% Mod. with 400Hz)	90MHz [¾" (19.2mm)]	Connect VTVM or scope to speaker terminal of receiver.	L5 (OSC Coil) L3 (DET Coil) L2 (ANT Coil)	Adjust for maximum output.
7	Connect to FM antenna terminal through FM dummy antenna.	106MHz (100% Mod. with 400Hz)	106MHz [6¾" (176.2mm)]	Connect VTVM or scope to speaker terminal of receiver.	CT3 (OSC Trimmer) CT2 (DET Trimmer) CT1 (ANT Trimmer)	Adjust for maximum output. Repeat steps (6) and (7).
FM MONO DISTORTION ALIGNMENT						
8	Connect to FM antenna terminal through FM dummy antenna.	100MHz (100% Mod. with 400Hz)	100MHz	Connect distortion meter to speaker terminal of receiver.	T101 (DISCRI IFT)(B) Green Core	Adjust for minimum distortion meter indication.
FM SIGNAL METER ALIGNMENT						
9	① Apply 100MHz FM signal of 100 dB, 400Hz 30% modulation to FM antenna terminal through FM dummy antenna.		③ Adjust VR104 for about 4.7 point of signal meter indication.			
② Tuning 100MHz for maximum output by speaker terminal.						
SOFT MUTING LEVEL ALIGNMENT Refer to SERVICE AID on page 4.						
10	① Muting switch to "off".		④ Muting switch to "on".			
② Apply a 60 dB (1mV) mono RF FM signal to the antenna terminals.						
⑤ Reduce FM signal to 19 dB (9μV).						
③ Adjust Volume Control of receiver to indicate 0 dB on meter across speaker terminals.						
⑥ Adjust VR101 to -3 dB on output meter. Refer to fig. 4.						
FM MPX PILOT ALIGNMENT						
Using a frequency counter			Using alternate system			
① 98MHz Non-modulated mono signal applied to set.			① Apply stereo signal from generator or stereo station to receiver.			
② Muting switch to "on".			② Adjust VR102 until stereo indicator lights up. Cement arm of VR102 as shown in fig. 2.			
③ Connect frequency counter to TP101 through resistor (100kΩ).						
④ Adjust VR102 to 19kHz ±30Hz.						

STEREO SEPARATION ALIGNMENT

Note: 1. Stereo modulator Connect stereo modulator output to EXT. MOD. terminal of signal generator. Internal OSC 1kHz Pilot signal modulation 10% 2. Signal generator Frequency approximately 98MHz. Output level 72 dB (IHF). Modulation mode to FM. 3. Band selector switch FM AUTO 4. Mode switch STEREO				
SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE and MOD. RATE	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
12	FM antenna terminal through dummy antenna.	L (and R) 30% Modulation.	VR103	Adjust for minimum right (and left) output.

Alignment Points (FM/AM RF & IF Circuit)

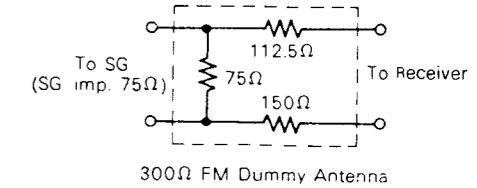
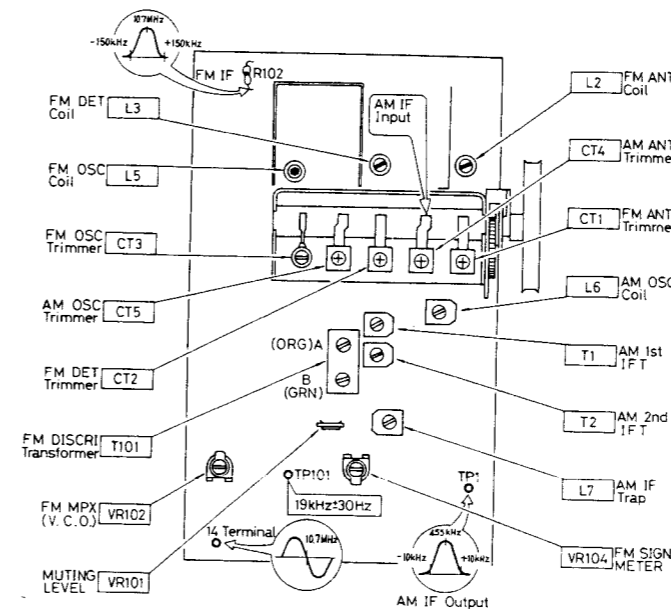
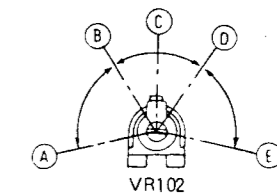


Fig. 1



- (A) ~ (B), (D) ~ (E) : Stereo OFF Position
- (B) ~ (D) : Stereo ON Position (Indicator Lighting)
- (C) : Adjust Point of Pilot Circuit.

Fig. 2

Alignment Points (AF Amplifier Circuit)

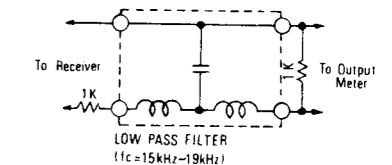
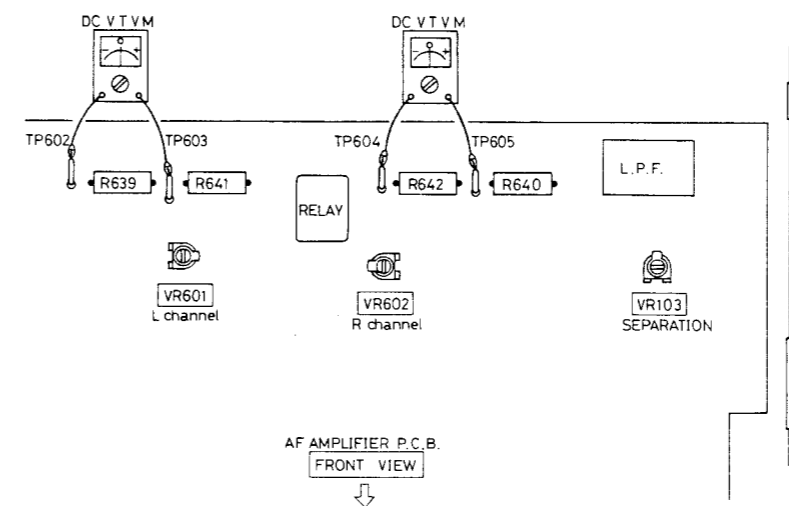
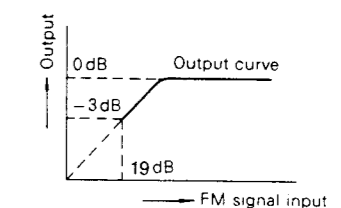


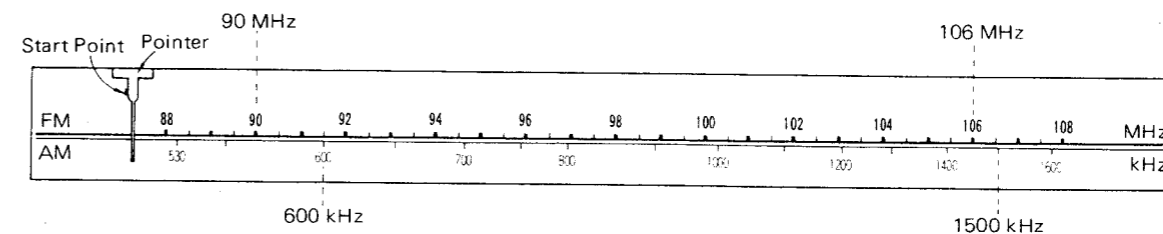
Fig. 3



FM input vs. AF output curve

Fig. 4

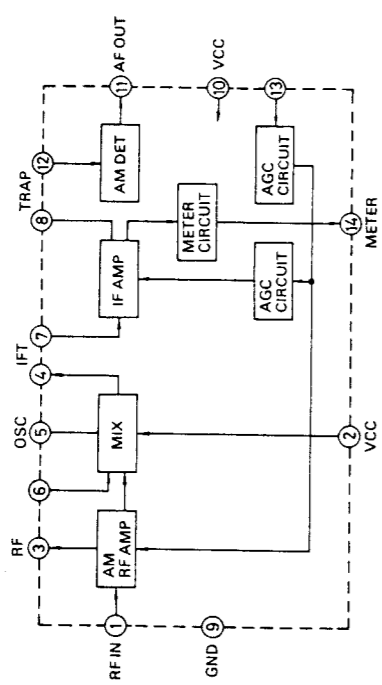
Dial Scale and Start Point of Dial Pointer



■ BLOCK DIAGRAM OF INTEGRATED CIRCUITS

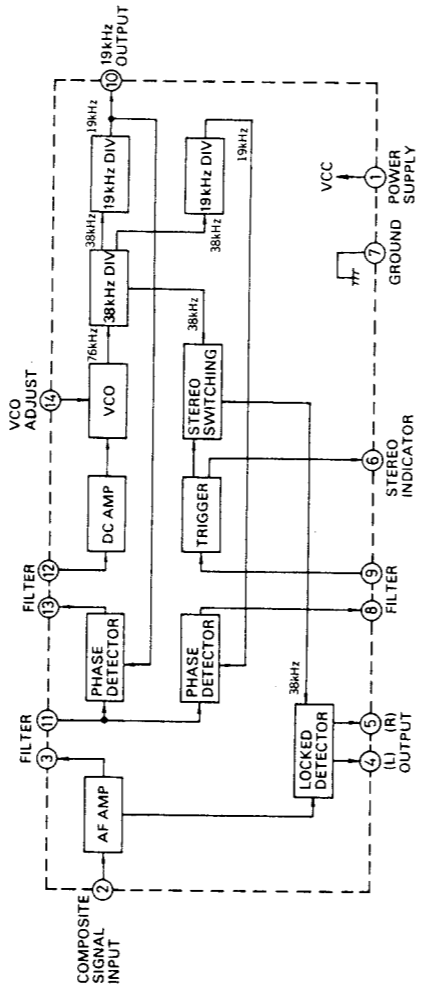
● IC1 (SVIHA1151)

AM RF, OSC, MIX, IF AMP & AM DETECTOR CIRCUIT



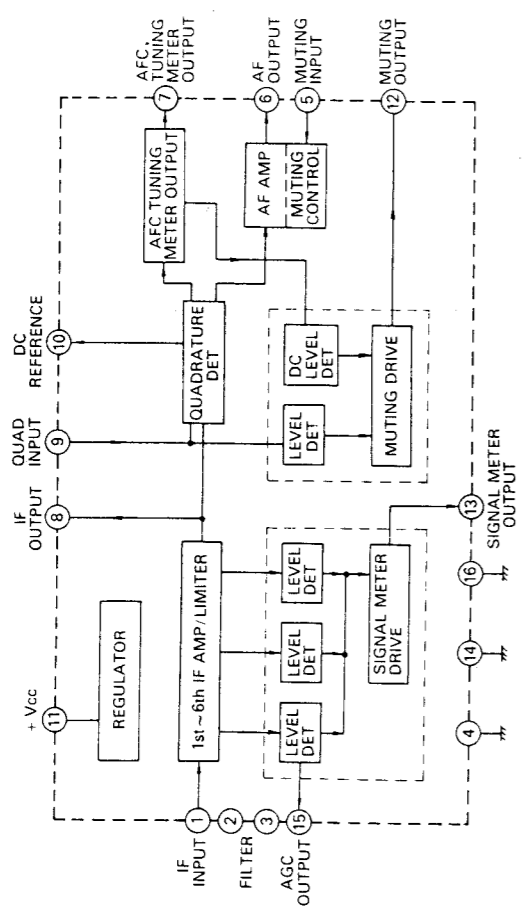
● IC102 (SVIHA1156)

FM MULTIPLEX CIRCUIT



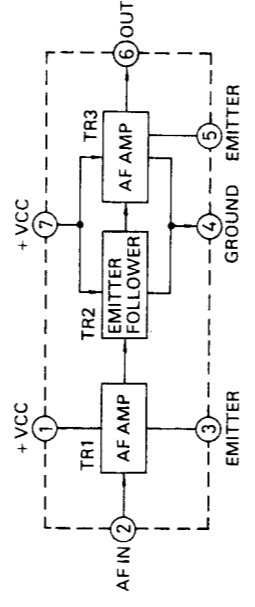
● IC101 (SVILA1230)

FM IF AMP, FM DETECTOR & MUTING CIRCUIT

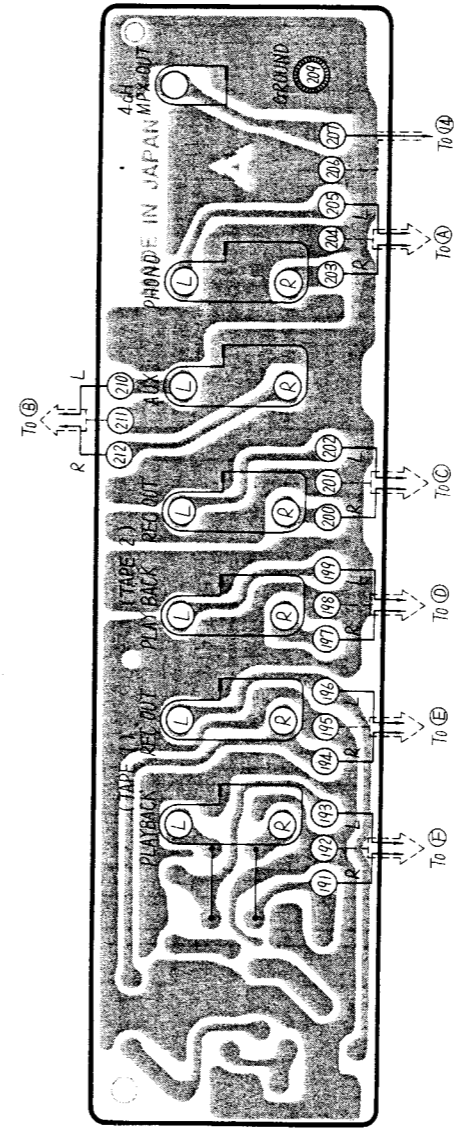


● IC201, 202 (SVITA7129P)

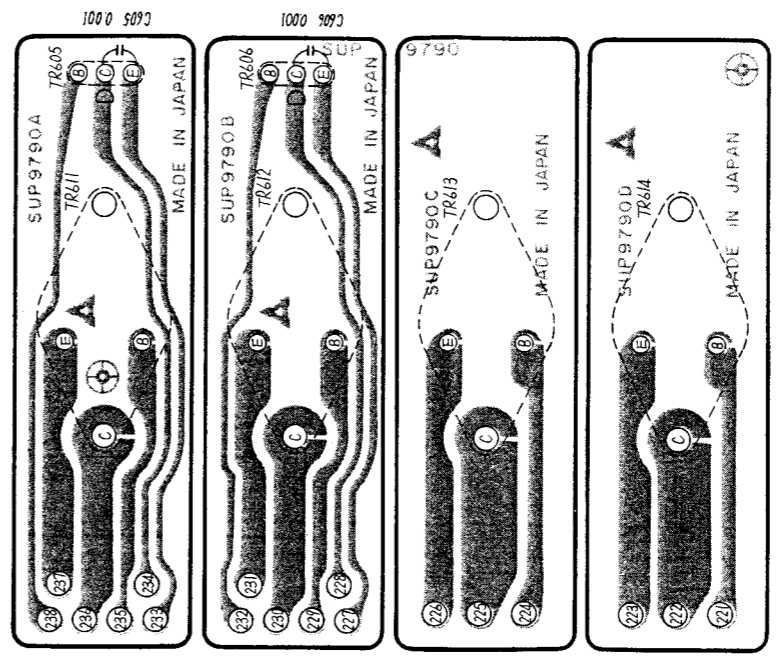
EQUALIZER AMPLIFIER



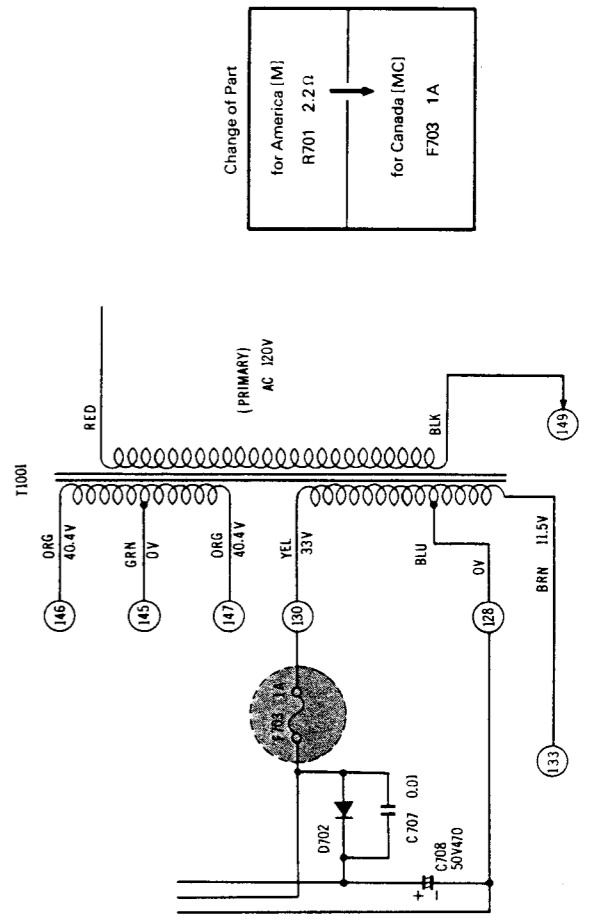
■ INPUT & TAPE DECK CONNECTION TERMINAL CIRCUIT BOARD



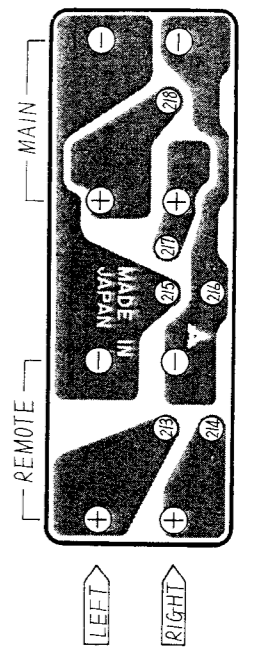
■ POWER TRANSISTOR CIRCUIT BOARDS



■ POWER SUPPLY CIRCUIT FOR CANADA [MC]

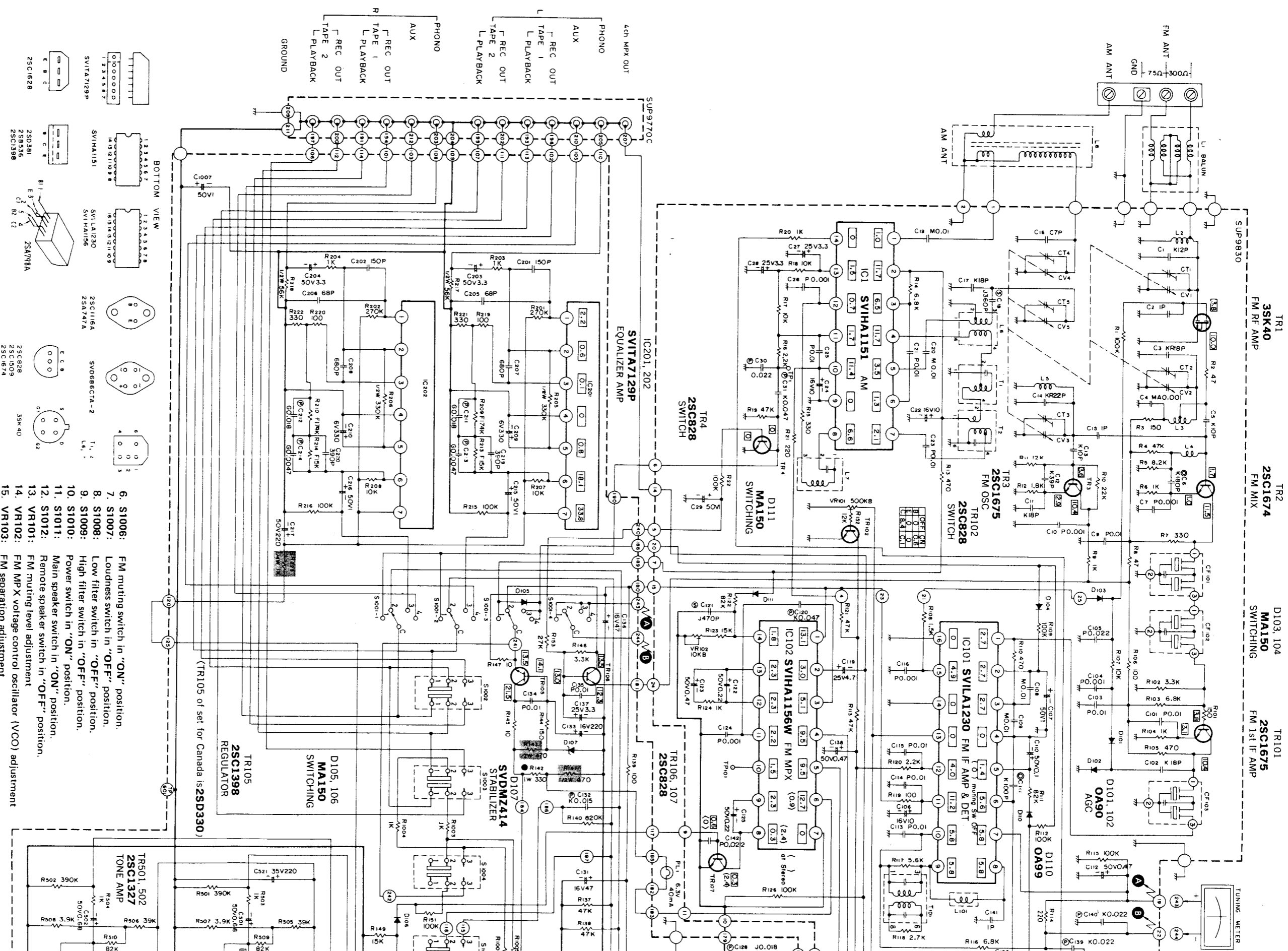


■ SPEAKERS TERMINAL CIRCUIT BOARD



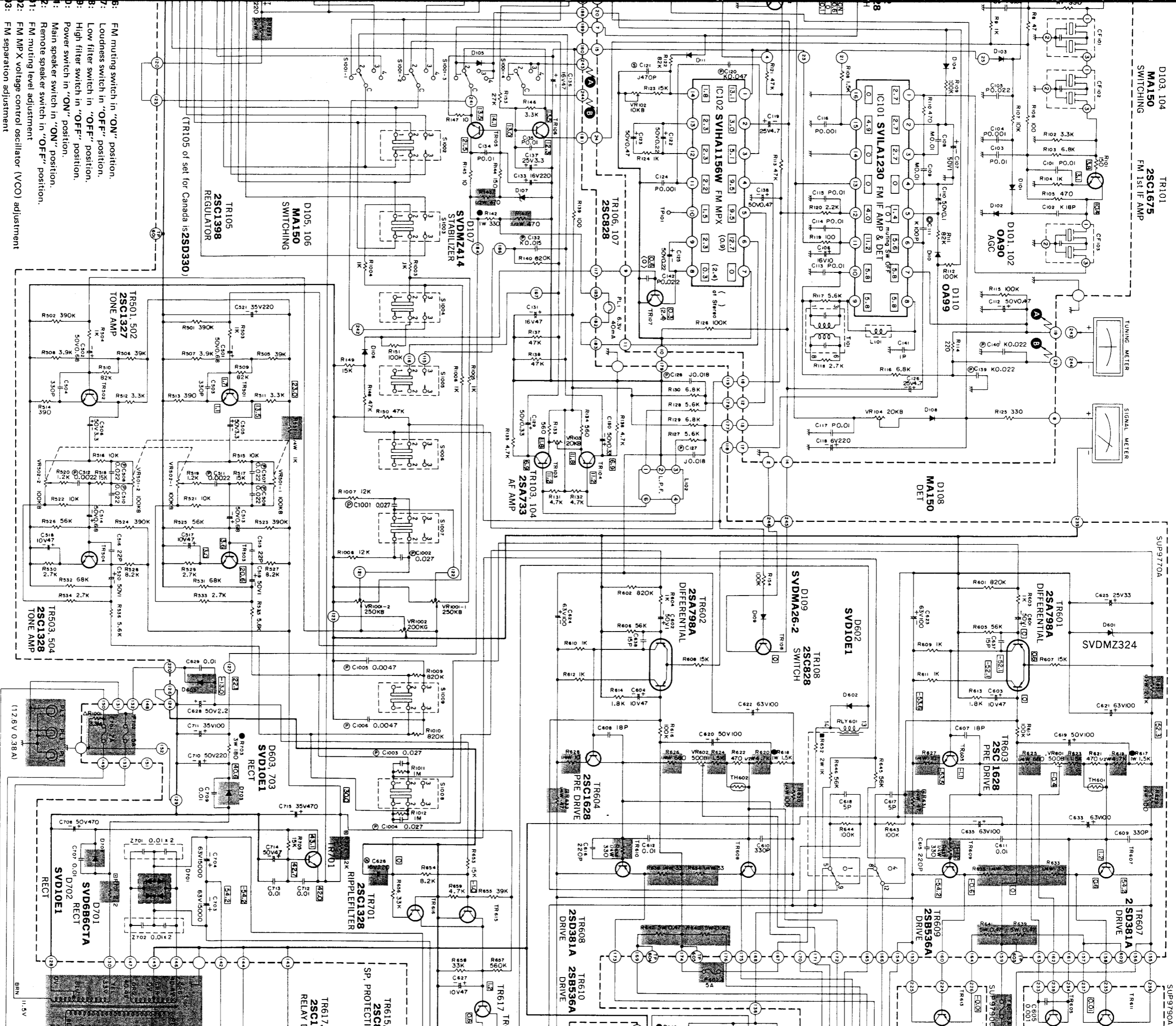
Schematic Diagram.....Model SA-5570

(This schematic diagram may be modified at any time with the development of new technology)



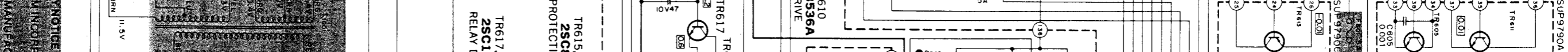
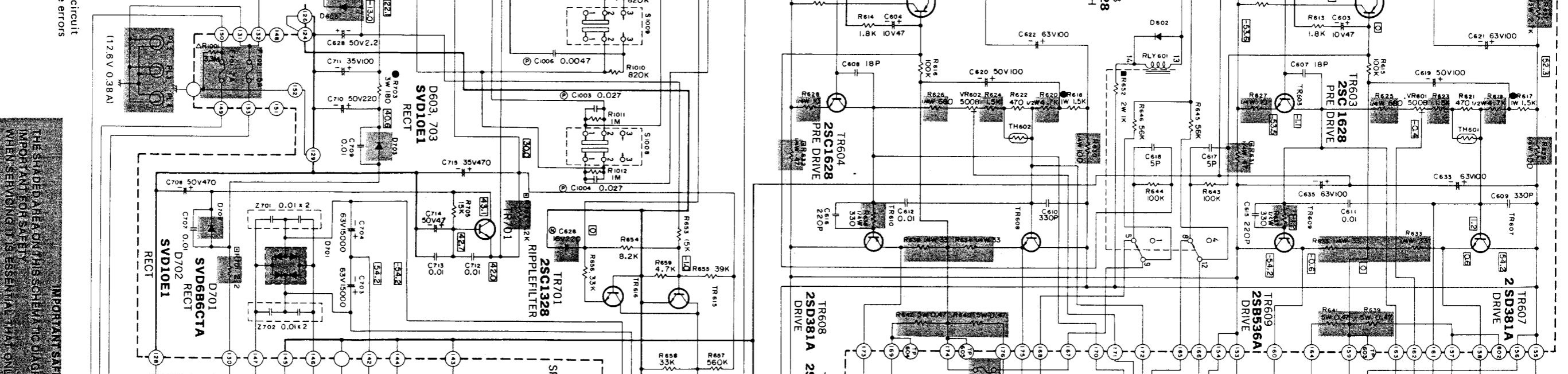
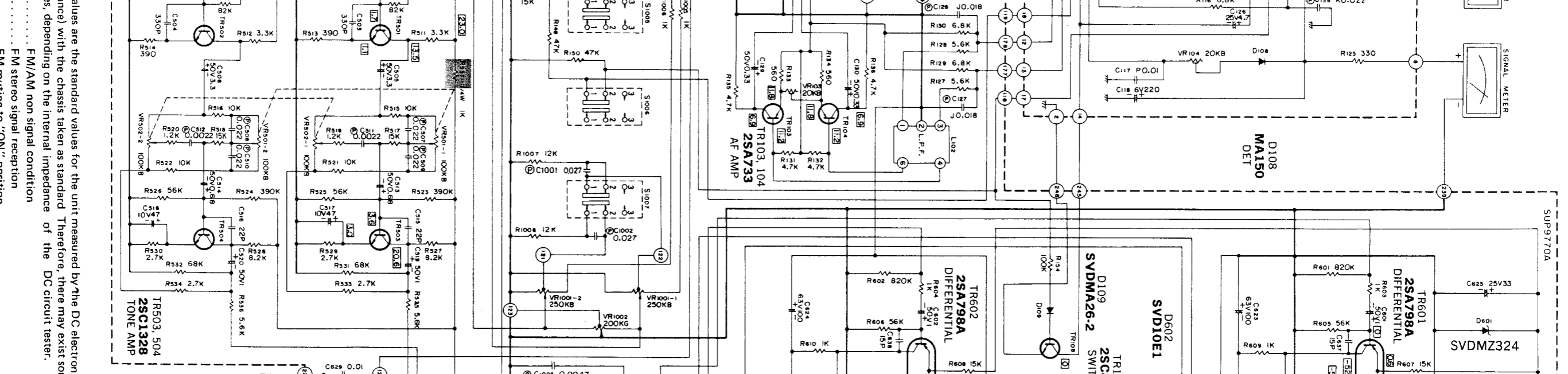
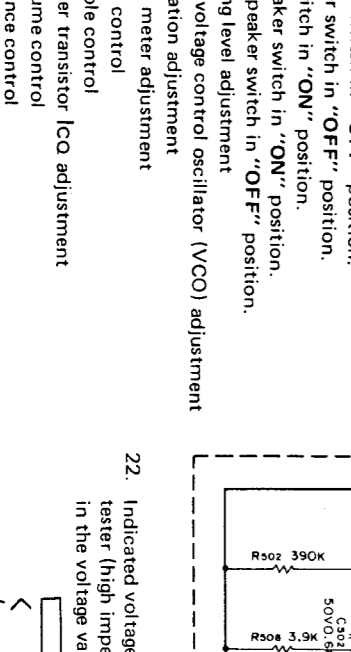
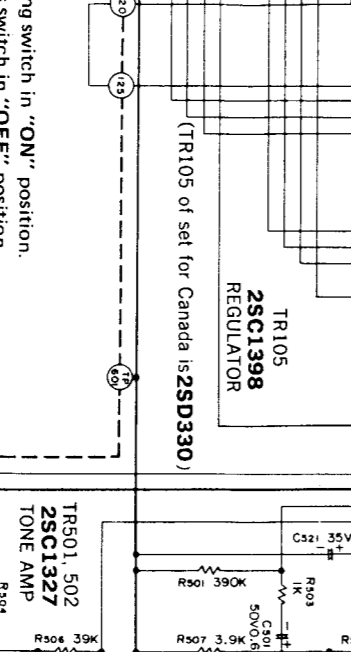
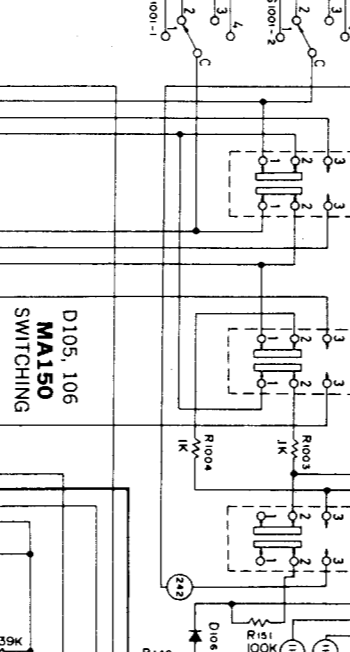
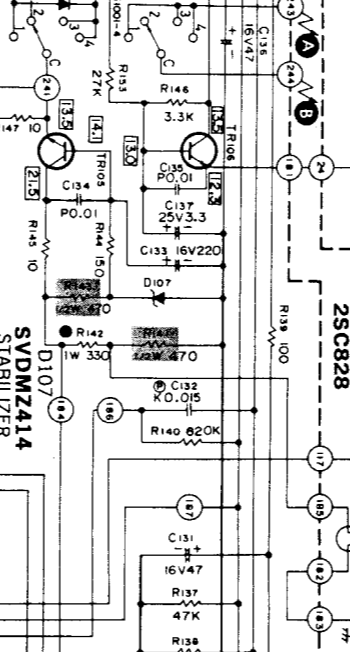
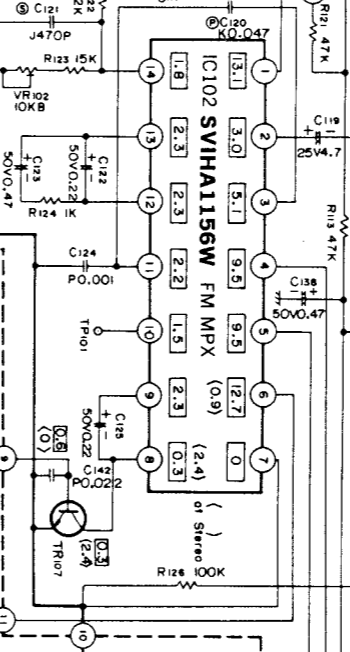
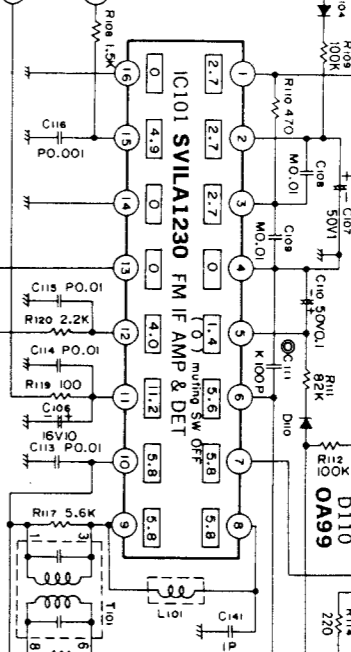
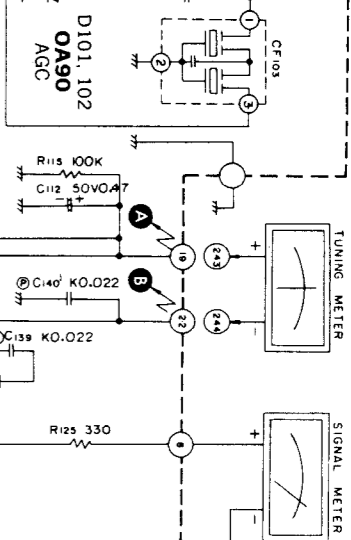
- Notes:**
1. S1001: Selector switch in "FM AUTO" position.
 2. S1001: $\text{FM AUTO} \leftrightarrow \text{PHONO} \leftrightarrow \text{AUX}$
 3. S1003: Tape monitor (TAPE 1) switch in "SOURCE" position.
 4. S1004: Mode switch in "STEREO" position.
 5. S1005: FM hi-blend switch in "OFF" position.
 6. S1006: FM muting switch in "ON" position.
 7. S1007: Loudness switch in "OFF" position.
 8. S1008: Low filter switch in "OFF" position.
 9. S1009: High filter switch in "OFF" position.
 10. S1010: Power switch in "ON" position.
 11. S1011: Main speaker switch in "ON" position.
 12. S1012: Remote speaker switch in "OFF" position.
 13. VR101: FM muting level adjustment
 14. VR102: FM MPX voltage control oscillator (VCO) adjustment
 15. VR103: FM separation adjustment
 16. VR104: FM signal meter adjustment
 17. VR501: Bass control
 18. VR502: Treble control
 19. VR601, 602: Power transistor ICQ adjustment
 20. VR1001: Volume control
 21. VR1002: Balance control
 22. Indicated voltage values (tester (high impedance) in the voltage values, de

atic diagram may be modified at any time with the development of new technology)



D103, 104
MA150
SWITCHING

TR101
25C1675
FM 1st IF AMP

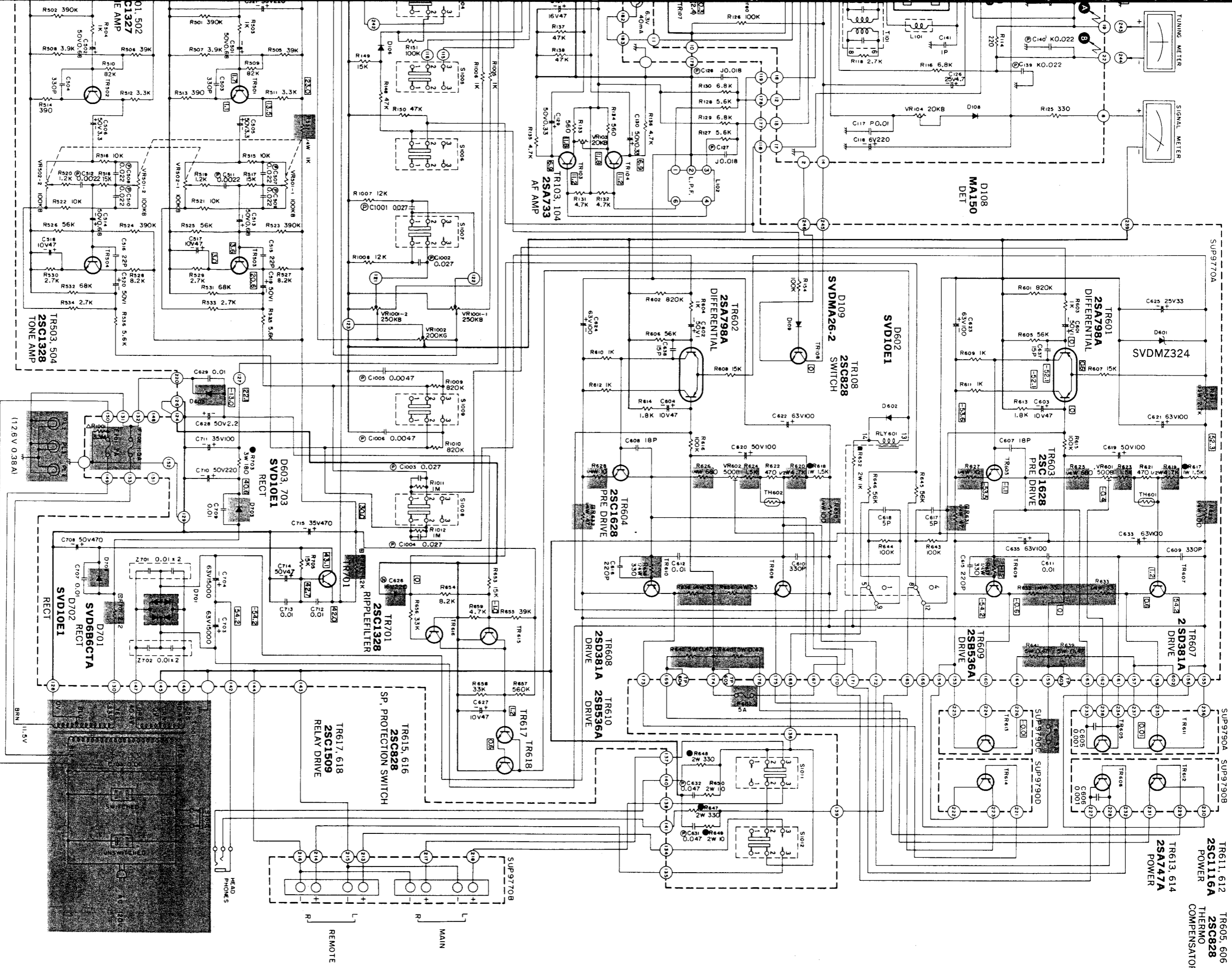


22. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

FM/AM non signal condition
 FM stereo signal reception
 FM muting to "ON" position

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INDICATES IMPORTANT SAFETY INFORMATION. WHEN SERVICING THIS EQUIPMENT, ONLY MANUFACTURER'S REPAIR MANUALS SHOULD BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREA.



Standard voltage values are the standard values for the unit measured by the DC electronic circuit (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

FM/AM non signal condition
 FM stereo signal reception
 FM muting to "ON" position

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

TR611, 612
2SC116A
POWER

TR605, 606
2SC828
THERMO
COMPENSATOR

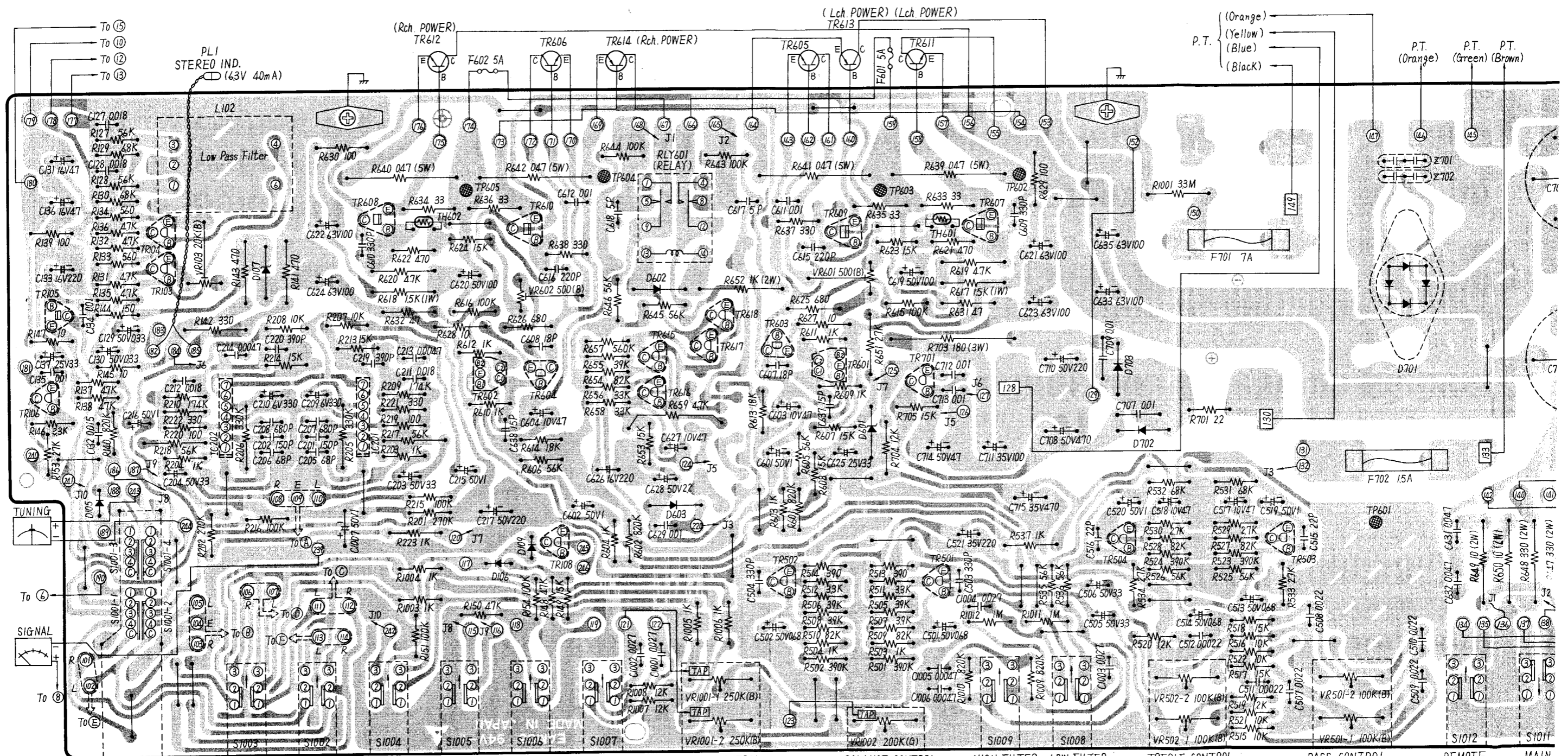
TR613, 614
2SA747A
POWER

REMOTE

MAIN

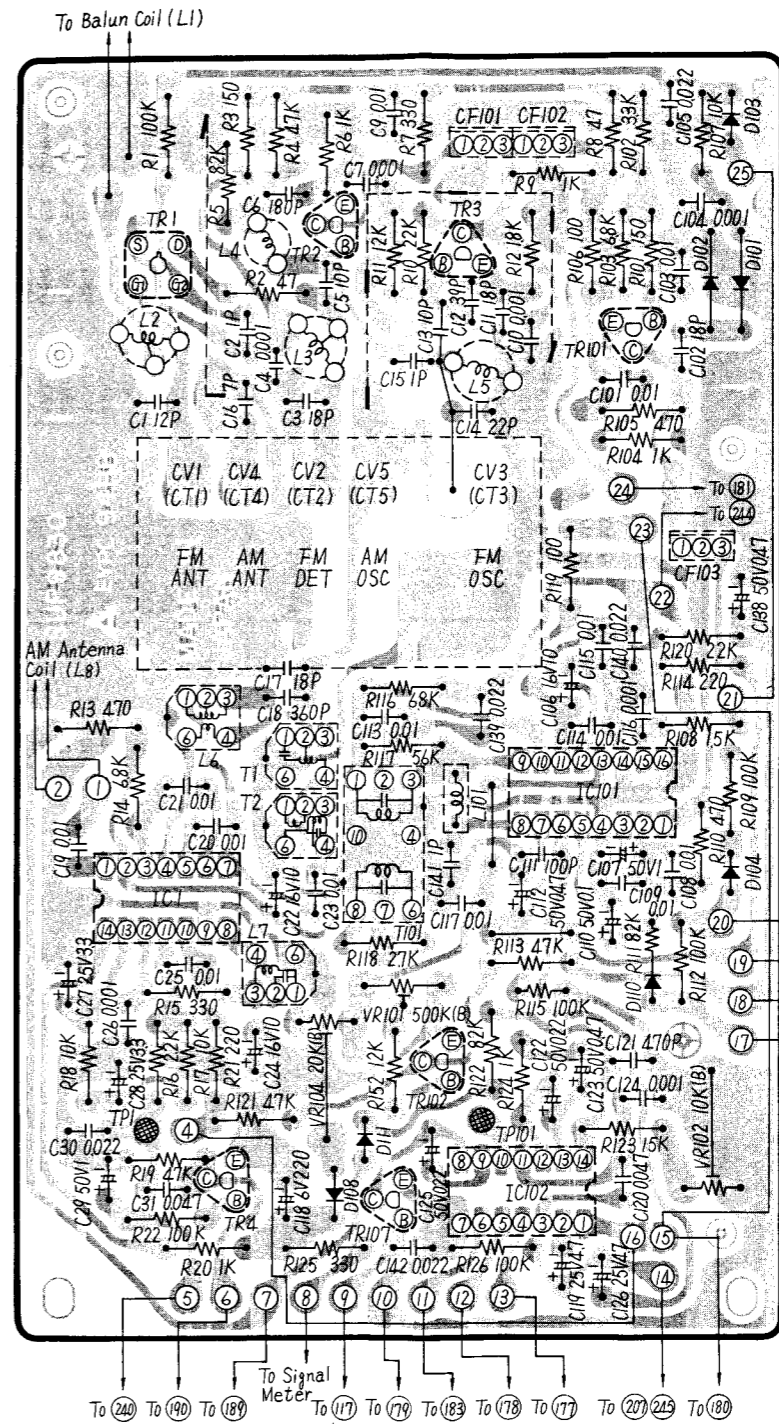
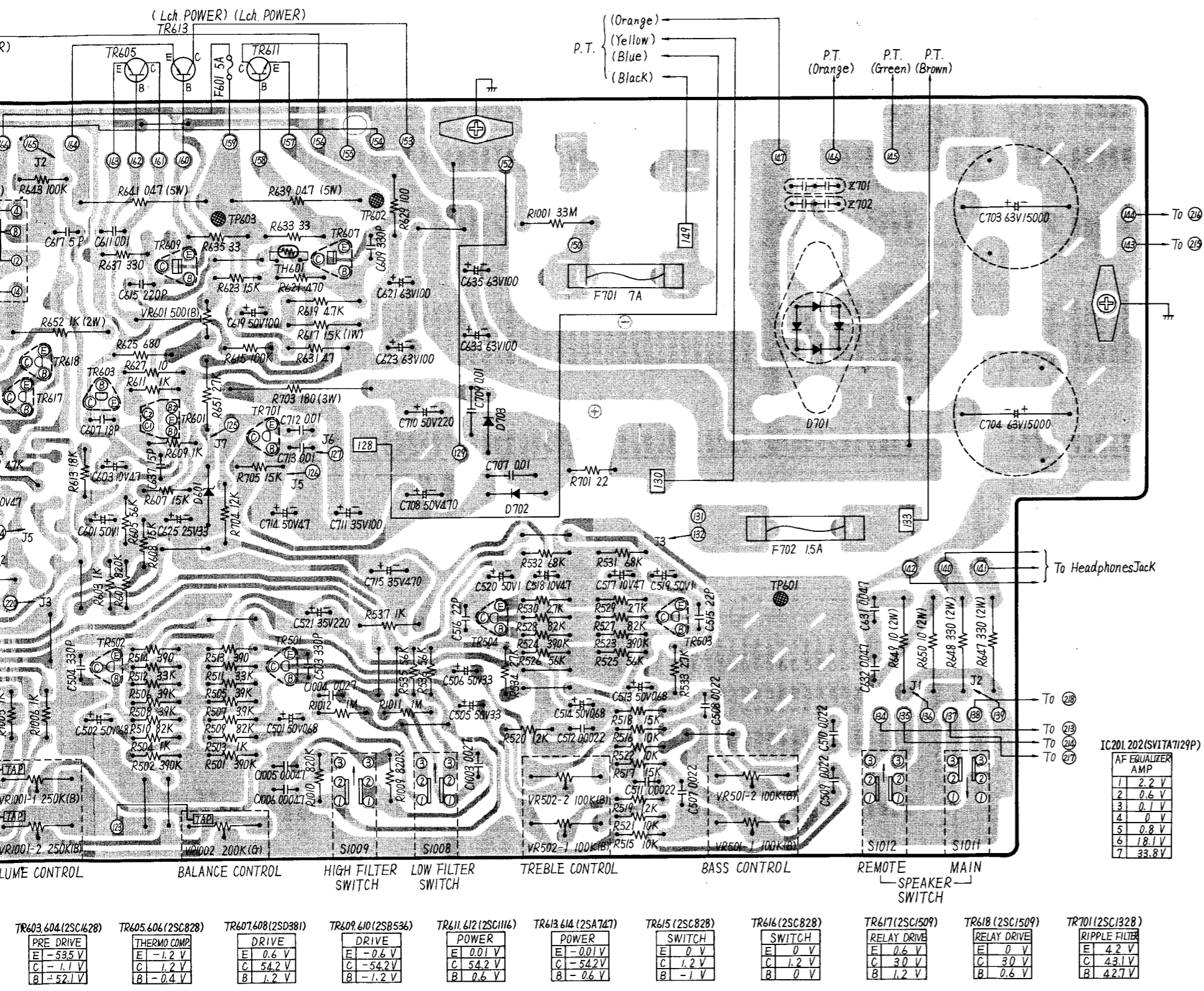
HEAD PHONES

EQUALIZER, TONE CONTROL, MAIN AMPLIFIER & POWER SUPPLY CIRCUIT BOARD



TR103 104 (2SA733) AF AMP E 11.8 V C 6.9 V B 11.2 V	TR105 (2SC1398) REGULATOR E 13.5 V C 21.5 V B 14.1 V	TR106 (2SC828) REGULATOR E 12.3 V C 13.5 V B 13 V	TR108 (2SC828) SWITCHING E 0 V C 0 V B 0 V	TR501.502 (2SC1327) TONE AMP E 1.1 V C 13.5 V B 1.7 V	TR503.504 (2SC1328) TONE AMP E 3 V C 20.6 V B 3.6 V	TR601.602 (2SA798) DIFFERENTIAL E 0.6 V B1 0 V B2 0 V C1 -52.1 V C2 -52.1 V	TR603.604 (2SC428) PRE DRIVE E -53.5 V C -1.1 V B -52.1 V	TR605.606 (2SC828) THERMO COMP E -1.2 V C 1.2 V B -0.4 V	TR607.608 (2SD381) DRIVE E 0.6 V C 54.2 V B 1.2 V	TR609.610 (2SB536) DRIVE E -0.6 V C -54.2 V B -1.2 V	TR611.612 (2SC1114) POWER E 0.01 V C 54.2 V B 0.6 V	TR613.614 (2SA747) POWER E -0.01 V C 54.2 V B -0.6 V	TR615 (2SC828) SWITCH E 0 V C 1.2 V B -1 V	TR616 (2SC828) SWITCH E 0 V C 1.2 V B 0 V	TR617 (2SC509) RELAY DRIVE E 0.6 V C 30 V B 1.2 V	TR61 REF E C B
--	---	--	---	--	--	--	--	---	--	---	--	---	---	--	--	--------------------------------

FM RF, IF AMPLIFIER, FM MPX & AM CIRCUIT BOARD



IC1 (SV1HA1151)

AM RF OSC MIX IF DET	V
1	1 V 8 6.6 V
2	11.7 V 9 0 V
3	6.5 V 11 11.4 V
4	11.7 V 11 1.7 V
5	3.5 V 12 0.7 V
6	1.3 V 13 1.5 V
7	2.1 V 14 0 V

IC101 (SV1LA1230)

FM IF AMP DISCR1	V
1	2.7 V 10 5.8 V
2	2.7 V 11 11.2 V
3	2.7 V 12 4 V
4	0 V 13 0 V
5	5.6 V 14 0 V
6	5.8 V 15 4.9 V
7	5.8 V 16 0 V
8	5.8 V 16 0 V
9	5.8 V 16 0 V
5	MUTING ON 1.4 V
5	MUTING OFF 0 V

IC102 (SV1HA1156W)

FM MPX	V
1	13.1 V 13.1 V
2	3 V 3 V
3	5.1 V 5.1 V
4	9.5 V 9.5 V
5	9.5 V 9.5 V
6	0.9 V 12.7 V
7	0 V 0 V
8	2.4 V 0.3 V
9	2.3 V 2.3 V
10	1.5 V 1.5 V
11	2.2 V 2.2 V
12	2.3 V 2.3 V
13	2.3 V 2.3 V
14	1.8 V 1.8 V

TR107 (2SC828)

SWITCHING	V
STEREO	0 V
MONO	0 V
E	0 V
C	2.4 V
B	0 V

TR1 (3SK40)

FM RF	V
S	0 V
D	1.0 V
G1	0 V
G2	3.8 V

TR2 (2SC1674)

FM MIX	V
E	1 V
C	11.5 V
B	1.7 V

TR3 (2SC1675)

FM OSC	V
E	2.9 V
C	10.4 V
B	3.6 V

TR4 (2SC828)

SWITCHING	V
E	0 V
C	0 V
B	0 V

TR101 (2SC1675)

FM IF	V
E	3.1 V
C	10.4 V
B	3.8 V

TR102 (2SC828)

MUT. SWITCH	V
OFF	0 V
ON	0 V
E	0 V
C	8.4 V
B	0 V

REPLACEMENT PARTS LIST

Important Safety Notices
 Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

NOTE: 1. Part numbers are indicated on most mechanical parts.
 Please use this part number for parts orders.

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
INTEGRATED CIRCUITS				
IC1	SVIHA1151	AM RF, IF Amplifier Mix, Osc & Det	1	
IC101	SVILA1230	FM IF Amplifier & Discriminator	1	
IC102	SVIHA1158W	FM MPX	1	
IC201, 202	SVITA7128P	Equalizer Amplifier	2	
TRANSISTORS				
TR1	3SK40-M	FM RF Amplifier	1	(FET)
TR2	2SC1674-M	FM Mixer	1	
TR3, 101	2SC1675-L1	FM Oscillator & IF Amplifier	2	
TR4, 102, 106	2SC1328-T	Switching, Tone Amplifier, Ripple Filter & Speakers Protection (in ranks S or T)	12	
107, 108, 501				
502, 503, 504,				
615, 616, 701				
TR103, 104	2SA7333-P1	AF Amplifier	2	
TR105 (MC)	2SC1398-Q	Regulator(Use in ranks P, Q or R)	1	
TR601, 602	2SD330-D	Differential Amplifier (ranks F2 or G2)	1	
TR603, 604	2SA798A-G2	Pre Drive Amplifier (ranks O or Y)	2	
TR605, 606	2SC1628-0	Thermo Compensation	2	
TR607, 608	2SC828A-R	Driver Amp	2	
TR609, 610	2SD381A-L9	Driver Amp	2	
	2S8538A-L9	Driver Amp	2	
TR611, 612	2SC1116A-0	Power Amp	2	Use in pair ranks (L or M)
TR613, 614	2SA747A-0	Power Amp	2	Use in pair ranks (O or Y)
TR617, 618	2SC1509-F-Q	Relay Driver (in ranks Q or R)	2	
DIODES				
D101, 102	OA90	AGC	2	
106, 108, 111	MA150	Muting Switching	6	
D110	OA99	Muting Switching	1	
D107	SVDMZ414	14V Zener, Voltage Stabilizer	1	
D109	SVDMZ26-2	Varistor	1	
D601	SVDMZ324	24V Zener, Voltage Stabilizer	1	
D602, 603, 702,	SVDI0E1	Rectifier	4	
703				
D701	SVDA86CTA#2	Rectifier	1	
COILS and TRANSFORMERS				
L1	SLAA4W1-3	Balun Coil	1	
L2	SLAA4N9	FM Antenna Coil	1	
L3	SLEA4N18	FM Detector Coil	1	
L4	ELO5A77	Choke Coil	1	
L5	SLOA4N9	FM Oscillator Coil	1	
L6	RL02M4P	AM Oscillator Coil	1	
L7	SLI2M401	AM IF Filter Coil	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
L8 (M)	SLF2D27	AM Antenna Coil, for America (M)	1	
L8 (MC)	SLOX180-1	AM Antenna Coil, for Canada (MC)	1	
L101	SLMA123-K	Choke Coil	1	
L102		Low Pass Filter	1	
T1	RLI2M201	AM IF Transformer	1	
T2	RLI2M202	AM IF Transformer	1	
T101 (M)	SLI4D513	FM IF Transformer	1	
T1001 (MC)	SLI5S11	Power Transf. for America (M), ETP1148UJIB	1	
T1001 (MC)	SLT8S17	Power Transformer, Set for Canada (MC)	1	
CERAMIC FILTERS				
CF101, 102, 103	SVFE107M48A	FM IF Circuit, Red, 10.7MHz	1	
	SVFE107M48B	FM IF Circuit, Blue, 10.67MHz	1	
	SVFE107M48C	FM IF Circuit, Orange, 10.73MHz	1	
	SVFE107M48D	FM IF Circuit, Black, 10.64MHz	1	
	SVFE107M48E	FM IF Circuit, White, 10.76MHz	1	
		(Use pair ranks as same as CF101, 102 and CF103)		
each			3	
THERMISTORS				
TH601, 602	RRT251	Thermistor, Drive Amplifier Circuit	2	
RESISTORS				
R1	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R2	ERD18TJ470	47Ω, ± 5%, Carbon	1	
R3	ERD18TJ151	150Ω, ± 5%, Carbon	1	
R4	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R5	ERD18TJ822	8.2kΩ, ± 5%, Carbon	1	
R6	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R7	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R8	ERD18TJ470	47Ω, ± 5%, Carbon	1	
R9	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R10	ERD18TJ223	22kΩ, ± 5%, Carbon	1	
R11	ERD18TJ123	12kΩ, ± 5%, Carbon	1	
R12	ERD18TJ182	1.8kΩ, ± 5%, Carbon	1	
R13	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R14	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	
R15	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R16	ERD18TJ222	2.2kΩ, ± 5%, Carbon	1	
R17	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R18	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R19	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R20	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R21	ERD18TJ221	220Ω, ± 5%, Carbon	1	
R22	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R101	ERD18TJ151	150Ω, ± 5%, Carbon	1	
R102	ERD18TJ332	3.3kΩ, ± 5%, Carbon	1	
R103	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R104	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R106	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R107	ERD18TJ101	100Ω, ± 5%, Carbon	1	
R108	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R109	ERD18TJ152	1.5kΩ, ± 5%, Carbon	1	
R110	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R111	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R112	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R113	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R114	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R115	ERD18TJ221	220Ω, ± 5%, Carbon	1	
R116	ERD14VJ104	100kΩ, ± 5%, Carbon	1	
R117	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	
R118	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R119	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R120	ERD18TJ101	100Ω, ± 5%, Carbon	1	
R121	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R122	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R123	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R124	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R125	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R126	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R127	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R128	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R129	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	
R130	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	
R131	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R132	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R133	ERD18TJ561	560Ω, ± 5%, Carbon	1	
R134	ERD18TJ561	560Ω, ± 5%, Carbon	1	
R135	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R136	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R137	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R138	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R139	ERD18TJ101	100Ω, ± 5%, Carbon	1	
R140	ERD18TJ824	820kΩ, ± 5%, Carbon	1	
R141	ERD12FJ471	470Ω, ± 5%, Carbon	1	
R142	ERD12FJ471	470Ω, ± 5%, Carbon	1	
R143	ERD12FJ471	470Ω, ± 5%, Carbon	1	
R144	ERD18TJ151	150Ω, ± 5%, Carbon	1	
R145	ERD18TJ100	10Ω, ± 5%, Carbon	1	
R146	ERD18TJ332	3.3kΩ, ± 5%, Carbon	1	
R147	ERD18TJ100	10Ω, ± 5%, Carbon	1	
R148	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R149	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R150	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R151	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R152	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R153	ERD18TJ273	27kΩ, ± 5%, Carbon	1	
R154	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R201	ERD12TSJ274	270kΩ, ± 5%, Carbon	1	
R202	ERD12TSJ274	270kΩ, ± 5%, Carbon	1	
R203	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R204	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R205	ERD12TSJ834	330kΩ, ± 5%, Carbon	1	
R206	ERD12TSJ334	330kΩ, ± 5%, Carbon	1	
R207	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R208	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R209	EROS0CKF1743	174kΩ, ± 1%, Metallic	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R210	EROS0CKF1743	174kΩ, ± 1%, Metallic	1	
R214	EROS0CKF1502	15kΩ, ± 1%, Metallic	1	
R215	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R216	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R217	ERD12TSJ563	56kΩ, ± 5%, Carbon	1	
R218	ERD12TSJ563	56kΩ, ± 5%, Carbon	1	
R219	ERD18TJ101	100Ω, ± 5%, Carbon	1	
R220	ERD18TJ101	100Ω, ± 5%, Carbon	1	
R221	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R222	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R223	ERD14FJ102	1kΩ, ± 5%, Carbon	1	
R501	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R502	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R503	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R504	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R505	ERD18TJ393	39kΩ, ± 5%, Carbon	1	
R506	ERD18TJ393	39kΩ, ± 5%, Carbon	1	
R507	ERD18TJ392	3.9kΩ, ± 5%, Carbon	1	
R508	ERD18TJ392	3.9kΩ, ± 5%, Carbon	1	
R509	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R510	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R511	ERD18TJ332	3.3kΩ, ± 5%, Carbon	1	
R512	ERD18TJ332	3.3kΩ, ± 5%, Carbon	1	
R513	ERD18TJ391	390Ω, ± 5%, Carbon	1	
R514	ERD18TJ391	390Ω, ± 5%, Carbon	1	
R515	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R516	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R517	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R518	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R519	ERD18TJ122	1.2kΩ, ± 5%, Carbon	1	
R520	ERD18TJ122	1.2kΩ, ± 5%, Carbon	1	
R521	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R522	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R523	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R524	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R525	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R526	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R527	ERD18TJ822	8.2kΩ, ± 5%, Carbon	1	
R528	ERD18TJ822	8.2kΩ, ± 5%, Carbon	1	
R529	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R530	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R531	ERD18TJ683	68kΩ, ± 5%, Carbon	1	
R532	ERD18TJ683	68kΩ, ± 5%, Carbon	1	
R533	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R534	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R535	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R536	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R537	ERD14FJ102	1kΩ, ± 5%, Carbon	1	
R601	ERD18TJ824	820kΩ, ± 5%, Carbon	1	
R602	ERD18TJ824	820kΩ, ± 5%, Carbon	1	
R603	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R604	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R605	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R606	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R607	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R608	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R609	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R610	ERD18TJ102	1kΩ, ± 5%, Carbon	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
----------	----------	-------------------------	---------	---------

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R210	ER050CKF1743	174kΩ, ± 1%, Metallic	1	
R213	ER050CKF1502	15kΩ, ± 1%, Metallic	1	
R214	ER050CKF1502	15kΩ, ± 1%, Metallic	1	
R215	ERD18TJ04	1/8W, ± 5%, Carbon	1	
R216	ERD18TJ04	1/8W, ± 5%, Carbon	1	
R217	ERD12TSJ563	100kΩ, ± 5%, Carbon	1	
R218	ERD12TSJ563	56kΩ, ± 5%, Carbon	1	
R219	ERD18TJ101	1/2W, ± 5%, Carbon	1	
R220	ERD18TJ101	1/2W, ± 5%, Carbon	1	
R221	ERD18TJ101	1/8W, ± 5%, Carbon	1	
R222	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R223	ERD14FJ102	1kΩ, ± 5%, Carbon	1	
R501	ERD18TJ394	1/8W, ± 5%, Carbon	1	
R502	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R503	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R504	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R505	ERD18TJ393	1/8W, ± 5%, Carbon	1	
R506	ERD18TJ393	39kΩ, ± 5%, Carbon	1	
R507	ERD18TJ392	39kΩ, ± 5%, Carbon	1	
R508	ERD18TJ392	3.9kΩ, ± 5%, Carbon	1	
R509	ERD18TJ823	1/8W, ± 5%, Carbon	1	
R510	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R511	ERD18TJ322	1/8W, ± 5%, Carbon	1	
R512	ERD18TJ322	3.3kΩ, ± 5%, Carbon	1	
R513	ERD18TJ391	1/8W, ± 5%, Carbon	1	
R514	ERD18TJ391	390Ω, ± 5%, Carbon	1	
R515	ERD18TJ103	1/8W, ± 5%, Carbon	1	
R516	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R517	ERD18TJ153	1/8W, ± 5%, Carbon	1	
R518	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R519	ERD18TJ122	1/8W, ± 5%, Carbon	1	
R520	ERD18TJ122	1.2kΩ, ± 5%, Carbon	1	
R521	ERD18TJ103	1/8W, ± 5%, Carbon	1	
R522	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R523	ERD18TJ394	1/8W, ± 5%, Carbon	1	
R524	ERD18TJ394	390kΩ, ± 5%, Carbon	1	
R525	ERD18TJ563	1/8W, ± 5%, Carbon	1	
R526	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R527	ERD18TJ822	1/8W, ± 5%, Carbon	1	
R528	ERD18TJ822	8.2kΩ, ± 5%, Carbon	1	
R529	ERD18TJ272	1/8W, ± 5%, Carbon	1	
R530	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R531	ERD18TJ683	1/8W, ± 5%, Carbon	1	
R532	ERD18TJ683	68kΩ, ± 5%, Carbon	1	
R533	ERD18TJ683	68kΩ, ± 5%, Carbon	1	
R534	ERD18TJ272	1/8W, ± 5%, Carbon	1	
R535	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R536	ERD18TJ562	1/8W, ± 5%, Carbon	1	
R537	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R601	ERD18TJ824	1/4W, ± 5%, Carbon	1	
R602	ERD18TJ824	820kΩ, ± 5%, Carbon	1	
R603	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R604	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R605	ERD18TJ563	1/8W, ± 5%, Carbon	1	
R606	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R607	ERD18TJ563	1/8W, ± 5%, Carbon	1	
R608	ERD18TJ153	1/8W, ± 5%, Carbon	1	
R609	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R610	ERD18TJ102	1/8W, ± 5%, Carbon	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R104	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R105	ERD18TJ471	1kΩ, ± 5%, Carbon	1	
R106	ERD18TJ101	470Ω, ± 5%, Carbon	1	
R107	ERD18TJ103	100Ω, ± 5%, Carbon	1	
R108	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R109	ERD18TJ104	1.5kΩ, ± 5%, Carbon	1	
R110	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R111	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R112	ERD18TJ823	82kΩ, ± 5%, Carbon	1	
R113	ERD18TJ104	1/8W, ± 5%, Carbon	1	
R114	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R115	ERD18TJ221	220Ω, ± 5%, Carbon	1	
R116	ERD14VJ104	1/4W, ± 5%, Carbon	1	
R117	ERD18TJ562	1/8W, ± 5%, Carbon	1	
R118	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R119	ERD18TJ272	1/8W, ± 5%, Carbon	1	
R120	ERD18TJ272	2.7kΩ, ± 5%, Carbon	1	
R121	ERD18TJ473	1/8W, ± 5%, Carbon	1	
R122	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R123	ERD18TJ153	1/8W, ± 5%, Carbon	1	
R124	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R125	ERD18TJ331	330Ω, ± 5%, Carbon	1	
R126	ERD18TJ104	1/8W, ± 5%, Carbon	1	
R127	ERD18TJ562	100kΩ, ± 5%, Carbon	1	
R128	ERD18TJ562	5.6kΩ, ± 5%, Carbon	1	
R129	ERD18TJ682	1/8W, ± 5%, Carbon	1	
R130	ERD18TJ682	6.8kΩ, ± 5%, Carbon	1	
R131	ERD18TJ472	1/8W, ± 5%, Carbon	1	
R132	ERD18TJ472	47kΩ, ± 5%, Carbon	1	
R133	ERD18TJ561	1/8W, ± 5%, Carbon	1	
R134	ERD18TJ561	560Ω, ± 5%, Carbon	1	
R135	ERD18TJ472	1/8W, ± 5%, Carbon	1	
R136	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R137	ERD18TJ473	1/8W, ± 5%, Carbon	1	
R138	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R139	ERD18TJ101	1/8W, ± 5%, Carbon	1	
R140	ERD18TJ824	100kΩ, ± 5%, Carbon	1	
R141	ERD12FJ471	470Ω, ± 5%, Carbon	1	
R142	ERD12FJ471	470Ω, ± 5%, Carbon	1	
R143	ERD12FJ471	330Ω, ± 5%, Carbon	1	
R144	ERD18TJ151	1/8W, ± 5%, Carbon	1	
R145	ERD18TJ100	150Ω, ± 5%, Carbon	1	
R146	ERD18TJ332	1/8W, ± 5%, Carbon	1	
R147	ERD18TJ100	3.3kΩ, ± 5%, Carbon	1	
R148	ERD18TJ473	1/8W, ± 5%, Carbon	1	
R149	ERD18TJ473	47kΩ, ± 5%, Carbon	1	
R150	ERD18TJ153	1/8W, ± 5%, Carbon	1	
R151	ERD18TJ473	15kΩ, ± 5%, Carbon	1	
R152	ERD18TJ104	1/8W, ± 5%, Carbon	1	
R153	ERD18TJ123	100kΩ, ± 5%, Carbon	1	
R154	ERD18TJ273	1/8W, ± 5%, Carbon	1	
R201	ERD12TSJ274	1/2W, ± 5%, Carbon	1	
R202	ERD12TSJ274	270kΩ, ± 5%, Carbon	1	
R203	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R204	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R205	ERD12TSJ334	330kΩ, ± 5%, Carbon	1	
R206	ERD12TSJ334	330kΩ, ± 5%, Carbon	1	
R207	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R208	ERD18TJ103	10kΩ, ± 5%, Carbon	1	
R209	ER050CKF1743	174kΩ, ± 1%, Metallic	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R1004	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R1005	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R1006	ERD18TJ102	1kΩ, ± 5%, Carbon	1	
R1007	ERD18TJ123	1/8W, ± 5%, Carbon	1	
R1008	ERD18TJ123	12kΩ, ± 5%, Carbon	1	
R1009	ERD18TJ824	1/8W, ± 5%, Carbon	1	
R1010	ERD18TJ824	820kΩ, ± 5%, Carbon	1	
R1011	ERD18TJ105	1/8W, ± 5%, Carbon	1	
R1012	ERD18TJ105	1MΩ, ± 5%, Carbon	1	
VARIABLE RESISTORS				
VR101	EVL50AA008B5	500kΩ (B), Muting Level Adjustment	1	
VR102	EVTS3AA008B4	20kΩ (B), PLL VCO Adjustment	1	
VR103	EVL53AA008B24	20kΩ (B), Separation Adjustment	1	
VR104	EMF20AF308B15	20kΩ (B), FM Signal Meter Adjustment	1	
VR501, 502	EVL53AA008B52	100kΩ (B), Bass & Treble Control	2	
VR601, 602	EWFSMA037B52	500Ω (B), Main Amp Ica. Adjustment	2	
VR1001	EVE7DA088G25	250kΩ (B), Volume Control	1	
VR1002	EVE7DA088G25	200kΩ (G), Balance Control	1	
CAPACITORS				
C1	ECCD1H120KC	12pF, ± 10%, Ceramic	1	
C2	ECCD1H1010CC	10pF, ± 10%, Ceramic	1	
C3	ECCD1H180KR	18pF, ± 10%, Ceramic	1	
C4	ECKD1H102MDA	0.001μF, ± 20%, Ceramic	1	
C5	ECCD1H100KC	10pF, ± 10%, Ceramic	1	
C6	ECCD1H181K	180pF, ± 10%, Ceramic	1	
C7	ECKD1H102PF	0.001μF, ± 10%, Ceramic	1	
C8	ECKD1H103PF	0.01μF, ± 10%, Ceramic	1	
C9	ECKD1H102PF	0.01μF, ± 10%, Ceramic	1	
C10	ECKD1H102PF	0.001μF, ± 10%, Ceramic	1	
C11	ECCD1H180KC	18pF, ± 10%, Ceramic	1	
C12	ECCD1H390KC	39pF, ± 10%, Ceramic	1	
C13	ECCD1H100KC	10pF, ± 10%, Ceramic	1	
C14	ECCD1H220KR	22pF, ± 10%, Ceramic	1	
C15	ECCD1H1010CC	10pF, ± 10%, Ceramic	1	
C16	ECCD1H070DC	7pF, ± 10%, Ceramic	1	
C17	ECCD1H180KC	18pF, ± 10%, Ceramic	1	
C18	ECCD1H103MD	360pF, ± 5%, Styrol	1	
C19	ECKD1H103MD	0.01μF, ± 20%, Ceramic	1	
C20	ECKD1H103MD	0.01μF, ± 20%, Ceramic	1	
C21	ECCA16V10L	0.01μF, ± 10%, Electrolytic	1	
C22	ECCA16V10L	10μF, ± 10%, Electrolytic	1	
C23	ECCA16V10L	10μF, ± 10%, Electrolytic	1	
C24	ECCA16V10L	0.01μF, ± 10%, Electrolytic	1	
C25	ECKD1H103PF	0.01μF, ± 10%, Ceramic	1	
C26	ECCA25V3R3L	0.001μF, ± 10%, Electrolytic	1	
C27	ECCA25V3R3L	3.3μF, ± 10%, Electrolytic	1	
C28	ECCA25V3R3L	25μF, ± 10%, Electrolytic	1	
C29	ECCA50V1L	1μF, ± 10%, Electrolytic	1	
C30	ECCM05223KZ	0.022μF, ± 10%, Polyester	1	
C31	ECCM05473KZ	0.047μF, ± 10%, Polyester	1	
C101	ECKD1H103PF	0.01μF, ± 10%, Ceramic	1	
C102	ECKD1H180KC	18pF, ± 10%, Ceramic	1	
C103	ECKD1H103PF	0.01μF, ± 10%, Ceramic	1	
C104	ECKD1H102PF	0.001μF, ± 10%, Ceramic	1	
C105	ECKD1H223PF	0.022μF, ± 10%, Ceramic	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R611	ERD18TJ102	1/8W, ± 5%, Carbon	1	
R612	ERD18TJ182	1kΩ, ± 5%, Carbon	1	
R613	ERD18TJ182	1.8kΩ, ± 5%, Carbon	1	
R614	ERD18TJ182	18kΩ, ± 5%, Carbon	1	
R615	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R616	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R617	ERD18TJ152	1.5kΩ, ± 5%, Carbon	1	
R618	ERD18TJ152	15kΩ, ± 5%, Carbon	1	
R619	ERD12EJ472	4.7kΩ, ± 5%, Carbon	1	
R620	ERD12EJ472	4.7kΩ, ± 5%, Carbon	1	
R621	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R622	ERD18TJ471	470Ω, ± 5%, Carbon	1	
R623	ERD14FJ162	1.5kΩ, ± 5%, Carbon	1	
R624	ERD14FJ162	1.5kΩ, ± 5%, Carbon	1	
R625	ERD14FJ681	680Ω, ± 5%, Carbon	1	
R626	ERD14FJ681	680Ω, ± 5%, Carbon	1	
R627	ERD14FJ100	100Ω, ± 5%, Carbon	1	
R628	ERD14FJ100	100Ω, ± 5%, Carbon	1	
R629	ERD14FJ101	100Ω, ± 5%, Carbon	1	
R630	ERD14FJ101	100Ω, ± 5%, Carbon	1	
R631	ERD14FJ470	47Ω, ± 5%, Carbon	1	
R632	ERD14FJ470	47Ω, ± 5%, Carbon	1	
R633	ERD14FJ330	33Ω, ± 5%, Carbon	1	
R634	ERD14FJ330	33Ω, ± 5%, Carbon	1	
R635	ERD14FJ330	33Ω, ± 5%, Carbon	1	
R636	ERD14FJ330	330Ω, ± 5%, Carbon	1	
R637	ERD14FJ331	330Ω, ± 5%, Carbon	1	
R638	ERD14FJ331	330Ω, ± 5%, Carbon	1	
R639	ERF5AKR47	0.47Ω, ± 10%, Non-Flammable	1	
R640	ERF5AKR47	0.47Ω, ± 10%, Non-Flammable	1	
R641	ERF5AKR47	0.47Ω, ± 10%, Non-Flammable	1	
R642	ERF5AKR47	0.47Ω, ± 10%, Non-Flammable	1	
R643	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R644	ERD18TJ104	100kΩ, ± 5%, Carbon	1	
R645	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R646	ERD18TJ563	56kΩ, ± 5%, Carbon	1	
R647	ERD18TJ563	330Ω, ± 5%, Carbon	1	
R648	ERG2ANJ331	330Ω, ± 5%, Carbon	1	
R649	ERG2ANJ100	10Ω, ± 5%, Carbon	1	
R650	ERG2ANJ100	10Ω, ± 5%, Carbon	1	
R651	ERD12FJ272	2.7kΩ, ± 5%, Carbon	1	
R652	ERG2ANJ102	1kΩ, ± 5%, Carbon	1	
R653	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R654	ERD18TJ822	8.2kΩ, ± 5%, Carbon	1	
R655	ERD18TJ393	39kΩ, ± 5%, Carbon	1	
R656	ERD18TJ333	33kΩ, ± 5%, Carbon	1	
R657	ERD18TJ564	560kΩ, ± 5%, Carbon	1	
R658	ERD18TJ333	33kΩ, ± 5%, Carbon	1	
R659	ERD18TJ472	4.7kΩ, ± 5%, Carbon	1	
R701 [M] only	ERD18FAJ242	2.2Ω, ± 5%, Carbon (Only use for America [M])	1	
R703	ERG3ANJ181	180Ω, ± 5%, Carbon	1	
R704	ERD18TJ122	1.2kΩ, ± 5%, Carbon	1	
R705	ERD18TJ153	15kΩ, ± 5%, Carbon	1	
R1001	ERD12ZGK335	3.3MΩ, ± 10%, Solid	1	
R1003	ER			

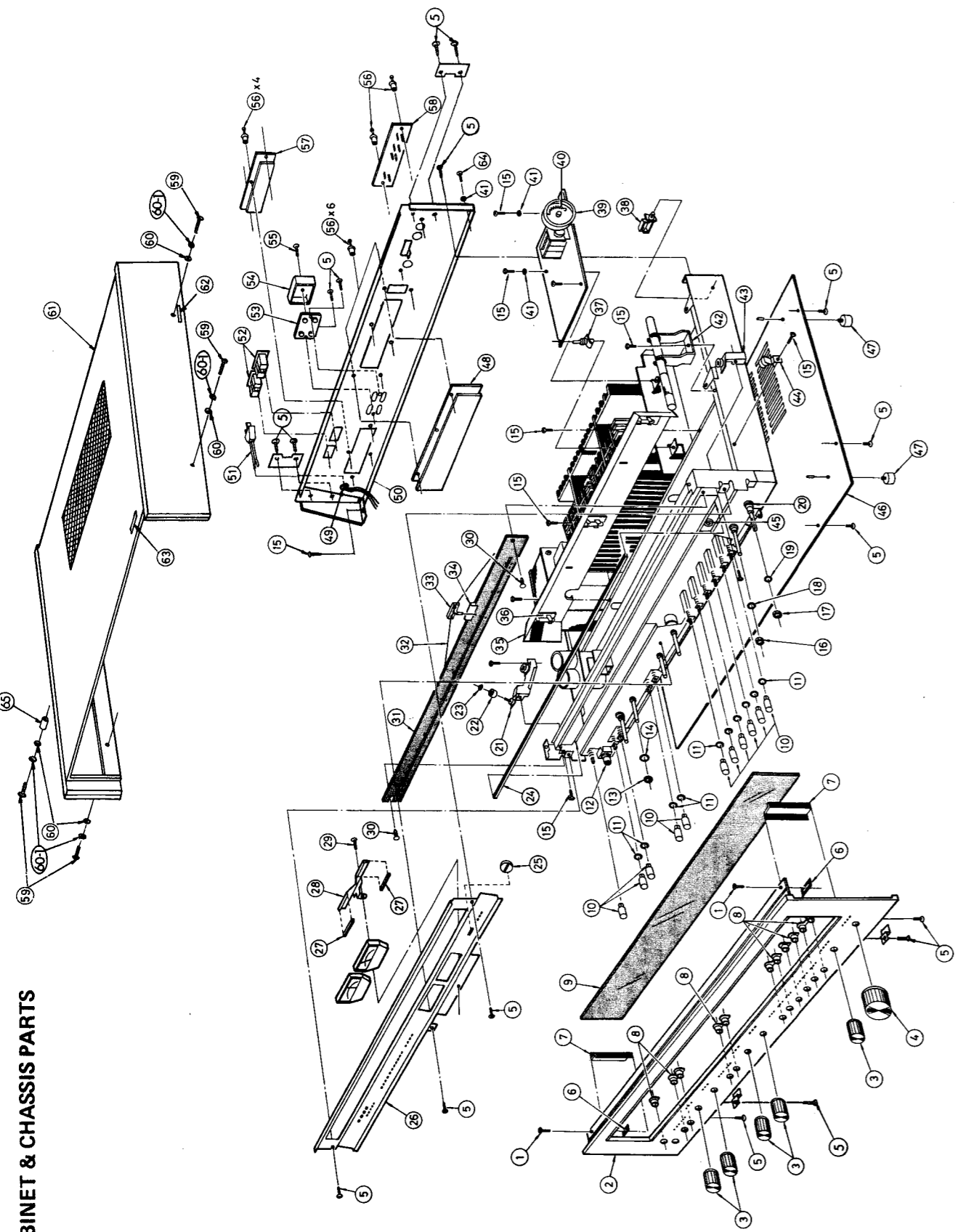
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C107	ECEA16V10L	10µF, 16WV, Electrolytic	1	
C108	ECEA50V1L	1µF, 50WV, Electrolytic	1	
C109	ECKD1H103MD	0.01µF, 50WV, ±20%, Ceramic	1	
C110	ECEA50Z1R	0.01µF, 50WV, ±20%, Ceramic	1	
C111	ECKD1H101K	0.01µF, 50WV, ±10%, Ceramic	1	
C112	ECEA50V47L	0.47µF, 50WV, ±10%, Electrolytic	1	
C113	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C114	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C115	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C116	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C117	ECEA25V47L	0.47µF, 25WV, ±10%, Electrolytic	1	
C118	ECEA25V47L	0.47µF, 25WV, ±10%, Electrolytic	1	
C119	ECEA25V47L	0.47µF, 25WV, ±10%, Electrolytic	1	
C120	ECEA25V47L	0.47µF, 25WV, ±10%, Electrolytic	1	
C121	ECEA50Z2R	0.02µF, 50WV, ±10%, Ceramic	1	
C122	ECEA50Z2R	0.02µF, 50WV, ±10%, Ceramic	1	
C123	ECEA50V47L	0.47µF, 50WV, ±10%, Electrolytic	1	
C124	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C125	ECEA50M22R	0.22µF, 50WV, ±10%, Electrolytic	1	
C126	ECEA25V47L	0.47µF, 25WV, ±10%, Electrolytic	1	
C127	ECEA50V47L	0.47µF, 50WV, ±10%, Electrolytic	1	
C128	ECEA50Z3R	0.33µF, 50WV, ±10%, Ceramic	1	
C129	ECEA50Z3R	0.33µF, 50WV, ±10%, Ceramic	1	
C130	ECEA50Z3R	0.33µF, 50WV, ±10%, Ceramic	1	
C131	ECEA16V47L	0.47µF, 16WV, ±10%, Electrolytic	1	
C132	ECEA50V47L	0.47µF, 50WV, ±10%, Electrolytic	1	
C133	ECEA16V220V	220µF, 16WV, ±10%, Electrolytic	1	
C134	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C135	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C136	ECEA16V47L	0.47µF, 16WV, ±10%, Electrolytic	1	
C137	ECEA25V3R3L	3.3µF, 25WV, ±10%, Electrolytic	1	
C138	ECEA50V47L	0.47µF, 50WV, ±10%, Electrolytic	1	
C139	ECEA50V22KZ	0.022µF, 50WV, ±10%, Electrolytic	1	
C140	ECEA50V22KZ	0.022µF, 50WV, ±10%, Electrolytic	1	
C141	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C142	ECKD1H223PF	0.022µF, 50WV, ±10%, Ceramic	1	
C201	ECKD1H151K	150pF, 50WV, ±10%, Ceramic	1	
C202	ECKD1H151K	150pF, 50WV, ±10%, Ceramic	1	
C203	ECEA50M3R3R	3.3µF, 50WV, ±10%, Electrolytic	1	
C204	ECEA50M3R3R	3.3µF, 50WV, ±10%, Electrolytic	1	
C205	ECKD1H680K	68pF, 50WV, ±10%, Ceramic	1	
C206	ECKD1H680K	68pF, 50WV, ±10%, Ceramic	1	
C207	ECKD2H181KB	180pF, 50WV, ±10%, Ceramic	1	
C208	ECKD2H181KB	180pF, 50WV, ±10%, Ceramic	1	
C209	ECEA6V330V	330µF, 6.3WV, Electrolytic	1	
C210	ECEA6V330V	330µF, 6.3WV, Electrolytic	1	
C211	ECKD1H183GZ	0.018µF, 125WV, ±2%, Polyester	1	
C212	ECKD1H183GZ	0.018µF, 125WV, ±2%, Polyester	1	
C213	ECKD1H183GZ	0.018µF, 125WV, ±2%, Polyester	1	
C214	ECKD1H183GZ	0.018µF, 125WV, ±2%, Polyester	1	
C215	ECEA50M1R	1µF, 50WV, ±10%, Electrolytic	1	
C216	ECEA50M1R	1µF, 50WV, ±10%, Electrolytic	1	
C217	ECEA50V220V	220µF, 50WV, ±10%, Electrolytic	1	
C218	ECKD2H391KB	390pF, 50WV, ±10%, Ceramic	1	
C219	ECKD2H391KB	390pF, 50WV, ±10%, Ceramic	1	
C501	ECEA50MR68R	0.68µF, 50WV, Electrolytic	1	
C502	ECEA50MR68R	0.68µF, 50WV, Electrolytic	1	
C503	ECKD2H331KB	330pF, 50WV, ±10%, Ceramic	1	
C504	ECKD2H331KB	330pF, 50WV, ±10%, Ceramic	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C505	ECEA50M3R3R	3.3µF, 50WV, Electrolytic	1	
C506	ECEA50M3R3R	3.3µF, 50WV, Electrolytic	1	
C507	ECOM05223KZ	0.022µF, 50WV, ±10%, Polyester	1	
C508	ECOM05223KZ	0.022µF, 50WV, ±10%, Polyester	1	
C509	ECOM05223KZ	0.022µF, 50WV, ±10%, Polyester	1	
C510	ECOM05223KZ	0.022µF, 50WV, ±10%, Polyester	1	
C511	ECOM05223KZ	0.022µF, 50WV, ±10%, Polyester	1	
C512	ECOM05222KZ	0.022µF, 50WV, ±10%, Polyester	1	
C513	ECEA50MR68R	0.68µF, 50WV, Electrolytic	1	
C514	ECEA50MR68R	0.68µF, 50WV, Electrolytic	1	
C515	ECEA50MR68R	0.68µF, 50WV, Electrolytic	1	
C516	ECKD1H220K	22pF, 50WV, ±10%, Ceramic	1	
C517	ECEA10V47L	47µF, 10WV, Electrolytic	1	
C518	ECEA10V47L	47µF, 10WV, Electrolytic	1	
C519	ECEA50M1R	1µF, 50WV, Electrolytic	1	
C520	ECEA50M1R	1µF, 50WV, Electrolytic	1	
C521	ECEA35V220V	220µF, 35WV, Electrolytic	1	
C601	ECEA50M1R	1µF, 50WV, Electrolytic	1	
C602	ECEA50M1R	1µF, 50WV, Electrolytic	1	
C603	ECEA10V47L	47µF, 10WV, Electrolytic	1	
C604	ECEA10V47L	47µF, 10WV, Electrolytic	1	
C605	ECKD1H102MD	0.001µF, 50WV, ±20%, Ceramic	1	
C606	ECKD1H102MD	0.001µF, 50WV, ±20%, Ceramic	1	
C607	ECKD2H180K	180pF, 50WV, ±10%, Ceramic	1	
C608	ECKD2H180K	180pF, 50WV, ±10%, Ceramic	1	
C609	ECKD2H221KB	220pF, 50WV, ±10%, Ceramic	1	
C610	ECKD2H221KB	220pF, 50WV, ±10%, Ceramic	1	
C611	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C612	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C613	ECKD2H221KB	220pF, 50WV, ±10%, Ceramic	1	
C614	ECKD2H221KB	220pF, 50WV, ±10%, Ceramic	1	
C615	ECKD2H221KB	220pF, 50WV, ±10%, Ceramic	1	
C616	ECKD1H050K	5pF, 50WV, ±0.25pF, Ceramic	1	
C617	ECKD1H050K	5pF, 50WV, ±0.25pF, Ceramic	1	
C618	ECEA50V100V	100µF, 50WV, Electrolytic	1	
C619	ECEA50V100V	100µF, 50WV, Electrolytic	1	
C620	ECEA50V100V	100µF, 50WV, Electrolytic	1	
C621	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C622	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C623	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C624	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C625	ECEA25V33L	33µF, 25WV, Electrolytic	1	
C626	ECEA16V220V	220µF, 16WV, Electrolytic	1	
C627	ECEA10V47L	47µF, 10WV, Electrolytic	1	
C628	ECEA50M2R2R	2.2µF, 50WV, Electrolytic	1	
C629	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C630	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C631	ECOM1473KZ	0.047µF, 125WV, ±10%, Polyester	1	
C632	ECOM1473KZ	0.047µF, 125WV, ±10%, Polyester	1	
C633	ECOM1473KZ	0.047µF, 125WV, ±10%, Polyester	1	
C634	ECOM1473KZ	0.047µF, 125WV, ±10%, Polyester	1	
C635	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C636	ECEA63V100V	100µF, 63WV, Electrolytic	1	
C637	ECKD2H103PE	15pF, 50WV, ±10%, Ceramic	1	
C638	ECKD2H103PE	15pF, 50WV, ±10%, Ceramic	1	
C701	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C702	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C703	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C704	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C705	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C706	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C707	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C708	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C709	ECEA50V220V	220µF, 50WV, Electrolytic	1	
C710	ECEA50V220V	220µF, 50WV, Electrolytic	1	

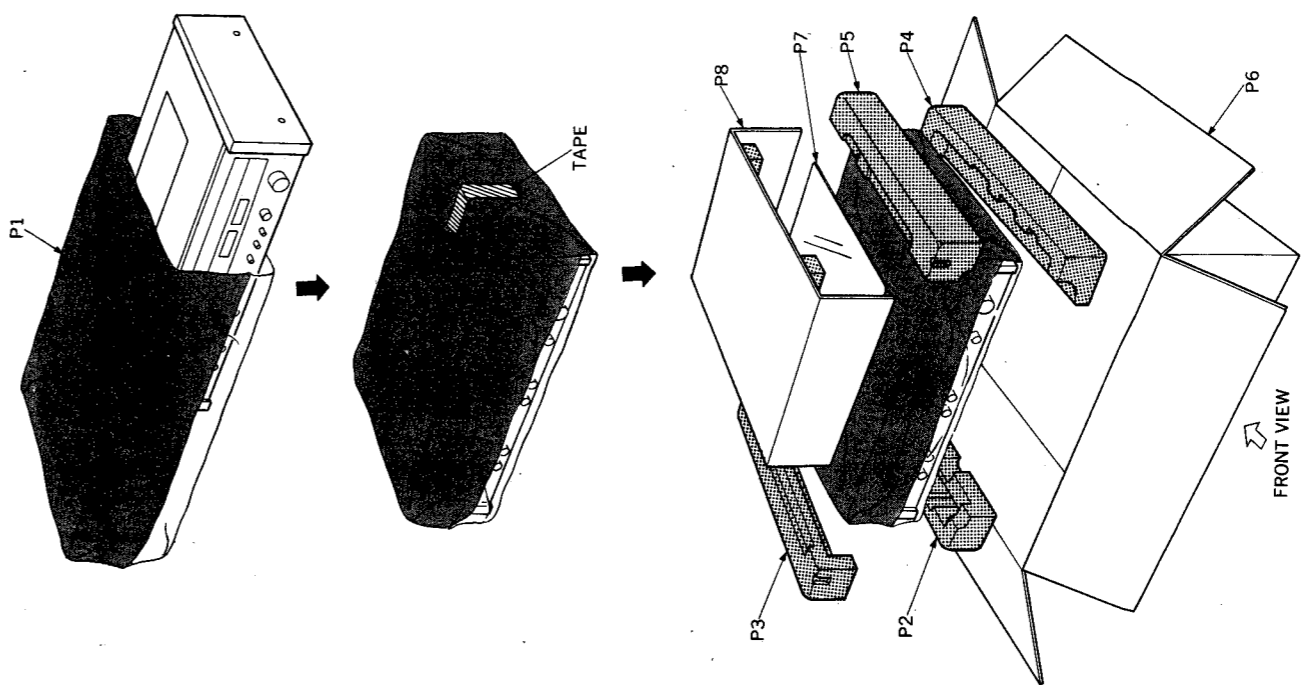
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C711	ECEA35V100V	100µF, 35WV, Electrolytic	1	
C712	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C713	ECKD1H103PF	0.01µF, 50WV, ±10%, Ceramic	1	
C714	ECEA50V47V	47µF, 50WV, ±10%, Electrolytic	1	
C715	ECEA35V470V	470µF, 35WV, Electrolytic	1	
C1001	ECOM05273KZ	0.027µF, 50WV, ±10%, Polyester	1	
C1002	ECOM05273KZ	0.027µF, 50WV, ±10%, Polyester	1	
C1003	ECOM05273KZ	0.027µF, 50WV, ±10%, Polyester	1	
C1004	ECOM05273KZ	0.027µF, 50WV, ±10%, Polyester	1	
C1005	ECOM0527KZ	0.0047µF, 50WV, ±10%, Polyester	1	
C1006	ECOM0527KZ	0.0047µF, 50WV, ±10%, Polyester	1	
C1007	ECEA50V1L	1µF, 50WV, Electrolytic	1	
CV1, 2, 3, 4, 5 (CT1, 2, 3, 4, 5)	ECV5MD34X67G	Tuning Gang, FM & AM (with Trimmer)	1	
Z701, 702	RXAF103P22HD	0.01µF (X2), Ham Cancel	2	
PL1	XJAF103P22HD	0.01µF (X2), Ham Cancel	2	
PL2	XJAF103P22HD	0.01µF (X2), Ham Cancel	2	
F701	XBA1M70MU100	70V Fuse	1	
F702	XBA1M70MU100	70V Fuse	1	
F703	XBA1M70MU100	70V Fuse	1	
F704	XBA1M70MU100	70V Fuse	1	
S1001	SSR33	Selector Switch	1	
S1002 ~ S1007	SSH619S	Push Switches (Type 1, 2, Mode, High-Blend, Muting & Loudness)	1	
S1008, 1009	SSH221S	Push Switches (High & Low Filter)	1	
S1010	ESB794T	Power Switch	1	
S1011, 1012	SSH223S	Push Switches (Main & Remote Speaker)	1	
RLY601	SSY21	Relay, Speaker Protection	1	
SSM77	SSM77	Meter, Signal	1	
SSM79	SSM79	Meter, Tuning	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
CABINET and CHASSIS PARTS				
1	XTS3+8CFZ	Screw, Front Panel M'tg.	2	
2	SYW33	Panel, Front	1	
3	SBN583	Knob, Tone, Volume, Balance, Selector	5	
4	SBN585-2	Knob, Tuning	1	
5	XTB3+8BFZ	Screw, Chassis M'tg.	27	
6	SHP641	Spacer, Front Panel	2	
7	SGX6453	Ornament, Front Panel	2	
8	SGX6455	Sleeve, Push Switch Buttons	5%	
9	SGU13	Glass Plate, Front Panel	1	
10	SBC149	Button, Push Switches	11	
11	SXC1339	Rubber Bushing, Push Switch Buttons	11	
12	XJC6N11B-A	Jack, Headphones	1	
13	XNS8	Nut, Tone, Balance & Volume Control	4	
14	XWV8	Spring Washer, Tone, Balance & Volume	4	
15	XTV3+8C	Screw, Chassis M'tg.	12	
16	XNS7	Nut, Selector Switch M'tg.	1	
17	XNS9	Nut, Tuning Control M'tg.	1	
18	XWV7	Spring Washer, Selector Switch	1	
19	XWV9	Spring Washer, Tuning Control	1	
20	SDT8007-1	Shaft, Tuning Control Ass'y	1	
21	SDX751S	Flywheel, Tuning	1	
22	XXAK5K5S	Screw, Flywheel M'tg.	2	
23	RDR20	Shaft, Dial Cord Ass'y	1	
24	RNM150-2	Pulley, Dial Cord	4	
25	SJM7-1	Washer, Pulley Lock	4	
26	SGL51	Bracket, Dial Scale	1	
27	SDH325-4	Orange Filter, Stereo Indicator	1	
28	RHG109	Plate, Dial Light	4	
29	XTM10-2	Rubber Cushion, Meter & AM Antenna Coil	1	
30	SHPA4	Bracket, Meter	1	
31	SHRA916-1	Screw, Meter Bracket M'tg.	2	
32	SKD2570	Lock Pin, Dial Scale	1	
33	SDZ6-1	Scale, Dial	1	
34	SDPA8	Cord, Dial 91¼" (230cm)	1	
35	SMP245	Pointer, Dial	1	
36	SJF109-2	Paper, Pointer Slide	1	
37	SHRA2	Reflection Board, Dial Light	1	
38	SHRA307	Holder, Dial Light	3	
39	SDD47-1	Rivet, Dial Light Holder M'tg.	3	
40	SDSA4121	Spacer, FM/AM Tuner P.C.B.	4	
41	XWC3B	Clamp, Lead Wire	1	
42	SMA209	Drum, Dial Cord	1	
43	SXE715	Spring, Dial Cord	1	
44	SHE713	Toothed Ring, P.C.B. M'tg.	3	
45	SHGA204	Bracket, AM Antenna Coil	1	
46	SKU5750	Shaft, Dial Cord Ass'y	1	
47	SKL145	Shaft, Dial Cord Ass'y	1	
48	SJF3015	Rubber Bracket, Stereo Indicator	1	
49	RHR111	Bottom Board	4	
50 [M]	SGP331P	Foot, Set (with Lock Pin)	1	
51 [MC]	SGP331Q	Terminal, Input & Tape Deck	1	
52	SGP331Q	Bushing, AC Cord	1	
53	SJFA5201-2	Rear Panel, Set for America [M]	1	
54	SJFA5202-1	Rear Panel, Set for Canada [MC]	1	
		Holder, SP. Circuit Protection Fuse	1	
		Cover, SP. Circuit Protection Fuse	1	

■ CABINET & CHASSIS PARTS



■ PACKINGS



Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
55	XSN26-12	Screw, SP, Circuit Protection Fuse Cover M'tg.	1	
56	SHR401-1	Lock Pin, Terminal M'tg.	12	
57	SJF4803-1	Terminal, Speakers	1	
58	SJFA4402	Terminal, FM/AM Antenna	1	
59	XTB4-35FFZ	Screw, Cabinet M'tg.	4	
60	XWGSFZ	Washer, Cabinet Screw	4	
60-1	XWA4BFZ	Washer, Spring	4	
61	SKA9090W	Cabinet	1	* ○
62	SOXA4112	Caution Label, Cabinet Screw	1	
63	OCCT045	Label, Cabinet	1	
64	XTW3+BEFZ	Screw, Rear Panel M'tg.	1	
65	SNE63	Sleeve, Cabinet Screw	1	* ○
ACCESSORIES				
A1	SSA251	Cord, FM Feeder Antenna	1	
A2	XBAS1A5001	5A Fuse, Speaker Circuit Protection	2	
PACKING PARTS				
P1	SPF509	Polyethylene Bag, Set	1	○ ○ ○ ○ ○ ○ ○ ○ ○ ○
P2	SPS683	Pad, Left Side, Lower	1	
P3	SPS685	Pad, Left Side, Upper	1	
P4	SPS687	Pad, Right Side, Lower	1	
P5	SPS689	Pad, Right Side, Upper	1	
P6 [M]	SPG939	Carton Box	1	
P6 [MC]	SPG941	Carton Box	1	
P7 [M]	SOF1535	Printed Matter	1	
P7 [MC]	SOF1537	Printed Matter	1	
P8	SPS959	Pad, Inside	1	
<p>NOTE</p> <ul style="list-style-type: none"> • The model SA-5570 [M] is available in America only. • The model SA-5570 [MC] is available in Canada only. 				

■ ACCESSORIES

