

REALISTIC[®]

Service Manual

31-2072

STA-52
AM/FM STEREO RECEIVER
Catalog Number: 31-2072



CUSTOM MANUFACTURED FOR RADIO SHACK **TC** A DIVISION OF TANDY CORPORATION

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(1) ELECTRICAL PERFORMANCE SPECIFICATIONS

AM BAND

	UNIT	NOMINAL	LIMIT
Range	kHz	510-1650	520-1620
IF	kHz	455	
Antenna Sensitivity for S/N 20 dB			
at 600 kHz	μV/m	200	500
at 1000 kHz	μV/m	200	500
at 1400 kHz	μV/m	200	500
Terminal Sensitivity (20 dB S/N)	μV	10	-
ACA at S/N 6 dB Sensitivity at 1000 kHz	dB	28	20
S/N Ratio at 5 mV Input	dB	45	40
AGC Distortion at 1000 kHz 100 mV/m Input 80% Mod.	%	4	10
AGC Figure of Merit	dB	45	38
IF Rejection at 600 kHz	dB	32	27
Image Rejection at 1400 kHz	dB	45	35
Distortion at 5 mV/m 30% Mod.	%	1.5	3.5
Tapeout Level 5 mV/m 30% 400 Hz	mV	250	200
Fidelity 5 mV/m Input (1 kHz = 0 dB) -6 dB Down	Hz	50-2500	70-1800
Whistle Modulation of 2nd and 3rd Harmonics at 1 and 5 mV/m Input	%	5	10
Calibration Accuracy at 600kHz	kHz	-	±25
at 1400kHz	kHz	-	±50

FM BAND

	UNIT	NOMINAL	LIMIT
Range (For UL and C.S.A. Models)	MHz	86.5-108.5	88-108
Range * (For European and Australian Models)	MHz	87.5-108.5	87.5-108
IF	MHz	10.7	
IHF Sensitivity at 90, 98 and 106 MHz	μV	2.5	4.2
FM S/N Ratio at 98 MHz 1 mV Input	dB	60	55
FM Limiting 3 dB	μV	3	6
IF Rejection at 90 MHz	dB	80	70
Image Rejection at 106 MHz	dB	50	45
Capture Ratio	dB	2	4
ACA ± 400 kHz at 100 μV	dB	70	40
Audio THD 400 Hz, 75 kHz Dev.	%	0.5	1
Calibration Accuracy at 90 MHz	kHz	-	±350
at 106 MHz	kHz	-	±350
AFC Holding Range with 1 mV Signal	kHz	±150	±350
AM Suppression	dB	46	40
Maximum Signal Handling Capacity	V	0.2	0.1
Tape out Level 75 kHz Dev.	mV	750	750 ± 2.5 dB

Frequency Response must meet the 75 μsec de-emphasis for USA and Canadian models and 50 μsec de-emphasis for European and Australian models.
All Sets must meet the requirements of the FCC.

FM MPX SECTION

	UNIT	NOMINAL	LIMIT
Stereo Indicator "ON" Level	μV	10	20
Separation at 1 mV	dB	29	22
1 kHz	dB	35	27
10 kHz	dB	26	20
Stereo Distortion 1 mV 1 kHz	%	0.6	2.0
38 kHz Rejection	dB	42	35
SCA Rejection	dB	42	35

AUDIO SECTION

	UNIT	NOMINAL	LIMIT
Input Impedance			
PHONO	K ohm	50	
AUX	K ohm	100	
Output Power THD 1%, 8 ohms			
Both Channel Driven at 1 kHz	W	18	14
Power Bandwidth 8 ohms Both Channels			
Driven THD 0.9%, from 20 Hz to 20 kHz	W	14	12
Sensitivity for Rated Power (14 Watt)			
Phono Mag.	mV	2.5	3.5
AUX	mV	150	200
Tape In	mV	280	340
Frequency Response at AUX (1 Watt \pm 2 dB)	Hz	15-30K	20-20K
Bass Action at 100 Hz	dB	\pm 10	\pm 10 \pm 2.5
Treble Action at 10 kHz	dB	\pm 10	\pm 10 \pm 2.5
Min. Volume Hum & Noise	mV	1.5	3
Max. Volume Hum & Noise at AUX	mV	25	70
Signal to Noise Ratio			
Phono Mag. 5 mV Input (Input Short)	dB	60	55
AUX 200 mV Input	dB	65	55
Cross Talk at 1 kHz AUX	dB	46	40
Bass Compensation at 100 Hz, -30 dB Volume	dB	+9	+9 \pm 2
Treble Compensation at 10 kHz, -30 dB Volume	dB	+4	+4 \pm 2
Tapeout Level			
Phono Mag. 5 mV Input at 1 kHz	mV	250	200
AUX 200 mV Input at 1 kHz	mV	250	200
Phono Mag. Eq. Response			
at 100 Hz	dB	+13	+13 \pm 2
at 10 kHz	dB	-13	-13 \pm 2
Phono Mag. Overload at 1 kHz	mV	100	80
Tapeout Level (DIN)			
AM 5 mV Input 30% Mod.	mV	25	25 \pm 3 dB
FM 1 mV Input 22.5 kHz Dev.	mV	25	25 \pm 3 dB
AUX 200 mV Input	mV	25	25 \pm 3 dB

NOTE:

The supply voltage is 120 volt AC (for UL & C.S.A. models) and use 220/240 volt AC for European & Australian models, from a regulated power supply.

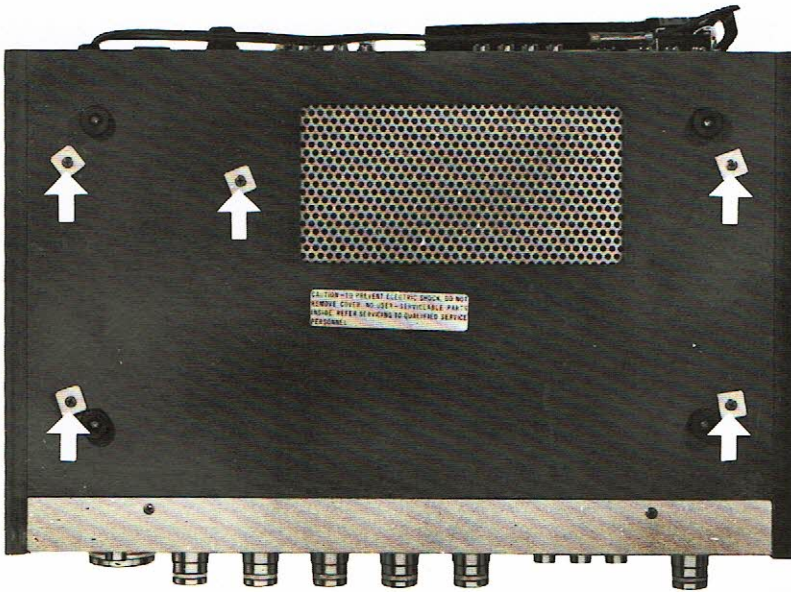
The power source must be insulated from other equipment connected to antenna or output.

The room temperature is 25 degrees C.

Nominal Specs represent the design specs; all units should be able to approximate these – some will exceed and some may drop slightly below these specs.

Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any limit specs.

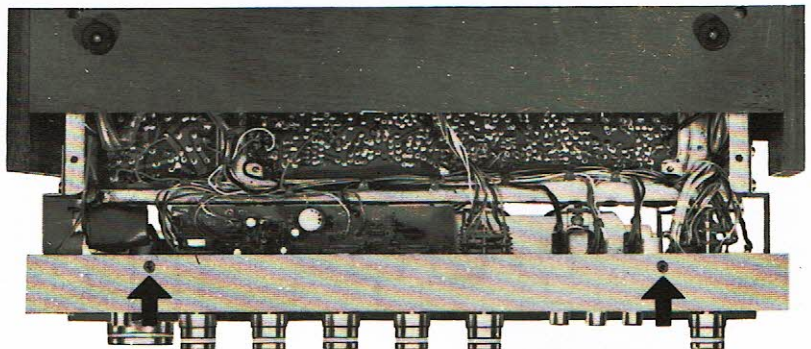
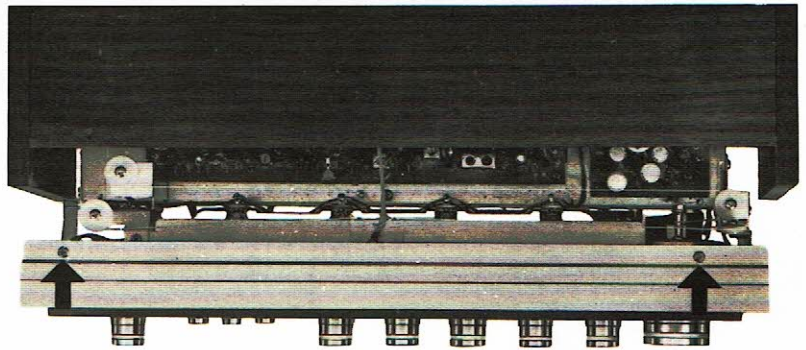
(2) DISASSEMBLY INSTRUCTIONS



- 1) To remove Chassis from wooden cabinet.
Turn the Cabinet upside down and remove the five pan head screws from the bottom cabinet.

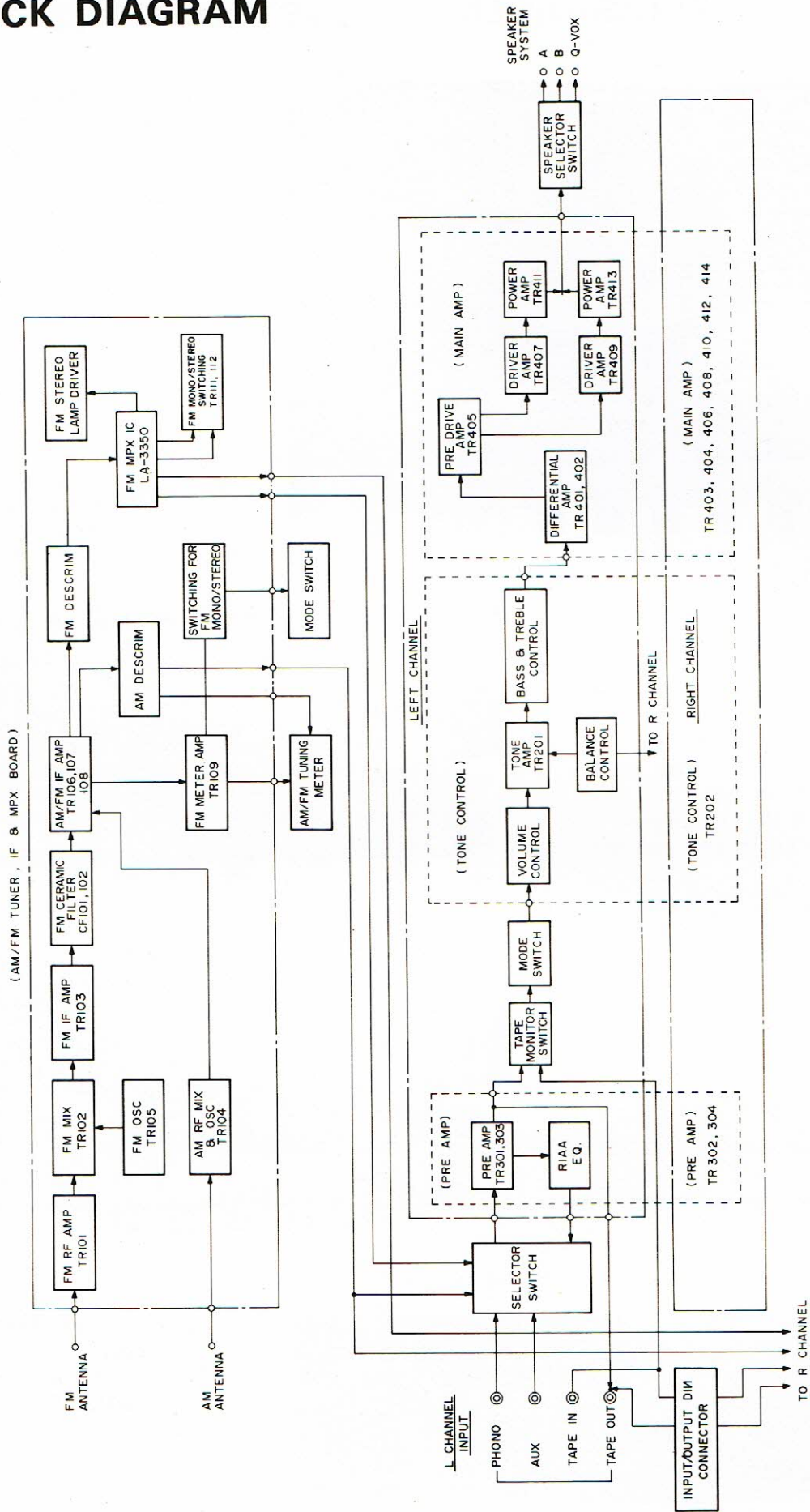
2) Removal of Front Panel (Aluminium panel).

- a) Remove the chassis from wooden cabinet as described in 1).
- b) Pull out the main chassis.
- c) Remove the two pan head screws from the top and bottom of the Front Panel.
- d) Remove knobs and pull off panel.



- 3) To remove Rear Panel from chassis.
Remove the four pan head screws from the Rear Panel.

(3) BLOCK DIAGRAM



(4) ALIGNMENT INSTRUCTIONS

MAIN AMP AND RESET CIRCUIT ALIGNMENT

- Note:**
- * Maintain line voltage at 120 volts. (UL, C.S.A.) (220/240 volt for European and Australian models)
 - * Set SELECTOR Switch to AUX.
 - * Set Mode Switch to Stereo.
 - * See P.C.B. illustrations for alignment points/adjustments.

MAIN AMP ADJUSTMENT

STEP	ALIGNMENT	EQUIPMENT	CON-NECTION	AUDIO FREQ.	LEVEL	ADJUST-MENT
1	Check Balance by measuring DC voltage across OUTPUT terminal of L and R channel	DC Volt Meter	See Fig. 1	No signal	DC voltage should be less than 30 mV.	Select value of R409 R410
2	Idling current adjustment	DC Volt Meter	See Fig. 2	No signal	Adjust voltage across Emitter resistors R438 and R440 to 10 mV. (8Ω Load)	pin 15-11+ R425 R426 pin 15-12+

RESET CIRCUIT ADJUSTMENT

STEP	ADJUSTMENT	EQUIPMENT	CON-NECTION	AUDIO FREQ.	SETTING	LEVEL
1		Audio Osc. V.T.V.M. Oscilloscope	See Fig. 3	1000 Hz	Volume: Max. BASS, TREBLE & BALANCE at center	Adjust input to AUX to get output level of about 3 Volts (8 ohm load).
2	Check if reset circuit is functioning.	Audio Osc. V.T.V.M. Oscilloscope	See Fig. 4	1000 Hz	Same as above	No output signal after output is shorted.

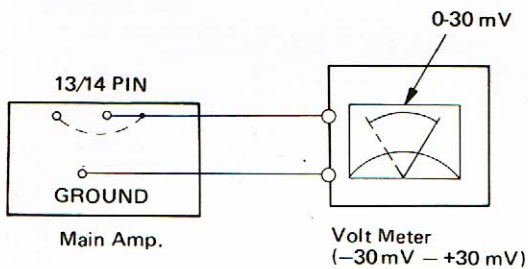


Figure 1

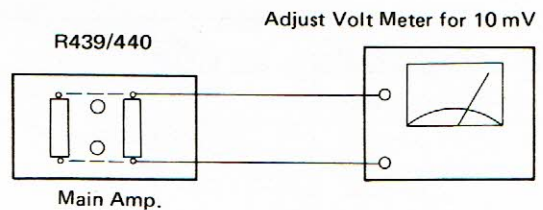


Figure 2

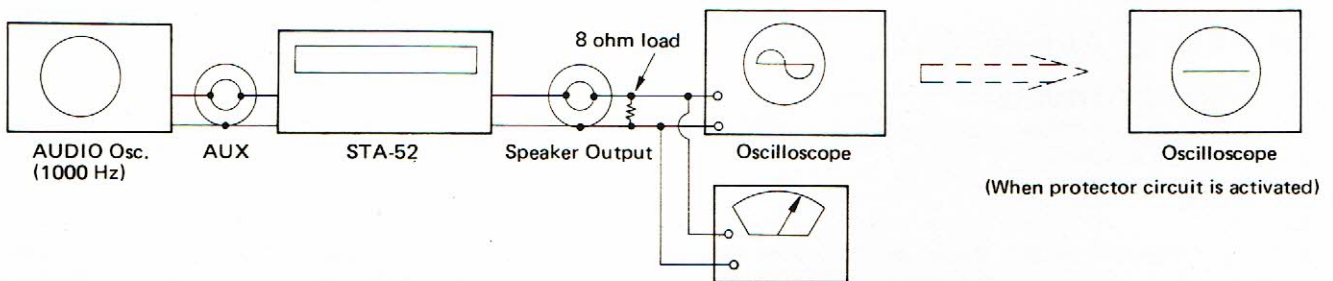


Figure 3

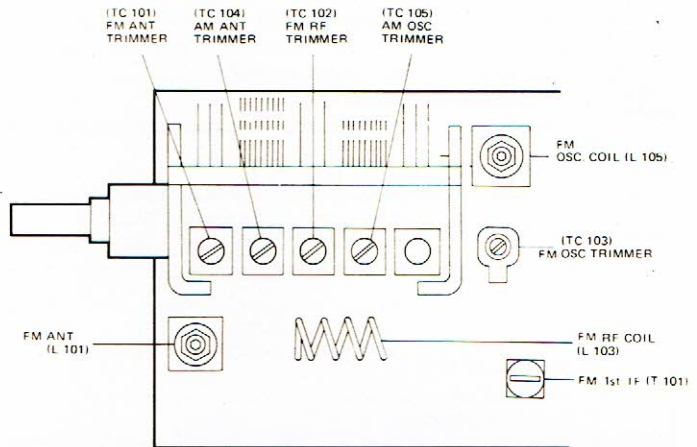
AC V.T.V.M. (3V)

Figure 4

EQUIPMENT REQUIRED

1. AM Signal Generator
2. AC Voltmeter
3. Oscilloscope

TUNER COIL & TRIMMER LOCATIONS



AM IF & RF ALIGNMENT

NOTE:

- Signal generator output should be no higher than necessary to obtain an output reading.
- Maintain line voltage at 120 volts. (UL, C.S.A.) (Use 220/240V AC For European & Australian Models.)
- Set SELECTOR Switch to AM.
- See P.C.B. illustrations for alignment points/adjustments.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Connect standard loop ANTENNA to Signal Generator and radiate signal into the AM Ferrite antenna. See Fig. 5.	455 kHz (400 Hz, 30% MOD)	Point of non-interference (near 600 kHz)	AC Voltmeter to TAPE OUT JACK	T106 T107 T108 T109	Adjust for maximum reading.
2	Same as above	600 kHz (400 Hz, 30% MOD)	600 kHz	Same as above	T105 (OSC Coil) L106 AM ANT Coil	Adjust for maximum reading.
3	Same as above	1400 kHz (400 Hz, 30% MOD)	1400 kHz	Same as above	TC105 (OSC Trimmer) TC104 (ANT Trimmer)	Adjust for maximum reading.
4	Repeat steps 2 and 3 until no further change is noticed.					
5	Same as step 1	1000 kHz (400 Hz, 30% MOD) Output level to 100 mV/m	Point of non-interference and no signal	AM Strength Meter	Select Value of R-160	Select Value so the Meter Pointer on Receiver is between 80% and 90% on the Meter.

AM ALIGNMENT SET-UP

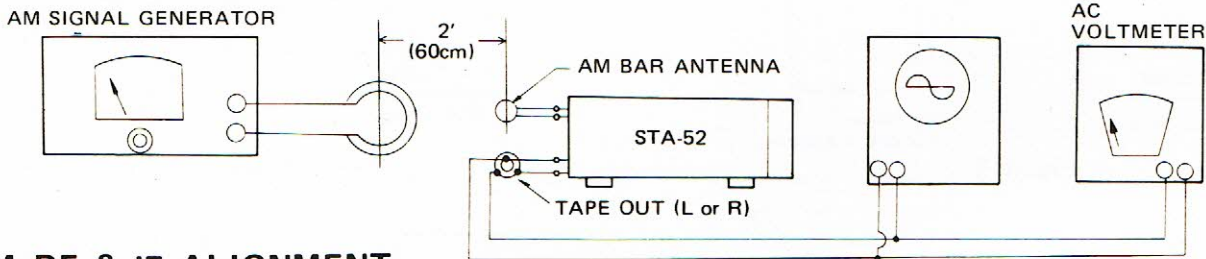


Figure 5

FM RF & IF ALIGNMENT

EQUIPMENT REQUIRED

1. FM Signal Generator Output Level: 1 mV
2. Sweep Generator
3. AC Voltmeter

4. Oscilloscope
5. Distortion Meter

NOTE:

- Signal Generator output should be no higher than necessary to obtain an output reading.
- Set SELECTOR Switch to FM.
- Maintain Line voltage at 120 volts. (UL, C.S.A.) (220/240 V AC For European & Australian Models.)
- Refer to P.C.B. illustrations for test points/adjustments.

STEP	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Sweep Generator to "FM ANT" terminal on FM Front end board	10.7 MHz (1400 kHz Sweep)	Any dial setting where no noise or interference exists	Scope to TP7 at R 151 (MPX input) AM/FM/MPX Board	T101, 102 103, 104 (Primary) FM IFT	Adjust for maximum amplitude and proper linearity between ± 150 kHz markers. Refer to Fig. 7.
2	Sweep Generator to FM Antenna Terminal thru FM Dummy antenna (300 ohm)	"	"	"	T101, 102 FM IFT	"
3	Same as above.	"	"	"	T104 FM IFT (Primary and Secondary)	Adjust for symmetrical "S" curve as shown in Fig. 6
4	Signal Generator to FM Antenna Terminal thru FM Dummy antenna (300 ohm)	98 MHz (400 Hz, 100% MOD)	Tune for Maximum reading on meter.	Distortion Meter to TAPE OUT Jack	T104 FM Discrim (Secondary)	Adjust for minimum distortion.
5	Same as above	*86.5 MHz See Note in step 7.	Tuning gang fully closed	AC Voltmeter and Scope to TAPE OUT Jack	L105 (FM OSC)	Adjust for maximum reading on meter.
6	Same as above	108.5 MHz	Tuning gang fully opened	"	TC103 (FM OSC Trimmer)	"
7	Repeat STEPs (5) and (6) until Tuning Range Covers exactly from 86.5 MHz to 108.5 MHz. (*European models must not be able to tune below 87.5 MHz.)					
8	Signal Generator to FM Dummy antenna (300 ohm)	90 MHz	90 MHz Tune to Signal.	AC Voltmeter and Scope to TAPE OUT Jack.	L101 (FM ANT Coil) L103 (FM RF Coil; stretch or squeeze)	Adjust for maximum reading on meter.
9	Same as above	106 MHz	106 MHz Tune to Signal.	"	TC101 (FM ANT Trimmer) TC102 (FM RF Trimmer)	"
10	Repeat STEPs (8) and (9) until no further improvement is noticed.					
11	Same as STEP (8) ANT. input 1 mV	98 MHz	98 MHz Tune to Signal.	-	T110	Adjust for maximum reading on meter.
12	Same as STEP (8) ANT. input 100mV	"	"	-	VR101	Adjust so the Meter Pointer on Receiver is full scale.

FM ALIGNMENT SET-UP

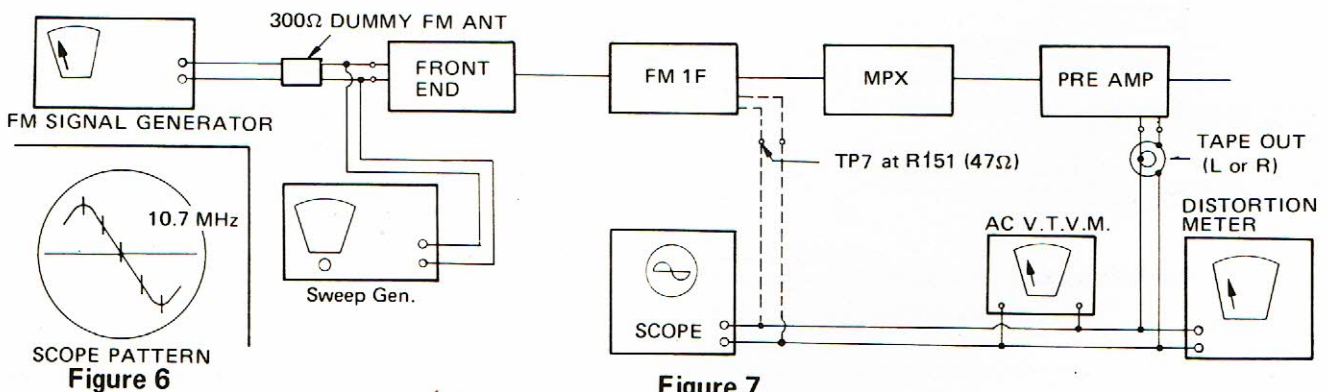


Figure 7

FM STEREO ALIGNMENT

EQUIPMENT REQUIRED

- | | | |
|------------------------------|---|----------------------|
| 1. Stereo Modulator . . . | Connect Stereo Modulator to EXT. Mod. terminal
FM signal generator.
Modulation Level of 19 kHz Pilot Signal . . . 8 – 10% | 3. Audio Generator |
| 2. FM Signal Generator . . . | Output Level 1 mV
Frequency Approximately 98 MHz.
Deviation 75 kHz 100 % modulation of
composite signal. | 4. AC Voltmeter |
| | | 5. Oscilloscope |
| | | 6. Distortion Meter |
| | | 7. Frequency Counter |

NOTE:

See P.C.B. Illustration for alignment/test points.

Preliminaries

Set SELECTOR switch to FM STEREO.

MULTIPLEX & SEPARATION ALIGNMENT

STEP	SIGNAL GENERATOR COUPLING	STEREO MODULATION	INDICATOR	ADJUSTMENT	REMARKS
1	Connect to FM Antenna terminal thru FM dummy antenna (300 Ω).	Mono. 1 kHz (1000 Hz, No Mod) Input 1 mV.	Counter connected to TP14 at Pin No. 12 of IC	VR103	Adjust for 19 kHz \pm 50 Hz on Counter. Refer to Fig. 8.
2	Same as above	Composite MPX Signal 1 kHz on Left channel ONLY	AC Voltmeter connected for TAPE OUT Jack of Right channel	VR102 (Separation)	Adjust for minimum reading. Refer to Fig. 9.
3	Same as above	Composite MPX Signal 1 kHz on Right channel ONLY	AC Voltmeter connected for TAPE OUT Jack of left channel	Same as above	Same as above
4	Repeat STEPS 2 and 3 until AC Voltmeter reading is at least -33 dB re same channel output (i.e. 33 dB separation).				
5	Same as step 1	Composite Signal 1 kHz	AC Voltmeter connected to TAPE OUT Jack		With 10 μ V antenna input signal, stereo indicator lamp should come on.

FM STEREO ALIGNMENT SET-UP

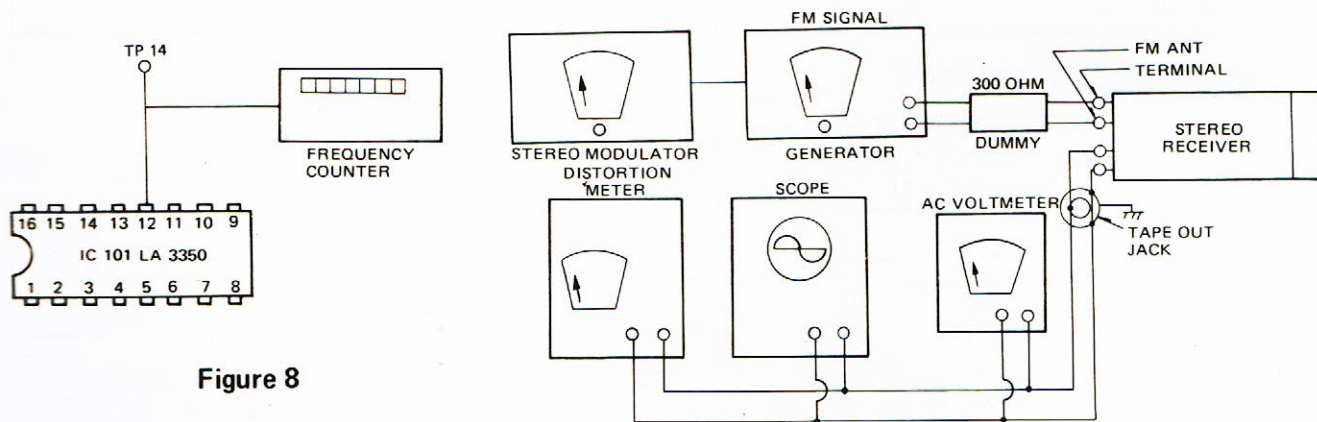


Figure 8

Figure 9

BRIEF DESCRIPTION OF PROTECTIVE CIRCUIT

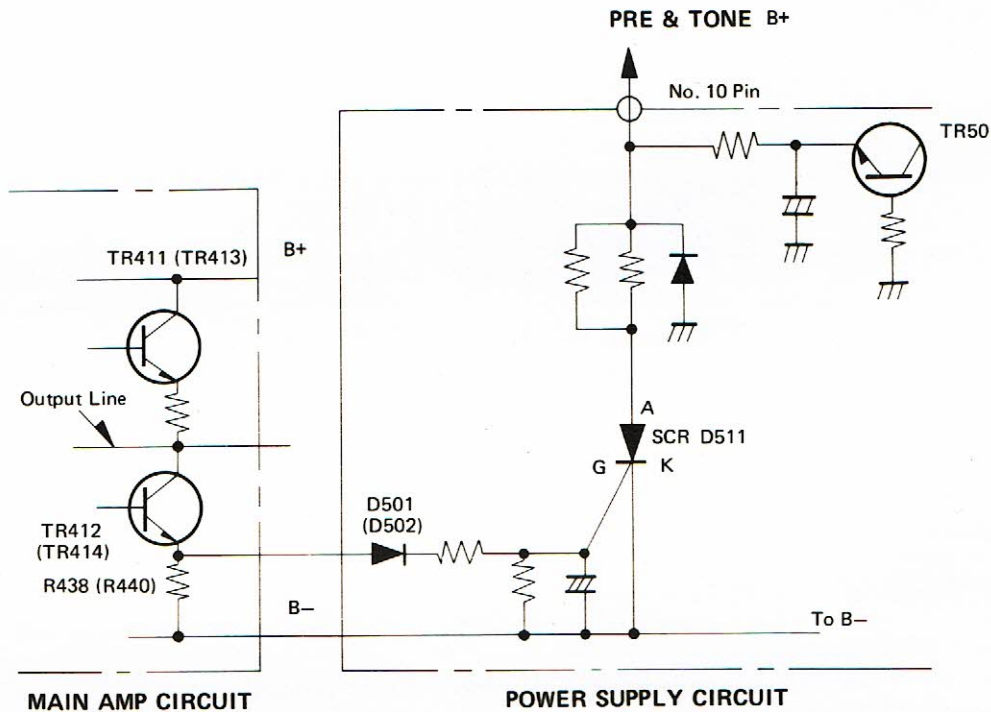
If speaker terminals are shorted (or Load impedance of one channel [Left or Right] is less than 4 ohms), excessively high current flows from Emitter to Collector of TR412 (or TR414) and a high voltage appears across R438 (or R440).

This high voltage goes to Gate of SCR D511 after being rectified by D501 (or D502).

When the voltage between Cathode and Gate increases to about 0.7V, SCR D511 will be turned on. Voltage at Pin No. 10 on Power Supply Board goes to -1V to 0V (PRE + TONE B+), PRE and TONE circuits will stop functioning and thus protect the MAIN Amp.

If this should occur, the Amplifier will automatically shut down and output will drop to zero. Turn the Receiver off to reset the protective circuit.

When the problem is corrected, turn the Receiver on again.



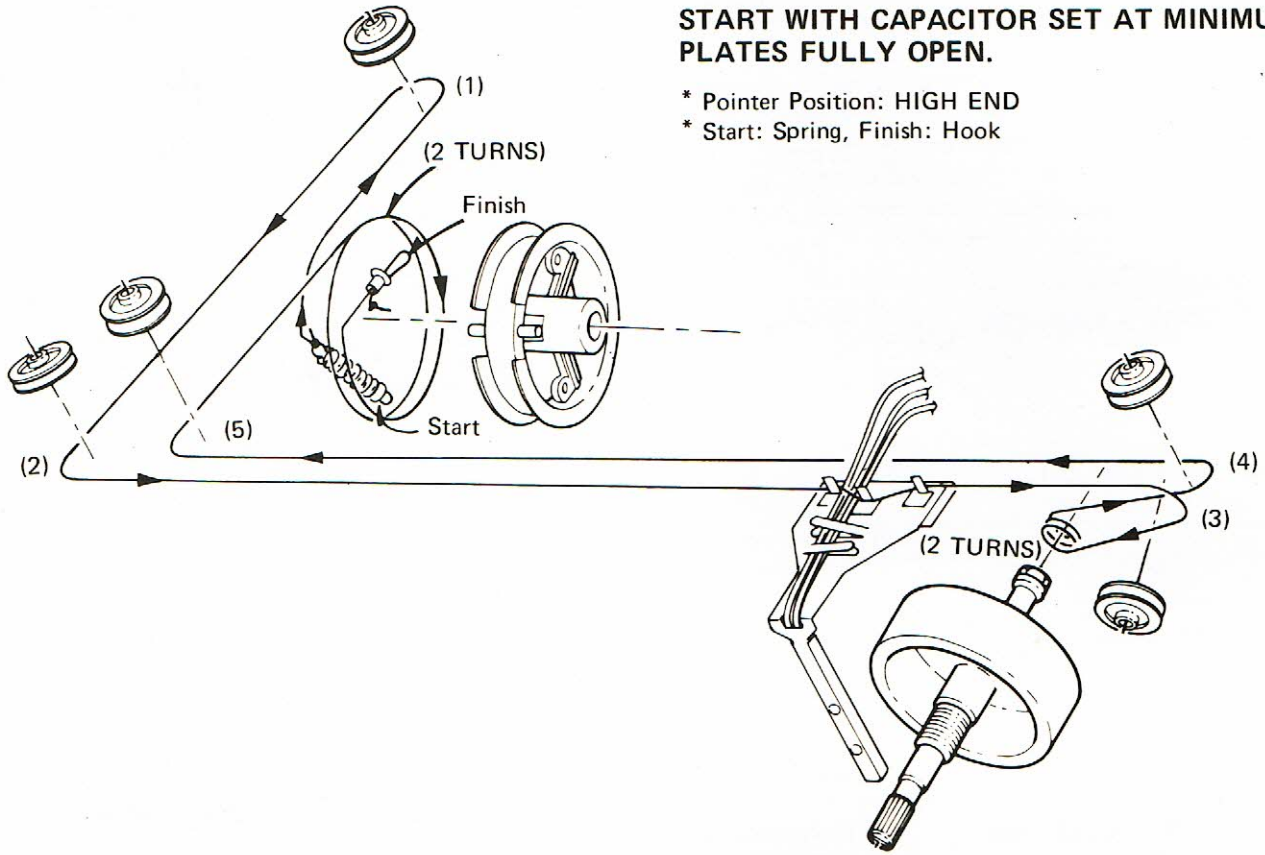
(5) TROUBLE SHOOTING

SYMPTOM	CAUSE/REMEDY
1) No output.	1) Faulty AC power cord. * Replace the cord. 2) Defective power switch. * Replace the switch. 3) Broken wire in the power transformer. * Replace the transformer.
2) Pilot lamps do not light.	1) Broken lamp(s). * Replace the lamp(s). 2) Open in the power transformer tertiary winding. * Replace the transformer. 3) Blown fuse in tertiary winding (2.5A). * Replace fuse.
3) Pilot lamps light but no speaker output.	1) Defective capacitor C417 or 418. * Replace the defective capacitor. 2) Defective diode D507-510. * Replace the defective diode(s). 3) Defect in the power transformer secondary winding. * Replace the power transformer.

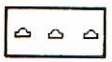
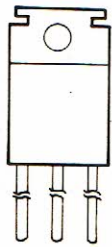
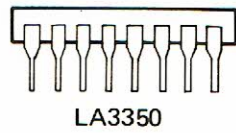
SYMPTOM	CAUSE/REMEDY
4) Blows fuse.	1) Defective diode D507–510 in the rectifier circuit. * Replace the defective diode(s). 2) Short-circuit in the rectifier circuit. * Remove the short. 3) Short-circuit in power transistor circuitry TR411–414. * Repair circuit and/or replace the defective transistor(s).
5-1) No output one channel with VOLUME at maximum and BALANCE at center, when a test signal is applied to the terminal of non-operating channel of the VALANCE control R222.	1) Defective transistor TR401–414. * Replace the defective transistor(s). 2) Defective resistor or capacitor of TONE or MAIN AMP circuit. * Replace the defective part(s).
5-2) No output when a test signal is applied to the input terminals.	1) Defective transistor, resistor or capacitor of PRE AMP circuit. * Replace the defective part(s). 2) Defective MONO/Stereo or TAPE MONitor switch. * Replace or repair the switch(es). 3) Defective Selector switch. * Replace the Selector switch.
6) Speaker works normally but headphone does not work.	1) Defective R443 (left) or R444 (right). * Change it.
7) All the inputs work normally except "AUX" input.	1) Poor contact in "AUX" input jack. * Repair or replace it. 2) Defective resistor R301–304. * Replace it. 3) Poor contact in selector switch. * Repair or replace the switch.
8) "PHONO" input not operative.	1) Poor contact in "PHONO" input jack. * Repair or replace it. 2) Faulty selector switch. * Repair or replace the switch.
9) "TAPE OUT" inoperative.	1) Poor contact in "TAPE OUT" output jack. * Repair or replace jack.
10) No AM or FM. (Tuner + B voltage is not 11–12V)	1) Blown fuse (2.5A) in tertiary circuit. * Replace fuse. 2) Open tertiary winding in the power transformer. * Replace the transformer. 3) Defective diode D505 or 506. * Change the defective diode(s). 4) Faulty capacitor C504, 506–508. * Change it. 5) Defective resistor R508 or 509. * Replace the resistor(s). 6) Zener diode D503 defective. * Replace the diode. 7) Short-circuit in Tuner + B circuit. * Repair the short. 8) Poor contact in Selector switch. * Repair or replace it.
11) No FM.	1) Poor contact in Selector switch. * Repair or replace it. 2) Defective resistor or capacitor of FM Front-end circuit. * Replace the defective part(s). 3) Transistor, diode, IFT, resistor or capacitor of FM IF circuit defective. * Replace the defective part(s). 4) Faulty FM Antenna lead-in/circuitry. * Repair or replace the Antenna lead-in/circuitry.

SYMPTOM	CAUSE/REMEDY
12) No AM.	1) Poor contact in selector switch. * Repair or replace switch. 2) Transistor, diode, IFT, resistor or capacitor of AM IF defective. * Replace the defective part(s). 3) Bar-antenna coil defective. * Repair or replace it.
13) No MPX separation.	1) Improper adjustment. * Readjust. 2) IC of MPX board defective. * Replace the IC. 3) VR102 or 103 (Trimmer resistor) defective. * Replace.
14) No stereo light.	1) Broken ST. indicator lamp. * Replace the lamp. 2) Defective IC of MPX board. * Change the defective IC.
15) FM stereo does not work.	1) Defective IC (LA3350). * Replace. 2) Defective VR102 or 103. * Replace. 3) Defective transistor, diode, resistor or capacitor of FM MPX circuit. * Replace the defective part(s). 4) Defective Pilot lamp PL5. * Replace.
16) "LOUDNESS" has no effect.	1) Defective "LOUDNESS" switch. * Replace the switch. 2) Defective C201-204, R201 or 202. * Replace the defective part(s).
17) "BASS" has no effect.	1) R224 (100 Kohm control) defective. * Replace it. 2) Defective R215-220 or C217-220 of Tone control board. * Replace the defective part(s).
18) "TREBLE" has no effect.	1) Faulty R223 (100 Kohm control). * Replace it. 2) Defective C213-216, R213 or 214 or Tone control board. * Replace the defective part(s).
19) "TAPE IN" inoperative.	1) Poor contact in "TAPE IN" input jack. * Repair or replace it. 2) Faulty "TAPE MONitor" switch. * Repair or replace the faulty switch.
20) Overload protector circuit does not work.	1) Defective SCR D511. * Replace the defective SCR. 2) Defective resistor R501-504. * Replace the defective resistor(s). 3) Defective capacitor C501. * Replace the defective capacitor. 4) Defective diode D501, 502 or 504. * Replace the defective diode(s).
21) DC not balanced within ± 30 mV at output of L/R channel.	1) Defective transistor TR401 or 402 (TR403 or 404). * Replace the defective transistor(s). 2) Incorrect/unsuited R409/410. * Select suitable value resistor.

(6) DIAL STRINGING DIAGRAM

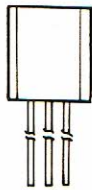


(7) IC & TRANSISTOR LEAD IDENTIFICATION



BCE

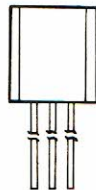
2SD 313
2SC 789



ECB



2SC 644 2SC 828
2SC 829 2SC 923
2SC 900 2SC 930
2SC 945 2SC 1047
2SC 1359 2SC 1571
2SC 1682 2SA 539
2SA 561



GAK



M 21C
2SF 657



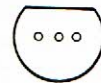
GDS



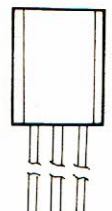
2SK 19



GDS



2SK 41



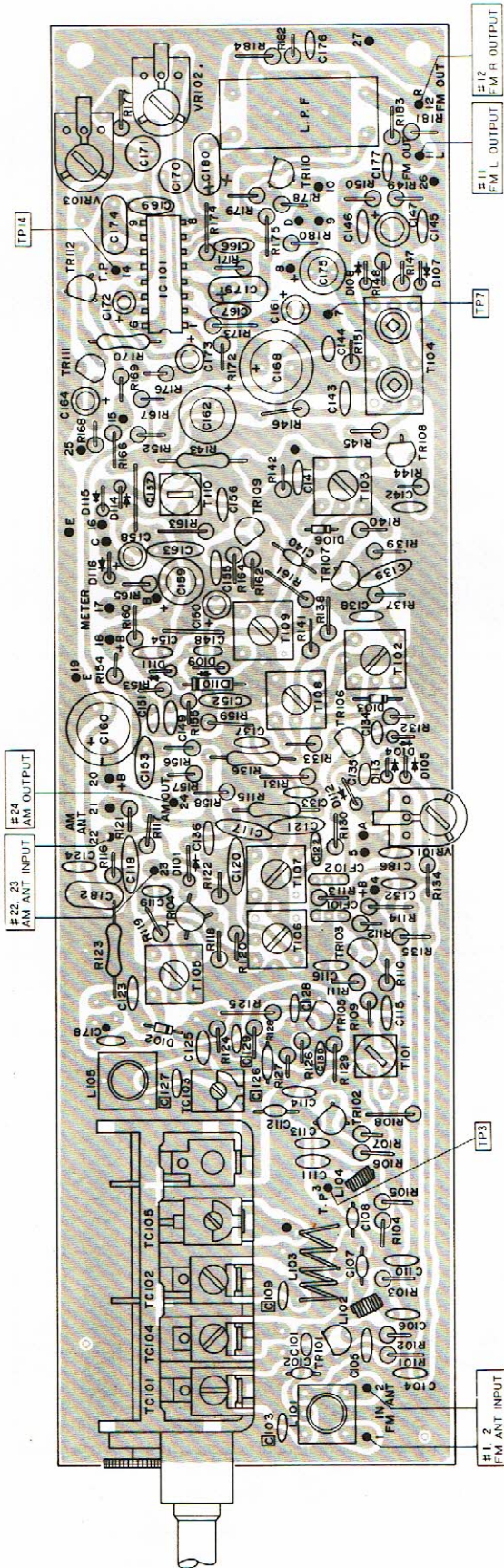
ECB



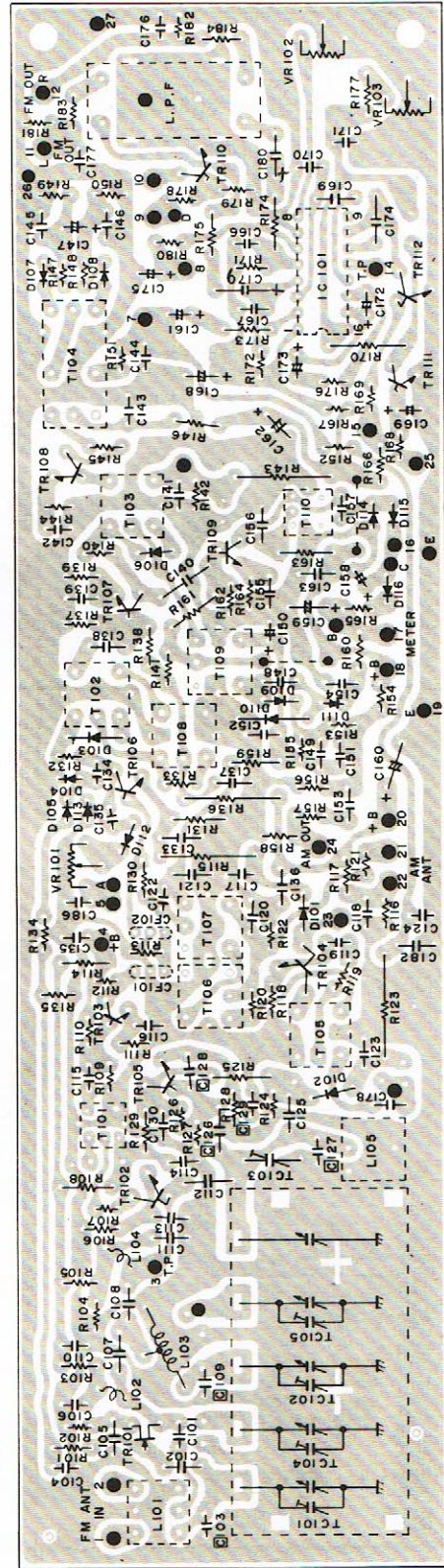
2SC 1384
2SA 684

(8) AM/FM TUNER, IF & MPX ASSEMBLED BOARD

TOP VIEW

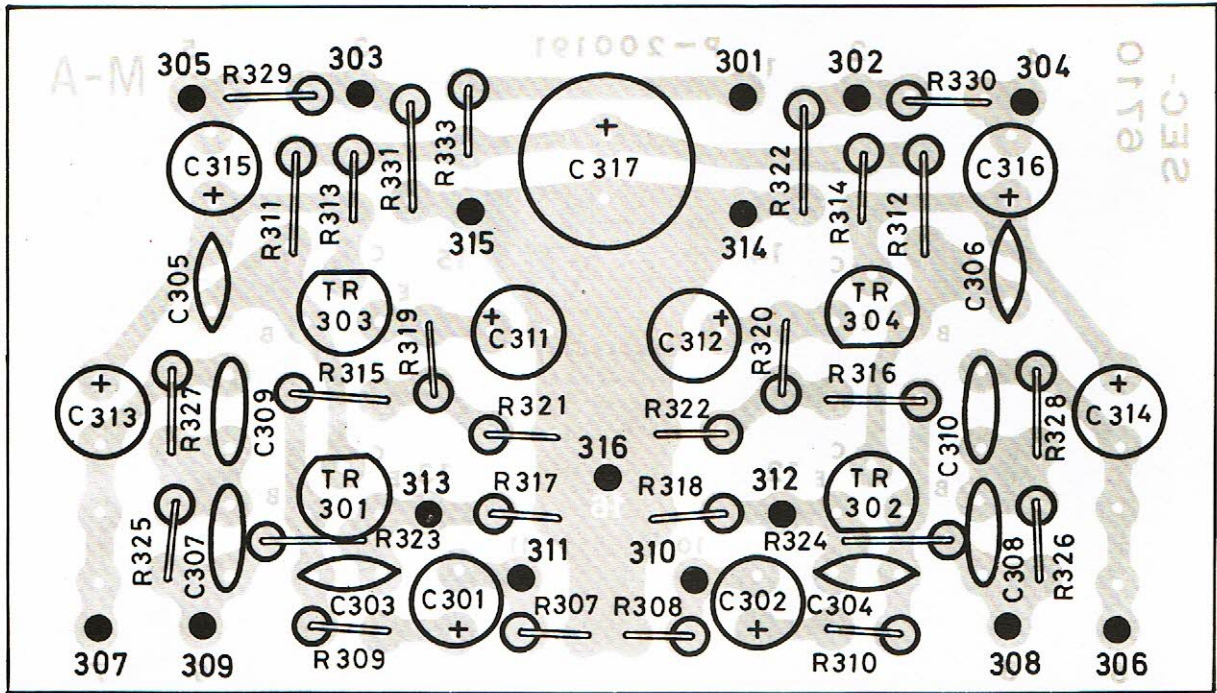


BOTTOM VIEW

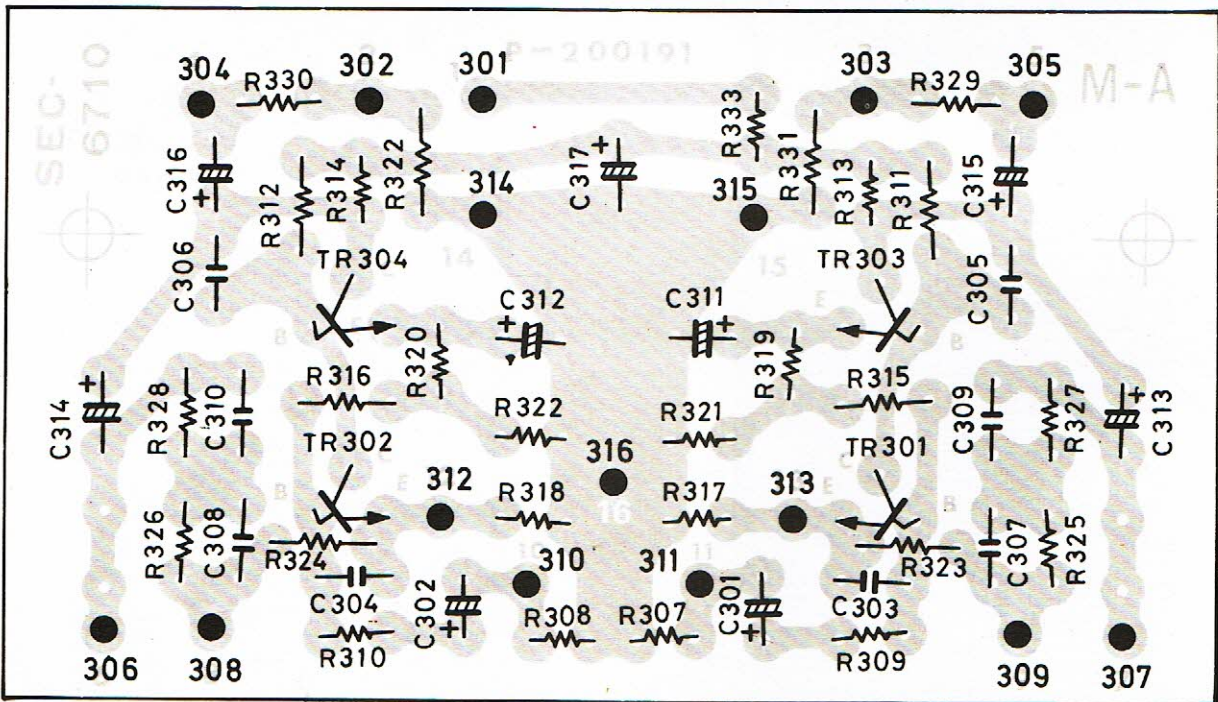


(9) PRE AMP ASSEMBLED BOARD

TOP VIEW



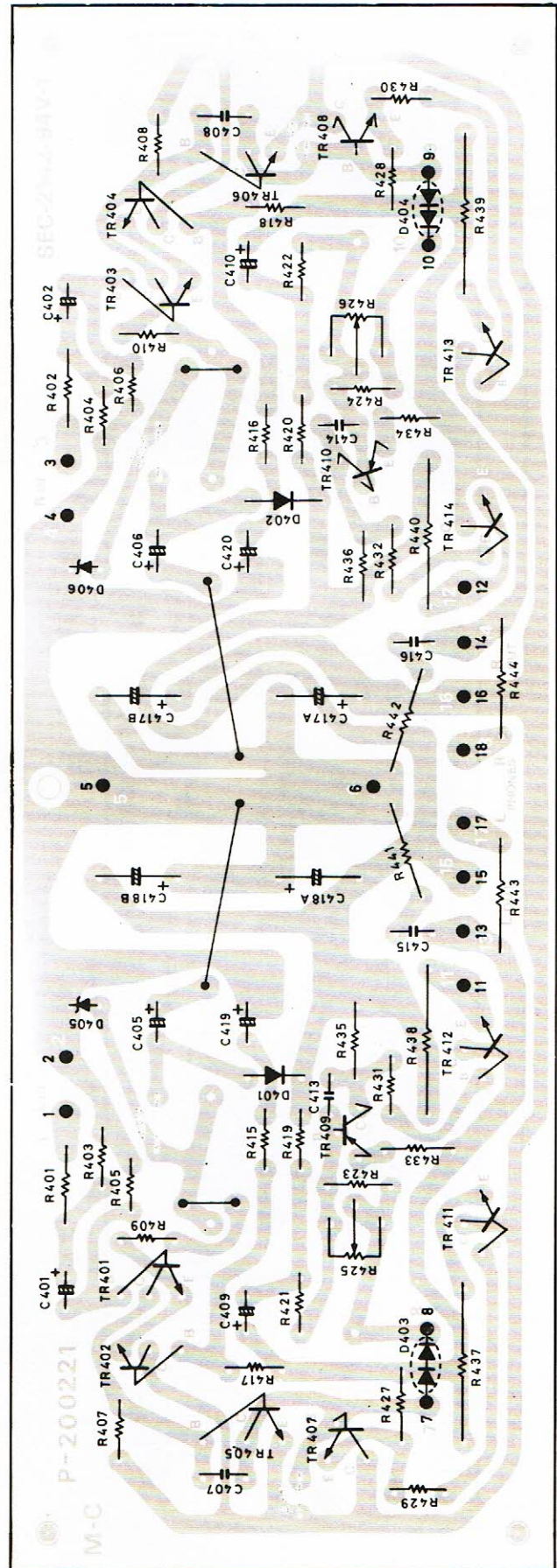
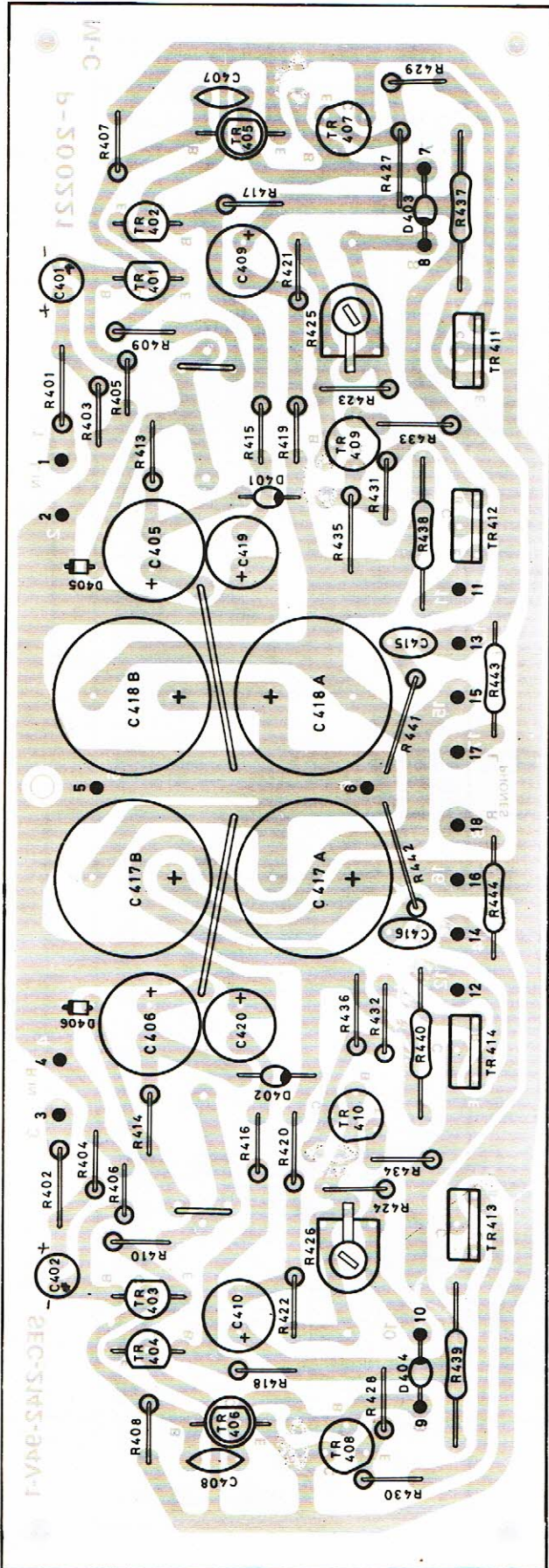
BOTTOM VIEW



(11) MAIN AMP ASSEMBLED BOARD

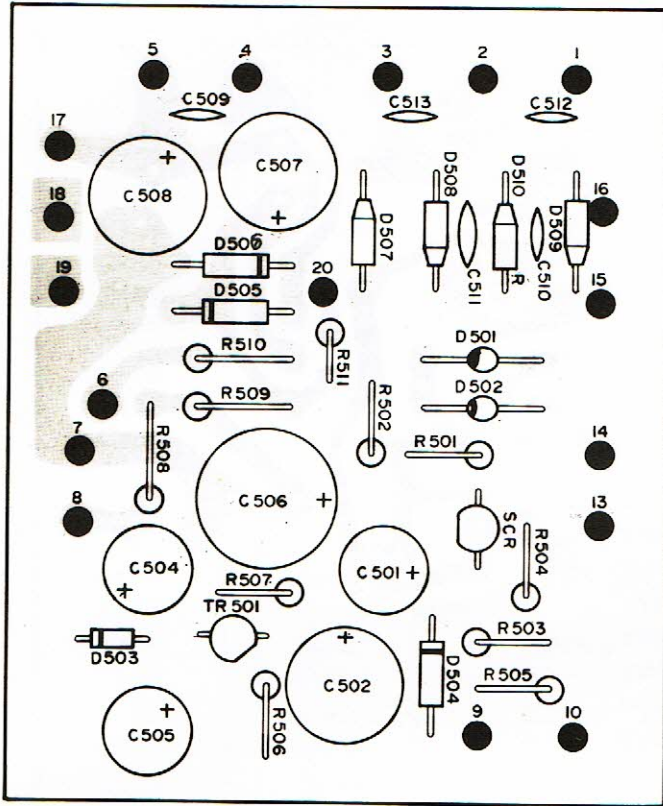
TOP VIEW

BOTTOM VIEW

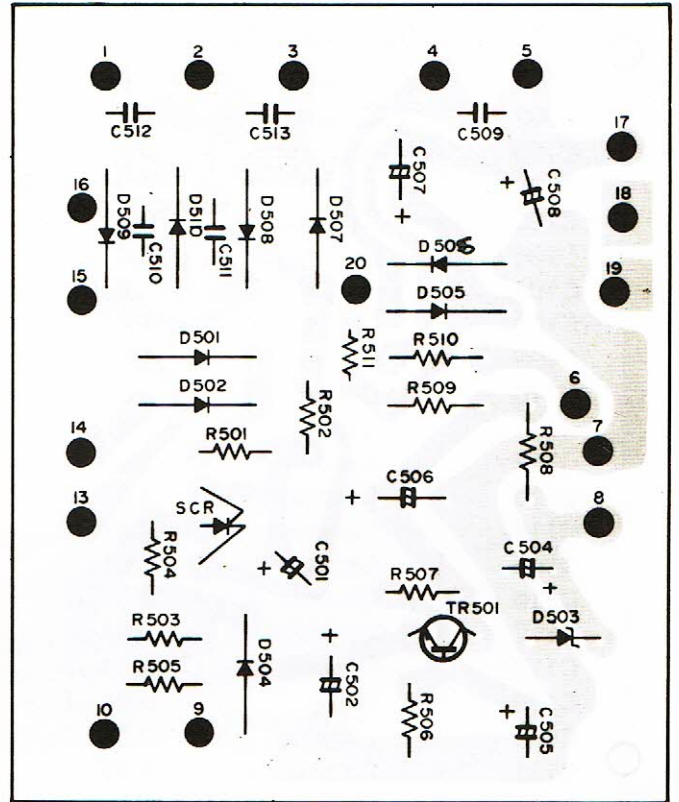


(12) POWER SUPPLY ASSEMBLED BOARD

TOP VIEW

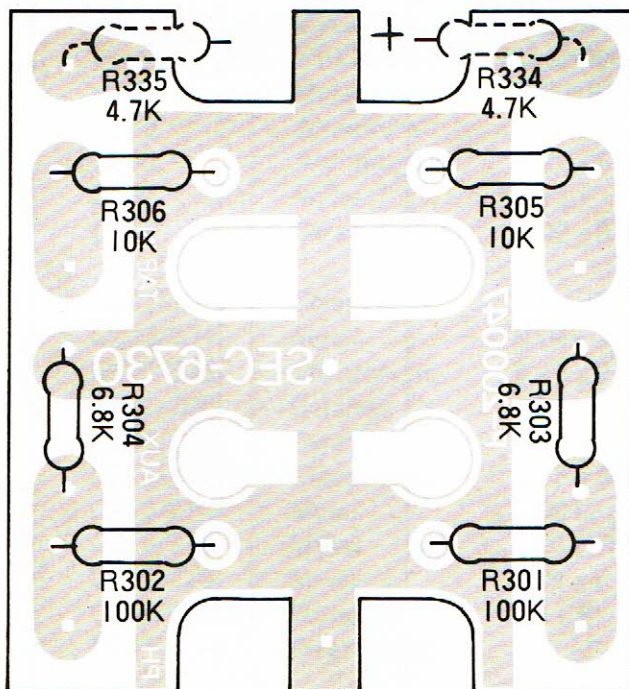


BOTTOM VIEW

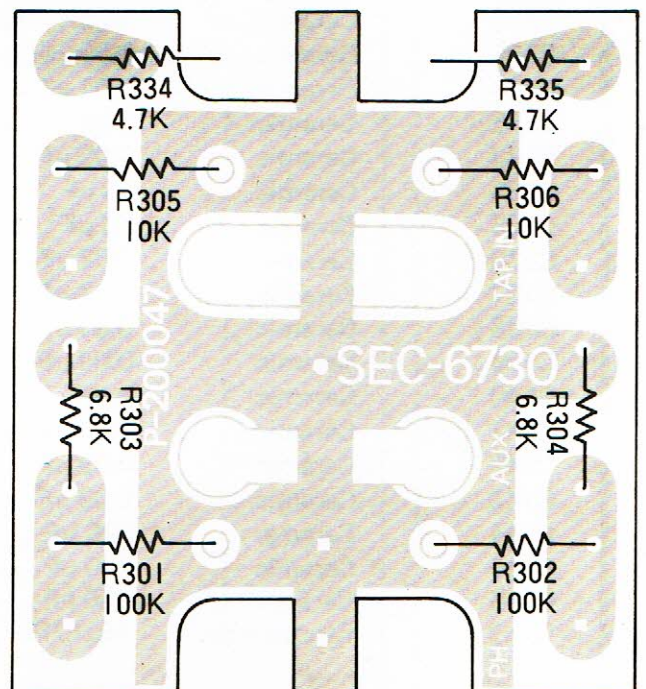


(13) JACK ASSEMBLED BOARD

TOP VIEW



BOTTOM VIEW



(14) ELECTRICAL PARTS LIST

REF. NO.	DESCRIPTION	PS PART NO.	MFD. PART NO.
CAPACITORS			
C101	Ceramic 1 pF 25WV		
C102	Ceramic 30 pF 25WV		
C103	Ceramic 15 pF 25WV (NPO)		
C104	Ceramic 0.01 μ F 25WV		
C105	Ceramic 0.01 μ F 25WV		
C106	Ceramic 0.01 μ F 25WV		
C107	Ceramic 30 pF 25WV		
C108	Ceramic 10 pF 25WV		
C109	Ceramic 15 pF 25WV (NPO)		
C110	Ceramic 0.01 μ F 25WV		
C111	Ceramic 150 pF 25WV		
C112	Ceramic 1 pF 25WV		
C113	Ceramic 0.01 μ F 25WV		
C114	Ceramic 0.01 μ F 25WV		
C115	Ceramic 0.01 μ F 25WV		
C116	Ceramic 0.01 μ F 25WV		
C117	Ceramic 0.04 μ F 25WV		
C118	Ceramic 0.04 μ F 25WV		
C119	Mylar 0.01 μ F 50WV		
C120	Ceramic 0.04 μ F 25WV		
C121	Ceramic 0.04 μ F 25WV		
C122	Mylar 0.0047 μ F 50WV		
C123	Ceramic 0.01 μ F 25WV		
C124	Ceramic 0.01 μ F 25WV		
C125	Ceramic 7 pF 25WV		
C126	Ceramic 7 pF 25WV (NPO)		
C127	Ceramic 18 pF 25WV (N470)		
C128	Ceramic 15 pF 25WV (NPO)		
C129	Ceramic 10 pF 25WV (NPO)		
C130	Ceramic 0.01 μ F 25WV		
C131	Ceramic 0.01 μ F 25WV		
C132	Ceramic 0.02 μ F 25WV		
C133	Ceramic 0.02 μ F 25WV		
C134	Ceramic 10 pF 25WV		
C135	Ceramic 30 pF 25WV		
C136	Ceramic 0.02 μ F 25WV		
C137	Ceramic 0.02 μ F 25WV		
C138	Ceramic 0.01 μ F 25WV		
C139	Ceramic 0.04 μ F 25WV		
C140	Ceramic 5 pF 25WV		
C141	Ceramic 0.01 μ F 25WV		
C142	Ceramic 0.02 μ F 25WV		
C143	Ceramic 0.02 μ F 25WV		
C144	Ceramic 220 pF 25WV		
C145	Ceramic 100 pF 25WV		
C146	Ceramic 100 pF 25WV		
C147	Electrolytic 10 μ F/10V		

REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
C148	Ceramic 220 pF 25WV		
C149	Mylar 0.015 μ F 50WV		
C150	Electrolytic 10 μ F / 10V		
C151	Mylar 0.015 μ F 50WV		
C152	Ceramic 0.04 μ F 25WV		
C153	Mylar 0.047 μ F 50WV		
C154	Ceramic 0.02 μ F 25WV		
C155	Ceramic 0.01 μ F 25WV		
C156	Ceramic 0.01 μ F 25WV		
C157	Ceramic 100 pF 25WV		
C158	Electrolytic 4.7 μ F / 10V		
C159	Electrolytic 100 μ F / 10V		
C160	Electrolytic 470 μ F / 16V		
C161	Electrolytic 3.3 μ F / 16V		
C162	Electrolytic 220 μ F / 16V		
C163	Ceramic 0.04 μ F 25WV		
C164	Electrolytic 1 μ F / 50V		
C165	Not used		
C166	Mylar 0.015 μ F 50WV		
C167	Mylar 0.015 μ F 50WV		
C168	Electrolytic 330 μ F / 16V		
C169	Mylar 0.047 μ F 50WV		
C170	Polystyrene 680 pF 50WV		
C171	Polystyrene 1500 pF 50WV		
C172	Aluminium 0.22 μ F / 25V		
C173	Aluminium 0.47 μ F / 25V		
C174	Mylar 0.1 μ F 50WV		
C175	Electrolytic 47 μ F / 16V		
C176	* Mylar 0.0068 μ F 50WV (0.0039 μ F for European & Australian models only)		
C177	* Mylar 0.0068 μ F 50WV (0.0039 μ F for European & Australian models only)		
C178	Mylar 0.0018 μ F 50WV		
C179	Aluminium 0.22 μ F / 25V		
C180	Aluminium 0.22 μ F / 25V		
C182	Mylar 0.1 μ F 50WV		
C186	Ceramic 0.02 μ F 25WV		
C201/202	Ceramic 330 pF (YP) 25WV		
C203/204	Mylar 0.047 μ F 50WV		
C205/206	Electrolytic 0.47 μ F / 50V		
C207/208	Ceramic 220 pF 25WV		
C209/210	Ceramic 470 pF (YP) 25WV		
C211/212	Electrolytic 1 μ F / 50V		
C213/214	Mylar 0.0012 μ F 50WV		
C215/216	Mylar 0.012 μ F 50WV		
C217/218	Mylar 0.01 μ F 50WV		
C219/220	Mylar 0.1 μ F 50WV		
C221	Electrolytic 220 μ F / 25V		

REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
C301/302	Tantalum 2.2 μ F / 25V		
C303/304			
305/306	Ceramic 100 pF 50WV		
C307/308	Mylar 0.0033 μ F 50WV		
C309/310	Mylar 0.015 μ F 50WV		
C311/312	Electrolytic 33 μ F / 10V		
C313/314	Electrolytic 4.7 μ F / 25V		
C315/316	Tantalum 1 μ F / 25V		
C317	Electrolytic 470 μ F / 35V		
C318	Ceramic 0.02 μ F 50WV		
C401/402	Electrolytic 3.3 μ F / 25V		
C403/404	Not used		
C405/406	Electrolytic 220 μ F / 25V		
C407/408	Ceramic 30 pF 25WV		
C409/410	Electrolytic 100 μ F / 16V		
C411/412			
413/414	Not used		
C415/416	Mylar 0.022 μ F 50WV		
C417 x 2			
418 x 2	Electrolytic 2200 μ F / 25V		
C419/420	Electrolytic 100 μ F / 16V		
C501	Electrolytic 220 μ F / 10V		
C502	Electrolytic 220 μ F / 25V		
C503	Not used		
C504	Electrolytic 220 μ F / 16V		
C505	Electrolytic 220 μ F / 25V		
C506	Electrolytic 1000 μ F / 35V		
C507/508	Electrolytic 1000 μ F / 16V		
C509/510/511	Ceramic 0.01 μ F 50WV		
C512/513	Ceramic 0.04 μ F 50WV		
C514	Electrolytic 470 μ F / 35V		
C601	*Ceramic 0.01 μ F 125V (MR or UK-535 type) (Use for UL models only) **Ceramic 0.01 μ F 125V (CP-3 type) (Use for C.S.A. models only) ***Ceramic 0.01 μ F 250V (VDE approved type) (Use for European & Australian models)		
CERAMIC FILTER			
C101/102	Ceramic Filter SEE-10.7 MA-8	CA-7536	P-140030
COILS & TRANSFORMERS			
L101	FM ANT Coil	CA-3593	P-110036 or P-110051
L102	FM Trap Coil	CB-2171	P-360003
L103	FM RF Coil		P-340015

REF NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
L104	FM Trap Coil	CG-2171	P-360003
L105	FM OSC Coil	CA-4528	P-120029
	*Use for UL & C.S.A. models		P-120033
	**Use for European & Australian models	CA-3597	P-110043
	AM Bar Antenna Coil		or P-110069
LPF101	Low Pass Filter Coil (19 kHz)	CA-3373	P-510006
T101	FM IFT (7F-007)	CA-7265	P-140007
T102/103	FM IFT (10F-011)	CA-7254	P-140011
T104	FM IFT (10F-014)	CA-7286	P-140014
T105	AM OSC Coil (OC-008)	CA-4438	P-120008
T106	AM IFT (OA-011)	CA-7281	P-130011
T107	AM IFT (OA-010)	CA-7428	P-130010
T108	AM IFT (OA-005)	CA-7112	P-130005
T109	AM IFT (OA-012)	CA-7313	P-130012
T110	FM IFT (7F-008)	CA-7266	P-140008
T601	*Power Transformer 120V AC Prim. Second. DC43V, 1A AC12V, 0.5A (Use for UL models only)	TA-0559	P-100375
	**Power Transformer 120V AC Prim. Second. DC43V, 1A AC12V, 0.5A (Use for C.S.A. models only)		P-100245A
	***Power Transformer 220/240V AC Prim. Second. DC43V, 1A AC12V, 0.5A (Use for European & Australian models)		P-100253
DIODES			
D101	Ge Diode	1N-60P	
D102	Varicap	1S 2139B	
D103	Si Diode	WG-713	
D104/105	Ge Diode	1N-60P	
D106	Si Diode	WG-713	
D107/108			
109/110			
111/112			
113/114			
115	Ge Diode	1N-60P	
D116	Si Diode	WG-713	
D201/202	Si Diode	WG-713	
D401/402	Si Diode	KB-162C5	
D403/404	Si Varistor	MV-13	
D405/406	Zener Diode	WZ-130	
D501/502	Si Diode	KB-162C5	
D503	Zener Diode	WZ-130 or ZPD-13	
D504/505			
506	Si Diode	SR-1K-2	
D507/508			
509/510	Si Diode	Hi Fi Special, S3V-20 or 30D-2	

REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
FUSES			
	*Fuse 250V, 1.5A (SLO-BLO Acting) (Use for UL & C.S.A. models)		P-250051
	**Fuse 250V, 2.5A (Quick Acting with Lead) (Use for UL models only)		P-250043
	***Fuse 125V, 1.5A (SLO-BLO Acting with Lead) (Use for C.S.A. models only)		P-250011
	***Fuse 125V, 5A (SLO-BLO Acting with Lead) (Use for C.S.A. models only)		P-250036
	****Fuse 250V, 1A (Quick Acting) (Use for European & Australian models)		P-250013
INTEGRATED CIRCUIT			
IC101	IC LA-3350		
METER			
	AM/FM Signal Strength Meter	M-0297	P-230039
PILOT LAMPS			
PL1/2/3/4	Fuse Lamp 12V, 150 mA	L-0529	P-240038
PL5	Stereo Lamp with Lead 6V, 60 mA		P-240080
PL6/7	L.E.D. (Included with Pointer Ass'y)		
PL8	Fuse Lamp 12V, 150 mA	L-0529	P-240038
RESISTORS UZ=Radial Type J=±5% PZ=Axial Type K=±10%			
R101	Carbon 1/4W UZ 100K ohm J		
R102	Carbon 1/4W UZ 220 or 330 ohm J		
R103	Carbon 1/4W UZ 330 ohm J		
R104	Carbon 1/4W UZ 6.8K ohm J		
R105	Carbon 1/4W UZ 33K ohm J		
R106	Carbon 1/4W UZ 1.5K ohm J		
R107	Carbon 1/4W UZ 270 ohm J		
R108	Carbon 1/4W UZ 330 ohm J		
R109	Carbon 1/4W UZ 3.3K ohm J		
R110	Carbon 1/4W UZ 10K ohm J		
R111	Carbon 1/4W UZ 2.2K ohm J		
R112	Carbon 1/4W UZ 330 ohm J		

REF. NO.	DESCRIPTION			RS PART NO.	MFD. PART NO.
R113	Carbon	1/4W UZ	680 ohm J		
R114	Carbon	1/4W UZ	22 ohm J		
R115	Carbon	1/4W PZ	4.7K ohm J		
R116	Carbon	1/4W UZ	1K ohm J		
R117	Carbon	1/4W UZ	10K ohm J		
R118	Carbon	1/4W UZ	1.5K ohm J		
R119	Carbon	1/4W UZ	12 ohm J		
R120	Carbon	1/4W UZ	27K ohm J		
R121	Carbon	1/4W UZ	4.7K ohm J		
R122	Carbon	1/4W UZ	3.3K ohm J		
R123	Carbon	1/4W PZ	470K ohm J		
R124	Carbon	1/4W UZ	47K ohm J		
R125	Carbon	1/4W UZ	120K ohm J		
R126	Carbon	1/4W UZ	15K ohm J		
R127	Carbon	1/4W UZ	10K ohm J		
R128	Carbon	1/4W UZ	3.3K ohm J		
R129	Carbon	1/4W UZ	100 ohm J		
R130	Carbon	1/4W UZ	1.5K ohm J		
R131	Carbon	1/4W UZ	1K ohm J		
R132	Carbon	1/4W UZ	330 ohm J		
R133	Carbon	1/4W UZ	56K ohm J		
R134	Carbon	1/4W UZ	10K ohm J		
R135	Not used				
R136	Carbon	1/4W PZ	100 ohm J		
R137	Carbon	1/4W UZ	3.3K ohm J		
R138	Carbon	1/4W UZ	18K ohm J		
R139	Carbon	1/4W UZ	560 ohm J		
R140	Carbon	1/4W UZ	1K ohm J		
R141	Carbon	1/4W UZ	22 ohm J		
R142	Carbon	1/4W UZ	3.3K ohm J		
R143	Carbon	1/4W PZ	2.7K ohm J		
R144	Carbon	1/4W UZ	2.2K ohm J		
R145	Carbon	1/4W UZ	1K ohm J		
R146	Carbon	1/4W UZ	330 ohm J		
R147/148	Carbon	1/4W UZ	1K ohm J		
R149/150	Carbon	1/4W UZ	10K ohm J		
R151	Carbon	1/4W UZ	47 ohm J		
R152	Carbon	1/4W UZ	470K ohm J		
R153	Carbon	1/4W UZ	4.7K ohm J		
R154	Carbon	1/4W UZ	100K ohm J		
R155	Carbon	1/4W UZ	10K ohm J		
R156	Carbon	1/4W UZ	33K ohm J		
R157	Carbon	1/4W UZ	15K ohm J		
R158	Carbon	1/4W UZ	8.2K ohm J		
R159	Carbon	1/4W UZ	4.7K ohm J		
R160	Carbon	1/4W UZ	27K ohm J		
R161	Carbon	1/4W UZ	22K ohm J		
R162	Carbon	1/4W UZ	3.3K ohm J		
R163	Carbon	1/4W UZ	2.7K ohm J		

REF. NO.	DESCRIPTION			RS PART NO.	MFD. PART NO.
R164	Carbon	1/4W UZ	1K ohm J		
R165	Carbon	1/4W UZ	56K ohm J		
R166	Carbon	1/4W UZ	10K ohm J		
R167	Carbon	1/4W UZ	150 ohm J		
R168/169	Carbon	1/4W UZ	4.7K ohm J		
R170	Carbon	1/4W PZ	100 ohm J		
R171/172	Carbon	1/4W UZ	3.3K ohm J		
R173/174					
175/176	Carbon	1/4W UZ	1K ohm J		
R177	Carbon	1/4W UZ	8.2K ohm J		
R178	Carbon	1/4W UZ	100K ohm J		
R179	Carbon	1/4W UZ	47K ohm J		
R180	Metal Oxide	1W	100 ohm J		
R181/182	Not used				
R183/184	Carbon	1/4W UZ	12K ohm J		
R201/202	Carbon	1/4W UZ	6.8K ohm J		
R203/204	Carbon	1/4W UZ	820K ohm J		
R205/206	Carbon	1/4W UZ	82K ohm J		
R207/208	Carbon	1/4W UZ	6.8K ohm J		
R209/210	Carbon	1/4W UZ	560 ohm J		
R211/212	Carbon	1/4W UZ	22K ohm J		
R213/214	Carbon	1/4W UZ	47K ohm J		
R215/216	Carbon	1/4W UZ	33K ohm J		
R217/218	Carbon	1/4W UZ	2.7K ohm J		
R219/220	Carbon	1/4W UZ	5.6K ohm J		
R301/302	Carbon	1/4W PZ	100K ohm J		
R303/304	Carbon	1/4W PZ	6.8K ohm J		
R305/306	Carbon	1/4W PZ	10K ohm J		
R307/308	Carbon	1/4W UZ	100K ohm J		
R309/310	Carbon	1/4W UZ	2.2K ohm J		
R311/312	Carbon	1/4W UZ	100K ohm J		
R313/314	Carbon	1/4W UZ	8.2K ohm J		
R315/316	Carbon	1/4W UZ	180K ohm J		
R317/318	Carbon	1/4W UZ	330 ohm J		
R319/320	Carbon	1/4W UZ	560 ohm J		
R321/322	Carbon	1/4W UZ	390 ohm J		
R323/324	Carbon	1/4W UZ	8.2K ohm J		
R325/326	Carbon	1/4W UZ	22K ohm J		
R327/328	Carbon	1/4W UZ	220K ohm J		
R329/330	Carbon	1/4W UZ	1K ohm J		
R331/332	Carbon	1/4W UZ	220K ohm J		
R333	Carbon	1/4W UZ	220 ohm J		
R334/335	Carbon	1/4W PZ	4.7K ohm J		
R401/402	Carbon	1/4W UZ	1K ohm J		
R403/404	Carbon	1/4W UZ	220K ohm J		
R405/406	Carbon	1/4W UZ	47K ohm J		

REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
R407/408	Carbon 1/4W UZ 1.8K ohm J		
R409/410	Carbon 1/4W UZ 12K ohm J		
R409A/410A	Carbon 1/4W UZ 2.2K ohm J		
R411/412	Not used		
R413/414	Carbon 1/4W UZ 2.2K ohm J		
R415/416	Carbon 1/4W UZ 470 ohm J		
R417/418	Carbon 1/4W UZ 33K ohm J		
R419/420	Carbon 1/4W UZ 2.2K ohm J		
R421/422	Carbon 1/4W UZ 3.3K ohm J		
R423/424	Carbon 1/4W UZ 330 ohm J		
R425/426	See VARIABLE RESISTOR section		
R427/428	Carbon 1/4W UZ 220 ohm J		
R429/430			
431/432	Carbon 1/4W UZ 10 ohm J		
R433/434	Carbon 1/4W UZ 18 ohm J		
R435/436	Carbon 1/4W UZ 220 ohm J		
R437/438			
439/440	Metal Oxide 2W 0.5 ohm J		
R441/442	Carbon 1/2W PZ 12 ohm J		
R443/444	Carbon 1/2W PZ 470 ohm J		
R501	Carbon 1/2W PZ 1.2K ohm K		
R502	Carbon 1/2W PZ 1.5K ohm K		
R503	Metal Oxide 2W 270 ohm J		
R504	Metal Oxide 2W 270 ohm J		
R505	Metal Oxide 3W 120 ohm J		
R506	Carbon 1/4W UZ 10K ohm K		
R507	Carbon 1/4W UZ 1.5K ohm K		
R508	Metal Oxide 1W 330 ohm J		
R509	Metal Oxide 2W 56 ohm J		
R510	Metal Oxide 1W 820 ohm J		
R511	Metal Oxide 1W 220 ohm J		
R601/602	Carbon 1/4W PZ 82K ohm J		
R603/604	Carbon 1/4W PZ 10K ohm J		
R605/606	Carbon 1/4W UZ 6.8K ohm J		
R607	Carbon 1/4W UZ 1.5K ohm J		
R608	*Carbon 1/2W PZ 2.2M ohm K (Use for UL & C.S.A. models only)		
SCR			
D511	SCR 2SF 657 or M21C		
SWITCHES			
POWER SWITCH	*Power Switch (Use for UL & C.S.A. models) **Power Switch MPS-U (VDE Approved) (Use for European & Australian models)	S-0759	P-180186
SA-1 – SA-7	Selector Switch 3-7-4	S-1214	P-180187
SB1-SB5	Speaker Switch 3-6-5	S-1215	P-180185

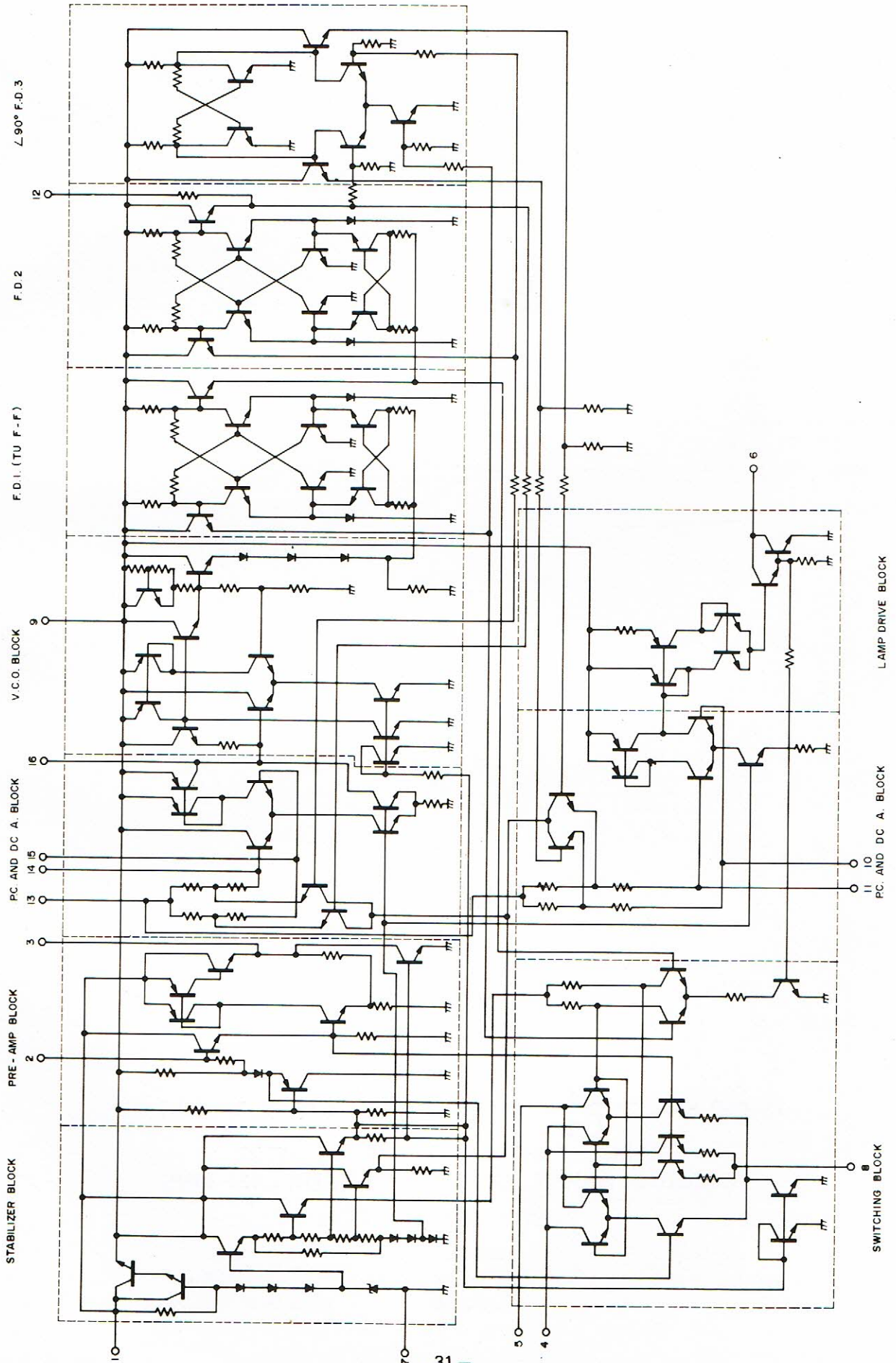
REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
	Mode Switch	S-7266	P-180112
TRANSISTORS			
TR101	FET 2SK-19(GR) or 2SK-41(F)		
TR102	Si Transistor 2SC 1047(C, D)		
TR103	Si Transistor 2SC 930(D,E)		
TR104	Si Transistor 2SC 829(C)		
TR105	Si Transistor 2SC 1359(C,D)		
TR106/107 108/109	Si Transistor 2SC 930(D,E)		
TR110/111 112	Si Transistor 2SC 945L(P,K) or 2SC 536(H)		
TR201/202	Si Transistor 2SC 900(F,E,U), 2SC 644(R,S,T) or 2SC 1571(H)		
TR301/302	Si Transistor 2SC 1571(H) or 2SC 1682(BL)		
TR303/304	Si Transistor 2SC 923(E,F,U), 2SC 828(R,S,T) or 2SC 1571(H)		
TR401/402 403/404	Si Transistor 2SC 923(E,U), 2SC 828(R,S,T) or 2SC 1571(H)		
TR405/406	Si Transistor 2SA 539(L,K) or 2SA 561(Y,G)		
TR407/408	Si Transistor 2SC 1384(Q,R)		
TR409/410	Si Transistor 2SA 684(Q,R)		
TR411/412 413/414	Si Transistor 2SD 313(D,E) or 2SC 789(O,R)		
TR501	Si Transistor 2SC 1384(Q,R)		
VARIABLE CAPACITORS			
VC101-105 (with TC 101 102, 104)	Variable Capacitor FM: 3 Gang AM: 2 Gang	C-4301	P-150015
TC103	Trimmer Capacitor 1T-P8 (8 pF)	C-0551	P-160001
TC105	Trimmer Capacitor 1P x 10 (10 pF)	CA-0249	P-160007
VARIABLE RESISTORS			
VR101	Trimmer Resistor 50K ohm B	P-6343	
VR102	Trimmer Resistor 1K ohm B	P-6344	
VR103	Trimmer Resistor 5K ohm B	P-6342	
R221	Potentiometer (VOLUME) 100K ohm B x 2	P-1666	P-170213
R222	Potentiometer (BALANCE) 100K ohm W	P-1665	P-170119
R223	Potentiometer (TREBLE) 100K ohm A x 2	P-1664	P-170118
R224	Potentiometer (BASS) 100K ohm A x 2	P-1664	P-170118
R425/426	Trimmer Resistor 500 ohm B	P-6155	P-170034

(15) EXPLODED VIEW PARTS LIST

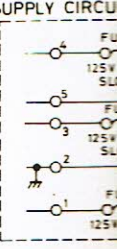
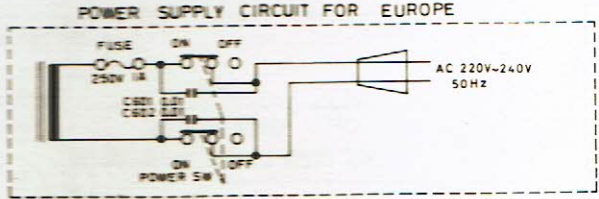
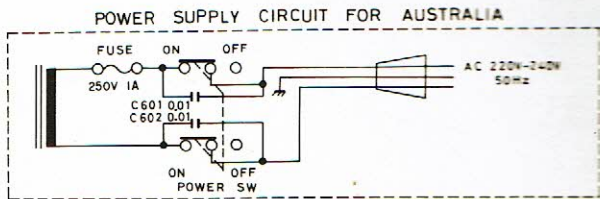
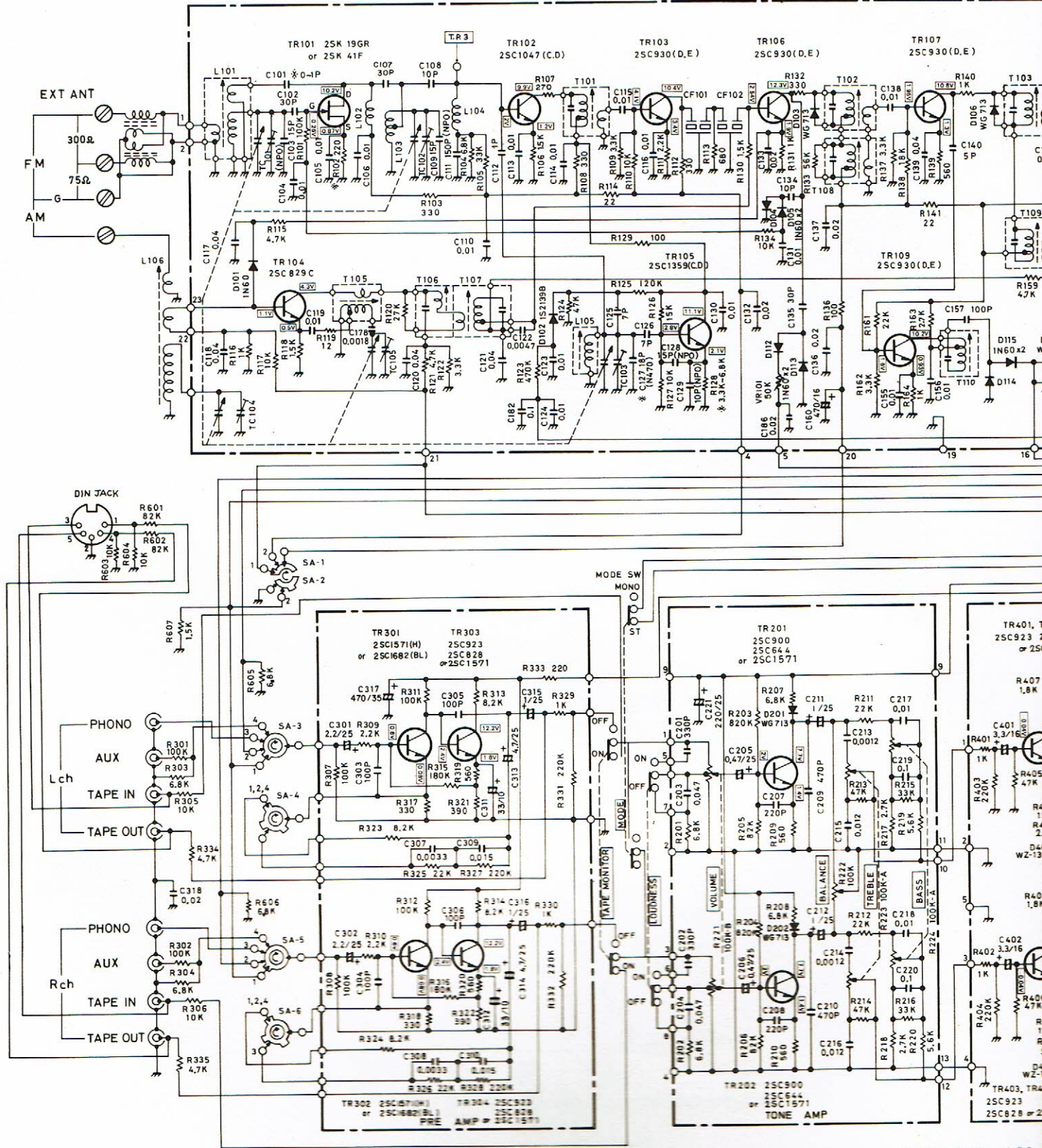
REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
1	Front Chassis Ass'y		P-400104
2	Tuning Shaft Ass'y	D-3195	P-420215
3	Reflector Rubber		P-480110
4	Lamp Cover	HB-2880	P-410776
5	Fuse Lamp (12V, 150 mA)	L-0529	P-240038
6	Lamp Holder	HB-2423	P-260012
7	Meter Ass'y	M-0297	P-230039
8	Spring for Meter Stopper	RB-5619	P-440089
9	Stereo Lamp with Lead (6V, 60 mA)		P-240080
10	Stereo Lamp Cover		P-680109
11	Sub-Pulley Bracket (A)	HB-2882	P-410777
12	Sub-Pulley Bracket (B)	HB-2883	P-410778
13	Sub-Pulley Bracket (C)	HB-2884	P-410779
14	Sub-Pulley	RA-2436	P-610162
15	Dial Scale Supporter	HB-2885	P-410780
16	*Dial Scale (Use for UL & C.S.A. models)	G-0263	P-640115
	**Dial Scale (Use for European & Australian models)		P-640131
17	Dial Holder (U)	HB-2886	P-410781
18	Dial Holder (R)	HB-2887	P-410782
19	Dial Plate		P-410787
20	Pointer Ass'y	D-1184	P-450045
21	Tone Control Unit	X-7177	U-14051
22	Headphone Jack	J-0444	P-190011
23	Push Switch	S-7266	P-180112
24	Selector Switch	S-1214	P-180187
25	Speaker Switch	S-1215	P-180185
26	Main Chassis Ass'y	Z-2795	P-100098
27	Power Transformer Bracket		P-410571
28	*Power Transformer for UL models	TA-0559	P-100375
	**Power Transformer for C.S.A. models		P-100245A
	***Power Transformer for European & Australian models		P-100253
29	*Back Panel for UL & C.S.A. models	Z-2796	P-410788
	**Back Panel for European & Australian models		P-410859
30	*AC Cord for UL & C.S.A. models	W-1000	P-310001
	**AC Cord for European models		P-310044
	***AC Cord for Australian models		P-310032
31	*AC Cord Stopper for UL, C.S.A. & European Models	HB-0598	P-480010
	**AC Cord Stopper for Australian models		P-610240
	(Use with Cord Bushing) (P-480078)		
32	*Power Switch for UL & C.S.A. models	S-0759	P-180186
	**Power Switch for European & Australian models		P-180200
33	AC Outlet	J-6347	P-190060
34	AC Outlet Bracket	HB-2896	P-410753
35	PRE. Amp. Unit	X-7176	U-14059
36	Tuner & IF Unit	X-7175	U-12025
37	Dial Pulley	D-0288	P-610239
38	Dial Spring	RA-5847	P-440014
39	Dial String Stopper		
40	Dial String		
41	Wire Stay	HB-2425	P-450032
42	Power Supply Unit	X-7179	U-17034

REF. NO.	DESCRIPTION	RS PART NO.	MFD. PART NO.
43	MAIN Amp. Unit	X-7178	U-16028
44	Speaker Terminal (8P Screw Type)	J-4455	P-320086
45	Fuse Holder	F-1017	P-260007
46	Antenna (Linecord) Bracket *(Use for UL, C.S.A. & European models)	HB-1110	P-410029
47	Line Antenna Isulator **(Use for UL, C.S.A. & European models)	HB-1053	P-480005
48	Speaker Jack (4P RCA type)	J-4363	P-320043
49	5P DIN Connector	J-0747	P-190036
50	Jack Unit	X-7180	U-23036
51	Antenna Terminal	J-4453	P-320079
52	Ground Screw	J-4454	P-420225
53	Balun Coil Ass'y	CA-2942	P-110012
54	AM Bar Antenna Coil	CA-3597	P-110043
55	AM Bar Antenna Bracket	HB-2890	P-410856
56	Lug Terminal		
57	Heat Sink	HH-0141	P-410461
58	Front Panel Ass'y	Z-2793	P-700159
59	Tuning Knob (166)	K-2191	P-650166
60	Control Knob (172)	K-2192	P-650172
61	Push Knob (173)	K-2193	P-650173
62	Reflector Sheet	HB-2433	P-820258
63	Cabinet Ass'y	Z-2794	P-620050
64	Foot		P-610361
65	Square Washer		P-410033
66	Tuning Knob Guide		P-610383
HARDWARE			
S1	Bind Tapping Screw	3 x 8 BT-2	
S2	Tapping Screw with Tooth Washer	3 x 8 PT-2	
S3	Screw with Spacer	3 x 9 x 3	P-420029
S4	Bind Tapping Screw	3 x 6 BT-2	
S5	Screw with Lock Washer Assembled	3 x 6P	
S6	Screw	4 x 40P	
S7	Wood Screw	3.1 x 10PW	
S8	Screw	4 x 20P	
S9	Tapping Screw with Nail	3 x 8 BT-2	
R1	Rivet	YB-429	
R2	Rivet	YB-340	
R3	Rivet	YB-423	
W1	Washer	4W	
W2	Washer	3W	
SW1	Spring Washer	4SW	
N1	Nut	4N	

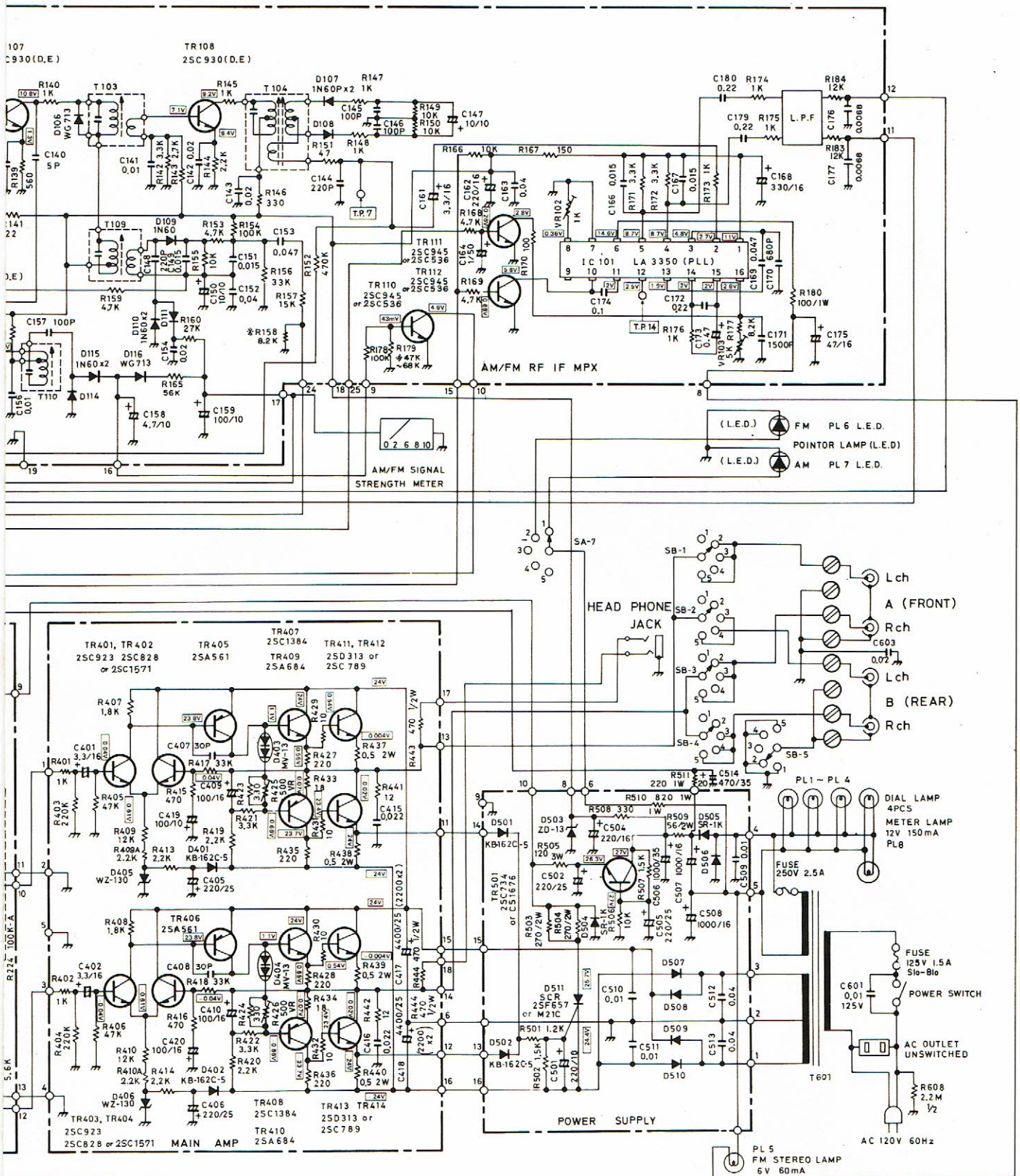
(16) IC INTERNAL DIAGRAM



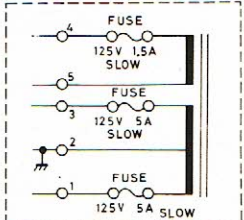
(17) SCHEMATIC DI



ATOMIC DIAGRAM



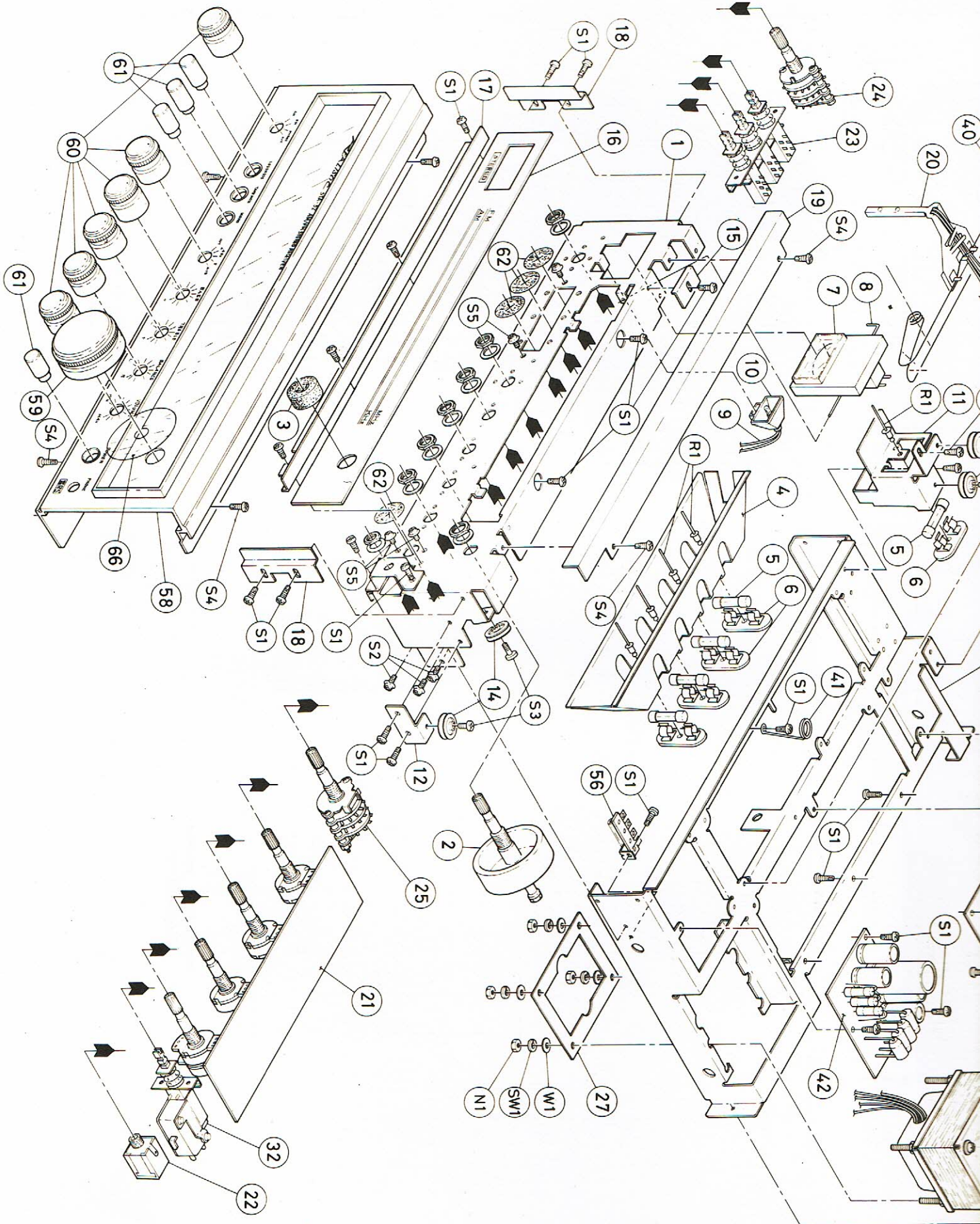
POWER SUPPLY CIRCUIT FOR CSA



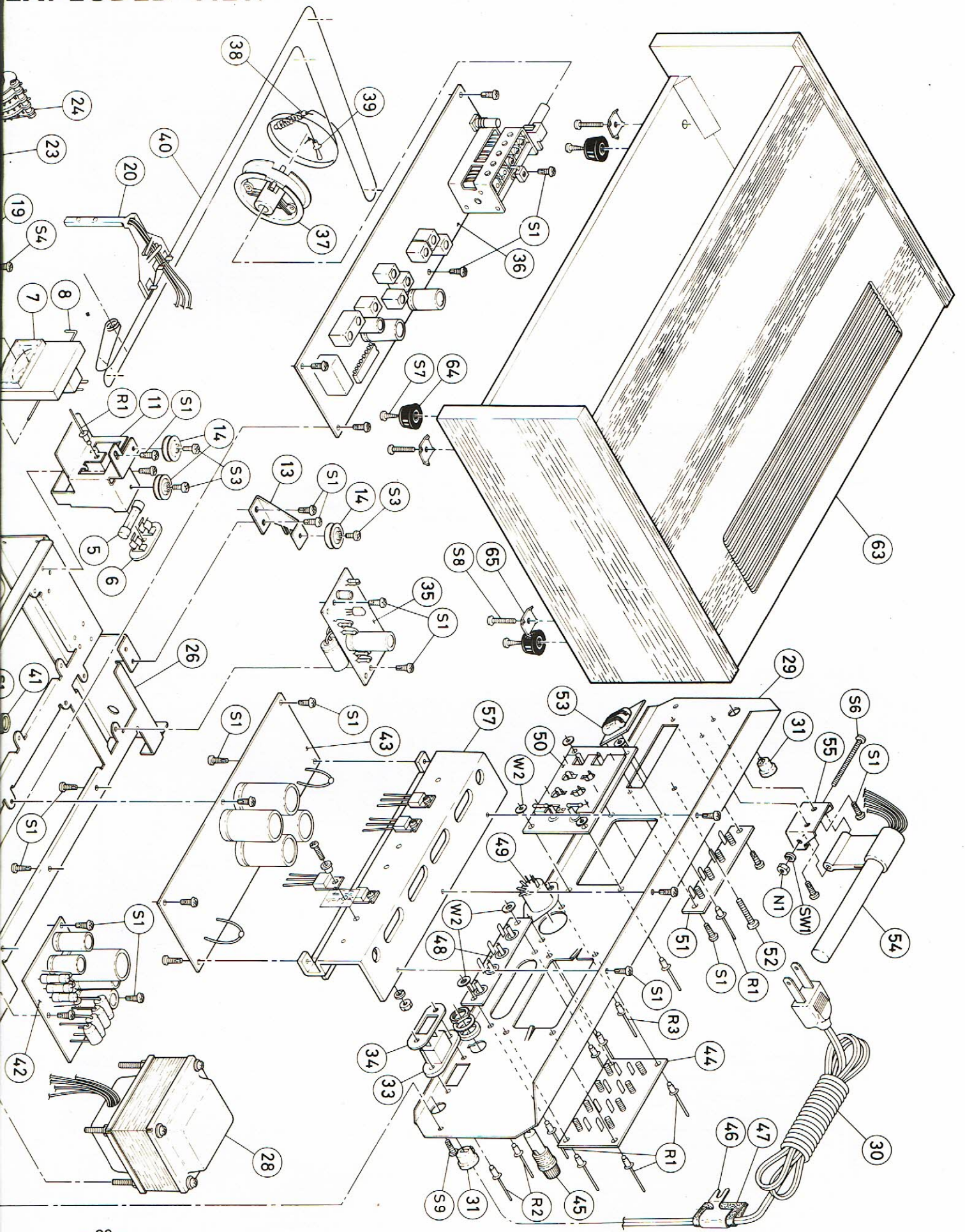
NOTE


- (1) SA-1-SA-7 FUNCTION SWITCH 1- AM, 2- FM, 3- PHONO, 4- AUX.
- (2) SB-1-SB-5 SPEAKER SELECTOR SWITCH 1- OUT, 2- A, 3- QUATRAVOX 4- B, 5- A+B.
- (3) ALL RESISTANCE VALUES ARE INDICATED IN "OHM" (K=10³ OHM, M=10⁶ OHM)
- (4) ALL CAPACITANCE VALUES ARE INDICATED IN "μF" (P=10⁻⁶ μF)
- (5) * VALUE MAY VARY FROM UNIT TO UNIT FOR OPTIMUM PERFORMANCE.

(18) EXPLODED



EXPLODED VIEW



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