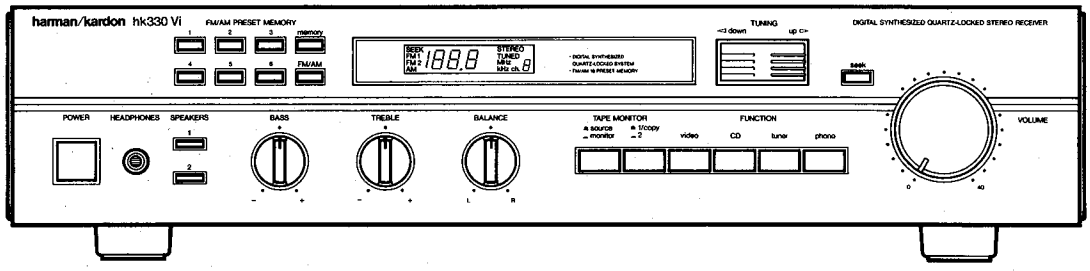
The Harman Kardon Model hk330Vi

Manual 143A

DIGITAL SYNTHESIZED QUARTS-LOCKED STEREO RECEIVER

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- BK : North America area model Black version
- GB : General model Black version
- BB : Australia model Black version

hk330 Vi

harman/kardon
240 Crossways Park West, Woodbury, N.Y. 11797
1112-3152143A6 P-078901 1500 Printed in Japan

SPECIFICATIONS

	Nominal	Limit
●FM SECTION		
Tuning Range	87.5 ~ 108.0MHz	
50dB Quieting Sensitivity		
Mono	15.2dBf	≦ 19dBf
Stereo	37.2dBf	≦ 41dBf
Usable Sensitivity		
North American area model	10.7dBf	≦ 15dBf
General and Australia models	10.7dBf	≦ 18dBf
Image Ratio	45dB	≧ 38dB
IF Rejection	87dB	≧ 70dB
Spurious Response Rejection	78dB	
Capture Ratio at 65dBf	1.7dB	≦ 2dB
Alternate Channel Selectivity	76dB	≧ 60dB
AM Rejection	59dB	≧ 45dB
Signal to Noise Ratio		
Mono	80dB	≧ 75dB
Stereo	73dB	≦ 68dB
Total Harmonic Distortion (65dBf 1kHz Input)		
Mono	0.18%	≦ 0.4%
Stereo	0.22%	≦ 0.5%
Stereo Separation at 1kHz	42dB	≧ 35dB
●AM SECTION		
Tuning Range		
North America area model	530 ~ 1,620kHz	
General and Australia models	531 ~ 1,602kHz	
Usable Sensitivity at 1kHz	14 μVm	≦ 20 μVm
Selectivity	36dB	≧ 25dB
Signal to Noise Ratio	53dB	≧ 48dB
Image Rejection	40dB	≧ 30dB
IF Rejection	67dB	≧ 50dB
●AUDIO SECTION		
Usable Sensitivity		
Video/CD	135mV ± 25mV	
Phono	2.2mV ± 0.2mV	

	Nominal	Limit
Signal to Noise Ratio		
Video/CD	85dB	≧ 78dB
Phono	81dB	≧ 73dB
Channel Separation at 10kHz	65dB	≧ 45dB
IM Distortion Ratio	0.045%	≦ 0.1%
RMS Output Power		
8Ω, 1kHz, THD 0.1%	29.5W	≧ 25W
Damping Factor at 1kHz	94.7	≧ 60
Tone Control Characteristics		
Bass at 50Hz		
Boost	8 ≦ 9.4 ≦ 12	
Cut	−12 ≦ −10.8 ≦ −8	
Treble at 10kHz		
Boost	8 ≦ 9.0 ≦ 12	
Cut	−12 ≦ −11.6 ≦ −8	
DC Output Voltage		
L channel	0mV ± 60mV	
R channel	0mV ± 60mV	
RIAA Equalization at Tape Out (20Hz/20kHz)	0.1dB±0.5dB/0.38dB±0.5dB	
●DIMENSIONS (W x H x D)	17-3/8" x 4" x 14-1/2" (443 x 103 x 368 mm)	
●WEIGHT	12.5 lbs. (5.7 kg)	
●POWER SUPPLY		
North America area model	AC120V, 60Hz	
General and Australia models	AC220/240V, 50/60Hz	
●POWER CONSUMPTION		
North America area model	280W (340VA)	
General and Australia models	210W	

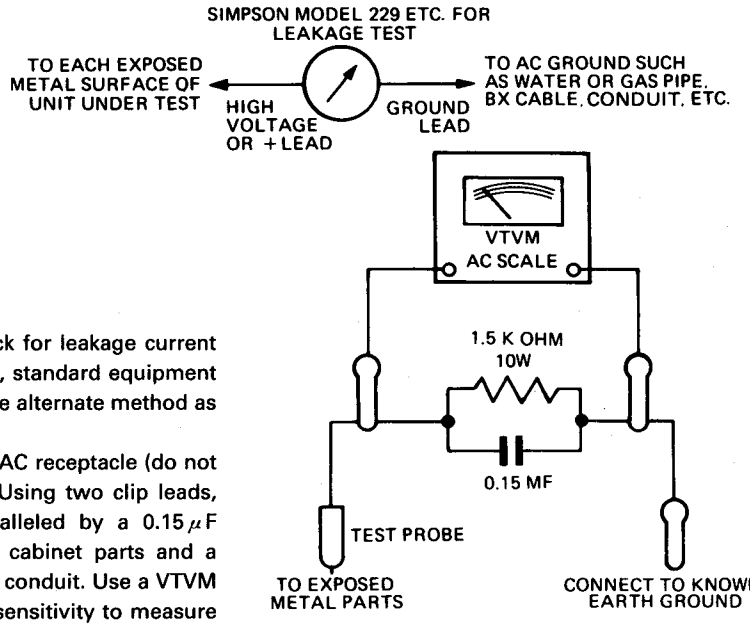
These specifications are Service target specs.

Specifications and components subject to change without notice. Overall performance will be maintained or improved.

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Replace all protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows:



Plug the AC line cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 ohm, 10-watt resistor paralleled by a 0.15 μF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.) A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.

DISASSEMBLY PROCEDURES (REFER TO PAGES 8, 9, 10, 20 AND 21)

1 CABIENT TOP (131) REMOVAL

Remove 5 screws (A) and then remove the Cabinet Top (131).

2 FRONT PANEL ASSEMBLY (AC) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step 1.
2. Remove 4 screws (B) mounting Front Panel Assembly (AC).
3. First hold down the two latches ⓐ and ⓑ at the front panel top with a flat-blade screwdriver, and pull the front panel top slightly to the front. Then disengage the latch ⓒ above the preset memory buttons, hold down the latch ⓓ with the flat-blade screwdriver, and pull the front panel top slightly. (See Fig. 1 and Fig. 2-①.)
   Note: The front panel is held in place to the front chassis by means of double-coated tape.
4. Using care so that the disengaged latches ⓐ, ⓑ and ⓓ do not re-engage, hold up the two latches ⓔ and ⓕ at the front panel bottom with the flat-blade screwdriver, and pull the front panel bottom slightly. Then remove the front panel. (See Fig. 1 and Fig. 2-②, ③.)

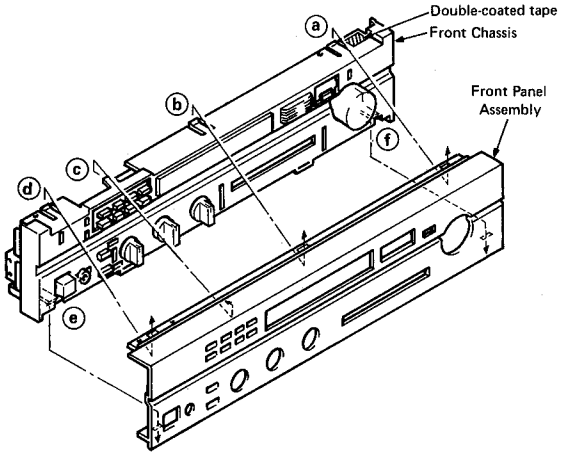


Fig. 1

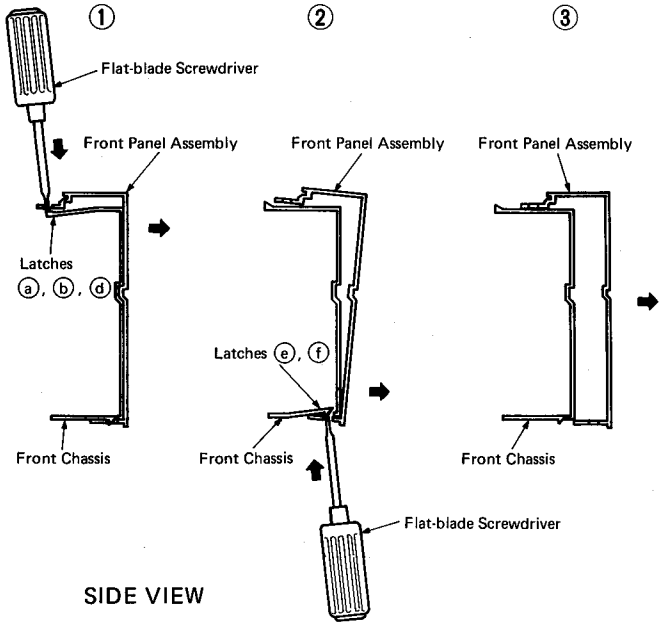


Fig. 2

3 FRONT CHASSIS (AA) REMOVAL

1. Remove the Front Pannel (AC), referring to the previous step 2.
2. Disconnect the (CW1 and CW2) from (CN101 and CN102) on the Indicator P.C. Board (PCB-11).
3. Pull out Bass, Treble and Balance Knob (153) and Volume Knob (152).
4. Remove 4 hexagon nuts (C).
5. Remove 5 screws (D) and then remove the Front Chassis with releasing the 4 latches of Front Chassis. Then remove the Headphone Jack P.C. Board with releasing the 2 latches of Front Chassis.

4 INDICATOR P.C. BOARD (PCB-11) REMOVAL

1. Remove the Front Chassis (AA), referring to the previous step 3.
2. Release 11 latches fastened Reflector (175). Preset switches P.C. Board (PCB-13) and Tuning Up/Down P.C. Board (PCB-14) and then remove Indicator P.C. Board (PCB-11) together with those P.C. Boards.

5 PRESET SWITCHES P.C. BOARD (PCB-13) REMOVAL

1. Remove the Indicator P.C. Board (PCB-11), referring to the previous step 4.
2. Disconnect the (CN2) from (CN4) on the Preset Switches P.C. Board (PCB-13).

6 TUNING UP/DOWN P.C. BOARD (PCB-14) REMOVAL

1. Remove the Indicator P.C. Board (PCB-11), referring to the previous step 4.
2. Disconnect the (CN1) from (CN3) on the Tuning Up/Down P.C. Board (PCB-14).

7 TUNER P.C. BOARD (PCB-10) REMOVAL

1. Remove the Front Chassis (AA), referring to the previous step 3.
2. Open the lid of connectors (CN7 and CN8) on the Tuner P.C. Board (PCB-10) and then disconnect the lead wires.
3. Remove 2 screws (E) and then remove the Tuner P.C. Board (PCB-10). If necessary, unsolder the lead wires.

8 FUNCTION P.C. BOARD (PCB-7) REMOVAL

1. Remove the Tuner P.C. Board (PCB-10), referring to the previous step 7.
2. Open the lid of connector (CN107) on the Function P.C. Board (PCB-7) and then disconnect the lead wire.
3. Unsolder the lead wires (JL103, JL104, JL105, JL106, JL114 and LCN10) on the Function P.C. Board (PCB-7).
4. Remove 1 screw (F) and then remove the Function P.C. Board (PCB-7).

9 TONE CONTROL P.C. BOARD (PCB-2) REMOVAL

1. Remove the Function P.C. Board (PCB-7), referring to the previous step 8.
2. Open the lid of connector (CN112) on the Main P.C. Board (PCB-1) and then remove the Tone Control P.C. Board (PCB-2).

[10] SPEAKER SWITCHES P.C. BOARD (PCB-5) REMOVAL

1. Remove the Front Chassis (AA), referring to the previous step [3].
2. Remove 1 screw (G) and then remove the Speaker Switches P.C. Board (PCB-5). If necessary, unsolder the lead wires.

[11] HEADPHONE JACK P.C. BOARD (PCB-4) REMOVAL

1. Remove the Front Chassis (AA), referring to the previous step [3].
2. Unsolder the lead wire (JL8) on the Headphone Jack P.C. Board.

[12] VOLUME P.C. BOARD (PCB-3) REMOVAL

1. Remove the Front Chassis (AA), referring to the previous step [3].
2. Unsolder the lead wires (W-401 and W-402) on the Volume P.C. Board.

[13] MAIN P.C. BOARD (PCB-1) REMOVAL

1. Remove the Tone Control P.C. Board (PCB-2), referring to the previous step [9].
2. Open the lid of connector (CN601) on the Main P.C. Board (PCB-1) and then disconnect the lead wire.
3. Remove 5 screws (H) an then remove the Main P.C. Board (PCB-1) with Metal Fittings (164 and 165) and Heat Sink (171). If necessary, unsolder the lead wires.

[14] ANTENNA TERMINAL P.C. BOARD (PCB-15) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Remove 2 screws (I) and then remove the Antenna terminal P.C. Board (PCB-15). If necessary, unsolder the lead wires.

[15] JACK P.C. BOARD (PCB-8) REMOVAL

1. Remove the Antenna Terminal P.C. Board (PCB-5), referring to the previous step [14].
2. Remove 1 screw (J) and then remove the Bracket (168).
3. Remove 4 screws (K) and then remove the Jack P.C. Board (PCB-8) with Equalizer P.C. Board (PCB-9).

[16] EQUALIZER P.C. BOARD (PCB-9) REMOVAL

1. Remove the Jack P.C. Board (PCB-8), referring to the previous step [15].
2. Unsolder the connectors (CN5 and CN6) on the Equalizer P.C. Board (PCB-9) and then remove the Equalizer P.C. Board (PCB-9).

[17] SPEAKER TERMINAL P.C. BOARD (PCB-6) REMOVAL

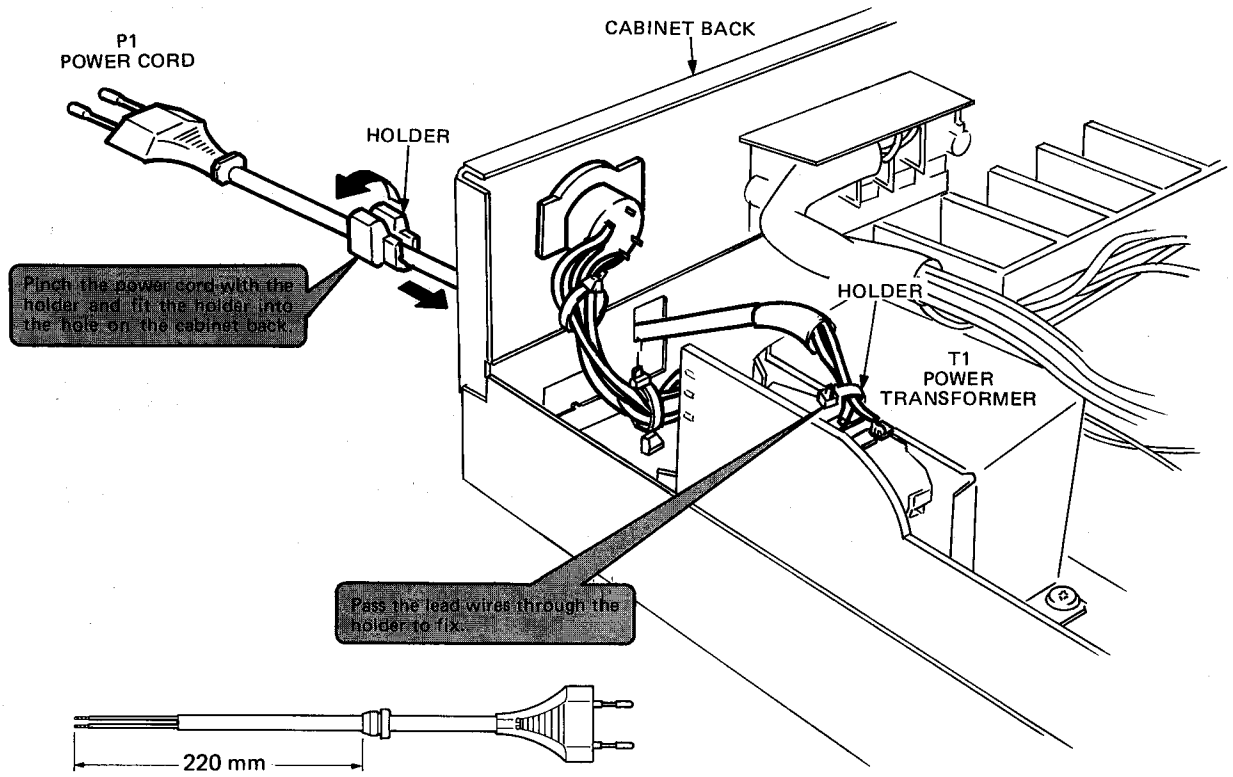
1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Remove 2 screws (L) and then remove the Speaker terminal P.C. Board (PCB-6).

[18] POWER TRANS P.C. BOARD (PCB-12) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Remove 5 Screws (M) and then remove the Power Trans P.C. Board (PCB-12) with Metal Fitting (166).

POWER CORD REPLACEMENT (FOR SERVICE ENGINEERS OTHER THAN NORTH AMERICA)

In order to prevent fire or shock hazard when replacing the power cord, follow the Procedure below to replace the part with the standard supply parts.



CIRCUIT DESCRIPTION

■FM TUNER SECTION

The FM signal which has entered through the antenna is high-frequency amplified in the front end. Then it is mixed with the output of the local oscillators and converted into the 10.7MHz intermediate-frequency.

The 10.7MHz signal is amplified in the intermediate frequency amplifying section which consists of CF201, Q201, CF202, Q202 and CF203 and fed to pin 1 of IC201. In IC201, the signal is sent through the IF amplifier and after being detected in the quadrature, it is sent through the post amplifier to pin 12 and then input to pin 2 of IC301. In IC301, the pilot signal is detected out of the signal which has been fed and 38kHz signal is produced. Then by this signal, stereo signal is demodulated, output from pin 4 for the left channel and from pin 7 for the right channel and transmitted to the input selector section.

■AM TUNER SECTION

The AM signal which has entered through the antenna passes through the tuning circuit consisting of T251 and TC251 and is inputted to pin 21 of IC201. In IC201, it undergoes radio-frequency amplification and local oscillation and is output from pin 20, and passed through the transformer (T252) and ceramic filter (CF251) and enters pin 18 of IC301. It is then passed through the IF amplification and detection and is output from pin 15. This signal is fed to IC301.

■AUDIO AMPLIFIER SECTION

The signal which has entered from each input terminal is selected by the input selector, passes through the balance circuit and volume circuit and is fed into the pre-amplifier. Then it is fed into the power amplifier through the tone control circuit, power amplified and transmitted to the speaker terminal.

The power amplifier has an over-output protective circuit. If current exceeding the specification flows to Q431, Q433 (L ch), Q432, Q434 (R ch), it is detected at Q3 (L ch) and Q4 (R ch) and the protective circuit consisting of Q1 and Q7 draws in the base of Q5 (L ch) and Q6 (R ch), and thus the input signal is cut to protect the circuit.

■MUTING CIRCUIT

If FM or AM is received out of tuning or in a very weak field intensity, pin 41 of IC701 becomes high level. This is fed to the base of Q706, whose collector then becomes low level and the collector of Q708 high level. As a result, Q301 (L ch) and Q302 (R ch) are conducted to mute the output.

■SYNTHESIZER SECTION

●FM

The local oscillation output at the front end is fed to pin 15 of the prescaler IC702 and after being frequency divided into 30 or 32, control output signal if fed from IC701, compared with the divided local oscillation output and output to pin 10. This voltage is level converted at Q701 and Q702, and fed to the front end.

●AM

The local oscillation output is fed from pin 24 of IC201 to pin 13 of IC702. In IC702, control output signal is fed from IC701, compared with the local oscillation output and output to pin 10. This voltage is level converted at Q701 and Q702, and fed to the AM local oscillation section.

■INDICATOR SECTION

●Frequency display

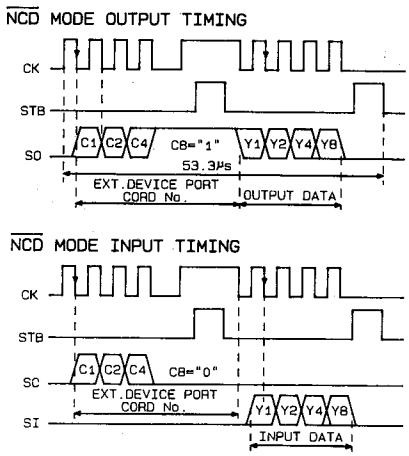
The indicator tube is turned ON by the output decoded in IC701.

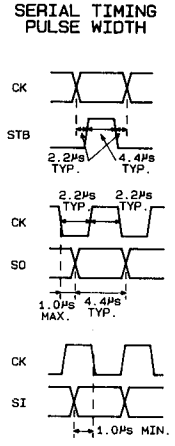
●Tuning

When broadcast is received, "Tuned" of the indicator tube is turned ON by the control signal in IC701. When FM or stereo broadcast is received, pin 9 of IC301 becomes low level, Q710 turns ON and "Stereo" of the indicator tube is turned ON by the control signal in IC701.

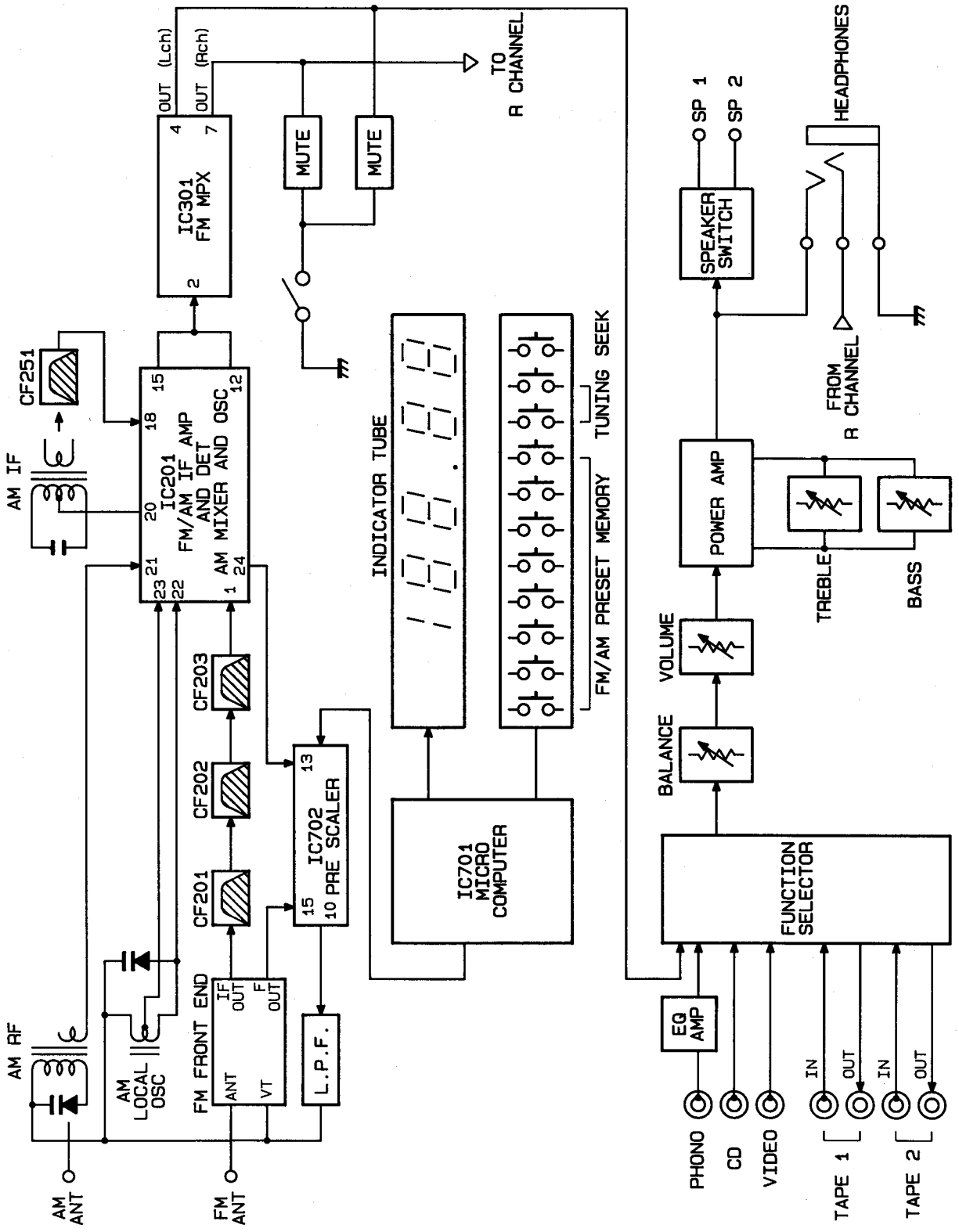
TIMING CHART

Frequency display timing chart of IC701 (TC9306F-025)





BLOCK DIAGRAM



ALIGNMENT PROCEDURES (REFER TO PAGES 15 THROUGH 19)

■ IDLING CURRENT ADJUSTMENT

Conditions:
- Set the Volume control to minimum.
- Press the "Speakers 1 and 2" switches to on (button in) position.
- Make the adjustment at a room temperature of 77°F (25°C).
- After the Power switch is pushed on, wait for 30 minutes before measuring to be sure of the most stable operation.
- Set the Function switch to tuner position.

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TP1 and TP2.	VR401 (L ch)	40mV ±2mV
2	Connect the Digital Volt Meter to TP3 and TP4.	VR402 (R ch)	40mV ±2mV

■ AM ADJUSTMENT

Conditions:
- Set the AM mode by pressing the "FM/AM" button.
- Set the Seek switch to off (put out seek indicator) position.
- Standard modulation of the AM signal Generator is 400Hz at 30%.

※General and Australia models

Step	Alignment	Connection Equipments	Measurement Frequency	Station Display	Adjustment	For
1	IF	• Connect the AM Test Loop Antenna cable into the output jack of AM Signal Generator (80 dBμV signal). Place AM Test Loop Antenna close enough to couple signal into the AM Loop Antenna. • Connect the VTVM and oscilloscope to the OUTPUT jacks.	1400kHz ※1404kHz	1400kHz ※1404kHz	T252	Maximum output level and symmetrical curve on scope.
2	Tracking		1400kHz ※1404kHz	1400kHz ※1404kHz	TC251	Maximum output.
3			600kHz ※603kHz	600kHz ※603kHz	T251	Maximum output.
4			Repeat steps 2 and 3 for optimum sensitivity.			

■ FM ADJUSTMENT

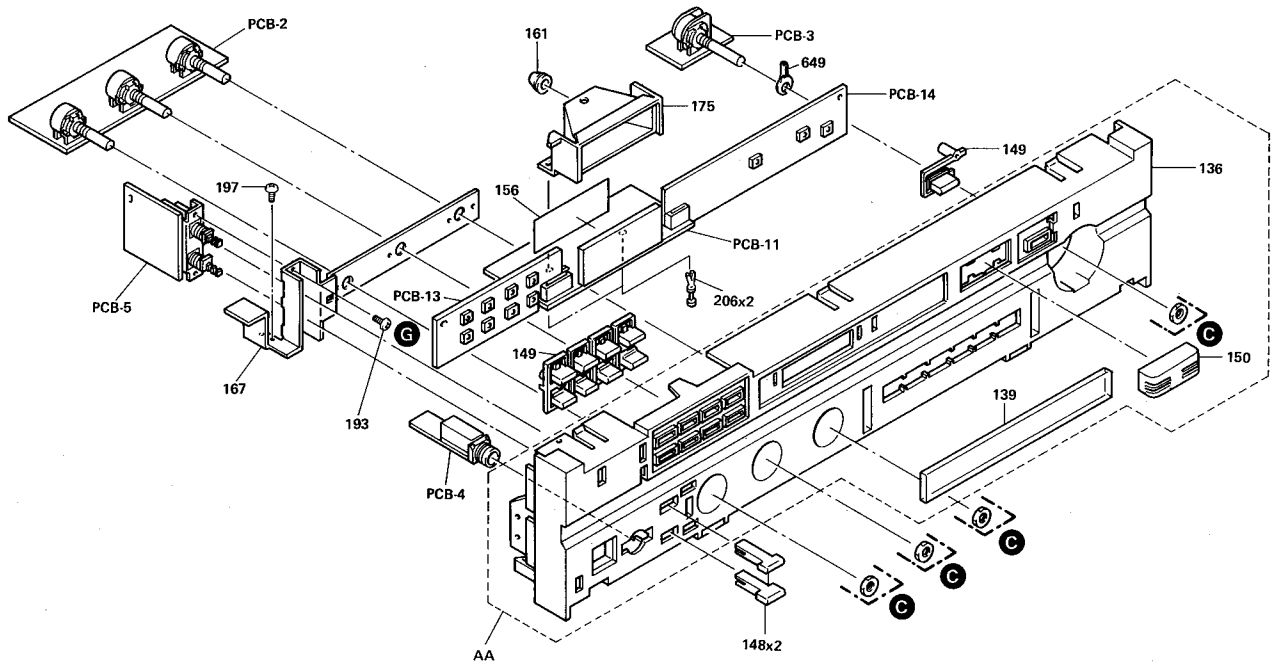
Conditions:
- Set the FM mode by pressing the "FM/AM" button.
- Set the Seek switch to off (put out seek indicator) position.
  (Set the Seek switch to on position when discriminator and muting level adjust.)

	North America model	General and Australia models
FM Signal Generator	1kHz, 100% modulation	1kHz, 45% modulation
Stereo Modulator	L+R=45.5%, L−R=45.5%, 19kHz=9%	L+R=22.5%, L−R=22.5%, 19kHz=8%

Step	Alignment	Connection Equipments	Measurement Frequency	Station Display	Adjustment	For
1	Discriminator	• Connect the FM Signal Generator to FM 300Ω BAL Antenna terminals through the 300Ω balanced dummy. [1mV(65dBf) input signal] • Connect the Oscilloscope and Distortion meter to the Tape 1 OUTPUT jacks. • Set the Seek switch to on (seek indicator lights) position.	97.9MHz	97.9MHz	T201(A)	Adjust T201 (A) so that the voltage across the terminal of R217 come to DC 0V±20mV.
2			97.9MHz	97.9MHz	T201(B)	Minimum distortion.
3			Repeat steps 1 and 2 for optimum sensitivity.			
4	Muting level		97.9MHz	97.9MHz	VR251	Apply 35dBf signal, and adjust VR251 so that the waveform becomes undistorted.

Step	Alignment	Connection Equipments	Measurement Frequency	Station Display	Adjustment	For
5	Separation	• Connect the Stereo Modulator to FM Signal Generator. Connect FM Signal Generator to FM 300Ω BAL Antenna terminal through the 300Ω balanced dummy. (65 dBf input signal) • Connect the VTVM and Oscilloscope to the Tape 1 OUTPUT jacks.	97.9MHz	97.9MHz	VR301	Adjust so that the left channel output becomes minimum when only the right channel of the Stereo Modulator is modulated.
					VR301	Adjust so that the right channel output becomes minimum when only the left channel of the Stereo Modulator is modulated.

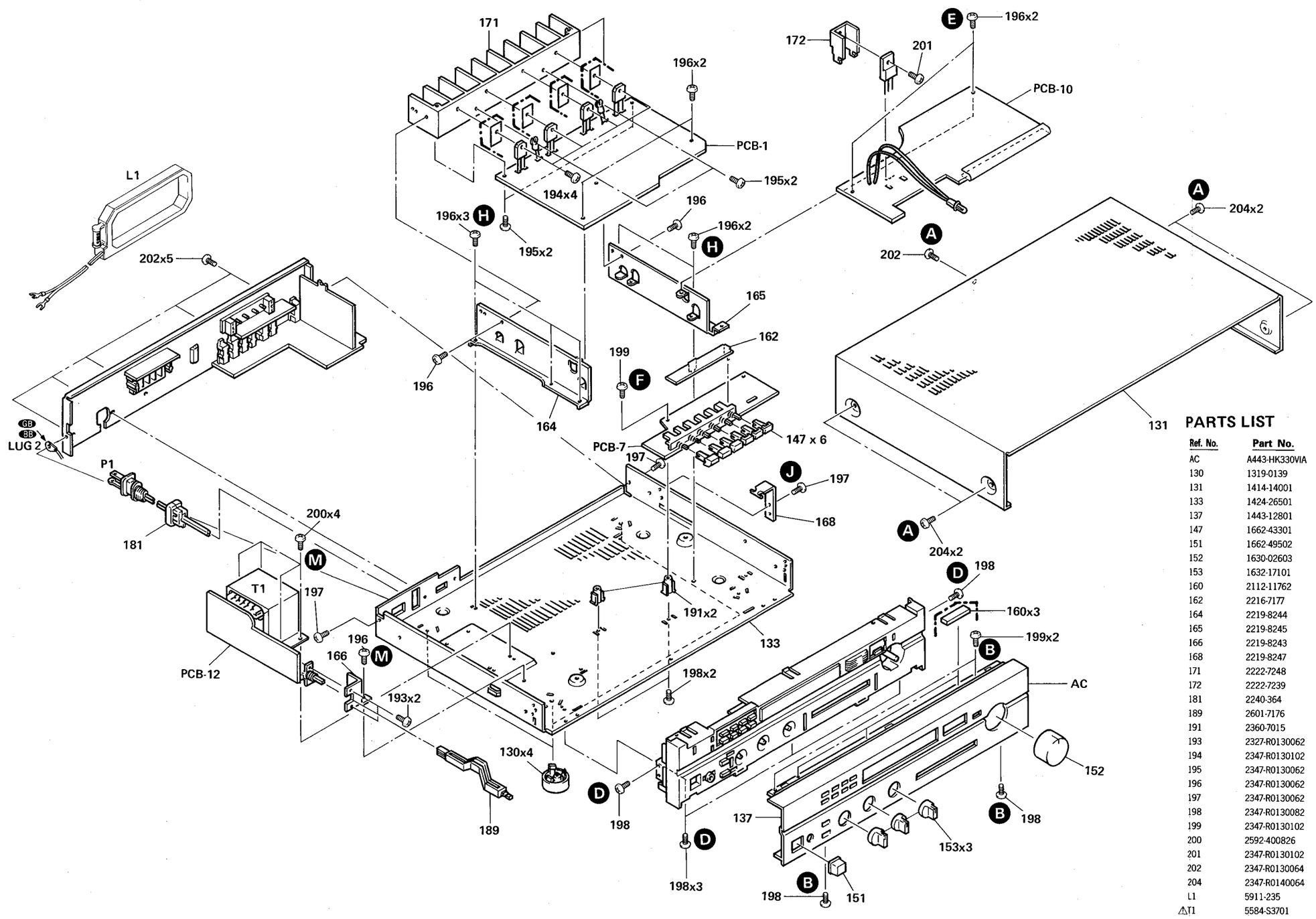
GENERAL UNIT
EXPLODED VIEW (FRONT CHASSIS)



PARTS LIST

Ref. No.	Part No.	Description
AA	A442-HK330VIA	FRONT CHASSIS
136	1442-19201	PANEL
139	1531-13601	WINDOW
148	1662-36002	PUSH BUTTON SP
149	1662-37202	PUSH BUTTON
150	1662-45002	PUSH BUTTON
156	1731-00701	INDICATOR LCD
161	2114-01306	BUSHING REFLECTOR
167	2219-8239	METAL FITTG SP
175	2223-7060	REFLECTOR
193	2327-R0130062	SCREW, BND+ (3X6mm)
197	2347-R0130062	SCREW, BND T+ (3X6mm)
206	2459-3005511	RIVET, PLSTC REFLECTOR
649	4211-21	LUG

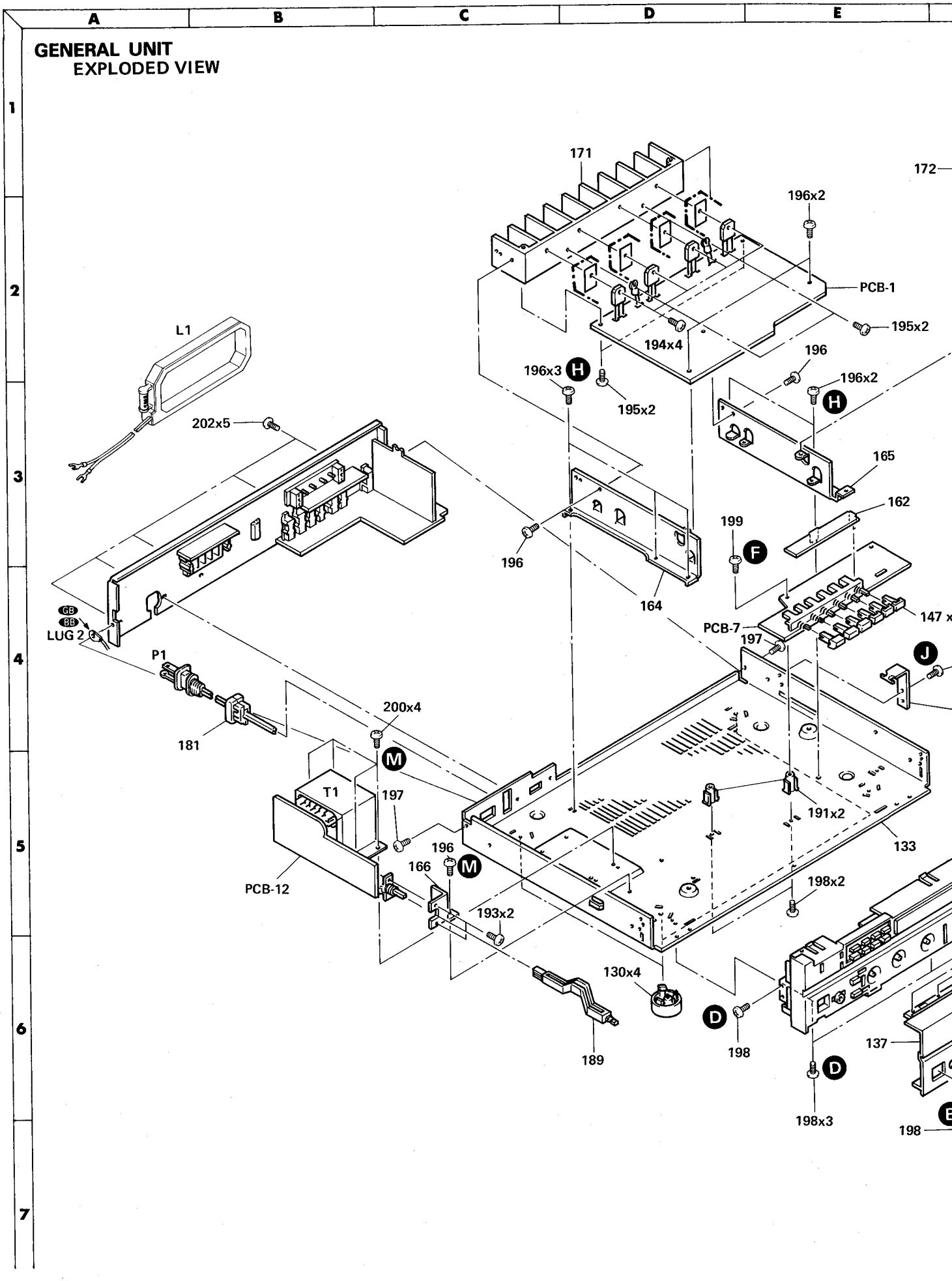
GENERAL UNIT
EXPLODED VIEW

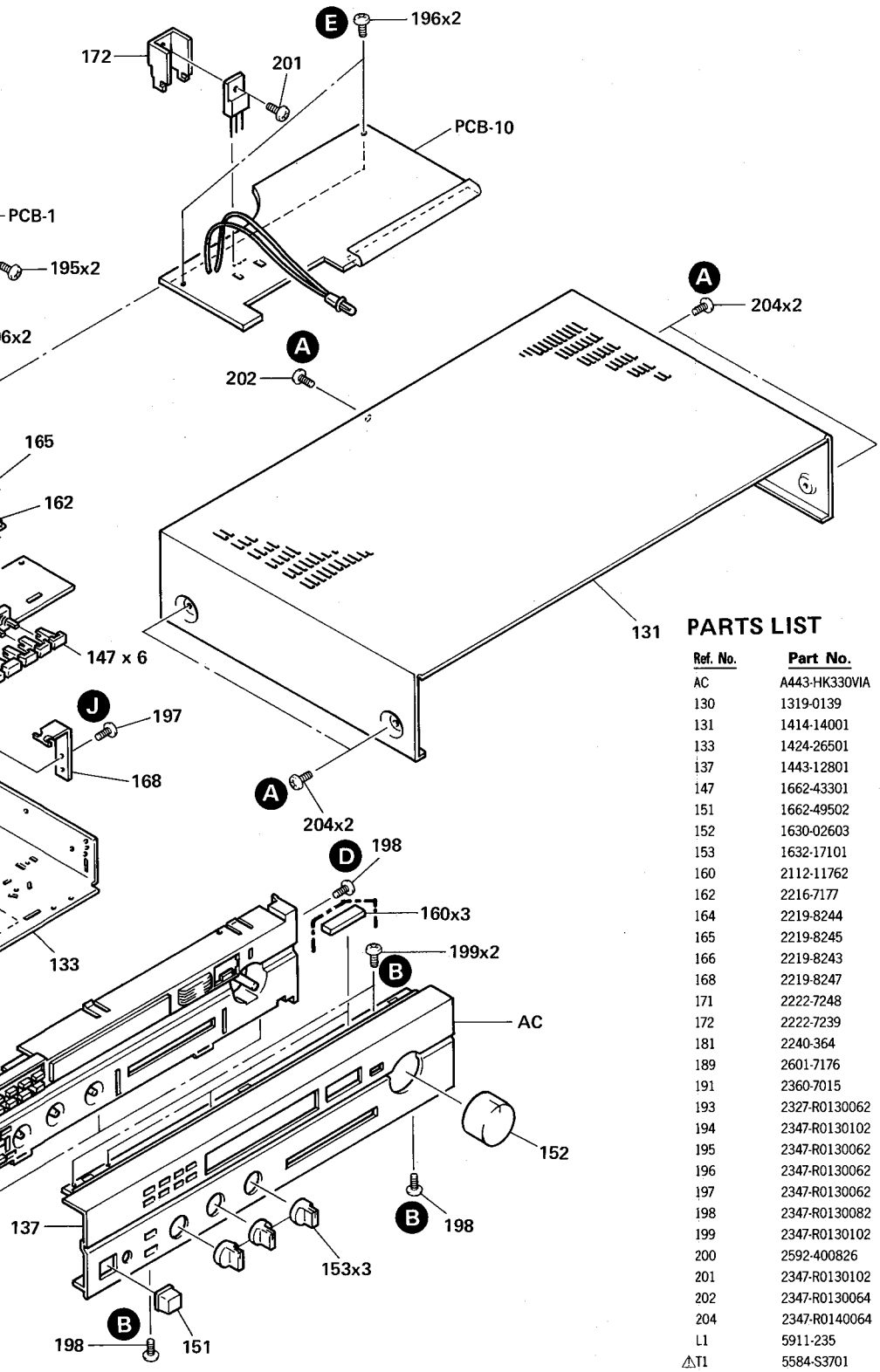


PARTS LIST

Ref. No.	Part No.	Description
AC	A443-HK330VIA	FRONT PANEL ASSEMBLY
130	1319-0139	LEG
131	1414-14001	CABINET
133	1424-26501	CABI BACK BOTTOM
137	1443-12801	PANEL FRONT
147	1662-43301	PUSH BUTTON FUNCTION
151	1662-49502	PUSH BUTTON POWER
152	1630-02603	ROTARY KNOB VOLUME
153	1632-17101	ROTARY KNOB B.T.B.
160	2112-11762	SPONGE PANEL
162	2216-7177	SHIELD PLATE
164	2219-8244	METAL FITTG L
165	2219-8245	METAL FITTG R
166	2219-8243	METAL FITTG POWER
168	2219-8247	METAL FITTG
171	2222-7248	HEAT SINK MAIN
172	2222-7239	HEAT SINK RF
181	2240-364	HOLDER AC
189	2601-7176	SHAFT POWER
191	2360-7015	BOSS, SPE
193	2327-R0130062	SCREW, BND+ (3X6mm)
194	2347-R0130102	SCREW, BND T+ (3X10mm)
195	2347-R0130062	SCREW, BND T+ (3X6mm)
196	2347-R0130062	SCREW, BND T+ (3X6mm)
197	2347-R0130062	SCREW, BND T+ (3X6mm)
198	2347-R0130082	SCREW, BND T+ (3X8mm)
199	2347-R0130102	SCREW, BND T+ (3X10mm)
200	2592-400826	SCREW, FPT+ (4X8mm)
201	2347-R0130102	SCREW, BND T+ (3X10mm)
202	2347-R0130064	SCREW, BND T+ (3X6mm)
204	2347-R0140064	SCREW, BND T+ (4X6mm)
L1	5911-235	ANT COIL, BC
⚠T1	5584-S3701	XFORMER, POWER BK
⚠T1	5584-S3702	XFORMER, POWER GB BB
⚠P1	4161-71151	CORD W/PLUG BK
⚠P1	4161-7256	CORD W/PLUG GB
⚠P1	4161-04100	CORD W/PLUG BB
LUG2	4211-4	LUG GB BB

GENERAL UNIT
EXPLODED VIEW

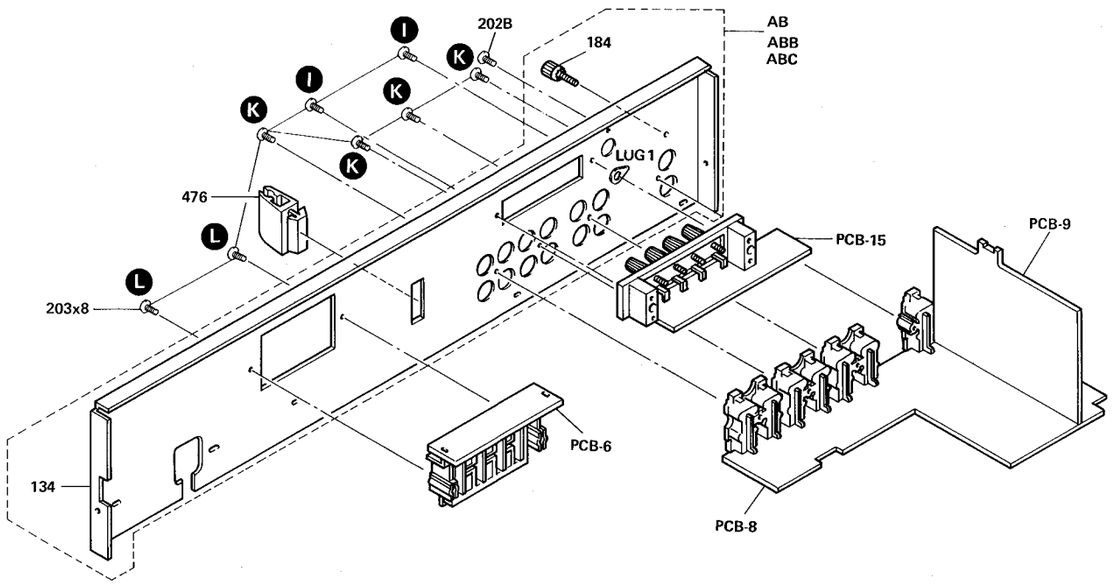




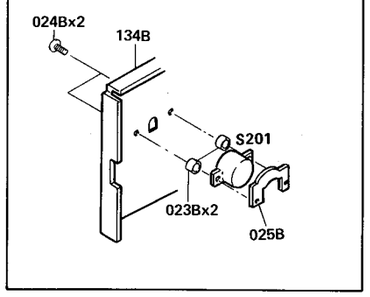
PARTS LIST

Ref. No.	Part No.	Description
AC	A443-HK330VIA	FRONT PANEL ASSEMBLY
130	1319-0139	LEG
131	1414-14001	CABINET
133	1424-26501	CABI BACK BOTTOM
137	1443-12801	PANEL FRONT
147	1662-43301	PUSH BUTTON FUNCTION
151	1662-49502	PUSH BUTTON POWER
152	1630-02603	ROTARY KNOB VOLUME
153	1632-17101	ROTARY KNOB B.T.B.
160	2112-11762	SPONGE PANEL
162	2216-7177	SHIELD PLATE
164	2219-8244	METAL FITTG L
165	2219-8245	METAL FITTG R
166	2219-8243	METAL FITTG POWER
168	2219-8247	METAL FITTG
171	2222-7248	HEAT SINK MAIN
172	2222-7239	HEAT SINK RF
181	2240-364	HOLDER AC
189	2601-7176	SHAFT POWER
191	2360-7015	BOSS, SPE
193	2327-R0130062	SCREW, BND+ (3X6mm)
194	2347-R0130102	SCREW, BND T+ (3X10mm)
195	2347-R0130062	SCREW, BND T+ (3X6mm)
196	2347-R0130062	SCREW, BND T+ (3X6mm)
197	2347-R0130062	SCREW, BND T+ (3X6mm)
198	2347-R0130082	SCREW, BND T+ (3X8mm)
199	2347-R0130102	SCREW, BND T+ (3X10mm)
200	2592-400826	SCREW, FPT+ (4X8mm)
201	2347-R0130102	SCREW, BND T+ (3X10mm)
202	2347-R0130064	SCREW, BND T+ (3X6mm)
204	2347-R0140064	SCREW, BND T+ (4X6mm)
L1	5911-235	ANT COIL, BC
⚠T1	5584-S3701	XFORMER, POWER BK
⚠T1	5584-S3702	XFORMER, POWER GB BB
⚠P1	4161-71151	CORD W/PLUG BK
⚠P1	4161-7256	CORD W/PLUG GB
⚠P1	4161-04100	CORD W/PLUG BB
LUG2	4211-4	LUG GB BB

GENERAL UNIT
EXPLODED VIEW (CABINET BACK)



General and Australia models



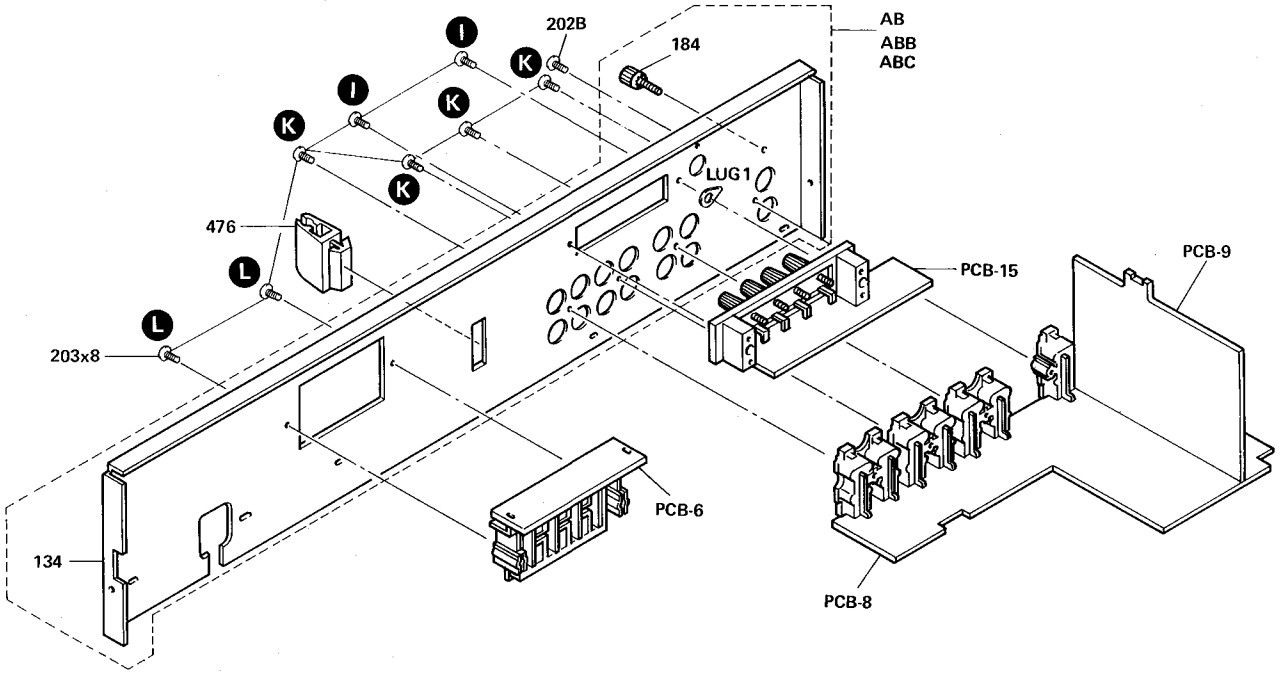
PARTS LIST

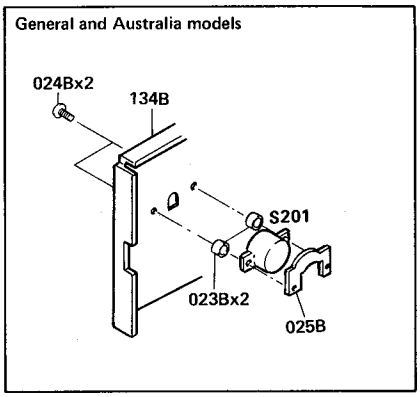
Ref. No.	Part No.	Description
AB	A424-HK330VIA	CABINET BACK ASSEMBLY (BK)
ABB	A424-HK330VIB	CABINET BACK ASSEMBLY (GB)
ABC	A424-HK330VIC	CABINET BACK ASSEMBLY (BB)
023B	2132-7116	SPACER (GB) (BB)
024B	2327-R0130124	SCREW, BND+ (3X12mm) (GB) (BB)
025B	2240-7017	SPECIAL NUT (GB) (BB)
134	1424-26601	CABI BACK REAR
134B	1424-26701	CABI BACK REAR (GB) (BB)
184	4214-168	TERMINAL (GND)
202B	2347-R0130064	SCREW, BND T+ (3X6mm) (GB) (BB)
203	2347-R0130104	SCREW, BND T+ (3X10mm)
476	2240-7208	HOLDER
LUG1	4211-4	LUG
⚠S201	4411-102729	ROTRY SWITCH, VOLTAGE SELECTOR (GB) (BB)

IC TERMINAL FUNCTIONS

	Terminal number	Port name	Terminal code	I/O	Outline of functions	
					Segment name COM1	Segment name COM2
	1	S7	S7	O	Received frequency display	Point 2 on level meter
	2	S8	S8	O	Received frequency display	Received frequency display
	3	S9	S9	O	Point 1 on level meter	Received frequency display
	4	S10	S10	O	Received frequency display	Received frequency display
	5	S11	S11	O	Received frequency display	Received frequency display
	6	S12	S12	O	Received frequency display	Received frequency display
	7	S13	S13	O	Received frequency display	Received frequency display
	8	S14	S14	O	Received frequency display	Received frequency display
	9	S15	S15	O	Received frequency display	Received frequency display
	10	S16	S16	O	Received frequency display	Received frequency display
	11	S17	S17	O	Received frequency display	Received frequency display
	12	S18	S18	O	Received frequency display	Received frequency display
	13	S19	S19	O	Received frequency display	Received frequency display
	14	S20	S20	O	Received frequency display	Received frequency display
IC701	15	S21	S21	O	Received frequency display	Received frequency display
	16	S22	S22	O	Point 5 on level meter	Store mode (MEMORY)
	17	S23	S23	O		Received frequency display
	18	S24	S24	O	Received frequency display	Received frequency display
	19	S25	S25	O	MW band	FM stereo
	20	S26	S26	O	MW band	FM band
	21	S27	S27	O	LW band	SW band
	22	COM1	COM1	O	Common 1	
	23	V_{DD}	V_{DD}	I	Power supply	
	24	K0	K0	I	Key input	
	25	K1	K1	I	Key input	
	26	K2	K2	I	Key input	
	27	K3	K3	I	Key input	
	28	T0	T0	O	Key timing output	
	29	T1	T1	O	Key timing output	
	30	T2	T2	O	Key timing output	
	31	T3	T3	O	Key timing output	
	32	T4	T4	O	Key timing output	
	33	T5	T5	O	Key timing output	

GENERAL UNIT
EXPLODED VIEW (CABINET BACK)





PARTS LIST

Ref. No.	Part No.	Description
AB	A424-HK330VIA	CABINET BACK ASSEMBLY (BK)
ABB	A424-HK330VIB	CABINET BACK ASSEMBLY (GB)
ABC	A424-HK330VIC	CABINET BACK ASSEMBLY (BB)
023B	2132-7116	SPACER (GB) (BB)
024B	2327-R0130124	SCREW, BND+ (3X12mm) (GB) (BB)
025B	2240-7017	SPECIAL NUT (GB) (BB)
134	1424-26601	CABI BACK REAR
134B	1424-26701	CABI BACK REAR (GB) (BB)
184	4214-168	TERMINAL (GND)
202B	2347-R0130064	SCREW, BND T+ (3X6mm) (GB) (BB)
203	2347-R0130104	SCREW, BND T+ (3X10mm)
476	2240-7208	HOLDER
LUG1	4211-4	LUG
⚠S201	4411-102729	ROTRY SWITCH, VOLTAGE SELECTOR (GB) (BB)

IC TERMINAL FUNCTIONS

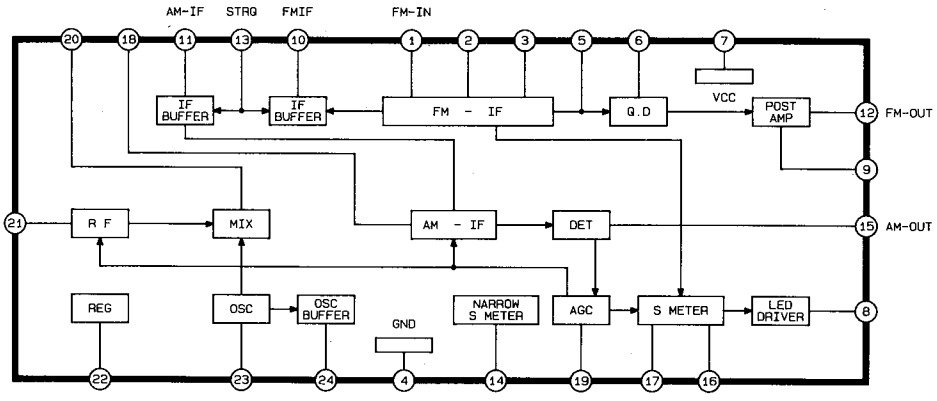
	Terminal number	Port name	Terminal code	I/O	Outline of functions	
					Segment name COM1	Segment name COM2
	1	S7	S7	O	Received frequency display	Point 2 on level meter
	2	S8	S8	O	Received frequency display	Received frequency display
	3	S9	S9	O	Point 1 on level meter	Received frequency display
	4	S10	S10	O	Received frequency display	Received frequency display
	5	S11	S11	O	Received frequency display	Received frequency display
	6	S12	S12	O	Received frequency display	Received frequency display
	7	S13	S13	O	Received frequency display	Received frequency display
	8	S14	S14	O	Received frequency display	Received frequency display
	9	S15	S15	O	Received frequency display	Received frequency display
	10	S16	S16	O	Received frequency display	Received frequency display
	11	S17	S17	O	Received frequency display	Received frequency display
	12	S18	S18	O	Received frequency display	Received frequency display
	13	S19	S19	O	Received frequency display	Received frequency display
	14	S20	S20	O	Received frequency display	Received frequency display
IC701	15	S21	S21	O	Received frequency display	Received frequency display
	16	S22	S22	O	Point 5 on level meter	Store mode (MEMORY)
	17	S23	S23	O		Received frequency display
	18	S24	S24	O	Received frequency display	Received frequency display
	19	S25	S25	O	MW band	FM stereo
	20	S26	S26	O	MW band	FM band
	21	S27	S27	O	LW band	SW band
	22	COM1	COM1	O	Common 1	
	23	V_{DD}	V_{DD}	I	Power supply	
	24	K0	K0	I	Key input	
	25	K1	K1	I	Key input	
	26	K2	K2	I	Key input	
	27	K3	K3	I	Key input	
	28	T0	T0	O	Key timing output	
	29	T1	T1	O	Key timing output	
	30	T2	T2	O	Key timing output	
	31	T3	T3	O	Key timing output	
	32	T4	T4	O	Key timing output	
	33	T5	T5	O	Key timing output	

	Terminal number	Port name	Terminal code	I/O	Outline of functions	
					Segment name COM1	Segment name COM2
	34	T6	T6	O	Key timing output	
	35	P3-2	AD IN	I	AD IN signal strength display input	
	36	P3-1	VREF	I	AD IN reference voltage input	
	37	P2-4	LOCAL IF	O	LOCAL DX select control output (FM, MW, LW)	
	38	P2-3	MONO	O	Forced output of mono control (FM mode only)	
	39	P2-2	AUTO·STOP	I	Stop signal input	
	40	P2-1	R-I	I	Remote control serial data input	
	41	MUTE	MUTE	O	Mute output	
	42	STB	STB	I	Strobe signal input	
	43	CK	CK	I	Serial clock signal input	
IC701	44	SO	SO	O	Serial data output	
	45	SI	SI	I	Serial data input	
	46	REF	REF	I	Reference frequency input	
	47	$\overline{\text{INT}}$	$\overline{\text{INT}}$	I	Initialize input terminal	
	48	$\overline{\text{INH}}$	$\overline{\text{INH}}$	I	Normal mode (H level) Inhibit mode (L level)	
	49	TEST	TEST	I	Test terminal	
	50	XT	XT	O	Clock output	
	51	$\overline{\text{XT}}$	$\overline{\text{XT}}$	O	Clock output	
	52	GND	GND	—	GND pin	
	53	V_{DD}	V_{DD}	I	Power supply	
	54	COM2	COM2	O		Common 2
	55	S1	S1	O	Preset ch	Received frequency display
	56	S2	S2	O	Received frequency display	Received frequency display
	57	S3	S3	O	Received frequency display	Received frequency display
	58	S4	S4	O	Received frequency display	Received frequency display
	59	S5	S5	O	Point 4 on level meter	FM/SW unit
	60	S6	S6	O	Point 3 on level meter	MW/LW unit

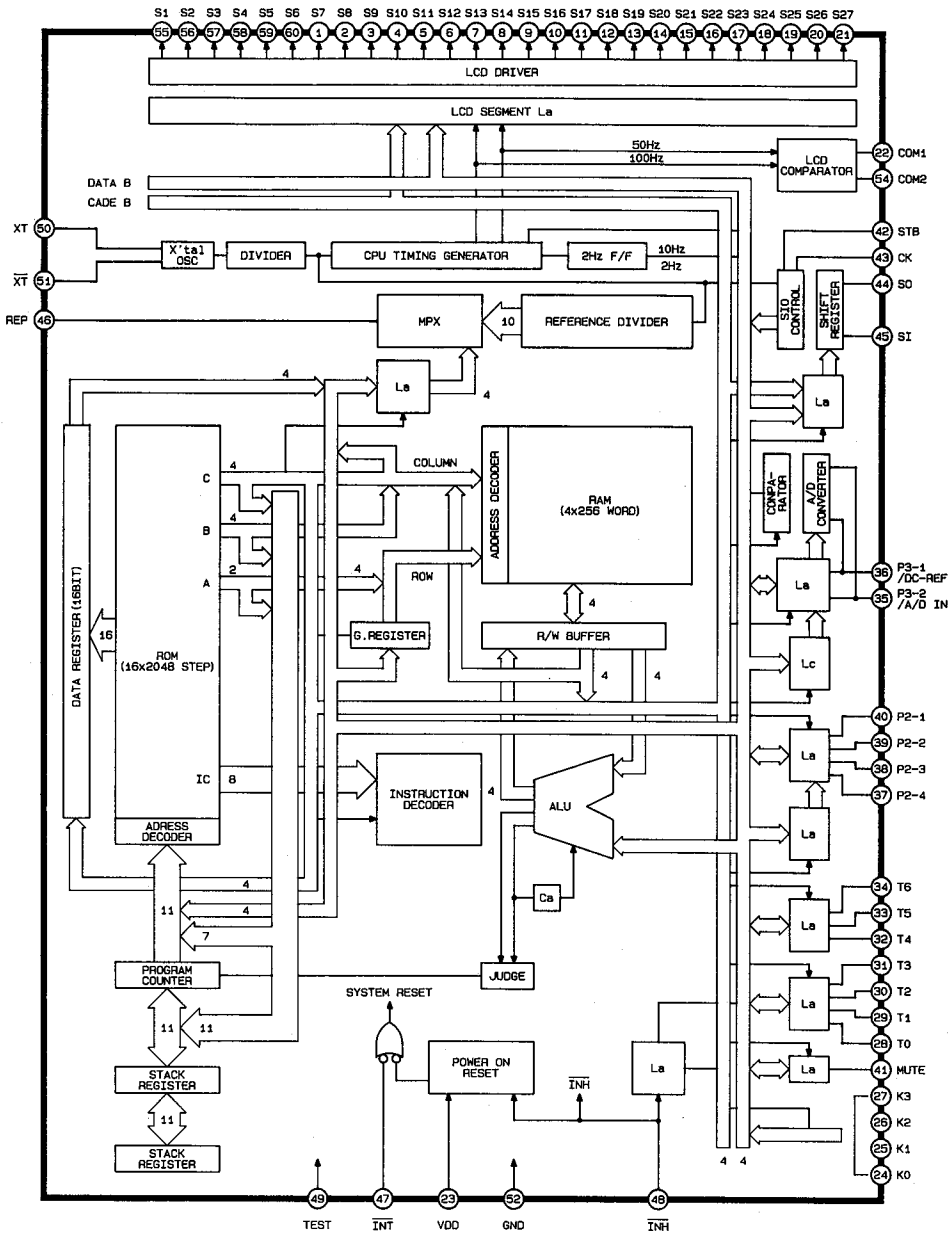
	Terminal number	Port name	Terminal code	I/O	Outline of functions
IC702	1	GND	GND	—	GND pin
	2	REF	REF	I	Reference frequency input
	3	SI	SI	I	Serial data input
	4	CK	CK	I	Serial clock signal input
	5	STB	STB	I	Strobe signal input
	6	OT1	FM	O	FM Band output
	7	OT2	MW	O	MW Band output
	8	OT3	IF-Mode	O	IF mode control output
	9	OT4	SDK	O	SDK control output
	10	DO2	DO2	O	Phase Comparat output
	11	DO1	DO1	O	Phase Comparat output
	12	TEST	TEST	I	Test mode control input terminal
	13	AM IN	AM IN	I	AM local oscillator signal input
	14	GND	GND	—	Prescaler ground terminal
	15	FM IN	FM IN	I	FM local oscillator signal input
	16	V_{DD}	V_{DD}	I	5V ± 10% power supply terminal

IC BLOCK DIAGRAM

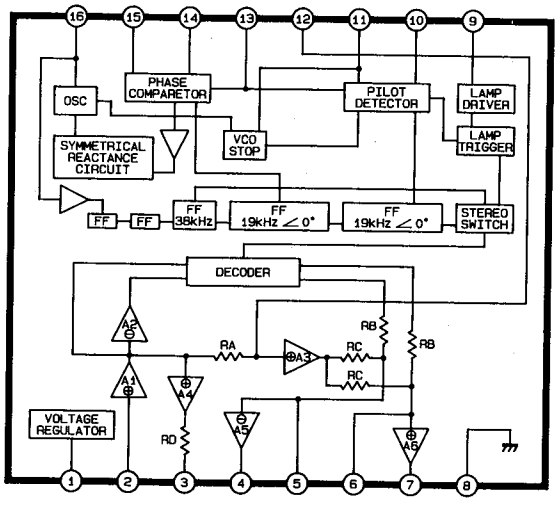
IC201 : LA1266
FM/AM IF Amp. and
Det., AM Mixer and Osc



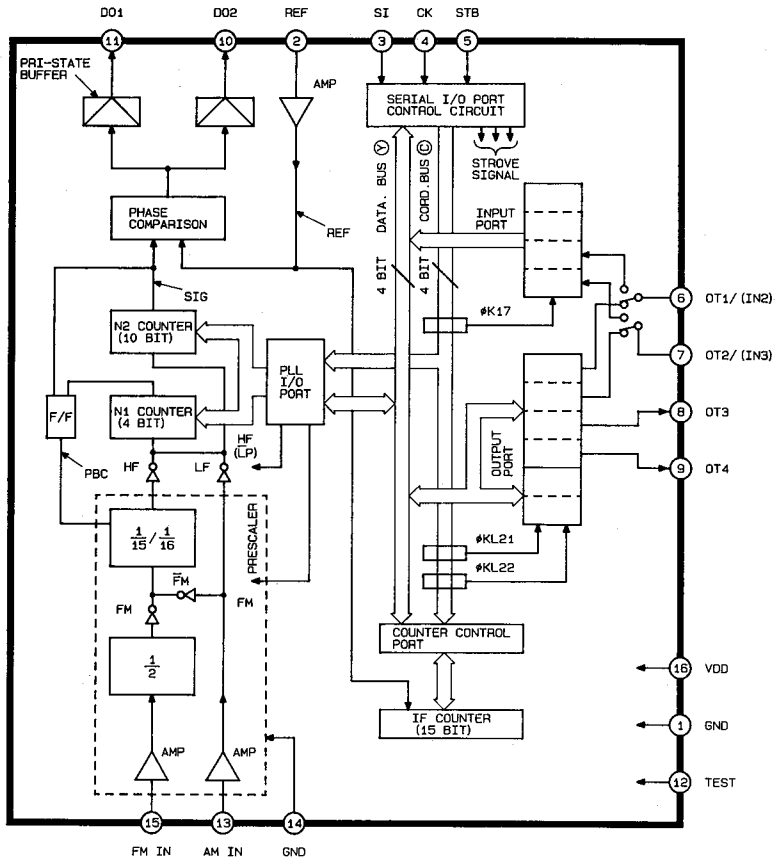
IC701 : TC9306F-025
Micro Computer



IC301 : LA3410
FM MPX

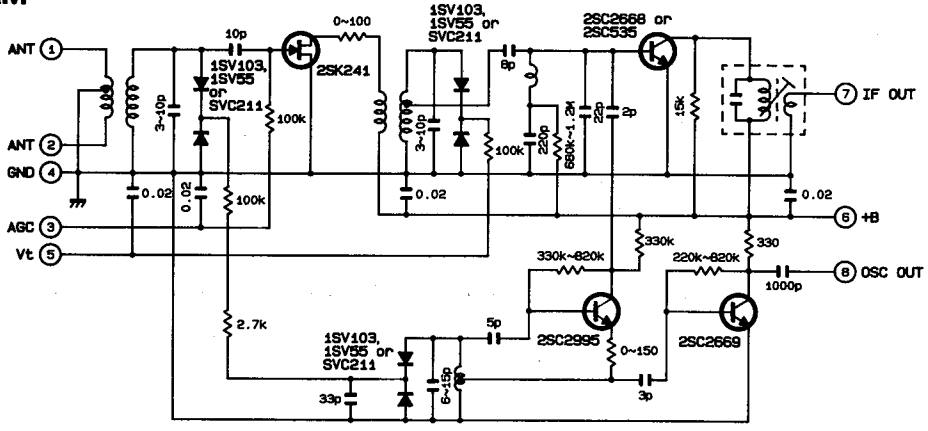


IC702 : TC9172AP
Pre Scaler

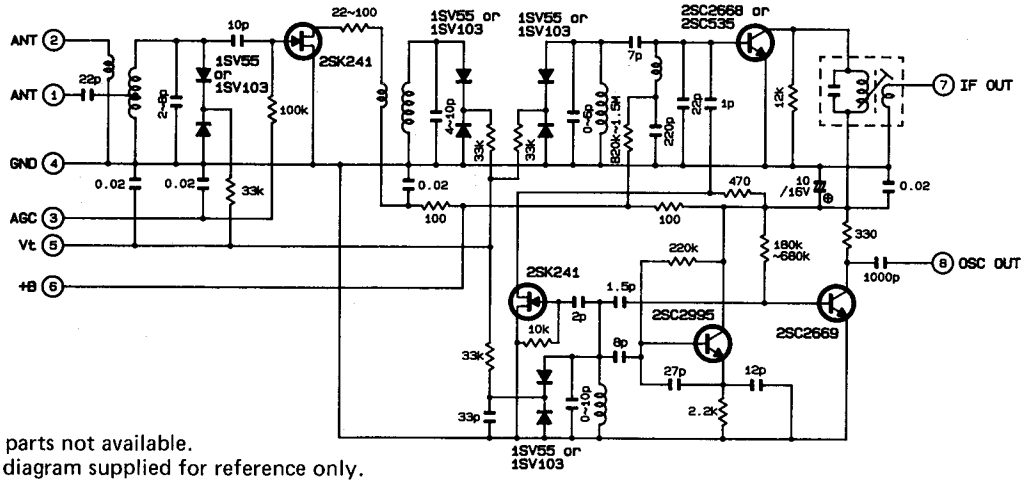


SCHEMATIC DIAGRAM

Front End

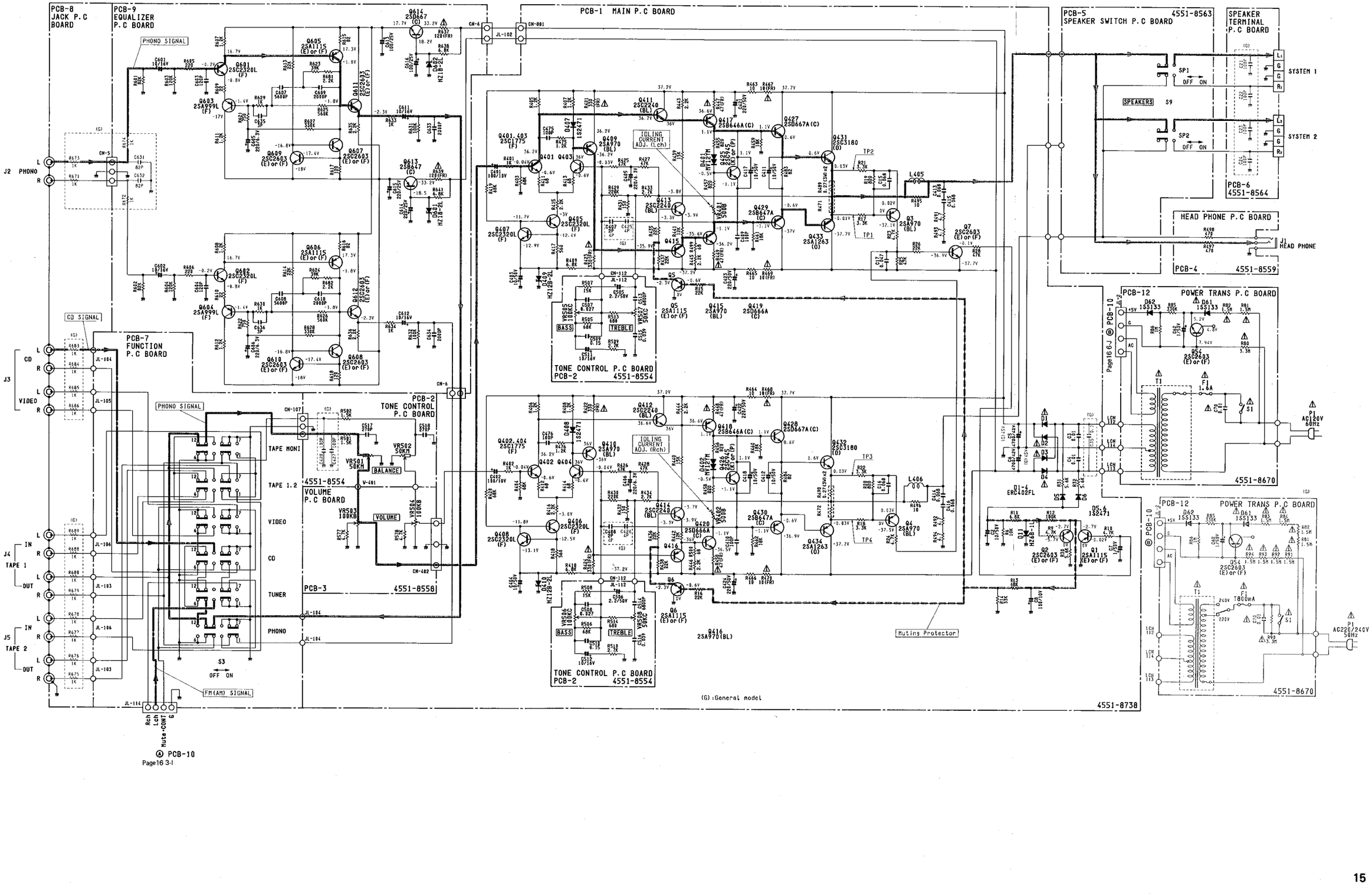


Front End (General and Australia models)

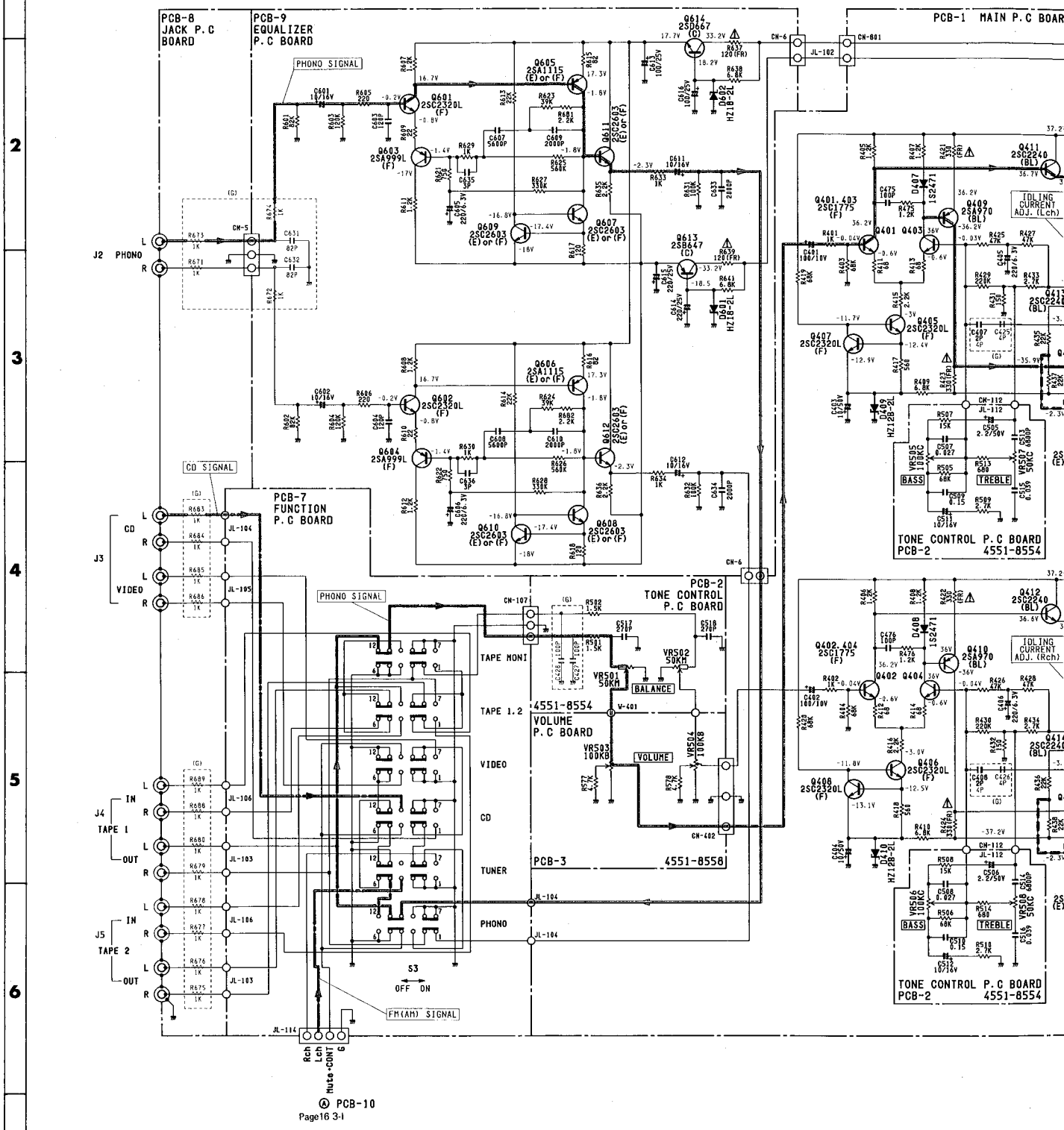


NOTE : Front End parts not available.
Schamatic diagram supplied for reference only.

SCHEMATIC DIAGRAM (1)



SCHEMATIC DIAGRAM (1)



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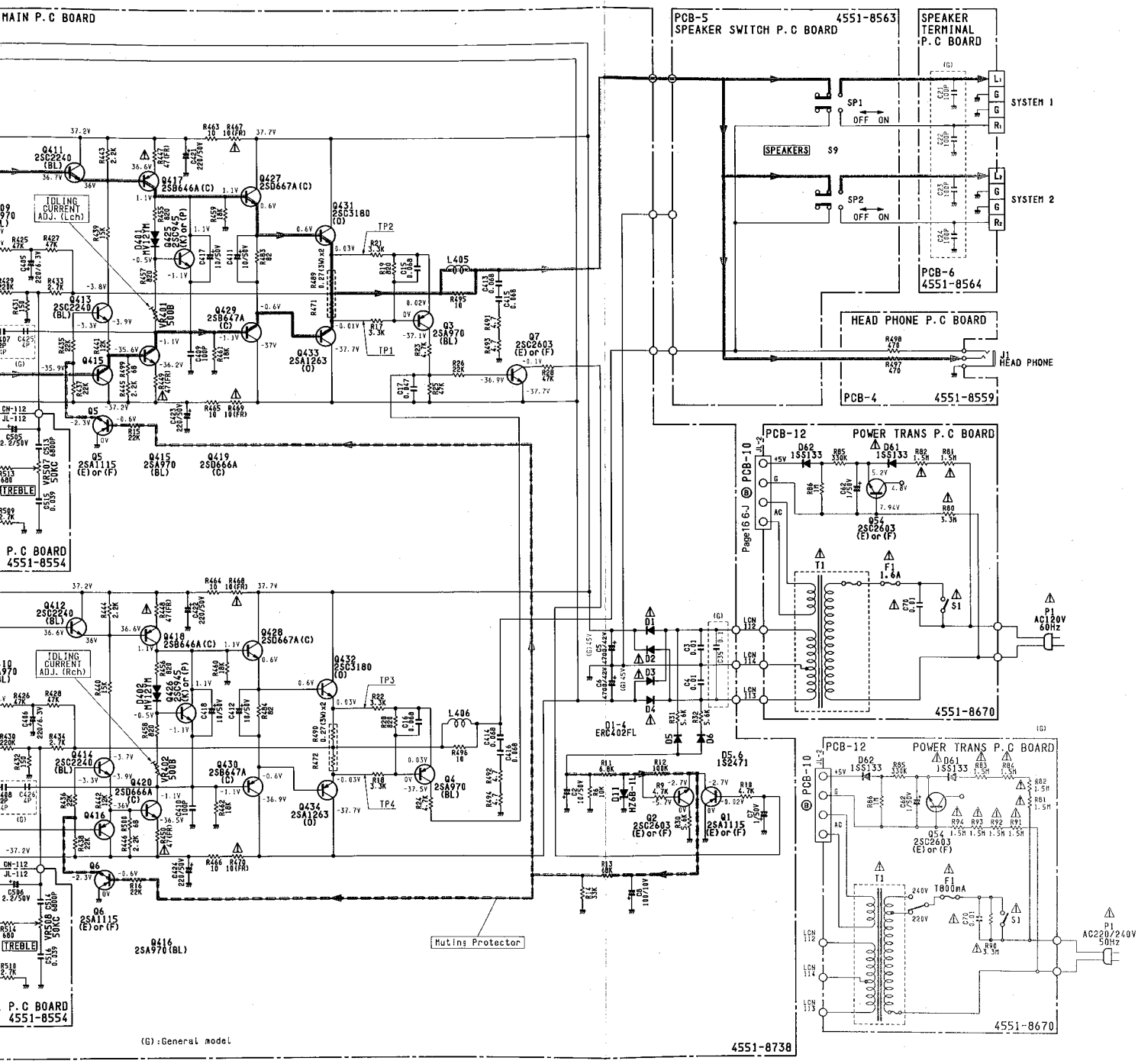

MAIN P.C BOARD
PCB-5 4551-8563
SPEAKER SWITCH P.C BOARD
SPEAKER TERMINAL P.C BOARD
SP1 OFF ON
SP2 OFF ON
SPEAKERS S9
SYSTEM 1
SYSTEM 2
PCB-6 4551-8564
HEAD PHONE P.C BOARD
J1 HEAD PHONE
PCB-4 4551-8559
PCB-12 POWER TRANS P.C BOARD
PCB-10
Page16-J
P1 AC120V 60Hz
4551-8670
P1 AC220/240V 50Hz
IDLING CURRENT ADJ. (Lch)
IDLING CURRENT ADJ. (Rch)
TREBLE
P.C BOARD 4551-8554
Muting Protector
(G):General model
4551-8738

SCHEMATIC DIAGRAM (2)

(G):General model

NOTE:
1. ALL RESISTANCES VALUES ARE IN Ω.
KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
(...V):FM SIGNAL (...V) :AM SIGNAL
5. ⚠ SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

RN1203
R1 22K
R2 22K

PCB-10
TUNER P.C BOARD

PCB-15
4551-8673
ANTENNA TERMINAL P.C BOARD

PCB-14
TUNING UP/DOWN P.C BOARD
4551-8671

PCB-13
PRESET SWITCH P.C BOARD
4551-8670
FM1/FM2/AM
Only for North Aeerica area model

PCB-11
INDICATOR P.C BOARD
4551-8669

4551-8668

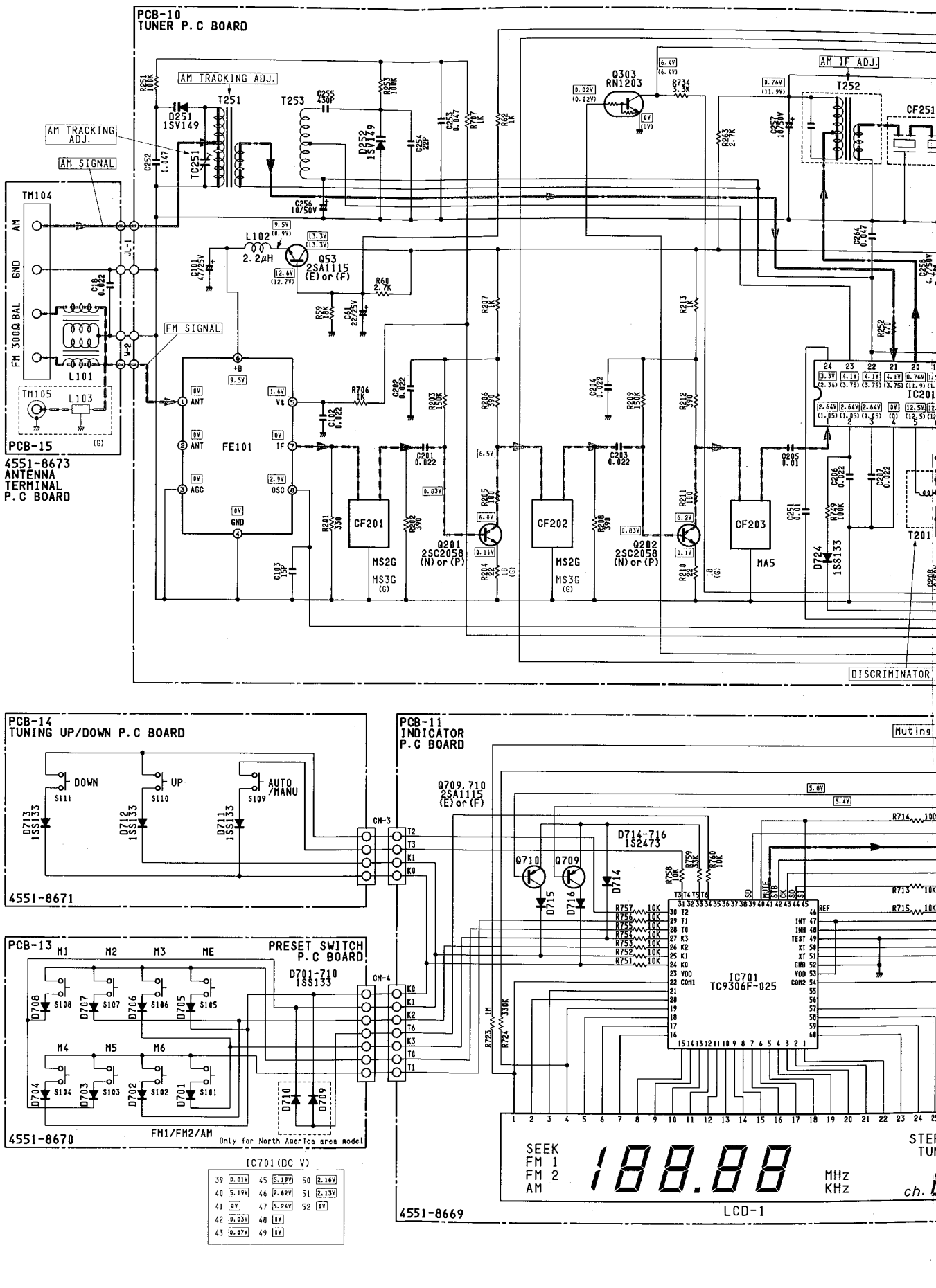
IC701 (DC V)

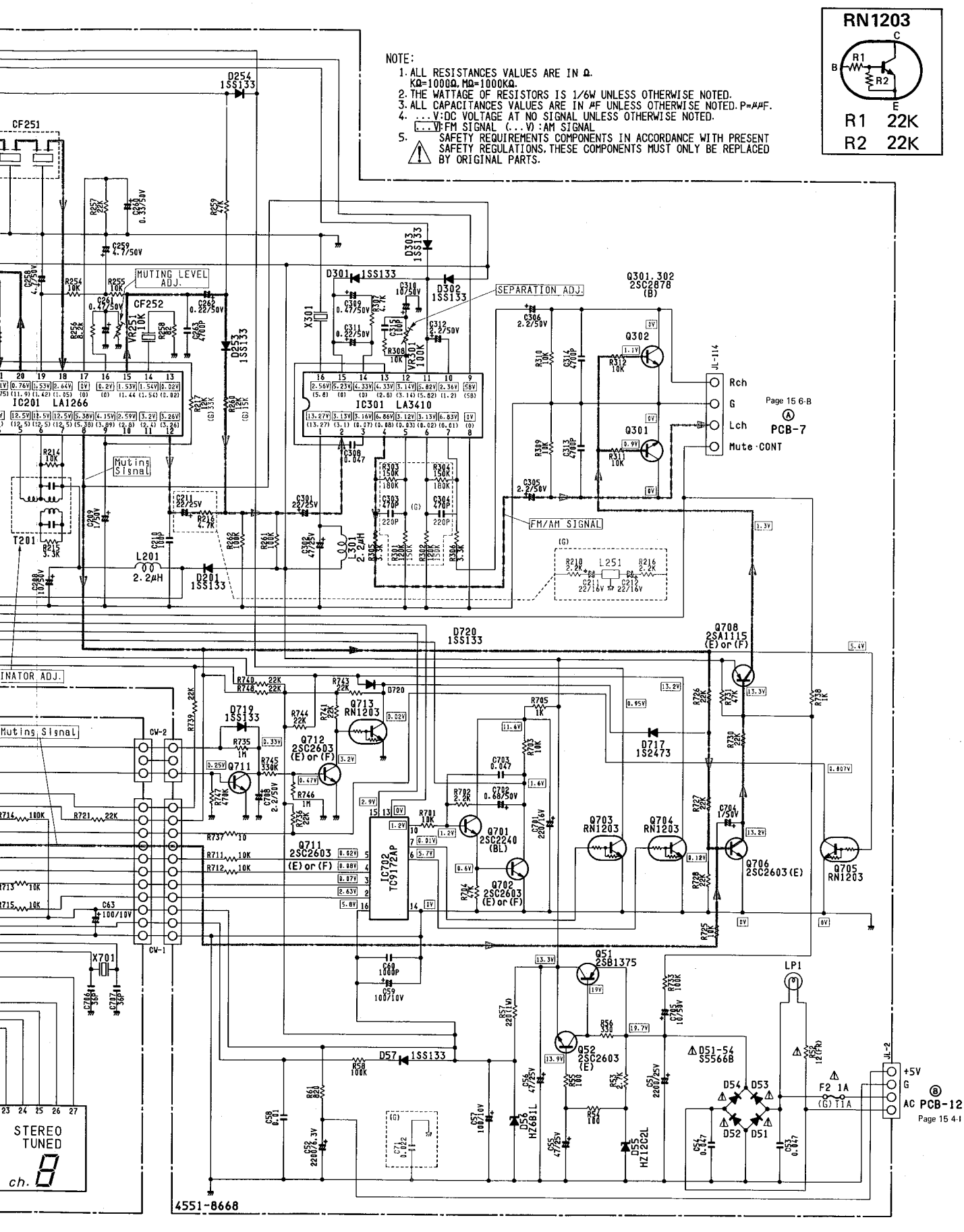
39	0.01V	45	5.19V	50	2.16V
40	5.19V	46	2.62V	51	2.13V
41	5V	47	5.24V	52	5V
42	0.03V	48	8V		
43	0.87V	49	5V		

Page 15 6-8 Ⓐ PCB-7
Page 15 4-1 Ⓑ PCB-12

SCHEMATIC DIAGRAM (2)

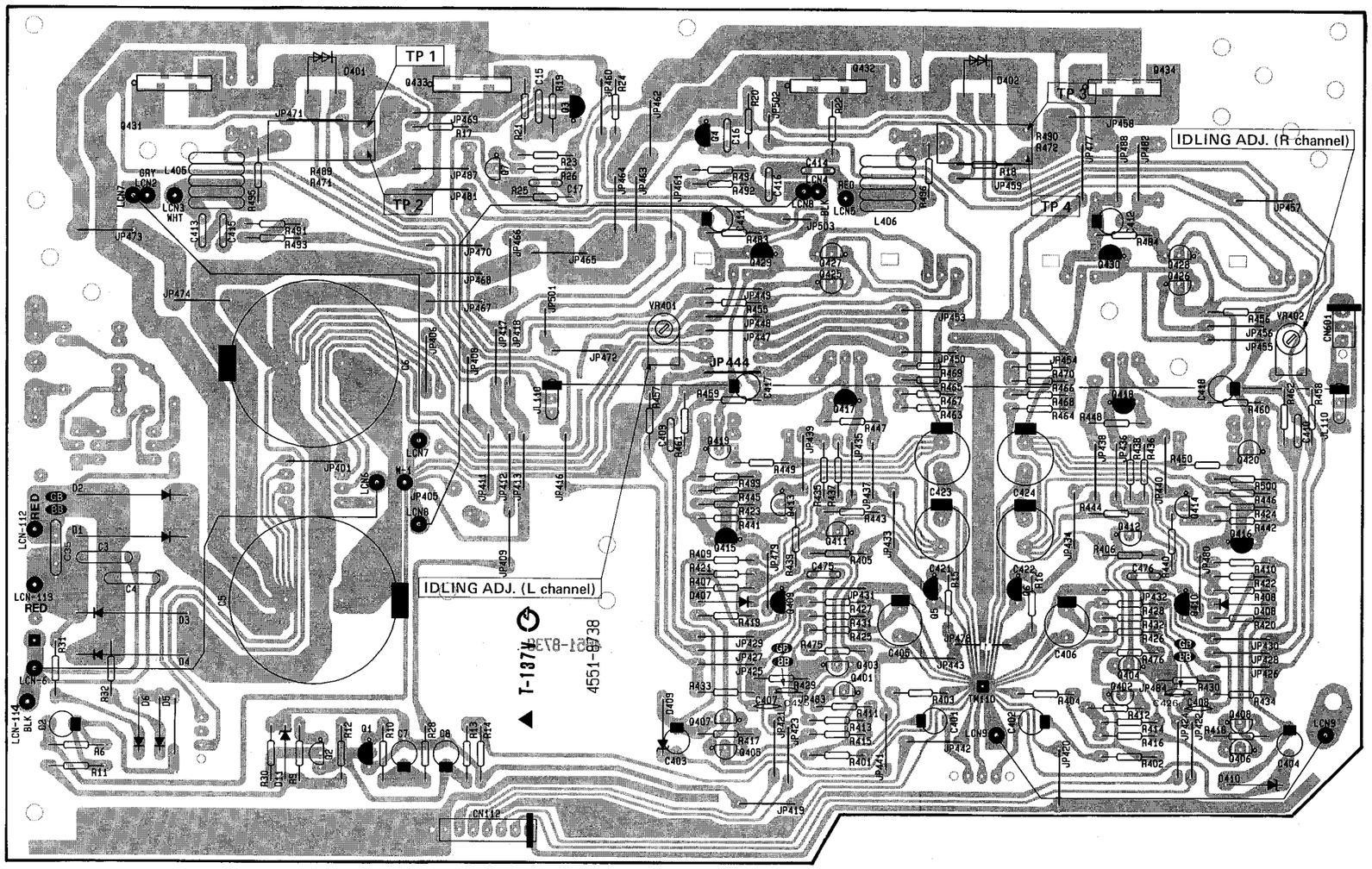
(G):General model



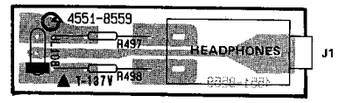

RN1203
C
R1
B
R2
E
R1 22K
R2 22K
NOTE:
1. ALL RESISTANCES VALUES ARE IN Ω.
KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
[...V]:FM SIGNAL (...V) :AM SIGNAL
5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.
D254 1SS133
CF251
MUTING LEVEL ADJ.
CF252
D303 1SS133
D301 1SS133
D302 1SS133
SEPARATION ADJ.
Q301,302 2SC2878 (B)
Q302
Q301
JL-114
Rch
G
Lch
Mute·CONT
Page 15 6-B
A
PCB-7
IC201 LA1266
IC301 LA3410
X301
VR301 100K
Muting Signal
T201
L201 2.2μH
L301 2.2μH
D201 1SS133
FM/AM SIGNAL
D720 1SS133
Q708 2SA1115 (E) or (F)
D719 1SS133
Q713 RN1203
Q712 2SC2603 (E) or (F)
Q711 2SC2603 (E) or (F)
Q717 1S2473
Q703 RN1203
Q704 RN1203
Q705 RN1203
Q706 2SC2603 (E)
Q701 2SC2240 (BL)
Q702 2SC2603 (E) or (F)
IC702 TC9172AP
CW-2
CW-1
X701
Q51 2SB1375
Q52 2SC2603 (E)
D57 1SS133
D56 HZ6B1L
D55 HZ12D2L
D54 D53 D52 D51
LP1
JL-2
+5V
G
AC
B
PCB-12
Page 15 4-I
F2 1A (G) T1A
D51-54 S5566B
STEREO TUNED
ch. 8
4551-8668

P.C. BOARDS (1)

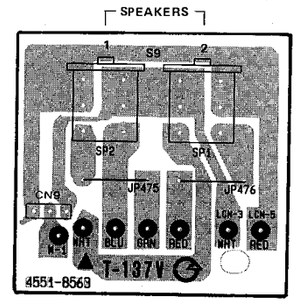
PCB-1 Main P.C. Board



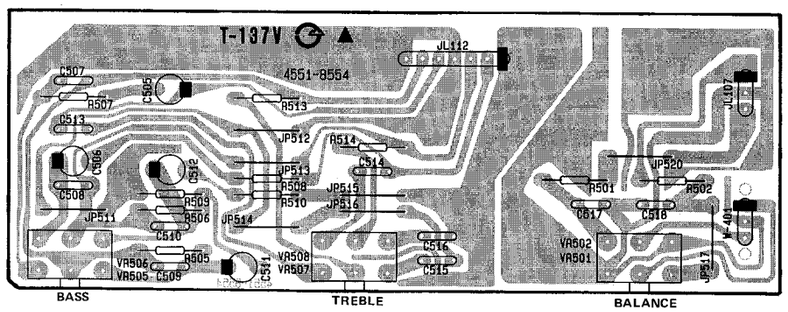
PCB-4 Headphone Jack P.C. Board



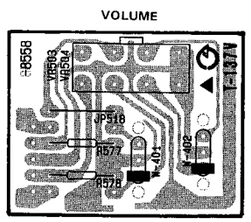
PCB-5 Speaker Switches P.C. Board



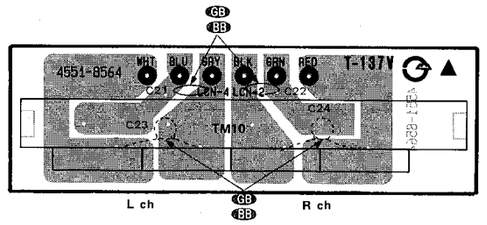
PCB-2 Tone Control P.C. Board



PCB-3 Volume P.C. Board

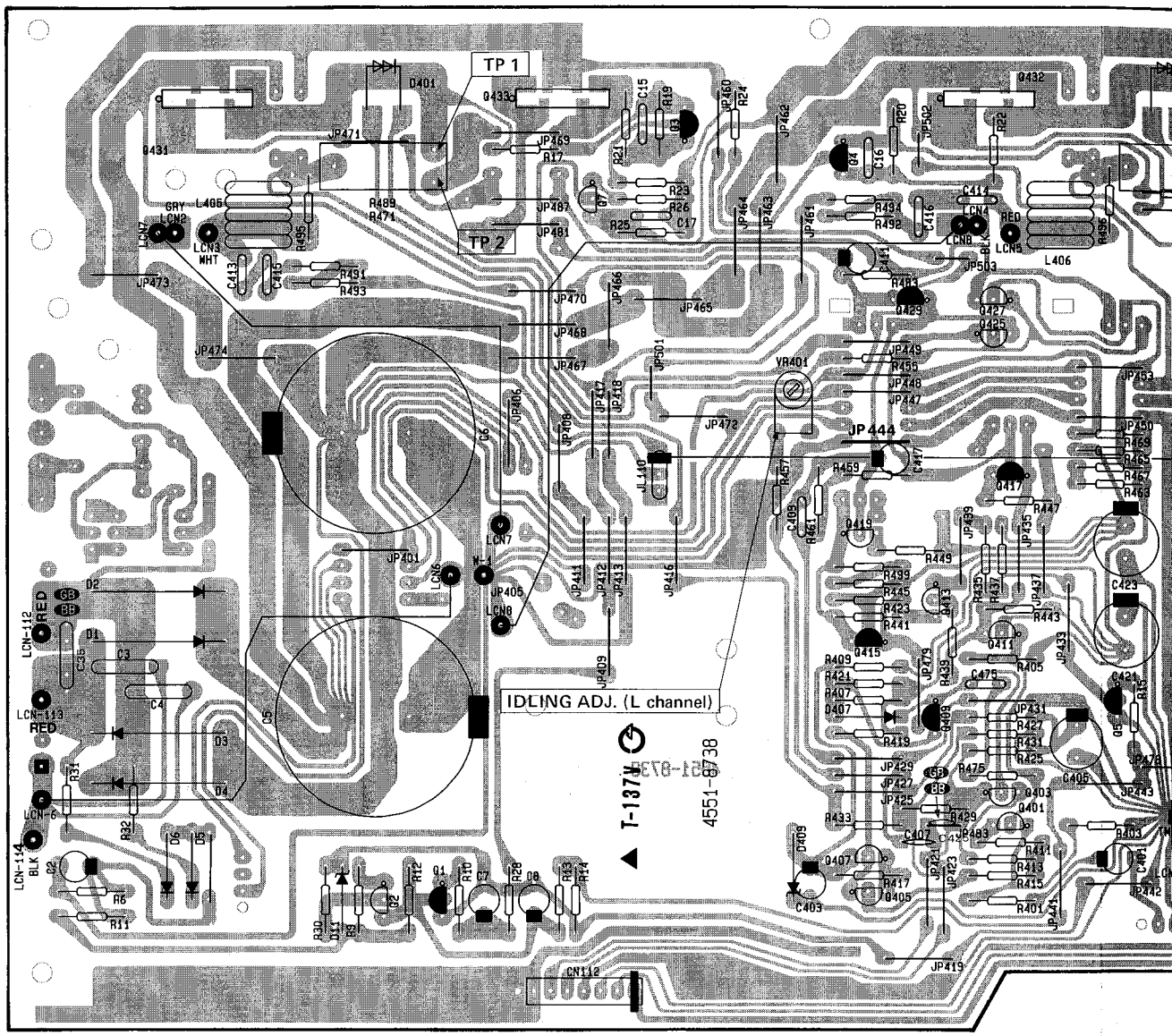


PCB-6 Speaker Terminal P.C. Board

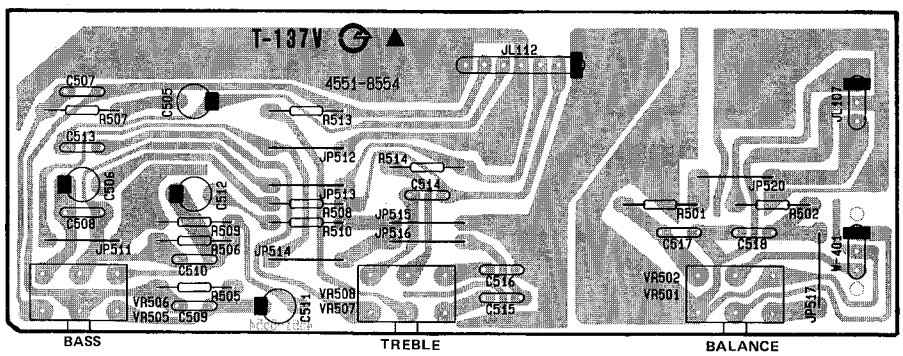


P.C. BOARDS (1)

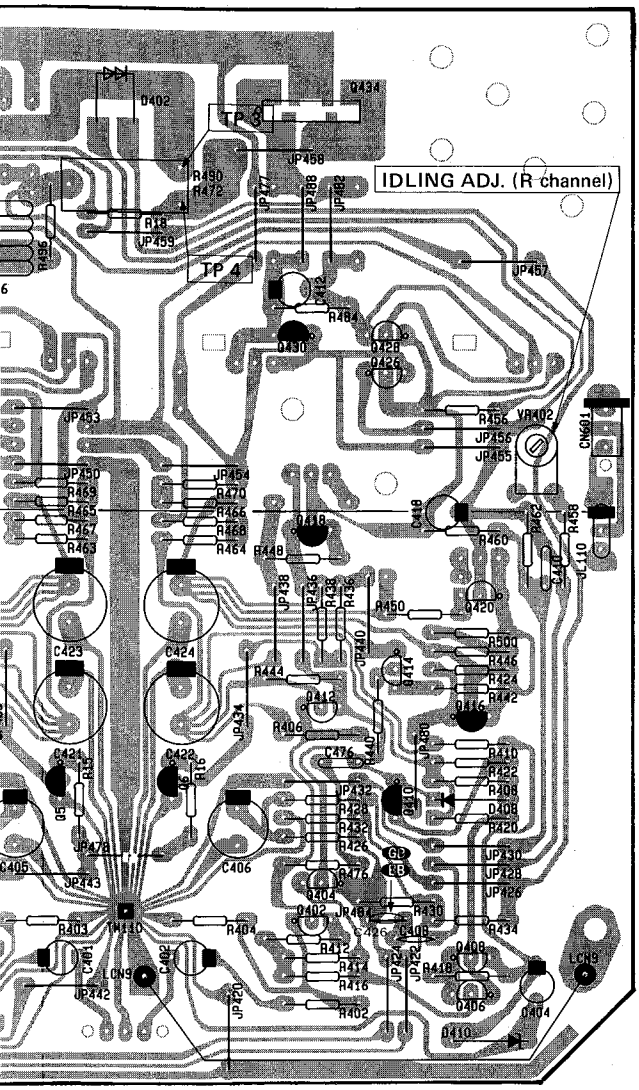
PCB-1 Main P.C. Board



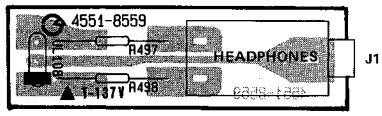
PCB-2 Tone Control P.C. Board



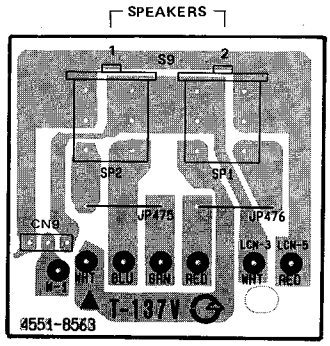
F G H I J



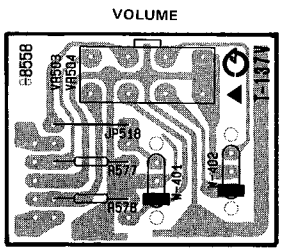
PCB-4 Headphone Jack P.C. Board



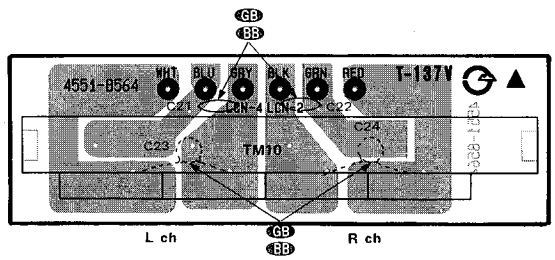
PCB-5 Speaker Switches P.C. Board



PCB-3 Volume P.C. Board

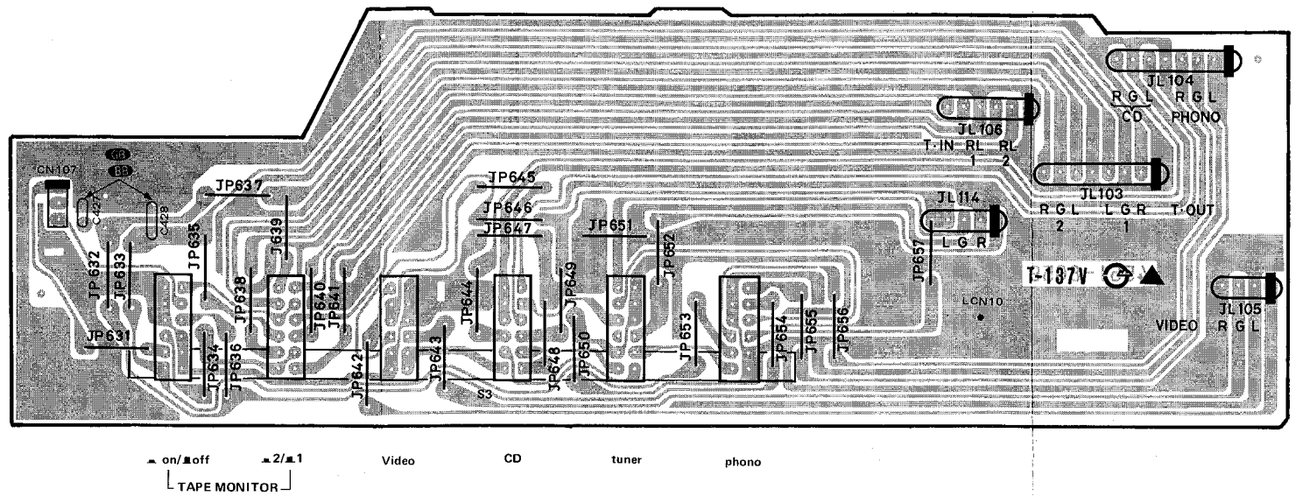


PCB-6 Speaker Terminal P.C. Board

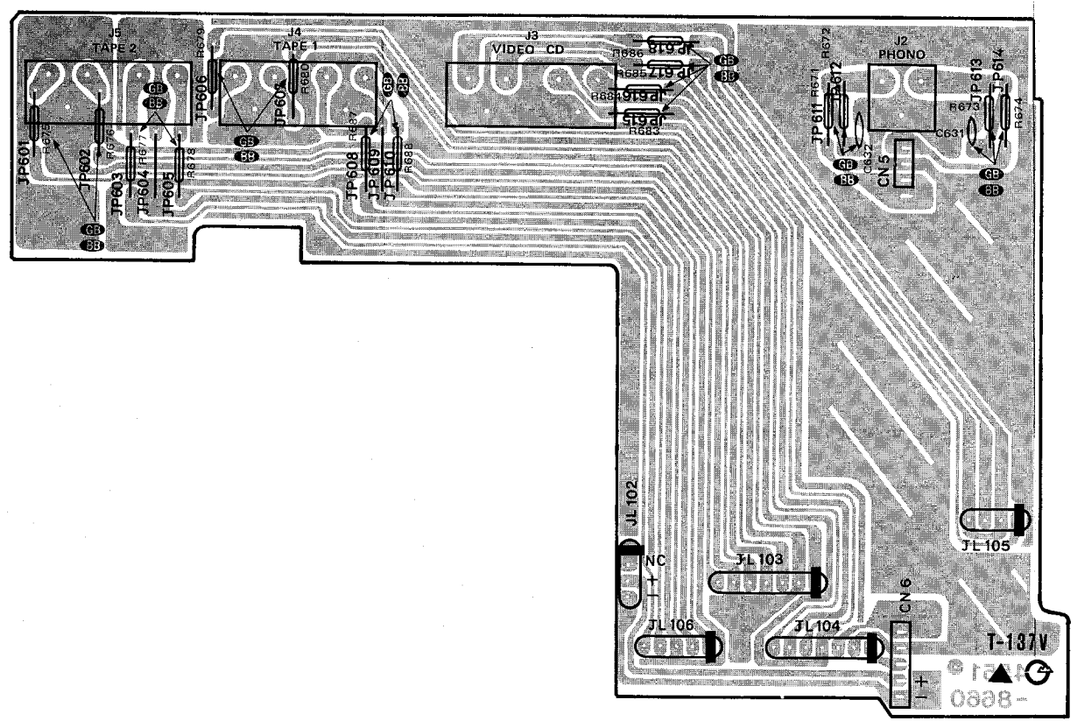


P.C. BOARDS (2)

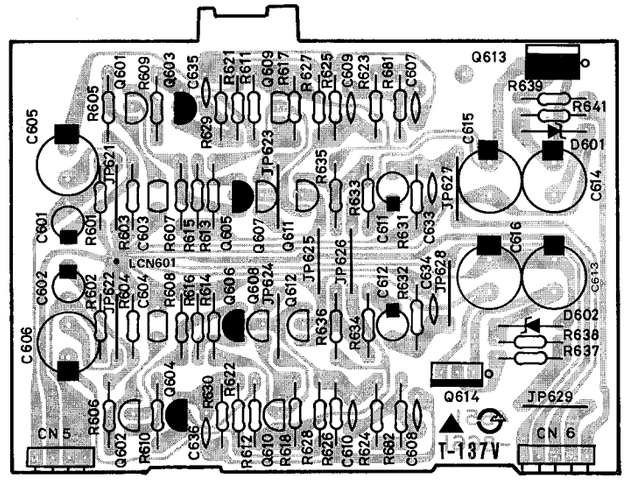
PCB-7 Function P.C. Boad Board



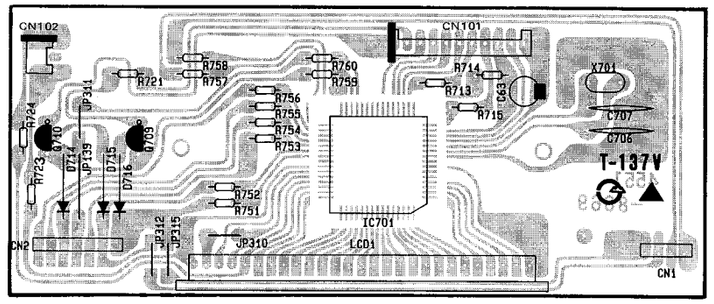
PCB-8 Jack P.C. Board



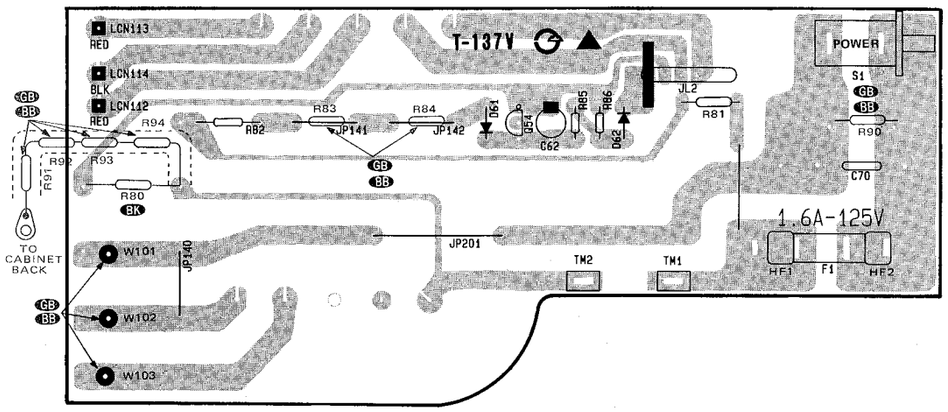
PCB-9 Equalizer P.C. Board



PCB-11 Indicator P.C. Board

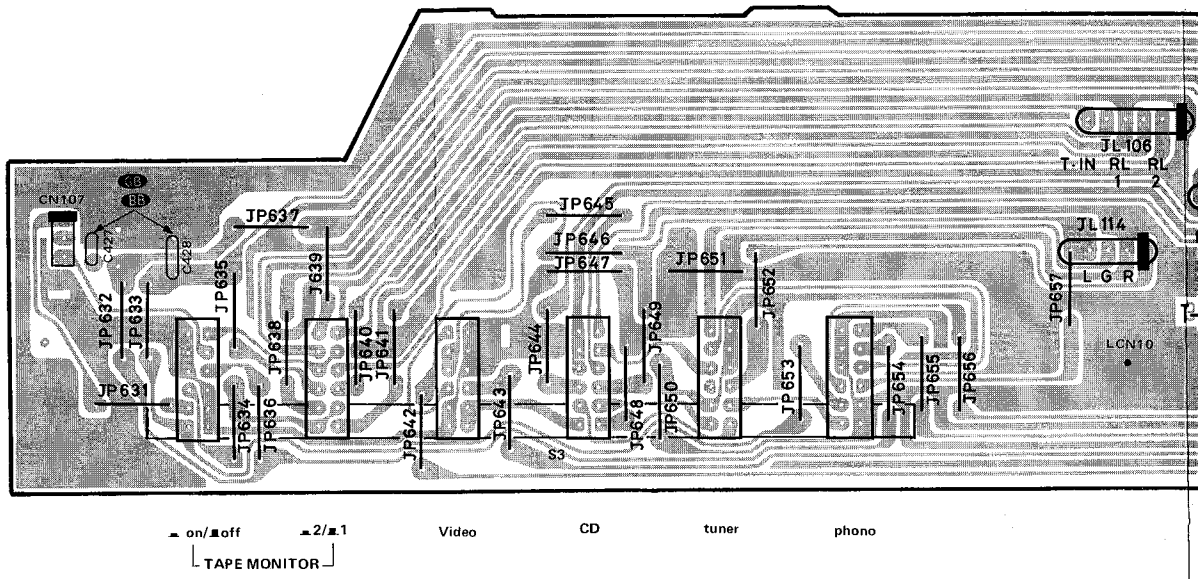


PCB-12 Power Trans P.C. Board

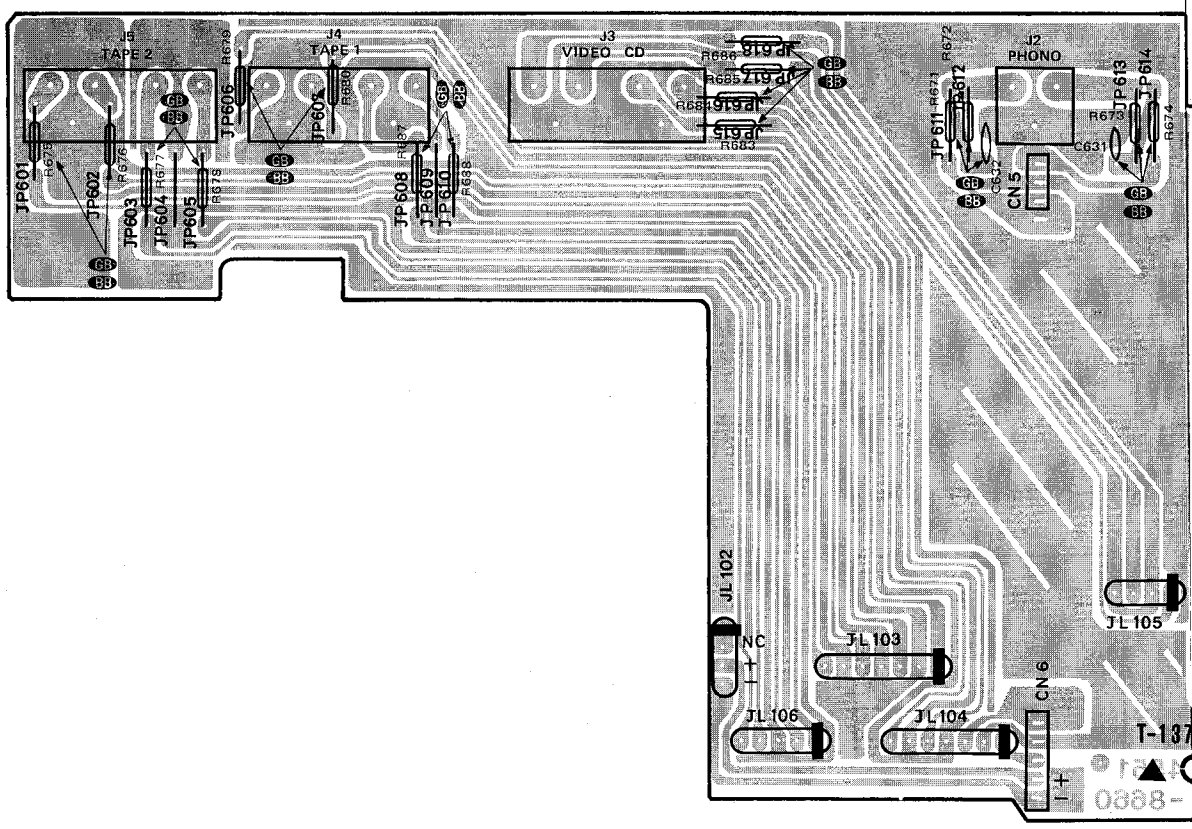


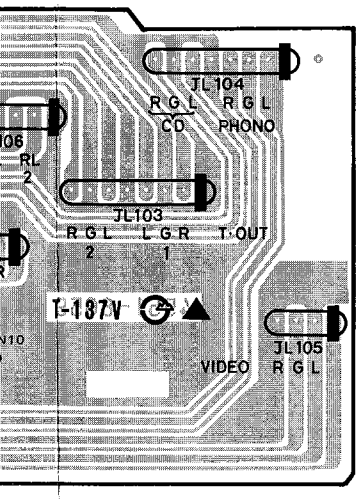
P.C. BOARDS (2)

PCB-7 Function P.C. Boad Board

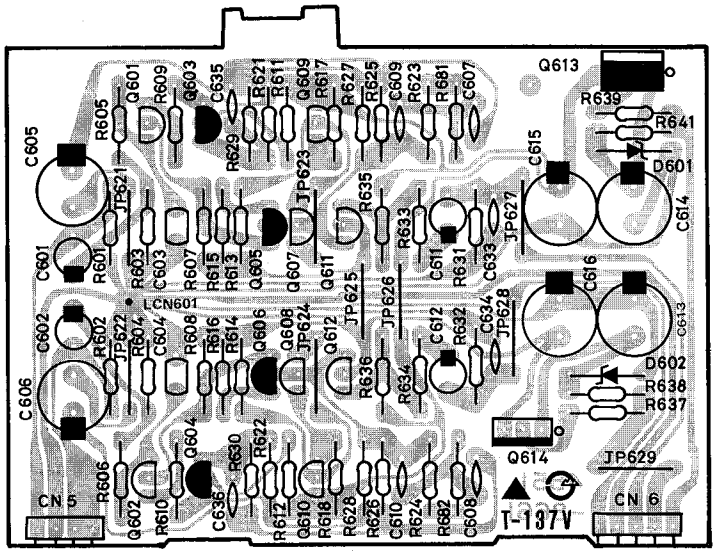


PCB-8 Jack P.C. Board

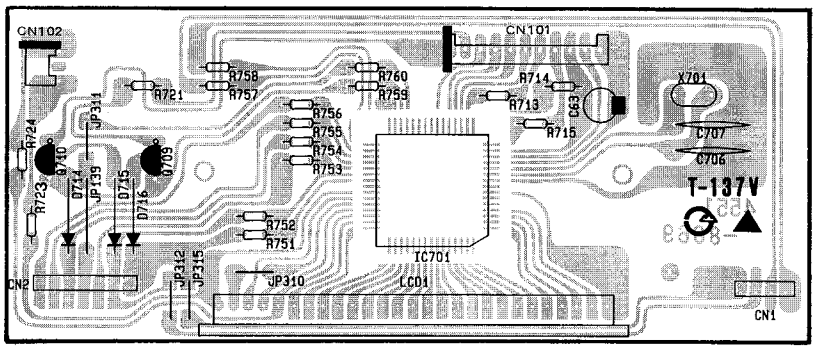




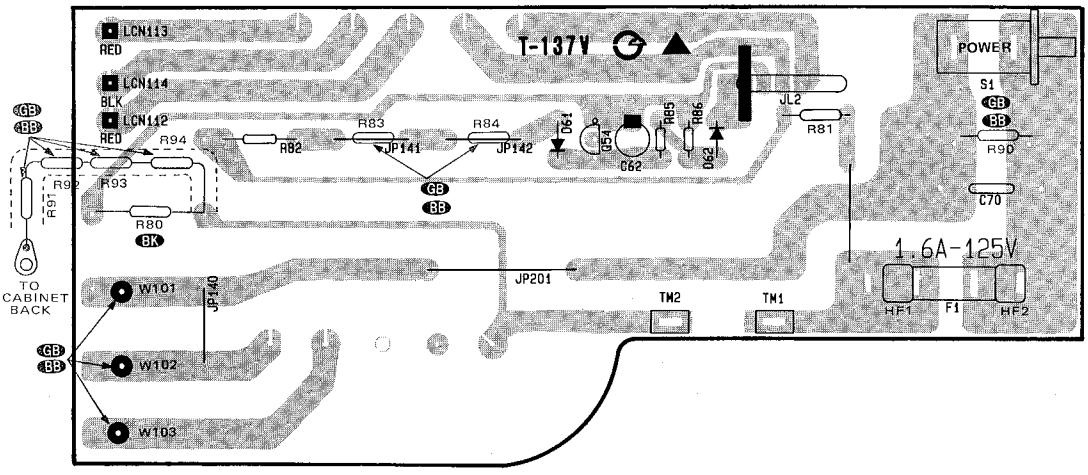
PCB-9 Equalizer P.C. Board



PCB-11 Indicator P.C. Board

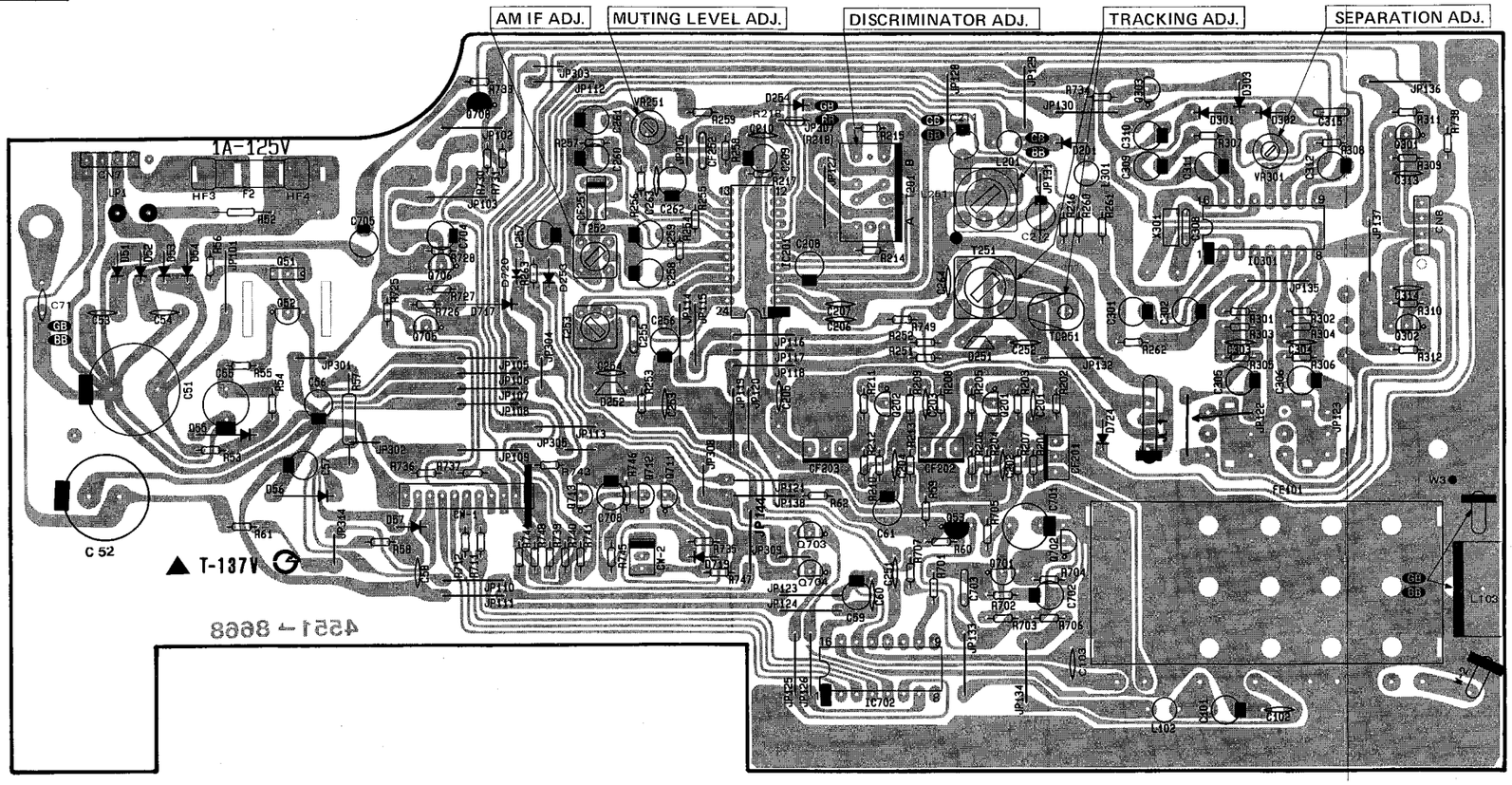


PCB-12 Power Trans P.C. Board

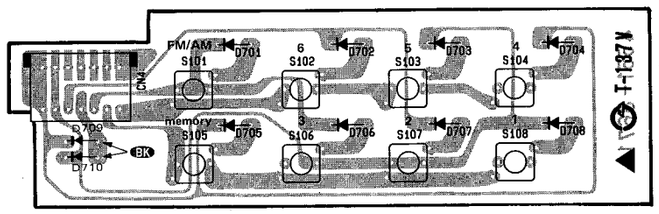


P.C. BOARDS (3)

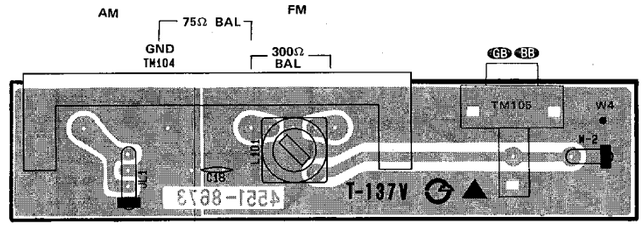
PCB-10 Tuner P.C. Board



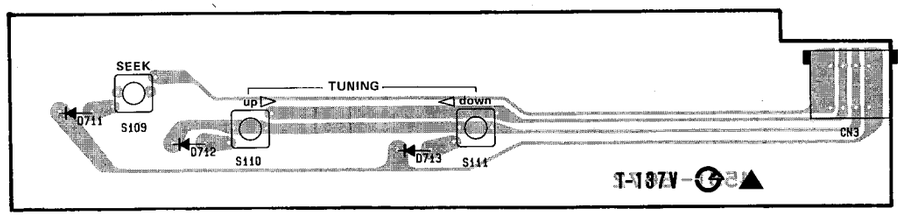
PCB-13 Preset Switches P.C. Board



PCB-15 Antenna Terminal P.C. Board



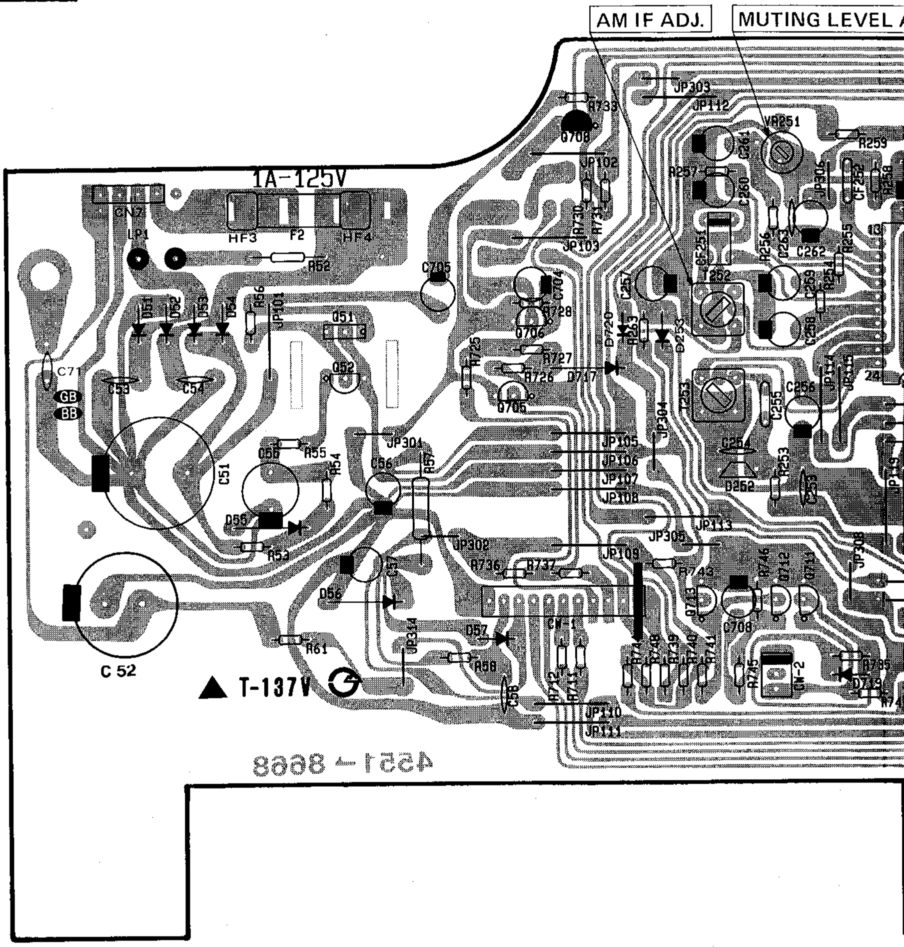
PCB-14 Tuning Up/Down P.C. Board



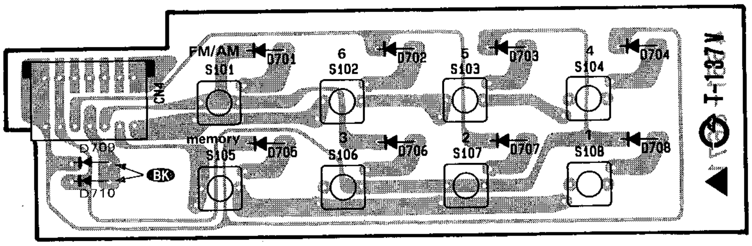
A	B	C	D	E

P.C. BOARDS (3)

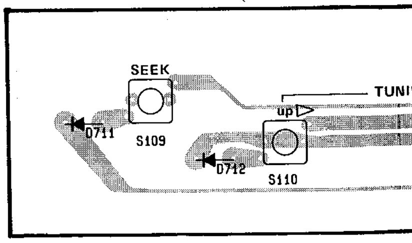
PCB-10 Tuner P.C. Board



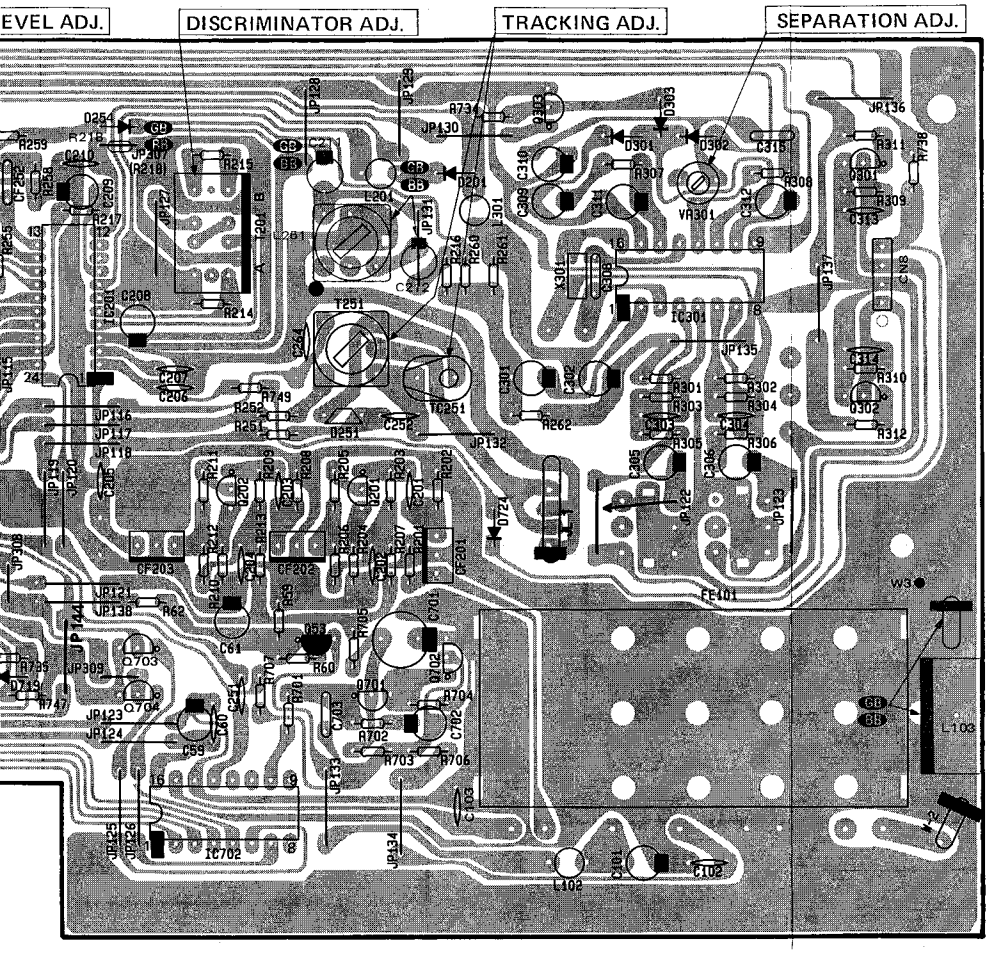
PCB-13 Preset Switches P.C. Board



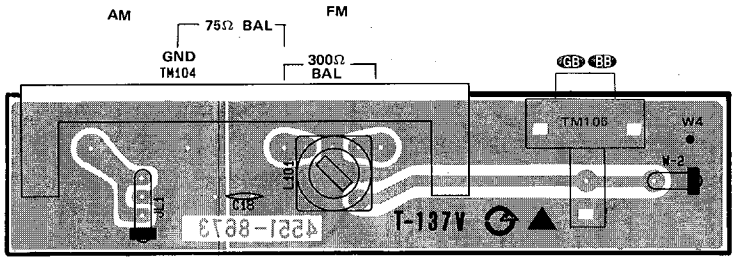
PCB-14 Tuning Up/Down P.C. Board



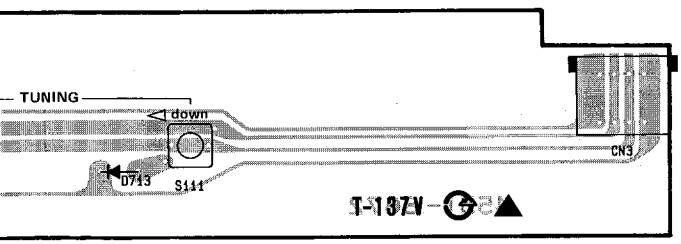
	F	G	H	I	J



PCB-15 Antenna Terminal P.C. Board



rd



WIRING DIAGRAM

WIRE COLOR ABBREVIATIONS

RED: Red	YEL: Yellow
ORG: Orange	PUP: Purple
BLU: Blue	PIK: Pink
WHT: White	GRY: Gray
GRN: Green	BRN: Brown
BLK: Black	

PCB-12 Power Trans P.C. Board

LCN112 LCN114 LCN113

RED BLK RED

T1 POWER

WHT TM2 TM1

P1 AC120V 60Hz

JL2

CABINET BACK

LUG1

BLK

PCB-15 Antenna Terminal P.C. Board

WHT

PCB-10 Tuner P.C. Board

CN7 CN8 WHT

JL1 WHT

BLK BLK BLK

General and Australia models

LCN112 A

LCN114 B

LCN113 C

JL114 D

W3 E

LP1

PCB-11 Indicator P.C. Board

RED BLK CN102 CN101 CN2 CN1

PCB-13 Preset Switches P.C. Board

CN4

PCB-14 Tuning Up/Down P.C. Board

CN3

RED BRN RED

W101 W102 W103

LCN112 LCN114 LCN113

RED BLK RED

S201 VOLTAGE SELECTOR

R94 R93 R92 R91

T1 POWER

BLU TM2

BRN TM1

JL2 WHT

CABINET BACK

LUG2

P1 AC220/240V 50/60Hz

General and Australia models

PCB-12 Power Trans P.C. Board

WIRING DIAGRAM

WIRE COLOR ABBREVIATIONS

RED: Red	YEL: Yellow
ORG: Orange	PUP: Purple
BLU: Blue	PIK: Pink
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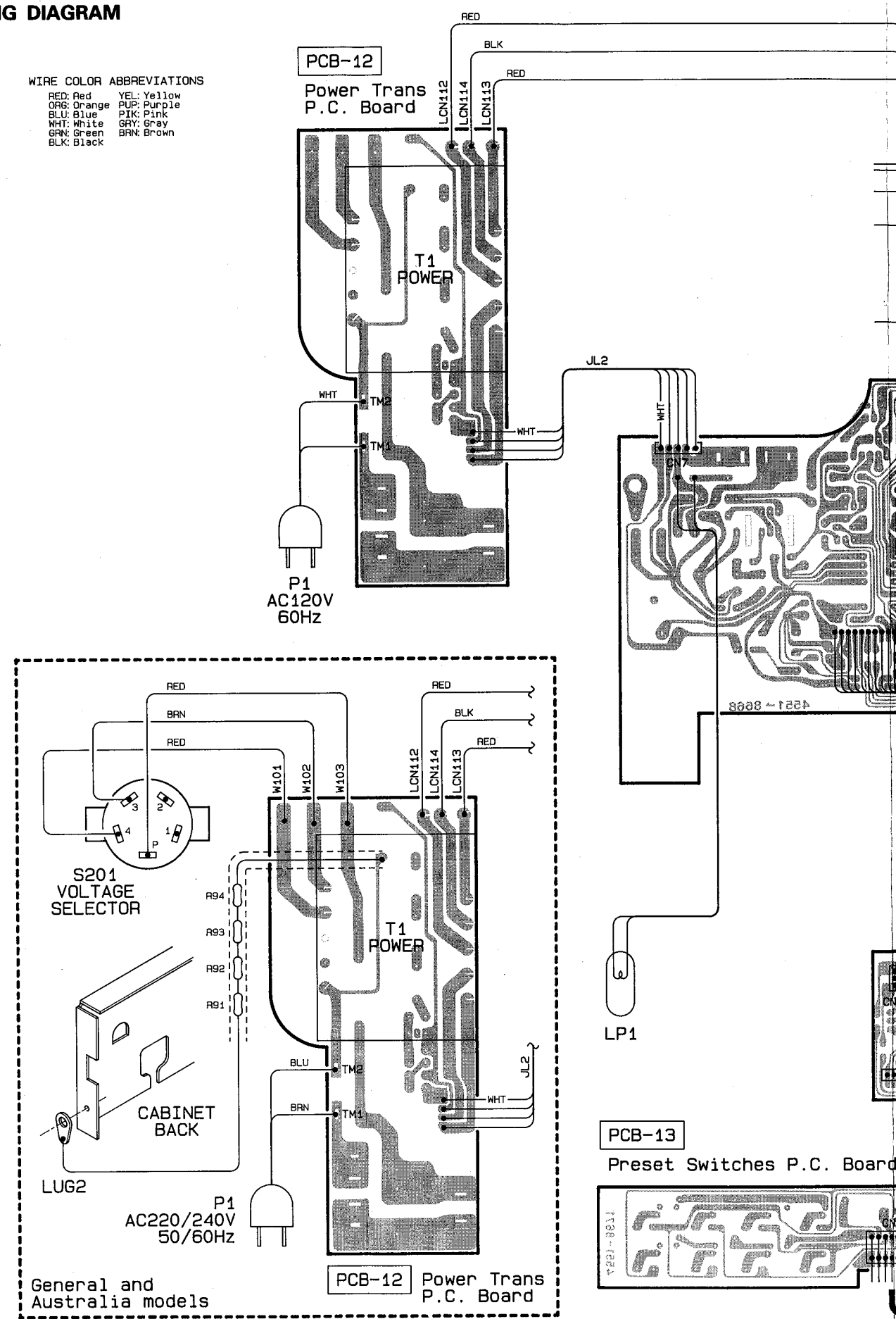
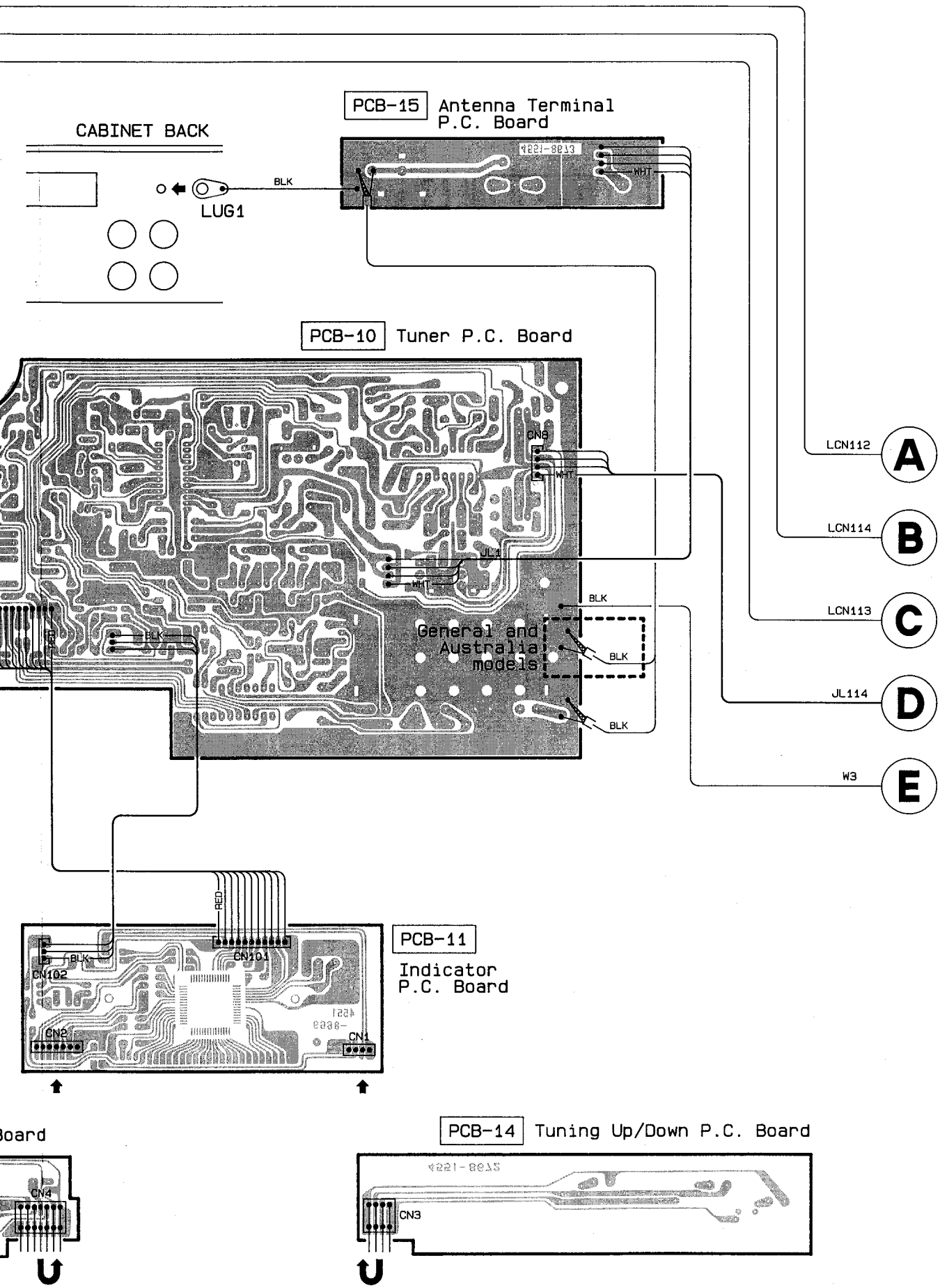


F G H I J


PCB-15 Antenna Terminal P.C. Board
CABINET BACK
BLK
LUG1
WHT
PCB-10 Tuner P.C. Board
CN8
WHT
JL1
BLK
BLK
BLK
BLK
General and Australia models
LCN112
LCN114
LCN113
JL114
W3
A
B
C
D
E
RED
BLK
CN102
CN101
CN2
CN1
PCB-11
Indicator P.C. Board
Board
CN4
PCB-14 Tuning Up/Down P.C. Board
CN3

WIRING DIAGRAM

PCB-6 Speaker Terminal P.C. Board

PCB-8 Jack P.C. Board

PCB-9 Equalizer P.C. Board

PCB-1 Main P.C. Board

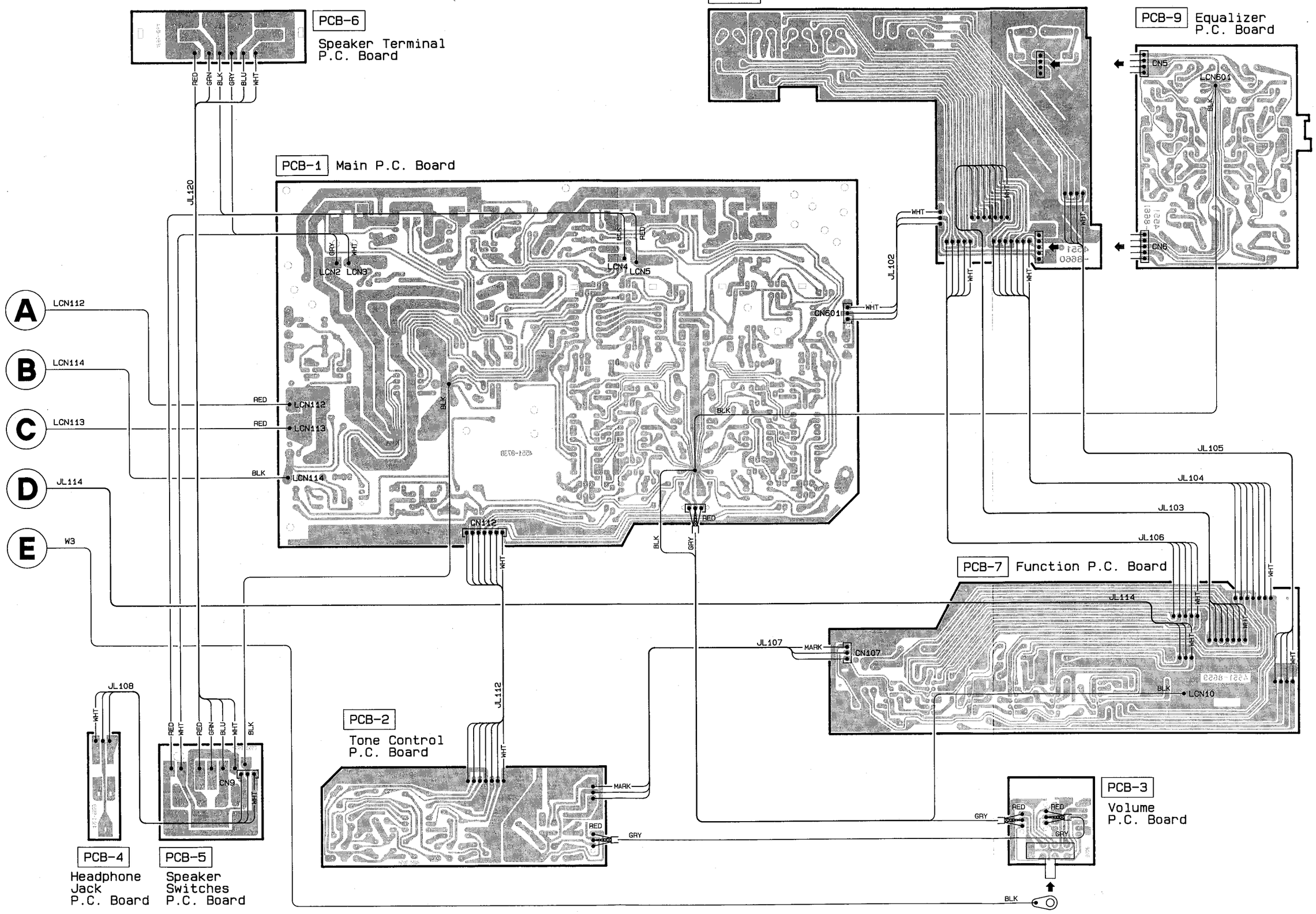
PCB-2 Tone Control P.C. Board

PCB-3 Volume P.C. Board

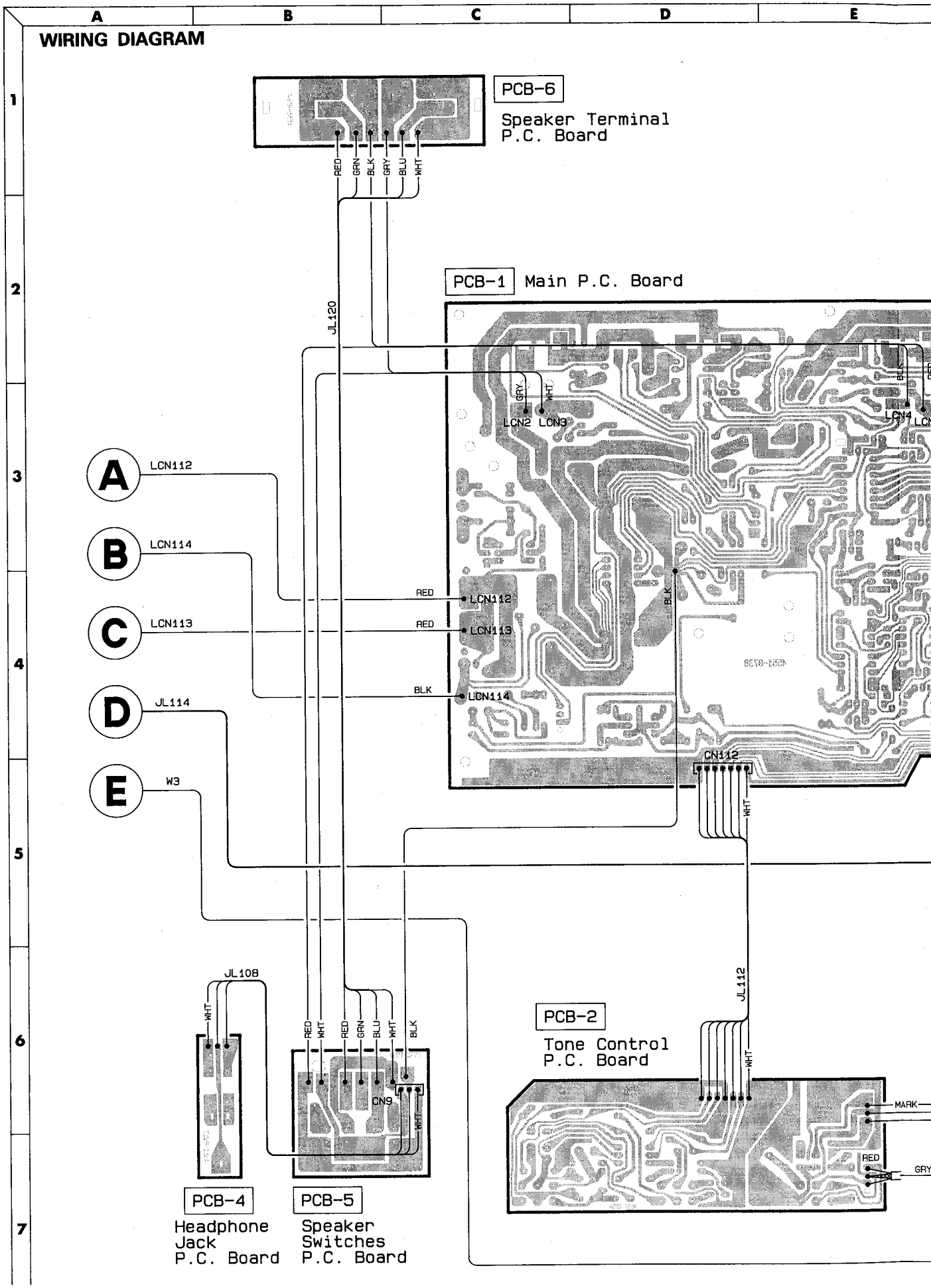
PCB-4 Headphone Jack P.C. Board

PCB-5 Speaker Switches P.C. Board

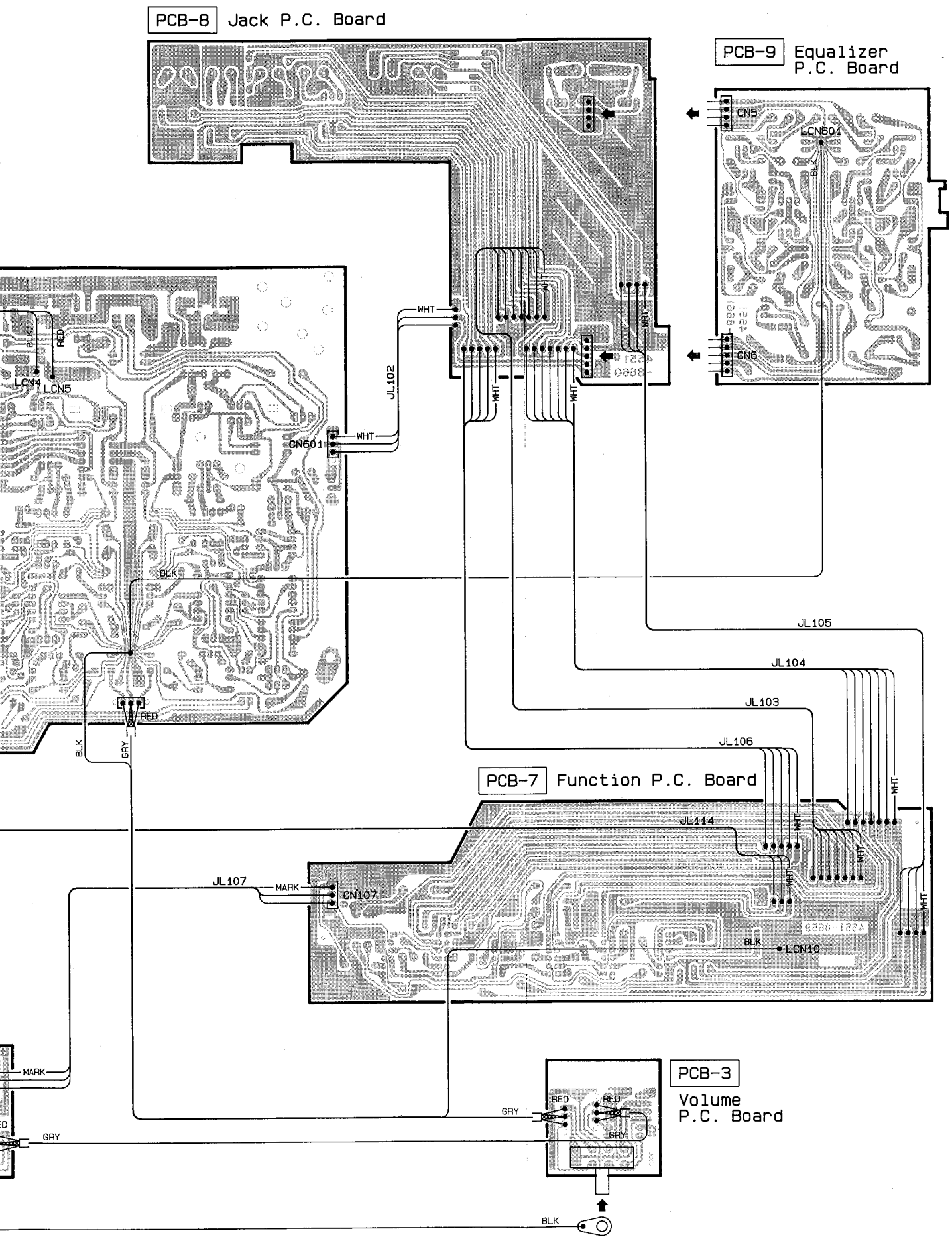
PCB-7 Function P.C. Board



WIRING DIAGRAM



F G H I J


PCB-8 Jack P.C. Board
PCB-9 Equalizer P.C. Board
CN5
LCN601
BLK
CN6
WHT
JL102
LCN4
LCN5
BLK
RED
CN601
JL105
JL104
JL103
JL106
RED
BLK
GRY
PCB-7 Function P.C. Board
JL114
JL107
MARK
CN107
BLK
LCN10
MARK
GRY
RED
RED
GRY
PCB-3
Volume
P.C. Board
BLK

ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
PCB-1 MAIN P.C. BOARD			
		CAPACITORS	
812	C2	5345-106F041	CAP, MINI ELE 10 μ/50V
839	C3	5362-103048	CAP, CER .01 μ
839	C4	5362-103048	CAP, CER .01 μ
837	C5	5341-478W0955	CAP, ELE 4700 μ BK
837B	C5	5341-S17FM478	CAP, ELE 4700 μ GB BB
837	C6	5341-478W0955	CAP, ELE 4700 μ BK
837B	C6	5341-S17FM478	CAP, ELE 4700 μ GB BB
810	C7	5345-105F041	CAP, MINI ELE 1 μ/50V
811	C8	5345-107B041	CAP, MINI ELE 100 μ/10V
813	C15	5354-683J1HM	CAP, MYL .068 μ
813	C16	5354-683J1HM	CAP, MYL .068 μ
814	C17	5354-473J1HM	CAP, MYL .047 μ
046B	C35	5352-1041957	CAP, MYL .1 μ GB BB
731	C401	5345-107B0951	CAP, MINI ELE 100 μ/10V
731	C402	5345-107B0951	CAP, MINI ELE 100 μ/10V
733	C403	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C404	5345-106F041	CAP, MINI ELE 10 μ/50V
732	C405	5345-227A0951	CAP, MINI ELE 220 μ/6.3V
732	C406	5345-227A0951	CAP, MINI ELE 220 μ/6.3V
742	C407	5353-020934	CAP, MCA 2p BK
742B	C407	5353-040934	CAP, MCA 4p GB BB
742	C408	5353-020934	CAP, MCA 2p BK
742B	C408	5353-040934	CAP, MCA 4p GB BB
740	C409	5359-1015851	CAP, PPP 100p
740	C410	5359-1015851	CAP, PPP 100p
733	C411	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C412	5345-106F041	CAP, MINI ELE 10 μ/50V
745	C413	5354-683J1HM	CAP, MYL .068 μ
745	C414	5354-683J1HM	CAP, MYL .068 μ
745	C415	5354-683J1HM	CAP, MYL .068 μ
745	C416	5354-683J1HM	CAP, MYL .068 μ
733	C417	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C418	5345-106F041	CAP, MINI ELE 10 μ/50V
734	C421	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C422	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C423	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C424	5345-227F041	CAP, MINI ELE 220 μ/50V
047B	C425	5353-040934	CAP, MCA 4p GB BB
047B	C426	5353-040934	CAP, MCA 4p GB BB
740	C475	5359-1015851	CAP, PPP 100p
740	C476	5359-1015851	CAP, PPP 100p
		RESISTORS	
818	R6	5135-103522	RES, CBN 1/2P 10K
820	R9	5135-472522	RES, CBN 1/2P 4.7K
820	R10	5135-472522	RES, CBN 1/2P 4.7K
817	R11	5135-682522	RES, CBN 1/2P 6.8K
819	R12	5135-104522	RES, CBN 1/2P 100K
825	R13	5135-683522	RES, CBN 1/2P 68K
826	R14	5135-333522	RES, CBN 1/2P 33K
822	R15	5135-223522	RES, CBN 1/2P 22K
822	R16	5135-223522	RES, CBN 1/2P 22K
824	R17	5135-332522	RES, CBN 1/2P 3.3K
824	R18	5135-332522	RES, CBN 1/2P 3.3K
823	R19	5135-821522	RES, CBN 1/2P 820
823	R20	5135-821522	RES, CBN 1/2P 820
824	R21	5135-332522	RES, CBN 1/2P 3.3K
824	R22	5135-332522	RES, CBN 1/2P 3.3K
820	R23	5135-472522	RES, CBN 1/2P 4.7K
820	R24	5135-472522	RES, CBN 1/2P 4.7K
821	R25	5135-473522	RES, CBN 1/2P 47K
822	R26	5135-223522	RES, CBN 1/2P 22K
821	R28	5135-473522	RES, CBN 1/2P 47K
816	R30	5135-562522	RES, CBN 1/2P 5.6K
816	R31	5135-562522	RES, CBN 1/2P 5.6K
816	R32	5135-562522	RES, CBN 1/2P 5.6K
753	R401	5135-102522	RES, CBN 1/2P 1K
753	R402	5135-102522	RES, CBN 1/2P 1K
754	R403	5135-683522	RES, CBN 1/2P 68K
754	R404	5135-683522	RES, CBN 1/2P 68K
755	R405	5135-122522	RES, CBN 1/2P 1.2K
755	R406	5135-122522	RES, CBN 1/2P 1.2K
755	R407	5135-122522	RES, CBN 1/2P 1.2K
755	R408	5135-122522	RES, CBN 1/2P 1.2K
756	R409	5135-682522	RES, CBN 1/2P 6.8K
756	R410	5135-682522	RES, CBN 1/2P 6.8K
757	R411	5135-680522	RES, CBN 1/2P 68
757	R412	5135-680522	RES, CBN 1/2P 68
757	R413	5135-680522	RES, CBN 1/2P 68
757	R414	5135-680522	RES, CBN 1/2P 68
773	R415	5135-222522	RES, CBN 1/2P 2.2K
773	R416	5135-222522	RES, CBN 1/2P 2.2K
759	R417	5135-561522	RES, CBN 1/2P 560
759	R418	5135-561522	RES, CBN 1/2P 560
754	R419	5135-683522	RES, CBN 1/2P 68K
754	R420	5135-683522	RES, CBN 1/2P 68K
788	⚠R421	5102-3315116	RES, FUSE 330
788	⚠R422	5102-3315116	RES, FUSE 330
788	⚠R423	5102-3315116	RES, FUSE 330
788	⚠R424	5102-3315116	RES, FUSE 330
760	R425	5135-473522	RES, CBN 1/2P 47K
760	R426	5135-473522	RES, CBN 1/2P 47K
760	R427	5135-473522	RES, CBN 1/2P 47K
760	R428	5135-473522	RES, CBN 1/2P 47K
761	R429	5135-224522	RES, CBN 1/2P 220K
761	R430	5135-224522	RES, CBN 1/2P 220K
782	R431	5174-151381	RES, MTL 1/4 150
782	R432	5174-151381	RES, MTL 1/4 150
762	R433	5135-272522	RES, CBN 1/2P 2.7K
762	R434	5135-272522	RES, CBN 1/2P 2.7K
763	R435	5135-223522	RES, CBN 1/2P 22K
763	R436	5135-223522	RES, CBN 1/2P 22K
763	R437	5135-223522	RES, CBN 1/2P 22K
763	R438	5135-223522	RES, CBN 1/2P 22K
774	R439	5135-153522	RES, CBN 1/2P 15K
774	R440	5135-153522	RES, CBN 1/2P 15K
764	R441	5135-123522	RES, CBN 1/2P 12K
764	R442	5135-123522	RES, CBN 1/2P 12K
783	R443	5174-222381	RES, MTL 1/4 2.2K
783	R444	5174-222381	RES, MTL 1/4 2.2K
783	R445	5174-222381	RES, MTL 1/4 2.2K
783	R446	5174-222381	RES, MTL 1/4 2.2K
786	⚠R447	5102-4705116	RES, FUSE 47
786	⚠R448	5102-4705116	RES, FUSE 47
786	⚠R449	5102-4705116	RES, FUSE 47
786	⚠R450	5102-4705116	RES, FUSE 47
765	R455	5135-821522	RES, CBN 1/2P 820
765	R456	5135-821522	RES, CBN 1/2P 820
765	R457	5135-821522	RES, CBN 1/2P 820
765	R458	5135-821522	RES, CBN 1/2P 820
775	R459	5135-183522	RES, CBN 1/2P 18K
775	R460	5135-183522	RES, CBN 1/2P 18K
775	R461	5135-183522	RES, CBN 1/2P 18K
775	R462	5135-183522	RES, CBN 1/2P 18K
767	R463	5135-100522	RES, CBN 1/2P 10
767	R464	5135-100522	RES, CBN 1/2P 10
767	R465	5135-100522	RES, CBN 1/2P 10
767	R466	5135-100522	RES, CBN 1/2P 10
787	⚠R467	5102-1005116	RES, FUSE 10
787	⚠R468	5102-1005116	RES, FUSE 10
787	⚠R469	5102-1005116	RES, FUSE 10
787	⚠R470	5102-1005116	RES, FUSE 10
789	R471	5273-R27672	RES, CEM 3P .27
789	R472	5273-R27672	RES, CEM 3P .27
755	R475	5135-122522	RES, CBN 1/2P 1.2K
755	R476	5135-122522	RES, CBN 1/2P 1.2K
766	R483	5135-820522	RES, CBN 1/2P 82
766	R484	5135-820522	RES, CBN 1/2P 82
789	R489	5273-R27672	RES, CEM 3P .27
789	R490	5273-R27672	RES, CEM 3P .27
776	R491	5135-4R7522	RES, CBN 1/2P 4.7
776	R492	5135-4R7522	RES, CBN 1/2P 4.7
776	R493	5135-4R7522	RES, CBN 1/2P 4.7
776	R494	5135-4R7522	RES, CBN 1/2P 4.7
767	R495	5135-100522	RES, CBN 1/2P 10
767	R496	5135-100522	RES, CBN 1/2P 10
757	R499	5135-680522	RES, CBN 1/2P 68
757	R500	5135-680522	RES, CBN 1/2P 68
		TRANSISTORS	
802	Q1	5611-1115 (F) or (E)	XISTOR, PNP R
801	Q2	5613-2603 (F) or (E)	XISTOR, NPN R
803	Q3	5611-970 (BL)	XISTOR, PNP R
803	Q4	5611-970 (BL)	XISTOR, PNP R
805	Q5	5611-1115 (E) or (F)	XISTOR, PNP R
805	Q6	5611-1115 (E) or (F)	XISTOR, PNP R
804	Q7	5613-2603 (E) or (F)	XISTOR, NPN R
711	Q401	5613-1775 (F)	XISTOR, NPN R
711	Q402	5613-1775 (F)	XISTOR, NPN R
711	Q403	5613-1775 (F)	XISTOR, NPN R
711	Q404	5613-1775 (F)	XISTOR, NPN R
712	Q405	5613-2320L (F)	XISTOR, NPN R
712	Q406	5613-2320L (F)	XISTOR, NPN R
712	Q407	5613-2320L (F)	XISTOR, NPN R
712	Q408	5613-2320L (F)	XISTOR, NPN R
713	Q409	5611-970 (BL)	XISTOR, PNP R
713	Q410	5611-970 (BL)	XISTOR, PNP R
723	Q411	5613-2240 (BL)	XISTOR, NPN R
723	Q412	5613-2240 (BL)	XISTOR, NPN R
723	Q413	5613-2240 (BL)	XISTOR, NPN R
723	Q414	5613-2240 (BL)	XISTOR, NPN R
713	Q415	5611-970 (BL)	XISTOR, PNP R
713	Q416	5611-970 (BL)	XISTOR, PNP R
714	Q417	5612-646A (C)	XISTOR, PNP A
714	Q418	5612-646A (C)	XISTOR, PNP A
715	Q419	5614-666A (C)	XISTOR, NPN A
715	Q420	5614-666A (C)	XISTOR, NPN A
716	Q425	5613-945 (K) or (P)	XISTOR, NPN R
716	Q426	5613-945 (K) or (P)	XISTOR, NPN R
717	Q427	5614-667A (C)	XISTOR, NPN A
717	Q428	5614-667A (C)	XISTOR, NPN A
718	Q429	5612-647A (C)	XISTOR, PNP A
718	Q430	5612-647A (C)	XISTOR, PNP A
719	Q431	5613-3180 (O)	XISTOR, NPN R
719	Q432	5613-3180 (O)	XISTOR, NPN R
721	Q433	5611-1263 (O)	XISTOR, PNP R
721	Q434	5611-1263 (O)	XISTOR, PNP R
		DIODES	
831	⚠D1	5632-ERC402FL	DIODE, RECT
831	⚠D2	5632-ERC402FL	DIODE, RECT
831	⚠D3	5632-ERC402FL	DIODE, RECT
831	⚠D4	5632-ERC402FL	DIODE, RECT
806	D5	5636-1S2471	DIODE, SWITCH
806	D6	5636-1S2471	DIODE, SWITCH
807	D11	5635-HZ6B1L	DIODE, ZENER
729	D401	5641-MV12YM	VARISTOR
729	D402	5641-MV12YM	VARISTOR
725	D407	5636-1S2471	DIODE, SWITCH
725	D408	5636-1S2471	DIODE, SWITCH
726	D409	5635-HZ12B2L	DIODE, ZENER
726	D410	5635-HZ12B2L	DIODE, ZENER
		COILS	
794	L405	5991-7165	SPRING COIL
794	L406	5991-7165	SPRING COIL
		CONTROLS	
791	VR401	5101-50171920	RES, SEMI FIX 500
791	VR402	5101-50171920	RES, SEMI FIX 500
		MISCELLANEOUS	
799	CN112	4443-070185	CONNECTOR
849	CN601	4443-030185	CONNECTOR
912	JL110	4242-R0103181	JUMPER LEAD
843	TM102	4214-11013	TERMINAL
891	TM102	4214-11013	TERMINAL
844	TM103	4214-11023	TERMINAL
892	TM103	4214-11023	TERMINAL
796	TM110	4214-11013	TERMINAL
897	LCN2	4163-0140026	CONNECTOR W/W
898	LCN3	4163-0140027	CONNECTOR W/W
899	LCN4	4163-0140024	CONNECTOR W/W
900	LCN5	4163-0140025	CONNECTOR W/W
901	LCN6	4163-0110024	CONNECTOR W/W
901	LCN7	4163-0110024	CONNECTOR W/W
909	LCN8	4163-0112024	CONNECTOR W/W
903	LCN9	4163-0110024	CONNECTOR W/W
905	LCN112	4163-0130025	CONNECTOR W/W
905	LCN113	4163-0130025	CONNECTOR W/W
906	LCN114	4163-0130024	CONNECTOR W/W
PCB-2 TONE CONTROL P.C. BOARD			
		CAPACITORS	
735	C505	5345-225F0951	CAP, MINI ELE 2.2 μ/50V
735	C506	5345-225F0951	CAP, MINI ELE 2.2 μ/50V
746	C507	5354-273J1HM	CAP, MYL .027 μ
746	C508	5354-273J1HM	CAP, MYL .027 μ
749	C509	5354-154593	CAP, MYL .15 μ
749	C510	5354-154593	CAP, MYL .15 μ
736	C511	5345-106C0951	CAP, MINI ELE 10 μ/16V
736	C512	5345-106C0951	CAP, MINI ELE 10 μ/16V
747	C513	5354-682J1HM	CAP, MYL 6800p
747	C514	5354-682J1HM	CAP, MYL 6800p
748	C515	5354-393J1HM	CAP, MYL .039 μ
748	C516	5354-393J1HM	CAP, MYL .039 μ
741	C517	5359-2715851	CAP, PPP 270p
741	C518	5359-2715851	CAP, PPP 270p
		RESISTORS	
771	R501	5135-152522	RES, CBN 1/2P 1.5K
771	R502	5135-152522	RES, CBN 1/2P 1.5K
769	R505	5135-683522	RES, CBN 1/2P 68K
769	R506	5135-683522	RES, CBN 1/2P 68K
768	R507	5135-153522	RES, CBN 1/2P 15K
768	R508	5135-153522	RES, CBN 1/2P 15K
770	R509	5135-272522	RES, CBN 1/2P 2.7K
770	R510	5135-272522	RES, CBN 1/2P 2.7K
772	R513	5135-681522	RES, CBN 1/2P 680
772	R514	5135-681522	RES, CBN 1/2P 680
		CONTROLS	
870	VR501	5113-50346122	RES, V CBN 16 50K
870	VR502	5113-50346122	RES, V CBN 16 50K
864	VR505	5113-10447122	RES, V CBN 16 100K
864	VR506	5113-10447122	RES, V CBN 16 100K
867	VR507	5113-50348122	RES, V CBN 16 50K
867	VR508	5113-50348122	RES, V CBN 16 50K
		MISCELLANEOUS	
914	JL107	4242-R0203600	JUMPER LEAD
910	JL112	4242-R0207800	JUMPER LEAD
PCB-3 VOLUME P.C. BOARD			
		RESISTORS	
778	R577	5135-472522	RES, CBN 1/2P 4.7K
778	R578	5135-472522	RES, CBN 1/2P 4.7K
		CONTROLS	
861	VR503	5113-10419122	RES, V CBN 16 100K
861	VR504	5113-10419122	RES, V CBN 16 100K
PCB-4 HEADPHONE JACK P.C. BOARD			
		RESISTORS	
777	R497	5135-471522	RES, CBN 1/2P 470
777	R498	5135-471522	RES, CBN 1/2P 470
		MISCELLANEOUS	
886	J1	4451-00159	JACK, 1P
927	CN9	4443-030185	CONNECTOR
PCB-5 SPEAKER SWITCHES P.C. BOARD			
		MISCELLANEOUS	
879	S9	4431-S0303204	SWITCH, PUSH
915	JL108	4242-R0203121	JUMPER LEAD

ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
		PCB-1 MAIN P.C. BOARD	
		CAPACITORS	
812	C2	5345-106F041	CAP, MINI ELE 10 μ/50V
839	C3	5362-103048	CAP, CER .01 μ
839	C4	5362-103048	CAP, CER .01 μ
837	C5	5341-478W0955	CAP, ELE 4700 μ BK
837B	C5	5341-S17FM478	CAP, ELE 4700 μ GB BB
837	C6	5341-478W0955	CAP, ELE 4700 μ BK
837B	C6	5341-S17FM478	CAP, ELE 4700 μ GB BB
810	C7	5345-105F041	CAP, MINI ELE 1 μ/50V
811	C8	5345-107B041	CAP, MINI ELE 100 μ/10V
813	C15	5354-683J1HM	CAP, MYL .068 μ
813	C16	5354-683J1HM	CAP, MYL .068 μ
814	C17	5354-473J1HM	CAP, MYL .047 μ
046B	C35	5352-1041957	CAP, MYL .1 μ GB BB
731	C401	5345-107B0951	CAP, MINI ELE 100 μ/10V
731	C402	5345-107B0951	CAP, MINI ELE 100 μ/10V
733	C403	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C404	5345-106F041	CAP, MINI ELE 10 μ/50V
732	C405	5345-227A0951	CAP, MINI ELE 220 μ/6.3V
732	C406	5345-227A0951	CAP, MINI ELE 220 μ/6.3V
742	C407	5353-020934	CAP, MCA 2p BK
742B	C407	5353-040934	CAP, MCA 4p GB BB
742	C408	5353-020934	CAP, MCA 2p BK
742B	C408	5353-040934	CAP, MCA 4p GB BB
740	C409	5359-1015851	CAP, PPP 100p
740	C410	5359-1015851	CAP, PPP 100p
733	C411	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C412	5345-106F041	CAP, MINI ELE 10 μ/50V
745	C413	5354-683J1HM	CAP, MYL .068 μ
745	C414	5354-683J1HM	CAP, MYL .068 μ
745	C415	5354-683J1HM	CAP, MYL .068 μ
745	C416	5354-683J1HM	CAP, MYL .068 μ
733	C417	5345-106F041	CAP, MINI ELE 10 μ/50V
733	C418	5345-106F041	CAP, MINI ELE 10 μ/50V
734	C421	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C422	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C423	5345-227F041	CAP, MINI ELE 220 μ/50V
734	C424	5345-227F041	CAP, MINI ELE 220 μ/50V
047B	C425	5353-040934	CAP, MCA 4p GB BB
047B	C426	5353-040934	CAP, MCA 4p GB BB
740	C475	5359-1015851	CAP, PPP 100p
740	C476	5359-1015851	CAP, PPP 100p
		RESISTORS	
818	R6	5135-103522	RES, CBN 1/2P 10K
820	R9	5135-472522	RES, CBN 1/2P 4.7K
820	R10	5135-472522	RES, CBN 1/2P 4.7K
817	R11	5135-682522	RES, CBN 1/2P 6.8K
819	R12	5135-104522	RES, CBN 1/2P 100K
825	R13	5135-683522	RES, CBN 1/2P 68K
826	R14	5135-333522	RES, CBN 1/2P 33K
822	R15	5135-223522	RES, CBN 1/2P 22K
822	R16	5135-223522	RES, CBN 1/2P 22K
824	R17	5135-332522	RES, CBN 1/2P 3.3K
824	R18	5135-332522	RES, CBN 1/2P 3.3K
823	R19	5135-821522	RES, CBN 1/2P 820
823	R20	5135-821522	RES, CBN 1/2P 820
824	R21	5135-332522	RES, CBN 1/2P 3.3K
824	R22	5135-332522	RES, CBN 1/2P 3.3K
820	R23	5135-472522	RES, CBN 1/2P 4.7K
820	R24	5135-472522	RES, CBN 1/2P 4.7K
821	R25	5135-473522	RES, CBN 1/2P 47K
822	R26	5135-223522	RES, CBN 1/2P 22K
821	R28	5135-473522	RES, CBN 1/2P 47K
816	R30	5135-562522	RES, CBN 1/2P 5.6K
816	R31	5135-562522	RES, CBN 1/2P 5.6K
816	R32	5135-562522	RES, CBN 1/2P 5.6K
753	R401	5135-102522	RES, CBN 1/2P 1K
753	R402	5135-102522	RES, CBN 1/2P 1K
754	R403	5135-683522	RES, CBN 1/2P 68K
754	R404	5135-683522	RES, CBN 1/2P 68K
755	R405	5135-122522	RES, CBN 1/2P 1.2K
755	R406	5135-122522	RES, CBN 1/2P 1.2K
755	R407	5135-122522	RES, CBN 1/2P 1.2K
755	R408	5135-122522	RES, CBN 1/2P 1.2K
756	R409	5135-682522	RES, CBN 1/2P 6.8K
756	R410	5135-682522	RES, CBN 1/2P 6.8K
757	R411	5135-680522	RES, CBN 1/2P 68
757	R412	5135-680522	RES, CBN 1/2P 68
757	R413	5135-680522	RES, CBN 1/2P 68
757	R414	5135-680522	RES, CBN 1/2P 68
773	R415	5135-222522	RES, CBN 1/2P 2.2K
773	R416	5135-222522	RES, CBN 1/2P 2.2K
759	R417	5135-561522	RES, CBN 1/2P 560
759	R418	5135-561522	RES, CBN 1/2P 560
754	R419	5135-683522	RES, CBN 1/2P 68K
754	R420	5135-683522	RES, CBN 1/2P 68K
788	⚠R421	5102-3315116	RES, FUSE 330
788	⚠R422	5102-3315116	RES, FUSE 330
788	⚠R423	5102-3315116	RES, FUSE 330
788	⚠R424	5102-3315116	RES, FUSE 330
760	R425	5135-473522	RES, CBN 1/2P 47K
760	R426	5135-473522	RES, CBN 1/2P 47K
760	R427	5135-473522	RES, CBN 1/2P 47K
760	R428	5135-473522	RES, CBN 1/2P 47K
761	R429	5135-224522	RES, CBN 1/2P 220K
761	R430	5135-224522	RES, CBN 1/2P 220K
782	R431	5174-151381	RES, MTL 1/4 150
782	R432	5174-151381	RES, MTL 1/4 150
762	R433	5135-272522	RES, CBN 1/2P 2.7K
762	R434	5135-272522	RES, CBN 1/2P 2.7K
763	R435	5135-223522	RES, CBN 1/2P 22K
763	R436	5135-223522	RES, CBN 1/2P 22K
763	R437	5135-223522	RES, CBN 1/2P 22K
763	R438	5135-223522	RES, CBN 1/2P 22K
774	R439	5135-153522	RES, CBN 1/2P 15K
774	R440	5135-153522	RES, CBN 1/2P 15K
764	R441	5135-123522	RES, CBN 1/2P 12K
764	R442	5135-123522	RES, CBN 1/2P 12K
783	R443	5174-222381	RES, MTL 1/4 2.2K
783	R444	5174-222381	RES, MTL 1/4 2.2K
783	R445	5174-222381	RES, MTL 1/4 2.2K
783	R446	5174-222381	RES, MTL 1/4 2.2K
786	⚠R447	5102-4705116	RES, FUSE 47
786	⚠R448	5102-4705116	RES, FUSE 47
786	⚠R449	5102-4705116	RES, FUSE 47
786	⚠R450	5102-4705116	RES, FUSE 47
765	R455	5135-821522	RES, CBN 1/2P 820
765	R456	5135-821522	RES, CBN 1/2P 820
765	R457	5135-821522	RES, CBN 1/2P 820
765	R458	5135-821522	RES, CBN 1/2P 820
775	R459	5135-183522	RES, CBN 1/2P 18K
775	R460	5135-183522	RES, CBN 1/2P 18K
775	R461	5135-183522	RES, CBN 1/2P 18K
775	R462	5135-183522	RES, CBN 1/2P 18K
767	R463	5135-100522	RES, CBN 1/2P 10
767	R464	5135-100522	RES, CBN 1/2P 10
767	R465	5135-100522	RES, CBN 1/2P 10
767	R466	5135-100522	RES, CBN 1/2P 10
787	⚠R467	5102-1005116	RES, FUSE 10
787	⚠R468	5102-1005116	RES, FUSE 10
787	⚠R469	5102-1005116	RES, FUSE 10
787	⚠R470	5102-1005116	RES, FUSE 10
789	R471	5273-R27672	RES, CEM 3P .27
789	R472	5273-R27672	RES, CEM 3P .27
755	R475	5135-122522	RES, CBN 1/2P 1.2K
755	R476	5135-122522	RES, CBN 1/2P 1.2K
766	R483	5135-820522	RES, CBN 1/2P 82
766	R484	5135-820522	RES, CBN 1/2P 82
789	R489	5273-R27672	RES, CEM 3P .27
789	R490	5273-R27672	RES, CEM 3P .27
776	R491	5135-4R7522	RES, CBN 1/2P 4.7
776	R492	5135-4R7522	RES, CBN 1/2P 4.7
776	R493	5135-4R7522	RES, CBN 1/2P 4.7
776	R494	5135-4R7522	RES, CBN 1/2P 4.7
767	R495	5135-100522	RES, CBN 1/2P 10
767	R496	5135-100522	RES, CBN 1/2P 10
757	R499	5135-680522	RES, CBN 1/2P 68

Ser. No.	Ref. No.	Part No.	Description
757	R500	5135-680522	RES, CBN 1/2P 68
		TRANSISTORS	
802	Q1	5611-1115 (F) or (E)	XISTOR, PNP R
801	Q2	5613-2603 (F) or (E)	XISTOR, NPN R
803	Q3	5611-970 (BL)	XISTOR, PNP R
803	Q4	5611-970 (BL)	XISTOR, PNP R
805	Q5	5611-1115 (E) or (F)	XISTOR, PNP R
805	Q6	5611-1115 (E) or (F)	XISTOR, PNP R
804	Q7	5613-2603 (E) or (F)	XISTOR, NPN R
711	Q401	5613-1775 (F)	XISTOR, NPN R
711	Q402	5613-1775 (F)	XISTOR, NPN R
711	Q403	5613-1775 (F)	XISTOR, NPN R
711	Q404	5613-1775 (F)	XISTOR, NPN R
712	Q405	5613-2320L (F)	XISTOR, NPN R
712	Q406	5613-2320L (F)	XISTOR, NPN R
712	Q407	5613-2320L (F)	XISTOR, NPN R
712	Q408	5613-2320L (F)	XISTOR, NPN R
713	Q409	5611-970 (BL)	XISTOR, PNP R
713	Q410	5611-970 (BL)	XISTOR, PNP R
723	Q411	5613-2240 (BL)	XISTOR, NPN R
723	Q412	5613-2240 (BL)	XISTOR, NPN R
723	Q413	5613-2240 (BL)	XISTOR, NPN R
723	Q414	5613-2240 (BL)	XISTOR, NPN R
713	Q415	5611-970 (BL)	XISTOR, PNP R
713	Q416	5611-970 (BL)	XISTOR, PNP R
714	Q417	5612-646A (C)	XISTOR, PNP A
714	Q418	5612-646A (C)	XISTOR, PNP A
715	Q419	5614-666A (C)	XISTOR, NPN A
715	Q420	5614-666A (C)	XISTOR, NPN A
716	Q425	5613-945 (K) or (P)	XISTOR, NPN R
716	Q426	5613-945 (K) or (P)	XISTOR, NPN R
717	Q427	5614-667A (C)	XISTOR, NPN A
717	Q428	5614-667A (C)	XISTOR, NPN A
718	Q429	5612-647A (C)	XISTOR, PNP A
718	Q430	5612-647A (C)	XISTOR, PNP A
719	Q431	5613-3180 (O)	XISTOR, NPN R
719	Q432	5613-3180 (O)	XISTOR, NPN R
721	Q433	5611-1263 (O)	XISTOR, PNP R
721	Q434	5611-1263 (O)	XISTOR, PNP R
		DIODES	
831	⚠D1	5632-ERC402FL	DIODE, RECT
831	⚠D2	5632-ERC402FL	DIODE, RECT
831	⚠D3	5632-ERC402FL	DIODE, RECT
831	⚠D4	5632-ERC402FL	DIODE, RECT
806	D5	5636-1S2471	DIODE, SWITCH
806	D6	5636-1S2471	DIODE, SWITCH
807	D11	5635-HZ6B1L	DIODE, ZENER
729	D401	5641-MV12YM	VARISTOR
729	D402	5641-MV12YM	VARISTOR
725	D407	5636-1S2471	DIODE, SWITCH
725	D408	5636-1S2471	DIODE, SWITCH
726	D409	5635-HZ12B2L	DIODE, ZENER
726	D410	5635-HZ12B2L	DIODE, ZENER
		COILS	
794	L405	5991-7165	SPRING COIL
794	L406	5991-7165	SPRING COIL
		CONTROLS	
791	VR401	5101-50171920	RES, SEMI FIX 500
791	VR402	5101-50171920	RES, SEMI FIX 500
		MISCELLANEOUS	
799	CN112	4443-070185	CONNECTOR
849	CN601	4443-030185	CONNECTOR
912	JL110	4242-R0103181	JUMPER LEAD
843	TM102	4214-11013	TERMINAL
891	TM102	4214-11013	TERMINAL
844	TM103	4214-11023	TERMINAL
892	TM103	4214-11023	TERMINAL
796	TM110	4214-11013	TERMINAL
897	LCN2	4163-0140026	CONNECTOR W/W
898	LCN3	4163-0140027	CONNECTOR W/W
899	LCN4	4163-0140024	CONNECTOR W/W
900	LCN5	4163-0140025	CONNECTOR W/W
901	LCN6	4163-0110024	CONNECTOR W/W
901	LCN7	4163-0110024	CONNECTOR W/W
909	LCN8	4163-0112024	CONNECTOR W/W
903	LCN9	4163-0110024	CONNECTOR W/W
905	LCN112	4163-0130025	CONNECTOR W/W
905	LCN113	4163-0130025	CONNECTOR W/W
906	LCN114	4163-0130024	CONNECTOR W/W

PCB-2 TONE CONTROL P.C. BOARD

		CAPACITORS	
735	C505	5345-225F0951	CAP, MINI ELE 2.2 μ/50V
735	C506	5345-225F0951	CAP, MINI ELE 2.2 μ/50V
746	C507	5354-273J1HM	CAP, MYL .027 μ
746	C508	5354-273J1HM	CAP, MYL .027 μ
749	C509	5354-154593	CAP, MYL .15 μ
749	C510	5354-154593	CAP, MYL .15 μ
736	C511	5345-106C0951	CAP, MINI ELE 10 μ/16V
736	C512	5345-106C0951	CAP, MINI ELE 10 μ/16V
747	C513	5354-682J1HM	CAP, MYL 6800p
747	C514	5354-682J1HM	CAP, MYL 6800p
748	C515	5354-393J1HM	CAP, MYL .039 μ
748	C516	5354-393J1HM	CAP, MYL .039 μ
741	C517	5359-2715851	CAP, PPP 270p
741	C518	5359-2715851	CAP, PPP 270p
		RESISTORS	
771	R501	5135-152522	RES, CBN 1/2P 1.5K
771	R502	5135-152522	RES, CBN 1/2P 1.5K
769	R505	5135-683522	RES, CBN 1/2P 68K
769	R506	5135-683522	RES, CBN 1/2P 68K
768	R507	5135-153522	RES, CBN 1/2P 15K
768	R508	5135-153522	RES, CBN 1/2P 15K
770	R509	5135-272522	RES, CBN 1/2P 2.7K
770	R510	5135-272522	RES, CBN 1/2P 2.7K
772	R513	5135-681522	RES, CBN 1/2P 680
772	R514	5135-681522	RES, CBN 1/2P 680
		CONTROLS	
870	VR501	5113-50346122	RES, V CBN 16 50K
870	VR502	5113-50346122	RES, V CBN 16 50K
864	VR505	5113-10447122	RES, V CBN 16 100K
864	VR506	5113-10447122	RES, V CBN 16 100K
867	VR507	5113-50348122	RES, V CBN 16 50K
867	VR508	5113-50348122	RES, V CBN 16 50K
		MISCELLANEOUS	
914	JL107	4242-R0203600	JUMPER LEAD
910	JL112	4242-R0207800	JUMPER LEAD

PCB-3 VOLUME P.C. BOARD

		RESISTORS	
778	R577	5135-472522	RES, CBN 1/2P 4.7K
778	R578	5135-472522	RES, CBN 1/2P 4.7K
		CONTROLS	
861	VR503	5113-10419122	RES, V CBN 16 100K
861	VR504	5113-10419122	RES, V CBN 16 100K

PCB-4 HEADPHONE JACK P.C. BOARD

		RESISTORS	
777	R497	5135-471522	RES, CBN 1/2P 470
777	R498	5135-471522	RES, CBN 1/2P 470
		MISCELLANEOUS	
886	J1	4451-00159	JACK, 1P
927	CN9	4443-030185	CONNECTOR

PCB-5 SPEAKER SWITCHES P.C. BOARD

		MISCELLANEOUS	
879	S9	4431-S0303204	SWITCH, PUSH
915	JL108	4242-R0203121	JUMPER LEAD

Ser. No.	Ref. No.	Part No.	Description
PCB-6 SPEAKER TERMINAL P.C. BOARD			
		CAPACITORS	
058B	C21	5361-101KSL	CAP, CER 100p GB BB
058B	C22	5361-101KSL	CAP, CER 100p GB BB
059B	C23	5361-101KSL	CAP, CER 100p GB BB
059B	C24	5361-101KSL	CAP, CER 100p GB BB
		MISCELLANEOUS	
911	JL120	4242-043805	JUMPER LEAD
893	TM10	4214-165	TERMINAL
PCB-7 FUNCTION P.C. BOARD			
		CAPACITORS	
054B	C427	5359-1015851	CAP, PPP 100p GB BB
054B	C428	5359-1015851	CAP, PPP 100p GB BB
		MISCELLANEOUS	
873	S3	4431-S0507624	SWITCH, PUSH
850	CN107	4443-030185	CONNECTOR
918	JL103	4242-R0107181	JUMPER LEAD
919	JL104	4242-R0107161	JUMPER LEAD
922	JL105	4242-R0104201	JUMPER LEAD
920	JL106	4242-R0105161	JUMPER LEAD
921	JL114	4242-R0204101	JUMPER LEAD
904	LCN10	4163-0118020	CONNECTOR W/W
PCB-8 JACK P.C. BOARD			
		CAPACITORS	
048B	C631	5353-820534	CAP, MCA 82p GB BB
048B	C632	5353-820534	CAP, MCA 82p GB BB
		RESISTORS	
050B	R671	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R672	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R673	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R674	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R675	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R676	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R677	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R678	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R679	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R680	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R683	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R684	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R685	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R686	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R687	5135-102522	RES, CBN 1/2P 1K GB BB
050B	R688	5135-102522	RES, CBN 1/2P 1K GB BB
		MISCELLANEOUS	
887	J2	4482-0133	PIN JACK, 2P
888	J3	4484-46	PIN JACK, 4P
888	J4	4484-46	PIN JACK, 4P
888	J5	4484-46	PIN JACK, 4P
917	JL102	4242-R0203101	JUMPER LEAD
PCB-9 EQUALIZER P.C. BOARD			
		CAPACITORS	
665	C601	5345-106C0951	CAP, MINI ELE 10μ/16V
665	C602	5345-106C0951	CAP, MINI ELE 10μ/16V
670	C603	5359-1215851	CAP, PPP 120p
670	C604	5359-1215851	CAP, PPP 120p
664	C605	5345-227A0951	CAP, MINI ELE 220μ/6.3V
664	C606	5345-227A0951	CAP, MINI ELE 220μ/6.3V
671	C607	5359-5625851	CAP, PPP 5600p
671	C608	5359-5625851	CAP, PPP 5600p
672	C609	5359-2025851	CAP, PPP 2000p
672	C610	5359-2025851	CAP, PPP 2000p
665	C611	5345-106C0951	CAP, MINI ELE 10μ/16V
665	C612	5345-106C0951	CAP, MINI ELE 10μ/16V
667	C613	5345-107D041	CAP, MINI ELE 100μ/25V
666	C614	5345-227D041	CAP, MINI ELE 220μ/25V
666	C615	5345-227D041	CAP, MINI ELE 220μ/25V
667	C616	5345-107D041	CAP, MINI ELE 100μ/25V
673	C633	5359-2025851	CAP, PPP 2000p
673	C634	5359-2025851	CAP, PPP 2000p
676	C635	5353-030934	CAP, MCA 3p
676	C636	5353-030934	CAP, MCA 3p
		RESISTORS	
681	R601	5135-823522	RES, CBN 1/2P 82K
681	R602	5135-823522	RES, CBN 1/2P 82K
682	R603	5135-124522	RES, CBN 1/2P 120K
682	R604	5135-124522	RES, CBN 1/2P 120K
683	R605	5135-221522	RES, CBN 1/2P 220
683	R606	5135-221522	RES, CBN 1/2P 220
684	R607	5135-122522	RES, CBN 1/2P 1.2K
684	R608	5135-122522	RES, CBN 1/2P 1.2K
685	R609	5135-220522	RES, CBN 1/2P 22
685	R610	5135-220522	RES, CBN 1/2P 22
684	R611	5135-122522	RES, CBN 1/2P 1.2K
684	R612	5135-122522	RES, CBN 1/2P 1.2K
686	R613	5135-223522	RES, CBN 1/2P 22K
686	R614	5135-223522	RES, CBN 1/2P 22K
687	R615	5135-820522	RES, CBN 1/2P 82
687	R616	5135-820522	RES, CBN 1/2P 82
688	R617	5135-121522	RES, CBN 1/2P 120
688	R618	5135-121522	RES, CBN 1/2P 120
689	R621	5135-751522	RES, CBN 1/2P 750
689	R622	5135-751522	RES, CBN 1/2P 750
690	R623	5135-393522	RES, CBN 1/2P 39K
690	R624	5135-393522	RES, CBN 1/2P 39K
691	R625	5135-564522	RES, CBN 1/2P 560K
691	R626	5135-564522	RES, CBN 1/2P 560K
692	R627	5135-334522	RES, CBN 1/2P 330K
692	R628	5135-334522	RES, CBN 1/2P 330K
693	R629	5135-102522	RES, CBN 1/2P 1K
693	R630	5135-102522	RES, CBN 1/2P 1K
694	R631	5135-104522	RES, CBN 1/2P 100K
694	R632	5135-104522	RES, CBN 1/2P 100K
693	R633	5135-102522	RES, CBN 1/2P 1K
693	R634	5135-102522	RES, CBN 1/2P 1K
695	R635	5135-222522	RES, CBN 1/2P 2.2K
695	R636	5135-222522	RES, CBN 1/2P 2.2K
701	⚠R637	5102-1215116	RES, FUSE 120
696	R638	5135-682522	RES, CBN 1/2P 6.8K
701	⚠R639	5102-1215116	RES, FUSE 120
696	R641	5135-682522	RES, CBN 1/2P 6.8K
695	R681	5135-222522	RES, CBN 1/2P 2.2K
695	R682	5135-222522	RES, CBN 1/2P 2.2K
		TRANSISTORS	
651	Q601	5613-2320L (F)	XISTOR, NPN R
651	Q602	5613-2320L (F)	XISTOR, NPN R
653	Q603	5611-999L (F)	XISTOR, PNP R
653	Q604	5611-999L (F)	XISTOR, PNP R
654	Q605	5611-1115 (F) or (E)	XISTOR, PNP R
654	Q606	5611-1115 (F) or (E)	XISTOR, PNP R
652	Q607	5613-2603 (F) or (E)	XISTOR, NPN R
652	Q608	5613-2603 (F) or (E)	XISTOR, NPN R
652	Q609	5613-2603 (F) or (E)	XISTOR, NPN R
652	Q610	5613-2603 (F) or (E)	XISTOR, NPN R
652	Q611	5613-2603 (F) or (E)	XISTOR, NPN R
652	Q612	5613-2603 (F) or (E)	XISTOR, NPN R
655	Q613	5612-647A (C)	XISTOR, PNP A
656	Q614	5614-667A (C)	XISTOR, NPN A
		DIODES	
659	D601	5635-HZ18-2L	DIODE, ZENER
659	D602	5635-HZ18-2L	DIODE, ZENER
		MISCELLANEOUS	
925	CN5	4443-047175	CONNECTOR
926	CN6	4443-057175	CONNECTOR
902	LCN601	4163-0135020	CONNECTOR W/W

PCB-10 TUNER P.C. BOARD

CAPACITORS

Ser. No.	Ref. No.	Part No.	Description
601	C51	5345-228D045	CAP, MINI ELE 2200 μ/25V
604	C52	5345-228A041	CAP, MINI ELE 2200 μ/6.3V
608	C53	5361-473ZF	CAP, CER .047 μ
608	C54	5361-473ZF	CAP, CER .047 μ
599	C55	5345-476D041	CAP, MINI ELE 47 μ/25V
599	C56	5345-476D041	CAP, MINI ELE 47 μ/25V
600	C57	5345-107B041	CAP, MINI ELE 100 μ/10V
606	C58	5361-103M920	CAP, CER .01 μ
600	C59	5345-107B041	CAP, MINI ELE 100 μ/10V
605	C60	5361-102K918	CAP, CER 1000p
602	C61	5345-226D041	CAP, MINI ELE 22 μ/25V
053B	C71	5361-223Z921	CAP, CER .022 μ GB BB
415	C101	5345-476D041	CAP, MINI ELE 47 μ/25V
417	C102	5361-223Z921	CAP, CER .022 μ
418	C103	5361-150KSL	CAP, CER 15p
452	C201	5361-223Z921	CAP, CER .022 μ
452	C202	5361-223Z921	CAP, CER .022 μ
452	C203	5361-223Z921	CAP, CER .022 μ
452	C204	5361-223Z921	CAP, CER .022 μ
451	C205	5361-103M920	CAP, CER .01 μ
452	C206	5361-223Z921	CAP, CER .022 μ
452	C207	5361-223Z921	CAP, CER .022 μ
453	C208	5345-106F041	CAP, MINI ELE 10 μ/50V
454	C209	5345-474F041	CAP, MINI ELE .47 μ/50V
457	C210	5361-101K918	CAP, CER 100p
455	C211	5345-226D041	CAP, MINI ELE 22 μ/25V
043B	C212	5345-226D041	CAP, MINI ELE 22 μ/25V GB BB
484	C251	5361-103M920	CAP, CER .01 μ
481	C252	5361-473ZF	CAP, CER .047 μ
481	C253	5361-473ZF	CAP, CER .047 μ
483	C254	5361-220JPH	CAP, CER 22p
482	C255	5359-4315851	CAP, PPP 430p
487	C256	5345-106F041	CAP, MINI ELE 10 μ/50V
487	C257	5345-106F041	CAP, MINI ELE 10 μ/50V
489	C258	5345-475F041	CAP, MINI ELE 4.7 μ/50V
489	C259	5345-475F041	CAP, MINI ELE 4.7 μ/50V
488	C260	5345-334F041	CAP, MINI ELE .33 μ/50V
491	C261	5345-474F041	CAP, MINI ELE .47 μ/50V
490	C262	5345-224F041	CAP, MINI ELE .22 μ/50V
485	C263	5361-472M919	CAP, CER 4700p
481	C264	5361-473ZF	CAP, CER .047 μ
509	C301	5345-226D041	CAP, MINI ELE 22 μ/25V
510	C302	5345-476D041	CAP, MINI ELE 47 μ/25V
517	C303	5361-471K918	CAP, CER 470p BK
517B	C303	5361-221K918	CAP, CER 220p GB BB
517	C304	5361-471K918	CAP, CER 470p BK
517B	C304	5361-221K918	CAP, CER 220p GB BB
514	C305	5345-225F041	CAP, MINI ELE 2.2 μ/50V
514	C306	5345-225F041	CAP, MINI ELE 2.2 μ/50V
518	C308	5354-473K1HM	CAP, MYL .047 μ
511	C309	5345-474F0951	CAP, MINI ELE .47 μ/50V
513	C310	5345-106F041	CAP, MINI ELE 10 μ/50V
512	C311	5345-224F0951	CAP, MINI ELE .22 μ/50V
514	C312	5345-225F041	CAP, MINI ELE 2.2 μ/50V
520	C313	5361-472M919	CAP, CER 4700p
520	C314	5361-472M919	CAP, CER 4700p
521	C315	5361-101K918	CAP, CER 100p
545	C701	5345-227C041	CAP, MINI ELE 220 μ/16V
543	C702	5345-684F0951	CAP, MINI ELE .68 μ/50V
544	C703	5354-473K1HM	CAP, MYL .047 μ
546	C704	5345-105F041	CAP, MINI ELE 1 μ/50V
547	C705	5345-106F041	CAP, MINI ELE 10 μ/50V
548	C708	5345-225F041	CAP, MINI ELE 2.2 μ/50V

RESISTORS

Ser. No.	Ref. No.	Part No.	Description
612	⚠R52	5102-1205116	RES, FUSE 12
613	R53	5232-272J16P	RES, CBN 1/6P 2.7K
614	R54	5232-101J16P	RES, CBN 1/6P 100
614	R55	5232-101J16P	RES, CBN 1/6P 100
615	R56	5232-331J16P	RES, CBN 1/6P 330
609	R57	5171-221593	RES, MTL 1 220
616	R58	5232-104J16P	RES, CBN 1/6P 100K
617	R59	5232-183J16P	RES, CBN 1/6P 18K
613	R60	5232-272J16P	RES, CBN 1/6P 2.7K
618	R61	5232-821J16P	RES, CBN 1/6P 820
620	R62	5232-102J16P	RES, CBN 1/6P 1K
459	R201	5232-331J16P	RES, CBN 1/6P 330
460	R202	5232-391J16P	RES, CBN 1/6P 390
461	R203	5232-154J16P	RES, CBN 1/6P 150K
464	R204	5232-220J16P	RES, CBN 1/6P 22 BK
464B	R204	5232-180J16P	RES, CBN 1/6P 18 GB BB
462	R205	5232-101J16P	RES, CBN 1/6P 100
460	R206	5232-391J16P	RES, CBN 1/6P 390
463	R207	5232-102J16P	RES, CBN 1/6P 1K
460	R208	5232-391J16P	RES, CBN 1/6P 390
461	R209	5232-154J16P	RES, CBN 1/6P 150K
464	R210	5232-220J16P	RES, CBN 1/6P 22 BK
464B	R210	5232-180J16P	RES, CBN 1/6P 18 GB BB
462	R211	5232-101J16P	RES, CBN 1/6P 100
460	R212	5232-391J16P	RES, CBN 1/6P 390
463	R213	5232-102J16P	RES, CBN 1/6P 1K
465	R214	5232-103J16P	RES, CBN 1/6P 10K
466	R215	5232-332J16P	RES, CBN 1/6P 3.3K
467	R216	5232-472J16P	RES, CBN 1/6P 4.7K BK
467B	R216	5232-222J16P	RES, CBN 1/6P 2.2K GB BB
468	R217	5232-123J16P	RES, CBN 1/6P 12K BK
468B	R217	5232-273J16P	RES, CBN 1/6P 27K GB BB
051B	R218	5232-222J16P	RES, CBN 1/6P 2.2K
493	R251	5232-104J16P	RES, CBN 1/6P 100K
497	R252	5232-471J16P	RES, CBN 1/6P 470
493	R253	5232-104J16P	RES, CBN 1/6P 100K
496	R254	5232-103J16P	RES, CBN 1/6P 10K
496	R255	5232-103J16P	RES, CBN 1/6P 10K
500	R256	5232-822J16P	RES, CBN 1/6P 8.2K
494	R257	5232-223J16P	RES, CBN 1/6P 22K
498	R258	5232-820J16P	RES, CBN 1/6P 82
499	R259	5232-473J16P	RES, CBN 1/6P 47K
492	R260	5232-123J16P	RES, CBN 1/6P 12K BK
492B	R260	5232-153J16P	RES, CBN 1/6P 15K GB BB
493	R261	5232-104J16P	RES, CBN 1/6P 100K
493	R262	5232-104J16P	RES, CBN 1/6P 100K
495	R263	5232-272J16P	RES, CBN 1/6P 2.7K
525	R301	5232-124J16P	RES, CBN 1/6P 120K BK
525B	R301	5232-154J16P	RES, CBN 1/6P 150K GB BB
525	R302	5232-124J16P	RES, CBN 1/6P 120K BK
525B	R302	5232-154J16P	RES, CBN 1/6P 150K GB BB
523	R303	5232-154J16P	RES, CBN 1/6P 150K BK
523B	R303	5232-184J16P	RES, CBN 1/6P 180K GB BB
523	R304	5232-154J16P	RES, CBN 1/6P 150K BK
523B	R304	5232-184J16P	RES, CBN 1/6P 180K GB BB
524	R305	5232-332J16P	RES, CBN 1/6P 3.3K
524	R306	5232-332J16P	RES, CBN 1/6P 3.3K
527	R307	5232-472J16P	RES, CBN 1/6P 4.7K
526	R308	5232-103J16P	RES, CBN 1/6P 10K
526	R309	5232-103J16P	RES, CBN 1/6P 10K
526	R310	5232-103J16P	RES, CBN 1/6P 10K
526	R311	5232-103J16P	RES, CBN 1/6P 10K
526	R312	5232-103J16P	RES, CBN 1/6P 10K
549	R701	5232-103J16P	RES, CBN 1/6P 10K
550	R702	5232-222J16P	RES, CBN 1/6P 2.2K
549	R703	5232-103J16P	RES, CBN 1/6P 10K
551	R704	5232-473J16P	RES, CBN 1/6P 47K
552	R705	5232-102J16P	RES, CBN 1/6P 1K
552	R706	5232-102J16P	RES, CBN 1/6P 1K
552	R707	5232-102J16P	RES, CBN 1/6P 1K
549	R711	5232-103J16P	RES, CBN 1/6P 10K
549	R712	5232-103J16P	RES, CBN 1/6P 10K
549	R725	5232-103J16P	RES, CBN 1/6P 10K
553	R726	5232-223J16P	RES, CBN 1/6P 22K
553	R727	5232-223J16P	RES, CBN 1/6P 22K
553	R728	5232-223J16P	RES, CBN 1/6P 22K
553	R730	5232-223J16P	RES, CBN 1/6P 22K
551	R731	5232-473J16P	RES, CBN 1/6P 47K
557	R733	5232-104J16P	RES, CBN 1/6P 100K
558	R734	5232-332J16P	RES, CBN 1/6P 3.3K
555	R735	5232-105J16P	RES, CBN 1/6P 1M
553	R736	5232-223J16P	RES, CBN 1/6P 22K

Ser. No.	Ref. No.	Part No.	Description
554	R737	5232-100J16P	RES, CBN 1/6P 10
553	R738	5232-223J16P	RES, CBN 1/6P 22K
553	R739	5232-223J16P	RES, CBN 1/6P 22K
553	R740	5232-223J16P	RES, CBN 1/6P 22K
553	R741	5232-223J16P	RES, CBN 1/6P 22K
553	R743	5232-223J16P	RES, CBN 1/6P 22K
553	R744	5232-223J16P	RES, CBN 1/6P 22K
560	R745	5232-334J16P	RES, CBN 1/6P 330K
555	R746	5232-105J16P	RES, CBN 1/6P 1M
556	R747	5232-474J16P	RES, CBN 1/6P 470K
552	R748	5232-102J16P	RES, CBN 1/6P 1K
557	R749	5232-104J16P	RES, CBN 1/6P 100K
		INTEGRATED CIRCUITS	
441	IC201	5653-LA1266	IC, LINEAR
501	IC301	5653-LA3410	IC, LINEAR
538	IC702	5654-TC9172AP	IC, DIGITAL
		TRANSISTORS	
591	Q51	5612-1375	XISTOR, PNP A
592	Q52	5613-2603 (E) or (F)	XISTOR, NPN R
574	Q53	5611-1115 (E) or (F)	XISTOR, PNP R
442	Q201	5613-2058 (N) or (P)	XISTOR, NPN R
442	Q202	5613-2058 (N) or (P)	XISTOR, NPN R
502	Q301	5613-2878 (B)	XISTOR, NPN R
502	Q302	5613-2878 (B)	XISTOR, NPN R
507	Q303	5613-RN1203	XISTOR, NPN R
534	Q701	5613-2240 (BL)	XISTOR, NPN R
535	Q702	5613-2603 (E) or (F)	XISTOR, NPN R
533	Q703	5613-RN1203	XISTOR, NPN R
533	Q704	5613-RN1203	XISTOR, NPN R
533	Q705	5613-RN1203	XISTOR, NPN R
535	Q706	5613-2603 (E) or (F)	XISTOR, NPN R
532	Q708	5611-1115 (E) or (F)	XISTOR, PNP R
535	Q711	5613-2603 (E) or (F)	XISTOR, NPN R
535	Q712	5613-2603 (E) or (F)	XISTOR, NPN R
533	Q713	5613-RN1203	XISTOR, NPN R
		DIODES	
594	⚠D51	5632-S5566B	DIODE, RECT
594	⚠D52	5632-S5566B	DIODE, RECT
594	⚠D53	5632-S5566B	DIODE, RECT
594	⚠D54	5632-S5566B	DIODE, RECT
596	D55	5635-HZ12C2L	DIODE, ZENER
597	D56	5635-HZ6B1L	DIODE, ZENER
595	D57	5631-1SS133	DIODE, DET
448	D201	5631-1SS133	DIODE, DET
471	D251	5633-1SV149	DIODE, CAP
471	D252	5633-1SV149	DIODE, CAP
472	D253	5631-1SS133	DIODE, DET
472	D254	5631-1SS133	DIODE, DET
503	D301	5631-1SS133	DIODE, DET
503	D302	5631-1SS133	DIODE, DET
503	D303	5631-1SS133	DIODE, DET
576	D717	5631-1S2473	DIODE, DET
539	D719	5631-1SS133	DIODE, DET
539	D720	5631-1SS133	DIODE, DET
539	D724	5631-1SS133	DIODE, DET
		COILS	
413	L102	5995-2R2J107	COIL W/CORE
057B	L103	5214-78	LC COMPOSITE GB BB
447	L201	5995-2R2J107	COIL W/CORE
042B	L251	5214-13101	LC COMPOSITE GB BB
506	L301	5995-2R2J107	COIL W/CORE
		TRANSFORMERS	
446	T201	5572-10201	DISCRI 7
480	T251	5933-S0102	COIL CASE, 10
475	T252	5552-70114	IFT, AM 7
474	T253	5922-00112	OSC COIL, 7
		CONTROLS	
444	VR251	5101-10301934	RES, SEMI FIX 10K
505	VR301	5101-10401934	RES, SEMI FIX 100K
		MISCELLANEOUS	
634	⚠F2	5732-102031	FUSE BK
634B	⚠F2	5732-102030	FUSE GB BB

Ser. No.	Ref. No.	Part No.	Description
504	X301	5693-CSB456F1	OSC, CER
445	CF201	5671-7147A	FILTER, CER S BK
445B	CF201	5671-7142A	FILTER, CER S GB BB
445	CF202	5671-7147A	FILTER, CER S BK
445B	CF202	5671-7142A	FILTER, CER S GB BB
449	CF203	5671-012A	FILTER, CER S
478	CF251	5671-7137C	FILTER, CER S
477	CF252	5671-0159	FILTER, CER S
627	CN7	4443-040185	CONNECTOR
627	CN8	4443-040185	CONNECTOR
639	CW1	4163-S0211500	CONNECTOR W/W
640	CW2	4163-S0103121	CONNECTOR W/W
411	FE101	6114-00401	FM TUNER BK
411B	FE101	6114-00402	FM TUNER GB BB
632	HF3	4472-0131	HOLDER, FUSE
632	HF4	4472-0131	HOLDER, FUSE
646	JL1	4242-R0104401	JUMPER LEAD
650	LP1	5731-00701180	LAMP
479	TC251	5371-93	TRIMMER, 1P

PCB-11 INDICATOR P.C. BOARD

		CAPACITORS	
610	C63	5345-107B041	CAP, MINI ELE 100μ/10V
559	C706	5361-360J930	CAP, CER 36p
559	C707	5361-360J930	CAP, CER 36p
		RESISTORS	
561	R713	5232-103J16P	RES, CBN 1/6P 10K
565	R714	5232-104J16P	RES, CBN 1/6P 100K
561	R715	5232-103J16P	RES, CBN 1/6P 10K
566	R721	5232-223J16P	RES, CBN 1/6P 22K
563	R723	5232-105J16P	RES, CBN 1/6P 1M
564	R724	5232-334J16P	RES, CBN 1/6P 330K
561	R751	5232-103J16P	RES, CBN 1/6P 10K
561	R752	5232-103J16P	RES, CBN 1/6P 10K
561	R753	5232-103J16P	RES, CBN 1/6P 10K
561	R754	5232-103J16P	RES, CBN 1/6P 10K
561	R755	5232-103J16P	RES, CBN 1/6P 10K
561	R756	5232-103J16P	RES, CBN 1/6P 10K
561	R757	5232-103J16P	RES, CBN 1/6P 10K
561	R758	5232-103J16P	RES, CBN 1/6P 10K
562	R759	5232-332J16P	RES, CBN 1/6P 3.3K
561	R760	5232-103J16P	RES, CBN 1/6P 10K
		INTEGRATED CIRCUIT	
531	IC701	5654-T9306F25	IC, DIGITAL
		TRANSISTORS	
537	Q709	5611-1115 (E) or (F)	XISTOR, PNP R
537	Q710	5611-1115 (E) or (F)	XISTOR, PNP R
		DIODES	
542	D714	5631-1S2473	DIODE, DET
542	D715	5631-1S2473	DIODE, DET
542	D716	5631-1S2473	DIODE, DET
		MISCELLANEOUS	
536	X701	5691-00720027	XTAL, OSC
623	CN1	4443-04501004	CONNECTOR
624	CN2	4443-04501007	CONNECTOR
641	CN101	4443-1101140	CONNECTOR
642	CN102	4443-0301140	CONNECTOR
647	LCD1	5791-TP6B7051	LCD

PCB-12 POWER TRANS P.C. BOARD

		CAPACITORS	
603	C62	5345-105F041	CAP, MINI ELE 1μ/50V
607	⚠C70	5352-S010M103	CAP, MTL .01μ
		RESISTORS	
572	R80	5135-335522	RES, CBN 1/2P 3.3M BK
571	⚠R81	5135-155522	RES, CBN 1/2P 1.5M
571	⚠R82	5135-155522	RES, CBN 1/2P 1.5M
571B	⚠R83	5135-155522	RES, CBN 1/2P 1.5M GB BB
571B	⚠R84	5135-155522	RES, CBN 1/2P 1.5M GB BB

Ser. No.	Ref. No.	Part No.	Description
567	R85	5232-334J16P	RES, CBN 1/6P 330K
568	R86	5232-105J16P	RES, CBN 1/6P 1M
045B	⚠R90	5135-335522	RES, CBN 1/2P 3.3M GB BB
044B	⚠R91	5135-155522	RES, CBN 1/2P 1.5M GB BB
044B	⚠R92	5135-155522	RES, CBN 1/2P 1.5M GB BB
044B	⚠R93	5135-155522	RES, CBN 1/2P 1.5M GB BB
044B	⚠R94	5135-155522	RES, CBN 1/2P 1.5M GB BB
		TRANSISTOR	
593	Q54	5613-2603 (E) or (F)	XISTOR, NPN R
		DIODES	
598	⚠D61	5631-1SS133	DIODE, DET
598	D62	5631-1SS133	DIODE, DET
		MISCELLANEOUS	
633	⚠F1	5732-162031	FUSE BK
633B	⚠F1	5732-801030	FUSE GB BB
628	⚠S1	4433-00103	SWITCH, PU-PW
631	⚠HF1	4472-0131	HOLDER, FUSE
631	⚠HF2	4472-0131	HOLDER, FUSE
645	JL2	4242-R0204161	JUMPER LEAD
635	TM1	4214-122	TERMINAL
635	TM2	4214-122	TERMINAL
055B	W101	4163-00803001	CONNECTOR W/W GB BB
056B	W102	4163-00804001	CONNECTOR W/W GB BB
055B	W103	4163-00803001	CONNECTOR W/W GB BB

PCB-13 PRESET SWITCHES P.C. BOARD

		DIODES	
541	D701	5631-1SS133	DIODE, DET
541	D702	5631-1SS133	DIODE, DET
541	D703	5631-1SS133	DIODE, DET
541	D704	5631-1SS133	DIODE, DET
541	D705	5631-1SS133	DIODE, DET
541	D706	5631-1SS133	DIODE, DET
541	D707	5631-1SS133	DIODE, DET
541	D708	5631-1SS133	DIODE, DET
541	D709	5631-1SS133	DIODE, DET BK
541	D710	5631-1SS133	DIODE, DET BK
		MISCELLANEOUS	
629	S101	4437-00604	SWITCH, PU-TC
629	S102	4437-00604	SWITCH, PU-TC
629	S103	4437-00604	SWITCH, PU-TC
629	S104	4437-00604	SWITCH, PU-TC
629	S105	4437-00604	SWITCH, PU-TC
629	S106	4437-00604	SWITCH, PU-TC
629	S107	4437-00604	SWITCH, PU-TC
629	S108	4437-00604	SWITCH, PU-TC
626	CN4	4443-04401007	CONNECTOR

PCB-14 TUNING UP/DOWN P.C. BOARD

		DIODES	
540	D711	5631-1SS133	DIODE, DET
540	D712	5631-1SS133	DIODE, DET
540	D713	5631-1SS133	DIODE, DET
		MISCELLANEOUS	
630	S109	4437-00604	SWITCH, PU-TC
630	S110	4437-00604	SWITCH, PU-TC
630	S111	4437-00604	SWITCH, PU-TC
625	CN3	4443-04401004	CONNECTOR

PCB-16 ANTENNA TERMINAL P.C. BOARD

		CAPACITOR	
419	C18	5361-223Z921	CAP, CER .022μ
		COIL	
421	L101	5943-00136	COIL BBN, 10
		MISCELLANEOUS	
636	TM104	4214-164	TERMINAL
041B	TM105	4214-167	TERMINAL GB BB

Ser. No.	Ref. No.	Part No.	Description

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE	: Electrolytic
CAP, CER	: Ceramic
CAP, PPP	: Polypropylene
CAP, MYL	: Mylar
CAP, MCA	: Mica
CAP, MINI BP	: Bipolar
CAP, ELE BP	: Electrolytic Bipolar
CAP, STY	: Polystyrene Film
CAP, SPE	: Special
CAP, TAN	: Tantalum
470μ	: 470μF
6800p	: 6800pF
.047μ	: 0.047μF

RESISTORS

RES, CBN 1/6P	: Carbon 1/6W
RES, FUSE	: Fuse
RES, CEM 5P	: Cement 5W
RES, MTL 1P	: Metal 1W
2.2K	: 2.2kΩ
220	: 220Ω

TRANSISTORS

XISTOR	: Transistor
FET	: Field Effect Transistor

CONTROLS

RES, V CBN	: Variable Carbon Resistor
RES, SEMI FIX	: Semi-fixed Resistor

CHASSIS MISCELLANEOUS

622	L1	5911-235	ANT COIL, BC
895	⚠P1	4161-71151	CORD W/PLUG BK
895B	⚠P1	4161-7256	CORD W/PLUG GB
895C	⚠P1	4161-04100	CORD W/PLUG BB
049B	⚠S201	4411-102729	ROTRY SWITCH, VOLTAGE SELECTOR GB BB
833	⚠T1	5584-S3701	XFORMER, POWER BK
833B	⚠T1	5584-S3702	XFORMER, POWER GB BB
800	LUG1	4211-4	LUG
052B	LUG2	4211-4	LUG GB BB

PACKAGE PARTS LIST

021B	1756-06303	LABEL GB BB
022B	1756-03108	LABEL GB
022C	1756-03111	LABEL BB
028B	1119-0135	ATTACH SHEET BB
029C	1756-08501	LABEL BB
107	1111-J30289	OWNER GUIDE BK
107B	1111-J30290	OWNER GUIDE GB BB
108	1113-717004	OWNER CARD BK
109	1119-047	ATTACH SHEET BK
110	1119-0137	ATTACH SHEET BK
111	1119-01201	ATTACH SHEET BK
121	1241-C12732	POLYETHY BAG OG
122	1241-R0160600	POLYETHY BAG SET
123	1221-947144	CARTON BOX
124	1222-7216	CUSHION
126	1223-11729	SOFT SHEET
621	1397-6	T FEEDER ANT

NOTE

⚠ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.