

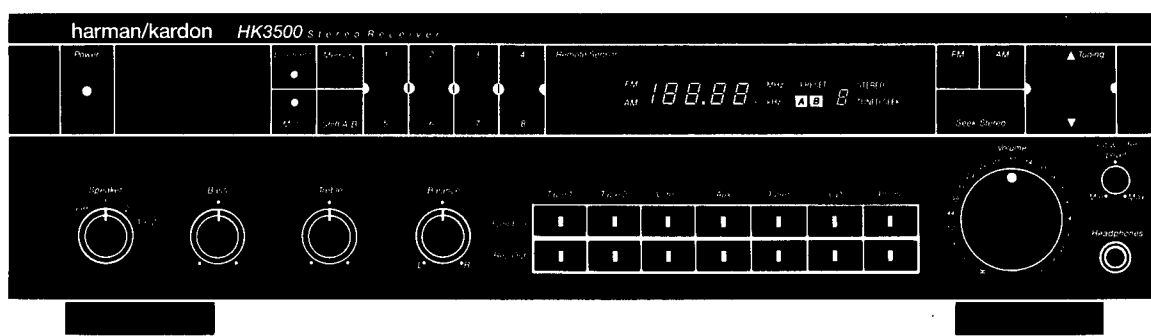
The Harman Kardon

Model HK3500

STEREO RECEIVER

Manual 166A

Technical Manual



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

- **UA** : North America area model
- **BK** : North American area model Black version

harman/kardon

240 Crossways Park West, Woodbury, N. Y. 11797
1112-3152166A9 P-089008 1000 Printed in Japan

SPECIFICATIONS

	Nominal	Limit		Nominal	Limit
● FM SECTION			Channel Separation		
Tuning Range	87.5—108.0MHz		Video/CD/Tape	54.0dB ≥ 45dB	
50dB Quieting Sensitivity (at 98MHz)			Phono (MM)	71.3dB ≥ 45dB	
Mono	15.2dBf ≤ 19.0dBf		IM Distortion Ratio	0.047% ≤ 0.1%	
Stereo	38.0dBf ≤ 41.0dBf		RMS Output Power		
Usable Sensitivity (at 98MHz)	11.2dBf ≤ 15.0dBf		8Ω, 1kHz, THD 0.1%	61.1W ≥ 50W	
Image Ratio	45.0dB ≥ 40.0dB		Damping Factor at 1kHz	92.0 ≥ 60	
IF Rejection	105.0dB ≥ 80.0dB		Tone Control Characteristics		
Capture Ratio (at 65dBf)	1.4dB		Bass at 50Hz	-	
Alternate Channel Selectivity	77dB ≥ 60dB		Boost	10dB ± 2dB	
AM Rejection (at 45dBf)	55dB		Cut	- 10dB ± 2dB	
Signal to Noise Ratio (at 65dBf)			Treble at 10kHz		
Mono	80.5dB ≥ 76.0dB		Boost	10dB ± 2dB	
Stereo	73.0dB ≥ 68.0dB		Cut	- 10dB ± 2dB	
Total Harmonic Distortion (at 65dBf, 1kHz)			Loudness Control		
Mono	0.09% ≤ 0.3%		at 50Hz	10dB ± 2dB	
Stereo	0.12% ≤ 0.4%		DC Output Voltage		
Stereo Separation	54.0dB ≥ 45.0dB		L channel	0mV ± 60mV	
(at 65dBf, 1kHz)			R channel	0mV ± 60mV	
● AM SECTION			RIAA Equalization at		
Tuning Range	530kHz—1710kHz		Tape Out	0dB ± 0.5dB	
Usable Sensitivity			(20Hz/20kHz)		
External Antenna	15μV		● DIMENSIONS	17-3/8'' × 5'' × 13-3/4''	
Selectivity	70.0dB ≥ 50dB		(W × H × D)	(443 × 126 × 349 mm)	
Signal to Noise Ratio	52.0dB ≥ 47.0dB		● WEIGHT	16.5 lbs./7.5 kg	
Image Rejection	39.0dB ≥ 30.0dB		● POWER SUPPLY	AC120V, 60Hz	
IF Rejection	63.0dB ≥ 50dB		● POWER CONSUMPTION	255W (295VA)	
● AUDIO SECTION					
Usable Sensitivity			These specifications are service target specs.		
Video/CD/Tape	135mV/22kΩ		Specifications and components subject to change without notice. Over		
Phono (MM)	2.2mV/47kΩ		performance will be maintained or improved.		
Signal to Noise Ratio					
Video/CD/Tape	98dB				
Phono (MM)	78dB				

These specifications are service target specs.

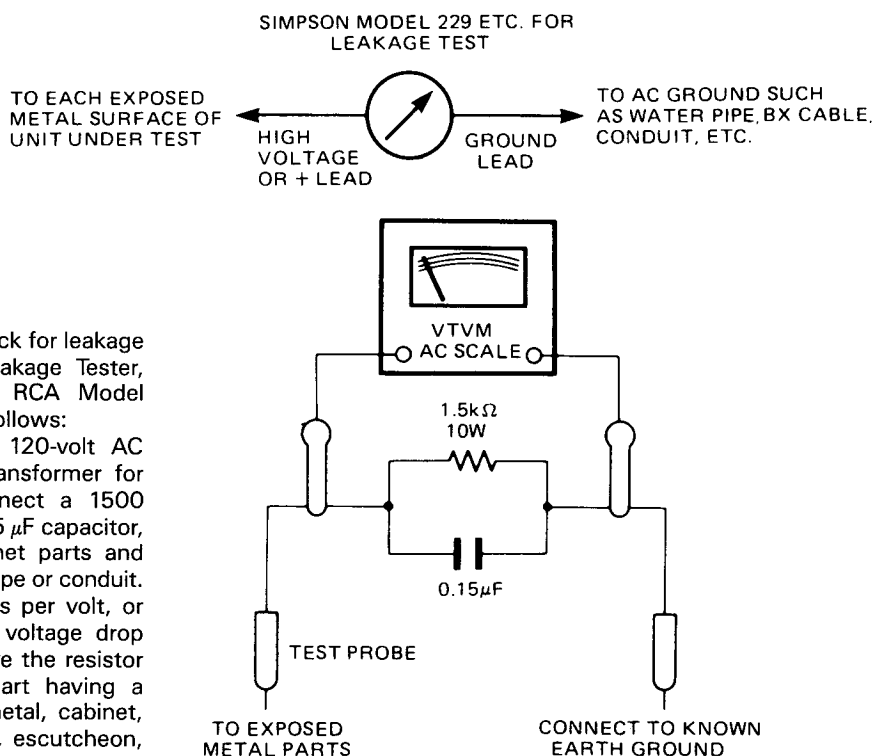
Specifications and components subject to change without notice. Overall performance will be maintained or improved.

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

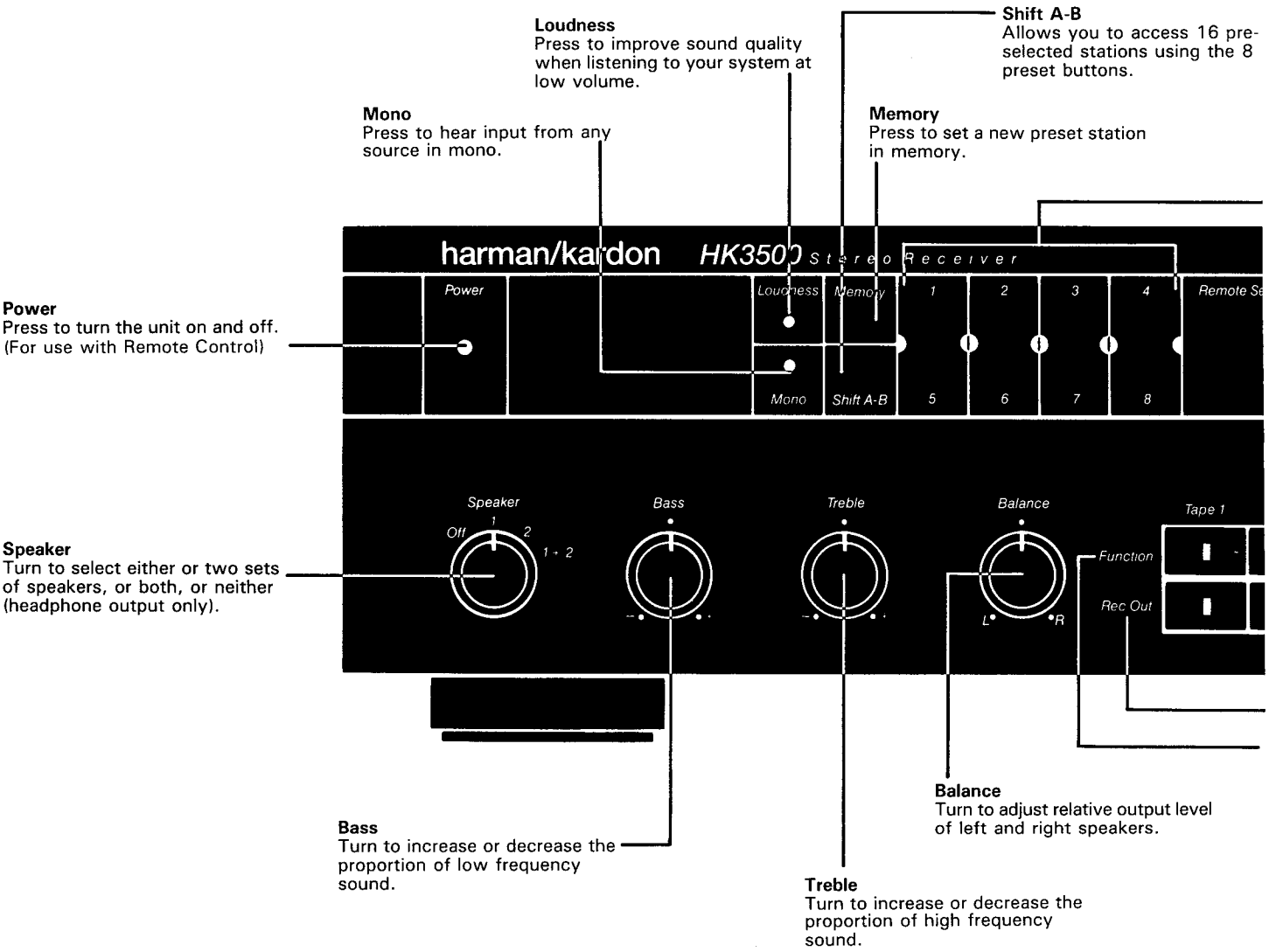
Before returning the unit to the user, perform the following safety checks:

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. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. which were removed for servicing are properly reinstalled.
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 power 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 μ F 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.)

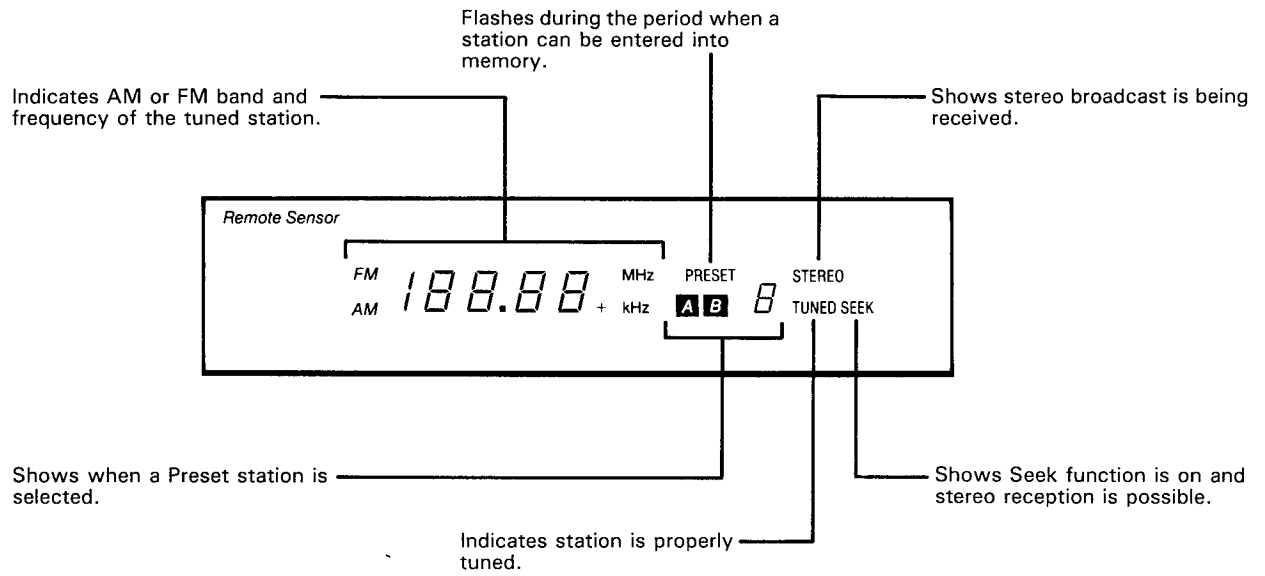
A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.

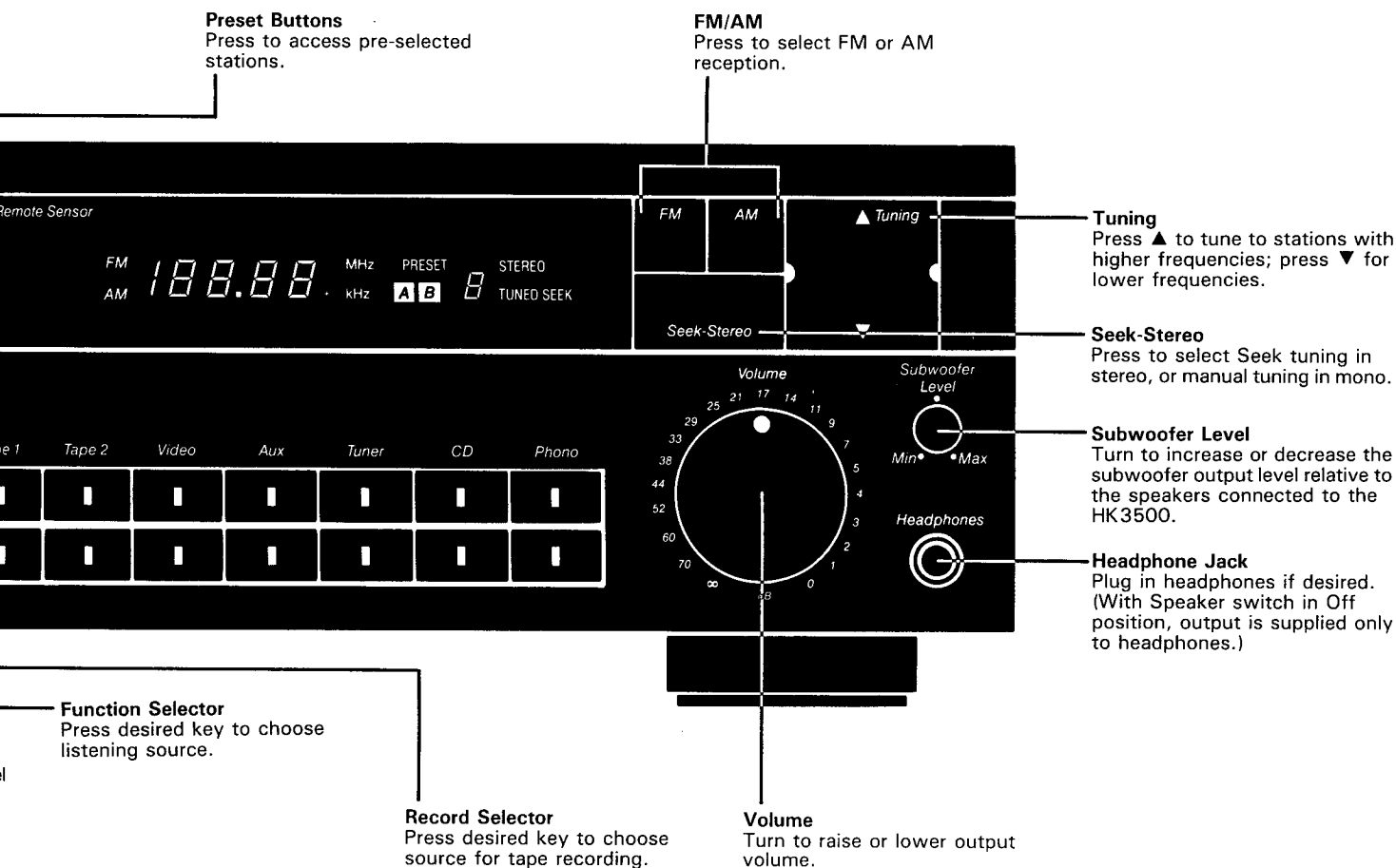


CONTROLS AND FUNCTIONS

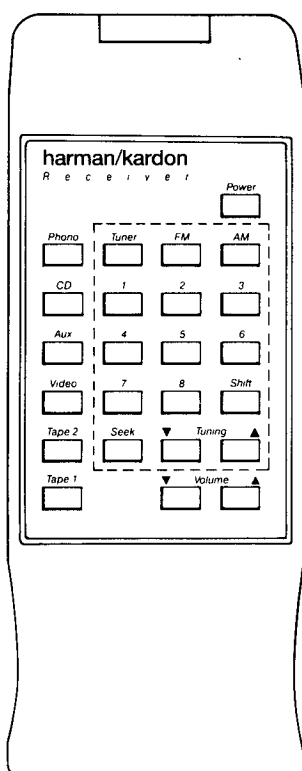


DISPLAYS



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REMOTE CONTROL



Independent Remote Control

The keys on the remote control unit function the same as the corresponding buttons on the receiver itself, except for the power switch.

The Power switch on the receiver turns the unit On and Off. The switch on the remote control switches the receiver from On (green LED illuminates on receiver power switch) to Standby (amber LED), as follows.

When power is On, pressing the power switch on the remote control puts the receiver in Standby mode. From this mode, the receiver can be turned back on from the remote control.

When power is Off, the receiver can be turned on only from the unit itself, not from the remote control.

Operating Conditions

The control unit operates effectively within a distance of 7 meters (23 feet) and an angle of 30° from the receiver. Using the control near fluorescent lights may shorten this range, as will any dust or dirt that accumulates on the front of the remote control, or the "Remote Sensor" area of the receiver. Also avoid blocking the line of sight between receiver and remote.

The control unit is powered by two AA batteries, included with your receiver. When you replace weak batteries, replace both at the same time. When the remote is to be unused for an extended period, remove the batteries to prevent damage from corrosion.

DISASSEMBLY PROCEDURES (REFER TO PAGES 7 AND 29)

① CABINET TOP REMOVAL

Remove 6 screws (A) and then remove the Cabinet Top (127).

② FRONT PANEL ASS'Y REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Disconnect the lead wires (JL101 and JL804) on the Tuner P. C. Board (PCB-1).
3. Disconnect the connector with lead wire (CW15) from connector (CN15) on the Tuner P. C. Board (PCB-1).
4. Pull out the Volume knob (139).
5. Disconnect the connector with lead wire (CW100) from connector (CN101) on the Secondary P. C. Board (PCB-9).
6. Remove 6 screws (B) and then remove the Front Panel Ass'y (AA).

③ TUNER P. C. BOARD (PCB-1) REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Disconnect the connector with lead wires (CW15, CW102, CW402 and CW504) from Connectors (CN15, CN102, CN402 and CN504) on the Tuner P. C. Board (PCB-1).
3. Disconnect the lead wires (JL101 and JL804) on the Tuner P. C. Board (PCB-1).
4. Open the lid of connectors (CN12 and CN501) on the Tuner P. C. Board (PCB-1) and then disconnect the lead wires (JL12 and W501).
5. Remove 12 screws (C and D) and then remove the Tuner P. C. Board (PCB-1) with Equalizer, Monitor and Subwoofer P. C. Boards (PCB-2, PCB-3 and PCB-4).

④ MAIN P. C. BOARD (PCB-5) REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Remove 2 screws (E) and then remove the Speaker Terminal P. C. Board (PCB-13).
3. Remove 5 screws (F) and then remove the Main P. C. Board (PCB-5) with Heat Sink (173) and Metal Fitting (167 and 168) and Speaker Terminal P. C. Board (PCB-13). If necessary, unsolder the lead wires.

⑤ FRONT CHASSIS REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Remove the Front Panel Ass'y (AA), referring to the previous step ②.
3. Remove 7 screws (G) and then remove the Front Chassis (161) with the Tone Control, Volume, Speaker Switch, Headphone, Subwoofer VR, Power Switch and Power Indicator P. C. Boards (PCB-6, PCB-7, PCB-10, PCB-11, PCB-12, PCB-16 and PCB-18).
Removal of P. C. Boards attached to the Front Chassis (161).
4. Pull out the Bass, Treble and Balance knobs (140).
5. Remove 3 hexagon-nuts (H) and then remove the Tone Control P. C. Board (PCB-6).
6. Remove a hexagon-nut (I) and then remove the Volume P. C. Board (PCB-7).
7. Pull out the Speaker knob (140).
8. Remove a hexagon-nut (J) and then remove the Speaker Switch P. C. Board (PCB-10).
9. Remove the metal fixture (K) fixing the Headphone P. C. Board (PCB-11) and then remove it.
10. Pull out the Subwoofer Level knob (141).
11. Remove a hexagon-nut (L) and then remove the Subwoofer VR P. C. Board (PCB-12).
12. Pull out the Power Indicator P. C. Board (PCB-18).
13. Remove 2 screws (M) and then remove the Power Switch P. C. Board (PCB-16).

⑥ SECONDARY P. C. BOARD (PCB-9) REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Remove the 4/8 Holder (188).
3. Disconnect the connector with lead wire (CW101) from connector (CN101) on the Secondary P. C. Board (PCB-9).
4. Remove 6 screws (N and O) and then remove the Secondary P. C. Board (PCB-9) with Power Transformer (T1).

⑦ PRIMARY P. C. BOARD (PCB-8) REMOVAL

1. Remove the Cabinet Top (127), referring to the previous step ①.
2. Remove the Secondary P. C. Board (PCB-9), referring to the previous step ⑥.
3. Remove 2 screws (P) and then remove the Primary P. C. Board (PCB-8).

CIRCUIT DESCRIPTION

■ FM TUNER SECTION

The FM signal which has entered through the antenna is high-frequency amplified in the front end unit FE101, mixed with the output of the local oscillator 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 transmitted through the IF amplifier in two steps, and after being detected in the quadrature, it is transmitted 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 be fed to the amplifier.

■ AM TUNER SECTION

The AM signal which has entered through the antenna is transmitted through the tuning circuit consisting of CB251 to IC201. In IC201 it undergoes high-frequency amplification, intermediate-frequency amplification local oscillation, intermediate-frequency amplification and detection, and then output from pin 15. This signal is turned ON and OFF at Q704 and Q720 according to the signal from the input selector and fed to pin 2 of IC301.

■ MUTING CIRCUIT

If FM is received out of tuning or in a very weak field intensity, pin 31 of IC701 becomes high level. This is fed to the base of Q707, 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 21 of IC702, Control output signal if fed from IC701, compared with the divided local oscillation output and output to pin 16. 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 19 of IC702. In IC702, Control output signal is fed from IC701, compared with the local oscillation output and output to pin 16. This voltage is level converted at Q701 and Q702, and fed to the AM local oscillation section.

■ AUDIO AMPLIFIER SECTION

The signal which has entered from each input terminal is selected by the function selector, passes through the balance circuit, volume and loudness circuit and is fed into the pre-amplifier.

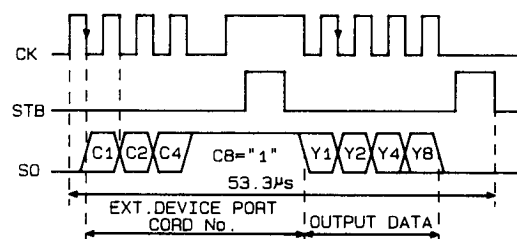
Then it is fed into the power amplifier through the tone control circuit, power amplified and transmitted to the speaker terminal.

The power amplifier has an over-output protective circuit. If current exceeding the specification flows to Q419, Q421 (L ch), Q420, Q422 (R ch), it is detected at Q27 (L ch) and Q28 (R ch) and the protective circuit consisting of Q22 to Q24 draws in the base of Q425 (L ch) and Q426 (R ch), and thus the input signal is cut to protect the circuit.

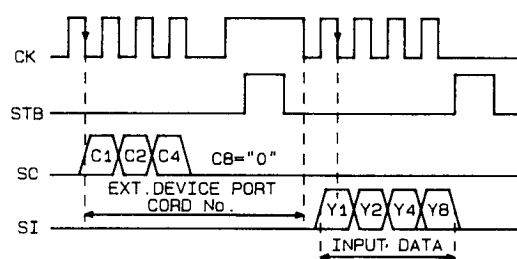
TIMING CHART

Frequency display timing chart of IC701 (TC9301AN-020)

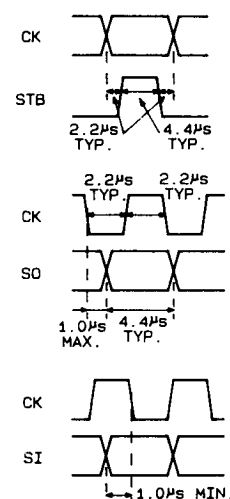
NCD MODE OUTPUT TIMING



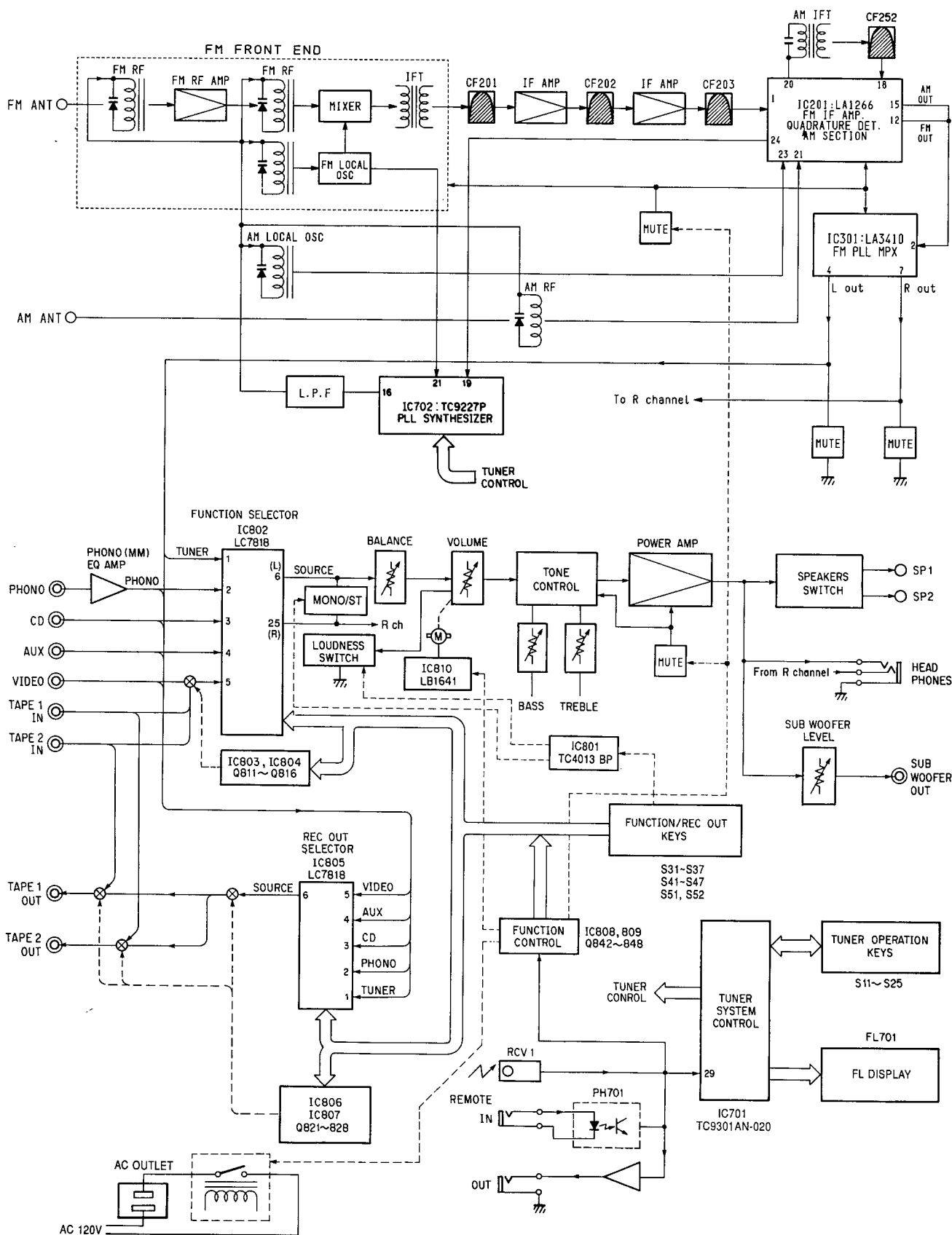
NCD MODE INPUT TIMING



SERIAL TIMING PULSE WIDTH



BLOCK DIAGRAM



ALIGNMENT PROCEDURES (REFER TO PAGES 9 AND 10)

- Conditions:**
- Set the Volume control to minimum.
 - Set the Speaker switches to on (button in) position.
 - Set the Speaker Operating Mode switch to "8Ω" position.
 - Set the Function switch to tuner 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.

■ IDLING CURRENT ADJUSTMENT

Step	Terminals to be connected	Adjustment	For
1	Connect the Digital Volt Meter to TP401 and TP403.	VR401 (L ch)	40mV ± 2mV
2	Connect the Digital Volt Meter to TP402 and TP404.	VR402 (R ch)	40mV ± 2mV

■ AM ADJUSTMENT

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

Step	Alignment	Terminals to be connected	Measurement Frequency	Station Display	Adjustment	For
1	IF	• Connect the AM Test Loop Antenna cable into the output jack of AM Signal Generator. (80dBμV input 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	1400kHz	T251	Maximum output level and symmetrical curve on scope.
2	Tracking		600kHz	600kHz	CB251	Maximum output.

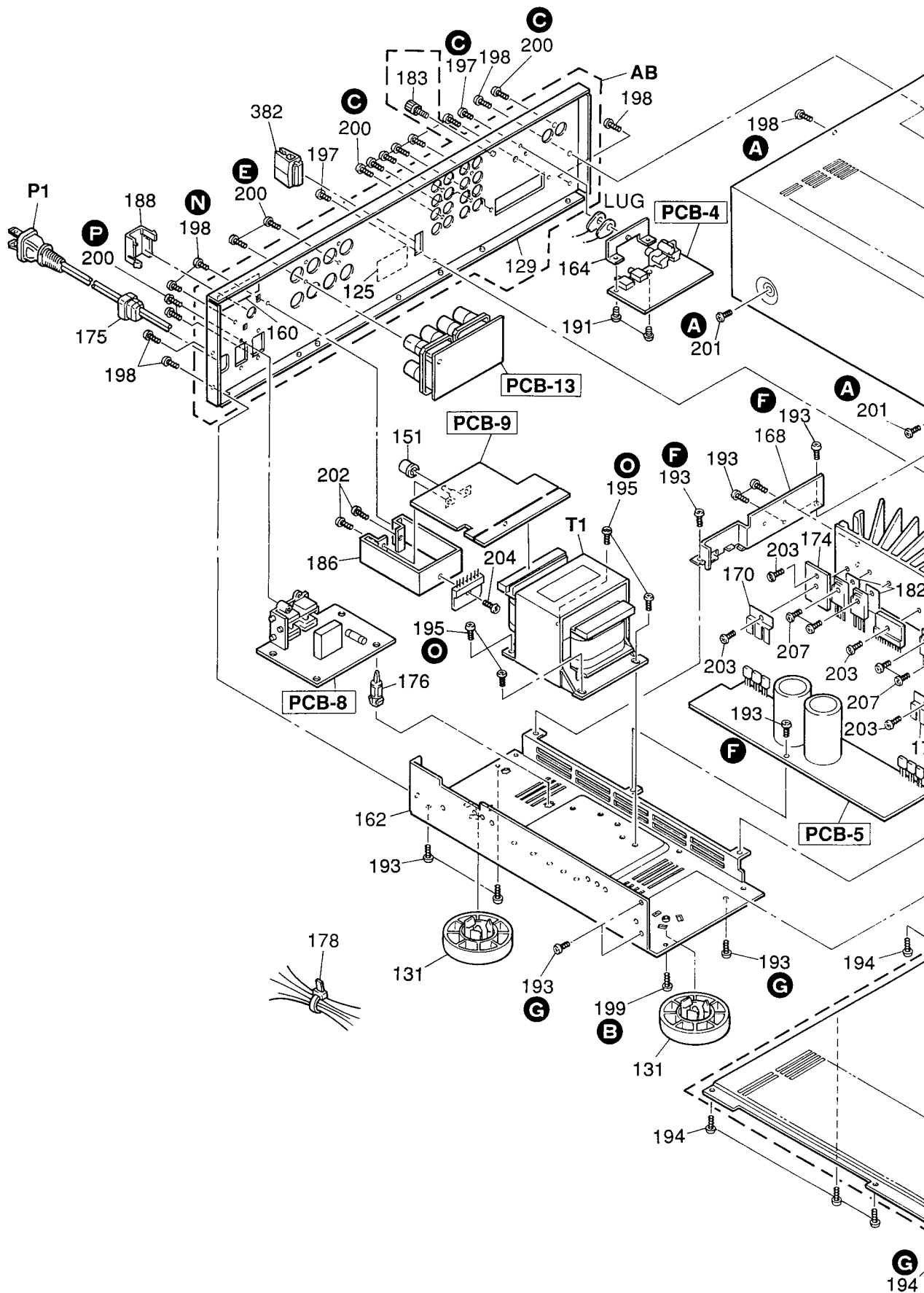
■ FM ADJUSTMENT

- Conditions :
- Set the FM mode by pressing the "FM" button.
 - Set the Seek-Stereo switch to off (put out seek indicator) position.

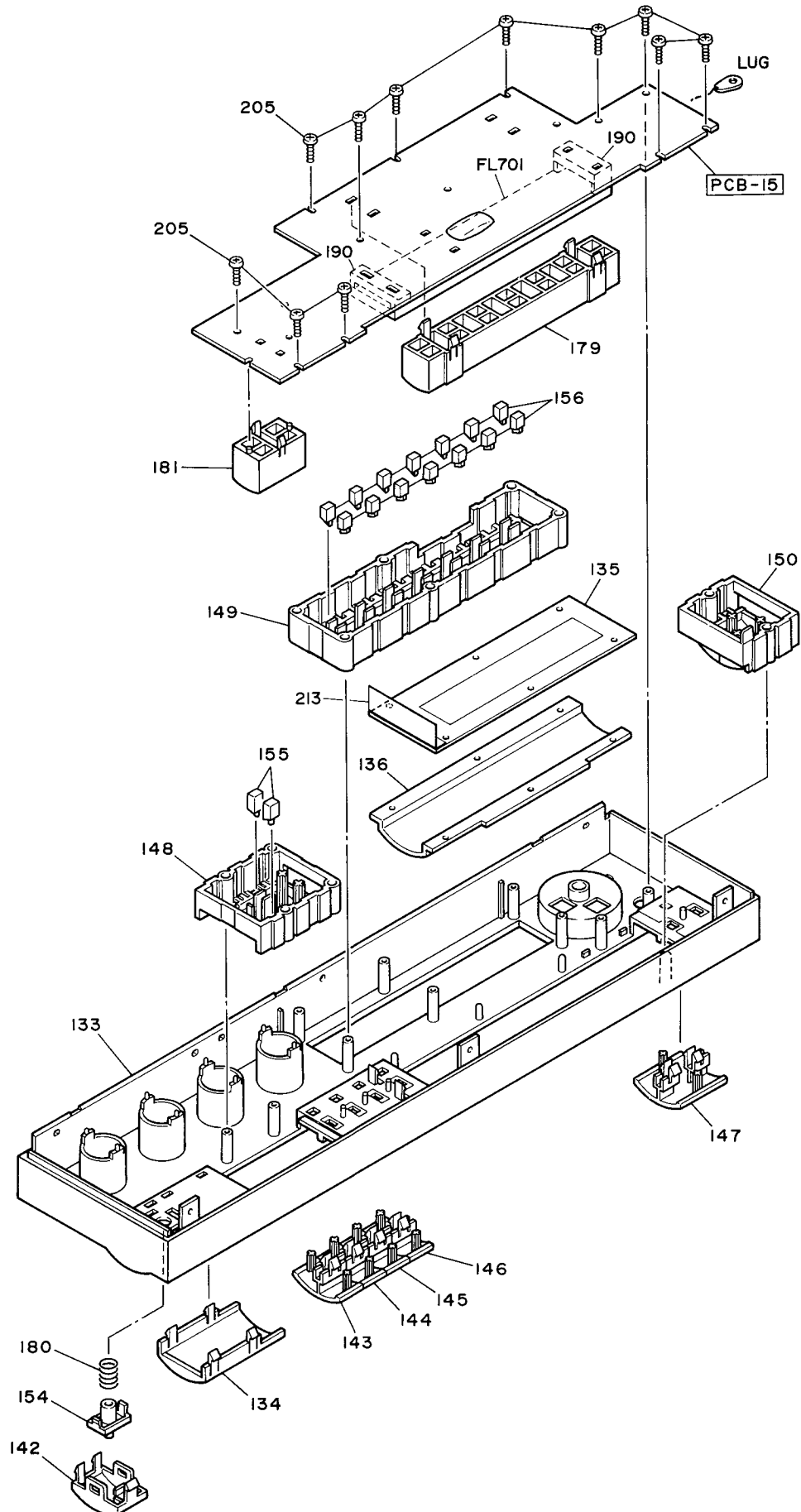
FM Signal Generator	1kHz, 100% modulation
Stereo Modulator	L + R = 45.5%, L - R = 45.5%, 19kHz = 9%

Step	Alignment	Terminals to be connected	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 OUT jacks. • Set the Seek-Stereo switch to on (seek indicator lights) position.	97.9MHz	97.9MHz	T201(A)	Adjust so that the TUNED indicator lights in the same range on both plus (+) and minus (-) sides of 97.9MHz.
2			97.9MHz	97.9MHz	T201(B)	Minimum distortion.
3			Repeat steps 1 and 2 for optimum sensitivity.			
4	Muting level	• Connect the Stereo Modulator to FM Signal Generator. Connect the FM Signal Generator to FM 300Ω BAL Antenna terminal through the 300Ω balanced dummy. [1mV (65dBf) input signal] • Connect the VTVM and Oscilloscope to the TAPE 1 OUT jacks.	97.9MHz	97.9MHz	VR201	Adjust VR201 so that the waveform is disappear at 30 dBf input.
5	Separation		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



GENERAL UNIT
EXPLODED VIEW (FRONT PANEL ASS'Y)



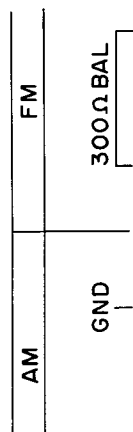
PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
AA	A442-HK3500IA	FRONT PANEL ASS'Y UA	186	2222-7286	HEAT SINK, 4/8 PCB
AA	A442-HK3500IB	FRONT PANEL ASS'Y BK	187	2240-7373	HOLDER, POWER SW
AB	A424-HK3500IA	CABI BACK ASS'Y, REAR	188	2240-7359	HOLDER, 4/8 REAR
AC	A424-HK3500IB	CABI BACK ASS'Y, BOTTOM	190	2240-7386	HOLDER, FL (x2)
125	1756-CSA	LABEL, CSA	191	2327-R0130062	SCREW, BND+ (3x6mm) (x5)
127	1414-16201	CABINET	192	2327-R0130082	SCREW, BND+ (3x8mm)
128	1424-33301	CABI BACK, BOTTOM	193	2347-R0130062	SCREW, BND T+ (3x6mm) (x15)
129	1424-33201	CABI BACK, REAR	194	2347-R0130062	SCREW, BND T+ (3x6mm) (x12)
131	1319-03301	LEG (x4)	195	2347-R0140082	SCREW, BND T+ (4x8mm) (x4)
133	1442-25701	PANEL, FRONT UA	197	2327-R0130064	SCREW, BND+ (3x6mm) (x2)
133	1442-25702	PANEL, FRONT BK	198	2347-R0130064	SCREW, BND T+ (3x6mm) (x8)
134	1442-25801	PANEL, DUMMY UA	199	2347-R0130084	SCREW, BND T+ (3x8mm) (x6)
134	1442-25802	PANEL, DUMMY BK	200	2347-R0130104	SCREW, BND T+ (3x10mm) (x11)
135	1511-19805	PLATE, FL FILTER	201	2347-R0140064	SCREW, BND T+ (4x6mm) (x4)
136	1532-17505	WINDOW, FRONT	202	2327-R0130062	SCREW, BND+ (3x6mm) (x2)
139	1630-04601	ROTARY KNOB, VOLUME UA	203	2327-R0130082	SCREW, BND+ (3x6mm) (x5)
139	1630-04602	ROTARY KNOB, VOLUME BK	204	2347-R0130082	SCREW, BND T+ (3x8mm)
140	1632-20701	ROTARY KNOB, BASS, TRE, BAL, SP UA	205	2347-R0126082	SCREW, BND T+ (2.6x8mm) (x11)
140	1632-20702	ROTARY KNOB, BASS, TRE, BAL, SP BK	207	2557-301029	SCREW, B SPW+ (3x10mm) (x4)
141	1632-20801	ROTARY KNOB, SUB WOOFER	209	2347-R0126082	SCREW, BND T+ (2.6x8mm)
141	1632-20802	ROTARY KNOB BK	211	2347-R0130062	SCREW, BND T+ (3x6mm)
142	1662-62501	PUSH BUTTON, POWER UA	213	2224-7135	INSULATOR, WINDOW
142	1662-62502	PUSH BUTTON, POWER BK	214	2134-11411	ADHESI SHEET
143	1662-58601	PUSH BUTTON, PRESET 1/5 UA	382	2240-7208	HOLDER, LOOP ANT
143	1662-58605	PUSH BUTTON, PRESET 1/5 BK	△ P1	4161-71151	CORD W/PLUG
144	1662-58602	PUSH BUTTON, PRESET 2/6 UA	△ T1	5584-S9101	XFORMER, POWER
144	1662-58606	PUSH BUTTON, PRESET 2/6 BK			
145	1662-58603	PUSH BUTTON, PRESET 3/7 UA			
145	1662-58607	PUSH BUTTON, PRESET 3/7 BK			
146	1662-58604	PUSH BUTTON, PRESET 4/8 UA			
146	1662-58608	PUSH BUTTON, PRESET 4/8 BK			
147	1662-58901	PUSH BUTTON, TUNING UA			
147	1662-58902	PUSH BUTTON, TUNING BK			
148	1662-62601	PUSH BUTTON, SHIFT, MEMORY, LOUD, MONO UA			
148	1662-62602	PUSH BUTTON, SHIFT, MEMORY, LOUD, MONO BK			
149	1662-62701	PUSH BUTTON, FUNCTION UA			
149	1662-62702	PUSH BUTTON, FUNCTION BK			
150	1662-62401	PUSH BUTTON, FM/AM, SEEK UA			
150	1662-62402	PUSH BUTTON, FM/AM, SEEK BK			
151	1662-52601	PUSH BUTTON, 4/8 SW			
154	1732-07901	INDICATOR, POWER			
155	1732-08001	INDICATOR, LOUDNESS, MONO (x2)			
156	1732-08101	INDICATOR, FUNCTION (x14)			
159	1751-01018	LABEL			
160	1756-05910	LABEL, FUSE CAUTION			
161	2211-7313	CHASSIS, FRONT			
162	2211-7314	CHASSIS, TRANS			
163	2218-89	BRACKET, FIX H/P			
164	2219-8298	METAL FITTING, REMOTE IN/OUT			
165	2219-8300	METAL FITTING, R SIDE			
166	2219-8301	METAL FITTING, CENTER			
167	2219-8302	METAL FITTING, HS FRONT			
168	2219-8303	METAL FITTING, HS REAR			
169	2219-8304	METAL FITTING, TUNER PCB FRONT			
170	2219-8305	METAL FITTING, HS TR (x2)			
171	2219-8299	METAL FITTING, SUB WOOFER, HP			
172	2222-7230	HEAT SINK, TUNER PCB			
173	2222-7284	HEAT SINK, MAIN			
174	2222-7285	HEAT SINK, SUB (x2)			
175	2240-364	HOLDER, AC CORD			
176	2240-7369	HOLDER, REAR PCB			
177	2240-7049	HOLDER, WIRING			
178	2240-R0101	HOLDER, WIRING (x18)			
179	2240-7375	HOLDER, FRONT PCB			
180	2651-2101736	SPRING, POWER			
181	2240-7374	HOLDER, FRONT PCB			
182	2224-7134	INSULATOR, TR (x4)			
183	4214-168	TERMINAL, GND			
184	2218-R0130	BRACKET, FIX (x3)			
185	2459-3003511	RIVET, PLASTIC			

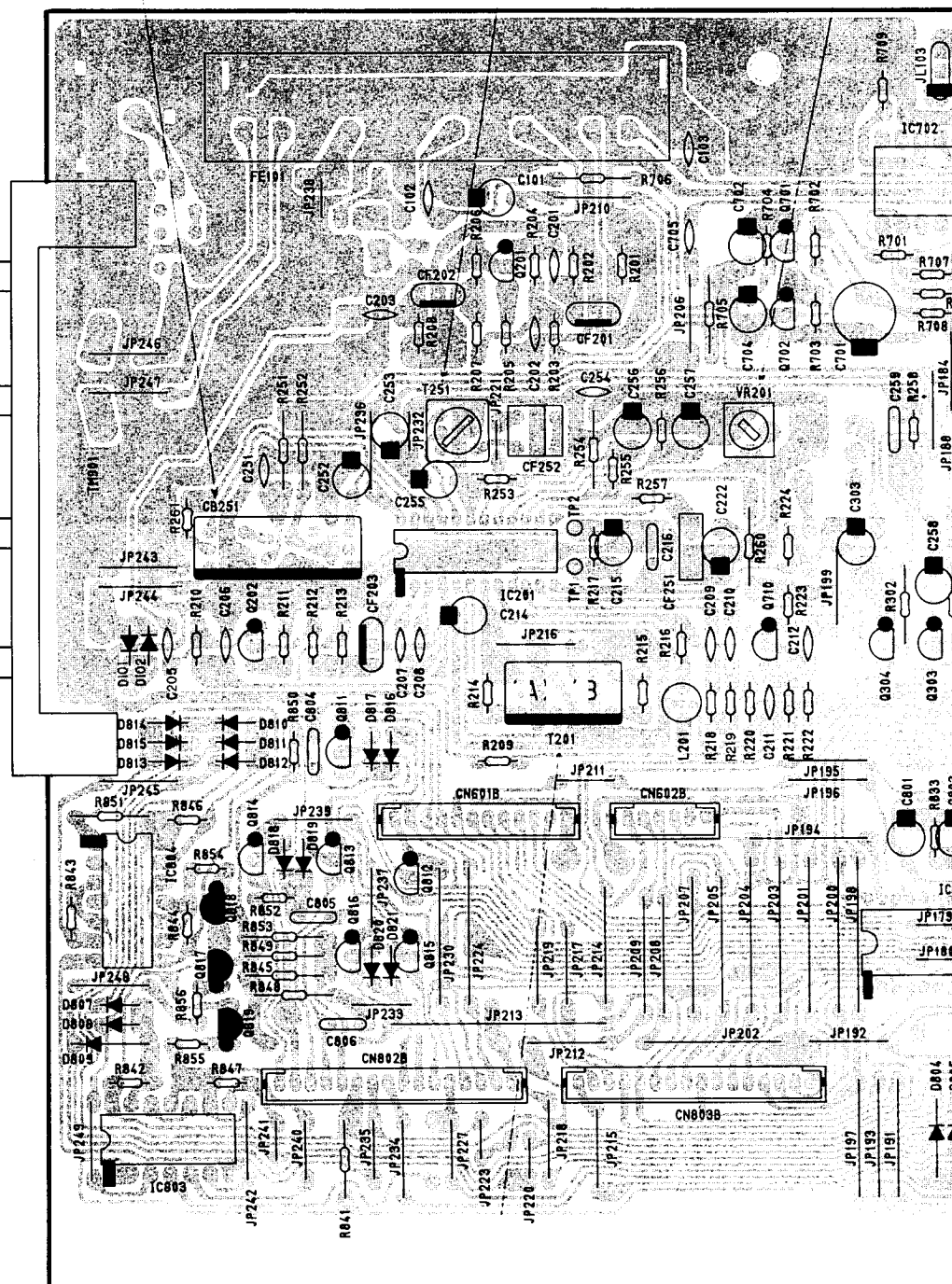
P. C. BOARDS

AM TEACHING ADD.

AM IF ADD.



750 Ω UNBAL



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F

G

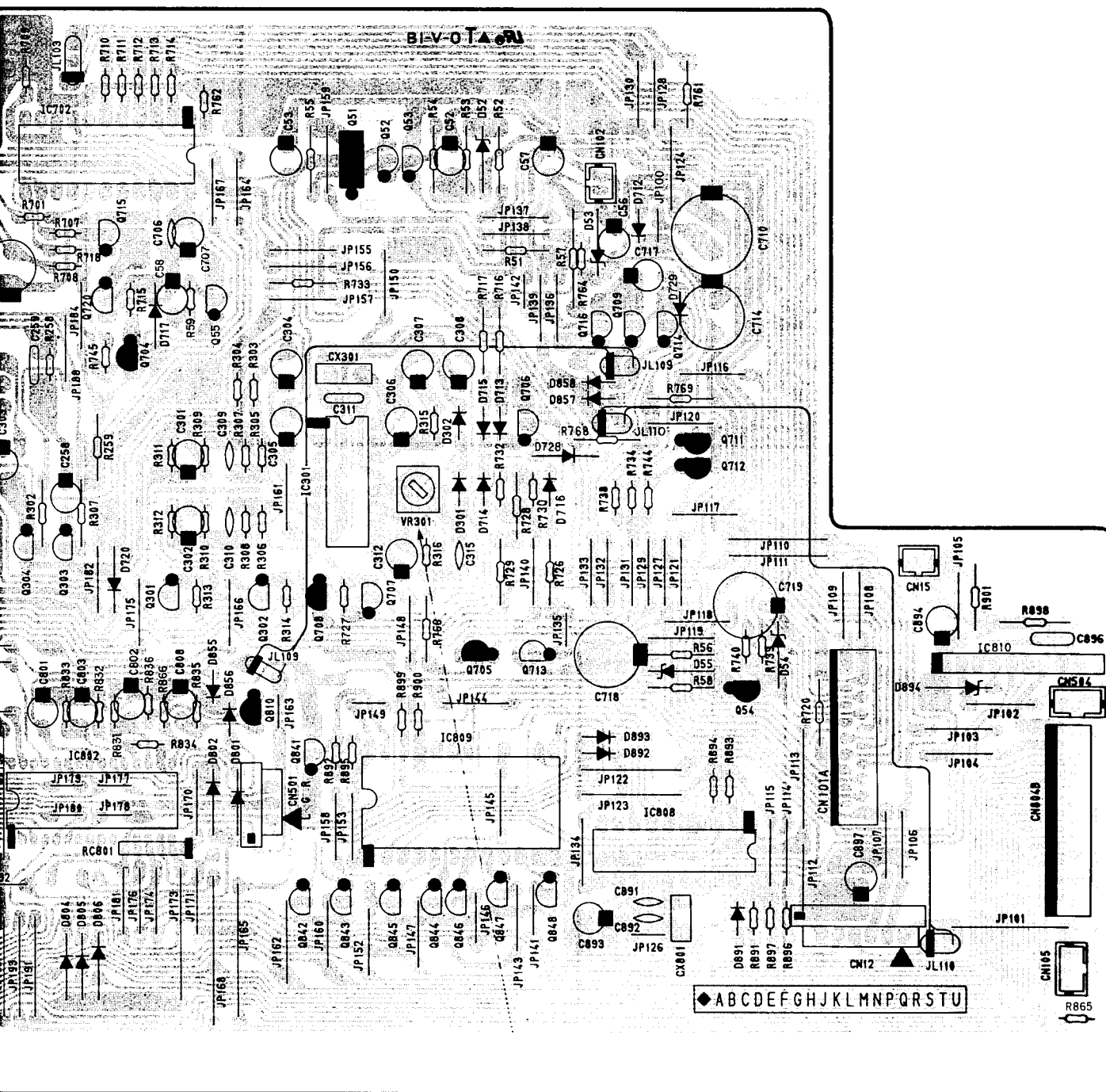
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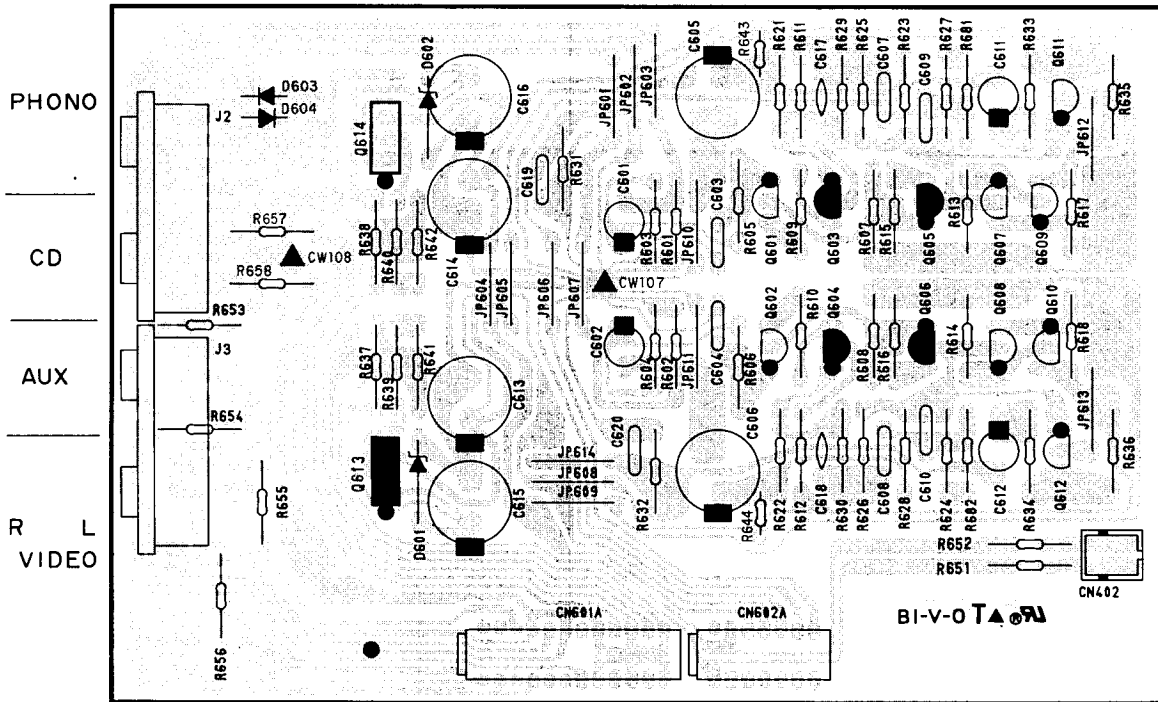
PCB-1

Tuner P. C. Board

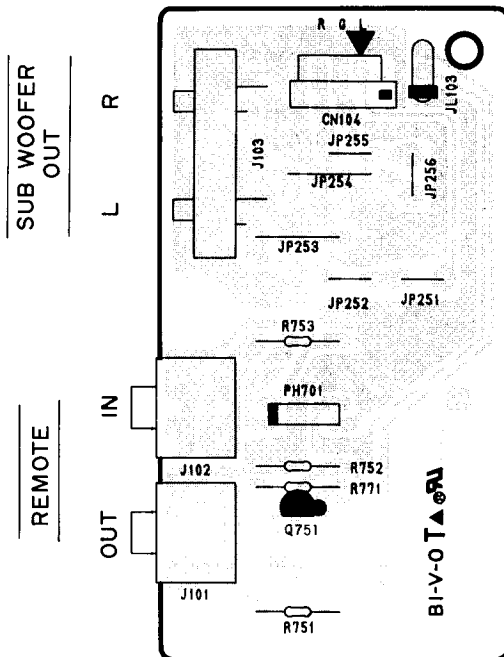


P. C. BOARDS

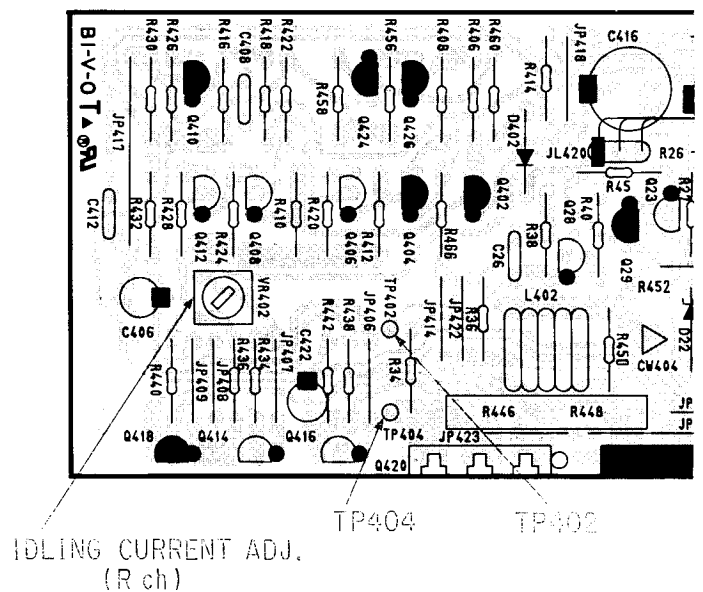
PCB-2 Equalizer P. C. Board



PCB-4 Subwoofer P. C. Board



PCB-5 Main P. C. Board



F

G

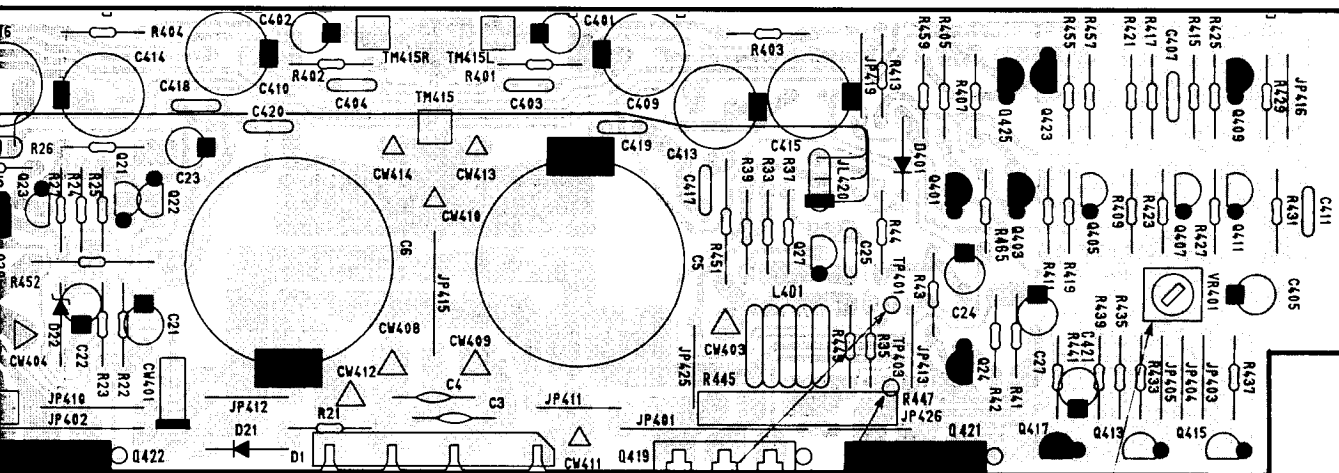
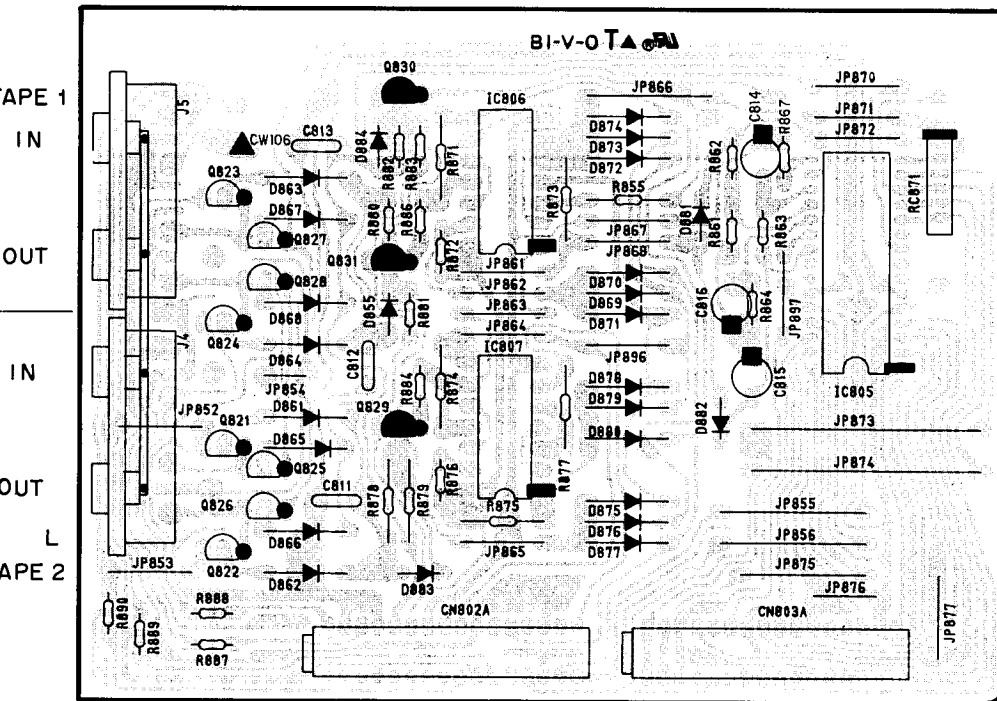
H

I

J

PCB-3

Monitor P. C. Board



TP401

TP405

IDLING CURRENT ADJ.
(L on)

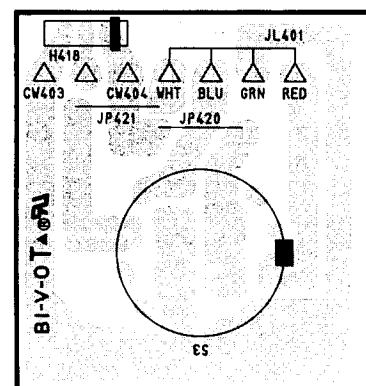
PCB-6 **Tone Control P. C. Board**



Balance

L R

PCB-10 Speaker Switch P

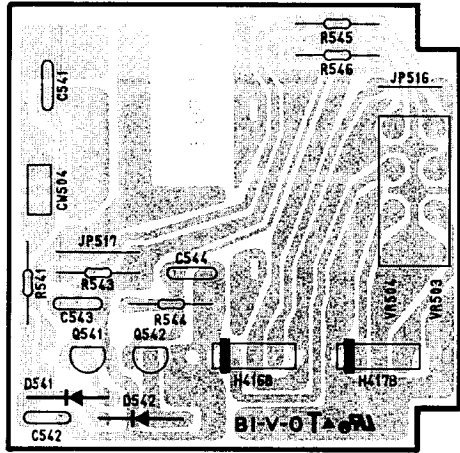


Off	1	2	1+2
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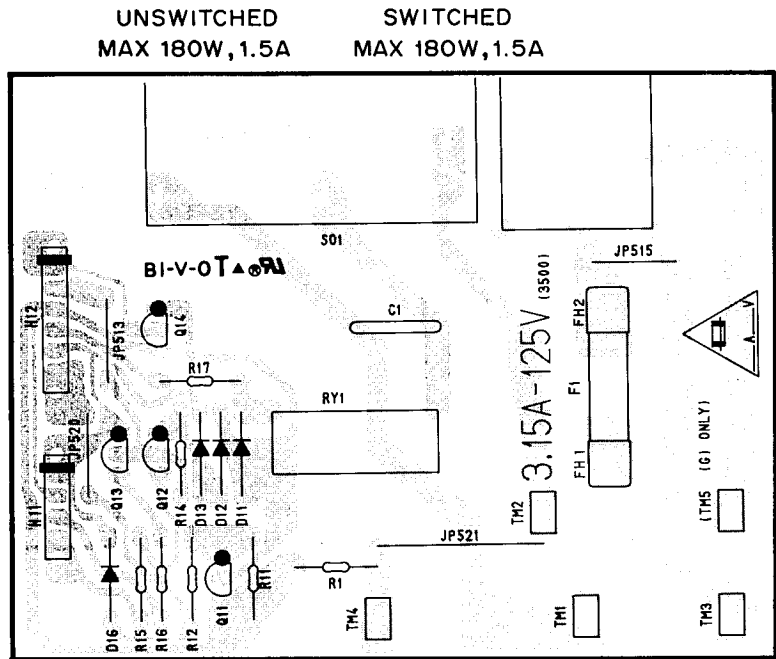
Off	1	2	1+2
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E	F	G	H	I	J
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PCB-7 Volume P. C. Board



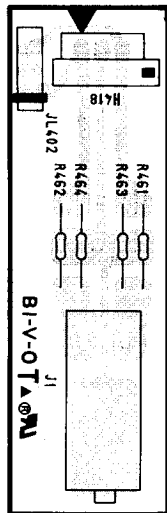
PCB-8 Primary P. C. Board



Switch P. C. Board



PCB-11 Headphone P. C. Board

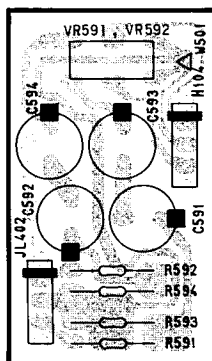


Headphones

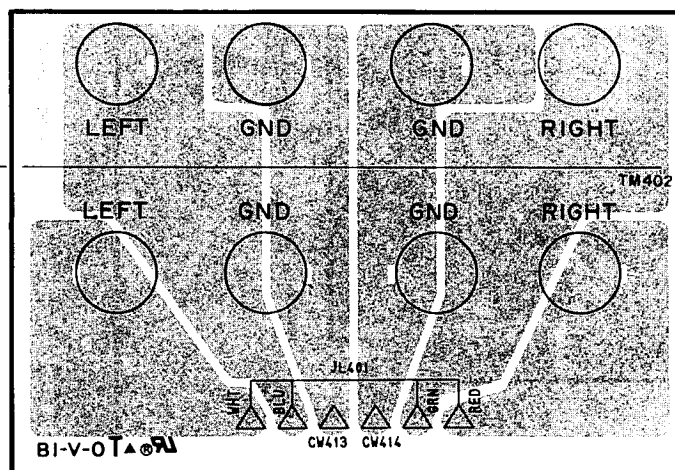
P. C. BOARDS

PCB-12 Subwoofer VR P. C. Board

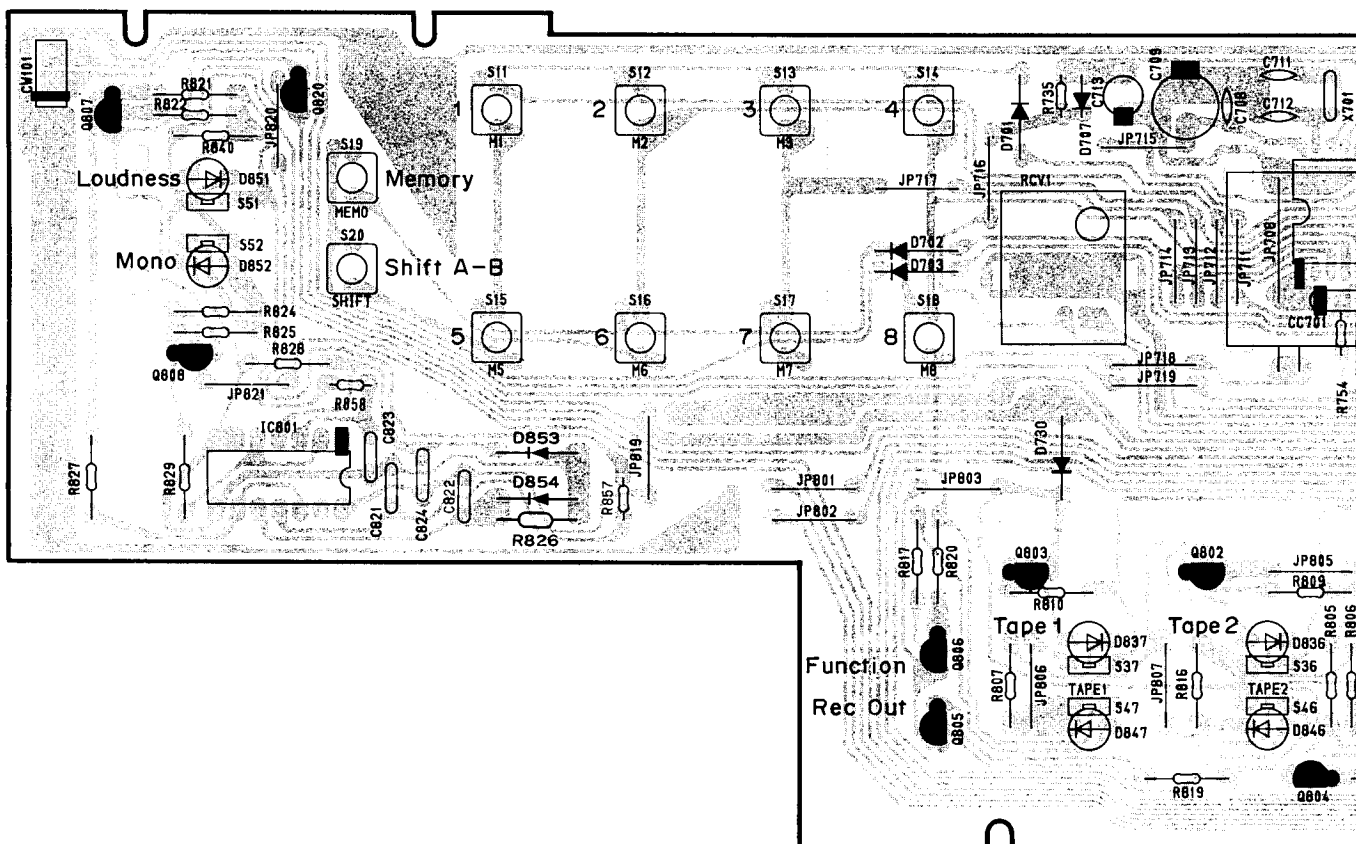
Subwoofer
Level
Min Max



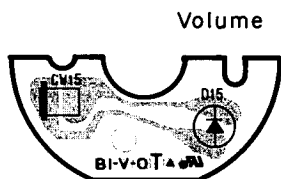
PCB-13 Speaker Terminal P. C. Board

SPEAKER
SYSTEM 2SPEAKER
SYSTEM 1

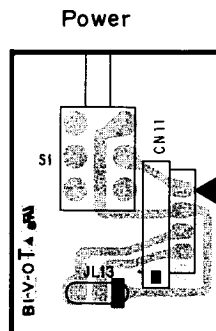
PCB-15 Front P. C. Board



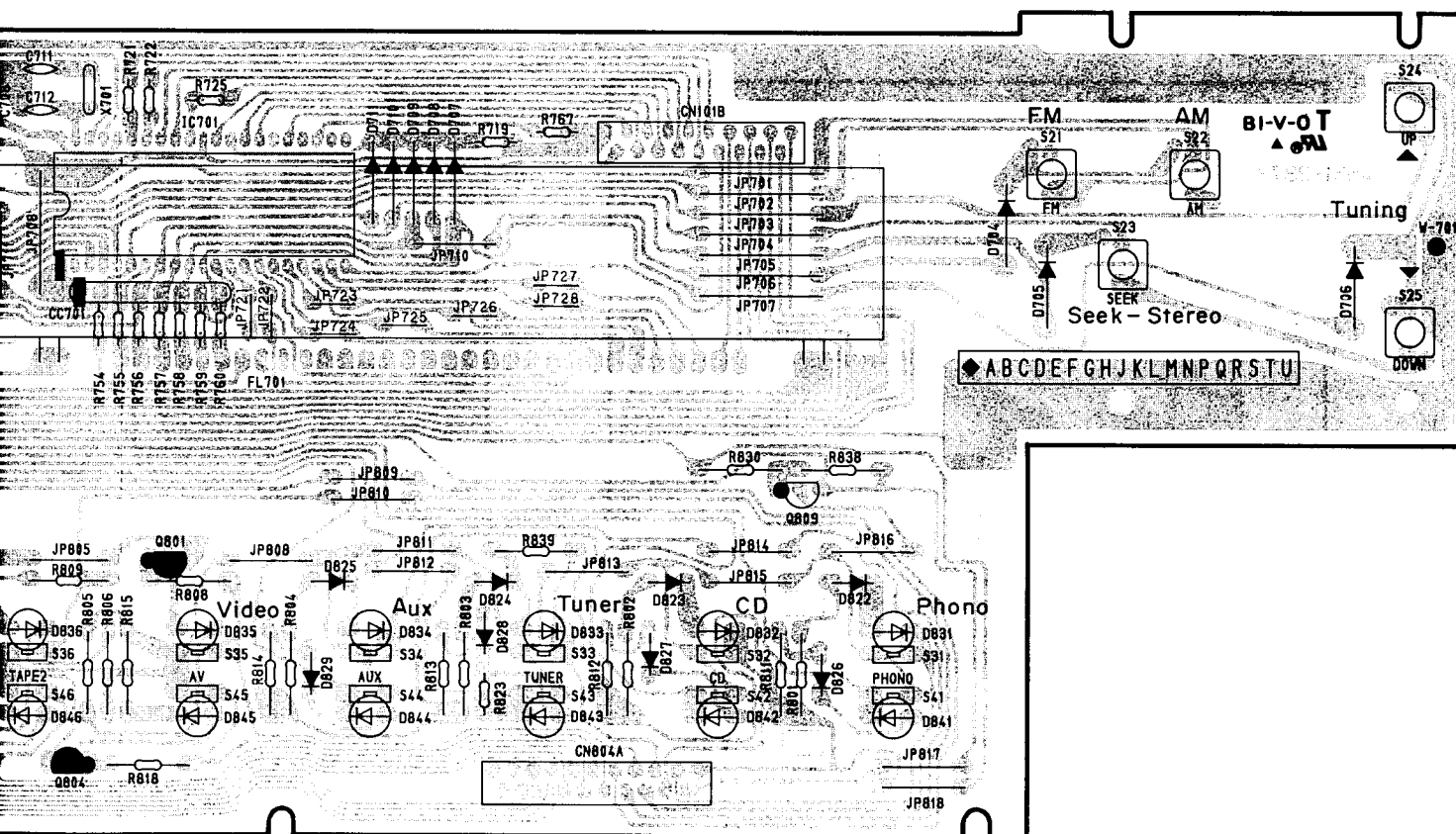
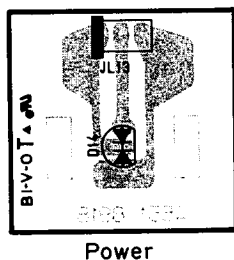
PCB-14 Volume Indicator P. C. Board



PCB-16 Power Switch P. C. Board



PCB-18 Power Indicator P. C. Board



ELECTRICAL PARTS LIST

Ser.No	Ref. No.	Part No.	Description
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PCB-1 TUNER P.C. BOARD

CAPACITORS

515	C52	5345-107C041	CAP, MINI ELE 100μ/16V
512	C53	5345-476D041	CAP, MINI ELE 47μ/25V
513	C56	5345-107B041	CAP, MINI ELE 100μ/10V
512	C57	5345-476D041	CAP, MINI ELE 47μ/25V
325	C101	5345-476D041	CAP, MINI ELE 47μ/25V
327	C102	5361-223Z921	CAP, CER .022μ
329	C103	5361-150KSL	CAP, CER 15P
361	C201	5361-223Z921	CAP, CER .022μ
361	C202	5361-223Z921	CAP, CER .022μ
362	C203	5361-223ZF	CAP, CER .022μ
361	C205	5361-223Z921	CAP, CER .022μ
361	C206	5361-223Z921	CAP, CER .022μ
361	C207	5361-223Z921	CAP, CER .022μ
361	C208	5361-223Z921	CAP, CER .022μ
361	C209	5361-223Z921	CAP, CER .022μ
361	C210	5361-223Z921	CAP, CER .022μ
361	C211	5361-223Z921	CAP, CER .022μ
361	C212	5361-223Z921	CAP, CER .022μ
364	C214	5345-106F041	CAP, MINI ELE 10μ/50V
365	C215	5345-105F041	CAP, MINI ELE 1μ/50V
363	C216	5359-1015851	CAP, PPP 100p
393	C222	5345-224F041	CAP, MINI ELE .22μ/50V
389	C251	5361-473ZF	CAP, CER .047μ
391	C252	5345-106F041	CAP, MINI ELE 10μ/50V
391	C253	5345-106F041	CAP, MINI ELE 10μ/50V
390	C254	5361-472M919	CAP, CER 4700p
392	C255	5345-475F041	CAP, MINI ELE 4.7μ/50V
392	C256	5345-475F041	CAP, MINI ELE 4.7μ/50V
365	C257	5345-105F041	CAP, MINI ELE 1μ/50V
393	C258	5345-224F041	CAP, MINI ELE .22μ/50V
394	C259	5359-1525851	CAP, PPP 1500p
419	C301	5345-225F041	CAP, MINI ELE 2.2μ/50V
419	C302	5345-225F041	CAP, MINI ELE 2.2μ/50V
420	C303	5345-226D041	CAP, MINI ELE 22μ/25V
420	C304	5345-226D041	CAP, MINI ELE 22μ/25V
421	C305	5345-476D041	CAP, MINI ELE 47μ/25V
422	C306	5345-224F0951	CAP, MINI ELE .22μ/50V
423	C307	5345-474F0951	CAP, MINI ELE .47μ/50V
424	C308	5345-106F041	CAP, MINI ELE 10μ/50V
417	C309	5359-4715851	CAP, PPP 470p
417	C310	5359-4715851	CAP, PPP 470p
418	C311	5354-473K1HM	CAP, MYL .047μ
419	C312	5345-225F041	CAP, MINI ELE 2.2μ/50V
425	C315	5361-101K918	CAP, CER 100p
453	C701	5345-227C041	CAP, MINI ELE 220μ/16V
459	C702	5345-224F0951	CAP, MINI ELE .22μ/50V
454	C704	5345-684F0951	CAP, MINI ELE .68μ/50V
460	C705	5361-223Z921	CAP, CER .022μ
461	C706	5361-102K918	CAP, CER 1000p
455	C707	5345-476D041	CAP, MINI ELE 47μ/25V
458	C710	5345-108A041	CAP, MINI ELE 1000μ/6.3V
456	C714	5345-228A041	CAP, MINI ELE 2200μ/6.3V
494	C717	5345-105F041	CAP, MINI ELE 1μ/50V
495	C718	5345-227D041	CAP, MINI ELE 220μ/25V
496	C719	5345-106F041	CAP, MINI ELE 10μ/50V
809	C801	5345-106F041	CAP, MINI ELE 10μ/50V
809	C802	5345-106F041	CAP, MINI ELE 10μ/50V
810	C803	5345-104F041	CAP, MINI ELE .1μ/50V
808	C804	5354-104593	CAP, MYL .1μ
808	C805	5354-104593	CAP, MYL .1μ
808	C806	5354-104593	CAP, MYL .1μ
809	C808	5345-106F041	CAP, MINI ELE 10μ/50V
869	C891	5361-101KB	CAP, CER 100p
869	C892	5361-101KB	CAP, CER 100p
870	C893	5345-104F041	CAP, MINI ELE .1μ/50V
871	C894	5345-106F041	CAP, MINI ELE 10μ/50V
880	C896	5354-103K1HM	CAP, MYL .01μ
919	C897	5345-477B041	CAP, MINI ELE 470μ/10V

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

524	△ R51	5102-2R25116	RES, FUSE 2.2
517	R52	5135-272522	RES, CBN 1/2P 2.7K
518	R53	5135-101522	RES, CBN 1/2P 100
518	R54	5135-101522	RES, CBN 1/2P 100
519	R55	5135-331522	RES, CBN 1/2P 330
520	△ R56	5102-5615116	RES, FUSE 560
523	R57	5171-221593	RES, MTL 1P 220
521	R58	5135-472522	RES, CBN 1/2P 4.7K
522	R59	5232-102J16P	RES, CBN 1/6P 1K
369	R201	5232-331J16P	RES, CBN 1/6P 330
370	R202	5232-391J16P	RES, CBN 1/6P 390
374	R203	5232-102J16P	RES, CBN 1/6P 1K
371	R204	5232-154J16P	RES, CBN 1/6P 150K
372	R205	5232-100J16P	RES, CBN 1/6P 10
373	R206	5232-101J16P	RES, CBN 1/6P 100
370	R207	5232-391J16P	RES, CBN 1/6P 390
370	R208	5232-391J16P	RES, CBN 1/6P 390
374	R209	5232-102J16P	RES, CBN 1/6P 1K
371	R210	5232-154J16P	RES, CBN 1/6P 150K
372	R211	5232-100J16P	RES, CBN 1/6P 10
373	R212	5232-101J16P	RES, CBN 1/6P 100
370	R213	5232-391J16P	RES, CBN 1/6P 390
375	R214	5232-103J16P	RES, CBN 1/6P 10K
376	R215	5232-332J16P	RES, CBN 1/6P 3.3K
377	R216	5232-472J16P	RES, CBN 1/6P 4.7K
378	R217	5232-153J16P	RES, CBN 1/6P 15K
377	R218	5232-472J16P	RES, CBN 1/6P 4.7K
368	R219	5232-104J16P	RES, CBN 1/6P 100K
366	R220	5232-154J16P	RES, CBN 1/6P 150K
374	R221	5232-102J16P	RES, CBN 1/6P 1K
377	R222	5232-472J16P	RES, CBN 1/6P 4.7K
367	R223	5232-104J16P	RES, CBN 1/6P 100K
377	R224	5232-472J16P	RES, CBN 1/6P 4.7K
397	R251	5135-334522	RES, CBN 1/2P 330K
398	R252	5135-104522	RES, CBN 1/2P 100K
401	R253	5232-103J16P	RES, CBN 1/6P 10K
399	R254	5135-102522	RES, CBN 1/2P 1K
401	R255	5232-103J16P	RES, CBN 1/6P 10K
402	R256	5232-223J16P	RES, CBN 1/6P 22K
403	R257	5232-820J16P	RES, CBN 1/6P 82
405	R258	5232-183J16P	RES, CBN 1/6P 18K
404	R259	5135-152522	RES, CBN 1/2P 1.5K
406	R260	5135-103522	RES, CBN 1/2P 10K
407	R261	5232-471J16P	RES, CBN 1/6P 470
435	R301	5135-105522	RES, CBN 1/2P 1M
435	R302	5135-105522	RES, CBN 1/2P 1M
427	R303	5232-104J16P	RES, CBN 1/6P 100K
427	R304	5232-104J16P	RES, CBN 1/6P 100K
428	R305	5232-753J16P	RES, CBN 1/6P 75K
428	R306	5232-753J16P	RES, CBN 1/6P 75K
429	R307	5232-154J16P	RES, CBN 1/6P 150K
429	R308	5232-154J16P	RES, CBN 1/6P 150K
430	R309	5232-182J16P	RES, CBN 1/6P 1.8K
430	R310	5232-182J16P	RES, CBN 1/6P 1.8K
431	R311	5232-103J16P	RES, CBN 1/6P 10K
431	R312	5232-103J16P	RES, CBN 1/6P 10K
431	R313	5232-103J16P	RES, CBN 1/6P 10K
431	R314	5232-103J16P	RES, CBN 1/6P 10K
432	R315	5232-472J16P	RES, CBN 1/6P 4.7K
431	R316	5232-103J16P	RES, CBN 1/6P 10K
465	R701	5232-103J16P	RES, CBN 1/6P 10K
465	R702	5232-103J16P	RES, CBN 1/6P 10K
466	R703	5232-473J16P	RES, CBN 1/6P 47K
467	R704	5232-222J16P	RES, CBN 1/6P 2.2K
471	R705	5135-102522	RES, CBN 1/2P 1K
471	R706	5135-102522	RES, CBN 1/2P 1K
465	R707	5232-103J16P	RES, CBN 1/6P 10K
468	R708	5232-102J16P	RES, CBN 1/6P 1K
470	R709	5232-104J16P	RES, CBN 1/6P 100K
467	R710	5232-222J16P	RES, CBN 1/6P 2.2K
467	R711	5232-222J16P	RES, CBN 1/6P 2.2K

Ser.No	Ref. No.	Part No.	Description
467	R712	5232-222J16P	RES, CBN 1/6P 2.2K
467	R713	5232-222J16P	RES, CBN 1/6P 2.2K
469	R714	5232-472J16P	RES, CBN 1/6P 4.7K
472	R715	5232-273J16P	RES, CBN 1/6P 27K
473	R716	5135-103522	RES, CBN 1/2P 10K
473	R717	5135-103522	RES, CBN 1/2P 10K
465	R718	5232-103J16P	RES, CBN 1/6P 10K
471	R720	5135-102522	RES, CBN 1/2P 1K
473	R726	5135-103522	RES, CBN 1/2P 10K
477	R727	5232-473J16P	RES, CBN 1/6P 47K
476	R728	5135-223522	RES, CBN 1/2P 22K
473	R729	5135-103522	RES, CBN 1/2P 10K
464	R730	5232-223J16P	RES, CBN 1/6P 22K
465	R732	5232-103J16P	RES, CBN 1/6P 10K
478	R733	5135-104522	RES, CBN 1/2P 100K
465	R734	5232-103J16P	RES, CBN 1/6P 10K
470	R739	5232-104J16P	RES, CBN 1/6P 100K
470	R740	5232-104J16P	RES, CBN 1/6P 100K
470	R744	5232-104J16P	RES, CBN 1/6P 100K
472	R745	5232-273J16P	RES, CBN 1/6P 27K
483	R761	5135-101522	RES, CBN 1/2P 100
484	R762	5232-332J16P	RES, CBN 1/6P 3.3K
465	R764	5232-103J16P	RES, CBN 1/6P 10K
482	R766	5135-332522	RES, CBN 1/2P 3.3K
474	R768	5135-472522	RES, CBN 1/2P 4.7K
482	R769	5135-332522	RES, CBN 1/2P 3.3K
819	R831	5232-224J16P	RES, CBN 1/6P 220K
815	R832	5232-104J16P	RES, CBN 1/6P 100K
821	R833	5232-274J16P	RES, CBN 1/6P 270K
819	R834	5232-224J16P	RES, CBN 1/6P 220K
818	R835	5232-223J16P	RES, CBN 1/6P 22K
818	R836	5232-223J16P	RES, CBN 1/6P 22K
820	R841	5135-472522	RES, CBN 1/2P 4.7K
815	R842	5232-104J16P	RES, CBN 1/6P 100K
817	R843	5232-473J16P	RES, CBN 1/6P 47K
817	R844	5232-473J16P	RES, CBN 1/6P 47K
812	R845	5135-104522	RES, CBN 1/2P 100K
815	R846	5232-104J16P	RES, CBN 1/6P 100K
817	R847	5232-473J16P	RES, CBN 1/6P 47K
813	R848	5135-105522	RES, CBN 1/2P 1M
812	R849	5135-104522	RES, CBN 1/2P 100K
816	R850	5232-105J16P	RES, CBN 1/6P 1M
812	R851	5135-104522	RES, CBN 1/2P 100K
816	R852	5232-105J16P	RES, CBN 1/6P 1M
814	R853	5135-104522	RES, CBN 1/2P 100K
819	R854	5232-224J16P	RES, CBN 1/6P 220K
819	R855	5232-224J16P	RES, CBN 1/6P 220K
819	R856	5232-224J16P	RES, CBN 1/6P 220K
815	R865	5232-104J16P	RES, CBN 1/6P 100K
811	R866	5232-100J16P	RES, CBN 1/6P 10
872	R891	5232-104J16P	RES, CBN 1/6P 100K
873	R892	5232-473J16P	RES, CBN 1/6P 47K
873	R893	5232-473J16P	RES, CBN 1/6P 47K
873	R894	5232-473J16P	RES, CBN 1/6P 47K
873	R895	5232-473J16P	RES, CBN 1/6P 47K
879	R896	5232-472J16P	RES, CBN 1/6P 4.7K
879	R897	5232-472J16P	RES, CBN 1/6P 4.7K
874	△ R898	5102-2205116	RES, FUSE 22
873	R899	5232-473J16P	RES, CBN 1/6P 47K
873	R900	5232-473J16P	RES, CBN 1/6P 47K
882	R901	5135-821522	RES, CBN 1/2P 820

INTEGRATED CIRCUITS

351	IC201	5653-LA1266	IC, LINEAR
411	IC301	5653-LA3410	IC, LINEAR
442	IC702	5654-TC9227P	IC, DIGITAL
801	IC802	5654-LC7818	IC, DIGITAL
802	IC803	5654-TC4011BP	IC, DIGITAL
802	IC804	5654-TC4011BP	IC, DIGITAL
861	IC808	5654-M761281P	IC, DIGITAL
862	IC809	5654-TC4514BP	IC, DIGITAL
875	IC810	5653-LB1641	IC, LINEAR

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

501	Q51	5612-1375	XISTOR, PNP A
502	Q52	5613-3311A(R)	XISTOR, NPN R
503	Q53	5613-UN4212	XISTOR, NPN R
504	Q54	5612-647(C)	XISTOR, PNP A
502	Q55	5613-3311A(R)	XISTOR, NPN R
352	Q201	5613-2058(N)	XISTOR, NPN R
352	Q202	5613-2058(N)	XISTOR, NPN R
412	Q301	5614-1450(T)	XISTOR, NPN A
412	Q302	5614-1450(T)	XISTOR, NPN A
413	Q303	5616-2SK364BL	FET, N-CH
413	Q304	5616-2SK364BL	FET, N-CH
443	Q701	5613-2240(BL)	XISTOR, NPN R
444	Q702	5613-3311A(R)	XISTOR, NPN R
446	Q704	5611-UN4112	XISTOR, PNP R
446	Q705	5611-UN4112	XISTOR, PNP R
445	Q706	5613-UN4212	XISTOR, NPN R
444	Q707	5613-3311A(R)	XISTOR, NPN R
446	Q708	5611-UN4112	XISTOR, PNP R
445	Q709	5613-UN4213	XISTOR, NPN R
444	Q710	5613-3311A(R)	XISTOR, NPN R
448	Q711	5611-UN4112	XISTOR, PNP R
448	Q712	5611-1309A(R)	XISTOR, PNP R
445	Q713	5613-UN4212	XISTOR, NPN R
445	Q714	5613-UN4213	XISTOR, NPN R
445	Q715	5613-UN4212	XISTOR, NPN R
445	Q716	5613-UN4212	XISTOR, NPN R
445	Q720	5613-UN4212	XISTOR, NPN R
822	Q810	5611-1309A(R)	XISTOR, PNP R
803	Q811	5616-2SK364BL	FET, N-CH
803	Q812	5616-2SK364BL	FET, N-CH
803	Q813	5616-2SK364BL	FET, N-CH
803	Q814	5616-2SK364BL	FET, N-CH
803	Q815	5616-2SK364BL	FET, N-CH
803	Q816	5616-2SK364BL	FET, N-CH
804	Q817	5611-UN4112	XISTOR, PNP R
804	Q818	5611-UN4112	XISTOR, PNP R
804	Q819	5611-UN4112	XISTOR, PNP R
863	Q841	5613-3311A(R)	XISTOR, NPN R
864	Q842	5613-UN4212	XISTOR, NPN R
864	Q843	5613-UN4212	XISTOR, NPN R
864	Q844	5613-UN4212	XISTOR, NPN R
864	Q845	5613-UN4212	XISTOR, NPN R
864	Q846	5613-UN4212	XISTOR, NPN R
864	Q847	5613-UN4212	XISTOR, NPN R
864	Q848	5613-UN4212	XISTOR, NPN R

DIODES

506	D52	5635-HZ12C2L	DIODE, ZENER
507	D53	5635-HZ6B1L	DIODE, ZENER
508	D54	5635-HZ5B2	DIODE, ZENER
509	D55	5635-HZ24-1L	DIODE, ZENER
416	D101	5631-1SS133	DIODE, DET
416	D102	5631-1SS133	DIODE, DET
416	D301	5631-1SS133	DIODE, DET
416	D302	5631-1SS133	DIODE, DET
450	D712	5631-1SS133	DIODE, DET
450	D714	5631-1SS133	DIODE, DET
450	D715	5631-1SS133	DIODE, DET
450	D716	5631-1SS133	DIODE, DET
452	D717	5631-1S2473	DIODE, DET
450	D718	5631-1SS133	DIODE, DET
452	D720	5631-1S2473	DIODE, DET
805	D728	5631-1S2473	DIODE, DET
450	D729	5631-1SS133	DIODE, DET
452	D731	5631-1S2473	DIODE, DET
805	D801	5631-1S2473	DIODE, DET
805	D802	5631-1S2473	DIODE, DET
805	D804	5631-1S2473	DIODE, DET
805	D805	5631-1S2473	DIODE, DET
805	D806	5631-1S2473	DIODE, DET
806	D807	5631-1SS133	DIODE, DET

Ser.No	Ref. No.	Part No.	Description
806	D808	5631-1SS133	DIODE, DET
805	D809	5631-1S2473	DIODE, DET
806	D810	5631-1SS133	DIODE, DET
806	D811	5631-1SS133	DIODE, DET
806	D812	5631-1SS133	DIODE, DET
806	D813	5631-1SS133	DIODE, DET
806	D814	5631-1SS133	DIODE, DET
806	D815	5631-1SS133	DIODE, DET
806	D816	5631-1SS133	DIODE, DET
806	D817	5631-1SS133	DIODE, DET
806	D818	5631-1SS133	DIODE, DET
806	D819	5631-1SS133	DIODE, DET
806	D820	5631-1SS133	DIODE, DET
806	D821	5631-1SS133	DIODE, DET
806	D855	5631-1SS133	DIODE, DET
806	D856	5631-1SS133	DIODE, DET
866	D857	5631-1SS133	DIODE, DET
866	D858	5631-1SS133	DIODE, DET
866	D891	5631-1SS133	DIODE, DET
866	D892	5631-1SS133	DIODE, DET
866	D893	5631-1SS133	DIODE, DET
878	D894	5635-HZ3C2	DIODE, ZENER

COILS

358	L201	5995-2R2J69	COIL W/CORE
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TRANSFORMERS

357	T201	5572-10201	DISCRI 7
384	T251	5552-00712	IFT, AM 7

CONTROLS

354	VR201	5101-50301934	RES, SEMI FIX 50K
415	VR301	5101-10401934	RES, SEMI FIX 100K

MISCELLANEOUS

383	CB251	6111-02401	RF BLOCK
355	CF201	5671-7120A	FILTER, CER S
355	CF202	5671-7120A	FILTER, CER S
356	CF203	5671-012A	FILTER, CER S
386	CF251	5671-7137C	FILTER, CER S
385	CF252	5671-0082A451	FILTER, CER S
941	CN12	4443-060185	CONNECTOR
949	CN15	4443-0201140	CONNECTOR
939	CN102	4443-0201140	CONNECTOR
946	CN105	4443-0301140	CONNECTOR
940	CN501	4443-030185	CONNECTOR
937	CN504	4443-0301140	CONNECTOR
539	CN101A	4443-05501019	CONNECTOR
825	CN601B	4443-01801012	CONNECTOR
826	CN602B	4443-01801007	CONNECTOR
827	CN802B	4443-01801016	CONNECTOR
827	CN803B	4443-01801016	CONNECTOR
867	CN804B	4443-05501021	CONNECTOR
935	CW106	4163-0145039	CONNECTOR W/W
936	CW107	4163-0140039	CONNECTOR W/W
936	CW108	4163-0140039	CONNECTOR W/W
414	CX301	5693-CSB456F1	OSC, CER
865	CX801	5693-CSB400P	OSC, CER
321	△ FE101	6114-00701	FM TUNER
959	JL103	4242-R0103181	JUMPER LEAD
545	JL109	4132-R0100101	CORD, 2C
546	JL110	4132-R0100121	CORD, 2C
828	RC801	5212-223J0503	R COMPOSITE
547	TM101	4214-164	TERMINAL
541	TP1	4214-132	TERMINAL
541	TP2	4214-132	TERMINAL
330	LUG	4211-4	LUG

PCB 2 EQUALIZER P.C. BOARD**CAPACITORS**

576	C601	5345-106C0951	CAP, MINI ELE 10μ/16V
576	C602	5345-106C0951	CAP, MINI ELE 10μ/16V

Ser.No	Ref. No.	Part No.	Description
582	C603	5359-1215851	CAP, PPP 120p
582	C604	5359-1215851	CAP, PPP 120p
575	C605	5345-227A0951	CAP, MINI ELE 220μ/6.3V
575	C606	5345-227A0951	CAP, MINI ELE 220μ/6.3V
583	C607	5359-5625851	CAP, PPP 5600p
583	C608	5359-5625851	CAP, PPP 5600p
584	C609	5359-2025851	CAP, PPP 2000p
584	C610	5359-2025851	CAP, PPP 2000p
576	C611	5345-106C0951	CAP, MINI ELE 10μ/16V
576	C612	5345-106C0951	CAP, MINI ELE 10μ/16V
577	C613	5345-227D041	CAP, MINI ELE 220μ/25V
577	C614	5345-227D041	CAP, MINI ELE 220μ/25V
578	C615	5345-107D041	CAP, MINI ELE 100μ/25V
578	C616	5345-107D041	CAP, MINI ELE 100μ/25V
588	C617	5353-040934	CAP, MCA 4p
588	C618	5353-040934	CAP, MCA 4p
585	C619	5359-1825851	CAP, PPP 1800p
585	C620	5359-1825851	CAP, PPP 1800p

RESISTORS

591	R601	5135-823522	RES, CBN 1/2P 82K
591	R602	5135-823522	RES, CBN 1/2P 82K
592	R603	5135-124522	RES, CBN 1/2P 120K
592	R604	5135-124522	RES, CBN 1/2P 120K
593	R605	5135-221522	RES, CBN 1/2P 220
593	R606	5135-221522	RES, CBN 1/2P 220
594	R607	5135-122522	RES, CBN 1/2P 1.2K
594	R608	5135-122522	RES, CBN 1/2P 1.2K
595	R609	5135-220522	RES, CBN 1/2P 22
595	R610	5135-220522	RES, CBN 1/2P 22
594	R611	5135-122522	RES, CBN 1/2P 1.2K
594	R612	5135-122522	RES, CBN 1/2P 1.2K
596	R613	5135-473522	RES, CBN 1/2P 47K
596	R614	5135-473522	RES, CBN 1/2P 47K
597	R615	5135-820522	RES, CBN 1/2P 82
597	R616	5135-820522	RES, CBN 1/2P 82
597	R617	5135-820522	RES, CBN 1/2P 82
597	R618	5135-820522	RES, CBN 1/2P 82
599	R621	5135-821522	RES, CBN 1/2P 820
599	R622	5135-821522	RES, CBN 1/2P 820
600	R623	5135-393522	RES, CBN 1/2P 39K
600	R624	5135-393522	RES, CBN 1/2P 39K
601	R625	5135-564522	RES, CBN 1/2P 560K
601	R626	5135-564522	RES, CBN 1/2P 560K
602	R627	5135-334522	RES, CBN 1/2P 330K
602	R628	5135-334522	RES, CBN 1/2P 330K
603	R629	5135-102522	RES, CBN 1/2P 1K
603	R630	5135-102522	RES, CBN 1/2P 1K
604	R631	5135-333522	RES, CBN 1/2P 33K
604	R632	5135-333522	RES, CBN 1/2P 33K
603	R633	5135-102522	RES, CBN 1/2P 1K
603	R634	5135-102522	RES, CBN 1/2P 1K
605	R635	5135-222522	RES, CBN 1/2P 2.2K
605	R636	5135-222522	RES, CBN 1/2P 2.2K
606	R637	5135-472522	RES, CBN 1/2P 4.7K
606	R638	5135-472522	RES, CBN 1/2P 4.7K
607	R639	5135-151522	RES, CBN 1/2P 150
607	R640	5135-151522	RES, CBN 1/2P 150
610	△ R641	5102-1814715	RES, FUSE 180
610	△ R642	5102-1814715	RES, FUSE 180
608	R643	5232-105J16P	RES, CBN 1/6P 1M
608	R644	5232-105J16P	RES, CBN 1/6P 1M
611	△ R651	5102-1005116	RES, FUSE 10
611	△ R652	5102-1005116	RES, FUSE 10
603	R653	5135-102522	RES, CBN 1/2P 1K
603	R654	5135-102522	RES, CBN 1/2P 1K
603	R655	5135-102522	RES, CBN 1/2P 1K
603	R656	5135-102522	RES, CBN 1/2P 1K
503	R657	5135-102522	RES, CBN 1/2P 1K
603	R658	5135-102522	RES, CBN 1/2P 1K
605	R681	5135-222522	RES, CBN 1/2P 2.2K
605	R682	5135-222522	RES, CBN 1/2P 2.2K

Ser.No	Ref. No.	Part No.	Description
TRANSISTORS			
561	Q601	5613-2320L(F)	XISTOR, NPN R
561	Q602	5613-2320L(F)	XISTOR, NPN R
563	Q603	5611-999L(F)	XISTOR, PNP R
563	Q604	5611-999L(F)	XISTOR, PNP R
564	Q605	5611-999(F)	XISTOR, PNP R
564	Q606	5611-999(F)	XISTOR, PNP R
562	Q607	5613-2320(F)	XISTOR, NPN R
562	Q608	5613-2320(F)	XISTOR, NPN R
562	Q609	5613-2320(F)	XISTOR, NPN R
562	Q610	5613-2320(F)	XISTOR, NPN R
562	Q611	5613-2320(F)	XISTOR, NPN R
562	Q612	5613-2320(F)	XISTOR, NPN R
565	Q613	5612-941(Q)	XISTOR, PNP A
566	Q614	5614-1266(Q)	XISTOR, NPN A

DIODES			
569	D601	5635-HZ15-2L	DIODE, ZENER
569	D602	5635-HZ15-2L	DIODE, ZENER
570	D603	5631-1SS133	DIODE, DET
570	D604	5631-1SS133	DIODE, DET

MISCELLANEOUS			
938	CN402	4443-0201141	CONNECTOR
613	CN601A	4443-01701012	CONNECTOR
614	CN602A	4443-01701007	CONNECTOR
912	△ J2	4484-46	PIN JACK, 4P
912	△ J3	4484-46	PIN JACK, 4P
615	LUG	4211-4	LUG

PCB-3 MONITOR P.C. BOARD

CAPACITORS			
838	C811	5354-104593	CAP, MYL .1μ
838	C812	5354-104593	CAP, MYL .1μ
838	C813	5354-104593	CAP, MYL .1μ
839	C814	5345-106F041	CAP, MINI ELE 10μ/50V
839	C815	5345-106F041	CAP, MINI ELE 10μ/50V
840	C816	5345-104F041	CAP, MINI ELE .1μ/50V

RESISTORS			
847	R861	5232-104J16P	RES, CBN 1/6P 100K
846	R862	5232-224J16P	RES, CBN 1/6P 220K
846	R863	5232-224J16P	RES, CBN 1/6P 220K
877	R864	5232-274J16P	RES, CBN 1/6P 270K
824	R867	5232-100J16P	RES, CBN 1/6P 10
844	R871	5135-473522	RES, CBN 1/2P 47K
847	R872	5232-104J16P	RES, CBN 1/6P 100K
876	R873	5135-472522	RES, CBN 1/2P 4.7K
844	R874	5135-473522	RES, CBN 1/2P 47K
843	R875	5135-104522	RES, CBN 1/2P 100K
847	R876	5232-104J16P	RES, CBN 1/6P 100K
844	R877	5135-473522	RES, CBN 1/2P 47K
842	R878	5135-105522	RES, CBN 1/2P 1M
843	R879	5135-104522	RES, CBN 1/2P 100K
850	R880	5232-105J16P	RES, CBN 1/6P 1M
847	R881	5232-104J16P	RES, CBN 1/6P 100K
850	R882	5232-105J16P	RES, CBN 1/6P 1M
847	R883	5232-104J16P	RES, CBN 1/6P 100K
846	R884	5232-224J16P	RES, CBN 1/6P 220K
823	R885	5135-224522	RES, CBN 1/2P 220K
846	R886	5232-224J16P	RES, CBN 1/6P 220K
845	R887	5232-102J16P	RES, CBN 1/6P 1K
845	R888	5232-102J16P	RES, CBN 1/6P 1K
845	R889	5232-102J16P	RES, CBN 1/6P 1K
845	R890	5232-102J16P	RES, CBN 1/6P 1K

INTEGRATED CIRCUITS			
831	IC805	5654-LC7818	IC, DIGITAL
832	IC806	5654-TC4011BP	IC, DIGITAL
832	IC807	5654-TC4011BP	IC, DIGITAL

Ser.No	Ref. No.	Part No.	Description
TRANSISTORS			
833	Q821	5616-2SK364BL	FET, N-CH
833	Q822	5616-2SK364BL	FET, N-CH
833	Q823	5616-2SK364BL	FET, N-CH
833	Q824	5616-2SK364BL	FET, N-CH
833	Q825	5616-2SK364BL	FET, N-CH
833	Q826	5616-2SK364BL	FET, N-CH
833	Q827	5616-2SK364BL	FET, N-CH
833	Q828	5616-2SK364BL	FET, N-CH
834	Q829	5611-UN4112	XISTOR, PNP R
834	Q830	5611-UN4112	XISTOR, PNP R
834	Q831	5611-UN4112	XISTOR, PNP R

DIODES			
835	D861	5631-1S2473	DIODE, DET
835	D862	5631-1S2473	DIODE, DET
835	D863	5631-1S2473	DIODE, DET
835	D864	5631-1S2473	DIODE, DET
835	D865	5631-1S2473	DIODE, DET
835	D866	5631-1S2473	DIODE, DET
835	D867	5631-1S2473	DIODE, DET
835	D868	5631-1S2473	DIODE, DET
835	D869	5631-1S2473	DIODE, DET
835	D870	5631-1S2473	DIODE, DET
835	D871	5631-1S2473	DIODE, DET
835	D872	5631-1S2473	DIODE, DET
835	D873	5631-1S2473	DIODE, DET
835	D874	5631-1S2473	DIODE, DET
835	D875	5631-1S2473	DIODE, DET
835	D876	5631-1S2473	DIODE, DET
835	D877	5631-1S2473	DIODE, DET
835	D878	5631-1S2473	DIODE, DET
835	D879	5631-1S2473	DIODE, DET
835	D880	5631-1S2473	DIODE, DET
836	D881	5631-1SS133	DIODE, DET
836	D882	5631-1SS133	DIODE, DET
836	D883	5631-1SS133	DIODE, DET
836	D884	5631-1SS133	DIODE, DET
836	D885	5631-1SS133	DIODE, DET

MISCELLANEOUS			
849	CN802A	4443-01701016	CONNECTOR
849	CN803A	4443-01701016	CONNECTOR
913	△ J4	4484-46	PIN JACK, 4P
913	△ J5	4484-46	PIN JACK, 4P
829	RC871	5212-223J0503	R COMPOSITE

PCB-4 SUB WOOFER P.C. BOARD

RESISTORS			
479	R751	5135-470522	RES, CBN 1/2P 47
480	R752	5135-473522	RES, CBN 1/2P 47K
481	R753	5135-271522	RES, CBN 1/2P 270
489	R771	5135-392522	RES, CBN 1/2P 3.9K

TRANSISTOR			
447	Q751	5611-UN411L	XISTOR, PNP R

MISCELLANEOUS			
945	CN104	4443-030185	CONNECTOR
551	J101	4451-00184	JACK, 1P
551	J102	4451-00184	JACK, 1P
552	△ J103	4489-00705002	PIN JACK, MLT
556	PH701	5624-ON3161(R	PHOTO COUPLER

PCB-5 MAIN P.C. BOARD

CAPACITORS			
766	C3	5362-103048	CAP, CER .01μ
766	C4	5362-103048	CAP, CER .01μ
765	C5	5341-S07FM822	CAP, ELE 8200μ/50V
765	C6	5341-S07FM822	CAP, ELE 8200μ/50V

Ser.No	Ref. No.	Part No.	Description	Ser.No	Ref. No.	Part No.	Description
748	C21	5345-106F041	CAP, MINI ELE 10μ/50V	716	R423	5135-561522	RES, CBN 1/2P 560
748	C22	5345-106F041	CAP, MINI ELE 10μ/50V	716	R424	5135-561522	RES, CBN 1/2P 560
749	C23	5345-107B041	CAP, MINI ELE 100μ/10V	717	△ R425	5102-5605116	RES, FUSE 56
750	C24	5345-105F041	CAP, MINI ELE 1μ/50V	717	△ R426	5102-5605116	RES, FUSE 56
751	C25	5354-683J1HM	CAP, MYL .068μ	717	△ R427	5102-5605116	RES, FUSE 56
751	C26	5354-683J1HM	CAP, MYL .068μ	717	△ R428	5102-5605116	RES, FUSE 56
747	C27	5345-105F0951	CAP, MINI ELE 1μ/50V	718	R429	5135-223522	RES, CBN 1/2P 22K
696	C401	5345-476B0951	CAP, MINI ELE 47μ/10V	718	R430	5135-223522	RES, CBN 1/2P 22K
696	C402	5345-476B0951	CAP, MINI ELE 47μ/10V	718	R431	5135-223522	RES, CBN 1/2P 22K
699	C403	5359-6805851	CAP, PPP 68p	718	R432	5135-223522	RES, CBN 1/2P 22K
698	C405	5345-106C0951	CAP, MINI ELE 10μ/16V	720	R433	5135-152522	RES, CBN 1/2P 1.5K
698	C406	5345-106C0951	CAP, MINI ELE 10μ/16V	720	R434	5135-152522	RES, CBN 1/2P 1.5K
700	C407	5353-050934	CAP, MCA 5p	719	R435	5135-271522	RES, CBN 1/2P 270
700	C408	5353-050934	CAP, MCA 5p	719	R436	5135-271522	RES, CBN 1/2P 270
697	C409	5345-477A0952	CAP, MINI ELE 470μ/6.3V	721	△ R437	5102-8205116	RES, FUSE 82
697	C410	5345-477A0952	CAP, MINI ELE 470μ/6.3V	721	△ R438	5102-8205116	RES, FUSE 82
703	C411	5359-1015851	CAP, PPP 100p	721	△ R439	5102-8205116	RES, FUSE 82
703	C412	5359-1015851	CAP, PPP 100p	721	△ R440	5102-8205116	RES, FUSE 82
704	C413	5345-476G041	CAP, MINI ELE 47μ/63V	722	R441	5135-820522	RES, CBN 1/2P 82
704	C414	5345-476G041	CAP, MINI ELE 47μ/63V	722	R442	5135-820522	RES, CBN 1/2P 82
704	C415	5345-476G041	CAP, MINI ELE 47μ/63V	730	R445/	5275-S040JR27	RES, CEM 5P .27
704	C416	5345-476G041	CAP, MINI ELE 47μ/63V		447		
701	C417	5354-104593	CAP, MYL .1μ	730	R446/	5275-S040JR27	RES, CEM 5P .27
701	C418	5354-104593	CAP, MYL .1μ		448		
701	C419	5354-104593	CAP, MYL .1μ	726	R449	5135-100522	RES, CBN 1/2P 10
701	C420	5354-104593	CAP, MYL .1μ	726	R450	5135-100522	RES, CBN 1/2P 10
705	C421	5345-475D0951	CAP, MINI ELE 4.7μ/25V	731	R451	5171-100571	RES, MTL 1P 10
705	C422	5345-475D0951	CAP, MINI ELE 4.7μ/25V	731	R452	5171-100571	RES, MTL 1P 10
RESISTORS				724	R455	5135-271522	RES, CBN 1/2P 270
753	R21	5135-471522	RES, CBN 1/2P 470	724	R456	5135-271522	RES, CBN 1/2P 270
754	R22	5135-392522	RES, CBN 1/2P 3.9K	725	R457	5135-103522	RES, CBN 1/2P 10K
755	R23	5135-332522	RES, CBN 1/2P 3.3K	725	R458	5135-103522	RES, CBN 1/2P 10K
756	R24	5135-472522	RES, CBN 1/2P 4.7K	723	R459	5135-333522	RES, CBN 1/2P 33K
757	R25	5135-104522	RES, CBN 1/2P 100K	723	R460	5135-333522	RES, CBN 1/2P 33K
758	R26	5135-683522	RES, CBN 1/2P 68K	723	R465	5135-333522	RES, CBN 1/2P 33K
759	R27	5135-333522	RES, CBN 1/2P 33K	723	R466	5135-333522	RES, CBN 1/2P 33K
762	R33	5135-132522	RES, CBN 1/2P 1.3K	TRANSISTORS			
762	R34	5135-132522	RES, CBN 1/2P 1.3K	741	Q21	5611-1309A(R)	XISTOR, PNP R
763	R35	5135-122522	RES, CBN 1/2P 1.2K	742	Q22	5613-3311A(R)	XISTOR, NPN R
763	R36	5135-122522	RES, CBN 1/2P 1.2K	743	Q23	5613-2240(BL)	XISTOR, NPN R
752	R37	5135-331522	RES, CBN 1/2P 330	744	Q24	5611-970(BL)	XISTOR, PNP R
752	R38	5135-331522	RES, CBN 1/2P 330	743	Q27	5613-2240(BL)	XISTOR, NPN R
756	R39	5135-472522	RES, CBN 1/2P 4.7K	743	Q28	5613-2240(BL)	XISTOR, NPN R
756	R40	5135-472522	RES, CBN 1/2P 4.7K	744	Q29	5611-970(BL)	XISTOR, PNP R
757	R41	5135-104522	RES, CBN 1/2P 100K	683	Q401	5611-970(BL)	XISTOR, PNP R
758	R42	5135-683522	RES, CBN 1/2P 68K	683	Q402	5611-970(BL)	XISTOR, PNP R
756	R43	5135-472522	RES, CBN 1/2P 4.7K	683	Q403	5611-970(BL)	XISTOR, PNP R
756	R44	5135-472522	RES, CBN 1/2P 4.7K	683	Q404	5611-970(BL)	XISTOR, PNP R
767	R45	5135-222522	RES, CBN 1/2P 2.2K	681	Q405	5613-2240(BL)	XISTOR, NPN R
711	R401	5135-333522	RES, CBN 1/2P 33K	681	Q406	5613-2240(BL)	XISTOR, NPN R
711	R402	5135-333522	RES, CBN 1/2P 33K	681	Q407	5613-2240(BL)	XISTOR, NPN R
712	R403	5135-331522	RES, CBN 1/2P 330	681	Q408	5613-2240(BL)	XISTOR, NPN R
712	R404	5135-331522	RES, CBN 1/2P 330	686	Q409	5612-646A(C)	XISTOR, PNP A
713	R405	5135-391522	RES, CBN 1/2P 390	686	Q410	5612-646A(C)	XISTOR, PNP A
713	R406	5135-391522	RES, CBN 1/2P 390	685	Q411	5614-666A(C)	XISTOR, NPN A
713	R407	5135-391522	RES, CBN 1/2P 390	685	Q412	5614-666A(C)	XISTOR, NPN A
713	R408	5135-391522	RES, CBN 1/2P 390	687	Q413	5613-945(K)	XISTOR, NPN R
714	R409	5135-152522	RES, CBN 1/2P 1.5K	687	Q414	5613-945(K)	XISTOR, NPN R
714	R410	5135-152522	RES, CBN 1/2P 1.5K	688	Q415	5614-667A(C)	XISTOR, NPN A
714	R411	5135-152522	RES, CBN 1/2P 1.5K	688	Q416	5614-667A(C)	XISTOR, NPN A
714	R412	5135-152522	RES, CBN 1/2P 1.5K	689	Q417	5612-647A(C)	XISTOR, PNP A
715	R413	5135-132522	RES, CBN 1/2P 1.3K	689	Q418	5612-647A(C)	XISTOR, PNP A
715	R414	5135-132522	RES, CBN 1/2P 1.3K	690	Q419	5613-3182(O)	XISTOR, NPN R
716	R415	5135-561522	RES, CBN 1/2P 560	690	Q420	5613-3182(O)	XISTOR, NPN R
716	R416	5135-561522	RES, CBN 1/2P 560	692	Q421	5611-1265(O)	XISTOR, PNP R
716	R417	5135-561522	RES, CBN 1/2P 560	692	Q422	5611-1265(O)	XISTOR, PNP R
716	R418	5135-561522	RES, CBN 1/2P 560	684	Q423	5611-999(F)	XISTOR, PNP R
716	R419	5135-561522	RES, CBN 1/2P 560	684	Q424	5611-999(F)	XISTOR, PNP R
716	R420	5135-561522	RES, CBN 1/2P 560	683	Q425	5611-970(BL)	XISTOR, PNP R
716	R421	5135-561522	RES, CBN 1/2P 560	683	Q426	5611-970(BL)	XISTOR, PNP R
716	R422	5135-561522	RES, CBN 1/2P 560				

Ser.No	Ref. No.	Part No.	Description
DIODES			
764	△ D1	5685-D5SB20	SILICON, BRIG
745	D21	5636-1S2471	DIODE, SWITCH
746	D22	5635-HZ6B1L	DIODE, ZENER
694	D401	5631-1S2473	DIODE, DET
694	D402	5631-1S2473	DIODE, DET

COILS			
707	L401	5991-7165	SPRING COIL
707	L402	5991-7165	SPRING COIL

CONTROLS			
729	VR401	5101-50101930	RES, SEMI FIX 500
729	VR402	5101-50101930	RES, SEMI FIX 500

MISCELLANEOUS			
921	CW401	4163-S0204351	CONNECTOR W/W
923	CW403	4163-0135027	CONNECTOR W/W
924	CW404	4163-0135025	CONNECTOR W/W
925	CW413	4163-0122024	CONNECTOR W/W
926	CW414	4163-0122026	CONNECTOR W/W
966	JL420	4242-R0103141	JUMPER LEAD
770	TM415	4214-11013	TERMINAL
770	TM415L	4214-11013	TERMINAL
770	TM415R	4214-11013	TERMINAL
769	TP401	4214-132	TERMINAL
769	TP402	4214-132	TERMINAL
769	TP403	4214-132	TERMINAL
769	TP404	4214-132	TERMINAL

PCB-6 TONE CONTROL P.C.BOARD

CAPACITORS			
631	C501	5345-226C0951	CAP, MINI ELE 22μ/16V
631	C502	5345-226C0951	CAP, MINI ELE 22μ/16V
629	C503	5345-476C0951	CAP, MINI ELE 47μ/16V
629	C504	5345-476C0951	CAP, MINI ELE 47μ/16V
632	C505	5345-225F0951	CAP, MINI ELE 2.2μ/50V
632	C506	5345-225F0951	CAP, MINI ELE 2.2μ/50V
636	C507	5354-273J1HM	CAP, MYL .027μ
636	C508	5354-273J1HM	CAP, MYL .027μ
635	C509	5354-154593	CAP, MYL .15μ
635	C510	5354-154593	CAP, MYL .15μ
638	C511	5354-682J1HM	CAP, MYL 6800P
638	C512	5354-682J1HM	CAP, MYL 6800P
637	C513	5354-393J1HM	CAP, MYL .039μ
637	C514	5354-393J1HM	CAP, MYL .039μ
630	C515	5345-226C0951	CAP, MINI ELE 22μ/16V
630	C516	5345-226C0951	CAP, MINI ELE 22μ/16V
640	C517	5353-020934	CAP, MCA 2P
640	C518	5353-020934	CAP, MCA 2P
643	C563	5359-1015851	CAP, PPP 100P
643	C564	5359-1015851	CAP, PPP 100P
644	C565	5354-104593	CAP, MYL .1μ
633	C581	5345-337D045	CAP, MINI ELE 330μ/25V
633	C582	5345-337D045	CAP, MINI ELE 330μ/25V
633	C583	5345-337D045	CAP, MINI ELE 330μ/25V
633	C584	5345-337D045	CAP, MINI ELE 330μ/25V

RESISTORS			
651	R501	5135-154522	RES, CBN 1/2P 150K
651	R502	5135-154522	RES, CBN 1/2P 150K
652	R503	5135-182522	RES, CBN 1/2P 1.8K
652	R504	5135-182522	RES, CBN 1/2P 1.8K
653	R505	5135-101522	RES, CBN 1/2P 100
653	R506	5135-101522	RES, CBN 1/2P 100
654	R507	5135-331522	RES, CBN 1/2P 330
654	R508	5135-331522	RES, CBN 1/2P 330
655	R509	5135-274522	RES, CBN 1/2P 270K
655	R510	5135-274522	RES, CBN 1/2P 270K
652	R511	5135-182522	RES, CBN 1/2P 1.8K
652	R512	5135-182522	RES, CBN 1/2P 1.8K
658	R513	5135-331522	RES, CBN 1/2P 330

Ser.No	Ref. No.	Part No.	Description
658	R514	5135-331522	RES, CBN 1/2P 330
657	R515	5135-101522	RES, CBN 1/2P 100
657	R516	5135-101522	RES, CBN 1/2P 100
658	R517	5135-331522	RES, CBN 1/2P 330
658	R518	5135-331522	RES, CBN 1/2P 330
659	R519	5135-221522	RES, CBN 1/2P 220
659	R520	5135-221522	RES, CBN 1/2P 220
660	R521	5135-122522	RES, CBN 1/2P 1.2K
660	R522	5135-122522	RES, CBN 1/2P 1.2K
661	R523	5135-331522	RES, CBN 1/2P 330
661	R524	5135-331522	RES, CBN 1/2P 330
656	R525	5135-473522	RES, CBN 1/2P 47K
656	R526	5135-473522	RES, CBN 1/2P 47K
662	R527	5135-272522	RES, CBN 1/2P 2.7K
662	R528	5135-272522	RES, CBN 1/2P 2.7K
663	R529	5135-153522	RES, CBN 1/2P 15K
663	R530	5135-153522	RES, CBN 1/2P 15K
658	R531	5135-331522	RES, CBN 1/2P 330
658	R532	5135-331522	RES, CBN 1/2P 330
656	R533	5135-473522	RES, CBN 1/2P 47K
656	R534	5135-473522	RES, CBN 1/2P 47K
651	R535	5135-154522	RES, CBN 1/2P 150K
651	R536	5135-154522	RES, CBN 1/2P 150K
656	R547	5135-473522	RES, CBN 1/2P 47K
656	R548	5135-473522	RES, CBN 1/2P 47K
666	R561	5135-105522	RES, CBN 1/2P 1M
666	R562	5135-105522	RES, CBN 1/2P 1M
667	R563	5135-331522	RES, CBN 1/2P 330
667	R564	5135-331522	RES, CBN 1/2P 330
736	R565	5135-224522	RES, CBN 1/2P 220K
735	R566	5135-104522	RES, CBN 1/2P 100K
737	R567	5135-223522	RES, CBN 1/2P 22K
738	R568	5135-153522	RES, CBN 1/2P 15K
668	R569	5135-104522	RES, CBN 1/2P 100K
666	R570	5135-105522	RES, CBN 1/2P 1M
739	R571	5135-334522	RES, CBN 1/2P 330K
740	R572	5135-100522	RES, CBN 1/2P 10
740	R573	5135-100522	RES, CBN 1/2P 10
665	△ R581	5102-1215116	RES, FUSE 120
665	△ R582	5102-1215116	RES, FUSE 120
664	R583	5135-562522	RES, CBN 1/2P 5.6K
664	R584	5135-562522	RES, CBN 1/2P 5.6K

TRANSISTORS

621	Q501	5613-2320L(F)	XISTOR, NPN R
621	Q502	5613-2320L(F)	XISTOR, NPN R
623	Q503	5611-999(F)	XISTOR, PNP R
623	Q504	5611-999(F)	XISTOR, PNP R
622	Q505	5611-999L(F)	XISTOR, PNP R
622	Q506	5611-999L(F)	XISTOR, PNP R
624	Q507	5613-2320(F)	XISTOR, NPN R
624	Q508	5613-2320(F)	XISTOR, NPN R
624	Q509	5613-2320(F)	XISTOR, NPN R
624	Q510	5613-2320(F)	XISTOR, NPN R
649	Q561	5616-2SK364BL	FET, N-CH
649	Q562	5616-2SK364BL	FET, N-CH
650	Q563	5611-UN4112	XISTOR, PNP R
650	Q564	5611-UN4112	XISTOR, PNP R
649	Q565	5616-2SK364BL	FET, N-CH
625	Q581	5614-667(C)	XISTOR, NPN A
626	Q582	5612-647(C)	XISTOR, PNP A

DIODES

628	D561	5631-1S2473	DIODE, DET
627	D581	5635-HZ15-2L	DIODE, ZENER
627	D582	5635-HZ15-2L	DIODE, ZENER
628	D583	5631-1S2473	DIODE, DET

CONTROLS

900	VR501/ 502	5113-S0906503	RES, V CBN 16 50K
894	VR505/ 506	5113-S0904104	RES, V CBN 16 100K

Ser.No	Ref. No.	Part No.	Description
897	VR507/ 508	5113-S0905503	RES, V CBN 16 50K

MISCELLANEOUS

942	CN401	4443-0401141	CONNECTOR
933	CW105	4163-S0203301	CONNECTOR W/W
922	CW402	4163-S0202401	CONNECTOR W/W
645	LUG	4211-4	LUG
647	TM416	4214-11013	TERMINAL

PCB-7 VOLUME P.C.BOARD**CAPACITORS**

675	C541	5354-104593	CAP, MYL .1 μ
675	C542	5354-104593	CAP, MYL .1 μ
646	C543	5354-823J1HM	CAP, MYL .082 μ
646	C544	5354-823J1HM	CAP, MYL .082 μ

RESISTORS

672	R541	5135-105522	RES, CBN 1/2P 1M
673	R543	5135-273522	RES, CBN 1/2P 27K
673	R544	5135-273522	RES, CBN 1/2P 27K
674	R545	5135-472522	RES, CBN 1/2P 4.7K
674	R546	5135-472522	RES, CBN 1/2P 4.7K

TRANSISTORS

678	Q541	5616-2SK364BL	FET, N-CH
678	Q542	5616-2SK364BL	FET, N-CH

DIODES

679	D541	5631-1S2473	DIODE, DET
679	D542	5631-1S2473	DIODE, DET

CONTROLS

891	VR503/ 504	6161-00701	VR BLOCK
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MISCELLANEOUS

934	CW504	4163-S0203101	CONNECTOR W/W
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PCB-8 PRIMARY P.C.BOARD**CAPACITOR**

787	Δ C1	5352-S010M103	CAP, MTL .01 μ
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RESISTORS

788	Δ R1	5135-335522	RES, CBN 1/2P 3.3M
794	R11	5135-103522	RES, CBN 1/2P 10K
795	R12	5135-332522	RES, CBN 1/2P 3.3K
799	R14	5135-472522	RES, CBN 1/2P 4.7K
796	R15	5135-331522	RES, CBN 1/2P 330
797	R16	5135-221522	RES, CBN 1/2P 220
798	R17	5135-221522	RES, CBN 1/2P 220

TRANSISTORS

791	Q11	5614-667(C)	XISTOR, NPN A
792	Q12	5613-3311A(R)	XISTOR, NPN R
792	Q13	5613-3311A(R)	XISTOR, NPN R
780	Q14	5613-UN4212	XISTOR, NPN R

DIODES

793	D11	5631-1S2473	DIODE, DET
793	D12	5631-1S2473	DIODE, DET
793	D13	5631-1S2473	DIODE, DET
793	D16	5631-1S2473	DIODE, DET

MISCELLANEOUS

784	Δ FH1	4472-04501	HOLDER, FUSE
785	Δ FH2	4472-04501	HOLDER, FUSE
961	JL11	4242-R0404351	JUMPER LEAD
962	JL12	4242-R0406651	JUMPER LEAD
789	Δ RY1	4331-01702	RELAY, DC
916	Δ SO1	4474-02901	SOCKET
790	TM1	4214-122	TERMINAL
790	TM2	4214-122	TERMINAL

Ser.No	Ref. No.	Part No.	Description
790	TM3	4214-122	TERMINAL
790	TM4	4214-122	TERMINAL

PCB-9 SECONDARY P.C.BOARD**CAPACITORS**

782	C7	5345-227F041	CAP, MINI ELE 220 μ /50V
782	C8	5345-227F041	CAP, MINI ELE 220 μ /50V
772	C9	5362-103048	CAP, CER .01 μ
772	C10	5362-103048	CAP, CER .01 μ
511	C51	5345-228D045	CAP, MINI ELE 2200 μ /25V
514	C54	5361-473ZF	CAP, CER .047 μ
514	C55	5361-473ZF	CAP, CER .047 μ

DIODES

781	Δ D2	5685-D5SB20	SILICON, BRIG
505	Δ D51	5685-S1VB10	SILICON, BRIG

MISCELLANEOUS

943	CN100	4443-0201141	CONNECTOR
932	CW102	4163-S0202751	CONNECTOR W/W
928	CW408	4163-0125026	CONNECTOR W/W
928	CW409	4163-0125026	CONNECTOR W/W
929	CW410	4163-0125024	CONNECTOR W/W
930	CW411	4163-0125025	CONNECTOR W/W
927	CW412	4163-0125027	CONNECTOR W/W
783	Δ S2	4431-S2102102	SWITCH, PUSH
536	Δ FH3	4472-04501	HOLDER, FUSE
537	Δ FH4	4472-04502	HOLDER, FUSE

PCB-10 SPEAKER SWITCH P.C.BOARD**MISCELLANEOUS**

965	JL401	4242-044005	JUMPER LEAD
903	S3	4411-00305103	SWITCH, ROTRY

PCB-11 HEAD PHONE P.C.BOARD**RESISTORS**

732	R461	5135-102522	RES, CBN 1/2P 1K
732	R462	5135-102522	RES, CBN 1/2P 1K
732	R463	5135-102522	RES, CBN 1/2P 1K
732	R464	5135-102522	RES, CBN 1/2P 1K

MISCELLANEOUS

956	CN418	4443-030185	CONNECTOR
911	Δ J1	4451-51501	JACK, 1P

PCB-12 SUB WOOFER VR P.C.BOARD**CAPACITORS**

702	C591	5345-S06BM107	CAP, MINI ELE 100 μ /10V
702	C592	5345-S06BM107	CAP, MINI ELE 100 μ /10V
702	C593	5345-S06BM107	CAP, MINI ELE 100 μ /10V
702	C594	5345-S06BM107	CAP, MINI ELE 100 μ /10V

RESISTORS

733	R591	5135-822522	RES, CBN 1/2P 8.2K
733	R592	5135-822522	RES, CBN 1/2P 8.2K
734	R593	5135-122522	RES, CBN 1/2P 1.2K
734	R594	5135-122522	RES, CBN 1/2P 1.2K

CONTROLS

908	VR591/ 592	5113-50251122	RES, V CBN 16 5K
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MISCELLANEOUS

963	JL402	4242-R0103800	JUMPER LEAD
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Ser.No	Ref. No.	Part No.	Description
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PCB-13 SPEAKER TERMINAL P.C.BOARD**MISCELLANEOUS**

915	△ TM402	4214-235	TERMINAL
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PCB-14 VOLUME INDICATOR P.C.BOARD**DIODES**

889	D15	5637-S2410E1	LED
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MISCELLANEOUS

948	CW15	4163-01524002	CONNECTOR W/W
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PCB-15 FRONT P.C.BOARD**CAPACITORS**

487	C708	5361-223Z921	CAP, CER .022μ
488	C709	5345-476D041	CAP, MINI ELE 47μ/25V
462	C711	5361-300JCH	CAP, CER 30p
462	C712	5361-300JCH	CAP, CER 30p
457	C713	5345-225F041	CAP, MINI ELE 2.2μ/50V
886	C821	5354-104593	CAP, MYL, 1μ
885	C822	5345-475F041	CAP, MINI ELE 4.7μ/50V
886	C823	5354-104593	CAP, MYL, 1μ
885	C824	5345-475F041	CAP, MINI ELE 4.7μ/50V

RESISTORS

491	R719	5232-104J16P	RES, CBN 1/6P 100K
492	R721	5232-472J16P	RES, CBN 1/6P 4.7K
475	R722	5232-222J16P	RES, CBN 1/6P 2.2K
475	R725	5232-222J16P	RES, CBN 1/6P 2.2K
491	R735	5232-104J16P	RES, CBN 1/6P 100K
490	R754	5232-102J16P	RES, CBN 1/6P 1K
490	R755	5232-102J16P	RES, CBN 1/6P 1K
490	R756	5232-102J16P	RES, CBN 1/6P 1K
490	R757	5232-102J16P	RES, CBN 1/6P 1K
490	R758	5232-102J16P	RES, CBN 1/6P 1K
490	R759	5232-102J16P	RES, CBN 1/6P 1K
490	R760	5232-102J16P	RES, CBN 1/6P 1K
486	R767	5232-473J16P	RES, CBN 1/6P 47K
859	R801	5135-681522	RES, CBN 1/2P 680
859	R802	5135-681522	RES, CBN 1/2P 680
859	R803	5135-681522	RES, CBN 1/2P 680
859	R804	5135-681522	RES, CBN 1/2P 680
859	R805	5135-681522	RES, CBN 1/2P 680
859	R806	5135-681522	RES, CBN 1/2P 680
859	R807	5135-681522	RES, CBN 1/2P 680
857	R808	5135-472522	RES, CBN 1/2P 4.7K
857	R809	5135-472522	RES, CBN 1/2P 4.7K
857	R810	5135-472522	RES, CBN 1/2P 4.7K
858	R811	5135-102522	RES, CBN 1/2P 1K
858	R812	5135-102522	RES, CBN 1/2P 1K
858	R813	5135-102522	RES, CBN 1/2P 1K
858	R814	5135-102522	RES, CBN 1/2P 1K
858	R815	5135-102522	RES, CBN 1/2P 1K
858	R816	5135-102522	RES, CBN 1/2P 1K
858	R817	5135-102522	RES, CBN 1/2P 1K
857	R818	5135-472522	RES, CBN 1/2P 4.7K
857	R819	5135-472522	RES, CBN 1/2P 4.7K
857	R820	5135-472522	RES, CBN 1/2P 4.7K
857	R821	5135-472522	RES, CBN 1/2P 4.7K
859	R822	5135-681522	RES, CBN 1/2P 680
490	R823	5232-102J16P	RES, CBN 1/6P 1K
859	R824	5135-681522	RES, CBN 1/2P 680
857	R825	5135-472522	RES, CBN 1/2P 4.7K
856	R826	5135-104522	RES, CBN 1/2P 100K
887	R827	5135-822522	RES, CBN 1/2P 8.2K
856	R828	5135-104522	RES, CBN 1/2P 100K
887	R829	5135-822522	RES, CBN 1/2P 8.2K
857	R830	5135-472522	RES, CBN 1/2P 4.7K
848	R838	5135-471522	RES, CBN 1/2P 470

Ser.No	Ref. No.	Part No.	Description
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858	R839	5135-102522	RES, CBN 1/2P 1K
858	R840	5135-102522	RES, CBN 1/2P 1K
830	R857	5232-472J16P	RES, CBN 1/6P 4.7K
830	R858	5232-472J16P	RES, CBN 1/6P 4.7K

INTEGRATED CIRCUITS

441	IC701	5654-T9301-20	IC, DIGITAL
883	IC801	5654-TC4013BP	IC, DIGITAL

TRANSISTORS

852	Q801	5611-1309A(R)	XISTOR, PNP R
852	Q802	5611-1309A(R)	XISTOR, PNP R
852	Q803	5611-1309A(R)	XISTOR, PNP R
852	Q804	5611-1309A(R)	XISTOR, PNP R
852	Q805	5611-1309A(R)	XISTOR, PNP R
852	Q806	5611-1309A(R)	XISTOR, PNP R
852	Q807	5611-1309A(R)	XISTOR, PNP R
852	Q808	5611-1309A(R)	XISTOR, PNP R
851	Q809	5613-3311A(R)	XISTOR, NPN R
841	Q820	5611-UN4112	XISTOR, PNP R

DIODES

451	D701	5631-1S2473	DIODE, DET
451	D702	5631-1S2473	DIODE, DET
451	D703	5631-1S2473	DIODE, DET
451	D704	5631-1S2473	DIODE, DET
451	D705	5631-1S2473	DIODE, DET
451	D706	5631-1S2473	DIODE, DET
451	D707	5631-1S2473	DIODE, DET
451	D708	5631-1S2473	DIODE, DET
451	D709	5631-1S2473	DIODE, DET
451	D710	5631-1S2473	DIODE, DET
451	D711	5631-1S2473	DIODE, DET
485	D713	5631-1SS133	DIODE, DET
884	D730	5631-1S2473	DIODE, DET
837	D822	5631-1SS133	DIODE, DET
837	D823	5631-1SS133	DIODE, DET
837	D824	5631-1SS133	DIODE, DET
837	D825	5631-1SS133	DIODE, DET
837	D826	5631-1SS133	DIODE, DET
837	D827	5631-1SS133	DIODE, DET
837	D828	5631-1SS133	DIODE, DET
837	D829	5631-1SS133	DIODE, DET
853	D831	5637-S2410E1	LED
853	D832	5637-S2410E1	LED
853	D833	5637-S2410E1	LED
853	D834	5637-S2410E1	LED
853	D835	5637-S2410E1	LED
853	D836	5637-S2410E1	LED
853	D837	5637-S2410E1	LED
854	D841	5637-S2210S1	LED
854	D842	5637-S2210S1	LED
854	D843	5637-S2210S1	LED
854	D844	5637-S2210S1	LED
854	D845	5637-S2210S1	LED
854	D846	5637-S2210S1	LED
854	D847	5637-S2210S1	LED
853	D851	5637-S2410E1	LED
853	D852	5637-S2410E1	LED
884	D853	5631-1S2473	DIODE, DET
884	D854	5631-1S2473	DIODE, DET

MISCELLANEOUS

463	CC701	5213-S0207221	C COMPOSITE 220Px7
540	CN101B	4443-05401019	CONNECTOR
860	CN804A	4443-05501021	CONNECTOR
931	CW100	4163-S0202401	CONNECTOR W/W
531	FL701	5722-057	TUBE DISPLAY
555	△ RCV1	6143-00802	RECEIVER BLOCK
534	S11	4437-00603	SWITCH, PU-TC
534	S12	4437-00603	SWITCH, PU-TC
534	S13	4437-00603	SWITCH, PU-TC
534	S14	4437-00603	SWITCH, PU-TC

Ser.No	Ref. No.	Part No.	Description
534	S15	4437-00603	SWITCH, PU-TC
534	S16	4437-00603	SWITCH, PU-TC
534	S17	4437-00603	SWITCH, PU-TC
534	S18	4437-00603	SWITCH, PU-TC
533	S19	4437-00604	SWITCH, PU-TC
533	S20	4437-00604	SWITCH, PU-TC
533	S21	4437-00604	SWITCH, PU-TC
533	S22	4437-00604	SWITCH, PU-TC
533	S23	4437-00604	SWITCH, PU-TC
534	S24	4437-00603	SWITCH, PU-TC
534	S25	4437-00603	SWITCH, PU-TC
855	S31	4437-00901	SWITCH, PU-TC
855	S32	4437-00901	SWITCH, PU-TC
855	S33	4437-00901	SWITCH, PU-TC
855	S34	4437-00901	SWITCH, PU-TC
855	S35	4437-00901	SWITCH, PU-TC
855	S36	4437-00901	SWITCH, PU-TC
855	S37	4437-00901	SWITCH, PU-TC
855	S41	4437-00901	SWITCH, PU-TC
855	S42	4437-00901	SWITCH, PU-TC
855	S43	4437-00901	SWITCH, PU-TC
855	S44	4437-00901	SWITCH, PU-TC
855	S45	4437-00901	SWITCH, PU-TC
855	S46	4437-00901	SWITCH, PU-TC
855	S47	4437-00901	SWITCH, PU-TC
855	S51	4437-00901	SWITCH, PU-TC
855	S52	4437-00901	SWITCH, PU-TC
449	X701	5691-00720027	XTAL, OSC
554	LUG	4211-4	LUG

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

470 μ : 470 μ F
 6800p : 6800pF
 .047 μ : 0.047 μ F

RESISTORS

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

TRANSISTORS

XISTOR : Transistor
 FET : Field Effect Transistor

CONTROLS

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

NOTE



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

PCB-16 POWER SWITCH P.C. BOARD

MISCELLANEOUS

944	CN11	4443-040185	CONNECTOR
964	JL13	4242-R0103101	JUMPER LEAD
906	S1	4431-A027610	SWITCH, PUSH

PCB-18 POWER INDICATOR P.C. BOARD

DIODES

888	D14	5637-GL3ED8	LED
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CHASSIS MISCELLANEOUS

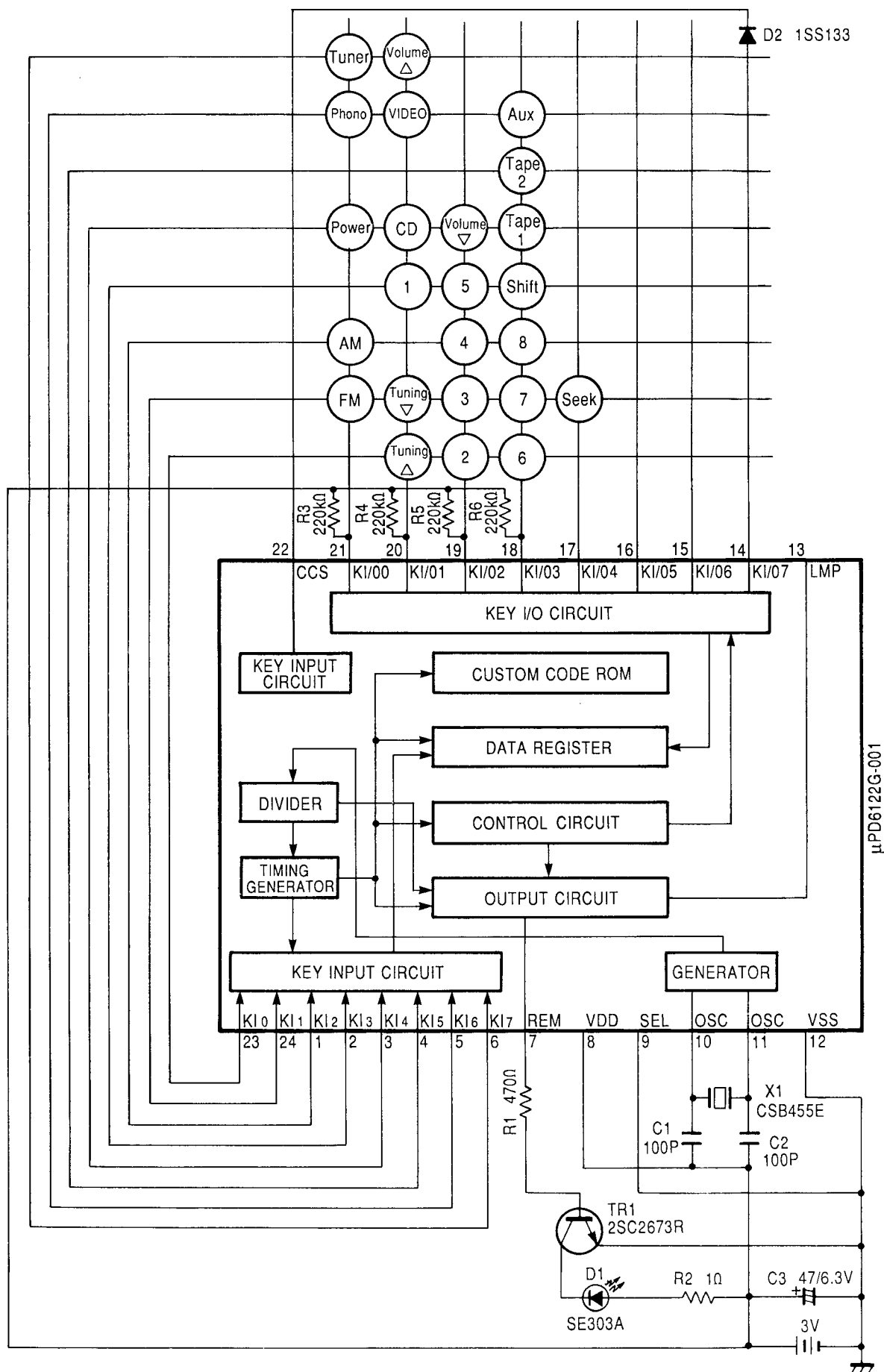
MISCELLANEOUS

786	Δ F1	5732-322031	FUSE
535	Δ F2	5732-162031	FUSE
543	JL101	4242-S0319131	JUMPER LEAD
868	JL804	4242-S0321151	JUMPER LEAD
917	Δ P1	4161-71151	CORD W/PLUG
771	Δ T1	5584-S9101	XFORMER, POWER

PACKAGE PARTS LIST

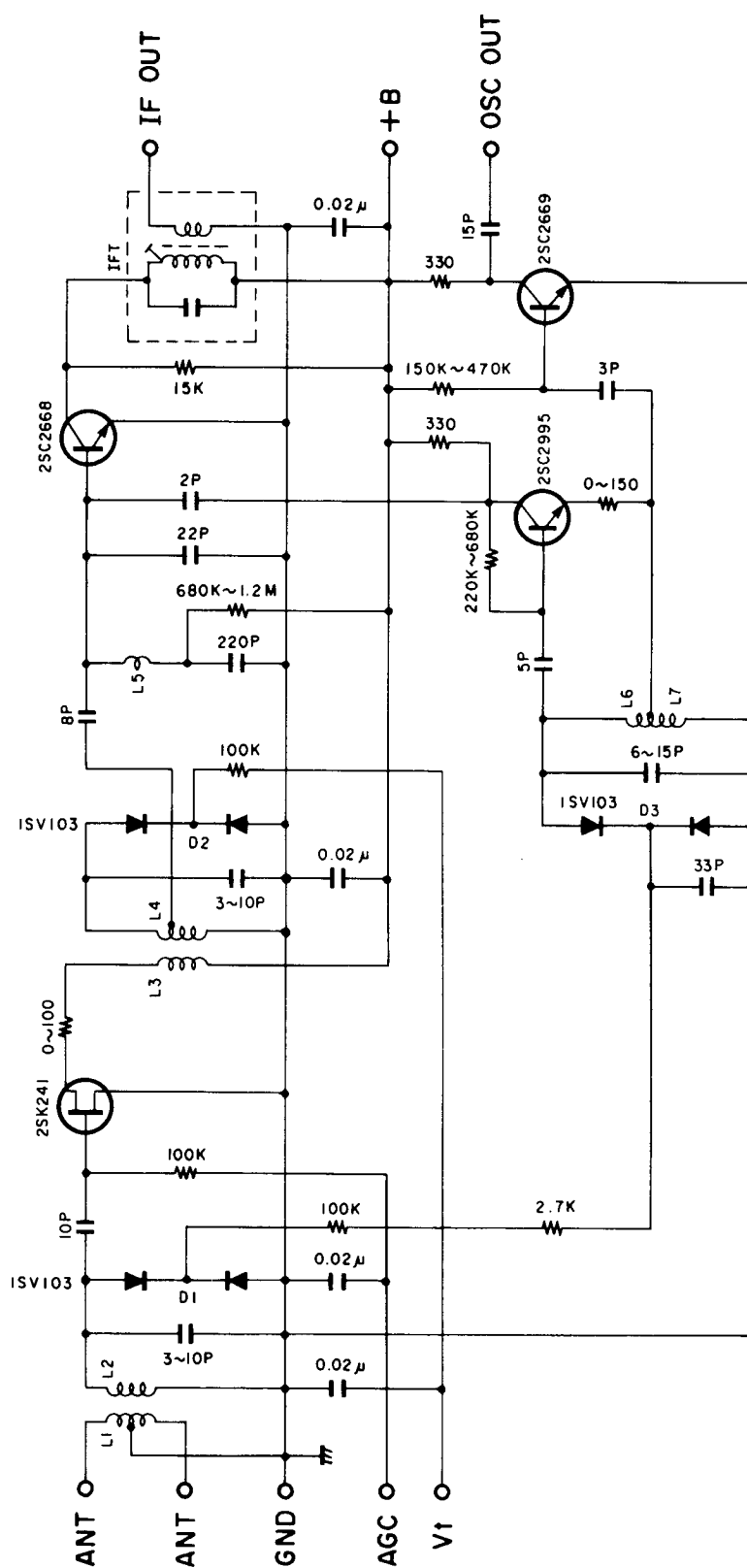
111		1221-28015	CARTON BOX UA
111		1221-28016	CARTON BOX BK
112		1222-7362	CUSHION
113		1222-7365	CUSHION
116		1223-R0120055	SOFT SHEET
117		1241-R0123350	POLYETHY BAG, IB
118		1241-R0160600	POLYETHY BAG, SET
119		1111-J30339	OWNER GUIDE, IB
120		1113-717004	OWNER CARD, REPLY CARD
121		1119-047	ATTACH SHEET, WARRANTY
122		1119-01201	ATTACH SHEET, IMPORT SAFETY
123		1119-0137	ATTACH SHEET
381	L251	5911-266	ANT COIL, BC (AM LOOP ANT)
548		1397-6	T FEEDER ANT (FM)
890		6142-02704	CONT BLOCK (COMMANDER)
881		4191-0355	BATTERY, DRY

INFRARED REMOTE CONTROL SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM (1)

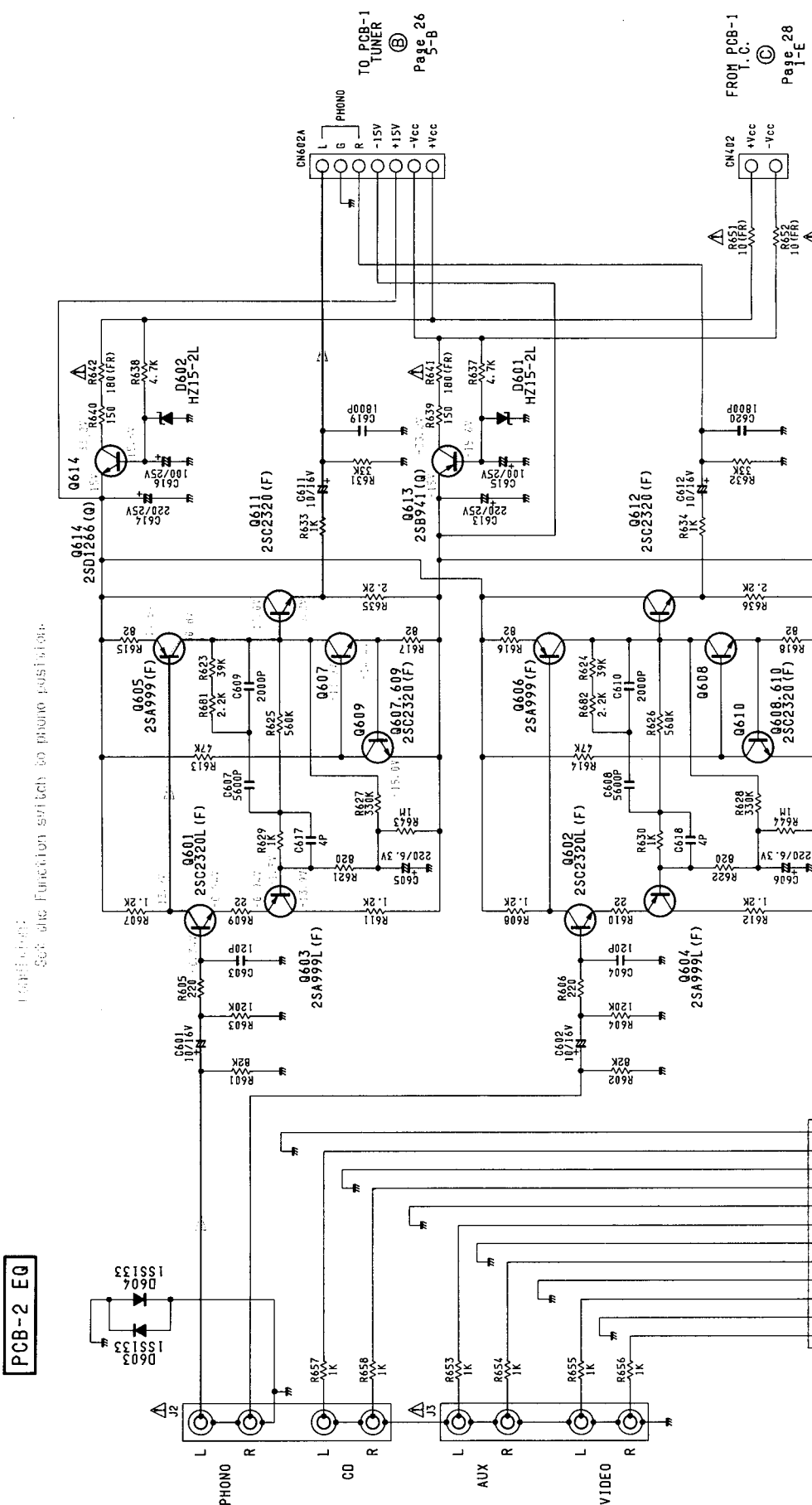
(FM TUNER PACK SECTION)



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

SCHEMATIC DIAGRAM (2)

(PHONO EQUALIZER AMP SECTION)



NOTE:

1. ALL RESISTANCE VALUES ARE IN Ω .
2. ALL CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE NOTED. $P=\mu F$.
3. ... V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
4. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

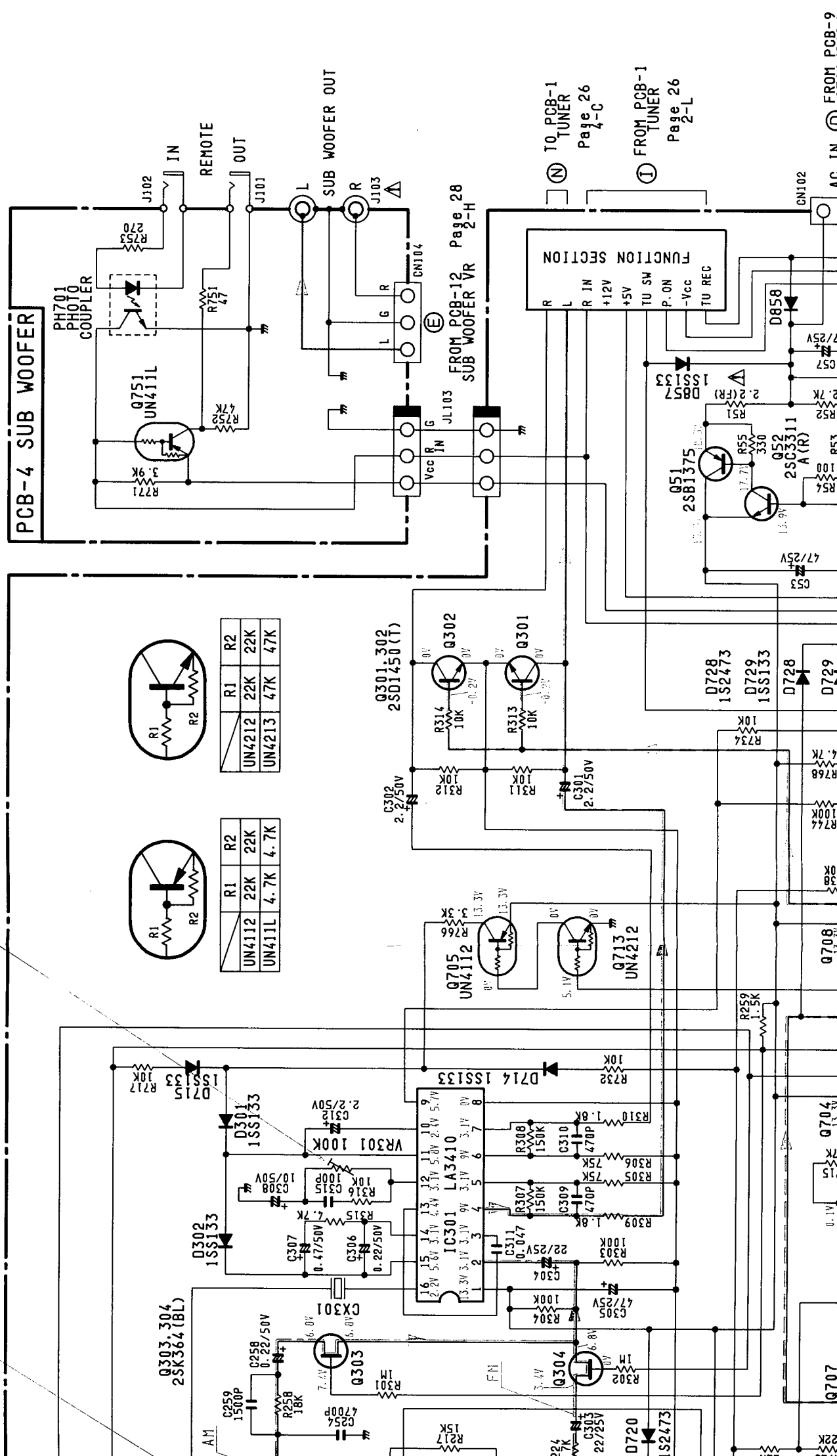
TO PCB-1
TUNERPage 26
6-B

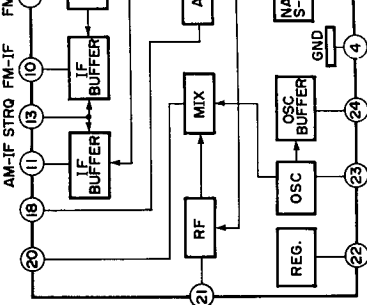
itions:
FM mode by pressing the 'FM' button.
Set the Seek-Stereo switch to off (put out seek indicator) position.
Set the Function switch to tuner position.

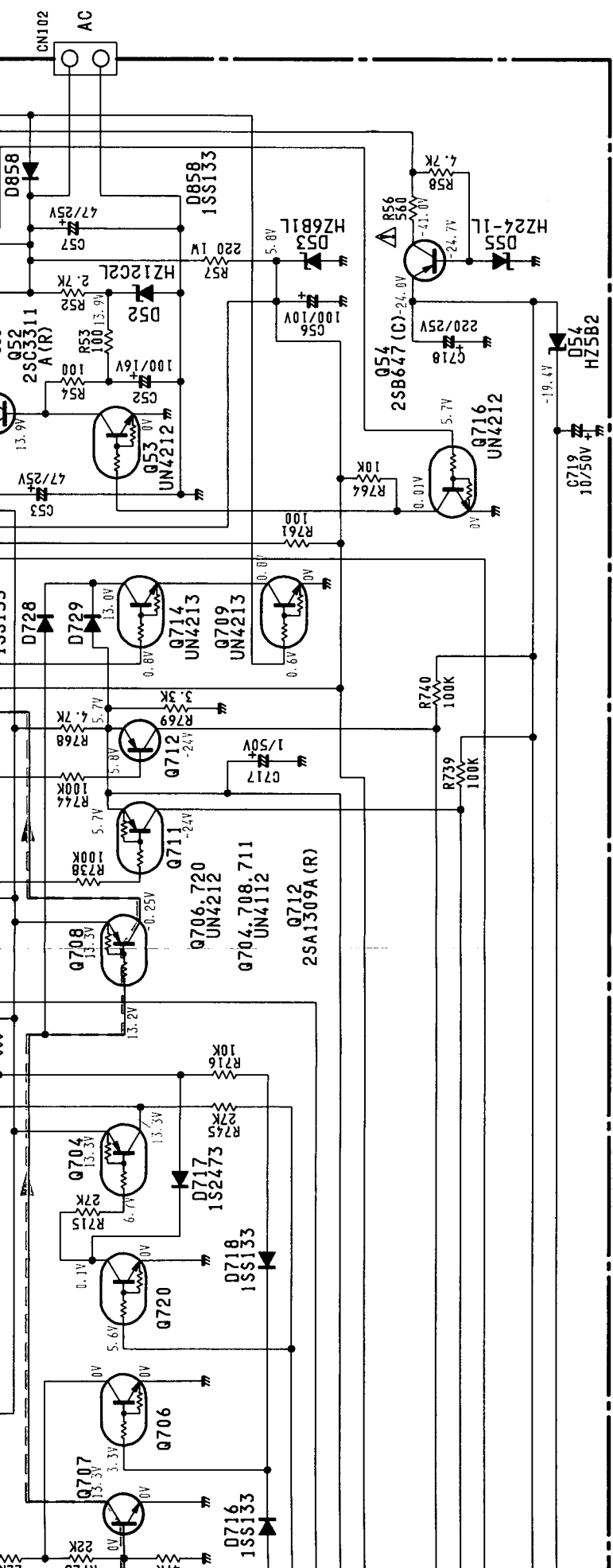
- NOTE:
1. ALL RESISTANCE VALUES ARE IN Ω .
K Ω =1000 Ω , M Ω =1000K Ω .
 2. THE WATTAGE OF RESISTORS IS 1/4W UNLESS OTHERWISE NOTED.
 3. ALL CAPACITANCE VALUES ARE IN μ F UNLESS OTHERWISE NOTED. P= μ F.
 4. ... V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
 5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

MUTING LEVEL ADJ.

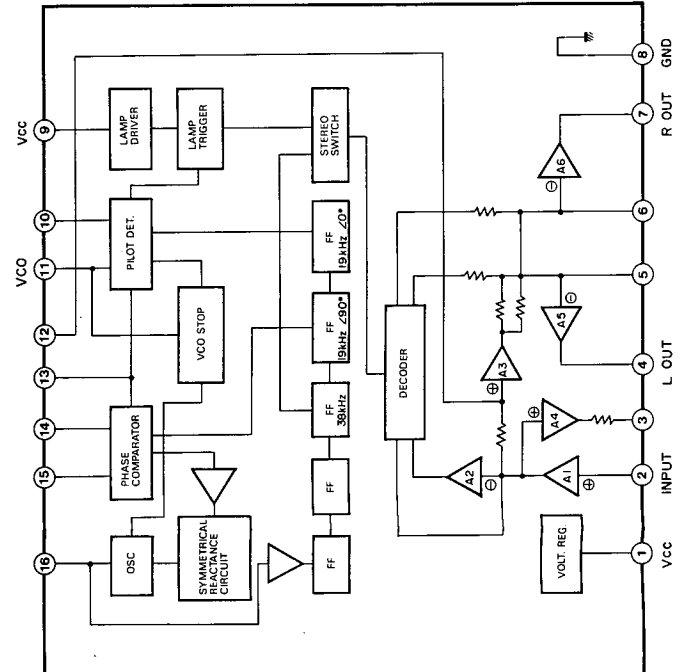
SEPARATION ADJ.



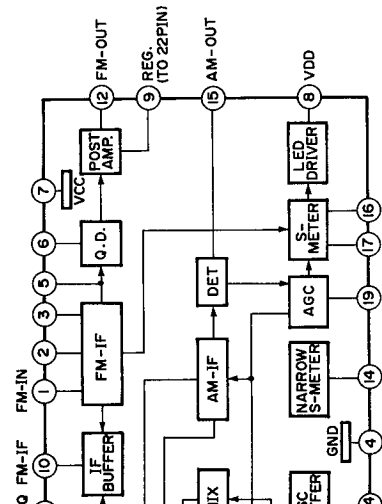




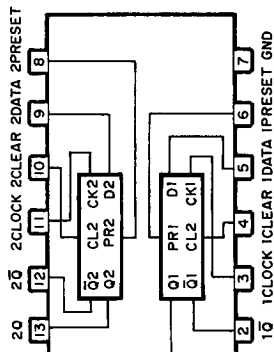
IC301 : LA3410
FM PLL MPX



IC1 : LA1266
AM IF AMP. and FM DET.



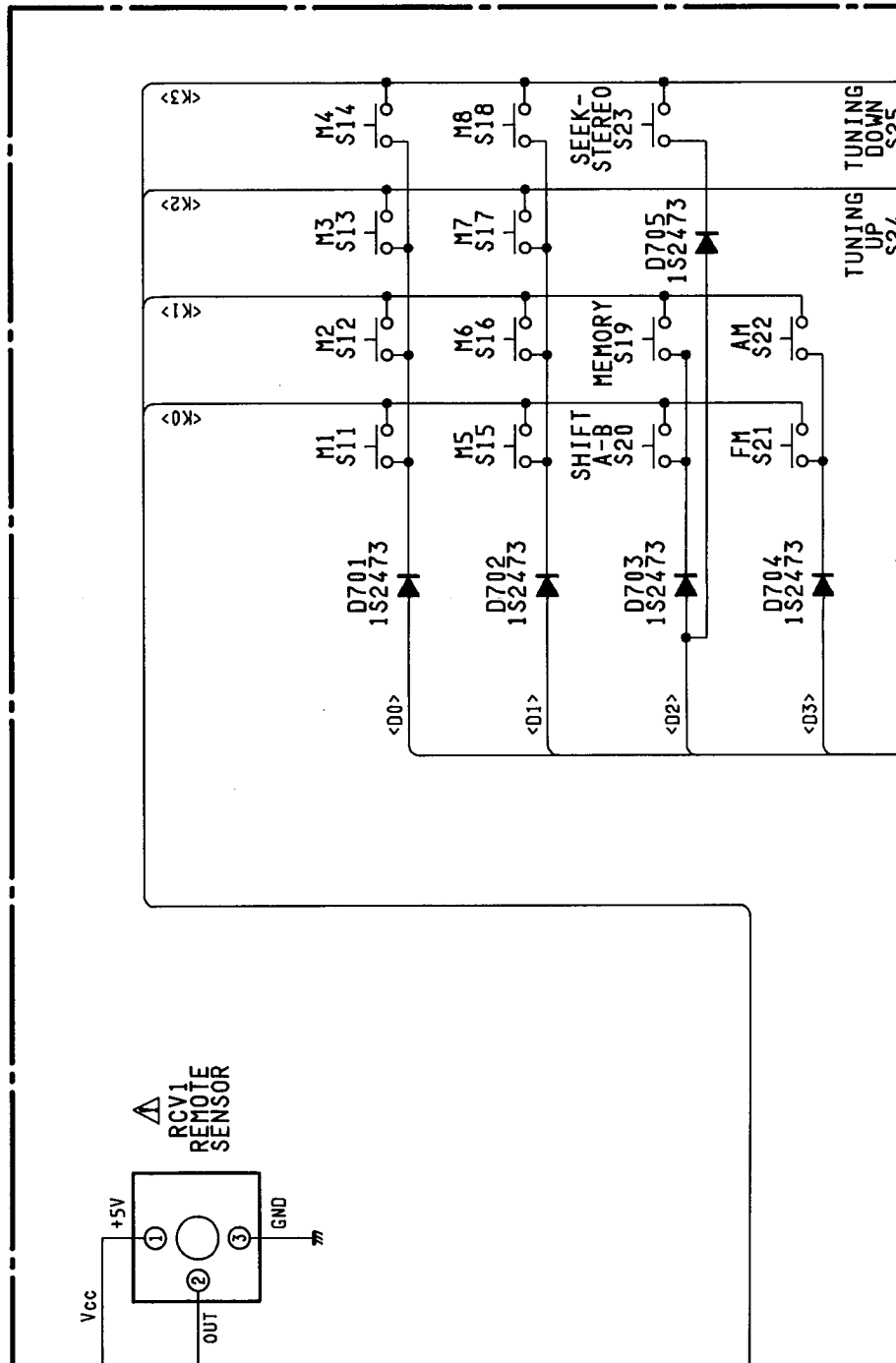
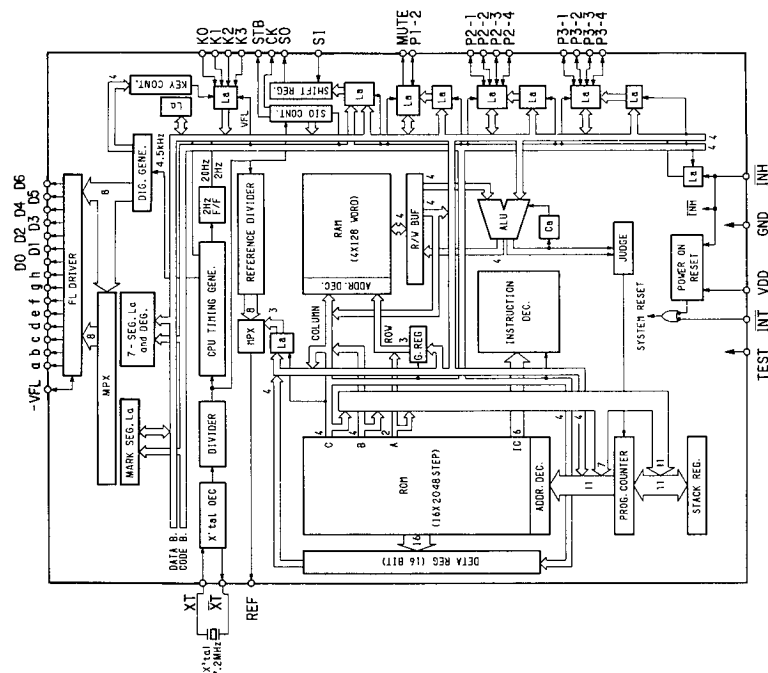
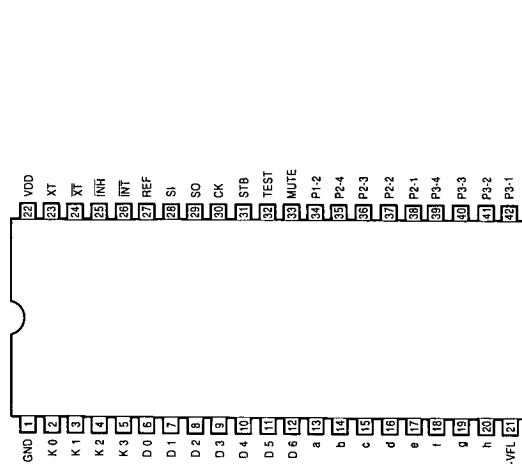
: TC4013BP
/STEREO and LOUDNESS CONTROL

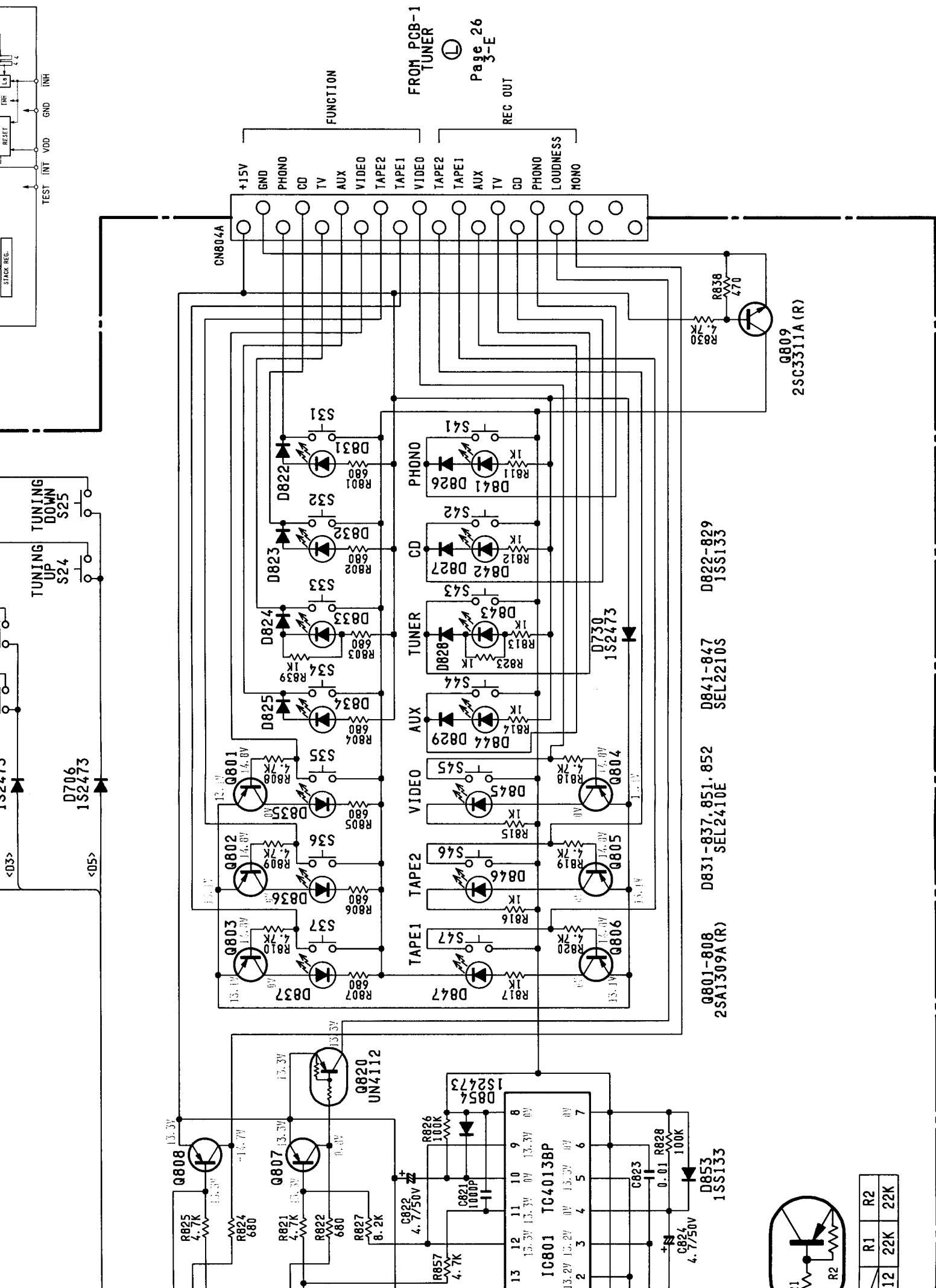


NOTE:

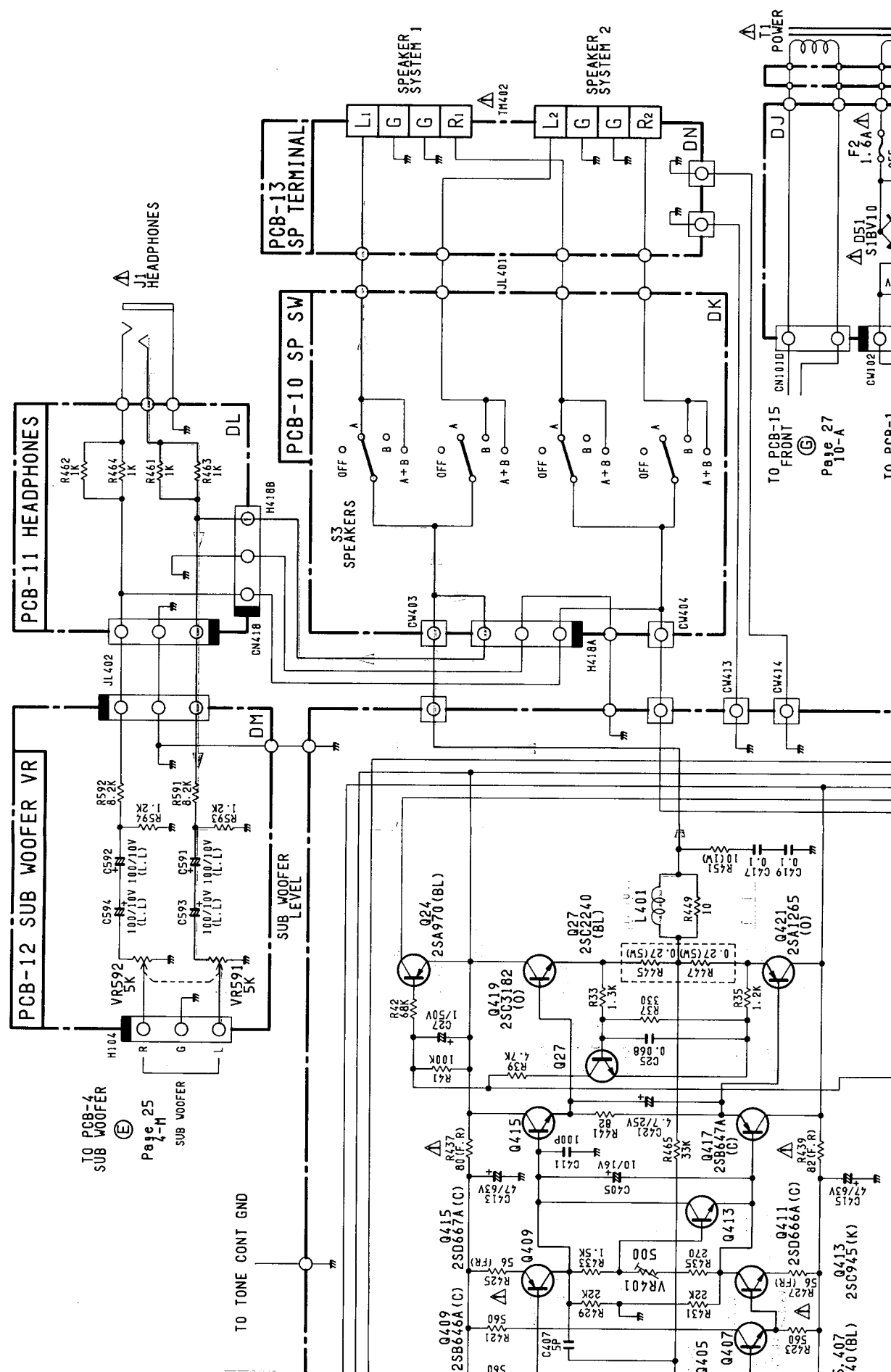
1. ALL RESISTANCES VALUES ARE IN Ω .
K Ω =1000 Ω , M Ω =1000K Ω .
2. THE WATTAGE OF RESISTORS IS 1/4W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μ F UNLESS OTHERWISE NOTED. P= μ F.
4. ... V-DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS, THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

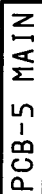
IC701 : T9301AN-020
FL DRIVER and PLL CONTROL





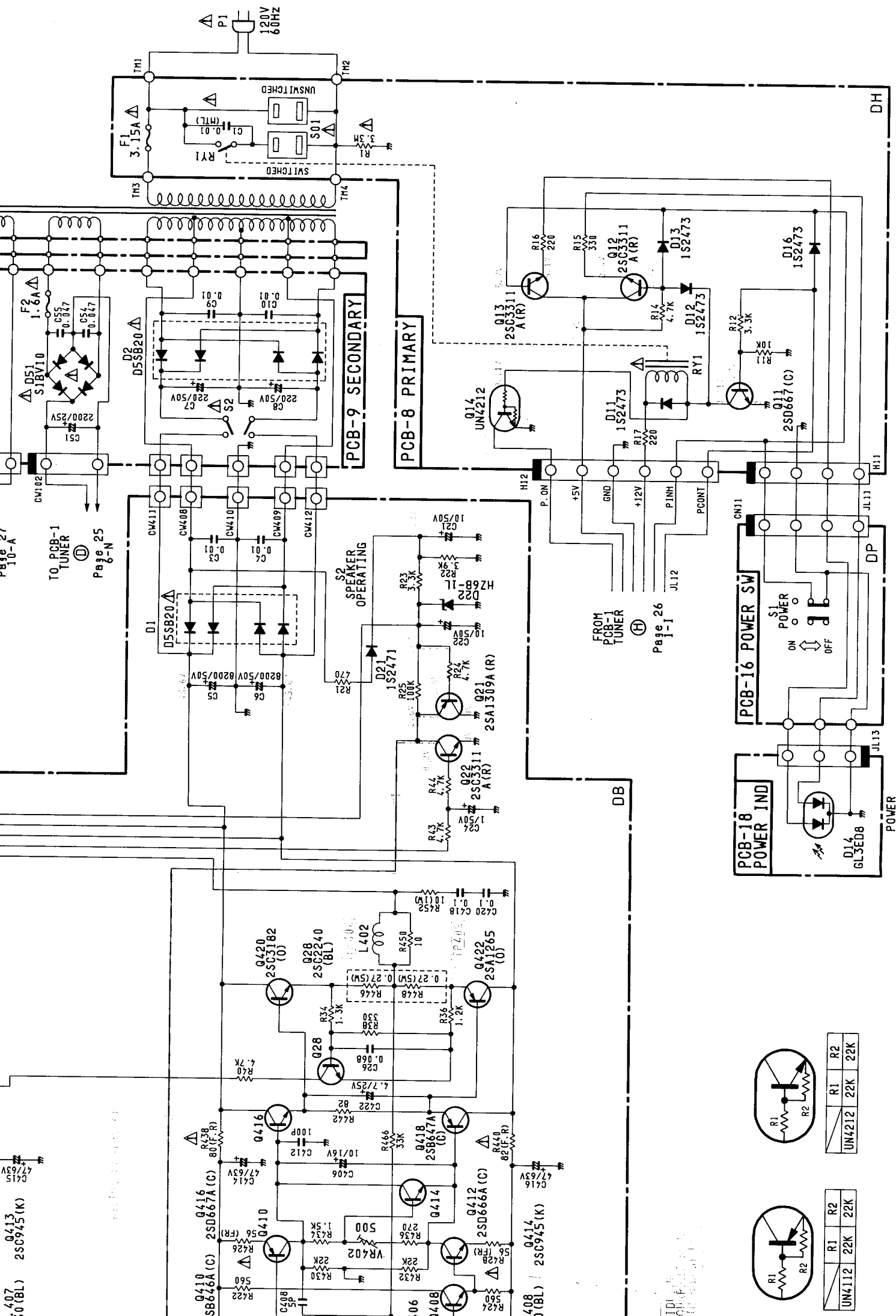
in the
position
switch in
position.



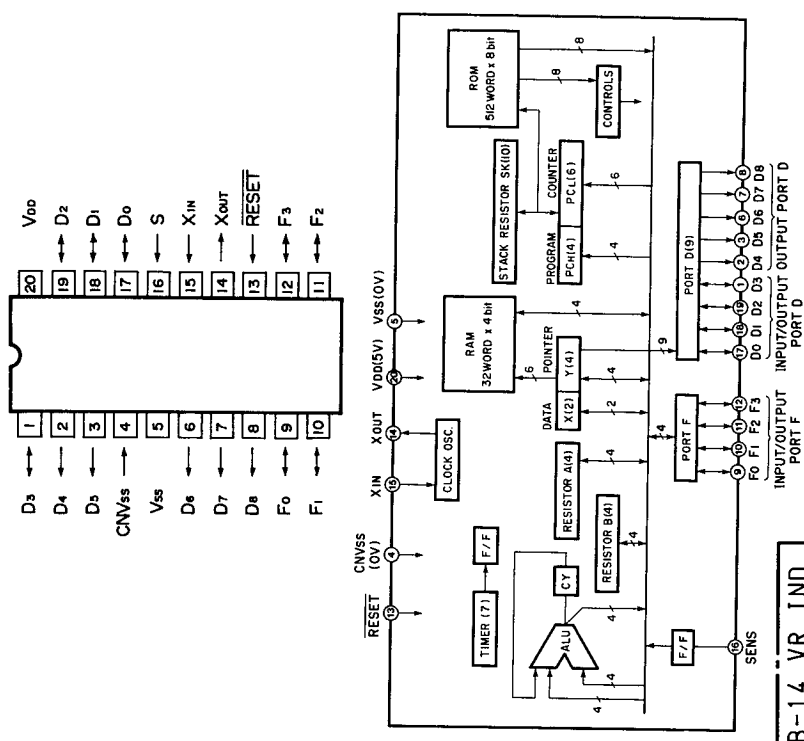
Page 26
5-L

2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μ F UNLESS OTHERWISE NOTED. P= μ F.
4. ... V-DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.

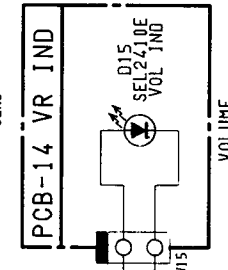
4.DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS, THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.



IC808 : M50761-281P
1st REMOTE CONTROL DECODER

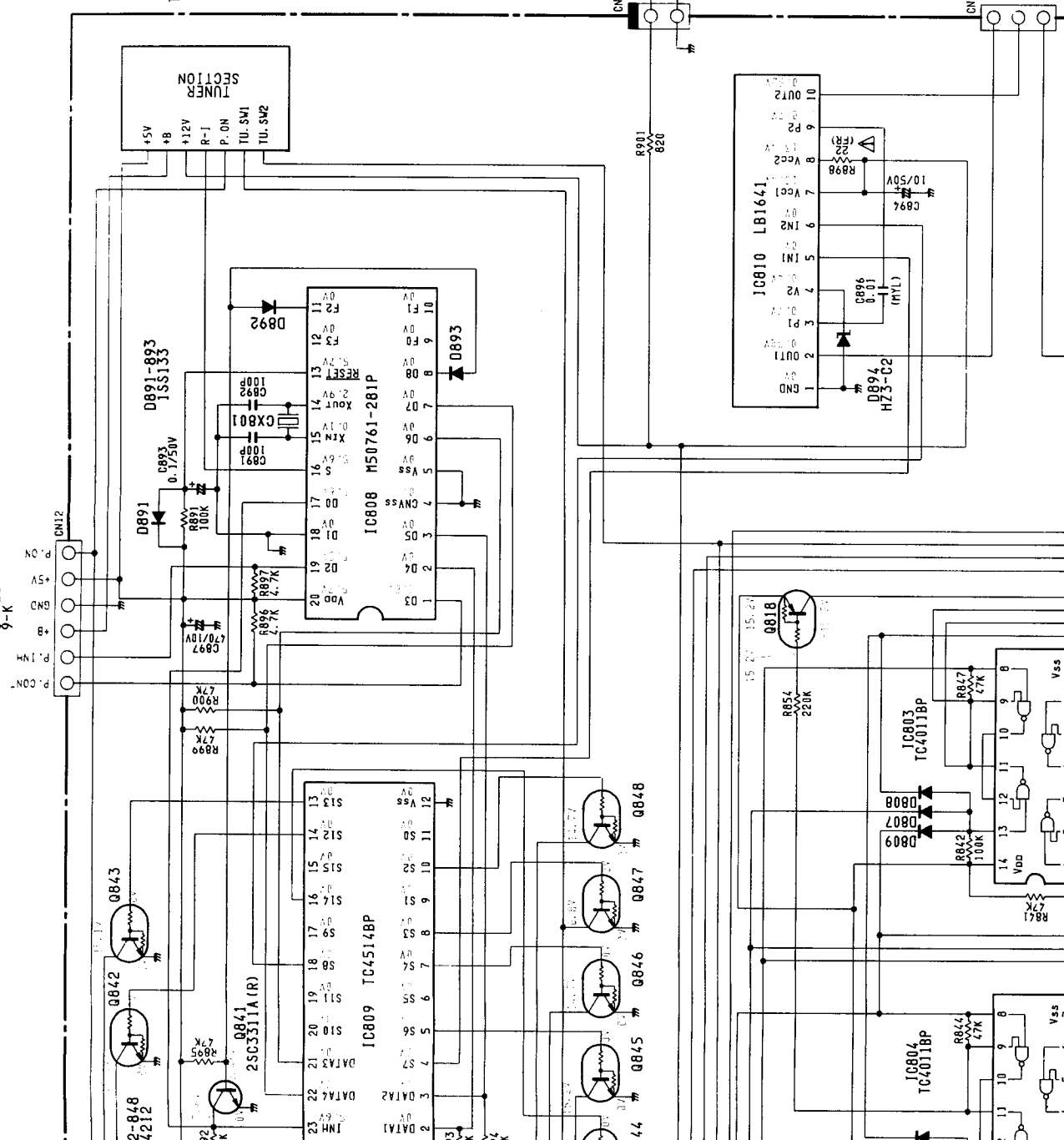


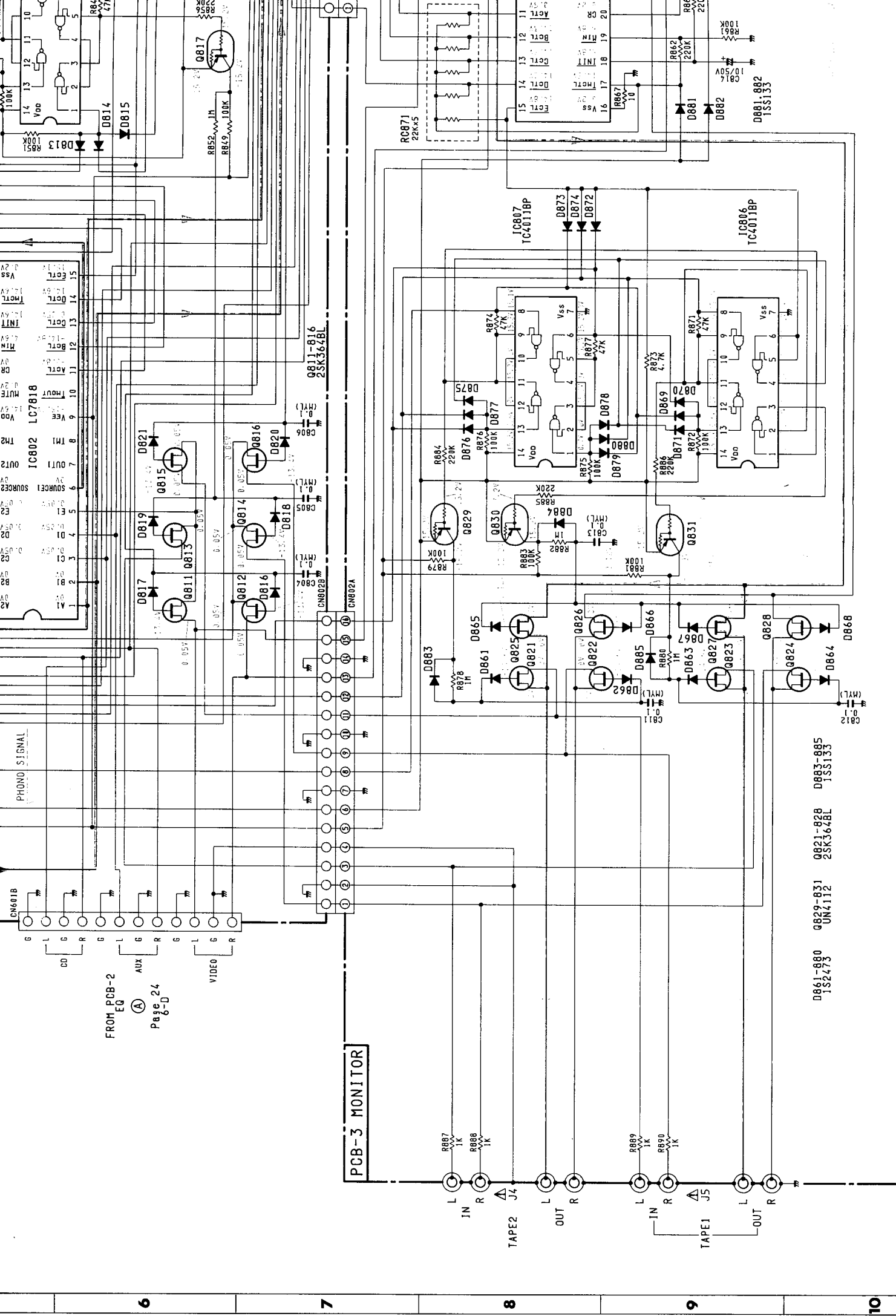
TO PCB-1
TUNER
①
Page 25
L-N

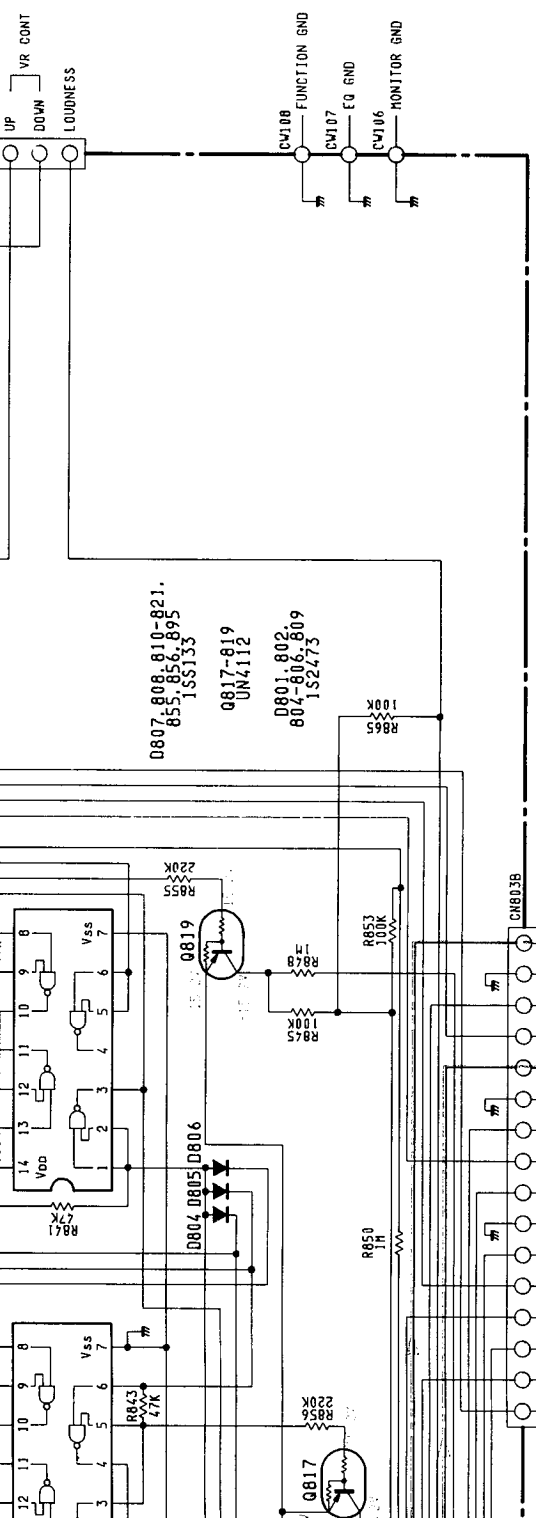


TO PCB-B
PRIMARY
(H)

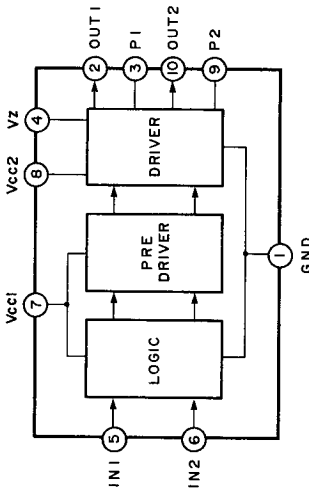
Page 28
9-K







IC810 : LB1641
MOTOR CONTROL

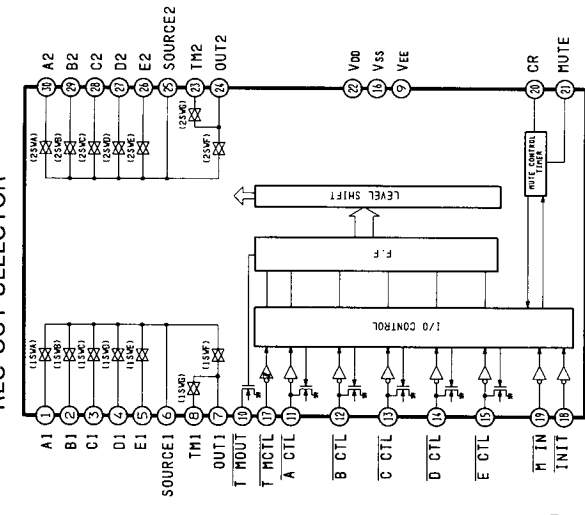


(conditions:
 1. Set the Rec Out switch to tuner position.
 2. Set the Function switch to tuner position.

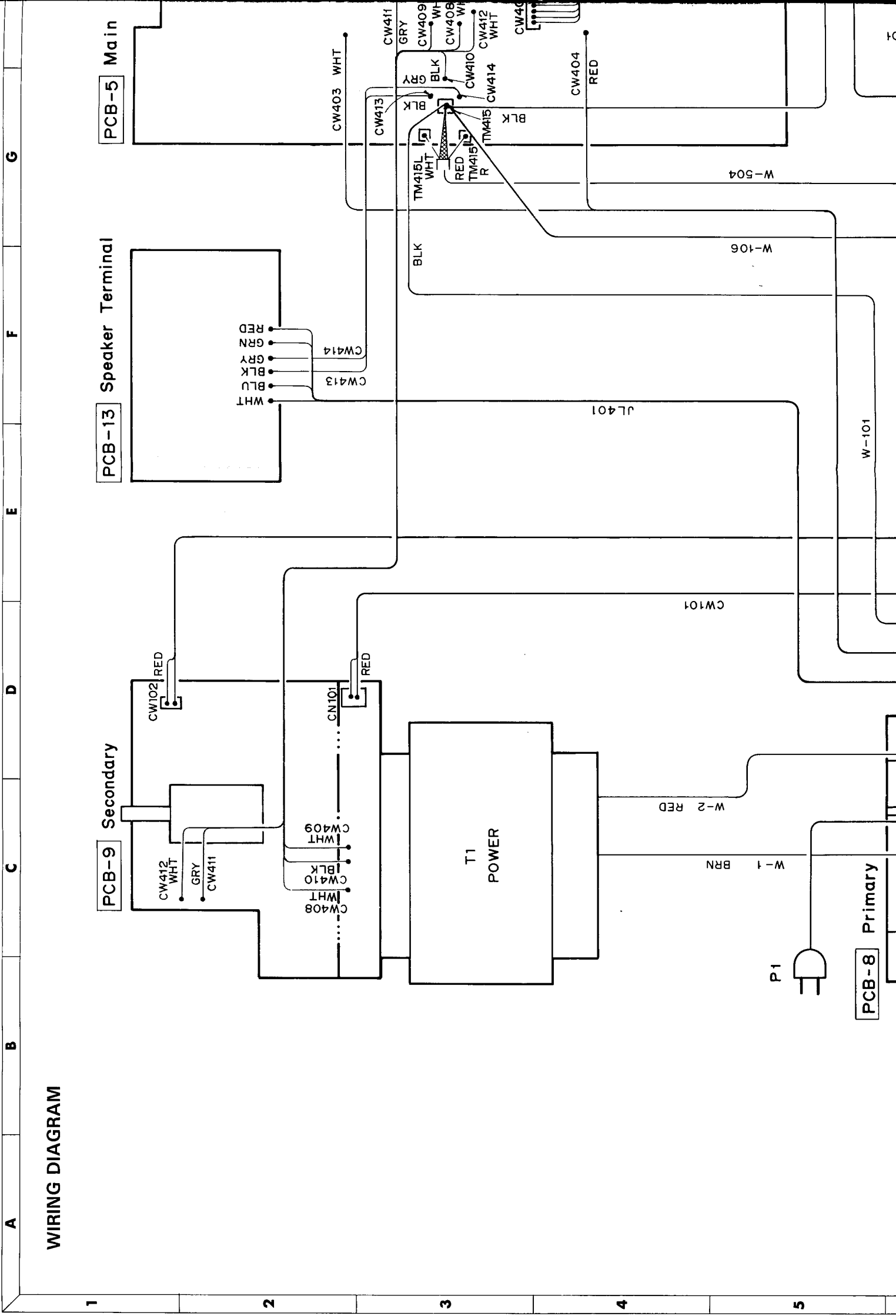


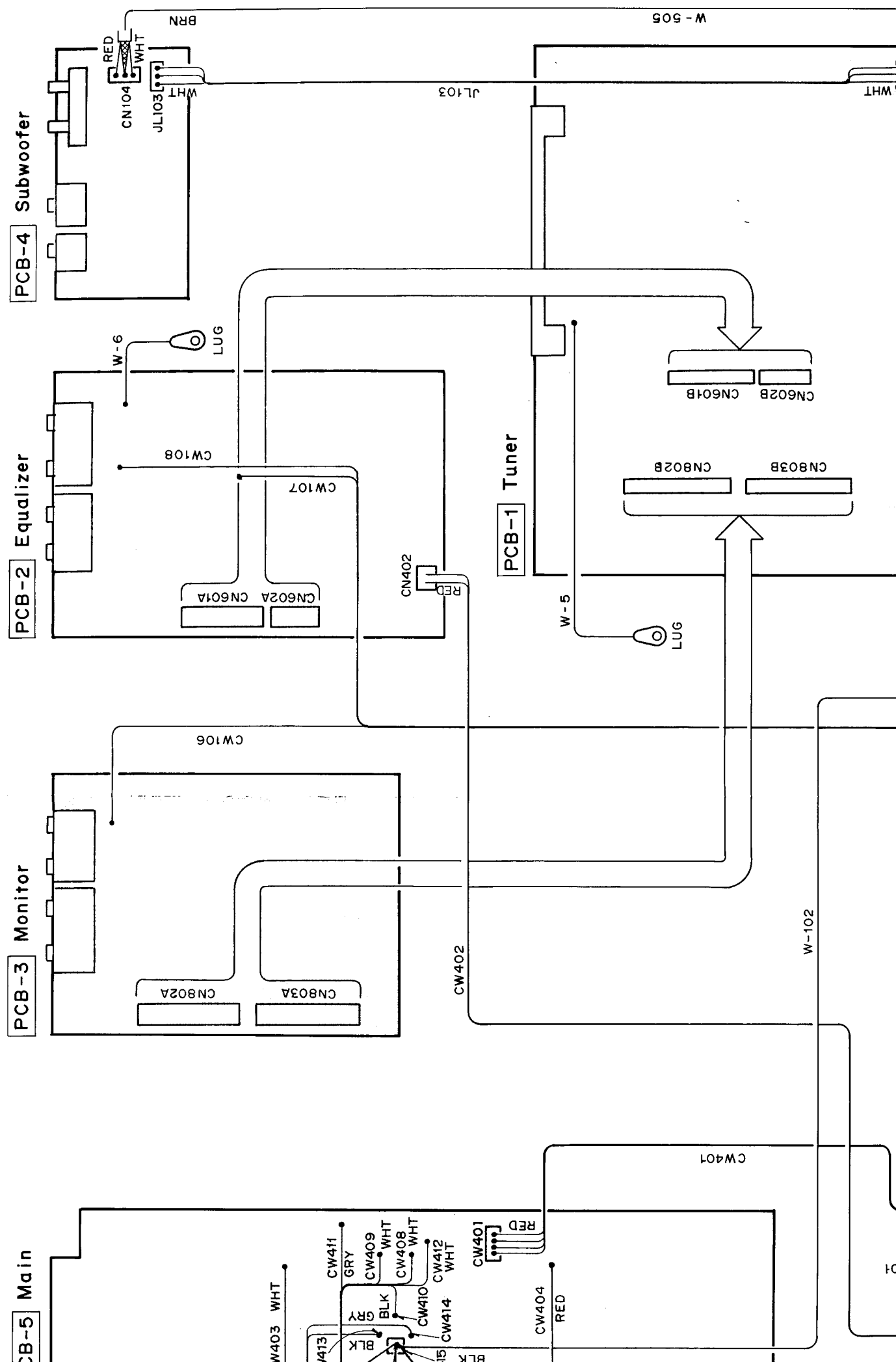
R1	R2
UN4112	22K 22K
UN4212	22K 22K

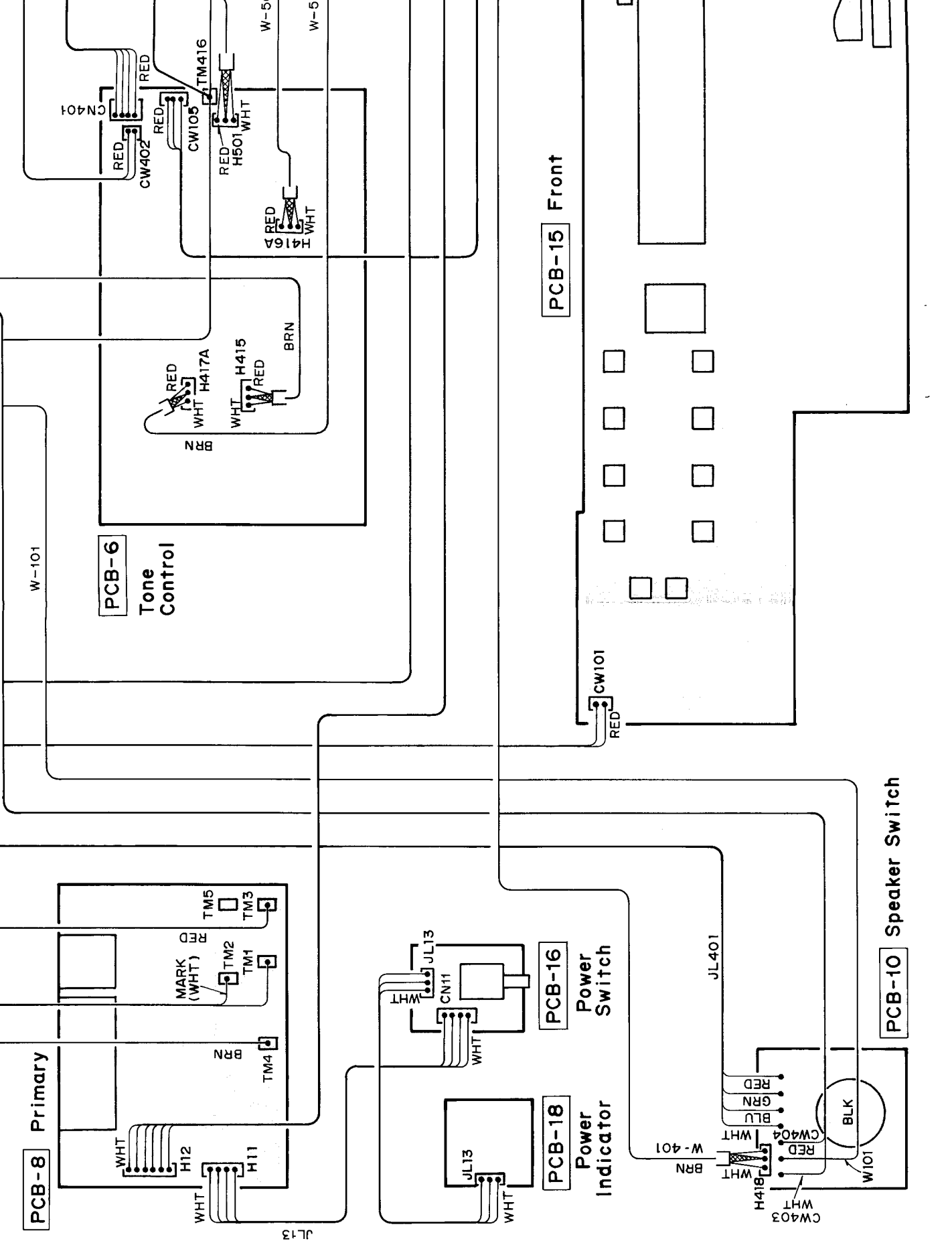
IC805 : LC7818
REC OUT SELECTOR



NOTE:
 1. ALL RESISTANCES VALUES ARE IN Ω .
 2. THE WATTAGE OF RESISTORS IS 1/4W UNLESS OTHERWISE NOTED.
 3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=#F.
 4. ... V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
 5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.







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

