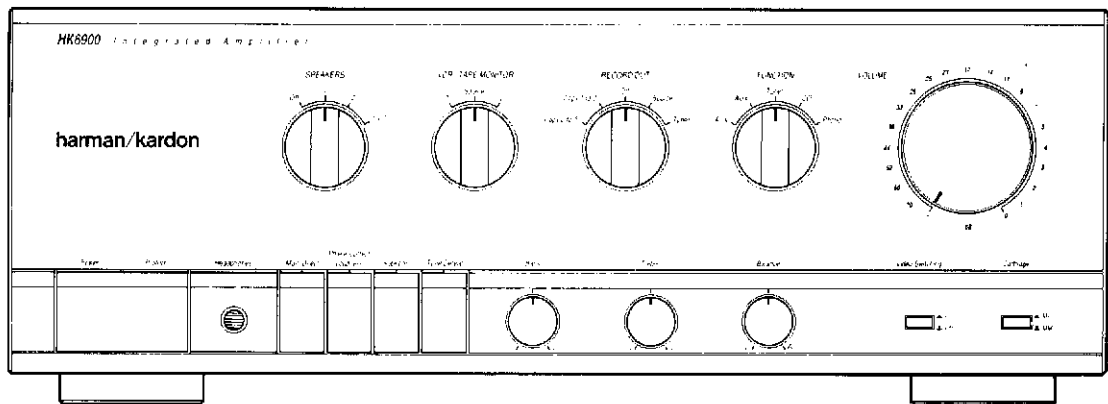


The Harman Kardon Model HK6900 INTEGRATED AMPLIFIER

Manual 150A

HK6900

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
- G : German model
- GB : German model Black version
- I : International model
- IB : International model Black version
- NB : Japan model Black version
- S : Switzerland model
- SB : Switzerland model Black version

harman/kardon

240 Crossways Park West, Woodbury, N.Y. 11797
1112-3152150A3 P-088906 1500 Printed in Japan

SPECIFICATIONS

| | Nominal | Limit |
|----------------------------------|------------------|-----------|
| Continuous Average Power (FTC) | | |
| 20Hz-20kHz, both channels driven | | |
| 8Ω, 0.08% THD | 198W | ≧ 170W |
| 4Ω, 0.1% THD | 198W | ≧ 170W |
| High Instantaneous Current | | |
| Capability (HCC) | 126A | ≧ 100A |
| Negative Feedback (Overall) | | 12dB |
| Half Power Bandwidth | 10Hz ~ 100kHz | |
| Frequency Response at -3dB | 0.25Hz ~ 234kHz* | |
| Slew Rate | 280V/μsec | |
| Square Wave Rise Time | 2μsec | ≧ 2.5μsec |
| Input Sensitivity | | |
| Video/CD, Tuner | 250mV ± 25mV | |
| Phono (MM) | 2.5mV ± 0.3mV* | |
| Phono (MC) | 125μV ± 20μV* | |
| Signal to Noise Ratio | | |
| Video/CD, Tuner | 80.8dB | ≧ 75dB |
| Phono (MM) | 80dB | ≧ 73dB |
| Phono (MC) | 75.6dB | ≧ 72dB |
| Channel Separation at 10kHz | | |
| Video/CD | 53.5dB | ≧ 43dB |
| Phono (MM), Tuner | 51dB | ≧ 40dB |
| Phono (MC) | 44.3dB | ≧ 35dB |
| IM Distortion Ratio | 0.07% | ≧ 0.1% |
| Damping Factor at 1kHz | 112 | ≧ 80 |
| Tone Control Characteristics | | |
| Bass at 50Hz | | |
| Boost | 10dB ± 2dB | |
| Cut | 10dB ± 2dB | |
| Treble at 10kHz | | |
| Boost | 10dB ± 2dB | |
| Cut | 10dB ± 2dB | |

| | Nominal | Limit |
|--------------------------------|-------------------------------|-----------------------|
| Filters | | |
| Subsonic | 15Hz, -3.6dB ± 1dB/Octave | |
| Phase Correct Loudness at 50Hz | | 6dB ± 3dB |
| DC Output Voltage | | |
| L channel | | 0mV ± 60mV |
| R channel | | 0mV ± 60mV |
| RIAA Equalization at Tape Out | | |
| (20Hz/20kHz) (22kΩ load) | | ± 0.2dB ± 0.5dB |
| Phono Over Load (No load) | | |
| Phono (MM) | | 163mV ≧ 130mV |
| Phono (MC) | | 7mV ≧ 5mV |
| Dimensions (W × H × D) | 17-1/2" × 6-5/16" × 15-15/16" | |
| | (443 × 160 × 405mm) | |
| Weight | | 37lbs. 14oz. (17.2kg) |
| Power Supplies | | |
| North America area model | AC 120V, 60Hz | |
| International model | AC 220/240V, 50/60Hz | |
| Japan model | AC 100V, 50/60Hz | |
| Power Consumption | | |
| North America area model | 630W (800VA) | |
| International model | 400W | |
| Japan model | 320W | |

* Input Sensitivity for International model are 2.7mV ± 0.3mV (MM) and 140μV ± 20μV (MC).

* Frequency Response International model 0.27Hz ~ 140kHz

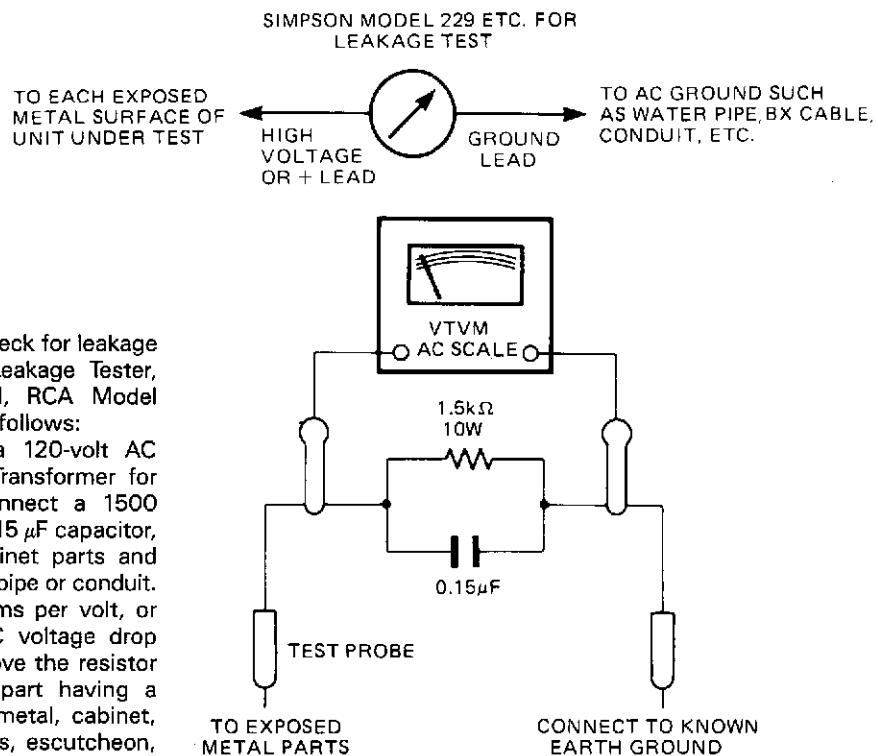
These specifications are service target specs.

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 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 7 AND 24)

① CABINET TOP (131) REMOVAL

Remove 10 screws (A) and then remove the Cabinet Top (131).

② FRONT PANEL ASS'Y (AA) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step ①.
2. Remove 6 screws (B) and then remove the Front Panel Ass'y (AA).

③ MAIN and DRIVER P. C. BOARDS (PCB-4 to 6) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step ①.
2. Remove 10 screws (C, D, E and F) and then remove the Main and Driver P. C. Boards (PCB-4 to 6) with the Heat Sink (183 and 184).
At this time, unsolder the lead wires connected to the Main and Driver P. C. Boards.

④ PHONO P. C. BOARD (PCB-1) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step ①.
2. Pull out the Shaft (230).
3. Remove 5 screws (G, H and I), and then remove the Phono P. C. Board (PCB-1).

⑤ CONTROL P. C. BOARD (PCB-3) REMOVAL

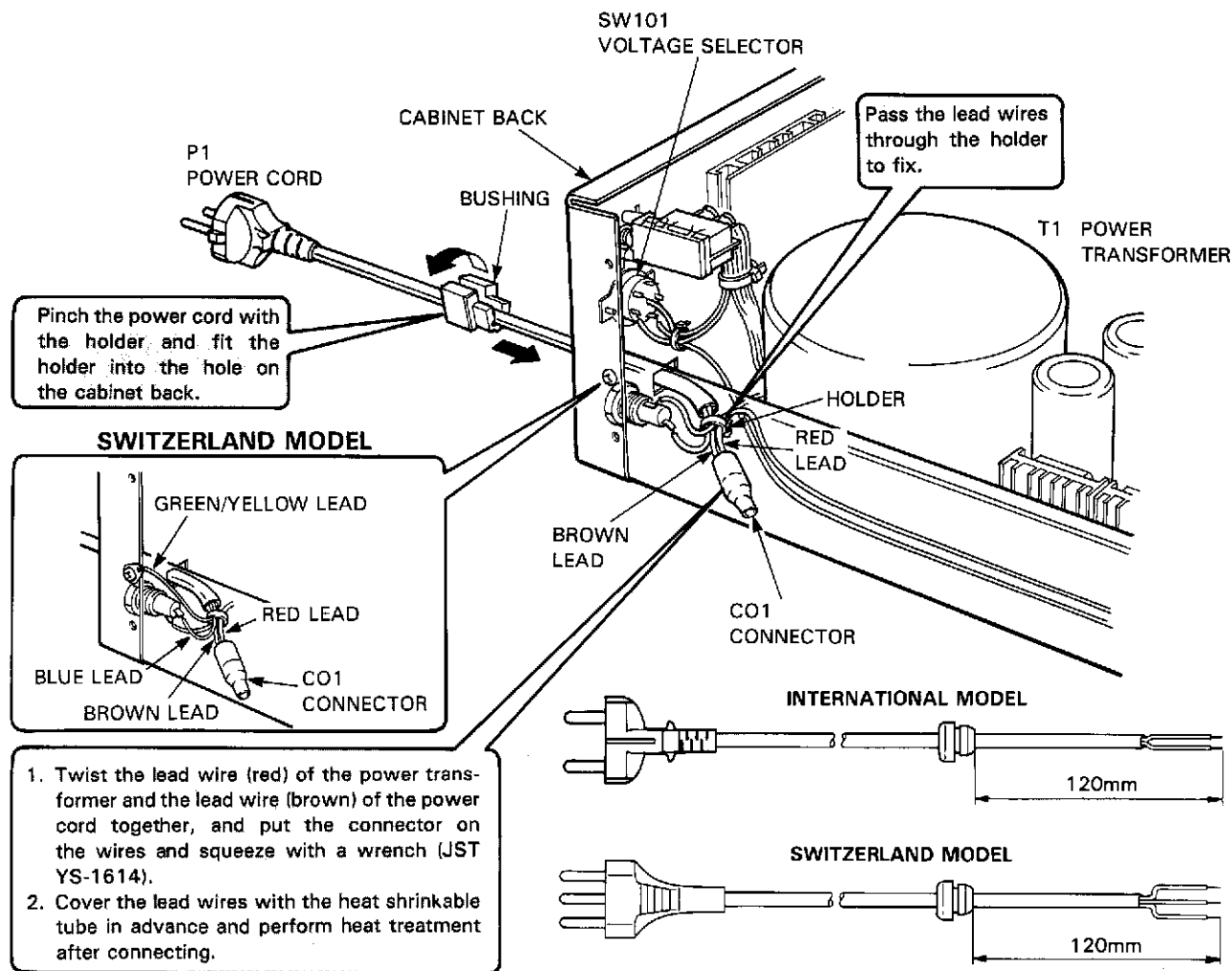
1. Remove the Main and Driver P. C. Boards (PCB-4 to 6), referring to the previous step ③.
2. Remove 6 screws (J) and then remove the Control P. C. Board (PCB-3).

⑥ TONE P. C. BOARD (PCB-2) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step ②.
2. Pull out the 6 Rotary knobs (143 and 144).
3. Remove 6 hexagon nuts (K) and remove 4 screws (L).
4. Remove 14 screws (C, G and M) and the Chassis Ass'y (BA), than the Tone P. C. Board (PCB-2) can be removed. Unsolder the lead wires if necessary when removing each P. C. Board.

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

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



ALIGNMENT PROCEDURES (REFER TO PAGES 8, 10, 11, 20 AND 23)

- Conditions:
- Set the Function selector to the "CD" position.
 - Set the Volume control to minimum.
 - Set the Speaker selector to the "off" position.
 - Make the adjustment at a room temperature of 77°F (25°C).

■ **MAIN DRIVER ADJUSTMENT**

- Set the Speaker Operating Mode switch to the "8Ω" position.

| Step | Connection Equipments | Adjustment | For |
|------|--|------------|------|
| 1 | Connect the Digital Volt Meter to TP401. | VR401 | 1.0V |
| 2 | Connect the Digital Volt Meter to TP402. | VR402 | 1.0V |

■ **IDLING CURRENT ADJUSTMENT**

| Step | Connection Equipments | Adjustment | For |
|------|--|------------|------|
| 1 | Connect the Digital Volt Meter to TP403. | VR405 | 52mV |
| 2 | Connect the Digital Volt Meter to TP404. | VR406 | 52mV |

■ **MAIN OFFSET ADJUSTMENT**

| Step | Connection Equipments | Adjustment | For |
|------|--|------------|----------|
| 1 | Connect the Digital Volt Meter to TM11 and TM13. | VR403 | 0 ± 10mV |
| 2 | Connect the Digital Volt Meter to TM12 and TM14. | VR404 | 0 ± 10mV |

■ **MAIN OFFSET CONFIRMATION**

- Set the Speaker Operating Mode switch to the "4Ω" position.

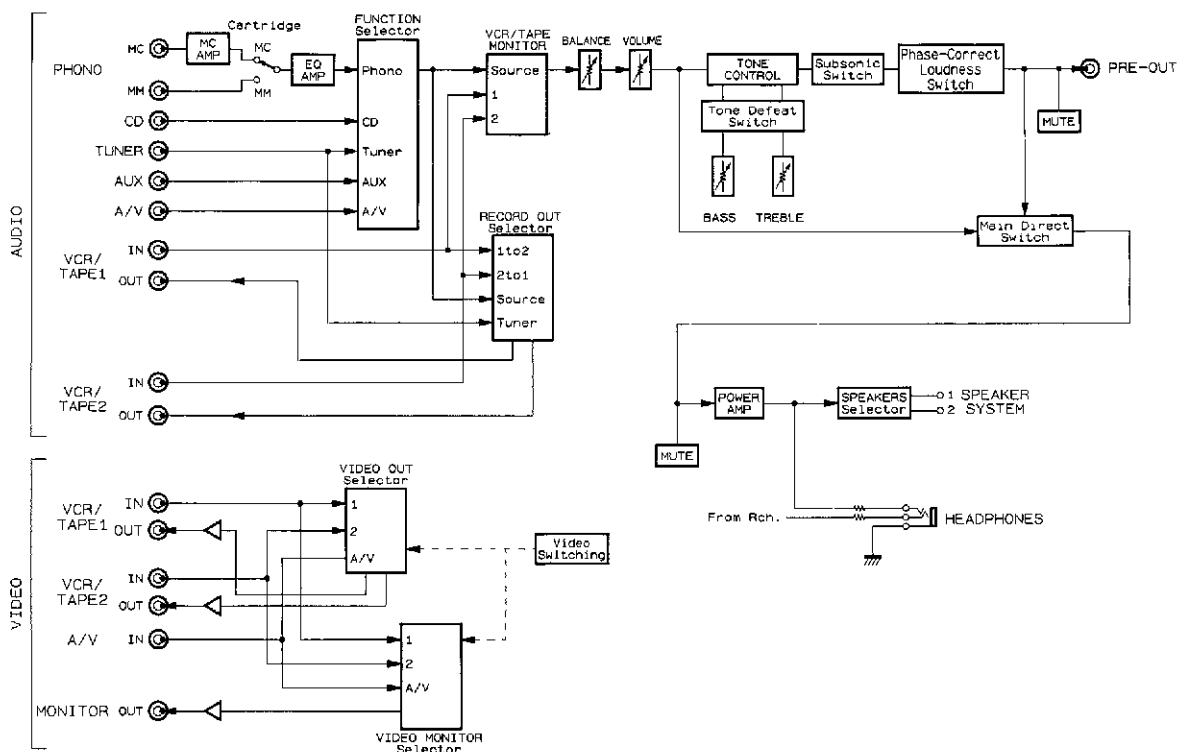
| Step | Connection Equipments | For |
|------|--|----------|
| 1 | Connect the Digital Volt Meter to TM11 and TM13. | 0 ± 60mV |
| 2 | Connect the Digital Volt Meter to TM12 and TM14. | 0 ± 60mV |

■ **PHONO DRIVER ADJUSTMENT**

| Step | Connection Equipments | Adjustment | For |
|------|--|------------|------|
| 1 | Connect the Digital Volt Meter to TP701. | VR601 | 2.2V |
| 2 | Connect the Digital Volt Meter to TP702. | VR602 | 2.2V |

- After the above adjustment, leave the unit with its power on for longer than 15 minutes and then repeat the same adjustment.

BLOCK DIAGRAM

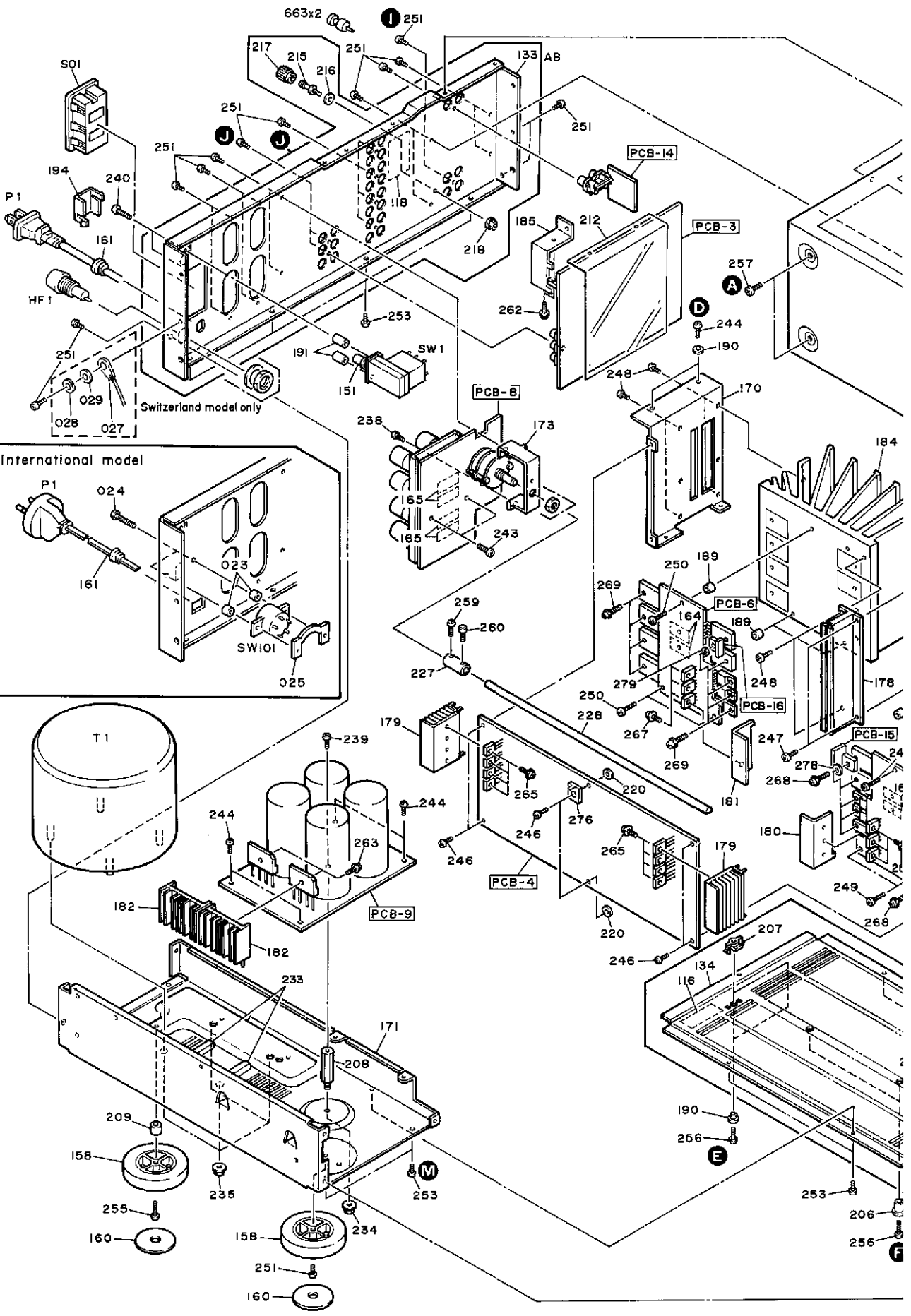


PARTS LIST

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|---------------|--|----------|--------------|--|
| AA | A443-HK6900A | FRONT PANEL ASS'Y G I S | 131 | 1414-14901 | CABINET TOP |
| AA | A443-HK6900B | FRONT PANEL ASS'Y BK | 133 | 1424-29703 | CABI BACK, REAR BK |
| AA | A443-HK6900C | FRONT PANEL ASS'Y GB | 133 | 1424-29802 | CABI BACK, REAR G GB I IB |
| AA | A443-HK6900D | FRONT PANEL ASS'Y IB | 133 | 1424-29704 | CABI BACK, REAR NB |
| AA | A443-HK6900E | FRONT PANEL ASS'Y NB | 133 | 1424-29804 | CABI BACK, REAR S SB |
| AA | A443-HK6900F | FRONT PANEL ASS'Y SB | 134 | 1424-29901 | CABI BACK, BOTTOM |
| AB | A424-HK6900A | CABI BACK ASS'Y BK | 136 | 1443-13503 | PANEL, FRONT G I S |
| AB | A424-HK6900C | CABI BACK ASS'Y G | 136 | 1443-13504 | PANEL, FRONT BK GB IB NB SB |
| AB | A424-HK6900E | CABI BACK ASS'Y GB | 138 | 1562-07701 | FRAME, R G I S |
| AB | A424-HK6900G | CABI BACK ASS'Y I | 138 | 1562-07702 | FRAME, R BK GB IB NB SB |
| AB | A424-HK6900J | CABI BACK ASS'Y IB | 139 | 1562-07801 | FRAME, L G I S |
| AB | A424-HK6900L | CABI BACK ASS'Y BK | 139 | 1562-07802 | FRAME, L BK GB IB NB SB |
| AB | A424-HK6900N | CABI BACK ASS'Y S | 142 | 1630-03901 | ROTARY KNOB, VOLUME G I S |
| AB | A424-HK6900Q | CABI BACK ASS'Y SB | 142 | 1630-03902 | ROTARY KNOB, VOLUME BK GB IB NB SB |
| AC | A424-HK6900B | CABI BOTTOM ASS'Y BK | | | |
| AC | A424-HK6900D | CABI BOTTOM ASS'Y G | 143 | 1630-04001 | ROTARY KNOB, FUNCTION G I S |
| AC | A424-HK6900F | CABI BOTTOM ASS'Y GB | 143 | 1630-04002 | ROTARY KNOB, FUNCTION BK GB IB NB SB |
| AC | A424-HK6900H | CABI BOTTOM ASS'Y I | | | |
| AC | A424-HK6900K | CABI BOTTOM ASS'Y IB | 144 | 1630-04101 | ROTARY KNOB, BASS/TRE/BAL G I S |
| AC | A424-HK6900M | CABI BOTTOM ASS'Y NB | 144 | 1630-04102 | ROTARY KNOB, BASS/TREBAL BK GB IB NB SB |
| AC | A424-HK6900P | CABI BOTTOM ASS'Y S | | | |
| AC | A424-HK6900R | CABI BOTTOM ASS'Y SB | 145 | 1634-05901 | ROTARY KNOB, SPEAKER G I S |
| BA | B216-HK6900A | SHIELD PLATE ASS'Y | 145 | 1634-05902 | ROTARY KNOB, SPEAKER BK GB IB NB SB |
| 023 | 2132-7116 | SPACER G GB I IB S SB | | | |
| 024 | 2327-R0130124 | SCREW, BND+ (3X12mm) G GB I IB S SB | 147 | 1660-01401 | PUSH BUTTON, POWER G I S |
| | | | 147 | 1660-01402 | PUSH BUTTON, POWER BK GB IB NB SB |
| 025 | 2440-7017 | NUT, SPE G GB I IB S SB | | | |
| 026 | 1756-01402 | LABEL, FUSE G GB I IB S SB | 148 | 1660-01501 | PUSH BUTTON, TONE G I S |
| | | | 148 | 1660-01502 | PUSH BUTTON, TONE BK GB IB NB SB |
| 027 | 4211-5005 | LUG, GND S SB | | | |
| 028 | 2412-3022 | WASHER, SPRING S SB | 150 | 1662-52501VN | PUSH BUTTON, MC/VIDEO G I S |
| 029 | 2401-0373 | WASHER, METAL S SB | 150 | 1662-52502 | PUSH BUTTON, MC/VIDEO BK GB IB NB SB |
| 116 | 1117-78 | SERIAL LABEL | | | |
| 117 | 1756-01018 | LABEL, UL BK | 151 | 1662-52601 | PUSH BUTTON, 4/8 SW |
| 118 | 1756-CSA | LABEL, CSA BK | 153 | 1714-02502 | NAME PLATE G I S |
| 119 | 1756-11301 | LABEL, FUSE CAUTION | 153 | 1714-02501 | NAME PLATE BK GB IB NB SB |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|---|----------|---------------|---------------------------------|
| 155 | 1732-06801 | INDICATOR, POWER | 231 | 2112-11773 | SPONGE |
| 156 | 1732-06901 | INDICATOR, TONE | 232 | 2112-11800 | SPONGE, HOLDER |
| 158 | 1319-02301 | LEG | 233 | 2112-11771 | SPONGE |
| 160 | 2111-244 | FELT, LEG | 234 | 2440-7016 | NUT, SPE |
| 161 | 2114-71246 | BUSHING | 235 | 2440-7029 | NUT, SPE |
| 162 | 2211-7308 | CHASSIS | 238 | 2327-R0130062 | SCREW, BND+ (3X6mm) |
| 163 | 2218-7038 | BRACKET, FIX | 239 | 2327-R0130062 | SCREW, BND+ (3X6mm) |
| 164 | 2218-7038 | BRACKET, FIX | 240 | 2327-R0130164 | SCREW, BND+ (3X16mm) |
| 165 | 2218-7038 | BRACKET, FIX | 243 | 2343-300826 | SCREW, CSK T+ (3X8mm) |
| 166 | 2218-89 | BRACKET, FIX | 244 | 2347-R0130062 | SCREW, BND T+ (3X6mm) |
| 167 | 2219-8273 | METAL FITTING, H/P | 245 | 2347-R0130082 | SCREW, BND T+ (3X8mm) |
| 168 | 2219-8267 | METAL FITTING, EQ BOTTOM | 246 | 2347-R0130082 | SCREW, BND T+ (3X8mm) |
| 169 | 2219-8268 | METAL FITTING, HEAT SINK (L) | 247 | 2347-R0130082 | SCREW, BND T+ (3X8mm) |
| 170 | 2219-8269 | METAL FITTING, HEAT SINK (R) | 248 | 2347-R0130082 | SCREW, BND T+ (3X8mm) |
| 171 | 2219-8270 | METAL FITTING, TRANS | 249 | 2347-R0130122 | SCREW, BND T+ (3X12mm) |
| 172 | 2219-8271 | METAL FITTING, EQ TOP | 250 | 2347-R0130122 | SCREW, BND T+ (3X12mm) |
| 173 | 2219-8272 | METAL FITTING, SPEAKER SW | 251 | 2347-R0130084 | SCREW, BND T+ (3X8mm) |
| 176 | 2222-7179 | HEAT SINK, TONE | 252 | 2347-R0130062 | SCREW, BND T+ (3X6mm) |
| 177 | 2222-7194 | HEAT SINK, EQ | 253 | 2347-R0130064 | SCREW, BND T+ (3X6mm) |
| 178 | 2222-7266 | HEAT SINK, JOINT | 255 | 2347-R0130124 | SCREW, BND T+ (3X12mm) |
| 179 | 2222-7267 | HEAT SINK, DRIVER | 256 | 2347-R0130164 | SCREW, BND T+ (3X16mm) |
| 180 | 2222-7268 | HEAT SINK, MAIN PCB (L) | 257 | 2347-R0140064 | SCREW, BND T+ (4X6mm) |
| 181 | 2222-7268 | HEAT SINK, MAIN PCB (R) | 259 | 2396-300549 | SCREW, SK HEX |
| 182 | 2222-7269 | HEAT SINK, SCR | 260 | 2396-300549 | SCREW, SK HEX |
| 183 | 2222-7265 | HEAT SINK, MAIN (L) BK NB | 261 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| 183 | 2222-7276 | HEAT SINK, MAIN (L) G GB I | 262 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| | | IB S SB | 263 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| 184 | 2222-7270 | HEAT SINK, MAIN (R) BK NB | 264 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| 184 | 2222-7277 | HEAT SINK, MAIN (R) G GB I | 265 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| | | IB S SB | 266 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| 185 | 2222-7273 | HEAT SINK, VIDEO | 267 | 2557-300829 | SCREW, B SPW+ (3X8mm) |
| 188 | 2132-7120 | SPACER, MAIN PCB (L) | 268 | 2557-301429 | SCREW, B SPW+ (3X14mm) |
| 189 | 2132-7120 | SPACER, MAIN PCB (R) | 269 | 2557-301429 | SCREW, B SPW+ (3X14mm) |
| 190 | 2132-7136 | SPACER | 271 | 2218-R0130 | BRACKET, FIX |
| 191 | 2132-01003 | SPACER, 4/8 SW | 273 | 2651-2101729 | SPRING |
| 192 | 2240-7357 | HOLDER, POWER BUTTON G I S | 274 | 2651-2101731 | SPRING |
| 192 | 2240-7357 | HOLDER, POWER BUTTON BK GB IB | 276 | 2219-7945 | METAL FITTG |
| | | NB SB | 278 | 2401-0373 | WASHER, METAL |
| 193 | 2240-7368 | HOLDER, MC/VIDEO BUTTON G I S | 279 | 2401-0373 | WASHER, METAL |
| 193 | 2240-7358 | HOLDER, MC/VIDEO BUTTON BK GB IB | 663 | 4442-14 | PIN PLUG |
| | | NB SB | △ P1 | 4161-04801252 | CORD W/PLUG BK |
| 194 | 2240-7359 | HOLDER, 4/8 SW | △ P1 | 4161-71150 | CORD W/PLUG G GB I IB |
| 195 | 2240-7360 | HOLDER, SP SW SHAFT | △ P1 | 4161-04901252 | CORD W/PLUG NB |
| 196 | 2240-7361 | HOLDER, SP KNOB SHAFT | △ P1 | 4161-71159 | CORD W/PLUG S SB |
| 197 | 2240-7362 | HOLDER, LINK | △ T1 | 5584-S6501 | XFORMER, POWER BK |
| 198 | 2240-7363 | HOLDER, SHAFT HOLD (FRONT) | △ T1 | 5584-S6502 | XFORMER, POWER G GB I IB |
| 199 | 2240-7364 | HOLDER, SHAFT HOLD (REAR) | | | S SB |
| 200 | 2240-7365 | HOLDER, POWER LED | △ T1 | 5584-S6503 | XFORMER, POWER NB |
| 201 | 2240-7366 | HOLDER, TONE LED | △ SO1 | 4474-156 | SOCKET BK NB |
| 202 | 2240-7369 | HOLDER, SUB PCB | △ SW1 | 4433-01002 | SWITCH, PU-PW BK NB |
| 203 | 2240-7120 | HOLDER, WIRING | △ SW1 | 4433-01001 | SWITCH, PU-PW G GB I IB |
| 206 | 2360-7019 | BOSS, SPE | | | S SB |
| 207 | 2360-7020 | BOSS, SPE | △ SW1 01 | 4411-102729 | SWITCH, ROTARY G GB I IB |
| 208 | 2362-961410 | BOSS, THREAD | | | S SB |
| 209 | 2363-501724 | BOSS, PIPE | △ F1 | 5732-802029 | FUSE BK |
| 212 | 2224-7132 | INSULATOR | △ F1 | 5732-502030 | FUSE G GB I IB S SB |
| 213 | 2216-7184 | SHIELD PLATE | △ F1 | 5732-802056 | FUSE NB |
| 214 | 2459-3005511 | RIVET, PLASTIC | △ HF1 | 4472-014 | HOLDER, FUSE BK NB |
| 215 | 2310-7036 | SCREW, SPE | △ HF1 | 4472-7118 | HOLDER, FUSE G GB I IB |
| 216 | 2410-7018 | WASHER, SPE | | | S SB |
| 217 | 2440-7027 | NUT, SPE | PT1 | 5192-00104 | POSISTOR |
| 218 | 2440-7016 | NUT, SPE | LUG | 4211-4 | LUG G GB |
| 220 | 2402-0374 | WASHER, PLASTIC | | | |
| 222 | 2433-0151 | FASTENER, PSH | | | |
| 223 | 2459-3008011 | RIVET, PLASTIC | | | |
| 224 | 2446-30229 | NUT, HEX | | | |
| 225 | 2111-1387 | FELT | | | |
| 226 | 2403-301 | WASHER, POLY | | | |
| 227 | 2601-7069 | SHAFT, SPEAKER JOINT | | | |
| 228 | 2601-7188 | SHAFT, SPEAKER SW | | | |
| 229 | 2601-7189 | SHAFT, SPEAKER KNOB | | | |
| 230 | 2601-7190 | SHAFT, CARTRIDGE | | | |

GENERAL UNIT EXPLODED VIEW



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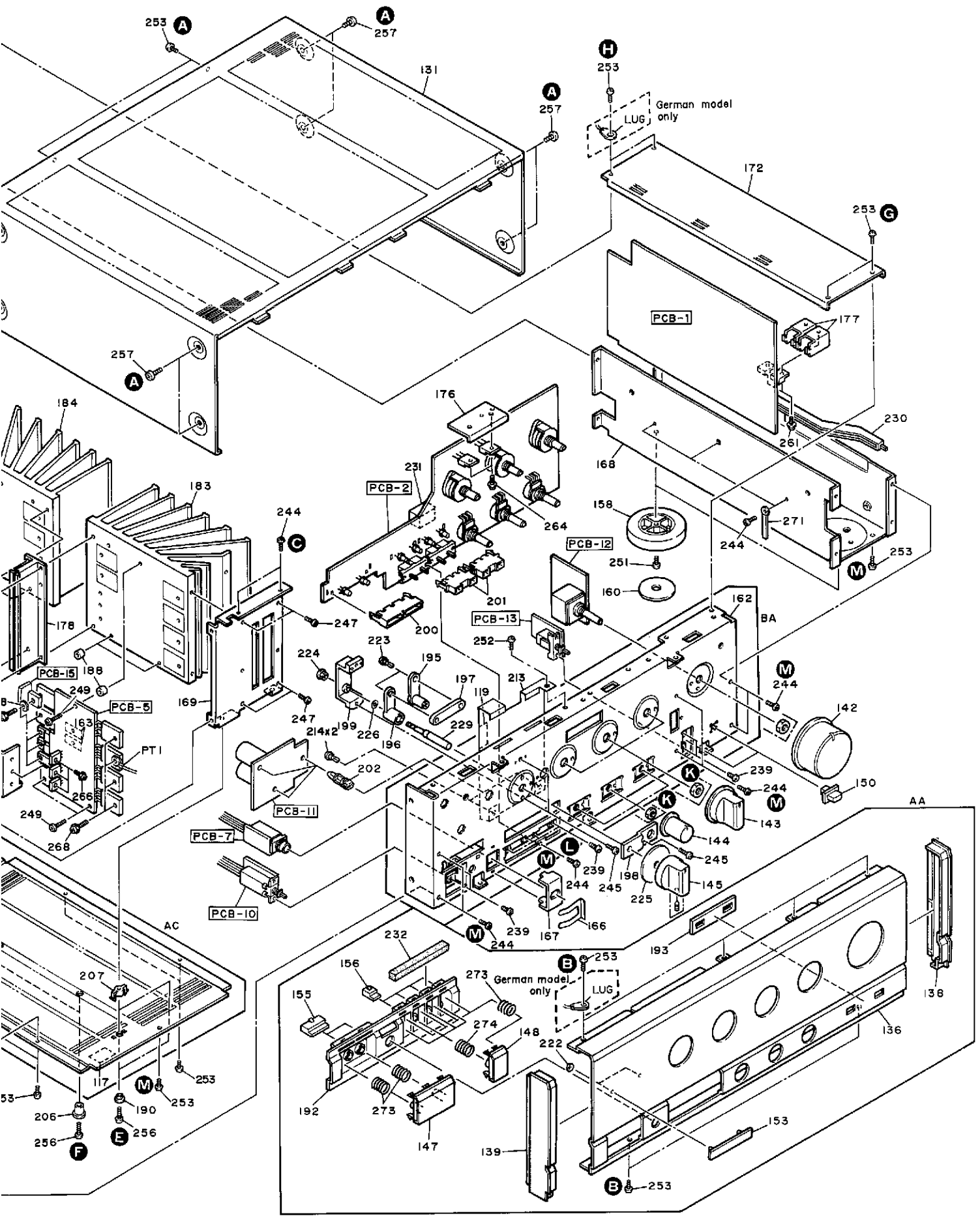
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E F G H I J



P. C. BOARDS

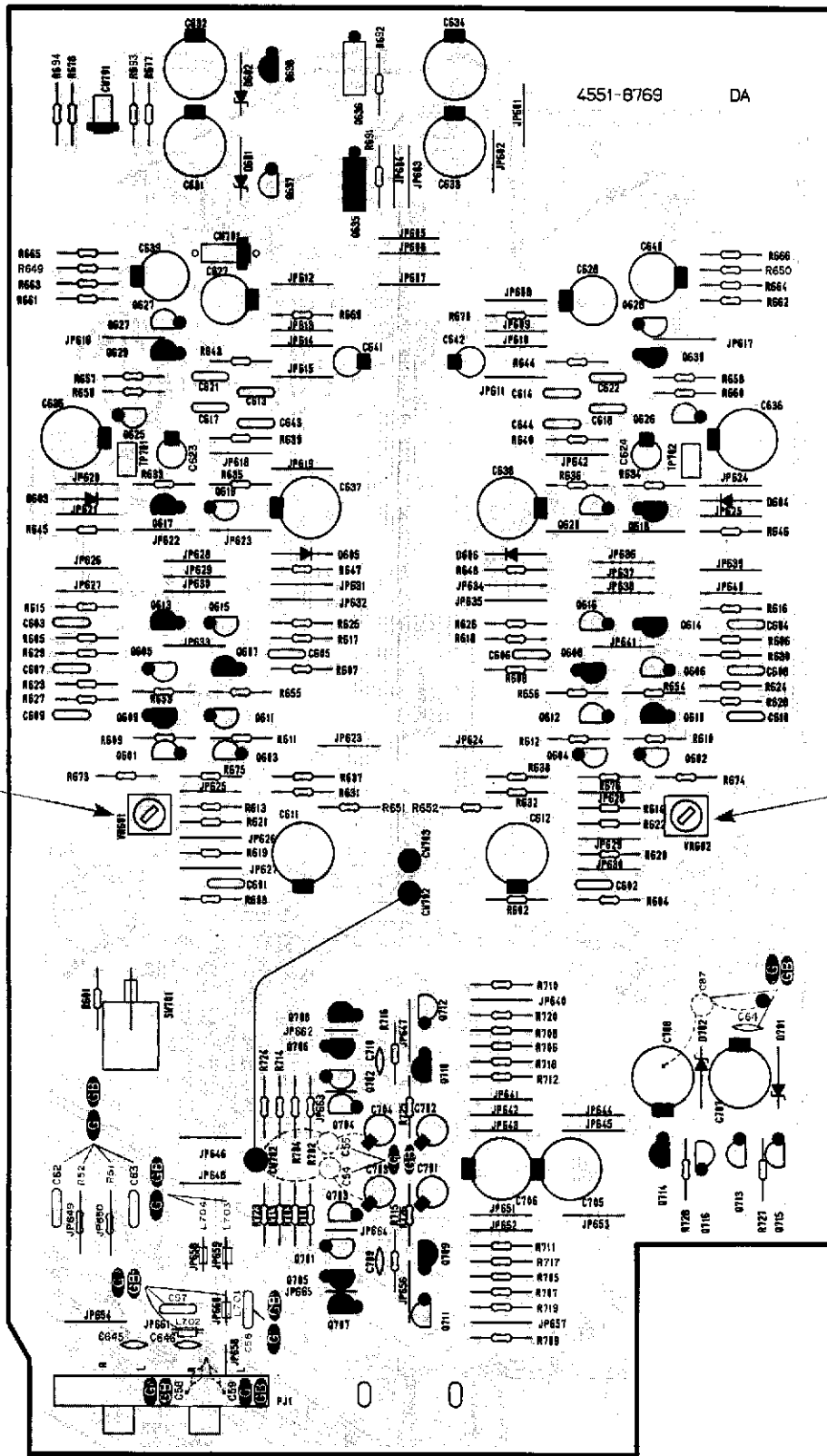
PCB-1 Phono P. C. Board

4551-8769 DA

PHONO DRIVER ADJ. (Lch)

PHONO DRIVER ADJ. (Rch)

Cartridge



MM
PHONO
MC

1

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3

4

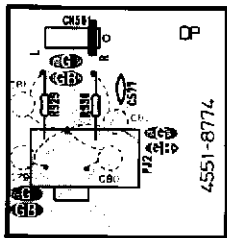
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PCB-14 Pre Out P. C. Board

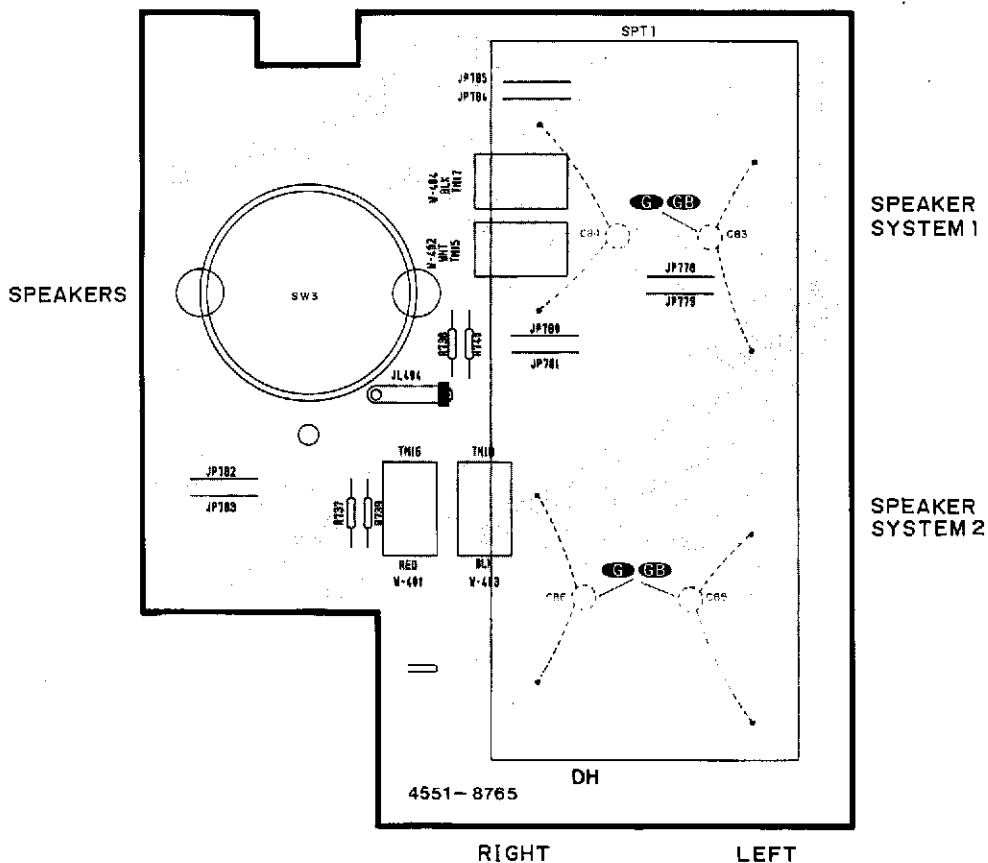
PCB-7 Headphone P. C. Board



PRE-OUT

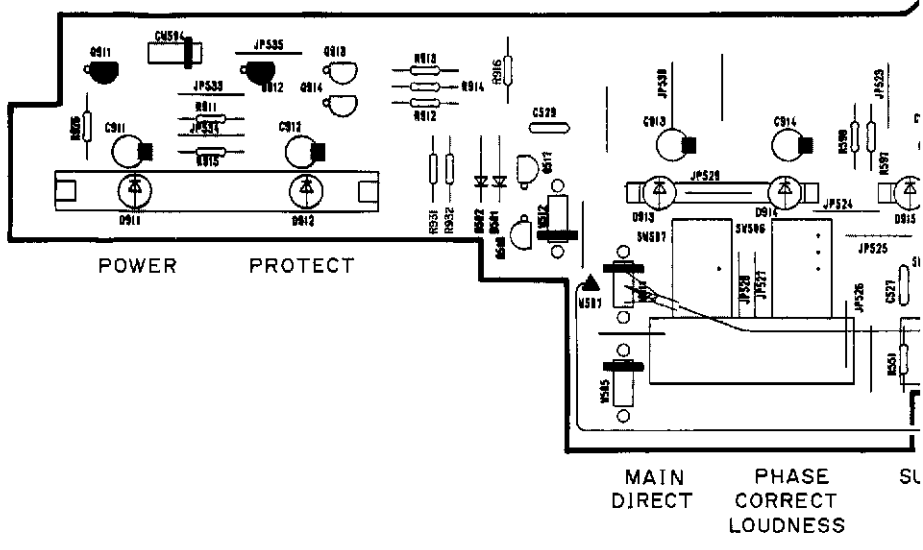
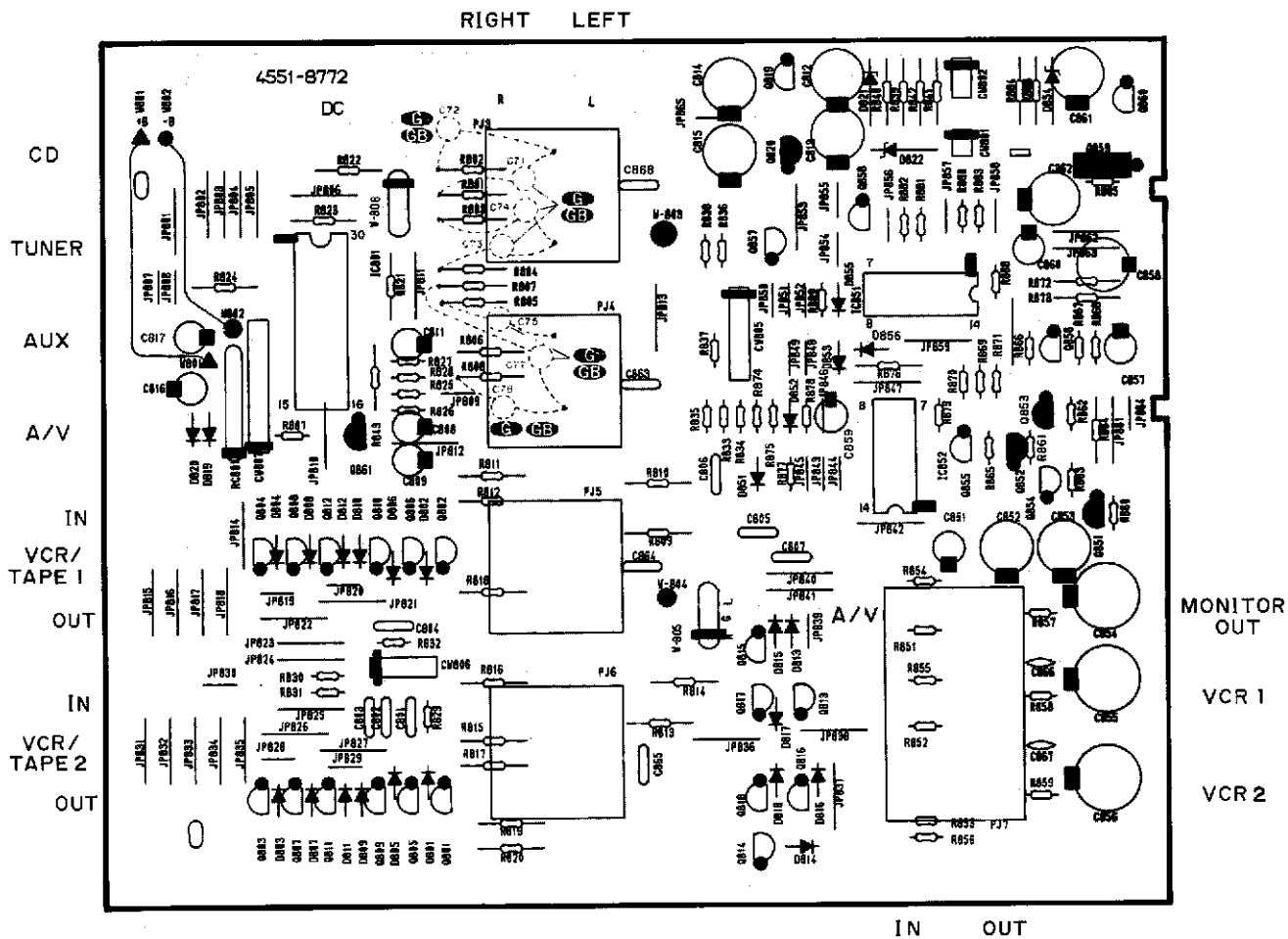


PCB-8 Speaker P. C. Board



P. C. BOARDS

PCB-3 Control P. C. Board



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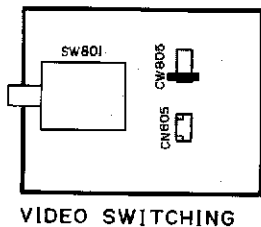
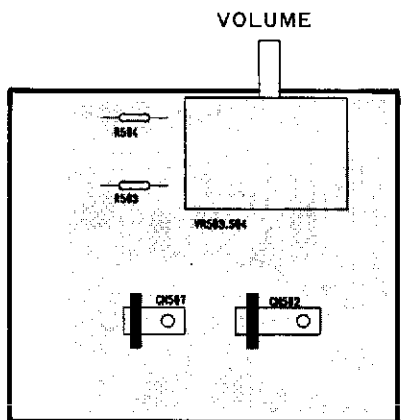
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PCB-12 Volume P. C. Board

PCB-13 V/D Switch P. C. Board



MONITOR OUT

VCR 1

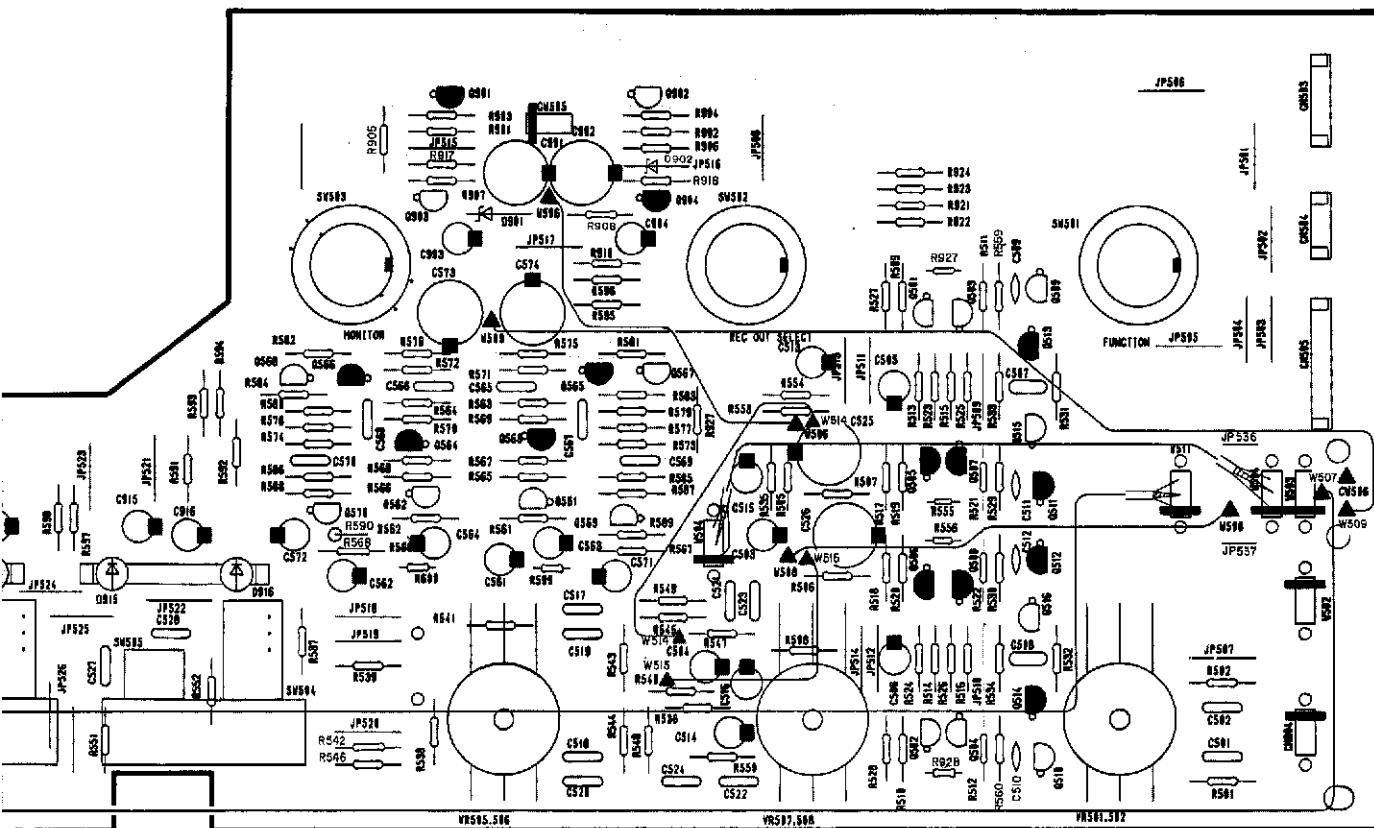
PCB-2 Tone P. C. Board

VCR 2

VCR/TAPE MONITOR

RECORD OUT

FUNCTION



USE SELECTNESS

SUBSONIC

TONE DEFEAT

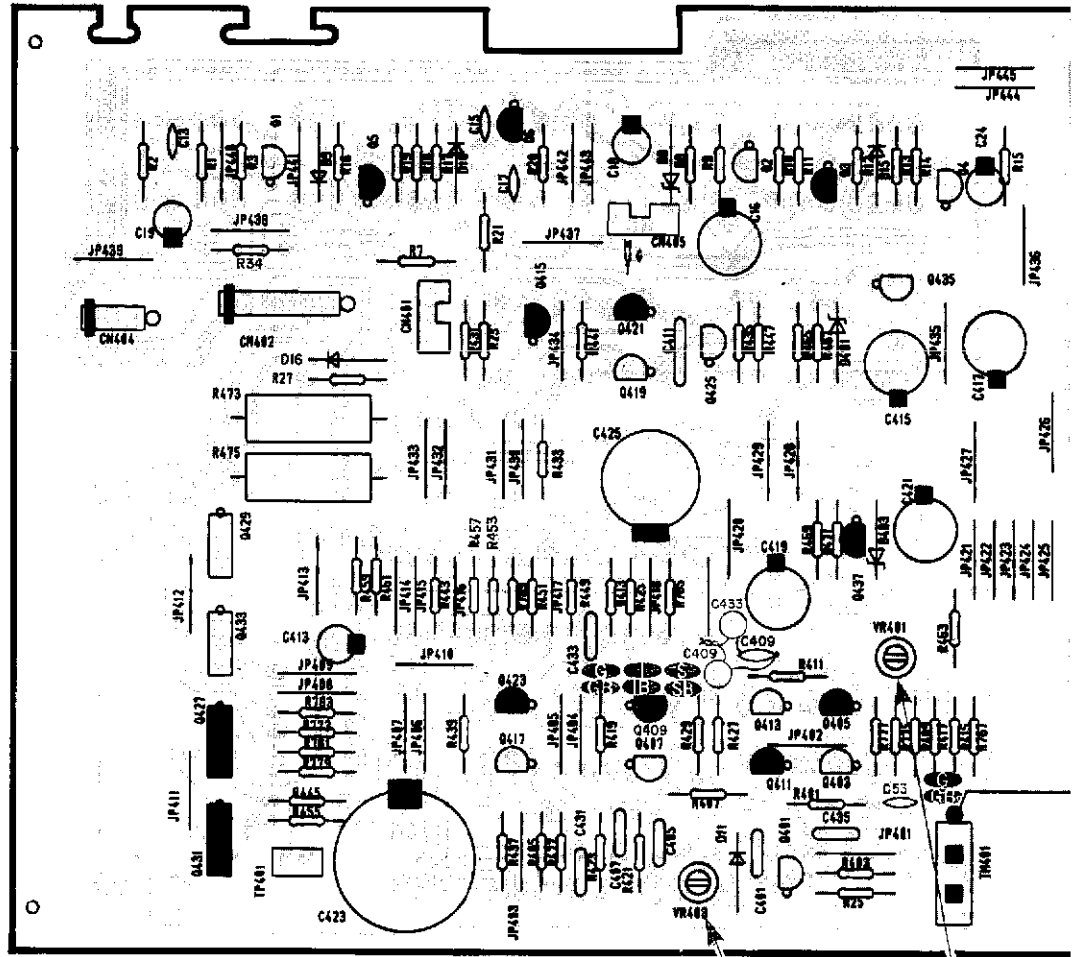
BASS

TREBLE

BALANCE

P. C. BOARDS

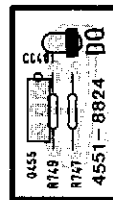
PCB-4 Driver P. C. Board

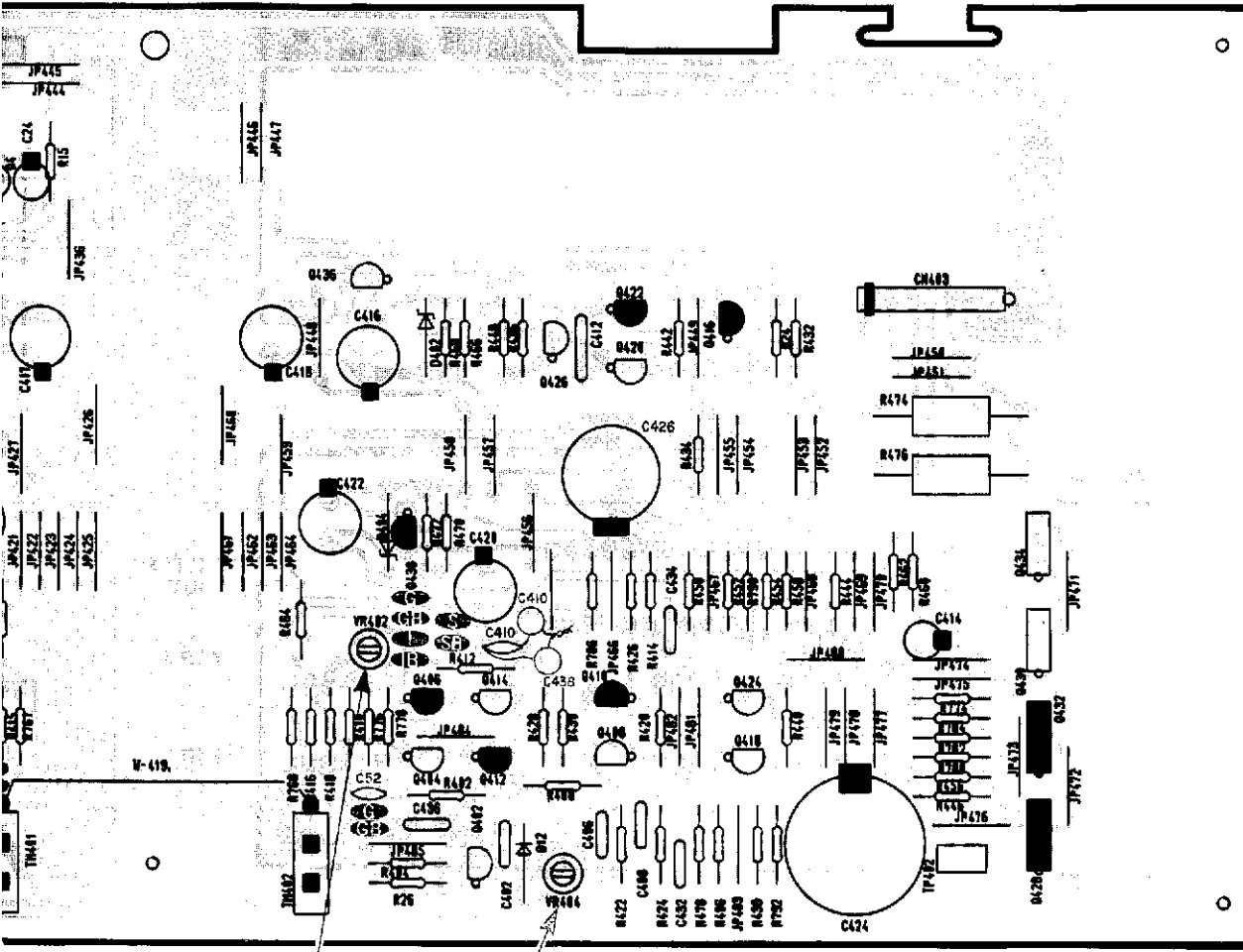


MAIN OFFSET ADJ. (Lch)

MAIN DRIVER ADJ. (Lch)

PCB-15 Terminal L P. C. Board



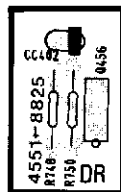


MAIN OFFSET ADJ. (R ch)

MAIN DRIVER ADJ. (R ch)

L ch)

PCB-16 Terminal R P.C. Board



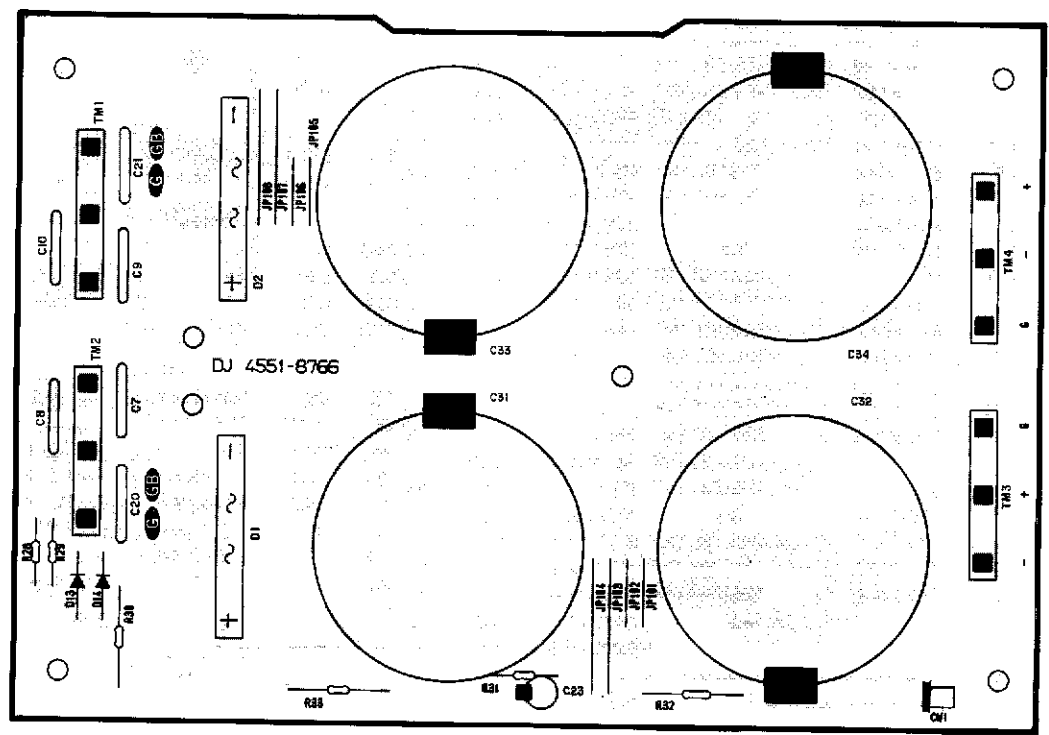
P. C. BOARDS

1

PCB-9 Main Power Supply P. C. Board

2

3

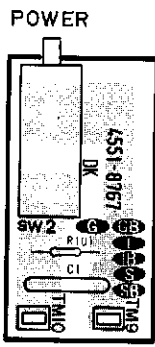


4

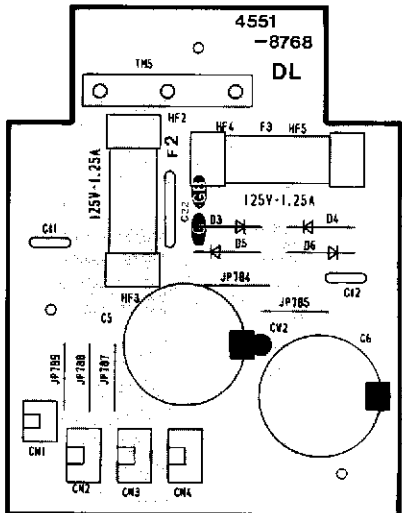
PCB-10 Power Switch P. C. Board

PCB-11 Sub Power Supply P. C. Board

5



6



7

F

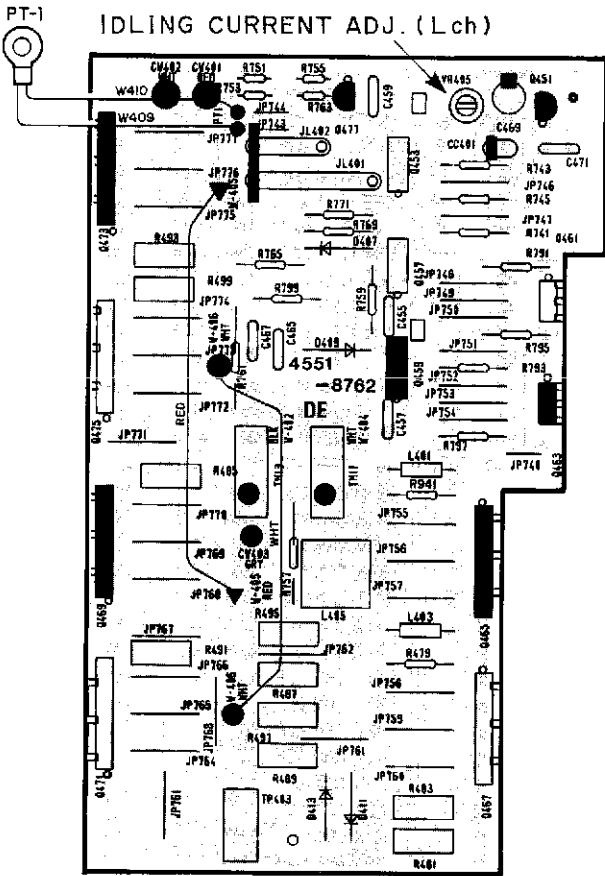
G

H

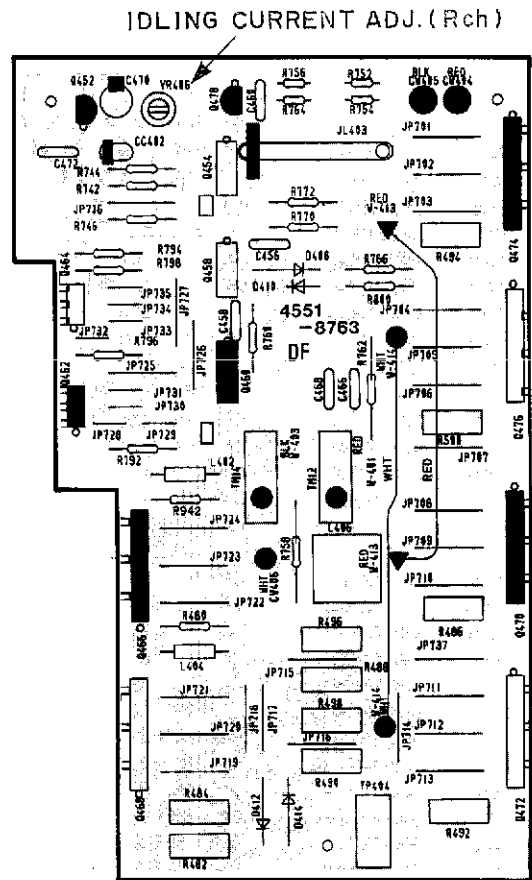
I

J

PCB-5 Main Lch P. C. Board



PCB-6 Main Rch P. C. Board



| Ser.No | Ref. No. | Part No. | Description |
|--------|----------|--------------|-------------------------------|
| 394 | R678 | 5135-182522 | RES, CBN 1/2P 1.8K |
| 395 | R691 | 5135-102522 | RES, CBN 1/2P 1K |
| 395 | R692 | 5135-102522 | RES, CBN 1/2P 1K |
| 398 | △ R693 | 5102-1005116 | RES, FUSE 10 |
| 398 | △ R694 | 5102-1005116 | RES, FUSE 10 |
| 301 | R701 | 5135-1R0522 | RES, CBN 1/2P 1 |
| 301B | R701 | 5135-5R6522 | RES, CBN 1/2P 5.6 G GB |
| 301 | R702 | 5135-1R0522 | RES, CBN 1/2P 1 |
| 301B | R702 | 5135-5R6522 | RES, CBN 1/2P 5.6 G GB |
| 302 | R703 | 5135-560522 | RES, CBN 1/2P 56 |
| 302 | R704 | 5135-560522 | RES, CBN 1/2P 56 |
| 308 | R705 | 5174-471381 | RES, MTL 1/4P 470 |
| 308 | R706 | 5174-471381 | RES, MTL 1/4P 470 |
| 308 | R707 | 5174-471381 | RES, MTL 1/4P 470 |
| 308 | R708 | 5174-471381 | RES, MTL 1/4P 470 |
| 303 | R709 | 5135-332522 | RES, CBN 1/2P 3.3K |
| 303 | R710 | 5135-332522 | RES, CBN 1/2P 3.3K |
| 303 | R711 | 5135-332522 | RES, CBN 1/2P 3.3K |
| 303 | R712 | 5135-332522 | RES, CBN 1/2P 3.3K |
| 310 | R713 | 5174-390381 | RES, MTL 1/4P 39 |
| 310 | R714 | 5174-390381 | RES, MTL 1/4P 39 |
| 309 | R715 | 5174-911381 | RES, MTL 1/4P 910 |
| 309 | R716 | 5174-911381 | RES, MTL 1/4P 910 |
| 304 | R717 | 5135-820522 | RES, CBN 1/2P 82 |
| 304 | R718 | 5135-820522 | RES, CBN 1/2P 82 |
| 304 | R719 | 5135-820522 | RES, CBN 1/2P 82 |
| 304 | R720 | 5135-820522 | RES, CBN 1/2P 82 |
| 305 | R723 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 305 | R724 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 306 | R725 | 5135-331522 | RES, CBN 1/2P 330 |
| 306 | R726 | 5135-331522 | RES, CBN 1/2P 330 |
| 318 | △ R727 | 5102-1005116 | RES, FUSE 10 |
| 318 | △ R728 | 5102-1005116 | RES, FUSE 10 |

TRANSISTORS

| | | | |
|-----|------|----------------|---------------|
| 322 | Q601 | 5616-2SK170BL | FET, N-CH |
| 322 | Q602 | 5616-2SK170BL | FET, N-CH |
| 321 | Q603 | 5615-2SJ74(BL) | FET, P-CH |
| 321 | Q604 | 5615-2SJ74(BL) | FET, P-CH |
| 326 | Q605 | 5613-1844(E) | XISTOR, NPN R |
| 326 | Q606 | 5613-1844(E) | XISTOR, NPN R |
| 325 | Q607 | 5611-991(E) | XISTOR, PNP R |
| 325 | Q608 | 5611-991(E) | XISTOR, PNP R |
| 323 | Q609 | 5611-999L(F) | XISTOR, PNP R |
| 323 | Q610 | 5611-999L(F) | XISTOR, PNP R |
| 324 | Q611 | 5613-2320L(F) | XISTOR, NPN R |
| 324 | Q612 | 5613-2320L(F) | XISTOR, NPN R |
| 323 | Q613 | 5611-999L(F) | XISTOR, PNP R |
| 323 | Q614 | 5611-999L(F) | XISTOR, PNP R |
| 324 | Q615 | 5613-2320L(F) | XISTOR, NPN R |
| 324 | Q616 | 5613-2320L(F) | XISTOR, NPN R |
| 327 | Q617 | 5612-646A(C) | XISTOR, PNP A |
| 327 | Q618 | 5612-646A(C) | XISTOR, PNP A |
| 328 | Q619 | 5614-666A(C) | XISTOR, NPN A |
| 328 | Q620 | 5614-666A(C) | XISTOR, NPN A |
| 324 | Q625 | 5613-2320L(F) | XISTOR, NPN R |
| 324 | Q626 | 5613-2320L(F) | XISTOR, NPN R |
| 328 | Q627 | 5614-666A(C) | XISTOR, NPN A |
| 328 | Q628 | 5614-666A(C) | XISTOR, NPN A |
| 327 | Q629 | 5612-646A(C) | XISTOR, PNP A |
| 327 | Q630 | 5612-646A(C) | XISTOR, PNP A |
| 384 | Q635 | 5612-941(P) | XISTOR, PNP A |
| 385 | Q636 | 5614-1266(P) | XISTOR, NPN A |
| 387 | Q637 | 5613-2320L(F) | XISTOR, NPN R |
| 386 | Q638 | 5611-999L(F) | XISTOR, PNP R |
| 292 | Q701 | 5613-1844(E) | XISTOR, NPN R |
| 292 | Q702 | 5613-1844(E) | XISTOR, NPN R |
| 292 | Q703 | 5613-1844(E) | XISTOR, NPN R |
| 292 | Q704 | 5613-1844(E) | XISTOR, NPN R |
| 291 | Q705 | 5611-991(E) | XISTOR, PNP R |

| Ser.No | Ref. No. | Part No. | Description |
|----------------------|----------|---------------|-------------------------|
| 291 | Q706 | 5611-991(E) | XISTOR, PNP R |
| 291 | Q707 | 5611-991(E) | XISTOR, PNP R |
| 291 | Q708 | 5611-991(E) | XISTOR, PNP R |
| 293 | Q709 | 5611-999L(F) | XISTOR, PNP R |
| 293 | Q710 | 5611-999L(F) | XISTOR, PNP R |
| 294 | Q711 | 5613-2320L(F) | XISTOR, NPN R |
| 294 | Q712 | 5613-2320L(F) | XISTOR, NPN R |
| 315 | Q713 | 5614-667A(C) | XISTOR, NPN A |
| 314 | Q714 | 5612-647A(C) | XISTOR, PNP A |
| 316 | Q715 | 5616-2SK246G1 | FET, N-CH |
| 316 | Q716 | 5616-2SK246G1 | FET, N-CH |
| CONTROLS | | | |
| 343 | VR601 | 5101-S0401332 | RES, SEMI FIX 3.3K |
| 343 | VR602 | 5101-S0401332 | RES, SEMI FIX 3.3K |
| COILS | | | |
| 065B | L701 | 5597-3 | CORE, BEADS G GB |
| 065B | L702 | 5597-3 | CORE, BEADS G GB |
| 065B | L703 | 5597-3 | CORE, BEADS G GB |
| 065B | L704 | 5597-3 | CORE, BEADS G GB |
| DIODES | | | |
| 389 | D601 | 5635-HZ24-1L | DIODE, ZENER |
| 389 | D602 | 5635-HZ24-1L | DIODE, ZENER |
| 372 | D603 | 5631-1S2473 | DIODE, DET |
| 372 | D604 | 5631-1S2473 | DIODE, DET |
| 372 | D605 | 5631-1S2473 | DIODE, DET |
| 372 | D606 | 5631-1S2473 | DIODE, DET |
| 317 | D701 | 5635-HZ15-2L | DIODE, ZENER |
| 317 | D702 | 5635-HZ15-2L | DIODE, ZENER |
| MISCELLANEOUS | | | |
| 795 | CN701 | 4443-030185 | CONNECTOR |
| 794 | CW701 | 4163-S0203551 | CONNECTOR W/W |
| 797 | CW702 | 4163-0109040 | CONNECTOR W/W |
| 798 | CW703 | 4163-0190039 | CONNECTOR W/W |
| 658 | △ PJ1 | 4489-03001004 | PIN JACK, 4P |
| 911 | SW701 | 4431-S0302102 | SWITCH, PUSH |
| 796 | TP701 | 4443-027114 | CONNECTOR |
| 796 | TP702 | 4443-027114 | CONNECTOR |

PCB-2 TONE P.C. BOARD

CAPACITORS

| | | | |
|-----|------|---------------|------------------------|
| 881 | C501 | 5359-1015851 | CAP, PPP 100p |
| 881 | C502 | 5359-1015851 | CAP, PPP 100p |
| 811 | C503 | 5345-106C0951 | CAP, MINI ELE 10μ/16V |
| 811 | C504 | 5345-106C0951 | CAP, MINI ELE 10μ/16V |
| 807 | C505 | 5345-107B0951 | CAP, MINI ELE 100μ/10V |
| 808 | C506 | 5345-107B0951 | CAP, MINI ELE 100μ/10V |
| 814 | C507 | 5353-020934 | CAP, MCA 2p |
| 814 | C508 | 5353-020934 | CAP, MCA 2p |
| 813 | C509 | 5353-680534 | CAP, MCA 68p |
| 813 | C510 | 5353-680534 | CAP, MCA 68p |
| 813 | C511 | 5353-680534 | CAP, MCA 68p |
| 813 | C512 | 5353-680534 | CAP, MCA 68p |
| 809 | C513 | 5345-476C0951 | CAP, MINI ELE 47μ/16V |
| 809 | C514 | 5345-476C0951 | CAP, MINI ELE 47μ/16V |
| 810 | C515 | 5345-226D0951 | CAP, MINI ELE 22μ/25V |
| 810 | C516 | 5345-226D0951 | CAP, MINI ELE 22μ/25V |
| 818 | C517 | 5354-273J1HM | CAP, MYL .027μ |
| 818 | C518 | 5354-273J1HM | CAP, MYL .027μ |
| 816 | C519 | 5354-154593 | CAP, MYL .15μ |
| 816 | C520 | 5354-154593 | CAP, MYL .15μ |
| 819 | C521 | 5354-682J1HM | CAP, MYL 6800p |
| 819 | C522 | 5354-682J1HM | CAP, MYL 6800p |
| 817 | C523 | 5354-393J1HM | CAP, MYL .039μ |
| 817 | C524 | 5354-393J1HM | CAP, MYL .039μ |
| 812 | C525 | 5345-227F045 | CAP, MINI ELE 220μ/50V |

| Ser.No | Ref. No. | Part No. | Description |
|--------|----------|--------------|--------------------|
| 448 | R463 | 5174-362381 | RES, MTL 1/4P 3.6K |
| 448 | R464 | 5174-362381 | RES, MTL 1/4P 3.6K |
| 446 | △ R465 | 5102-2205116 | RES, FUSE 22 |
| 446 | △ R466 | 5102-2205116 | RES, FUSE 22 |
| 458 | R467 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 458 | R468 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 446 | △ R469 | 5102-2205116 | RES, FUSE 22 |
| 446 | △ R470 | 5102-2205116 | RES, FUSE 22 |
| 458 | R471 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 458 | R472 | 5135-562522 | RES, CBN 1/2P 5.6K |
| 443 | △ R473 | 5102-1005711 | RES, FUSE 10 |
| 443 | △ R474 | 5102-1005711 | RES, FUSE 10 |
| 443 | △ R475 | 5102-1005711 | RES, FUSE 10 |
| 443 | △ R476 | 5102-1005711 | RES, FUSE 10 |
| 452 | R477 | 5135-680522 | RES, CBN 1/2P 68 |
| 452 | R478 | 5135-680522 | RES, CBN 1/2P 68 |
| 453 | R767 | 5174-131381 | RES, MTL 1/4P 130 |
| 453 | R768 | 5174-131381 | RES, MTL 1/4P 130 |
| 470 | R773 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R774 | 5135-220522 | RES, CBN 1/2P 22 |
| 469 | R775 | 5135-101522 | RES, CBN 1/2P 100 |
| 469 | R776 | 5135-101522 | RES, CBN 1/2P 100 |
| 469 | R777 | 5135-101522 | RES, CBN 1/2P 100 |
| 469 | R778 | 5135-101522 | RES, CBN 1/2P 100 |
| 470 | R779 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R780 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R781 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R782 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R783 | 5135-220522 | RES, CBN 1/2P 22 |
| 470 | R784 | 5135-220522 | RES, CBN 1/2P 22 |
| 466 | R785 | 5135-472522 | RES, CBN 1/2P 4.7K |
| 466 | R786 | 5135-472522 | RES, CBN 1/2P 4.7K |
| 456 | R789 | 5135-184522 | RES, CBN 1/2P 180K |
| 456 | R790 | 5135-184522 | RES, CBN 1/2P 180K |

TRANSISTORS

| | | | |
|-----|------|----------------|---------------|
| 475 | Q1 | 5613-2240(BL) | XISTOR, NPN R |
| 473 | Q2 | 5613-1740(S) | XISTOR, NPN R |
| 472 | Q3 | 5611-933(S) | XISTOR, PNP R |
| 473 | Q4 | 5613-1740(S) | XISTOR, NPN R |
| 472 | Q5 | 5611-933(S) | XISTOR, PNP R |
| 472 | Q6 | 5611-933(S) | XISTOR, PNP R |
| 471 | Q401 | 5616-2SK364BL | FET, N-CH |
| 471 | Q402 | 5616-2SK364BL | FET, N-CH |
| 412 | Q403 | 5616-2SK170BL | FET, N-CH |
| 412 | Q404 | 5616-2SK170BL | FET, N-CH |
| 411 | Q405 | 5615-2SJ74(BL) | FET, P-CH |
| 411 | Q406 | 5615-2SJ74(BL) | FET, P-CH |
| 416 | Q407 | 5613-1845(E) | XISTOR, NPN R |
| 416 | Q408 | 5613-1845(E) | XISTOR, NPN R |
| 415 | Q409 | 5611-992(E) | XISTOR, PNP R |
| 415 | Q410 | 5611-992(E) | XISTOR, PNP R |
| 413 | Q411 | 5611-999(F) | XISTOR, PNP R |
| 413 | Q412 | 5611-999(F) | XISTOR, PNP R |
| 414 | Q413 | 5613-2320(LF) | XISTOR, NPN R |
| 414 | Q414 | 5613-2320(LF) | XISTOR, NPN R |
| 418 | Q415 | 5611-970(BL) | XISTOR, PNP R |
| 418 | Q416 | 5611-970(BL) | XISTOR, PNP R |
| 414 | Q417 | 5613-2320(LF) | XISTOR, NPN R |
| 414 | Q418 | 5613-2320(LF) | XISTOR, NPN R |
| 416 | Q419 | 5613-1845(E) | XISTOR, NPN R |
| 416 | Q420 | 5613-1845(E) | XISTOR, NPN R |
| 415 | Q421 | 5611-992(E) | XISTOR, PNP R |
| 415 | Q422 | 5611-992(E) | XISTOR, PNP R |
| 413 | Q423 | 5611-999(F) | XISTOR, PNP R |
| 413 | Q424 | 5611-999(F) | XISTOR, PNP R |
| 417 | Q425 | 5613-2240(BL) | XISTOR, NPN R |
| 417 | Q426 | 5613-2240(BL) | XISTOR, NPN R |
| 419 | Q427 | 5612-648A(C) | XISTOR, PNP A |
| 418 | Q428 | 5612-648A(C) | XISTOR, PNP A |
| 420 | Q429 | 5614-668A(C) | XISTOR, NPN A |
| 420 | Q430 | 5614-668A(C) | XISTOR, NPN A |
| 419 | Q431 | 5612-648A(C) | XISTOR, PNP A |

| Ser.No | Ref. No. | Part No. | Description |
|--------|----------|---------------|---------------|
| 419 | Q432 | 5612-648A(C) | XISTOR, PNP A |
| 420 | Q433 | 5614-668A(C) | XISTOR, NPN A |
| 420 | Q434 | 5614-668A(C) | XISTOR, NPN A |
| 417 | Q435 | 5613-2240(BL) | XISTOR, NPN R |
| 417 | Q436 | 5613-2240(BL) | XISTOR, NPN R |
| 418 | Q437 | 5611-970(BL) | XISTOR, PNP R |
| 418 | Q438 | 5611-970(BL) | XISTOR, PNP R |

DIODES

| | | | |
|-----|------|--------------|--------------|
| 477 | D8 | 5635-HZ6A-2L | DIODE, ZENER |
| 478 | D9 | 5631-1S2473 | DIODE, DET |
| 478 | D10 | 5631-1S2473 | DIODE, DET |
| 478 | D11 | 5631-1S2473 | DIODE, DET |
| 478 | D12 | 5631-1S2473 | DIODE, DET |
| 478 | D15 | 5631-1S2473 | DIODE, DET |
| 479 | D16 | 5632-S5566B | DIODE, RECT |
| 426 | D401 | 5635-HZ24-2L | DIODE, ZENER |
| 426 | D402 | 5635-HZ24-2L | DIODE, ZENER |
| 426 | D403 | 5635-HZ24-2L | DIODE, ZENER |
| 426 | D404 | 5635-HZ24-2L | DIODE, ZENER |

CONTROLS

| | | | |
|-----|-------|---------------|--------------------|
| 441 | VR401 | 5101-S0401152 | RES, SEMI FIX 1.5K |
| 441 | VR402 | 5101-S0401152 | RES, SEMI FIX 1.5K |
| 442 | VR403 | 5101-S0401103 | RES, SEMI FIX 10K |
| 442 | VR404 | 5101-S0401103 | RES, SEMI FIX 10K |

MISCELLANEOUS

| | | | |
|-----|-------|--------------|-----------|
| 724 | CN401 | 4443-0801140 | CONNECTOR |
| 726 | CN402 | 4443-060185 | CONNECTOR |
| 727 | CN403 | 4443-070185 | CONNECTOR |
| 728 | CN404 | 4443-080185 | CONNECTOR |
| 723 | CN405 | 4443-0201140 | CONNECTOR |
| 729 | TM401 | 4214-11021 | TERMINAL |
| 729 | TM402 | 4214-11021 | TERMINAL |
| 730 | TP401 | 4443-024116 | CONNECTOR |
| 730 | TP402 | 4443-024116 | CONNECTOR |

PCB-5 MAIN Lch P.C.BOARD

CAPACITORS

| | | | |
|-----|------|--------------|-----------------------|
| 534 | C455 | 5353-330534 | CAP, MCA 33p |
| 534 | C457 | 5353-330534 | CAP, MCA 33p |
| 691 | C459 | 5354-104593 | CAP, MYL .1μ |
| 541 | C465 | 5354-473593 | CAP, MYL .047μ |
| 541 | C467 | 5354-473593 | CAP, MYL .047μ |
| 542 | C469 | 5345-106C095 | CAP, MINI ELE 10μ/16V |
| 540 | C471 | 5354-104593 | CAP, MYL .1μ |

RESISTORS

| | | | |
|-----|--------|---------------|--------------------|
| 549 | R479 | 5135-100522 | RES, CBN 1/2P 10 |
| 518 | R481 | 5272-S010KR15 | RES, CEM 2P .15 |
| 518 | R483 | 5272-S010KR15 | RES, CEM 2P .15 |
| 518 | R485 | 5272-S010KR15 | RES, CEM 2P .15 |
| 517 | R487 | 5272-S010JR22 | RES, CEM 2P .22 |
| 517 | R489 | 5272-S010JR22 | RES, CEM 2P .22 |
| 518 | R491 | 5272-S010KR15 | RES, CEM 2P .15 |
| 518 | R493 | 5272-S010KR15 | RES, CEM 2P .15 |
| 517 | R495 | 5272-S010JR22 | RES, CEM 2P .22 |
| 517 | R497 | 5272-S010JR22 | RES, CEM 2P .22 |
| 518 | R499 | 5272-S010KR15 | RES, CEM 2P .15 |
| 524 | R741 | 5135-221522 | RES, CBN 1/2P 220 |
| 528 | R743 | 5135-102522 | RES, CBN 1/2P 1K |
| 525 | R745 | 5135-561522 | RES, CBN 1/2P 560 |
| 693 | R751 | 5232-562J16P | RES, CBN 1/6P 5.6K |
| 693 | R753 | 5232-562J16P | RES, CBN 1/6P 5.6K |
| 694 | R755 | 5232-182J16P | RES, CBN 1/6P 1.8K |
| 531 | R757 | 5171-100572 | RES, MTL 1P 10 |
| 526 | R759 | 5135-121522 | RES, CBN 1/2P 120 |
| 531 | R761 | 5171-100572 | RES, MTL 1P 10 |
| 695 | R763 | 5232-472J16P | RES, CBN 1/6P 4.7K |
| 527 | R765 | 5135-150522 | RES, CBN 1/2P 15 |
| 523 | △ R769 | 5102-2215116 | RES, FUSE 220 |

| Ser.No | Ref. No. | Part No. | Description | Ser.No | Ref. No. | Part No. | Description |
|--------|----------|--------------|------------------|--------|----------|--------------|--------------------|
| 523 | △ R771 | 5102-2215116 | RES, FUSE 220 | 701 | R752 | 5232-562J16P | RES, CBN 1/6P 5.6K |
| 520 | △ R791 | 5102-1015116 | RES, FUSE 100 | 701 | R754 | 5232-562J18P | RES, CBN 1/6P 5.6K |
| 520 | △ R793 | 5102-1015116 | RES, FUSE 100 | 702 | R756 | 5232-182J16P | RES, CBN 1/6P 1.8K |
| 521 | △ R795 | 5102-1005116 | RES, FUSE 10 | 591 | R758 | 5171-100572 | RES, MTL 1P 10 |
| 521 | △ R797 | 5102-1005116 | RES, FUSE 10 | 586 | R760 | 5135-121522 | RES, CBN 1/2P 120 |
| 527 | R799 | 5135-150522 | RES, CBN 1/2P 15 | 591 | R762 | 5171-100572 | RES, MTL 1P 10 |
| 549 | R941 | 5135-100522 | RES, CBN 1/2P 10 | 703 | R764 | 5232-472J16P | RES, CBN 1/6P 4.7K |

TRANSISTORS

| | | | | | | | |
|-----|------|---------------|---------------|--------------------|--------|---------------|------------------|
| 501 | Q451 | 5611-970(BL) | XISTOR, PNP R | 583 | △ R772 | 5102-2215116 | RES, FUSE 220 |
| 505 | Q453 | 5613-3423(Y) | XISTOR, NPN R | 580 | △ R792 | 5102-1015116 | RES, FUSE 100 |
| 503 | Q457 | 5614-668A(C) | XISTOR, NPN A | 580 | △ R794 | 5102-1015116 | RES, FUSE 100 |
| 502 | Q459 | 5612-648A(C) | XISTOR, PNP A | 581 | △ R796 | 5102-1005116 | RES, FUSE 10 |
| 508 | Q461 | 5611-1306A(Y) | XISTOR, PNP R | 581 | △ R798 | 5102-1005116 | RES, FUSE 10 |
| 507 | Q463 | 5613-3298A(Y) | XISTOR, NPN R | 587 | R800 | 5135-150522 | RES, CBN 1/2P 15 |
| 508 | Q465 | 5611-1302(O) | XISTOR, PNP R | 612 | R942 | 5135-100522 | RES, CBN 1/2P 10 |
| 510 | Q467 | 5613-3281(O) | XISTOR, NPN R | TRANSISTORS | | | |
| 508 | Q469 | 5611-1302(O) | XISTOR, PNP R | 561 | Q452 | 5611-970(BL) | XISTOR, PNP R |
| 510 | Q471 | 5613-3281(O) | XISTOR, NPN R | 565 | Q454 | 5613-3423(Y) | XISTOR, NPN R |
| 508 | Q473 | 5611-1302(O) | XISTOR, PNP R | 563 | Q458 | 5614-668A(C) | XISTOR, NPN A |
| 510 | Q475 | 5613-3281(O) | XISTOR, NPN R | 562 | Q460 | 5612-648A(C) | XISTOR, PNP A |
| 690 | Q477 | 5611-970(BL) | XISTOR, PNP R | 566 | Q462 | 5611-1306A(Y) | XISTOR, PNP R |

DIODES

| | | | | | | | |
|-----|------|------------|-------------|-----|------|---------------|---------------|
| 514 | D407 | 5632-10DF2 | DIODE, RECT | 567 | Q464 | 5613-3298A(Y) | XISTOR, NPN R |
| 514 | D409 | 5632-10DF2 | DIODE, RECT | 568 | Q470 | 5611-1302(O) | XISTOR, PNP R |
| 514 | D411 | 5632-10DF2 | DIODE, RECT | 570 | Q472 | 5613-3281(O) | XISTOR, NPN R |
| 514 | D413 | 5632-10DF2 | DIODE, RECT | 568 | Q474 | 5611-1302(O) | XISTOR, PNP R |

COILS

| | | | | | | | |
|-----|------|------------|-------------|-----|------|--------------|---------------|
| 550 | L401 | 5597-45502 | CORE, BEADS | 570 | Q466 | 5611-1302(O) | XISTOR, PNP R |
| 550 | L403 | 5597-45502 | CORE, BEADS | 570 | Q468 | 5613-3281(O) | XISTOR, NPN R |
| 535 | L405 | 5991-7165 | SPRING COIL | 568 | Q470 | 5611-1302(O) | XISTOR, PNP R |

CONTROL

| | | | | | | | |
|-----|-------|---------------|------------------|-----|------|--------------|---------------|
| 543 | VR405 | 5101-S0401102 | RES, SEMI FIX 1K | 570 | Q472 | 5613-3281(O) | XISTOR, NPN R |
|-----|-------|---------------|------------------|-----|------|--------------|---------------|

MISCELLANEOUS

| | | | | | | | |
|-----|-------|---------------|---------------|---------------|------|--------------|---------------|
| 744 | CC401 | 4132-R0110121 | CORD, 2C | 570 | Q474 | 5611-1302(O) | XISTOR, PNP R |
| 741 | CW401 | 4163-0135021 | CONNECTOR W/W | 570 | Q476 | 5613-3281(O) | XISTOR, NPN R |
| 742 | CW402 | 4163-0135023 | CONNECTOR W/W | 698 | Q478 | 5611-970(BL) | XISTOR, PNP R |
| 743 | CW403 | 4163-0140022 | CONNECTOR W/W | DIODES | | | |
| 738 | JL401 | 4242-R0406141 | JUMPER LEAD | 574 | D408 | 5632-10DF2 | DIODE, RECT |
| 737 | JL402 | 4242-R0403141 | JUMPER LEAD | 574 | D410 | 5632-10DF2 | DIODE, RECT |
| 606 | PT1 | 5192-00104 | POSISTOR | 574 | D412 | 5632-10DF2 | DIODE, RECT |
| 735 | TP403 | 4443-024116 | CONNECTOR | 574 | D414 | 5632-10DF2 | DIODE, RECT |

PCB-6 MAIN Rch P.C.BOARD

CAPACITORS

| | | | | | | | |
|-----|------|---------------|-----------------------|----------------------|-------|---------------|------------------|
| 594 | C456 | 5353-330534 | CAP, MCA 33p | COILS | | | |
| 594 | C458 | 5353-330534 | CAP, MCA 33p | 613 | L402 | 5597-45502 | CORE, BEADS |
| 699 | C460 | 5354-104593 | CAP, MYL .1µ | 613 | L404 | 5597-45502 | CORE, BEADS |
| 601 | C466 | 5354-473593 | CAP, MYL .047µ | 595 | L406 | 5991-7165 | SPRING COIL |
| 601 | C468 | 5354-473593 | CAP, MYL .047µ | CONTROL | | | |
| 602 | C470 | 5345-106C0951 | CAP, MINI ELE 10µ*16V | 603 | VR406 | 5101-S0401102 | RES, SEMI FIX 1K |
| 600 | C472 | 5354-104593 | CAP, MYL .1µ | MISCELLANEOUS | | | |

RESISTORS

| | | | | | | | |
|-----|------|---------------|-------------------|----------------------------------|-------|---------------|---------------------------|
| 612 | R480 | 5135-100522 | RES, CBN 1/2P 10 | 748 | CC402 | 4132-R0110121 | CORD, 2C |
| 578 | R482 | 5272-S010KR15 | RES, CEM 2P .15 | 752 | CW404 | 4163-0135021 | CONNECTOR W/W |
| 578 | R484 | 5272-S010KR15 | RES, CEM 2P .15 | 753 | CW405 | 4163-0135020 | CONNECTOR W/W |
| 578 | R486 | 5272-S010KR15 | RES, CEM 2P .15 | 754 | CW406 | 4163-0140023 | CONNECTOR W/W |
| 577 | R488 | 5272-S010JR22 | RES, CEM 2P .22 | 750 | JL403 | 4242-R0407141 | JUMPER LEAD |
| 577 | R490 | 5272-S010JR22 | RES, CEM 2P .22 | 747 | TP404 | 4443-024116 | CONNECTOR |
| 578 | R492 | 5272-S010KR15 | RES, CEM 2P .15 | PCB-7 HEADPHONE P.C.BOARD | | | |
| 578 | R494 | 5272-S010KR15 | RES, CEM 2P .15 | MISCELLANEOUS | | | |
| 577 | R496 | 5272-S010JR22 | RES, CEM 2P .22 | 917 | J1 | 4451-00161 | JACK, 1P |
| 577 | R498 | 5272-S010JR22 | RES, CEM 2P .22 | PCB-8 SPEAKER P.C.BOARD | | | |
| 578 | R500 | 5272-S010KR15 | RES, CEM 2P .15 | CAPACITORS | | | |
| 584 | R742 | 5135-221522 | RES, CBN 1/2P 220 | 069B | C83 | 5359-1015851 | CAP, PPP 100p G GB |
| 588 | R744 | 5135-102522 | RES, CBN 1/2P 1K | 069B | C84 | 5359-1015851 | CAP, PPP 100p G GB |
| 585 | R746 | 5135-561522 | RES, CBN 1/2P 560 | 069B | C85 | 5359-1015851 | CAP, PPP 100p G GB |
| | | | | 069B | C86 | 5359-1015851 | CAP, PPP 100p G GB |

RESISTORS

| | | | |
|-----|------|-------------|------------------|
| 679 | R737 | 5135-102522 | RES, CBN 1/2P 1K |
| 679 | R738 | 5135-102522 | RES, CBN 1/2P 1K |
| 679 | R739 | 5135-102522 | RES, CBN 1/2P 1K |
| 679 | R740 | 5135-102522 | RES, CBN 1/2P 1K |

| Ser.No | Ref. No. | Part No. | Description |
|----------------------|----------|---------------|----------------|
| MISCELLANEOUS | | | |
| 772 | JL404 | 4242-R0303451 | JUMPER LEAD |
| 651 | △ SPT1 | 4214-221 | TERMINAL |
| 914 | SW3 | 4411-204715 | SWITCH, ROTARY |

PCB-9 MAIN POWER SUPPLY P.C. BOARD

| CAPACITORS | | | |
|-------------------|-------|---------------|--------------------------|
| 624 | C7 | 5352-1041957 | CAP, MTL .1μ |
| 624 | C8 | 5352-1041957 | CAP, MTL .1μ |
| 624 | C9 | 5352-1041957 | CAP, MTL .1μ |
| 624 | C10 | 5352-1041957 | CAP, MTL .1μ |
| 051B | C20 | 5352-1041957 | CAP, MTL .1μ G GB |
| 051B | C21 | 5352-1041957 | CAP, MTL .1μ G GB |
| 683 | C23 | 5345-475J0962 | CAP, MINI ELE 4.7μ/100V |
| 623 | △ C31 | 5341-S10JM109 | CAP, ELE 10000μ/85V |
| 623 | △ C32 | 5341-S10JM109 | CAP, ELE 10000μ/85V |
| 623 | △ C33 | 5341-S10JM109 | CAP, ELE 10000μ/85V |
| 623 | △ C34 | 5341-S10JM109 | CAP, ELE 10000μ/85V |

| RESISTORS | | | |
|------------------|-------|--------------|-------------------|
| 685 | △ R28 | 5102-8205116 | RES, FUSE 82 |
| 685 | △ R29 | 5102-8205116 | RES, FUSE 82 |
| 688 | R30 | 5171-331593 | RES, MTL 1P 330 |
| 687 | R31 | 5135-103522 | RES, CBN 1/2P 10K |
| 689 | R32 | 5171-471593 | RES, MTL 1P 470 |
| 688 | R33 | 5171-331593 | RES, MTL 1P 330 |

| DIODES | | | |
|---------------|-------|-------------|---------------|
| 621 | △ D1 | 5685-D5SB40 | SILICON, BRIG |
| 621 | △ D2 | 5685-D5SB40 | SILICON, BRIG |
| 681 | △ D13 | 5632-S5566B | DIODE, RECT |
| 681 | △ D14 | 5632-S5566B | DIODE, RECT |

| MISCELLANEOUS | | | |
|----------------------|-------|---------------|---------------|
| 762 | CW1 | 4163-S0202201 | CONNECTOR W/W |
| 759 | △ TM1 | 4214-11033 | TERMINAL |
| 759 | △ TM2 | 4214-11033 | TERMINAL |

PCB-10 POWER SWITCH P.C. BOARD

| CAPACITORS | | | |
|-------------------|------|---------------|--------------------------------------|
| 913 | △ C1 | 5352-S010M103 | CAP, MTL .01μ BK NB |
| 913B | △ C1 | 5352-4720958 | CAP, MTL 4700p G GB I IB S SB |

| RESISTOR | | | |
|-----------------|------|--------------|---|
| 054B | R101 | 5135-335J50P | RES, CBN 12P 3.3M G GB I IB S SB |

| MISCELLANEOUS | | | |
|----------------------|--------|------------|---------------|
| 912 | △ SW2 | 4433-01101 | SWITCH, PU-PW |
| 916 | △ TM9 | 4214-122 | TERMINAL |
| 916 | △ TM10 | 4214-122 | TERMINAL |

PCB-11 POWER SUPPLY P.C. BOARD

| CAPACITORS | | | |
|-------------------|------|---------------|--------------------------|
| 629 | △ C5 | 5345-228F0962 | CAP, MINI ELE 2200μ/50V |
| 629 | △ C6 | 5345-228F0962 | CAP, MINI ELE 2200μ/50V |
| 630 | C11 | 5354-104593 | CAP, MYL .1μ |
| 630 | C12 | 5354-104593 | CAP, MYL .1μ |
| 052B | C22 | 5352-1041957 | CAP, MTL .1μ G GB |

| DIODES | | | |
|---------------|------|-------------|-------------|
| 627 | △ D3 | 5632-S5566B | DIODE, RECT |
| 627 | △ D4 | 5632-S5566B | DIODE, RECT |
| 627 | △ D5 | 5632-S5566B | DIODE, RECT |
| 627 | △ D6 | 5632-S5566B | DIODE, RECT |

| MISCELLANEOUS | | | |
|----------------------|-----|--------------|-----------|
| 764 | CN1 | 4443-0201140 | CONNECTOR |

| Ser.No | Ref. No. | Part No. | Description |
|--------|----------|--------------|----------------------------|
| 765 | CN2 | 4443-0301140 | CONNECTOR |
| 765 | CN3 | 4443-0301140 | CONNECTOR |
| 765 | CN4 | 4443-0301140 | CONNECTOR |
| 766 | CW2 | 4163-0140039 | CONNECTOR W/W |
| 632 | △ F2 | 5732-122031 | FUSE BK |
| 632B | △ F2 | 5732-122030 | FUSE G GB I IB S SB |
| 632F | △ F2 | 5732-122037 | FUSE NB |
| 632 | △ F3 | 5732-122031 | FUSE BK |
| 632B | △ F3 | 5732-122030 | FUSE G GB I IB S SB |
| 632F | △ F3 | 5732-122037 | FUSE NB |
| 633 | △ HF2 | 4472-0131 | HOLDER, FUSE |
| 633 | △ HF3 | 4472-0131 | HOLDER, FUSE |
| 633 | △ HF4 | 4472-0131 | HOLDER, FUSE |
| 633 | △ HF5 | 4472-0131 | HOLDER, FUSE |
| 763 | TM5 | 4214-11033 | TERMINAL |

PCB-12 VOLUME P.C. BOARD

| RESISTORS | | | |
|------------------|------|-------------|--------------------|
| 920 | R503 | 5135-472522 | RES, CBN 1/2P 4.7K |
| 920 | R504 | 5135-472522 | RES, CBN 1/2P 4.7K |

| CONTROLS | | | |
|-----------------|-----------|---------------|--------------------|
| 896 | VR503/504 | 5113-10472147 | RES, V CBN 16 100K |

| MISCELLANEOUS | | | |
|----------------------|-------|-------------|-----------|
| 767 | CN502 | 4443-030185 | CONNECTOR |
| 767 | CN507 | 4443-030185 | CONNECTOR |

PCB-13 V/D SWITCH P.C. BOARD

| MISCELLANEOUS | | | |
|----------------------|-------|---------------|---------------|
| 756 | CN805 | 4443-0201141 | CONNECTOR |
| 755 | CW809 | 4163-S0202451 | CONNECTOR W/W |
| 904 | SW801 | 4431-A027610 | SWITCH, PUSH |

PCB-14 PRE OUT P.C. BOARD

| CAPACITOR | | | |
|------------------|------|--------------|---------------------------|
| 066B | C79 | 5359-1215851 | CAP, PPP 120p G GB |
| 066B | C80 | 5359-1215851 | CAP, PPP 120p G GB |
| 067B | C81 | 5359-4715851 | CAP, PPP 470p G GB |
| 067B | C82 | 5359-4715851 | CAP, PPP 470p G GB |
| 666 | C577 | 5361-103KB | CAP, CER .01μ |

| RESISTORS | | | |
|------------------|------|-------------|--------------------------------|
| 919 | R929 | 5135-331522 | RES, CBN 1/2P 330 |
| 919B | R929 | 5135-182522 | RES, CBN 1/2P 1.8K G GB |
| 919 | R930 | 5135-331522 | RES, CBN 1/2P 330 |
| 919B | R930 | 5135-182522 | RES, CBN 1/2P 1.8K G GB |

| MISCELLANEOUS | | | |
|----------------------|-------|---------------|---------------|
| 770 | CN501 | 4443-030185 | CONNECTOR |
| 661 | △ PJ2 | 4489-02601002 | PIN JACK, MLT |

| RESISTORS | | | |
|------------------|------|-------------|--------------------|
| 553 | R747 | 5135-561522 | RES, CBN 1/2P 560 |
| 554 | R749 | 5135-122522 | RES, CBN 1/2P 1.2K |

| TRANSISTOR | | | |
|-------------------|------|--------------|---------------|
| 557 | Q455 | 5613-3423(Y) | XISTOR, NPN R |

PCB-15 TERMINAL P.C. BOARD

| RESISTORS | | | |
|------------------|------|-------------|-------------------|
| 615 | R748 | 5135-561522 | RES, CBN 1/2P 560 |

| Ser.No | Ref. No. | Part No. | Description |
|------------------------------|----------|---------------|--|
| 616 | R750 | 5135-122522 | RES, CBN 1/2P 1.2K |
| TRANSISTOR | | | |
| 618 | Q456 | 5613-3423(Y) | XISTOR, NPN R |
| CHASSIS MISCELLANEOUS | | | |
| MISCELLANEOUS | | | |
| 057B | C51 | 5361-223KB | CAP, CER .022μ G GB |
| 056B | △ CO1 | 4443-712 | CONNECTOR G GB I IB S SB |
| 667 | △ F1 | 5732-802029 | FUSE BK |
| 667B | △ F1 | 5732-502030 | FUSE G GB I IB S SB |
| 667F | △ F1 | 5732-802056 | FUSE NB |
| 668 | △ HF1 | 4472-014 | HOLDER, FUSE BK NB |
| 668B | △ HF1 | 4472-7118 | HOLDER, FUSE G GB I IB S SB |
| 654 | △ P1 | 4161-04901252 | CORD W/PLUG BK |
| 654B | △ P1 | 4161-71150 | CORD W/PLUG G GB I IB |
| 654F | △ P1 | 4161-04901252 | CORD W/PLUG NB |
| 654G | △ P1 | 4161-71159 | CORD W/PLUG S SB |
| 652 | △ SO1 | 4474-156 | SOCKET BK NB |
| 656 | △ SW1 | 4433-01002 | SWITCH, PU-PW BK NB |
| 656B | △ SW1 | 4433-01001 | SWITCH, PU-PW G GB I IB S SB |
| 053B | △ SW101 | 4411-102729 | SWITCH, ROTARY G GB I IB S SB |
| 674 | △ T1 | 5584-S6501 | XFORMER, POWER BK |
| 674B | △ T1 | 5584-S6502 | XFORMER, POWER G GB I IB S SB |
| 674F | △ T1 | 5584-S6503 | XFORMER, POWER NB |
| 055B | | 4150-8 | TUBING, SPE G GB I IB S SB |
| 663 | | 4442-14 | PIN PLUG |

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

NOTE



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

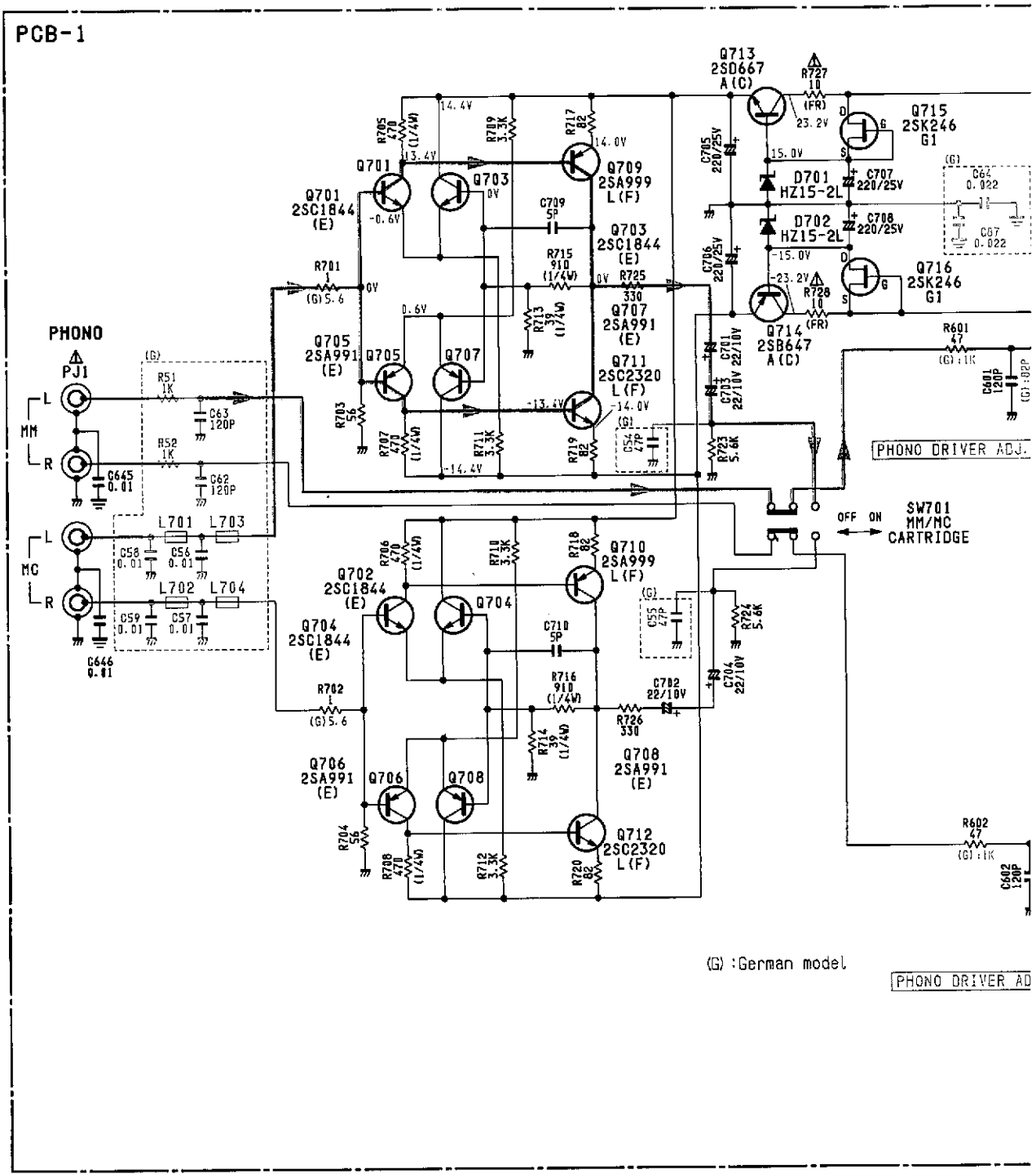
PACKAGE

| | | |
|-----|---------------|---|
| 021 | 1756-06303 | LABEL G GB I IB S SB |
| 021 | 1756-03113 | LABEL NB |
| 022 | 1756-03124 | LABEL, (G) G GB |
| 022 | 1756-03108 | LABEL, (I) I IB |
| 022 | 1756-03106 | LABEL, (SEV) S SB |
| 022 | 1751-07705 | LABEL, AC CORD NB |
| 023 | 1241-PB | POLYETHYLENE BAG NB |
| 107 | 1111-J30317 | OWNER GUIDE, OG BK |
| 107 | 1111-J30318 | OWNER GUIDE, OG G GB I IB S SB |
| 107 | 1111-J2052 | OWNER GUIDE NB |
| 108 | 1113-717004 | OWNER CARD BK |
| 108 | 1113-0C | OWNER GUIDE NB |
| 109 | 1119-047 | ATTACH SHEET, WARANTY BK |
| 109 | 1116-GC | GUARANT CARD NB |
| 110 | 1119-0137 | ATTACH SHEET BK |
| 111 | 1119-01201 | ATTACH SHEET, UL BK |
| 111 | 1119-0135 | ATTACH SHEET FTZ G GB |
| 113 | 1241-R0123350 | POLYETHYLENE BAG, OG |
| 122 | 1241-C1494 | POLYETHYLENE BAG, SET |
| 125 | 1221-757198 | CARTON BOX G I S |
| 125 | 1221-767198 | CARTON BOX BK GB NB IB SB |
| 126 | 1222-7357 | CUSHION, L |
| 127 | 1222-7358 | CUSHION, R |
| 128 | 1223-11747 | SOFT SHEET, SET |
| 129 | 1223-11115 | SOFT SHEET, AC CORD |

A B C D E


SCHEMATIC DIAGRAM (PHONO AMP SECTION)

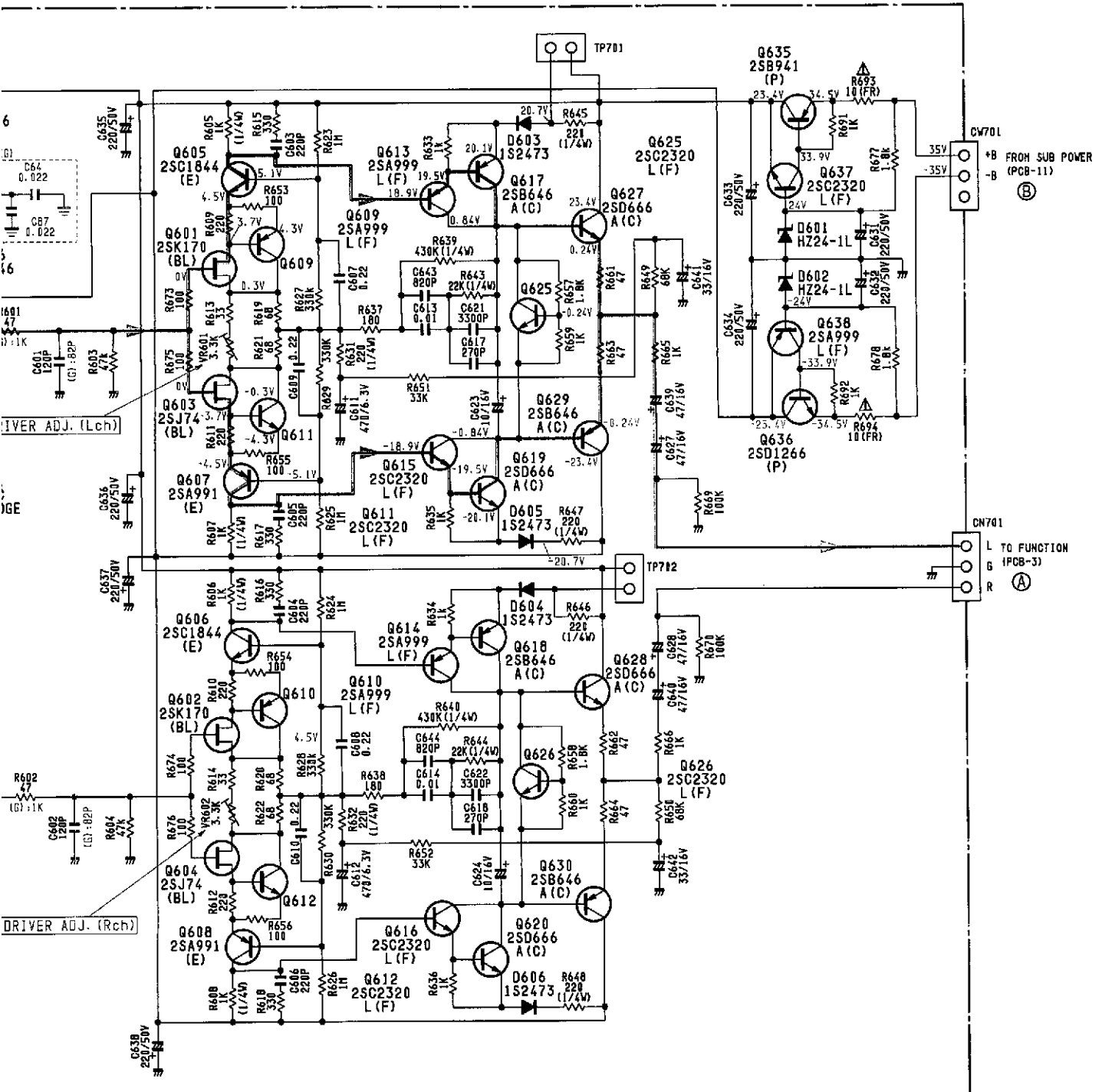
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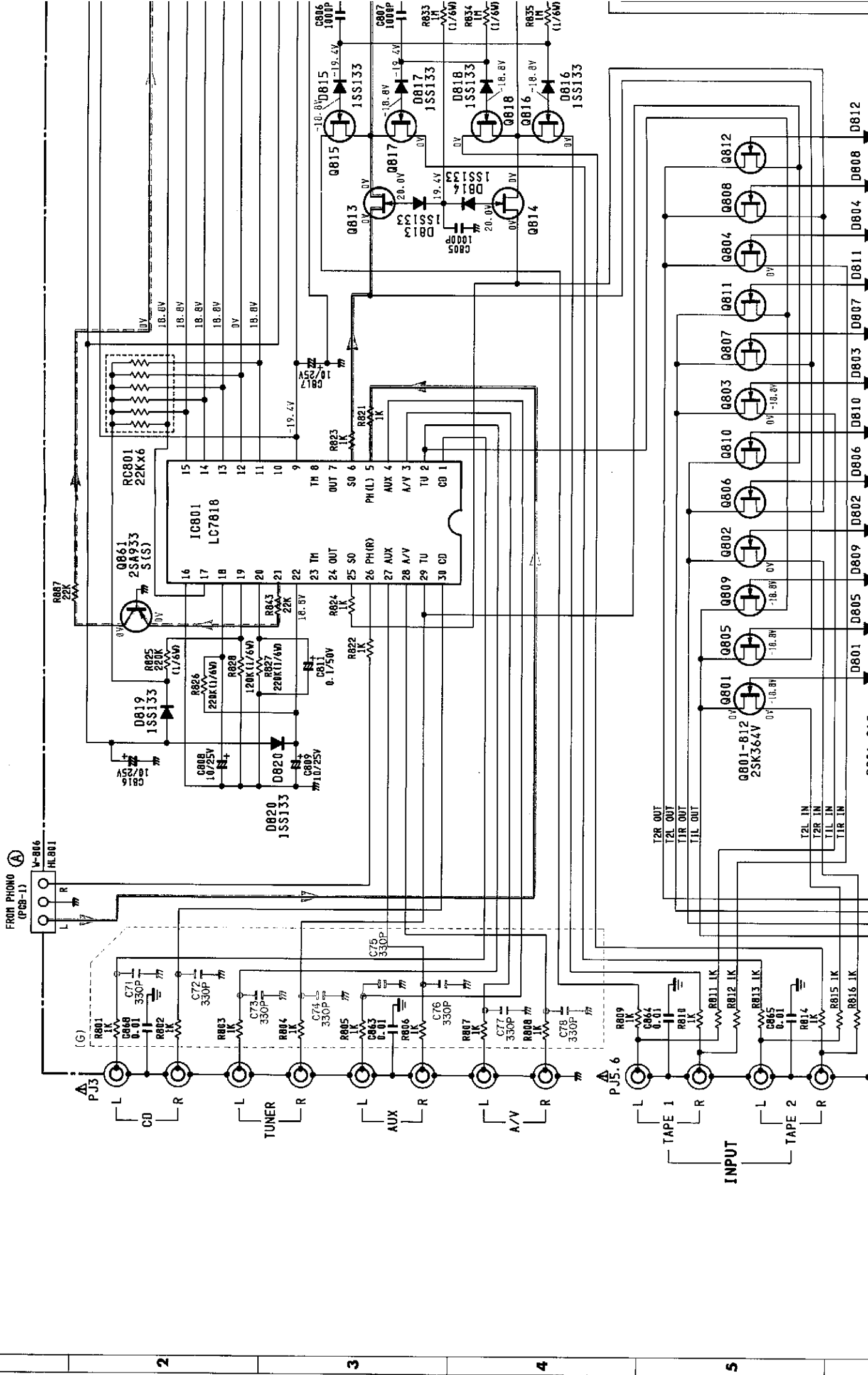
PHONO DRIVER AD

NOTE:

1. ALL RESISTANCES VALUES ARE IN Ω .
 $K\Omega=1000\Omega$, $M\Omega=1000K\Omega$.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. $P=\mu F$.
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.



SCHEMATIC DIAGRAM (FUNCTION & VIDEO SECTION)



1

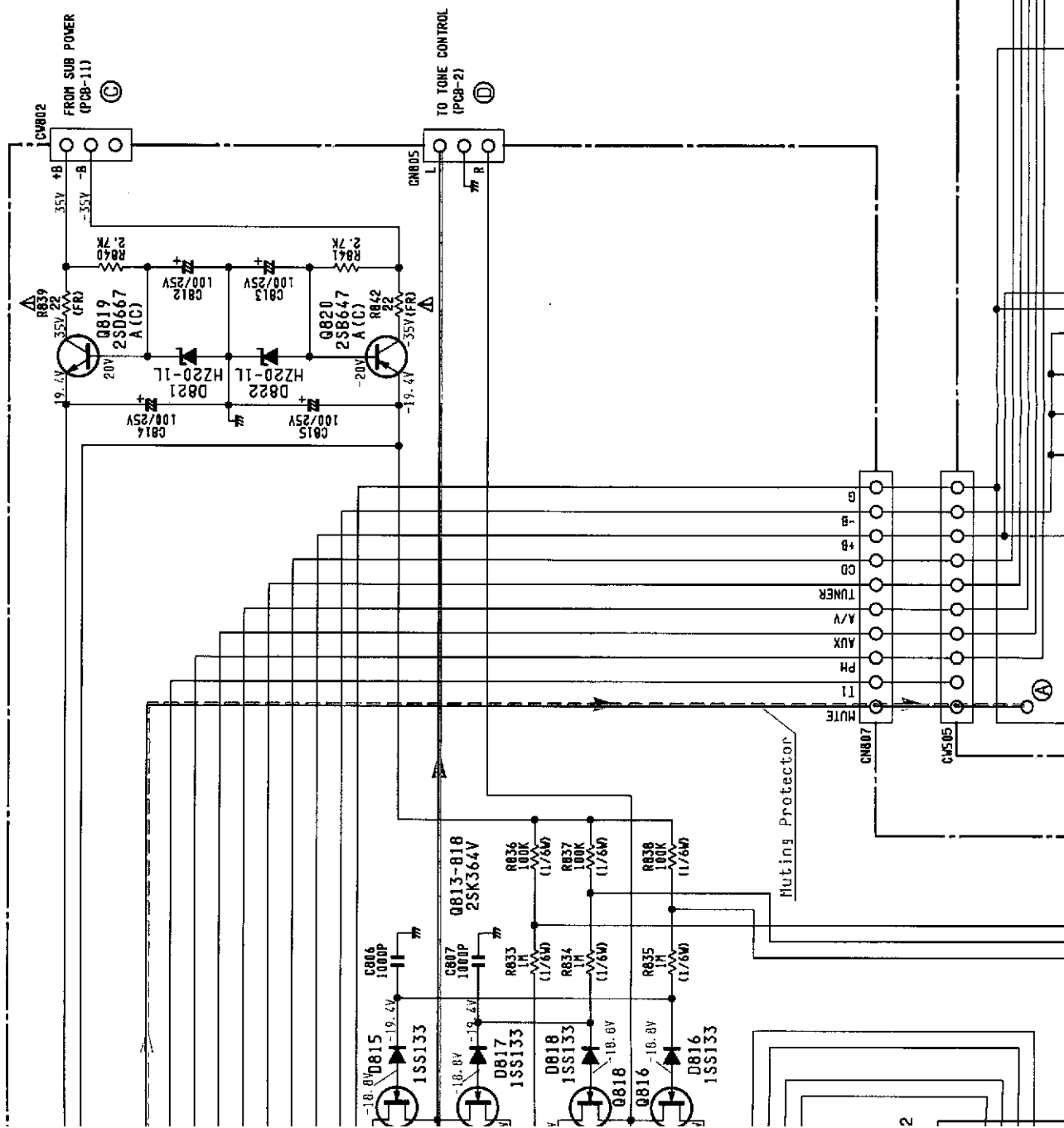
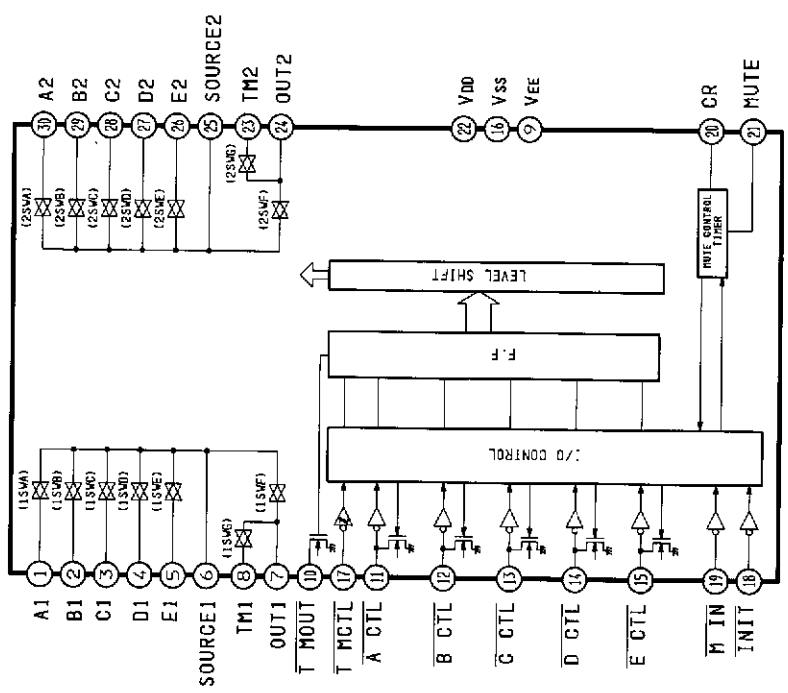
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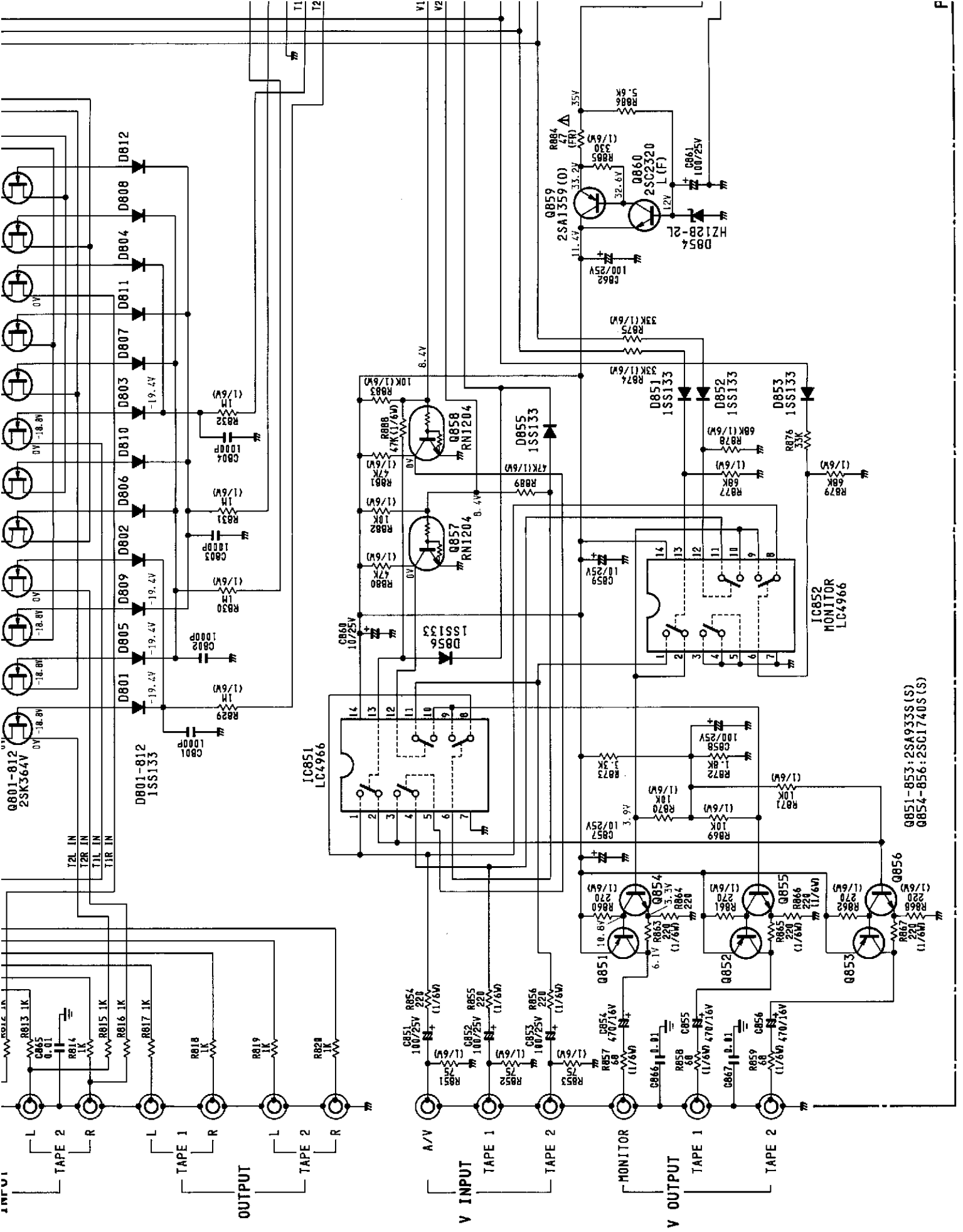
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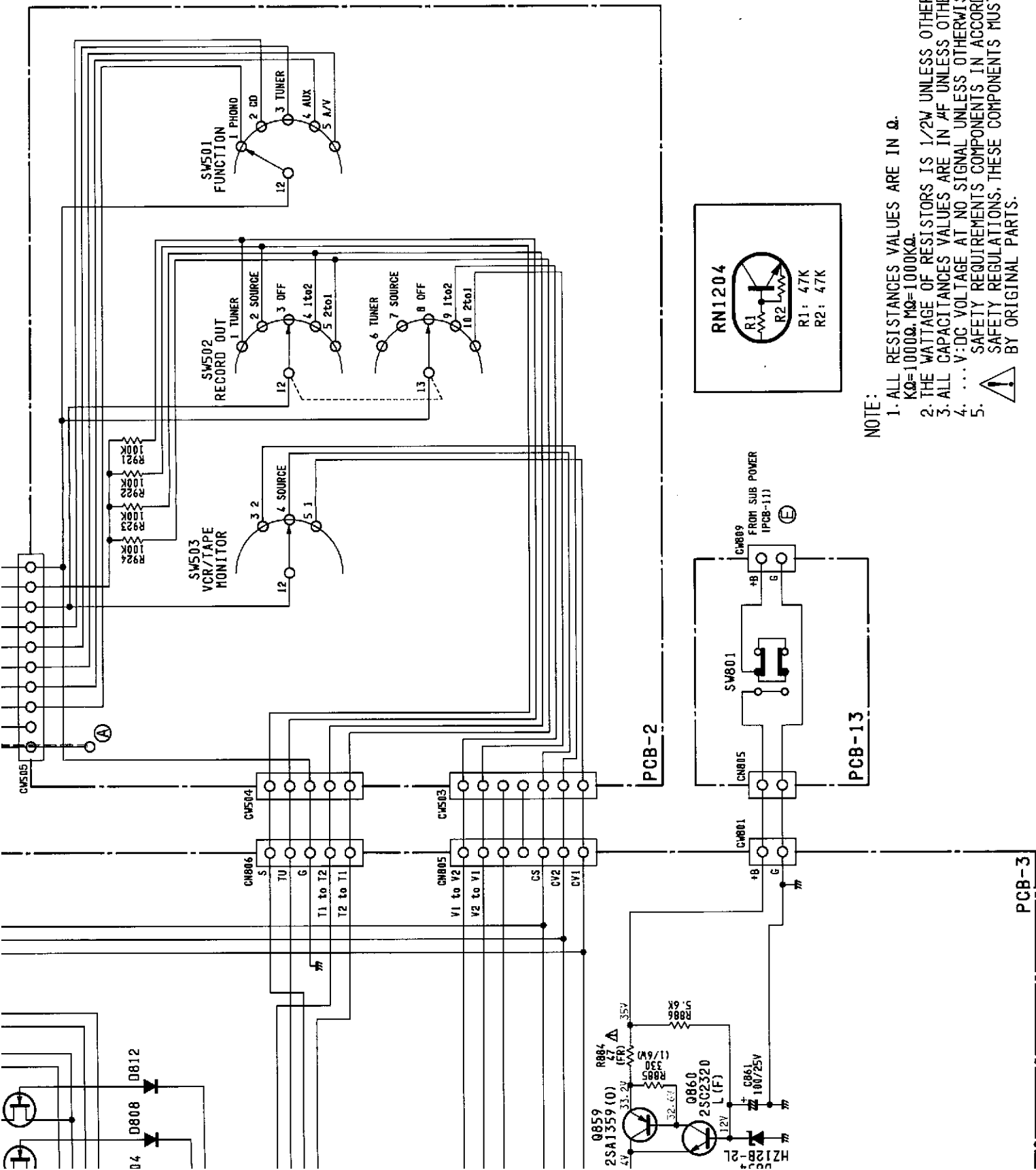
5

LC 7818





Q851-Q853: 2SA933(S)
Q854-Q856: 2SC1740(S)



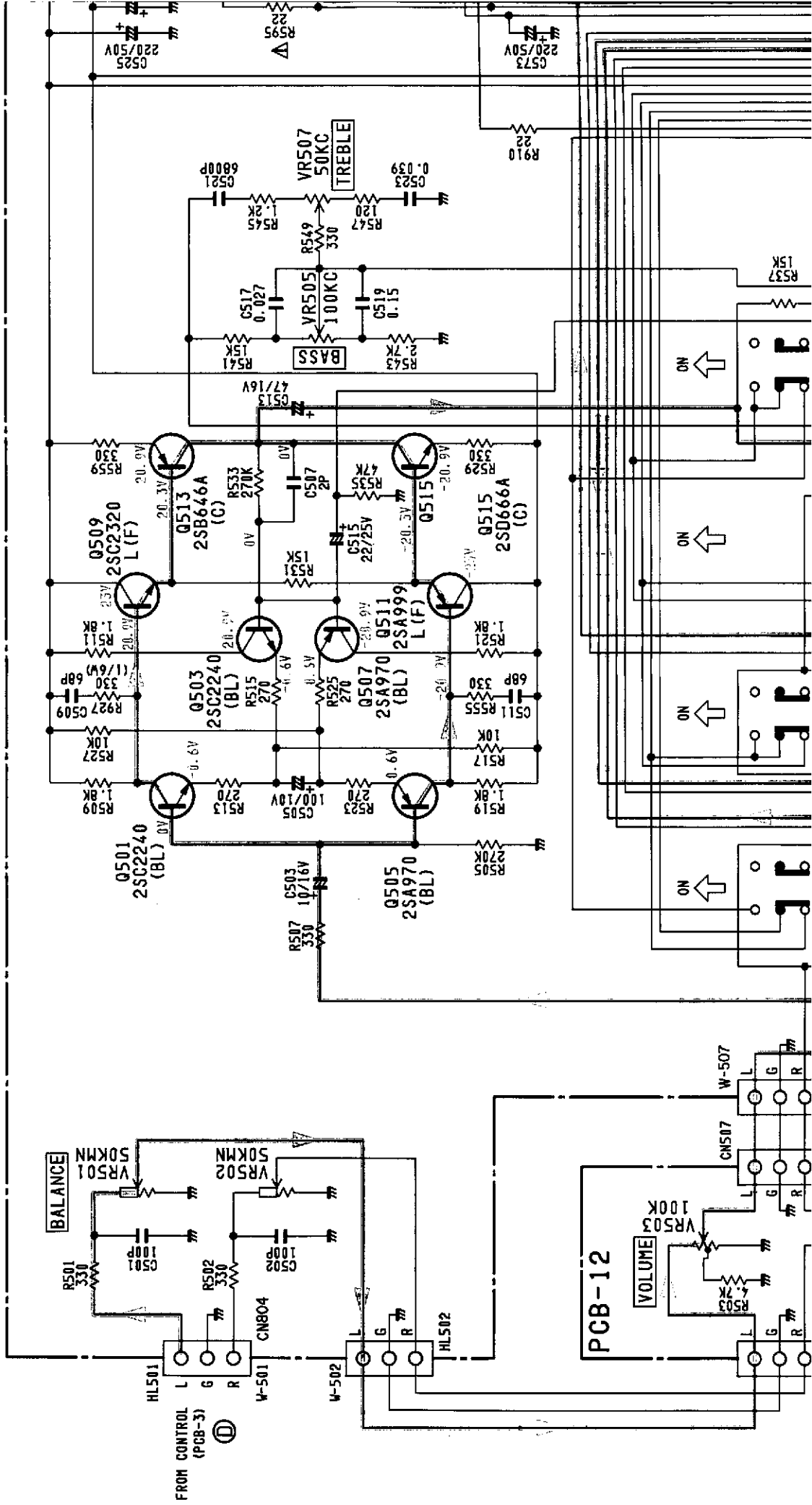
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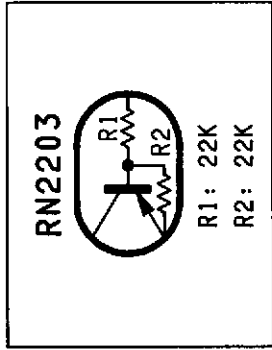
1. ALL RESISTANCE VALUES ARE IN Ω .
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN μ F UNLESS OTHERWISE NOTED.
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS, THESE COMPONENTS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



A B C D E F G

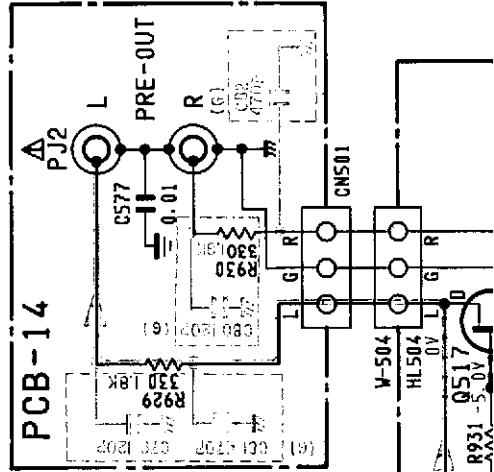
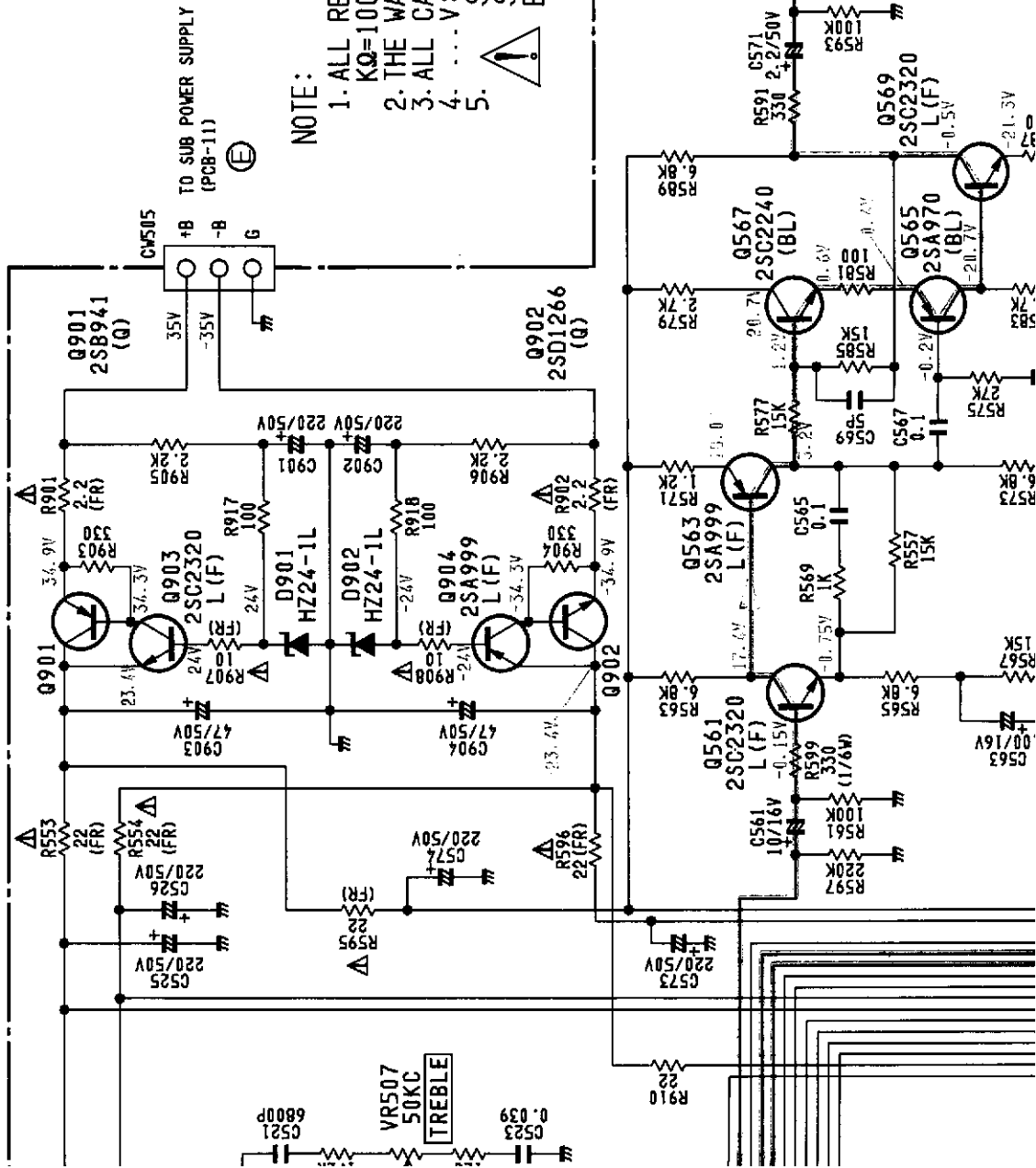
SCHEMATIC DIAGRAM (TONE CONTROL SECTION)

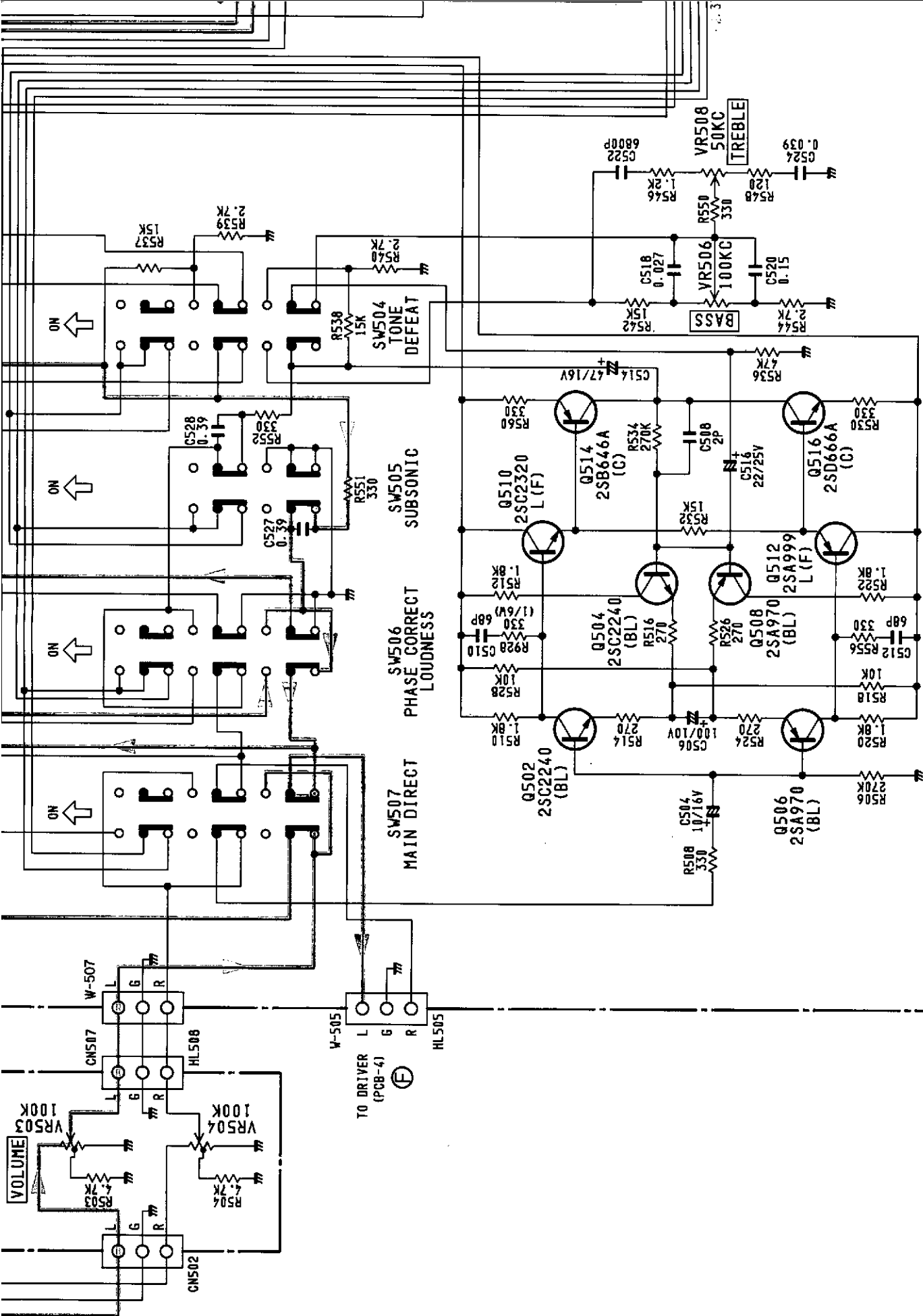




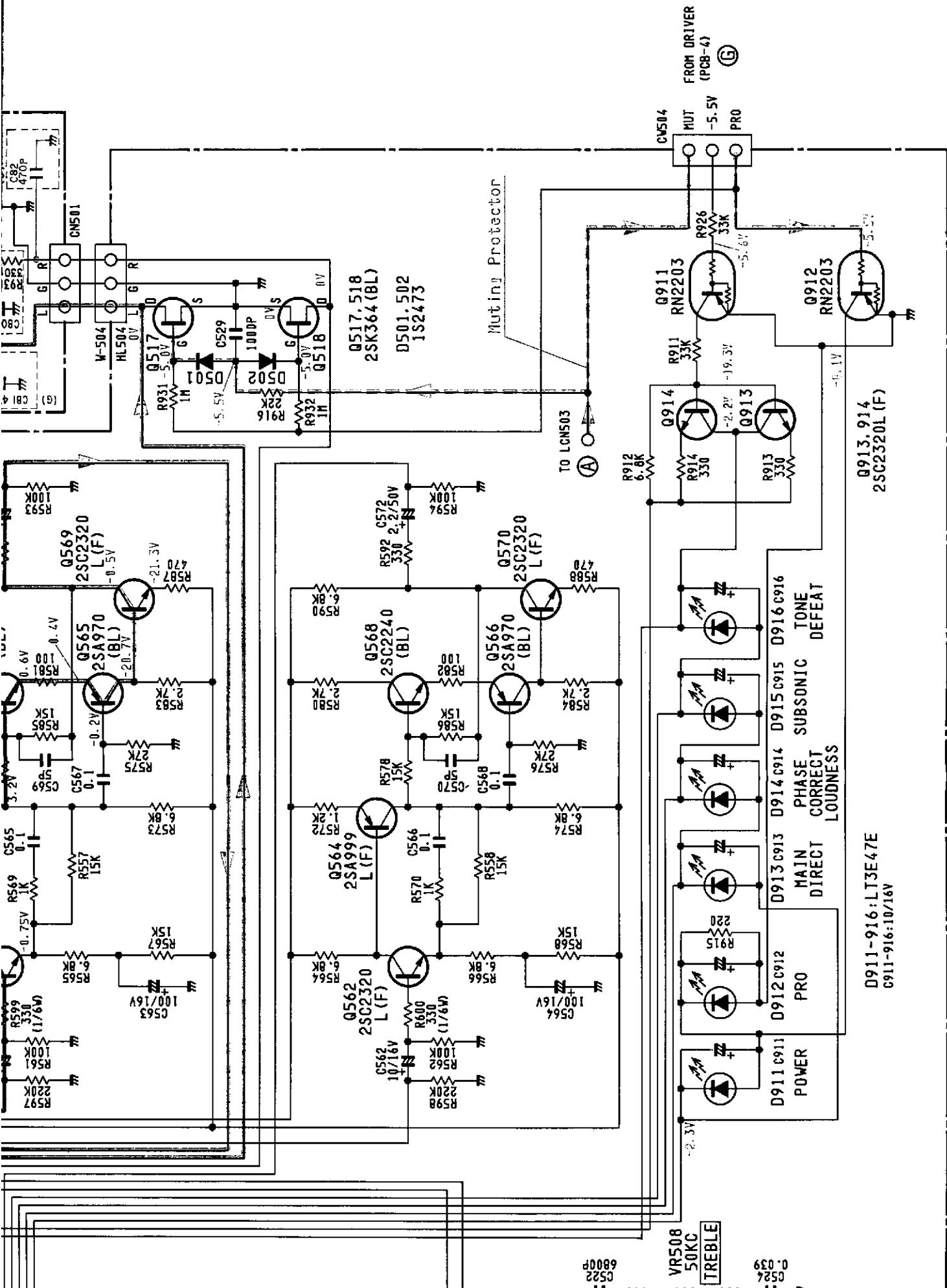
NOTE:

1. ALL RESISTANCE VALUES ARE IN Ω .
 $K\Omega=1000\Omega$, $M\Omega=1000K\Omega$.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=#/FF.
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.





PCB-2



FROM DRIVER (PCB-4) **(G)**

MUT -5.5V

PRO

TO LCN503

TO LCN503

TO LCN503

TO LCN503

Q911 RN2203

Q912 RN2203

Q913 2SC2320L (F)

Q914 2SC2320L (F)

Q915 2SC2320L (F)

Q916 2SC2320L (F)

Q917 2SC2320L (F)

Q918 2SC2320L (F)

Q919 2SC2320L (F)

Q920 2SC2320L (F)

Q921 2SC2320L (F)

Q922 2SC2320L (F)

Q923 2SC2320L (F)

Q924 2SC2320L (F)

Q925 2SC2320L (F)

Q926 2SC2320L (F)

Q927 2SC2320L (F)

Q928 2SC2320L (F)

Q929 2SC2320L (F)

Q930 2SC2320L (F)

Q931 2SC2320L (F)

Q932 2SC2320L (F)

Q933 2SC2320L (F)

Q934 2SC2320L (F)

Q935 2SC2320L (F)

Q936 2SC2320L (F)

Q937 2SC2320L (F)

Q938 2SC2320L (F)

Q939 2SC2320L (F)

Q940 2SC2320L (F)

Q941 2SC2320L (F)

Q942 2SC2320L (F)

Q943 2SC2320L (F)

Q944 2SC2320L (F)

Q945 2SC2320L (F)

Q946 2SC2320L (F)

Q947 2SC2320L (F)

Q948 2SC2320L (F)

Q949 2SC2320L (F)

Q950 2SC2320L (F)

Q951 2SC2320L (F)

Q952 2SC2320L (F)

Q953 2SC2320L (F)

Q954 2SC2320L (F)

Q955 2SC2320L (F)

Q956 2SC2320L (F)

Q957 2SC2320L (F)

Q958 2SC2320L (F)

Q959 2SC2320L (F)

Q960 2SC2320L (F)

Q961 2SC2320L (F)

Q962 2SC2320L (F)

Q963 2SC2320L (F)

Q964 2SC2320L (F)

Q965 2SC2320L (F)

Q966 2SC2320L (F)

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Q968 2SC2320L (F)

Q969 2SC2320L (F)

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Q971 2SC2320L (F)

Q972 2SC2320L (F)

Q973 2SC2320L (F)

Q974 2SC2320L (F)

Q975 2SC2320L (F)

Q976 2SC2320L (F)

Q977 2SC2320L (F)

Q978 2SC2320L (F)

Q979 2SC2320L (F)

Q980 2SC2320L (F)

Q981 2SC2320L (F)

Q982 2SC2320L (F)

Q983 2SC2320L (F)

Q984 2SC2320L (F)

Q985 2SC2320L (F)

Q986 2SC2320L (F)

Q987 2SC2320L (F)

Q988 2SC2320L (F)

Q989 2SC2320L (F)

Q990 2SC2320L (F)

Q991 2SC2320L (F)

Q992 2SC2320L (F)

Q993 2SC2320L (F)

Q994 2SC2320L (F)

Q995 2SC2320L (F)

Q996 2SC2320L (F)

Q997 2SC2320L (F)

Q998 2SC2320L (F)

Q999 2SC2320L (F)

Q1000 2SC2320L (F)

A

B

C

D

E

SCHEMATIC DIAGRAM (POWER AMP SECTION)

1

2

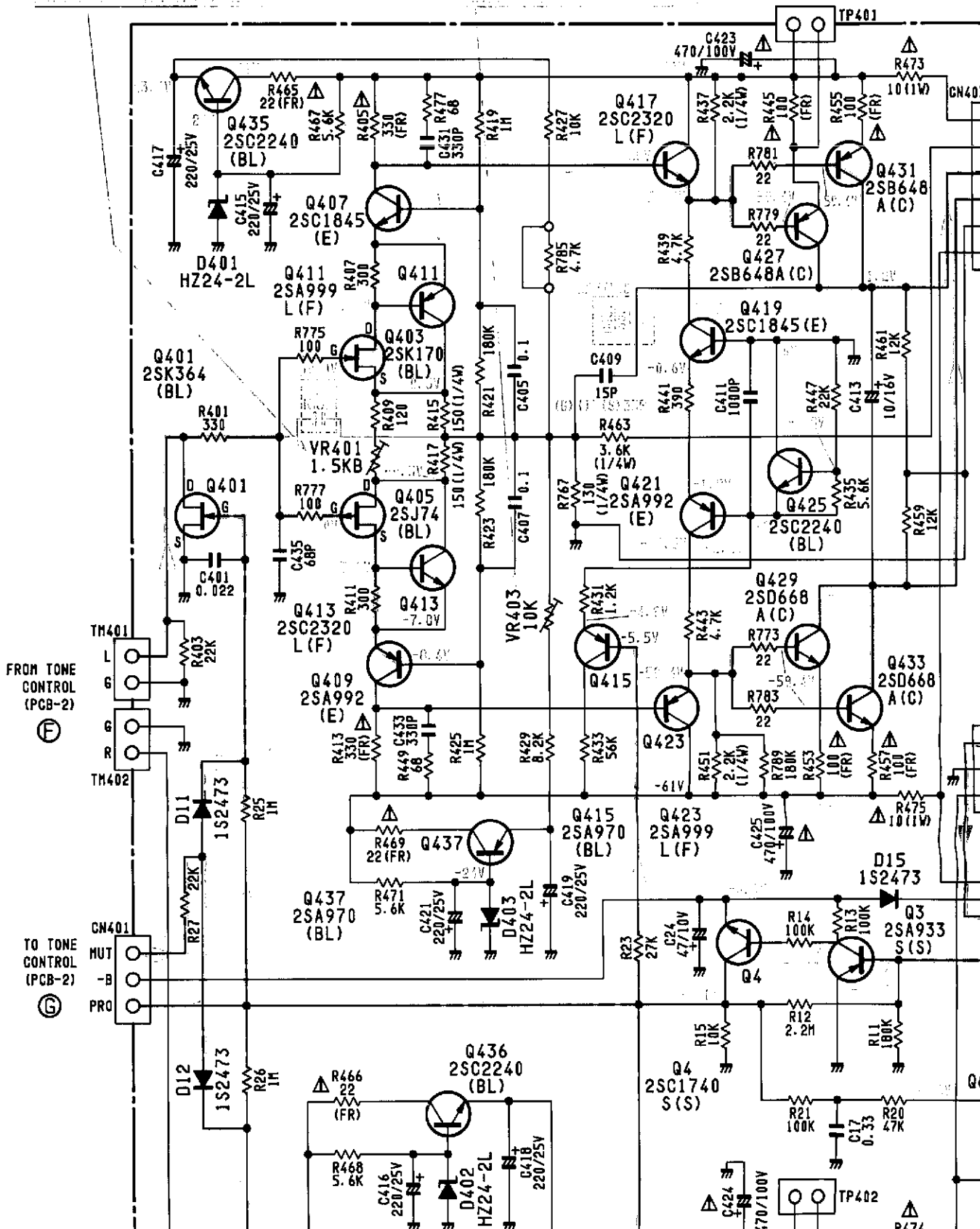
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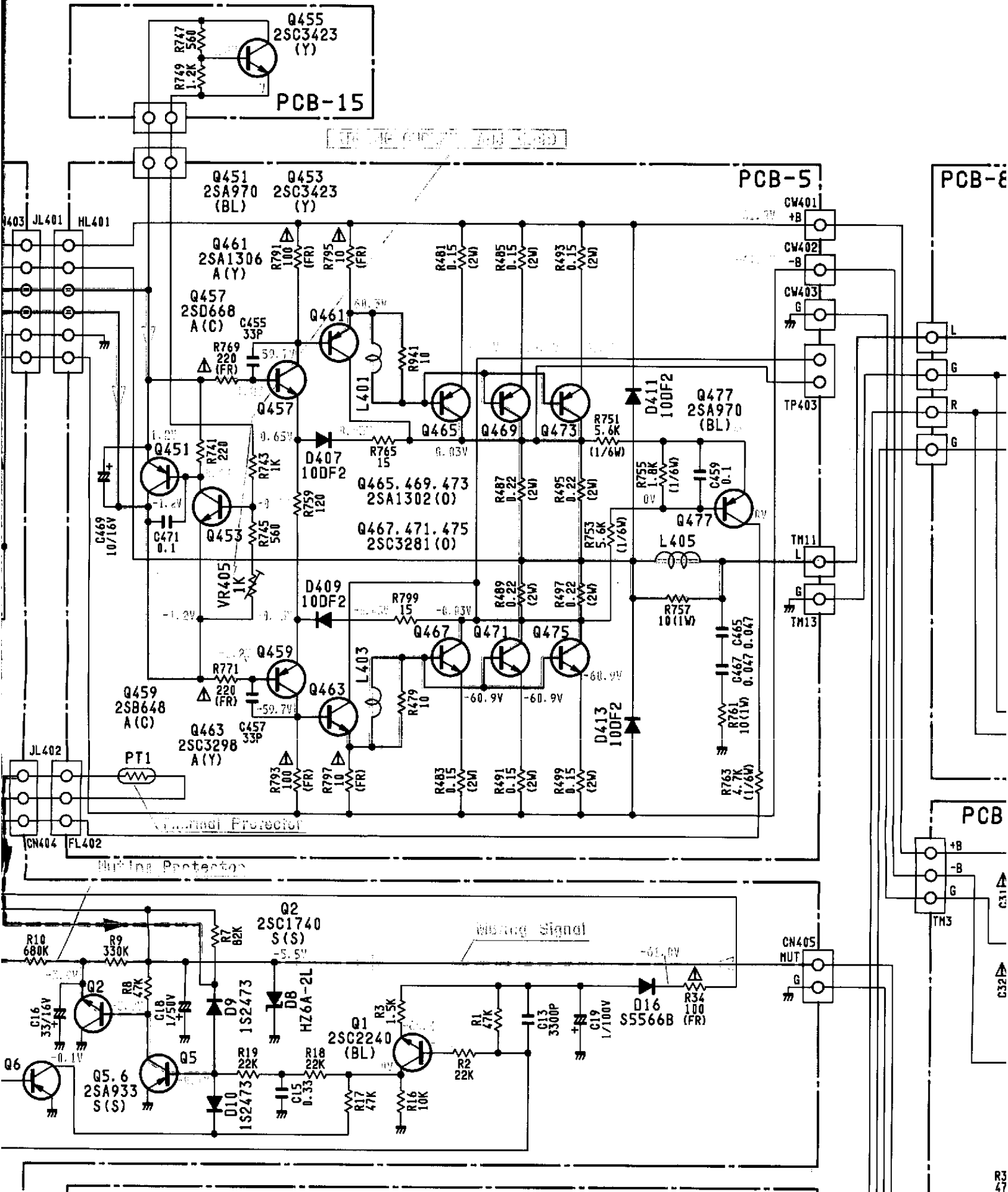
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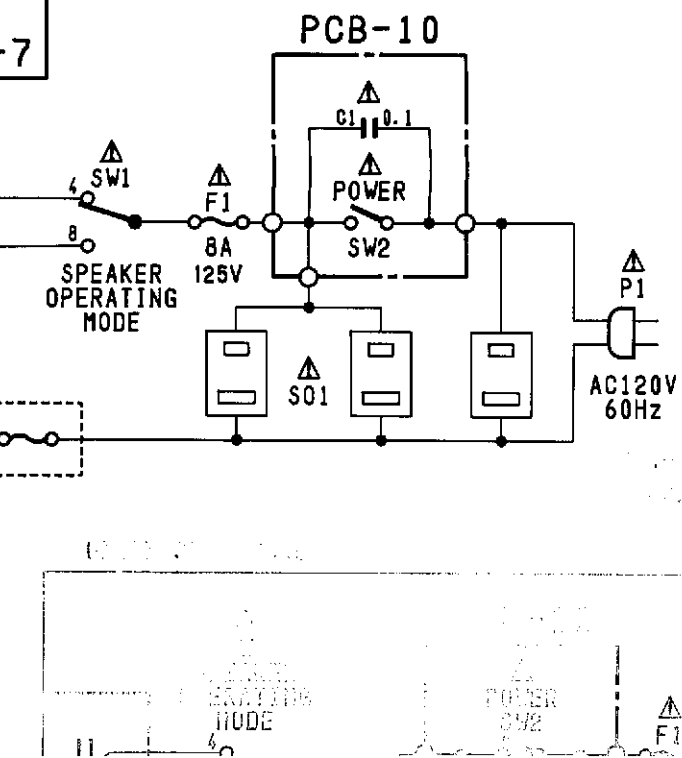
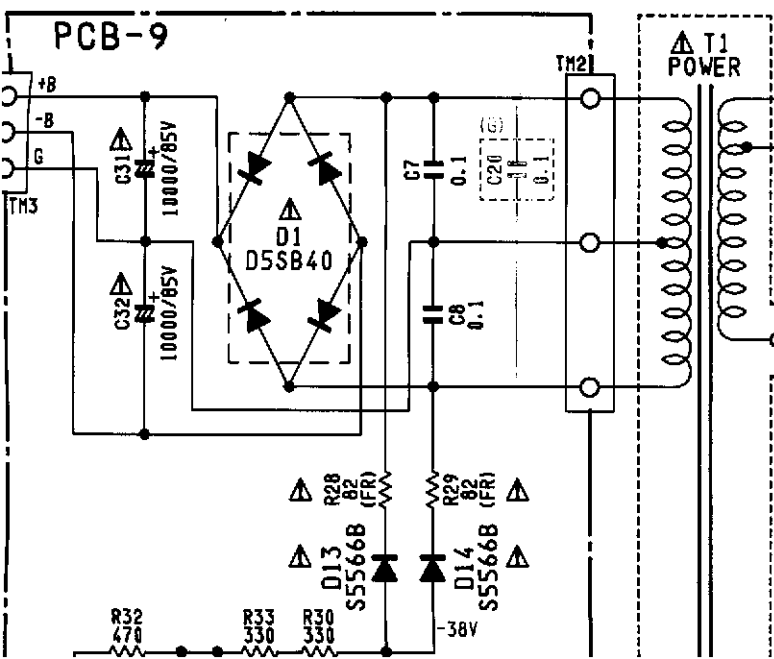
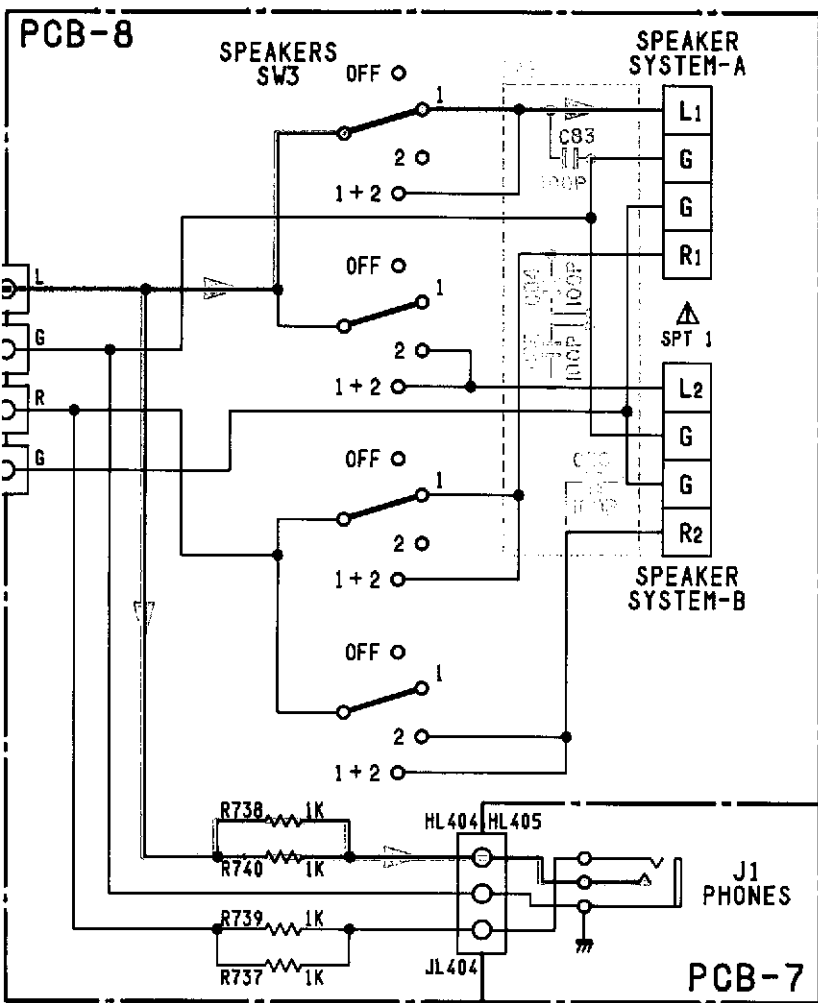
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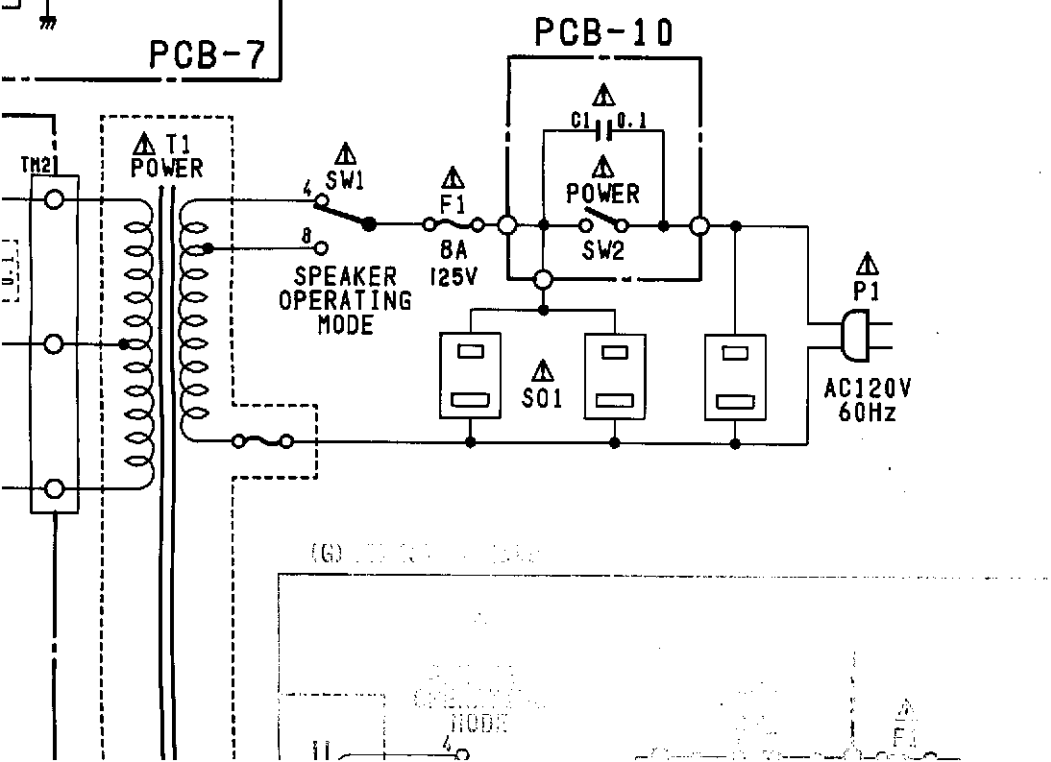
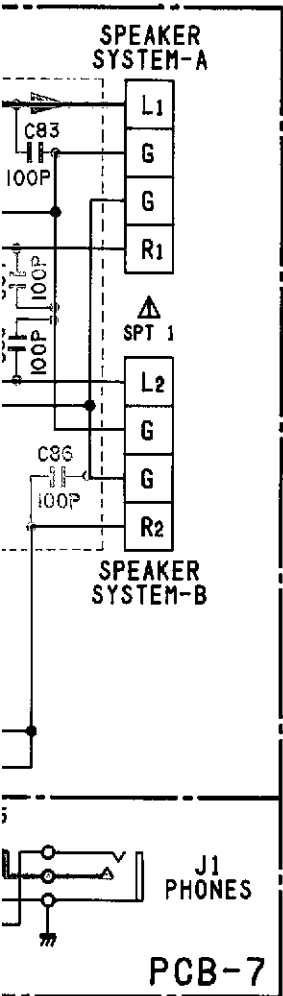
6

7









6

7

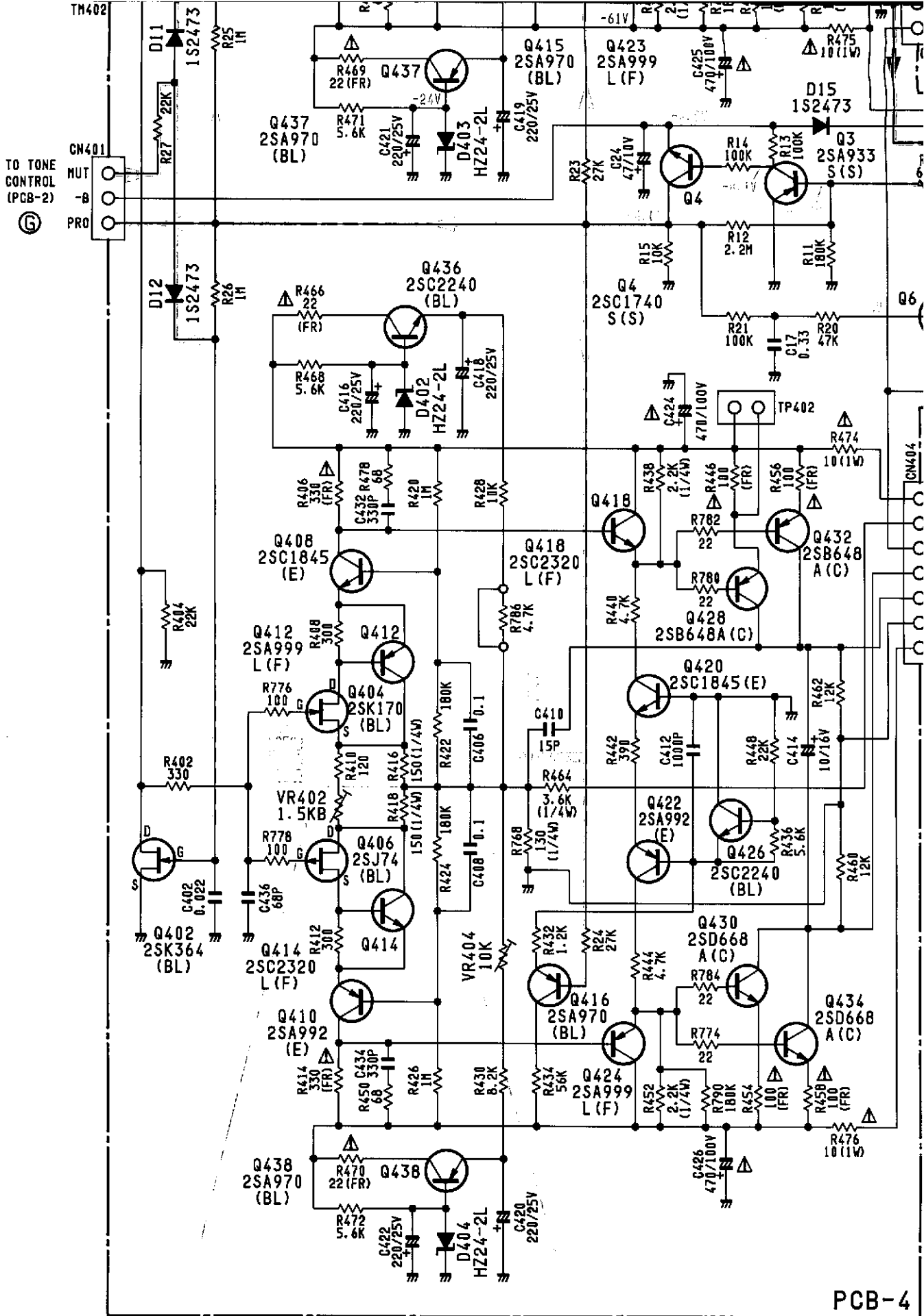
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9

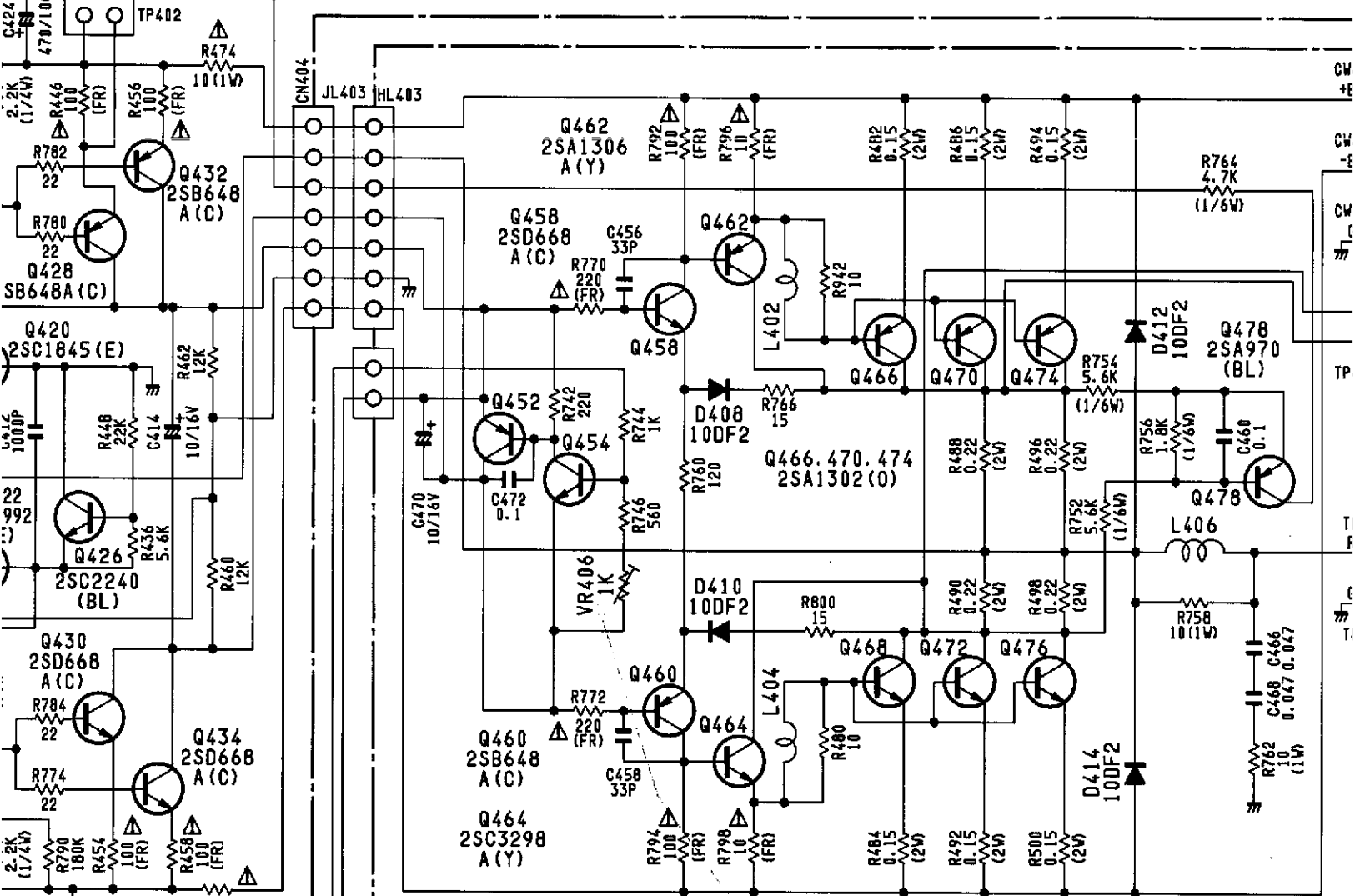
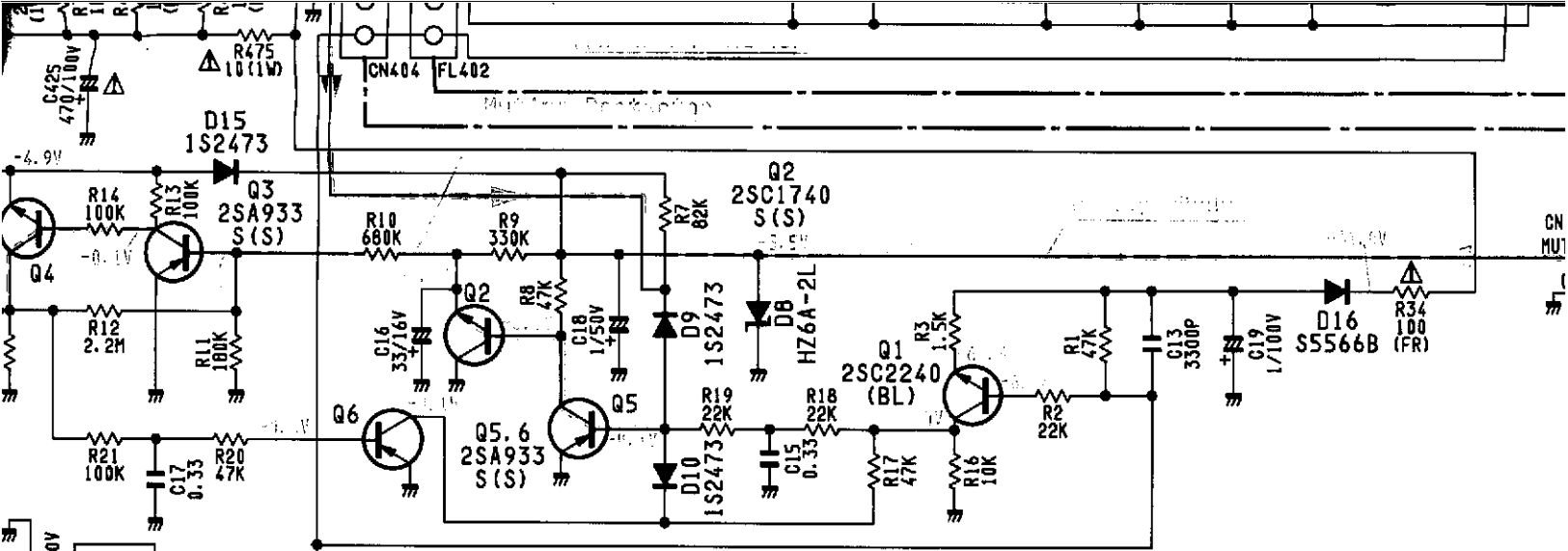
10

11

12

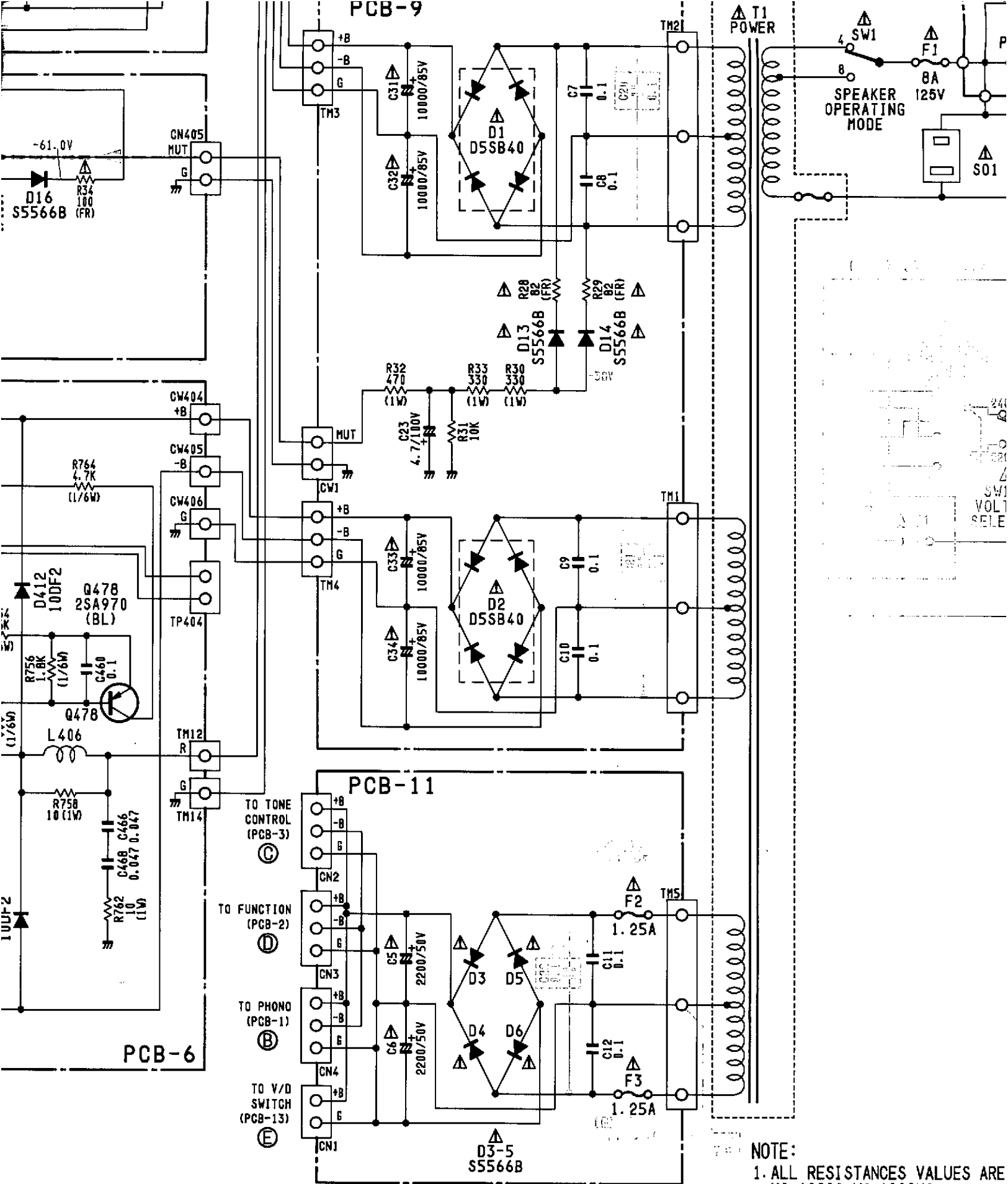


PCB-4



PCB-

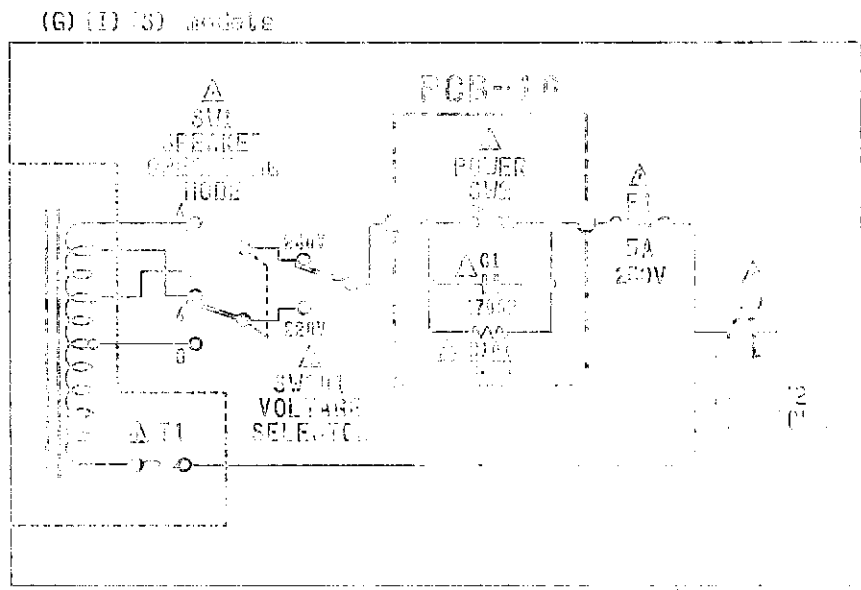
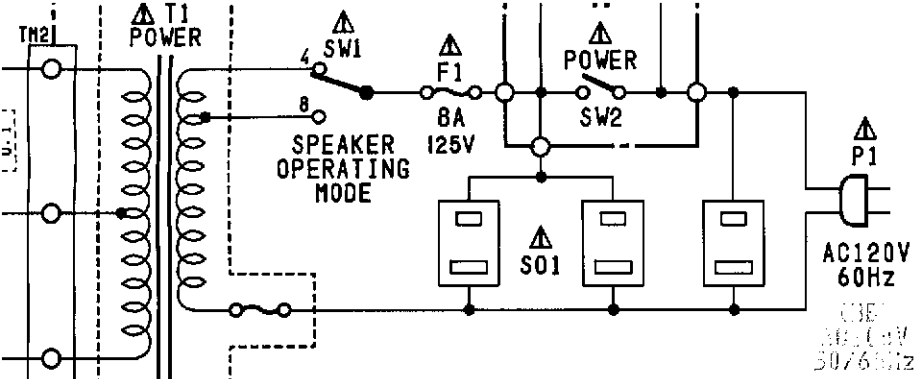
ADV. 1971



NOTE:

1. ALL RESISTANCES VALUES ARE KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS ...
3. ALL CAPACITANCES VALUES ARE ...
4. ... V:DC VOLTAGE AT NO SIGNAL SAFETY REQUIREMENTS OR SAFETY REGULATIONS, TH BY ORIGINAL PARTS.





NOTE:

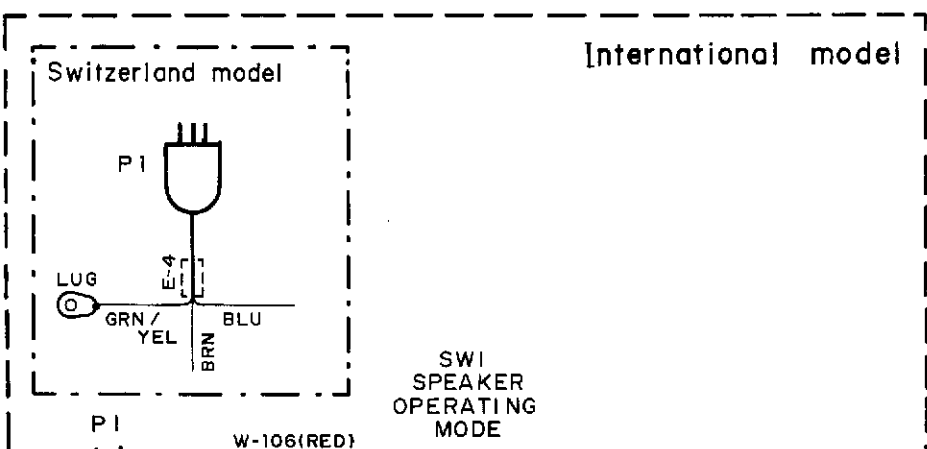
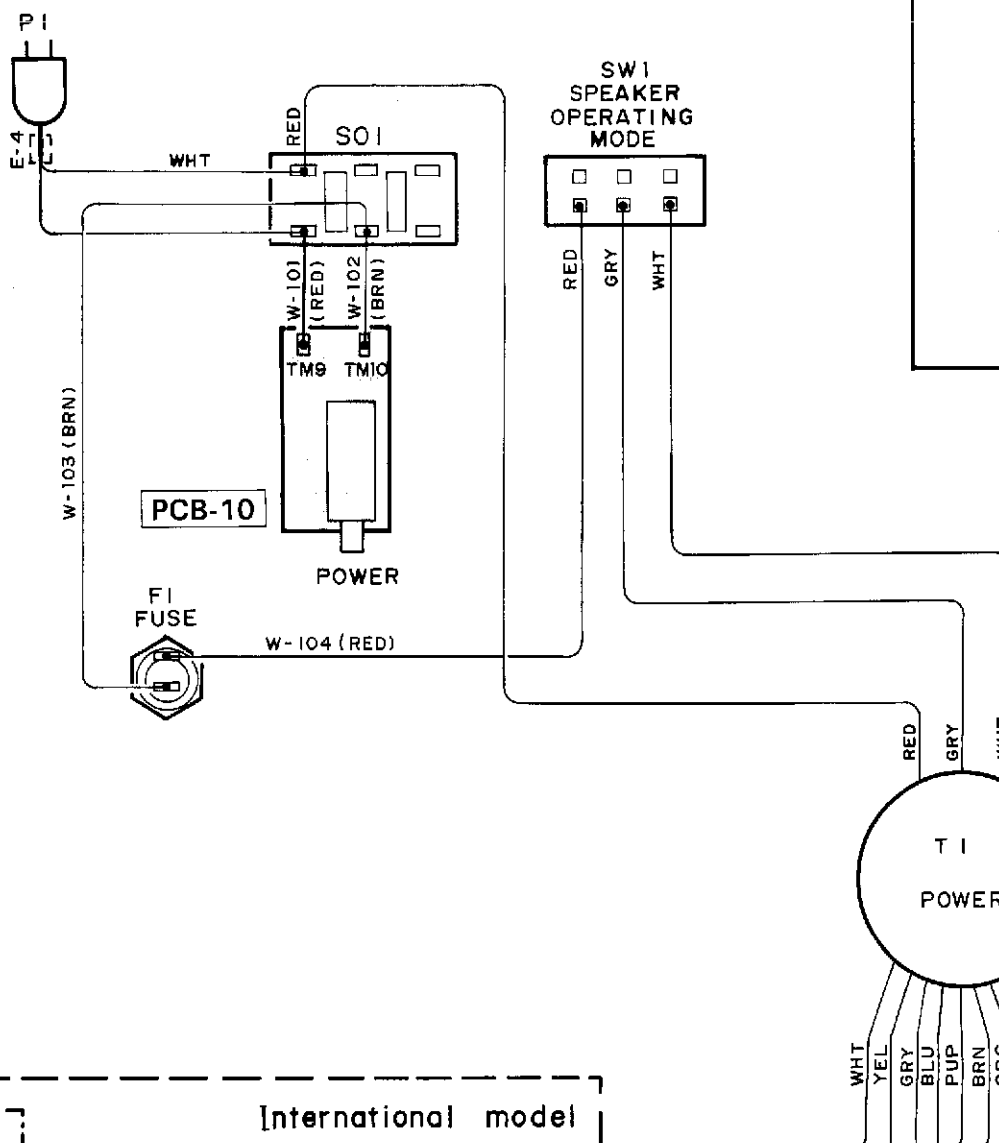
1. ALL RESISTANCES VALUES ARE IN Ω .
 $K\Omega=1000\Omega$, $M\Omega=1000K\Omega$.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P= μF .
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS COMPONENTS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



WIRING DIAGRAM

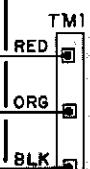
WIRE COLOR ABBREVIATIONS

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



SW1
SPEAKER
OPERATING
MODE

PCB-9



F

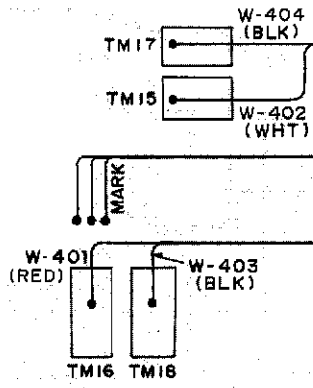
G

H

I

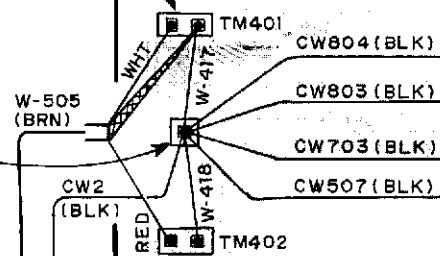
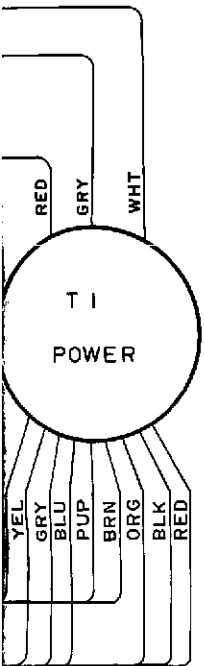
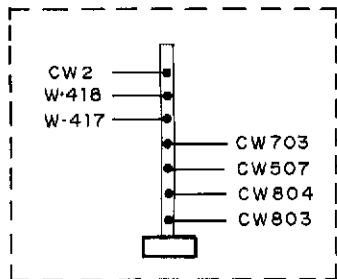
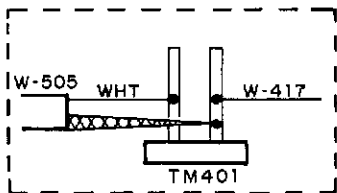
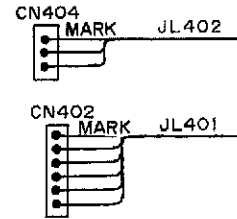
J

8

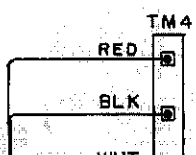


JL404

PCB-4

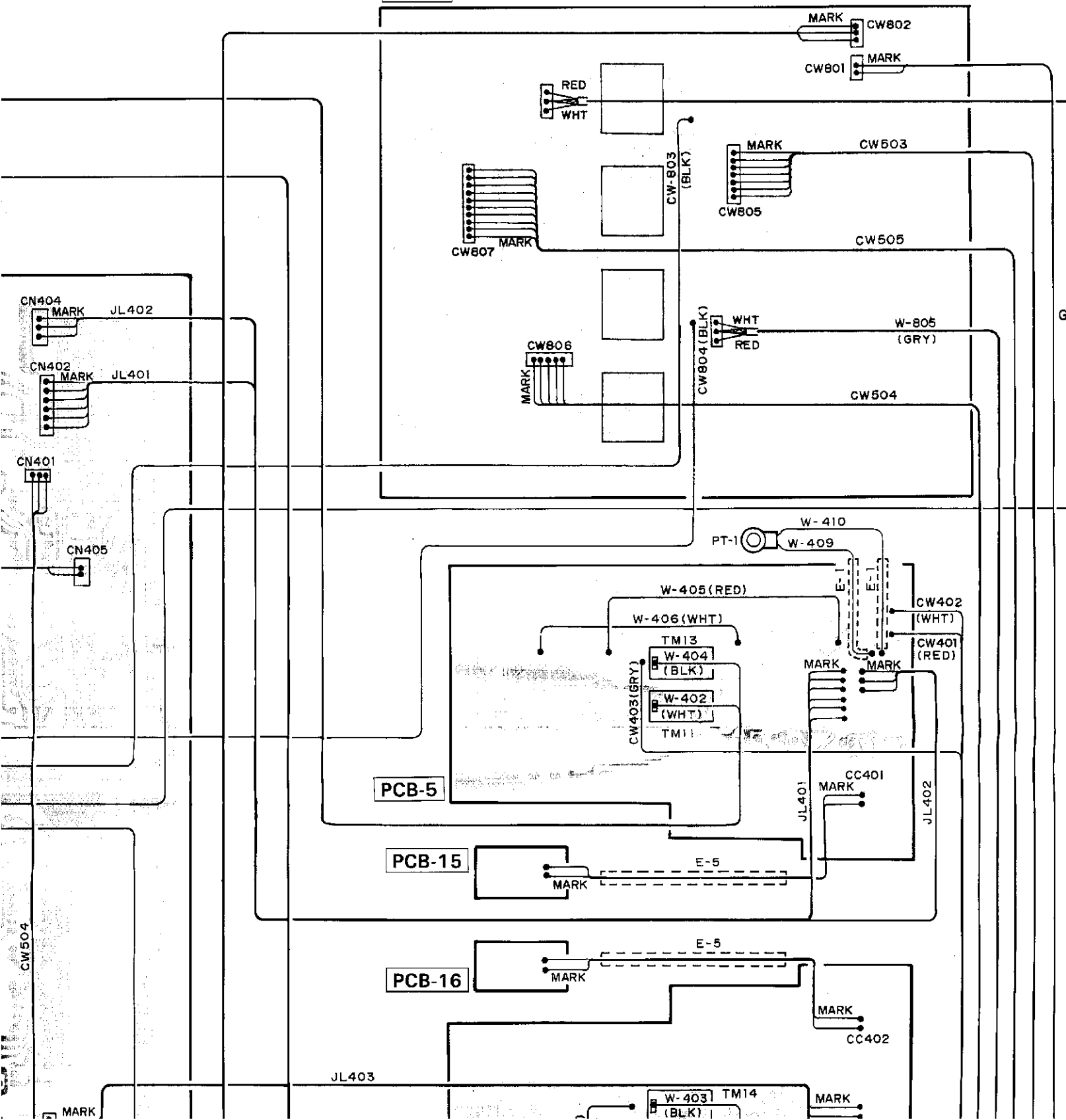


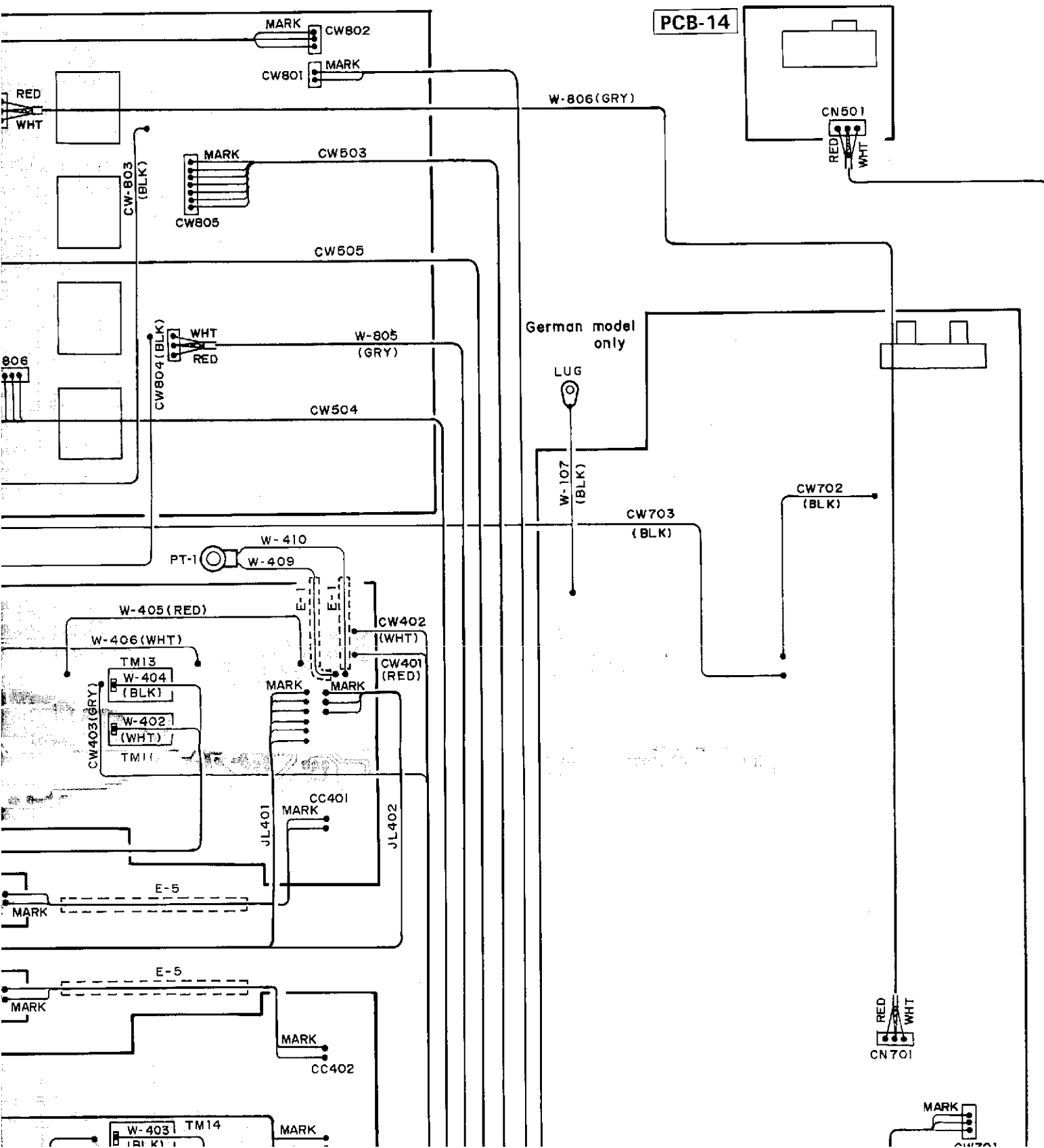
CW504



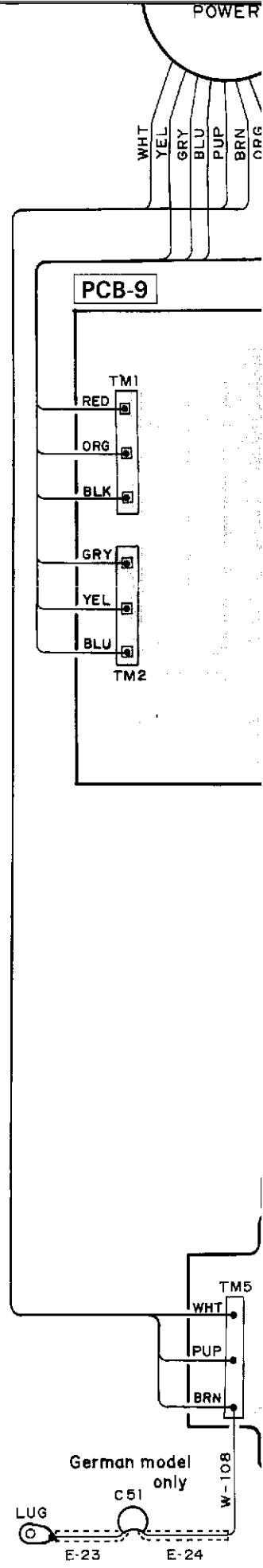
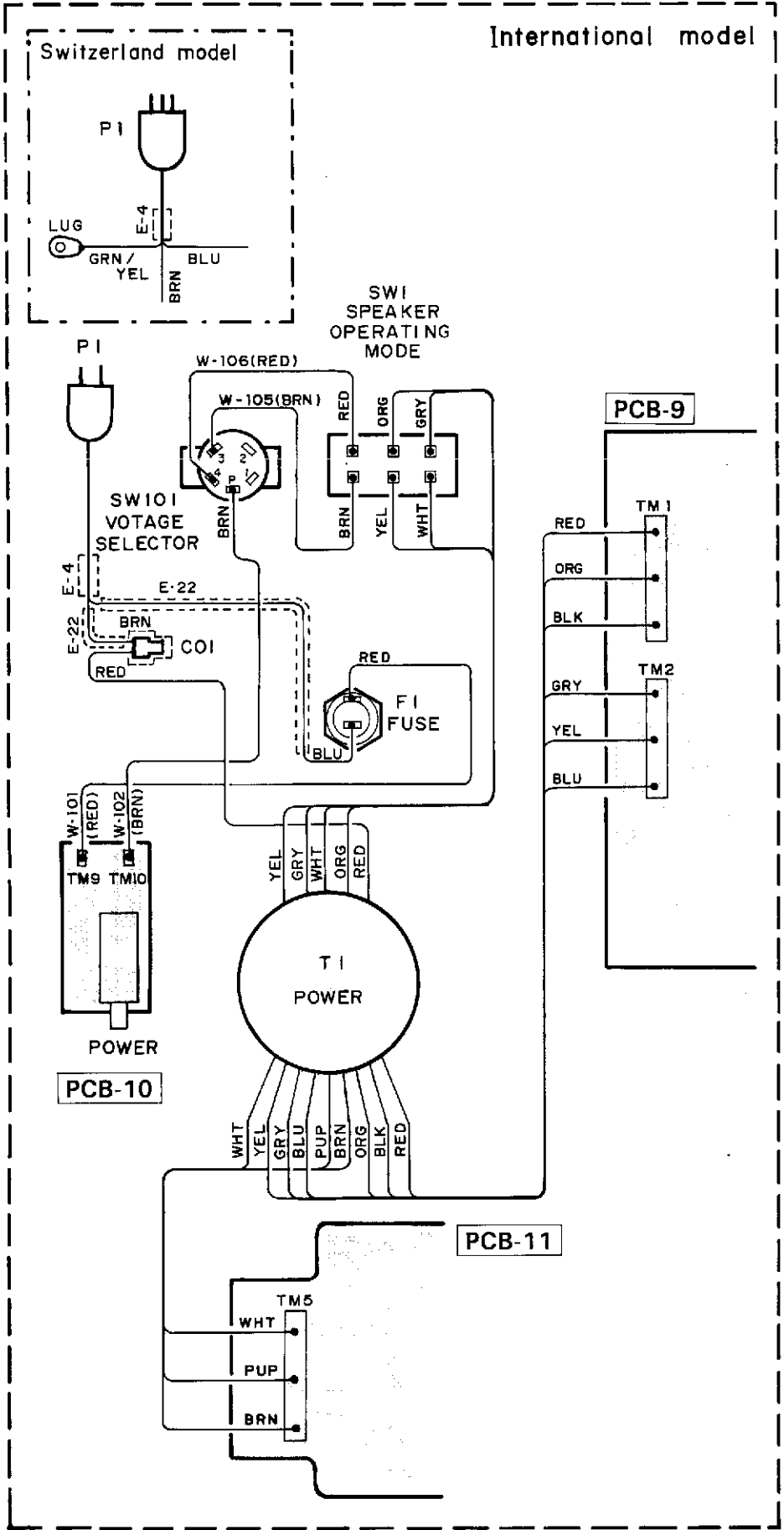
MARK

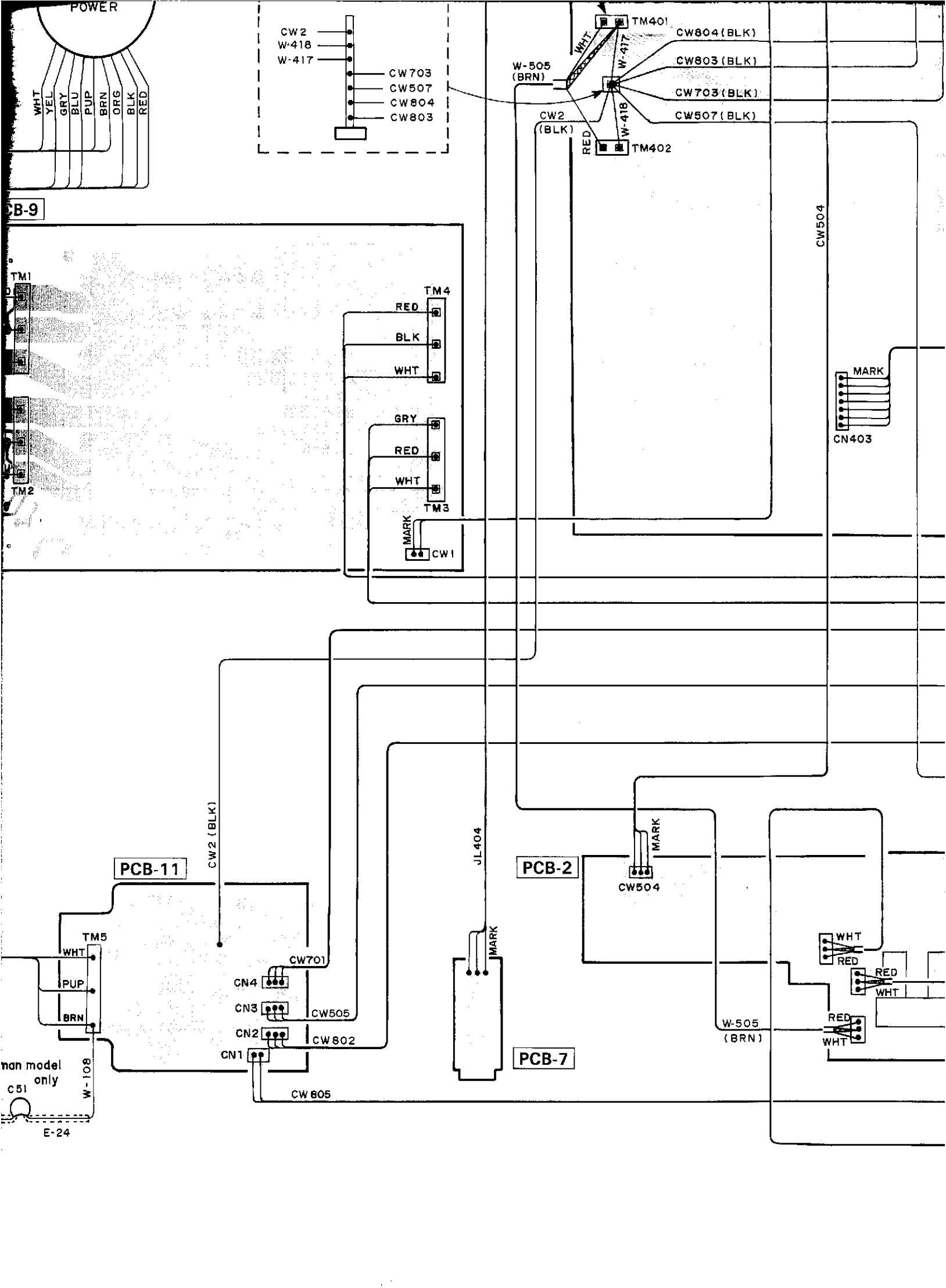
PCB-3



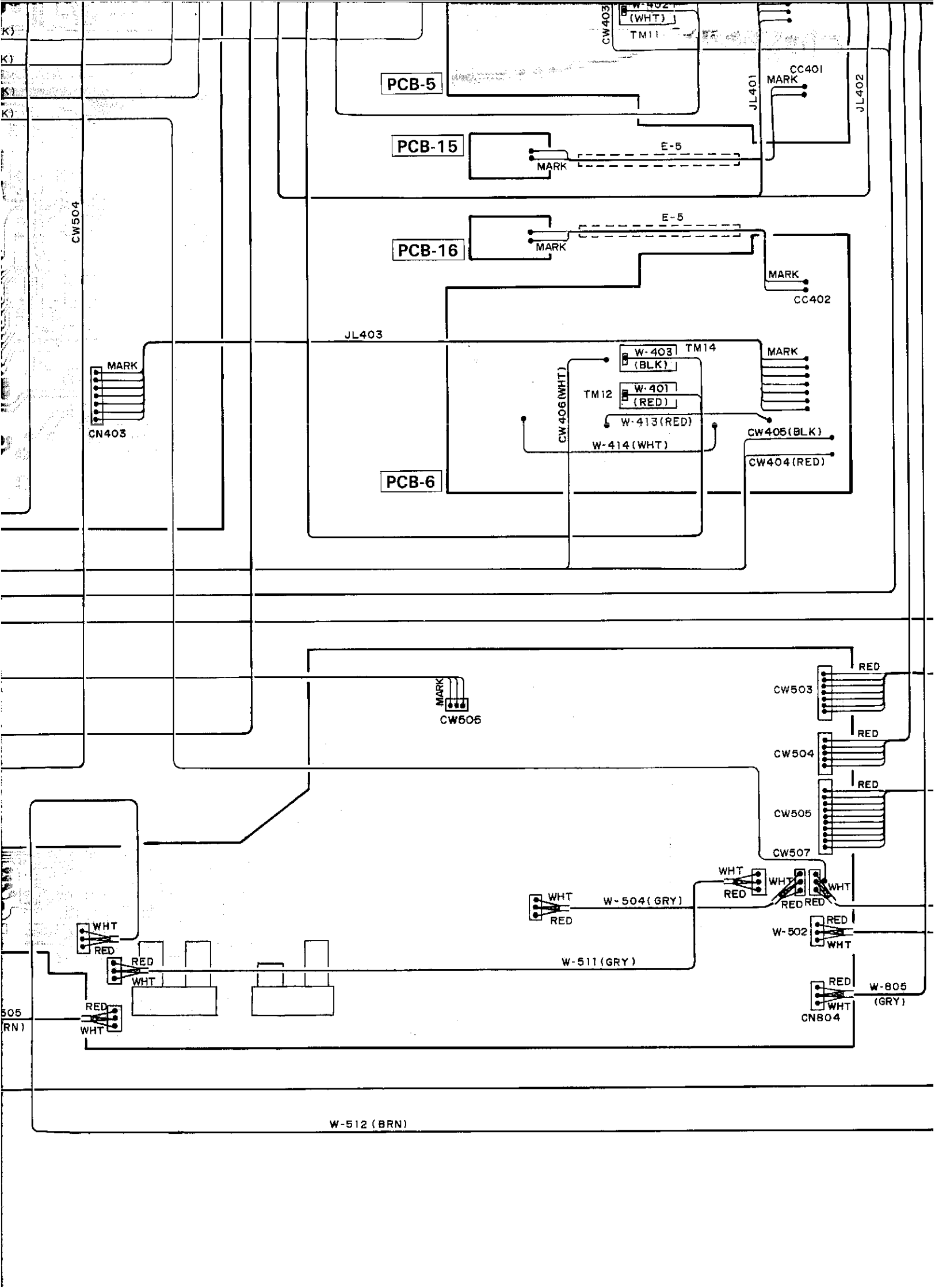


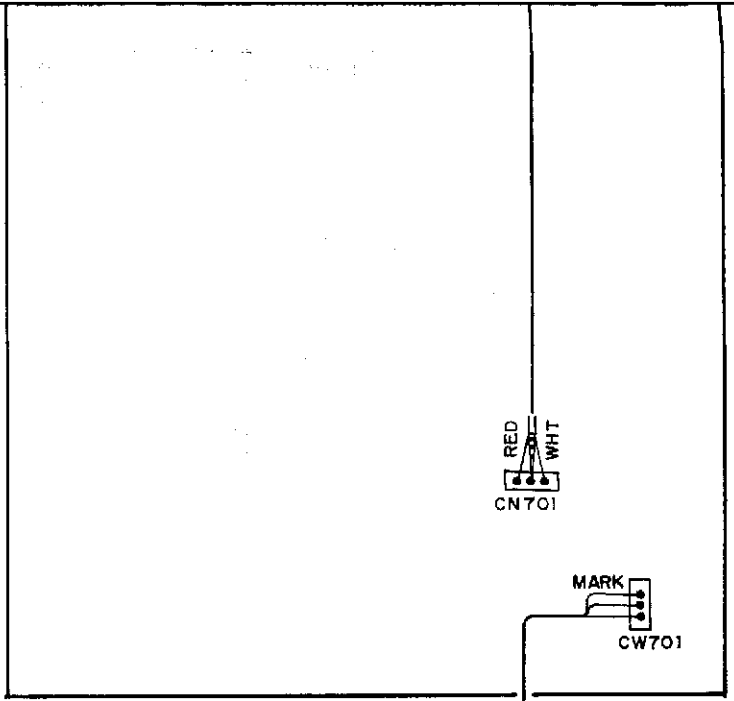
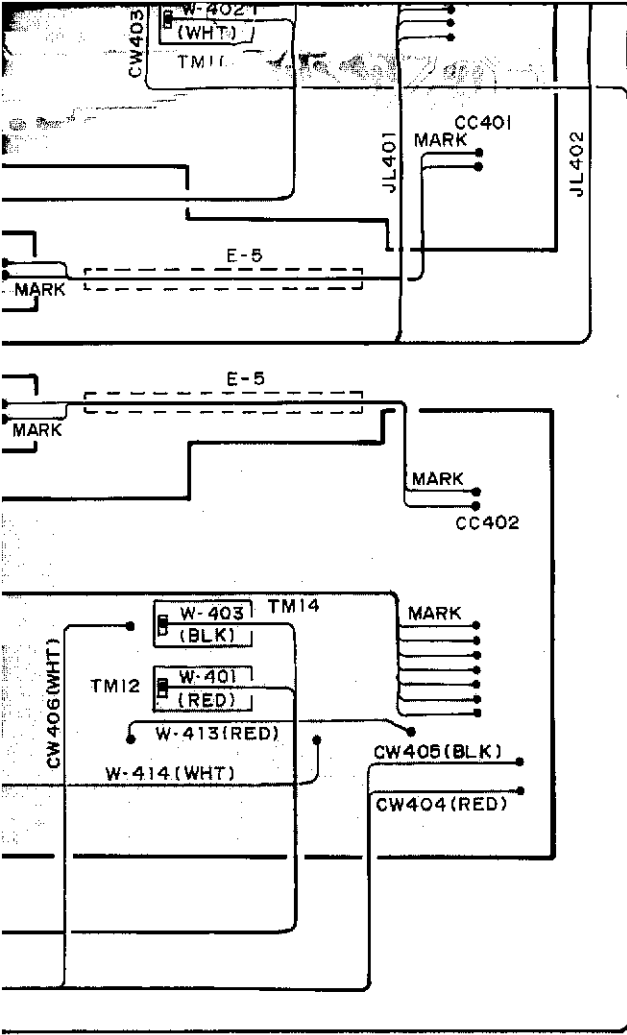
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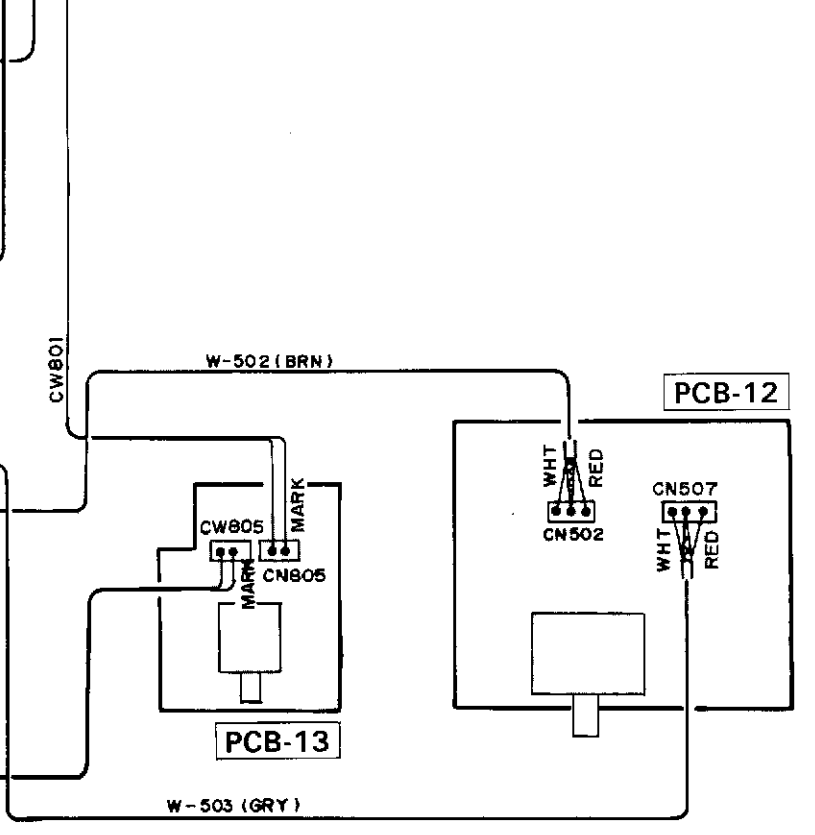
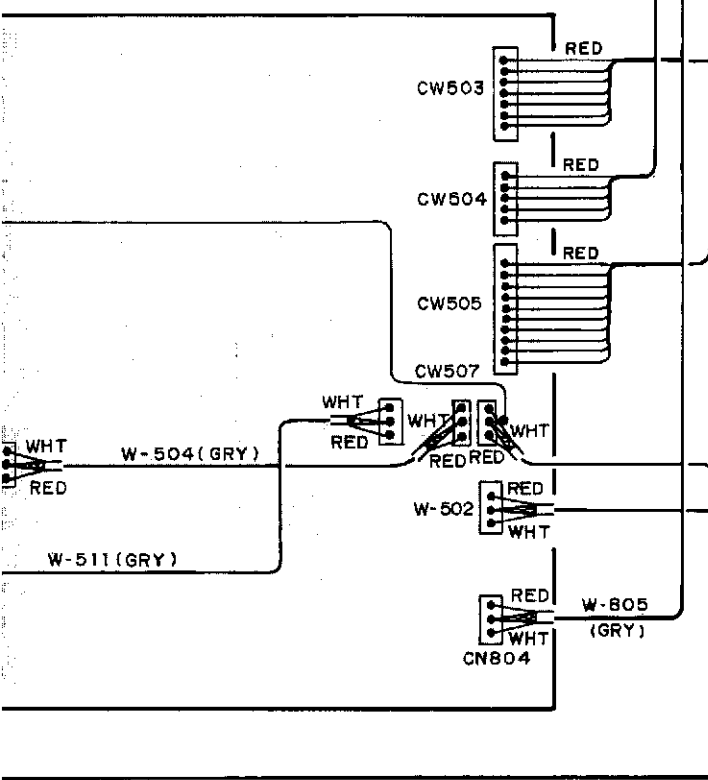


nan model only
c.51
E-24





PCB-1



PCB-13

PCB-12