

Service Manual

75SR1030 /_{1B} /_{2B}
75SR1040 /_{1A} /_{2A}
Stereo receiver



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4822 725 51073

marantz®

model SR1030 / SR1040

First issue : 1994 / 9
PCS 79 597

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available at our National Marantz Subsidiary or Agent.

MARANTZ EUROPE B.V.
P.O. Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands
Phone : +31-40-732241
Fax : +31-40-735578

ORDERING PARTS

Parts can be ordered either by mail or by telex. In both cases, the correct part number has to be specified. The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which the part is required
5. Way of shipment
6. Signature: any order form or telex must be signed, otherwise such part order will be considered as null and void.

ADDRESSES

AUSTRALIA
MARANTZ AUSTRALIA
Figtree Drive
Australia Centre
Homebush, NSW 2140
AUSTRALIA

FINLAND
MARANTZ
Kuortanegatan 1
00520
Helsingfors 52
Finland

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Piazza IV Novembre 3
20124 Milano
Italy

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Postboks 7034
Assiden
3007 Drammen
Norway

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Apartado 2065
Madrid 28027
Spain

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Hietzinger Kai 137a
1130 Wien
Austria

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MARANTZ FRANCE
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92600 Asnières
France

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211-2 Esq.
1200 Lisboa
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Box 1324
17125 Solna
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P.O.Box 8196
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P.O.Box 5954
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Saudi Arabia

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Postfach
8010 Zürich-Müllingen
Switzerland

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Av.Santa Maria 0760
Casilla 2687
Santiago
Chile

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Padbury Oaks
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U.K.

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The Netherlands

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10 Bond Street
Randburg 2194
P.O. Box 7703
Johannesburg 2000
South Africa

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MARANTZ TRADING
P.O.Box 20008
Building SFF 2
5600 JB Eindhoven
The Netherlands

DENMARK
MARANTZ
Horsvinget 5
2630 Tastrup
Denmark

GREECE
ADAMCO ELECTR. SA
P.O.Box 21025
Hippocrates Str. 188
Athens 11471
Greece

1. TECHNICAL SPECIFICATIONS (DIN)

FM TUNER SECTION

| | |
|---|------------------|
| Frequency range | 87.5 - 108 MHz |
| Sensitivity DIN (Mono / Stereo) | 1.0 / 25 μ V |
| S / N (Mono / Stereo) | 76 / 68 dB |
| T.H.D. | 0.3 / 0.6% |
| Selectivity at 98 MHz (\pm 300 kHz) | 60 dB |

MW TUNER SECTION

| | |
|---|----------------|
| Frequency range | 531 - 1602 kHz |
| Sensitivity DIN (S/N 20 dB 30% Mod. 999kHz) | 500 μ V |
| S / N at 999 kHz | 50 dB |

LW TUNER SECTION

| | |
|--|---------------|
| Frequency range | 152 - 282 kHz |
| Sensitivity DIN (S / N 20 dB 30% Mod. 207 kHz) | 1500 μ V |

AMPLIFIER SECTION

| | | |
|--|-------------------------------|----------------------------|
| Power output | DIN 8 Ω | 50 W |
| | RMS 8 Ω | 45 W |
| IHF Dynamic power 8 Ω / 4 Ω / 2 Ω | | 64 W / 85 W / 92 W |
| T.H.D. at 8 Ω rated RMS output | | 0.05% |
| Damping factor | | 100 |
| Input sensitivity | : CD / TAPE / DCC / AUX | 220 mV / 40 k Ω |
| S / N (IFH-A) | : CD / TAPE / DCC / AUX | 80 dB |
| POWER REQUIREMENTS | | |
| / 2A / 2B version | | 230 V AC, 50 / 60 Hz |
| / 1A / 1B version | | 115 / 230 V AC, 50 / 60 Hz |

DIMENSIONS

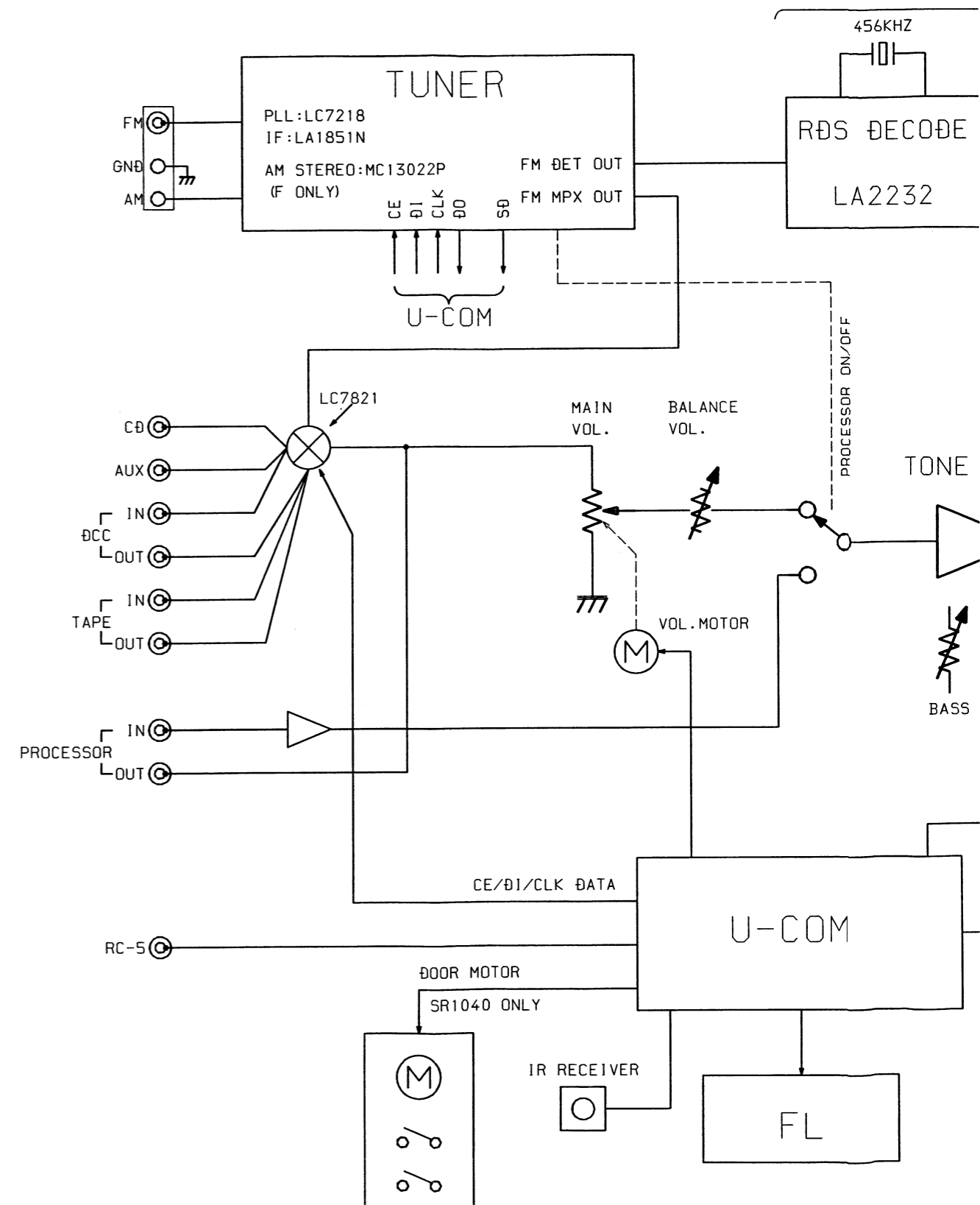
| | |
|---------------------|-------------------|
| Width | 422 mm |
| Height | 76 mm |
| Depth | 334 mm |
| WEIGHT | 5.9 kg (SR1030) |
| | 6.0 kg (SR1040) |

SUPPLIED ACCESSORIES

Remote controller (RC1040SR) x 1
 CR2032 LITHIUM Battery x 1
 FM antenna x 1
 AM loop antenna x 1

Specifications subject to change without prior notice.

2. BLOCK DIAGRAM



2. BLOCK DIAGRAM

- 108 MHz
 .0 / 25 μ V
 76 / 68 dB
 0.3 / 0.6%
 60 dB

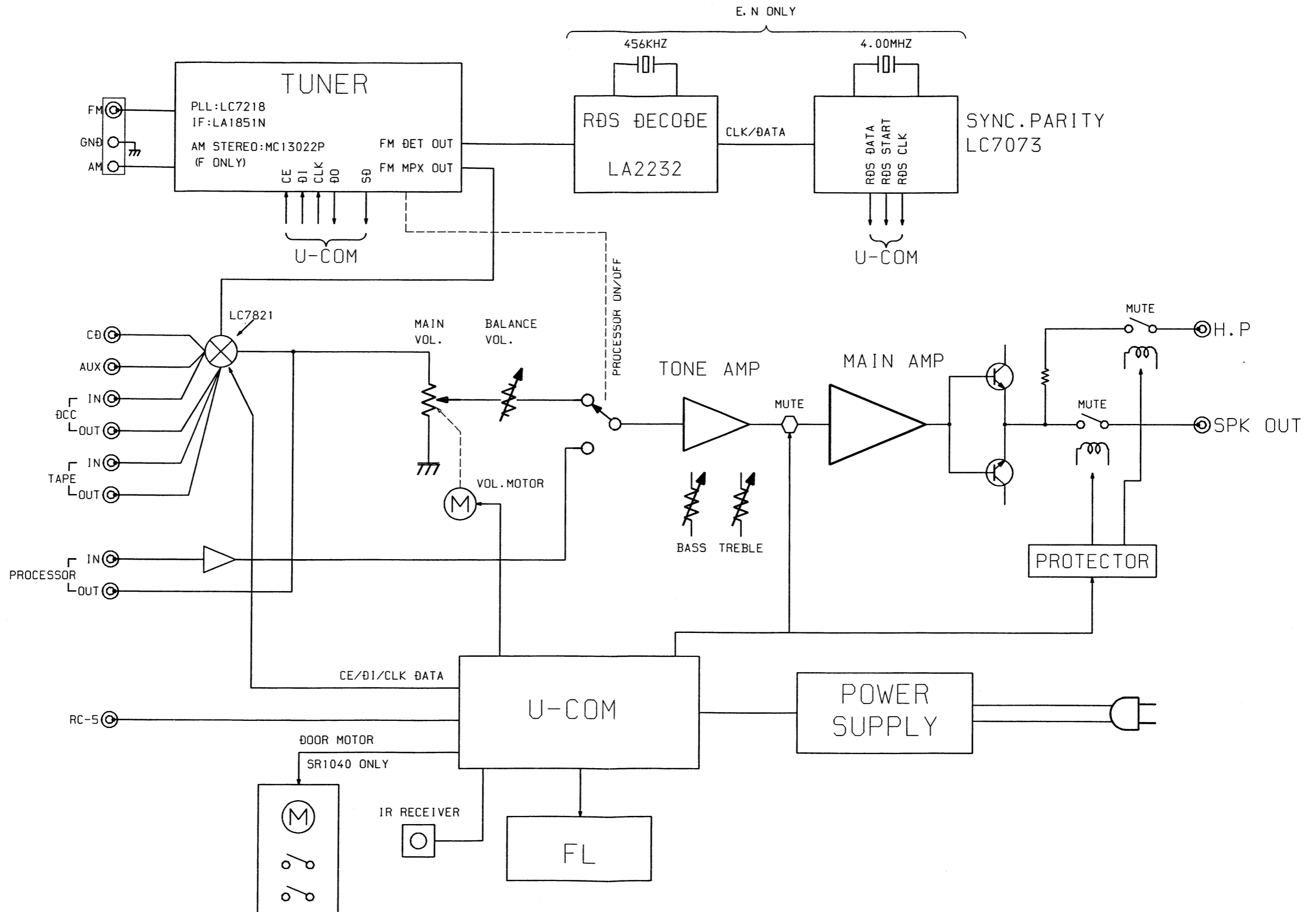
1602 kHz
 500 μ V
 50 dB

- 282 kHz
 .. 1500 μ V

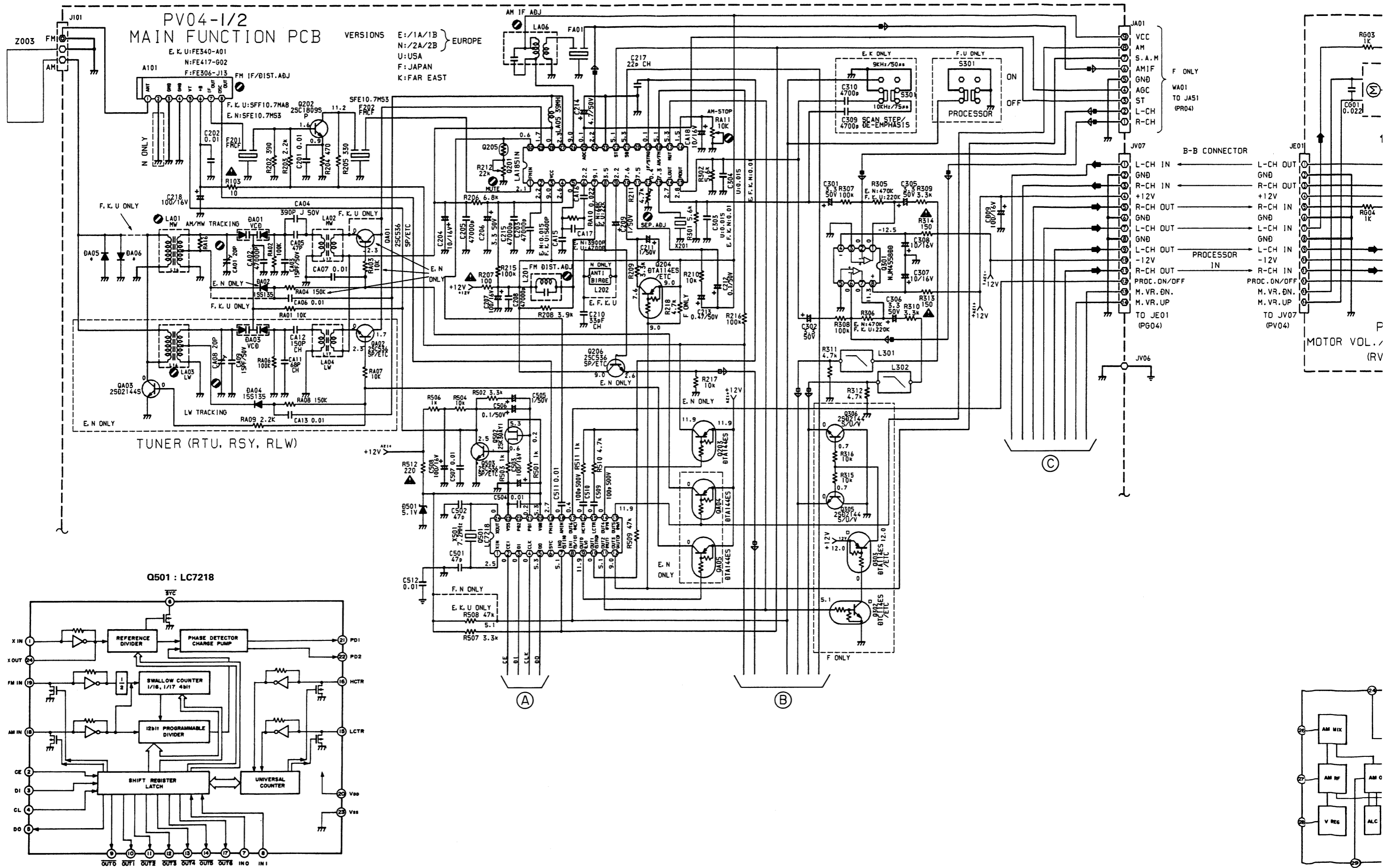
..... 50 W
 45 W
 W / 92 W
 0.05%
 100
 1V / 40 k Ω
 80 dB

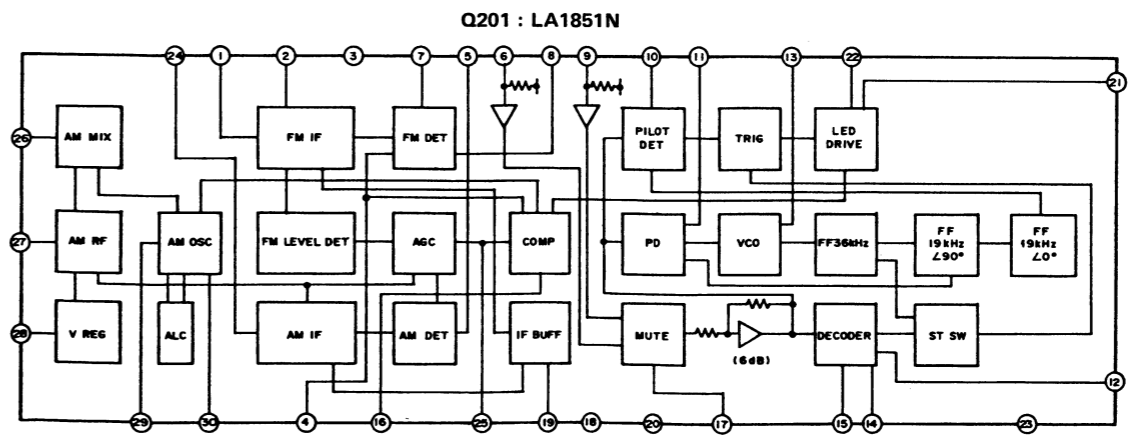
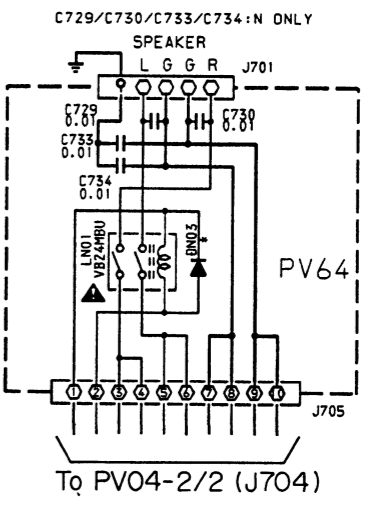
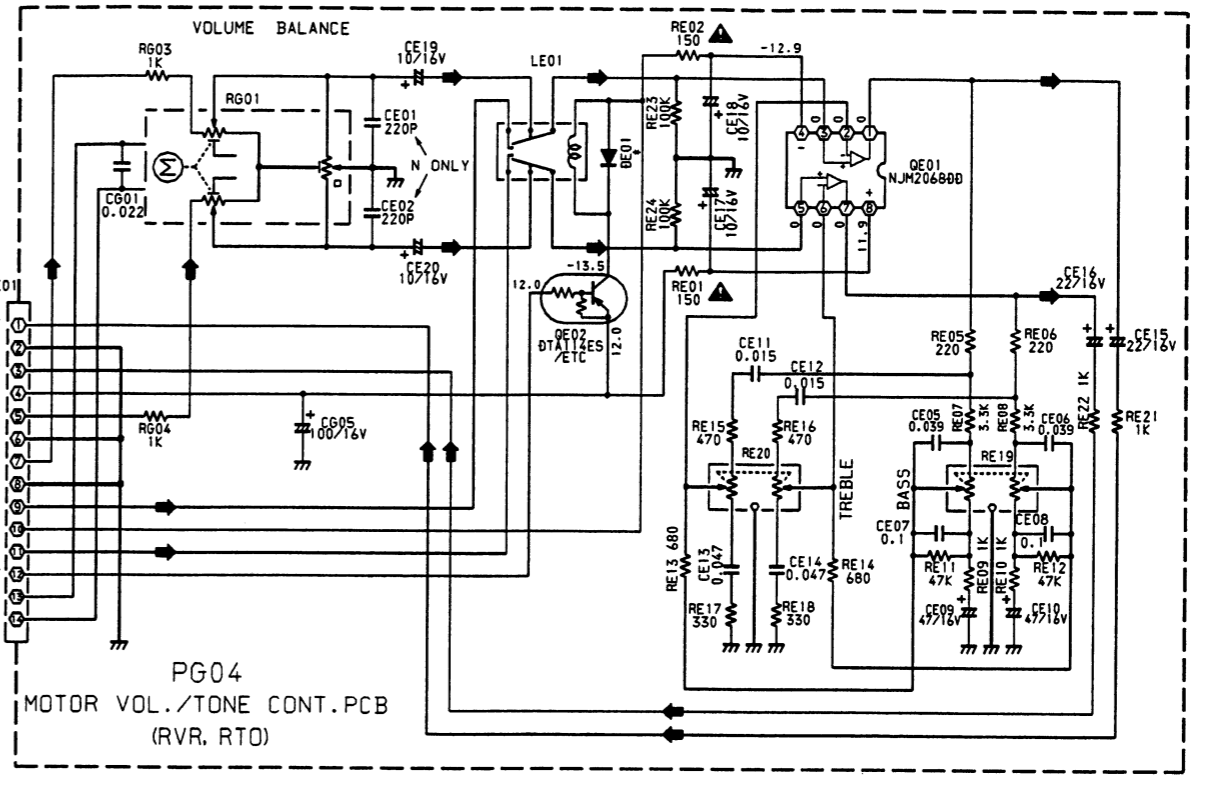
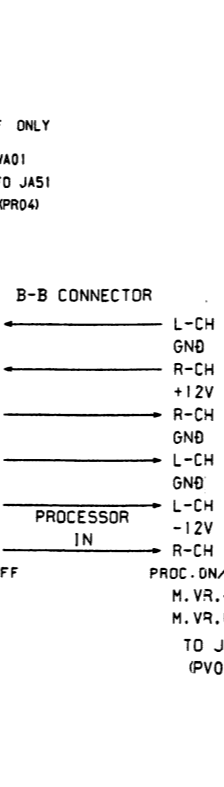
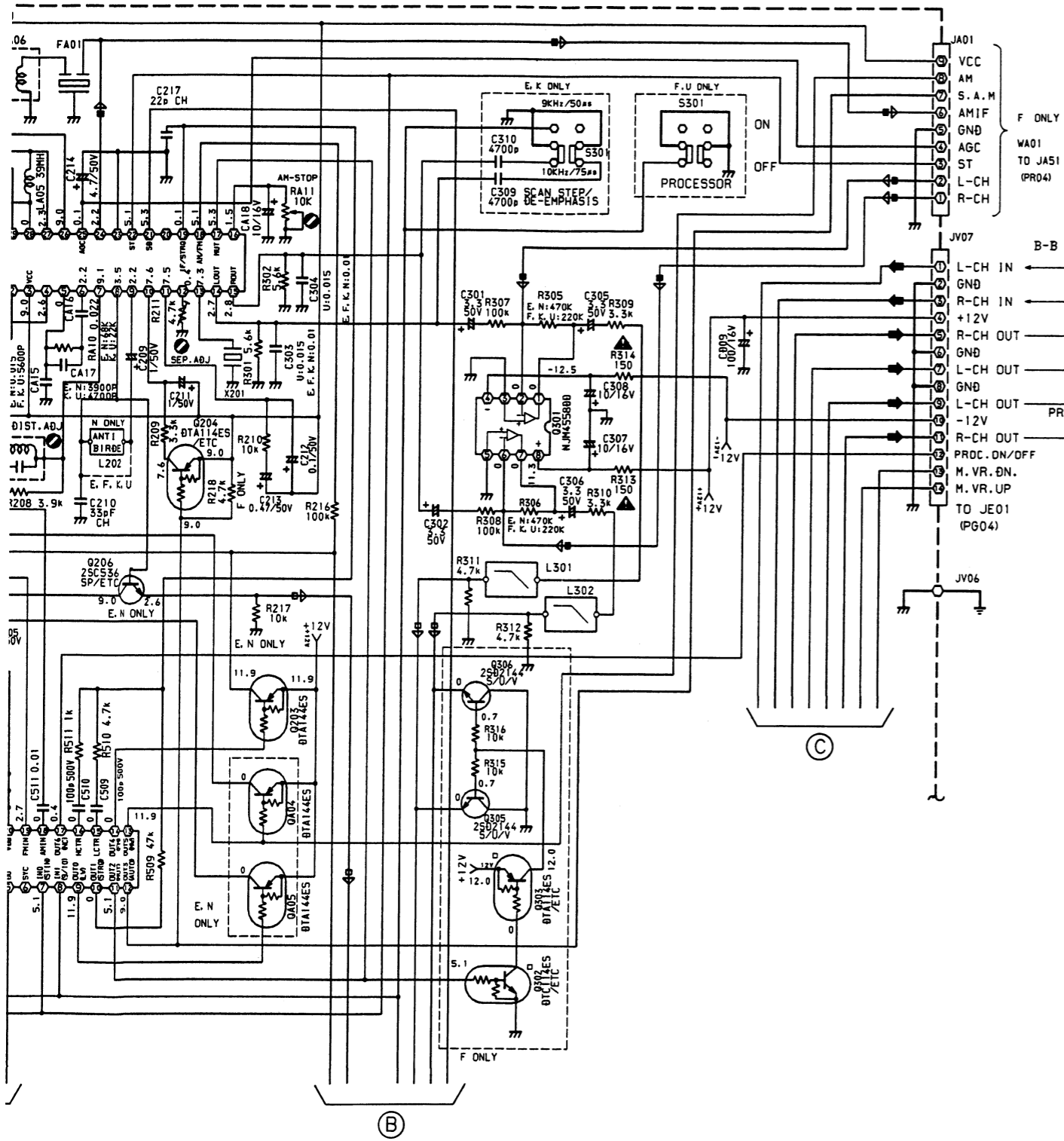
50 / 60 Hz
 50 / 60 Hz

... 422 mm
 76 mm
 ... 334 mm
 SR1030)
 SR1040)

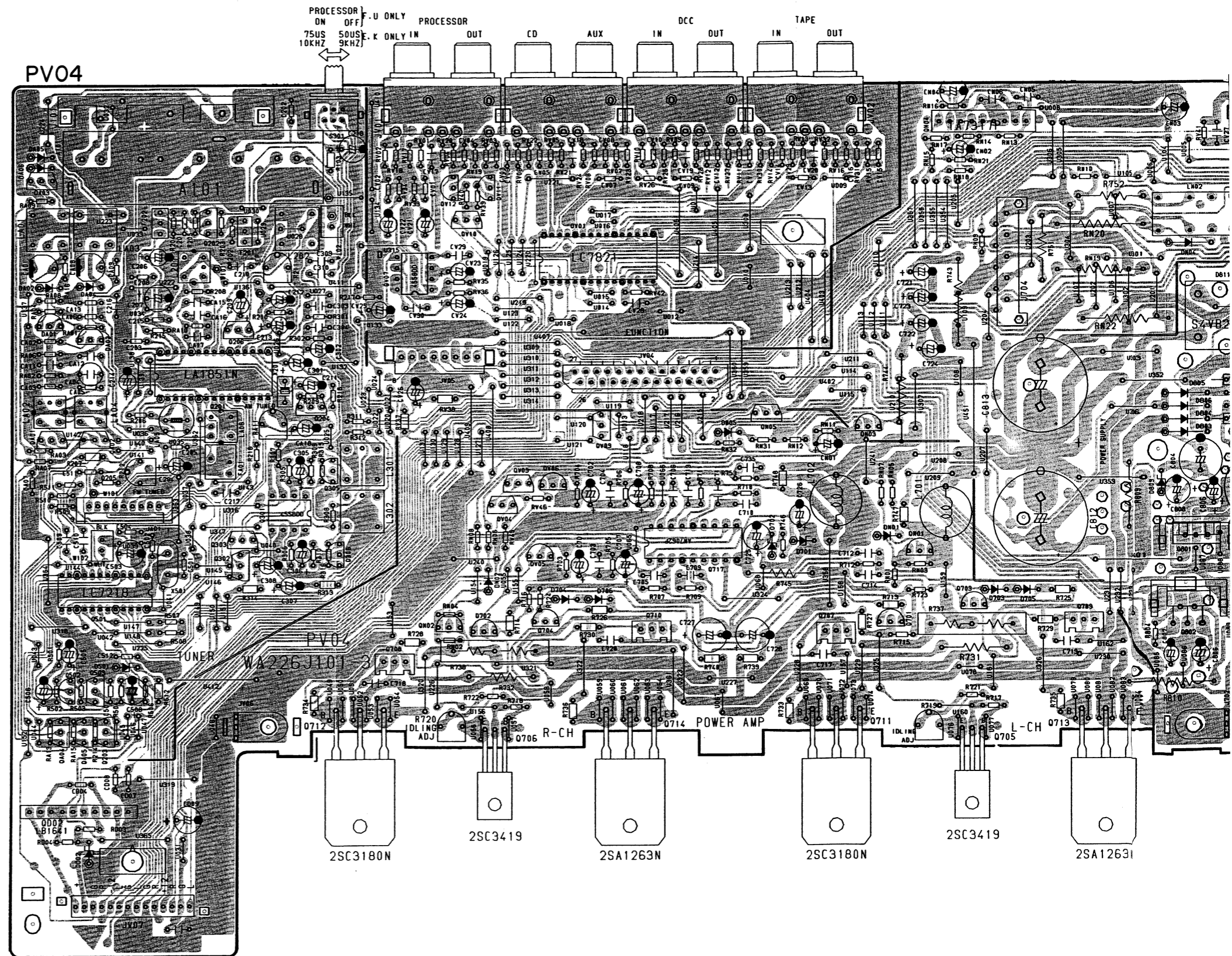


3. SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern side)

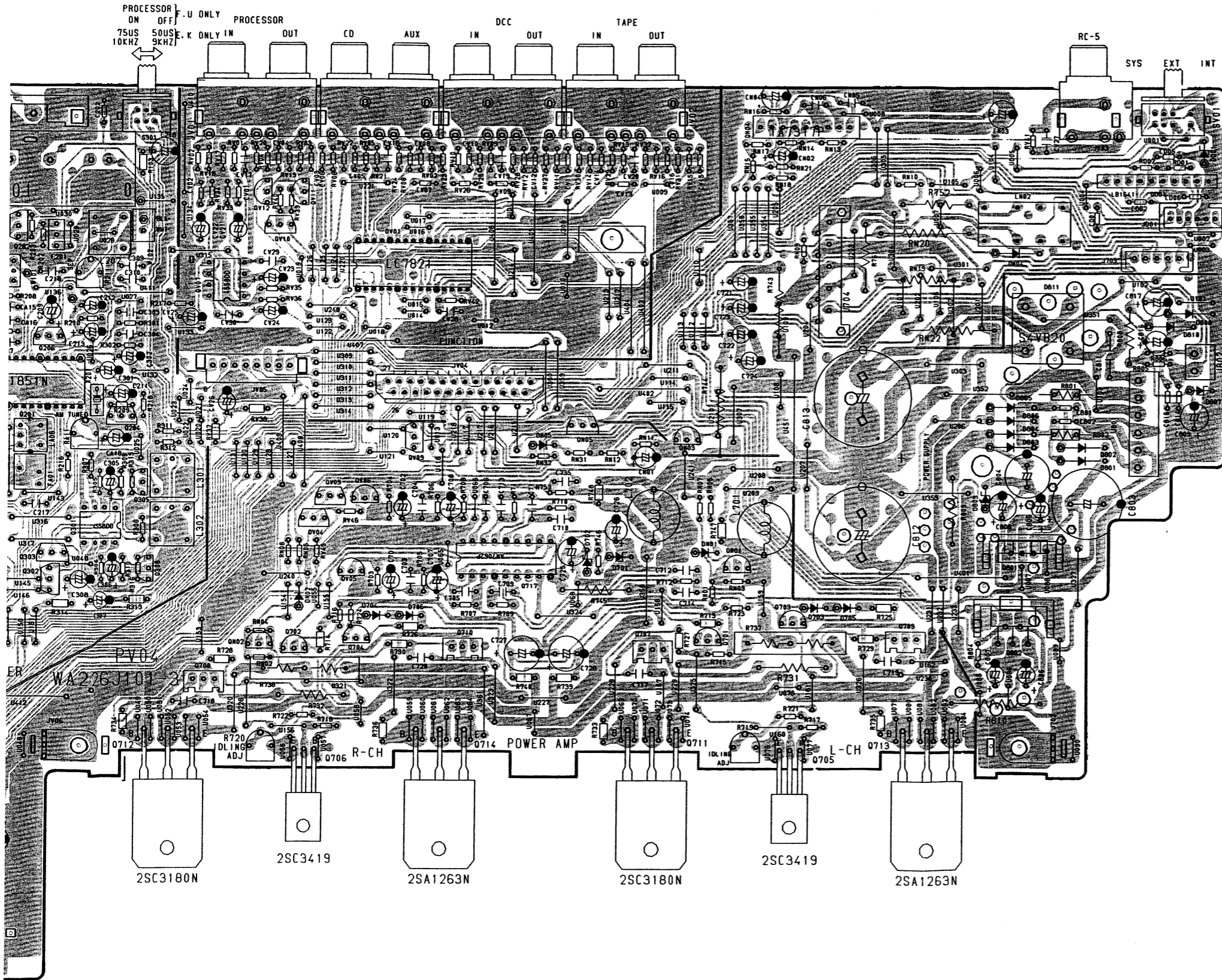




QA03 QA01 QA02 Q202 Q201 Q206 Q204 QV07 QV10~QV12 QV01 QN04
 Q502 Q503 Q501 Q303 Q302 Q301 Q305 Q306 QV03~QV06 QV09 QN05 QN03 QN01
 QD02 QA04 QA05 Q203 Q712 Q708 QN02 Q702 Q706 Q704 Q710 Q714 Q707 Q711 Q701 Q703 Q705 Q713 Q709 Q801 Q802

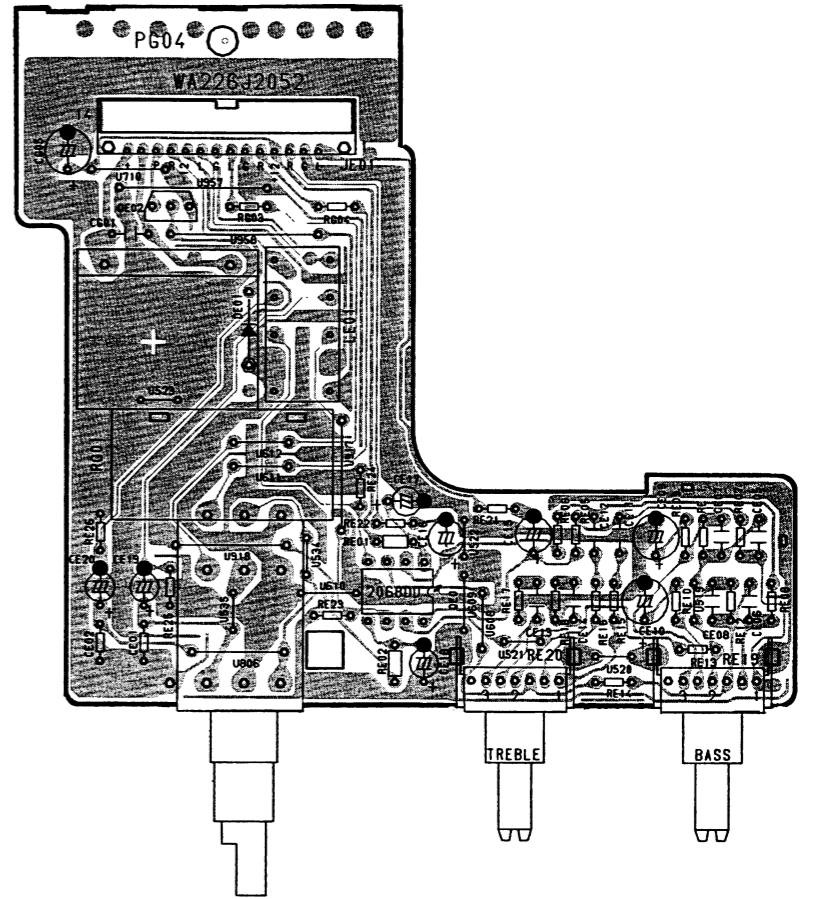


Q202 Q201 Q206 Q204 QV07 QV10~QV12 QV01
 Q303 Q302 Q301 Q305 Q306 QV03~QV06 QV09 Q717 QN05 QN03 QN04 QN01 Q801 QD01
 Q712 Q708 QN02 Q702 Q706 Q704 Q710 Q714 Q707 Q711 Q701 Q703 Q705 Q713 Q709 Q802

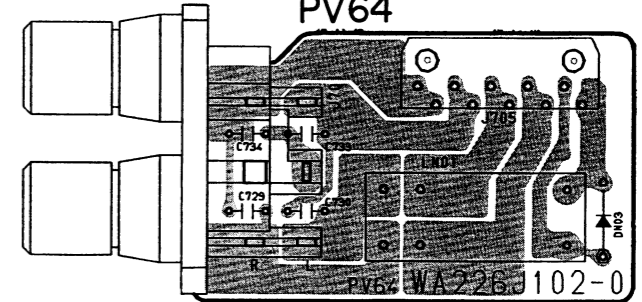


QE01

PG04

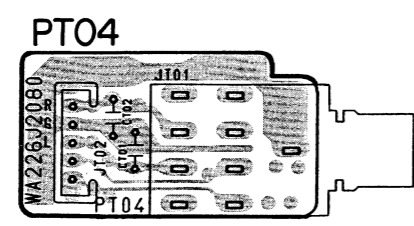
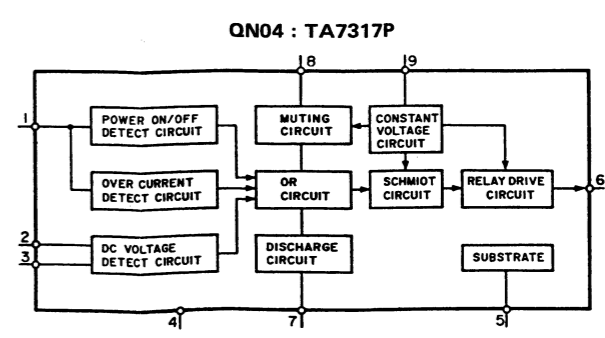
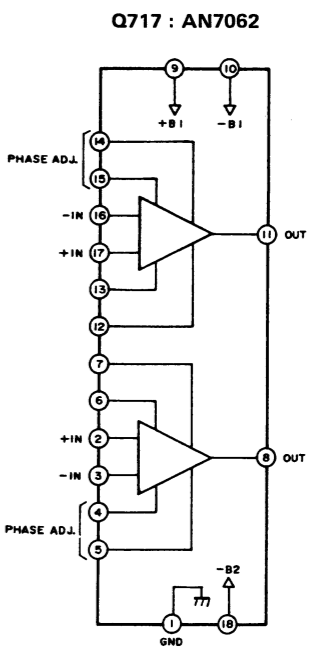
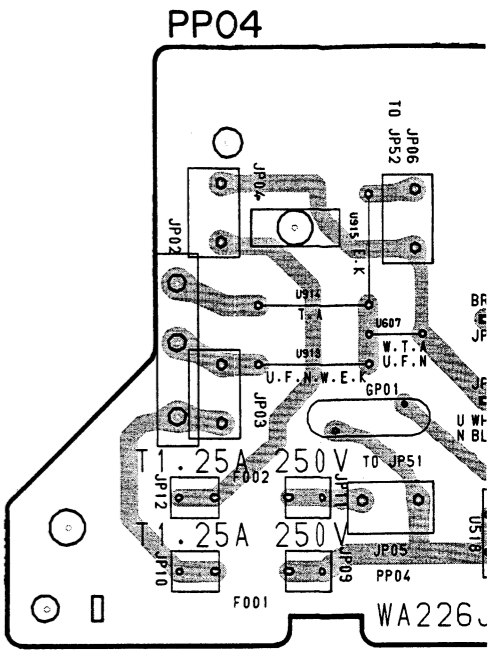
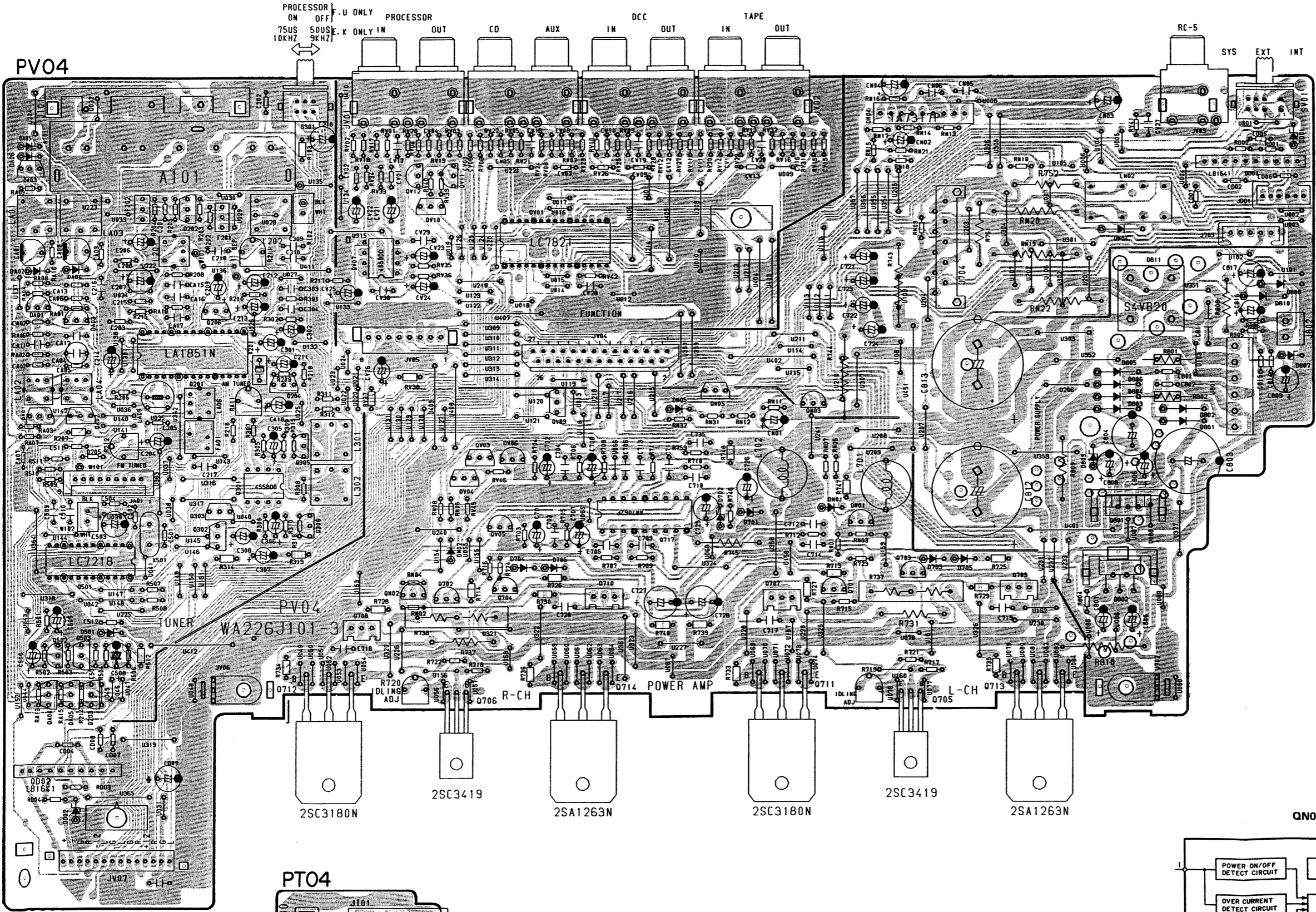


PV64

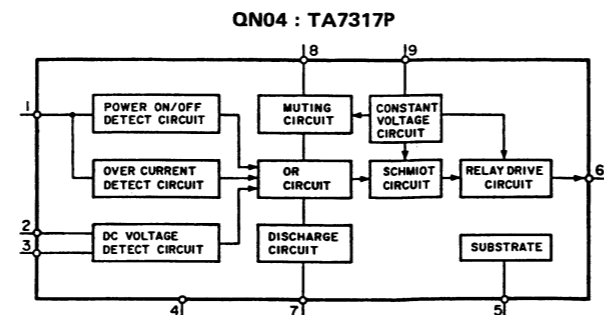
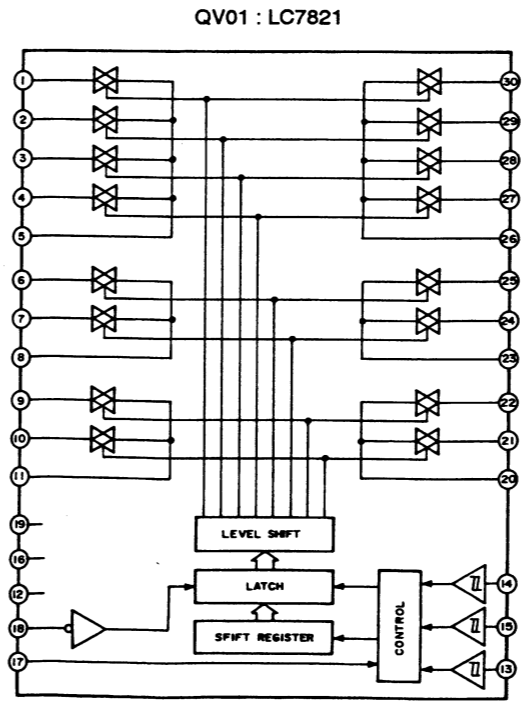
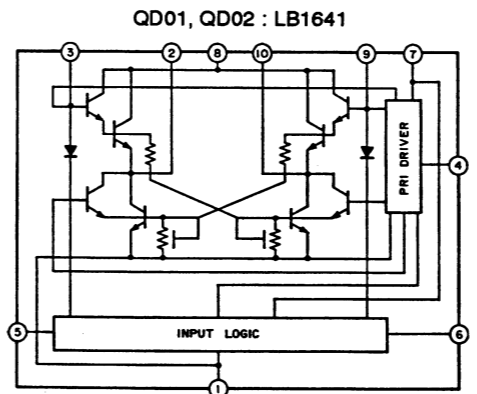
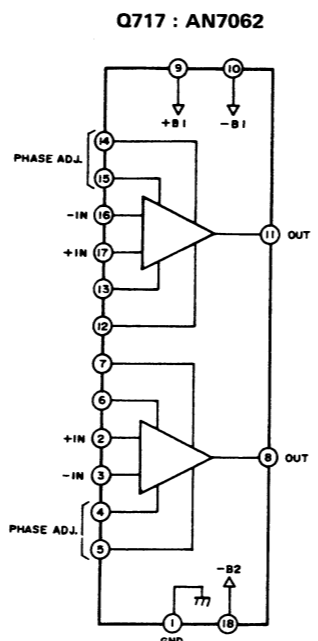
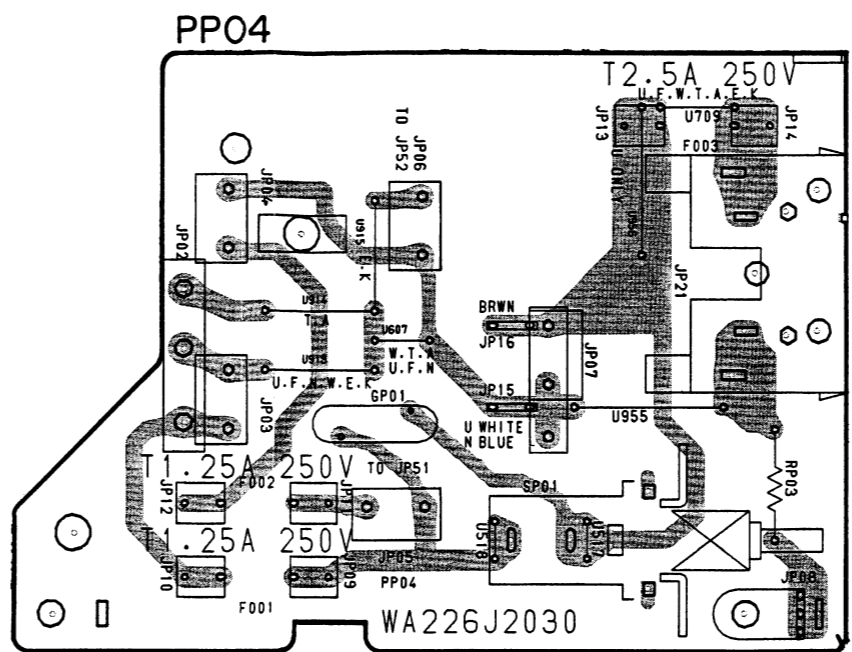
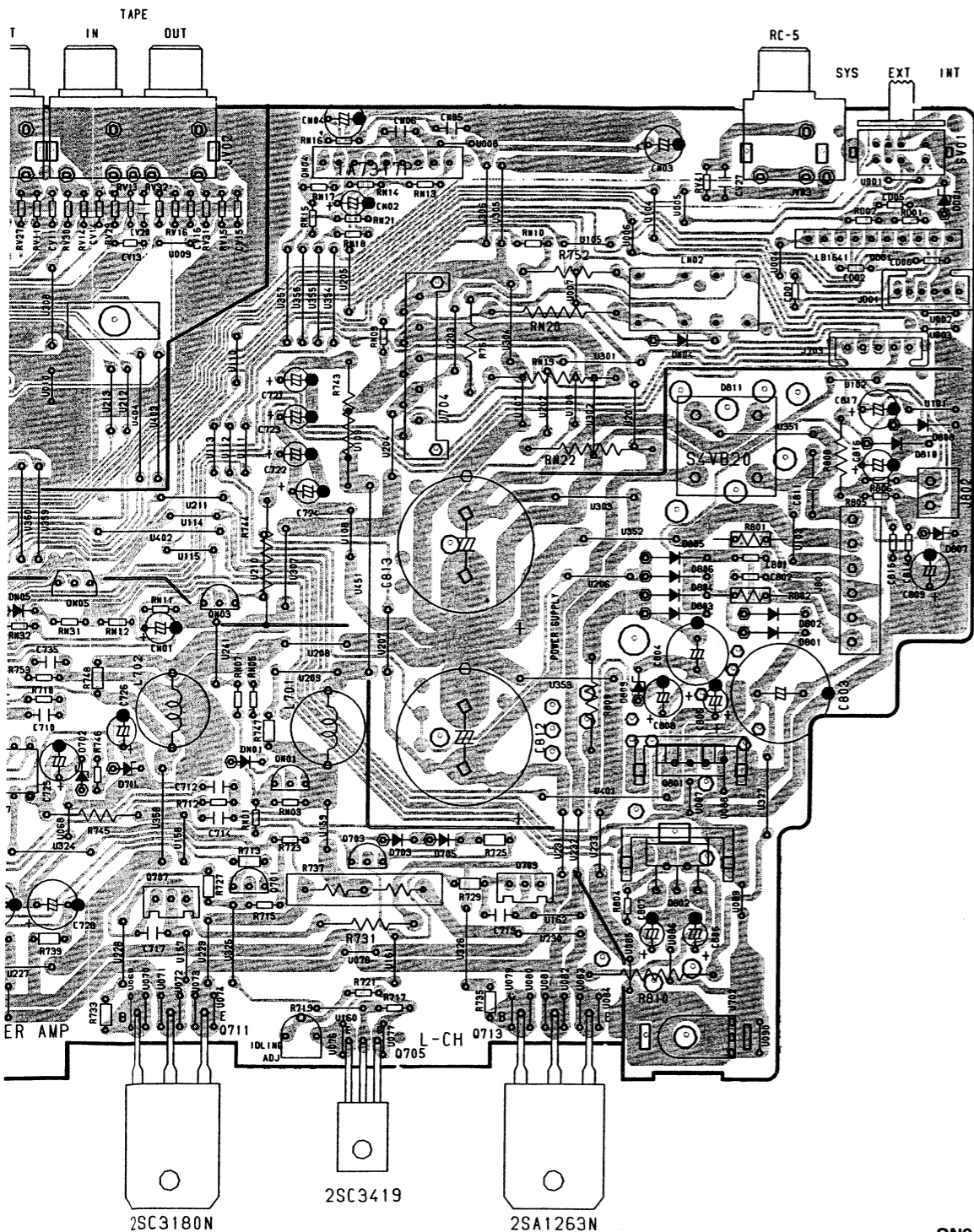


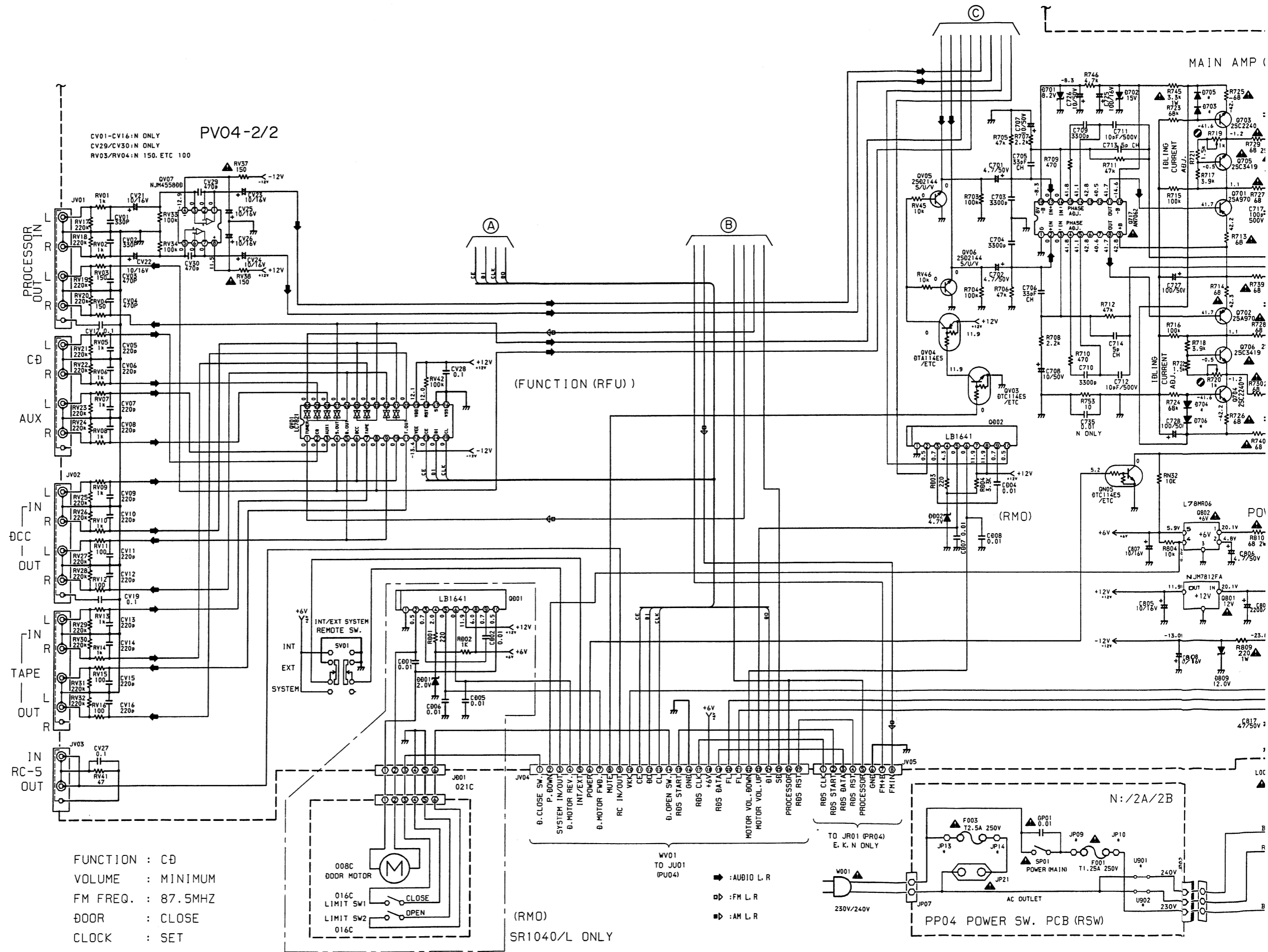
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 Q502 Q503 Q501 Q303 Q302 Q301 Q305 Q306 QV03~QV06 QV09 Q717 QN05 QN03 QN01 Q703 Q705 Q713 Q709 Q802
 QD02 QA04 QA05 Q203 Q712 Q708 QN02 Q702 Q706 Q704 Q710 Q714 Q707 Q711 Q701 Q703 Q705 Q713 Q709 Q802

PV04



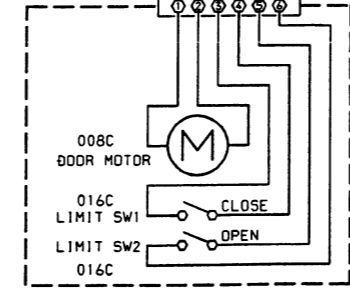
7 QN05 QN04 QN03 QN01 Q801 Q802 Q707 Q711 Q701 Q703 Q705 Q713 Q709 QD01



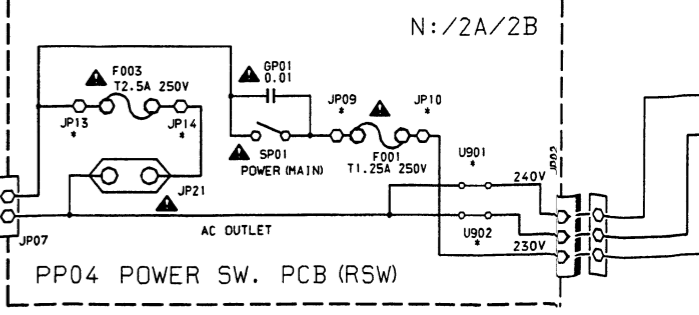


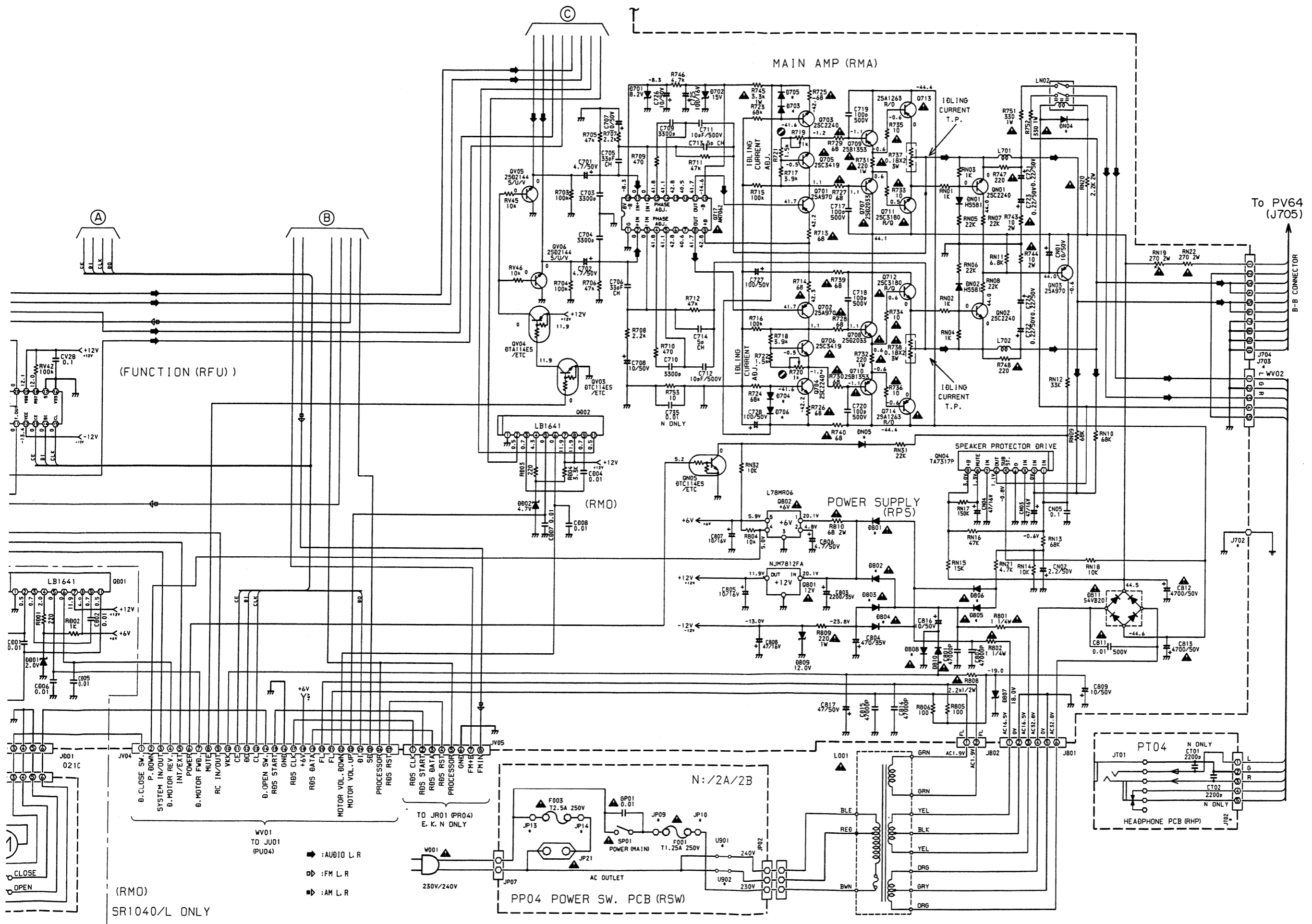
PV04-2/2
 CV01-CV16:N ONLY
 CV29/CV30:N ONLY
 RV03/RV04:N 150. ETC 100

FUNCTION : CD
 VOLUME : MINIMUM
 FM FREQ. : 87.5MHZ
 DOOR : CLOSE
 CLOCK : SET



(RMO)
 SR1040/L ONLY





To PV64 (J705)

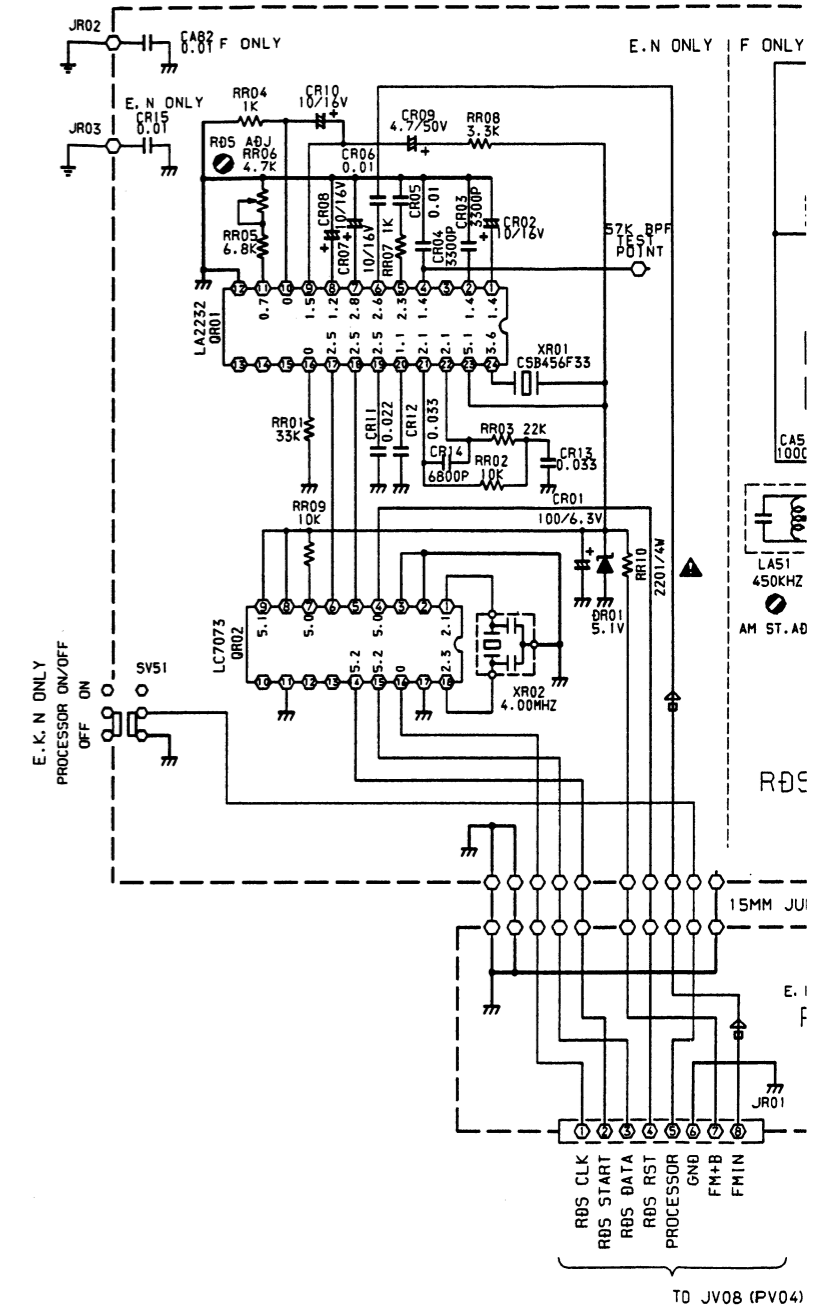
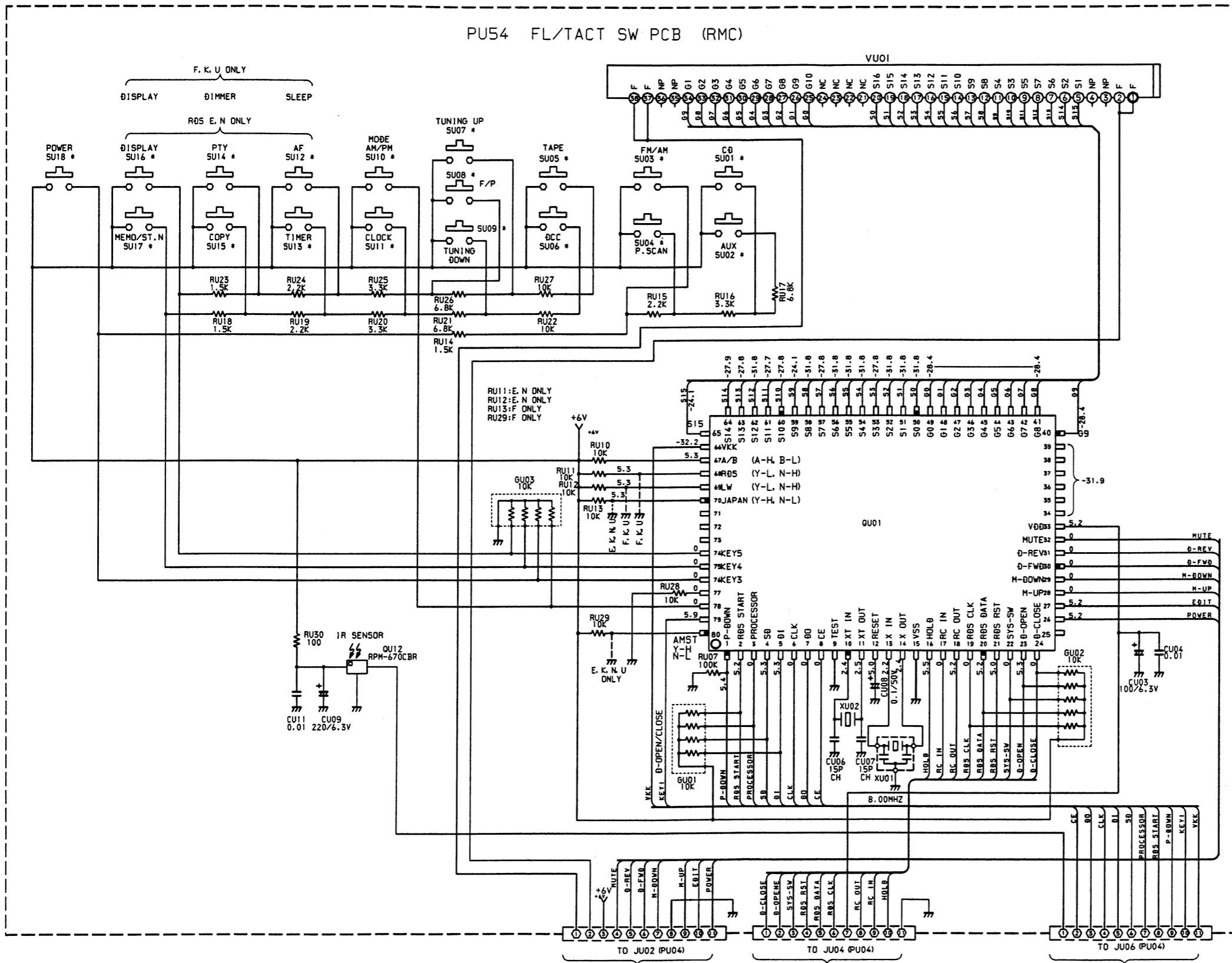
B-B CONNECTOR

WV02

J702

PT04

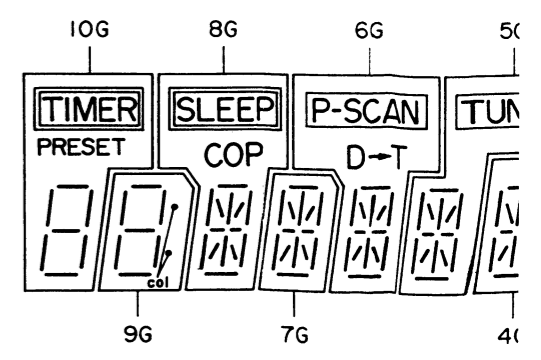
HEADPHONE PCB (RHP)

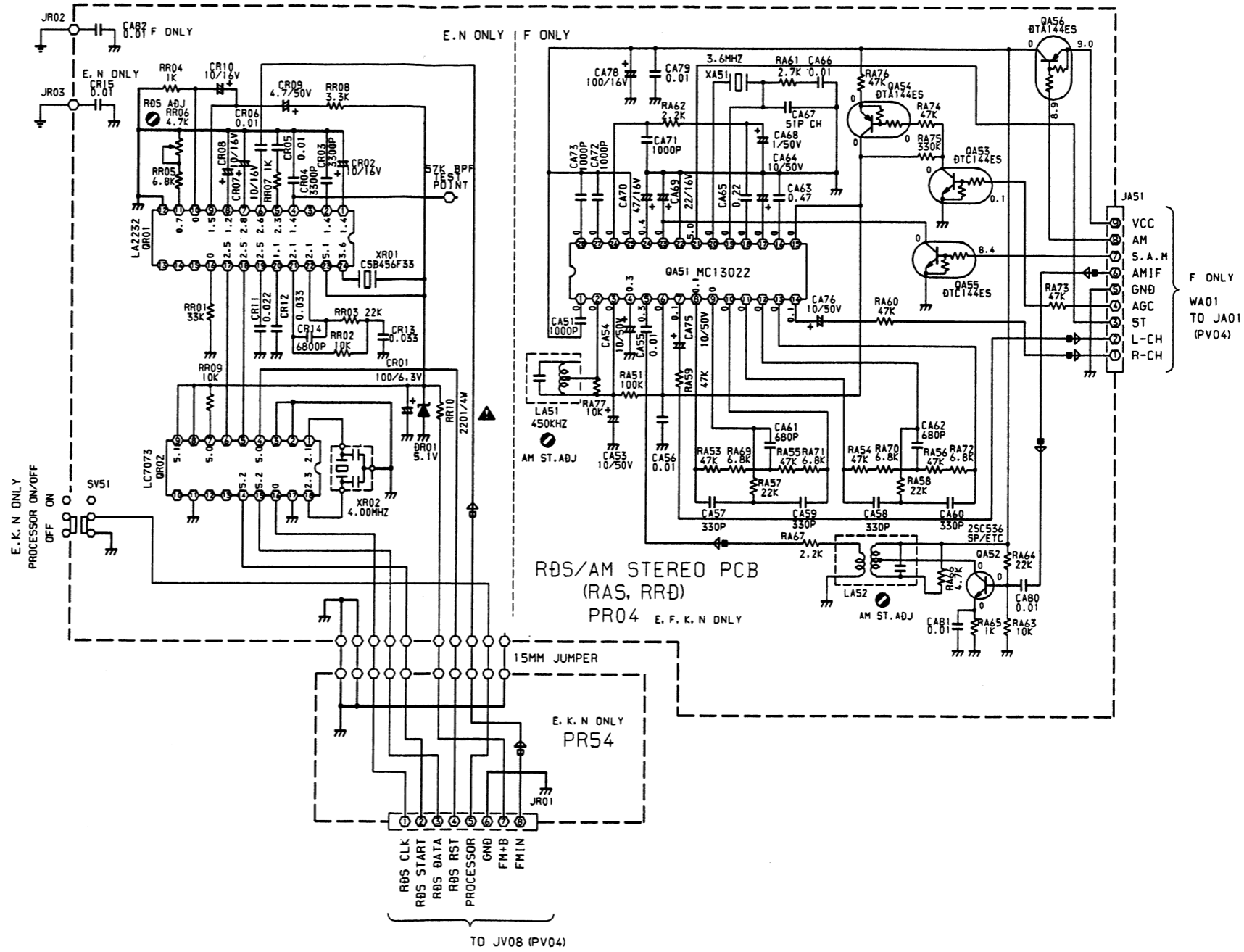
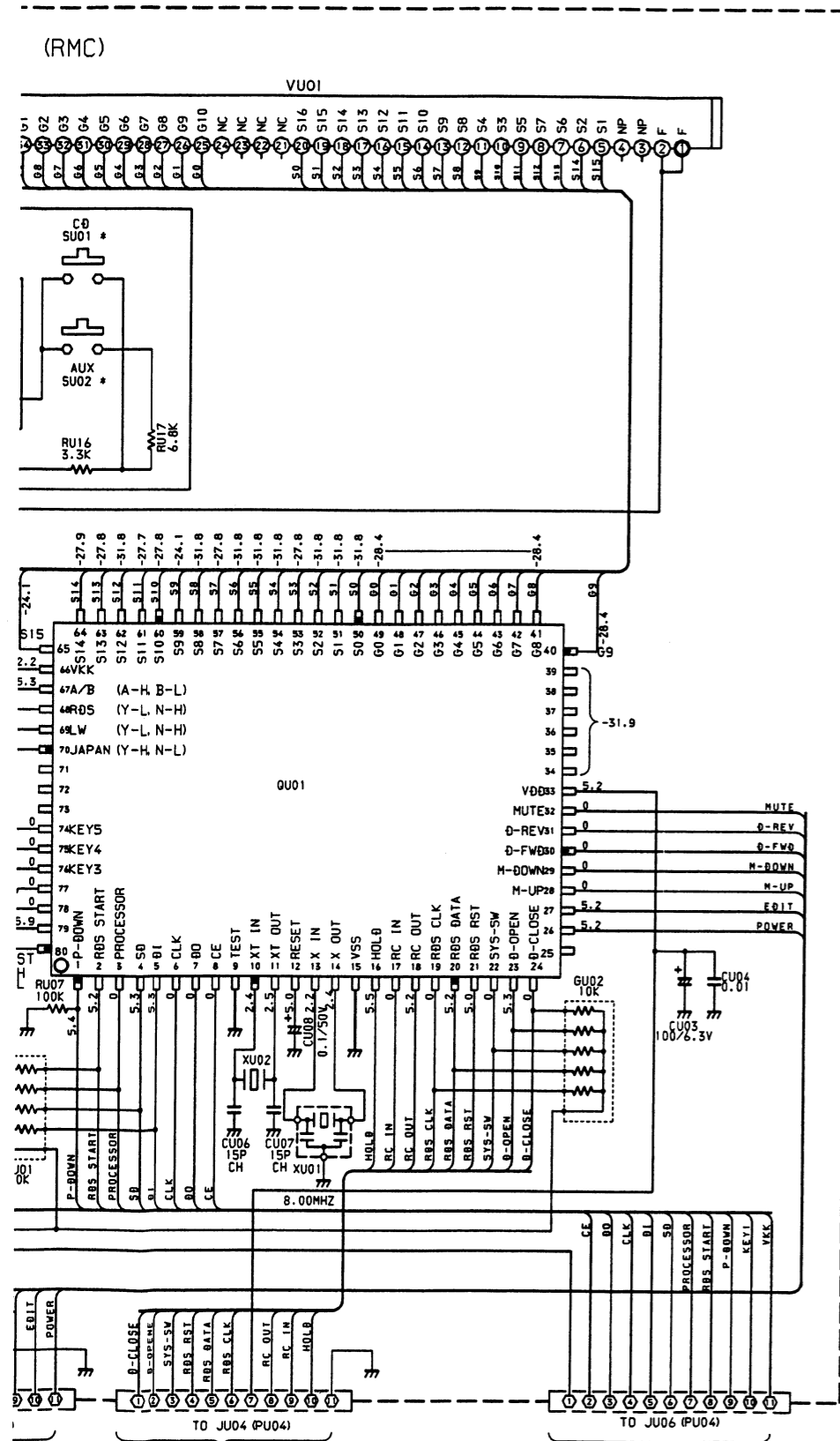


**FL DISPLAY
TERMINAL CONNECTION**

| PIN NO. | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|---------|
| CONNECTION | F2 | F2 | NP | NP | 1G | 2G | 3G | 4G | 5G | 6G | 7G | 8G | 9G | 10G | NC | NC | NC | NC | NC | P16/P15 |

NOTE 1. F1, F2 --- FILAI
 2. NP --- NO PI
 3. NC --- NO CC
 4. 1G~10G --- GRII
 5. DL --- DAT

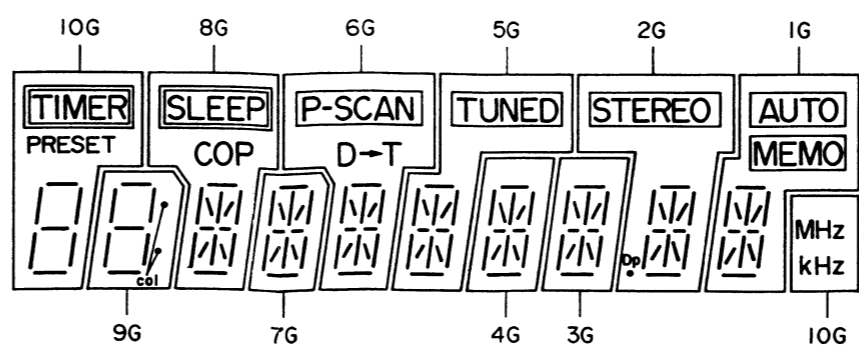


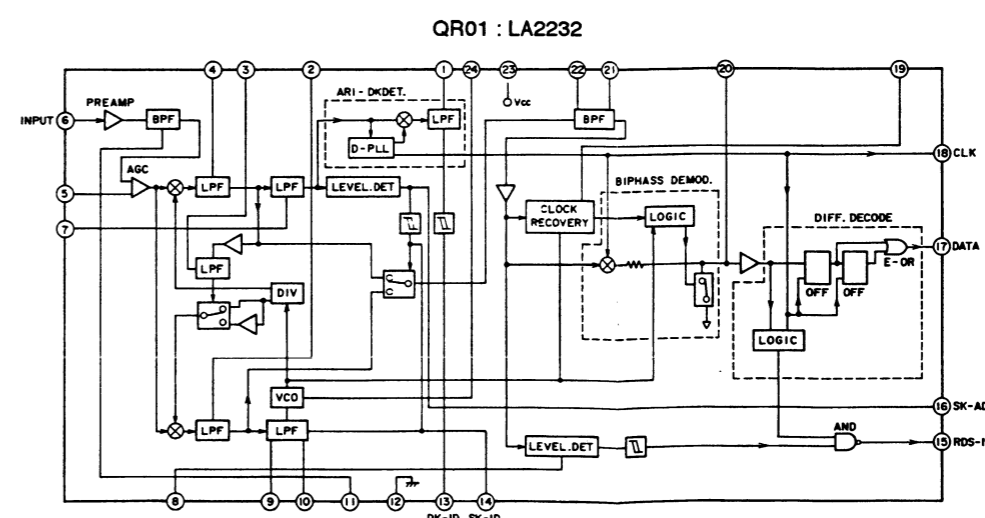
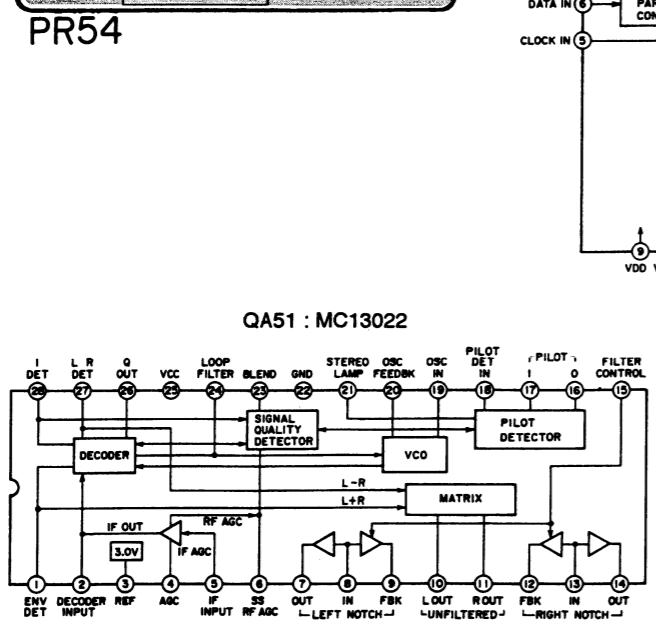
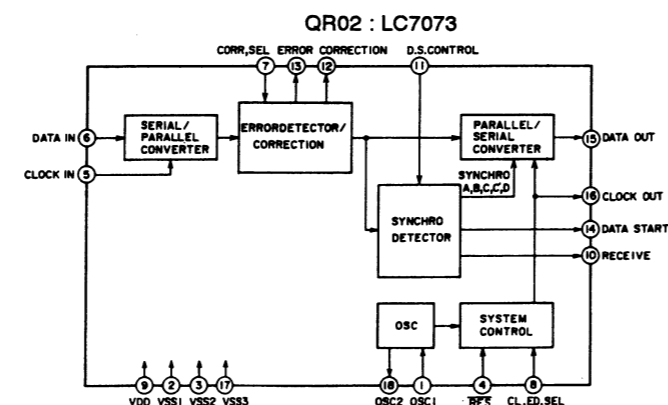
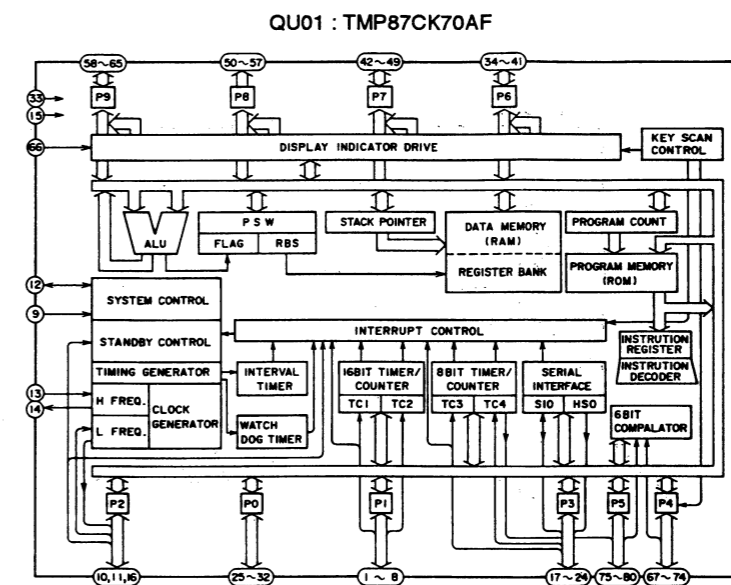
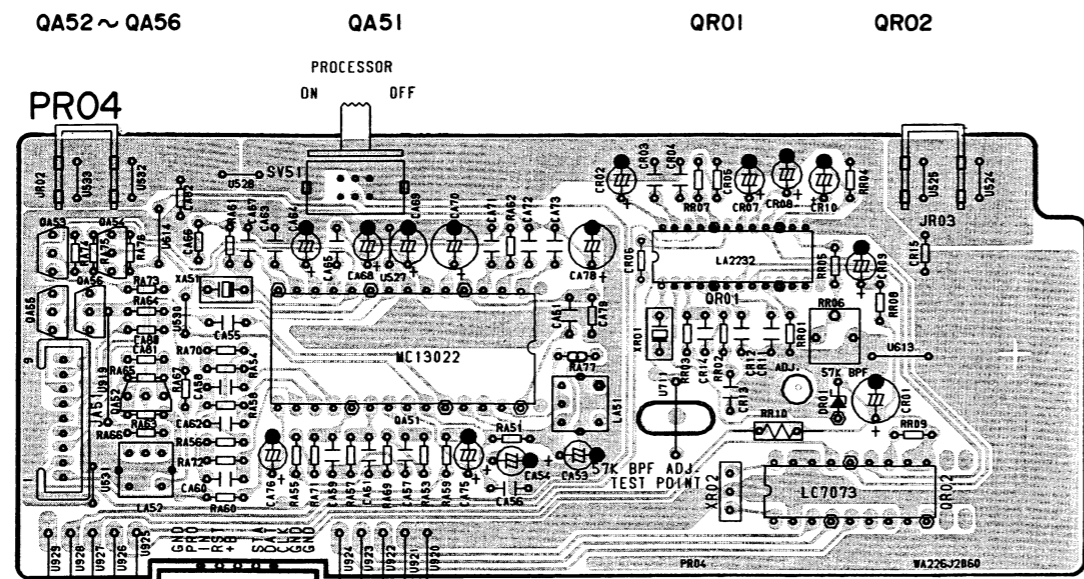
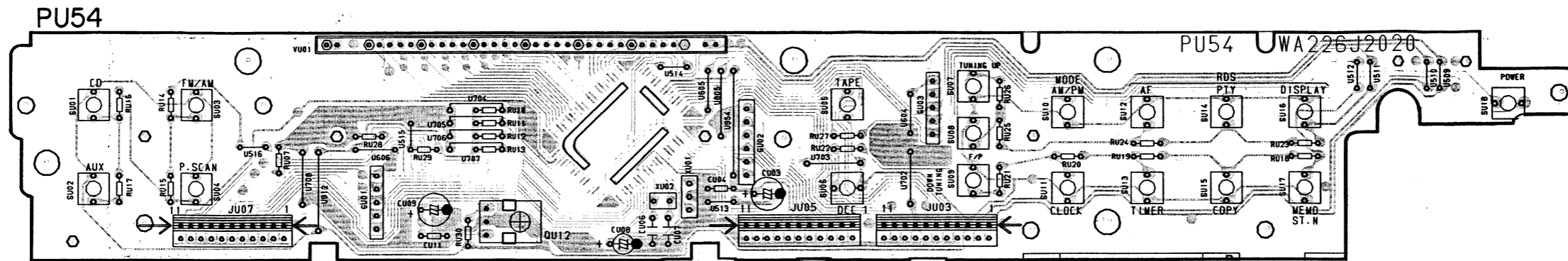


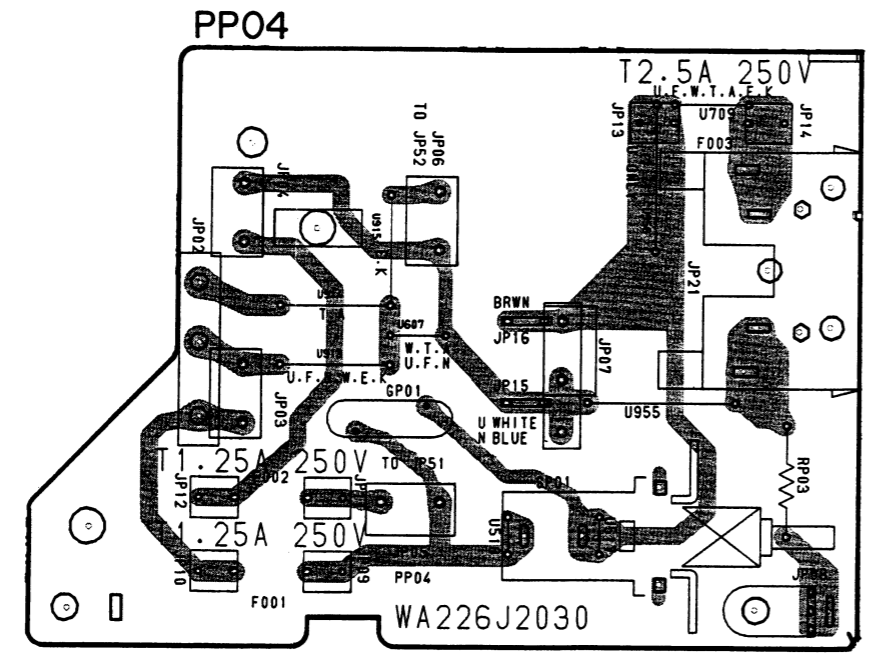
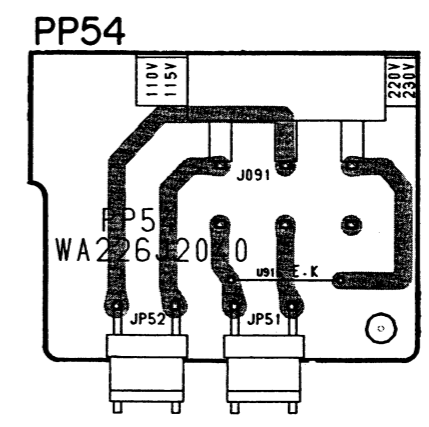
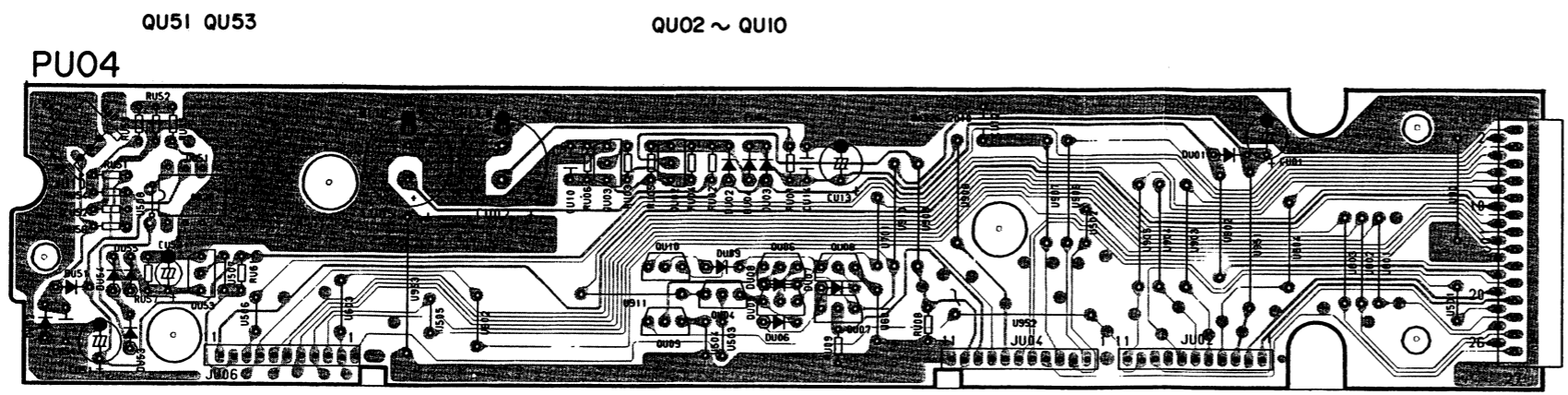
**FL DISPLAY
TERMINAL CONNECTION**

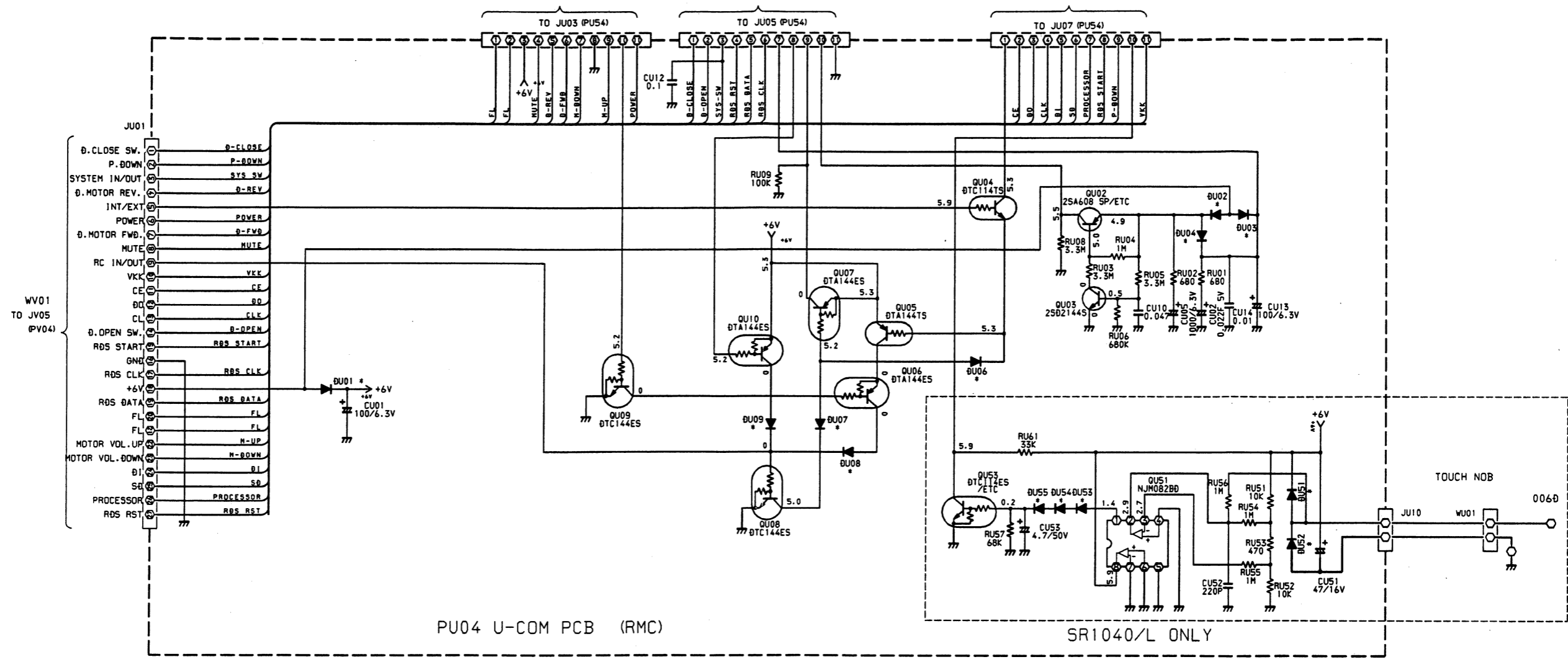
| PIN NO. | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| CONNECTION | F2 | F2 | NP | NP | 1G | 2G | 3G | 4G | 5G | 6G | 7G | 8G | 9G | 10G | NC | NC | NC | NC | P16 | P15 | P14 | P13 | P12 | P11 | P10 | P9 | P8 | P4 | P3 | P5 | P7 | P6 | P2 | P1 | NP | NP | F1 | F1 |

- NOTE
1. F1, F2 --- FILAMENT
 2. NP --- NO PIN
 3. NC --- NO CONNECTION
 4. 1G~10G --- GRID
 5. DL --- DATUM LINE

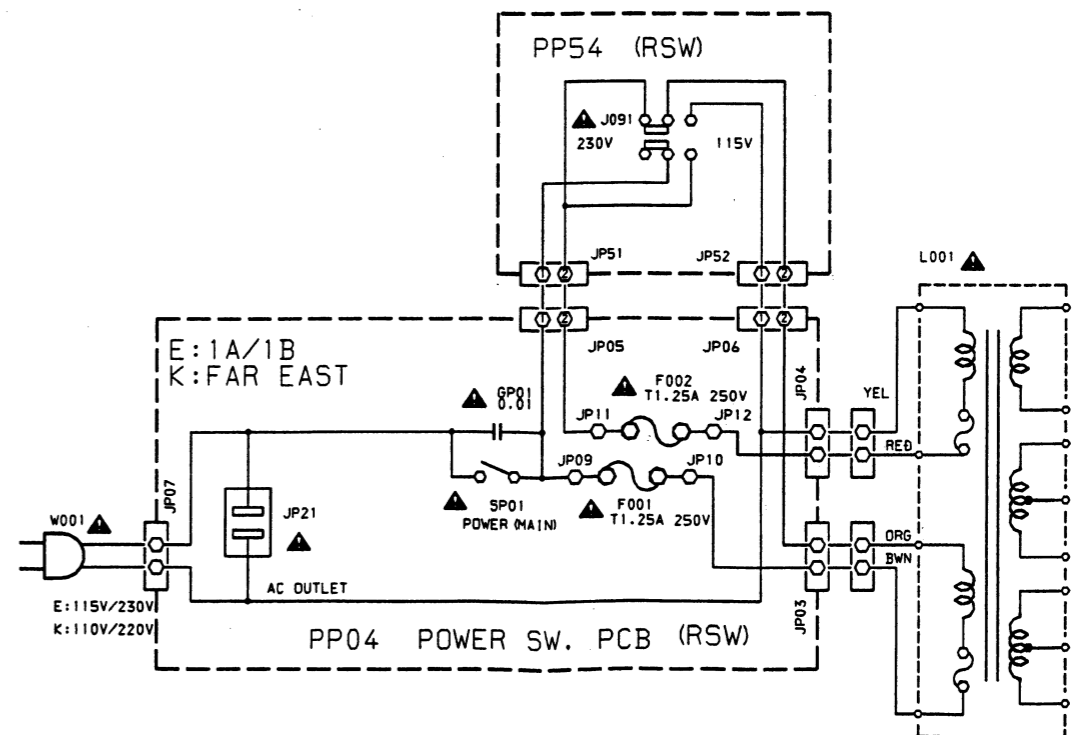
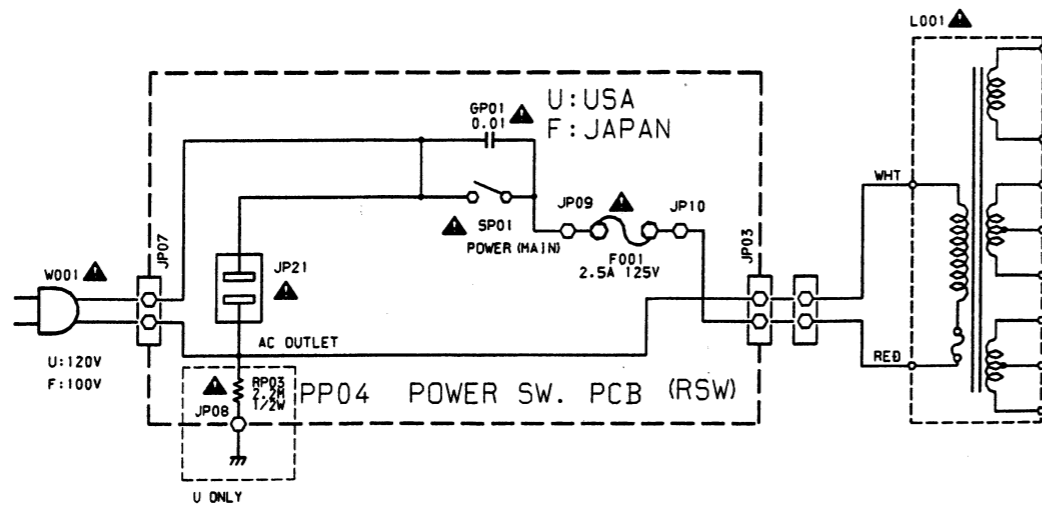




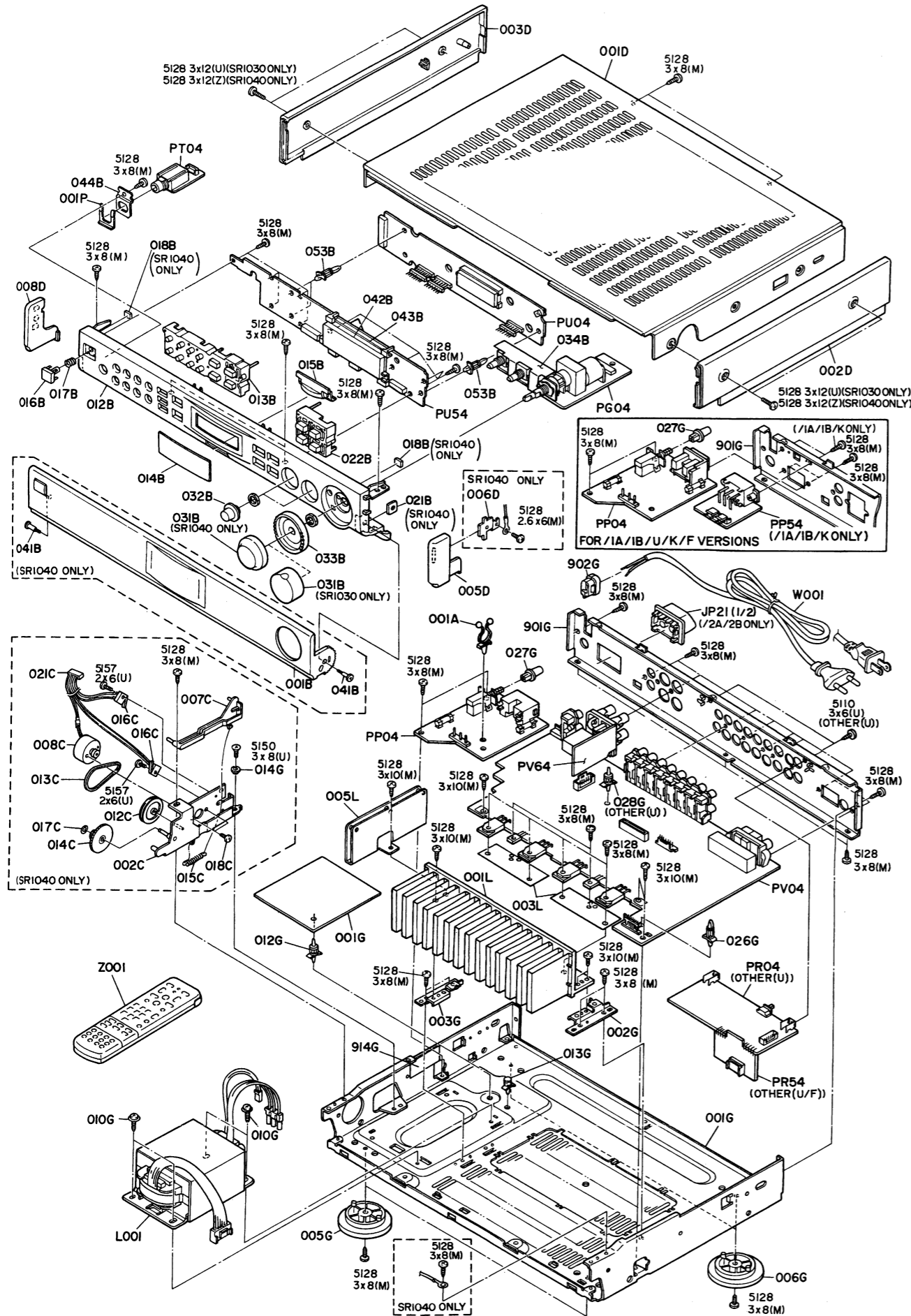




FUNCTION : CØ
 VOLUME : MINIMUM ▶ : AUDIO L R
 FM FREQ. : 87.5MHZ ◻▶ : FM L R
 ØOR : CLOSE ◻▶ : AM L R
 CLOCK : SET



4. EXPLODED VIEW AND PARTS LIST



| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|---------------------------------|
| 001B | 4822 426 60645 | ESCUTCHEON, DOOR PANEL ASSY |
| 012B | 4822 426 51781 | FRONT PANEL (SR1040) |
| 012B | 4822 426 51784 | FRONT PANEL (SR1030) |
| 013B | 4822 410 63503 | BUTTON BLOCK (L) (SR1040) |
| 013B | 4822 410 63507 | BUTTON BLOCK (L) (SR1030) |
| 014B | 4822 450 62123 | FL WINDOW (SR1040) |
| 014B | 4822 450 62144 | FL WINDOW (SR1030) |
| 015B | 4822 381 11434 | IR LENS |
| 016B | 4822 410 62813 | POWER BUTTON (SR1040) |
| 016B | 4822 410 62877 | POWER BUTTON (SR1030) |
| 017B | 4822 492 33409 | POWER BUTTON SPRING |
| 022B | 4822 410 63504 | BUTTON BLOCK (R) (SR1040) |
| 022B | 4822 410 63509 | BUTTON BLOCK (R) (SR1030) |
| 031B | 4822 413 41818 | MAIN VOLUME KNOB (SR1040) |
| 031B | 4822 413 41823 | MAIN VOLUME KNOB (SR1030) |
| 032B | 4822 413 31768 | TONE KNOB (SR1040) |
| 032B | 4822 413 31775 | TONE KNOB (SR1030) |
| 033B | 4822 413 41819 | BALANCE KNOB (SR1040) |
| 033B | 4822 413 41822 | BALANCE KNOB (SR1030) |
| 041B | 4822 502 21379 | DOOR SPECIAL SCREW |
| 042B | 4822 256 92093 | FL HOLDER |
| 007C | 4822 404 21283 | LEVER |
| 008C | 4822 361 21687 | MOTOR ASSY |
| 012C | 4822 528 40363 | PULLEY |
| 013C | 4822 358 31264 | BELT |
| 014C | 4822 522 33388 | GEAR |
| 015C | 4822 492 33411 | SPRING |
| 016C | 4822 271 30768 | MINI SWITCH |
| 017C | 4822 462 71954 | STOPPER, WASHER |
| 018C | 4822 502 21381 | P.H.M. SCREW, (M1.7 x 2) |
| 002D | 4822 426 30156 | SIDE PANEL (R) (SR1040) |
| 002D | 4822 443 41304 | SIDE PANEL (R) (SR1030) |
| 003D | 4822 426 30157 | SIDE PANEL (L) (SR1040) |
| 003D | 4822 443 41305 | SIDE PANEL (L) (SR1030) |
| 005D | 4822 532 12253 | BUSHING, SIDE (R) (SR1040) |
| 005D | 4822 532 21483 | BUSHING, SIDE (R) (SR1030) |
| 006D | 4822 281 50181 | TOUCH CONTACTOR (SR1040) |
| 008D | 4822 532 12254 | BUSHING, SIDE (L) (SR1040) |
| 008D | 4822 532 21484 | BUSHING, SIDE (L) (SR1030) |
| 005G | 4822 462 42064 | LEG, FRONT (SR1040) |
| 005G | 4822 462 42063 | LEG, FRONT (SR1030) |
| 006G | 4822 462 42065 | LEG, REAR (SR1040) |
| 006G | 4822 462 42051 | LEG, REAR (SR1030) |
| 010G | 4822 502 12511 | B.T. SCREW (W/W), TRANSF. |
| 027G | 4822 410 60343 | MAIN POWER BUTTON |
| 902G | 4822 532 61184 | BUSHING, AC CORD [/01] |
| 902G | 4822 532 60948 | BUSHING, AC CORD [/02] |
| 003L | 4822 466 62412 | POWER TR SHEET |
| ▲L001 | 4822 146 21753 | POWER TRANSF., 115V 230V [/01] |
| ▲L001 | 4822 146 21752 | POWER TRANSF., 230V 240V [/02] |
| 001T | 4822 736 22227 | USER MANUAL |
| Z001 | 4822 218 10563 | UNIT K, REMOTE COMMANDER |
| Z003 | 4822 157 63083 | LOOP ANTENNA |
| Z004 | 4822 303 50079 | EXT. ANTENNA |
| Z006 | 4822 265 10092 | JACK, AC ADAPTER [/01] |

◆ アイドリング電流の調整

- (1) 電源を投入しない状態で、マスターボリュームを最小の位置にします。
- (2) 電流調整用半固定抵抗 R719 (Lch)、R720 (Rch) を中央の位置にします。
- (3) セメント抵抗 R737 (Lch)、R738 (Rch) の両端のピンに、デジタル電圧計を接続します。

* 電源を投入しアイドリング電流を、下表に従って R719、R720 を調整します。

参考

アイドリング電流調整済みのセットを、冷えた状態から電源投入すると、30 秒後に約 3.5mV、1 分後に約 4.5mV に達する。10 分後には平衡状態となり、7mV で安定します。従って、電源投入後、30 秒後～1 分以内に調整作業を行なう場合は「4mV」に調整します。同様に 1 分後～2 分以内の場合は「5mV」に、2 分後～3 分以内の場合は「6mV」に調整します。5 分後以降は、設定値である「7mV」に調整します。尚、ヒートラン、エージング後あるいは修理後に調整を行なう場合は、10 分間無信号、無負荷、電源投入状態で放置し、その後設定値である「7mV」に調整します。

5. IDLING CURRENT ADJUSTMENT

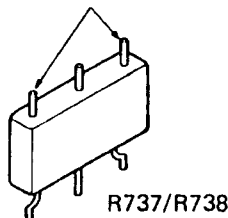
- (1) Before switching the power ON, set the Master Volume control to the minimum position and the Balance and Tone controls to the center positions. Then, rotate the semi-fixed resistors R719 (LCH) and R720 (RCH) on the PC board PV04 center positions.
- (2) Connect a digital voltmeter, set for the DC voltage input to the pertinent test points (the marked ones of R737-R738) on the PC board PV04.
- (3) After the completion of the above setup. Switch the power ON and adjust the semi-fixed resistors R719 (L CH) and R720 (R CH) on the PC board PV04 according to the reading of the digital voltmeter. The setting values are 7 mV (19.4 mA) of the both channels.

Note:

When you proceed to this adjustment after having serviced the unit, operate the unit with a non-signal condition for about 15 minutes after turning its power ON, then adjust to 7 mV. If you should proceed to the adjustment in less than 15 minutes after turning the power ON, refer to the following table for the value to be adjusted.

| Power ON | |
|-------------------|--------|
| 30 sec. ~ 1 min. | 4.0 mV |
| 1 min. ~ 2 min. | 5.0 mV |
| 2 min. ~ 3 min. | 6.0 mV |
| More than 10 min. | 7.0 mV |

Measurement point



◆ サービスプログラム

- (1) トラッキングポイントメモリー

「MEMO」「TAPE」keys を同時押ししながら「FM/AM」key を押します。下表参照 (FM: JAPAN, AM: 10 kHz)

memory を clear する場合は

「MEMO」「TAPE」keys を同時押ししながら「AUX」key を押します。この場合、全ての「RAM Data」が clear されず。

- (2) FL セグメントチェック

「MEMO」「TAPE」キーを同時押ししながら「P. SCAN」を押します。

all segments が点灯します。この時、function が「TUNER」の場合は約 5 秒後に消灯し、最左端桁より 1 桁ずつ順番に点灯します。「TUNER」以外の function では、全点灯のままです。

segment check mode 中は他の動作は一切しません。

power off で cancel されます。

6. SERVICE PROGRAM

6-1. T.R POINT ME (tracking point memory) mode.

While holding the MEMO and TAPE keys depressed simultaneously, press the FM / AM (MW) key, the T.R POINT ME mode is called. Frequencies to be memorized are as follows.

| | | P1 | P2 | P3 | P4 | P5 | P6 | P7 |
|-------------|-----------------|----|----|-----|------|-----|------|------|
| FM [MHz] | EUROPE | 90 | 98 | 106 | 87.5 | | | |
| | USA | 90 | 98 | 106 | 87.5 | | | |
| | JAPAN | 78 | 83 | 88 | 76.0 | | | |
| AM [KHz] | 9KHz without LW | | | | | 603 | 999 | 1404 |
| | 9KHz with LW | | | | | 603 | 999 | 1404 |
| | 10 KHz | | | | | 600 | 1000 | 1400 |

| | | P8 | P9 | P10 | P11 | P12 ~ P30 |
|-------------|-----------------|-----|-----|-----|-----|-----------|
| AM [KHz] | 9KHz without LW | - | - | - | - | - |
| | 9KHz with LW | 171 | 207 | 270 | 152 | 531 |
| | 10 KHz | - | - | - | - | - |

- : Low end frequency of the AM (MW) band.

To clear the entire memory:

While holding the MEMO and TAPE keys depressed simultaneously, press the AUX key. This will clear the RAM data entirely.

6-2. FL segment check mode.

While holding the MEMO and TAPE keys depressed simultaneously, press the P. SCAN keys.

All of the display segments light up. If the current input function is TUNER, the segments go off in about 5 seconds then the segments of each display digit light one after another starting with the leftmost digit. If the current input function is other than TUNER, all of the segments remain lit.

No other operation occurs during the segment check mode. This mode can be cancelled by turning the power OFF.

7. TUNER ALIGNMENT PROCEDURES

- Set to T.R point ME mode of the service program.
(P2) to (P10) in the Digital Readout Frequency Setting column shows preset numbers for the above mode.
- Before alignment, connect a dummy resistor of 47 kohms to the tape output terminal.

7-1. FM Alignment Procedures

(Band switch at "FM" position and MODE switch at "MONO" position)

FM RF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|------------------|--|-----------------------------------|---|
| 1 | FM signal generator to FM antenna terminal. Adjust the RF signal output so that slight noise occurs at the upper and lower sides of the output waveform. | 98.0 MHz | AC VTVM to L-or R-channel Tape out (JV02) | 98.0 MHz (P2) | Front end (A101) IFT for maximum output and minimum distortion. |
| 2 | FM signal generator 500 μ V output to FM antenna terminal (75-ohm). | 98.0 MHz | Distortion meter to L-or R-channel Tape out (JV02) | 98.0 MHz (P2) | L201 core for minimum distortion. |

FM IF Alignment

(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|---|-------------------------------|---|-----------------------------------|--|
| 1 | FM signal generator 500 μ V output modulated by MPX signal generator to FM antenna terminal (75-ohm). | Stereo L-channel (1.000 Hz) | VTVM to L-channel Tape out (JV02 L-channel) | 98.0 MHz (P2) | Front end (A101) IFT for minimum distortion. |
| 2 | Modulation level: IHF 67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev. | Stereo R-channel (1.000 Hz) | VTVM to R-channel Tape out (JV02 R-channel) | | |

Muting Level Alignment

(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|------------------|--|-----------------------------------|--|
| 1 | FM signal generator 6.3 μ V output to FM antenna terminal (75-ohm) | 98.0 MHz | AC VTVM to L-or R- channel Tape out (JV02) | 98.0 MHz (P2) | R212 to a point at which output appears. |

Multiplex Alignment

(Band switch at "FM" position and MODE switch at "AUTO STEREO" position)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|-------------------------------|---|-----------------------------------|---|
| 1 | FM signal generator 500 μ V output modulated by MPX signal generator to FM antenna terminal (75-ohm) Modulation level : IHF 67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev. | Stereo L-channel (1.000 Hz) | VTVM to R-channel Tape out (JV02 R-channel) | 98.0 MHz (P2) | R211 so that channel separation is identical between both channels. |
| 2 | | Stereo R-channel (1.000 Hz) | VTVM to L-channel Tape out (JV02 L-channel) | | |
| 3 | Repeat steps 1 and 2 | | | | |

RDS 57 kHz BPF Alignment (Europe only)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|---|------------------|---|-----------------------------------|--------------------------|
| 1 | FM signal generator 500 μ V output modulated by MPX signal generator to FM antenna terminal (75-ohm). Modulation level: RDS signal 1 kHz dev. | 98.0 MHz | AC VM and Oscilloscope between U711 and GND. (PR04) | 98.0 MHz | RR06 for maximum output. |

7-2. AM (MW) / LW Alignment Procedures

(Band switch at "MW" or "AM" position)

AM IF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|---|------------------|---|-----------------------------------|--|
| 1 | Sweep generator to AM antenna terminal. | 450 kHz | AC VTVM to L-or R-channel Tape out (JV02) | — | LA06 for maximum and symmetrical waveform. |

AM (MW) RF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|--|--|-----------------------------------|--------------------------|
| 1 | AM signal generator to AM loop antenna in a test loop. | 603 kHz (Europe, Japan) 600 kHz (USA) | VTVM to L-or R-channel Tape out (JV02) | 603 kHz 600 kHz (P5) | LA01 for maximum output. |
| 2 | | 1404 kHz (Europe, Japan) 1400 kHz (USA) | | 1404 kHz 1400 kHz (P7) | CA01 for maximum output. |
| 3 | Repeat steps 1 and 2 until sensitivity is maximized. | | | | |

AM Auto Stop Alignment (Band switch at "MW" or "AM" position)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|---|----------------------|-----------------------------------|--|
| 1 | RF generator to AM loop antenna in a test loop (500 μ V / m) | 999 kHz (Europe, Japan) 1000 kHz (USA) | — | 999 kHz 1000 kHz (P6) | RA11 so that the "TUNED" on the display tube lights. |

LW RF Alignment (Europe only)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Digital Readout Frequency Setting | Adjust |
|------|--|------------------|--|-----------------------------------|--------------------------|
| 1 | AM signal generator to AM loop antenna in a test loop. | 171 kHz | VTVM to L-or R-channel Tape out (JV02) | 171 kHz (P8) | LA03 for maximum output. |
| 2 | | 270 kHz | | 270 kHz (P10) | CA08 for maximum output. |
| 3 | Repeat steps 1 and 2 until sensitivity is maximized. | | | | |

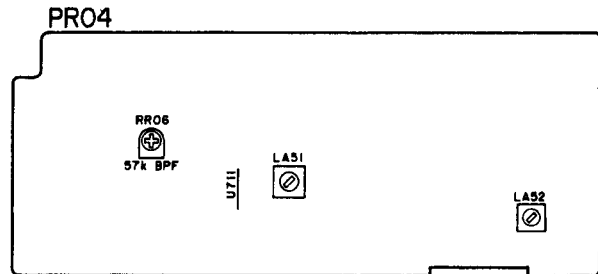
AM Stereo 調整 (Japan only)

調整箇所 : LA51, LA52, LA06
 調整周波数 : 999 kHz, 50mV/m (94 dB/m)
 変調条件 : 400 Hz (L+R) = 30% MOD.
 25 Hz PILOT = 5% MOD.

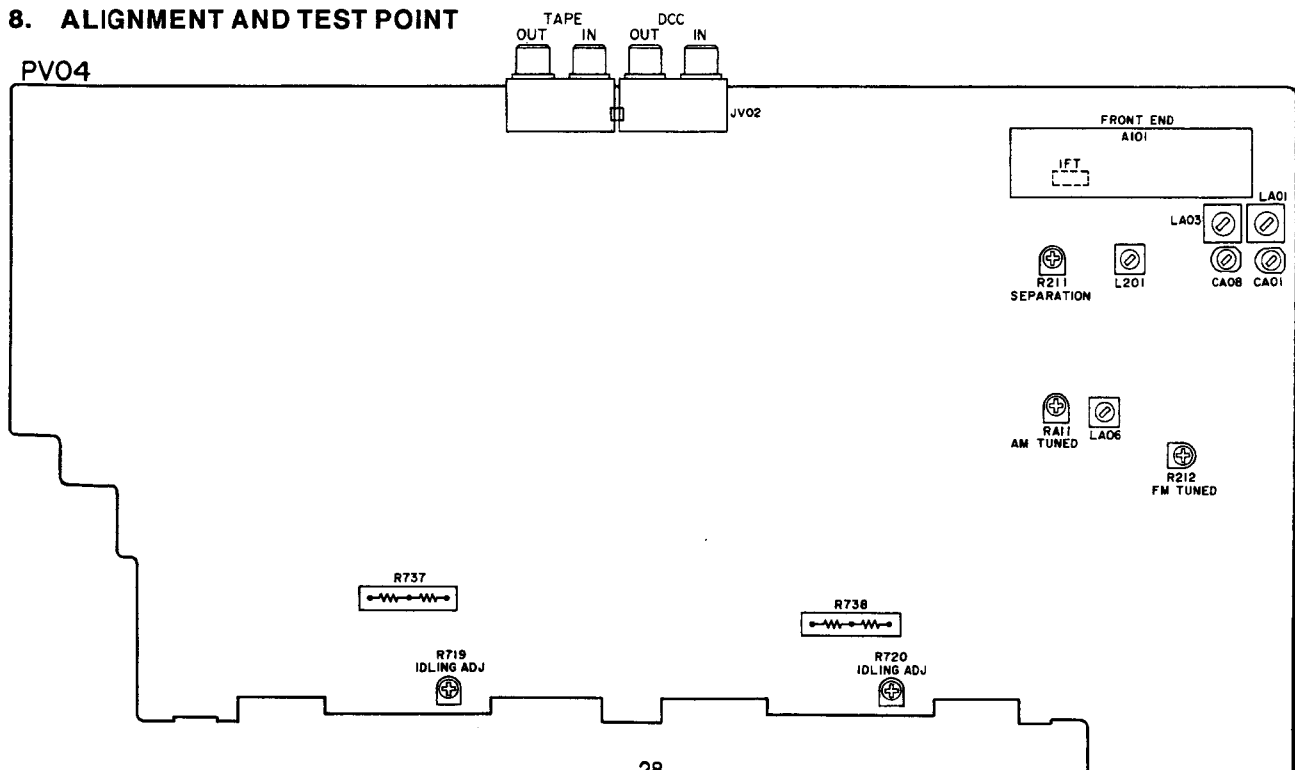
1. SG の変調を「L-R」(SUB), PILOT-OFF にする。
2. セットの Lch (又は Rch) の出力が最小になるように、LA51, LA52 を調整、LA06 を微調整する。(注)

*MODE SW は、「AUTO」ポジションとする。

(注) LA52 の調整はブロードであり、セットの出力変化は極僅かです。



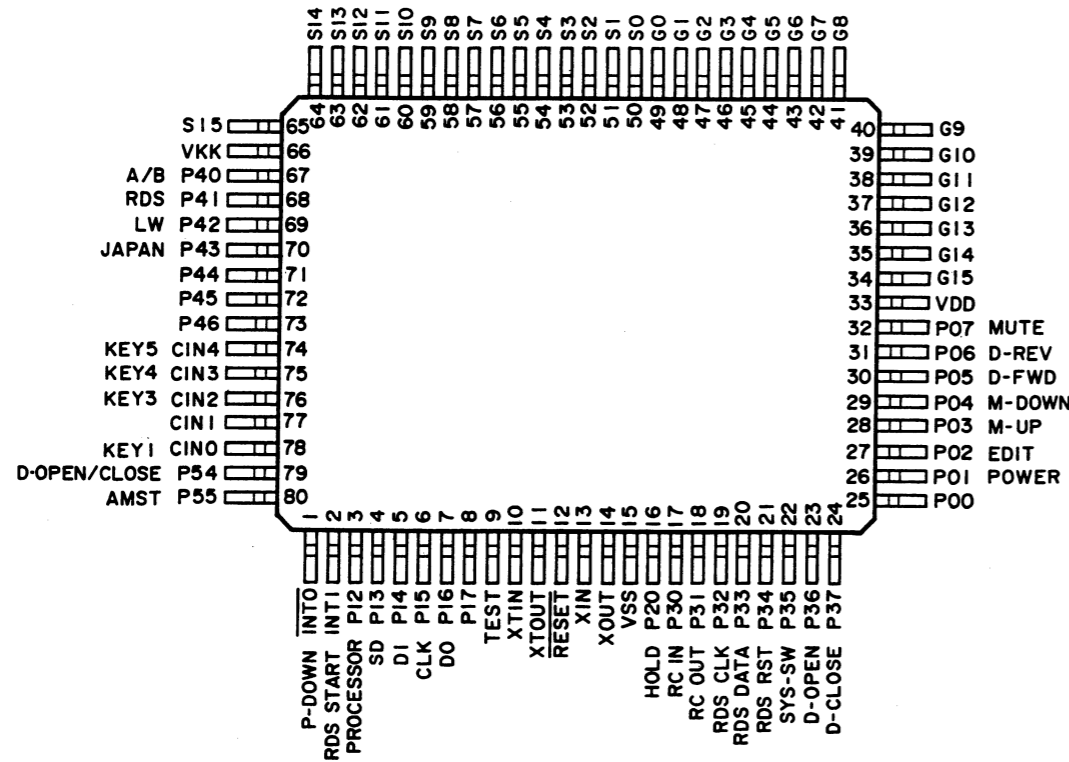
8. ALIGNMENT AND TEST POINT



9. MICROPROCESSOR SPECIFICATIONS

Receiving Frequency Range, Channel Space, Reference Frequency and Intermediate Frequency

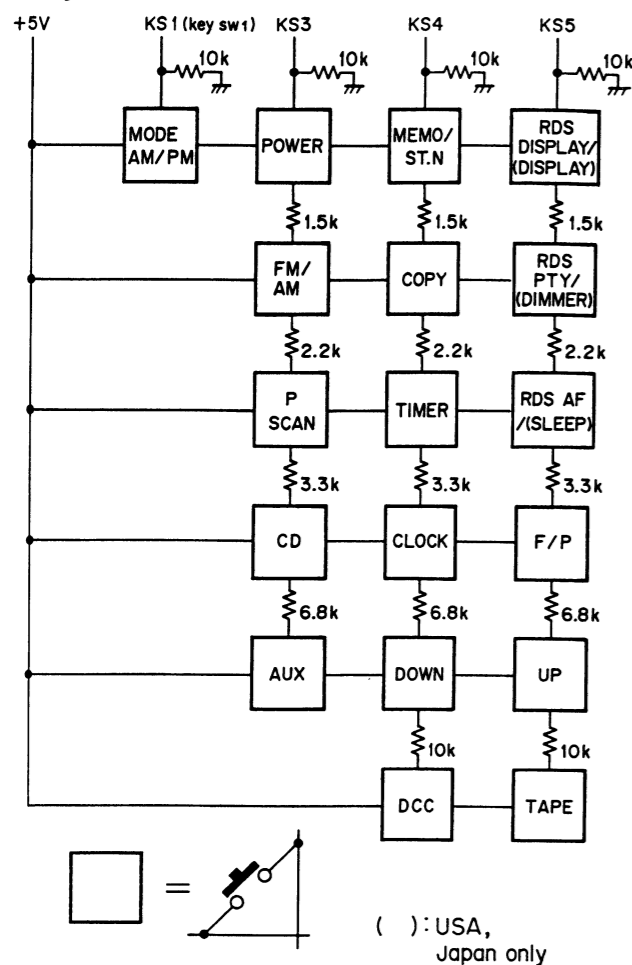
| | | Receiving Frequency | Channel Space | Reference Frequency | Intermediate Frequency |
|--------|----|---------------------|---------------|---------------------|------------------------|
| Europe | FM | 87.5 ~ 108.0 MHz | 50 kHz | 25 kHz | +10.7 MHz |
| | MW | 531 ~ 1602 kHz | 9 kHz | 9 kHz | +450 kHz |
| | LW | 152 ~ 282 kHz | 1 kHz | 1 kHz | +450 kHz |
| U.S.A. | FM | 87.5 ~ 108.0 MHz | 100 kHz | 25 kHz | +10.7 MHz |
| | AM | 520 ~ 1710 kHz | 10 kHz | 10 kHz | +450 kHz |
| Japan | FM | 76.0 ~ 90.0 MHz | 100 kHz | 25 kHz | -10.7 MHz |
| | AM | 531 ~ 1602 kHz | 9 kHz | 9 kHz | +450 kHz |



TMP87CK70AF

| Pin No. | Pin name | I/O | Action | Function | Pin No. | Pin name | I/O | Action | Function | | |
|---------|----------|-----------|--------|----------|----------------------|----------|------|------------------|----------|---|--------------------|
| 1 | INT0 | P-DOWN | I | H | Power down signal | 41 | G8 | G8 | 0 | H | FTD 2G digit |
| 2 | INT1 | RDS START | I | L | RDS Data start | 42 | G7 | G7 | 0 | H | FTD 3G digit |
| 3 | P12 | PROCESSOR | I | H | Processor SW | 43 | G6 | G6 | 0 | H | FTD 4G digit |
| 4 | P13 | SD | I | L | SD in | 44 | G5 | G5 | 0 | H | FTD 5G digit |
| 5 | P14 | DI | I | H | Di in | 45 | G4 | G4 | 0 | H | FTD 6G digit |
| 6 | P15 | CLK | O | H | Clock out | 46 | G3 | G3 | 0 | H | FTD 7G digit |
| 7 | P16 | DO | O | H | Data out | 47 | G2 | G2 | 0 | H | FTD 8G digit |
| 8 | P17 | CE | O | H | CE out | 48 | G1 | G1 | 0 | H | FTD 9G digit |
| 9 | TEST | TEST | I | - | Not used | 49 | G0 | G0 | 0 | H | FTD 10G digit |
| 10 | XT in | XT in | I | - | Sub clock, 32.768kHz | 50 | S0 | S0 | 0 | H | FTD S16 segment |
| 11 | XT out | XT out | O | - | Sub clock | 51 | S1 | S1 | 0 | H | FTD S15 segment |
| 12 | RESET | RESET | I | L | Reset | 52 | S2 | S2 | 0 | H | FTD Sr segment |
| 13 | X in | X in | I | - | Main clock, 8.0MHz | 53 | S3 | S3 | 0 | H | FTD Sp segment |
| 14 | X out | X out | O | - | Main clock | 54 | S4 | S4 | 0 | H | FTD Sn segment |
| 15 | Vss | Vss | - | - | GND | 55 | S5 | S5 | 0 | H | FTD Sm segment |
| 16 | P20 | HOLD | I | H | Hold | 56 | S6 | S6 | 0 | H | FTD Sk segment |
| 17 | P30 | RC IN | I | H | RC-5 in | 57 | S7 | S7 | 0 | H | FTD Sj segment |
| 18 | P31 | RC OUT | O | L | RC-5 out | 58 | S8 | S8 | 0 | H | FTD Sh segment |
| 19 | P32 | RDS CLK | I | L | RDS clock in | 59 | S9 | S9 | 0 | H | FTD Sd segment |
| 20 | P33 | RDS DATA | I | L | RDS data in | 60 | S10 | S10 | 0 | H | FTD Sc segment |
| 21 | P34 | RDS RST | O | L | RDS reset out | 61 | S11 | S11 | 0 | H | FTD Se segment |
| 22 | P35 | SYS-SW | I | H | System SW | 62 | S12 | S12 | 0 | H | FTD Sg segment |
| 23 | P36 | D-OPEN | I | L | Door open SW | 63 | S13 | S13 | 0 | H | FTD Sf segment |
| 24 | P37 | D-CLOSE | I | L | Door close SW | 64 | S14 | S14 | 0 | H | FTD Sb segment |
| 25 | P00 | | O | - | Not used | 65 | S15 | S15 | 0 | H | FTD Sa segment |
| 26 | P01 | POWER | O | H | Power relay drive | 66 | Vkk | Vkk | - | - | -30V |
| 27 | P02 | EDIT | O | L | Edit | 67 | P40 | A/B | I | - | MODEL |
| 28 | P03 | M-UP | O | H | Motor volume up | 68 | P41 | RDS | I | L | *RDS |
| 29 | P04 | M-DOWN | O | H | Motor volume down | 69 | P42 | LW | I | L | *LW |
| 30 | P05 | D-FWD | O | H | Door motor forward | 70 | P43 | JAPAN | I | H | *JAPAN |
| 31 | P06 | D-REV | O | H | Door motor reverse | 71 | P44 | | O | - | Not used |
| 32 | P07 | MUTE | O | H | Muting | 72 | P45 | | O | - | Not used |
| 33 | Vdd | Vdd | - | - | +5V | 73 | P46 | | - | - | Not used |
| 34 | G15 | G15 | O | - | Not used | 74 | CIN4 | KEY5 | I | - | Key SW 5 |
| 35 | G14 | G14 | O | - | Not used | 75 | CIN3 | KEY4 | I | - | Key SW 4 |
| 36 | G13 | G13 | O | - | Not used | 76 | CIN2 | KEY3 | I | - | Key SW 3 |
| 37 | G12 | G12 | O | - | Not used | 77 | CIN1 | | I | - | Not used |
| 38 | G11 | G11 | O | - | Not used | 78 | CIN0 | KEY1 | I | - | Key SW 1 |
| 39 | G10 | G10 | O | - | Not used | 79 | P54 | D-OPEN/ CLOSE | I | L | Door key SW |
| 40 | G9 | G9 | O | H | FTD 1G digit | 80 | P55 | AMST | I | H | * AM stereo SELECT |

Key Matrix



Description of Keys

* RDS DISPLAY/(DISPLAY) key

This key is used to switch the information shown on the display. It is valid only during tuner reception. Usually, the display shows the station name but the frequency appears when the key is pressed. During reception of a station without station name, its frequency is displayed. If this key is pressed then, "NO NAME" will be displayed for about 2 second.

* RDS PTY/(DIMMER) key

This key is used to select the PTY (Programme Type). When this key is pressed during reception of an RDS station, the PTY of the station being received will be displayed for about 5 seconds. If the UP or DOWN key is pressed after displaying the PTY, the PTY auto search starts and stops only when a station of the same PTY is received. In case of "without RDS", this key functions as the Dimmer key, which varies (dims) the display brightness when it is pressed.

* RDS AF/(SLEEP) key

This key is used to switch the station being received to an AF (Alternative Frequencies) station. When the key is pressed during reception of an RDS station, a station broadcasting the same programme will be received. If there is no AF station to the original station, "NO AF" will be displayed. In case of "without RDS", this key functions as the Sleep key, which allow to set the sleep timer.

* F/P key

This key is used to switch the function of the UP / DOWN keys between the Frequency up / down keys and Preset up / down keys.

* UP / DOWN keys

These keys are used to increase or decrease the frequency or preset number. In the clock and timer modes, these keys are used to set the time, programme, etc.

* TAPE, DCC, CD and AUX keys

These keys are used to select the input function.

* FM / AM keys

This key is used to select the tuner mode and the receiving band. In case the LW band is available, this key functions as the FM / MW / LW band selector keys.

* P. SCAN key

This key is used to initiate the preset scanning of radio stations. With preset scanning, the preset stations in memory are received sequentially for 5 seconds per each station. When this key is pressed again, the preset scanning stops at that point.

* MODE AM / PM key

This key is usually used as the MODE key for selecting the FM reception mode (Auto stereo / Mono). In the clock and timer modes, this key functions as the AM / PM selector key.

* MEMO / ST. N key

This key is usually used as the MEMO key for use in storing preset stations in memory or programming of the clock or timer.

When the key is held depressed for more than 3 seconds, the station name input mode is initiated and this key allows to input the station name manually.

* COPY key

This key is used to initiate direct recording from DCC to TAPE. This key is invalid if D. BUS switch on the rear panel is set to SYSTEM.

* CLOCK key

This key is used when setting the current time of the day. When this key is pressed while the power is ON, the current time will be displayed for about 3 seconds.

* TIMER key

This key is used when setting the programme timer or checking the programmed contents.

* POWER key

This key is used to turn the power ON / OFF. The clock is displayed while the power is OFF.

* DISPLAY key

DISPLAY 部の表示を切換る Key です。チューナ受信時のみ有効です。

* DIMMER key

Key を押すと表示部の明るさが変化 (暗くなる) します。

* SLEEP key

Sleep key で Sleep timer を設定することができます。

* F/P key

UP/DOWN keys を、Frequency up/down か Preset up/down かに切換る key です。

* UP/DOWN keys

Frequency Preset number の up/down key です。Clock、Timer mode の時には、Time、Programme 等の設定 keys になります。

* TAPE、DCC、CD、AUX keys

Function 切換 key です。

* FM/AM key

Tuner 選択及び受信 Band 切換 key です。

* P. SCAN key

Tuner の Preset scan を行なう key です。Memory されている Preset station を 5 秒間ずつ、順番に受信します。Preset scan 中に再度 key を押すと stop します。

* MODE AM/PM key

FM/AM の受信 Mode (Auto stereo/Mono) を切換る key です。Clock、Timer mode の時には、AM/PM 切換え key になります。

* MEMO/ST. N key

Tuner の Preset memory や Clock、Timer の Programme 等に使用する Memory key です。3 秒以上押し続けると、Station name input mode になり、manual で station name を input することができます。

* COPY key

DCC から TAPE に直接、録音する時に使用する key です。Rear panel の「D. BUS」の Switch が「SYSTEM」に切換えてある時には、無効 key となります。

* CLOCK key

現時刻を設定する時に使用する key です。又、Power on 中に key を押すと表示部に約 3 秒間現時刻が表示されます。

* TIMER key

Programme timer の設定や Programme 内容の確認を行なう key です。

* POWER key

Power on/off key です。power off 時は時計表示となります。

10. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

- R***** : 1) GD05 x x x 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
R*** : 2) GD05 x x x 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

(1) — Resistance value

Examples :

(1) Resistance value

| | | | |
|---------------------|---------------------|----------------------|----------------------|
| 0.1 Ω ...001 | 10 Ω ...100 | 1k Ω ...102 | 100k Ω ...104 |
| 0.5 Ω ...005 | 18 Ω ...180 | 2.7k Ω ...272 | 680k Ω ...684 |
| 1 Ω ...010 | 100 Ω ...101 | 10k Ω ...103 | 1M Ω ...105 |
| 6.8 Ω ...068 | 390 Ω ...391 | 22k Ω ...223 | 4.7M Ω ...475 |

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C*** : CERAMIC CAP.

- 1) DD1 x x x 370, Ceramic capacitor
 Disc type
 Temp.coeff.P350~N1000.50V
 (1) — Capacity value
 (2) — Tolerance

Examples

(1) Tolerance (Capacity deviation)

| |
|---------------------------|
| $\pm 0.25\text{pF}$... 0 |
| $\pm 0.5\text{pF}$... 1 |
| $\pm 5\%$... 5 |

* Tolerance of COMMON PARTS handled here are as follows :

| |
|-----------------------------------|
| 0.5pF~ 5pF... $\pm 0.25\text{pF}$ |
| 6pF~ 10pF... $\pm 0.5\text{pF}$ |
| 12pF~ 560pF... $\pm 5\%$ |

(2) Capacity value

| | | |
|-------------|------------|-------------|
| 0.5pF...005 | 3pF...030 | 100pF...101 |
| 1pF...010 | 10pF...100 | 220pF...221 |
| 1.5pF...015 | 47pF...470 | 560pF...561 |

C*** : CERAMIC CAP

- 1) DK16 x x x 300, High dielectric constant ceramic capacitor
 Disc type
 Temp.chara. 2B4, 50V
 (1) — Capacity value

Examples

(2) Capacity value

| | | |
|-------------|--------------|---------------|
| 100pF...101 | 1000pF...102 | 10000pF...103 |
| 470pF...471 | 2200pF...222 | |

C*** : ELECTROLY CAP. (⏏), FILM CAP. (⏏)

- 1) EA x x x x x 10, Electrolytic capacitor
 One-way lead type, Tolerance $\pm 20\%$

(1) — Working voltage
 (2) — Capacity value

Examples

(1) Capacity value

| | | |
|---------------------------|--------------------------|---------------------------|
| 0.1 μF ...104 | 4.7 μF ...475 | 100 μF ...107 |
| 0.33 μF ...334 | 10 μF ...106 | 330 μF ...337 |
| 1 μF ...105 | 22 μF ...226 | 1100 μF ...118 |
| | | 2200 μF ...228 |

(2) Working voltage

| | |
|------------|-----------|
| 6.3V...006 | 25V...025 |
| 10V...010 | 35V...035 |
| 16V...016 | 50V...050 |

- 2) DF15 x x x 350 } Plastic film capacitor
 DF15 x x x 310 } One-way type, Mylar $\pm 5\%$ 50V
 DF16 x x x 310 } Plastic film capacitor
 One-way type, Mylar $\pm 10\%$ 50V

(1) — Capacity value

Examples

(1) Capacity value

| | |
|------------------------------------|---------------------------|
| 0.001 μF (1000pF)...102 | 0.1 μF ...104 |
| 0.0018 μF ...182 | 0.56 μF ...564 |
| 0.01 μF ...103 | 1 μF ...105 |
| 0.015 μF ...153 | |

- NOTE** : 1) The above CODES (**R*****, **R*****, **C*****, **C***** and **C*****) are omitted on the schematic diagram in some case.
 2) On the occasion, be confirmed the common parts on the parts list.
 3) Refer to "Common Parts List" for the other common parts(**RI05**, **DD4**, **DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows :

1. KOA Corporation

| Part No. | Type No. | Description |
|----------------|----------------------------|---------------------|
| NH05 x x x 140 | RF25S x x x x Ω J | ($\pm 5\%$ 1/4W) |
| NH05 x x x 120 | RF50S x x x x Ω J | ($\pm 5\%$ 1/2W) |
| NH85 x x x 110 | RF73B2A x x x x Ω J | ($\pm 5\%$ 1/10W) |
| NH95 x x x 140 | RF73B2E x x x x Ω J | ($\pm 5\%$ 1/4W) |

* Resistance value (0.1~10k Ω)

2. Matsushita Electronic Components Co., Ltd

| Part No. | Type No. | Description |
|----------------|----------------|--------------------|
| NF05 x x x 140 | ERD-2FCJ x x x | ($\pm 5\%$ 1/4W) |
| RF05 x x x 140 | | |
| NF02 x x x 140 | ERD-2FCG x x x | ($\pm 2\%$ 1/4W) |
| RF02 x x x 140 | | |

* Resistance value

Examples :

* Resistance value

| | | | |
|---------------------|---------------------|----------------------|----------------------|
| 0.1 Ω ...001 | 10 Ω ...100 | 1k Ω ...102 | 100k Ω ...104 |
| 0.5 Ω ...005 | 18 Ω ...180 | 2.7k Ω ...272 | 680k Ω ...684 |
| 1 Ω ...010 | 100 Ω ...101 | 10k Ω ...103 | 1M Ω ...105 |
| 6.8 Ω ...068 | 390 Ω ...391 | 22k Ω ...223 | 4.7M Ω ...475 |

NOTE ON SAFETY :

Symbol \blacktriangle Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol \blacktriangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|---|
| | | PG04-MOTOR VOLUME AND TONE CONTROL CIRCUIT BOARD |
| | | PG04-CAPACITORS |
| CE01 | 4822 126 10408 | CERAMIC 220 μ F \pm 10% 25V |
| CE02 | 4822 126 10408 | CERAMIC 220 μ F \pm 10% 25V |
| CE09 | 4822 124 23056 | ELECT 47 μ F 16V |
| CE10 | 4822 124 23056 | ELECT 47 μ F 16V |
| CE15 | 4822 124 23055 | ELECT 22 μ F 16V |
| CE16 | 4822 124 23055 | ELECT 22 μ F 16V |
| CE17 | | |
| CE20 | 4822 124 21894 | ELECT 10 μ F 16V |
| CG01 | 4822 122 30103 | CERAMIC 0.022 μ F +80% -20% 50V |
| CG05 | 4822 124 23052 | ELECT 100 μ F 16V |
| C*** | | PG04-CAPACITORS (COMMON) PLASTIC FILM CAPACITOR, \pm 5% 50V : CE05~CE08, CE11~CE14 |
| | | PG04-RESISTORS |
| ▲RE01 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |
| ▲RE02 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |
| RE19 | 4822 101 30834 | 10K Ω (E) VARIABLE |
| RE20 | 4822 101 30834 | 10K Ω (E) VARIABLE |
| RG01 | 4822 101 30835 | 100K Ω (B) X2 / 100K (W) VARIABLE |
| R*** | | PG04-RESISTORS (COMMON) CARBON FILM FIXED RESISTOR, \pm 5% 1/6W : RE05~RE18, RE21~RE24, CG03, CG04 |
| | | PG04-SEMICONDUCTORS |
| DE01 | 4822 130 32508 | DIODE RL103E / DSF10C |
| QE01 | 4822 209 73064 | IC NJM2068DD |
| QE02 | 4822 130 60766 | DIGITAL TRANSISTOR DTA114ES/ UN4111 |
| | | PG04-MISCELLANEOUS |
| LE01 | 4822 280 20501 | RELAY MR62-24SR |
| | | PP04-POWER SW CIRCUIT BOARD |
| | | PP04-CAPACITOR |
| ▲GP01 | 4822 122 33276 | CERAMIC 0.01 μ F \pm 20% 400V |
| | | PP04-MISCELLANEOUS |
| ▲F001 | 4822 070 31252 | FUSE 1.25A 250V |
| ▲F002 | 4822 070 31252 | FUSE 1.25A 250V [/01] |
| ▲F003 | 4822 253 40166 | FUSE T2.5A 250V [/02] |
| ▲JP21 | 4822 267 31686 | JACK, AC OUTLET 1P [/01] |
| ▲JP21 | 4822 267 31687 | JACK, AC OUTLET 1P [/02] |
| ▲SP01 | 4822 276 12924 | PUSH SWITCH, POWER |
| | | PP54-VOLTAGE SELECTOR CIRCUIT BOARD |
| ▲J091 | 4822 277 21763 | SLIDE SWITCH [/01] |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|--|
| | | PR04-RDS / AM STEREO CIRCUIT BOARD |
| | | PR04-CAPACITORS |
| CR01 | 4822 126 10935 | ELECT 100 μ F 6.3V |
| CR02 | 4822 124 21894 | ELECT 10 μ F 16V |
| CR05 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CR06 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CR07 | 4822 124 21894 | ELECT 10 μ F 16V |
| CR08 | 4822 124 21894 | ELECT 10 μ F 16V |
| CR09 | 4822 124 23057 | ELECT 4.7 μ F 50V |
| CR10 | 4822 124 21894 | ELECT 10 μ F 16V |
| CR11 | 4822 122 30103 | CERAMIC 0.022 μ F +80% -20% 50V |
| U526 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| U529 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C*** | | PR04-CAPACITORS (COMMON) HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR, \pm 10% 50V : CR03, CR04 |
| C*** | | PLASTIC FILM CAPACITOR, \pm 5% 50V : CR12~CR14 |
| | | PR04-RESISTORS |
| RR06 | 4822 100 11373 | 4.7K Ω , TRIMMING |
| RR10 | 4822 116 83929 | 220 Ω \pm 5% 1/4W |
| R*** | | PR04-RESISTORS (COMMON) CARBON FILM FIXED RESISTOR, \pm 5% 1/6W : RR01~RR05, RR07~RR09 |
| | | PR04-SEMICONDUCTORS |
| DR01 | 4822 130 80317 | ZENER DIODE 5.1V |
| QR01 | 4822 209 32706 | IC LA2232 |
| QR02 | 4822 209 33818 | IC LC7073 |
| | | PR04-MISCELLANEOUS |
| SV51 | 4822 277 21712 | SLIDE SWITCH, PROCESSOR ON / OFF |
| XR01 | 4822 242 81608 | CERAMIC RESONATOR CSB456F33 |
| XR02 | 4822 242 72527 | CERAMIC RESONATOR CST4.00MGW |
| | | PT04-HEADPHONE CIRCUIT BOARD |
| | | PT04-CAPACITORS (COMMON) HIGH DIELECTRIC CONSTANT CERMIC CAPACITOR, \pm 10% 50V : (CT01, CT02 [/02]) |
| | | PT04-MISCELLANEOUS |
| JT01 | 4822 267 31685 | JACK, HEADPHONE |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|----------------|---|
| | | PU04-μ-COM CIRCUIT BOARD |
| | | PU04-CAPACITORS |
| CU01 | 4822 126 10935 | ELECT 100 μ F 6.3V |
| CU02 | 4822 124 23295 | BIG ELECT 0.022F 5V |
| CU05 | 4822 126 12867 | ELECT 1000 μ F 6.3V |
| CU12 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| CU51 | 4822 124 23056 | ELECT 47 μ F 16V (SR1040) |
| CU52 | 4822 126 10408 | CERAMIC 220PF \pm 10% 25V (SR1040) |
| CU53 | 4822 124 23057 | ELECT 4.7 μ F 50V (SR1040) |
| | | PU04-CAPACITORS (COMMON) |
| C*** | | PLASTIC FILM CAPACITOR , \pm 5% 50V : CU10 |
| | | PU04-RESISTORS |
| RU03 | 4822 050 23308 | 3.3M Ω \pm 5% 1/6W |
| RU05 | 4822 050 23308 | 3.3M Ω \pm 5% 1/6W |
| RU08 | 4822 050 23308 | 3.3M Ω \pm 5% 1/6W |
| | | PU04-RESISTORS (COMMON) |
| R*** | | CARBON FILM FIXED RESISTOR, \pm 5% 1/6W : RU01, RU02, RU04, RU06, RU07, RU09, (RU51~RU57, RU61, SR1040) |
| | | PU04-SEMICONDUCTORS |
| DU01 { DU04 DU06 { DU09 DU51 { DU55 | 4822 130 33305 | DIODE 1SS176, MA165, 1SS254 |
| QU02 | 4822 130 42715 | TRANSISTOR 2SA608SP, 2SA1048, 2SA1309, 2SA933S |
| QU03 | 4822 130 61892 | TRANSISTOR 2SD2144S (U, V) |
| QU04 | 4822 130 61189 | DIGITAL TRANSISTOR DTC114TS |
| QU05 | 4822 130 61187 | DIGITAL TRANSISTOR DTA144TS |
| QU06 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| QU07 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| QU08 | 4822 130 42594 | DIGITAL TRANSISTOR DTC144ES/ UN4213 |
| QU09 | 4822 130 42594 | DIGITAL TRANSISTOR DTC144ES/ UN4213 |
| QU10 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| QU51 | 4822 209 63468 | IC NJM082D (SR1040) |
| QU53 | 4822 130 60588 | DIGITAL TRANSISTOR DTC114ES/ UN4211 (SR1040) |
| | | PU04-MISCELLANEOUS |
| JU01 | | CONNECTOR, CARD FIT 27P |
| XU02 | 4822 242 72236 | CRYSTAL 32.768KH2 |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------------|----------------|---|
| | | PU54-DISPLAY AND SWITCH CIRCUIT BOARD |
| | | PU54-CAPACITORS |
| CU03 | 4822 126 10935 | ELECT 100 μ F 6.3V |
| CU04 | 4822 122 40586 | CERAMIC 0.1 μ F \pm 20% 25V |
| CU06 | 4822 122 31823 | CERAMIC 15PF \pm 5% 50V |
| CU07 | 4822 122 31823 | CERAMIC 15PF \pm 5% 50V |
| CU08 | 4822 124 41604 | ELECT 0.1 μ F 50V |
| CU09 | 4822 124 80087 | ELECT 220 μ F 6.3V |
| CU11 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| | | PU54-RESISTORS |
| GU01 | 4822 111 92205 | 10K Ω X 4, ARRAY |
| GU02 | 4822 111 92204 | 10K Ω X 5, ARRAY |
| GU03 | 4822 111 92205 | 10K Ω X 4, ARRAY |
| | | PU54-RESISTORS (COMMON) |
| R*** | | CARBON FILM FIXED RESISTOR, \pm 5% 1/6W : RU10, RU14~RU28, RU30 |
| | | PU54-SEMICONDUCTORS |
| QU01 | 4822 209 33823 | U-COM TMP87CK70AF |
| QU12 | 4822 130 83519 | PHOTO UNIT RPM-670CBR |
| | | PU54-MISCELLANEOUS |
| SU01 { SU18 | 4822 276 20508 | PUSH SWITCH, TACT |
| VU01 | 4822 130 91418 | DISPLAY UNIT |
| XU01 | 4822 242 72066 | CERAMIC RESONATOR, CST8.0MHZ |
| | | PV04-MAIN FUNCTION CIRCUIT BOARD |
| | | PV04-CAPACITORS |
| CA01 | 4822 125 60185 | TRIMMING 20PF |
| CA02 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| CA03 | 4822 126 11553 | CERAMIC 15PF \pm 5% 50V |
| CA04 | 5322 121 54128 | FILM 390PF \pm 5% 50V |
| CA05 | 4822 126 10513 | CERAMIC 47PF \pm 5% 50V |
| CA06 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CA07 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CA08 | 4822 125 60185 | TRIMMING 20PF |
| CA09 | 4822 126 11553 | CERAMIC 15PF \pm 5% 50V |
| CA11 | 4822 122 31349 | CERAMIC 68PF \pm 5% 50V |
| CA12 | 4822 122 10367 | CERAMIC 150PF \pm 5% 50V |
| CA13 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CA18 | 4822 124 21894 | ELECT 10 μ F 16V |
| CD01 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V (SR1040) |
| CD02 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V (SR1040) |
| CD04 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CD05 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V (SR1040) |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|---|
| CD06 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V (SR1040) |
| CD07 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CD08 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| CD09 | 4822 124 23052 | ELECT 100 μ F 16V |
| CN01 | 4822 124 22571 | ELECT 10 μ F 50V |
| CN02 | 4822 124 40786 | ELECT 2.2 μ F 50V |
| CN03 | 4822 124 23056 | ELECT 47 μ F 16V |
| CN04 | 4822 124 23056 | ELECT 47 μ F 16V |
| CN05 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| CV05 | 4822 126 10408 | CERAMIC 220PF \pm 10% 25V |
| CV16 | | [J02] |
| CV17 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| CV19 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| CV21 | 4822 124 21894 | ELECT 10 μ F 16V |
| CV26 | | |
| CV27 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| CV28 | 4822 122 40617 | CERAMIC 0.1 μ F +80% -20% 50V |
| C201 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C202 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C203 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C204 | 4822 124 21894 | ELECT 10 μ F 16V |
| C205 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C206 | 4822 124 21982 | ELECT 3.3 μ F 50V |
| C207 | 4822 124 23052 | ELECT 100 μ F 16V |
| C208 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C209 | 4822 124 23053 | ELECT 1 μ F 50V |
| C210 | 5322 122 32072 | CERAMIC 33pF \pm 5% 50V |
| C211 | 4822 124 23053 | ELECT 1 μ F 50V |
| C212 | 4822 124 41604 | ELECT 0.1 μ F 50V |
| C213 | 4822 124 23054 | ELECT 0.47 μ F 50V |
| C214 | 4822 124 23057 | ELECT 10 μ F 50V |
| C215 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C217 | 5322 122 32143 | CERAMIC 22 μ F \pm 5% 50V |
| C218 | 4822 124 23052 | ELECT 100 μ F 16V |
| C301 | 4822 124 21982 | ELECT 3.3 μ F 50V |
| C302 | 4822 124 21982 | ELECT 3.3 μ F 50V |
| C305 | 4822 124 21982 | ELECT 3.3 μ F 50V |
| C306 | 4822 124 21982 | ELECT 3.3 μ F 50V |
| C307 | 4822 124 21894 | ELECT 100 μ F 16V |
| C308 | 4822 124 21894 | ELECT 100 μ F 16V |
| C501 | 4822 126 10513 | CERAMIC 47PF \pm 5% 25V |
| C502 | 4822 126 10513 | CERAMIC 47PF \pm 5% 25V |
| C503 | 4822 124 23052 | ELECT 100 μ F 16V |
| C504 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C505 | 4822 124 23053 | ELECT 1 μ F 50V |
| C506 | 4822 124 41604 | ELECT 0.1 μ F 50V |
| C507 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C508 | 4822 124 23052 | ELECT 100 μ F 16V |
| C509 | 5322 122 32265 | CERAMIC 100PF \pm 5% SL 500V |
| C510 | 5322 122 32265 | CERAMIC 100PF \pm 5% SL 500V |
| C511 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C512 | 4822 122 40586 | CERAMIC 0.01 μ F \pm 20% 25V |
| C701 | 4822 124 23057 | ELECT 4.7 μ F 50V |
| C702 | 4822 124 23057 | ELECT 4.7 μ F 50V |
| C705 | 5322 122 32072 | CERAMIC 33pF \pm 5% 50V |
| C706 | 5322 122 32072 | CERAMIC 33pF \pm 5% 50V |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|---|
| C707 | 4822 124 22571 | ELECT 10 μ F 50V |
| C708 | 4822 124 22571 | ELECT 10 μ F 50V |
| C711 | 4822 126 10797 | CERAMIC 10PF 500V |
| C712 | 4822 126 10797 | CERAMIC 10PF 500V |
| C713 | 4822 122 40103 | CERAMIC 5PF \pm 0.25PF 50V |
| C714 | 4822 122 40103 | CERAMIC 5PF \pm 0.25PF 50V |
| C717 | 5322 122 32265 | CERAMIC 100PF \pm 5% 500V |
| } | | |
| C720 | 4822 124 21895 | ELECT 0.22 μ F 50V |
| C721 | | |
| } | | |
| C724 | | |
| C725 | 4822 124 23052 | ELECT 100 μ F 16V |
| C726 | 4822 124 22571 | ELECT 10 μ F 50V |
| C735 | 4822 122 30043 | CERAMIC 0.01 μ F +80% -20% 50V [J02] |
| C801 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C802 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C803 | 4822 124 22695 | ELECT 2200 μ F 35V |
| C805 | 4822 124 21894 | ELECT 10 μ F 50V |
| C806 | 4822 124 23057 | ELECT 4.7 μ F 50V |
| C807 | 4822 124 21894 | ELECT 10 μ F 50V |
| C808 | 4822 124 23056 | ELECT 47 μ F 16V |
| C809 | 4822 124 22571 | ELECT 10 μ F 50V |
| ▲C811 | 4822 126 12453 | CERAMIC 0.01 μ F +80%-20%500V |
| ▲C812 | 4822 126 12866 | ELECT 4700 μ F 50V |
| ▲C813 | 4822 126 12866 | ELECT 4700 μ F 50V |
| C814 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20 25V |
| C815 | 4822 122 40589 | CERAMIC 0.047 μ F \pm 20% 25V |
| C816 | 4822 124 22571 | ELECT 10 μ F 50V |
| C*** | | PV04-CAPACITORS (COMMON) HIGH DIELECTRIC CONSTANT CERAMIC CAPACITOR, \pm 10% 50V: (CV01-CV04, CV29, CV30 [J02]), C703, C704, C709, C710 |
| C*** | | PLASTIC FILM CAPACITOR \pm 5% 50V : CA15, CA16, CA17, C303, C304, (C309, C310 [J01]) |
| C*** | | ELECTROLYTIC CAPACITOR, \pm 20% : C727, C728, C804, C817 |
| RA11 | 4822 100 11351 | PV04-RESISTORS 10K Ω TRIMMING |
| ▲RN19 | 4822 053 11271 | 270 Ω \pm 5% 2W |
| ▲RN20 | 4822 053 11222 | 2.2K Ω \pm 5% 2W |
| ▲RN22 | 4822 053 11271 | 270 Ω \pm 5% 2W |
| ▲RV37 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |
| ▲RV38 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |
| ▲R103 | 4822 052 10109 | 10 Ω \pm 5% 1/6W |
| ▲R207 | 4822 052 10101 | 100 Ω \pm 5% 1/6W |
| R211 | 4822 100 11373 | 4.7K Ω TRIMMING |
| R212 | 4822 100 11352 | 22K Ω TRIMMING |
| ▲R313 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |
| ▲R314 | 4822 052 10151 | 150 Ω \pm 5% 1/6W |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|---|
| ▲R512 | 4822 052 10221 | 220 Ω ±5% 1/6W |
| ▲R713 | 4822 050 26809 | 68 Ω ±5% 1/6W |
| ▲R714 | 4822 050 26809 | 68 Ω ±5% 1/6W |
| R719 | 4822 100 11386 | 1K Ω TRIMMING |
| R720 | 4822 100 11386 | 1K Ω TRIMMING |
| ▲R725 | | |
| } | 4822 050 26809 | 68 Ω ±5% 1/6W |
| ▲R730 | | |
| ▲R731 | 4822 053 10221 | 220 Ω ±5% 1W |
| ▲R732 | 4822 053 10221 | 220 Ω ±5% 1W |
| ▲R733 | | |
| } | 4822 052 10109 | 10 Ω ±5% 1/6W |
| ▲R736 | | |
| ▲R737 | 4822 116 82049 | 0.18 Ω X 2 3W |
| ▲R738 | 4822 116 82049 | 0.18 Ω X 2 3W |
| ▲R739 | 4822 050 26809 | 68 Ω ±5% 1/6W |
| ▲R740 | 4822 050 26809 | 68 Ω ±5% 1/6W |
| ▲R743 | 4822 053 11109 | 10 Ω ±5% 2W |
| ▲R744 | 4822 053 11109 | 10 Ω ±5% 2W |
| ▲R745 | 4822 116 80263 | 3.3K Ω ±5% 1W |
| ▲R747 | 4822 052 10221 | 220 Ω ±5% 1/6W |
| ▲R748 | 4822 052 10221 | 220 Ω ±5% 1/6W |
| ▲R751 | 4822 053 10331 | 330 Ω ±5% 1W |
| ▲R752 | 4822 053 10331 | 330 Ω ±5% 1W |
| ▲R801 | 4822 117 10158 | 1 Ω ±5% 1/4W |
| ▲R802 | 4822 117 10158 | 1 Ω ±5% 1/4W |
| ▲R808 | 4822 117 10002 | 2.2K Ω ±5% 1/2W |
| ▲R809 | 4822 053 10221 | 220 Ω ±5% 1W |
| ▲R810 | 4822 053 11688 | 6.8 Ω ±5% 2W |
| R*** | | PV04-RESISTORS (COMMON) CARBON FILM FIXED RESISTOR, ±5% 1/6W : RA01~RA04, RA06~RA10, (RD01, RD02 [SR1040]) RD03, RD04, RN01~RN18, RN21, RN31, RN32, RV01~RV36, RV41, RV42, RV45, RV46, R202~R206, R208~R210, R215~R217, R301, R302, R305~R312, R501~R504, R506, R507, R508 [/01], R509~R511, R703~R712, R715~R718, R721~R724, R746, R753, R804~R806 |
| | | PV04-SEMICONDUCTORS |
| DA01 | 4822 125 50416 | VARICAP SVC342-K |
| DA02 | 4822 130 33697 | DIODE 1SS135 |
| DA03 | 4822 125 50416 | VARICAP SVC342-K |
| DA04 | 4822 130 33697 | DIODE 1SS135 |
| DA05 | 4822 130 33305 | DIODE 1SS176, MA165, 1SS254 |
| DA06 | 4822 130 33305 | DIODE 1SS176, MA165, 1SS254 |
| DD01 | 4822 130 82609 | ZENER DIODE MTZJ2.0B (SR1040) |
| DD02 | 4822 130 33759 | ZENER DIODE 4.7V |
| DN01 | 4822 130 80837 | DIODE HSS81 |
| DN02 | 4822 130 80837 | DIODE HSS81 |
| DN04 | 4822 130 32508 | DIODE RL103E / DSF10C |
| DN05 | 4822 130 33305 | DIODE 1SS176, MA165, 1SS254 |
| D501 | 4822 130 80317 | ZENER DIODE 5.1V |
| D701 | 4822 130 80273 | ZENER DIODE 8.2V |
| D702 | 4822 130 80322 | ZENER DIODE 15V |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|----------------|--|
| D703 | | |
| } | 4822 130 33305 | DIODE 1SS176, MA165, 1SS254 |
| D706 | | |
| ▲D801 | | |
| } | 4822 130 32508 | DIODE RL103E / DSF10C |
| ▲D806 | | |
| ▲D807 | 4822 130 80838 | ZENER DIODE 18V |
| ▲D808 | 4822 130 32508 | DIODE RL103E / DSF10C |
| ▲D809 | 4822 130 80091 | ZENER DIODE 12V |
| ▲D810 | 4822 130 32508 | DIODE RL103E / DSF10C |
| ▲D811 | 4822 130 31007 | DIODE S4VB20 |
| QA01 | 4822 130 42298 | TRANSISTOR 2SC536SP, 2SC2458, 2SC3311, 2SC1740S |
| QA02 | 4822 130 42298 | TRANSISTOR 2SC536SP, 2SC2458, 2SC3311, 2SC1740S |
| QA03 | 4822 130 61892 | TRANSISTOR 2SD2144S (U, V) |
| QA04 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| QA05 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| QD01 | 4822 209 30193 | IC LB1641 |
| QD02 | 4822 209 30193 | IC LB1641 |
| QN01 | 4822 130 43233 | TRANSISTOR 2SC2240 |
| QN02 | 4822 130 43233 | TRANSISTOR 2SC2240 |
| QN03 | 4822 130 42951 | TRANSISTOR 2SA970 |
| QN04 | 4822 209 83312 | IC TA7317P |
| QN05 | 4822 130 60588 | DIGITAL TRANSISTOR DTC114ES/ UN4211 |
| QV01 | 4822 209 72748 | IC LC7821 |
| QV03 | 4822 130 60588 | DIGITAL TRANSISTOR DTC114ES/ UN4211 |
| QV04 | 4822 130 60766 | DIGITAL TRANSISTOR DTA114ES/ UN4111 |
| QV05 | 4822 130 61892 | TRANSISTOR 2SD2144S (U, V) |
| QV06 | 4822 130 61892 | TRANSISTOR 2SD2144S (U, V) |
| QV07 | 4822 209 83631 | IC NJM4558D-D |
| Q201 | 4822 209 31001 | IC LA1851N |
| Q202 | 4822 130 62294 | TRANSISTOR 2C1809S (P) |
| Q203 | 4822 130 42682 | DIGITAL TRANSISTOR DTA144ES/ UN4113 |
| Q204 | 4822 130 60766 | DIGITAL TRANSISTOR DTA114ES/ UN4111 |
| Q205 | 4822 126 90006 | POSISTOR PTH59F04BH222TS |
| Q206 | 4822 130 42298 | TRANSISTOR 2SC536SP, 2SC2458, 2SC3311, 2SC1740S |
| Q301 | 4822 209 83631 | IC NJM4558D-D |
| Q501 | 4822 209 30178 | IC LC7218 |
| Q502 | 4822 130 42121 | F.E.T. 2SK30A (Y) |
| Q503 | 4822 130 42298 | TRANSISTOR 2SC536SP, 2SC2458, 2SC3311, 2SC1740S |
| Q701 | 4822 130 42951 | TRANSISTOR 2SA970 (GR, BL) |
| Q702 | 4822 130 42951 | TRANSISTOR 2SA970 (GR, BL) |
| Q703 | 4822 130 43233 | TRANSISTOR 2SC2240 |
| Q704 | 4822 130 43233 | TRANSISTOR 2SC2240 |
| ▲Q705 | 4822 130 60117 | TRANSISTOR 2SC3419 (Y) |
| ▲Q706 | 4822 130 60117 | TRANSISTOR 2SC3419 (Y) |
| ▲Q707 | 4822 130 62335 | TRANSISTOR 2SD2033 (E) |
| ▲Q708 | 4822 130 62335 | TRANSISTOR 2SD2033 (E) |
| ▲Q709 | 4822 130 62334 | TRANSISTOR 2SB1353 (E) |
| ▲Q710 | 4822 130 62334 | TRANSISTOR 2SB1353 (E) |

| REF. DESIG. | PART NO. | DESCRIPTION |
|--|----------------|--|
| ▲Q711 | 4822 130 60697 | TRANSISTOR 2SC3180N (R, O) |
| ▲Q712 | 4822 130 60697 | TRANSISTOR 2SC3180N (R, O) |
| ▲Q713 | 4822 130 60694 | TRANSISTOR 2SA1263N (R, O) |
| ▲Q714 | 4822 130 60694 | TRANSISTOR 2SA1263N (R, O) |
| ▲Q717 | 4822 209 83732 | IC AN7062 |
| ▲Q801 | 4822 209 60826 | IC NJM7812FA |
| ▲Q802 | 4822 209 32514 | IC L78MR06 |
| PV04-MISCELLANEOUS | | |
| A101 | 4822 210 10568 | V.H.F. TUNER, FRONT END [/01] |
| A101 | 4822 210 10567 | V.H.F. TUNER, FRONT END [/02] |
| FA01 | 4822 242 81262 | CERAMIC FILTER SFP450F |
| F201 | 4822 242 70665 | CERAMIC FILTER SFE10.7MS3-A |
| F202 | 4822 242 70665 | CERAMIC FILTER SFE10.7MS3-A |
| JV01 | 4822 267 31451 | TERMINAL 8P |
| JV02 | 4822 267 31451 | TERMINAL 8P |
| JV03 | 4822 267 41009 | TERMINAL 2P |
| JV04 | | JACK, CARD FIT 27P |
| J101 | 4822 290 81632 | TERMINAL ANTENNA |
| LA01 | 4822 157 63084 | ANT COIL MW |
| LA02 | 4822 157 70779 | OSC COIL MW |
| LA03 | 4822 157 52714 | ANT COIL LW |
| LA04 | 4822 157 70781 | OSC COIL LW |
| LA05 | 4822 157 53589 | CHOKE COIL 39mH |
| LA06 | 4822 148 81095 | I.F.T. COIL AM |
| LN02 | 4822 280 20469 | RELAY SVR-24A |
| L201 | 4822 157 63904 | I.F.T. COIL FM DET |
| L202 | 4822 156 10794 | M.P.X. COIL [/02] |
| L301 | 4822 157 70021 | M.P.X. COIL 19.38KHz |
| L302 | 4822 157 70021 | M.P.X. COIL 19.38KHz |
| L701 | 4822 157 70022 | SPEAKER CHOKE COIL |
| L702 | 4822 157 70022 | SPEAKER CHOKE COIL |
| SV01 | 4822 277 21718 | SLIDE SWITCH SYSTEM / INT/EXT |
| S301 | 4822 277 21712 | SLIDE SWITCH SCAN STEP [/01] |
| WV01 | | JAMPER LEAD, SUM-CARD 27P |
| X201 | 4822 242 81608 | CERAMIC RESONATOR, CSB456F33 |
| X501 | 4822 242 72333 | CRYSTAL 7.2MHZ |
| PV64-SPEAKER TERMINAL CIRCUIT BOARD | | |
| C729 | 4822 122 30043 | CERAMIC CAP. 0.01 μ F +80% -20% 50V [/02] |
| C730 | 4822 122 30043 | CERAMIC CAP. 0.01 μ F +80% -20% 50V [/02] |
| C733 | 4822 122 30043 | CERAMIC CAP. 0.01 μ F +80% -20% 50V [/02] |
| C734 | 4822 122 30043 | CERAMIC CAP. 0.01 μ F +80% -20% 50V [/02] |
| DN03 | 4822 130 32508 | DIODE RL103E / DSF10C |
| J701 | 4822 290 81646 | TERMINALL 4P SPEAKER |
| ▲LN01 | 4822 280 70354 | RELAY VB24MBU |

NOTE ON SAFETY:

Symbol ▲ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ▲. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.