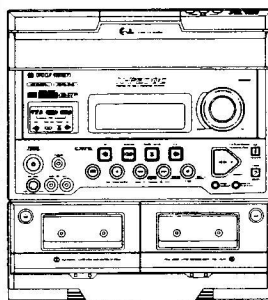


# Service Manual

**PIONEER**  
The Art of Entertainment



**124.**

ORDER NO.  
RRV 1703

STEREO CD CASSETTE DECK RECEIVER

# XR-P270C

## XR-P170C

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

| Type    | Model    |          | Power Requirement       | The voltage can be converted by the following method. |
|---------|----------|----------|-------------------------|-------------------------------------------------------|
|         | XR-P270C | XR-P170C |                         |                                                       |
| RD      | O        | O        | AC110 - 127V/220 - 240V | With the voltage selector                             |
| RDXJ    | O        | O        | AC110 - 127V/220 - 240V | With the voltage selector                             |
| RDXJ/NC | O        | O        | AC110 - 127V/220 - 240V | With the voltage selector                             |
| RLXJ/NC | O        | O        | AC110 - 127V/220 - 240V | With the voltage selector                             |

## CONTENTS

|                                        |    |                                              |    |
|----------------------------------------|----|----------------------------------------------|----|
| 1. SAFETY INFORMATION .....            | 2  | 7. GENERAL INFORMATION .....                 | 50 |
| 2. EXPLODED VIEWS AND PARTS LIST ..... | 3  | 7.1 PARTS .....                              | 50 |
| 3. SCHEMATIC DIAGRAM .....             | 16 | 7.1.1 IC .....                               | 50 |
| 4. PCB CONNECTION DIAGRAM .....        | 30 | 7.1.2 DISPLAY .....                          | 61 |
| 5. PCB PARTS LIST .....                | 38 | 7.2 DIAGNOSIS .....                          | 62 |
| 6. ADJUSTMENT .....                    | 44 | 7.2.1 DISASSEMBLY .....                      | 62 |
|                                        |    | 7.2.2 TROUBLESHOOTING .....                  | 64 |
|                                        |    | 7.3 BLOCKDIAGRAM .....                       | 68 |
|                                        |    | 8. PANEL FACILITIES AND SPECIFICATIONS ..... | 69 |

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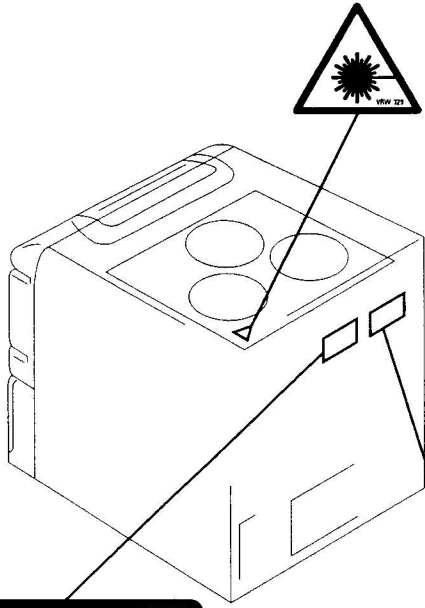
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# 1. SAFETY INFORMATION

|                                                                                                                                                                                         |                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>VARO!</b><br/>         AVATTAESSA JA SUOJALUKITUS<br/>         OHITETTAESSA OLET ALTTIINA<br/>         NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.<br/>         ÄLÄ KATSO SÄTEESEEN.</p>      | <br><b>LASER</b><br>Kuva 1<br>Lasersäteilyn<br>varoitusmerkki                                                                                   | <p><b>WARNING!</b><br/>         DEVICE INCLUDES LASER DIODE WHICH<br/>         EMITS INVISIBLE INFRARED RADIATION<br/>         WHICH IS DANGEROUS TO EYES. THERE IS<br/>         A WARNING SIGN ACCORDING TO PICTURE<br/>         1 INSIDE THE DEVICE CLOSE TO THE LASER<br/>         DIODE.</p> | <br><b>LASER</b><br>Picture 1<br>Warning sign for<br>laser radiation |
| <p><b>ADVERSEL:</b><br/>         USYNLIG LASERSTRÅLING VED ÅBNING<br/>         NÅR SIKKERHEDSAFBRYDERE ER UDE AF<br/>         FUNKTION UNDGÅ UDSAETTELSE FOR<br/>         STRÅLING.</p> | <p><b>IMPORTANT</b><br/>         THIS PIONEER APPARATUS CONTAINS<br/>         LASER OF CLASS 1.<br/>         SERVICING OPERATION OF THE APPARATUS<br/>         SHOULD BE DONE BY A SPECIALLY<br/>         INSTRUCTED PERSON.</p> |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                         |
| <p><b>VARNING!</b><br/>         OSYNLIG LASERSTRÅLNING NÅR DENNA<br/>         DEL ÄR ÖPPNAD OCH SPÄRREN<br/>         ÄR URKOPPLAD. BETRakta EJ STRÅLEN.</p>                             | <p><b>LASER DIODE CHARACTERISTICS</b><br/>         MAXIMUM OUTPUT POWER: 5 mw<br/>         WAVELENGTH: 780-785 nm</p>                                                                                                            |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                         |

## LABEL CHECK (For RLXJ/NC type)



**CAUTION**  
 INVISIBLE LASER  
 RADIATION WHEN OPEN,  
 AVOID EXPOSURE  
 TO BEAM  
 PRW1018

**CLASS 1  
 LASER PRODUCT**  
 VRW-328

- Additional Laser Caution**
- Laser Interlock Mechanism**  
 The position of the switch (S8501) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S8501) is pressed physically. Thus, the interlock will no longer function if the switch (S8501) is released physically and deliberately. The interlock also does not function in the test mode \*. Laser diode oscillation will continue, if pin 62 of LA9240ML (IC8101) on the CD ASSY mounted on the \$M Loading Mechanism assembly is connected to GND, or else the terminals of Q8101 are shorted to each other (fault condition).
  - When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

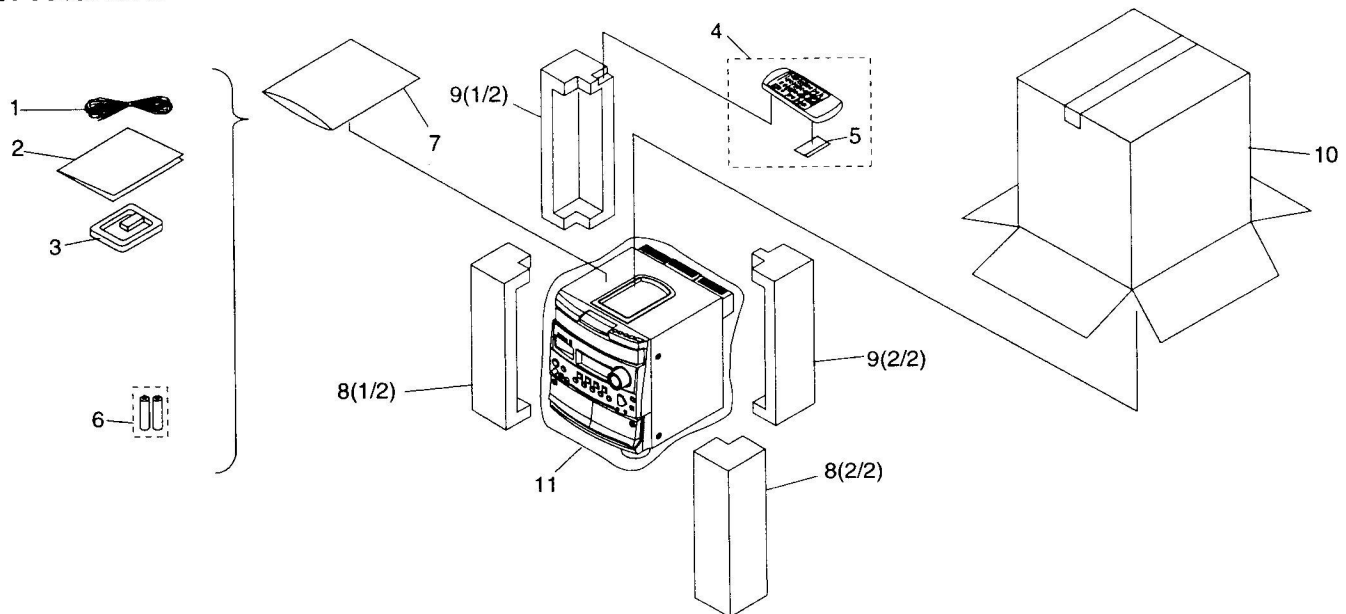
\* : Refer to page 49.



## 2. EXPLODED VIEWS AND PARTS LIST

NOTES: • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.  
 • The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
 • Screws adjacent to  $\blacktriangledown$  mark on product are used for disassembly.

### 2.1 PACKING



#### (1) Parts List

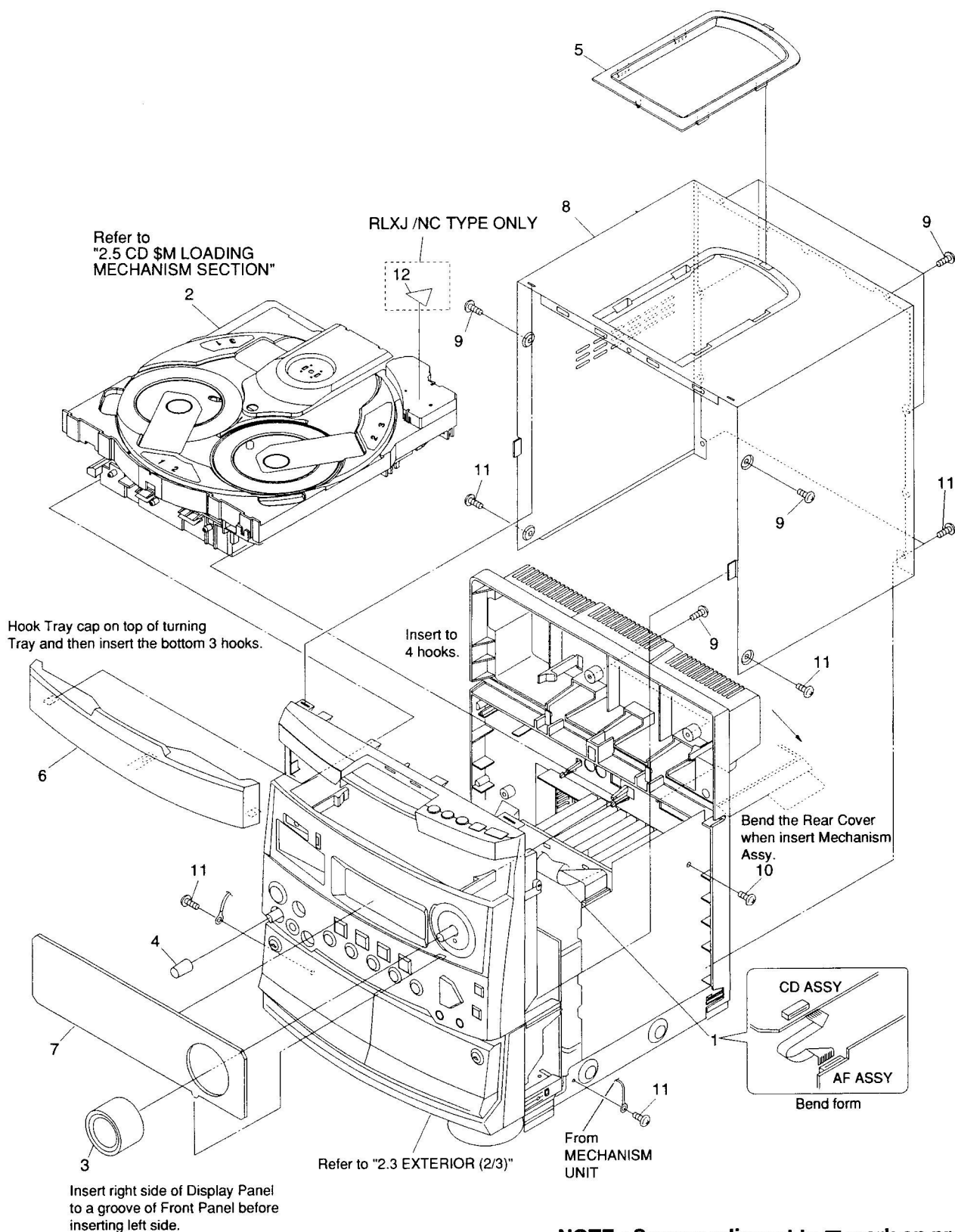
| Mark | No. | Description            | Parts No.              | Mark | No. | Description                     | Parts No.              |
|------|-----|------------------------|------------------------|------|-----|---------------------------------|------------------------|
|      | 1   | FM Antenna             | ADH7004                | NSP  | 6   | Battery (R6P, AA)               | VEM - 013              |
|      | 2   | Operating Instructions | See Contrast table (2) |      | 7   | Polyethylene Bag (0.03X230X340) | Z21 - 038              |
|      | 3   | AM Loop Antenna        | ATB7007                |      | 8   | F Protector                     | See Contrast table (2) |
|      | 4   | Remote Control Unit    | See Contrast table (2) |      | 9   | R Protector                     | See Contrast table (2) |
|      | 5   | Battery Cover          | AZA7204                |      | 10  | Packing Case                    | See Contrast table (2) |
|      |     |                        |                        |      | 11  | Packing Sheet                   | AHG7003                |

#### (2) Contrast Table

XR-P270C/RD, XR-P270C/RDXJ, XR-P270C/RDXJ/NC, XR-P270C/RLXJ/NC, XR-P170C/RD, XR-P170C/RDXJ, XR-P170C/RDXJ/NC AND XR-P170C/RLXJ/NC have the same construction except for the following:

| Mark | No. | Symbol & Description                                | Part No.     |                |                   |                   |              |                |                   |                   | Remarks |
|------|-----|-----------------------------------------------------|--------------|----------------|-------------------|-------------------|--------------|----------------|-------------------|-------------------|---------|
|      |     |                                                     | XR-P270C /RD | XR-P270C /RDXJ | XR-P270C /RDXJ/NC | XR-P270C /RLXJ/NC | XR-P170C /RD | XR-P170C /RDXJ | XR-P170C /RDXJ/NC | XR-P170C /RLXJ/NC |         |
|      | 2   | Operating instructions (English/Spanish/Portuguese) | ARE7081      | Not used       | ARE7081           | Not used          | ARE7081      | Not used       | ARE7081           | Not used          |         |
|      | 2   | Operating instructions (English/Spanish/Chinese)    | Not used     | ARE7115        | Not used          | Not used          | Not used     | ARE7115        | Not used          | Not used          |         |
|      | 2   | Operating instructions (English/Chinese)            | Not used     | Not used       | Not used          | ARE7106           | Not used     | Not used       | Not used          | ARE7106           |         |
|      | 4   | Remote Control Unit (CU-XR026)                      | AXD7101      | AXD7101        | AXD7101           | AXD7101           | Not used     | Not used       | Not used          | Not used          |         |
|      | 4   | Remote Control Unit (CU-XR025)                      | Not used     | Not used       | Not used          | Not used          | AXD7096      | AXD7096        | AXD7096           | AXD7096           |         |
|      | 8   | F Protector                                         | AHA7146      | AHA7134        | AHA7134           | AHA7134           | AHA7146      | AHA7134        | AHA7134           | AHA7134           |         |
|      | 9   | R Protector                                         | AHA7147      | AHA7135        | AHA7135           | AHA7135           | AHA7147      | AHA7135        | AHA7135           | AHA7135           |         |
|      | 10  | Packing Case                                        | AHD7380      | AHD7373        | AHD7423           | AHD7423           | AHD7379      | AHD7344        | AHD7422           | AHD7422           |         |

## 2.2 EXTERIOR (1/3)



**NOTE :** Screws adjacent to ▼ mark on product are used for disassembly. However, there is no indication on the hood installation screws of the Rear Cover.

**(1) Parts List**

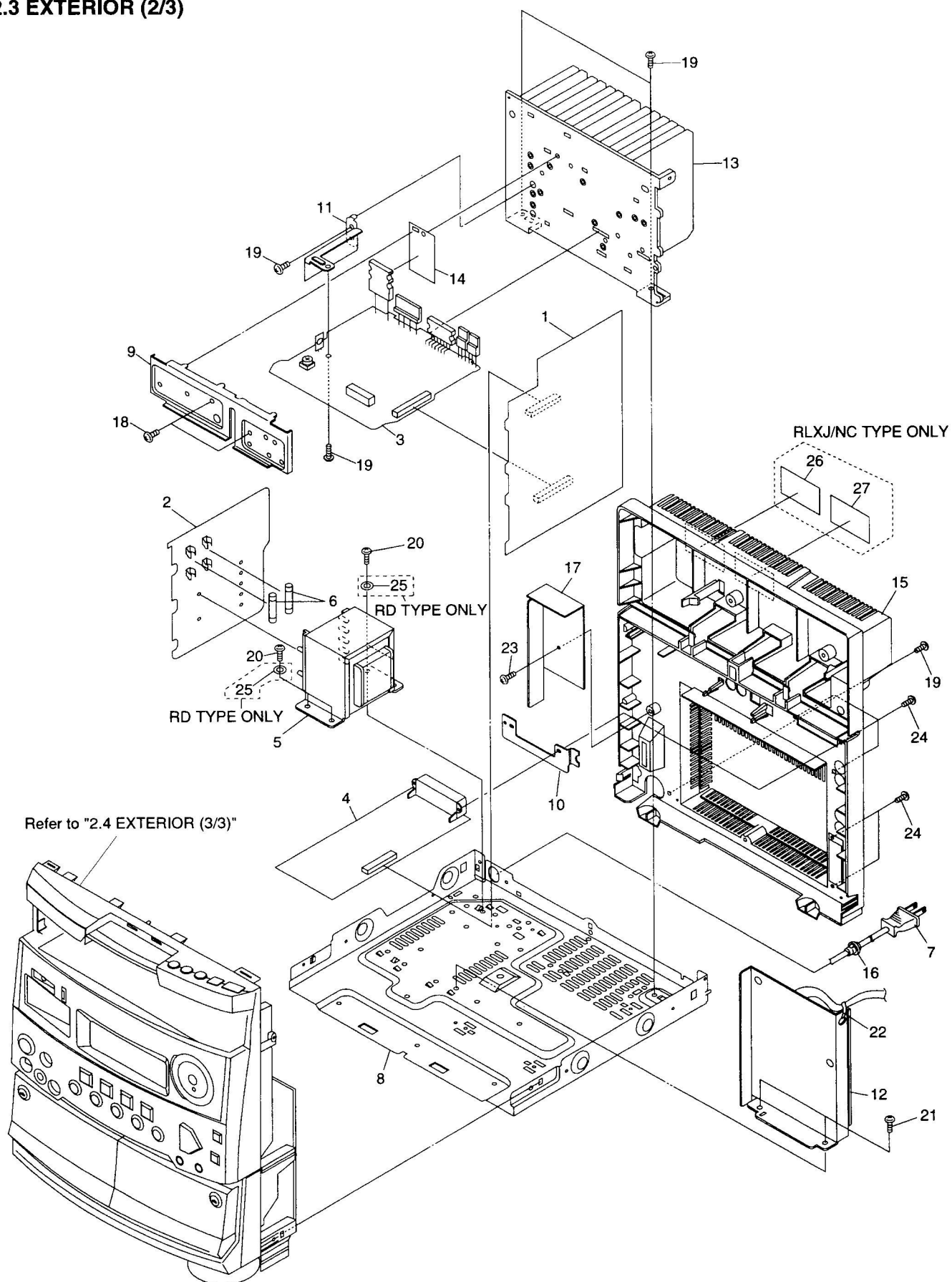
| Mark | No. | Description              | Parts No.              |
|------|-----|--------------------------|------------------------|
| NSP  | 1   | 20P F.F.C/30V            | ADD7041                |
|      | 2   | CD \$M Loading Mechanism | AXA7037                |
|      | 3   | Volume Knob              | AAA7001                |
|      | 4   | Mic Knob                 | AAB7102                |
|      | 5   | TOP Window               | AAK7279                |
|      | 6   | Tray Cap                 | See Contrast table (2) |
|      | 7   | Display Panel            | See Contrast table (2) |
|      | 8   | Bonnet Case              | AZN7657                |
|      | 9   | Screw                    | BPZ30P100FZK           |
|      | 10  | Screw                    | BPZ30P080FMC           |
|      | 11  | Screw                    | VBZ30P080FZK           |
|      | 12  | Caution Label (G)        | See Contrast table (2) |

**(2) Contrast Table**

XR-P270C/RD, XR-P270C/RDXJ, XR-P270C/RDXJ/NC, XR-P270C/RLXJ/NC, XR-P170C/RD, XR-P170C/RDXJ, XR-P170C/RDXJ/NC AND XR-P170C/RLXJ/NC have the same construction except for the following:

| Mark | No. | Symbol & Description | Part No.        |                   |                      |                     |                 |                   |                      |                     | Remarks |
|------|-----|----------------------|-----------------|-------------------|----------------------|---------------------|-----------------|-------------------|----------------------|---------------------|---------|
|      |     |                      | XR-P270C<br>/RD | XR-P270C<br>/RDXJ | XR-P270C<br>/RDXJ/NC | XR-P270C<br>RLXJ/NC | XR-P170C<br>/RD | XR-P170C<br>/RDXJ | XR-P170C<br>/RDXJ/NC | XR-P170C<br>RLXJ/NC |         |
|      | 6   | Tray Cap             | AAK7327         | AAK7327           | AAK7327              | AAK7327             | AAK7280         | AAK7280           | AAK7280              | AAK7280             |         |
|      | 7   | Display Panel        | AAK7328         | AAK7328           | AAK7328              | AAK7328             | AAK7281         | AAK7281           | AAK7281              | AAK7281             |         |
|      | 12  | Caution Label (G)    | Not used        | Not used          | Not used             | VRW – 329           | Not used        | Not used          | Not used             | VRW – 329           |         |

## 2.3 EXTERIOR (2/3)



## (1) Parts List

| Mark | No. | Description          | Parts No.              | Mark | No. | Description       | Parts No.              |
|------|-----|----------------------|------------------------|------|-----|-------------------|------------------------|
| NSP  | 1   | AF ASSY              | See Contrast table (2) |      | 16  | Strain relief     | CM – 22B               |
|      | 2   | TRANS ASSY           | See Contrast table (2) |      | 17  | Barrier           | ANK7029                |
|      | 3   | POWER ASSY           | See Contrast table (2) |      | 18  | Screw             | BBZ30P120FMC           |
|      | 4   | FM/AM TUNER MODULE   | See Contrast table (2) |      | 19  | Screw             | VBZ30P080FZK           |
| △    | 5   | T1 Power Transformer | See Contrast table (2) |      | 20  | Screw             | See Contrast table (2) |
| △    | 6   | FU1, FU2 Fuse        | See Contrast table (2) |      | 21  | Screw             | See Contrast table (2) |
| △    | 7   | AC Power Cord        | See Contrast table (2) |      | 22  | Binder            | See Contrast table (2) |
| NSP  | 8   | Chassis              | ANA7051                |      | 23  | Screw             | BPZ30P080FMC           |
|      | 9   | Bracket A            | ANG7100                |      | 24  | Screw             | BPZ30P100FZK           |
|      | 10  | GND Plate            | ANG7106                |      | 25  | Washer            | See Contrast table (2) |
|      | 11  | Bracket B            | ANG7107                | NSP  | 26  | Caution Label (F) | See Contrast table (2) |
|      | 12  | Shield Plate         | ANG7118                |      | 27  | Caution Label     | See Contrast table (2) |
|      | 13  | Heat Sink            | See Contrast table (2) |      |     |                   |                        |
|      | 14  | Mica Sheet           | AEE7015                |      |     |                   |                        |
|      | 15  | Rear Cover           | AMC7001                |      |     |                   |                        |

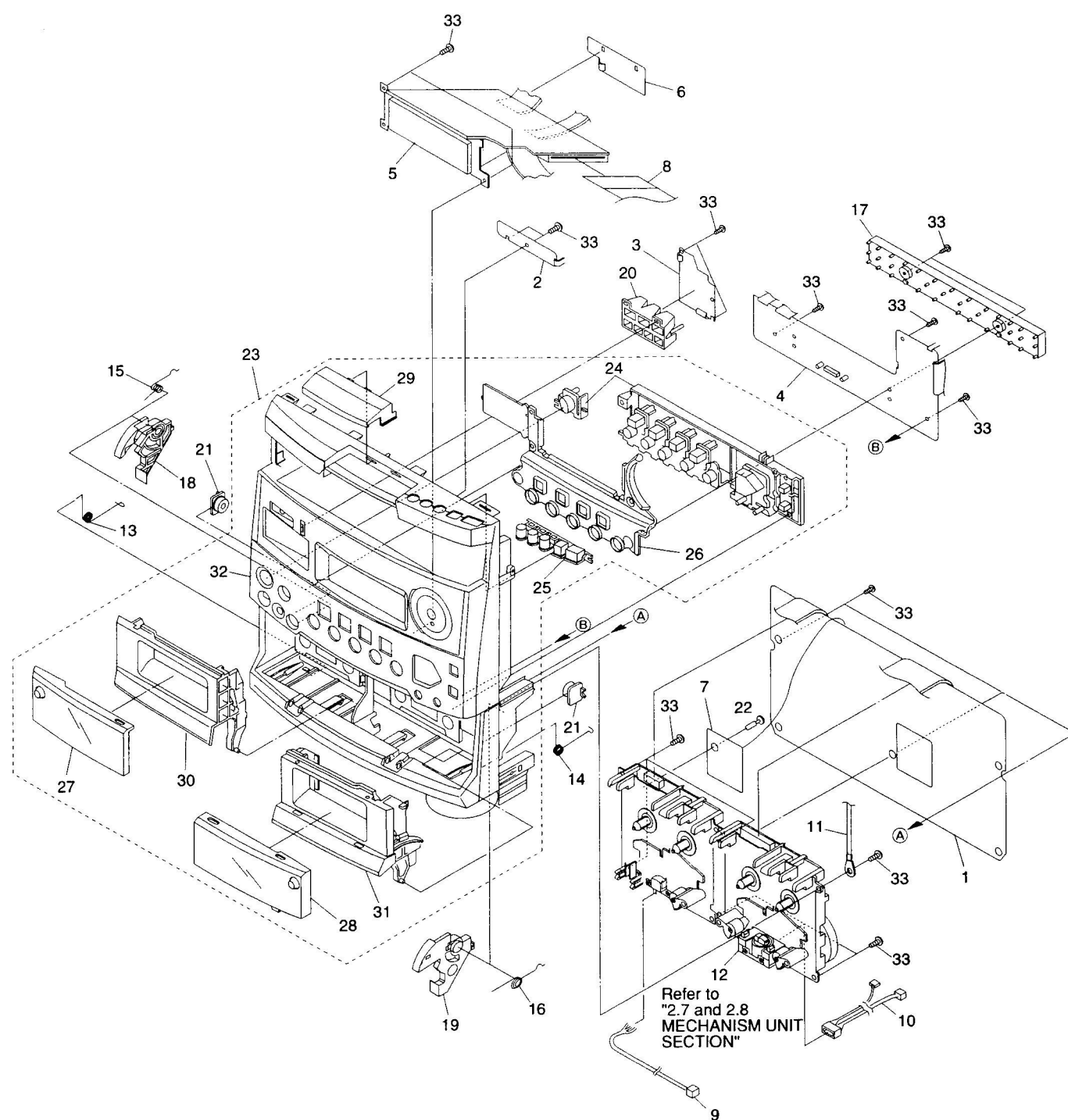
Note: The GND Plate (No.10) will tend to come off once it is removed, as the plate is fit with light pressure. If you have to remove the plate, secure it onto the Rear Cover with adhesive tape for reinstallation.

## (2) Contrast Table

XR-P270C/RD, XR-P270C/RDXJ, XR-P270C/RDXJ/NC, XR-P270C/RLXJ/NC, XR-P170C/RD, XR-P170C/RDXJ, XR-P170C/RDXJ/NC AND XR-P170C/RLXJ/NC have the same construction except for the following:

| Mark | No. | Symbol & Description  | Part No.     |                |                   |                   |              |                |                   |                   | Remarks |
|------|-----|-----------------------|--------------|----------------|-------------------|-------------------|--------------|----------------|-------------------|-------------------|---------|
|      |     |                       | XR-P270C /RD | XR-P270C /RDXJ | XR-P270C /RDXJ/NC | XR-P270C /RLXJ/NC | XR-P170C /RD | XR-P170C /RDXJ | XR-P170C /RDXJ/NC | XR-P170C /RLXJ/NC |         |
| NSP  | 1   | AF ASSY               | AWM7250      | AWM7250        | AWM7250           | AWM7250           | AWM7238      | AWM7238        | AWM7238           | AWM7238           |         |
|      | 2   | TRANS ASSY            | AWZ8533      | AWZ8533        | AWZ8533           | AWZ8533           | AWZ8430      | AWZ8430        | AWZ8430           | AWZ8430           |         |
|      | 3   | POWER ASSY            | AWZ8534      | AWZ8534        | AWZ8534           | AWZ8534           | AWZ8432      | AWZ8432        | AWZ8432           | AWZ8432           |         |
|      | 4   | FM/AM TUNER MODULE    | AXQ7051      | AXQ7061        | AXQ7061           | AXQ7061           | AXQ7051      | AXQ7061        | AXQ7061           | AXQ7061           |         |
| △    | 5   | T1 Power Transformer  | ATS7139      | ATS7139        | ATS7139           | ATS7139           | ATS7135      | ATS7135        | ATS7135           | ATS7135           |         |
| △    | 6   | FU1, FU2 Fuse (1.0A)  | REK1022      | REK1022        | REK1022           | REK1022           | Not used     | Not used       | Not used          | Not used          |         |
| △    | 6   | FU1, FU2 Fuse (800mA) | Not used     | Not used       | Not used          | Not used          | REK1021      | REK1021        | REK1021           | REK1021           |         |
| △    | 7   | AC Power Cord         | PDG1013      | ADG1157        | ADG1157           | PDG1058           | PDG1013      | ADG1157        | ADG1157           | PDG1058           |         |
|      | 13  | Heat Sink             | ANH7047      | ANH7047        | ANH7047           | ANH7047           | ANH7048      | ANH7048        | ANH7048           | ANH7048           |         |
|      | 20  | Screw                 | PSA40P080FZB | ABA7031        | ABA7031           | ABA7031           | PSA40P080FZB | ABA7031        | ABA7031           | ABA7031           |         |
|      | 21  | Screw                 | BSZ40P060FZK | ASZ40P060FMC   | ASZ40P060FMC      | ASZ40P060FMC      | BSZ40P060FZK | ASZ40P060FMC   | ASZ40P060FMC      | ASZ40P060FMC      |         |
|      | 22  | Binder                | Z09 – 056    | ZCA – SKB90BK  | ZCA – SKB90BK     | ZCA – SKB90BK     | Z09 – 056    | ZCA – SKB90BK  | ZCA – SKB90BK     | ZCA – SKB90BK     |         |
|      | 25  | Washer                | WA40F100M050 | Not used       | Not used          | Not used          | WA40F100M050 | Not used       | Not used          | Not used          |         |
| NSP  | 26  | Caution Label (F)     | Not used     | Not used       | Not used          | VRW – 328         | Not used     | Not used       | Not used          | VRW – 328         |         |
|      | 27  | Caution Label         | Not used     | Not used       | Not used          | PRW1018           | Not used     | Not used       | Not used          | PRW1018           |         |

## 2.4 EXTERIOR (3/3)



**(1) Parts List**

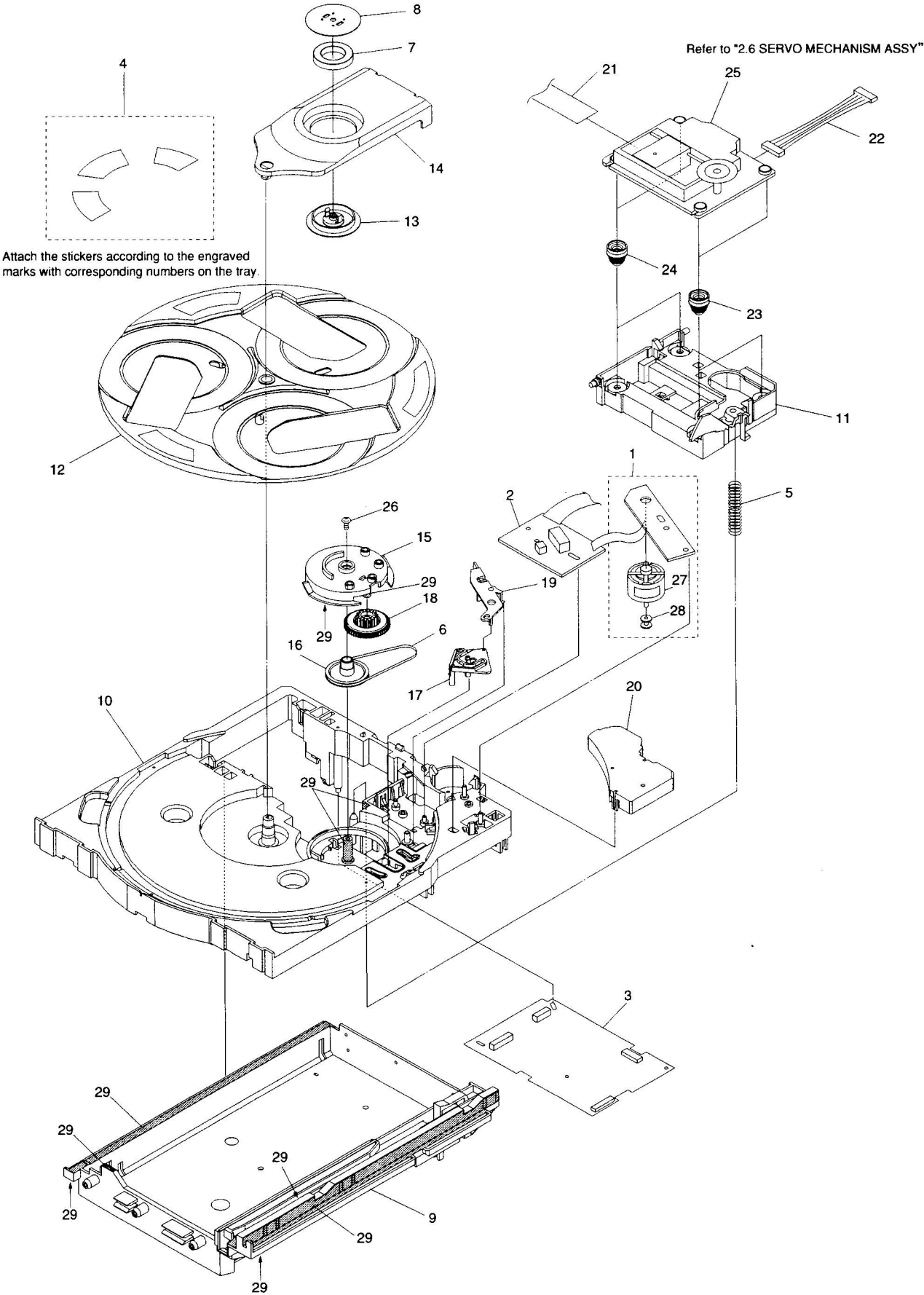
| Mark | No. | Description          | Parts No.              |
|------|-----|----------------------|------------------------|
|      | 1   | DECK ASSY            | AWZ8436                |
|      | 2   | CD SW ASSY           | AWZ8438                |
|      | 3   | LED ASSY             | AWZ8439                |
|      | 4   | DISPLAY ASSY         | See Contrast table (2) |
|      | 5   | LCD ASSY             | See Contrast table (2) |
|      | 6   | LAMP ASSY            | See Contrast table (2) |
| NSP  | 7   | SHIELD ASSY          | AWZ8745                |
|      | 8   | Flexible Cable 40P20 | ADD7040                |
|      | 9   | Connector Assy 3P    | ADE7011                |
|      | 10  | Connector Assy 5P    | ADE7012                |
| NSP  | 11  | Cord With Plug       | DE015VF0               |
|      | 12  | Mechanism Unit       | RYM1253                |
|      | 13  | Door Spring L        | ABH7128                |
|      | 14  | Door Spring R        | ABH7129                |
|      | 15  | Ratch Spring L       | ABH7130                |
|      | 16  | Ratch Spring R       | ABH7131                |
|      | 17  | PCB Holder           | AMD7001                |
|      | 18  | Ratch Mold L         | AMR7128                |
|      | 19  | Ratch Mold R         | AMR7129                |
|      | 20  | LED Holder           | AMR7130                |
|      | 21  | Damper Assy          | AXA7038                |
|      | 22  | Push Rivet           | AEC7071                |
| NSP  | 23  | Front Panel ASSY     | See Contrast table (2) |
|      | 24  | Button A             | AAD7314                |
|      | 25  | Button B             | AAD7315                |
|      | 26  | LT Conductor         | AAK7275                |
|      | 27  | Door Window L        | AAK7276                |
|      | 28  | Door Window R        | AAK7277                |
|      | 29  | CD Window            | AAK7278                |
|      | 30  | Door Pocket L        | AAN7143                |
|      | 31  | Door Pocket R        | AAN7144                |
|      | 32  | Front Panel          | See Contrast table (2) |
|      | 33  | Screw                | BPZ30P080FMC           |

**(2) Contrast Table**

XR-P270C/RD, XR-P270C/RDXJ, XR-P270C/RDXJ/NC, XR-P270C/RLXJ/NC, XR-P170C/RD, XR-P170C/RDXJ, XR-P170C/RDXJ/NC AND XR-P170C/RLXJ/NC have the same construction except for the following:

| Mark | No. | Symbol & Description | Part No.        |                   |                      |                      |                 |                   |                      |                      | Remarks |
|------|-----|----------------------|-----------------|-------------------|----------------------|----------------------|-----------------|-------------------|----------------------|----------------------|---------|
|      |     |                      | XR-P270C<br>/RD | XR-P270C<br>/RDXJ | XR-P270C<br>/RDXJ/NC | XR-P270C<br>/RLXJ/NC | XR-P170C<br>/RD | XR-P170C<br>/RDXJ | XR-P170C<br>/RDXJ/NC | XR-P170C<br>/RLXJ/NC |         |
|      | 4   | DISPLAY ASSY         | AWZ8535         | AWZ8535           | AWZ8535              | AWZ8535              | AWZ8434         | AWZ8434           | AWZ8434              | AWZ8434              |         |
|      | 5   | LCD ASSY             | AWZ8536         | AWZ8536           | AWZ8536              | AWZ8536              | AWZ8435         | AWZ8435           | AWZ8435              | AWZ8435              |         |
|      | 6   | LAMP ASSY            | AWZ8537         | AWZ8537           | AWZ8537              | AWZ8537              | AWZ8437         | AWZ8437           | AWZ8437              | AWZ8437              |         |
| NSP  | 23  | Front Panel ASSY     | AXG7002         | AXG7002           | AXG7002              | AXG7002              | AXG7001         | AXG7001           | AXG7001              | AXG7001              |         |
|      | 32  | Front Panel          | AMB7380         | AMB7380           | AMB7380              | AMB7380              | AMB7379         | AMB7379           | AMB7379              | AMB7379              |         |

2.5 CD \$M LOADING MECHANISM SECTION

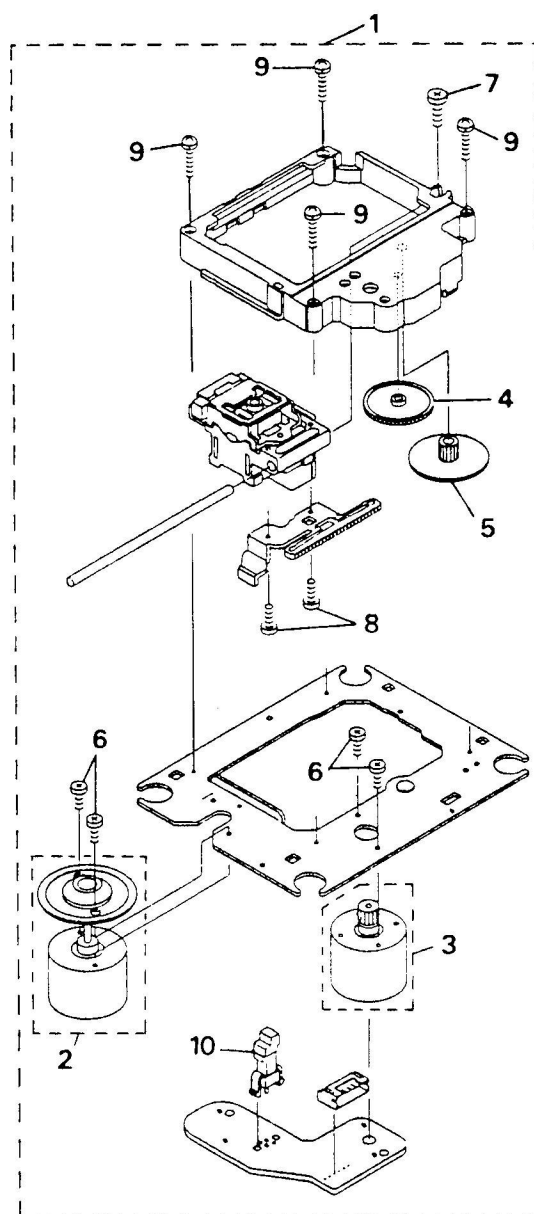




## Parts List

| Mark | No. | Description          | Parts No.    |
|------|-----|----------------------|--------------|
| NSP  | 1   | MOTOR ASSY           | AWZ8428      |
|      | 2   | SW ASSY              | AWZ8429      |
|      | 3   | CD ASSY              | AWZ8427      |
|      | 4   | Disc Label           | AAX7371      |
|      | 5   | Servo Spring         | ABH7126      |
|      | 6   | Belt                 | AEB7072      |
|      | 7   | Clamp Magnet         | AMF7001      |
|      | 8   | Yoke                 | ANB7067      |
|      | 9   | Mecha Base           | ANW7087      |
|      | 10  | Loading Tray         | ANW7088      |
|      | 11  | Servo Base           | ANW7089      |
|      | 12  | Rotary Tray          | ANW7090      |
|      | 13  | Clamper              | ANW7091      |
|      | 14  | Clamper Holder       | ANW7092      |
|      | 15  | Main Cam             | ANW7093      |
|      | 16  | Gear Pulley          | ANW7094      |
|      | 17  | Lock Lever           | ANW7095      |
|      | 18  | Planet Gear          | ANW7096      |
|      | 19  | Actuator             | ANW7097      |
|      | 20  | Motor Cover          | ANW7098      |
|      | 21  | 15P F.F.C/30V        | ADD7038      |
|      | 22  | Connector Assy (6P)  | ADE7010      |
|      | 23  | Float Rubber A       | AEB7063      |
|      | 24  | Float Rubber B       | AEB7066      |
|      | 25  | Servo Mechanism Assy | AXA7039      |
|      | 26  | Screw                | IPZ30P080FMC |
|      | 27  | Carriage Motor       | VXM1033      |
|      | 28  | Motor Pulley         | PNW1634      |
|      | 29  | Ha Nari              | GEM1016      |

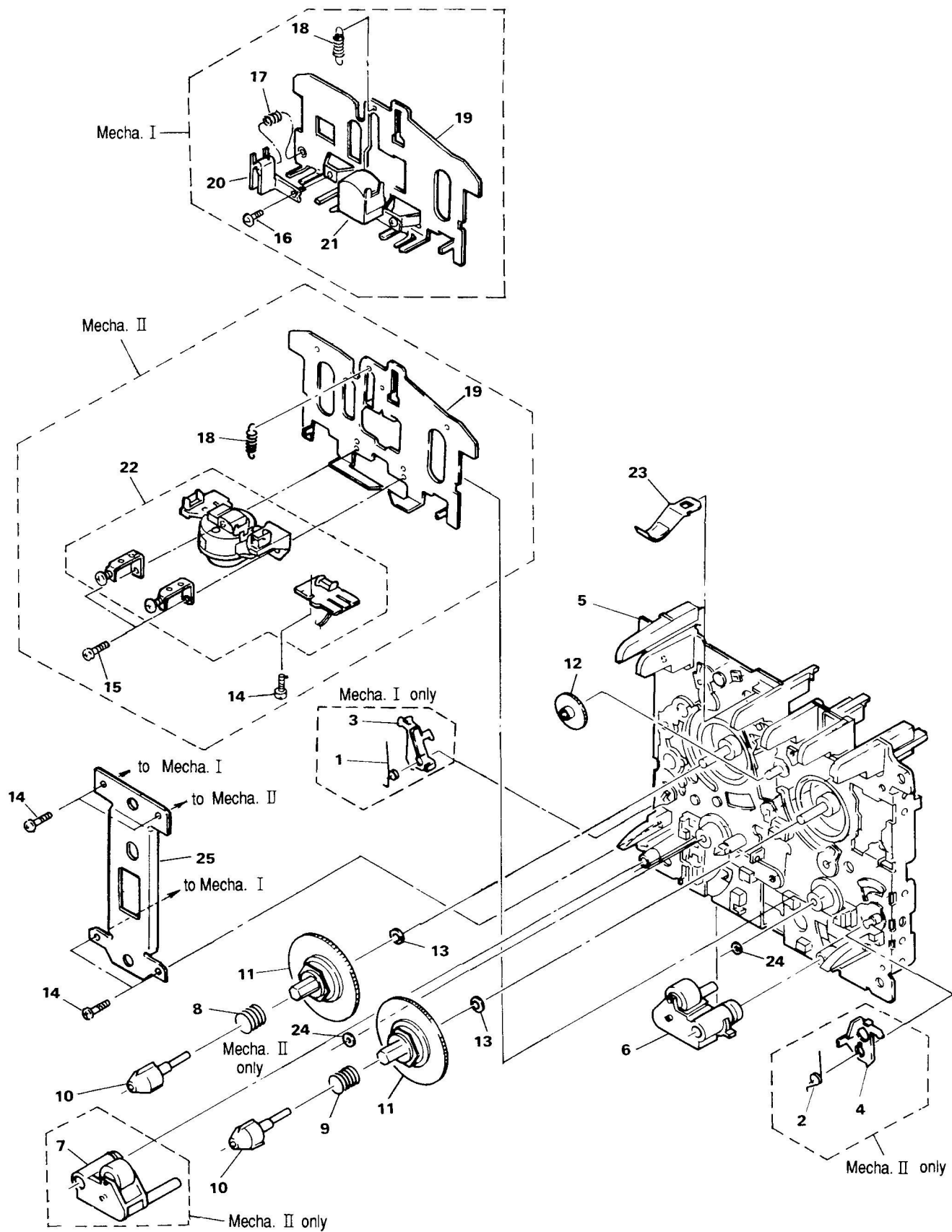
## 2.6 SERVO MECHANISM ASSY



## Parts List

| Mark | No. | Description        | Parts No. |
|------|-----|--------------------|-----------|
|      | 1   | Servo Mechanism    | AXA7039   |
|      | 2   | SPINDLE MOTOR ASSY | AEA7009   |
|      | 3   | SLEAD MOTOR ASSY   | AEA7010   |
|      | 4   | Gear A             | AEA7013   |
|      | 5   | Gear B             | AEA7014   |
|      | 6   | Screw              | AEA7015   |
|      | 7   | Screw              | AEA7016   |
|      | 8   | Screw              | AEA7017   |
|      | 9   | Screw              | AEA7018   |
|      | 10  | Leaf Switch        | AEA7011   |

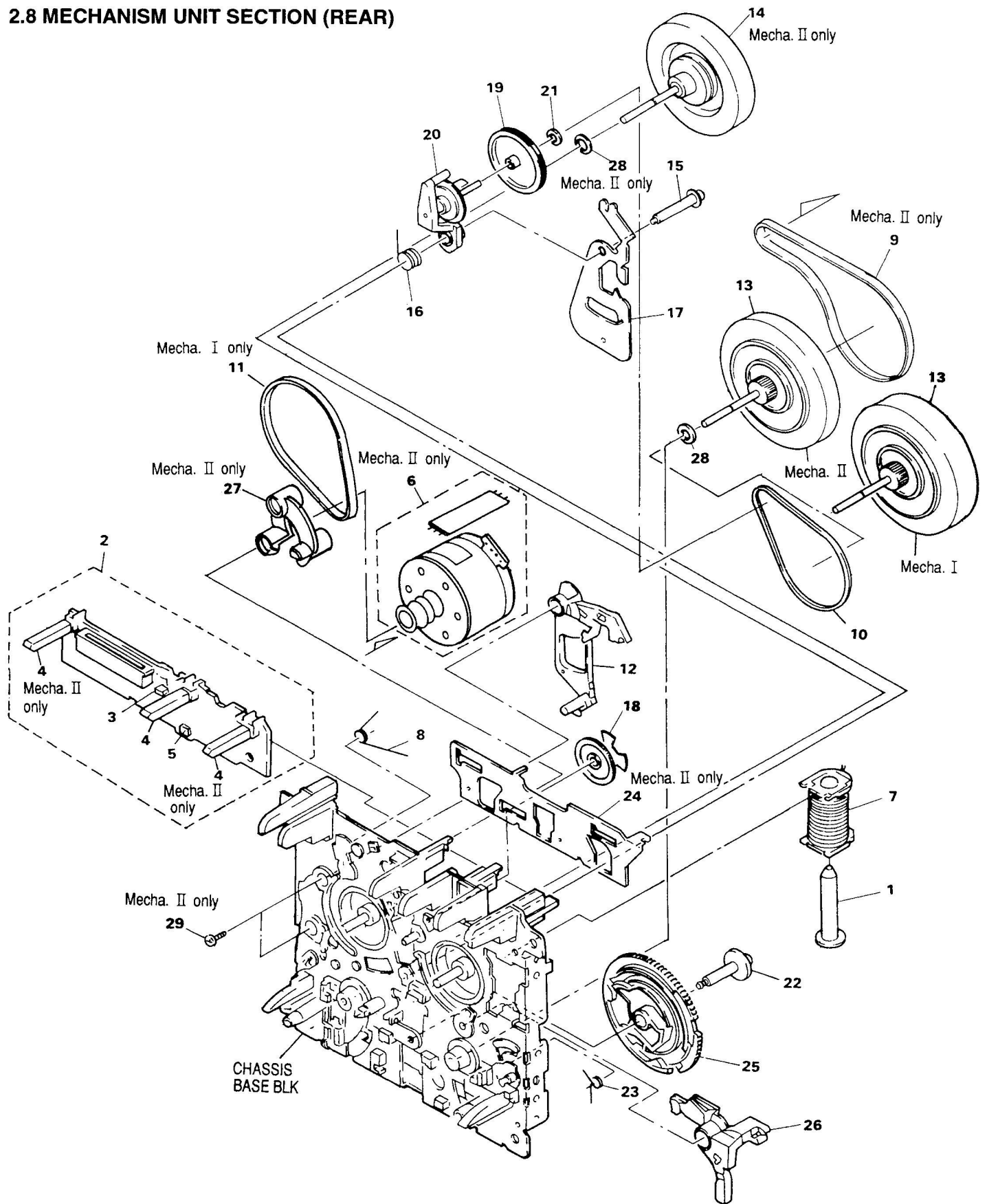
## 2.7 MECHANISM UNIT SECTION (FRONT)



**Parts List**

| Mark | No. | Description                            | Parts No.    |
|------|-----|----------------------------------------|--------------|
|      | 1   | SP Interlock L<br>(Mecha. I only)      | RBH1385      |
|      | 2   | SP Interlock R<br>(Mecha. II only)     | RBH1386      |
|      | 3   | Arm Interlock L<br>(Mecha. I only)     | RNE1780      |
|      | 4   | Arm Interlock R<br>(Mecha. II only)    | RNE1781      |
|      | 5   | Chassis Base BLK (Mecha. I)            | RXA1627      |
|      | 5   | Chassis Base BLK (Mecha. II)           | RXA1626      |
|      | 6   | Roller Pinch BLK R (Mecha. I)          | RXA1630      |
|      | 6   | Roller Pinch BLK R (Mecha. II)         | RXA1628      |
|      | 7   | Roller Pinch BLK L<br>(Mecha. II only) | RXA1629      |
|      | 8   | SP Reel (L)                            | RBH1388      |
|      | 9   | SP Reel (R)                            | RBH1389      |
|      | 10  | Reel Feather                           | RNK2072      |
|      | 11  | Reel Base                              | RNK2073      |
|      | 12  | Play Gear (A)                          | RNK2074      |
|      | 13  | Washer                                 | WA41D065D025 |
|      | 14  | Screw                                  | PCZ20P040FMC |
|      | 15  | Screw                                  | PMZ20P060FMC |
|      | 16  | Screw M3×10                            | RBA1031      |
|      | 17  | Spring                                 | RBH1076      |
|      | 18  | Spring HB                              | RBH1390      |
|      | 19  | Head Base (Mecha. I)                   | RNE1906      |
|      | 19  | Head Base (Mecha. II)                  | RNE1783      |
|      | 20  | Tape Guide (Mecha. I only)             | RNK2077      |
|      | 21  | R/P Head (Mecha. I only)               | RPB1061      |
|      | 22  | Plate HD BLK (Mecha. II only)          | RXA1746      |
|      | 23  | SP Cassette                            | RNE1786      |
|      | 24  | Washer                                 | WT15D040D050 |
|      | 25  | Mecha Bracket                          | RNE1907      |

## 2.8 MECHANISM UNIT SECTION (REAR)



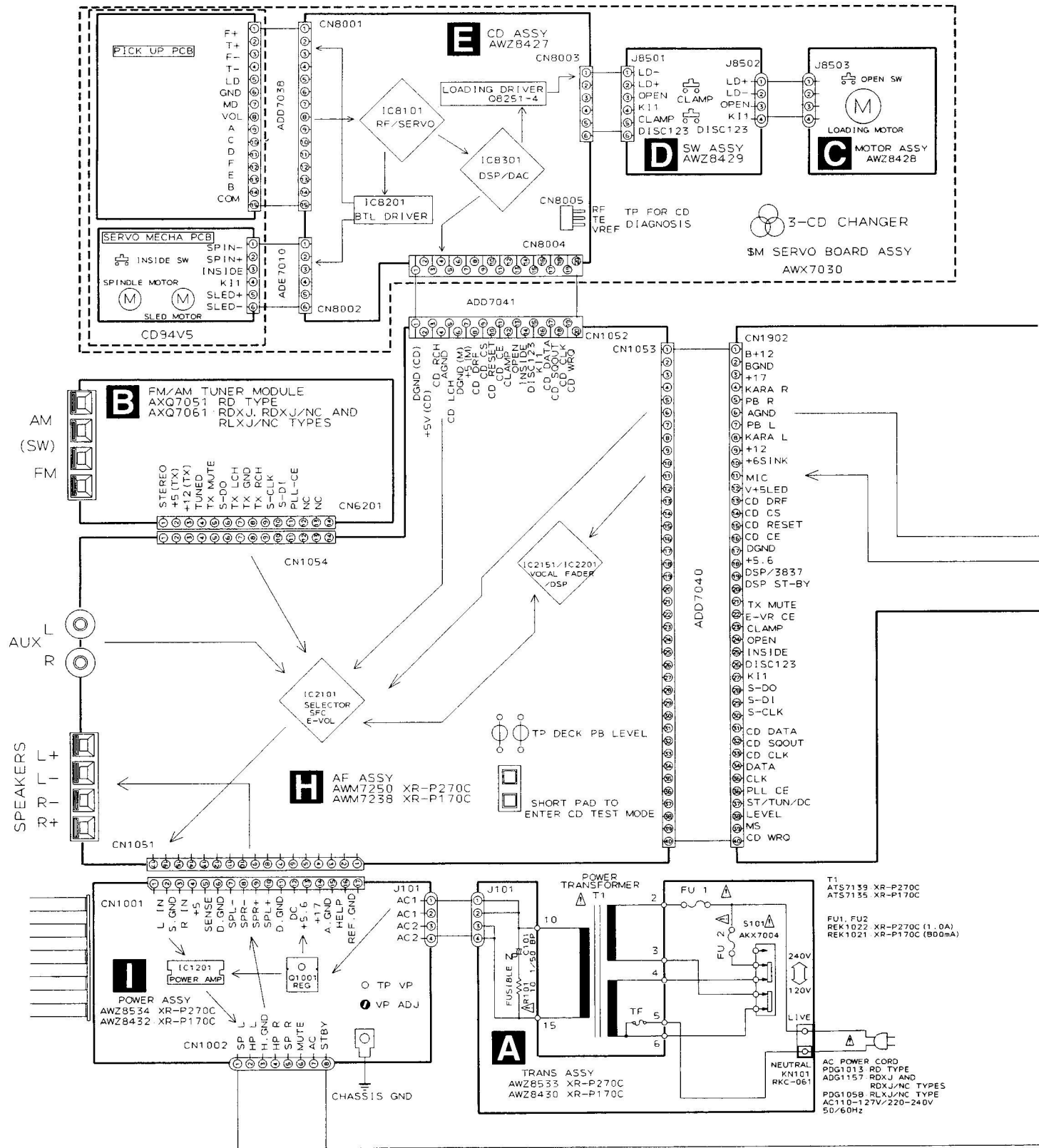
## Parts List

| Mark | No. | Description                   | Parts No.    |
|------|-----|-------------------------------|--------------|
|      | 1   | Plunger                       | PLA1288      |
|      | 2   | PCB Control BLK (Mecha. I)    | RXA1742      |
|      | 2   | PCB Control BLK (Mecha. II)   | RXA1743      |
|      | 3   | Switch                        | RSG1018      |
|      | 4   | SPLF                          | RSN1023      |
|      | 5   | Photo-Transistor              | SPI33534FG   |
|      | 6   | MTR Main BLK (Mecha. II only) | RXM1086      |
|      | 7   | Solenoid BLK                  | RXP1021      |
|      | 8   | SP Brake                      | RBH1387      |
|      | 9   | Main Belt (Mecha. II only)    | REB1157      |
|      | 10  | F/R Belt                      | REB1254      |
|      | 11  | Joint Belt (Mecha. I only)    | REB1307      |
|      | 12  | Lever Brake                   | RNK2071      |
|      | 13  | Clutch ASSY BLK (Mecha. I)    | RXA1744      |
|      | 13  | Clutch ASSY BLK (Mecha. II)   | RXA1745      |
|      | 14  | ASSY F/W (Mecha. II only)     | RXA1769      |
|      | 15  | Screw 2-6×3.5                 | RBA1120      |
|      | 16  | Cam SP                        | RBH1393      |
|      | 17  | Lever F/R                     | RNE1782      |
|      | 18  | FF Gear (A)                   | RNK2075      |
|      | 19  | F/R Pulley                    | RNK2076      |
|      | 20  | Clutch ASSY BLK               | RXA1632      |
|      | 21  | Washer                        | WA17D040D025 |
|      | 22  | Screw 2-9×3.5                 | RBA1121      |
|      | 23  | SP Arm Play (Mecha. I)        | RBH1391      |
|      | 23  | SP Arm Play (Mecha. II)       | RBH1392      |
|      | 24  | Plate Slide (Mecha. II only)  | RNE1785      |
|      | 25  | Cam Gear                      | RNK2078      |
|      | 26  | Arm Play                      | RNK2079      |
|      | 27  | Motor Spacer (Mecha. II only) | RNK2244      |
|      | 28  | Washer                        | WA26D045D025 |
|      | 29  | Screw                         | PMA26P140FMC |

3. SCHEMATIC DIAGRAM

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST "or "PCB PARTS LIST".

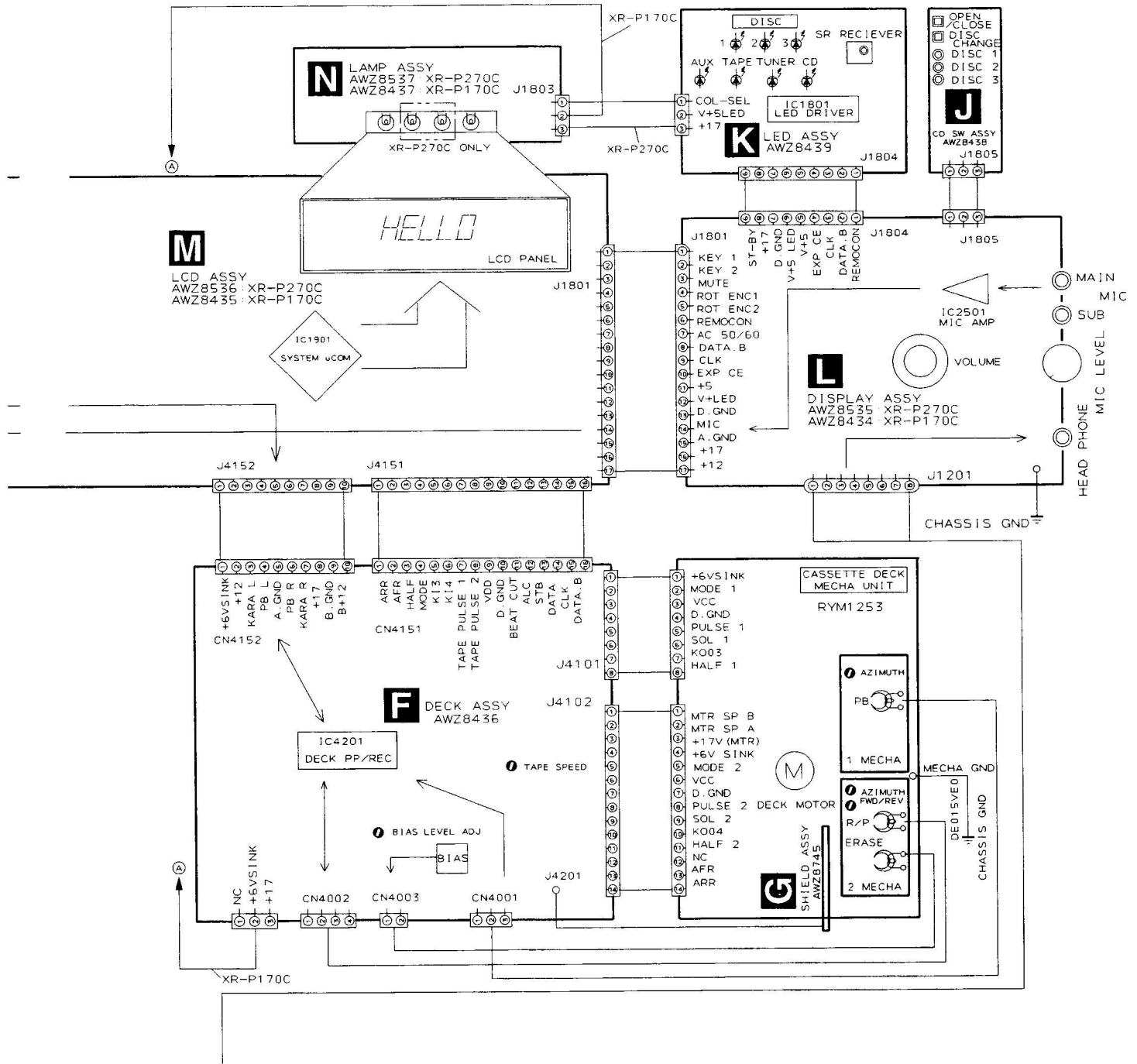
3.1 OVERALL CONNECTION AND TRANS ASSY



● NOTE FOR FUSE REPLACEMENT

CAUTION — FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.









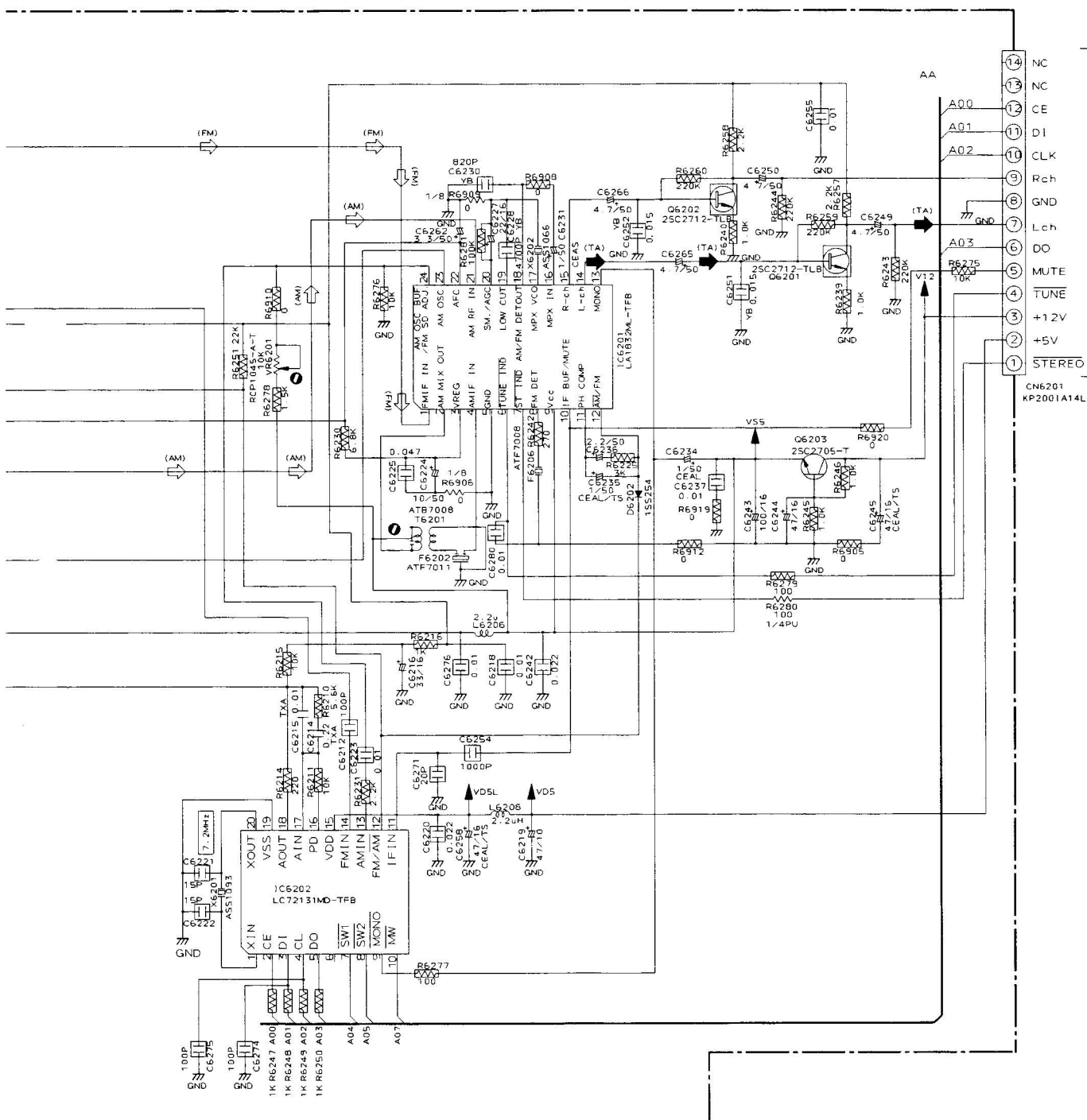
## Notes

## 1.RESISTORS

Indicated in  $\Omega$ , 1/10W $\pm$ 5% Tolerance unless otherwise noted K:K $\Omega$ , M:M $\Omega$ .

## 2.CAPACITORS

Indicated in Capacity ( $\mu$ F)/VOLTAGE (V) unless otherwise noted P:PF.



H CN1054

B

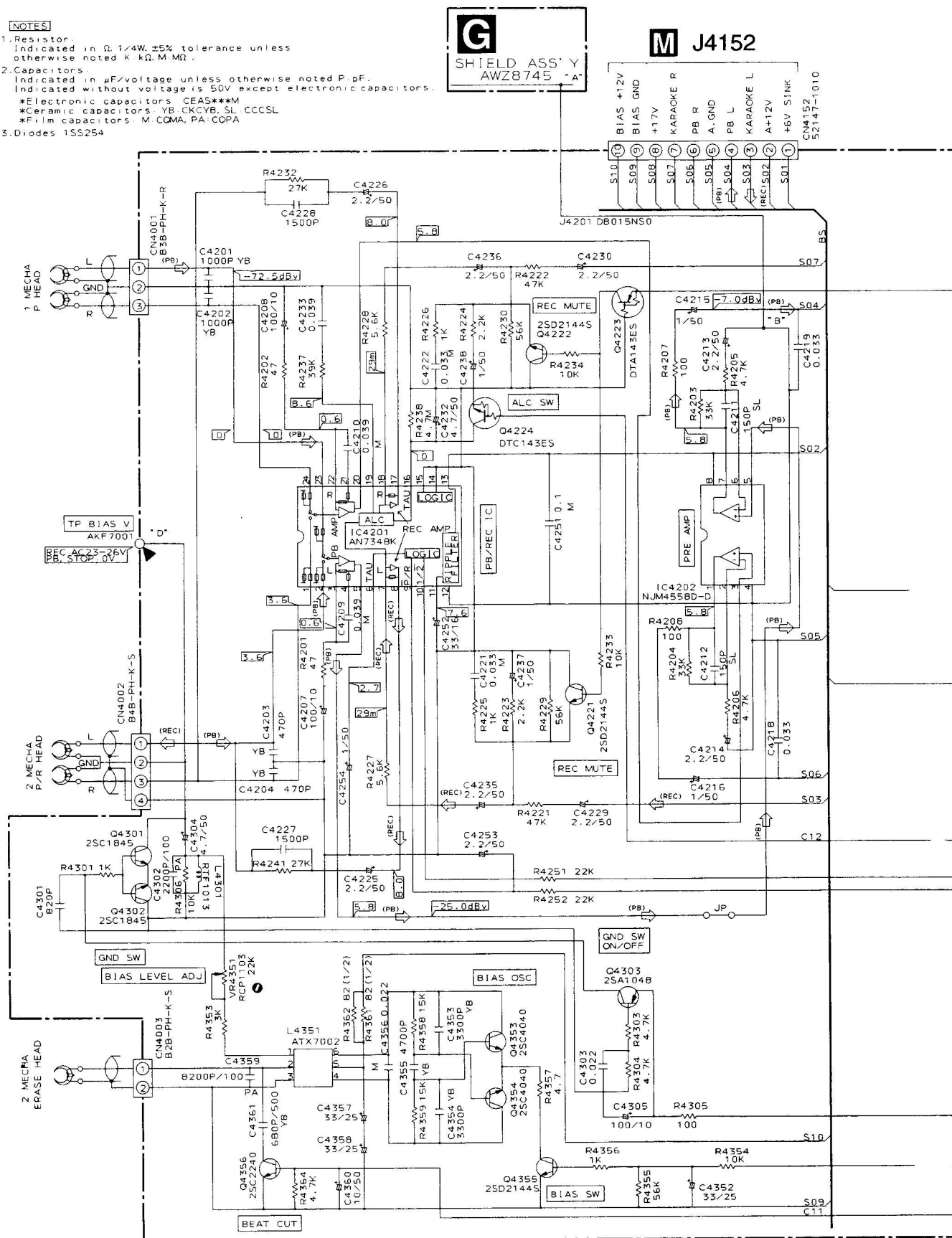




### 3.4 DECK ASSY AND SHIELD ASSY

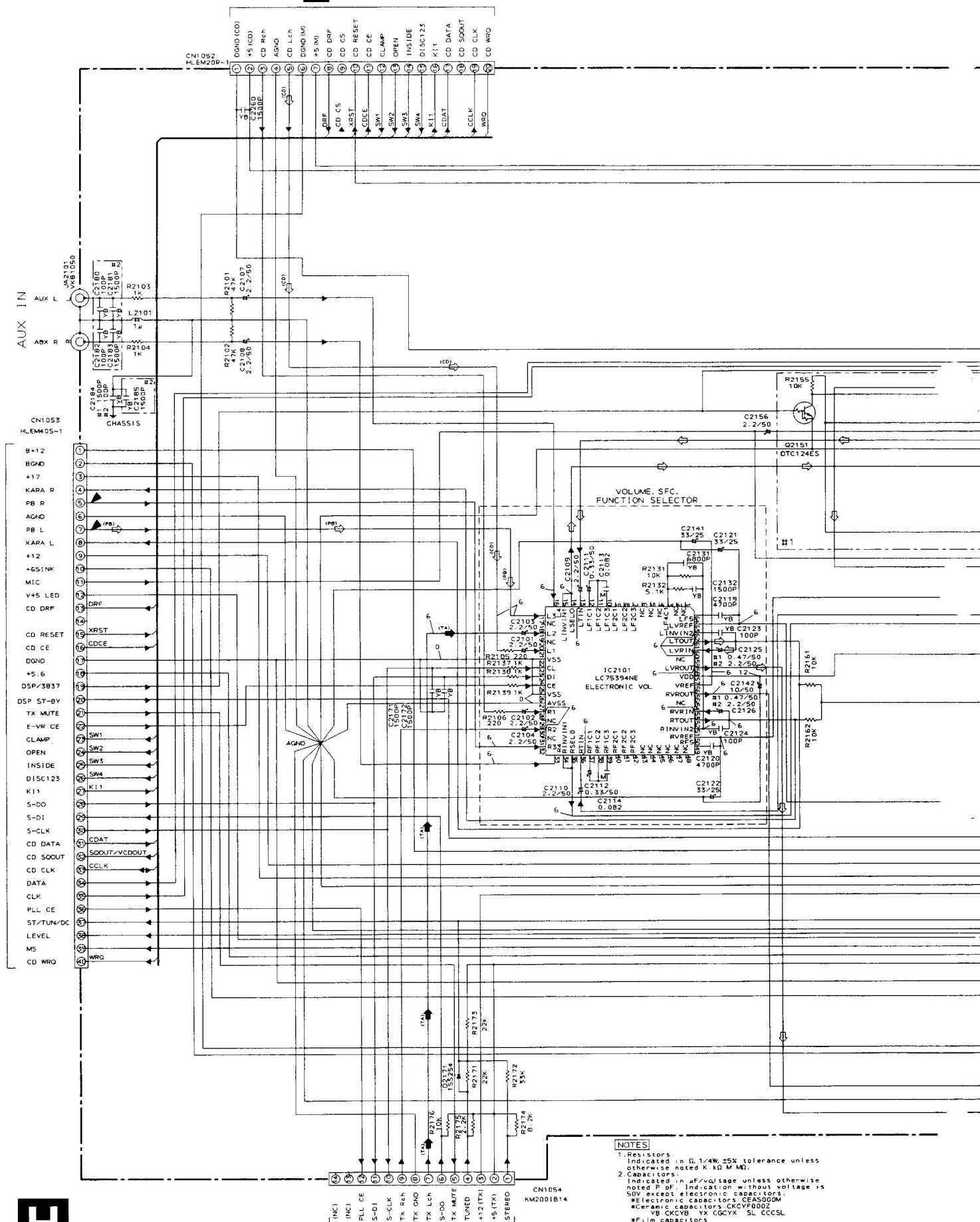
NOTES

1. Resistors Indicated in  $\Omega$ , 1/4W,  $\pm 5\%$  tolerance unless otherwise noted K, k $\Omega$ , M, M $\Omega$ .
2. Capacitors Indicated in  $\mu$ F/voltage unless otherwise noted P, pF. Indicated without voltage is 50V except electronic capacitors.  
\*Electronic capacitors CEAS\*\*M  
\*Ceramic capacitors YB GKGVE SL CCCSL  
\*Film capacitors M, CQMA, PA, CQPA
3. Diodes 1SS254





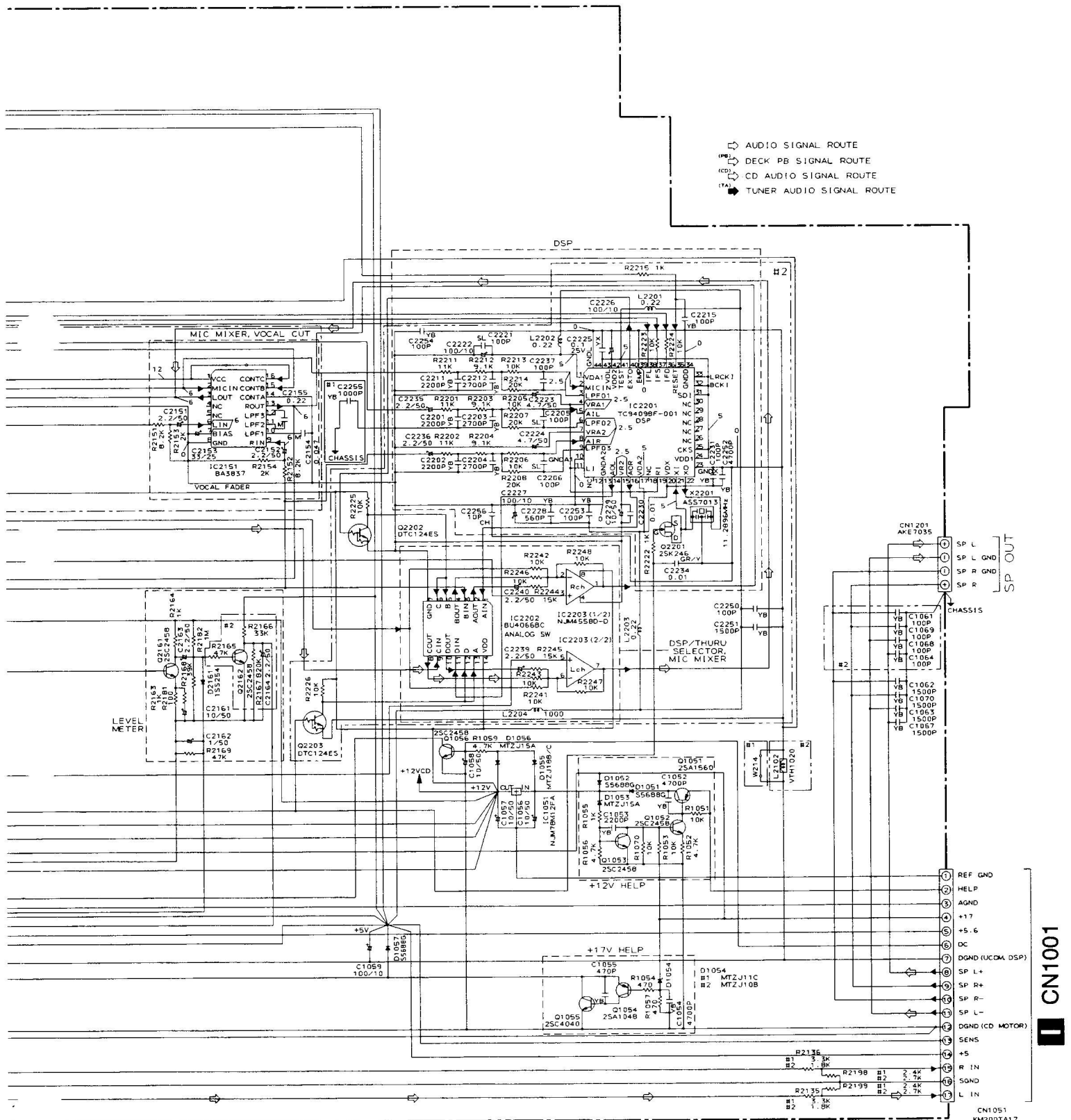
**M** CN1902



NOTES

1. Resistors  
Indicated in  $\Omega$ , 1/4W,  $\pm 5\%$  tolerance unless otherwise noted K,  $\Omega$ , M, MQ.
2. Capacitors  
Indicated in  $\mu$ F/voltage unless otherwise noted P, pF. Indication without voltage is 50V except electronic capacitors.  
\*Electronic capacitors CEAS000M  
\*Ceramic capacitors KCYF000Z  
YB CKCYB YX GCYX SL CCCC  
\*Film capacitors  
M, CQMA
3. Inductors LAU000

**B** CN6201



**H** AF ASS'Y  
AWM7250.XR-P270C  
AWM7238.XR-P170C

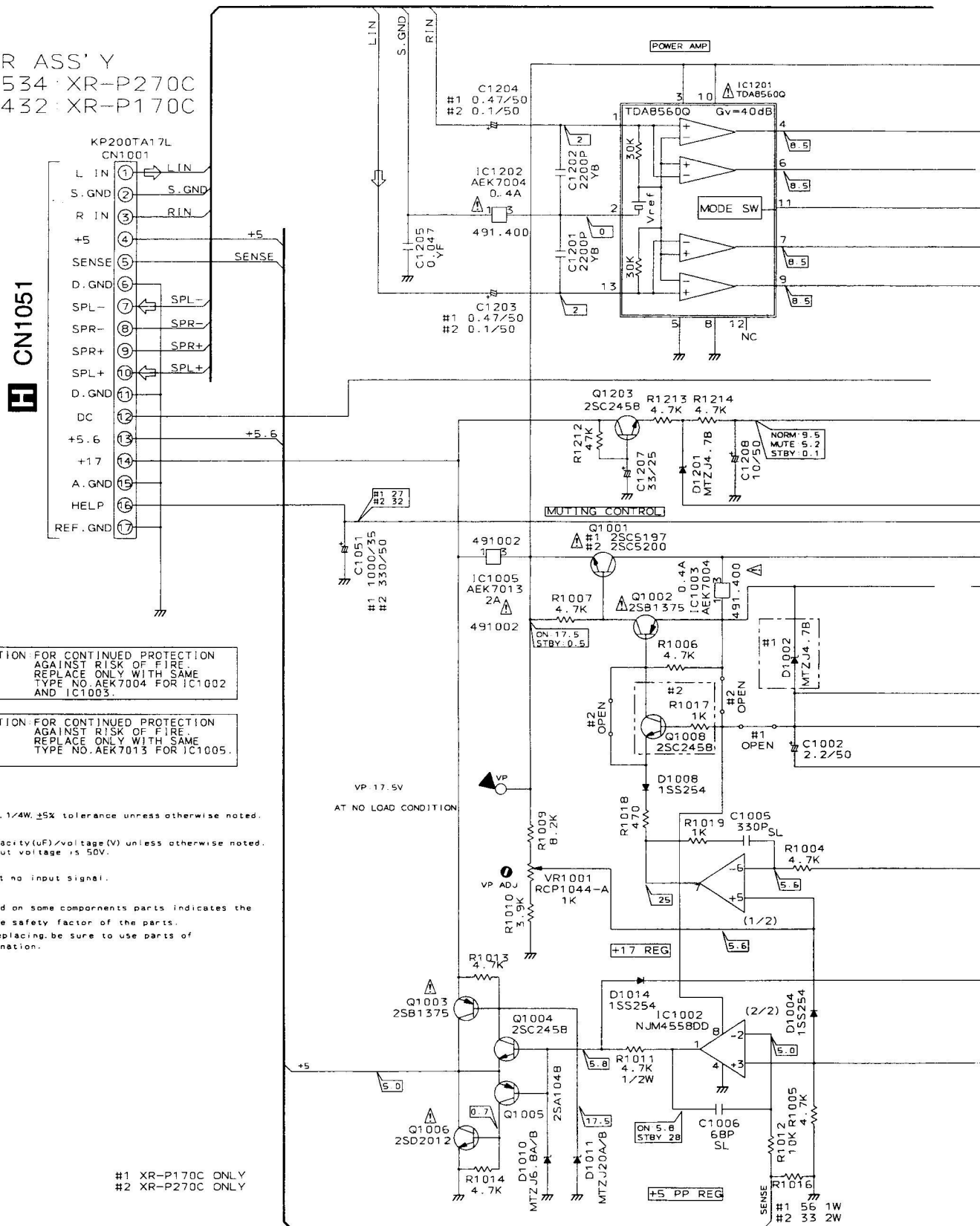
#1 XR-P170C ONLY  
#2 XR-P270C ONLY



### 3.6 POWER ASSY



POWER ASS'Y  
AWZ8534 : XR-P270C  
AWZ8432 : XR-P170C



CAUTION: FOR CONTINUED PROTECTION  
AGAINST RISK OF FIRE,  
REPLACE ONLY WITH SAME  
TYPE NO. AEK7004 FOR IC1002  
AND IC1003.

CAUTION: FOR CONTINUED PROTECTION  
AGAINST RISK OF FIRE,  
REPLACE ONLY WITH SAME  
TYPE NO. AEK7013 FOR IC1005.

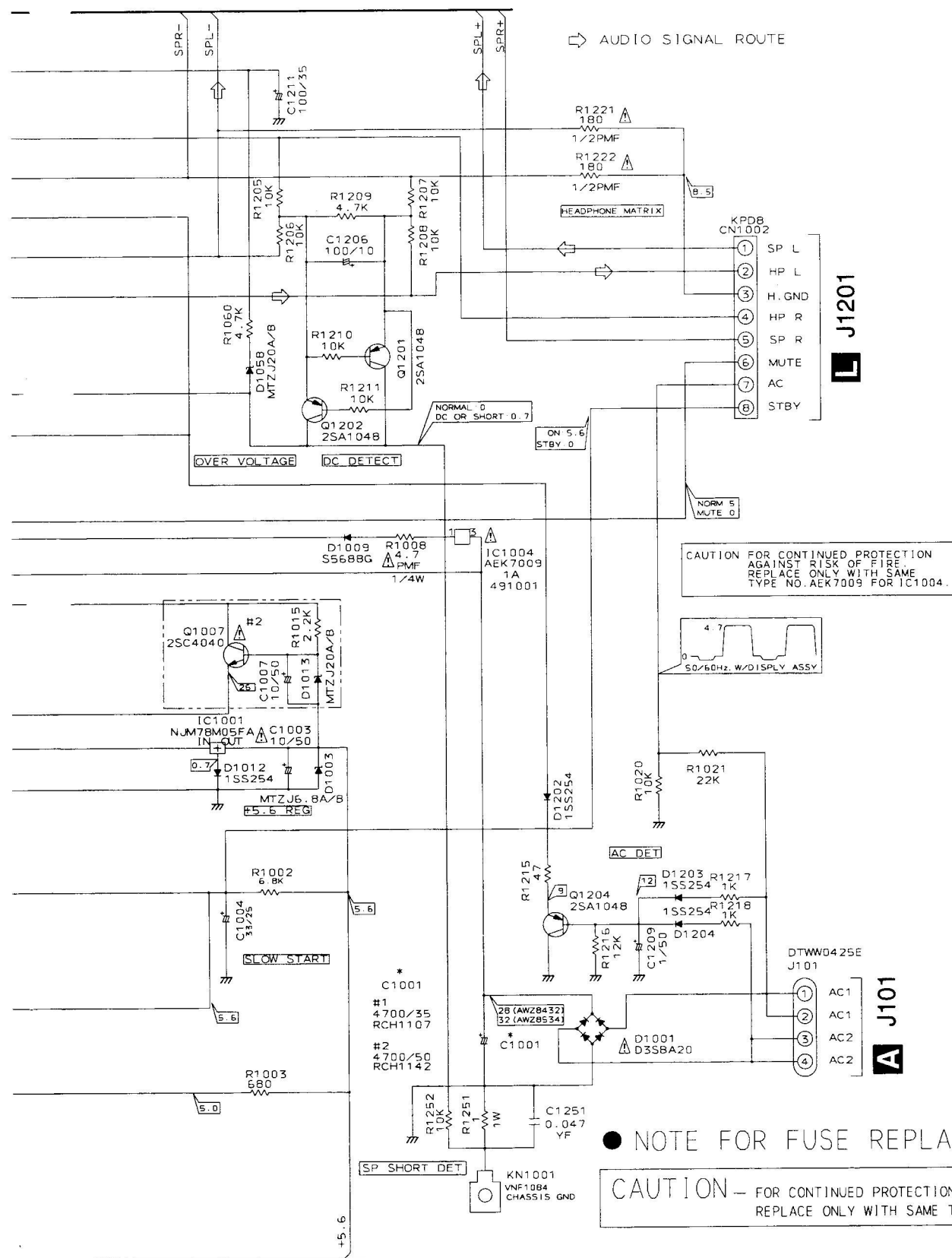
## Notes

1. **Resistors**  
[Indicated in Ohm, 1/4W,  $\pm 5\%$  tolerance unless otherwise noted.]
2. **Capacitors**  
[Indicated in capacity( $\mu$ F)/voltage(V) unless otherwise noted.  
Indication without voltage is 50V.]
3. **Voltage**  
DC voltage (V) at no input signal.
4. **Others**  
The  $\Delta$  mark found on some components parts indicates the importance of the safety factor of the parts.  
Therefore, when replacing, be sure to use parts of identical designation.

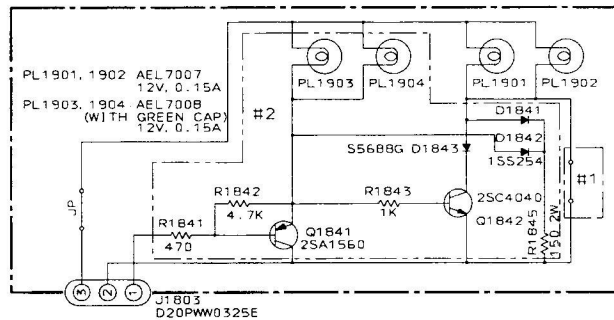
#1 XR-P170C ONLY Y  
#2 XR-P270C ONLY Y









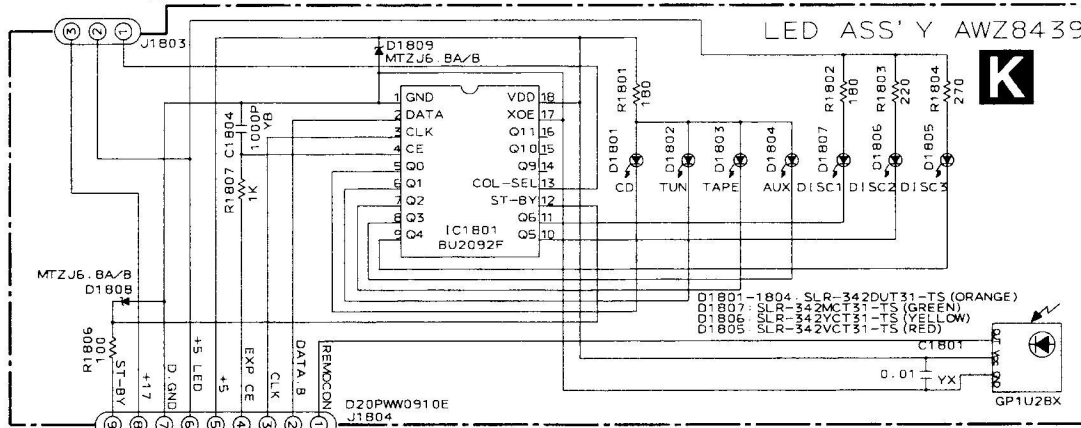


# N

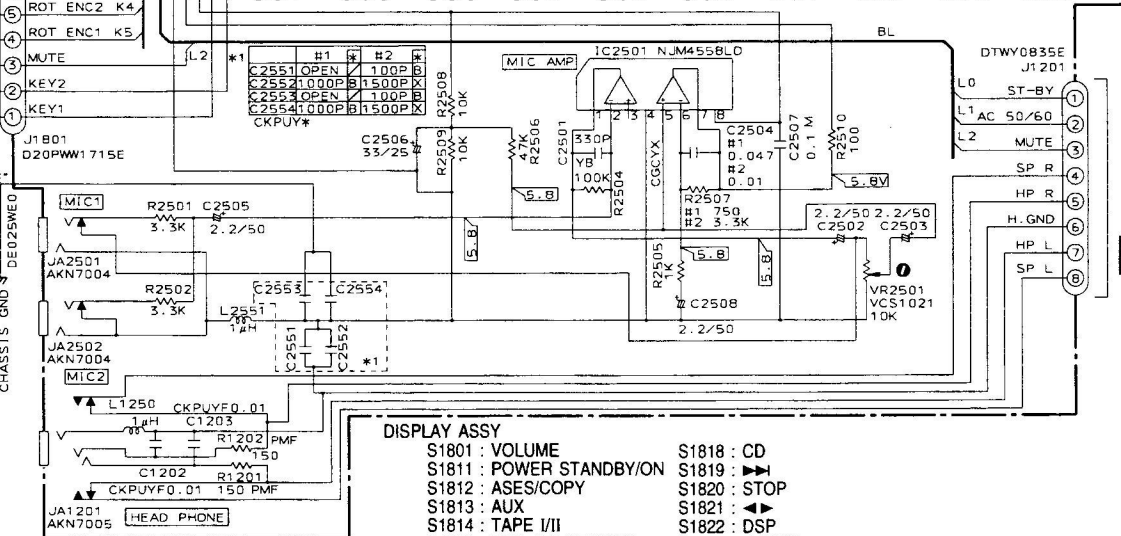
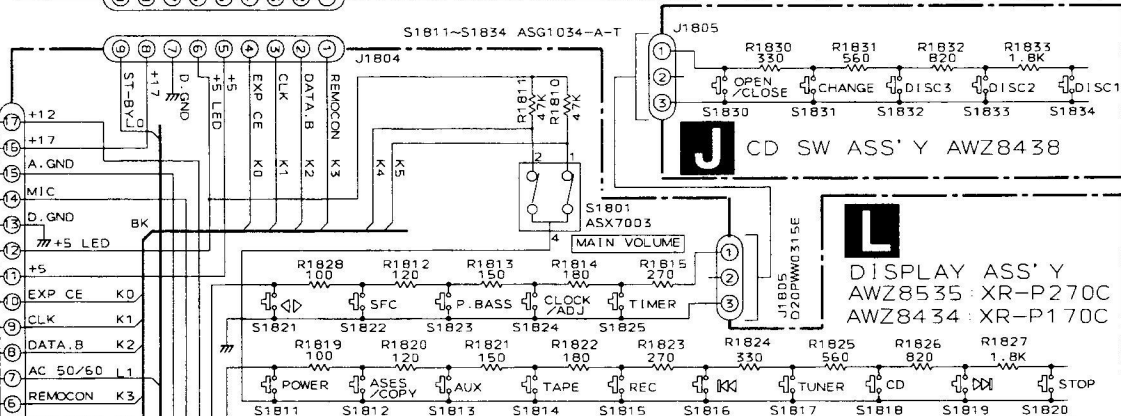
LAMP ASS'Y  
AWZ8537:XR-P270C  
AWZ8437:XR-P170C

## NOTES

1. Resistors:  
Indicated in  $\Omega$ , 1/4W,  $\pm 5\%$  tolerance unless otherwise noted K, k $\Omega$ , M, M $\Omega$ .
2. Capacitors:  
Indicated in  $\mu$ F/voltage unless otherwise noted p, pF. Indication without voltage is 50V except electronic capacitors.  
\*Electronic capacitors: CEAS000M  
\*Ceramic capacitors: YB, CKCY6 YX, CKCYX YF, CKCYF
3. Diodes: 1SS254



- CD SW ASSY  
S1830 : OPEN/CLOSE  
S1831 : DISC CHANGE  
S1832 : DISC 3  
S1833 : DISC 2  
S1834 : DISC 1



4. PCB CONNECTION DIAGRAM

4.1 TRANS ASSY

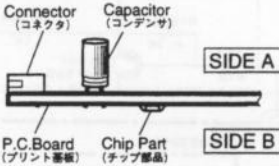
NOTE FOR PCB DIAGRAMS

- 1. Part numbers in PCB diagrams match those in the schematic diagrams.
- 2. A comparison between the main parts of PCB and schematic diagram is shown below.

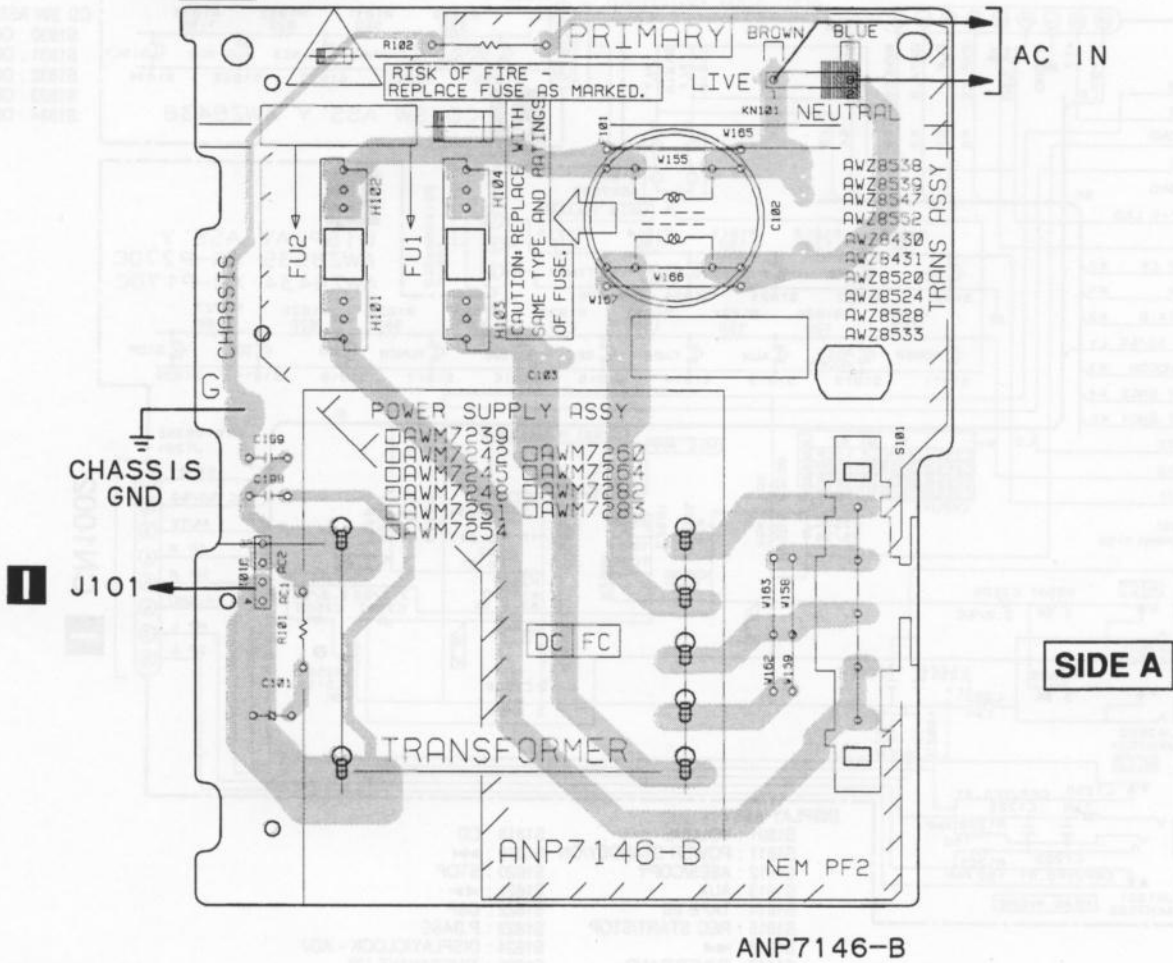
| Symbol in PCB Diagrams | Symbol in Schematic Diagrams | Part Name                |
|------------------------|------------------------------|--------------------------|
|                        |                              | Transistor               |
|                        |                              | Transistor with resistor |
|                        |                              | Field effect transistor  |
|                        |                              | Resistor array           |
|                        |                              | 3-terminal regulator     |

- 3. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.

4. Viewpoint of PCB diagrams



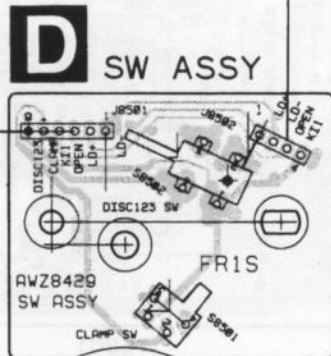
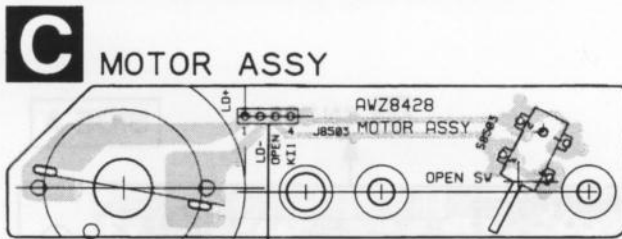
**A** TRANS ASSY





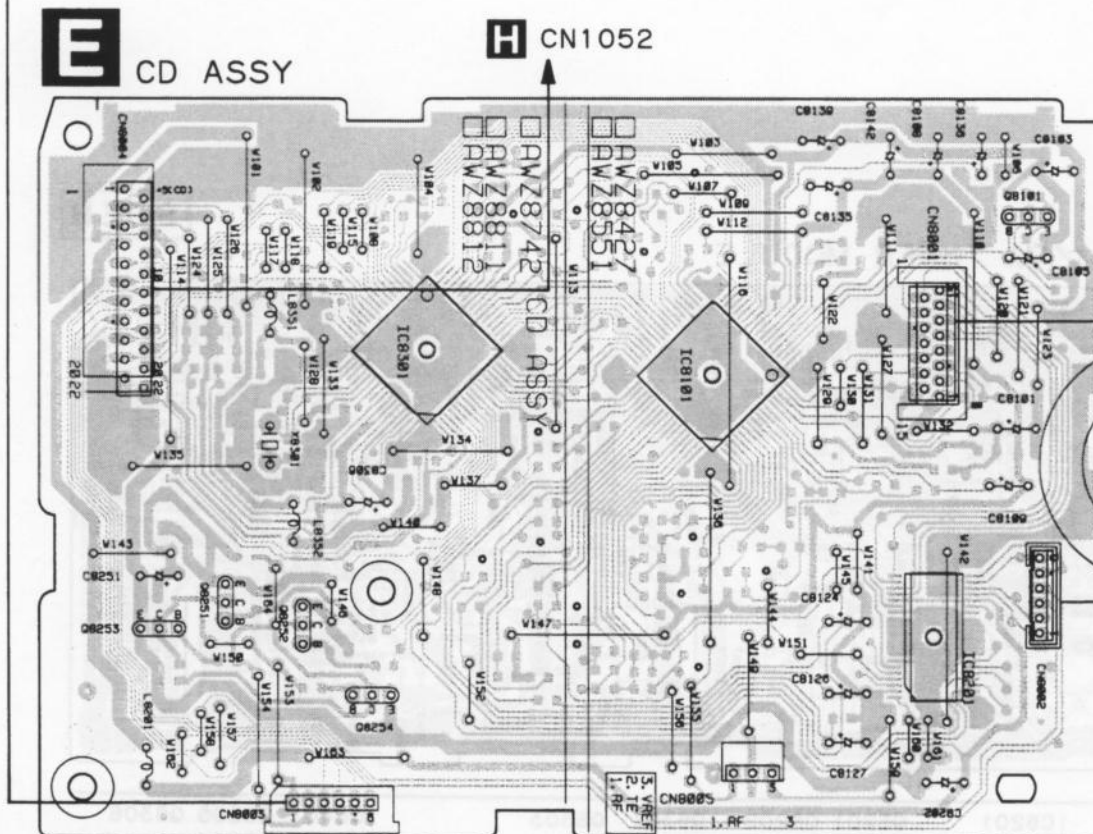


4.3 MOTOR ASSY, SW ASSY AND CD ASSY



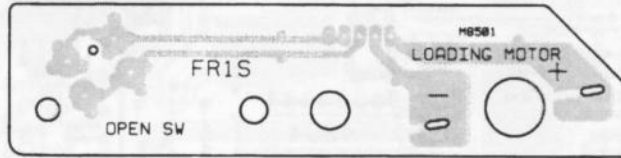
**SIDE A**

TO SERVO MECHA ASSY



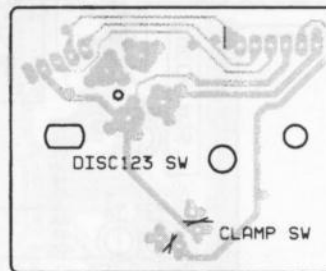
# C

## MOTOR ASSY



# D

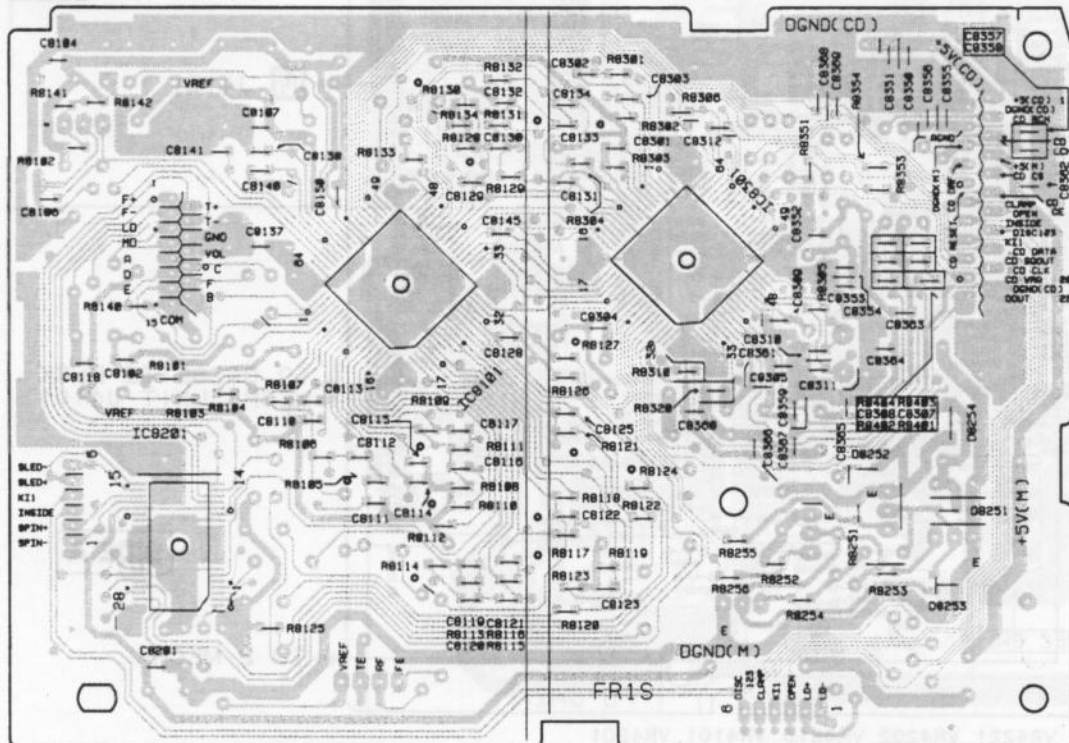
## SW ASSY



SIDE B

# E

## CD ASSY



IC8201

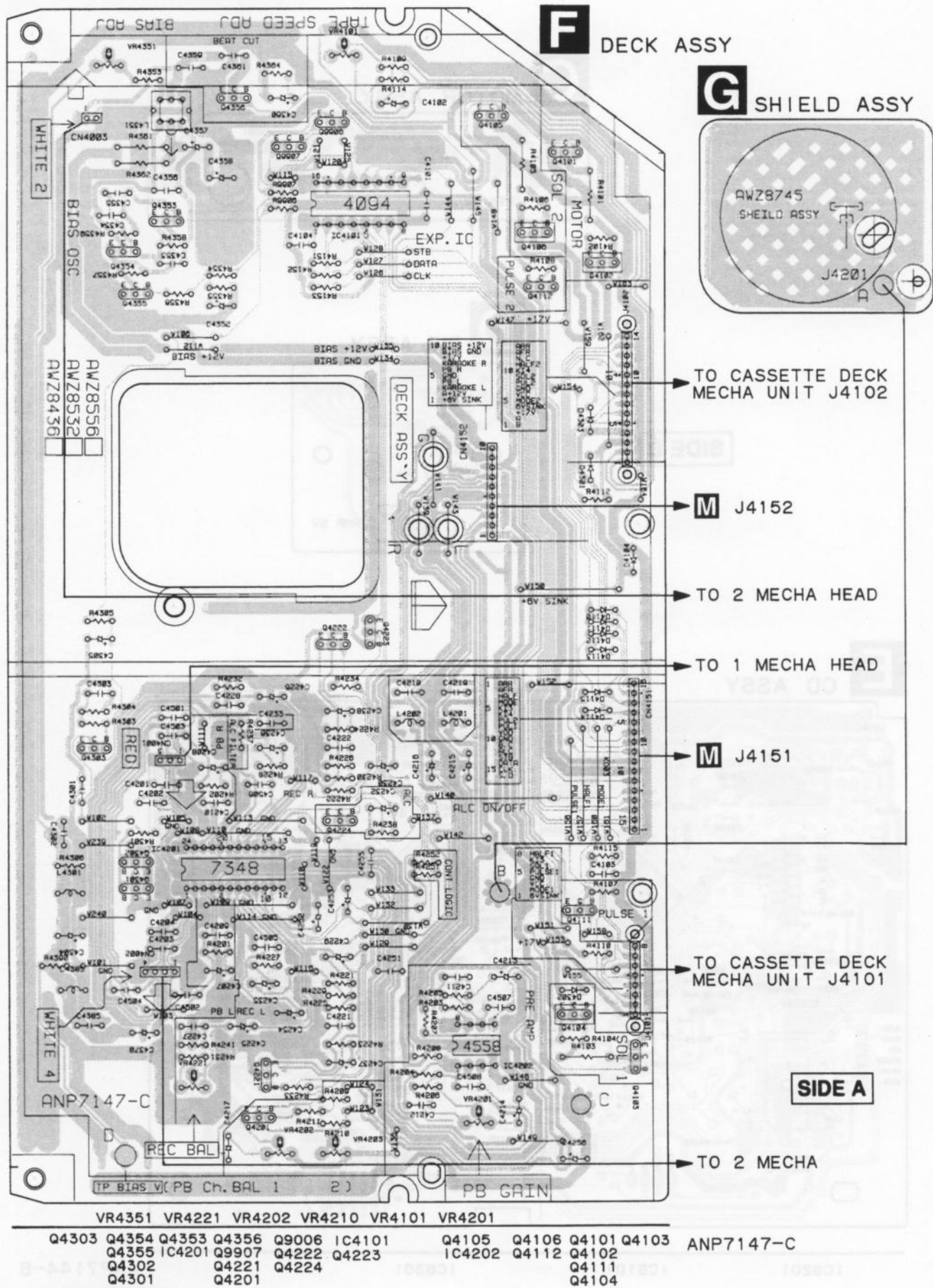
IC8101

IC8301

ANP7144-B

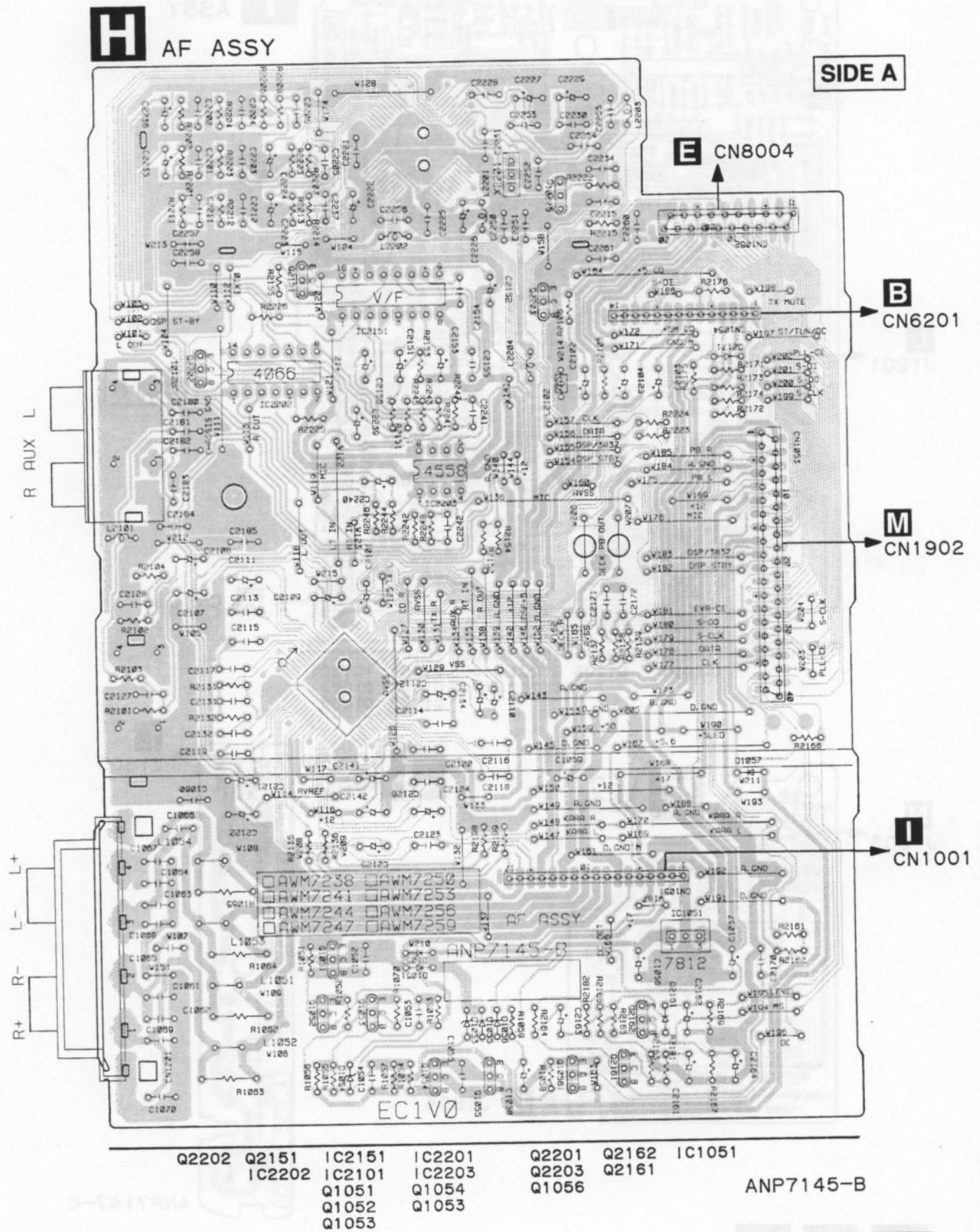
C D E

4.4 DECK ASSY AND SHEILD ASSY

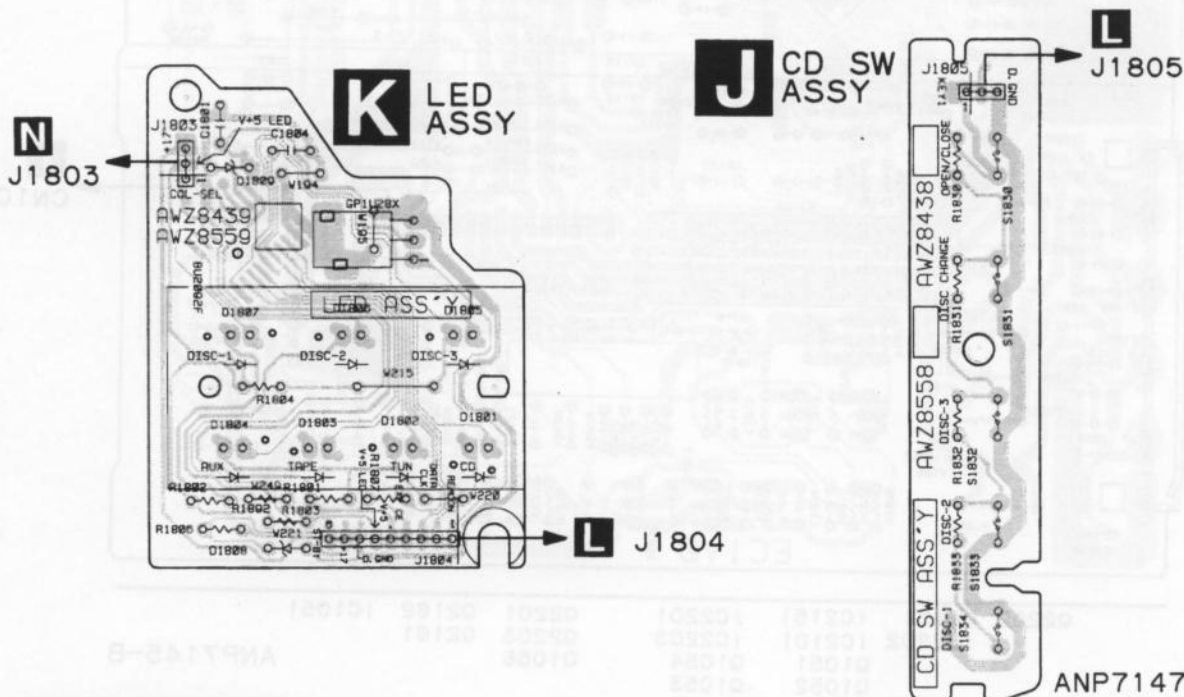
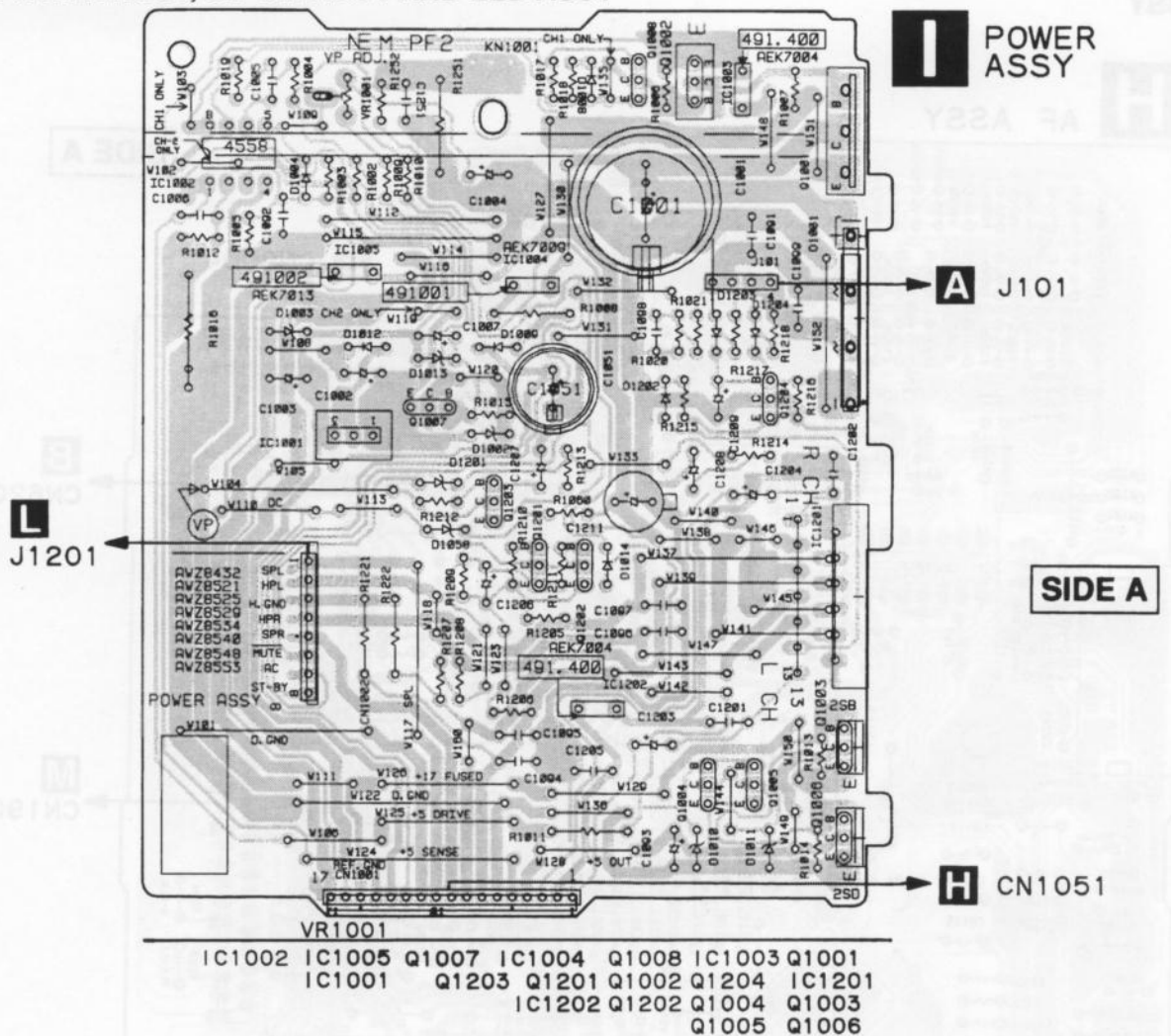




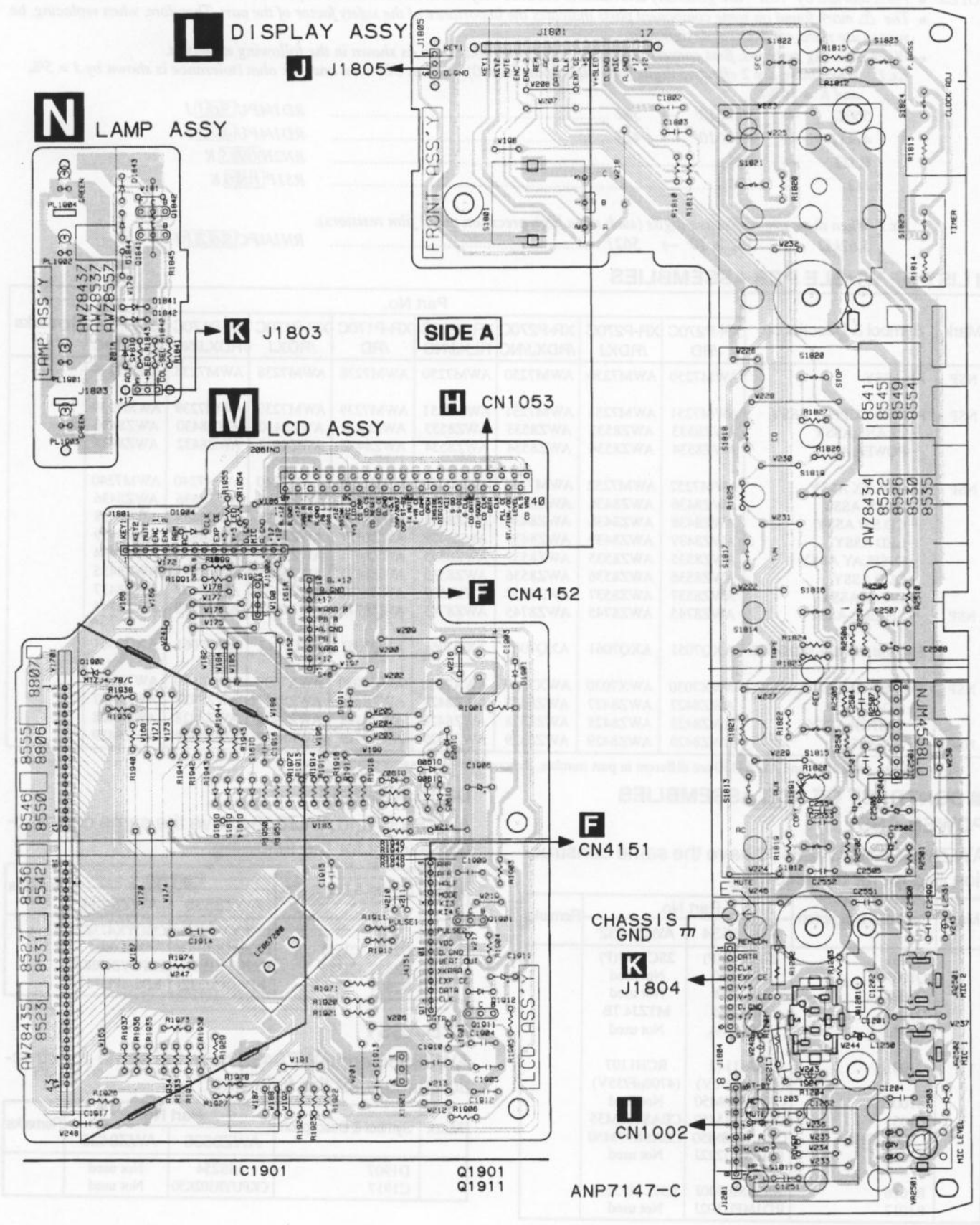
4.5 AF ASSY



# 4.6 POWER ASSY, CD SW ASSY AND LED ASSY



#### 4.7 DISPLAY ASSY, LCD ASSY AND LAMP ASSY



## 5. PCB PARTS LIST

NOTES: • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

• The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

• When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 $\Omega$  → 56  $\times 10^1$  → 561 ..... RD1/4PU561J

47k $\Omega$  → 47  $\times 10^3$  → 473 ..... RD1/4PU473J

0.5 $\Omega$  → 0R5 ..... RN2H0R5K

1 $\Omega$  → 1R0 ..... RS1P1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k $\Omega$  → 562  $\times 10^1$  → 5621 ..... RN1/4PC5621F

### ■ LIST OF WHOLE PCB ASSEMBLIES

| Mark | Symbol & Description | Part No.        |                   |                      |                     |                 |                   |                      |                     | Remarks |
|------|----------------------|-----------------|-------------------|----------------------|---------------------|-----------------|-------------------|----------------------|---------------------|---------|
|      |                      | XR-P270C<br>/RD | XR-P270C<br>/RDXJ | XR-P270C<br>/RDXJ/NC | XR-P270C<br>RLXJ/NC | XR-P170C<br>/RD | XR-P170C<br>/RDXJ | XR-P170C<br>/RDXJ/NC | XR-P170C<br>RLXJ/NC |         |
| NSP  | AF ASSY              | AWM7250         | AWM7250           | AWM7250              | AWM7250             | AWM7238         | AWM7238           | AWM7238              | AWM7238             | *1      |
| NSP  | POWER SUPPLY ASSY    | AWM7251         | AWM7251           | AWM7251              | AWM7251             | AWM7239         | AWM7239           | AWM7239              | AWM7239             |         |
|      | └ TRANS ASSY         | AWZ8533         | AWZ8533           | AWZ8533              | AWZ8533             | AWZ8430         | AWZ8430           | AWZ8430              | AWZ8430             |         |
|      | └ POWER ASSY         | AWZ8534         | AWZ8534           | AWZ8534              | AWZ8534             | AWZ8432         | AWZ8432           | AWZ8432              | AWZ8432             |         |
| NSP  | COMPLEX ASSY         | AWM7252         | AWM7252           | AWM7252              | AWM7252             | AWM7240         | AWM7240           | AWM7240              | AWM7240             |         |
|      | └ DECK ASSY          | AWZ8436         | AWZ8436           | AWZ8436              | AWZ8436             | AWZ8436         | AWZ8436           | AWZ8436              | AWZ8436             |         |
|      | └ CD SW ASSY         | AWZ8438         | AWZ8438           | AWZ8438              | AWZ8438             | AWZ8438         | AWZ8438           | AWZ8438              | AWZ8438             |         |
|      | └ LED ASSY           | AWZ8439         | AWZ8439           | AWZ8439              | AWZ8439             | AWZ8439         | AWZ8439           | AWZ8439              | AWZ8439             |         |
|      | └ DISPLAY ASSY       | AWZ8535         | AWZ8535           | AWZ8535              | AWZ8535             | AWZ8434         | AWZ8434           | AWZ8434              | AWZ8434             |         |
|      | └ LCD ASSY           | AWZ8536         | AWZ8536           | AWZ8536              | AWZ8536             | AWZ8435         | AWZ8435           | AWZ8435              | AWZ8435             |         |
| NSP  | └ LAMP ASSY          | AWZ8537         | AWZ8537           | AWZ8537              | AWZ8537             | AWZ8437         | AWZ8437           | AWZ8437              | AWZ8437             |         |
|      | └ SHIELD ASSY        | AWZ8745         | AWZ8745           | AWZ8745              | AWZ8745             | AWZ8745         | AWZ8745           | AWZ8745              | AWZ8745             |         |
|      | FM/AM TUNER MODULE   | AXQ7051         | AXQ7061           | AXQ7061              | AXQ7061             | AXQ7051         | AXQ7061           | AXQ7061              | AXQ7061             |         |
| NSP  | \$M SERVO BOARD ASSY | AWX7030         | AWX7030           | AWX7030              | AWX7030             | AWX7030         | AWX7030           | AWX7030              | AWX7030             |         |
|      | └ CD ASSY            | AWZ8427         | AWZ8427           | AWZ8427              | AWZ8427             | AWZ8427         | AWZ8427           | AWZ8427              | AWZ8427             |         |
|      | └ MOTOR ASSY         | AWZ8428         | AWZ8428           | AWZ8428              | AWZ8428             | AWZ8428         | AWZ8428           | AWZ8428              | AWZ8428             |         |
| NSP  | └ SW ASSY            | AWZ8429         | AWZ8429           | AWZ8429              | AWZ8429             | AWZ8429         | AWZ8429           | AWZ8429              | AWZ8429             |         |

\*1 : Although AWZ8533 and AWZ8430 are different in part number, they consist of the same components.

### ■ CONTRAST OF PCB ASSEMBLIES

#### POWER ASSY

AWZ8534 and AWZ8432 have the same construction except for the following:

| Mark | Symbol & Description | Part No.                      |                               | Remarks |
|------|----------------------|-------------------------------|-------------------------------|---------|
|      |                      | AWZ8534                       | AWZ8432                       |         |
|      | Q1001                | 2SC5200(P)                    | 2SC5197(P)                    |         |
|      | Q1007                | 2SC4040                       | Not used                      |         |
|      | Q1008                | 2SC2458                       | Not used                      |         |
|      | D1002                | Not used                      | MTZJ4.7B                      |         |
|      | D1013                | MTZJ20A                       | Not used                      |         |
|      | C1001                | RCH1142<br>(4700 $\mu$ F/50V) | RCH1107<br>(4700 $\mu$ F/35V) |         |
|      | C1007                | CEAS100M50                    | Not used                      |         |
|      | C1051                | CEAS331M50                    | CEAS102M35                    |         |
|      | C1203, C1204         | CEASR10M50                    | CEASR47M50                    |         |
|      | R1015                | RD1/4PU222J                   | Not used                      |         |
|      | R1016                | RS2LMF330J                    | RS1LMF560J                    |         |
|      | R1017                | RD1/4PU102J                   | Not used                      |         |

#### DISPLAY ASSY

AWZ8535 and AWZ8434 have the same construction except for the following:

| Mark | Symbol & Description | Part No.     |              | Remarks |
|------|----------------------|--------------|--------------|---------|
|      |                      | AWZ8535      | AWZ8434      |         |
|      | C2504                | CGCYX103K25  | CGCYX473K25  |         |
|      | C2551, C2553         | CKPUYB101K50 | Not used     |         |
|      | C2552, C2554         | CKPUYX152N16 | CKPUYB102K50 |         |
|      | R2507                | RD1/4PU332J  | RD1/4PU751J  |         |

#### LCD ASSY

AWZ8536 and AWZ8435 have the same construction except for the following:

| Mark | Symbol & Description | Part No.     |          | Remarks |
|------|----------------------|--------------|----------|---------|
|      |                      | AWZ8536      | AWZ8435  |         |
|      | D1907                | ISS254       | Not used |         |
|      | C1917                | CKPUYB102K50 | Not used |         |



**LAMP ASSY**

AWZ8537 and AWZ8437 have the same construction except for the following:

| Mark | Symbol & Description | Part No.    |          | Remarks |
|------|----------------------|-------------|----------|---------|
|      |                      | AWZ8537     | AWZ8437  |         |
|      | Q1841                | 2SA1560     | Not used |         |
|      | Q1842                | 2SC4040     | Not used |         |
|      | D1841, D1842         | 1SS254      | Not used |         |
|      | D1843                | S5688G      | Not used |         |
|      | R1841                | RD1/4PU471J | Not used |         |
|      | R1842                | RD1/4PU472J | Not used |         |
|      | R1843                | RD1/4PU102J | Not used |         |
|      | R1845                | RS2LMF151J  | Not used |         |
|      | PL1903, PL1904       | AEL7008     | Not used |         |

**FM/AM TUNER MODULE**

AXQ7051 and AXQ7061 have the same construction except for the following:

| Mark | Symbol & Description | Part No. |         | Remarks |
|------|----------------------|----------|---------|---------|
|      |                      | AXQ7051  | AXQ7061 |         |
|      | BN6202 Terminal 4-P  | AKE7028  | AKE7025 |         |

Mark No. Description Parts No.

**H AF ASSY (AWM7238 : FOR XR-P170C SERIES)**

**SEMICONDUCTORS**

|                            |            |
|----------------------------|------------|
| IC2151                     | BA3837     |
| IC2101                     | LC75394NHE |
| IC1051                     | NJM78M12FA |
| Q1054                      | 2SA1048    |
| Q1051                      | 2SA1560    |
| Q1052, Q1053, Q1056, Q2161 | 2SC2458    |
| Q1055                      | 2SC4040    |
| Q2151                      | DTC124ES   |
| D2161, D2171               | 1SS254     |
| D1054                      | MTZJ11C    |
| D1053, D1056               | MTZJ15A    |
| D1055                      | MTZJ18B    |
| D1051, D1052, D1057        | S5688G     |

**COILS AND FILTERS**

|       |         |
|-------|---------|
| L2101 | LAU010J |
|-------|---------|

**CAPACITORS**

|                              |             |
|------------------------------|-------------|
| C2162                        | CEAS010M50  |
| C1056 - C1058, C2142, C2161  | CEAS100M50  |
| C1059                        | CEAS101M10  |
| C2101 - C2104, C2107 - C2110 | CEAS2R2M50  |
| C2151, C2152, C2156, C2163   | CEAS2R2M50  |
| C2121, C2122, C2141, C2153   | CEAS330M25  |
| C2111, C2112                 | CEASR33M50  |
| C2125, C2126                 | CEASR47M50  |
| C2123, C2124                 | CKCYB101K50 |
| C2255                        | CKCYB102K50 |

| Mark | No. | Description                       | Parts No.   |
|------|-----|-----------------------------------|-------------|
|      |     | C1062, C1063, C1067, C1070, C2132 | CKCYB152K50 |
|      |     | C2171, C2172, C2184, C2260        | CKCYB152K50 |
|      |     | C1053                             | CKCYB222K50 |
|      |     | C1055                             | CKCYB471K50 |
|      |     | C1052, C1054, C2119, C2120        | CKCYB472K50 |
|      |     | C2131                             | CKCYB682K50 |
|      |     | C2155                             | CQMA224J50  |
|      |     | C2154                             | CQMA473J50  |
|      |     | C2113, C2114                      | CQMA823J50  |

**RESISTORS**

|               |             |
|---------------|-------------|
| All Resistors | RD1/4PU□□□□ |
|---------------|-------------|

**OTHERS**

|        |                                |
|--------|--------------------------------|
| CN1201 | SPEAKER TERMINAL 4 - P AKE7035 |
| CN1052 | CONNECTOR HLEM20R - 1          |
| CN1053 | CONNECTOR HLEM40S - 1          |
| CN1054 | 14P PLUG KM200IB14             |
| CN1051 | 17P PLUG KM200TA17             |
| JA2101 | JACK VKB1050                   |

**PCB PARTS LIST FOR XR-P270C SERIES****H AF ASSY****SEMICONDUCTORS**

|                                   |                |
|-----------------------------------|----------------|
| IC2202                            | BU4066BC       |
| IC2101                            | LC75394NHE     |
| IC2203                            | NJM4558D - D   |
| IC1051                            | NJM78M12FA     |
| IC2201                            | TC9409BF - 001 |
| Q1054                             | 2SA1048        |
| Q1051                             | 2SA1560        |
| Q1052, Q1053, Q1056, Q2161, Q2162 | 2SC2458        |
| Q1055                             | 2SC4040        |
| Q2201                             | 2SK246         |
| Q2202, Q2203                      | DTC124ES       |
| D2161, D2171                      | 1SS254         |
| D1054                             | MTZJ10B        |
| D1053, D1056                      | MTZJ15A        |
| D1055                             | MTZJ18B        |
| D1051, D1052, D1057               | S5688G         |

**COILS AND FILTERS**

|               |         |
|---------------|---------|
| L2101         | LAU010K |
| L2201 - L2203 | LAUR22J |
| L2204         | LTA102J |
| L2102         | VTH1020 |

**CAPACITORS**

|                                    |             |
|------------------------------------|-------------|
| C2256                              | CCCCH100D50 |
| C2205, C2206, C2221, C2237         | CCCSL101J50 |
| C2162                              | CEAS010M50  |
| C1056 - C1058, C2142, C2161, C2229 | CEAS100M50  |
| C1059, C2222, C2226, C2227         | CEAS101M10  |
| C2101 - C2104, C2107 - C2110       | CEAS2R2M50  |
| C2125, C2126, C2156, C2163, C2164  | CEAS2R2M50  |
| C2235, C2236, C2239, C2240         | CEAS2R2M50  |
| C2121, C2122, C2141                | CEAS330M25  |
| C2223, C2224                       | CEAS4R7M50  |

# XR-P270C,XR-P170C

| Mark | No.                               | Description | Parts No.   |
|------|-----------------------------------|-------------|-------------|
|      | C2111, C2112                      |             | CEASR33M50  |
|      | C2225                             |             | CGCYX104K25 |
|      | C1061, C1064, C1068, C1069        |             | CKCYB101K50 |
|      | C2123, C2124, C2180, C2182, C2184 |             | CKCYB101K50 |
|      | C2215, C2231, C2250, C2253, C2254 |             | CKCYB101K50 |
|      | C1062, C1063, C1067, C1070, C2132 |             | CKCYB152K50 |
|      | C2171, C2172, C2181, C2183, C2185 |             | CKCYB152K50 |
|      | C2251, C2260                      |             | CKCYB152K50 |
|      | C1053, C2201, C2202, C2211        |             | CKCYB222K50 |
|      | C2203, C2204, C2212               |             | CKCYB272K50 |
|      | C1055                             |             | CKCYB471K50 |
|      | C1052, C1054, C2252, C2119, C2120 |             | CKCYB472K50 |
|      | C2228                             |             | CKCYB561K50 |
|      | C2131                             |             | CKCYB682K50 |
|      | C2230, C2234                      |             | CKCYF103Z50 |
|      | C2113, C2114                      |             | CQMA823J50  |

## RESISTORS

All Resistors RD1/4PU□□□J

## OTHERS

|        |                          |             |
|--------|--------------------------|-------------|
| CN1201 | SPEAKER TERMINAL 4 – P   | AKE7035     |
| X2201  | CERAMIC RESONATOR(11MHz) | ASS7013     |
| CN1052 | CONNECTOR                | HLEM20R – 1 |
| CN1053 | CONNECTOR                | HLEM40S – 1 |
| CN1054 | 14P PLUG                 | KM200IB14   |

|        |          |           |
|--------|----------|-----------|
| CN1051 | 17P PLUG | KM200TA17 |
| JA2101 | JACK     | VKB1050   |

## A TRANS ASSY

## CAPACITORS

C101 CEANP010M50

## RESISTORS

R101 RF1/4PS100J

## OTHERS

|             |                              |                      |
|-------------|------------------------------|----------------------|
| H101 – H104 | FUSE CLIP                    | AKR1004              |
| S101        | VOLTAGE SELECTOR<br>TERMINAL | AKX7004<br>RKC – 061 |

## I POWER ASSY

## SEMICONDUCTORS

|                |                       |              |
|----------------|-----------------------|--------------|
| IC1002         |                       | NJM4558D – D |
| IC1001         |                       | NJM78M05FA   |
| IC1201         |                       | TDA8560Q     |
| IC1003, IC1202 | PROTECTOR(400mA/125V) | AEK7004      |
| IC1004         | PROTECTOR(1A/125V)    | AEK7009      |

|                            |                    |         |
|----------------------------|--------------------|---------|
| IC1005                     | PROTECTOR(2A/125V) | AEK7013 |
| Q1005, Q1201, Q1202, Q1204 |                    | 2SA1048 |
| Q1002, Q1003               |                    | 2SB1375 |
| Q1004, Q1008, Q1203        |                    | 2SC2458 |
| Q1007                      |                    | 2SC4040 |

|                            |  |            |
|----------------------------|--|------------|
| Q1001                      |  | 2SC5200(P) |
| Q1006                      |  | 2SD2012    |
| D1004, D1008, D1012, D1014 |  | 1SS254     |
| D1202 – D1204              |  | 1SS254     |
| D1001                      |  | D3SBA20    |

| Mark | No.                 | Description | Parts No. |
|------|---------------------|-------------|-----------|
|      | D1011, D1013, D1058 |             | MTZJ20A   |
|      | D1201               |             | MTZJ4.7B  |
|      | D1003, D1010        |             | MTZJ6.8A  |
|      | D1009               |             | S5688G    |

## CAPACITORS

|                     |             |
|---------------------|-------------|
| C1005               | CCCSL331J50 |
| C1006               | CCCSL680J50 |
| C1209               | CEAS010M50  |
| C1003, C1007, C1208 | CEAS100M50  |
| C1206               | CEAS101M10  |

|              |            |
|--------------|------------|
| C1211        | CEAS101M35 |
| C1002        | CEAS2R2M50 |
| C1004, C1207 | CEAS330M25 |
| C1051        | CEAS331M50 |
| C1203, C1204 | CEASR10M50 |

|                    |             |
|--------------------|-------------|
| C1201, C1202       | CKCYB222K50 |
| C1205, C1251       | CKCYF473Z50 |
| C1001 (4700pF/50V) | RCH1142     |

## RESISTORS

|              |              |
|--------------|--------------|
| R1011        | RD1/2PM472J  |
| R1221, R1222 | RD1/2PMF181J |
| R1008        | RD1/4PMF4R7J |
| R1251        | RS1LMF010J   |
| R1016        | RS2LMF330J   |

|                      |         |
|----------------------|---------|
| VR1001 (1.0kΩ, 0.1W) | RCP1044 |
|----------------------|---------|

Other Resistors RD1/4PU□□□J

## OTHERS

|        |                     |            |
|--------|---------------------|------------|
| CN1001 | 17P SOCKET          | KP200TA17L |
| KN1001 | EARTH METAL FITTING | VNF1084    |

## F DECK ASSY

## SEMICONDUCTORS

|                     |              |
|---------------------|--------------|
| IC4201              | AN7348K      |
| IC4101              | BU4094BC     |
| IC4202              | NJM4558D – D |
| Q4303               | 2SA1048      |
| Q4102, Q4104, Q4106 | 2SA1560      |

|                     |          |
|---------------------|----------|
| Q4301, Q4302        | 2SC1845  |
| Q4356               | 2SC2240  |
| Q4353, Q4354        | 2SC4040  |
| Q4221, Q4222, Q4355 | 2SD2144S |
| Q4111, Q4112        | DTA124ES |

|                                     |          |
|-------------------------------------|----------|
| Q4223                               | DTA143ES |
| Q4101, Q4103, Q4105, Q4224          | DTC143ES |
| D4104, D4110 – D4115, D4301 – D4303 | 1SS254   |

## COILS AND FILTERS

|                       |         |
|-----------------------|---------|
| L4351 (4.05mH/105KHz) | ATX7002 |
| L4301 (1mH/252kHz)    | RTF1013 |

## CAPACITORS

|                                   |             |
|-----------------------------------|-------------|
| C4211, C4212                      | CCCSL151J50 |
| C4215, C4216, C4237, C4238, C4254 | CEAS010M50  |
| C4360                             | CEAS100M50  |
| C4207, C4208, C4305               | CEAS101M10  |
| C4213, C4214, C4225, C4226        | CEAS2R2M50  |

| Mark | No.                               | Description | Parts No.    |
|------|-----------------------------------|-------------|--------------|
|      | C4229, C4230, C4235, C4236, C4253 |             | CEAS2R2M50   |
|      | C4102, C4252, C4352, C4357, C4358 |             | CEAS330M25   |
|      | C4232, C4304                      |             | CEAS4R7M50   |
|      | C4218, C4219                      |             | CGCYX333K25  |
|      | C4201, C4202                      |             | CKCYB102K50  |
|      | C4227, C4228                      |             | CKCYB152K50  |
|      | C4103                             |             | CKCYB222K50  |
|      | C4302                             |             | CQPA222J100  |
|      | C4353, C4354                      |             | CKCYB332K50  |
|      | C4203, C4204                      |             | CKCYB471K50  |
|      | C4355                             |             | CKCYB472K50  |
|      | C4104                             |             | CKCYB681K50  |
|      | C4361                             |             | CKCYB681K500 |
|      | C4301                             |             | CKCYB821K50  |
|      | C4303                             |             | CKCYF223Z50  |
|      | C4251                             |             | CQMA104J50   |
|      | C4356                             |             | CQMA223J50   |
|      | C4221, C4222                      |             | CQMA333K50   |
|      | C4209, C4210, C4233               |             | CQMA393K50   |
|      | C4359                             |             | CQPA822J100  |

#### RESISTORS

|                     |             |
|---------------------|-------------|
| R4101, R4103, R4105 | RD1/2PM102J |
| R4361, R4362        | RD1/2PM820J |
| VR4351 (22kΩ, 0.1W) | RCP1103     |
| VR4101 (10kΩ, 0.1W) | RCP1140     |

Other Resistors

RD1/4PU□□□J

#### OTHERS

|        |                     |                  |
|--------|---------------------|------------------|
| CN4152 | 10PJUMPER CONNECTOR | 52147 – 1010     |
| CN4003 | CONNECTOR POST      | B2B – PH – K – S |
| CN4001 | CONNECTOR POST      | B3B – PH – K – R |
| CN4002 | CONNECTOR POST      | B4B – PH – K – S |

#### J CD SW ASSY

#### SWITCHES AND RELAYS

|               |         |
|---------------|---------|
| S1830 – S1834 | ASG1051 |
|---------------|---------|

#### RESISTORS

All Resistors

RD1/4PU□□□J

#### K LED ASSY

#### SEMICONDUCTORS

|               |                |
|---------------|----------------|
| IC1801        | BU2092F        |
| D1808, D1809  | MTZJ6.8A       |
| D1801 – D1804 | SLR – 342DUT31 |
| D1807         | SLR – 342MCT31 |
| D1805         | SLR – 342VCT31 |
| D1806         | SLR – 342YCT31 |

#### CAPACITORS

|       |             |
|-------|-------------|
| C1804 | CKCYB102K50 |
| C1801 | CKCYF103Z50 |

#### RESISTORS

All Resistors

RD1/4PU□□□J

| Mark | No. | Description | Parts No. |
|------|-----|-------------|-----------|
|------|-----|-------------|-----------|

#### OTHERS

REMOTE RECEIVER UNIT GPIU28X

#### L DISPLAY ASSY

#### SEMICONDUCTORS

|        |           |
|--------|-----------|
| IC2501 | NJM4558LD |
|--------|-----------|

#### COILS AND FILTERS

|              |         |
|--------------|---------|
| L1250, L2551 | LAU010K |
|--------------|---------|

#### SWITCHES AND RELAYS

|               |         |
|---------------|---------|
| S1811 – S1825 | ASG1051 |
| S1801         | ASX7003 |

#### CAPACITORS

|                     |             |
|---------------------|-------------|
| C2502, C2505, C2508 | CEAS2R2M50  |
| C2506               | CEAS330M25  |
| C2503               | CEJA2R2M50  |
| C2504               | CGCYX103K25 |
| C2501               | CKCYB331K50 |

|              |              |
|--------------|--------------|
| C2551, C2553 | CKPUYB101K50 |
| C1202, C1203 | CKPUYF103Z25 |
| C2552, C2554 | CKPUYX152N16 |
| C2507        | CQMA104J50   |

#### RESISTORS

|                   |              |
|-------------------|--------------|
| R1201, R1202      | RD1/2PMF151J |
| VR2501 (10kΩ – B) | VCS1021      |

Other Resistors

RD1/4PU□□□J

#### OTHERS

|                      |             |
|----------------------|-------------|
| JA2501, JA2502 JACK  | AKN7004     |
| JA1201 MINITURE JACK | AKN7005     |
| J1805 3P JUMPER WIRE | D20PWW0315E |

#### M LCD ASSY

#### SEMICONDUCTORS

|                                    |          |
|------------------------------------|----------|
| IC1901                             | PDC035B  |
| Q1911                              | DTC143ES |
| D1901, D1904, D1907, D1911 – D1916 | 1SS254   |
| D1902                              | MTZJ4.7B |

#### COILS AND FILTERS

|       |         |
|-------|---------|
| L1901 | LAU220J |
|-------|---------|

#### CAPACITORS

|       |             |
|-------|-------------|
| C1903 | ACH7013     |
| C1911 | CEAS100M50  |
| C1906 | CEAS330M25  |
| C1910 | CGCYX104K25 |
| C1909 | CKCYB102K50 |

|                     |              |
|---------------------|--------------|
| C1904, C1912, C1913 | CKCYF103Z50  |
| C1905               | CKCYF473Z50  |
| C1917               | CKPUYB102K50 |
| C1914, C1915        | CKPUYF103Z25 |
| C1916               | CKPUYX222M16 |

#### RESISTORS

|              |              |
|--------------|--------------|
| R1925        | RD1/4PM103J  |
| R1954, R1955 | RN1/6PQ1001F |

Other Resistors

RD1/4PU□□□J

# XR-P270C,XR-P170C

| Mark          | No.    | Description                | Parts No.   |
|---------------|--------|----------------------------|-------------|
| <b>OTHERS</b> |        |                            |             |
|               |        | LT FILTER                  | AAK7282     |
|               |        | PVC SHEET(PLS)             | AAK7367     |
|               | V1701  | LCD                        | AAV7031     |
|               | CN1902 | CONNECTOR                  | HLEM40R – 1 |
|               | X1901  | CERAMIC RESONATOR(6.00MHz) | VSS1045     |

## **N** LAMP ASSY

### SEMICONDUCTORS

|              |         |
|--------------|---------|
| Q1841        | 2SA1560 |
| Q1842        | 2SC4040 |
| D1841, D1842 | 1SS254  |
| D1843        | S5688G  |

### RESISTORS

|                 |             |
|-----------------|-------------|
| R1845           | RS2LMF151J  |
| Other Resistors | RD1/4PU□□□J |

### OTHERS

|                |                               |         |
|----------------|-------------------------------|---------|
| PL1901, PL1902 | SUB MINIATURE LAMP(0.15A/12V) | AEL7007 |
| PL1903, PL1904 | SUB MINIATURE LAMP(0.15A/12V) | AEL7008 |

## **G** SHEILD ASSY

SHEILD assembly has no service part.

## **B** FM/AM TUNER MODULE

### SEMICONDUCTORS

|              |           |
|--------------|-----------|
| IC6201       | LA1832ML  |
| IC6202       | LC72131MD |
| Q6402        | 2SC2223   |
| Q6203        | 2SC2705   |
| Q6201, Q6202 | 2SC2712   |
| Q6214, Q6403 | 2SC2714   |
| Q6404        | 2SK302    |
| Q6401        | 3SK194    |
| Q6204        | DTA124ES  |
| Q6205        | DTC124EK  |
| D6202        | 1SS254    |
| D6401, D6402 | 1T363     |

### COILS AND FILTERS

|                     |           |
|---------------------|-----------|
| L6404               | ATC1003   |
| L6401               | ATC1020   |
| L6402               | ATC1021   |
| F6204               | ATF – 107 |
| F6203               | ATF – 119 |
| F6401               | ATF – 155 |
| F6206               | ATF7008   |
| F6202 (455kHz)      | ATF7011   |
| L6206, L6208, L6403 | LAU2R2J   |

### TRANSFORMERS

|       |         |
|-------|---------|
| T6201 | ATB7008 |
| T6401 | ATE7002 |

### CAPACITORS

|                            |              |
|----------------------------|--------------|
| C6407                      | CCSQCH010C50 |
| C6410                      | CCSQCH020C50 |
| C6401, C6419               | CCSQCH050C50 |
| C6208                      | CCSQCH100D50 |
| C6212, C6274, C6275, C6408 | CCSQCH101J50 |

| Mark | No.                        | Description | Parts No.    |
|------|----------------------------|-------------|--------------|
|      | C6221, C6222, C6416        |             | CCSQCH150J50 |
|      | C6271                      |             | CCSQCH200J50 |
|      | C6415                      |             | CCSQCH330J50 |
|      | C6414                      |             | CCSQPH080D50 |
|      | C6413                      |             | CCSQPH220J50 |
|      | C6405                      |             | CCSQTH180J50 |
|      | C6234, C6235               |             | CEAL010M50   |
|      | C6245                      |             | CEAL470M16   |
|      | C6231                      |             | CEAS010M50   |
|      | C6224                      |             | CEAS100M50   |
|      | C6243                      |             | CEAS101M16   |
|      | C6227                      |             | CEAS220M16   |
|      | C6236                      |             | CEAS2R2M50   |
|      | C6216                      |             | CEAS330M16   |
|      | C6262                      |             | CEAS3R3M50   |
|      | C6219                      |             | CEAS470M10   |
|      | C6244                      |             | CEAS470M16   |
|      | C6249, C6250, C6265, C6266 |             | CEAS4R7M50   |
|      | C6258                      |             | CEJA470M16   |
|      | C6215                      |             | CFTXA103J50  |

|                                   |              |
|-----------------------------------|--------------|
| C6214                             | CFTXA224J50  |
| C6211, C6254, C6403, C6406, C6412 | CKSQYB102K50 |
| C6201, C6205, C6210, C6213, C6237 | CKSQYB103K50 |
| C6276, C6278, C6280, C6281, C6402 | CKSQYB103K50 |
| C6409, C6417, C6418               | CKSQYB103K50 |

|              |              |
|--------------|--------------|
| C6251, C6252 | CKSQYB153K50 |
| C6203, C6259 | CKSQYB223K50 |
| C6228        | CKSQYB472K50 |
| C6209        | CKSQYB473K50 |
| C6230        | CKSQYB821K50 |

|                            |              |
|----------------------------|--------------|
| C6218, C6223, C6255        | CKSQYF103Z50 |
| C6220, C6226, C6242, C6256 | CKSQYF223Z50 |
| C6225                      | CKSQYF473Z50 |

### RESISTORS

|                                   |             |
|-----------------------------------|-------------|
| R6280                             | RD1/4PU101J |
| R6413, R6416, R6418, R6906, R6909 | RS1/8S000J  |
| R6401                             | RS1/8S470J  |
| VR6201 (10KΩ, 0.1W)               | RCPI045     |

|                 |             |
|-----------------|-------------|
| Other Resistors | RS1/10S□□□J |
|-----------------|-------------|

### OTHERS

|        |                              |            |
|--------|------------------------------|------------|
| BN6202 | TERMINAL 4 – P               | AKE7028    |
| X6202  | CRYSTAL RESONATOR(456kHz)    | ASS1066    |
| X6201  | CRYSTAL RESONATOR(7.2000MHz) | ASS1093    |
| CN6201 | 14P SOCKET                   | KP2001A14L |

## **E** CD ASSY

### SEMICONDUCTORS

|              |           |
|--------------|-----------|
| IC8201       | BA5923FP  |
| IC8101       | LA9240ML  |
| IC8301       | LC78622ED |
| Q8101        | 2SA1048   |
| Q8251, Q8252 | 2SA1560   |

|              |         |
|--------------|---------|
| Q8253, Q8254 | 2SC4040 |
| D8253        | 1SS181  |
| D8251, D8252 | 1SS355  |



| Mark | No. | Description | Parts No. |
|------|-----|-------------|-----------|
|------|-----|-------------|-----------|

**COILS AND FILTERS**

|              |         |
|--------------|---------|
| L8351, L8352 | LFA010K |
| L8201        | LFA470J |

**CAPACITORS**

|                                   |              |
|-----------------------------------|--------------|
| C8129                             | CCSQCH010C50 |
| C8145, C8352, C8354, C8356, C8358 | CCSQCH101J50 |
| C8361, C8362                      | CCSQCH101J50 |
| C8132, C8310, C8311               | CCSQCH150J50 |
| C8131                             | CCSQCH300J50 |

|              |             |
|--------------|-------------|
| C8127        | CEAL010M50  |
| C8142        | CEAL101M6R3 |
| C8126, C8139 | CEAL470M16  |
| C8135        | CEAL4R7M16  |
| C8124        | CEALR47M50  |

|              |            |
|--------------|------------|
| C8136        | CEAS100M50 |
| C8108, C8306 | CEAS101M10 |
| C8202        | CEAS101M25 |
| C8101        | CEAS3R3M50 |
| C8105        | CEAS470M16 |

|                                   |              |
|-----------------------------------|--------------|
| C8109                             | CEASR22M50   |
| C8106, C8119, C8133, C8360        | CKSQYB102K50 |
| C8102, C8122, C8123, C8130        | CKSQYB103K50 |
| C8137, C8138, C8201, C8309, C8312 | CKSQYB103K50 |
| C8134, C8302, C8303               | CKSQYB104K25 |

|                            |              |
|----------------------------|--------------|
| C8353, C8359               | CKSQYB152K50 |
| C8111                      | CKSQYB153K25 |
| C8114, C8117, C8120, C8121 | CKSQYB154K16 |
| C8125                      | CKSQYB221K50 |
| C8107                      | CKSQYB223K50 |

|              |              |
|--------------|--------------|
| C8110        | CKSQYB331K50 |
| C8115, C8128 | CKSQYB332K50 |
| C8113        | CKSQYB333K25 |
| C8112, C8141 | CKSQYB334K16 |
| C8355, C8357 | CKSQYB471K50 |

|                            |              |
|----------------------------|--------------|
| C8116, C8140               | CKSQYB473K50 |
| C8118, C8301, C8304, C8305 | CKSQYF104Z25 |

**RESISTORS**

|               |             |
|---------------|-------------|
| All Resistors | RS1/10S□□□J |
|---------------|-------------|

**OTHERS**

|        |                     |                  |
|--------|---------------------|------------------|
| CN8003 | 6PJUMPER CONNECTOR  | 52151 – 0610     |
| CN8002 | CONNECTOR POST      | B6B – PH – K – S |
| CN8005 | SIDE POST 3P        | BS3P – SHF – 1AA |
| X8301  | CERAMIC(16.9344MHz) | DSS1083          |
| CN8004 | CONNECTOR           | HLEM20R – 1      |

|        |           |              |
|--------|-----------|--------------|
| CN8001 | CONNECTOR | SLW15S – 1C7 |
|--------|-----------|--------------|

**C MOTOR ASSY****SWITCHES AND RELAYS**

|       |         |
|-------|---------|
| S8503 | ASG7009 |
|-------|---------|

**OTHERS**

|              |         |
|--------------|---------|
| MOTOR PULLEY | PNW1634 |
| SLIDER MOTOR | VXM1033 |

| Mark | No. | Description | Parts No. |
|------|-----|-------------|-----------|
|------|-----|-------------|-----------|

**D SW ASSY****SWITCHES AND RELAYS**

|       |         |
|-------|---------|
| S8502 | ASG7009 |
| S8501 | DSG1017 |

## 6. ADJUSTMENT

### 6.1 TUNER SECTION

#### ■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1-1.

| Step No. | Adjustment Title          | FM SG (1kHz, $\pm 75$ kHz dev.) |                    | Reception Frequency Display | Adjustment Location | Specifications                                                                    |
|----------|---------------------------|---------------------------------|--------------------|-----------------------------|---------------------|-----------------------------------------------------------------------------------|
|          |                           | Frequency (MHz)                 | Level (dB $\mu$ V) |                             |                     |                                                                                   |
| 1        | Front End Sensitivity     | 98                              | 0-30               | 98MHz                       | L6402<br>T6401      | Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level. |
| 2        | TUNED IND. Lighting Level | 98                              | 18 $\pm$ 2         | 98MHz                       | VR6201              | Adjust so that the indicator of TUNED IND. starts to light up.                    |

Notes:

- Before adjusting, make sure there is no gap between L6401 and L6402. If there is a gap between them, bring them into contact with each other first, and then make adjustments.

#### ■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1-1.

| Step No. | Adjustment Title      | AM SG (400Hz, 30% Mod.) |                      | Reception Frequency Display | Adjustment Location | Specifications                                                                    |
|----------|-----------------------|-------------------------|----------------------|-----------------------------|---------------------|-----------------------------------------------------------------------------------|
|          |                       | Frequency (kHz)         | Level (dB $\mu$ V/m) |                             |                     |                                                                                   |
| 1        | Front End Sensitivity | 999 <sup>*1</sup>       | 35-45                | 999kHz <sup>*1</sup>        | T6201               | Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level. |

\*1: For the area using 10kHz step, frequencies should be 1000 kHz

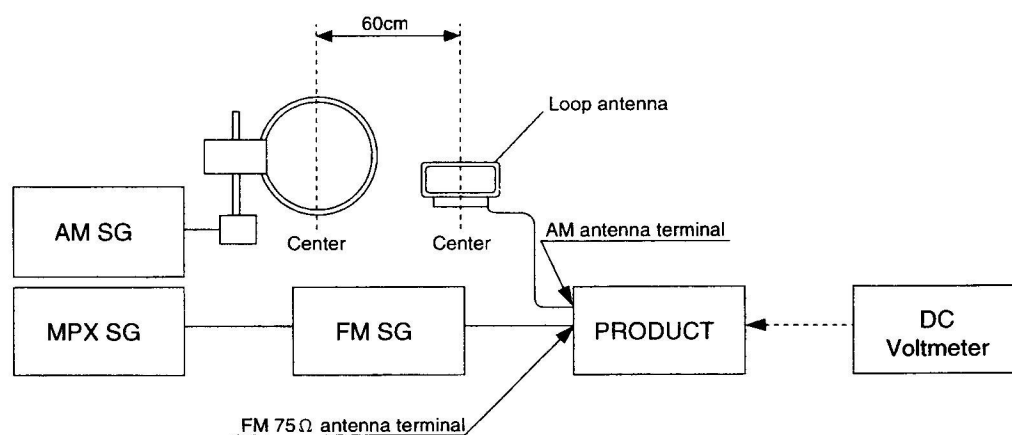


Fig. 1-1 AM and FM Adjustment Wiring Diagram

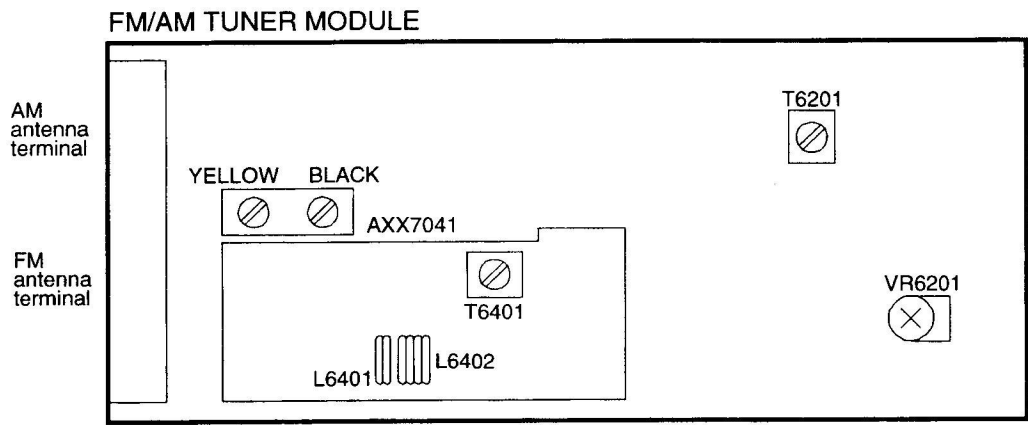


Fig. 1-2 Adjustment Points

6.2 CASSETTE DECK SECTION

- Adjustment points and test points are shown in Fig. 2-2 and Fig. 2-3.

■ Mechanical Adjustment

- Test tape: NCT-111 or STD-301 (3kHz, 30min).

1. Tape Speed Adjustment

| No. | Mode           | Test Tape                                 | Adjusting Points    | Measurement Points                 | Adjustment Procedure                                                                                                                                                                                         | Remarks |
|-----|----------------|-------------------------------------------|---------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1   | Deck I<br>PLAY | NCT-111<br>or STD-301<br>(Playback: 3kHz) | DECK ASSY<br>VR4101 | PB OUT<br>POINT (Rch)<br>(AF Assy) | Press the PLAY SW and adjust so that the reading becomes 3000Hz $\pm$ 20Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3000Hz $\pm$ 60Hz). |         |

## ■ Electrical Adjustment

Check the following before starting.

- (1) Confirm that the tape speed adjustment has been completed.
- (2) Clean the heads and demagnetize them using a head eraser.
- (3) Set the measurement level to 0 dBV = 1 Vrms.
- (4) Use the specified tape for adjustment. Use the labeled (A) side of the test tape.  
STD-331E: For playback check  
STD-631or STD-632: Normal blank tape
- (5) Provide yourself with the following measuring devices:
  - AC voltmeter (Noisemeter : filter off)
  - AC millivoltmeter
  - Low-frequency oscillator
  - Attenuator
  - Oscilloscope
- (6) Adjust both right and left channels unless otherwise specified.
- (7) Warm up the unit for several minutes before adjustment.  
In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
- (8) Always follow the indicated adjustment order.  
Otherwise, a complete adjustment may not be achieved.

## Playback Adjustment (Decks I and II)

- (1) Head Azimuth Adjustment

## Recording Adjustment (Deck II)

- (1) Bias Oscillation Frequency Adjustment
- (2) Recording Bias Adjustment
- (3) ALC Operation Check

\* As the reference recording level is 250nwb/m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160nwb/m). When adjusting, pay careful attention to the type of tape used.

|          |                         |       |       |       |          |           |      |        |      |      |      |       |       |       |      |      |       |
|----------|-------------------------|-------|-------|-------|----------|-----------|------|--------|------|------|------|-------|-------|-------|------|------|-------|
| 0 dB 30s | 0 dB: 315 Hz, 250 nwb/m |       |       |       |          |           |      |        |      |      |      |       |       |       |      |      |       |
| 315Hz    | 30s                     | 30s   | 30s   | 10s   | 10s      | ..... 10s |      |        |      |      |      |       |       |       |      |      | -20dB |
|          | 6.3kHz                  | 10kHz | 315Hz | 14kHz | 12.5 kHz | 10kHz     | 8kHz | 6.3kHz | 4kHz | 2kHz | 1kHz | 500Hz | 250Hz | 125Hz | 63Hz | 40Hz |       |

Fig. 2-1 STD-331E Test Tape

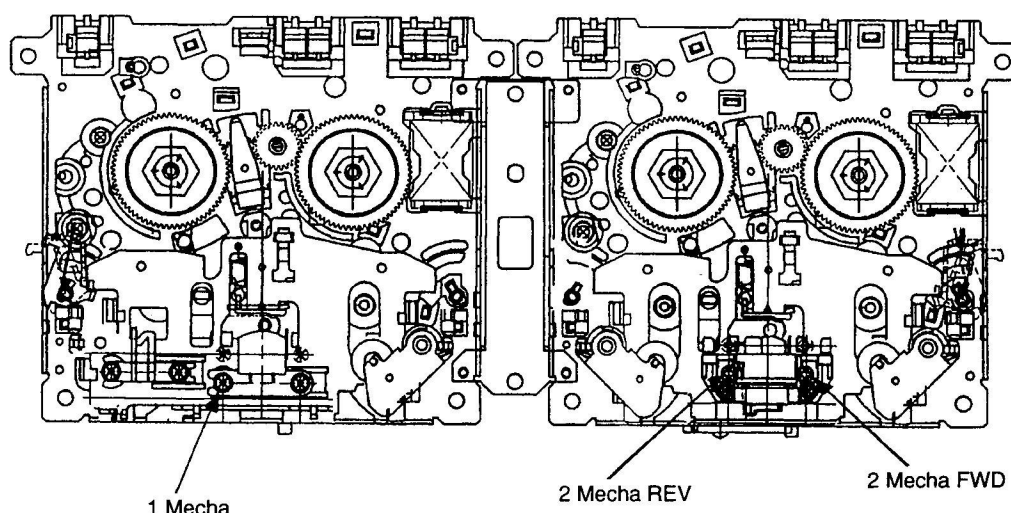


Fig. 2-2 Head Azimuth Adjustment screw

## ■ Playback Adjustment

### (1) Head Azimuth Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

| Step | Mode | Input Signal/<br>Test Tape                           | Adjusting Points |                                                   | Measurement<br>Points                | Adjustment<br>Value              | Remarks                                                                       |
|------|------|------------------------------------------------------|------------------|---------------------------------------------------|--------------------------------------|----------------------------------|-------------------------------------------------------------------------------|
| 1    | PLAY | STD-331E<br>test tape<br>(Playback: 10kHz,<br>-20dB) | Deck I           | Head azimuth<br>adjustment<br>screw<br>(Fig. 2-2) | DECK PB OUT<br>(L, Rch)<br>(AF Assy) | Max.<br>playback<br>signal level | After adjustment, apply silicon bond<br>to the head azimuth adjustment screw. |
|      |      |                                                      | Deck II          |                                                   |                                      |                                  |                                                                               |

## ■ Recording Adjustment

### (1) Bias Oscillation Frequency Adjustment

| Step | Mode | Input Signal/<br>Test Tape                                                 | Adjusting Points |       | Measurement<br>Points                      | Adjustment<br>Value                                  | Remarks                                                                                                                    |
|------|------|----------------------------------------------------------------------------|------------------|-------|--------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1    | REC  | Load the STD-631<br>or STD-632 test<br>tape and set the<br>recording mode. | Deck I           | ————— | —————                                      | Oscillation<br>frequency to be<br>105.0kHz<br>±2kHz. | If the ASES/COPY button for four seconds<br>while the power is in STAND BY mode,<br>the frequency will decrease 2 – 3 kHz. |
|      |      |                                                                            | Deck II          | L4351 | Between ④<br>point in Fig.<br>2-3 and GND. |                                                      |                                                                                                                            |

### (2) Recording Bias Adjustment ● Since this adjustment affects recording bias, prevent distortion from increasing due to underbias.

| Step | Mode         | Input Signal/Test Tape                                                                                                  | Adjusting Points |        | Measurement<br>Points                   | Adjustment Value                                                                                                     | Remarks |
|------|--------------|-------------------------------------------------------------------------------------------------------------------------|------------------|--------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------|
| 1    | REC→<br>PLAY | Load the STD-631 or STD-632<br>test tape. Record the 315Hz and<br>10kHz signals at 25.2dBV input<br>level and playback. | Deck I           | —————  | DECK PB<br>OUT<br>(L, Rch)<br>(AF Assy) | Repeat adjustment until<br>playback level of the 10kHz<br>signal is within 0±0.5dB from<br>that of the 315Hz signal. |         |
|      |              |                                                                                                                         | Deck II          | VR4351 |                                         |                                                                                                                      |         |
| 2    | REC          | Load the STD-632 test tape and<br>record (No signal)                                                                    | Deck II          | VR4351 | TP BIAS<br>V POINT                      | 23V–26V                                                                                                              |         |

### (3) ALC Operation Check

| Step | Mode | Input Signal/Test Tape                                                      | Adjusting Points                                     | Measurement Points                    | Adjustment Value                        | Remarks |
|------|------|-----------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------|-----------------------------------------|---------|
| 1    | REC  | Input a 315Hz signal to the AUX terminal and set the input selector to AUX. | Input signal level                                   | PB OUT POINT<br>(L, Rch)<br>(AF Assy) | -8.2dBV                                 |         |
| 2    |      |                                                                             | Set to a level +10dB above the input level at step1. |                                       | Confirm that the reading is -3.2±2.5dBV |         |

## <CASSETTE DECK>

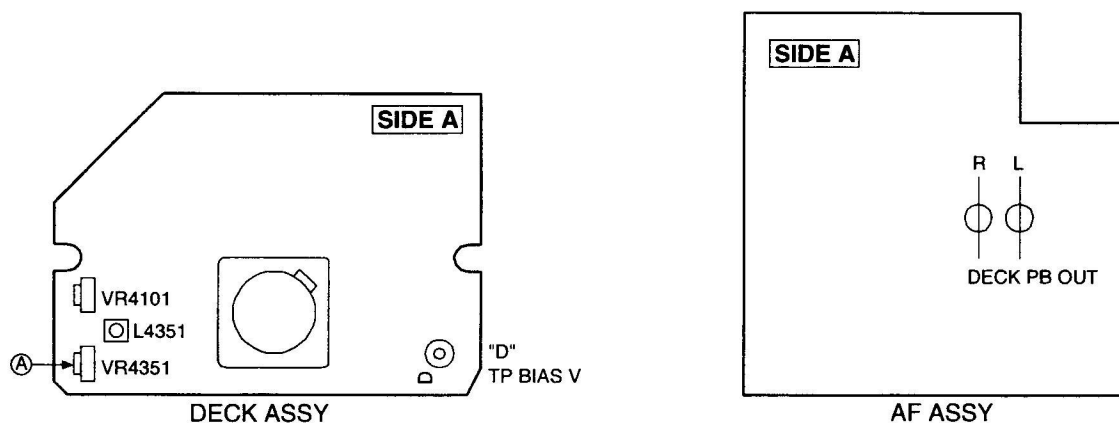
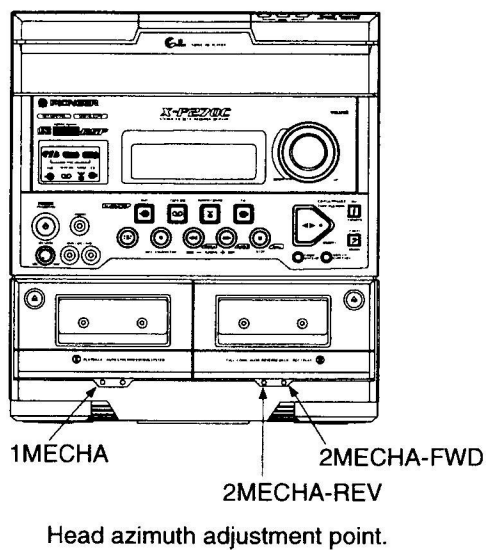


Fig. 2-3 Adjustment points

## 6.3 POWER SECTION

### ■ Adjustment of Vp

Adjust VR1001 in the Power assy so that the voltage of Vp checking point W104 is  $17.5 \pm 0.1V$ .

Adjustment can be made when no load is applied while the power is turned ON and no signal is sent, as well as for the GND voltage or for the chassis.

Adjustment is required when the 5volte regurator, IC1001(NJM78M05) in the Power assy are replaced.

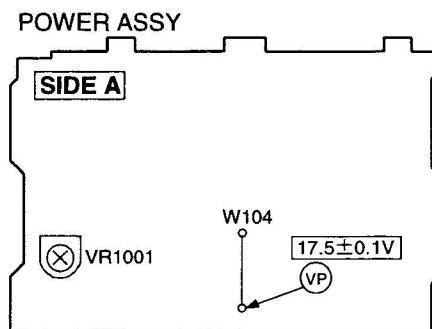


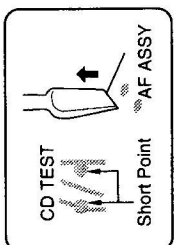
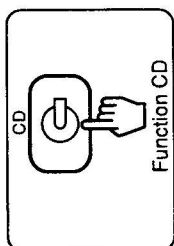
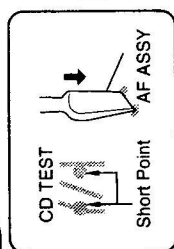
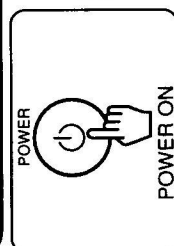
Fig. 3-1 Adjustment of Vp

## 6.3 TEST MODE

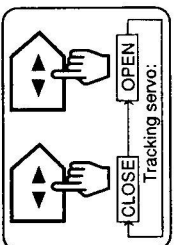
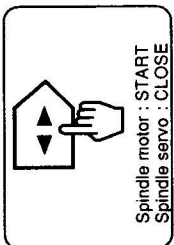
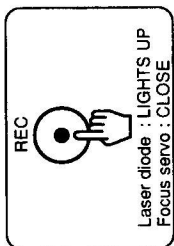
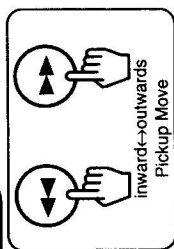
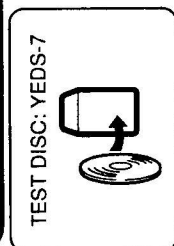
NOTE: There is no information to be shown in this CD adjustment.

### ■ How to Start/Cancel Test Mode (テストモードの設定/解除)

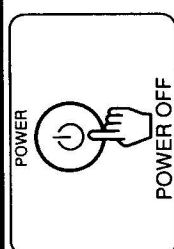
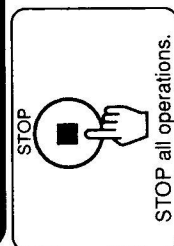
#### TEST MODE: ON



#### TEST MODE:

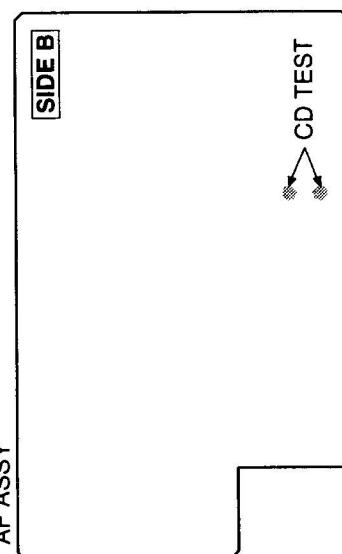


#### TEST MODE: STOP → CANCEL



### ■ Test Point (テストポイントの位置)

AF ASSY





## 7. GENERAL INFORMATION

## 7.1 PARTS

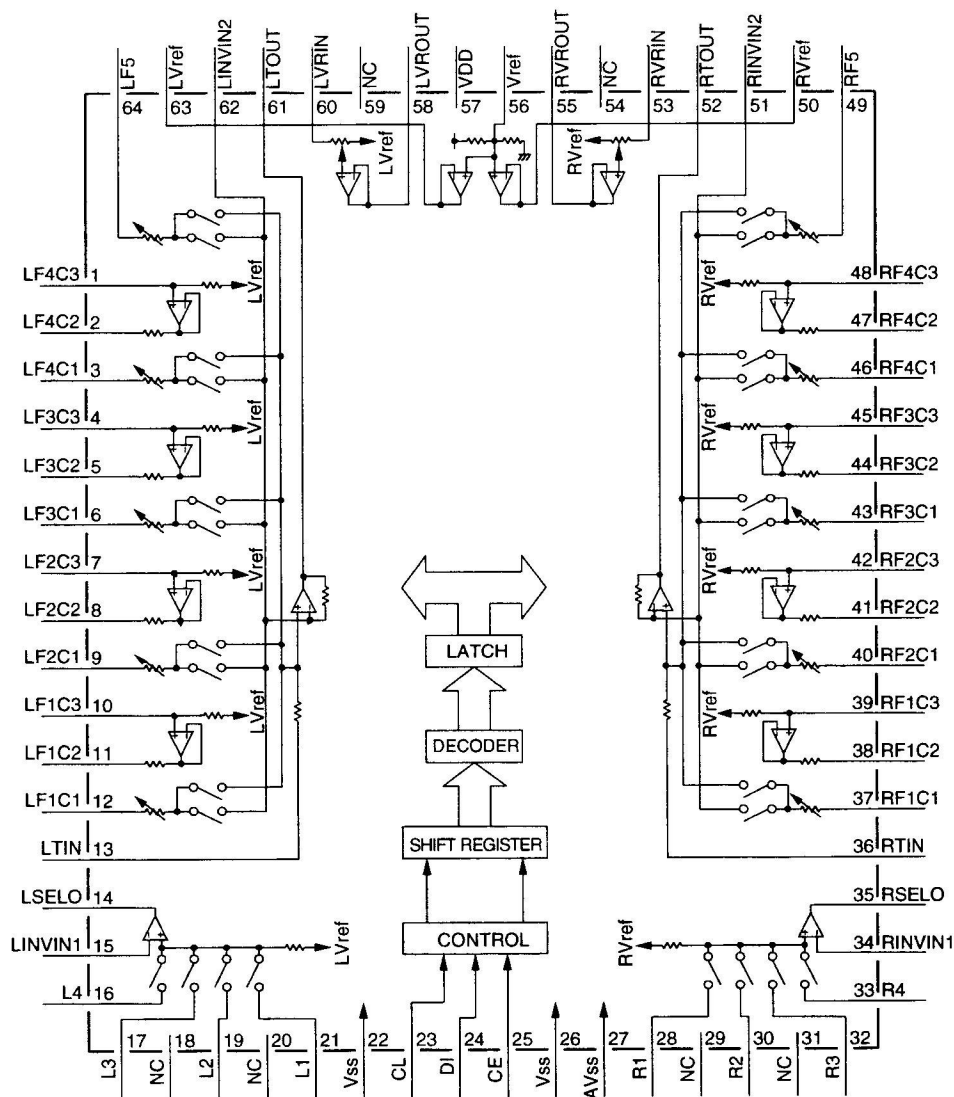
### 7.1.1 IC

■ LC75394NHE (IC2101 : AF ASSY)

● **ELECTRONIC VOL IC**

- Block Diagram

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.



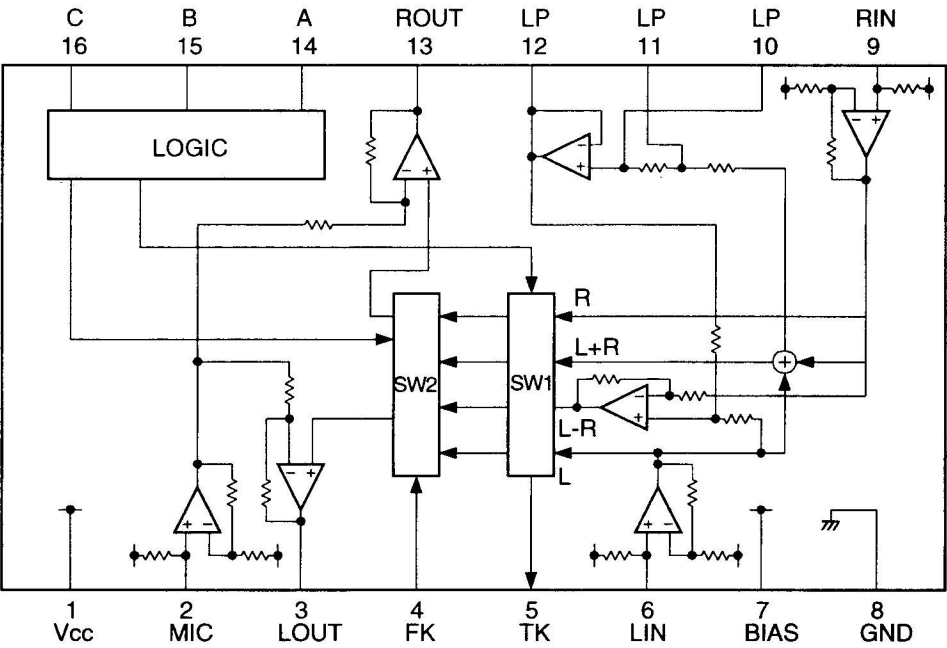
- Pin Function

| No. | Name  | Function                                |
|-----|-------|-----------------------------------------|
| 1   | LF4C3 | F4 band control block of L channel.     |
| 2   | LF4C2 | External capacitor connection terminal. |
| 3   | LF4C1 |                                         |
| 4   | LF3C3 | F3 band control block of L channel.     |
| 5   | LF3C2 | External capacitor connection terminal. |
| 6   | LF3C1 |                                         |
| 7   | LF2C3 | F2 band control block of L channel.     |
| 8   | LF2C2 | External capacitor connection terminal. |
| 9   | LF2C1 |                                         |

| No. | Name    | Function                                                                                                                                                                                                                                                                                            |
|-----|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10  | LF1C3   | F1 band control block of L channel.                                                                                                                                                                                                                                                                 |
| 11  | LF1C2   | External capacitor connection terminal.                                                                                                                                                                                                                                                             |
| 12  | LF1C1   |                                                                                                                                                                                                                                                                                                     |
| 13  | LTIN    | Tone control input terminal. Should be driven at low impedance.                                                                                                                                                                                                                                     |
| 14  | LSELO   | Output terminal of input selector.                                                                                                                                                                                                                                                                  |
| 15  | LINVIN1 | Reverse input terminal of the operational amplifier for input gain setting.                                                                                                                                                                                                                         |
| 16  | L4      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 17  | L3      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 18  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 19  | L2      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 20  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 21  | L1      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 22  | Vss     | Grounding terminal of internal logic.                                                                                                                                                                                                                                                               |
| 23  | CL      | Input terminal for serial data and clock for control.                                                                                                                                                                                                                                               |
| 24  | DI      | Input terminal for serial data and clock for control.                                                                                                                                                                                                                                               |
| 25  | CE      | Chip enable terminal. Data is written to the internal latch when the system changes from "H" to "L", whereby the analog switches operate. Data transmission is enabled at the "H" level.                                                                                                            |
| 26  | Vss     | Grounding terminal of internal logic.                                                                                                                                                                                                                                                               |
| 27  | AVss    | Grounding terminal of internal operational amplifier.                                                                                                                                                                                                                                               |
| 28  | R1      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 29  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 30  | R2      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 31  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 32  | R3      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 33  | R4      | Signal input terminal.                                                                                                                                                                                                                                                                              |
| 34  | RINVIN1 | Reverse input terminal of the operational amplifier for input gain setting.                                                                                                                                                                                                                         |
| 35  | RSELO   | Output terminal of input selector.                                                                                                                                                                                                                                                                  |
| 36  | RTIN    | Tone control input terminal. Should be driven at low impedance.                                                                                                                                                                                                                                     |
| 37  | RF1C1   | F1 band control block of R channel.                                                                                                                                                                                                                                                                 |
| 38  | RF1C2   | External capacitor connection terminal.                                                                                                                                                                                                                                                             |
| 39  | RF1C3   |                                                                                                                                                                                                                                                                                                     |
| 40  | RF2C1   | F2 band control block of R channel.                                                                                                                                                                                                                                                                 |
| 41  | RF2C2   | External capacitor connection terminal.                                                                                                                                                                                                                                                             |
| 42  | RF2C3   |                                                                                                                                                                                                                                                                                                     |
| 43  | RF3C1   | F3 band control block of R channel.                                                                                                                                                                                                                                                                 |
| 44  | RF3C2   | External capacitor connection terminal.                                                                                                                                                                                                                                                             |
| 45  | RF3C3   |                                                                                                                                                                                                                                                                                                     |
| 46  | RF4C1   | F4 band control block of R channel.                                                                                                                                                                                                                                                                 |
| 47  | RF4C2   | External capacitor connection terminal.                                                                                                                                                                                                                                                             |
| 48  | RF4C3   |                                                                                                                                                                                                                                                                                                     |
| 49  | RF5     | F5 band control block. External capacitor connection terminal.                                                                                                                                                                                                                                      |
| 50  | RVref   | Common terminal for the volume, tone, and input switching parts. The capacitor between LVref (RVref) and VSS is used for residual resistance when the volume is decreased. Thus, adequate attention should be taken for the capacity of the capacitor. Voltage higher than VDD must not be applied. |
| 51  | RINVIN2 | Reverse input terminal of the operational amplifier for graphic equalizer. Connecting a capacitor between INVIN2 and TOUT eliminates unwanted band and provides measures for oscillation.                                                                                                           |
| 52  | RTOUT   | Tone control output terminal.                                                                                                                                                                                                                                                                       |
| 53  | RVRIN   | Volume input terminal. Should be driven at low impedance.                                                                                                                                                                                                                                           |
| 54  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 55  | RVROUT  | Volume output terminal.                                                                                                                                                                                                                                                                             |
| 56  | Vref    | VDD/2 voltage generator. Connects the capacitor between Vref and VSS as measures for power ripple.                                                                                                                                                                                                  |
| 57  | VDD     | Power terminal.                                                                                                                                                                                                                                                                                     |
| 58  | LVROUT  | Volume output terminal.                                                                                                                                                                                                                                                                             |
| 59  | NC      | No Connect terminal.                                                                                                                                                                                                                                                                                |
| 60  | LVRIN   | Volume input terminal. Should be driven at low impedance.                                                                                                                                                                                                                                           |
| 61  | LTOUT   | Tone control output terminal.                                                                                                                                                                                                                                                                       |
| 62  | LINVIN2 | Reverse input terminal of the operational amplifier for graphic equalizer. Connecting a capacitor between INVIN2 and TOUT eliminates unwanted band and provides measures for oscillation.                                                                                                           |
| 63  | LVref   | Common terminal for the volume, tone, and input switching parts. The capacitor between LVref (RVref) and VSS is used for residual resistance when the volume is decreased. Thus, adequate attention should be taken for the capacity of the capacitor. Voltage higher than VDD must not be applied. |
| 64  | LF5     | F5 band control block. External capacitor connection terminal.                                                                                                                                                                                                                                      |

XR-P270C,XR-P170C

- BA3837 (IC2151 : AF ASSY)
- VOCAL FADER
- Block Diagram

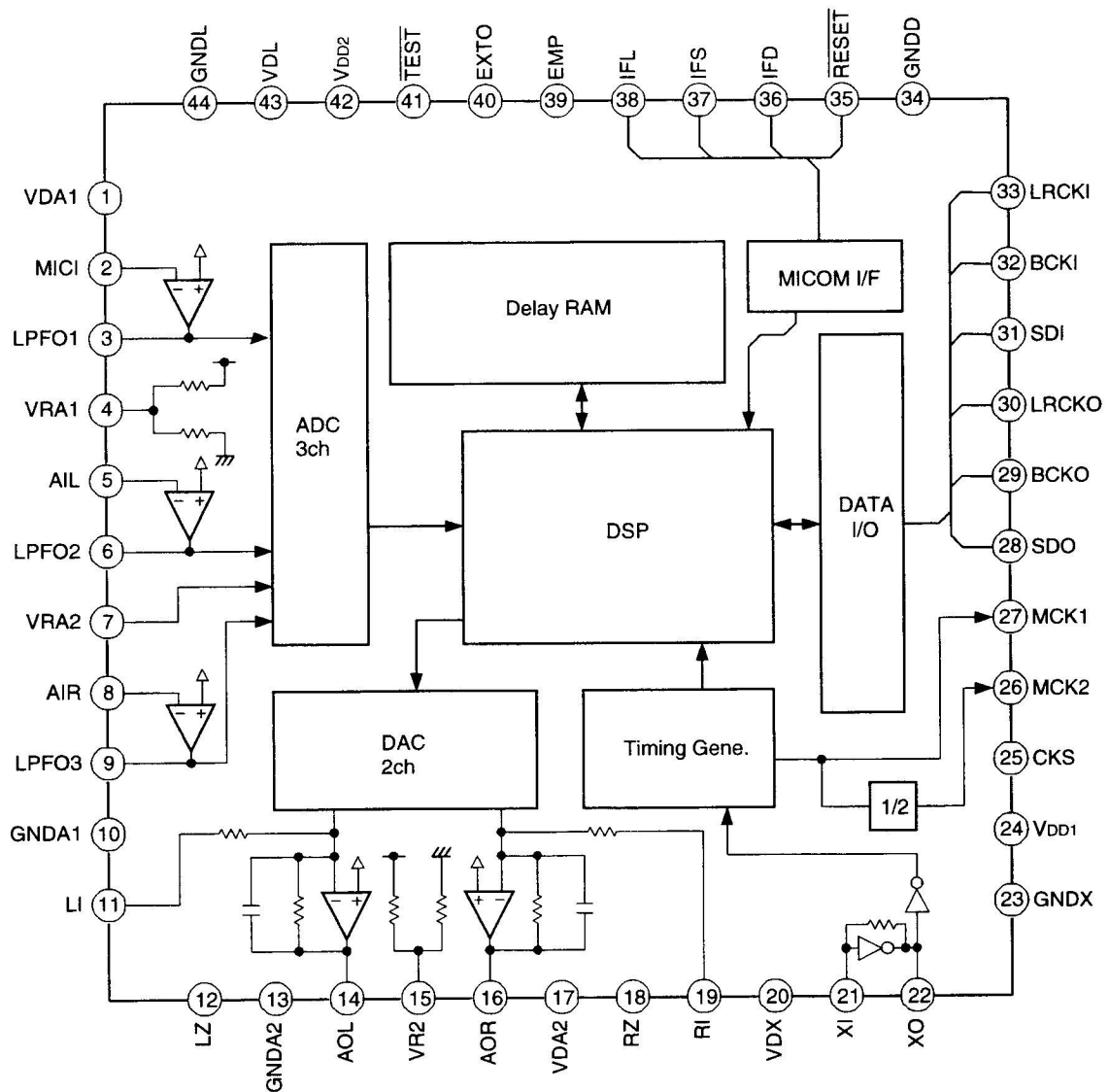


● Pin Function

| No. | Name   | Function                                          |
|-----|--------|---------------------------------------------------|
| 1   | Vcc    | Vcc                                               |
| 2   | MIC IN | Mixing input terminal of microphone audio.        |
| 3   | LOUT   | L-ch output terminal.                             |
| 4   | FK     | Terminal to input signal from the key controller. |
| 5   | TK     | Terminal to output signal to the key controller.  |
| 6   | LIN    | L signal input terminal.                          |
| 7   | BIAS   | Signal bias circuit terminal.                     |
| 8   | GND    | GND                                               |
| 9   | RIN    | R signal input terminal.                          |
| 10  | LPF1   | LPF time constant terminal.                       |
| 11  | LPF2   | LPF time constant terminal.                       |
| 12  | LPF3   | LPF output terminal.                              |
| 13  | ROUT   | R-ch output terminal.                             |
| 14  | CONTA  | Mode switching terminal A.                        |
| 15  | CONTB  | Mode switching terminal B.                        |
| 16  | CONTC  | Mode switching terminal C.                        |

■ TC9409BF-001 (IC2201 : AF ASSY)

- DSP
- Block Diagram



# XR-P270C,XR-P170C

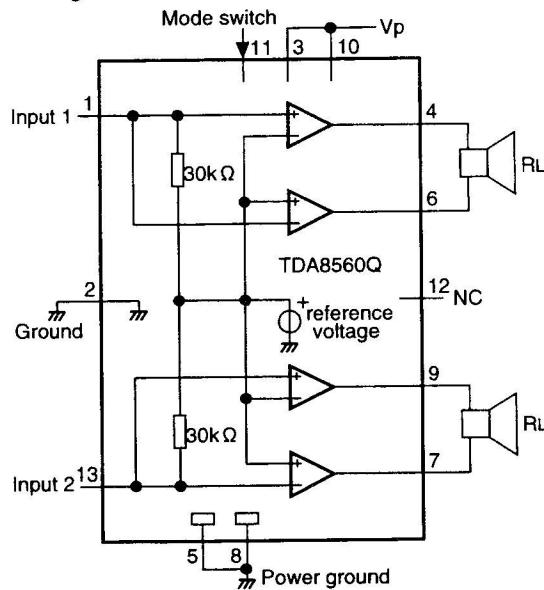
## ● Pin Function

| No. | Name   | I/O | Function                                                         |
|-----|--------|-----|------------------------------------------------------------------|
| 1   | VDA1   | -   | ADC power supply.                                                |
| 2   | MICI   | I   | LPF input for MIC input.                                         |
| 3   | LPFO1  | O   | LPF output for MIC input.                                        |
| 4   | VRA1   | -   | ADC reference voltage.                                           |
| 5   | AIL    | I   | LPF input for line input Lch.                                    |
| 6   | LPFO2  | O   | LPF output for line input Lch.                                   |
| 7   | VRA2   | -   | ADC reference voltage.                                           |
| 8   | AIR    | I   | LPF input for line input Rch.                                    |
| 9   | LPFO3  | O   | LPF output for line input Rch.                                   |
| 10  | GND A1 | -   | ADC grounding.                                                   |
| 11  | LI     | I   | L-ch analog addition input.                                      |
| 12  | LZ     | O   | L-ch digital input zero detection.                               |
| 13  | GND A2 | -   | DAC grounding.                                                   |
| 14  | AOL    | O   | DAC output Lch.                                                  |
| 15  | VR2    | -   | DAC reference voltage.                                           |
| 16  | AOR    | O   | DAC output Rch.                                                  |
| 17  | VDA2   | -   | DAC power supply.                                                |
| 18  | RZ     | O   | R-ch digital input zero detection.                               |
| 19  | RI     | I   | R-ch analog addition input.                                      |
| 20  | VDX    | -   | Oscillation power supply.                                        |
| 21  | XI     | I   | Oscillator connection terminal (either 256, 384, 512 or 768 fs). |
| 22  | XO     | O   | Oscillator connection terminal.                                  |
| 23  | GNDX   | -   | Oscillation grounding.                                           |
| 24  | VDD1   | -   | Digital power supply.                                            |
| 25  | CKS    | I   | Master clock selection (H: 256/384 fs, L: 512/768 fs).           |
| 26  | MCK2   | O   | Oscillation clock 1/2 dividing output.                           |
| 27  | MCK1   | O   | Oscillation clock output.                                        |
| 28  | SDO    | O   | Digital audio data output.                                       |
| 29  | BCKO   | O   | Bit clock output.                                                |
| 30  | LRCKO  | O   | Channel clock output.                                            |
| 31  | SDI    | I   | Digital audio data input.                                        |
| 32  | BCKI   | I   | Bit clock input.                                                 |
| 33  | LRCKI  | I   | Channel clock input.                                             |
| 34  | GND D  | -   | Digital grounding.                                               |
| 35  | RESET  | I   | Reset (L:reset). Pullup resistance.                              |
| 36  | IFD    | I   | Microprocessor I/F data input.                                   |
| 37  | IFS    | I   | Microprocessor I/F data shift clock input.                       |
| 38  | IFL    | I   | Microprocessor I/F latch pulse input.                            |
| 39  | EMP    | I   | De-emphasis setting (de-emphasis filter ON at H).                |
| 40  | EXTO   | O   | Expansion output terminal.                                       |
| 41  | TEST   | I   | Test mode setting (normally H: fixed). Pullup resistance.        |
| 42  | VDD2   | -   | Digital power supply.                                            |
| 43  | VDL    | -   | Digital power supply for DRAM.                                   |
| 44  | GND L  | -   | Digital grounding for DRAM.                                      |

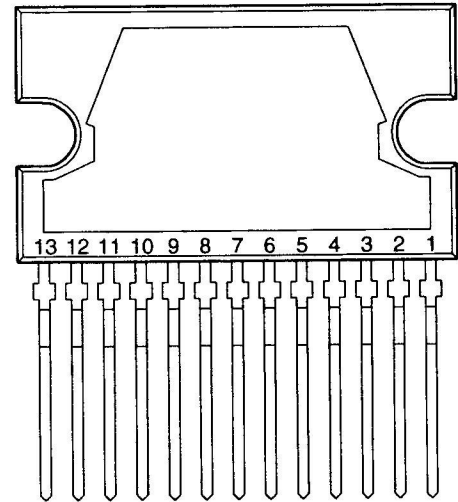
# ■ TDA8560Q (IC1201 : POWER ASSY)

## ● POWER AMP

## ● Block Diagram



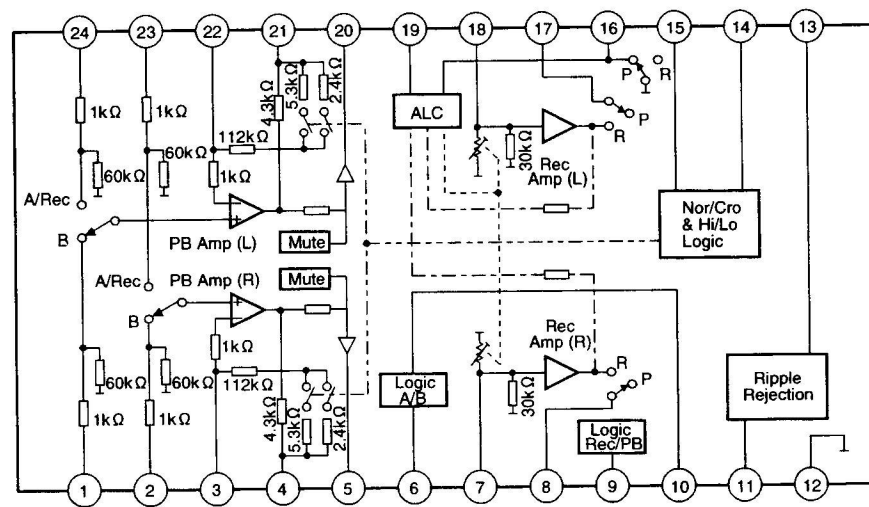
## ● Pin Assignment



# ■ AN7348K (IC4201 : DECK ASSY)

## ● PB/REC IC

## ● Block Diagram



## ● Pin Assignment

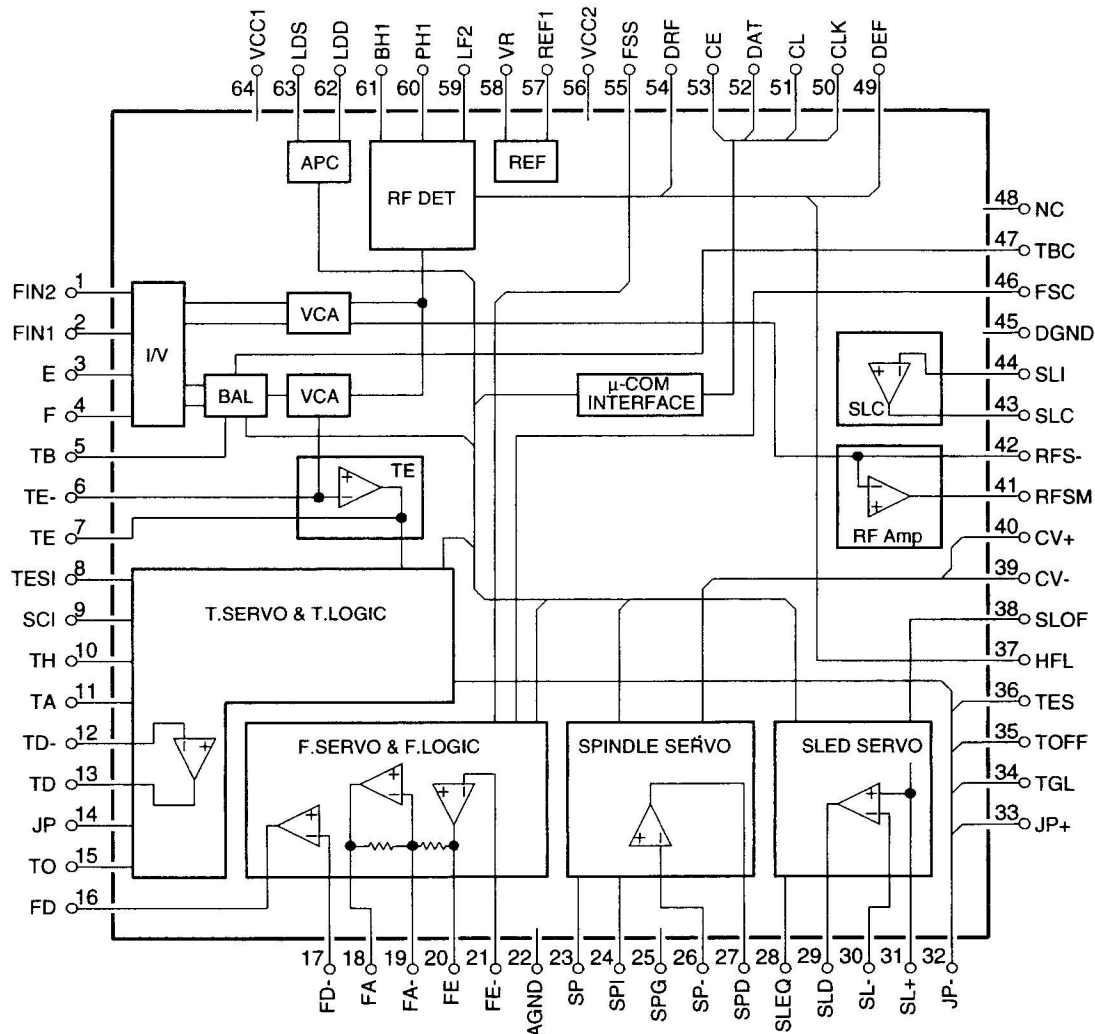
| No. | Function                    |
|-----|-----------------------------|
| 1   | L-Ch. PB Amp Input (B).     |
| 2   | R-Ch. PB Amp Input (B).     |
| 3   | R-Ch. Negative Feedback.    |
| 4   | R-Ch. PB Equalization.      |
| 5   | R-Ch. PB Output.            |
| 6   | AB Switching Time Constant. |
| 7   | R-Ch. REC Input.            |
| 8   | R-Ch. REC Output.           |
| 9   | REC/PB Select.              |
| 10  | Tape A/B Select.            |
| 11  | Ripple Filter.              |
| 12  | Output Gnd.                 |

| No. | Function                 |
|-----|--------------------------|
| 13  | Vcc                      |
| 14  | Normal/Cro2 Select.      |
| 15  | Hi/Lo Dubbing Select.    |
| 16  | ALC Time Constant.       |
| 17  | L-Ch. REC Output.        |
| 18  | L-Ch. REC Input.         |
| 19  | ALC Low Cut.             |
| 20  | L-Ch. PB Amp Output.     |
| 21  | L-Ch. PB Equalization.   |
| 22  | L-Ch. Negative Feedback. |
| 23  | R-Ch. PB Amp Input (A).  |
| 24  | L-Ch. PB Amp Input (A).  |

## ■ LA9240ML (IC8101 : CD ASSY)

### ● SERVO SIGNAL PROCESSOR IC FOR CD PLAYER

#### ● Block Diagram



#### ● Pin Function

| No. | Name | I/O | Function                                                                                                                             |
|-----|------|-----|--------------------------------------------------------------------------------------------------------------------------------------|
| 1   | FIN2 | I   | Pin for connection of the photodiode of the pickup. Generates RF signal by addition with the FIN1 pin, and FE signal by subtraction. |
| 2   | FIN1 | I   | Pin for connection of the photodiode of the pickup.                                                                                  |
| 3   | E    | I   | Pin for connection of the photodiode of the pickup. Generates TE signal by subtraction with the F pin.                               |
| 4   | F    | I   | Pin for connection of the photodiode of the pickup.                                                                                  |
| 5   | TB   | I   | Pin for DC component input of TE signal.                                                                                             |
| 6   | TE-  | I   | Pin to connect resistance for gain setting of TE signal between the TE pin.                                                          |
| 7   | TE   | O   | TE signal output pin.                                                                                                                |
| 8   | TESI | I   | TES (Track Error Sense) comparator input pin. Passes and inputs TE signal through the band-pass filter.                              |
| 9   | SCI  | I   | Input pin for shock detection.                                                                                                       |
| 10  | TH   | I   | Pin for setting tracking gain time constant.                                                                                         |
| 11  | TA   | O   | TA amplifier output pin.                                                                                                             |
| 12  | TD-  | I   | Pin to form the tracking phase compensation constant between the TD and VR pins.                                                     |
| 13  | TD   | O   | Pin for setting tracking phase compensation.                                                                                         |
| 14  | JP   | I   | Pin for setting tracking jump signal (kick pulse) amplitude.                                                                         |
| 15  | TO   | O   | Tracking control signal output pin.                                                                                                  |

| No. | Name | I/O | Function                                                                                                                |
|-----|------|-----|-------------------------------------------------------------------------------------------------------------------------|
| 16  | FD   | O   | Focusing control signal output pin.                                                                                     |
| 17  | FD-  | I   | Pin to form the focusing phase compensation constant between the FD and FA pins.                                        |
| 18  | FA   | O   | Pin to form the focusing phase compensation constant between the FD- and FA- pins.                                      |
| 19  | FA-  | I   | Pin to form the focusing phase compensation constant between the FA and FE pins.                                        |
| 20  | FE   | O   | Output pin of FE signal.                                                                                                |
| 21  | FE-  | I   | Pin to connect the resistance for gain setting of FE signal between the FE pin.                                         |
| 22  | AGND | -   | GND for analog signal.                                                                                                  |
| 23  | SP   | O   | Single end output of CV+/CV- pin input signal.                                                                          |
| 24  | SPI  | I   | Spindle amplifier input.                                                                                                |
| 25  | SPG  | I   | Resistance connection pin for gain setting in 12-cm mode for spindle.                                                   |
| 26  | SP-  | I   | Pin for connection of spindle phase compensation constant, as well as with the SPD pin.                                 |
| 27  | SPD  | O   | Spindle control signal output pin.                                                                                      |
| 28  | SLEQ | I   | Pin for connection of thread phase compensation constant.                                                               |
| 29  | SLD  | O   | Thread control signal output pin.                                                                                       |
| 30  | SL-  | I   | Pin to input thread feeding signal from the microprocessor.                                                             |
| 31  | SL+  | I   | Pin to input thread feeding signal from the microprocessor.                                                             |
| 32  | JP+  | I   | Pin to input tracking jump signal from DSP.                                                                             |
| 33  | JP+  | I   | Pin to input tracking jump signal from DSP.                                                                             |
| 34  | TGL  | I   | Pin to input tracking gain control signal from DSP. Tracking is set to gain low when TGL is "H".                        |
| 35  | TOFF | I   | Pin to input tracking OFF control signal from DSP. Tracking is OFF when TOFF is "H".                                    |
| 36  | TES  | O   | Pin to output TES signal to DSP.                                                                                        |
| 37  | HFL  | I   | High Frequency Level to be used for judgment whether the phase of the main beam is on the bit or mirror.                |
| 38  | SLOF | I   | Thread servo OFF control input pin.                                                                                     |
| 39  | CV-  | I   | Pin to input CLV error signal from DSP.                                                                                 |
| 40  | CV+  | I   | Pin to input CLV error signal from DSP.                                                                                 |
| 41  | RFSM | O   | RF output pin.                                                                                                          |
| 42  | RFS- | I   | Pin for RF gain setting and EFM signal 3T compensation constant setting, as well as with the RFSM pin.                  |
| 43  | SLC  | O   | Slice Level Control. Output pin to control the level of data slice by DSP of RF waveforms.                              |
| 44  | SLI  | I   | Input pin to control the level of data slice by DSP.                                                                    |
| 45  | DGND | -   | GND pin of the digital system.                                                                                          |
| 46  | FSC  | O   | Output pin for focus search smoothing capacitor.                                                                        |
| 47  | TBC  | I   | Tracking Balance Control. Pin to set EF balance variable range.                                                         |
| 48  | NC   | -   | No Connect.                                                                                                             |
| 49  | DEF  | O   | Pin to output defect detection of disc.                                                                                 |
| 50  | CLK  | I   | Reference clock input pin. Frequency of 4.23MHz is input from DSP.                                                      |
| 51  | CL   | I   | Microprocessor command clock input pin.                                                                                 |
| 52  | DAT  | I   | Microprocessor command data input pin.                                                                                  |
| 53  | CE   | I   | Microprocessor command chip enable input pin.                                                                           |
| 54  | DRF  | O   | Detect RF. RF level detection output.                                                                                   |
| 55  | FSS  | I   | Focus Search Select. Pin to switch focus search mode (switching between ÷search and +search for the reference voltage). |
| 56  | VCC2 | -   | VCC pin for the servo and digital systems.                                                                              |
| 57  | REFI | I   | Pin for connection of reference voltage bypass capacitor.                                                               |
| 58  | VR   | O   | Reference voltage output pin.                                                                                           |
| 59  | LF2  | I   | Pin for setting defect detection time constant of disc.                                                                 |
| 60  | PH1  | I   | Pin to connect capacitor for peak hold of RF signal.                                                                    |
| 61  | BH1  | I   | Pin to connect capacitor for bottom hold of RF signal.                                                                  |
| 62  | LDD  | O   | APC circuit output pin.                                                                                                 |
| 63  | LDS  | I   | APC circuit input pin.                                                                                                  |
| 64  | VCC1 | -   | VCC pin for the RF system.                                                                                              |

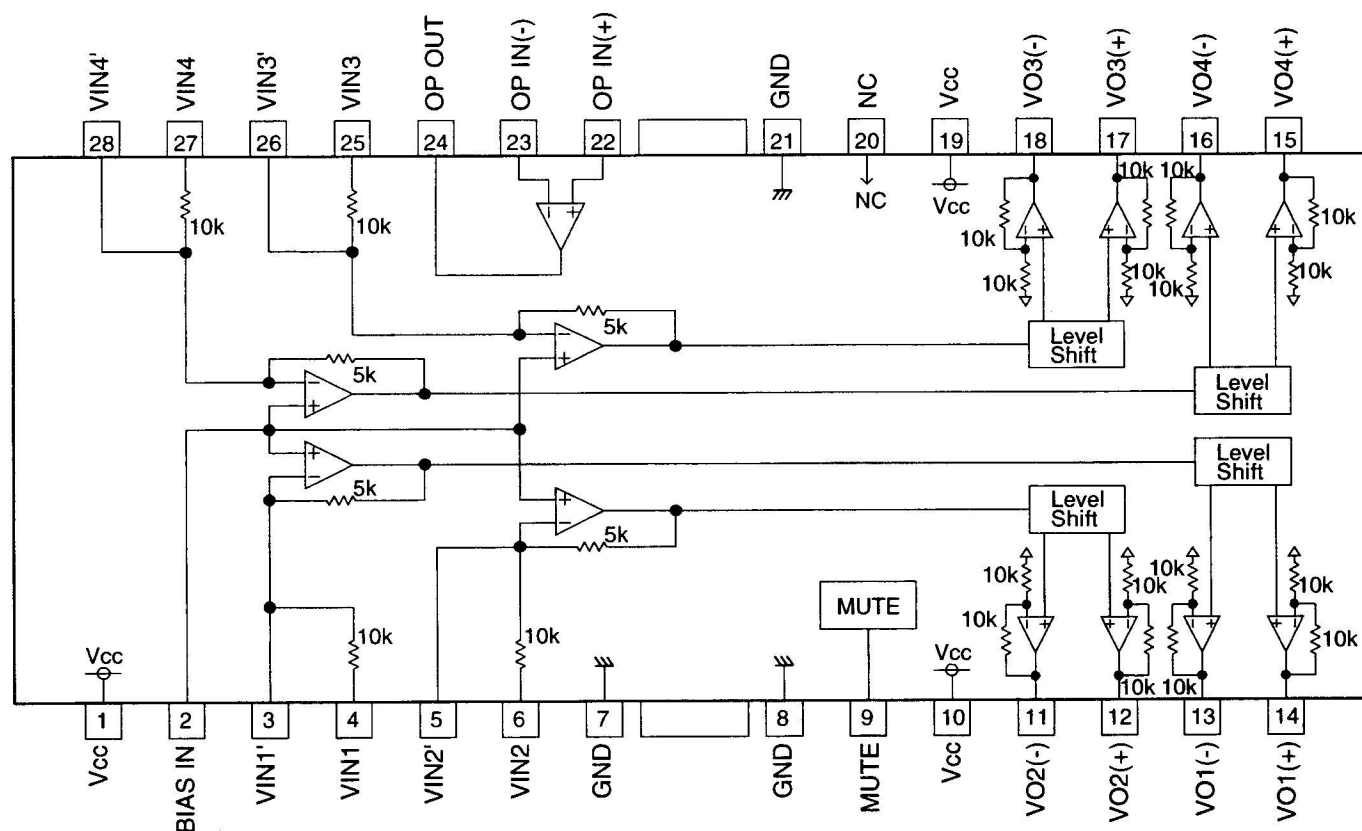


# XR-P270C,XR-P170C

## ■ BA5923FP (IC8201 : CD ASSY)

### ● POWER DRIVER IC FOR CD PLAYER

#### ● Block Diagram



#### ● Pin Function

| No. | Name    | I/O | Function                               |
|-----|---------|-----|----------------------------------------|
| 1   | Vcc     | -   | Vcc                                    |
| 2   | BIAS IN | I   | Bias amplifier input.                  |
| 3   | VIN1'   | I   | Driver CH1 input, gain adjustment pin. |
| 4   | VIN1    | I   | Driver CH1 input.                      |
| 5   | VIN2'   | I   | Driver CH2 input, gain adjustment pin. |
| 6   | VIN2    | I   | Driver CH2 input.                      |
| 7   | GND     | -   | Substrate Ground.                      |
| 8   | GND     | -   | Ground                                 |
| 9   | MUTE    | I   | Driver mute control input.             |
| 10  | Vcc     | -   | Vcc                                    |
| 11  | VO2 (-) | O   | Driver CH2 inverted output.            |
| 12  | VO2 (+) | O   | Driver CH2 noninverted output.         |
| 13  | VO1 (-) | O   | Driver CH1 inverted output.            |
| 14  | VO1 (+) | O   | Driver CH1 noninverted output.         |

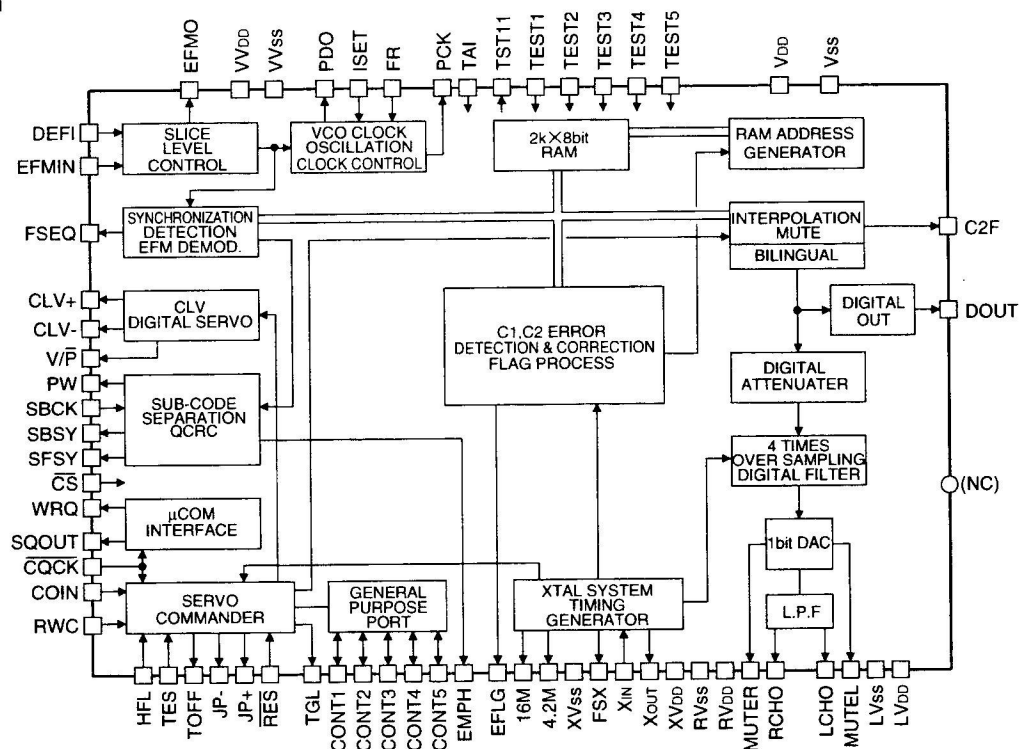
| No. | Name      | I/O | Function                               |
|-----|-----------|-----|----------------------------------------|
| 15  | VO4 (+)   | O   | Driver CH4 noninverted output.         |
| 16  | VO4 (-)   | O   | Driver CH4 inverted output.            |
| 17  | VO3 (+)   | O   | Driver CH3 noninverted output.         |
| 18  | VO3 (-)   | O   | Driver CH3 inverted output.            |
| 19  | Vcc       | -   | Vcc                                    |
| 20  | NC        | -   |                                        |
| 21  | GND       | -   | Substrate Ground.                      |
| 22  | OP IN (+) | I   | Op-amp input, positive.                |
| 23  | OP IN (-) | I   | Op-amp input, negative.                |
| 24  | OP OUT    | O   | Op-amp output.                         |
| 25  | VIN3      | I   | Driver CH3 input.                      |
| 26  | VIN3'     | I   | Driver CH3 input, gain adjustment pin. |
| 27  | VIN4      | I   | Driver CH4 input.                      |
| 28  | VIN4'     | I   | Driver CH4 input, gain adjustment pin. |

Note) Symbol of + and - (output of DRIVERS) means polarity to input pin.  
(For example if voltage of pin4 is high, pin14 is high.)

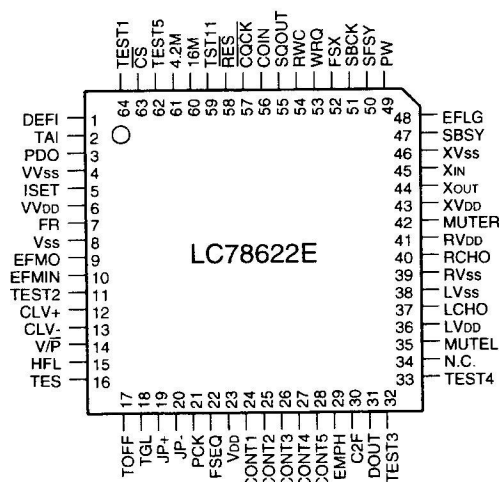
# ■ LC78622ED (IC8301 : CD ASSY)

## ● SIGNAL PROCESSOR AND SERVO CONTROL IC FOR CD PLAYER

### ● Block Diagram



### ● Pin Assignment



### ● Pin Function

| No. | Name  | I/O | Function                                                                    |
|-----|-------|-----|-----------------------------------------------------------------------------|
| 1   | DEFI  | I   | Defect detection signal (DEF) input. (Must be connected to 0V when unused). |
| 2   | TAI   | I   | Test input. A pull-down resistor is built-in. Must be connected to 0V.      |
| 3   | PDO   | O   | External VCO control phase comparator output.                               |
| 4   | VVss  | -   | Internal VCO ground. Must be connected to 0V.                               |
| 5   | ISET  | AI  | PDO output current adjustment resistor connection.                          |
| 6   | VVDD  | -   | Internal VCO power supply.                                                  |
| 7   | FR    | AI  | VCO frequency range adjustment.                                             |
| 8   | Vss   | -   | Digital system ground. Must be connected to 0V.                             |
| 9   | EFMO  | O   | Since level                                                                 |
| 10  | EFMIN | I   | control                                                                     |

# XR-P270C,XR-P170C

## ● Pin Function

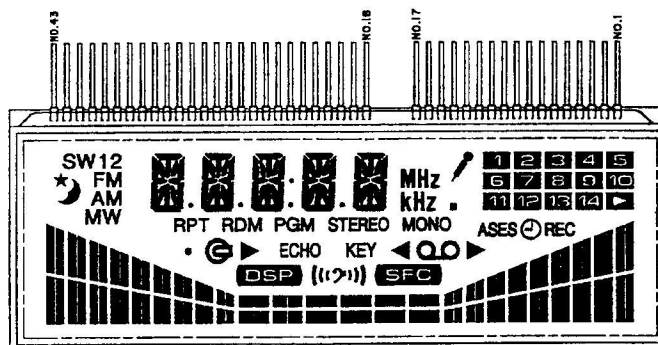
| No. | Name  | I/O | Function                                                                                                                                                                              |
|-----|-------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11  | TEST2 | I   | Test pin. A pull-down resistor is built-in. Must be connected to 0V.                                                                                                                  |
| 12  | CLV+  | O   | Disc motor control output. Can be set to 3-value output by microprocessor command.                                                                                                    |
| 13  | CLV-  | O   | Three-value output is also possible when specified microprocessor command.                                                                                                            |
| 14  | V/P   | O   | Rough servo/phase control automatic switching monitor output. Outputs a high during rough servo and a low level.                                                                      |
| 15  | HFL   | I   | Track detection signal input. This is a Schmitt input.                                                                                                                                |
| 16  | TES   | I   | Tracking error signal input. This is a Schmitt input.                                                                                                                                 |
| 17  | TOFF  | O   | Tracking off output.                                                                                                                                                                  |
| 18  | TGL   | O   | Tracking gain switching output. Increase the gain when low.                                                                                                                           |
| 19  | JP+   | O   | Track jump output.                                                                                                                                                                    |
| 20  | JP-   | O   | Three-value output is also possible when specified by microprocessor command.                                                                                                         |
| 21  | PCK   | O   | EFM data playback clock monitor. Outputs 4.3218MHz when the phase command.                                                                                                            |
| 22  | FSEQ  | O   | Synchronization signal detection output. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal range. |
| 23  | VDD   | -   | Digital system power supply.                                                                                                                                                          |
| 24  | CONT1 | I/O | General-purpose 1.                                                                                                                                                                    |
| 25  | CONT2 | I/O | General-purpose 2.                                                                                                                                                                    |
| 26  | CONT3 | I/O | General-purpose 3.                                                                                                                                                                    |
| 27  | CONT4 | I/O | General-purpose 4.                                                                                                                                                                    |
| 28  | CONT5 | I/O | General-purpose 5.                                                                                                                                                                    |
| 29  | EMPH  | O   | De-emphasis monitor pin. A high level indicates playback of a de-emphasis disc.                                                                                                       |
| 30  | C2F   | O   | C2 flag output.                                                                                                                                                                       |
| 31  | DOUT  | O   | Digital output. (EIAJ format)                                                                                                                                                         |
| 32  | TEST3 | I   | Test input. A pull-down resistor is built-in. Must be connected to 0V.                                                                                                                |
| 33  | TEST4 | I   | Test input. A pull-down resistor is built-in. Must be connected to 0V.                                                                                                                |
| 34  | N.C.  | -   | Unused. Must be left open.                                                                                                                                                            |
| 35  | MUTEL | O   | Left channel mute output.                                                                                                                                                             |
| 36  | LVDD  | -   | Left channel power supply.                                                                                                                                                            |
| 37  | LCHO  | O   | Left channel output.                                                                                                                                                                  |
| 38  | LVss  | -   | Left channel ground. Must be connected to 0V.                                                                                                                                         |
| 39  | RVss  | -   | Right channel ground. Must be connected to 0V.                                                                                                                                        |
| 40  | RCHO  | O   | Right channel output.                                                                                                                                                                 |
| 41  | RVDD  | -   | Right channel power supply.                                                                                                                                                           |
| 42  | MUTER | O   | Right channel mute output.                                                                                                                                                            |
| 43  | XVDD  | -   | Crystal oscillator power supply.                                                                                                                                                      |
| 44  | XOUT  | O   | Connections for a 16.9344 crystal oscillator element.                                                                                                                                 |
| 45  | XIN   | I   |                                                                                                                                                                                       |
| 46  | XVss  | -   | Crystal oscillator ground. Must be connected to 0V.                                                                                                                                   |
| 47  | SBSY  | O   | Subcode block synchronization signal.                                                                                                                                                 |
| 48  | EFLG  | O   | C1, C2, signal and double error correction monitor pin.                                                                                                                               |
| 49  | PW    | O   | Subcode P, Q, R, S, T, U and W output.                                                                                                                                                |
| 50  | SFSY  | O   | Subcode frame synchronization signal output. This signal falls when the subcodes are in the standby state.                                                                            |
| 51  | SBCK  | I   | Subcode readout clock input. This is a Schmitt input. (Must be connected to 0V when unused).                                                                                          |
| 52  | FSX   | O   | Output for the 7.35kHz synchronization signal divided from crystal oscillator.                                                                                                        |
| 53  | WRQ   | O   | Subcode Q output standby output.                                                                                                                                                      |
| 54  | RWC   | I   | Read/write control input. This is a Schmitt input.                                                                                                                                    |
| 55  | SQOUT | O   | Subcode Q output.                                                                                                                                                                     |
| 56  | COIN  | I   | Command input from the control microprocessor.                                                                                                                                        |
| 57  | CQCK  | I   | input for both the command input acquisition clock and the SQOUT pin subcode readout clock input. This is a Schmitt input.                                                            |
| 58  | RES   | I   | Chip reset input. This pin must be set low briefly after power is first applied.                                                                                                      |
| 59  | TST11 | O   | Test output. Leave open. (Normally outputs a low level).                                                                                                                              |
| 60  | 16M   | O   | 16.9344MHz output.                                                                                                                                                                    |
| 61  | 4.2M  | O   | 4.2336MHz output.                                                                                                                                                                     |
| 62  | TEST5 | I   | Test input. A pull-down resistor is built-in. Must be connected to 0V.                                                                                                                |
| 63  | CS    | I   | Chip select input. A pull-down resistor is built in. Must be connected to 0V if not controlled.                                                                                       |
| 64  | TEST1 | I   | Test input. A pull-down resistor is built-in. Must be connected to 0V.                                                                                                                |

## 7.1.2 DISPLAY

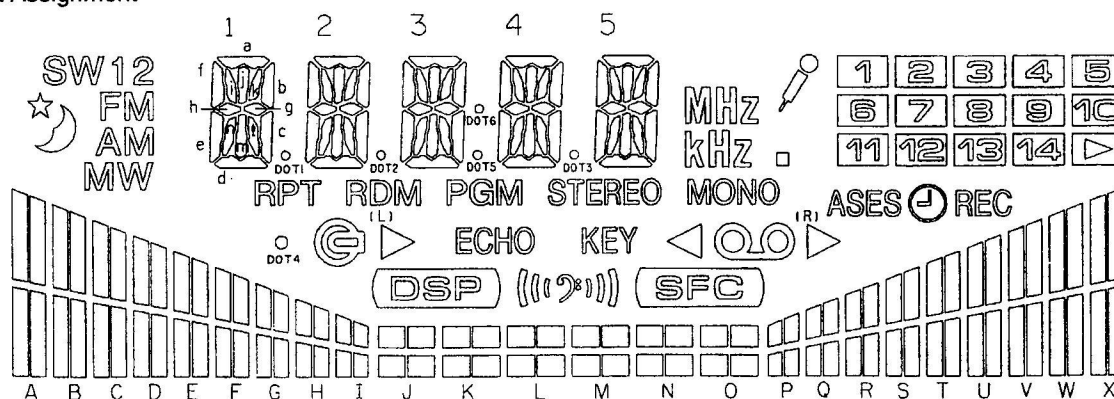
## ■ AAV7031 (V1701 : LCD ASSY)

## ● LCD

## ● Pin Assignment



## ● Segment Assignment



## ● Pin Connection

| NO. | COM.1 | COM.2 | COM.3  | COM.4 | NO. | COM.1   | COM.2   | COM.3   | COM.4   |
|-----|-------|-------|--------|-------|-----|---------|---------|---------|---------|
| 1   |       |       |        | COM.4 | 23  | 3a      | 3j      | 3g      | 3l      |
| 2   |       |       | COM.3  |       | 24  | 3i      | 3h      | 3n      | 3m      |
| 3   |       | COM.2 |        |       | 25  |         | 3f      | 3e      | 3d      |
| 4   | COM.1 |       |        |       | 26  |         | DOT2    | RDM     | G       |
| 5   | 5     | 10    | ▷      | X     | 27  | 2k      | 2b      | 2c      | F       |
| 6   | 4     | 9     | 14     | W     | 28  | 2a      | 2j      | 2g      | 2l      |
| 7   | 3     | 8     | 13     | V     | 29  | 2i      | 2h      | 2n      | 2m      |
| 8   | 2     | 7     | 12     | REC   | 30  |         | 2f      | 2e      | 2d      |
| 9   | 1     | 6     | 11     | ⊖     | 31  |         | DOT1    | RPT     | DOT4    |
| 10  | 7     | □     | ASES   | U     | 32  | 1k      | 1b      | 1c      | E       |
| 11  | MHz   | KHz   | MONO   | T     | 33  | 1a      | 1j      | 1g      | 1l      |
| 12  | 5k    | 5b    | 5c     | ▷(R)  | 34  | 1i      | 1h      | 1n      | 1m      |
| 13  | 5a    | 5j    | 5g     | 5l    | 35  |         | 1f      | 1e      | 1d      |
| 14  | 5i    | 5h    | 5n     | 5m    | 36  | 2       | FM      | AM      | MW      |
| 15  |       | 5f    | 5e     | 5d    | 37  | 1       | SW      | *       | D       |
| 16  | DOT6  | DOT3  | STEREO | ◁     | 38  | A       | B       | C       |         |
| 17  | 4k    | 4b    | 4c     | KEY   | 39  | K       | J       | I       | H       |
| 18  | 4a    | 4j    | 4g     | 4l    | 40  | ((( ))) | DSP     | ▷(L)    | ⊕       |
| 19  | 4i    | 4h    | 4n     | 4m    | 41  | ((( ))) | ((( ))) | ((( ))) | ((( ))) |
| 20  |       | 4f    | 4e     | 4d    | 42  | L       | M       | N       | O       |
| 21  | DOT6  | DOT5  | PGM    | SFC   | 43  | S       | R       | Q       | P       |
| 22  | 3k    | 3b    | 3c     | ECHO  |     |         |         |         |         |

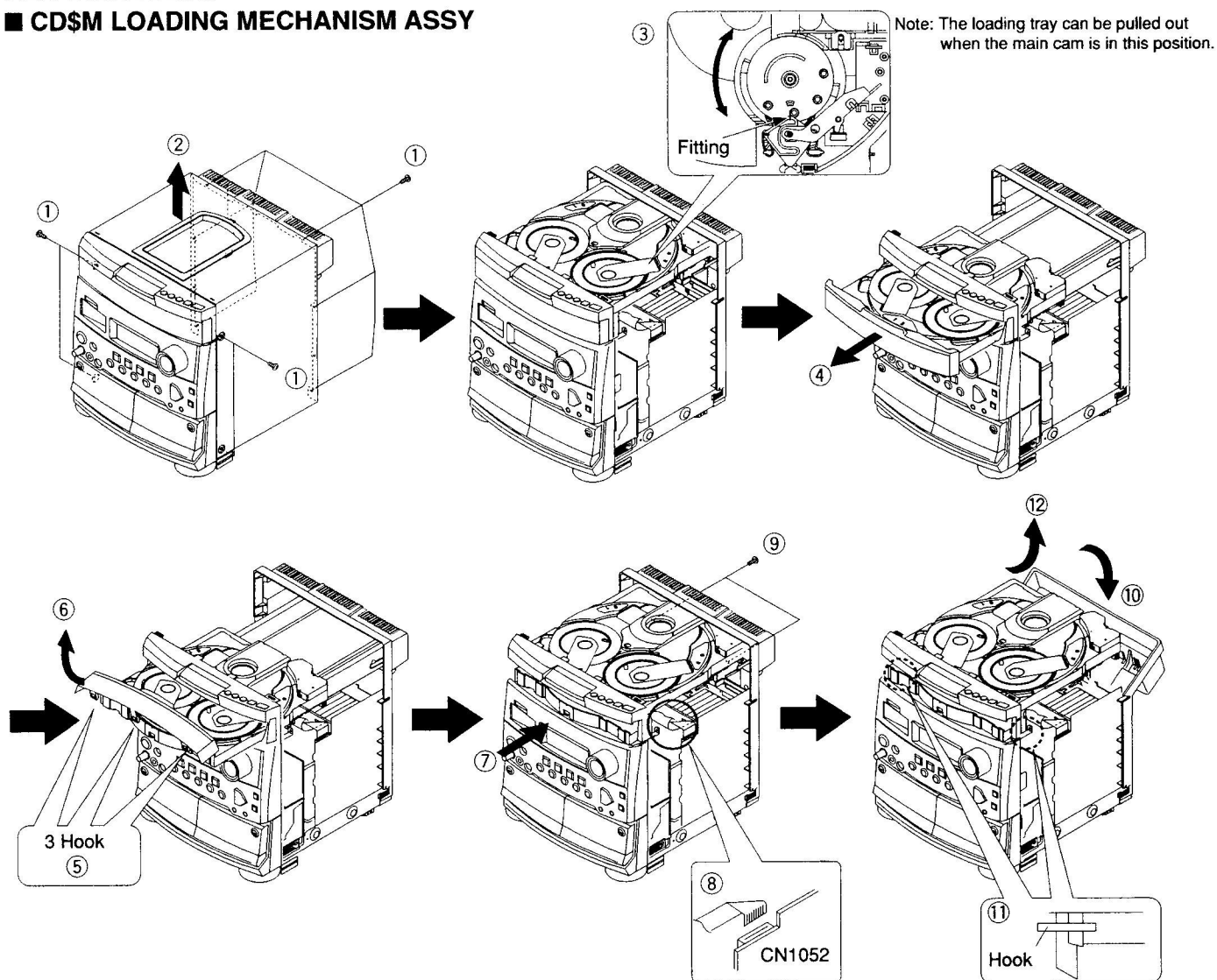
## Notes.

- 1.TN transmissive type,positive display
- 2.Dynamic drive : 1/4duty,1/3bias
- 3.Driving voltage : 5volt
4. Inside of chain line is the viewing area
- 5.Polarizers are with protective film.

## 7.2 DIAGNOSIS

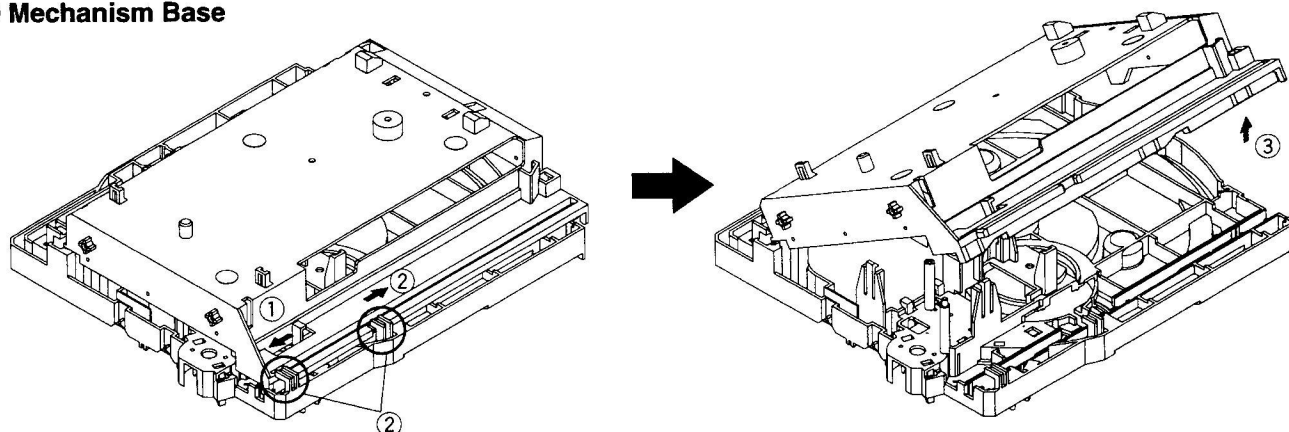
### 7.2.1 DISASSEMBLY

#### ■ CD\$M LOADING MECHANISM ASSY

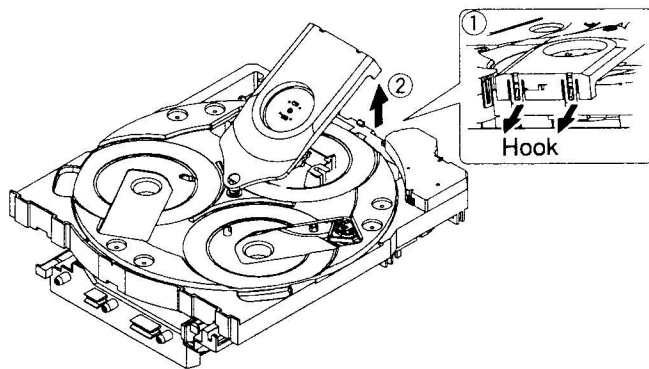


#### ■ CD \$M LOADING MECHANISM ASSY ADDITIONAL TO JOB

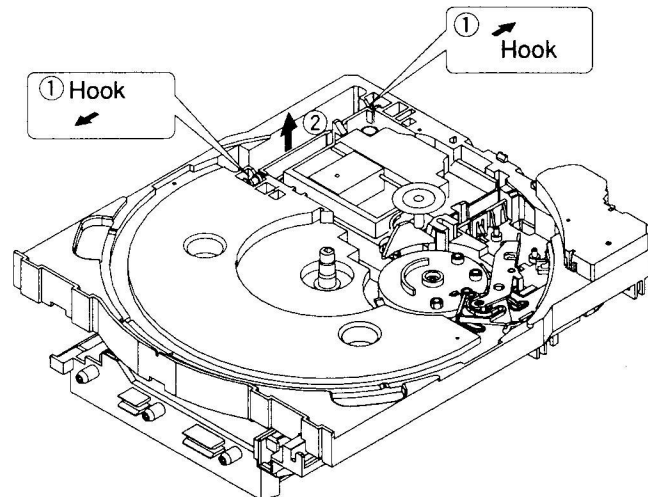
##### ● Mechanism Base



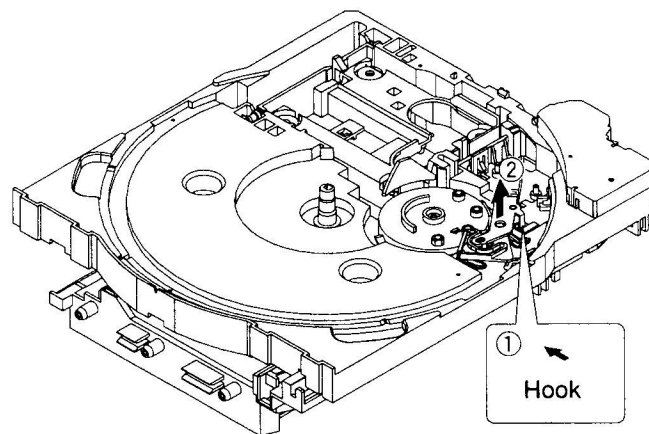
● Clamper Holder



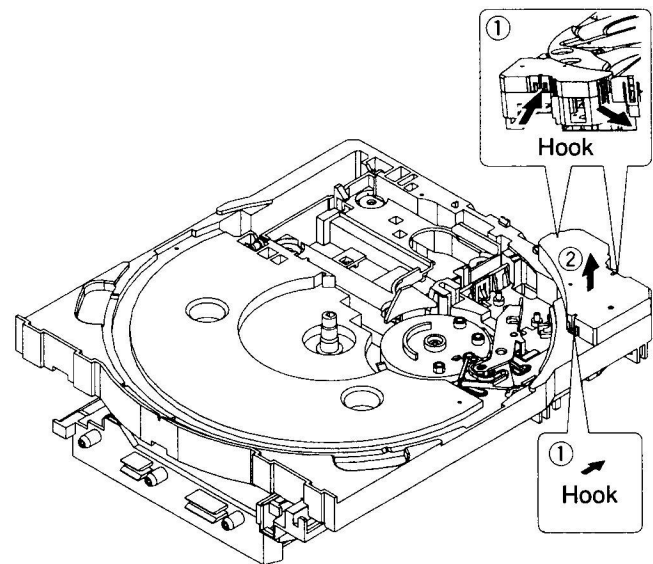
● Servo Base



● Actuator

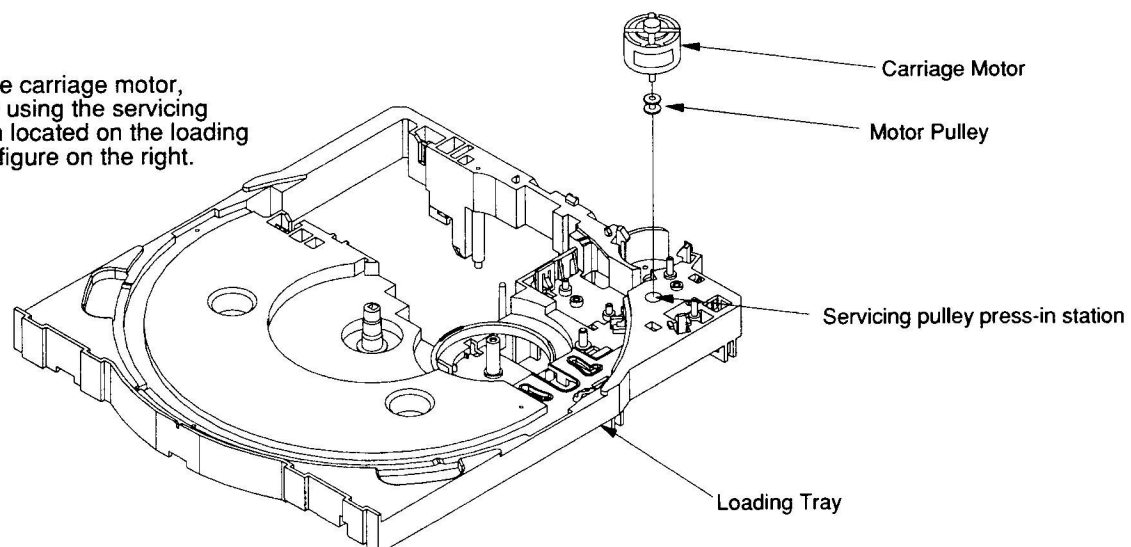


● Motor Cover



■ FITTING THE PULLEY INTO THE CARRIAGE MOTOR

For replacement of the carriage motor, fit the motor pulley by using the servicing pulley press-in station located on the loading tray, as shown in the figure on the right.



## 7.2.2 TROUBLESHOOTING

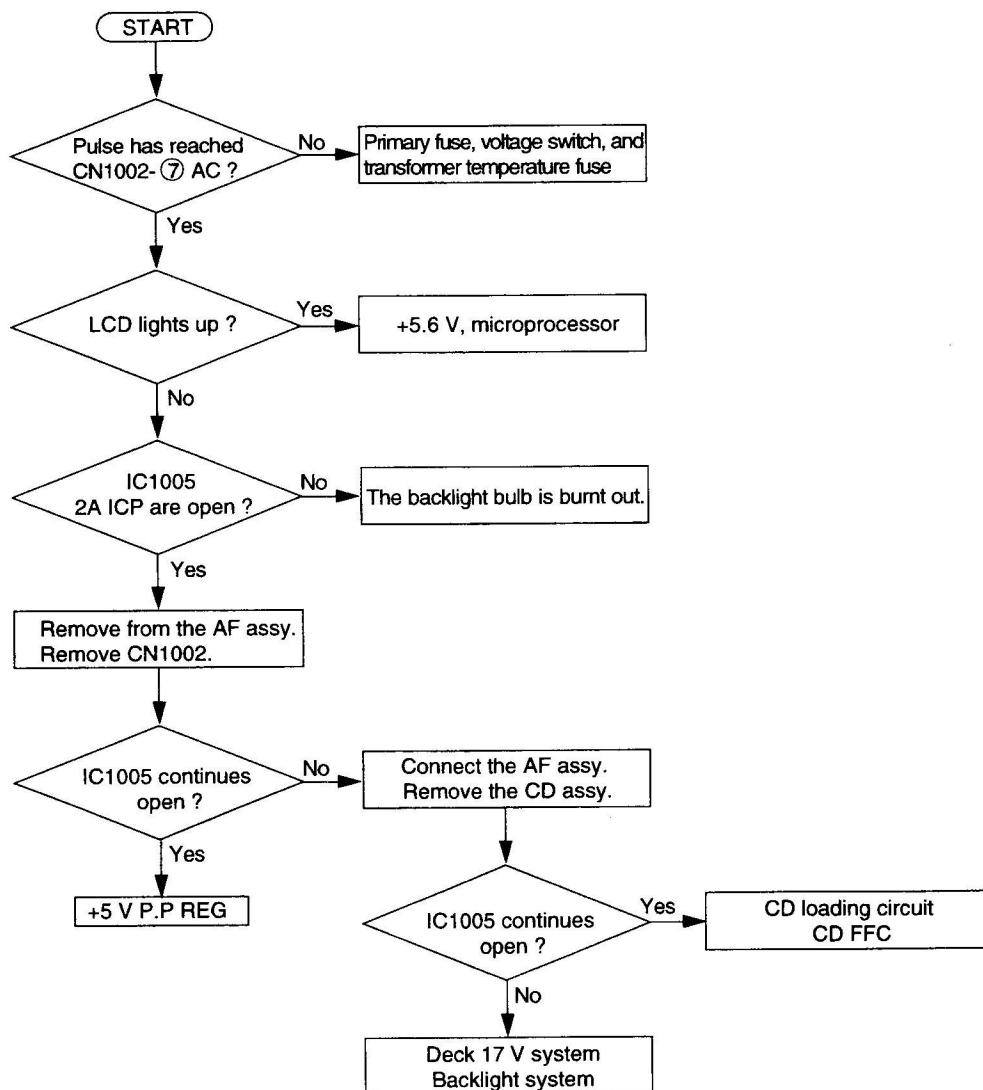
**Note** Do not short-circuit IC1003 and IC1005 (ICP) for diagnosis. If the regulator is damaged by short circuit in ICP, the parts will be damaged to a wide extent of setting, making repair difficult.

### LIST OF ERROR CODES

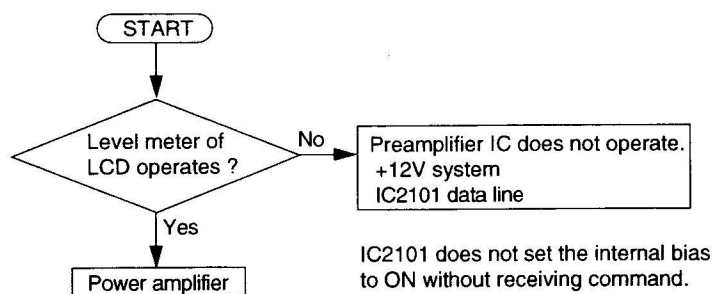
An error code will be displayed by the CD calendar in the LCD.

| ERROR CODE  | CAUSE                                                                                          | POINT TO BE CHECKED                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| ① : DC DET  | DC appears in the SP terminal.<br>Vp +17.5V is over 20V.<br>Current passes toward the chassis. | Defective IC1201<br>Improper operation of the regulator.→ See "Adjustment of Vp cannot made".<br>Mica Sheet, 1Ω/1W (Power assy R1251) may be open. |
| ② : Vp      | Vp is below 6V or over 20V.                                                                    | Regulator<br>Adjustment of Vp (Refer to page 48).                                                                                                  |
| ③ : DECK I  | Initialization could not be made.                                                              | Output of +17V and +6V SINK may be improper.                                                                                                       |
| ④ : DECK II |                                                                                                | Reel pulse may be improper.<br>Deck mechanism lock (Lights up ③ and ④.)                                                                            |

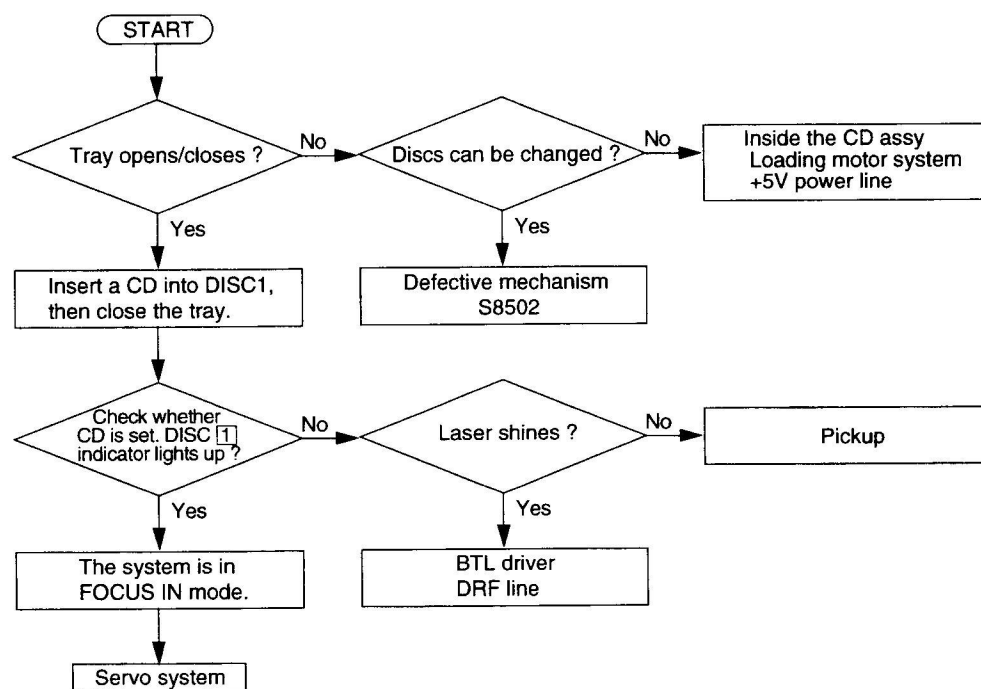
### ■ The power of the system does not turn to ON. The backlight does not light up.



■ No sound is output.



■ The system does not play back CD.



\* CN8025 of the CD ASSY shows RF OUT and a tracking error. Use them for diagnosis.

No adjustment is required for the CD ASSY.

Disconnect the AC plug from the outlet and reset the microprocessor every time diagnosis is made.

If the system microprocessor determines a malfunction in CD, no command will be sent to the CD ASSY thereafter.



## ■ IC1003 (ICP of 400mA) is broken.

- The +5.6V line is short-circuited. The 40-core FFC is not inserted straight.
- The 6.8V Zener diode of the +5.6V line is short-circuited.
  - D1003 in the Power assy
  - D1809 in the LED assy
- If the ICP is broken after disconnecting the Power assy from AF assy, IC1001 (78M05) or its surrounding parts may be malfunctioning.
- The ICP is also broken by short circuit of IC1002 (4558).
- The ICP is also broken by B-E short circuit of Q1001 (power TR, 2SC5197/5200).

The stereo set does not operate at all if the IC1003 is broken.

## ■ The power of $\mu$ -COM does not switch ON. Nothing is displayed on the LCD.

- AC power is not supplied to the AC50/60Hz line of IC1901.
- Zener D1902 in the LCD assy is short-circuited because the headphone parallel jumper is inserted incorrectly (incorrect direction).
- Is +5.6V supplied?
- Is  $\overline{\text{XRESET}}$  set to "H"? Is resetting completed?

## ■ IC1005 (ICP of 2A) is broken, although the microprocessor is operating.

- Does the ICP break after disconnecting from the AF assy?

Yes → Inside the Power assy

No → Outside the Power assy

- Connect only the AF assy. (Disconnect the headphone parallel jumper. CN1002)

If the ICP still breaks, AF assy may have short-circuited, or a malfunction may have occurred in the front of +12V REG.

- Connect the 40-core FFC. Be sure that the flexible substrate is inserted correctly.

If the ICP still breaks, short circuit may have occurred in the complex (solenoid, motor, electrostatic Zener, LED assy, and +5.6 V line).

- Connect the CD assy.

If the ICP still breaks, short circuit may have occurred in the CD assy or the FFC of CD.

In such a case, the 5V PP REG is short-circuited. Check for short circuit in Q1003-1006 and D1011. (Because of the structure of the circuitry, short circuit is difficult to be detected by a tester. Replacing the circuitry as a whole will result in faster solution.)

### NOTE

If the headphone parallel jumper is removed, +17V voltage is supplied to  $\mu$ -COM in standby mode. The power amplifier and all power sources will turn to ON. However, an IC that does not operated without serial data cannot be diagnosed.

## ■ Although sound is output, discontinuance occurs at full power.

- Vp is adjusted to high level. (The protective function for the power-amplifier ICs turns to ON.)
- Dedicated speakers for the system are not used. The protective circuit turns to ON during clipping if speakers with high inductance are used even though they have high impedance.
- IC1201 (TDA8560Q) is malfunctioning. → Replace the IC.
- LPF(C1201, C1202 [2200pF]) of IC1201, are not installed. If they are not installed, the system interferes with the preamplifier IC and causes oscillation, resulting in muted IC1201.
- Check for short circuit of the negative  $\ominus$  terminals of L/R if the measuring instrument is connected to the SP terminal. If line noise from the measuring instrument is added, the power amplifier IC mutes and causes cracking noise.
- The power amplifier or +17V REG oscillates. Check Pin7 of IC1002 (4558) for major oscillation waveform appearing at the same time as with the cracking noise.

### NOTE

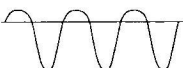
The power amplifier IC tends to cause discontinuance of sound with a slight oscillation or high-frequency noise.

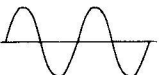
## ■ Large popping noise is output only from the headphone when turning the power to ON/OFF.

- The following headphone matrix resistors may be incorrect or disconnected.  
R1221 and R1222 (POWER ASSY)  
R1201 and R1202 (DISPLAY ASSY)
- H.GND of J1201 is disconnected.

## ■ The following symptoms occur if IC1202 (0.4A) is broken.

For SIG GND

- The top and bottom portions of waveforms (  ) have different gain.

Proper waveforms (  ) are obtained with load resistance.

- This ICP is broken when +B is supplied to the heat sink because micanite is not installed, or when IC1201 power amplifier ICs are malfunctioning.

## ■ If Mica Sheet for the power transformer is not installed ?

- +UNREG will be supplied to R1251 (1 $\Omega$ ,1W) of the Power assy, making the resistor open (or increasing the resistance value).
- Current will be supplied to the rear part of IC1201 of the Power amplifier from the heat sink, resulting in incomplete functioning of the IC. At the worst, ICP, Zener diode, etc. will be destroyed.
- Power transformer Q1001 will not be destroyed.
- If a power source without breaker is used, the system stops demonstration mode 1 to 2 seconds after the power is turned ON, and forcedly enters standby mode. Error code 2 (or 1) lights up.

### NOTE

Mica Sheet is placed higher than the heat-sink bracket. Thus, whether Mica Sheet is installed or not can be checked without removing the bracket.

## ■ Adjustment of Vp cannot be made. Cannot change from +17V.

- If +5.6V (for  $\mu$ -COM) correctly output? → Correct the 5.6V system.
- Is 5.6V supplied to Pin 6 of IC1002 (4558)? This IC is Vref of +17V.
- Check the voltage of Pin7 of IC1002 (4558).
 

|                                          |                                                |
|------------------------------------------|------------------------------------------------|
| Cannot be changed from the Pin 8 side. → | Short circuit in Q1001, Q1002, D1008, or Q1008 |
| Cannot be changed from the Pin 4 side. → | Q1001, Q1002, D1008, R1018, or Q1008 is open.  |
|                                          | Check whether UNREG voltage is supplied.       |

Otherwise, IC1002 is malfunctioning.

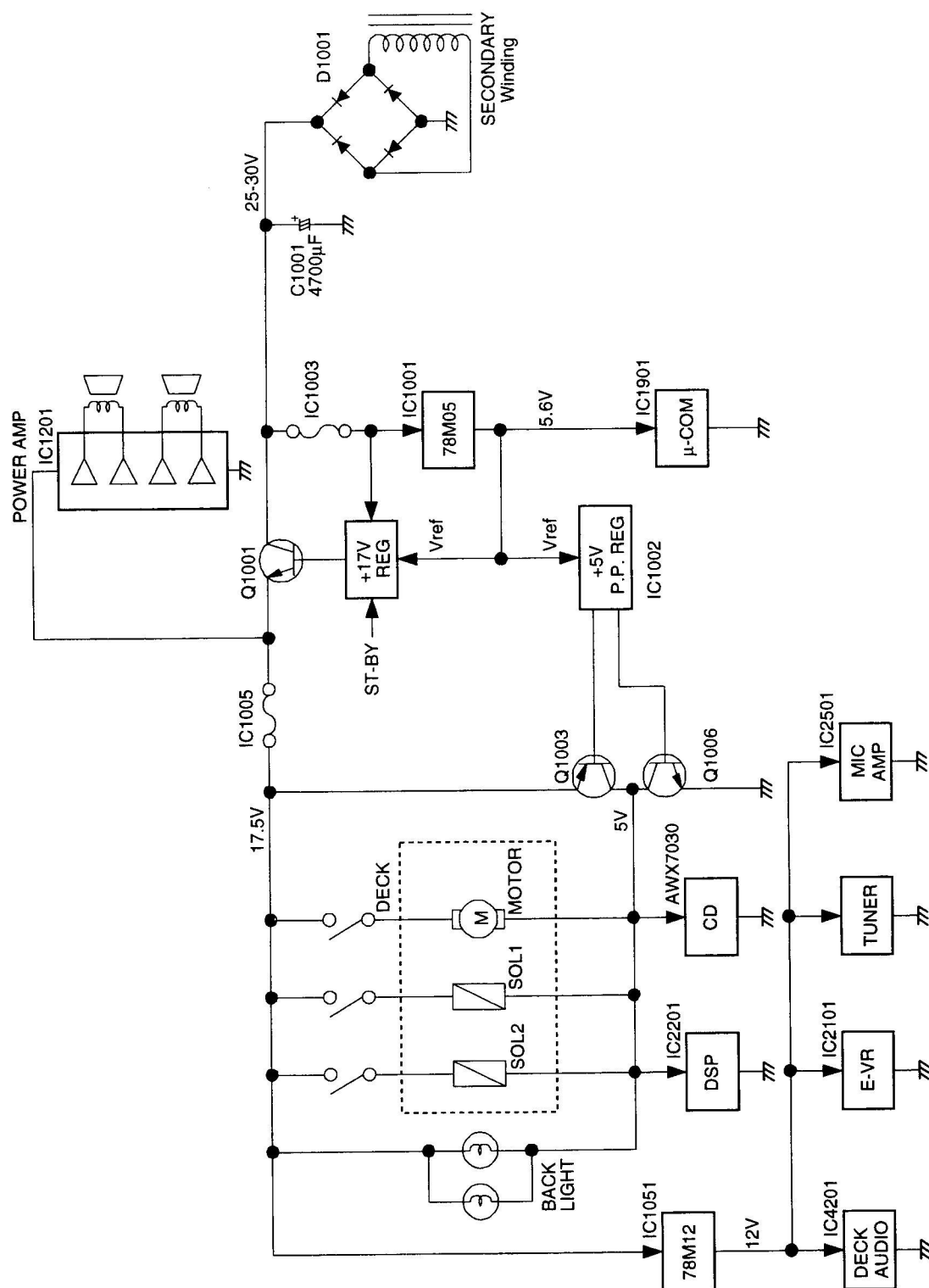
- Check for short circuit in D1014.
- IC1081 (LED driver in the LED assy) is not functioning completely. Lift the ST-BY pin of CN1002 to adjust the IC.
- Check if R1251 (1 $\Omega$ , 1W) is open. Chassis GND may be lifted.
- If Vp is dislocated extremely, the microprocessor gives instruction to the system to enter standby mode. Error code 2 lights up.  
If this is troublesome, leave ST-BY of CN1002 open so that +17V is maintained during standby mode.

### NOTE

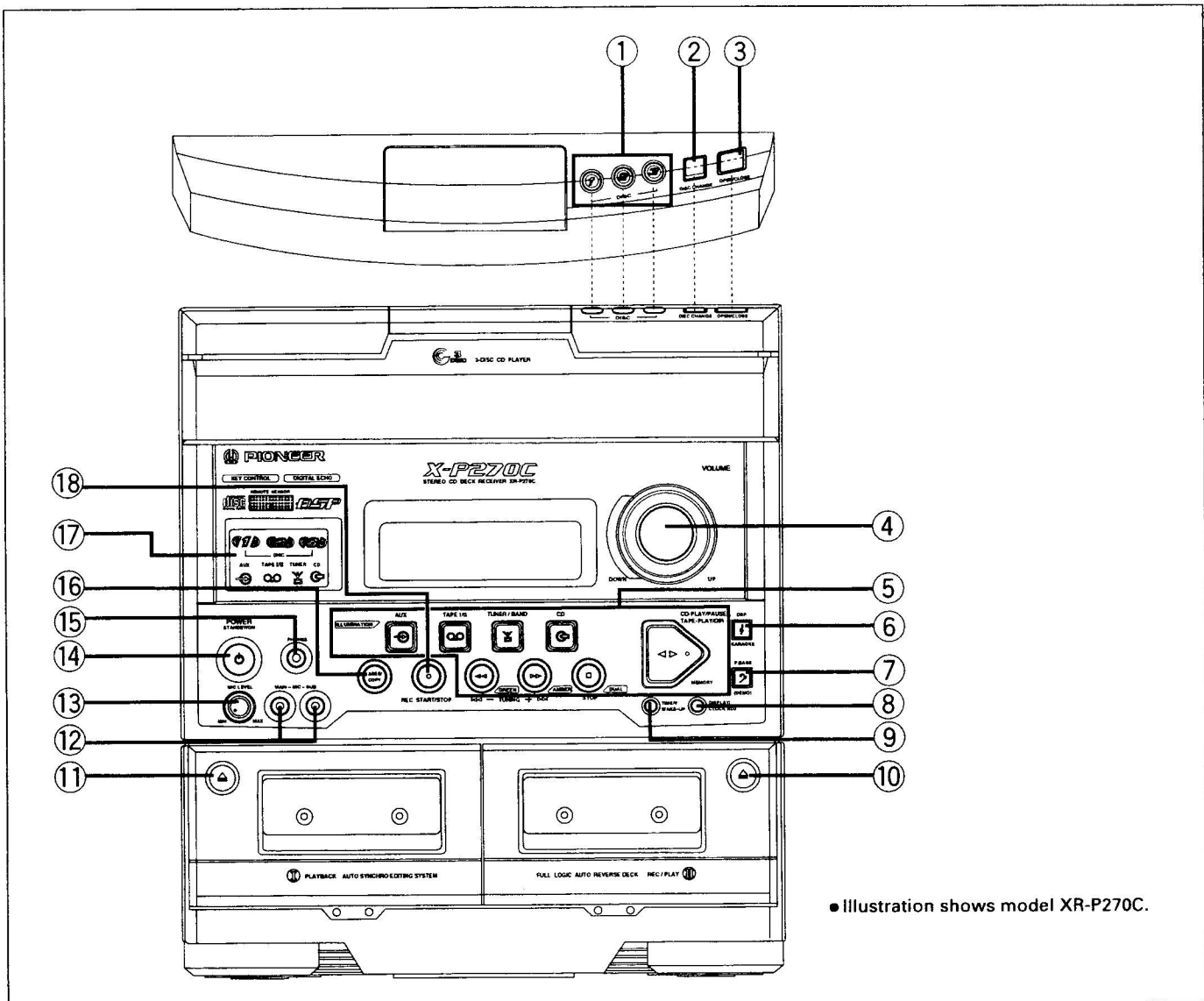
Vp adjustment is completed in the Power assy. Therefore, it checking can be made by removing the headphone parallel jumper (the system will not enter standby mode) and AF ASSY.

### 7.3 BLOCK DIAGRAM

## ● POWER SUPPLY MAP



## 8. PANEL FACILITIES AND SPECIFICATIONS

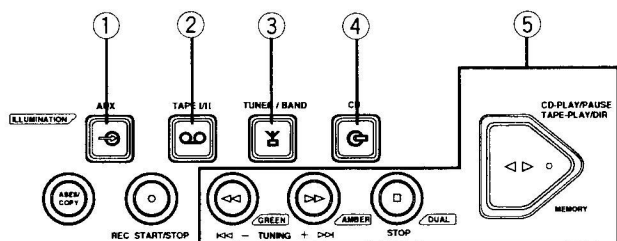


● Illustration shows model XR-P270C.

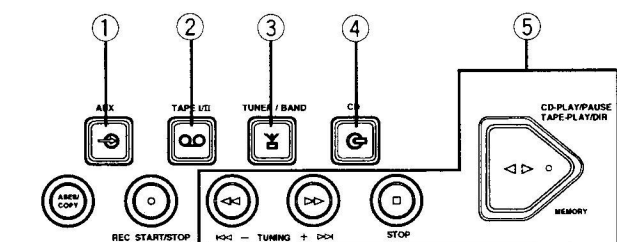
- |                                                                                |                                       |
|--------------------------------------------------------------------------------|---------------------------------------|
| ① DISC select buttons (1 – 3)                                                  | ⑪ DECK I EJECT (▲)                    |
| ② DISC CHANGE button                                                           | ⑫ MIC MAIN, SUB jacks                 |
| ③ CD OPEN/CLOSE button                                                         | ⑬ MIC LEVEL control                   |
| ④ VOLUME control                                                               | ⑭ POWER (STANDBY/ON) button           |
| ⑤ Function buttons                                                             | ⑮ Headphones jack (PHONES)            |
| ⑥ XR-P270C: DSP/KARAOKE mode button<br>XR-P170C: SFC/KARAOKE mode button       | ⑯ ASSES/COPY button                   |
| ⑦ P.BASS (DEMO) button<br>Set to ON to produce powerfully enhanced bass sound. | ⑰ DISC indicator & Function indicator |
| ⑧ DISPLAY/CLOCK ADJ button                                                     | ⑱ REC START/STOP button               |
| ⑨ TIMER/WAKE-UP button                                                         |                                       |
| ⑩ DECK II EJECT (▲)                                                            |                                       |

The function indicator ⑰ also serves as a standby indicator, so your selected function continues to be illuminated even after the power is turned off.

XR-P270C



XR-P170C



## Function button section

- ① AUX function button
- ② TAPE I/II function button
- ③ TUNER/BAND function button
- ④ CD function button
- ⑤ Common operation buttons

● Roles of the common operation buttons. (The roles of the buttons vary depending on the input functions as shown below.)

During CD input

- ▶ : Play/Pause button
- : Stop button
- ⏭ : Fast forward/track search button
- ⏮ : Fast reverse/track search button

During cassette deck input

- ▶ : Play button/Tape transport direction
- : Stop button
- ⏭ : Fast forward button  
MS button (XR-P270C only)
- ⏮ : Rewind button  
MS button (XR-P270C only)

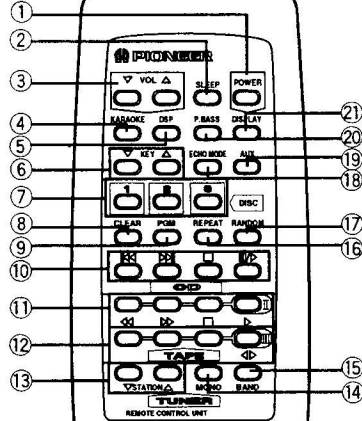
During tuner operation

- ▶ : Station memory button
- ⏭ : Frequency & Station + (up) button
- ⏮ : Frequency & Station - (down) button

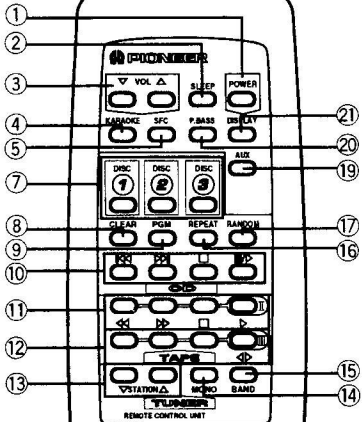
## Remote control unit

- ① POWER button
- ② SLEEP button
- ③ VOLUME buttons
- ④ KARAOKE button
- ⑤ DSP button (XR-P270C only) SFC button (XR-P170C only)
- ⑥ KEY control buttons (XR-P270C only)
- ⑦ DISC select buttons
- ⑧ CLEAR button
- ⑨ PGM button
- ⑩ CD operation buttons  
(Track search ◀▶▶▶, Stop ■, Pause/Play II/▶)
- ⑪ TAPE I operation buttons  
(Fast ◀▶▶▶, Stop ■, Play ▶)
- ⑫ TAPE II operation buttons  
(Fast ◀▶▶▶, Stop ■, Play ◀▶)
- ⑬ STATION buttons
- ⑭ MONO button
- ⑮ BAND button
- ⑯ REPEAT button
- ⑰ RANDOM button
- ⑱ ECHO MODE button (XR-P270C only)
- ⑲ AUX button
- ⑳ P.BASS button
- ㉑ DISPLAY button

XR-P270C



XR-P170C



## STEREO CD CASSETTE DECK RECEIVER

### Amplifier Section

Continuous power output (RMS)

|                |                                       |
|----------------|---------------------------------------|
| XR-P270C ..... | 33 W + 33 W (1 kHz, T.H.D. 10 %, 4 Ω) |
| XR-P170C ..... | 25 W + 25 W (1 kHz, T.H.D. 10 %, 4 Ω) |

### FM/AM Tuner Section

#### FM Tuner Section

|                       |                     |
|-----------------------|---------------------|
| Frequency Range ..... | 87.5 MHz to 108 MHz |
| Antenna Input .....   | 75 Ω unbalanced     |

#### AM Tuner Section

|                        |                      |
|------------------------|----------------------|
| Frequency Range        |                      |
| With 9 kHz step .....  | 531 kHz to 1,602 kHz |
| With 10 kHz step ..... | 530 kHz to 1,700 kHz |
| Antenna .....          | Loop antenna         |

### CD Section

|                       |                                                         |
|-----------------------|---------------------------------------------------------|
| Type .....            | Compact disc digital audio system                       |
| Wow and Flutter ..... | Limit of measurement<br>(±0.001% W.PEAK) or less (EIAJ) |

### Cassette Deck Section

|                 |                                                                      |
|-----------------|----------------------------------------------------------------------|
| Systems .....   | 4-track, 2-channel stereo                                            |
| Heads .....     | Recording/playback head x 1<br>Playback head x 1<br>Erasing head x 1 |
| Motor .....     | DC servo motor x 1                                                   |
| Tape type ..... | TYPE I (Normal) tape                                                 |

### Miscellaneous

|                          |                                                |
|--------------------------|------------------------------------------------|
| Power Requirements ..... | AC 110-127/220-240 V<br>(switchable), 50/60 Hz |
|--------------------------|------------------------------------------------|

#### Power Consumption

|                |       |
|----------------|-------|
| XR-P270C ..... | 210 W |
| XR-P170C ..... | 170 W |

Dimensions ..... 270 (W) x 300 (H) x 295 (D) mm

#### Weight (without package)

|                |        |
|----------------|--------|
| XR-P270C ..... | 6.1 kg |
| XR-P170C ..... | 5.9 kg |

### Accessories

|                                   |   |
|-----------------------------------|---|
| Operating Instructions .....      | 1 |
| Remote Control Unit .....         | 1 |
| Dry Cell Batteries (AA/R6P) ..... | 2 |
| FM Antenna .....                  | 1 |
| AM Loop Antenna .....             | 1 |

#### NOTE:

Specifications and design are subject to possible modifications without notice, due to improvements.

721-Comp

## POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

#### ① Remote control unit x 1

The illustration shows the remote control unit supplied with the XR-P170C. The remote for the XR-P270C is different.

#### ② AA/R6P dry cell batteries x 2

#### ③ FM antenna x 1

#### ④ AM loop antenna x 1

