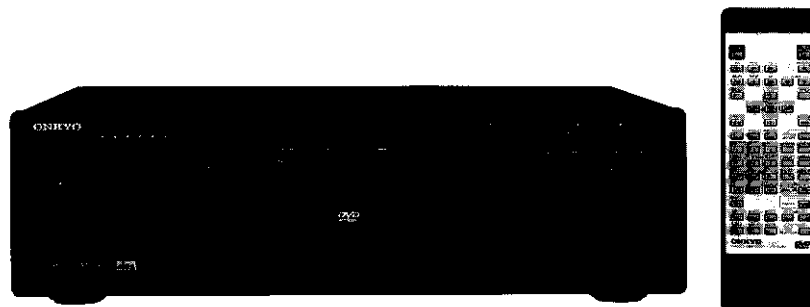


# ONKYO® SERVICE MANUAL

## DVD CHANGER MODEL DV-C600



|      |                      |
|------|----------------------|
| BMD  | 120V AC, 60Hz        |
| BMP  | 100-240V AC, 50/60Hz |
| BMPA | 100-240V AC, 50/60Hz |

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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# OPERATING INSTRUCTIONS SAFETY PRECAUTIONS

**WARNING**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN

**AVIS**      RISQUE DE CHOC ELECTRIQUE NE PAS OUVRI

**WARNING :** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PART INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING :** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

**CAUTION :** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**ATTENTION :** POUR EVITER LES CHOCES ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

## PRECAUTIONS

### Replacing the fuses

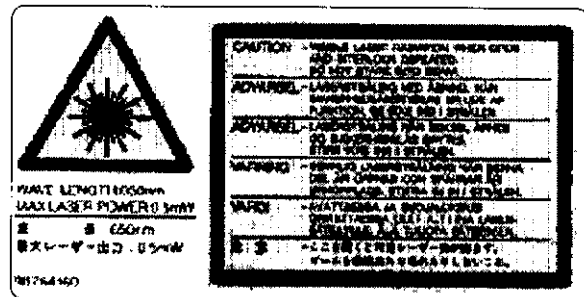
For continued protection against risk fire, replace only with same type and same rating fuse.

| CIRCUIT No.   | PART No. | DESCRIPTION    |
|---------------|----------|----------------|
| F901 <MD>     | 252157   | 1.25A-UL/T-237 |
| F901 <MP/MPA> | 252071   | 1.25A-SE-EAWK  |

This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce dernier est indique la qu le present symbol est appose.

### LASER BEAM CAUTION LABEL



When the power supply is being turned on, you may not remove this laser caution label, radiation of a laser may be received. Pickup Head consists of a laser diode that is very susceptible to external static electricity. Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity. And also, the LSI and IC are same as above.

## SPECIFICATIONS

### DVD Changer

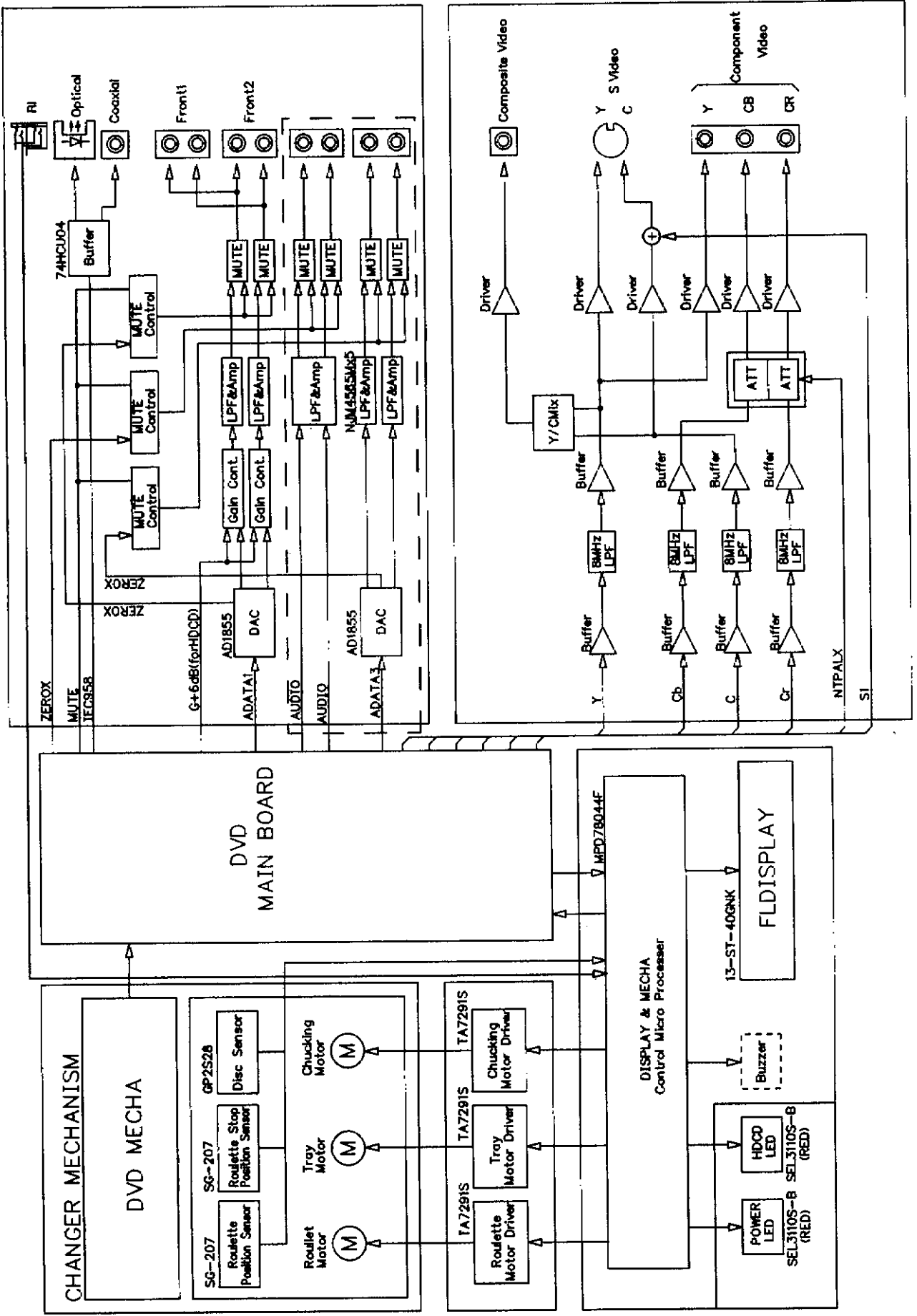
|                                       |  |
|---------------------------------------|--|
| Power supply                          | AC 120 V, 60 Hz (MD)<br>AC 100-240 V, 50/60 Hz (MP/MPA)  |
| Power consumption                     | 19 W   |
| Weight                                | 7.0 kg   |
| External dimensions                   | 435 x 131 x 433 mm (W/H/D)   |
| Signal system                         | Standard NTSC (MD), PAL / 3.58 NTSC (MP/MPA)   |
| Laser                                 | Semiconductor laser, wavelength 650 nm   |
| Frequency range (digital audio)       | DVD linear sound : 48 kHz sampling 4 Hz to 22 kHz<br>96 kHz sampling 4 Hz to 44 kHz<br>Audio CD : 4 Hz to 20 kHz |
| Signal-to-noise ratio (digital audio) | More than 96 dB (EIAJ)   |
| Audio dynamic range (digital audio)   | More than 90 dB (EIAJ)   |
| Harmonic distortion (digital audio)   | Less than 0.01 %   |
| Wow and flutter                       | Below measurable level (less than $\pm 0.001$ % (W .PEAK)) (EIAJ)  |
| Operating conditions                  | Temperature: 5°C to 35°C (41 to 95 degrees), Operation status: Horizontal  |

### Outputs

|                                |   |
|--------------------------------|---|
| Video output                   | 1.0 V (p-p), 75 $\Omega$ , negative sync., pin jack x 1   |
| S video output                 | (Y) 1.0 V (p-p), 75 $\Omega$ , negative sync., Mini DIN 4-pin x 1<br>(C) 0.286 V (p-p), 75 $\Omega$ |
| Component Video output (MD)    | (Y) 1.0 V (p-p), 75 $\Omega$ , negative sync., pin jack x 1<br>(Cb)/(Cr) 0.7 V (p-p), 75 $\Omega$   |
| Digital Audio output (optical) | Optical connector x 1   |
| Digital Audio output (coaxial) | 0.5 V (p-p), 75 $\Omega$ , pin jack x 1   |
| Audio output (analog audio)    | 2.0 V (rms), 470 $\Omega$ , pin jack (L, R) x 1   |

\* Design and specifications are subject to change without notice.

**BLOCK DIAGRAM**



# 1. REPLACEMENT OF MECHANICAL PARTS

## 1-1. Cabinet Replacement

### 1-1-1. Top Cover

1. Remove 7 screws (1) and remove the top cover (2).

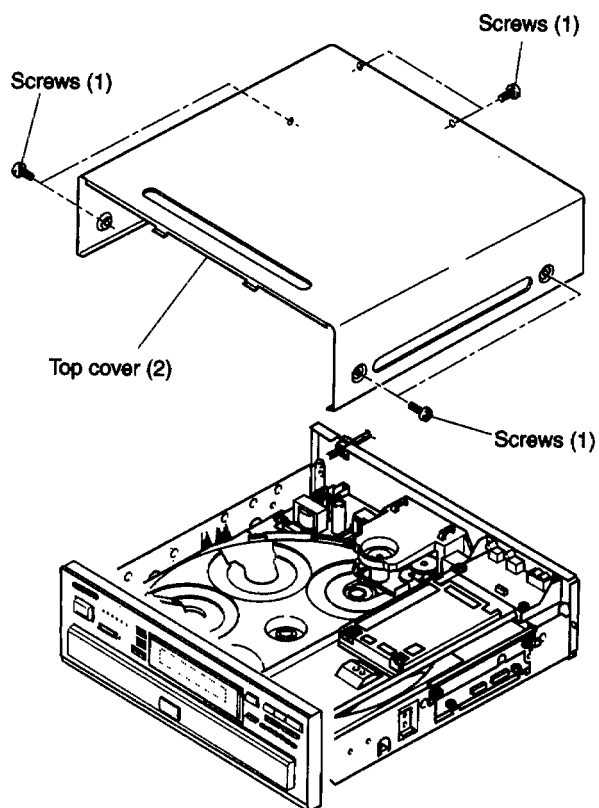


Fig. 2-1-1

### 1-1-2. Tray Panel

1. Eject the tray (1).
2. Twist the tray panel (2) a little in the arrow A direction with the tray (1) held to release two claws and lift up the tray panel (2) in the arrow B direction, then the tray panel (2) is removed.
3. When mounting the tray panel (2), insert the tray panel (2) along the groove of the both sides of the tray (1) until it clicks.

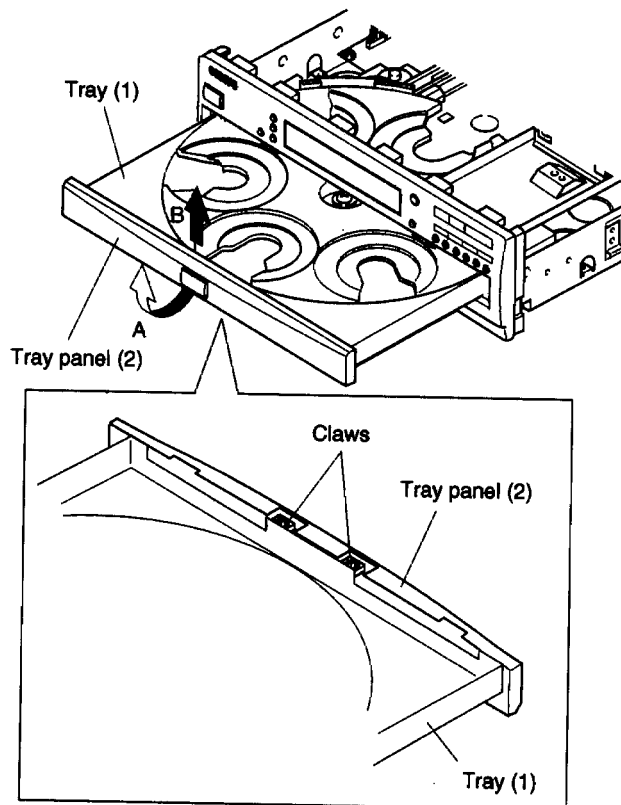


Fig. 2-1-2

**1-1-3. Front Panel**

1. Remove three screws(4) of the aluminum front panel.
2. Pull out the tray and remove the tray panel.  
(Refer to item Fig.2-1-2)
3. Remove three screws(6) of the front bracket.
4. Peel off the tape(1) and disconnect the FFC(2).
5. Disconnect the FFC(3).
6. Remove the bosses of the front panel(9).

**NOTE:**

- When connecting the FFC(2), be sure to insert it to the connector after passing through the FFC band.

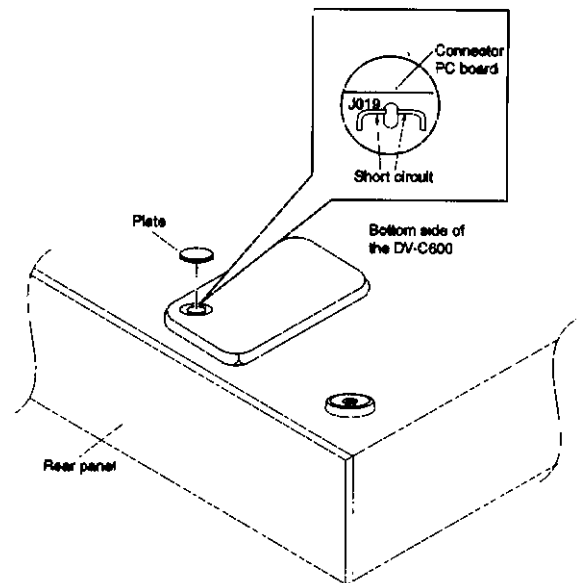
**1-2. PC Board Replacement**

**1-2-1. Main PC Board**

1. Peel off the tape(1).
2. Disconnect five FFCs(4) and one connector(3).

**Note:**

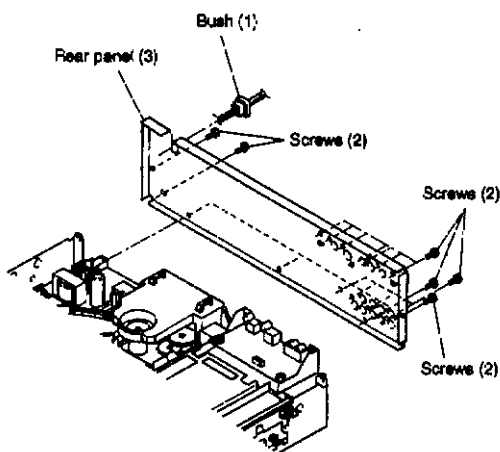
Before disconnecting the FFC from the main PC board, pull out the round bottom cover (attached with both-side adhesive tape) and be sure to short-circuit the LD-SHORT J019 by a clip or soldering.



**Fig. 2-1-5**

**1-1-4. Rear panel**

1. Remove the AC cord bushing(1).
2. Remove the 17 screws(2) and remove the rear panel(3).



**Fig. 2-1-4**

# DV-C600

## 1-2-2. Video Output PC Board

1. Disconnect one FFC (1) and one connector (2).
2. Remove two screws (3).
3. Remove four screws (4) and remove the video output PC board (5).

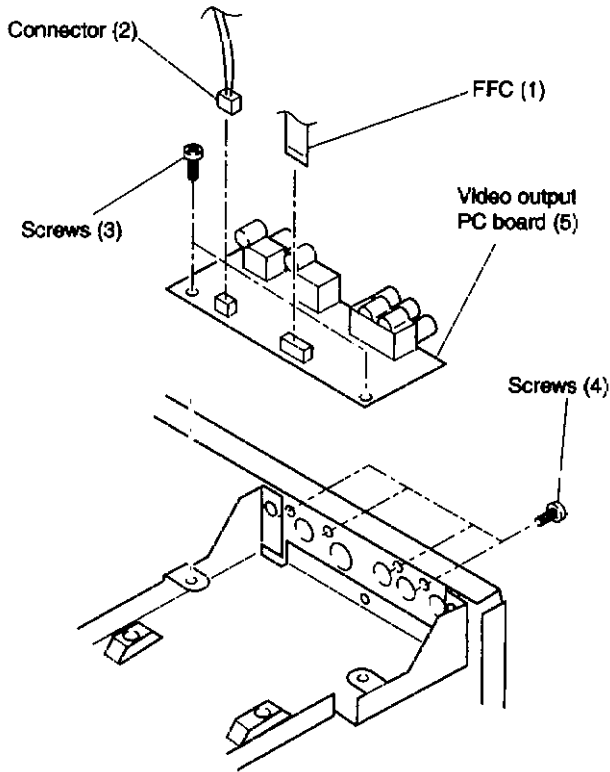


Fig. 2-1-6

## 1-2-3. Mechanism Drive/Audio Output PC Board

1. Peel off the tape (1).
2. Disconnect five FFCs (2) and two connectors (3).
3. Remove one screw (4) and remove the shield cover (5).
4. Remove seven screws (6) and remove the stay (7).
5. Pull out the tray (8) to this side until it stops.
6. Disconnect two FFCs (9) and three connectors (10).
7. Remove four screws (11) and four screws (12) and remove mechanism drive/audio output PC board (13).

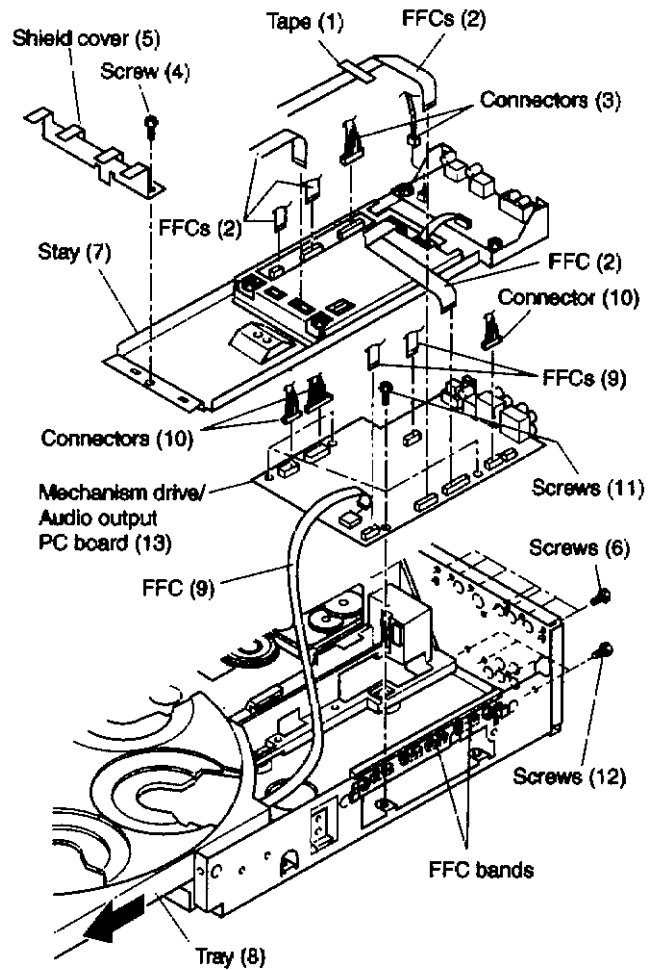


Fig. 2-1-7

### 1-2-4. Power Supply PC Board

1. Pull out the tray to this side until it stops.
2. Remove one screw (1).
3. Disconnect one connector (2).
4. Remove the PC board clip (3) and remove the power supply PC board (4) by lifting upward.

(The power supply PC board (4) is connected to the DC power PC board (5) with the connector (6).)

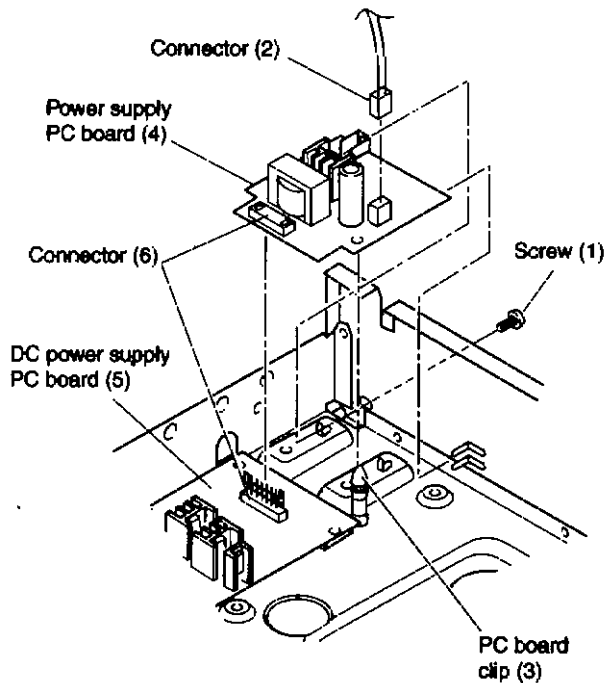


Fig. 2-1-8

### 1-2-5. DC Power Supply PC Board

1. Remove the power supply PC board. (Refer to item 1-2-4.)
  2. Cut off three cord bands (1).
  3. Remove four screws (2) and remove the DC power supply PC board (3).
- (Refer to Figure A when mounting the cord band (1).)

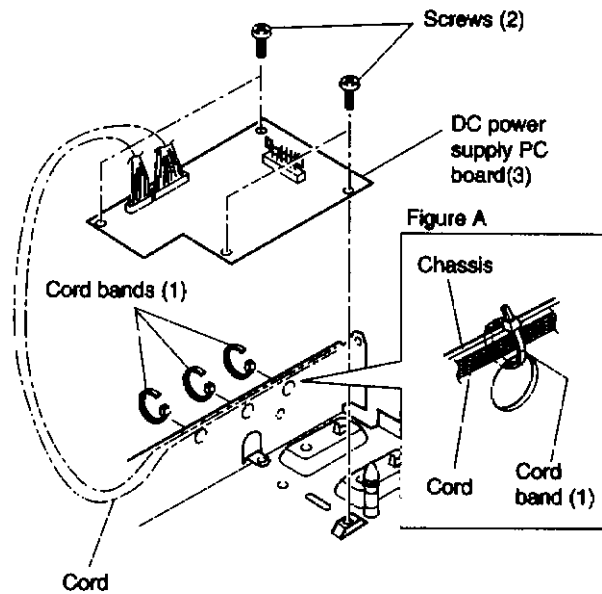


Fig. 2-1-9

### 1-2-6. Front PC Board and Power Switch PC Board

1. Remove the front panel. (Refer to item 1-1-3.)
2. Remove six screws (1), and remove the metal plate (2) and the front PC board (3).
3. Remove three screws (4) and remove the power switch PC board (5).

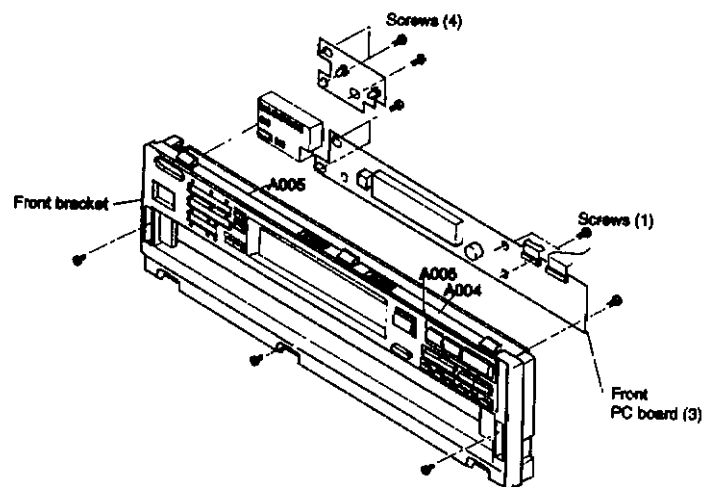


Fig. 2-1-10



### 1-3. Tray Replacement

#### 1-3-1. Tray

1. Remove the front panel. (Refer to item 1-1-3.)
2. Pull out the tray (1) until it stops.
3. Disconnect one FFC (2).
4. Push the claw and pull out the tray to this side.

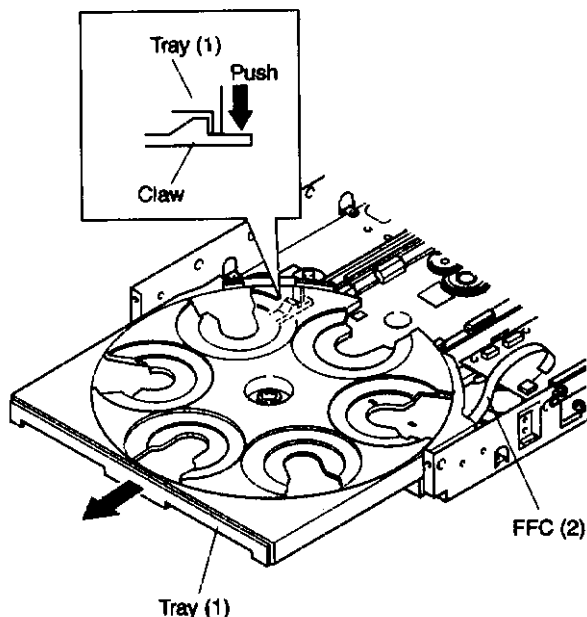


Fig. 2-1-11

#### 1-3-2. Roulette

1. Remove the tray. (Refer to item 1-3-1.)
2. Remove one screw (1) and remove the roulette (2).

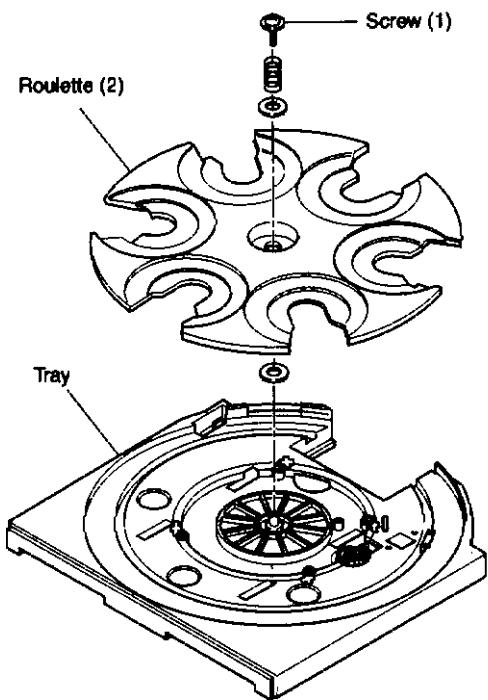


Fig. 2-1-12

#### 1-3-3. Wheel Gear, Worm Gear, Disc Sensor PC Board, Position Sensor PC Board, Loading Motor

1. Remove the tray roulette. (Refer to item 1-3-2.)
2. Remove one screw (1) and remove the wheel gear (2).

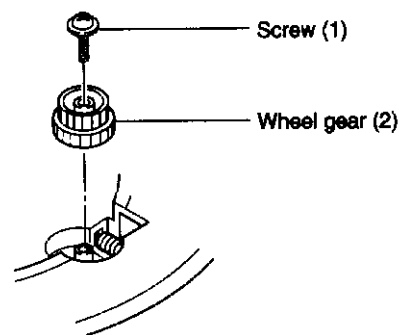


Fig. 2-1-13

3. Turn over the tray.
4. Remove one screw (3), and remove the worm gear (4), pin (5), and belt (6).
5. Remove one screw (7) and remove the disc sensor PC board (8).
6. Remove two screws (9) and remove the motor cover (10).
7. Remove one screw (11) and release three claws, and remove the position sensor PC board (12).
8. Desolder and remove the loading motor (13).

**Note:**

- Be sure to pass the cords through the cord clamps when wiring.

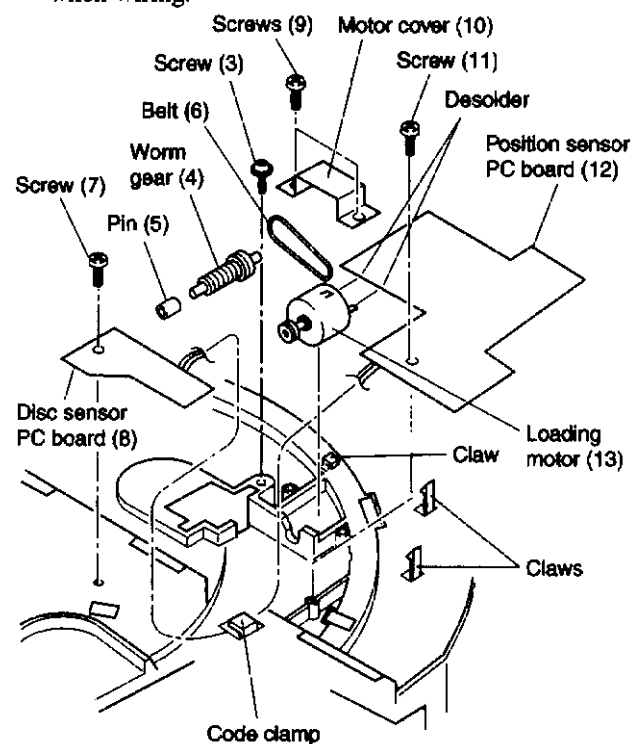


Fig. 2-1-14

## 1-4. Mechanism Parts Replacement

### 1-4-1. Mechanism Chassis Assembly

1. Remove the tray. (Refer to item 1-3-1.)
2. Remove two cords (2) from the cord clamps (1).
3. Disconnect one FFC (4) and two connectors (5).
4. Remove seven screws (6).
5. Remove two screws (7) and remove the mechanism chassis assembly (8).

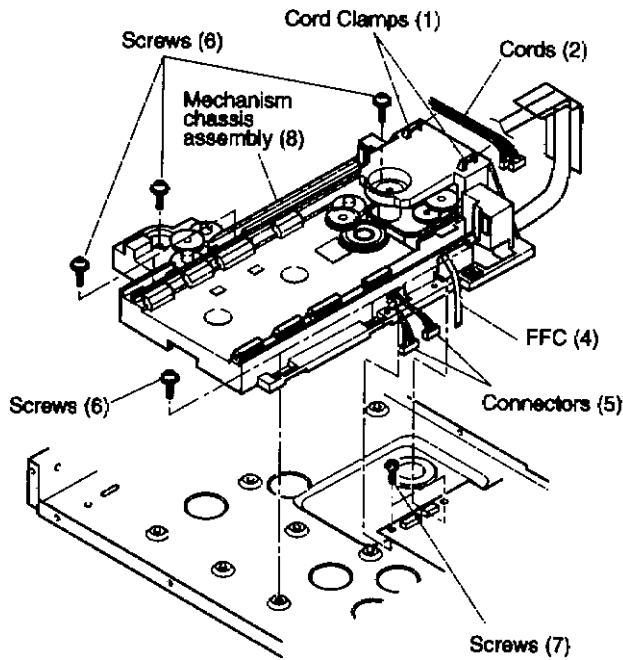


Fig. 2-1-15

### 1-4-2. Sub Chassis Assembly

1. Remove the mechanism chassis assembly. (Refer to item 1-3-4.)
2. Turn over the mechanism chassis assembly.
3. Remove one screw (1) and remove the sub chassis assembly (2).

**Note:**

- When mounting, tighten the screw (1) after fitting the boss with the cam groove.

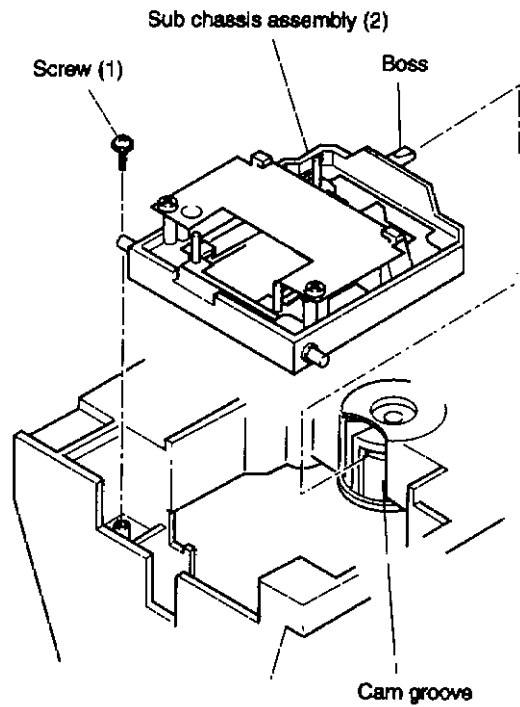


Fig. 2-1-16

### 1-4-3. LD Short PC Board

1. Remove the sub chassis assembly. (Refer to item 1-4-1.)
2. Remove two screws (1) and remove the LD short PC board (2).

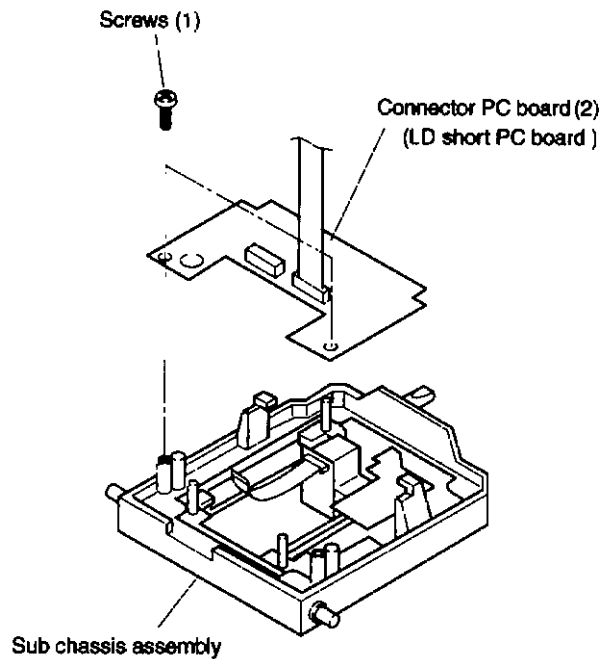
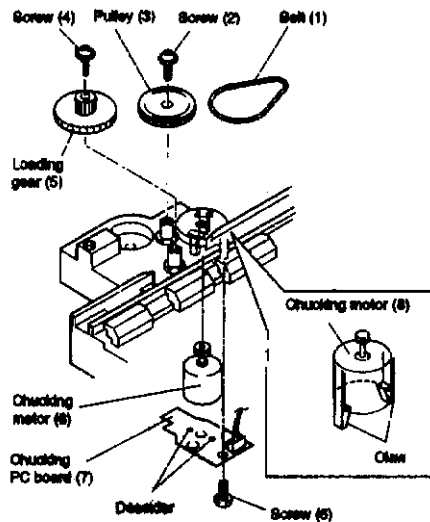


Fig. 2-1-17

**1-4-4. Pickup Mechanism Assembly**

1. Remove the sub chassis assembly. (Refer to item 1-4-1)
2. Disconnect the FFC (1).
3. Remove four screws (2) and remove the pickup mechanism assembly. (3).

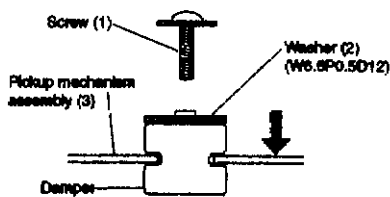


**Fig. 2-1-18**

**Note:**

The dampers' color differs when used for the front side and the rear.

when mounting the pickup mechanism assembly (3) with the screws (1), push the pickup mechanism assembly (3) downward without being caught and tighten the screws (1) after placing the washer with the damper bent.



**Fig. 2-1-19**

### 1-4-5. Gear B Assembly, Gear A and Rack Gear Assembly

#### <Removal>

1. Release one claw and remove the gear B assembly (1).
2. Remove the gear A (2).
3. Remove one screw (3) and remove the rack gear assembly (4).

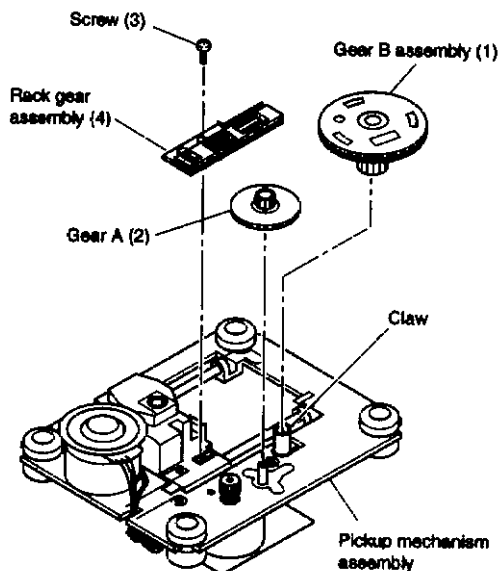


Fig. 2-1-20

#### <Mounting>

1. When mounting, perform the reverse order of the removal.
2. Mount the gear B assembly (1) by pushing the pickup head (5) to the disc motor side (arrow A direction) and shifting the upper gear of the rack gear assembly (4) in the arrow B direction. (Refer to Fig.2-1-22)
3. Fit the positioning holes on the upper gear and lower gear of the gear B assembly (1) and mount on the pickup mechanism assembly with the phase matched. At this time, note that the phase of the gear B assembly (1) and the gear A (2) show's the status in the Fig.2-1-23.

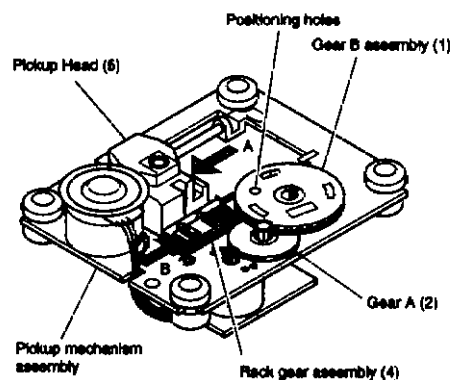


Fig. 2-1-21

#### Note:

- Mount the gear B assembly (1) and the gear a (2) with their gear teeth placed more than on tooth at least inside the shaded portion.

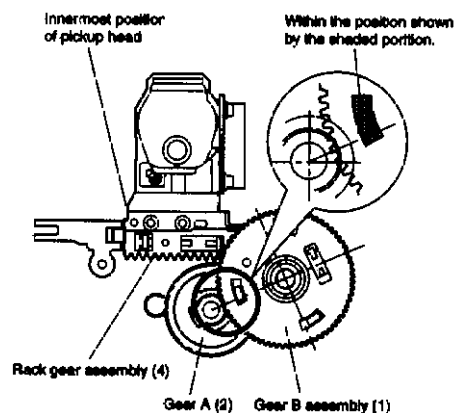


Fig. 2-1-22

### 1-4-6. Feed Motor

#### <Removal>

1. Remove the gear B assembly (1) and the gear A (2).
2. Remove two screws (1) and remove the feed motor (2) (with the feed motor PC board (3) attached.)
3. Desolder the terminals of the feed motor (2) and remove the feed motor PC board (3).

#### <Mounting>

1. Tighten the feed motor (2) on the pickup mechanism assembly with two screws (1).
2. Insert the feed motor PC board (3) with the positioning pin on the chassis matched and solder the terminals.
3. Perform the reverse order of the removal.

#### Note:

- After mounting, put the lead wires through the notch of the pickup mechanism assembly.
- When replacing the loading motor, meet the polarity phase of the terminals.

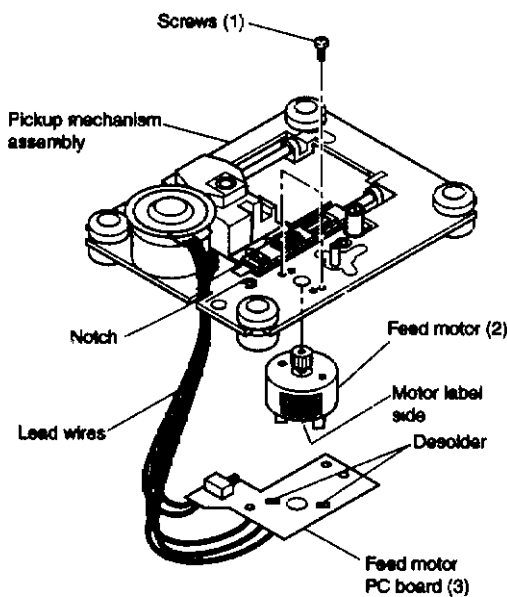


Fig. 2-1-23

### 1-4-7. Chucking Motor

1. Remove the mechanism chassis assembly. (Refer to item 1-3-4.)
2. remove the belt (1).
3. Remove one screw (2) and remove the pulley (3).
4. Remove one screw (4) and remove the loading gear.
5. Turn over the mechanism chassis assembly.
6. remove one screw (6).
7. De-solder and remove the chucking PC board (7).
8. Release two claws and remove the chucking motor (8).

#### Note:

When mounting, be sure to fix the cords with the cord clamps specified locations. (Refer to item 1-4-11).

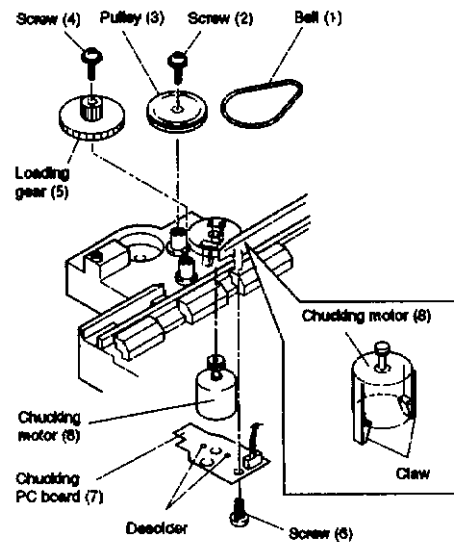
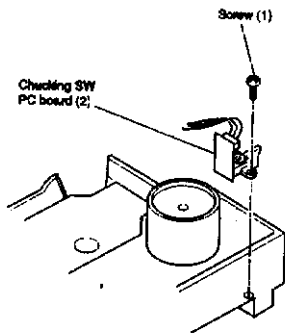


Fig. 2-1-24

**1-4-8. Chucking sw PC Board**

1. Remove the mechanism chassis assembly. (Refer to item 1-3-4).
2. Turn over the mechanism chassis assembly.
3. Remove one screw (1) and remove the chucking SW PC board (2).



**Fig. 2-1-25**

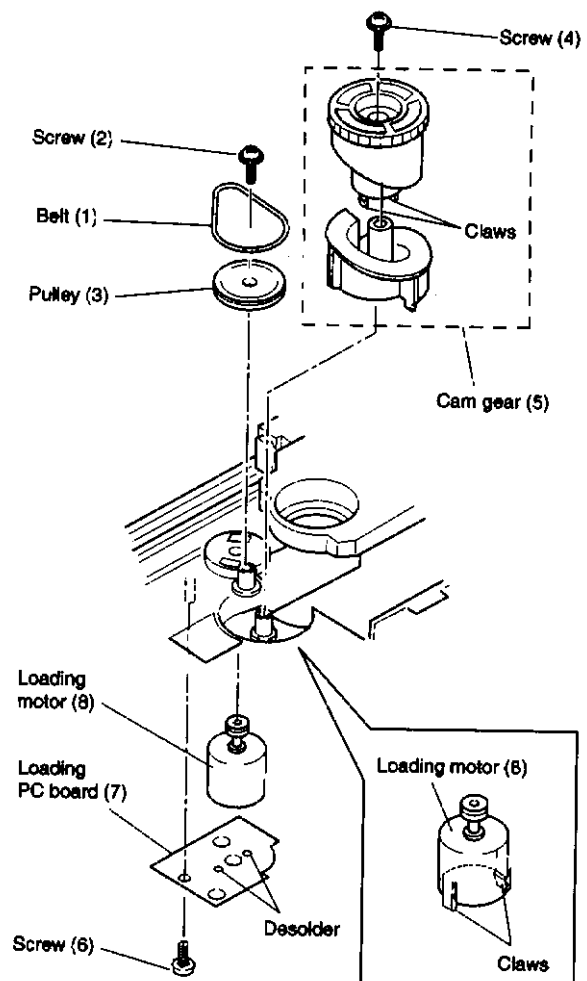
**1-4-9. Loading Motor PC Board**

1. Remove the mechanism chassis assembly. (Refer to item 1-3-4).
2. Remove the belt (1).
3. Remove one screw (2) and remove the pulley (3).
4. remove one screw (4) and remove the cam gear (5).
5. Turn over the mechanism chassis assembly.
6. Remove one screw (6).
7. De-solder and remove the loading motor PC board (7).
8. Release two claws and remove the loading motor (8).

**Note:**

The cam gear (5) is divided in upper and lower sides by releasing two claws.

When mounting, be sure fix the cords with the cord clamps at specified locations. (Refer to item 1-4-11).

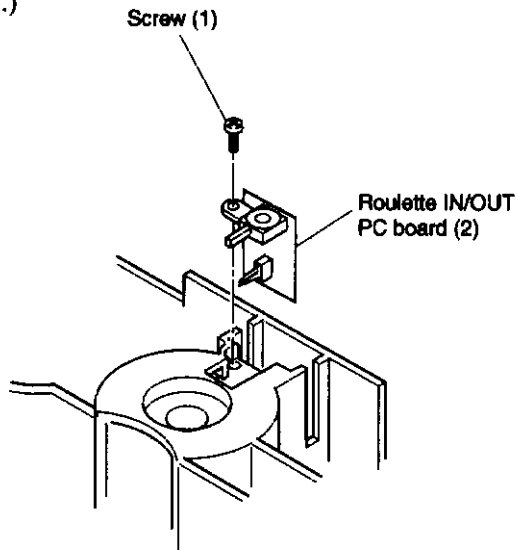


**Fig. 2-1-26**

**1-4-10. Roulette IN/ OUT PC Board**

1. Remove the tray rail. (Refer to item 1-3-4.)
2. Turn over the mechanism chassis assembly.
3. Remove one screw (1) and remove the roulette IN/ OUT PC board (2).

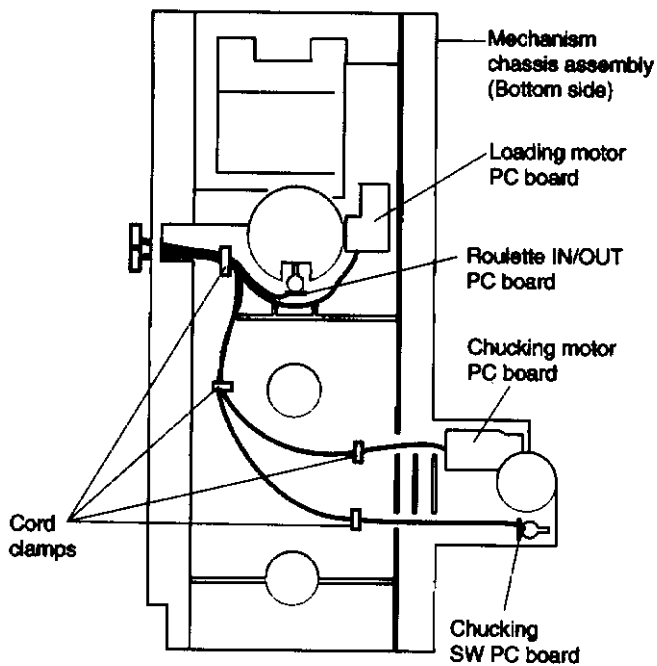
When mounting, be sure to fix the cords with the cord clamps at specified locations. (Refer to item 1-4-8.)



**Fig. 2-1-27**

**1-4-11. Cord Wiring****Note:**

- When removing the PC boards located on the bottom side of the mechanism chassis, switches, etc., wire the cords shown in the figure below and fix with the cord clamps



**Fig. 2-1-28**

## REPLACEMENT OF OPTICAL PICKUP

The laser diode in the optical pickup block is so sensitive to static electricity, surge current and etc. That the components are liable to be broken down or its reliability remarkably deteriorated. During repair, carefully take the following precautions.  
Do not touch the optical pickup object lens with the hands.

1. Remove the spacer on bottom side of the chassis. (Fig. A)  
When replacing the optical pick up, first short J019 on Connector PC board(NAAR-3397).
2. Solder the LD terminal on the DVD mechanism.  
(Fig. B)
3. Disconnect the flexible flat cable E101 and E103..
4. Replace the optical pickup.
5. Connect the flexible flat cable E101 and E103.
6. Unsolder the LD terminal on Mechanism.  
(Fig. C)
7. Cutting the J019.

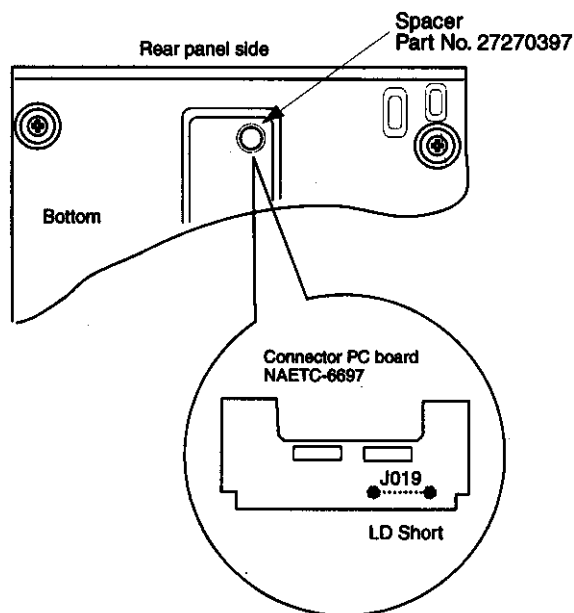


Fig. A

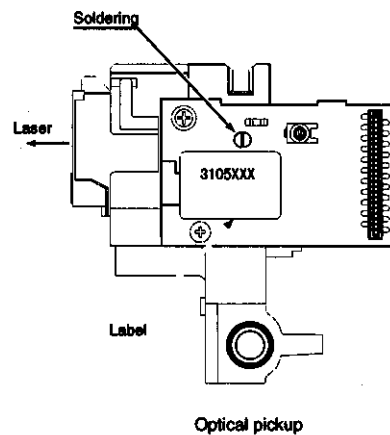


Fig. B

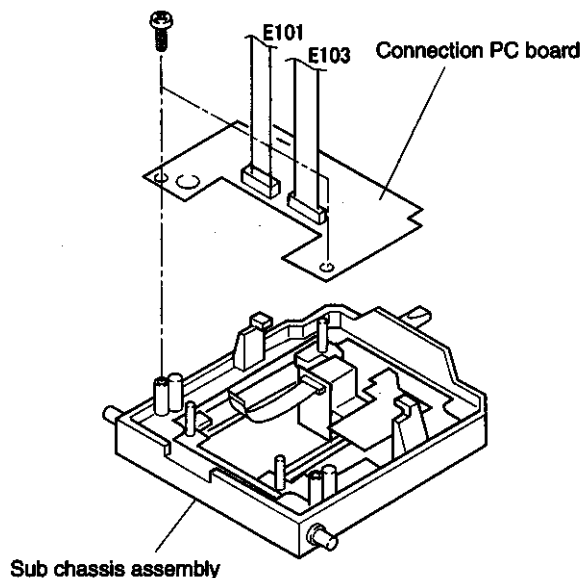
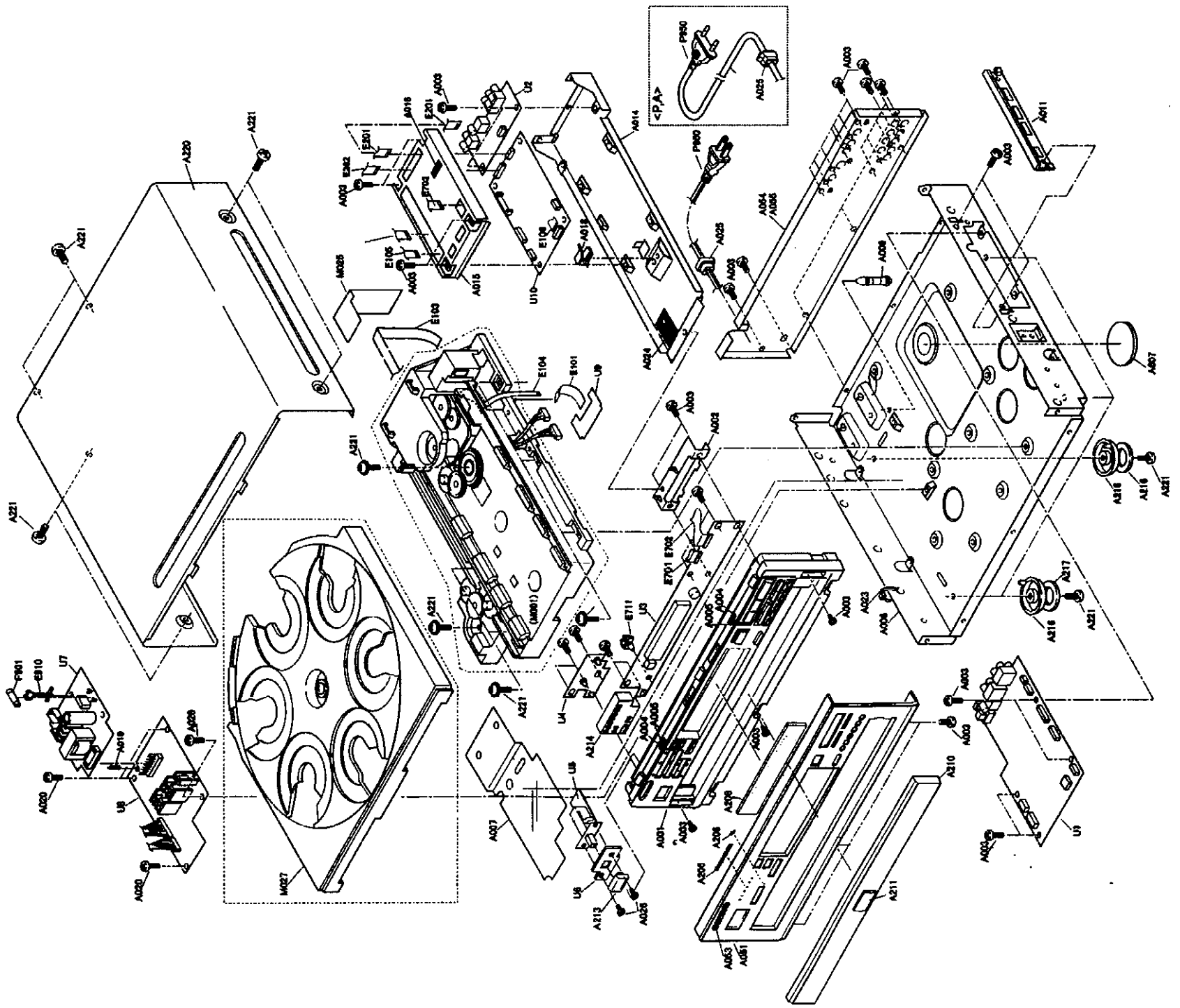


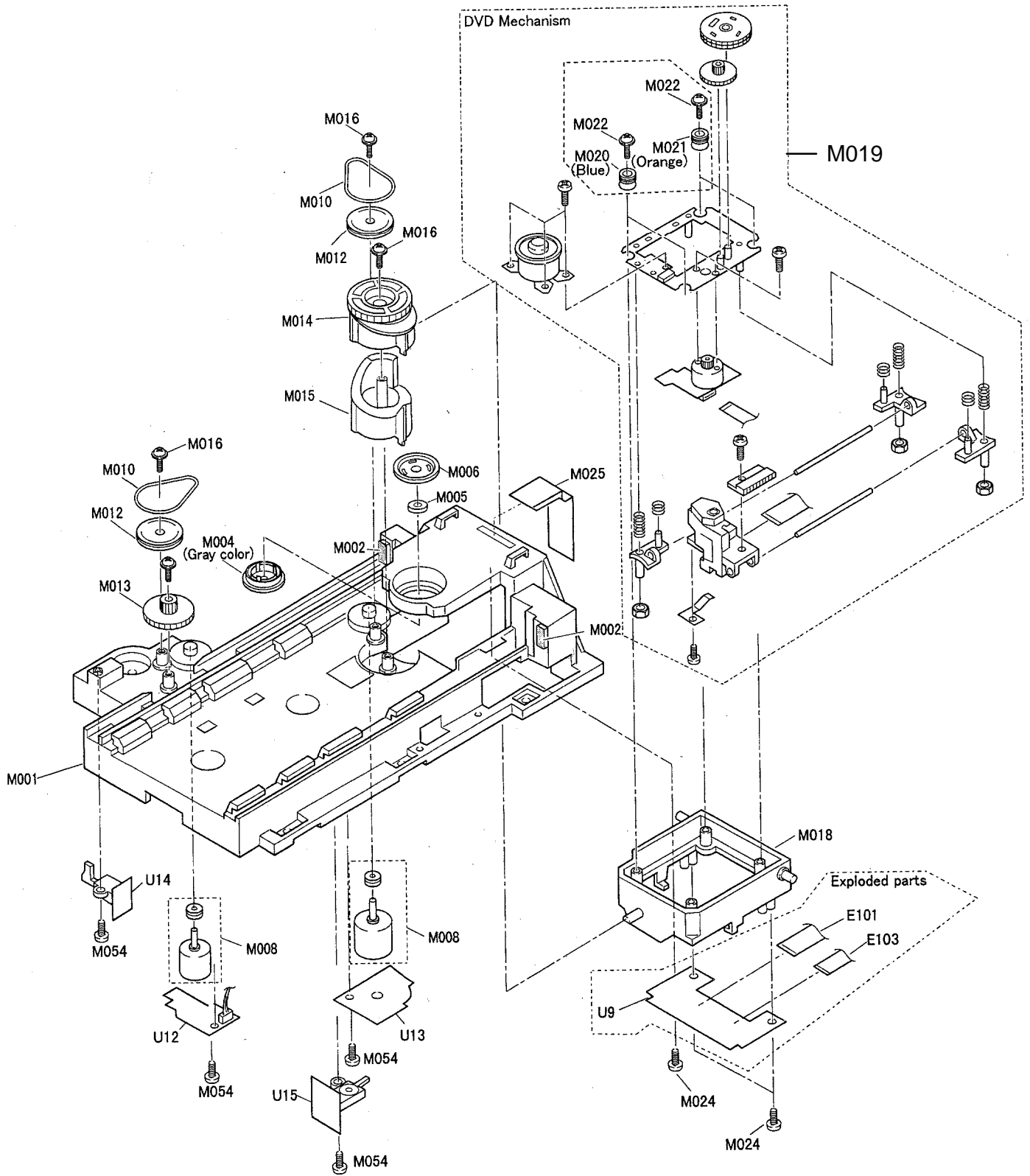
Fig. C



EXPLODED VIEW



# MECHANICAL EXPLODED VIEW (1)



# EXPLODED PARTS LIST

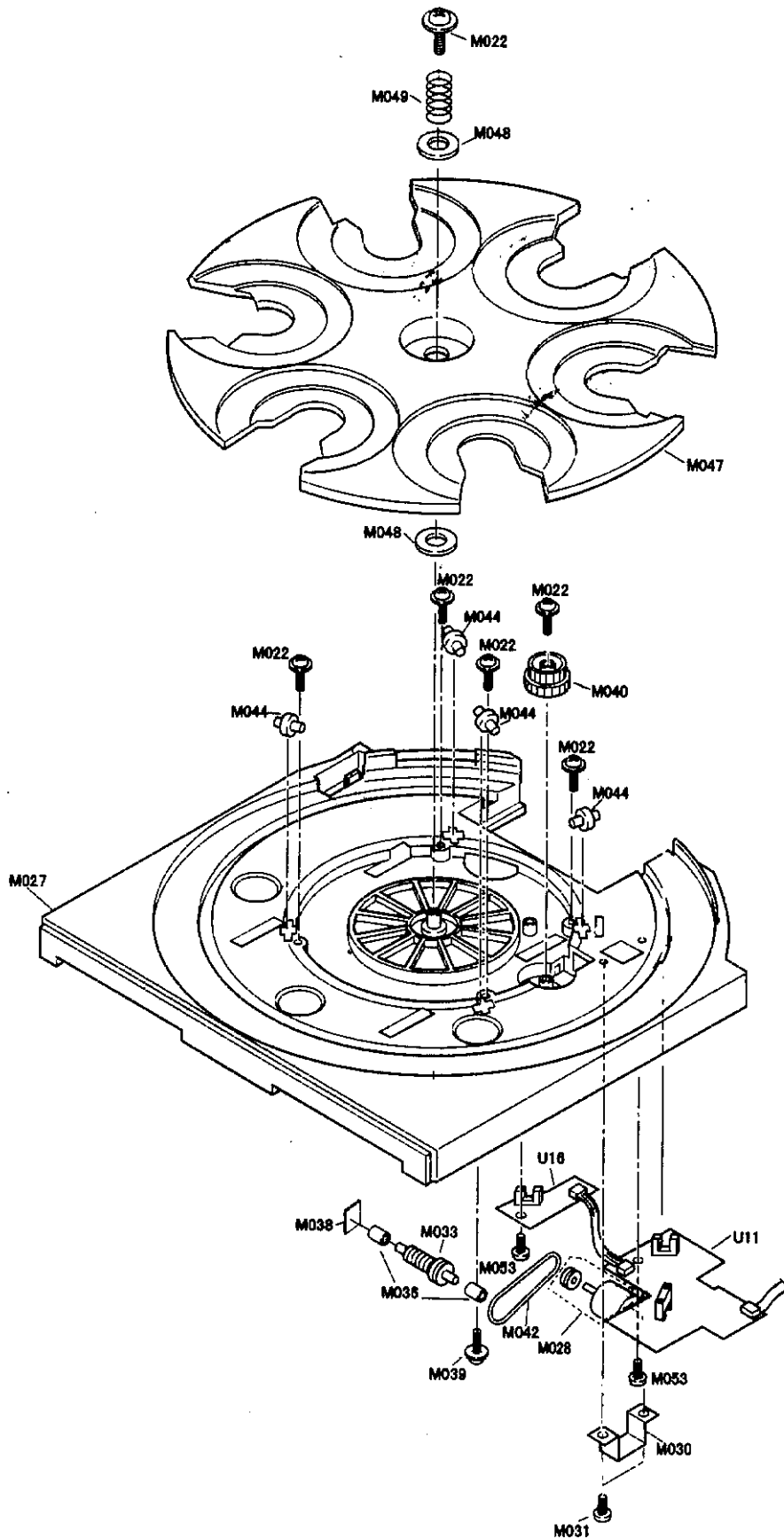
| REF.NO. | PART NO.   | DESCRIPTION                      |
|---------|------------|----------------------------------|
| A001    | 27111129A  | Front bracket                    |
| A002    | 27141746   | Retainer F                       |
| A003    | 838130088  | 3TTB+8B,Self-tapping screw       |
| A004    | 29110138   | Tape, copper                     |
| A005    | 28141400   | Cushion                          |
| A006    | 27100327B  | Chassis                          |
| A007    | 28175252B  | Isolated plate                   |
| A008    | 27190511   | KGLS-16RF,Holder                 |
| A010    | 27191089   | WLS-10-0,Holder                  |
| A011    | 27191084   | Holder FFC                       |
| A014    | 27130828   | Bracket PC                       |
| A015    | 27225143A  | Shield case                      |
| A016    | 28141387   | Cushion                          |
| A018    | 27191000Y  | MFS-1000,Holder                  |
| A020    | 831430088  | 3TTW+8B(BC),Self-tapping screw   |
| A023    | 260208     | Wire tie                         |
| A024    | 29362285   | Label                            |
| A025    | △ 27300750 | Bushing cord                     |
| A026    | 838430107  | 3TTB+10S(BC),Self tapping screw  |
| A051    | 27212139   | Front panel <P/A>                |
| A051    | 27212124   | Front panel <D>                  |
| A053    | 28135244Y  | Badge                            |
| A054    | 27122634   | Rear panel <D>                   |
| A055    | 27122666   | Rear panel <A>                   |
| A055    | 27122635   | Rear panel <P>                   |
| A205    | 28198896   | Facet 6                          |
| A206    | 28198897   | Facet 1                          |
| A208    | 28191858   | Clear plate                      |
| A210    | 28148417A  | Door                             |
| A211    | 27262641   | Plate DVD                        |
| A213    | 28325465   | Knob, POWER                      |
| A214    | 28325686   | Knob ST                          |
| A216    | 27175316B  | Leg                              |
| A217    | 28141332   | Cushion for leg                  |
| A218    | 838130088  | 3TTB+8B,Tapping screw            |
| A220    | 28184680A  | Top cover                        |
| A221    | 838430088  | 3TTB+8B(BC),Self-tapping screw   |
| A607    | 27270397Y  | Spacer                           |
| E101    | 2042180512 | NCFC2-180512,Flexible flat cable |
| E103    | 2042183512 | NCFC3-183512,Flexible flat cable |

| REF.NO. | PART NO.       | DESCRIPTION  |
|---------|----------------|--|
| E104    | 2042080812     | NCFC2-080812,Flexible flat cable                   |
| E105    | 2045082012     | NCFC5-082012,Flexible flat cable                   |
| E106    | 2046072022     | NCFC6-072022,Flexible flat cable                   |
| E201    | 2045130512     | NCFC5-130512,Flexible flat cable                   |
| E202    | 2044180122     | NCFC4-180122,Flexible flat cable                   |
| E701    | 2045132512     | NCFC5-132512,Flexible flat cable                   |
| E702    | 2045194512     | NCFC5-194512,Flexible flat cable                   |
| E711    | 27190608-1     | Holder   |
| E801    | 260208         | Wire tie   |
| E910    | 27301396       | HL-28-0,Clamper                                    |
| F901    | △ 252071       | 1.25A-SE-EAWK,Fuse <P/A>                           |
| F901    | △ 252157       | 1.25A-UL/T-237,Fuse <D>                            |
| P950    | △ 253193HIT or | AS-CEE or  |
| P950    | △ 253195MAR    | AS CEE,Power supply cord <P/A>                     |
| P950    | △ 253279HIT or | AS-UC-2#18 or                                      |
| P950    | △ 253280VOL    | AS-UC-2#18,Power supply cord <D>                   |
| U1      | 1H412589-1A    | NAAF-6689-1A,Output terminal PC board ass'y <D>    |
|         | 1H412589-1B    | NAAF-6689-1B,Output terminal PC board ass'y <P/A>  |
| U2      | 1H412590-1A    | NAAF-6690-1A,Video amplifier PC board ass'y <D>    |
|         | 1H412590-1B    | NAAF-6690-1B,Video amplifier PC board ass'y <P/A>  |
| U3      | 1H412591-1A    | NADIS-6691-1A,Display circuit PC board ass'y <D>   |
|         | 1H412591-1B    | NADIS-6691-1B,Display circuit PC board ass'y <P/A> |
| U4      | 1H412592-1A    | NADIS-6692-1A,LED indicator PC board ass'y <D>     |
|         | 1H412592-1B    | NADIS-6692-1B,LED indicator PC board ass'y <P/A>   |
| U5      | 1H412593-1A    | NASW-6693-1A,Power switch PC board ass'y <D>       |
|         | 1H412593-1B    | NASW-6693-1B,Power switch PC board ass'y <P/A>     |
| U6      | 1H412594-1A    | NAETC-6694-1A,PC board ass'y <D>                   |
|         | 1H412594-1B    | NAETC-6694-1B,PC board ass'y <P/A>                 |
| U7      | 1H412595-1A    | NAPS-6695-1A,Power supply PC board ass'y (1) <D>   |
|         | 1H412595-1B    | NAPS-6695-1B,Power supply PC board ass'y (1) <P/A> |
| U8      | 1H412596-1A    | NAPS-6696-1A,Power supply PC board ass'y (2) <D>   |
|         | 1H412596-1B    | NAPS-6696-1B,Power supply PC board ass'y (2) <P/A> |
| U9      | 1H412597-1A    | NAETC-6697-1A,Connector PC board ass'y <D>         |
|         | 1H412597-1B    | NAETC-6697-1B,Connector PC board ass'y <P/A>       |
| U10     | 24150011       | SD-20D1, Main circuit PC board ass'y <D>           |
|         | 24150012       | SD-20E2,Main circuit PC board ass'y <P/A>          |

**NOTE:**

- <D>: 120V model only
- <P>: European model only
- <A>: Australian model only

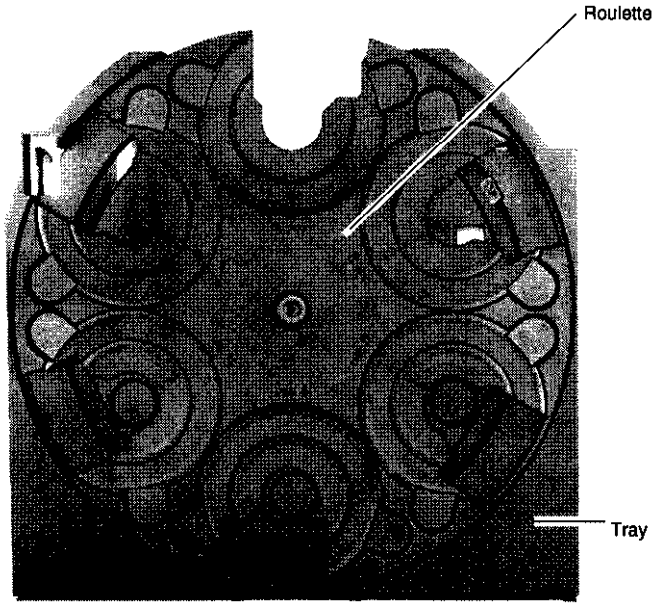
# MECHANICAL EXPLODED VIEW (2)



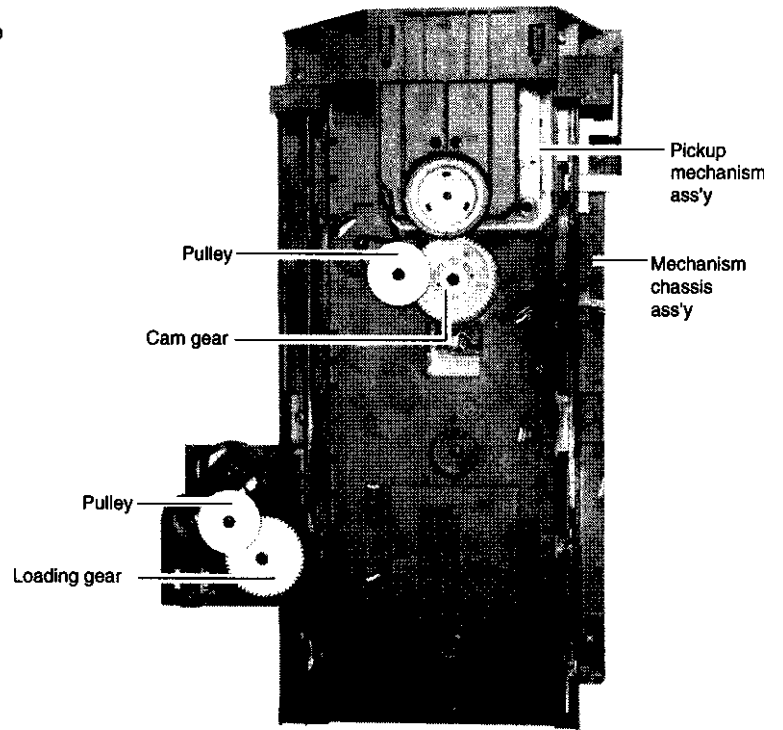
## ROULETTE MECHANISM PARTS LIST

| REF. NO. | PART NO.   | DESCRIPTION                         | REF. NO. | PART NO.   | DESCRIPTION                                |
|----------|------------|-------------------------------------|----------|------------|--|
| M001     | 24840109B  | Rail                                | M036     | 24834017A  | Spacer                                     |
| M002     | 28141337Y  | Cushion                             | M038     | 28141340Y  | Cushion                                    |
| M004     | 24824028   | Cap CHD                             | M039     | 831430088  | 3TTW+8B(BC),Self-tapping screw             |
| M005     | 24832028   | Magnet CHC                          | M040     | 24810043Y  | Gear, wheel                                |
| M006     | 24830028   | Yoke CHC                            | M041     | 24840111   | Special screw                              |
| M008     | 1H412901   | RF-500TB-14415,Loading motor ass'y  | M042     | 24816035   | Rubber belt                                |
| M010     | 24816010AY | Rubber belt                         | M044     | 24840110Y  | Roller                                     |
| M012     | 24810040Y  | Gear, pulley                        | M045     | 24840111   | Special screw                              |
| M013     | 24810039A  | Gear, load                          | M047     | 24840108A  | Roulette                                   |
| M014     | 24810041Y  | Cam gear A                          | M048     | 24834016   | Washer A                                   |
| M015     | 24810042Y  | Cam gear B                          | M049     | 24820033Y  | Spring A                                   |
| M016     | 831430088  | 3TTW+8B(BC),Self-tapping screw      | M050     | 24840111   | Special screw                              |
| M018     | 24802046A  | Sub chassis                         | M053     | 838130088  | 3TTB+8B,Self-tapping screw                 |
| M019     | 24801003   | SD-2109K1-ZX,DVD mechanism          | M054     | 838426088  | 2.6TTB+8B(BC),Self-tapping screw           |
| M020     | 24818013Y  | Insulator A                         | U11      | 1H412554-2 | NAETC-5854-2 Position Sensor PCB assy.     |
| M021     | 24818014Y  | Insulator B                         | U12      | 1H412555-2 | NAETC-5855-2,Chucking motor PC board ass'y |
| M022     | 24840111   | Special screw                       | U13      | 1H412556-2 | NAETC-5856-2,Loading motor PC board ass'y  |
| M024     | 838130088  | 3TTB+8B,Self-tapping screw          | U14      | 1H412557-2 | NASW-5857-2,Chucking switch PC board ass'y |
| M025     | 28175255   | Isolated plate                      | U15      | 1H412558-2 | NASW-5858-2,Roulette in/out PC board ass'y |
| M027     | 24840142   | Tray                                | U16      | 1H412559-2 | NAETC-5859-2,Disc sensor PC board ass'y    |
| M028     | 1H412902   | RF-310TA-11400,Roulette motor ass'y |          |            |  |
| M030     | 24822018Y  | Retainer                            |          |            |  |
| M031     | 838130088  | 3TTB+8B,self-tapping screw          |          |            |  |
| M033     | 24810045A  | Worm ass'y                          |          |            |  |

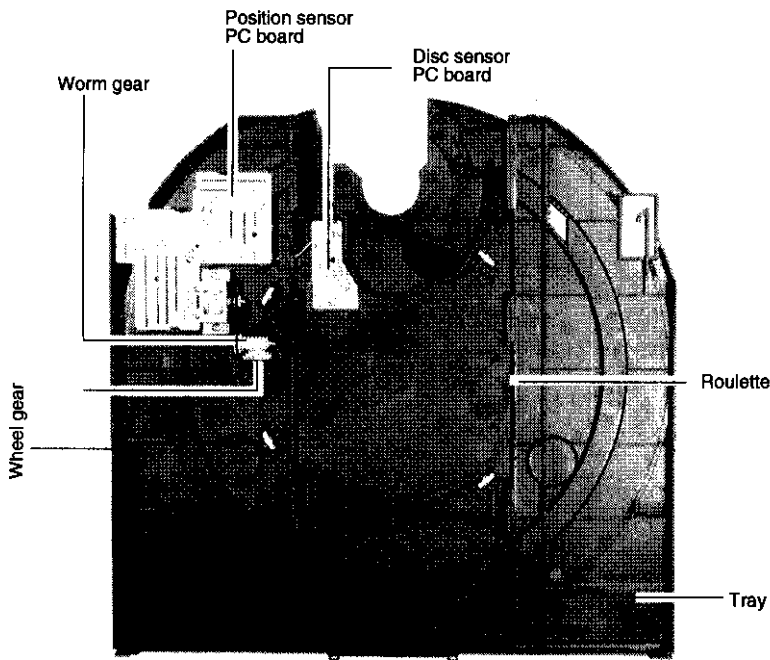
# LOCATION OF MECHANISM PARTS



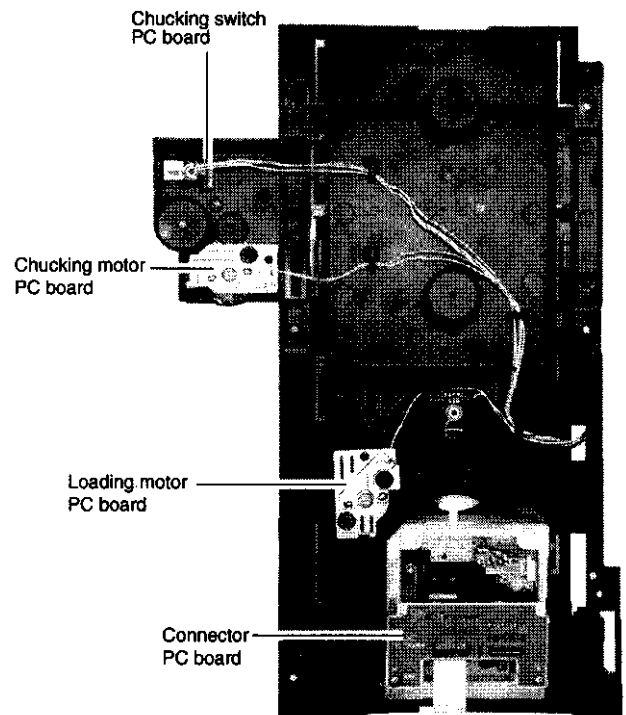
Mechanism chassis ass'y (Top side)



Mechanism chassis ass'y (Top side)



Mechanism chassis ass'y (Bottom side)



Mechanism chassis ass'y (Bottom side)

## ELECTRICAL PARTS LIST

| OUTPUT TERMINAL PC BOARD (NAAF-6689-1A/1B) |                      |                                  | DISPLAY CIRCUIT PC BOARD (NADIS-6691-1A/1B) |                      |                             |
|--|----------------------|----------------------------------|---|----------------------|-----------------------------|
| CIRCUIT NO.                                | PART NO.             | DESCRIPTION                      | CIRCUIT NO.                                 | PART NO.             | DESCRIPTION                 |
| Q101-Q103                                  | 22240239             | TA7291S                          | Q212,Q213                                   | 2213284 or           | 2SC1740S-R or               |
| Q301                                       | 222740046R2          | 74HC004F                         |   | 2215864              | KTC3199-GR                  |
| Q401                                       | 22241383R1 or        | NJM4565M-D or                    | Q217,Q220                                   | 2213284 or           | 2SC1740S-R or               |
|  | 22241383R2           | NJM4565M-D                       |   | 2215864              | KTC3199-GR <D>              |
|  | <b>Transistors</b>   |                                  | Q218  | 2213354,             | 2SA933S-R,                  |
| Q104,Q410                                  | 221281 or            | DTC114YS or                      |   | 2213355 or           | 2SA933S-S or                |
|  | 2213570              | RN1207                           |   | 2215995              | KTA1267-GR <D>              |
| Q105                                       | 2213354,             | 2SA933S-R,                       | Q221  | 2213354 or           | 2SA933S-R or                |
|  | 2213355 or           | 2SA933S-S or                     |   | 2213355              | 2SA933S-S                   |
|  | 2215995              | KTA1267-GR                       |   | 2215995              | KTA1267-GR                  |
| Q403-Q406                                  | 2211705,             | 2SD655-E                         | Q230  | 2211705 or           | 2SD655-E or                 |
|  | 2211706 or           | 2SD655-F or                      |   | 2211706              | 2SD655-F                    |
|  | 2216002              | KTC2874-B                        |   | <b>Diode</b>         |                             |
| Q411                                       | 2212600 or           | DTA124ES or                      | D201  | 224490750R2          | UD27.5B                     |
|  | 2215780              | KRA103M                          |   | <b>Coils</b>         |                             |
|  | <b>Photo coupler</b> |                                  | L201  | 231253K100           | NCH-1490                    |
| Q302                                       | 24120031             | TOTX178A                         | L210  | 230921R2             | BLM21B222SPT <D>            |
|  | <b>Diodes</b>        |                                  | L211,L212                                   | 230921R2 or          | BLM21B222SPT or             |
| D101,                                      | 223233R1 or          | 1SS355 or                        |   | 230952R2             | BK2125LM182-T <D>           |
| D401-D403                                  | 223234R2             | 1SS352                           | L213-L215                                   | 230921R2             | BLM21B222SPT                |
|  | <b>Coil</b>          |                                  |   | <b>Filters</b>       |                             |
| L301                                       | 230921R2 or          | BLM21B222SPT or                  | Z201,Z202                                   | 3030041              | Y-5(8.00MHz)                |
|  | 230952R2             | BK2125LM182-T                    | Z203,Z204                                   | 3030041              | Y-5(8.00MHz)                |
|  | <b>Capacitors</b>    |                                  |   | <b>Capacitors</b>    |                             |
| C101-C106                                  | 354744709            | 47 $\mu$ F,16V,Elect.            | C201  | 354744719            | 470 $\mu$ F,16V,Elect.      |
| C303,C307                                  | 354721019            | 100 $\mu$ F,6.3V,Elect.          | C211,C215                                   | 354744709            | 47 $\mu$ F,16V,Elect.       |
| C401,C402                                  | 374722224            | 2200pF $\pm$ 5%,50V,Plastic      | C222-C224                                   | 354724719            | 470 $\mu$ F,6.3V,Elect. <D> |
| C403,C404                                  | 374724724            | 4700pF $\pm$ 5%,50V,Plastic      | C225,C227                                   | 354724719            | 470 $\mu$ F,6.3V,Elect.     |
| C407,C408                                  | 354782209            | 22 $\mu$ F,50V,Elect.            | C230  | 354744709            | 47 $\mu$ F,16V,Elect.       |
| C409,C410                                  | 354744709            | 47 $\mu$ F,16V,Elect.            |   | <b>Terminals</b>     |                             |
| C411,C412                                  | 354782209            | 22 $\mu$ F,50V,Elect.            | P201  | 25045546             | NPJ-3PDRE367 <D>            |
| C421                                       | 354724719            | 470 $\mu$ F,6.3V,Elect.          | P203  | 25045547             | NPJ-1PDYE368                |
|  | <b>Resistor</b>      |                                  |   | <b>Sockets</b>       |                             |
| R108                                       | 453530474            | 4.7 $\Omega$ $\pm$ 5%,1/2W,Metal | P202  | 25051750             | NSCT-4P1537                 |
|  | <b>Terminals</b>     |                                  | P212  | 25051765A            | NSCT-13P1552                |
| P301                                       | 25045548             | NPJ-1FDOR369                     |   | <b>Plug</b>          |                             |
| P310                                       | 25045330 or          | NPJ-2PDBL184 or                  | P211  | 25055146             | NPLG-2P130                  |
|  | 25045481             | NPJ-2PDBL299                     |   |                      |                             |
| P401                                       | 25045371             | NPJ-2PDWR214                     |   |                      |                             |
|  | <b>Plugs</b>         |                                  |   |                      |                             |
| P103A                                      | 25055149             | NPLG-5P133                       |   |                      |                             |
| P104A                                      | 25055150             | NPLG-6P134                       |   |                      |                             |
|  | <b>Sockets</b>       |                                  |   |                      |                             |
| P113,P114                                  | 25051760A            | NSCT-8P1547                      |   |                      |                             |
| P115                                       | 25051851             | NSCT-7P1638                      |   |                      |                             |
| P210                                       | 25051777A            | NSCT-25P1564                     |   |                      |                             |
| P211A                                      | 2002A390420          | NSAS-4P0754                      |   |                      |                             |
| P302                                       | 2009990560UL         | NSAS-4P0752 <D>                  |   |                      |                             |
| P712B                                      | 25051771A            | NSCT-19P1558                     |   |                      |                             |
| VIDEO AMPLIFIER PC BOARD (NAAF-6690-1A/1B) |                      |                                  |   |                      |                             |
| CIRCUIT NO.                                | PART NO.             | DESCRIPTION                      | CIRCUIT NO.                                 | PART NO.             | DESCRIPTION                 |
|  | <b>Transistors</b>   |                                  | Q703  | 212201               | 13-ST-40GNK                 |
| Q201,Q202                                  | 2213354 or           | 2SA933S-R or                     |   | <b>IC</b>            |                             |
| Q205,Q206                                  | 2213355              | 2SA933S-S                        | Q701  | 22241389R3           | MPD78042FGF-113-3B9         |
| Q207,Q210,                                 | 2213284 or           | 2SC1740S-R or                    |   | <b>Remote sensor</b> |                             |
| Q211                                       | 2215864              | KTC3199-GR <D>                   | Q705  | 24130011 or          | PIC-12043TE2 or             |
| Q214,Q215                                  | 2215995              | KTA1267-GR <D>                   |   | 241330               | PIC-26043TE2                |
| Q203,Q204                                  | 2213354 or           | 2SA933S-R or                     |   | <b>Transistors</b>   |                             |
| Q208,Q209                                  | 2213355              | 2SA933S-S                        | Q702  | 2211504              | 2SA950-Y                    |
| Q216,Q219                                  | 2215995              | KTA1267-GR                       | Q704  | 2212600 or           | DTA124ES or                 |
|  |                      |                                  |   | 2215780              | KRA103M                     |
|  |                      |                                  |   | <b>Diodes</b>        |                             |
|  |                      |                                  | D701  | 223233R1 or          | 1SS355 or                   |
|  |                      |                                  |   | 223234R2             | 1SS352                      |
|  |                      |                                  | D702  | 224490560R2          | UD25.6B                     |
|  |                      |                                  |   | <b>Oscillator</b>    |                             |
|  |                      |                                  | X701  | 3010242              | CST5.00MGW,Ceramic          |
|  |                      |                                  |   | <b>Capacitors</b>    |                             |
|  |                      |                                  | C701  | 354782209            | 22 $\mu$ F,50V,Elect.       |
|  |                      |                                  | C702,C703                                   | 354721019            | 100 $\mu$ F,6.3V,Elect.     |
|  |                      |                                  |   | <b>Switches</b>      |                             |
|  |                      |                                  | S701-S719                                   | 25035652             | NFS-111-S604                |

| CIRCUIT NO. | PART NO.       | DESCRIPTION  |
|-------------|----------------|--------------|
|             | <b>Sockets</b> |              |
| P710        | 25051793A      | NSCT-13P1580 |
| P712A       | 25051799A      | NSCT-19P1586 |
|             | <b>Plug</b>    |              |
| P713A       | 25055152       | NPLG-8P136   |
|             | <b>Holder</b>  |              |
| E710        | 27191085       | (FL)         |

**LED INDICATOR PC BOARD(NADIS-6692-1A/1B)**

| CIRCUIT NO. | PART NO.    | DESCRIPTION                       |
|-------------|-------------|-----------------------------------|
| Q707        | 222745955R2 | 74HC595F,IC                       |
| D703        | 225255B     | SEL3110S-B,LED                    |
| D704-D709   | 225324D     | SEL6910A-D,LED                    |
| C704        | 355721019   | 100 $\mu$ F,6.3V,Elect. Capacitor |
| S720        | 25035652    | NPS-111-S604,Switch               |
| P713B       | 2002391615  | NSAS-16P0194,Socket               |

**POWER SWITCH PC BOARD (NASW-6693-1A/1B)**

| CIRCUIT NO. | PART NO.   | DESCRIPTION                   |
|-------------|------------|-------------------------------|
| S990        | △ 25035550 | NPS-111-L512P,Switch          |
| P912B       | 25055152   | NPLG-8P136,Plug               |
| C990        | △ 3500077  | DE7150F-472M,IS capacitor <P> |
|             | △ 3500196  | RE275V-103M,IS capacitor <D>  |

**POWER SUPPLY PC BOARD (1) (NAPS-6695-1A/1B)**

| CIRCUIT NO. | PART NO.                               | DESCRIPTION   |
|-------------|--|---|
|             | <b>IC</b>                              |   |
| Q901        | △ 22241229                             | STR-F6653   |
|             | <b>Photo coupler</b>                   |   |
| Q907        | 24120044                               | ON3131-R  |
|             | <b>Diodes</b>                          |   |
| D901-D904   | △ 22380287F                            | EM2A  |
| D905        | △ 22380291                             | EG01C   |
| D906-D908   | 22380294                               | AG01Z   |
|             | <b>Power Transformer</b>               |   |
| T901        | △ 2301432                              | NPT-1380  |
|             | <b>Coil</b>                            |   |
| L901        | △ 231280                               | NCH-3561  |
|             | <b>Core</b>                            |   |
| L903        | △ 230906                               | BL02RN2-R62   |
|             | <b>Capacitors</b>                      |   |
| C901,C902   | △ 3500077                              | DE7150F-472M,IS   |
| C910        | △ 3500197 or<br>△ 3937E1017            | 100 $\mu$ F,400V or<br>100 $\mu$ F,400V,Elect.                                    |
| C911        | △ 3000115                              | DE1005SL-221J2K   |
| C912        | △ 3000114                              | QXJ2J-103K-TPT  |
| C913        | 354764709                              | 47 $\mu$ F,35V,Elect.   |
| C916        | △ 3300052<br>△ 3500077                 | DE1610E 472M-KX,IS <P><br>DE7150F-472M,IS <D>                                     |
|             | <b>Resistors</b>                       |   |
| R901        | △ 4500018 or<br>△ 4000076<br>△ 4500026 | BPR58FK-0.22 or<br>MPC74-5WK-0.22,Metal plate <D><br>BPR58FK-1.00,Metal plate <p> |
| R902        | △ 411566844                            | 680k $\Omega$ $\pm$ 5%,1/2W,Carbon  |
| R903        | △ 441726834NF                          | 68k $\Omega$ $\pm$ 5%,2W,Metal oxide  |
| R904        | △ 441721044NF                          | 100k $\Omega$ $\pm$ 5%,2W,Metal oxide   |
| R905        | 443523304                              | 33 $\Omega$ $\pm$ 5%,1/2W,Metal oxide   |
| R906        | 443522724                              | 2.7k $\Omega$ $\pm$ 5%,1/2W,Metal oxide   |
| R907        | △ 451735194F                           | 0.51 $\Omega$ $\pm$ 5%,2W,Metal   |
| R908        | 443526814                              | 680 $\Omega$ $\pm$ 5%,1/2W,Metal oxide  |
| R909        | 443523324                              | 3.3k $\Omega$ $\pm$ 5%,1/2W,Metal oxide   |
| R910        | 443522234                              | 22k $\Omega$ $\pm$ 5%,1/2W,Metal oxide  |

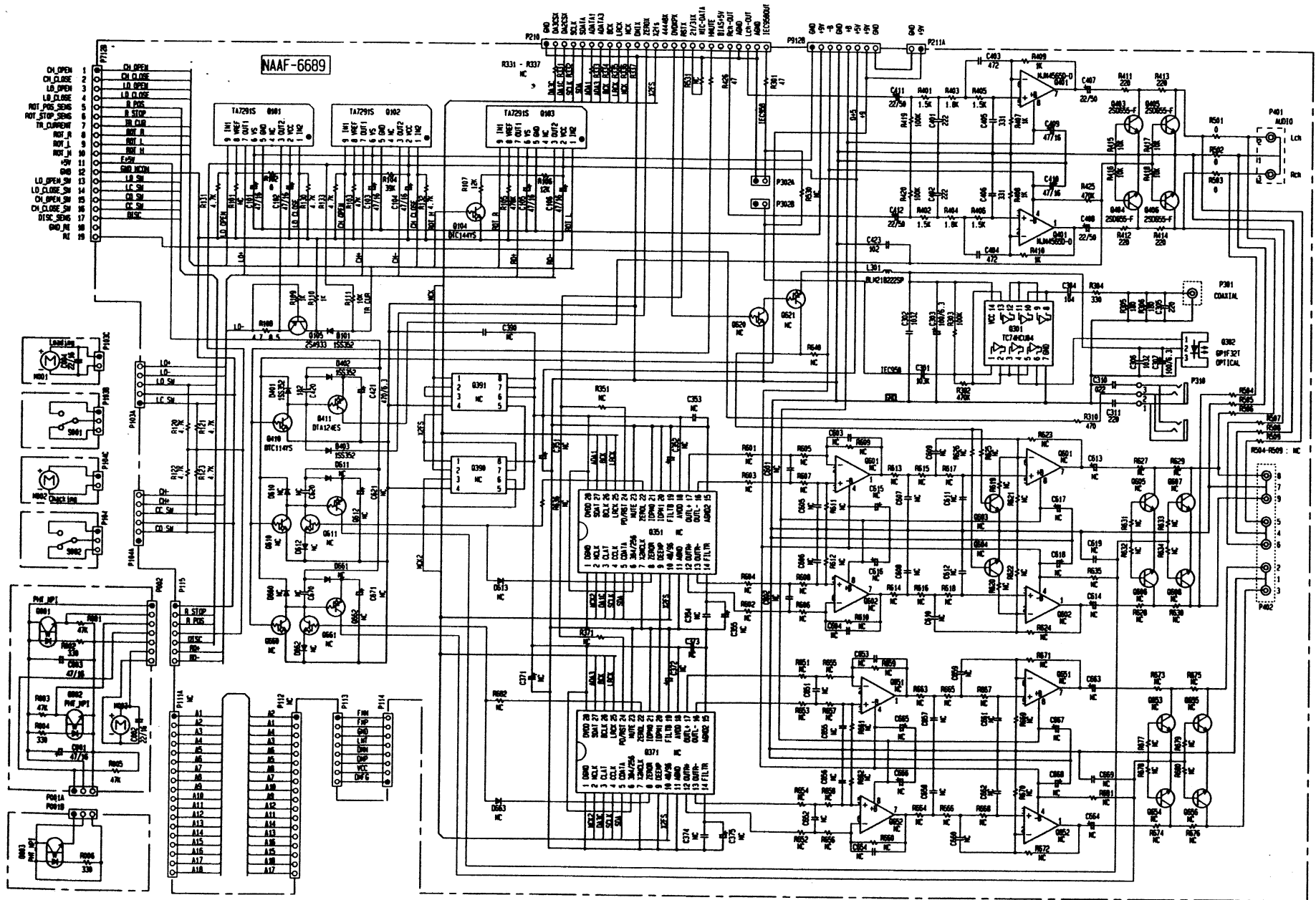
| CIRCUIT NO. | PART NO.                | DESCRIPTION               |
|-------------|-------------------------|---------------------------|
|             | <b>Fuse holders</b>     |                           |
| F901A,F901B | 25050065                | YSH403T                   |
|             | <b>Fuse label</b>       |                           |
| E902        | 29361580                | T1.25AL250V <P>           |
|             | <b>Socket</b>           |                           |
| P920A       | 25051553                | NSCT-12P1340              |
|             | <b>Plug</b>             |                           |
| P950A       | 25055675                | NPLG-2P631                |
|             | <b>Heat sink</b>        |                           |
| Q901A       | 27160412 or<br>27160428 | RAD-111 or<br>17PB23L30   |
|             | <b>Cover</b>            |                           |
| C902A       | 27301216                | SB1925A                   |
|             | <b>Screw</b>            |                           |
| Q901B       | 838430107               | 3TTB+10S(BC),Self-tapping |

**POWER SUPPLY CIRCUIT PC BOARD (2) (NAPS-6696-1A/1B)**

| CIRCUIT NO. | PART NO.                               | DESCRIPTION                                |
|-------------|--|--|
|             | <b>ICs</b>                             |  |
| Q902        | 22241230                               | SI3090C                                    |
| Q903        | 22241231                               | SI3050C                                    |
| Q904        | 22241232                               | SI3033C                                    |
| Q905        | 22241233                               | SE005N                                     |
|             | <b>Transistors</b>                     |  |
| Q906,Q908   | 2211504                                | 2SA950-Y                                   |
| Q909,Q914   | 2213354 or<br>2213355 or<br>2215995    | 2SA933S-R or<br>2SA933S-S or<br>KTA1267-GR |
|             | <b>Diodes</b>                          |  |
| D909        | 22380295F                              | RN2Z                                       |
| D910,D911   | 22380296F                              | RK46                                       |
| D912        | 22380297                               | EU01                                       |
| D913,D921   | 22380294                               | AG01Z                                      |
| D917        | 22380300F                              | RU2YX                                      |
| D918        | 224473304                              | MTZJ33D                                    |
| D919        | 224470332                              | MTZJ3.3B                                   |
| D920,D923   | 22380032 or<br>22380035 or<br>22380260 | 1SR139-100 or<br>GP104003E or<br>RL1N4003  |
| D922        | 224470753                              | MTZJ7.5C                                   |
|             | <b>Coils</b>                           |  |
| L904-L907   | 231253K100                             | NCH-1490                                   |
|             | <b>Capacitors</b>                      |  |
| C920        | 393751027                              | 1000 $\mu$ F,25V,Elect.                    |
| C921,C922   | 354744719                              | 470 $\mu$ F,16V,Elect.                     |
| C923,C924   | 354782209                              | 22 $\mu$ F,50V,Elect.                      |
| C925,C928   | 393741027                              | 1000 $\mu$ F,16V,Elect.                    |
| C926,C927   | 354782209                              | 22 $\mu$ F,50V,Elect.                      |
| C929        | 374722244                              | 0.22 $\mu$ F $\pm$ 5%,50V,Plastic          |
| C930        | 354782209                              | 22 $\mu$ F,50V,Elect.                      |
| C931        | 354744719                              | 470 $\mu$ F,16V,Elect.                     |
| C932-C934   | 354782209                              | 22 $\mu$ F,50V,Elect.                      |
| C935,C944   | 374721034                              | 0.01 $\mu$ F $\pm$ 5%,50V,Plastic          |
| C936,C938   | 354782209                              | 22 $\mu$ F,50V,Elect.                      |
| C937        | 354761019                              | 100 $\mu$ F,35V,Elect.                     |
| C941,C942   | 354761019                              | 100 $\mu$ F,35V,Elect.                     |
| C943        | 354744709                              | 47 $\mu$ F,16V,Elect.                      |
| C945,C946   | 354782209                              | 22 $\mu$ F,50V,Elect.                      |



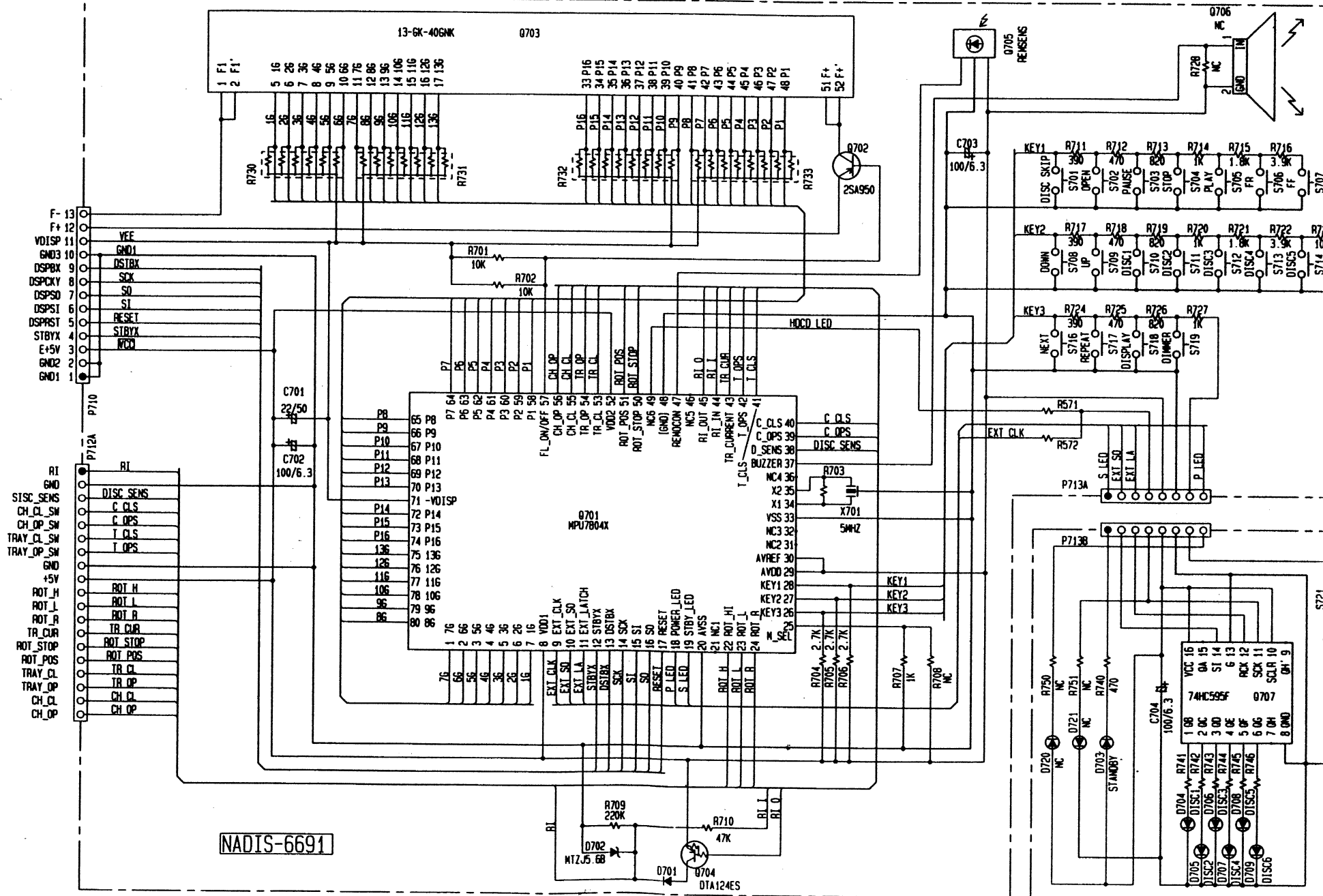
SCHEMATIC DIAGRAM



A B C D E F G

SCHEMATIC DIAGRAM

1  
2  
3  
4  
5



NADIS-6691

**SCHEMATIC DIAGRAM**

**CAUTION**

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.



THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.

**ATTENTION**

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRAGE COMME INDIQUE.

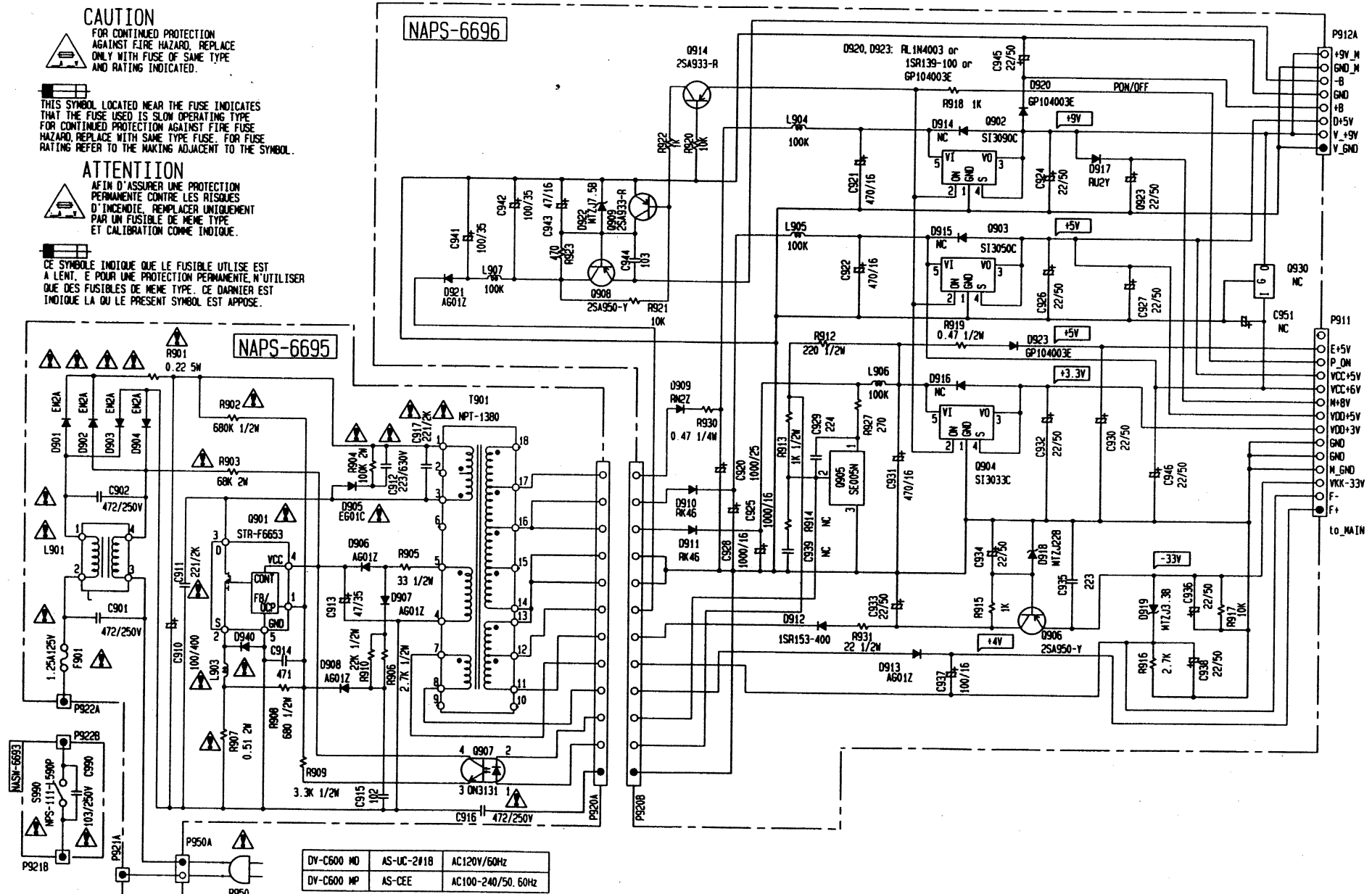


CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST A LENT, E POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DERNIER EST INDIQUE LA OU LE PRESENT SYMBOLE EST APPOSE.

1  
2  
3  
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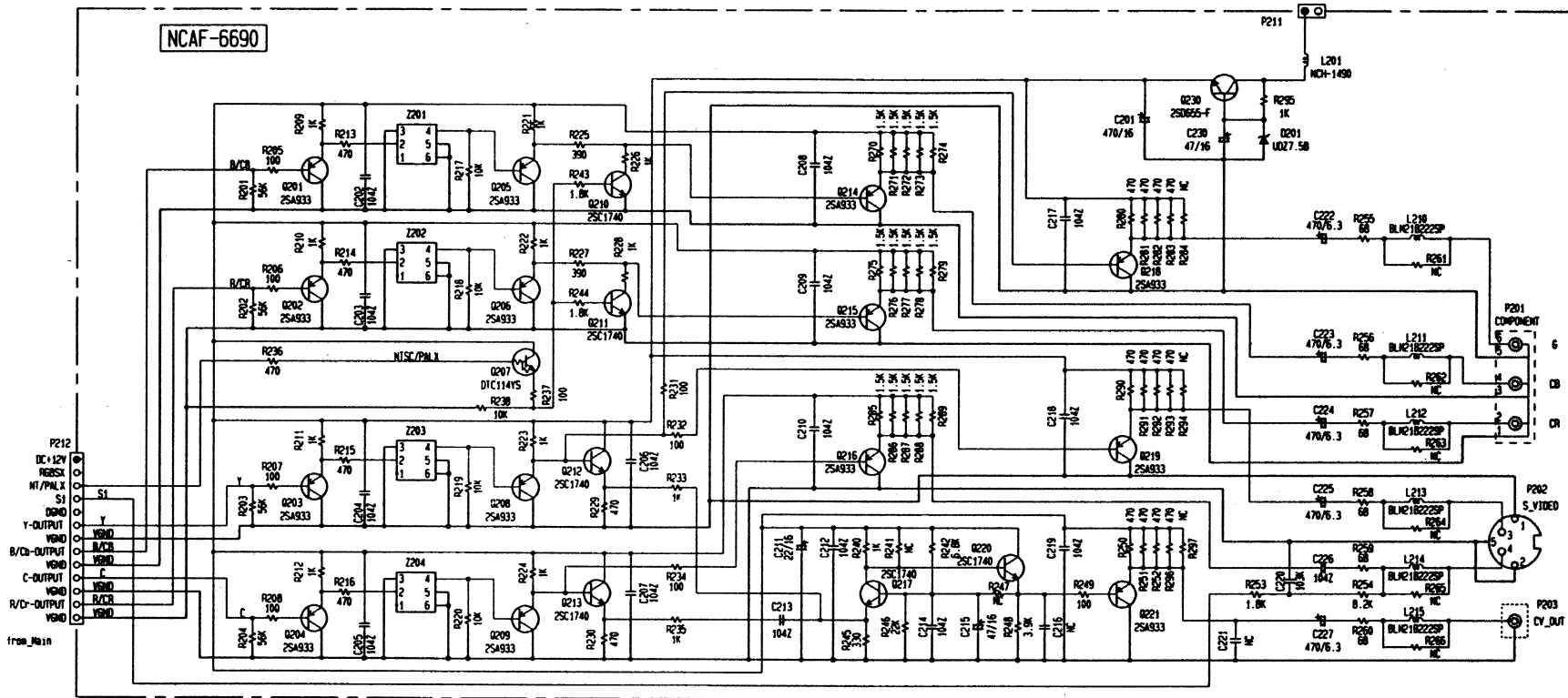
NAPS-6696

NAPS-6695



|            |            |                    |
|------------|------------|--------------------|
| DV-C600 MD | AS-UC-2#18 | AC120V/60Hz        |
| DV-C600 MP | AS-CEE     | AC100-240/50, 60Hz |

SCHMATIC DIAGRAM



NOTE

- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE MEASURED WITH VOLTMETER (V) IS DC VOLTAGE, NO INPUT SIGNAL.
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SC1015-OR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1015-OR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ( ) ARE IN  $\mu$ F/VV.
- ALL CAPACITORS ARE IN pF/500V UNLESS OTHERWISE NOTED.
- EX1 030-30F 330-330F 331-8300F 333-0.0330F
- ALL RESISTORS ARE IN OHMS  $\Omega$ /MILLIS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
- EX1 PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

## ELECTRICAL PARTS LIST

| CIRCUIT NO.  | PART NO.          | DESCRIPTION                              |
|--------------|-------------------|--|
|              | <b>Resistors</b>  |  |
| R912         | 443522214         | 220 $\Omega$ $\pm$ 5%, 1/2W, Metal oxide |
| R913         | 443521024         | 1k $\Omega$ $\pm$ 5%, 1/2W, Metal oxide  |
| R919         | 453534794         | 0.47 $\Omega$ $\pm$ 5%, 1/2W, Metal      |
| R930         | 4500163           | 0.47 $\Omega$ $\pm$ 5%, 1/4W, Metal      |
| R931         | 443522204         | 22 $\Omega$ $\pm$ 5%, 1/2W, Metal oxide  |
|              | <b>Sockets</b>    |  |
| P912A        | 2002A391665       | NSAS-16P0765                             |
| P911         | 2002A392855       | NSAS-28P0766                             |
|              | <b>Plug</b>       |  |
| P920B        | 25055853          | NPLG-12P809                              |
|              | <b>Heat sinks</b> |  |
| Q902A        | 27160145-1        | RAD-51                                   |
| Q903A, Q904A | 27160176          |  |
|              | <b>Screws</b>     |  |
| Q902B-Q904B  | 838430107         | 3TTB+10S(BC)                             |

**NOTE:**

THE COMPONENTS IDENTIFIED BY MARK  $\Delta$  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

**NOTE:**

<D> : 120V model only

<P/A> : European and Australian models only

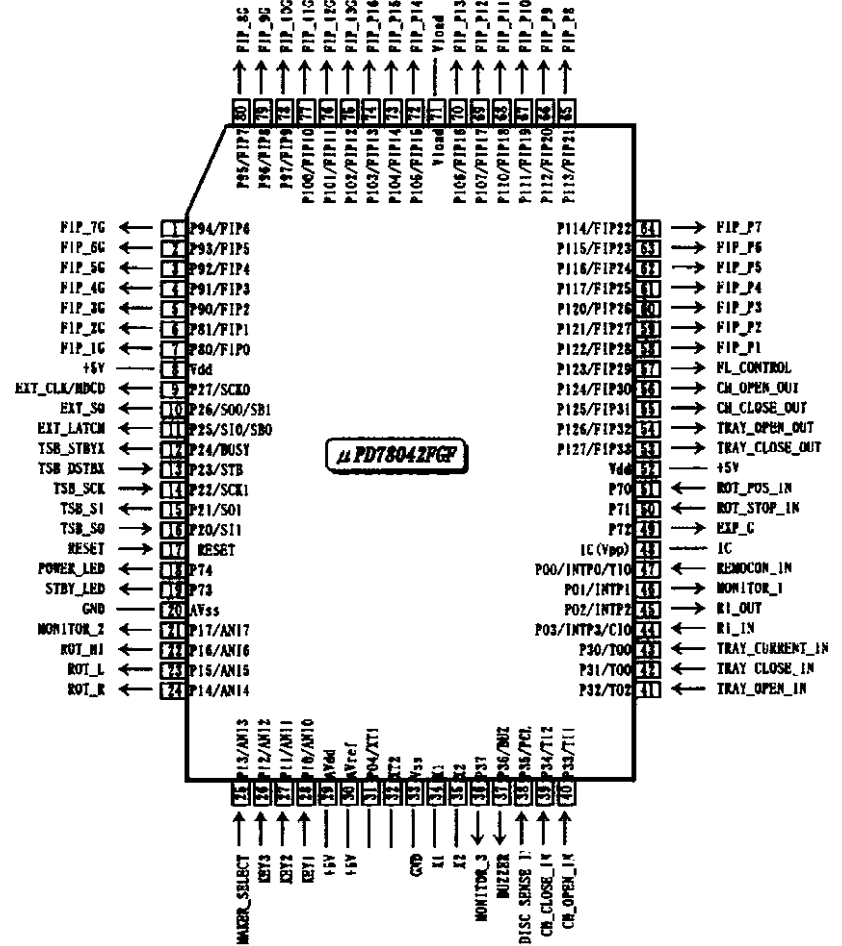
## MECHANISM SECTION PC BOARD-PARTS LIST

| CIRCUIT NO. | PART NO.                  | DESCRIPTION                       |
|-------------|---------------------------|-----------------------------------|
|             | <b>Capacitors</b>         |                                   |
| C001, C003  | 354744709                 | 47 $\mu$ F, 16V, Elect.           |
| C002, C004  | 352942206                 | 22 $\mu$ F, 16, Elect., Non-polar |
|             | <b>Sockets</b>            |                                   |
| P001A       | 2002390605UL              | NSAS-6P0597                       |
| P104        | 2009990446UL              | NSAS-11P0595                      |
| P103        | 2009990447UL              | NSAS-10P0596                      |
|             | <b>Photo interrupters</b> |                                   |
| Q001, Q003  | 24190041                  | SG-207                            |
| Q002        | 24190046                  | GP2S28                            |
|             | <b>Socket</b>             |                                   |
| P105B       | 25050913,                 | NSCT-7P700,                       |
|             | 25051851Y or              | NSCT-7P1638 or                    |
|             | 25052053                  | NSCT-7P1840                       |
|             | <b>Plug</b>               |                                   |
| P001B       | 25055367                  | NPLG-3P350                        |
|             | <b>Switches</b>           |                                   |
| S001        | 25065491                  | NMS-1223                          |
| S002        | 25065375                  | NMS-1219                          |

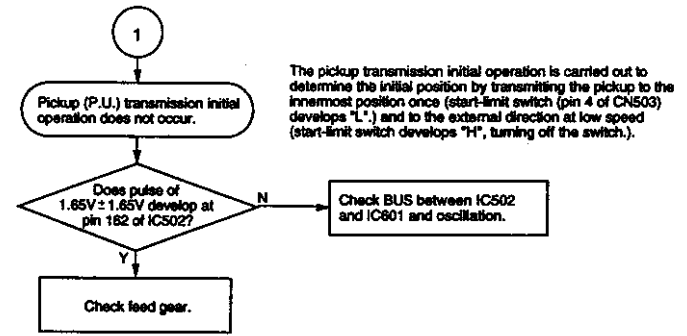
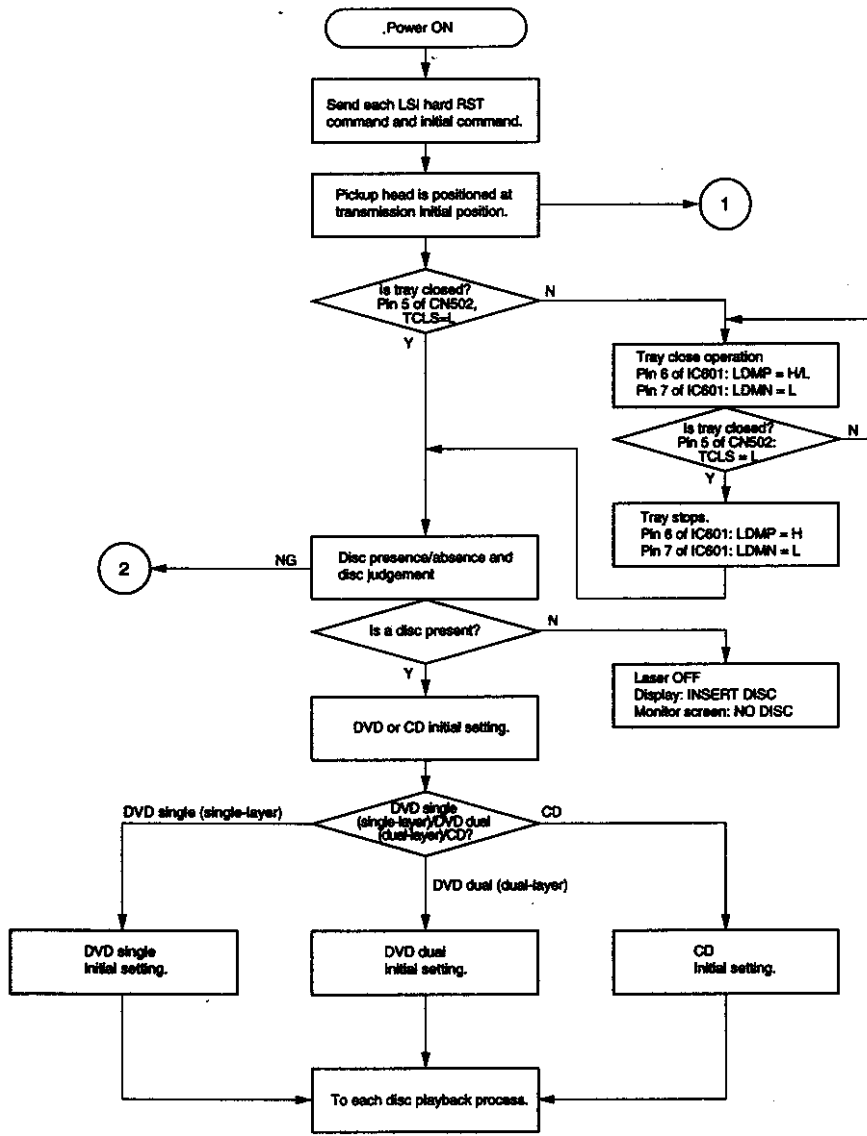
MICROPROCESSOR TERMINAL DESCRIPTION

Q701:  $\mu$  PD78042PGF

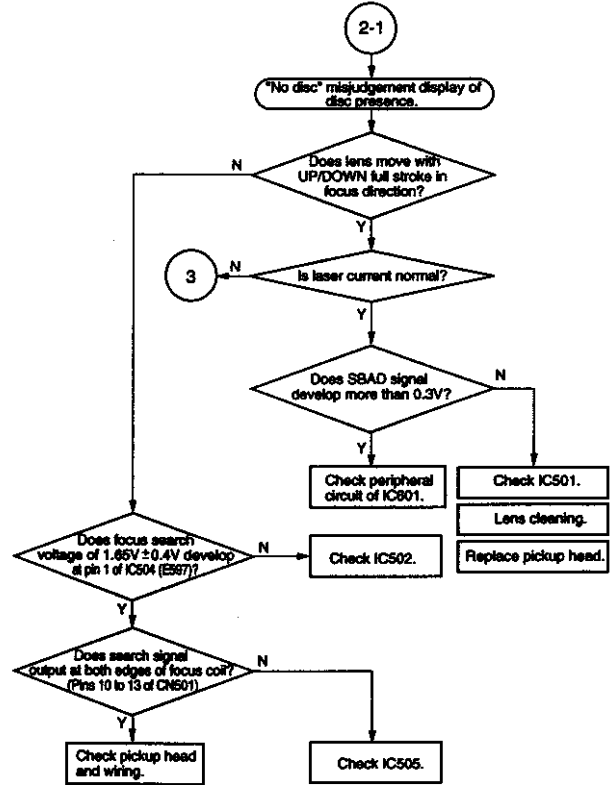
| PIN No. | TERMINAL        | NO | DESCRIPTION   |
|---------|-----------------|----|---|
| 1       | FIP_7G          | 0  | Grid output pins.   |
| 2       | FIP_6G          | 0  | Grid output pins.   |
| 3       | FIP_5G          | 0  | Grid output pins.   |
| 4       | FIP_4G          | 0  | Grid output pins.   |
| 5       | FIP_3G          | 0  | Grid output pins.   |
| 6       | FIP_2G          | 0  | Grid output pins.   |
| 7       | FIP_1G          | 0  | Grid output pins.   |
| 8       | +5V             |    | Power supply pin(+VDD)  |
| 9       | EXT_CLK/HDCD    | 0  | Command data output terminal for microprocessor. To connect to the SCK terminal of 74HC595. |
| 10      | EXT_S0          | 0  | Command data output terminal for microprocessor. To connect to the SER terminal of 74HC595. |
| 11      | EXT_LATCH       | 0  | Command data output terminal for microprocessor. To connect to the SCK terminal of 74HC595. |
| 12      | TSB_STBYX       | 0  | Sleeve reset output terminal from main microprocessor.                                      |
| 13      | TSB_DSTRX       | 1  | Strobe data input terminal from main microprocessor.  |
| 14      | TSB_SCK         | 1  | Serial clock input terminal from main microprocessor.                                       |
| 15      | TSB_S1          | 0  | Serial data output terminal to main microprocessor.   |
| 16      | TSB_S0          | 1  | Serial data input terminal from main microprocessor.  |
| 17      | -RESSET         | 1  | System reset input terminal.  |
| 18      | POWER_LED       | 0  | Power LED control output terminal.  |
| 19      | STBY_LED        | 0  | Standby LED control output terminal.  |
| 20      | GND             |    | Ground terminal for A/D converter.  |
| 21      | MONITOR_2       | 0  | Monitor terminal for checking the microprocessor  |
| 22      | ROT_HI          | 0  | Roulette control output terminal.   |
| 23      | ROT_L           | 0  | Roulette control output terminal.   |
| 24      | ROT_R           | 0  | Roulette control output terminal.   |
| 25      | MAKER_SELECT    | 1  | Maker select analog input terminal.   |
| 26      | KEY3            | 1  | Key input terminal.   |
| 27      | KEY2            | 1  | Key input terminal.   |
| 28      | KEY1            | 1  | Key input terminal.   |
| 29      | +5V             |    | Power supply terminal of the A/D converter.   |
| 30      | +5V             |    | Reference power supply terminal of the A/D converter.                                       |
| 31      |                 |    | Not used.   |
| 32      |                 |    | Not used.   |
| 33      | GND             |    | Ground terminal.  |
| 34      | X1              |    | Connect 5MHz ceramic resonator across the terminal X1 and X2.                               |
| 35      | X2              |    | Ceramic oscillator connection for main system clock.  |
| 36      | MONITOR_3       | 0  | Monitor terminal for checking the microprocessor  |
| 37      | BUZZER          | 0  | Buzzer signal output terminal.  |
| 38      | DISC_SENSE_IN   | 1  | Connect to the photo-sensor of reelless   |
| 39      | CH_CLOSE_IN     | 1  | Checking control input signal (Close)   |
| 40      | CH_OPEN_IN      | 1  | Checking control input signal (Open)  |
| 41      | TRAY_OPEN_IN    | 1  | Detection input terminal for tray open switch   |
| 42      | TRAY_CLOSE_IN   | 1  | Detection input terminal for tray close switch  |
| 43      | TRAY_CURRENT_IN | 1  | Detection input signal of overcurrent for loading motor                                     |
| 44      | RI_IN           | 1  | Input terminal of the RI signal   |
| 45      | RI_OUT          | 0  | Output terminal of the RI signal  |
| 46      | MONITOR_1       | 0  | Monitor terminal for checking the microprocessor  |
| 47      | REMOCON_IN      | 1  | Remote control input signal   |
| 48      | IC              |    | Connect to the ground terminal  |
| 49      | EXT_O           | 0  | Open terminal   |
| 50      | ROT_STOP_IN     | 1  | Detection input terminal of the carousel rotation   |
| 51      | ROT_POS_IN      | 1  | Detection input terminal of the carousel position   |
| 52      | +5V             |    | Power supply (+5V)  |
| 53      | TRAY_CLOSE_OUT  | 0  | Output control signal for closed of tray  |
| 54      | TRAY_OPEN_OUT   | 0  | Output control signal for opened of tray  |
| 55      | CH_CLOSE_OUT    | 0  | Checking close detection output terminal  |
| 56      | CH_OPEN_OUT     | 0  | Checking open detection output terminal   |
| 57      | FL_CONTROL      | 0  | FL tube control output terminal   |
| 58      | FIP_P1          | 0  | Segment output terminals.   |
| 59      | FIP_P2          | 0  | Segment output terminals.   |
| 60      | FIP_P3          | 0  | Segment output terminals.   |
| 61      | Vfwd            |    | Power supply terminal for FL tube   |
| 62      | FIP_P14         | 0  | Segment output terminals.   |
| 63      | FIP_P15         | 0  | Segment output terminals.   |
| 64      | FIP_P16         | 0  | Segment output terminals.   |
| 65      | FIP_13G         | 0  | Grid output pins.   |
| 66      | FIP_12G         | 0  | Grid output pins.   |
| 67      | FIP_11G         | 0  | Grid output pins.   |
| 68      | FIP_10G         | 0  | Grid output pins.   |
| 69      | FIP_9G          | 0  | Grid output pins.   |
| 70      | FIP_8G          | 0  | Grid output pins.   |

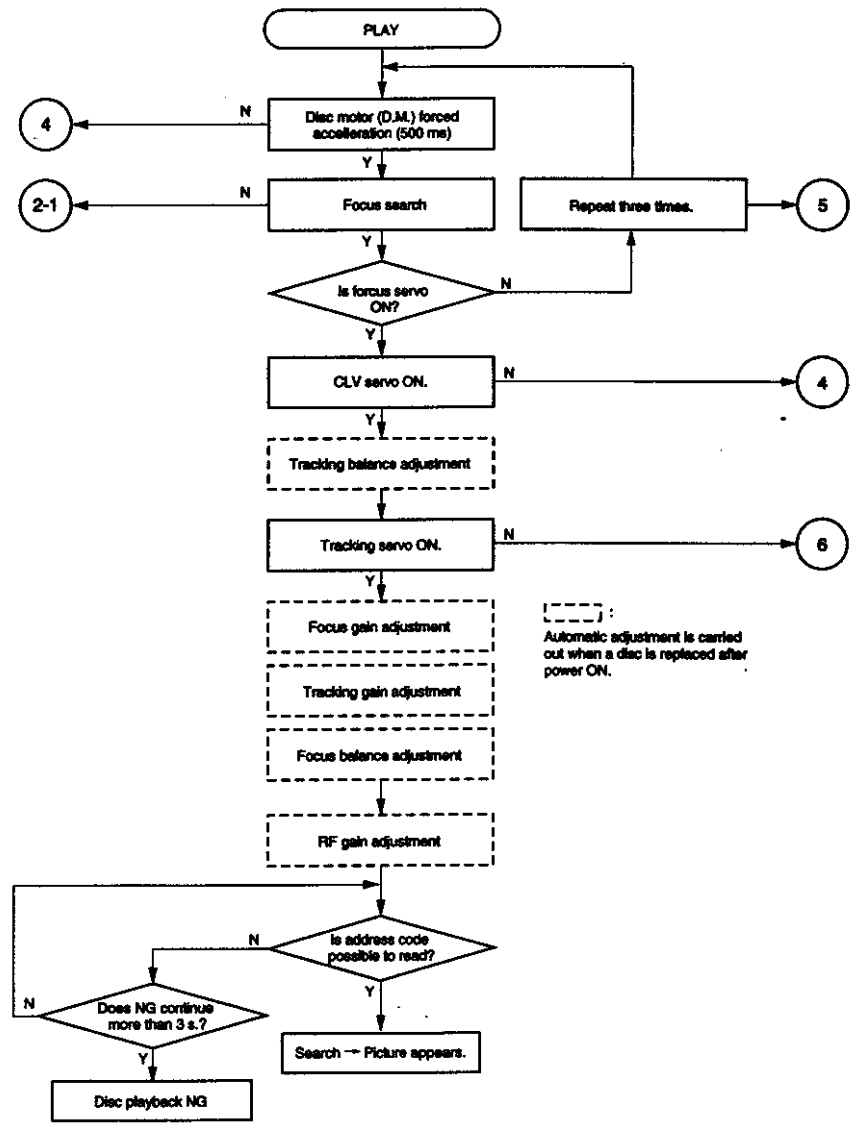
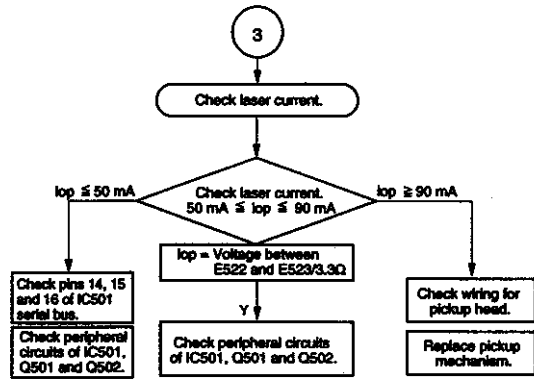
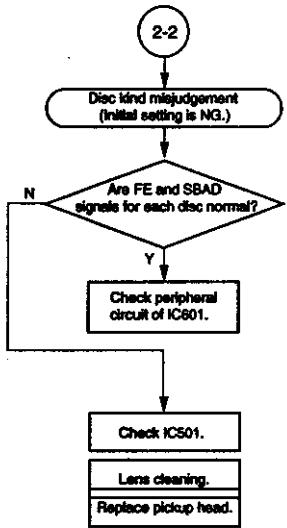


**TROUBLESHOOTING**  
**SERVO SYSTEM**

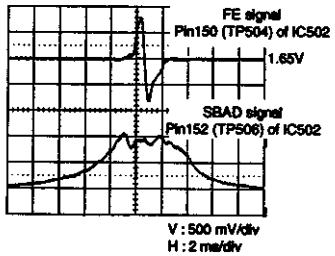


The pickup transmission initial operation is carried out to determine the initial position by transmitting the pickup to the innermost position once (start-limit switch (pin 4 of CN503) develops "L") and to the external direction at low speed (start-limit switch develops "H", turning off the switch).

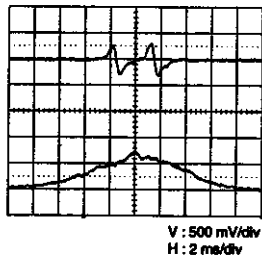




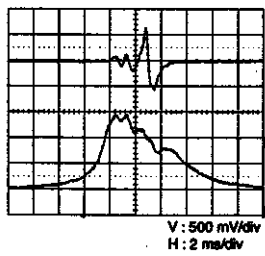
DVD single (single-layer) disc detection waveform



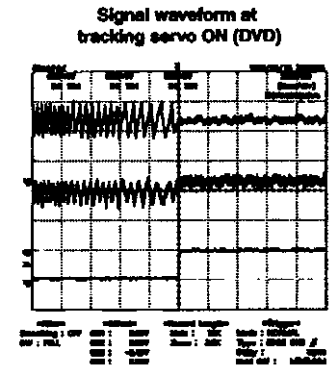
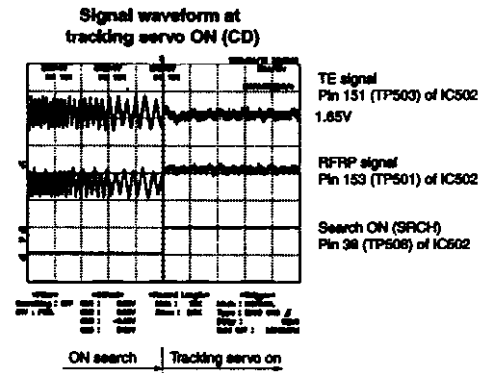
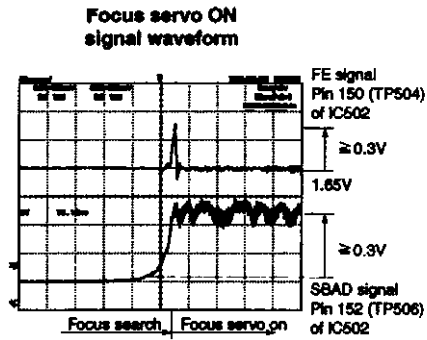
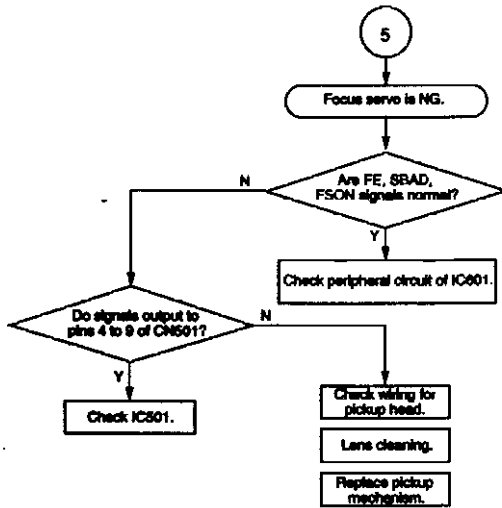
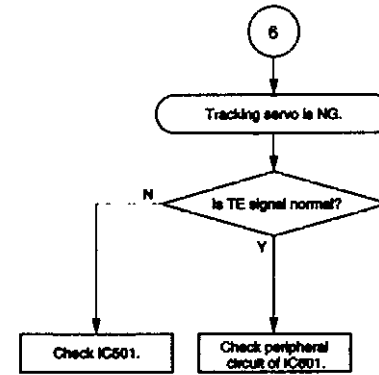
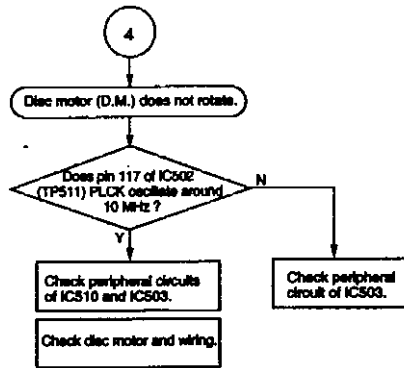
DVD dual (dual-layer) disc detection waveform

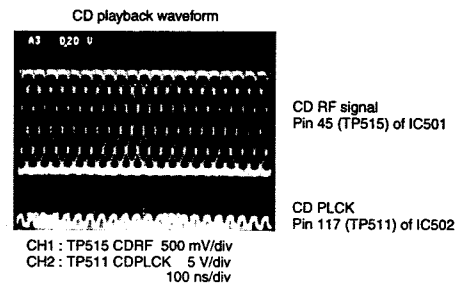
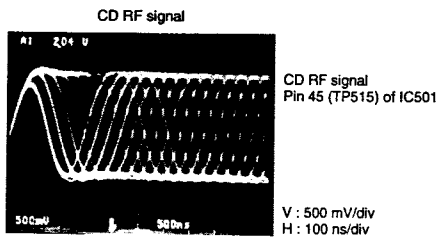
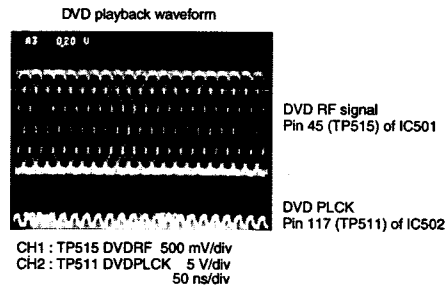
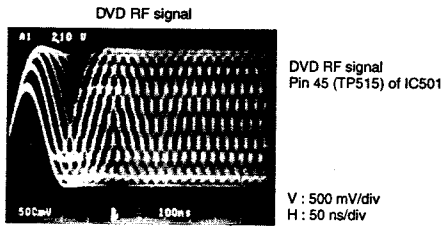
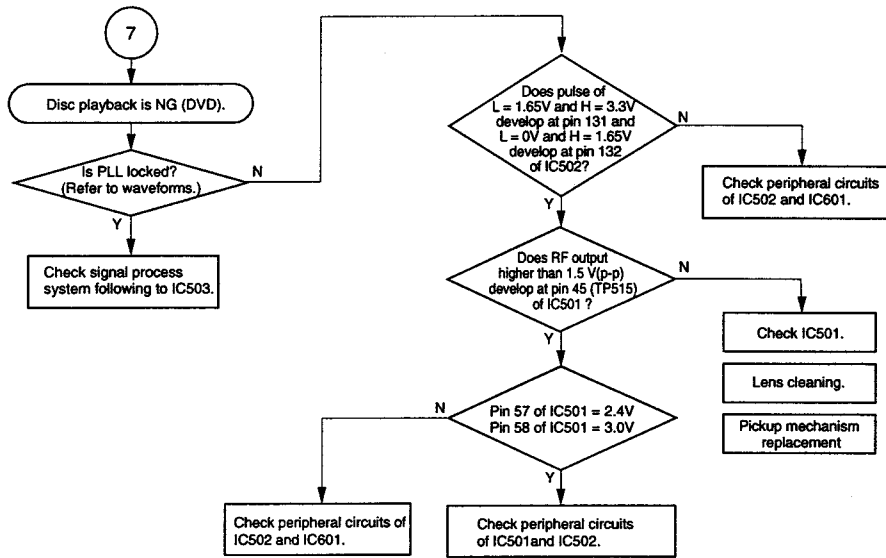


CD disc detection waveform

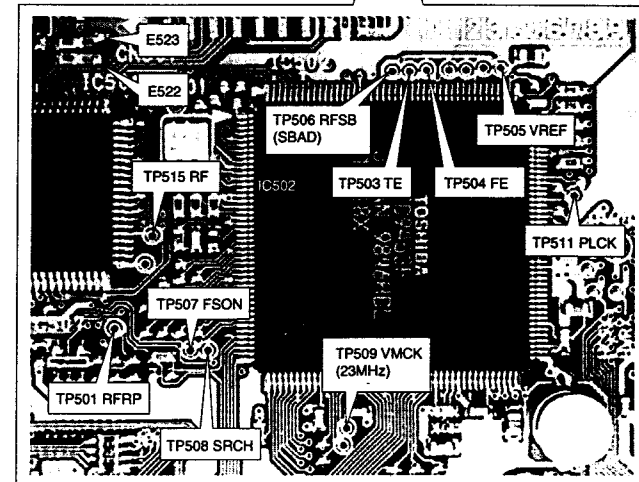
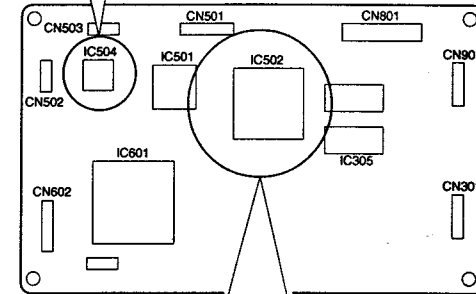
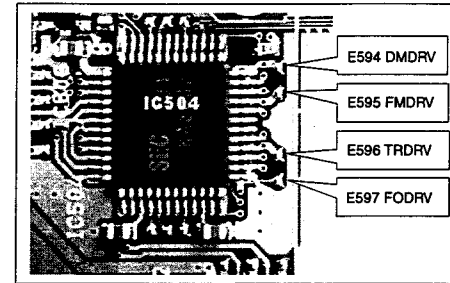




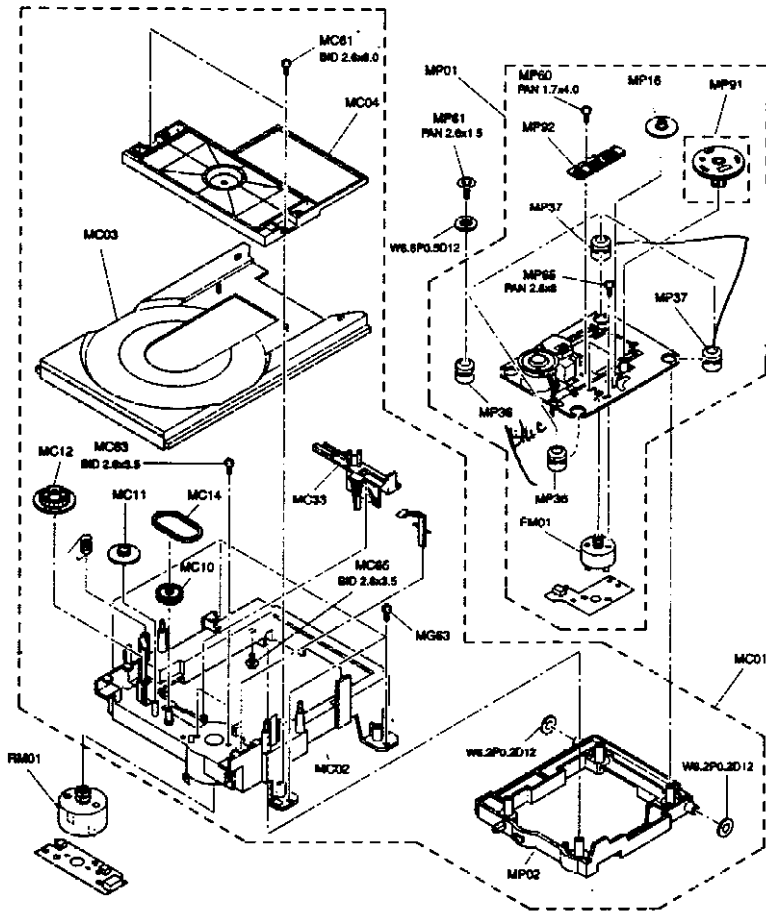




LOCATION DIAGRAM OF SERVO TEST POINT



MECHANISM ASSEMBLY



MECHANICAL PARTS LIST

| REF. No. | PART No. | DESCRIPTION             |
|----------|----------|-------------------------|
| MP01     | 79070415 | MECHA ASSY-PUI          |
| MP36     | 79070417 | RUBBER, DUMPER, FRONT   |
| MP37     | 79070418 | RUBBER, DUMPER, REAR    |
| MP91     | 79070419 | GEAR ASSY, KIT, B       |
| MP92     | 79070420 | GEAR ASSY, RACK         |
| FM01     | 79070421 | MOTOR ASSY, FEED, DC    |
| MP16     | 79070422 | GEAR A                  |
| RM01     | 79070427 | MOTOR ASSY, LOADING, DC |
| MC14     | 79070428 | BELT, LOAD              |
| MC01     | 79070416 | CHASSIS ASSY, MECHANISM |

PARTS LIST (Main PC board)

| LOCATION No.               | PART No. | DESCRIPTION | LOCATION No. | PART No.           | DESCRIPTION          |               |          |                    |             |
|----------------------------|----------|-------------|--------------|--------------------|----------------------|---------------|----------|--------------------|-------------|
| <b>Integrated circuits</b> |          |             |              |                    |                      |               |          |                    |             |
| IC201                      | NSP      | 79040154    | IC           | TC203G08AF-0103(Z) | IC616                | NSP           | 79040007 | IC                 | TC7S08F     |
| IC202                      | NSP      | 79010145    | IC           | NN514800AJ-G0T     | IC617                | NSP           | 79040087 | IC                 | TC7W241FU   |
| IC301                      | NSP      | 79040122    | IC           | MD36710X           | IC901                | NSP           | 79040151 | IC                 | PCM1727F    |
| IC302                      | NSP      | 79040063    | IC           | HY57V16160ATC-10   | IC902                | NSP           | 79040119 | IC                 | TC7SH86F    |
| IC305                      | NSP      | 79040063    | IC           | HY57V16160ATC-10   | IC903                | NSP           | 79040102 | IC                 | NJM2370U50  |
| IC306                      | NSP      | 79040096    | IC           | ADV7170KS          | IC904                | NSP           | 79040087 | IC                 | TC7W241FU   |
| IC307                      | NSP      | 79040130    | IC           | NJU6321PE-TE1      | <b>Transistors</b>   |               |          |                    |             |
| IC308                      | NSP      | 79040011    | IC           | TC7W04F            | Q501                 | NSP           | 79050036 | Transistor, Chip   | 2SA1832-GR  |
| IC311                      | NSP      | 79040013    | IC           | TC7W74F            | Q502                 | NSP           | 79050042 | Transistor, Chip   | 2SC2883-Y   |
| IC312                      | NSP      | 79040119    | IC           | TC7SH86F           | Q503                 | NSP           | 79050014 | Transistor, Chip   | HN1C03F     |
| IC313                      | NSP      | 79040119    | IC           | TC7SH86F           | Q601                 | NSP           | 79050031 | Transistor, Chip   | DTA114EKA   |
| IC314                      | NSP      | 79040119    | IC           | TC7SH86F           | <b>Miscellaneous</b> |               |          |                    |             |
| ICS01                      | NSP      | 79040152    | IC           | TA1293F            | X301                 | NSP           | 79089003 | Oscillator         | SMD49.27MHz |
| ICS02                      | NSP      | 79040149    | IC           | TC9453F            | X501                 | NSP           | 79089021 | Ceramic Oscillator | 22.58MHz    |
| IC503                      | NSP      | 79040148    | IC           | V53C16128HK-30     | X601                 | NSP           | 79089022 | Ceramic Oscillator | 9.00MHz     |
| IC504                      | NSP      | 79040150    | IC           | KA3032             | <b>EU01</b>          |               |          |                    |             |
| IC506                      | NSP      | 79040006    | IC           | TC7S04F            | 79083019             | PC Board Assy | Main PCB |                    |             |
| IC508                      | NSP      | 79040066    | IC           | UPC291.33T         | NSP : Not spare part |               |          |                    |             |
| IC601                      | NSP      | 79040158    | IC           | TMP94CS40AF-4401   |                      |               |          |                    |             |
| IC602                      | NSP      | 79040041    | IC           | PST591-IDT         |                      |               |          |                    |             |
| IC607                      | NSP      | 79040007    | IC           | TC7S08F            |                      |               |          |                    |             |
| IC613                      | NSP      | 79040070    | IC           | S-2401AFJ-TB       |                      |               |          |                    |             |
| IC614                      | NSP      | 79040148    | IC           | V53C16128HK-30     |                      |               |          |                    |             |
| IC615                      | NSP      | 79040153    | IC           | MBM29F800BA55TN    |                      |               |          |                    |             |