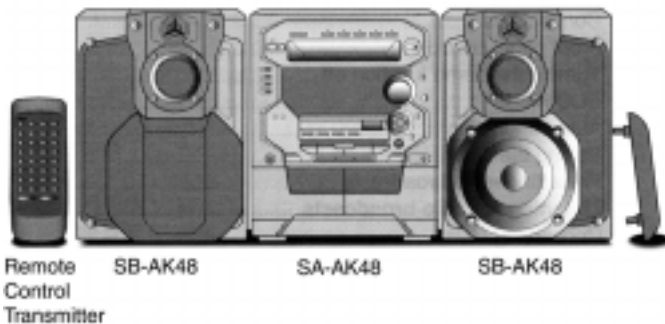


# Service Manual

## CD Stereo System

COMPACT  
disc  
DIGITAL AUDIO

MASH  
multi-stage noise shaping



Remote  
Control  
Transmitter

SB-AK48

SA-AK48

SB-AK48

## SA-AK48

Colour

(S) ..... Silver Type

Areas

(GC) ..... Asia, Latin America,  
Middle East and Africa.

TAPE SECTION : AR2 MECHANISM SERIES

CD SECTION : RAE0152Z-M TRAVERSE DECK  
SERIES

SYSTEM : SC-AK48

## Specifications

### ●AMPLIFIER SECTION

PMPO 3000W

RMS power output

THD 10%, both channels driven

(HIGH) 40W per channel (6Ω)  
(MID) 40W per channel (6Ω)  
(LOW) 120W per channel (6Ω)  
(TOTAL) 200W per channel (6Ω)

Input sensitivity

AUX 250mA

MIC 0.7mV

Input impedance

AUX 13.9kΩ

MIC 680Ω

### ●FM TUNER SECTION

Frequency range 87.50 - 108.00MHz  
(50kHz steps)

Sensitivity 2.5μV (IHF)

S/N 26dB 2.2μV

Antenna terminal (s) 75Ω (unbalanced)

### ●AM TUNER SECTION

Frequency range 552-1629kHz (9kHz steps)

Sensitivity 520-1630kHz (10kHz steps)

S/N 20dB (at 999kHz) 560μV/m

### ●CASSETTE DECK SECTION

Track system 4 track, 2 channel

Heads

Record/playback Solid permalloy head

Erase Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100kHz

Erasing system AC erase 100kHz

Tape speed 4.8cm/s

Frequency response (+3, -6dB) at DECK OUT

NORMAL (TYPE I) 35Hz - 14kHz

HIGH (TYPE II) 35Hz - 14kHz

S/N 50dB (A weighted)

Wow and flutter 0.18% (WRMS)

Fast forward and rewind time Approx. 120 seconds with  
C-60 cassette tape

### ●CD SECTION

Sampling frequency 44.1kHz

Decoding 16 bit linear

Beam source/wave length Semiconductor laser/  
780nm

Number of channels Stereo

Frequency response 20Hz - 20kHz (+1dB, -2dB)

Wow and flutter Below measurable limit

Digital filter 8fs

**Panasonic**<sup>®</sup>

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D/A converter

MASH (1bit DAC)

Weight

9.0kg

## ●GENERAL

<b>Power supply :</b>	AC110V/127V/220V/ 230-240V, 50/50Hz
<b>Power consumption</b>	220W
<b>Power consumption in standby mode</b>	
<b>Eco mode on</b>	0.8W
<b>Eco mode off</b>	14W
<b>Dimensions (WxHxD)</b>	270x331x338mm

## Notes:

- Specifications are subject to change without notice.  
Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

## ●SYSTEM

SC-AK48 :  
Main unit : SA-AK48  
Speakers : SB-AK48

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# 1 Accessories

· AC power supply cord [for other areas]  
(RJA0019-2K) .....1



· AM loop antenna  
(RSA0029) .....1



· Remote control transmitter  
(RAK-SC957WK) .....1



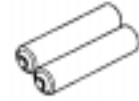
· Power plug adaptor  
(SJP5213-2) .....1



· FM indoor antenna  
(RSA0008-J) .....1



· Batteries for remote control transmitter  
(R6/LR6, AA, UM-3) .....2  
**Note :** These are available on sales route.



## 2 Before Repair

1. Turn off the power supply. Using a 10Ω, 10W resistor, connect both ends of power supply capacitors (C571 - 574, 558) in order to discharge the voltage.
2. Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed

current at 50Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230/230-240V.

Power supply voltage	AC230V, 50Hz	AC230 - 240V, 50Hz
Consumed current	Less than 250mA	Less than 250mA

## 3 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are “shorted”, or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

### Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and ON again.

## 4 Handling Precautions for Traverse Deck

The laser diodes in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

### 4.1. Handling the traverse deck (optical pickup)

1. The traverse deck (optical pickup) is an extremely high-precision construction and must not be subjected to impact, excessive vibration, or other types of rough handling.
2. In order to prevent static electricity damage to the laser diode, use a short pin or similar tool to short the optical pickup's flexible circuit boards after they have been disconnected from the main circuit board.
3. Handle the flexible circuit boards with care; excessive force could cause them to be broken.
4. Do not turn the pre-set variable resistor (for adjustment of the laser power); it has been adjusted at the factory. (as shown in Fig.1)

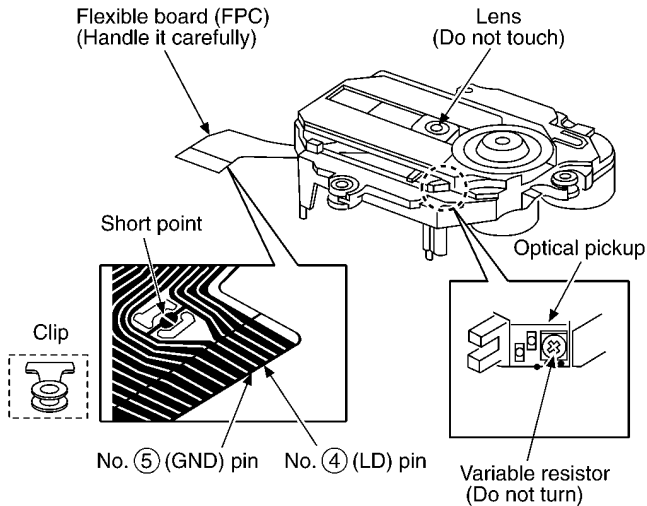


Fig.1

### 4.2. Grounding for electrostatic breakdown prevention

1. Human body grounding  
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding  
Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed, and ground the sheet. (sa shown in Fig.2)

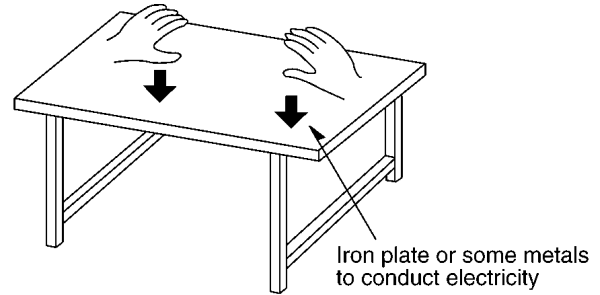
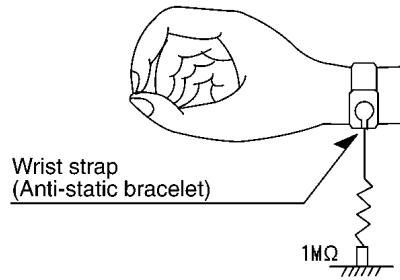


Fig.2

#### Caution:

The static electricity of your clothes will not be grounded through the wrist strap.  
So, take care not to let your clothes touch the traverse deck (optical pickup)

### 4.3. Caution when Replacing the Traverse Deck

The traverse deck has a short point shorted with solder protect the laser diode against electrostatic breakdown. Be sure to remove the solder from the short point before making connections.

#### CAUTION:

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

## 5 Precaution of Laser Diode

**CAUTION:** This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.  
Wave length: 780 nm  
Maximum output radiation power from pick up: 100  $\mu$ W/VDE

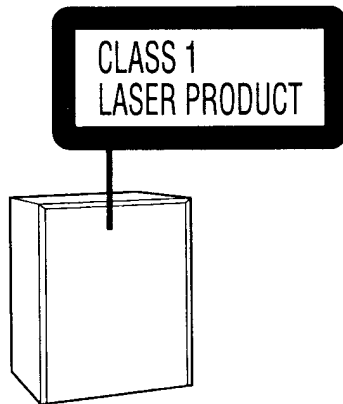
Laser radiation from the pick up unit is safety level, but be sure the followings:

1. Do not disassemble the pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

**ACHTUNG:** Dieses produkt enthält eine laserdioden. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit adgestrahlt.  
Wellenlänge: 780 nm  
Maximale strahlungsleistung der lasereinheit: 100  $\mu$ W/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdioden gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinheit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLING NÅR DENNA DEL ÅR ÖPPNAD OCH SPÄRREN ÅR URKOPPLAD. BETRÄKTA EJ STARÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNEES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSIHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

(Inside of product)

(Indersiden at apparatet)

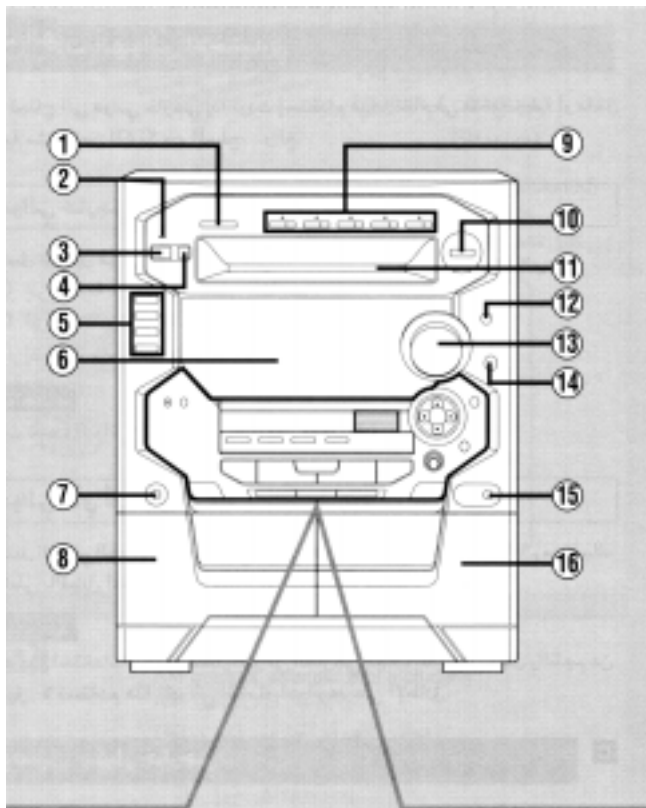
(Tuotteen sisällä)

(Apparatens insida)

(Produktets innsida)

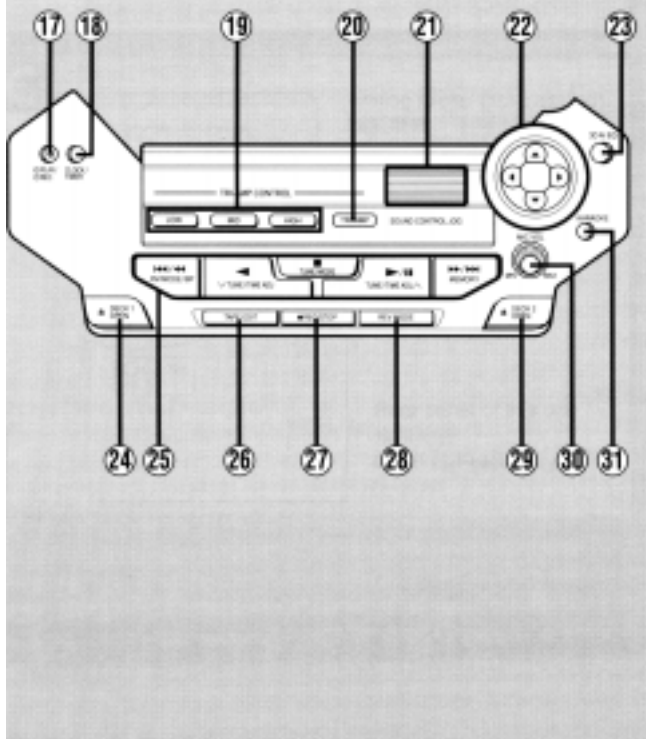
(Im Inneren des Gerätes)

## 6 Location of Controls



### Main unit

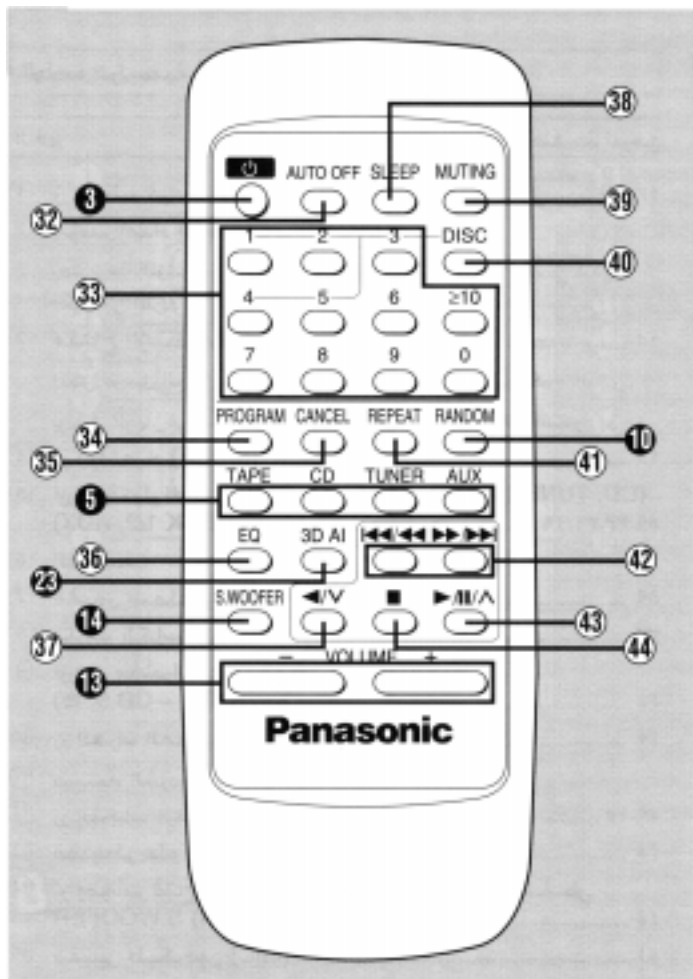
No.	Name
①	CD manager button (CD MANAGER)
②	AC supply indicator (AC IN) This indicator lights when the unit is connected to the AC mains supply.
③	Standby/on switch (⏻/⏻, POWER) Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
④	Eco button (MODE)
⑤	Input select buttons and indicators (CD, TUNER BAND, TAPE DECK 1/2, AUX)
⑥	Display
⑦	Headphone jack (PHONES)
⑧	Deck 1 cassette holder
⑨	Disc direct play, open/close buttons and indicators (CD 1 ~ CD 5, ⏪)
⑩	Random play button (RANDOM)
⑪	Disc tray
⑫	Display select/demonstration button (-DISPLAY/-DEMO)
⑬	Volume control (VOLUME)
⑭	Super woofer on/off button and indicator (S.WOOFER)
⑮	Microphone jack (MIC)
⑯	Deck 2 cassette holder



### Center console

No.	Name
⑰	Play timer/record timer button and indicator (⏻/⏻)
⑱	Clock/timer button (CLOCK/TIMER)
⑲	TRI-AMP control buttons (LOW, MID, HIGH)
⑳	TRI-AMP indicator (TRI-AMP)
㉑	Jog control (SOUND CONTROL JOG)
㉒	Joy stick
㉓	3D AI EQ button (3D AI EQ)
㉔	Deck 1 open button (⏻ DECK 1 OPEN)
㉕	Basic operating buttons Functions change according to the source.
㉖	Tape edit button (TAPE EDIT)
㉗	Recording start/stop button (● REC/STOP)
㉘	Reverse mode select button (REV MODE)
㉙	Deck 2 open button (⏻ DECK 2 OPEN)
㉚	Microphone volume control (MIC VOL)
㉛	Karaoke button (KARAOKE)

## 7 Location of Controls for Remote Control Transmitter



### Remote control

Buttons ③, ⑤, ⑩, ⑬, ⑭ and ⑮ have the same functions as the corresponding buttons on the main unit.

No.	Name
-----	------

- |   |  |
|---|--|
| ③ | Auto off button (AUTO OFF)   |
| ③ | Numeric buttons ( $\geq 10$ , 1-0)   |
| ④ | Program button (PROGRAM)   |
| ⑤ | Cancel button (CANCEL)   |
| ⑥ | EQ select button (EQ)  |
| ⑦ | Reverse side playback/preset channel select button ( $\blacktriangleleft$ /V).   |
| ⑧ | Sleep button (SLEEP)   |
| ⑨ | Muting button (MUTING)   |
| ⑩ | Disc button (DISC)   |
| ⑪ | Repeat button (REPEAT)   |
| ⑫ | Skip/search buttons ( $\blacktriangleleft\blacktriangleleft$ / $\blacktriangleleft$ , $\blacktriangleright$ / $\blacktriangleright\blacktriangleright$ ) |
| ⑬ | Play/pause/preset channel select button ( $\blacktriangleright$ /II/ $\wedge$ )  |
| ⑭ | Stop button ( $\blacksquare$ )   |

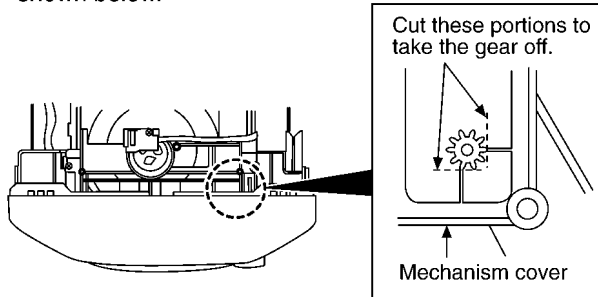
## 8 Operation Checks and Component Replacement Procedures

- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

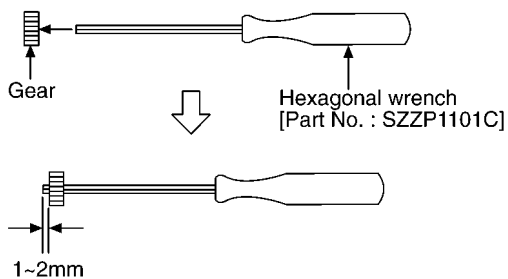
### Gear for servicing (as jig) information

1. This unit has a gear which used for checking items (Open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
2. For preparation of gear (for servicing), perform the procedures as follows.
3. In case of re-servicing the same set, the "gear for servicing" may be took off because it had been used. So, the "gear for servicing" must be stored.

1. Remove the gear provided with mechanism cover as shown below.

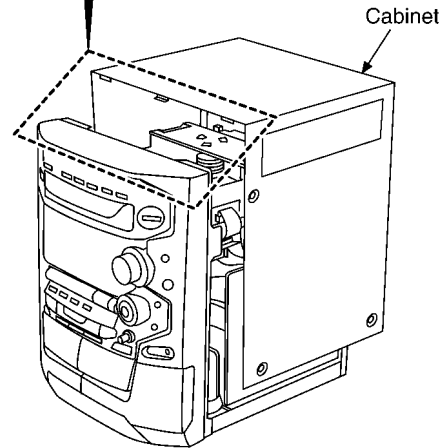
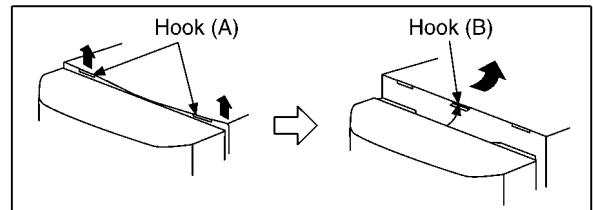
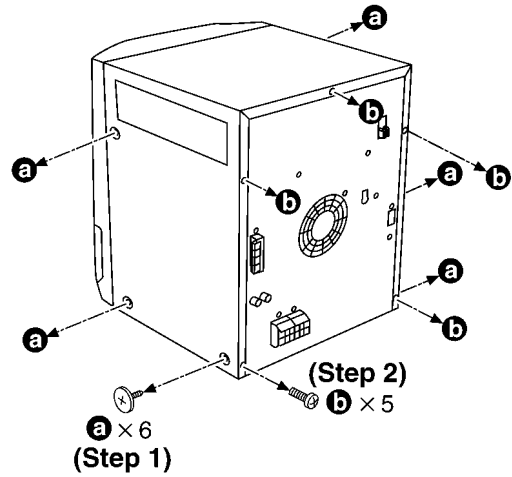


2. Insert the hexagonal wrench (2mm) into the gear, and then project the tip of wrench for 1~2mm length.



(Preparation of gear as jig is completed.)

### 8.1. Checking for the main P.C.B.



#### (Step 3)

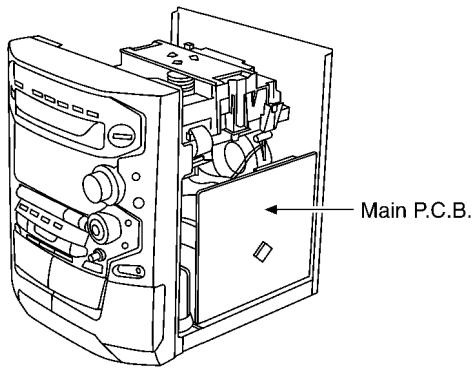
Lift up the both sides of cabinet ass'y to release the hooks (A). Then, pull the cabinet ass'y toward the rear and release the hook (B) to remove the cabinet ass'y.

#### NOTE:

When installing the cabinet ass'y, take care not to damage the front cabinet ass'y from hook (B).



- Check the main P.C.B. as shown below.



## 8.2. Disassembly for the CD changer ass'y

(The CD changer unit can be removed until the tray base ornament would removed.)

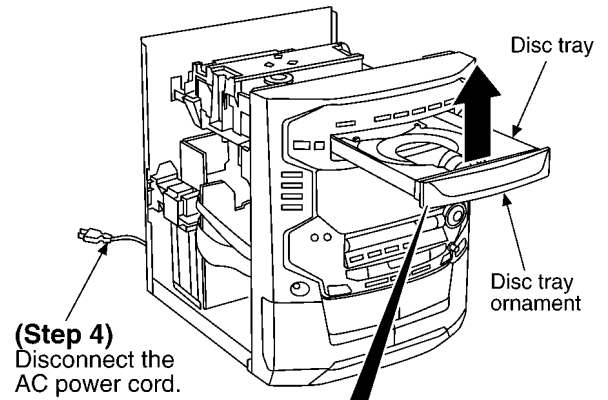
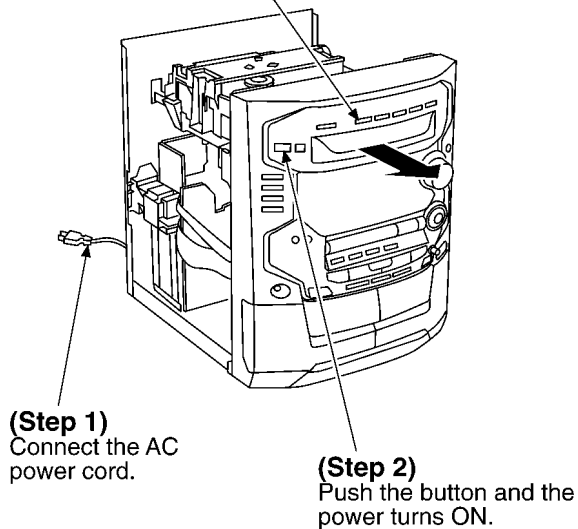
### 8.2.1. Disassembly for the disc tray ornament

- Follow the (Step 1) - (Step 3) of item 8.1.

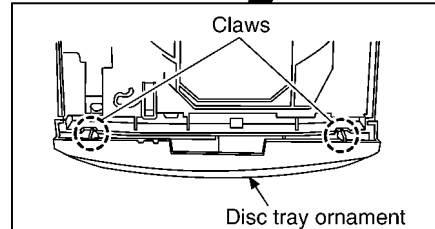
#### When opening the disc tray automatically

##### (Step 3)

Push the open / close button 1, so the disc tray will be open automatically.  
(If the other buttons would be pushed, disc tray would be open.)



(Bottom side)

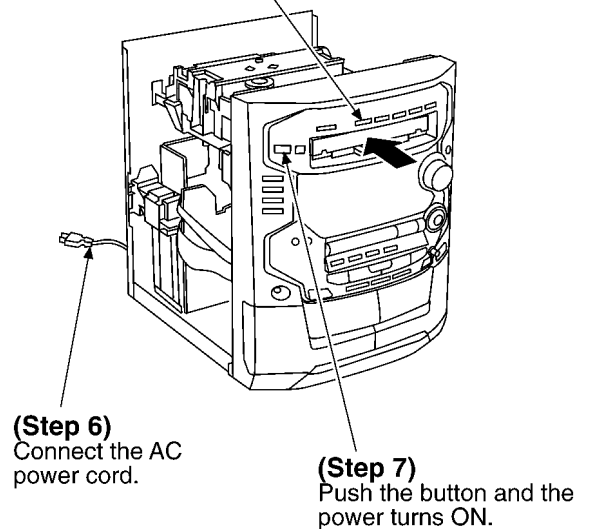


##### (Step 5)

Release the 2 claws, and then remove the disc tray ornament.

##### (Step 8)

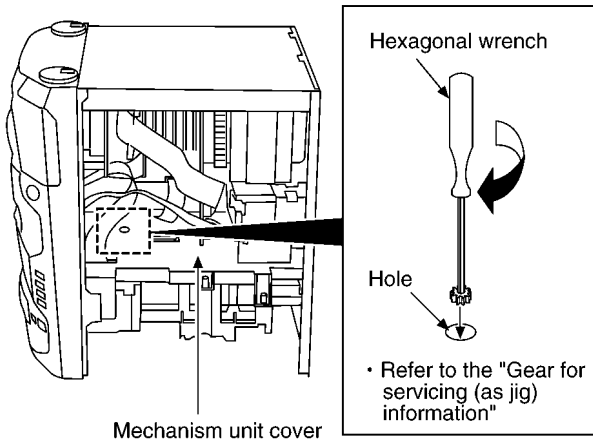
Push the open / close button 1, so the disc tray will be close.



### When opening the disc tray manually

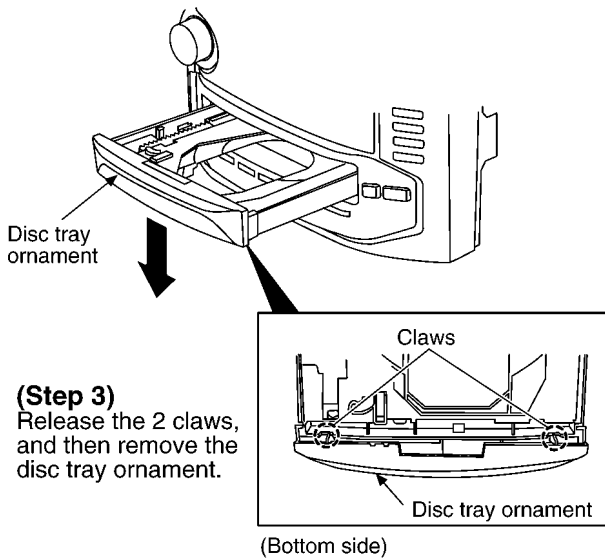
#### (Step 1)

Upset the unit.



#### (Step 2)

Insert the gear for servicing into the bottom hole of mechanism unit cover, and then rotate the hexagonal wrench in the direction of arrow. So, the disc tray will be open.

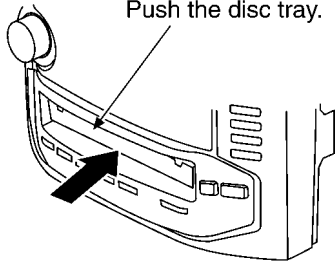


#### (Step 3)

Release the 2 claws, and then remove the disc tray ornament.

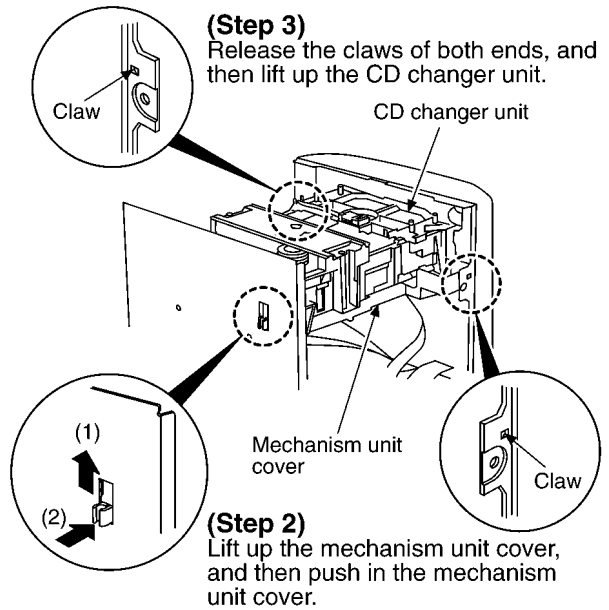
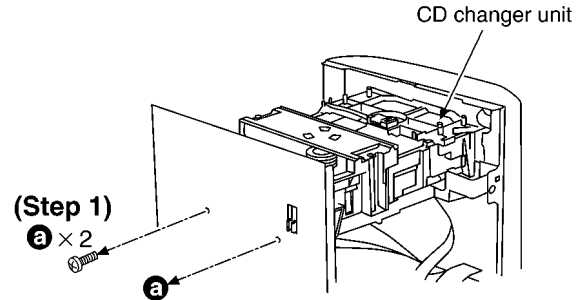
#### (Step 4)

Push the disc tray.



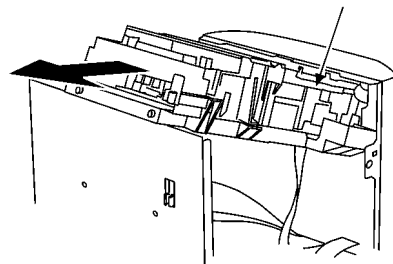
### 8.2.2. Disassembly for the CD changer unit

- Follow the (Step 1) - (Step 3) of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.

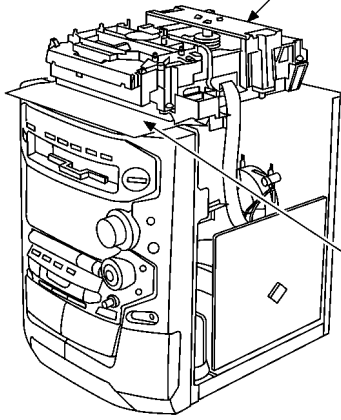


#### (Step 4)

Remove the CD changer unit.



**(Step 5)**  
Place the CD changer  
unit on the unit.



**NOTE:**  
Cover the front panel  
assy with cloth to  
prevent from damage.

⟨ The preparation of checking procedures  
in operational condition is completed. ⟩

### 8.3. Checking for the unit operational condition

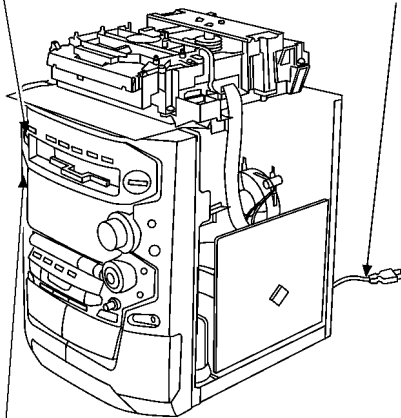
(Place the unit horizontally when loading the CD changer unit.)

#### 8.3.1. Initial setting of CD unit

- Follow the **(Step 1)** - **(Step 3)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.

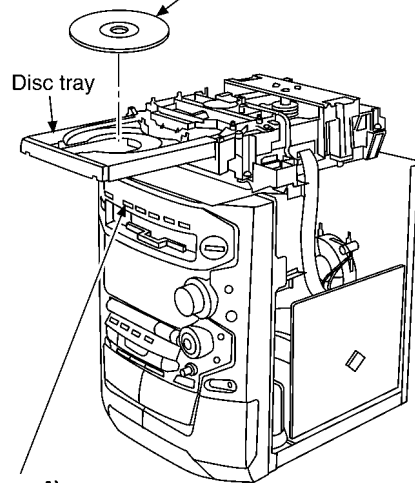
**(Step 2)**  
Push power button and the  
power turns ON.

**(Step 1)**  
Connect the AC  
power cord.



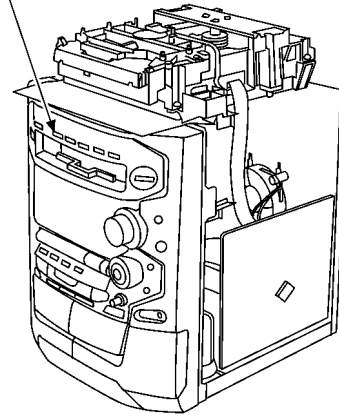
**(Step 3)**  
Select the input select  
button to "CD".

**(Step 5)**  
Put the CD into the disc tray.



**(Step 4)**  
Push the open/close button 1, and then  
open the disc tray.

**(Step 6)**  
Push the open/close button 1, and then close the disc tray.  
(Then, the CD will load.)



⟨ The initial setting of CD unit is completed. ⟩

### 8.3.2. Checking for the CD servo P.C.B.

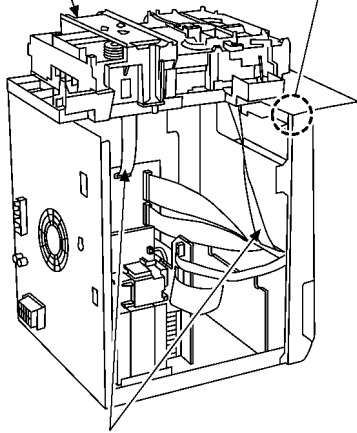
- The initial setting of CD unit must be completed.  
(Refer to the initial setting of CD unit in item 8.3.1.)

**(Step 3)**

Remove the CD changer unit.

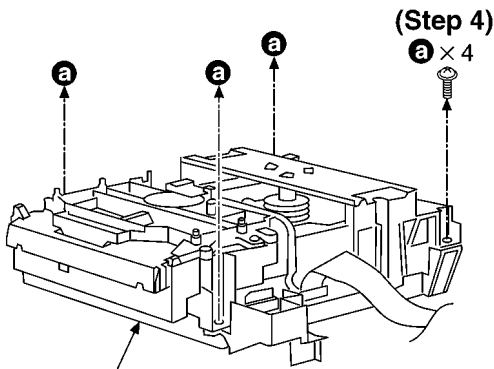
**(Step 1)**

Push the power button and the power turns OFF.



**(Step 2)**

Remove the FFC boards.



**(Step 4)**

**a** × 4

**(Step 5)**

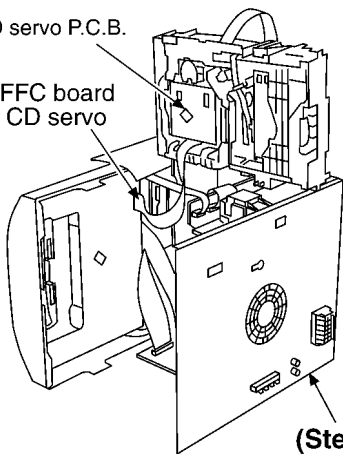
Remove the mechanism unit cover.

- Check the CD servo P.C.B. as shown below.

CD servo P.C.B.

**(Step 7)**

Connect the FFC board (19 pin) from CD servo P.C.B..



**(Step 6)**

Lay the unit.

### 8.3.3. Checking for the FL P.C.B. and cassette mechanism control P.C.B.

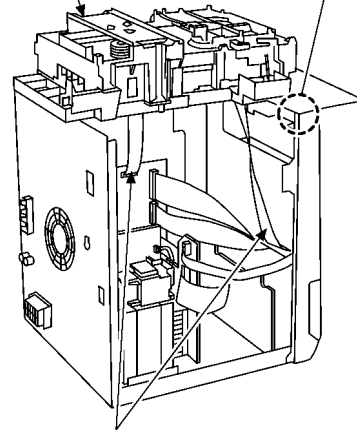
- The initial setting of CD unit must be completed.  
(Refer to the initial setting of CD unit in item 8.3.1.)

**(Step 3)**

Remove the CD changer unit.

**(Step 1)**

Push the power button and the power turns OFF.

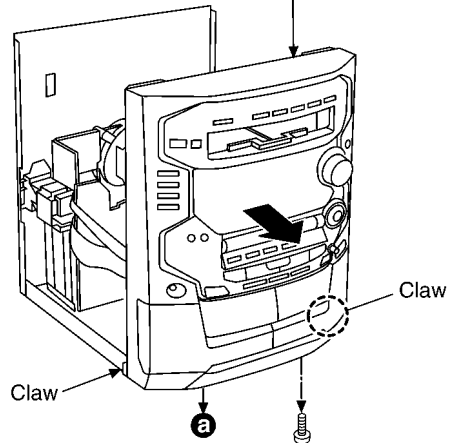


**(Step 2)**

Remove the FFC boards.

**(Step 5)**

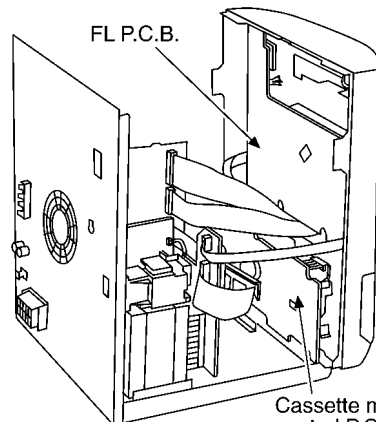
Release the 2 claws, and then draw the front panel ass'y.



**(Step 4)** **a** × 2

- Check the FL P.C.B. and cassette mechanism control P.C.B. as shown below.

FL P.C.B.



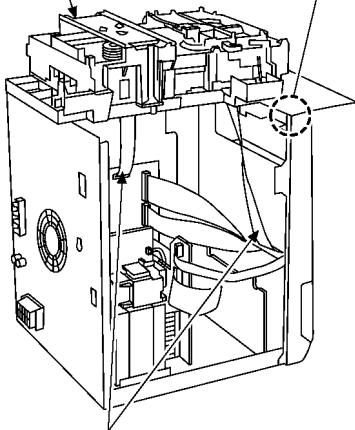
Cassette mechanism control P.C.B.

### 8.3.4. Checking for the power supply P.C.B.

- The initial setting of CD unit must be completed.  
(Refer to the initial setting of CD unit in item 8.3.1.)

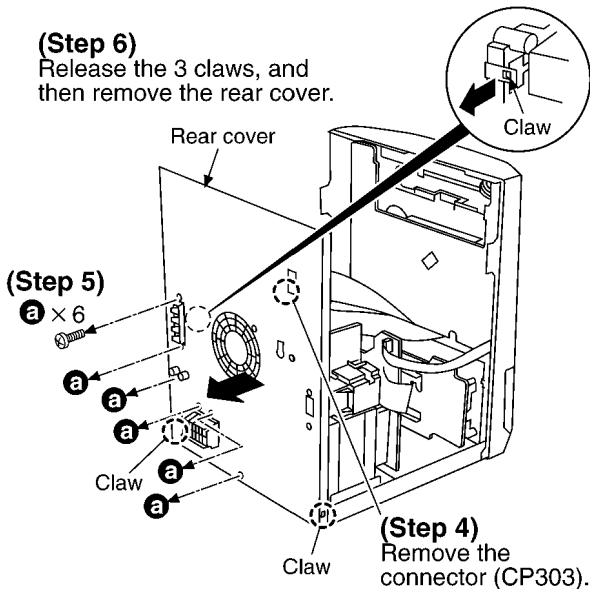
**(Step 3)**  
Remove the CD  
changer unit.

**(Step 1)**  
Push the power button  
and the power turns OFF.



**(Step 2)**  
Remove the FFC boards.

**(Step 6)**  
Release the 3 claws, and  
then remove the rear cover.



**(Step 5)**

**a** × 6

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

**a**

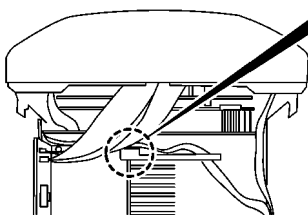
**a**

**a**

**a**

**(Step 4)**  
Remove the  
connector (CP303).

**(Step 7)**  
Release the 2 claws, and then  
remove the cord clammer.



Cord clammer

Claws

**(Step 8)**

**b** × 2

**b**

**(Step 9)**

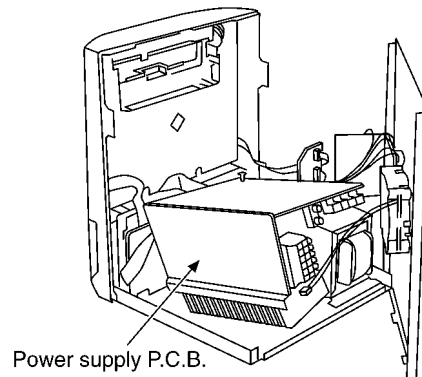
**c** × 2

**c**

**b**

**c**

- Check the power supply P.C.B. as shown below.



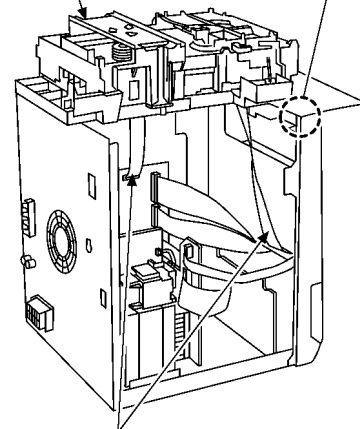
Power supply P.C.B.

### 8.4. Replacement for the traverse deck ass'y

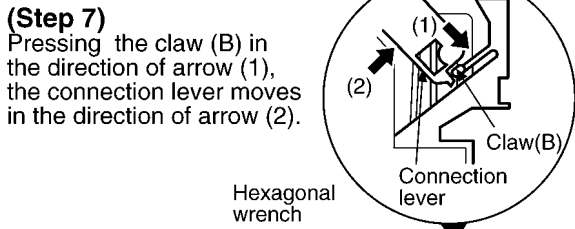
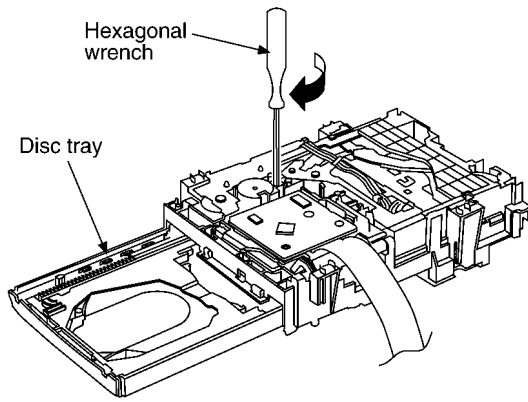
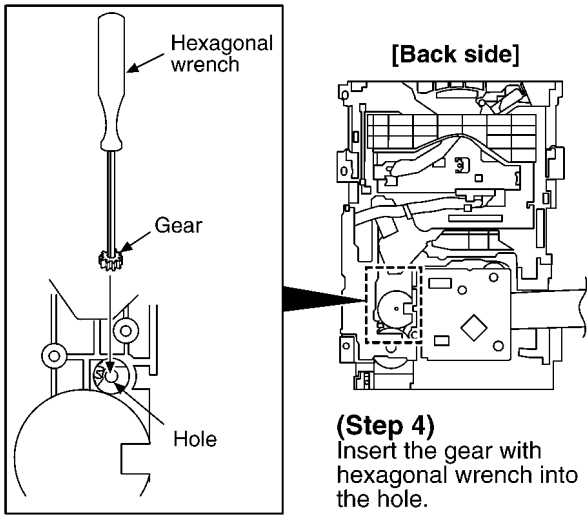
- Follow the **(Step 1) - (Step 3)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.

**(Step 3)**  
Remove the CD  
changer unit.

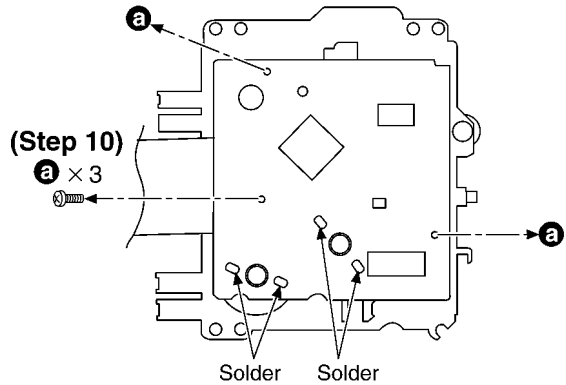
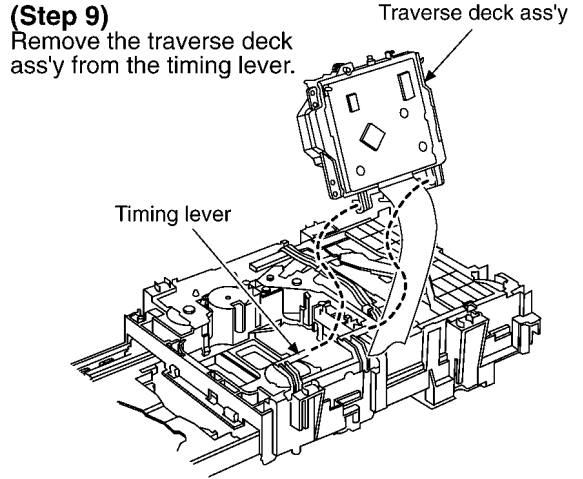
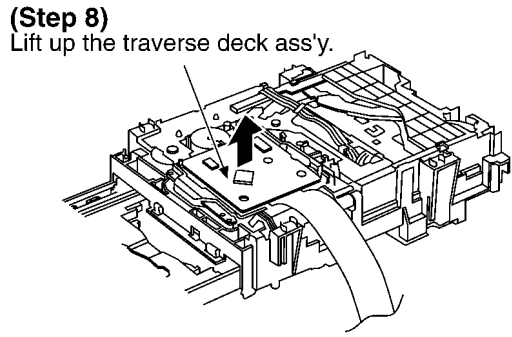
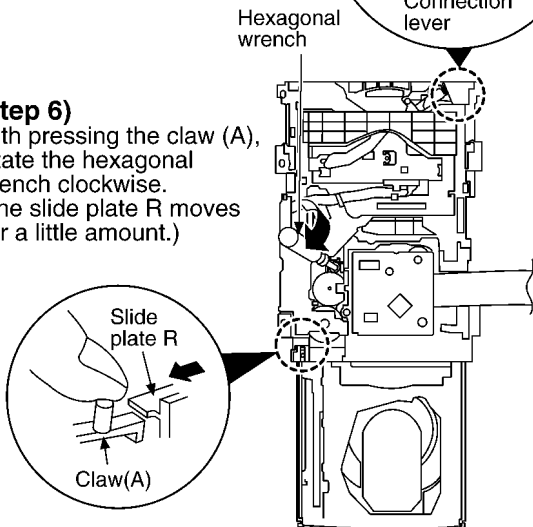
**(Step 1)**  
Push the power button  
and the power turns OFF.



**(Step 2)**  
Remove the FFC boards.

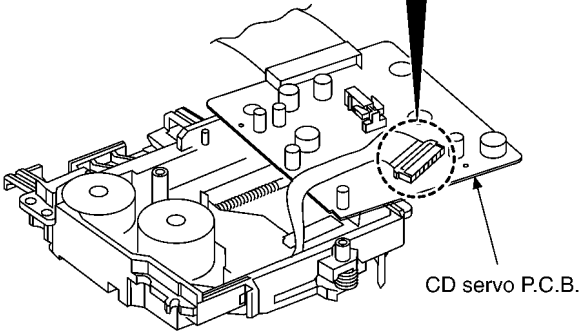
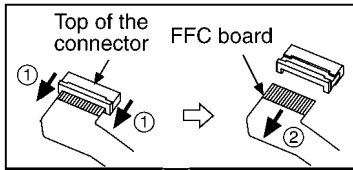


**(Step 6)** With pressing the claw (A), rotate the hexagonal wrench clockwise. (The slide plate R moves for a little amount.)

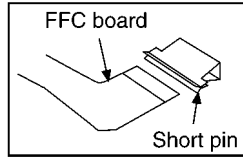


**(Step 11)** Unsolder the motor terminals (4 points).

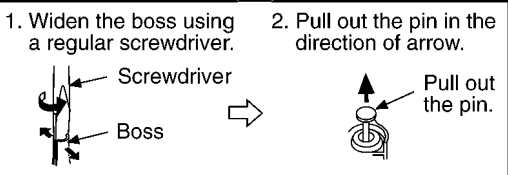
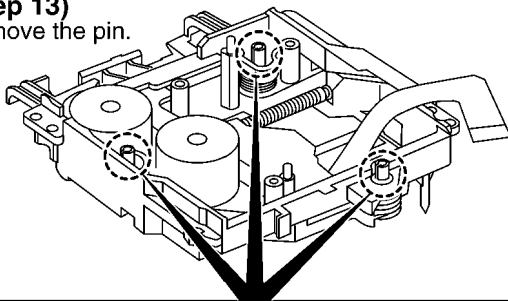
**(Step 12)**  
Remove the FFC board from the connector, and then remove the CD servo P.C.B..



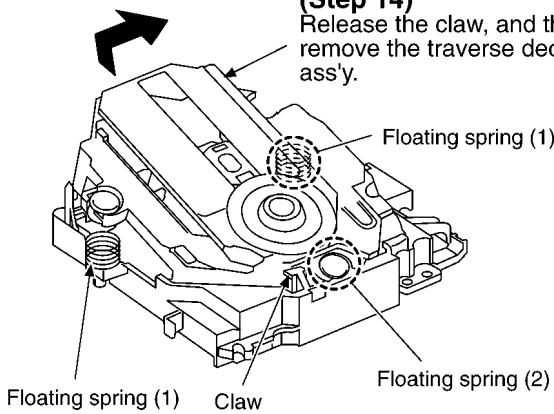
**Caution:**  
Insert a short pin into the traverse unit FFC board.  
(Refer to "Handling Precautions for Traverse Deck".)



**(Step 13)**  
Remove the pin.

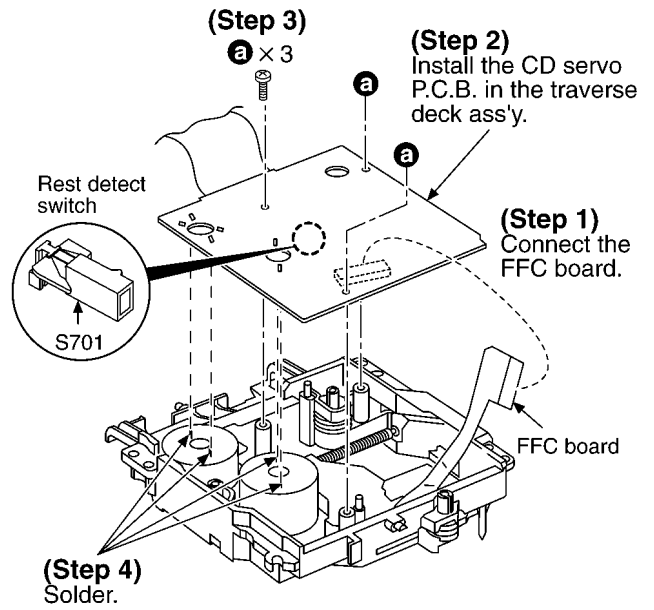


**(Step 14)**  
Release the claw, and then remove the traverse deck ass'y.



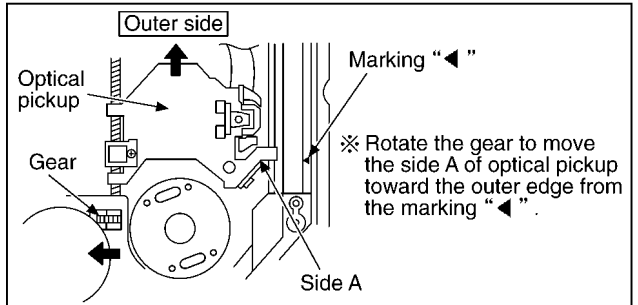
**NOTE:**  
Be careful not to lose the 3 floating springs because those will also be removed on removal of the traverse deck ass'y.

**Installation of the CD servo P.C.B. after replacement**



**Note for installation of the CD servo P.C.B.**

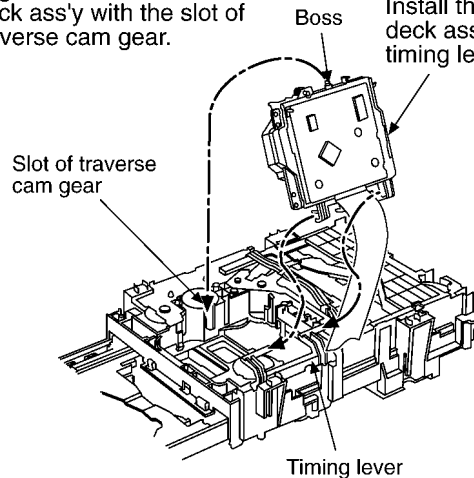
Before installing the CD servo P.C.B., move the optical pickup toward the outer edge from the mark "◀".  
[Otherwise, the rest detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]



**Installation for traverse deck ass'y**

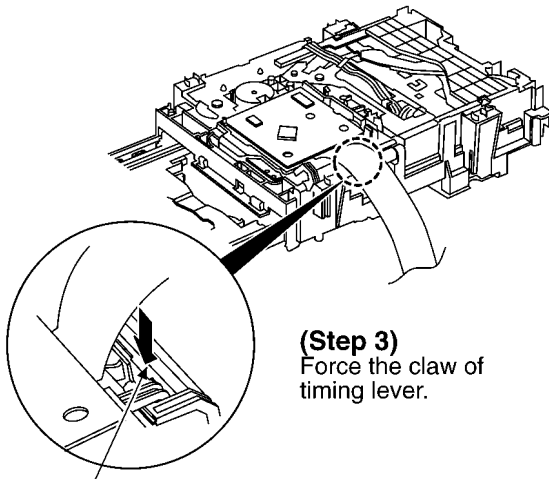
**(Step 2)**  
Align the boss of traverse deck ass'y with the slot of traverse cam gear.

**(Step 1)**  
Install the traverse deck ass'y to the timing lever.



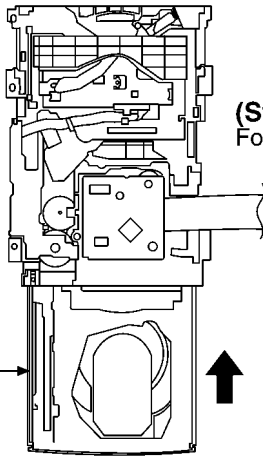
## 8.5. Replacement for the disc tray

- Follow the (Step 1) - (Step 3) of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.



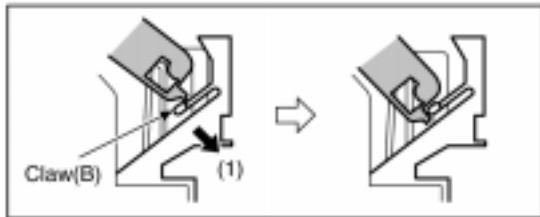
**(Step 3)**  
Force the claw of timing lever.

Claw of timing lever



**(Step 4)**  
Force the disc tray fully.

Disc tray

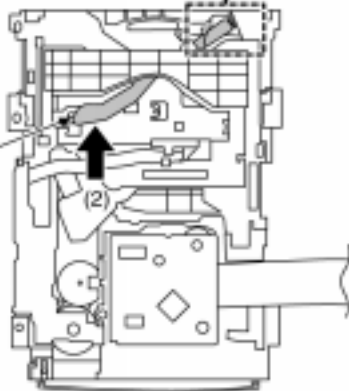


Claw(B)

(1)

(2)

Connection lever

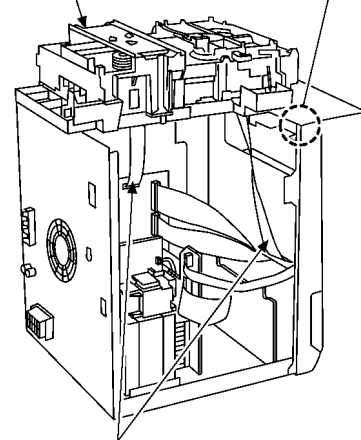


(2)

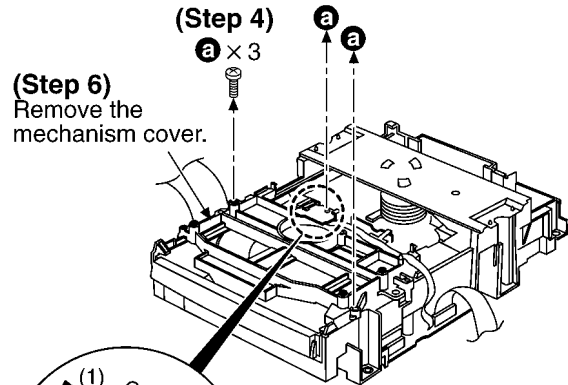
**(Step 5)**  
With pressing the claw (B) in the direction of arrow (1), force the connection lever in the direction of arrow (2).

**(Step 3)**  
Remove the CD changer unit.

**(Step 1)**  
Push the power button and the power turns OFF.



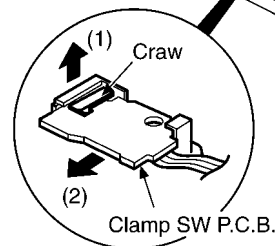
**(Step 2)**  
Remove the FFC boards.



**(Step 4)**

a × 3

**(Step 6)**  
Remove the mechanism cover.



(1)

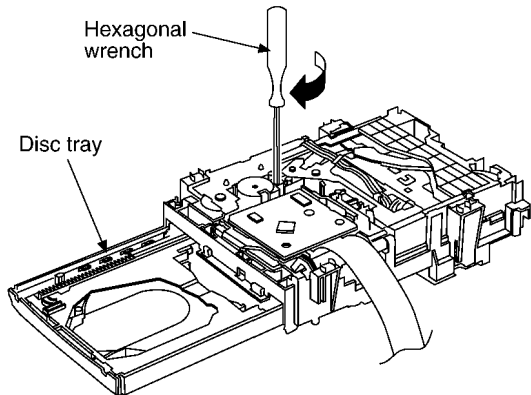
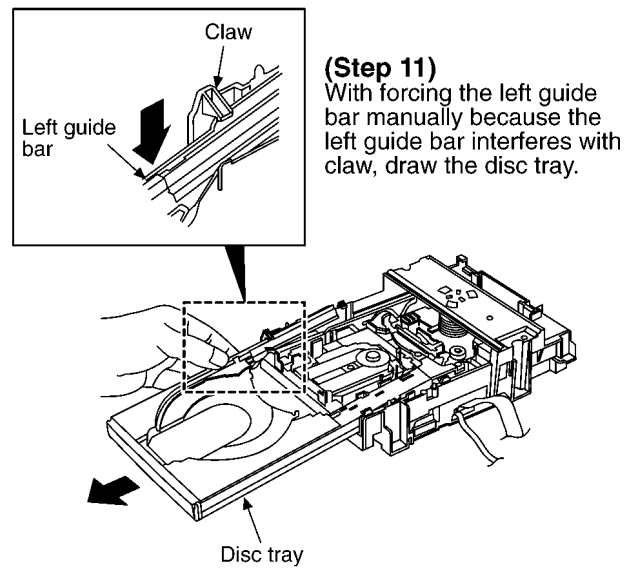
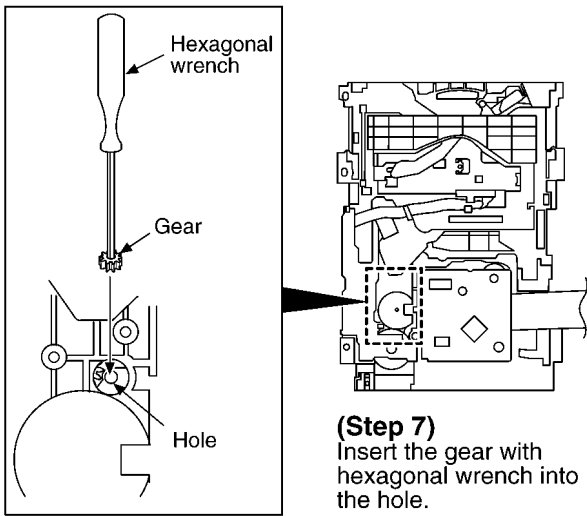
Craw

(2)

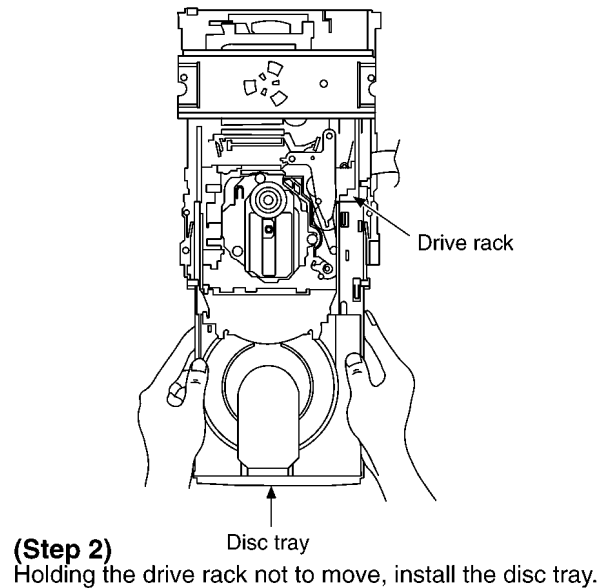
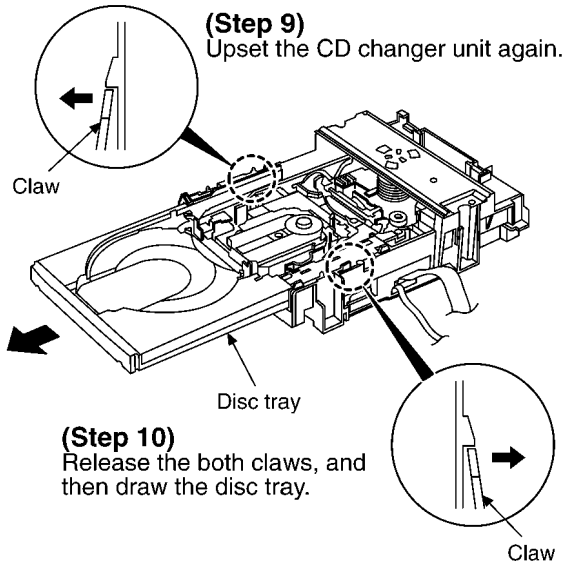
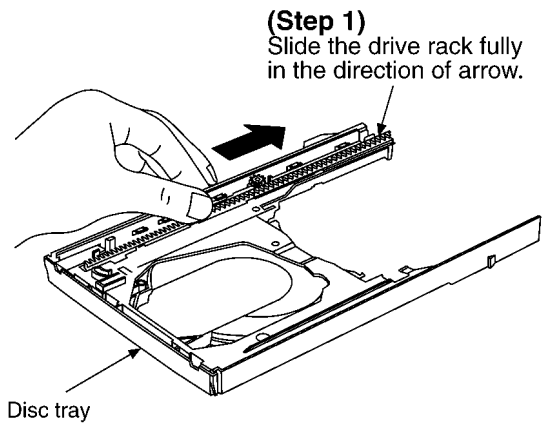
Clamp SW P.C.B.

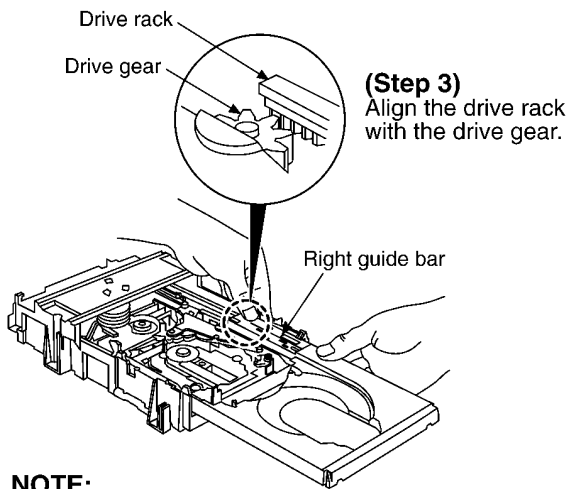
**(Step 5)**  
With lifting the claw in the direction of arrow (1), draw the clamp SW P.C.B. in the direction of arrow (2).





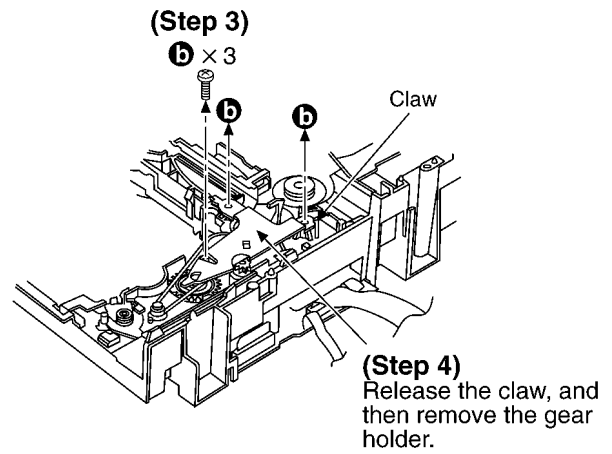
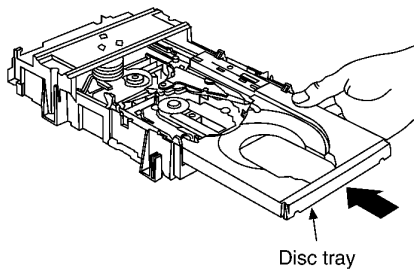
**Installation of the disc tray after replacement**



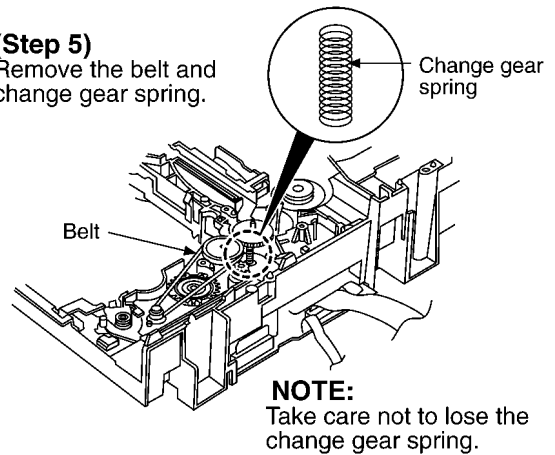


**NOTE:**  
Force the right guide bar of tray base manually not to move upwards.

**(Step 4)**  
Holding the drive rack manually, push the disc tray in the direction of arrow.



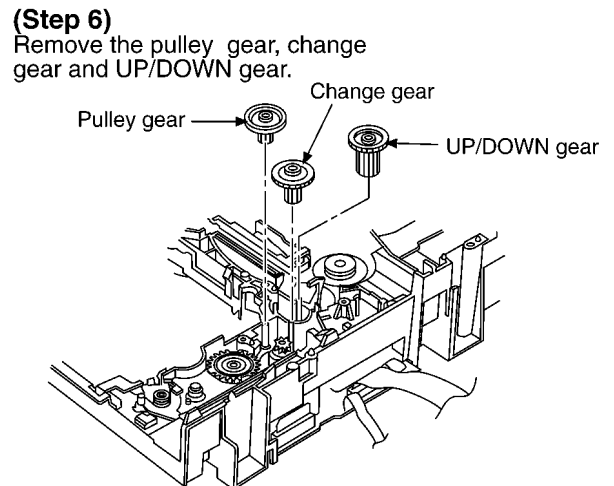
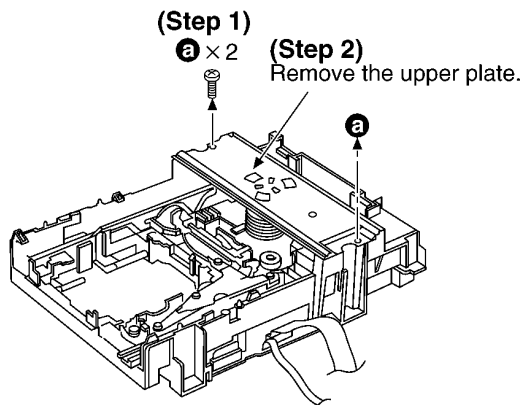
**(Step 5)**  
Remove the belt and change gear spring.

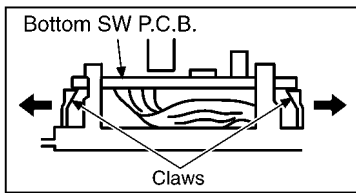


## 8.6. Disassembly and reassembly for mechanism base drive unit

### Disassembly for mechanism base drive unit

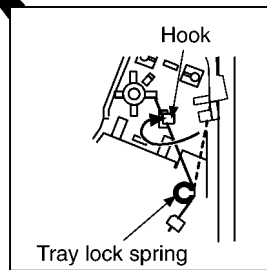
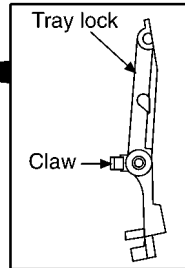
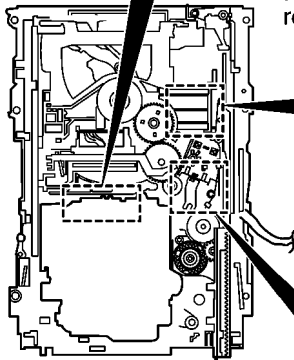
- Follow the **(Step 1) - (Step 11)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.
- Follow the **(Step 1) - (Step 9)** of item 8.4.
- Follow the **(Step 1) - (Step 11)** of item 8.5.





**(Step 7)**  
Release the 2 claws,  
and then remove the  
bottom SW P.C.B..

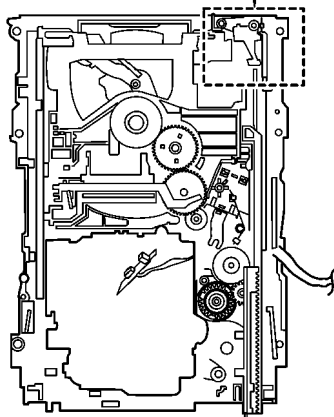
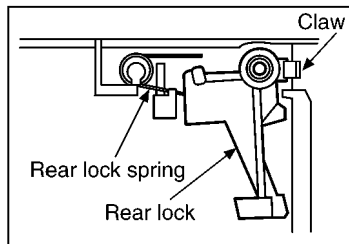
**(Step 9)**  
Release the claw, and then  
remove the tray lock.



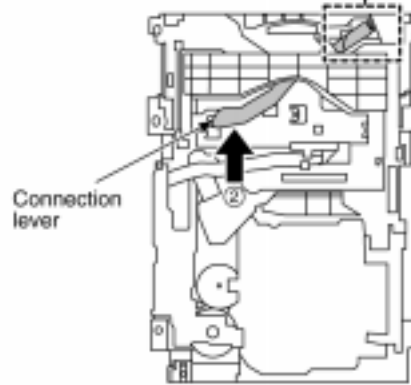
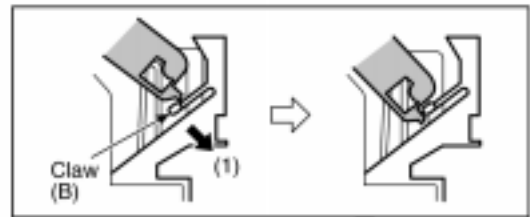
**(Step 8)**  
Install the tray lock spring to  
the hook temporarily.

**(Step 10)**  
Release the claw, and  
then remove the rear  
lock.

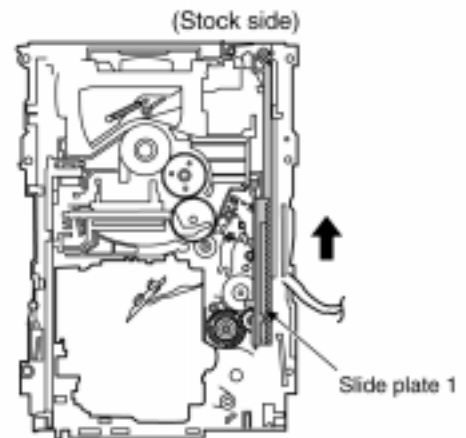
**NOTE:**  
Take care not to take the  
rear lock spring off.



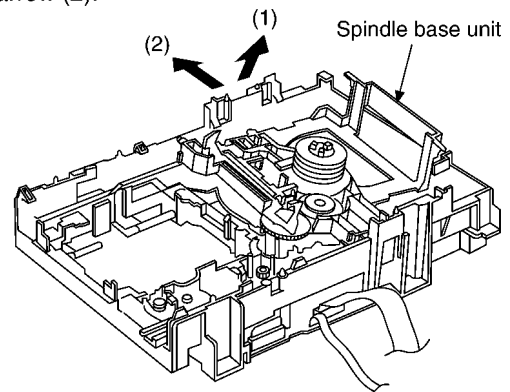
**(Step 11)**  
Pressing the claw (B) in the direction of arrow (1),  
force the connection lever in the direction of arrow (2).

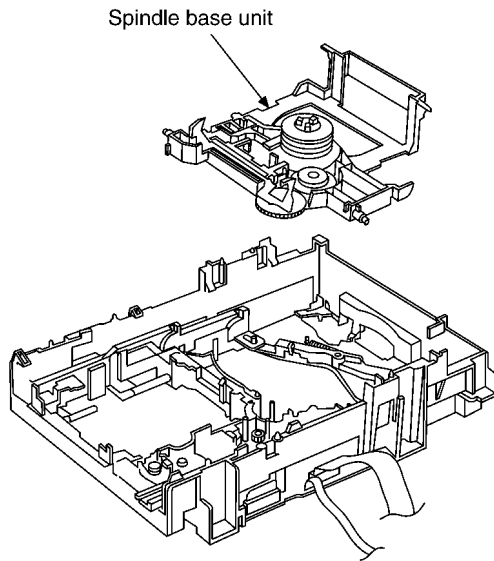


**(Step 12)**  
Move the slide plate 1 to the end of stock side.

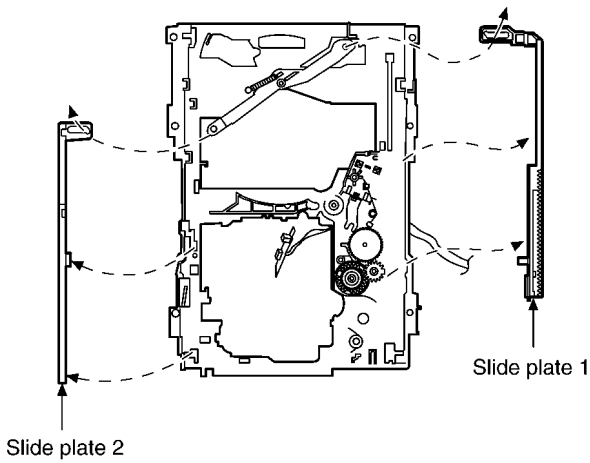


**(Step 13)**  
Lift up the left end of spindle base unit in the direction  
of arrow (1), and then remove the unit in the direction  
of arrow (2).

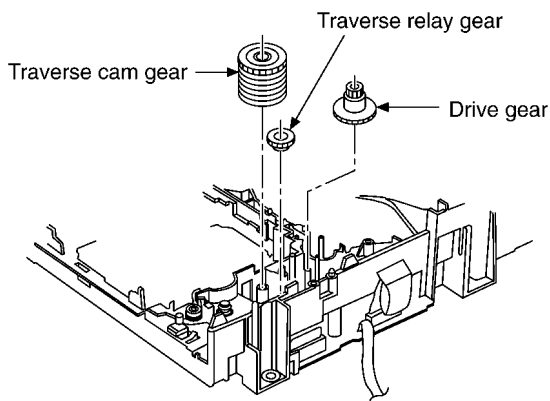




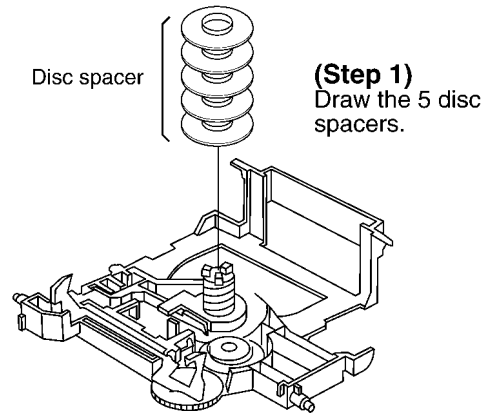
**(Step 14)**  
Remove the slide plate 1 and slide plate 2.



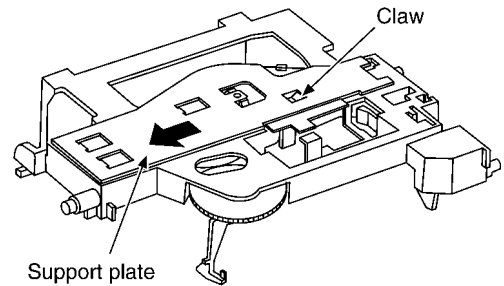
**(Step 15)**  
Remove the traverse relay gear, traverse cam gear and drive gear.



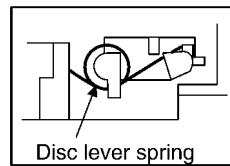
**Disassembly/reassembly for the spindle base unit**



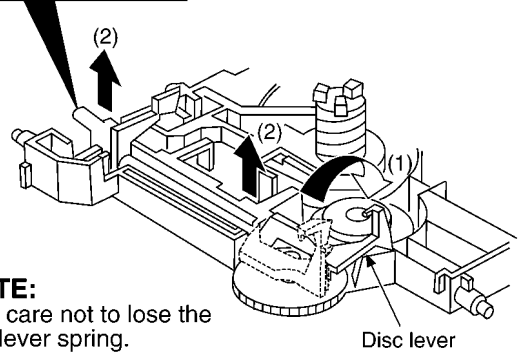
**(Step 2)**  
Pushing the claw, slide the support plate in the direction of arrow, and then remove it.



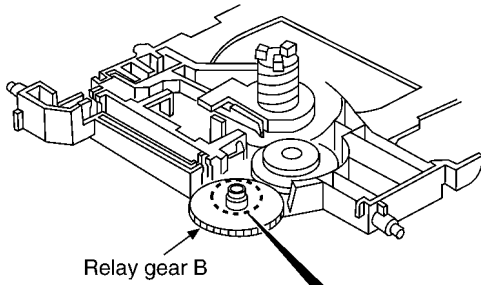
(Installation for disc lever spring)



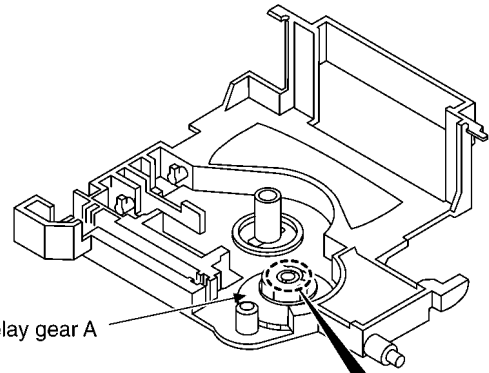
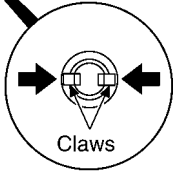
**(Step 3)**  
Rotate the disc lever in the direction of arrow (1), draw the disc lever.



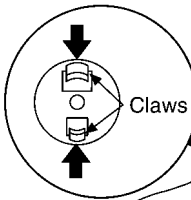
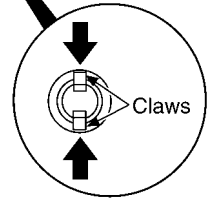
**NOTE:**  
Take care not to lose the disc lever spring.



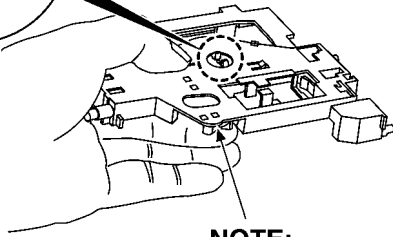
**(Step 4)**  
Release the 2 claws, and then draw the relay gear B.



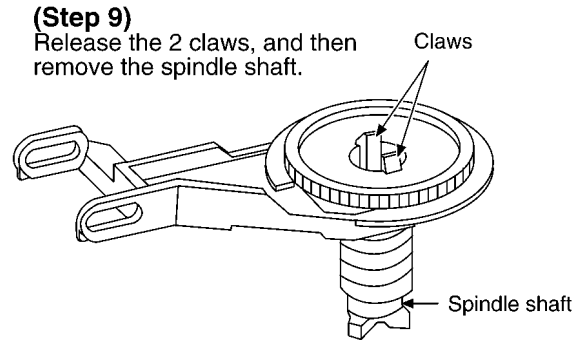
**(Step 8)**  
Release the 2 claws, and then remove the relay gear A.



**(Step 5)**  
Release the 2 claws.

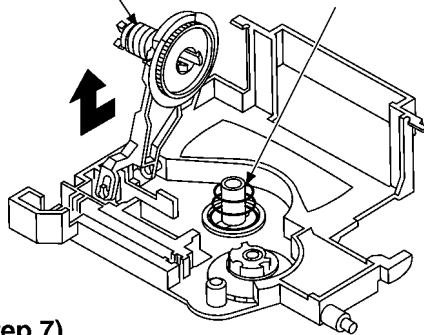


**NOTE:**  
Hold the loading stopper ass'y manually because it is flipped by spring.

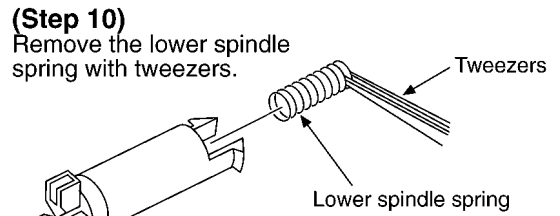


**(Step 9)**  
Release the 2 claws, and then remove the spindle shaft.

**(Step 6)**  
Remove the cushion spring.

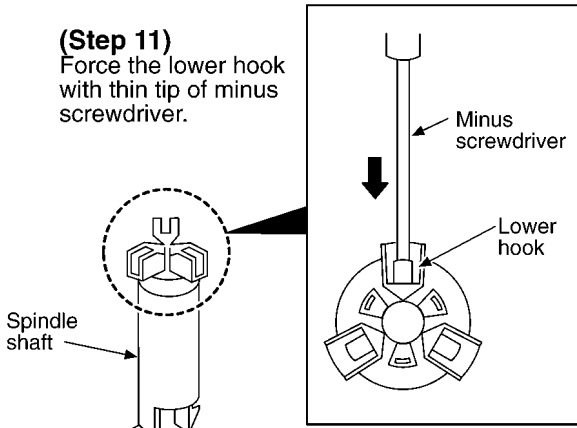


**(Step 7)**  
Remove the loading stopper ass'y in the direction of arrow.

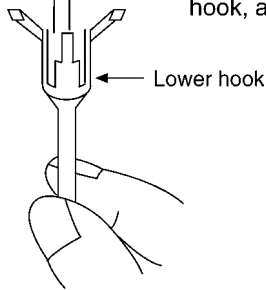


**(Step 10)**  
Remove the lower spindle spring with tweezers.

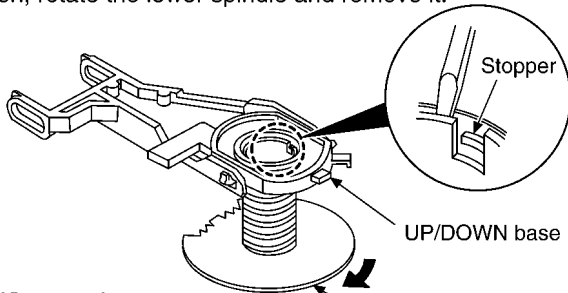
**(Step 11)**  
Force the lower hook with thin tip of minus screwdriver.



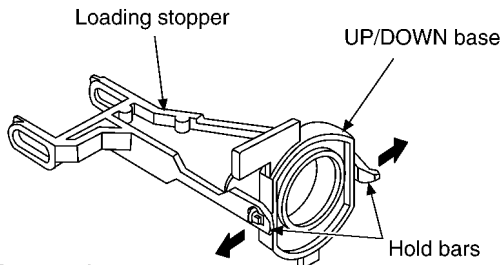
**(Step 12)**  
Squeeze the shaft of lower hook, and then draw it.



**(Step 14)**  
Insert the thin tip of minus screwdriver between the lower spindle and UP/DOWN base, and then slacken the lower spindle to release the stopper. Then, rotate the lower spindle and remove it.



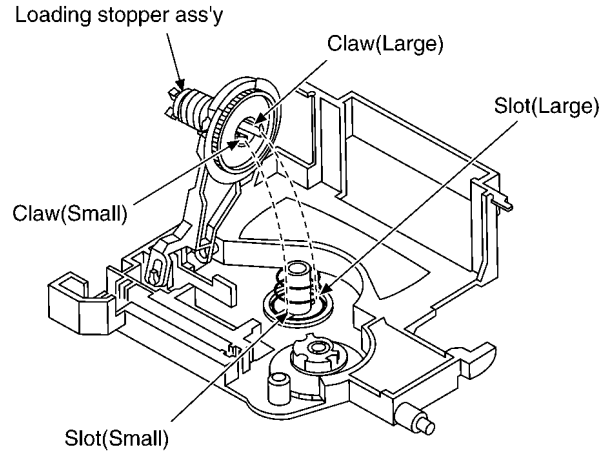
**(Step 13)**  
Rotate the lower spindle in the direction of arrow until the lower spindle interferes with stopper.



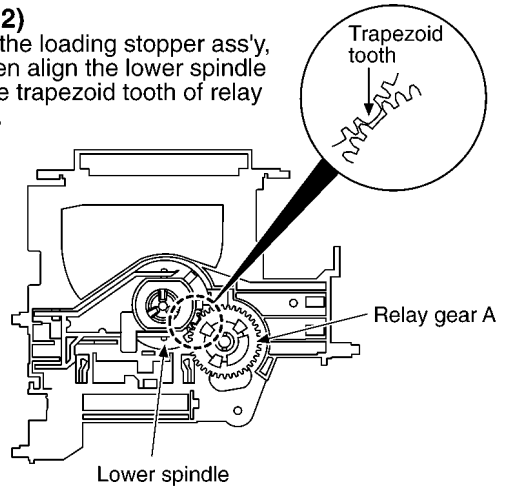
**(Step 15)**  
Rotate the UP/DOWN base at a 90 degree angle. Then, spread the hold bars of loading stopper and remove the UP/DOWN base.

**Installation for loading stopper ass'y**

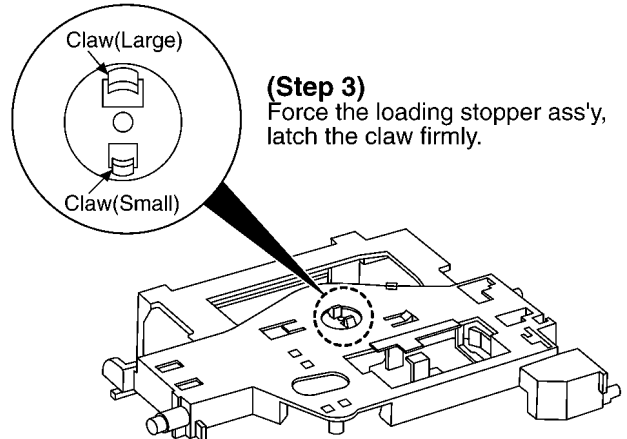
**(Step 1)**  
Align the claw of loading stopper ass'y with the slot of spindle base. (Caution should be exercised when alignment of claw due to the size of claws.)



**(Step 2)**  
Lower the loading stopper ass'y, and then align the lower spindle with the trapezoid tooth of relay gear A.

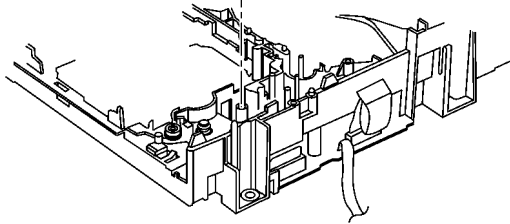


**(Step 3)**  
Force the loading stopper ass'y, latch the claw firmly.

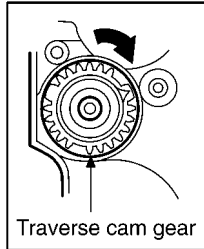


**Reassembling for mechanism base drive unit**

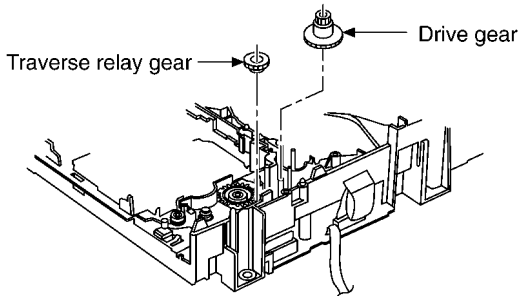
Traverse cam gear → **(Step 1)**  
Install the traverse cam gear.



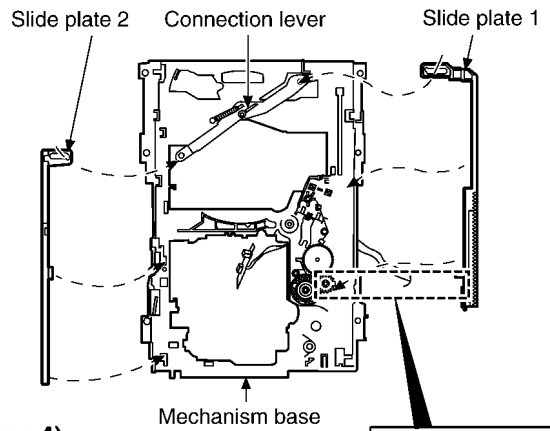
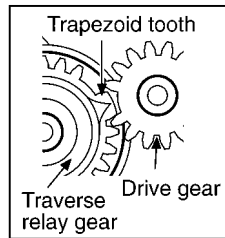
**(Step 2)**  
Rotate the traverse cam gear to the direction of arrow.



**(Step 3)**  
Install the drive gear and traverse relay gear.

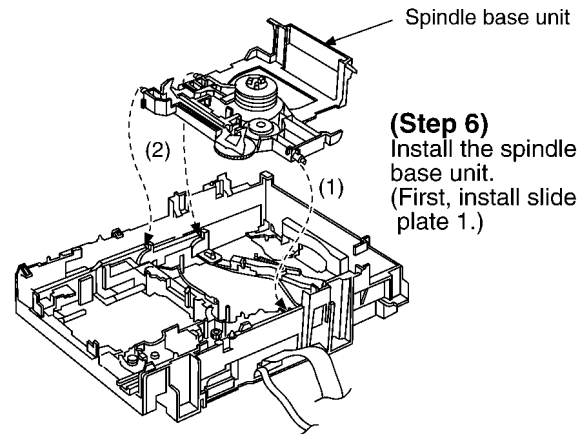
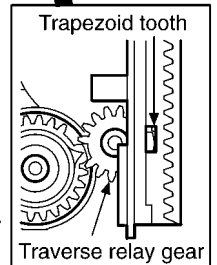


※ When installing the traverse relay gear, align the trapezoid tooth of gear with tooth of drive gear.

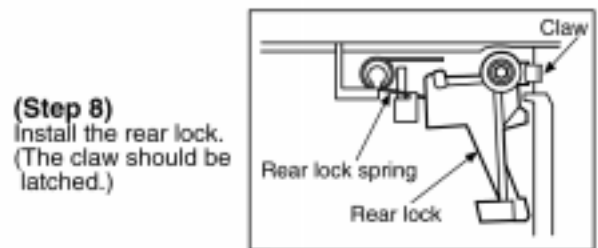


**(Step 4)**  
Install the slide plate 2 to the mechanism base, and then match to the connection lever.

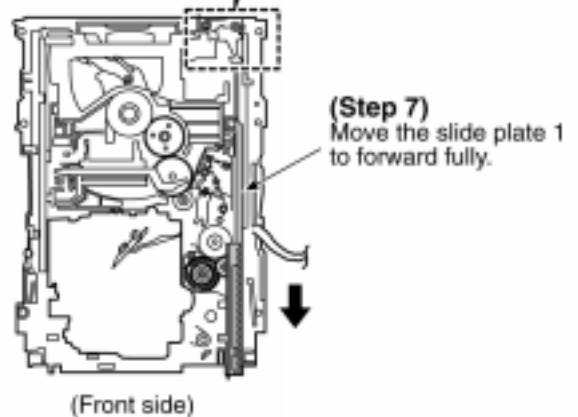
**(Step 5)**  
Install the slide plate 1 to the mechanism base, and then match to the connection lever and align the trapezoid tooth of traverse relay gear with the slide plate 1.

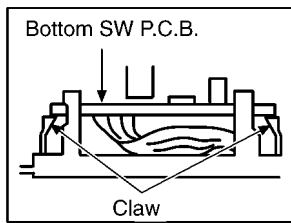


**(Step 6)**  
Install the spindle base unit.  
(First, install slide plate 1.)



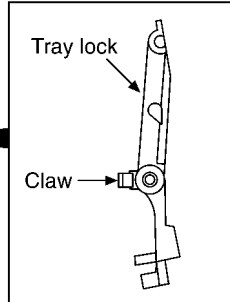
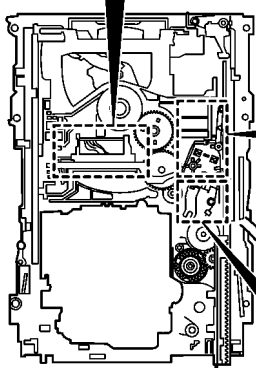
**(Step 8)**  
Install the rear lock.  
(The claw should be latched.)



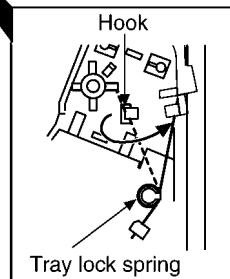


**(Step 9)**  
Install the bottom SW P.C.B..  
(The claw should be latched.)

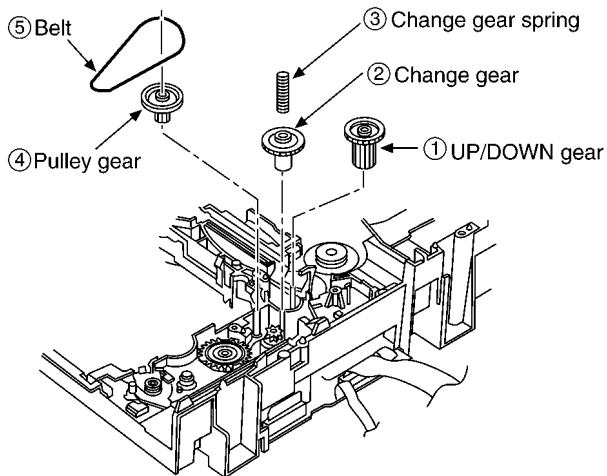
**(Step 10)**  
Install the tray lock.  
(The claw should be latched.)



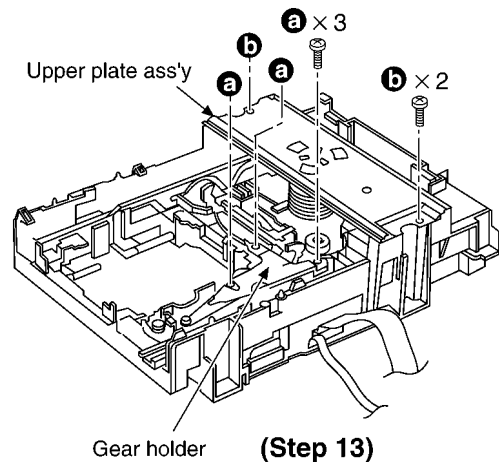
**(Step 11)**  
Remove the tray lock spring from hook, and then latch to the tray lock.



**(Step 12)**  
Install the UP/DOWN gear, change gear, change gear spring, pulley gear and belt in the order of ① - ⑤ .



**(Step 14)**  
Install the upper plate ass'y, and then tighten the screw ( **b** ).



**(Step 13)**  
Install the gear holder, and then tighten the screw ( **a** ).

**(Step 15)**  
Install the tray base, traverse deck ass'y and mechanism cover. (Refer to the items 5.4. and 5.5.)

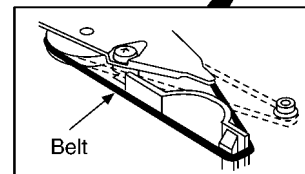
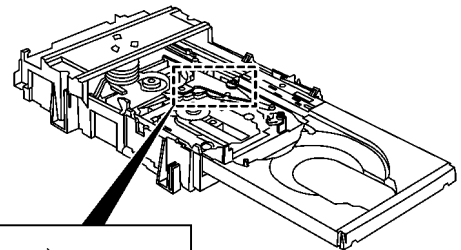
[Operation check after servicing]

Check the proper operation of following items with gear and hexagonal screwdriver.

- 1) Open/close of tray base.
- 2) Moving the tray base to the stock side.
- 3) UP/DOWN operation of spindle base unit.
- 4) UP/DOWN operation of traverse unit.

## 8.7. Replacement for the motor ass'y

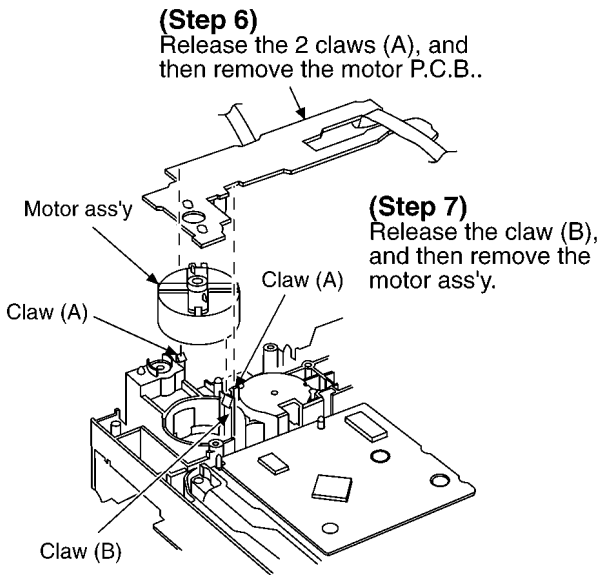
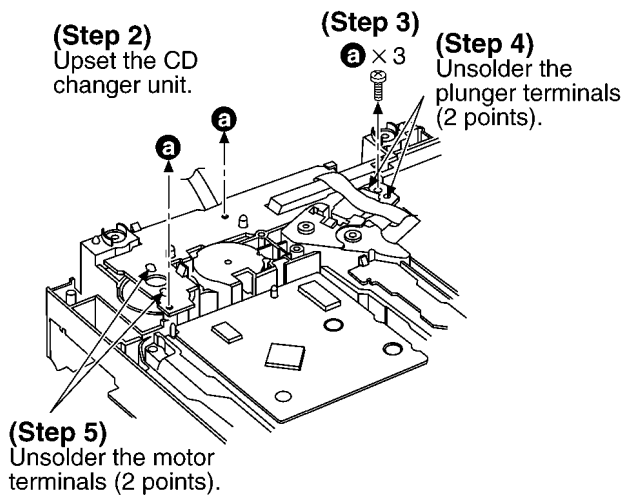
- Follow the **(Step 1) - (Step 3)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.
- Follow the **(Step 1) - (Step 10)** of item 8.5.



**(Step 1)**  
Install the belt temporarily.

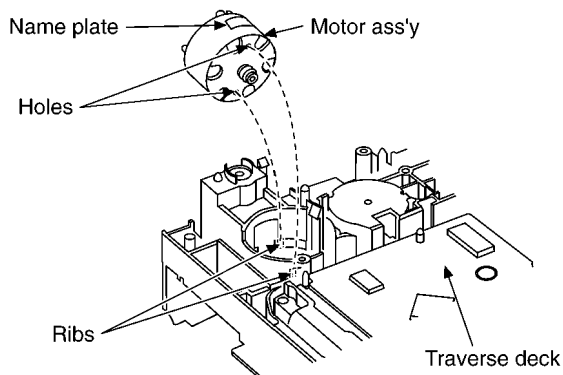
**NOTE:**  
Take care not apply the grease to the belt.





#### Notice for motor ass'y installation

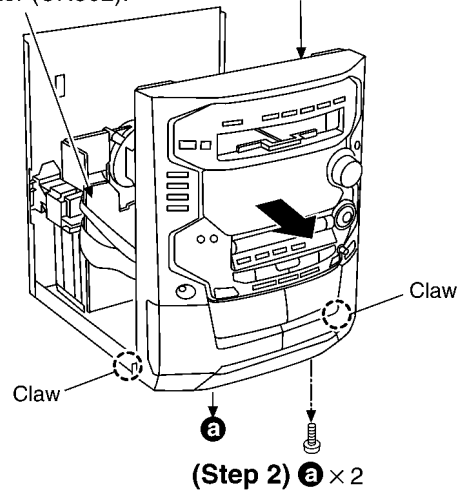
1. Locate the name plate of motor to the traverse deck.
2. Align the hole of motor with the ribs.



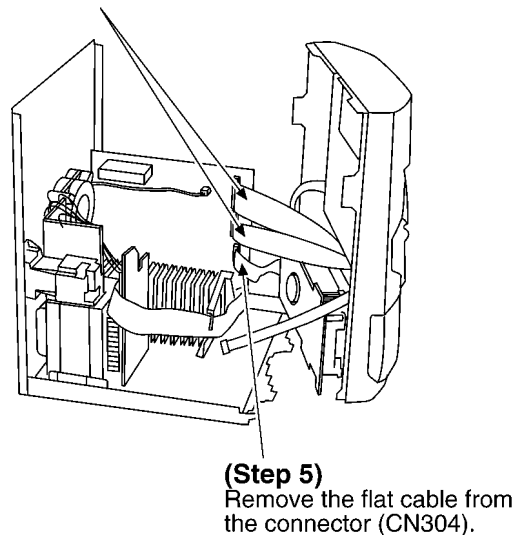
## 8.8. Replacement for the pinch roller ass'y and head block

- Follow the **(Step 1) - (Step 3)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.
- Follow the **(Step 1) - (Step 3)** of item 8.3.3.

- (Step 1)**  
Remove the connector (CN502).
- (Step 3)**  
Release the 2 claws, and then draw the front panel ass'y.

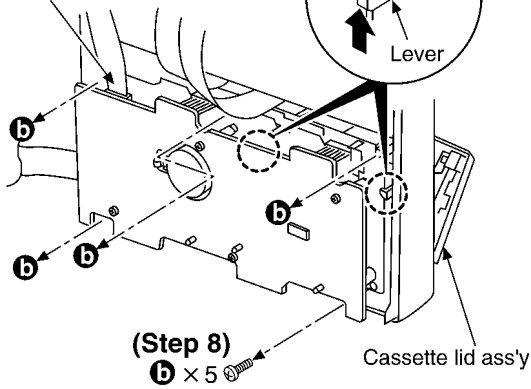


- (Step 4)**  
Pull out the FFC board.

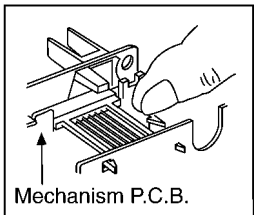
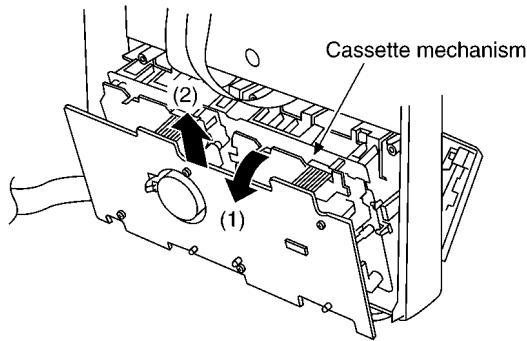


**(Step 6)**  
Push the lever upward, and then open the cassette lid ass'y (For DECK1 and DECK2).

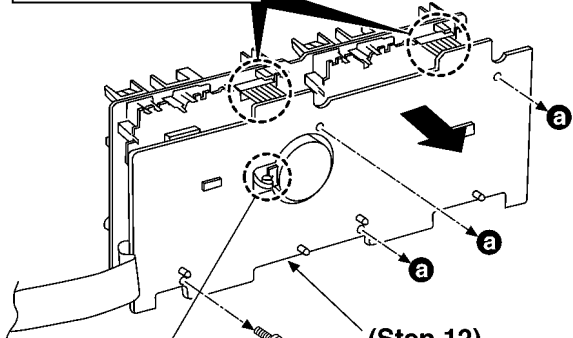
**(Step 7)**  
Remove the flat cable from the connector (CN1001).



**(Step 9)**  
Tilt the cassette mechanism in the direction of arrow (1), and then remove it in the direction of arrow (2).



**NOTE:**  
When removing the mechanism control P.C.B., remove it with holding the mechanism P.C.B..



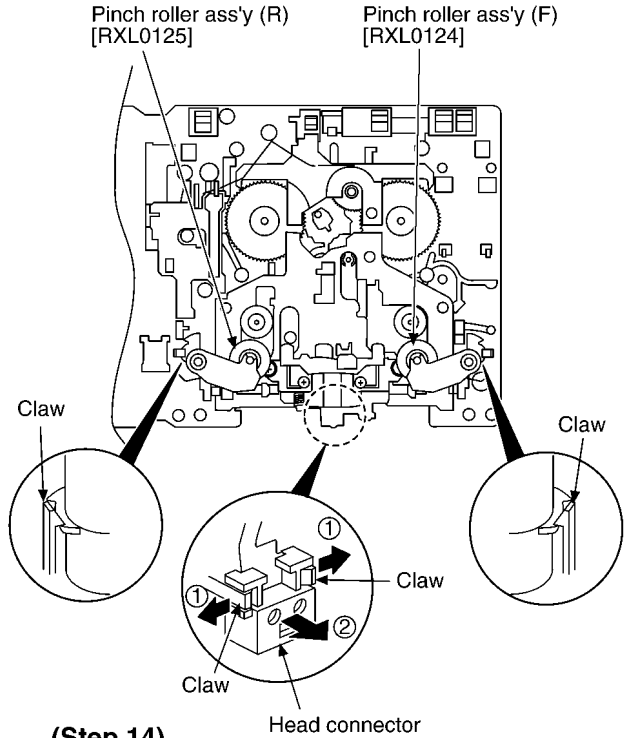
**(Step 10)**  
Unsolder the motor terminals.

**(Step 11)**  
a x 4

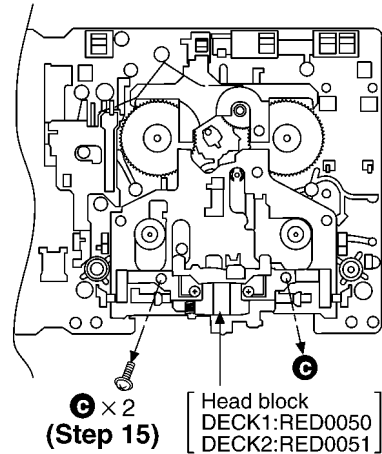
**(Step 12)**  
Remove the mechanism control P.C.B..

※ The mechanism as shown below is for DECK2.  
For the one of DECK1, perform the same procedures.

**(Step 13)**  
Release the 2 claws, and then remove the pinch roller (R), (F).



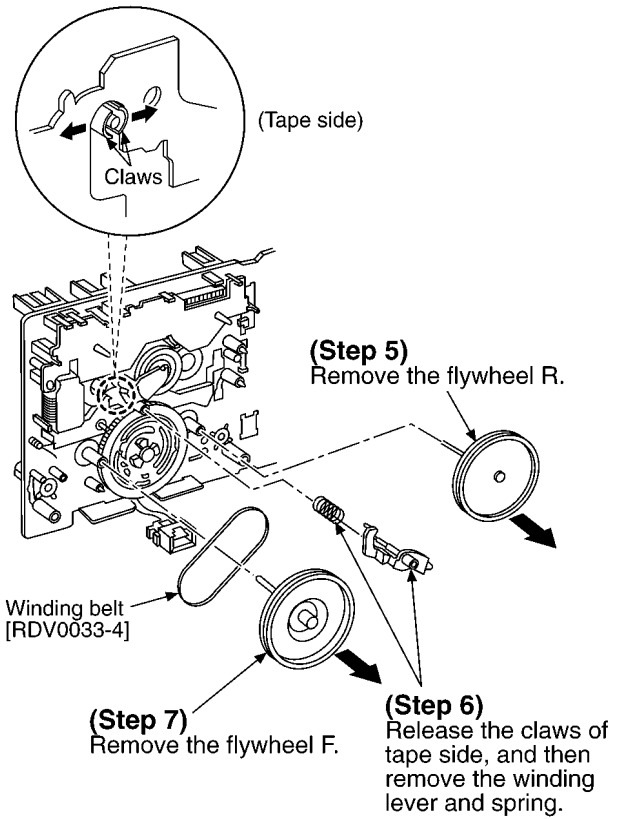
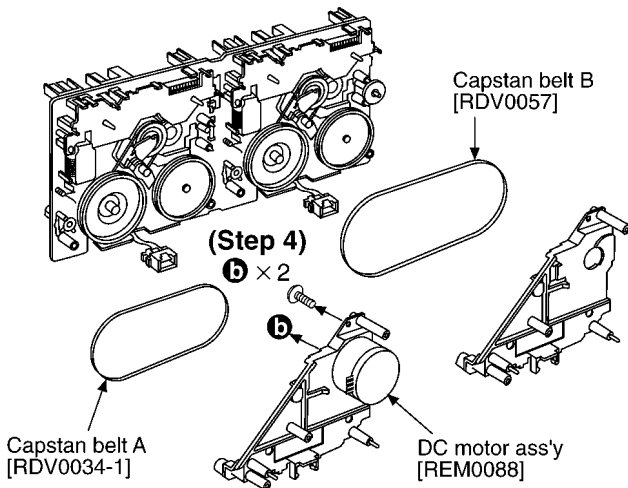
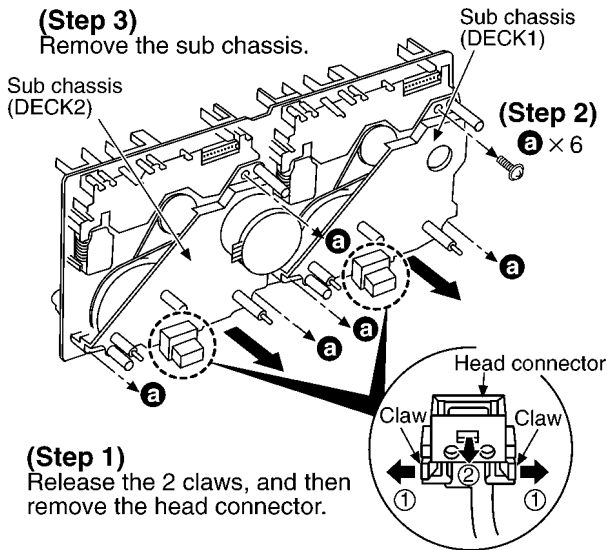
**(Step 14)**  
Release the 2 claws, and then remove the head connector.



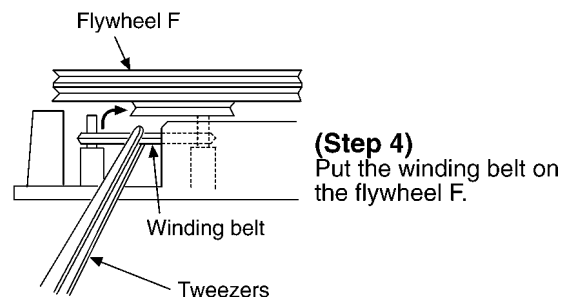
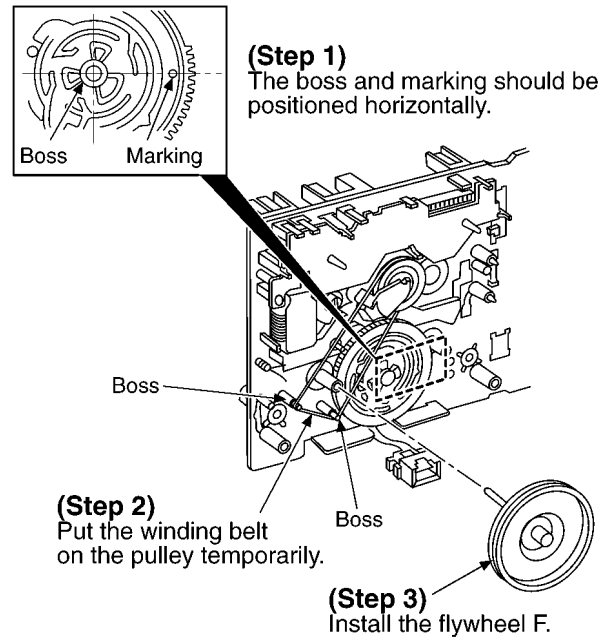
c x 2  
**(Step 15)** [ Head block DECK1:RED0050 DECK2:RED0051 ]

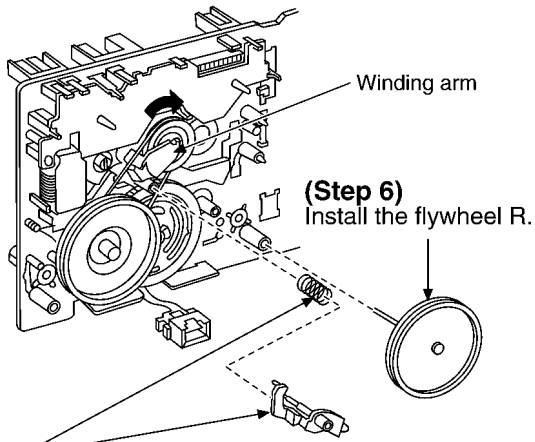
## 8.9. Replacement for the CD motor ass'y, capstan belt A, capstan belt B and winding belt

- Follow the (Step 1) - (Step 3) of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.
- Follow the (Step 1) - (Step 3) of item 8.3.3.
- Follow the (Step 1) - (Step 11) of item 8.8.



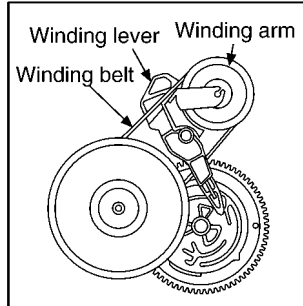
### Installation of the belt



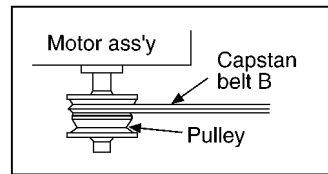


**(Step 6)**  
Install the flywheel R.

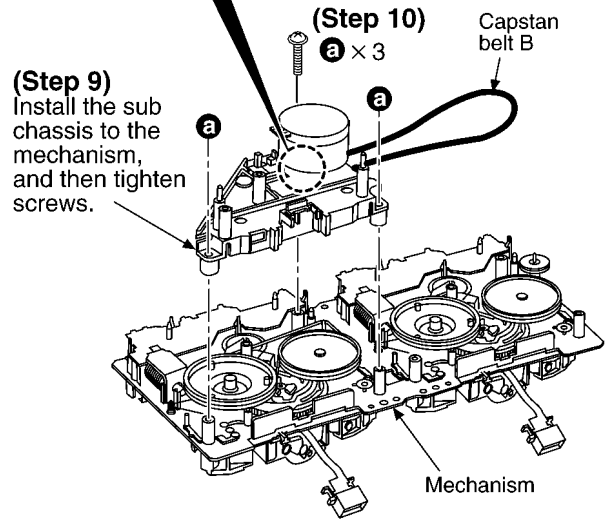
**(Step 5)**  
Install the winding lever and spring while pressing the winding arm in the direction of arrow.  
(The winding lever must be inserted completely and latched with claws.)



**NOTE:**  
The winding lever should be positioned as shown below.



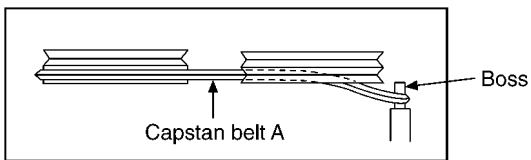
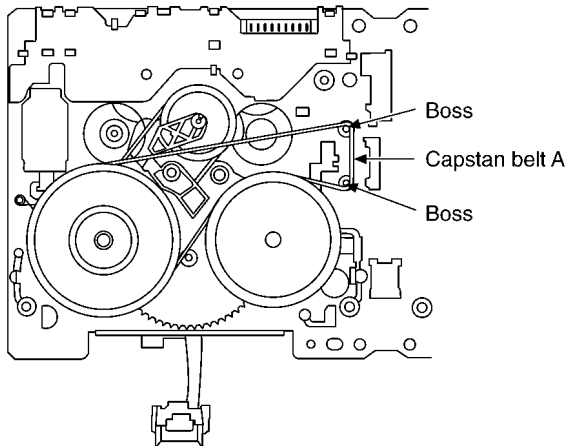
**(Step 8)**  
Put the capstan belt B on the motor ass'y pulley.



**(Step 9)**  
Install the sub chassis to the mechanism, and then tighten screws.

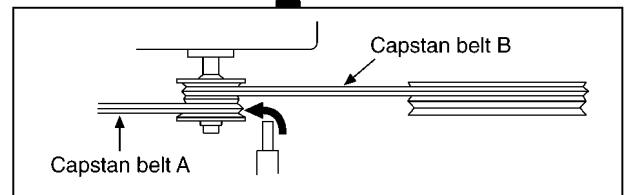
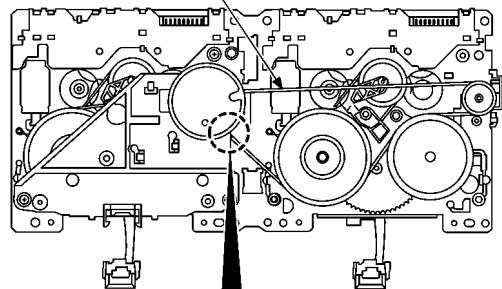
**(Step 10)**

**(Step 7)**  
Put the capstan belt A temporarily as shown below.



(Side view)

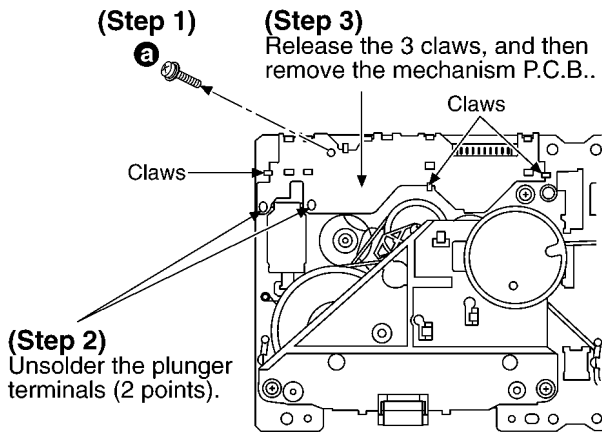
**(Step 11)**  
Put the capstan belt B as shown below.



**(Step 12)**  
Put the capstan belt A on the motor ass'y pulley.

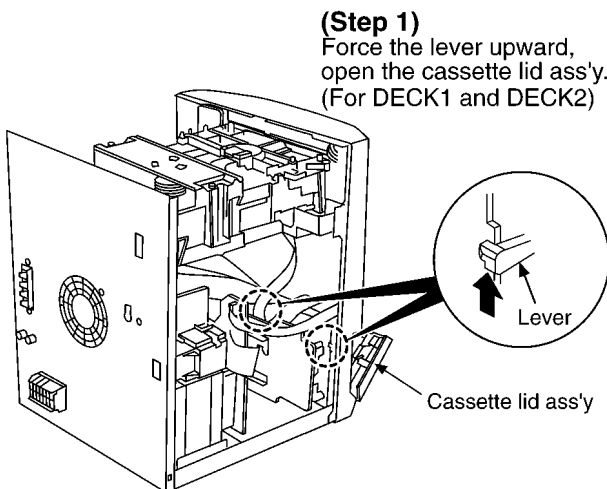
## 8.10. Replacement for the components parts on the mechanism P.C.B.

- Follow the **(Step 1)** - **(Step 3)** of item 8.1.
- Follow the disassembly instruction for the disc tray ornament of item 8.2.1.
- Follow the disassembly instruction for the CD changer unit of item 8.2.2.
- Follow the **(Step 1)** - **(Step 5)** of item 8.3.3.
- Follow the **(Step 1)** - **(Step 6)** of item 8.8.

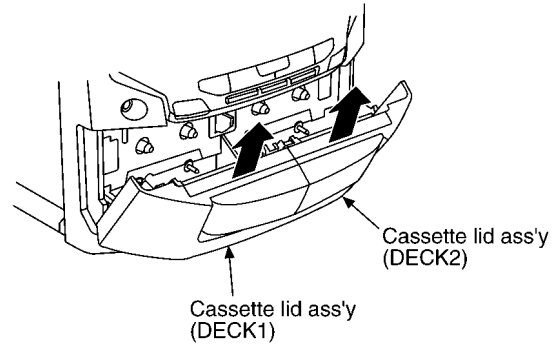


## 8.11. Replacement for the cassette lid ass'y

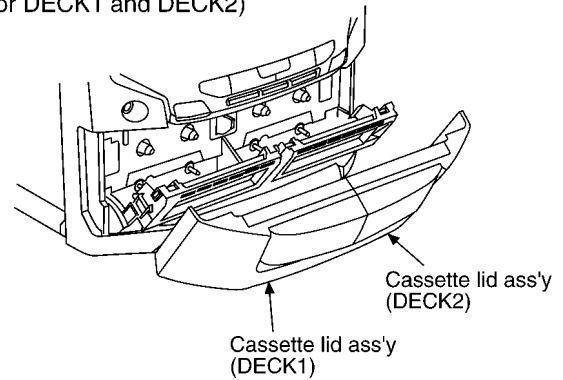
- Follow the **(Step 1)** - **(Step 3)** of item 8.1.



- (Step 2)**  
Lift up the cassette lid ass'y in the direction of arrow.  
(For DECK1 and DECK2)



- (Step 3)**  
Remove the cassette lid ass'y.  
(For DECK1 and DECK2)

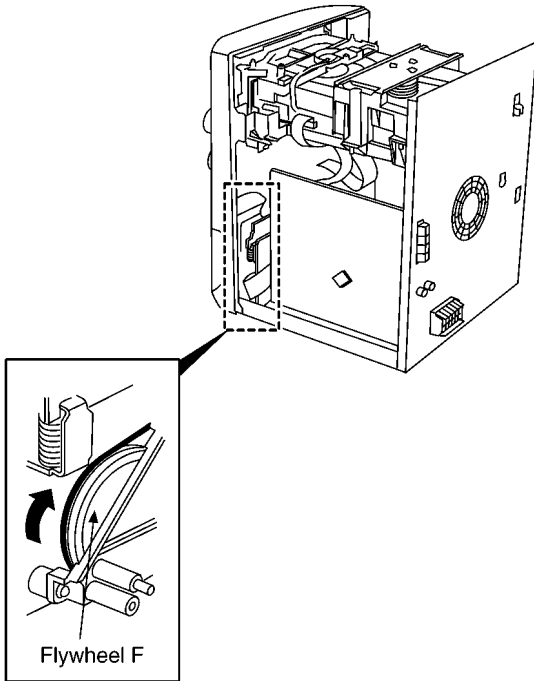


## 8.12. Measure for tape trouble

- Follow the (Step 1) - (Step 3) of item 8.1.

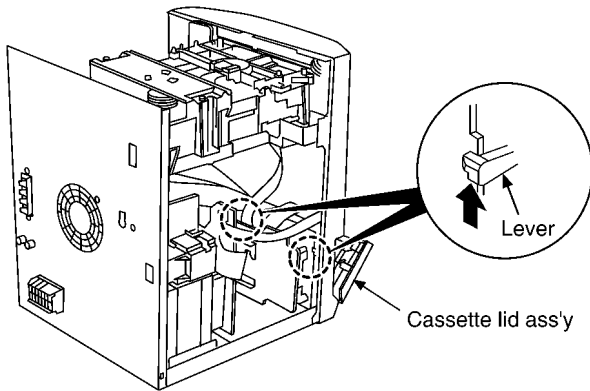
### (Step 1)

If a cassette tape cannot be removed from the deck since the tape is caught by the capstan or pinch roller during playback or recording, rotate the flywheel F in the direction of the arrow to remove the tape.



### (Step 2)

Force the lever upward and open the cassette lid ass'y. Take the cassette tape off.



## 9 Checking Procedure for Self-operation of Cassette Mechanism Ass'y

- This procedure describes simple methods independent of mechanism controller or governor circuit.

### 9.1. Operation Check Providing with Cassette Tape

1. Push up the EJECT lever with rubber band.(Refer to Fig. 2)
2. Apply DC 5V to the MOTOR. (MOTOR will be rotated) (Refer to Fig. 1)
3. Provide the cassette tape with mechanism ass'y.
4. Apply DC 9V to the plunger, and then operate it by switching power ON/OFF. (Power: +PL, -PL) (Refer to Fig. 1)
  - a. **FWD PLAY** : Supply power to the plunger momentarily. (Duration: approx. 50msec.)
  - b. **FWD FF** : At FWD PLAY mode, supply power to the plunger momentarily. (Duration: approx. 50msec.)
  - c. **STOP** : At FWD FF mode, supply power to the plunger momentarily. (Duration: approx. 50msec.)
  - d. **REV PLAY** : At STOP mode, supply power to the plunger for ordinary duration. (Duration: approx. 200msec.)
  - e. **REV REW** : At REV PLAY mode, supply power to the plunger momentarily. (Duration: approx. 50msec.)
  - f. **STOP** : At REV REW mode, supply power to the plunger momentarily. (Duration: approx. 50msec.)

Repeat the above operation to FWD PLAY mode.

**Note:** Incorrect duration for power supply may be operated to other mode.

#### 9.1.1. Connection Diagram Between the Mechanism Ass'y and Power Supply (MOTOR and Plunger)

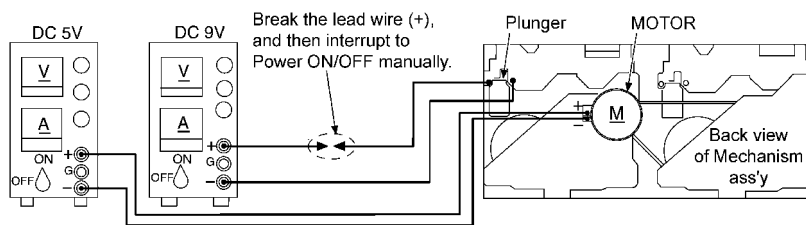


Fig. 1

#### 9.1.2. Detail View of EJECT Lever (EJECT lever fixed by rubber band, Plunger rib operation)

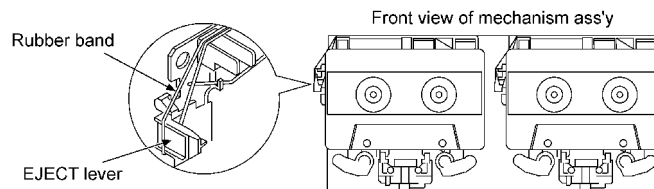


Fig. 2

### 9.2. Operation Check Not Provided with Cassette Tape

1. Push up the EJECT lever with rubber band. (Refer to Fig. 2)
2. Apply DC 5V to the MOTOR. (MOTOR will be rotated)
3. Lift up the plunger rib of mechanism ass'y with the tip of minus screwdriver, and then operate it same as power supply duration. (Refer to Fig. 3)

**Note:** Operation order is same as the "Operation Check Providing with Cassette Tape" item 4. above.

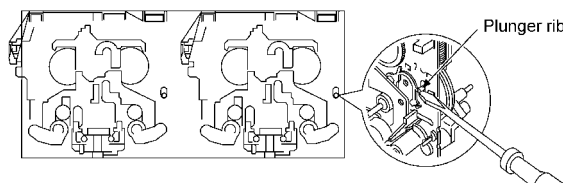


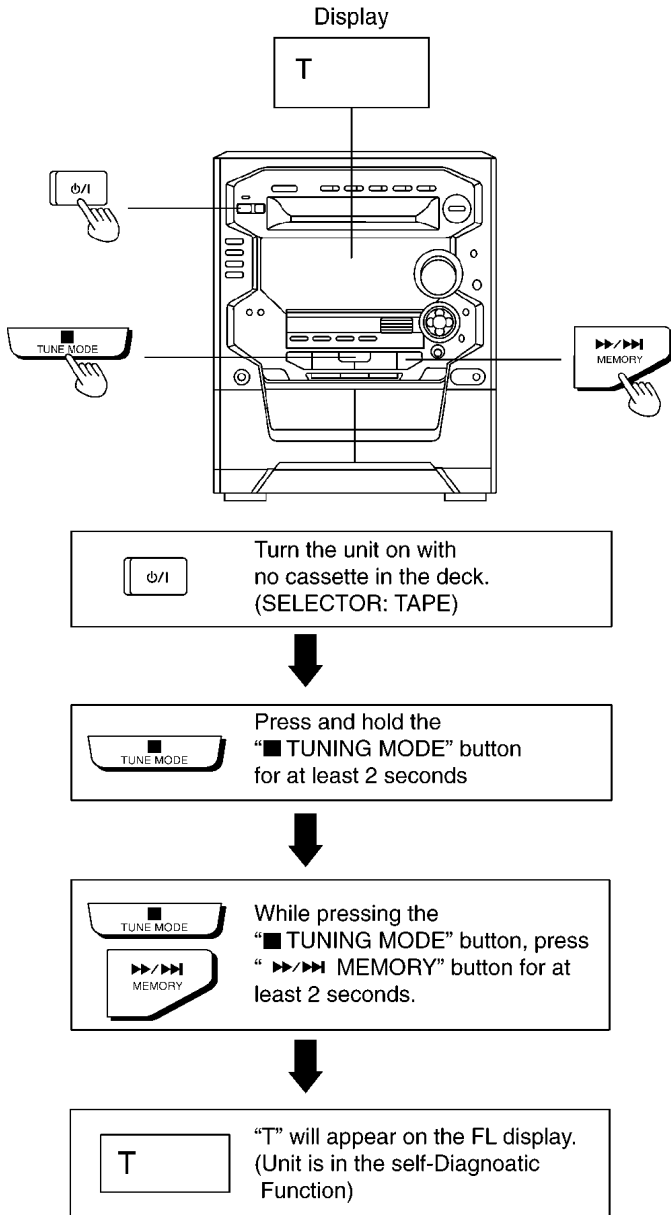
Fig. 3

# 10 Self-Diagnostic Display Function

## ●Self-Diagnostic display

This unit is equipped with a self-diagnostic display function which, if a problem occurs, will display an error code corresponding to the problem. Use this function when performing maintenance on the unit.

## ●How to set the Self-Diagnostic Function



## ●Cassette Mechanism Test

(For error code H01, H02, H03, F01, F02)

1. Press "TAPE, DECK 1/2" to select Deck 2.
2. Load a cassette tape with the erasure prevention tab removed from the left side only and close the cassette holder.
3. Press "MEMORY" button. (FAST FORWARD shall be executed for 2 seconds, after which it will STOP)
4. Load a cassette tape with the erasure prevention tab removed from the right side only and close the cassette holder.
5. Press "FM MODE/BP" button. (REWIND shall be executed for 2 seconds, after which it will STOP)
6. Load a pre-recorded tape with both recording tabs intact and close the cassette holder.
7. Press "TUNE/TIME ADSJ ^" button.
8. Press "● REC/STOP" button. (Tape will not move)
9. Press "■ TUNE MODE" button to indicate Error Code. (Error Code is displayed for DECK1 when DECK selector is switched to DECK1 and display for DECK2 when it is switched to DECK2)
10. Press "TAPE, DECK1/2" button to select DECK1.
11. Repeat step 2 to 9 to test DECK1. (Tape Deck1 will not check H02 because of no recording function)

## ●CD Mechanism Test

(F15, F16, F17, F26, F27, F28, F29, H15)

1. Press "CD" button.
2. Press "CD Manager" button.
3. Press "■ /TUNE MODE" button to indicate Error Code.

## ●To clear all Error Code

1. Press "■ /TUNE MODE" button
2. FL will display "CLEAR" for 1 second and change to "T".

## ●How to cancel Self-Diagnostic Function

1. Press "⏻" button OFF.

## ●Power Amplifier Failure (F61)

1. When power amplifier fail, F61 will be displayed automatically.



# 11 Description of Error Code

## 11.1. Error Detection for Cassette Mechanism block

No.	Error	Error Display	Problem Condition
1	MODE SW detection error	H01	Faulty operation of cassette mechanism. Faulty contact or short-circuit of mechanism mode switch (S951, S971)
2	REC INH SW detection error	H02	Recording not possible. Faulty contact or short-circuit of REC INH switch (S974, S975)
3	HALF SW detection error	H03	Playback can not perform. Faulty contact or short-circuit of HALF switch (S952, S972)
4	Reel Pulse detection error	F01	The tape advances slightly and then stops. Faulty reel pulse, faulty hole detect IC (IC951, IC971)
5	TPS abnormal	F02	Cassette deck will not perform TPS function. Faulty playback EQ/recording amplifier IC (IC1101)

## 11.2. Error Detection for CD/Changer block

No.	Error	Error Display	Problem Condition
1	REST SW detection error	F15	CD dose not function. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time (about 8 seconds)
2	CD tray opens automatically	F16	CLAMP switch (S4) NG (Check & Replace)
3	Does not startup when "TUNE/TIME ADJ^" button is pressed	F17	BOTTOM switch (S5) NG (Check & Replace)
4	Transmission error between CD servo LSI and micon	F26	CD does not function. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.
5	Startup fails even when you insert CD or the selected disc tray does not open	F27	Tray 1 detect switch or Tray 2 detect switch NG (Check & Replace)
6	Cannot insert CD	F28	Tray 1 detect switch NG (Check & Replace)
7	Cannot eject CD	F29	Check if Disc is stuck. Tray 2 detect switch NG (Confirm & Replace)
8	CD Tray closes	H15	CD disc tray detect switch NG (S3) (Check & Replace)

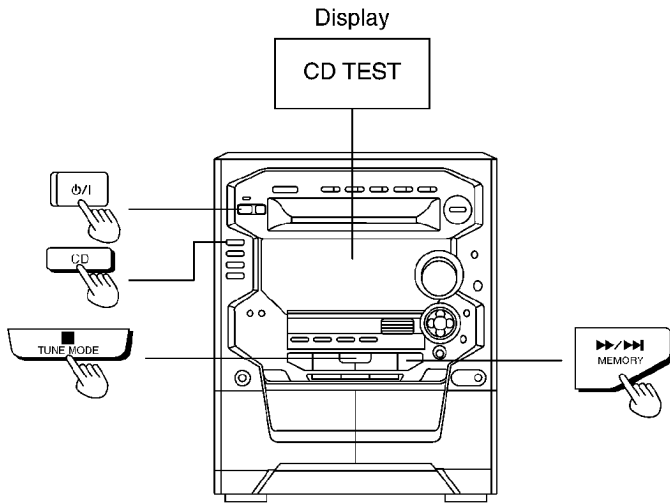
## 11.3. Error Detection for Cassette Mechanism block

No.	Error	Error Display	Problem Condition
1	POWER AMP output abnormal	F61	When POWER is switch on, power become off automatically. During normal operation, if DC DET become L, PCNT shall become L and the error display on the left shall be displayed (IC500)

## 12 CD Test Mode Function

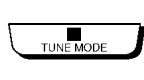

This CD test mode is provided to check CD unit without connecting to changer loading mechanism. This mode shall operate CD PLAY with CD unit being connected only and CD Automatic Alignment result is shown on FL display.

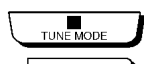


### ●How to set CD test mode

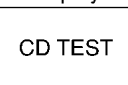


Prepare and set up the CD unit  
Check condition (Refer to “checking for the CD servo P.C.B.”)

 Press CD button

 Press and hold the “ TUNE MODE” button for at least 2 seconds

 While pressing the “ TUNE MODE” button, press “ MEMORY” button for at least 2 seconds.

Display  
 “CD TEST” will appear on the FL display.  
(Unit is in the Self-Diagnostic Function)

### ●CD Automatic Alignment result indication

Under CD test mode, pressing the numeric key '0' on the remote controller will display the auto adjustment result. FLOCK, TLOCK and CLVS status shall be shown as below.

[ \_ \_ 0 0 0 0 \_ \_ ] .....FL shall display as left if the Result is OK

↑ Self Adjustment result  
CLVS (1 = OK, 0 = NG)

↑ TLOCK (1 = NG, 0 = OK)

↑ FLOCK (1 = NG, 0 = OK)

# 13 Measurement and Adjustments

## 13.1. Tuner Section

### 13.1.1. Measuring Instruments and Special Tools

- AM signal generator (AM-SG)
- EVM-AC (AC Electronic voltmeter)
- EVM-DC (DC Electronic voltmeter)
- Oscilloscope
- Choke coil (100μH)
- AM loop antenna

**Note:**

- Trimmer will be instability that once you tighten, please adjust with tighten slowly from loosened condition.
- Adjust OSC coil and IFT with nonmetal driver.

### 13.1.2. AM IF Adjustment

1. Connect the instrument as shown in Fig.1.
2. Set the unit to AM mode.
3. Apply signal sa shown in Fig.1 from AM-SG.
4. Adjust **Z102** so that the output frequency is maximized in Fig.2.

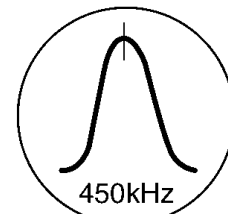
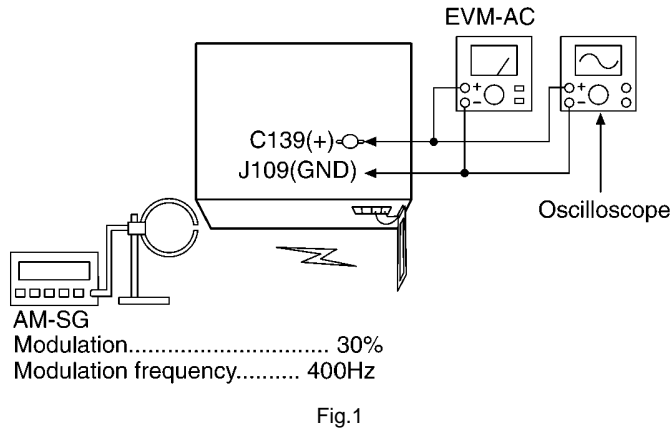
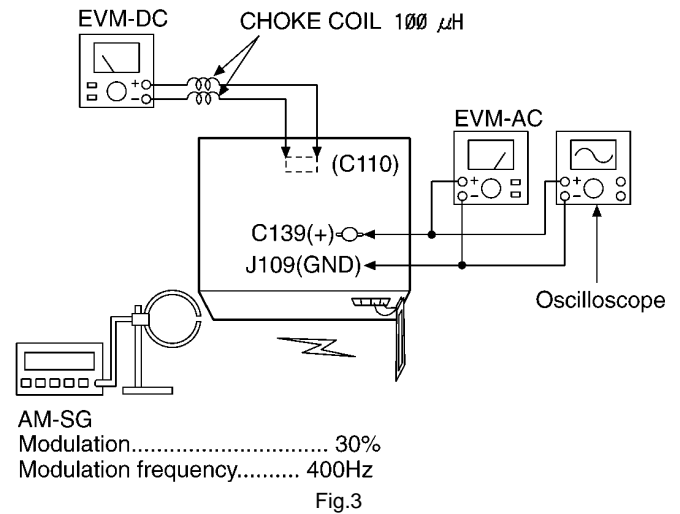


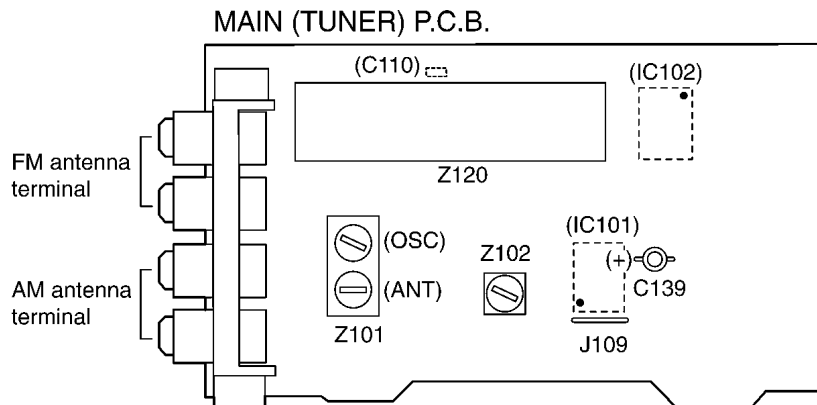
Fig.2

### 13.1.3. AM RF Adjustment

1. Connect the instrument as shown in Fig.3.
2. Set the unit to AM mode.
3. Set AM-SG to 522kHz.
4. Receive 522kHz in the unit.
5. Adjust **Z101 (OSC)** so that the EVM-AC is maximized.
6. Set AM-SG to 603kHz.
7. Receive 603kHz in the unit.
8. Adjust **Z101 (ANT)** so that the EVM-AC is maximized.
9. Set AM-SG to 522kHz.
10. Receive 522kHz in the unit.
11. Adjust **Z101 (OSC)** so that the EVM-DC value is within 0.5±1.4V.



### 13.1.4. Adjustment point



## 13.2. Cassette Deck Section

### 13.2.1. Measuring Instruments and Special Tools

- Digital frequency counter
- EVM-AC (AC Electronic voltmeter)
- Test tape
  - QZZCFM : Head azimuth adjustment
  - QZZCWAT : Tape speed adjustment
  - QZZCRA : Normal reference blank tape
  - QZZCRX : CrO<sub>2</sub> tape

### 13.2.2. Head Azimuth Adjustment (Deck 1/2)

#### Caution:

- Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) simultaneously when readjusting the head azimuth. (Shown in Fig.5). Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment cannot be done because of the screw-locking bond adhered to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig.6)

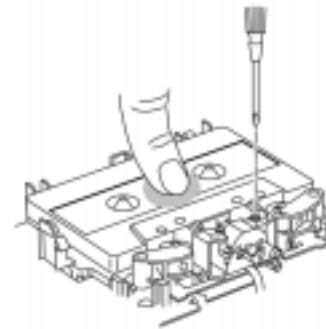


Fig.6

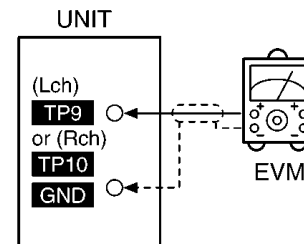


Fig.7

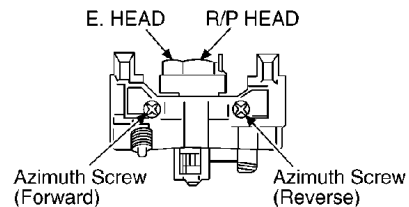


Fig.8

1. Connect the measuring instrument as shown in Fig.7.
2. Playback the azimuth adjustment portion (8kHz, -20dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/R-ch are maximized. (Refer to Fig.8)  
Make sure that the difference in the peak level between the left and right channels does not exceed 0.5dB.
3. Perform the same adjustment in reverse playback mode.  
**Checking of the level difference forward and reverse directions**
4. Playback the playback gain adjustment portion (315Hz, 0dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5dB.
5. After the adjustment, apply screwlock to the azimuth adjusting screw.

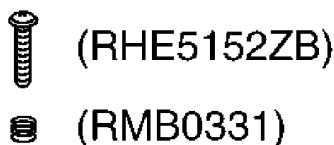


Fig.5

### 13.2.3. Tape Speed Adjustment (Deck 1/2)

1. Insert the test tape (QZZCWAT) to Deck 2 and playback (FWD side) the middle portion of it.
2. Adjust motor VR (Deck 2) for the output value shown below.  
**Adjustment target : 2940 - 3060Hz (NORMAL speed)**
3. After alignment, assure that the output frequency of the DECK2 REV and DECK1 FWD are within  $\pm 45\text{Hz}$  and  $\pm 60\text{Hz}$  respectively of the value of the output frequency of DECK2 FWD.

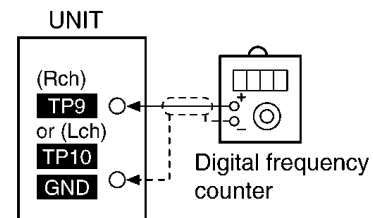


Fig.9

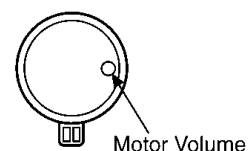


Fig.10

### 13.2.4. Bias OSC Frequency Adjustment (Deck 2)

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK2 and set the unit to "REC" mode (use "● REC/STOP" key).
3. Adjust L1201 so that the output frequency is within the standard value.

**Standard value :  $97\pm 8\text{kHz}$**

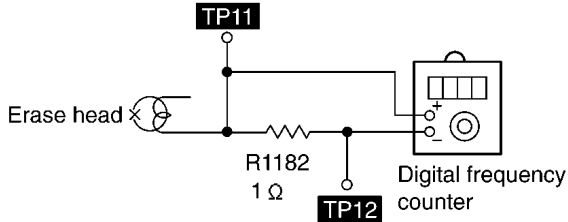


Fig.11

### 13.2.5. Bias Voltage Check

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK2 and set the unit to "REC" mode (use "● REC/STOP" key).
3. Measure and make sure that the output is within the standard value.
4. Insert the CrO2 tape (QZZCRX).
5. Repeat step 2 and 3.

**Standard value (Normal) :  $14\pm 4\text{mV}$**

**Standard value (CrO2) :  $17\pm 5\text{mV}$**

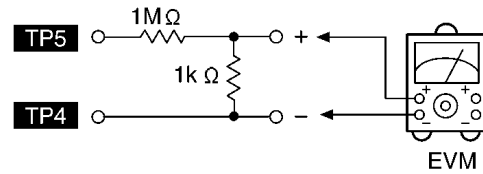


Fig.12

### 13.2.6. Erase Voltage Check

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK2 and set the unit to "REC" mode (use "● REC/STOP" key).
3. Measure and make sure that the output is within the standard value.
4. Insert the CrO2 tape (QZZCRX).
5. Repeat step 2 and 3.

**Standard value (Normal) : more than 80mV**

**Standard value (CrO2) : more than 90mV**

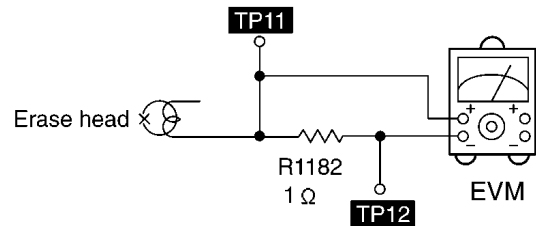


Fig.13

### 13.2.7. Adjustment Point

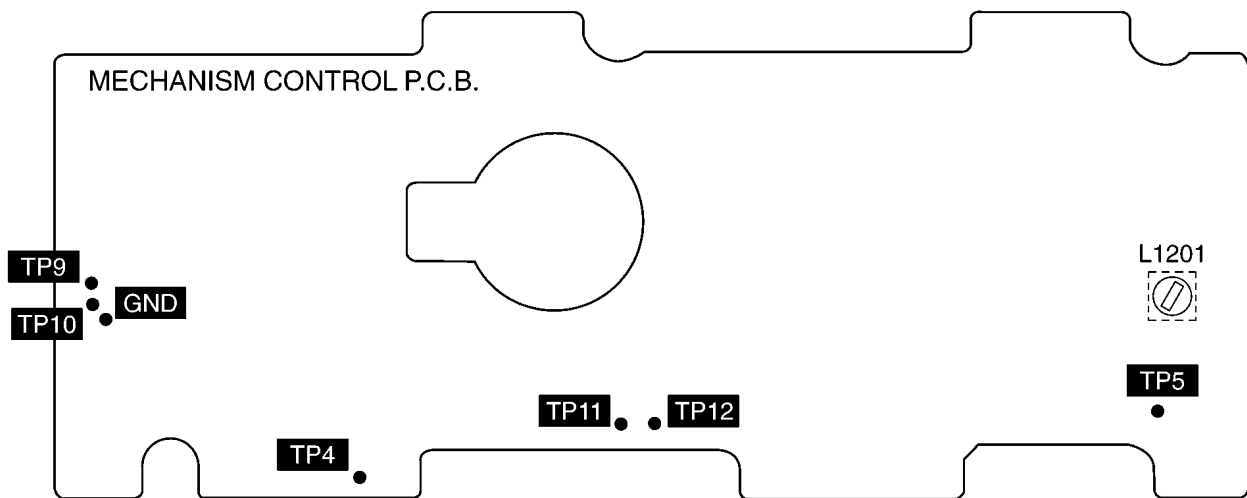
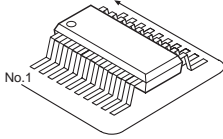
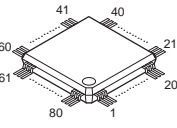
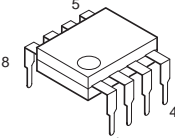
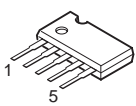
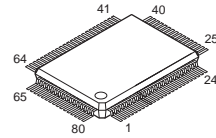
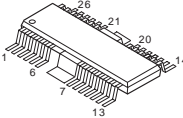
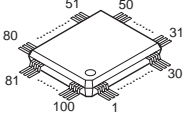
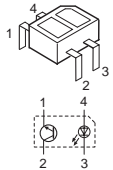
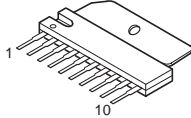
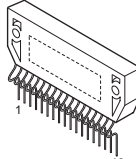
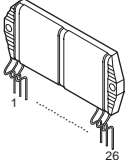
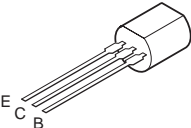
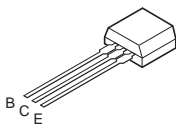
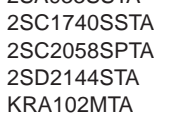
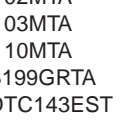
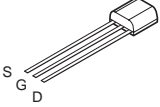

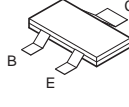
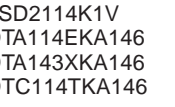
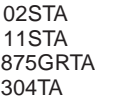
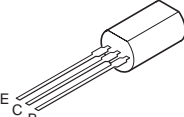
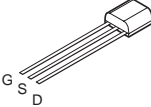
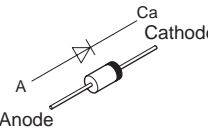
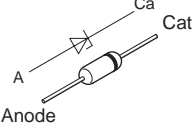
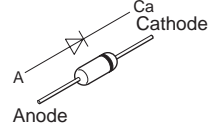
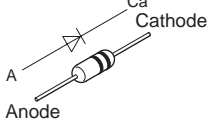
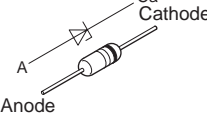
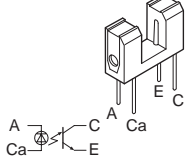
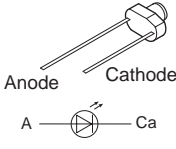
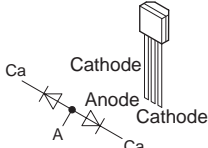
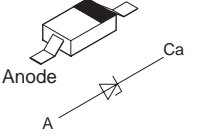
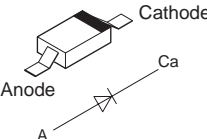
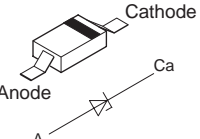
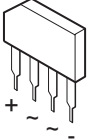
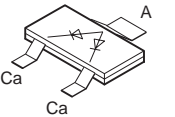
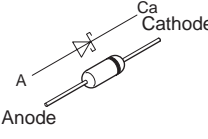
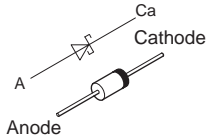
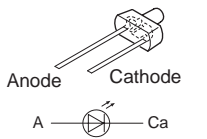


Fig.14

# 14 Illustration of ICs, Transistors and Diodes

 <p>No.1</p>	<table border="1"> <tr><td>AN8839NSBE2</td><td>28PIN</td></tr> <tr><td>BU2090AF-E2</td><td>16PIN</td></tr> <tr><td>LA1833NMNTLM</td><td>24PIN</td></tr> <tr><td>LC72131MDTRM</td><td>20PIN</td></tr> <tr><td>M51167AFP-TB</td><td>36PIN</td></tr> <tr><td>M62456FPE1</td><td>24PIN</td></tr> <tr><td>M62457FPE1</td><td>16PIN</td></tr> </table>	AN8839NSBE2	28PIN	BU2090AF-E2	16PIN	LA1833NMNTLM	24PIN	LC72131MDTRM	20PIN	M51167AFP-TB	36PIN	M62456FPE1	24PIN	M62457FPE1	16PIN	<p>MN662790RSC</p> 	<p>M5218AP</p> 	<p>BA7755A</p> 
AN8839NSBE2	28PIN																	
BU2090AF-E2	16PIN																	
LA1833NMNTLM	24PIN																	
LC72131MDTRM	20PIN																	
M51167AFP-TB	36PIN																	
M62456FPE1	24PIN																	
M62457FPE1	16PIN																	
<p>M62433AFP</p> 	<p>AN8739SBE2</p> 	<p>M38199MF227</p> 	<p>ON2180RLC1</p> 	<p>TA7291P</p> 	<p>STK470-040</p> 													
<p>RSN311W64A-P</p> 	<p>2SB621ARSTA 2SB621RTA 2SD1302STA 2SD965RTA KTA12710YTA</p> 		<p>2SA933SSTA 2SC1740SSTA 2SC2058SPTA 2SD2144STA KRA102MTA</p> 	<p>KRC102MTA KRC103MTA KRC110MTA KTC3199GRTA RVTDTTC143EST</p> 														
<p>2SJ498CDTA</p> 	<p>2SB1436R 2SC2002KTA 2SC2786MTA 2SC2787FL1TA</p> 		<p>2SA1037AKSTX 2SC2412KT96R 2SD2114K1V DTA114EKA146 DTA143XKA146 DTC114TKA146</p> 	<p>DTC144TKA146 KRA102STA KRC102STA DTA114EKA146 KTC3875GRTA KTD1304TA</p> 														
<p>2SC3940AQSTA</p> 	<p>2SK544F-AC</p> 	<p>1D3E RL1N4003S-P</p> 	<p>MTZJ10BTA MTZJ12BTA MTZJ15CCTA MTZJ16BTA MTZJ30BTA MTZJ4R7BTA MTZJ7R5ATA</p> 	<p>MA165TA RVD1SS133TA</p> 														
<p>1SS291TA MA700ATA</p> 	<p>MA4020LTA</p> 	<p>GP1S94</p> 	<p>SLI325DCT31 SLI325URCT31 SLR325MCT31W</p> 	<p>SVC211SPA-AL</p> 														
<p>UDZSTE175R1B</p> 	<p>MA111TX 1SS355TE17</p> 	<p>MA8036HTX MA8047MTX</p> 	<p>KBP152G4R5</p> 	<p>DAP202KT146</p> 	<p>MA723TA</p> 													
<p>RK306LFU1</p> 	<p>LNJ301MPUJAD</p> 																	

# 15 Schematic Diagram

## 15.1. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

### Notes:

- S1 : Tray position 1 detect switch in OFF position
- S2 : Tray position 2 detect switch in OFF position
- S3 : Tray open detect switch in OFF position
- S4 : Clump switch in OFF position
- S5 : Bottom switch on OFF position
- S501 : Voltage select switch (VOLT ADJ)
- S600 : Sound control jog switch (SOUND CONTROL JOG)
- S601 : TRI-AMP control switch (LOW)
- S602 : Auxiliary input switch (AUX)
- S603 : Deck1 open switch ( ▲ DECK1 OPEN)
- S604 : CD management switch (CD MANAGER)
- S605 : Tuner/band select switch (TUNER/BAND)
- S606 : Tape edit switch (TAPE EDIT)
- S607 : Disc5 direct open/close switch ( ▲ )
- S608 : CD switch (CD)
- S609 : Recording start/stop switch ( ● REC/STOP)
- S610 : Disc direct play switch (CD5)
- S611 : Tape/deck select switch (TAPE/DECK1/2)
- S612 : Reverse mode select switch (REV MODE)
- S613 : Disc4 direct open/close switch ( ▲ )
- S614 : EQ down switch ( ▼ )
- S615 : Super woofer switch (S. WOOFER)
- S616 : Disc2 open switch ( ▲ DECK2 OPEN)
- S617 : Disc direct play switch (CD4)
- S618 : EQ left switch ( ◀ )
- S619 : Display select/demonstration mode switch (-DISPLAY—DEMO)
- S620 : Playback, tuning, time adjust switch ( ◀ , √ TUNE/TIME ADJ)
- S621 : Play timer/record timer switch ( ⌚ PLAY/ ⌚ REC)
- S622 : EQ up switch ( ▲ )
- S623 : Disc3 direct open/close switch ( ▲ )
- S624 : Karaoke switch (KARAOKE)
- S625 : Clock/timer select switch (CLOCK/TIMER)
- S626 : EQ right switch ( ▶ )
- S627 : Disc direct play switch (CD3)
- S628 : Eco switch (MODE)
- S629 : Stop/tune mode switch ( ■ /TUNE MODE)
- S630 : Disc2 direct open/close switch ( ▲ )
- S631 : Random play switch (RANDOM)
- S632 : FF/skip, memory switch ( ▶▶/▶▶▶▶ , MEMORY)
- S633 : Disc2 direct play switch (CD2)
- S634 : Playback/pause, tuning, time adjust switch ( ▶/||| , TUNE/TIME ADJ ^ )
- S635 : Disc1 direct open/close switch ( ▲ )
- S636 : Disc direct play switch (CD1)
- S637 : REW/R.skip, FM mode/beat proof switch ( ◀◀/◀◀ , FM MODE/BP)
- S638 : Standby/on switch ( ⏻ /I)
- S639 : 3D AI EQ switch (3D AI EQ)
- S640 : TRI-AMP control switch (MID)
- S641 : TRI-AMP control switch (HIGH)
- S701 : Rest switch (REST)
- S951 : Deck1 mode detect switch (MODE)
- S952 : Deck1 half detect switch (HALF)
- S953 : Deck1 CrO2 tape detect switch (ATS/CrO2)
- S971 : Deck2 mode select switch (MODE)
- S972 : Deck2 half detect switch (HALF)
- S973 : Deck2 CrO2 tape detect switch (ATS/CrO2)

- S974 : Deck2 reverse side record prevention tab detect switch (R. REC. INH)
- S975 : Deck2 forward side record prevention tab detect switch (F. REC. INH)
- VR600 : Volume control (VOLUME)
- VR601 : Microphone volume control (MIC VOL)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some error in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark ..... CD STOP

( ) ..... CD playback (1kHz, L+R, 0dB)

< > ..... FM

[ ] ..... AM

(( )) ..... DECK2 playback

(《 》) ..... DECK2 record

- Important safety notice:  
Components identified by ▲ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturers specified parts shown in the parts list.

### • Caution!

- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.  
Ground the soldering iron.  
Put a conductive mat on the work table.  
Do not touch the legs of IC or LSI with the fingers directly.
- \*L10-L12 are printed coils formed on the P.C.B. and thus not found in the Replacement Parts list.

### • Voltage and signal line

→ : Positive voltage line

- - - - -> : Negative voltage line

⇨ : CD signal line

⇨ : FM signal line

⇨ : FM OSC signal line

⇨ : AM signal line

⇨ : AM OSC signal line

⇨ : Tape playback signal line

⇨ : Tape recording signal line

⇨ : Front low SP drive signal line

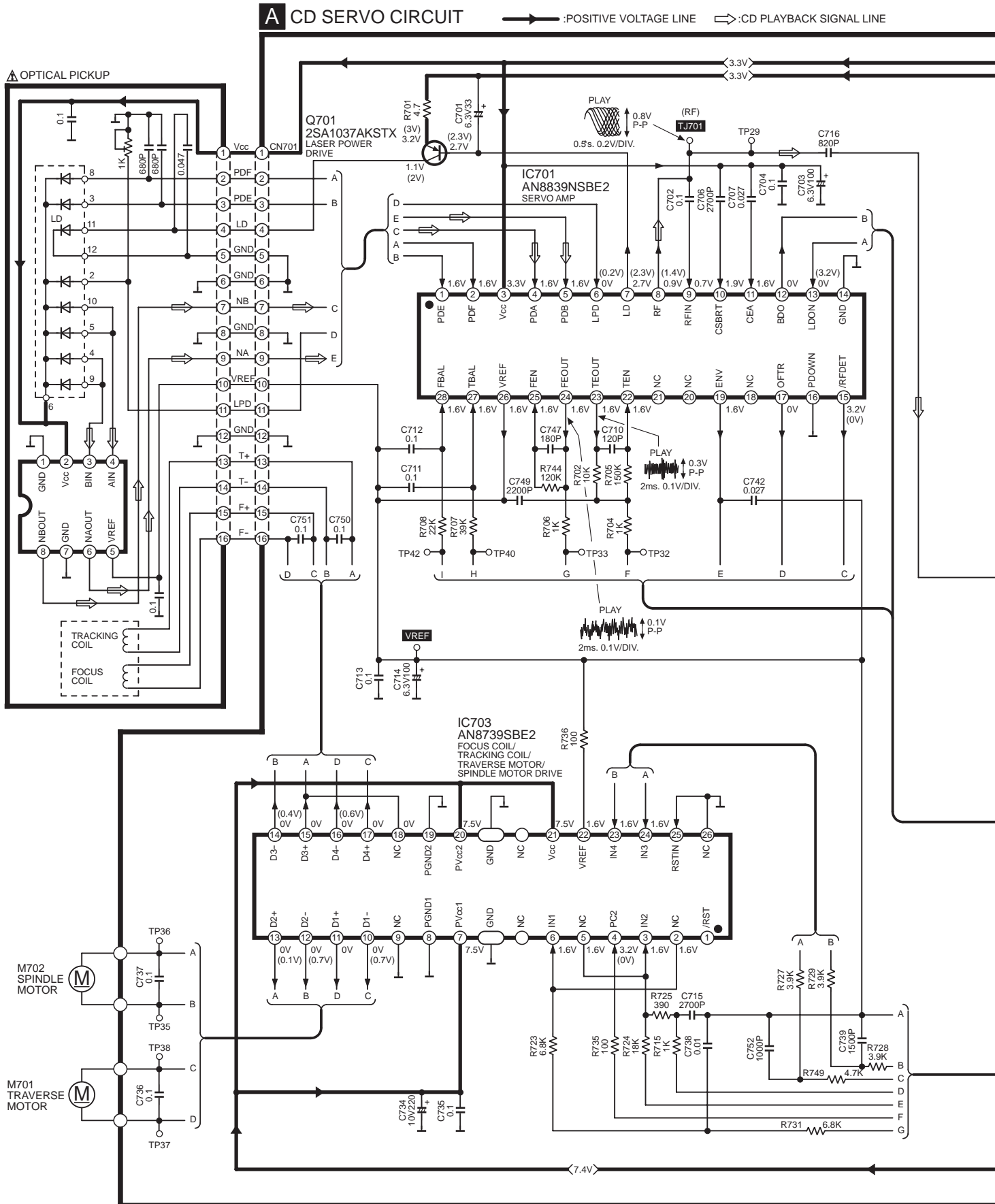
⇨ : Front mid/high SP drive signal line

⇨ : Mic signal line

# 15.2. Schematic Diagram

SCHEMATIC DIAGRAM-1

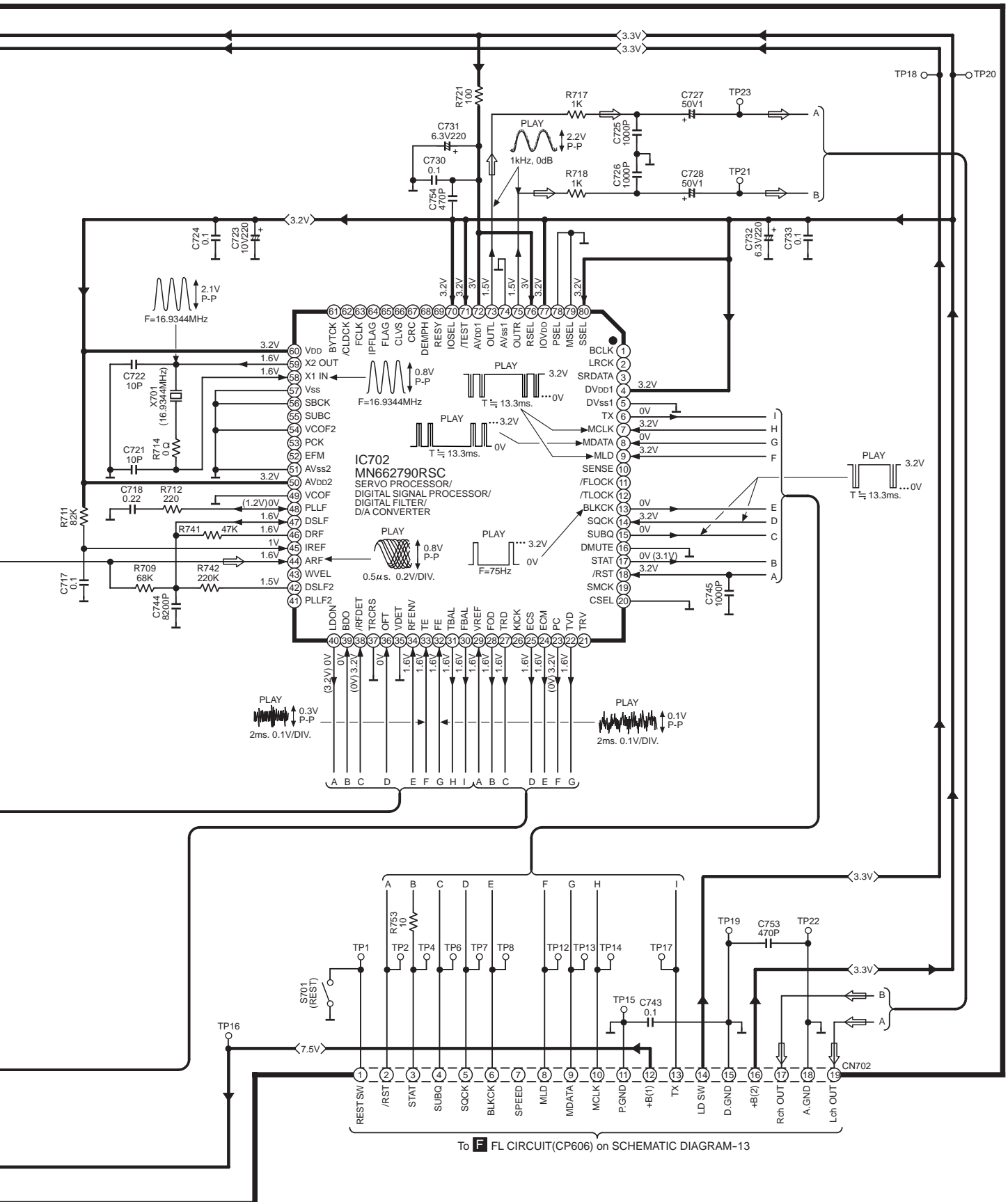
NOTE:  
The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.





SCHEMATIC DIAGRAM-2

➔ : POSITIVE VOLTAGE LINE    ⇨ : CD PLAYBACK SIGNAL LINE

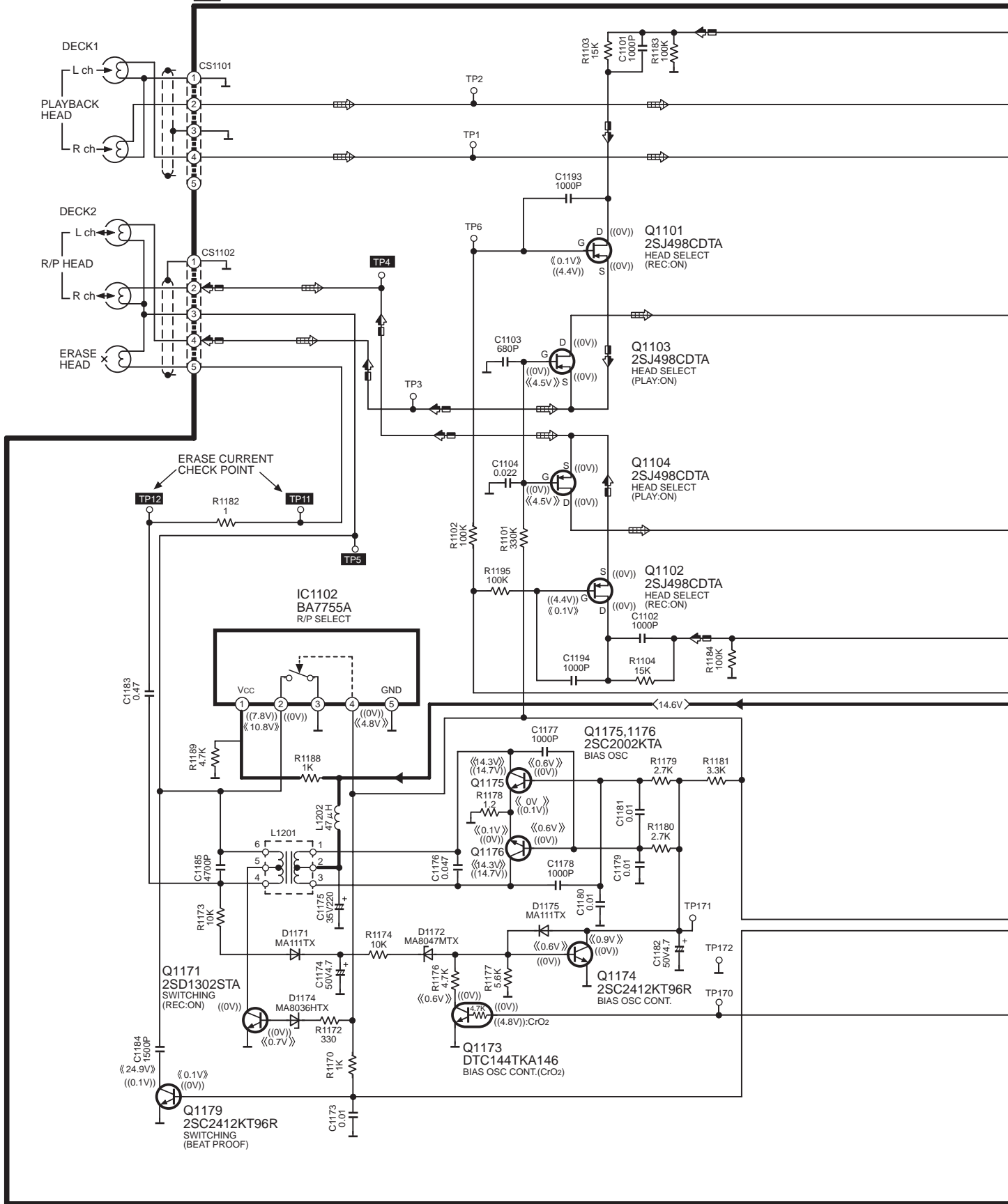


To [F] FL CIRCUIT(CP606) on SCHEMATIC DIAGRAM-13

SCHEMATIC DIAGRAM-3

B MECHANISM CONTROL CIRCUIT

→ : POSITIVE VOLTAGE LINE  
⇨ : TAPE PLAYBACK SIGNAL LINE  
⇩ : RECORDING SIGNAL LINE

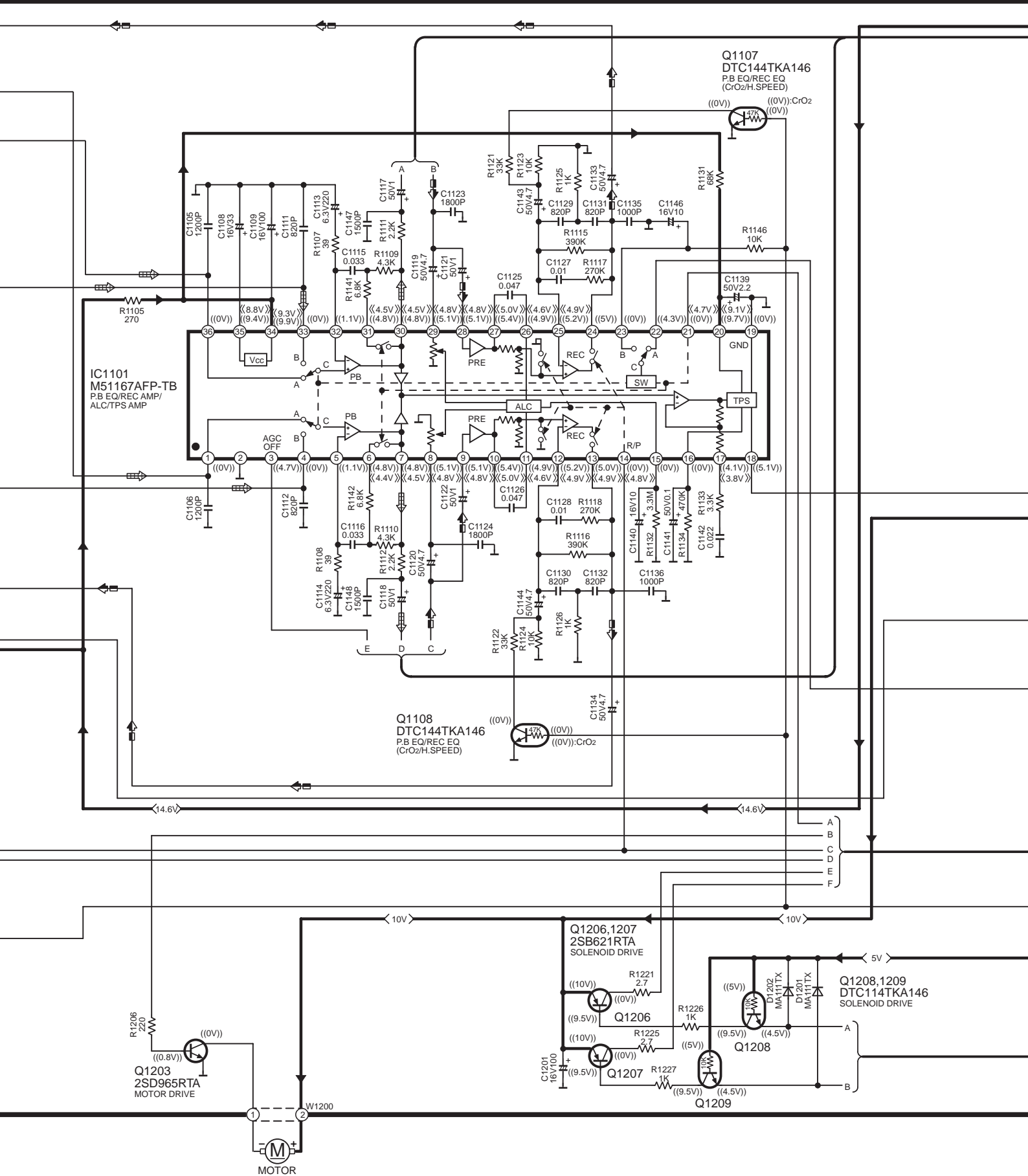


SCHEMATIC DIAGRAM-4

→ : POSITIVE VOLTAGE LINE

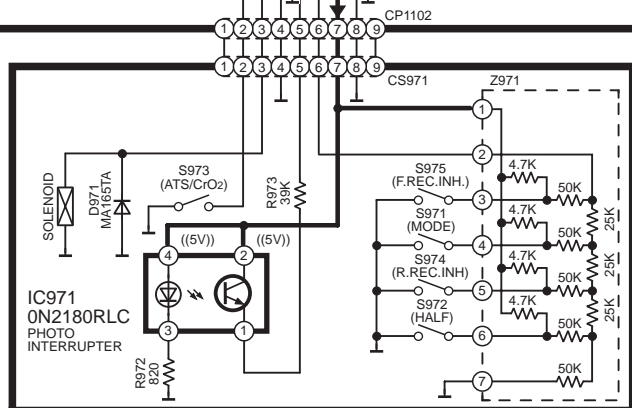
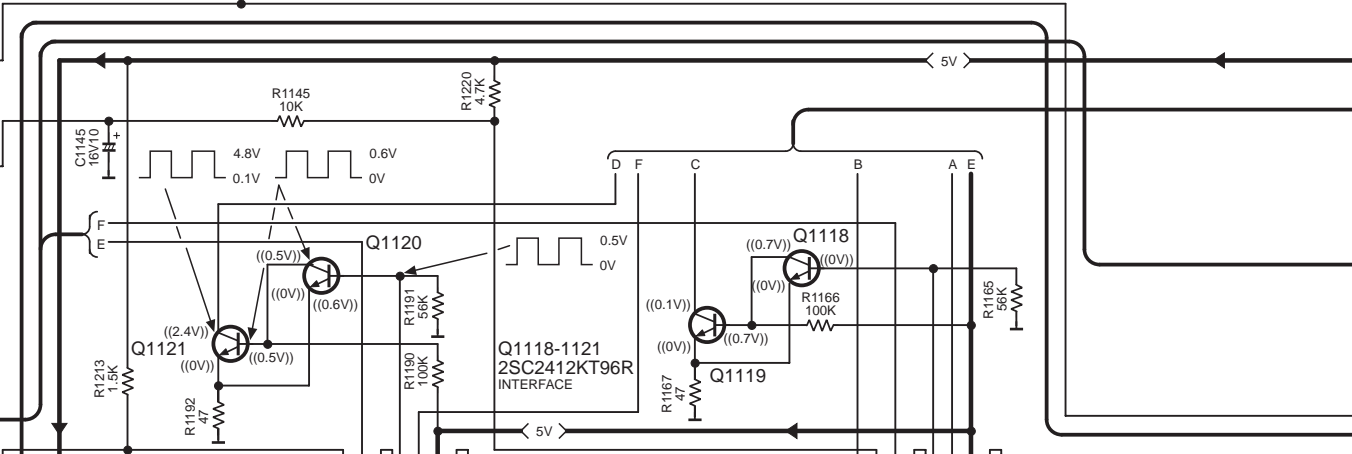
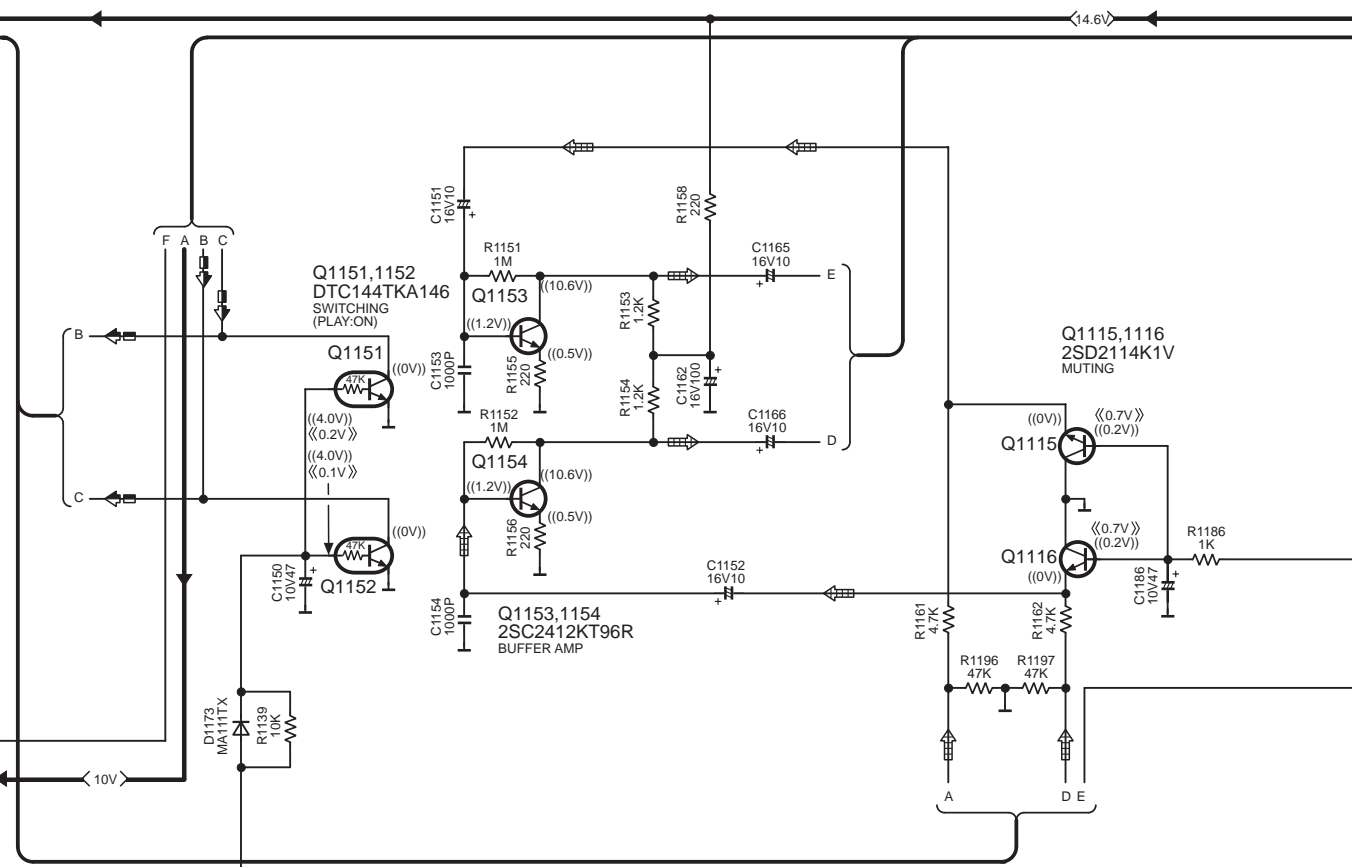
⇨ : RECORDING SIGNAL LINE

⇨ : TAPE PLAYBACK SIGNAL LINE

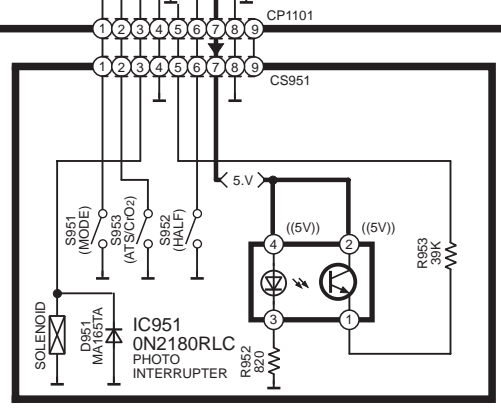


SCHEMATIC DIAGRAM-5

 : POSITIVE VOLTAGE LINE  
 : TAPE PLAYBACK SIGNAL LINE  
 : RECORDING SIGNAL LINE



**C** MECHANISM (DECK2) CIRCUIT



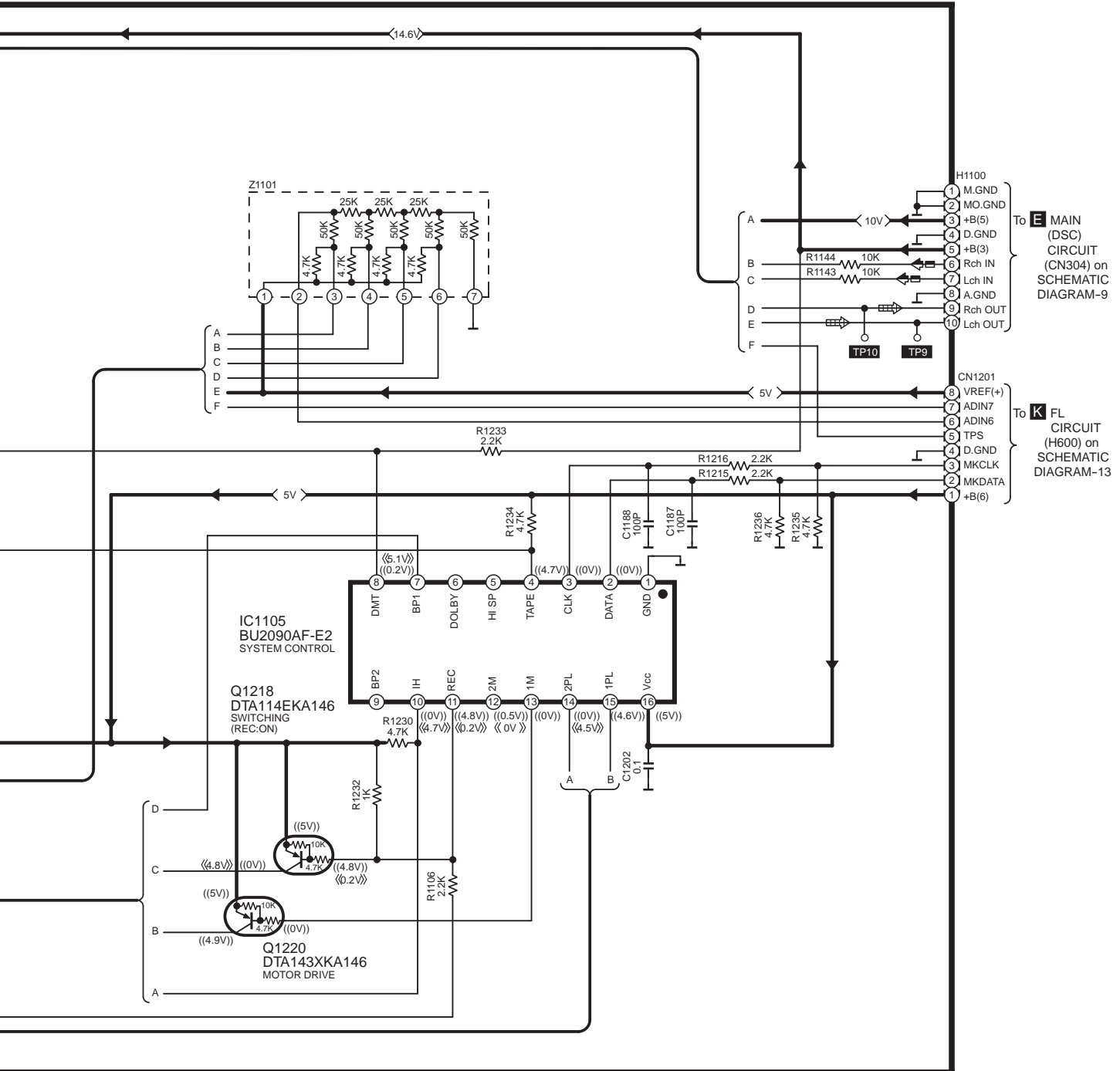
**D** MECHANISM (DECK1) CIRCUIT

SCHEMATIC DIAGRAM-6

→ : POSITIVE VOLTAGE LINE

▣ : RECORDING SIGNAL LINE

▢ : TAPE PLAYBACK SIGNAL LINE

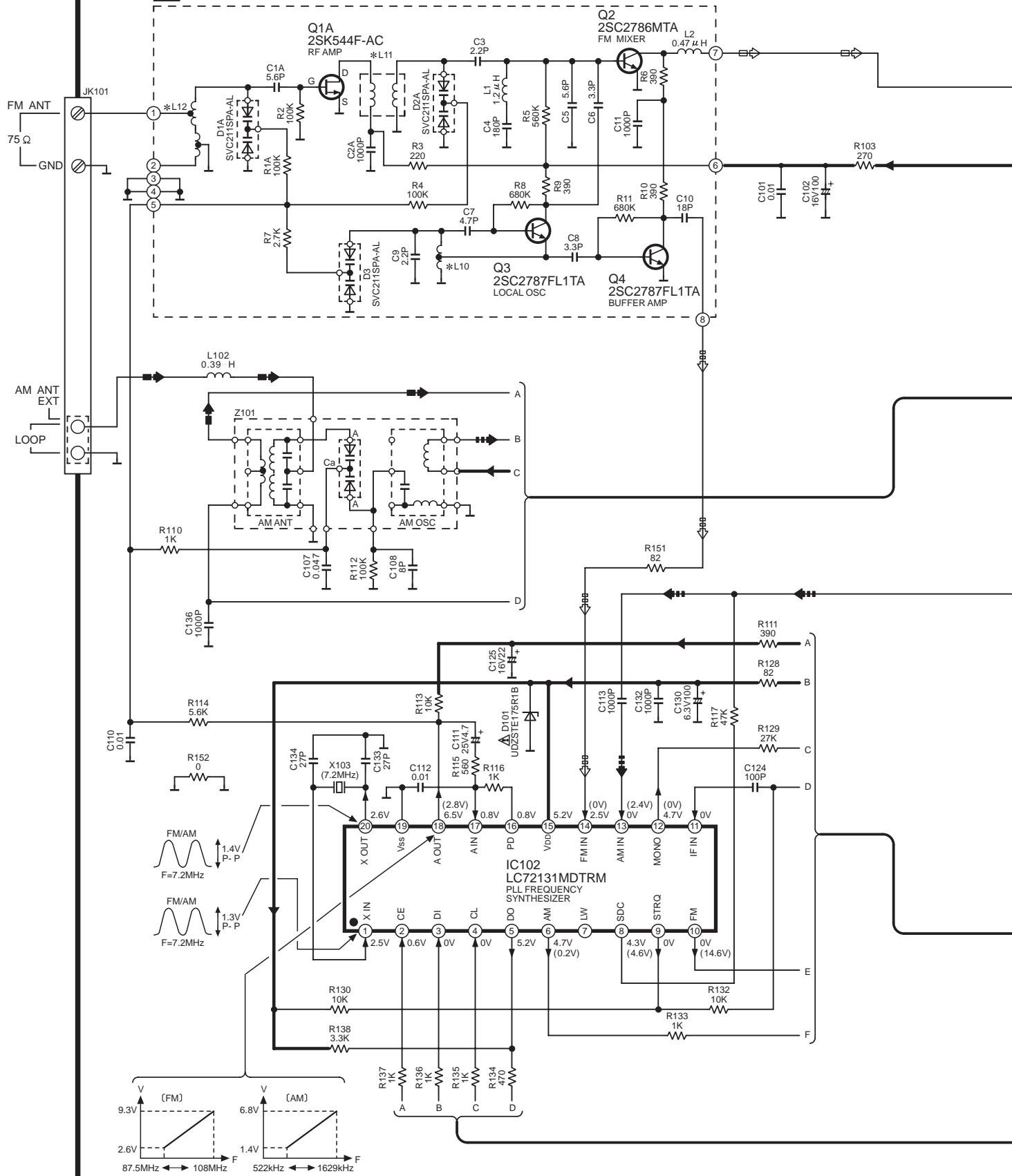


SCHEMATIC DIAGRAM-7

**E** MAIN(TUNER) CIRCUIT

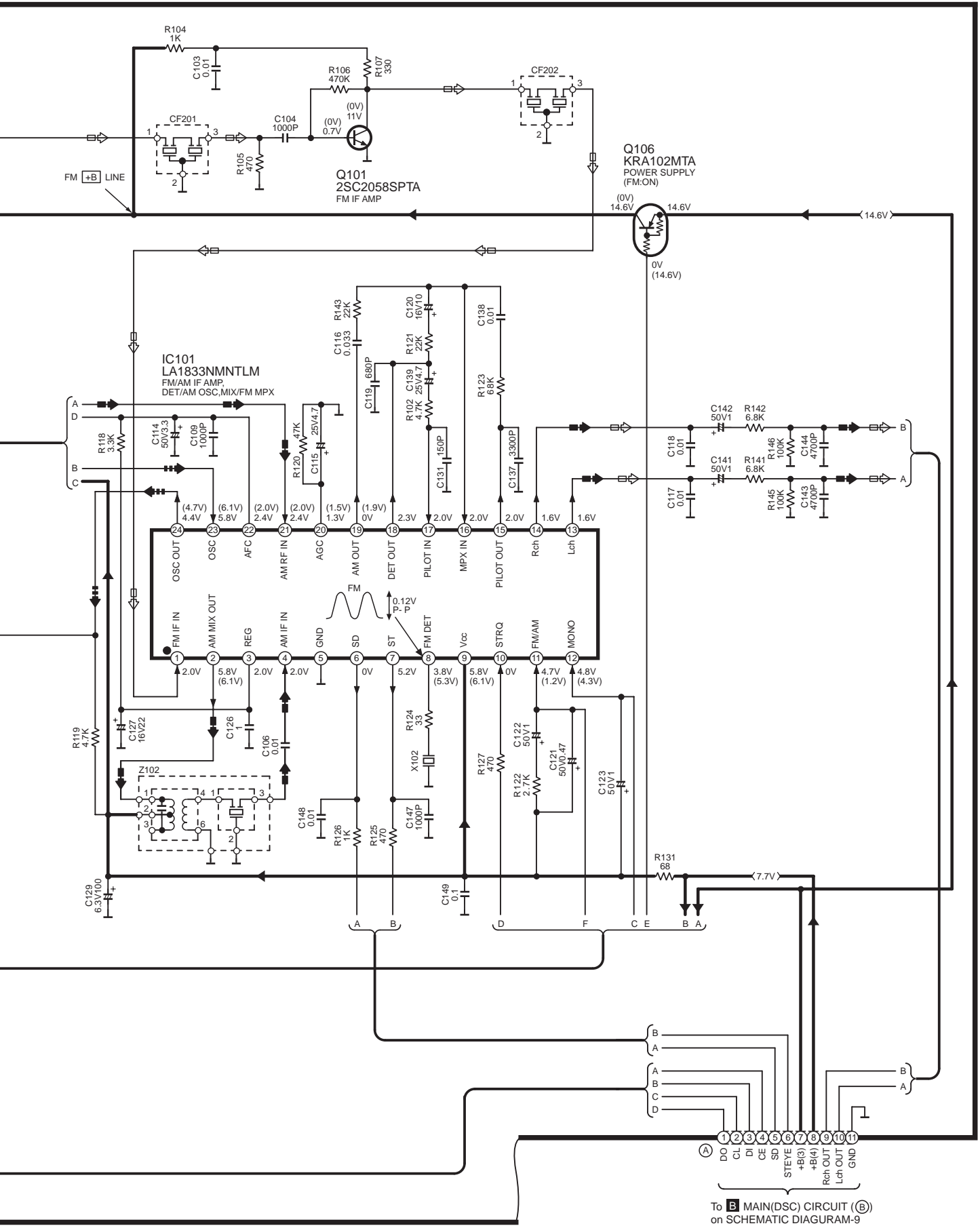
: POSITIVE VOLTAGE LINE  
 : FM SIGNAL LINE  
 : FM OSC SIGNAL LINE  
 : AM SIGNAL LINE  
 : AM OSC SIGNAL LINE

**O** FM FRONT END CIRCUIT



SCHEMATIC DIAGRAM-8

➔ : POSITIVE VOLTAGE LINE    ◻◻ : FM SIGNAL LINE    ■➔ : AM SIGNAL LINE    ■■➔ : AM OSC SIGNAL LINE

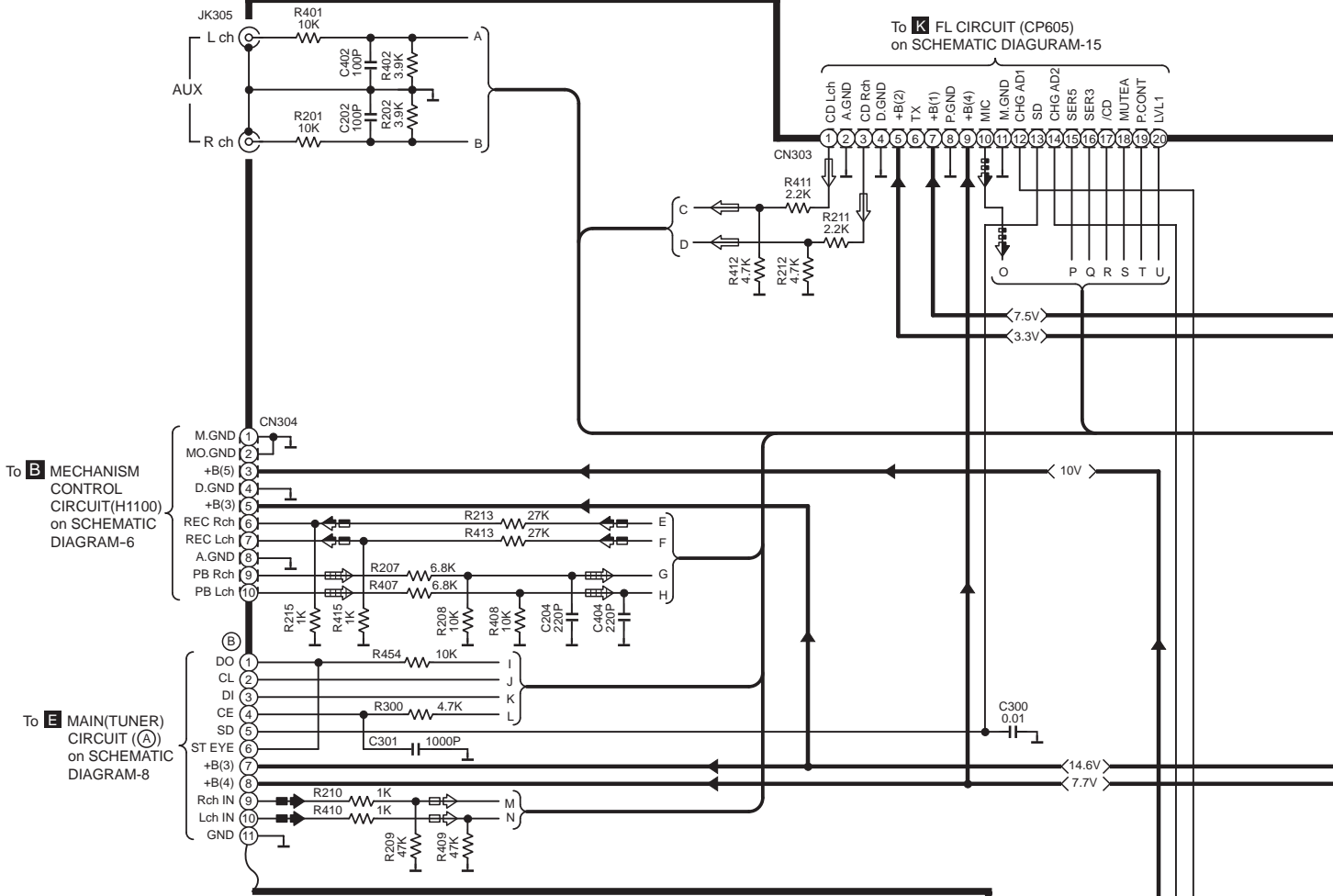


To **B** MAIN(DSC) CIRCUIT (ⓐ) on SCHEMATIC DIAGRAM-9

SCHEMATIC DIAGRAM- 9

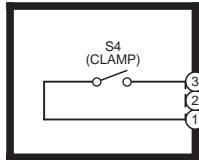
**E** MAIN(DSC) CIRCUIT

- ➔ : POSITIVE VOLTAGE LINE
- ➔ : RECORDING SIGNAL LINE
- ➔ : CD PLAYBACK SIGNAL LINE
- ⏏ : TAPE PLAYBACK SIGNAL LINE
- ⏏ : FM SIGNAL LINE
- ⏏ : MIC SIGNAL LINE
- ➔ : AM SIGNAL LINE

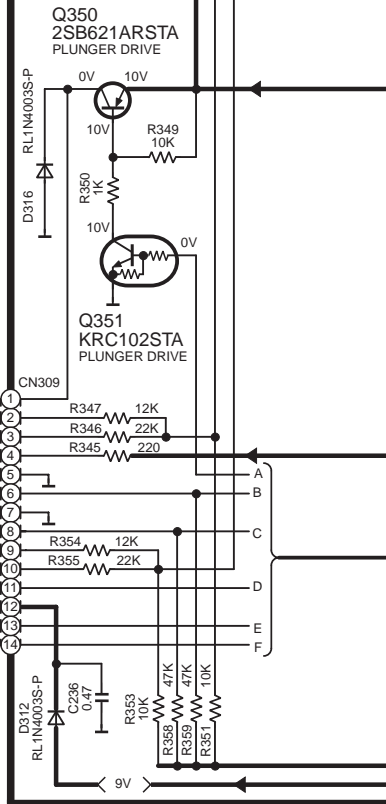
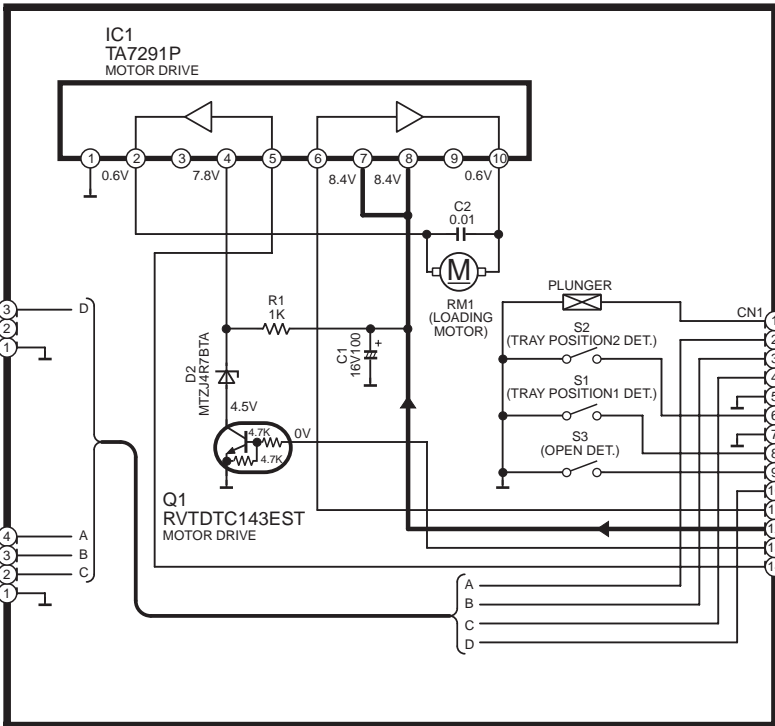
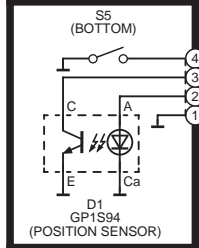


**H** MOTOR CIRCUIT

**F** CLAMP SW CIRCUIT



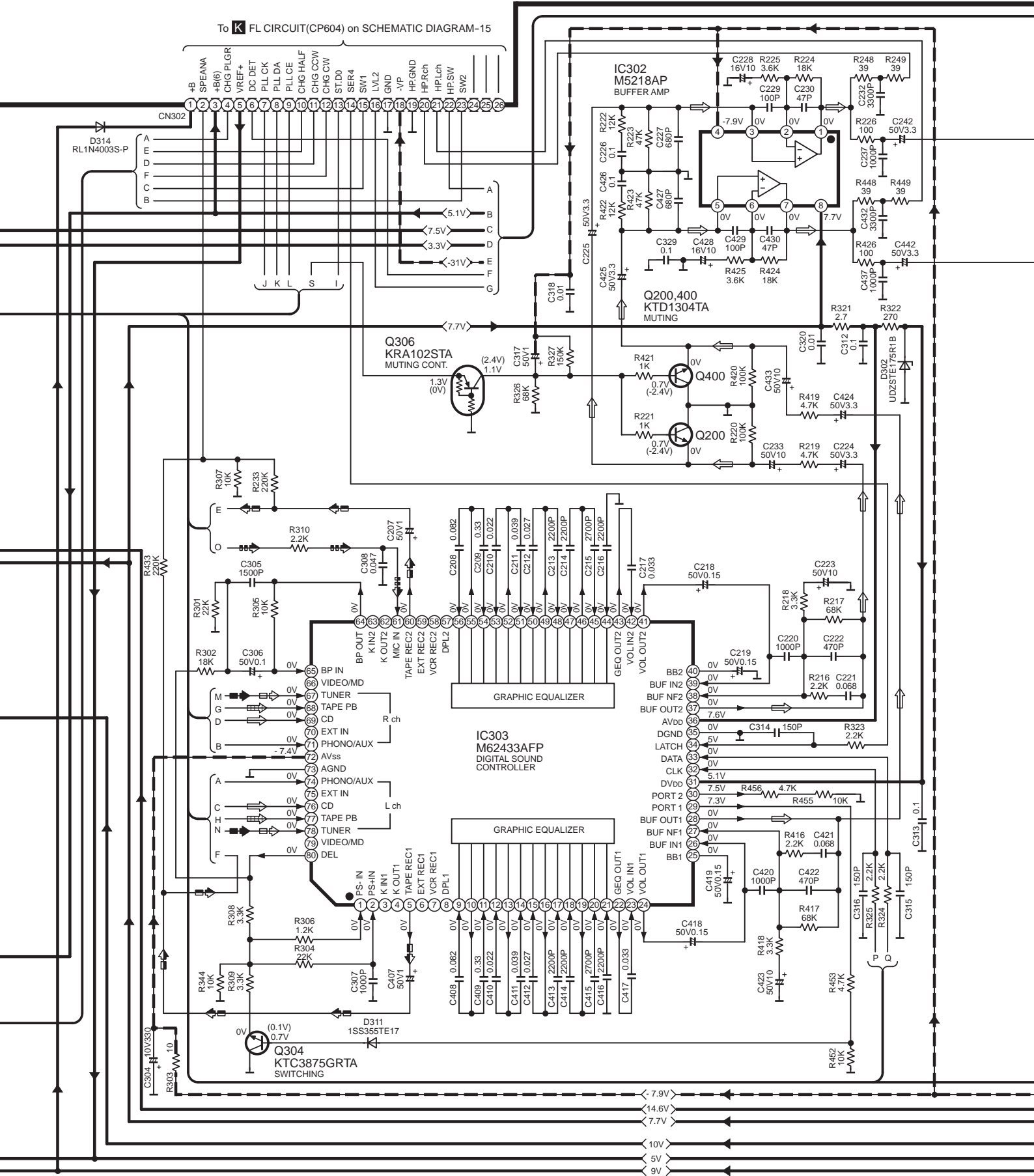
**G** BOTTOM SW CIRCUIT





SCHEMATIC DIAGRAM-10

- :NEGATIVE VOLTAGE LINE
- :POSITIVE VOLTAGE LINE
- :MIC SIGNAL LINE
- :CD SIGNAL LINE
- :RECORDING SIGNAL LINE
- :TAPE PLAYBACK SIGNAL LINE
- :FM SIGNAL LINE
- :AM SIGNAL LINE

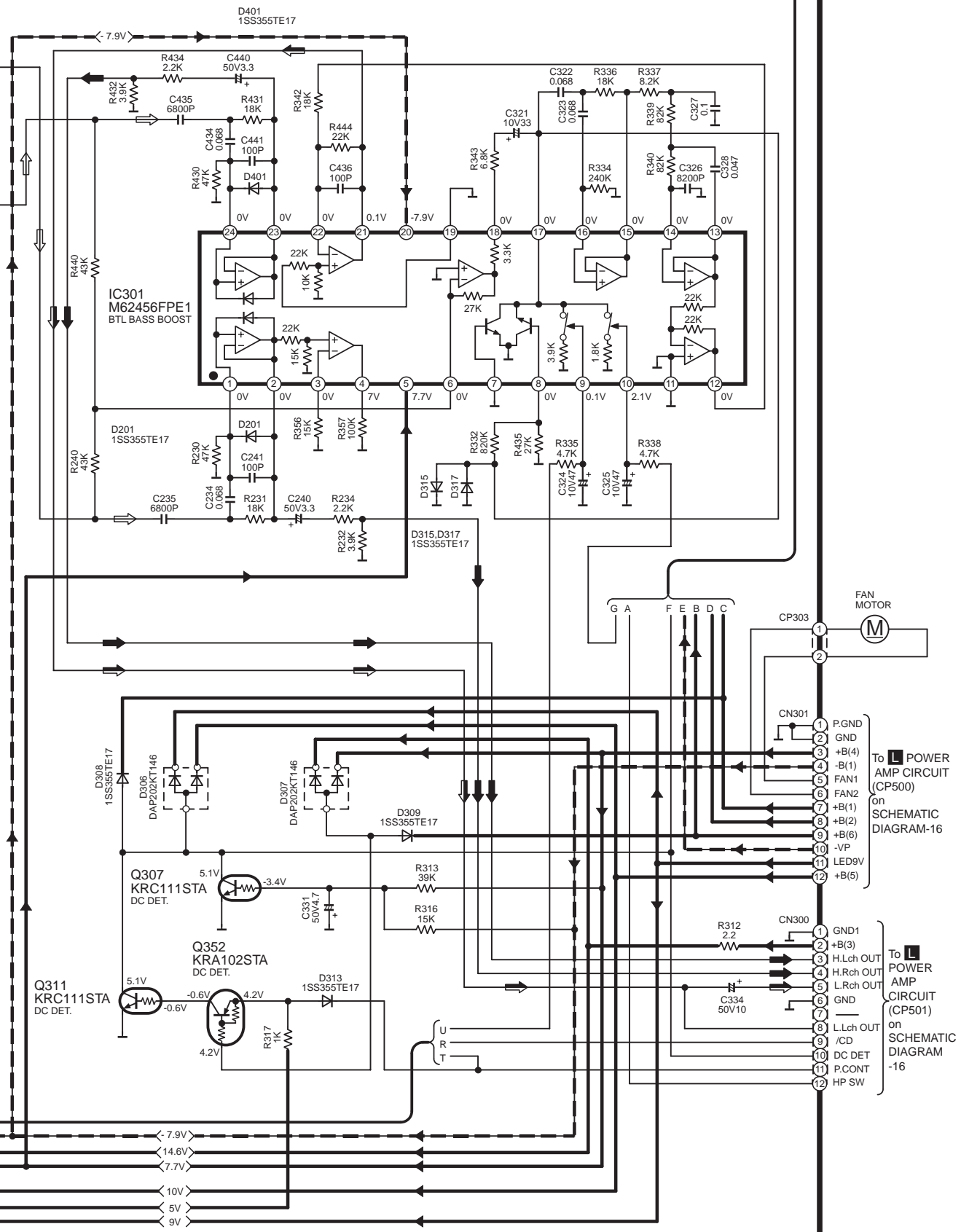


SCHEMATIC DIAGRAM-11

---:NEGATIVE VOLTAGE LINE  
 ---:POSITIVE VOLTAGE LINE

⇨:CD SIGNAL LINE

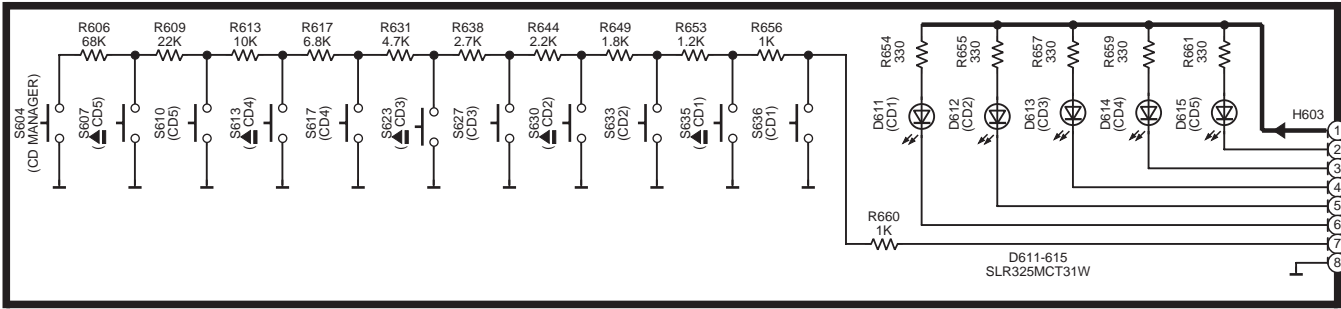
⇨:FRONT LOW SP DRIVE SIGNAL LINE  
 ⇨:FRONT MID/HIGH SP DRIVE SIGNAL LINE



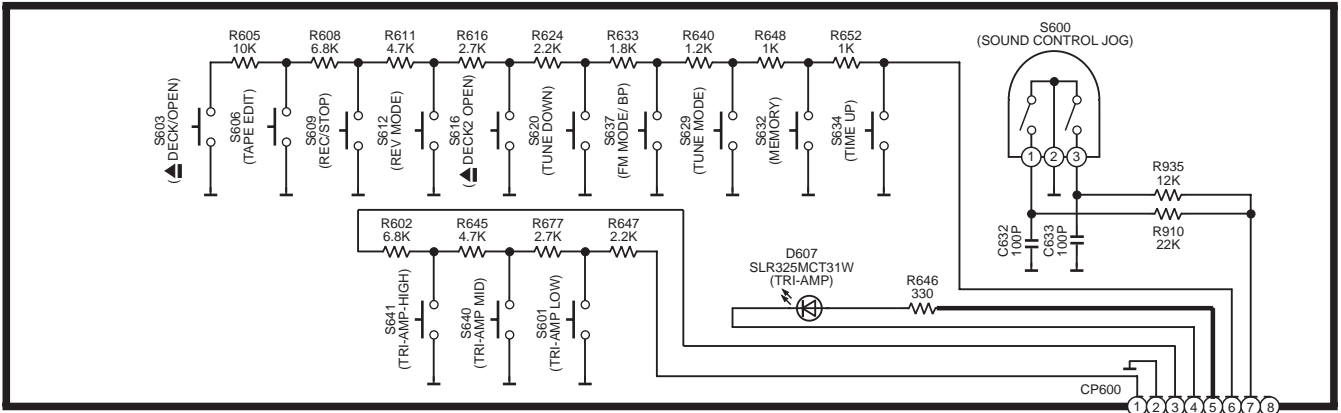
SCHEMATIC DIAGRAM-12

I OPERATION (1) CIRCUIT

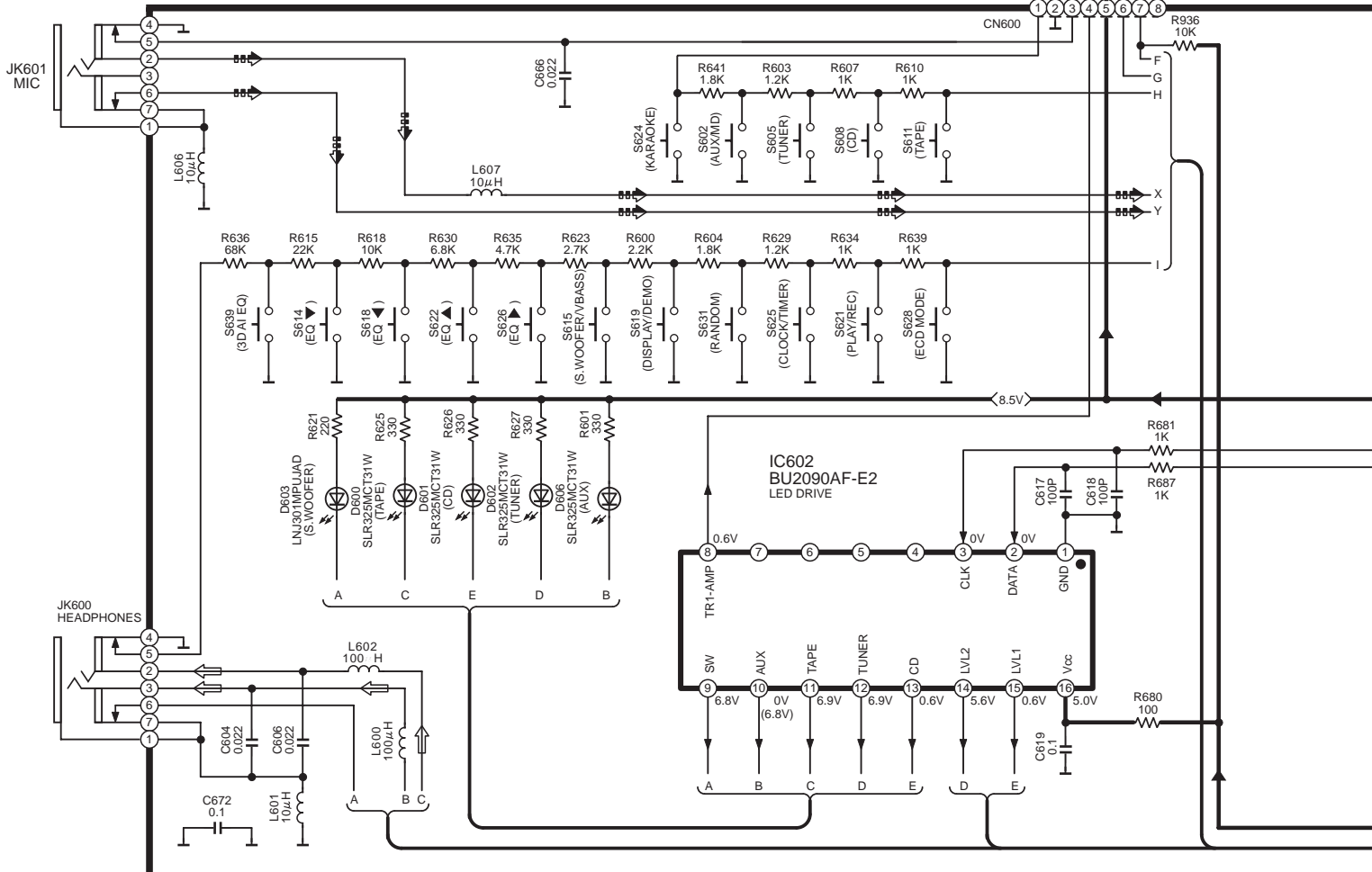
→ : POSITIVE VOLTAGE LINE  
 ⇨ : MIC SIGNAL LINE  
 ⇨ : CD PLAYBACK SIGNAL LINE



J OPERATION (2) CIRCUIT

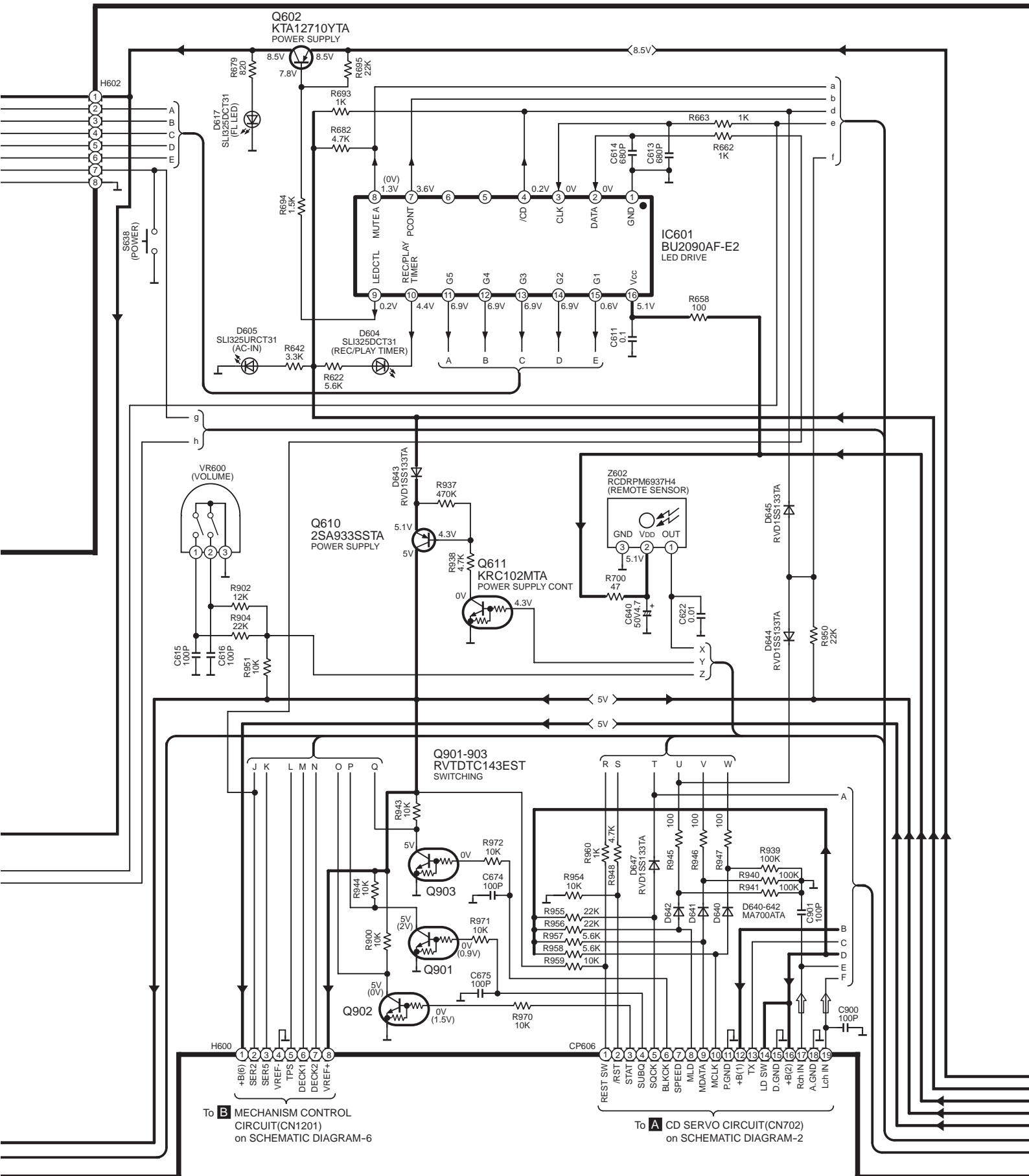


K FL CIRCUIT



SCHEMATIC DIAGRAM-13

→ : POSITIVE VOLTAGE LINE    ⇨ : CD PLAYBACK SIGNAL LINE

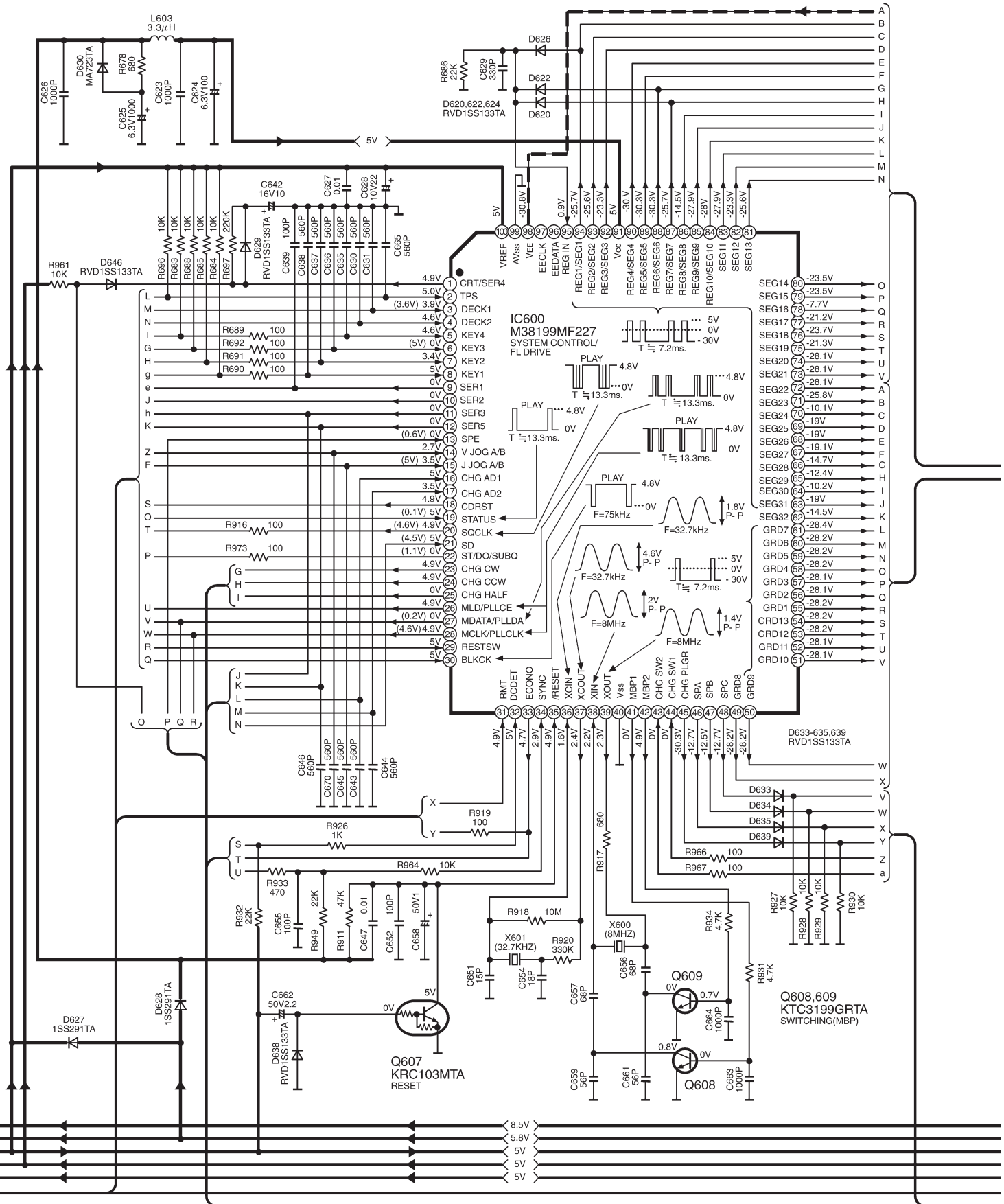


To **B** MECHANISM CONTROL CIRCUIT(CN1201) on SCHEMATIC DIAGRAM-6

To **A** CD SERVO CIRCUIT(CN702) on SCHEMATIC DIAGRAM-2

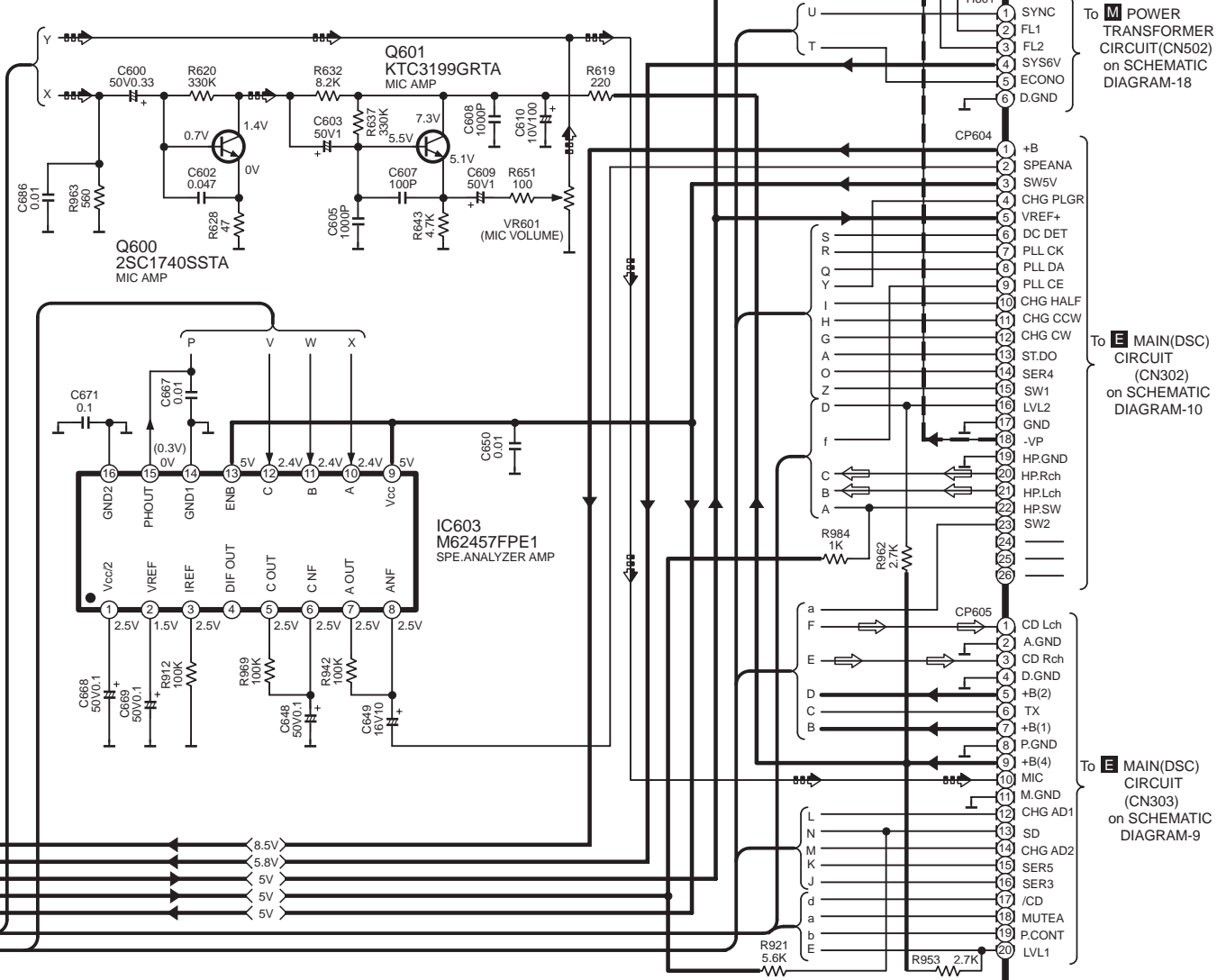
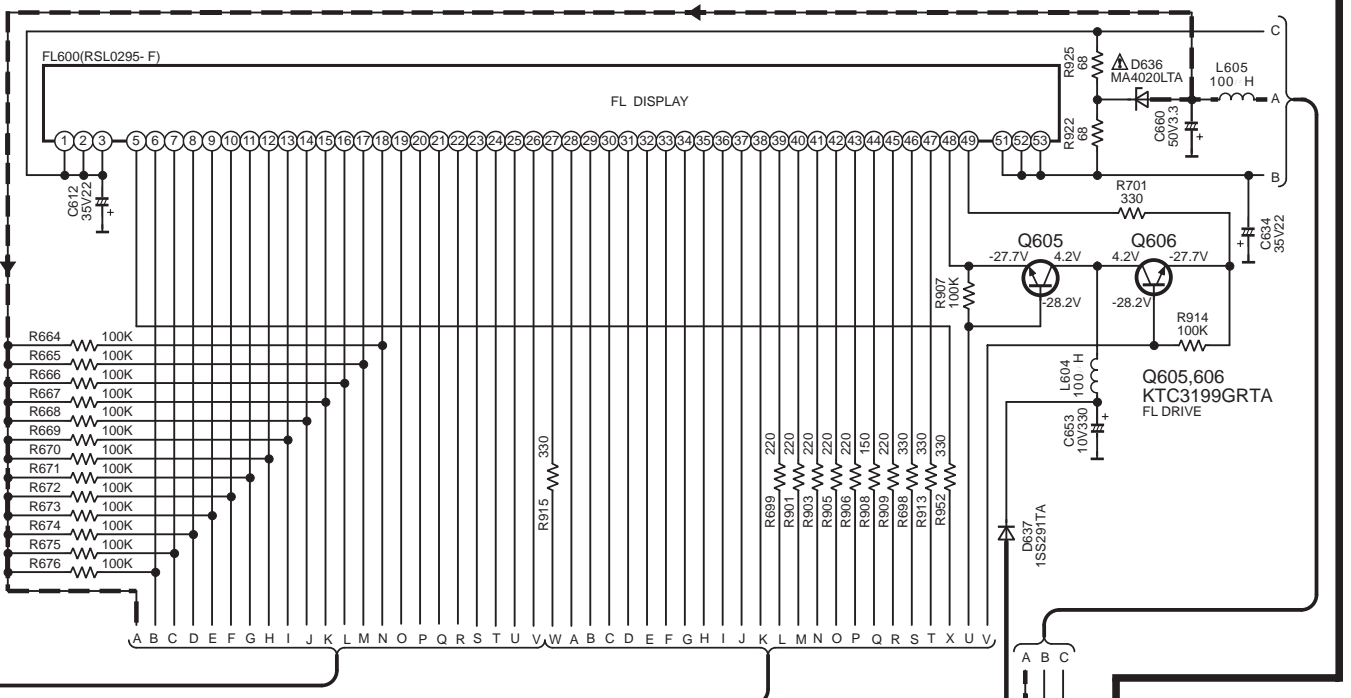
SCHEMATIC DIAGRAM-14

---:NEGATIVE VOLTAGE LINE  
---:POSITIVE VOLTAGE LINE



SCHEMATIC DIAGRAM-15

:NEGATIVE VOLTAGE LINE  
 :MIC SIGNAL LINE  
 :POSITIVE VOLTAGE LINE  
 :CD PLAYBACK SIGNAL LINE



To **M** POWER TRANSFORMER CIRCUIT (CN502) on SCHEMATIC DIAGRAM-18

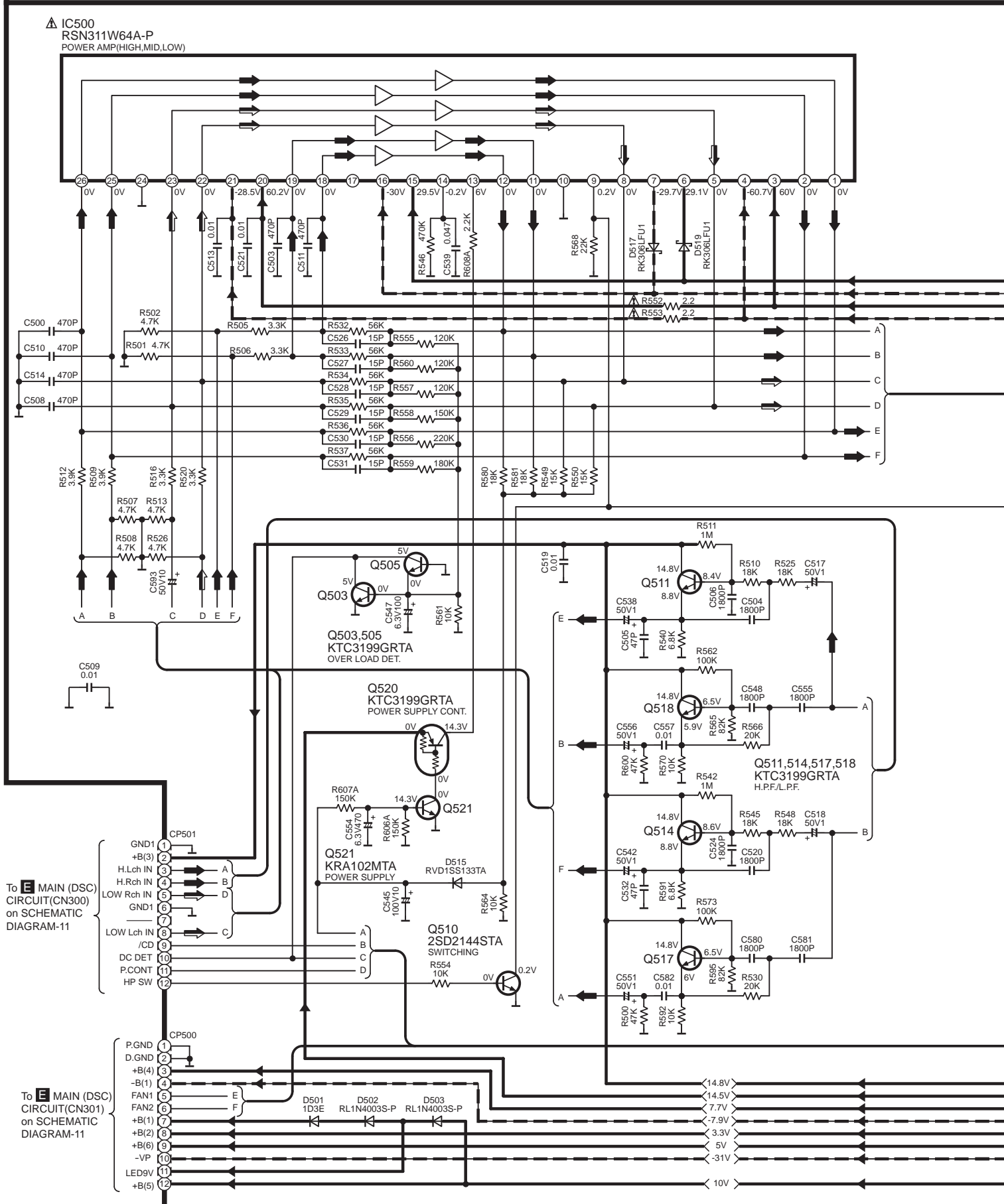
To **E** MAIN(DSC) CIRCUIT (CN302) on SCHEMATIC DIAGRAM-10

To **E** MAIN(DSC) CIRCUIT (CN303) on SCHEMATIC DIAGRAM-9

# SCHEMATIC DIAGRAM-16 L POWER AMP CIRCUIT

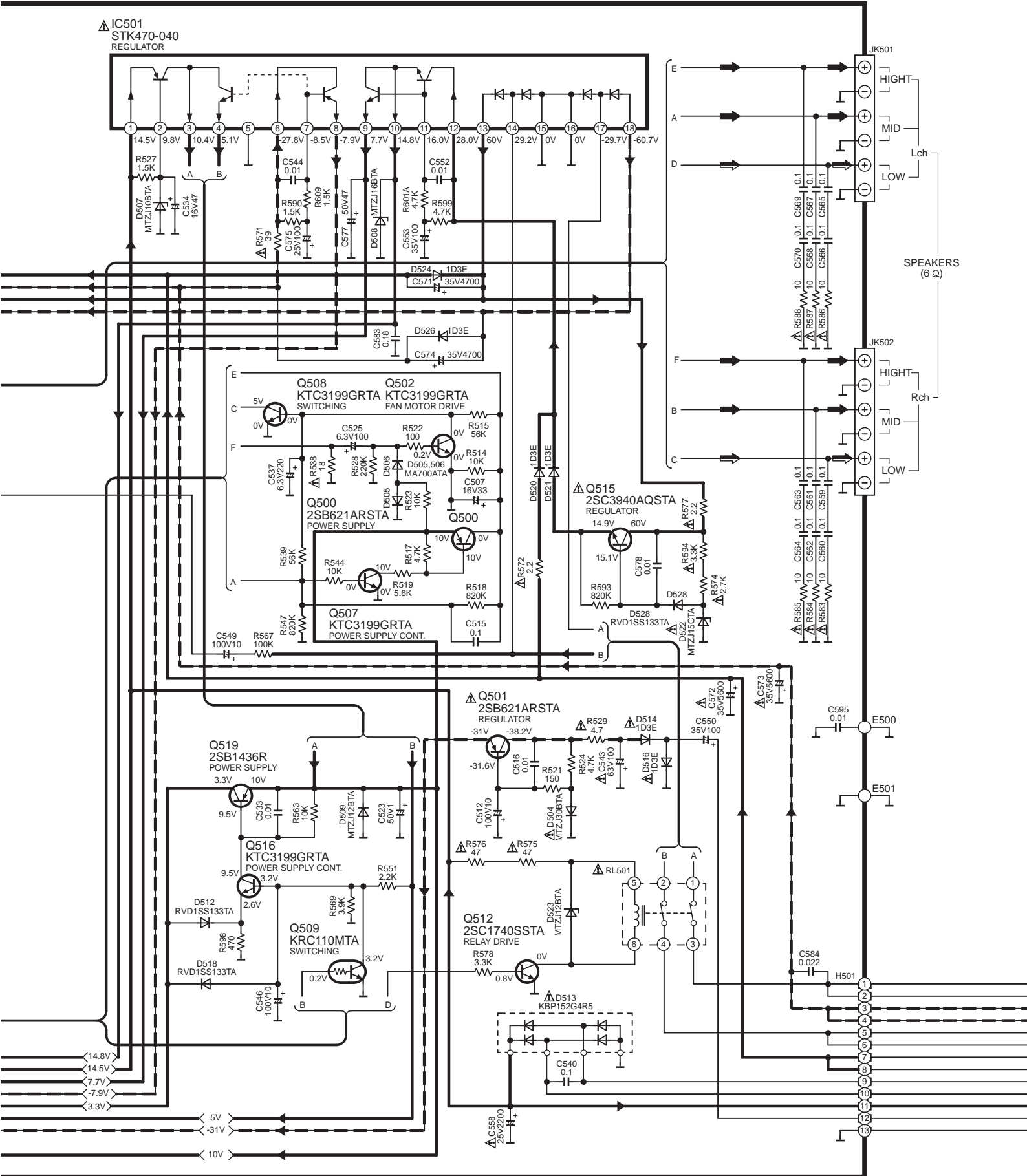
:NEGATIVE VOLTAGE LINE  
 :POSITIVE VOLTAGE LINE

:FRONT LOW SP DRIVE SIGNAL LINE  
 :FRONT MID/HIGHT SP DRIVE SIGNAL LINE



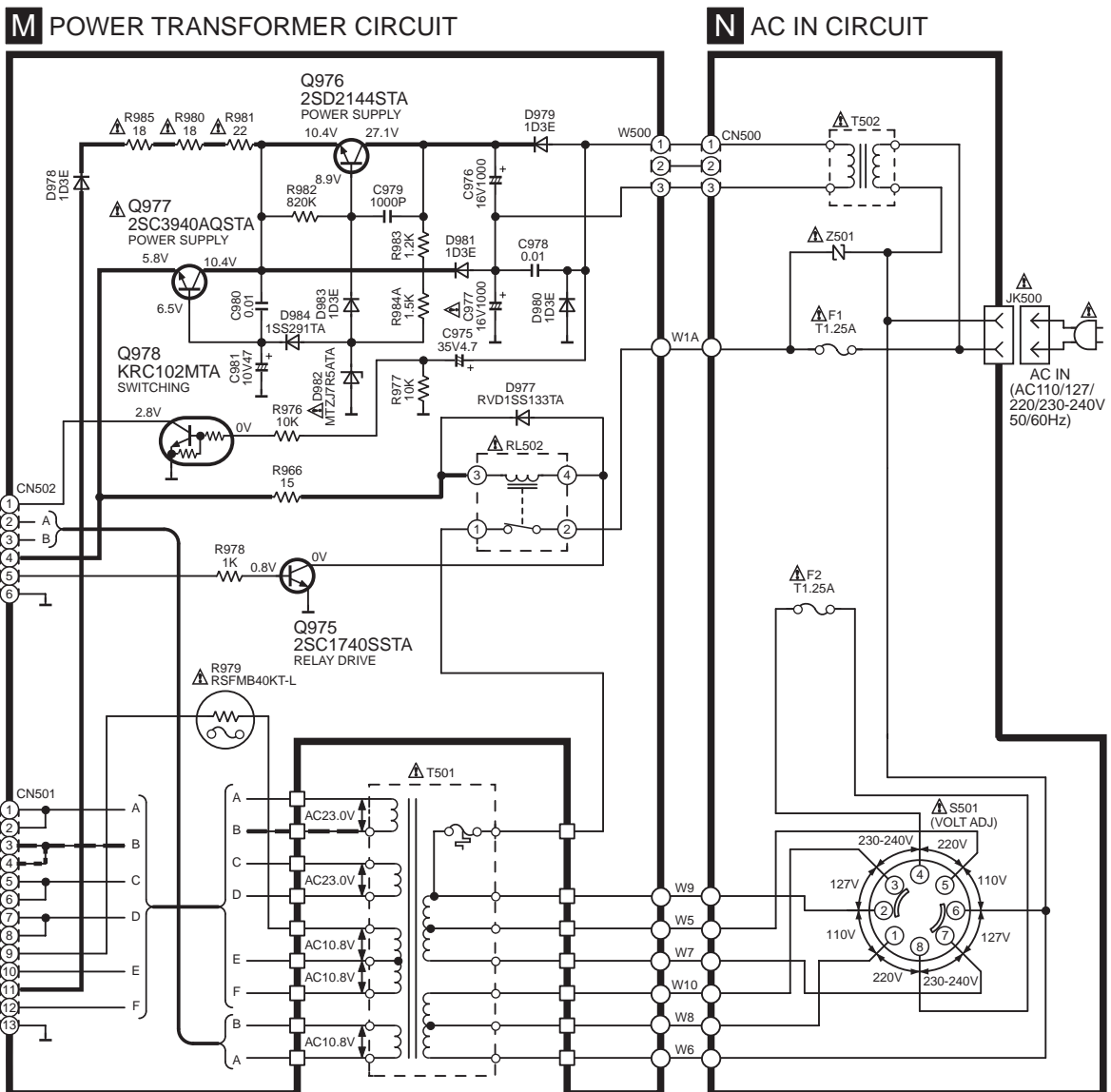
SCHEMATIC DIAGRAM-17

---: NEGATIVE VOLTAGE LINE  
---: POSITIVE VOLTAGE LINE  
⇒: FRONT LOW SP DRIVE SIGNAL LINE  
⇒: FRONT HIGH SP DRIVE SIGNAL LINE





SCHEMATIC DIAGRAM-18

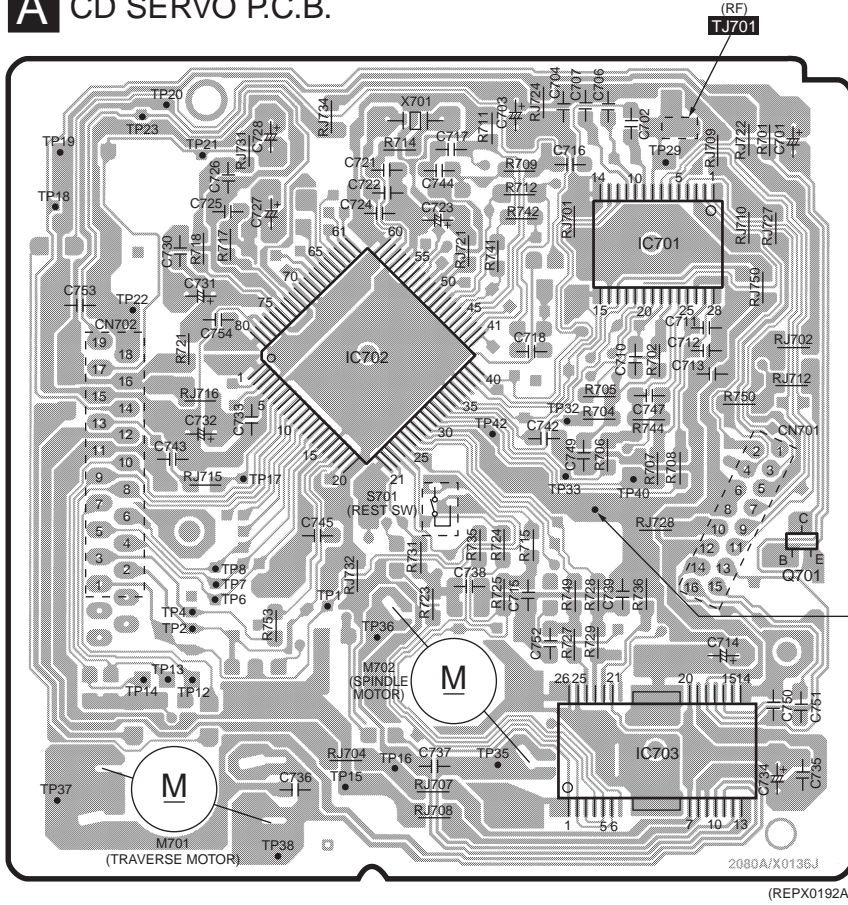


# 16 Printed Circuit Board Diagram



Notes: • This printed circuit board diagram may be modified at any time with the development of new technology.  
 • \*L10-12 are printed coils formed on the P.C.B. and thus not found in the replacement parts list.

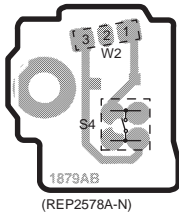
## A CD SERVO P.C.B.



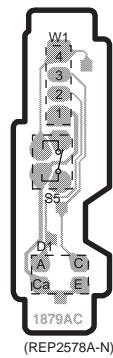
### ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>A</b> CD SERVO P.C.B.			
IC701	2D	RJ722	2D
IC702	3B	RJ724	2C
IC703	5D	RJ727	2D
Q701	4D	RJ728	4D
X701	2C	RJ731	2B
S701	4C	RJ732	4B
CN701	4D	RJ734	2B
CN702	3A	RJ750	3D
M701	5B	C701	2D
M702	4C	C702	2D
TJ701	2D	C703	2C
R701	2D	C704	2C
R702	3D	C706	2C
R704	3C	C707	2C
R705	3C	C710	3D
R706	3C	C711	3D
R707	3D	C712	3D
R708	3D	C713	3D
R709	2C	C714	4D
R711	2C	C715	4C
R712	2C	C716	2C
R714	2C	C717	2C
R715	4C	C718	3C
R717	2B	C721	2C
R718	2B	C722	2C
R721	3B	C723	2C
R723	4C	C724	2B
R724	4C	C725	2B
R725	4C	C726	2B
R727	4C	C727	2B
R728	4C	C728	2B
R729	4C	C730	2B
R731	4C	C731	3B
R735	4C	C732	3B
R736	4D	C733	3B
R741	2C	C734	5D
R742	2C	C735	5D
R744	3D	C736	5B
R749	4C	C737	5C
R750	3D	C738	4C
R753	4B	C739	4D
RJ701	2C	C742	3C
RJ702	3D	C743	3B
RJ704	5B	C744	2C
RJ707	5C	C745	4B
RJ708	5C	C747	3D
RJ709	2D	C749	3C
RJ710	2D	C750	4D
RJ712	3D	C751	4D
RJ715	3B	C752	4C
RJ716	3B	C753	3A
RJ721	2C	C754	3B

## F CLAMP SW P.C.B.



## G BOTTOM SW P.C.B.

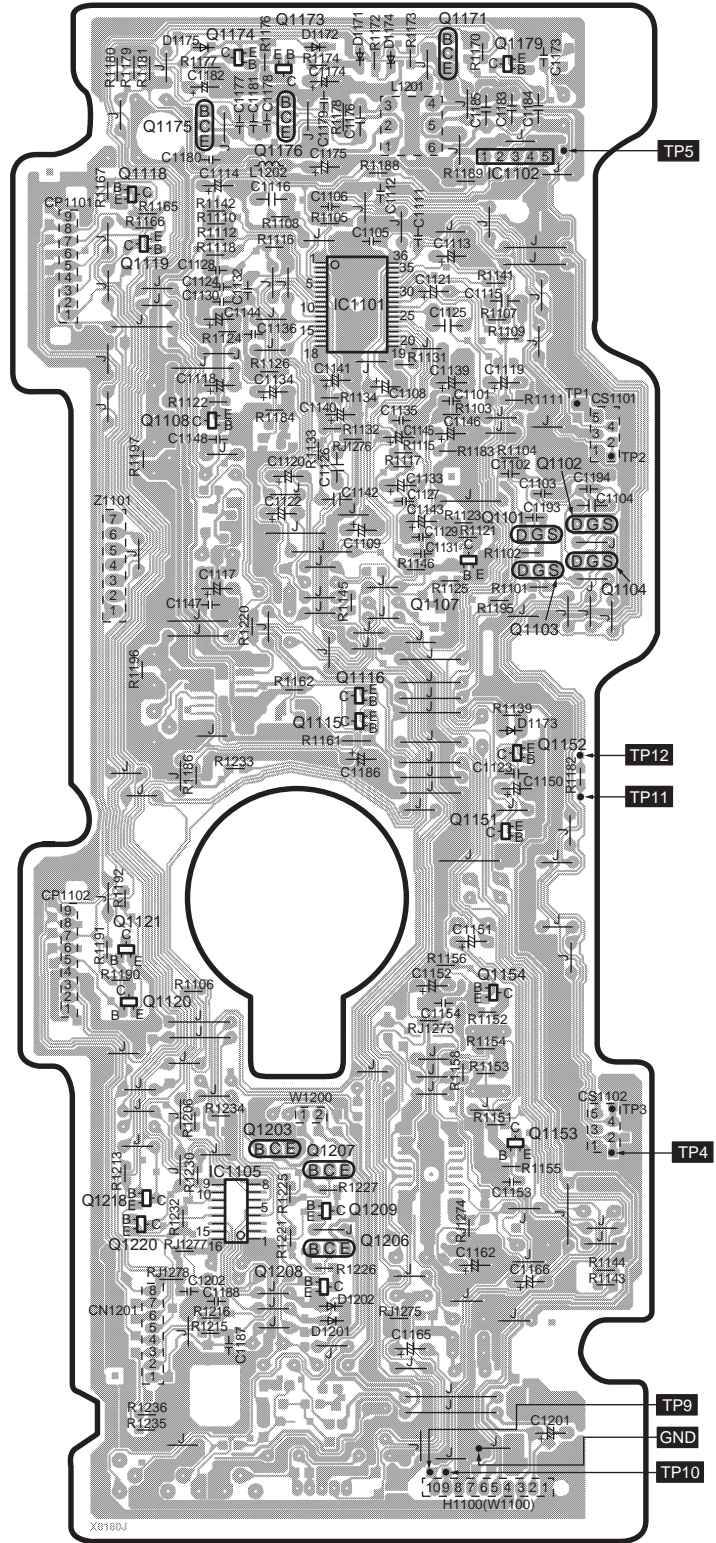


<b>F</b> CLAMP SW P.C.B.			
S4	6B	W2	6A
<b>G</b> BOTTOM SW P.C.B.			
D1	7D	W1	6D
S5	7D		

A B C D E F

1  
2  
3  
4  
5  
6  
7  
8

**B** MECHANISM CONTROL P.C.B.



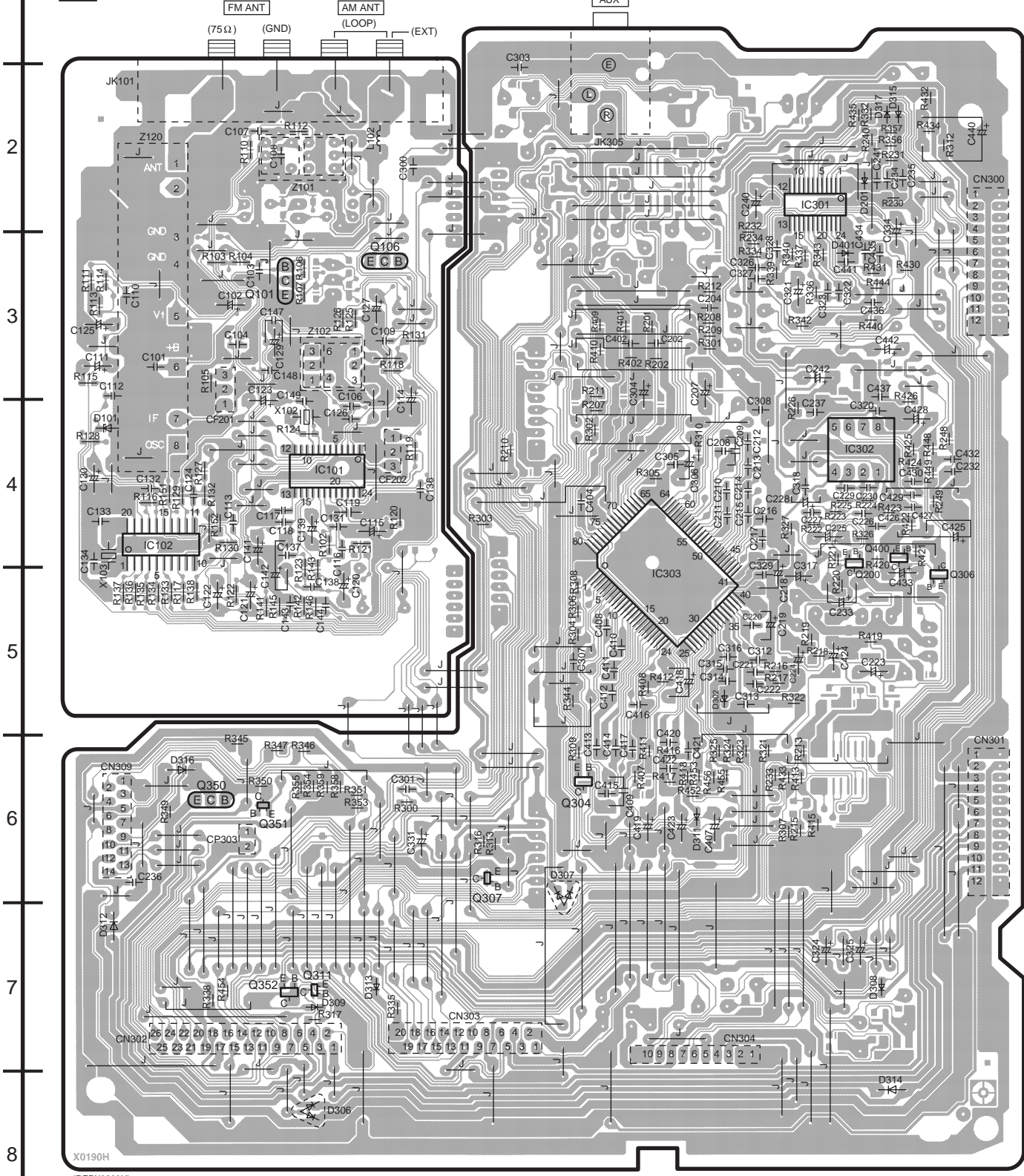
(REPX0169J)

**ELECTRICAL PARTS LOCATION**

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>B</b> MECHANISM CONTROL P.C.B.					
IC1101	3B	R1126	3B	C1104	4D
IC1102	2C	R1131	3C	C1105	2C
IC1105	7B	R1132	3B	C1106	2B
Q1101	4C	R1133	3B	C1108	3C
Q1102	4D	R1134	3B	C1109	4C
Q1103	4C	R1139	4C	C1111	2C
Q1104	4D	R1141	3C	C1112	2C
Q1107	4C	R1142	2B	C1113	2C
Q1108	3B	R1143	7D	C1114	2B
Q1115	5C	R1144	7D	C1115	3C
Q1116	4C	R1145	4B	C1116	2B
Q1118	2B	R1146	4C	C1117	4B
Q1119	2B	R1151	6C	C1118	3B
Q1120	6A	R1152	6C	C1119	3C
Q1121	6A	R1153	6C	C1120	3B
Q1151	5C	R1154	6C	C1121	3C
Q1152	5C	R1155	6C	C1122	4B
Q1153	6C	R1156	6C	C1123	5C
Q1154	6C	R1158	6C	C1124	3B
Q1171	2C	R1161	5B	C1125	3C
Q1173	2B	R1162	4B	C1126	3B
Q1174	2B	R1165	2B	C1127	4C
Q1175	2B	R1166	2B	C1128	3B
Q1176	2B	R1167	2A	C1129	4C
Q1179	2C	R1170	2C	C1130	3B
Q1203	6B	R1172	2C	C1131	4C
Q1206	7B	R1173	2C	C1132	3B
Q1207	6B	R1174	2B	C1133	3C
Q1208	7B	R1176	2B	C1134	3B
Q1209	7B	R1177	2B	C1135	3C
Q1218	7B	R1178	2B	C1136	3B
Q1220	7B	R1179	2B	C1139	3C
D1171	2C	R1180	2A	C1140	3B
D1172	2B	R1181	2B	C1141	3B
D1173	5C	R1182	5C	C1142	4B
D1174	2C	R1183	3C	C1143	4C
D1175	2B	R1184	3B	C1144	3B
D1201	7B	R1186	5B	C1145	3C
D1202	7B	R1188	2C	C1146	3C
L1201	2C	R1189	2C	C1147	4B
L1202	2B	R1190	6A	C1148	3B
Z1101	4A	R1191	6A	C1150	5C
CN1201	7B	R1192	5A	C1151	5C
CP1101	2A	R1195	4C	C1152	6C
CP1102	5A	R1196	4B	C1153	7C
CS1101	3D	R1197	3B	C1154	6C
CS1102	6D	R1206	6B	C1162	7C
H1100(W1100)	8C	R1213	7A	C1165	7C
W1200	6B	R1215	7B	C1166	7C
R1101	4C	R1216	7B	C1173	2C
R1102	4C	R1220	4B	C1174	2B
R1103	3C	R1221	7B	C1175	2B
R1104	3C	R1225	7B	C1176	2C
R1105	2B	R1226	7B	C1177	2B
R1106	6B	R1227	7B	C1178	2B
R1107	3C	R1230	7B	C1179	2B
R1108	2B	R1232	7B	C1180	2B
R1109	3C	R1233	5B	C1181	2B
R1110	2B	R1234	6B	C1182	2B
R1111	3C	R1235	8B	C1183	2C
R1112	2B	R1236	8B	C1184	2C
R1115	3C	RJ1273	6C	C1185	2C
R1116	2B	RJ1274	7C	C1186	5C
R1117	3C	RJ1275	7C	C1187	7B
R1118	2B	RJ1276	3B	C1188	7B
R1121	4C	RJ1277	7B	C1193	4C
R1122	3B	RJ1278	7B	C1194	3D
R1123	4C	C1101	3C	C1201	8C
R1124	3B	C1102	3C	C1202	7B
R1125	4C	C1103	3C		

A B C D E F

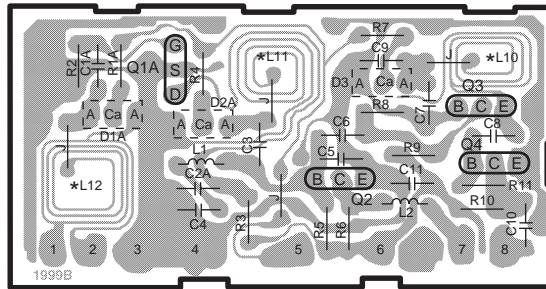
1 **E** MAIN P.C.B.



X0190H  
(REP X0200H)



**FM FRONT END P.C.B.**



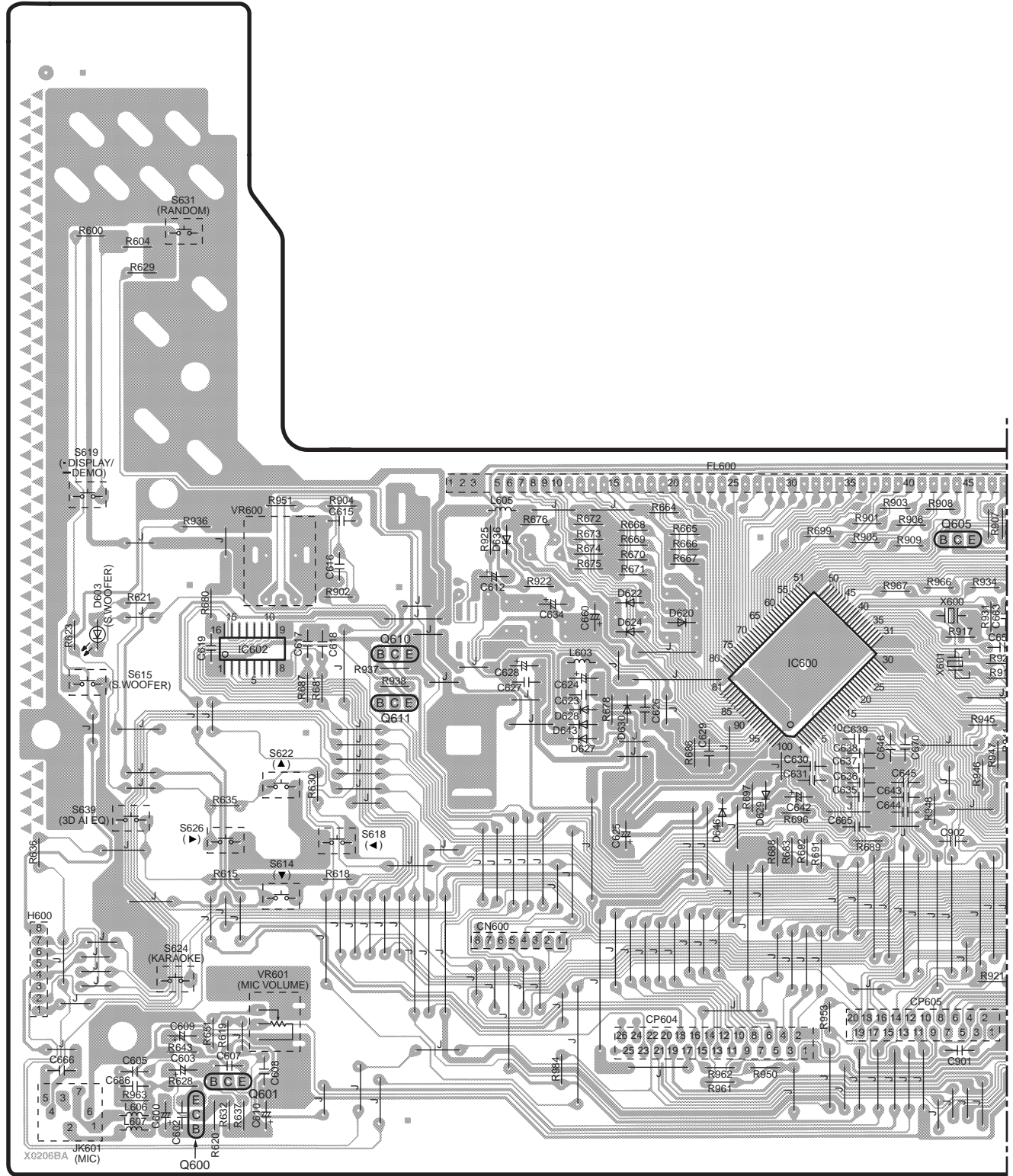
**ELECTRICAL PARTS LOCATION**

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>MAIN P.C.B.</b>															
IC101	4B	CN304	7E	R145	5B	R310	4E	R412	5D	C116	4B	C219	5E	C326	3E
IC102	4A	CN309	6A	R146	5B	R312	2F	R413	6E	C117	4B	C220	5E	C327	3E
IC301	2E	CP303	6B	R151	4A	R313	6C	R415	6E	C118	4B	C221	5E	C328	3E
IC302	4E	JK101	2B	R152	4B	R316	6C	R416	6D	C119	4B	C222	5E	C329	5E
IC303	5D	JK305	2D	R201	3D	R317	7B	R417	6D	C120	5B	C223	5F	C331	6C
Q101	3B	R102	4B	R202	3D	R321	6E	R418	6D	C121	5B	C224	5E	C334	2F
Q106	3C	R103	3B	R207	4D	R322	5E	R419	5F	C122	5B	C225	4E	C402	3D
Q200	4E	R104	3B	R208	3E	R323	6E	R420	4F	C123	4B	C226	4F	C404	4D
Q304	6D	R105	3B	R209	3E	R324	6E	R421	4F	C124	4B	C227	4E	C407	6E
Q306	5F	R106	3B	R210	4C	R325	6E	R422	4F	C125	3A	C228	4E	C408	5D
Q307	6C	R107	3B	R211	3D	R326	4F	R423	4F	C126	4B	C229	4E	C409	6D
Q311	7B	R110	2B	R212	3E	R327	4E	R424	4F	C127	3C	C230	4F	C410	5D
Q350	6B	R111	3A	R213	6E	R332	2F	R425	4F	C129	3B	C232	4F	C411	5D
Q351	6B	R112	2B	R215	6E	R334	3E	R426	4F	C130	4A	C233	5E	C412	5D
Q352	7B	R113	3A	R216	5E	R335	7C	R430	3F	C131	4B	C234	2F	C413	5D
Q400	4F	R114	3A	R217	5E	R336	3E	R431	3F	C132	4A	C235	2F	C414	6D
D101	4A	R115	3A	R218	5E	R337	3E	R432	2F	C133	4A	C236	6A	C415	6D
D201	2F	R116	4A	R219	5E	R338	7B	R433	6E	C134	4A	C237	4E	C416	5D
D302	5E	R117	5A	R220	5E	R339	3E	R434	2F	C136	4C	C240	2E	C417	6D
D306	8B	R118	3C	R221	4E	R340	3E	R435	2E	C137	4B	C241	2F	C418	5D
D307	6D	R119	4C	R222	4E	R342	3E	R440	3F	C138	5B	C242	3E	C419	6D
D308	7F	R120	4C	R223	4E	R343	3E	R444	3F	C139	4B	C300	2C	C420	6D
D309	7B	R121	4B	R224	4F	R344	5D	R448	4F	C141	4B	C301	6C	C421	6D
D311	6E	R122	5B	R225	4E	R345	6B	R449	4F	C142	4B	C303	2C	C422	6D
D312	7A	R123	5B	R226	4E	R346	6B	R452	6D	C143	5B	C304	3D	C423	6D
D313	7C	R124	4B	R230	2F	R347	6B	R453	6E	C144	5B	C305	4D	C424	5E
D314	8F	R125	3B	R231	2F	R349	6A	R454	7B	C147	3B	C306	4D	C425	4F
D315	2F	R126	3B	R232	2E	R350	6B	R455	6E	C148	3B	C307	5D	C426	4F
D316	6A	R127	4B	R233	6E	R351	6B	R456	6E	C149	4B	C308	3E	C427	4F
D317	2F	R128	4A	R234	3E	R353	6B	C101	3A	C202	3D	C309	2F	C428	4F
D401	3E	R129	4A	R240	2F	R354	6B	C102	3B	C204	3E	C312	5E	C429	4F
L102	2C	R130	4B	R248	4F	R355	6B	C103	3B	C207	3E	C313	5E	C430	4F
Z101	2B	R131	3C	R249	4F	R356	2F	C104	3B	C208	4E	C314	5E	C432	4F
Z102	3B	R132	4B	R300	6C	R357	2F	C106	4B	C209	4E	C315	5E	C433	5F
Z120	3A	R133	5A	R301	3E	R358	6B	C107	2B	C210	4E	C316	5E	C434	3F
CF201	3B	R134	5A	R302	4D	R359	6B	C108	2B	C211	4E	C317	5E	C435	3F
CF202	4C	R135	5A	R303	4C	R401	3D	C109	3C	C212	4E	C318	4E	C436	3F
X102	4B	R136	5A	R304	5D	R402	3D	C110	3A	C213	4E	C320	4F	C437	3F
X103	4A	R137	5A	R305	4D	R407	6D	C111	3A	C214	4E	C321	3E	C440	2F
CN300	3F	R138	5B	R306	5D	R408	5D	C112	3A	C215	4E	C322	3E	C441	3E
CN301	6F	R141	5B	R307	6E	R409	3D	C113	4B	C216	4E	C323	3E	C442	3F
CN302	7B	R142	5B	R308	5D	R410	3D	C114	3C	C217	4E	C324	7E		
CN303	7C	R143	5B	R309	6D	R411	6D	C115	4C	C218	5E	C325	7E		
<b>FM FRONT END P.C.B.</b>															
Q1A	2I	D2A	2I	* L11	2I	R4	2I	R9	2J	C3	2I	C8	2J		
Q2	2J	D3	2J	* L12	2I	R5	2J	R10	2J	C4	2I	C9	2J		
Q3	2J	L1	2I	R1A	2I	R6	2J	R11	2J	C5	2J	C10	2J		
Q4	2J	L2	2J	R2	2H	R7	1J	C1A	2I	C6	2J	C11	2J		
D1A	2I	* L10	2J	R3	2I	R8	2J	C2A	2I	C7	2J				

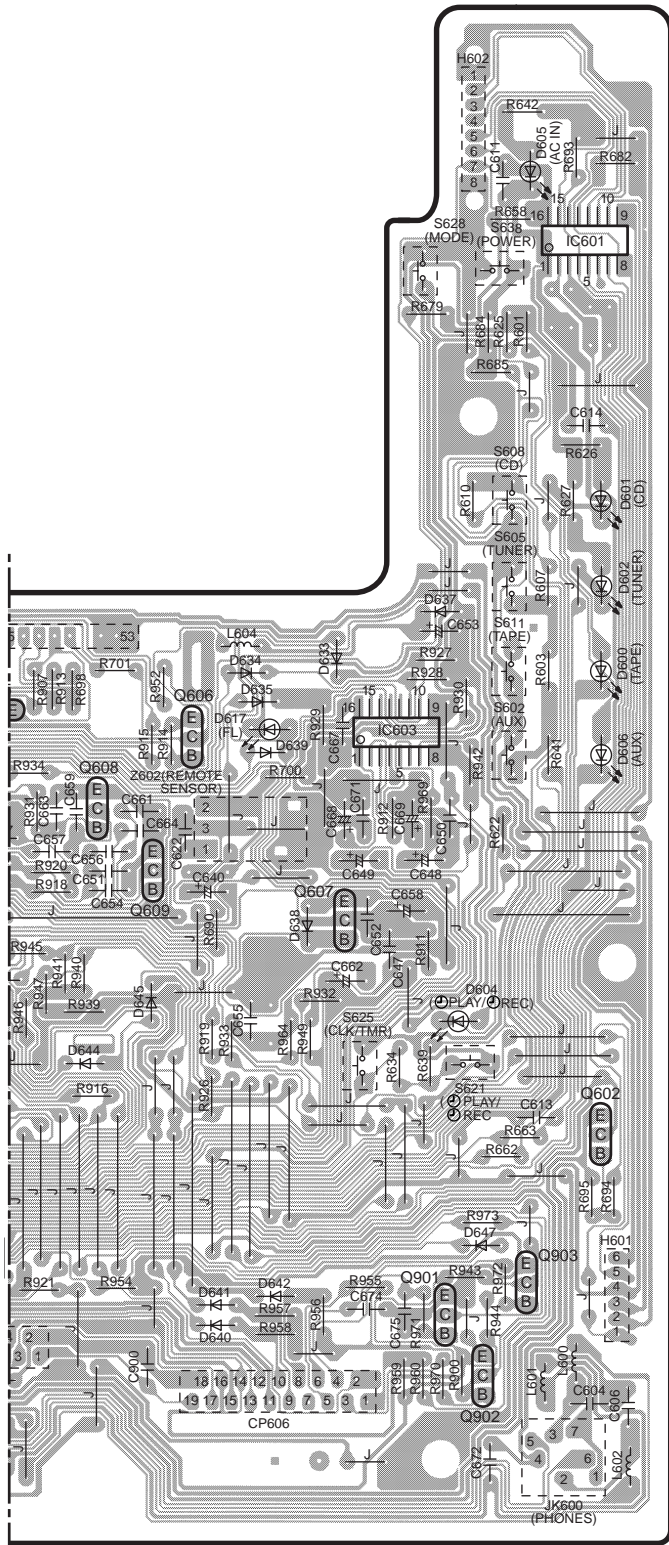
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# K FL P.C.B.



(REPX0217B)



■ ELECTRICAL PARTS LOCATION

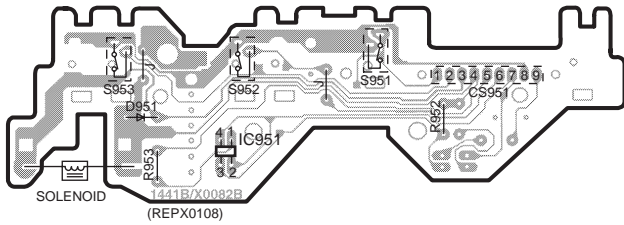
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<b>K FL P.C.B.</b>							
IC600	5E	S639	6A	R699	4E	C605	7A
IC601	2I	CN600	7D	R700	5H	C606	7I
IC602	5B	CP604	7E	R701	4G	C607	7B
IC603	4H	CP605	7F	R900	7I	C608	7B
Q600	8B	CP606	7H	R901	4F	C609	7B
Q601	8B	JK600	8I	R902	5C	C610	8B
Q602	6I	JK601	8A	R903	4F	C611	2I
Q605	4F	H600	7A	R904	4C	C612	5D
Q606	4G	H601	7I	R905	4F	C613	6I
Q607	5H	H602	2I	R906	4F	C614	3I
Q608	5G	R600	3A	R907	4F	C615	4C
Q609	5G	R601	3I	R908	4F	C616	5C
Q610	5C	R603	4I	R909	4F	C617	5B
Q611	5C	R604	3A	R911	5H	C618	5C
Q902	7I	R607	4I	R912	5H	C619	5B
Q903	7I	R610	3I	R913	4F	C622	5G
D600	4I	R615	6B	R914	5G	C623	5D
D601	3I	R618	6C	R915	5G	C624	5D
D602	4I	R619	7B	R916	6G	C625	5D
D603	5A	R620	8B	R917	5F	C626	5D
D604	6H	R621	5A	R918	5F	C627	5D
D605	2I	R622	5I	R919	6G	C628	5D
D606	5I	R623	5A	R920	5F	C629	6E
D617	4H	R625	3I	R921	7F	C630	6E
D620	5E	R626	3I	R922	5D	C631	6E
D622	5D	R627	3I	R925	4D	C634	5D
D624	5D	R628	8B	R926	6G	C635	6F
D627	6D	R629	3A	R927	4H	C636	6F
D628	6D	R630	6C	R928	4H	C637	6F
D629	6E	R632	8B	R929	4H	C638	6F
D630	5D	R634	6H	R930	4I	C639	6F
D633	4H	R635	6B	R931	5F	C640	5G
D634	4H	R636	6A	R932	6H	C642	6E
D635	4H	R637	8B	R933	6G	C643	6F
D636	4D	R639	6H	R934	5F	C644	6F
D637	4H	R641	5I	R936	4B	C645	6F
D638	5H	R642	2I	R937	5C	C646	6F
D639	5H	R643	7B	R938	5C	C647	5H
D640	7G	R651	7B	R939	6G	C648	5H
D641	7G	R658	2I	R940	6G	C649	5H
D642	7H	R662	6I	R941	6G	C650	5H
D643	5D	R663	6I	R942	5I	C651	5G
D644	6G	R664	4E	R943	7I	C652	5H
D645	6G	R665	4E	R944	7I	C653	4H
D646	6E	R666	4E	R945	5F	C654	5G
D647	7I	R667	4E	R946	6F	C655	6H
VR600	4B	R668	4D	R947	6F	C656	5G
VR601	7B	R669	4D	R948	6F	C657	5F
L600	7I	R670	4D	R949	6H	C658	5H
L601	7I	R671	5D	R950	7E	C659	5G
L602	8I	R672	4D	R951	4B	C660	5D
L603	5D	R673	4D	R952	4G	C661	5G
L604	4H	R674	4D	R953	7E	C662	6H
L605	4D	R675	5D	R954	7G	C663	5G
L606	8A	R676	4D	R955	7H	C664	5G
L607	8A	R678	5D	R956	7H	C665	6F
Z602	5H	R679	3H	R957	7H	C666	7A
X600	5F	R680	5B	R958	7H	C667	4H
X601	5F	R681	5C	R959	7H	C668	5H
FL600	4E	R682	2I	R960	7H	C669	5H
S602	5I	R683	6E	R961	7E	C670	5H
S605	4I	R684	3I	R962	7E	C671	6F
S608	3I	R685	3I	R963	8A	C672	8I
S611	4I	R686	6E	R964	6H	C674	7H
S614	6B	R687	5B	R966	5F	C675	7H
S615	5A	R688	6E	R967	5F	C686	7A
S618	6C	R689	6F	R969	5H	C900	7G
S619	4A	R690	5G	R970	7H	C901	7F
S621	6I	R691	6E	R971	7H	C902	6F
S622	6B	R692	6E	R972	7I		
S624	7B	R693	2I	R973	7I		
S625	6H	R694	6I	R984	7D		
S626	6B	R695	6I	C600	8B		
S628	2H	R696	6E	C602	8B		
S631	3B	R697	6E	C603	7B		
S638	2I	R698	4G	C604	7I		

A B C D E F

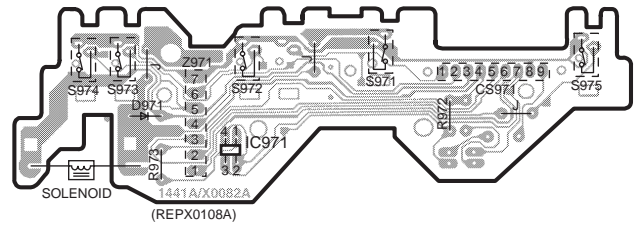
■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>D</b> MECHANISM P.C.B. (DECK 1)															
IC951	3B	S951	3B	S952	3B	S953	3A	CS951	3C	R952	3C	R953	3A		
D951	3A														
<b>C</b> MECHANISM P.C.B. (DECK 2)															
IC971	3E	Z971	3E	S972	3E	S974	3D	S975	3F	CS971	3F	R972	3F	R973	3D
D971	3D	S971	3E	S973	3D										

**D** MECHANISM P.C.B. (DECK1)



**C** MECHANISM P.C.B. (DECK2)



Note for IC951 replacement

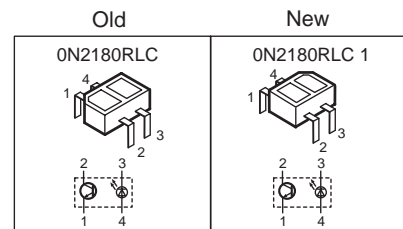
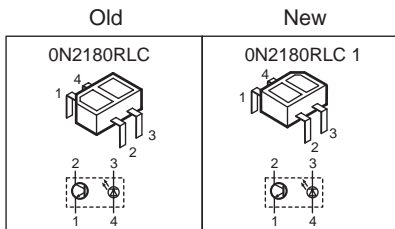
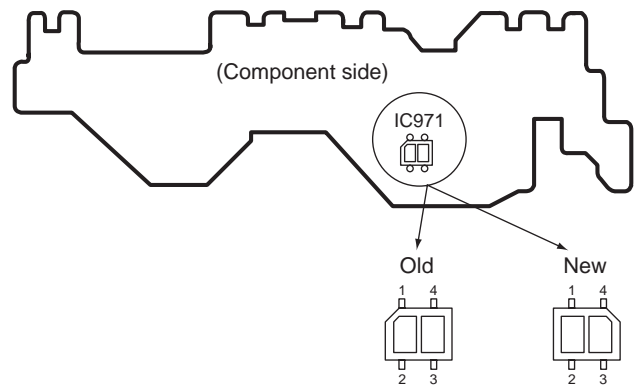
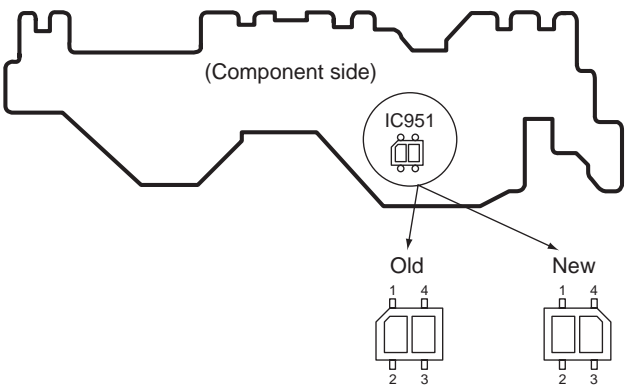
- Two different types (old or new) parts are mounted on P.C.B. as for IC951.
- When servicing, care to replace the parts due to those shape.
- Replacement procedures

	Parts No.	Direction	Remarks
Old	0N2180RLC	Mount the parts on given position. (Printed pattern on P.C.B.)	Refer to the figure below.
New	0N2180RLC1	Mount the parts so the cut corner is located upper right.	

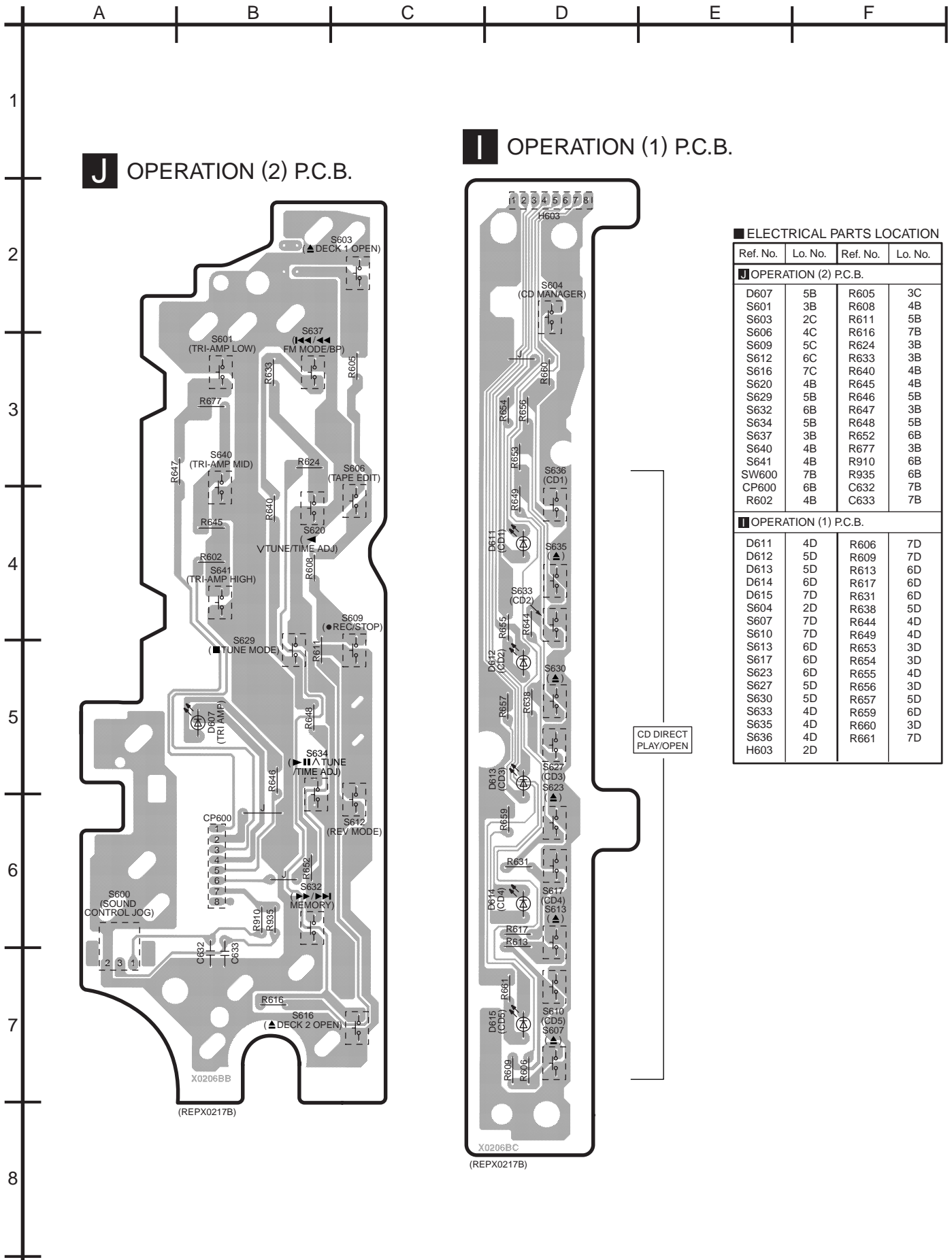
Note for IC971 replacement

- Two different types (old or new) parts are mounted on P.C.B. as for IC971.
- When servicing, care to replace the parts due to those shape.
- Replacement procedures

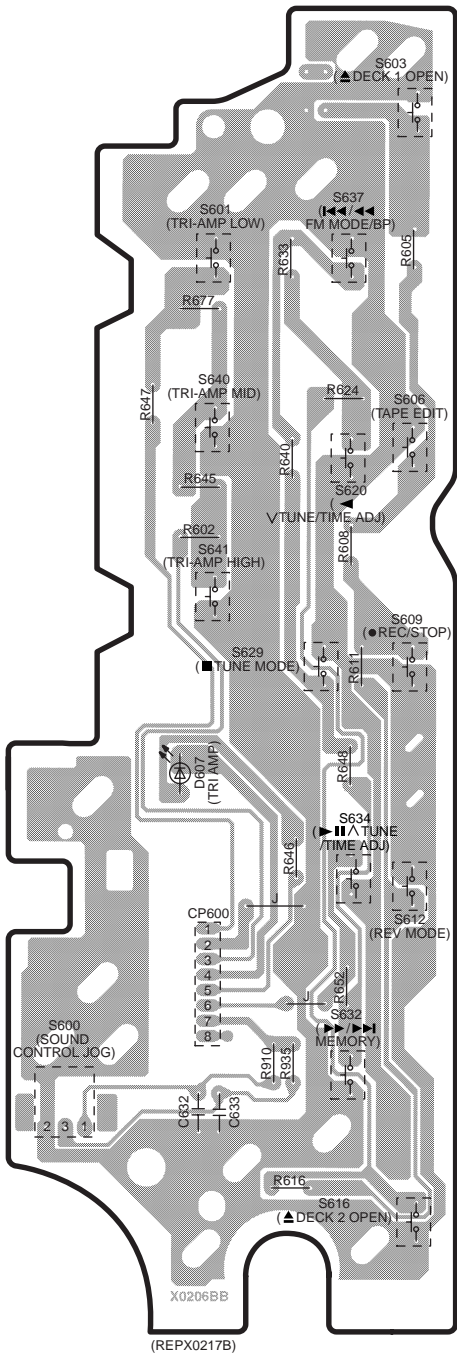
	Parts No.	Direction	Remarks
Old	0N2180RLC	Mount the parts on given position. (Printed pattern on P.C.B.)	Refer to the figure below.
New	0N2180RLC1	Mount the parts so the cut corner is located upper right.	



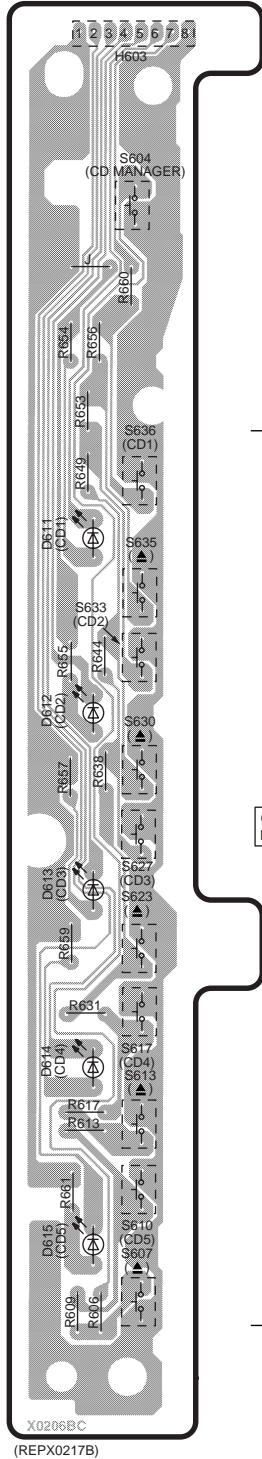




**J** OPERATION (2) P.C.B.



**I** OPERATION (1) P.C.B.



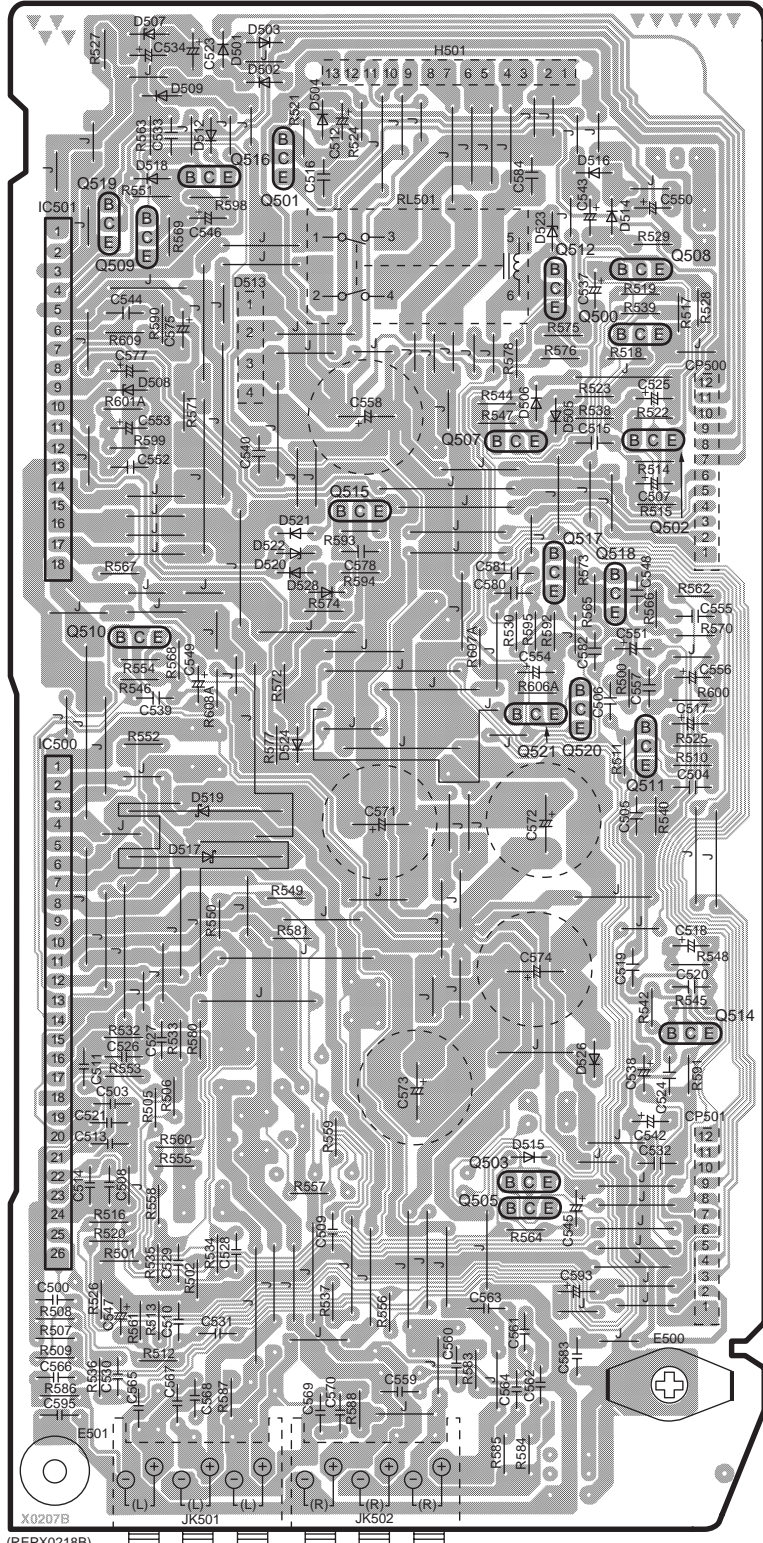
■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>J</b> OPERATION (2) P.C.B.			
D607	5B	R605	3C
S601	3B	R608	4B
S603	2C	R611	5B
S606	4C	R616	7B
S609	5C	R624	3B
S612	6C	R633	3B
S616	7C	R640	4B
S620	4B	R645	4B
S629	5B	R646	5B
S632	6B	R647	3B
S634	5B	R648	5B
S637	3B	R652	6B
S640	4B	R677	3B
S641	4B	R910	6B
SW600	7B	R935	6B
CP600	6B	C632	7B
R602	4B	C633	7B
<b>I</b> OPERATION (1) P.C.B.			
D611	4D	R606	7D
D612	5D	R609	7D
D613	5D	R613	6D
D614	6D	R617	6D
D615	7D	R631	6D
S604	2D	R638	5D
S607	7D	R644	4D
S610	7D	R649	4D
S613	6D	R653	3D
S617	6D	R654	3D
S623	6D	R655	4D
S627	5D	R656	3D
S630	5D	R657	5D
S633	4D	R659	6D
S635	4D	R660	3D
S636	4D	R661	7D
H603	2D		

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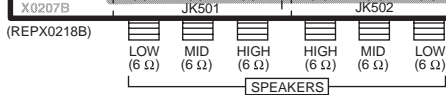
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**L** POWER AMP P.C.B.



**ELECTRICAL PARTS LOCATION**

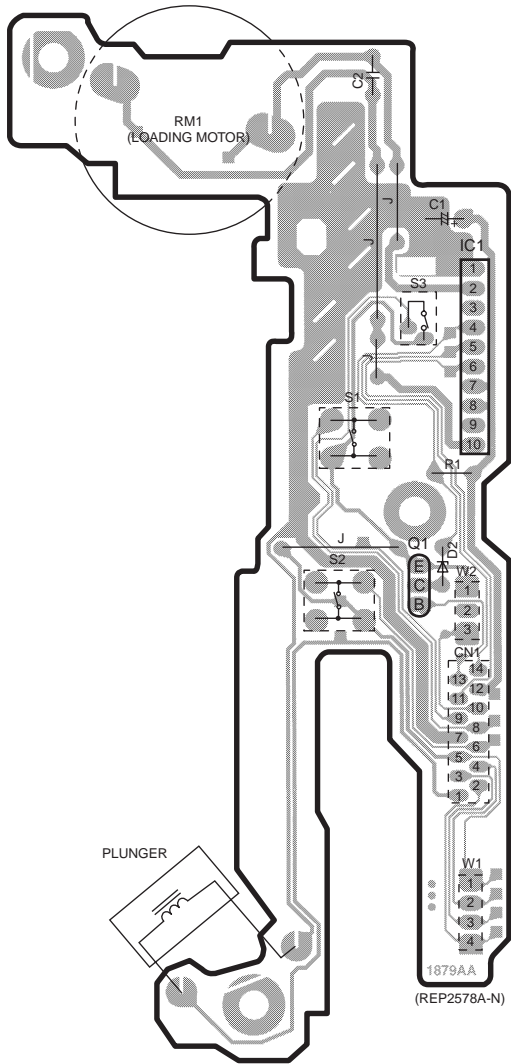
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>POWER AMP P.C.B.</b>					
IC500	6A	R525	5D	C505	5D
IC501	3A	R526	7A	C506	4D
Q500	3D	R527	1A	C507	3D
Q501	2B	R528	3D	C508	6A
Q502	3D	R529	2D	C509	7B
Q503	6C	R530	4C	C510	7B
Q505	7C	R532	6B	C511	6A
Q507	3C	R533	6B	C512	2B
Q508	2D	R534	7B	C513	6A
Q509	2B	R535	7B	C514	6A
Q510	4B	R536	7A	C515	3D
Q511	5D	R537	7B	C516	2B
Q512	2C	R538	3D	C517	4D
Q514	7D	R539	3D	C518	5D
Q515	3C	R540	5D	C519	6D
Q516	2B	R542	6D	C520	6D
Q517	4C	R544	3C	C521	6A
Q518	4D	R545	6D	C523	1B
Q519	2A	R546	4B	C524	6D
Q520	4C	R547	3C	C525	3D
Q521	4D	R548	5D	C526	6B
D501	1B	R549	5B	C527	6B
D502	2B	R550	5B	C528	7B
D503	1B	R551	2B	C529	7B
D504	2B	R552	5B	C530	7A
D505	3C	R553	6B	C531	7B
D506	3C	R554	4B	C532	6D
D507	1B	R555	6B	C533	2B
D508	3D	R556	7C	C534	1B
D509	2B	R557	7B	C537	3D
D512	2B	R558	7B	C538	6D
D513	3B	R559	6B	C539	4B
D514	2C	R560	6B	C540	3B
D515	6C	R561	7B	C542	6D
D516	2D	R562	4D	C543	2D
D517	5B	R563	2B	C544	3B
D518	2B	R564	7C	C545	7D
D519	5B	R565	4D	C546	2B
D520	4B	R566	4D	C547	7A
D521	4B	R567	4B	C548	4D
D522	4B	R568	4B	C549	4B
D523	2C	R569	2B	C550	2D
D524	5B	R570	4D	C551	4D
D526	6D	R571	3B	C552	3B
D528	4B	R572	4B	C553	3B
RL501	2C	R573	4D	C554	4C
CP500	3D	R574	4B	C555	4D
CP501	7D	R575	3C	C556	4D
JK501	8B	R576	3C	C557	4D
JK502	8C	R577	5B	C558	3C
E500	7D	R578	3C	C559	7C
E501	8A	R580	6B	C560	7C
H501	2C	R581	5B	C561	7C
R500	4D	R583	7C	C562	7C
R501	7A	R584	8C	C563	7C
R502	7B	R585	8C	C564	7C
R505	6B	R586	7A	C565	7B
R506	6B	R587	7B	C566	7A
R507	7A	R588	7C	C567	7B
R508	7A	R590	3B	C568	7B
R509	7A	R591	6D	C569	7B
R510	5D	R592	4C	C570	7B
R511	5D	R593	4C	C571	5C
R512	7B	R594	4C	C572	5C
R513	7B	R595	4C	C573	6C
R514	3D	R598	2B	C574	6C
R515	3D	R599	3B	C575	3B
R516	7A	R600	4B	C577	3B
R517	3D	R601A	3B	C578	4C
R518	3D	R606A	4C	C580	4C
R519	3D	R607A	4C	C581	4C
R520	7A	R608A	4B	C582	4D
R521	2B	R609	3B	C583	7D
R522	3D	C500	7A	C584	2C
R523	3D	C503	6A	C593	7D
R524	2C	C504	5D	C595	7A



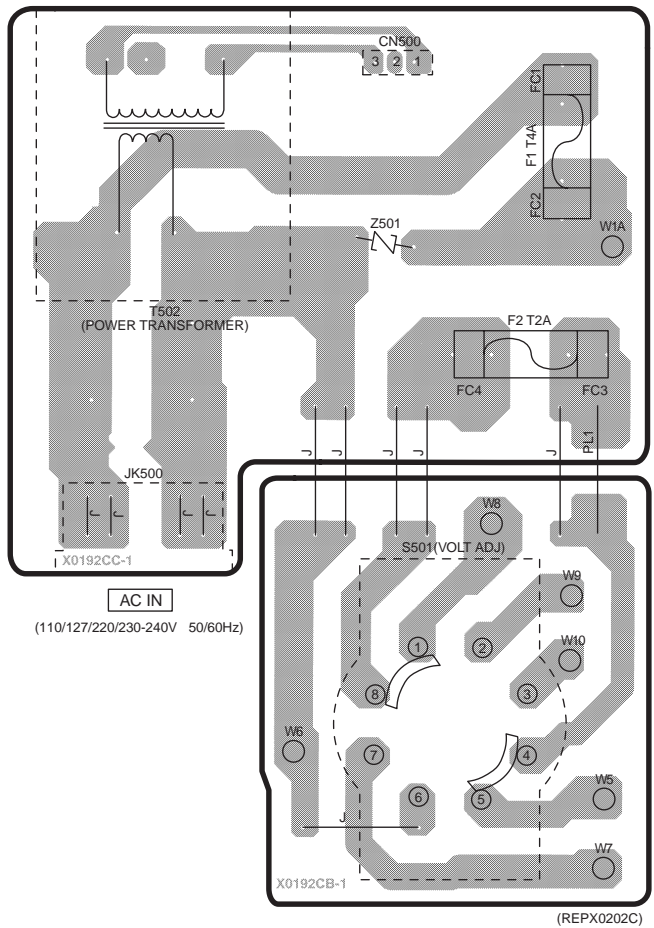
A B C D E F

1

**H** MOTOR P.C.B.



**N** AC IN P.C.B.



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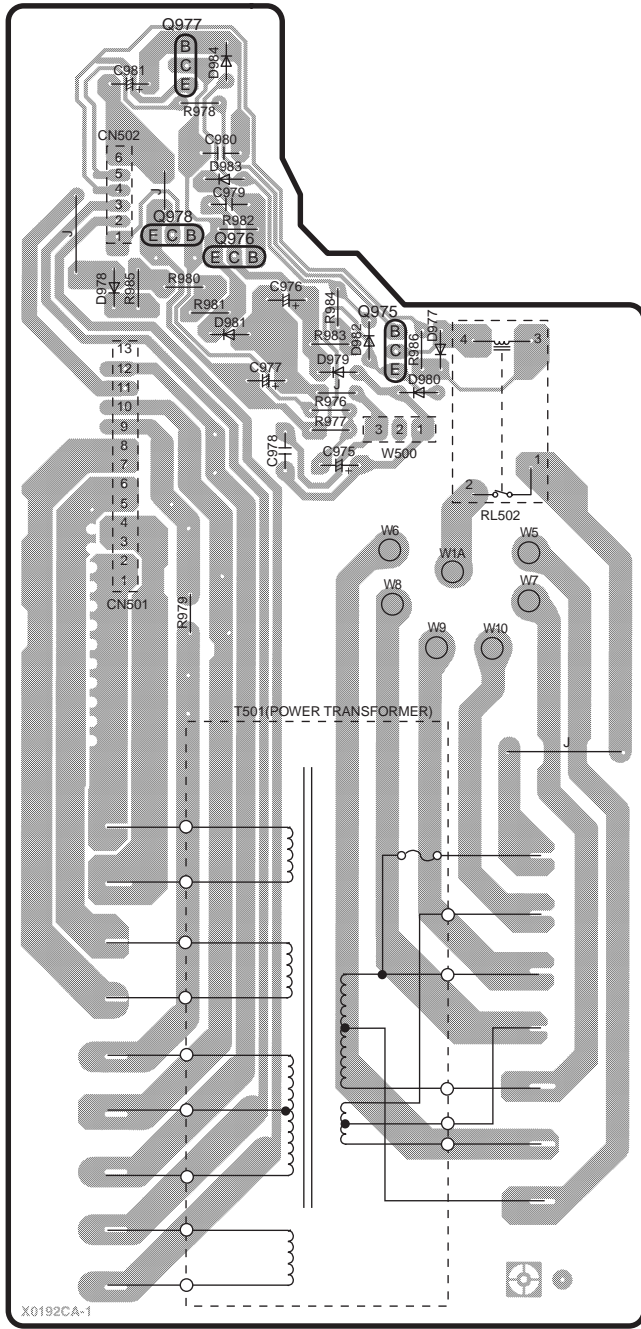
**ELECTRICAL PARTS LOCATION**

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>H</b> MOTOR P.C.B.							
IC1	3C	S2	4B	W2	4C	C2	2B
Q1	4C	S3	3C	RM1	2B		
D2	4C	CN1	4C	R1	3C		
S1	3B	W1	5C	C1	2C		
<b>N</b> AC IN P.C.B.							
T502	2D	F1	2F	W5	5F	W9	4F
S501	4E	F2	3F	W6	5E	W10	4F
Z501	2E	CN500	2E	W7	5F	JK500	4D
PL1	3F	W1A	2F	W8	4F		

A B C D E F

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8

**M** POWER TRANSFORMER P.C.B.



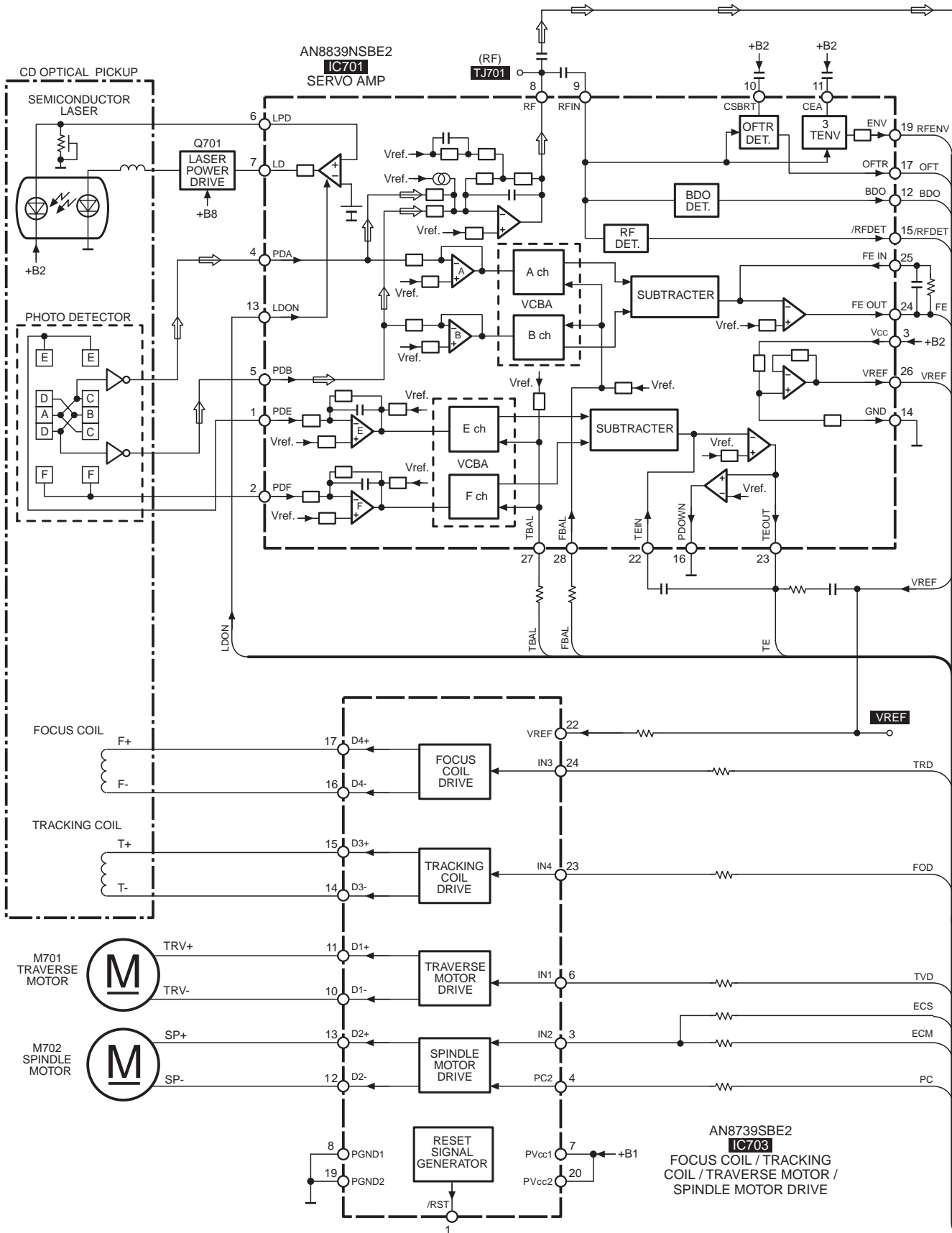
X0192CA-1  
(REPX0202C)

**ELECTRICAL PARTS LOCATION**

Ref. No.	Lo. No.	Ref. No.	Lo. No.
<b>M POWER TRANSFORMER P.C.B.</b>			
Q975	3B	W7	4D
Q976	3B	W8	4C
Q977	2B	W9	5C
Q978	3B	R976	3C
D977	3C	R977	4C
D978	3B	R978	2B
D979	3C	R979	4B
D980	3C	R980	3B
D981	3B	R981	3B
D982	3C	R982	3B
D983	2B	R983	3C
D984	2B	R984	3C
T501	5C	R985	3B
RL502	4C	R986	3C
CN501	4B	C975	4C
CN502	2B	C976	3C
W1A	4C	C977	3B
W10	5C	C978	4B
W5	4D	C979	3B
W500	4C	C980	2B
W6	4C	C981	2B

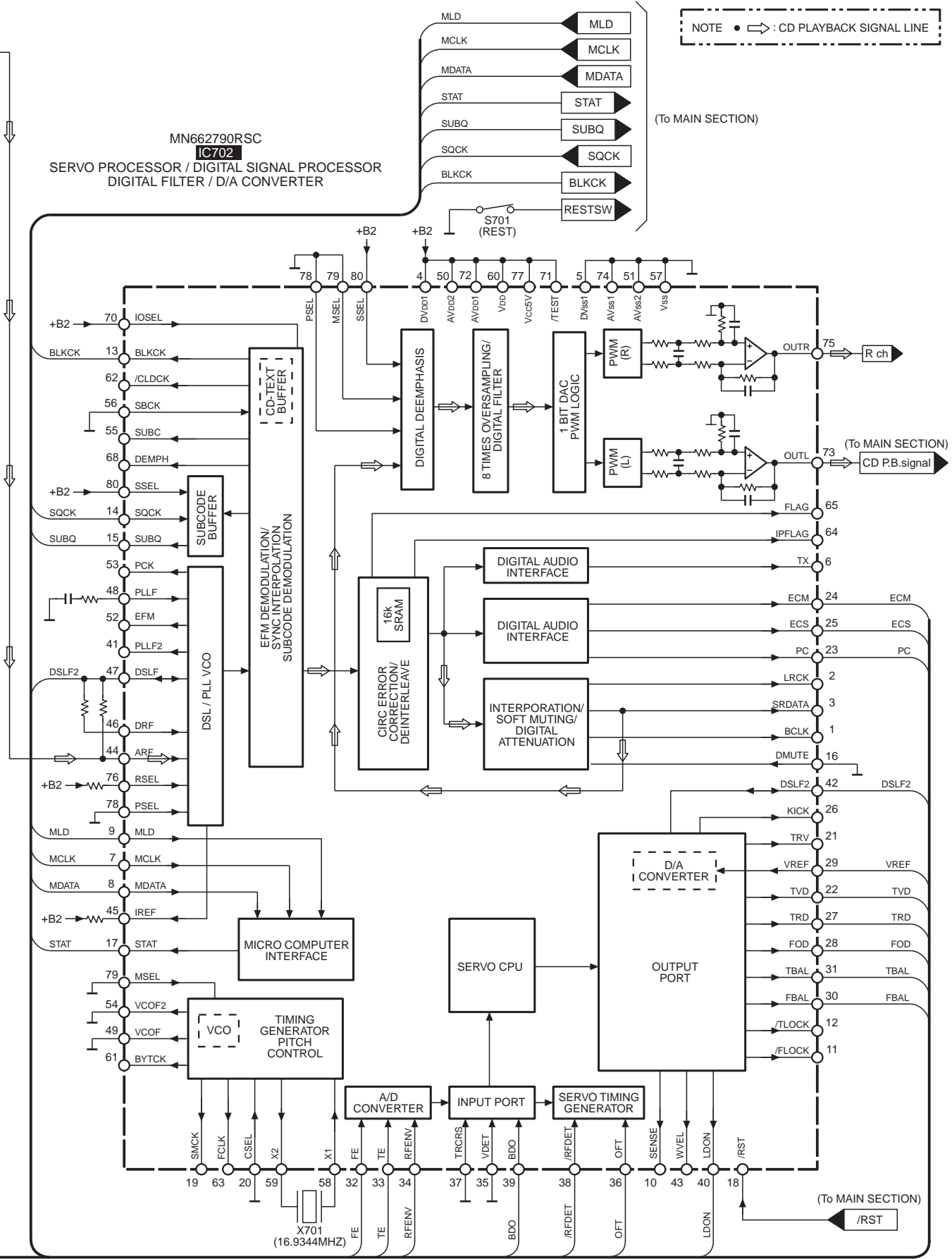
# 17 Block Diagram

## ● CD CHANGER SECTION

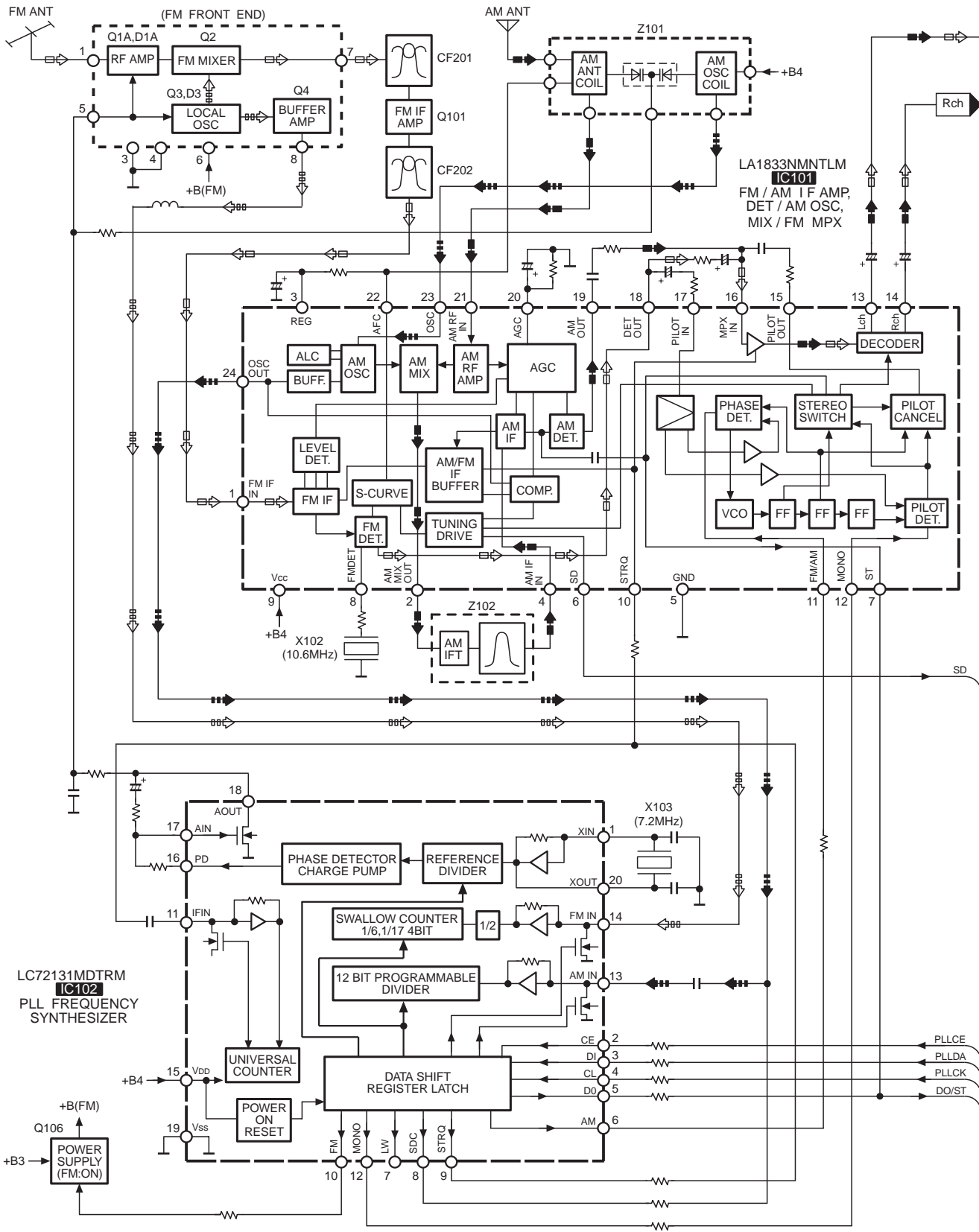


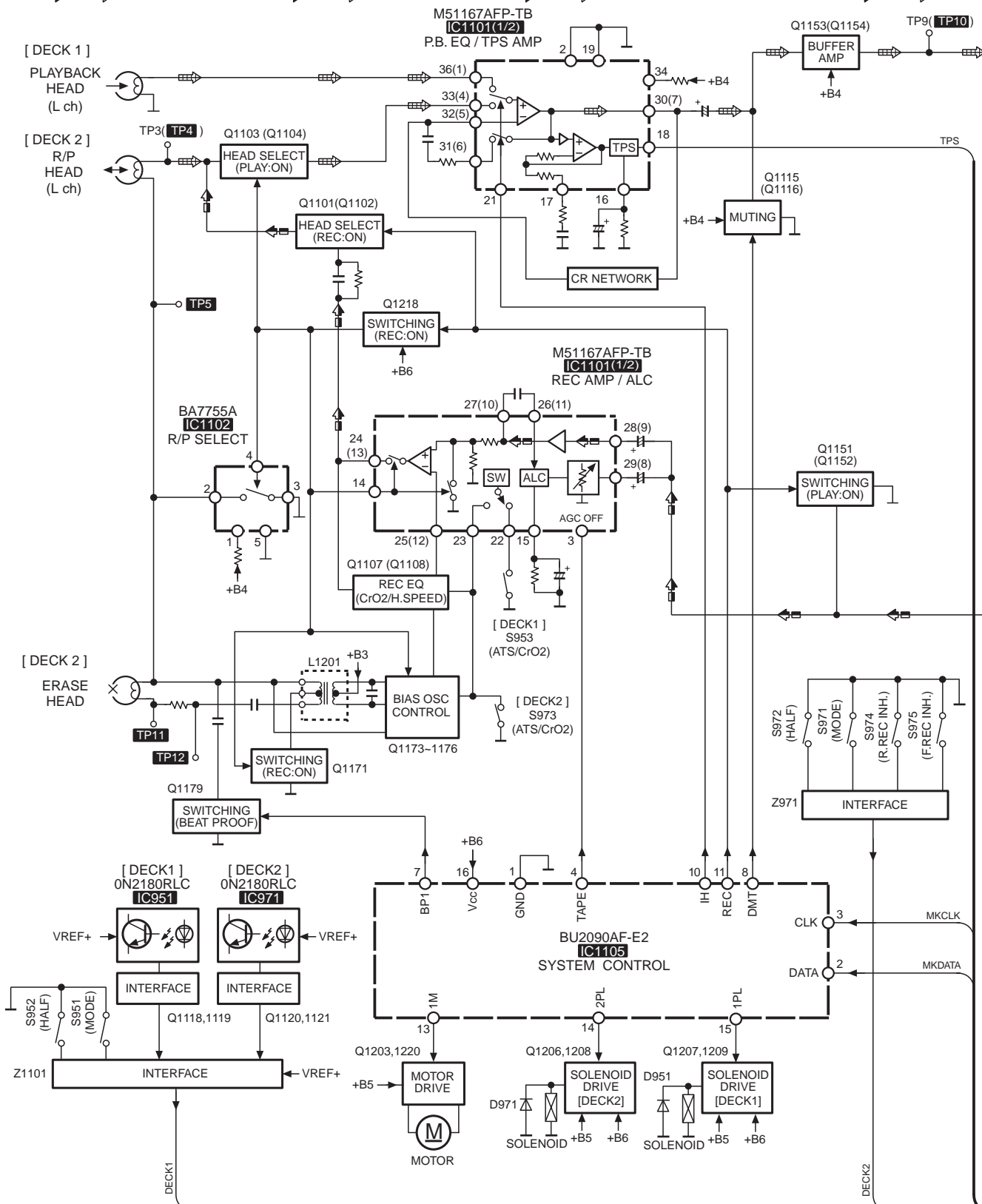
MN662790RSC  
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR  
DIGITAL FILTER / D/A CONVERTER

NOTE ● → : CD PLAYBACK SIGNAL LINE

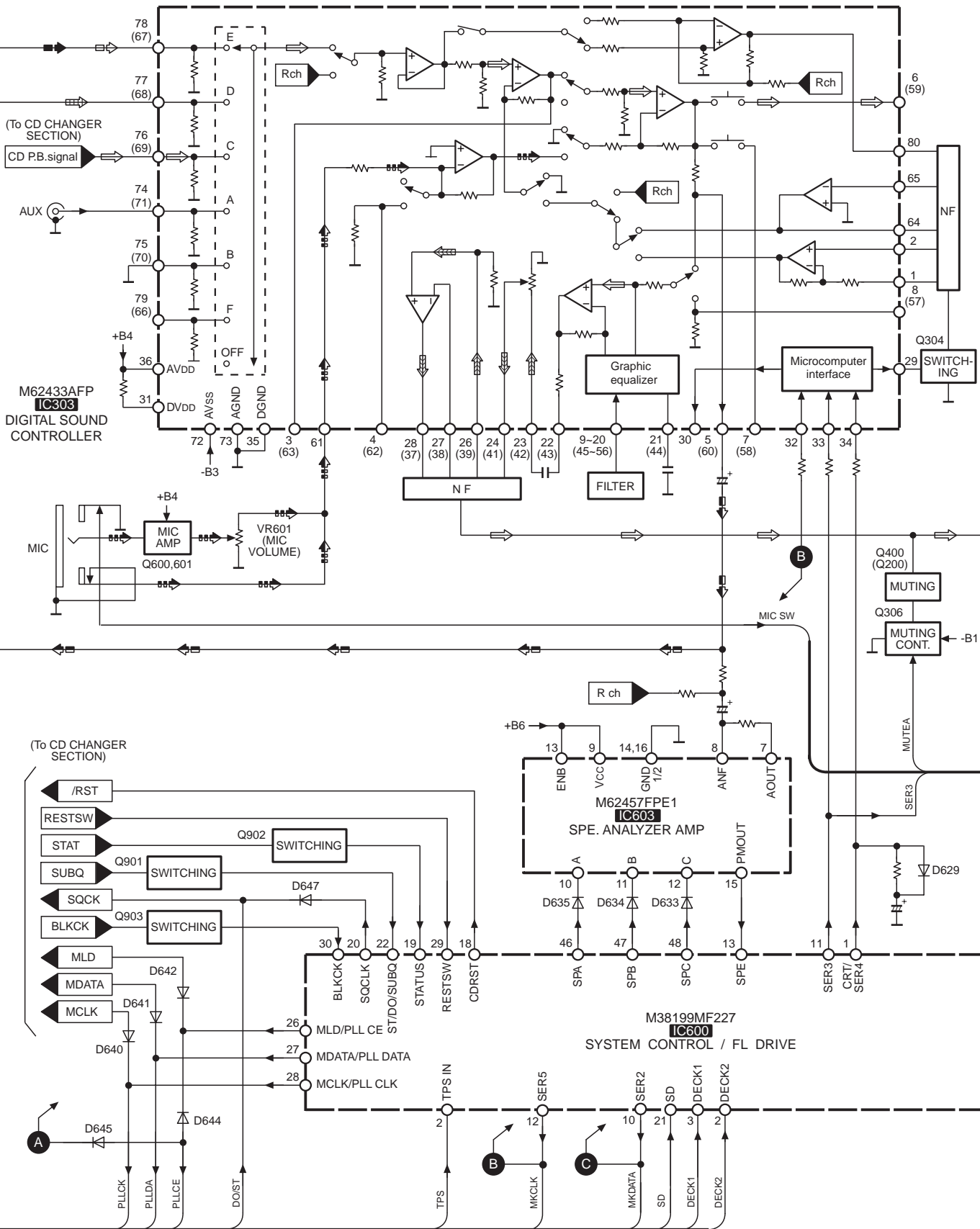


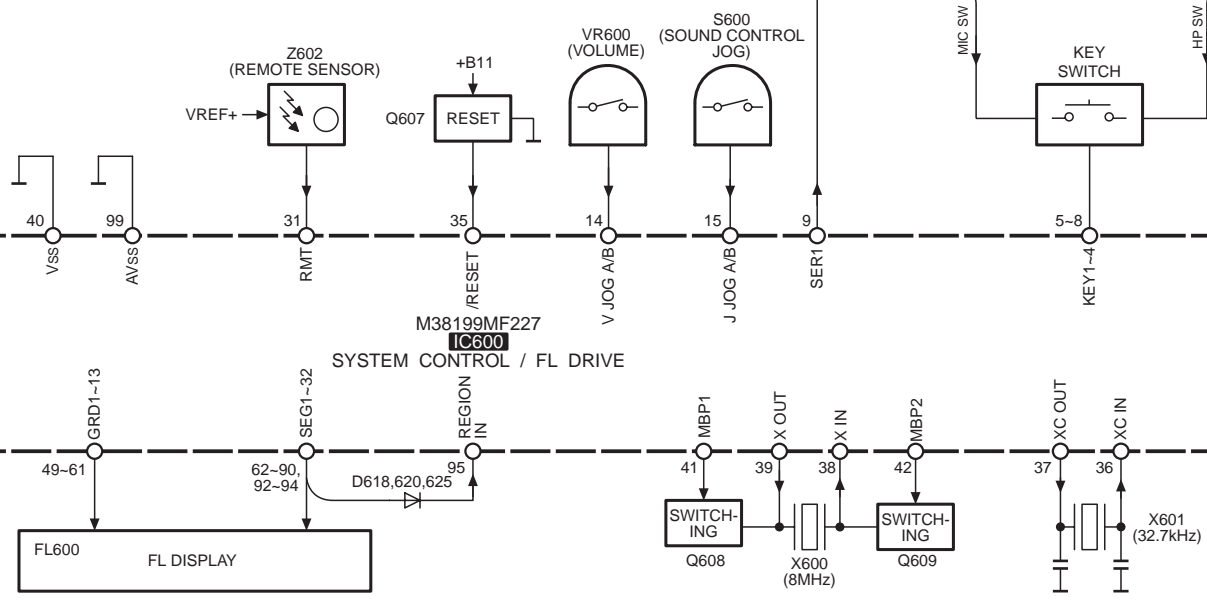
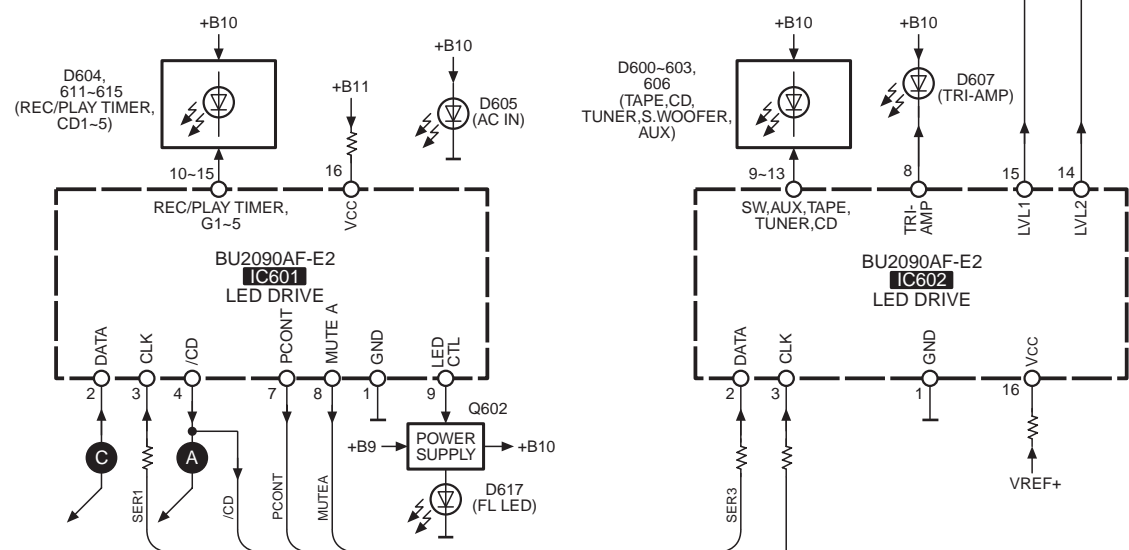
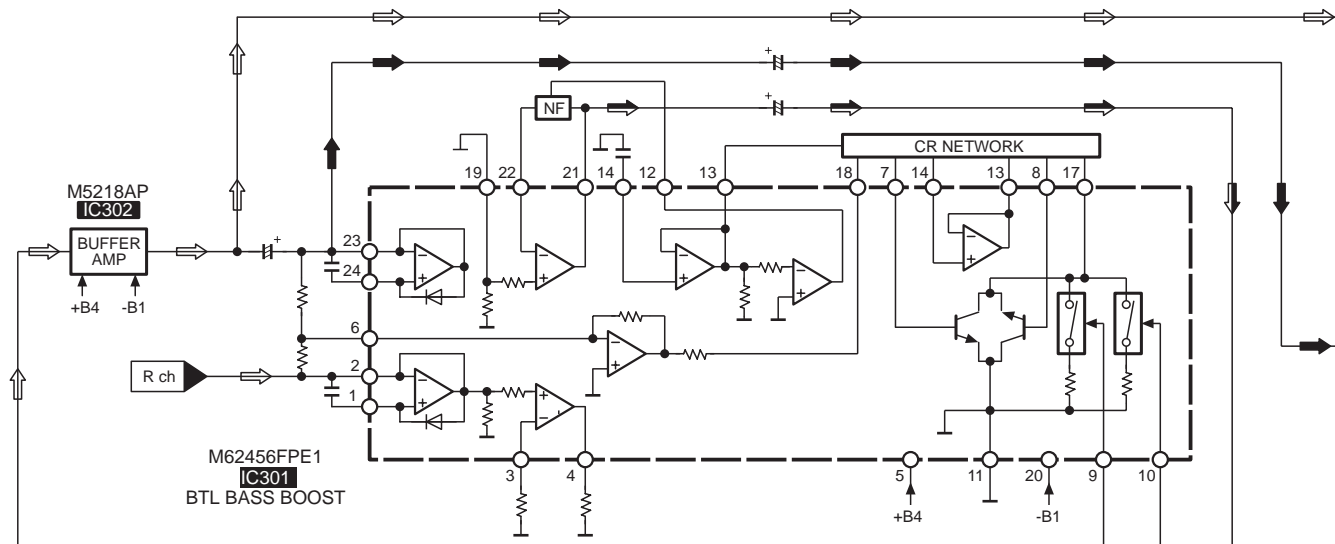
● MAIN SECTION

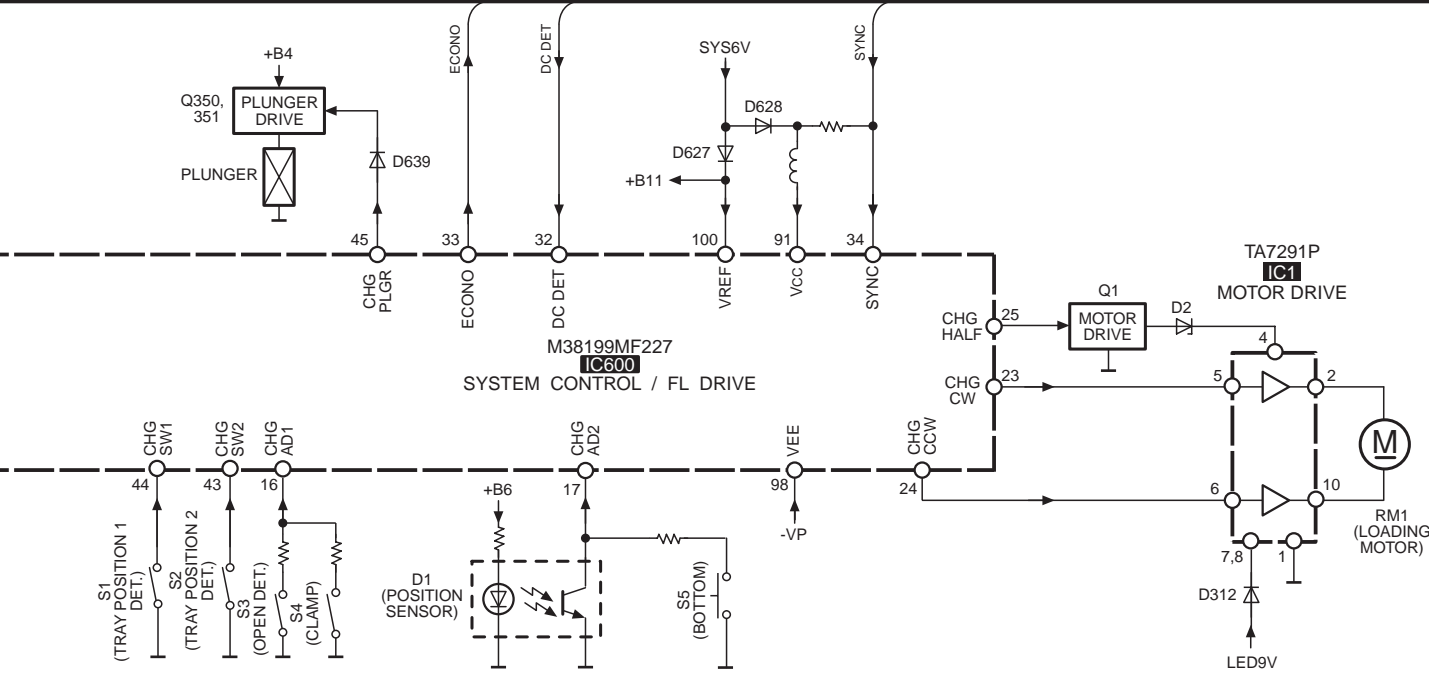
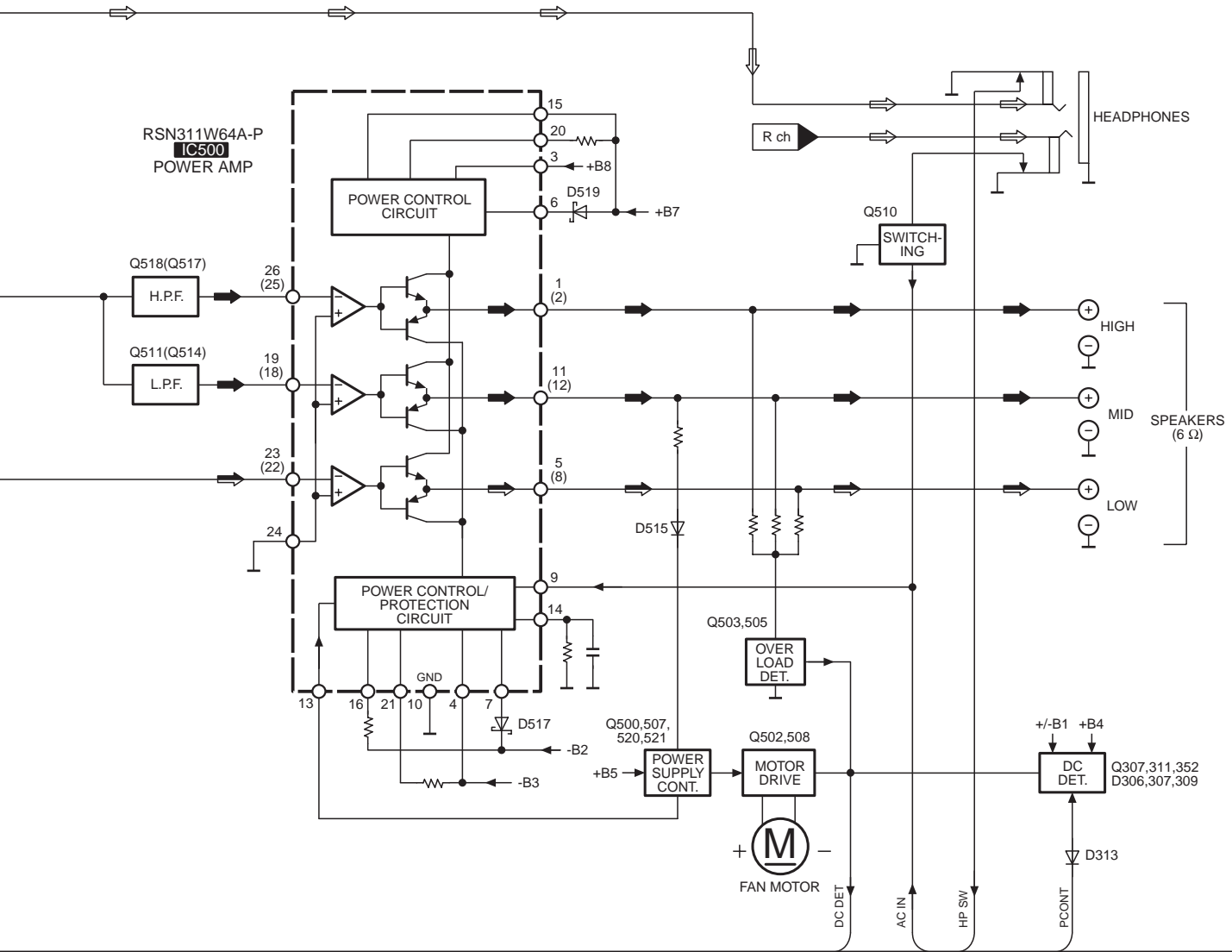


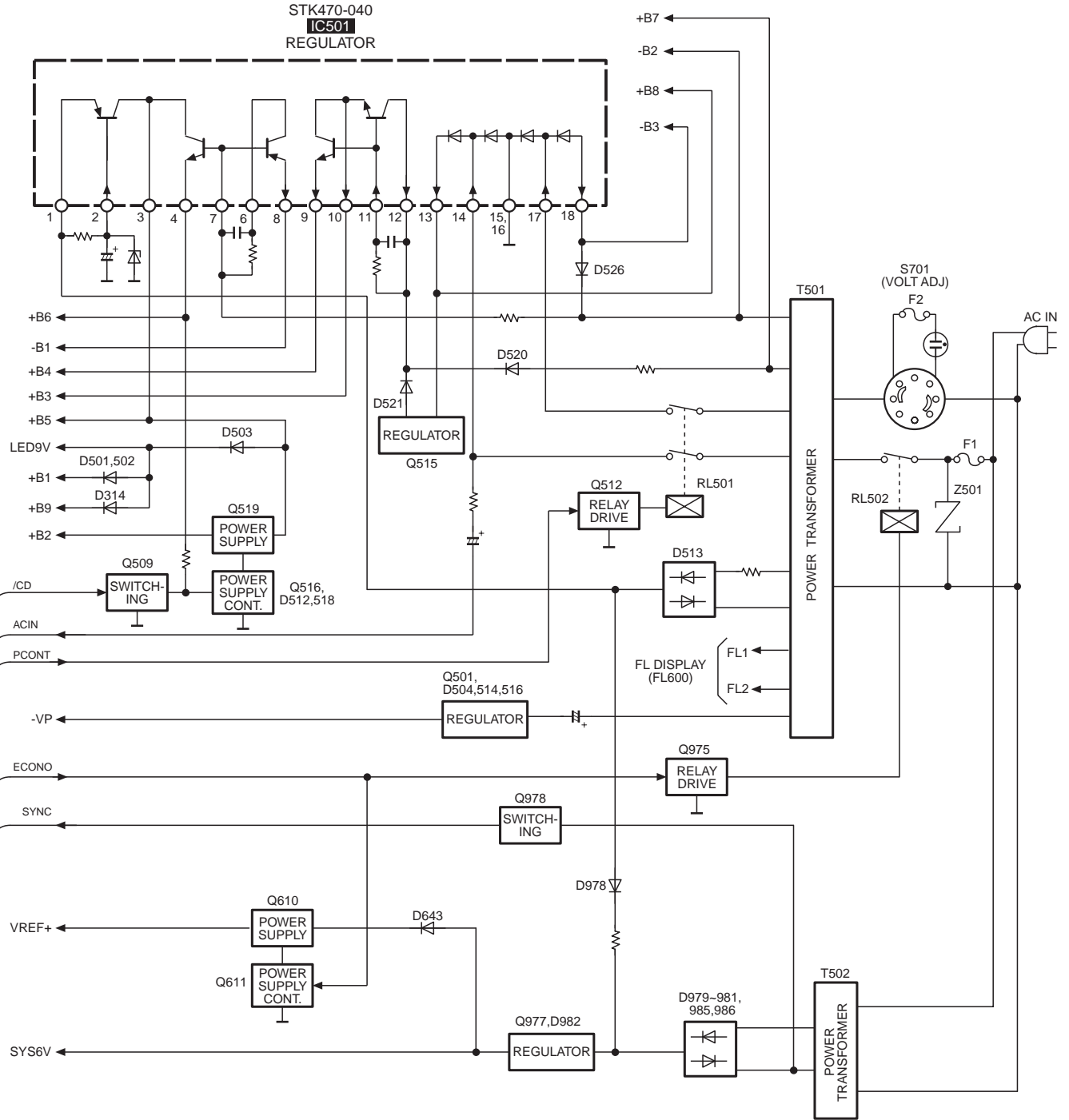






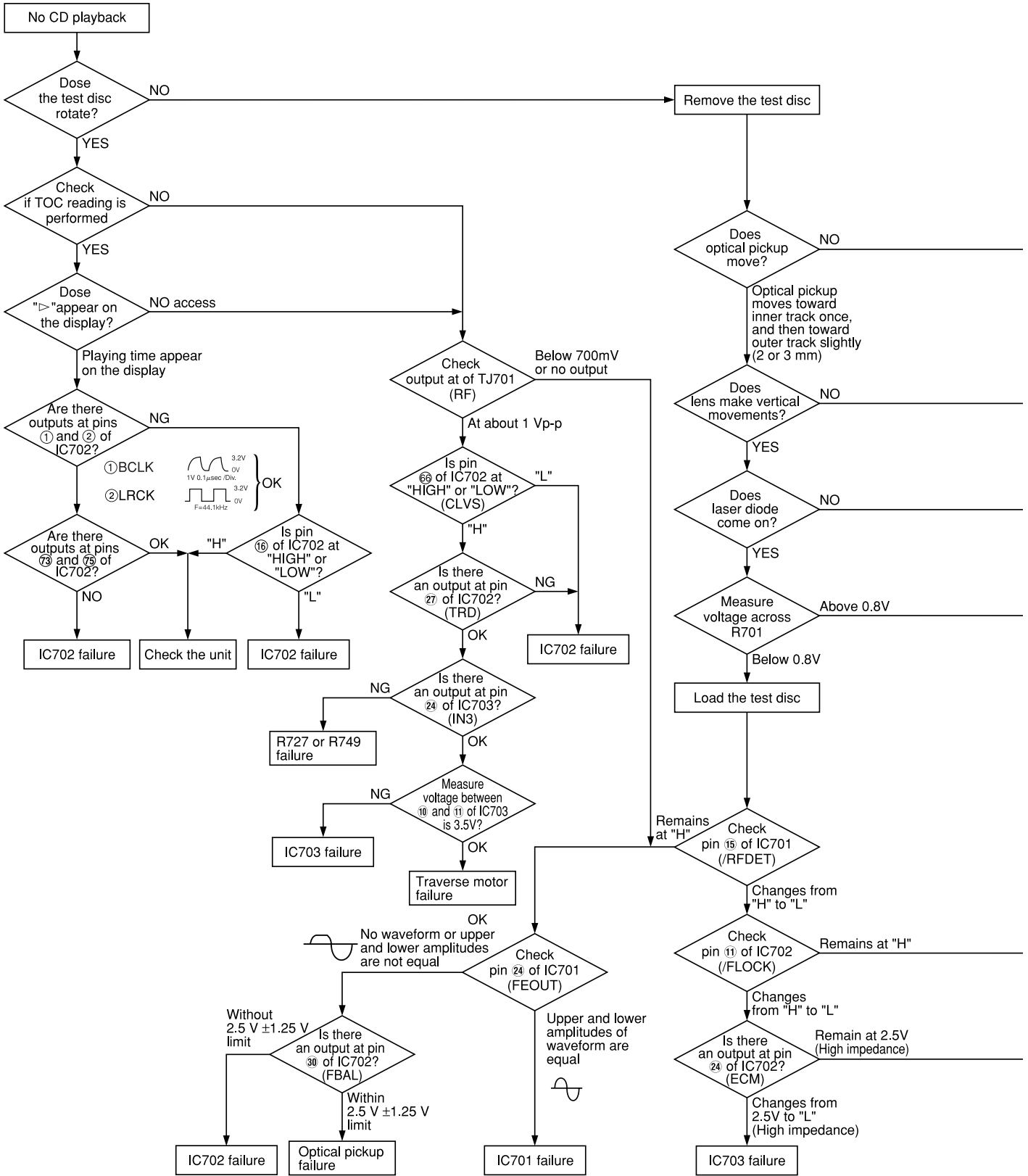


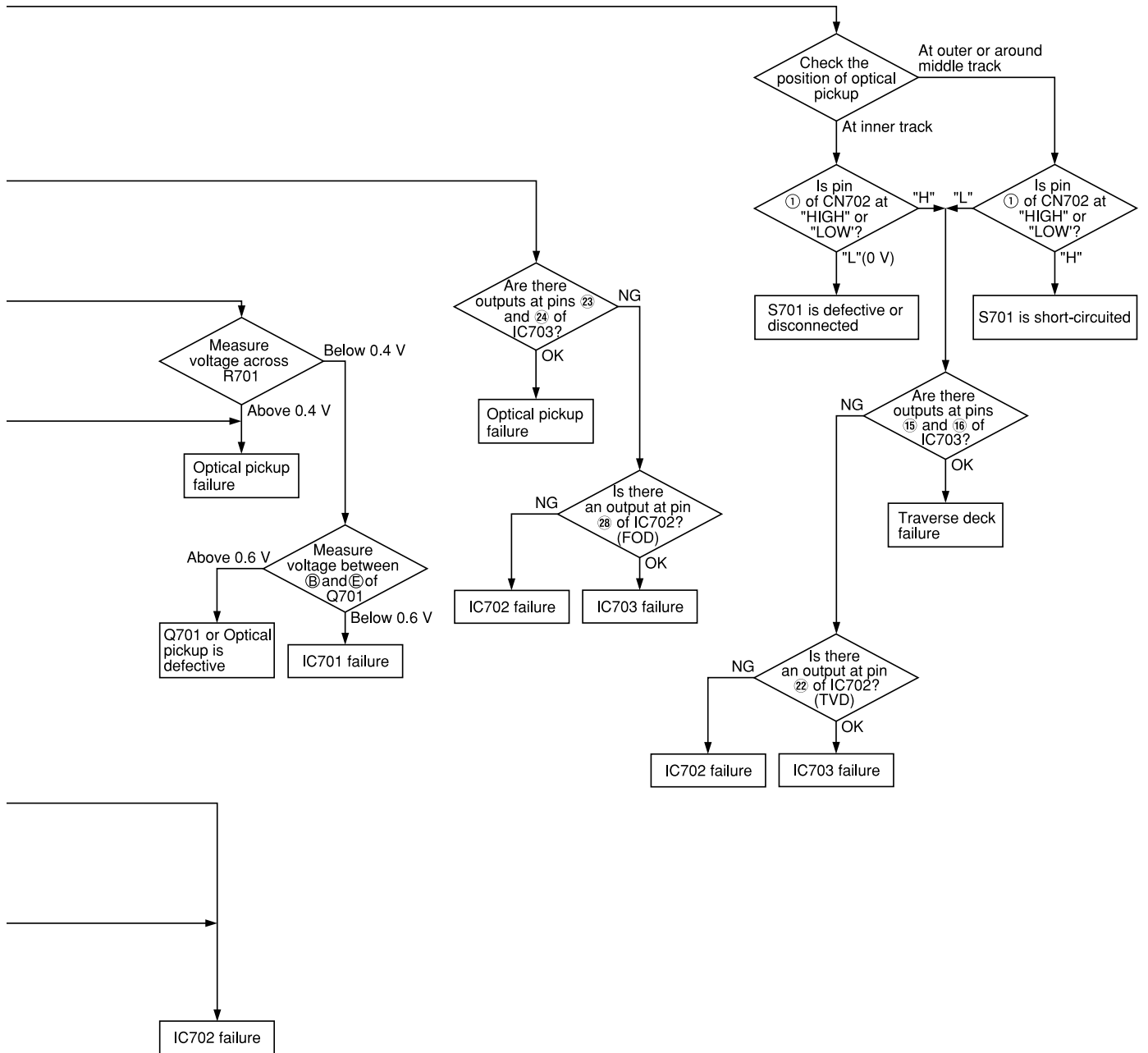




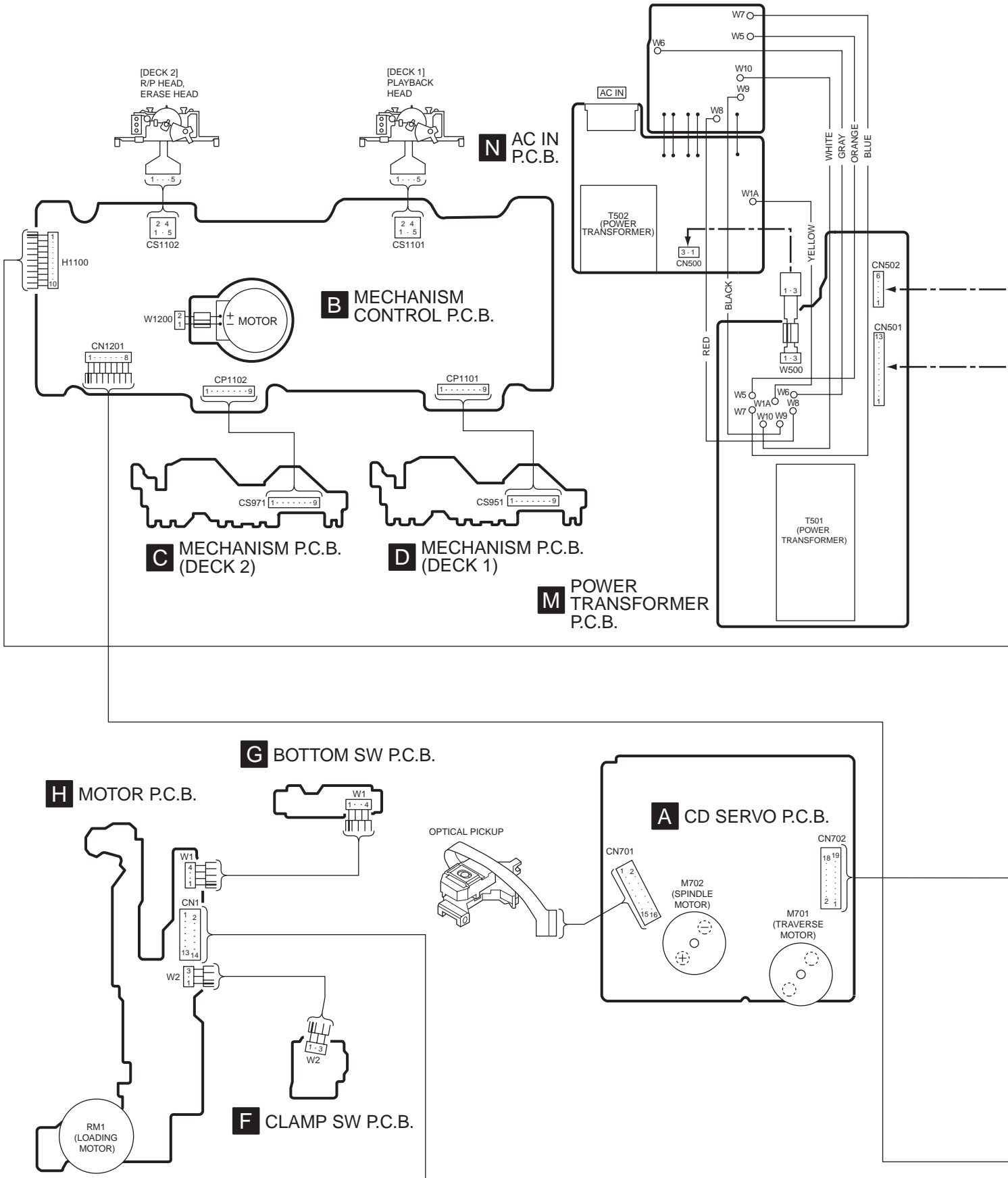
- Notes
- 1) : CD PLAYBACK SIGNAL LINE
    - : FM SIGNAL LINE
    - : FM OSC SIGNAL LINE
    - : AM SIGNAL LINE
    - : AM OSC SIGNAL LINE
    - : TAPE PLAYBACK SIGNAL LINE
    - : TAPE RECORDING SIGNAL LINE
    - : FRONT LOW SP DRIVE SIGNAL LINE
    - : FRONT MID/HIGH SP DRIVE SIGNAL LINE
    - : MIC SIGNAL LINE
  - 2) ( ) indicates pin No. of Right channel.

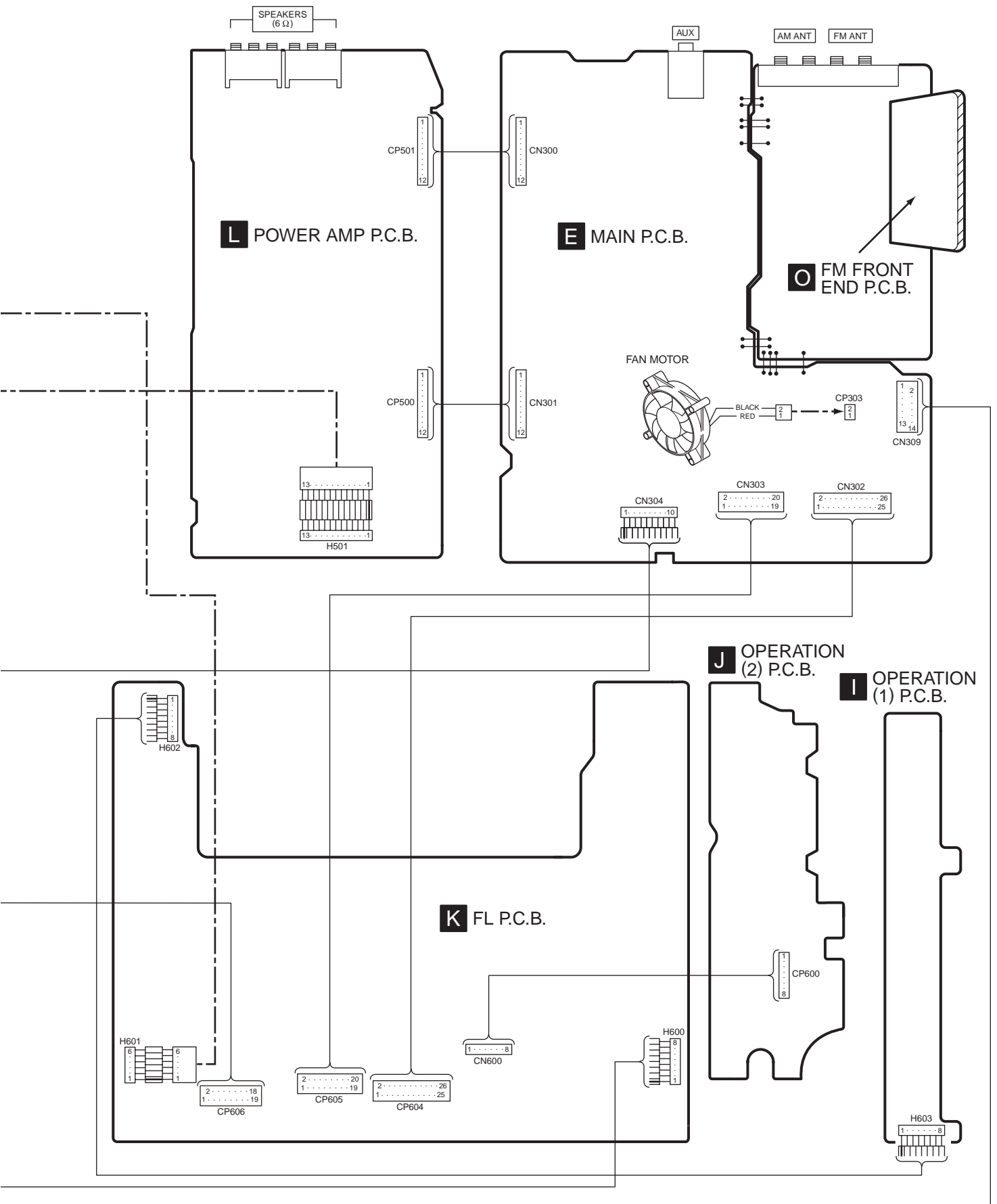
# 18 Troubleshooting Guide





# 19 Wiring Connection Diagram







## 20 Terminal Function of ICs

### 20.1. IC600 (M38199MF227): System Control and FL Driver

Pin No.	Terminal Name	I/O	Function
1	CRT/SER4	I	CRT timer
2	TPS	I	TPS signal input
3	DECK1	I	Deck1 mechanism condition input
4	DECK2	I	Deck2 mechanism condition input
5-8	KEY4-KEY1	I	Operation switch signal input
9	SER1	O	Serial clock output for IC601 and IC602
10	SER2	O	Serial data/clock output for IC601 and IC1105
11	SER3	O	Serial data output for IC602
12	SER5	O	Serial data/clock output for IC303 or IC1105
13	SPE	I	Spectrum analyzer signal input
14	V JOG A/B	I	Volume control signal input
15	J JOG A/B	I	Sound control signal input
16	CHG AD1	I	Open detect switch (S3) and clump detect switch (S4) signal input
17	CHG AD2	I	Position sensor (D1) and bottom detect switch (S5) signal input
18	CDRST	O	Reset signal output for CD circuit
19	STATUS	I	Status signal input from CD circuit
20	SQCLK	O	CD subcode clock output
21	SD	I	Station detector signal input for tuner circuit
22	ST/DO/SUBQ	I	CD subcode data input
23	CHG CW	O	CD mechanism motor control signal output (forward direction)
24	CHG CCW	O	CD mechanism motor control signal output (reverse direction)
25	CHG HALF	O	CD mechanism motor speed control signal output
26	MLD/PLLCE	O	CD command load signal output and tuner chip enable output
27	MDATA/PLDA	O	CD command data output and tuner PLL data output
28	MCLK/PLLCLK	O	CD command data output and tuner PLL clock output
29	REST SW	I	Rest switch (S701) signal input
30	BLKCK	I	CD subcode block clock input
31	RMT	I	Remote control signal input
32	DCDET	I	DC detect terminal
33	ECONO	O	Eco signal output
34	SYNC	I	AC power source detect signal input
35	/RESET	I	System reset signal input
36	XCIN	I	Oscillator connection (Sub clock : 32.768kHz)
37	XCOU	O	Oscillator connection (Sub clock : 32.768kHz)
38	XIN	I	Oscillator connection (Main clock : 8.0kHz)
39	XOUT	O	Oscillator connection (Main clock : 8.0kHz)
40	VSS	-	GND
41	MBP1	O	Beat proof control signal output
42	MBP2	O	Beat proof control signal output
43	CHG SW2	I	Disc tray position 2 detect signal input
44	CHG SW1	I	Disc tray position 1 detect signal input
45	CHG PLGR	O	CD mechanism solenoid control signal output
46	SPA	O	Spectrum analyzer band control signal output
47	SPB		
48	SPC		

Pin No.	Terminal Name	I/O	Function
49	GRD1	O	FL grid signal output
61	GRD13		
62	SEG32	O	FL segment signal output
90	SEG4		
91	VCC	I	Power supply (+5V)
92	SEG3	O	FL segment signal output
94	SEG1		
95	REG IN	I	Region select signal input
96	EEDATA	-	Not used, open
97	EECLK	-	Not used, open
98	VEE	-	Power supply (-30V)
99	AVSS	-	GND
100	VREF	I	Reference voltage input

### 20.2. IC701 (AN8839NSBE2): Servo Amp

Pin No.	Terminal Name	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (F ch)
3	V <sub>cc</sub>	I	Power supply terminal
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD signal
7	LD	O	Laser power auto control output
8	RF	O	RF amp terminal
9	RFIN	I	AGC input terminal
10	CSBRT	I	OFTR capacitor connection terminal
11	CEA	I	HPF-AMP capacitor connection terminal
12	BDO	O	Dropout detection control
13	LDON	I	LD APC ON/OFF (H: ON)
14	GND	-	GND terminal
15	/RFDET	O	RF detect signal output (L: detect)
16	PDOWN	-	Power down terminal
17	OFTR	O	Off track detection (H: detect)
18	NC	-	Not used, open
19	ENV	O	Envelope signal output
20	NC	-	Not used, open
21			
22	TEN	I	Tracking error signal input
23	TEOUT	O	Tracking error signal output
24	FEOUT	O	Focus error signal output
25	FEN	I	Focus error signal input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance adj. input
28	FBAL	I	Focus balance adj. input

### 20.3. IC702 (MN662790RSC): Servo Processor/Digital Signal Processor/Digital Filter/ D/A converter

Pin No.	Terminal Name	I/O	Function
1	BCLK	-	Serial bit clock output (Not used, open)
2	LRCK	-	L/R discriminating signal output (Not used, open)
3	SRDATA	-	Serial data signal output (Not used, open)
4	DV <sub>DD</sub> 1	I	Power supply terminal

Pin No.	Terminal Name	I/O	Function
5	DV <sub>SS1</sub>	-	GND terminal
6	TX	O	Digital audio interface signal output
7	MCLK	I	Command clock signal input
8	MDATA	I	Command data signal input
9	MLD	I	Command load signal input
10	SENSE	-	Sense signal (Not used, open)
11	/FLOCK	-	Optical servo condition (focus) (Not used, open)
12	/TLOCK	-	Optical servo condition (tracking) (Not used, open)
13	BLKCK	O	Sub-code block clock signal output (f=75 Hz)
14	SQCK	I	Sub-code Q resistor clock signal input
15	SUBQ	O	Sub-code Q data signal output
16	DMUTE	-	Muting input (Not used, connected to GND)
17	STAT	O	Status signal output
18	/RST	I	Reset signal input (L: reset)
19	SMCK	-	System clock (f=4.2336 MHz) (Not used, open)
20	CSEL	I	Frequency control terminal of crystal oscillator (Connected to V <sub>DD</sub> )
21	TRV	-	Traverse servo control signal output (Not used, open)
22	TVD	O	Traverse drive signal output
23	PC	O	Turntable motor drive signal output (L: ON)
24	ECM	O	Turntable motor drive signal output (Forced mode)
25	ECS	O	Turntable motor drive signal output (Servo error signal)
26	KICK	-	Kick pulse output (Not used, open)
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	I	D/A drive output normal voltage input
30	FBAL	O	Focus balance adj. output
31	TBAL	O	Tracking balance adj. output
32	FE	I	Focus error signal input
33	TE	I	Tracking error signal input
34	RFENV	I	RF envelope signal input
35	VDET	I	Oscillator detect signal input (H: detect)
36	OFT	I	Off track signal input (H: Off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detect signal input (L: detect)
39	BDO	I	Dropout detection signal input (H: dropout)
40	LDON	O	Laser power control signal output (H: ON)
41	PLL2	-	PLL loop filter terminal (Not used, open)
42	DSL2	I/O	DSL loop filter terminal
43	WVEL	-	Double velocity status signal output (Not used, open)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal
47	DSL2	I/O	DSL loop filter terminal
48	PLL2	I/O	PLL loop filter terminal
49	VCO2	-	VCO loop filter terminal (Not used, connected to GND)
50	AV <sub>DD2</sub>	I	Power supply terminal
51	AV <sub>SS2</sub>	-	GND terminal
52	EFM	-	EFM signal (Not used, open)
53	PCK	-	PLL extract clock (Not used, open)
54	VCO2	-	VCO loop filter terminal (Not used, connected to GND)
55	SUBC	-	Sub-code serial output clock (Not used, open)
56	SBCK	-	Sub-code serial input data (Not used, connected to GND)
57	V <sub>SS</sub>	-	GND terminal
58	X1 IN	I	Crystal oscillator terminal (f=16.9344 MHz)
59	X2 OUT	O	

Pin No.	Terminal Name	I/O	Function
60	V <sub>DD</sub>	I	Power supply terminal
61	BYTCK	-	Byte clock signal (Not used, open)
62	/CLDCK	-	Sub-code frame clock signal (Not used, open)
63	FCLK	-	Crystal frame clock (Not used, open)
64	IPFLAG	-	Interpolation flag terminal (Not used, open)
65	FLAG	-	Flag terminal (Not used, open)
66	CLVS	-	Turntable servo phase synchro signal (Not used, open)
67	CRC	-	Sub-code CRC check terminal (Not used, open)
68	DEMPH	-	De-emphasis ON signal (Not used, open)
69	RESY	-	Re-synchronizing signal of frame sync. (Not used, open)
70	IOSEL	I	I/O select signal input (Connected to V <sub>DD</sub> )
71	/TEST	I	Test terminal (Not used, connected to power supply)
72	AV <sub>DD1</sub>	I	Power supply terminal
73	OUTL	O	L ch audio signal output
74	AV <sub>SS1</sub>	-	GND terminal
75	OUTR	O	R ch audio signal output
76	RSEL	I	Polarity direction control terminal of RF signal (Not used, connected to power supply)
77	IOV <sub>DD</sub>	I	Power supply terminal
78	PSEL	I	Test terminal (Connected to GND)
79	MSEL	-	Output frequency select signal input (Not used, connected to GND)
80	SSEL	I	SUBQ output mode select signal input (Not used, connected to V <sub>DD</sub> )

## 20.4. IC703 (AN8739SBE2): Focus Coil/Tracking Coil/ Traverse Motor/Spindle Motor Drive

Pin No.	Terminal Name	I/O	Function
1	/RST	-	Not used, open
2	NC	-	Not used
3	IN2	I	Motor driver 2 input
4	PC2	I	Turntable motor drive signal input (L: ON)
5	NC	-	Not used
6	IN1	I	Motor driver 1 input
7	PV <sub>CC1</sub>	I	Driver power supply terminal 1
8	PGND1	-	Driver GND terminal 1
9	NC	-	Not used, connected to GND
10	D1-	O	Motor driver 1 output terminal (-)
11	D1+	O	Motor driver 1 output terminal (+)
12	D2-	O	Motor driver 2 output terminal (-)
13	D2+	O	Motor driver 2 output terminal (+)
14	D3-	O	Motor driver 3 output terminal (-)
15	D3+	O	Motor driver 3 output terminal (+)
16	D4-	O	Motor driver 4 output terminal (-)
17	D4+	O	Motor driver 4 output terminal (+)
18	NC	-	Not used
19	PGND2	-	Driver GND terminal 2
20	PV <sub>CC2</sub>	I	Driver power supply terminal 2
21	V <sub>CC</sub>	I	Power supply terminal
22	VREF	I	Reference voltage input terminal
23	IN4	I	Motor driver 4 input
24	IN3	I	Motor driver 3 input
25	RSTIN	I	Reset terminal (Not used, connected to GND)
26	NC	-	Not used, connected to GND

# 21 Replacement Parts List

## Notes:

- Important safety notice :  
Component identified  $\triangle$  mark have special characteristics important safety.  
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.  
When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.
- The <ODSD> mark in Remarks indicates source of supply.
- The marking (RTL) indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of item. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will on longer be available.
- [M] indicates in the remarks columns indicates parts supplied by **MESA**.

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
		CABINET AND CHASSIS		
1	REEX0065-1	20P FFC	1	[M]
2	REEX0081	19P FFC WIRE	1	[M]
3	REEX0083	14P FFC WIRE	1	[M]
4	REEX0090	26P FFC	1	[M]
5	PF4K48	FRONT PANEL	1	[M]
6	RGU1847-H	RANDOM BUTTON	1	[M]
7	RGU1855-H	DEMO BUTTON	1	[M]
8	RGU1849-Q	S. WOOFER BUTTOM	1	[M]
9	RGU1854B-H	A1 BUTTON	1	[M]
10	RGU1851-H	CONTROL BUTTON	1	[M]
11	RGL0487-Q	LIGHTING CHIP	1	[M]
12	RGU1845-H	POWER BUTTON	1	[M]
13	RGK1234-K	EQ SHEET	1	[M]
14	RGL0489-Q	CLOCK LIGHT	1	[M]
15	RGU1853-H	CLOCK BUTTON	1	[M]
16	RGU1852-H	DECK BUTTON	1	[M]
17	RKF0585-K2J	CASS. HOLDER (L)	1	[M]
18	RKF0586-K2J	CASS. HOLDER (R)	1	[M]
19	RKF0604-H	CASSETTE LID (L)	1	[M]
20	RKF0605-H	CASSETTE LID (R)	1	[M]
21	RKW0601-Q	CASSETTE WINDOW (L)	1	[M]
22	RKW0602-Q	CASSETTE WINDOW (R)	1	[M]
23	RXG0049	DAMPER GEAR UNIT	2	[M]
24	RMB0474-1	CASS. OPEN SPRING	2	[M]
25	RKW0603-V1	FL WINDOW	1	[M]
26	RUS757ZAA	CASSETTE HALF SPRING	4	[M]
27	RGK1233-Q	JOG ORNAMENT 1	1	[M]
28	RGK1240-Q	JOG ORNAMENT 2	1	[M]
29	RGK1238A-S	JOG SHEET	1	[M]
30	RGU1848A-Q	FUNCTION BUTTON	1	[M]
31	RMKX0036	BOTTOM CHASSIS	1	[M]
32	RYQ0289-S1	JOY UNIT	1	[M]
33	RMKX0038A	CD HCASSIS	1	[M]
34	SHE187-4	SPACER (TRANS)	2	[M]
35	REM0072-3	FAN	1	[M]
36	RGRX2B0016-2	REAR PANEL	1	[M]
37	RMNX0029-4	SUB-TRANS HOLDER	1	[M]
38	RKMX2B0045-DBL	TOP CABINET (BENT)	1	[M]
39	RGK1232-S	CD LID	1	[M]
40	RGW0330A-S	MAIN VOL KNOB	1	[M]
41	RGU1850A-Q	DPL BUTTON	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
42	RYQ0290-S	JOG CYLINDER UNIT	1	[M]
43	RGL0486-Q	DISC LIGHTING CHIP	1	[M]
44	RGB0113-N	PANA BADGE (HOOK TYP	1	[M]
45	RHD30002-H	SCREW	6	[M]
46	RGU1846-H	DISC BUTTON	1	[M]
47	RXXX0017-2	HEAT SINK UNIT	1	[M]
48	RMN0577	JOY CYLINDER BASE	2	[M]
49	RGLX0025-Q	TRI-AMP LIGHT CHIP	1	[M]
50	RKA0059-K	LEG RUBBER	1	[M]
51	RMNX0030	FL HOLDER	1	[M]
52	RMRX0030	HEAT SINK SUPPORT	1	[M]
53	RMNX0019	PCB SPACER	1	[M]
54	RGW0341-S	MIC KNOB	1	[M]
55	XTW3+15T	SCREW	4	[M]
56	XTB3+10JFZ	SCREW	5	[M]
57	XTBS3+8JFZ1	SCREW	26	[M]
58	XTBS26+10J	SCREW	20	[M]
59	XTB3+20J	SCREW	2	[M]
60	XTW3+12T	SCREW	4	[M]
61	XTB3+10J	SCREW	2	[M]
62	RSC0027-2	TUNER PACK	1	[M]
		CASSETTE DECK		
101	RED0050	R/P HEAD BLOCK UNIT	1	[M]
101-1	RHE5152ZB	SCREW	2	[M]
102	RED0051	P/B HEAD BLOCK UNIT	1	[M]
102-1	RHE5152ZB	SCREW	2	[M]
103	RDG0300	REEL BASE GEAR	4	[M]
104	RDG0301	WINDING RELAY GEAR	2	[M]
105	RDK0026	MAIN GEAR	2	[M]
106	RDR0029	RELAY PULLEY	1	[M]
107	RDV0033-4	WINDING BELT	2	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	1	[M]
109	RDV0057	MAIN BELT B	1	[M]
110	RMB0312	TRIGGER LEVER SPRING	2	[M]
111	RMB0400	REEL SPRING	4	[M]
112	RMB0403	HEAB PANEL SPRING	2	[M]
113	RMB0404	BRAKE ROD SPRING	2	[M]
114	RMB0406	FR LEVER SP	2	[M]
115	RMB0408	THRUST SPRING	2	[M]
116	RML0370	TRIGGER LEVER	2	[M]
117	RML0371	FR LEVER	2	[M]
118	RML0372	WINDING LEVER	2	[M]
119	RML0374	EJECT LEVER	2	[M]
120	RMM0131	BRAKE ROD	2	[M]
121	RMM0133-1	EJECT ROD	2	[M]
122	RMQ0519	REEL HUB	4	[M]
123	RMS0398-1	MOVING CORE	2	[M]
124	RSJ0003	PLUNGER	2	[M]
125	RMC0061	PACK SPRING	2	[M]
126	RXF0061	FLYWHEEL 'F' ASS'Y	2	[M]
127	RXF0062	FLYWHEEL 'R' ASS'Y	2	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	2	[M]
129	RMK0283A-J	SUB CHASSIS	2	[M]
130	RXL0124	PINCH ROLLER 'F' ASS	2	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	2	[M]
131	RXL0125	PINCH ROLLER 'R' ASS	2	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	2	[M]
132	RXL0126	WINDING ARM ASS'Y	2	[M]
133	RXQ0412	HEAD PANEL ASS'Y	2	[M]
133-1	RMB0405	FR ROD SPRING	2	[M]
133-2	RMM0132	FR ROD	2	[M]
134	REM0088	CAP MOTOR ASS'Y	1	[M]
135	RHD26022	MOTOR SCREW	2	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	4	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	6	[M]
138	XYC2+JF17	PCB EARTH SCREW	2	[M]
139	RFKJXD70-K	CHASSIS ASS'Y	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
		TRAVERSE DECK		
301	RML0517	TIMING LEVER	1	[M]
302	RML0516	PLUNGER LEVER	1	[M]
303	RMB0551	UPPER SPINDLE SPRING	1	[M]
304	RMQ0744	LOWER HOOK	1	[M]
305	RDV0056	BELT	1	[M]
306	RML0525	FRONT LOCK LEVER	1	[M]
307	RML0526	DISC LEVER	1	[M]
308	RDG0424	DRIVE GEAR	1	[M]
309	RDG0425	CHANGE GEAR	1	[M]
310	RDG0427	TRAVERSE CAM GEAR	1	[M]
311	RDG0428	TRAVERSE RELAY GEAR	1	[M]
312	RDG0426	UP/DOWN GEAR	1	[M]
313	RDG0429	PULLEY GEAR	1	[M]
314	RMB0549-1	CHANGE GEAR SPRING	1	[M]
315	RMQ0748	PITCH PLATE	1	[M]
316	RMB0553	PUSH SPRING	1	[M]
317	RML0530	ASSIST LEVER	1	[M]
318	RML0518	CONNECTION LEVER	1	[M]
319	RMM0201	SLIDE PLATE 1	1	[M]
320	RME0258	REAR LOCK SPRING	1	[M]
321	RML0521	REAR LOCK	1	[M]
322	RME0257	TRAY LOCK LEVER SPRI	1	[M]
323	RML0520	TRAY LOCK	1	[M]
324	RMM0202	SLIDE PLATE 2	1	[M]
325	XTB3+10J	SCREW	11	[M]
326	RMR0334	FIXED PLATE	1	[M]
327	RMR0624-W2	CLAMPER	1	[M]
328	RMB0561	ASSIST LEVER SPRING	1	[M]
329	RMR1121-K	MECHA COVER	1	[M]
330	RMA1110-2	TRAY ANGLE	1	[M]
331	RMR1122-H1	TRAY BASE	1	[M]
332	RMM0204	CARRIER	1	[M]
333	RMM0203	DRIVE RACK	1	[M]
334	RDG0432	SPEED UP GEAR	1	[M]
335	RML0524	SLIDE LOCK	1	[M]
336	RML0523	CARRIER LOCK	1	[M]
337	RME0260-1	SLIDE LOCK SPRING	1	[M]
338	RMR1123-H	TRAY	1	[M]
339	RXQ0595	MOTOR SUB ASS`Y	1	[M]
341	RSJ0003	SOLENOID ASS`Y	1	[M]
343	RMA1106	UPPER PLATE	1	[M]
344	RML0519	8CD LEVER	1	[M]
345	RFKNAAK27GCS	MECHA BASE ASS`Y	1	[M]
346	RML0522	TURNING STOPPER	1	[M]
347	RMQ0745	LOWER SPINDLE	1	[M]
348	RMQ0746	UP/DOWN BASE	1	[M]
349	RMB0550	LOWER SPINDLE SPRING	1	[M]
350	RMQ0747	UPPER HOOK	1	[M]
351	RME0263	CLICK SPRING	1	[M]
352	RMQ0743	SPINDLE SHAFT	1	[M]
353	RMB0552	CUSHION SPRING	1	[M]
354	RDG0430	RELAY GEAR `A`	1	[M]
355	RDG0431	RELAY GEAR `B`	1	[M]
356	RME0262	DISK LEVER SP.	1	[M]
357	RMA1105	SUPPORT PLATE	1	[M]
358	RAE0152Z-3	TRAVERSE	1	[M]
358-1	SHGD113-1	FLOATING CUSHION	3	[M]
358-2	SNSD38	TRV MOTOR ASS`Y SCRE	2	[M]
359	RME0142	FLOATING SPRING A	1	[M]
360	RME0109	FLOATING SPRING B	2	[M]
361	RMR1124-K1	TRAVERSE CHASSIS	1	[M]
362	RMS0632	TRAVERSE PIN	3	[M]
363	XTN2+6G	SCREW	3	[M]
364	RXQ0304-1	NUT PLATE ASS`Y	1	[M]
365	RXQ0339	TRAVERSE MOTOR ASS`Y	1	[M]
366	XQN17+CG5	NUT PLATE ASS`Y SCRE	1	[M]
369	RMX0141	PUSH SPACER	1	[M]
370	RMQ0749	UPPER SPINDLE	1	[M]
371	RHM0001	MAGNET	5	[M]
372	RMX0140	DISC SPACER	1	[M]
373	RME0261	FRONT LOCK SPRING	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
374	RMQ0742	SPINDLE BASE	1	[M]
		INTEGRATED CIRCUITS		
IC1	TA7291P	IC DRIVE	1	[M]
IC101	LA1833NMNTLM	IC IF & MPX	1	[M]
IC102	LC72131MDTRM	IC PLL	1	[M]
IC301	M62456FPE1	IC BTL	1	[M]
IC302	M5218AP	IC BUFFER AMP	1	[M]
IC303	M62433AFP	IC AUDIO	1	[M]
IC500	RSN311W64A-P	IC HIC	1	[M] △
IC501	STR470-040	IC HIC	1	[M] △
IC600	M38199MF227	IC MICRO PROCESSOR	1	[M]
IC601	BU2090AF-E2	IC I/O EXPANDER	1	[M]
IC602	BU2090AF-E2	IC I/O EXPANDER	1	[M]
IC603	M62457FPE1	IC SPEANA	1	[M]
IC701	AN8839NSBE2	IC RF HEAD AMP	1	[M]
IC702	MN662790RSC	IC LSI	1	[M]
IC703	AN8739SBE2	IC 4CH DRIVER	1	[M]
IC951	0N2180RLC1	IC PHOTO INTERRUPTOR	1	[M]
IC971	0N2180RLC1	IC PHOTO INTERRUPTOR	1	[M]
IC1101	M51167AFP-TB	IC R/P	1	[M]
IC1102	BA7755A	IC SW	1	[M]
IC1105	BU2090AF-E2	IC I/O EXPANDER	1	[M]
		TRANSISTORS		
Q1	2SK544F-AC	TRANSISTOR	1	[M]
Q1	RVTDTC143EST	TRANSISTOR	1	[M]
Q2	2SC2786MTA	TRANSISTOR	1	[M]
Q3	2SC2787FL1TA	TRANSISTOR	1	[M]
Q4	2SC2787FL1TA	TRANSISTOR	1	[M]
Q101	2SC2058SPTA	TRANSISTOR	1	[M]
Q106	KRA102MTA	TRANSISTOR	1	[M]
Q200	KTD1304TA	TRANSISTOR	1	[M]
Q304	KTC3875GRTA	TRANSISTOR	1	[M]
Q306	KRA102STA	TRANSISTOR	1	[M]
Q307	KRC111STA	TRANSISTOR	1	[M]
Q311	KRC111STA	TRANSISTOR	1	[M]
Q350	2SB621ARSTA	TRANSISTOR	1	[M]
Q351	KRC102STA	TRANSISTOR	1	[M]
Q352	KRA102STA	TRANSISTOR	1	[M]
Q400	KTD1304TA	TRANSISTOR	1	[M]
Q500	2SB621ARSTA	TRANSISTOR	1	[M]
Q501	2SB621ARSTA	TRANSISTOR	1	[M] △
Q502	KTC3199GRTA	TRANSISTOR	1	[M]
Q503	KTC3199GRTA	TRANSISTOR	1	[M]
Q505	KTC3199GRTA	TRANSISTOR	1	[M]
Q507	KTC3199GRTA	TRANSISTOR	1	[M]
Q508	KTC3199GRTA	TRANSISTOR	1	[M]
Q509	KRC110MTA	TRANSISTOR	1	[M]
Q510	2SD2144STA	TRANSISTOR	1	[M]
Q511	KTC3199GRTA	TRANSISTOR	1	[M]
Q512	2SC1740SSSTA	TRANSISTOR	1	[M]
Q514	KTC3199GRTA	TRANSISTOR	1	[M]
Q515	2SC3940AQSTA	TRANSISTOR	1	[M] △
Q516	KTC3199GRTA	TRANSISTOR	1	[M]
Q517	KTC3199GRTA	TRANSISTOR	1	[M]
Q518	KTC3199GRTA	TRANSISTOR	1	[M]
Q519	2SB1436R	TRANSISTOR	1	[M]
Q520	KTC3199GRTA	TRANSISTOR	1	[M]
Q521	KRA102MTA	TRANSISTOR	1	[M]
Q600	2SC1740SSSTA	TRANSISTOR	1	[M]
Q601	KTC3199GRTA	TRANSISTOR	1	[M]
Q602	KTA12710YTA	TRANSISTOR	1	[M]
Q605	KTC3199GRTA	TRANSISTOR	1	[M]
Q606	KTC3199GRTA	TRANSISTOR	1	[M]
Q607	KRC103MTA	TRANSISTOR	1	[M]
Q608	KTC3199GRTA	TRANSISTOR	1	[M]
Q609	KTC3199GRTA	TRANSISTOR	1	[M]
Q610	2SA933SSTA	TRANSISTOR	1	[M]
Q611	KRC102MTA	TRANSISTOR	1	[M]
Q701	2SA1037AKSTX	TRANSISTOR	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
Q901	RVTDTTC143EST	TRANSISTOR	1	[M]
Q902	RVTDTTC143EST	TRANSISTOR	1	[M]
Q903	RVTDTTC143EST	TRANSISTOR	1	[M]
Q975	2SC1740SSTA	TRANSISTOR	1	[M]
Q976	2SD2144STA	TRANSISTOR	1	[M]
Q977	2SC3940AQSTA	TRANSISTOR	1	[M] △
Q978	KRC102MTA	TRANSISTOR	1	[M]
Q1101	2SJ498CDTA	TRANSISTOR	1	[M]
Q1102	2SJ498CDTA	TRANSISTOR	1	[M]
Q1103	2SJ498CDTA	TRANSISTOR	1	[M]
Q1104	2SJ498CDTA	TRANSISTOR	1	[M]
Q1107	DTC144TKA146	TRANSISTOR	1	[M]
Q1108	DTC144TKA146	TRANSISTOR	1	[M]
Q1115	2SD2114K1V	TRANSISTOR	1	[M]
Q1116	2SD2114K1V	TRANSISTOR	1	[M]
Q1118	2SC2412KT96R	TRANSISTOR	1	[M]
Q1119	2SC2412KT96R	TRANSISTOR	1	[M]
Q1120	2SC2412KT96R	TRANSISTOR	1	[M]
Q1121	2SC2412KT96R	TRANSISTOR	1	[M]
Q1151	DTC144TKA146	TRANSISTOR	1	[M]
Q1152	DTC144TKA146	TRANSISTOR	1	[M]
Q1153	2SC2412KT96R	TRANSISTOR	1	[M]
Q1154	2SC2412KT96R	TRANSISTOR	1	[M]
Q1171	2SD1302STA	TRANSISTOR	1	[M]
Q1173	DTC144TKA146	TRANSISTOR	1	[M]
Q1174	2SC2412KT96R	TRANSISTOR	1	[M]
Q1175	2SC2002KTA	TRANSISTOR	1	[M]
Q1176	2SC2002KTA	TRANSISTOR	1	[M]
Q1179	2SC2412KT96R	TRANSISTOR	1	[M]
Q1203	2SD965RTA	TRANSISTOR	1	[M]
Q1206	2SB621RTA	TRANSISTOR	1	[M]
Q1207	2SB621RTA	TRANSISTOR	1	[M]
Q1208	DTC114TKA146	TRANSISTOR	1	[M]
Q1209	DTC114TKA146	TRANSISTOR	1	[M]
Q1218	DTA114EKA146	TRANSISTOR	1	[M]
Q1220	DTA143XKA146	TRANSISTOR	1	[M]
		DIODES		
D1	GP1894	DIODE	1	[M]
D1A	SVC211SPA-AL	DIODE	1	[M]
D2	MTZJ4R7BTA	DIODE	1	[M]
D2A	SVC211SPA-AL	DIODE	1	[M]
D3	SVC211SPA-AL	DIODE	1	[M]
D101	UDZSTE175R1B	DIODE	1	[M] △
D201	1SS355TE17	DIODE	1	[M]
D302	UDZSTE175R1B	DIODE	1	[M]
D306	DAP202KT146	DIODE	1	[M]
D307	DAP202KT146	DIODE	1	[M]
D308	1SS355TE17	DIODE	1	[M]
D309	1SS355TE17	DIODE	1	[M]
D311	1SS355TE17	DIODE	1	[M]
D312	RL1N4003S-P	DIODE	1	[M]
D313	1SS355TE17	DIODE	1	[M]
D314	RL1N4003S-P	DIODE	1	[M]
D315	1SS355TE17	DIODE	1	[M]
D316	RL1N4003S-P	DIODE	1	[M]
D317	1SS355TE17	DIODE	1	[M]
D401	1SS355TE17	DIODE	1	[M]
D501	1D3E	DIODE	1	[M]
D502	RL1N4003S-P	DIODE	1	[M]
D503	RL1N4003S-P	DIODE	1	[M]
D504	MTZJ30BTA	DIODE	1	[M] △
D505	MA700ATA	DIODE	1	[M]
D506	MA700ATA	DIODE	1	[M]
D507	MTZJ10BTA	DIODE	1	[M]
D508	MTZJ16BTA	DIODE	1	[M]
D509	MTZJ12BTA	DIODE	1	[M]
D512	RVD1SS133TA	DIODE	1	[M]
D513	KBP152G4R5	DIODE	1	[M] △
D514	1D3E	DIODE	1	[M] △
D515	RVD1SS133TA	DIODE	1	[M]
D516	1D3E	DIODE	1	[M] △

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
D517	RK306LFU1	DIODE	1	[M]
D518	RVD1SS133TA	DIODE	1	[M]
D519	RK306LFU1	DIODE	1	[M]
D520	1D3E	DIODE	1	[M]
D521	1D3E	DIODE	1	[M]
D522	MTZJ15CTA	DIODE	1	[M] △
D523	SLR325MCT31W	DIODE	1	[M]
D524	1D3E	DIODE	1	[M]
D526	1D3E	DIODE	1	[M]
D528	RVD1SS133TA	DIODE	1	[M]
D600	SLR325MCT31W	DIODE	1	[M]
D601	SLR325MCT31W	DIODE	1	[M]
D602	SLR325MCT31W	DIODE	1	[M]
D603	LNJ301MPUJAD	DIODE	1	[M]
D604	SLI325DCT31	DIODE	1	[M]
D605	SLI325URCT31	DIODE	1	[M]
D606	SLR325MCT31W	DIODE	1	[M]
D607	SLR325MCT31W	DIODE	1	[M]
D611	SLR325MCT31W	DIODE	1	[M]
D612	SLR325MCT31W	DIODE	1	[M]
D613	SLR325MCT31W	DIODE	1	[M]
D614	SLR325MCT31W	DIODE	1	[M]
D615	SLR325MCT31W	DIODE	1	[M]
D617	SLI325DCT31	DIODE	1	[M]
D620	RVD1SS133TA	DIODE	1	[M]
D622	RVD1SS133TA	DIODE	1	[M]
D624	RVD1SS133TA	DIODE	1	[M]
D627	1SS291TA	DIODE	1	[M]
D628	1SS291TA	DIODE	1	[M]
D629	RVD1SS133TA	DIODE	1	[M]
D630	MA723TA	DIODE	1	[M]
D633	RVD1SS133TA	DIODE	1	[M]
D634	RVD1SS133TA	DIODE	1	[M]
D635	RVD1SS133TA	DIODE	1	[M]
D636	MA4020LTA	DIODE	1	[M] △
D637	1SS291TA	DIODE	1	[M]
D638	RVD1SS133TA	DIODE	1	[M]
D639	RVD1SS133TA	DIODE	1	[M]
D640	MA700ATA	DIODE	1	[M]
D641	MA700ATA	DIODE	1	[M]
D642	MA700ATA	DIODE	1	[M]
D643	RVD1SS133TA	DIODE	1	[M]
D644	RVD1SS133TA	DIODE	1	[M]
D645	RVD1SS133TA	DIODE	1	[M]
D646	RVD1SS133TA	DIODE	1	[M]
D647	RVD1SS133TA	DIODE	1	[M]
D951	MA165TA	DIODE	1	[M]
D971	MA165TA	DIODE	1	[M]
D977	RVD1SS133TA	DIODE	1	[M]
D978	1D3E	DIODE	1	[M]
D979	1D3E	DIODE	1	[M]
D980	1D3E	DIODE	1	[M]
D981	1D3E	DIODE	1	[M]
D982	MTZJ7R5ATA	DIODE	1	[M] △
D983	1D3E	DIODE	1	[M]
D984	1SS291TA	DIODE	1	[M]
D1171	MA111TX	DIODE	1	[M]
D1172	MA8047MTX	DIODE	1	[M]
D1173	MA111TX	DIODE	1	[M]
D1174	MA8036HTX	DIODE	1	[M]
D1175	MA111TX	DIODE	1	[M]
D1201	MA111TX	DIODE	1	[M]
D1202	MA111TX	DIODE	1	[M]
		VARIABLE RESISTORS		
VR600	EVEKE2F3024B	VARIABLE RESISTOR	1	[M]
VR601	EVUF2AF30B14	VARIABLE RESISTOR	1	[M]
		SWITCHES		
S501	RSR4B007S-Q	SW VOLTAGE ADJUST	1	[M] △
S601	EVQ21405R	SW TRI-AMP LOW	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
S602	EVQ21405R	SW AUX	1	[M]
S603	EVQ21405R	SW DECK 1 OPEN	1	[M]
S604	EVQ21405R	SW CD MANAGER	1	[M]
S605	EVQ21405R	SW TUNER	1	[M]
S606	EVQ21405R	SW TAPE EDIT	1	[M]
S607	EVQ11G05R	SW EJECT 5	1	[M]
S608	EVQ21405R	SW CD	1	[M]
S609	EVQ21405R	SW REC/STOP	1	[M]
S610	EVQ11G05R	SW DISC 5	1	[M]
S611	EVQ21405R	SW TAPE	1	[M]
S612	EVQ21405R	SW REV MODE	1	[M]
S613	EVQ11G05R	SW EJECT 4	1	[M]
S614	EVQ11G07K	SW EQ DOWN	1	[M]
S615	EVQ21405R	SW S. WOOFER	1	[M]
S616	EVQ21405R	SW DECK 2 OPEN	1	[M]
S617	EVQ11G05R	SW DISC 4	1	[M]
S618	EVQ11G07K	SW EQ LEFT	1	[M]
S619	EVQ21405R	SW DISPLAY/DEMO	1	[M]
S620	EVQ21405R	SW TUNE DOWN	1	[M]
S621	EVQ21405R	SW PLAY/REC	1	[M]
S622	EVQ11G07K	SW EQ UP	1	[M]
S623	EVQ11G05R	SW EJECT 3	1	[M]
S624	EVQ21405R	SW KARAOKE	1	[M]
S625	EVQ21405R	SW CLOCK/TIMER	1	[M]
S626	EVQ11G07K	SW EQ RIGHT	1	[M]
S627	EVQ11G05R	SW DISC 3	1	[M]
S628	EVQ21405R	SW ECO	1	[M]
S629	EVQ21405R	SW TUNE MODE/STOP	1	[M]
S630	EVQ11G05R	SW EJECT 2	1	[M]
S631	EVQ21405R	SW RANDOM	1	[M]
S632	EVQ21405R	SW MEMORY	1	[M]
S633	EVQ11G05R	SW DISC 2	1	[M]
S634	EVQ21405R	SW TUNER UP	1	[M]
S635	EVQ11G05R	SW EJECT 1	1	[M]
S636	EVQ11G05R	SW DISC 1	1	[M]
S637	EVQ21405R	SW FM MODE/BP	1	[M]
S638	EVQ21405R	SW POWER	1	[M]
S639	EVQ21405R	SW 3D AI EQ	1	[M]
S640	EVQ21405R	SW TRI-AMP MID	1	[M]
S641	EVQ21405R	SW TRI-AMP HIGH	1	[M]
S701	RSH1A043-U	SW REST	1	[M]
S951	RSH1A018-3U	LEAF SWITCH	1	[M]
S952	RSH1A019-2U	SW LEAF	1	[M]
S953	RSH1A019-2U	SW LEAF	1	[M]
S971	RSH1A018-3U	LEAF SWITCH	1	[M]
S972	RSH1A019-2U	SW LEAF	1	[M]
S973	RSH1A019-2U	SW LEAF	1	[M]
S974	RSH1A019-2U	SW LEAF	1	[M]
S975	RSH1A019-2U	SW LEAF	1	[M]
		SWITCHES		
S1	RSH1A032-U	SW PUSH	1	[M]
S2	RSH1A032-U	SW PUSH	1	[M]
S3	RSH1A005-1U	SW	1	[M]
S4	RSH1A91ZA-A	SW CD	1	[M]
S5	RSP1A017-A	SW LOCK	1	[M]
S600	EVQVXD00112B	SW A1 JOG VOLUME	1	[M]
		CONNECTORS		
CN1	RJS1A9414	FF CONNECTOR	1	[M]
CN300	RJU057G12	12P P2 MQ CONNECTOR	1	[M]
CN301	RJU057G12	12P P2 MQ CONNECTOR	1	[M]
CN302	RJS1A9426-1	26P FFC CONNECTOR	1	[M]
CN303	RJS1A9420	20P FFC CONNECTOR	1	[M]
CN304	RJS1A5210	10P WIRE HOLDER	1	[M]
CN309	RJS1A9414-1	14P CONNECTOR	1	[M]
CN500	RJT029W03V-1	CONNECTOR	1	[M]
CN501	RJT119W13V	13P CONNECTOR	1	[M]
CN502	RJP6G18ZA	SOCKET	1	[M]
CN600	RJT066H08F	CONNECTOR	1	[M]
CN701	RJS2A6016	16P FFC CONNECTOR	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
CN702	RJS1A6719-1Q	19P FFC CONNECTOR	1	[M]
CN1201	RJS8T7ZA	8P MOLEX CONNECTOR	1	[M]
CP303	RJP2G4YA	CONNECTOR	1	[M]
CP500	RJT057G12	12P P2 MQ CONNECTOR	1	[M]
CP501	RJT057G12	12P P2 MQ CONNECTOR	1	[M]
CP600	RJU066H08	8P B-B SOCKET	1	[M]
CP604	RJS1A9426-1	26P FFC CONNECTOR	1	[M]
CP605	RJS1A9420	20P FFC CONNECTOR	1	[M]
CP606	RJS1A6219-1	19P FFC CONNECTOR	1	[M]
CP1101	RJT071K09A	9P B/B CONNECTOR	1	[M]
CP1102	RJT071K09A	9P B/B CONNECTOR	1	[M]
CS951	RJU071H09M1	CONNECTOR	1	[M]
CS971	RJU071H09M1	CONNECTOR	1	[M]
CS1101	RJS1A6805-J	5P CONNECTOR SOCKET	1	[M]
CS1102	RJS1A6805-J	5P CONNECTOR SOCKET	1	[M]
		COILS & TRANSFORMERS		
L1	RLQZP1R2KT-Y	COIL	1	[M]
L2	RLQZPR47KT-Y	COIL	1	[M]
L102	RLQB1R0KTD-D	INDUCTOR	1	[M]
L600	RLQZP101KT-Y	AXIAL COIL	1	[M]
L601	RLQZP100KT-Y	AXIAL COIL	1	[M]
L602	RLQZP101KT-Y	AXIAL COIL	1	[M]
L603	RLQZP3R3KT-Y	AXIAL COIL	1	[M]
L604	RLQZP101KT-Y	AXIAL COIL	1	[M]
L605	RLQZP101KT-Y	AXIAL COIL	1	[M]
L606	RLQB100JTD-D	INDUCTOR	1	[M]
L607	RLQZP100KT-Y	AXIAL COIL	1	[M]
L1201	RL08C002M-T	BIAS OSC COIL	1	[M]
L1202	RLQZB470KT-D	RF CHOKE COIL	1	[M]
T501	RTP1P3E004-T	POWER TRANSFORMER	1	[M] △
T502	RTP1H3E001	BACKUP TRANSFORMER	1	[M] △
		COMPONENT COMBINATIO		
Z101	RLA2Z007-T	COIL	1	[M]
Z102	RLI2Z021M-T	AM IF BLOCK	1	[M]
Z501	ERZV10V511CS	ZENER DIODE	1	[M] △
Z602	RCDRPM6937H4	R/C SENSOR	1	[M]
Z971	EXBF7L355SYV	RADA RESISTOR	1	[M]
Z1101	EXBF7L355SYV	RADA RESISTOR	1	[M]
		CERAMIC FILTERS		
CF201	RLFFETWND01M	FM CF	1	[M]
CF202	RLFFETWND01M	FM CF	1	[M]
		RELAY		
RL501	RSY0037M-C	RELAY	1	[M] △
RL502	RSY0056M-C	PRIMAY RELAY	1	[M] △
		OSCILLATORS		
X102	RLFDFT22DD	DISCRIMINATOR	1	[M]
X103	RSXC7M20S05T	CRYSTAL OSCILLATOR	1	[M]
X600	RSXZ8M00D01T	CERAMIC RESONATOR	1	[M]
X601	RSXD32K7802	CRYSTAL OSCILLATOR	1	[M]
X701	RSXZ16M9M01T	CERAMIC OSCILLATOR	1	[M]
		DISPLAY TUBE		
FL600	RSL0295-F	FL DISPLAY	1	[M]
		FUSES		
F1	XBA2C40TB0	FUSE	1	[M] △
F2	XBA2C20TB0	FUSE	1	[M] △

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
		FUSE HOLDERS		
FC1	EYF52BC	FUSE HOLDER	1 [M]	
FC2	EYF52BC	FUSE HOLDER	1 [M]	
FC3	EYF52BC	FUSE HOLDER	1 [M]	
FC4	EYF52BC	FUSE HOLDER	1 [M]	
		HOLDERS		
H501	RJS1A5513	13P WIRE HOLDER	1 [M]	
H600	RMR0317	8P CABLE HOLDER	1 [M]	
H601	RMR0315	6P CABLE HOLDER	1 [M]	
H602	RMR0317	8P CABLE HOLDER	1 [M]	
H603	RMR0317	8P CABLE HOLDER	1 [M]	
H1100	RMR0319	10P CABLE HOLDER	1 [M]	
		JACKS		
JK101	RJH5414	JK ANTENNA	1 [M]	
JK305	RJH2206	JK RCA	1 [M]	
JK500	SJS9236-1	JK SOCKET	1 [M] △	
JK501	RJH5603	JK SPEAKER TERMINAL	1 [M]	
JK502	RJH5603	JK SPEAKER TERMINAL	1 [M]	
JK600	RJJ37TK07-X	JK HP/MIC	1 [M]	
JK601	RJJ37TK07-X	JK HP/MIC	1 [M]	
		EARTH TERMINAL		
E500	SNE1004-2	EARTH TERMINAL	1 [M]	
		WIRES		
W1A	REE0854	PRI WIRE YELLOW	1 [M]	
W1	REZ1023-1	4P WIRE	1 [M]	
W2A	REZ1024	3P WIRE	1 [M]	
W5	REEX0057	WIRE (ORANGE)	1 [M]	
W6	REE0955	WIRE (GREY)	1 [M]	
W7	REEX0059	WIRE (BLUE)	1 [M]	
W8	REEX0086	WIRE (RED)	1 [M]	
W9	REEX0061	WIRE (BLACK)	1 [M]	
W10	REEX0062	WIRE (WHITE)	1 [M]	
W500	REXX0206	STANDBY BY WIRE	1 [M]	
W501	REXX0224	13P WIRE	1 [M]	
W600	RWJ0208155RX	8P WIRE	1 [M]	
W601	REXX0223	6P WIRE	1 [M]	
W602	RWJ1108080RR	8P WIRE	1 [M]	
W1100	RWJ8010160RX	10P WIRE	1 [M]	
W1200	RWJ0102065CK	WIRE	1 [M]	
		JUMPER PLATE		
PL1	RJR0199	JUMPER PLATE	1 [M]	
		PACKING MATERIALS		
P1	RPGX0645	PACKING CASE	1 [M]	
P2	RPN1267	POLYFOAM	1 [M]	
P3	RPFK0007	MIRAMAT BAG	1 [M]	
		ACCESSORIES		
A1	RAK2B1248-MONT	REMOTE CONTROL NACIONAL	1 [M]	
A1	RAK21248	REMOTE CONTROL IMPORT.	1 [M]	
A1-1	RKK-SC957WK	R/C BATTERY COVER	1 [M]	
A2	VJA2B004	AC CORD	1 [M] △	
A3	RQT5322-G	O/I BOOK	1 [M]	
A3	RQT5323-R	O/I BOOK	1 [M]	
A4	RSA0006-J	FM ANT	1 [M]	
A5	RSA0029	AM LOOP ANT	1 [M]	
A6	SJP5213-2	AC CORD ADAPTOR	1 [M] △	
		RESISTORS		
R1	ERDS2TJ102T	1K 1/4W	1 [M]	

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R1A	ERDS2TJ104T	100K 1/4W	1 [M]	
R2	ERDS2TJ104T	100K 1/4W	1 [M]	
R3	ERDS2TJ221T	220 1/4W	1 [M]	
R4	ERDS2TJ104T	100K 1/4W	1 [M]	
R5	ERDS2TJ564T	560K 1/4W	1 [M]	
R6	ERDS2TJ391T	390 1/4W	1 [M]	
R7	ERDS2TJ272T	2.7K 1/4W	1 [M]	
R8	ERDS2TJ684T	680K 1/4W	1 [M]	
R9	ERDS2TJ391T	390 1/4W	1 [M]	
R10	ERDS2TJ391T	390 1/4W	1 [M]	
R11	ERDS2TJ684T	680K 1/4W	1 [M]	
R102	ERJ6GEYJ472V	4.7K 1/10W	1 [M]	
R103	ERJ6GEYJ271V	270 1/10W	1 [M]	
R104	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R105	ERJ6GEYJ471V	470 1/10W	1 [M]	
R106	ERJ6GEYJ474V	470K 1/10W	1 [M]	
R107	ERJ6GEYJ331V	330 1/10W	1 [M]	
R110	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R111	ERJ6GEYJ391V	390 1/10W	1 [M]	
R112	ERJ6GEYJ104V	100K 1/10W	1 [M]	
R113	ERJ6GEYJ103V	10K 1/10W	1 [M]	
R114	ERJ6GEYJ562V	5.6K 1/10W	1 [M]	
R115	ERJ6GEYJ561V	560 1/10W	1 [M]	
R116	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R117	ERJ6GEYJ473V	47K 1/10W	1 [M]	
R118	ERJ6GEYJ332V	3.3K 1/10W	1 [M]	
R119	ERJ6GEYJ472V	4.7K 1/10W	1 [M]	
R120	ERJ6GEYJ473V	47K 1/10W	1 [M]	
R121	ERJ6GEYJ223V	22K 1/10W	1 [M]	
R122	ERJ6GEYJ272V	2.7K 1/10W	1 [M]	
R123	ERJ6GEYJ683V	68K 1/10W	1 [M]	
R124	ERJ6GEYJ330V	33 1/10W	1 [M]	
R125	ERJ6GEYJ471V	470 1/10W	1 [M]	
R126	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R127	ERJ6GEYJ471V	470 1/10W	1 [M]	
R128	ERJ6GEYJ820V	82 1/10W	1 [M]	
R129	ERJ6GEYJ273V	27K 1/10W	1 [M]	
R130	ERJ6GEYJ103V	10K 1/10W	1 [M]	
R131	ERJ8GEYJ680V	68 1/8W	1 [M]	
R132	ERJ6GEYJ103V	10K 1/10W	1 [M]	
R133	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R134	ERJ6GEYJ471V	470 1/10W	1 [M]	
R135	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R136	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R137	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R138	ERJ6GEYJ332V	3.3K 1/10W	1 [M]	
R141	ERJ6GEYJ682V	6.8K 1/10W	1 [M]	
R142	ERJ6GEYJ682V	6.8K 1/10W	1 [M]	
R143	ERJ6GEYJ223V	22K 1/10W	1 [M]	
R145	ERJ6GEYJ104V	100K 1/10W	1 [M]	
R146	ERJ6GEYJ104V	100K 1/10W	1 [M]	
R151	ERJ6GEYJ820V	82 1/10W	1 [M]	
R152	ERJ6GEY0R00V	0 1/10W	1 [M]	
R201	ERJ6GEYJ103V	10K 1/10W	1 [M]	
R202	ERJ6GEYJ392V	3.9K 1/10W	1 [M]	
R207	ERJ6GEYJ682V	6.8K 1/10W	1 [M]	
R208	ERJ6GEYJ103V	10K 1/10W	1 [M]	
R209	ERJ6GEYJ473V	47K 1/10W	1 [M]	
R210	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R211	ERJ6GEYJ222V	2.2K 1/10W	1 [M]	
R212	ERJ6GEYJ472V	4.7K 1/10W	1 [M]	
R213	ERJ6GEYJ273V	27K 1/10W	1 [M]	
R215	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R216	ERJ6GEYJ222V	2.2K 1/10W	1 [M]	
R217	ERJ6GEYJ683V	68K 1/10W	1 [M]	
R218	ERJ6GEYJ332V	3.3K 1/10W	1 [M]	
R219	ERJ6GEYJ472V	4.7K 1/10W	1 [M]	
R220	ERJ6GEYJ104V	100K 1/10W	1 [M]	
R221	ERJ6GEYJ102V	1K 1/10W	1 [M]	
R222	ERJ6GEYJ123V	12K 1/10W	1 [M]	
R223	ERJ6GEYJ473V	47K 1/10W	1 [M]	
R224	ERJ6GEYJ183V	18K 1/10W	1 [M]	
R225	ERJ6GEYJ362V	3.6K 1/10W	1 [M]	

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R226	ERJ6GEYJ101V	100 1/10W	1	[M]
R230	ERJ6GEYJ473V	47K 1/10W	1	[M]
R231	ERJ6GEYJ183V	18K 1/10W	1	[M]
R232	ERJ6GEYJ392V	3.9K 1/10W	1	[M]
R233	ERJ6GEYJ224V	220K 1/10W	1	[M]
R234	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R240	ERJ6GEYJ433V	43K 1/10W	1	[M]
R248	ERJ6GEYJ390V	39 1/10W	1	[M]
R249	ERJ6GEYJ390V	39 1/10W	1	[M]
R300	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R301	ERJ6GEYJ223V	22K 1/10W	1	[M]
R302	ERJ6GEYJ183V	18K 1/10W	1	[M]
R303	ERJ6GEYJ100V	10 1/10W	1	[M]
R304	ERJ6GEYJ223V	22K 1/10W	1	[M]
R305	ERJ6GEYJ103V	10K 1/10W	1	[M]
R306	ERJ6GEYJ122V	1.2K 1/10W	1	[M]
R307	ERJ6GEYJ103V	10K 1/10W	1	[M]
R308	ERJ6GEYJ332V	3.3K 1/10W	1	[M]
R309	ERJ6GEYJ332V	3.3K 1/10W	1	[M]
R310	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R312	ERJ6GEYJ2R2V	2.2 1/10W	1	[M]
R313	ERJ6GEYJ393V	39K 1/10W	1	[M]
R316	ERJ6GEYJ153V	15K 1/10W	1	[M]
R317	ERJ6GEYJ102V	1K 1/10W	1	[M]
R321	ERJ6GEYJ2R7V	2.7 1/10W	1	[M]
R322	ERJ6GEYJ271V	270 1/10W	1	[M]
R323	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R324	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R325	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R326	ERJ6GEYJ683V	68K 1/10W	1	[M]
R327	ERJ6GEYJ154V	150K 1/10W	1	[M]
R332	ERJ6GEYJ824V	820K 1/10W	1	[M]
R334	ERJ6GEYJ244V	240K 1/10W	1	[M]
R335	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R336	ERJ6GEYJ183V	18K 1/10W	1	[M]
R337	ERJ6GEYJ822V	8.2K 1/10W	1	[M]
R338	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R339	ERJ6GEYJ823V	82K 1/10W	1	[M]
R340	ERJ6GEYJ823V	82K 1/10W	1	[M]
R342	ERJ6GEYJ183V	18K 1/10W	1	[M]
R343	ERJ6GEYJ682V	6.8K 1/10W	1	[M]
R344	ERJ6GEYJ103V	10K 1/10W	1	[M]
R345	ERJ6GEYJ221V	220 1/10W	1	[M]
R346	ERJ6GEYJ223V	22K 1/10W	1	[M]
R347	ERJ6GEYJ123V	12K 1/10W	1	[M]
R349	ERJ6GEYJ103V	10K 1/10W	1	[M]
R350	ERJ6GEYJ102V	1K 1/10W	1	[M]
R351	ERJ6GEYJ103V	10K 1/10W	1	[M]
R353	ERJ6GEYJ103V	10K 1/10W	1	[M]
R354	ERJ6GEYJ123V	12K 1/10W	1	[M]
R355	ERJ6GEYJ223V	22K 1/10W	1	[M]
R356	ERJ6GEYJ153V	15K 1/10W	1	[M]
R357	ERJ6GEYJ104V	100K 1/10W	1	[M]
R358	ERJ6GEYJ473V	47K 1/10W	1	[M]
R359	ERJ6GEYJ473V	47K 1/10W	1	[M]
R401	ERJ6GEYJ103V	10K 1/10W	1	[M]
R402	ERJ6GEYJ392V	3.9K 1/10W	1	[M]
R407	ERJ6GEYJ682V	6.8K 1/10W	1	[M]
R408	ERJ6GEYJ103V	10K 1/10W	1	[M]
R409	ERJ6GEYJ473V	47K 1/10W	1	[M]
R410	ERJ6GEYJ102V	1K 1/10W	1	[M]
R411	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R412	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R413	ERJ6GEYJ273V	27K 1/10W	1	[M]
R415	ERJ6GEYJ102V	1K 1/10W	1	[M]
R416	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R417	ERJ6GEYJ683V	68K 1/10W	1	[M]
R418	ERJ6GEYJ332V	3.3K 1/10W	1	[M]
R419	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R420	ERJ6GEYJ104V	100K 1/10W	1	[M]
R421	ERJ6GEYJ102V	1K 1/10W	1	[M]
R422	ERJ6GEYJ123V	12K 1/10W	1	[M]
R423	ERJ6GEYJ473V	47K 1/10W	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R424	ERJ6GEYJ183V	18K 1/10W	1	[M]
R425	ERJ6GEYJ362V	3.6K 1/10W	1	[M]
R426	ERJ6GEYJ101V	100 1/10W	1	[M]
R430	ERJ6GEYJ473V	47K 1/10W	1	[M]
R431	ERJ6GEYJ183V	18K 1/10W	1	[M]
R432	ERJ6GEYJ392V	3.9K 1/10W	1	[M]
R433	ERJ6GEYJ224V	220K 1/10W	1	[M]
R434	ERJ6GEYJ222V	2.2K 1/10W	1	[M]
R435	ERJ6GEYJ273V	27K 1/10W	1	[M]
R440	ERJ6GEYJ433V	43K 1/10W	1	[M]
R444	ERJ6GEYJ223V	22K 1/10W	1	[M]
R448	ERJ6GEYJ390V	39 1/10W	1	[M]
R449	ERJ6GEYJ390V	39 1/10W	1	[M]
R452	ERJ6GEYJ103V	10K 1/10W	1	[M]
R453	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R454	ERJ6GEYJ103V	10K 1/10W	1	[M]
R455	ERJ6GEYJ103V	10K 1/10W	1	[M]
R456	ERJ6GEYJ472V	4.7K 1/10W	1	[M]
R500	ERDS2TJ473T	47K 1/4W	1	[M]
R501	ERDS2TJ472T	4.7K 1/4W	1	[M]
R502	ERDS2TJ472T	4.7K 1/4W	1	[M]
R505	ERDS2TJ332T	3.3K 1/4W	1	[M]
R506	ERDS2TJ332T	3.3K 1/4W	1	[M]
R507	ERDS2TJ472T	4.7K 1/4W	1	[M]
R508	ERDS2TJ472T	4.7K 1/4W	1	[M]
R509	ERDS2TJ392T	3.9K 1/4W	1	[M]
R510	ERDS2TJ183T	18K 1/4W	1	[M]
R511	ERDS2TJ105T	1M 1/4W	1	[M]
R512	ERDS2TJ392T	3.9K 1/4W	1	[M]
R513	ERDS2TJ472T	4.7K 1/4W	1	[M]
R514	ERDS2TJ103T	10K 1/4W	1	[M]
R515	ERDS2TJ563T	56K 1/4W	1	[M]
R516	ERDS2TJ332T	3.3K 1/4W	1	[M]
R517	ERDS2TJ472T	4.7K 1/4W	1	[M]
R518	ERDS2TJ824T	820K 1/4W	1	[M]
R519	ERDS2TJ562T	5.6K 1/4W	1	[M]
R520	ERDS2TJ332T	3.3K 1/4W	1	[M]
R521	ERDS2TJ151T	150 1/4W	1	[M]
R522	ERDS2TJ101T	100 1/4W	1	[M]
R523	ERDS2TJ103T	10K 1/4W	1	[M]
R524	ERDS2TJ472T	4.7K 1/4W	1	[M]
R525	ERDS2TJ183T	18K 1/4W	1	[M]
R526	ERDS2TJ472T	4.7K 1/4W	1	[M]
R527	ERDS2TJ152T	1.5K 1/4W	1	[M]
R528	ERDS2TJ224T	220K 1/4W	1	[M]
R529	ERD2FCVJ4R7T	4.7 1/4W	1	[M] △
R530	ERDS2TJ203T	20K 1/4W	1	[M]
R532	ERDS2TJ563T	56K 1/4W	1	[M]
R533	ERDS2TJ563T	56K 1/4W	1	[M]
R534	ERDS2TJ563T	56K 1/4W	1	[M]
R535	ERDS2TJ563T	56K 1/4W	1	[M]
R536	ERDS2TJ563T	56K 1/4W	1	[M]
R537	ERDS2TJ563T	56K 1/4W	1	[M]
R538	ERDS1FVJ180T	18 1/2W	1	[M] △
R539	ERDS2TJ563T	56K 1/4W	1	[M]
R540	ERDS2TJ682T	6.8K 1/4W	1	[M]
R542	ERDS2TJ105T	1M 1/4W	1	[M]
R544	ERDS2TJ103T	10K 1/4W	1	[M]
R545	ERDS2TJ183T	18K 1/4W	1	[M]
R546	ERDS2TJ474T	470K 1/4W	1	[M]
R547	ERDS2TJ824T	820K 1/4W	1	[M]
R548	ERDS2TJ183T	18K 1/4W	1	[M]
R549	ERDS2TJ153T	15K 1/4W	1	[M]
R550	ERDS2TJ153T	15K 1/4W	1	[M]
R551	ERDS2TJ222T	2.2K 1/4W	1	[M]
R552	ERDS1FVJ2R2T	2.2 1/2W	1	[M] △
R553	ERDS1FVJ2R2T	2.2 1/2W	1	[M] △
R554	ERDS2TJ103T	10K 1/4W	1	[M]
R555	ERDS2TJ124T	120K 1/4W	1	[M]
R556	ERDS2TJ224T	220K 1/4W	1	[M]
R557	ERDS2TJ124T	120K 1/4W	1	[M]
R558	ERDS2TJ154T	150K 1/4W	1	[M]
R559	ERDS2TJ184T	180K 1/4W	1	[M]



Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R560	ERDS2TJ124T	120K 1/4W	1	[M]
R561	ERDS2TJ103T	10K 1/4W	1	[M]
R562	ERDS2TJ104T	100K 1/4W	1	[M]
R563	ERDS2TJ103T	10K 1/4W	1	[M]
R564	ERDS2TJ103T	10K 1/4W	1	[M]
R565	ERDS2TJ823T	82K 1/4W	1	[M]
R566	ERDS2TJ203T	20K 1/4W	1	[M]
R567	ERDS2TJ104T	100K 1/4W	1	[M]
R568	ERDS2TJ223T	22K 1/4W	1	[M]
R569	ERDS2TJ392T	3.9K 1/4W	1	[M]
R570	ERDS2TJ103T	10K 1/4W	1	[M]
R571	ERD2FCVG390T	39 1/4W	1	[M] △
R572	ERDS1FVJ2R2T	2.2 1/2W	1	[M] △
R573	ERDS2TJ104T	100K 1/4W	1	[M]
R574	ERDS1FVJ272T	2.7K 1/2W	1	[M] △
R575	ERDS1FVJ470T	47 1/2W	1	[M] △
R576	ERDS1FVJ470T	47 1/2W	1	[M] △
R577	ERDS1FVJ2R2T	2.2 1/2W	1	[M] △
R578	ERDS2TJ332T	3.3K 1/4W	1	[M]
R580	ERDS2TJ183T	18K 1/4W	1	[M]
R581	ERDS2TJ183T	18K 1/4W	1	[M]
R583	ERDS1FVJ100T	10 1/2W	1	[M] △
R584	ERDS1FVJ100T	10 1/2W	1	[M] △
R585	ERDS1FVJ100T	10 1/2W	1	[M] △
R586	ERDS1FVJ100T	10 1/2W	1	[M] △
R587	ERDS1FVJ100T	10 1/2W	1	[M] △
R588	ERDS1FVJ100T	10 1/2W	1	[M] △
R590	ERDS2TJ152T	1.5K 1/4W	1	[M]
R591	ERDS2TJ682T	6.8K 1/4W	1	[M]
R592	ERDS2TJ103T	10K 1/4W	1	[M]
R593	ERDS2TJ824T	820K 1/4W	1	[M]
R594	ERDS1FVJ332T	3.3K 1/2W	1	[M] △
R595	ERDS2TJ823T	82K 1/4W	1	[M]
R598	ERDS2TJ471T	470 1/4W	1	[M]
R599	ERDS2TJ472T	4.7K 1/4W	1	[M]
R600	ERDS2TJ222T	2.2K 1/4W	1	[M]
R600	ERDS2TJ473T	47K 1/4W	1	[M]
R601	ERDS2TJ331T	330 1/4W	1	[M]
R601A	ERDS2TJ472T	4.7K 1/4W	1	[M]
R602A	ERDS2TJ682T	6.8K 1/4W	1	[M]
R603	ERDS2TJ122T	1.2K 1/4W	1	[M]
R604	ERDS2TJ182T	1.8K 1/4W	1	[M]
R605	ERDS2TJ103T	10K 1/4W	1	[M]
R606A	ERDS2TJ154T	150K 1/4W	1	[M]
R606	ERDS2TJ683T	68K 1/4W	1	[M]
R607	ERDS2TJ102T	1K 1/4W	1	[M]
R607A	ERDS2TJ154T	150K 1/4W	1	[M]
R608A	ERDS2TJ222T	2.2K 1/4W	1	[M]
R608	ERDS2TJ682T	6.8K 1/4W	1	[M]
R609	ERDS2TJ152T	1.5K 1/4W	1	[M]
R609	ERDS2TJ223T	22K 1/4W	1	[M]
R610	ERDS2TJ102T	1K 1/4W	1	[M]
R611	ERDS2TJ472T	4.7K 1/4W	1	[M]
R613	ERDS2TJ103T	10K 1/4W	1	[M]
R615	ERDS2TJ223T	22K 1/4W	1	[M]
R616	ERDS2TJ272T	2.7K 1/4W	1	[M]
R617	ERDS2TJ682T	6.8K 1/4W	1	[M]
R618	ERDS2TJ103T	10K 1/4W	1	[M]
R619	ERDS2TJ221T	220 1/4W	1	[M]
R620	ERDS2TJ334T	330K 1/4W	1	[M]
R621	ERDS2TJ221T	220 1/4W	1	[M]
R622	ERDS2TJ562T	5.6K 1/4W	1	[M]
R623	ERDS2TJ272T	2.7K 1/4W	1	[M]
R624	ERDS2TJ222T	2.2K 1/4W	1	[M]
R625	ERDS2TJ331T	330 1/4W	1	[M]
R626	ERDS2TJ331T	330 1/4W	1	[M]
R627	ERDS2TJ331T	330 1/4W	1	[M]
R628	ERDS2TJ470T	47 1/4W	1	[M]
R629	ERDS2TJ122T	1.2K 1/4W	1	[M]
R630	ERDS2TJ682T	6.8K 1/4W	1	[M]
R631	ERDS2TJ472T	4.7K 1/4W	1	[M]
R632	ERDS2TJ822T	8.2K 1/4W	1	[M]
R633	ERDS2TJ182T	1.8K 1/4W	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R634	ERDS2TJ102T	1K 1/4W	1	[M]
R635	ERDS2TJ472T	4.7K 1/4W	1	[M]
R636	ERDS2TJ683T	68K 1/4W	1	[M]
R637	ERDS2TJ334T	330K 1/4W	1	[M]
R638	ERDS2TJ272T	2.7K 1/4W	1	[M]
R639	ERDS2TJ102T	1K 1/4W	1	[M]
R640	ERDS2TJ122T	1.2K 1/4W	1	[M]
R641	ERDS2TJ182T	1.8K 1/4W	1	[M]
R642	ERDS2TJ332T	3.3K 1/4W	1	[M]
R643	ERDS2TJ472T	4.7K 1/4W	1	[M]
R644	ERDS2TJ222T	2.2K 1/4W	1	[M]
R645	ERDS2TJ472T	4.7K 1/4W	1	[M]
R646	ERDS2TJ331T	330 1/4W	1	[M]
R647	ERDS2TJ222T	2.2K 1/4W	1	[M]
R648	ERDS2TJ102T	1K 1/4W	1	[M]
R649	ERDS2TJ182T	1.8K 1/4W	1	[M]
R651	ERDS2TJ101T	100 1/4W	1	[M]
R652	ERDS2TJ102T	1K 1/4W	1	[M]
R653	ERDS2TJ122T	1.2K 1/4W	1	[M]
R654	ERDS2TJ331T	330 1/4W	1	[M]
R655	ERDS2TJ331T	330 1/4W	1	[M]
R656	ERDS2TJ102T	1K 1/4W	1	[M]
R657	ERDS2TJ331T	330 1/4W	1	[M]
R658	ERDS2TJ101T	100 1/4W	1	[M]
R659	ERDS2TJ331T	330 1/4W	1	[M]
R660	ERDS2TJ102T	1K 1/4W	1	[M]
R661	ERDS2TJ331T	330 1/4W	1	[M]
R662	ERDS2TJ102T	1K 1/4W	1	[M]
R663	ERDS2TJ102T	1K 1/4W	1	[M]
R664	ERDS2TJ104T	100K 1/4W	1	[M]
R665	ERDS2TJ104T	100K 1/4W	1	[M]
R666	ERDS2TJ104T	100K 1/4W	1	[M]
R667	ERDS2TJ104T	100K 1/4W	1	[M]
R668	ERDS2TJ104T	100K 1/4W	1	[M]
R669	ERDS2TJ104T	100K 1/4W	1	[M]
R670	ERDS2TJ104T	100K 1/4W	1	[M]
R671	ERDS2TJ104T	100K 1/4W	1	[M]
R672	ERDS2TJ104T	100K 1/4W	1	[M]
R673	ERDS2TJ104T	100K 1/4W	1	[M]
R674	ERDS2TJ104T	100K 1/4W	1	[M]
R675	ERDS2TJ104T	100K 1/4W	1	[M]
R676	ERDS2TJ104T	100K 1/4W	1	[M]
R677	ERDS2TJ272T	2.7K 1/4W	1	[M]
R678	ERDS2TJ681T	680 1/4W	1	[M]
R679	ERDS2TJ821T	820 1/4W	1	[M]
R680	ERDS2TJ101T	100 1/4W	1	[M]
R681	ERDS2TJ102T	1K 1/4W	1	[M]
R682	ERDS2TJ472T	4.7K 1/4W	1	[M]
R683	ERDS2TJ103T	10K 1/4W	1	[M]
R684	ERDS2TJ103T	10K 1/4W	1	[M]
R685	ERDS2TJ103T	10K 1/4W	1	[M]
R686	ERDS2TJ223T	22K 1/4W	1	[M]
R687	ERDS2TJ102T	1K 1/4W	1	[M]
R688	ERDS2TJ103T	10K 1/4W	1	[M]
R689	ERDS2TJ101T	100 1/4W	1	[M]
R690	ERDS2TJ101T	100 1/4W	1	[M]
R691	ERDS2TJ101T	100 1/4W	1	[M]
R692	ERDS2TJ101T	100 1/4W	1	[M]
R693	ERDS2TJ102T	1K 1/4W	1	[M]
R694	ERDS2TJ152T	1.5K 1/4W	1	[M]
R695	ERDS2TJ223T	22K 1/4W	1	[M]
R696	ERDS2TJ103T	10K 1/4W	1	[M]
R697	ERDS2TJ224T	220K 1/4W	1	[M]
R698	ERDS2TJ331T	330 1/4W	1	[M]
R699	ERDS2TJ221T	220 1/4W	1	[M]
R700	ERDS2TJ470T	47 1/4W	1	[M]
R701	ERDS2TJ331T	330 1/4W	1	[M]
R701	ERJ6GEYJ4R7A	4.7 1/10W	1	[M]
R702	ERJ6GEYJ103A	10K 1/10W	1	[M]
R704	ERJ6GEYJ102A	1K 1/10W	1	[M]
R705	ERJ6GEYJ154A	150K 1/10W	1	[M]
R706	ERJ6GEYJ102A	1K 1/10W	1	[M]
R707	ERJ6GEYJ393V	39K 1/10W	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R708	ERJ6GEYJ223A	22K 1/10W	1	[M]
R709	ERJ6GEYJ683A	68K 1/10W	1	[M]
R710	ERJ6GEYJ102V	1K 1/10W	1	[M]
R711	ERJ6GEYJ823A	82K 1/10W	1	[M]
R712	ERJ8GEYJ221A	220 1/8W	1	[M]
R714	ERJ6GEY0R00A	0 1/10W	1	[M]
R715	ERJ6GEYJ102A	1K 1/10W	1	[M]
R717	ERJ6GEYJ102A	1K 1/10W	1	[M]
R718	ERJ6GEYJ102A	1K 1/10W	1	[M]
R721	ERJ6GEYJ101A	100 1/10W	1	[M]
R723	ERJ6GEYJ682A	6.8K 1/10W	1	[M]
R724	ERJ6GEYJ183A	18K 1/10W	1	[M]
R725	ERJ6GEYJ391A	390 1/10W	1	[M]
R727	ERJ6GEYJ392A	3.9K 1/10W	1	[M]
R728	ERJ6GEYJ392A	3.9K 1/10W	1	[M]
R729	ERJ6GEYJ392A	3.9K 1/10W	1	[M]
R731	ERJ6GEYJ682A	6.8K 1/10W	1	[M]
R735	ERJ6GEYJ101A	100 1/10W	1	[M]
R736	ERJ6GEYJ101A	100 1/10W	1	[M]
R741	ERJ6GEYJ473A	47K 1/10W	1	[M]
R742	ERJ6GEYJ224A	220K 1/10W	1	[M]
R744	ERJ6GEYJ124A	120K 1/10W	1	[M]
R749	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R750	ERJ8GEYJ5R6V	5.6 1/8W	1	[M]
R753	ERJ6GEYJ100V	10 1/10W	1	[M]
R900	ERDS2TJ103T	10K 1/4W	1	[M]
R901	ERDS2TJ221T	220 1/4W	1	[M]
R902	ERDS2TJ123T	12K 1/4W	1	[M]
R903	ERDS2TJ221T	220 1/4W	1	[M]
R904	ERDS2TJ223T	22K 1/4W	1	[M]
R905	ERDS2TJ221T	220 1/4W	1	[M]
R906	ERDS2TJ221T	220 1/4W	1	[M]
R907	ERDS2TJ104T	100K 1/4W	1	[M]
R908	ERDS2TJ151T	150 1/4W	1	[M]
R909	ERDS2TJ221T	220 1/4W	1	[M]
R910	ERDS2TJ223T	22K 1/4W	1	[M]
R911	ERDS2TJ473T	47K 1/4W	1	[M]
R912	ERDS2TJ104T	100K 1/4W	1	[M]
R913	ERDS2TJ331T	330 1/4W	1	[M]
R914	ERDS2TJ104T	100K 1/4W	1	[M]
R915	ERDS2TJ331T	330 1/4W	1	[M]
R916	ERDS2TJ101T	100 1/4W	1	[M]
R917	ERDS2TJ681T	680 1/4W	1	[M]
R918	ERDS2TJ106T	10M 1/4W	1	[M]
R919	ERDS2TJ101T	100 1/4W	1	[M]
R920	ERDS2TJ334T	330K 1/4W	1	[M]
R921	ERDS2TJ562T	5.6K 1/4W	1	[M]
R922	ERDS2TJ680T	68 1/4W	1	[M]
R925	ERDS2TJ680T	68 1/4W	1	[M]
R926	ERDS2TJ102T	1K 1/4W	1	[M]
R927	ERDS2TJ103T	10K 1/4W	1	[M]
R928	ERDS2TJ103T	10K 1/4W	1	[M]
R929	ERDS2TJ103T	10K 1/4W	1	[M]
R930	ERDS2TJ103T	10K 1/4W	1	[M]
R931	ERDS2TJ472T	4.7K 1/4W	1	[M]
R932	ERDS2TJ223T	22K 1/4W	1	[M]
R933	ERDS2TJ471T	470 1/4W	1	[M]
R934	ERDS2TJ472T	4.7K 1/4W	1	[M]
R935	ERDS2TJ123T	12K 1/4W	1	[M]
R936	ERDS2TJ103T	10K 1/4W	1	[M]
R937	ERDS2TJ474T	470K 1/4W	1	[M]
R938	ERDS2TJ472T	4.7K 1/4W	1	[M]
R939	ERDS2TJ104T	100K 1/4W	1	[M]
R940	ERDS2TJ104T	100K 1/4W	1	[M]
R941	ERDS2TJ104T	100K 1/4W	1	[M]
R942	ERDS2TJ104T	100K 1/4W	1	[M]
R943	ERDS2TJ103T	10K 1/4W	1	[M]
R944	ERDS2TJ103T	10K 1/4W	1	[M]
R945	ERDS2TJ101T	100 1/4W	1	[M]
R946	ERDS2TJ101T	100 1/4W	1	[M]
R947	ERDS2TJ101T	100 1/4W	1	[M]
R948	ERDS2TJ472T	4.7K 1/4W	1	[M]
R949	ERDS2TJ223T	22K 1/4W	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R950	ERDS2TJ223T	22K 1/4W	1	[M]
R951	ERDS2TJ103T	10K 1/4W	1	[M]
R952	ERDS2TJ331T	330 1/4W	1	[M]
R952	ERDS2TJ821T	820 1/4W	1	[M]
R953	ERDS2TJ272T	2.7K 1/4W	1	[M]
R953	ERDS2TJ393T	39K 1/4W	1	[M]
R954	ERDS2TJ103T	10K 1/4W	1	[M]
R955	ERDS2TJ223T	22K 1/4W	1	[M]
R956	ERDS2TJ223T	22K 1/4W	1	[M]
R957	ERDS2TJ562T	5.6K 1/4W	1	[M]
R958	ERDS2TJ562T	5.6K 1/4W	1	[M]
R959	ERDS2TJ103T	10K 1/4W	1	[M]
R960	ERDS2TJ102T	1K 1/4W	1	[M]
R961	ERDS2TJ103T	10K 1/4W	1	[M]
R962	ERDS2TJ272T	2.7K 1/4W	1	[M]
R963	ERDS2TJ561T	560 1/4W	1	[M]
R964	ERDS2TJ103T	10K 1/4W	1	[M]
R966	ERDS2TJ101T	100 1/4W	1	[M]
R967	ERDS2TJ101T	100 1/4W	1	[M]
R969	ERDS2TJ104T	100K 1/4W	1	[M]
R970	ERDS2TJ103T	10K 1/4W	1	[M]
R971	ERDS2TJ103T	10K 1/4W	1	[M]
R972	ERDS2TJ103T	10K 1/4W	1	[M]
R972	ERDS2TJ821T	820 1/4W	1	[M]
R973	ERDS2TJ101T	100 1/4W	1	[M]
R973	ERDS2TJ393T	39K 1/4W	1	[M]
R976	ERDS2TJ103T	10K 1/4W	1	[M]
R977	ERDS2TJ103T	10K 1/4W	1	[M]
R978	ERDS2TJ102T	1K 1/4W	1	[M]
R979	RSFMB40KT-L	FUSE PROTECTOR	1	[M] △
R980	ERDS1FVJ180T	18 1/2W	1	[M] △
R981	ERDS1FVJ220T	22 1/2W	1	[M] △
R982	ERDS2TJ824T	820K 1/4W	1	[M]
R983	ERDS2TJ122T	1.2K 1/4W	1	[M]
R984	ERDS2TJ102T	1K 1/4W	1	[M]
R984A	ERDS2TJ152T	1.5K 1/4W	1	[M]
R985	ERDS1FVJ180T	18 1/2W	1	[M] △
R986	ERDS2TJ150T	15 1/4W	1	[M]
R1101	ERJ6GEYJ334A	330K 1/10W	1	[M]
R1102	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1103	ERJ6GEYJ153A	15K 1/10W	1	[M]
R1104	ERJ6GEYJ153A	15K 1/10W	1	[M]
R1105	ERJ6GEYJ271A	270 1/10W	1	[M]
R1106	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1107	ERJ6GEYJ390A	39 1/10W	1	[M]
R1108	ERJ6GEYJ390A	39 1/10W	1	[M]
R1109	ERJ6GEYJ432A	4.3K 1/10W	1	[M]
R1110	ERJ6GEYJ432A	4.3K 1/10W	1	[M]
R1111	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1112	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1115	ERJ6GEYJ394A	390K 1/10W	1	[M]
R1116	ERJ6GEYJ394A	390K 1/10W	1	[M]
R1117	ERJ6GEYJ274A	270K 1/10W	1	[M]
R1118	ERJ6GEYJ274A	270K 1/10W	1	[M]
R1121	ERJ6GEYJ333A	33K 1/10W	1	[M]
R1122	ERJ6GEYJ333A	33K 1/10W	1	[M]
R1123	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1124	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1125	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1126	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1131	ERJ6GEYJ683A	68K 1/10W	1	[M]
R1132	ERJ6GEYJ335A	3.3M 1/10W	1	[M]
R1133	ERJ6GEYJ332A	3.3K 1/10W	1	[M]
R1134	ERJ6GEYJ474A	470K 1/10W	1	[M]
R1139	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1141	ERJ6GEYJ682A	6.8K 1/10W	1	[M]
R1142	ERJ6GEYJ682A	6.8K 1/10W	1	[M]
R1143	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1144	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1145	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1146	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1151	ERJ6GEYJ105A	1M 1/10W	1	[M]
R1152	ERJ6GEYJ105A	1M 1/10W	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
R1153	ERJ6GEYJ122A	1.2K 1/10W	1	[M]
R1154	ERJ6GEYJ122A	1.2K 1/10W	1	[M]
R1155	ERJ6GEYJ221A	220 1/10W	1	[M]
R1156	ERJ6GEYJ221A	220 1/10W	1	[M]
R1158	ERJ6GEYJ221A	220 1/10W	1	[M]
R1161	ERJ8GEYJ472A	4.7K 1/8W	1	[M]
R1162	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1165	ERJ6GEYJ563A	56K 1/10W	1	[M]
R1166	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1167	ERJ6GEYJ470A	47 1/10W	1	[M]
R1170	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1172	ERJ6GEYJ331A	330 1/10W	1	[M]
R1173	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1174	ERJ6GEYJ103A	10K 1/10W	1	[M]
R1176	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1177	ERJ6GEYJ562A	5.6K 1/10W	1	[M]
R1178	ERJ6GEYJ1R2A	1.2 1/10W	1	[M]
R1179	ERJ6GEYJ272A	2.7K 1/10W	1	[M]
R1180	ERJ6GEYJ272A	2.7K 1/10W	1	[M]
R1181	ERJ6GEYJ332A	3.3K 1/10W	1	[M]
R1182	ERJ6GEYJ1R0A	1 1/10W	1	[M]
R1183	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1184	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1186	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1188	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1189	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1190	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1191	ERJ6GEYJ563A	56K 1/10W	1	[M]
R1192	ERJ6GEYJ470A	47 1/10W	1	[M]
R1195	ERJ6GEYJ104A	100K 1/10W	1	[M]
R1196	ERJ6GEYJ473A	47K 1/10W	1	[M]
R1197	ERJ6GEYJ473A	47K 1/10W	1	[M]
R1206	ERJ6GEYJ221A	220 1/10W	1	[M]
R1213	ERJ6GEYJ152A	1.5K 1/10W	1	[M]
R1215	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1216	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1220	ERJ8GEYJ472A	4.7K 1/8W	1	[M]
R1221	ERJ6GEYJ2R7A	2.7 1/10W	1	[M]
R1225	ERJ6GEYJ2R7A	2.7 1/10W	1	[M]
R1226	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1227	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1230	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1232	ERJ6GEYJ102A	1K 1/10W	1	[M]
R1233	ERJ6GEYJ222A	2.2K 1/10W	1	[M]
R1234	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1235	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
R1236	ERJ6GEYJ472A	4.7K 1/10W	1	[M]
		CAPACITORS		
C1A	ECBT1H5R6KC5	5.6P 50V	1	[M]
C1	ECEA1CKA101B	100 16V	1	[M]
C2	ECBT1E103ZF5	0.01 25V	1	[M]
C2A	RCBS1H102KBY	1000P 50V	1	[M]
C3	ECBT1H2R2KC5	2.2P 50V	1	[M]
C4	ECBT1H181KB5	180P 50V	1	[M]
C5	ECBT1H5R6KC5	5.6P 50V	1	[M]
C6	ECBT1H3R3KC5	3.3P 50V	1	[M]
C7	ECBT1H4R7KC5	4.7P 50V	1	[M]
C8	ECBT1H3R3KC5	3.3P 50V	1	[M]
C9	ECBT1H2R2KC5	2.2P 50V	1	[M]
C10	ECBT1H180JC5	18P 50V	1	[M]
C11	RCBS1H102KBY	1000P 50V	1	[M]
C101	ECUV1H103KBN	0.01 50V	1	[M]
C102	ECEA1CKA100B	10 16V	1	[M]
C103	ECUV1H103KBN	0.01 50V	1	[M]
C104	ECUV1H102KBN	1000P 50V	1	[M]
C106	ECUV1H103KBN	0.01 50V	1	[M]
C107	ECUV1E473ZFN	0.047 25V	1	[M]
C108	ECUV1H080DCN	8P 50V	1	[M]
C109	ECUV1H102KBN	1000P 50V	1	[M]
C110	ECUV1H103KBN	0.01 50V	1	[M]
C111	ECEA1EKA4R7B	4.7 25V	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C112	ECUV1H103KBN	0.01 50V	1	[M]
C113	ECUV1H102KBN	1000P 50V	1	[M]
C114	ECEA1HKA3R3B	3.3 50V	1	[M]
C115	ECEA1EKA4R7B	4.7 25V	1	[M]
C116	ECUVNE333KBN	0.033 25V	1	[M]
C117	ECUV1H103KBN	0.01 50V	1	[M]
C118	ECUV1H103KBN	0.01 50V	1	[M]
C119	ECQP2A681JZT	680P 100V	1	[M]
C120	ECEA1CKA100B	10 16V	1	[M]
C121	ECEA1HKAR47B	0.47 50V	1	[M]
C122	ECEA1HKA010B	1 50V	1	[M]
C123	ECEA1HKA010B	1 50V	1	[M]
C124	ECUV1H101KCN	100P 50V	1	[M]
C125	ECEA1CKA220B	22 16V	1	[M]
C126	ECUVNC105ZFN	1 16V	1	[M]
C127	ECEA1CKA220B	22 16V	1	[M]
C129	ECEA0JKA101B	100 6.3V	1	[M]
C130	ECEA0JKA101B	100 6.3V	1	[M]
C131	ECUV1H151KCN	150P 50V	1	[M]
C132	ECUV1H102KBN	1000P 50V	1	[M]
C133	ECUV1H270JCN	27P 50V	1	[M]
C134	ECUV1H270JCN	27P 50V	1	[M]
C136	ECUV1H102KBN	1000P 50V	1	[M]
C137	ECUV1H332KBN	3300P 50V	1	[M]
C138	ECUV1H103KBN	0.01 50V	1	[M]
C139	ECEA1EKA4R7B	4.7 25V	1	[M]
C141	ECEA1HKA010B	1 50V	1	[M]
C142	ECEA1HKA010B	1 50V	1	[M]
C143	ECUV1H472KBN	4700P 50V	1	[M]
C144	ECUV1H472KBN	4700P 50V	1	[M]
C147	ECUV1H102KBN	1000P 50V	1	[M]
C148	ECUV1H103KBN	0.01 50V	1	[M]
C149	ECUV1E104ZFN	0.1 25V	1	[M]
C202	ECUZ1H101JCN	100P 50V	1	[M]
C204	ECUV1H221KBN	220P 50V	1	[M]
C207	ECEA1HKA010B	1 50V	1	[M]
C208	ECUVNC823KBV	0.082 16V	1	[M]
C209	ECQV1H334JZ3	0.33 50V	1	[M]
C210	ECUZ1E223KBN	0.022 25V	1	[M]
C211	ECUZNC393KBN	0.039 16V	1	[M]
C212	ECUZ1E273KBN	0.027 25V	1	[M]
C213	ECUZ1H222KBN	2200P 50V	1	[M]
C214	ECUZ1H222KBN	2200P 50V	1	[M]
C215	ECUZ1H272KBN	2700P 50V	1	[M]
C216	ECUZ1H222KBN	2200P 50V	1	[M]
C217	ECUZ1C333KBN	0.033 16V	1	[M]
C218	ECEA1HKAR15B	0.15 50V	1	[M]
C219	ECEA1HKAR15B	0.15 50V	1	[M]
C220	ECUZ1H102KBN	1000P 50V	1	[M]
C221	ECUZNC683KBN	0.068 16V	1	[M]
C222	ECUZ1H471KBN	470P 50V	1	[M]
C223	ECEA1HKA100B	10 50V	1	[M]
C224	ECEA1HKA3R3B	3.3 50V	1	[M]
C225	ECEA1HKA3R3B	3.3 50V	1	[M]
C226	ECUZ1E104MBN	0.1 25V	1	[M]
C227	ECUV1H681KBN	680P 50V	1	[M]
C228	ECEA1CKA100B	10 16V	1	[M]
C229	ECUZ1H101JCN	100P 50V	1	[M]
C230	ECUZ1H470JCN	47P 50V	1	[M]
C232	ECUV1H332KBN	3300P 50V	1	[M]
C233	ECEA1HKA100B	10 50V	1	[M]
C234	ECUZNC683KBN	0.068 16V	1	[M]
C235	ECUV1H682KBN	6800P 50V	1	[M]
C236	ECUZ1C474ZFN	0.47 16V	1	[M]
C237	ECUZ1H102KBN	1000P 50V	1	[M]
C240	ECEA1HKA3R3B	3.3 50V	1	[M]
C241	ECUZ1H101JCN	100P 50V	1	[M]
C242	ECEA1HKA3R3B	3.3 50V	1	[M]
C300	ECUZ1C103KBN	0.01 16V	1	[M]
C301	ECUZ1H102KBN	1000P 50V	1	[M]
C303	ECUV1H682KBN	6800P 50V	1	[M]
C304	ECEA1AM331B	330 10V	1	[M]
C305	ECUZ1H152KBN	1500P 50V	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C306	ECEA1HKA0R1B	0.1 50V	1	[M]
C307	ECUZ1H102KBN	1000P 50V	1	[M]
C308	ECUZ1E473ZFN	0.047 25V	1	[M]
C312	ECUZ1E104ZFN	0.1 25V	1	[M]
C313	ECUZ1E104ZFN	0.1 25V	1	[M]
C314	ECUV1H151KCN	150P 50V	1	[M]
C315	ECUV1H151KCN	150P 50V	1	[M]
C316	ECUV1H151KCN	150P 50V	1	[M]
C317	ECEA1HKA010B	1 50V	1	[M]
C318	ECUZ1C103KBN	0.01 16V	1	[M]
C320	ECUZ1C103KBN	0.01 16V	1	[M]
C321	ECEA1AKA330B	33 10V	1	[M]
C322	ECUZNC683KBN	0.068 16V	1	[M]
C323	ECUZNC683KBN	0.068 16V	1	[M]
C324	ECEA1AKA470B	47 10V	1	[M]
C325	ECEA1AKA470B	47 10V	1	[M]
C326	ECUV1H822KBN	8200P 50V	1	[M]
C327	ECUVNC104KBV	0.1 16V	1	[M]
C328	ECUZ1C473KBN	0.047 16V	1	[M]
C329	ECUZ1E104ZFN	0.1 25V	1	[M]
C331	ECEA1HKA4R7B	4.7 50V	1	[M]
C334	ECEA1HKA100B	10 50V	1	[M]
C402	ECUZ1H101JCN	100P 50V	1	[M]
C404	ECUV1H221KBN	220P 50V	1	[M]
C407	ECEA1HKA010B	1 50V	1	[M]
C408	ECUVNC823KBV	0.082 16V	1	[M]
C409	ECQV1H334JZ3	0.33 50V	1	[M]
C410	ECUZ1E223KBN	0.022 25V	1	[M]
C411	ECUZNC393KBN	0.039 16V	1	[M]
C412	ECUZ1E273KBN	0.027 25V	1	[M]
C413	ECUV1H222KBN	2200P 50V	1	[M]
C414	ECUZ1H222KBN	2200P 50V	1	[M]
C415	ECUZ1H272KBN	2700P 50V	1	[M]
C416	ECUZ1H222KBN	2200P 50V	1	[M]
C417	ECUZ1C333KBN	0.033 16V	1	[M]
C418	ECEA1HKAR15B	0.15 50V	1	[M]
C419	ECEA1HKAR15B	0.15 50V	1	[M]
C420	ECUZ1H102KBN	1000P 50V	1	[M]
C421	ECUZNC683KBN	0.068 16V	1	[M]
C422	ECUZ1H471KBN	470P 50V	1	[M]
C423	ECEA1HKA100B	10 50V	1	[M]
C424	ECEA1HKA3R3B	3.3 50V	1	[M]
C425	ECEA1HKA3R3B	3.3 50V	1	[M]
C426	ECUZ1E104MBN	0.1 25V	1	[M]
C427	ECUV1H681KBN	680P 50V	1	[M]
C428	ECEA1CKA100B	10 16V	1	[M]
C429	ECUZ1H101JCN	100P 50V	1	[M]
C430	ECUZ1H470JCN	47P 50V	1	[M]
C432	ECUV1H332KBN	3300P 50V	1	[M]
C433	ECEA1HKA100B	10 50V	1	[M]
C434	ECUZNC683KBN	0.068 16V	1	[M]
C435	ECUV1H682KBN	6800P 50V	1	[M]
C436	ECUZ1H101JCN	100P 50V	1	[M]
C437	ECUZ1H102KBN	1000P 50V	1	[M]
C440	ECEA1HKA3R3B	3.3 50V	1	[M]
C441	ECUZ1H101JCN	100P 50V	1	[M]
C442	ECEA1HKA3R3B	3.3 50V	1	[M]
C500	ECBT1H471KB5	470P 50V	1	[M]
C503	ECBT1H471KB5	470P 50V	1	[M]
C504	ECBT1C182KR5	1800P 16V	1	[M]
C505	ECBT1H470J5	47P 50V	1	[M]
C506	ECBT1C182KR5	1800P 16V	1	[M]
C507	ECEA1CKA330B	33 16V	1	[M]
C508	ECBT1H471KB5	470P 50V	1	[M]
C510	ECBT1H471KB5	470P 50V	1	[M]
C511	ECBT1H471KB5	470P 50V	1	[M]
C512	ECEA2AM100B	10 100V	1	[M]
C513	ECKR1H103ZF5	0.01 50V	1	[M]
C514	ECBT1H471KB5	470P 50V	1	[M]
C515	ECBT1H104ZF5	0.1 50V	1	[M]
C516	ECKR1H103ZF5	0.01 50V	1	[M]
C517	ECEA1HKA010B	1 50V	1	[M]
C518	ECEA1HKA010B	1 50V	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C520	ECBT1C182KR5	1800P 16V	1	[M]
C521	ECKR1H103ZF5	0.01 50V	1	[M]
C523	ECEA1HKA010B	1 50V	1	[M]
C524	ECBT1C182KR5	1800P 16V	1	[M]
C525	ECEA0JKA101B	100 6.3V	1	[M]
C526	ECBT1H150JC5	15P 50V	1	[M]
C527	ECBT1H150JC5	15P 50V	1	[M]
C528	ECBT1H150JC5	15P 50V	1	[M]
C529	ECBT1H150JC5	15P 50V	1	[M]
C530	ECBT1H150JC5	15P 50V	1	[M]
C531	ECBT1H150JC5	15P 50V	1	[M]
C532	ECBT1H470J5	47P 50V	1	[M]
C533	ECKR1H103ZF5	0.01 50V	1	[M]
C534	ECEA1CKA470B	47 16V	1	[M]
C537	ECEA0JKA221B	220 6.3V	1	[M]
C538	ECEA1HKA010B	1 50V	1	[M]
C539	ECBT1H473ZF5	0.047 50V	1	[M]
C540	ECQV1H104JZ3	0.1 50V	1	[M]
C542	ECEA1HKA010B	1 50V	1	[M]
C543	ECEA1JM101B	100 63V	1	[M] △
C544	ECBT1H103KB5	0.01 50V	1	[M]
C545	ECEA2AU100B	10 100V	1	[M]
C546	ECEA2AU100B	10 100V	1	[M]
C547	ECEA0JKA101B	100 6.3V	1	[M]
C548	ECBT1C182KR5	1800P 16V	1	[M]
C549	ECEA2AU100B	10 100V	1	[M]
C550	ECEA1VM101B	100 35V	1	[M]
C551	ECEA1HKA010B	1 50V	1	[M]
C552	ECKR1H103ZF5	0.01 50V	1	[M]
C553	ECEA1VM101B	100 35V	1	[M]
C554	ECA0JM471B	470 6.3V	1	[M]
C555	ECBT1C182KR5	1800P 16V	1	[M]
C556	ECEA1HKA010B	1 50V	1	[M]
C557	ECBT1H103KB5	0.01 50V	1	[M]
C558	RCEA1E222B-S	2200P 25V	1	[M] △
C559	ECBT1H104ZF5	0.1 50V	1	[M]
C560	ECBT1H104ZF5	0.1 50V	1	[M]
C561	ECBT1H104ZF5	0.1 50V	1	[M]
C562	ECBT1H104ZF5	0.1 50V	1	[M]
C563	ECBT1H104ZF5	0.1 50V	1	[M]
C564	ECBT1H104ZF5	0.1 50V	1	[M]
C565	ECBT1H104ZF5	0.1 50V	1	[M]
C566	ECBT1H104ZF5	0.1 50V	1	[M]
C567	ECBT1H104ZF5	0.1 50V	1	[M]
C568	ECBT1H104ZF5	0.1 50V	1	[M]
C569	ECBT1H104ZF5	0.1 50V	1	[M]
C570	ECBT1H104ZF5	0.1 50V	1	[M]
C571	RCE1VFW472BJ	4700 35V	1	[M]
C572	RCE1VFW562BJ	5600 35V	1	[M] △
C573	RCE1VFW562BJ	5600 35V	1	[M] △
C574	RCE1VFW472BJ	4700 35V	1	[M]
C575	ECEALEM101B	100 25V	1	[M]
C577	ECEA1HM470B	47 50V	1	[M]
C578	ECBT1H103KB5	0.01 50V	1	[M]
C580	ECBT1C182KR5	1800P 16V	1	[M]
C581	ECBT1C182KR5	1800P 16V	1	[M]
C582	ECBT1H103KB5	0.01 50V	1	[M]
C583	ECQV1H184JZ3	0.18 50V	1	[M]
C584	ECQP1223JZT	0.022 100V	1	[M]
C593	ECEA1HKA100B	10 50V	1	[M]
C595	ECBT1H103KB5	0.01 50V	1	[M]
C600	ECEA1HKAR33B	0.33 50V	1	[M]
C602	ECBT1H473ZF5	0.047 50V	1	[M]
C603	ECEA1HKA010B	1 50V	1	[M]
C604	ECBT1E223ZF5	0.022 25V	1	[M]
C605	ECBT1H102KB5	1000P 50V	1	[M]
C606	ECBT1E223ZF5	0.022 25V	1	[M]
C607	ECBT1H101KB5	100P 50V	1	[M]
C608	ECBT1H102KB5	1000P 50V	1	[M]
C609	ECEA1HKA010B	1 50V	1	[M]
C610	ECEA1AKA101B	100 10V	1	[M]
C611	ECBT1H104ZF5	0.1 50V	1	[M]
C612	ECEA1VKA220B	22 35V	1	[M]

Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C613	ECBT1H681KB5	680P 50V	1	[M]
C614	ECBT1H681KB5	680P 50V	1	[M]
C615	ECBT1H101KB5	100P 50V	1	[M]
C616	ECBT1H101KB5	100P 50V	1	[M]
C617	ECBT1H101KB5	100P 50V	1	[M]
C618	ECBT1H101KB5	100P 50V	1	[M]
C619	ECBT1E104ZF5	0.1 25V	1	[M]
C622	ECBT1E103ZF5	0.01 25V	1	[M]
C623	ECBT1H102KB5	1000P 50V	1	[M]
C624	ECEA0JKA101B	100 6.3V	1	[M]
C625	RCEA0J102B-S	1000P 6.3V	1	[M]
C626	ECBT1H102KB5	1000P 50V	1	[M]
C627	ECBT1E103ZF5	0.01 25V	1	[M]
C628	ECEA1AKA220B	22 10V	1	[M]
C629	ECBT1H331KB5	330P 50V	1	[M]
C630	ECBT1H561KB5	560P 50V	1	[M]
C631	ECBT1H561KB5	560P 50V	1	[M]
C632	ECBT1H101KB5	100P 50V	1	[M]
C633	ECBT1H101KB5	100P 50V	1	[M]
C635	ECBT1H561KB5	560P 50V	1	[M]
C636	ECBT1H561KB5	560P 50V	1	[M]
C637	ECBT1H561KB5	560P 50V	1	[M]
C638	ECBT1H561KB5	560P 50V	1	[M]
C639	ECBT1H101KB5	100P 50V	1	[M]
C640	ECEA1HKA4R7B	4.7 50V	1	[M]
C642	ECEA1CKA100B	10 16V	1	[M]
C643	ECBT1H561KB5	560P 50V	1	[M]
C644	ECBT1H561KB5	560P 50V	1	[M]
C645	ECBT1H561KB5	560P 50V	1	[M]
C646	ECBT1H561KB5	560P 50V	1	[M]
C647	ECBT1E103ZF5	0.01 25V	1	[M]
C648	ECEA1HKA0R1B	0.1 50V	1	[M]
C649	ECEA1CKA100B	10 16V	1	[M]
C650	ECBT1E103ZF5	0.01 25V	1	[M]
C651	ECBT1H150JC5	15P 50V	1	[M]
C652	ECBT1H101KB5	100P 50V	1	[M]
C653	ECEA1AM331B	330 10V	1	[M]
C655	ECBT1H101KB5	100P 50V	1	[M]
C656	ECBT1H680J5	68P 50V	1	[M]
C657	ECBT1H680J5	68P 50V	1	[M]
C658	ECEA1HKA010B	1 50V	1	[M]
C659	ECBT1H560J5	56P 50V	1	[M]
C660	ECEA1HKA3R3B	3.3 50V	1	[M]
C661	ECBT1H560J5	56P 50V	1	[M]
C662	ECEA1HKA2R2B	2.2 50V	1	[M]
C663	ECBT1H102KB5	1000P 50V	1	[M]
C664	ECBT1H102KB5	1000P 50V	1	[M]
C665	ECBT1H561KB5	560P 50V	1	[M]
C666	ECBT1E223ZF5	0.022 25V	1	[M]
C667	ECBT1E103ZF5	0.01 25V	1	[M]
C668	ECEA1HKA0R1B	0.1 50V	1	[M]
C669	ECEA1HKA0R1B	0.1 50V	1	[M]
C670	ECBT1H561KB5	560P 50V	1	[M]
C671	ECBT1H104ZF5	0.1 50V	1	[M]
C672	ECBT1H104ZF5	0.1 50V	1	[M]
C674	ECBT1H101KB5	100P 50V	1	[M]
C675	ECBT1H101KB5	100P 50V	1	[M]
C686	ECBT1C103MS5	0.01 16V	1	[M]
C701	ECEA0JKA330I	33 6.3V	1	[M]
C702	ECUZ1E104MBN	0.1 25V	1	[M]
C703	ECEA0JKA101I	100 6.3V	1	[M]
C704	ECUZ1E104MBN	0.1 25V	1	[M]
C706	ECUZ1H272KBN	2700P 50V	1	[M]
C707	ECUZ1E273KBN	0.027 25V	1	[M]
C710	ECUZ1H121KCN	120P 50V	1	[M]
C711	ECUZ1E104ZFN	0.1 25V	1	[M]
C712	ECUZ1E104ZFN	0.1 25V	1	[M]
C713	ECUZ1E104MBN	0.1 25V	1	[M]
C714	ECEA0JKA101I	100 6.3V	1	[M]
C715	ECUZ1H272KBN	2700P 50V	1	[M]
C716	ECUZ1H821KBN	820P 50V	1	[M]
C717	ECUZ1E104ZFN	0.1 25V	1	[M]
C718	ECUZ1C224KBN	0.22 16V	1	[M]

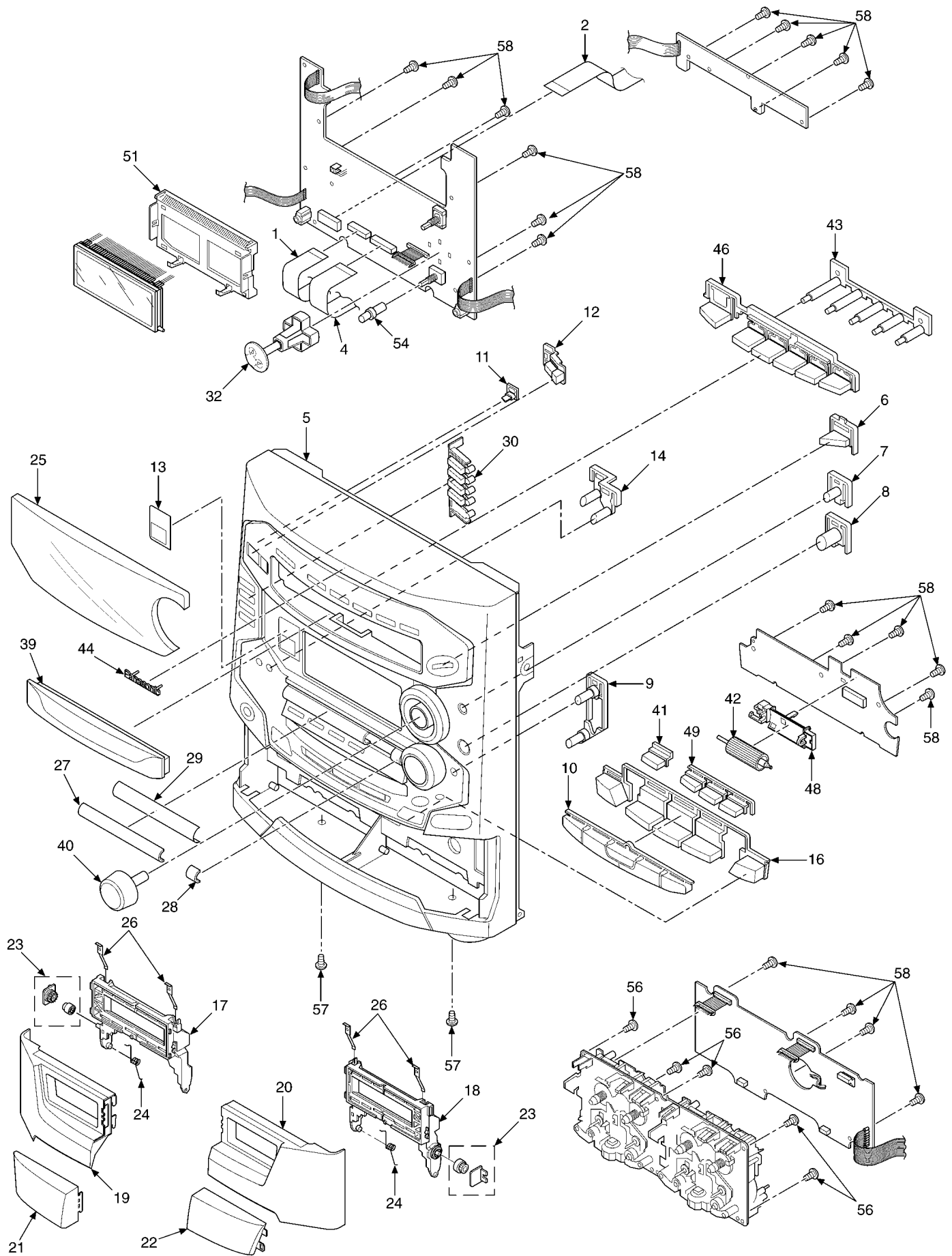
Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C721	ECUZ1H100DCN	10P 50V	1	[M]
C722	ECUZ1H100DCN	10P 50V	1	[M]
C723	ECEA1AKA221I	220 10V	1	[M]
C724	ECUZ1E104MBN	0.1 25V	1	[M]
C725	ECUZ1H102KBN	1000P 50V	1	[M]
C726	ECUZ1H102KBN	1000P 50V	1	[M]
C727	ECA1HAK010XI	1 50V	1	[M]
C728	ECA1HAK010XI	1 50V	1	[M]
C730	ECUZ1E104ZFN	0.1 25V	1	[M]
C731	ECEA0JKA221I	220 6.3V	1	[M]
C732	ECEA0JKA221I	220 6.3V	1	[M]
C733	ECUZ1E104MBN	0.1 25V	1	[M]
C734	ECEA1AKA221I	220 10V	1	[M]
C735	ECUZ1E104ZFN	0.1 25V	1	[M]
C736	ECUZ1E104ZFN	0.1 25V	1	[M]
C737	ECUZ1E104ZFN	0.1 25V	1	[M]
C738	ECUZ1H103KBN	0.01 50V	1	[M]
C739	ECUZ1H152KBN	1500P 50V	1	[M]
C742	ECUZ1E273KBN	0.027 25V	1	[M]
C743	ECUZ1E104ZFN	0.1 25V	1	[M]
C744	ECUZ1E822KBN	8200P 25V	1	[M]
C745	ECUZ1H102KBN	1000P 50V	1	[M]
C747	ECUZ1H181KCN	180P 50V	1	[M]
C749	ECUZ1H222KBN	2200P 50V	1	[M]
C750	ECUZ1E104MBN	0.1 25V	1	[M]
C751	ECUZ1E104MBN	0.1 25V	1	[M]
C752	ECUZ1H102KBN	1000P 50V	1	[M]
C753	ECUZ1H471KBM	470P 50V	1	[M]
C754	ECUZ1H471KBN	470P 50V	1	[M]
C900	ECBT1H101KB5	100P 50V	1	[M]
C901	ECBT1H101KB5	100P 50V	1	[M]
C902	ECBT1H104ZF5	0.1 50V	1	[M]
C975	ECEA1VKA4R7B	4.7 35V	1	[M]
C976	RCEA1C102B-S	1000P 16V	1	[M]
C977	RCEA1C102B-S	1000P 16V	1	[M] △
C978	ECKR1H103ZF5	0.01 50V	1	[M]
C979	ECKR1H102ZF5	1000P 50V	1	[M]
C980	ECKR1H103ZF5	0.01 50V	1	[M]
C981	ECEA1AKA470B	47 10V	1	[M]
C1101	ECUZ1H102KBN	1000P 50V	1	[M]
C1102	ECUZ1H102KBN	1000P 50V	1	[M]
C1103	ECUZ1H681KBN	680P 50V	1	[M]
C1104	ECFR1C223KR	0.022 16V	1	[M]
C1105	ECUZ1H122KBN	1200P 50V	1	[M]
C1106	ECUZ1H122KBN	1200P 50V	1	[M]
C1108	ECEA1CKA330B	33 16V	1	[M]
C1109	ECEA1CKA101B	100 16V	1	[M]
C1111	ECUZ1H821KBN	820P 50V	1	[M]
C1112	ECUZ1H821KBN	820P 50V	1	[M]
C1113	ECEA0JKA221B	220 6.3V	1	[M]
C1114	ECEA0JKA221B	220 6.3V	1	[M]
C1115	ECFR1C333JR	0.033 16V	1	[M]
C1116	ECFR1C333JR	0.033 16V	1	[M]
C1117	ECEA1HKM010B	1 50V	1	[M]
C1118	ECEA1HKM010B	1 50V	1	[M]
C1119	ECEA1HKA4R7B	4.7 50V	1	[M]
C1120	ECEA1HKA4R7B	4.7 50V	1	[M]
C1121	ECEA1HKA010B	1 50V	1	[M]
C1122	ECEA1HKA010B	1 50V	1	[M]
C1123	ECUZ1H182KBN	1800P 50V	1	[M]
C1124	ECUZ1H182KBN	1800P 50V	1	[M]
C1125	ECFR1C473MR	0.047 16V	1	[M]
C1126	ECFR1C473MR	0.047 16V	1	[M]
C1127	ECUZ1H103KBN	0.01 50V	1	[M]
C1128	ECUZ1H103KBN	0.01 50V	1	[M]
C1129	ECUZ1H821KBN	820P 50V	1	[M]
C1130	ECUZ1H821KBN	820P 50V	1	[M]
C1131	ECUZ1H821KBN	820P 50V	1	[M]
C1132	ECUZ1H821KBN	820P 50V	1	[M]
C1133	ECEA1HKA4R7B	4.7 50V	1	[M]
C1134	ECEA1HKA4R7B	4.7 50V	1	[M]
C1135	ECUZ1H102KBN	1000P 50V	1	[M]
C1136	ECUZ1H102KBN	1000P 50V	1	[M]

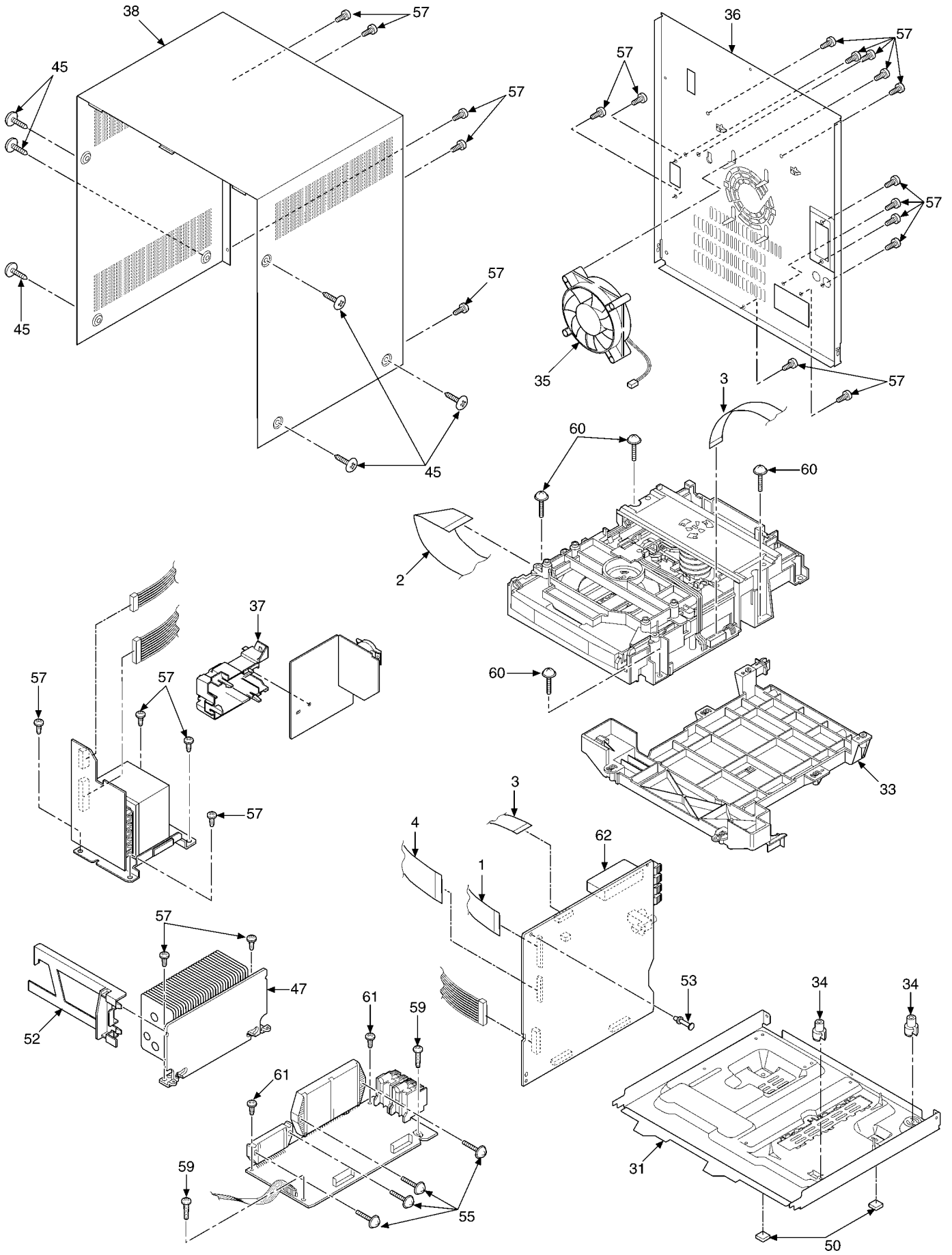
Ref. No.	Part No.	Part Name & Description	Psc.	Remarks
C1139	ECEA1HKA2R2B	2.2 50V	1	[M]
C1140	ECEA1CKA100B	10 16V	1	[M]
C1141	ECEA1HKA0R1B	0.1 50V	1	[M]
C1142	ECFR1C223KR	0.022 16V	1	[M]
C1143	ECEA1HKA4R7B	4.7 50V	1	[M]
C1144	ECEA1HKA4R7B	4.7 50V	1	[M]
C1145	ECEA1CKA100B	10 16V	1	[M]
C1146	ECEA1CKA100B	10 16V	1	[M]
C1147	ECUZ1H152KBN	1500P 50V	1	[M]
C1148	ECUZ1H152KBN	1500P 50V	1	[M]
C1150	ECEA1AKA470B	47 10V	1	[M]
C1151	ECEA1CKA100B	10 16V	1	[M]
C1152	ECEA1CKA100B	10 16V	1	[M]
C1153	ECUZ1H102KBN	1000P 50V	1	[M]
C1154	ECUZ1H102KBN	1000P 50V	1	[M]
C1162	ECEA1CKA101B	100 16V	1	[M]
C1165	ECEA1CKA100B	10 16V	1	[M]
C1166	ECEA1CKA100B	10 16V	1	[M]
C1173	ECUZ1H103KBN	0.01 50V	1	[M]
C1174	ECEA1HKA4R7B	4.7 50V	1	[M]
C1175	ECEA1VU221B	220 35V	1	[M]
C1176	ECQV1H473JZ3	0.047 50V	1	[M]
C1177	ECUZ1H102KBN	1000P 50V	1	[M]
C1178	ECUZ1H102KBN	1000P 50V	1	[M]
C1179	ECUZ1H103KBN	0.01 50V	1	[M]
C1180	ECUZ1H103KBN	0.01 50V	1	[M]
C1181	ECUZ1H103KBN	0.01 50V	1	[M]
C1182	ECEA1HKA4R7B	4.7 50V	1	[M]
C1183	ECQV1H474JZ3	0.47 50V	1	[M]
C1184	ECQP1152JZT	1500P 100V	1	[M]
C1185	ECQP2A472JZT	4700P 100V	1	[M]
C1186	ECEA1AKA470B	47 10V	1	[M]
C1187	ECUZ1H101KBN	100P 50V	1	[M]
C1188	ECUZ1H101KBN	100P 50V	1	[M]
C1193	ECUZ1H102KBN	1000P 50V	1	[M]
C1194	ECUZ1H102KBN	1000P 50V	1	[M]
C1201	ECEA1CKA101B	100 16V	1	[M]
C1202	ECUZ1E104ZFN	0.1 25V	1	[M]
		CHIP JUMPER		
RJ701	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ702	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ704	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ707	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ708	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ709	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ710	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ712	ERJ8GEY0R00A	0 1/8W	1	[M]
RJ715	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ716	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ721	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ722	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ724	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ727	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ728	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ731	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ732	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ734	ERJ6GEY0R00A	0 1/10W	1	[M]
RJ750	ERJ6GEY0R00A	0 1/10W	1	[M]
		TEST JUMPER		
TJ701	EYF8CU	TEST JUMPER	1	[M]

## PLACAS MONTADAS

CÓDIGO	DESCRIÇÃO
AK48-PCI-POWER-MONT	PLACA POWER
AK48-PCI-TRAFO-MONT	PLACA DO TRAFO
AK48-MAIN-MONT	PLACA MAIN
AK48-PCI-PAINEL-MONT	PLACA DO PAINEL
PCI-DECK78-MONT	PLACA DO DECK

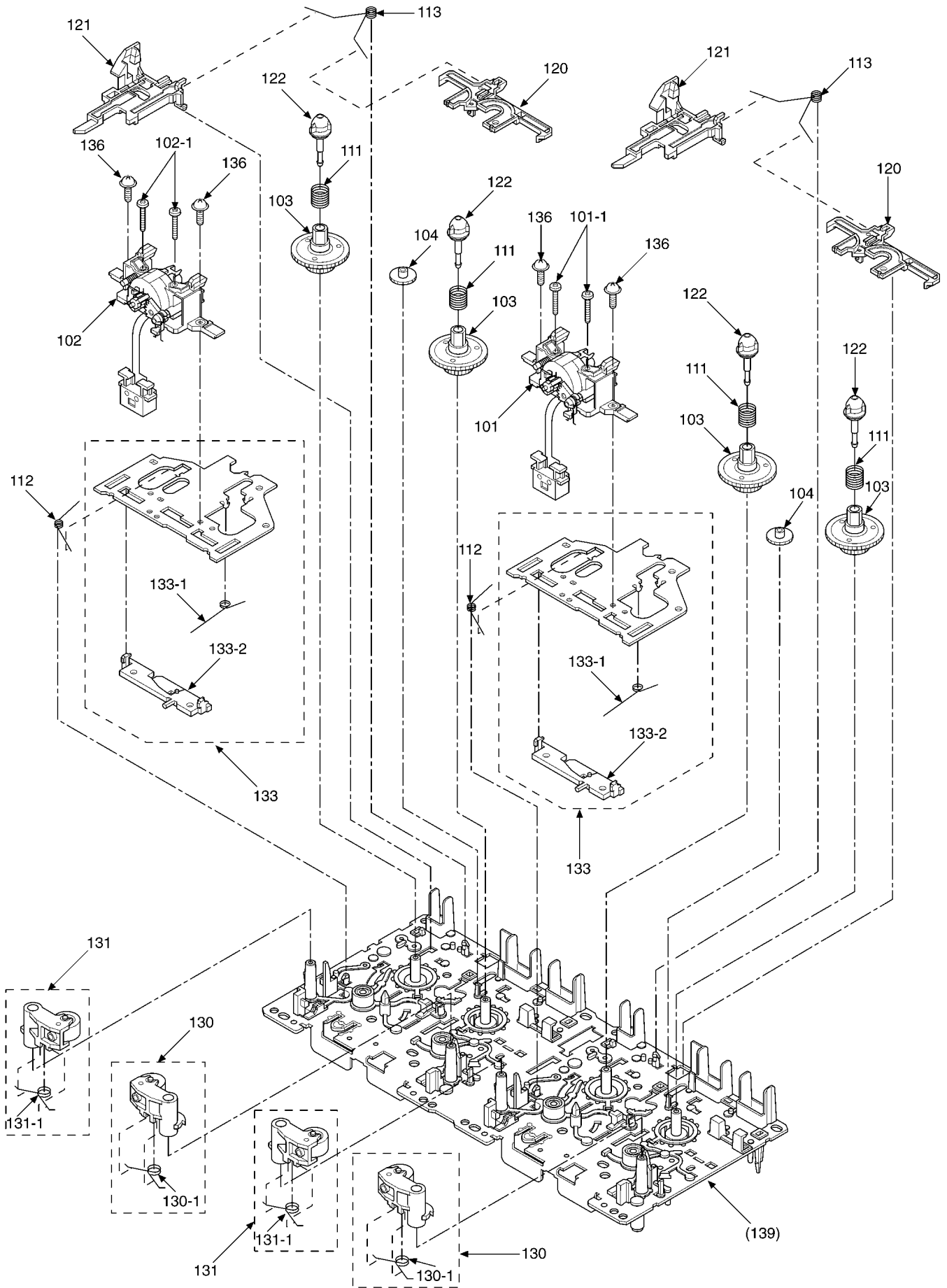
# 22 Cabinet Parts Location





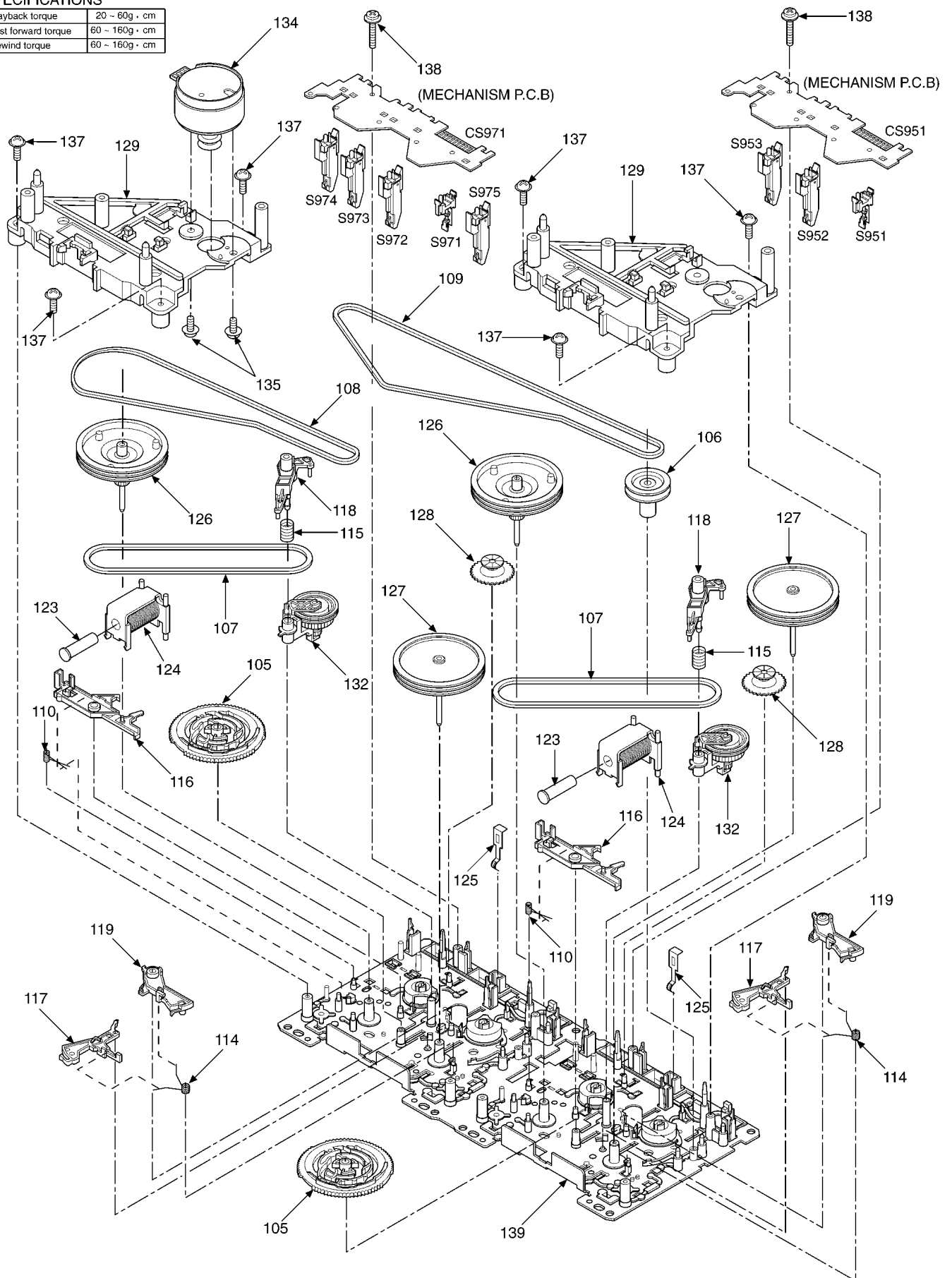


# 23 Mechanism Parts Location

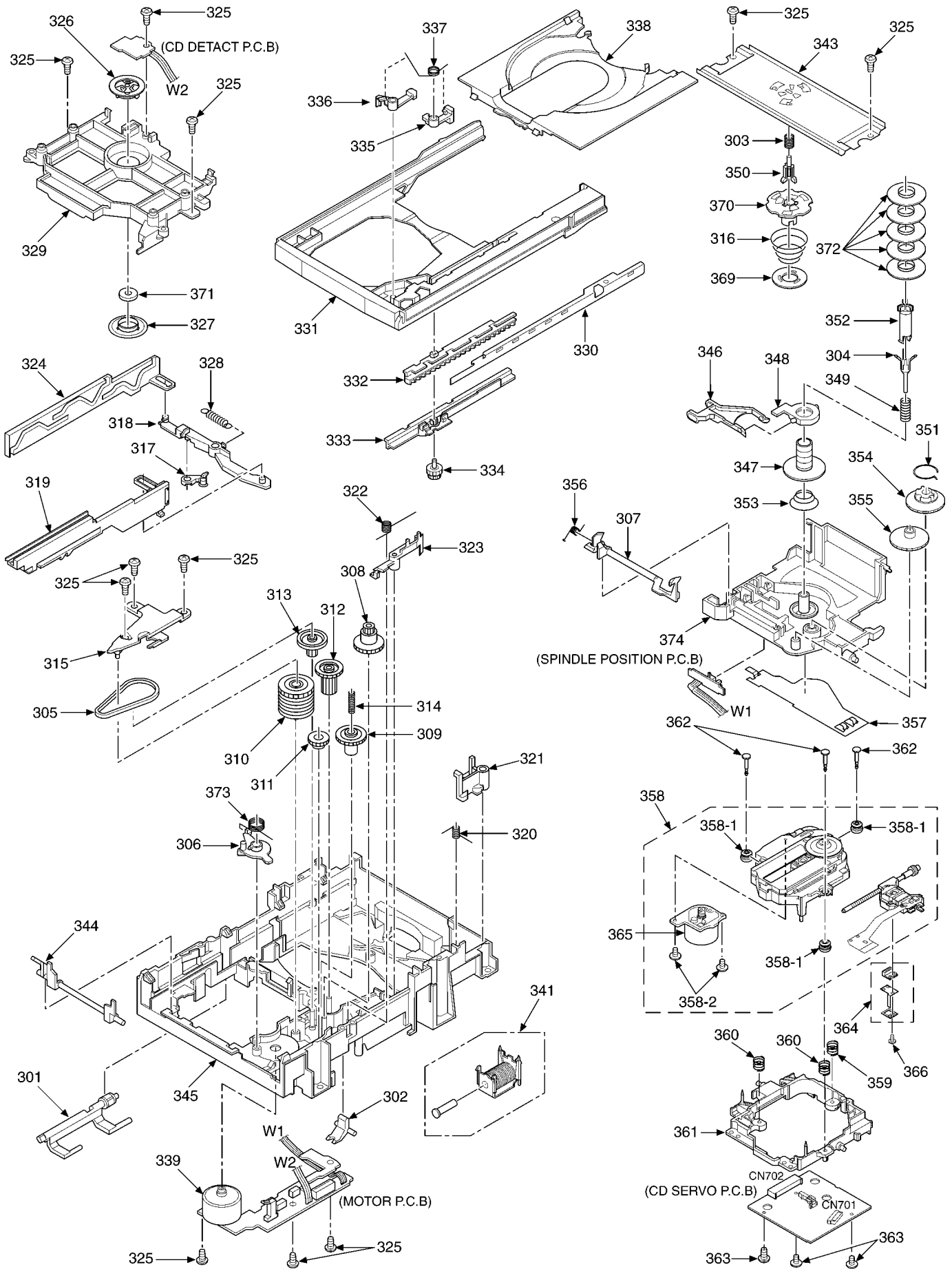


SPECIFICATIONS

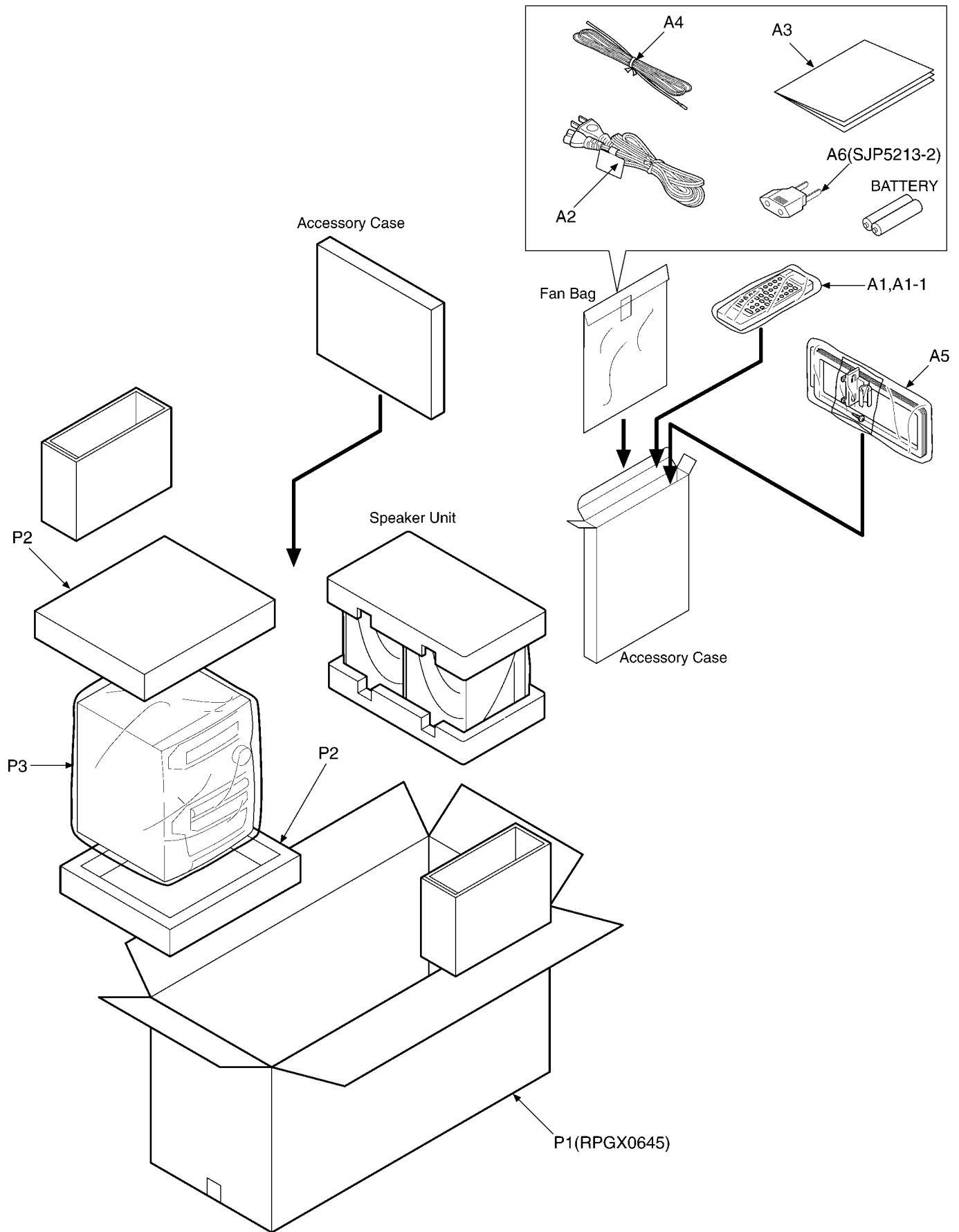
Playback torque	20 ~ 60g · cm
Fast forward torque	60 ~ 160g · cm
Rewind torque	60 ~ 160g · cm



# 24 CD Mechanism Parts Location

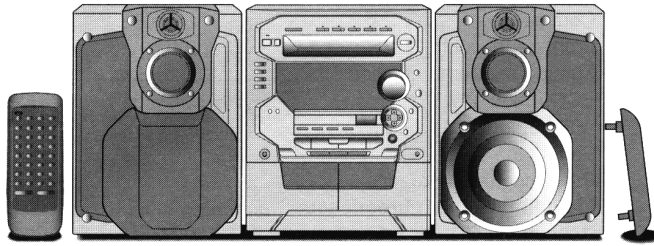


# 25 Packaging



# Service Manual

## Speaker System

Remote  
Control  
Transmitter

SB-AK48

SA-AK48

SB-AK48

### SB-AK48

Colour

(S)... Silver Type

Area

(GC)... Asia, Latin America, Africa and  
Middle Near East

### Specification

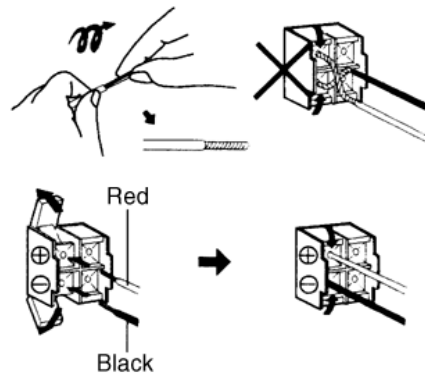
Type	4 way speaker system	LOW	200W (Music)
Speaker(s)		Output sound pressure level	87 dB/W (1.0m)
Super Woofer	17cm cone type	Cross over frequency	150 Hz, 3.5 kHz
Woofer	12cm cone type	Frequency range	40 Hz - 50 kHz (-16 dB)
Tweeter	6cm ring shaped dome type		50 Hz - 36 kHz (-10 dB)
Super Tweeter	Piezo type	Dimensions (W x H x D)	250 x 348 x 292 mm
Impedance		Weight	5.1 kg
HIGH	6Ω	Notes :	
MID	6Ω	Specifications are subject to change without notice. Weight and dimensions are approximate.	
LOW	6Ω	■System : SC-AK48 (GC)	Music Center : SA-AK48 (GC)
Input power			Speaker : SB-AK48 (GC)
HIGH	60W (Music)		
MID	60W (Music)		

### WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# 1 Connection of the Speaker Cables

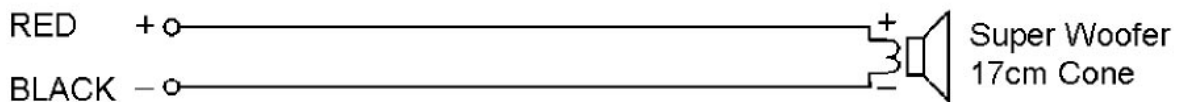
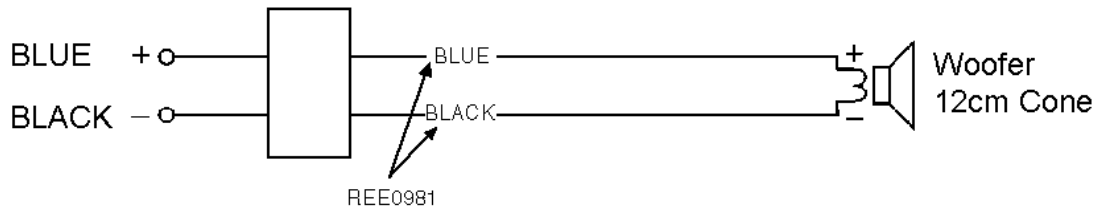
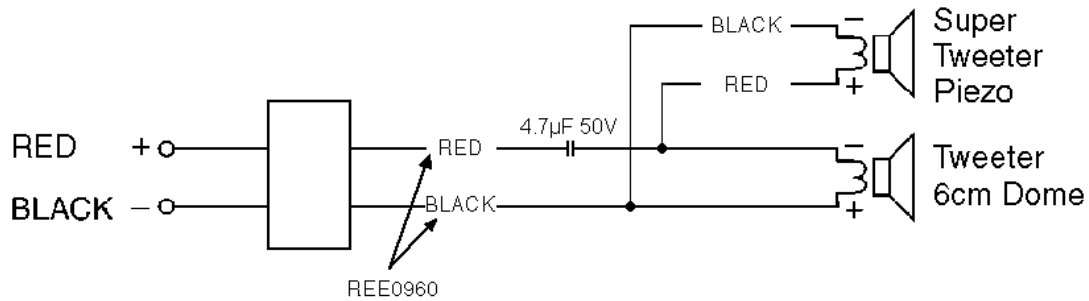
- Be sure to connect speaker cables before connecting the AC power supply cord.
  - The load impedance of any speaker used with this unit must be 6Ω.
  - Be sure to connect the cable from the right speaker to the right terminal and the cable from the left speaker to the left terminal.
1. Strip off the outer covering, and twist the center conductor. Make sure the bare ends of the wires are not unravelled. (If they are, twist them toght again.)
  2. Insert the wire to the rear panel of the unit and close the lever.



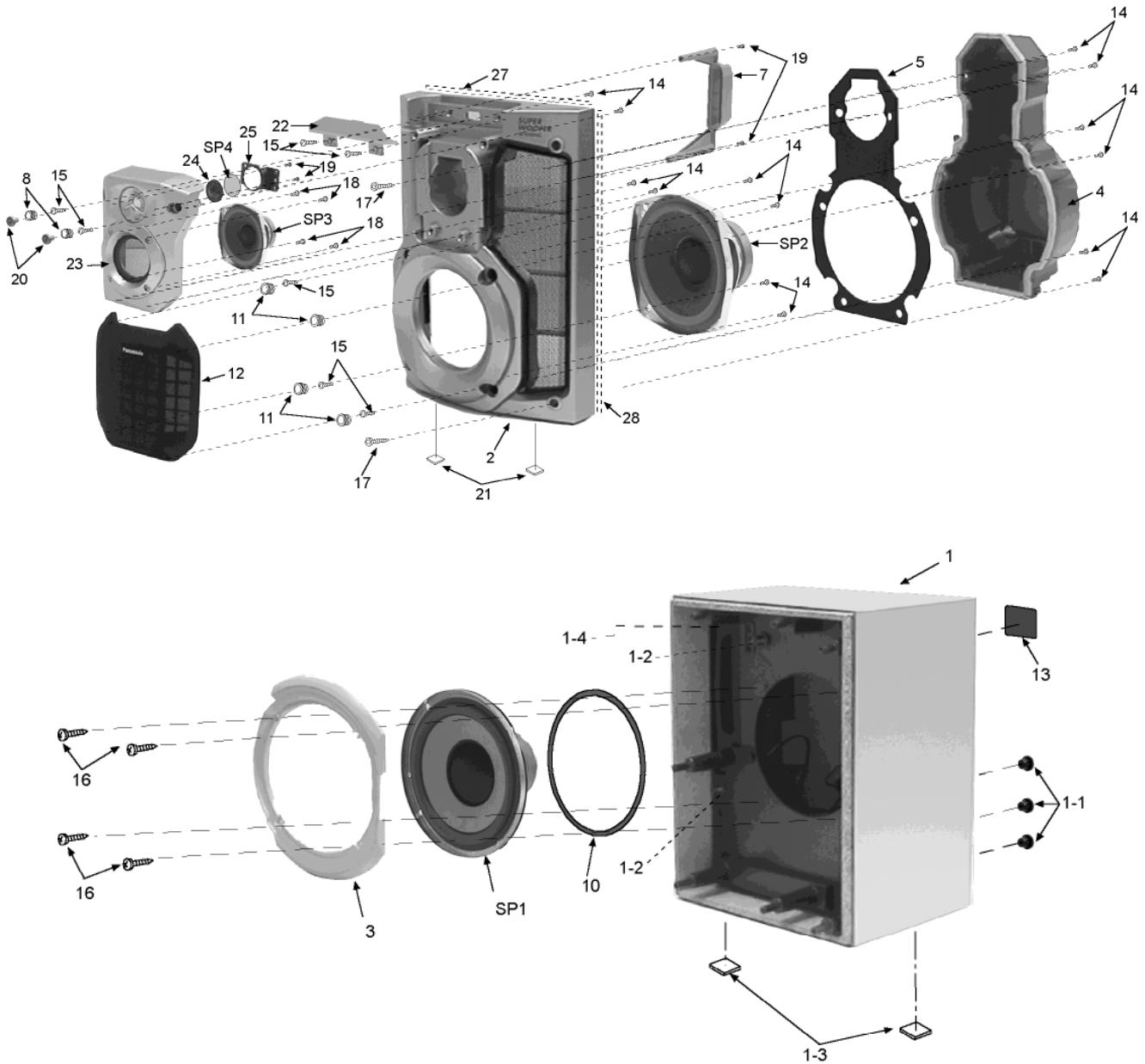
Notes :

- To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (red) wires to positive (+) terminals and negative (black) wires to negative (-) terminals.

# 2 Schematic Diagram



### 3 Cabinet Parts Location



### 4 Replacement Parts List

Notes :

- Important safety notice :

Components identified by  $\triangle$  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fireretardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- [M] indicates in the Remarks columns indicates parts supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	BKM0146	SP CABINET ASS'Y(L)	[M]
1	BKM0145	SP CABINET ASS'Y(R)	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
1-1	RGQ0230-K	CORD CLIPPER	[M]
1-2	RMQ0941	BUSH TERMINAL	[M]
1-3	RKA0072-KJ	LEG	[M]
1-4	RMQ0938	PORT PACKING	[M]
2	RYQ0296-S	FRONT PANEL (L)	[M]
2	RYQ0296A-S	FRONT PANEL (R)	[M]
3	RMR1278-W	WOOFER RING	[M]
4	RMR1277-K	BACK CAVITY	[M]
5	RMQ0936S	EVA PACKING (B/C)	[M]
6	REE0960	CORD ASS'Y	[M]
7	RMR1281A-H	EXTEND PORT R	[M]
7	RMR1281-H	EXTEND PORT L	[M]
8	RMG0513-K	CATCHER	[M]
10	RMQ0705	EVA PACKING (S/W)	[M]
11	RMG0490-K	CATCHER	[M]
12	RYB0234	NET FRAME ASS'Y	[M]
13	RGN1849-K	BACK LEBAL	[M]
14	XTB4+10G	SCREW (B/C)	[M]
15	XTB4+14G	SCREW (F/P)	[M]
16	XTB4+20AFN	SCREW (SUPER WOOFER)	[M]
17	RHD40009-S	SCREW (FRONT PANEL)	[M]
18	XTB4+8GFZ	SCREW (TWEETER)	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
19	XTB3+10G	SCREW (EXTEND PORT)	[M]
20	RGK0985B-H	ORNAMENT CAP	[M]
21	RKA0072-KJ	LEG	[M]
22	RGQ0260-S	PANEL SPACER	[M]
23	RYQ0297-H	ORNAMENT ASS'Y (L)	[M]
23	RYQ0297A-H	ORNAMENT ASS'Y (R)	[M]
24	RGK0500-K	DUST CAP	[M]
25	RMR1208-K	TWEETER SPACER	[M]
26	REE0981	WIRE	[M]
27	RMQ0931C	CAB PACKING	[M]
28	RMQ0931LK	CABINET PACKING	[M]
		CAPACITORS	
C1	ECEA1HAY4R7S	4.7uF 50V	[M]
		PACKING MATERIALS	
P1	RPH0187	MIRAMAT	[M]
P2	RPN1250	POLYFOAM	[M]
		SPEAKER	
SP1	EAST17PL11B6	SUPER WOOFER	[M]
SP2	EAST12P25A6	WOOFER	[M]
SP3	EAST6PH06A6	TWEETER	[M]
SP4	EFBS55C41A6	SUPER TWEETER	[M]