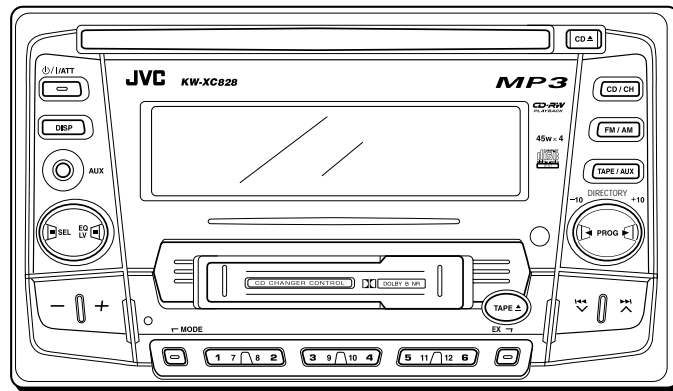
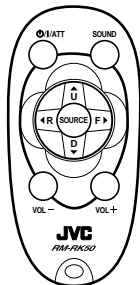


# JVC

# SERVICE MANUAL

## CD/CASSETTE RECEIVER

# KW-XC828



**MP3**




**CD-RW  
PLAYBACK**

**Area Suffix**  
U----- Ather Areas

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## Safety precaution

 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

## Disassembly method

### ■ Removing the front panel assembly (See Fig.1 ~ 3)

1. Remove the four screws **A** on both sides of the body.
2. Release four joints **a** on both sides of the body using a screwdriver and remove the front panel assembly toward the front. The connector which connects the front panel assembly with the rear section comes off.

**CAUTION:** When reassembling, make sure that connector CN501 on the front panel assembly is securely connected to CN701 on the main board (See Fig.3).

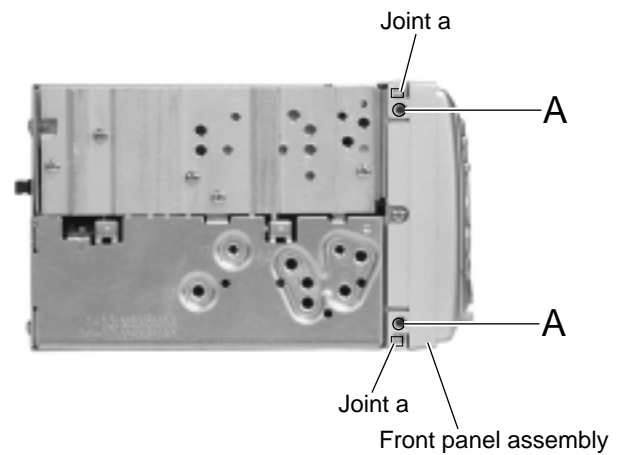


Fig.1

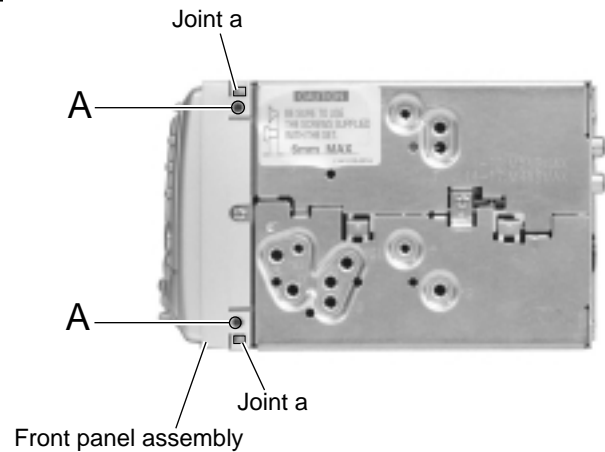


Fig.2

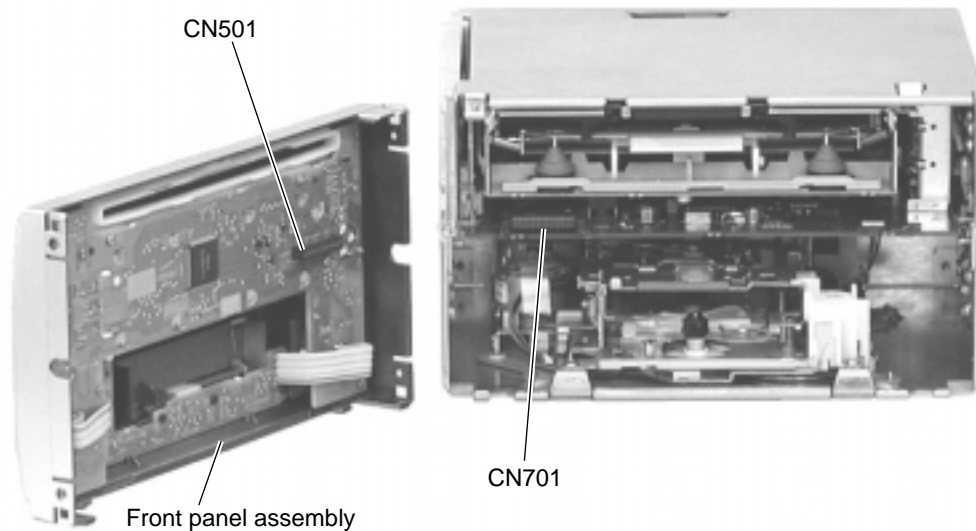


Fig.3

■ **Removing the system control board / switch board (See Fig.4 , 5)**

• Prior to performing the following procedure, remove the front panel assembly.

1. Remove the twelve screws **B** retaining the system control board.
2. Remove the five screws **C** retaining the switch board.
3. Unsolder WR501 and WR502 of the wires connecting the system control board with the switch board.

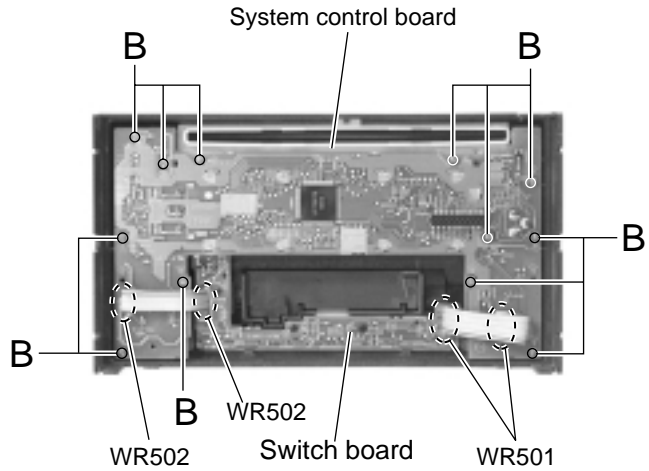


Fig.4

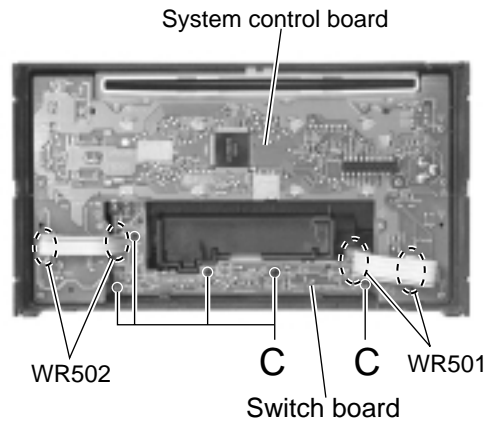


Fig.5

**■Removing the CD player section / cassette player section (See Fig.6 ~ 10)**

· Prior to performing the following procedure, remove the front panel assembly.

1. Remove the ten screws **D**, the screw **E** and **F** attaching the rear panel on the back of the body.
2. Remove the three screws **G** and the two screws **H** attaching the heat sink on the left side.
3. Remove the three screws **I** attaching the CD player section and the cassette player section on the both sides of the body.
4. Disconnect the card wire from connector CN702 on the main board in the CD player section on the back of the body.
5. Remove the CD player section upward.

**CAUTION:** When reassembling, joint the CD player section and the cassette player section at four joints **b**.

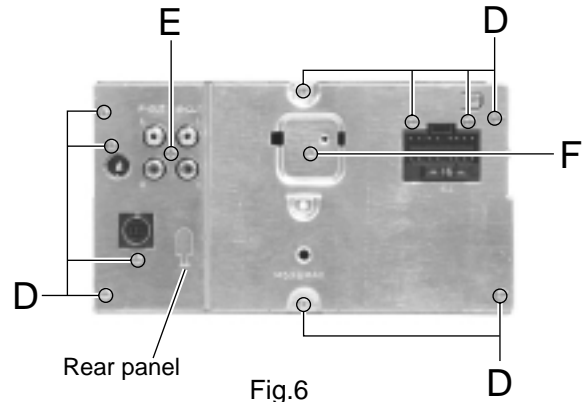


Fig.6

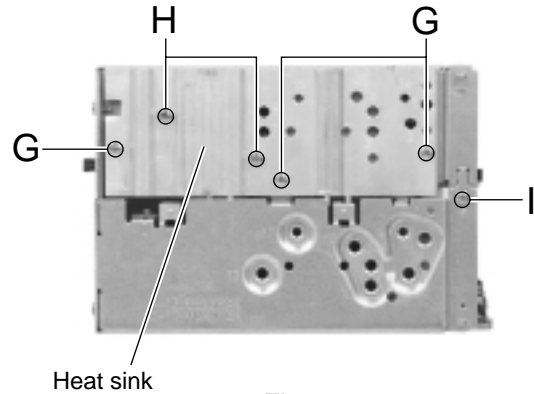


Fig.7

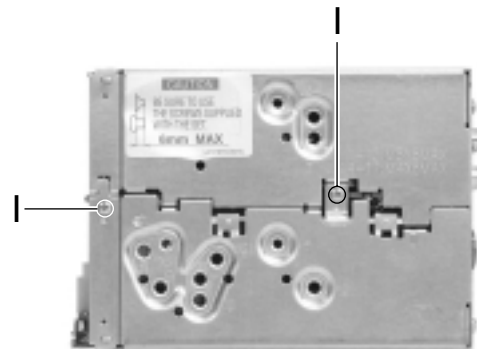


Fig.8

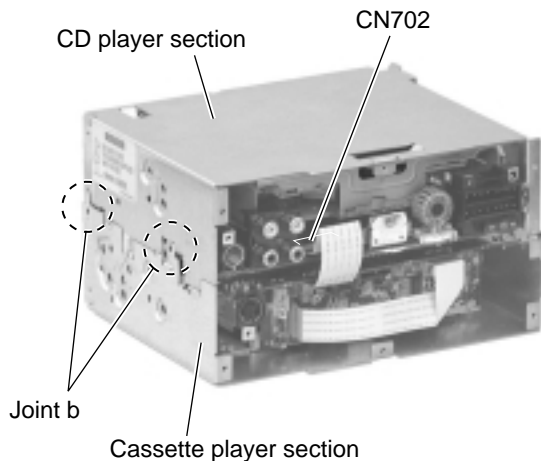


Fig.9

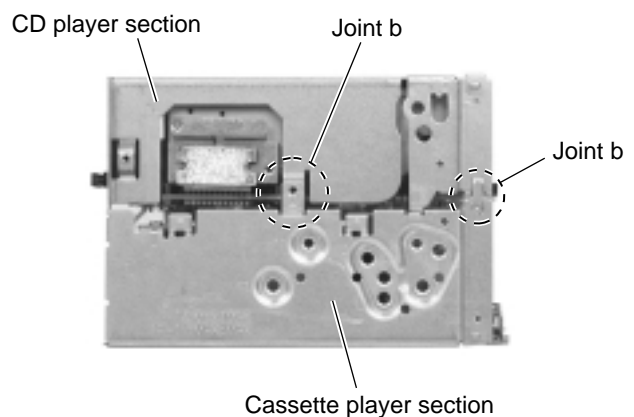


Fig.10

## <CD player section>

- Prior to performing the following procedure, remove the front panel assembly, the CD player section and the cassette player section.

### ■ Removing the main board (See Fig.11)

1. Remove the three screws **J** attaching the main board. The connector CN601 on the main board is disconnected from the CD mechanism control board.

**CAUTION:** When reassembling, securely connect connector CN601 on the main board to the connector on the CD mechanism control board.

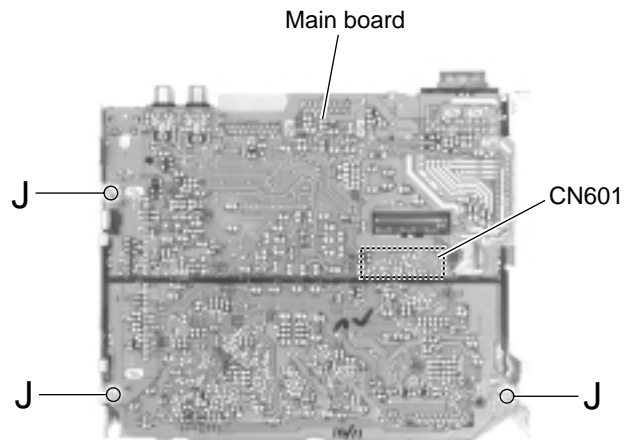


Fig.11

### ■ Removing the MP3 board (See Fig.12)

(See Fig.12)

- Prior to performing the following procedure, remove the main board.
1. Disconnect the wire from connector CN601 on the MP3 board.
  2. Remove the five screws **K** and the MP3 board, releasing the joint **c** and **d**.

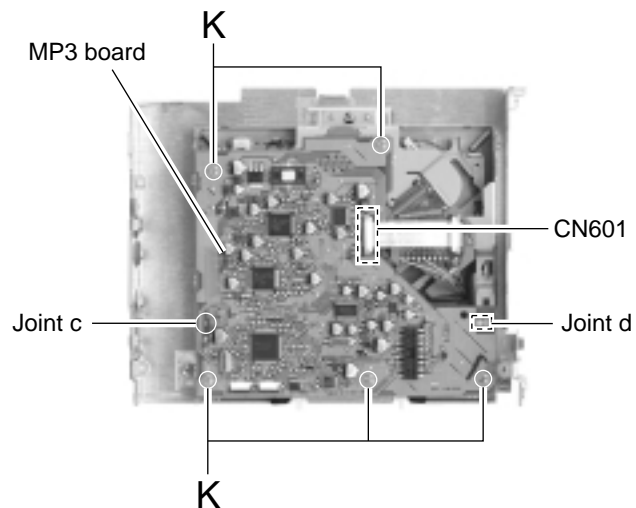


Fig.12

### ■ Removing the CD mechanism assembly (See Fig.13)

- Prior to performing the following procedure, remove the main board and MP3 board.
1. Remove the three screws **L** attaching the CD mechanism assembly.

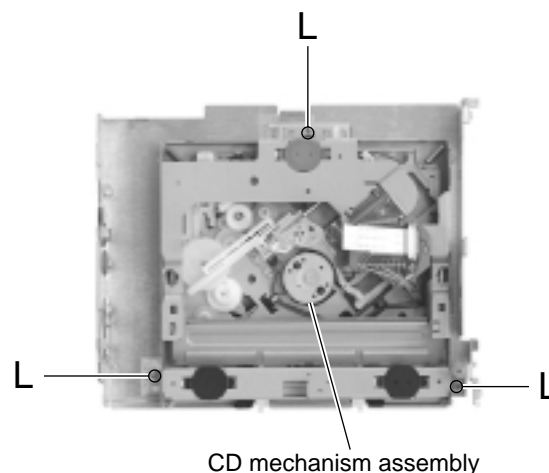


Fig.13

## <Cassette player section>

- Prior to performing the following procedures, remove the front panel assembly, the CD player section and the cassette player section.

### ■ Removing the main board (See Fig.14)

1. Disconnect the card wire from connector CN972 on the main board.
2. Remove the two screws **M** attaching the main board.

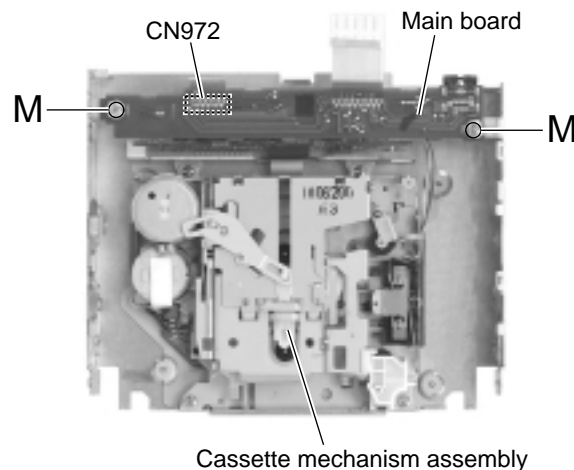


Fig.14

### ■ Removing the cassette mechanism assembly (See Fig.14 , 15)

- Prior to performing the following procedure, remove the main board.
1. Disconnect the card wire from connector CN972 on the main board.
  2. Remove the four screws **N** from the bottom cover of the cassette player section.

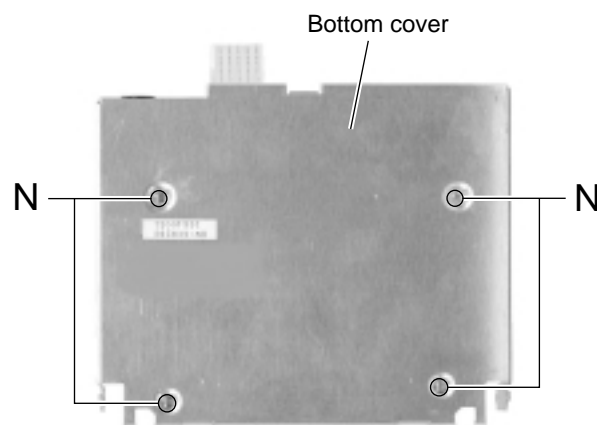


Fig.15

### ■ Removing the connector board (See Fig.16)

- Prior to performing the following procedure, remove the cassette mechanism assembly.
1. Remove the screw **O** and move the connector board in the direction of the arrow to release the two joints **e**.
  2. Disconnect the wire from connector CJ402 and the card wire from CN403 on the connector board respectively.

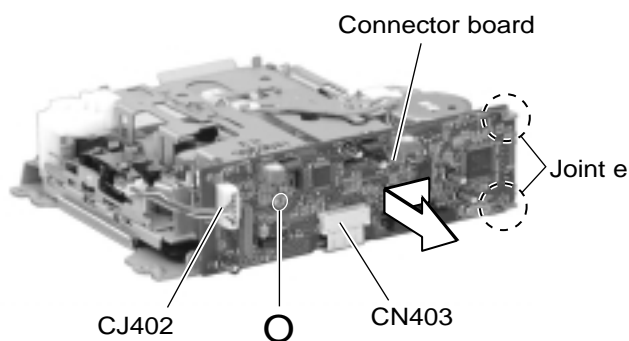


Fig.16

**< CD mechanism section >**

**■ Removing the top cover**

(See Fig.1 and 2)

1. Remove the two screws **A** on each side of the body.
2. Lift the front side of the top cover and move the cover backward to release the two joints **a**.

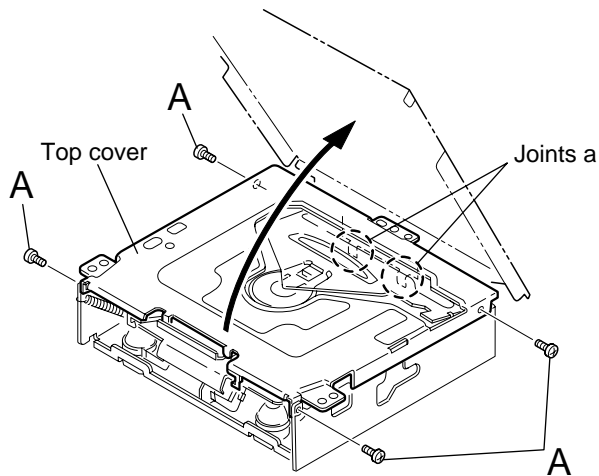


Fig.1

**■ Removing the connector board**

(See Fig.3 to 5)

**CAUTION:** Before disconnecting the flexible wire from the pickup, solder the short-circuit point on the pickup. No observance of this instruction may cause damage of the pickup.

1. Remove the screw **B** fixing the connector board.
2. Solder the short-circuit point on the connector board.  
Disconnect the flexible wire from the pickup.
3. Move the connector board in the direction of the arrow to release the two joints **b**.
4. Unsolder the wire on the connector board if necessary.

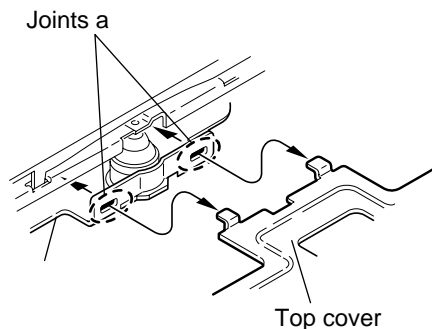


Fig.2

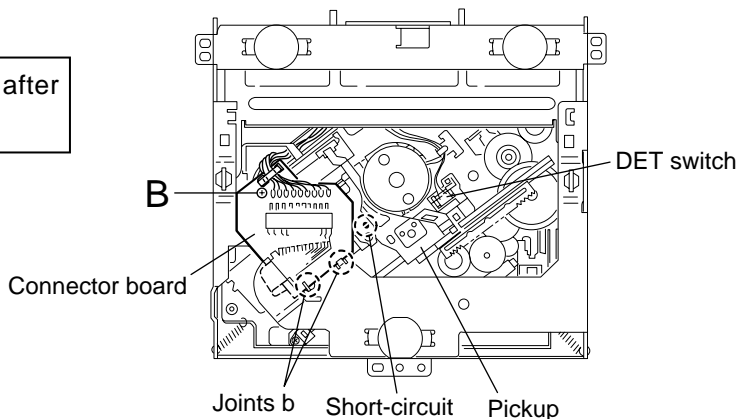


Fig.3

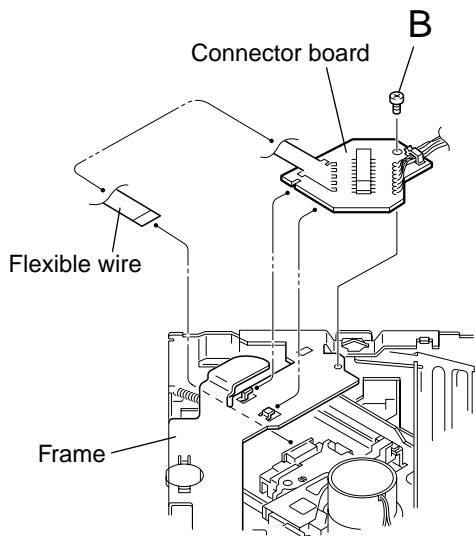


Fig.5

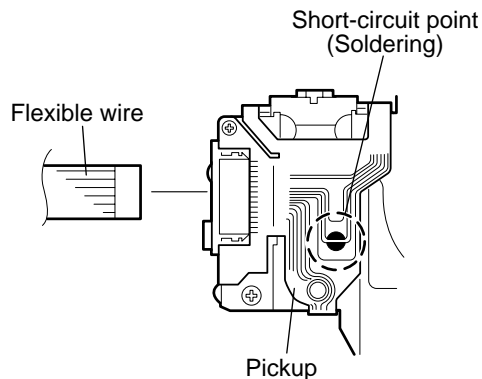


Fig.4



**■ Removing the DET switch**  
(See Fig.3 and 6)

1. Extend the two tabs **c** of the feed sw. holder and pull out the switch.
2. Unsolder the DET switch wire if necessary.

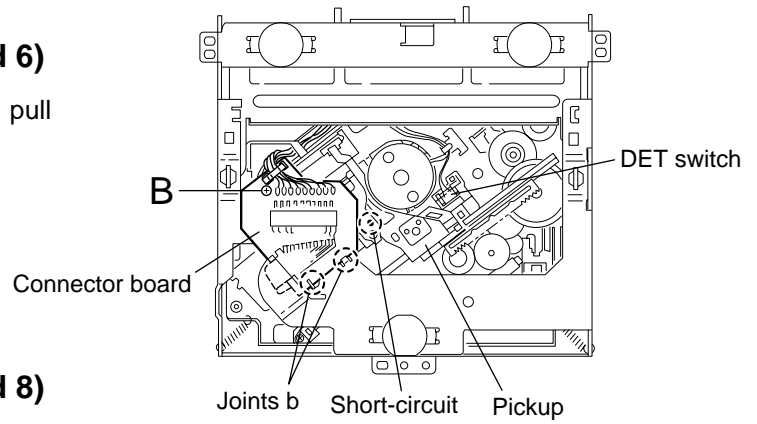


Fig.3

**■ Removing the chassis unit**  
(See Fig.7 and 8)

- Prior to performing the following procedure, remove the top cover and the connector board.
1. Remove the two suspension springs (L) and (R) attaching the chassis unit to the frame.

**CAUTION:** The shape of the suspension spring (L) and (R) are different. Handle them with care.

**CAUTION:** When reassembling, make sure that the three shafts on the underside of the chassis unit are inserted to the dampers certainly.

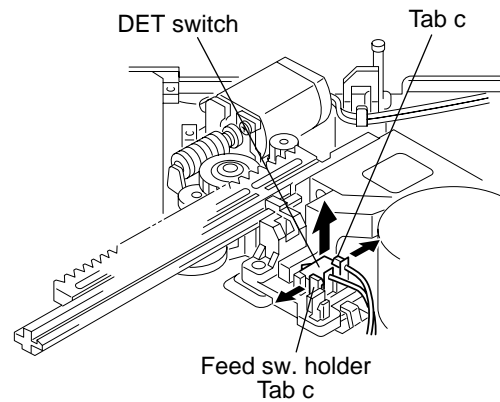


Fig.6

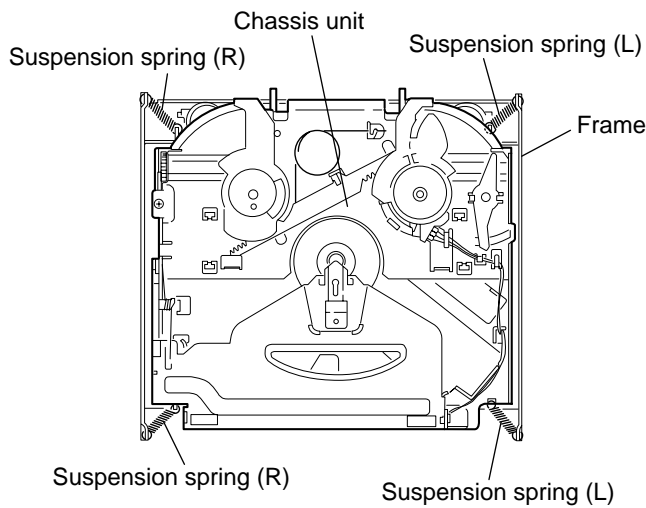


Fig.7

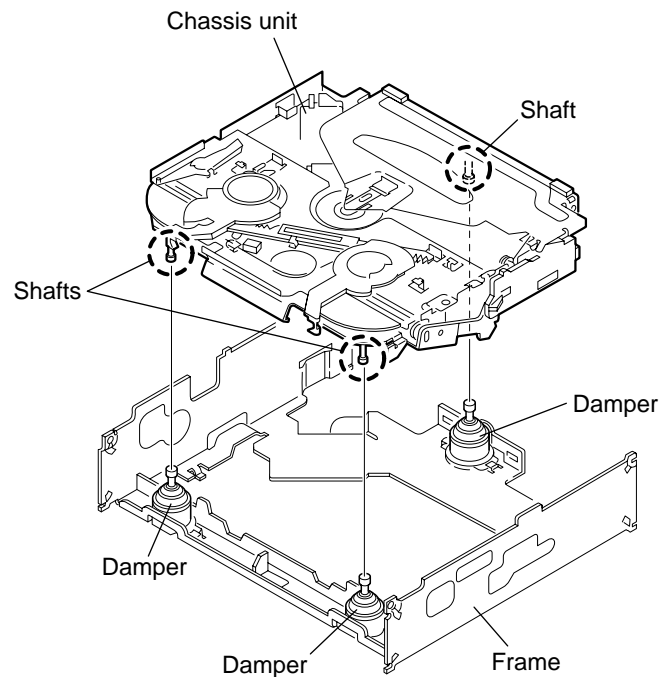


Fig.8

**■ Removing the clamper assembly  
(See Fig.9 and 10)**

• Prior to performing the following procedure, remove the top cover.

1. Remove the clamper arm spring.
2. Move the clamper assembly in the direction of the arrow to release the two joints **d**.

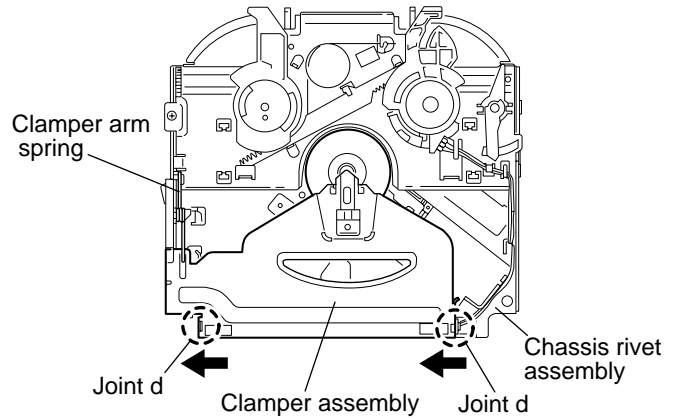


Fig.9

**■ Removing the loading / feed motor assembly  
(See Fig.11 and 12)**

• Prior to performing the following procedure, remove the top cover, the connector board and the chassis unit.

1. Remove the screw **C** and move the loading / feed motor assembly in the direction of the arrow to remove it from the chassis rivet assembly.
2. Disconnect the wire from the loading / feed motor assembly if necessary.

**CAUTION:** When reassembling, connect the wire from the loading / feed motor assembly to the flame as shown in Fig.11.

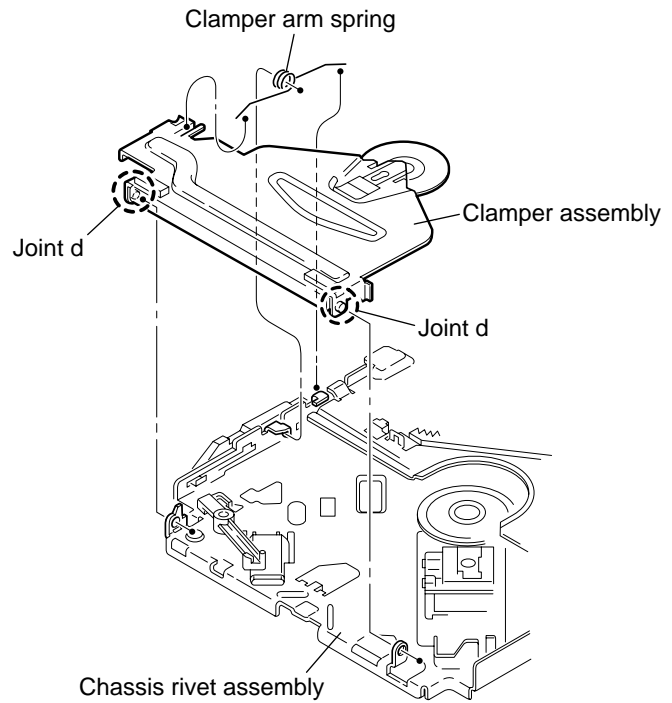
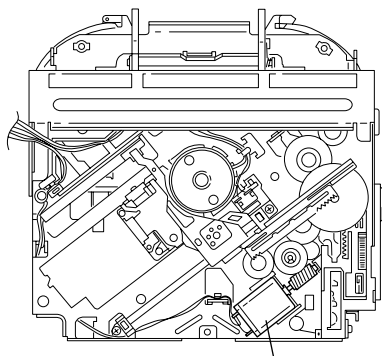


Fig.10



Loading / feed motor assembly

Fig.11

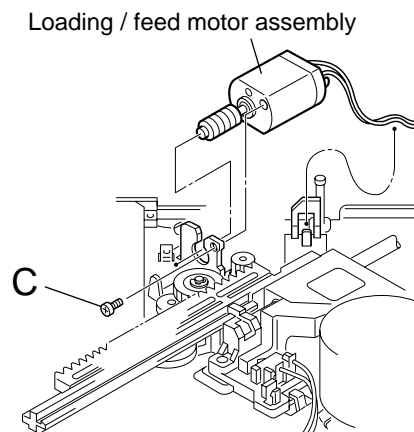


Fig.12

## ■ Removing the pickup unit (See Fig.13 to 17)

• Prior to performing the following procedure, remove the top cover, the connector board and the chassis unit.

1. Remove the screw **D** and pull out the pu. shaft holder from the shaft.
2. Remove the screw **E** attaching the feed sw. holder.
3. Move the part **e** of the pickup unit upward with the shaft and the feed sw. holder, then release the joint **f** of the feed sw. holder in the direction of the arrow. The joint **g** of the pickup unit and the feed rack is released, and the feed sw. holder comes off.
4. Remove the shaft from the pickup unit.
5. Remove the screw **F** attaching the feed rack to the pickup unit.

## ■ Reattaching the pickup unit (See Fig.13 to 16)

1. Reattach the feed rack to the pickup unit using the screw **F**.
2. Reattach the feed sw. holder to the feed rack while setting the joint tab **g** to the slot of the feed rack and setting the part **f** of the feed rack to the switch of the feed sw. holder correctly.
3. As the feed sw. holder is temporarily attached to the pickup unit, set to the gear of the joint **g** and to the bending part of the chassis (joint **h**) at a time.

**CAUTION:** Make sure that the part **i** on the underside of the feed rack is certainly inserted to the slot **j** of the change lock lever.

4. Reattach the feed sw. holder using the screw **E**.
5. Reattach the shaft to the pickup unit. Reattach the pu. shaft holder to the shaft using the screw **D**.

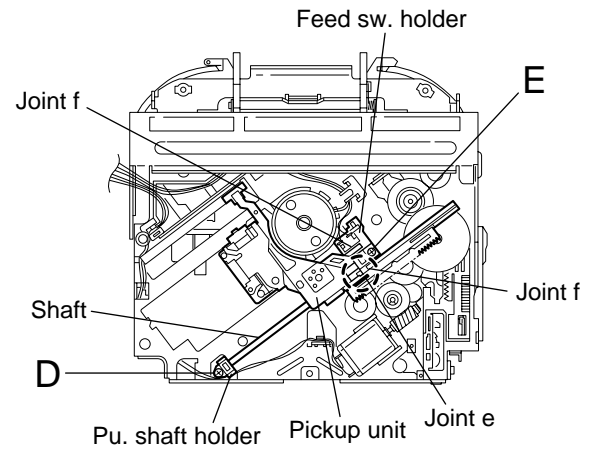


Fig.13

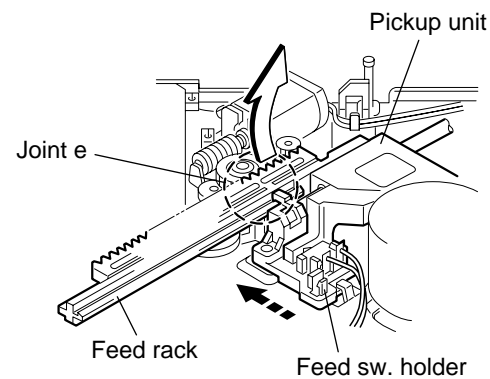


Fig.14

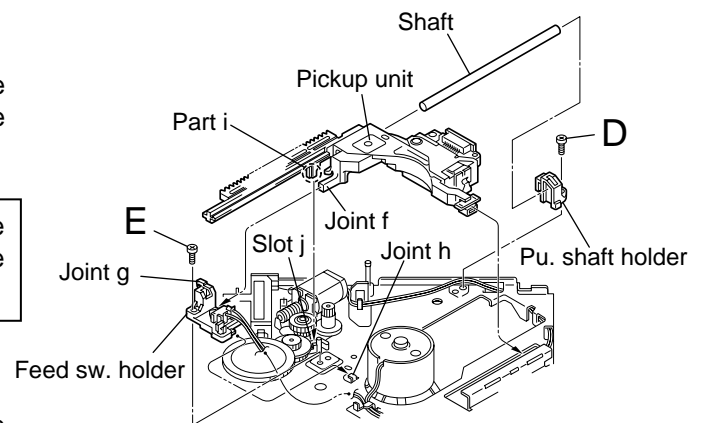


Fig.15

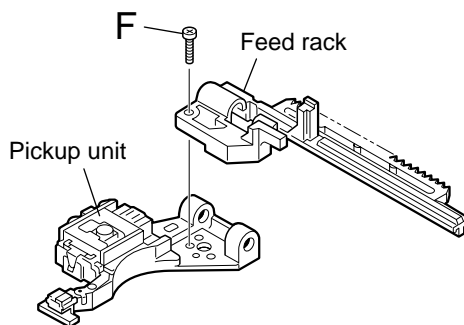


Fig.16

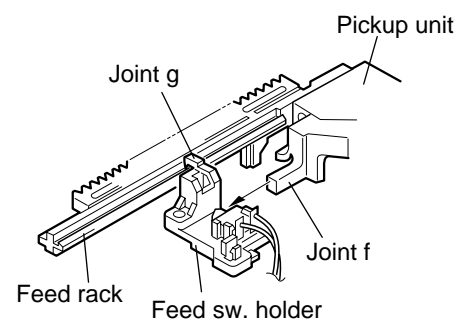


Fig.17

■ **Removing the trigger arm**

(See Fig.18 and 19)

• Prior to performing the following procedure, remove the top cover, the connector board and the clamber unit.

1. Turn the trigger arm in the direction of the arrow to release the joint **k** and pull out upward.

**CAUTION:** When reassembling, insert the part **l** and **m** of the trigger arm into the part **n** and **o** at the slot of the chassis rivet assembly respectively and join the joint **k** at a time.

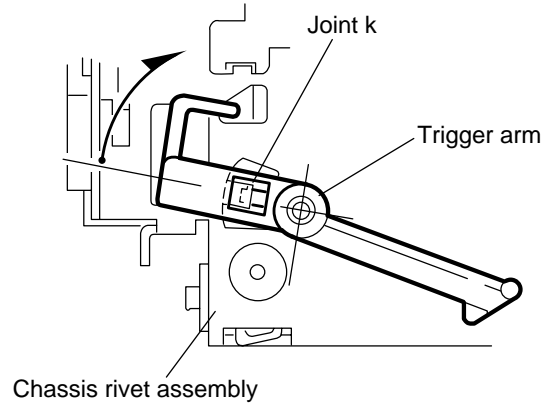


Fig.18

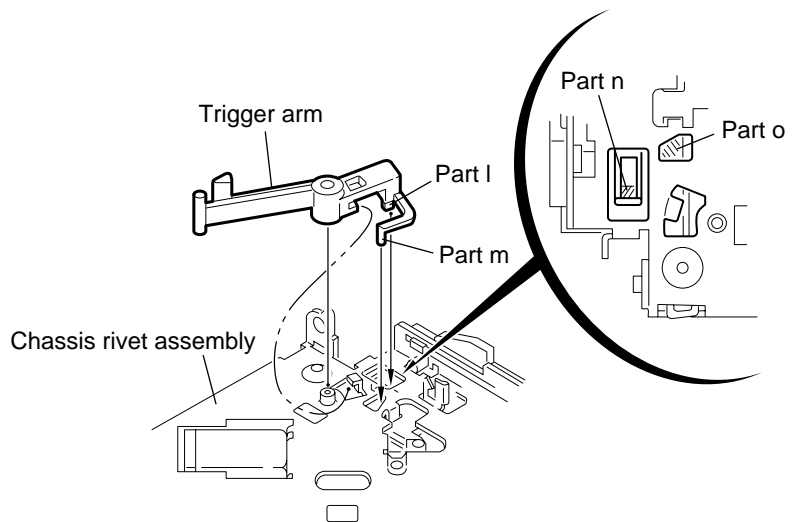


Fig.19

■ **Removing the top plate assembly**

(See Fig.20)

• Prior to performing the following procedure, remove the top cover, the connector board, the chassis unit, and the clamber assembly.

1. Remove the screw **H**.
2. Move the top plate assembly in the direction of the arrow to release the two joints **p**.
3. Unsolder the wire marked **q** if necessary.

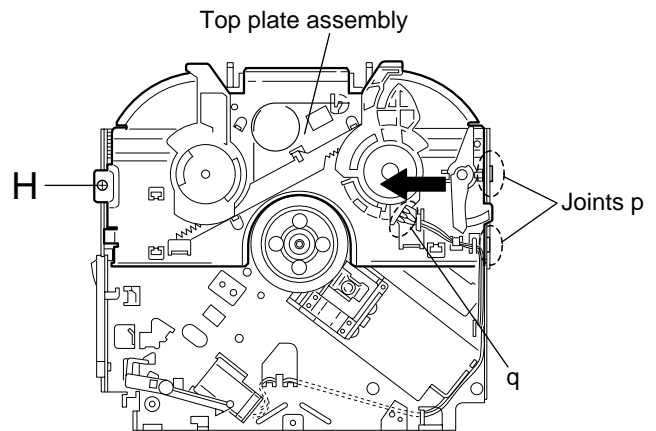


Fig.20

**■ Removing the select arm (L) / select lock arm (See Fig.21 and 22)**

- Prior to performing the following procedure, remove the top plate assembly.
- 1. Bring up the select arm (L) to release from the link plate (joint r) and turn in the direction of the arrow to release the joint s.
- 2. Unsolder the wire of the select arm (L) marked q if necessary.
- 3. Turn the select lock arm in the direction of the arrow to release the two joints t.

The select lock arm spring comes off the select lock arm at the same time.

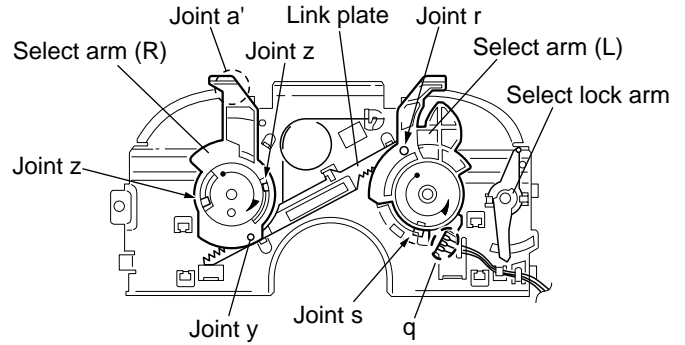


Fig.21

**■ Reassembling the select arm (L) / select lock arm (See Fig.23 to 25)**

REFERENCE: Reverse the above removing procedure.

1. Reattach the select lock arm spring to the top plate and set the shorter end of the select lock arm spring to the hook u on the top plate.
2. Set the other longer end of the select lock arm spring to the boss v on the underside of the select lock arm, and join the select lock arm to the slots (joint t). Turn the select lock arm as shown in the figure.
3. Reattach the select arm (L) while setting the part r to the first peak of the link plate gear, and join the joint s.

CAUTION: When reattaching the select arm (L), check if the points w and x are correctly fitted and if each part operates properly.

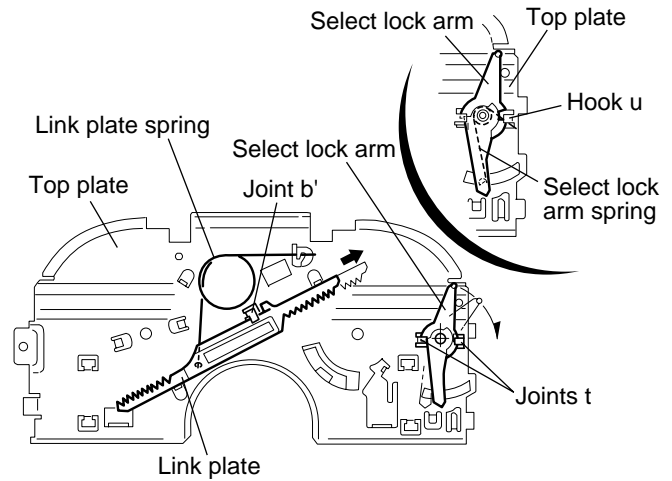


Fig.22

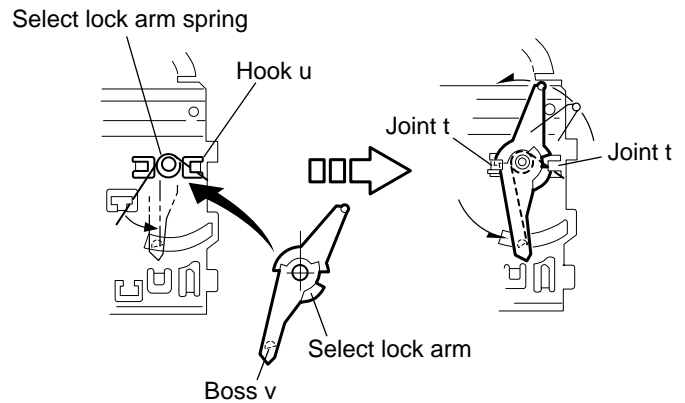


Fig.23

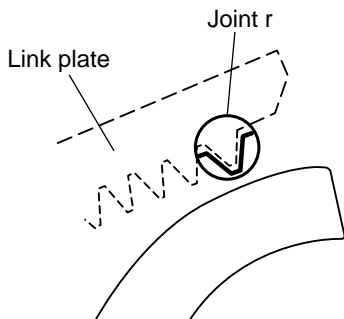


Fig.24

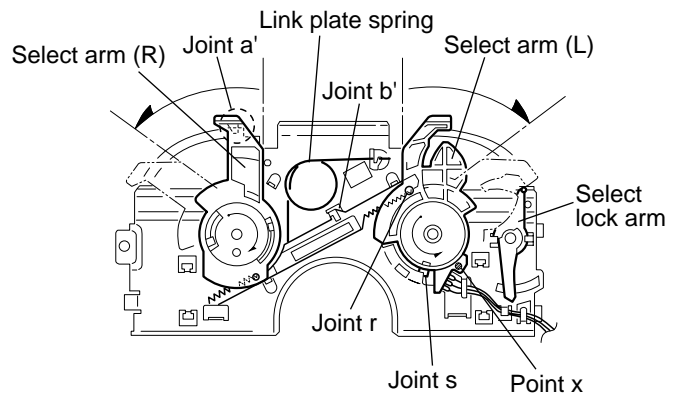


Fig.25

**■ Removing the select arm (R) / link plate  
(See Fig.21 and 22)**

- Prior to performing the following procedure, remove the top plate assembly.
1. Bring up the select arm (R) to release from the link plate (joint y) and turn as shown in the figure to release the two joints z and joint a'.
  2. Move the link plate in the direction of the arrow to release the joint b'. Remove the link plate spring at the same time.

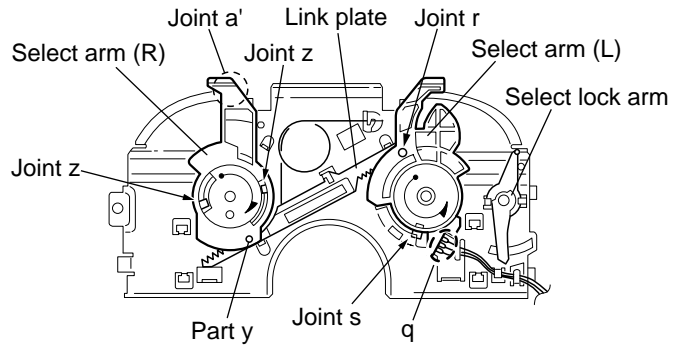


Fig.21

REFERENCE: Before removing the link plate, remove the select arm (L).

**■ Reattaching the Select arm (R) / link plate  
(See Fig.25 and 26)**

REFERENCE: Reverse the above removing procedure.

1. Reattach the link plate spring.
2. Reattach the link plate to the link plate spring while joining them at joint b'.
3. Reattach the part y of the select arm (R) to the first peak of the link plate while joining the two joints z with the slots. Then turn the select arm (R) as shown in the figure. The top plate is joined to the joint a'.

CAUTION: When reattaching the select arm (R), check if the part c' is correctly fitted and if each part operates properly.

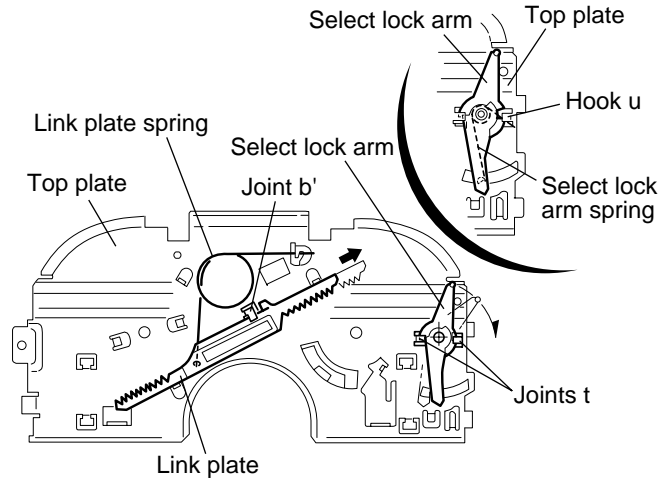


Fig.22

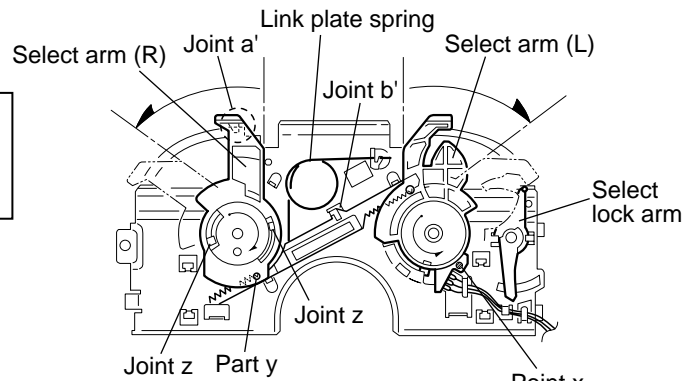


Fig.25

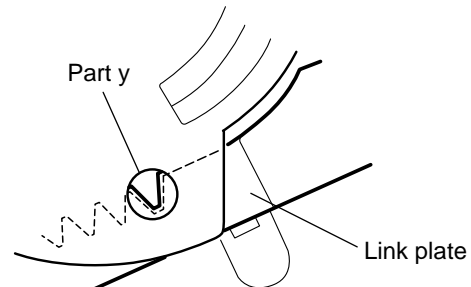


Fig.26

**■ Removing the loading roller assembly  
(See Fig.27 to 29)**

• Prior to performing the following procedure, remove the clumper assembly and the top plate assembly.

1. Push inward the loading roller assembly on the gear side and detach it upward from the slot of the joint **d'** of the lock arm rivet assembly.

Detach the loading roller assembly from the slot of the joint **e'** of the lock arm rivet assembly.

The roller guide comes off the gear section of the loading roller assembly.

Remove the roller guide and the washer from the shaft of the loading roller assembly.

2. Remove the screw **I** attaching the lock arm rivet assembly.

3. Push the shaft at the joint **f'** of the lock arm rivet assembly inward to release the lock arm rivet assembly from the slot of the slide plate. Extend the lock arm rivet assembly outward and release the joint **g'** from the boss of the chassis rivet assembly. The roller guide springs on both sides come off.

**CAUTION:** When reassembling, reattach the left and right roller guide springs to the lock arm rivet assembly before reattaching the lock arm rivet assembly to the chassis rivet assembly. Make sure to fit the part **h'** of the roller guide spring (L) inside of the roller guide (Refer to Fig.30).

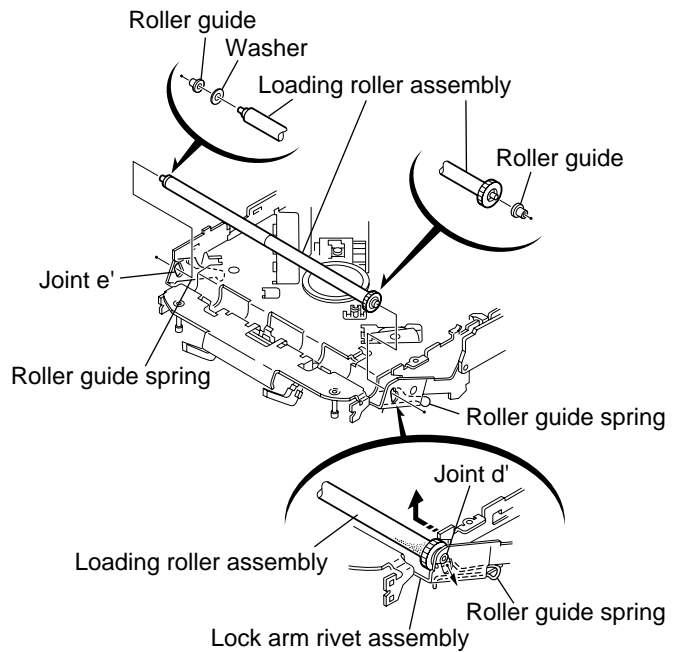


Fig.27

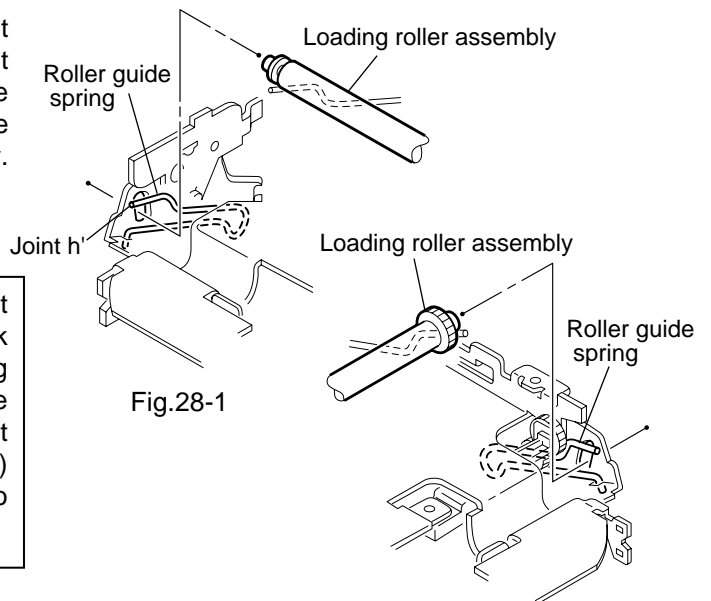


Fig.28-1

Fig.28-2

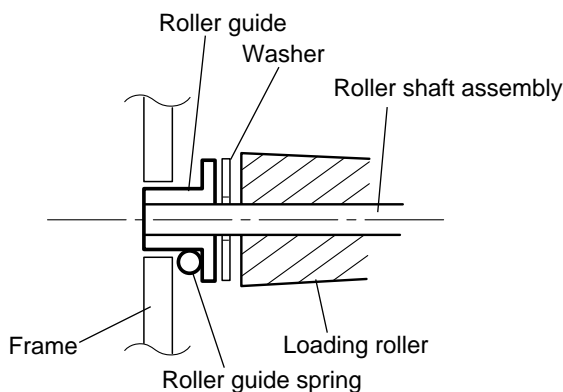


Fig.30

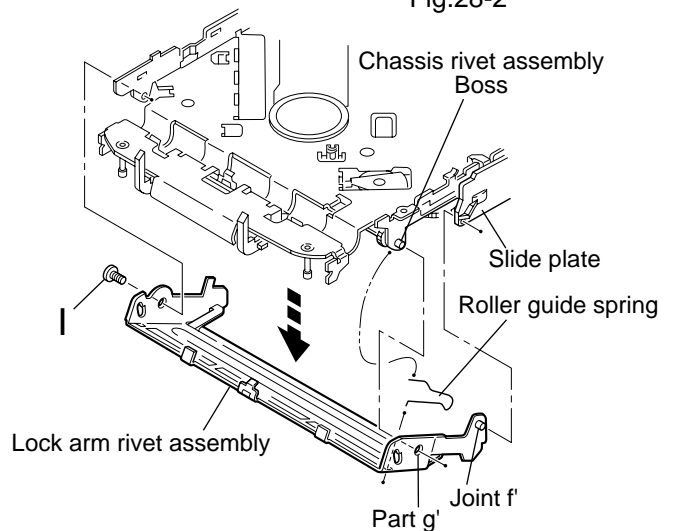


Fig.29

■ **Removing the loading gear (5), (6) and (7) (See Fig.31 and 32)**

• Prior to performing the following procedure, remove the top cover, the chassis unit and the top plate assembly.

1. Remove the screw **J** attaching the loading gear bracket. The loading gear (6) and (7) come off the loading gear bracket.
2. Pull out the loading gear (5).

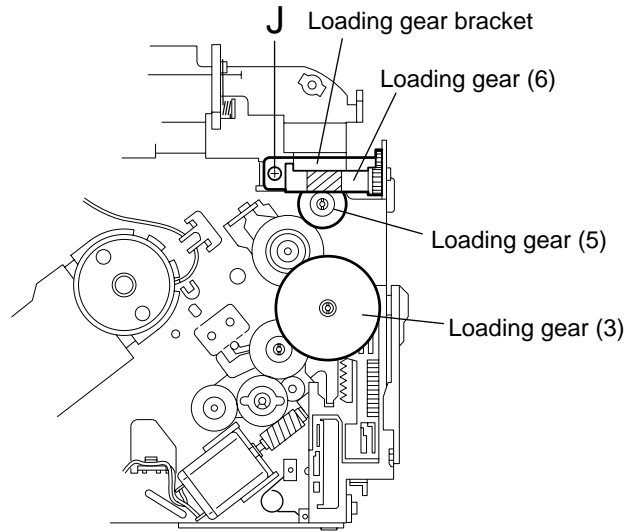


Fig.31

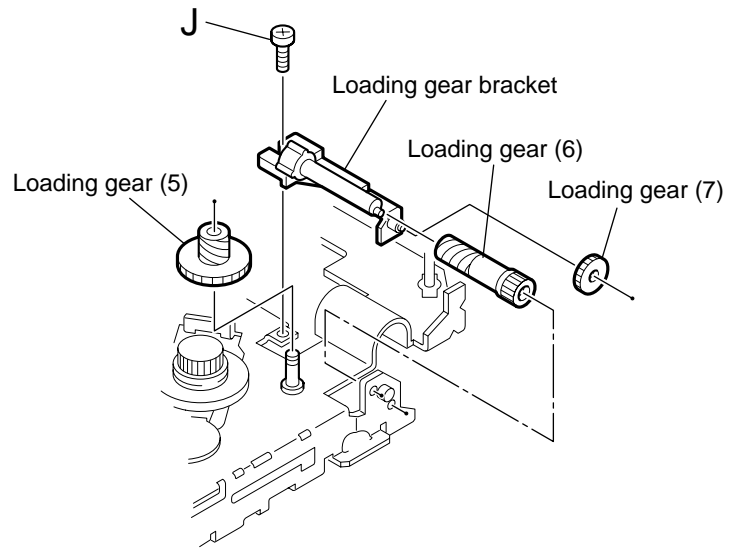


Fig.32



■ Removing the gears (See Fig.33 to 36)

· Prior to performing the following procedure, remove the top cover, the chassis unit, the top plate assembly and the pickup unit.

1. Pull out the feed gear.
2. Move the loading plate assembly in the direction of the arrow to release the slide plate from the two slots j' of the chassis rivet assembly.
3. Detach the loading plate assembly upward from the chassis rivet assembly while releasing the joint k'. Remove the slide hook and the loading plate spring from the loading plate assembly.
4. Pull out the loading gear (2) and remove the change lock lever.
5. Remove the E-washer and the washer attaching the changer gear (2).
6. The changer gear (2), the changer gear spring and the adjusting washer come off.
7. Remove the loading gear (1).
8. Move the hang plate rivet assembly in the direction of the arrow to release from the three shafts of the chassis rivet assembly upward.
9. Detach the loading gear plate rivet assembly from the shaft of the chassis rivet assembly upward while releasing the joint l'.
10. Pull out the loading gear (4).

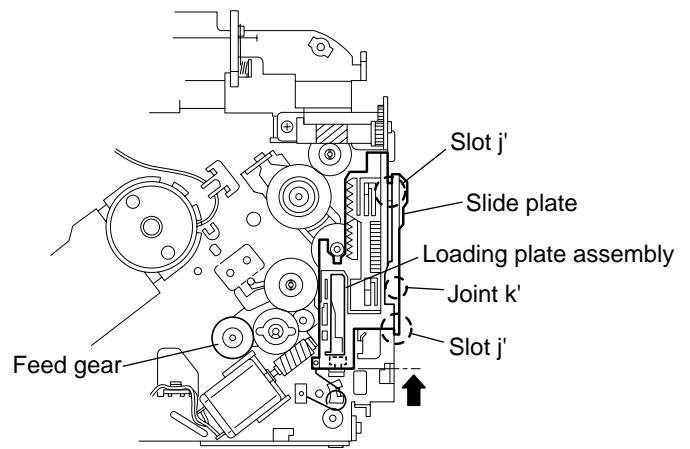


Fig.33

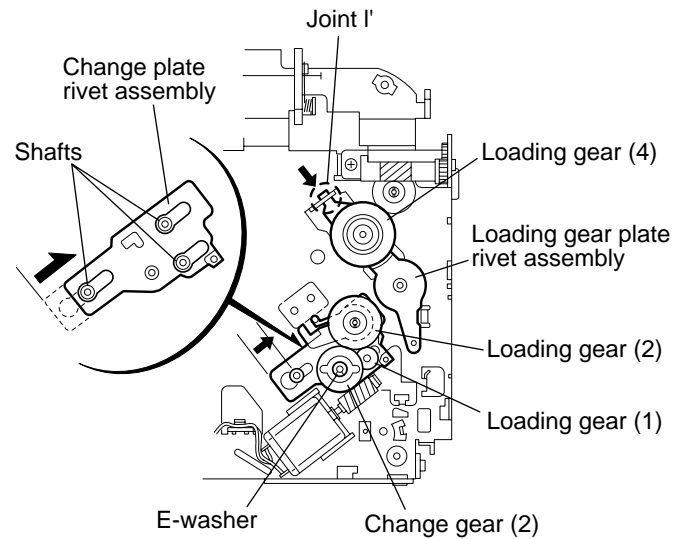


Fig.34

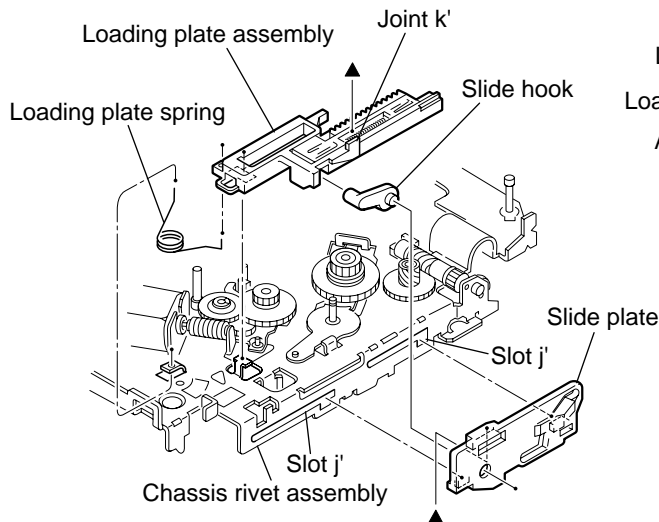


Fig.35

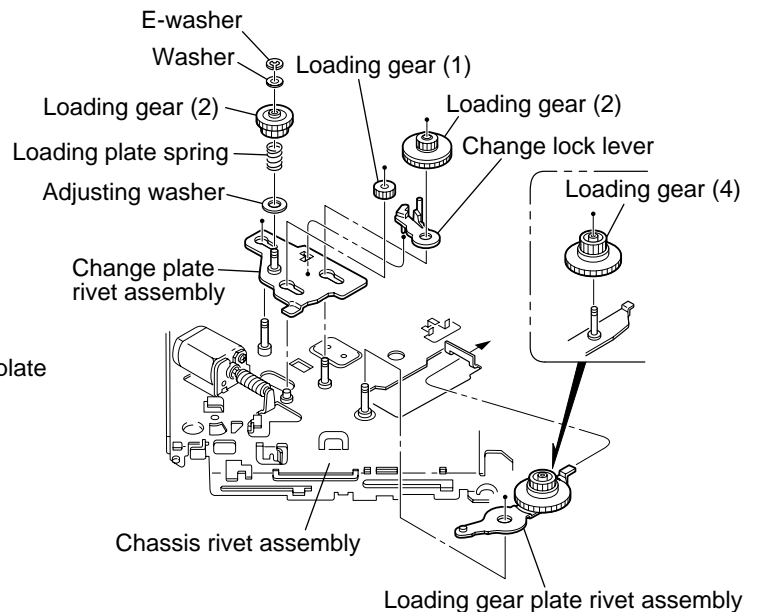


Fig.36

## ■ Removing the turn table / spindle motor (See Fig.37 and 38)

- Prior to performing the following procedure, remove the top cover, the connector assembly and the chassis / clamper assembly.
1. Remove the two screws **K** attaching the spindle motor assembly through the slot of the turn table on top of the body.
  2. Unsolder the wire on the connector board if necessary.

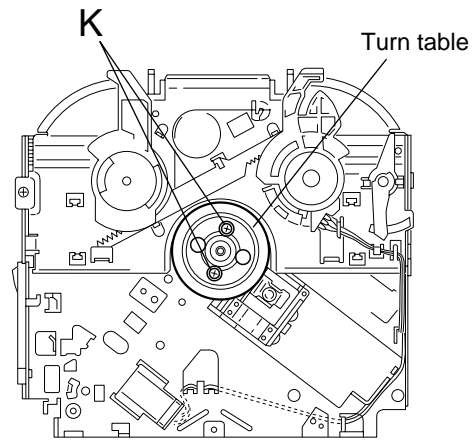


Fig.37

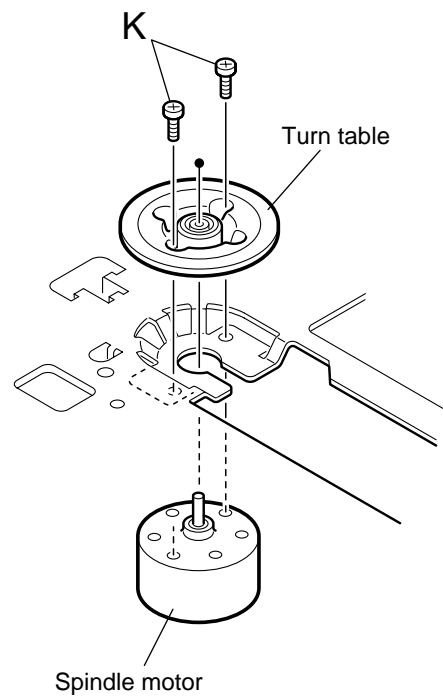


Fig.38

REFERENCE: Prior to performing the following procedures, turn the mode gear on the bottom of the body until the respective part comes to the EJECT position (Refer to Fig.1).

### ■ Removing the cassette guide (See Fig.2)

1. Turn the mode gear to set to RVS play or subsequent mode.
2. Remove the cassette guide from the main chassis while releasing each two joint tabs **a** in the direction of the arrow.

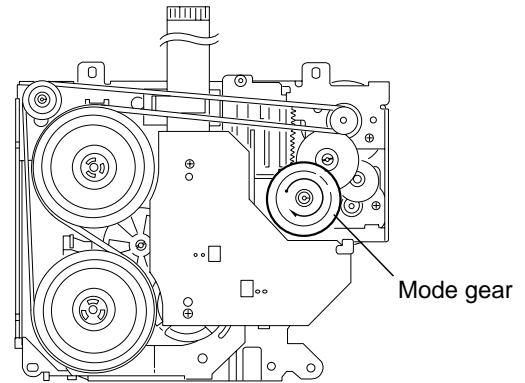


Fig.1

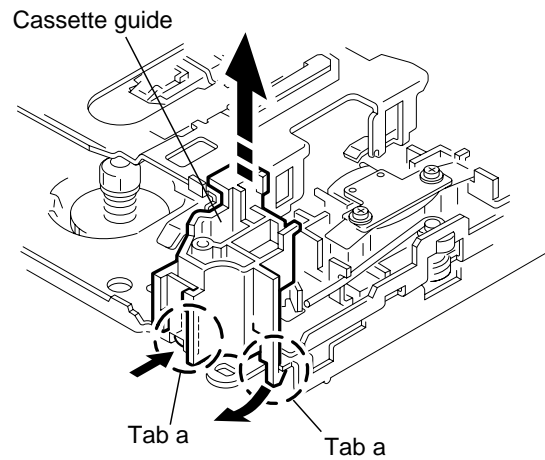


Fig.2

### ■ Removing the load arm (See Fig.3)

1. Remove the E-washer attaching the load arm.
2. Move the load arm in the direction of the arrow and release the joint **b** on the cassette catch.

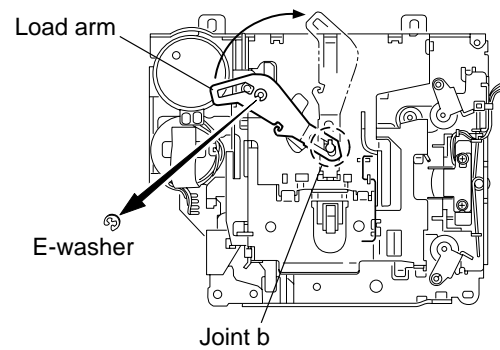


Fig.3

**■ Removing the cassette hanger assembly / cassette holder (See Fig.4 to 7)**

1. Check the mode is set to EJECT. Push down the front part of the cassette holder and move in the direction of the arrow to release the joint c.
2. Move the rear part of the cassette hanger assembly in the direction of the arrow to release it from the two joint bosses d.
3. Release the holder stabilizer spring from the hooks e and f, then pull out from the cassette hanger assembly.
4. Bring up the rear side of the cassette hanger assembly to release the joint g and h.
5. Pull out the cassette catch from the cassette hanger assembly.

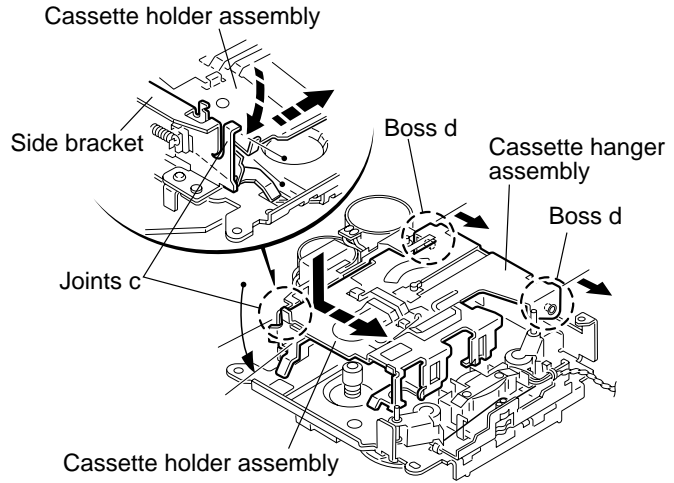


Fig.4

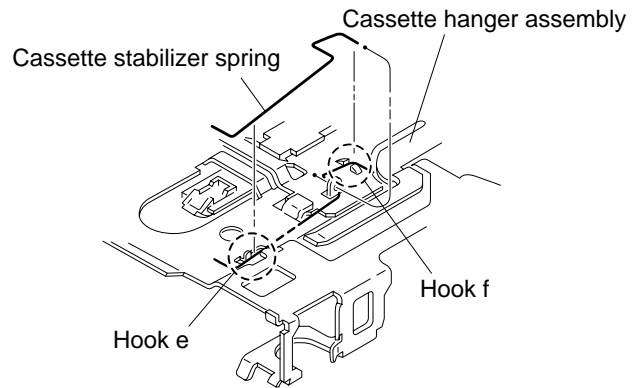


Fig.5

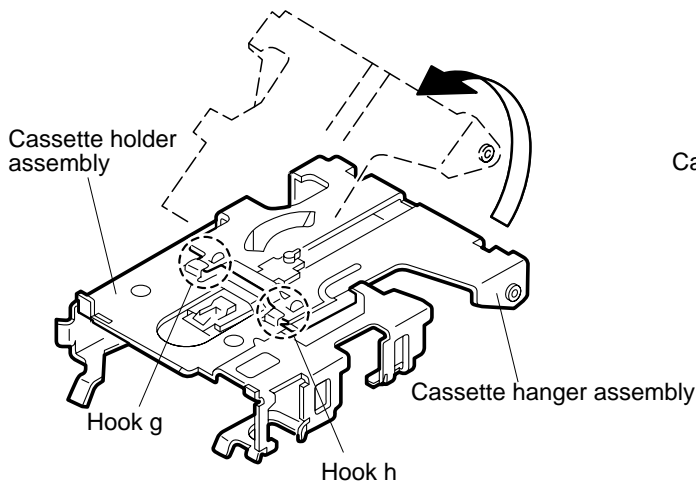


Fig.6

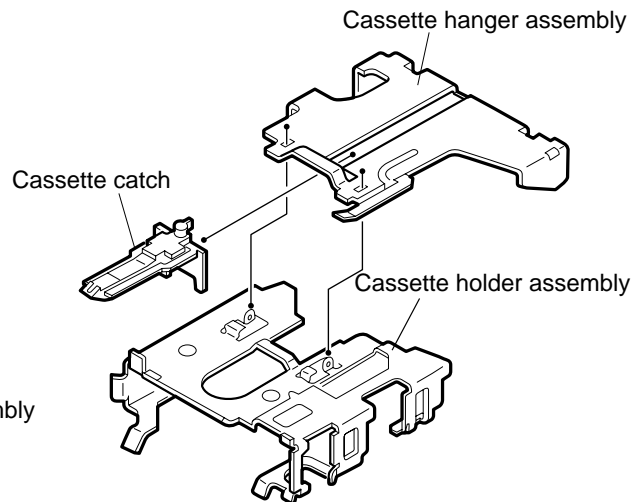


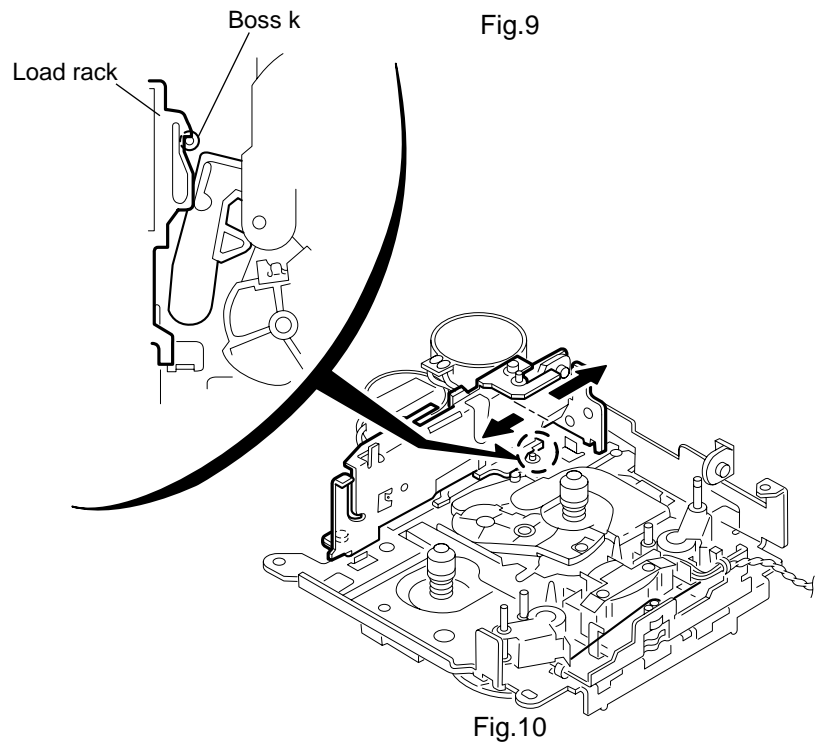
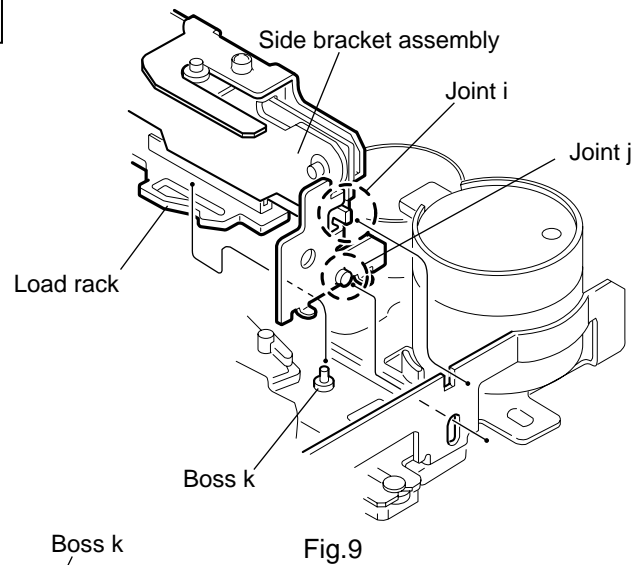
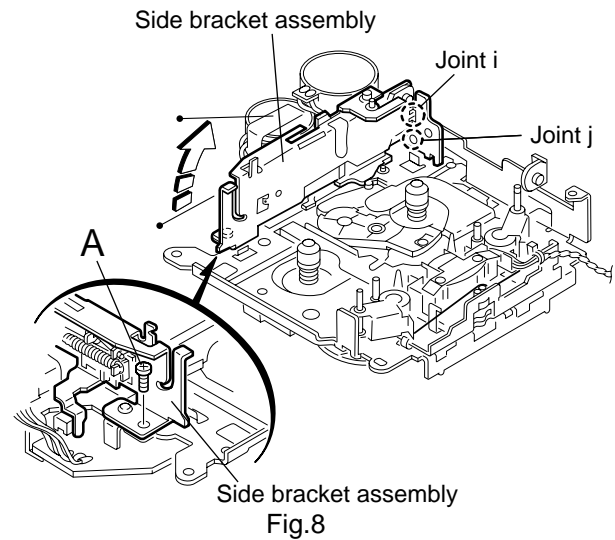
Fig.7

## ■ Removing the side bracket assembly (See Fig.8 to 10)

1. Remove the screw **A** attaching the side bracket assembly.
2. Detach the front side of the side bracket assembly upward and pull out forward to release the joint **i** and **j** in the rear.

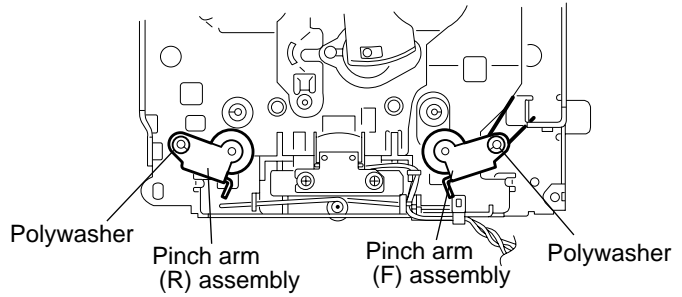
**CAUTION:** When reassembling, make sure that the boss **k** of the main chassis is set in the notch of the load rack under the side bracket assembly. Do not reattach the load rack on the boss **k**.

**CAUTION:** After reattaching the side bracket assembly, confirm operation.



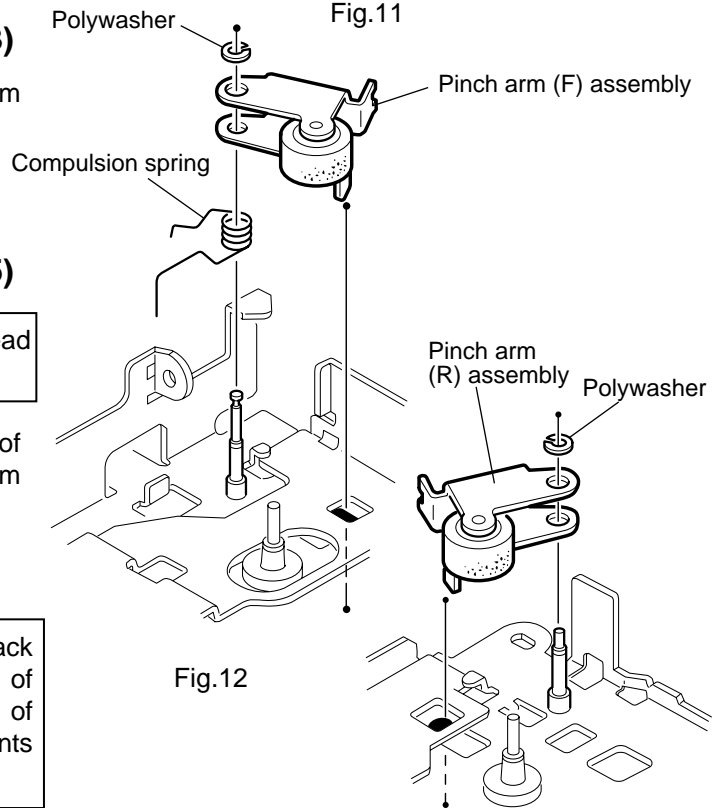
**■ Removing the pinch arm (F) assembly  
(See Fig.11 and 12)**

1. Remove the polywasher and pull out the pinch arm (F) assembly.
2. Remove the compulsion spring.



**■ Removing the pinch arm (R) assembly  
(See Fig.11 and 13)**

1. Remove the polywasher and pull out the pinch arm (R) assembly.



**■ Removing the slide chassis assembly  
(See Fig.14 and 15)**

REFERENCE: It is not necessary to remove the head and the tape guide.

1. Move the slide chassis assembly in the direction of the arrow to release the two joints I and remove from the main chassis.
2. Remove the rack link.

CAUTION: When reassembling, first reattach the rack link, and next fit the boss m and hook n of the slide chassis assembly to the hole of the main chassis, and engage the two joints I.

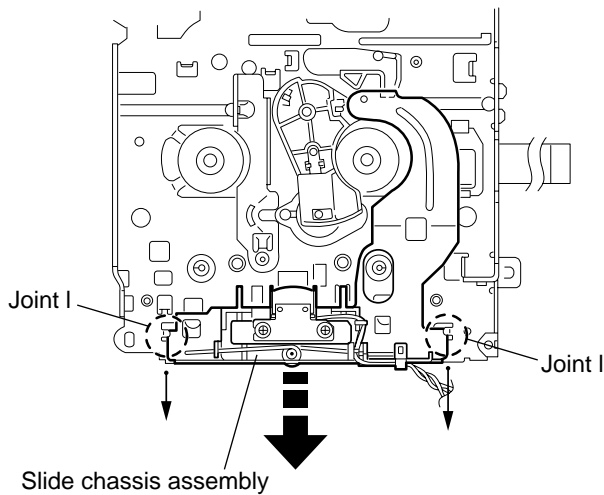


Fig.14

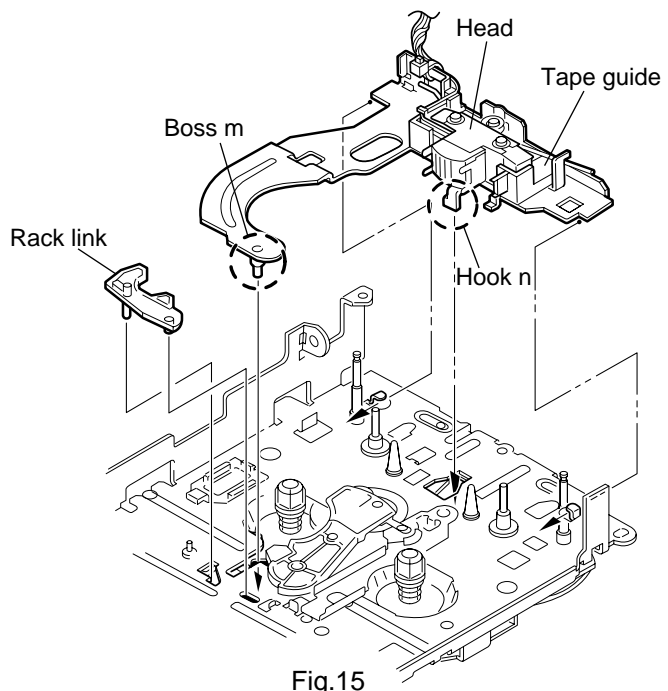


Fig.15

**■ Removing the head / tape guide  
(See Fig.16 and 17)**

REFERENCE:It is not necessary to remove the slide chassis assembly.

1. Remove the band attaching the wire to the head.
2. Remove the two screws **B**, the head and the head support spring.
3. Remove the pinch arm spring from the tape guide.
4. Remove the tape guide and the pinch spring arm.

CAUTION: When reattaching the pinch arm spring, set both end of it to the pinch spring arm ( remarked **o**).

CAUTION: When reattaching the head, set the wires into the groove of the tape guide (Fig.16).

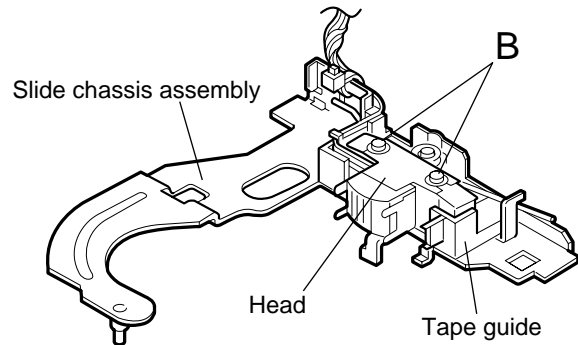


Fig.16

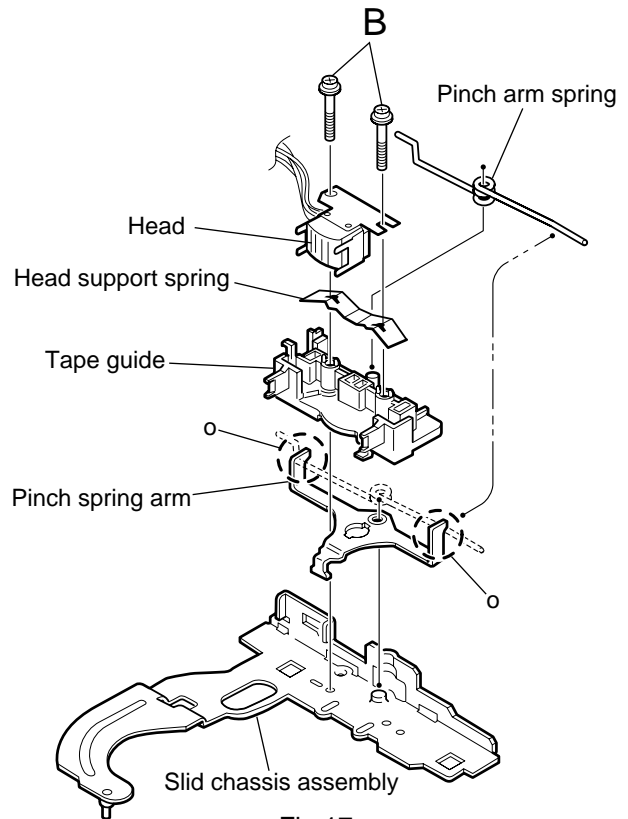


Fig.17

**■ Removing the flywheel assembly (F) & (R)  
(See Fig.18 and 19)**

REFERENCE:It is not necessary to remove the slide chassis assembly.

1. Remove the belt at the bottom.
2. Remove the two polywashers on the upper side.
3. Pull out each flywheel assembly downward.

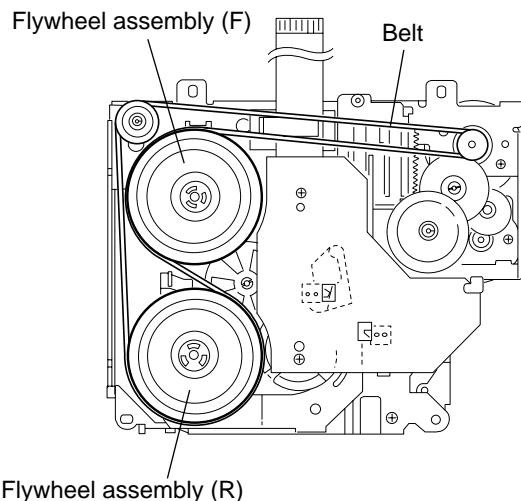


Fig.18

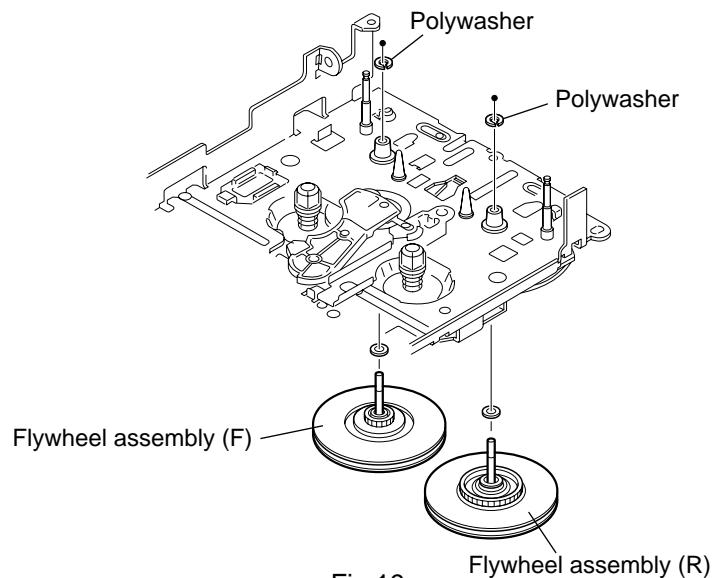


Fig.19

**Disassembling the flywheel assembly (F)**  
(See Fig.20 and 21)

1. Push and turn counterclockwise the spring holder (F) to release the three joints **p** on the bottom of the flywheel.
2. The spring holder (F), the TU spring and the friction gear play come off.
3. Remove the polywasher and felt.

**Disassembling the flywheel assembly (R)**  
(See Fig.20 and 22)

1. Push and turn clockwise the spring holder (R) to release the three joints **q** on the bottom of the flywheel.
2. The spring holder (R), the FF spring and the friction gear FF come off.
3. Remove the polywasher and the felt.

**Removing the reel board**  
(See Fig.23 and 24)

1. Remove the two screws **C** attaching the reel board.
2. Move the reel board in the direction of the arrow to release the joint **r**.
3. Unsolder the wires if necessary.

**CAUTION:** When reattaching, confirm operation of the MODE switch and the ST-BY switch.

The mode position between EJECT and ST-BY is optimum for reattaching.

Connect the card wire extending from the reel board to the FFC pad before reattaching the reel board.

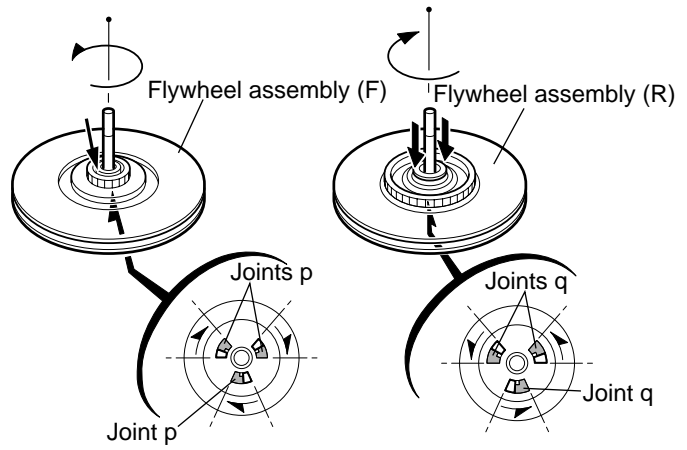


Fig.20

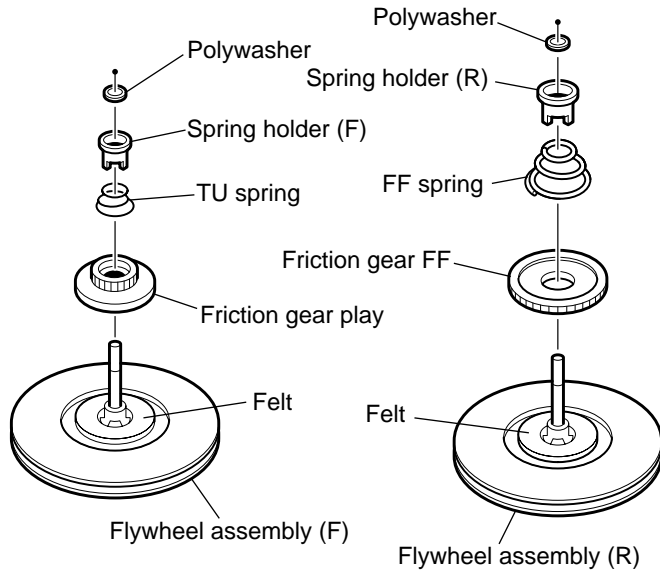


Fig.21

Fig.22

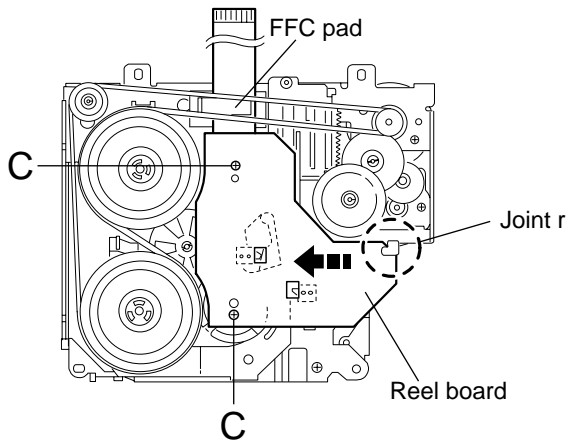


Fig.23

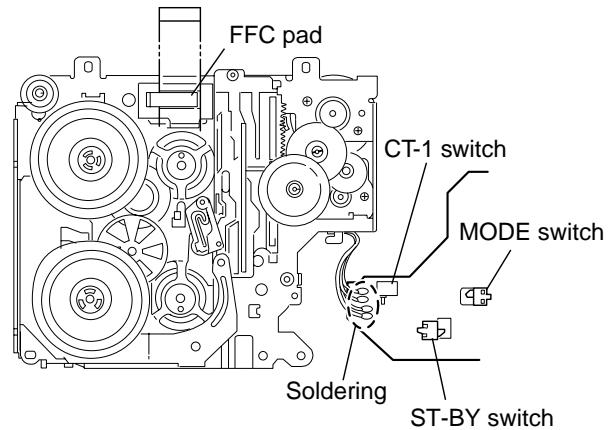


Fig.24



### ■ Removing the gear base arm / gear base link assembly (See Fig.25 to 27)

1. Move the gear base arm in the direction of the arrow.
2. Insert a slotted screwdriver to the gear base spring under the gear base arm, and release the gear base arm upward from the boss on the gear base assembly.
3. Remove the gear base arm from the main chassis while releasing the two joints **s**.
4. Move the gear base link assembly in the direction of the arrow to release the two joints **t**.

REFERENCE:When reattaching the gear base arm, make sure that the boss on the gear base assembly is inside the gear base spring.

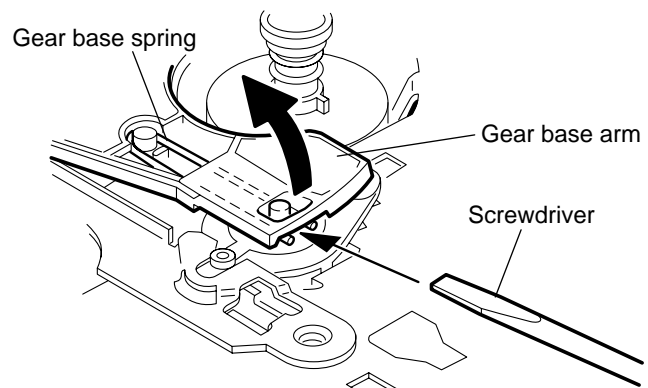
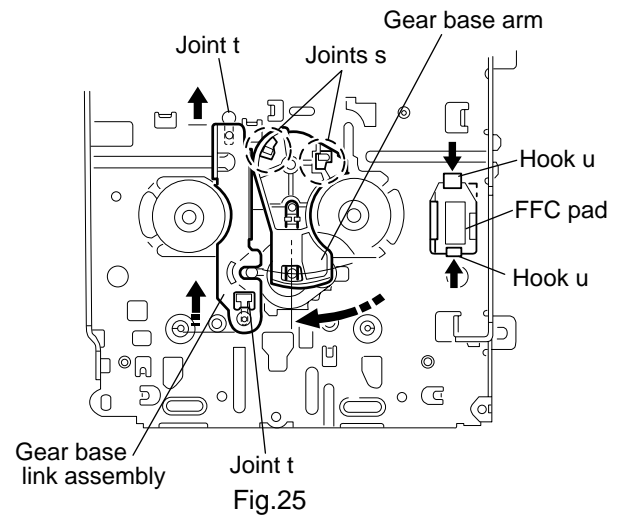


Fig.26

### ■ Removing the FFC pad (See Fig.27 and 29)

1. Push each joint hook **u** of the FFC pad and remove toward the bottom.

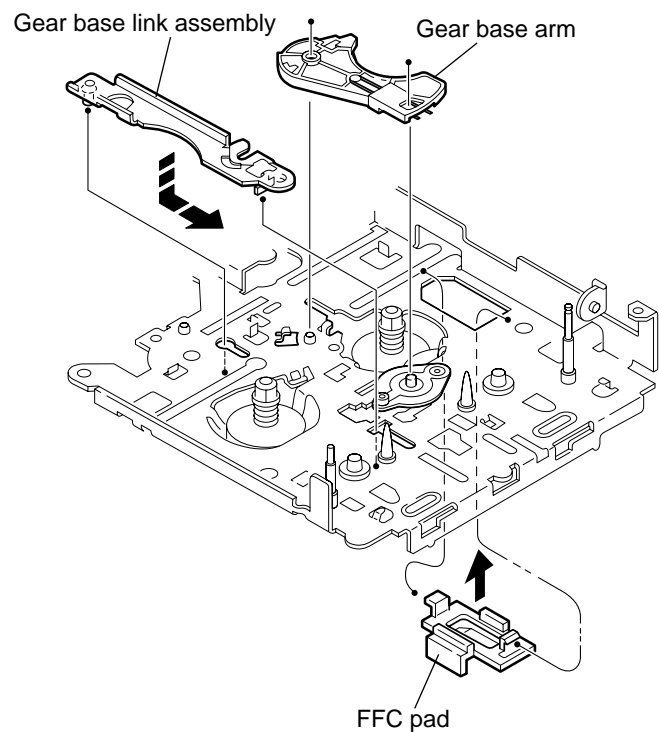


Fig.27

**■ Removing the mode gear**  
(See Fig.28 and 31)

1. Remove the polywasher on the bottom and pull out the mode gear.

**■ Removing the mode switch actuator**  
(See Fig.28, 29 and 31)

1. Pull out the mode switch actuator at the bottom.

REFERENCE:When reattaching the mode switch actuator to the main chassis, make sure to set on the shaft and insert **v** into the slot **w**.

**■ Removing the direction link / direction plate**  
(See Fig.29 to 31)

1. Remove the polywasher attaching the direction link.
2. Bring up the direction link to release the three joints **x**, **y** and **z** at a time.
3. Move the direction plate in the direction of the arrow to release the two joints **a'**.

REFERENCE:When reattaching the direction plate, engage the two joints **a'** and move in the direction of the arrow (Refer to Fig.30).

REFERENCE:When reattaching the direction link, move the direction plate in the direction of the arrow and engage the three joint **x**, **y** and **z** at a time (Refer to Fig.31).

**■ Removing the mode rack assembly**  
(See Fig.29 and 30)

1. Move the mode rack assembly in the direction of the arrow to release the two joints **b'** and the joint **c'**.

REFERENCE:When reattaching, set the two **b'** on the bottom of the mode rack assembly into the slots of the main chassis and move in the direction of the arrow (See Fig.30).

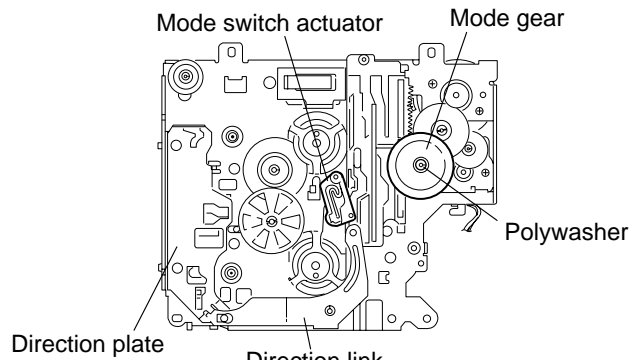


Fig.28

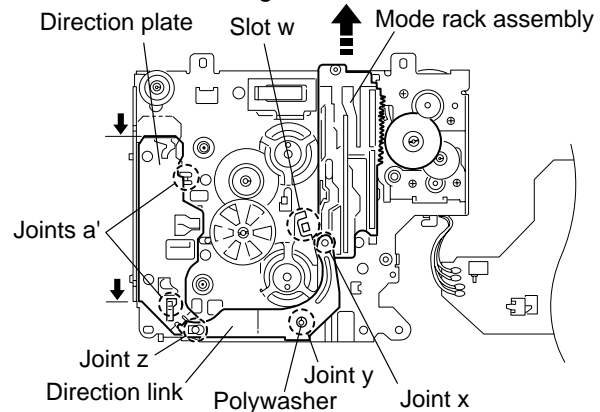


Fig.29

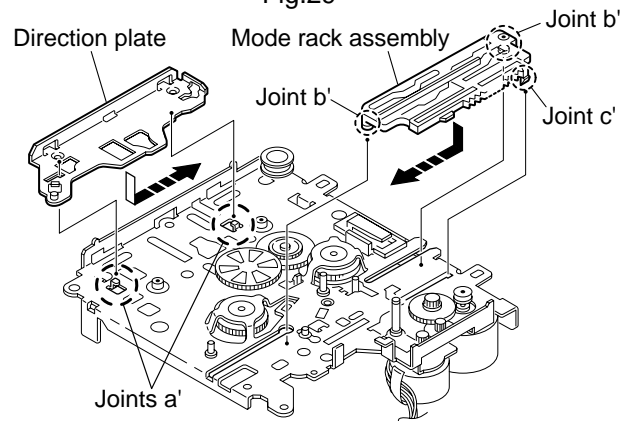


Fig.30

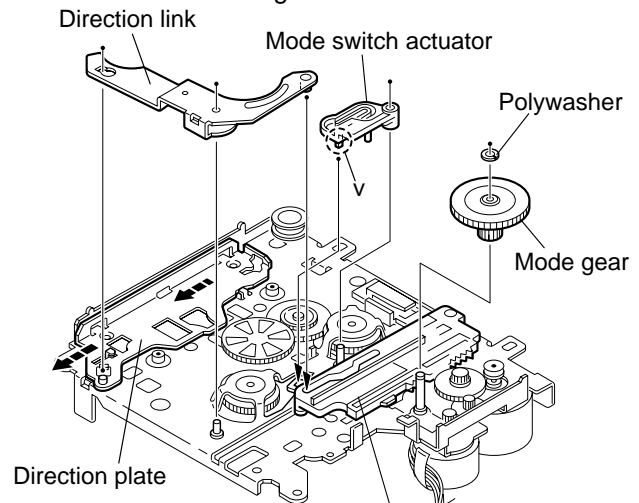


Fig.31

**■ Removing the gear base assembly / take up gear / reflector gear (See Fig.32 to 34)**

1. Push in the pin **d'** of the gear base assembly on the upper side of the body and move the reflector gear toward the bottom, then pull out.
2. Remove the polywasher on the bottom and pull out the take up gear.
3. Move the gear base assembly in the direction of the arrow to release it from the two slots **e'** of the main chassis.

REFERENCE: The parts are damaged when removed. Please replace with new ones.

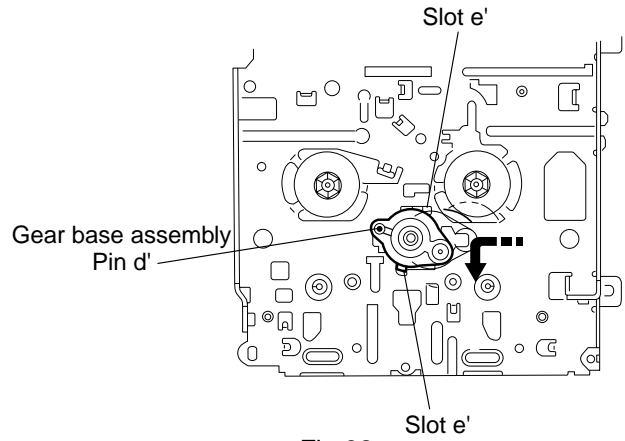


Fig.32

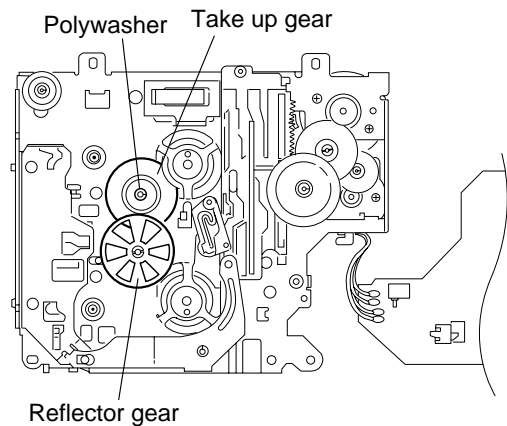


Fig.33

**■ Removing the reel driver / reel spindle (See Fig.34)**

1. Draw out the reel driver from the shaft on the main chassis and remove the reel driver spring and the reel spindle respectively.

CAUTION: The reel driver is damaged when removed. Please replace with a new one.

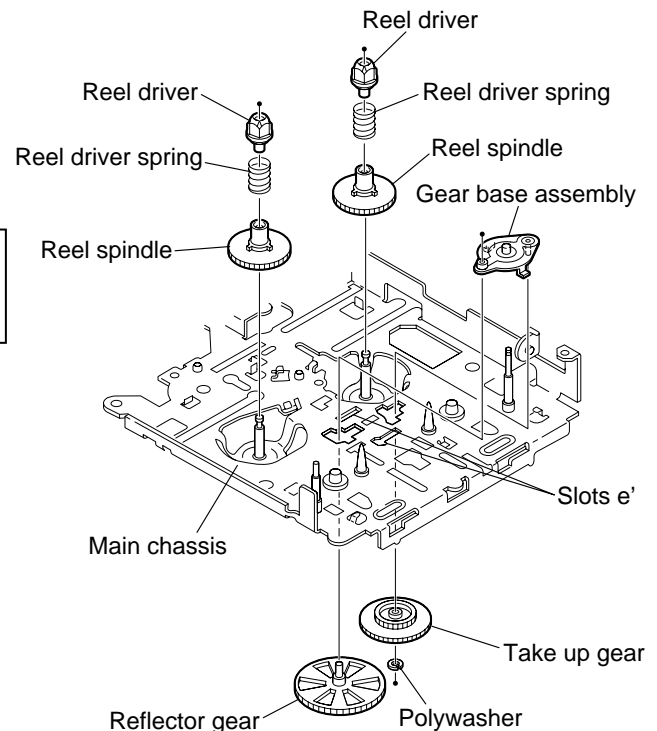


Fig.34

**■ Removing the side bracket assembly  
(See Fig.35 to 39)**

1. Remove the eject cam plate spring.
2. Push the joint f' through the slot to remove the load rack downward.
3. Move the eject cam limiter in the direction of the arrow to release it from the boss g' of the side bracket assembly and from the two joints h'.
4. Move the eject cam plate in the direction of the arrow to release the joint i'.

**CAUTION:** When reassembling, confirm operation of each part before reattaching the eject cam plate spring.

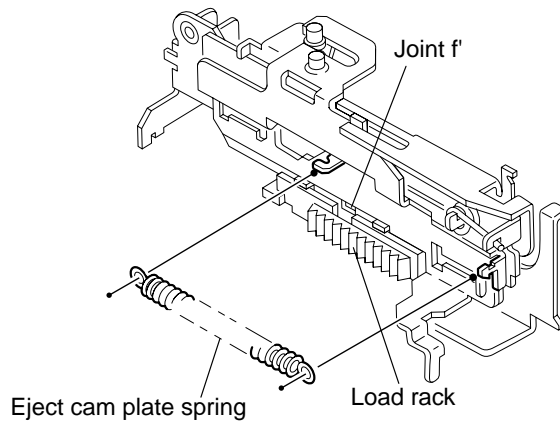


Fig.35

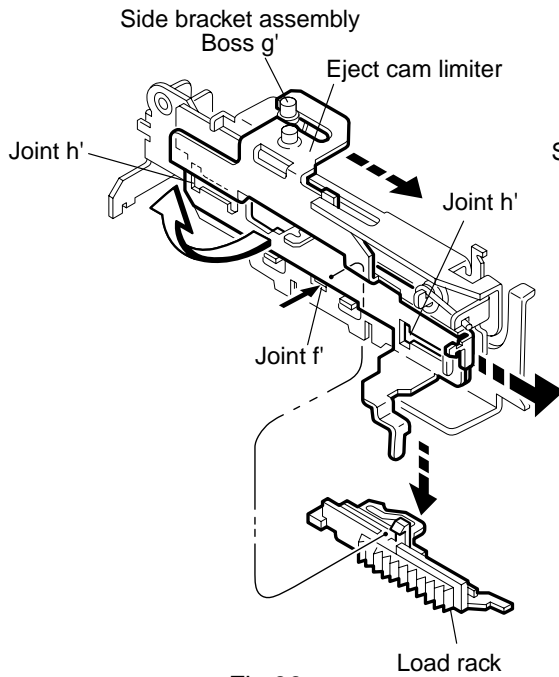


Fig.36

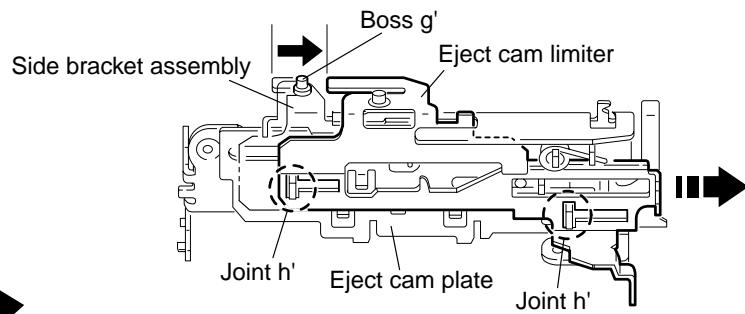


Fig.37

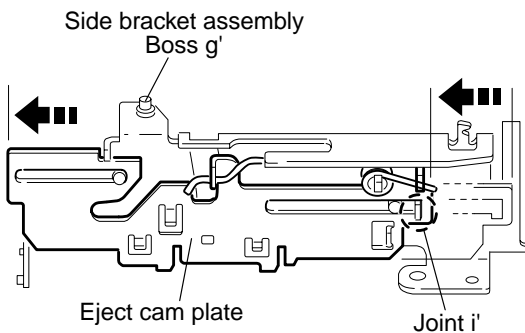


Fig.38

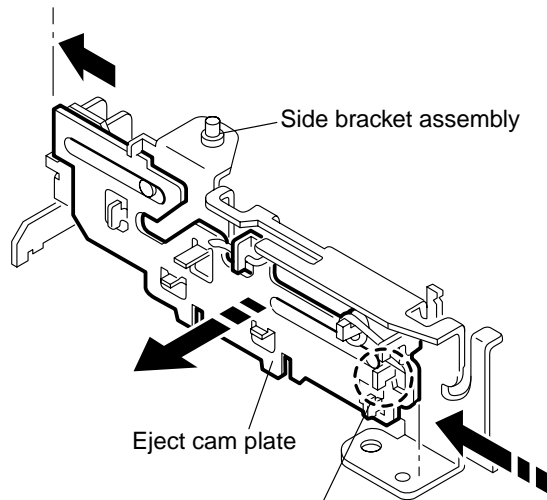


Fig.39

## ■ Removing the main motor assembly / sub motor assembly (See Fig.40 to 42)

1. Remove the belt at the bottom.
2. Remove the polywasher and pull out the mode gear.
3. Pull out the reduction gear (B).
4. Remove the polywasher and pull out the reduction gear (A).
5. Remove the two screws **D** attaching the main motor assembly.
6. Remove the two screws **E** attaching the sub motor assembly.
7. Unsolder the wires on the reel board if necessary.

**CAUTION:** When reassembling, adjust the length of the wires extending from the sub motor assembly by attaching them to the side of the sub motor assembly with the wires extending from the main motor assembly using a spacer.

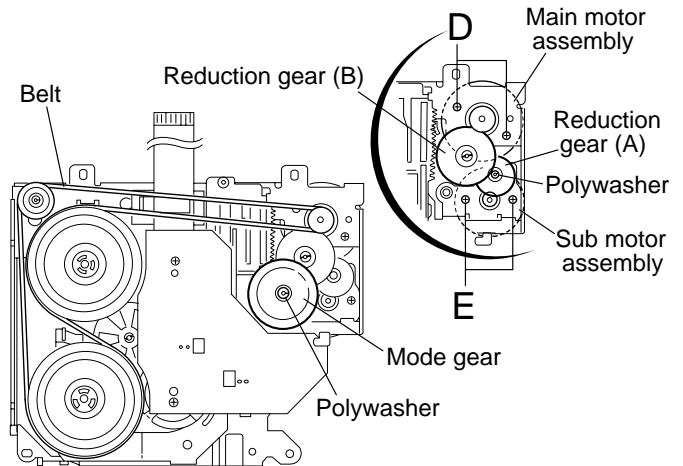


Fig.40

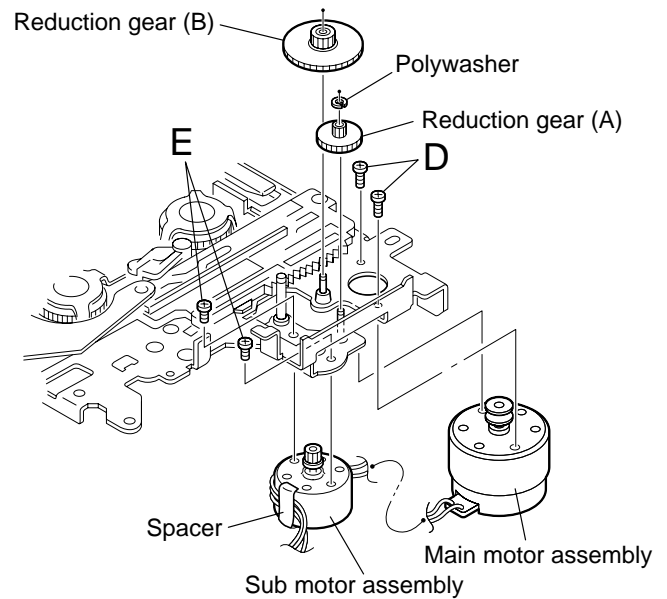


Fig.41

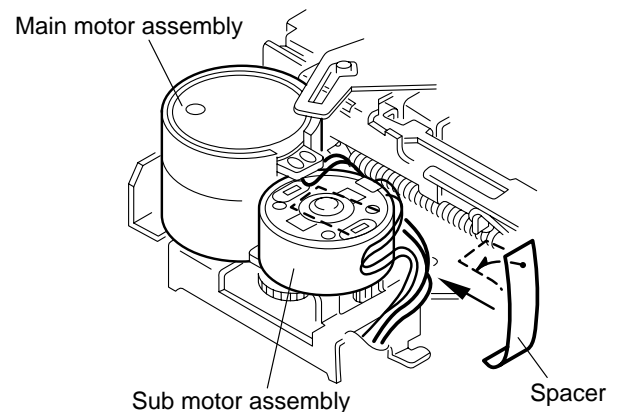


Fig.42

# Adjustment method

## ■ Test Instruments required for adjustment

1. Digital oscilloscope(100Mz)
2. Frequency Counter meter
3. Electric voltmeter
4. Wow&flutter meter
5. Test tapes VT739..For playback frequency measurement  
VT712..For wow flutter& tape speed measurement  
VT703..For head azimuth measurement
6. Torque gauge Cassette for CTG-N(mechanism adjustment)
7. Laser power meter(Reader:LP800102)
8. Prove for MD (Reader:LP8010-02)
9. Pre masterd disc (TGYS-1)
- 10.Test disc (JVC:CTS1000)

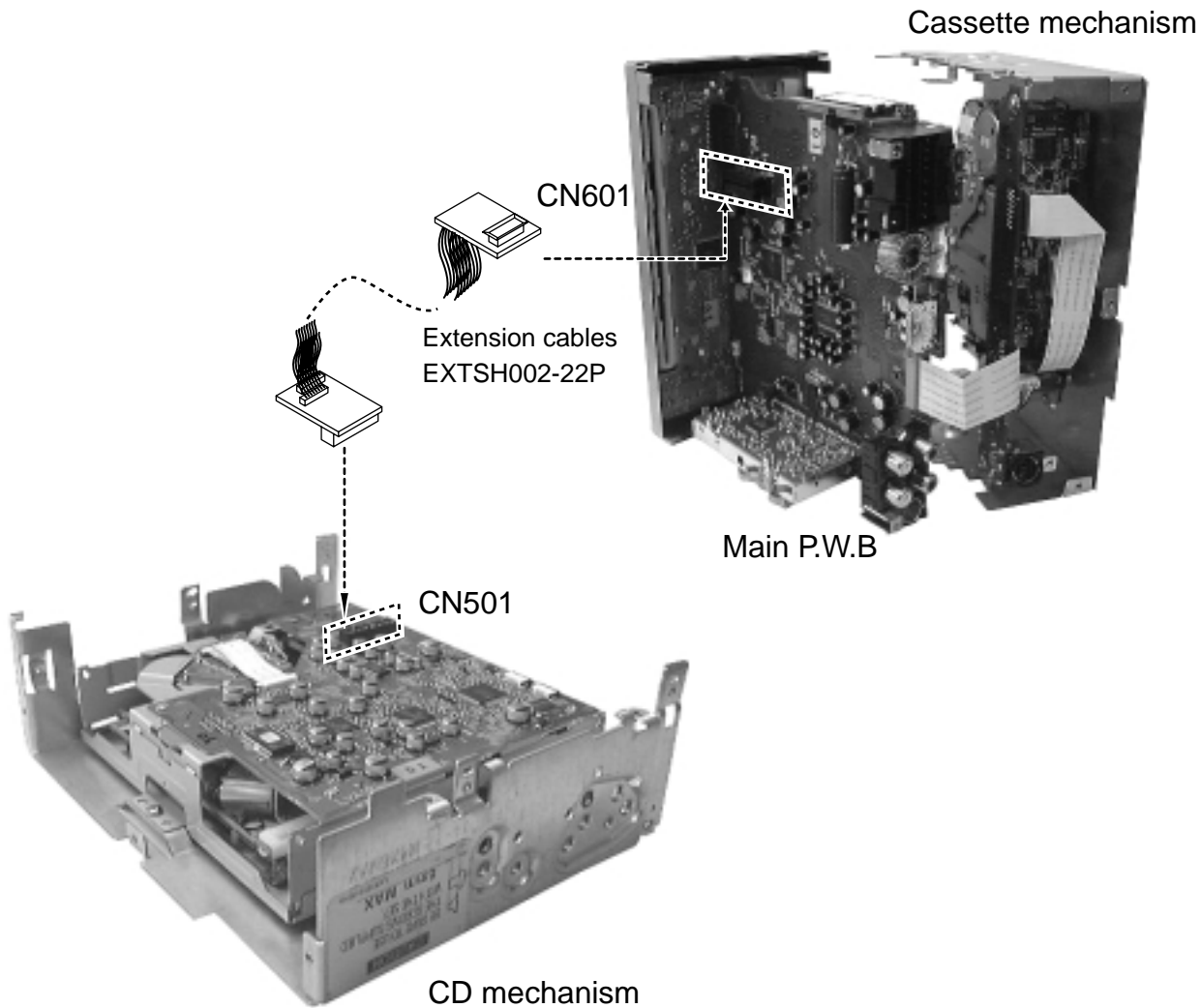
## ■ Measuring conditions (amplifier section)

Power supply voltage ..... DC14.4V(11V to 16V allowance )  
 Load impedance..... 4 ohm (4 ohm to 8 ohm allowance)  
 Line out .... 2.0V

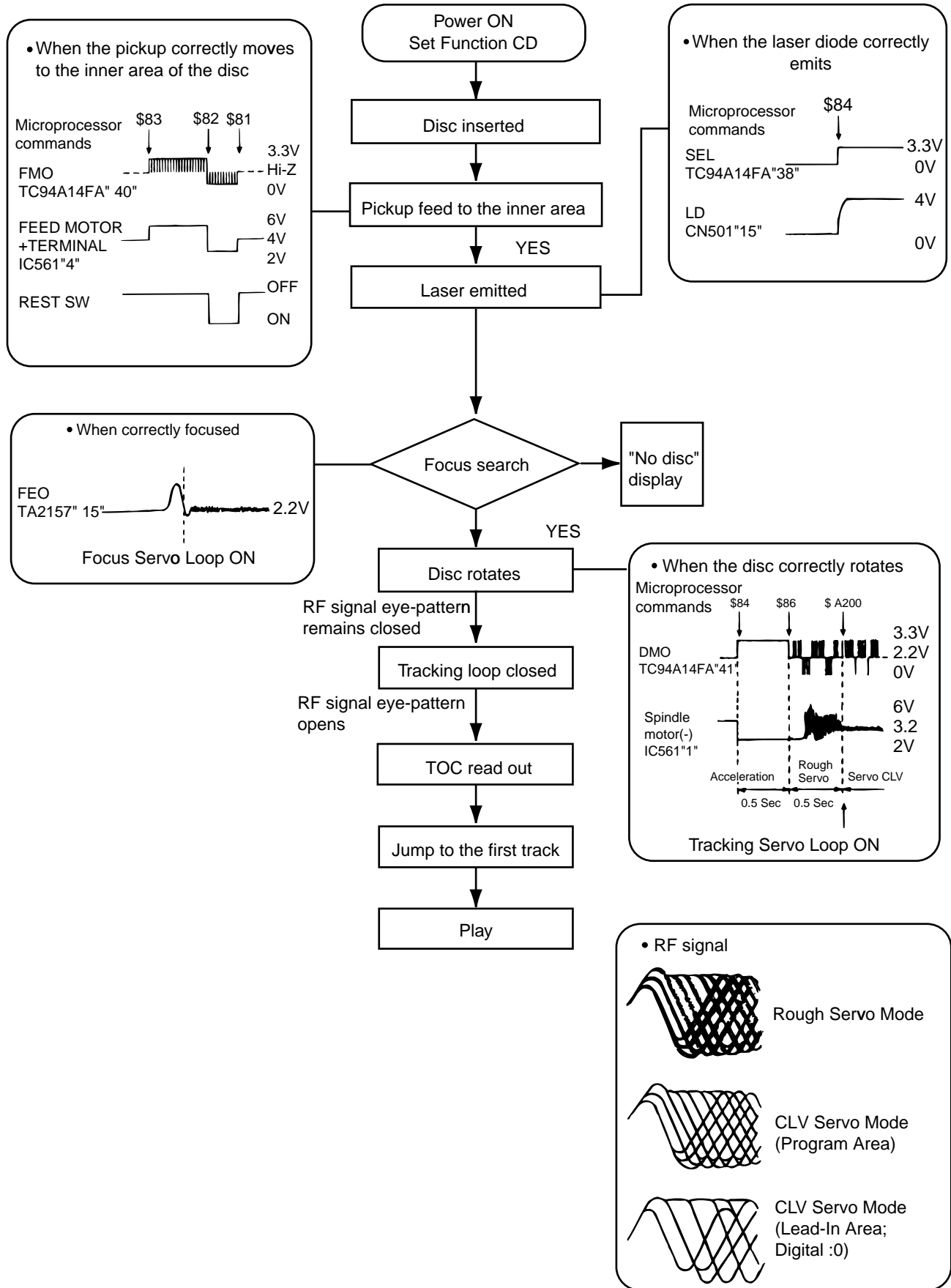
## ■ Method of connecting extension cable adjustment

Jig list: EXTSH002-22P x 1pc

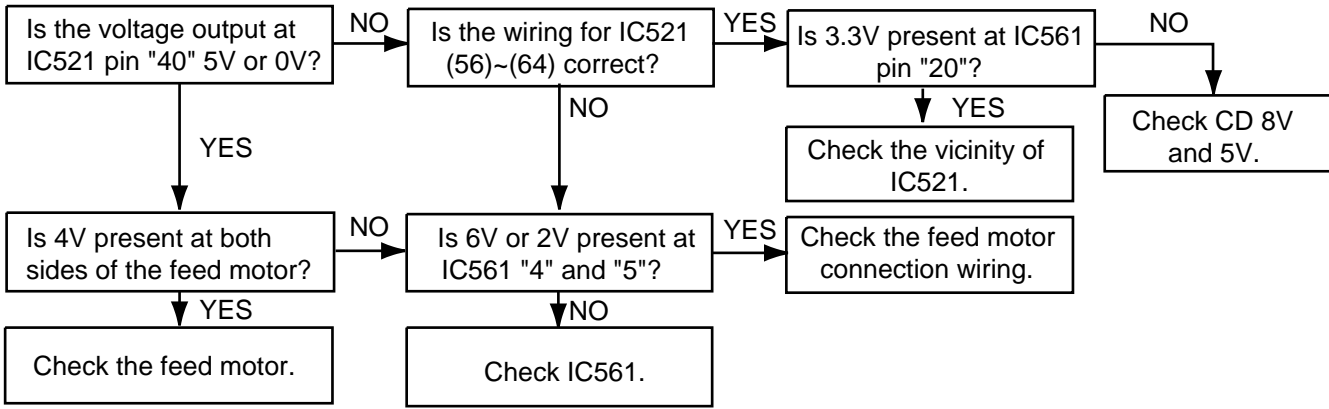
Frequency Range:  
 FM: 87.5MHz to 108.0MHz  
 AM: 531 kHz to 1602kHz



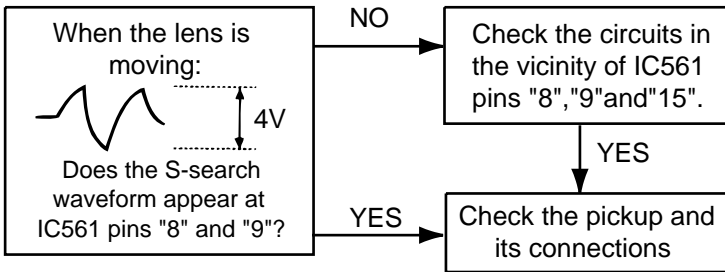
# Flow of functional operation unit TOC read



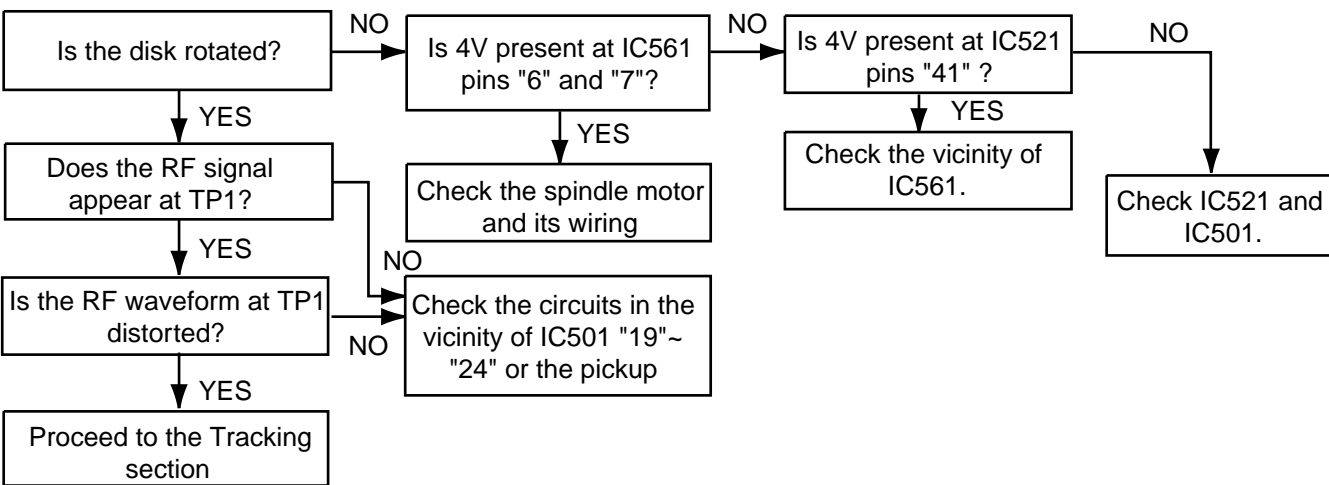
**■ Feed section**



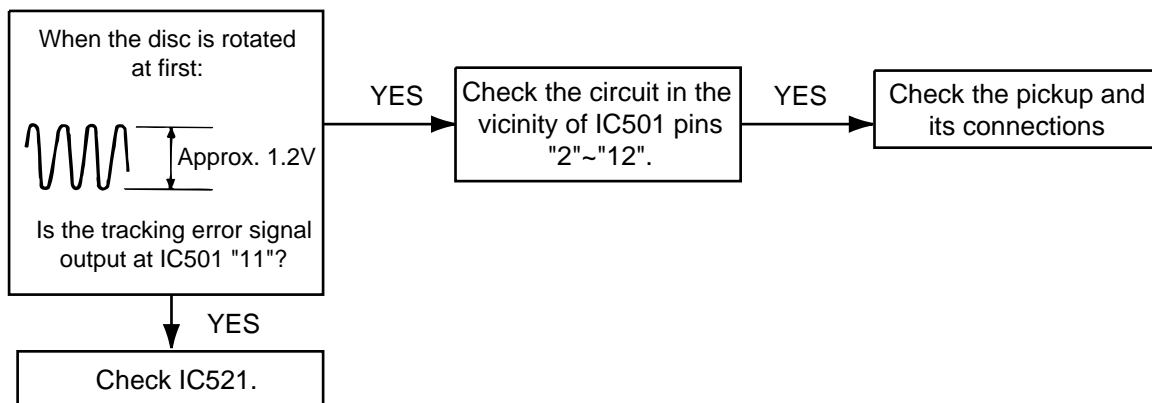
**■ Focus section**



**■ Spindle section**



**■ Tracking section**





## Maintenance of laser pickup

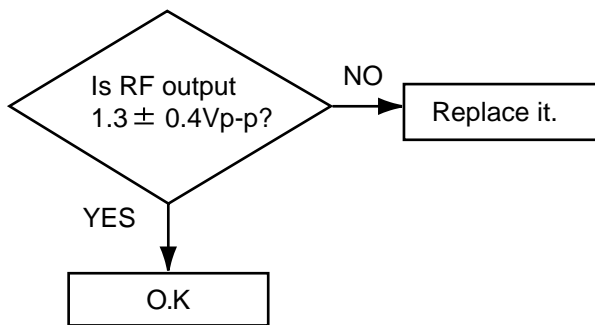
### (1) Cleaning the pickup lens

Before you replace the pickup, please try to clean the lens with a alcohol soaked cotton swab.

### (2) Life of the laser diode

When the life of the laser diode has expired. the following symptoms will appear.

- (1) The level of RF output (EFM output: amplitude of eye pattern) will be low.



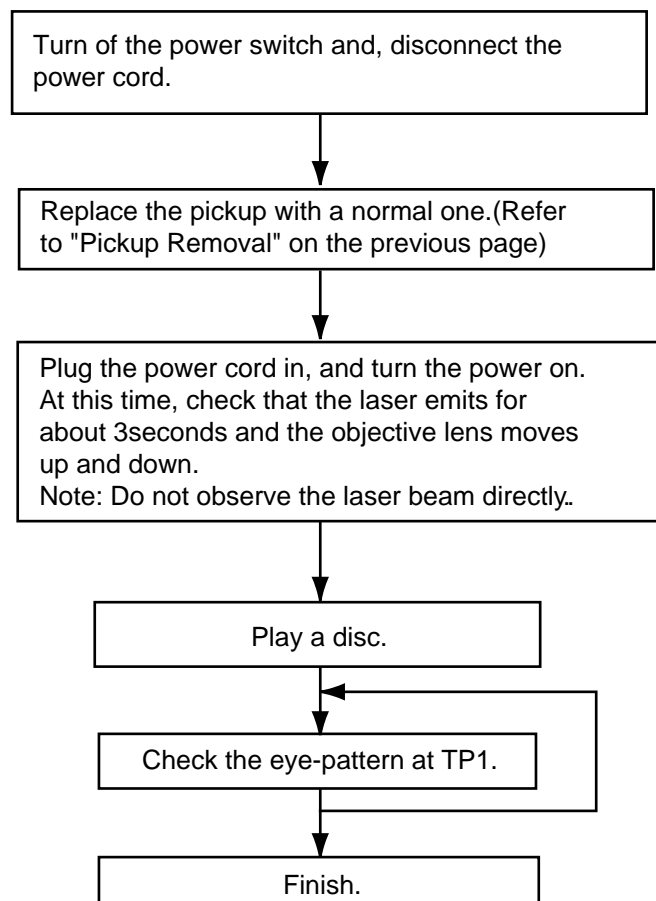
### (3) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

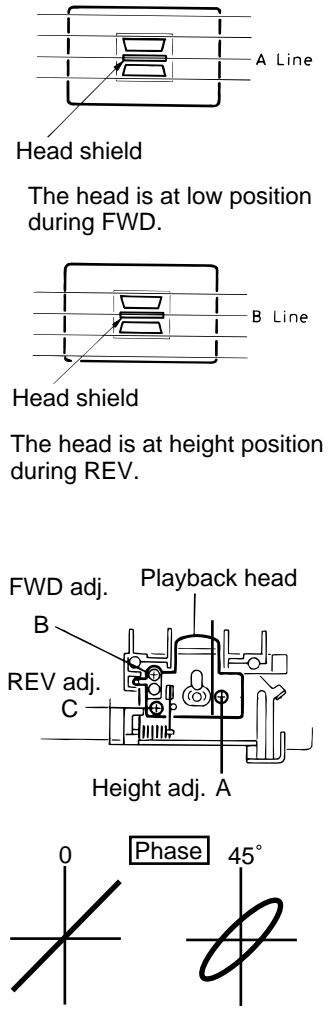
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

## Replacement of laser pickup

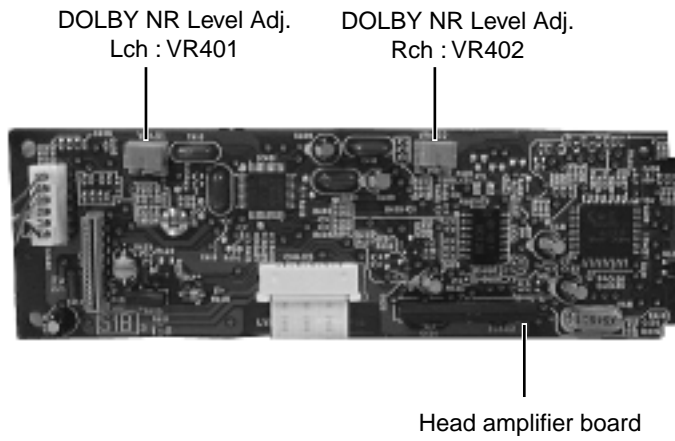
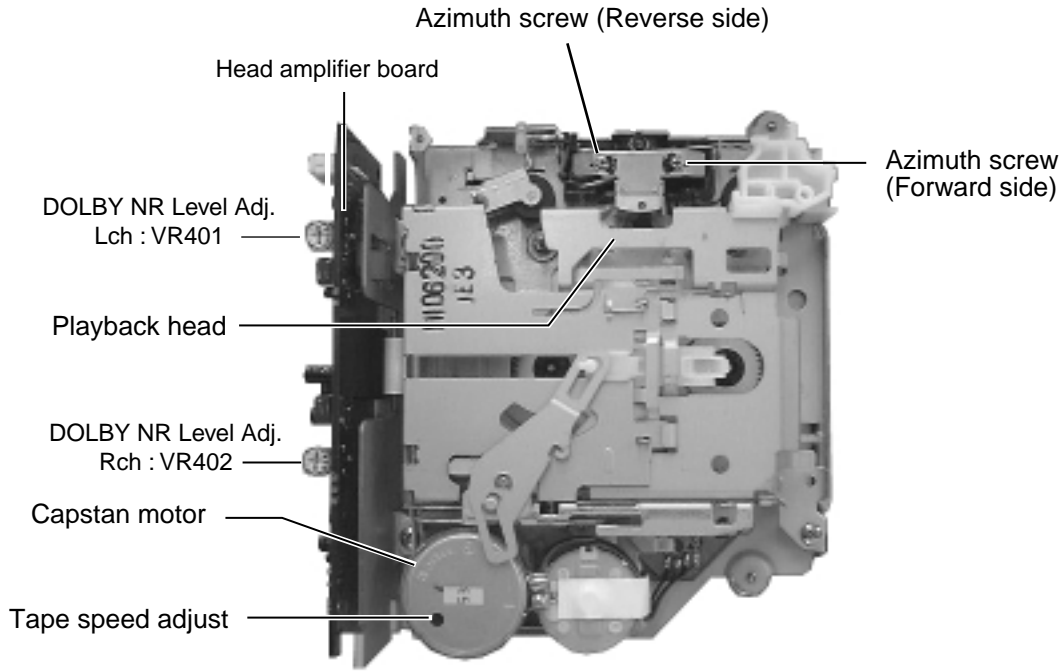


## Mechanism Adjustment Section

Item	Adjusting & Confirmation Methods	Adjust	Std. Value
1.Head azimuth	<p>"Head Height Adjustment"</p> <p>Note</p> <p>Adjust the azimuth directly. When you adjust the height using a mirror tape, remove the cassette housing from the mechanism chassis. After installing the cassette housing, perform the azimuth adjustment.</p> <ol style="list-style-type: none"> <li>load the mirror tape (SCC-1659). Adjust with height adjustment screw A and azimuth adjustment screw B so that line "A" of the mirror tape runs in the center between Lch and Rch in the reverse play mode.</li> <li>After switching from REV to FWD then to REV, check that the head position set in procedure "1" is not changed. *If the position has shifted, adjust again and check.</li> <li>Adjust the azimuth screw B so that line "B" of the mirror tape runs in the center between Lch and Rch in the forward play mode.</li> </ol> <p>"Head Azimuth Adjustment"</p> <ol style="list-style-type: none"> <li>Load the test tape (VT724: 1kHz) and play it back in the reverse play mode. set the Rch output level to maximum.</li> <li>Load the test tape (VT703: 10kHz) and play it back in the forward play mode. Adjust the Rch and Lch output levels to maximum, with azimuth adjustment screw B . In this case, the phase difference should be within 45°.</li> <li>Engage the reverse mode and adjust the output level to maximum, with azimuth adjustment screw C .</li> <li>When switching between forward and reverse modes, the difference between channels should be within 3dB. *Between FWD Lch and Rch, REV Lch and Rch.</li> <li>When the test tape (VT721 (315Hz )) is played back, the level difference between channels should be within 1.5dB.</li> </ol>	 <p>Head shield</p> <p>The head is at low position during FWD.</p> <p>Head shield</p> <p>The head is at height position during REV.</p> <p>FWD adj. Playback head B REV adj. C Height adj. A</p> <p>0 Phase 45°</p>	
2. Tape Speed and Wow & Flutter	<ol style="list-style-type: none"> <li>Check to see if the reading of the frequency counter &amp; Wow flutter meter is within 3015-3045 Hz (FWD/REV), and less than 0.35% (JIS RMS).</li> <li>In case of out of specification, adjust the motor with a built-in volume resistor.</li> </ol>	Built-in volume resistor	Tape Speed 3015-3045Hz Wow & Flutter Less than 0.35% (JIS RMS)
3. DOLBY NR level adjustment	<ol style="list-style-type: none"> <li>Play the test tape (VT724 : 1kHz) back.</li> <li>Adjust the VR191 (Lch) and VR291 (Rch) so that the DOLBY NR level is <math>27.5\text{mV} \pm 0.5\text{dB}</math> by TP191 (Lch), TP291 (Rch).</li> </ol>	VR191:Lch VR291: Rch	Speaker out 1kHz/10kHz : $-1\text{dB} \pm 3\text{dB}$ , 63Hz/1kHz : $0\text{dB} \pm 3\text{dB}$ ,

■ Arrangement of adjusting & test points

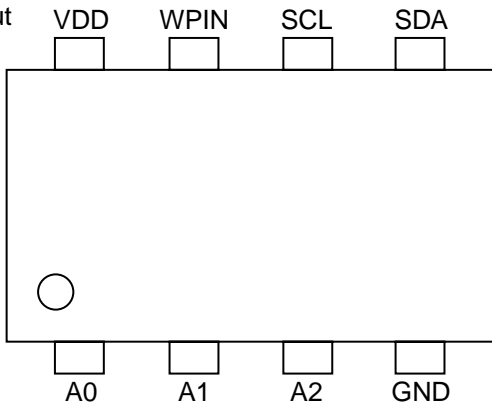
Cassette mechanism  
(Surface)



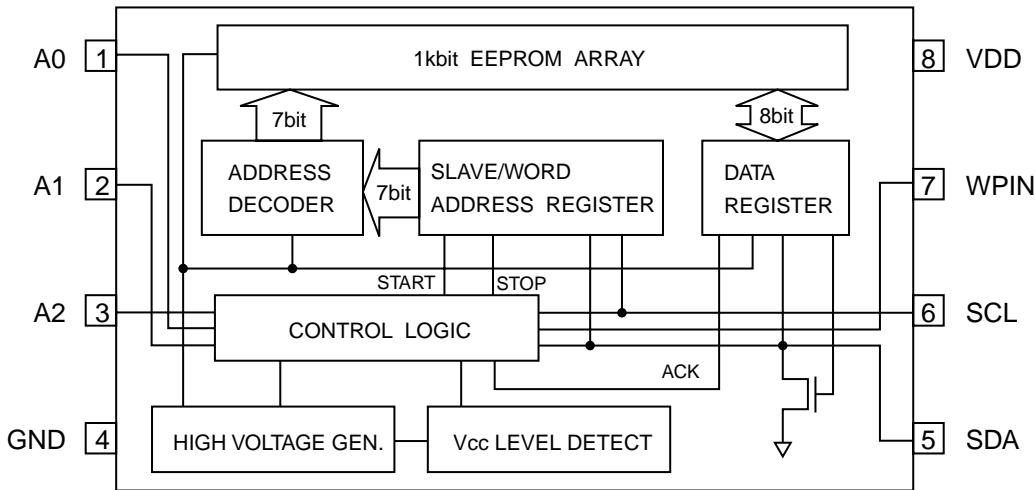
# Description of major ICs

## ■ BR24C01AFV-W-X (IC502) : EEPROM

1.Pin layout



2.Block diagram



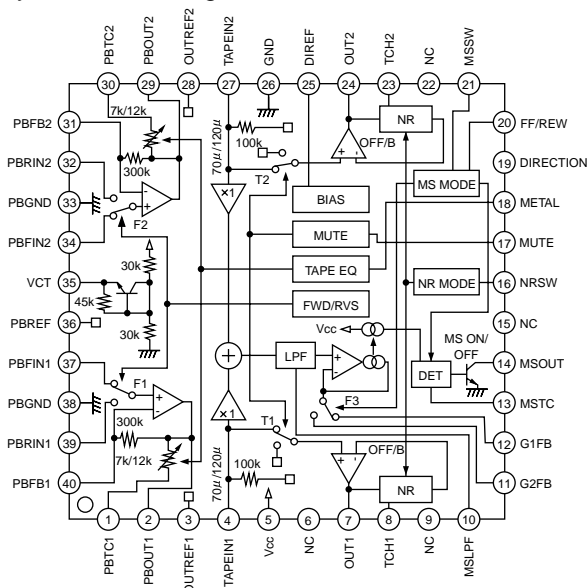
3.Pin function

Pin name	I/O	Function
VDD	-	Power supply
GND	-	Ground (0v)
A0,A1,A2	IN	Slave address set
SCL	IN	Serial clock input
SDA	IN / OUT	Slave and word address, serial data input, serial data output *1
WPIN	IN	Write protect input

\*1 An open drain output requires a pull-up resistor.

## ■ CXA2560Q (IC401) : Dolby B type noise reduction system with play back equalizer amp.

### 1. Pin layout & block diagram

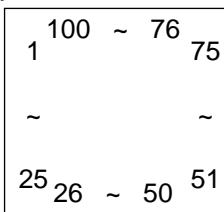


### 2. Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	PBTC1	-	Playback equalizer amplifier capacitance	25	DIREF	-	Resistance for setting the reference
2	PBOUT1	O	Playback equalizer amplifier output	26	GND	-	Ground
3	OUTREF1	O	Output reference	27	TAPEIN2	I	TAPE input
4	TAPEIN1	I	TAPE input	28	OUTREF2	O	Output reference
5	Vcc	-	Power supply	29	PBOUT2	O	Playback equalizer amplifier output
6	NC	-		30	PBTC2	-	Playback equalizer amplifier capacitance
7	OUT1	O	Line output	31	PFB2	I	Playback equalizer amplifier feedback
8	TCH1	-	Time constant for the HLS	32	PBRIN2	I	Playback equalizer amplifier input
9	NC	-		33	PBGND	-	Playback equalizer amplifier ground
10	MSLPF	-	Cut-off frequency adjustment of the music sensor LPF	34	PBFIN2	I	Playback equalizer amplifier input
11	G2FB	-	Music signal interval detection	35	VCT	O	Center
12	G1FB	-	Music signal interval detection	36	PBREF	O	Playback equalizer amplifier reference
13	MSTC	-	Time constant for detecting music signal interval	37	PBFIN1	I	Playback equalizer amplifier input
14	MSOUT	O	Music sensor out	38	PBGND	-	Playback equalizer amplifier ground
15	NC	-	No use	39	PBRIN1	I	Playback equalizer amplifier input
16	NRSW	I	Dolby NR control	40	PFB1	I	Playback equalizer amplifier feedback
17	MUTE	I	Mute function control				
18	METAL	I	Playback equalizer amplifier control				
19	DRSW	I	Head select control				
20	DIRECTION	I	Music sensor mode control				
21	FF/REW	I	Music sensor control				
22	NC	-					
23	TCH2	-	Time constant for the HLS				
24	OUT2	O	Line output				

## ■ UPD784215AGC173 (IC701) : Main micon

### 1.Pin layout



### 2.Pin functions(1/2)

Pin No.	Symbol	I/O	Function
1	NC	O	Non connect
2	NC	O	Non connect
3~7	NC	O	Non connect
8	MUTE	O	Mute output terminal("L" output at mute)
9	VDD	-	Connects with VDD
10	X2	-	Connects with X'tal departure pendulum of 12.5MHz(output )(main)
11	X1	-	Connects with X'tal departure pendulum of 12.5MHz(input )(main)
12	GND	-	Connect with GND
13	XT2	-	Connects with X'tal departure pendulum of 32.768KHz(output)
14	XT1	-	Connects with X'tal departure pendulum of 32.768KHz(input)
15	RESET	I	System reset input terminal
16	BUS INT	I	Interrupt signal detection terminal from J-BUS communication
17	REMOCON	I	Interrupt signal detection terminal from optical remote control
18	ACC DET	I	ACC power supply detection terminal("L" become a holding mode because of the input)
19	MEMORY DET	I	Backup power supply detection terminal ("L" it when backup power supply is input) ("H" input when backup power supply uninputs)
20	NC	O	Non connect
21	CST P.REQ	I	Cassette mechanism power supply start-up demand signal input
22	CD P.REQ	I	CD mechanism power supply start-up demand signal input
23	AVDD	-	(Connect witj VDD)(Power supply for the A/D converter)
24	AVREF0	-	(Connect with VDD)(Standard power supply for the A/D converter)
25	KEY0	I	KEY0 input terminal
26	KEY1	I	KEY1 input terminal
27	KEY2	I	KEY2 input terminal
28	KEY3	I	KEY3 input terminal
29	S.METER	I	Terminal of input of voltage of S meter(Electric field strength)
30	LEVEL/ANA	I	Level input terminal of level meter
31	TEMP	I	Voltage input terminal (Use to correct the temperature of the contrast) from the thermally sensitive resister.
32	NC	I	To GND with 47k $\Omega$
33	AVSS	-	(Connect with GND)(GND for the A/D converter and the D/A converter)
34	DIMMER IN	I	Dimmer signal input terminal("L" input at dimmer)
35	DIMMER OUT	O	"H" output at DIMMER ON
36	AVREF1	-	(Connect with VDD)(Standard power supply for the D/A converter)
37	BUS-SI	I	Input of data J-BUS communication
38	BUS-SO	O	Output of data of J-BUS communication
39	BUS-SCK	I/O	Clock output for J-BUS communication
40	BUS-I/O	O	Output of I/O switch signal of J-BUS communication (output "H" and input "L")
41	LCD-DA	O	data output terminal to LCD driver
42	LCD-SCK	O	Clock output terminal for communication to LCD driver
43	LCD-CE	O	Chip enable output terminal to LCD driver

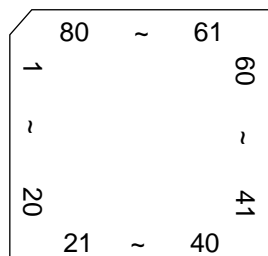
## 2.Pin functions(2/2)

UPD784215AGC173(2/2)

Pin No.	Symbol	I/O	Function
44~47	NC	O	Non connect
48	EPROM DI	O	Data input from EPROM
49	EPROM DO	O	Data output to EPROM
50	EPROM CK	O	EPROM Clock signal I/O
51	SD/SI	I	Stationdetector and stereo signal input terminal ("H" input at SD)
52	PLL CE	O	Chip enable output terminal to PLL
53	PLLDATA	O	Data output terminal to PLL
54	PLL CLK	O	Clock output terminal for communication to PLL
55	PLL DI	I	Data input terminal from PLL
56~60	NC	O	Non connect
61	NC	O	Non connect
62	E.VOL SO	I/O	Data I/O terminal to electric volume
63	E.VOL SCK	I/O	Clock I/O terminal for communication to electric volume
64	LCD RESET	O	Reset signal output terminalto LCD driver("L" output when resetting)
65	TEL MUTE	I	Outputs by "L" input the mute output terminal "L"
66~71	NC	O	Non connect
72	GND	-	(Connect with GND)
73~79	NC	O	Non connect
80	POWER ON	O	Power is output " H" when it is on
81	VDD	-	(Connect with VDD)
82	CD MUTE	I	Mute signal demand input terminal from CD mechanism
83	CD RESET	O	When the terminal RESET detects "L", 200mS "H" (CD mechanism) (Reset output terminal is output)
84	NC		Non connect
85	NC	O	Non connect
86	AREA SET1	I	Area setting of tuner 1
87	AREA SET2	I	Area setting of tuner 2
88	NC	O	Non connect
89	LCD TEST	I	All lighring display of LCD by "L" input
90	NC	O	Non connect
91	NC	O	Non connect
92	CST MUTE	I	Mute signal demandinput terminal from cassette mechanism
93	CST RESET	O	Reset output terminal to cassette mechanism - (When the terminal RESET detects "L", 200mS "H" is output)
94	TEST		GND and connects with 10k $\Omega$
95~100	NC	O	Non connect

## ■ UPD784225GK-623 (IC501) : CPU

### 1.Pin layout



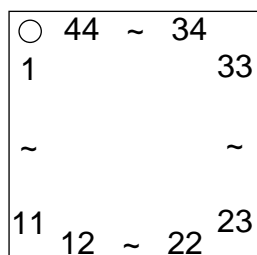
### 2.Pin function

Pin no.	Symbol	I/O	Function	Pin no.	Symbol	I/O	Function
1	TEMP	I	Connect to TEMP detector	41	NC	-	Non use
2	GND	-	Connect to GND	42	NC	-	Non use
3	GND	-	Connect to GND	43	NC	-	Non use
4	AVSS	-	Connect to GND	44	DACML	O	DAC mode control latch
5	ADCONT	-	No use	45	DACMC	O	DAC mode control clock
6	NC	-	No use	46	DACMD	O	DAC mode control data
7	AVREF1	-	Analog reference voltage	47	DACCS	I	DA convertor chip select
8	EPROMDI	I	Data input terminal from EEPROM	48	NC	-	No use
9	EPROMDO	O	Data output terminal from EEPROM	49	NC	-	No use
10	EPROMCK	I/O	Clock signal I/O terminal with EEPROM	50	NC	-	No use
11	LCDCE/SO	-	No use	51	NC	-	No use
12	LCDDA/SI	-	No use	52	DISCSEL	O	Initial setting
13	LCDCK	-	No use	53	DACSEL	O	DA convertor select
14	/BUSIO	I/O	J-BUS data I/O terminal	54	NC	-	No use
15	BUSIO	I/O	J-BUS data I/O terminal	55	TEST MODE	-	Connect to GND
16	BUSSI	I	J-BUS data input	56	MP3SEL	O	MP3/CD-DA switch SW L:CD H:MP3
17	BUSSO	O	J-BUS data output	57	8VDET	I	8V detection
18	BUSSCK	I/O	J-BUS clock I/O	58	REST	I	Systemreset signal input
19	BUSOUT	-	No use	59	SW2	I	Detection switch of CD mechanism
20	CDON	O	The CD power supply control signal output. At CD:H	60	RESET		Reset detection terminal
21	CDREQ	I	CD request	61	SW1	I	Detection switch of CD mechanism
22	CDMUTE	O	CD Mute	62	B.DET	I	Panel switch detection
23	NC	-	No use	63	P.DET	I	Power switch detection
24	DSPRESET	O	DSP reset	64	BUSINT	I	J-BUS signal interrupt input
25	CCE	O	CE output for data communication with CDLSI	65	MP3REQ	O	MP3 request
26	BUCK	O	Clock output for data communication with CDLSI	66	NC	-	No use
27	BUS3	I/O	Data communication input output port 3 with CDLSI	67	VSS0	-	Connect to ground
28	BUS2	I/O	Data communication input output port 2 with CDLSI	68	VDD1	-	Reference voltage terminal
29	BUS1	I/O	Data communication input output port 1 with CDLSI	69	X2	-	No use
30	BUS0	I/O	Data communication input output port 0 with CDLSI	70	X1	I	Connect to X'tal osc.
31	2XPLAY	-	No use	71	VPP	I	Test terminal
32	RWSEL	I	CD RW select	72	XT2	-	Non use
33	VSS1	-	Connect to GND	73	XT1	-	Connect to ground
34	LOAD	O	Loading signal	74	VDD0	-	Connect to ground
35	LD/FE	O	LDFLE switching signal	75	AVDD	-	Reference voltage terminal
36	MP3DI	I	MP3 data input	76	IOP	I/O	Laser signal input output
37	MP3DO	O	MP3 data output	77	KEY0	I	Key control signal input 0
38	MP3CK	O	MP3 data clock	78	KEY1	I	Key control signal input 0
39	MP3RESET	O	MP3 data reset	79	KEY2	I	Key control signal input 0
40	MPSSTB	I	MP3 data standby	80	KEY3	I	Key control signal input 0



## ■ UPD789166GB-590 (IC431) : CPU

### 1.Pin layout

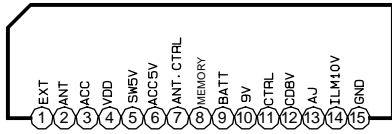


### 2.Pin function

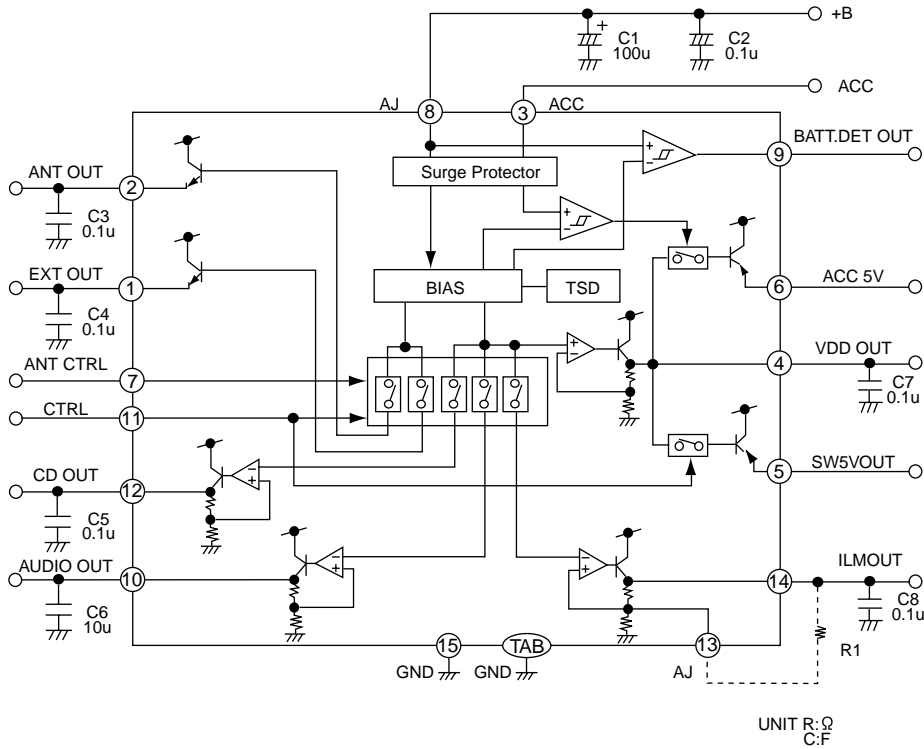
Pin No.	Symbol	I/O	Function
1	KEY0	I	KEY0 input terminal
2	KEY1	I	KEY1 input terminal
3	KEY2	I	KEY2 input terminal
4	KEY SEL	I	KEY in select setting terminal (H:active)
5	DOLBY SEL	I	DOLBY select setting terminal L: No DOLBY
6	RPT SEL	I	REPEAT select setting input terminal L:No REPEAT
7	B.SKIP	I	B.SKIP select setting input terminal
8	NC	-	Connect to GND
9	AVSS	-	A/D converter GND voltage. Connect to GND
10	NC	O	Non connect
11	BUS-I/O	O	J-BUS I/O switching output. output:H input:L
12	BUS-INT	I	J-BUS signal interlupt input
13	TAPE IN	I	Tape IN detection switch input
14	MAIN POWER	I	CTRL+B input H:Normal operation L:Save mode
15	PWR_DET	I	MEMORY detection
16	BUS-SCK	I/O	J-BUS clock input/output
17	VDD1	-	Power supply (without port section) connect to 5V
18	BUS-SO	O	J-BUS data output terminal
19	BUS-SI	I	J-BUS data input terminal
20	METAL IN	-	Non connect
21	METAL OUT	-	Non connect
22	ICO	-	Connect to VSS0 or VSS1
23	XT2	-	Non connect
24	XT1	-	Connect to VSS0 or VSS1
25	RESET	-	Reset detection terminal
26	X2	-	X'tal oscillator (4.1943MHz)
27	X1	-	X'tal oscillator (4.1943MHz)
28	VSS0	-	Ground voltage of port section. Connect to GND
29	VDD0	-	Power supply for port section Connect to 5V
30	DOLBY	O	DOLBY ON/OFF setting output H:ON
31	MS IN	I	MS input
32	FF/REW	O	Input level selrct for MS L:FF,REW H:Normal PLAY
33	MOTOR	O	Main motor output H:Motor rotation
34	SUBMO-	O	Clockwise operation output for sub motor
35	SUBMO+	O	Counterclockwise operation output for sub motor
36	HEAD SEL	O	HEAD AMP input signal select output L:FWD H:REV
37	VSS1	I	GND voltage (without port section)
38	REEL	I	REEL pulse input
39	STANBY	I	Standby position detection H:EJECT side L:operation side
40	MODE	I	Mode pulse input L: mechanism position fix
41	PREQ	O	Power request output H:cassette mechanism operation
42	MUTE	O	Mute request output L:mute request
43	AVDD	-	A/D converter analog power supply. Connect to 5V
44	AVREF	-	A/D converter reference voltege. Connect to 5V

## HA13164A (IC911) : Regulator

### 1. Terminal layout



### 2. Block diagram



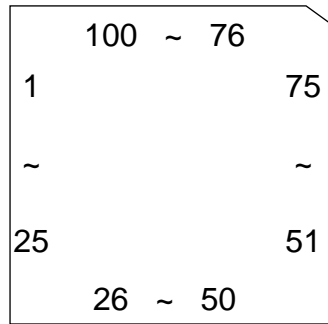
note1) TAB (header of IC)  
connected to GND

### 3. Pin function

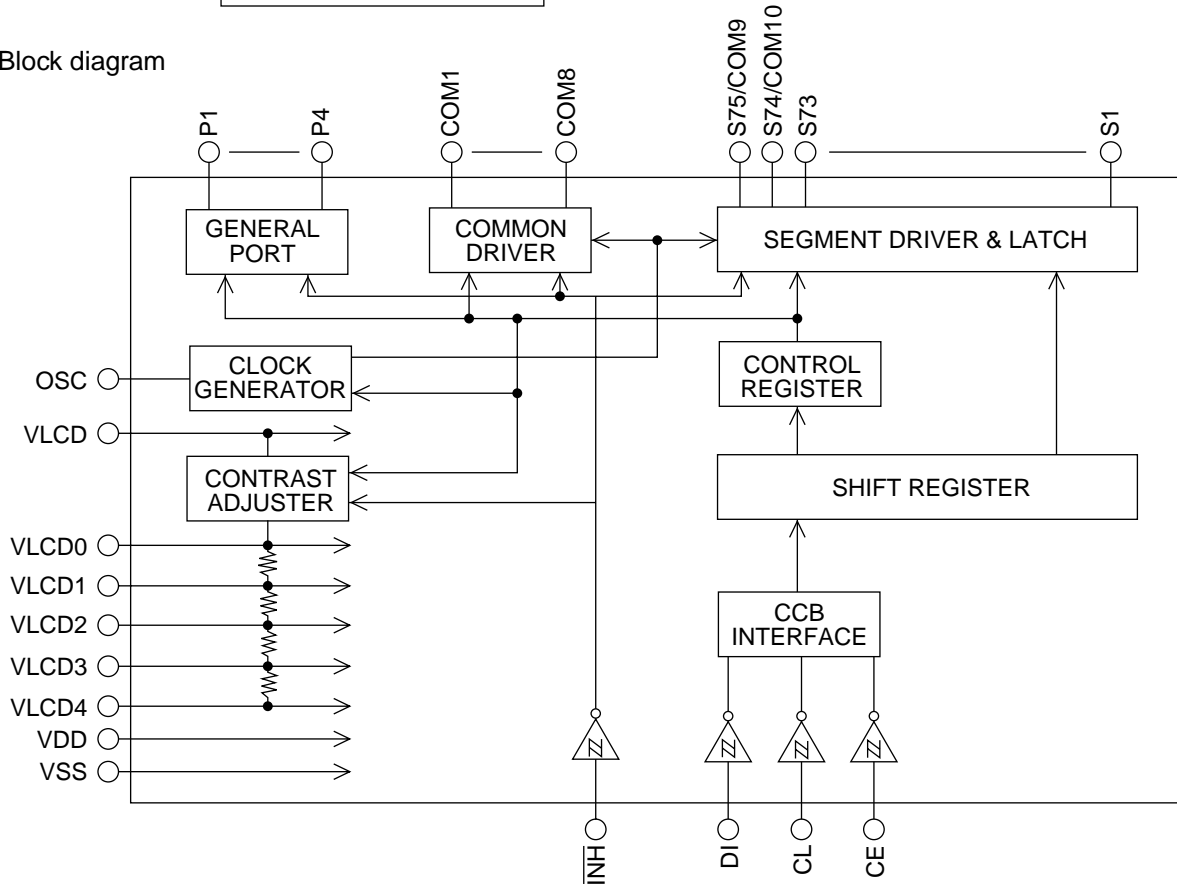
Pin No.	Symbol	Function
1	EXTOUT	Output voltage is VCC-1 V when M or H level applied to CTRL pin.
2	ANT	Output voltage is VCC-1 V when M or H level to CTRL pin and H level to ANT-CTRL.
3	ACCIN	Connected to ACC.
4	VDDOUT	Regular 5.7V.
5	SW5VOUT	Output voltage is 5V when M or H level applied to CTRL pin.
6	ACC5V	Output for ACC detector.
7	ANT CTRL	L:ANT output OFF , H:ANT output ON
8	MEMORY	Connected to VCC.
9	BATT	Low battery detect.
10	9V	Output voltage is 9V when M or H level applied to CTRL pin.
11	CTRL	L:BIAS OFF, M:BIAS ON, H:CD ON
12	CD OUT	Output voltage is 8V when H level applied to CTRL pin.
13	AJ	Adjustment pin for ILM output voltage.
14	ILM	Output voltage is 10V when M or H level applied to CTRL pin.
15	GND	Connected to GND.

■ LC75878W (IC501) : LCD driver

1. Pin layout



2. Block diagram

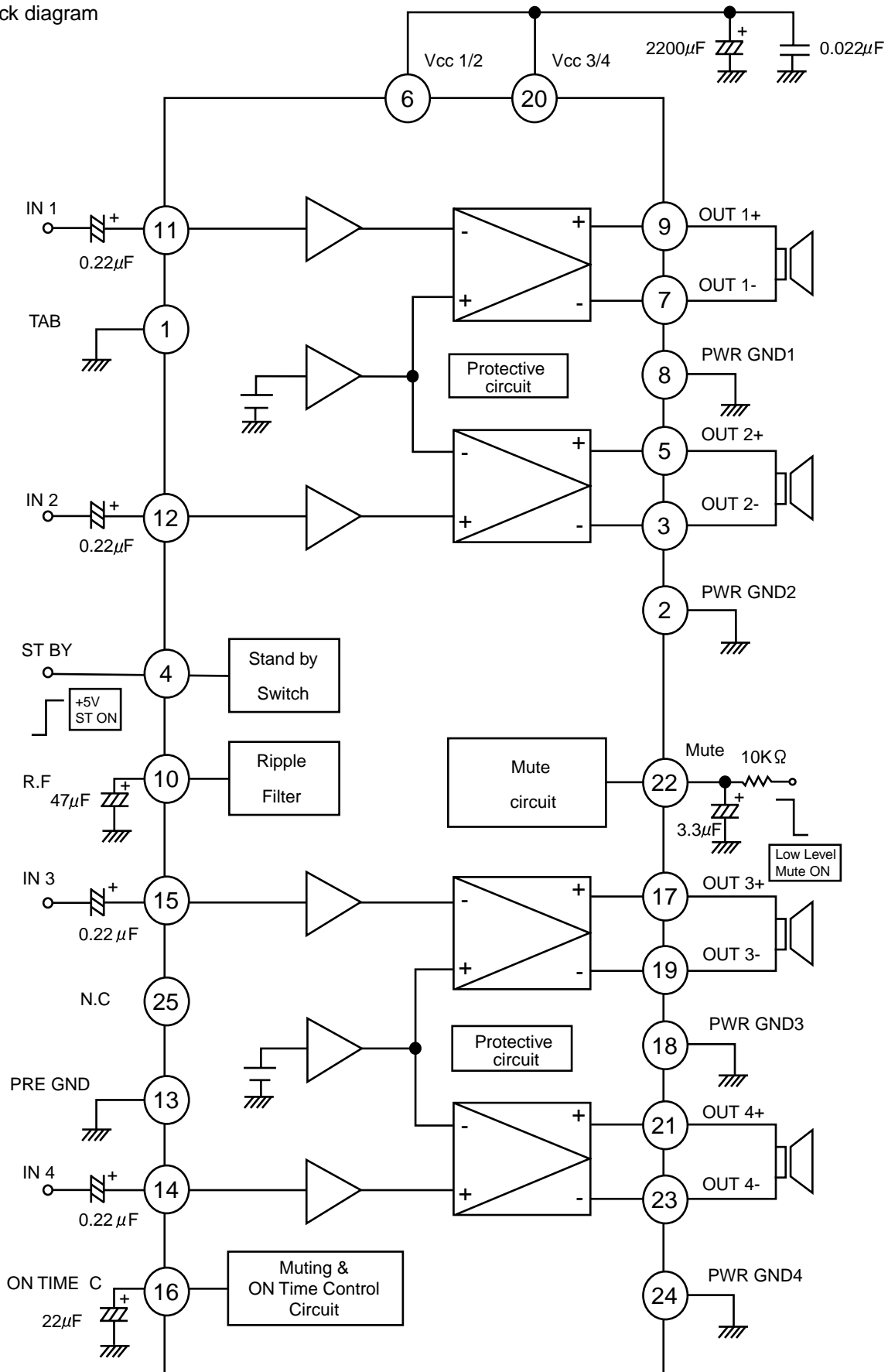


3. Pin function

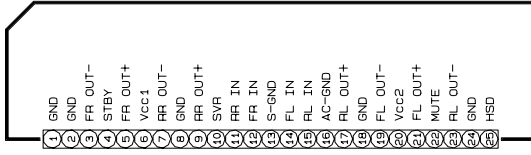
No.	Symbol	I/O	Function
1~73	SEG1~SEG73	O	Segment driver output pin.
74	SEG74	O	Segment driver output pin.
75	SEG75	O	Segment driver output pin.
76~83	COM8~COM1	O	Common driver output pin.
84~87	P1~P4	O	General-purpose output pin.
88	VDD	-	Logic block power supply pin.
89	VLCD	-	LCD driver power supply pin.
90	VLCD0	O	LCD driver bias 4/4 voltage (H-level) power pin.
91	VLCD1	I	LCD driver bias 3/4 voltage (intermediate level) power pin.
92	VLCD2	I	LCD driver bias 2/4 voltage (intermediate level) power pin.
93	VLCD3	I	LCD driver bias 1/4 voltage (intermediate level) power pin.
94	VLCD4	I	LCD driver bias 0/4 voltage (L-level) power pin.
95	VSS	-	Power supply pin to connect to ground.
96	OSC	I/O	Oscillator pin.
97	LCD RESET	I	Display off, general-purpose output port 「L」 fixed input pin.
98	CE	I	Chip enable
99	CL	I	Synchronization clock
100	DI	I	Transfer data

■ LA4743K (IC901) : Power amp.

1. Block diagram



2. Terminal layout



3. Pin function

Pin No.	Symbol	Function
1	GND	Header of IC
2	GND	Power GND
3	RFOUT-	Output(-) for front Rch
4	STBY	Stand by input
5	RFOUT+	Output (+) for front Rch
6	GND	Power input
7	RROUT-	Output (-) for rear Rch
8	GND	Power GND
9	RROUT+	Output (+) for rear Rch
10	SVR	Ripple filter
11	RRIN	Rear Rch input
12	RFIN	Front Rch input
13	SGND	Signal GND
14	FLIN	Front Lch input
15	RLIN	Rear Lch input
16	AC-GND	Power on time control
17	RLOUT+	Output (+) for rear Lch
18	GND	Power GND
19	RLOUT-	Output (-) for rear Lch
20	VCC2	Power input
21	FLOUT+	Output (+) for front
22	MUTE	Muting control input
23	RLOUT-	Output (-) for front
24	GND	Power GND
25	HSD	No connection



## 3.Pin function

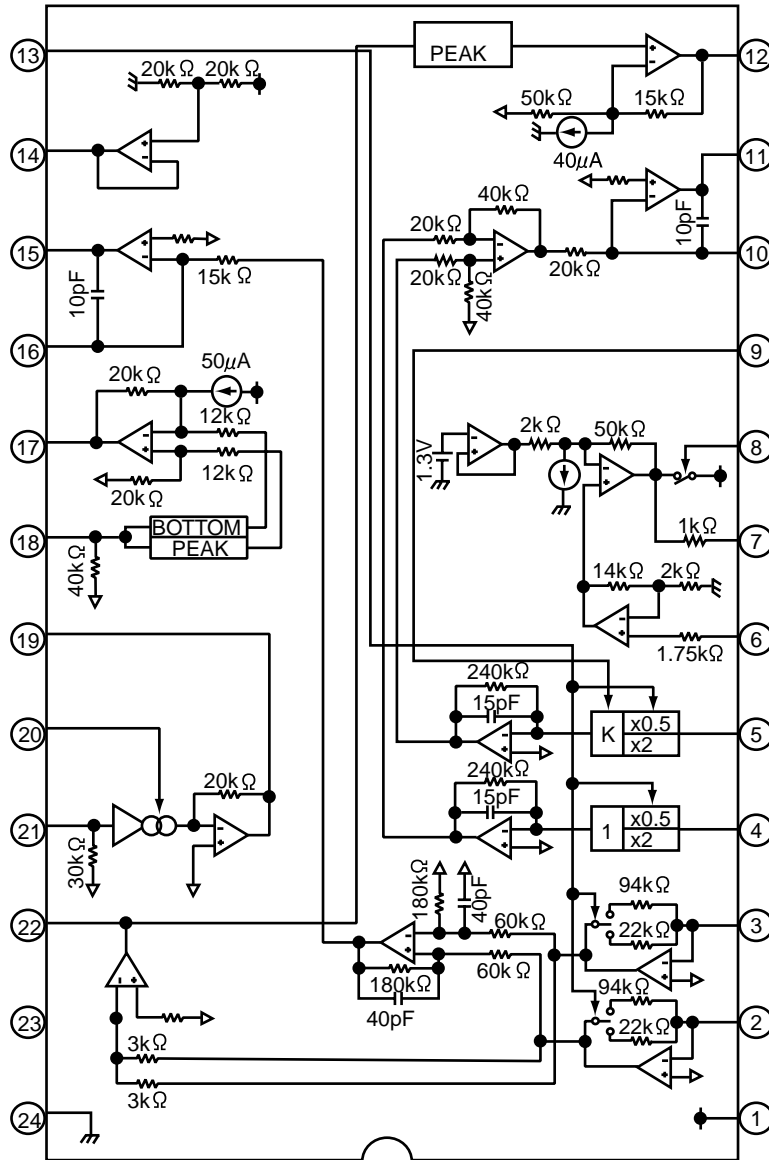
Pin No.	Symbol	Function
1	VIN1-A	CH1 input AMP_inverted input
2	VIN1+A	CH1 input AMP_non-inverted input
3	VCCP1	CH1 and CH2 power stage power supply
4	VO1+	Output pin(+)for channel 1
5	VO1-	CH1 output pin (-) for channel 1
6	VO2+	Output pin(+)for channel 2
7	VO2-	Output pin(-)for channel 2
8	VO3+	Output pin(+)for channel 3
9	VO3-	Output pin(-)for channel 3
10	VO4+	Output pin(+)for channel 4
11	VO4-	Output pin(-)for channel 4
12	VCCP2	CH3 and CH4 power stage powr supply
13	VIN4	Input pin for channel 4
14	VIN4G	Input pin for channel 4(for gain adjustment)
15	VIN3	Input pin for channel 3
16	VIN3G	Input pin for channel 3(for gain adjustment)
17	VIN2	Input pin for channel 2
18	VIN2G	Input pin for channel 2(for gain adjustment)
19	REGIN	External PNP transistor, base connection
20	3.3VREG	3.3VREG output pin, external PNP transistor,collector connection
21	VCCS	Signal system GND
22	VREFIN	Reference voltage application pin
23	MUTE	Output ON/OFF pin
24	VIN1_SW	CH1 input OP AMP_changeover pin
25	S_GND	Signal system GND
26	VIN1+B	CH1 AMP_B non-inverted input pin
27	VIN1-B	CH1 AMP_B inverted input pin
28	VIN1	CH1 input pin, input OP_AMP output pin

■ TA2157FN-X(IC601):RF amp

1. Terminal layout



2. Block diagram



PIN VCTRLPIN	SEL (APC SW)	TEB (TE BAL)	RFGC (AGC Gian)	TEB (TE BAL)
VCC	APC ON	-50%	+12dB	Normal mode (0dB)
HiZ	APC ON	0%	+6dB	Normal mode (0dB)
GND	APC OFF (LDO=H)	+50%	0dB	CD-RW mode (+12dB)



## 3.Pin function

TA2175FN-X

Pin No.	Symbol	I/O	Function												
1	VCC	-	3.3V power supply pin												
2	FNI	I	Main-beam amp input pin												
3	FPI	I	Main-beam amp input pin												
4	TPI	I	Sub-beam amp input pin												
5	TNI	I	Sub-beam amp input pin												
6	MDI	I	Monitor photo diode amp input pin												
7	LDO	O	Laser diode amp output pin												
8	SEL	I	APC circuit ON/OFF control signal, laser diode (LDO) control signal input or bottom/peak detection frequency change pin. <table border="1" data-bbox="581 541 1242 737"> <thead> <tr> <th>SEL</th> <th>APC circuit</th> <th>LCD</th> </tr> </thead> <tbody> <tr> <td>GND</td> <td>OFF</td> <td>Connected VCC through 1kΩ resistor</td> </tr> <tr> <td>Hiz</td> <td>ON</td> <td>Control signal output</td> </tr> <tr> <td>VCC</td> <td>ON</td> <td>Control signal output</td> </tr> </tbody> </table>	SEL	APC circuit	LCD	GND	OFF	Connected VCC through 1kΩ resistor	Hiz	ON	Control signal output	VCC	ON	Control signal output
SEL	APC circuit	LCD													
GND	OFF	Connected VCC through 1kΩ resistor													
Hiz	ON	Control signal output													
VCC	ON	Control signal output													
9	TEB	I	Tracking error balance adjustment signal input pin Adjusts TE signal balance by eliminating carrier component from PWM signal (3-state output, PWM carrier = 88.2kHz) output from TC94A14F/FA TEB pin using RC-LPF and inputting DC. TEBC input voltage: GND~VCC												
10	TEN	I	Tracking error signal generation amp negative-phase input pin												
11	TEO	O	Tracking error signal generation amp output pin. Combining TEO signal RFRP signal with TC94A14F/FA configures tracking search system.												
12	RFDC	O	RF signal peak detection output pin												
13	GVSW	I	AGC/FE/TE amp gain change pin <table border="1" data-bbox="581 1125 831 1320"> <thead> <tr> <th>GVSW</th> <th>Mode</th> </tr> </thead> <tbody> <tr> <td>GND</td> <td>CD-RW</td> </tr> <tr> <td>Hiz</td> <td rowspan="2">Normal</td> </tr> <tr> <td>VCC</td> </tr> </tbody> </table>	GVSW	Mode	GND	CD-RW	Hiz	Normal	VCC					
GVSW	Mode														
GND	CD-RW														
Hiz	Normal														
VCC															
14	VRO	O	Reference voltage (VRO) output pin *VRO=1/2VCC When VCC=3.3V												
15	FEO	O	Focus error signal generation amp output pin												
16	FEN	I	Focus error signal generation amp negative-phase input pin												
17	RFRP	O	Signal amp output pin for track count Combining RFRP signal and TEO signal with TC94A14F/FA configures tracking search system.												
18	REIS	I	Signal generation amp input pin for track count												
19	RFGO	O	RF signal amplitude adjustment amp output pin												
20	RFGC	I	RF amplitude adjustment control signal input pin Adjusts RF signal amplitude by eliminating carrier component from PWM signal (3-state output, PWM carrier=88.2kHz) output from TC94A14F/14FA RFGC pin using RC-LPF and inputting DC. * RFGC input voltage: GND~VCC												
21	AGCI	I	RF signal amplitude adjustment amp input pin												
22	RFO	O	RF signal generation amp output pin												
23	RFN	I	RF signal generation amp input pin												
24	GND	-	GND pin												



## 3.Pin function(1/2)

TC94A02F-005

Pin No.	Symbol	I/O	Function
1	/RESET	I	Hard reset input terminal(H:Normal operation L: Reset)
2	MiMD	I	Micon I/F mode select input terminal
3	AD0	O	External SRAM address output 0 terminal
4	AD1	O	External SRAM address output 1 terminal
5	MiDio	I/O	Micon I/F data input/output terminal
6	/MiCK	I	Micon I/F clock input terminal
7	AD2	O	External SRAM address output 2 terminal
8	VDDT	-	Digital power supply (3.3V)
9	SDo	O	Data output terminal
10	AD3	O	External SRAM address output 3 terminal
11	AD4	O	External SRAM address output 4 terminal
12	SDi0	I	Data input terminal 0
13	BCKiA	I	Bit clock input terminal A
14	LRCKiA	I	LR clock input terminal A
15	AD5	O	External SRAM address output 5 terminal
16	CE	O	External SRAM chip enable terminal
17	OE	O	External SRAM output enable terminal
18	VDD	-	Digital power supply (2.5V)
19	STANBY	I	Standby mode control terminal
20	VSS	-	Digital GND
21	VSSL	-	DAC Lch GND
22	VRAL	-	DAC Lch reference voltage terminal
23	LO	O	DAC Lch output terminal
24	VDAL	-	DAC Rch power supply terminal(2.5V)
25	VDAR	-	DAC Lch power supply terminal(2.5V)
26	RO	O	DAC Rch output terminal
27	VRAR	-	DAC Rch reference voltage terminal
28	VSSR	-	DAC Rch GND
29	TESTP	I	Test terminal
30	CKS	I	VCO select terminal
31	AD12	O	External SRAM address output 12 terminal
32	AD11	O	External SRAM address output 11 terminal
33	AD10	O	External SRAM address output 10 terminal
34	AD9	O	External SRAM address output 9 terminal
35	VDDT	-	Digital power supply terminal (3.3V)
36	AD8	O	External SRAM address output 8 terminal
37	AD7	O	External SRAM address output 7 terminal
38	AD6	O	External SRAM address output 6 terminal
39	REQ	O	Squeeze request terminal to host
40	VSS	-	Digital GND
41	AD13	O	External SRAM address output 13 terminal
42	AD14	O	External SRAM address output 14 terminal
43	WR	O	External SRAM write signal
44	AD16	O	External SRAM address output 16 terminal
45	AD15	O	External SRAM address output 15 terminal
46	io0	I/O	External SRAM data input/output 0 terminal
47	io1	I/O	External SRAM data input/output 1 terminal
48	VSS	-	Digital GND
49	io2	I/O	External SRAM data input/output 2 terminal
50	io3	I/O	External SRAM data input/output 3 terminal

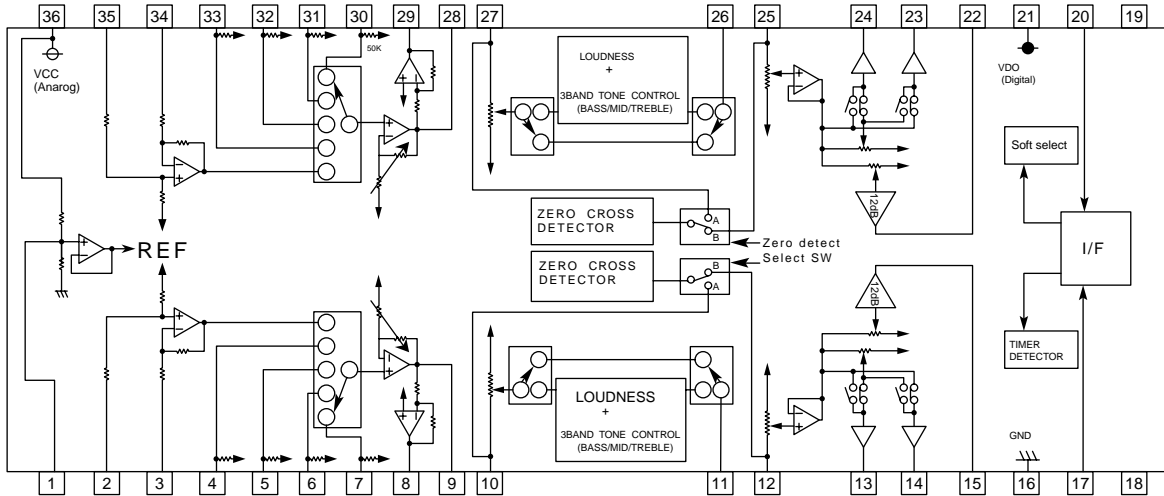
## 3.Pin function(2/2)

TC94A02F-005

Pin No.	Symbol	I/O	Function
51	io4	I/O	External SRAM data input/output 4 terminal
52	VDD	-	Digital power supply (2.5V) terminal
53	io5	I/O	External SRAM data input/output 5 terminal
54	io6	I/O	External SRAM data input/output 6 terminal
55	io7	I/O	External SRAM data input/output 7 terminal
56	VSSP	-	VCO GND
57	Pdo	O	PLL phase error detection signal output terminal
58	Vcoi	I	VCO control voltage input terminal
59	VDDP	-	VCO power supply
60	Cko	O	16.934 MHz clock output terminal
61	VDDX	-	Power supply (2.5V) terminal for oscillator
62	Xi	I	Connection terminal for oscillator(input)
63	Xo	O	Connection terminal for oscillator(output)
64	VSSX	-	GND for oscillator

■ M61508FP-X (IC951) : E. volume

1. Pin layout & Block diagram

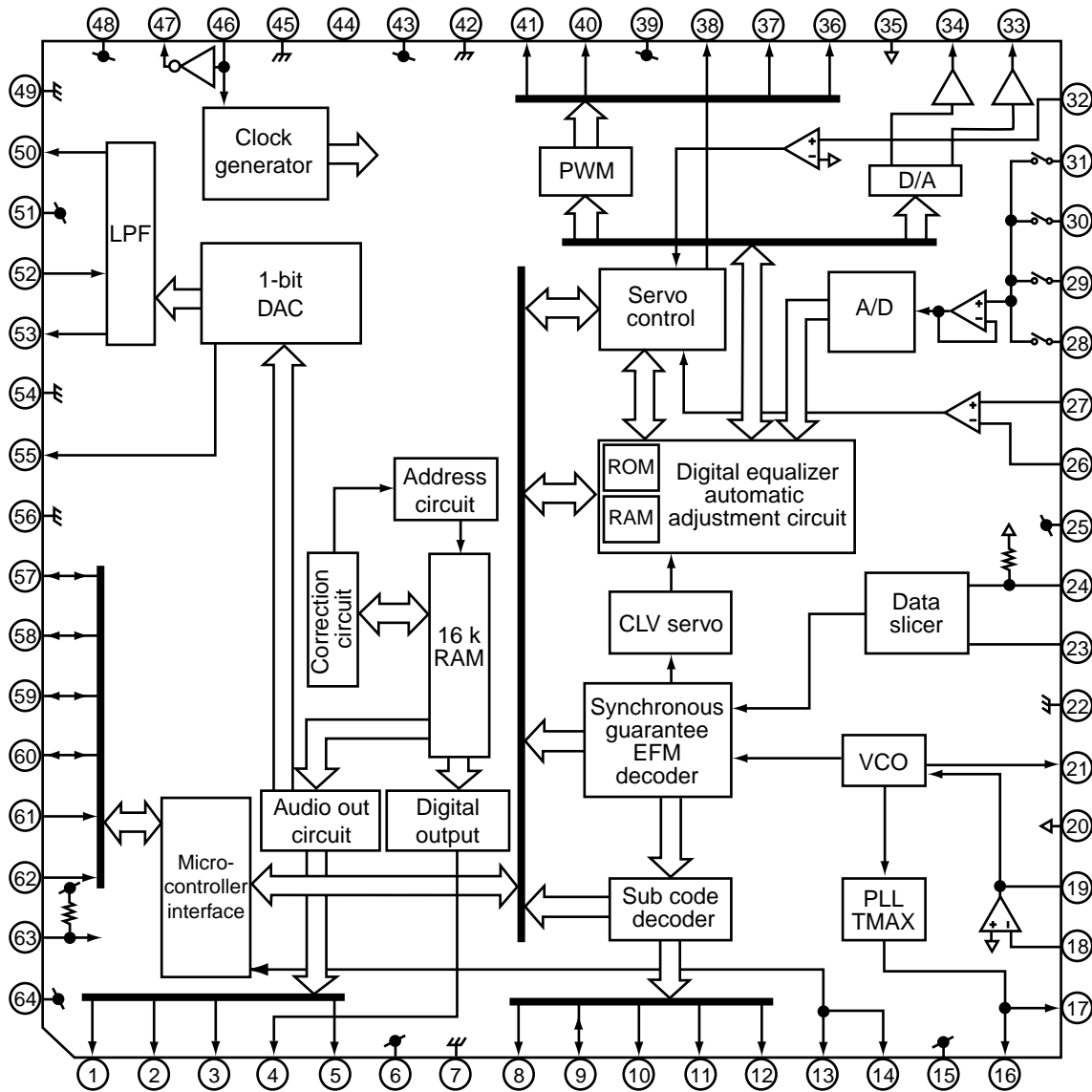


2. Pin function

Pin No.	Symbol	Function
1	REF	Grand for IC signal
2	DEFP IN1	Differential motion amp. Positive terminal
3	DEFN IN1	Differential motion amp. Negative terminal
4	INA1	Input terminal of input selector switch channel 1
5	INB1	Input terminal of input selector switch channel 1
6	INC1	Input terminal of input selector switch channel 1
7	IND1	Input terminal of input selector switch channel 1
8	DEFN OUT1	Differential output terminal (-)
9	SEL OUT1	Input selector output terminal
10	VOL IN1	Volume 1 input terminal
11	TONE OUT1	Tone output terminal
12	FADER IN1	Volume 2 input terminal
13	REAR OUT1	Fader volume control (Rear) output terminal
14	FRONT OUT1	Fader volume control (Front) output terminal
15	NonFader OUT1	Non fader volume output terminal
16	GND	GND terminal
17	DATA	Control data input terminal
18	VDDOUT1	Test terminal
19	VDDOUT2	Test terminal
20	CLOCK	Clock input terminal for serial data transport
21	VDD	Power supply terminal for digital
22	NonFader OUT2	Non fader volume control output terminal
23	FRONT OUT2	Fader volume (Front) output terminal
24	REAR OUT2	Fader volume (Rear) output terminal
25	FADER IN2	Volume 2 input terminal
26	TONE OUT2	Tone output terminal
27	VOL IN2	Volume 1 input terminal
28	SEL OUT2	Input selector output terminal
29	DEFN OUT1	Differential output terminal (-)
30	IND2	Input terminal of input selector switch channel 2
31	INC2	Input terminal of input selector switch channel 2
32	INB2	Input terminal of input selector switch channel 2
33	INA2	Input terminal of input selector switch channel 2
34	DEFN IN1	Differential motion amp negative input terminal
35	DEFP IN1	Differential motion amp positive input terminal
36	VCC	Power supply terminal

■ TC94A14FA (IC621) : DSP & DAC

1. Terminal layout & block diagram



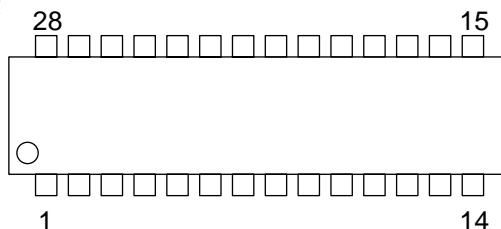
2. Pin function

Pin No	Symbol	I/O	Description
1	BCK	O	Bit clock output pin. 32fs, 48fs, or 64fs selectable by command.
2	LRCK	O	L/R channel clock output pin. "L" for L channel and "H" for R channel. Output polarity can be inverted by command.
3	AOUT	O	Audio data output pin. MSB-first or LSB-first selectable by command.
4	DOUT	O	Digital data output pin. Outputs up to double-speed playback.
5	IPF	O	Correction flag output pin. When set to "H", AOUT output cannot be corrected by C2 correction processing.
6	VDD3	-	Digital 3.3V power supply voltage pin.
7	VSS3	-	Digital GND pin.
8	SBOK	O	Subcode Q data CRCC result output pin. "H" level when result is OK.
9	CLCK	O	Subcode P-W data read I/O pin. I/O polarity selectable by command.
10	DATA	O	Subcode P-W data output pin.
11	SFSY	O	Playback frame sync signal output pin.
12	SBSY	O	Subcode block sync signal output pin. "H" level at S1 when subcode sync is detected.
13	HSO	I/O	General-purpose input / output pins.
14	UHSO		Input port at reset.
15	PVDD3	-	PLL-only 3.3V power supply voltage pin.

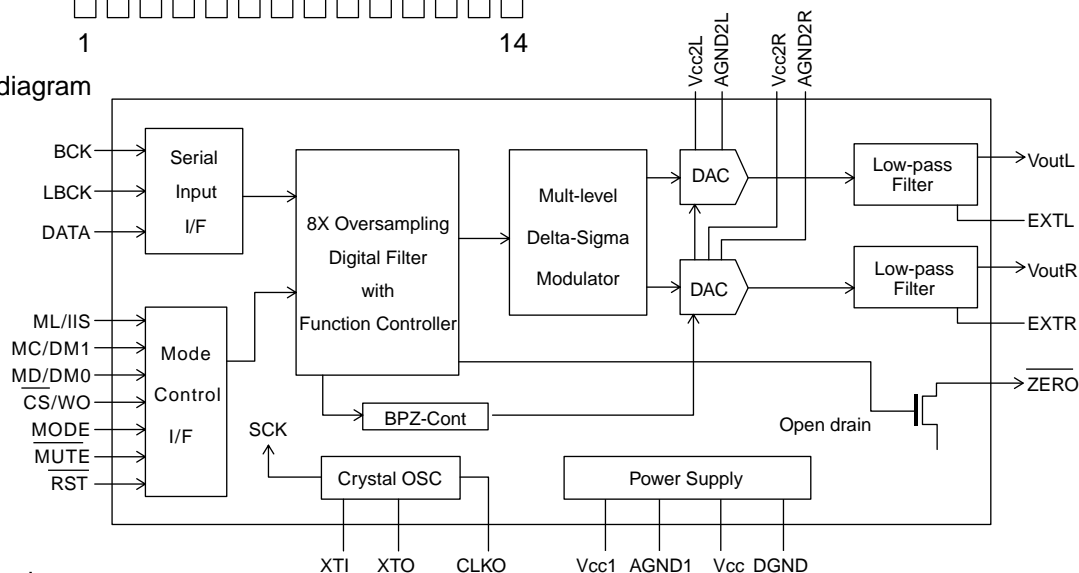
Pin No	Symbol	I/O	Description								
16	PDO	O	EFM and PLCK phase difference signal output pin.								
17	TMAX	O	TMAX detection result output pin. <table border="1" data-bbox="477 279 1070 413"> <thead> <tr> <th>TMAX Detection Result</th> <th>TMAX Output</th> </tr> </thead> <tbody> <tr> <td>Longer than fixed period</td> <td>"PVD3"</td> </tr> <tr> <td>Within fixed period</td> <td>"HiZ"</td> </tr> <tr> <td>Shorter than fixed period</td> <td>"AVSS3"</td> </tr> </tbody> </table>	TMAX Detection Result	TMAX Output	Longer than fixed period	"PVD3"	Within fixed period	"HiZ"	Shorter than fixed period	"AVSS3"
TMAX Detection Result	TMAX Output										
Longer than fixed period	"PVD3"										
Within fixed period	"HiZ"										
Shorter than fixed period	"AVSS3"										
18	LPFN	I	Inverted input pin for PLL LPF amp.								
19	LPFO	O	Output pin for PLL LPF amp.								
20	PVREF	-	PLL-only VREF pin.								
21	VCOF	O	VCO filter pin.								
22	AVSS3	-	Analog GND pin.								
23	SLCO	O	DAC output pin for data slice level generation.								
24	RFI	I	RF signal input pin. Zin selectable by command.								
25	AVDD3	-	Analog 3.3V power supply voltage pin.								
26	RFCT	I	RFRP signal center level input pin.								
27	RFZI	I	RFRP signal zero-cross input pin.								
28	RFRP	I	RF ripple signal input pin.								
29	FEI	I	Focus error signal input pin.								
30	SBAD	I	Sub-beam adder signal input pin.								
31	TEI	I	Tracking error input pin. Inputs when tracking servo is on.								
32	TEZI	I	Tracking error signal zero-cross input pin.								
33	FOO	O	Focus equalizer output pin.								
34	TRO	O	Tracking equalizer output pin.								
35	VREF	-	Analog reference power supply voltage pin.								
36	RFGC	O	RF amplitude adjustment control signal output pin.								
37	TEBC	O	Tracking balance control signal output pin.								
38	SEL	O	APC circuit ON/OFF signal output pin. At laser on, high impedance with UHS="L", H output with UHS="H".								
39	AVDD3	-	Analog 3.3V power supply voltage pin.								
40	FMO	O	Feed equalizer output pin.								
41	DMO	O	Disc equalizer output pin.								
42	VSS3	-	Digital GND pin.								
43	VDD3	-	Digital 3.3V power supply voltage pin.								
44	TESIN	I	Test input pin. Normally, fixed to "L".								
45	XVSS3	-	System clock oscillator GND pin.								
46	XI	I	System clock oscillator input pin.								
47	XO	O	System clock oscillator output pin.								
48	XVDD3	-	System clock oscillator 3.3V power supply voltage pin.								
49	DVSS3R	-	DA converter GND pin.								
50	RO	O	R-channel data forward output pin.								
51	DVDD3	-	DA converter 3.3V power supply pin.								
52	DVR	-	Reference voltage pin.								
53	LO	O	L-channel data forward output pin.								
54	DVSS3L	-	DA converter GND pin.								
55	ZDET	O	1 bit DA converter zero detection flag output pin.								
56	VSS5	-	Microcontroller interface GND pin.								
57	BUS0										
58	BUS1	I/O	Microcontroller interface data I/O pins.								
59	BUS2										
60	BUS3										
61	BUCK	I	Microcontroller interface clock input pin.								
62	/CCE	I	Microcontroller interface chip enable signal input pin. At "L", BUS0 to BUS3 are active.								
63	/RST	I	Reset signal input pin. At reset, "L".								
64	VDD5	-	Microcontroller interface 5V power supply pin.								

## ■ PCM1716E-X (IC571) : D/A converter

### 1. Pin layout



### 2. Block diagram



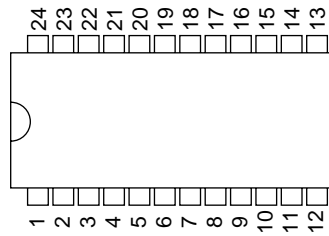
### 3. Pin function

Pin No.	Symbol	I/O	Function
1	LRCK	I	LRCK clock input
2	DATA	I	Serial audio data input
3	BCK	I	Bit clock input for serial audio data
4	CLKO	O	Buffered output of system clock
5	XTI	I	Oscillator input / External clock input
6	XTO	O	Oscillator output
7	DGND	-	Digital ground
8	VDD	-	Digital power +5V
9	VDD2R	-	Analog power +5V
10	AGND2R	-	Analog ground
11	EXTR	O	Rch common pin of analog output amp
12	NC	-	Non connection
13	VOUTR	O	Rch analog voltage output of audio signal
14	AGND1	-	Analog ground
15	Vcc1	-	Analog power +5V
16	VOUTL	O	Lch analog voltage output of audio signal
17	NC	-	Non connection
18	EXTL	O	Lch common pin of analog output amp
19	AGND2L	-	Analog ground
20	Vcc2L	-	Analog power +5V
21	ZERO	O	Zero data flag
22	RST	I	Reset
23	CS/IWO	I	Chip select / Input format selection
24	MODE	I	Mode control select
25	MUTE	I	Mute control
26	MD/DM0	I	Mode control, Data / De-emphasis selection 1
27	MC/DM1	I	Mode control, BCK / De-emphasis selection 2
28	ML/IIS	I	Mode control, WDCK / Input format selection

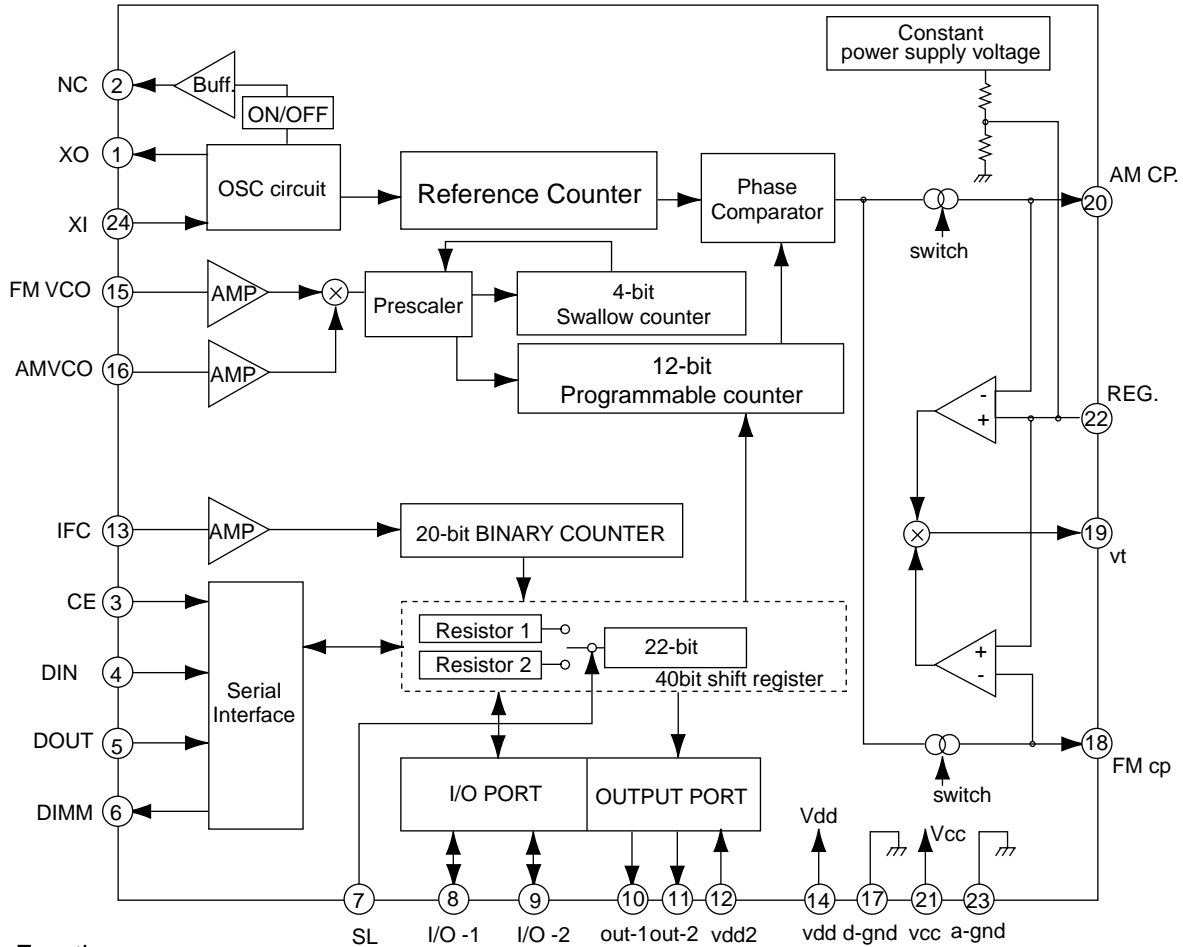


**■TB2118F-X (IC21) : PLL**

1.Terminal Layout



2.Block diagram

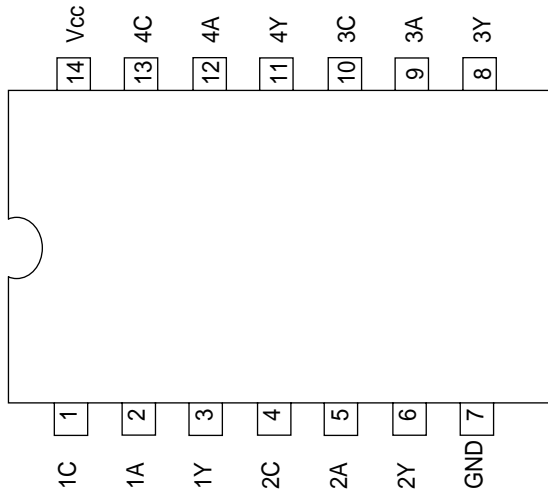


3.Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XOUT	O	Crystal oscillator pin	13	IFC	I	IF signal input
2	NC	-	Non connect	14	VDD	-	Power pins for digital block
3	CE	I	Chip enable input	15	FMIN	I	FM band local signal input
4	DI	I	Serial data input	16	AMIN	I	AM band local signal input
5	CK	I	Clock input	17	DGND	-	Connect to GND (for digital circuit)
6	DOUT	O	Serial data output	18	FMCP	O	Charge pump output for FM
7	SR	O	Register control pin	19	VT	-	Tuning voltage biased to 2.5V.
8	I/O1	I/O	I/O ports	20	AMCP	O	Charge pump output for AM
9	I/O2	I/O	I/O ports	21	VCC	-	Power pins for analog block
10	O1	-	Non connect	22	RF	I	Ripple filter connecting pin
11	O2	-	Non connect	23	AGND	-	Connect to GND (for analog circuit)
12	VDD2	-	Single power supply for REF. frequency block	24	XIN	I	Crystal oscillator pin

■ HD74HCT126T-X (IC503) : Buffer

1. Terminal layout

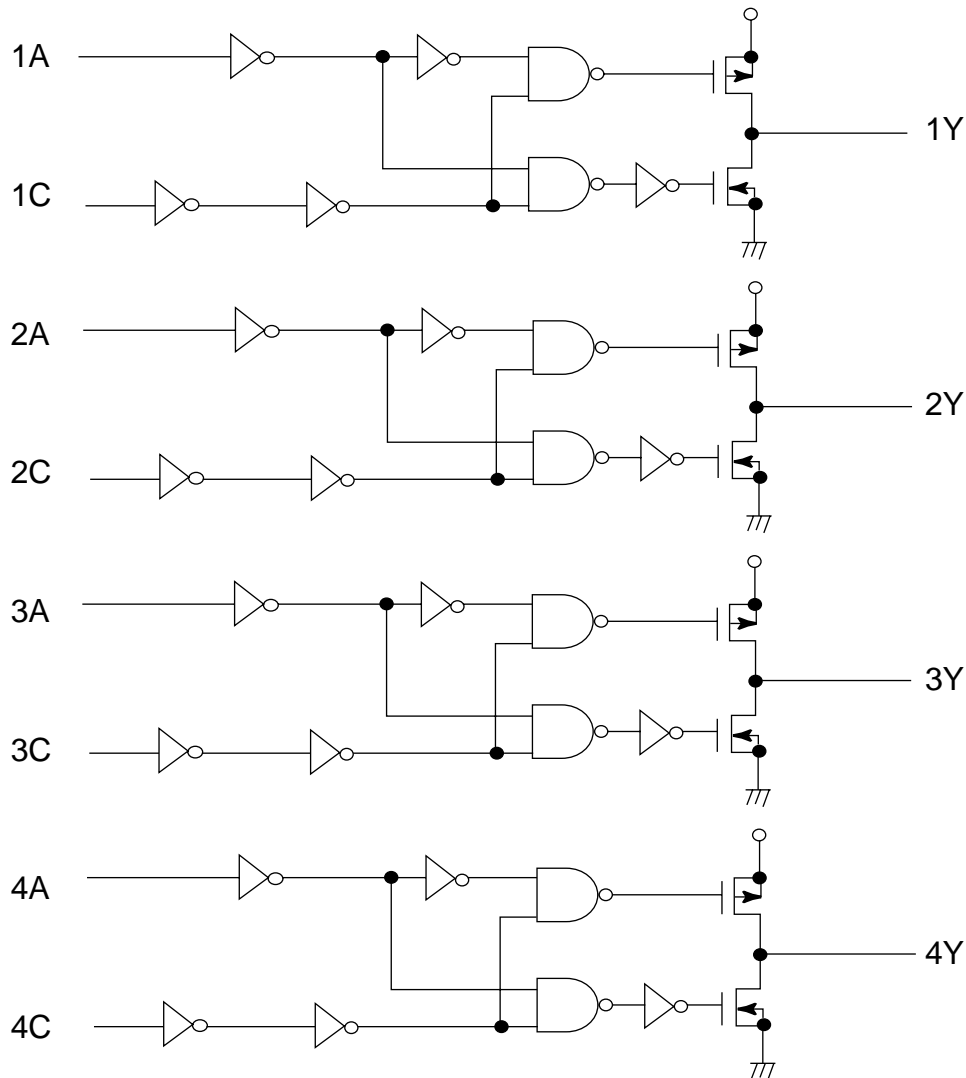


3. Pin function

INPUT		OUTPUT
C	A	Y
L	X	Z
H	L	L
H	H	H

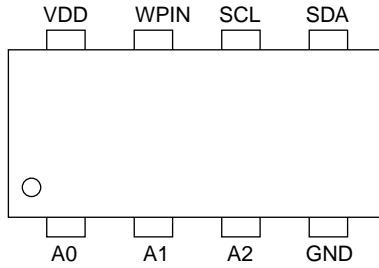
H : High level  
 L : Low level  
 X : Irrelevant  
 Z : Off (High-impedance) state of a 3-stage output

2. Block diagram



**■ BR24C16F-X (IC702) : EEPROM**

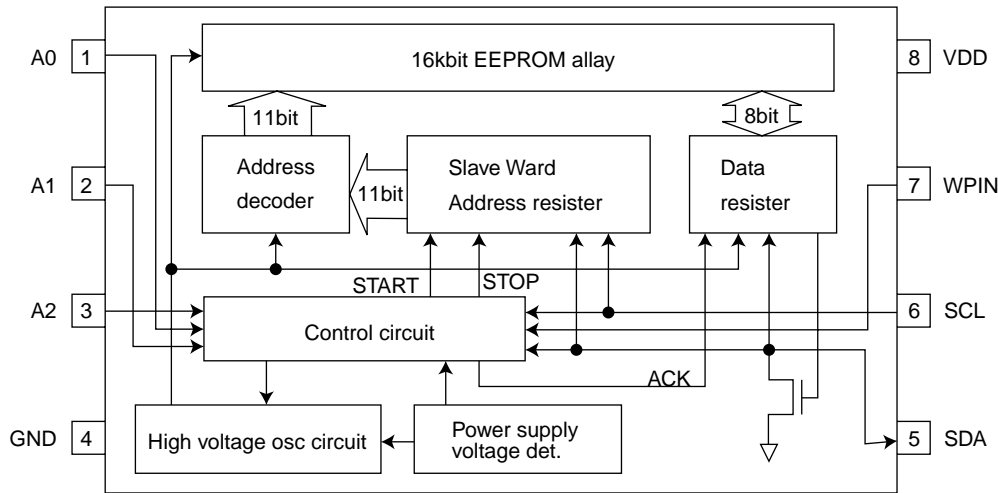
1. Pin layout



2. Pin function

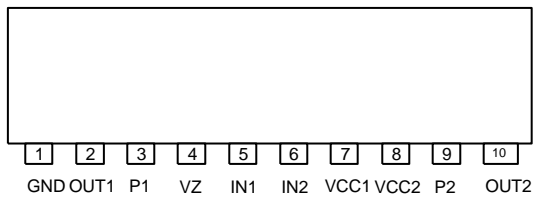
Symbol	I/O	Function
VDD	-	Power supply.
GND	-	GND
A0,A1,A2	I	No use connect to GND.
SCL	I	Serial clock input.
SDA	I/O	Serial data I/O of slave and ward address.
WPIN	I	Write protect terminal.

3. Block diagram



**■ LB1641 (IC402) : DC motor driver**

1. Pin layout

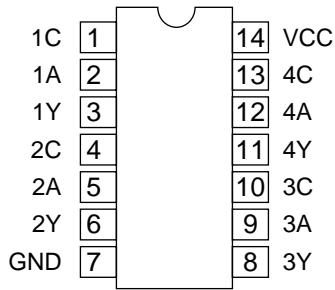


2. Pin function

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

■ HD74HC126FP-X (IC461,IC761) : Buffer

1.Pin layout

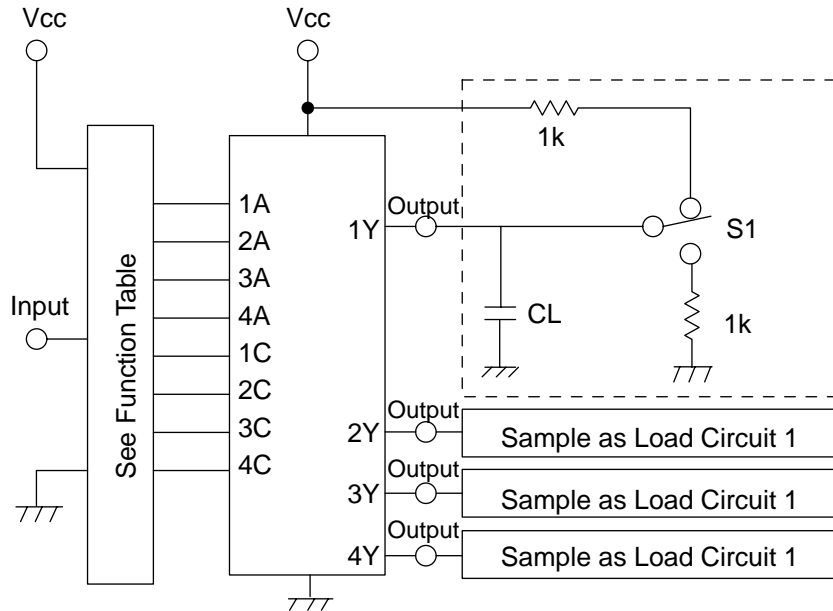


2.Pin function

Input		Output
C	A	Y
L	X	Z
H	L	H
H	H	L

Note) H:High level  
 L:Low level  
 X:Irrelevant  
 Z:Off(High-impedance)  
 State a 3-state input

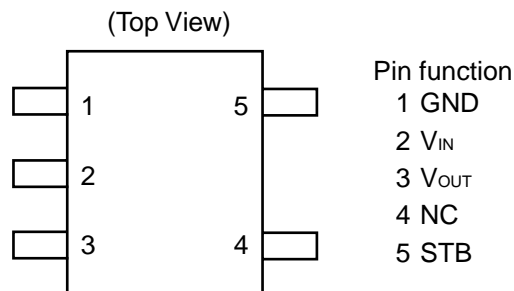
3.Block diagram



Note) CL includes probe and jig capacitance

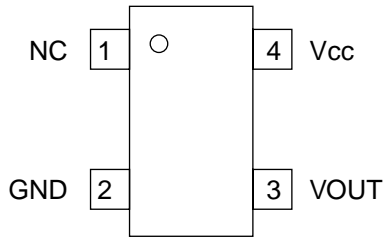
■ NJU7241F25-X(IC651,IC504):Voltage regulator

1.Terminal layout & Pin function

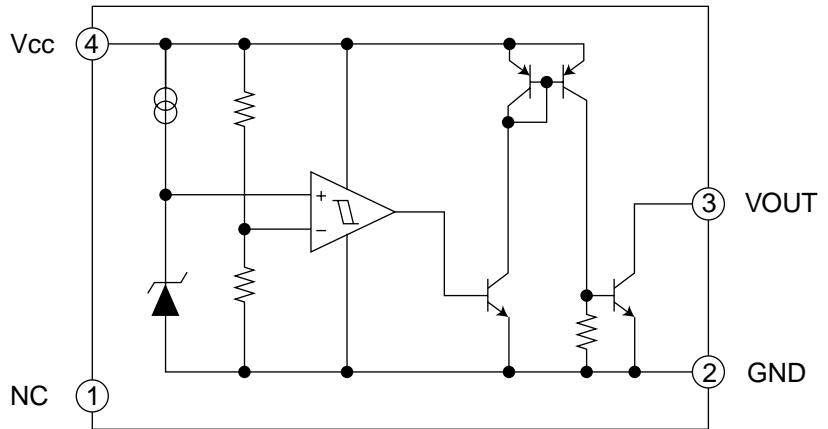


■ IC-PST9333U-X (IC432,IC791) : Regulator

1. Pin layout



2. Block diagram

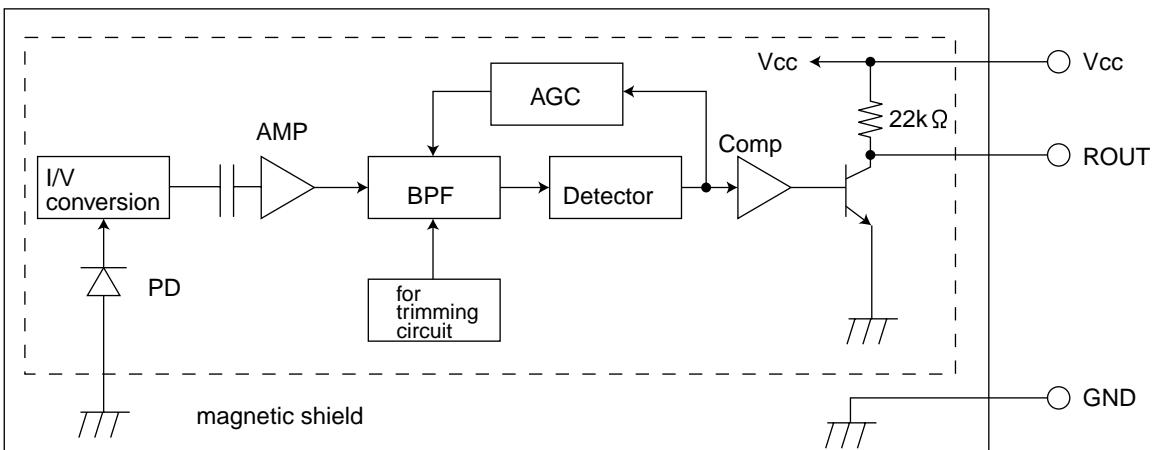


3. Pin function

Pin No.	Symbol	Function
1	NC	Non connect
2	GND	GND terminal
3	VOUT	Reset signal output terminal
4	Vcc	Vcc terminal/Voltage detect terminal

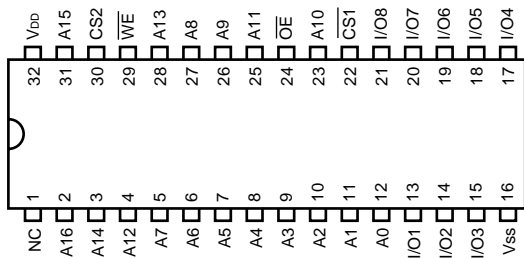
■ RPM6938-V4 (IC502) : Remocon reseiver

1. Block diagram

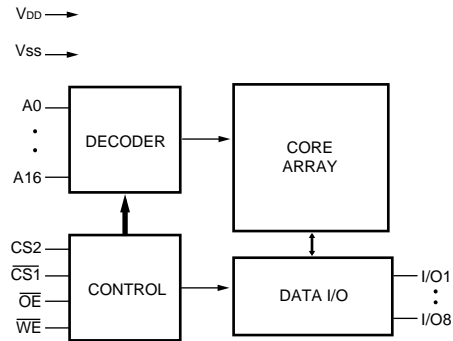


■ **W24L010AJ-12-X (IC653) : SRAM**

1. Pin layout



2. Block diagram

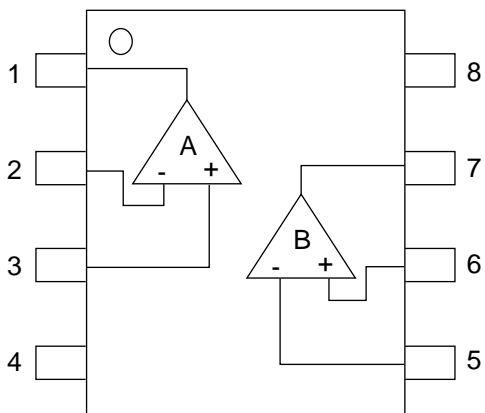


3. Pin function

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	NC	No Connection	17	I/O4	Data Input/Output
2	A16	Address Input	18	I/O5	Data Input/Output
3	A14	Address Input	19	I/O6	Data Input/Output
4	A12	Address Input	20	I/O7	Data Input/Output
5	A7	Address Input	21	I/O8	Data Input/Output
6	A6	Address Input	22	$\overline{CS1}$	Chip Select Inputs
7	A5	Address Input	23	A10	Address Input
8	A4	Address Input	24	$\overline{OE}$	Output Enable Input
9	A3	Address Input	25	A11	Address Input
10	A2	Address Input	26	A9	Address Input
11	A1	Address Input	27	A8	Address Input
12	A0	Address Input	28	A13	Address Input
13	I/O1	Data Input/Output	29	$\overline{WE}$	Write Enable Input
14	I/O2	Data Input/Output	30	CS2	Chip Select Inputs
15	I/O3	Data Input/Output	31	A15	Address Input
16	Vss	Ground	32	VDD	Power Supply

■ **NJM4565V-X (IC572) : Dual ope amp**

1. Terminal layout & Pin function



- 1 AOUTPUT
- 2 A-INPUT
- 3 A+INPUT
- 4 V<sup>-</sup>
- 5 B+INPUT
- 6 B-INPUT
- 7 B OUTPUT
- 8 V<sup>+</sup>



**VICTOR COMPANY OF JAPAN, LIMITED**

MOBILE ELECTRONICS DIVISION

PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1Chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

# PARTS LIST

[ KW-XC828 ]

\* All printed circuit boards and its assemblies are not available as service parts.

Area suffix

U ----- Other Areas

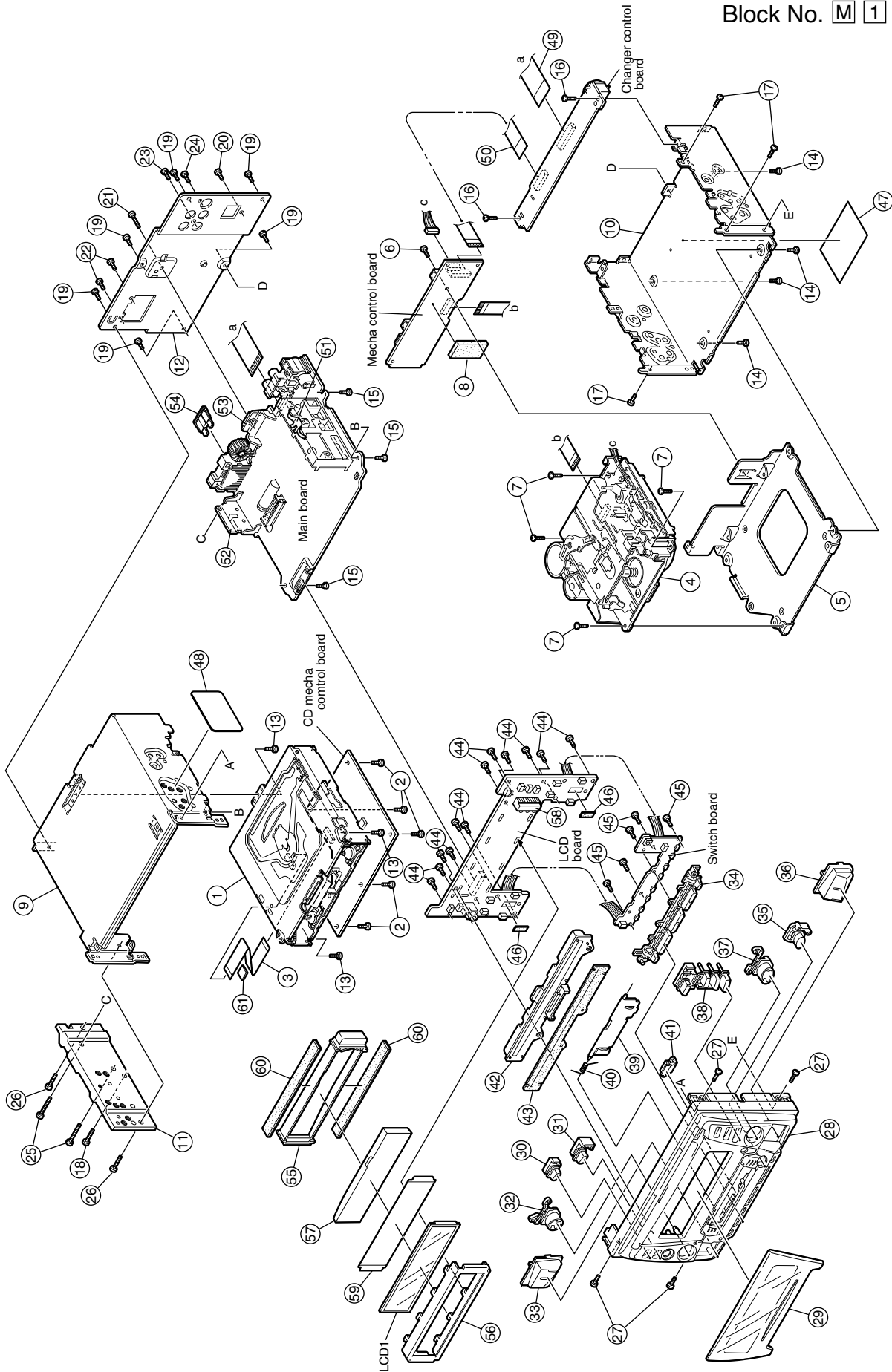
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# Exploded view of general assembly and parts list

Block No. M 1 M M



**Parts list (General assembly)**

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	-----	CD MECHA	1	TN-2001-1003	
	2	QYSDST2004Z	SCREW	5		
	3	VYSH101-009	SPACER	1		
	4	-----	CASSETTE MECHA	1	CDS-802JE3	
	5	LV21157-001A	MECHA BKT(CA)	1		
	6	QYSDST2604Z	SCREW	1	PWB+CS BKT	
	7	QYSDST2604Z	SCREW	4	CS MECHA+CS BKT	
	8	FSYH4036-050	SHEET	1		
	9	LV10611-003A	TOP CHASSIS	1		
	10	LV10612-003A	BOTTOM CHASSIS	1		
	11	LV33135-001A	HEAT SINK	1		
	12	LV21156-001A	REAR BRACKET	1		
	13	QYSDST2604Z	SCREW	3	CD MECHA+T.CHASSIS	
	14	QYSDST2604Z	SCREW	4	CS BKT+B.CHASSIS	
	15	QYSDST2606Z	SCREW	3	PWB+TOP CHASSIS	
	16	QYSDST2606Z	SCREW	2	PWB+B.CHASSIS	
	17	QYSDST2606Z	SCREW	3	T.CHASSIS+B.CHASSIS	
	18	QYSDST2610Z	SCREW	1	T.CHA+B.CHA+HEAT SINK	
	19	QYSDST2606Z	SCREW	6	REAR BKT+CHASSIS	
	20	QYSDST2606Z	SCREW	1	REAR BKT+CD-CH	
	21	QYSDST2610Z	SCREW	1	REAR BKT+REG.BKT	
	22	QYSDST2606Z	SCREW	2	REAR BKT+16PIN	
	23	QYSDSF3006Z	SCREW	1	REAR BKT+PIN JACK	
	24	QYSDST2606Z	SCREW	1	REAR BKT+ANT JACK	
	25	QYSDSP2612Z	SCREW	2	HEAT SINK+IC BKT	
	26	QYSDST2610Z	SCREW	2	HEAT SINK+CHASSIS	
	27	QYSDST2004Z	SCREW	4	F.PANEL+CHASSIS	
	28	LV10613-011B	FRONT PANEL	1		
	29	LV21159-010B	FINDER	1		
	30	LV33139-001A	PUSH BUTTON 1	1		
	31	LV33140-001A	PUSH BUTTON 2	1		
	32	LV33141-004A	PUSH BUTTON 3	1		
	33	LV33142-004A	PUSH BUTTON 4	1		
	34	LV21158-001A	PUSH BUTTON 5	1		
	35	LV33143-001A	PUSH BUTTON 6	1		
	36	LV33144-004A	PUSH BUTTON 7	1		
	37	LV33145-004A	PUSH BUTTON 8	1		
	38	LV33146-006A	PUSH BUTTON 9	1		
	39	LV33147-004A	CS LID	1		
	40	VKW5312-001	DOOR SPRING	1	CS LID	
	41	LV42673-001A	CS LENS	1		
	42	LV33148-002A	DISC GUIDE	1		
	43	LV42674-001A	BLIND	1		
	44	VKZ4777-005	MINI SCREW	12	PWB+F.PANEL	
	45	VKZ4777-003	MINI SCREW	5	PWB+F.PANEL	
	46	LV40846-030A	SPACER(F)	2		
	47	LV33414-001A	NAME PLATE	1		
	48	LV42940-001A	CAUTION LABEL	1		

**■ Parts list (General assembly)**

Block No. M1MM

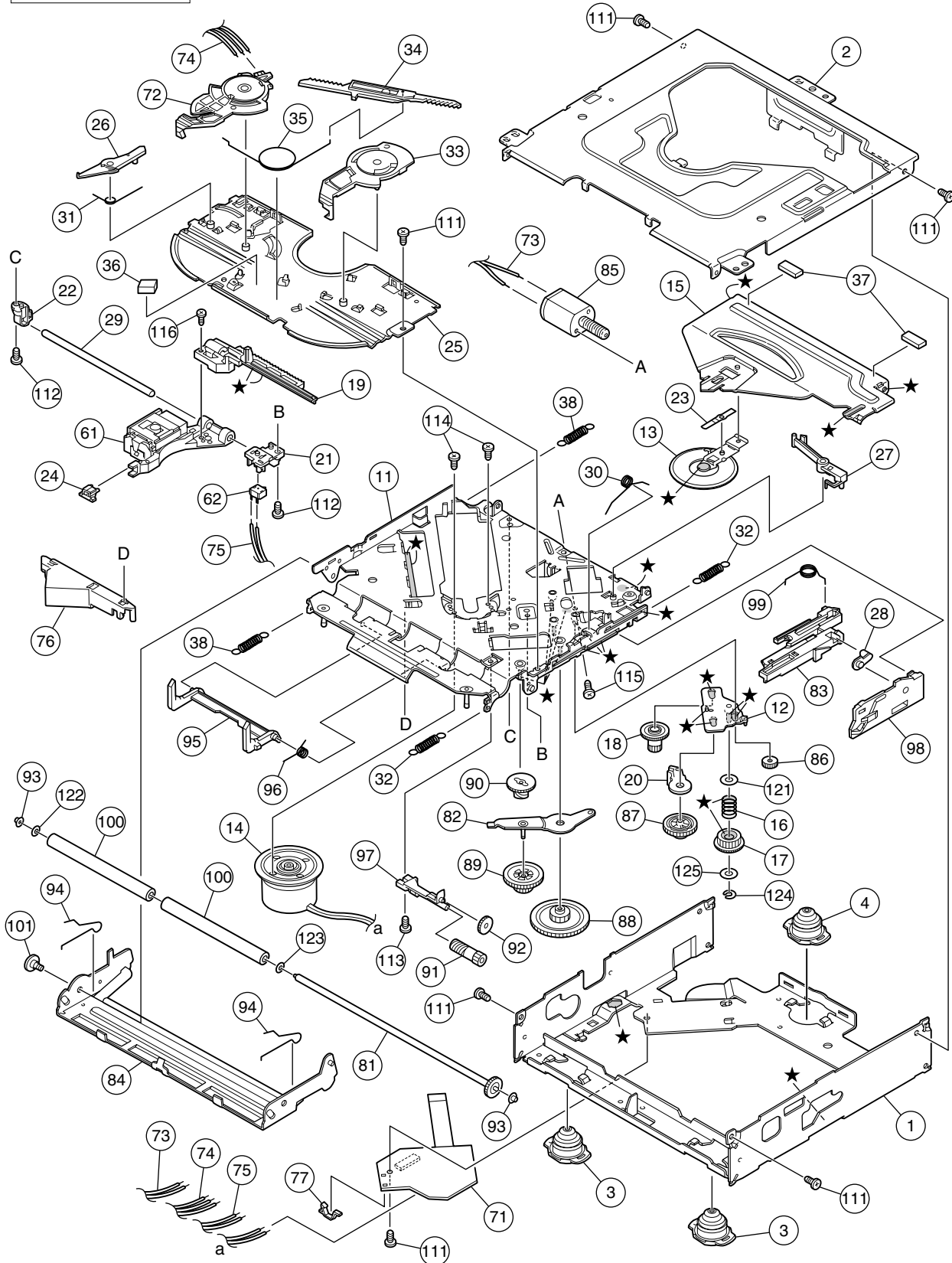
△	Item	Parts number	Parts name	Q'ty	Description	Area
	49	QUQ210-2107CJ	FFC WIRE	1		
	50	QUQ210-1512CJ	FFC WIRE	1		
	51	VMA4652-001SS	EARTH PLATE	1		
	52	LV42302-001A	POWER IC BRACKE	1		
	53	LV42670-001A	REG.IC BRACKET	1		
△	54	QMFZ047-150-T	FUSE	1		
	55	LV33136-001A	LIGHTING CASE	1		
	56	LV33137-001A	LCD CASE	1		
	57	LV42671-001A	LCD LENS	1		
	58	LV33138-001A	LED HOLDER	1		
	59	LV42672-001A	LCD FILTER	1		
	60	QNZ0556-001	RUBBER CONNECTOR	2		
	61	QUQ105-2207AE	FFC WIRE	1		
	LCD 1	QLD0229-001	LCD-PAMERU	1		

# CD mechanism assembly and parts list

Block No. **M** **B** **M** **M**

Grease  
★ TNG-87

TN-2001-1003



## ■ Parts list (CD mechanism)

Block No. MBMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	30320101T	FRAME	1		
	2	30320102T	TOP COVER	1		
	3	30320109T	DAMPER F	2		
	4	30320110T	DAMPER R	1		
	11	303205501T	CHASSIS RIVET A	1		
	12	303205503T	CHANGE P.RVT A	1		
	13	303205301T	CLAMPER ASS'Y	1		
	14	303205304T	SPINDLE MOTOR A	1	MDN1AL3RHCS	
	15	30320502T	CLAMPER ARM	1		
	16	30320503T	CHANGE GEAR SPG	1		
	17	30320505T	CHANGE GEAR 2	1		
	18	30320506T	FEED GEAR	1		
	19	30320507T	FEED RACK	1		
	20	30320509T	CHANGE LOCK RAR	1		
	21	30320510T	FEED SW HOLDER	1		
	22	30320511T	PU SHAFT HOLDER	1		
	23	30320513T	CLAMPER SUB SPG	1		
	24	30320514T	FD SUB HOLDER	1		
	25	30320518T	TOP PLATE	1		
	26	30320519T	SELECT LOCK ARM	1		
	27	30320520T	TRIGGER ARM	1		
	28	30320521T	SLIDE HOOK	1		
	29	30320522T	PU SHAFT	1		
	30	30320525T	CLAMPER ARM SPG	1		
	31	30320526T	SELECT L ARM SP	1		
	32	30320527T	SUSPENSION SPG	2		
	33	30320529T	SELECT ARM R	1		
	34	30320530T	LINK PLATE	1		
	35	30320531T	LINK PLATE SPG	1		
	36	30320523T	CUSHION F	1		
	37	30320524T	CUSHION R	2		
	38	30320528T	SUSPENSION SPGL	2		
	61	69011614T	PICKUP OPT-725	1		
	62	64180406T	DET SW ESE22	1	ESE22MH56	
	71	303210302T	CONN PWB ASS'Y	1	MP3 CONN	
	72	30321002T	MODE SW	1	MMS000690ZMB0	
	73	30321003T	LOAD MOTOR WIRE	1		
	74	30321005T	MODE SW WIRE	1		
	75	30321009T	SL WIRE	1		
	76	30321011T	WIRE HOLDER	1		
	77	19501403T	WIRE CLAMPER	1		
	81	303211301T	ROLLER SHAFT AS	1		
	82	303211501T	L GEAR PLATE RV	1		
	83	303211302T	LOADING PLATE A	1		
	84	303211502T	LOCK ARM RV ASS	1		
	85	303211303T	L/F MOTOR ASS'Y	1	FF030PK-10180	
	86	30321101T	LOADING GEAR 1	1		
	87	30321102T	LOADING GEAR 2	1		

## ■ Parts list (CD mechanism)

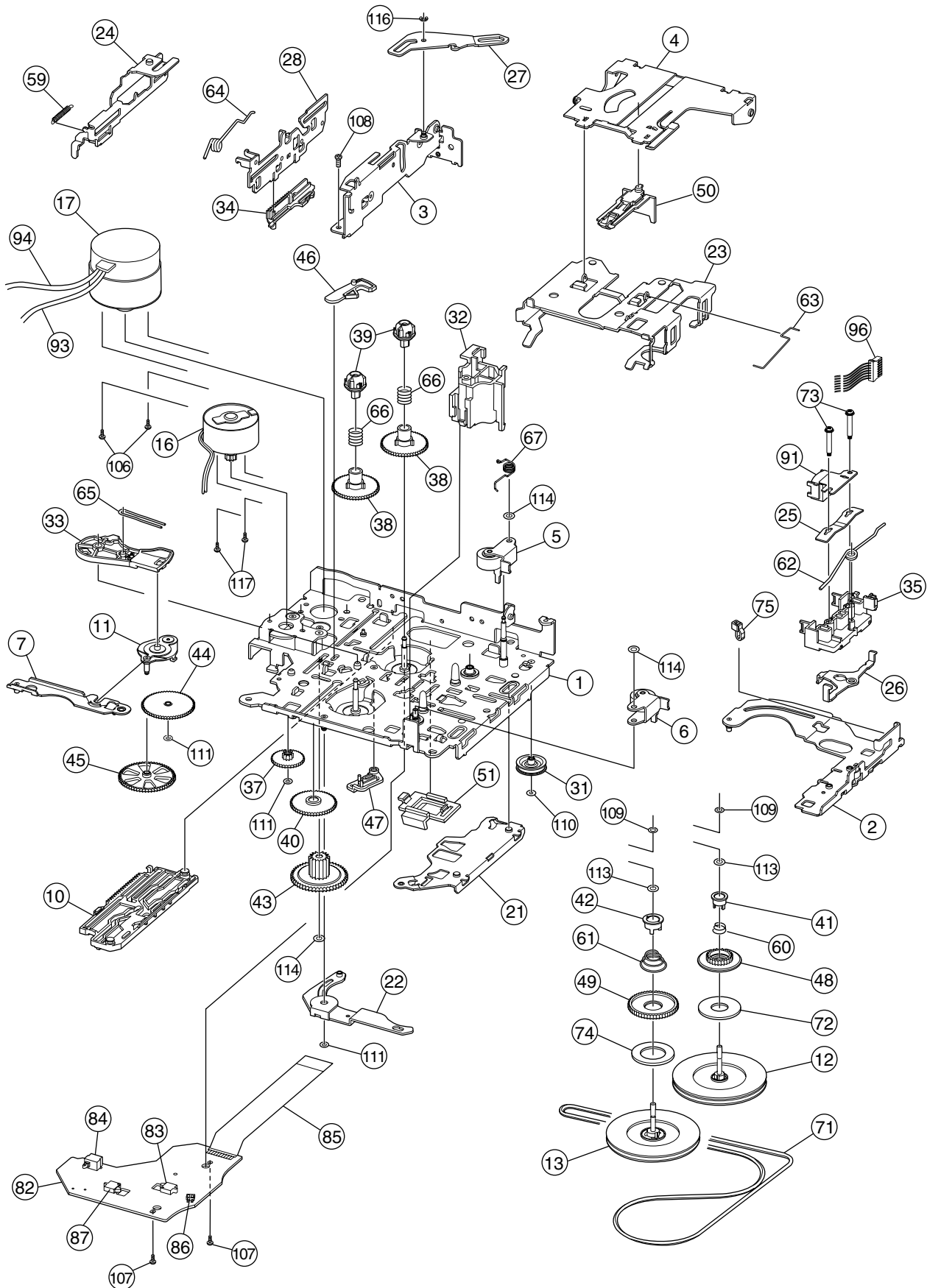
Block No. MBMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	88	30321103T	LOADING GEAR 3	1		
	89	30321104T	LOADING GEAR 4	1		
	90	30321105T	LOADING GEAR 5	1		
	91	30321106T	LOADING GEAR 6	1		
	92	30321107T	LOADING GEAR 7	1		
	93	30321111T	ROLLER GUIDE	2		
	94	30321114T	ROLLER GUIDE SP	2		
	95	30321116T	DISC STOPPER AR	1		
	96	30321117T	DISC ST ARM SPG	1		
	97	30321118T	LD GEAR BRACKET	1		
	98	30321125T	L SIDE PLATE	1		
	99	30321131T	LOAD PLATE SPG	1		
	100	30321133T	LDG ROLLER	2		
	101	18211223T	COLLAR SCREW	1		
	111	9P0420031T	SCREW M2X3	6	TAP 2X3	
	112	9P0420041T	SCREW(M2 X 4)	2	TAP 2X4	
	113	9B0320041T	SCREW(M2 X 4)	1	BIND 2X4	
	114	9C0117183T	SCREW	2	SCR M1.7X1.8	
	115	9C0120203T	SCREW	1	SCR M2X2	
	116	9C0317503T	SCREW	1	T SCR M1.5X5	
	121	9W0130170T	PW 3.5X8X0.3	1		
	122	9W0513060T	HL WASHER	1	HLW1.85X5X0.13	
	123	9W0710070T	L WASHER	1	LW3.1X6X0.1	
	124	9E0100152T	E RING	1	S 1.5	
	125	9W0113020T	PW 2.1X4X0.13	1		

# Cassette mechanism assembly and parts list

CDS-802JE3

Block No. M P M M



**Parts list (Cassette mechanism)**

Block No. MPMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	X-0802-1009S	MAIN CHASSIS AS	1		
	2	X-0802-1002S	SLIDE CHASSIS A	1		
	3	X-0802-1003S	SIDE BKT ASSY	1		
	4	X-0802-1004S	CASSETTE HANGER	1		
	5	X-0802-1005S	PINCH ARM(F)ASS	1		
	6	X-0802-1006S	PINCH ARM(R)ASS	1		
	7	X-0802-1007S	GEAR BASE LINK	1		
	10	X-0802-2001S	MODE RACK ASSY	1		
	11	X-0802-2002S	GEAR BASE ASSY	1		
	12	1-0802-6001S	FLYWHEEL ASSY(F	1		
	13	1-0802-6002S	FLYWHEEL ASSY(R	1		
	16	X-0802-7002S	SUB MOTOR ASSY	1		
	17	X-0802-7004S	MAIN MOTOR ASSY	1		
	21	1-0802-1002S	DIRECTION PLATE	1		
	22	1-0802-1005S	DIRECTION LINK	1		
	23	1-0802-1006S	CASSETTE HOLDER	1		
	24	1-0802-1011S	EJECT CAM LIMIT	1		
	25	1-0802-1012S	HEAD SUPT SPG	1		
	26	1-0802-1013S	PINCH SPG ARM	1		
	27	1-0802-1014S	LOAD ARM	1		
	28	1-0802-1015S	EJECT CAM PLATE	1		
	31	1-0101-2056S	IDLE PULLEY(A1)	1		
	32	1-0802-2001S	CASSETTE GUIDE	1		
	33	1-0802-2004S	GEAR BASE ARM	1		
	34	1-0802-2006S	LOAD RACK	1		
	35	1-0802-2007S	TAPE GUIDE	1		
	37	1-0802-2009S	REDUCTION GEAR	1	A	
	38	1-0802-2010S	REEL SPINDLE	2		
	39	1-0802-2011S	REEL DRIVER	2		
	40	1-0802-2012S	REDUCTION GEAR	1	B	
	41	1-0802-2013S	SPG HOLDER(F)	1		
	42	1-0802-2014S	SPG HOLDER(R)	1		
	43	1-0802-2015S	MODE GEAR	1		
	44	1-0802-2016S	TAKE UP GEAR	1		
	45	1-0802-2017S	REFLECTOR GEAR	1		
	46	1-0802-2018S	RACK LINK	1		
	47	1-0802-2019S	MODE SW ACTUATR	1		
	48	1-0802-2020S	FRICTION GEAR	1	PLAY	
	49	1-0802-2021S	FRICTION GEAR	1	FF	
	50	1-0802-2022S	CASSETTE CATCH	1		
	51	1-0802-2026S	FFC PAD	1		
	59	1-0802-4001S	EJECT CAM PL SP	1		
	60	1-0802-4002S	TU SPG	1		
	61	1-0802-4003S	FF SPG	1		
	62	1-0802-4004S	PINCH ARM SPG	1		
	63	1-0802-4005S	HOLDER STAB SPG	1		
	64	1-0802-4006S	HOLDER CUSH SPG	1		
	65	1-0802-4007S	GEAR BASE SPG	1		

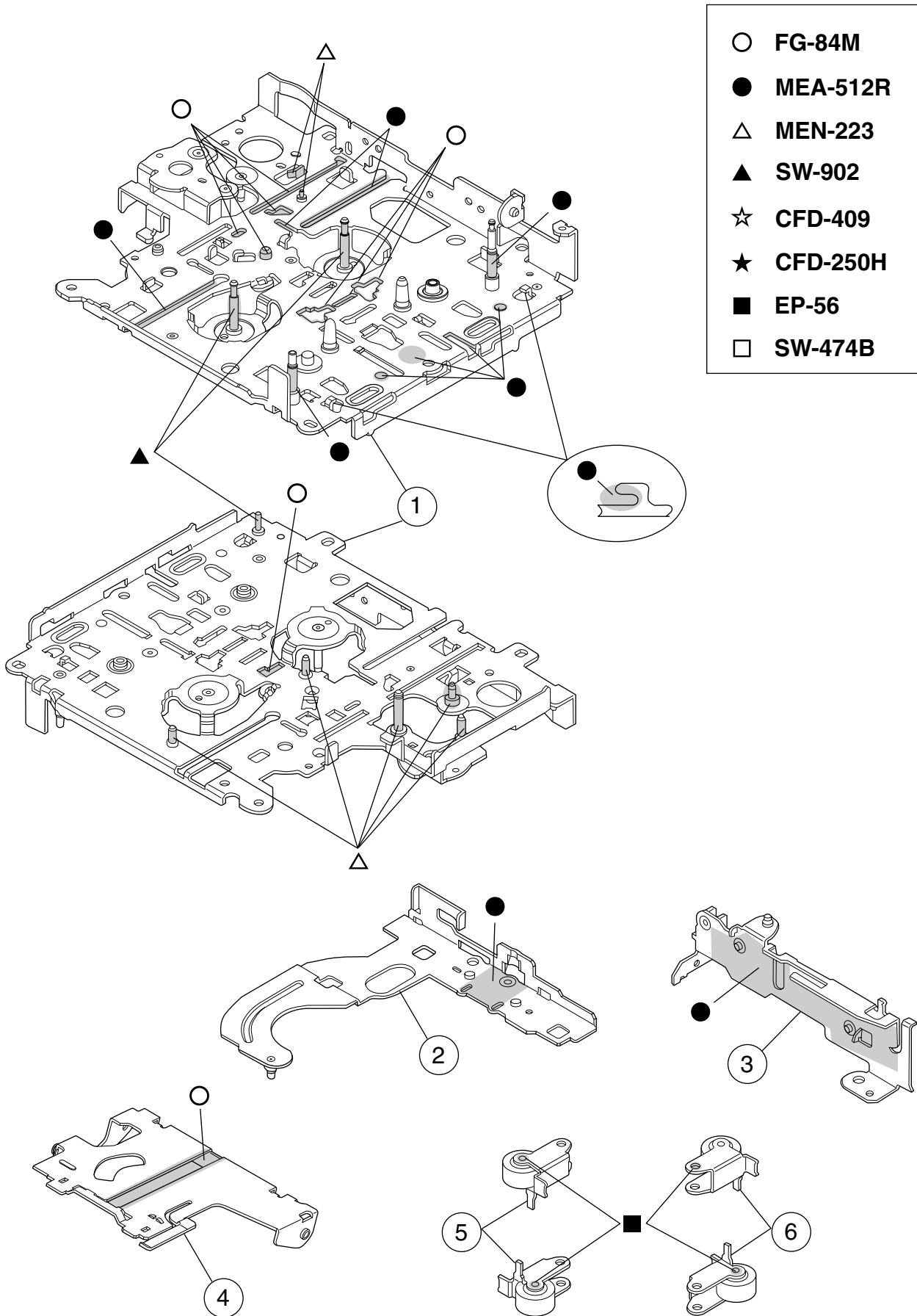


## ■ Parts list (Cassette mechanism)

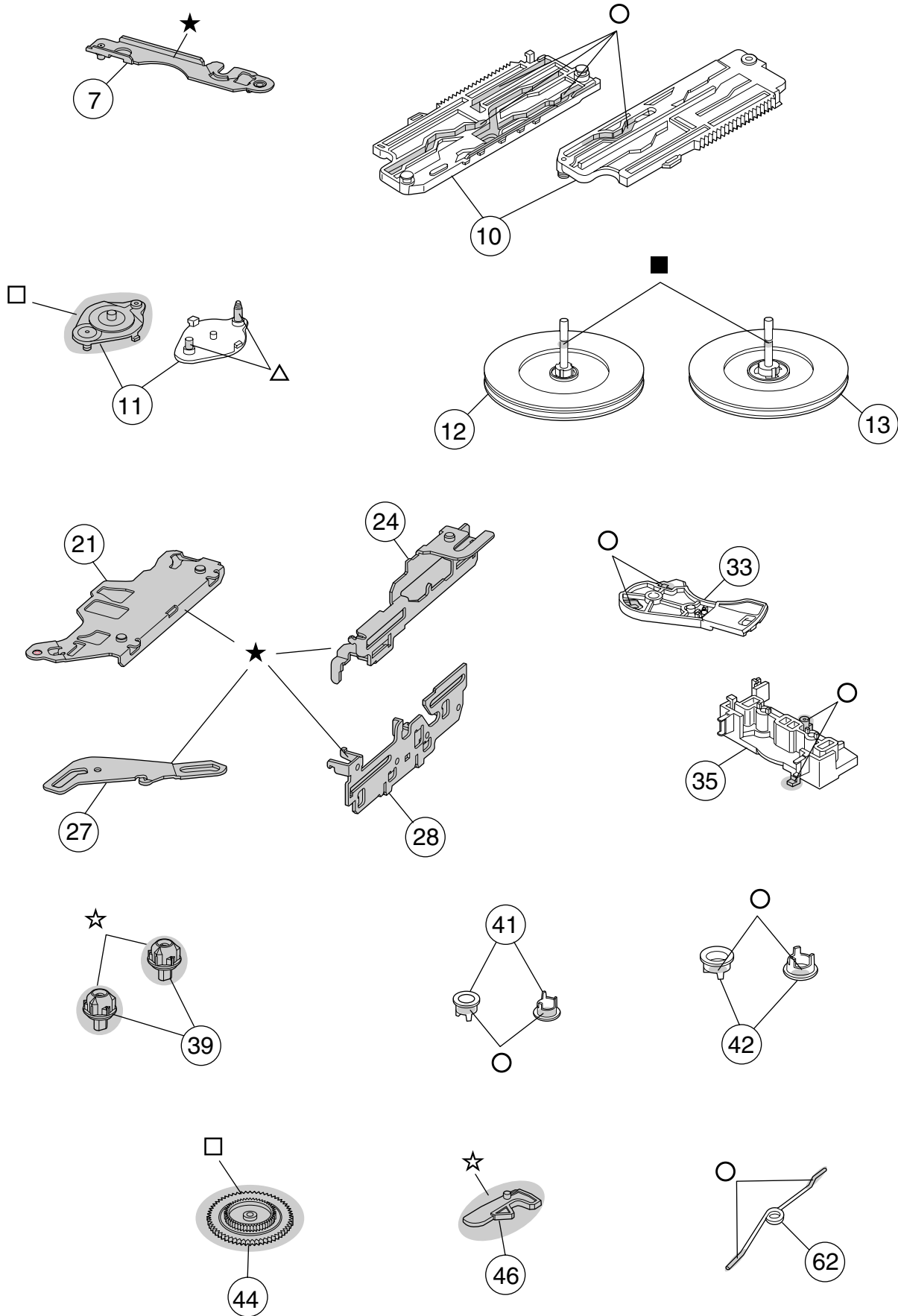
Block No. MPMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	66	1-0802-4008S	REEL DRIVER SPG	2		
	67	1-0802-4013S	COMPULSION SPG	1		
	71	1-0802-5001S	BELT	1		
	72	1-0802-5002S	FELT	1	7.5*18.5*1	
	73	1-0802-5003S	AZIMUTH SCREW	2		
	74	1-0802-5004S	FELT	1	11*18.5*1	
	75	1-0050-5023S	WTRE CLAMPER	1		
	82	1-0802-7001S	REEL PCB	1		
	83	1-0802-7010S	SWITCH(MATSUSHI)	1	ESE22MH32	
	84	1-0802-7003S	SWITCH(MIC)	1	MPU11750MLB0	
	85	1-0802-7016S	FLAT CABLE	1	10P-J	
	86	1-0801-7024S	PHOTO SENSOR	1	ON2170-QR FS	
	87	1-0802-7009S	SWITCH(MIC)	1	MPU12370MLB0	
	91	1-0802-7007S	HEAD(MITSUMI)	1	P-5344-CB-4152	
	93	1-0801-7009-0S	M.MOTOR WIRE	1	BLACK	
	94	1-0801-7009-1S	M.MOTOR WIRE	1	RED	
	96	1-0802-7017S	JOINT WIRE ASSY	1	6P-J	
	106	2-1032-0025-C2S	SCREW	2	M2*2.5	
	107	2-13S2-0025-P2S	+PLAIN SCREW	2	M2*2.5 #2S	
	108	2-1112-6035-C2S	+PLAIN SCREW	1	M2.6*3.5	
	109	2-1816-0032-E8S	MYLAR WASHER(S)	2	1.6*3.2*0.35	
	110	2-1812-0032-D2S	PSW-S	1	1.2*3.2*0.25	
	111	1-0036-5024S	PSW(REEL)	3	1.5*3.2*0.25	
	113	2-1821-0040-D1S	POLY WASHER	2	2.1*4.0*0.25	
	114	2-1821-0040-D2S	PSW-S	3	2.1*4.0*0.25	
	116	2-1711-5040-16S	E RING	1		
	117	2-1031-7030-C2S	SCREW	2	M1.7*3.0 #3	

# Grease point 1/2



# Grease point 2/2



## ■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 1	NCB31HK-103X	C CAPACITOR				C 248	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 4	NCB31HK-103X	C CAPACITOR				C 249	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 5	NCB31HK-103X	C CAPACITOR				C 272	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 6	QERF1HM-104Z	E CAPACITOR	0.1MF 20% 50V			C 281	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 8	NCB31HK-331X	C CAPACITOR				C 291	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 9	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			C 701	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 12	NCS31HJ-470X	C CAPACITOR				C 702	NCB31HK-103X	C CAPACITOR		
	C 13	NCS31HJ-101X	C CAPACITOR				C 703	NCS31HJ-8R0X	C CAPACITOR		
	C 20	QDYB1CM-103Y	C CAPACITOR				C 704	NDC31HJ-270X	C CAPACITOR		
	C 21	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V			C 705	NDC31HJ-270X	C CAPACITOR		
	C 22	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V			C 706	NDC31HJ-220X	C CAPACITOR		
	C 23	NCB31CK-473X	C CAPACITOR				C 708	NCB31HK-103X	C CAPACITOR		
	C 24	NCB31HK-102X	C CAPACITOR				C 709	NCB31HK-103X	C CAPACITOR		
	C 25	NCB31HK-103X	C CAPACITOR				C 710	NCB31HK-103X	C CAPACITOR		
	C 26	NCB31HK-103X	C CAPACITOR				C 714	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 27	NCB31HK-103X	C CAPACITOR				C 715	NCB31HK-103X	C CAPACITOR		
	C 28	NCB31HK-272X	C CAPACITOR				C 771	NCB31HK-223X	C CAPACITOR		
	C 29	QFV61HJ-473Z	MF CAPACITOR	0.047MF 5% 50V			C 791	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V	
	C 30	NCB31HK-103X	C CAPACITOR				C 792	NCB31HK-103X	C CAPACITOR		
	C 31	NCB31CK-473X	C CAPACITOR				C 801	NCB31HK-103X	C CAPACITOR		
	C 32	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V			C 802	NCB31HK-103X	C CAPACITOR		
	C 33	NDC31HJ-100X	C CAPACITOR				C 803	NCB31HK-103X	C CAPACITOR		
	C 34	NDC31HJ-100X	C CAPACITOR				C 804	NCB31HK-103X	C CAPACITOR		
	C 35	NCS31HJ-7R0X	C CAPACITOR				C 805	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 36	NCB31HK-102X	C CAPACITOR				C 901	NCB31HK-103X	C CAPACITOR		
	C 37	NCB31HK-102X	C CAPACITOR				C 902	QERF1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 38	NCB31CK-473X	C CAPACITOR				C 904	QERF1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 39	NCS31HJ-470X	C CAPACITOR				C 905	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 81	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 906	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 82	NCB31CK-473X	C CAPACITOR				C 911	QEZ0338-228	E CAPACITOR	2200MF	
	C 83	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V			C 913	NCF31EZ-104X	C CAPACITOR		
	C 84	QERF1HM-224Z	E CAPACITOR	0.22MF 20% 50V			C 914	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 91	QERF0JM-476Z	E CAPACITOR	47MF 20% 6.3V			C 915	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 101	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 916	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 102	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 917	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 103	NCS31HJ-331X	C CAPACITOR				C 918	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 104	NCS31HJ-331X	C CAPACITOR				C 919	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 111	NCB31EK-183X	C CAPACITOR				C 920	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 112	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			C 921	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 113	NCS31HJ-681X	C CAPACITOR				C 922	NCB31EK-104X	C CAPACITOR		
	C 114	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			C 923	NCB31EK-104X	C CAPACITOR		
	C 131	NCB31EK-473X	C CAPACITOR				C 925	NCB31CK-104X	C CAPACITOR		
	C 142	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 926	NCF31EZ-104X	C CAPACITOR		
	C 146	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 927	NCB31EK-104X	C CAPACITOR		
	C 147	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 928	NCB31HK-103X	C CAPACITOR		
	C 148	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 929	NCB31HK-103X	C CAPACITOR		
	C 149	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 930	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 172	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 931	NCF31EZ-104X	C CAPACITOR		
	C 181	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			C 941	NCB31HK-103X	C CAPACITOR		
	C 182	QERF0JM-226Z	E CAPACITOR	22MF 20% 6.3V			C 942	NCB31HK-103X	C CAPACITOR		
	C 191	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 944	QERF1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 201	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 951	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 202	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 952	QERF1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 203	NCS31HJ-331X	C CAPACITOR				C 953	QERF1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 204	NCS31HJ-331X	C CAPACITOR				C 954	NBE21AM-106X	E CAPACITOR		
	C 211	NCB31EK-183X	C CAPACITOR				C 955	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 212	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			C 974	NCF31EZ-104X	C CAPACITOR		
	C 213	NCS31HJ-681X	C CAPACITOR				C 981	NCB31EK-104X	C CAPACITOR		
	C 214	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V			C 982	NCB31EK-104X	C CAPACITOR		
	C 232	NCB31EK-473X	C CAPACITOR				C 983	NCB31EK-104X	C CAPACITOR		
	C 242	QERF1HM-105Z	E CAPACITOR	1.0MF 20% 50V			C 984	NCB31EK-104X	C CAPACITOR		
	C 246	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 990	NCB31HK-103X	C CAPACITOR		
	C 247	QERF1HM-225Z	E CAPACITOR	2.2MF 20% 50V			C 991	NCS31HJ-101X	C CAPACITOR		

## ■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 992	NCS31HJ-101X	C CAPACITOR				Q 5	UN2211-X	TRANSISTOR		
	C 993	NCS31HJ-101X	C CAPACITOR				Q 81	2SD601A/RS/-X	TRANSISTOR		
	C 994	NCS31HJ-101X	C CAPACITOR				Q 91	UN2111-X	TRANSISTOR		
	C 995	NCS31HJ-101X	C CAPACITOR				Q 101	2SD1048/6-7-X	TRANSISTOR		
	C 996	NCS31HJ-101X	C CAPACITOR				Q 102	2SD1048/6-7-X	TRANSISTOR		
	C 997	NCS31HJ-101X	C CAPACITOR				Q 201	2SD1048/6-7-X	TRANSISTOR		
	C 998	NCS31HJ-101X	C CAPACITOR				Q 202	2SD1048/6-7-X	TRANSISTOR		
	CN601	QGB2027M4-22S	CONNECTOR				Q 701	UN2213-X	TRANSISTOR		
	CN701	QGB1004K1-20	CONNECTOR				Q 801	UN2211-X	TRANSISTOR		
	CN702	QGF1016F3-21	CONNECTOR				Q 802	UN2213-X	TRANSISTOR		
	CN911	QNZ0002-001	JACK UNIT				Q 803	UN2213-X	TRANSISTOR		
	CN951	QNN0175-001	PIN JACK				Q 804	UN2211-X	TRANSISTOR		
	CN971	QNZ0095-001	CONNECTOR				Q 805	UN2211-X	TRANSISTOR		
	CN972	QGF1016F3-15	CONNECTOR				Q 901	UN2211-X	TRANSISTOR		
	CN973	QGF1016F3-21	CONNECTOR				Q 903	UN2111-X	TRANSISTOR		
	D 1	1SS355-X	DIODE				Q 911	UN2211-X	TRANSISTOR		
	D 2	1SS355-X	DIODE				Q 914	2SB709A/QR/-X	TRANSISTOR		
	D 3	MA152WK-X	SI DIODE				Q 918	UN2111-X	TRANSISTOR		
	D 81	MA152WK-X	SI DIODE				Q 919	UN2211-X	TRANSISTOR		
	D 82	1SS355-X	DIODE				Q 920	UN2211-X	TRANSISTOR		
	D 83	1SS355-X	DIODE				Q 941	UN2211-X	TRANSISTOR		
	D 84	CRS03-W	SB DIODE				Q 943	UN2213-X	TRANSISTOR		
	D 90	1SS355-X	DIODE				R 1	NRSA63J-101X	MG RESISTOR		
	D 91	1SS355-X	DIODE				R 2	NRSA63J-103X	MG RESISTOR		
	D 92	1SS355-X	DIODE				R 3	NRSA63J-223X	MG RESISTOR		
	D 101	MA152WA-X	DIODE				R 4	NRSA63J-103X	MG RESISTOR		
	D 201	MA152WA-X	DIODE				R 5	NRSA63J-222X	MG RESISTOR		
	D 791	1SS355-X	DIODE				R 6	NRSA63J-103X	MG RESISTOR		
	D 801	CRS03-W	SB DIODE				R 7	NRSA63J-102X	MG RESISTOR		
	D 901	UDZ11B-X	ZENER DIODE				R 8	NRS181J-100X	MG RESISTOR		
	D 902	1SS355-X	DIODE				R 9	NRSA63J-103X	MG RESISTOR		
	D 911	1N5404-TU-15	DIODE				R 10	NRSA63J-221X	MG RESISTOR		
	D 912	CRS03-W	SB DIODE				R 11	NRSA63J-471X	MG RESISTOR		
	D 913	CRS03-W	SB DIODE				R 21	NRS181J-220X	MG RESISTOR		
	D 914	1SS355-X	DIODE				R 22	NRSA63J-0R0X	MG RESISTOR		
	D 921	UDZ56.2B-X	SI DIODE				R 23	NRSA63J-682X	MG RESISTOR		
	D 932	CRS03-W	SB DIODE				R 24	NRSA63J-472X	MG RESISTOR		
	D 933	CRS03-W	SB DIODE				R 25	NRSA63J-222X	MG RESISTOR		
	IC 21	TB2118F-X	IC				R 26	NRSA63J-222X	MG RESISTOR		
	IC701	UPD784215AGC173	IC				R 27	NRSA63J-222X	MG RESISTOR		
	IC761	HD74HC126FP-X	IC				R 28	NRSA63J-222X	MG RESISTOR		
	IC791	IC-PST9333U-X	IC				R 29	NRSA63J-103X	MG RESISTOR		
	IC901	LA4743K	IC				R 30	NRSA63J-393X	MG RESISTOR		
	IC911	HA13164A	IC				R 31	NRSA63J-101X	MG RESISTOR		
	IC951	M61508FP-X	IC				R 32	NRSA63J-103X	MG RESISTOR		
	J 1	QNB0100-002	ANT TERMINAL				R 33	NRSA63J-103X	MG RESISTOR		
	L 1	NQL334J-4R7X	INDUCTOR				R 81	NRSA63J-473X	MG RESISTOR		
	L 21	NQL114K-470X	INDUCTOR				R 82	NRSA63J-184X	MG RESISTOR		
	L 701	NQL114K-470X	INDUCTOR				R 83	NRSA63J-223X	MG RESISTOR		
	L 702	NQL114K-101X	INDUCTOR				R 84	NRSA63J-123X	MG RESISTOR		
	L 781	NQL093K-1R8X	CHIP INDUCTOR				R 85	NRSA63J-391X	MG RESISTOR		
	L 782	NQL093K-1R8X	CHIP INDUCTOR				R 86	NRSA63J-102X	MG RESISTOR		
	L 802	NQL114K-470X	INDUCTOR				R 87	NRSA63J-274X	MG RESISTOR		
	L 803	NQL114K-100X	INDUCTOR				R 108	NRSA63J-473X	MG RESISTOR		
	L 804	NQL114K-470X	INDUCTOR				R 109	NRSA63J-473X	MG RESISTOR		
	L 911	QQR0703-001	CHOKE COIL				R 111	NRSA63J-472X	MG RESISTOR		
	L 941	NQL114K-100X	INDUCTOR				R 115	NRSA63J-123X	MG RESISTOR		
	L 942	NQL114K-470X	INDUCTOR				R 121	NRSA63J-203X	MG RESISTOR		
	L 999	NQL114K-470X	INDUCTOR				R 122	NRSA63J-203X	MG RESISTOR		
	Q 1	UN2211-X	TRANSISTOR				R 131	NRSA63J-102X	MG RESISTOR		
	Q 2	2SB815/7/-X	TRANSISTOR				R 132	NRSA63J-102X	MG RESISTOR		
	Q 3	2SB815/7/-X	TRANSISTOR				R 133	NRSA63J-332X	MG RESISTOR		
	Q 4	UN2211-X	TRANSISTOR				R 134	NRSA63J-332X	MG RESISTOR		

## ■ Electrical parts list (Main board)

Block No. 01

▲	Item	Parts number	Parts name	Remarks	Area	▲	Item	Parts number	Parts name	Remarks	Area
	R 141	NRSA63J-272X	MG RESISTOR				R 746	NRSA63J-473X	MG RESISTOR		
	R 142	NRSA63J-123X	MG RESISTOR				R 752	NRSA63J-102X	MG RESISTOR		
	R 147	NRSA63J-124X	MG RESISTOR				R 753	NRSA63J-473X	MG RESISTOR		
	R 161	NRSA63J-101X	MG RESISTOR				R 754	NRSA63J-102X	MG RESISTOR		
	R 162	NRSA63J-101X	MG RESISTOR				R 759	NRSA63J-102X	MG RESISTOR		
	R 181	NRSA63J-104X	MG RESISTOR				R 765	NRSA63J-473X	MG RESISTOR		
	R 182	NRSA63J-102X	MG RESISTOR				R 767	NRSA63J-473X	MG RESISTOR		
	R 191	NRSA63J-472X	MG RESISTOR				R 769	NRSA63J-473X	MG RESISTOR		
	R 208	NRSA63J-473X	MG RESISTOR				R 771	NRSA63J-102X	MG RESISTOR		
	R 209	NRSA63J-473X	MG RESISTOR				R 772	NRSA63J-103X	MG RESISTOR		
	R 211	NRSA63J-472X	MG RESISTOR				R 773	NRSA63J-473X	MG RESISTOR		
	R 215	NRSA63J-123X	MG RESISTOR				R 774	NRSA63J-223X	MG RESISTOR		
	R 221	NRSA63J-203X	MG RESISTOR				R 775	NRSA63J-104X	MG RESISTOR		
	R 222	NRSA63J-203X	MG RESISTOR				R 776	NRSA63J-473X	MG RESISTOR		
	R 231	NRSA63J-102X	MG RESISTOR				R 777	NRSA63J-101X	MG RESISTOR		
	R 232	NRSA63J-102X	MG RESISTOR				R 778	NRSA63J-104X	MG RESISTOR		
	R 233	NRSA63J-332X	MG RESISTOR				R 779	NRSA63J-331X	MG RESISTOR		
	R 234	NRSA63J-332X	MG RESISTOR				R 780	NRSA63J-103X	MG RESISTOR		
	R 241	NRSA63J-272X	MG RESISTOR				R 781	NRSA63J-223X	MG RESISTOR		
	R 242	NRSA63J-123X	MG RESISTOR				R 782	NRSA63J-101X	MG RESISTOR		
	R 247	NRSA63J-124X	MG RESISTOR				R 783	NRSA63J-473X	MG RESISTOR		
	R 261	NRSA63J-101X	MG RESISTOR				R 784	NRSA63J-223X	MG RESISTOR		
	R 262	NRSA63J-101X	MG RESISTOR				R 786	NRSA63J-473X	MG RESISTOR		
	R 281	NRSA63J-104X	MG RESISTOR				R 791	NRSA63J-473X	MG RESISTOR		
	R 282	NRSA63J-102X	MG RESISTOR				R 792	NRSA63J-222X	MG RESISTOR		
	R 291	NRSA63J-472X	MG RESISTOR				R 902	NRSA63J-273X	MG RESISTOR		
	R 704	NRSA63J-102X	MG RESISTOR				R 903	NRSA63J-273X	MG RESISTOR		
	R 705	NRSA63J-821X	MG RESISTOR				R 904	NRSA63J-102X	MG RESISTOR		
	R 706	NRSA63J-473X	MG RESISTOR				R 911	NRS181J-222X	MG RESISTOR		
	R 707	NRSA63J-106X	MG RESISTOR				R 912	NRS181J-222X	MG RESISTOR		
	R 708	NRSA63J-102X	MG RESISTOR				R 913	QRE142J-102X	C RESISTOR	1.0K 5% 1/4W	
	R 709	NRSA63J-102X	MG RESISTOR				R 914	NRSA63J-912X	MG RESISTOR		
	R 710	NRSA63J-102X	MG RESISTOR				R 915	NRSA63J-472X	MG RESISTOR		
	R 711	NRSA63J-102X	MG RESISTOR				R 916	NRSA63J-104X	MG RESISTOR		
	R 712	NRSA63J-102X	MG RESISTOR				R 917	NRSA63J-472X	MG RESISTOR		
	R 713	NRSA63J-102X	MG RESISTOR				R 918	NRSA63J-473X	MG RESISTOR		
	R 714	NRSA63J-103X	MG RESISTOR				R 921	NRSA63J-562X	MG RESISTOR		
	R 715	NRSA63J-473X	MG RESISTOR				R 922	NRSA63J-183X	MG RESISTOR		
	R 716	NRSA63J-473X	MG RESISTOR				R 923	NRSA63J-473X	MG RESISTOR		
	R 717	NRSA63J-473X	MG RESISTOR				R 925	NRSA63J-273X	MG RESISTOR		
	R 718	NRSA63J-332X	MG RESISTOR				R 926	NRSA63J-153X	MG RESISTOR		
	R 719	NRSA63J-103X	MG RESISTOR				R 927	NRSA63J-332X	MG RESISTOR		
	R 720	NRSA63J-103X	MG RESISTOR				R 928	NRSA63J-103X	MG RESISTOR		
	R 721	NRSA63J-103X	MG RESISTOR				R 929	NRSA63J-473X	MG RESISTOR		
	R 722	NRSA63J-332X	MG RESISTOR				R 931	NRSA63J-103X	MG RESISTOR		
	R 723	NRSA63J-332X	MG RESISTOR				R 971	NRS181J-0R0X	MG RESISTOR		
	R 724	NRSA63J-332X	MG RESISTOR				R 974	NRSA63J-271X	MG RESISTOR		
	R 725	NRSA63J-102X	MG RESISTOR				R 975	NRSA63J-271X	MG RESISTOR		
	R 726	NRSA63J-102X	MG RESISTOR				TH745	NAD0028-103X	N THERMISTOR		
	R 727	NRSA63J-102X	MG RESISTOR				TU 1	QAU0258-002	TUNER		
	R 728	NRSA63J-102X	MG RESISTOR				X 21	QAX0616-001Z	CRYSTAL		
	R 729	NRSA63J-102X	MG RESISTOR				X 701	QAX0617-001Z	CRYSTAL		
	R 730	NRSA63J-102X	MG RESISTOR				X 702	QAX0401-001	CRYSTAL		
	R 731	NRSA63J-222X	MG RESISTOR								
	R 732	NRSA63J-222X	MG RESISTOR								
	R 733	NRSA63J-222X	MG RESISTOR								
	R 739	NRSA63J-473X	MG RESISTOR								
	R 740	NRSA63J-102X	MG RESISTOR								
	R 741	NRSA63J-102X	MG RESISTOR								
	R 742	NRSA63J-102X	MG RESISTOR								
	R 743	NRSA63J-222X	MG RESISTOR								
	R 744	NRSA63J-102X	MG RESISTOR								
	R 745	NRSA63J-103X	MG RESISTOR								

## ■ Electrical parts list (Front board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 501	NBE21AM-106X	E CAPACITOR				R 518	NRSA63J-222X	MG RESISTOR		
	C 502	NBE21AM-106X	E CAPACITOR				R 520	NRSA63J-471X	MG RESISTOR		
	C 503	NCB31CK-104X	C CAPACITOR				R 521	NRSA63J-122X	MG RESISTOR		
	C 504	NCB31CK-104X	C CAPACITOR				R 522	NRSA63J-122X	MG RESISTOR		
	C 505	NCB31CK-104X	C CAPACITOR				R 523	NRSA63J-821X	MG RESISTOR		
	C 506	NCB31CK-473X	C CAPACITOR				R 524	NRSA63J-821X	MG RESISTOR		
	C 507	NCS31HJ-681X	C CAPACITOR				R 525	NRSA63J-821X	MG RESISTOR		
	C 509	NBE20JM-475X	TS E CAPACITOR				R 526	NRSA63J-821X	MG RESISTOR		
	C 511	NCB31HK-472X	C CAPACITOR				R 527	NRSA63J-561X	MG RESISTOR		
	C 512	NCB31HK-472X	C CAPACITOR				R 528	NRSA63J-561X	MG RESISTOR		
	C 513	NCB31CK-473X	C CAPACITOR				R 529	NRSA63J-561X	MG RESISTOR		
	CN501	QGB1004J1-20X	CONNECTOR				R 530	NRSA63J-561X	MG RESISTOR		
	D 501	UDZS9.1B-X	ZENER DIODE				R 531	NRSA63J-561X	MG RESISTOR		
	D 520	MA152WK-X	SI DIODE				R 532	NRSA63J-561X	MG RESISTOR		
	D 521	SML-310LT/MN/-X	LED				R 533	NRSA63J-561X	MG RESISTOR		
	D 522	SML-310PT/KL/-X	LED				R 534	NRSA63J-561X	MG RESISTOR		
	D 524	SML-310PT/KL/-X	LED				R 535	NRSA63J-561X	MG RESISTOR		
	D 525	SML-310PT/KL/-X	LED				R 536	NRSA63J-561X	MG RESISTOR		
	D 526	SML-310PT/KL/-X	LED				R 537	NRSA63J-561X	MG RESISTOR		
	D 527	SML-310PT/KL/-X	LED				R 538	NRSA63J-561X	MG RESISTOR		
	D 528	SML-310PT/KL/-X	LED				R 539	NRSA63J-561X	MG RESISTOR		
	D 529	SML-310PT/KL/-X	LED				R 540	NRSA63J-561X	MG RESISTOR		
	D 530	SML-310PT/KL/-X	LED				R 541	NRSA63J-471X	MG RESISTOR		
	D 531	SML-310PT/KL/-X	LED				R 542	NRSA63J-471X	MG RESISTOR		
	D 532	SML-310PT/KL/-X	LED				R 543	NRSA63J-471X	MG RESISTOR		
	D 533	SML-310PT/KL/-X	LED				R 544	NRSA63J-471X	MG RESISTOR		
	D 534	SML-310PT/KL/-X	LED				R 545	NRSA63J-471X	MG RESISTOR		
	D 535	SML-310PT/KL/-X	LED				R 546	NRSA63J-471X	MG RESISTOR		
	D 536	SML-310PT/KL/-X	LED				R 551	NRSA63J-621X	MG RESISTOR		
	D 537	SML-310PT/KL/-X	LED				R 552	NRSA63J-621X	MG RESISTOR		
	D 538	SML-310PT/KL/-X	LED				R 553	NRSA63J-821X	MG RESISTOR		
	D 541	NSPW310BS/BRS/	LED				R 554	NRSA63J-122X	MG RESISTOR		
	D 542	NSPW310BS/BRS/	LED				R 555	NRSA63J-621X	MG RESISTOR		
	D 543	NSPW310BS/BRS/	LED				R 556	NRSA63J-621X	MG RESISTOR		
	D 561	SML-310PT/KL/-X	LED				R 561	NRSA63J-561X	MG RESISTOR		
	D 562	SML-310PT/KL/-X	LED				R 562	NRSA63J-561X	MG RESISTOR		
	D 569	SML-310PT/KL/-X	LED				R 569	NRSA63J-561X	MG RESISTOR		
	D 570	SML-310PT/KL/-X	LED				R 570	NRSA63J-561X	MG RESISTOR		
	D 571	SML-310PT/KL/-X	LED				R 571	NRSA63J-561X	MG RESISTOR		
	D 572	SML-310PT/KL/-X	LED				R 572	NRSA63J-561X	MG RESISTOR		
	D 573	SML-310PT/KL/-X	LED				R 573	NRSA63J-561X	MG RESISTOR		
	D 574	SML-310PT/KL/-X	LED				R 574	NRSA63J-561X	MG RESISTOR		
	D 575	SML-310PT/KL/-X	LED				R 575	NRSA63J-561X	MG RESISTOR		
	D 576	SML-310PT/KL/-X	LED				R 576	NRSA63J-561X	MG RESISTOR		
	D 581	SML-310PT/KL/-X	LED				R 581	NRSA63J-821X	MG RESISTOR		
	D 582	SML-310PT/KL/-X	LED				R 582	NRSA63J-821X	MG RESISTOR		
	D 583	SML-310PT/KL/-X	LED				R 583	NRSA63J-821X	MG RESISTOR		
	IC501	LC75878W	IC				R 584	NRSA63J-821X	MG RESISTOR		
	IC502	RPM6938-SV4	IC				R 585	NRSA63J-821X	MG RESISTOR		
	PJ501	QNS0180-002	3.5 JACK				R 586	NRSA63J-821X	MG RESISTOR		
	Q 501	2SB815/7/-X	TRANSISTOR				R 587	NRSA63J-681X	MG RESISTOR		
	Q 502	DTC114EKA-X	TRANSISTOR				R 588	NRSA63J-681X	MG RESISTOR		
	R 501	NRSA63J-471X	MG RESISTOR				R 589	NRSA63J-821X	MG RESISTOR		
	R 502	NRSA63J-823X	MG RESISTOR				R 590	NRSA63J-122X	MG RESISTOR		
	R 503	NRSA63J-0R0X	MG RESISTOR				R 591	NRSA63J-182X	MG RESISTOR		
	R 508	NRSA63J-103X	MG RESISTOR				R 592	NRSA63J-302X	MG RESISTOR		
	R 509	NRSA63J-470X	MG RESISTOR				R 593	NRSA63J-562X	MG RESISTOR		
	R 511	NRSA63J-473X	MG RESISTOR				R 594	NRSA63J-681X	MG RESISTOR		
	R 512	NRSA63J-473X	MG RESISTOR				R 595	NRSA63J-681X	MG RESISTOR		
	R 513	NRSA63J-471X	MG RESISTOR				R 596	NRSA63J-821X	MG RESISTOR		
	R 515	NRSA63J-221X	MG RESISTOR				R 597	NRSA63J-122X	MG RESISTOR		
	R 516	NRSA63J-221X	MG RESISTOR				R 598	NRSA63J-182X	MG RESISTOR		
	R 517	NRSA63J-223X	MG RESISTOR				R 599	NRSA63J-302X	MG RESISTOR		

## ■ Electrical parts list (Front board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	S 501	NSW0066-001X	TACT SWITCH		
	S 502	NSW0066-001X	TACT SWITCH		
	S 503	NSW0066-001X	TACT SWITCH		
	S 504	NSW0066-001X	TACT SWITCH		
	S 505	NSW0066-001X	TACT SWITCH		
	S 511	NSW0066-001X	TACT SWITCH		
	S 512	NSW0066-001X	TACT SWITCH		
	S 513	NSW0066-001X	TACT SWITCH		
	S 520	NSW0066-001X	TACT SWITCH		
	S 521	NSW0066-001X	TACT SWITCH		
	S 522	NSW0041-001X	TACT SWITCH		
	S 523	NSW0041-001X	TACT SWITCH		
	S 524	NSW0041-001X	TACT SWITCH		
	S 525	NSW0041-001X	TACT SWITCH		
	S 526	NSW0041-001X	TACT SWITCH		
	S 527	NSW0041-001X	TACT SWITCH		
	S 528	NSW0041-001X	TACT SWITCH		
	S 531	NSW0066-001X	TACT SWITCH		
	S 532	NSW0066-001X	TACT SWITCH		
	S 533	NSW0066-001X	TACT SWITCH		
	S 534	NSW0066-001X	TACT SWITCH		
	S 535	NSW0066-001X	TACT SWITCH		
	S 536	NSW0066-001X	TACT SWITCH		
	S 537	NSW0041-001X	TACT SWITCH		
	WR501	QUM024-06BGBG	PARA RIBON WIRE		
	WR502	QUM023-06BGBG	PARA RIBON WIRE		



## ■ Electrical parts list (CD mecha control board) Block No. 03

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 501	NCB31HK-103X	C CAPACITOR				C 628	NEAD0JM-476X	E CAPACITOR		
	C 502	NCB31HK-103X	C CAPACITOR				C 629	NCB31EK-333X	C CAPACITOR		
	C 503	NCB31HK-103X	C CAPACITOR				C 630	NCB31EK-333X	C CAPACITOR		
	C 504	NEAD0JM-107X	E CAPACITOR				C 631	NCS31HJ-471X	C CAPACITOR		
	C 505	NDC31HJ-270X	C CAPACITOR				C 632	NCS31HJ-471X	C CAPACITOR		
	C 506	NDC31HJ-220X	C CAPACITOR				C 633	NCB31CK-473X	C CAPACITOR		
	C 507	NCS31HJ-471X	C CAPACITOR				C 634	NCB31CK-473X	C CAPACITOR		
	C 508	NCB31HK-103X	C CAPACITOR				C 635	NCB31CK-473X	C CAPACITOR		
	C 509	NCB31HK-103X	C CAPACITOR				C 636	NCB31CK-473X	C CAPACITOR		
	C 510	NCS31HJ-102X	C CAPACITOR				C 637	NCB31CK-473X	C CAPACITOR		
	C 511	NCB31CK-104X	C CAPACITOR				C 638	NCB31HK-103X	C CAPACITOR		
	C 512	NEAD0JM-107X	E CAPACITOR				C 639	NEAD0JM-476X	E CAPACITOR		
	C 513	NCB31HK-103X	C CAPACITOR				C 640	NCB31HK-103X	C CAPACITOR		
	C 551	NCB31HK-103X	C CAPACITOR				C 641	NEAD0JM-476X	E CAPACITOR		
	C 571	NDC31HJ-100X	C CAPACITOR				C 642	NCS31HJ-101X	C CAPACITOR		
	C 572	NDC31HJ-100X	C CAPACITOR				C 643	NCB31HK-103X	C CAPACITOR		
	C 573	NCB31CK-104X	C CAPACITOR				C 644	NCB31AK-334X	C CAPACITOR		
	C 574	NEAD1CM-106X	E CAPACITOR				C 645	NEAD0JM-476X	E CAPACITOR		
	C 575	NEAD0JM-476X	E CAPACITOR				C 646	NCB31HK-103X	C CAPACITOR		
	C 576	NCB31CK-104X	C CAPACITOR				C 651	NEAD0JM-476X	E CAPACITOR		
	C 577	NCB31CK-104X	C CAPACITOR				C 652	NCB31HK-103X	C CAPACITOR		
	C 578	NEAD0JM-476X	E CAPACITOR				C 653	NEAD0JM-476X	E CAPACITOR		
	C 579	NEAD1CM-106X	E CAPACITOR				C 654	NCB31CK-104X	C CAPACITOR		
	C 580	NCB31CK-104X	C CAPACITOR				C 655	NCB31HK-103X	C CAPACITOR		
	C 581	NCS31HJ-101X	C CAPACITOR				C 656	NCB31CK-104X	C CAPACITOR		
	C 582	NCS31HJ-101X	C CAPACITOR				C 657	NCB31CK-104X	C CAPACITOR		
	C 583	NCS31HJ-821X	C CAPACITOR				C 658	NCB31CK-104X	C CAPACITOR		
	C 584	NCS31HJ-821X	C CAPACITOR				C 659	NCB31CK-104X	C CAPACITOR		
	C 585	NEAD1VM-475X	E CAPACITOR				C 660	NCS31HJ-101X	C CAPACITOR		
	C 586	NEAD1VM-475X	E CAPACITOR				C 661	NCB31HK-103X	C CAPACITOR		
	C 587	NCS31HJ-121X	C CAPACITOR				C 662	NCS31HJ-101X	C CAPACITOR		
	C 588	NCS31HJ-121X	C CAPACITOR				C 663	NCB31CK-104X	C CAPACITOR		
	C 589	NEAD1VM-475X	E CAPACITOR				C 664	NCB31EK-273X	C CAPACITOR		
	C 590	NEAD1VM-475X	E CAPACITOR				C 665	NCB31AK-334X	C CAPACITOR		
	C 591	NEAD0JM-476X	E CAPACITOR				C 666	NCS31HJ-101X	C CAPACITOR		
	C 592	NEAD0JM-476X	E CAPACITOR				C 667	NCB31HK-103X	C CAPACITOR		
	C 593	NEAD1CM-476X	E CAPACITOR				C 668	NEAD0JM-476X	E CAPACITOR		
	C 594	NCS31HJ-102X	C CAPACITOR				C 669	NCB31HK-103X	C CAPACITOR		
	C 595	NCB31CK-473X	C CAPACITOR				C 671	NEAD0JM-476X	E CAPACITOR		
	C 596	NCS31HJ-101X	C CAPACITOR				C 672	NCB31CK-104X	C CAPACITOR		
	C 597	NCS31HJ-102X	C CAPACITOR				C 673	NCS31HJ-101X	C CAPACITOR		
	C 598	NCS31HJ-102X	C CAPACITOR				C 682	NEAD1CM-106X	E CAPACITOR		
	C 601	NEAD0JM-476X	E CAPACITOR				C 683	NCB31CK-104X	C CAPACITOR		
	C 602	NCB31HK-103X	C CAPACITOR				C 684	NEAD1CM-476X	E CAPACITOR		
	C 603	NEAD0JM-107X	E CAPACITOR				C 685	NCB31CK-473X	C CAPACITOR		
	C 604	NCB31HK-103X	C CAPACITOR				C 686	NCB31CK-473X	C CAPACITOR		
	C 605	NCB31HK-682X	C CAPACITOR				C 687	NCB31CK-473X	C CAPACITOR		
	C 606	NEAD0JM-476X	E CAPACITOR				C 688	NCB31CK-473X	C CAPACITOR		
	C 607	NCB31HK-103X	C CAPACITOR				C 689	NEAD1CM-476X	E CAPACITOR		
	C 608	NCB31CK-104X	C CAPACITOR				C 690	NBE20JM-106X	TS E CAPACITOR		
	C 609	NCB31CK-104X	C CAPACITOR				CN501	QGB2027L1-22X	CONNECTOR		
	C 610	NDC31HJ-5R0X	C CAPACITOR				CN502	QGF0501F1-08X	CONNECTOR		
	C 611	NCS31HJ-680X	C CAPACITOR				CN601	QGF0526F1-22X	FPC CONNECTOR		
	C 612	NCB31HK-103X	C CAPACITOR				D 501	1SS355-X	DIODE		
	C 613	NCB31HK-103X	C CAPACITOR				D 502	1SS355-X	DIODE		
	C 614	NCB31HK-103X	C CAPACITOR				D 503	1SS355-X	DIODE		
	C 621	NCB31HK-103X	C CAPACITOR				D 504	1SS355-X	DIODE		
	C 622	NEAD0JM-476X	E CAPACITOR				D 505	1SS355-X	DIODE		
	C 623	NCS31HJ-470X	C CAPACITOR				D 506	CRS03-W	SB DIODE		
	C 624	NCB31HK-153X	C CAPACITOR				D 682	1SR154-400-X	DIODE		
	C 625	NCB31HK-103X	C CAPACITOR				IC501	UPD784225GK-624	IC		
	C 626	NCB31HK-272X	C CAPACITOR				IC502	BR24C01AFV-W-X	IC		
	C 627	NCB31HK-103X	C CAPACITOR				IC503	HD74HCT126T-X	IC		

## ■ Electrical parts list (CD mecha control board) Block No. 03

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	IC504	NJU7241F33-X	IC				R 542	NRSA63J-101X	MG RESISTOR		
	IC571	PCM1716E-X	IC				R 543	NRSA63J-0R0X	MG RESISTOR		
	IC572	NJM4565V-X	IC				R 544	NRSA63J-102X	MG RESISTOR		
	IC601	TA2157FN-X	IC				R 545	NRSA63J-103X	MG RESISTOR		
	IC621	TC94A14FA	IC				R 546	NRSA63J-104X	MG RESISTOR		
	IC651	NJU7241F25-X	IC				R 547	NRSA63J-472X	MG RESISTOR		
	IC652	TC94A02F-005	IC				R 548	NRSA63J-472X	MG RESISTOR		
	IC653	W24L010AJ-12-X	IC				R 549	NRSA63J-472X	MG RESISTOR		
	IC681	LA6579H-X	IC				R 550	NRSA63J-472X	MG RESISTOR		
	L 501	NQL114K-470X	INDUCTOR				R 551	NRSA63J-104X	MG RESISTOR		
	L 502	NQL114K-470X	INDUCTOR				R 552	NRSA63J-104X	MG RESISTOR		
	L 571	NQL114K-470X	INDUCTOR				R 553	NRSA63J-183X	MG RESISTOR		
	L 572	NQL114K-470X	INDUCTOR				R 554	NRSA63J-333X	MG RESISTOR		
	L 621	NQL114K-470X	INDUCTOR				R 555	NRSA63J-101X	MG RESISTOR		
	L 622	NQL114K-470X	INDUCTOR				R 556	NRSA63J-0R0X	MG RESISTOR		
	L 623	NQL114K-470X	INDUCTOR				R 557	NRSA63J-104X	MG RESISTOR		
	L 651	NQL114K-470X	INDUCTOR				R 558	NRSA63J-104X	MG RESISTOR		
	L 652	NQL114K-470X	INDUCTOR				R 559	NRSA63J-0R0X	MG RESISTOR		
	L 653	NQL114K-470X	INDUCTOR				R 560	NRSA63J-101X	MG RESISTOR		
	Q 501	UN2111-X	TRANSISTOR				R 561	NRSA63J-104X	MG RESISTOR		
	Q 502	UN2211-X	TRANSISTOR				R 562	NRSA63J-392X	MG RESISTOR		
	Q 571	UN2111-X	TRANSISTOR				R 563	NRSA63J-682X	MG RESISTOR		
	Q 572	UN2211-X	TRANSISTOR				R 567	NRSA63J-101X	MG RESISTOR		
	Q 601	2SB1132/QR/-X	TRANSISTOR				R 568	NRSA63J-102X	MG RESISTOR		
	Q 681	2SB1184/QR/-X	TRANSISTOR				R 569	NRSA63J-102X	MG RESISTOR		
	R 501	NRSA63J-822X	MG RESISTOR				R 570	NRSA63J-102X	MG RESISTOR		
	R 502	NRSA63J-271X	MG RESISTOR				R 572	NRSA63J-473X	MG RESISTOR		
	R 503	NRSA63J-103X	MG RESISTOR				R 573	NRSA63J-473X	MG RESISTOR		
	R 504	NRSA63J-271X	MG RESISTOR				R 574	NRSA63J-470X	MG RESISTOR		
	R 505	NRSA63J-102X	MG RESISTOR				R 581	NRSA63J-203X	MG RESISTOR		
	R 506	NRSA63J-102X	MG RESISTOR				R 582	NRSA63J-203X	MG RESISTOR		
	R 507	NRSA63J-101X	MG RESISTOR				R 583	NRSA63J-123X	MG RESISTOR		
	R 508	NRSA63J-101X	MG RESISTOR				R 584	NRSA63J-123X	MG RESISTOR		
	R 509	NRSA63J-101X	MG RESISTOR				R 585	NRSA63J-303X	MG RESISTOR		
	R 510	NRSA63J-101X	MG RESISTOR				R 586	NRSA63J-303X	MG RESISTOR		
	R 511	NRSA63J-101X	MG RESISTOR				R 587	NRSA63J-473X	MG RESISTOR		
	R 512	NRSA63J-101X	MG RESISTOR				R 588	NRSA63J-473X	MG RESISTOR		
	R 513	NRSA63J-101X	MG RESISTOR				R 589	NRSA63J-103X	MG RESISTOR		
	R 514	NRSA63J-102X	MG RESISTOR				R 590	NRSA63J-103X	MG RESISTOR		
	R 515	NRSA63J-101X	MG RESISTOR				R 591	NRSA63J-103X	MG RESISTOR		
	R 516	NRSA63J-101X	MG RESISTOR				R 592	NRSA63J-103X	MG RESISTOR		
	R 517	NRSA63J-101X	MG RESISTOR				R 593	NRSA63J-4R7X	MG RESISTOR		
	R 518	NRSA63J-472X	MG RESISTOR				R 601	NRSA63J-823X	MG RESISTOR		
	R 519	NRSA63J-101X	MG RESISTOR				R 602	NRSA63J-823X	MG RESISTOR		
	R 520	NRSA63J-101X	MG RESISTOR				R 603	NRSA63J-334X	MG RESISTOR		
	R 521	NRSA63J-101X	MG RESISTOR				R 604	NRSA63J-334X	MG RESISTOR		
	R 522	NRSA63J-101X	MG RESISTOR				R 605	NRSA63J-220X	MG RESISTOR		
	R 523	NRSA63J-101X	MG RESISTOR				R 606	NRSA63J-220X	MG RESISTOR		
	R 524	NRSA63J-101X	MG RESISTOR				R 607	NRSA63J-823X	MG RESISTOR		
	R 525	NRSA63J-101X	MG RESISTOR				R 608	NRSA63J-821X	MG RESISTOR		
	R 527	NRSA63J-104X	MG RESISTOR				R 609	NRSA63J-563X	MG RESISTOR		
	R 528	NRSA63J-473X	MG RESISTOR				R 610	NRSA63J-101X	MG RESISTOR		
	R 530	NRSA63J-473X	MG RESISTOR				R 611	NRSA63J-103X	MG RESISTOR		
	R 531	NRSA63J-473X	MG RESISTOR				R 612	NRSA63J-202X	MG RESISTOR		
	R 533	NRSA63J-473X	MG RESISTOR				R 613	NRSA63J-102X	MG RESISTOR		
	R 534	NRSA63J-473X	MG RESISTOR				R 614	NRSA63J-153X	MG RESISTOR		
	R 535	NRSA63J-473X	MG RESISTOR				R 615	NRSA63J-151X	MG RESISTOR		
	R 536	NRSA63J-102X	MG RESISTOR				R 616	NRSA63J-103X	MG RESISTOR		
	R 537	NRSA63J-473X	MG RESISTOR				R 621	NRSA63J-470X	MG RESISTOR		
	R 538	NRSA63J-473X	MG RESISTOR				R 622	NRSA63J-470X	MG RESISTOR		
	R 539	NRSA63J-102X	MG RESISTOR				R 623	NRSA63J-470X	MG RESISTOR		
	R 540	NRSA63J-473X	MG RESISTOR				R 624	NRSA63J-562X	MG RESISTOR		
	R 541	NRSA63J-102X	MG RESISTOR				R 625	NRSA63J-473X	MG RESISTOR		

■ Electrical parts list (CD mecha control board) Block No. 03

△	Item	Parts number	Parts name	Remarks	Area
	R 626	NRSA63J-474X	MG RESISTOR		
	R 627	NRSA63J-103X	MG RESISTOR		
	R 628	NRSA63J-225X	MG RESISTOR		
	R 629	NRSA63J-103X	MG RESISTOR		
	R 630	NRSA63J-101X	MG RESISTOR		
	R 631	NRSA63J-101X	MG RESISTOR		
	R 632	NRSA63J-0R0X	MG RESISTOR		
	R 633	NRSA63J-0R0X	MG RESISTOR		
	R 634	NRSA63J-0R0X	MG RESISTOR		
	R 635	NRSA63J-101X	MG RESISTOR		
	R 636	NRSA63J-101X	MG RESISTOR		
	R 637	NRSA63J-105X	MG RESISTOR		
	R 638	NRSA63J-472X	MG RESISTOR		
	R 639	NRSA63J-472X	MG RESISTOR		
	R 640	NRSA63J-472X	MG RESISTOR		
	R 641	NRSA63J-472X	MG RESISTOR		
	R 642	NRSA63J-103X	MG RESISTOR		
	R 651	NRSA63J-104X	MG RESISTOR		
	R 652	NRSA63J-474X	MG RESISTOR		
	R 653	NRSA63J-474X	MG RESISTOR		
	R 654	NRSA63J-470X	MG RESISTOR		
	R 655	NRSA63J-0R0X	MG RESISTOR		
	R 656	NRSA63J-0R0X	MG RESISTOR		
	R 657	NRSA63J-0R0X	MG RESISTOR		
	R 658	NRSA63J-474X	MG RESISTOR		
	R 659	NRSA63J-474X	MG RESISTOR		
	R 660	NRSA63J-474X	MG RESISTOR		
	R 661	NRSA63J-474X	MG RESISTOR		
	R 662	NRSA63J-474X	MG RESISTOR		
	R 663	NRSA63J-474X	MG RESISTOR		
	R 664	NRSA63J-474X	MG RESISTOR		
	R 665	NRSA63J-474X	MG RESISTOR		
	R 666	NRSA63J-474X	MG RESISTOR		
	R 667	NRSA63J-474X	MG RESISTOR		
	R 668	NRSA63J-0R0X	MG RESISTOR		
	R 669	NRSA63J-474X	MG RESISTOR		
	R 670	NRSA63J-474X	MG RESISTOR		
	R 671	NRSA63J-474X	MG RESISTOR		
	R 672	NRSA63J-474X	MG RESISTOR		
	R 673	NRSA63J-474X	MG RESISTOR		
	R 674	NRSA63J-331X	MG RESISTOR		
	R 675	NRSA63J-331X	MG RESISTOR		
	R 677	NRSA63J-105X	MG RESISTOR		
	R 681	NRSA63J-682X	MG RESISTOR		
	R 682	NRSA63J-682X	MG RESISTOR		
	R 683	NRSA63J-472X	MG RESISTOR		
	R 684	NRSA63J-153X	MG RESISTOR		
	R 685	NRSA63J-333X	MG RESISTOR		
	R 686	NRSA63J-822X	MG RESISTOR		
	R 687	NRSA63J-0R0X	MG RESISTOR		
	R 688	NRSA63J-303X	MG RESISTOR		
	R 689	NRSA63J-223X	MG RESISTOR		
	TH501	NAD0022-103X	N THERMISTOR		
	X 501	NAX0430-001X	CRYSTAL		
	X 571	NAX0375-001X	CRYSTAL		

**■ Electrical parts list (Mecha control board) Block No. 04**

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C 401	NCS31HJ-101X	C CAPACITOR				R 420	NRSA63J-124X	MG RESISTOR		
	C 402	NCS31HJ-101X	C CAPACITOR				R 421	NRSA63J-0R0X	MG RESISTOR		
	C 403	NCS31HJ-101X	C CAPACITOR				R 422	NRSA63J-332X	MG RESISTOR		
	C 404	NCS31HJ-101X	C CAPACITOR				R 423	NRSA63J-473X	MG RESISTOR		
	C 405	NCS31HJ-101X	C CAPACITOR				R 424	NRSA63J-222X	MG RESISTOR		
	C 406	NCS31HJ-101X	C CAPACITOR				R 425	NRSA63J-680X	MG RESISTOR		
	C 407	NCS31HJ-101X	C CAPACITOR				R 426	NRSA63J-680X	MG RESISTOR		
	C 408	NCS31HJ-101X	C CAPACITOR				R 432	NRSA63J-473X	MG RESISTOR		
	C 409	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V			R 433	NRSA63J-473X	MG RESISTOR		
	C 410	QFV61HJ-153Z	MF CAPACITOR	0.015MF 5% 50V			R 435	NRSA63J-473X	MG RESISTOR		
	C 411	QFV61HJ-153Z	MF CAPACITOR	0.015MF 5% 50V			R 437	NRSA63J-473X	MG RESISTOR		
	C 412	NCB31CK-104X	C CAPACITOR				R 438	NRSA63J-473X	MG RESISTOR		
	C 413	NCB31CK-104X	C CAPACITOR				R 439	NRSA63J-473X	MG RESISTOR		
	C 414	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V			R 440	NRSA63J-473X	MG RESISTOR		
	C 416	QFV61HJ-104Z	MF CAPACITOR	0.1MF 5% 50V			R 441	NRSA63J-473X	MG RESISTOR		
	C 417	QFV61HJ-104Z	MF CAPACITOR	0.1MF 5% 50V			R 442	NRSA63J-473X	MG RESISTOR		
	C 418	NCS31HJ-221X	C CAPACITOR				R 443	NRSA63J-222X	MG RESISTOR		
	C 419	QEKJ1HM-474Z	E CAPACITOR	0.47MF 20% 50V			R 444	NRSA63J-473X	MG RESISTOR		
	C 421	NCB31HK-103X	C CAPACITOR				R 445	NRSA63J-473X	MG RESISTOR		
	C 422	NCB31CK-104X	C CAPACITOR				R 446	NRSA63J-473X	MG RESISTOR		
	C 423	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V			R 447	NRSA63J-473X	MG RESISTOR		
	C 424	NCB31CK-104X	C CAPACITOR				R 449	NRSA63J-103X	MG RESISTOR		
	C 425	NCB31HK-103X	C CAPACITOR				R 450	NRSA63J-473X	MG RESISTOR		
	C 431	QEKJ0JM-476Z	E CAPACITOR	47MF 20% 6.3V			R 461	NRSA63J-223X	MG RESISTOR		
	C 432	NCB31HK-103X	C CAPACITOR				R 462	NRSA63J-334X	MG RESISTOR		
	C 433	QEKJ0JM-476Z	E CAPACITOR	47MF 20% 6.3V			R 463	NRSA63J-101X	MG RESISTOR		
	C 434	NCB31HK-103X	C CAPACITOR				R 464	NRSA63J-104X	MG RESISTOR		
	C 435	NCS31HJ-220X	C CAPACITOR				R 465	NRSA63J-223X	MG RESISTOR		
	C 436	NCS31HJ-220X	C CAPACITOR				R 466	NRSA63J-104X	MG RESISTOR		
	C 437	NCB31HK-103X	C CAPACITOR				R 467	NRSA63J-103X	MG RESISTOR		
	C 438	NCB31HK-103X	C CAPACITOR				R 468	NRSA63J-331X	MG RESISTOR		
	C 439	NCB31HK-103X	C CAPACITOR				R 469	NRSA63J-223X	MG RESISTOR		
	C 461	NCB31HK-103X	C CAPACITOR				R 470	NRSA63J-101X	MG RESISTOR		
	C 491	NCS31HJ-101X	C CAPACITOR				R 471	NRSA63J-334X	MG RESISTOR		
	CJ402	QGA2001C1-06	6P PLUG ASSY				R 481	NRSA63J-473X	MG RESISTOR		
	CN401	QGF1016C1-15	CONNECTOR				R 484	NRSA63J-473X	MG RESISTOR		
	CN403	QGF1219F1-10	CONNECTOR				VR401	QVP0009-333Z	SEMI V RESISTOR		
	D 401	MA8047/H/-X	ZENER DIODE				VR402	QVP0009-333Z	SEMI V RESISTOR		
	D 402	DSK10C-T1	DIODE				X 431	QAX0414-001Z	CRYSTAL		
	IC401	CXA2560Q	IC								
	IC402	LB1641	IC								
	IC431	UPD789166GB-590	IC								
	IC432	IC-PST9333U-X	IC								
	IC461	HD74HC126FP-X	IC								
	L 431	QQL244K-4R7Z	INDUCTOR								
	Q 402	DTC114EKA-X	TRANSISTOR								
	Q 403	2SB1322/RS/-T	TRANSISTOR								
	Q 431	DTC114EKA-X	TRANSISTOR								
	Q 432	2SD601A/QR/-X	TRANSISTOR								
	R 401	NRS181J-681X	MG RESISTOR								
	R 402	NRSA63J-104X	MG RESISTOR								
	R 403	NRSA63J-104X	MG RESISTOR								
	R 404	NRSA63J-104X	MG RESISTOR								
	R 405	NRSA63J-104X	MG RESISTOR								
	R 406	NRSA63J-181X	MG RESISTOR								
	R 407	NRSA63J-181X	MG RESISTOR								
	R 412	NRSA63J-101X	MG RESISTOR								
	R 413	NRSA63J-183X	MG RESISTOR								
	R 414	NRSA63J-392X	MG RESISTOR								
	R 415	NRSA63J-223X	MG RESISTOR								
	R 416	NRSA63J-155X	MG RESISTOR								
	R 417	NRSA63J-103X	MG RESISTOR								
	R 418	NRSA63J-153X	MG RESISTOR								

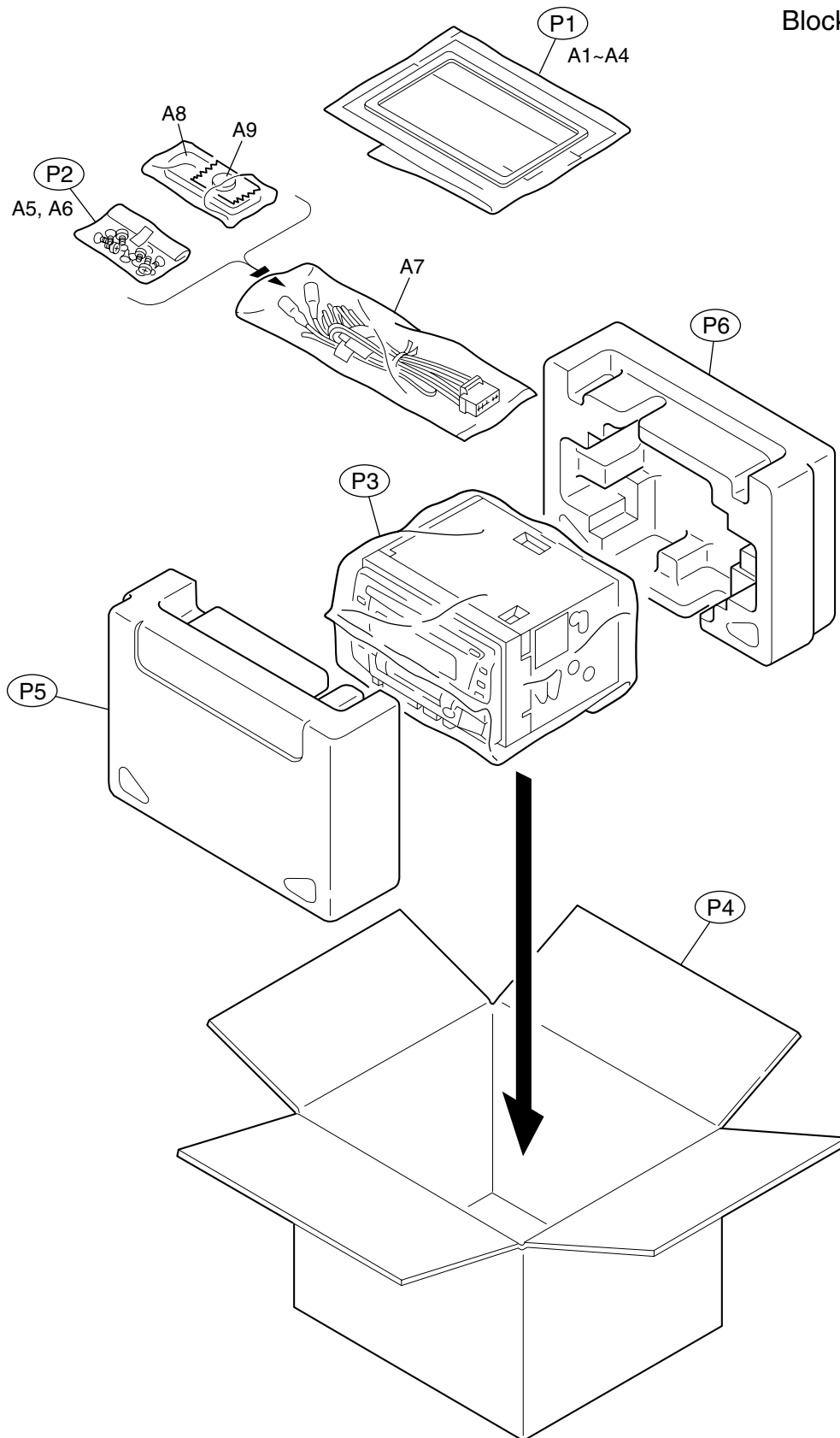
# Packing materials and accessories parts list

Block No. 

M	3	M	M
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Block No. 

M	5	M	M
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**■ Parts list (Packing)**

Block No. M3MM

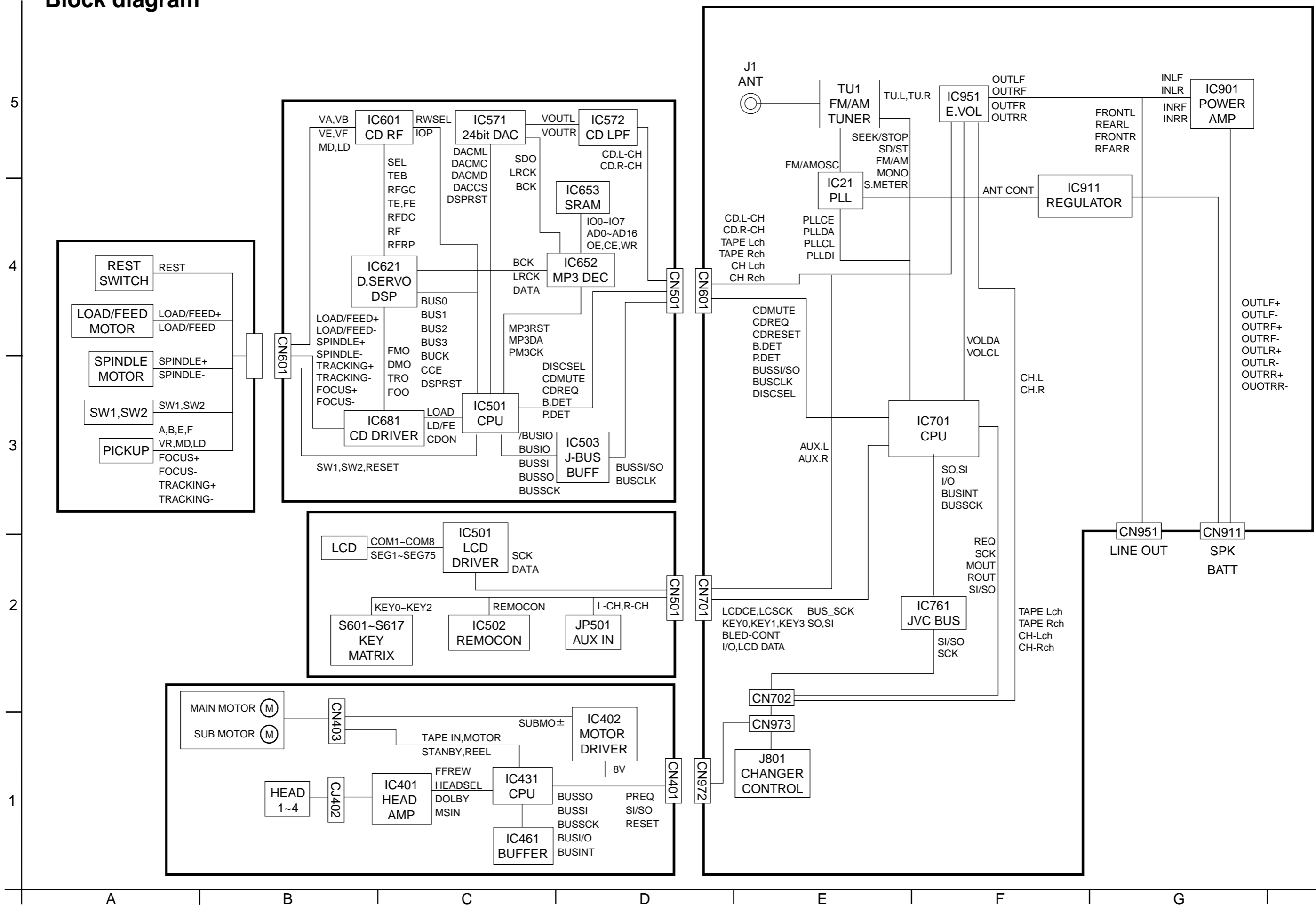
△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPA01703505P	POLY BAG	1	INST.BOOK	
	P 2	QPA00801205	POLY BAG	1	SCREW ASSY	
	P 3	QPC03004315P	POLY BAG	1	SET	
	P 4	LV33415-001A	CARTON	1		
	P 5	LV10614-001A	CUSHION	1		
	P 6	LV10615-001A	CUSHION	1		

**■ Parts list (Accessories)**

Block No. M5MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	LVT0835-001A	INST.BOOK	1	ENG,CHI,THA,ARA	
	A 2	LVT0834-002A	SETTING MANUAL	1		
	A 3	LVT0918-001A	MP3 MANUAL	1		
	A 4	VJC3300-001	BLIND PLATE	1		
	A 5	QYSDSP5006Z	SCREW	8		
	A 6	QYSSSP5006Z	SCREW	8		
	A 7	QAM0397-001	CAR CABLE	1		
	A 8	RM-RK50	REMOCON	1		
	A 9	-----	LI BATTERY	1		

# Block diagram



# Standard schematic diagrams

## Receiver & System control section

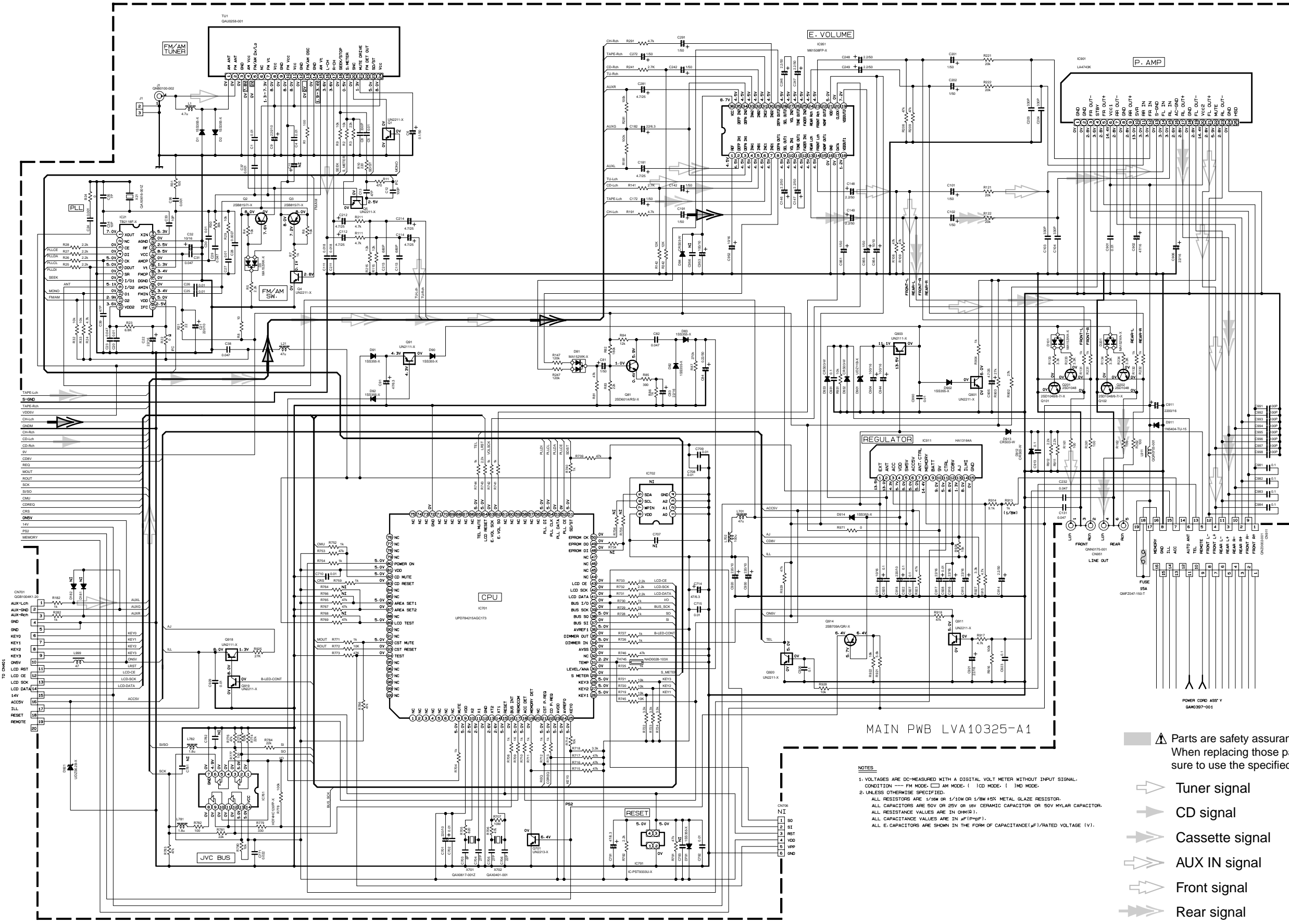
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
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MAIN PWB LVA10325-A1

**NOTES**

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL-CONDITION --- FM MODE, □ AM MODE, ( ) CD MODE, [ ] MD MODE.
2. UNLESS OTHERWISE SPECIFIED:  
 ALL RESISTORS ARE 1/8W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.  
 ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.  
 ALL RESISTANCE VALUES ARE IN OHMS (Ω).  
 ALL CAPACITANCE VALUES ARE IN pF (pF).  
 ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF/RATED VOLTAGE (V)).

-  Parts are safety assurance parts. When replacing those parts make sure to use the specified one.
-  Tuner signal
-  CD signal
-  Cassette signal
-  AUX IN signal
-  Front signal
-  Rear signal
-  CD Changer signal

A B C 2-2 D E F G H



■ LCD driver & Operation switch section

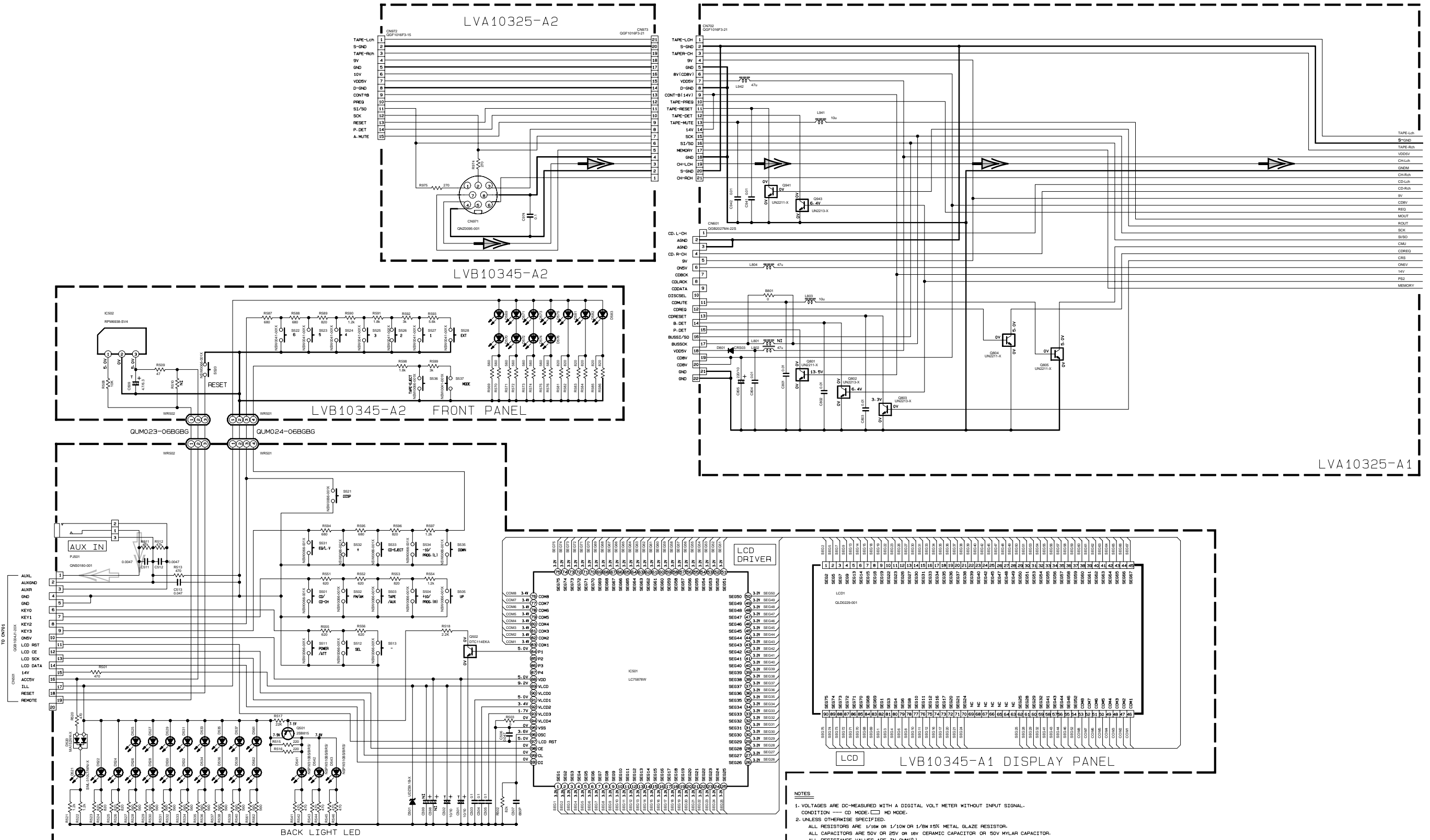
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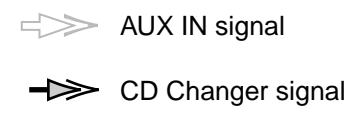
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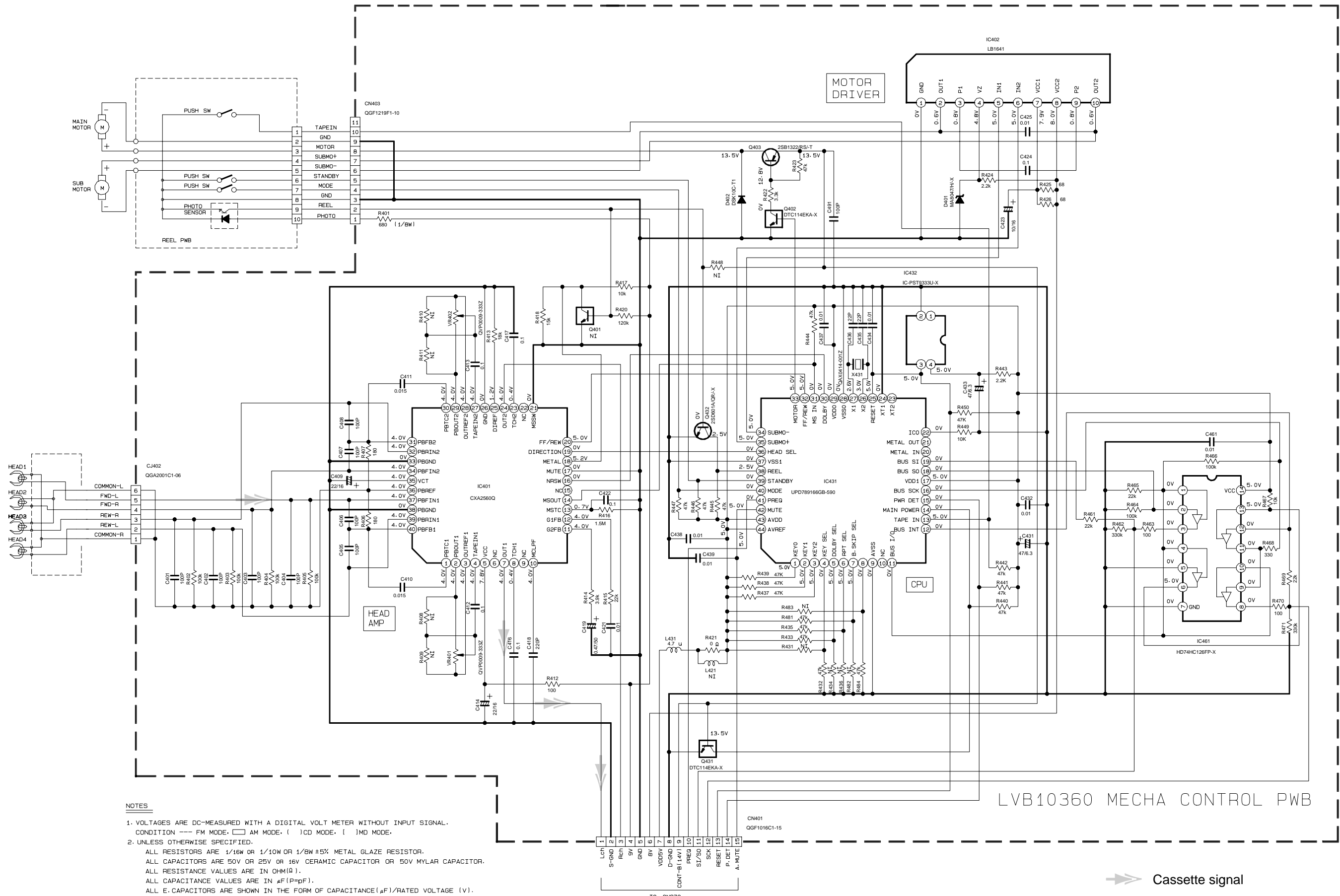
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- NOTES**
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION: CD MODE:  MD MODE:
  - UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR. ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR. ALL RESISTANCE VALUES ARE IN Ω(MΩ). ALL CAPACITANCE VALUES ARE IN µF(pF). ALL E: CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(µF)/RATED VOLTAGE (V).



■ Mecha control circuit section



NOTES

- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.  
CONDITION --- FM MODE. □ AM MODE. ( ) CD MODE. [ ] MD MODE.
- UNLESS OTHERWISE SPECIFIED.  
ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.  
ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.  
ALL RESISTANCE VALUES ARE IN OHM(Ω).  
ALL CAPACITANCE VALUES ARE IN μF(P=pF).  
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).
- NI STANDS FOR NOT MOUNTED PARTS

LVB10360 MECHA CONTROL PWB

➔ Cassette signal

5

4

3

2

1

A

B

C

2-4

D

E

F

G

H

CD servo control section

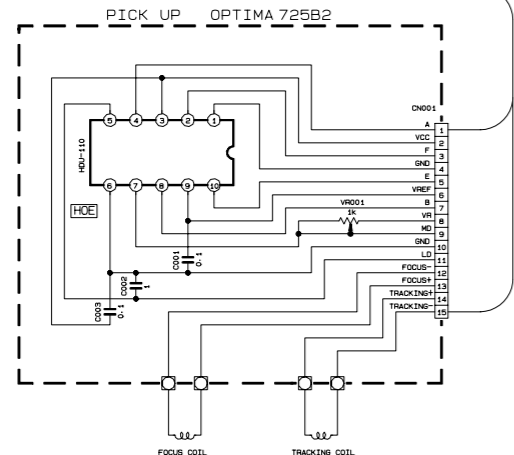
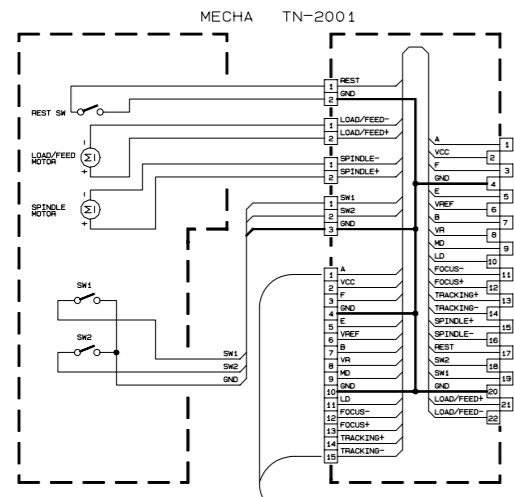
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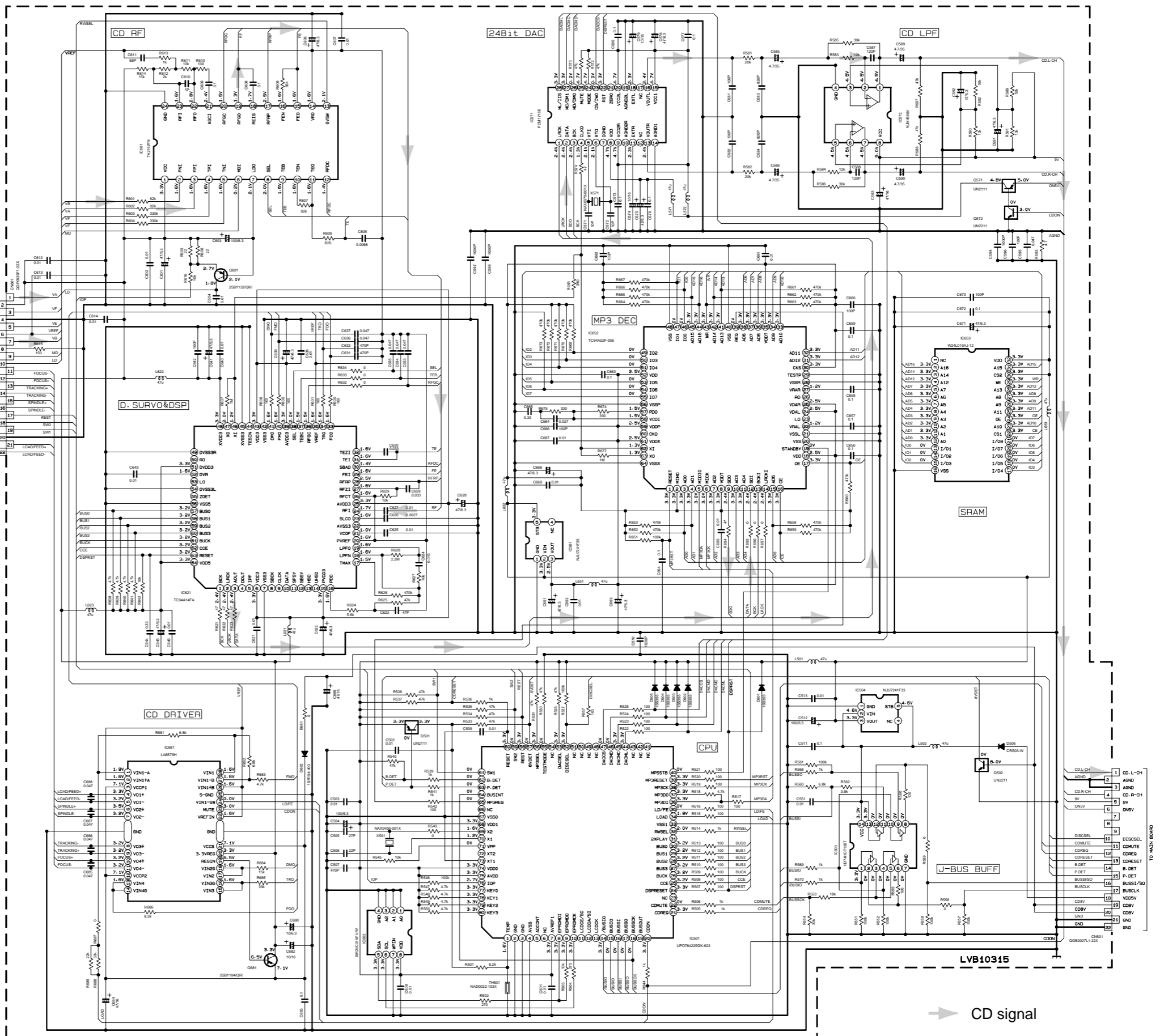
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	10k	UN2211
	47k	UN2213
	10k	UN2111
	47k	UN2113

NOTES  
 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION --- CD MODE.  
 2. UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.  
 ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.  
 ALL RESISTANCE VALUES ARE IN OHMS (Ω).  
 ALL CAPACITANCE VALUES ARE IN PICO-FARADS (pF).  
 ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE/RAIATED VOLTAGE (V).



CD signal

# Printed circuit boards

■ Main board (Reverse side)

■ Main board (Forward side)

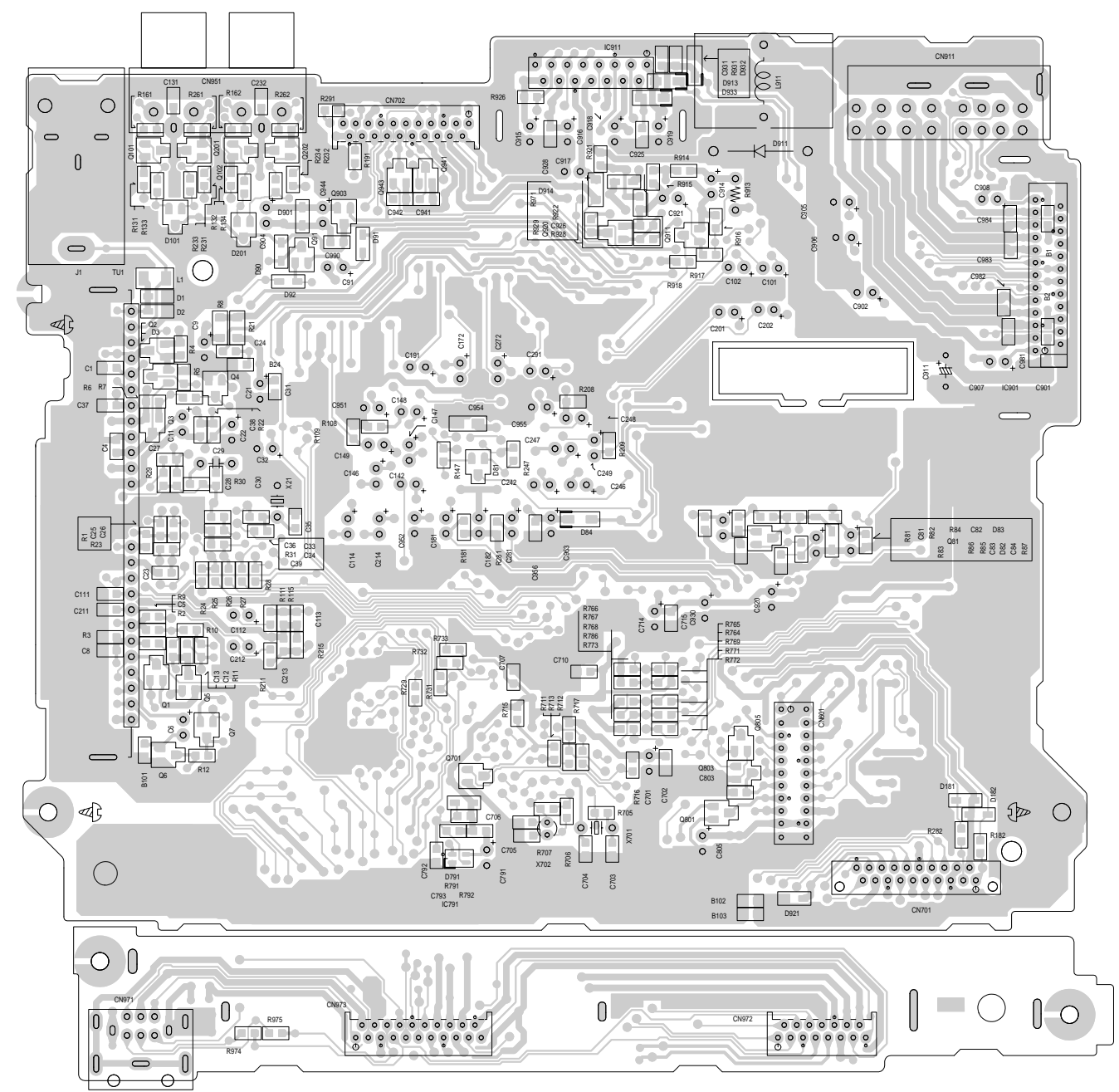
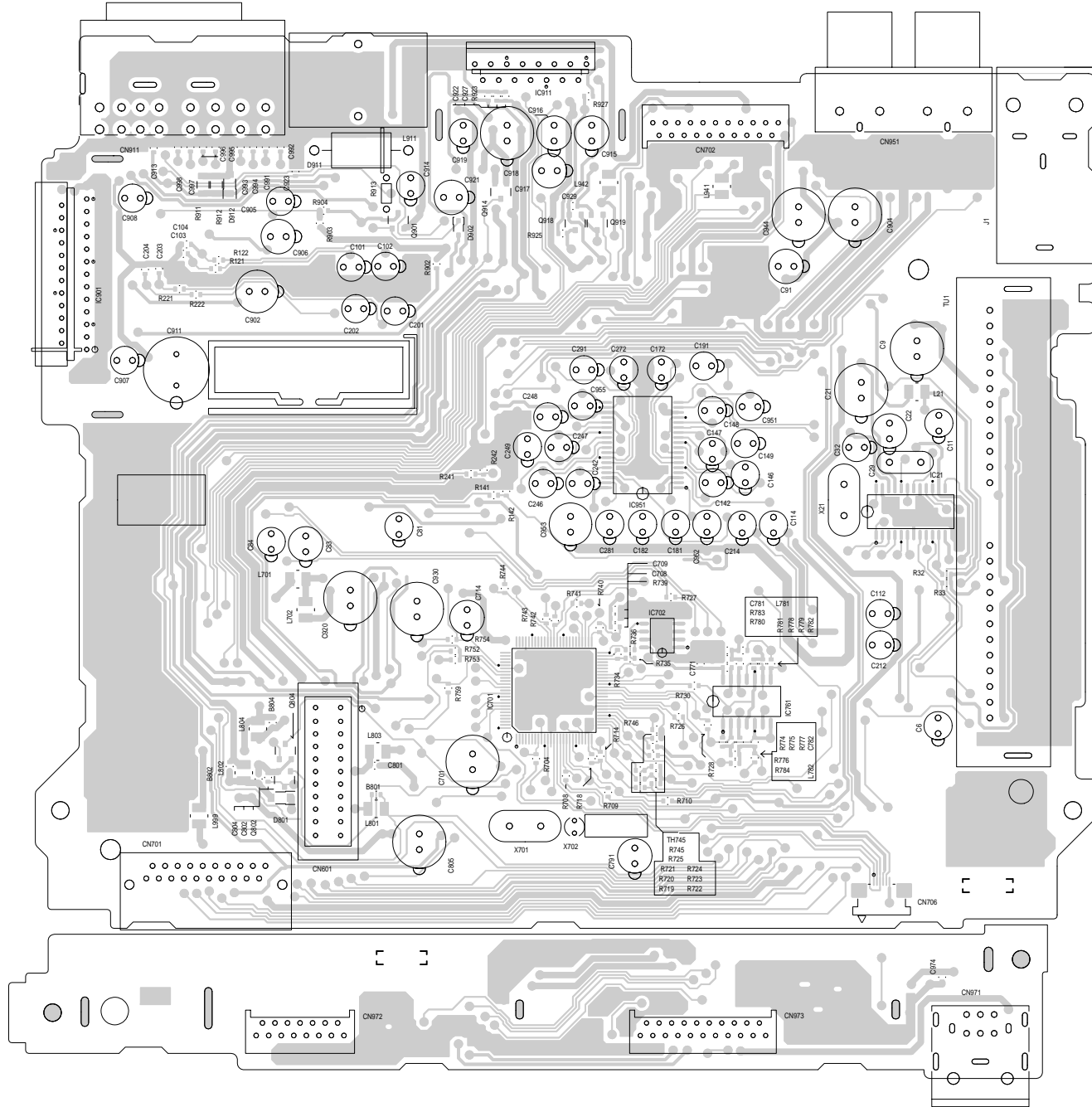
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2

1



A

B

C

2-6

D

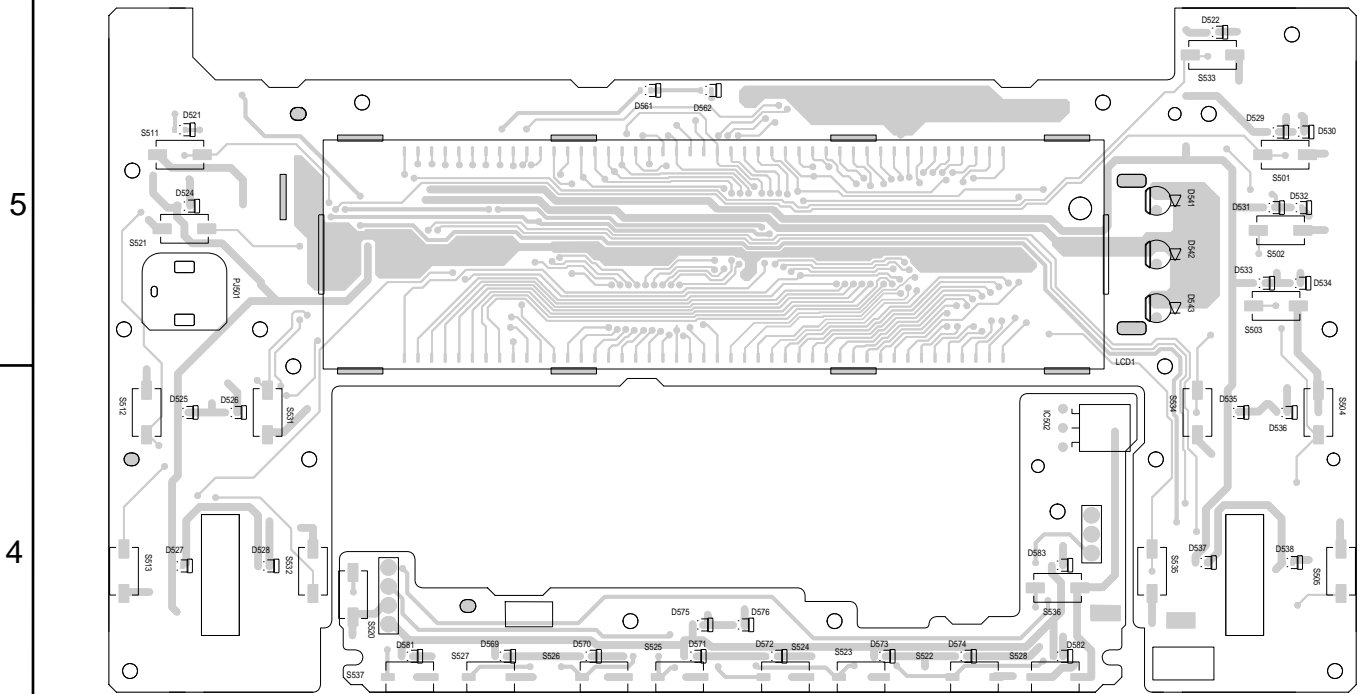
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F

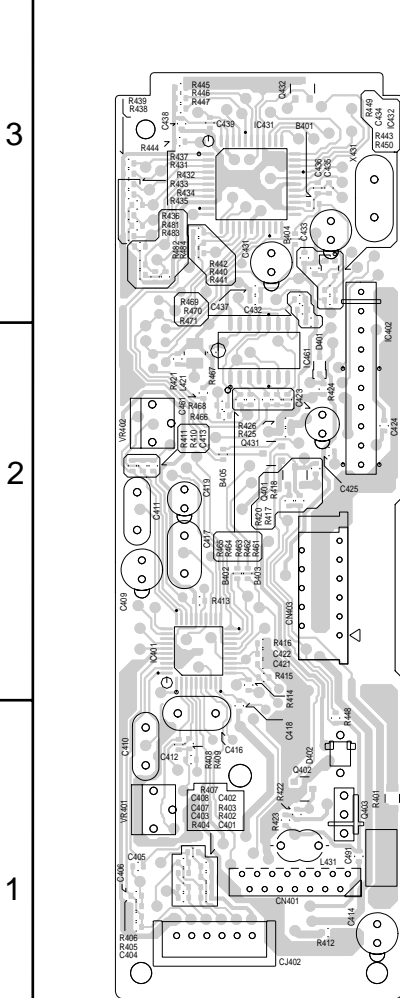
G

H

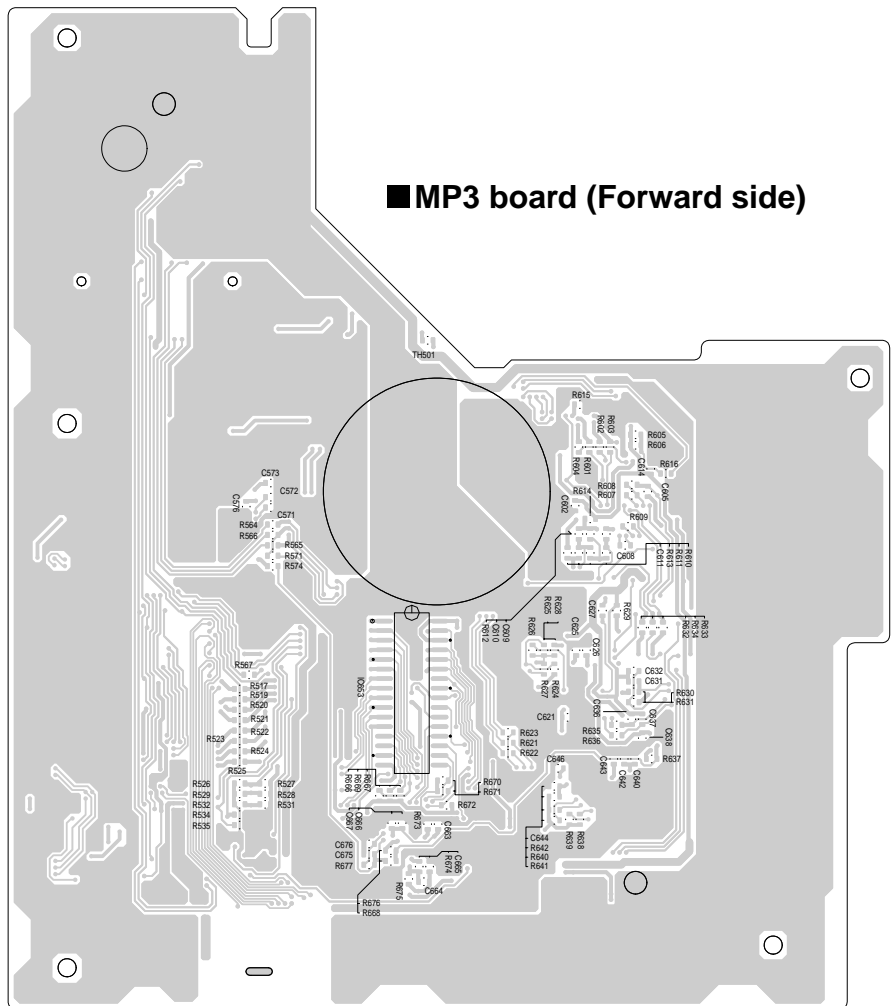
■ Front board (Forward side)



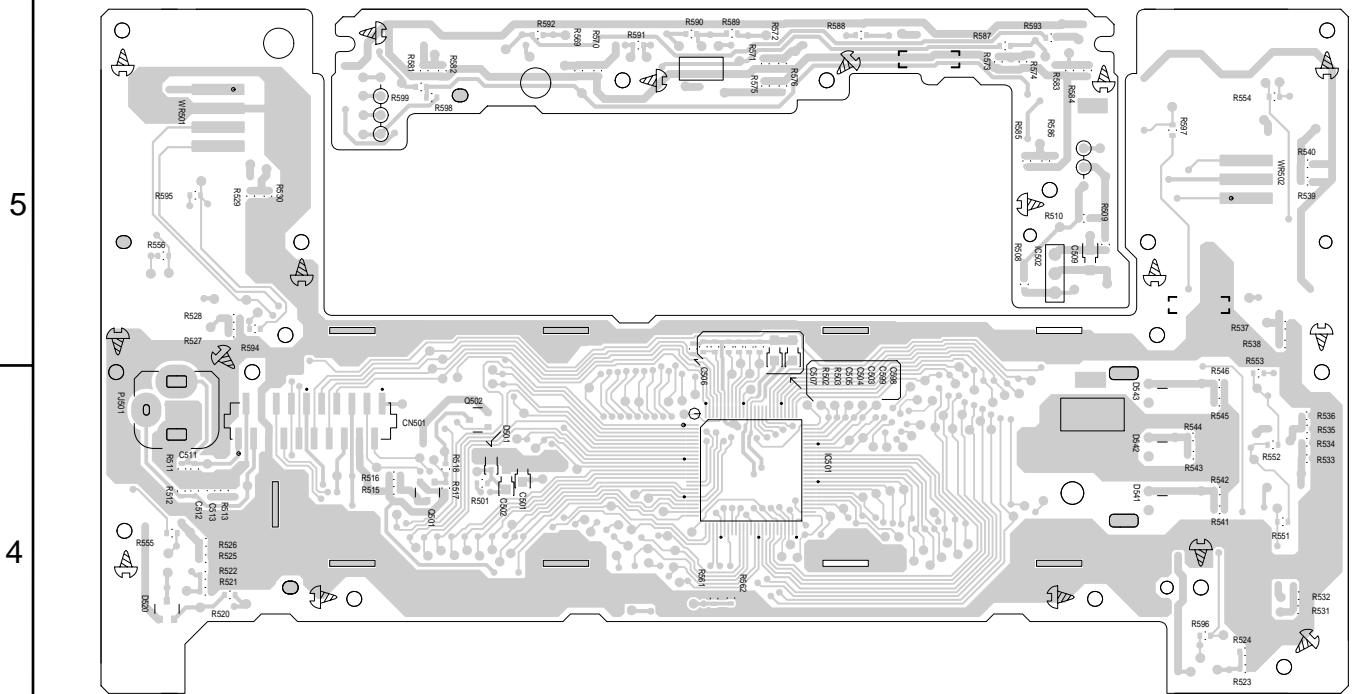
■ Cassette board (Forward side)



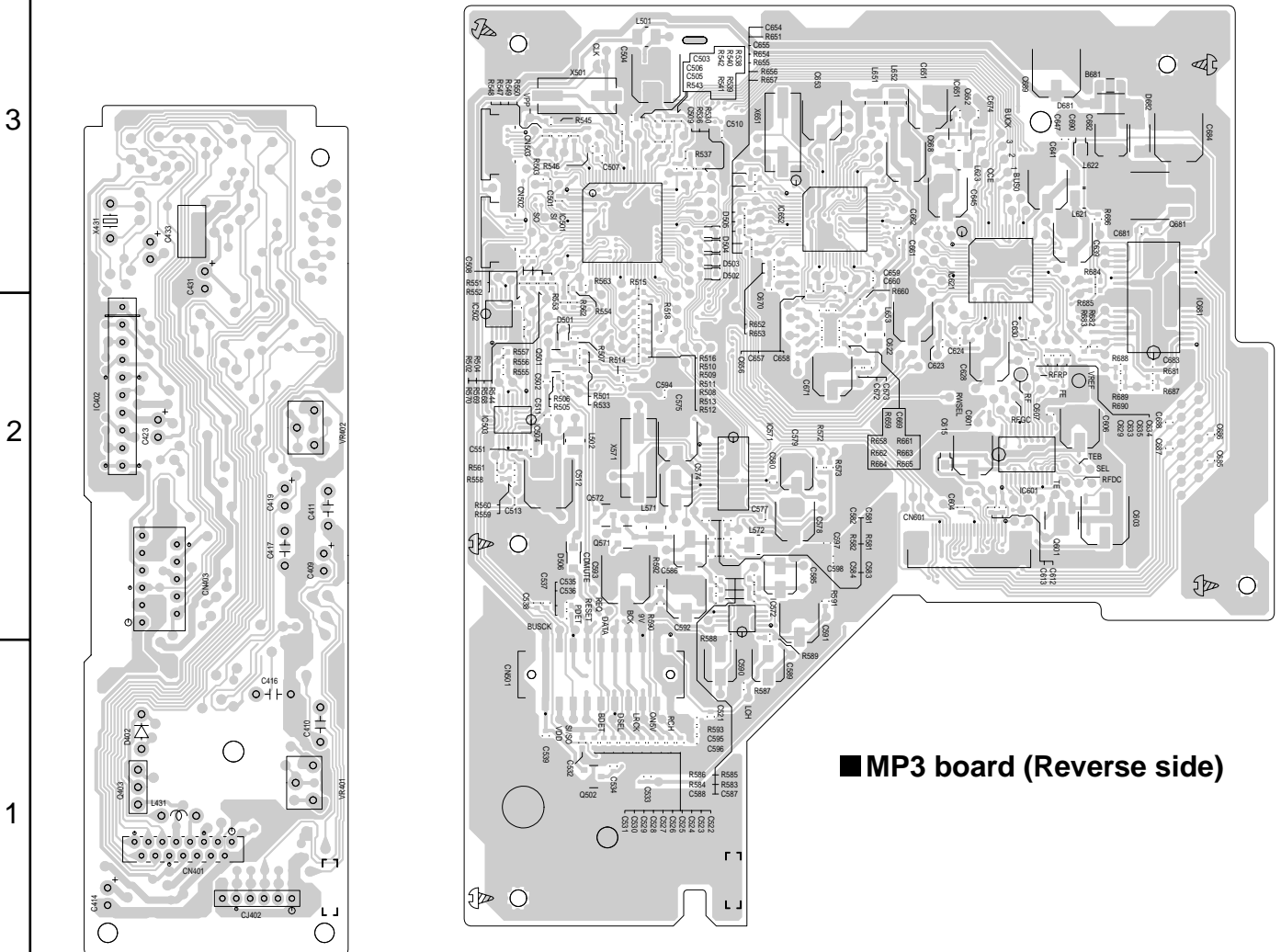
■ MP3 board (Forward side)



■ Front board (Reverse side)



■ Cassette board (Reverse side)



■ MP3 board (Reverse side)