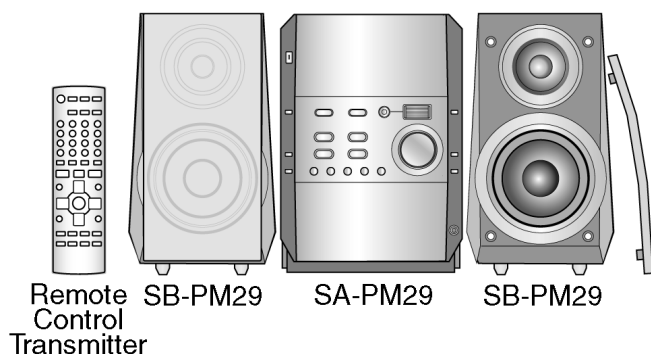


Service Manual

CD Stereo System



SA-PM29E SA-PM29EB SA-PM29EG

Colour

(S)... Silver Type

Specification

n Amplifier Section

RMS Power output	
10%, Total harmonic distortion	
1 kHz, both channels driven	
(Low channel)	35 W per channel (6 Ω)
8 kHz, both channels driven	
(High channel)	35 W per channel (6 Ω)
Total Bi-Amp power	70 W per channel
Output Impedance	
Headphone	16 - 32 Ω

n FM Tuner Section

Frequency range	87.5 - 108.0 MHz
Sensitivity	1.5 μ V (IHF)
S/N 26 dB	1.5 μ V
Antenna terminal(s)	75 Ω (unbalanced)

n AM Tuner Section

Frequency range	522 - 1629 kHz (9 kHz steps)
	520 - 1630 kHz (10 kHz steps)

Sensitivity	
S/N 20 dB (at 999 Hz)	560 μ V/m

n Cassette Deck Section

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head

Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm/s
Overall frequency response (+3 dB, -6 dB) at DECK OUT)	
NORMAL (TYPE I)	35 Hz - 14 kHz
S/N	45 dB (A weighted)
Wow and flutter	0.16% (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

n CD Section

Disc played	
CD-DA/MP3/WMA, HighMat	8cm / 12cm, CD / CD-R / CD-RW
Sampling frequency	
CD-DA	44.1 kHz
MP3/WMA	32 kHz, 44.1 kHz, 48 kHz
Bit rate	
MP3	32 - 320 kbps
Decoding	16 bit linear
Pickup	
Beam source / wavelength	Semiconductor laser / 780nm
Number of channels	Stereo
Frequency response	20Hz - 20 kHz (+1, -2 dB)
Wow and flutter	Below measurable limit
Digital filter	8 fs

Panasonic

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D/A converter	MASH (1 bit DAC)
n General	
Power supply	
For continental Europe	AC 230 V, 50 Hz
For United Kingdom, Australia and N.Z.	AC 230-240 V, 50 Hz
Power consumption	130 W
Dimensions (W x H x D)	179 x 250 x 383 mm
Mass	5.6 kg
Power consumption in standby mode	Approx 0.9 W

Notes :

1. Specifications are subject to change without notices. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels "HIGH (HF)" and "Low (LF)" on the rear of the speakers refer to High frequency and Low frequency.

n System : SC-PM29E-S	Music center: SA-PM9E-S Speaker: SB-PM29P-K
n System : SC-PM29EB-S	Music center: SA-PM29EB-S Speaker: SB-PM29P-K
n System : SC-PM29EG-S	Music center: SA-PM29EG-S Speaker: SB-PM29EG-K

⚠ WARNING

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

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1 Caution for AC Mains Lead

(For “EB” area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

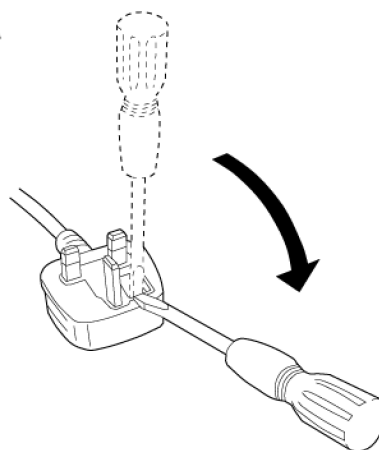
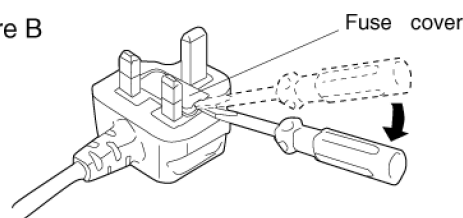


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

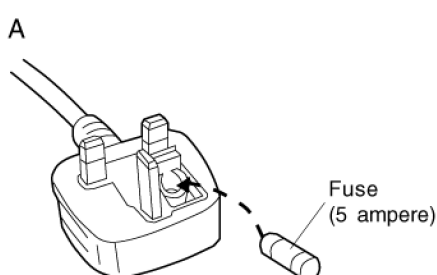
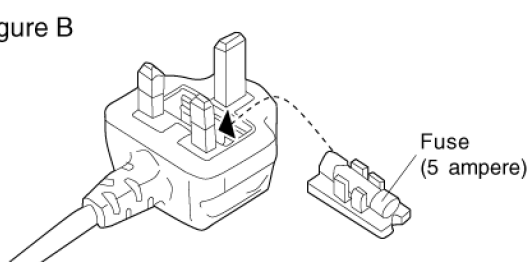


Figure B



2 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C506, C507, C508, C584, C587, C588 & C311 through a 10 Ω , 5W resistor to ground.

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- For E, EG Current consumption at AC 230V, 50 Hz in NO SIGNAL mode should be ~300 mA.
- For EB Current consumption at AC 230V - 240V, 50 Hz in NO SIGNAL mode should be ~300 mA.

3 Protection Circuitry

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

- No sound is heard when the power is turned on.
- Sound stops during a performance.

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

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

4 Handling the Lead-free Solder

4.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

5 Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.

Wavelength : 780 nm

Maximum output radiation power from pick up : 100 μ W/VDE

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

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

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge : 780nm

Maximale Strahlungsleistung der Lasereinheit :100 μ W/VDE

Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

ADVARSEL :

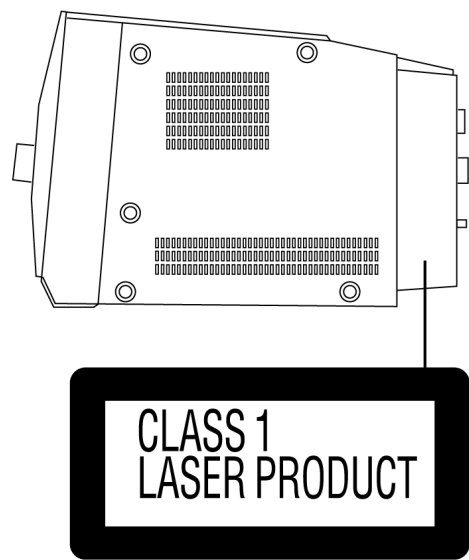
I dette apparat anvendes laser.

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

n Use of Caution Labels



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

CAUTION	- INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. IEC60825-1 / Class 3b
WARNING	- ÖSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	- USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL	- USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FÖR STRÅLEN.
VARO!	- AVATTAESSA OLET NÄKYMÄTÖNTÄ ALTTIINA LASERSÄTELYLLE. ÄLÄ KATSO SÄTEESEEN.
VORSICHT	- UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION	- RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
注意	- 打开时有不可见激光辐射。避免激光束照射。
注意	- ここを開くと不可視レーザー光が出ます。 ビームを見たり、触れたりしないで下さい。

Inside of
product

Produktets
innside

Tuotteen
sisällä

6 Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).
3. Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible. (Fig 6.1)
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

• Grounding for electrostatic breakdown prevention

1. Human body grounding (Fig 6.2)

Use the anti-static wrist strap to discharge the static electricity from your body.

2. Work table grounding. (Fig 6.2)

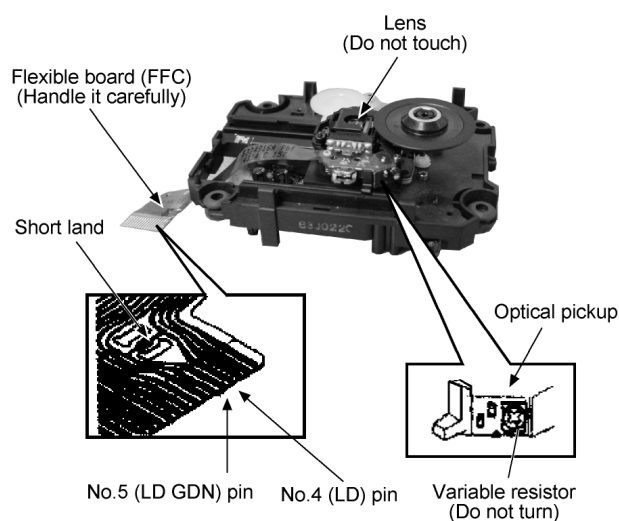
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:

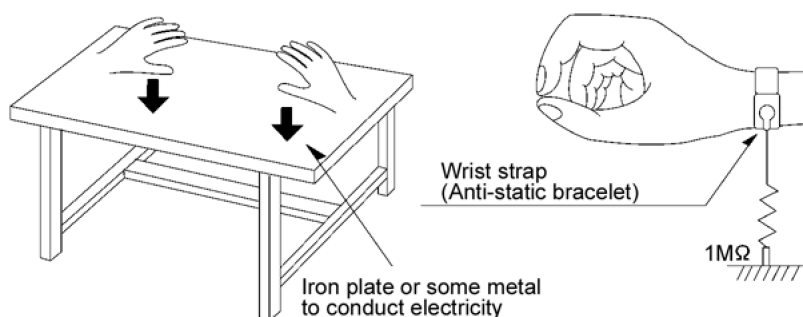
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when replacing the Traverse Deck

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



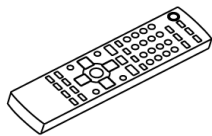
(Fig 6.1)



(Fig 6.2)

7 Accessories

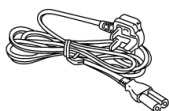
Note : Refer to Packing Materials & Accessories for part number.



Remote Control
Transmitter



AC power supply
cord (For E &
EG only)



AC power supply
cord (For EB only)



FM indoor
antenna

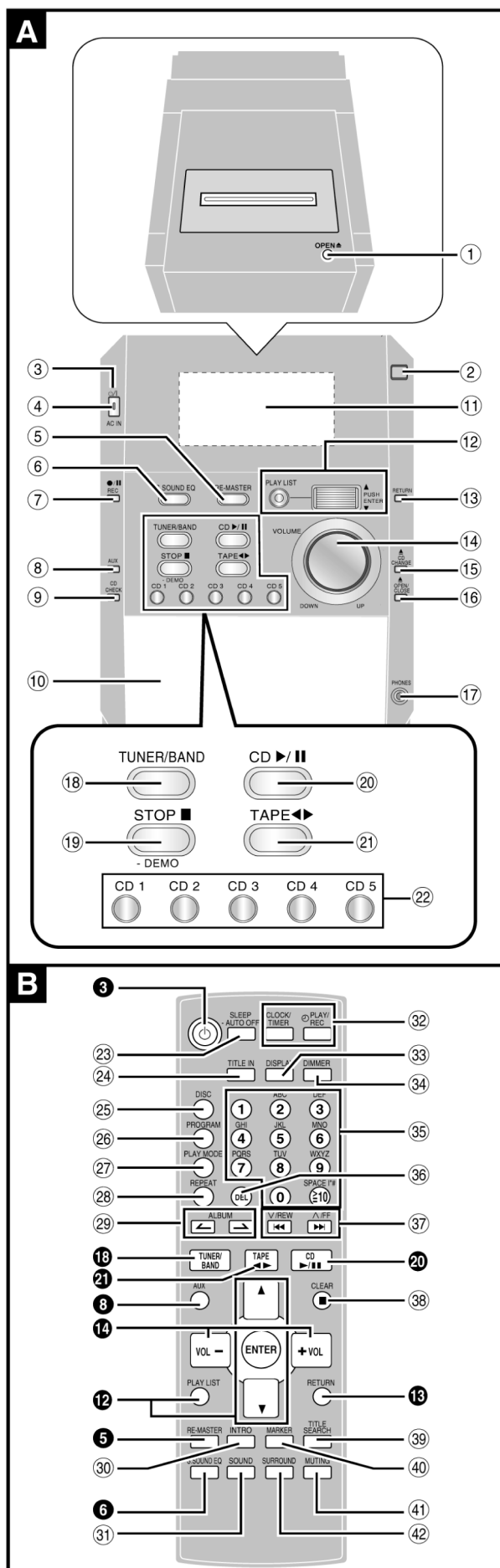


AM Loop antenna



Antenna
Plug
adaptor

8 Operation Procedures



A Main unit

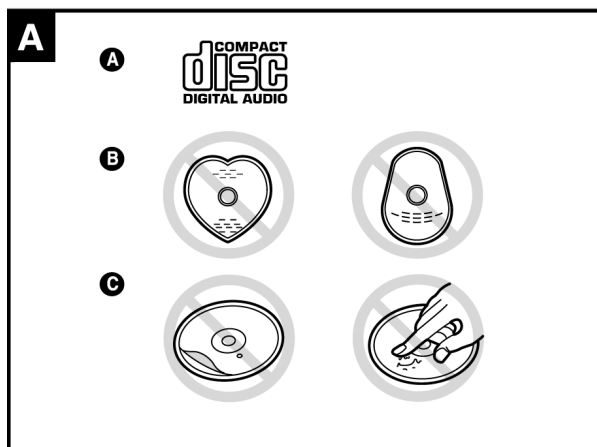
- ① **Cassette open button (OPEN ▲)**
- ② **Remote control signal sensor**
- ③ **Standby/on switch (⏻/⏻)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ④ **AC supply indicator (AC IN)**
This indicator lights when the unit is connected to the AC mains supply.
- ⑤ **Re-master button (RE-MASTER)**
- ⑥ **Super sound EQ button (S.SOUND EQ)**
- ⑦ **Recording start/pause button (●/|| REC)**
- ⑧ **Aux button (AUX)**
- ⑨ **CD check button (CD CHECK)**
- ⑩ **CD trays**
- ⑪ **Display**
- ⑫ **Play list button and jog control (PLAY LIST)**
- ⑬ **Return button (RETURN)**
- ⑭ **Volume control**
- ⑮ **CD change button (▲ CD CHANGE)**
- ⑯ **CD tray open/close button (▲ OPEN/CLOSE)**
- ⑰ **Headphone jack (PHONES)**
- ⑱ **Tuner/band select button (TUNER/BAND)**
- ⑲ **Stop/program clear and demonstration button (STOP ■, -DEMO)**
- ⑳ **CD play/pause button (CD ►/||)**
- ㉑ **Tape play/direction button (TAPE ◀▶)**
- ㉒ **Disc direct play buttons (CD 1 - CD 5)**

B Remote Control

Buttons such as ③ function the same as the controls on the main unit.

- ㉓ **Sleep timer, Auto off button (SLEEP, - AUTO OFF)**
- ㉔ **Title input button (TITLE IN)**
- ㉕ **Disc button (DISC)**
- ㉖ **CD Program/clear, tuner preset button (PROGRAM)**
- ㉗ **Play mode select button (PLAY MODE)**
Use this for selecting CD play mode, tune mode, FM mode and AM beat proof function.
- ㉘ **Repeat button (REPEAT)**
- ㉙ **Album select buttons (◀ ALBUM ▶)**
- ㉚ **Intro button (INTRO)**
- ㉛ **Preset EQ/Manual EQ button (SOUND)**
- ㉜ **Clock/Timer operation buttons (CLOCK/TIMER, ⌚ PLAY/REC)**
- ㉝ **Display button (DISPLAY)**
- ㉞ **Dimmer button (DIMMER)**
- ㉟ **Numbered, character buttons**
- ㊱ **Delete button (DEL)**
- ㊲ **CD skip/search, tape fast-forward/rewind/TPS, tune preset channel select, time adjust buttons (◀◀ V/REW, ▶▶ I ^/FF)**
- ㊳ **Stop/program clear button (■ CLEAR)**
- ㊴ **Title search button (TITLE SEARCH)**
- ㊵ **Marker memory/recall button (MARKER)**
- ㊶ **Muting button (MUTING)**
- ㊷ **Surround button (SURROUND)**

9 Information on MP3 & WMA



A CD selection and care

Only play CDs with COMPACT disc DIGITAL AUDIO trademark (see **A**).

Note on CD-R and CD-RW

This unit can play CD-R and CD-RW recorded with CD-DA or WMA/MP3. Use an audio recording disc for CD-DA and finalize (a process performed after recording that enables this unit to play audio CD-R/RW) it when you finish recording. The unit may not be able to play some discs due to the condition of the recording.

Do not;

- use irregularly shaped CDs. (**B**)
- attach extra labels and stickers.
- use CDs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers. (**C**)
- attach scratch-proof covers or any other kind of accessory.
- write anything on the CD.
- clean CDs with liquids. (Wipe with a soft, dry cloth.)
- use CDs printed with label printers available on the market.

To prevent damage

Always observe the following points.

- Set the system on a flat, level surface.
- Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while tray is opening/closing, or when loaded. Always unload all CDs before moving the system.
- Do not put anything except a CD in the tray.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not disconnect the AC mains lead from the household mains socket during CD changing operation.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

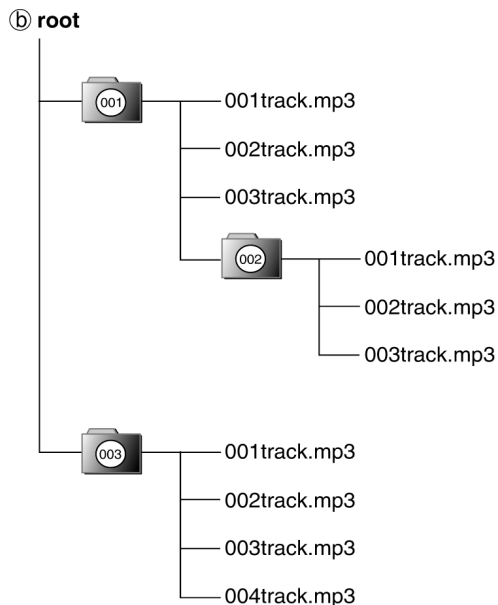


MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

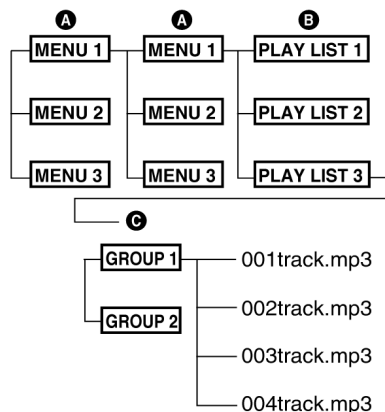
HighMAT and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.



Ⓐ Example MP3 disc



Ⓒ Example HighMAT disc with MP3



MP3 and WMA

- The folder and file names you enter on the computer become the album and track names on this unit.
- There can be a maximum of 400 albums and 999 tracks.
- Folders that do not contain MP3/WMA are skipped.
- This unit is compatible with multisession, but if the number of sessions is large, it may take longer for play to start.

Disc format

Discs must conform to ISO9660 level 1 or 2 (except for extended formats).

File format

- MP3 files must have the extension ".MP3" or ".mp3".
- WMA files must have the extension ".WMA" or ".wma".

To play in a certain order

Prefix the folder and file names with 3-digit numbers in the order you want to play them.

Files may not be recorded in numbered order if the prefixes have different numbers of digits, for example: 1track.mp3, 2track.mp3, 10track.mp3.

However, some writing software may also cause recording to occur in a different order.

Limitations on MP3/WMA play

- This unit is not compatible with packet-write format.
- This unit is not compatible with ID3 tags.
- If you have recorded MP3/WMA on the same disc as CD-DA, only the format recorded in the first session can be played.
- Recordings will not necessarily be played in the order you recorded them.
- You cannot search while playing MP3/WMA. Program and random play work only within a single disc.
- You cannot play protected WMA tracks ("TRACK PROTECTED" appears). Consult the creator of the software you used to record the WMA tracks for details.
- Noise may occur when playing WMA files.

HighMAT

HighMAT is a new way of recording and managing MP3 and WMA on CD-R/RW.

- The unit plays the tracks in play lists that you create on your computer, sorting them by artist, album, and genre.

Ⓐ Menu (a list of items you can use to find play lists)

Ⓑ Play lists

Ⓒ Group (a group of tracks within a play list)

- Menus can have up to 8 levels.
- You will need a computer running on Windows XP to create discs with HighMAT.

10 About HighMAT

10.1. What is HighMAT?

This word combines the abbreviations of Matsushita Electric Industrial Co., Ltd. and High Performance Media Access Technology, and is a trademark of Microsoft Corporation. The products with the HighMAT logo shown below are made according to the HighMAT standard.



Level 1



Level 2



Level 3

HighMat is a format that allows users to save digital contents such as photographs, audio and images on a CD. This gives consistency in the way of reading data when general consumer products (such as DVD players) and PCs are used, and thus, it is easy to operate for the user.

10.2. Why use HighMAT?

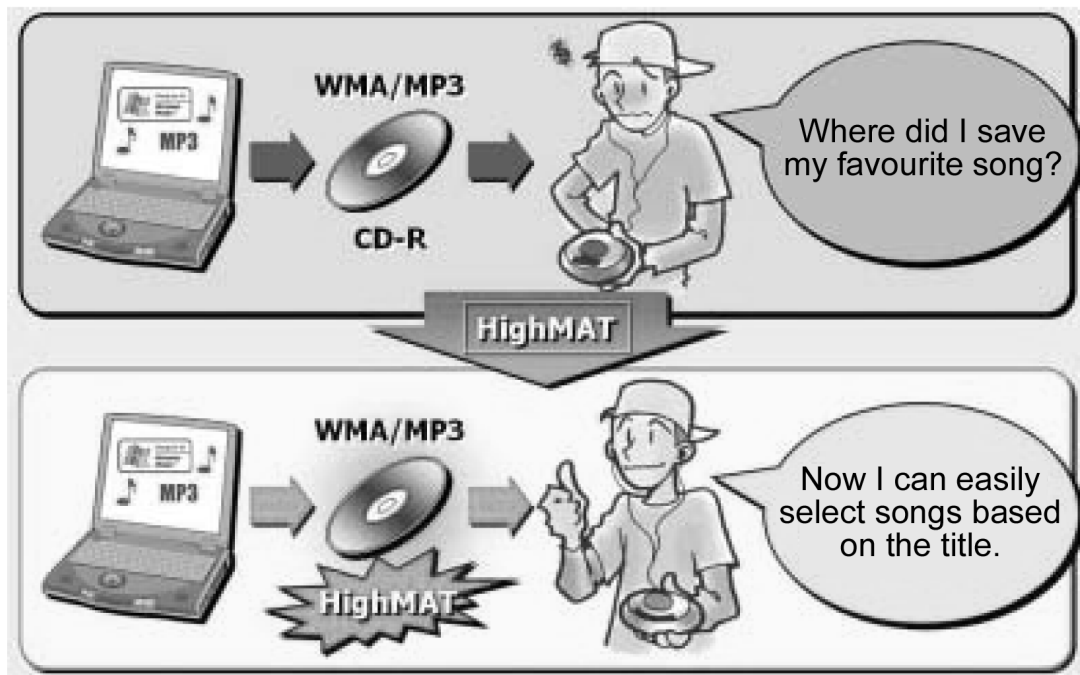
Up to now, there was no harmonized standard from playing digital content stored in CD-ROM formats (including CD-R) on consumer products like DVD players. Therefore, we used to have problems such as follow:

- There was no common play list or attached information on contents, which is called metadata.
- The data compression method differed according to the equipment.
- As the number of CD-ROMs recorded increased retrieved the contents became more difficult.
- Because display and operation methods were different depending on the equipment, the play order of the content on the same disc could change.

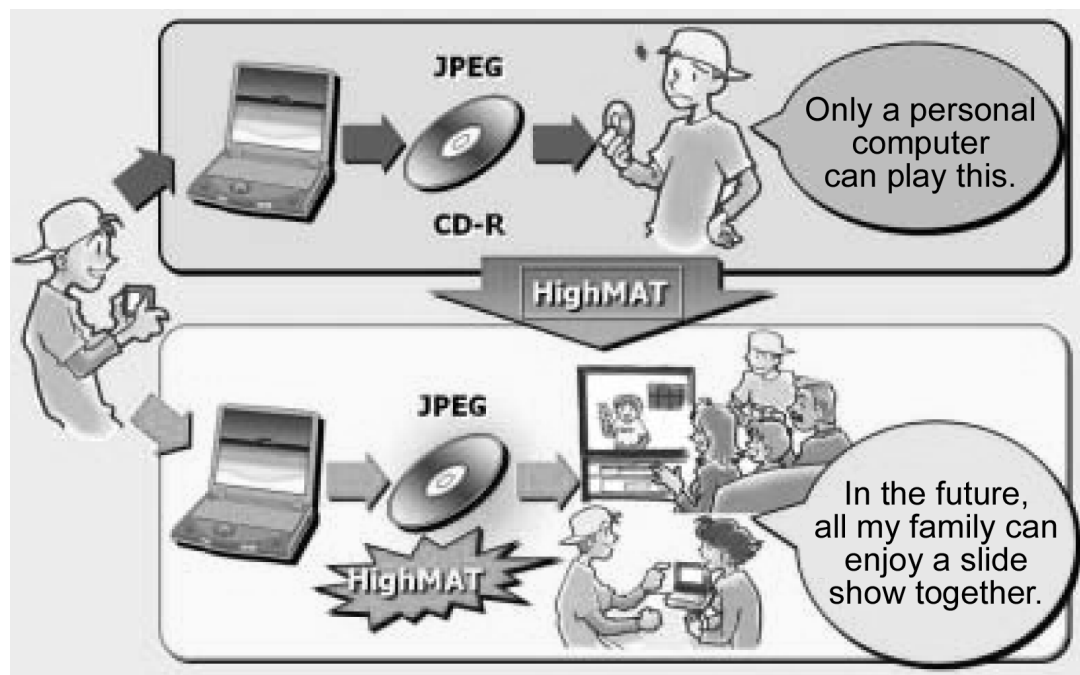
10.3. The advantages of using HighMAT

Applying the HighMAT standard will solve the following problems and will improve usability.

- It will create a common user interface for both PC and consumer products.



- Regardless of the types of consumer products, such as DVD players, portable CD players, car stereos and minicomputers, a consistent way to play for digital content will be created, and it will make it easier to retrieve data.

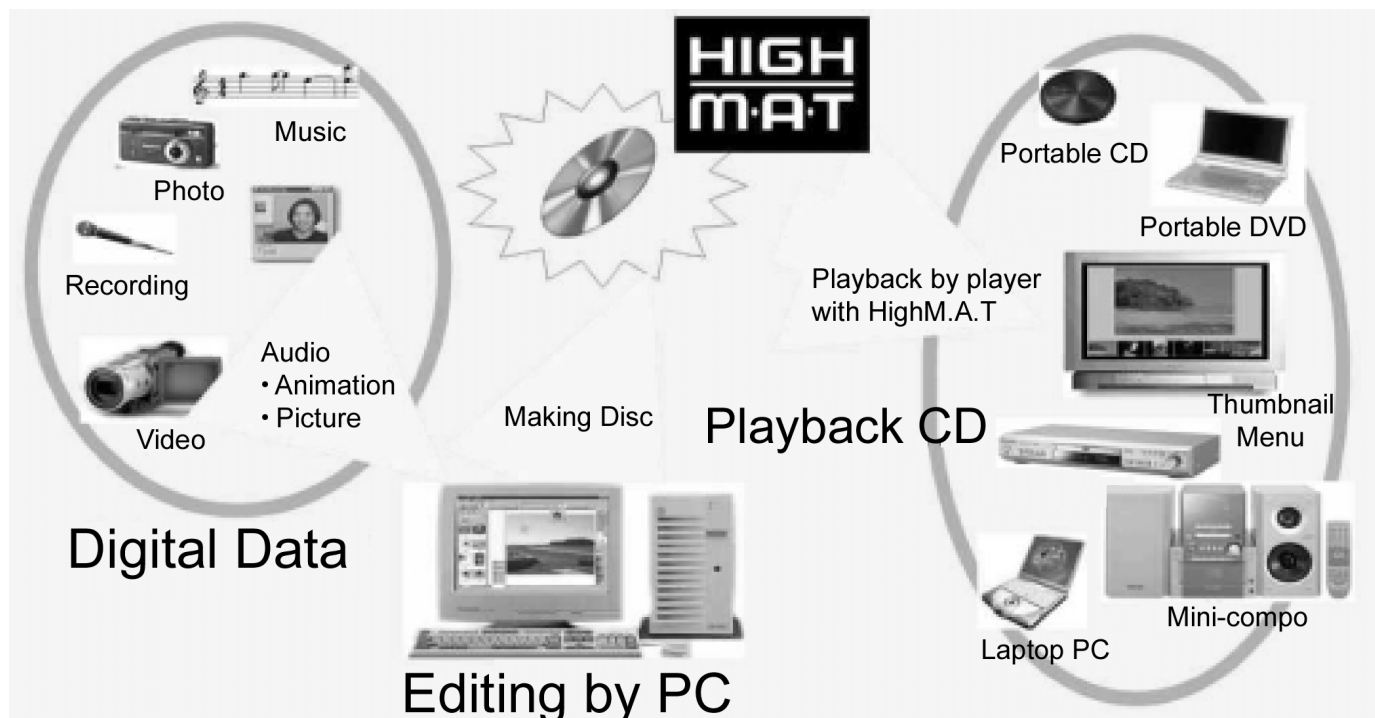


- You can also play digital content on the disc, which was created in accordance with the HighMAT format with a conventional CD-ROM player.

10.4. Outline of the HighMAT standard

1. Recording medium

- CD-R/CD-RW
- Supports ISO 9660 Level Expanded Joliet
- For multiple session



2. Support data format

- Level 1 player: WMA, MP3 (MPEG-1 Audio Layer 3)
- Level 2 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG
- Level 3 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG, WMV, MPEG4 (optional)

3. Limitation of data format

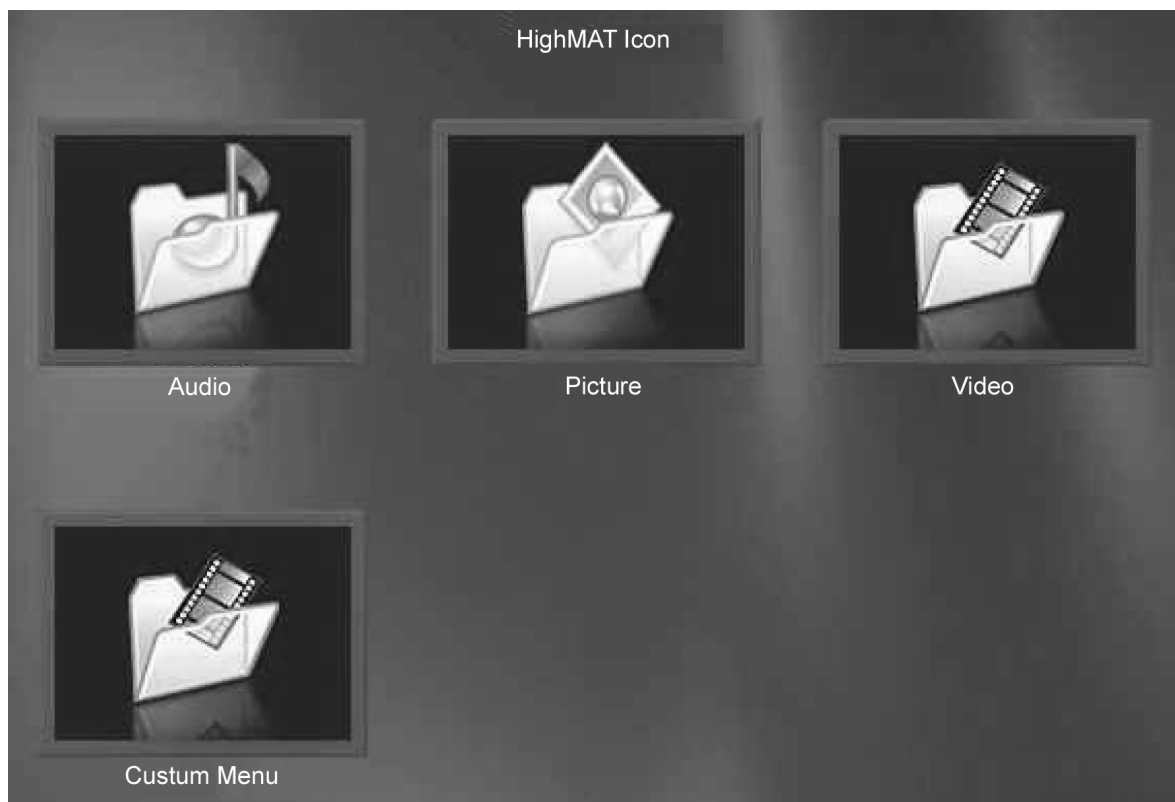
- WMA, MP3 (MPEG-1 Audio Layer 3) 64 kbps - 160.999 kbps, 44.1 kHz, stereo, fixed bit rate/variable bit rate.
- WMA, V2 and above, excluding Lossless/Voice/Pro
- JPEG: Max 6M pixel, Maximum file size: 3 MB

4. Limitations regarding the number of files on the media, etc.

- Total number of audio files: Maximum 450
- Total number of still picture files: Maximum 999
- Total number of animation files: Maximum 200
- Total number of directories: Maximum 400
- Length of a file name: Maximum 108 characters (Unicode)
- Total number of play lists: Maximum 200
- Number of contents in the playlist: Maximum 900

5. Composition of HighMAT disc

- Menu: Classified for the navigation of the HighMAT digital contents. When menu selected, its submenu or the play list will be displayed.
- Play list: A list in which one or more digital contents are arranged in order.
- Group: Sub-divided group of a play list.
- Digital Contents: Audio, still picture and animation data.

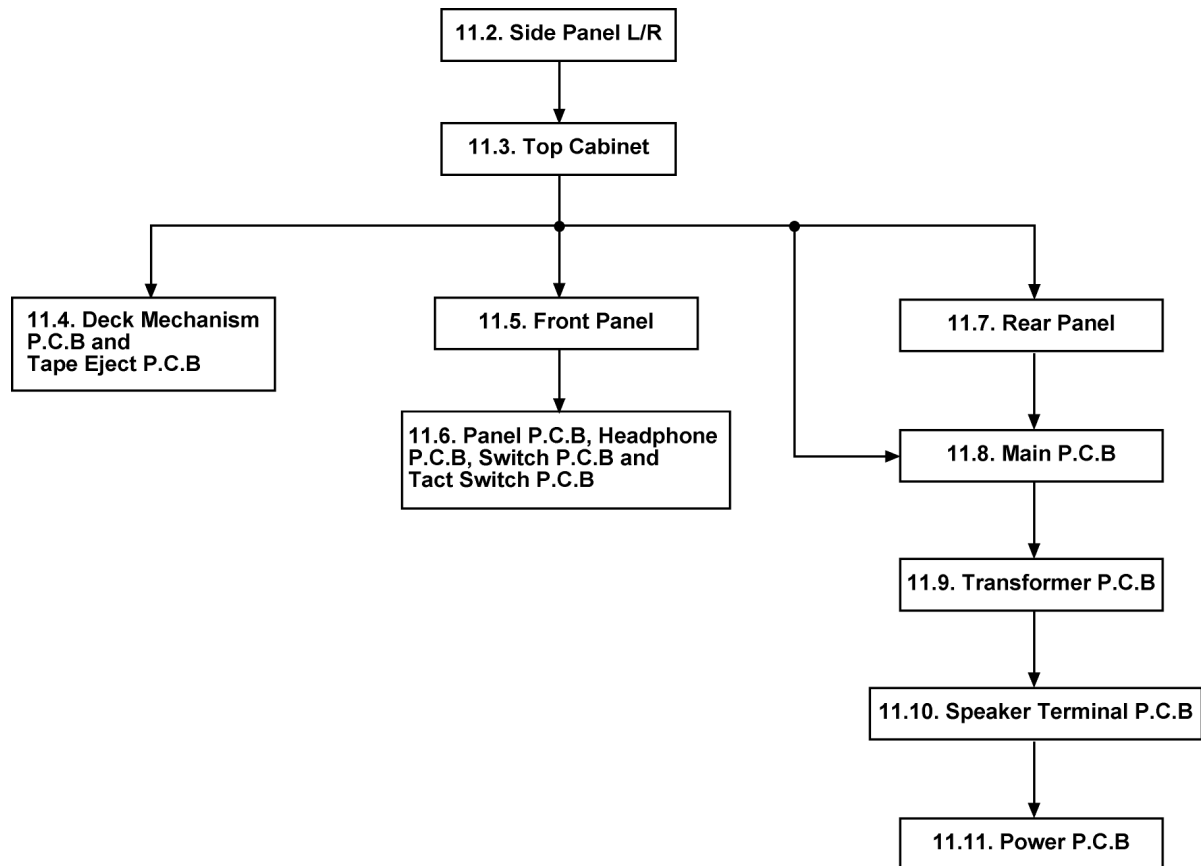


11 Assembling and Disassembling

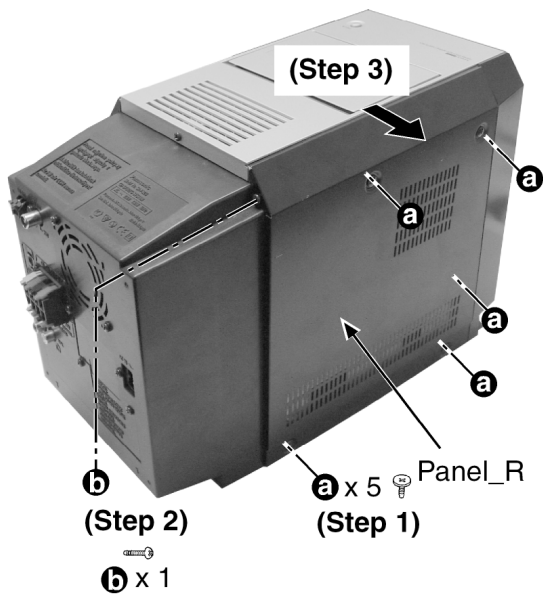
11.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.



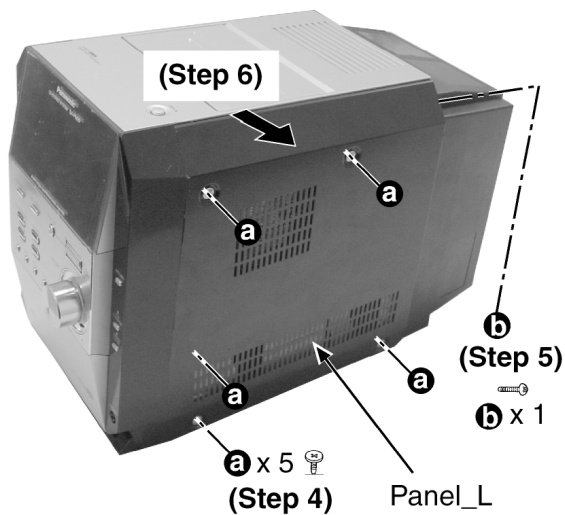
11.2. Disassembly of Side Panel L & R



Step 1 : Remove all the screws.

Step 2 : Remove the screw.

Step 3 : Remove the Panel_R as arrow shown.



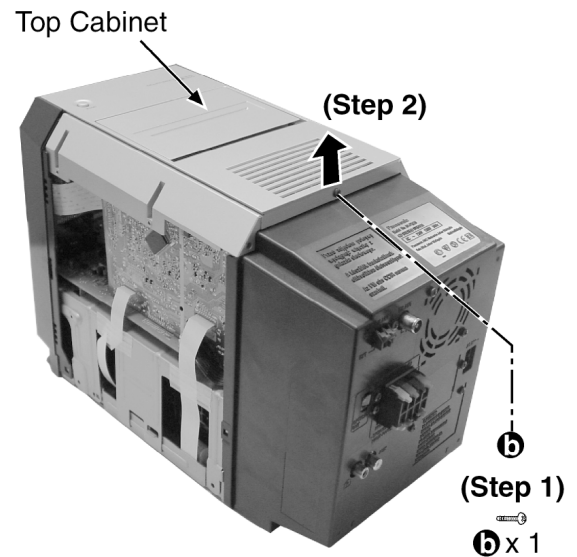
Step 4 : Remove all the screws.

Step 5 : Remove the screw.

Step 6 : Remove the Panel_L as arrow shown.

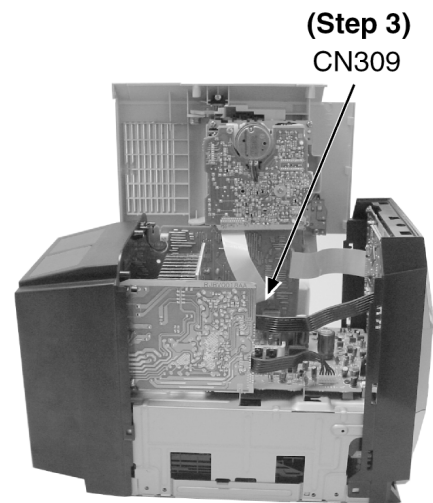
11.3. Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 6) of Item 11.2.



Step 1 : Remove the screw.

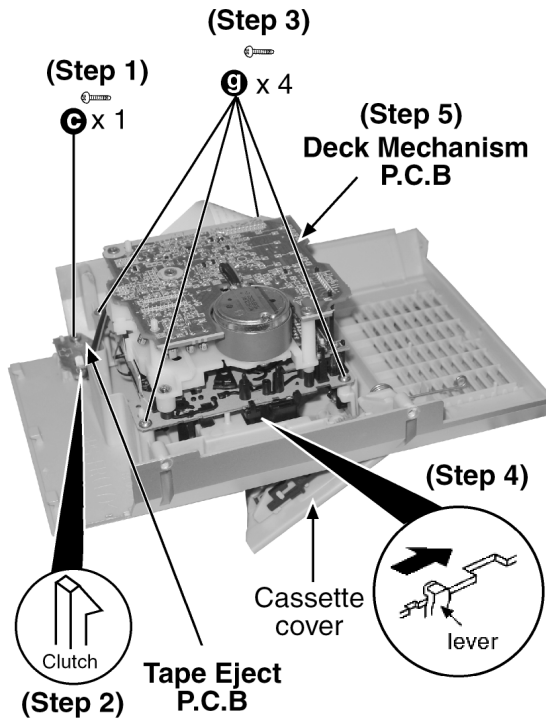
Step 2 : Push up the Top Cabinet as arrow shown.



Step 3 : Disconnect the FFC board (CN309).

11.4. Disassembly of Deck Mechanism P.C.B and Tape Eject P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.



Step 1 : Remove the screw.

Step 2 : Release Clutch.

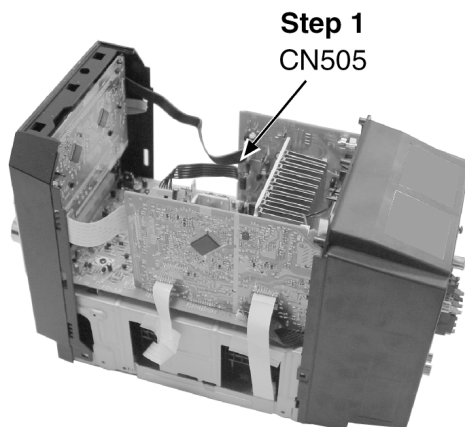
Step 3 : Remove all the screws.

Step 4 : Press the lever to open the cassette cover.

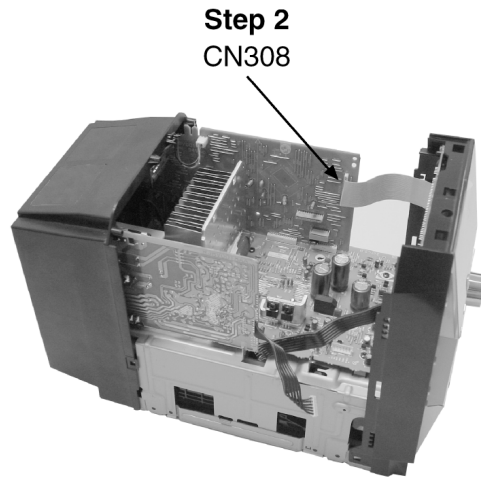
Step 5 : Remove the cassette mechanism unit.

11.5. Disassembly of Front Panel

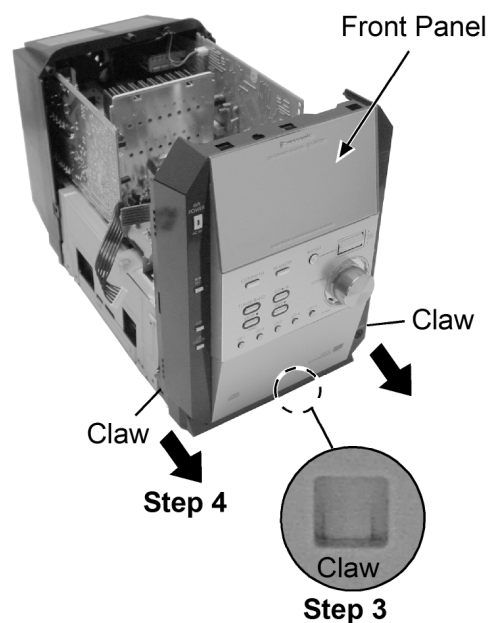
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.



Step 1 : Remove the CN505 Connector.



Step 2 : Remove the FFC CN308.

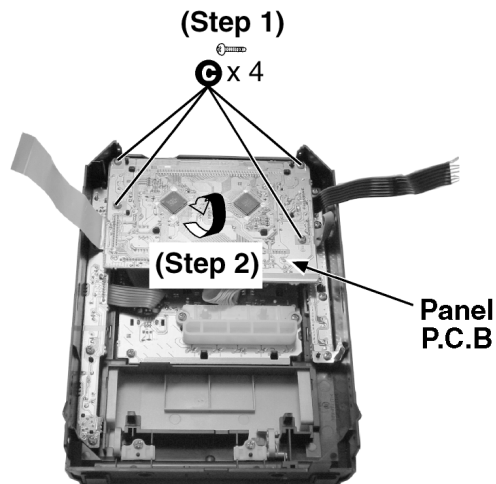


Step 3 : Release all the Claws.

Step 4 : Remove the Front Panel as arrow shown.

11.6. Disassembly of Panel P.C.B, Headphone P.C.B, Switch P.C.B and Tact switch P.C.B

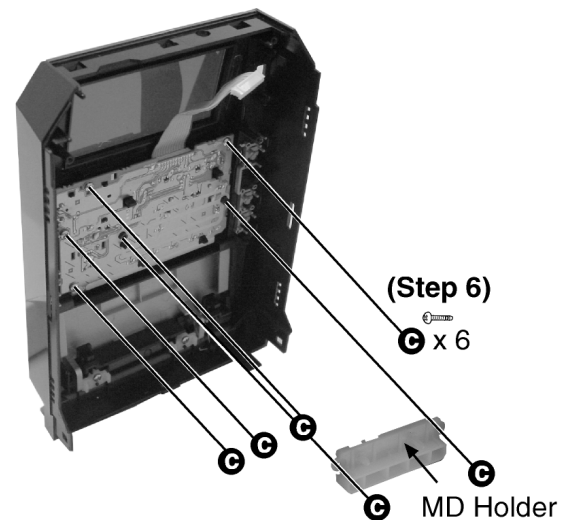
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Disassembly of Panel P.C.B.



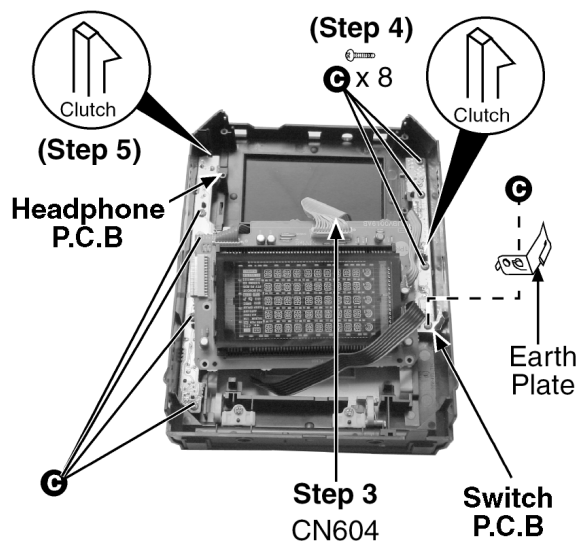
Step 1 : Remove all the screws.

Step 2 : Flip over the Panel P.C.B.

- Disassembly of Headphone P.C.B and Switch P.C.B.



Step 6 : Remove all the screws.

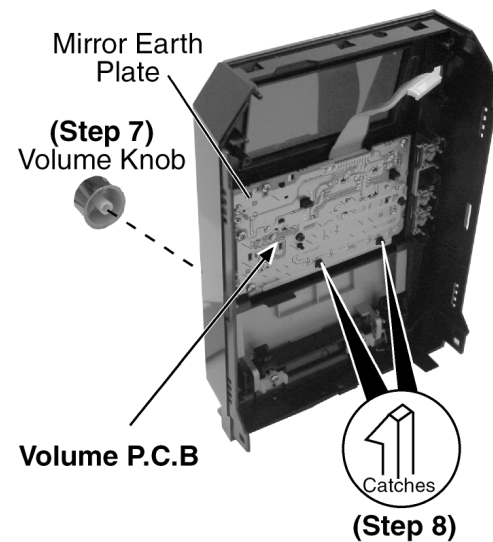


Step 3 : Remove the connector CN604.

Step 4 : Remove all the screws.

Step 5 : Release all the catches.

- Disassembly of Tact Switch P.C.B.



Step 7 : Remove the Volume Knob.

Step 8 : Release the Catches.

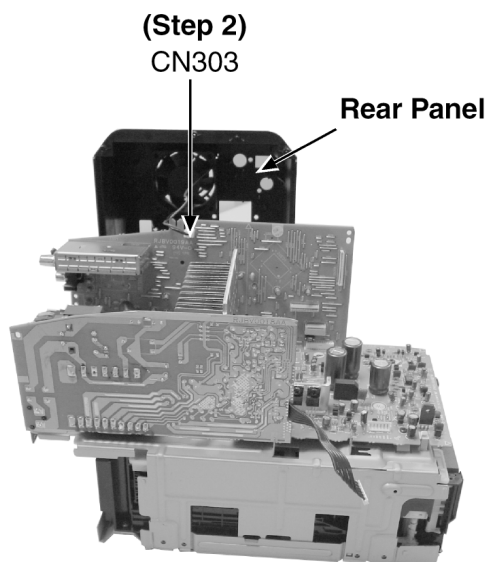
11.7. Disassembly of Rear Panel

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.

**(Step 1)**

x 12

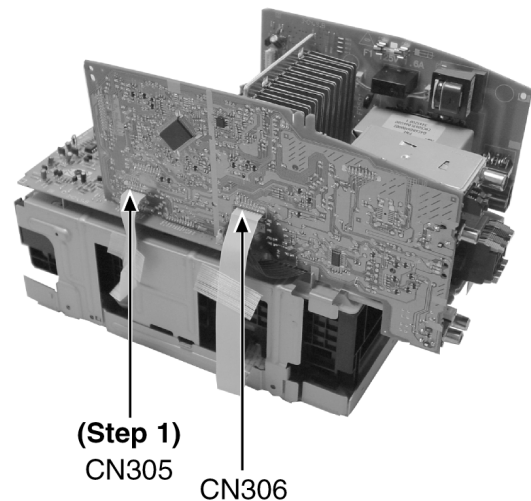
Step 1 : Remove all the screws.



Step 2 : Release the connector CN303.

11.8. Disassembly of Main P.C.B

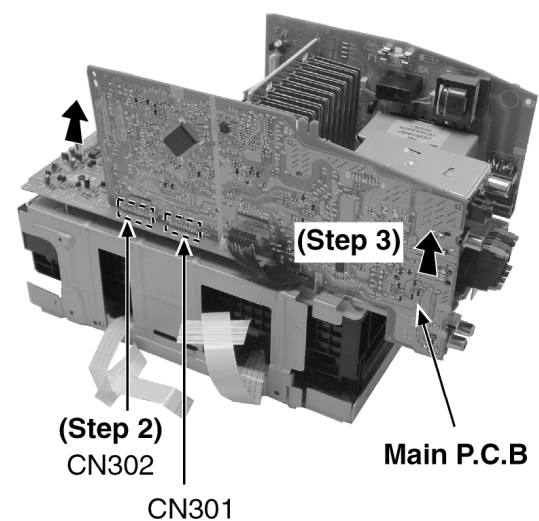
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.

**(Step 1)**

CN305

CN306

Step 1 : Release all the connector CN305 & CN306.

**(Step 2)**

CN302

CN301

(Step 3)

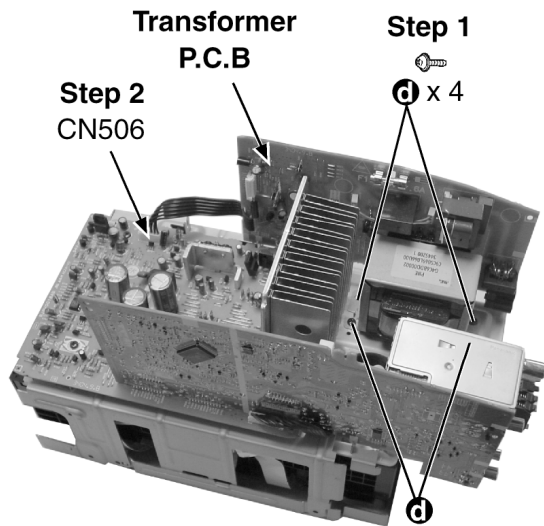
Main P.C.B

Step 2 : Detach FFC Board (CN301 and CN302).

Step 3 : Lift up the Main P.C.B as arrow shown.

11.9. Disassembly of Transformer P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.

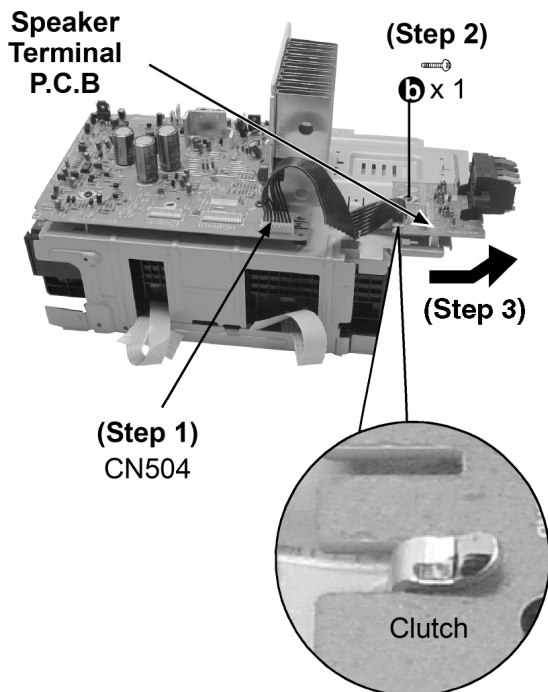


Step 1 : Remove all the screws.

Step 2 : Release the connector CN506.

11.10. Disassembly of Speaker Terminal P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.



Step 1 : Release the connector CN504.

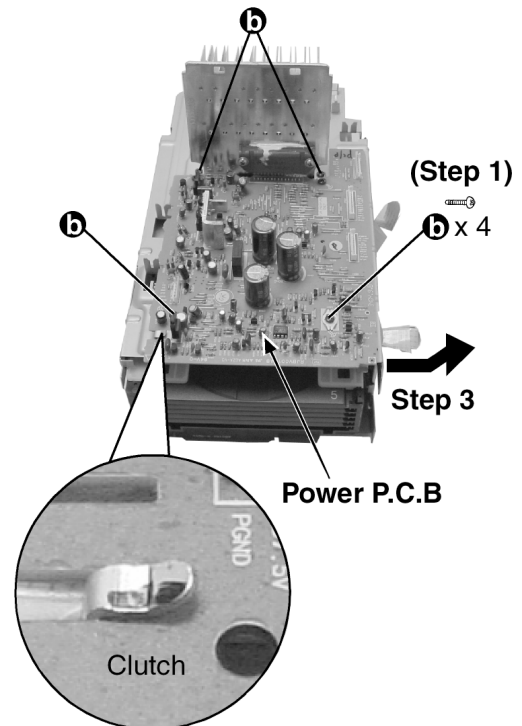
Step 2 : Remove the screw.

Step 3 : Remove the Speaker Terminal as arrow shown.

11.11. Disassembly of Power P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.

- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.

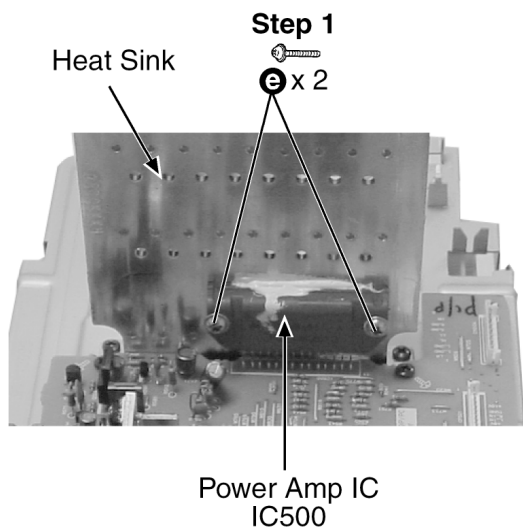


Step 1 : Remove all the screws.

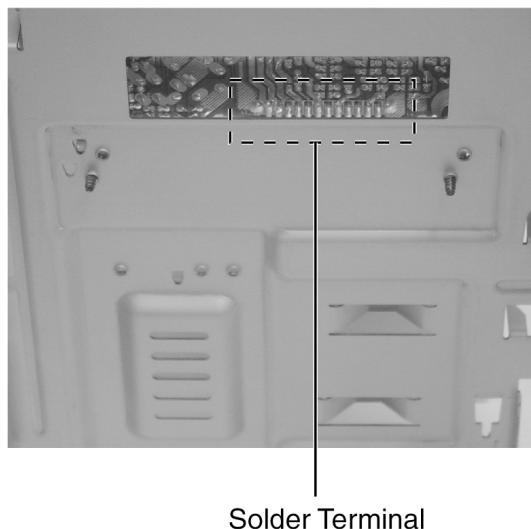
Step 2 : Remove the Power P.C.B as arrow shown.

11.12. Replacement of the Power Amplifier IC

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- **Replacement of the Power Amplifier IC**



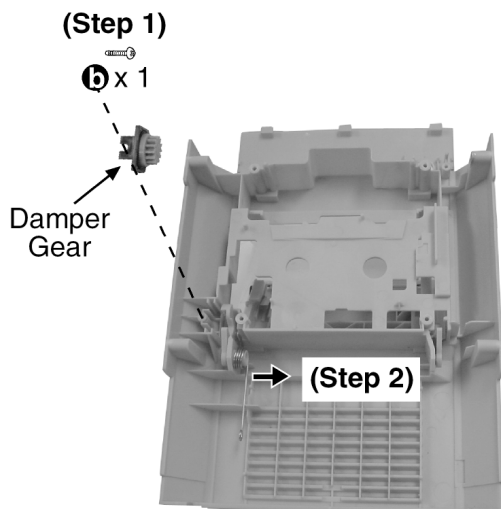
Step 1 : Remove 2 screws fixed to the Power Amp I.C.



Step 2 : Unsolder the terminals of Power Amp IC, transistor and replace the component.

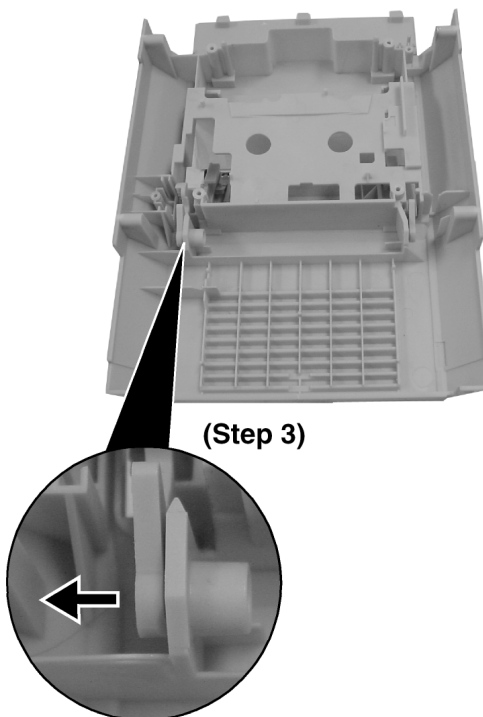
11.13. Procedure for Replacing Cassette Holder

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.

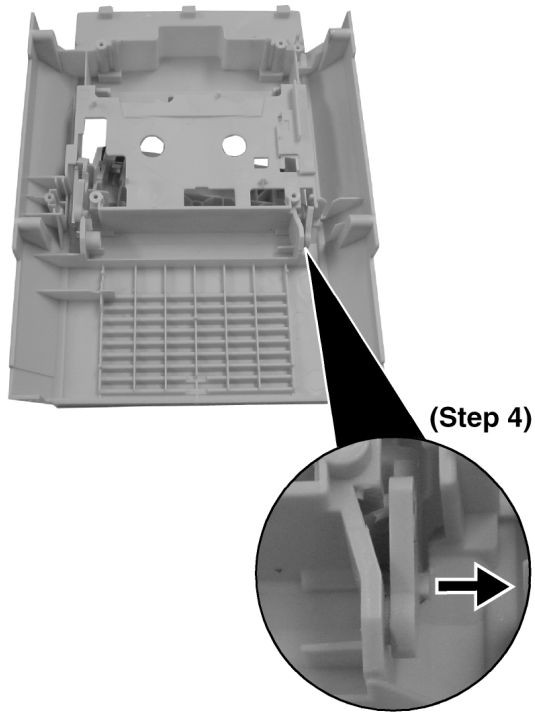


Step 1 : Remove the screw.

Step 2 : Remove the cassette open spring as arrow shown.



Step 3 : Remove the left cassette holder as arrow shown.



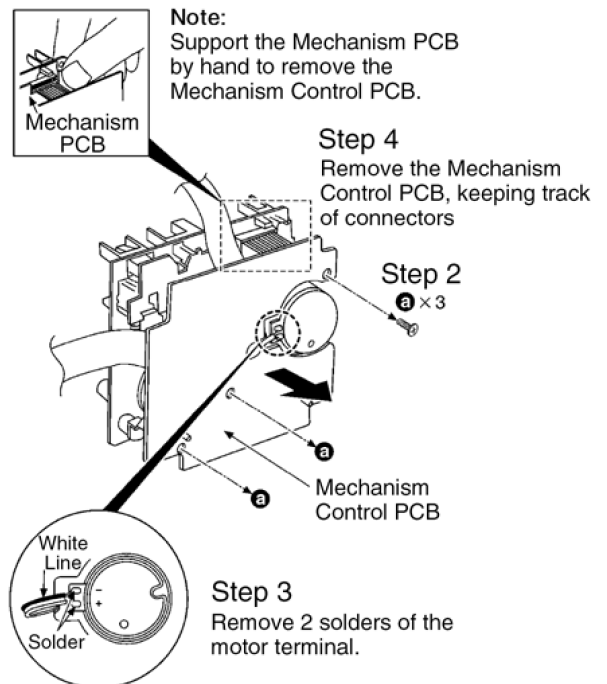
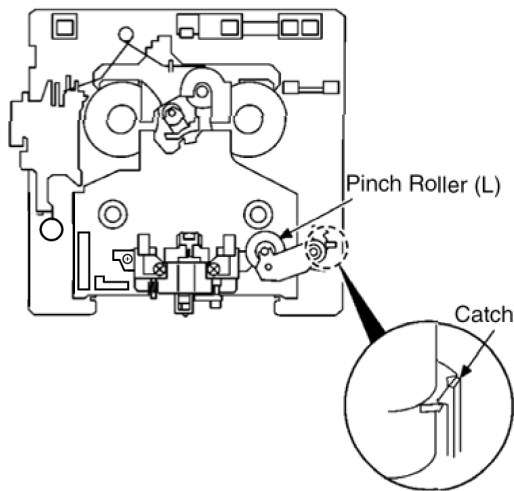
Step 4 : Remove the right cassette holder as arrow shown.

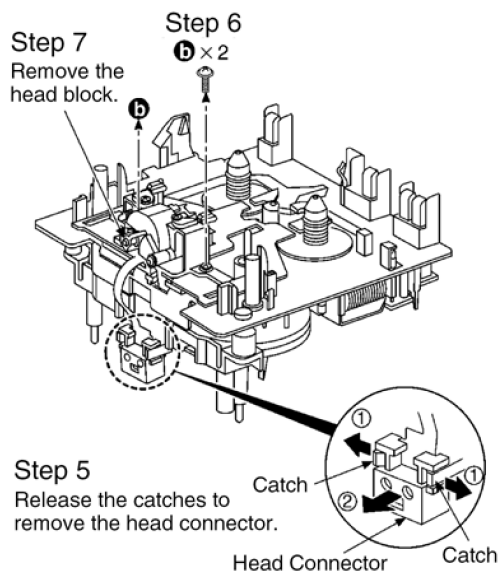
11.14. Procedure for Replacing Pinch Roller and Head Block (Cassette Mechanism Unit)

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.

Step 1

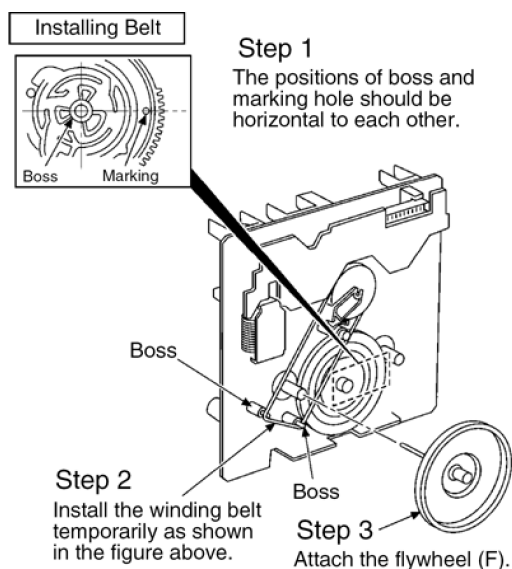
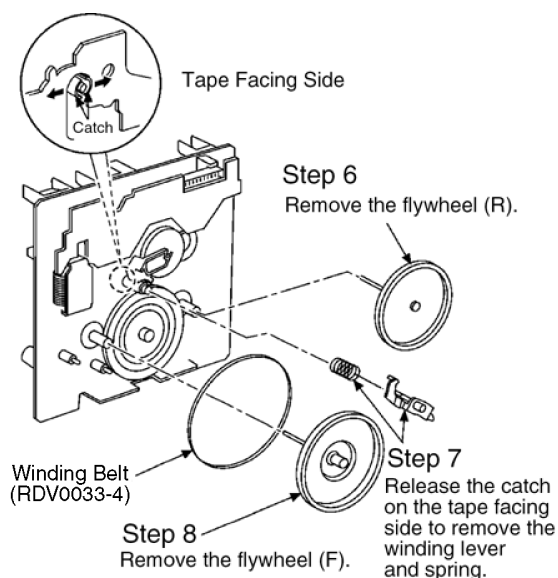
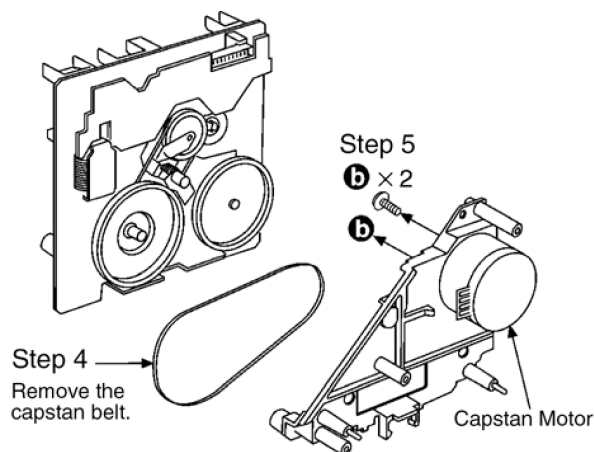
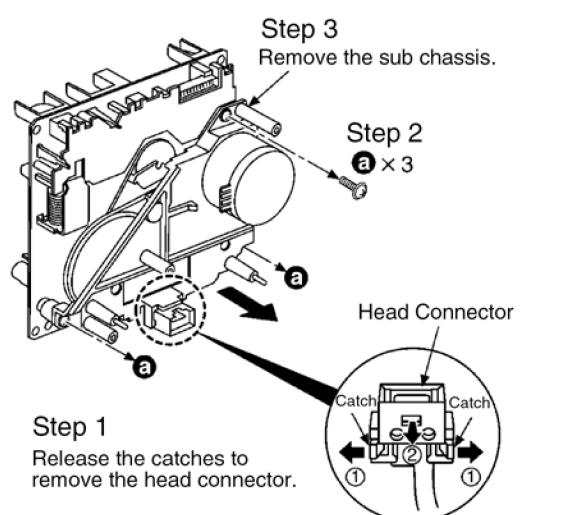
Release catches to remove the pinch rollers (L).

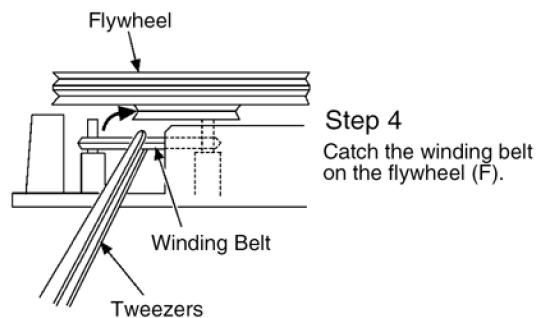




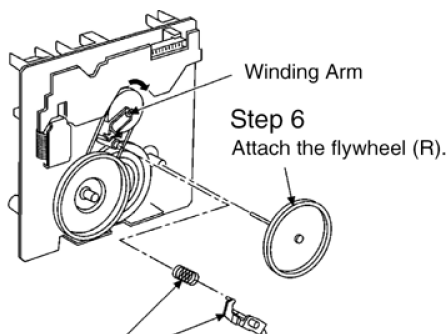
11.15. Procedure for Replacing Motor, Capstan Belt A, Capstan Belt B, and Winding Belt (Cassette Mechanism Unit)

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.
- Follow the (Step 1) - (Step 7) of Item 11.15.





Step 4
Catch the winding belt on the flywheel (F).



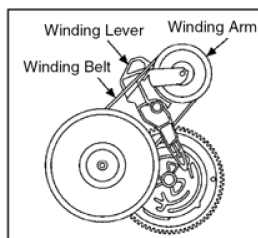
Step 6
Attach the flywheel (R).

Step 5

Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)

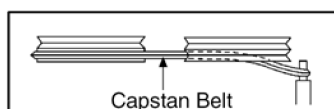
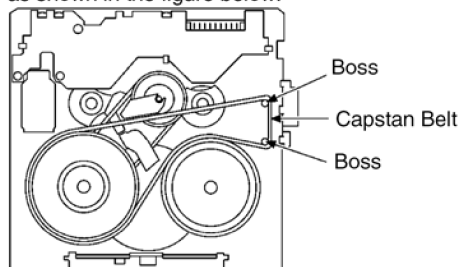
Note:

The winding lever should be positioned as shown in the right figure.



Step 7

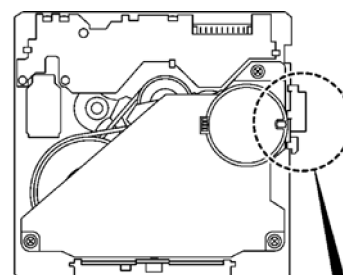
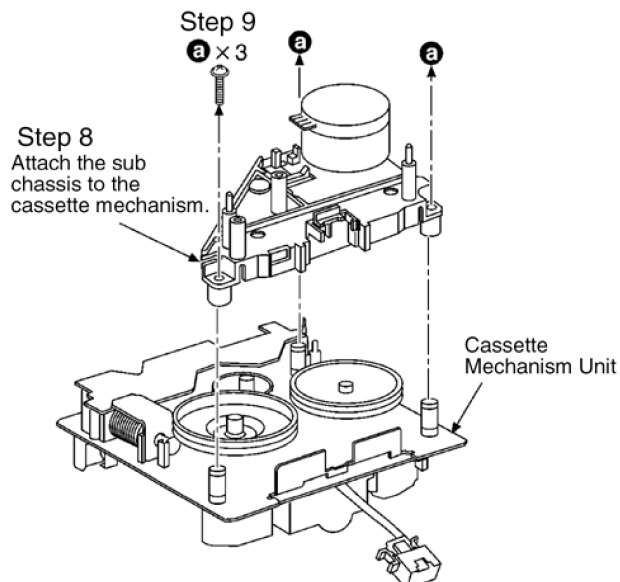
Install the capstan belt temporarily as shown in the figure below.



Side View

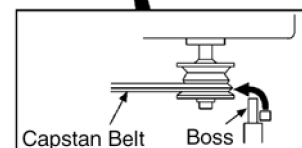
Note:

Keep the belt away from grease.



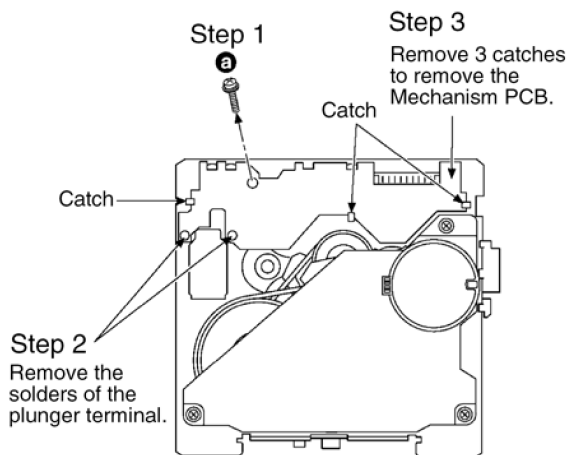
Step 10

Catch the capstan belt to the pulley of the capstan motor.



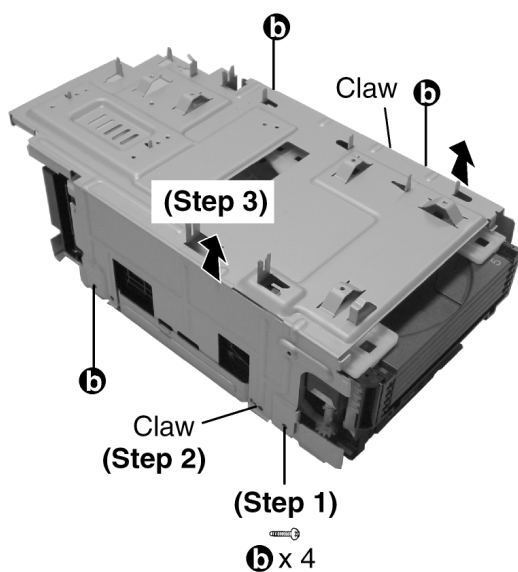
11.16. Procedure for Replacing Parts on Mechanism PCB

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.
- Follow the (Step 1) - (Step 7) of Item 11.15.



11.17. Disassembly of CR16 Mechanism

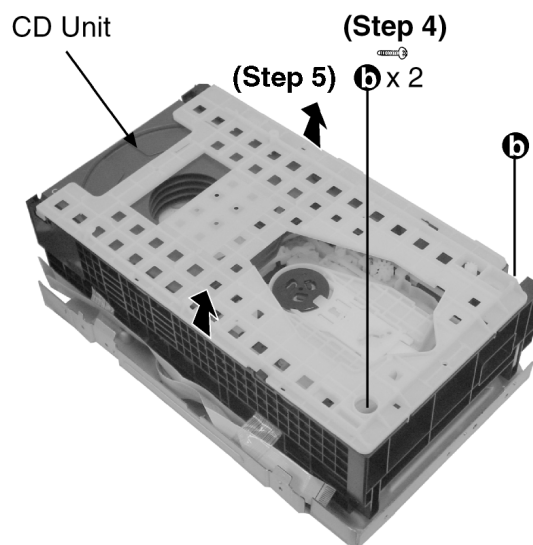
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.



Step 1 : Remove all the screws.

Step 2 : Release all the Claws.

Step 3 : Remove the chassis as arrow shown.

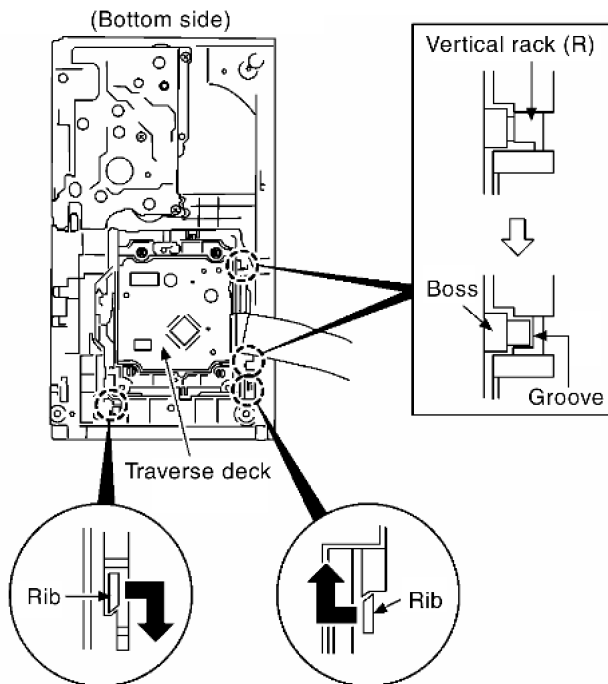


Step 4 : Remove all the screws.

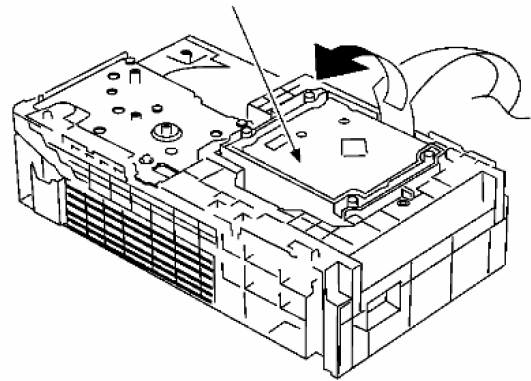
Step 5 : Remove the CD Unit as arrow shown.

Step 6

Move ribs at both sides to the arrow direction
(The vertical rack (R) slides and the groove opens)

**Step 7**

Remove CD traverse deck rotating to the arrow direction.

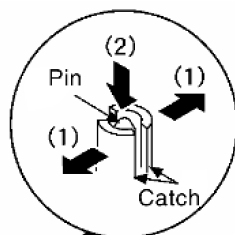


11.18. Replacement of optical pickup unit (CD mechanism)

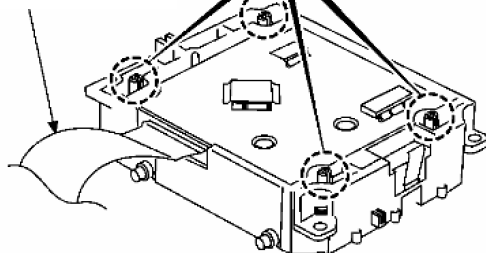
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.

Step 2

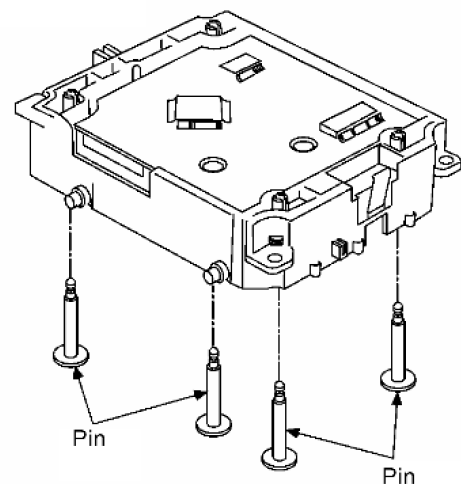
Widening the catch, push the pin in

**Step 1**

Pull out FFC

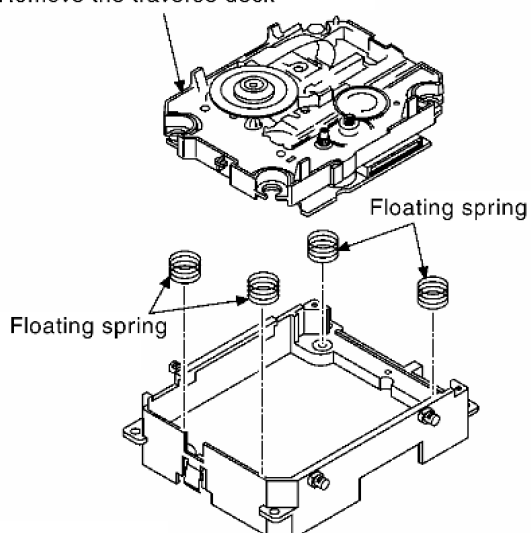
**Step 3**

Remove 4 pins



Step 4

Remove the traverse deck

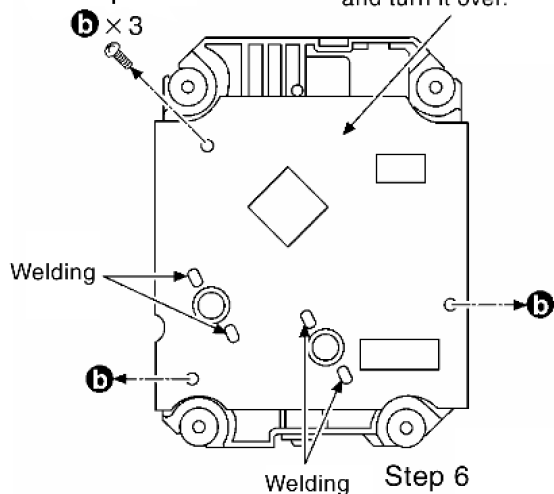


Note:

As floating springs (4 pieces) come off at the same time, be careful not to lose them.

Step 7

Remove CD servo board and turn it over.

Step 5**b** × 3

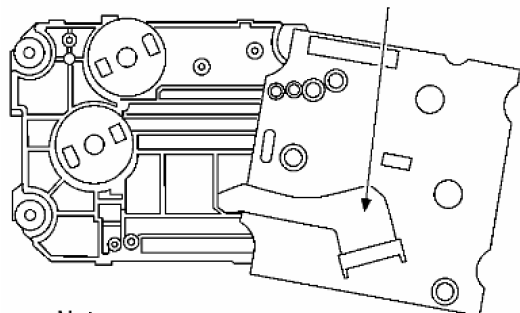
Welding

Step 6

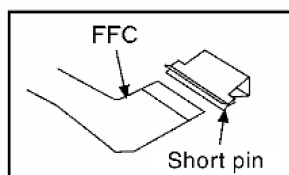
Remove 4 welded parts of the motor terminal.

Step 8

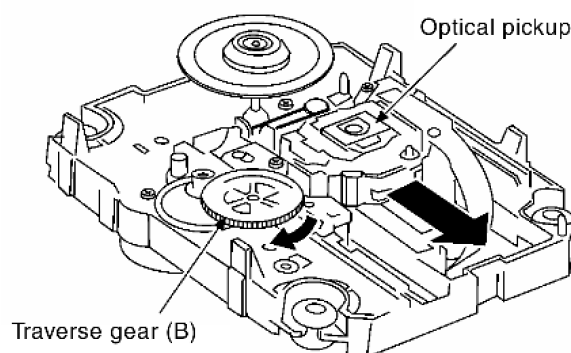
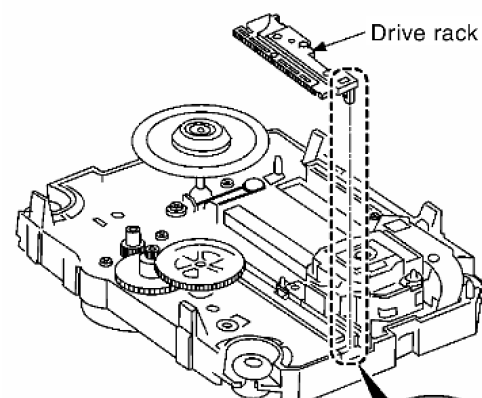
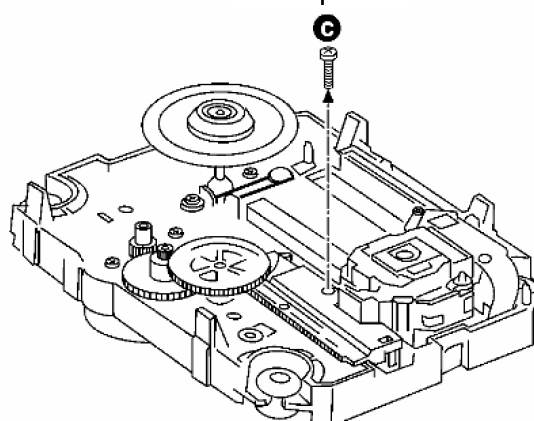
Pull FFC out from the connector.



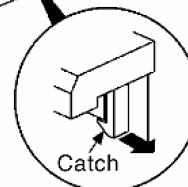
Note:

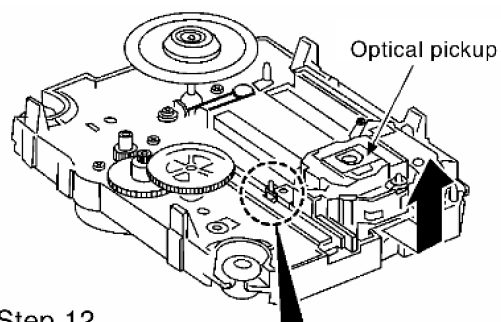
Insert a short pin into FFC of the optical pickup.
[See "Notice on handling of the optical pickup"]**Step 9**

Rotate the traverse gear (B) to the arrow direction and shift the optical pickup to the furthest backward.

**Step 10****Step 11**

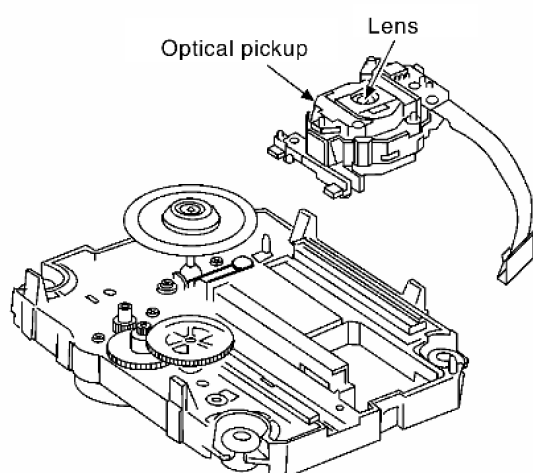
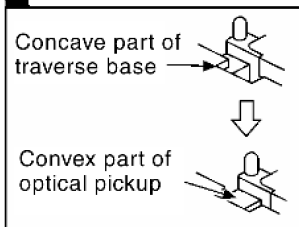
Remove the catch of the drive rack, and take out the drive rack.





Step 12

Place the convex part of an optical pickup to the concave part of a traverse base, then take out the optical pickup.



Note:

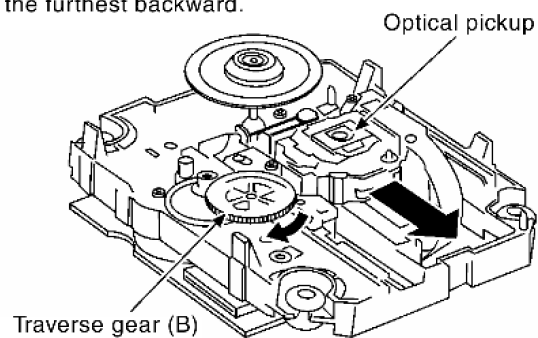
Do not touch the lens of the optical pickup

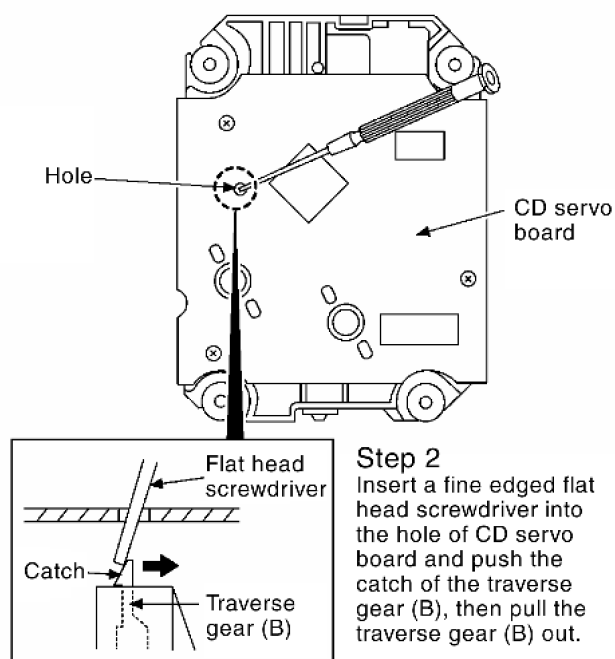
11.19. Replacement of a traverse gear A and a traverse gear B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 12) of Item 11.18.

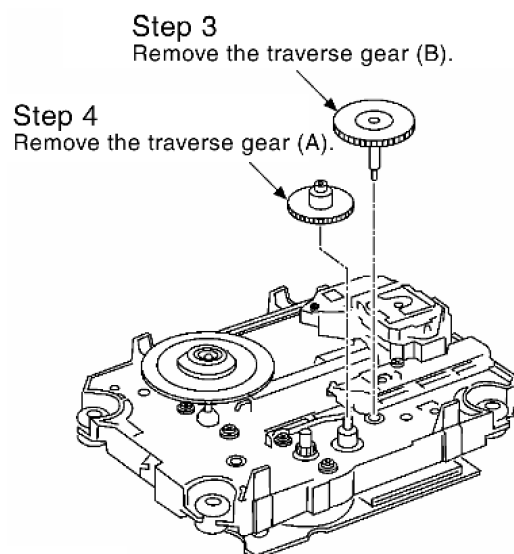
Step 1

Rotate the traverse gear (B) to the arrow direction, and shift the optical pickup to the furthest backward.





Note:
Be careful not to break the hook of the traverse gear (B)



Note:
Do not use the removed traverse gear (B) anymore. Surely replace with a new one.

11.20. Procedure for removing CD loading mechanism

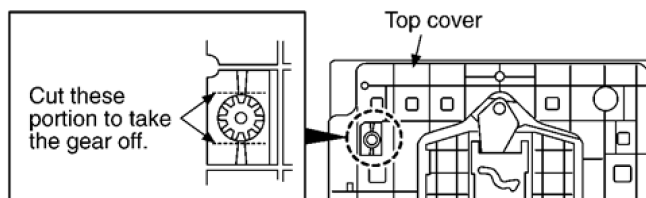
1. Turn off by pressing power SW in the body.
2. Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

11.21. CR16 mechanism disassembly procedure

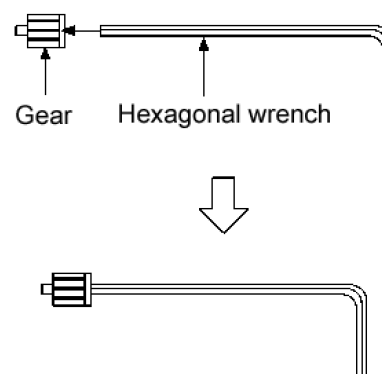
11.21.1. Gear for servicing information

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

1. Remove the gear attached to top cover of CD loading mechanism.



2. Insert the hexagonal wrench (2.5mm) into the gear.



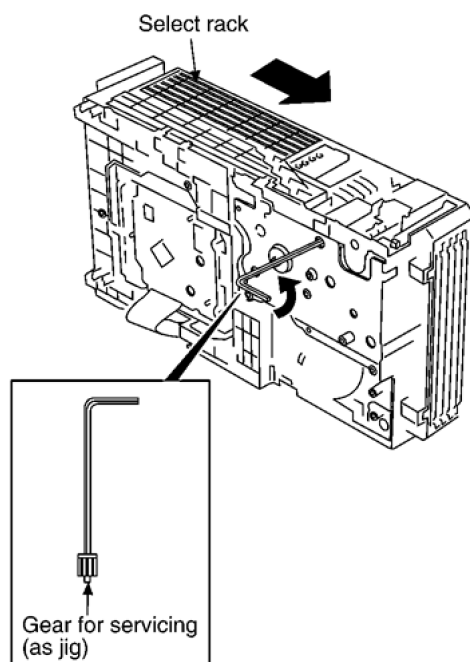
(Preparation of gear as jig is completed)

11.21.2. Replacement for the disc tray

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.

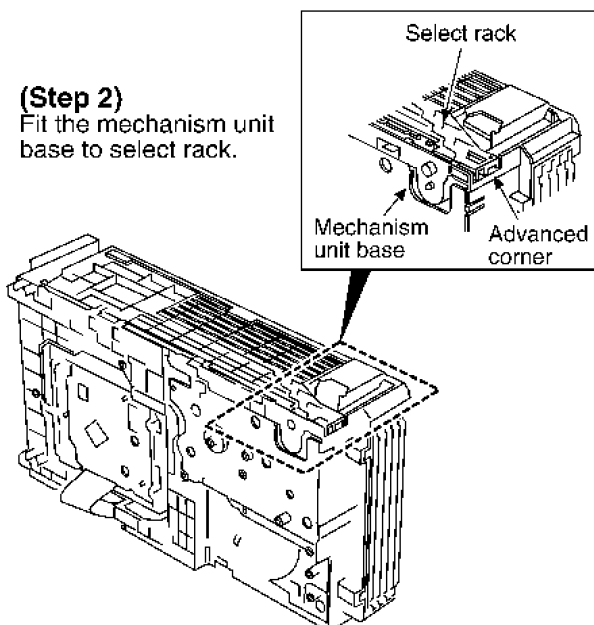
(Step 1)

Rotate the gear for servicing and move the select rack to advanced corner.



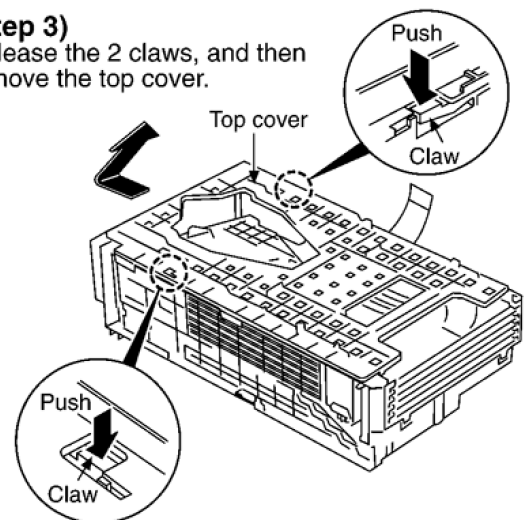
(Step 2)

Fit the mechanism unit base to select rack.



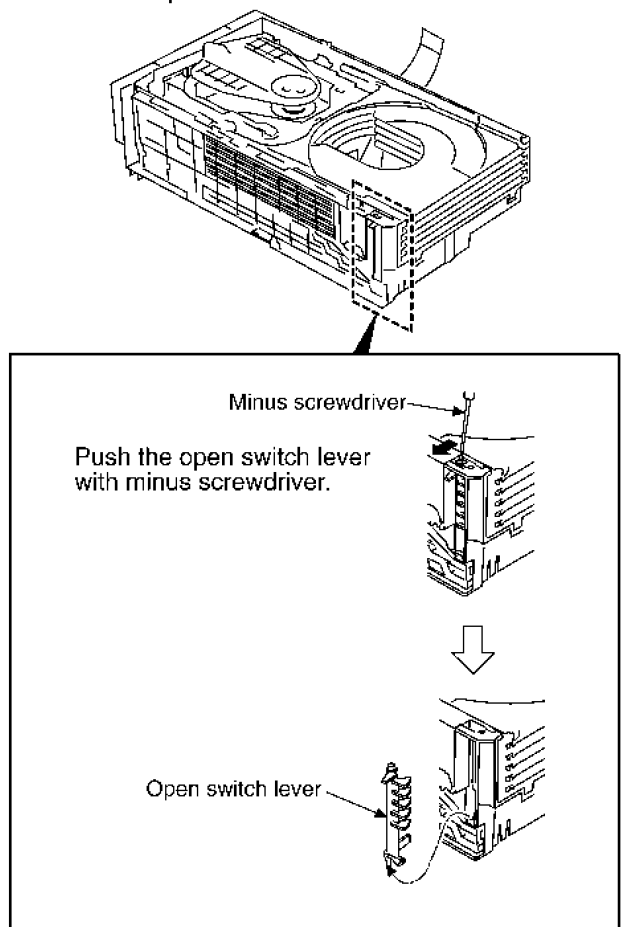
(Step 3)

Release the 2 claws, and then remove the top cover.



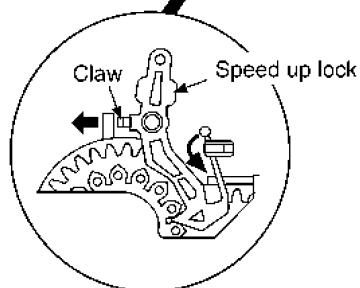
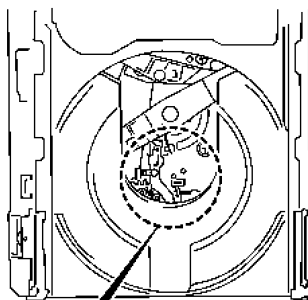
(Step 4)

Remove the open switch lever.



(Step 5)

Release the claw, and then remove the speed up lock.



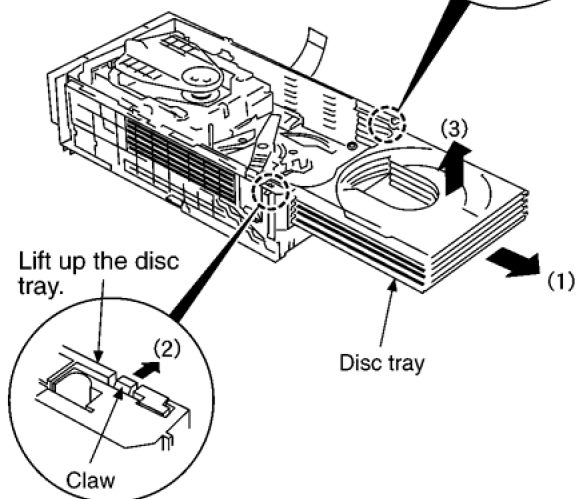
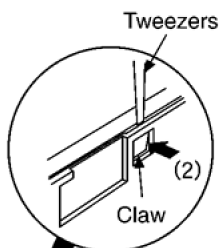
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

(Step 6)

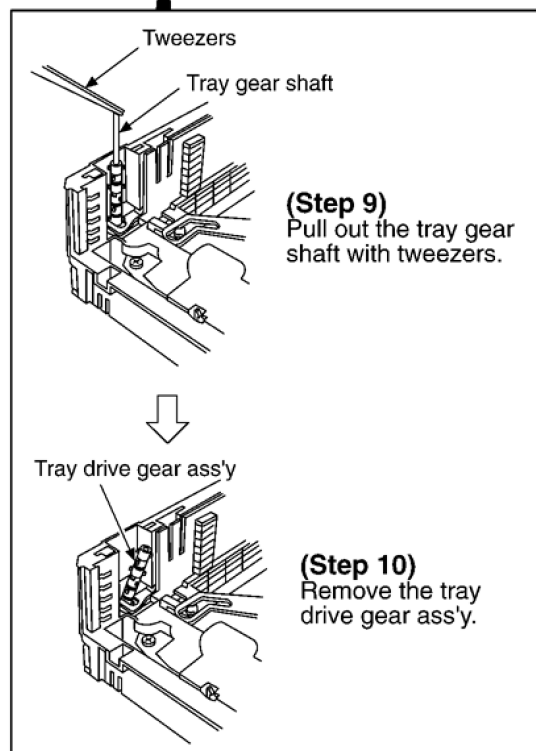
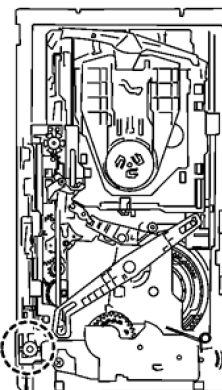
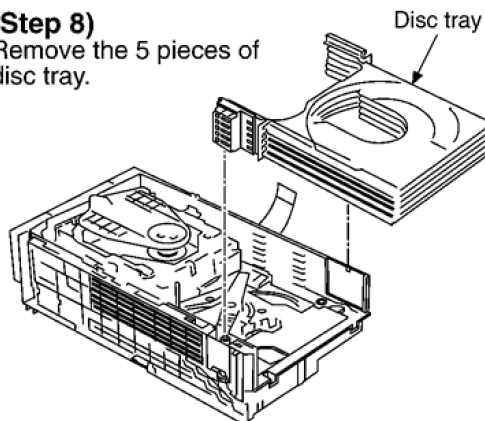
Draw out all disc tray completely.

(Step 7)

Release the both claws, and then lift up the disc tray.

**(Step 8)**

Remove the 5 pieces of disc tray.



11.21.3. Replacement for the traverse deck

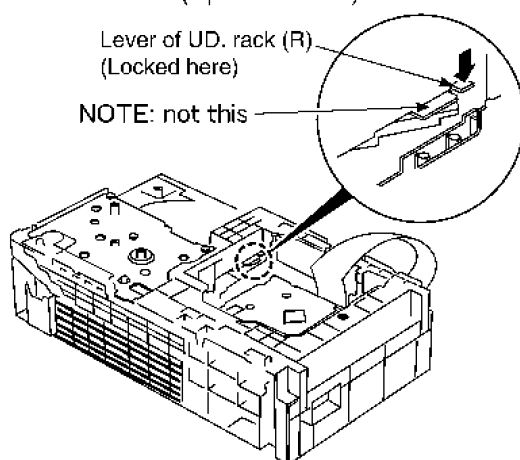
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 10) of Item 11.21.2

(Step 1)

Confirm the position for lever of UD. rack (R) to remove traverse unit.

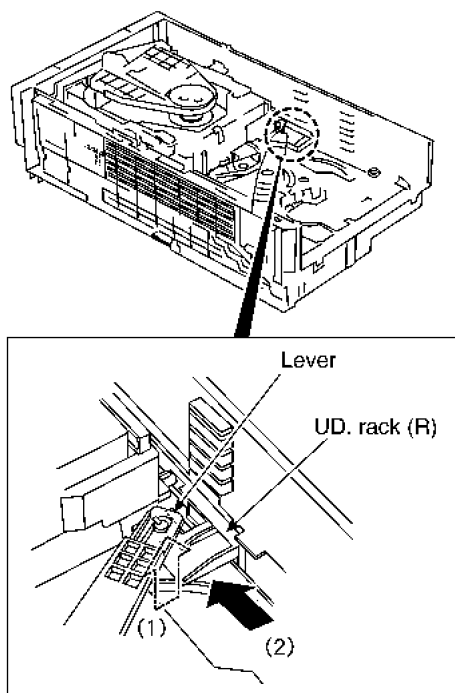
(Step 2)

Turn the unit over. (Upside: P.C.B.)



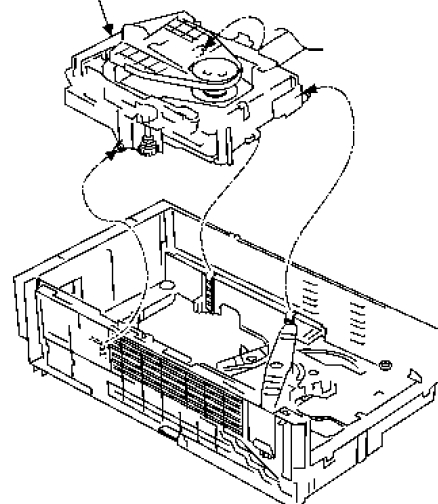
(Step 3)

Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.



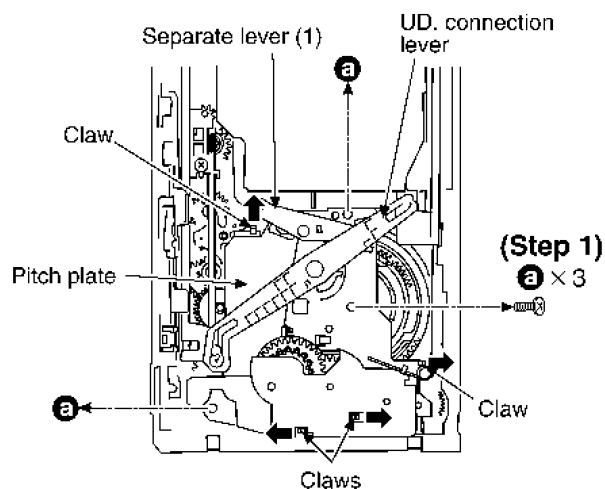
(Step 4)

Remove the traverse unit.



11.21.4. Disassembly for CD loading unit

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 10) of Item 11.21.2
- Follow the (Step 1) - (Step 4) of Item 11.21.3

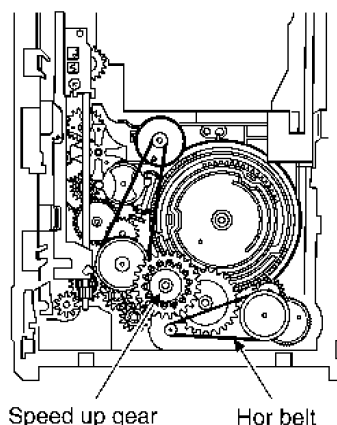


(Step 2)

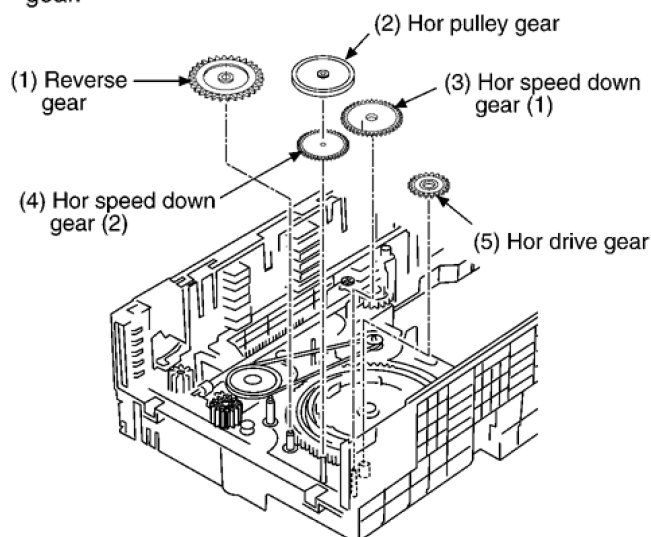
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

(Step 3)

Remove the speed up gear and hor belt.

**(Step 4)**

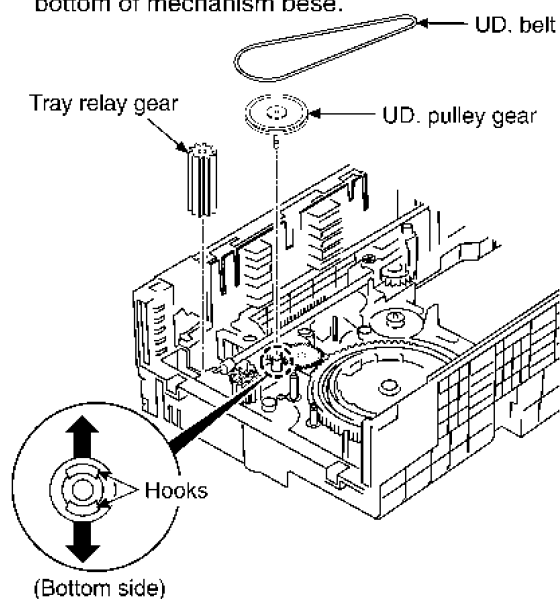
Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

**(Step 5)**

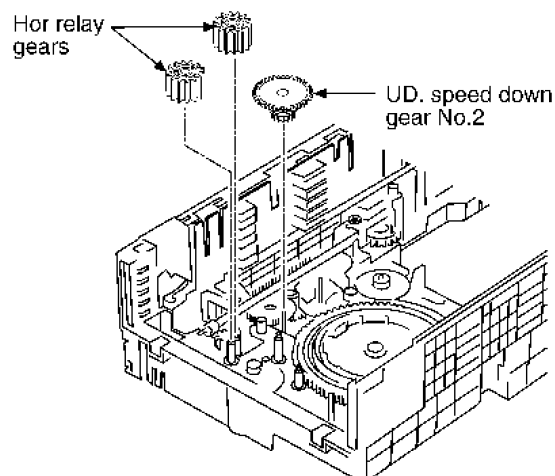
Remove the UD. belt and tray relay gear.

(Step 6)

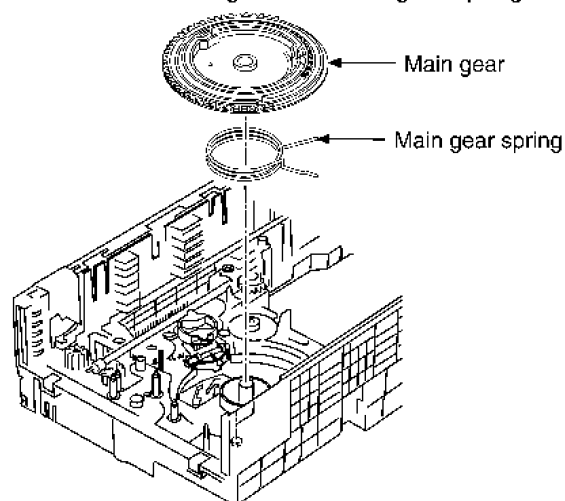
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism base.

**(Step 7)**

Remove the 2 hor relay gears and UD. speed down gear No.2.

**(Step 8)**

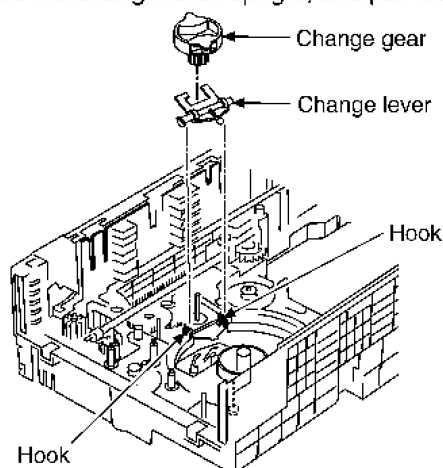
Remove the main gear and main gear spring.

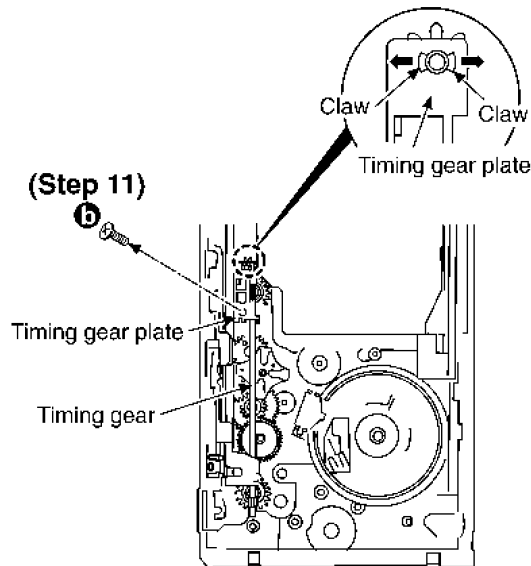
**(Step 9)**

Remove the change gear.

(Step 10)

Raise the change lever upright, and pull it out of hook.

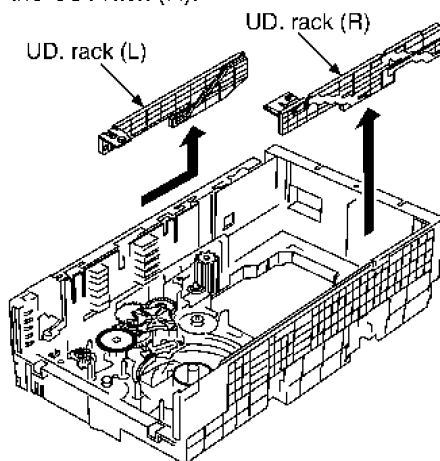




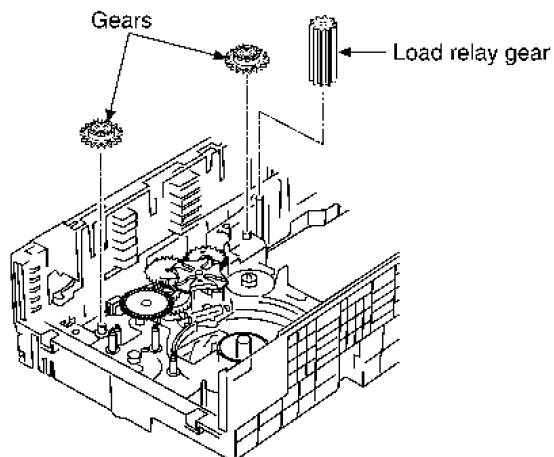
(Step 12)
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)
Move the UD. rack (L) to backward, and then remove it.

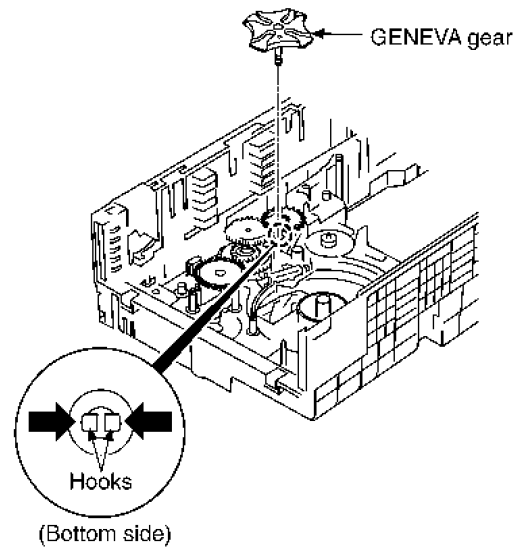
(Step 14)
Remove the UD. rack (R).



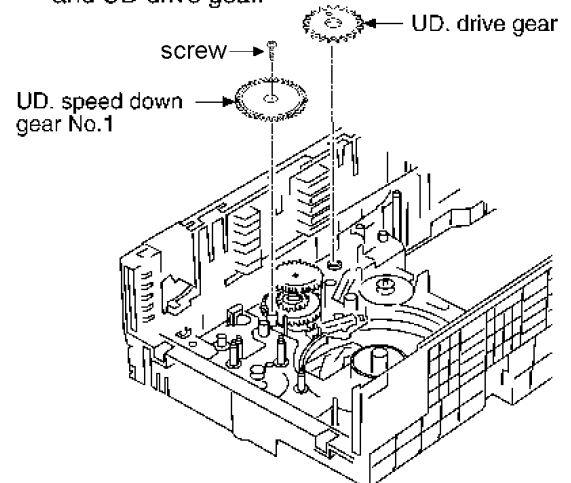
(Step 15)
Remove the 2 gears and load relay gear.



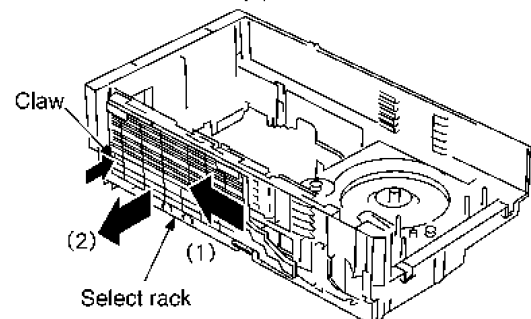
(Step 16)
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.

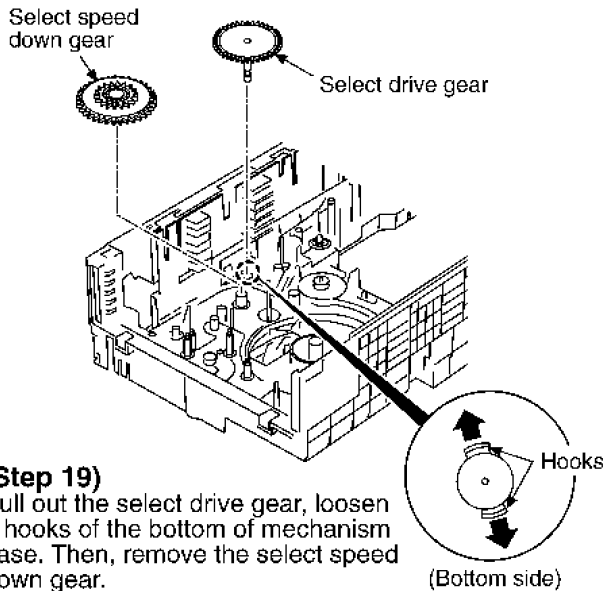


(Step 17)
Remove the UD. speed down gear No.1 and UD drive gear.

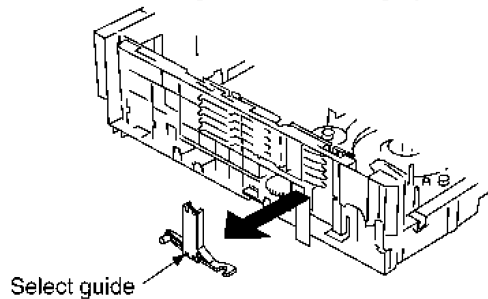


(Step 18)
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).

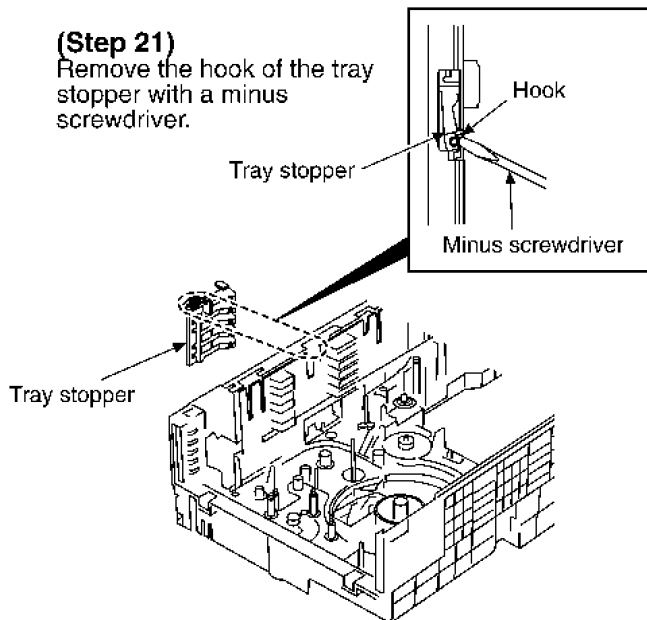




(Step 20)
Remove the select guide after sliding upside.

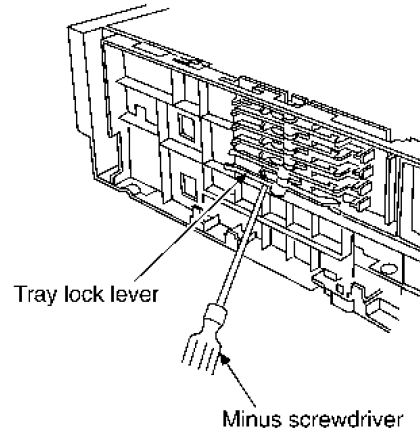


(Step 21)
Remove the hook of the tray stopper with a minus screwdriver.



(Step 22)

Remove the bottom of the tray lock lever with a minus screwdriver and others.



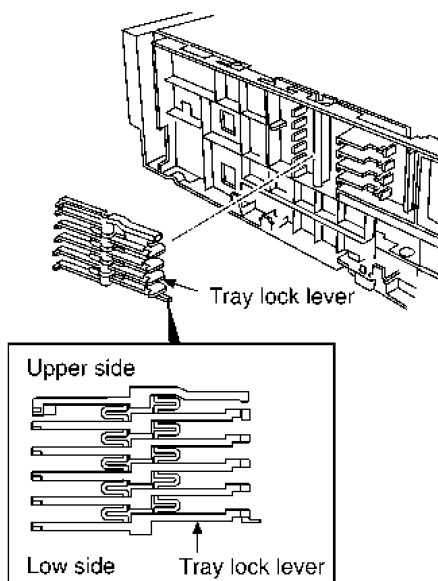
11.22. CR16 MECHANISM ASSEMBLY PROCEDURE

The following specified greases and/or oil must be applied when some specific parts are changed.

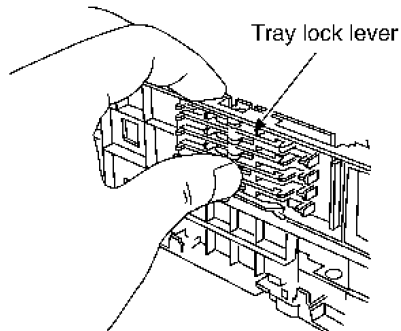
1. Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).
 2. Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.
- Follow the (Step 1) - (Step 6) of Item 11.2.
 - Follow the (Step 1) - (Step 3) of Item 11.3.
 - Follow the (Step 1) - (Step 4) of Item 11.5.
 - Follow the (Step 1) - (Step 2) of Item 11.7.
 - Follow the (Step 1) - (Step 3) of Item 11.8.
 - Follow the (Step 1) - (Step 2) of Item 11.9.
 - Follow the (Step 1) - (Step 3) of Item 11.10.
 - Follow the (Step 1) - (Step 2) of Item 11.11.
 - Follow the (Step 1) - (Step 7) of Item 11.17.
 - Follow the (Step 1) - (Step 10) of Item 11.21.2
 - Follow the (Step 1) - (Step 4) of Item 11.21.3
 - Follow the (Step 1) - (Step 22) of Item 11.21.4

(Step 1)

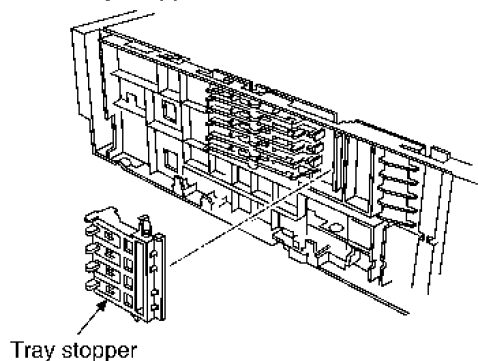
Install the tray lock lever to mechanism base.

**(Step 2)**

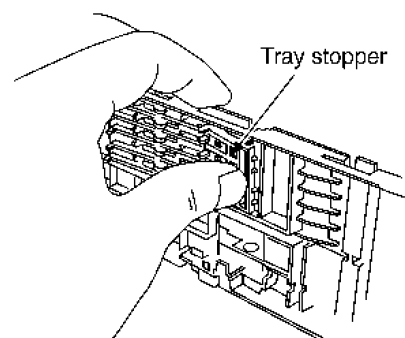
Push the tray lock lever with a hand and install it.

**(Step 3)**

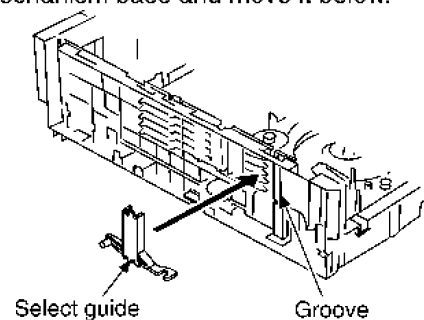
Install the tray stopper to mechanism base.

**(Step 4)**

Push the tray stopper with a hand and install it.

**(Step 5)**

Insert the select guide with a groove of the mechanism base and move it below.

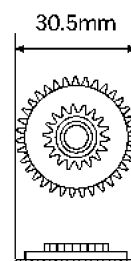
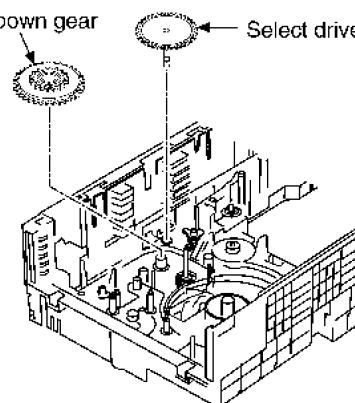
**(Step 6)**

Install the select speed down gear to mechanism base.

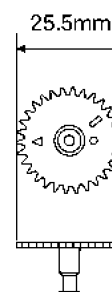
(Step 7)

Install the select drive gear to mechanism base.

Select speed down gear Select drive gear



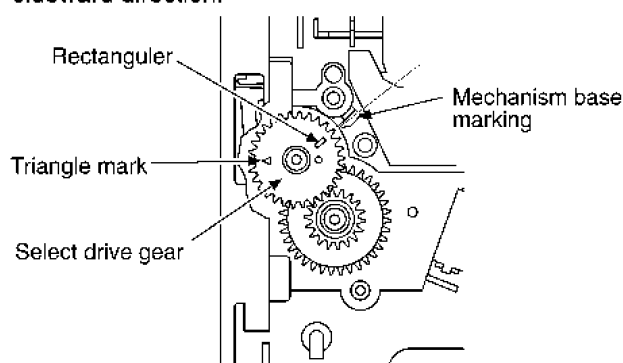
Select speed down gear
(White)



Select drive gear
(White)

(Step 8)

Fit a mechanism base marking to the rectangular mark of gear so that the triangle mark can indicate the sideward direction.

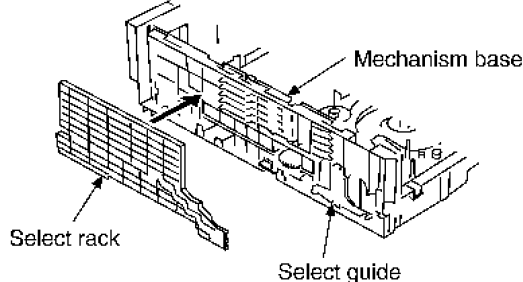
**(Step 9)**

Install the select rack to mechanism base.

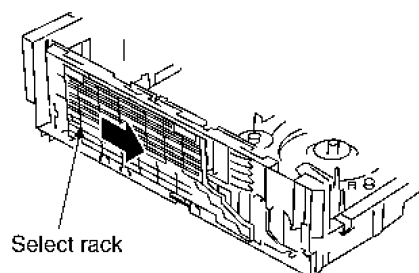
Checking items before the installation.

1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position. (Rectangle/Triangular mark) (Refer to Step 8)

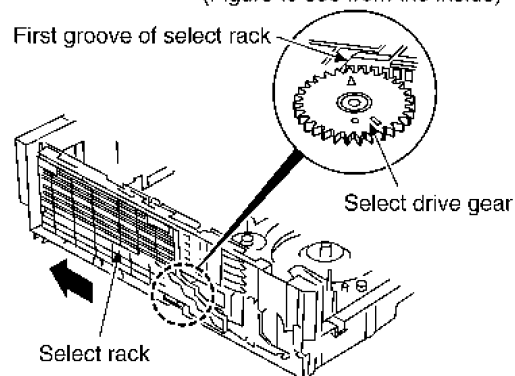
1. Put a select rack down with it fitted to its circumference of mechanism base.



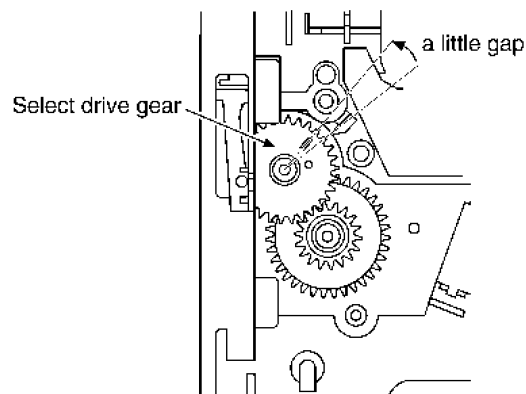
2. Slide the select rack with it's pushing to a little right direction and install it.



(Figure to see from the inside)

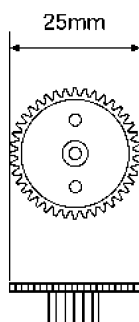
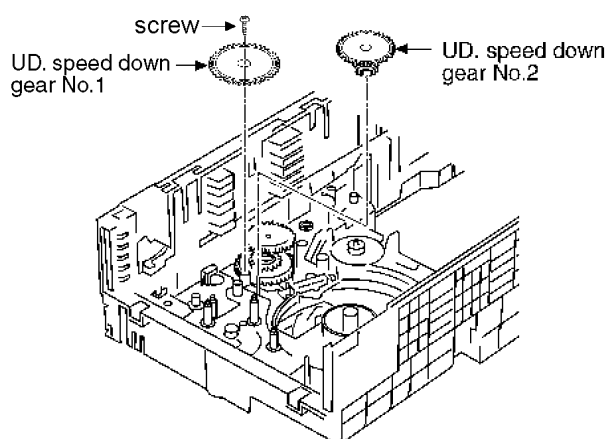


3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it goes forward. And, all the while it must be checked that select rack is in the extreme end.
5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

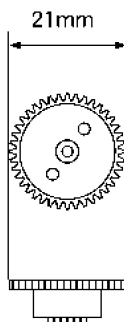


(Step 10)

Install the UD. speed down gear No.1 and UD. speed down gear No.2.



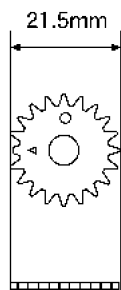
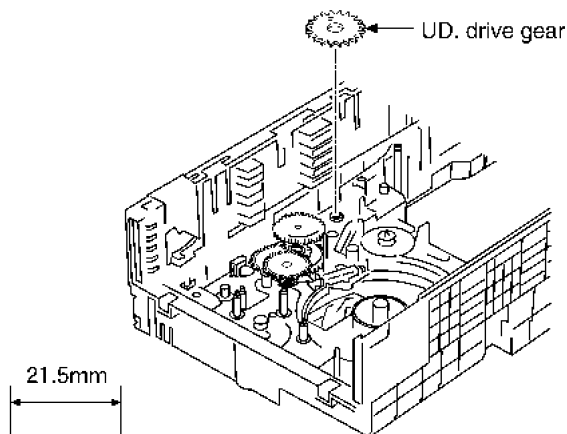
UD. speed down gear No.1
(White)



UD. speed down gear No.2
(Semi-transparent)

(Step 11)

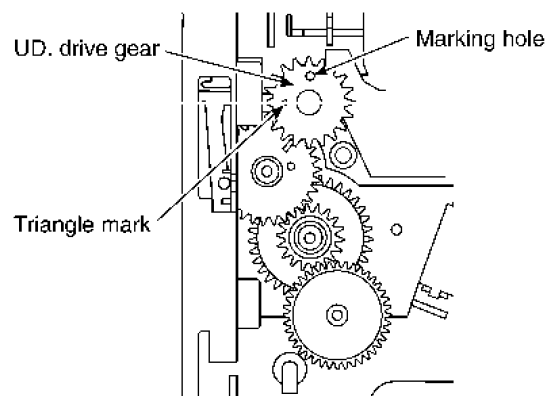
Install the UD. drive gear to mechanism base.



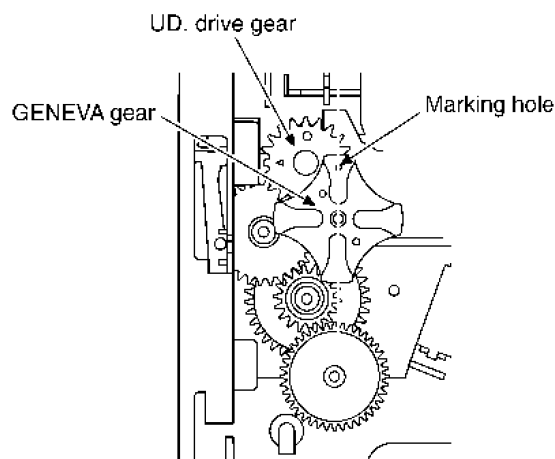
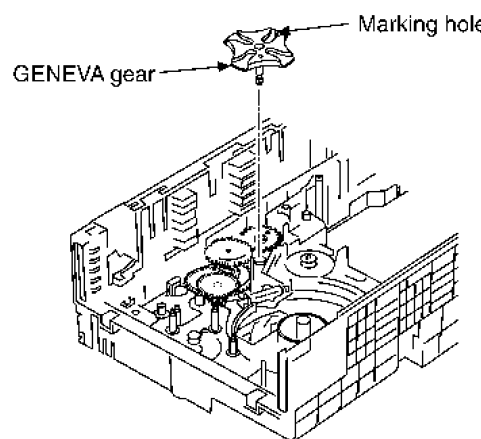
UD drive gear
(White)

(Step 12)

Insert the UD. drive gear with its marking hole upward. At that time, its triangle mark should be sideways.

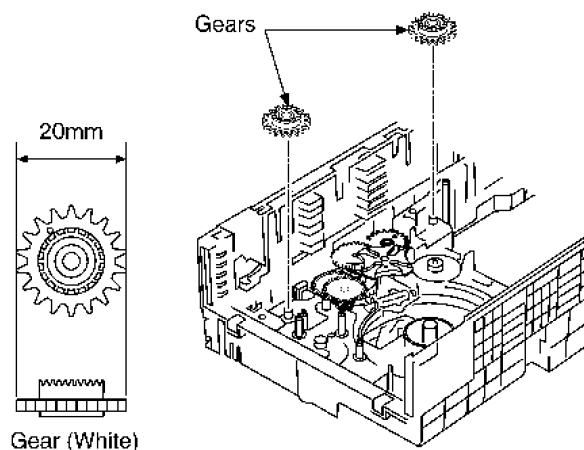
**(Step 13)**

Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base. At that time, UD. drive gear mustn't be moved.

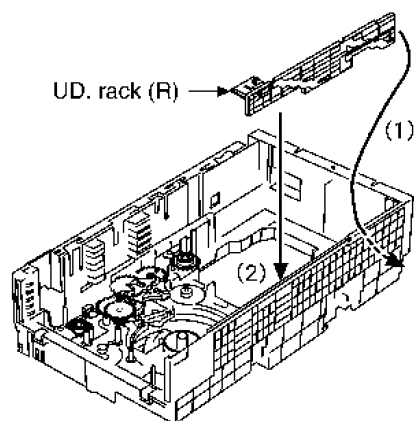


(Step 14)

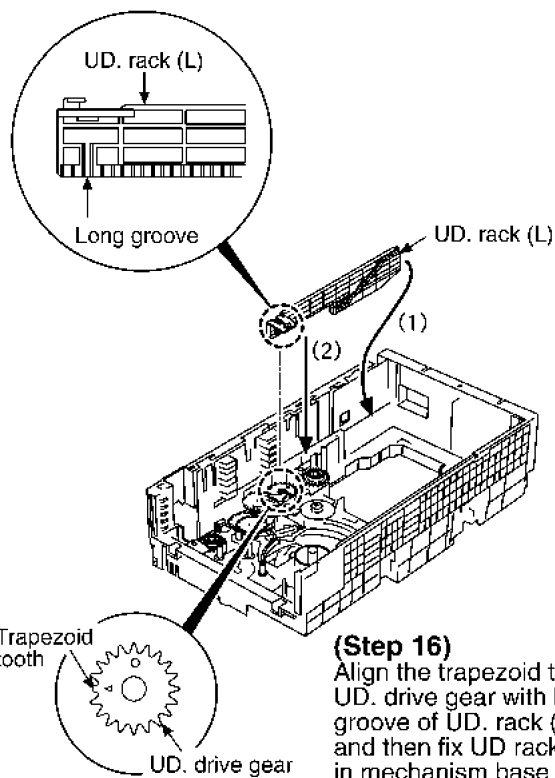
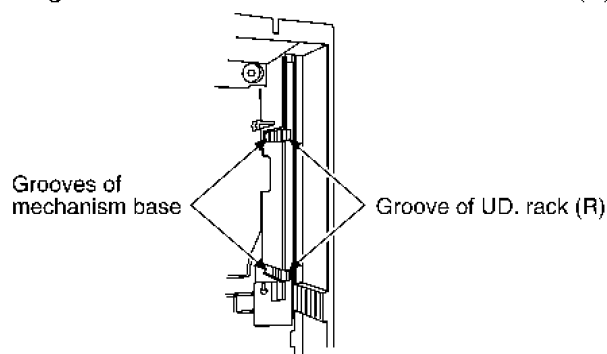
Install the 2 gears to mechanism base.

**(Step 15)**

Insert the UD. rack (R) to (2) from arrow (1).

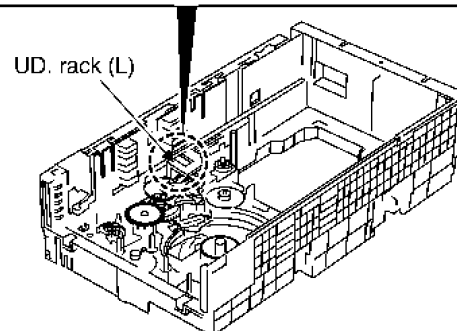
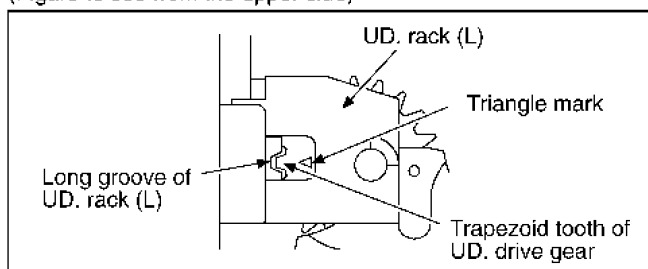
**NOTE:**

Put a groove of the mechanism base to the UD. rack (R).

**(Step 16)**

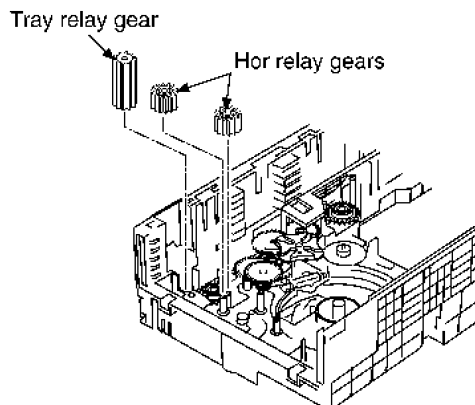
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

(Figure to see from the upper side)



(Step 17)

Install the tray relay gear and 2 hor relay gears.



15.5mm



Hor relay gears
(White)

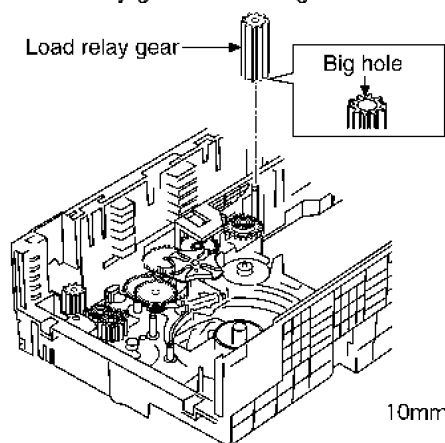
12mm



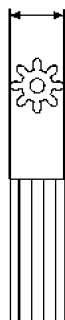
Tray relay gear
(White)

(Step 18)

Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)



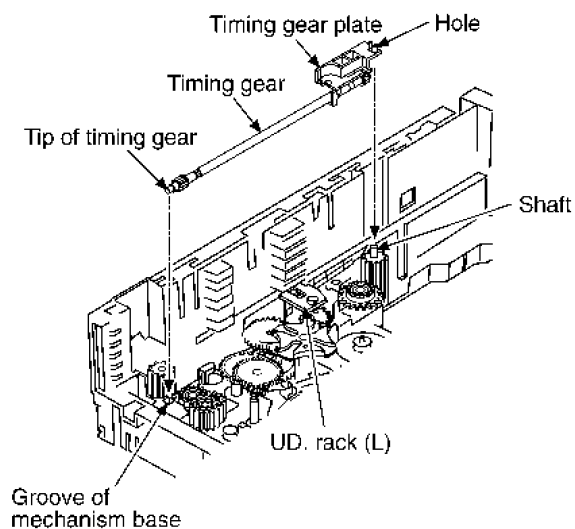
10mm



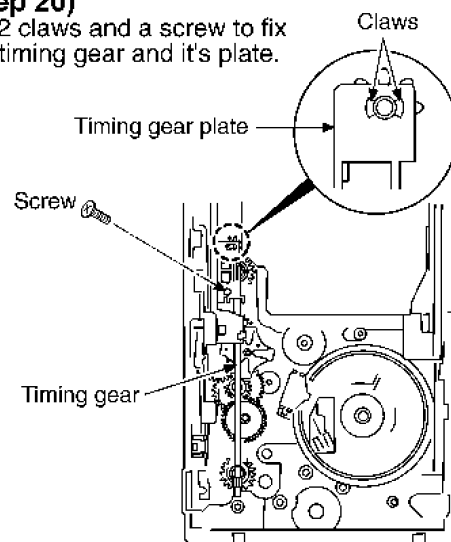
Load relay gear
(White)

(Step 19)

Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).

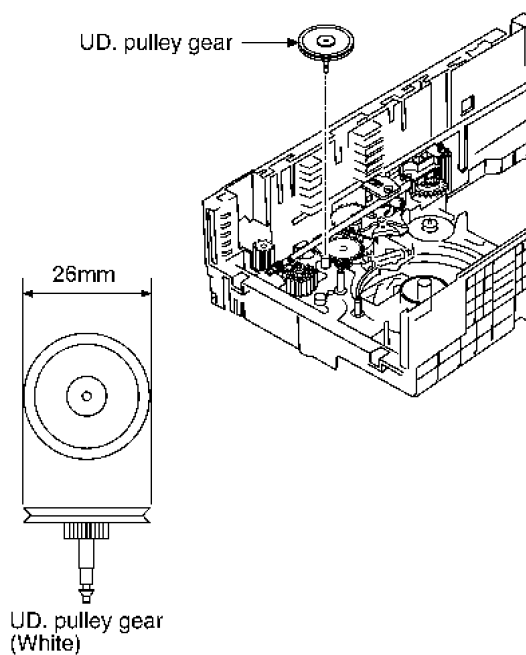
**(Step 20)**

Fix 2 claws and a screw to fix the timing gear and it's plate.

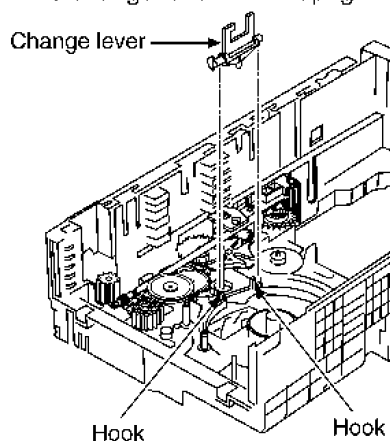


(Step 21)

Install the UD. pulley gear to mechanism base.

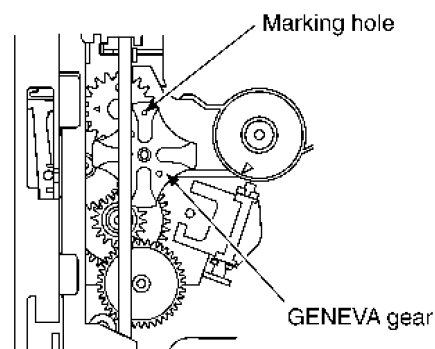
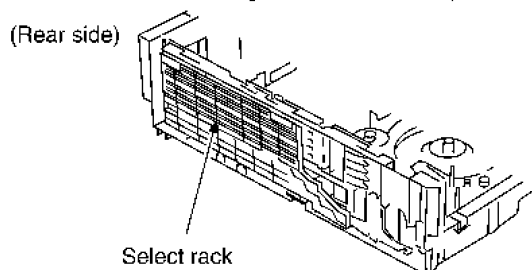
**(Step 22)**

Insert the change lever with it upright.

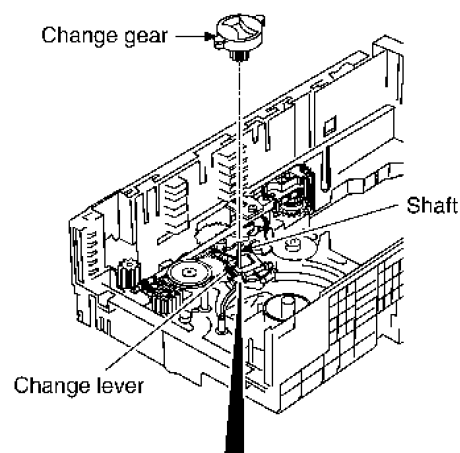
**(Step 23)**

Be sure the notice of bellow before fixing the change gear.

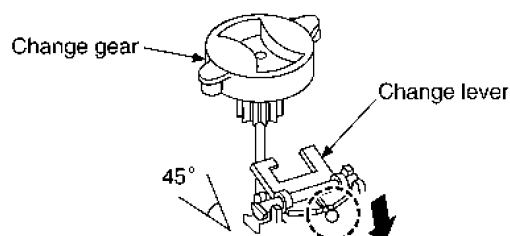
1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

**(Step 24)**

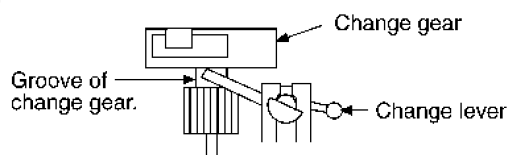
Install the change gear as insert the change lever into the groove of change gear.



1. Pushing the ○ part and pull up the change lever 45°.



2. Insert the change lever into the groove of change gear.



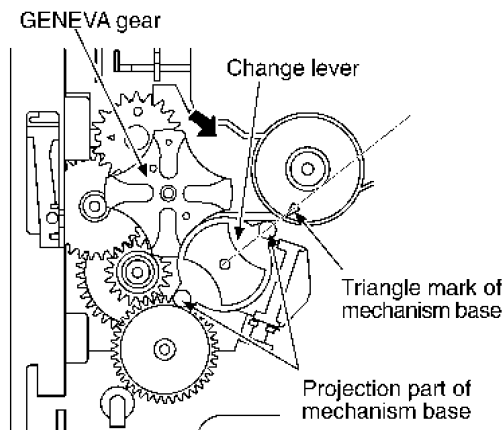
(Step 25)

Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.

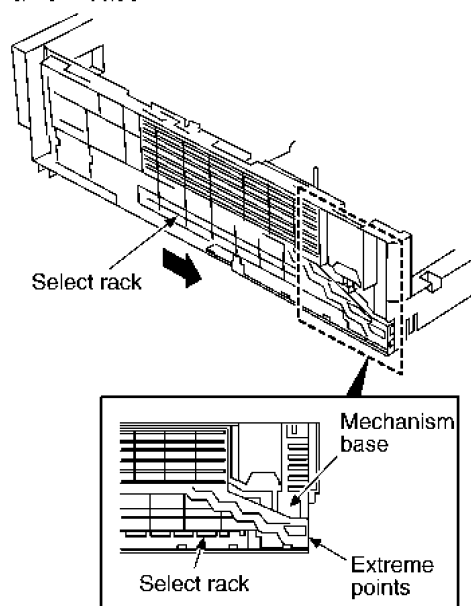
At that time, check change gear is inserted into the groove of change lever.

(Step 26)

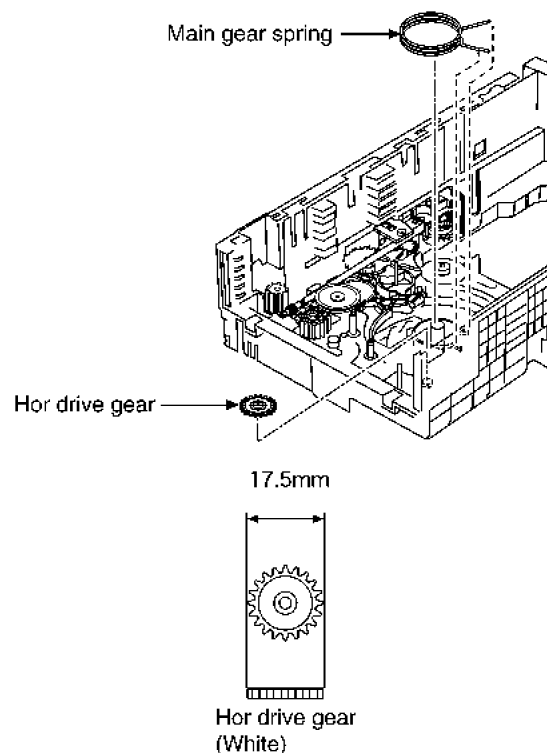
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.

**(Step 27)**

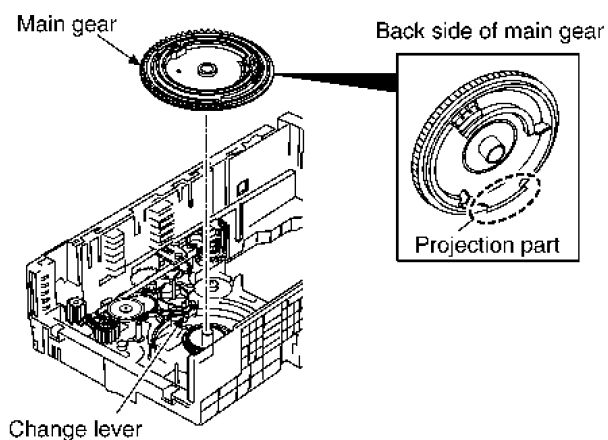
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.

**(Step 28)**

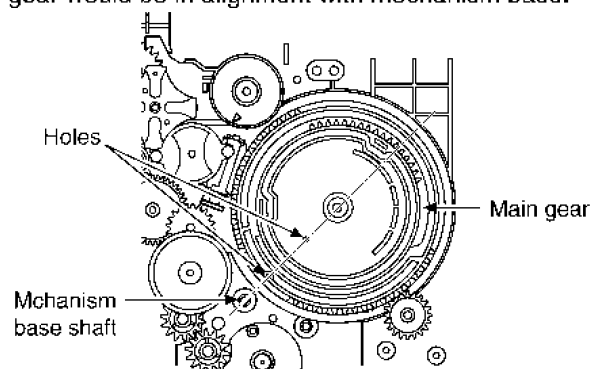
Install the main gear spring and hor drive gear.

**(Step 29)**

Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.

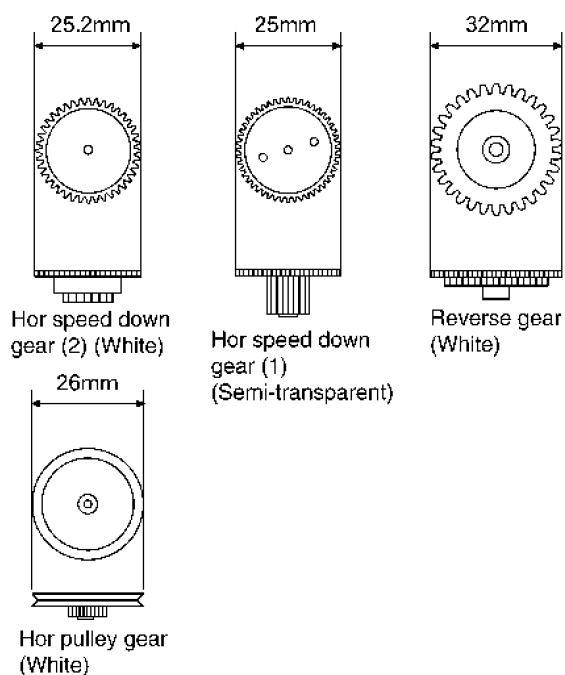
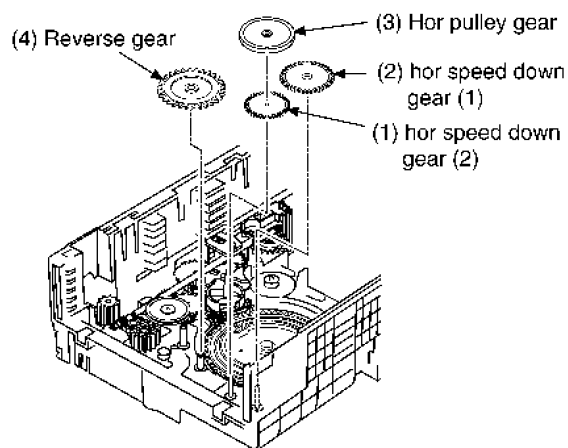
**(Step 30)**

After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.



(Step 31)

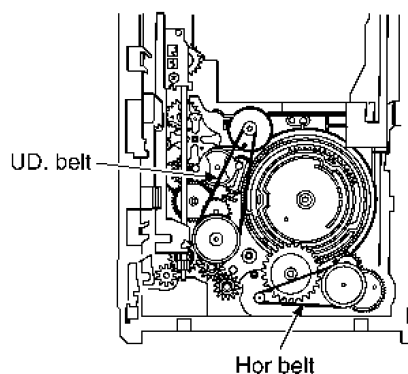
Install the hor speed down gear (2), hor speed down gear (1), hor pulley gear and reverse gear.

**(Step 32)**

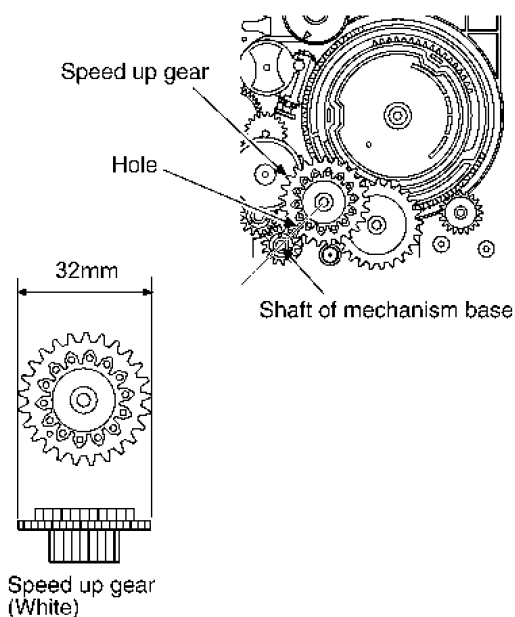
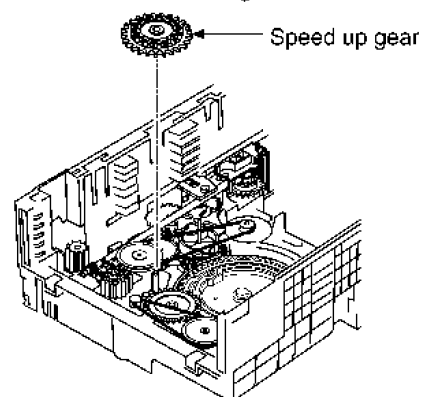
Install the UD. belt and hor belt.

NOTE:

1. Take care not apply the grease to the belt.
2. Install the belt without twist.

**(Step 33)**

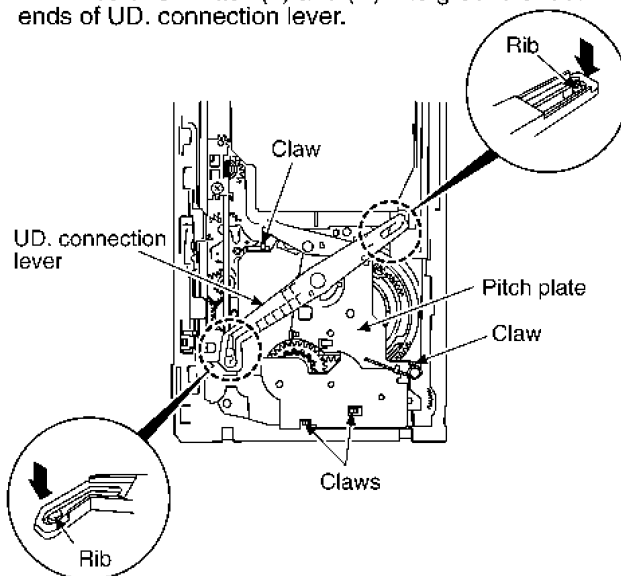
Install speed up gear to its shaft of mechanism base with 2 fitting.

**(Step 34)**

Install the pitch plate. (The 4 claws should be latched.)

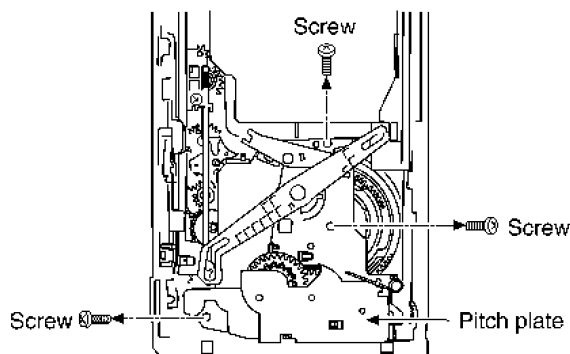
(Step 35)

Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.



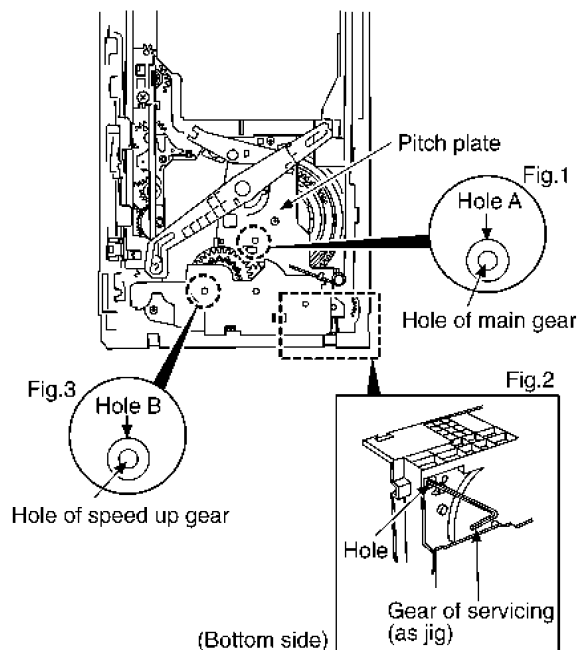
(Step 36)

Fixed it by three screws further.

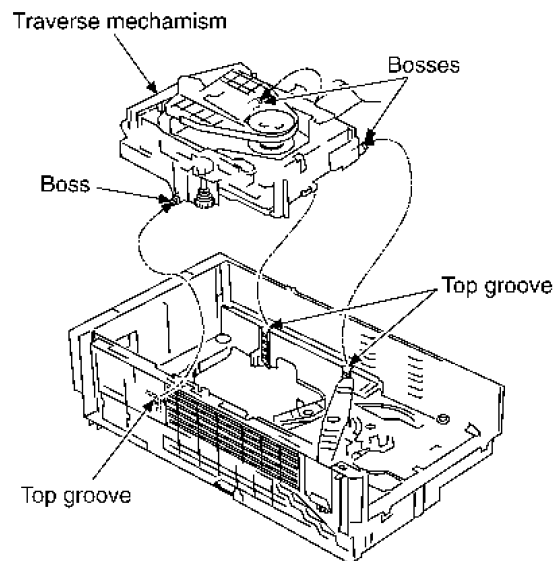
**(Step 37)**

Be sure the notice of below before fixing the traverse mechanism.

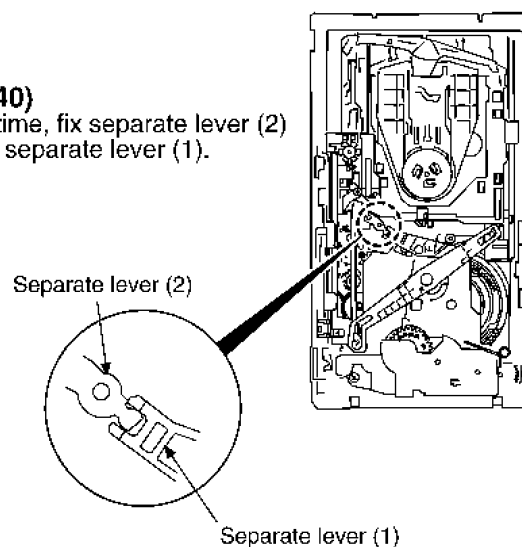
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)
If it's not fitted turn the speed up gear to adjust it.

**(Step 39)**

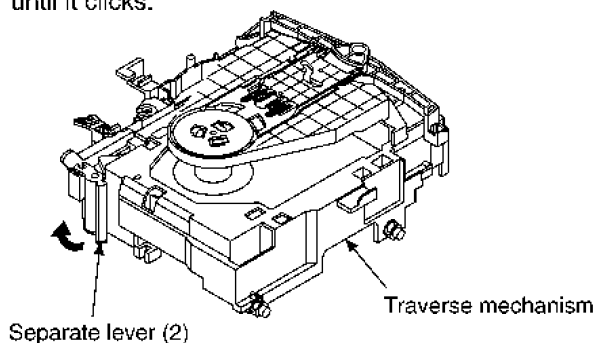
Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).

**(Step 40)**

At that time, fix separate lever (2) into the separate lever (1).

**(Step 38)**

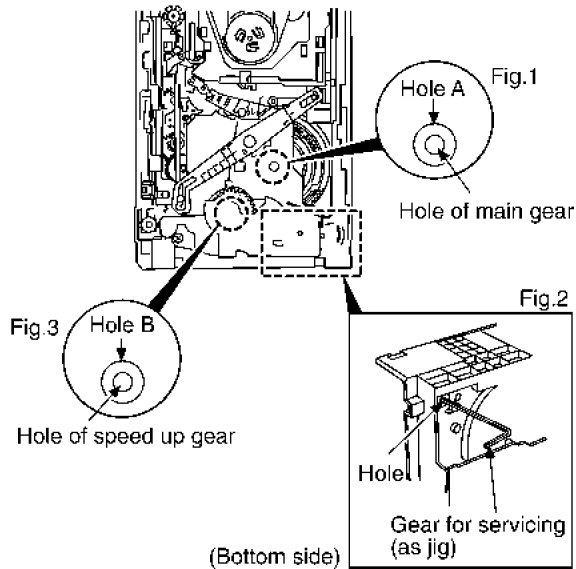
Turn the separate lever (2) slowly toward left side until it clicks.



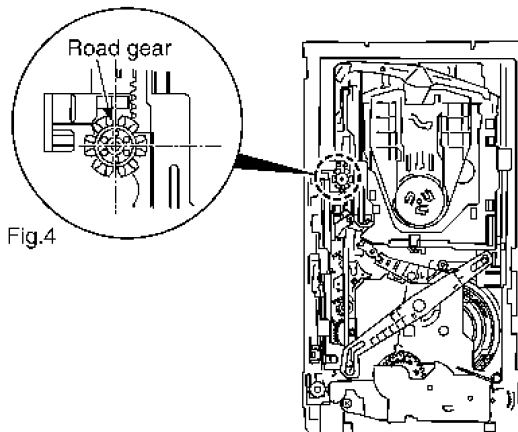
(Step 41)

After the traverse mechanism fixed, confirm the phase in order below.

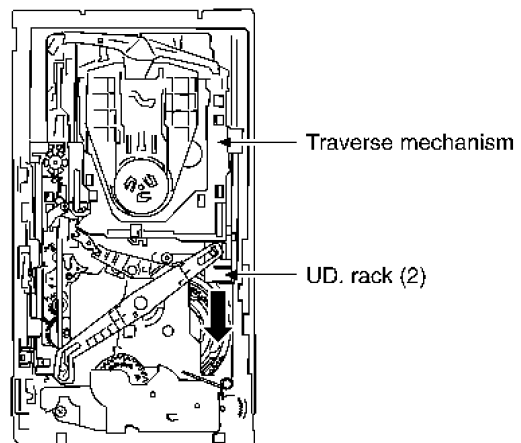
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)
If it's not fitted turn the speed up gear to adjust it.



3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
NOTE: By this time, do not adjust to rotate the road gear.

**(Step 42)**

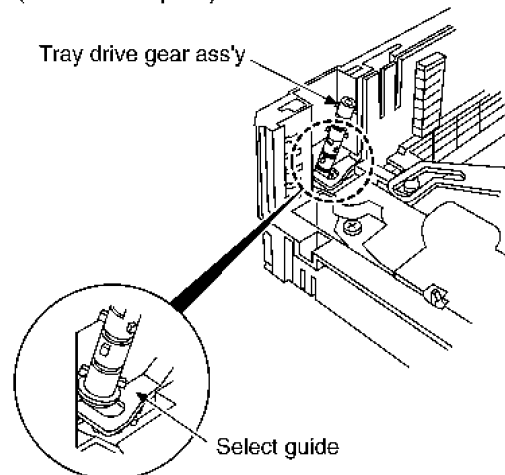
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.

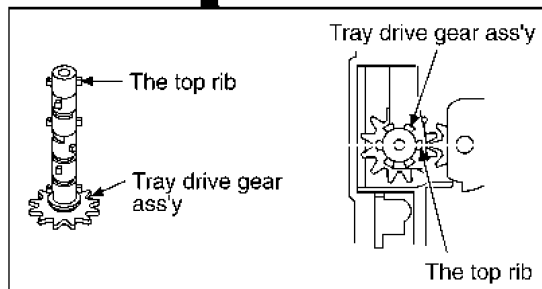
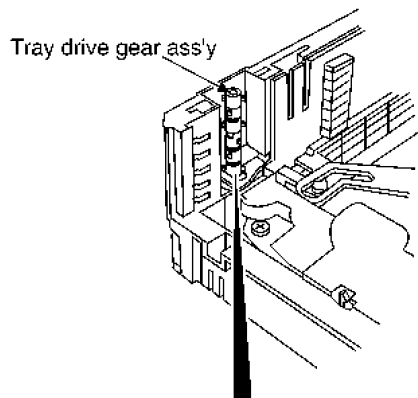
**(Step 43)**

Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

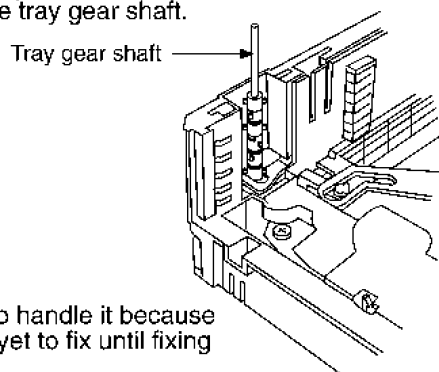
NOTE:

Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).





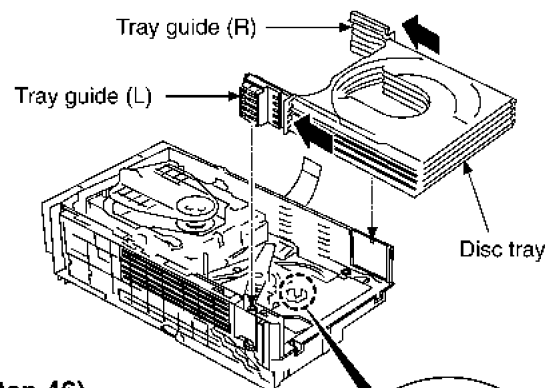
(Step 44)
Insert the tray gear shaft.



NOTE:
Be careful to handle it because the shaft is yet to fix until fixing top cover.

(Step 45)

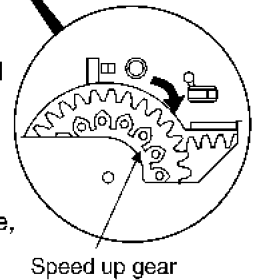
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.



(Step 46)

Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rotate, repeat from Step 45 and 46.

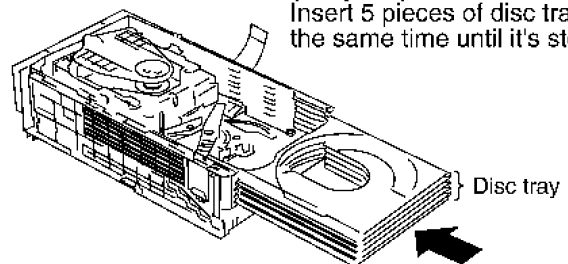


NOTE:

While keeping all position, install 5 pieces of disc tray.

(Step 47)

Insert 5 pieces of disc tray at the same time until it's stop.



(Step 48)

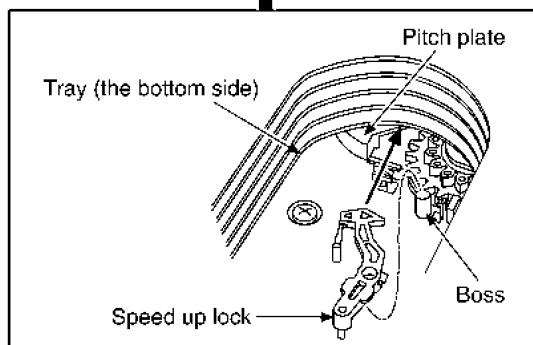
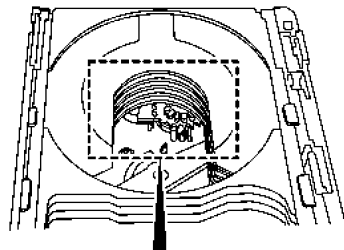
Turn the traverse side 180°.

(Step 49)

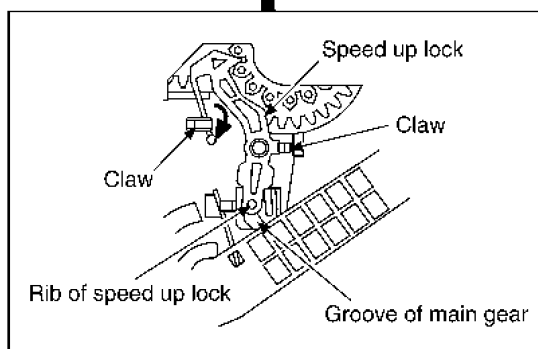
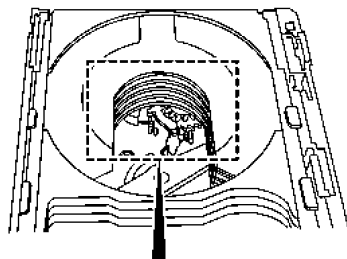
While install the tip of speed up lock between tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

NOTE:

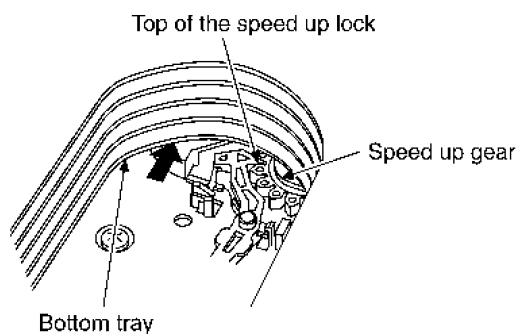
At that time, do not move the tray.
(See the tray the most front side)

**(Step 50)**

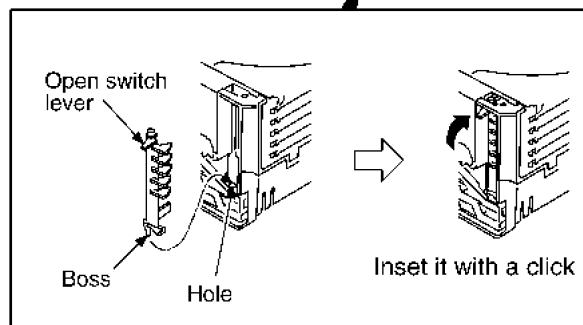
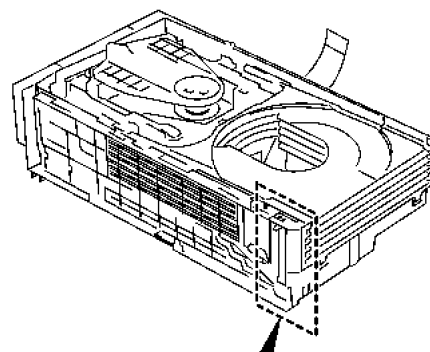
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.

**(Step 51)**

Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.

**(Step 52)**

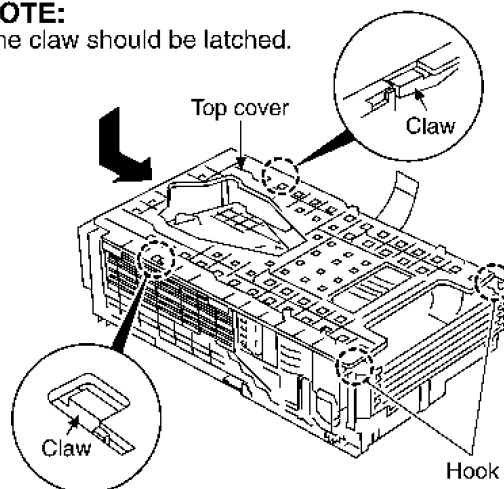
Install the open switch lever.
(Put the boss into the hole of the mechanism base.)

**(Step 53)**

Install the top cover.
Fix it into hooks and slide direction to the arrow.

NOTE:

The claw should be latched.



11.23. Disassembly of traverse mechanism

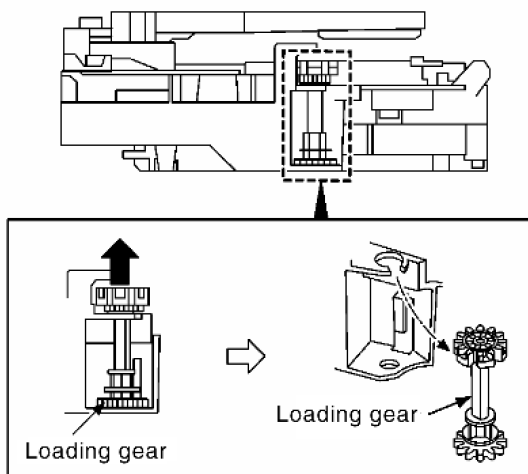
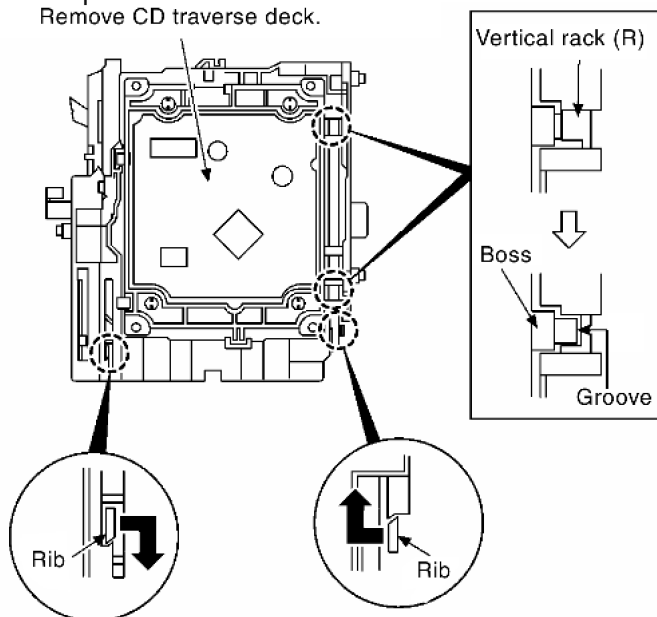
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.

Step 1

Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2

Remove CD traverse deck.



Step 3

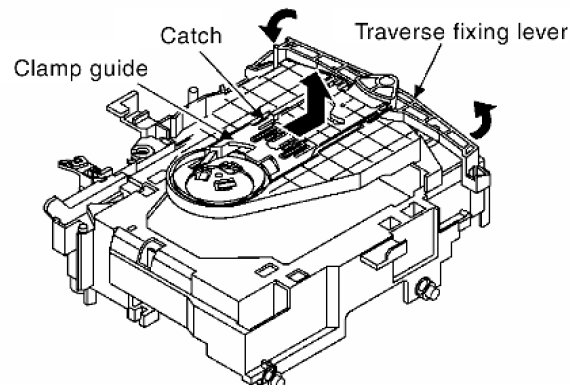
Lift a loading gear slightly and pull out.

Step 4

Fixing lever to the arrow direction, rotate a traverse.

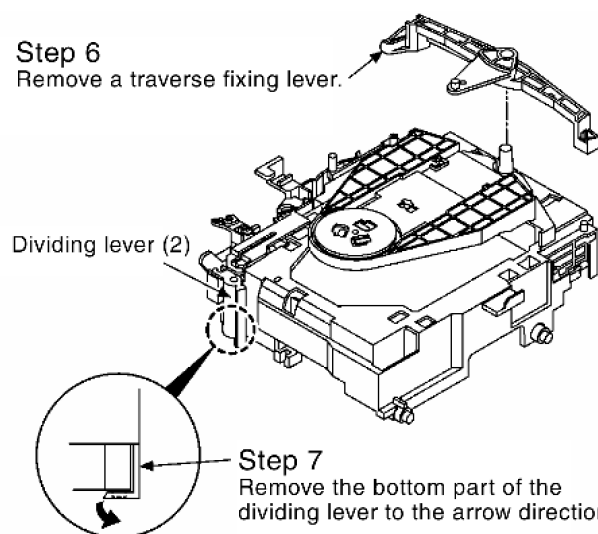
Step 5

Remove catch and take out a clamp guide.



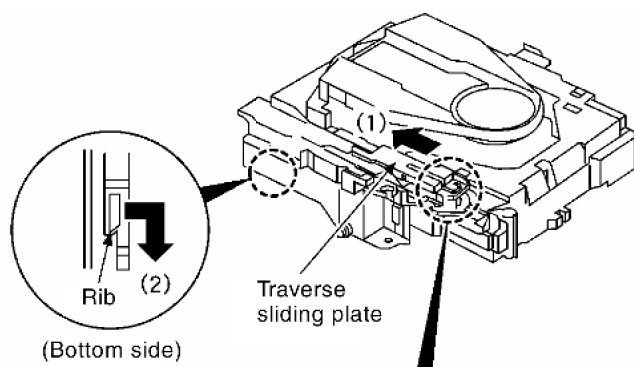
Step 6

Remove a traverse fixing lever.

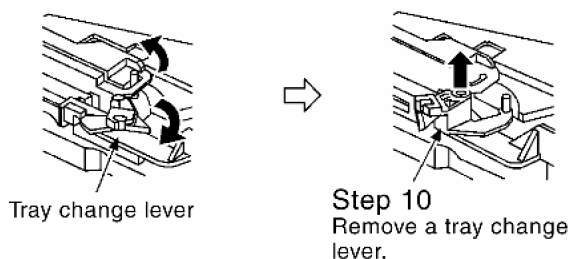


Step 8

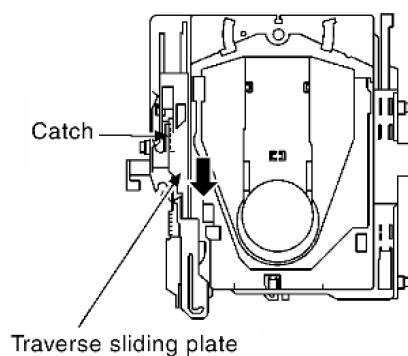
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).

**Step 9**

Shifting a traverse sliding plate slightly and rotate a tray change lever.

**Step 11**

Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.

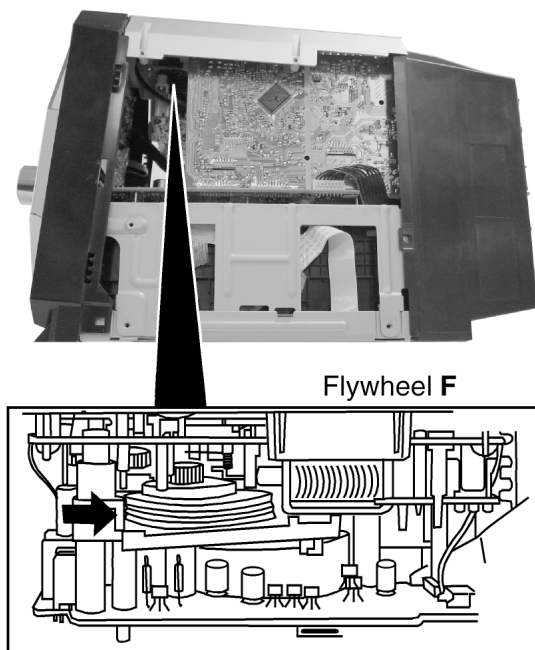


11.24. Handling of cassette tape jam

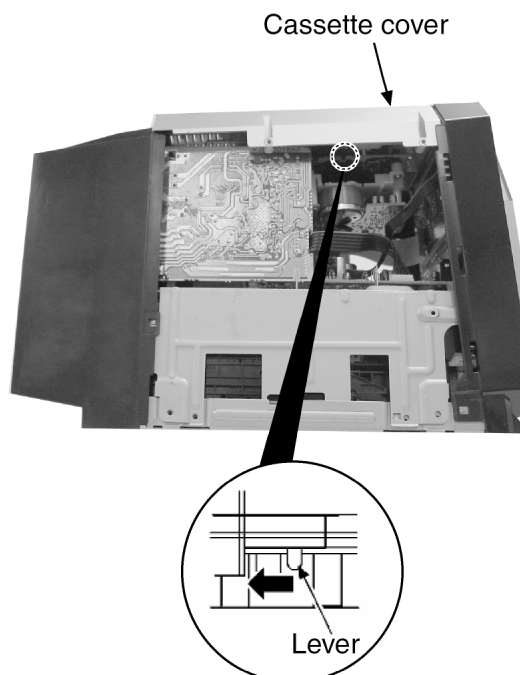
• Follow the (Step 1) - (Step 6) of Item 11.2.

Step 1

If the cassette tape is not ejected due to twining around capstan or pinch roller during playing or recording, rotate a flywheel **F** to the arrow direction to remove twined tape.

**Step 2**

Push the lever to the arrow direction, open the cassette cover and take out the cassette tape.



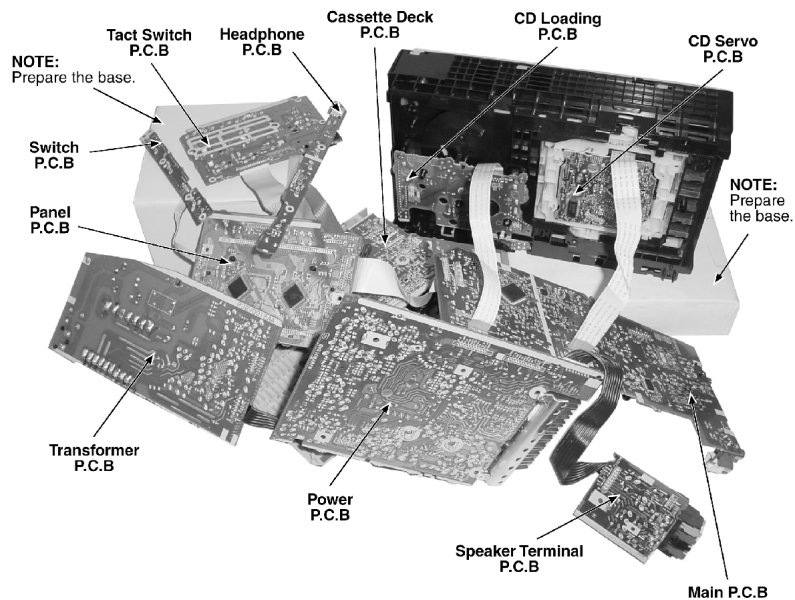
12 Service Positions

12.1. Checking procedure

Note : For the disassembling procedure, see the section 11.

12.2. Checking the major P.C.B

1. Disassembly of Side Panel L & R
2. Disassembly of Top Cabinet
3. Disassembly of Deck Mechanism P.C.B and Tape Eject P.C.B
4. Disassembly of Front Panel
5. Disassembly of Panel P.C.B Headphone P.C.B, Switch P.C.B and Tact switch P.C.B
6. Disassembly of Rear Panel
7. Disassembly of Main P.C.B
8. Disassembly of Transformer P.C.B
9. Disassembly of Speaker Terminal P.C.B
10. Disassembly of Power P.C.B
11. Disassembly of CR16 Mechanism.



13 Self-Diagnostic Display Function

This unit is equipped with a self-diagnostic display function, which will be useful during servicing and maintenance.

- Refer to the next page for display symbols, symptoms, etc.

13.1. Preparations

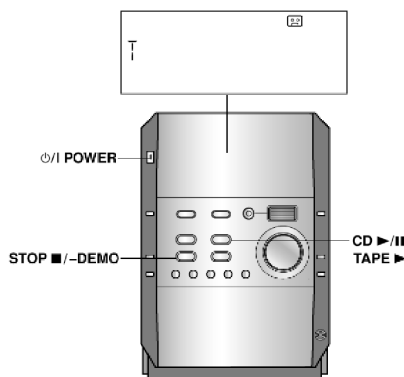
1. A Cr02-positioned blank cassette tape with an erase prevention niche on either Side A or B.
2. A normal-positioned music tape with erase prevention niches on both Sides A and B. Both tapes are halfway forwarded in advance.
3. The remote controller that comes with this unit.

13.2. Setting of the Self-Diagnostic Mode

No.	Operation Procedure	Operation and Processing of Microcomputer
1	Switch the SELECTOR to CD. There should be NO disc loaded.	
2	Press the [STOP _n] key for 2 sec and press [CD PLAY] for another 2 sec, it shall enter into the diagnostic mode.	[T] shall be displayed in the FL.

13.3. Restoring Normal Display

- From the F76 display, the normal display does not appear till an error is recovered.
- For displays other than F76, press "POWER" button to turn off the power, and then turn on the power.



13.4. Clearing Self-Diagnostic Memory

<CD Section> (F15, F17, F22, F26, F27, F28, F29)

1. Enter a self-diagnostic mode.
2. Press "STOP_n-DEMO" button. A symbol of self-diagnostic is indicated on the display if an error is found. If several errors are found, a respective indication is displayed when "STOP_n-DEMO" button is pressing repeatedly. (e.g. H01 → CD F15 → F01)
If no error is found, only "T" indication is displayed and remains unchange even if "STOP_n-DEMO" button is pressed.

13.5. Displaying Self-Diagnostic Results

<Cassette Deck Section> (H01, H02, H03, F01, F02)

1. Enter the self-diagnostic mode, following the instructions described in [13.2. Setting of the Self-Diagnostic Mode].
2. Insert a normal-positioned music tape with erase prevention niches on both Sides A and B. Press [TAPE ►] button to activate the TPS operation so that the tape automatically stops at an interval between music selections.
3. Press [STOP_n /-DEMO] and [TAPE ►] buttons together on the remote controller. (Recording does not start.)
4. Then, insert a Cr02-positioned blank cassette tape with an erase prevention niche of Side A or B set to the left side.
5. Press [∧ /FF/ ►►] button on the remote control. The tape will be forwarded and automatically stop after two seconds.
6. Remove the cassette tape, and set the other side.
7. Press [∨ /REW/ ◀◀] button on the remote control. The tape will be rewound and automatically stop after two seconds.
8. Press [STOP_n-DEMO] button on the unit.

If an error is found, a self-diagnostic key appears on the display.

If several errors are found, the display shows these keys when [STOP_n-DEMO] button is pressed repeatedly. (Ex.: H01 - H02 - F01 - H01)

If no error is found, only the message, "CD TEST" appears on the display.

(*1) TPS operation (music search) detects the blank sections between music selections. Therefore, do not use tapes with the following conditions:

- A blank section that lasts only 4 seconds or less.
- No blank sections (recording through microphones, etc.).
- Music selections that have extremely low pitches or prolonged silent sections (such as classical music).
- and/or Music recorded with fade in/out effect.

13.5.1. Error detection for CD Block

Error Code	Abnormal Items	Possible Cause
F15	CD REST SW abnormal	CD traverse position initial setting operation failsafe counter (1000 ms) waiting for REST SW to turn on. Error No. shall be clear by force or during coldstart.
H15	The CD tray closes	CD disc tray detect switch NG. (Check and replace)
F26	CD servo LSI command signal abnormal	CD function DTMS command, after system setting, If SENSE = 'L' cannot be detected. Memory shall contain F26 code. After Power on, CD function shall continue, error shall occur "NODISC". Error No. shall be clear by force or coldstart.
F28	DISC LOAD abnormal	While going to play position, if failsafe counter is finished and switch o change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. ErrorNo. shall be clear by force or coldstart.
F29	DISC unload abnormal	While going to play position, if failsafe counter is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. ErrorNo. shall be clear by force or coldstart.
F27	Slide operation abnormal	During vertical operation, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. ErrorNo. shall be clear by force or coldstart.
F17	Down SW abnormal	During vertical operation going to the bottom position, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. The Next time mechanism operates, it shall do mechanism initialization. Error No. shall be clear by force or coldstart.
F22	Loading Mode / Mecha abnormal	During mecha initialization, Loading mode mechanism abnormal, normal operation cannot be achieve. The next time mechanism operates, it shall do mechanism initialization. Error No. shall be clear by force or coldstart.
Abnormal item	Error Display	Method of detection
F75	CD power abnormal	Under normal operation (self-diagnostic mode inclusive), check if CDRST is H for SELECTOR at CD. If it is not H after 1 sec, it shall be memorised as an error.

13.5.2. Error detection code for Cassette Mechanism Block

Error Code	Abnormal Items	Possible Cause
H01	MODE SW abnormal	Normal operation during mecha transition, MODE SW abnormal is memorised. The content of abnormality can be confirmed in the abnormal detection mode explained in the later section.
H02	REC INH SW abnormal	
H03	HALF SW abnormal	
F01	Reel pulse abnormal	
F02	TPS abnormal	

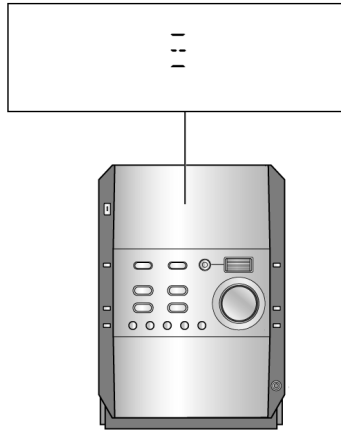
13.5.3. Doctor Mode set up

- At any more (CD, TAPE, TUNER).
- To enter Doctor Mode, press Doctor Mode key [C2DF] of special remote control or input 4 then 7 from the remote control while pressing STOP $\square$ key of the main set.

13.5.4. Cold start setting

- Doctor mode ON.
- Remote control  key ON.

- Data shall be set in order to make a cold start (backup data are initialized) when reset starts next time. To clarify that the code was accepted at this time, The pattern below is displayed in the LCD for 2 seconds.



(Note) In the case that you unplug from AC outlet after this mode was set, then plug to AC again, a cold start shall begin. And “- - - - -” is displayed in the FL for 2 seconds.

14 Procedure for Checking Operation of Individual Parts for Cassette Mechanism Unit

14.1. Operation Check with Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.) (Cf. Fig. 5)
3. Insert a cassette tape to the unit.
4. Supply DC9V to the plunger, and turn the power ON and OFF. (→ Power +PL, -PL) (Cf. Fig. 5)
 - a. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)
 - b. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)
 - c. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)
 - d. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)
 - e. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)
 - f. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)

Repeat the operation (→ FWD PLAY)

(Note) Other operation may start if a timing of supplying the plunger power is missed.

14.1.1. Connection Status between Mechanism and Power Supply (Motor, Plunger)

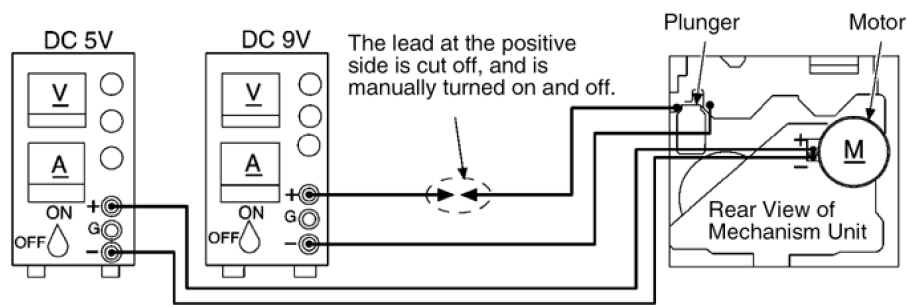


Fig. 5

14.1.2. Operative Parts of Mechanism Unit (EJECT lever fitted with rubber band, Plunger/Rib operation)

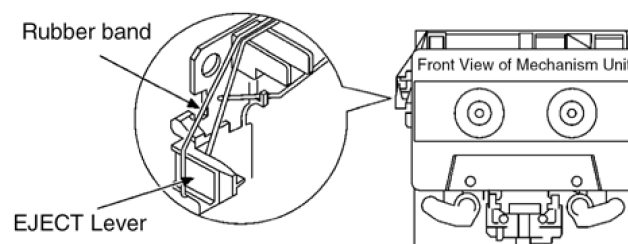


Fig. 6

14.2. Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.)
3. Lift up the mechanism unit's plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as supplying the power. (Cf. Fig. 7)

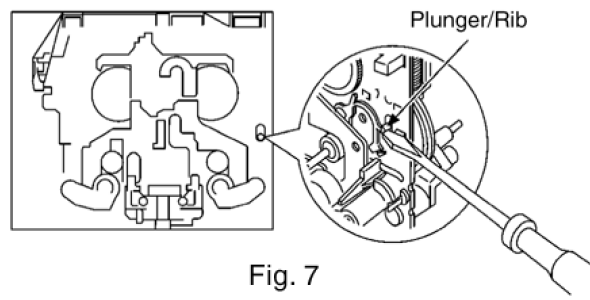


Fig. 7

15 Measurement And Adjustments

15.1. Cassette Deck Section

15.1.1. Requirements

- Test tape (QZZCFM) (QZZCWAT)
- Normal blank cassette tape (QZZCRA)
- Digital frequency counter
- Oscilloscope
- Electrical voltmeter
- Headphone jack output jig (Cf. Fig. 8)

15.1.2. Setting of Unit

- VOLUME: MAX

15.1.3. Preparations

1. Apply under [11. Assembling and Disassembling].
2. Remove 4 screws from the mechanism unit to disassemble. under [11. Assembling and Disassembling].
3. Connect the headphone jack output jig (Cf. Fig. 8) to headphone jack.

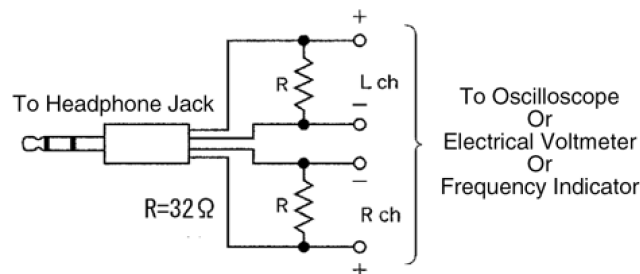


Fig. 8

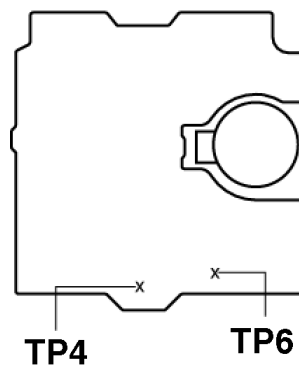


Fig. 9

15.1.4. Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)
(Product reference value: $3,000 \pm 90\text{Hz}$)
1. Connect a frequency indicator. (Cf. Fig. 12)
 2. Playback the middle portion of the test tape (QZZCWAT).
 3. Adjust the motor screw so that the following output level is produced. (Cf. Fig. 10)
Adjustment Range: $3,000 \pm 90\text{Hz}$ (a constant speed)

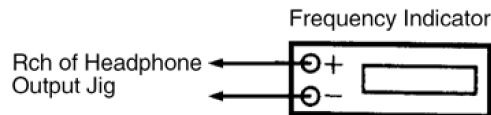


Fig. 10

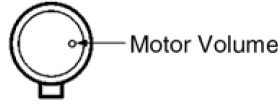


Fig. 11

15.1.5. Bias Voltage Check

1. Connect an electrical voltmeter. (Cf. Fig. 9) (Cf. Fig. 12)
2. Set the function to "TAPE" position.
3. Insert a normal blank cassette tape (QZZCRA).
4. While pressing and holding down [REC (●/■)] button, press [TAPE (▶)] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)
5. Check that the output level is within the standard range.
Standard Range: $14 \pm 4\text{mV}$

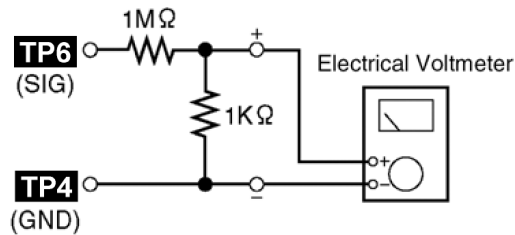


Fig. 12

15.1.6. Bias Frequency Check

1. Connect a digital frequency counter (Figure 13).
2. Set the function to "TAPE" position.
3. Insert a normal blank cassette tape (QZZCRA) and press "REC" mode on main unit.
4. Check that the output frequency is within the standard range.

Standard Value: $98 \pm 8\text{ kHz}$

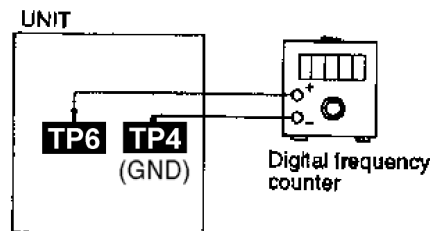
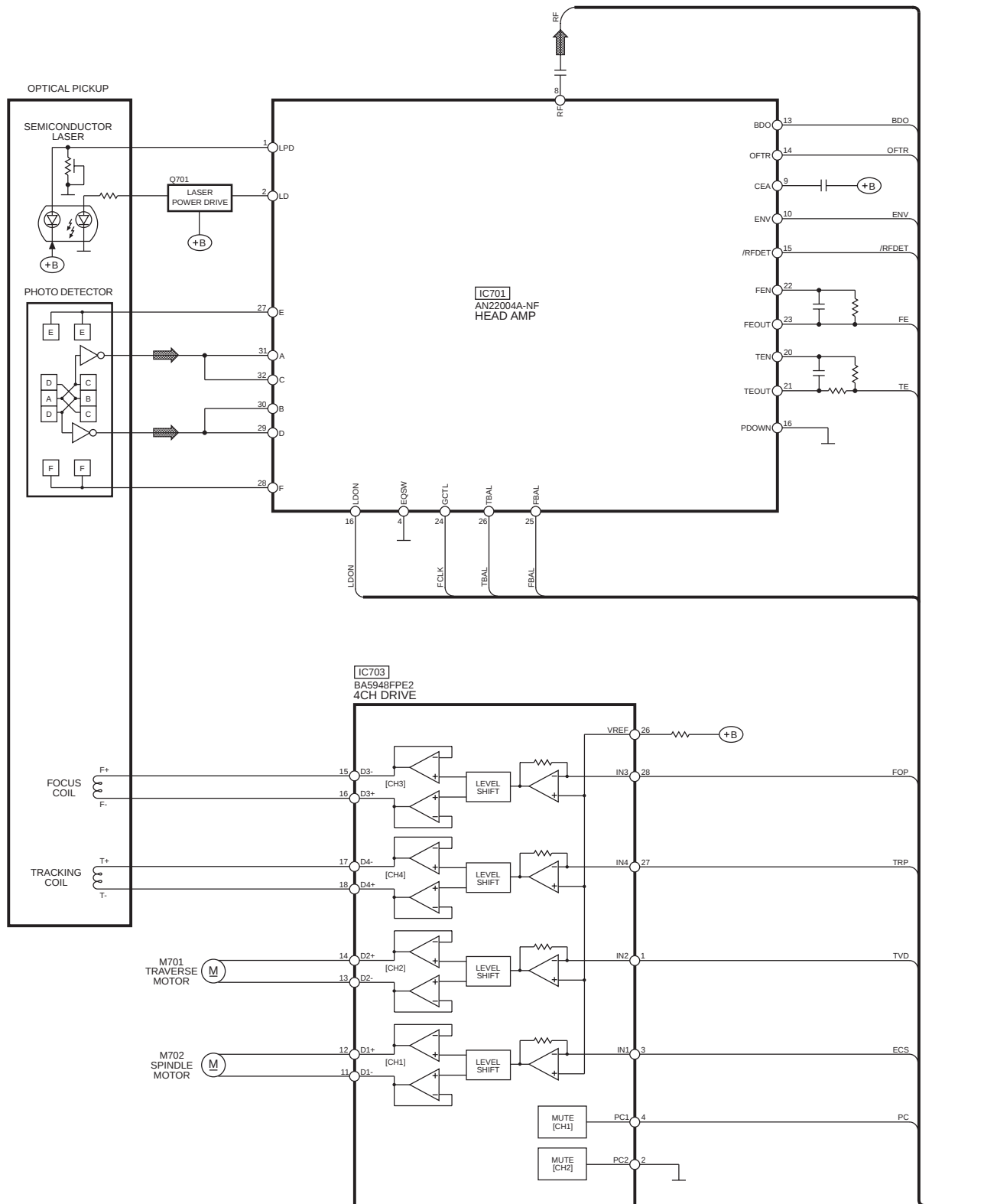
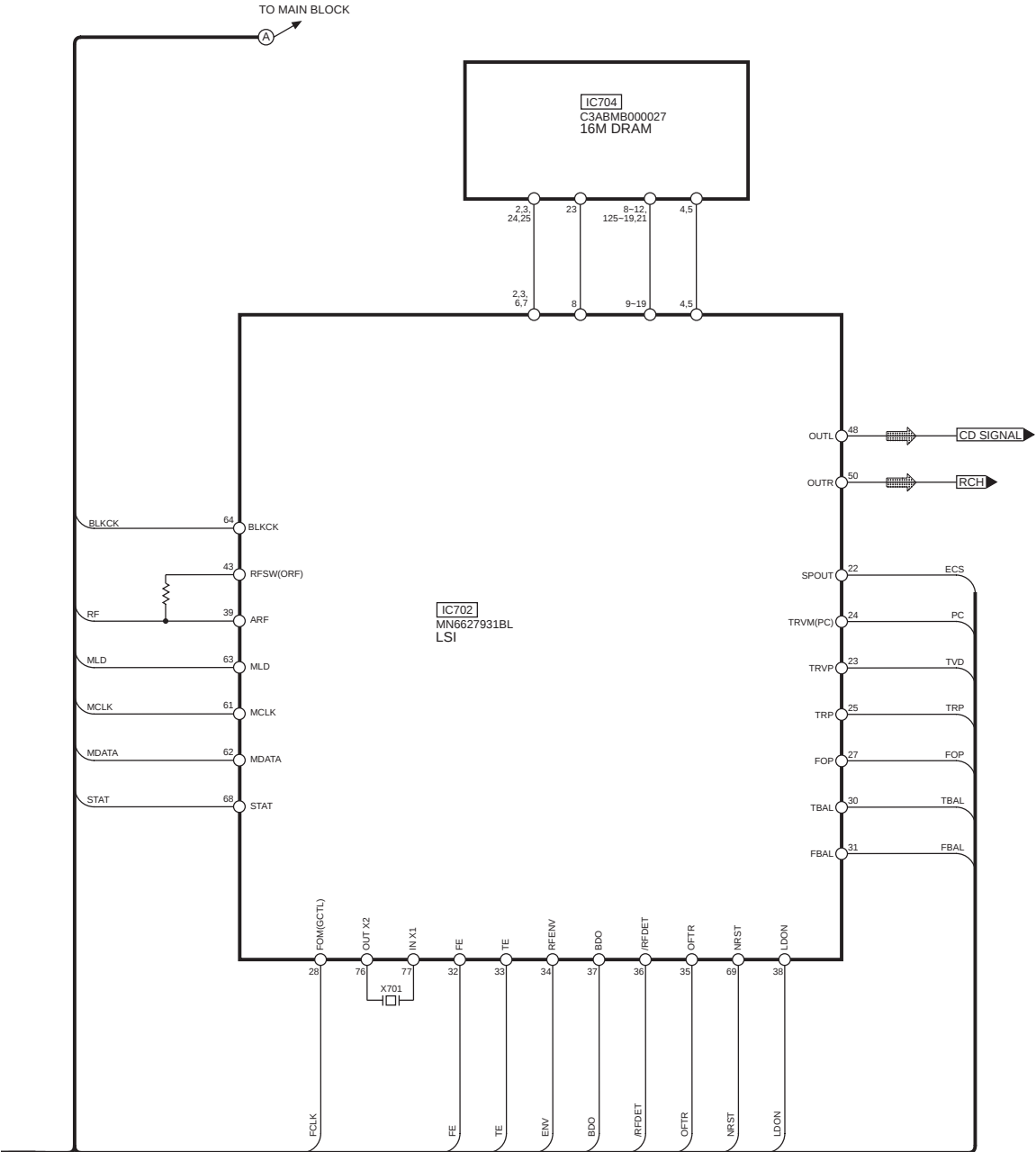


Fig. 13

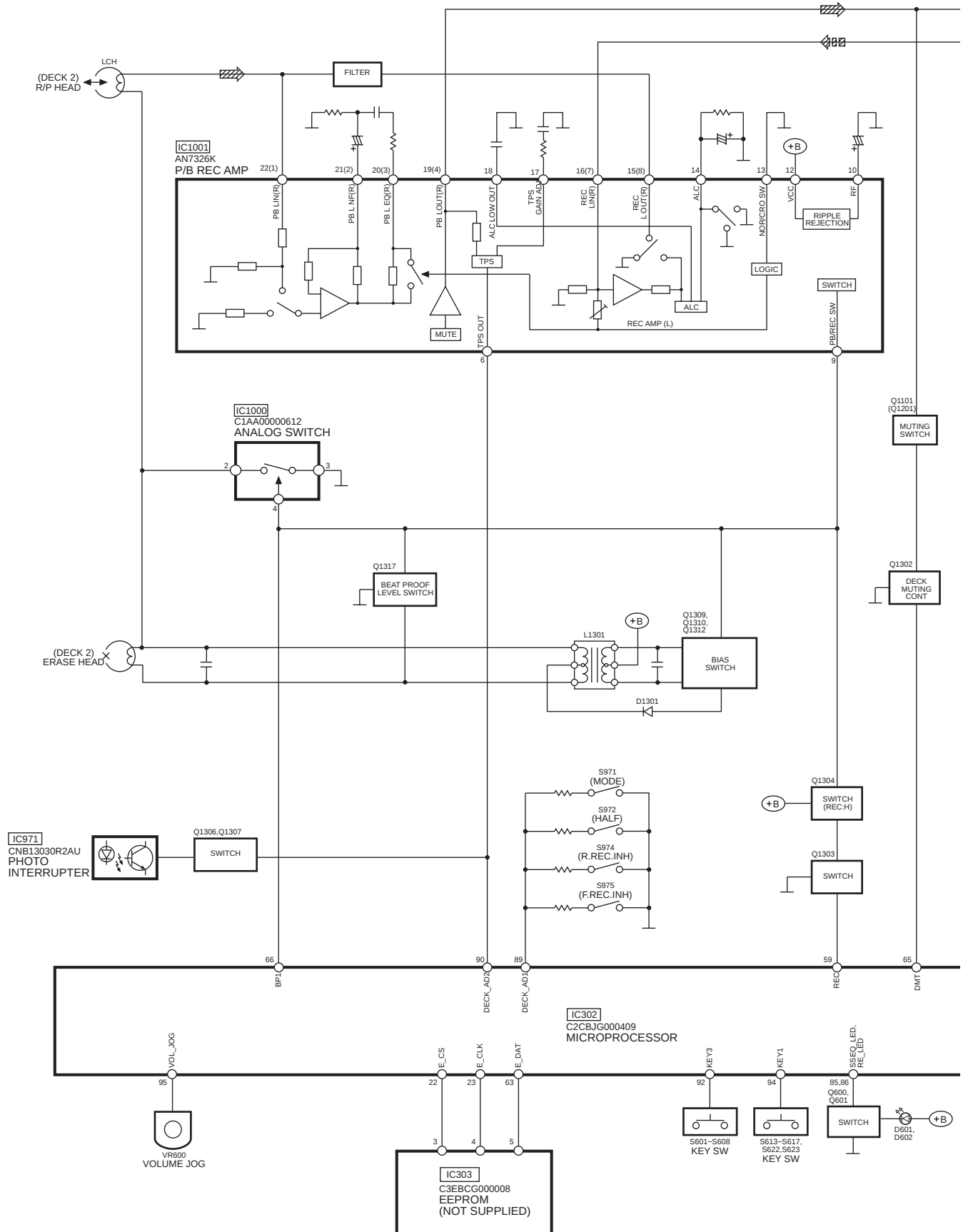
16 Block Diagram

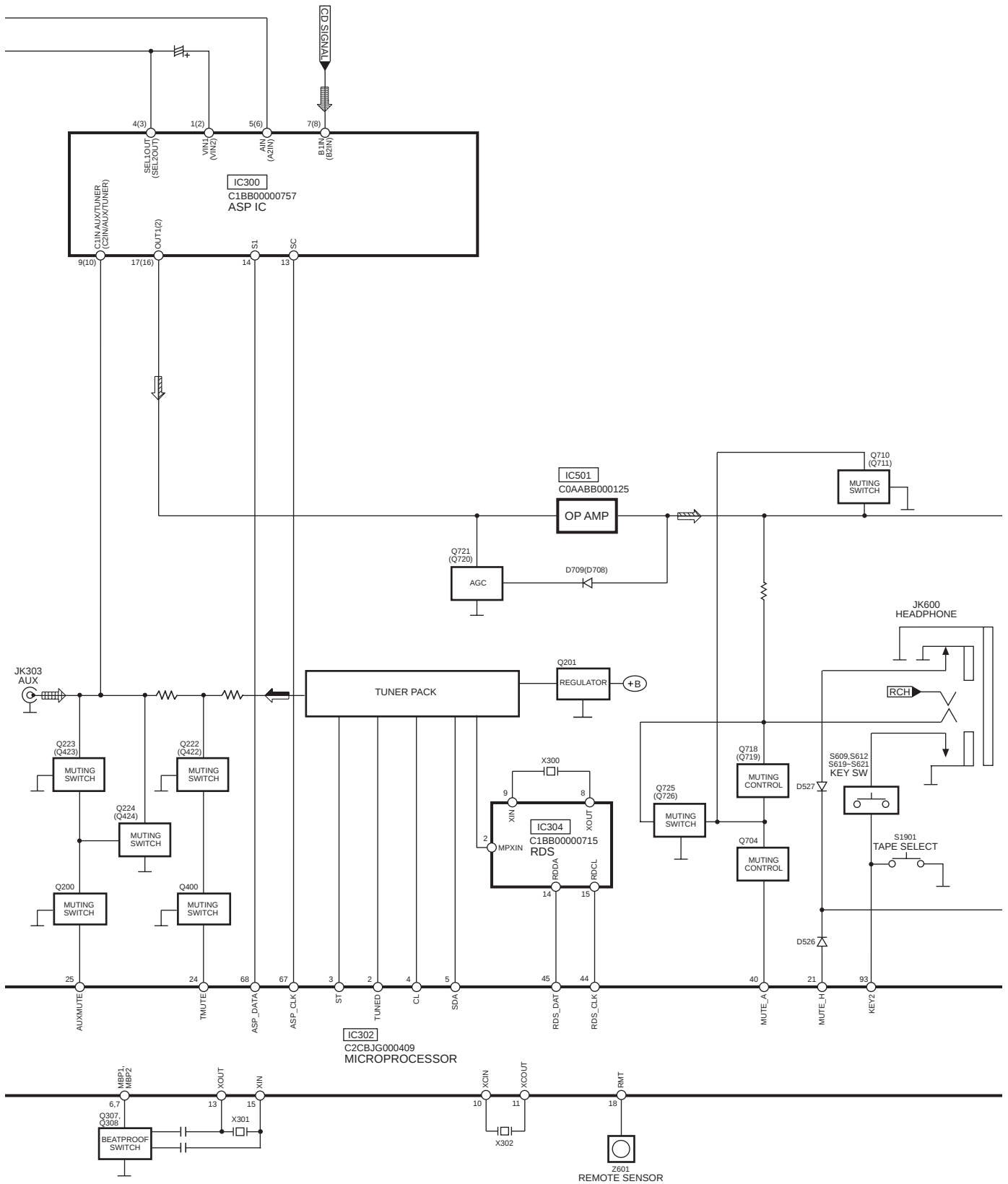
16.1. CD Servo Block

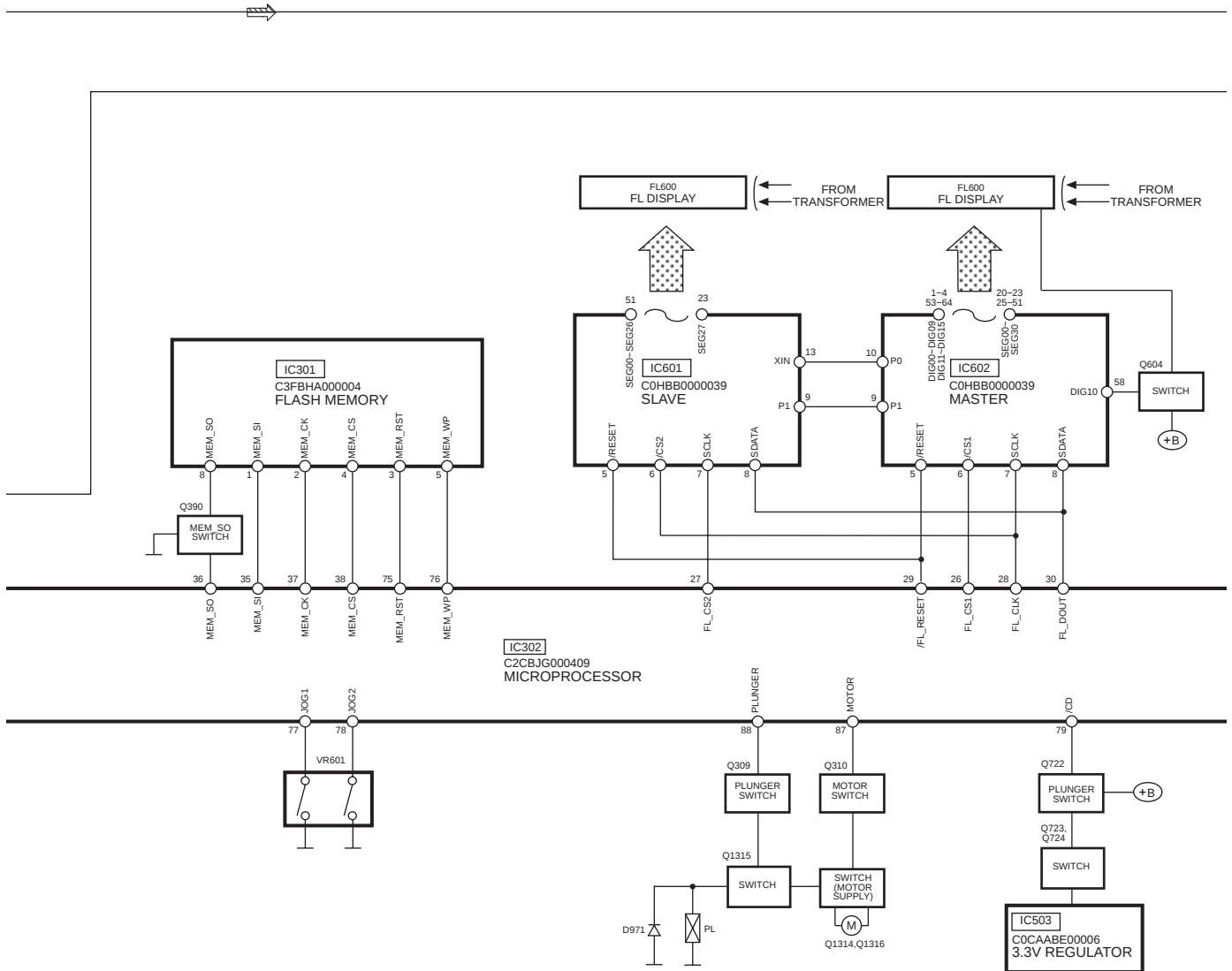


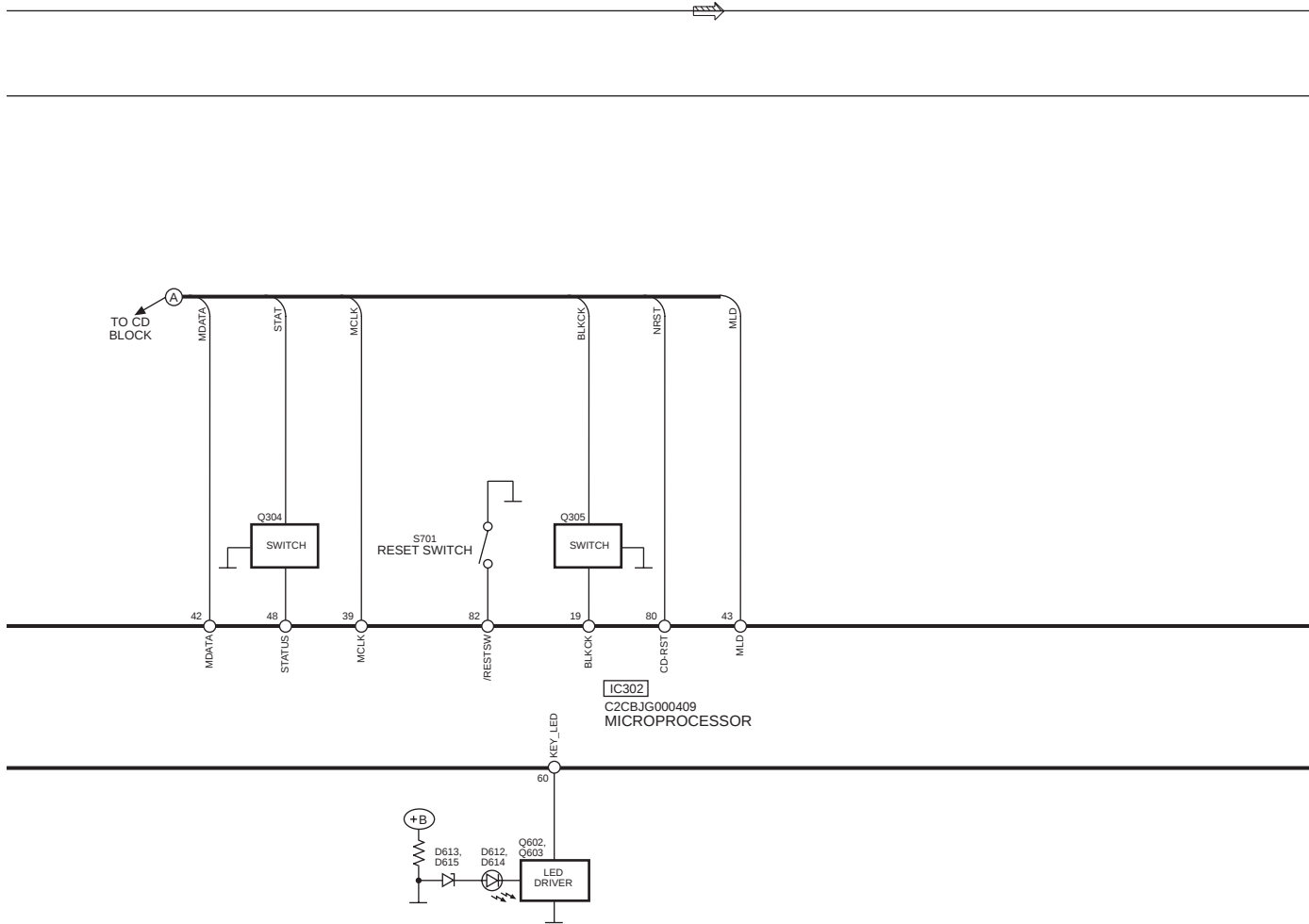


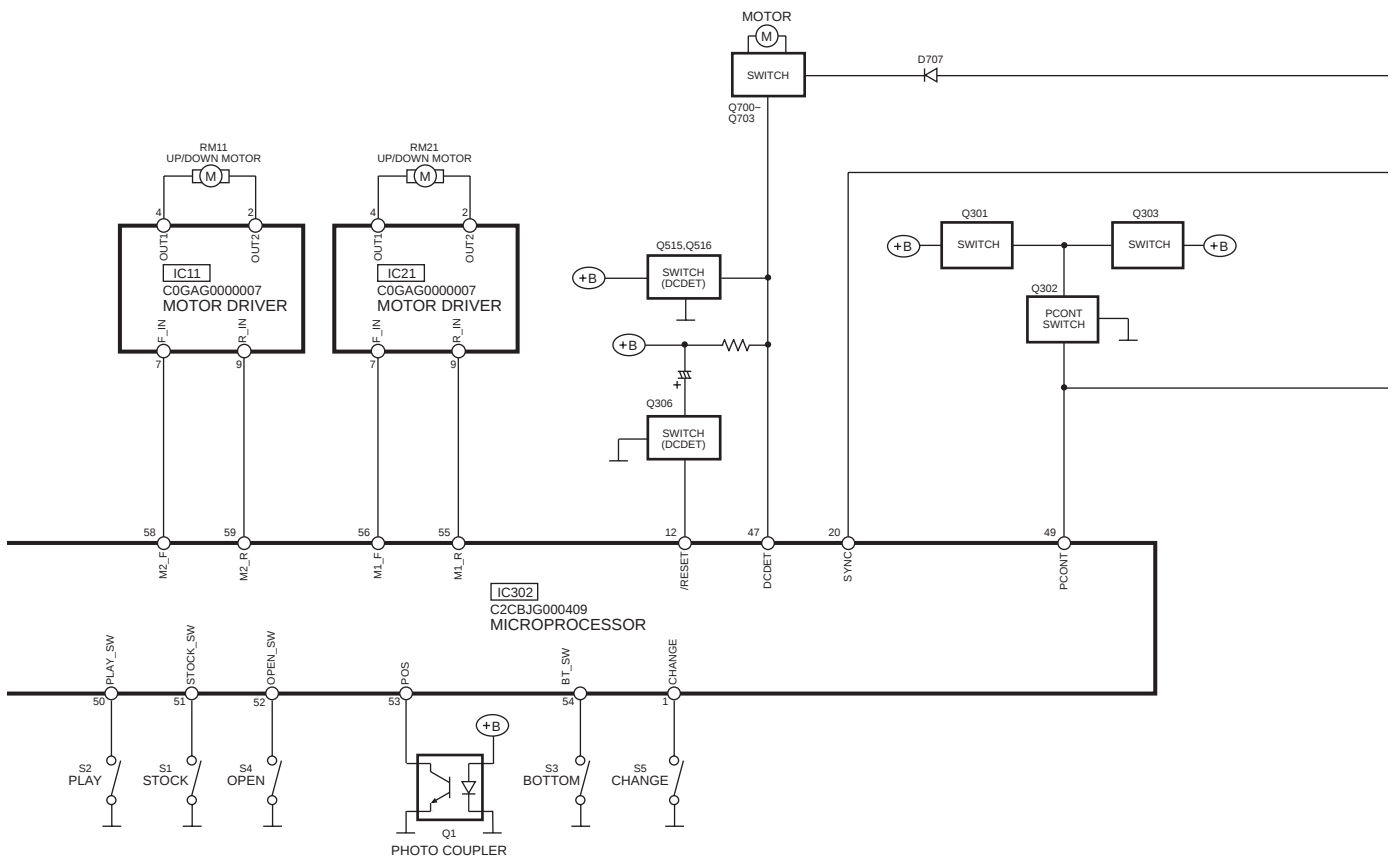
16.2. Main Block



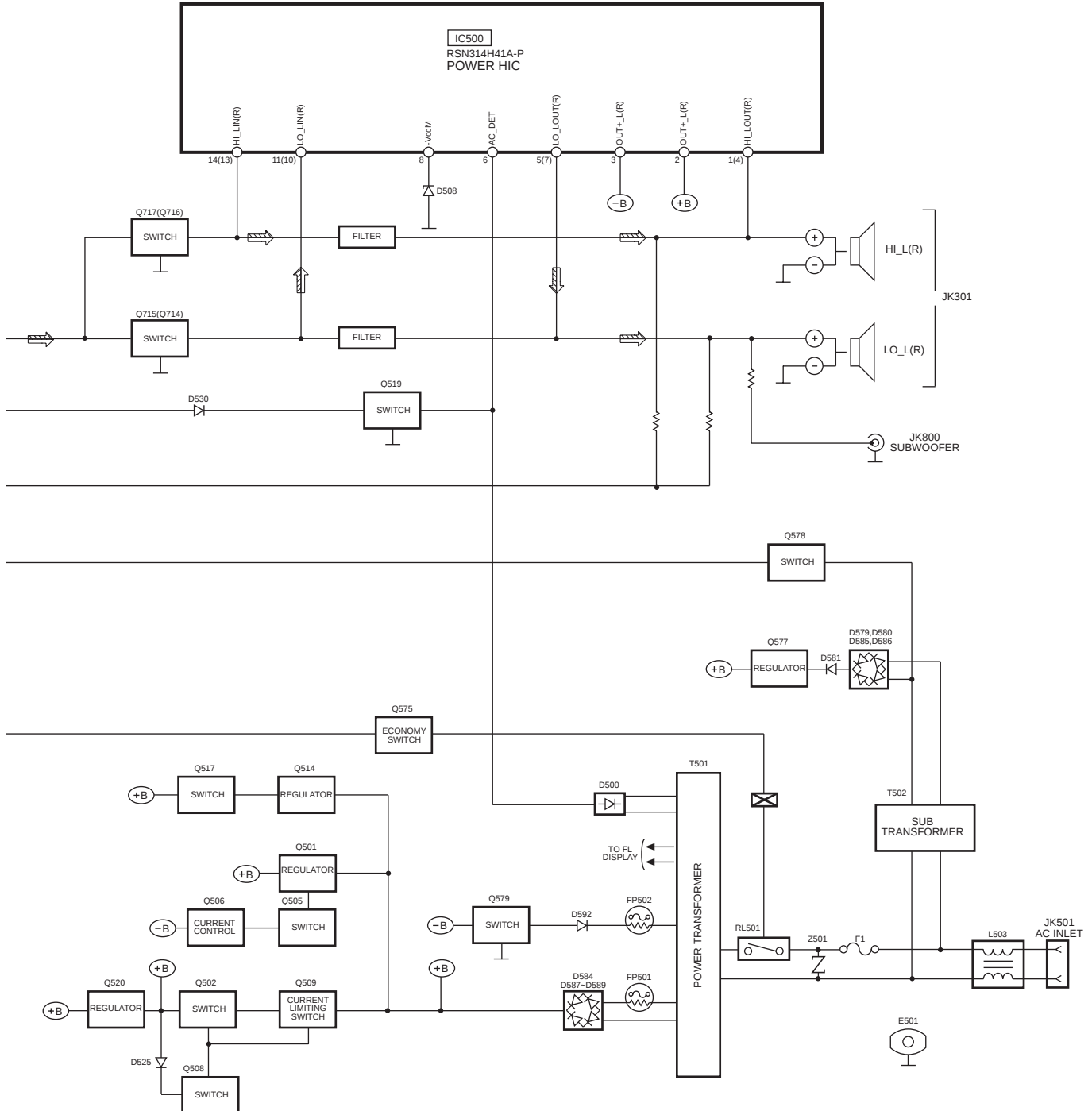
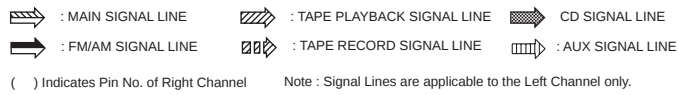








SIGNAL LINES



17 Notes of Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

S1	Stock switch
S2	Play switch
S3	Bottom switch
S4	Open switch
S5	Change switch
S601	CD 1 switch
S602	CD 2 switch
S603	CD 3 switch
S604	CD 4 switch
S605	CD 5 switch
S606	CD switch
S607	Tape switch
S608	Tuner/Band switch
S609	Enter switch
S612	Play List switch
S613	Stop/Demo switch
S614	Power switch
S615	Rec switch
S616	Aux switch
S617	CD Check switch
S619	Return switch
S620	CD Change switch
S621	Open/Close switch
S622	Re-Master switch
S623	SSEQ switch
S701	Reset switch
S971	Mode switch
S972	Half switch
S973	CR02 switch
S974	Recinh_R switch
S975	Recinh_F switch
S1901	Tape Eject switch
VR600	Volume VR

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	: Playback
<< >>	: Rec
(())	: CD
< >	: FM
()	: AM

• Importance safety notice :

Components identified by $\triangle$ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

18 Schematic Diagram

18.1. CD Servo Circuit

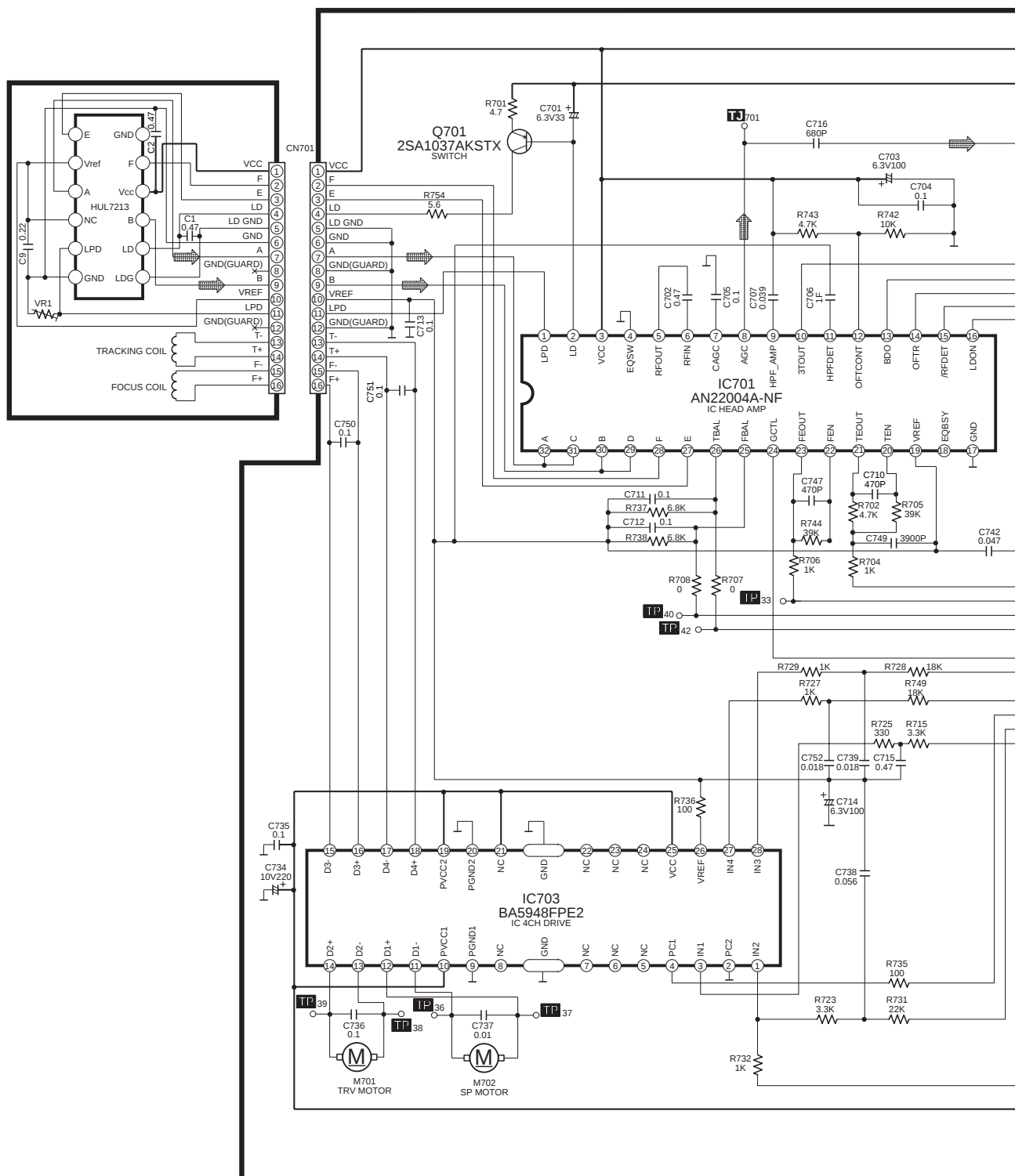
SCHEMATIC DIAGRAM-1

A

CD SERVO CIRCUIT

— : +B SIGNAL LINE

▢ : CD SIGNAL LINE

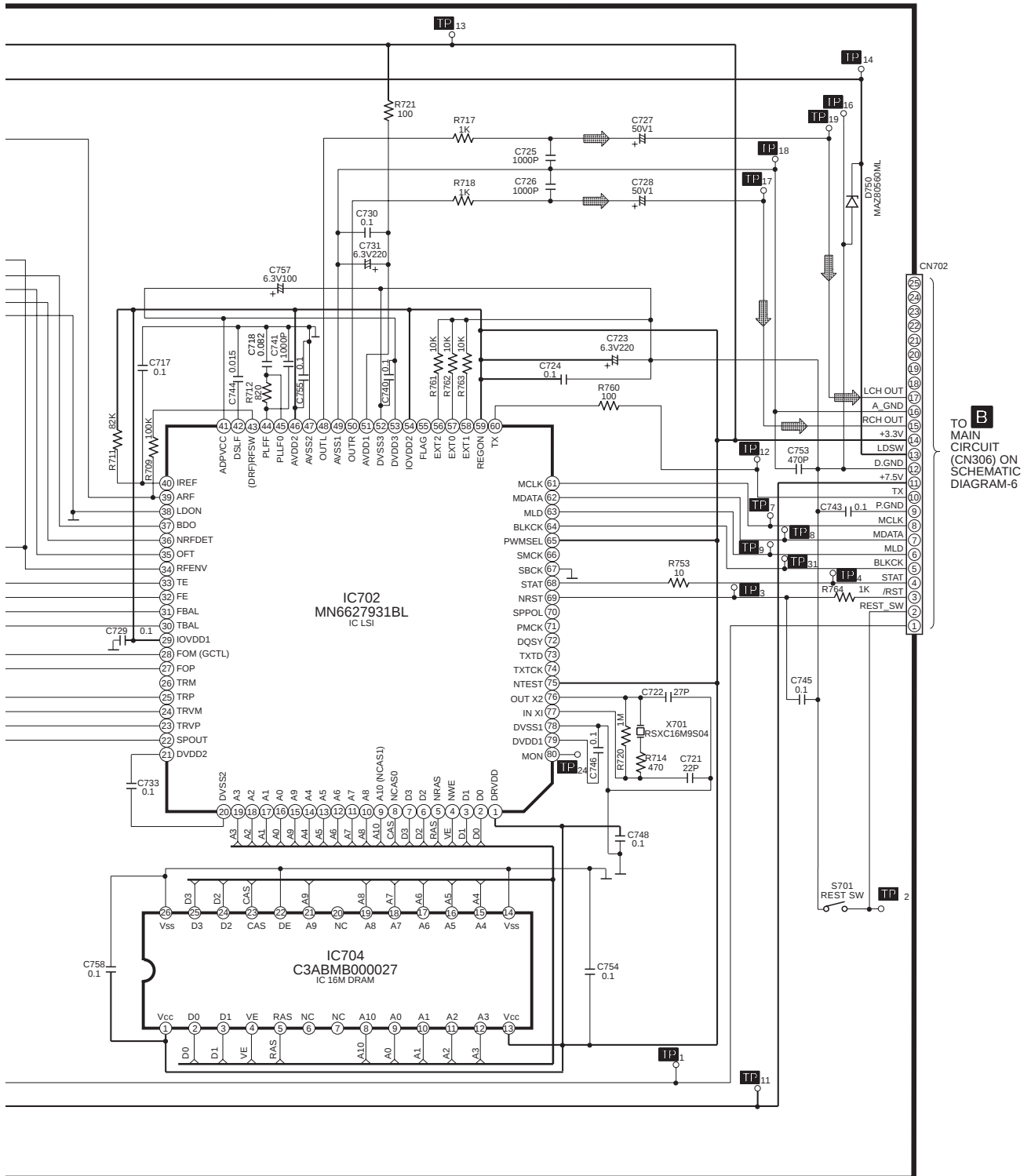


SCHEMATIC DIAGRAM-2

A CD SERVO CIRCUIT

— : +B SIGNAL LINE

▢ : CD SIGNAL LINE



18.2. Main Circuit

SCHEMATIC DIAGRAM-3

B

MAIN CIRCUIT

— : +B SIGNAL LINE

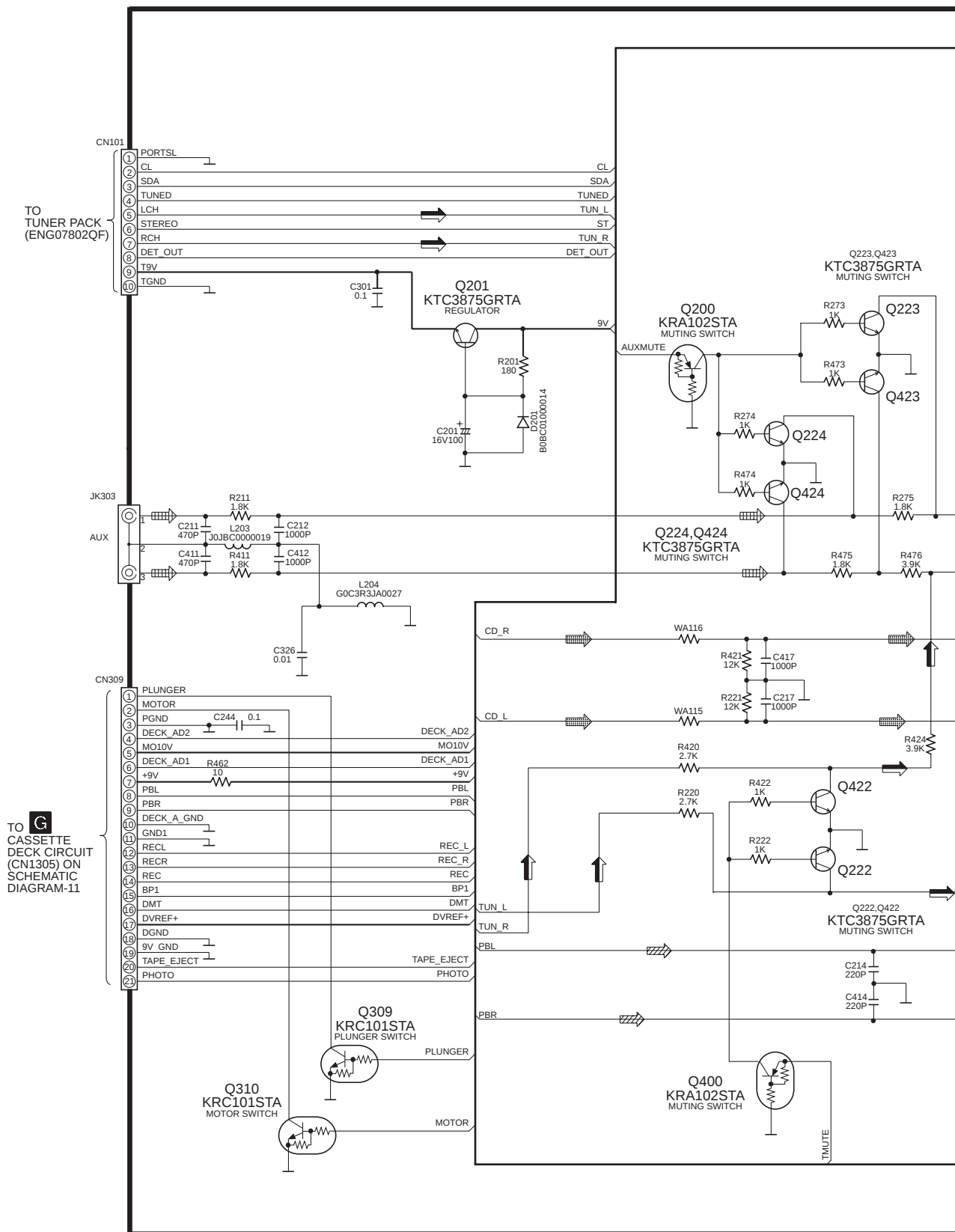
→ : FM/AM SIGNAL LINE

▨ : TAPE PLAYBACK SIGNAL LINE

▨ : TAPE RECORD SIGNAL LINE

▨ : CD SIGNAL LINE

▨ : AUX SIGNAL LINE



SCHEMATIC DIAGRAM-4

B MAIN CIRCUIT

 : MAIN SIGNAL LINE

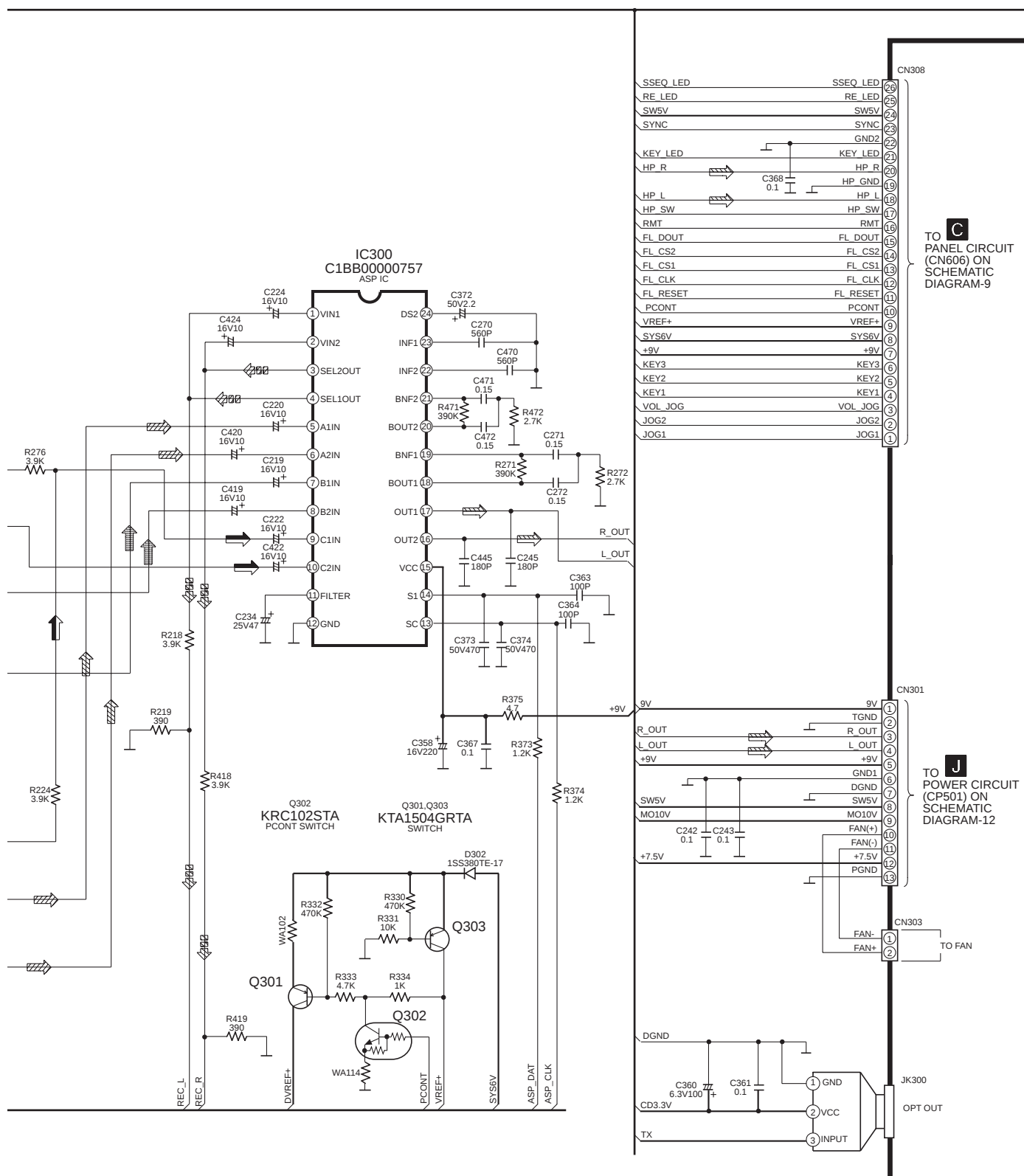
 : MAIN SIGNAL LINE
 : FM/AM SIGNAL LINE

 : TAPE RECORD SIGNAL LINE
 : TAPE PLAYBACK SIGNAL LINE

 : TAPE RECORD SIGNAL LINE

 : CD SIGNAL LINE

———— : +B SIGNAL LINE

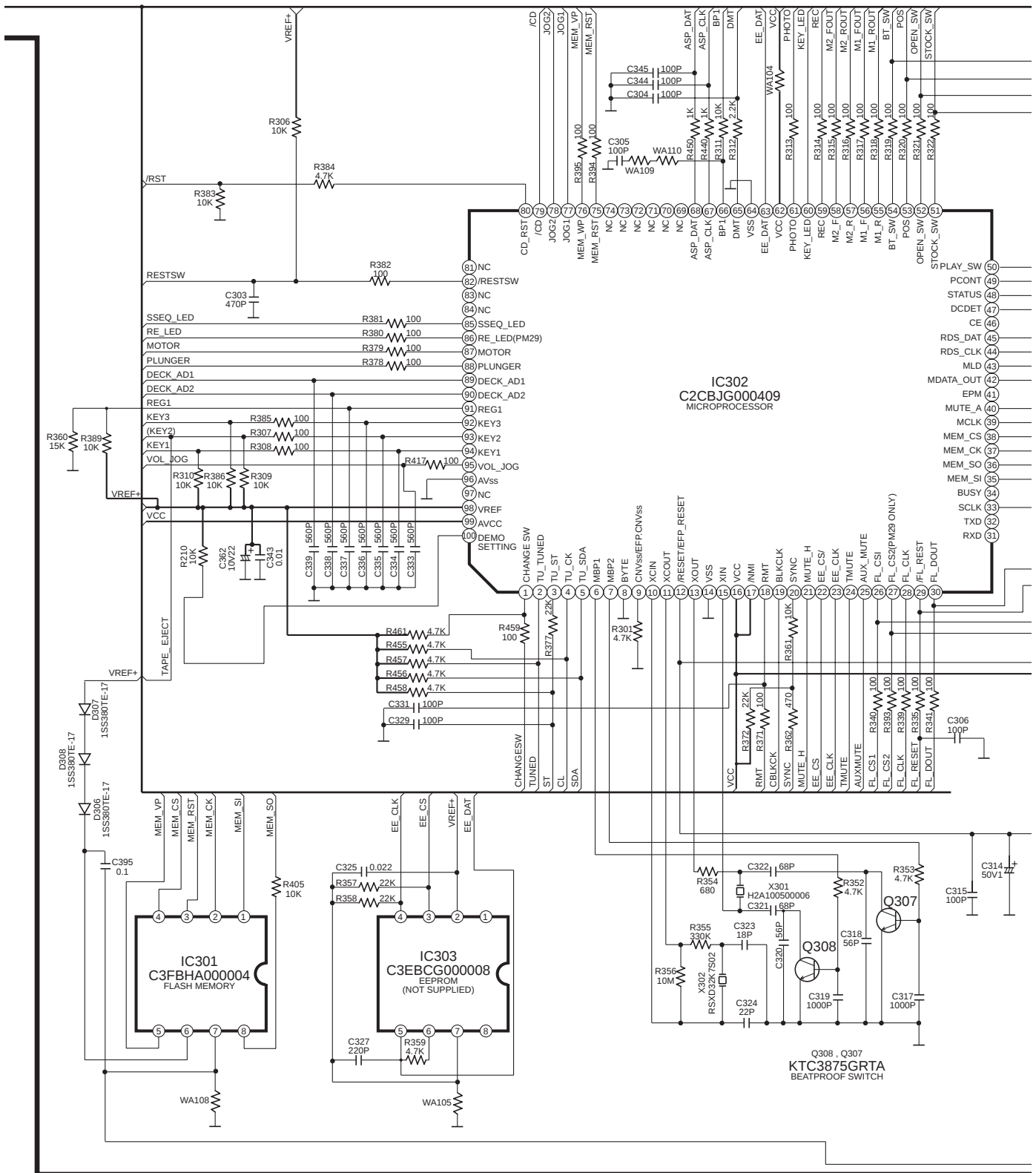


SCHEMATIC DIAGRAM-5

B

MAIN CIRCUIT

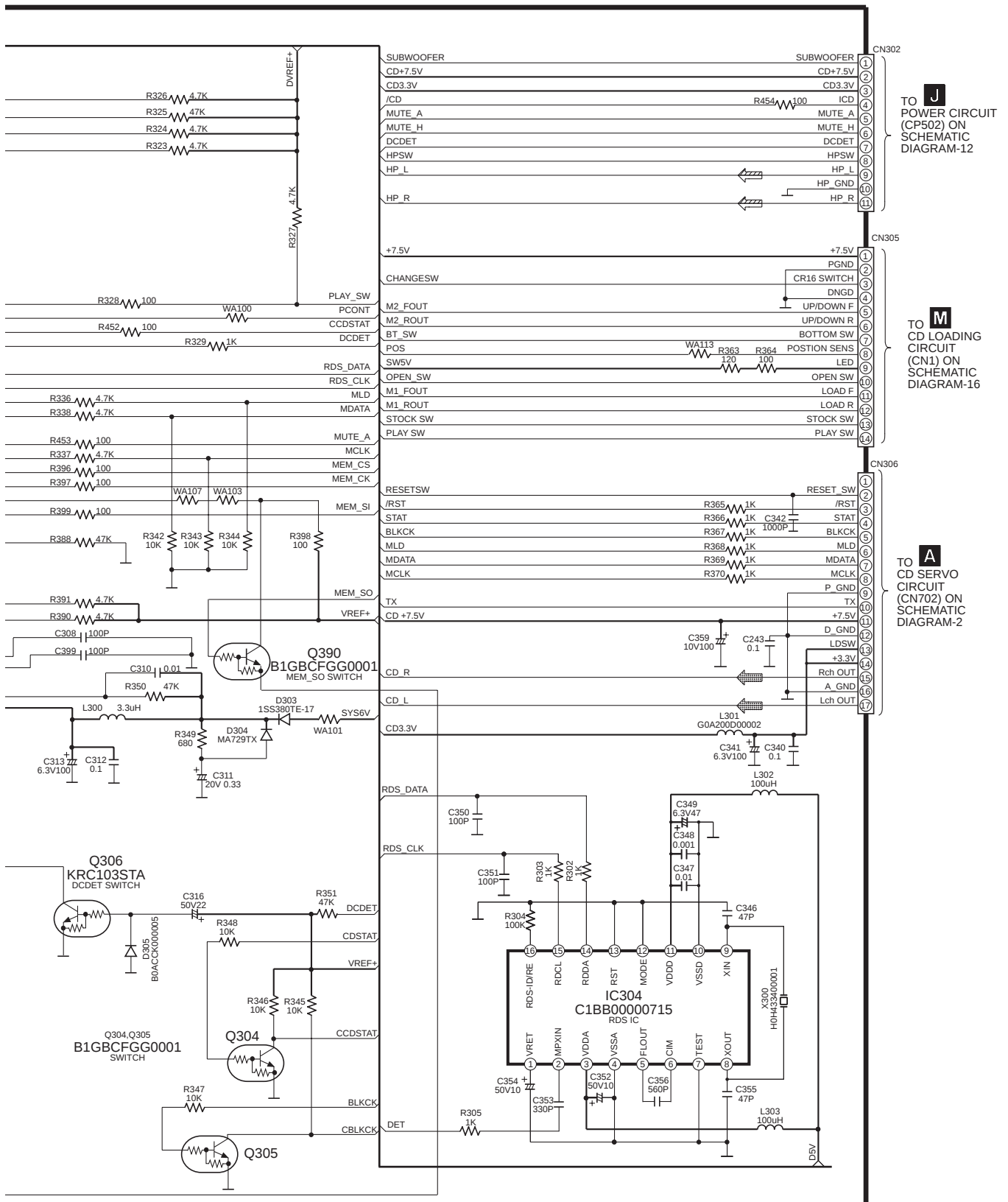
— : +B SIGNAL LINE



SCHEMATIC DIAGRAM-6

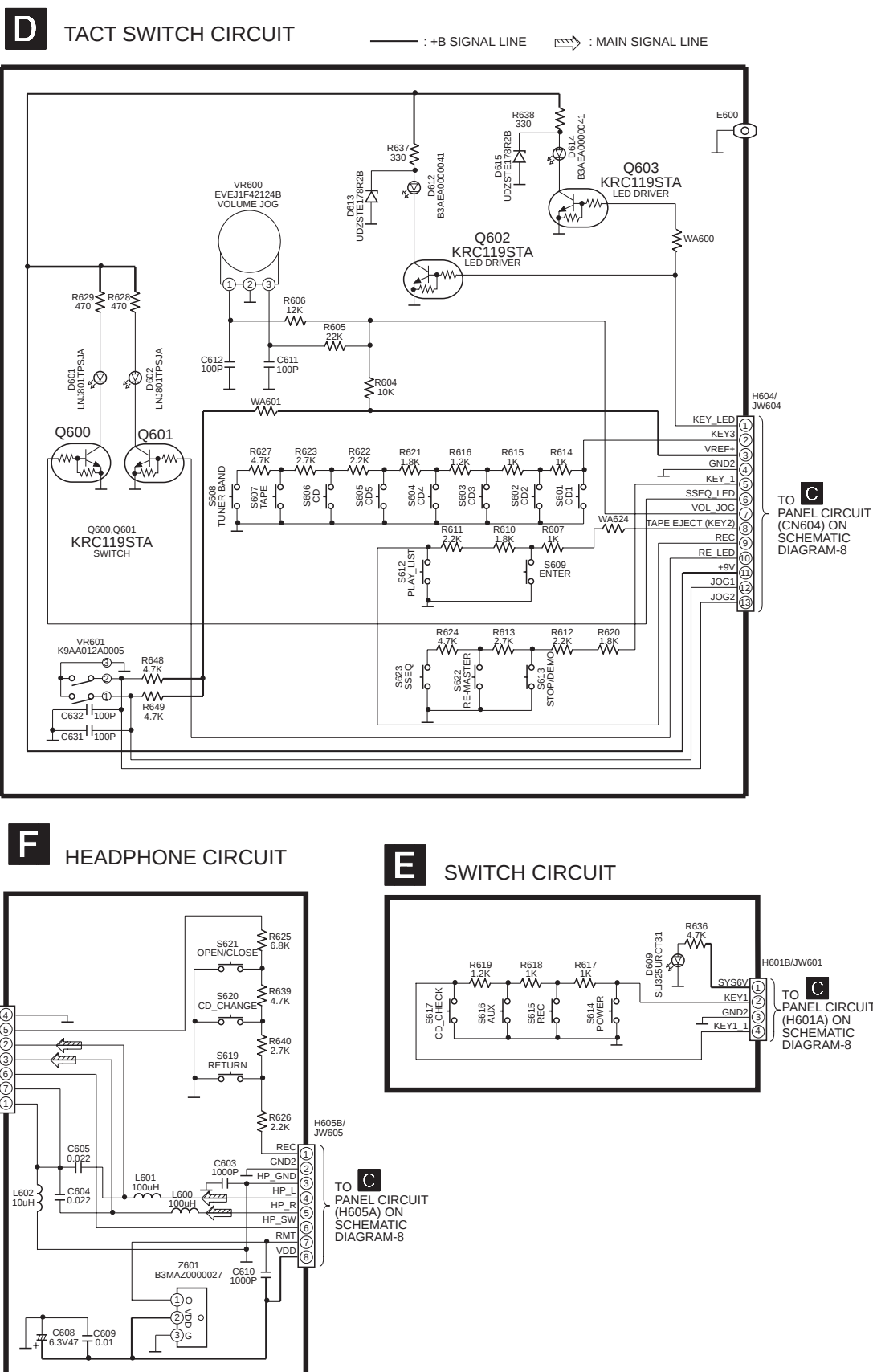
B MAIN CIRCUIT

— : +B SIGNAL LINE
 : MAIN SIGNAL LINE
 : CD SIGNAL LINE



18.3. Panel Circuit, Tact Switch Circuit, Headphone Circuit and Switch Circuit

SCHEMATIC DIAGRAM-7

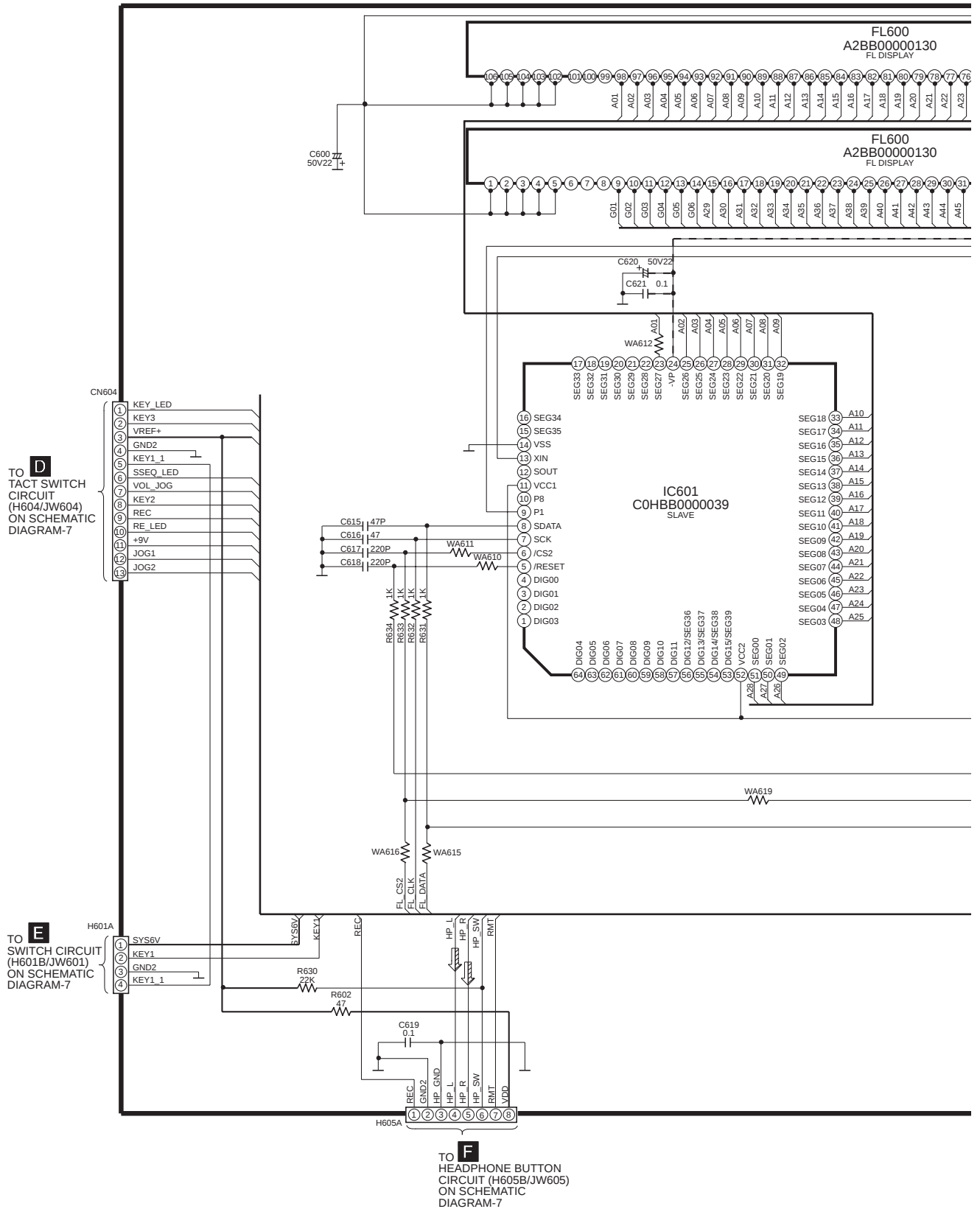


SCHEMATIC DIAGRAM-8

C

PANEL CIRCUIT

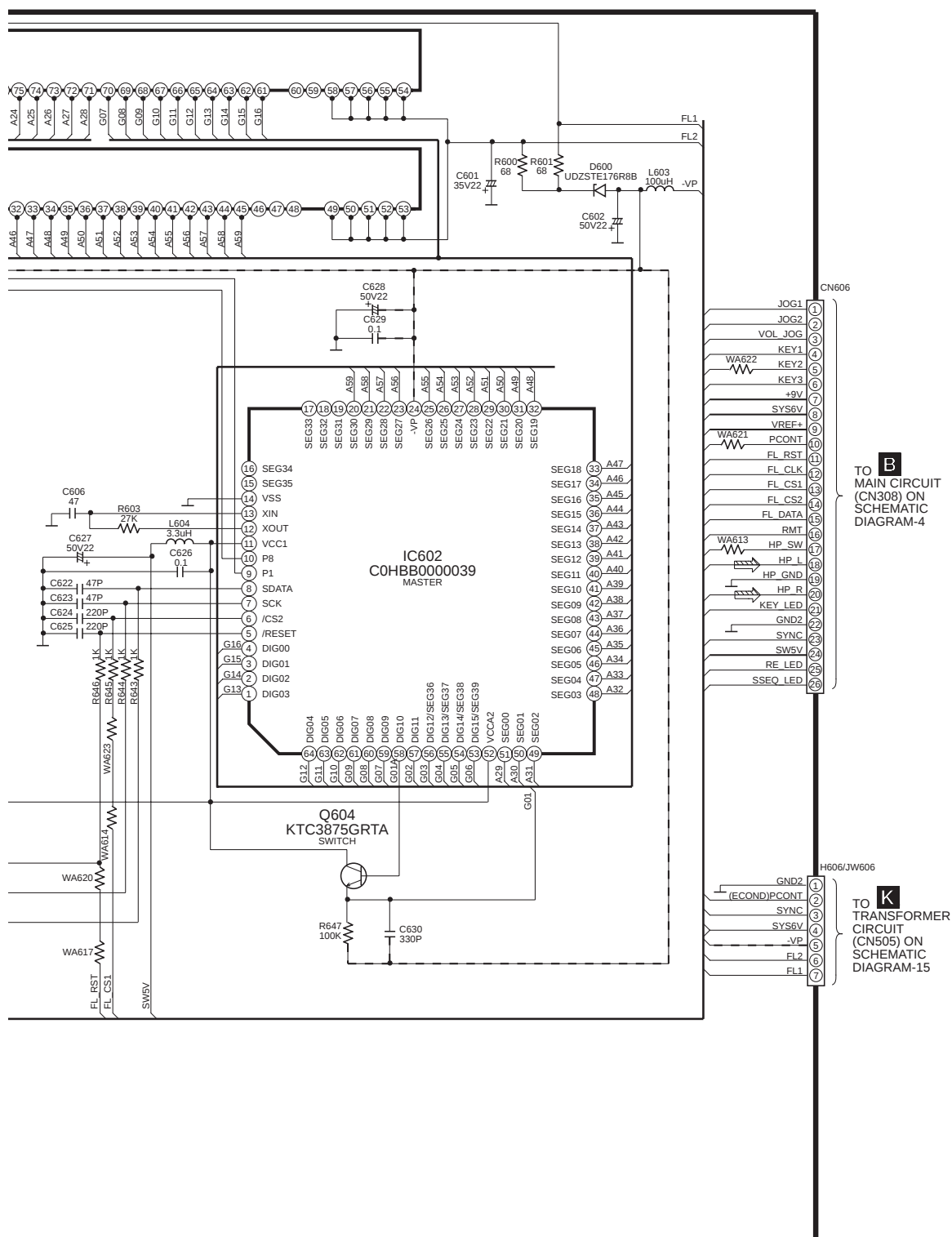
--- : -B SIGNAL LINE
 — : +B SIGNAL LINE ➡ : MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-9

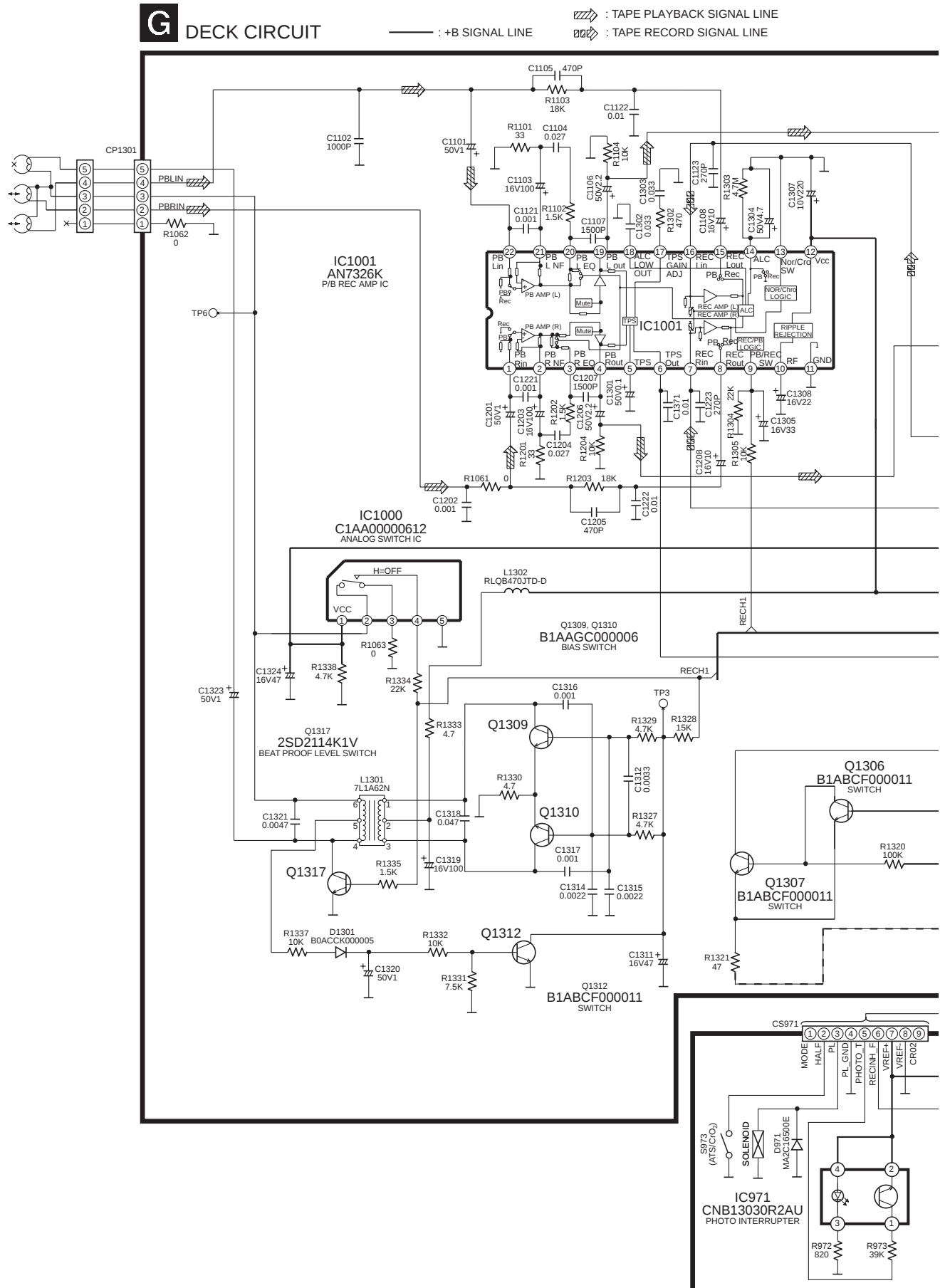
C PANEL CIRCUIT

--- : -B SIGNAL LINE
 — : +B SIGNAL LINE ➡ : MAIN SIGNAL LINE



18.4. Deck Circuit, Deck Mechanism Circuit and Tape Eject Circuit

SCHEMATIC DIAGRAM-10



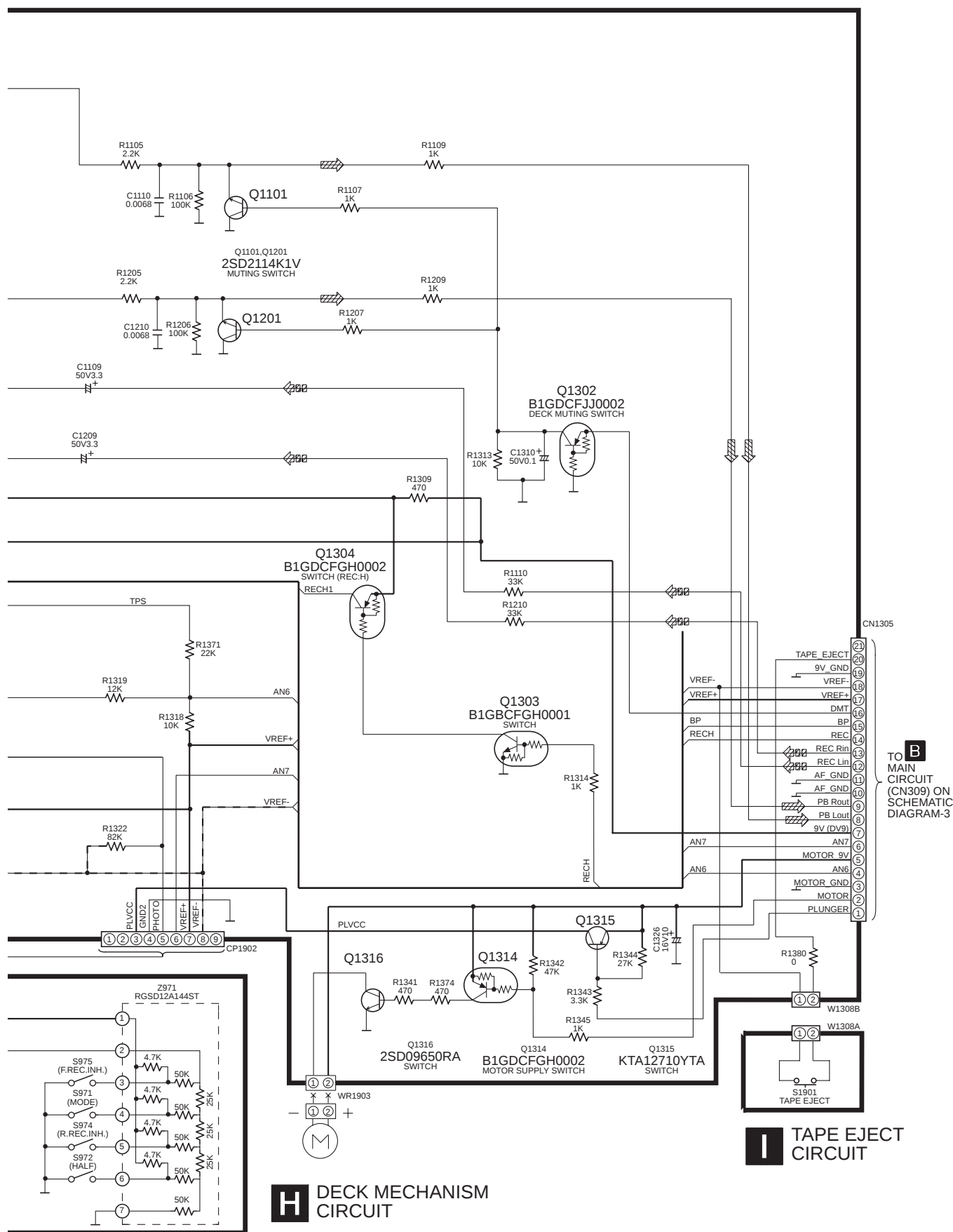
SCHEMATIC DIAGRAM-11

G DECK CIRCUIT

— : +B SIGNAL LINE

▨ : TAPE PLAYBACK SIGNAL LINE

▨ : TAPE RECORD SIGNAL LINE

**H** DECK MECHANISM CIRCUIT**I** TAPE EJECT CIRCUIT

18.5. Power Circuit

SCHEMATIC DIAGRAM-12

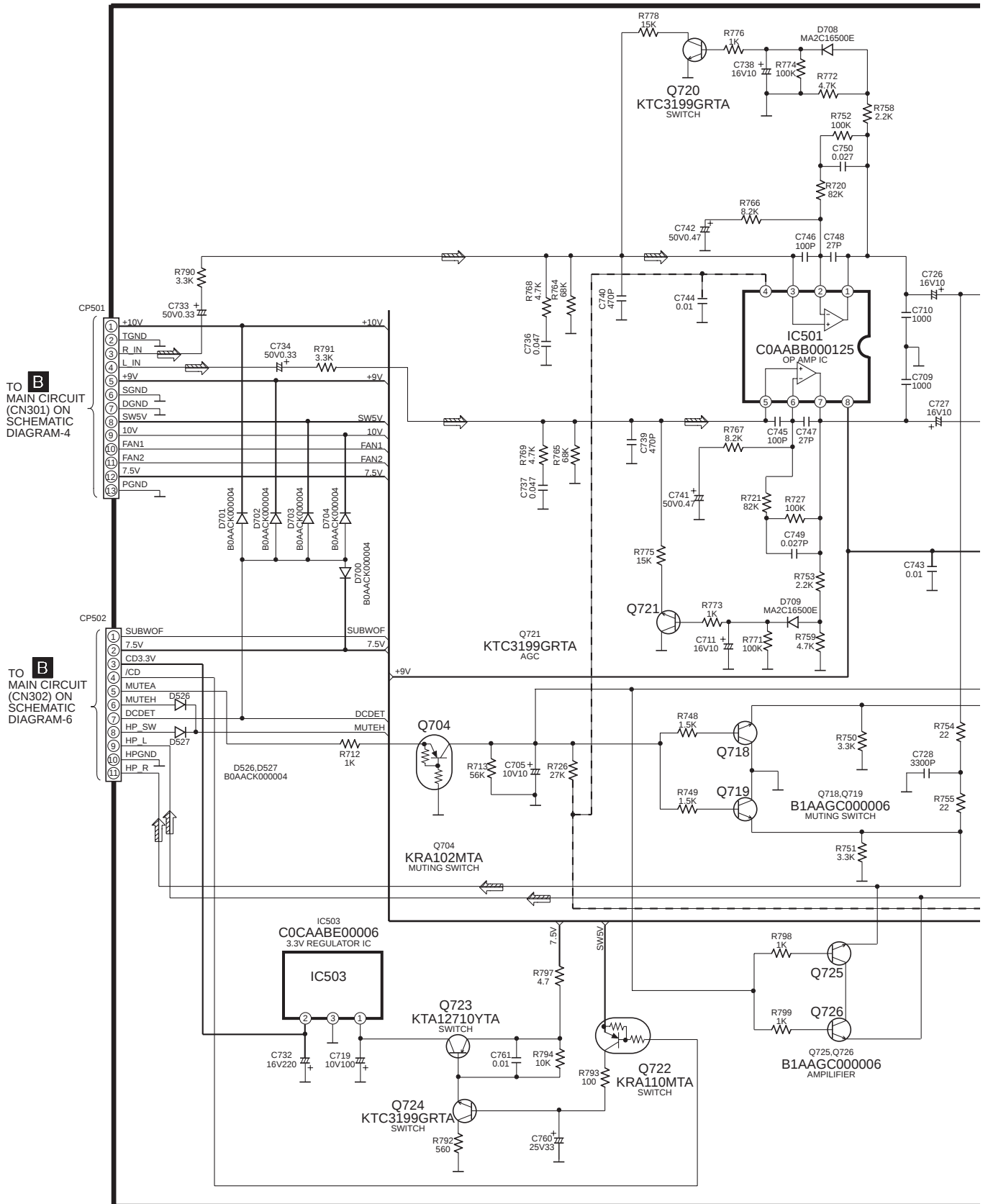
J

POWER CIRCUIT

- - - : - B SIGNAL LINE

— : +B SIGNAL LINE

⇒ : MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-13

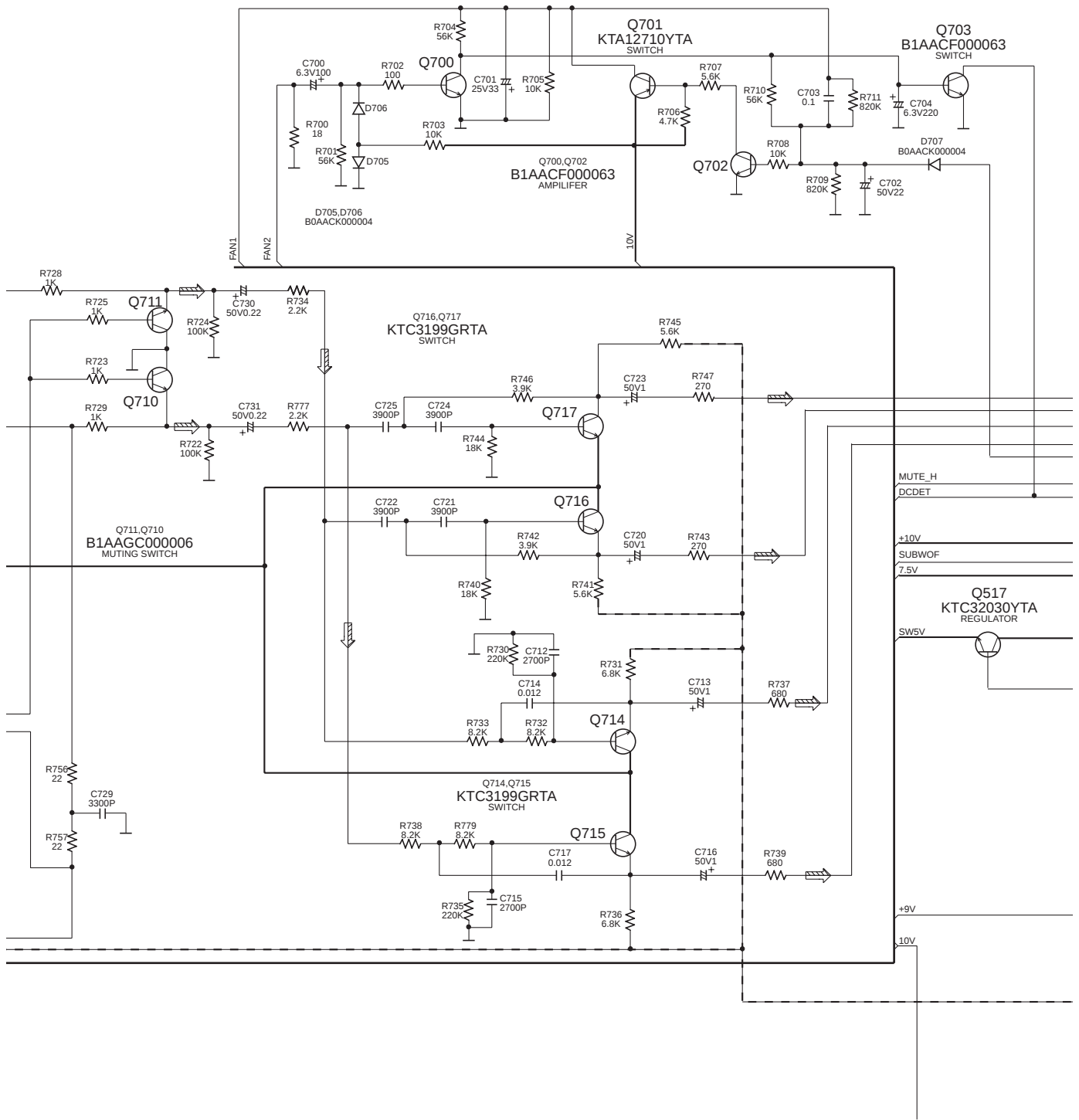


POWER CIRCUIT

- - - : - B SIGNAL LINE

— : +B SIGNAL LINE

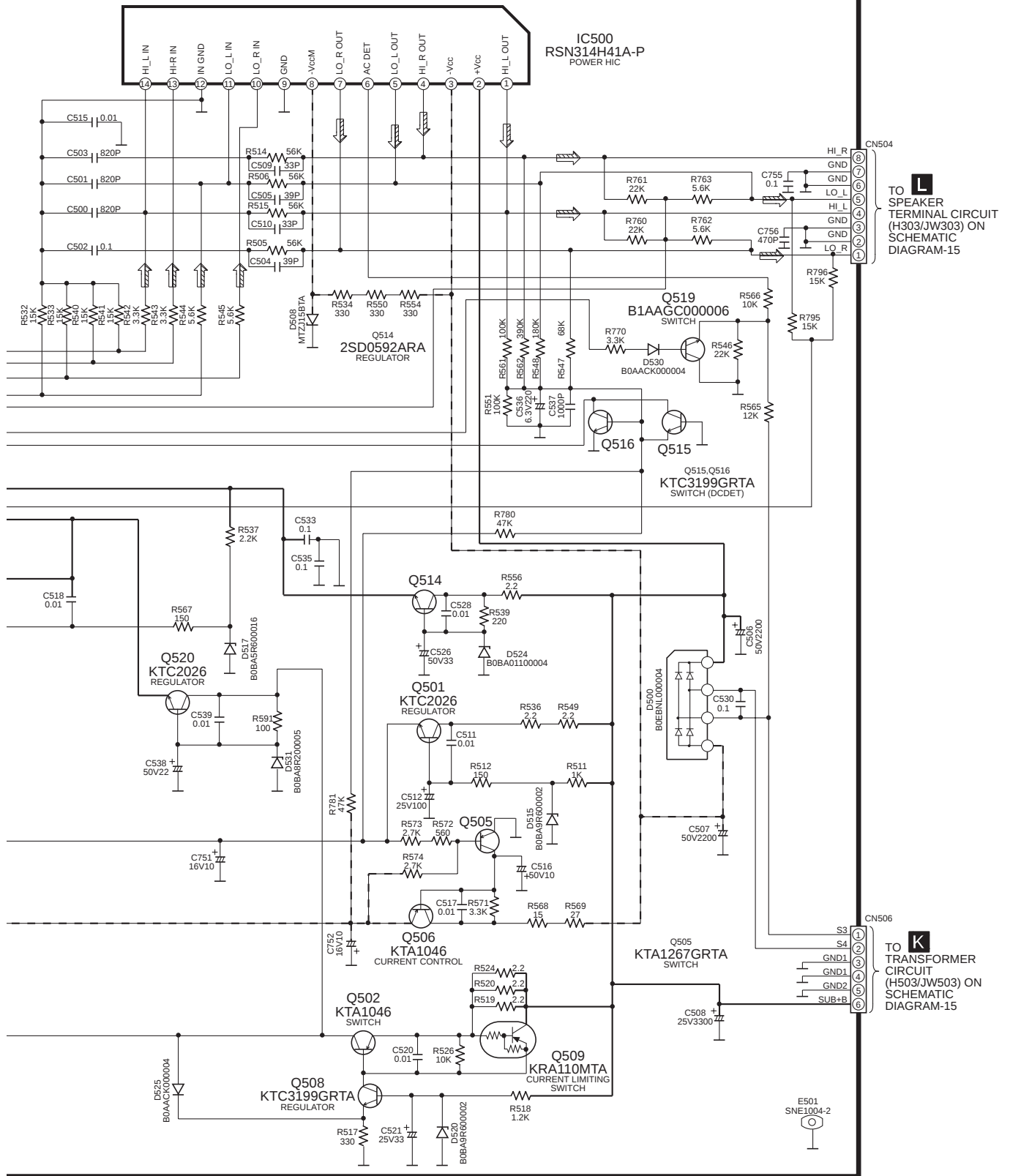
⇒ : MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-14

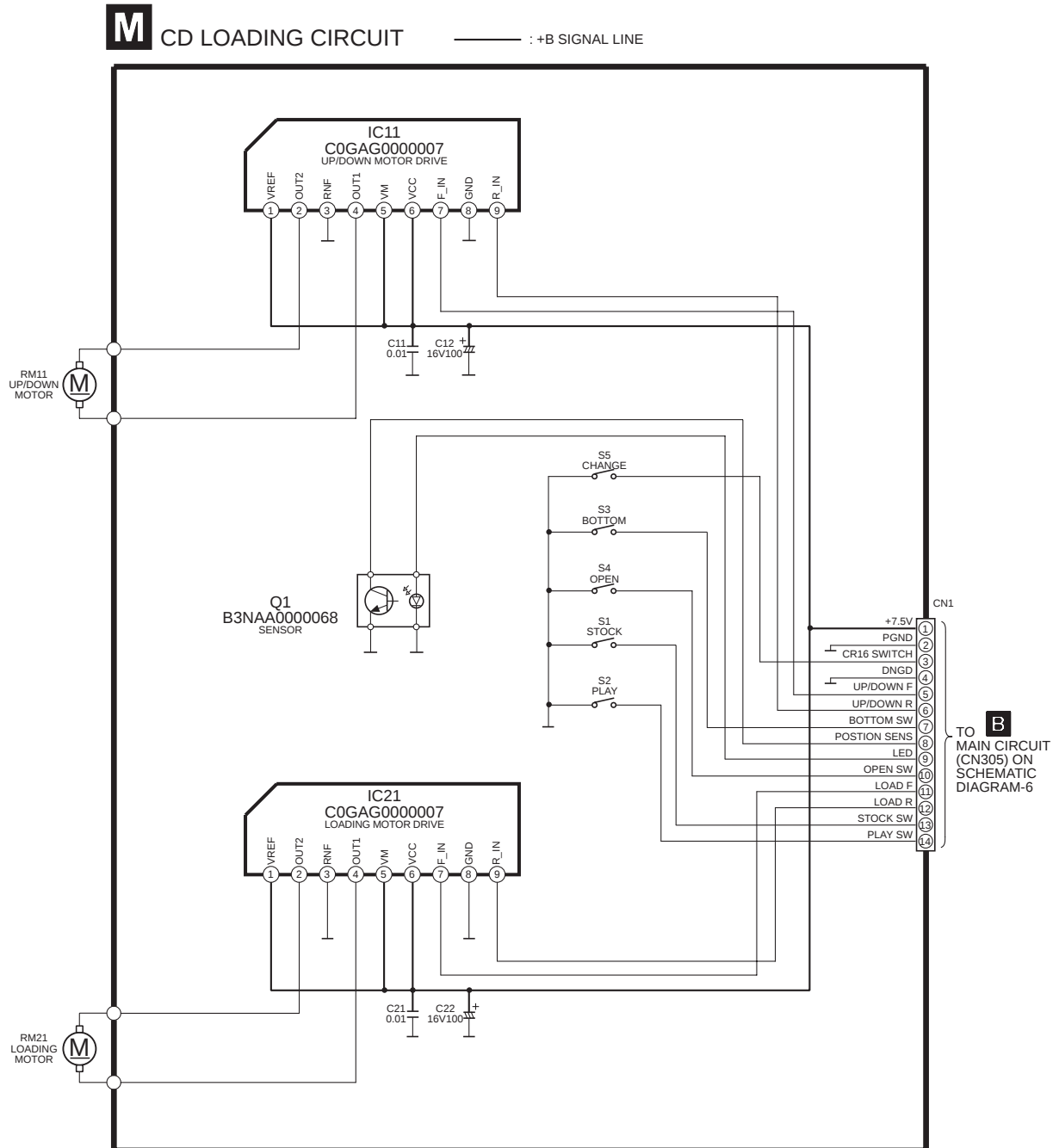
J POWER CIRCUIT

--- : -B SIGNAL LINE
 — : +B SIGNAL LINE ➡ : MAIN SIGNAL LINE



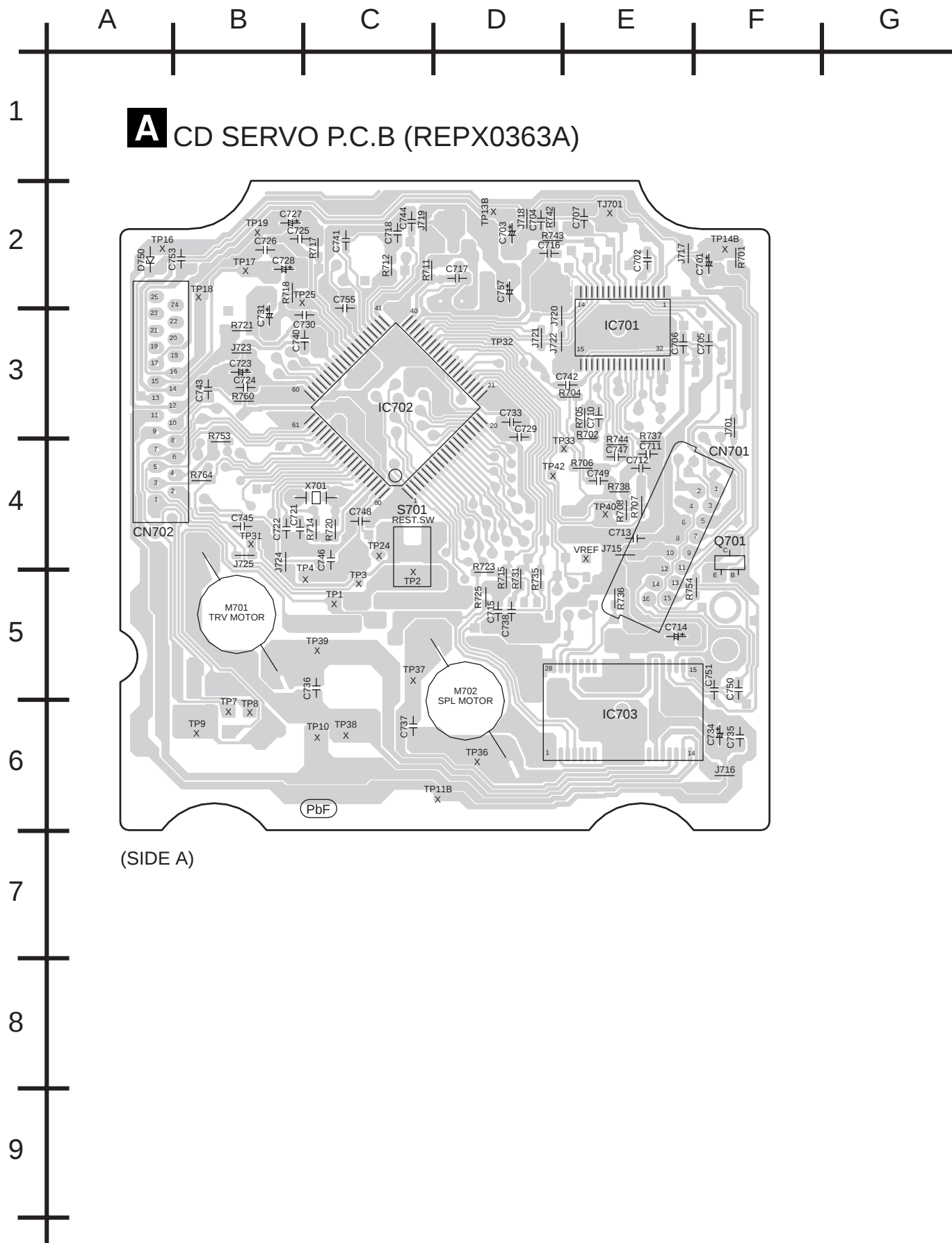
18.7. CD Loading Circuit

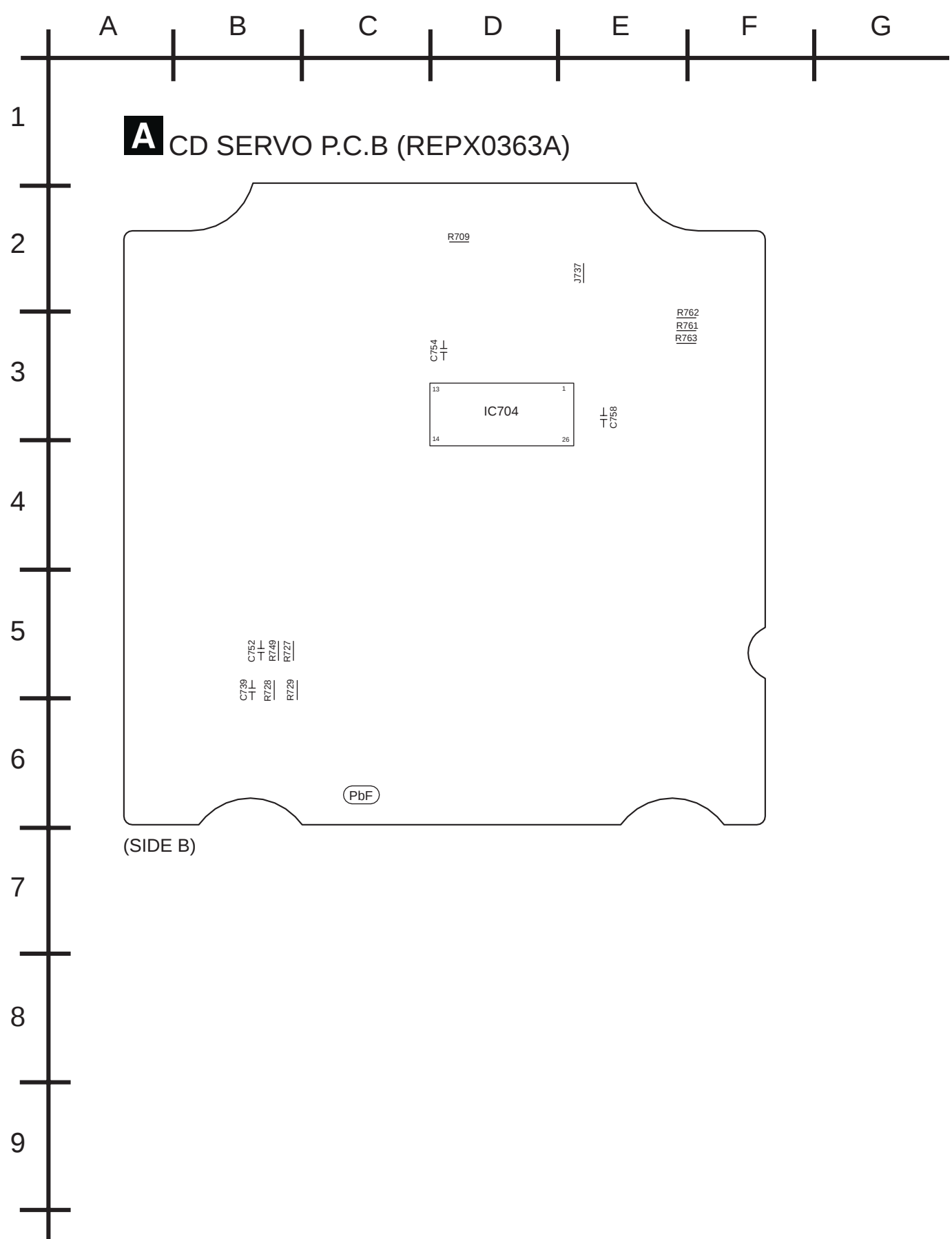
SCHEMATIC DIAGRAM-16



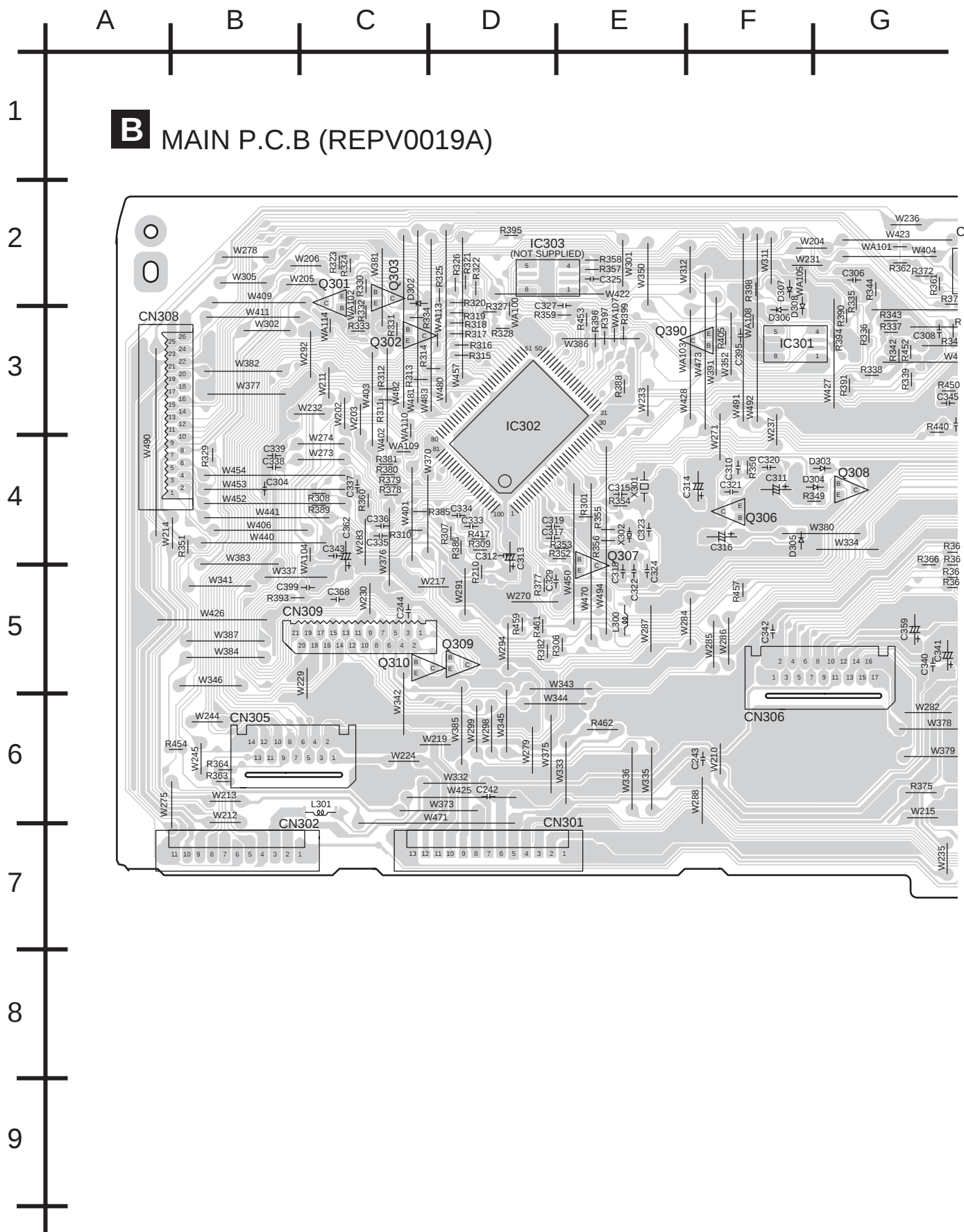
19 Printed Circuit Board

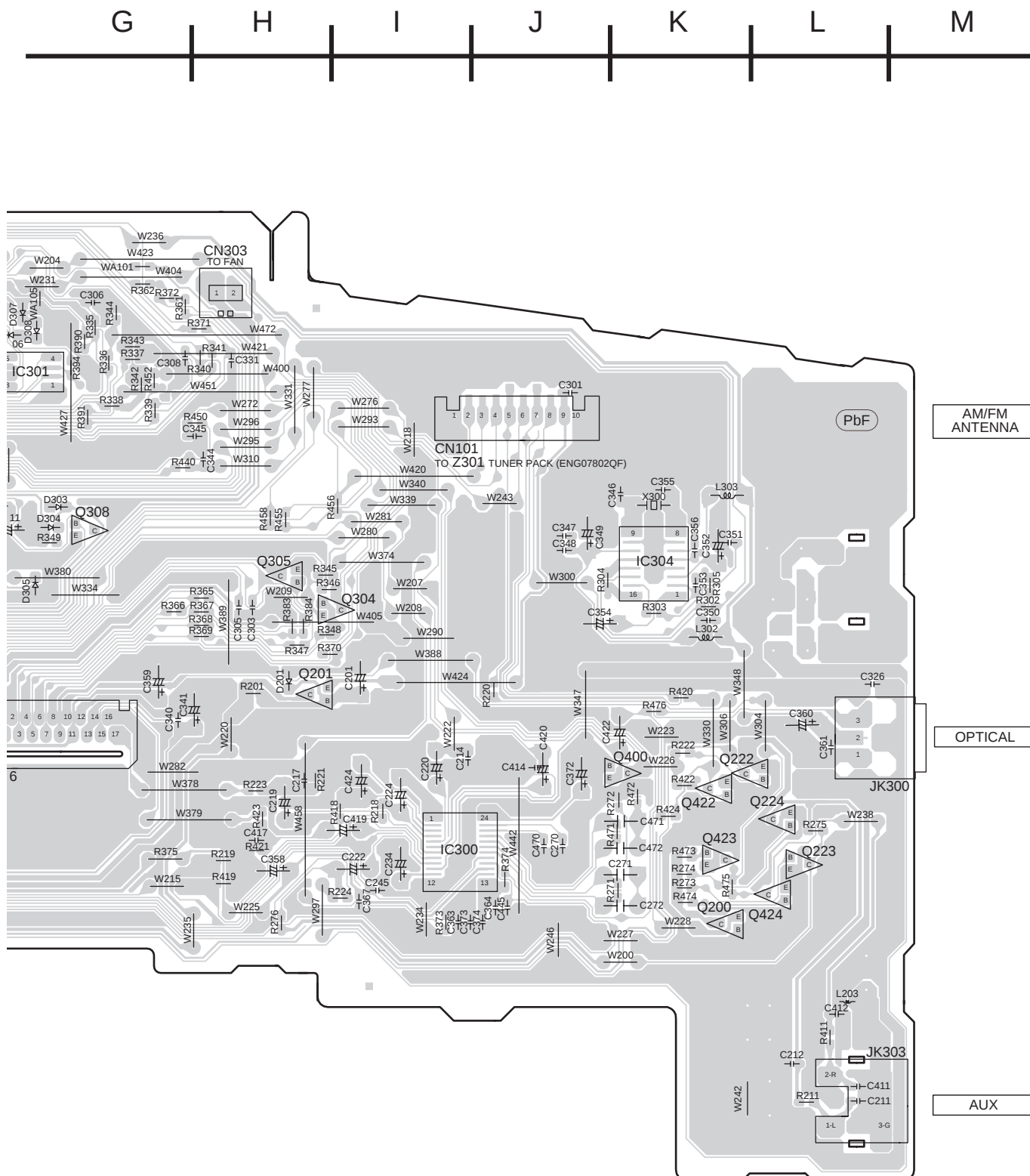
19.1. CD Servo P.C.B. (Side A and Side B)





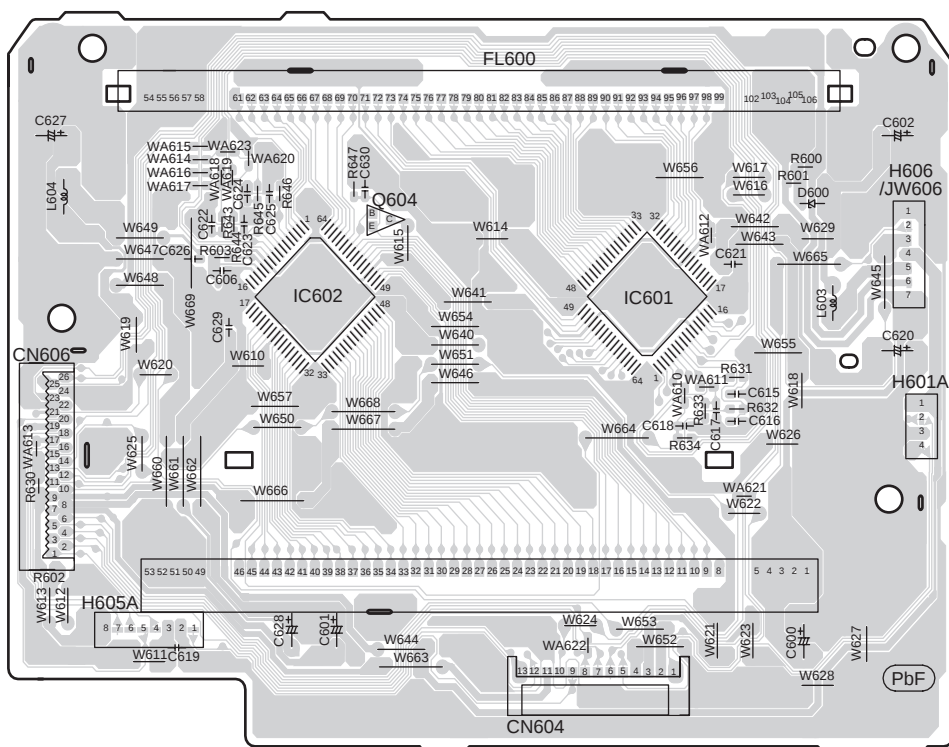
19.2. Main P.C.B.



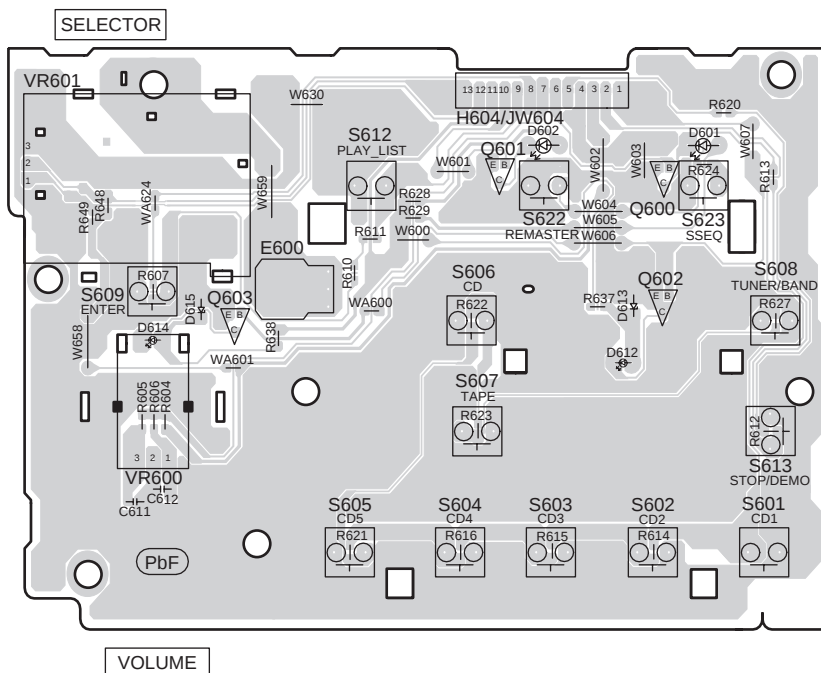


19.3. Panel P.C.B. and Tact Switch P.C.B.

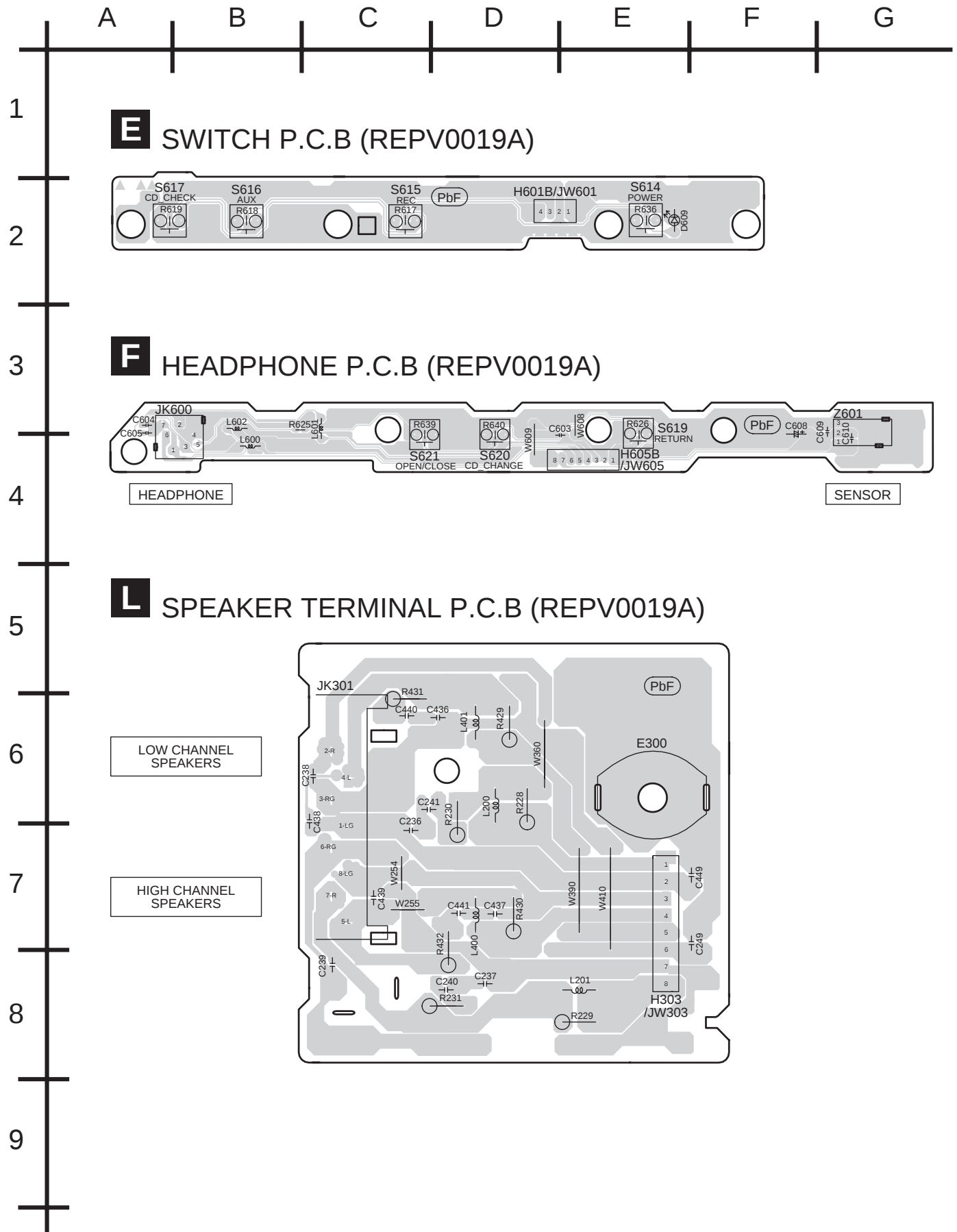
C PANEL P.C.B (REPV0019A)



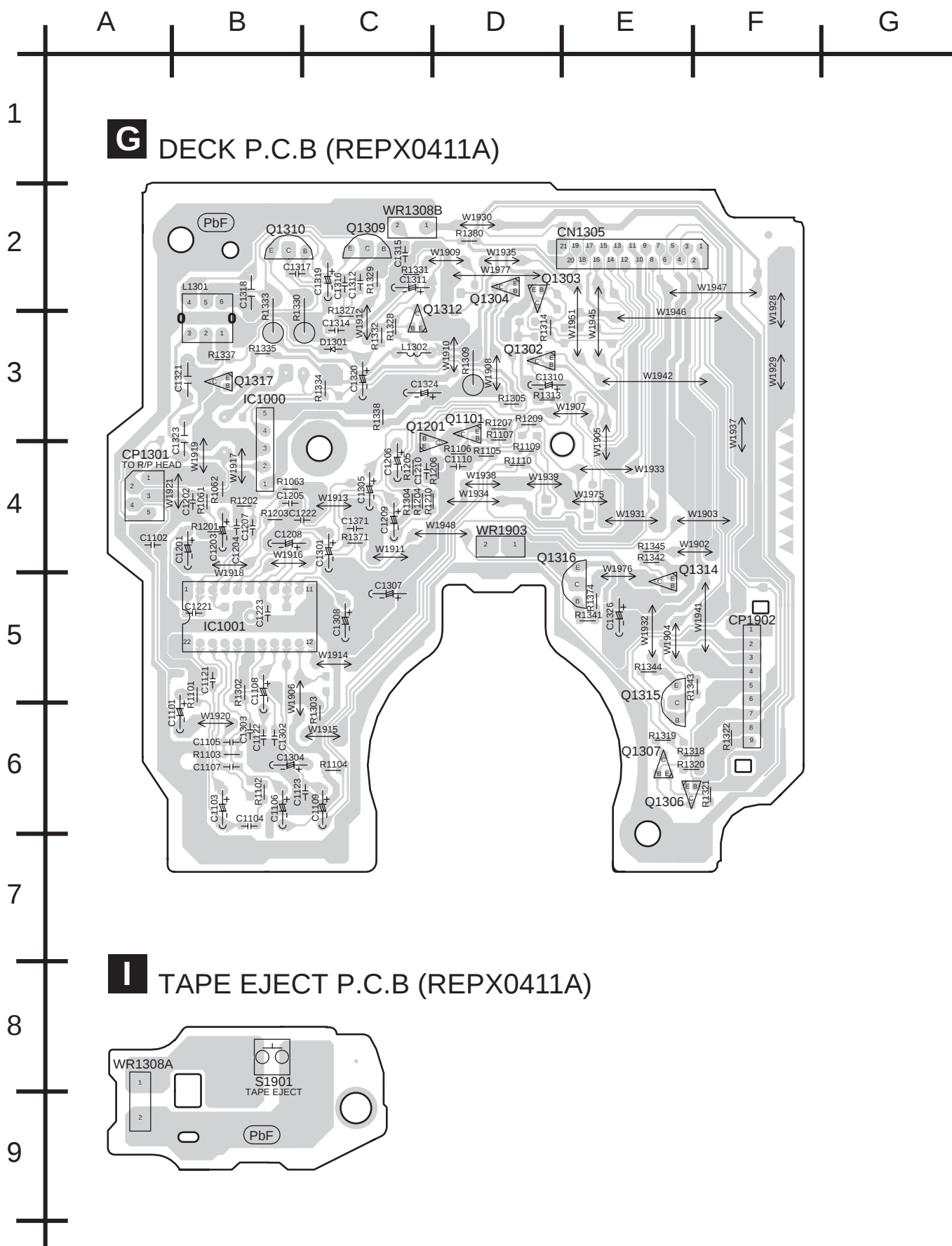
D TACT SWITCH P.C.B (REPV0019A)



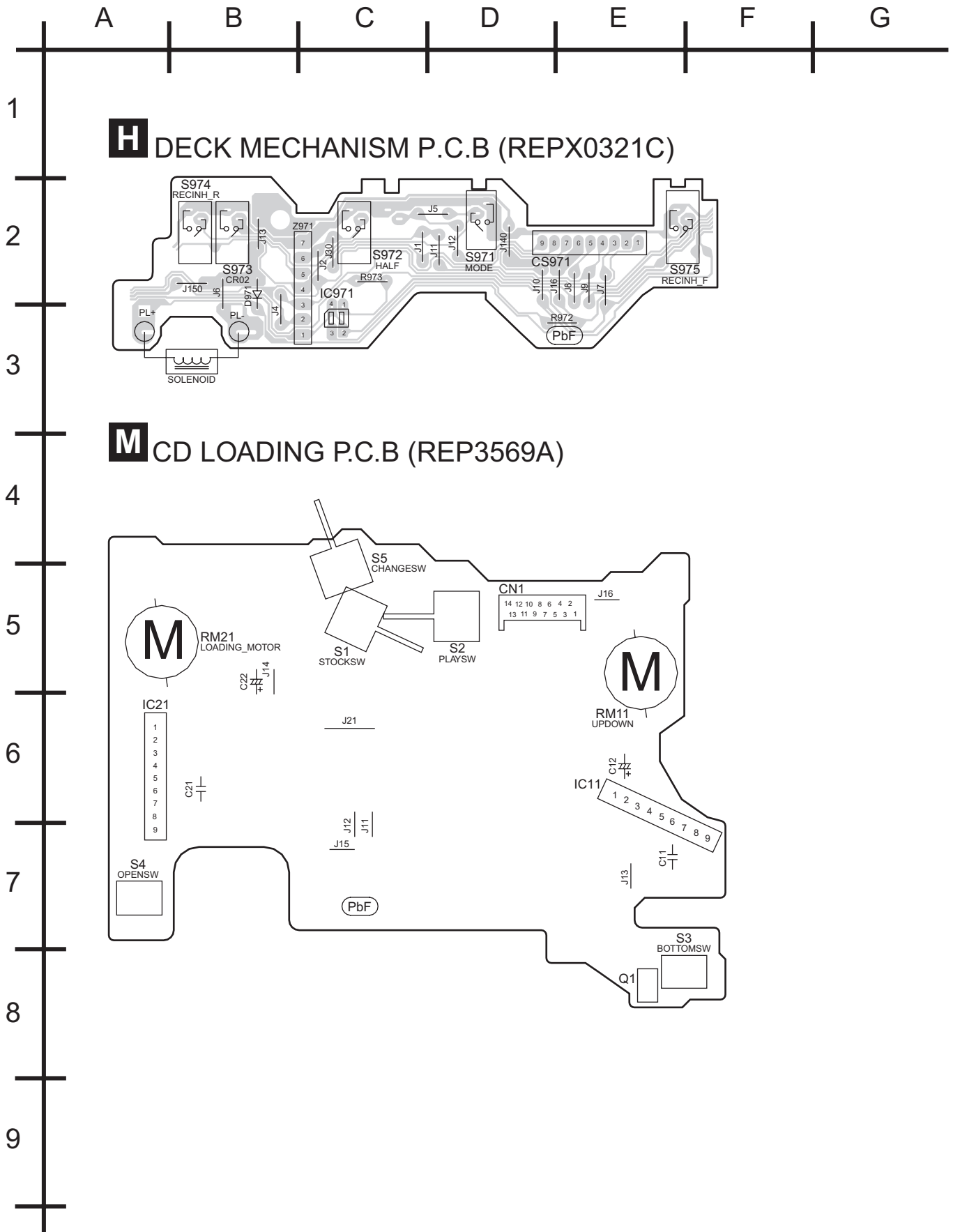
19.4. Switch P.C.B., Headphone P.C.B. and Speaker Terminal P.C.B.



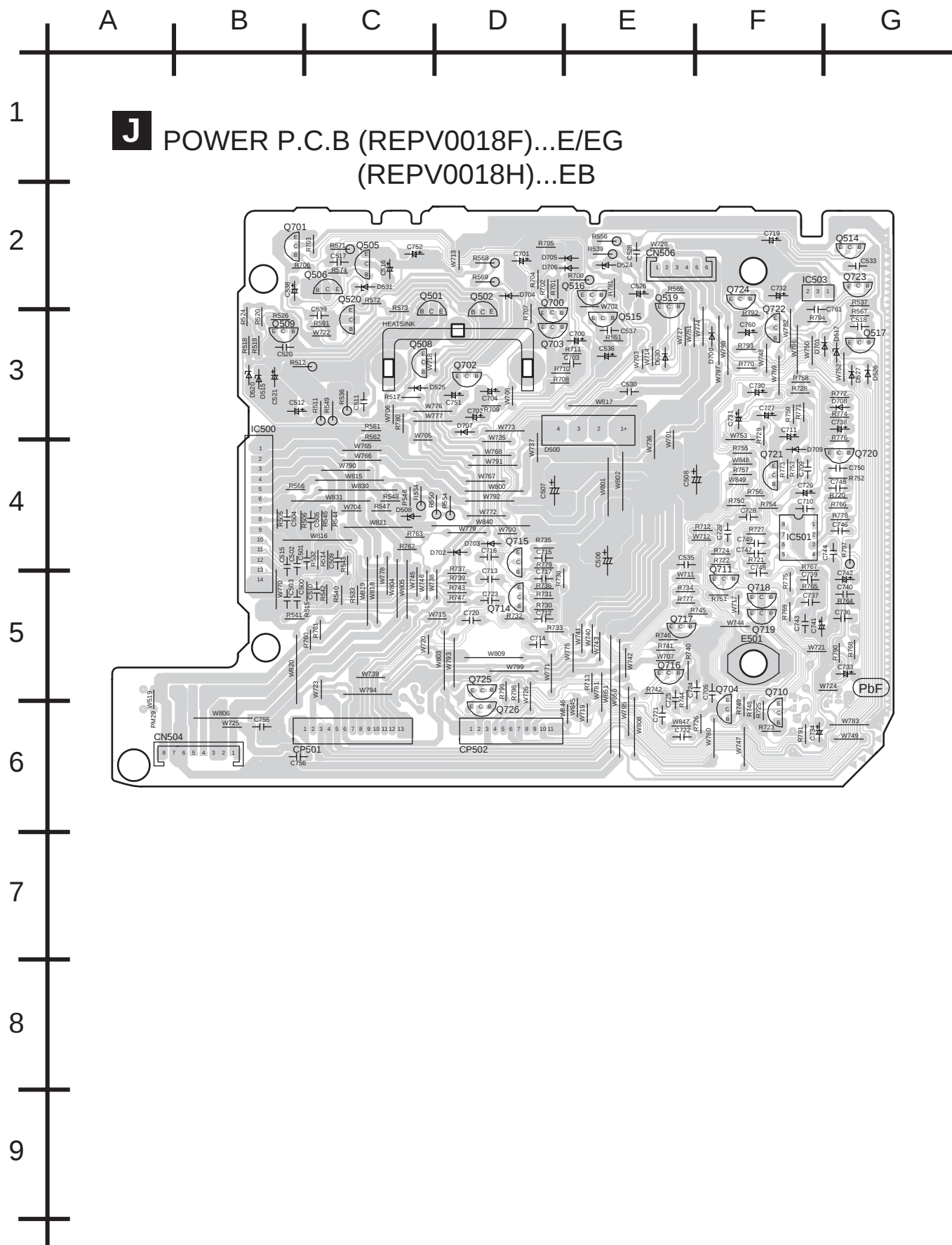
19.5. Deck P.C.B. and Tape Eject P.C.B.



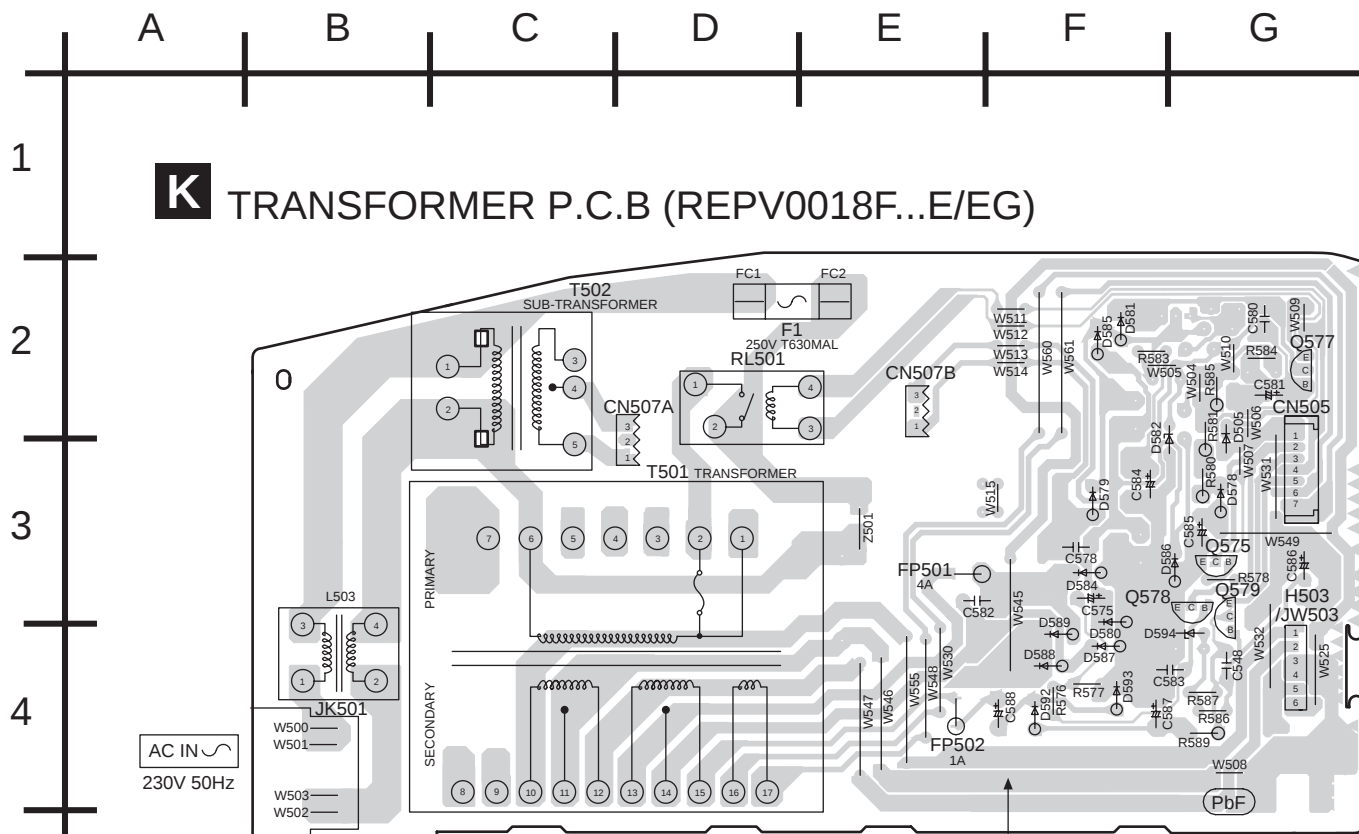
19.6. Deck Mechanism P.C.B and CD Loadind P.C.B.



19.7. Power P.C.B.

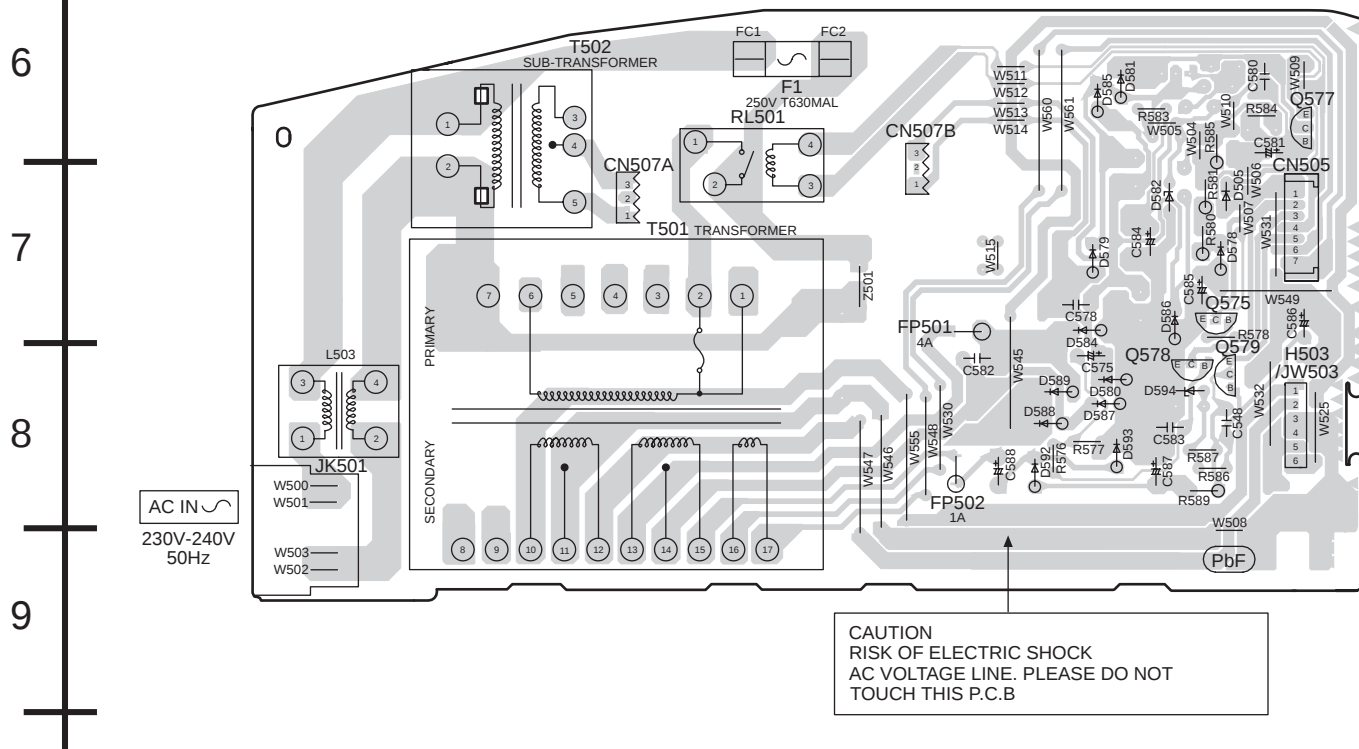


19.8. Transformer P.C.B.



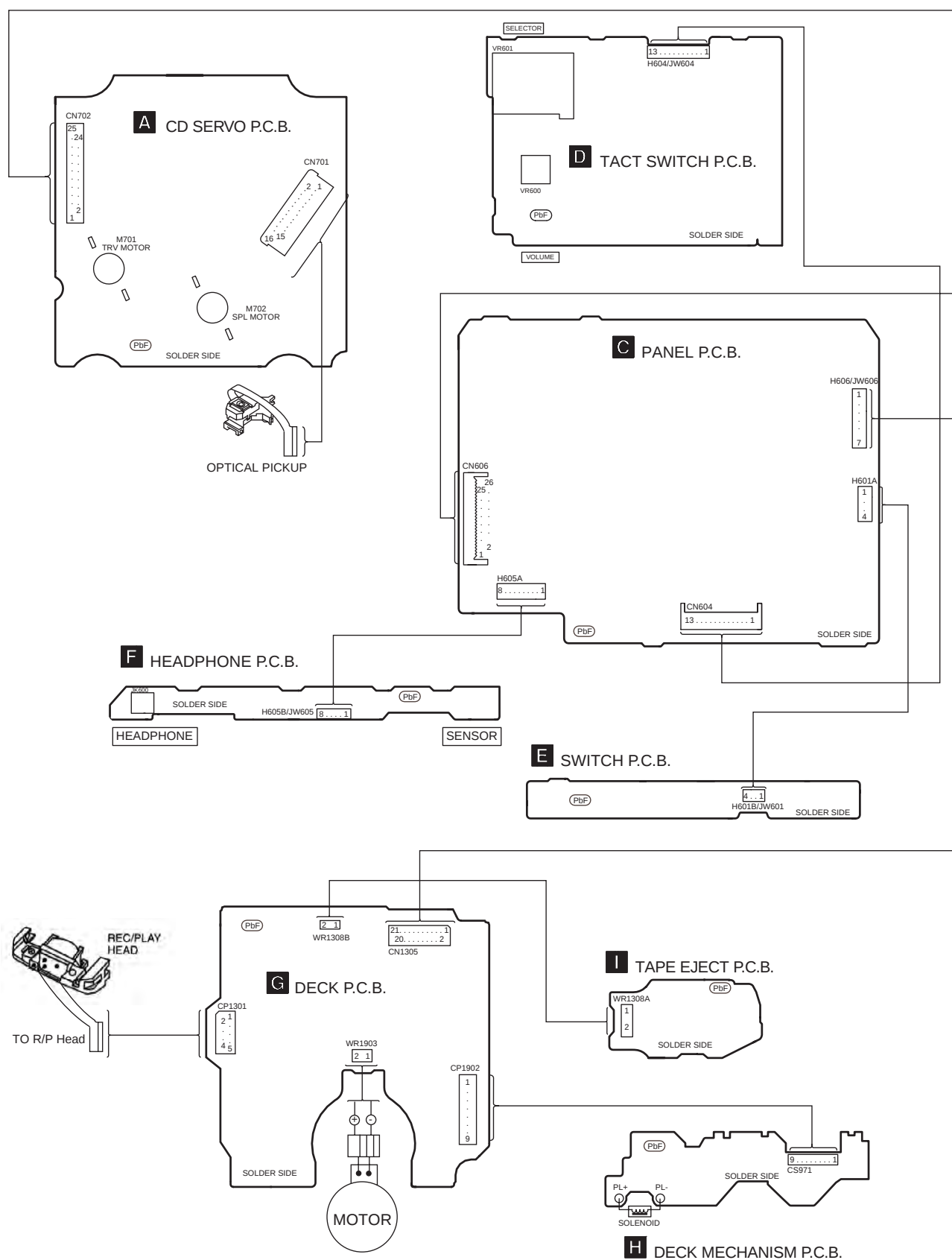
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS P.C.B

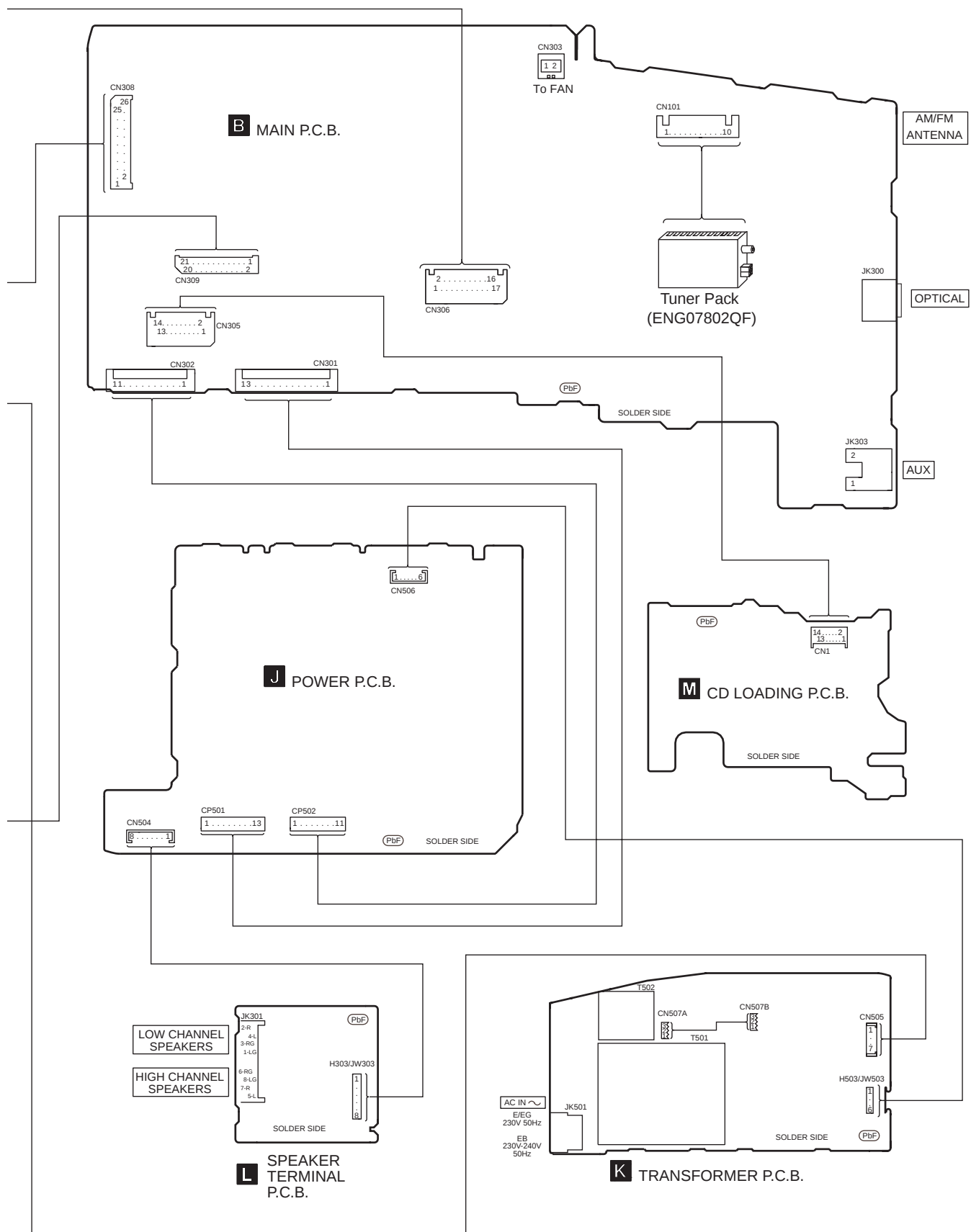
K TRANSFORMER P.C.B
(REPV0018H...EB)



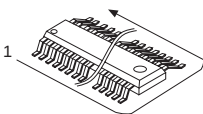
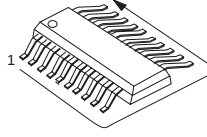
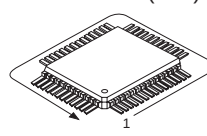
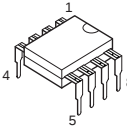
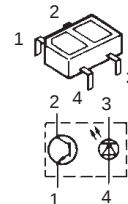
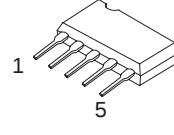
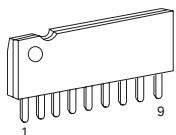
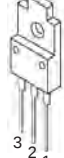
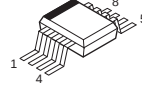
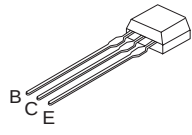
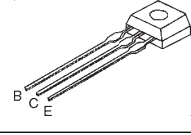
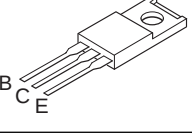
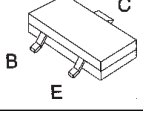
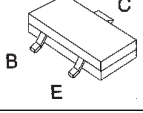
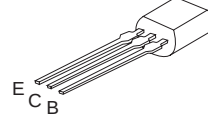
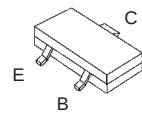
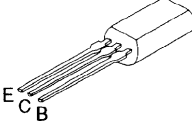
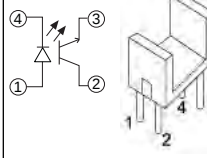
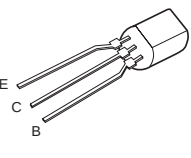
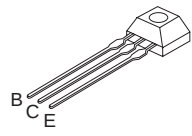
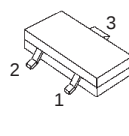
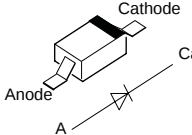
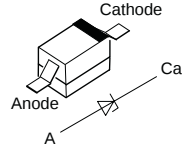
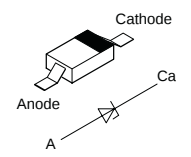
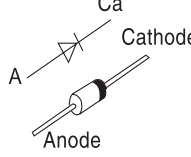
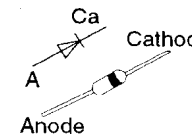
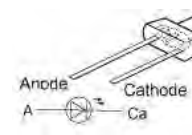
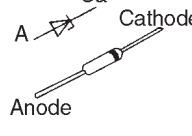
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS P.C.B

20 Wiring Connection Diagram





21 Illustration of IC's, Transistors and Diodes

BA5948FPE2 (28P) AN7326K (26P) 	AN22004A-NF (32P) C1BB00000757 (24P) C3EBCG000008 (16P) C3ABMB000027 (26P) C1BB00000715 (16P) 	C0HBB0000039(64P) C2CBJG000409(100P) MN6627931BL(80P) 	C0AABB000125 	CNB13030R2AU 	
C1AA00000612 	RSN314H41A-P 	C0GAG0000007 	C0CAABE00006 	C3FBHA000004 	B1AAGC000006 
KTC3199GRTA B1AACF000063 	KTA1046 KTC2026 	B1GDCFJJ0002 KTC3875GRTA KRA102STA KRC101STA KRC102STA KRC103STA 2SA1037AKSTX B1GBFCFGG0001 	B1GBFCFGH0001 B1GDCFGH0002 B1ABCF000011 	2SD0592ARA 2SD09650RA KTA12710YTA KTA1504GRTA KTC32030YTA KTA1267GRTA 	
KRC119STA 	2SC3940ARA 	B3NAA0000068 	2SB0621AHA 	KRA102MTA KRC102MTA KRA110MTA 	2SD2114K1V 
1SS380TE-17 B0BC01000014 B0ACCK000005 	UDZSTE176R8B 	MAZ80560ML UDZSTE178R2B 	B0EAKM000117 	B0AACK000004 MA729TX MA2C16500E 	LNJ801TPSJA SLI325URCT31 B3AEA0000041 
B0BA5R600016 B0BA9R600002 B0BA6R600008 B0BA01100004 B0BA8R200005 MTZJ15BTA B0BA03100016 	B0EBNL000004 				

22 Terminal Function of IC's

22.1. IC701 (AN22004A-NF) IC HEAD AMP

Pin No.	Mark	I/O	Function
1	LPD	I	APC Amp input terminal
2	LD	O	APC Amp. output terminal
3	VCC	I	Power source terminal
4	EQSW	-	Equalizer switch terminal
5	RFOUT	O	RF summing Amp output terminal
6	RFIN	I	AGC input terminal
7	CAGC	-	AGC loop filter connecting capacitor terminal
8	AGC	O	AGC output terminal
9	HPF-AMP	-	HPF Amp connecting capacitor terminal
10	3TOUT	O	3TOUT output terminal
11	HPFDET	-	Detection system's HPF connecting capacitor terminal
12	OFT CONT	-	PFTR detection level adjustment terminal
13	BDO	O	BDO output terminal
14	OFTR	O	OFTR output terminal
15	/RFDET	O	NRFDET output terminal

Pin No.	Mark	I/O	Function
16	LDON	-	LDON terminal
17	GND	-	Earth terminal
18	EQBSY	-	Equalizer boost adjustment terminal
19	VREF	O	VREF output terminal
20	TEN	I	Amp inverting input terminal
21	TEOUT	O	TE amp output terminal
22	FEN	I	Amp inverting input terminal
23	FEOUT	O	FE amp output terminal
24	GCTL	-	GCTL terminal
25	FBAL	I	FBAL control terminal
26	TBAL	I	TBAL control terminal
27	E	O	Tracking signal input terminal 1
28	F	O	Tracking signal input terminal 2
29	D	O	Tracking signal input terminal 4
30	B	O	Tracking signal input terminal 2
31	C	O	Tracking signal input terminal 3
32	A	O	Tracking signal input terminal 1

22.2. IC702 (MN6627931BL) IC LSI

Pin No.	Mark	I/O	Function
1	DRVDD	I	DRAM interface power supply
2	D0	I/O	DRAM data input-output 0
3	D1	I/O	DRAM data input-output 1
4	NWE	O	DRAM ROM enable signal
5	NRAS	O	DRAM RAS control signal
6	D2	I/O	DRAM data input-output 2
7	D3	I/O	DRAM data input-output 3
8	NCAS0	O	DRAM CAS control 0
9	NCAS1	O	DRAM CAS control 1
10	A8	O	DRAM Address 8
11	A7	O	DRAM Address 7
12	A6	O	DRAM Address 6
13	A5	O	DRAM Address 5
14	A4	O	DRAM Address 4
15	A9	O	DRAM Address 9
16	A0	O	DRAM Address 0
17	A1	O	DRAM Address 1
18	A2	O	DRAM Address 2
19	A3	O	DRAM Address 3
20	DVSS2	-	Digital GND
21	DVDD2	-	Digital power supply
22	SPOUT	O	Spindle motor drive output signal (absolute value output)
23	TRVP	O	Traverse drive output (+output)
24	TRVM	O	Traverse drive output (-output)
25	TRP	O	Tracking drive output (+output)
26	TRM	O	Tracking drive output (-output)
27	FOP	O	Focus drive output (+output)
28	FOM	O	Focus drive output (-output)
29	IOVDD1	-	IO power supply
30	TBAL	O	Tracking balance adjustment output
31	FBAL	O	Focus balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input (analog input)
35	OFT	I	Off track signal input (H: off track)

Pin No.	Mark	I/O	Function
36	NRFDET	I	RF detective signal input (L: detection)
37	BDO	I	Drop out signal input (H: drop out)
38	LDON	O	Laser ON signal input (H: ON)
39	ARF	I	RF signal input
40	IREF	I/O	Resistance terminal for current electricity setting
41	ADP VCC	I	Analog power supply voltage monitor input
42	DSL F	I/O	DSL loop filter terminal
43	RFSW	I/O	DSL loop filter terminal
44	PLL F	I/O	PLL loop filter terminal (phase comparison)
45	PLL F0	I/O	PLL loop filter terminal (speed comparison)
46	AVDD2	I	"Analog power supply (DSL
47	AVSS2	-	"Analog ground (DSL
48	OUTL	O	L ch audio output
49	AVSS1	-	Analog ground (audio output)
50	OUTR	O	R ch audio output
51	AVDD1	-	Analog power supply (audio output)
52	DVSS3	-	Digital GND
53	DVDD3	-	Digital power supply
54	IOVDD2	-	IO power supply
55	FLAG	O	Flag output
56	EXT2	I/O	Extension input-output port 2
57	EXT0	I/O	Extension input-output port 0
58	EXT1	I/O	Extension input-output port 1
59	REGON	I	"In-housed regulator control (H: ON
60	TX	O	Digital audio interface output
61	MCLK	I	Micon command clock input
62	MDATA	I	Micon command data input
63	MLD	I	Micon command load input (L: Load)
64	BLKCK	O	Sub code block clock (f-75Hz: normal play)
65	PWM SEL	I	"PWM output mode switch input (L: direct
66	SMCK	O	4.2336MHz/8.4672MHz clock output

Pin No.	Mark	I/O	Function
67	SBCK	I/O	Sub code serial output clock input
68	STAT	O	Status output
69	NRST	I	Reset input (L: reset)
70	SPPOL	O	Spindle motor drive output signal (polarity output)
71	PMCK	O	88.2kHz clock output
72	DQSY	O	CD TEXT data back output
73	TXTD	O	CD TEXT data output

Pin No.	Mark	I/O	Function
74	TXTCK	I/O	CD TEXT resister outer clock input
75	NTEST	I	Test input (H: normal)
76	OUT X2	O	Oscillator output
77	IN X1	I	Oscillator input
78	DVSS1	-	Digital GND
79	DVDD1	I	Digital power supply
80	MON	I/O	Monitor terminal

22.3. IC703 (BA5948FPE2) IC 4CH DRIVE

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver 92 Input
2	PC2	I	Turntable Motor Drive Signal ("L":ON)
3	IN1	I	Motor Driver (1) Input
4	PC1	-	Traverse Motor Drive Signal ("L":ON)
5	N.C.	-	No Connection
6	N.C.	-	No Connection
7	N.C.	-	No Connection
8	N.C.	-	No Connection
9	PGND1	-	Ground Connection (1) for Driver
10	PVCC1	I	Power Supply (1) for Driver
11	D1-	O	Motor Driver (1) reverse - action output
12	D1+	O	Motor Driver (1) forward - action output
13	D2-	O	Motor Driver (2) reverse - action output

Pin No.	Mark	I/O	Function
14	D2+	O	Motor Driver (1) forward - action output
15	D3-	O	Motor Driver (3) reverse - action output
16	D3+	O	Motor Driver (3) forward - action output
17	D4-	O	Motor Driver (4) reverse - action output
18	D4+	O	Motor Driver (4) forward - action output
19	PVCC2	-	Power Supply (2) for Driver
20	PGND2	-	Ground Connection (2) for Driver
21	N.C.	-	No Connection
22	N.C.	-	No Connection
23	N.C.	-	No Connection
24	N.C.	-	No Connection
25	VCC	I	Power Supply Terminal
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

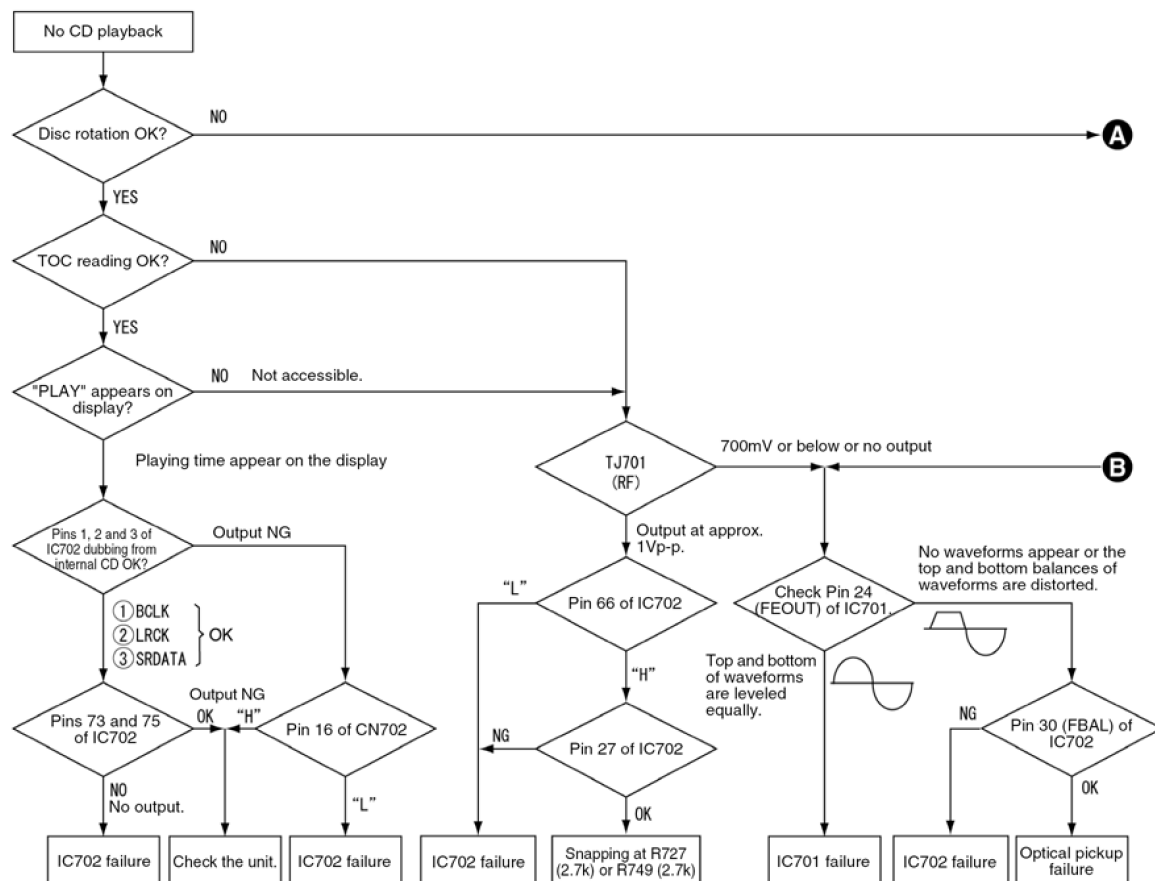
22.4. IC302 (C2CBJG000409) MICRO PROCESSOR

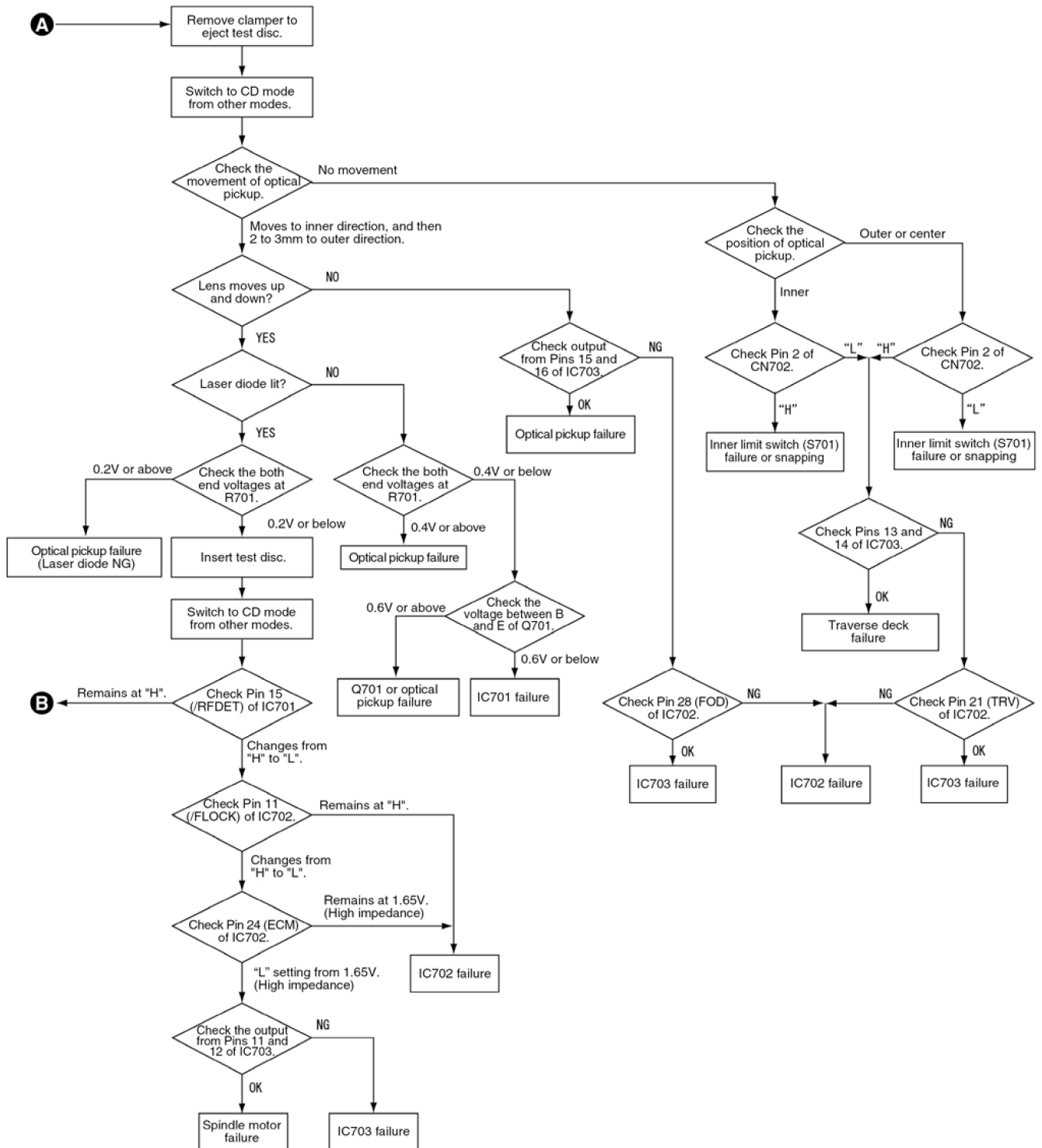
Pin No.	Mark	I/O	Function
1	CH_SW	I	Change Switch (CR16)
2	TU_TUNED	I	Tuner tuned signal
3	TU_ST	I	Tuner Stereo signal
4	TU_CK	I	Tuner Serial Clock Input
5	TU_SDA	I	Tuner Serial Data Input
6	MBP1	O	Microcomputer Beat Proof Output 1 (CONTROL)
7	MBP2	O	Microcomputer Beat Proof Output 2 (CONTROL)
8	BYTE	-	External Data Bus Width Select Input (Connect To Ground)
9	CNVSS	-	Flash Mode Terminal (Connect To Ground)
10	XCIN	-	32.768 kHz Sub Clock
11	XCOUT	-	32.768 kHz Sub Clock
12	/RESET	-	Reset Input (ACTIVEL)
13	XOUT	-	10 MHz Main Clock
14	VSS	-	Ground (0V)
15	XIN	-	10 MHz Main Clock
16	VCC	-	Power Supply (+5V)
17	/NMI	-	Connect to Vcc (+5V)
18	RMT	I	Remote Control Input
19	BLKCK	I	CD Block Clock Input (Inverted)
20	SYNC	I	AC Failure Detect Input
21	MUTE_H	O	HIC Mute
22	EE_CS/	O	EEPROM Chip Select
23	EE_CLK	O	EEPROM CLOCK
24	MUTE_T	O	H=Tuner muting
25	MUTE_X	O	A=AUX muting
26	FL_CS1	O	FL Driver Chip Select (Master)

Pin No.	Mark	I/O	Function
27	FL_CS2	O	FL Driver Chip Select (PM 29 ONLY)
28	FL_CLK	O	Serial Clock to FL Driver
29	/FL_RESET	O	Reset Input (ACTIVEL)
30	FL_DOUT	O	Serial Data To FL Driver (Output)
31	RXD	-	N.C
32	TXD	-	N.C
33	SCLK	-	N.C
34	BUSY	-	N.C
35	MEM_SI	O	Flash Memory Serial Input
36	MEM_SO	I	Flash Memory Serial Output
37	MEM_CK	O	Flash Memory Serial Clock
38	MEM_CS	O	Flash Memory Chip Select
39	MCLK	O	CD Command CLK Output
40	MUTE_A	O	Audio Mute
41	EPM	O	-
42	MDATA	O	CD Command Data Output
43	MLD	O	CD Command Load Output/
44	RDS_CLK	I	RDS Clock Input
45	RDS_DAT	I	RDS Data Input
46	CE	-	-
47	DCDET	I	DC Detect Input
48	STATUS	I	CD Servo LSI Status Input (Inverted)
49	PCONT	O	Main Transformer Control Output
50	PLAY_SW	I	Play Switch (CR16)
51	ST_SW	I	Stock Switch (CR16)
52	OP_SW	I	Open Switch (CR16)
53	POS	I	Position Switch (CR16)
54	BT_SW	I	Bottom Switch (CR16)

Pin No.	Mark	I/O	Function
55	M1_R	O	Changer Motor 1 Reverse Control
56	M1_F	O	Changer Motor 1 Forward Control
57	M2_R	O	Changer Motor 2 Reverse Control
58	M2_F	O	Changer Motor 2 Forward Control
59	REC	O	when record circuit is operating DURING RECORDING=H
60	KEY_LED	O	Dimmer ON=L, Dimmer Off=H-
61	PHOTO	I	PHOTO (SG Mechanism only)
62	VCC	-	Power Supply (+5V)
63	EE_DAT	I/O	EE_DAT
64	VSS	-	Ground (0V)
65	DMT	O	Deck Mute at mecha transition L=mute OFF, H=mute ON
66	BP1	O	AM beatproof 1 output L=BP1, H=BP2
67	ASP_CLK	O	ASP CLK
68	ASP_DAT	O	ASP DATA
69	N.C.	-	No Connection
70	N.C.	-	No Connection
71	N.C.	-	No Connection
72	N.C.	-	No Connection
73	N.C.	-	No Connection
74	N.C.	-	No Connection
75	MEM_RST	O	Flash memory reset
76	MEM_WP	O	Flash Memory Write Protect
77	JOG1	I	JOG SEARCH 1
78	JOG2	I	JOG SEARCH 2
79	/CD	O	CD POWER CONTROL (Active Low)
80	CD_RST	O	CD Reset Output
81	N.C.	-	No Connection
82	/RESTSW	I	CD Limit Switch Input for the Most Inner Point (Active Low)
83	N.C.	-	No Connection
84	N.C.	-	No Connection
85	SSEQ_LED	O	Super Sound EQ LED Control
86	RE_LED	O	MP3/WMA Re-master Control
87	MOTOR	O	MOTOR Control Output L=OFF, H=ON
88	PLUNGER	O	Deck PLUNGER Control Output L=OFF, H=ON
89	DECK_AD1	I	DECK AD Input 1
90	DECK_AD2	I	DECK AD Input 2
91	REG1	I	Region Setting 1
92	KEY3	I	KEY3 INPUT
93	KEY2	I	KEY2 INPUT
94	KEY1	I	KEY1 INPUT
95	VOL_JOG1	I	Volume Jog 1
96	AVSS	-	Analog Power Supply Input (Connect to GND)
97	N.C.	-	No Connection
98	VREF	-	Reference for A-D (5V)
99	AVCC	-	Analog Power Supply Input
100	N.C.	-	No Connection

23 Troubleshooting Flowchart (CD Section Circuit)





24 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

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

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

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

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to Precaution of Laser Diode.

ACTUNG:

Die Lasereinheit nicht zerlegen.

Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.

- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).

- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

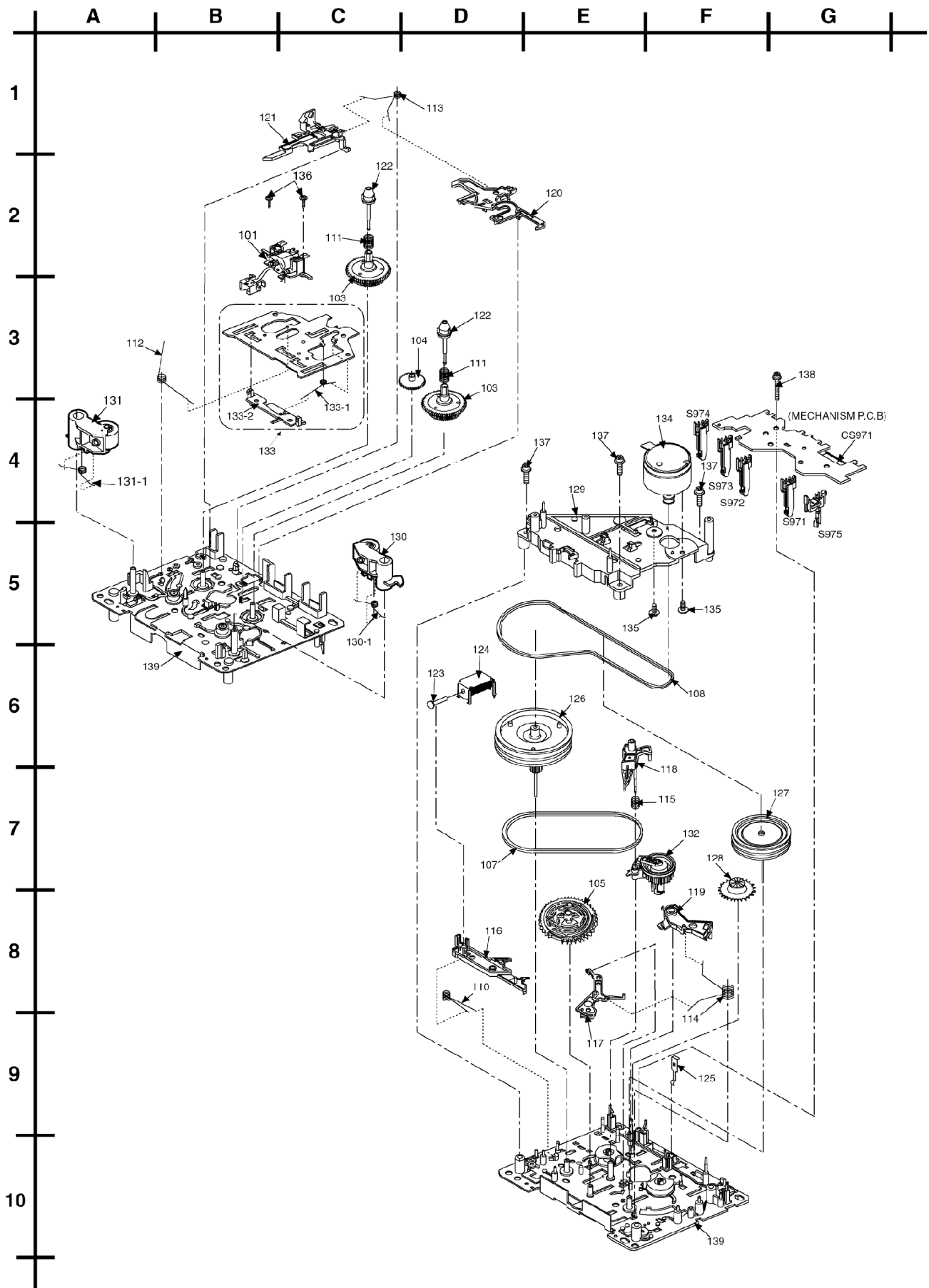
- [M] Indicates in the Remarks columns indicates parts supplied by **PAVCSG**.

- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian						

24.1. Deck Mechanism

24.1.1. Deck Mechanism Parts Location (RAA4110-S)

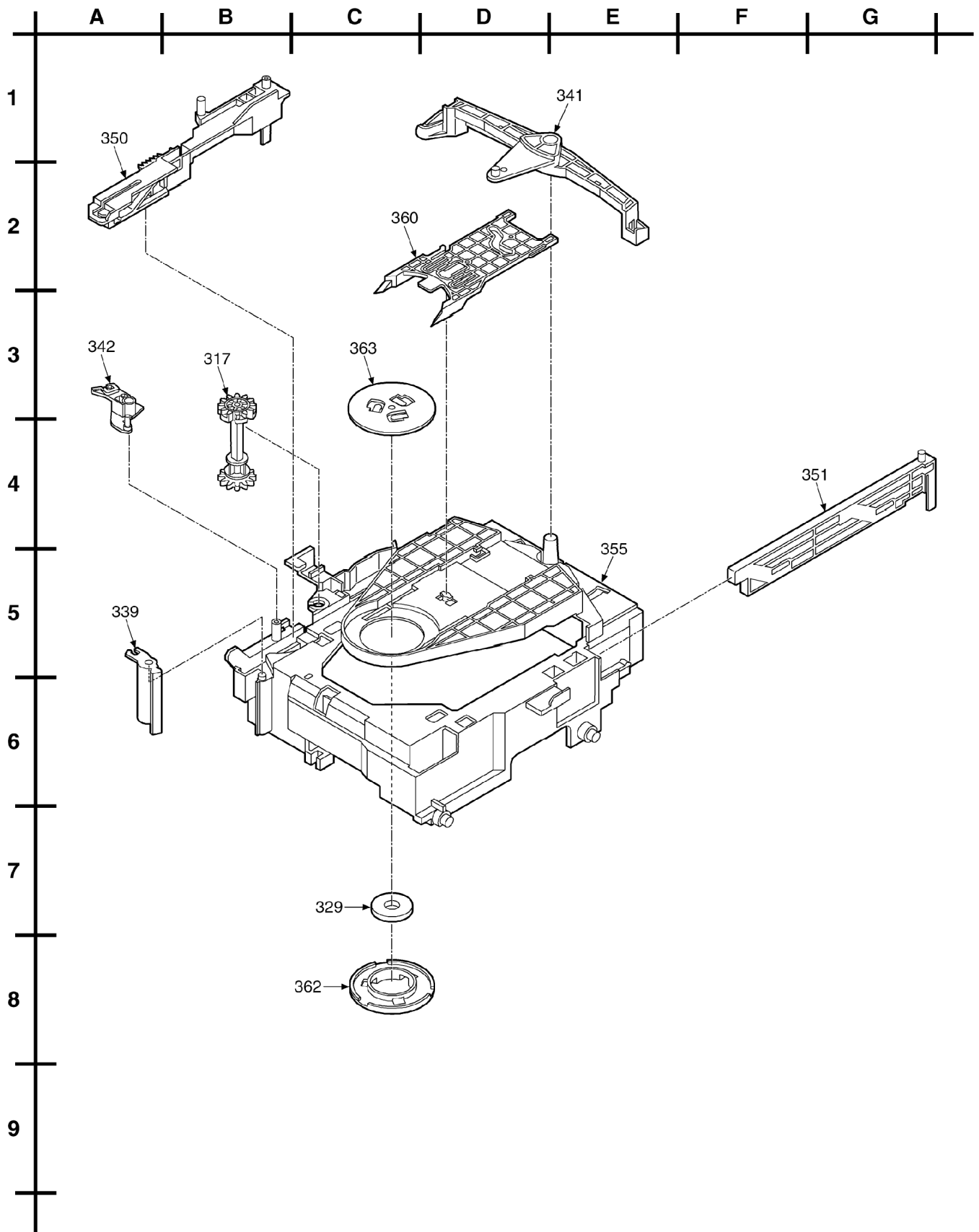


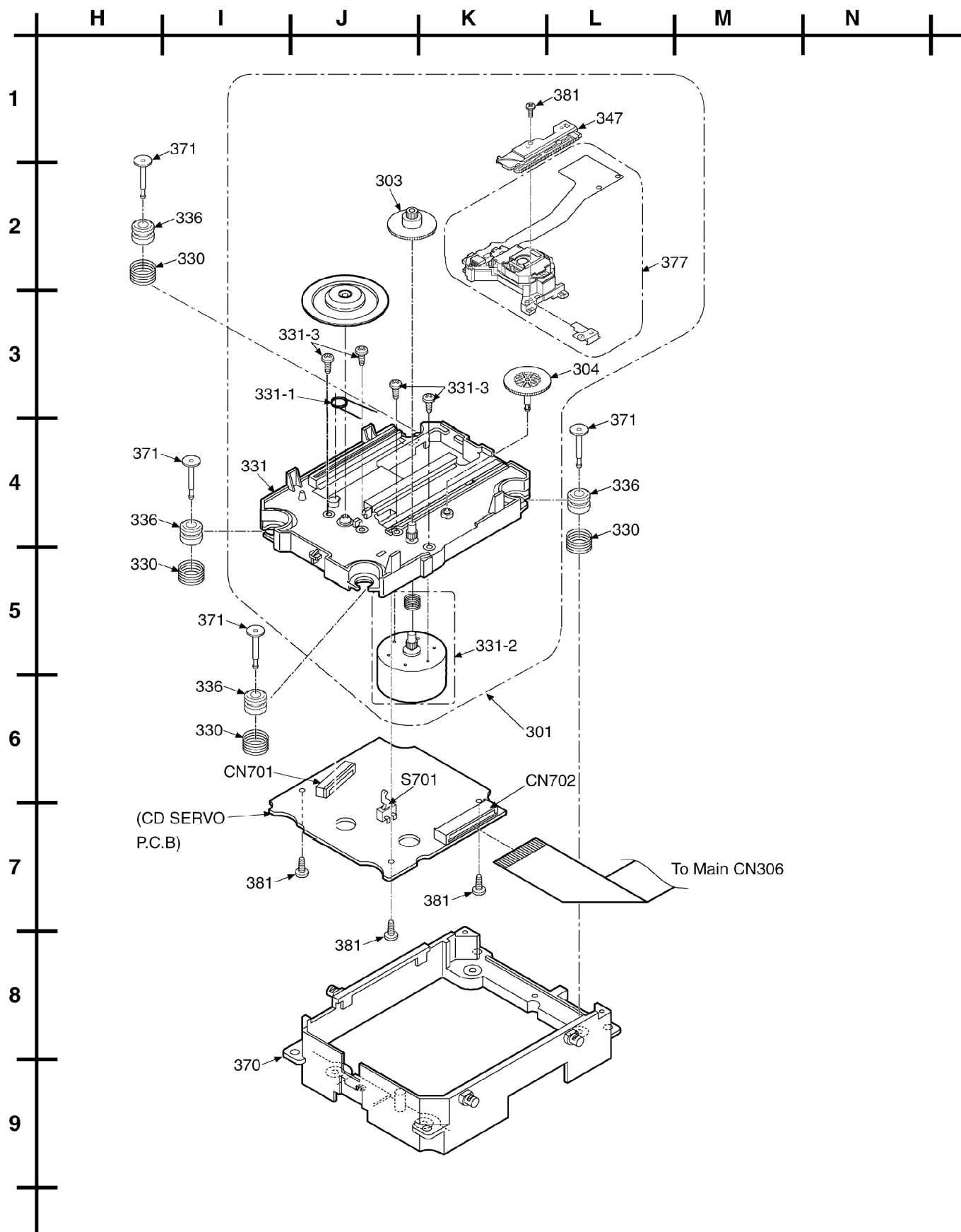
24.1.2. Deck Mechanism Parts List

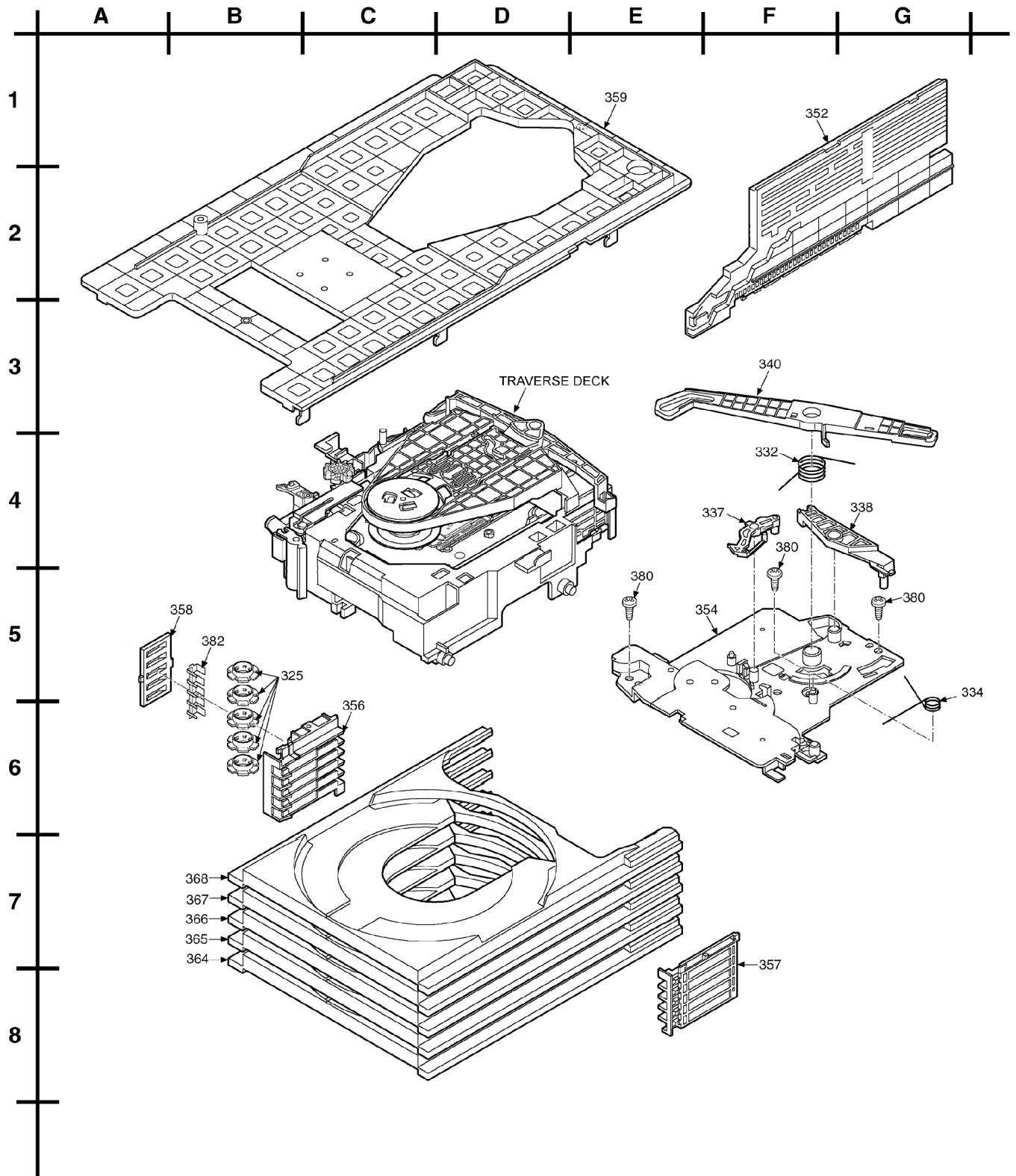
Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0071	R/P HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT A	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061	FLYWHEEL F ASSY	[M]
127	RXF0062	FLYWHEEL R ASSY	[M]
128	RXG0040	FF RELAY GEAR ASSY	[M]
129	RMK0283A-J	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER F ASSY	[M]
130-1	RMB0401	PINCH ARM SPRING F	[M]
131	RXL0125	PINCH ROLLER R ASSY	[M]
131-1	RMB0402	PINCH ARM SPRING R	[M]
132	RXL0126	WINDING ARM ASSY	[M]
133	RXQ0412	HEAD PANEL ASSY	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0098	CAP MOTOR ASSY	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCREW	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	MAIN CHASSIS ASS'Y	[M]

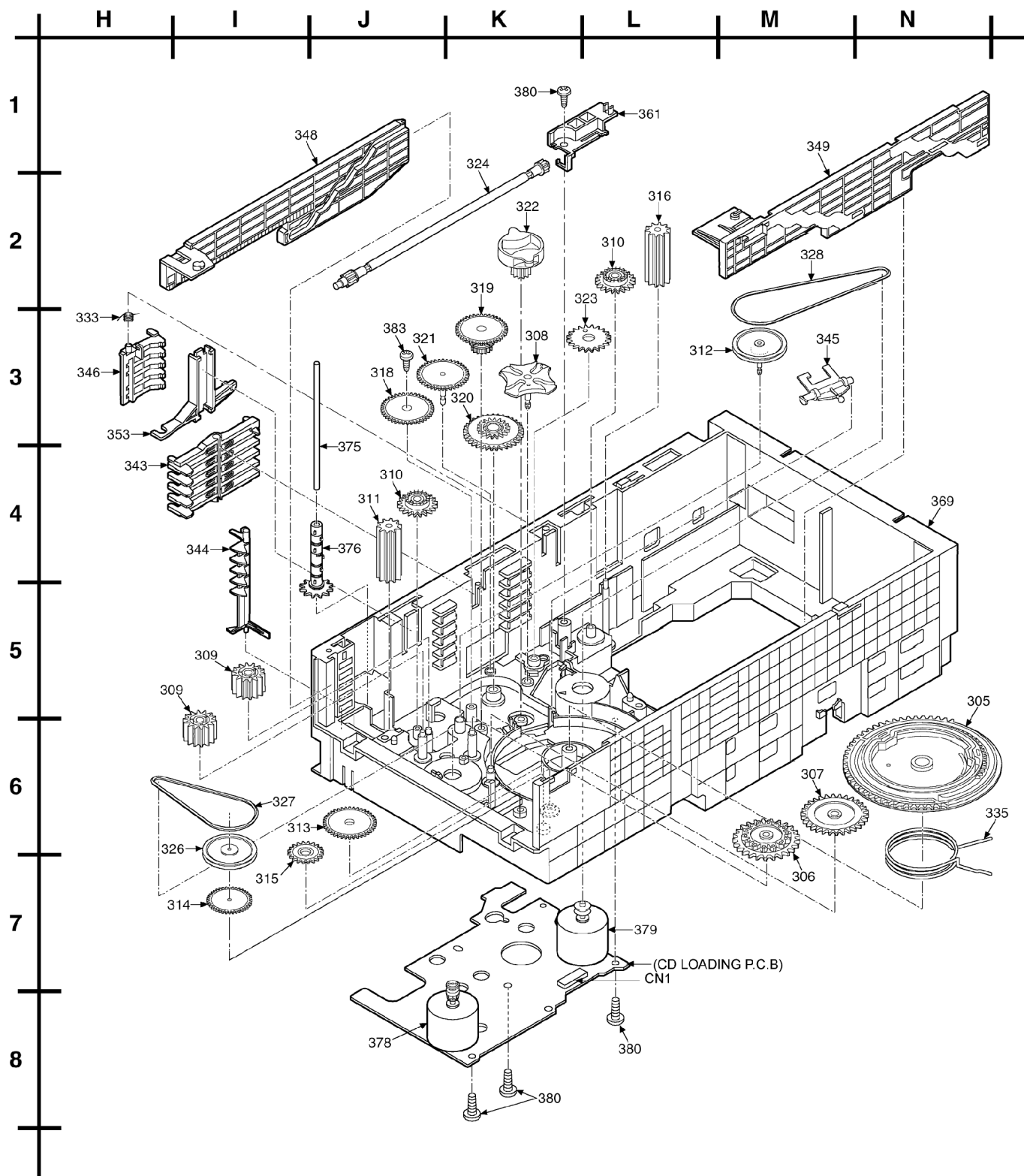
24.2. CD Loading Mechanism

24.2.1. CD Loading Mechanism Parts Location





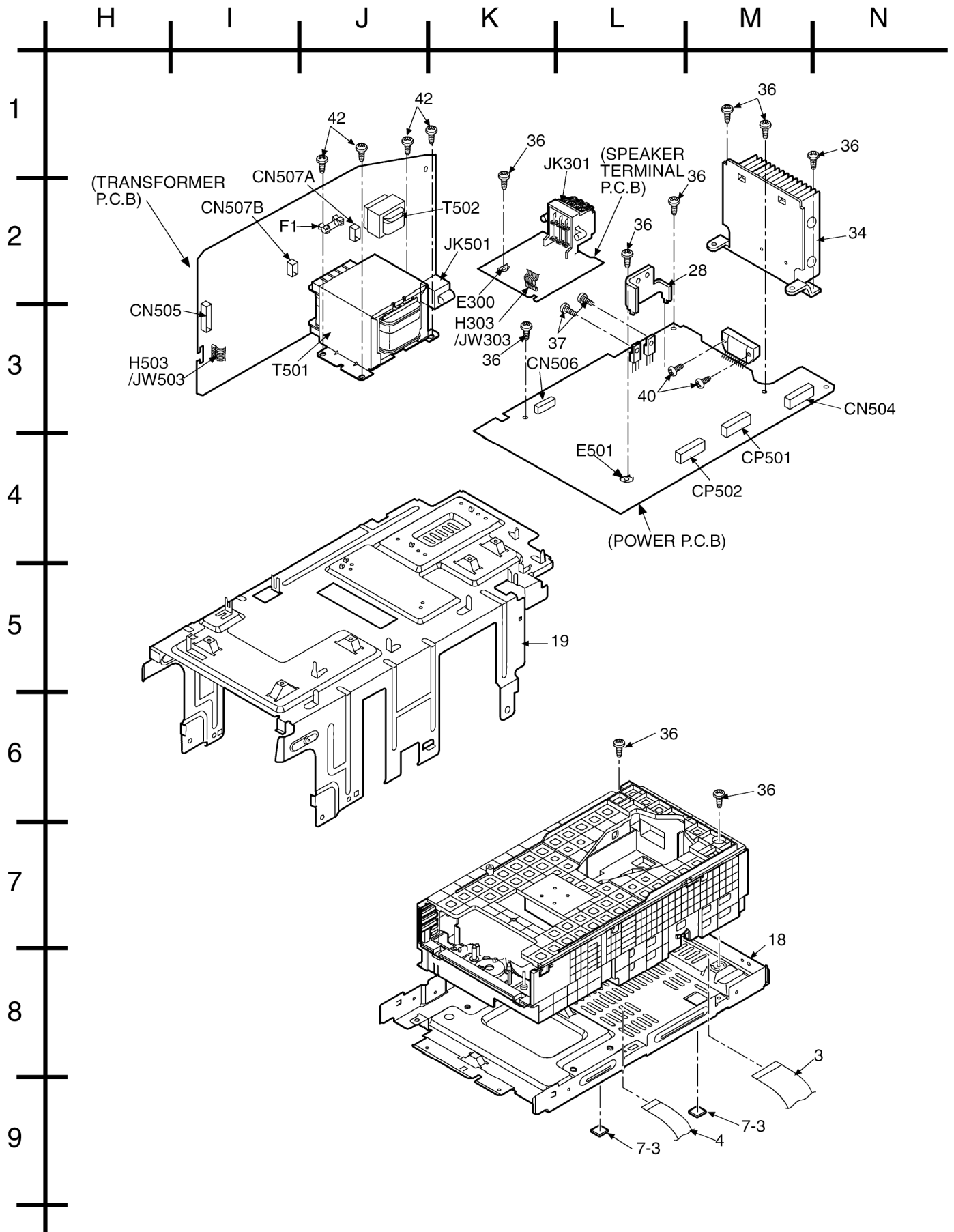


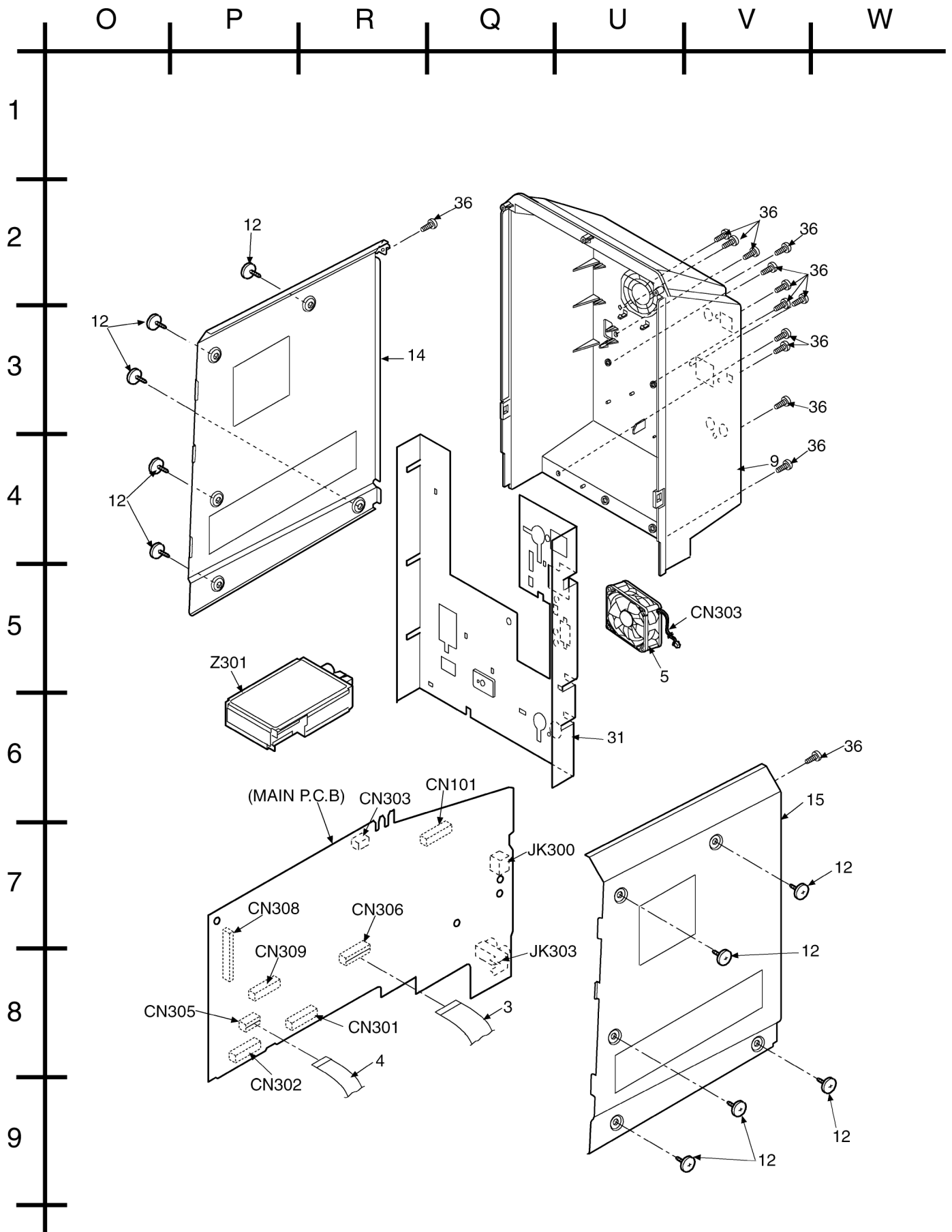


24.2.2. CD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0157A-V	TRV UNIT WITHOUT SER	[M]
303	RDG0455	TRV GEAR (A)	[M]
304	RDG0456	TRV GEAR (B)	[M]
305	RDG0519-1	MAIN GEAR	[M]
306	RDG0520	SPEED UP GEAR	[M]
307	RDG0521	REVERSE GEAR	[M]
308	RDG0522	GENEVA GEAR	[M]
309	RDG0523	HOR RELAY GEAR	[M]
310	RDG0525	CROWN GEAR	[M]
311	RDG0526	TRAY RELAY GEAR	[M]
312	RDG0527	UD PULLEY GEAR	[M]
313	RDG0528	HOR SPEED DOWN GEAR	[M]
314	RDG0529	HOR SPEED DOWN GEAR	[M]
315	RDG0530	HOR DRIVE GEAR	[M]
316	RDG0531-1	LOAD RELAY GEAR	[M]
317	RDG0532	LOAD GEAR	[M]
318	RDG0534	UD SPEED DOWN GEAR	[M]
319	RDG0535	UD SPEED DOWN GEAR	[M]
320	RDG0536	SELECT SPEED DOWN GEAR	[M]
321	RDG0537-1	SELECT DRIVE GEAR	[M]
322	RDG0538-1	CHANGE GEAR	[M]
323	RDG0539	UD DRIVE GEAR	[M]
324	RDG0540	TIMING GEAR	[M]
325	RDG0542	TRAY GEAR	[M]
326	RDG0543	HOR PULLEY GEAR	[M]
327	RDV0068	HOR BELT	[M]
328	RDV0069	UD BELT	[M]
329	RHM0001	MAGNET	[M]
330	RME0109	FLOATING SPRING	[M]
331	RFKNCT101	TRAVERSE UNIT ASS'Y	[M]
331-1	RME0369	PRESS SPRING	[M]
331-2	RXQ0632	TRV MOTOR UNIT	[M]
331-3	XQN17+C28F	SCREW	[M]
332	RME0344-1	UD ASSIST SPRING	[M]
333	RME0361	TRAY STOPPER SPRING	[M]
334	RME0363-1	LIMIT SPRING	[M]
335	RME0368-1	MAIN GEAR SPRING	[M]
336	RMG0563-T	FLOATING RUBBER	[M]
337	RML0616	SPEED UP LOCK	[M]
338	RML0617-2	SEPARATE LEVER 1	[M]
339	RML0618-1	SEPARATE LEVER 2	[M]
340	RML0619-1	UD. CONNECTION LEVER	[M]
341	RML0620	TRV.CONNECT LEVER	[M]
342	RML0621-2	TRAY CHANGE LEVER	[M]
343	RML0622-1	TRAY LOCK LEVER	[M]
344	RML0623	OPEN SW. LEVER	[M]
345	RML0624	CHG. LEVER	[M]
346	RML0637	TRAY STOPPER	[M]
347	RMM0218	TRV DRIVE RACK	[M]
348	RMM0239-1	UD RACK [L]	[M]
349	RMM0240	UD.RACK [R]	[M]
350	RMM0241-1	TRV SLIDE PLATE (L)	[M]
351	RMM0242-1	TRV SLIDE PLATE [R]	[M]
352	RMM0243-2	SELECT RACK PART	[M]
353	RMM0244	SELECT GUIDE	[M]
354	RMQ1051-2	PITCH PLATE PART	[M]
355	RMQ1052-1	UD BASE	[M]
356	RMQ1056	TRAY GUIDE [L]	[M]
357	RMQ1057	TRAY GUIDE [R]	[M]
358	RMQ1058	GEAR HOLDER	[M]
359	RMQ1059-2	TOP COVER	[M]
360	RMQ1060	CLAMP GUIDE	[M]
361	RMQ1061	TG.PLATE	[M]
362	RMR0334	FIXTURE	[M]
363	RMR0624-W5	CLAMPER	[M]
364	RMR1407A-H1	TRAY	[M]
365	RMR1407B-H1	TRAY	[M]
366	RMR1407C-H1	TRAY	[M]
367	RMR1407D-H1	TRAY	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
368	RMR1407E-H1	TRAY	[M]
369	RFKNAPM77MDS	MECHA BASE ASS'Y	[M]
370	RMR1427-X	MIDDLE CHASSIS	[M]
371	RMS0757-1	FIXED PIN	[M]
375	RMS0762	TRAY GEAR SHAFT	[M]
376	RXG0053	TRAY DRIVE GEAR ASSY	[M]
377	RXQ0999	OPU UNIT	[M]
378	RXQ0803	LOADING MOTOR ASSY	[M]
379	RXQ0804	UD MOTOR ASSY	[M]
380	XTB3+10J	SCREW	[M]
381	XTN2+6G	SCREW	[M]
382	RMC0472	TRAY SPRING	[M]
383	XTBS26+8J	SCREW	[M]





24.3.2. Cabinet Part List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REEV0026	21P FFC	[M]
2	REEV0027	26P FFC	[M]
3	REEV0039	17P FFC	[M]
4	REEX0166	14P FFC WIRE	[M]
5	REM0094A	COOLING FAN	[M]
6	RGK1750-S	VOLUME RING	[M]
7	RYPV0034-S	FRONT PANEL UNIT	[M]
7-1	RYQV0014-S	CD LID UNIT	[M]
7-2	RYQV0015-S	BUTTON UNIT	[M]
7-3	RHGV0008	LEG CUSHION	[M]
7-4	RGUV0063-S	CD/MAIN SEL. BUTTON	[M]
7-5	RGK1756-A	M/FUNCTION BTN ORN.	[M]
8	RGL0660-Q1	VOLUME RING LIGHT	[M]
9	RKSX0056Q-H	REAR PANEL	[M] E
9	RKSX0056Q-K	REAR PANEL	[M] EG
9	RKSX0056R-K	REAR PANEL	[M] EB
10	RGU2280-S	CASS EJECT BUTTON	[M]
11	RGW0406-S	VOLUME KNOB	[M]
12	RHD30007-K1	SCREW	[M]
13	RKF0688-S	CASS LID	[M]
14	RKM0502A-K	SIDE PANEL LEFT	[M]
15	RKM0503A-K	SIDE PANEL RIGHT	[M]
16	RKM0504C-S	TOP CABINET	[M]
17	RMB0448-J	LOCK ROD SPRING	[M]
18	RMK0595	BOTTOM CHASSIS	[M]
19	RMKX0090	INNER CHASSIS	[M]
20	RMM0163-1	CASS LOCK ROD	[M]
21	RMN0780	CD LID SUPPORT	[M]
22	RMN0778	MD HOLDER	[M]
23	RMNV0015	FL HOLDER	[M]
24	RMN0779	LED HOLDER	[M]
25	RMN0789	FUNCTION LED CASE	[M]
26	RMQ1294	JOG BASE B	[M]
27	RMR1619-W	DIFFUSER CASE	[M]
28	RMY0260	HEAT SINK (SMALL)	[M]
29	RSC0725	EARTH PLATE	[M]
30	RSCV0018	FL REAR SHIELD	[M]
31	RSCV0019	REAR SHIELD PLATE	[M]
32	RUS757ZAA	CASS HALF SPRING	[M]
33	RXGX0003	DAMPER GEAR	[M]
34	RXXX0043	HEAT SINK UNIT	[M]
35	RYQ0488-S	JOG UNIT	[M]
36	XTB3+10JFZ	SCREW	[M]
37	XTB3+8JFZ	SCREW	[M]
38	XTBS26+10J	SCREW	[M]
39	XTV3+10G-M	SCREW	[M]
40	XTW3+15T	SCREW	[M]
41	XTWS26+10Q	SCREW	[M]
42	XTWS3+6T	SCREW	[M]
43	RMB0782	EARTH SPRING	[M]
44	RMB0780	CASS OPEN SPRING	[M]
45	RSCV0021	EARTH PLATE	[M]

24.4. Electrical Part List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REPX0363A	CD SERVO (SIDE A AND SIDE B) P.C.B.	[M] RTL
	REPV0019A	MAIN P.C.B. / PANEL P.C.B. / TACT SWITCH P.C.B. / SWITCH P.C.B. / HEADPHONE P.C.B. / SPEAKER TERMINAL P.C.B.	[M] RTL
	REPX0411A	DECK P.C.B. / TAPE EJECT P.C.B.	[M] RTL
	REPX0321C	DECK MECHANISM P.C.B.	[M] RTL
	REP3569A	CD LOADING P.C.B.	[M] RTL
	REPV0018F	POWER P.C.B. / TRANSFORMER P.C.B.	[M] RTL (E/EG)
	REPV0018H	POWER P.C.B. / TRANSFORMER P.C.B.	[M] RTL (EB)
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC DRIVER	[M]
IC21	C0GAG0000007	IC DRIVER	[M]
IC300	C1BB00000757	IC ASP	[M]
IC301	C3FBHA000004	IC FLASH MEMORY	[M]
IC302	C2CBJG000409	IC MICRO PROCESSOR	[M]
IC304	C1BB00000715	IC RDS	[M]
IC500	RSN314H41A-P	IC POWER AMP HIC	[M]
IC501	C0AABB000125	IC OP AMP	[M]
IC503	C0CAABE00006	IC 3.3V REGULATOR	[M]
IC601	C0HBB0000039	IC FL DRIVER	[M]
IC602	C0HBB0000039	IC FL DRIVER	[M]
IC701	AN22004A-NF	IC HEAD AMP	[M]
IC702	MN6627931BL	IC LSI	[M]
IC703	BA5948FPE2	IC 4 CH DRIVE	[M]
IC704	C3ABMB000027	IC 16M DRAM	[M]
IC971	CNB13030R2AU	IC PHOTO INTERRUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SW	[M]
IC1001	AN7326K	IC DECK R/P	[M]
		TRANSISTORS	
Q1	B3NAA0000068	TRANSISTOR	[M]
Q200	KRA102STA	TRANSISTOR	[M]
Q201	KTC3875GRTA	TRANSISTOR	[M]
Q222	KTC3875GRTA	TRANSISTOR	[M]
Q223	KTC3875GRTA	TRANSISTOR	[M]
Q224	KTC3875GRTA	TRANSISTOR	[M]
Q301	KTA1504GRTA	TRANSISTOR	[M]
Q302	KRC102STA	TRANSISTOR	[M]
Q303	KTA1504GRTA	TRANSISTOR	[M]
Q304	B1GBCFGG0001	TRANSISTOR	[M]
Q305	B1GBCFGG0001	TRANSISTOR	[M]
Q306	KRC103STA	TRANSISTOR	[M]
Q307	KTC3875GRTA	TRANSISTOR	[M]
Q308	KTC3875GRTA	TRANSISTOR	[M]
Q309	KRC101STA	TRANSISTOR	[M]
Q310	KRC101STA	TRANSISTOR	[M]
Q390	B1GBCFGG0001	TRANSISTOR	[M]
Q400	KRA102STA	TRANSISTOR	[M]
Q422	KTC3875GRTA	TRANSISTOR	[M]
Q423	KTC3875GRTA	TRANSISTOR	[M]
Q424	KTC3875GRTA	TRANSISTOR	[M]
Q501	KTC2026	TRANSISTOR	[M]
Q502	KTA1046	TRANSISTOR	[M]
Q505	KTA1267GRTA	TRANSISTOR	[M]
Q506	KTA1046	TRANSISTOR	[M]
Q508	KTC3199GRTA	TRANSISTOR	[M]
Q509	KRA110MTA	TRANSISTOR	[M]
Q514	2SD0592ARA	TRANSISTOR	[M]
Q515	KTC3199GRTA	TRANSISTOR	[M]
Q516	KTC3199GRTA	TRANSISTOR	[M]
Q517	KTC32030YTA	TRANSISTOR	[M]
Q519	B1AAGC000006	TRANSISTOR	[M]
Q520	KTC2026	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q575	B1AAGC000006	TRANSISTOR	[M]
Q577	2SC3940ARA	TRANSISTOR	[M]
Q578	KRC102MTA	TRANSISTOR	[M]
Q579	2SB0621AHA	TRANSISTOR	[M]
Q600	KRC119STA	TRANSISTOR	[M]
Q601	KRC119STA	TRANSISTOR	[M]
Q602	KRC119STA	TRANSISTOR	[M]
Q603	KRC119STA	TRANSISTOR	[M]
Q604	KTC3875GRTA	TRANSISTOR	[M]
Q700	B1AACF000063	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q701	KTA12710YTA	TRANSISTOR	[M]
Q702	B1AACF000063	TRANSISTOR	[M]
Q703	B1AACF000063	TRANSISTOR	[M]
Q704	KRA102MTA	TRANSISTOR	[M]
Q710	B1AAGC000006	TRANSISTOR	[M]
Q711	B1AAGC000006	TRANSISTOR	[M]
Q714	KTC3199GRTA	TRANSISTOR	[M]
Q715	KTC3199GRTA	TRANSISTOR	[M]
Q716	KTC3199GRTA	TRANSISTOR	[M]
Q717	KTC3199GRTA	TRANSISTOR	[M]
Q718	B1AAGC000006	TRANSISTOR	[M]
Q719	B1AAGC000006	TRANSISTOR	[M]
Q720	KTC3199GRTA	TRANSISTOR	[M]
Q721	KTC3199GRTA	TRANSISTOR	[M]
Q722	KRA110MTA	TRANSISTOR	[M]
Q723	KTA12710YTA	TRANSISTOR	[M]
Q724	KTC3199GRTA	TRANSISTOR	[M]
Q725	B1AAGC000006	TRANSISTOR	[M]
Q726	B1AAGC000006	TRANSISTOR	[M]
Q1101	2SD2114K1V	TRANSISTOR	[M]
Q1201	2SD2114K1V	TRANSISTOR	[M]
Q1302	B1GDCFJJ0002	TRANSISTOR	[M]
Q1303	B1GBCFGH0001	TRANSISTOR	[M]
Q1304	B1GDCFJGH0002	TRANSISTOR	[M]
Q1306	B1ABCF000011	TRANSISTOR	[M]
Q1307	B1ABCF000011	TRANSISTOR	[M]
Q1309	B1AAGC000006	TRANSISTOR	[M]
Q1310	B1AAGC000006	TRANSISTOR	[M]
Q1312	B1ABCF000011	TRANSISTOR	[M]
Q1314	B1GDCFJGH0002	TRANSISTOR	[M]
Q1315	KTA12710YTA	TRANSISTOR	[M]
Q1316	2SD09650RA	TRANSISTOR	[M]
Q1317	2SD2114K1V	TRANSISTOR	[M]
		DIODES	
D201	B0BC01000014	DIODE	[M]
D302	1SS380TE-17	DIODE	[M]
D303	1SS380TE-17	DIODE	[M]
D304	MA729TX	DIODE	[M]
D305	B0ACKK000005	DIODE	[M]
D306	1SS380TE-17	DIODE	[M]
D307	1SS380TE-17	DIODE	[M]
D308	1SS380TE-17	DIODE	[M]
D500	B0EBNL000004	DIODE	[M]
D505	B0AAK000004	DIODE	[M]
D508	MTZJ15BTA	DIODE	[M]
D515	B0BA9R600002	DIODE	[M]
D517	B0BA5R600016	DIODE	[M]
D520	B0BA9R600002	DIODE	[M]
D524	B0BA01100004	DIODE	[M]
D525	B0AAK000004	DIODE	[M]
D526	B0AAK000004	DIODE	[M]
D527	B0AAK000004	DIODE	[M]
D530	B0AAK000004	DIODE	[M]
D531	B0BA8R200005	DIODE	[M]
D578	B0EAKM000117	DIODE	[M]
D579	B0EAKM000117	DIODE	[M]
D580	B0EAKM000117	DIODE	[M]
D581	B0EAKM000117	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D582	B0BA6R600008	DIODE	[M]
D584	B0EAKM000117	DIODE	[M]
D585	B0EAKM000117	DIODE	[M]
D586	B0EAKM000117	DIODE	[M]
D587	B0EAKM000117	DIODE	[M]
D588	B0EAKM000117	DIODE	[M]
D589	B0EAKM000117	DIODE	[M]
D592	B0EAKM000117	DIODE	[M]
D593	B0EAKM000117	DIODE	[M]
D595	B0BA03100016	DIODE	[M]
D600	UDZSTE176R8B	DIODE	[M]
D601	LNJ801TPSJA	DIODE	[M]
D602	LNJ801TPSJA	DIODE	[M]
D609	SLI325URCT31	DIODE	[M]
D612	B3AEA0000041	DIODE	[M]
D613	UDZSTE178R2B	DIODE	[M]
D614	B3AEA0000041	DIODE	[M]
D615	UDZSTE178R2B	DIODE	[M]
D700	B0AACK000004	DIODE	[M]
D701	B0AACK000004	DIODE	[M]
D702	B0AACK000004	DIODE	[M]
D703	B0AACK000004	DIODE	[M]
D704	B0AACK000004	DIODE	[M]
D705	B0AACK000004	DIODE	[M]
D706	B0AACK000004	DIODE	[M]
D707	B0AACK000004	DIODE	[M]
D708	MA2C16500E	DIODE	[M]
D709	MA2C16500E	DIODE	[M]
D750	MAZ80560ML	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1301	B0ACK000005	DIODE	[M]
		VARIABLE RESISTORS	
VR600	EVEJ1F42124B	VR ENCODER	[M]
VR601	K9AA012A0005	VR ROTARY ENCODER	[M]
		SWITCHES	
S1	K0L1BA000065	SW STOCK	[M]
S2	K0L1BA000065	SW PLAY	[M]
S3	K0L1BA000078	SW BOTTOM	[M]
S4	RSH1A045-1A	SW OPEN	[M]
S5	K0L1BA000065	SW CHANGE	[M]
S601	EVQ21405RJ	SW CD 1	[M]
S602	EVQ21405RJ	SW CD 2	[M]
S603	EVQ21405RJ	SW CD 3	[M]
S604	EVQ21405RJ	SW CD 4	[M]
S605	EVQ21405RJ	SW CD 5	[M]
S606	EVQ21405RJ	SW CD	[M]
S607	EVQ21405RJ	SW TAPE	[M]
S608	EVQ21405RJ	SW TUNER	[M]
S609	EVQ21405RJ	SW ENTER	[M]
S612	EVQ21405RJ	SW PLAYLIST	[M]
S613	EVQ21405RJ	SW STOP DEMO	[M]
S614	EVQ21405RJ	SW POWER	[M]
S615	EVQ21405RJ	SW REC	[M]
S616	EVQ21405RJ	SW AUX	[M]
S617	EVQ21405RJ	SW CD CHECK	[M]
S619	EVQ21405RJ	SW RETURN	[M]
S620	EVQ21405RJ	SW CD CHANGE	[M]
S621	EVQ21405RJ	SW OPEN/CLOSE	[M]
S622	EVQ21405RJ	SW REMASTER	[M]
S623	EVQ21405RJ	SW SEQ	[M]
S701	RSH1A048-A	SW RESET	[M]
S971	RSH1A018-3U	SW MODE	[M]
S972	RSH1A019-2U	SW HALF	[M]
S973	RSH1A019-2U	SW CR02	[M]
S974	RSH1A019-2U	SW RECINH_R	[M]
S975	RSH1A019-2U	SW RECINH_F	[M]
S1901	EVQ21405RJ	SW TAPE EJECT	[M]
		CONNECTORS	

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	K1MN14B00066	14P FFC CONNECTOR	[M]
CN101	K1KA10A00263	10P CONNECTOR	[M]
CN301	RJU100W13	13P B2B CONNECTOR	[M]
CN302	K1KB11A00020	11P CONNECTOR	[M]
CN303	K1KA02A00008	FAN CONNECTOR	[M]
CN305	K1MN14C00004	14P FFC CONNECTOR	[M]
CN306	K1MN17C00002	17P FFC CONNECTOR	[M]
CN308	K1MN26A00065	26P CONNECTOR	[M]
CN309	K1MN21A00031	21P CONNECTOR	[M]
CN504	RJT119W08V	8P CONNECTOR	[M]
CN505	K1KB07A00016	7P CONNECTOR	[M]
CN506	RJT119W06V	6P CONNECTOR	[M]
CN507A	REXX0320	2P STANDBY WIRE	[M]
CN604	K1KA13B00053	13P CONNECTOR	[M]
CN606	K1MN26B00010	26P CONNECTOR	[M]
CN701	RJS2A8616	16P FFC CONNECTOR	[M]
CN702	RJS2A7717	17P FFC CONNECTOR	[M]
CN1305	K1MN21B00010	21P FFC CONNECTOR	[M]
CP501	RJT100W13	13P BTB CONNECTOR	[M]
CP502	K1KA11A00093	11P CONNECTOR	[M]
CP1301	RJS1A6805-J	CONNECTOR	[M]
CP1902	K1KA09B00058	9P CONNECTOR	[M]
CS971	RJU071H09M1	9P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L200	G0AR76Y00001	COIL	[M]
L201	G0AR76Y00001	COIL	[M]
L203	J0JBC0000019	CHIP INDUCTOR	[M]
L204	G0C3R3JA0027	COIL	[M]
L300	G0C3R3JA0027	COIL	[M]
L301	G0A200D00002	RF CHOKE COIL	[M]
L302	RLQB101JTD-D	INDUCTOR	[M]
L303	RLQB101JTD-D	INDUCTOR	[M]
L400	G0AR76Y00001	COIL	[M]
L401	G0AR76Y00001	COIL	[M]
L503	RLQZ371	CHOKE COIL	[M] △
L600	RLQB101JTD-D	INDUCTOR	[M]
L601	RLQB101JTD-D	INDUCTOR	[M]
L602	G0C100JA0030	INDUCTOR	[M]
L603	G0C101JA0027	COIL	[M]
L604	G0C3R3JA0027	COIL	[M]
L1301	7L1A62N	BIAS OCS COIL	[M]
L1302	RLQB470JTD-D	RF CHOKE COIL	[M]
T501	G4C6BDZ00001	TRANSFORMER	[M] △
T502	G4C2AAJ00006	BACKUP TRANSFORMER	[M] △
		COMPONENT COMBINATIONS	
Z301	ENG07802QF	TUNER PACK	[M]
Z501	ERZV10V511CS	ZENER	[M] △
Z601	B3MAZ0000027	INFRARED SENSOR	[M]
Z971	RGSD12A1445T	RADA RESISTOR	[M]
		RELAY	
RL501	K6B1ADA00011	RELAY	[M] △
		OSCILLATORS	
X300	H0H433400001	CRYSTAL OSCILLATOR	[M]
X301	H2A100500006	RESONATOR	[M]
X302	RSXD32K7S02	CRYSTAL OSCILLATOR	[M]
X701	RSXC16M9S04	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL600	A2BB00000130	FL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSES	
F1	K5Y630B00001	FUSE	[M] △
		FUSE HOLDERS	
FC1	EYF52BC	FUSE HOLDER	[M]
FC2	EYF52BC	FUSE HOLDER	[M]
		FUSE PROTECTORS	
FP501	K5G402AA0002	FUSE PROTECTOR	[M] △
FP502	K5G102AA0002	FUSE PROTECTOR	[M] △
		HOLDERS	
H303	K1YF08000003	8P WIRE HOLDER	[M]
H503	K1YF06000002	6P WIRE HOLDER	[M]
H601A	RMR0313	CABLE HOLDER	[M]
H601B	RMR0313	CABLE HOLDER	[M]
H604	K1YZ13000001	HOLDER	[M]
H605A	RMR0317	8P WIRE HOLDER	[M]
H605B	RMR0317	8P WIRE HOLDER	[M]
H606	RMR0316	7P WIRE HOLDER	[M]
		JACKS	
JK300	K7AABA000001	JK OPTICAL MODULE	[M]
JK301	K4BC08B00013	JK SPEAKER	[M]
JK303	K4BK02B00007	JK AUX-IN	[M]
JK501	K2AA2B000004	JK AC INLET	[M] △
JK600	RJ37TK07-X	JK HEADPHONE	[M]
		EARTH TERMINAL	
E300	SNE1004-2	EARTH TERMINAL	[M]
E501	SNE1004-2	EARTH TERMINAL	[M]
E600	K9ZZ00000424	EARTH TERMINAL	[M]
		RESISTORS	
R201	ERJ3GEYJ181V	180 1/16W	[M]
R210	ERJ3GEYJ103V	10K 1/16W	[M]
R211	ERJ3GEYJ182V	1.8K 1/16W	[M]
R218	ERJ3GEYJ392V	3.9K 1/16W	[M]
R219	ERJ3GEYJ391V	390 1/16W	[M]
R220	ERJ3GEYJ272V	2.7K 1/16W	[M]
R221	ERJ3GEYJ123V	12K 1/16W	[M]
R222	ERJ3GEYJ102V	1K 1/16W	[M]
R223	ERJ3GEYJ182V	1.8K 1/16W	[M]
R224	ERJ3GEYJ392V	3.9K 1/16W	[M]
R228	ERDS1FVJ100T	10 1/2W	[M]
R229	ERDS1FVJ100T	10 1/2W	[M]
R230	ERDS1FVJ100T	10 1/2W	[M]
R231	ERDS1FVJ100T	10 1/2W	[M]
R271	ERJ6GEYJ394V	390K 1/10W	[M]
R272	ERJ6GEYJ272V	2.7K 1/10W	[M]
R273	ERJ3GEYJ102V	1K 1/16W	[M]
R274	ERJ3GEYJ102V	1K 1/16W	[M]
R275	ERJ3GEYJ182V	1.8K 1/16W	[M]
R276	ERJ3GEYJ392V	3.9K 1/16W	[M]
R301	ERJ3GEYJ472V	4.7K 1/16W	[M]
R302	ERJ3GEYJ102V	1K 1/16W	[M]
R303	ERJ3GEYJ102V	1K 1/16W	[M]
R304	ERJ3GEYJ104V	100K 1/16W	[M]
R305	ERJ3GEYJ102V	1K 1/16W	[M]
R306	ERJ3GEYJ103V	10K 1/16W	[M]
R307	ERJ3GEYJ101V	100 1/16W	[M]
R308	ERJ3GEYJ101V	100 1/16W	[M]
R309	ERJ3GEYJ103V	10K 1/16W	[M]
R310	ERJ3GEYJ103V	10K 1/16W	[M]
R311	ERJ3GEYJ103V	10K 1/16W	[M]
R312	ERJ3GEYJ222V	2.2K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R313	ERJ3GEYJ101V	100 1/16W	[M]
R314	ERJ3GEYJ101V	100 1/16W	[M]
R315	ERJ3GEYJ101V	100 1/16W	[M]
R316	ERJ3GEYJ101V	100 1/16W	[M]
R317	ERJ3GEYJ101V	100 1/16W	[M]
R318	ERJ3GEYJ101V	100 1/16W	[M]
R319	ERJ3GEYJ101V	100 1/16W	[M]
R320	ERJ3GEYJ101V	100 1/16W	[M]
R321	ERJ3GEYJ101V	100 1/16W	[M]
R322	ERJ3GEYJ101V	100 1/16W	[M]
R323	ERJ3GEYJ472V	4.7K 1/16W	[M]
R324	ERJ3GEYJ472V	4.7K 1/16W	[M]
R325	ERJ3GEYJ473V	47K 1/16W	[M]
R326	ERJ3GEYJ472V	4.7K 1/16W	[M]
R327	ERJ3GEYJ472V	4.7K 1/16W	[M]
R328	ERJ3GEYJ101V	100 1/16W	[M]
R329	ERJ3GEYJ102V	1K 1/16W	[M]
R330	ERJ3GEYJ474V	470K 1/16W	[M]
R331	ERJ3GEYJ103V	10K 1/16W	[M]
R332	ERJ3GEYJ474V	470K 1/16W	[M]
R333	ERJ3GEYJ472V	4.7K 1/16W	[M]
R334	ERJ3GEYJ102V	1K 1/16W	[M]
R335	ERJ3GEYJ101V	100 1/16W	[M]
R336	ERJ3GEYJ472V	4.7K 1/16W	[M]
R337	ERJ3GEYJ472V	4.7K 1/16W	[M]
R338	ERJ3GEYJ472V	4.7K 1/16W	[M]
R339	ERJ3GEYJ101V	100 1/16W	[M]
R340	ERJ3GEYJ101V	100 1/16W	[M]
R341	ERJ3GEYJ101V	100 1/16W	[M]
R342	ERJ3GEYJ103V	10K 1/16W	[M]
R343	ERJ3GEYJ103V	10K 1/16W	[M]
R344	ERJ3GEYJ103V	10K 1/16W	[M]
R345	ERJ3GEYJ103V	10K 1/16W	[M]
R346	ERJ3GEYJ103V	10K 1/16W	[M]
R347	ERJ3GEYJ103V	10K 1/16W	[M]
R348	ERJ3GEYJ103V	10K 1/16W	[M]
R349	ERJ3GEYJ681V	680 1/16W	[M]
R350	ERJ3GEYJ473V	47K 1/16W	[M]
R351	ERJ3GEYJ473V	47K 1/16W	[M]
R352	ERJ3GEYJ472V	4.7K 1/16W	[M]
R353	ERJ3GEYJ472V	4.7K 1/16W	[M]
R354	ERJ3GEYJ681V	680 1/16W	[M]
R355	ERJ3GEYJ334V	330K 1/16W	[M]
R356	ERJ3GEYJ106V	10M 1/16W	[M]
R357	ERJ3GEYJ223V	22K 1/16W	[M]
R358	ERJ3GEYJ223V	22K 1/16W	[M]
R359	ERJ3GEYJ472V	4.7K 1/16W	[M]
R360	ERJ3GEYJ153V	15K 1/16W	[M]
R361	ERJ3GEYJ103V	10K 1/16W	[M]
R362	ERJ3GEYJ471V	470 1/16W	[M]
R363	ERJ3GEYJ121V	120 1/16W	[M]
R364	ERJ3GEYJ101V	100 1/16W	[M]
R365	ERJ3GEYJ102V	1K 1/16W	[M]
R366	ERJ3GEYJ102V	1K 1/16W	[M]
R367	ERJ3GEYJ102V	1K 1/16W	[M]
R368	ERJ3GEYJ102V	1K 1/16W	[M]
R369	ERJ3GEYJ102V	1K 1/16W	[M]
R370	ERJ3GEYJ102V	1K 1/16W	[M]
R371	ERJ3GEYJ101V	100 1/16W	[M]
R372	ERJ3GEYJ223V	22K 1/16W	[M]
R373	ERJ3GEYJ122V	1.2K 1/16W	[M]
R374	ERJ3GEYJ122V	1.2K 1/16W	[M]
R375	ERDS1FVJ4R7T	4.7 1/2W	[M]
R377	ERJ3GEYJ223V	22K 1/16W	[M]
R378	ERJ3GEYJ101V	100 1/16W	[M]
R379	ERJ3GEYJ101V	100 1/16W	[M]
R380	ERJ3GEYJ101V	100 1/16W	[M]
R381	ERJ3GEYJ101V	100 1/16W	[M]
R382	ERJ3GEYJ101V	100 1/16W	[M]
R383	ERJ3GEYJ103V	10K 1/16W	[M]
R384	ERJ3GEYJ472V	4.7K 1/16W	[M]
R385	ERJ3GEYJ101V	100 1/16W	[M]
R386	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R388	ERJ3GEYJ473V	47K 1/16W	[M]
R389	ERJ3GEYJ103V	10K 1/16W	[M]
R390	ERJ3GEYJ472V	4.7K 1/16W	[M]
R391	ERJ3GEYJ472V	4.7K 1/16W	[M]
R392	ERJ3GEYJ103V	10K 1/16W	[M]
R393	ERJ3GEYJ101V	100 1/16W	[M]
R394	ERJ3GEYJ101V	100 1/16W	[M]
R395	ERJ3GEYJ101V	100 1/16W	[M]
R396	ERJ3GEYJ101V	100 1/16W	[M]
R397	ERJ3GEYJ101V	100 1/16W	[M]
R398	ERJ3GEYJ103V	10K 1/16W	[M]
R399	ERJ3GEYJ101V	100 1/16W	[M]
R405	ERJ3GEYJ103V	10K 1/16W	[M]
R411	ERJ3GEYJ182V	1.8K 1/16W	[M]
R417	ERJ3GEYJ101V	100 1/16W	[M]
R418	ERJ3GEYJ392V	3.9K 1/16W	[M]
R419	ERJ3GEYJ391V	390 1/16W	[M]
R420	ERJ3GEYJ272V	2.7K 1/16W	[M]
R421	ERJ3GEYJ123V	12K 1/16W	[M]
R422	ERJ3GEYJ102V	1K 1/16W	[M]
R423	ERJ3GEYJ182V	1.8K 1/16W	[M]
R424	ERJ3GEYJ392V	3.9K 1/16W	[M]
R429	ERDS1FVJ100T	10 1/2W	[M]
R430	ERDS1FVJ100T	10 1/2W	[M]
R431	ERDS1FVJ100T	10 1/2W	[M]
R432	ERDS1FVJ100T	10 1/2W	[M]
R440	ERJ3GEYJ102V	1K 1/16W	[M]
R450	ERJ3GEYJ102V	1K 1/16W	[M]
R452	ERJ3GEYJ101V	100 1/16W	[M]
R453	ERJ3GEYJ101V	100 1/16W	[M]
R454	ERJ3GEYJ101V	100 1/16W	[M]
R455	ERJ3GEYJ472V	4.7K 1/16W	[M]
R456	ERJ3GEYJ472V	4.7K 1/16W	[M]
R457	ERJ3GEYJ472V	4.7K 1/16W	[M]
R458	ERJ3GEYJ472V	4.7K 1/16W	[M]
R459	ERJ3GEYJ101V	100 1/16W	[M]
R461	ERJ3GEYJ472V	4.7K 1/16W	[M]
R462	ERD2FCVJ100T	10 1/4W	[M]
R471	ERJ6GEYJ394V	390K 1/10W	[M]
R472	ERJ6GEYJ272V	2.7K 1/10W	[M]
R473	ERJ3GEYJ102V	1K 1/16W	[M]
R474	ERJ3GEYJ102V	1K 1/16W	[M]
R475	ERJ3GEYJ182V	1.8K 1/16W	[M]
R476	ERJ3GEYJ392V	3.9K 1/16W	[M]
R505	DOAE563JA048	56K 1/4W	[M]
R506	DOAE563JA048	56K 1/4W	[M]
R511	ERDS1FVJ102T	1K 1/2W	[M]
R512	ERDS1FVJ151T	150 1/2W	[M]
R514	DOAE563JA048	56K 1/4W	[M]
R515	DOAE563JA048	56K 1/4W	[M]
R517	ERDS2TJ331T	330 1/4W	[M]
R518	DOAE122JA048	1.2K 1/4W	[M]
R519	ERDS2TJ2R2T	2.2 1/4W	[M]
R520	ERDS2TJ2R2T	2.2 1/4W	[M]
R524	ERDS2TJ2R2T	2.2 1/4W	[M]
R526	ERDS2TJ103T	10K 1/4W	[M]
R532	ERDS2TJ153T	15K 1/4W	[M]
R533	ERDS2TJ153T	15K 1/4W	[M]
R534	ERDS1FVJ331T	330 1/2W	[M]
R536	ERDS1FVJ2R2T	2.2 1/2W	[M]
R537	ERDS2TJ222T	2.2K 1/4W	[M]
R539	ERDS1FVJ221T	220 1/2W	[M]
R540	ERDS2TJ153T	15K 1/4W	[M]
R541	ERDS2TJ153T	15K 1/4W	[M]
R542	ERDS2TJ332T	3.3K 1/4W	[M]
R543	ERDS2TJ332T	3.3K 1/4W	[M]
R544	DOAE562JA048	5.6K 1/4W	[M]
R545	DOAE562JA048	5.6K 1/4W	[M]
R546	DOAE223JA048	22K 1/4W	[M]
R547	ERDS2TJ683T	68K 1/4W	[M]
R548	ERDS2TJ184T	180K 1/4W	[M]
R549	ERDS1FVJ2R2T	2.2 1/2W	[M]
R550	ERDS1FVJ331T	330 1/2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R551	ERDS2TJ104T	100K 1/4W	[M]
R554	ERDS1FVJ331T	330 1/2W	[M]
R556	ERDS1FVJ2R2T	2.2 1/2W	[M]
R561	ERDS2TJ104T	100K 1/4W	[M]
R562	ERDS2TJ394T	390K 1/4W	[M]
R565	ERDS2TJ123T	12K 1/4W	[M]
R566	ERDS2TJ103T	10K 1/4W	[M]
R567	ERDS2TJ151T	150 1/4W	[M]
R568	ERDS1FVJ150T	15 1/2W	[M]
R569	ERDS1FVJ270T	27 1/2W	[M]
R571	ERDS1FVJ332T	3.3K 1/2W	[M]
R572	ERDS2TJ561T	560 1/4W	[M]
R573	DOAE272JA048	2.7K 1/4W	[M]
R574	DOAE272JA048	2.7K 1/4W	[M]
R576	ERDS2TJ103T	10K 1/4W	[M]
R577	ERDS2TJ103T	10K 1/4W	[M]
R578	ERDS2TJ332T	3.3K 1/4W	[M]
R580	ERDS1FVJ180T	18 1/2W	[M]
R581	ERDS1FVJ180T	18 1/2W	[M]
R583	ERDS2TJ821T	820 1/4W	[M]
R584	ERDS2TJ151T	150 1/4W	[M]
R585	ERDS1FVJ220T	22 1/2W	[M]
R586	ERDS2TJ151T	150 1/4W	[M]
R587	DOAE472JA048	4.7K 1/4W	[M]
R589	ERD2FCVJ4R7T	4.7 1/4W	[M]
R591	ERDS2TJ101T	100 1/4W	[M]
R600	ERJ3GEYJ680V	68 1/16W	[M]
R601	ERJ3GEYJ680V	68 1/16W	[M]
R602	D0GB470JA008	47 1/16W	[M]
R603	ERJ3GEYJ273V	27K 1/16W	[M]
R604	ERJ3GEYJ103V	10K 1/16W	[M]
R605	ERJ3GEYJ223V	22K 1/16W	[M]
R606	ERJ3GEYJ123V	12K 1/16W	[M]
R607	ERJ3GEYJ102V	1K 1/16W	[M]
R610	ERJ3GEYJ182V	1.8K 1/16W	[M]
R611	ERJ3GEYJ222V	2.2K 1/16W	[M]
R612	ERJ3GEYJ222V	2.2K 1/16W	[M]
R613	ERJ3GEYJ272V	2.7K 1/16W	[M]
R614	ERJ3GEYJ102V	1K 1/16W	[M]
R615	ERJ3GEYJ102V	1K 1/16W	[M]
R616	ERJ3GEYJ122V	1.2K 1/16W	[M]
R617	ERJ3GEYJ102V	1K 1/16W	[M]
R618	ERJ3GEYJ102V	1K 1/16W	[M]
R619	ERJ3GEYJ122V	1.2K 1/16W	[M]
R620	ERJ3GEYJ182V	1.8K 1/16W	[M]
R621	ERJ3GEYJ182V	1.8K 1/16W	[M]
R622	ERJ3GEYJ222V	2.2K 1/16W	[M]
R623	ERJ3GEYJ272V	2.7K 1/16W	[M]
R624	ERJ3GEYJ472V	4.7K 1/16W	[M]
R625	ERJ3GEYJ682V	6.8K 1/16W	[M]
R626	ERJ3GEYJ222V	2.2K 1/16W	[M]
R627	ERJ3GEYJ472V	4.7K 1/16W	[M]
R628	ERJ3GEYJ471V	470 1/16W	[M]
R629	ERJ3GEYJ471V	470 1/16W	[M]
R630	ERJ3GEYJ223V	22K 1/16W	[M]
R631	ERJ3GEYJ102V	1K 1/16W	[M]
R632	ERJ3GEYJ102V	1K 1/16W	[M]
R633	ERJ3GEYJ102V	1K 1/16W	[M]
R634	ERJ3GEYJ102V	1K 1/16W	[M]
R636	ERJ3GEYJ472V	4.7K 1/16W	[M]
R637	ERJ3GEYJ331V	330 1/16W	[M]
R638	ERJ3GEYJ331V	330 1/16W	[M]
R639	ERJ3GEYJ472V	4.7K 1/16W	[M]
R640	ERJ3GEYJ272V	2.7K 1/16W	[M]
R643	ERJ3GEYJ102V	1K 1/16W	[M]
R644	ERJ3GEYJ102V	1K 1/16W	[M]
R645	ERJ3GEYJ102V	1K 1/16W	[M]
R646	ERJ3GEYJ102V	1K 1/16W	[M]
R647	ERJ3GEYJ104V	100K 1/16W	[M]
R648	ERJ3GEYJ472V	4.7K 1/16W	[M]
R649	ERJ3GEYJ472V	4.7K 1/16W	[M]
R700	ERDS1FVJ180T	18 1/2W	[M]
R701	DOAE563JA048	56K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R701	ERJ3GEYJ4R7V	4.7 1/16W	[M]
R702	ERDS2TJ101T	100 1/4W	[M]
R702	ERJ3GEYJ472V	4.7K 1/16W	[M]
R703	ERDS2TJ103T	10K 1/4W	[M]
R704	D0AE563JA048	56K 1/4W	[M]
R704	ERJ3GEYJ102V	1K 1/16W	[M]
R705	ERDS2TJ103T	10K 1/4W	[M]
R705	ERJ3GEYJ393V	39K 1/16W	[M]
R706	D0AE472JA048	4.7K 1/4W	[M]
R706	ERJ3GEYJ102V	1K 1/16W	[M]
R707	D0AE562JA048	5.6K 1/4W	[M]
R707	ERJ3GEY0R00V	0 1/16W	[M]
R708	ERDS2TJ103T	10K 1/4W	[M]
R708	ERJ3GEY0R00V	0 1/16W	[M]
R709	ERDS2TJ824T	820K 1/4W	[M]
R709	ERJ3GEYJ104V	100K 1/16W	[M]
R710	D0AE563JA048	56K 1/4W	[M]
R711	ERDS2TJ824T	820K 1/4W	[M]
R711	ERJ3GEYJ823V	82K 1/16W	[M]
R712	ERDS2TJ102T	1K 1/4W	[M]
R712	ERJ3GEYJ821V	820 1/16W	[M]
R713	D0AE563JA048	56K 1/4W	[M]
R714	ERJ3GEYJ471V	470 1/16W	[M]
R715	ERJ3GEYJ332V	3.3K 1/16W	[M]
R717	ERJ3GEYJ102V	1K 1/16W	[M]
R718	ERJ3GEYJ102V	1K 1/16W	[M]
R720	ERDS2TJ823T	82K 1/4W	[M]
R720	ERJ3GEYJ105V	1M 1/16W	[M]
R721	ERDS2TJ823T	82K 1/4W	[M]
R721	ERJ3GEYJ101V	100 1/16W	[M]
R722	ERDS2TJ104T	100K 1/4W	[M]
R723	ERDS2TJ102T	1K 1/4W	[M]
R723	ERJ3GEYJ332V	3.3K 1/16W	[M]
R724	ERDS2TJ104T	100K 1/4W	[M]
R725	ERDS2TJ102T	1K 1/4W	[M]
R725	ERJ3GEYJ331V	330 1/16W	[M]
R726	ERDS2TJ273T	27K 1/4W	[M]
R727	ERDS2TJ104T	100K 1/4W	[M]
R727	ERJ3GEYJ102V	1K 1/16W	[M]
R728	ERDS2TJ102T	1K 1/4W	[M]
R728	ERJ3GEYJ183V	18K 1/16W	[M]
R729	ERDS2TJ102T	1K 1/4W	[M]
R729	ERJ3GEYJ102V	1K 1/16W	[M]
R730	ERDS2TJ224T	220K 1/4W	[M]
R731	ERDS2TJ682T	6.8K 1/4W	[M]
R731	ERJ3GEYJ223V	22K 1/16W	[M]
R732	ERDS2TJ822T	8.2K 1/4W	[M]
R733	ERDS2TJ822T	8.2K 1/4W	[M]
R734	ERDS2TJ222T	2.2K 1/4W	[M]
R735	ERDS2TJ224T	220K 1/4W	[M]
R735	ERJ3GEYJ101V	100 1/16W	[M]
R736	ERDS2TJ682T	6.8K 1/4W	[M]
R736	ERJ3GEYJ101V	100 1/16W	[M]
R737	ERDS2TJ681T	680 1/4W	[M]
R737	ERJ3GEYJ682V	6.8K 1/16W	[M]
R738	ERDS2TJ822T	8.2K 1/4W	[M]
R738	ERJ3GEYJ682V	6.8K 1/16W	[M]
R739	ERDS2TJ681T	680 1/4W	[M]
R740	ERDS2TJ183T	18K 1/4W	[M]
R741	D0AE562JA048	5.6K 1/4W	[M]
R742	ERDS2TJ392T	3.9K 1/4W	[M]
R742	ERJ3GEYJ103V	10K 1/16W	[M]
R743	ERDS2TJ271T	270 1/4W	[M]
R743	ERJ3GEYJ472V	4.7K 1/16W	[M]
R744	ERDS2TJ183T	18K 1/4W	[M]
R744	ERJ3GEYJ393V	39K 1/16W	[M]
R745	D0AE562JA048	5.6K 1/4W	[M]
R746	ERDS2TJ392T	3.9K 1/4W	[M]
R747	ERDS2TJ271T	270 1/4W	[M]
R748	ERDS2TJ152T	1.5K 1/4W	[M]
R749	ERDS2TJ152T	1.5K 1/4W	[M]
R749	ERJ3GEYJ183V	18K 1/16W	[M]
R750	ERDS2TJ332T	3.3K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R751	ERDS2TJ332T	3.3K 1/4W	[M]
R752	ERDS2TJ104T	100K 1/4W	[M]
R753	ERDS2TJ222T	2.2K 1/4W	[M]
R753	ERJ3GEYJ100V	10 1/16W	[M]
R754	D0GB5R6JA002	5.6 1/16W	[M]
R754	ERDS2TJ220T	22 1/4W	[M]
R755	ERDS2TJ220T	22 1/4W	[M]
R756	ERDS2TJ220T	22 1/4W	[M]
R757	ERDS2TJ220T	22 1/4W	[M]
R758	ERDS2TJ222T	2.2K 1/4W	[M]
R759	D0AE472JA048	4.7K 1/4W	[M]
R760	D0AE223JA048	22K 1/4W	[M]
R760	ERJ3GEYJ101V	100 1/16W	[M]
R761	D0AE223JA048	22K 1/4W	[M]
R761	ERJ3GEYJ103V	10K 1/16W	[M]
R762	D0AE562JA048	5.6K 1/4W	[M]
R762	ERJ3GEYJ103V	10K 1/16W	[M]
R763	D0AE562JA048	5.6K 1/4W	[M]
R763	ERJ3GEYJ103V	10K 1/16W	[M]
R764	ERDS2TJ683T	68K 1/4W	[M]
R764	ERJ3GEYJ102V	1K 1/16W	[M]
R765	ERDS2TJ683T	68K 1/4W	[M]
R766	ERDS2TJ822T	8.2K 1/4W	[M]
R767	ERDS2TJ822T	8.2K 1/4W	[M]
R768	D0AE472JA048	4.7K 1/4W	[M]
R769	D0AE472JA048	4.7K 1/4W	[M]
R770	ERDS2TJ332T	3.3K 1/4W	[M]
R771	ERDS2TJ104T	100K 1/4W	[M]
R772	D0AE472JA048	4.7K 1/4W	[M]
R773	ERDS2TJ102T	1K 1/4W	[M]
R774	ERDS2TJ104T	100K 1/4W	[M]
R775	ERDS2TJ153T	15K 1/4W	[M]
R776	ERDS2TJ102T	1K 1/4W	[M]
R777	ERDS2TJ222T	2.2K 1/4W	[M]
R778	ERDS2TJ153T	15K 1/4W	[M]
R779	ERDS2TJ822T	8.2K 1/4W	[M]
R780	D0AE473JA048	47K 1/4W	[M]
R781	D0AE473JA048	47K 1/4W	[M]
R790	ERDS2TJ332T	3.3K 1/4W	[M]
R791	ERDS2TJ332T	3.3K 1/4W	[M]
R792	ERDS2TJ561T	560 1/4W	[M]
R793	ERDS2TJ101T	100 1/4W	[M]
R794	ERDS2TJ103T	10K 1/4W	[M]
R797	ERD2FCVJ4R7T	4.7 1/4W	[M]
R798	ERDS2TJ102T	1K 1/4W	[M]
R799	ERDS2TJ102T	1K 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R1061	ERJ3GEY0R00V	0 1/16W	[M]
R1062	ERJ3GEY0R00V	0 1/16W	[M]
R1063	ERJ3GEY0R00V	0 1/16W	[M]
R1101	ERJ3GEYJ330V	33 1/16W	[M]
R1102	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1103	ERJ3GEYJ183V	18K 1/16W	[M]
R1104	ERJ3GEYJ103V	10K 1/16W	[M]
R1105	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1106	ERJ3GEYJ104V	100K 1/16W	[M]
R1107	ERJ3GEYJ102V	1K 1/16W	[M]
R1109	ERJ3GEYJ102V	1K 1/16W	[M]
R1110	ERJ3GEYJ333V	33K 1/16W	[M]
R1201	ERJ3GEYJ330V	33 1/16W	[M]
R1202	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1203	ERJ3GEYJ183V	18K 1/16W	[M]
R1204	ERJ3GEYJ103V	10K 1/16W	[M]
R1205	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1206	ERJ3GEYJ104V	100K 1/16W	[M]
R1207	ERJ3GEYJ102V	1K 1/16W	[M]
R1209	ERJ3GEYJ102V	1K 1/16W	[M]
R1210	ERJ3GEYJ333V	33K 1/16W	[M]
R1302	ERJ3GEYJ471V	470 1/16W	[M]
R1303	ERJ3GEYJ475V	4.7M 1/16W	[M]
R1304	ERJ3GEYJ223V	22K 1/16W	[M]
R1305	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1309	ERDS1FVJ471T	470 1/2W	[M]
R1313	ERJ3GEYJ103V	10K 1/16W	[M]
R1314	ERJ3GEYJ102V	1K 1/16W	[M]
R1318	ERJ3GEYJ103V	10K 1/16W	[M]
R1319	ERJ3GEYJ123V	12K 1/16W	[M]
R1320	ERJ3GEYJ104V	100K 1/16W	[M]
R1321	D0GB470JA008	47 1/16W	[M]
R1322	D0GB823JA002	82K 1/16W	[M]
R1327	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1328	ERJ3GEYJ153V	15K 1/16W	[M]
R1329	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	ERJ3GEYJ752V	7.5K 1/16W	[M]
R1332	ERJ3GEYJ103V	10K 1/16W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	ERJ3GEYJ223V	22K 1/16W	[M]
R1335	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1337	ERJ3GEYJ103V	10K 1/16W	[M]
R1338	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1341	ERJ3GEYJ471V	470 1/16W	[M]
R1342	ERJ3GEYJ473V	47K 1/16W	[M]
R1343	ERJ3GEYJ332V	3.3K 1/16W	[M]
R1344	ERJ3GEYJ273V	27K 1/16W	[M]
R1345	ERJ3GEYJ102V	1K 1/16W	[M]
R1371	ERJ3GEYJ223V	22K 1/16W	[M]
R1374	ERJ3GEYJ471V	470 1/16W	[M]
R1380	ERJ3GEY0R00V	0 1/16W	[M]
WA100	ERJ3GEY0R00V	0 1/16W	[M]
WA101	ERJ3GEY0R00V	0 1/16W	[M]
WA102	ERJ3GEY0R00V	0 1/16W	[M]
WA103	ERJ3GEY0R00V	0 1/16W	[M]
WA104	ERJ3GEY0R00V	0 1/16W	[M]
WA105	ERJ3GEY0R00V	0 1/16W	[M]
WA107	ERJ3GEY0R00V	0 1/16W	[M]
WA108	ERJ3GEY0R00V	0 1/16W	[M]
WA109	ERJ3GEY0R00V	0 1/16W	[M]
WA110	ERJ3GEY0R00V	0 1/16W	[M]
WA113	ERJ3GEY0R00V	0 1/16W	[M]
WA114	ERJ3GEY0R00V	0 1/16W	[M]
WA600	ERJ3GEY0R00V	0 1/16W	[M]
WA601	ERJ3GEY0R00V	0 1/16W	[M]
WA610	ERJ3GEY0R00V	0 1/16W	[M]
WA611	ERJ3GEY0R00V	0 1/16W	[M]
WA612	ERJ3GEY0R00V	0 1/16W	[M]
WA613	ERJ3GEY0R00V	0 1/16W	[M]
WA614	ERJ3GEY0R00V	0 1/16W	[M]
WA615	ERJ3GEY0R00V	0 1/16W	[M]
WA616	ERJ3GEY0R00V	0 1/16W	[M]
WA617	ERJ3GEY0R00V	0 1/16W	[M]
WA618	ERJ3GEY0R00V	0 1/16W	[M]
WA619	ERJ3GEY0R00V	0 1/16W	[M]
WA620	ERJ3GEY0R00V	0 1/16W	[M]
WA621	ERJ3GEY0R00V	0 1/16W	[M]
WA622	ERJ3GEY0R00V	0 1/16W	[M]
WA623	ERJ3GEY0R00V	0 1/16W	[M]
		WIRES	
JW303	REXV0019	8P WIRE (SP-PWR)	[M]
JW503	REXV0020	6P WIRE (PWR-TRAN)	[M]
JW601	RWJ1104100XX	4P WIRE (PWR-PAN)	[M]
JW603	REXV0025	13P (PNL-MAIN)	[M]
JW605	RWJ1108100XX	8P WIRE	[M]
JW606	RWJ0207180XQ	7P WIRE (PANEL-TRAN)	[M]
WR308B	RWJ0102110SS	2P (MTR WIRE)	[M]
WR1903	RWJ0102050KR	2P (MOTOR WIRE)	[M]
		CAPACITORS	
C11	F1D1E103A001	0.01 25V	[M]
C12	F2A1C101A235	100P 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	F2A1C101A235	100P 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C201	ECA1CAK101XB	100 16V	[M]
C209	ECJ1VC1H102J	1000P 50V	[M]
C211	ECJ1VB1H471K	470P 50V	[M]
C212	ECJ1VB1H102K	1000P 50V	[M]
C214	ECJ1VB1H221K	220P 50V	[M]
C217	ECJ1VC1H102J	1000P 50V	[M]
C219	ECA1CAK100XB	10 16V	[M]
C220	ECA1CAK100XB	10 16V	[M]
C222	ECA1CAK100XB	10 16V	[M]
C224	ECA1CAK100XB	10 16V	[M]
C234	ECA1EPX470B	47 25V	[M]
C236	F1H1E104A029	0.1 25V	[M]
C237	F1H1E104A029	0.1 25V	[M]
C238	F1H1H682A219	6800P 50V	[M]
C239	F1H1H682A219	6800P 50V	[M]
C240	F1H1E104A029	0.1 25V	[M]
C241	F1H1E104A029	0.1 25V	[M]
C242	F1H1H104A783	0.1 50V	[M]
C243	F1H1H104A783	0.1 50V	[M]
C244	F1H1H104A783	0.1 50V	[M]
C245	ECJ1VC1H181J	180P 50V	[M]
C249	ECJ1VC1H102J	1000P 50V	[M]
C270	ECJ1VC1H561K	560P 50V	[M]
C271	ECQV1H154JZ3	0.15 50V	[M]
C272	ECQV1H154JZ3	0.15 50V	[M]
C301	F1H1H104A783	0.1 50V	[M]
C303	ECJ1VB1H471K	470P 50V	[M]
C304	ECJ1VC1H101K	100P 50V	[M]
C305	ECJ1VC1H101K	100P 50V	[M]
C306	ECJ1VC1H101K	100P 50V	[M]
C308	ECJ1VC1H101K	100P 50V	[M]
C310	ECJ1VB1E103K	0.01 25V	[M]
C311	F4D55334A008	0.055	[M]
C312	ECJ2VF1H104Z	0.1 50V	[M]
C313	ECA0JAK101XB	100 6.3V	[M]
C314	ECA1HAK010XB	1 50V	[M]
C315	ECJ1VC1H101K	100P 50V	[M]
C316	ECA1HAK2R2XB	2.2 50V	[M]
C317	ECJ1VC1H102J	1000P 50V	[M]
C318	ECJ1VC1H560J	56P 50V	[M]
C319	ECJ1VB1H102K	1000P 50V	[M]
C320	ECJ1VC1H560J	56P 50V	[M]
C321	ECJ1VC1H680J	68P 50V	[M]
C322	ECJ1VC1H680J	68P 50V	[M]
C323	ECJ1VC1H180J	18P 50V	[M]
C324	ECJ1VC1H220J	22P 50V	[M]
C325	ECJ1VB1E223K	0.022 25V	[M]
C326	ECJ1VB1H103K	0.01 50V	[M]
C327	ECJ1VB1H221K	220P 50V	[M]
C329	ECJ1VC1H101K	100P 50V	[M]
C331	ECJ1VC1H101K	100P 50V	[M]
C333	ECJ1VB1H561K	560P 50V	[M]
C334	ECJ1VB1H561K	560P 50V	[M]
C335	ECJ1VB1H561K	560P 50V	[M]
C336	ECJ1VB1H561K	560P 50V	[M]
C337	ECJ1VB1H561K	560P 50V	[M]
C338	ECJ1VB1H561K	560P 50V	[M]
C339	ECJ1VB1H561K	560P 50V	[M]
C340	F1H1H104A783	0.1 50V	[M]
C341	ECA0JAK101XB	100 6.3V	[M]
C342	ECJ1VB1H102K	1000P 50V	[M]
C343	ECJ1VB1H103K	0.01 50V	[M]
C344	ECJ1VC1H101J	100P 50V	[M]
C345	ECJ1VC1H101J	100P 50V	[M]
C346	ECJ1VC1H470J	47P 50V	[M]
C347	ECJ1VB1E103K	0.01 25V	[M]
C348	ECJ1VB1H102K	1000P 50V	[M]
C349	ECEA0JKA470B	47 6.3V	[M]
C350	ECJ1VC1H101K	100P 50V	[M]
C351	ECJ1VC1H101K	100P 50V	[M]
C352	ECA1HAK100XB	10 50V	[M]
C353	ECJ1VB1H331K	330P 50V	[M]
C354	ECA1HAK100XB	10 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C355	ECJ1VC1H470J	47P 50V	[M]
C356	ECJ1VB1H561K	560P 50V	[M]
C358	ECA1CAM221XB	220 16V	[M]
C359	ECEA1AKA101B	100 10V	[M]
C360	ECA0JAK101XB	100 6.3V	[M]
C361	F1H1E104A029	0.1 25V	[M]
C362	ECA1AAK220XB	22 10V	[M]
C363	ECJ1VC1H101J	100P 50V	[M]
C364	ECJ1VC1H101J	100P 50V	[M]
C367	F1H1H104A783	0.1 50V	[M]
C368	F1H1H104A783	0.1 50V	[M]
C372	ECA1HAK2R2XB	2.2 50V	[M]
C373	ECJ1VB1H471K	470P 50V	[M]
C374	ECJ1VB1H471K	470P 50V	[M]
C395	F1H1H104A783	0.1 50V	[M]
C399	ECJ1VC1H101K	100P 50V	[M]
C409	ECJ1VC1H102J	1000P 50V	[M]
C411	ECJ1VB1H471K	470P 50V	[M]
C412	ECJ1VB1H102K	1000P 50V	[M]
C414	ECJ1VB1H221K	220P 50V	[M]
C417	ECJ1VC1H102J	1000P 50V	[M]
C419	ECA1CAK100XB	10 16V	[M]
C420	ECA1CAK100XB	10 16V	[M]
C422	ECA1CAK100XB	10 16V	[M]
C424	ECA1CAK100XB	10 16V	[M]
C436	F1H1E104A029	0.1 25V	[M]
C437	F1H1E104A029	0.1 25V	[M]
C438	F1H1H682A219	6800P 50V	[M]
C439	F1H1H682A219	6800P 50V	[M]
C440	F1H1E104A029	0.1 25V	[M]
C441	F1H1E104A029	0.1 25V	[M]
C445	ECJ1VC1H181J	180P 50V	[M]
C449	ECJ1VC1H102J	1000P 50V	[M]
C470	ECJ1VC1H561K	560P 50V	[M]
C471	ECQV1H154JZ3	0.15 50V	[M]
C472	ECQV1H154JZ3	0.15 50V	[M]
C500	F1D1H821A012	820P 50V	[M]
C501	F1D1H821A012	820P 50V	[M]
C502	F1D1H821A012	820P 50V	[M]
C503	F1D1H821A012	820P 50V	[M]
C504	F1D1H390A006	39P 50V	[M]
C505	F1D1H390A006	39P 50V	[M]
C506	ECA1SAM222YE	2200 100V	[M]
C507	ECA1SAM222YE	2200 100V	[M]
C508	ECA1EAM332XE	3300 25V	[M]
C509	F1D1H330A041	33P 50V	[M]
C510	F1D1H330A041	33P 50V	[M]
C511	F1B1H103A007	0.01 50V	[M]
C512	ECA1EAM101XB	100 25V	[M]
C515	F1E1H1030001	0.01 50V	[M]
C516	ECA1HAK100XB	10 50V	[M]
C517	ECKR2H103ZF5	0.01 500V	[M]
C518	F1B1H103A007	0.01 50V	[M]
C520	F1B1H103A007	0.01 50V	[M]
C521	ECA1EAK330XB	33 25V	[M]
C526	ECA1HM330B	33 50V	[M]
C528	F1B1H103A007	0.01 50V	[M]
C530	ECQE1104KF3	0.1 100V	[M]
C533	ECQV1H104JZ3	0.1 50V	[M]
C535	ECQV1H104JZ3	0.1 50V	[M]
C536	ECA0JAK221XB	220 6.3V	[M]
C537	F1D1H102A012	1000P 50V	[M]
C538	ECA1HAK220XB	22 50V	[M]
C539	F1B1H103A007	0.01 50V	[M]
C548	ECKR1H103KB5	0.01 50V	[M]
C575	ECA1HAK4R7XB	4.7 50V	[M]
C578	F1B1H103A007	0.01 50V	[M]
C580	F1B1H103A007	0.01 50V	[M]
C581	ECA1HAM470XB	47 50V	[M]
C582	ECQE1104KF3	0.1 100V	[M]
C583	F1B1H103A007	0.01 50V	[M]
C584	ECA1CAM102XB	1000 16V	[M]
C585	ECA1EAM101XB	100 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C586	ECA2AM100B	10 100V	[M]
C587	ECA1JM101B	100 63V	[M]
C588	ECA1JM101B	100 63V	[M]
C600	ECA1HAK220XB	22 50V	[M]
C601	ECA1HAK220XB	22 50V	[M]
C602	ECA1HAK220XB	22 50V	[M]
C603	ECJ1VB1H102K	1000P 50V	[M]
C604	ECJ1VB1E223K	0.022 25V	[M]
C605	ECJ1VB1E223K	0.022 25V	[M]
C606	ECJ1VC1H470J	47P 50V	[M]
C608	ECEA0JKA470B	47 6.3V	[M]
C609	ECJ1VB1H103K	0.01 50V	[M]
C610	ECJ1VB1H102K	1000P 50V	[M]
C611	ECJ1VC1H101J	100P 50V	[M]
C612	ECJ1VC1H101J	100P 50V	[M]
C615	ECJ1VC1H470J	47P 50V	[M]
C616	ECJ1VC1H470J	47P 50V	[M]
C617	ECJ1VB1H221K	220P 50V	[M]
C618	ECJ1VB1H221K	220P 50V	[M]
C619	F1H1H104A783	0.1 50V	[M]
C620	ECA1HAK220XB	22 50V	[M]
C621	F1H1H104A783	0.1 50V	[M]
C622	ECJ1VC1H470J	47P 50V	[M]
C623	ECJ1VC1H470J	47P 50V	[M]
C624	ECJ1VB1H221K	220P 50V	[M]
C625	ECJ1VB1H221K	220P 50V	[M]
C626	F1H1H104A783	0.1 50V	[M]
C627	ECA1HAK220XB	22 50V	[M]
C628	ECA1HAK220XB	22 50V	[M]
C629	F1H1H104A783	0.1 50V	[M]
C630	ECJ1VC1H331J	330P 50V	[M]
C700	ECA0JAK101XB	100 6.3V	[M]
C701	ECA1EAK330XB	33 25V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C702	ECA1HAK2R2XB	2.2 50V	[M]
C702	F1H1A474A025	0.47 10V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C703	F1D1H1040002	0.1 50V	[M]
C704	ECA0JAK221XB	220 6.3V	[M]
C704	F1H1C104A065	0.1 16V	[M]
C705	ECEA1AKN100B	10 10V	[M]
C705	F1H1C104A065	0.1 16V	[M]
C706	ECJ1VF1A105Z	1 10V	[M]
C707	ECJ1VB1C393K	0.039 16V	[M]
C709	F1D1H102A012	1000P 50V	[M]
C710	ECJ1VC1H471J	470P 50V	[M]
C710	F1D1H102A012	1000P 50V	[M]
C711	ECA1CAK100XB	10 16V	[M]
C711	F1H1C104A065	0.1 16V	[M]
C712	F1D1C272A010	2700P 16V	[M]
C712	F1H1C104A065	0.1 16V	[M]
C713	ECEA1HKN010B	1 50V	[M]
C713	F1H1C104A065	0.1 16V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C714	F1C1C123A001	0.012 16V	[M]
C715	F1D1C272A010	2700P 16V	[M]
C715	F1H1A474A025	0.47 10V	[M]
C716	ECEA1HKN010B	1 50V	[M]
C716	ECJ1VB1H681K	680P 50V	[M]
C717	F1C1C123A001	0.012 16V	[M]
C717	F1H1C104A065	0.1 16V	[M]
C718	ECJ1VB1C823K	0.082 16V	[M]
C719	ECEA1AKA101B	100 10V	[M]
C720	ECEA1HKN010B	1 50V	[M]
C721	F1D1C392A010	3900P 16V	[M]
C721	F1H1H220A230	22P 50V	[M]
C722	ECJ1VC1H270J	27P 50V	[M]
C722	F1D1C392A010	3900P 16V	[M]
C723	ECEA0JKA221I	220 6.3V	[M]
C723	ECEA1HKN010B	1 50V	[M]
C724	F1D1C392A010	3900P 16V	[M]
C724	F1H1C104A065	0.1 16V	[M]
C725	ECJ1VB1H102K	1000P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C725	F1D1C392A010	3900P 16V	[M]
C726	ECA1CAK100XB	10 16V	[M]
C726	ECJ1VB1H102K	1000P 50V	[M]
C727	ECA1CAK100XB	10 16V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C728	F1D1H332A046	3300P 50V	[M]
C729	F1D1H332A046	3300P 50V	[M]
C729	F1H1C104A065	0.1 16V	[M]
C730	ECA1HAKR22XB	0.22 50V	[M]
C730	F1H1C104A065	0.1 16V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]
C731	ECA1HAKR22XB	0.22 50V	[M]
C732	ECA1CAK221XB	220 16V	[M]
C733	ECA1HAKR33XB	0.33 50V	[M]
C733	F1H1C104A065	0.1 16V	[M]
C734	ECA1HAKR33XB	0.33 50V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	F1H1E104A030	0.1 25V	[M]
C736	ECQV1H473JZ3	0.047 50V	[M]
C736	F1H1E104A030	0.1 25V	[M]
C737	ECJ1VB1E103K	0.01 25V	[M]
C737	ECQV1H473JZ3	0.047 50V	[M]
C738	ECA1CAK100XB	10 16V	[M]
C738	ECJ1VB1C563K	0.056 16V	[M]
C739	ECJ1VB1E183K	0.018 25V	[M]
C739	F1D1H471A012	470P 50V	[M]
C740	F1D1H471A012	470P 50V	[M]
C740	F1H1C104A065	0.1 16V	[M]
C741	ECA1HAKR47XB	0.47 50V	[M]
C741	ECJ1VB1H102K	1000P 50V	[M]
C742	ECA1HAKR47XB	0.47 50V	[M]
C742	ECJ1VB1C473K	0.047 16V	[M]
C743	F1E1H1030001	0.01 50V	[M]
C743	F1H1E104A030	0.1 25V	[M]
C744	ECJ1VB1E153K	0.015 25V	[M]
C744	F1E1H1030001	0.01 50V	[M]
C745	F1D1H101A012	100P 50V	[M]
C745	F1H1E104A030	0.1 25V	[M]
C746	F1D1H101A012	100P 50V	[M]
C746	F1H1C104A065	0.1 16V	[M]
C747	ECJ1VB1H471K	470P 50V	[M]
C747	F1D1H270A006	27P 50V	[M]
C748	F1D1H270A006	27P 50V	[M]
C748	F1H1C104A065	0.1 16V	[M]
C749	ECJ1VB1H392K	3900P 50V	[M]
C749	ECQB1H273JF3	0.027 50V	[M]
C750	ECQB1H273JF3	0.027 50V	[M]
C750	F1H1C104A065	0.1 16V	[M]
C751	ECA1CAK100XB	10 16V	[M]
C751	F1H1C104A065	0.1 16V	[M]
C752	ECA1CAK100XB	10 16V	[M]
C752	ECJ1VB1E183K	0.018 25V	[M]
C753	ECJ1VB1H471K	470P 50V	[M]
C754	F1H1C104A065	0.1 16V	[M]
C755	F1D1H471A012	470P 50V	[M]
C755	F1H1C104A065	0.1 16V	[M]
C756	F1D1H471A012	470P 50V	[M]
C757	ECEA0JKA101I	100 6.3V	[M]
C758	F1H1C104A065	0.1 16V	[M]
C760	ECA1EAK330XB	33 25V	[M]
C761	F1B1H103A007	0.01 50V	[M]
C1101	ECA1HAK010XB	1 50V	[M]
C1102	ECJ1VB1H102K	1000P 50V	[M]
C1103	ECA1CAK101XB	100 16V	[M]
C1104	ECJ1VB1C273K	0.027 16V	[M]
C1105	ECJ1VB1H471K	470P 50V	[M]
C1106	ECA1HAK2R2XB	2.2 50V	[M]
C1107	F1H1H152A219	1500P 50V	[M]
C1108	ECA1CAK100XB	10 16V	[M]
C1109	ECA1HAK3R3XB	3.3 50V	[M]
C1110	F1H1H682A219	6800P 50V	[M]
C1121	ECJ1VB1H102K	1000P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1122	F1H1H103A219	0.01 50V	[M]
C1123	ECJ1VB1H271K	270P 50V	[M]
C1201	ECA1HAK010XB	1 50V	[M]
C1202	ECJ1VB1H102K	1000P 50V	[M]
C1203	ECA1CAK101XB	100 16V	[M]
C1204	ECJ1VB1C273K	0.027 16V	[M]
C1205	ECJ1VB1H471K	470P 50V	[M]
C1206	ECA1HAK2R2XB	2.2 50V	[M]
C1207	F1H1H152A219	1500P 50V	[M]
C1208	ECA1CAK100XB	10 16V	[M]
C1209	ECA1HAK3R3XB	3.3 50V	[M]
C1210	F1H1H682A219	6800P 50V	[M]
C1221	ECJ1VB1H102K	1000P 50V	[M]
C1222	F1H1H103A219	0.01 50V	[M]
C1223	ECJ1VB1H271K	270P 50V	[M]
C1301	ECA1HAK0R1XB	0.1 50V	[M]
C1302	ECJ1VB1C333K	0.033 16V	[M]
C1303	ECJ1VB1C333K	0.033 16V	[M]
C1304	ECA1HAK4R7XB	4.7 50V	[M]
C1305	ECA1CAK330XB	33 16V	[M]
C1307	ECA1AAK221XQ	220 10V	[M]
C1308	ECA1CAK220XB	22 16V	[M]
C1310	ECA1HAK0R1XB	0.1 50V	[M]
C1311	ECA1CAK470XB	47 16V	[M]
C1312	ECJ1VB1H332K	3300P 50V	[M]
C1314	ECJ1VB1H222K	2200P 50V	[M]
C1315	ECJ1VB1H222K	2200P 50V	[M]
C1316	ECJ1VB1H102K	1000P 50V	[M]
C1317	ECJ1VB1H102K	1000P 50V	[M]
C1318	ECQV1H473JZ3	0.047 50V	[M]
C1319	ECA1CAK101XB	100 16V	[M]
C1320	ECA1HAK010XB	1 50V	[M]
C1321	F0A2A472A019	4700P 100V	[M]
C1323	ECEA1HKN010B	1 50V	[M]
C1324	ECA1CAK470XB	47 16V	[M]
C1326	ECA1CAK100XB	10 16V	[M]
C1371	F1H1H103A219	0.01 50V	[M]
		CHIP JUMPER	
RJ701	ERJ3GEY0R00V	0 1/16W	[M]
RJ715	ERJ3GEY0R00V	0 1/16W	[M]
RJ716	ERJ3GEY0R00V	0 1/16W	[M]
RJ717	ERJ3GEY0R00V	0 1/16W	[M]
RJ718	ERJ3GEY0R00V	0 1/16W	[M]
RJ719	ERJ3GEY0R00V	0 1/16W	[M]
RJ720	ERJ3GEY0R00V	0 1/16W	[M]
RJ721	ERJ3GEY0R00V	0 1/16W	[M]
RJ722	ERJ3GEY0R00V	0 1/16W	[M]
RJ723	ERJ3GEY0R00V	0 1/16W	[M]
RJ724	ERJ3GEY0R00V	0 1/16W	[M]
RJ725	ERJ3GEY0R00V	0 1/16W	[M]

24.5. Packaging Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGV0062	PACKING CASE	[M]
P2	RPNV0026	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	N2QAJB000096	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
A2	K2CQ2CA00002	AC CORD	[M] EG E ⚠
A2	RJA0053-3X	AC CORD	[M] EB ⚠
A3	RQT7375-D	O/I BOOK (Ge/It/Fr)	[M] EG
A3	RQT7376-H	O/I BOOK (Du/Da/Sw)	[M] EG
A3	RQT7377-B	O/I BOOK (En)	[M] EB E
A3	RQT7378-R	O/I BOOK (Sp/Ru/Pol/Cz)	[M] E
A4	RSA0007-L	FM ANTENNA WIRE	[M]
A5	N1DAAA00001	AM LOOP ANTENNA	[M]
A6	K1YZ02000013	ANT ADAPTER	[M] EB

24.6. Packaging

