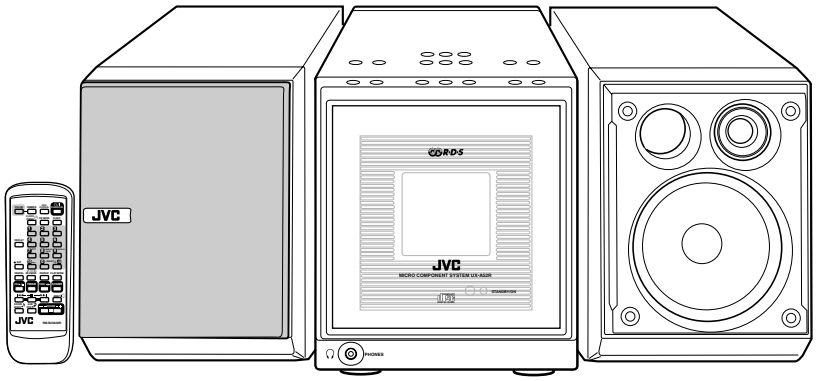
JVC

SERVICE MANUAL

MICRO COMPONENET SYSTEM

UX-A52R



R·D·S

COMPACT disc DIGITAL AUDIO

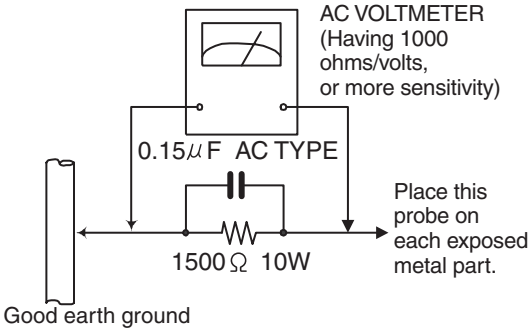
Area Suffix	
B	U.K.
E	Continental Europe
EN	Northem Europe

Contents

No.21064
Feb. 2002

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ CAUTION

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

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.

(This regulation does not correspond to J and C version.)

Safety precautions (U.K only)

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by (⚠) on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

Warning

1. Service should be performed by qualified personnel only.
2. This equipment has been designed and manufactured to meet international safety standards.
3. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
4. Repairs must be made in accordance with the relevant safety standards.
5. It is essential that safety critical components are replaced by approved parts.
6. If mains voltage selector is provided, check setting for local voltage.

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

Preventing static electricity

1.Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

2.About the earth processing for the destruction prevention by static electricity

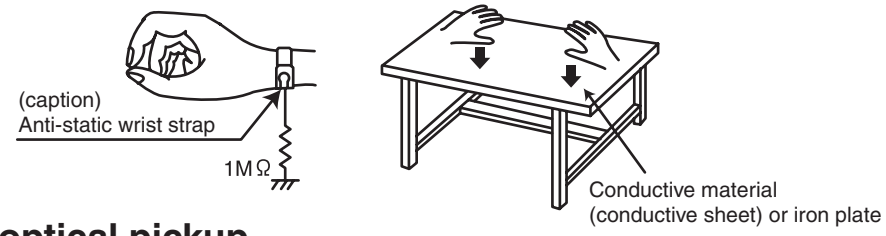
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players. Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

4.Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

3. Handle the flexible cable carefully as it may break when subjected to strong force.

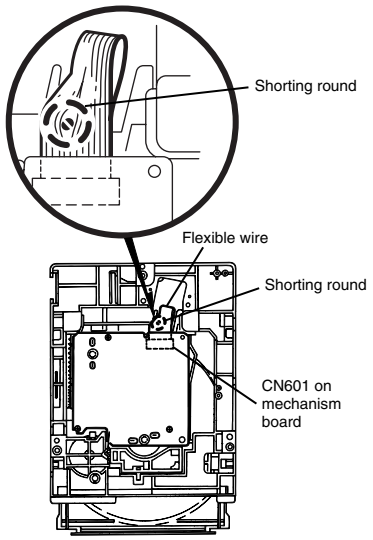
4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for pick-up and how to detach the substrate.**

1.Solder is put up before the card wire is removed from connector on the CD substrate as shown in Figure.
(When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)

2.Please remove solder after connecting the card wire with when you install picking up in the substrate.



Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

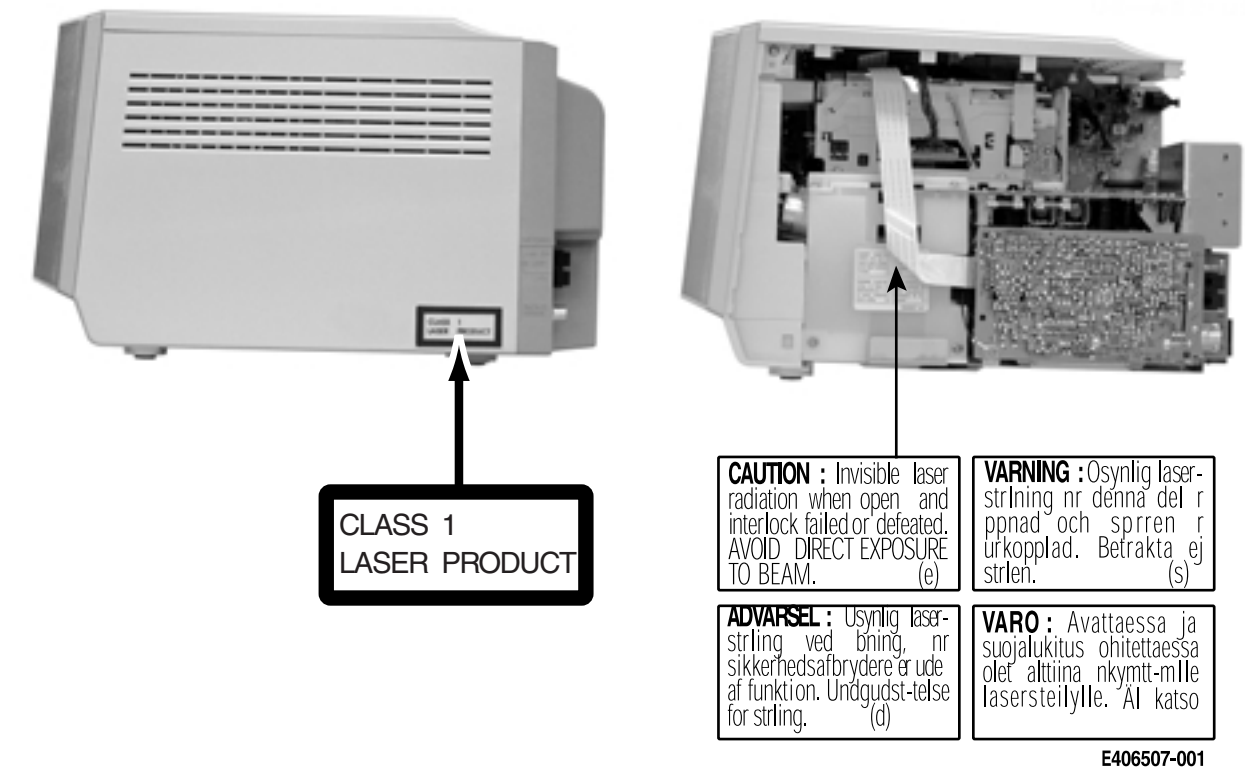
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL



Disassembly method

<Main body>

■ Removing the rear cover

(See Fig.1 and 2)

1. Remove the eight screws **A** on the back of the body.
2. Remove the two screws **B** on the bottom of the body.
3. Unlock the speaker terminal and the antenna terminal, then remove the rear cover backward with releasing the hooks.

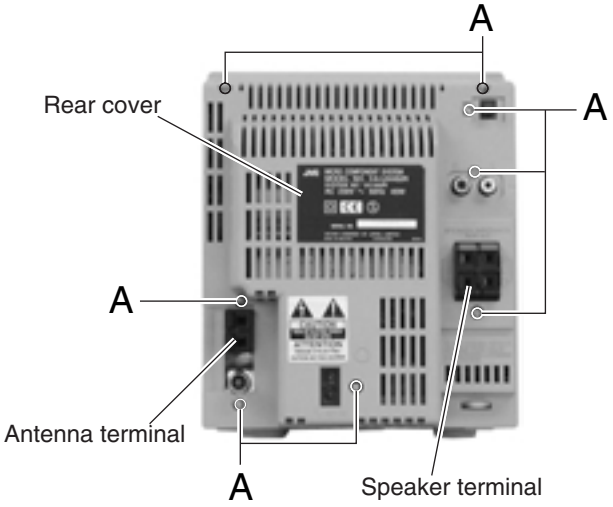


Fig.1

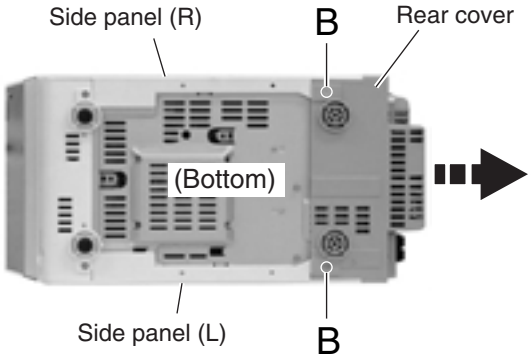


Fig.2

■ Removing the side panels

(See Fig.3 to 5)

・ Prior to performing the following procedure, remove the rear cover.

1. Remove the two screws **C** attaching the side panels on the bottom of the body.
2. Remove each side panel backward while releasing the eight joints **a** as shown in Fig.4 and 5.

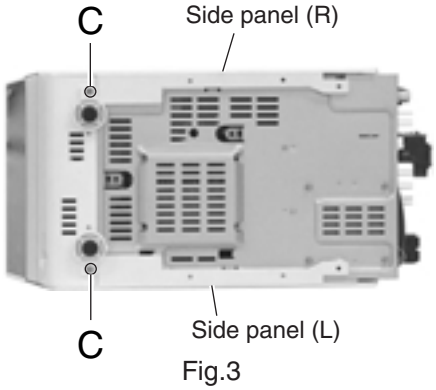


Fig.3

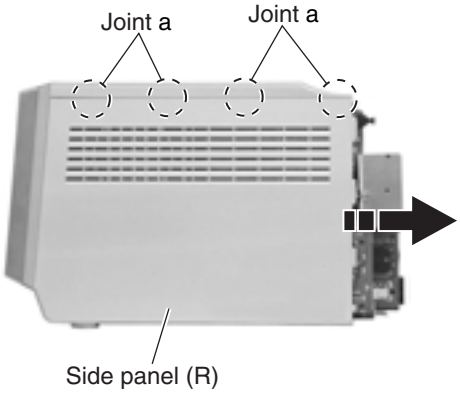


Fig.4

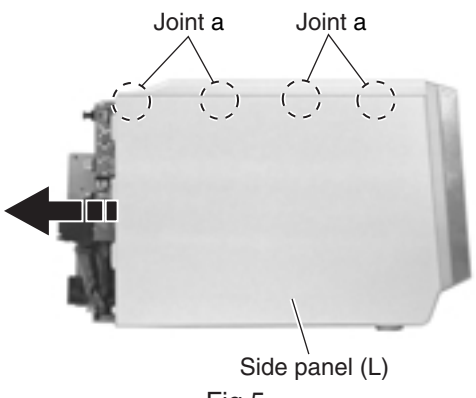


Fig.5

■ Removing the top panel (See Fig.6 and 7)

・ Prior to performing the following procedure, remove the rear cover and the side panels.

1. Remove the two screws **D** on each side of the body.
2. Release the two joints **b** on each side of the body and remove the top panel in the direction of the arrow.
3. Disconnect the card wires from connector CN705 on the system control board on the left side of the body.

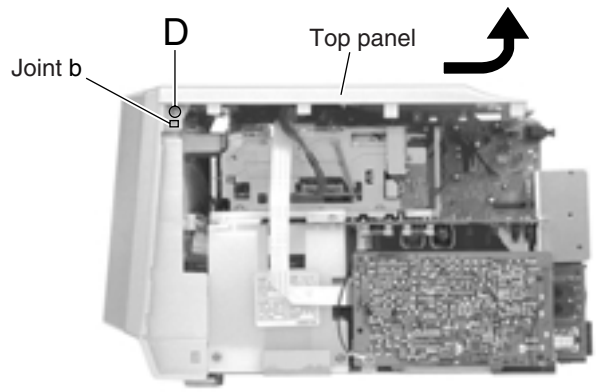


Fig.6

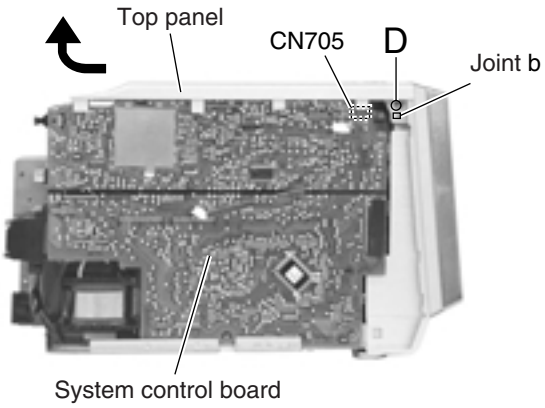


Fig.7

■ Removing the cassette mechanism assembly section (See Fig.8)

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

1. Disconnect each wire from connector CN706, CN715 and CN716 on the system control board on top of the body.
2. Remove the four screws **E** retaining the cassette mechanism assembly section on top of the body.

REFERENCE: Reference: If necessary, remove the spacer marked **h** and the wire from the Cassette mechanism assembly section.

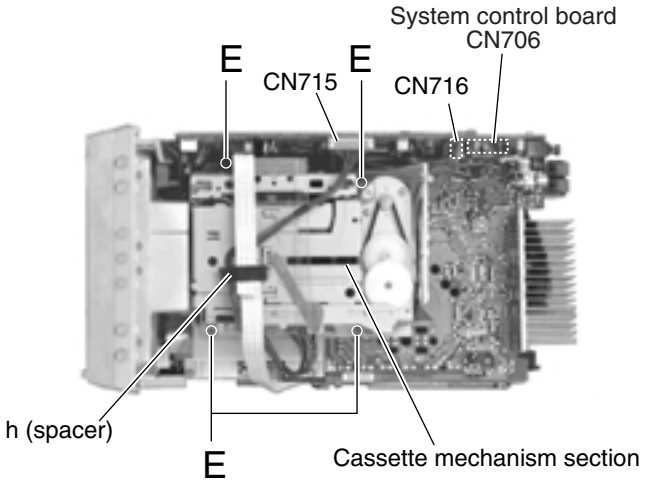


Fig.8

■ Removing the system control board (See Fig.9)

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

1. Disconnect the card wire from connector CN701 and the wire from connector CN706, CN715, CN716 on the system control board.
2. Remove the screw **F** on the left side of the body.
3. Disconnect connector CN709, CN711 and CN712 on the system control board from the body outward.
4. Disconnect the card wire from connector CN704 on the underside of the system control board.

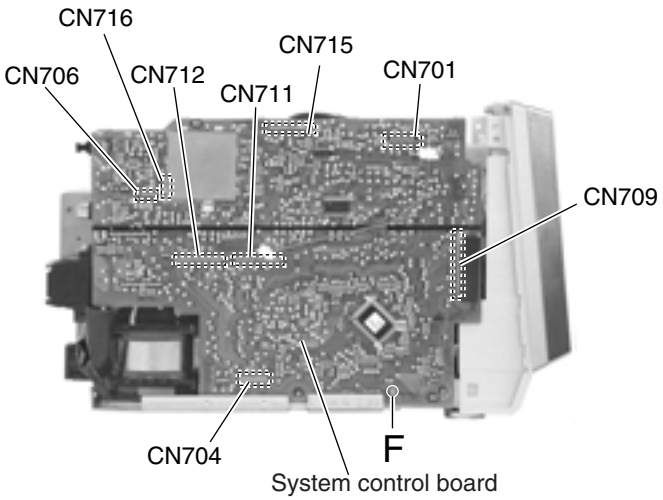


Fig.9

■ Removing the tuner board (See Fig.10)

・ Prior to performing the following procedure, remove the rear cover and the right side panel.

1. Disconnect the card wire from connector CN1 on the tuner board on the right side of the body.
2. Remove the screw **G** and remove the tuner board upward while disengaging the three joints **c**.

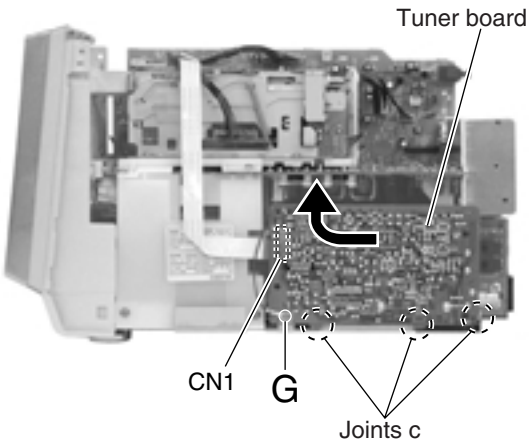


Fig.10

■ Removing the front panel assembly (See Fig.11 and 12)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel and the system control board.

1. Release the two joints **d** on the lower right and left sides of the front panel assembly, then remove the front panel assembly toward the front.

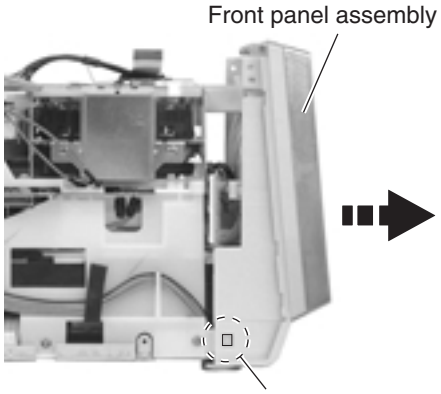


Fig.11

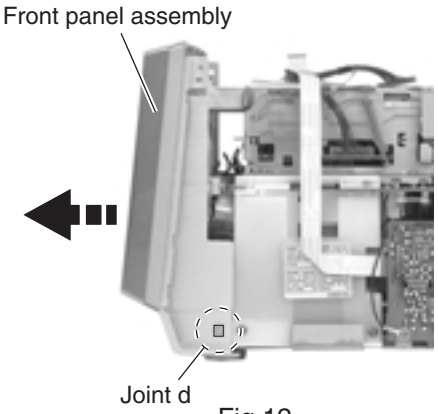


Fig.12

■ Removing the headphone jack board (See Fig.13 and 14)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the system control board and the front panel assembly section.

1. Disconnect the wire from connector CN804 on the main board.

2. Remove the plastic rivet fixing the headphone jack board.

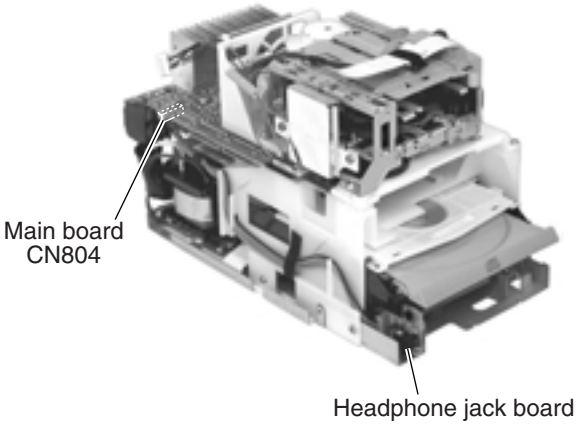


Fig.13

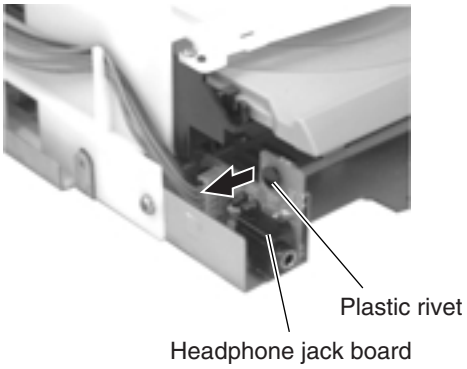


Fig.14

■ Removing the main board / the heat sink (See Fig.15 to 17)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section and and the system control board.

1. Disconnect the wire from connector CN804 on the main board.
2. Remove the five screws **H** attaching the cassette mechanism bracket.
3. Remove the screw **G** attaching the grounding terminal extending from the main board.
4. Disconnect connector CN805 on the main board from the AC jack board while pulling out it. Remove the main board in the direction of the arrow and disconnect the wire from connector CN803 on the reverse side of the main board.
5. Remove the three screws **I** attaching the heat sink on the reverse side of the main board.

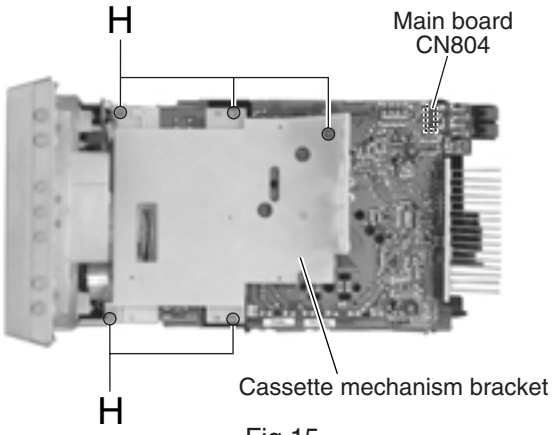


Fig.15

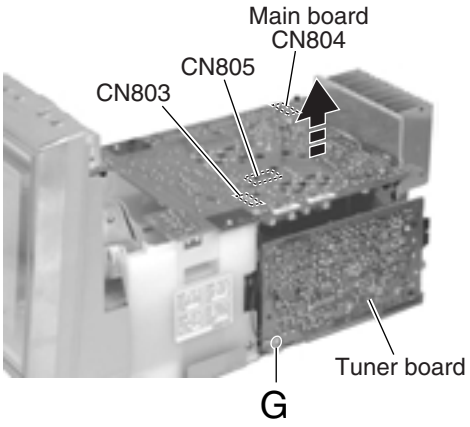


Fig.16

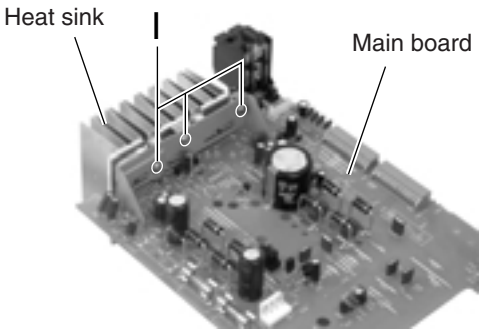


Fig.17

■ Removing the AC jack board (See Fig.18 and 19)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board and the main board / the tuner board.

1. Disconnect the wire from connector CN809 on the AC jack board.

2. Remove the screw **J** and screw **K** attaching the AC jack board.

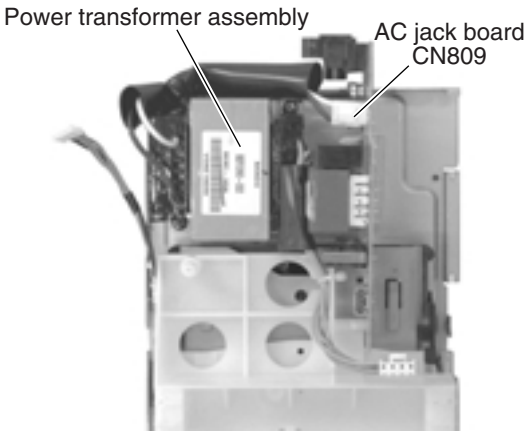


Fig.18

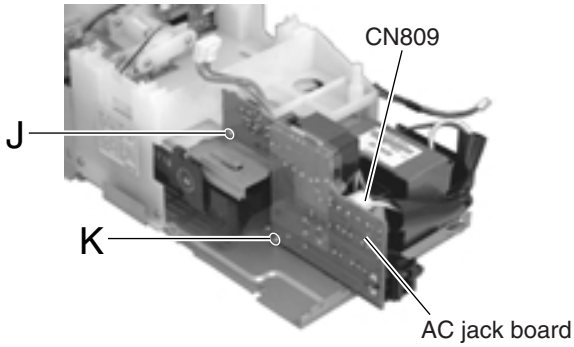


Fig.19

■ Removing the power transformer assembly (See Fig.20)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board and the main board.

1. Disconnect the wire from connector CN809 on the AC jack board.

2. Cut off the band setting the wire on the CD mechanism cover.

3. Remove the four screws **L** attaching the power transformer assembly.

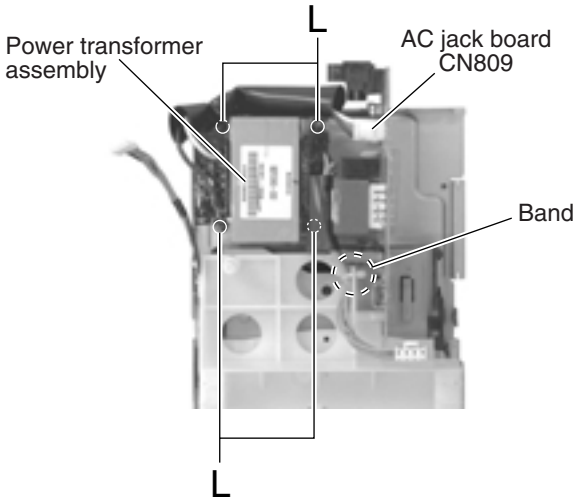


Fig.20

■ Removing the CD mechanism assembly (See Fig.21 to 23)

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the cassette mechanism assembly section, the system control board, the front panel assembly section, the main board / the tuner board and the AC jack board.

1. Cut off the band setting the wire on the CD mechanism cover.

2. Release the wire extending from the headphone jack board from the spacer and the three notches of the CD mechanism cover on the left side of the body.

3. Remove the four screws **M** on the left and right side of the CD mechanism cover. Then remove the CD mechanism cover upward.

4. Remove the three screws **N** attaching the CD mechanism assembly.

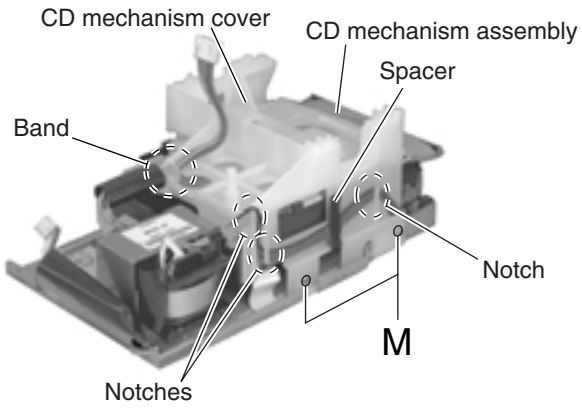


Fig.21

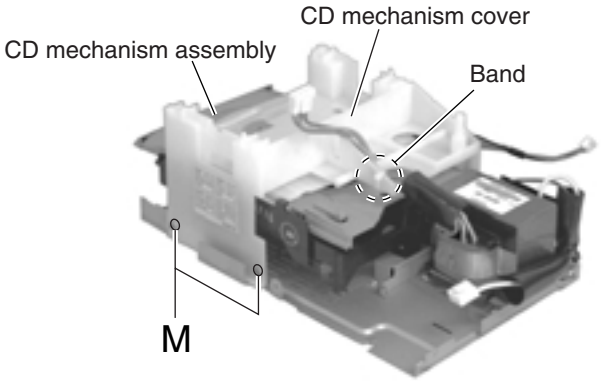


Fig.22

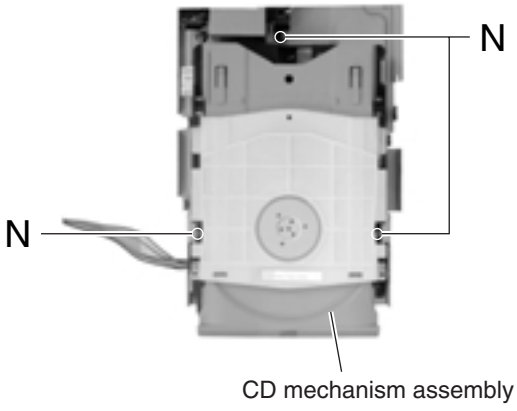


Fig.23

<Front panel assembly section>

- Prior to performing the following procedure, remove the rear cover, the side panels, the top panel, the system control board and the front panel assembly section.

■ Removing the relay board (See Fig. 24)

1. Disconnect the wire from connector CN906, CN907 and the card wire from CN908 on the relay board respectively.
2. Remove the two screws **O**.

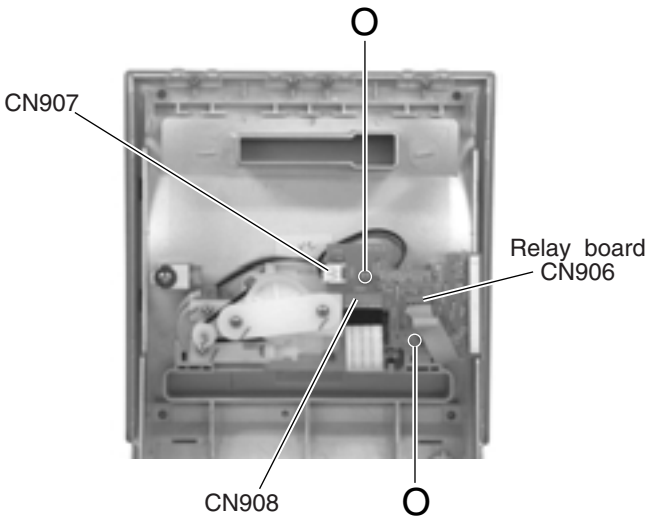


Fig.24

■ Removing the drive motor assembly (See Fig.25)

- Prior to performing the following procedure, remove the relay board.

1. Remove the four screws **P** attaching the drive motor assembly.

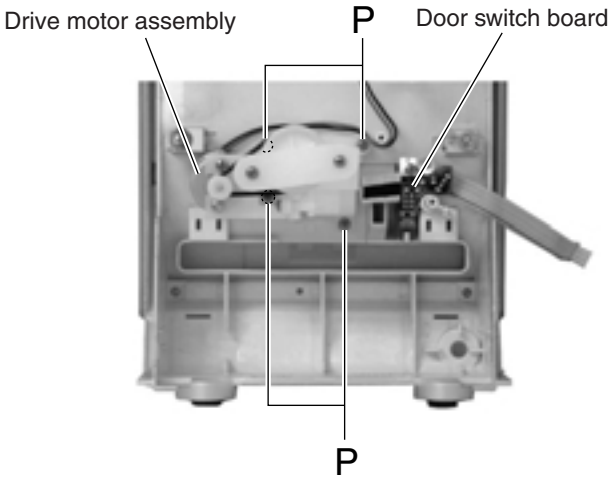


Fig.25

■ Removing the belt and the drive motor (See Fig.26)

REFERENCE: The belt and the drive motor can be removed respectively without removing the drive motor assembly from the front panel section.

1. Remove the two screws **Q** attaching the plate.
2. Remove the belt from the two pulleys.
3. Remove the two screws **R** attaching the drive motor.

REFERENCE: When removing the drive motor only, remove the belt from the drive motor pulleys in advance.

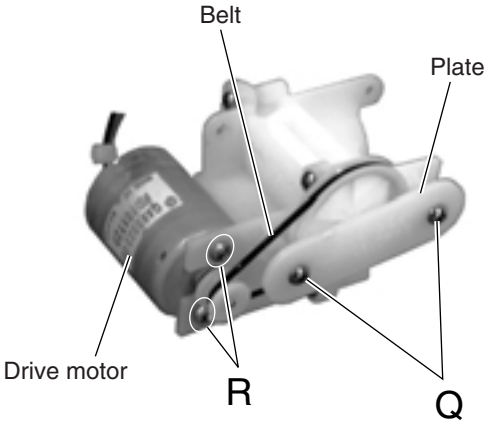


Fig.26

■ Removing the door switch board (See Fig.27 and 28)

- Prior to performing the following procedure, remove the relay board.

1. Loosen the screw **S** attaching the door switch.
2. Remove the door switch board while releasing it from the joint **e**.

CAUTION: When reattaching the door switch board, fit it to the joint **e** and check the operating state of the switch before tightening the screw **S**.

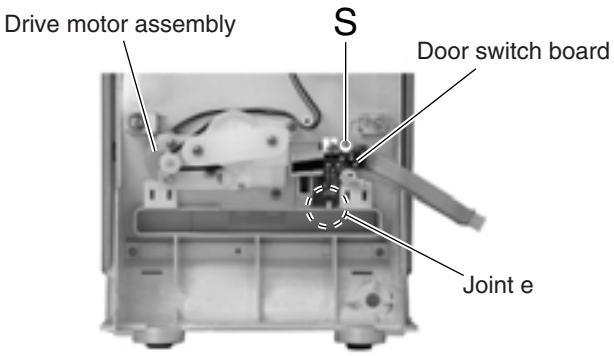


Fig.27

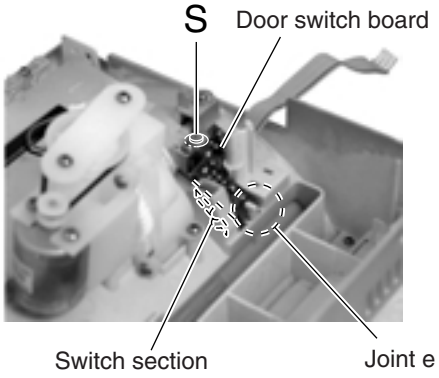


Fig.28

■ Removing the LCD section (See Fig.29 to 31)

- Prior to performing the following procedure, remove the relay board.

1. Loosen the two screws **T** attaching the lock lever.
2. Push the part **f** of the lock lever in the direction of the arrow as shown in Fig.30-1 / 30-2 and disengage the LCD section from the front panel assembly.

CAUTION: Because the LCD may come off, hold it when loosening the screws **T**.

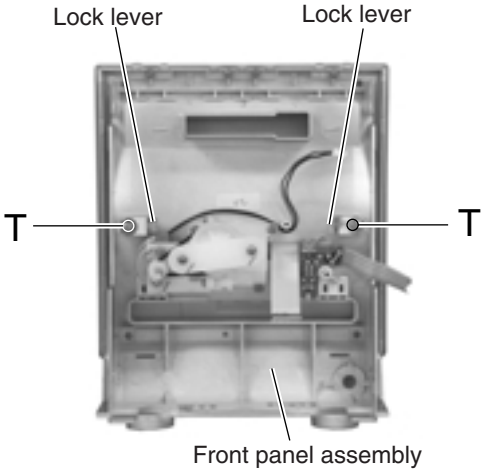


Fig.29

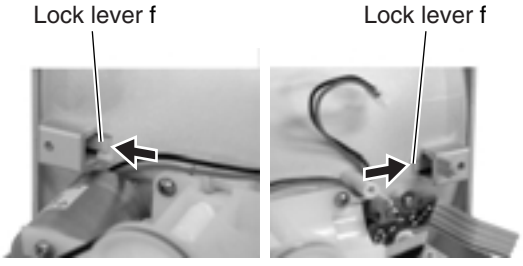


Fig.30-1 Fig.30-2

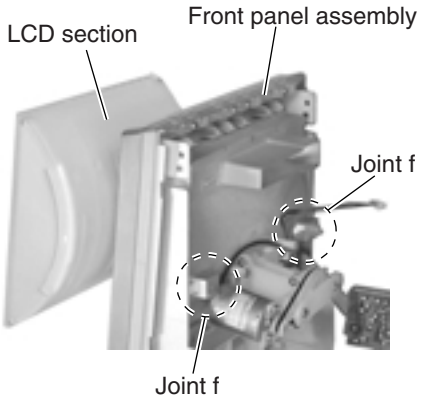


Fig.31

■Removing the LCD board assembly (See Fig.32 to 36)

・ Prior to performing the following procedure, remove the relay board and the LCD section.

1. Remove the four screws **U** attaching the case cover.
2. Remove the four screws **V** attaching the LCD panel on the back of the LCD section.
3. Remove the LCD cover.
4. Release the three joints **g** and remove the LCD board assembly in the direction of the arrow.

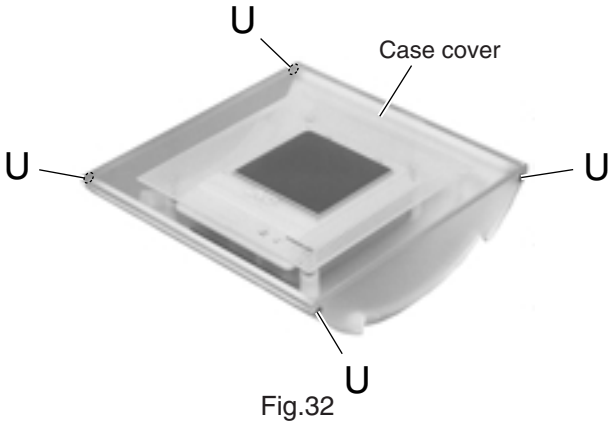


Fig.32

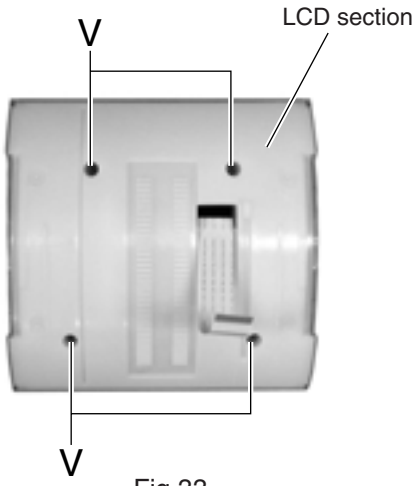


Fig.33

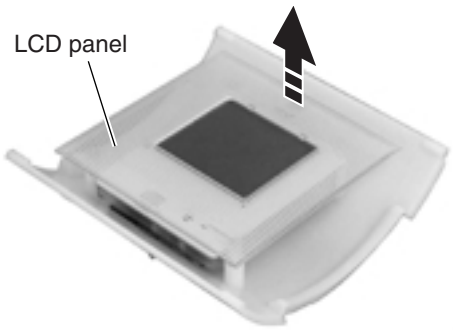


Fig.34

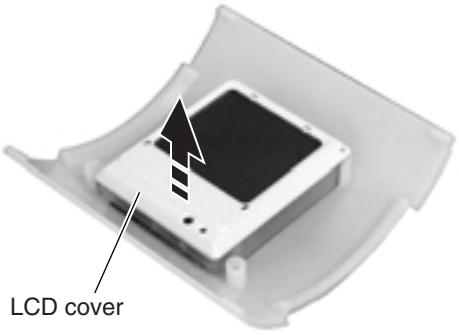


Fig.35

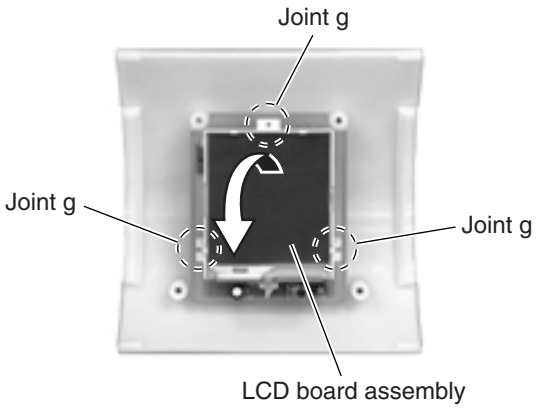


Fig.36

<Top panel section>

・ Prior to performing the following procedure, remove the rear cover, the side panels and the top panel.

■ Removing the operation switch board (See Fig.37)

1. Remove the seven screws **W** attaching the operation switch board on the reverse side of the top panel.

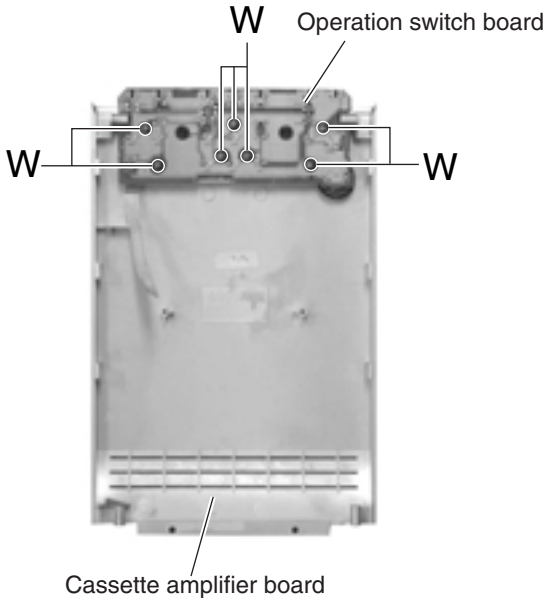


Fig.37

<CD Mechanism Assembly>

■ Removing the CL. Base Assembly and Tray (Refer to Figs. 1 to 5.)

1. Remove the two screws A fastening the CL. base assembly from the top of the CD mechanism assembly.

2. Move the CL. base assembly diagonally upwards as indicated by the arrow to release it from the two hooks a.

3. Turn the idle gear in the arrow-marked direction from the upper side of the CD mechanism assembly. Accordingly, the TRAMECHA assembly moves downwards.

> Note: When drawing out the tray, shift down the TRAMECHA assembly to the position where the tray does not contact the T-T assembly of the TRAMECHA assembly.

4. Draw out the tray frontwards for removing it.

> Note: When reinstalling the tray:
> - Turn the idle gear so that the part b of the tray gear is positioned in the part c shown in Fig. 4. (Eject position)
> - Engage the right and left hooks d and e of the tray with the right and left grooves of the TRAMECHA assembly respectively for retaining the tray.

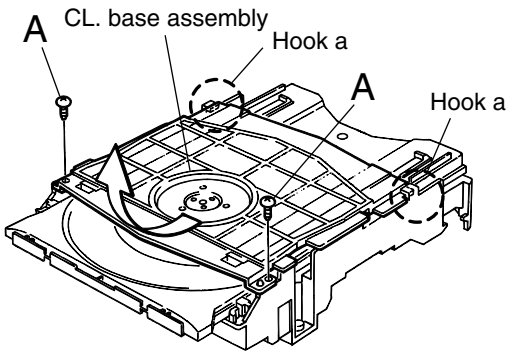


Fig. 1

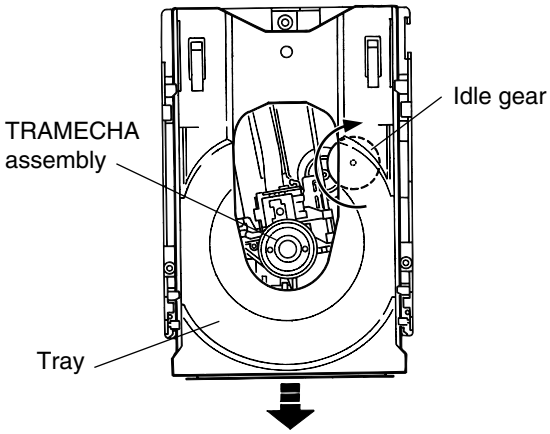


Fig. 2

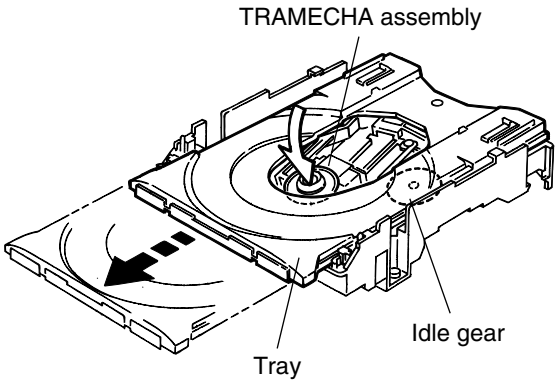


Fig. 3

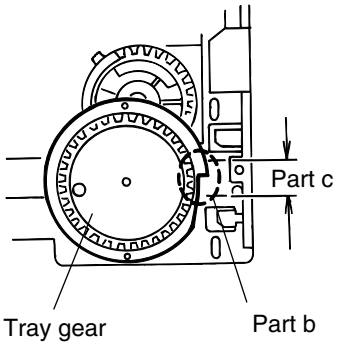


Fig. 4

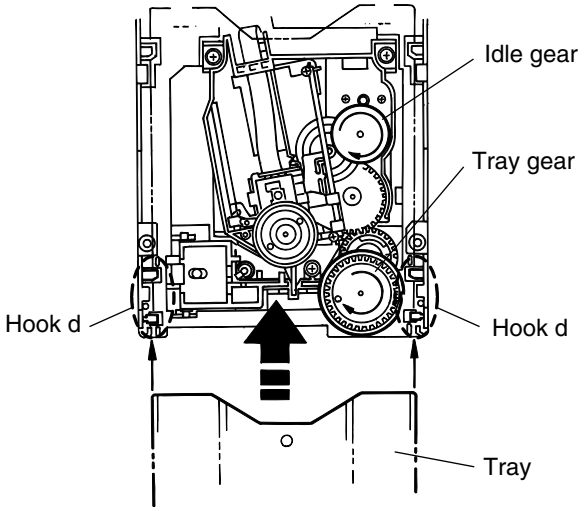


Fig. 5

■ Removing the TRAMECHA Assembly (Refer to Figs. 6 to 9.)

- Remove the CL. base assembly and tray.

Reference: The TRAMECHA assembly can be removed without removal of the mechanism board.

1. If the TRAMECHA assembly is lowered and it is located out of the PLAY position, turn the idle gear in the arrow-marked direction so that the hole in the part f of the tray gear meets the hole on the CL. base assembly. (Set the TRAMECHA assembly at the PLAY position.)

2. Remove the three screws B fastening the TRAMECHA assembly and then remove the TRAMECHA assembly upwards from the front side.

3. At the same time, remove the spring from the groove of the CH. base assembly in the part g of the TRAMECHA assembly.

Note: When reinstalling the TRAMECHA assembly:
- Check to see if the spring is properly engaged with groove of the CH. base assembly in the part g of the TRAMECHA assembly.
- After making sure that the three insulators of the TRAMECHA assembly are properly set on the bosses of the L. base assembly's guide, fasten them with the screws.

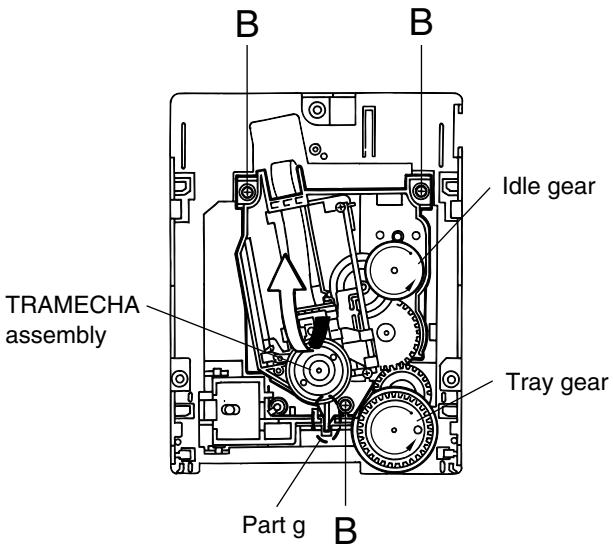


Fig. 6

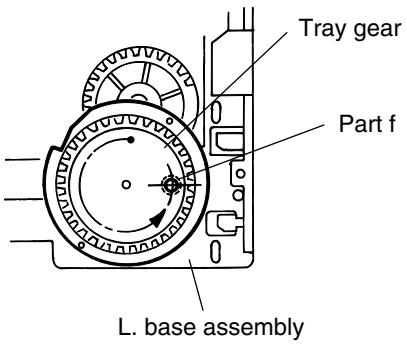


Fig. 7

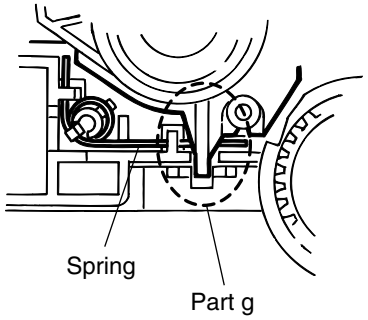


Fig. 8

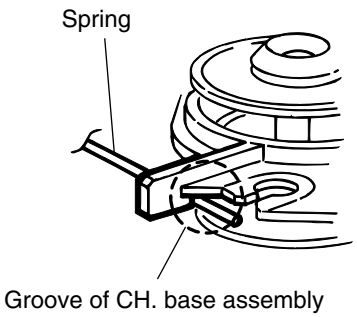


Fig. 9

■ Removing the Mechanism Board (Refer to Fig 10.)

Reference: The mechanism board can be removed without removal of the TRAMECHA assembly.

Note: Before disconnecting the flexible wire coming from the pickup from the connector, be sure to solder its shorting round.
If the flexible wire is connected without soldering, it may cause breakdown of the pickup.

1. Solder the shorting round of the flexible wire connected with the mechanism board from the back of the mechanism assembly.
2. Disconnect the flexible wire from the connector CN601 on the mechanism board.
3. Remove the three screws C fastening the mechanism board.
4. Unsolder the two points of the part h and one point of the part i of the mechanism board. Then, remove the mechanism board upwards.

Note: When reinstalling the mechanism board, connect the flexible wire coming from the pickup to the connector first and then remove the solder from the shorting round of the flexible cable.

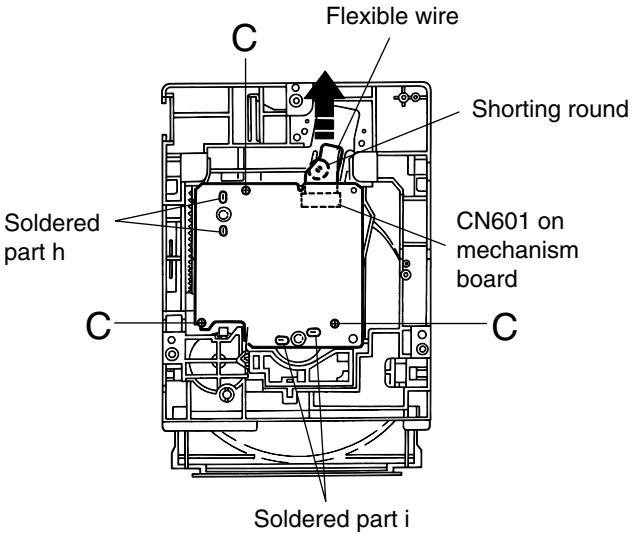


Fig. 10

■ Removing the Pickup (Refer to Figs. 11 to 14.)

- Remove the CL. base assembly and tray.
- Remove the TRAMECHA assembly.

Reference: The pickup can be removed without removal of the mechanism board.

Note: Before disconnecting the flexible wire coming from the pickup from the connector, be sure to solder its shorting round.
If the flexible wire is connected without soldering, it may cause breakdown of the pickup.

1. Solder the shorting round of the flexible wire connected with the mechanism board from the back of the TRAMECHA assembly.

2. Disconnect the flexible wire from the connector CN601 on the mechanism board.

3. Turn the idle gear in the arrow-marked direction from the top of the TRAMECHA assembly so that the pickup assembly is shifted to the reverse side of the T-T assembly.
Move the pickup assembly until the part j of the rack plate in the lower part of the pickup assembly comes out of the CH. base assembly.

4. Remove the two screws D retaining the shaft of the pickup assembly. Next, disengage the hook k from the CH. base assembly and then remove the pickup assembly together with the shaft.

5. Pull the shaft out of the pickup.

6. Remove the two screws E fastening the rack plate from the pickup.

7. Remove the screw F retaining the P.S. spring from the pickup.

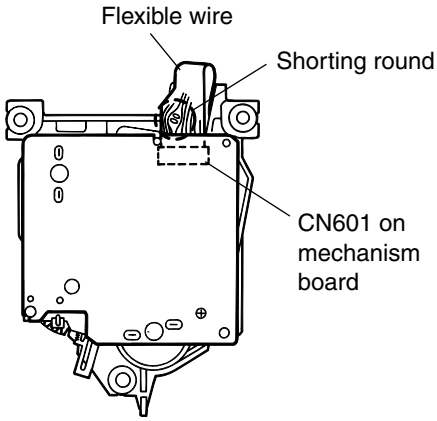


Fig. 11

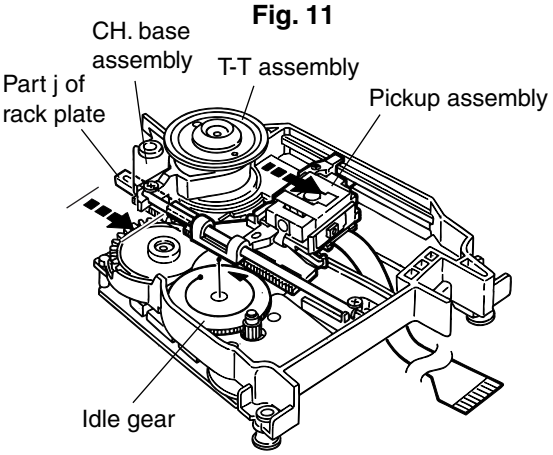


Fig. 12

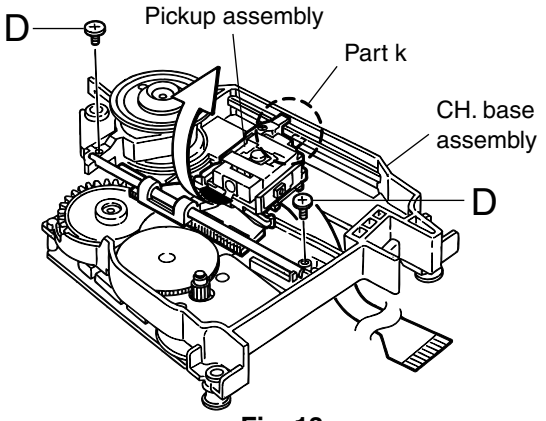


Fig. 13

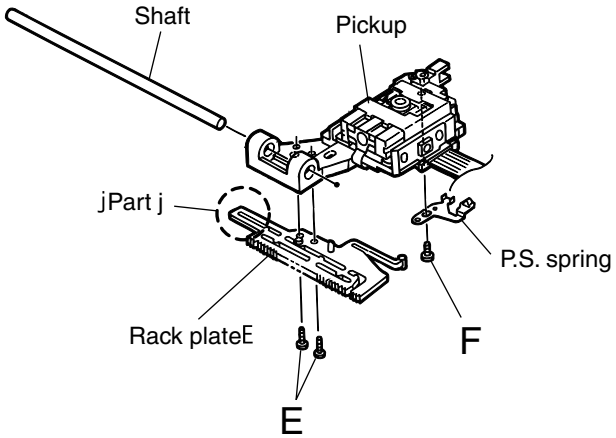


Fig. 14

■ Reinstalling the Pickup Assembly (Refer to Figs. 15 and 16.)

Reference: Refer to the explanation of "Removing the Pickup" on the preceding page.

1. Fit the P.S. spring and rack plate to the pickup.
2. Insert the shaft into the pickup.
3. Engage the hook k of the pickup assembly with the CH. base assembly first, and set the part j of the rack plate in the opening I next. Then, reinstall the pickup assembly while shifting it to the T-T side (inward) so that the part m of the rack plate is positioned as shown in Fig. 16.
4. Move the pickup assembly to the center position and fasten the shaft with the two screws D. (Make sure that the part n of the rack plate is correctly engaged with the middle gear.)
5. After passing the flexible wire coming from the pickup through the opening of the CH. base assembly, connect it to the connector CN601.

Note: When reinstalling the pickup assembly, remove the solder from the shorting round after connecting the flexible wire coming from the pick to the connector CN601.

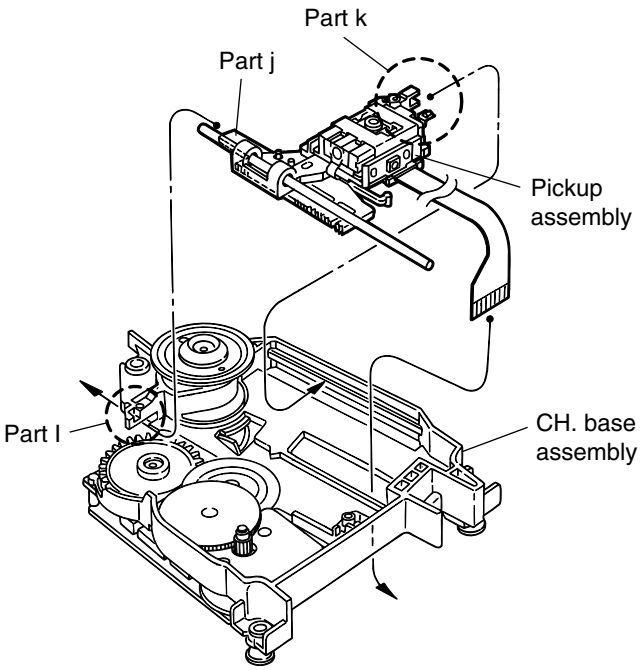


Fig. 15

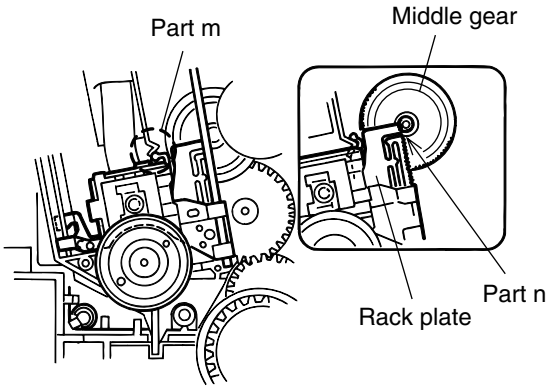


Fig. 16

■ Removing the Feed Motor Assembly (Refer to Fig. 17.)

- Remove the CL. base assembly and tray.
- Remove the mechanism board.

Remove the two screws E fastening the feed motor assembly from the top of the mechanism assembly.

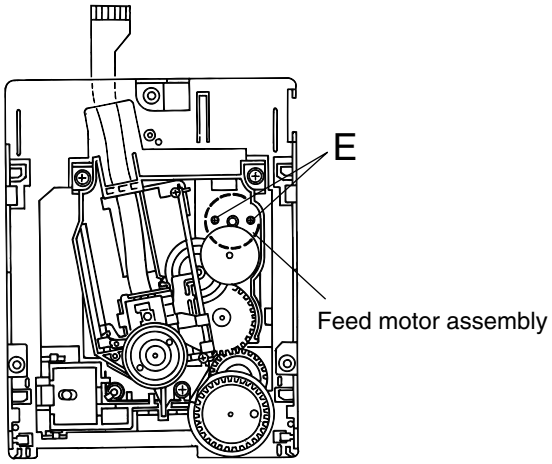


Fig. 17

<Cassette mechanism section>

CAUTION: Prior to performing the following procedures, turn the mode gear in the direction of the arrow to move each section to the eject position.

■Removing the side bracket (L) and (R) / load board (See Fig.1 to 4)

1. Remove the E-washer attaching the load arm on the right side of the body.
2. Turn the load arm in the direction of the arrow to release from the cassette hook at the joint **a**.
3. Remove the spring (1) attaching the trig lever.
4. Move the trig lever in the direction of the arrow and release it from the two holes **b**.
5. Remove the screw **A** attaching the load board on the right side of the body and unsolder the wire extending from the sub motor.

REFERENCE: The side bracket unit (R) can be removed even if the load board is attached. In such case, make sure to unsolder the wire extending from the sub motor.

6. Remove the spring (2) and the holder collar on the right side of the body.
7. Remove the two screws **B** attaching the side bracket unit (R) in the direction of the arrow.
8. Remove the four screws **C** attaching the side bracket (L) in the direction of the arrow.

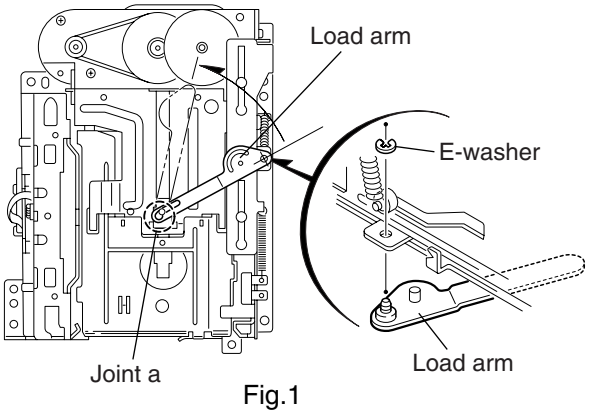


Fig.1

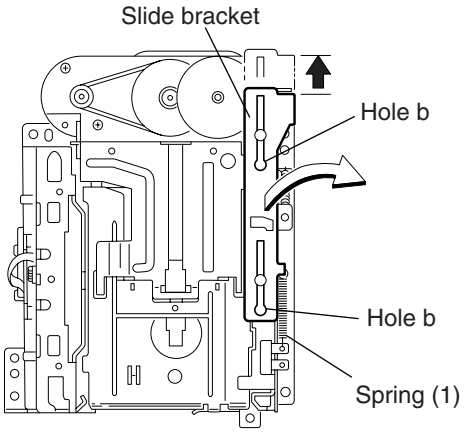


Fig.2

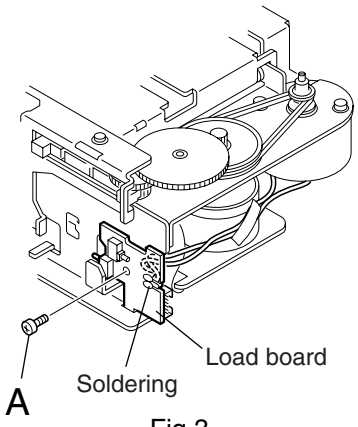


Fig.3

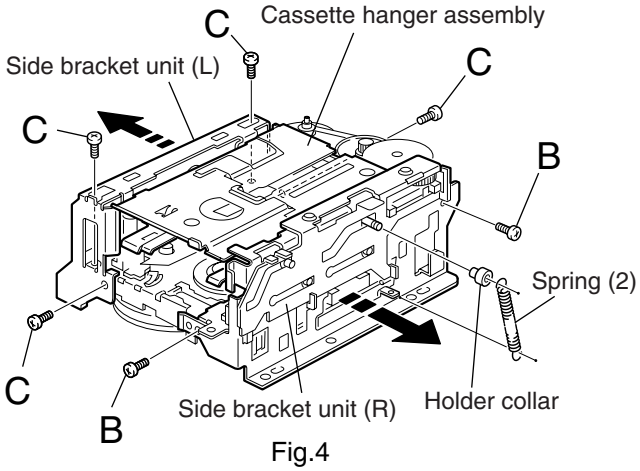


Fig.4

■ Removing the cassette hanger assembly / cassette holder (See Fig.5)

・ Prior to performing the following procedure, remove the side bracket (L) and (R).

1. Remove the slit washer attaching the cassette hanger assembly and pull out the pin.

2. Move the cassette hanger assembly in the direction of the arrow to release the boss of the joint **c** on the left rear side and detach the cassette hanger assembly upward.

REFERENCE: The cassette hanger assembly is detached with the cassette holder.

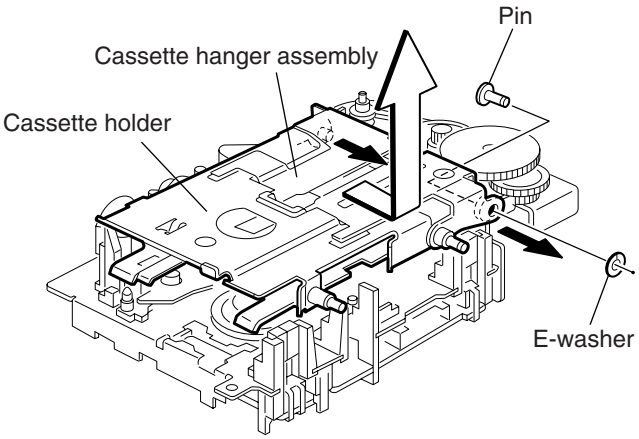


Fig.5

■ Removing the pinch roller (F) and (R) (See Fig.6 to 8)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Release the tab **d** in the direction of the arrow and pull out the pinch roller upward.

REFERENCE: The above method is for removing the pinch roller (F) and (R).

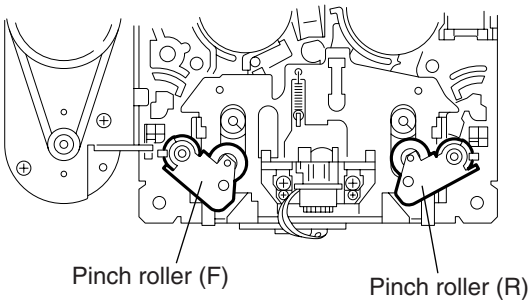


Fig.6

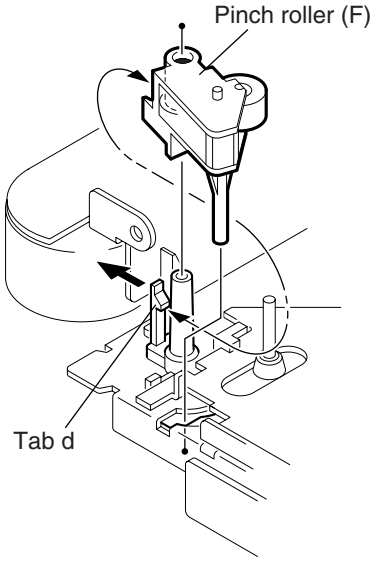


Fig.7

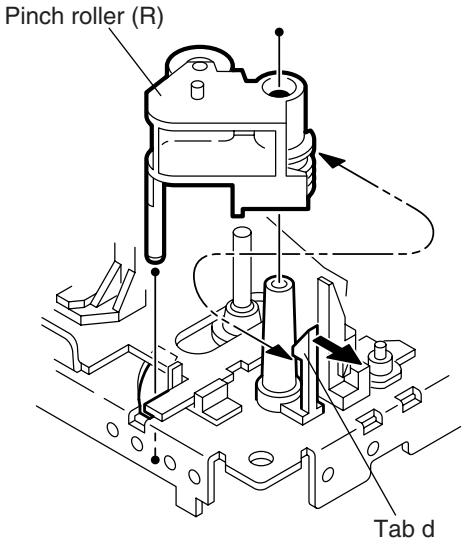


Fig.8

■Removing the head assembly / head board (See Fig.9 and 10)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Remove the spring on the lower side of the head assembly.

2. Remove the two screws **D** and remove the head assembly upward.

3. Remove the screw **E** attaching the head board. Unsolder the flexible wire extending from the head assembly if necessary.

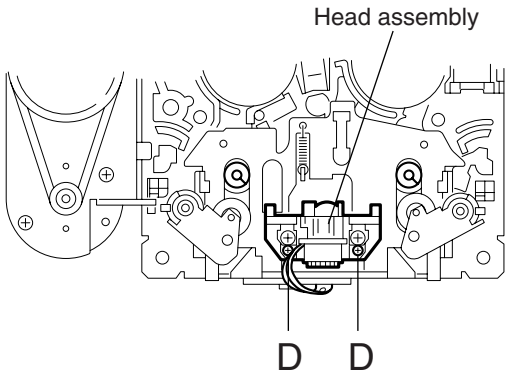


Fig.9

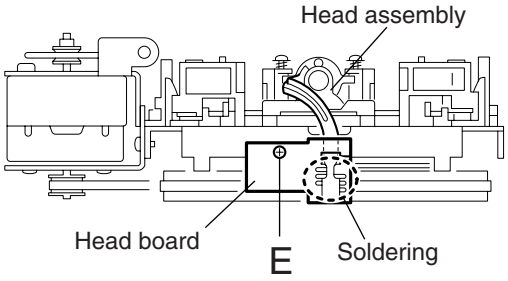


Fig.10

■Removing the flywheel assembly (F) and (R) (See Fig.11 and 12)

・ Prior to performing the following procedure, remove the side bracket (L), (R), cassette hanger assembly / cassette holder.

1. Remove the belt and sub belt on the bottom of the body.

2. Remove the polywasher from the flywheel (F) and (R) on top of the body.

3. Pull out the flywheel (F) and (R).

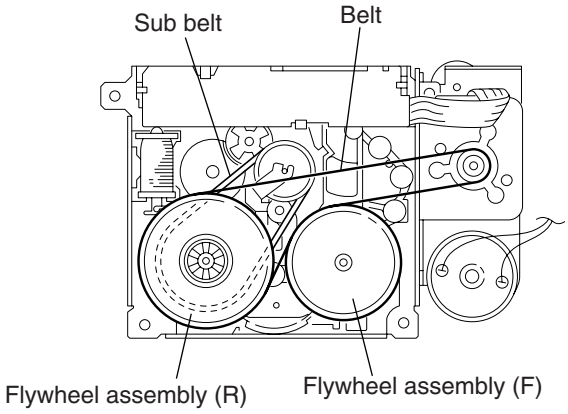


Fig.11

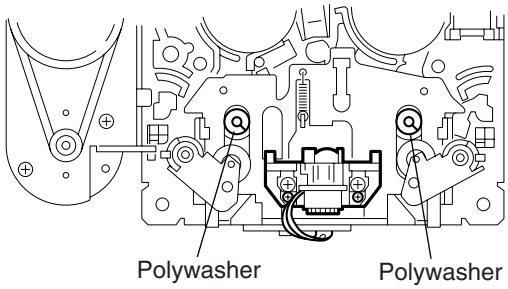


Fig.12

Adjustment Method

1. Jigs and test instruments

Test disc (CTS-1000)
Test tape (VT712)
Test tape (VT703)
Test tape (AC225)

2. Adjustment and check items

1) Indications in the modes that all LCD's are on

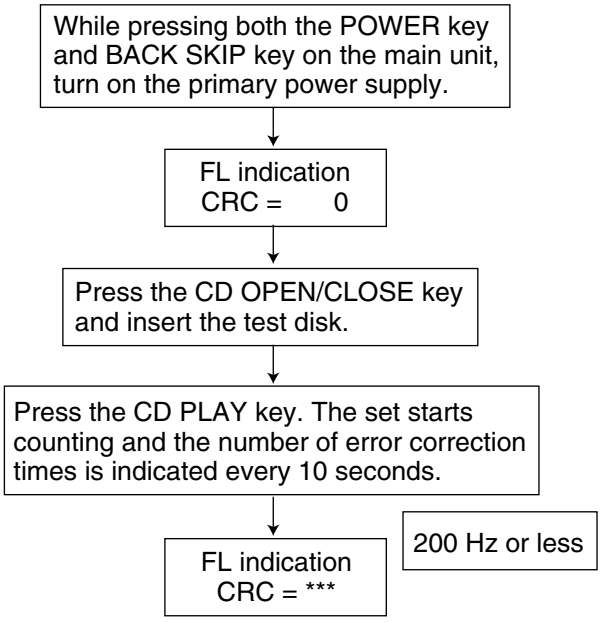
2) CD section

(1) Indication of the C1 error
(2) Cancel of the C1 error indication

3. Adjustment and check method

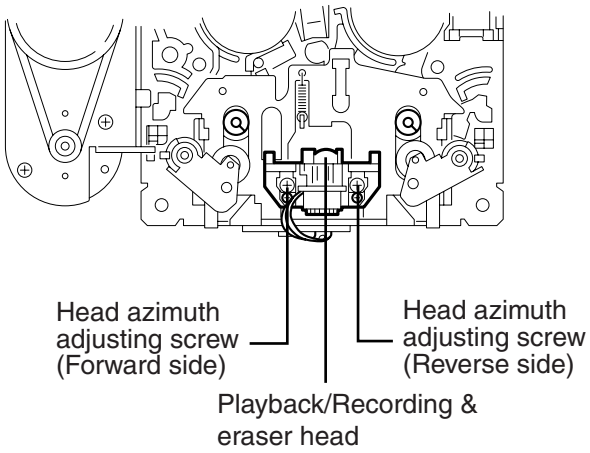
1) CD section

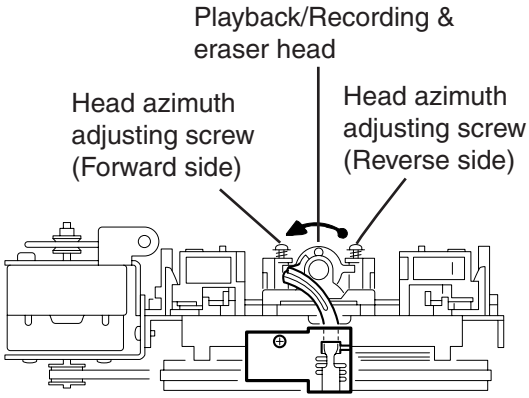
(1) Indication of the C1 error



(2) Cancel of the C1 error indication
To cancel the C1 error indication, cut off the power supply.

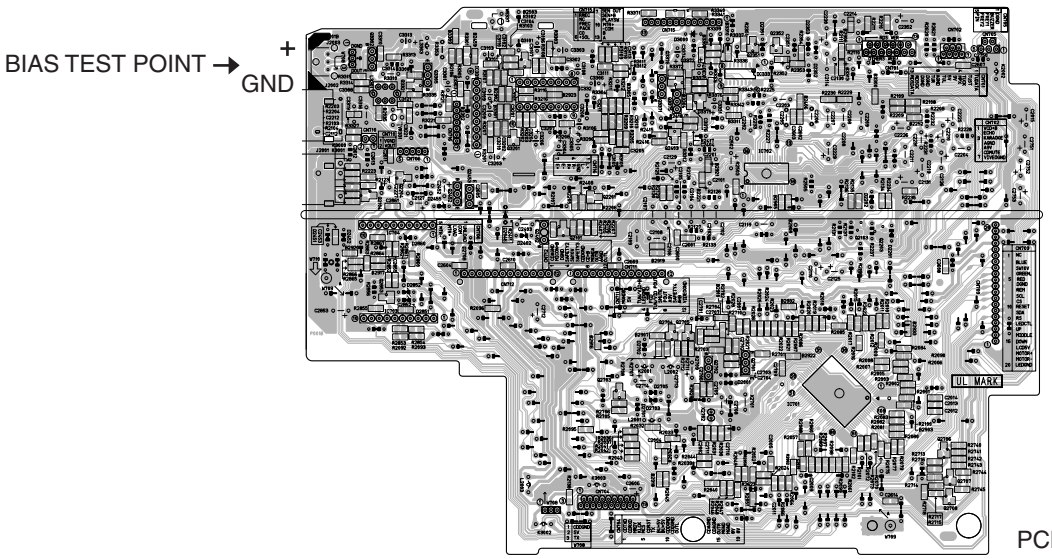
■ Cassette section





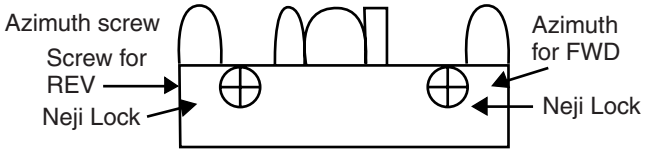
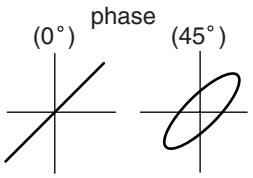
Removing the Cassette Mechanism Assembly

1. Remove the rear cover.
2. Remove the side panels (right and left).
3. Remove the cassette mechanism assembly.
4. Remove the four screws S fastening the cassette mechanism assembly from the back of the cassette mechanism.
5. Press the EJECT button on the front side of the cassette mechanism assembly to open the cassette door, and then remove the cassette mechanism assembly.

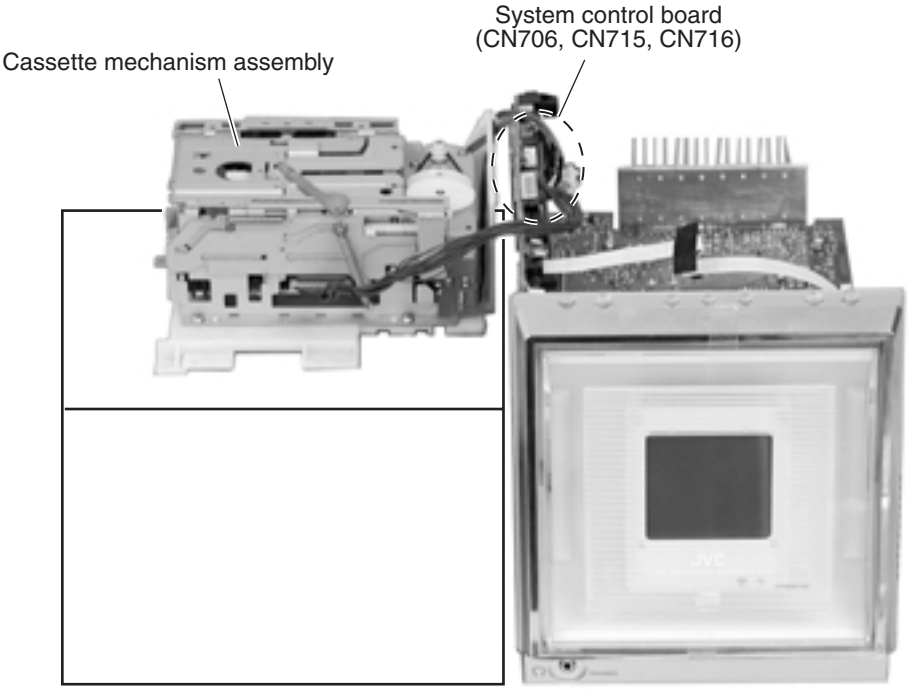


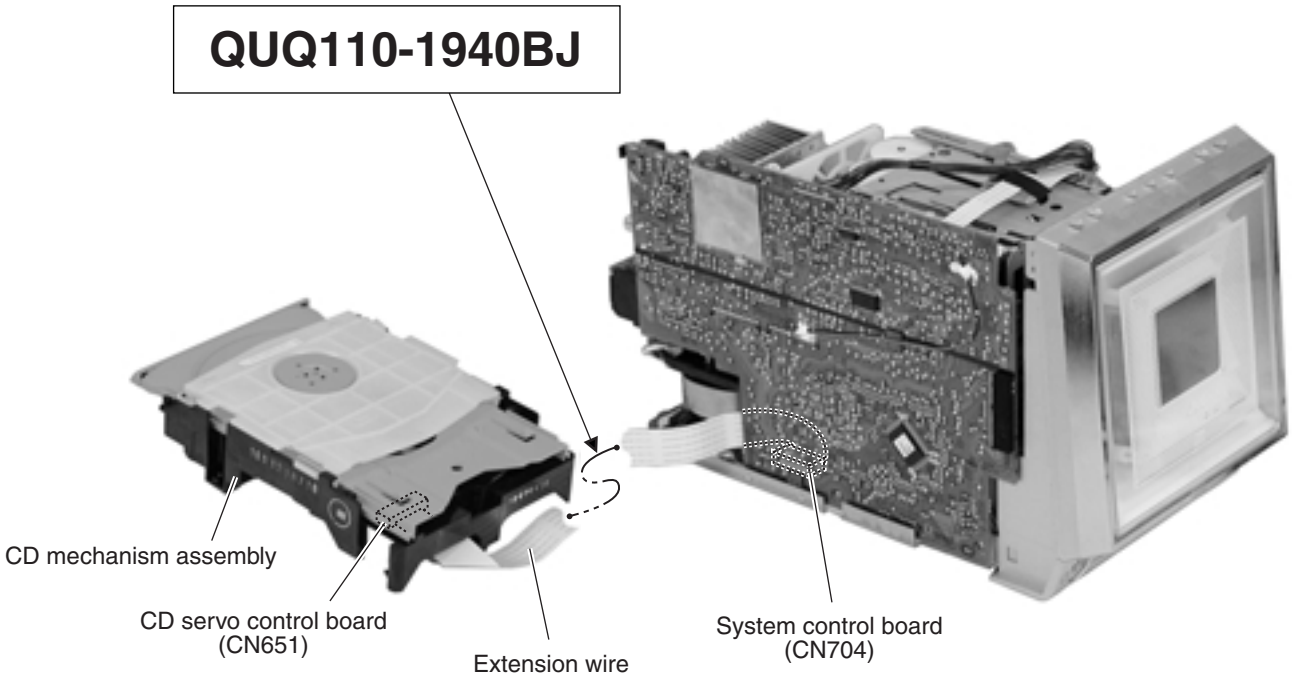
PCB – FMB

■ Check and adjustment of the Head amplifier section

Item	Check/Adjustment Method	Adjusting Point	Standard Value
1. Head azimuth adjustment	1) Play back the end part of the test tape VT703 (10 kHz). 2) Adjust the head azimuth screws so that the output becomes maximum in both the normal and reverse directions. After adjustment, lock the screws with screw bond without fail. Measuring output terminal: Speaker terminal, 4Ωload resistance Difference between L-ch and R-ch: Within 3 dB Difference between FWD and REV directions: Within 4 dB Adjust max level in FWD and REV. After adjusting, should be Applied bond (THREEBOND 1401 A/C) to screw.  	Head azimuth screw	Maximum output 
2. Tape speed adjustment (Reference value) Speed difference between the normal and reverse directions Wow and flutter	1) Play back the end part of the test tape VT712 (3 kHz). 2) Adjust VR37 so that the frequency counter reads 3000 ±15 Hz in playback in the normal direction. Measuring output terminal: Speaker terminal Make sure that speed difference between the normal and reverse directions is 60 Hz or less by reading of the frequency counter. (With the beginning part of the test tape) Play back the end part of the test tape VT712 (3 kHz). Make sure that the wow and flutter meter reads 0.25 % (WRMS) or less.	VR37 — 	3000 ±15Hz 60 Hz or less 0.25 % (WRMS) or less
3. Recording / playback frequency characteristic adjustment (Reference value) Recording bias frequency (Reference value) Erasing current	1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) Cancel the pause mode and start recording. Repeat to input the 1 kHz and 10 kHz reference signals alternately from the CD test disk to record the signals on the blank tape. 3) While playing back the repeatedly input 1 kHz and 10 kHz reference signals, adjust VR31 so that output level of 10 kHz signals is +2 dB ±1 dB of 1 kHz. 1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) Make sure that the bias frequency at the bias test point (Refer on 1-26 board drowing) on the head amplifier board is 70 ±9 kHz. 1) Set a blank cassette tape (Type I: AC225) and enter the set into the recording pause mode. 2) After connecting a 1Ω resistor to the erasing head in series, cancel the pause mode and start recording. Connect the electronic voltmeter to both the terminals and measure the erasing current.	VR31 — — 	 -1dB ±1dB 70 ±9kHz Erasing current: 60 mA (Type I tape)

■ Extension code connecting method





Flow of functional operation until TOC read (CD)

Power ON → Power Key → Slider turns REST SW ON.

Check Point

Check to see if the voltage at the pin 72 of IC701 or pin 5 of CN602 becomes 0 V for an instant. (The moment the switch is turned on, the voltage becomes 0 V.)

↓

Automatic tuning of TE offset

↓

Laser ON → Make sure of the H level at the pin 40 of IC603.

↓

Detection of disc

↓

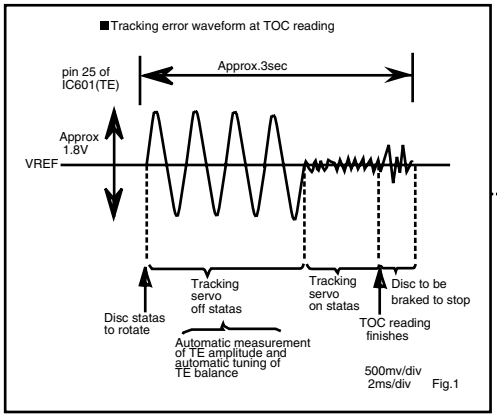
Automatic tuning of Foucus offset

↓

Automatic measurement of Focus A-curve amplitude → Confirm that the Focus error S-curve siganl at the pin28 of IC603 is approx.2Vp-p

↓

Disc is rotated → Confirm that the siganl from pin24 IC603 (R645) is 0V as a accelerated pulse during approx.400ms.



↓

Focus servo ON (Tracking servo ON)

↓

Automatic measurement of Tracking error amplitude → Make sure that the TE signal (1.8 Vp-p approx.) indicating the tracking servo off status is output from the pin 25 (one side of R609) of IC601.

↓

Automatic tuning of Tracking error balance

↓

Automatic tuning of Focus error balance

↓

Automatic tuning of Focus error gain

↓

Automatic tuning of Tracking error gain

↓

TOC reading → Confirm the eys-pattern at the lead of TP602

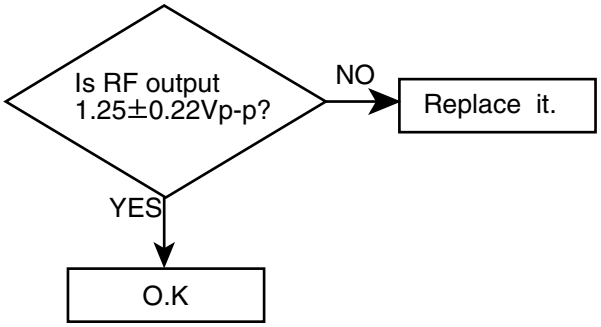
↓

Play a disc

Maintenance of laser pickup

(1) Cleaning the pick up lens
Befor you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

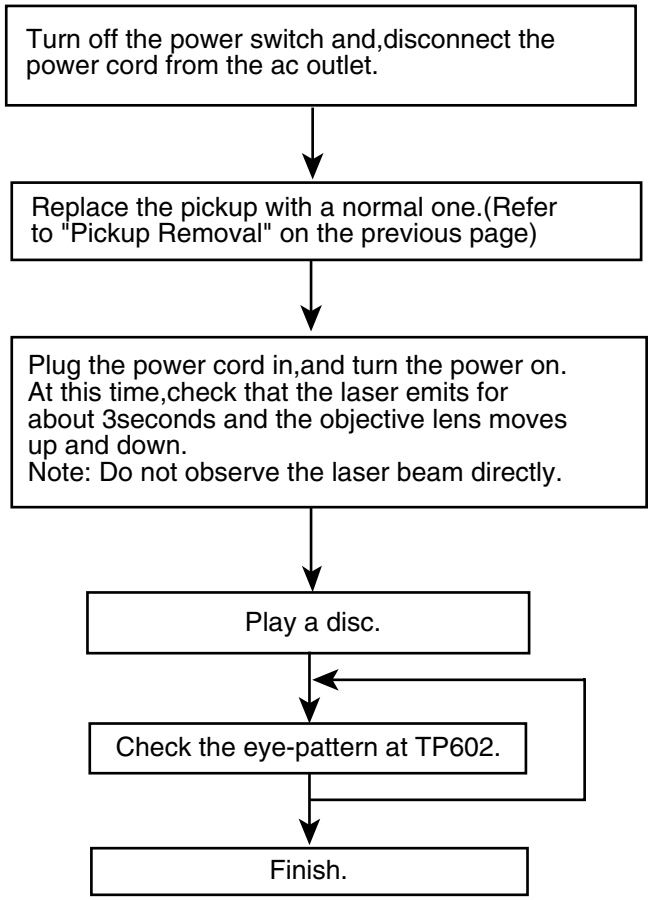
(2) Life of the laser diode (Fig.1)
When the life of the laser diode has expired, the following symptoms wil appear.
(1) The level of RF output (EFM output:amplitude of eye pattern) will below.



(Fig.1)

(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

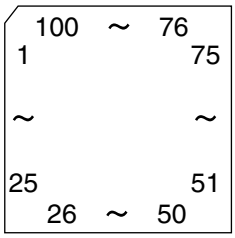
Replacement of laser pickup



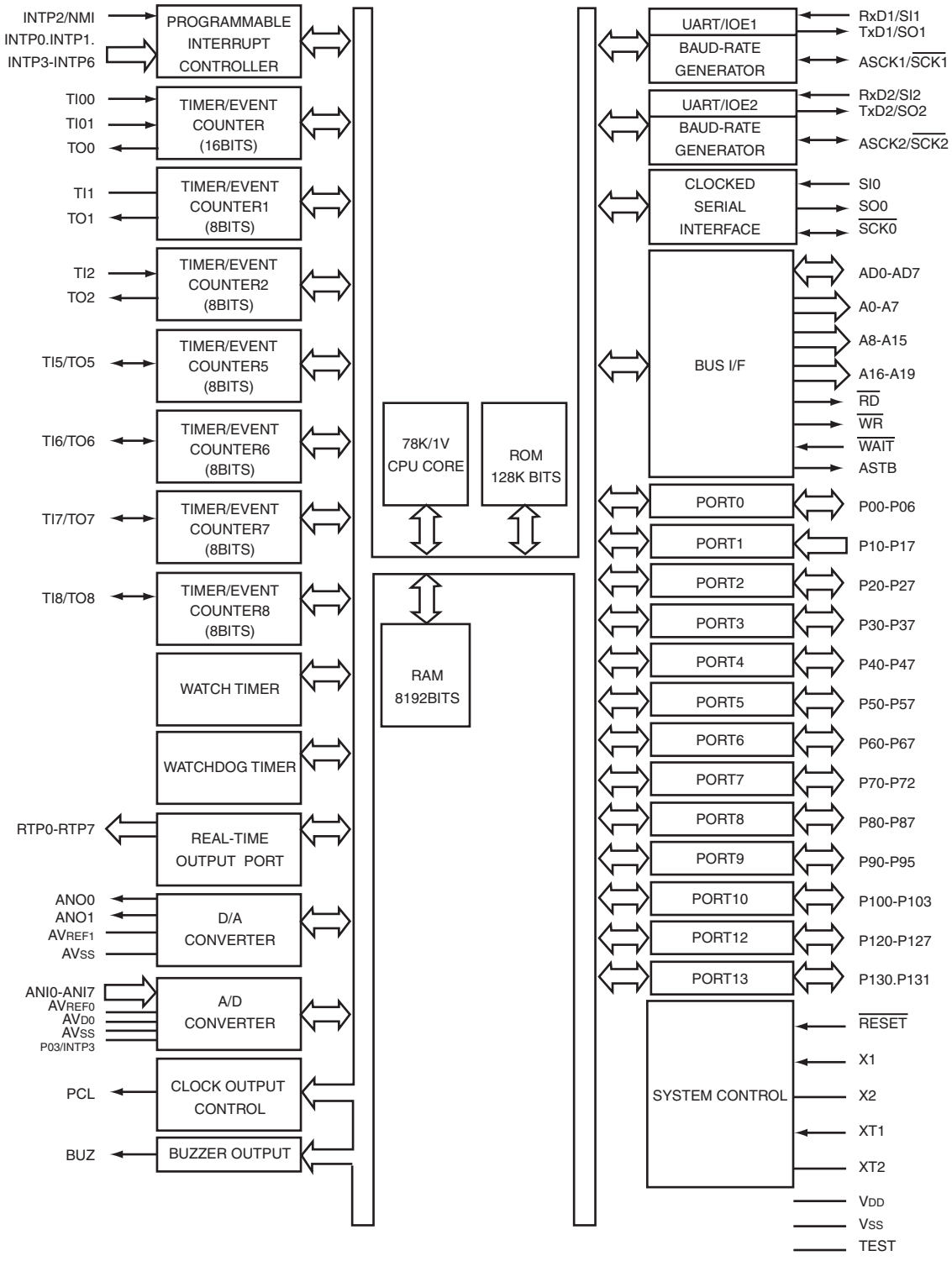
Description of major ICs

■ UPD784216AGF (IC701) : System micon

1. Pin layout



2. Block diagram



3. Pin function (1/2)

Pin No.	Symbol	I/O	Description
1	FAUX2	-	Not connected
2	NC	-	Not connected
3	RDSDATA	-	Not connected
4	MPX	I	Stereo detection
5	TUST	I	Stereo indicator detection
6	NC	O	Not connected
7	FTUNER	O	Tuner switch output
8	FCD	O	CD switch output
9	VDD	-	Connected with VDD
10	NC	-	Not connected
11	PBMUTE	O	PB mute output
12	NC	-	Not connected
13	PIN	I	Power key input
14	LEDCTL	O	LED control output
15	BUZER	O	Buzzer output
16	MDPOUT	O	MD PB output
17	MDRESET	O	MD reset output
18	SMUTE	O	System mute output
19	NC	-	Not connected
20	NC	-	Not connected
21	POUT	O	Power-on control output
22	VPP	I	GND
23	UP	I	Door position detection - UP
24	RMT0	O	Door open/shut motor control output
25	RMT1	O	Door open/shut motor control output
26	MIDDLE	I	Door position detection - MIDDLE
27	DOWN	I	Door position detection - DOWN
28	RMSPEED	O	Door open/shut motor speed control output
29	VOLCK	O	Volume control clock
30	VOLCE	O	Volume control chip enable
31	VOLDA	O	Volume control data
32	AHB	O	Active hyper bus control
33	BUB	I	Backup detection
34	BTCL	O	Battery control
35	NC	O	Not connected
36	XKILL	I/O	Power-off clock oscillator control
37	VDD	I	Power supply
38	X1	I	Master clock
39	X2	O	Master clock
40	VSS	I	GND
41	XT2	O	Clock for timer
42	XT1	I	Clock for timer
43	RESET	I	Power-on reset
44	REM	I	Remote control sensor
45	RDSCK	-	Not connected
46	NC	-	Not connected
47	PHOTO	I	Reel pulse detection
48	SAFTEY4	I	Current detection
49	NC	-	Not connected
50	NC	-	Not connected

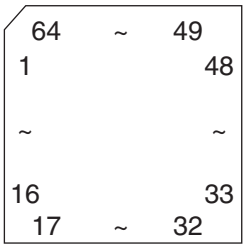
3. Pin function (2/2)

UPD784216AGF(2/2)

Pin No.	Symbol	I/O	Description
51	AVREF	I	Reference power supply +5 V
52	AVREF0	I	Reference power supply +5 V
53	SEFTY2	I	Current detection
54	SEFTY3	I	Current detection
55	LDCK	I/O	
56	FKEY1	I	Function switch key input
57	VERSION	I	Destination switch input
58	FKEY2	I	Function switch key input
59	KEY1	I	Cassette key input
60	SEFTY1	I	Current detection
61	VSS	I	GND
62	RCDL	O	LED color display control
63	BCDL	O	LED color display control
64	AVREF1	I	Reference power supply +5 V
65	RXD	I	Digital input
66	TXD	O	Digital output
67	NC	-	Not connected
68	CDRXD	I	CD digital input
69	CDTXD	O	CD digital output
70	CDRST	O	CD reset
71	GCDL	O	LED color display control
72	NC	-	Not connected
73	TUDATA(1)	I	Tuner data
74	TUDATA	O	Tuner data
75	TUCK	O	Tuner clock
76	NC	-	Not connected
77	NC	-	Not connected
78	NC	-	Not connected
79	NC	-	Not connected
80	NC	-	Not connected
81	NC	-	Not connected
82	NC	-	Not connected
83	NC	-	Not connected
84	NC	-	Not connected
85	NC	-	Not connected
86	NC	-	Not connected
87	NC	-	Not connected
88	SCL	O	LCD clock
89	CS	O	LCD power supply
90	RESET	O	LCD reset
91	SDA	I/O	LCD serial data
92	NC	-	Not connected
93	RS	I	LCD start
94	NC	-	Not connected
95	NC	-	Not connected
96	SDATA	I/O	Cassette control serial data
97	SCK	I/O	Cassette control serial clock
98	STTA	I/O	Cassette control status signal
99	PLAY	O	Cassette PB switch detection
100	VSS	I	GND

■ UPD780024AGKB21 (IC251) : Unit micon

1. Pin layout



2. Pin function (1/2)

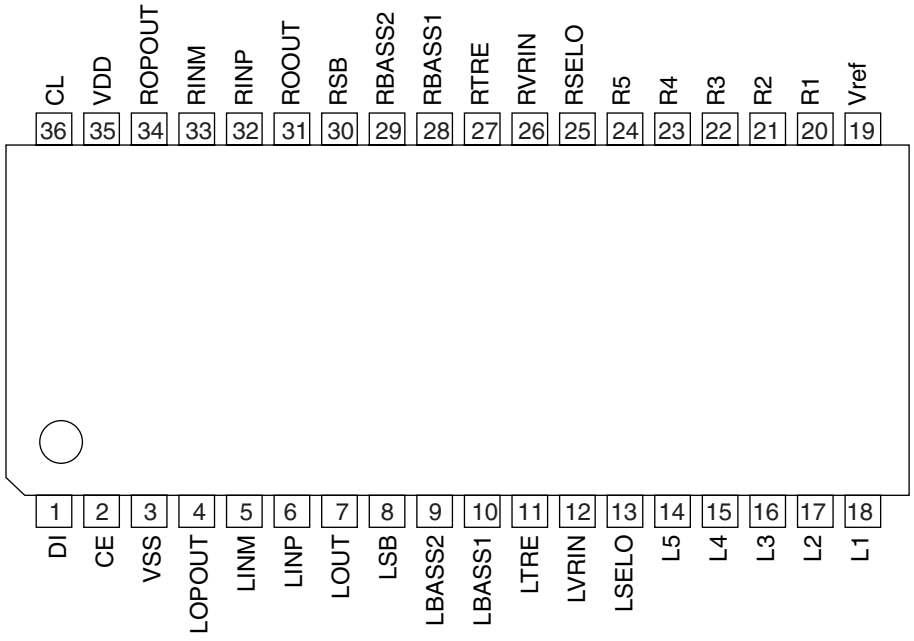
Pin No.	Symbol	I/O	Description
1	P50/A8	-	Connected to GND
2	P59/A9	-	Not used
3	MCS	-	Pull-up +B
4	MRDY	-	Not used
5	CDINDEX	-	Not used
6	CDEMP	I	CD emphasis detection
7	CDTNO	I	CD track No. detection
8	CDCOPY	I	CD copy detection
9	VSS0	-	GND
10	VDD0	-	Power supply
11	P30	-	Not used
12	P31	-	Not used
13	P32	-	Not used
14	MUTE	O	Mute output
15	SUBQ	I	Sub-code Q data input from IC651
16	P35/SO31	-	Not used
17	SQCK	O	Sub-code Q register clock output to IC651
18	KCMND	O	Kick command data
19	MSTAT	O	CD control status output to IC801
20	MCLK	I	CD control command clock input from IC801
21	RXDO	I	Digital data input
22	TXDO	O	Digital data output
23	P25/SCK0	-	Connected to GND
24	VDD1	-	Power supply
25	AVSS	-	GND
26	KEY1	I	Key input 1
27	KEY2	I	Key input 2
28	PCHK	I	Parity check
29	P14/AN14	-	Connected to GND
30	P13/AN13	-	Connected to GND
31	/OPEN	I	Open switch input
32	/REST	I	Rest switch input

2. Pin function (2/2)

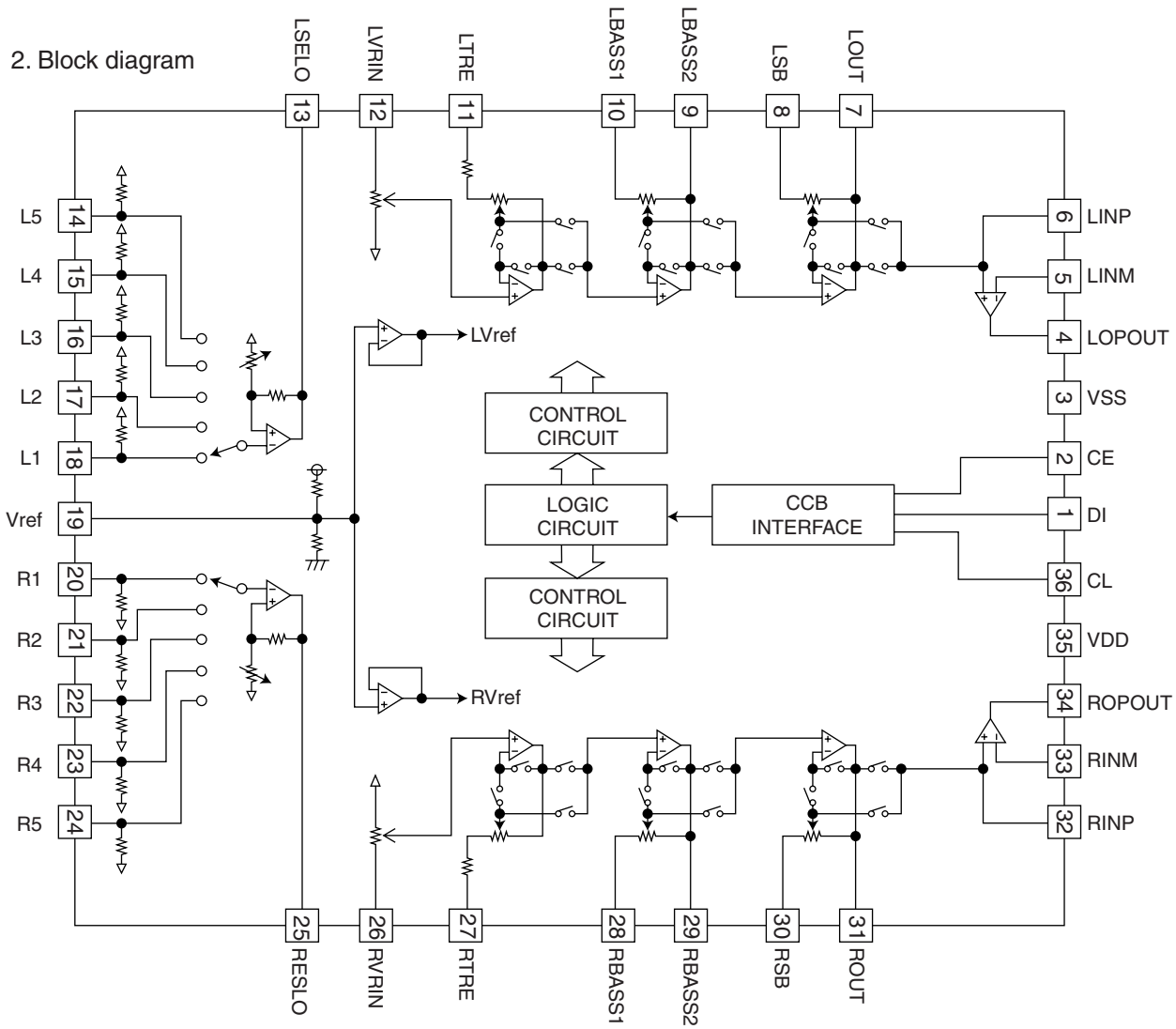
Pin No.	Symbol	I/O	Function
33	P10/AN10	-	Connected to GND
34	AVREF	-	Analog circuit reference voltage. Connected with analog circuit power supply
35	AVDD	-	Analog circuit power supply
36	/RESET	I	CD control reset input from IC801
37	XT2	-	Not used
38	XT1	-	Connected with power supply
39	IC	O	Flash memory control
40	X2	-	Connected with external crystal oscillator
41	X1	-	Connected with external crystal oscillator
42	VSS1	-	GND
43	FLAG	I	Flag signal input from IC651
44	BLKCK	I	Sub-code block clock signal input from IC651
45	/RFDET	I	RF signal amplitude detection input
46	EQx2	O	×2 equalizer switch output
47	EQx4	O	×4 equalizer switch output
48	VCOx4	-	Not used
49	OPEN	I	Open door detection
50	/CLOSE	I	Closed door detection
51	IREFx4	O	×4 DSP current switch output
52	P75/BUZ	-	Not used
53	/RESET	O	Reset signal output to IC651 (L: Reset)
54	STAT	I	Status signal input from IC651
55	/DMUTE	O	Muting output to IC651
56	/P.ON	O	Power on/off switch signal output to IC291
57	MLD	O	Microcomputer command load signal output to IC651
58	MDATA	O	Microcomputer command data output to IC651
59	MCLK	O	Microcomputer command clock signal output to IC651
60	CLKSW	-	Not used
61	JIG	-	Not used
62	JIG	-	Not used
63	JIG	-	Not used
64	JIG	-	Connected to GND

■ LC75345M-X (IC702) : E.volume

1. Pin layout



2. Block diagram

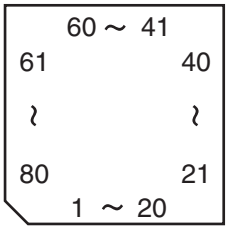


3. Pin function

Pin No.	Symbol	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin.
3	VSS	Ground pin.
4	LOPOUT	Output pin of general-purpose operation amplifier.
5	LINM	Non-inverted input pin of general-purpuse operation amplifier.
6	LINP	Non-inverted input pin of general-purpuse operation amplifier.
7	LOUT	ATT + equalizer output pin.
8	LSB	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
9	LBASS2	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
10	LBASS1	Capacitor and resistor connection pin comprising filters for bass and super-bass band.
11	LTRE	Capacitor and resistor connection pin comprising treble band filter.
12	LVRIN	Volume input pin.
13	LSELO	Input selector output pin.
14	L5	Input signal pin.
15	L4	Input signal pin.
16	L3	Input signal pin.
17	L2	Input signal pin.
18	L1	Input signal pin.
19	Vref	0.5 x VDD voltage generation block for analog ground.
20	R1	Input signal pin.
21	R2	Input signal pin.
22	R3	Input signal pin.
23	R4	Input signal pin.
24	R5	Input signal pin.
25	RSELO	Input selector output pin.
26	RVRIN	Volume input pin.
27	RTRE	Capacitor connection pin comprising treble band filter.
28	RBASS1	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
29	RBASS2	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
30	RSB	Capacitor and resistor connection pin comprising filter for bass and super-bass band.
31	ROUT	ATT + equalizer output pin.
32	RINP	Non inverted input pin of general-purpose operation amplifier.
33	RINM	Non inverted input pin of general purpose operation amplifier.
34	ROPOUT	Output pin of general-purpose operation amplifier.
35	VDD	Supply pin.
36	CL	Serial data and clock input pin for control.

■ MN662790RSC (IC651) : Digital servo & processor

1.Pin layout



2.Pin function

MN662790RSC (1/2)

Pin No.	Symbol	I/O	Description
1	BCLK	O	Bit clock output for SRDATA
2	LRCK	O	Identifying signal output of L,R
3	SRDATA	O	Serial data output
4	DVDD1	-	Power supply for digital circuit
5	DVSS1	-	Connect to ground for digital circuit
6	TX	O	Digital audio interface output signal
7	MCLK	I	Micom command clock signal input
8	MDATA	I	Micom command data signal input
9	MLD	I	Micom command load signal input L:load
10	SENSE	-	Non connect
11	FLOCK	-	Non connect
12	TLOCK	-	Non connect
13	BLKCK	O	Sub code block clock signal (Command execution : CD-TEXT data readout enabling signal (DQSY) output)
14	SQCK	I	Export clock signal input for sub code Q resister
15	SUBQ	O	Sub code Q data output
16	DMUTE	I	Muting input H:muting
17	STAT	O	Status signal output
18	LSI_RST	I	Reset signal input L:reset
19	SMCK	O	Clock signal output MSEL is H : 8.4672 MHz MSEL is L : 4.2336 MHz
20	CSEL	I	Oscillation frequency specification terminal H:33.8688 MHz L:16.9344 MHz
21	TEST2	-	TEST2 terminal usually : open
22	TVD	O	Traverse drive output
23	PC	-	Non connect
24	ECM	O	Spindle motor drive signal output (Compulsion mode output)
25	ECS	O	Spindle motor drive signal output (Servo error signal output)
26	VDETMON	-	Non connect
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	-	Reference voltage for DA output section
30	FBAL	O	Focus balance adjust signal output
31	TBAL	O	Tracking balance adjust signal 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	TEST3	I	TEST3 Terminal usually : Fixation L
36	OFT	I	Off track signal input H : off track
37	TRCRS	I	Track cross signal input (analog input)
38	RFDET	I	RF detection signal input L : detection
39	BDO	I	Dropout signal input H : dropout
40	LDON	-	Non connect

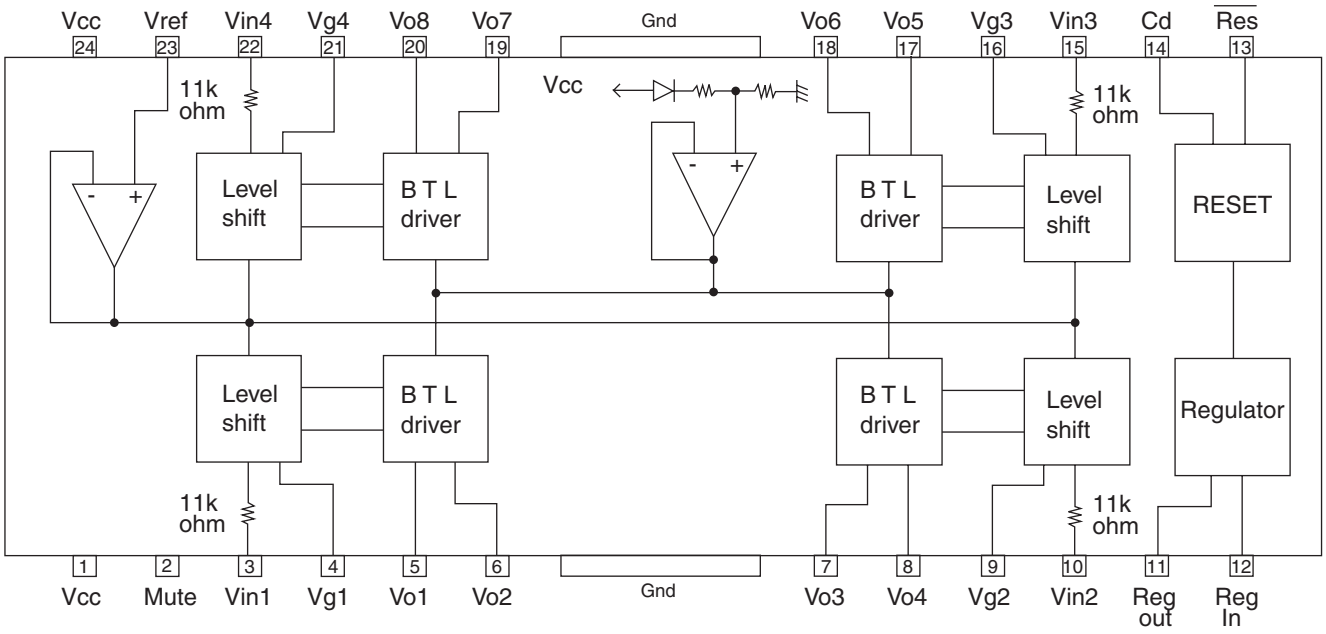
2.Pin function

MN662790RSC (2/2)

Pin No.	Symbol	I/O	Functions
41	PLLF2	I/O	Terminal for loop filter characteristic switch for PLL
42	DSLBDA	-	Non connect
43	WVEL	-	Non connect
44	ARF	I	RF Signal output
45	IREF	I	Standard electric current input terminal
46	DRF	I	Bias terminal for DSL
47	DSLF	I/O	Loop filter terminal for DSL
48	PLLF	I/O	Loop filter terminal for PLL
49	VCOF	I/O	Loop filter terminal for VCO
50	AVDD2	-	Power supply terminal for analog circuit
51	AVSS2	-	Connect to ground terminal for analog circuit
52	EFM	-	Non connect
53	DSLB	O	PLL extraction clock output
54	VCOF2	I/O	Loop filter terminal for VCO
55	SUBC	O	Sub code serial output
56	SBCK	I	Clock signal input for sub code serial output
57	VSS	-	Connect to ground terminal for oscillation circuit
58	X1	I	Oscillation circuit input terminal f=16.9344 MHz, 33.8688 MHz
59	X2	O	Oscillation circuit output terminal f=16.9344 MHz, 33.8688 MHz
60	VDD	-	Power supply terminal for oscillation circuit
61	BYTCK	-	Non connect
62	LDON	O	Laser ON signal output H : ON
63	GCTRL	O	General I/O port
64	IPFLAG	-	Non connect
65	FLAG	O	Flag signal output
66	CLVS	-	Non connect
67	CRC	-	Non connect
68	DEMPH	O	De-emphasis detection signal output
69	RESY	-	Non connect
70	IOSEL	I	Mode switch terminal
71	TEST	I	TEST terminal usually : H
72	AVDD1	-	Power supply terminal for analog circuit (for audio output section)
73	OUTL	O	Lch audio output
74	AVSS1	-	Connect to ground terminal for analog circuit (for audio output section)
75	OUTR	O	Rch audio output
76	DQSY	I	RF signal polarity specification terminal
77	VCC5V	-	Power supply terminal (5V)
78	PSEL	O	IOSEL=H TEST terminal IOSEL=L SRDATA input
79	MSEL	O	IOSEL=H SMCK terminal output (frequency switch terminal) IOSEL=L LRCK input
80	SSEL	O	IOSEL=H SUBQ terminal output mode switch terminal IOSEL=L BCLK input

■ LA6541-X (IC801) : Servo driver

1. Pin layout & Block diagram

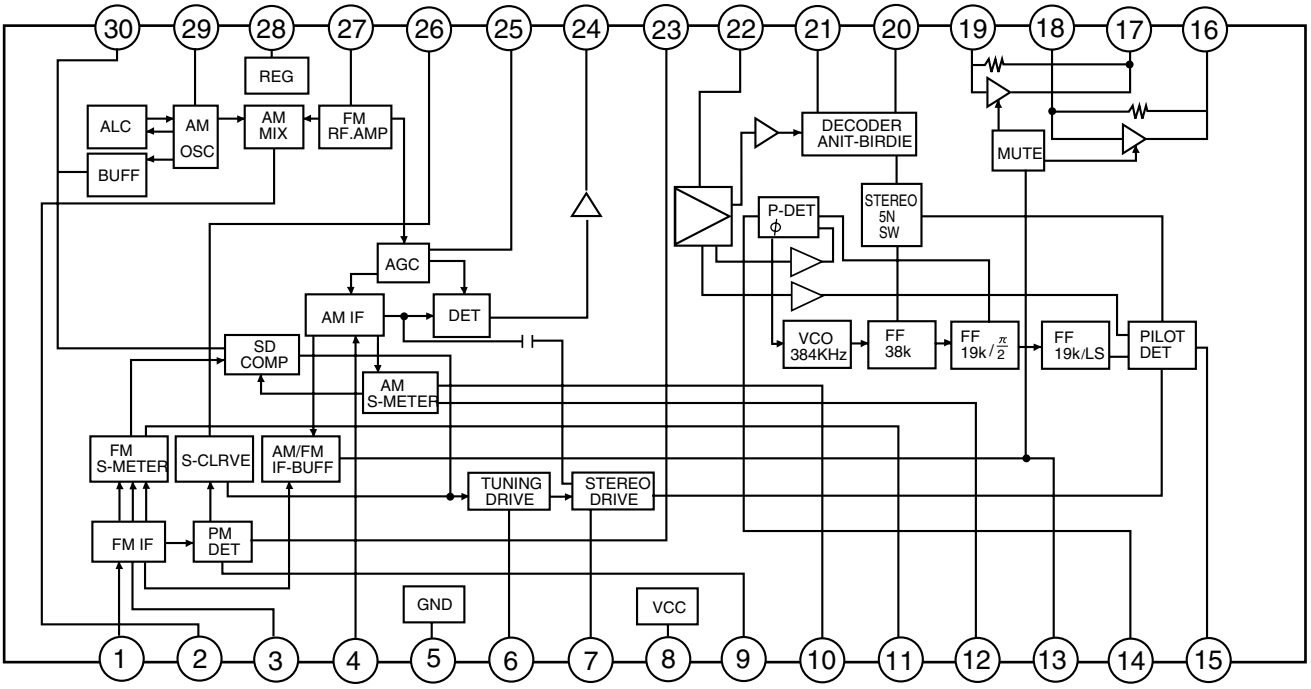


2. Pin function

Pin No.	Symbol	Function
1	Vcc	Power supply (Shorted to pin 24)
2	Mute	All BTL amplifier outputs ON/OFF
3	Vin1	BTL AMP 1 input pin
4	Vg1	BTL AMP 1 input pin (For gain adjustment)
5	Vo1	BTL AMP 1 input pin (Non inverting side)
6	Vo2	BTL AMP 1 input pin (Inverting side)
7	Vo3	BTL AMP 2 input pin (Inverting side)
8	Vo4	BTL AMP 2 input pin (Non inverting side)
9	Vg2	BTL AMP 2 input pin (For gain adjustment)
10	Vin2	BTL AMP 2 input pin
11	Reg Out	External transistor collector (PNP) connection. 5V power supply output
12	Reg In	External transistor (PNP) base connection
13	Res	Reset output
14	Cd	Reset output delay time setting (Capacitor connected externally)
15	Vin3	BTL AMP 3 input pin
16	Vg3	BTL AMP 3 input pin (For gain adjustment)
17	Vo5	BTL AMP 3 output pin (Non inverting side)
18	Vo6	BTL AMP 3 output pin (Inverting side)
19	Vo7	BTL AMP 4 output pin (Inverting side)
20	Vo8	BTL AMP 4 output pin (Non inverting side)
21	Vg4	BTL AMP 4 output pin (For gain adjustment)
22	Vin4	BTL AMP 4 output pin
23	Vref	Level shift circuit's reference voltage application
24	Vcc	Power supply (Shorted to pin 1)

■ LA1838 (IC1) : FM AM IF amp & Detector, FM MPX decoder

1. Block diagram

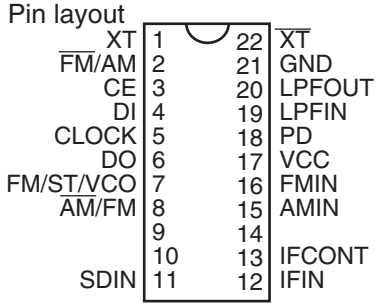


2. Pin function

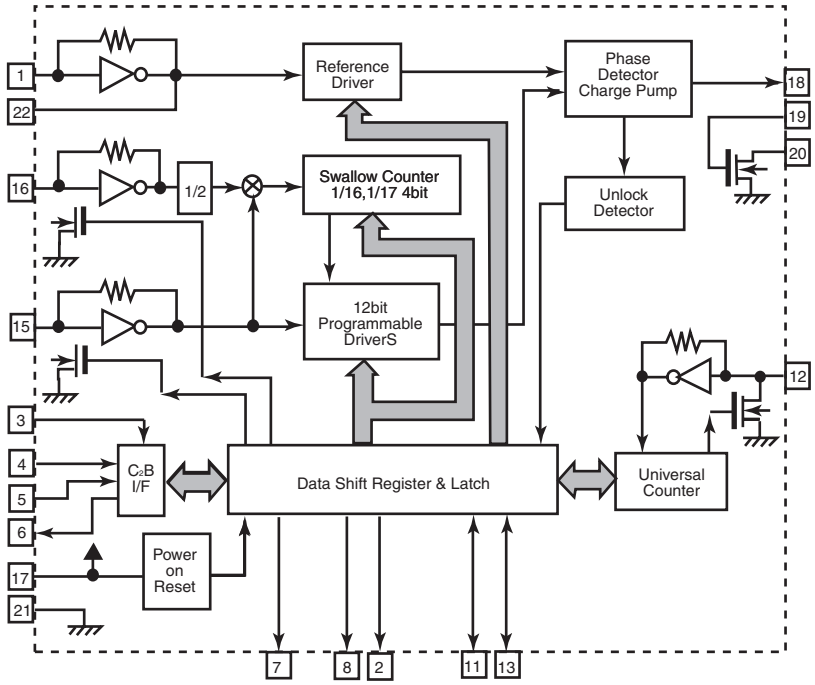
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the Left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the Right channel post AMP.
5	GND	—	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	$\overline{\text{TUNED}}$	O	When the set is tunning,this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	$\overline{\text{STEREO}}$	O	Stereo indicator output. Stereo "L", Mono: "H"	22	MPX IN	I	Mpx input terminal
8	VCC	—	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	—	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	—	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	—	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 besides the frequency width of the input signal.
14	FM/$\overline{\text{AM}}$	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
15	$\overline{\text{MONO}}$/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LC72136N (IC2) : PLL frequency synthesizer

1. Pin layout



2. Block diagram

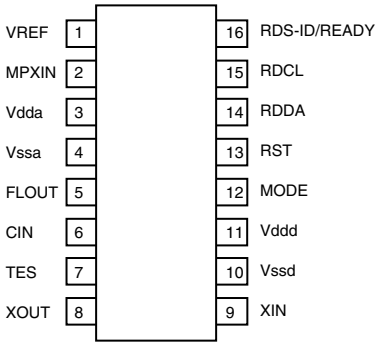


3. Pin function

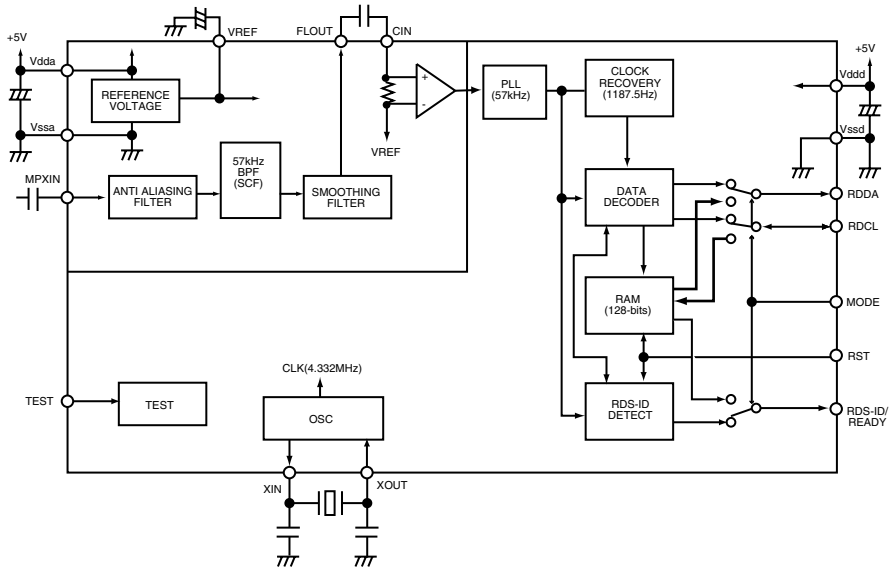
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ LA72723 (IC3) : RDS demodulation

1. Pin layout



2. Block Diagram

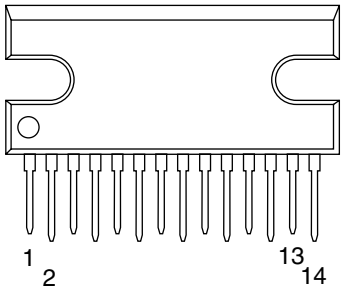


3. Pin functions

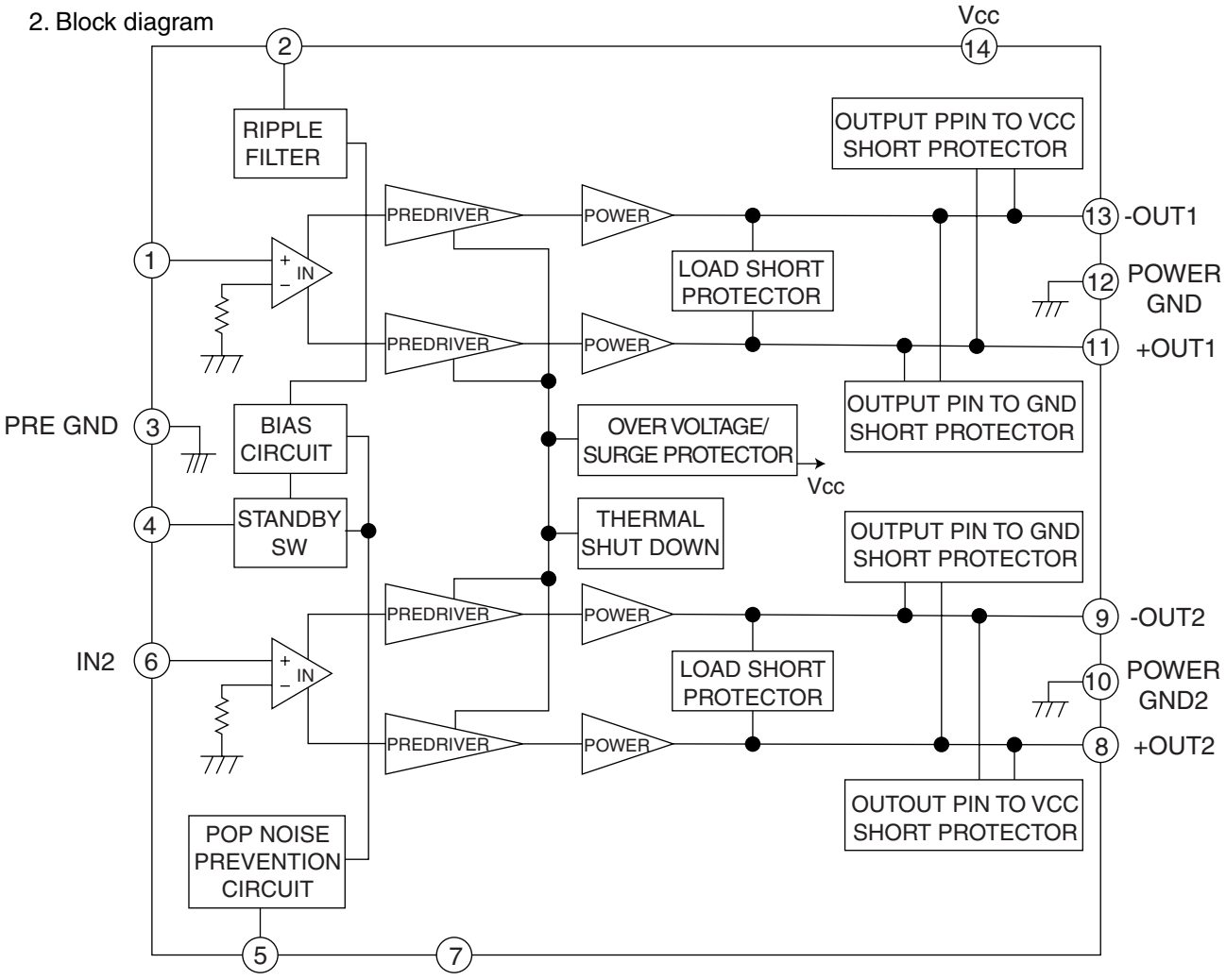
Pin No.	Symbol	I/O	Function
1	VREF	O	Reference voltage output (Vdda/2)
2	MPXIN	I	Baseband (multiplexed) signal input
3	Vdda	—	Analog power supply (+5V)
4	Vssa	—	Analog ground
5	FLOUT	O	Subcarrier input (filter output)
6	CIN	I	Subcarrier input (comparator input)
7	TEST	I	Test input
8	XOUT	O	Crystal oscillator output (4.332MHz)
9	XIN	I	Crystal oscillator input (exeternal reference input)
10	Vssd	—	Digtal ground
11	Vddd	—	Digtal power supply
12	MODE	I	Read mode setting (0:master,1:slave)
13	RST	I	RDS-ID/RAM reset (positive polarity)
14	RDDA	O	RDS data output
15	RDCL	I/O	RDS clock output (master mode)/RDS clock input (slave mode)
16	RDS-ID READY	O	RDS-ID/READY output (negative polarity)

■ LA4628 (IC801) : Power amp.

1. Pin layout

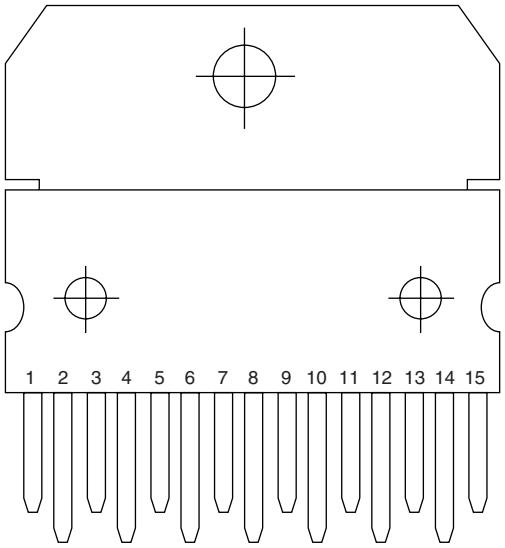


2. Block diagram

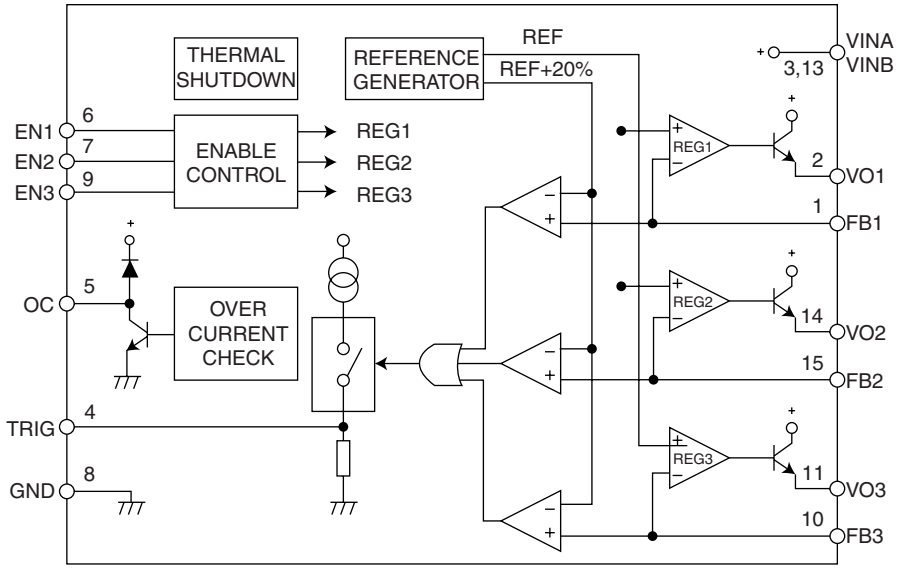


■ L4909 (IC802) : Regulator

1. Pin layout



2. Block diagram

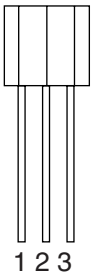


3. Pin functions

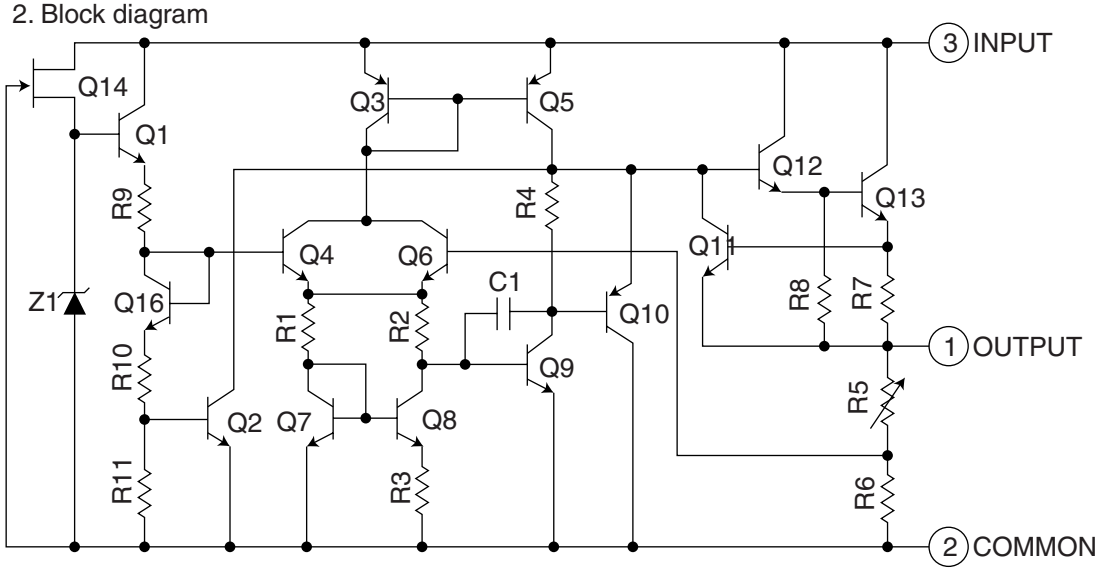
Pin No.	Symbol	Function
1	FB1	REG1 feedback voltage input
2	VO1	REG1 output voltage
3	VINA	Input DC supply voltage
4	TRIG	Trigger for external SCR (crowbar protection)
5	OC	Over current warning output
6	EN1	REG1 enable input
7	EN2	REG2 enable input
8	GND	Analog ground
9	EN3	REG3 enable input
10	FB3	REG3 feedback voltage input
11	VO3	REG3 output voltage
12	N.C.	Not connected
13	VINB	Input DC supply voltage
14	VO2	REG2 output voltage
15	FB2	REG2 feedback voltage input

■ KIA78S05P-T (IC803) : Reglator

1. Pin layout

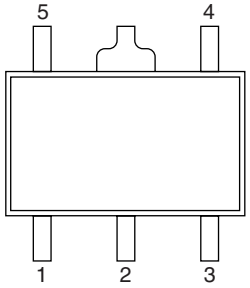


2. Block diagram

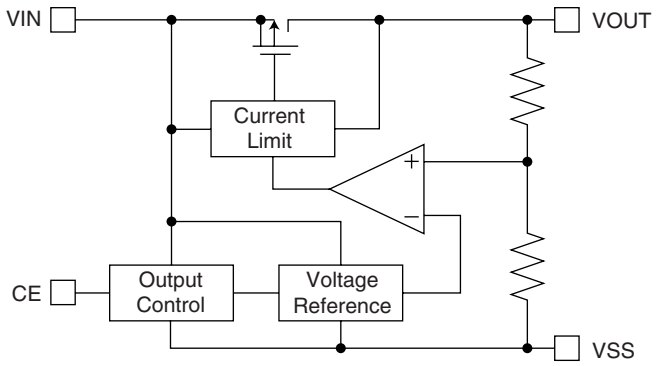


■ XC62HR3502P-X (IC291) : Regulator

1. Pin layout



2. Block diagram

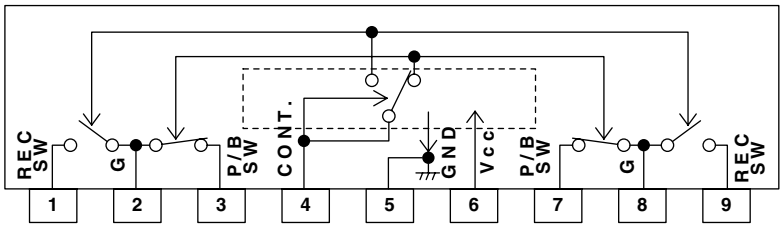


3. Pin function

Pin No.	Symbol	Function
1	VSS	Ground
2	VIN	Supply voltage input
3	CE	Chip enable
4	NC	Non connect
5	VOUT	Regulated output voltage

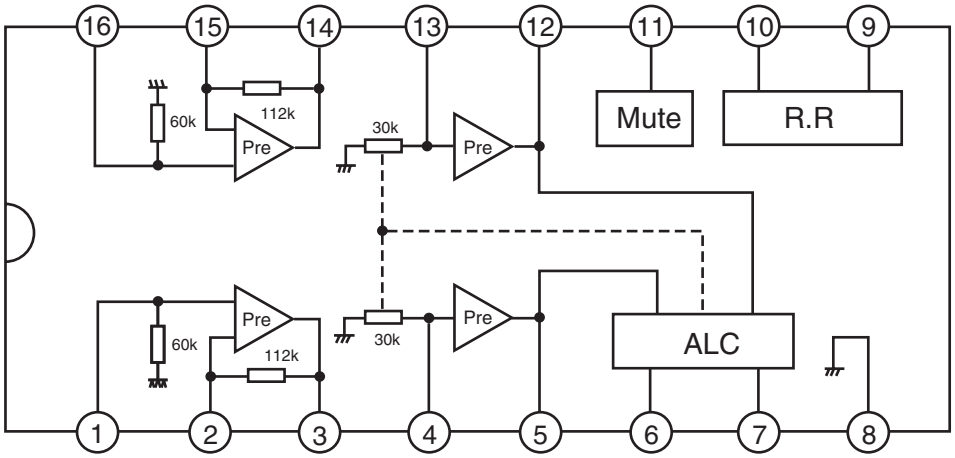
■ BA3126N (IC331) : R / P switch

1. Pin layout & Block diagram



■ AN7317 (IC332) : R / P amp

1. Pin layout & Block diagram

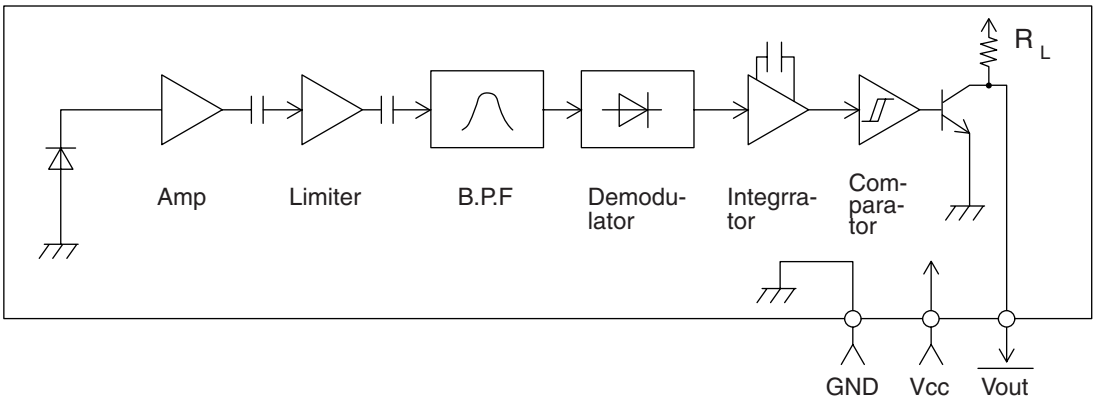


2. Pin function

Pin No.	Function
1	CH1 playback amp input
2	Feedback of CH1 playback amp
3	CH1 playback amp output
4	CH1 recording amp input
5	CH1 recording amp output
6	Low cut of ALC
7	Time of ALC
8	GND
9	Vcc
10	Lipple filter
11	Recording amp mute
12	CH2 recording amp output
13	CH2 recording amp input
14	CH2 playback amp output
15	Feedback of CH2 playback amp
16	CH2 playback amp input

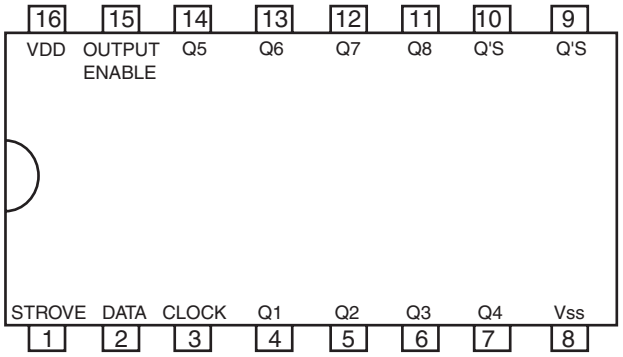
■ GP1UM271XK (IC901) : Remocon

1. Block diagram

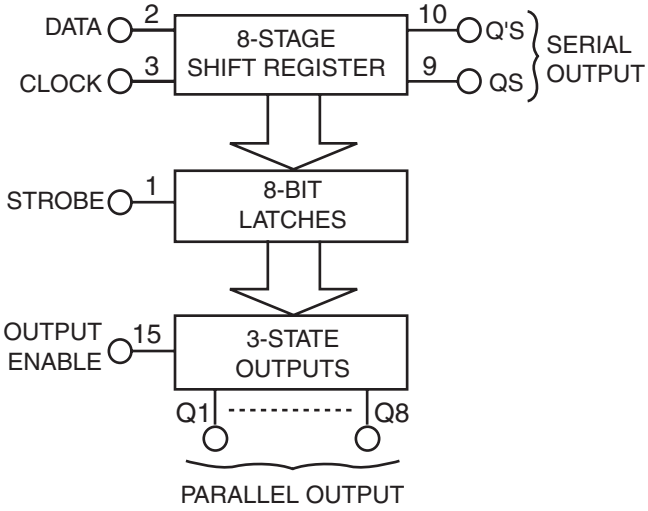


■ BU4094BCF-X (IC333) : Shift / Store registor

1. Pin layout

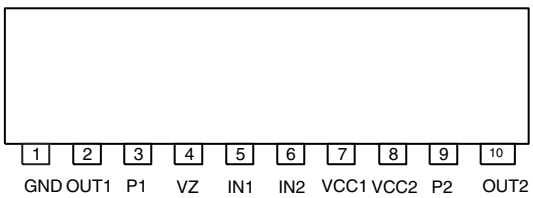


2. Block diagram



■ LB1641 (IC703, IC704) : DC motor driver

1. Pin layout

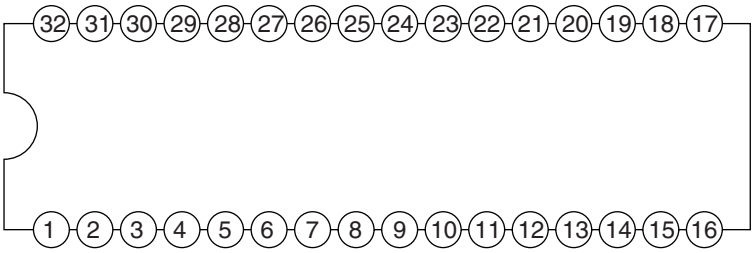


2. Pin function

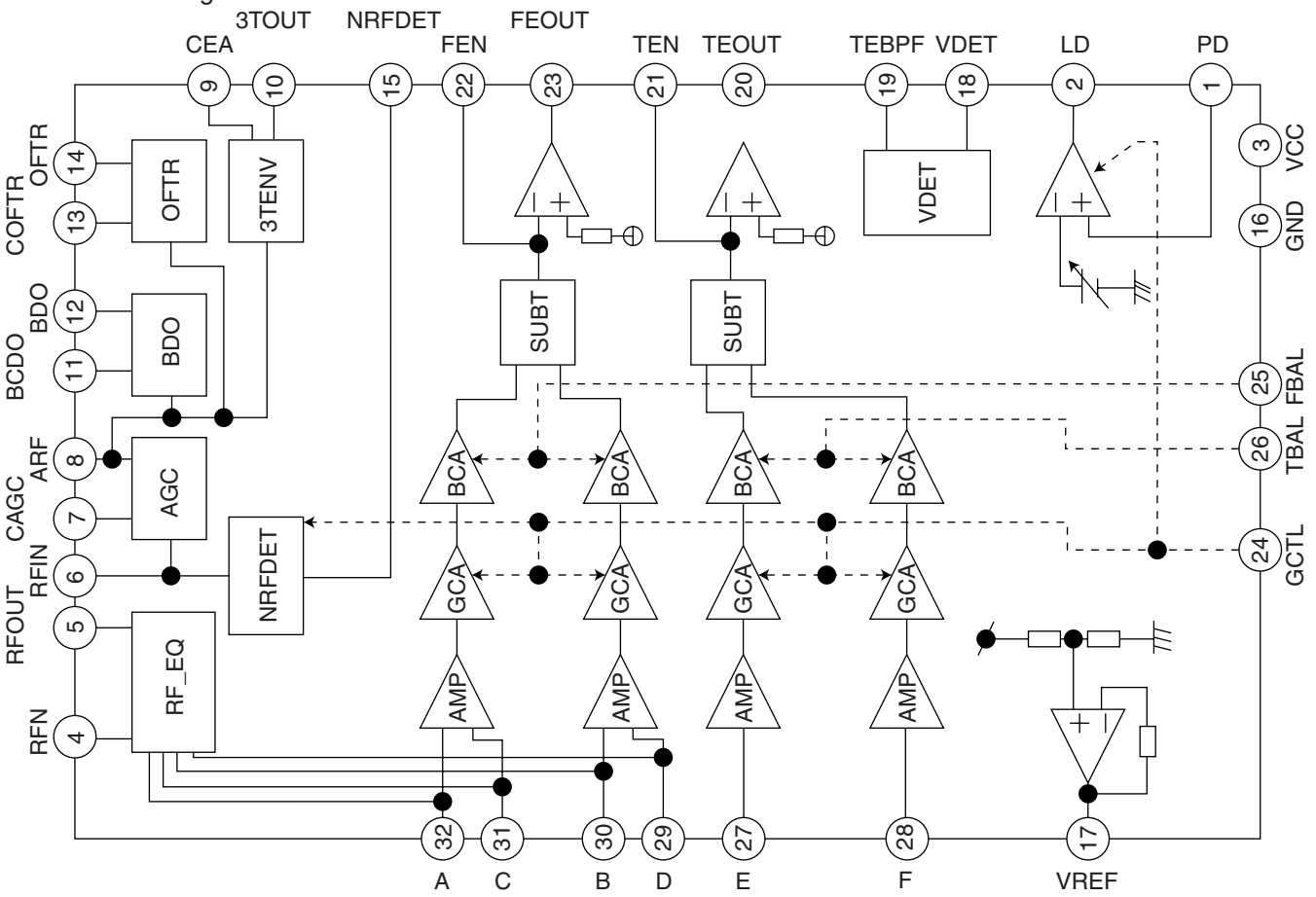
Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

■ AN22000A-W (IC601) : RF head amp.

1. Pin layout



2. Block diagram



3. Pin function

Pin No.	Function	Pin No.	Function
1	APC amp input terminal.	17	VREF output terminal.
2	APC amp output terminal.	18	VDET output terminal.
3	Power supply.	19	VDET input terminal.
4	RF amp negative input terminal.	20	TE amp. output terminal.
5	RF amp output terminal.	21	TE amp. negative input terminal.
6	AGC input terminal.	22	FE amp. negative input terminal.
7	AGC loop filter capacitor connection terminal.	23	FE amp. output terminal.
8	AGC output terminal.	24	GCTL & APC terminal.
9	Capacitor connection terminal for HPF-amp.	25	FBAL control terminal.
10	3TENV output terminal.	26	TBAL control terminal.
11	Capacitor connection terminal for RF enberope detection.	27	Tracking signal input terminal 1.
12	BDO output terminal.	28	Tracking signal input terminal 2.
13	Capacitor connection terminal for RF enverope detection.	29	Focus signal input terminal 4.
14	OFTR output terminal.	30	Focus signal input terminal 3.
15	NRDET output terminal.	31	Focus signal input terminal 2.
16	Ground terminal.	32	Focus signal input terminal 1.

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO & COMUNICATION BUSINESS DIVISION
PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

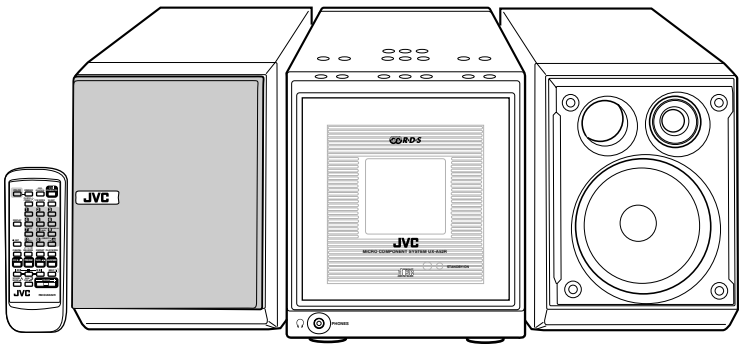
(No.21064)

200202

JVC

MICRO COMPONENT SYSTEM

UX-A52R — Consists of CA-UXA52R and SP-UXA52



R·D·S

COMPACT disc DIGITAL AUDIO

INSTRUCTIONS

For Customer Use:

Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

GVT0071-008A
[B]

IMPORTANT for the U.K.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT:

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product 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.

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

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

Caution — ⏻/I STANDBY/ON button!
Disconnect the mains plug to shut the power off completely (the STANDBY/ON lamp goes off).
The ⏻/I STANDBY/ON button in any position does not disconnect the mains line.

- When the unit is on standby, the STANDBY/ON lamp lights red.
- When the unit is turned on, the STANDBY/ON lamp lights green.

The power can be remote controlled.

CAUTION
To reduce the risk of electrical shocks, fire, etc.:

1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

CAUTION

- Do not block the ventilation openings or holes.
  (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
- Do not place any naked flame sources, such as lighted candles, on the apparatus.
- When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
- Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution: Proper Ventilation

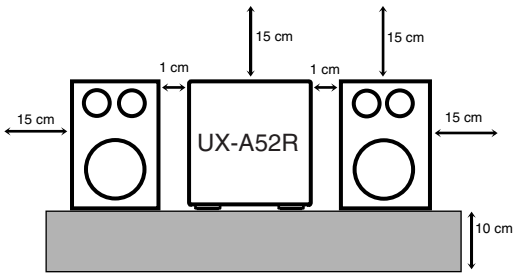
To avoid risk of electric shock and fire, and to prevent damage, locate the apparatus as follows:

1 Front:
No obstructions and open spacing.

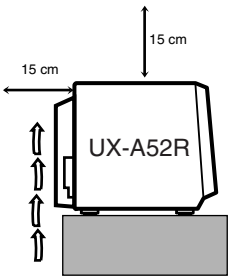
2 Sides/ Top/ Back:
No obstructions should be placed in the areas shown by the dimensions below.

3 Bottom:
Place on the level surface. Maintain an adequate air path for ventilation by placing on a stand with a height of 10 cm or more.

Front view



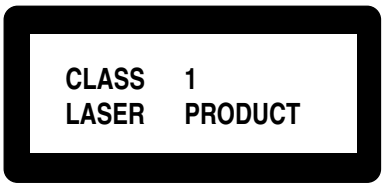
Side view



IMPORTANT FOR LASER PRODUCTS

REPRODUCTION OF LABELS

① CLASSIFICATION LABEL, PLACED ON EXTERIOR SURFACE



1. CLASS 1 LASER PRODUCT
2. **DANGER**: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION**: Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.

② WARNING LABEL, PLACED INSIDE THE UNIT

SAFETY INSTRUCTIONS
"SOME DOS AND DON'TS ON THE SAFE USE OF EQUIPMENT"

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

☆☆

Do read the operating instructions before you attempt to use the equipment.

Do ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

Do consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

Do be careful with glass panels or doors on equipment.

☆☆

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way – switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode.

Switch off using the switch on the equipment and make sure that your family know how to do this.

Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings.

Overheating will cause damage and shorten the life of the equipment.

DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

— NEVER let anyone, especially children, push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock.

— NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!

Introduction

We would like to thank you for purchasing one of our JVC products. Before operating this unit, read this manual carefully and thoroughly to obtain the best possible performance from your unit, and retain this manual for future reference.

About This Manual

This manual is organized as follows:

- **This manual mainly explains playback using the remote control, and the other operations such as recording operations using the buttons on the unit. You can use the buttons both on the remote control and on the unit for the same operations if they have the same or similar names (or marks), unless mentioned otherwise.**
- Basic and common information that is the same for many functions is grouped in one place, and is not repeated in each procedure. For instance, we do not repeat the information about turning on/off the unit, setting the volume, changing the sound effects, and others, which are explained in the section “Basic and Common Operations” on pages 10 – 13.
- The following marks are used in this manual:

STOP!	Gives you warning and caution to prevent from damage or risk of fire/electric shock. Furthermore, gives you information which is not good for obtaining the best possible performance from the unit.
notes	Gives you information and hints you had better know.

Precautions

Installation

- Install in a place which is level, dry and neither too hot nor too cold—between 5˚C and 35˚C.
- Install the unit in a location with adequate ventilation to prevent internal heat buildup in the unit.
- Leave sufficient distance between the unit and the TV.
- Keep the speakers away from the TV to avoid interference with TV.

STOP! DO NOT install the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or vibration.

Power sources

- When unplugging the unit from the wall outlet, always pull the plug, not the AC power cord.

STOP! DO NOT handle the AC power cord with wet hands.

Moisture condensation

Moisture may condense on the lens inside the unit in the following cases:

- After starting heating in the room
- In a damp room
- If the unit is brought directly from a cold to a warm place

Should this occur, the unit may malfunction. In this case, leave the unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, then plug it in again.

Others

- Should any metallic object or liquid fall into the unit, unplug the AC power cord and consult your dealer before operating any further.
- If you are not going to operate the unit for an extended period of time, unplug the AC power cord from the wall outlet.

STOP! DO NOT disassemble the unit since there are no user serviceable parts inside.

If anything goes wrong, unplug the AC power cord and consult your dealer.

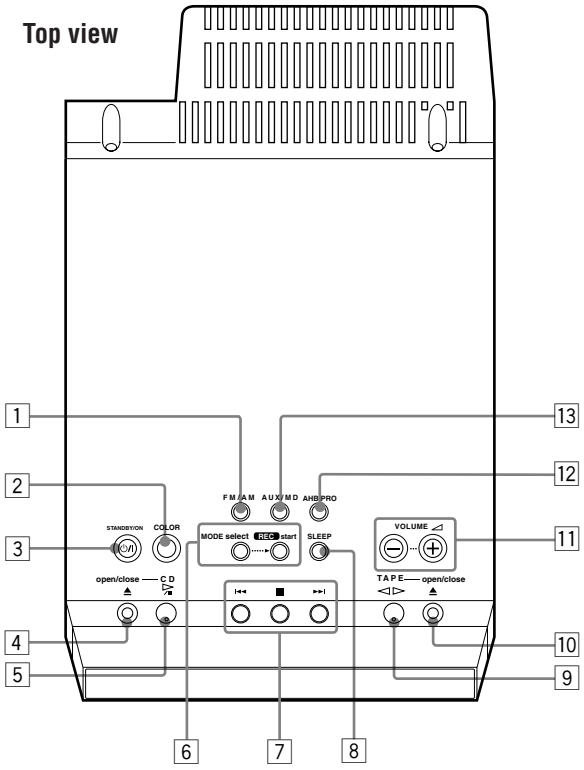
Contents

Location of the Buttons

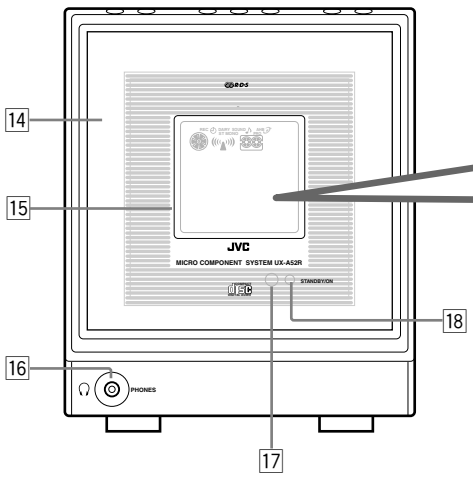
Become familiar with the buttons on your unit.

Main Unit

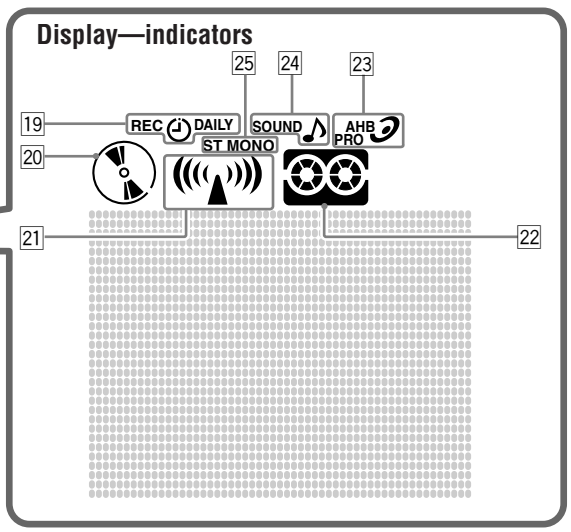
Top view



Front view



Display—indicators



See pages in the parentheses for details.

Main unit

1 FM/AM button (11, 15)
- *Pressing this button also turns on the unit.*

2 COLOR button (9, 13)

3 ⏻/I STANDBY/ON button (11)

4 CD open/close ⏏ button (21 – 23)
- *Pressing this button also turns on the unit.*

5 CD ▷ / ❚❚ (play/pause) button (11, 21, 31)
- *Pressing this button also turns on the unit.*

6 MODE select and REC start buttons (31, 32)

7 Multi operation buttons
- I◄◄ (reverse skip), ■ (stop), and ►►I (forward skip)

8 SLEEP button (37)

9 TAPE ◁ ▷ (play) button (11, 26, 31, 32)
- *Pressing this button also turns on the unit.*

10 TAPE open/close ⏏ button (26)
- *Pressing this button also turns on the unit.*

11 VOLUME + / – buttons (12, 28)

12 AHB (Active Hyper Bass) PRO button (12, 28)

13 AUX/MD button (11, 28, 32)
- *Pressing this button also turns on the unit.*

14 Electronic swing panel

15 Display
- Shows the source name and some indicators, etc.

16 PHONES (🎧) jack—stereo mini-type (12)

17 Remote sensor

18 STANDBY/ON lamp (11)

Display—indicators

19 Timer mode indicators (34 – 37)
- ⏲ (Timer), DAILY (Daily Timer), and REC (Recording Timer)

20 CD indicator
- Lights when CD is in the disc tray.

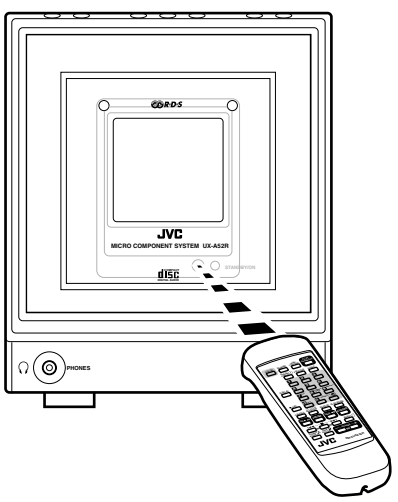
21 Tuner indicator
- Lights when the tuner is selected as the source.

22 Tape indicator
- Lights when a cassette is in the cassette loading slot.

23 AHB (Active Hyper Bass) PRO indicator (12)

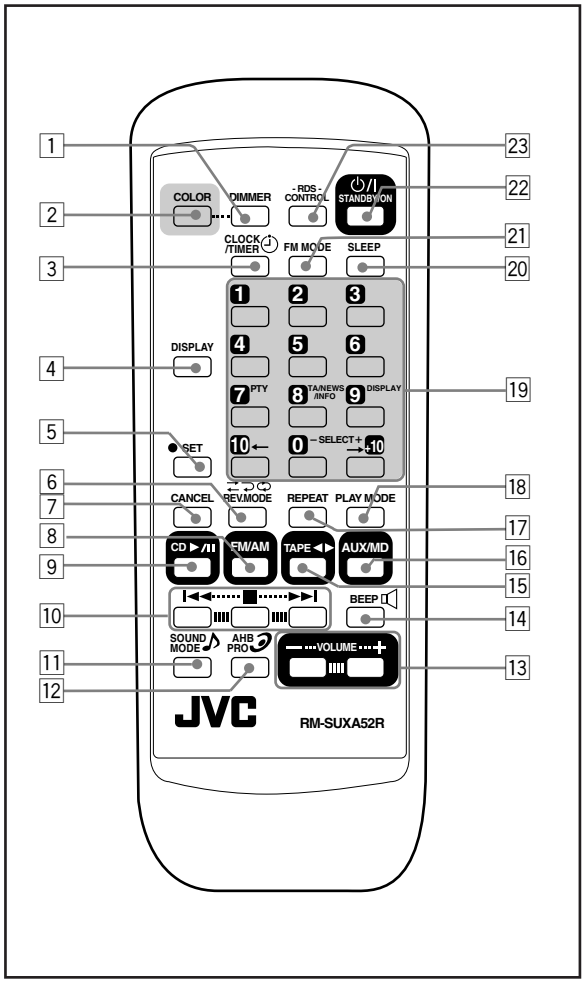
24 SOUND indicator (12)

25 ST (stereo) and MONO indicators (15)



When using the remote control, point it at the remote sensor on the electronic swing panel.

Remote Control



Remote control

1 DIMMER button (13, 34)
2 COLOR button (9, 13)
3 CLOCK/TIMER button (34 – 36)
4 DISPLAY button (16, 22, 26, 31, 32)
5 SET button (13, 15, 34 – 37)
6 REV. (reverse) MODE button (26)
7 CANCEL button (23, 34, 35)
8 FM/AM button (11, 15, 16)
- *Pressing this button also turns on the unit.*

9 CD ► / II (play/pause) button (11, 21 – 24)
- *Pressing this button also turns on the unit.*

10 Multi operation buttons
- I◄◄ (reverse skip), ■ (stop), and ►►I (forward skip)

11 SOUND MODE button (12, 28)
12 AHB (Active Hyper Bass) PRO button (12, 28)
13 VOLUME + / – buttons (12, 28)
14 BEEP button (12)
15 TAPE ◄ ► button (11, 26)
- *Pressing this button also turns on the unit.*

16 AUX/MD button (11, 28)
- *Pressing this button also turns on the unit.*

17 REPEAT button (24)
18 PLAY MODE button (23, 24)
19 Number buttons
- 0, 1 – 10, +10 buttons
- RDS operating buttons—PTY, TA/NEWS/INFO, DISPLAY, SELECT + / – (16, 17)
- ← / → buttons (13)

20 SLEEP button (37)
21 FM MODE button (15)
22 ⏻/I STANDBY/ON button (11, 35, 36)
23 RDS CONTROL button (16, 17)

Getting Started

Continued

Unpacking

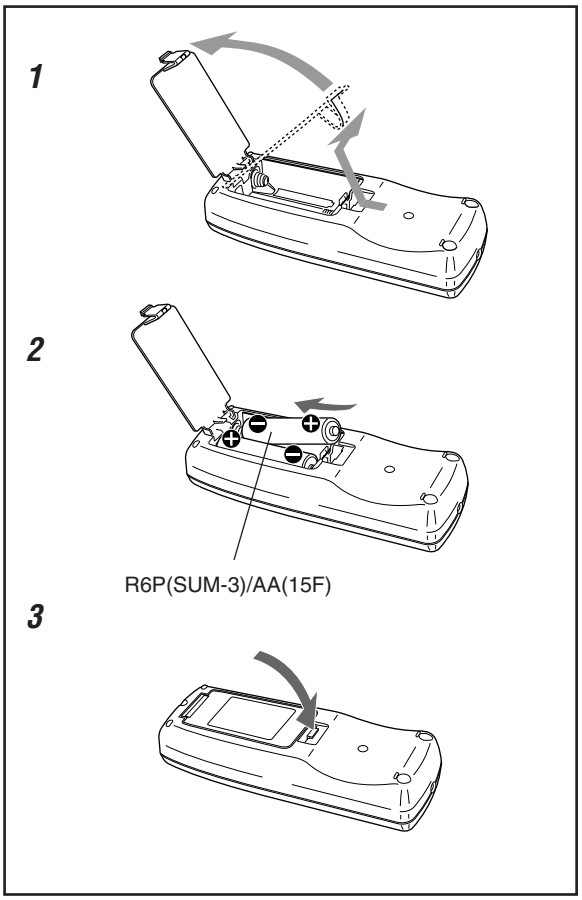
Make sure that you have all the following items.
The number in parentheses indicates the quantity of the pieces supplied.

- FM antenna (1)
- AM (MW/LW) loop antenna (1)
- AC power cord (1)
- Remote control (1)
- Batteries (2)

If anything is missing, consult your dealer immediately.

Putting the Batteries into the Remote Control

Insert the batteries—R6P(SUM-3)/AA(15F)—into the remote control, by matching the polarity (+ and –) on the batteries with the + and – marking on the battery compartment.
When the remote control can no longer operate the unit, replace both batteries at the same time.

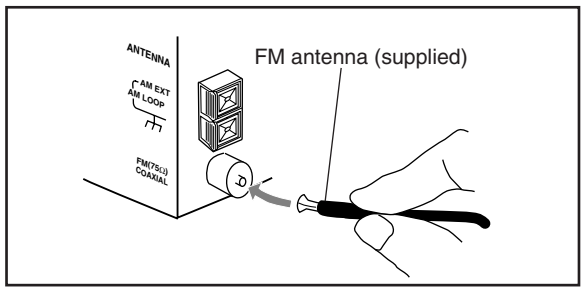


STOP!

- DO NOT use an old battery together with a new one.
- DO NOT use different types of batteries together.
- DO NOT expose batteries to heat or flame.
- DO NOT leave the batteries in the battery compartment when you are not going to use the remote control for an extended period of time. Otherwise, it will be damaged from battery leakage.

Connecting Antennas

FM antenna



1 Attach the FM antenna to the FM (75 Ω) COAXIAL terminal.

2 Extend the FM antenna.

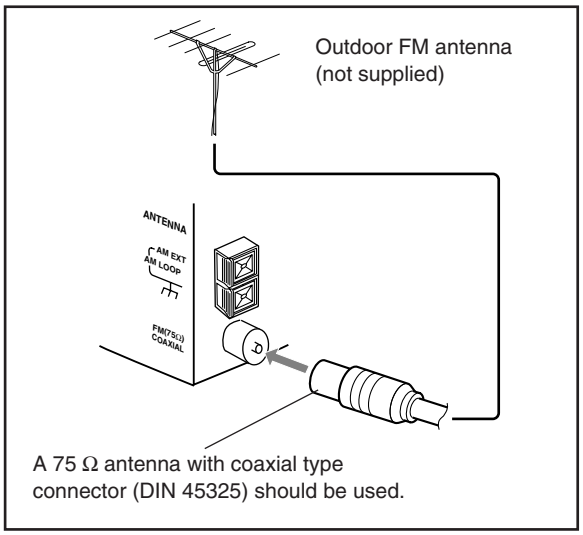
3 Fasten it up in the position which gives you the best reception.

About the supplied FM antenna

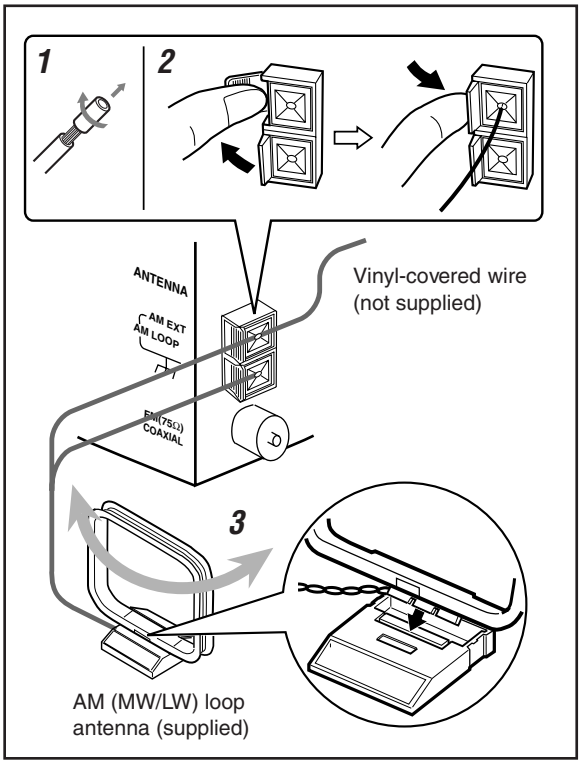
The FM antenna supplied with this unit can be used as temporary measure. If reception is poor, you can connect an outdoor FM antenna.

To connect an outdoor FM antenna

Before connecting it, disconnect the supplied FM antenna.



AM (MW/LW) antenna



1 If cords are covered with insulation, twist the core of the cord at the end of each cord, then remove the insulation.

2 Connect the AM (MW/LW) loop antenna to the AM LOOP terminals as illustrated.

3 Turn the AM (MW/LW) loop antenna until you have the best reception.

To connect an outdoor AM (MW/LW) antenna

When reception is poor, connect a single vinyl-covered wire to the AM EXT terminal and extend it horizontally. The AM (MW/LW) loop antenna must remain connected.

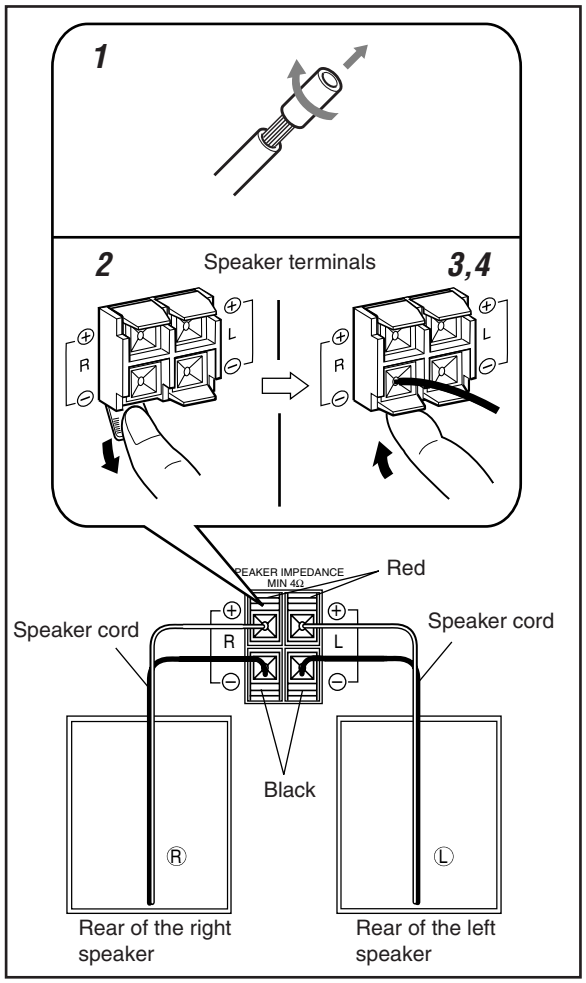
For better reception of both FM and AM (MW/LW)

- Make sure the antenna conductors do not touch any other terminals and connecting cords.
- Keep the antennas away from metallic parts of the unit, connecting cords, and the AC power cord.

Connecting Speakers

To connect speakers

You can connect the speakers by following the procedure below:



1 **If cords are covered with insulation, twist the core of the cord at the end of each cord, then remove the insulation.**

2 **Open the speaker terminal.**

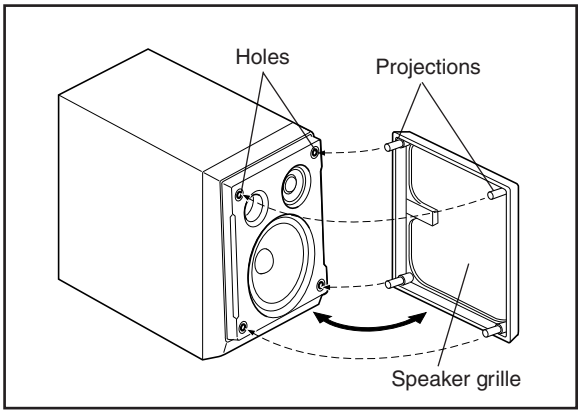
3 **Insert the end of the speaker cord to the terminal.**
Match the polarity: White cord to red (+) terminal and black cord to black (–) terminal.

4 **Close the speaker terminal on the rear of the unit.**

Use only speakers with the speaker impedance—4 Ω to 16 Ω.

To remove the speaker grilles

The speaker grilles are removable.



To remove the speaker grille, insert your fingers at the top of the speaker grille, then pull towards you. Do the same at the bottom.

To attach the speaker grille, put the projections of the speaker grille into the holes of the speaker.

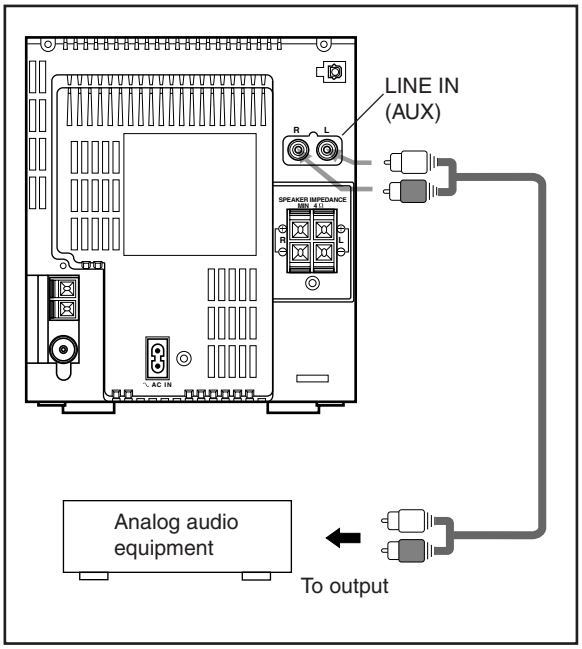
Connecting Other Equipment

You can connect both of the analog and digital equipment. When you connect and use the equipment, refer also to its manual supplied.

- DO NOT connect other equipment while the power is on.
- DO NOT plug in any equipment until all connections are complete.

To connect analog audio equipment

Be sure that the plugs of the audio cords and the jacks on the rear of the unit are color-coded: White plugs and jacks are for left audio signals, and red ones for right audio signals.

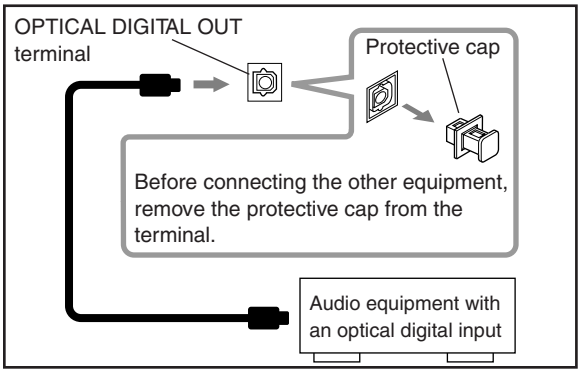


For playing the other equipment through this unit, connect between the audio output jacks on the other equipment and the LINE IN (AUX) jacks by using an audio cord (not supplied.)

To connect audio equipment with an optical digital input terminal

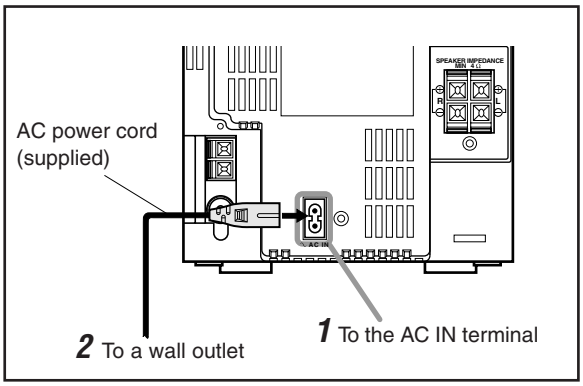
You can record CD sound onto the connected digital equipment.

Connect an optical digital cord (not supplied) between the optical digital input terminal on the other equipment and the OPTICAL DIGITAL OUT terminal.



NOW, you can plug the AC power cord.

IMPORTANT: Be sure to check all connections to be done before plugging the AC power cord into a wall outlet.



When connecting the AC power cord into a wall outlet, the unit automatically starts the display illumination.

To stop and cancel the display demonstration, press COLOR during display illumination—while the unit is turned off (on standby.)

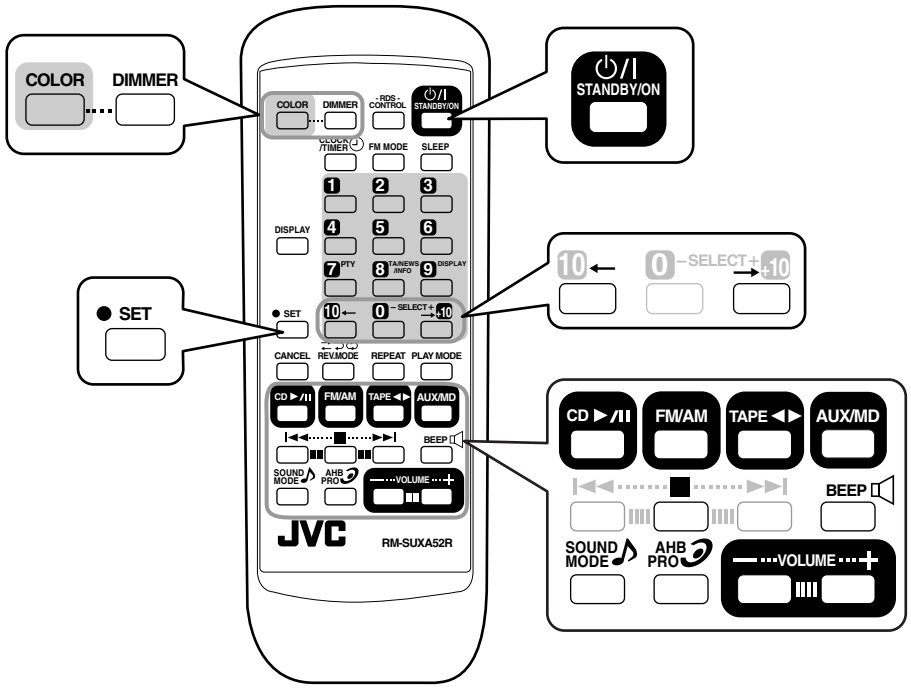
To start the display illumination manually, press COLOR again while the unit is turned off (on standby.)

Basic and Common Operations

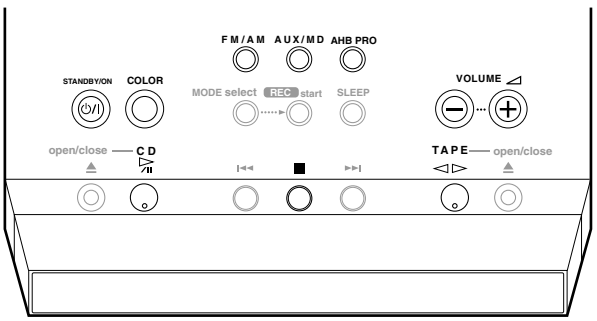
Continued

The buttons emphasized in the illustration below are used and explained in this section (pages 11 to 13.)

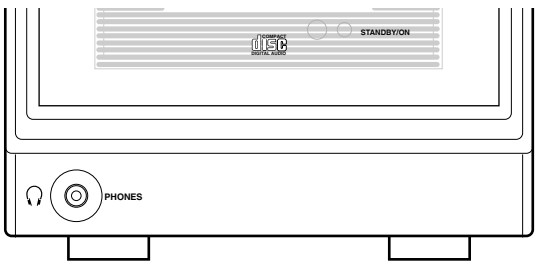
Remote control



Main unit (Top view)



Main unit (Front view)



Turning On the Power

When you press the play buttons (CD ► / ❚❚, TAPE ◄ ►) for a particular source or FM/AM and AUX/MD, the unit automatically turns on (and starts playback if the source is ready.)

To turn on the unit without playing, press ⏻/I STANDBY/ON.
The STANDBY/ON lamp on the electronic swing panel lights green.

To turn off the unit (on standby), press ⏻/I STANDBY/ON again.
The STANDBY/ON lamp on the electronic swing panel lights red.

- "0:00" appears on the display until you set the built-in clock. After setting the clock, the clock time will appear on the display while the unit is turned off (on standby.)
- A little power is always consumed even while the unit is on standby.

To set the built-in clock, see page 34.

To switch off the power supply completely, unplug the AC power cord from the AC outlet.

When you unplug the AC power cord or if a power failure occurs

The clock setting, the tuner preset stations and other settings will be erased.

Selecting the Sources and Starting Play

To select the tuner, press FM/AM.
The unit automatically turns on (when the unit is on standby) and the last selected station is tuned in.
Each time you press FM/AM, the band alternates between FM and AM (MW/LW.)

- For more detailed operations, see pages 14 to 19.

To select the CD player, press CD ► / ❚❚.
The unit automatically turns on (when the unit is on standby), and "CD" appears on the display. Play will start if a CD is on the disc tray. ("NO DISC" will appear on the display if a CD is not loaded.)
To stop playback, press ■.

- For more detailed operations, see pages 20 to 24.

To select the cassette deck, press TAPE ◄ ►.
The unit automatically turns on (when the unit is on standby), and "TAPE" appears on the display. Play will start if a cassette is in the cassette loading slot. ("NO TAPE" will appear on the display if a cassette is not in the cassette loading slot.)
To stop playback, press ■.

- For more detailed operations, see pages 25 and 26.

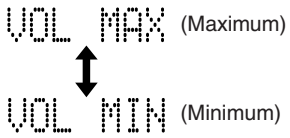
To select external equipment, press AUX/MD.
The unit automatically turns on (when the unit is on standby), and "AUX" appears on the display.

- For more detailed operations, see pages 27 and 28.
- For operating the external equipment, see the manuals supplied with them.

Adjusting the Volume

You can adjust the volume level while the unit is turned on. The volume level has no effect on recording.

To increase the volume, press VOLUME +.
To decrease the volume, press VOLUME –.



The volume level meter appears on the display.

- The volume level can be adjusted in 41 steps (VOL MIN, VOL 1 – VOL 39, and VOL MAX.)
- When pressing and holding the button, you can change the volume level continuously.

For private listening

Connect the headphones to the PHONES jack. No sound comes out of the speakers. Be sure to turn down the volume before connecting or putting on the headphones.

DO NOT turn off (on standby) the unit with the volume set to an extremely high level; otherwise, the sudden blast of sound can damage your hearing, speakers and/or headphones when you turn on the unit or start playing any source.
REMEMBER you cannot adjust the volume level while the unit is on standby mode.

Turning On/Off the Key-touch Tone

If you do not want the key-touch tone to beep each time you press buttons, you can deactivate it while the unit is turned on.

On the remote control ONLY:

Press BEEP.

- Each time you press the button, the key-touch tone turns on (BEEP ON) and off (BEEP OFF) alternately:

BEEP ON ⟷ BEEP OFF

Reinforcing the Bass Sound

The richness and fullness of the bass sound is clearly maintained regardless of how low you set the volume—Active Hyper Bass PRO. You can select the bass effect levels while the unit is turned on. The AHB PRO can be applied only to playback sounds, and cannot be used for recording.

To get the effect, press AHB PRO.
The AHB PRO indicator lights on the display.

- Each time you press the button, the effect changes as follows:

AHB 1 → AHB 2 → AHB OFF (Canceled) → AHB 1

AHB 1: Bass sound is clearly heard even in the low volume.
AHB 2: Bass sound is more effective than AHB 1.
AHB OFF: Cancels the AHB PRO.
The AHB PRO indicator goes off from the display.

To check the AHB PRO setting currently selected, press AHB PRO once while the AHB PRO indicator is lit.

Selecting the Sound Modes

You can select one of the 4 preset sound modes while the unit is turned on. The sound modes can be applied only to playback sounds, and cannot be used for recording.

On the remote control ONLY:

To select the sound modes, press SOUND MODE repeatedly until the sound mode you want appears on the display.
The SOUND indicator also lights on the display.

- Each time you press the button, the sound mode changes as follows:

ROCK → POP → CLASSIC → JAZZ → FLAT (Canceled) → ROCK

ROCK: Boosts low and high frequency. Good for acoustic music.
POP: Good for vocal music or voice.
CLASSIC: Good for classical music.
JAZZ: Good for jazz music.
FLAT: Cancels the sound mode.
The SOUND indicator goes off from the display.

To check the sound mode currently selected, press SOUND MODE once while the SOUND indicator is lit.

Setting the Display Illumination

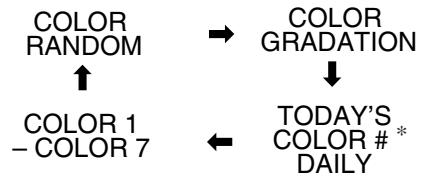
You can change the color and brightness of the display illumination.

To select the color pattern

You can select the color pattern by your preference.

While the unit is turned on, press COLOR repeatedly until the color pattern you want appears on the display.

- Each time you press the button, the color pattern changes as follows:



COLOR RANDOM: Changes the illumination color randomly every 2 seconds.

COLOR GRADATION: Changes the illumination color gradually.

TODAY'S COLOR #* DAILY: Changes the illumination color every day. You can select which color to start with. (See "To select TODAY'S COLOR" to the right column.)

* The color number of TODAY'S COLOR is selected from COLOR 1 – 7.

COLOR 1 – 7: You can adjust and register the color from COLOR 1 to 7. (See "To adjust and register the color" to the right column.)

- If you press COLOR while the unit is turned off, the display illumination will start (see page 9.)

More on the display illumination

- The colors shown on the display cannot always be reproduced precisely. Due to the circumstances (room temperature, etc.) where the unit is used, colors may vary slightly.
- When you change the color of the display, the display may seem to move back and forth; this is a characteristic of this unit and is not a malfunction.
- When a strong light strikes the display, the display happens to become dark, but this is not a malfunction.

To adjust and register the color

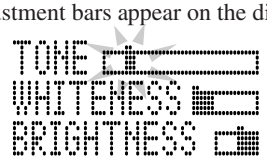
You can adjust the color by changing the tone, whiteness, brightness, and register into COLOR 1 to 7.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step ***1*** again.

On the remote control ONLY:

1 **Press COLOR repeatedly until the color number (COLOR 1 to 7) you want to adjust appears on the display.**

The adjustment bars appear on the display.



2 **Adjust the tone, whiteness, and brightness.**

1) Press → or ← to select the level you want and press SET.

- Each time you press SET, the adjustment items change.
- The tone can be adjusted in 14 patterns. The whiteness can be adjusted in 3 levels and the brightness can be adjusted in 2 levels.

2) Repeat 1) to adjust "WHITENESS" and "BRIGHTNESS."

- If the whiteness is set to the right end, the tone you adjusted will be no longer valid.

To select "TODAY'S COLOR"

The illumination color changes automatically each time the built-in clock becomes "0:00."

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step ***1*** again.

On the remote control ONLY:

1 **Press COLOR repeatedly until "TODAY'S COLOR" appears on the display.**

2 **Press → or ← to select the color number (COLOR 1 to 7.)**

To dim the display

This function can be used only while the unit is turned on.

On the remote control ONLY:

To dim the display, press DIMMER.

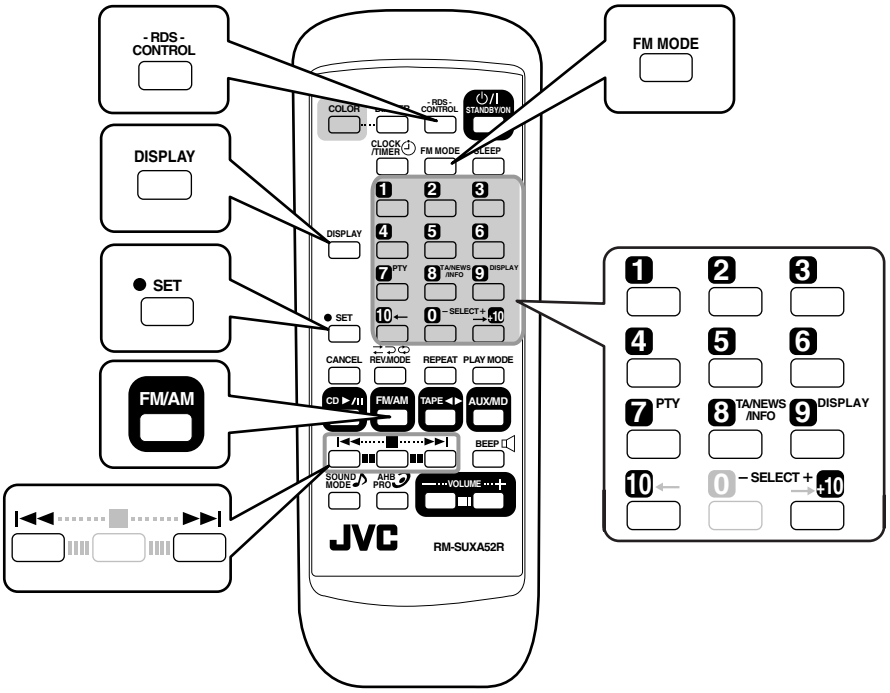
To brighten the display, press DIMMER again.

- Pressing COLOR also brightens the display.

Listening to FM and AM (MW/LW) Broadcasts

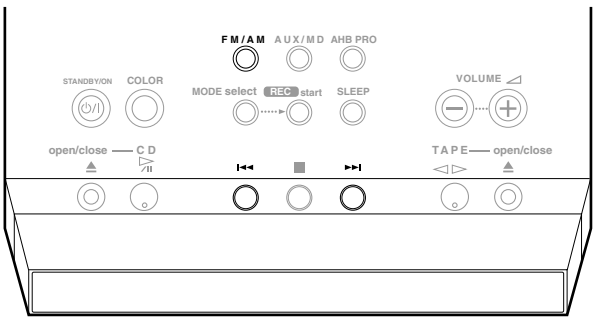
The buttons emphasized in the illustration below are used and explained in this section (pages 15 to 19.)

Remote control



For RDS (Radio Data System) operations, use the green letter buttons on the remote control.

Main unit (Top view)



Tuning in a Station

1 Press FM/AM repeatedly to select "FM" or "AM (MW/LW)."

The unit automatically turns on with the last selected station.

- Each time you press the button, the band alternates between FM and AM (MW/LW.)

2 Press and hold ►►| or |◄◄ until the station frequencies start changing on the display.

- ►►| : to increase the frequencies.
- |◄◄ : to decrease the frequencies.

The unit starts searching stations and stops when a station of sufficient signal strength is tuned in.

Ex. An FM station is tuned in.

- If an FM program is broadcast in stereo, the ST (stereo) indicator lights on the display.

To stop during searching, press ►►| or |◄◄.

notes **When you press ►►| or |◄◄ repeatedly**

The frequency changes step by step.

To change the FM reception mode

When an FM stereo broadcast is noisy or hard to receive, you can change the FM reception mode to improve the reception.

On the remote control ONLY:

Press FM MODE so that the MONO indicator lights on the display.

- Each time you press the button, the MONO indicator lights and goes off alternately.

When the MONO indicator is lit:
Reception improves though stereo effect is lost.

When the MONO indicator is not lit:
You can hear stereo sound when a program is broadcast in stereo.
The ST (stereo) indicator lights while receiving the FM stereo broadcast (only when the reception is good.)
In addition, static noise between stations will be erased while tuning.

Presetting Stations

You can preset 30 FM and 15 AM (MW/LW) stations manually.

In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step ***2*** again.

On the remote control ONLY:

1 Tune in a station you want to preset.

- See "Tuning in a Station" to the left column.

2 Press SET.

The preset number starts flashing as follows:

- **When you select an FM station in step *1***

- **When you select an AM (MW/LW) station in step *1***

Preset No. 1 always appears at first.

3 Press the number buttons to select a preset number.

Ex. For preset number 5, press 5.
For preset number 15, press +10, then 5.
For preset number 20, press +10, then 10.
For preset number 30, press +10, +10, then 10.

- You can also select the preset number by pressing ►►| or |◄◄.

4 Press SET again.

"STORED" appears on the display for a while.

The tuned station in step ***1*** is stored in the preset number selected in step ***3***.

- Storing a new station on a used number erases the previously stored one.

notes **When you unplug the AC power cord or if a power failure occurs**

The preset stations will be erased. If this happens, preset the stations again.

Tuning in a Preset Station

On the remote control ONLY:

1 Press FM/AM repeatedly to select "FM" or "AM (MW/LW)."

The unit automatically turns on with the last selected station.

- Each time you press the button, the band alternates between FM and AM (MW/LW.)

2 Press the number buttons to select a preset number.

Ex. For preset number 5, press 5.
For preset number 15, press +10, then 5.
For preset number 20, press +10, then 10.
For preset number 30, press +10, +10, then 10.

To check the clock time while listening to the broadcast

On the remote control ONLY:

Press DISPLAY (not on number buttons.)

- Each time you press the button, the source information and the clock time alternate on the display.

Receiving FM Stations with RDS

RDS (Radio Data System) allows FM stations to send an additional signal along with their regular program signals. For example, the stations send their station names, as well as information about what type of program they broadcast, such as sports or music, etc.
When tuned to an FM station which provides the RDS service, the RDS indication lights on the display.
With the unit, you can receive the following types of RDS signals.

PS (Program Service):
Shows commonly known station names.

PTY (Program Type):
Shows types of broadcast programs.

RT (Radio Text):
Shows text messages the station sends.

Enhanced Other Networks:
Provides the information about the types of the programs sent by other RDS stations.

notes More about RDS

- Some FM stations do not provide RDS signals.
- RDS services vary among FM RDS stations. For details on RDS services in your area, check with local radio stations.
- RDS may not work correctly if the received station is not transmitting the signals properly or if the signal strength is weak.

Changing the RDS Information

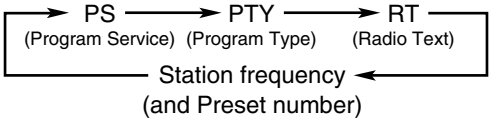
You can see RDS information on the display while listening to an FM station.

On the remote control ONLY:

1 Press and hold RDS CONTROL until you finish the following procedure.

2 Press DISPLAY (on number buttons.)

- Each time you press the button, the display changes as follows:



3 Release your finger from RDS CONTROL.

notes If no PS, PTY, or RT signals are sent by a station

"NO PS," "NO PTY," or "NO RT" appears on the display.

notes If the unit takes time to show the RDS information received from a station

"WAIT PS," "WAIT PTY," or "WAIT RT" may appear on the display.

Searching for Programs by PTY Codes (PTY Search)

One of the advantages of RDS is that you can locate a particular kind of program by specifying the PTY codes.

- For details on the PTY codes, see "Description of the PTY codes" on page 19.

To search for a program using the PTY codes

- You need to preset FM RDS stations (if not yet done, see page 15), and listen to the FM station.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step ***1*** again.

On the remote control ONLY:

1 **Press and hold RDS CONTROL until you finish the following procedure.**

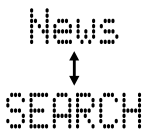
2 **Press PTY.**
"PTY SELECT" appears on the display.

3 **Press SELECT + / – to select a PTY code.**
The selected PTY code starts flashing on the display.

Ex. "News" is selected.

- For PTY code, see "Description of the PTY codes" on page 19.

4 **Press PTY again and release your finger from RDS CONTROL.**
While searching, the selected PTY code and "SEARCH" appear alternately on the display.



Ex. When "News" is selected as the PTY code.

The unit searches 30 preset FM stations, stops searching when it finds the one you have selected, and tunes in that station.

To continue searching after the first stop
Press PTY (while holding RDS CONTROL) again when the indications on the display are flashing.
If no program is found, "NOT FOUND" appears on the display and the unit returns to the last selected station.

To stop searching any time during the process
Press PTY (while holding RDS CONTROL) when searching.

Switching to a Program Type of Your Choice Temporarily

The Enhanced Other Networks function allows the unit to switch temporarily to a broadcast program of your choice (TA, News, or Info) from a different station.

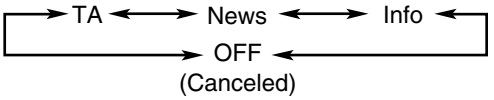
To activate this function
- This function only works when you are listening to a preset FM RDS stations providing this data.
- The indication lights while receiving a station with your choice data.
- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step ***1*** again.

On the remote control ONLY:

1 **Press and hold RDS CONTROL until you finish the following procedure.**

2 **Press TA/NEWS/INFO.**
The current indication starts flashing on the display.

3 **Press SELECT + / – repeatedly until the indication you want is selected.**
- Each time you press SELECT + / –, the indication changes as follows:



TA: Traffic Announcement
News: News
Info: Programs the purpose of which is to impart advice in the widest sense.
OFF: This function is canceled.

4 **Press TA/NEWS/INFO again.**
The indication disappears.
Now, this function is activated. See "How the Enhanced Other Networks function actually works" on page 18.

5 **Release your finger from RDS CONTROL.**

To cancel this function, select OFF in step ***3*** above.
- If you cancel this function while receiving a program selected by this function, the unit returns to the last selected station.

How the Enhanced Other Networks function actually works:

CASE 1

If there is no station broadcasting the program you have selected

The unit continues tuning in the current station.

⬇

When a station starts broadcasting the program you have selected, the unit automatically switches to the station. The indication of received PTY code starts flashing.

⬇

When the program is over, the unit goes back to the previously tuned station, but the Enhanced Other Networks function still remains activated.

CASE 2

If there is a station broadcasting the program you have selected

The unit tunes in the program. The indication of received PTY code starts flashing.

⬇

When the program is over, the unit goes back to the previously tuned station, but the Enhanced Other Networks function still remains activated.

CASE 3

If the FM station you are listening to is broadcasting the program you have selected

The unit continues to receive the station but the indication of received PTY code starts flashing.

⬇

When the program is over, the indication of received PTY code stops flashing and remains lit, but the Enhanced Other Networks function still remains activated.

Alarm function

If an “Alarm!” (Emergency) signal is received from a station while listening to the radio, the unit automatically switches to the station broadcasting the “Alarm!” signal, except when you are listening to non-RDS stations (all AM—MW/LW and some FM stations.)

Test function

The TEST signal is used for testing the “Alarm!” signal.
Therefore, it makes the unit work in the same way as the “Alarm!” signal does.
If a TEST signal is received from a station while listening to the radio, the unit automatically switches to the station broadcasting the TEST signal, except when you are listening to non-RDS stations (all AM—MW/LW and some FM stations.)

More about the Enhanced Other Networks function

- This data sent from some stations may not be compatible with this unit. In this case, this function may not work correctly.
- While listening to a program tuned in by this function, the station does not change even if another network station starts broadcasting a program of the same data.
- This function is canceled when you change the source to CD, TAPE, or AUX, while it is temporarily canceled when you change the source to AM (MW/LW.)
- This function is also canceled when you turn off the unit.

Description of the PTY codes:

News:	News.
Affairs:	Topical program expanding or enlarging upon the news—debate, or analysis.
Info:	Program the purpose of which is to impart advice in the widest sense.
Sport:	Program concerned with any aspect of sports.
Educate:	Educational programs.
Drama:	All radio plays and serials.
Culture:	Programs concerning any aspect of national or regional culture, including language, theater, etc.
Science:	Programs about natural sciences and technology.
Varied:	Used for mainly speech-based programs such as quizzes, panel games and personality interviews.
Pop M:	Commercial music of current popular appeal.
Rock M:	Rock music.
Easy M:	Current contemporary music considered to be “easy-listening.”
Light M:	Instrumental music, and vocal or choral works.
Classics:	Performances of major orchestral works, symphonies, chamber music, etc.
Other M:	Music not fitting into any of the other categories.
Weather:	Weather reports and forecasts.
Finance:	Stock market reports, commerce, trading etc.
Children:	Programs targeted at a young audience.
Social:	Programs about sociology, history, geography, psychology and society.
Religion:	Religious programs.
Phone In:	Involving members of the public expressing their views either by phone or at a public forum.
Travel:	Travel information.
Leisure:	Programs about recreational activities.
Jazz:	Jazz music.
Country:	Songs which originate from, or continue the musical tradition of the American Southern States.
Nation M:	Current popular music of the nation or region in that country’s language.
Oldies:	Music from the so-called “golden age” of popular music.
Folk M:	Music which has its roots in the musical culture of a particular nation.
Document:	Program concerning factual matters, presented in an investigative style.
TEST:	Broadcasts for testing emergency broadcast equipment or receiver.
Alarm!:	Emergency announcement.

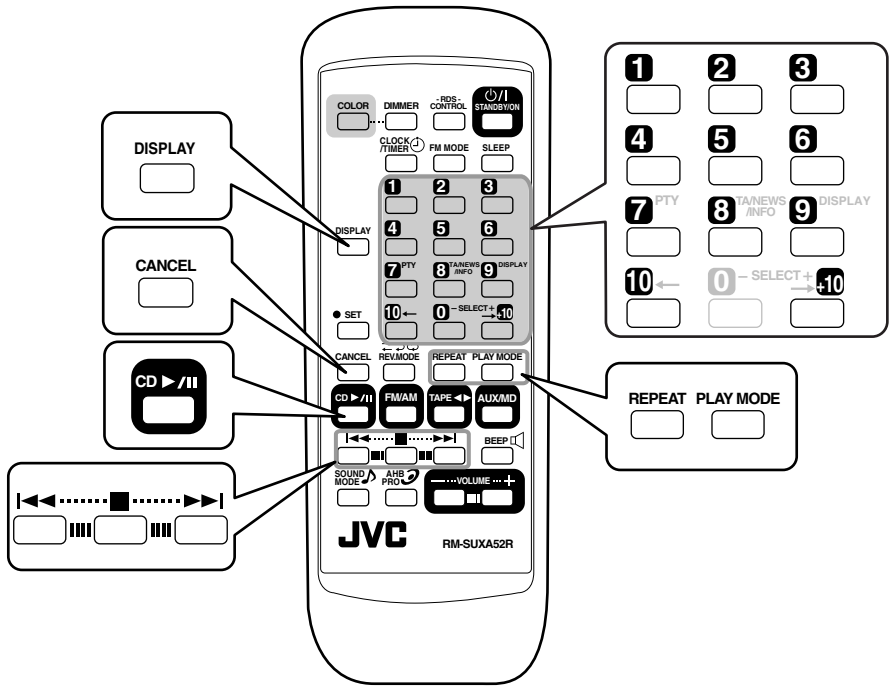
Classification of the PTY codes for some FM stations may be different from the above list.

Playing Back a CD

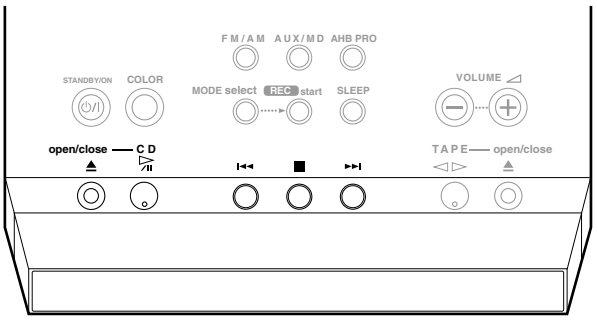
Continued

The buttons emphasized in the illustration below are used and explained in this section (pages 21 to 24.)

Remote control



Main unit (Top view)



Precautions on CD Playback

This unit has been designed to play back discs bearing the following logos:

CD ReWritable (CD-RW)

CD Recordable (CD-R)

Audio CD

When playing a CD-R or CD-RW

User-edited CD-Rs (CD-Recordable) and CD-RWs (CD-ReWritable) can be played back when they are already "**finalized**." If you play back an **unfinalized** discs, "UNFINALIZE" appears on the display.

- You can play back your original CD-Rs or CD-RWs recorded in **music CD format ONLY**. (If CD-RWs have been recorded in different format, erase all the data on CD-RWs completely before re-recording on the discs.)

STOP! DO NOT play back CD-Rs or CD-RWs including the sound files such as MP3.

- Before playing back CD-Rs or CD-RWs, read their instructions or cautions carefully.
- Some CD-Rs or CD-RWs may not be played back on this unit because of their disc characteristics, damage or stain on them, or if the player's lens is dirty.

Important notices:

- In general, you will have the best performance by keeping your CDs and the mechanism clean.
  - Store CDs in their cases, and keep them in cabinets or on shelves.
  - Keep the unit's disc tray closed when not in use.
- Continuous use of irregular shaped discs (heart-shape, octagonal, etc.) can damage the disc rotating mechanism.

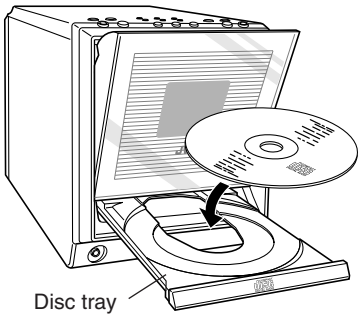
- CD-RWs may require a longer readout time. This is caused by the fact that the reflectance of CD-RWs is lower than for regular CDs.

Playing Back the Entire CD—Normal Play

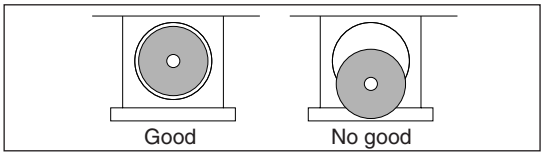
You can play a CD.

1 Press CD open/close ⏏ on the unit.

The unit automatically turns on, the electronic swing panel slides upward, and the disc tray comes out.



2 Place a CD correctly on the circle of the disc tray with its label side up.



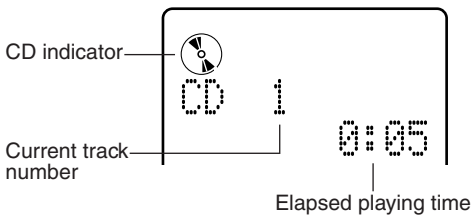
- When using a CD single (8 cm), place it on the inner circle of the disc tray.

3 Press CD ► / II.

The disc tray closes, then the electronic swing panel slides downward automatically.

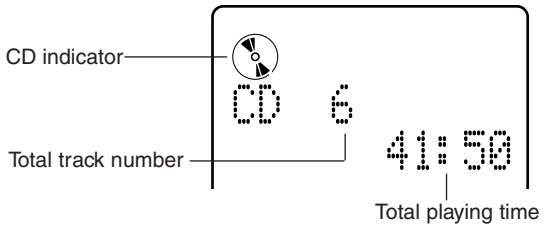
The CD indicator starts rotating on the display and CD playback starts from the first track.

- If you press CD open/close ⏏ again, the disc tray closes, and the electronic swing panel slides downward automatically. CD playback does not start until you press CD ► / II.

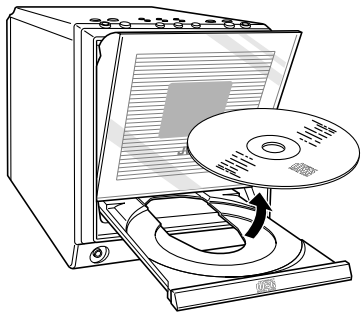


CD playback stops automatically after playing all the tracks on the CD.

To stop during play, press ■.
The following information appears.



To remove the disc, press CD open/close ⏏.
The electronic swing panel slides upward, and the disc tray comes out.



- After removing the CD, press CD open/close ⏏ again to close the electronic swing panel.

Basic CD Operations

While playing a CD, you can do the following operations.

To stop playback for a moment

Press CD ► / II.
The elapsed playing time starts flashing on the display.
To resume playback, press CD ► / II again.

To locate a particular point in a track during play

Press and hold ►►I or I◄◄.

- ►►I : Fast-forwards the tracks.
- I◄◄ : Fast-reverses the tracks.

To go to another track

Press ►►I or I◄◄ repeatedly.

- ►►I : Skips to the beginning of the next or succeeding tracks.
- I◄◄ : Goes back to the beginning of the current or previous tracks.

To go to another track directly using the number buttons

On the remote control ONLY:
Pressing the number button(s) allows you to start playing the track number you want.

Ex.: For track number 5, press 5.
For track number 15, press +10, then 5.
For track number 20, press +10, then 10.
For track number 32, press +10, +10, +10, then 2.

To check the clock time while playing back CD

On the remote control ONLY:
Press DISPLAY (not on number buttons.)

- Each time you press the button, the source information and the clock time alternate on the display.

Programing the Playing Order of the Tracks —Program Play

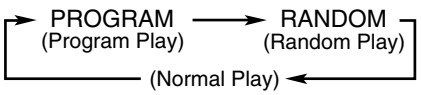
You can arrange the order in which the tracks play before you start playing. You can program up to 32 tracks.

On the remote control ONLY:

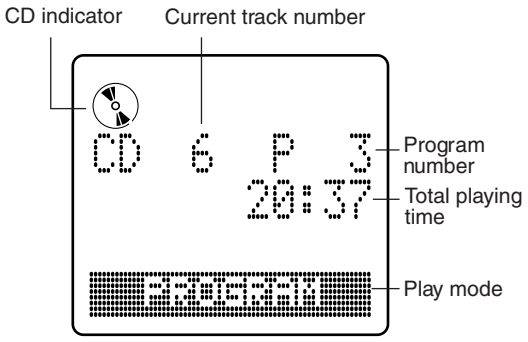
1 Load a CD.

2 Press CD ► / II, then ■.
The source is changed to "CD."

3 Press PLAY MODE repeatedly until "PROGRAM" appears on the display.
- Each time you press the button, play mode changes as follows:



4 Press the number buttons to select the tracks.
- For how to use the number buttons, see "To go to another track directly using the number buttons" on page 22.



5 Press CD ► / II.
The tracks are played in the order you have programed. Program Play ends when all the tracks are played once.

To stop during play, press ■.

To exit from Program Play, press PLAY MODE repeatedly so that the unit enters the other play modes (Random Play or Normal Play) before or after play.

To check the program contents

Before playing, you can check the program contents by pressing I◄◄ or ►►I.
- I◄◄ : Shows the programed tracks in the reverse order.
- ►►I : Shows tracks in the programed order.

To modify the program

Before or after playing, you can erase the last programed track by pressing CANCEL. Each time you press the button, the last programed track is erased from the program.

To add tracks in the program before you start play, press the number buttons to select track numbers you want to add.

To erase the entire program, press CD open/close ▲ to eject the CD.
- Turning off the unit will also erase the program.

If you try to program a 33rd step
"MEMORY FULL" will appear on the display.

If your entry is ignored
You have tried to program a track number that does not exist on the CD (for example, selecting track 14 on a CD that only has 12 tracks.) Such entries are ignored.

If the total playing time is 100 minutes (one hour and 40 minutes) or more
The total playing time will not be shown. ("– – : – –" will appear.)

Playing at Random—Random Play

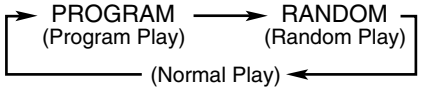
The tracks of a loaded CD will play at random.

On the remote control ONLY:

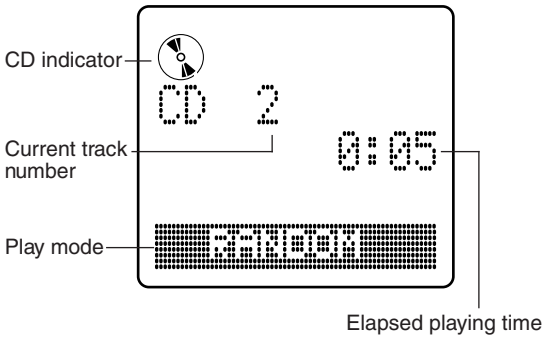
1 **Load a CD.**

2 **Press CD ► / II, then ■.**
The source is changed to "CD."

3 **Press PLAY MODE repeatedly until "RANDOM" appears on the display.**
- Each time you press the button, play mode changes as follows:



4 **Press CD ► / II.**
The tracks are played at random.



Random Play stops when all the tracks are played once.

To skip the current track, press ►►I.
- You cannot go back to the previous tracks by pressing I◄◄.

To stop during play, press ■.

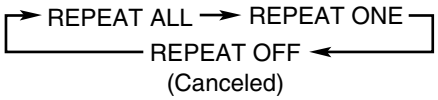
To exit from Random Play, press PLAY MODE repeatedly so that the unit enters the other play modes (Normal Play or Program Play) before or after play.

Repeating Tracks—Repeat Play

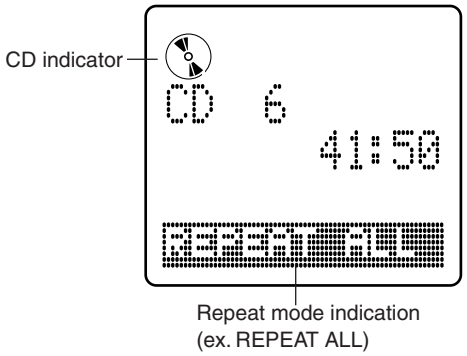
You can repeat all tracks (regardless of play mode), or also a single track as many times as you like.

On the remote control ONLY:

To repeat play, press REPEAT before or during play.
- Each time you press the button, Repeat Play changes as follows:



REPEAT ALL : Repeats all the tracks on the CD (in Normal or Random Play), or all the tracks in Program Play.
REPEAT ONE : Repeats only one track.
REPEAT OFF : Cancels Repeat Play.



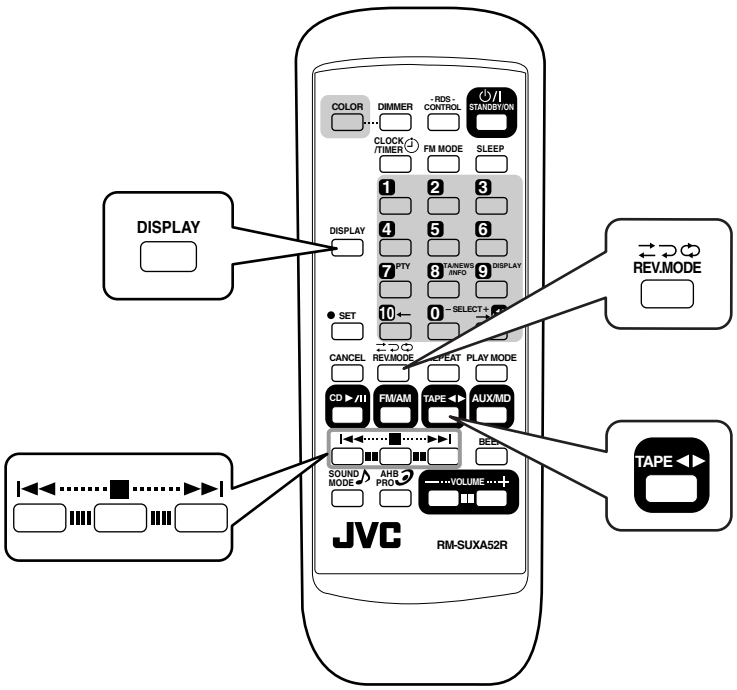
- If play mode is either Program or Random Play, the repeat mode indication appears on the display for a while each time you press REPEAT.

To exit from Repeat Play, press REPEAT repeatedly until "REPEAT OFF" appears on the display.

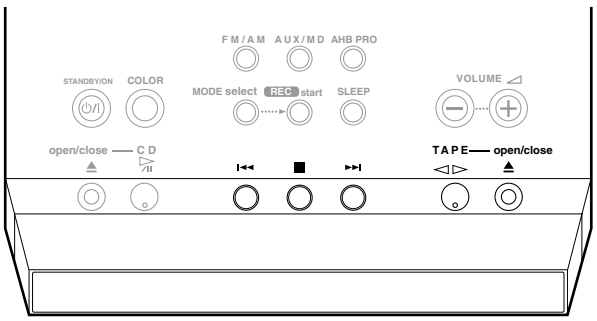
Playing Back a Tape

The buttons emphasized in the illustration below are used and explained in this section (page 26.)

Remote control



Main unit (Top view)

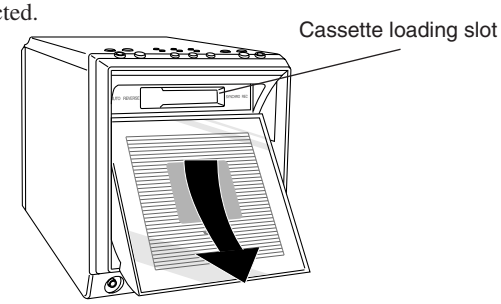


Playing Back a Tape

You can play back type I, II, and IV tapes.

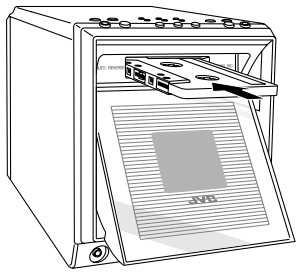
1 Press TAPE open/close ⏏ on the unit.

The unit automatically turns on, the electronic swing panel slides downward, and the cassette loading slot appears.
If a cassette is already in the cassette loading slot, it is ejected.



2 Insert a cassette with the exposed part facing left.

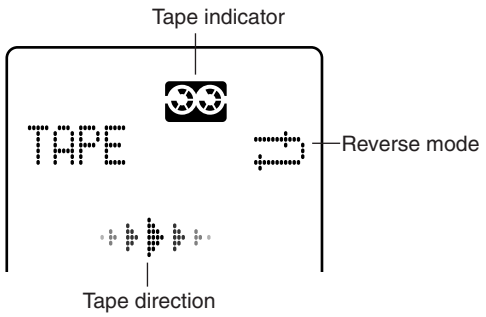
The cassette is pulled in, then the electronic swing panel slides upward automatically.



3 Press TAPE ◄ ►.

The tape starts playing.

- Each time you press the button, the tape direction changes as follows:
  - ▸▸ : Plays the front side.
  - ◂◂ : Plays the reverse side.



When the tape plays to the end, the cassette deck automatically stops if the reverse mode is set to ⇄ or ⇆. (See "To play both sides—Reverse Mode".)

To stop during play, press ■.

To fast-wind or rewind the tape, press ►►| or |◄◄.

- **When the tape direction is ▸▸**
  - ►►| : Fast-winds the tape.
  - |◄◄ : Rewinds the tape.
- **When the tape direction is ◂◂**
  - |◄◄ : Fast-winds the tape.
  - ►►| : Rewinds the tape.

To eject the cassette, press TAPE open/close ⏏.

- After ejecting the cassette, press TAPE open/close ⏏ again to close the electronic swing panel.

STOP! DO NOT press TAPE open/close ⏏ during tape play.

To play both sides—Reverse Mode

You can set the cassette deck to play just one side of a tape, both sides once, or both sides continuously.

- You can set this mode only when a cassette is already in the cassette deck.

On the remote control ONLY:
Press REV. MODE.

- Each time you press the button, the reverse mode changes as follows:
  - ⇄ : To only play back one side (front or reverse.)
  - ⇆ : To play back the front and reverse sides once.
  - ⟲ : To play back both front and reverse sides continuously.

To check the clock time while playing back a tape

On the remote control ONLY:
Press DISPLAY (not on number buttons.)

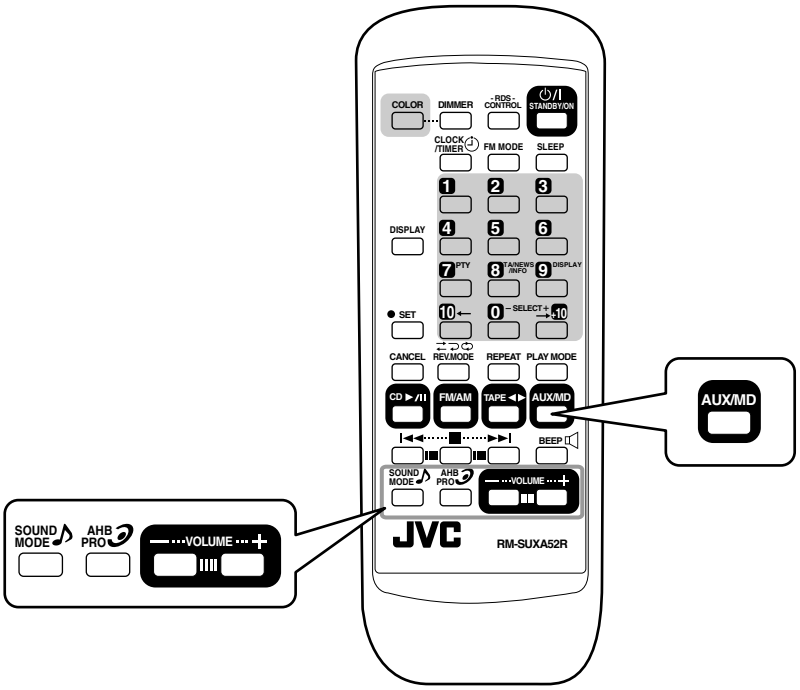
- Each time you press the button, the source information and the clock time alternate on the display.

notes The use of the C-120 or thinner tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch rollers and the capstans.

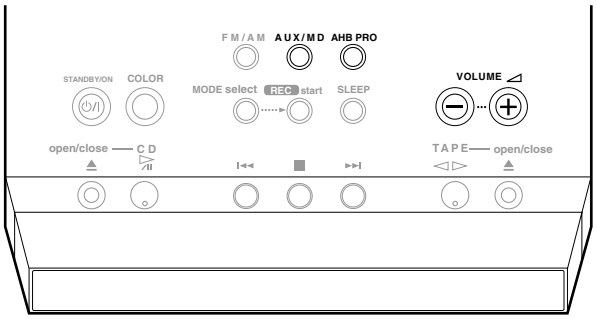
Using External Equipment

The buttons emphasized in the illustration below are used and explained in this section (page 28.)

Remote control



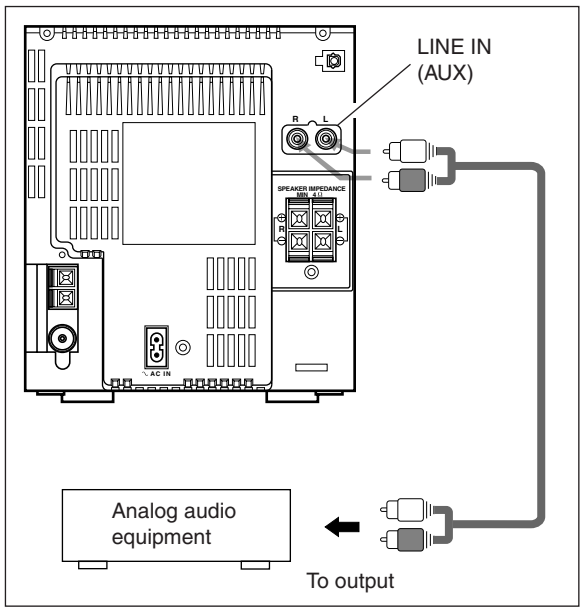
Main unit (Top view)



Listening to External Equipment

You can listen to external equipment such as an MD recorder.

- First make sure that the external equipment is properly connected as follows:



1 Press AUX/MD.

"AUX" appears on the display.

2 Adjust the volume level to the minimum position.

3 Start playing the external equipment.

- For operation of the external equipment, refer to its manual.

4 Press VOLUME + / – to adjust your desired listening level.

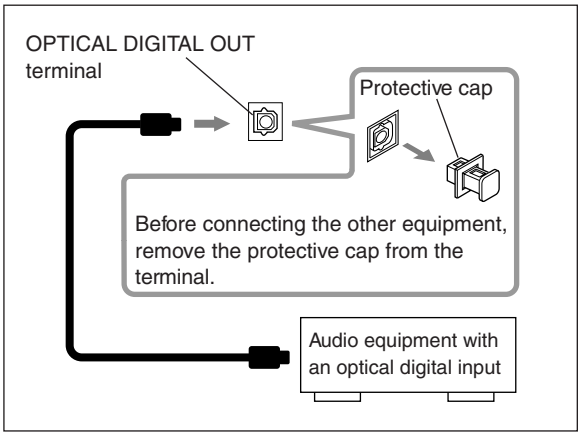
5 Apply sound effects, if you wish.

- Press AHB PRO if you want to reinforce the bass sound.
  (See "Reinforcing the Bass sound" on page 12.)
- Press SOUND MODE if you want to control the tone.
  (See "Selecting the Sound modes" on page 12.)

Recording from This Unit to External Equipment

You can record from this unit to external equipment connected to the OPTICAL DIGITAL OUT terminal of this unit, such as an MD recorder.

- The recording level is not affected by the VOLUME level and sound effect, either.
- First make sure that the external equipment is properly connected as follows:



1 Prepare for recording on the external equipment.

2 Start recording on the external equipment.

- For operation of the external equipment, refer to its manual.

3 Play the CD Player of this unit.

- For the CD operation, see page 20 to 24.

To check the clock time while listening to the external equipment

<u>On the remote control ONLY:</u>

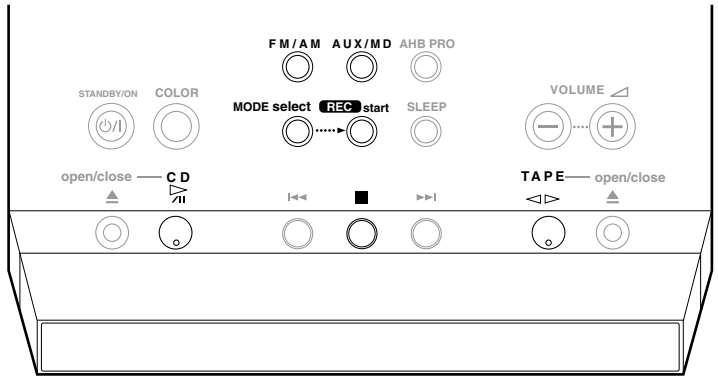
Press DISPLAY (not on number buttons.)

- Each time you press the button, "AUX" and the clock time alternate on the display.

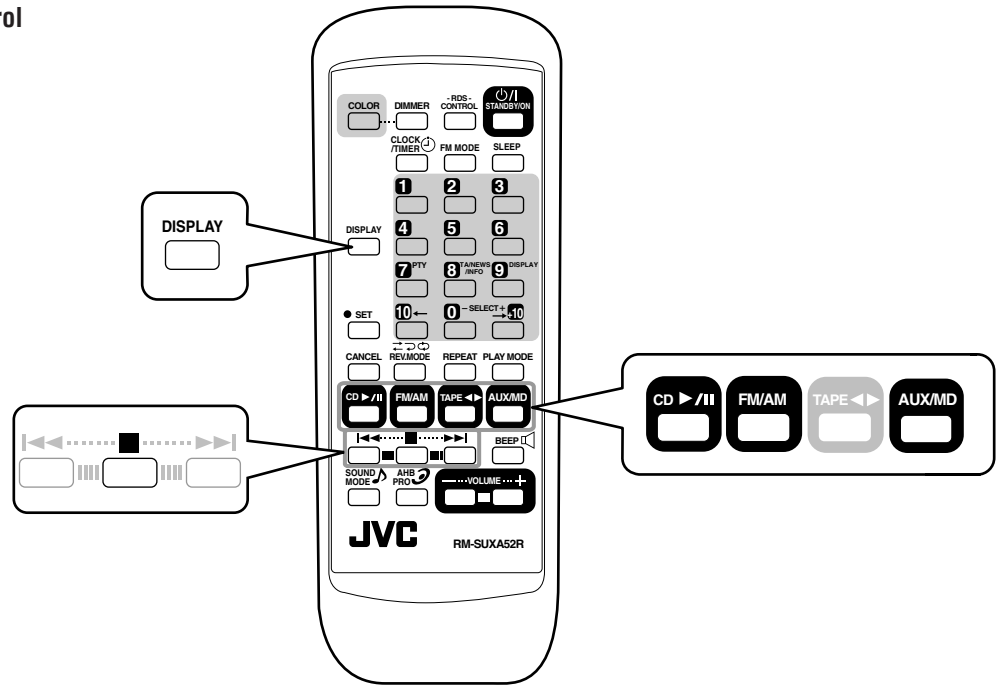
Recording on Tapes

The buttons emphasized in the illustration below are used and explained in this section (pages 31 to 32.)
For recording operations, mainly use the buttons on the unit.

Main unit (Top view)



Remote control

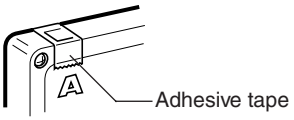


Before You Start Recording

- **It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic embodied therein.**
- The recording level is automatically set correctly, so it is not affected by the VOLUME control. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- While recording, you can hear sound mode effect and/or the Active Hyper Bass PRO effect through the speakers or headphones. However, the sound is recorded without these effects (see pages 12.)
- While recording, the display lights red.
- If recordings you have made have excessive noise or static, the unit may be too close to a TV. Place the unit away from the TV.
- You can use type I tape for recording.

To protect your recordings

Cassettes have two small tabs on the back to protect unexpected erasure or recording.
To protect your recording, remove these tabs.
To re-record on a protected tape, cover the holes with adhesive tape.



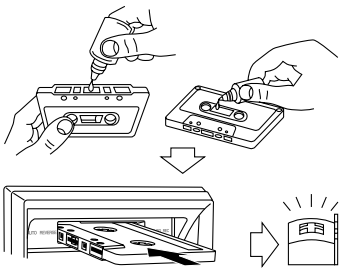
notes

The use of the C-120 or thinner tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch rollers and the capstans.

To keep the best recording and playback sound quality

You need to clean the heads.

- Clean the heads after every 10 hours of use with a wet-type head cleaning tape (available at electronic and audio shops.)
  When the head becomes dirty, the following symptoms will occur:
  – Sound quality is reduced.
  – Sound level decreases.
  – Sound drops out.
- Do not play dirty or dusty tapes.
- Do not touch the highly-polished head with any metallic or magnetic tools.



To demagnetize the head

Turn off the unit, and use a head demagnetizer (available at electronic and audio shops.)

notes

At the start and end of cassette tapes

There is leader tape which cannot be recorded onto. Thus, when recording CDs or radio broadcasts, wind the leader tape first to ensure that the recording will be made without any music part lost.

What's a Recording Mode and Reverse Mode ?

You have two methods (MODE 1/2 and 2/2) to record from some sources onto a tape.

Recording mode	Reverse mode
MODE 1/2	⇄
MODE 2/2	→

⇄ : To record the front and reverse sides once.

→ : To only record one side (front or reverse.)

In the following procedure, MODE 1/2 (⇄) is selected as a recording method.

Recording FM/AM (MW/LW) Broadcasts

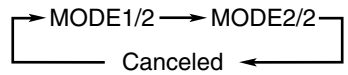
You can record from an FM or AM (MW/LW) broadcast onto a tape.

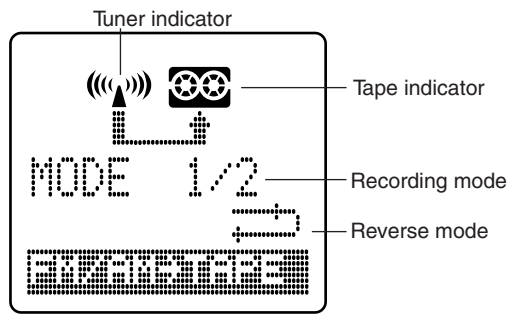
On the unit ONLY:

1 **Insert a recordable cassette into the cassette loading slot.**
- Press TAPE ◁ ▷ to adjust the tape direction to " ⫞⫞ " then ■.

2 **Tune in a station you want.**
- For more detailed operations, see pages 15 and 16.

3 **Press MODE select to select a recording mode.**
- Each time you press the button, recording mode changes as follows:





Ex.When selecting MODE 1/2

4 **Press REC start.**

The recording starts.

To stop recording, press ■.

To check the clock time while recording from the broadcast onto a tape

On the remote control ONLY:

Press DISPLAY (not on number buttons.)
- Each time you press the button, the recording information and the clock time alternate on the display.

Recording CD—CD Synchronized Recording

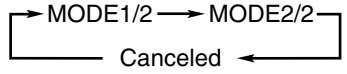
You can record from a CD onto a tape.
Using these synchronized recording methods, you can start and stop CD play and tape recording at the same time.

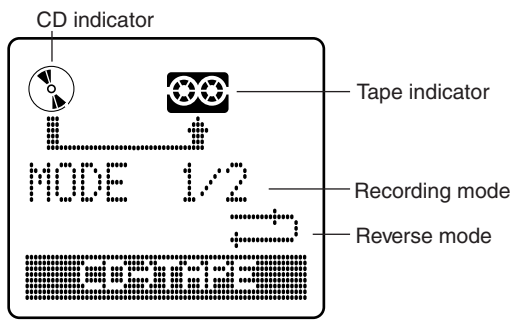
On the unit ONLY:

1 **Insert a recordable cassette into the cassette loading slot.**
- Press TAPE ◁ ▷ to adjust the tape direction to " ⫞⫞ " then ■.

2 **Prepare a CD.**
- After loading the CD, press CD ▷ / ❚❚, then ■ before going to the next step.
- You can make a program (see page 23) or select Random Play (see page 24) if you want.

3 **Press MODE select to select a recording mode.**
- Each time you press the button, recording mode changes as follows:





Ex. When selecting MODE 1/2

4 **Press REC start.**

Both the CD play and the recording start.
- After the recording, both the CD player and the cassette deck stop automatically.

To stop recording, press ■.
CD play stops first, then after 4 seconds, the recording stops.

To record a single track during play or pause

While playing back you want to record, perform steps ***3*** and ***4***.

The playback of the track is stopped, and then starts from the beginning again. This time, the cassette deck starts recording the track.

- After the track is recorded, both the CD player and the cassette deck stop automatically.

To check the clock time while recording from the CD onto a tape

On the remote control ONLY:

Press DISPLAY (not on number buttons.)

- Each time you press the button, the recording information and the clock time alternate on the display.

Recording External Equipment

You can record from external equipment onto a tape.
The external equipment needs to be connected to LINE IN (AUX) terminal of this unit (for how to connect, see page 9.)

On the unit ONLY:

1 **Insert a recordable cassette into the cassette loading slot.**

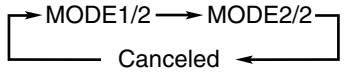
- Press TAPE ◁ ▷ to adjust the tape direction to " ▸▸ " then ■.

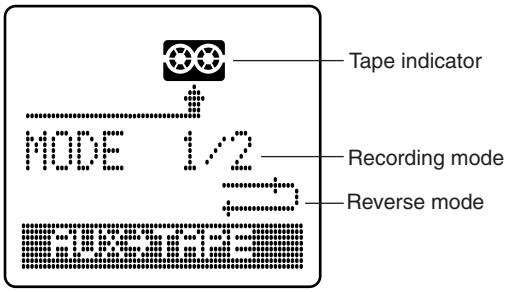
2 **Press AUX/MD.**

The source is changed to "AUX."

3 **Press MODE select to select a recording mode.**

- Each time you press the button, recording mode changes as follows:





Ex. When selecting MODE 1/2

4 **Press REC start.**

The recording starts.

5 **Start playback on the external equipment.**

To stop recording, press ■.

To check the clock time while recording from the external equipment onto a tape

On the remote control ONLY:

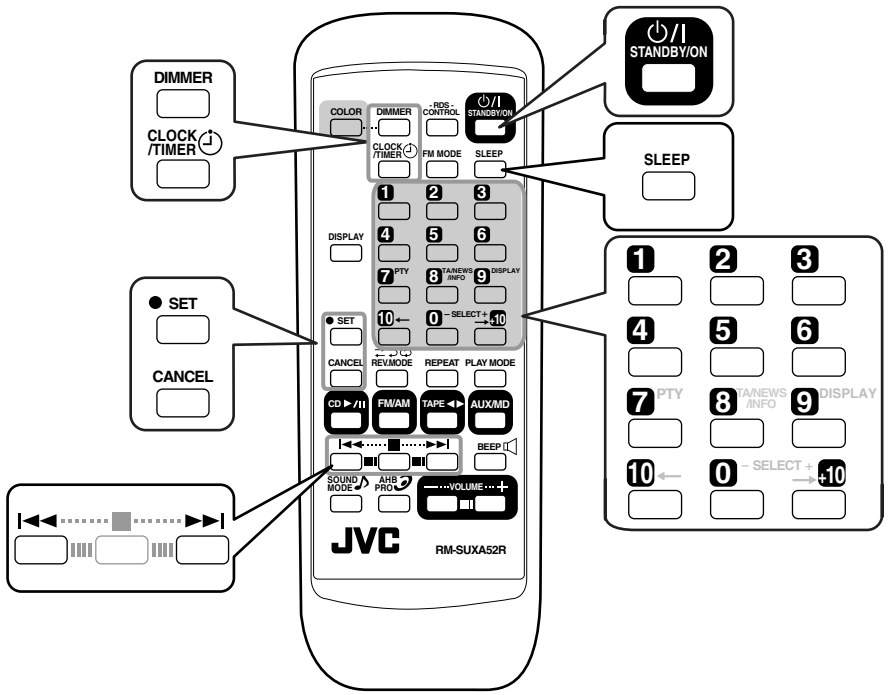
Press DISPLAY (not on number buttons.)

- Each time you press the button, the recording information and the clock time alternate on the display.

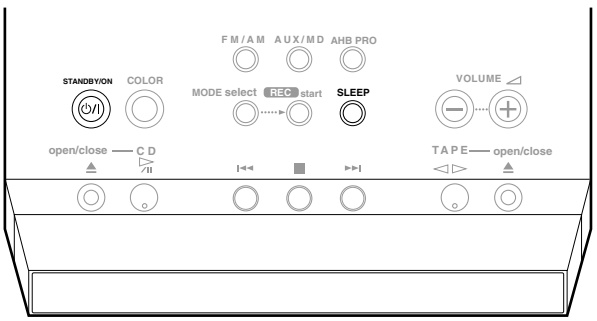
Using the Timers

The buttons emphasized in the illustration below are used and explained in this section (pages 34 to 37.)

Remote control



Main unit (Top view)



There are three timers available—Recording Timer, Daily Timer, and Sleep Timer.

You need to set the built-in clock to use these timers.

Setting the Clock

You can set the clock whether the unit is turned on or off (on standby.)

On the remote control ONLY:

1 **Press CLOCK/TIMER repeatedly until "TIME ADJUST" appears on the display.**
The hour digit starts flashing on the display.

2 **Press ►►I or I◄◄ repeatedly to adjust the hour.**
- When you press and hold the button, the hour digit changes continuously.

3 **Press SET to set the hour.**
The minute digit starts flashing on the display.

Ex. When pressing SET after adjusting the hour to 10.

- If you want to correct the hour again, press CANCEL.
  The hour digit starts flashing again.

4 **Press ►►I or I◄◄ repeatedly to adjust the minute.**
- When you press and hold the button, the minute digit changes continuously.

5 **Press SET to finish setting the clock.**
The built-in clock starts.

Ex. When pressing SET after adjusting the minute to 10.

notes **To adjust the clock again**
Press CLOCK/TIMER repeatedly in step ***1*** until "TIME ADJUST" appears on the display, then perform steps ***2*** to ***5*** above.

notes **To check the clock time by sound while the unit is turned off (on standby)**
Press DIMMER while the key-touch tone is set to on. The clock time will be indicated by sound.

notes **When you unplug the AC power cord or if a power failure occurs**
The clock setting will be reset to "0:00." If this happen, you need to set the clock again.

Using Recording Timer

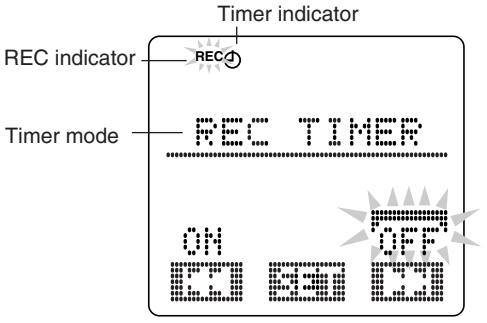
With Recording Timer, you can make an unattended recording.
- You can set Recording Timer whether the unit is turned on or off (on standby.)
- To correct a misentry any time during the setting process, press CANCEL.

How Recording Timer actually works

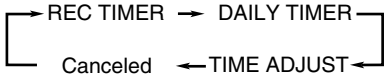
The unit automatically turns on, and starts recording on a tape when the timer-on time comes. (While Recording Timer is working, the REC indicator keeps flashing.) Then, when the timer-off time comes, the recording stops and the unit automatically turns off (on standby.)
Recording Timer works only once, but the timer settings remain stored in memory unless you reset them or unplug the AC power cord.

On the remote control ONLY:

1 **Press CLOCK/TIMER repeatedly until "REC TIMER" appears on the display.**
The timer ( ) indicator lights, and the REC indicator starts flashing on the display.



- Each time you press the button, the timer mode changes as follows:

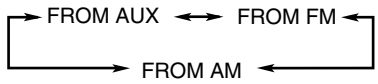


2 Press ⏮ to select "ON," then press SET.

3 Select the source to record.

1) Press ⏭ or ⏮ repeatedly to select the source.

- Each time you press the buttons, the source changes as follows:



2) Press SET.

- **When you have selected "FROM FM" or "FROM AM,"** select a preset number by pressing ⏭ or ⏮ (for how to preset stations, see page 15.)
- **When you have selected "FROM AUX,"** the external equipment also needs to have the timer function.

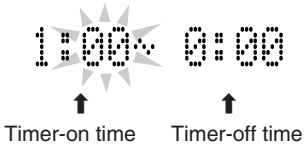
3) Press SET again.

4 Select the reverse mode either ⇄ or ⇄ by pressing ⏭ or ⏮, then press SET.

- For reverse mode, see page 31.

5 Set the timer-on and timer-off time.

1) Press ⏭ or ⏮ repeatedly to select the hour of the timer-on time, then press SET.
The minute digit of timer-on time starts flashing on the display.



2) Press ⏭ or ⏮ repeatedly to select the minute of the timer-on time, then press SET.
The hour digit of timer-off time starts flashing on the display.

3) Press ⏭ or ⏮ repeatedly to select the hour of the timer-off time, then press SET.
The minute digit of timer-off time starts flashing on the display.

4) Press ⏭ or ⏮ repeatedly to select the minute of the timer-off time, then press SET.

- The setting you have done are shown on the display in sequence.
- The REC indicator stops flashing and remains lit.

6 Press ⏻/I STANDBY/ON to turn off the unit (on standby) if necessary.

- No sounds come out while timer recording is performed.

To turn off the Recording Timer after its setting is done,

1 Press CLOCK/TIMER repeatedly until "REC TIMER" appears on the display.
2 Press ⏭ to select "OFF," then press SET.
The timer (⏲) and REC indicators go off from the display.

To turn on the Recording Timer again, press ⏮ to select "ON," then press SET.
The timer (⏲) and REC indicators light on the display.
The settings you have done are shown on the display for your confirmation.

If you stop recording during Recording Timer

The recording is canceled, but when the timer-off time comes, the unit turns off.

When you unplug the AC power cord or if a power failure occurs

The timer setting, the tuner preset stations and other settings will be erased.

Using Daily Timer

With Daily Timer, you can wake up to your favorite music or radio program.

- You can set Daily Timer whether the unit is turned on or off (on standby.)
- To correct a misentry any time during the setting process, press CANCEL.

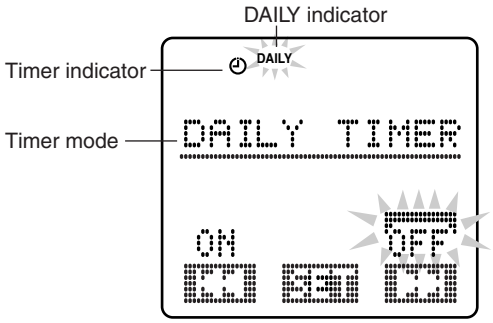
How Daily Timer actually works

The unit automatically turns on, and starts playing the specified source when the timer-on time comes. (While Daily Timer is working, the DAILY indicator keeps flashing.) Then, when the timer-off time comes, the unit automatically turns off (on standby.)
Daily Timer works every day, and the timer settings remain stored in memory unless you reset them or unplug the AC power cord.

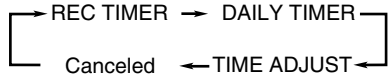
On the remote control ONLY:

1 Press CLOCK/TIMER repeatedly until "DAILY TIMER" appears on the display.

The timer ( ) indicator lights, and the DAILY indicator starts flashing on the display.



- Each time you press the button, the timer mode changes as follows:

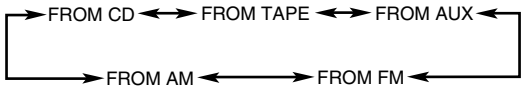


2 Press I◄◄ to select "ON," then press SET.

3 Select the source to play.

1) Press ►►I or I◄◄ repeatedly to select the source.

- Each time you press the buttons, the source changes as follows:



2) Press SET.

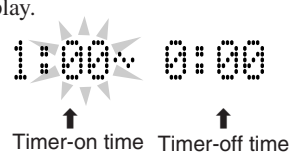
- **When you have selected "FROM FM" or "FROM AM,"** select a preset number by pressing ►►I or I◄◄ (for how to preset stations, see page 15.)
- **When you have selected "FROM AUX,"** the external equipment also needs to have the timer function.

3) Press SET again.

4 Set the timer-on and timer-off time.

1) Press ►►I or I◄◄ repeatedly to select the hour of the timer-on time, then press SET.

The minute digit of timer-on time starts flashing on the display.



2) Press ►►I or I◄◄ repeatedly to select the minute of the timer-on time, then press SET.

The hour digit of timer-off time starts flashing on the display.

3) Press ►►I or I◄◄ repeatedly to select the hour of the timer-off time, then press SET.

The minute digit of timer-off time starts flashing on the display.

4) Press ►►I or I◄◄ repeatedly to select the minute of the timer-off time, then press SET.

5 Adjust the volume level.

1) Press ►►I or I◄◄ repeatedly to adjust the volume level.

- You can adjust the volume level within the range of 0 (silent) to 40 (maximum.)
- When you select "VOLUME – –," the volume is set to the current volume level.

2) Press SET.

- The settings you have done are shown on the display in sequence.
- The DAILY indicator stop flashing and remains lit on the display.

6 Press ⏻/I STANDBY/ON to turn off the unit (on standby.)

To turn off the Daily Timer after its setting is done,

1 Press CLOCK/TIMER repeatedly until "DAILY TIMER" appears on the display.

2 Press ►►I to select "OFF," then press SET.

The timer ( ) and DAILY indicators go off from the display.

To turn on the Daily Timer again, press I◄◄ to select "ON," then press SET.

The timer ( ) and DAILY indicators light on the display.

The settings you have done are shown on the display for your confirmation.

If the unit is kept turned on until the timer-on time comes

Daily Timer does not work at all.

Daily Timer will be canceled and the unit will not turn off automatically in the following:

- When you change the source.

When you unplug the AC power cord or if a power failure occurs

The timer setting, the tuner preset stations and other settings will be erased.

Using Sleep Timer

With Sleep Timer, you can fall asleep to your favorite music.

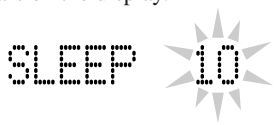
- You can set Sleep Timer while the unit is turned on.

How Sleep Timer actually works

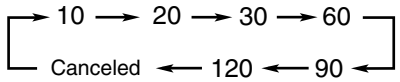
The unit automatically turns off after the specified time length passes.

1 Press SLEEP repeatedly until the time length you want appears on the display.

The timer ( ) indicator starts flashing and "SLEEP 10" appears on the display.



- Each time you press the button, the time length changes as follows:



2 Press SET or wait for about 5 seconds.

The display dims.
"SLEEP" appears on the display.

To check the remaining time until the shut-off time, press SLEEP once. The remaining time until the shut-off time appears for about 5 seconds.

To change the shut-off time, press SLEEP repeatedly until the time length you want appears.

To cancel the setting, press SLEEP repeatedly until "SLEEP" disappears from the display.

Sleep Timer will be canceled in the following:

- When you turn off the unit.
- When you operate other timer settings.
- When you adjust the clock.

If "CLOCK ADJUST" appears on the display

You need to set the built-in clock (see page 34.)

To sleep with the Sleep Timer and wake up with the Daily Timer

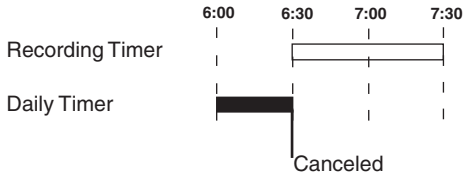
The unit turns off when the shut-off time comes (set by the Sleep Timer), and turns on when the timer-on time comes (set by the Daily Timer.)

1 **Set the Daily Timer as explained on pages 35 and 36.**
2 **Start playing back any source you want to listen to before sleep.**
3 **Set the Sleep Timer.**

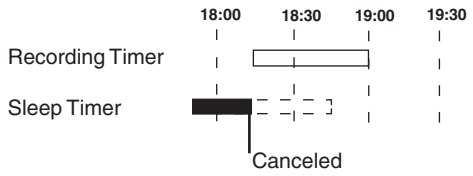
Timer Priority

Since each timer can be set separately, you may wonder what happens if the setting for these timers overlaps. Here are the priorities for each timer.

- **A timer with the later timer-on time has priority.**
  If Recording Timer is set to come on while Daily Timer is operating, Daily Timer is canceled.



If Recording Timer is set to come on while Sleep Timer is operating, Sleep Timer will not shut off the power even if the shut-off time comes.



Maintenance

To get the best performance of the unit, keep your discs, tapes, and mechanism clean.

General Notes

In general, you will have the best performance by keeping your discs and the mechanism clean.

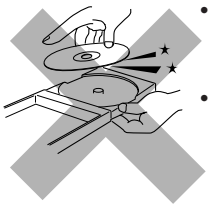
- Store discs in their cases, and keep them in cabinets or on shelves.
- Keep the electronic swing panel closed when not in use.

Cleaning the unit

- **Stains on the unit**
  Should be wiped off with a soft cloth. If the unit is heavily stained, wipe it with a cloth soaked in water-diluted neutral detergent and wrung well, then wipe clean with a dry cloth.
- **Avoid the following since they may cause damage to the unit.**
  - DO NOT wipe it with a hard cloth.
  - DO NOT wipe it strong.
  - DO NOT wipe it with thinner or benzine.
  - DO NOT apply any volatile substance such as insecticides to it.
  - DO NOT allow any rubber or plastic to remain in contact with it for a long time.

Handling discs

- Remove the disc from its case by holding it at the edge while pressing the center hole lightly.
- Do not touch the shiny surface of the disc, or bend the disc.
- Put the disc back in its case after use to prevent warping.

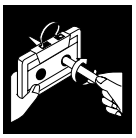


- Be careful not to scratch the surface of the disc when placing it back in its case.
- Avoid exposure to direct sunlight, temperature extremes and moisture.

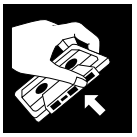
To clean the disc
Wipe the disc with a soft cloth in a straight line from center to edge.

DO NOT use any solvent—such as conventional record cleaner, spray, thinner, or benzine—to clean the disc.

Handling cassette tapes



- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose, it may get stretched, cut, or caught in the cassette.



- Be careful not to touch the tape surface.

- Avoid the following places to store the tape:
  - In dusty places
  - In direct sunlight or heat
  - In moist areas
  - On a TV or speaker
  - Near a magnet

Specifications

UX-A52R (CA-UXA52R and SP-UXA52)

Amplifier

Output Power (IEC 268-3/DIN):
40 W (20 W + 20 W) at 4 Ω (10 % THD)

Audio input sensitivity/Impedance (at 1 kHz)
LINE IN (AUX): 500 mV/47 kΩ

Digital output – OPTICAL DIGITAL OUT
Signal wave length: 660 nm
Output level: –21 dBm to –15 dBm

Speaker Terminals: 4 Ω — 16 Ω

Tuner

FM tuning range:
87.50 MHz — 108.00 MHz

AM (MW/LW) tuning range:
MW: 522 kHz — 1 629 kHz
LW: 144 kHz — 288 kHz

CD player

CD capacity: 1 CD

Dynamic range: 85 dB

Signal-to-noise ratio: 90 dB

Wow and flutter: Immeasurable

Cassette deck

Frequency response
Normal (type I): 60 Hz — 14 000 Hz

Wow and flutter
0.15 % (WRMS)

General

Power requirement: AC 230 V ∿, 50 Hz

Power consumption: 45 W (at operation)
1.2 W (on standby)

Dimensions (approx.):
163 mm x 200 mm x 329 mm (W/H/D)

Mass (approx.): 4.3 kg

Speaker Section

Speakers: Woofer 10 cm, Tweeter 4 cm

Impedance: 4 Ω

Dimensions (approx.):
140 mm x 200 mm x 249 mm (W/H/D)

Mass (approx.):2.0 kg

Supplied accessories

See page 6.

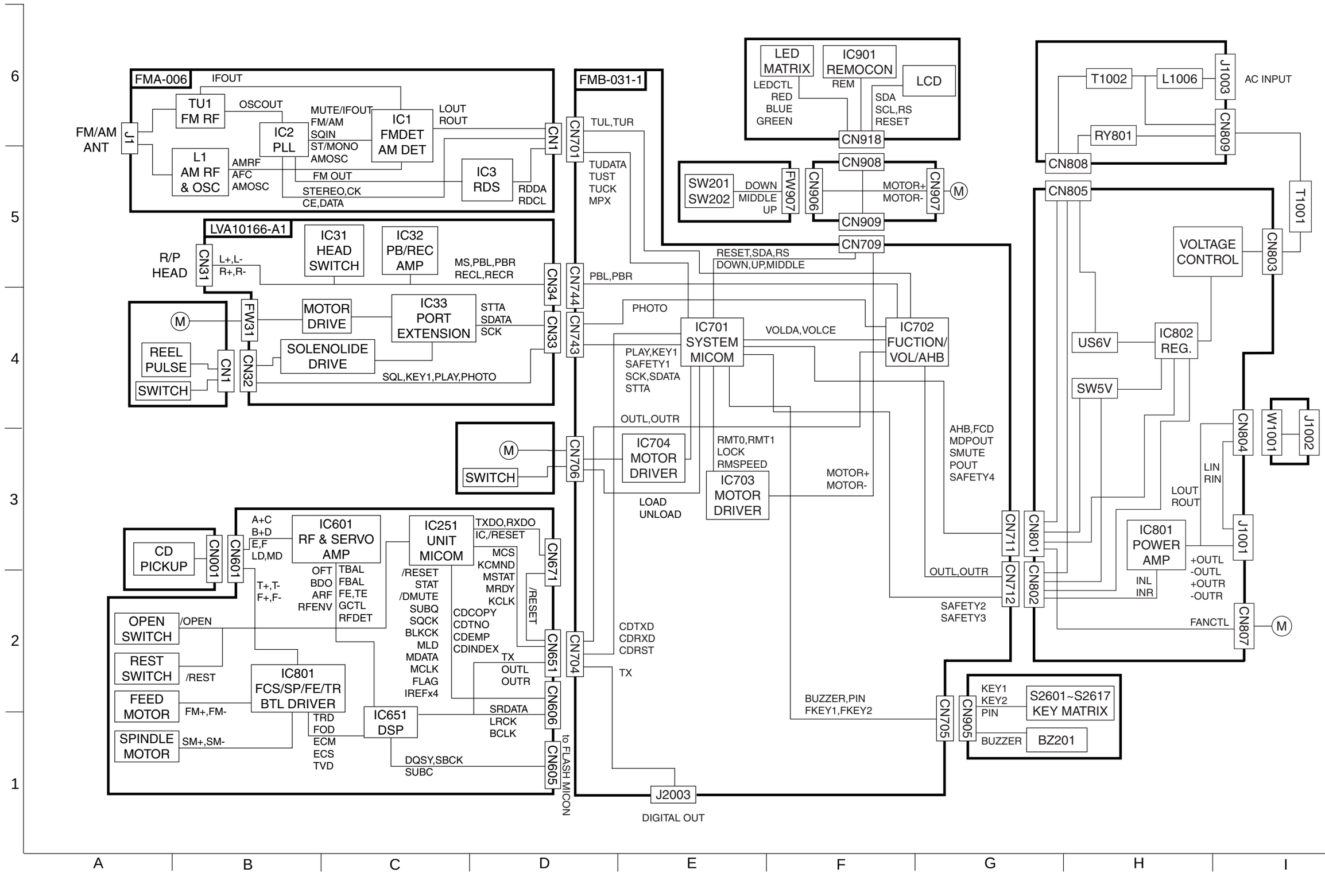
Design and specifications are subject to change without notice.

JVC

VICTOR COMPANY OF JAPAN, LIMITED

1101MWMMDWJEM

Block diagram



Standard schematic diagrams

■ Main & control circuit

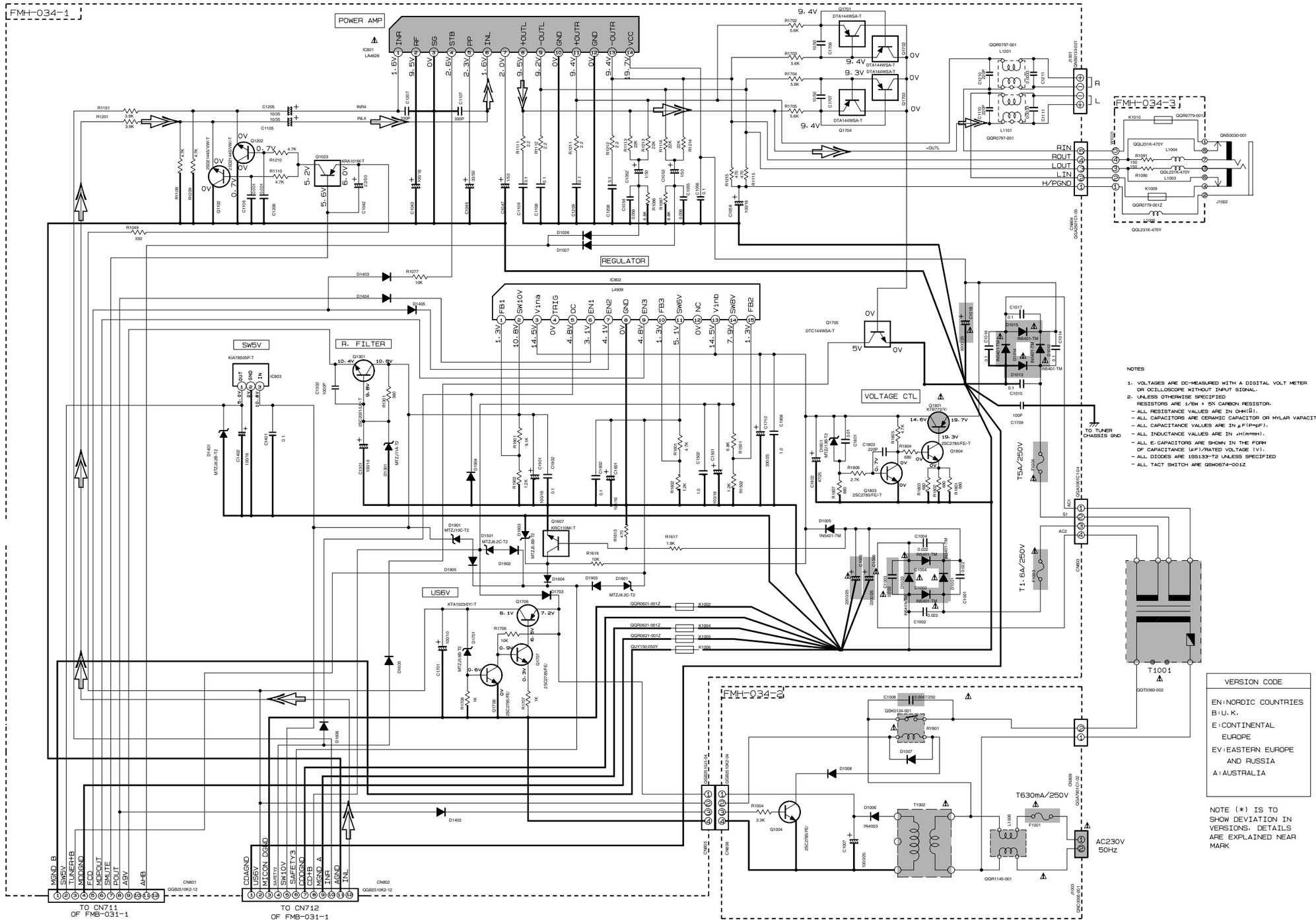
FUNC./VOL/AHB IC VOLTAGE MEASUREMENT

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOLT	0	0	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
PIN NO	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
VOLT	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9.8	0

*MARK	B/E/EN/EV	A	USeries	J/C
R2039	10K	11K	22K	20K
R2040	NONE	13K	4.7K	10K
R2411	FR 5.6 1/4W		NONE	
D2046	NONE		IN4003S-T5	
L2003	QQL244K-100Z		QUY150-050Y	
C2606	QEKC1CM-226Z		NONE	

NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— CD STOP MODE
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/5W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(MFD).
   ALL INDUCTANCE VALUES ARE IN μH(MMH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133-T2 UNLESS SPECIFIED
   ALL TACT SWITCH ARE QSW0674-001Z

■ Power amplifier & Power supply circuit



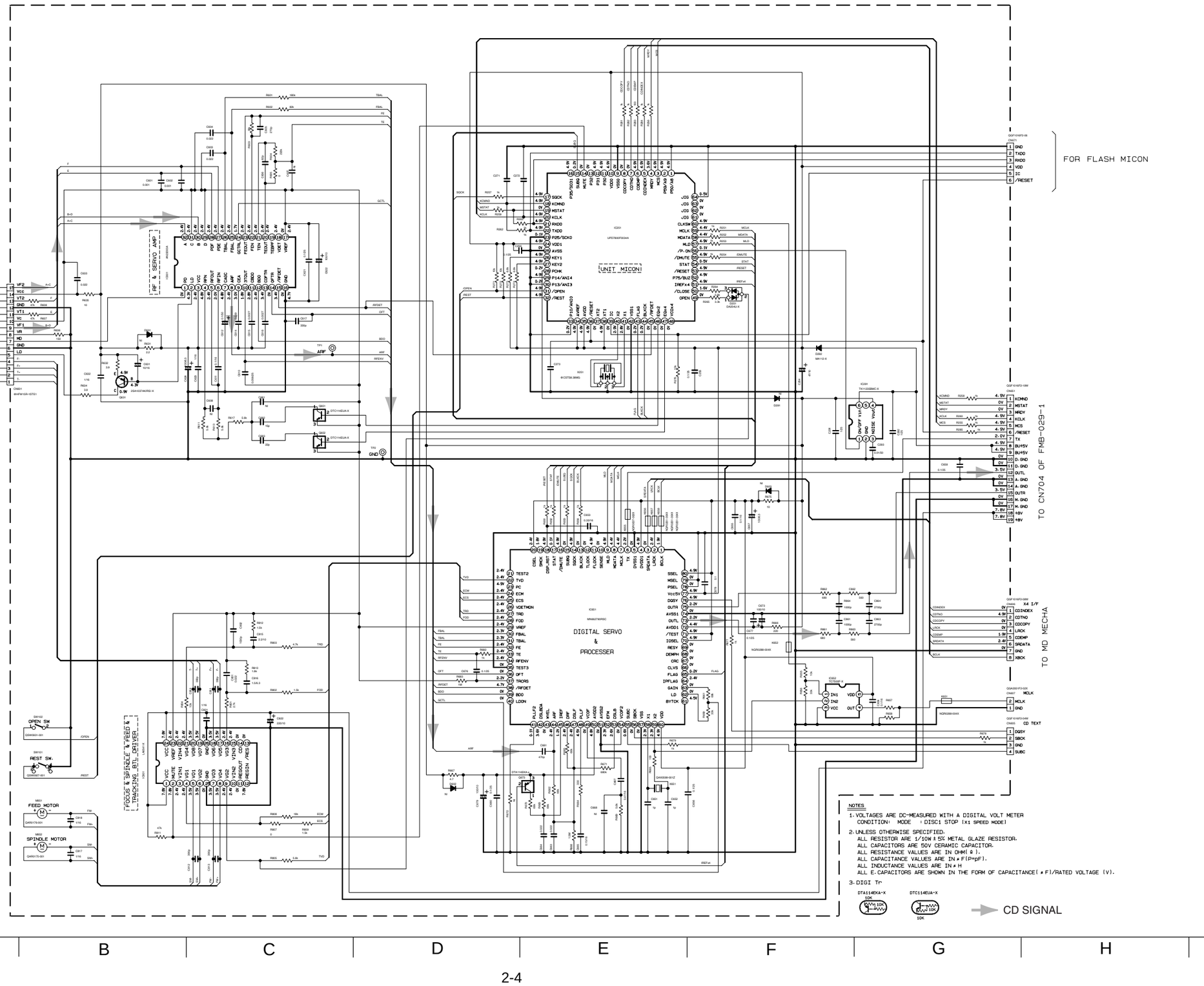
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OCILLOSCOPE WITHOUT INPUT SIGNAL.
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/6W ± 5% CARBON RESISTOR.
   - ALL RESISTANCE VALUES ARE IN OHM(Ω).
   - ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR VAPACITOR.
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL INDUCTANCE VALUES ARE IN H(m=mH).
   - ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - ALL DIODES ARE 1SS133-T2 UNLESS SPECIFIED
   - ALL TACT SWITCH ARE QSW0674-001Z

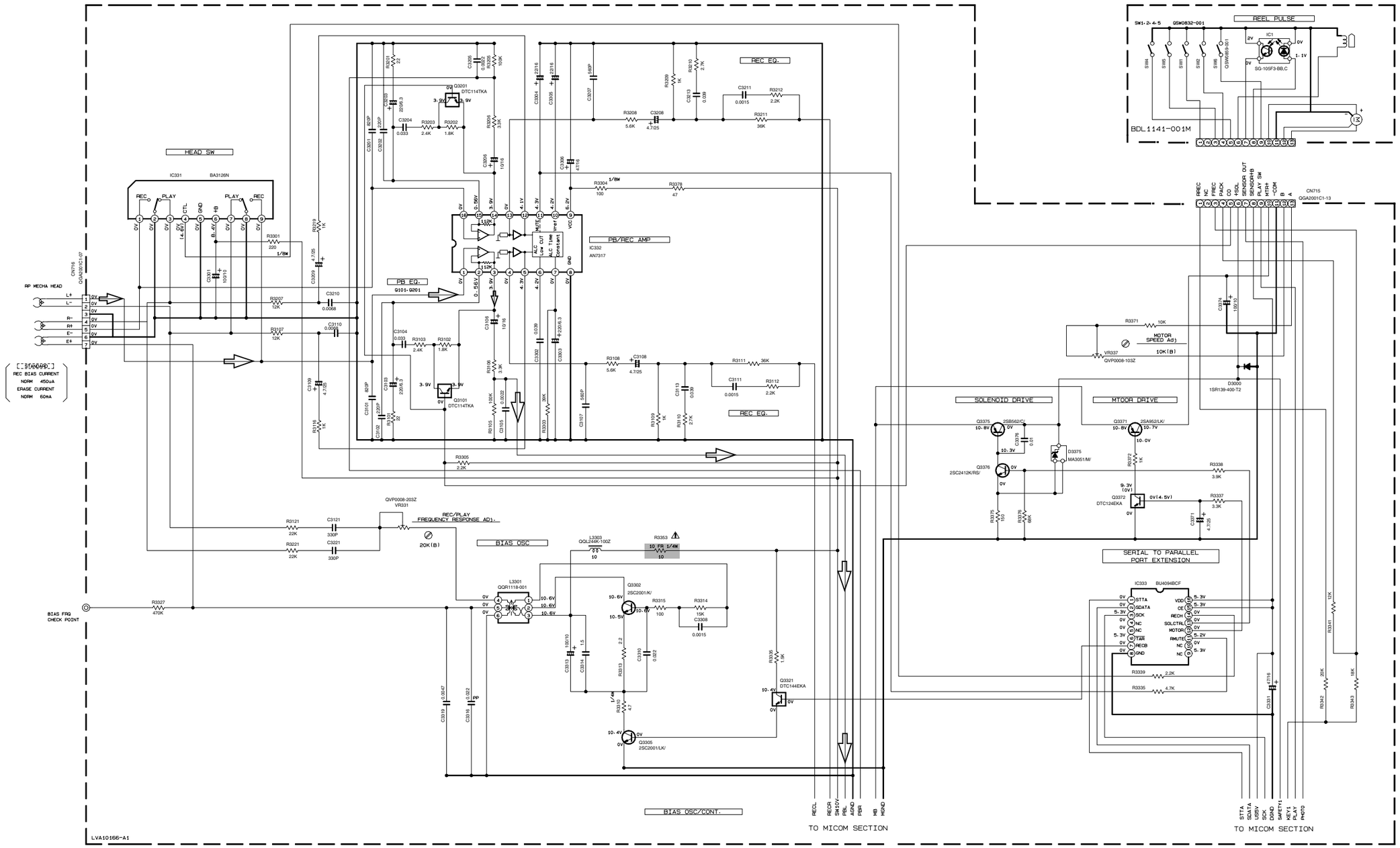
VERSION CODE
EN:NORDIC COUNTRIES
B:U.K.
E:CONTINENTAL EUROPE
EV:EASTERN EUROPE AND RUSSIA
A:AUSTRALIA

NOTE (*) IS TO SHOW DEVIATION IN VERSIONS. DETAILS ARE EXPLAINED NEAR MARK

■ CD control circuit



■ Tape circuit



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. CONDITION : MECHA STOP MODE

2. UNLESS OTHERWISE SPECIFIED . RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
ALL CAPACITANCE VALUES ARE IN μF(P=pF).
ALL INDUCTANCE VALUES ARE IN μH(m=mH).
ALL E.CAPACITORS ARE SHOWN IN THE FORMOF CAPACITANCE (μF)/RATED VOLTAGE (V).
POLYPROPYLENE CAPACITOR

PARTS	NAME	REF.NO
10K 47K	FA1A4Z or DTC114TKA	Q101·Q201 Q103·Q203 Q331
47K 47K	FA1L4M or DTC144EKA	Q321
22K 22K	FA1F4M or DTC124EKA	Q372

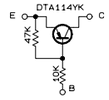
TAPE P. B. SIGNAL

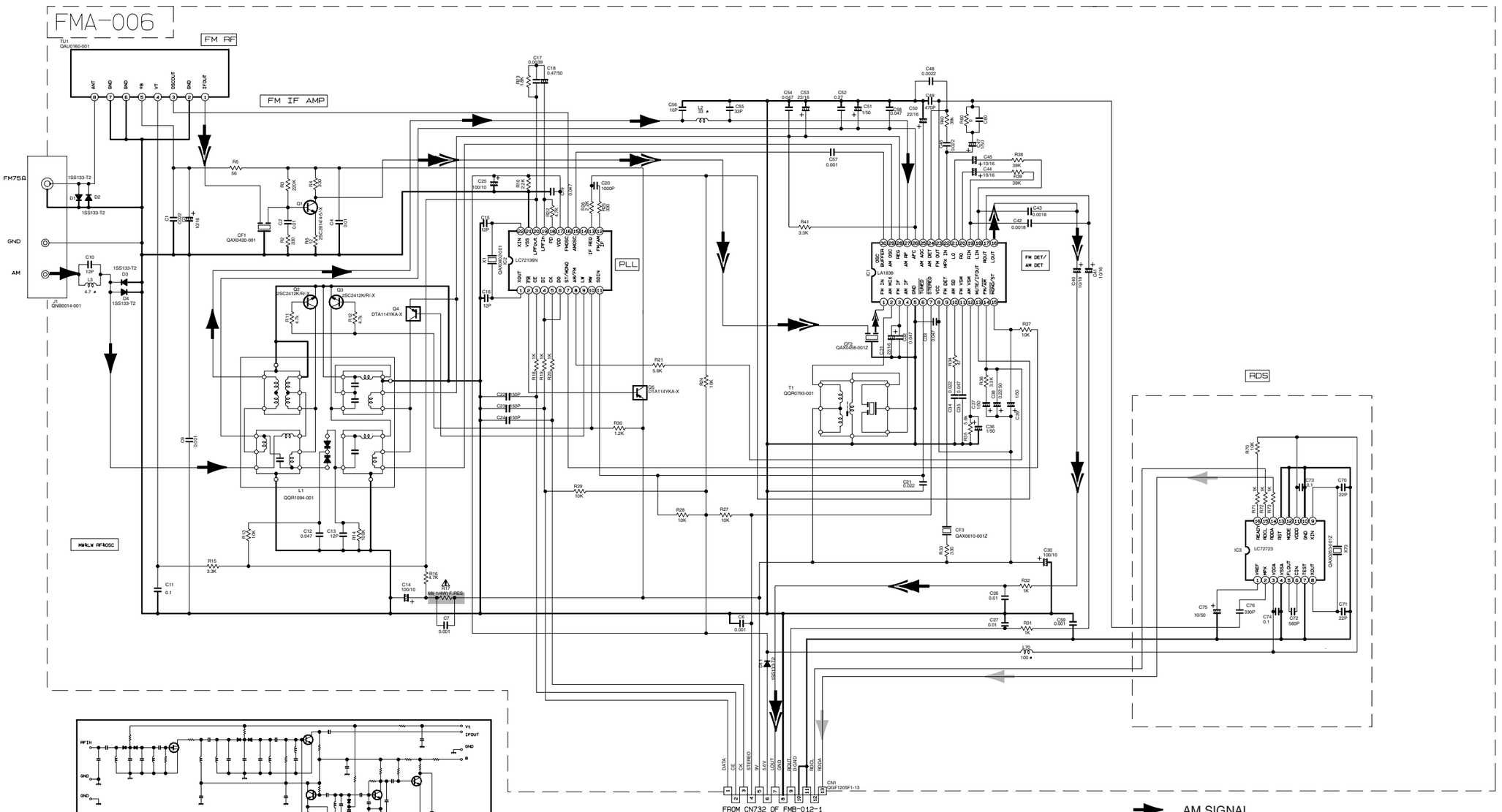
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

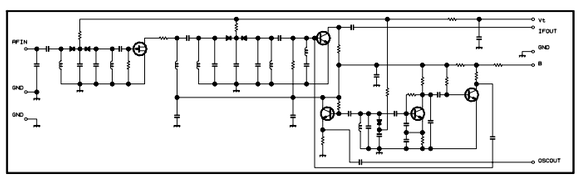
■ Tuner circuit

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/8W ±5% METAL GLAZE RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI DIODES (▶|) ARE ALL 1SS133-T THAT CAN BE CHANGED TO SIMILAR DIODE SUCH AS MA165 OR HSS104J.
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.
   Q1 2SC2814/4-5/-X Q2.Q3 2SC2412K/R/-X
   Q4.Q5 DTA114YKA-X
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.







	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.6	8.9	3.6	3.6	0	5.0	5.0	8.9	8.9	1.3	0.1	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.5	3.5	3.6	3.6	2.7
	FM 60dB STEREO	3.6	8.9	3.6	3.6	0	0	5.0	8.9	8.9	1.3	4.3	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.6	3.6	3.6	3.6	2.7
	AM NO SIGNAL	3.5	9.0	3.5	3.5	0	5.0	5.1	9.0	2.6	1.3	0	0	0.9	4.7	5.5	4.3	4.3	4.3	4.3	3.3	3.2	2.8	ust	0.7	0.7	3.6	3.6	3.6	3.6	2.1
IC2	FM NO SIGNAL	2.5	0	0	5.0	4.9	5.0	7.9	7.8	3.6	6.1	5.1	0	0	0	0	2.5	5.1	0.9	0.9	3.8	0	2.3								

Tr NO.	Q1			Q5					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.1	0.85	8.9	8.8	0			
AM 522KHz NO SIGNAL	0	0	0	9.0	0	8.9			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	0	0	0.7	0	0	0.7	0	3.6	0.7
AM 144KHz NO SIGNAL	0	0	0.3	0	0.3	0.3	3.6	3.6	3.6

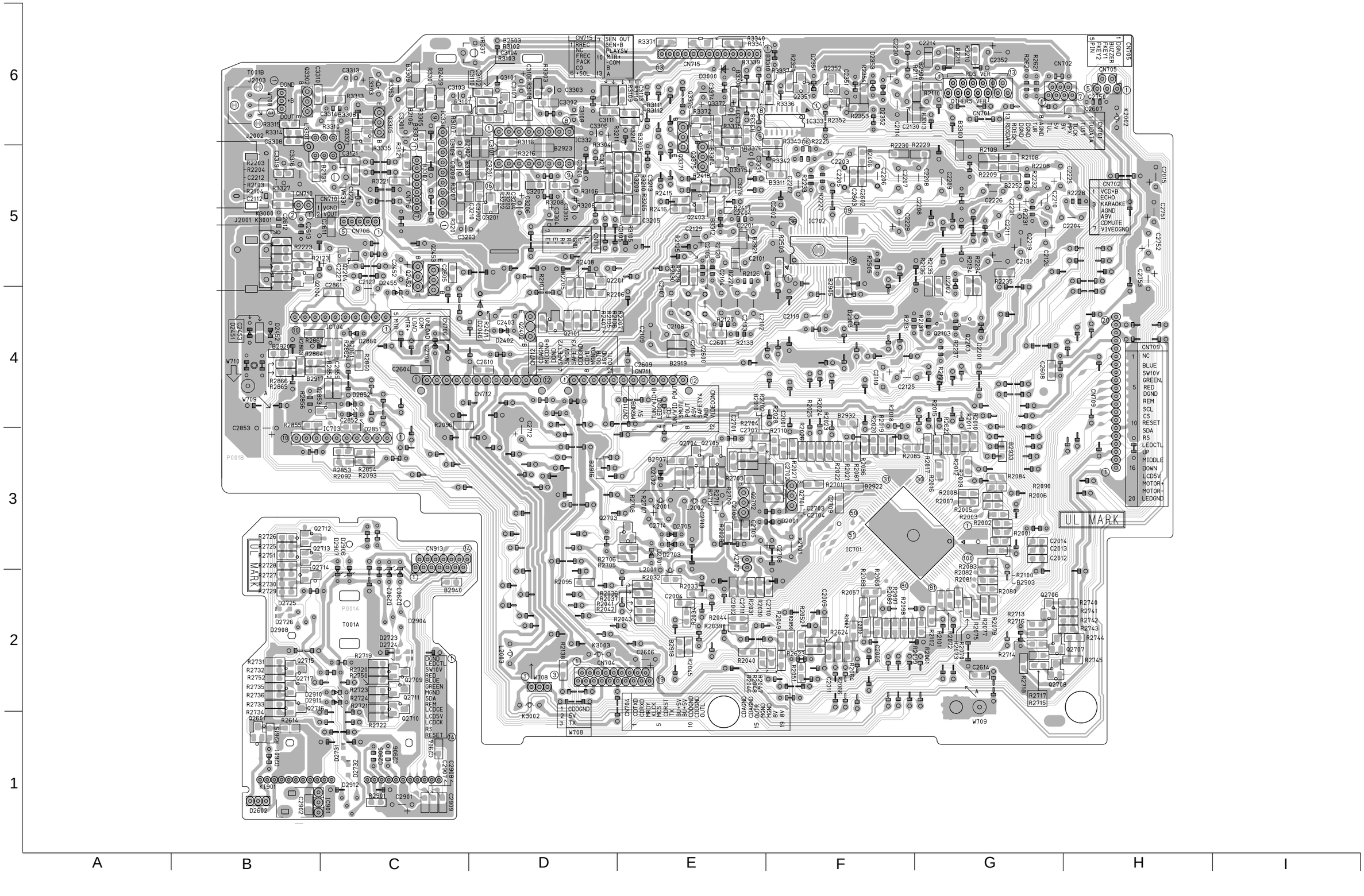
AM SIGNAL
FM/TUNER SIGNAL
RDS SIGNAL

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

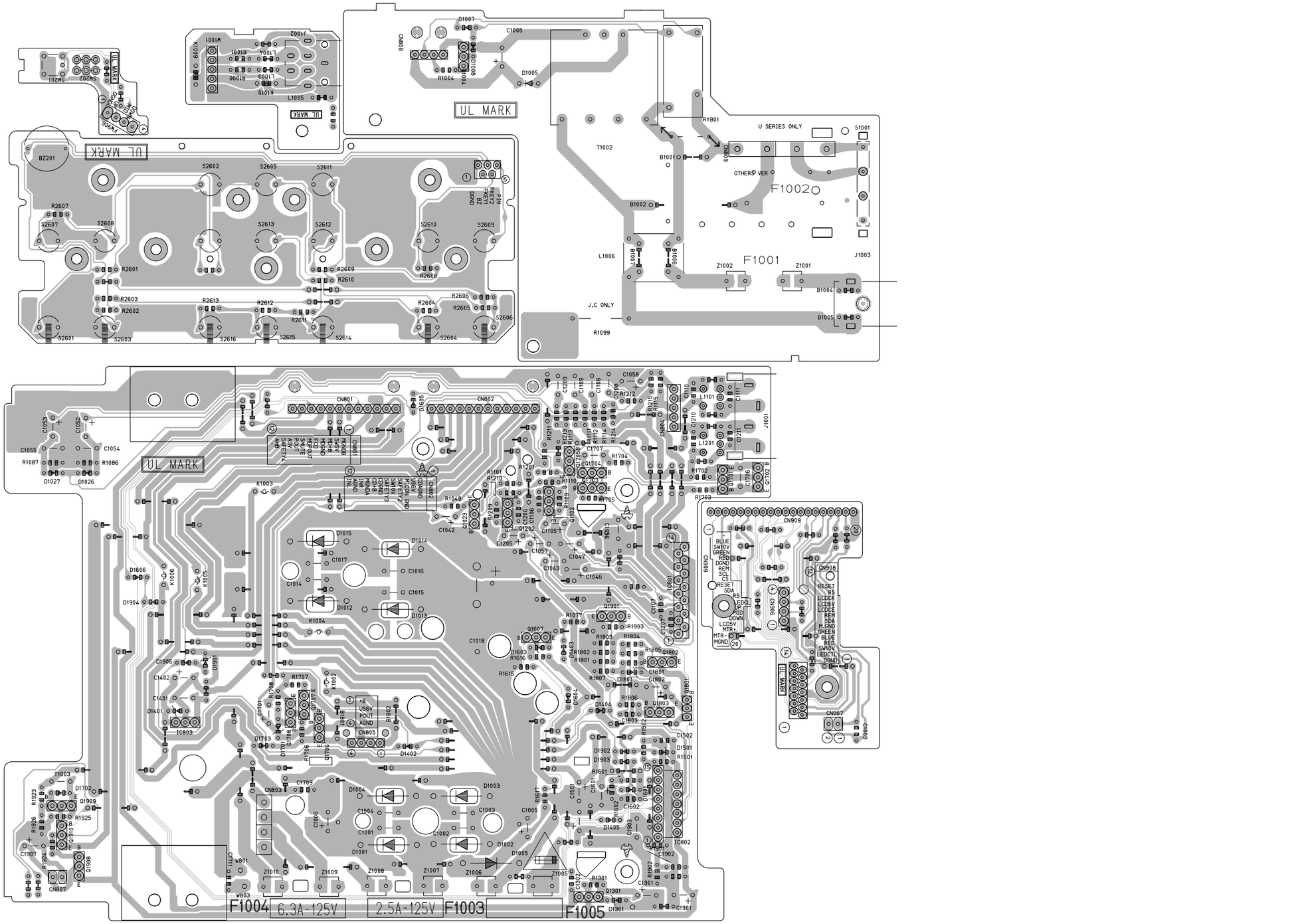
SHEET 1/7

Printed circuit boards

■Main board

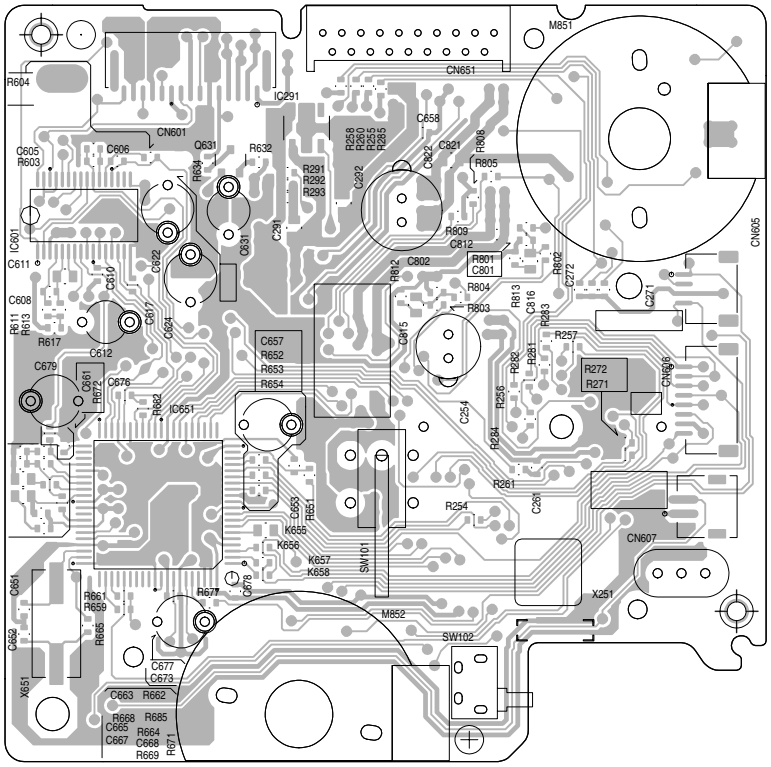


■ Power amplifier & control & AC jack board

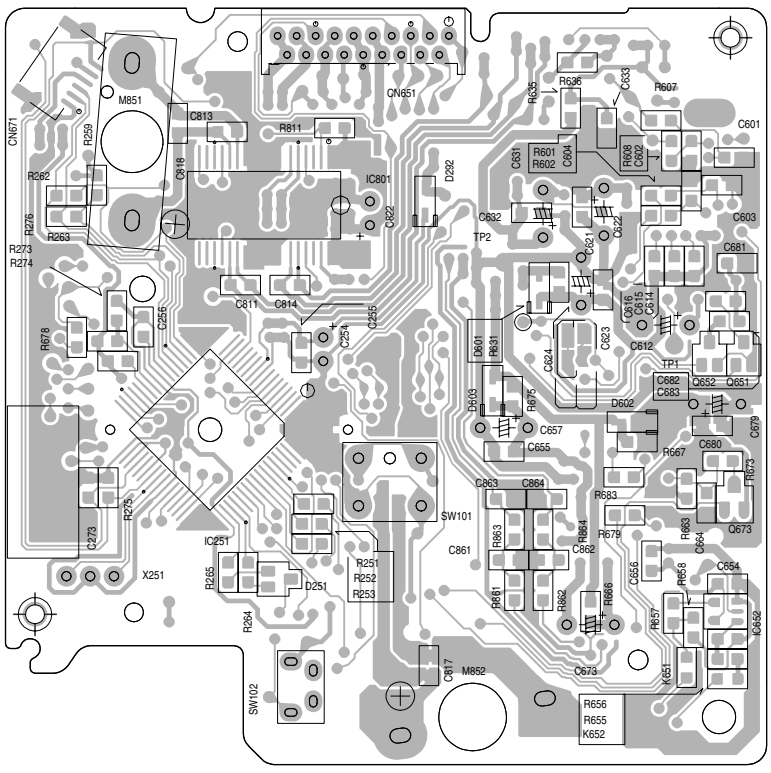


■CD servo control board

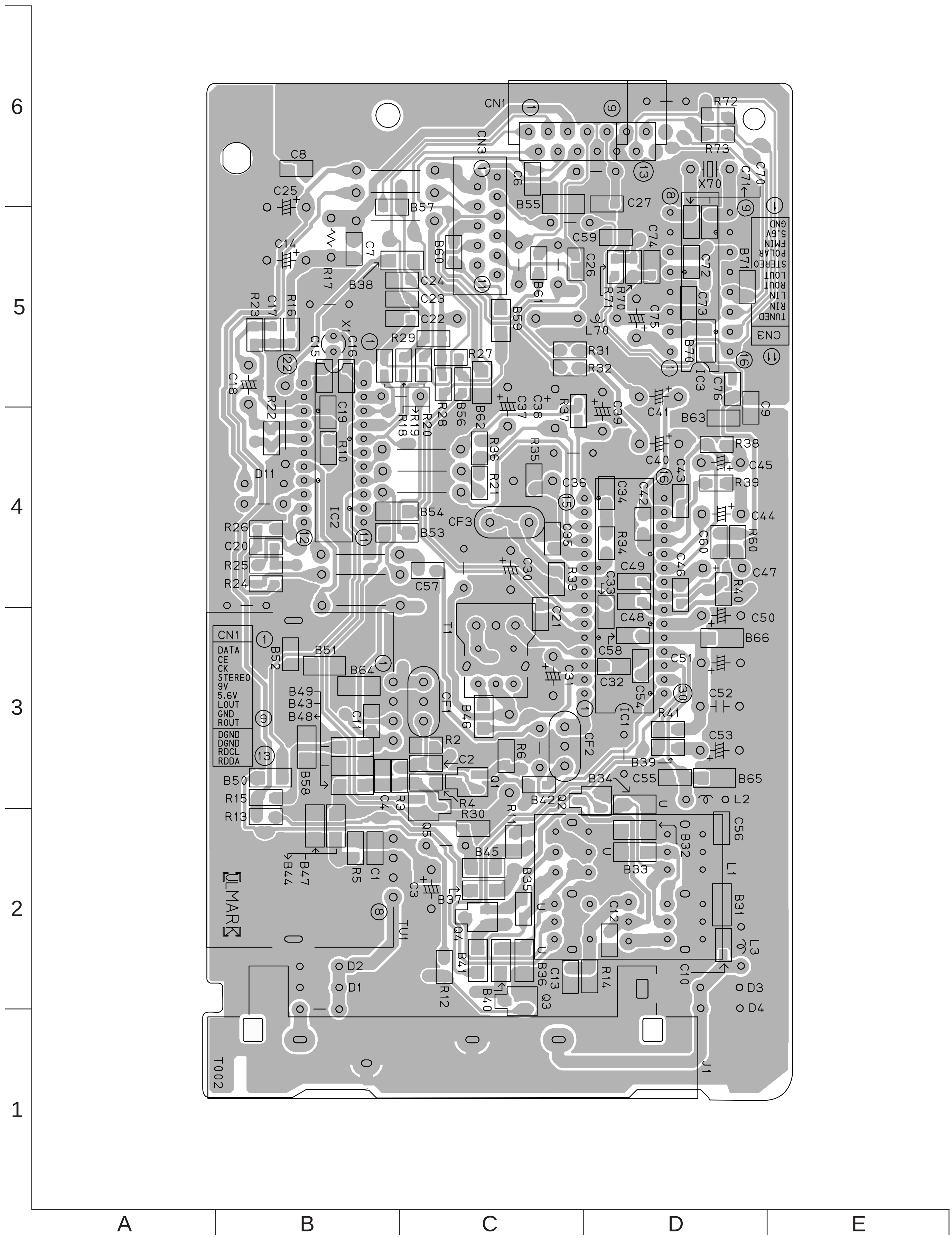
(Forward side)



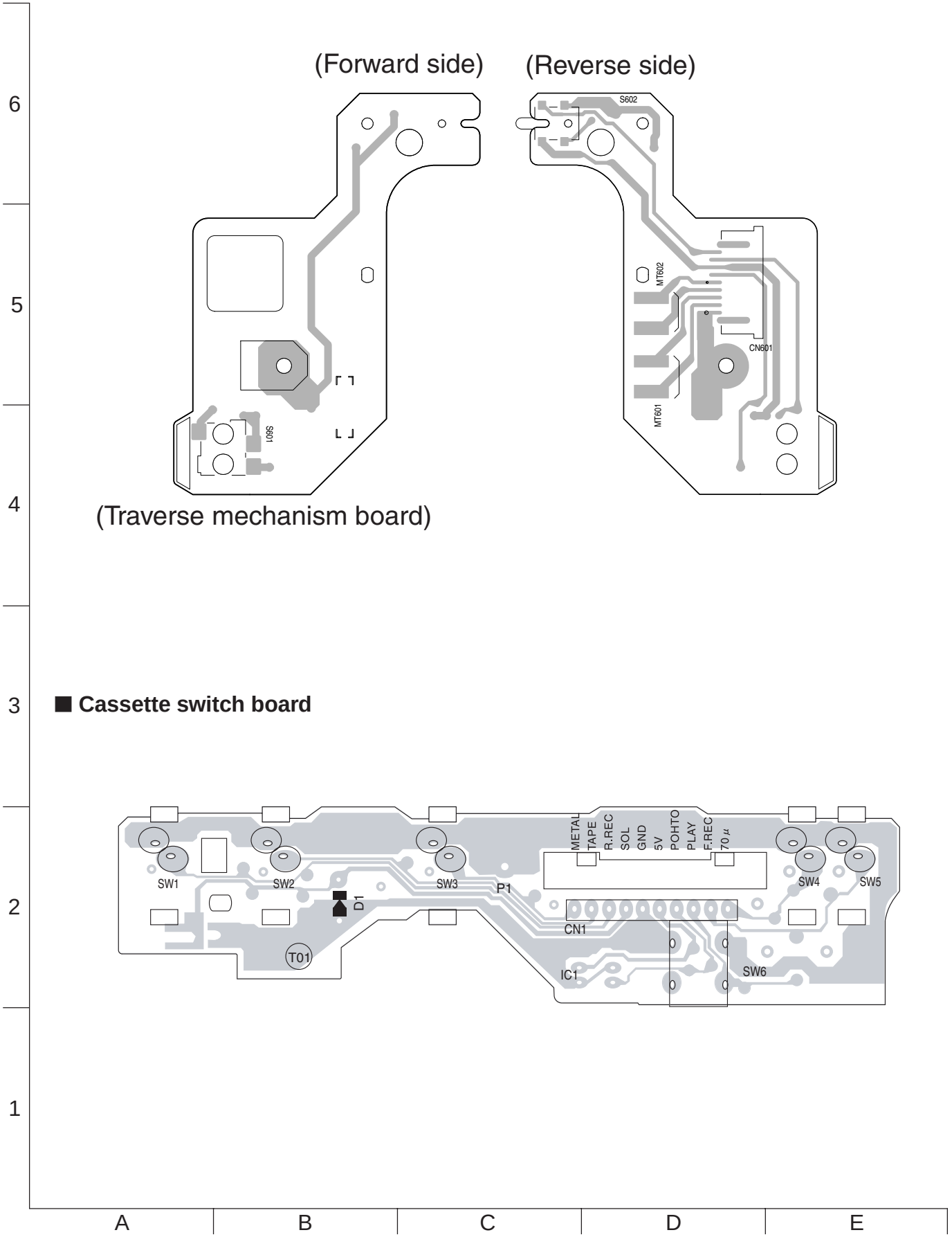
(Reverse side)



■Tuner board


6
5
4
3
2
1
A
B
C
D
E
CN1
DATA
CE
CK
STEREO
9V
5.6V
LOUT
GND
ROUT
DGND
DGND
RDCL
RDDA
CN3
TUNED
RIN
LIN
ROUT
LOUT
STEREO
POLAR
FMIN
5.6V
GND

■ Traverse mechanism board



■ Cassette switch board

PARTS LIST

[UX-A52R]

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

Area suffix

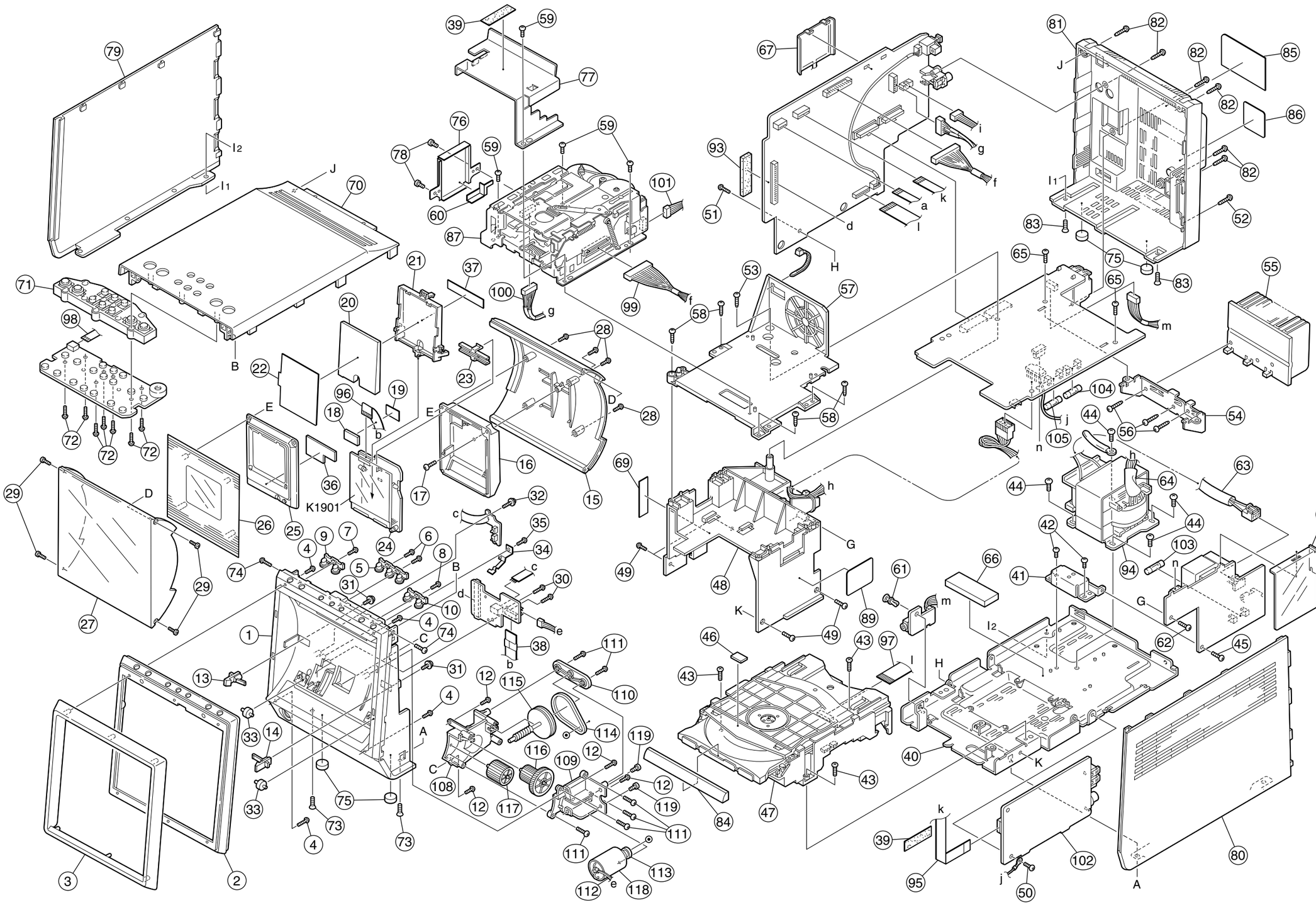
B ---------- U.K.
E ---------- Continental Europe
EN ---------- Northern Europe

- Contents -

< MEMO >

Exploded view of general assembly and parts list

Block No. M 1 M M



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	GV10076-016A	FRONT PANEL	1		
	2	GV10077-001A	SUB FRAME	1		
	3	GV10078-001A	MAIN FRAME	1		
	4	QYSBSF2008Z	SCREW	4	FRONT PNL+MAIN	
	5	GV40190-001A	CONTROL BUTTON	1		
	6	QYSBSF2608Z	T.SCREW	2	FRONT+CONT.BTN	
	7	QYSBSF2608Z	T.SCREW	1	+ FRONT PANEL	
	8	QYSBSF2608Z	T.SCREW	1	FRONT+E.BTN.B	
	9	GV40197-001A	EJECT BUTTON A	1		
	10	GV40198-001A	EJECT BUTTON B	1		
	12	QYSBSF2608Z	T.SCREW	4	FRONT+ GEAR ASS	
	13	GV40200-002A	PANEL HOLDER L	1		
	14	GV40201-002A	PANEL HOLDER R	1		
	15	GV20131-002A	FRONT CASE	1		
	16	GV30207-001A	LED LENS	1		
	17	QYSBSF2608Z	T.SCREW	1	LED LENS+FRONT	
	18	GV40217-001A	SPACER	1		
	19	GV40217-002A	SPACER	1		
	20	GV40210-001A	LCD LENS	1		
	21	GV30206-001A	LCD HOLDER	1		
	22	GV40221-001A	LCD SHEET	1		
	23	GV40202-001A	LED HOLDER	1		
	24	GV40203-002A	LED HOLDER B	1		
	25	GV30208-002A	LED COVER	1		
	26	GV30213-002A	LCD COVER	1		
	27	GV20132-002A	FRONT LENS	1		
	28	QYSBSF2610Z	SCREW	4	LCD COVER+F.CAS	
	29	QYSDSF2006N	SCREW	4	F.LENS+ F.CASE	
	30	QYSBSF2608Z	T.SCREW	2	CON.PWB+ F.PANE	
	31	GV40035-001A	SPECIAL SCREW	2	F.PANEL+PANEL H	
	32	GV40219-001A	SPECIAL SCREW	1	DETEC.SW.PWB+F.	
	33	GV40199-001A	ROLLER	2		
	34	GV40214-001A	FRONT SPRING	1		
	35	QYSBSF2608Z	T.SCREW	1	F.SPRING/F.BRD	
	36	GV40235-003A	SPACER	1		
	37	GV40243-001A	SPACER	1	STICK AT LCD HO	
	38	GV40242-003A	COMMON SPACER	1	MOV.PNL/PHONE W	
	39	GV40242-004A	COMMON SPACER	2	WIRE ARRANG.	
	40	GV10081-002A	BOTTOM CHASSIS	1		
	41	GV40195-001A	CD MECHA BRACKE	1		
	42	QYSBST3004Z	T.SCREW	2	CD M.BKT+BTM.CH	
	43	QYSBST3008Z	T.SCREW	3	CD MECHA+BTM.CH	
	44	QYSBST4006Z	T.SCREW	4	TRANS +BTM.CHAS	
	45	QYSBST3006Z	T.SCREW	1	BKT.+ AC PWB.	
	46	GV40247-001A	SPACER	1		
	47	----------	CD MECHA	1		
	48	GV10080-001A	INNER CHASSIS	1		
	49	QYSBST3006Z	T.SCREW	4	INNER CHA+ BTTM	

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	50	QYSBST3006Z	T.SCREW	1	TUNER PWB+ BTTM	
	51	QYSBST3006Z	T.SCREW	1	FMB PWB+BTM.CHA	
	52	QYSBSF3010N	TAP SCREW	1	TUNER+BTM.CHAS(	
	53	QYSBSF3010Z	SCREW	1	CHASSIS+MECH.BR	
	54	GV30201-002A	IC HOLDER	1		
	55	GV30203-001A	HEAT SINK	1		
	56	QYSBSF3012Z	SCREW	3	IC HOLD.+ H.SIN	
	57	GV20153-002A	MECHA BRACKET	1		
	58	QYSBSF3010Z	SCREW	4	CASS.MEC/IN.CHA	
	59	QYSBSF3008Z	SCREW	4	CASS./MECH.BRAC	
	60	GV40242-004A	COMMON SPACER	1	FOR HEAD SHIELD	
	61	E310243-002	PLASTIC RIVET	1	PHONE PWB+BTTM.	
	62	QYSBSF3010Z	SCREW	1	AC PWB+INNER CH	
	63	QWTBG00-130	VINYL TUBE	1		
	64	QWTBG00-040	VINYL TUBE	1		
	65	QYSBSF3008Z	SCREW	2	MAIN BRD/BRACKE	
	66	GV40251-002A	SPACER	1	STICK AT BTM.CH	
	67	GV40259-001A	PROTECT SHEET	1	(MICOM)	
	68	GV40240-001A	PROTECT SHT(AC)	1	(SUB TRANS.)	
	69	GV40242-003A	COMMON SPACER	1	FOR EMC USED	
	70	GV10089-001A	TOP COVER(EXP)	1		
	71	GV30197-002A	BOTTON	1		
	72	QYSBSF2608Z	T.SCREW	7	BUTTON+TOP COVE	
	73	QYSSST3010Z	SCREW	2	F.PNL/BTTM CHAS	
	74	QYSBSF3008Z	SCREW	2	F.PANEL/T.COVER	
	75	GV40091-002A	FOOT	4	FRONT & REAR	
	76	GV30233-001A	HEAD SHIELD	1		
	77	GV30234-001A	SLC COVER	1		
	78	QYSDST3004Z	SCREW	2	FOR HEAD SHIELD	
	79	GV10082-002A	SIDE PANEL(L)	1		
	80	GV10083-006A	SIDE PANEL(R)	1		
	81	GV10085-008A	REAR COVER	1		
	82	QYSBSF3010N	TAP SCREW	7	FOR REAR COVER	
	83	QYSSST3010Z	SCREW	2	+ REAR COVER	
	84	GV30200-002A	CD FITTING	1		
	85	GV30226-006A	RATING LABEL	1		
	86	VND4118-003	CAUTION LABEL	1	STICK AT R.COVE	
	87	BDL1141-001M	C MECHA UNIT	1	CASSETTE MECHA	
	89	E406507-001	LASER CAUTION	1		
	93	GV40250-001A	BOARD SPACER	1	STICK AT FMB BO	
⚠	94	QQT0360-002	POWER TRANSF	1	T1001	
	95	QUQ412-1330CJ	FFC WIRE	1	FMB-TUNER	
	96	QUQ610-1415BF	FFC WIRE	1	CONN-LCD	
	97	QUQ110-1915BJ	FFC WIRE	1	FMB-CD	
	98	QUQ412-0510DJ	FFC WIRE	1	FMB-FKEY	
	99	QJA003-132520	WIRE	1	FW803	
	100	QJA003-051700	SIN ID C-C WIRE	1	FW802	
	101	WJN0074-001A	E-SH C WIRE C-C	1	FW801	

■ Parts list (General assembly)

Block No. M1MM

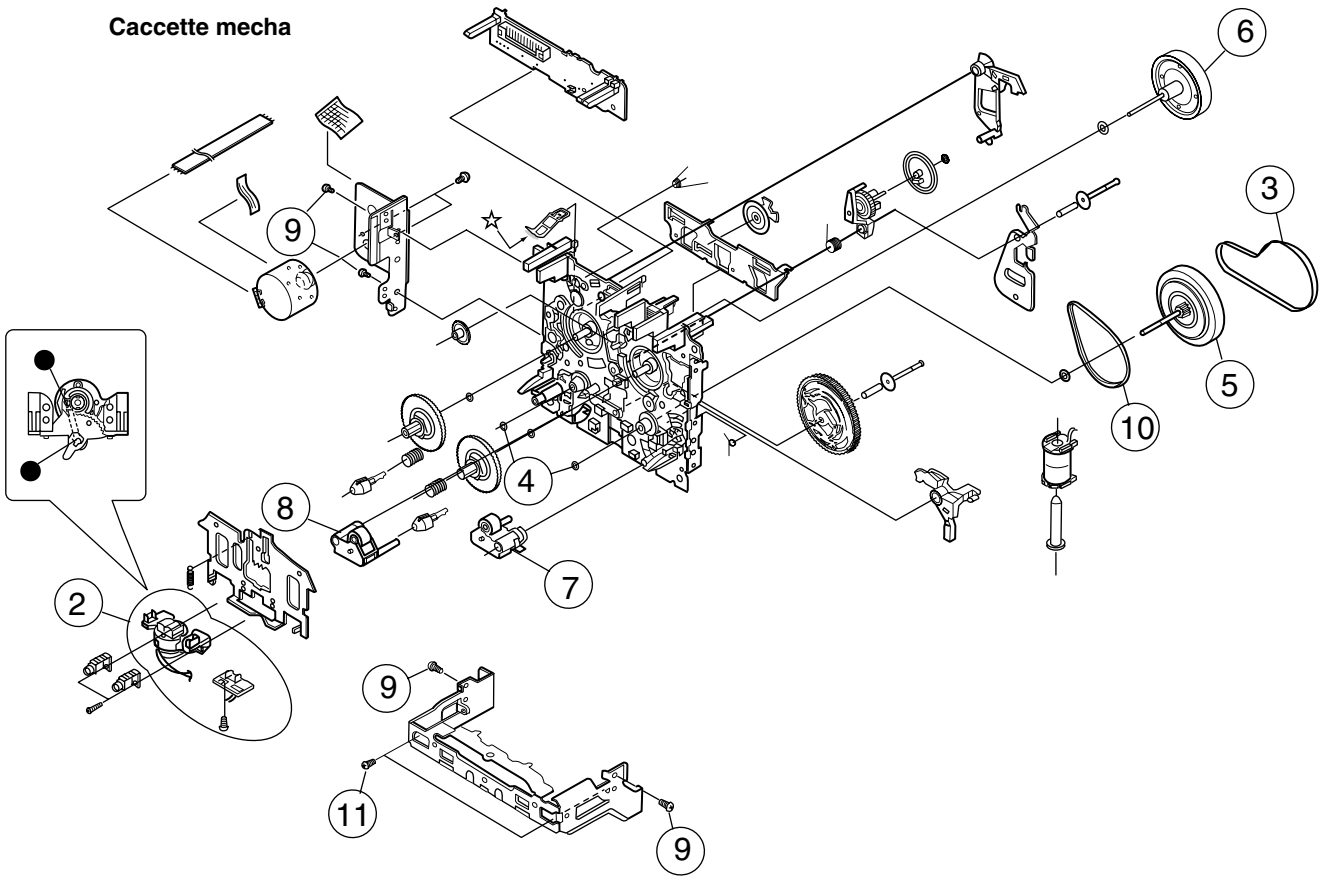
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	102	----------	TUNER ASSY	1	TUNER MODULE	
⚠	103	QMF51W2-R63-J8	FUSE	1	F1001	
⚠	104	QMF51W2-1R6-J8	FUSE	1	F1003	
⚠	105	QMF51W2-5R0-J8	FUSE	1	F1004	
	108	GV20216-001A	GEAR HOLDER A	1		
	109	GV20217-001A	GEAR HOLDER B	1		
	110	GV40191-001A	GEAR HOLDER C	1		
	111	QYSBSF2608Z	T.SCREW	6		
	112	WJM0072-001A	WIRE CONNECTOR	1		
	113	GV40126-001A	PULLEY	1		
	114	GV30038-001A	BELT	1		
	115	GV40098-001A	WORM/PULLEY	1		
	116	GV40097-001A	GEAR B	1		
	117	GV40096-001A	GEAR A	1		
	119	QYSPSP3004Z	SCREW	2		
	KI901	QLD0184-001	LCD MODULE	1		

Cassette mechanism assembly and parts list

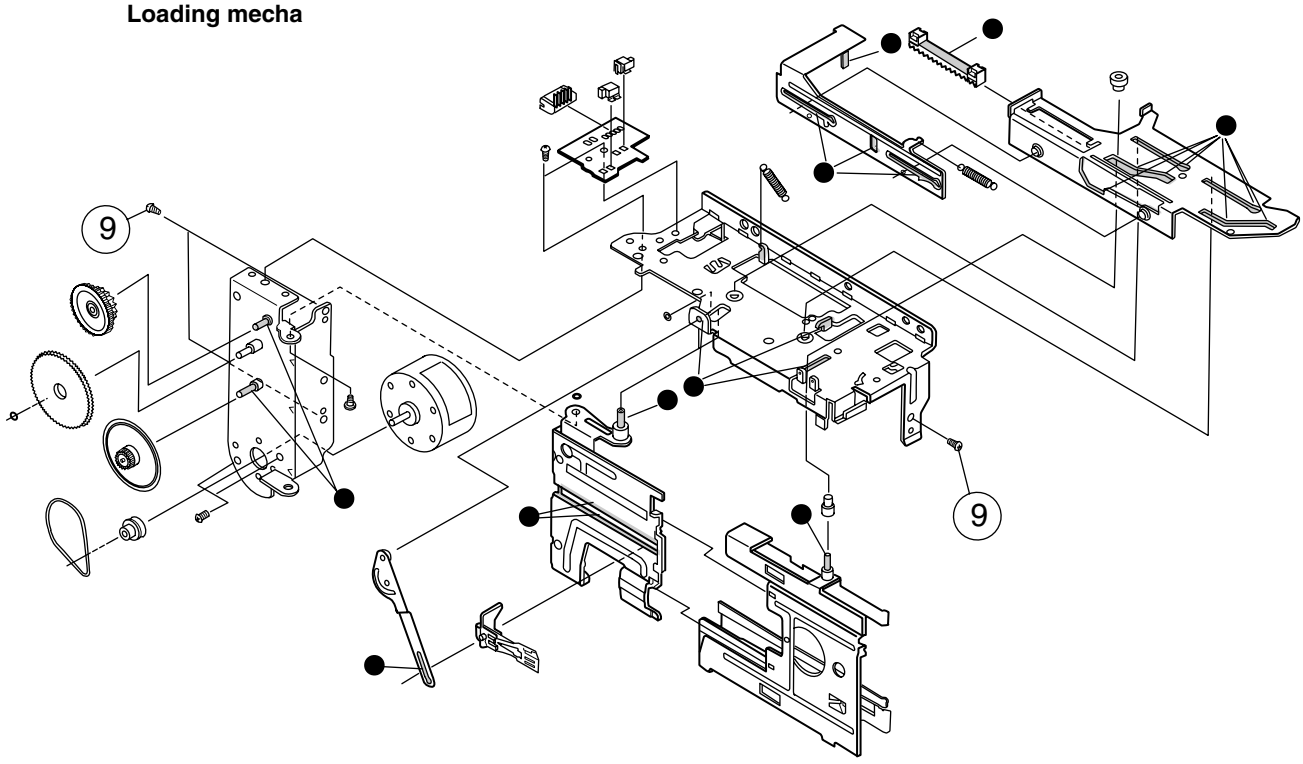
Block No. M P M M

Grease
- ● EM-60L
- ☆ FL-721

Caccette mecha



Loading mecha



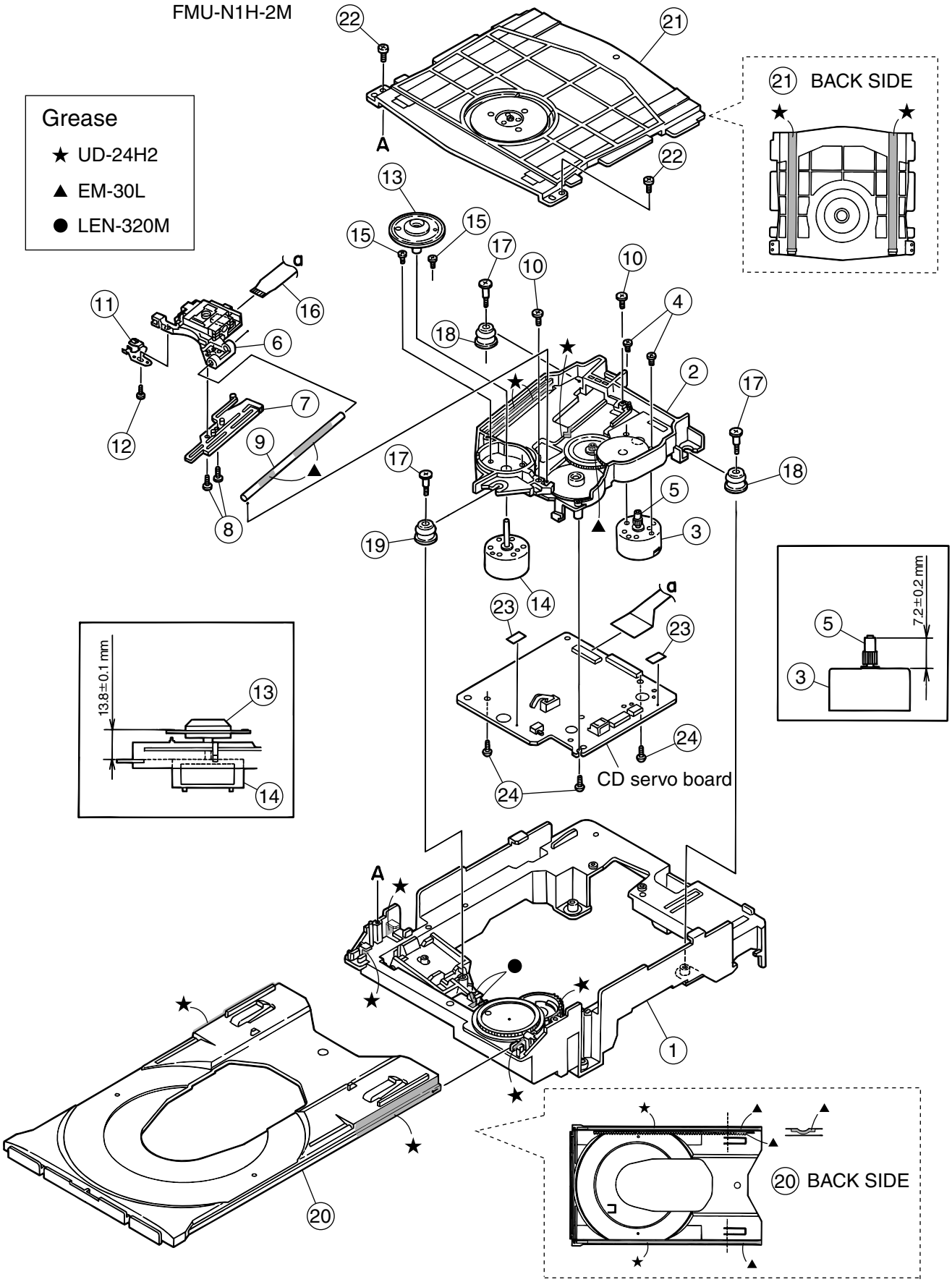
■ Parts list (Cassette mechanism)

Block No. MPMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	BDL1141-001M	C MECHA UNIT	1		
	2	F513-884	HEAD BLOCK	1		
	3	FF19Y	MAIN BELT	1		
	4	UJ16F-11	WASHER	1		
	5	F522-064	FLYWHEEL	1		
	6	FR26K	FLYWHEEL	1		
	7	F514-129	PINCH ROLLER	1		
	8	F514-130	PINCH ROLLER	1		
	9	KG194-28	TT.SCREW	1	2.6X4	
	10	FF18W	F/R BELT	1		
	11	KG194-34	TT.SCREW	1	2.0X4	

CD mechanism assembly and parts list

Block No. M B M M



■ Parts list (CD mechanism)

Block No. MBMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV32649-005A	L.BASE ASSY	1		
	2	LV32651-002A	CH.BASE ASSY	1		
	3	QAR0176-001	FEED MOTOR	1		
	4	VKZ4743-001	SPECIAL SCREW	2		
	5	LV42229-001A	MOTOR GEAR	1		
	6	OPTIMA-725B1	CD PICK UP	1		
	7	LV20993-002A	RACK PLATE	1		
	8	QYSPSGT1735M	MINI SCREW	2		
	9	E406777-002SM	C.D SHAFT	1		
	10	LV41741-001A	SPECIAL SCREW	2		
	11	LV31744-001A	P.S.SPRING	1		
	12	QYSPSGT1425M	TAP SCREW	1		
	13	LV42350-001A	T.T.ASSY	1		
	14	QAR0175-001	SP.MOTOR	1		
	15	VKZ4743-001	SPECIAL SCREW	2		
	16	LVB30008-001A	FPC	1		
	17	LV41424-001A	SPECIAL SCREW	3		
	18	LV41659-001A	INSULATOR	2		
	19	LV41659-002A	INSULATOR	1		
	20	LV10503-002A	TRAY	1		
	21	LV32650-001A	CL.BASE ASSY	1		
	22	QYSBSF2005Z	T.SCREW	2		
	23	LV30225-0B6A	SPACER	2		
	24	QYSBSF2005Z	T.SCREW	3		

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	BZ201	QAN0045-001	BUZZER	SOUNDER	
	CN801	QGB2510K2-12	CONNECTOR		
	CN802	QGB2510K2-12	CONNECTOR		
	CN803	QGA3901C1-04	CONNECTOR		
	CN804	QGA2501C1-05	5P CONNECTOR		
	CN805	QGB2510J1-04	CONNECTOR		
	CN808	QGB2510K2-04	CONNECTOR		
	CN809	QGA7901C1-02	CONNECTOR		
	CN905	QGF1201F3-05	CONNECTOR		
	CN906	QGD2504C1-04Z	SOCKET	TO FUNCTION KEY	
	CN907	QGA2501F1-02	CONNECTOR		
	CN908	QGF1016F1-14	FFC/FPC CONNE	TO CONN. BOARD	
	CN909	QGB2024J1-20S	B TO B CONNE		
	C1001	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1002	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1003	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1004	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1005	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
	C1006	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
	C1007	QETM1EM-108	E CAPACITOR	1000MF 20% 25V	
⚠	C1008	QCZ9105-472	C CAPACITOR	4700PF	
	C1009	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C1014	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1015	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1016	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1017	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
⚠	C1018	QEZ0512-828	E CAPACITOR	8200MF	
	C1042	QETC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C1043	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1046	QETN1HM-336Z	E CAPACITOR	33MF 20% 50V	
	C1047	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C1052	EETC1HM-105ZJC	E CAPACITOR		
	C1053	EETC1HM-105ZJC	E CAPACITOR		
	C1054	QFLC1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C1055	QFLC1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C1056	QFLA1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C1058	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1105	QTE1V06-106Z	E CAPACITOR		
	C1106	QDGB1HK-102Y	C CAPACITOR		
	C1107	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C1108	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1109	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1110	QCBB1HK-221Y	C CAPACITOR	EMC	
	C1111	QDXB1CM-332Y	C CAPACITOR	EMC	
	C1205	QTE1V06-106Z	E CAPACITOR		
	C1206	QDGB1HK-102Y	C CAPACITOR		
	C1207	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C1208	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1209	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1210	QCBB1HK-221Y	C CAPACITOR	EMC	
	C1211	QDXB1CM-332Y	C CAPACITOR	EMC	
	C1301	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1302	QDGB1HK-102Y	C CAPACITOR		
	C1401	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1402	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1501	EETC1CM-107ZJC	E CAPACITOR		
	C1502	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C1601	EETC1CM-107ZJC	E CAPACITOR		
	C1602	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1701	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1704	QDGB1HK-102Y	C CAPACITOR		
	C1705	QDGB1HK-102Y	C CAPACITOR		
	C1706	QENC1HM-106Z	NP E CAPACITOR	10MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C1707	QENC1HM-106Z	NP E CAPACITOR	10MF 20% 50V	
	C1709	QCBB1HK-103Y	C CAPACITOR		
	C1710	QETN1EM-337Z	E CAPACITOR	330MF 20% 25V	
	C1801	QDYB1CM-103Y	C CAPACITOR		
	C1802	EETC1EM-476ZJC	E CAPACITOR		
	C1803	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1901	EETC1CM-107ZJC	E CAPACITOR		
	C1902	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1908	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
⚠	D1001	1N5401-TM	DIODE		
⚠	D1002	1N5401-TM	DIODE		
⚠	D1003	1N5401-TM	DIODE		
⚠	D1004	1N5401-TM	DIODE		
	D1005	1N5401-TM	DIODE		
	D1006	1N4003S-T5	SI DIODE		
	D1007	1SS133-T2	SI DIODE		
	D1008	1SS133-T2	SI DIODE		
⚠	D1012	1N5401-TM	DIODE		
⚠	D1013	1N5401-TM	DIODE		
⚠	D1014	1N5401-TM	DIODE		
⚠	D1015	1N5401-TM	DIODE		
	D1026	1SS133-T2	SI DIODE		
	D1027	1SS133-T2	SI DIODE		
	D1301	MTZJ11A-T2	ZENER DIODE		
	D1401	MTZJ8.2B-T2	DIODE		
	D1402	1SS133-T2	SI DIODE		
	D1403	1SS133-T2	SI DIODE		
	D1404	1SS133-T2	SI DIODE		
	D1405	1SS133-T2	SI DIODE		
	D1501	MTZJ8.2C-T2	ZENER DIODE		
	D1601	MTZJ8.2C-T2	ZENER DIODE		
	D1603	MTZJ5.6B-T2	ZENER DIODE		
	D1604	1SS133-T2	SI DIODE		
	D1605	1SS133-T2	SI DIODE		
	D1606	1SS133-T2	SI DIODE		
	D1701	MTZJ5.6B-T2	ZENER DIODE		
	D1703	1SS133-T2	SI DIODE		
	D1801	MTZJ13B-T2	Z DIODE		
	D1901	MTZJ10C-T2	Z.DIODE		
	D1902	1SS133-T2	SI DIODE		
	D1903	1SS133-T2	SI DIODE		
	D1904	1SS133-T2	SI DIODE		
	D1905	1SS133-T2	SI DIODE		
	FW906	QUM024-10DGZ3	PARA RIBON WIRE	TO CONN BOARD	
⚠	IC801	LA4628	IC		
	IC802	L4909	REGULATOR IC		
	IC803	KIA78S05P-T	IC	SW5V REG	
	J1001	QNB0133-001	SPK TERMINAL		
	J1002	QNS0030-001	JACK		
⚠	J1003	QNC0006-001	AC SOCKET		
	K1002	QQR0621-001Z	FERRITE BEADS	EMC	
	K1003	QUY150-050Y	BUS WIRE	EMC	
	K1004	QQR0621-001Z	FERRITE BEADS	EMC	
	K1005	QQR0621-001Z	FERRITE BEADS	EMC	
	K1006	QUY150-050Y	BUS WIRE	EMC	
	K1009	QQR0779-001Z	INDUCTOR	EMC	
	K1010	QQR0779-001Z	INDUCTOR	EMC	
	L1003	QQL231K-470Y	INDUCTOR	EMC	
	L1004	QQL231K-470Y	INDUCTOR	EMC	
	L1005	QQL231K-470Y	INDUCTOR	EMC	
	L1006	QQR1145-001	LINE FILTER	EMC FILTER	
	L1101	QQR0797-001	INDUCTOR	EMC	
	L1201	QQR0797-001	INDUCTOR	EMC	

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q1004	KTC3199/GL/-T	TRANSISTOR		
	Q1023	KRA101M-T	TRANSISTOR		
	Q1102	2SC3576-JVC-T	TRANSISTOR		
	Q1202	2SC3576-JVC-T	TRANSISTOR		
	Q1301	2SC2001/LK/-T	TRANSISTOR		
	Q1607	KRC110M-T	TR I/M		
	Q1701	DTA144WSA-T	DIGITAL.TR		
	Q1702	DTA144WSA-T	DIGITAL.TR		
	Q1703	DTA144WSA-T	DIGITAL.TR		
	Q1704	DTA144WSA-T	DIGITAL.TR		
	Q1705	DTC144WSA-T	DIGITAL.TR		
	Q1706	KTA1023/OY/-T	TRANSISTOR		
	Q1707	KTC3199/GL/-T	TRANSISTOR		
	Q1708	KTC3199/GL/-T	TRANSISTOR		
	Q1801	KTB772/Y/	TRANSISTOR		
	Q1802	KTC3199/GL/-T	TRANSISTOR		
	Q1803	KTC3199/GL/-T	TRANSISTOR		
⚠	RY801	QSK0124-001	RELAY		
	R1004	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1049	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1077	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1086	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R1087	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R1090	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R1091	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R1101	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1109	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1110	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1111	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1112	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1113	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1114	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1115	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1201	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R1209	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1210	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1211	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1212	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1213	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1214	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1215	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1301	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1501	QRE141J-622Y	C RESISTOR	6.2K 5% 1/4W	
	R1502	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R1601	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1602	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R1615	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1616	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1617	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R1702	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1703	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1704	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1705	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R1706	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1707	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1708	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1801	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1802	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1803	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1804	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R1805	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1806	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R1807	QRE141J-681Y	C RESISTOR	680 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R1901	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R1902	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2601	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2602	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2603	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2604	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R2605	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2606	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R2607	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R2608	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2609	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R2610	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R2611	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R2612	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2613	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R2617	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	SW201	QSW0803-001	DETECT SWITCH	MIDDLE SWITCH	
	SW202	QSW0933-001	DETECT SWITCH	UP/DOWN SWITCH	
	S2601	QSW0674-001Z	TACT SWITCH	MD OPEN/CLOSE	
	S2602	QSW0674-001Z	TACT SWITCH	MD	
	S2603	QSW0674-001Z	TACT SWITCH	CD	
	S2604	QSW0674-001Z	TACT SWITCH	TAPE	
	S2605	QSW0674-001Z	TACT SWITCH	FM/AM	
	S2606	QSW0674-001Z	TACT SWITCH	CD OPEN/CLOSE	
	S2607	QSW0674-001Z	TACT SWITCH	VOLUME +	
	S2608	QSW0674-001Z	TACT SWITCH	VOLUME -	
	S2609	QSW0674-001Z	TACT SWITCH	POWER	
	S2610	QSW0674-001Z	TACT SWITCH	COLOR	
	S2611	QSW0674-001Z	TACT SWITCH	AUX	
	S2612	QSW0674-001Z	TACT SWITCH	REC MODE	
	S2613	QSW0674-001Z	TACT SWITCH	REC	
	S2614	QSW0674-001Z	TACT SWITCH	REVERSE	
	S2615	QSW0674-001Z	TACT SWITCH	FORWARD	
	S2616	QSW0674-001Z	TACT SWITCH	STOP	
	S2617	QSW0674-001Z	TACT SWITCH	MD GROUP	
⚠	T1002	QQT0349-002	POWER TRANSF		
	W 801	QUB230-21A2HP	WIRE		
	W1001	WJK0135-001A	E-SI C WIRE C-B		
	Z1001	QNG0020-001Z	FUSE CLIP		
	Z1002	QNG0020-001Z	FUSE CLIP		
	Z1007	QNG0020-001Z	FUSE CLIP		
	Z1008	QNG0020-001Z	FUSE CLIP		
	Z1009	QNG0020-001Z	FUSE CLIP		
	Z1010	QNG0020-001Z	FUSE CLIP		

■ **Electrical parts list (Front board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN701	QGF1205C1-13	CONNECTOR	TO TUNER	
	CN704	QGF1016C1-19	CONNECTOR	TO CD MECHA	
	CN705	QGF1201C3-05	CONNECTOR	TO FUNCTION KEY	
	CN706	QGA2001C1-05	5P PLUG ASSY	TO CASS. MECHA	
	CN709	QGB2024K1-20S	CONNECTOR	TO CONN BOARD	
	CN711	QGB2510J1-12	CONNECTOR	TO FMH	
	CN712	QGB2510J1-12	CONNECTOR	TO FMH	
	CN715	QGA2001C1-13	13P PLUG ASSY	TO CASS. MECHA	
	CN716	QGA2001C1-07	7P PLUG ASSY	TO CASS. MECHA	
	CN913	QGF1016F1-14	FFC/FPC CONNE	LED CONN.	
	C2001	NCB31HK-103X	C CAPACITOR		
	C2002	NCB31HK-103X	C CAPACITOR		
	C2004	NCS31HJ-101X	C CAPACITOR		
	C2005	NCB31HK-103X	C CAPACITOR		
	C2009	NCS31HJ-101X	C CAPACITOR		
	C2010	NCS31HJ-101X	C CAPACITOR		
	C2011	NCS31HJ-101X	C CAPACITOR		
	C2012	NCS31HJ-101X	C CAPACITOR		
	C2013	NCS31HJ-101X	C CAPACITOR		
	C2014	NCS31HJ-101X	C CAPACITOR		
	C2015	EEKC1AM-476ZJC	E CAPACITOR		
	C2101	QTE1C06-226Z	E CAPACITOR		
	C2102	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2103	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2104	QFV61HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C2105	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2106	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2107	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2108	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2109	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C2110	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2112	NCS31HJ-221X	C CAPACITORM		
	C2114	QFN31HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C2119	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C2125	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2126	QTE1V06-106Z	E CAPACITOR		
	C2127	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2129	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2130	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2131	EEKC1HM-105ZJC	E CAPACITOR		
	C2201	QTE1C06-226Z	E CAPACITOR		
	C2202	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2203	QFV61HJ-823Z	MF CAPACITOR	.082MF 5% 50V	
	C2204	QFV61HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C2205	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2206	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2207	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2208	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C2209	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C2210	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2211	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C2212	NCS31HJ-221X	C CAPACITORM		
	C2214	QFN31HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C2219	EEKC1CM-106ZJC	E CAPACITOR		
	C2225	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2226	QTE1V06-106Z	E CAPACITOR		
	C2227	QETC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2229	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2230	QEKC1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2231	EEKC1CM-226ZJC	C RESISTOR		
	C2404	NCB31HK-103X	C CAPACITOR		
	C2453	NCB31HK-103X	C CAPACITOR		
	C2502	EETC1CM-107ZJC	E CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C2600	NCB31CK-823X	C CAPACITOR		
	C2601	NCB31CK-823X	C CAPACITOR		
	C2602	NCB31CK-823X	C CAPACITOR		
	C2603	NCB31CK-823X	C CAPACITOR		
	C2604	NCB21HK-102X	C CAPACITOR		
	C2605	NCB21HK-102X	C CAPACITOR		
	C2606	QEKC1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C2704	NCS31HJ-330X	C CAPACITOR		
	C2705	NCS31HJ-330X	C CAPACITOR		
	C2708	EEKC1CM-107ZJC	E CAPACITOR		
	C2709	NCB31HK-103X	C CAPACITOR		
	C2710	NCS31HJ-220X	C CAPACITOR		
	C2711	NCS31HJ-220X	C CAPACITOR		
	C2712	QETM0JM-228	E CAPACITOR	2200MF 20% 6.3V	
	C2713	EEKC1HM-225ZJC	E CAPACITOR		
	C2714	EEKC1HM-475ZJC	E CAPACITOR		
	C2750	QDGB1HK-102Y	C CAPACITOR		
	C2751	EEKC1HM-105ZJC	E CAPACITOR		
	C2752	EEKC1HM-105ZJC	E CAPACITOR		
	C2753	EEKC1HM-105ZJC	E CAPACITOR		
	C2852	NCB21HK-103X	C CAPACITOR		
	C2853	EEKC1CM-107ZJC	E CAPACITOR		
	C2855	NCB21HK-103X	C CAPACITOR		
	C2861	NCB21HK-103X	C CAPACITOR		
	C2901	QER61AM-107Z	E CAPACITOR	100MF 20% 10V	
	C2902	NCB31HK-102X	C CAPACITOR		
	C2905	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C2906	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C3101	NCS21HJ-821X	C CAPACITOR		
	C3102	NCS21HJ-221X	C CAPACITOR		
	C3103	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3104	NCB21HK-333X	C CAPACITOR		
	C3105	NCB21HK-222X	C CAPACITOR		
	C3106	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C3107	NCS21HJ-561X	C CAPACITOR		
	C3108	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3109	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3110	NCB21HK-682X	C CAPACITOR		
	C3111	NCB21HK-152X	C CAPACITOR		
	C3113	NCB21HK-393X	C CAPACITOR		
	C3121	NCS21HJ-331X	C CAPACITOR		
	C3201	NCS21HJ-821X	C CAPACITOR		
	C3202	NCS21HJ-221X	C CAPACITOR		
	C3203	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3204	NCB21HK-333X	C CAPACITOR		
	C3205	NCB21HK-222X	C CAPACITOR		
	C3206	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C3207	NCS21HJ-561X	C CAPACITOR		
	C3208	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3209	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3210	NCB21HK-682X	C CAPACITOR		
	C3211	NCB21HK-152X	C CAPACITOR		
	C3213	NCB21HK-393X	C CAPACITOR		
	C3221	NCS21HJ-331X	C CAPACITOR		
	C3301	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C3302	NCB21HK-393X	C CAPACITOR		
	C3303	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C3304	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C3305	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C3306	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C3308	NCB21HK-152X	C CAPACITOR		
	C3310	NCB21HK-223X	C CAPACITOR		
	C3313	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	

■ **Electrical parts list (Front board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	C3314	QCFB1HZ-105Y	C CAPACITOR	1.0MF +80:-20%	
	C3316	QFG32AJ-223Z	PP CAPACITOR	TANK	
	C3319	QFLM1HJ-472Z	M CAPACITOR	TANK	
	C3331	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C3371	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C3374	QEKJ1AM-107Z	E CAPACITOR	MOTOR +B	
	C3376	NCB21HK-103X	C CAPACITOR		
	D2001	1SS133-T2	SI DIODE		
	D2201	1SS133-T2	SI DIODE		
	D2202	1SS133-T2	SI DIODE		
	D2451	1SS133-T2	SI DIODE		
	D2452	1SS133-T2	SI DIODE		
	D2601	1SS133-T2	SI DIODE		
	D2602	SPR-39MVWF	LED		
	D2701	1SS133-T2	SI DIODE	US5V	
	D2702	1SS133-T2	SI DIODE		
	D2703	MTZJ5.1C-T2	ZENER DIODE		
	D2705	1SS133-T2	SI DIODE		
	D2708	1SS133-T2	SI DIODE		
	D2723	1SS355-X	DIODE		
	D2724	1SS355-X	DIODE		
	D2725	1SS355-X	DIODE		
	D2726	1SS355-X	DIODE		
	D2731	1SS355-X	DIODE		
	D2732	1SS355-X	DIODE		
	D2852	MTZJ7.5C-T2	ZENER DIODE		
	D2860	MTZJ7.5C-T2	ZENER DIODE		
	D2902	MTZJ7.5C-T2	ZENER DIODE		
	D2903	MTZJ7.5C-T2	ZENER DIODE		
	D2904	NSTM515AS	LED	COLOR LED	
	D2906	MTZJ7.5C-T2	ZENER DIODE		
	D2907	MTZJ7.5C-T2	ZENER DIODE		
	D2908	NSTM515AS	LED	COLOR LED	
	D2910	MTZJ7.5C-T2	ZENER DIODE		
	D2911	MTZJ7.5C-T2	ZENER DIODE		
	D2912	NSTM515AS	LED	COLOR LED	
	D3000	1SR139-400-T2	SI DIODE		
	D3375	HZM5.1NB2-X	CHIP Z DIODE CM		
	IC331	BA3126N	IC	HEAD SW	
	IC332	AN7317	IC	PB&REC	
	IC333	BU4094BCF-X	IC		
	IC701	UPD784214AGF527	SYSTEM MICON	SYSTEM MICOM	
	IC702	LC75345M-X	IC		
	IC703	LB1641	IC		
	IC704	LB1641	IC		
	IC901	GP1UM271XK	IR DETECT UNIT	REMOCON SENS	
	J2001	QNN0215-001	PIN JACK	AUX IN JACK	
	J2003	GP1FA550TZ	OPT TRANSMITTER	DIGITAL OUTPUT	
	K2001	QQR0621-001Z	FERRITE BEADS		
	K2002	QQR0621-001Z	FERRITE BEADS		
	K3002	QQR0621-001Z	FERRITE BEADS		
	K3003	QQR0621-001Z	FERRITE BEADS		
	L2001	QQL244K-100Z	INDUCTOR		
	L2002	QQL244K-100Z	INDUCTOR		
	L2003	QQL244K-100Z	INDUCTOR		
	L3301	QQR1118-001	OSC COIL(BIAS)		
	L3303	QQL244K-100Z	INDUCTOR		
	Q2103	KTC3875/GR/-X	TRANSISTOR		
	Q2203	KTC3875/GR/-X	TRANSISTOR		
	Q2403	KTC3875/GR/-X	TRANSISTOR		
	Q2601	KRC102S-X	DIGITAL.TR		
	Q2703	KTA1504/GR-X	TRANSISTOR	SW5V	
	Q2704	KTC3875/GR/-X	TRANSISTOR	RESET SW	

⚠	Item	Parts number	Parts name	Remarks	Area
	Q2705	KTC3875/GR/-X	TRANSISTOR	BACKUP CONT	
	Q2706	KTC3875/GR/-X	TRANSISTOR		
	Q2707	KTC3875/GR/-X	TRANSISTOR		
	Q2708	KTC3875/GR/-X	TRANSISTOR		
	Q2709	KTC3875/GR/-X	TRANSISTOR		
	Q2710	KTC3875/GR/-X	TRANSISTOR		
	Q2711	KTC3875/GR/-X	TRANSISTOR		
	Q2712	KTC3875/GR/-X	TRANSISTOR		
	Q2713	KTC3875/GR/-X	TRANSISTOR		
	Q2714	KTC3875/GR/-X	TRANSISTOR		
	Q2715	KTC3875/GR/-X	TRANSISTOR		
	Q2716	KTC3875/GR/-X	TRANSISTOR		
	Q2717	KTC3875/GR/-X	TRANSISTOR		
	Q3101	DTC114TKA-X	TRANSISTOR	70U/12U	
	Q3201	DTC114TKA-X	TRANSISTOR	70U/12U	
	Q3302	2SC2001/K/-T	TRANSISTOR	OSC	
	Q3305	2SC2001/LK/-T	TRANSISTOR	SW	
	Q3321	DTC144EKA-X	TRANSISTOR	BUFFER	
	Q3371	2SA952/LK/-T	TRANSISTOR	MOTER+B	
	Q3372	DTC124EKA-X	TRANSISTOR		
	Q3375	2SB562/C/-T	TRANSISTOR	SOLENOID DRIVE	
	Q3376	2SC2412K/RS/-X	CHIP TRANSISTOR		
	R2001	NRSA63J-102X	MG RESISTOR	RDSDATA	
	R2002	NRSA63J-103X	MG RESISTOR		
	R2003	NRSA63J-222X	MG RESISTOR		
	R2006	NRSA63J-222X	MG RESISTOR		
	R2007	NRSA63J-222X	MG RESISTOR		
	R2008	NRSA63J-103X	MG RESISTOR		
	R2009	NRSA63J-222X	MG RESISTOR		
	R2010	NRSA63J-222X	MG RESISTOR		
	R2011	NRSA63J-102X	MG RESISTOR		
	R2012	NRSA63J-153X	MG RESISTOR		
	R2015	NRSA63J-102X	MG RESISTOR		
	R2016	NRSA63J-103X	MG RESISTOR		
	R2017	NRSA63J-103X	MG RESISTOR		
	R2018	NRSA63J-222X	MG RESISTOR		
	R2019	NRSA63J-222X	MG RESISTOR		
	R2020	NRSA63J-103X	MG RESISTOR		
	R2021	NRSA63J-103X	MG RESISTOR		
	R2022	NRSA63J-222X	MG RESISTOR		
	R2023	NRSA63J-102X	MG RESISTOR		
	R2024	NRSA63J-102X	MG RESISTOR		
	R2025	NRSA63J-102X	MG RESISTOR		
	R2026	NRSA63J-222X	MG RESISTOR		
	R2027	NRSA63J-102X	MG RESISTOR		
	R2028	NRSA63J-103X	MG RESISTOR		
	R2029	NRSA63J-102X	MG RESISTOR		
	R2030	NRSA63J-104X	MG RESISTOR		
	R2031	NRSA63J-104X	MG RESISTOR		
	R2032	NRSA63J-102X	MG RESISTOR		
	R2033	NRSA63J-222X	MG RESISTOR		
	R2034	NRSA63J-102X	MG RESISTOR	RDSCK	
	R2039	NRSA63J-103X	MG RESISTOR	VERSION	
	R2041	NRSA63J-222X	MG RESISTOR		
	R2042	NRSA63J-222X	MG RESISTOR		
	R2043	NRSA63J-222X	MG RESISTOR		
	R2044	NRSA63J-222X	MG RESISTOR		
	R2045	NRSA63J-103X	MG RESISTOR		
	R2046	NRSA63J-222X	MG RESISTOR		
	R2047	NRSA63J-103X	MG RESISTOR		
	R2048	NRSA63J-222X	MG RESISTOR		
	R2049	NRSA63J-103X	MG RESISTOR		
	R2050	NRSA63J-222X	MG RESISTOR		

■ **Electrical parts list (Front board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	R2051	NRSA63J-222X	MG RESISTOR		
	R2052	NRSA63J-222X	MG RESISTOR		
	R2057	NRSA63J-222X	MG RESISTOR		
	R2060	NRSA63J-222X	MG RESISTOR		
	R2061	NRSA63J-222X	MG RESISTOR		
	R2062	NRSA63J-102X	MG RESISTOR		
	R2064	NRSA63J-102X	MG RESISTOR		
	R2066	NRSA63J-102X	MG RESISTOR		
	R2070	NRSA63J-101X	MG RESISTOR		
	R2072	NRSA63J-101X	MG RESISTOR		
	R2073	NRSA63J-101X	MG RESISTOR		
	R2075	NRSA63J-101X	MG RESISTOR		
	R2077	NRSA63J-101X	MG RESISTOR		
	R2079	NRSA63J-222X	MG RESISTOR		
	R2080	NRSA63J-222X	MG RESISTOR		
	R2081	NRSA63J-222X	MG RESISTOR		
	R2082	NRSA63J-222X	MG RESISTOR		
	R2083	NRSA63J-103X	MG RESISTOR		
	R2084	NRSA63J-103X	MG RESISTOR		
	R2085	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2086	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2087	NRSA63J-473X	MG RESISTOR	SENSOR P/UP	
	R2088	NRSA63J-104X	MG RESISTOR	PWM	
	R2089	NRSA63J-222X	MG RESISTOR		
	R2092	NRSA63J-473X	MG RESISTOR	RMT0 P/U	
	R2093	NRSA63J-473X	MG RESISTOR	RMT1 P/U	
	R2095	NRSA63J-103X	MG RESISTOR		
	R2096	NRSA63J-103X	MG RESISTOR		
	R2097	NRSA63J-222X	MG RESISTOR		
	R2098	NRSA63J-222X	MG RESISTOR		
	R2099	NRSA63J-222X	MG RESISTOR		
	R2103	NRSA63J-393X	MG RESISTOR		
	R2104	NRSA63J-103X	MG RESISTOR		
	R2105	NRSA63J-472X	MG RESISTOR		
	R2106	NRSA63J-153X	MG RESISTOR		
	R2108	NRSA63J-182X	MG RESISTOR		
	R2109	NRSA63J-182X	MG RESISTOR		
	R2110	NRSA63J-122X	MG RESISTOR		
	R2111	NRSA63J-682X	MG RESISTOR		
	R2125	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2126	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2127	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2128	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2129	NRSA63J-752X	MG RESISTOR		
	R2130	NRSA63J-752X	MG RESISTOR		
	R2131	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2132	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2133	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R2134	NRSA63J-103X	MG RESISTOR		
	R2135	NRSA63J-124X	MG RESISTOR		
	R2136	NRSA63J-154X	MG RESISTOR		
	R2137	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R2138	NRSA63J-103X	MG RESISTOR		
	R2203	NRSA63J-393X	MG RESISTOR		
	R2204	NRSA63J-103X	MG RESISTOR		
	R2205	NRSA63J-472X	MG RESISTOR		
	R2206	NRSA63J-153X	MG RESISTOR		
	R2208	NRSA63J-182X	MG RESISTOR		
	R2209	NRSA63J-182X	MG RESISTOR		
	R2210	NRSA63J-122X	MG RESISTOR		
	R2211	NRSA63J-682X	MG RESISTOR		
	R2225	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2226	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R2227	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2228	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2229	NRSA63J-752X	MG RESISTOR		
	R2230	NRSA63J-752X	MG RESISTOR		
	R2231	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2232	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2233	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R2234	NRSA63J-103X	MG RESISTOR		
	R2235	NRSA63J-513X	MG RESISTOR		
	R2237	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R2407	NRSA63J-332X	MG RESISTOR		
	R2408	NRSA63J-392X	MG RESISTOR		
⚠	R2411	QRZ9006-5R6X	F RESISTOR	EUROPE ONLY	
	R2415	NRSA63J-823X	MG RESISTOR		
	R2416	NRSA63J-823X	MG RESISTOR		
	R2417	NRSA63J-394X	MG RESISTOR		
	R2418	NRSA63J-104X	MG RESISTOR		
	R2503	NRSA63J-222X	MG RESISTOR		
	R2505	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2614	NRSA63J-161X	MG RESISTOR		
	R2615	NRSA63J-470X	MG RESISTOR		
	R2620	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R2621	QRE141J-820Y	C RESISTOR	82 5% 1/4W	
	R2622	NRSA63J-222X	MG RESISTOR		
	R2624	NRSA63J-0R0X	MG RESISTOR		
	R2705	NRSA63J-331X	MG RESISTOR		
	R2706	NRSA63J-103X	MG RESISTOR		
	R2707	NRSA63J-103X	MG RESISTOR		
	R2708	NRSA63J-103X	MG RESISTOR		
	R2709	NRSA63J-103X	MG RESISTOR		
	R2710	NRSA63J-104X	MG RESISTOR		
	R2711	NRSA63J-473X	MG RESISTOR		
	R2712	NRSA63J-333X	MG RESISTOR		
	R2713	NRSA63J-102X	MG RESISTOR		
	R2714	NRSA63J-102X	MG RESISTOR		
	R2715	NRSA63J-102X	MG RESISTOR		
	R2716	NRSA63J-102X	MG RESISTOR		
	R2717	NRSA63J-102X	MG RESISTOR		
	R2718	NRSA63J-102X	MG RESISTOR		
	R2719	NRSA63J-221X	MG RESISTOR		
	R2720	NRSA63J-221X	MG RESISTOR		
	R2721	NRSA63J-271X	MG RESISTOR		
	R2722	NRSA63J-271X	MG RESISTOR		
	R2723	NRSA63J-271X	MG RESISTOR		
	R2724	NRSA63J-271X	MG RESISTOR		
	R2725	NRSA63J-221X	MG RESISTOR		
	R2726	NRSA63J-221X	MG RESISTOR		
	R2727	NRSA63J-271X	MG RESISTOR		
	R2728	NRSA63J-271X	MG RESISTOR		
	R2729	NRSA63J-271X	MG RESISTOR		
	R2730	NRSA63J-271X	MG RESISTOR		
	R2731	NRSA63J-221X	MG RESISTOR		
	R2732	NRSA63J-221X	MG RESISTOR		
	R2733	NRSA63J-271X	MG RESISTOR		
	R2734	NRSA63J-271X	MG RESISTOR		
	R2735	NRSA63J-271X	MG RESISTOR		
	R2736	NRSA63J-271X	MG RESISTOR		
	R2740	NRSA63J-222X	MG RESISTOR		
	R2741	NRSA63J-222X	MG RESISTOR		
	R2742	NRSA63J-222X	MG RESISTOR		
	R2743	NRSA63J-222X	MG RESISTOR		
	R2744	NRSA63J-222X	MG RESISTOR		
	R2745	NRSA63J-222X	MG RESISTOR		

■ **Electrical parts list (Front board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	R2750	NRSA63J-221X	MG RESISTOR		
	R2751	NRSA63J-221X	MG RESISTOR		
	R2752	NRSA63J-221X	MG RESISTOR		
	R2852	NRSA63J-100X	MG RESISTOR		
	R2853	NRSA63J-222X	MG RESISTOR		
	R2854	NRSA63J-222X	MG RESISTOR		
	R2855	NRSA63J-100X	MG RESISTOR		
	R2856	QRE141J-9R1Y	C RESISTOR	9.1 5% 1/4W	
	R2860	NRSA63J-100X	MG RESISTOR		
	R2861	NRSA63J-222X	MG RESISTOR		
	R2862	NRSA63J-222X	MG RESISTOR		
	R2863	NRSA63J-103X	MG RESISTOR		
	R2864	NRSA63J-103X	MG RESISTOR		
	R2865	NRSA63J-103X	MG RESISTOR		
	R2866	NRSA63J-103X	MG RESISTOR		
	R2867	NRSA63J-100X	MG RESISTOR		
	R2901	NRSA63J-103X	MG RESISTOR		
	R3101	NRSA63J-220X	MG RESISTOR		
	R3102	NRSA63J-182X	MG RESISTOR		
	R3103	NRSA63J-242X	MG RESISTOR		
	R3105	NRSA63J-104X	MG RESISTOR		
	R3106	NRSA63J-332X	MG RESISTOR		
	R3107	NRSA63J-123X	MG RESISTOR		
	R3108	NRSA63J-562X	MG RESISTOR		
	R3109	NRSA63J-102X	MG RESISTOR		
	R3110	NRSA63J-272X	MG RESISTOR		
	R3111	NRSA63J-363X	MG RESISTOR		
	R3112	NRSA63J-222X	MG RESISTOR		
	R3116	NRSA63J-102X	MG RESISTOR		
	R3121	NRSA63J-223X	MG RESISTOR		
	R3201	NRSA63J-220X	MG RESISTOR		
	R3202	NRSA63J-182X	MG RESISTOR		
	R3203	NRSA63J-242X	MG RESISTOR		
	R3205	NRSA63J-104X	MG RESISTOR		
	R3206	NRSA63J-332X	MG RESISTOR		
	R3207	NRSA63J-123X	MG RESISTOR		
	R3208	NRSA63J-562X	MG RESISTOR		
	R3209	NRSA63J-102X	MG RESISTOR		
	R3210	NRSA63J-272X	MG RESISTOR		
	R3211	NRSA63J-363X	MG RESISTOR		
	R3212	NRSA63J-222X	MG RESISTOR		
	R3216	NRSA63J-102X	MG RESISTOR		
	R3221	NRSA63J-223X	MG RESISTOR		
	R3301	NRS181J-221X	MG RESISTOR	VCC	
	R3303	NRSA63J-393X	MG RESISTOR		
	R3304	NRS181J-101X	MG RESISTOR	VCC	
	R3305	NRSA63J-222X	MG RESISTOR		
	R3310	QRJ146J-4R7X	UNF C RESISTOR	4.7 5% 1/4W	
	R3313	NRSA63J-2R2X	MG RESISTOR		
	R3314	NRSA63J-153X	MG RESISTOR		
	R3315	NRSA63J-101X	MG RESISTOR	DUMP	
	R3327	NRSA63J-474X	MG RESISTOR	BIAS T.P	
	R3335	NRSA63J-152X	MG RESISTOR	BIAS SW	
	R3336	NRSA63J-472X	MG RESISTOR		
	R3337	NRSA63J-332X	MG RESISTOR		
	R3338	NRSA63J-392X	MG RESISTOR		
	R3339	NRSA63J-222X	MG RESISTOR		
	R3340	NRS181J-0R0X	MG RESISTOR	VDD	
	R3341	NRSA63J-123X	MG RESISTOR		
	R3342	NRSA63J-203X	MG RESISTOR		
	R3343	NRSA63J-183X	MG RESISTOR		
⚠	R3353	QRZ9005-100X	F RESISTOR	+B	
	R3371	NRSA63J-103X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R3372	NRSA63J-102X	MG RESISTOR		
	R3375	NRSA02J-151X	MG RESISTOR	1/8W	
	R3376	NRSA02J-683X	MG RESISTOR		
	SP709	LV30064-092A	SPACER		
	VR331	QVP0077-203Z	SEMI V RESISTOR	BIAS ADJ	
	VR337	QVP0077-103Z	SEMI V RESISTOR	TAPE SPEED ADJ	
	W 708	QJQ009-032601	SHI CR B-B WIRE	DIGITAL OUTPUT	
	W 709	QUB230-22HPHP	SIN TWIST WIRE		
	X2701	QAX0283-001Z	C RESONATOR	MAIN CLOCK	
	X2702	QAX0401-001	CRYSTAL	SUB CLOCK	

■ **Electrical parts list (Tuner board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 1	NCB21HK-223X	C CAPACITOR		
	C 2	NCB21HK-103X	C CAPACITOR		
	C 3	EETC1CM-106ZJC	E CAPACITOR		
	C 4	NCB21HK-103X	C CAPACITOR		
	C 6	NCB21HK-222X	C CAPACITOR		
	C 7	NCB21HK-102X	C CAPACITOR		
	C 8	NCB21HK-102X	C CAPACITOR		
	C 9	NCB21HK-102X	C CAPACITOR		
	C 10	NCS21HJ-120X	C CAPACITOR		
	C 11	NCB21HK-223X	C CAPACITOR		
	C 12	NCB21HK-473X	C CAPACITOR		
	C 13	NCS21HJ-120X	C CAPACITOR		
	C 14	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 15	NCS21HJ-120X	C CAPACITOR		
	C 16	NCS21HJ-120X	C CAPACITOR		
	C 17	NCB21HK-392X	C CAPACITOR		
	C 18	QEQ61HM-474Z	NP E CAPACITOR	.47MF 20% 50V	
	C 19	NCB21HK-473X	C CAPACITOR		
	C 20	NCB21HK-102X	C CAPACITOR		
	C 21	NCB21HK-223X	C CAPACITOR		
	C 22	NCS21HJ-151X	C CAPACITOR		
	C 23	NCS21HJ-151X	C CAPACITOR		
	C 24	NCS21HJ-151X	C CAPACITOR		
	C 25	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 26	NCB21HK-103X	C CAPACITOR		
	C 27	NCB21HK-102X	C CAPACITOR		
	C 30	EETC1CM-107ZJC	E CAPACITOR		
	C 31	EEKC1CM-226ZJC	E CAPACITOR		
	C 32	NCB21HK-473X	C CAPACITOR		
	C 33	NCB21HK-473X	C CAPACITOR		
	C 34	NCB21HK-223X	C CAPACITOR		
	C 35	NCB21HK-473X	C CAPACITOR		
	C 36	EEKC1HM-105ZJC	E CAPACITOR		
	C 37	EEKC1HM-105ZJC	E CAPACITOR		
	C 38	EETC1HM-224ZJC	E CAPACITOR		
	C 39	EETC1HM-105ZJC	E CAPACITOR		
	C 40	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 41	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 42	NCB21HK-182X	C CAPACITOR		
	C 43	NCB21HK-182X	C CAPACITOR		
	C 44	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 45	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 46	NCB21HK-223X	C CAPACITOR		
	C 47	EETC1HM-105ZJC	E CAPACITOR		
	C 48	NCB21HK-222X	C CAPACITOR		
	C 49	NCS21HJ-471X	C CAPACITOR		
	C 50	EETC1CM-226ZJC	E CAPACITOR		
	C 51	EEKC1HM-105ZJC	E CAPACITOR		
	C 52	QFVJ1HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C 53	EETC1CM-226ZJC	E CAPACITOR		
	C 54	NCB21HK-473X	C CAPACITOR		
	C 55	NCS21HJ-330X	C CAPACITOR		
	C 56	NCS21HJ-100X	C CAPACITOR		
	C 57	NCB21HK-102X	C CAPACITOR		
	C 58	NCB21HK-473X	C CAPACITOR		
	C 59	NCB21HK-102X	C CAPACITOR		
	C 70	NCS21HJ-220X	C CAPACITOR		
	C 71	NCS21HJ-220X	C CAPACITOR		
	C 72	NCB21HK-561X	C CAPACITOR		
	C 73	NCB21HK-104X	C CAPACITOR		
	C 74	NCB21HK-104X	C CAPACITOR		
	C 75	EETC1HM-106ZJC	E CAPACITOR		
	C 76	NCB21HK-331X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	CF 1	QAX0420-001	C FILTER		
	CF 2	QAX0458-001Z	C FILTER		
	CF 3	QAX0610-001Z	C DISCRIMINATOR		
	CN 1	QGF1205F1-13	CONNECTOR		
	D 1	1SS133-T2	SI DIODE		
	D 2	1SS133-T2	SI DIODE		
	D 3	1SS133-T2	SI DIODE		
	D 4	1SS133-T2	SI DIODE		
	D 11	1SS133-T2	SI DIODE		
	IC 1	LA1838	IC		
	IC 2	LC72136N	IC		
	IC 3	LC72723	IC(RDS)		
	J 1	QNB0014-001	ANT TERMINAL		
	L 1	QQR1094-001	COIL BLOCK		
	L 2	QQL231K-330Y	INDUCTOR		
	L 3	QQL231K-4R7Y	INDUCTOR		
	L 70	QQL231K-101Y	INDUCTOR		
	Q 1	2SC2814/4-5/-X	TRANSISTOR		
	Q 2	2SD601A/QR/-X	TRANSISTOR		
	Q 3	2SD601A/QR/-X	TRANSISTOR		
	Q 4	KRA107S-X	TRANSISTOR		
	Q 5	KRA107S-X	TRANSISTOR		
	R 2	NRSA02J-331X	MG RESISTOR		
	R 3	NRSA02J-224X	MG RESISTOR		
	R 4	NRSA02J-331X	MG RESISTOR		
	R 5	NRSA02J-120X	MG RESISTOR		
	R 6	NRSA02J-120X	MG RESISTOR		
	R 10	NRSA02J-222X	MG RESISTOR		
	R 11	NRSA02J-472X	MG RESISTOR		
	R 12	NRSA02J-472X	MG RESISTOR		
	R 13	NRSA02J-103X	MG RESISTOR		
	R 14	NRSA02J-104X	MG RESISTOR		
	R 15	NRSA02J-332X	MG RESISTOR		
	R 16	NRSA02J-472X	MG RESISTOR		
⚠	R 17	QRZ9005-680X	F RESISTOR	68 1/4W	
	R 18	NRSA02J-102X	MG RESISTOR		
	R 19	NRSA02J-102X	MG RESISTOR		
	R 20	NRSA02J-102X	MG RESISTOR		
	R 21	NRSA02J-562X	MG RESISTOR		
	R 22	NRSA02J-222X	MG RESISTOR		
	R 23	NRSA02J-822X	MG RESISTOR		
	R 24	NRSA02J-103X	MG RESISTOR		
	R 25	NRSA02J-331X	MG RESISTOR		
	R 26	NRSA02J-222X	MG RESISTOR		
	R 27	NRSA02J-103X	MG RESISTOR		
	R 28	NRSA02J-103X	MG RESISTOR		
	R 29	NRSA02J-103X	MG RESISTOR		
	R 30	NRSA02J-122X	MG RESISTOR		
	R 31	NRSA02J-102X	MG RESISTOR		
	R 32	NRSA02J-102X	MG RESISTOR		
	R 33	NRSA02J-331X	MG RESISTOR		
	R 34	NRSA02J-470X	MG RESISTOR		
	R 35	NRSA02J-562X	MG RESISTOR		
	R 36	NRSA02J-332X	MG RESISTOR		
	R 37	NRSA02J-103X	MG RESISTOR		
	R 38	NRSA02J-393X	MG RESISTOR		
	R 39	NRSA02J-393X	MG RESISTOR		
	R 40	NRSA02J-273X	MG RESISTOR		
	R 41	NRSA02J-332X	MG RESISTOR		
	R 60	NRSA02J-0R0X	MG RESISTOR		
	R 72	NRSA02J-102X	MG RESISTOR		
	R 73	NRSA02J-102X	MG RESISTOR		
	T 1	QQR0793-001	IFT		

■ **Electrical parts list (Tuner board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	TU 1	QAU0160-001	FRONT END		
	X 1	QAX0402-001	CRYSTAL		
	X 70	QAX0263-001Z	CRYSTAL		

■ **Electrical parts list (CD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 254	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 255	NCB31CK-104X	C CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR		
	C 271	NCS31HJ-101X	C CAPACITOR		
	C 272	NCS31HJ-101X	C CAPACITOR		
	C 273	NCB31CK-104X	C CAPACITOR		
	C 291	NCB21CK-105X	C CAPACITOR		
	C 292	NCB21CK-105X	C CAPACITOR		
	C 601	NCB31HK-102X	C CAPACITOR		
	C 602	NCB31HK-102X	C CAPACITOR		
	C 603	NCB31EK-223X	C CAPACITOR		
	C 604	NCB31EK-223X	C CAPACITOR		
	C 605	NCS31HJ-271X	C CAPACITOR		
	C 606	NCS31HJ-820X	C CAPACITOR		
	C 610	NCB31CK-563X	C CAPACITOR		
	C 611	NCB21CK-104X	C CAPACITOR		
	C 612	QEKC1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 614	NCB31CK-393X	C CAPACITOR		
	C 615	NCB31HK-272X	C CAPACITOR		
	C 616	NCB31HK-681X	C CAPACITOR		
	C 617	NCB31HK-331X	C CAPACITOR		
	C 621	NCB31CK-104X	C CAPACITOR		
	C 622	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 623	NCF21CZ-105X	C CAPACITOR		
	C 624	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 631	QEKC1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 632	NCF21CZ-105X	C CAPACITOR		
	C 633	NCB31EK-223X	C CAPACITOR		
	C 651	NCS31HJ-1R0X	C CAPACITOR		
	C 652	NCS31HJ-1R0X	C CAPACITOR		
	C 653	NCB31AK-334X	C CAPACITOR		
	C 655	NCB31CK-104X	C CAPACITOR		
	C 656	NCB31CK-104X	C CAPACITOR		
	C 657	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 658	NCB31CK-104X	C CAPACITOR		
	C 661	NCS31HJ-471X	C CAPACITOR		
	C 663	NCB31EK-223X	C CAPACITOR		
	C 664	NCB31EK-223X	C CAPACITOR		
	C 665	NCB21CK-154X	C CAPACITOR		
	C 667	NCB21CK-474X	C CAPACITOR		
	C 668	NCB31CK-473X	C CAPACITOR		
	C 673	QER60JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 676	NCB31CK-104X	C CAPACITOR		
	C 677	NCB31CK-104X	C CAPACITOR		
	C 678	NCB31CK-104X	C CAPACITOR		
	C 679	QEKC0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 680	NCB31CK-104X	C CAPACITOR		
	C 681	NCS31HJ-6R0X	C CAPACITOR		
	C 682	NCS31HJ-150X	C CAPACITOR		
	C 683	NCS31HJ-220X	C CAPACITOR		
	C 801	NCB31EK-223X	C CAPACITOR		
	C 802	NCS31HJ-102X	C CAPACITOR		
	C 811	NCS31HJ-391X	C CAPACITOR		
	C 812	NCS31HJ-391X	C CAPACITOR		
	C 813	NCS31HJ-391X	C CAPACITOR		
	C 814	NCS31HJ-391X	C CAPACITOR		
	C 815	NCB21AK-105X	C CAPACITOR		
	C 816	NCB20JK-155X	C CAPACITOR		
	C 817	NCF21CZ-105X	C CAPACITOR		
	C 818	NCF21CZ-105X	C CAPACITOR		
	C 821	NCF21CZ-105X	C CAPACITOR		
	C 822	QERF1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 861	NCB31HK-102X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 862	NCB31HK-102X	C CAPACITOR		
	C 863	NCB31HK-272X	C CAPACITOR		
	C 864	NCB31HK-272X	C CAPACITOR		
	CN601	QGF1037F1-15W	CONNECTOR	PICK UP/TR.MECH	
	CN605	QGF1016F2-04W	CONNECTOR	CD TEXT	
	CN606	QGF1016F2-08W	CONNECTOR	4T I/F	
	CN651	QGF1016F3-19	CONNECTOR	MAIN	
	D 251	DA204U-X	DIODE		
	D 292	MA112-X	DIODE		
	D 603	1SS355-X	DIODE		
	HL251	VYH7653-002	IC HOLDER	FOR IC251	
	IC251	UPD780024AGKB21	IC	MICOM	
	IC291	XC62HR3502P-X	IC	3.5VREG	
	IC601	AN22000A-W	IC	RF AMP	
	IC651	MN662790RSC	IC	DSP & DAC	
	IC801	LA6541-X	IC	PU DRIVE	
	K 655	NQR0007-002X	FERRITE BEADS	TX	
	K 656	NQR0251-004X	FERRITE BEADS	SRDATA	
	K 657	NQR0251-004X	FERRITE BEADS	LRCK	
	K 658	NQR0251-004X	FERRITE BEADS	BCLK	
	Q 631	2SA1037AK/RS/-X	TRANSISTOR	APC	
	Q 651	DTC114EUA-X	TRANSISTOR		
	Q 652	DTC114EUA-X	TRANSISTOR	RF EQ	
	Q 673	DTA114EKA-X	DIGITAL.TRANSIS	IREF CHANGE	
	R 251	NRSA63J-102X	MG RESISTOR		
	R 252	NRSA63J-102X	MG RESISTOR		
	R 253	NRSA63J-102X	MG RESISTOR		
	R 254	NRSA63J-102X	MG RESISTOR		
	R 255	NRSA63J-102X	MG RESISTOR		
	R 256	NRSA63J-102X	MG RESISTOR		
	R 257	NRSA63J-102X	MG RESISTOR		
	R 258	NRSA63J-102X	MG RESISTOR		
	R 259	NRSA63J-102X	MG RESISTOR		
	R 260	NRSA63J-102X	MG RESISTOR		
	R 261	NRSA63J-0R0X	MG RESISTOR		
	R 262	NRSA63J-102X	MG RESISTOR		
	R 263	NRSA63J-102X	MG RESISTOR		
	R 264	NRSA63J-103X	MG RESISTOR		
	R 265	NRSA63J-183X	MG RESISTOR		
	R 271	NRSA63J-103X	MG RESISTOR		
	R 272	NRSA63J-103X	MG RESISTOR		
	R 273	NRSA63J-103X	MG RESISTOR		
	R 274	NRSA63J-682X	MG RESISTOR		
	R 275	NRSA63J-103X	MG RESISTOR		
	R 281	NRSA63J-102X	MG RESISTOR		
	R 282	NRSA63J-102X	MG RESISTOR		
	R 283	NRSA63J-101X	MG RESISTOR		
	R 284	NRSA63J-102X	MG RESISTOR		
	R 285	NRSA63J-102X	MG RESISTOR		
	R 291	NRSA63J-103X	MG RESISTOR		
	R 292	NRSA63J-1R0X	MG RESISTOR		
	R 293	NRSA63J-1R0X	MG RESISTOR		
	R 601	NRSA63J-224X	MG RESISTOR		
	R 602	NRSA63J-823X	MG RESISTOR		
	R 603	NRSA63J-393X	MG RESISTOR		
	R 604	NRSA63J-224X	MG RESISTOR		
	R 607	NRSA63J-473X	MG RESISTOR		
	R 608	NRSA63J-473X	MG RESISTOR		
	R 611	NRSA63J-562X	MG RESISTOR		
	R 613	NRSA63J-562X	MG RESISTOR		
	R 617	NRSA63J-332X	MG RESISTOR		
	R 631	NRSA63J-2R2X	MG RESISTOR		
	R 632	NRSA63J-3R9X	MG RESISTOR		

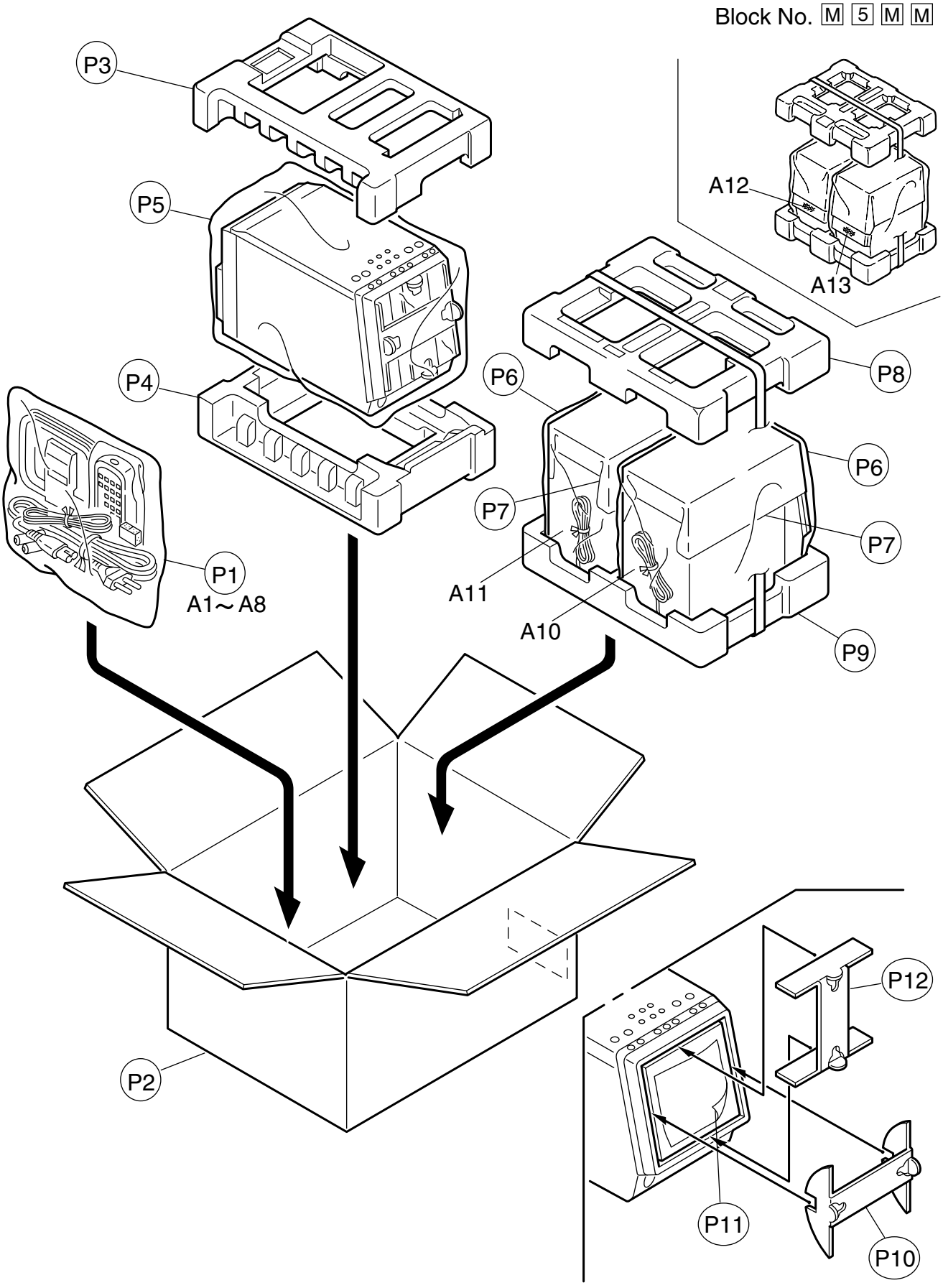
■ **Electrical parts list (CD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 634	NRSA63J-3R9X	MG RESISTOR		
	R 635	NRSA63J-100X	MG RESISTOR		
	R 636	NRSA63J-151X	MG RESISTOR		
	R 651	NRSA63J-102X	MG RESISTOR		
	R 652	NRSA63J-102X	MG RESISTOR		
	R 653	NRSA63J-102X	MG RESISTOR		
	R 654	NRSA63J-102X	MG RESISTOR		
	R 659	NRSA63J-203X	MG RESISTOR		
	R 661	NRSA63J-473X	MG RESISTOR		
	R 662	NRSA63J-683X	MG RESISTOR		
	R 663	NRSA63J-683X	MG RESISTOR		
	R 664	NRSA63J-331X	MG RESISTOR		
	R 665	NRSA63J-101X	MG RESISTOR		
	R 666	NRSA02J-101X	MG RESISTOR		
	R 667	NRSA63J-4R7X	MG RESISTOR		
	R 668	NRSA63J-155X	MG RESISTOR		
	R 669	NRSA63J-562X	MG RESISTOR		
	R 671	NRSA63J-684X	MG RESISTOR		
	R 673	NRSA63J-683X	MG RESISTOR		
	R 675	NRSA63J-100X	MG RESISTOR		
	R 677	NRSA63J-102X	MG RESISTOR		
	R 678	NRSA63J-102X	MG RESISTOR		
	R 679	NRSA63J-102X	MG RESISTOR		
	R 682	NRSA63J-102X	MG RESISTOR		
	R 683	NRSA63J-105X	MG RESISTOR		
	R 685	NRSA63J-683X	MG RESISTOR		
	R 801	NRSA63J-272X	MG RESISTOR		
	R 802	NRSA63J-152X	MG RESISTOR		
	R 803	NRSA63J-472X	MG RESISTOR		
	R 804	NRSA63J-103X	MG RESISTOR		
	R 805	NRSA63J-123X	MG RESISTOR		
	R 808	NRSA63J-183X	MG RESISTOR		
	R 809	NRSA63J-152X	MG RESISTOR		
	R 811	NRSA63J-473X	MG RESISTOR		
	R 812	NRSA63J-152X	MG RESISTOR		
	R 813	NRSA63J-182X	MG RESISTOR		
	R 861	NRSA63J-681X	MG RESISTOR		
	R 862	NRSA63J-681X	MG RESISTOR		
	R 863	NRSA63J-561X	MG RESISTOR		
	R 864	NRSA63J-561X	MG RESISTOR		
	SW101	QSW0927-001	SWITCH	REST SW	
	SW102	QSW0931-001	SWITCH	TRAY SW	
	X 251	QAX0664-001Z	C OSCILLATOR	FOR IC251 8.38M	
	X 651	NAX0476-001X	CRYSTAL	FOR IC651	

Packing materials and accessories parts list

Block No. M 3 M M

Block No. M 5 M M



■ Parts list (Packing)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPC02503515P	POLY BAG	1	FOR INST	
	P 2	GV20154-001A	CARTON ASSY	1	MASTER PACKING	
	P 3	GV10087-001A	CUSHION(TOP)	1		
	P 4	GV10088-001A	CUSHION(BOTTOM)	1		
	P 5	QPC05005015P	POLY BAG	1	FOR SET	
	P 6	700-120070-10	POLY BAG	2	FOR SPK	
	P 7	715-250035-00	MIRROR MAT	2	FOR SPK	
	P 8	720-TUXF70-00	TOP CUSHION	1	FOR SPK	
	P 9	720-BUXF70-00	BOTTOM CUSHION	1	FOR SPK	
	P 10	GV30228-002A	PACKING SPACER	1		
	P 11	GV40168-004A	PACKING SHEET	1		
	P 12	GV30229-001A	PACKING SPACER	1		

■ Parts list (Accessories)

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	EWP503-001C	ANT.WIRE	1		
	A 2	QAL0014-001	AM LOOP ANT	1		
	A 3	GVT0071-008A	INST.BOOK	1	ENG	B
		GVT0071-006A	INST.BOOK	1	GER.FRE.DUT	E
		GVT0071-007A	INST.BOOK	1	SWE.FIN.DAN	EN
		GVT0071-007A	INST.BOOK	1	FRE.GER.SPA.ITA	EN
⚠	A 4	QMPL060-183-JD	POWER CORD	1		E,EN
⚠		QMPP060-183-JD	POWER CORD	1		B
	A 5	RM-SUXA52R	REMOCON	1		
	A 6	----------	BATTERY	2		
	A 7	BT-54013-2	W.CARD	1		
	A 8	VNA3000-204	REGIST.CARD	1		B
	A 10	UXA52R-SPBOX-L	SPEAKER BOX	1		
	A 11	UXA52R-SPBOX-R	SPEAKER BOX	1		
	A 12	201-0070US-10	SARAN BOARD	1		
	A 13	201-1070US-10	SARAN BOARD	1		