

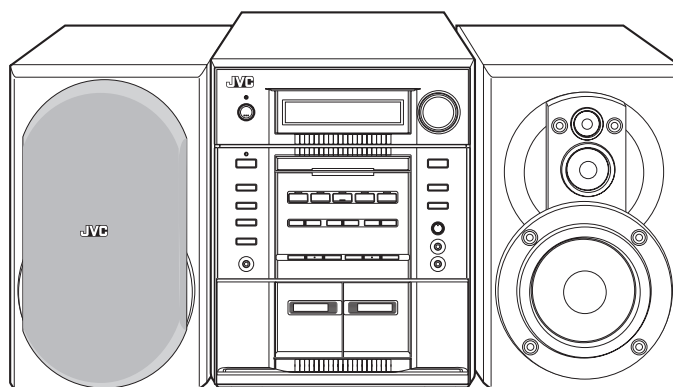
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-JD3

Area suffix
EE ----- Russian Federation



SP-MXJD3

CA-MXJD3

SP-MXJD3



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SPECIFICATION

Amplifier section	Output Power		100 W per channel, min. RMS, driven into 6 Ω at 1 kHz with no more than 10% total harmonic distortion.
	Digital output	OPTICAL DIGITAL OUTPUT	-21 dBm to -15 dBm (660 nm $\pm$ 30 nm)
	Audio input sensitivity/Impedance (Measured at 1 kHz, with tape recording signal 300 mV)		AUX : 300 mV/47 k Ω MIC 1/2 : 3.0 mV/50 k Ω
	VIDEO OUT	Color system	NTSC/PAL selectable
		VIDEO (composite)	1 V(p-p)/75 Ω
		S-VIDEO	Y (luminance) : 1 V(p-p)/75 Ω
			C (chrominance, burst) : 0.286 V(p-p)/75 Ω
		COMPONENT (Interlace/Progressive)	(Y) : 1 V(p-p)/75 Ω (PB/PR) : 0.7 V(p-p)/75 Ω
		Speaker Terminals	6 Ω - 16 Ω (Main speakers)
Others	AV COMPU LINK $\times$ 2 ($\varnothing$ 3.5)		16 Ω - 32 Ω (Surround speakers)
Tuner section	FM tuning range		87.50 MHz - 108.00 MHz
	AM (MW) tuning range		531 kHz - 1 710 kHz (at 9 kHz) 530 kHz - 1 710 kHz (at 10 kHz)
Disc player section	Playable disc		DVD VIDEO/DVD AUDIO CD/VCD/SVCD CD-R/CD-RW (recorded in Audio CD/Video CD/ Super Video CD/MP3/ WMA/JPEG format) DVD-R/DVD-RW (recorded in video format)
	Dynamic range		90 dB
	Horizontal resolution		500 lines
	Wow and flutter		Immeasurable
Cassette deck section	Frequency response		Normal (type I) : 50 Hz - 14 000 Hz
	Wow and flutter		0.15 % (WRMS)
General	Power requirement		AC 110 V / AC 127 V / AC 220 V / AC 230 V - AC 240 V , (adjustable with the voltage selector), 50 Hz / 60 Hz
	Power consumption		135 W (at operation) 17 W (on standby)
	Dimensions (approx.)		265 mm $\times$ 335 mm $\times$ 352 mm (W/H/D)
	Mass (approx.)		8.6 kg
Speakers	Type		3-Way 3-Speaker Bass Reflex Type
	Speaker Systems	Woofer	15 cm cone $\times$ 1
		Mid	5 cm cone $\times$ 1
		Tweeter	2 cm dome $\times$ 1
	Power handling capacity		100 W
	Impedance		6 Ω
	Frequency range		42 Hz - 37 000 Hz
	Sound pressure level		83 dB/W·m
	Dimensions (approx.)		205 mm $\times$ 337 mm $\times$ 240 mm (W/H/D)
	Mass (approx.)		3.5 kg each

Design and specifications are subject to change without notice.

SECTION 1

PRECAUTION

1.1 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 manufacturers 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 (Δ) 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 reassembling.

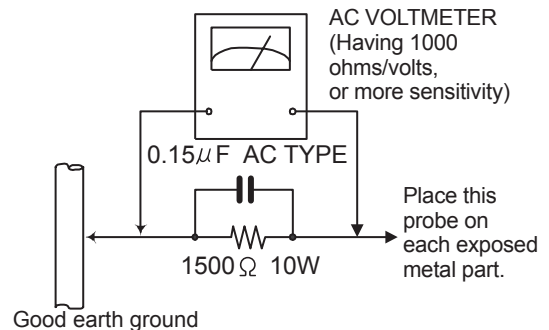
(5) Leakage shock hazard testing

After reassembling 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 Ω per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10W resistor paralleled by a 0.15 μ F 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 measure 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.).



1.2 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.

1.3 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 pre-forming repair of this system.

1.4 Critical parts for safety

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 ($\blacksquare$), diode ($\blacktriangle$) and ICP ($\bullet$) or identified by the " Δ " mark nearby are critical for safety. When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (This regulation dose not Except the J and C version)

1.5 Preventing 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.

1.5.1 Grounding to prevent damage by static electricity

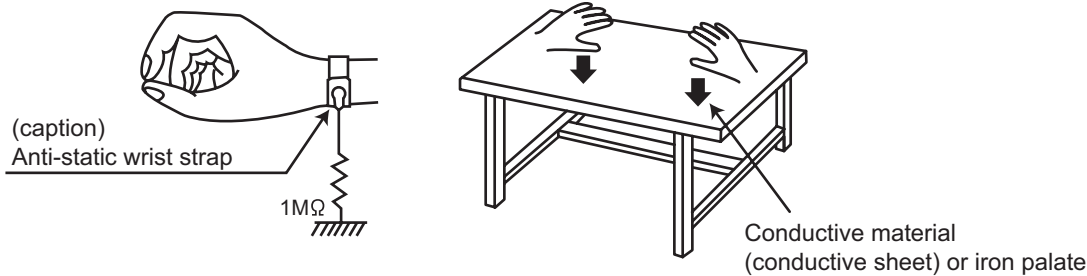
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as laser products. Be careful to use proper grounding in the area where repairs are being performed.

(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) Ground yourself

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



(3) Handling the optical pickup

- 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.)
- 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.

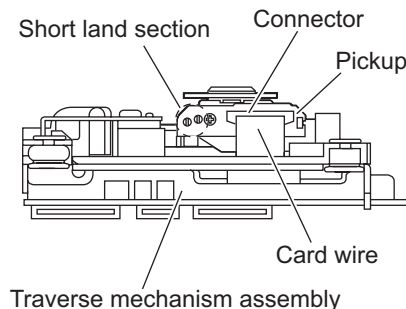
1.6 Handling the traverse unit (optical pickup)

- (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.

1.7 Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the pickup unit.**

- Apply solder to the short land sections before the flexible wire is disconnected from the connector on the servo board. (If the flexible wire is disconnected without applying solder, the pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short land sections after connecting the flexible wire.



1.8 Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and interlock 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 CD,MD and DVD player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. 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 here in 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.

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated.

AVOID DIRECT EXPOSURE TO BEAM.

ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling.

VARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling. (d)	VARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen. (s)	VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)
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CLASS 1
LASER PRODUCT

CAUTION : Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	VARO : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alttiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)
VARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen. (s)	ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling. (d)

SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3 DISASSEMBLY

3.1 Main body section

3.1.1 Removing the metal cover

(See Figs.1 to 3)

- (1) From the both sides of the main body, remove the two screws **A** attaching the metal cover. (See Figs.1 and 2.)
- (2) From the back side of the main body, remove the six screws **B** attaching the metal cover. (See Fig.3.)
- (3) Remove the metal cover from the main body while lifting the rear section of the metal cover in the direction of the arrow. (See Figs.1 and 2.)

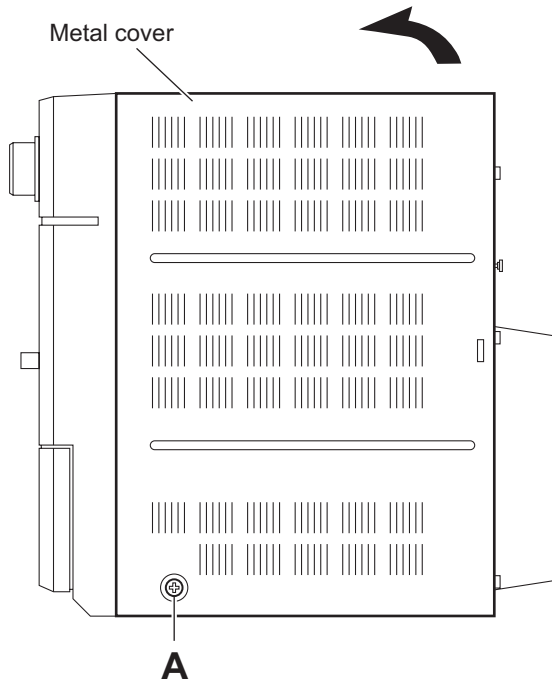


Fig.1

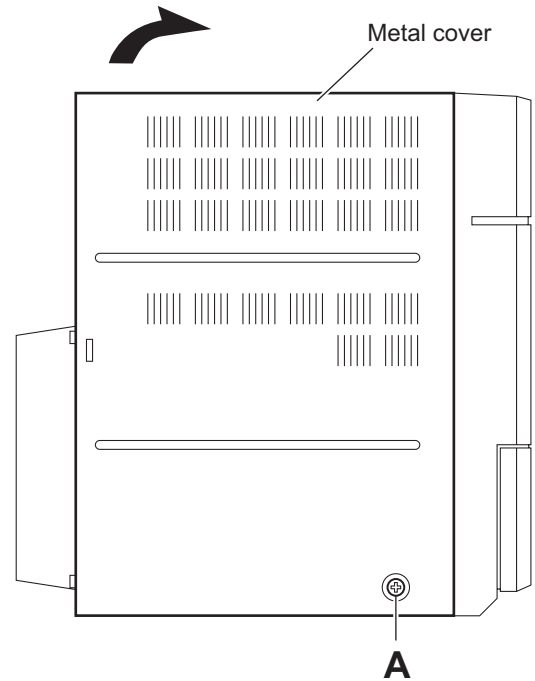


Fig.2

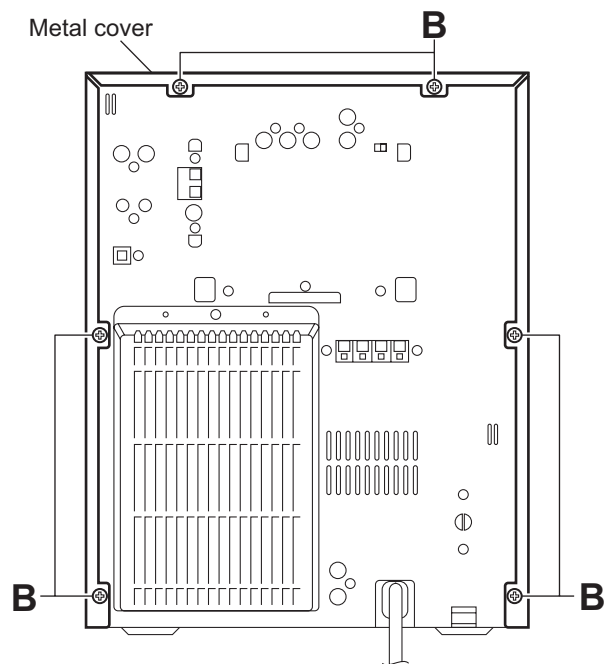


Fig.3

3.1.2 Removing the front panel assembly (See Figs.4 to 7)

- Prior to performing the following procedures, remove the metal cover.

(1) From the right side of the main body, remove the screw **C** attaching the earth wires on the reverse side of the main board. (See Fig.4.)

Reference:

After attaching the earth wires, fix them with a spacer as before. (See Fig.4.)

(2) Remove the plastic rivet attaching the main board. (See Fig.4.)

(3) From the inside of the main body, disconnect the card wires from the connectors (CN303, CN860, CN880) on the forward side of the main board. (See Fig.4.)

(4) Remove the wire clamp fixing the wires and disconnect the wires from the connector (CN301, CN302) on the forward side of the main body. (See Fig.5.)

Reference:

After connecting the wires to the connectors, fix the wires with the wire clamp as before. (See Fig.5.)

(5) From the left side of the main body, disconnect the parallel wire from the connector CN101 on the transformer board. (See Fig.5.)

(6) Disconnect the wire from the connector CN119 on the transformer board. (See Fig.5.)

Reference:

After connecting the wire, pass the wire through the slot **b** of the holder board as before. (See Fig.5.)

(7) Remove the tie band fixing the wire and disconnect the wire from the connector CN106 on the speaker terminal board. (See Fig.5.)

Reference:

- After connecting the wire, fix the wire with a new tie band as before. (See Fig.5.)

- After connecting the wire, pass the wire through the slot **b** of the holder board as before. (See Fig.5.)

(8) From the top side of the main body, remove the screw **D** and screw **D'** attach the front panel assembly to the main body. (See Fig.6.)

Reference:

When attaching the screw **D'**, attach the earth wire with it. (See Fig.6.)

(9) From the bottom side of the main body, remove the two screws **E** and two screws **F** attaching the front panel assembly. (See Fig.7.)

(10) Release the claws **a**, remove the front panel assembly from the main body in the direction of the arrow. (See Fig.7.)

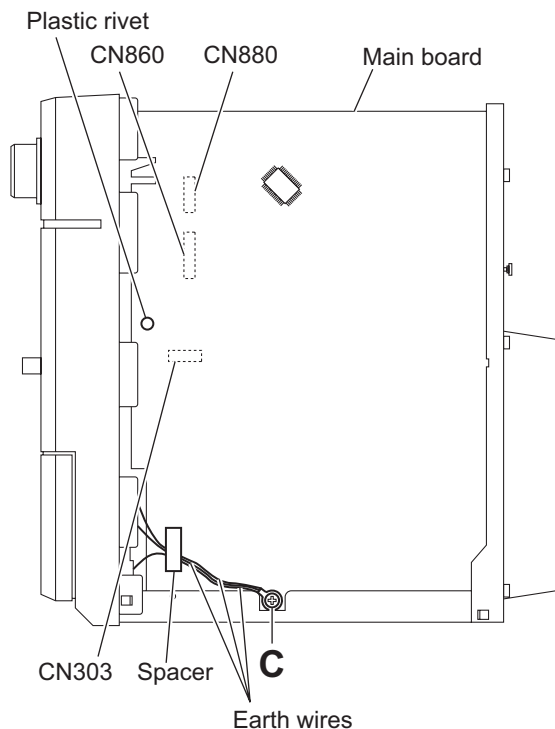


Fig.4

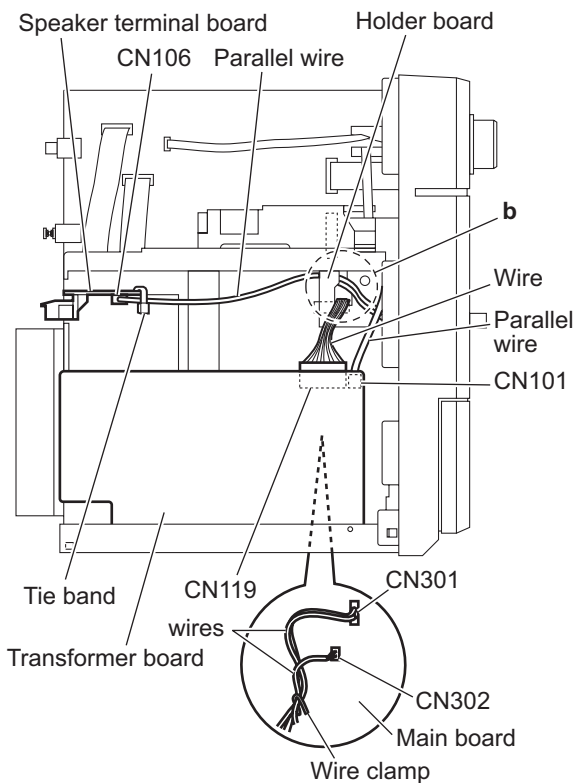


Fig.5

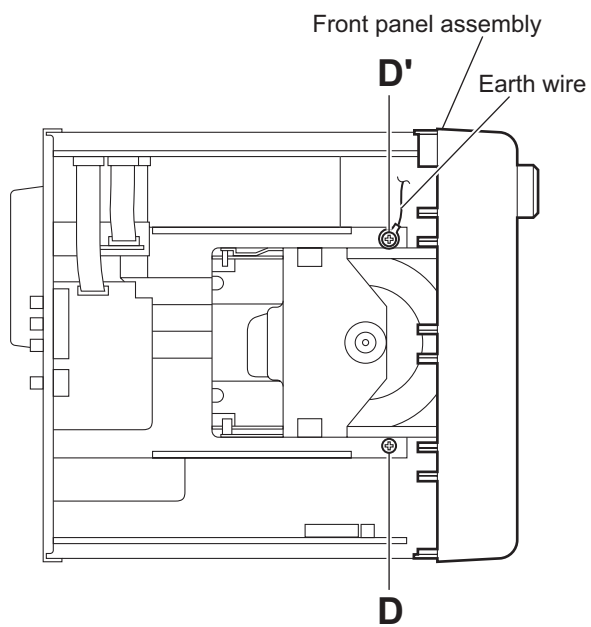


Fig.6

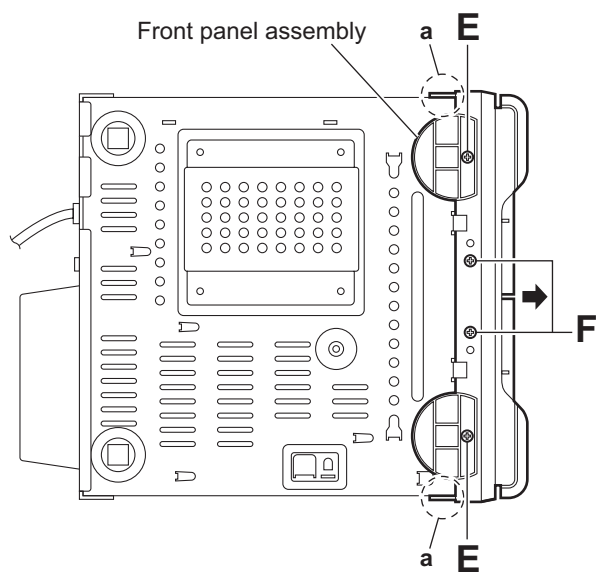


Fig.7

3.1.3 Removing the tuner (See Figs.8 and 9.)

- Prior to performing the following procedures, remove the metal cover.
 - (1) From the top side of the main body, disconnect the card wire from the connector [CN21](#) on the main board. (See Fig.8.)
 - (2) From the back side of the main body, remove the two screws **G** attaching the tuner to the rear panel. (See Fig.9.)

3.1.4 Removing the video board (See Figs.8 and 9.)

- Prior to performing the following procedures, remove the metal cover.
 - (1) From the top side of the main body, disconnect the card wire from the connector [CN410](#) on the main board. (See Fig.8.)
 - (2) From the back side of the main body, remove the three screws **H** attaching the video board to the rear panel. (See Fig.9.)

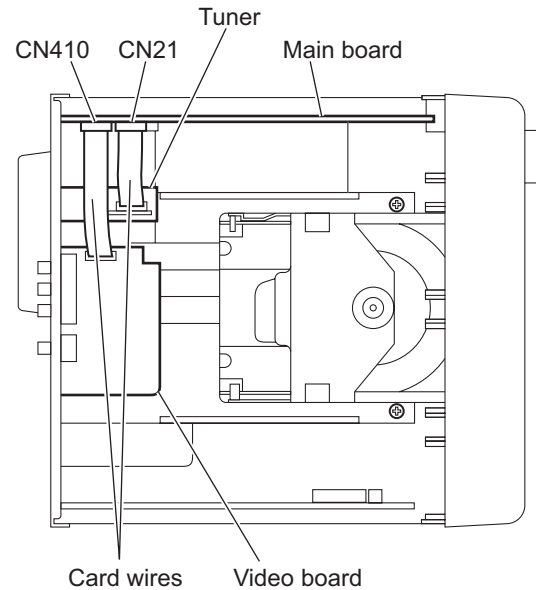


Fig.8

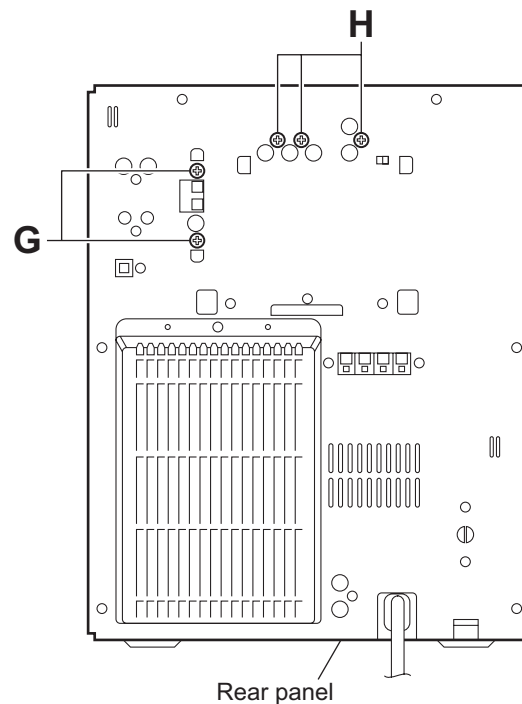


Fig.9

3.1.5 Removing the rear panel

(See Figs.8 to 11)

- Prior to performing the following procedures, remove the metal cover.

- (1) From the back side of the main body, remove the screw **J** attaching the rear cover. (See Fig.10.)
- (2) Release the sections **c** and remove the rear cover from the rear panel. (See Fig.10.)
- (3) Remove the two screws **K** and nineteen screws **L** attaching the rear panel. (See Fig.11.)

Reference:

Remove the tuner and video board as required. (See Figs.8 and 9.)

- (4) From the both sides of the main body, release the sections **d** of the center chassis in the direction of the arrow and release the joints **e** attaching the rear panel to the bottom chassis. (See Fig. 11.)

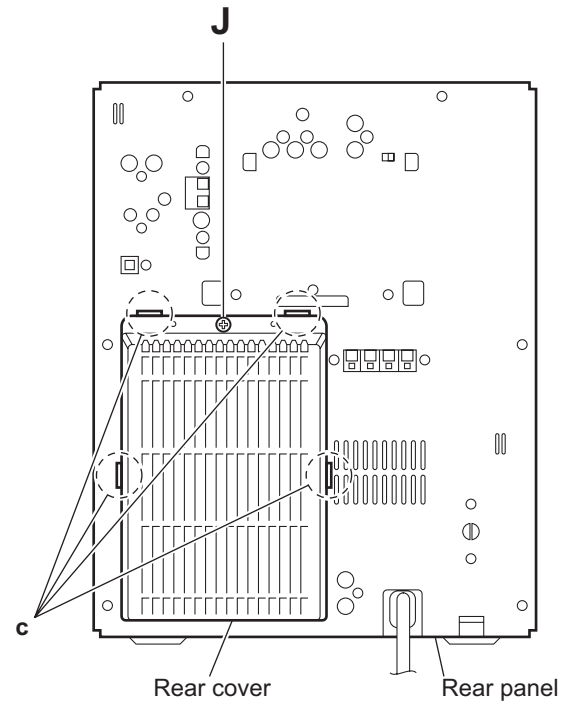


Fig.10

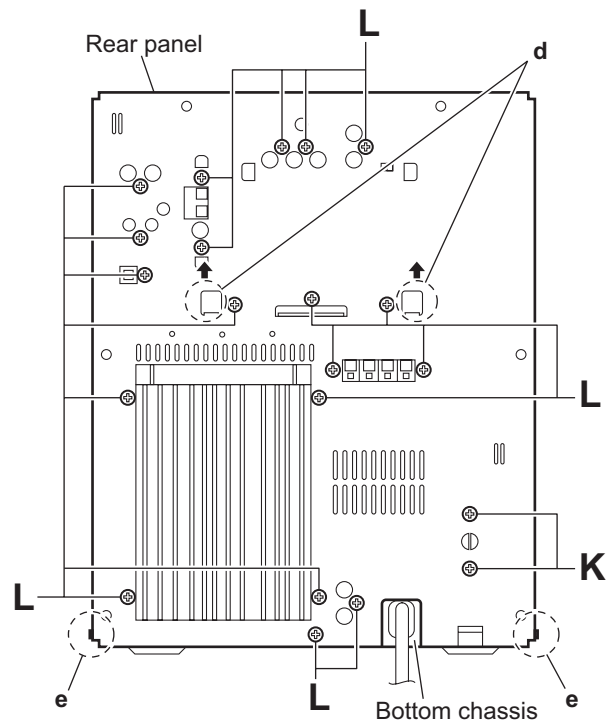


Fig.11

3.1.6 Removing the DVD mechanism assembly (See Figs.12 and 13)

- Prior to performing the following procedures, remove the metal cover, tuner and video board.
 - From the top side of the main body, remove the three screws **M** attaching the DVD mechanism assembly on the center chassis. (See Fig.12.)
 - From the forward side of the main board, disconnect the card wires from the connectors ([CN11](#), [CN511](#), [CN513](#)). (See Fig.12.)

Reference:

When reassembly, pass the card wire through the section **f** of the main board before connecting the card wire to the connector [CN11](#). (See Fig.12.)

- Remove the spacers fixing the card wires. (See Fig.12.)

Reference:

After connecting the card wires, fix them with the spacers as before. (See Fig.12.)

- From the inside of the main body, take out the DVD mechanism assembly.
- Remove the tray fitting from the DVD mechanism assembly in the direction of the arrow. (See Fig.13.)

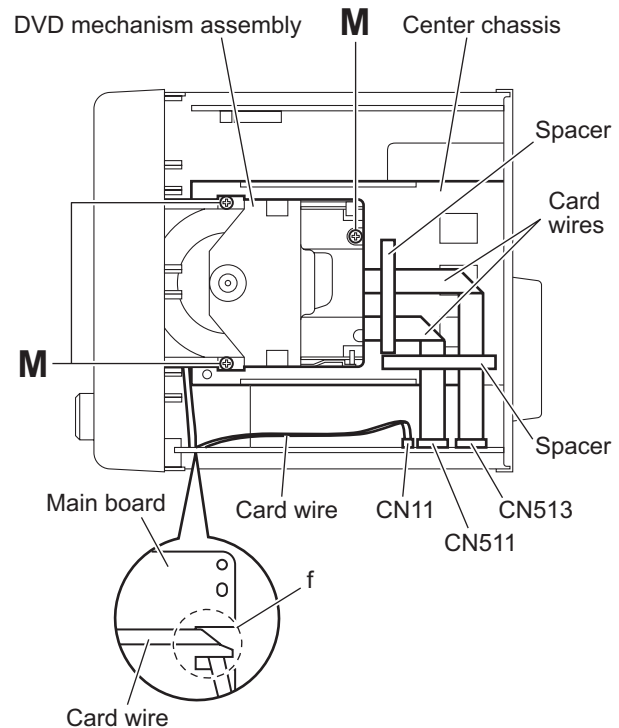


Fig.12

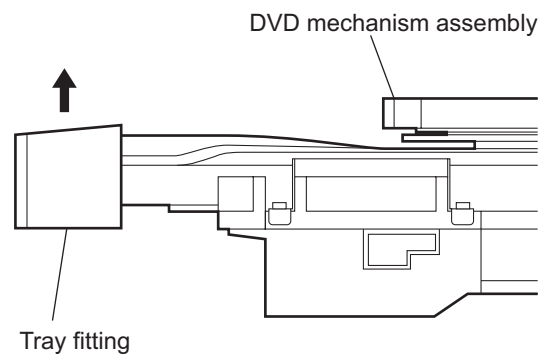


Fig.13

3.1.7 Removing the main board

(See Figs.14 and 15)

- Prior to performing the following procedures, remove the metal cover, tuner, video board and rear panel.
- (1) From the right side of the main body, remove the screw **N** attaching the earth wires on the reverse side of the main board. (See Fig.14.)

Reference:

After attaching the earth wires, fix them with a spacer as before. (See Fig.14.)

- (2) Remove the plastic rivet attaching the main board. (See Fig.14.)
- (3) From the inside of the main body, disconnect the card wires from the connectors ([CN11](#), [CN303](#), [CN511](#), [CN513](#), [CN860](#), [CN880](#)) on the forward side of the main board. (See Figs.14 and 15.)

Reference:

When reassembly, pass the card wire through the section **f** of the main board before connecting the card wire to the connector [CN11](#). (See Fig.14.)

- (4) Remove the wire clamp fixing the wires and disconnect the wires from the connector ([CN301](#), [CN302](#)) on the forward side of the main body. (See Fig.15.)

Reference:

After connecting the wires to the connectors, fix the wires with the wire clamp as before. (See Fig.15.)

- (5) Disconnect the parallel wire from the connectors ([CN220](#), [CN221](#)) on the main board. (See Fig.15.)
- (6) Release the lock **g** of the connector [CN216](#) on the main board in the direction of the arrow 1 and disconnect the main board from the connector [CN216](#) on the speaker terminal board toward this side. (See Fig.14.)

Note:

When releasing the lock **g** of the connector [CN216](#), take care not to break the lock. (See Fig.14.)

- (7) Release the lock **h** of the connector [CN201](#) on the primary board in the direction of the arrow 2 and disconnect the main board from the connector [CN201](#) in the direction of the arrow 3. (See Fig.14.)

Note:

When releasing the lock **h** of the connector [CN201](#), take care not to break the lock. (See Fig.14.)

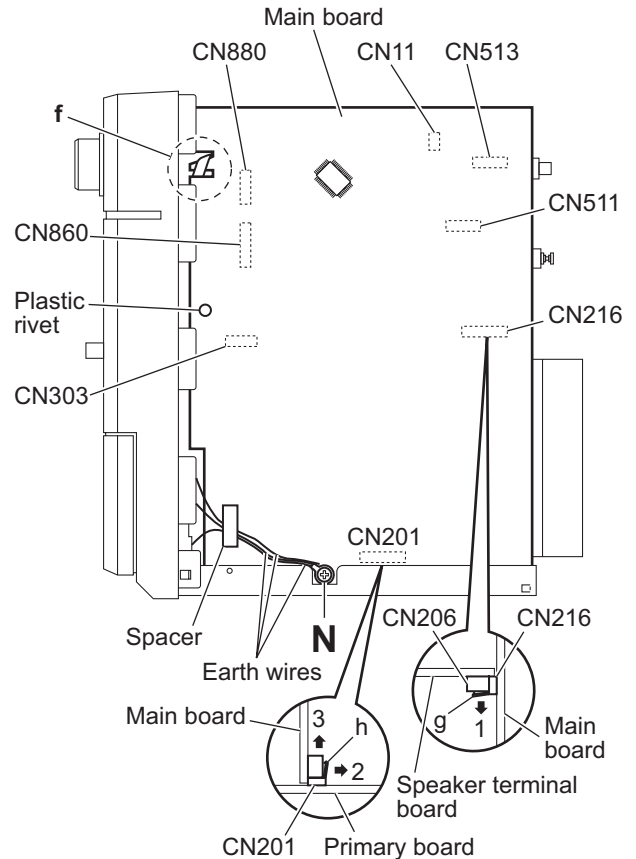


Fig.14

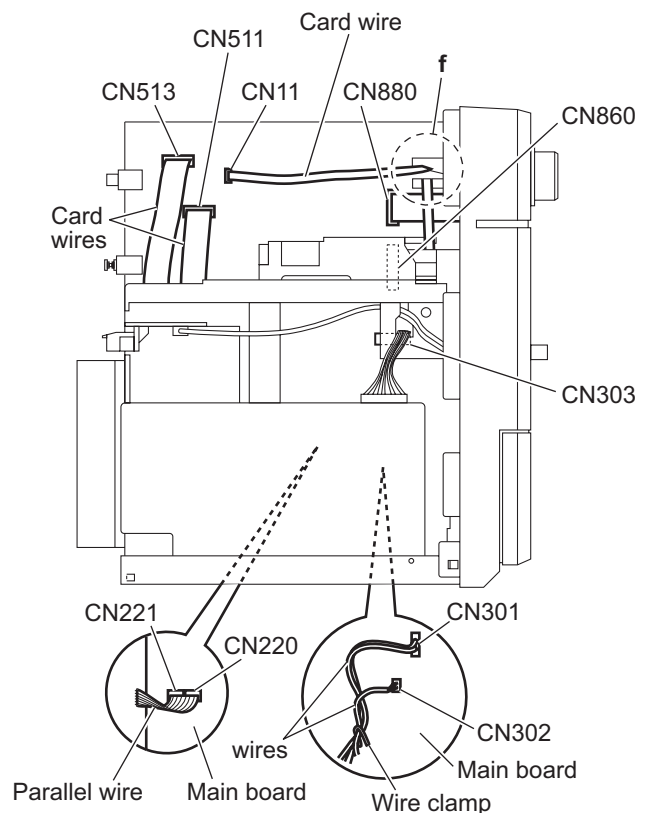


Fig.15

3.1.8 Removing the center chassis assembly (See Fig.16)

- Prior to performing the following procedures, remove the metal cover, tuner, video board and rear panel.

(1) From the top side of the main body, disconnect the card wires from the connectors (CN11, CN511, CN513) on the main board.

Reference:

When reassembly, pass the card wire through the section **f** of the main board before connecting the card wire to the connector CN11.

- (2) Disconnect the wire from the connector CN105 on the speaker terminal board.
- (3) Remove the two screws **P** attaching the center chassis assembly.
- (4) Take out the center chassis assembly from the main body.

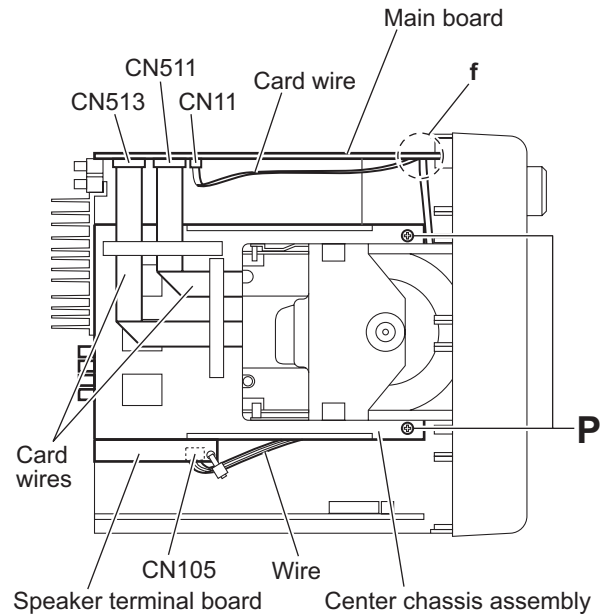


Fig.16

3.1.9 Removing the fan (See Fig.17)

- Prior to performing the following procedure, remove the metal cover, tuner, video board, rear panel and center chassis assembly.

From the bottom side of the center chassis assembly, remove the two screws **Q** attaching the fan.

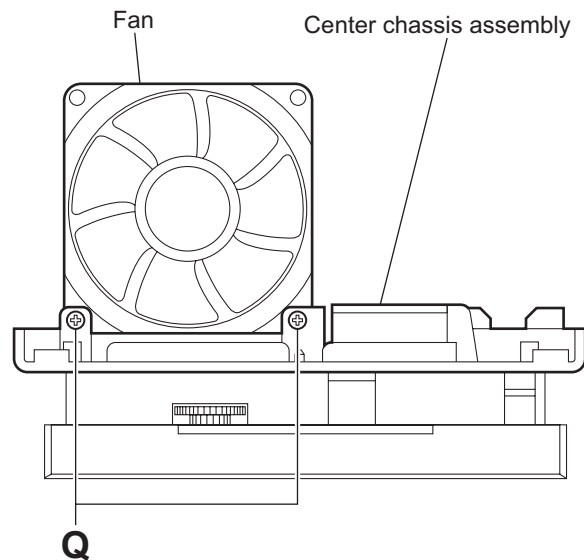


Fig.17

3.1.10 Removing the transformer board

(See Fig.18)

- Prior to performing the following procedure, remove the metal cover, tuner, video board, rear panel and center chassis assembly.
 - (1) From the top side of the main body, disconnect the wires from the connectors (CN119, CN250) on the transformer board.
 - (2) Disconnect the parallel wire from the connector CN101 on the transformer board.
 - (3) Remove the four screws **R** attaching the transformer board and take out the transformer board from the bottom chassis.

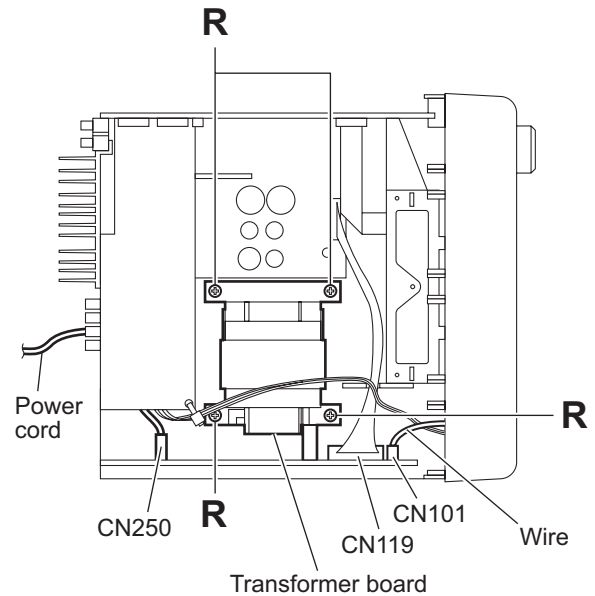


Fig.18

3.1.11 Removing the speaker terminal board

(See Fig.19.)

- Prior to performing the following procedure, remove the metal cover, tuner, video board, rear panel, main board and center chassis assembly.
 - (1) From the top side of the main body, remove the tie band fixing the parallel wire.

Reference:
After connecting the parallel wire, fix it with the new tie band.

 - (2) Disconnect the parallel wire from the connector CN106 on the speaker terminal board.
 - (3) Disconnect the parallel wire from the connector CN219 on the primary board.
 - (4) Release the locks (i, j) of the connectors (CN205, CN214) and disconnect the speaker terminal board in an upward direction.

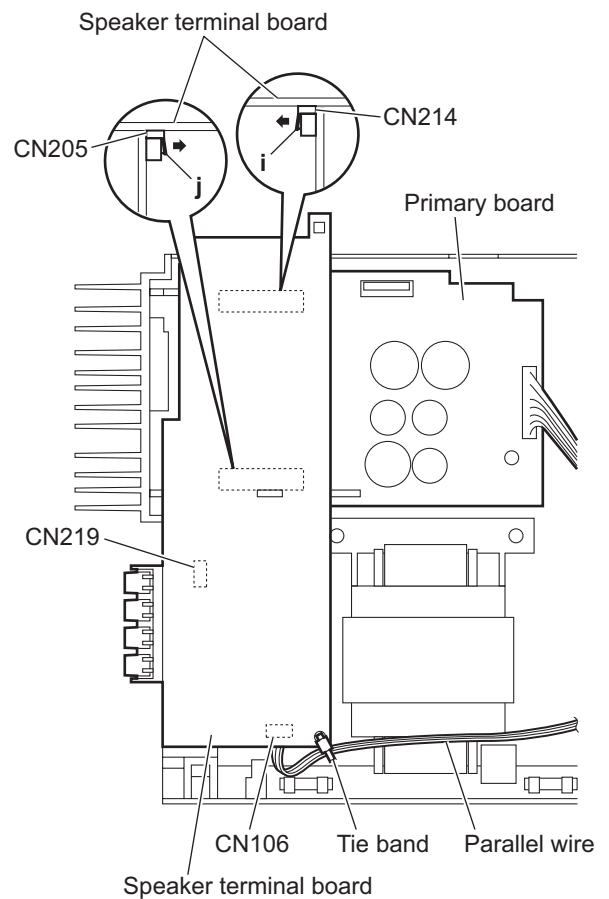


Fig.19

3.1.12 Removing the regulator & surround amplifier board and main & subwoofer amplifier board (See Figs.20 and 21)

- Prior to performing the following procedure, remove the metal cover, tuner, video board, rear panel, main board, center chassis assembly and speaker terminal board.

- (1) From the top side of the main body, disconnect the regulator & surround amplifier and main & subwoofer amplifier boards in an upward direction while releasing the locks (**k**, **m**) of the connectors (CN202, CN203) on the primary board. (See Fig.20.)
- (2) Take out the regulator & surround amplifier and main & subwoofer amplifier boards at the same time from the main body.
- (3) Remove the two screws **S** attaching the leaf spring to the heat sink and remove the regulator & surround amplifier board from the heat sink. (See Fig.21.)
- (4) Remove the three screws **T** attaching the main & subwoofer amplifier boards to the heat sink. (See Fig.21.)

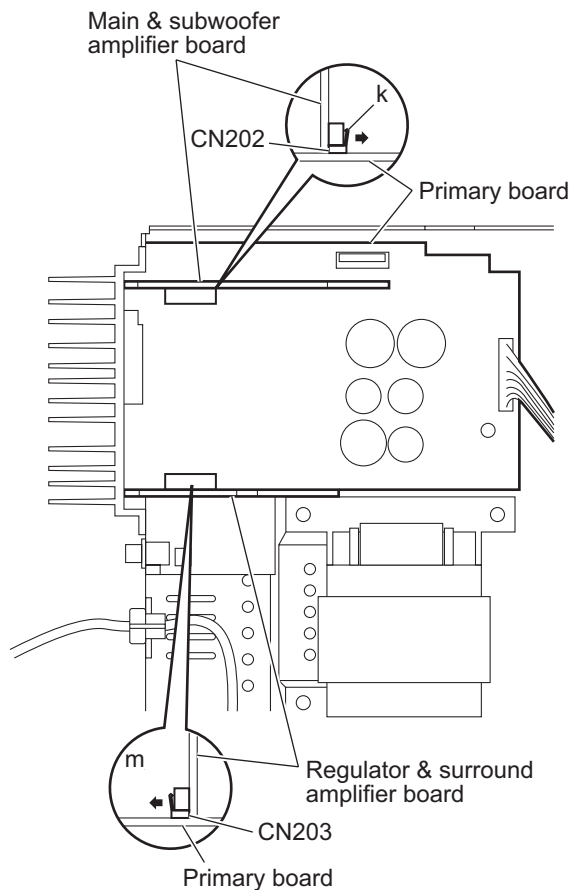


Fig.20

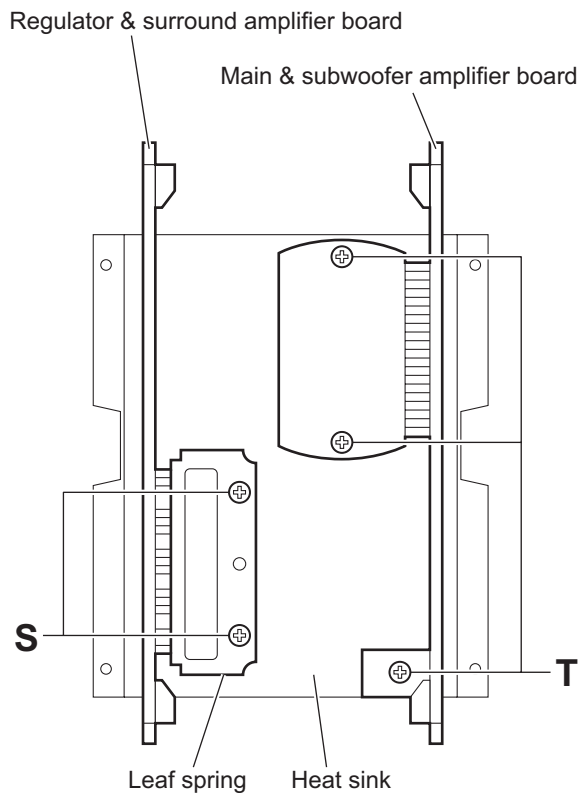


Fig.21

3.1.13 Removing the primary board

(See Fig.22)

- Prior to performing the following procedure, remove the metal cover, tuner, video board, rear panel, main board, center chassis assembly, speaker terminal board and regulator & surround amplifier board and main & subwoofer amplifier board.
 - (1) From the top side of the main body, disconnect the wire from the connector [CN119](#) on the transformer board.

Reference:

Pass the wire through the slot **n** of the holder board before connecting the wire to the connector.

- (2) Remove the screw **U** attaching the primary board on the bottom chassis.
- (3) Remove the section **p** of the primary board and take out the primary board from the main body.

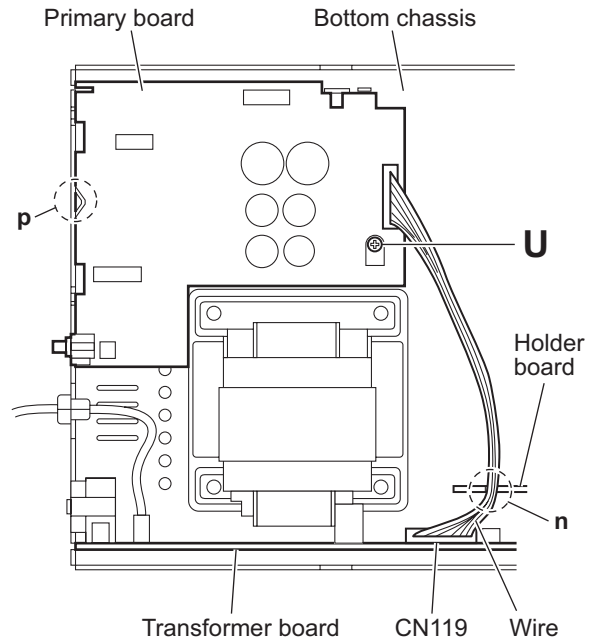


Fig.22

3.1.14 Removing the FL board (See Figs.23 and 24)

- Prior to performing the following procedures, remove the metal cover and front panel assembly.
 - (1) From the front side of the front panel assembly, pull the volume knob out of the front panel assembly. (See Fig.23.)
 - (2) From the inside of the front panel assembly, remove the six screws **V** attaching the FL board. (See Fig.24.)
 - (3) Release the claws **q** in the direction of the arrow and take out the FL board from the front panel assembly. (See Fig.24.)

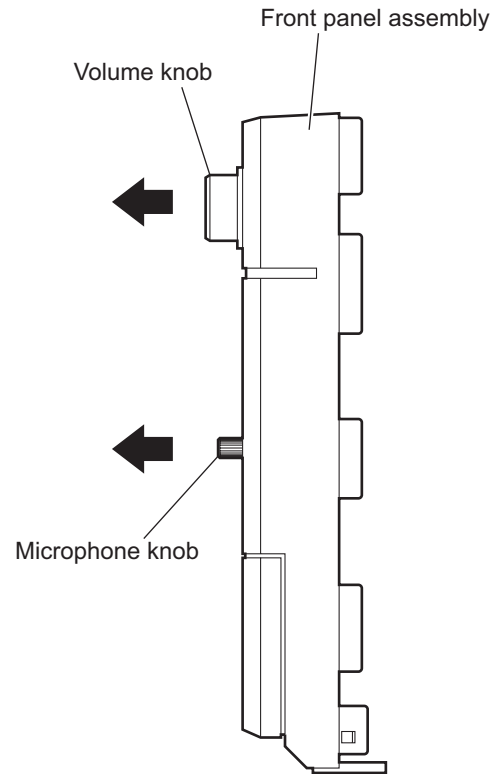


Fig.23

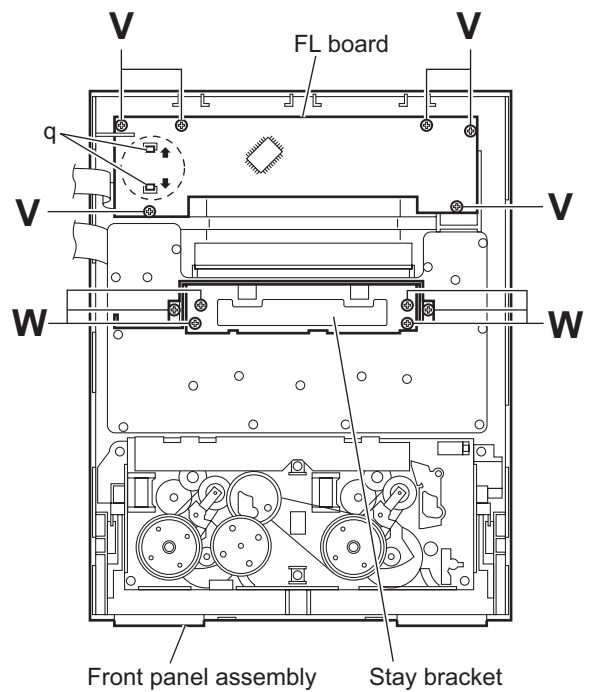


Fig.24

3.1.15 Removing the switch board

(See Figs.23 to 25)

- Prior to performing the following procedures, remove the metal cover and front panel assembly.
 - (1) From the front side of the front panel assembly, pull the microphone knob out of the front panel assembly. (See Fig.23.)
 - (2) From the inside of the front panel assembly, remove the six screws **W** attaching the stay bracket. (See Fig.24.)
 - (3) From the inside of the front panel assembly, remove the thirteen screws **X** attaching the switch board. (See Fig.25.)
 - (4) Take out the switch board from the front panel assembly.

3.1.16 Removing the cassette mechanism assembly

(See Fig.25)

- Prior to performing the following procedures, remove the metal cover and front panel assembly.
 - (1) From the inside of the front panel assembly, remove the three screws **Y**, screw **Y'** and two screws **Z** attaching the cassette mechanism assembly.
 - (2) Take out the cassette mechanism assembly from the front panel assembly.

Reference:

- When attaching the screw **Y'**, attach the earth wire with it.
- When attaching the screws **Z**, attach the swing cam (L)/(R) with them.

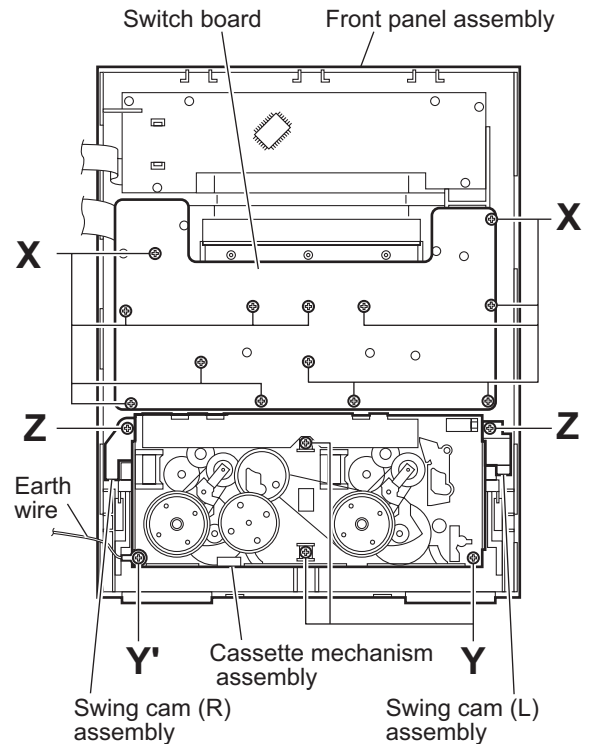


Fig.25

3.2 DVD mechanism section

- Prior to performing the following procedures, remove the DVD mechanism assembly from the main body.
(See "3.1.6 Removing the DVD mechanism assembly".)

3.2.1 Removing the tray assembly (See Figs.1 to 3)

- (1) From the right side of the DVD mechanism assembly, push the slide cam and pull the tray assembly out of the DVD mechanism assembly in the direction of the arrow. (See Fig.1.)
- (2) From the top side of the DVD mechanism assembly, remove the two screws **A** attaching the leaf spring to the bushing and remove the leaf spring. (See Fig.2.)
- (3) Remove the bushing of the tray assembly from the projection **a** on the DVD mechanism assembly and move the tray assembly in the direction of the arrow. (See Fig.3.)
- (4) Remove the claw **b** of the tray assembly from the DVD mechanism assembly and take out the tray assembly. (See Fig.3.)

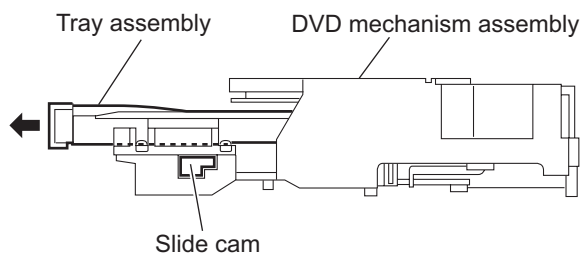
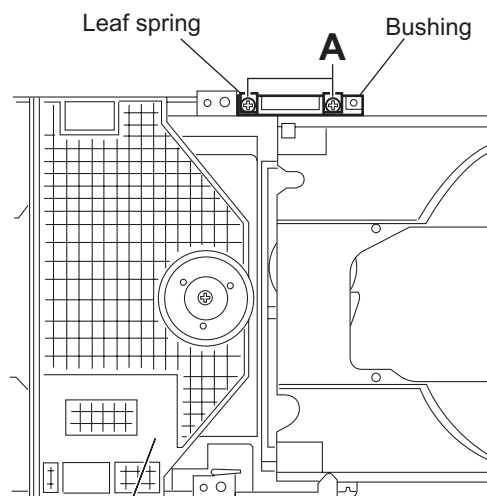


Fig.1



DVD mechanism assembly

Fig.2

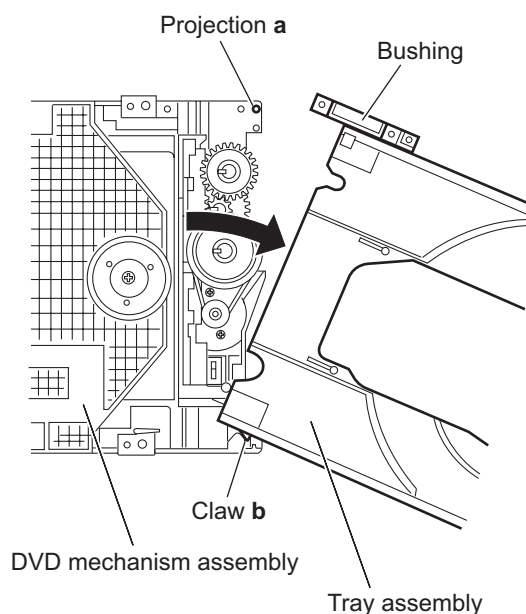


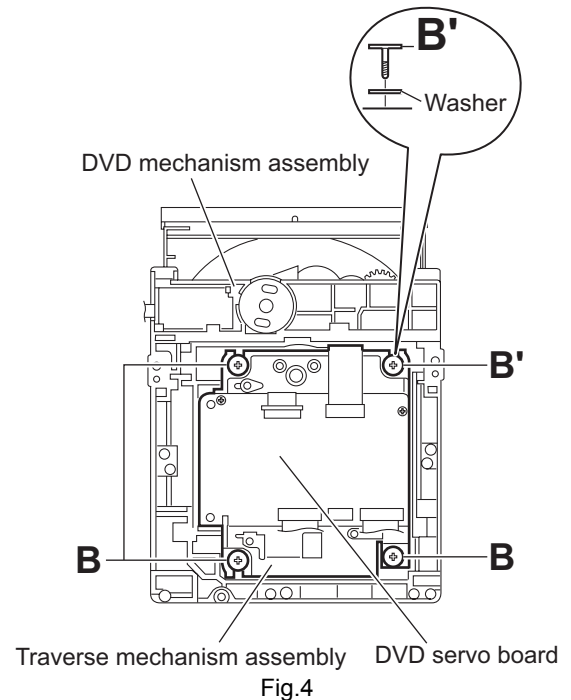
Fig.3

3.2.2 Removing the traverse mechanism assembly (See Figs.4)

- (1) From the bottom side of the DVD mechanism assembly, remove the three screws **B** and screw **B'** attaching the traverse mechanism assembly and take out the DVD traverse mechanism assembly with the DVD servo board.

Reference:

When attaching the screw **B'**, attach the washer with it.

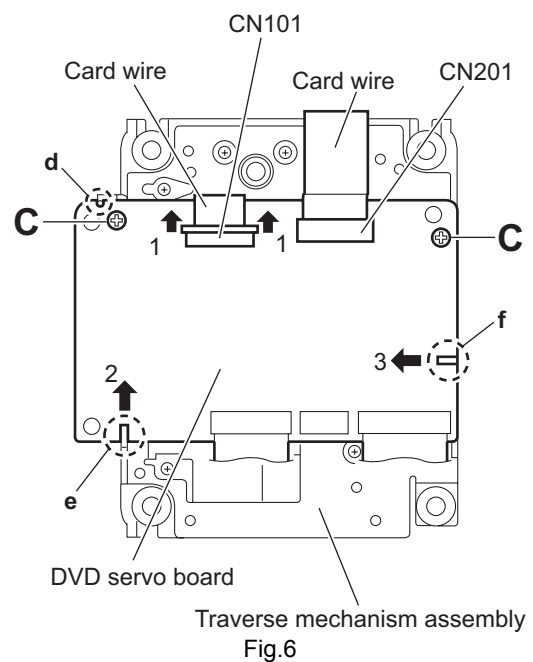
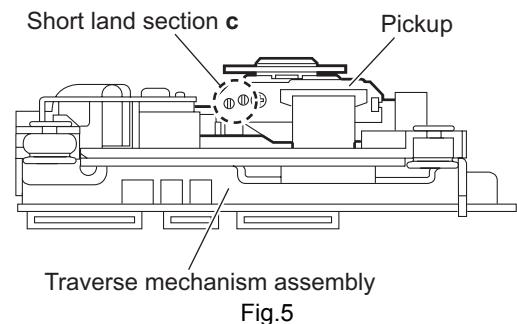


3.2.3 Removing the DVD servo board (See Figs.5 and 6)

- Prior to performing the following procedures, remove the traverse mechanism assembly.
- (1) From the side of the traverse mechanism assembly, solder the short land sections **c** on the pickup. (See Fig.5.)
- (2) From the bottom side of the traverse mechanism assembly, release the lock of the connector **CN101** on the DVD servo board in the direction of the arrow **1** and disconnect the card wire. (See Fig.6.)

Caution:

- Solder the short land sections **c** on the pickup before disconnecting the card wire from the connector **CN101** on the DVD servo board. If the card wire is disconnected without attaching solder, the pickup may be destroyed by static electricity. (See Figs.5 and 6.)
 - When attaching the DVD servo board, be sure to remove solders from the short land sections **c** after connecting the card wire to the connector **CN101** on the DVD servo board. (See Figs.5 and 6.)
- (3) Disconnect the card wire from the connector **CN201** on the DVD servo board. (See Fig.6.)
 - (4) Remove the two screws **C** attaching the DVD servo board. (See Fig.6.)
 - (5) Remove the DVD servo board from the engagement section **d** in an upward and remove the engagement section **f** in the direction 3 while removing the engagement section **e** in the direction of the arrow **2**. (See Fig.6.)



3.2.4 Removing the pickup (See Figs.5,7 to 9)

- Prior to performing the following procedures, remove the traverse mechanism assembly.

- (1) From the side of the traverse mechanism assembly, solder the short land sections **c** on the pickup. (See Fig.5.)
- (2) Release the lock of the connector on the pickup in the direction of the arrow and disconnect the card wire. (See Fig.7.)

Caution:

- Solder the short land sections **c** on the pickup before disconnecting the card wire from the connector on the pickup. If the card wire is disconnected without attaching solder, the pickup may be destroyed by static electricity. (See Figs.5 and 7.)
 - When attaching the pickup, be sure to remove solders from the short land sections **c** after connecting the card wire to the connector on the pickup. (See Figs.5 and 7.)
- (3) Remove the screw **D** attaching the plate and thrust spring. (See Fig.7.)
 - (4) Remove the engagement section **g** attaching the plate to the feed holder and remove the plate with the thrust spring. (See Fig.7.)
 - (5) Remove the shaft of the pickup from the section **h** on the traverse mechanism assembly and remove the shaft from the section **i** while moving it in the direction of the arrow. (See Fig.8.)
 - (6) Remove the pickup from the section **j** of the traverse mechanism assembly and take out the pickup with the shaft. (See fig.8.)
 - (7) From the bottom side of the pickup, remove the two screws **E** attaching the SW actuator and LEAD spring. (See Fig.9.)
 - (8) Pull the shaft out of the pickup. (See Fig.9.)

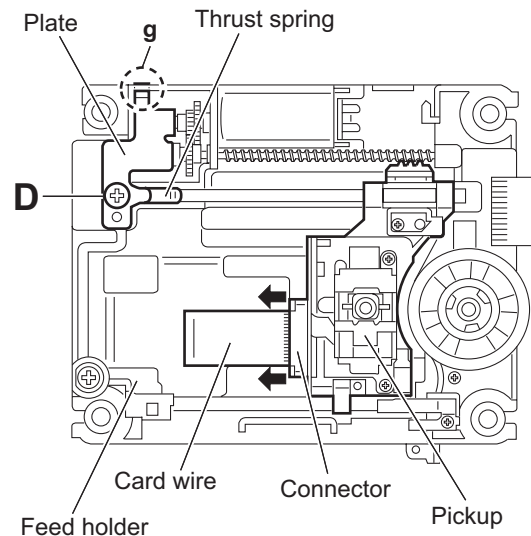


Fig.7

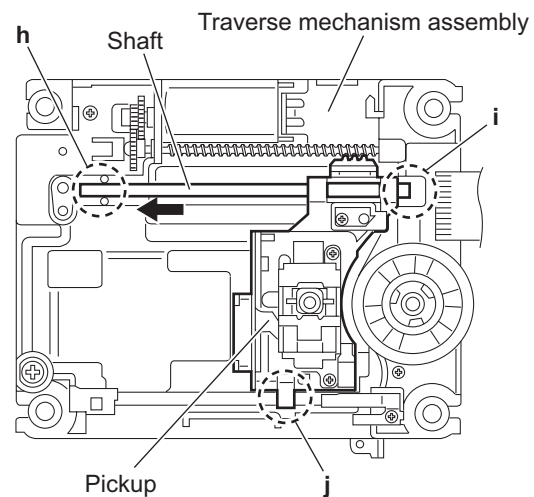


Fig.8

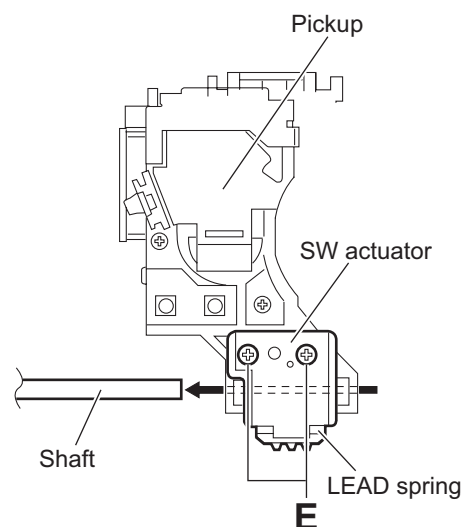


Fig.9

3.2.5 Attaching the pickup (See Figs.5,7 to 10)

- See "3.2.4 Removing the pickup".
 - (1) Attach the shaft, SW actuator and LEAD spring to the pickup. (See Fig.9.)
 - (2) Align the pickup to the section **j** of the traverse mechanism assembly first, and set the both ends of the shaft of the pickup in the sections **g** and **i** of the traverse mechanism assembly. (See Fig.8.)
 - (3) Attach the plate and thrust spring. (See Fig.7.)
 - (4) Remove solders from the short land sections **c** after connecting the card wire to the connector on the pickup. (See Figs.5 and 7.)
 - (5) Turn the feed gear **M** in the direction of the arrow **1** to move the pickup in the direction of the arrow **2**. (See Fig.10.)

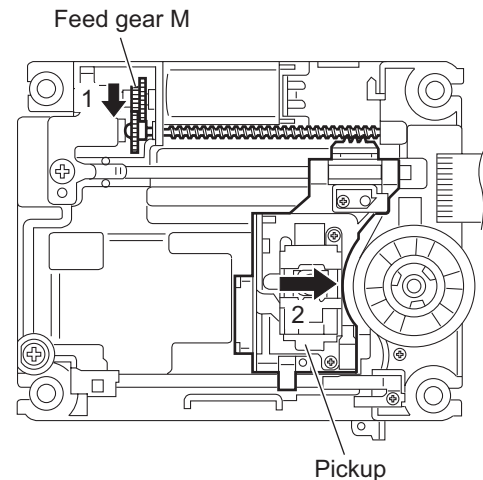


Fig.10

3.2.6 Removing the feed motor (See Figs.7,11 and 12)

- Prior to performing the following procedures, remove the traverse mechanism assembly.
 - (1) From the top side of the traverse mechanism assembly, remove the screw **D** attaching the plate and thrust spring. (See Fig.7.)
 - (2) Remove the engagement section **g** attaching the plate to the feed holder and remove the plate with the thrust spring. (See Fig.7.)
 - (3) Remove the wires from the soldered section **k** on the spindle motor board. (See Fig.11.)

Reference:

- When attaching the feed motor, pass the wire through the section **m** on the spindle base. (See Fig.11.)
- (4) Remove the feed holder, feed motor, lead screw, feed gear **E** and feed gear **M** at the same time after removing the two screws **F** attaching the feed holder. (See Fig.11.)
- (5) From the side of the feed holder, remove the two screws **G** attaching the feed motor. (See Fig.12.)

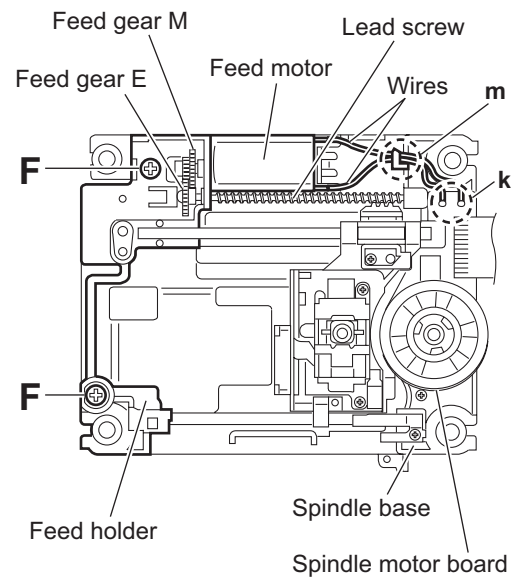


Fig.11

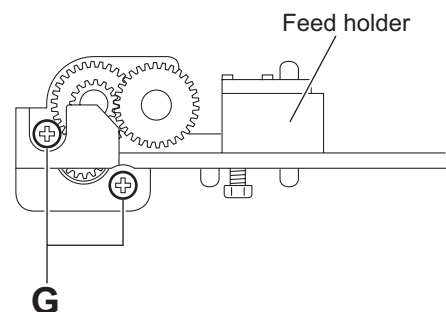


Fig.12

3.2.7 Removing the spindle motor board (See Figs.11 and 13)

- Prior to performing the following procedures, remove the traverse mechanism assembly and DVD servo board.
 - (1) From the top side of the traverse mechanism assembly, remove the wires from the soldered section **k** on the spindle motor board. (See Fig.11.)
 - (2) From the bottom side of the traverse mechanism assembly, remove the three screws **H** attaching the spindle motor board. (See Fig.13.)

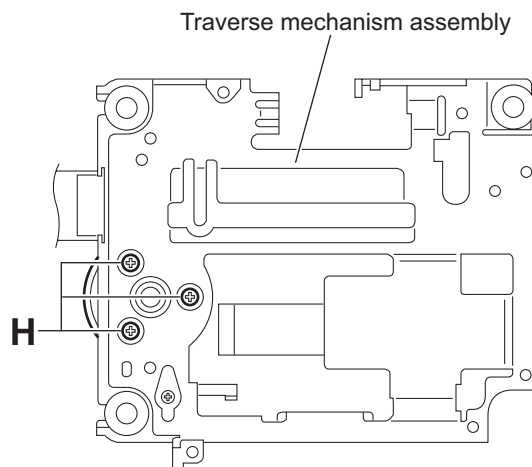


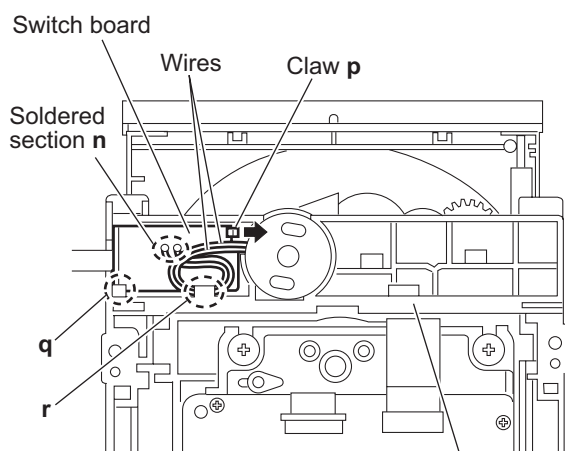
Fig.13

3.2.8 Removing the switch board (See Fig.14.)

- (1) From the bottom side of the DVD mechanism assembly, remove the wires from the soldered section **n** on the switch board.
- (2) Lift the switch board while pressing the claw **p** of the DVD mechanism assembly in the direction of the arrow and remove it from the section **q**.

Reference:

- Put the wires on the section **r** after attaching the switch board to the DVD mechanism assembly.
- Fix the claw **p** on the DVD mechanism assembly with bonds after attaching the switch board.



DVD mechanism assembly
Fig.14

3.2.9 Removing the motor (See Figs.14 and 15)

- Prior to performing the following procedures, remove the tray assembly.
 - (1) From the bottom side of the DVD mechanism assembly, remove the wires from the soldered section **n** on the switch board. (See Fig.14.)
 - (2) From the top side of the DVD mechanism assembly, remove the belt from the motor pulley. (See Fig.15.)

Note:

Take care not to attach grease on the belt.

- (3) Remove the two screws **J** attaching the motor to the DVD mechanism assembly and take out the motor from the bottom side of the DVD mechanism assembly. (See Fig.15.)

Reference:

Put the wires on the section **r** after attaching the motor to the DVD mechanism assembly. (See Fig.14.)

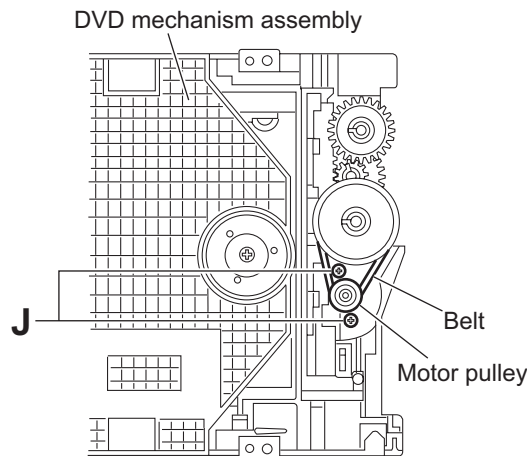


Fig.15

3.3 Cassette mechanism assembly section

- Prior to performing the following procedures, remove the cassette mechanism assembly.
(See "3.1.16 Removing the cassette mechanism assembly".)

3.3.1 Removing the main motor and replacing the main belts (See Figs.1 and 2)

- (1) From the front side of the cassette mechanism assembly, remove the two screws **A** attaching the main motor. (See Fig.1.)
- (2) From the back side of the cassette mechanism assembly, remove the wires from the soldered sections **a** on the switch board. (See Fig.2.)

Caution:

After reassembling, check the direction of the main motor and polarity of the wires. (See Fig.2.)

- (3) Remove the main motor and main belts. (See Fig.2.)

Note:

When attaching the main belts, take care not to attach grease on the main belts.

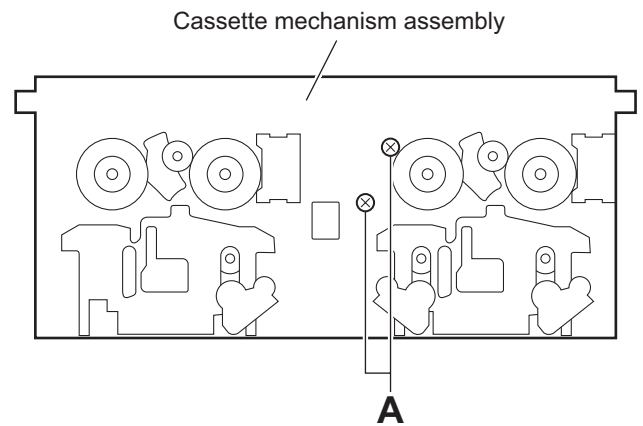


Fig.1

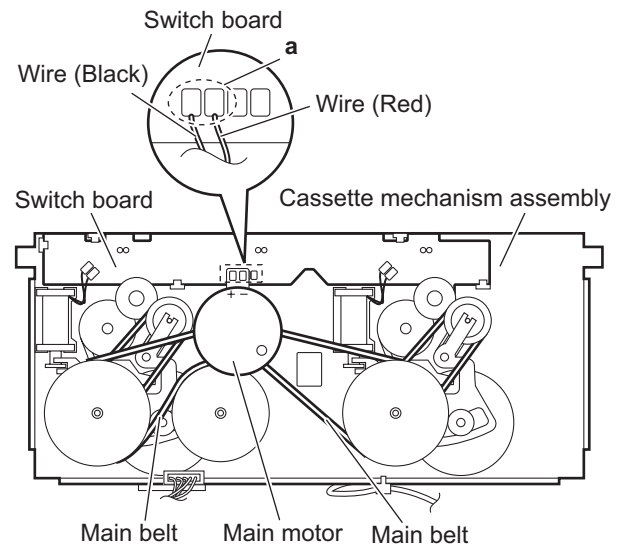


Fig.2

3.3.2 Replacing the F/R belts (See Fig.3)

- Prior to performing the following procedures, remove the main motor and main belts.
- Remove the wires of the main motor as required.
From the back side of the cassette mechanism assembly, remove the F/R belts from the flywheel 1 and flywheel 2.

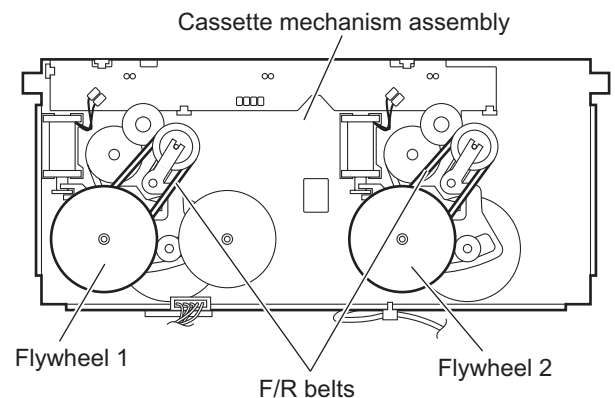


Fig.3

3.3.3 Removing the clutch assemblies (See Figs.4 to 7)

- Prior to performing the following procedures, remove the main motor, main belts and F/R belts.
- Remove the wires of the main motor as required.
- (1) From the front side of the cassette mechanism assembly, remove the three slit washers attaching the flywheel 1, flywheel 2 and flywheel 3. (See Fig.4.)
- (2) From the back side of the cassette mechanism assembly, pull out the flywheel 1, flywheel 2 and flywheel 3. (See Fig.5.)
- (3) Remove the stoppers in an upward direction. (See Fig.5.)
- (4) Remove the springs from the sections **b**. (See Fig.6.)
- (5) Release the claws **c** in the direction of the arrow, remove the plates and pulleys. (See Fig.6.)
- (6) Release the claws **d** in the direction of the arrow, remove the guide arms. (See Fig.7.)

Note:

When attaching the guide arms, attach the springs with them as before. (See Fig.7.)

- (7) Remove the cam gears in an upward direction. (See Fig.7.)
- (8) Take out the clutch assemblies from the cassette mechanism assembly. (See Fig.7.)

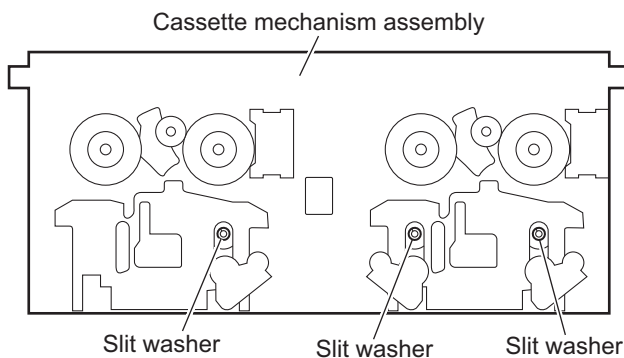


Fig.4

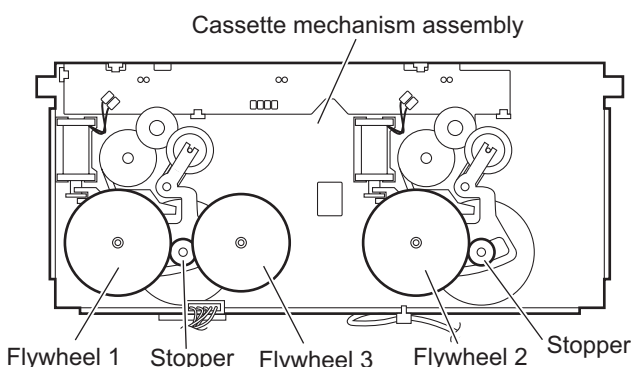


Fig.5

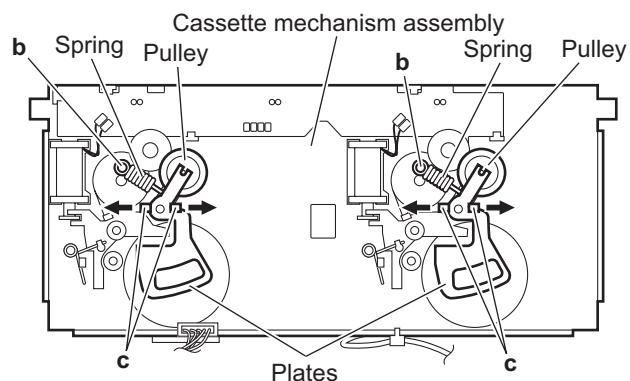


Fig.6

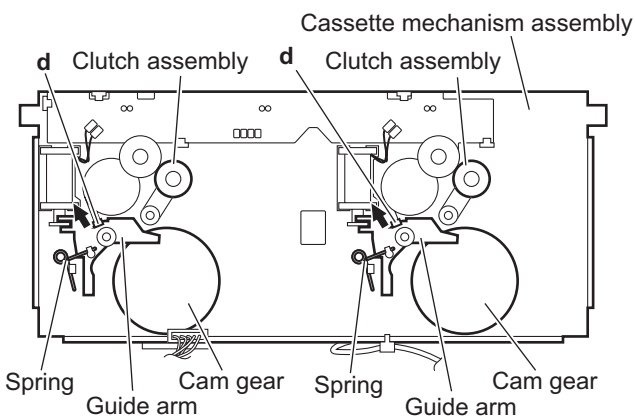


Fig.7

3.3.4 Removing the leaf switches

(See Fig.8)

- (1) From the back side of the cassette mechanism assembly, remove the solders from the soldered sections **e** attaching the leaf switches on the switch board.
- (2) From the front side of the cassette mechanism assembly, pull out the leaf switches.

3.3.5 Removing the switch board

(See Fig.8)

- (1) From the back side of the cassette mechanism assembly, remove the solders from the soldered sections (**f**, **g**) connecting the wires.

Note:

After reassembling, check the polarity of the wires.

- (2) Release the claws **h** in the direction of the arrow and remove the switch board from the cassette mechanism assembly.

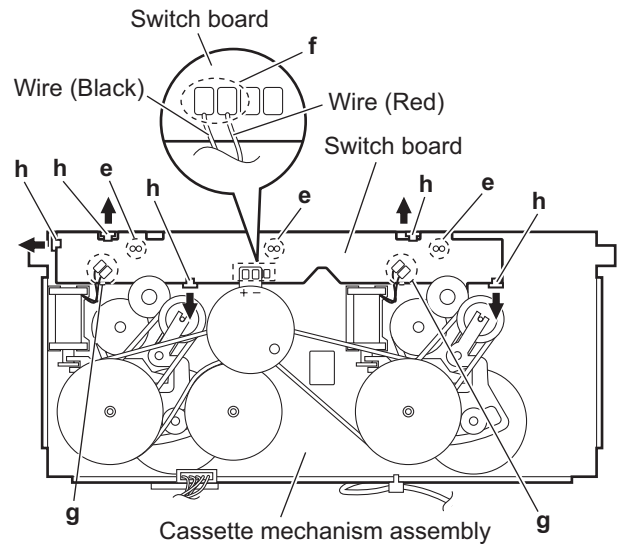


Fig.8

3.3.6 Removing the PB head block

(See Fig.9)

- (1) From the bottom side of the cassette mechanism assembly, remove the tie band fixing the wire.

Reference:

After reassembling, fix the wire with a new tie band as before.

- (2) From the front side of the cassette mechanism assembly, release the claw **i** in the direction of the arrow 1 and pull out the pinch roller in an upward direction.
- (3) Remove the screw **B** attaching the PB head.
- (4) Remove the spring from the section **j**.
- (5) Move the PB head block in the direction of the arrow 2 and remove the hooks **k** from the PB head block.
- (6) Take out the PB head block from the cassette mechanism assembly.

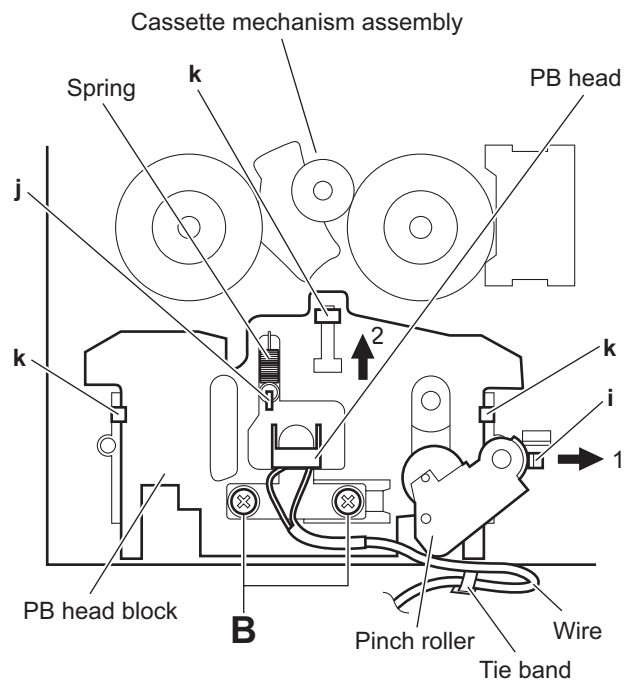


Fig.9

3.3.7 Removing the R/P head block (See Fig.10)

- (1) From the front side of the cassette mechanism assembly, release the claw **m** in the direction of the arrow 1 and pull out the pinch roller L in an upward direction.
- (2) Release the claw **n** in the direction of the arrow 2 and pull out the pinch roller R in an upward direction.
- (3) From the bottom side of the cassette mechanism assembly, remove the screw **C** attaching the R/P head board.
- (4) From the front side of the cassette mechanism assembly, remove the two screws **D** attaching the R/P head.
- (5) Take out the R/P head block (R/P head and R/P head board) from the cassette mechanism assembly.

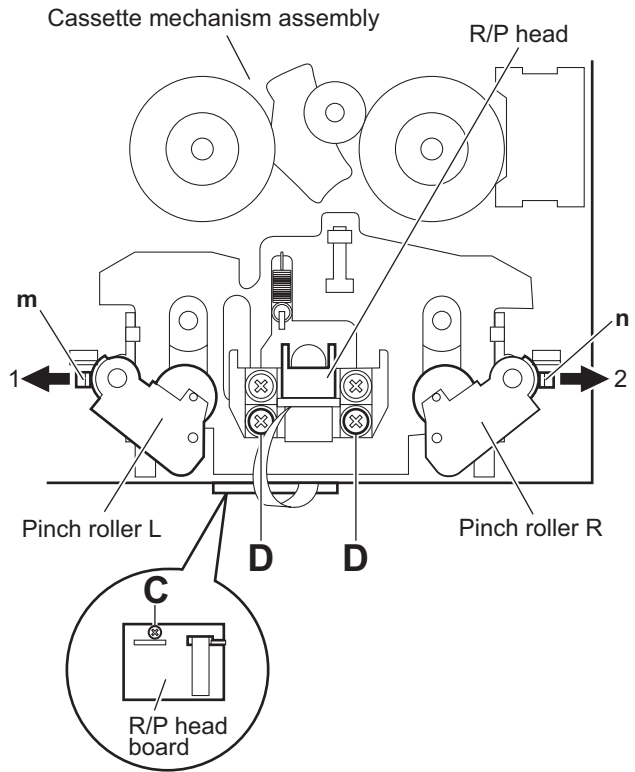


Fig.10

3.4 Speaker section

3.4.1 Removing the net assembly (See Fig.1)

- (1) From the front side of the speaker main body, remove the sections **a** of the net assembly toward this side.

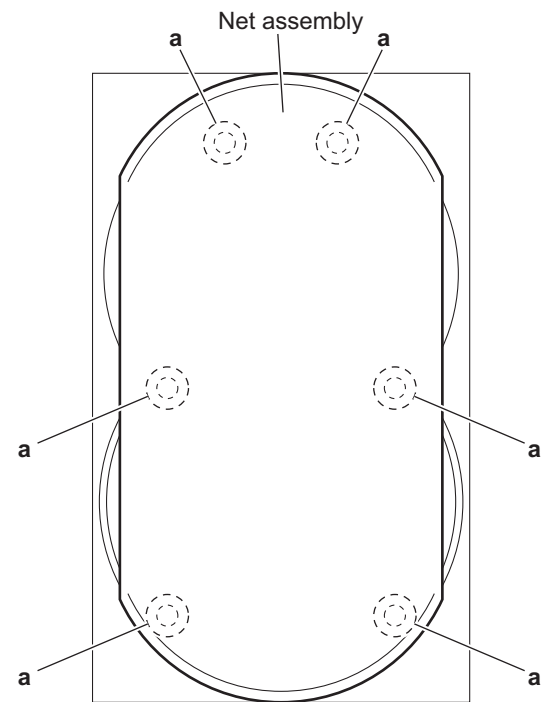


Fig.1

3.4.2 Removing the front panel assembly (See Figs.2 and 3)

- Remove the net assembly as required.
 - (1) Insert the tip of a flat-bladed screwdriver or similar tool into the space between the speaker main body and front panel assembly, and lift the front panel assembly little by little to remove the sections **b**. (See Fig.2.)

Note:

To prevent damaging the front panel assembly and speaker main body, insert cushioning plates etc. into the space between the speaker main body and front panel assembly. (See Fig.2.)

- (2) From the inside of the front panel assembly, disconnect the yellow and black wires from the terminal of the tweeter. (See Fig.3.)

3.4.3 Removing the tweeter (See Fig.3)

- Prior to performing the following procedures, remove the front panel assembly.
 - (1) Disconnect the blue and white wires from the terminal of the tweeter.
 - (2) Remove the two screws **A** attaching the tweeter.
 - (3) Take out the tweeter from the front panel assembly.

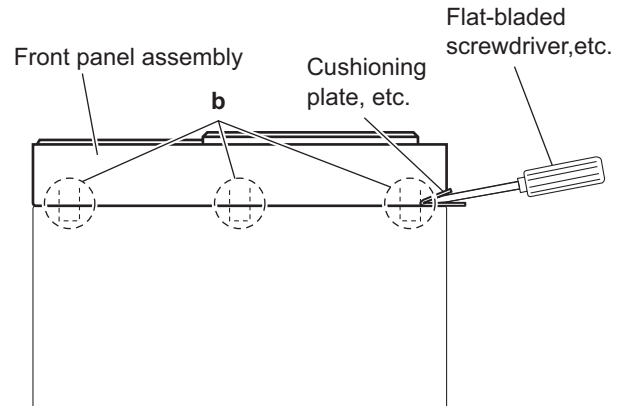


Fig.2

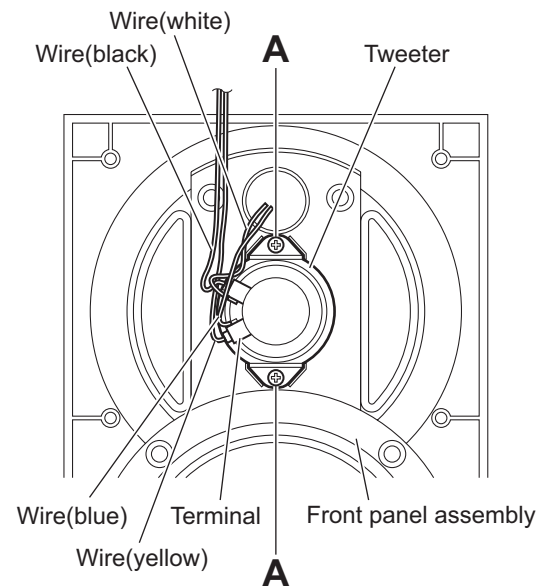


Fig.3

3.4.4 Removing the speaker (See Figs.4 and 5)

- Prior to performing the following procedures, remove the front panel assembly.
 - (1) From the front side of the speaker main body, remove the four screws **B** attaching the speaker. (See Fig.4.)
 - (2) Take out the speaker from the speaker main body and disconnect the wires (red/black, yellow/black) from the terminal of the speaker. (See Fig.5.)

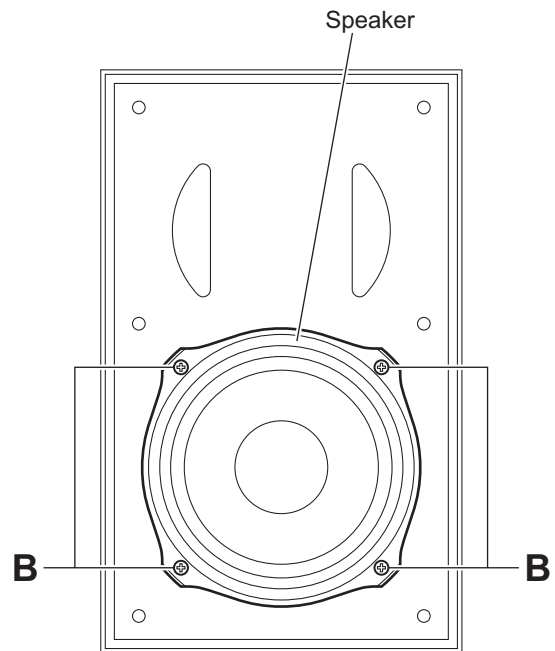


Fig.4

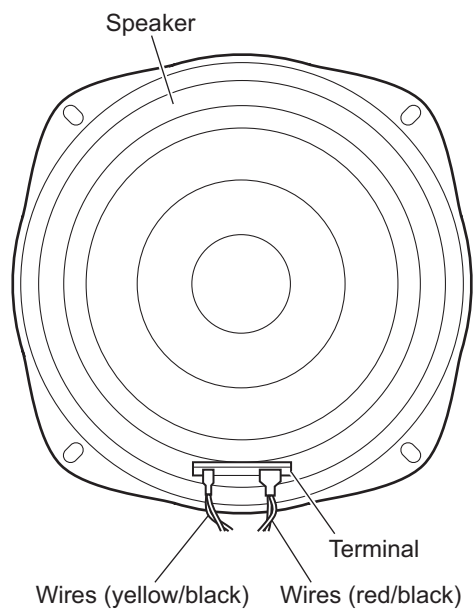


Fig.5

SECTION 4 ADJUSTMENT

4.1 Measurement instruments required for adjustment

- (1) Low frequency oscillator
This oscillator should have a capacity to output 0dBs to 600 Ω at an oscillation frequency of 50Hz-20kHz.
- (2) Attenuator impedance : 600 Ω
- (3) Electronic voltmeter
- (4) Distortion meter
- (5) Frequency counter
- (6) Wow & flutter meter
- (7) Test tape
VTT703 : Head azimuth
- (8) Blank tape
TYPE I : AC-514
- (9) Test disc : VT-501, CTS-1000

4.2 Measurement conditions

Power supply voltage : AC110V / AC127V / AC220V /
AC230V to AC240V 50Hz / 60Hz (Adjustable with the voltage selector)

Reference output : Speaker : 0.775V/4 Ω
Headphone : 0.077V/32 Ω

Reference frequency : 1kHz, AUX : -8dBs
and input level

Measurement output : at Speaker J200
terminal

Load resistance : 4 Ω

4.3 Radio input signal

AM frequency : 400Hz

AM modulation : 30%

FM frequency : 400Hz

FM frequency deviation : 22.5kHz

4.4 Tuner section

FM Band cover : 87.5~108.0MHz

AM Band cover : 531~1,602kHz (at 9kHz)
530~1,600kHz (at 10kHz)

Voltage applied to tuner : +B : DC5.7V
VT : DC 12V

Reference measurement output : 26.1mV(0.28V)/3 Ω

Input positions : AM : Standard loop antenna
FM : TP1 (hot) and TP2 (GND)

4.5 Standard measurement position of volume

Function switch : to Tape

Beat cut switch : to Cut

Super Bass/Active hyper Bass : to OFF

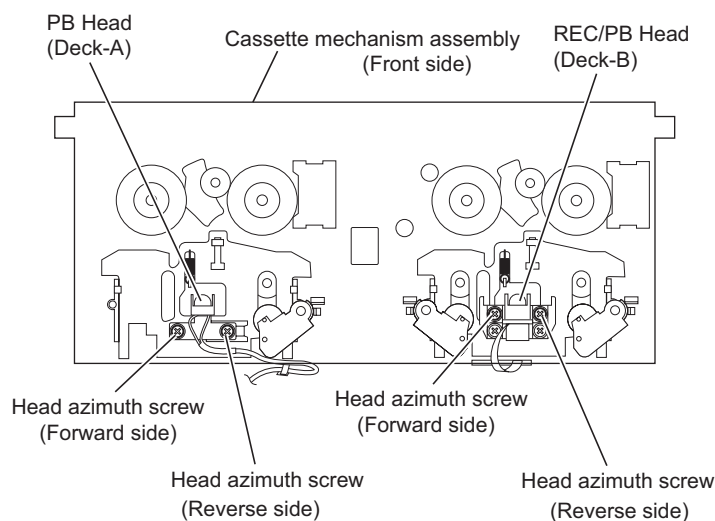
Bass Treble : to Center

Adjustment of main volume to reference output : VOL : 28

Precautions for measurement

- (1) Apply 30pF and 33k Ω to the IF sweeper output side and 0.082 μ F and 100k Ω in series to the sweeper input side.
- (2) The IF sweeper output level should be made as low as possible within the adjustable range.
- (3) Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
- (4) Since a ceramic oscillator is used, there is no need to perform any MIX adjustment.
- (5) Since a fixed coil is used, there is no need to adjust the FM tracking.
- (6) The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly carefully.
- (7) In the case of BTL connection amp., the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an BTL system.
- (8) For connecting a dummy resistor when measuring the output, use the wire with a greater code size.
- (9) Whenever any mixed tape is used, use the band pass filter (DV-12).

4.6 Arrangement of adjusting positions



4.6.1 Tape recorder section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Cassette Head Azimuth Alignments	Test tape :VT703 (10kHz) Measurement output terminal :Left and Right speaker output (6-ohm loaded) or Headphone Output (32-ohm loaded)	1. Playback the test tape VT703 (10kHz) or equivalent. 2. Adjust the head azimuth screw to obtain maximum output and both output of L / R is in 3dB. 3. Put on the screw lock paint after alignments.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Recording Bias Frequency Alignment	Test tape :TYPE I AC-514 Measurement output terminal :Erase head terminal (CN308 8-Pin)	1. Insert the recording tape in deck-B. 2. Starting the recording. 3. Adjust the oscillation frequency to 80kHz $\pm$ 3kHz by core of Oscillation coil of L301.	80kHz $\pm$ 3kHz	Use the High-Impedance Probe or Frequency counter input.

4.7 Service mode

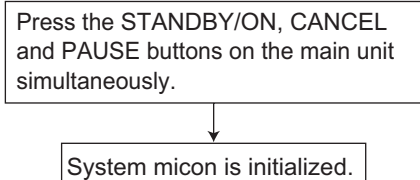
4.7.1 Confirming contents

- (1) System micon reset
- (2) System micon cold start
- (3) FL display check
- (4) Micon version check
- (5) DVD region check
- (6) DVD test mode

4.7.2 Confirming methods

1. System micon reset

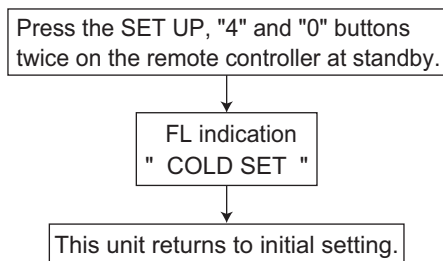
When DVD mechanism stuck, this may solve the problem without removing/inserting power cord.



2. System micon cold start

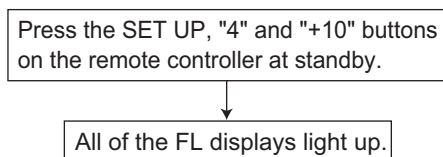
This function clears all user setting, and return to initial setting.

- Daily timer, REC timer
- Tuner preset
- SEA preset
- Last condition (Source, Volume)



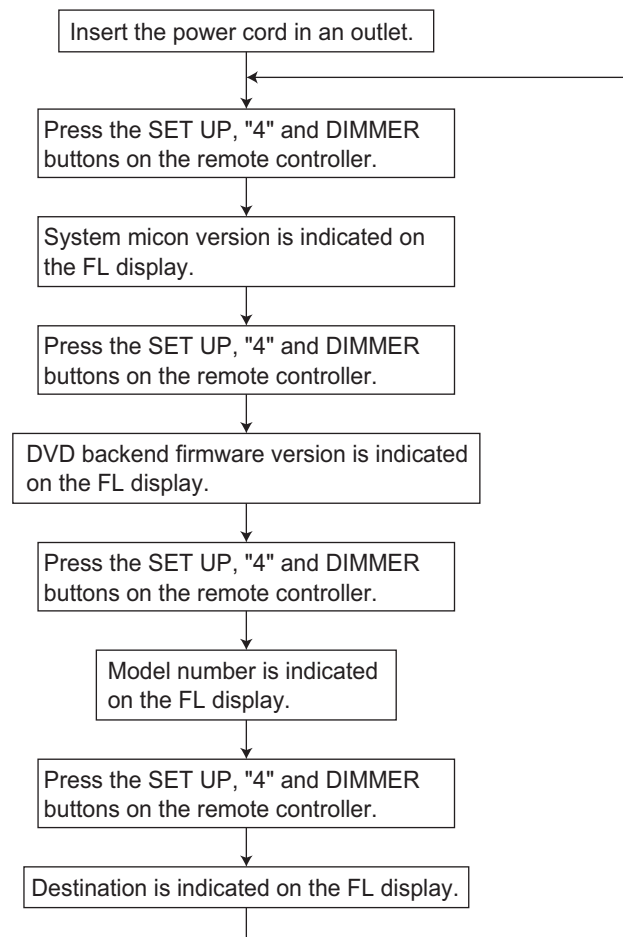
3. FL display check

This enables all FL segment light up.



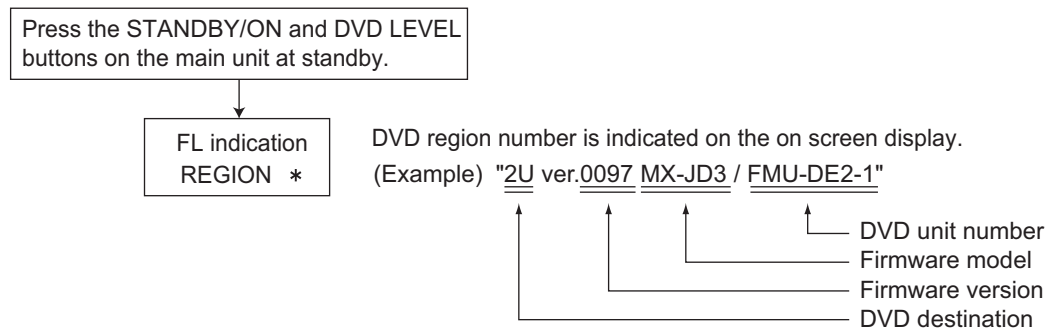
4. Micon version check

You can confirm Micon version and destination.

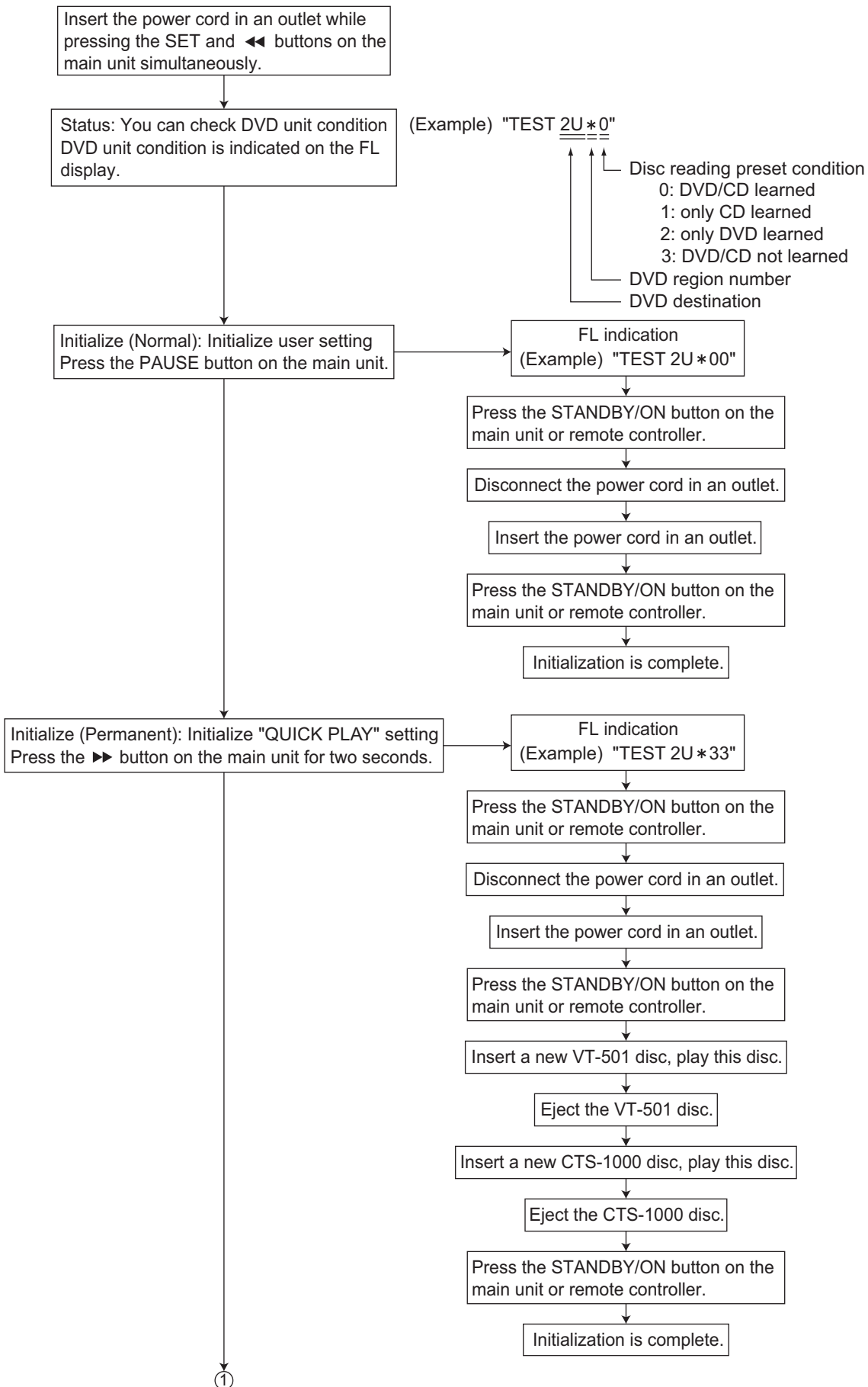


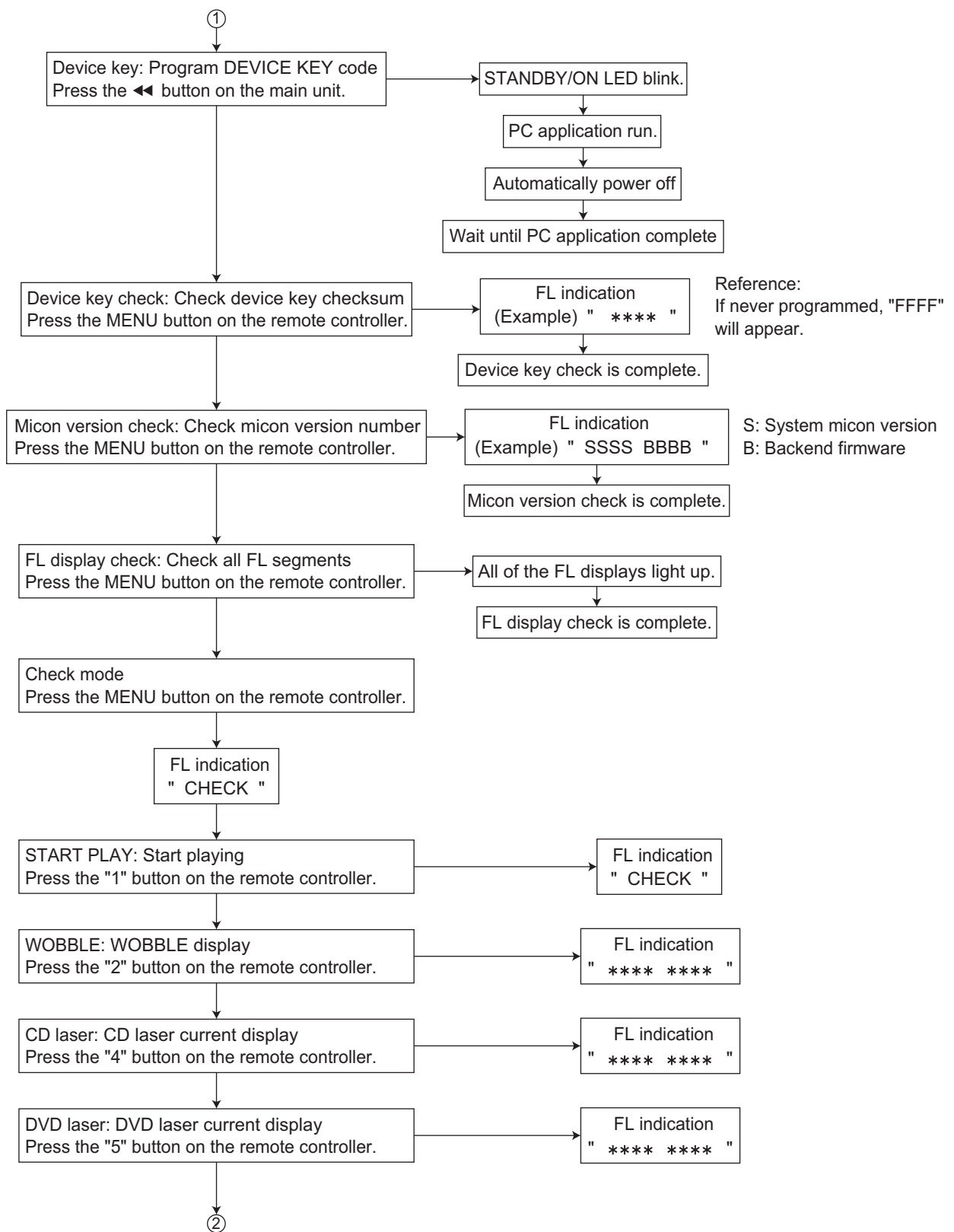
5. DVD region check

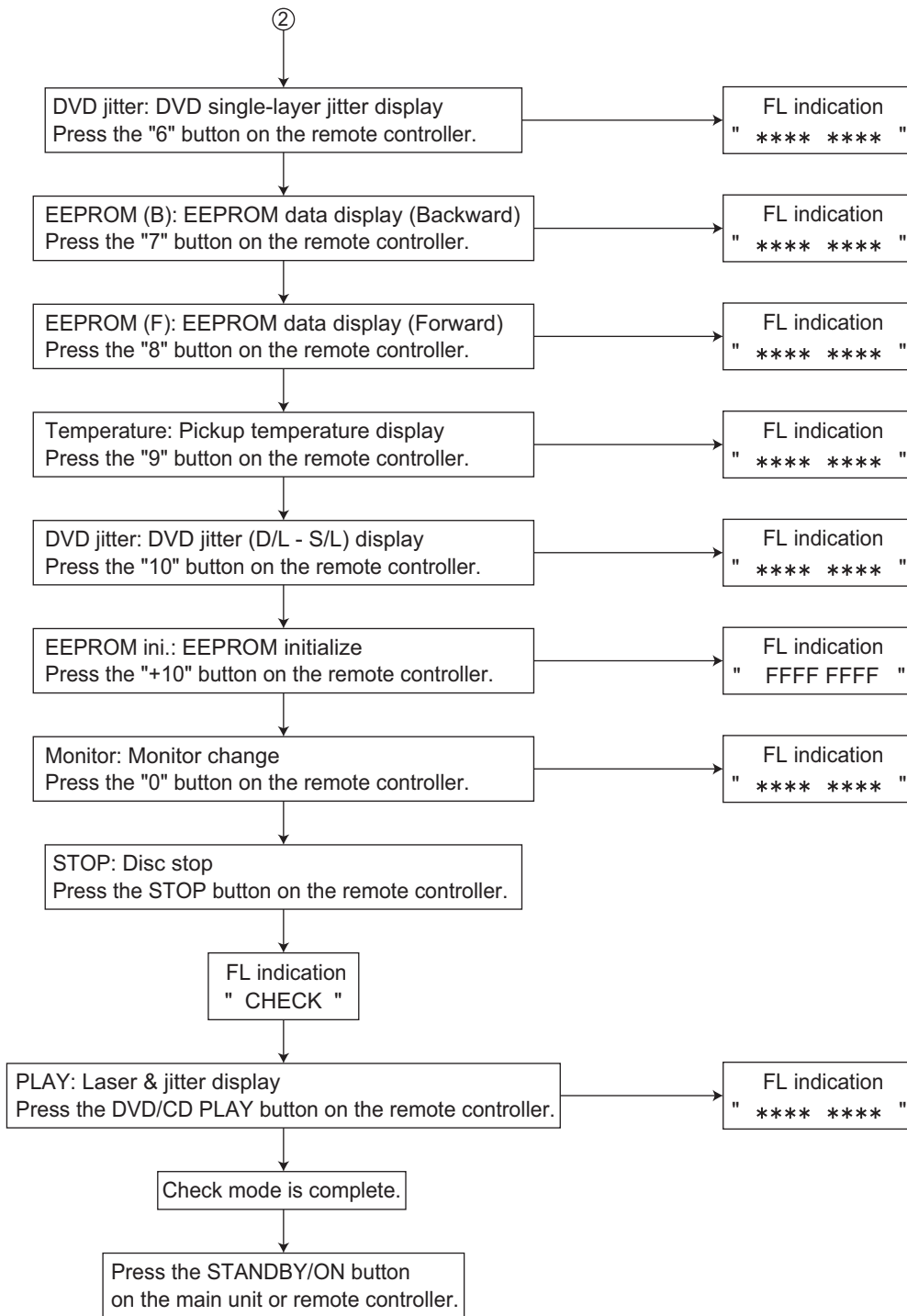
You can confirm DVD region number.



6. DVD test mode







4.7.3 Indicating check for FL display

No.	Function	FL display												Note
1	SOURCE													Exchange to mm:ss (60-99 minutes) Display "--:--" (over 100 minutes) without PBC with PBC without PBC with PBC * *: PRESET NUMBER * *: PRESET NUMBER
	DVD (DVD-V)	1	2.	3	4		1:	1	2:	3	4			
	DVD (DVD-A)	1	2.	3	4		1:	1	2:	3	4			
	DVD (CD)	C	D	1	2.		1:	1	2:	3	4			
	DVD (MP3)	1	2.	1	2	2.		1	2:	3	4			
	DVD (WMA)	1	2.	1	2	2.		1	2:	3	4			
	DVD (ASF)	1	2.	1	2	2.		1	2:	3	4			
	DVD (VCD)	V	D	1	2.		1:	1	2:	3	4			
	DVD (VCD)	V	D	1	2.				P	B	C			
	DVD (SVCD)	S	V	1	2.		1:	1	2:	3	4			
	DVD (SVCD)	S	V	1	2.				P	B	C			
	DVD (JPEG)	1	2.	1	2	2.		J	P	E	G			
	TAPE A				T	A	P	E						
	TAPE B				T	A	P	E						
	AUX			A	U	X		I	N					
2	AM	A	M	*	*		1	6	0	2				* *: PRESET NUMBER * *: PRESET NUMBER
	FM	F	M	*	*		1	0	8.	0	0			
2	TUNER		T	U	N	E	R	—	F	M				BLINKING BLINKING
			T	U	N	E	R	—	F	M				
	PRESET MEMOERY				S	E	T							
	PRESET MEMOERY				P	—	1	2						
3	PRESET MEMOERY				S	T	O	R	E	D				"DISC REC FINISHED" SCROLL
	TAPE				T	A	P	E						
	PLAY TAPE A				T	A	P	E						
	PLAY TAPE B				T	A	P	E						
	REVERSE TAPE B			R	E	V	E	R	S	E				
	FF/REW TAPE A				T	A	P	E						
	FF/REW TAPE B				T	A	P	E						
	REC				T	A	P	E						
	DISC REC		D	I	S	C		R	E	C				
	DISC REC STOP	—	—	—	—	—	—	—	—	—	—			
4	DUBBING			D	U	B	B	I	N	G				
	VOLUME	V	O	L	U	M	E							
	UP/DOWN	V	O	L	U	M	E		3	0				
	MAX	V	O	L	U	M	E		M	A	X			
	MIN	V	O	L	U	M	E		M	I	N			
	BEATBOOSTER													
	ON	R	H	Y	T	H	M		A	X				
						O	N							
	OFF	R	H	Y	T	H	M		A	X				
						O	F	F						
	ACTIVEBASS													
	LEVEL CHANGE	A	C	T	I	V	E	B	A	S	S	0		
	LEVEL CHANGE	A	C	T	I	V	E	B	A	S	S	1		
	LEVEL CHANGE	A	C	T	I	V	E	B	A	S	S	2		

No.	Function	FL display										Note
4	SOUND MODE											
	DANCE			D	A	N	C	E				
	HALL				H	A	L	L				
	STADIUM	S	T	A	D	I	U	M				
	ROCK			R	O	C	K					
	POP			P	O	P						
	CLASSIC	C	L	A	S	S	I	C				
	FLAT			F	L	A	T					
	USER1			U	S	E	R	1				
	USER2			U	S	E	R	2				
	USER3			U	S	E	R	3				
	OFF			O	F	F						
	3D PHONIC											
	3D ACTION	3	D		A	C	T	I	O	N		
	3D DRAMA	3	D		D	R	A	M	A			
	3D THEATER	3	D	T	H	E	A	T	E	R		
	3D PHONIC OFF	3	D		O	F	F					
												Note: DVD-A cannot be activated 3D-Phonic. Also at Karaoke condition, 3D-PHONIC is prohibited. Display should be done after STATUS reception.
	TONE SETTING											
	TONE MEMORY	S	E	A		C	O	N	T			
	TONE MEMORY	B	A	S	S		±	0				RANGE: ± 0 ~ +3
	TONE MEMORY		T	R	E		±	0				RANGE: -3 ~ ± 0 ~ +3
	TONE MEMORY		U	S	E	R		1				NUMBER BLINKING
	TONE MEMORY		M	E	M	O	R	Y				
	LEVEL ADJUST											
	BALANCE	L	/	R			*	*	*			RANGE: R-6 ~ ± 0 ~ L-6
	SUBWOOFER	S.	W	O	O	F	E	R		*		RANGE: 0/1/2/3/4
	EFFECT	E	F	F	E	C	T			*		RANGE: 1 ~ 3
	DVD LEVEL											
	LEVEL 1	D	V	D		L	E	V	E	L	1	
	LEVEL 2	D	V	D		L	E	V	E	L	2	
	LEVEL 3	D	V	D		L	E	V	E	L	3	
	KARAOKE											
	KARAOKE ON	K	A	R	A	O	K	E				
	KARAOKE OFF			O	F	F						
	MIC MIX											
	MIC MIX	M	I	C		M	I	X				
	MIC OFF	M	I	C		O	F	F				
	ECHO											
	ECHO*			E	C	H	O	*				RANGE: 1 ~ 3
	ECHO OFF	E	C	H	O		O	F	F			
	KEY CONTROL											
	KEYCON	K	E	Y	C	O	N		*	*		RANGE: -6 ~ ± 0 ~ +6

No.	Function	FL display										Note
5	SLEEP	S	L	E	E	P		*	*	*		RANGE: 10/20/30/60/120
	SLEEP 10 – 120											
	DIMMER											
	DIMMER				D	I	M	M	E	R		
	NORMAL				N	O	R	M	A	L		
	CLOCK											
	ADJUST	A	M			1	2:	0	0			HOUR BLINKING MINUTE BLINKING
	SET	A	M			1	2:	0	0			
	SET			C	L	O	C	K	O	K		
	DAILY TIMER											
	SELECT	D	A	I	L	Y	T	I	M	E	R	
		O	N			A	M	1	2:	0	0	
	SET	O	N			A	M	1	2:	0	0	HOUR BLINKING MINUTE BLINKING
	SET					S	E	T				
		O	F	F		A	M	1	2:	0	0	
	SET	O	F	F		A	M	1	2:	0	0	HOUR BLINKING MINUTE BLINKING
	SET					S	E	T				
						D	I	S	C			
						T	A	P	E			BLINKING (ALL) BLINKING BLINKING BLINKING BLINKING
				A	U	X		I	N			
				T	U	N	E	R	–	F	M	
	SET			T	U	N	E	R	–	A	M	BLINKING
						S	E	T				
						G	1.	T			1	
	SET					S	E	T				BLINKING GROUP (G*)
						G	1.	T			1	
	SET					S	E	T				
						S	E	T				BLINKING TRACK (T*)
						S	E	T				
						S	E	T				
SET	V	O	L	U	M	E		–	–		--/5/10/15	
SET					S	E	T		O	K		
REC TIMER												
SELECT			R	E	C		T	I	M	E	R	HOUR BLINKING MINUTE BLINKING
			O	N			A	M	1	2:	0	
SET			O	N			A	M	1	2:	0	
SET					S	E	T				HOUR BLINKING MINUTE BLINKING	
			O	F	F		A	M	1	2:	0	
SET			O	F	F		A	M	1	2:	0	
SET					S	E	T				BLINKING BLINKING	
					T	U	N	E	R	–	F	
					T	U	N	E	R	–	A	
SET					S	E	T				BLINKING	
SET	F	M	3	0		1	0	8.	0	0		
					S	E	T		O	K		

No.	Function	FL display										Note
6	TEST (ROM)	S	Y	S	C	O	N	*	*	*	*	ROM CORRECTION # +3 CHARACTORS
		D	V					*	*	*	*	
		M	D	L		*	*	*	*	*	*	US / UX / UE / UW / A
	TEST (REGION)	R	E	G	I	O	N				*	0/1/2/3/4/5/6
7	DVD STATUS											SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD SOURCE DVD/CD
	OPEN				O	P	E	N				
	CLOSE				C	L	O	S	E			
	NO DISC		N	O	R	E	A	D	I	S	C	
	TOC READING											
	ROM CORRECTION	R	O	M		C	O	R	R	C	T	
	ROM CR. OK	R	O	M		C	R		O	K		
	ROM CR. NG	R	O	M		C	R		E	R	R	
	BACKEND "UPGRADE"		U	P	G	R	A	D	E			
	"UNKNOWN" DISC	C	A	N	'	T	P	L	A	Y		
	REGION ERROR	R	E	G	I	O	N		E	R	R	
8	DVD VIDEO											After TOC READING TIME BLINKING RESUME BLINKS TWICE BEFORE PLAY
	STOP	*	*					S	T	O	P	
	+10KEY INPUT	1	—									
	PLAY	1	2.	3	4.		1:	2	3:	4	5	
	PLAY (MENU)		1.	—	—			P	L	A	Y	
	PAUSE	1	2.	3	4.		1:	2	3:	4	5	
	SEARCH	1	2.	3	4.		—:	—	—:	—	—	
	RESUME STOP	*	*					S	T	O	P	
9	RESUME PLAY	1	2.	3	4.		1:	2	3:	4	5	After TOC READING TIME BLINKING RESUME RESUME OFF BEFORE PLAY
	DVD AUDIO											
	STOP	*	*	*	*			S	T	O	P	
	+10KEY INPUT	*	*	1	—			S	T	O	P	
	PLAY	1	2.	3	4.		1:	2	3:	4	5	
	PLAY (MENU)	—	—	—	—			P	L	A	Y	
	PAUSE	1	2.	3	4.		1:	2	3:	4	5	
	SEARCH	1	2.	3	4.		—:	—	—:	—	—	
	RESUME STOP	*	*	*	*			S	T	O	P	
	RESUME PLAY	1	2.	3	4.		1:	2	3:	4	5	
	DOWNMIX PROHIBITED				L	R		O	N	L	Y	
	WATERMARK				N	O		A	U	D	I	
	HIDDEN GROUP	K	E	Y			—	—	—	—		

No.	Function	FL display										Note
14	PROGRAM PROGRAM MODE GROUP INPUT GROUP +10 INPUT TRACK INPUT TRACK +10 INPUT TRACK +10 INPUT (CD) TRACK INPUT (CD) STOP PLAY FULL MEMORY	P		P	R	O	G	R	A	M		"---" Blink, 10-key Input "1--" Blink, 10-key Input No Blink, 10-key Input "1-" Blink, 10-key Input "1-" Blink, 10-key Input No Blink, 10-key Input No Blink, display last step DEPEND ON DISC TYPE
15	RANDOM RANDOM MODE SEARCH PLAY	*	*	*	R	A	N	D	O	M		* : MOVING DEPEND ON DISC TYPE
16	REPEAT REPEAT 1 track REPEAT 1 track REPEAT 1 chapter REPEAT 1 title REPEAT 1 group REPEAT ALL REPEAT A-B	*	*		2.		1:	2	3:	4	5	CD/VCD case MP3/WMA case DVD case DVD case MP3/WMA case DEPEND ON DISC TYPE DEPEND ON DISC TYPE
17	KARAOKE RESERVE OSD DISPLAY RESERVE ENTRY RESERVE PLAY RESERVE END	—	—	—	—	—	—	—	—	—	—	NO CHANGE FROM CURRENT DISPLAY NO CHANGE FROM CURRENT DISPLAY DEPEND ON DISC TYPE NO CHANGE FROM CURRENT DISPLAY
18	PROGRESSIVE INTERLACE PROGRESSIVE	I	N	T	E	R	L	A	C	E		
19	DEMO DEMO START	D	E	M	O		S	T	A	R	T	

No.	Function	FL display										Note
19			3	D		P	H	O	N	I	C	
				D	A	N	C	E	L			
			S	T	H	A	L	L				
					A	D	I	U	M			
					R	O	C	K				
			C	L	P	O	P					
					A	S	S	I	C			
					U	S	E	R	1			
					U	S	E	R	2			
					U	S	E	R	3			
		A	C	T	I	V	E	B	A	S	S	0
		A	C	T	I	V	E	B	A	S	S	1
		A	C	T	I	V	E	B	A	S	S	2
		R	H	Y	T	H	M	A	X			
	DEMO OFF		D	E	M	O		O	F	F		
	TRAY LOCK											
	LOCK				L	O	C	K	E	D		
	UNLOCK		U	N	L	O	C	K	E	D		
	AM STEP CHANGE											
	9kHz			A	M			9	K			
	10kHz			A	M		1	0	K			

No.	Function	FL display										Note
20	DVD TEST MODE TEST START (Version info)	T	E	S	T	*	*	#	@			By AC cord on with holding SET and ◀◀ ** : VERSION @ : FE learning condition # : REGION
	A. EEPROM INITIALIZE (NORMAL)	T	E	S	T	*	*	#	@			By pressing PAUSE (Front)
		T	E	S	T	*	*	#	@	0		
	B. EEPROM INITIALIZE (FULL)	T	E	S	T	*	*	#	@			By pressing and holding ▶▶ (Front) for 2-sec
		T	E	S	T	*	*	#	3	3		
	① DEVICE KEY DISPLAY				*	*	*	*				By pressing MENU (Remote)
	② VERSION DISPLAY	a	a	a	a			c	c	c	c	By pressing MENU (Remote) aaaa: Syscon, cccc: Backend
	③ FL ALL ON	■	■	■	■	■	■	■	■	■	■	By pressing MENU (Remote)
	④ CHECK MODE				C	H	E	C	K			By pressing MENU (Remote)
	START PLAY				C	H	E	C	K			By pressing 1 (Remote)
	WOBBLE	*	*	*	*	*	*	*	*	*	*	By pressing 2 (Remote)
	CD LASER current	*	*	*	*	*	*	*	*	*	*	By pressing 4 (Remote)
	DVD LASER current	*	*	*	*	*	*	*	*	*	*	By pressing 5 (Remote)
	DVD-SL jitter	*	*	*	*	*	*	*	*	*	*	By pressing 6 (Remote)
	EEPROM (BWD)	*	*	*	*	*	*	*	*	*	*	By pressing 7 (Remote)
	EEPROM (FWD)	*	*	*	*	*	*	*	*	*	*	By pressing 8 (Remote)
	Temperature	*	*	*	*	*	*	*	*	*	*	By pressing 9 (Remote)
	DVD-DL/SL jitter	*	*	*	*	*	*	*	*	*	*	By pressing 10 (Remote)
	EEPROM initialize	*	*	*	*	*	*	*	*	*	*	By pressing +10 (Remote)
	Monitor change	*	*	*	*	*	*	*	*	*	*	By pressing 0 (Remote)
	STOP				C	H	E	C	K			By pressing STOP (Front or Remote)
	OPEN/CLOSE	—	—	—	—	—	—	—	—	—	—	By pressing OPEN/CLOSE (Front)
	PLAY	*	*	*	*	*	*	*	*	*	*	By pressing PLAY (Front or Remote)

SECTION 5

TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.



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