JVC

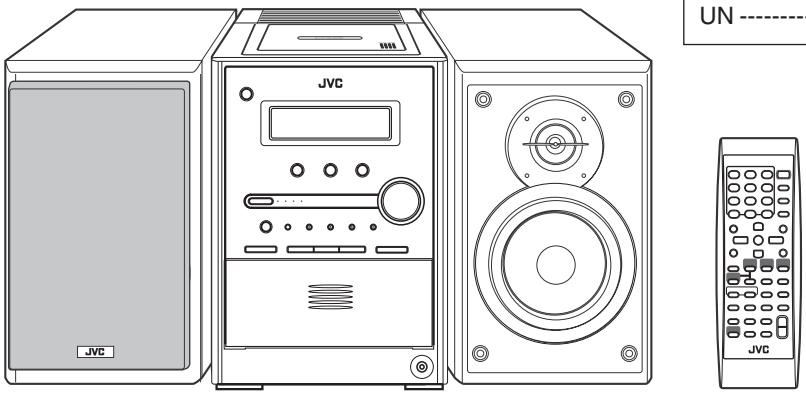
SERVICE MANUAL

COMPACT COMPONENT SYSTEM

UX-S77

Area suffix

A ---------- Australia
US ---------- Singapore
UW ---------- Brazil,Mexico,Peru
UX ---------- Saudi Arabia
UJ ---------- U.S.Military
UN ---------- Asean



(SP-UXS77) (CA-UXS77) (SP-UXS77)

(Except US/UN)

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No.MB230
2004/5

SPECIFICATION

Amplifier section	Output Power	HIGH	40 W (20 W+ 20 W) at 4 Ω (10% THD) 50 W (25 W+ 25 W) at 4 Ω (10% MAX)
		LOW	40 W (20 W+ 20 W) at 4 Ω (10% THD) 50 W (25 W+ 25 W) at 4 Ω (10% MAX)
	Analog input	AUX	Sensitivity/Impedance (at 1 kHz)
			400 mV/47 k Ω (at "AUX LEVEL 1")
			200 mV/47 k Ω (at "AUX LEVEL 2")
	Digital output	DVD OPTICAL DIGITAL OUT	-21 dBm to -15 dBm (660 nm ±30 nm)
	VIDEO OUT	Color system	NTSC
		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	(Y):1 V(p-p)/75 Ω
			(PB/PR):0.7 V(p-p)/75 Ω
		Speaker Terminals	4 Ω - 16 Ω
	Others	AV COMPU LINK × 2 (Ø3.5)	
Tuner section	FM tuning range	87.5 MHz - 108.0 MHz	
	AM 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	
	MP3 recording format	MPEG 1/2 Audio Layer 3	
	Max. Bit rate	320 kbps	
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, (adjustable with the voltage selector), 50 Hz/60 Hz	
	Power consumption	90 W (at operation)	
		12 W (on standby)	
		5.3 W (with deactivating the clock indication)	
	Dimensions (approx.)	175 mm × 237 mm × 375 mm (W/H/D)	
	Mass (approx.)	7.5 kg	
Speakers	Type	2-Way Bass-reflex type	
	Speaker Systems	Woofer: 10 cm cone × 1	
	Power handling capacity	Tweeter: 4 cm cone × 1	
		HIGH: 20 W	
		LOW: 20 W	
	Impedance	HIGH: 4 Ω	
		LOW: 4 Ω	
	Frequency range	56 Hz - 40 000 Hz	
	Sound pressure level	84 dB/W·m	
	Dimensions (approx.)	145 mm × 236 mm × 205 mm (W/H/D)	
	Mass (approx.)	2.3 kg each	

Design and specifications are subject to change without notice.

SECTION 1
PRECAUTION

1.1 Safety Precautions

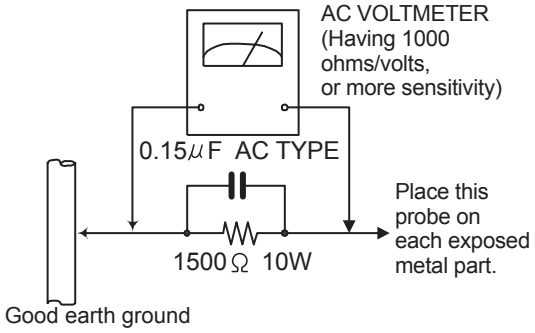
(1) This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the 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 (⚠) 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, 1,000Ω 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 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 preforming 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 (▬), diode (▮) and ICP (●) or identified by the " ⚠ " 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

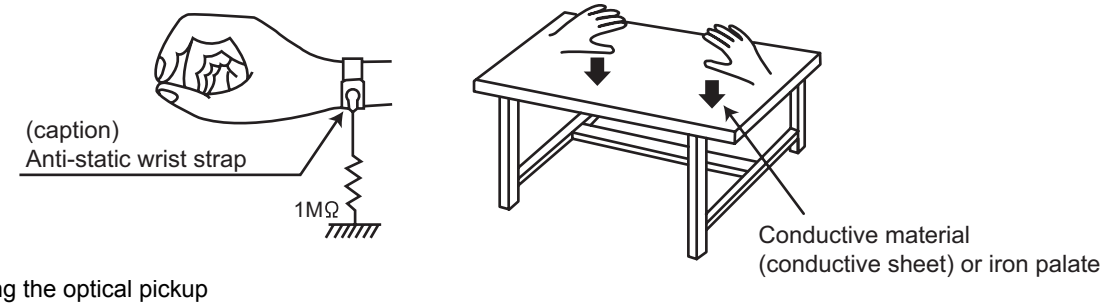
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

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.

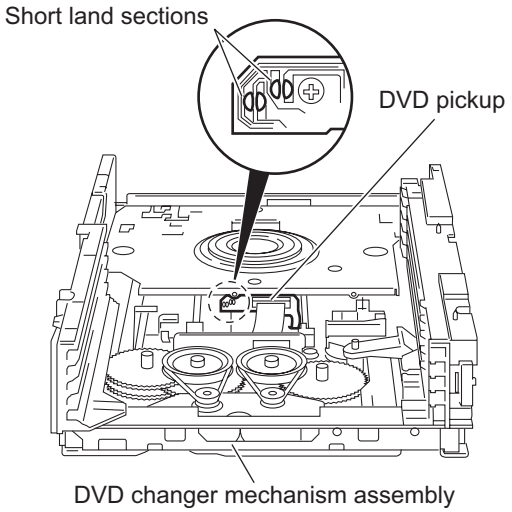
1.6 Handling the traverse unit (optical pickup)

(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) I t 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 connecto 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 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 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 EXPOSUREBTO BEAM.

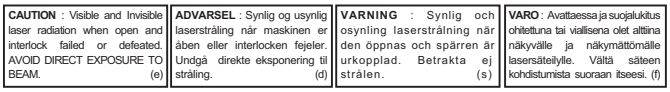
ADVARSEL : Synlig og usynlig laserstråling når maskinen er åben eller interlocken fejler. Undgå direkte eksponering til stråling.

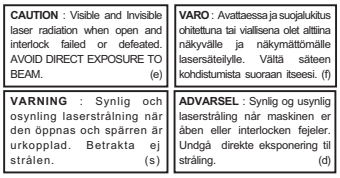
VARNING : Synlig och osynlig laserstråling när den öppnas och spärren är urkopplad. Betrakta ej strålen.

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

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL





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 side panels L/R (See Figs.1 to 4)

(1) From the both sides of the main body, remove the four screws **A** attaching the side panels L/R. (See Figs.1 and 2)
(2) From the back side of the main body, remove the two screws **B** and two screws **C** attaching the side panels L/R to the rear cover and top cover. (See Fig.3)
(3) From the bottom side of the main body, remove the two screws **D** attaching the side panels L/R. (See Fig.4)
(4) Release the claws **a** of the side panels L/R in the direction of the arrow and remove the side panels L/R from the main body. (See Figs.1 and 2)

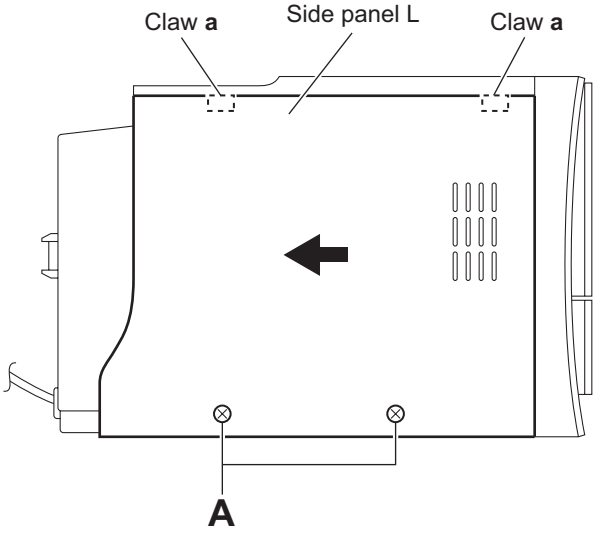


Fig.1

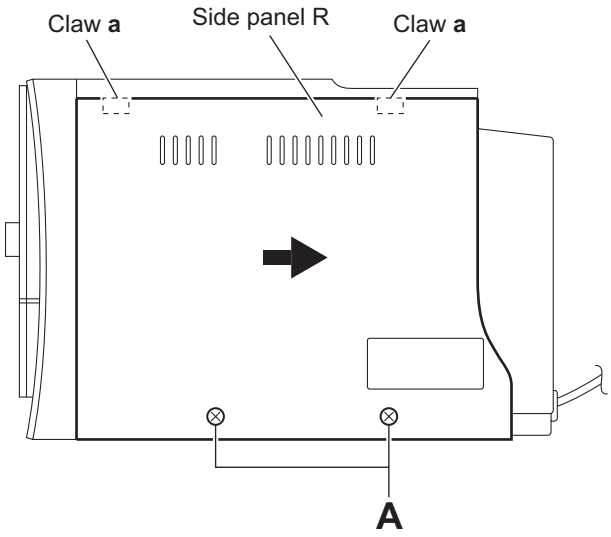


Fig.2

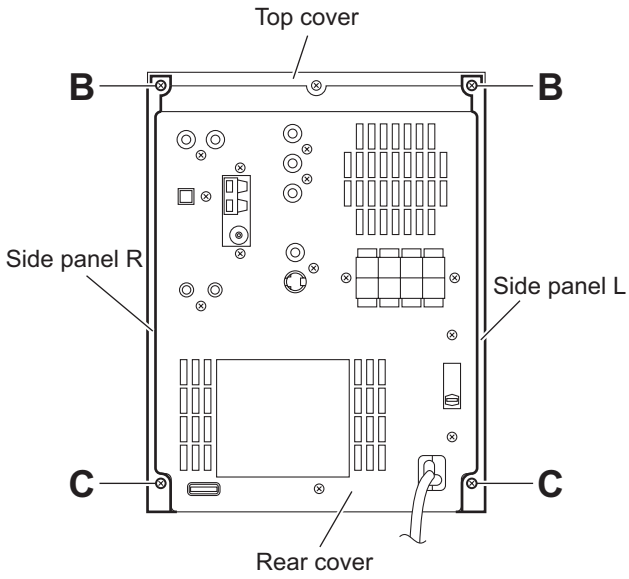


Fig.3

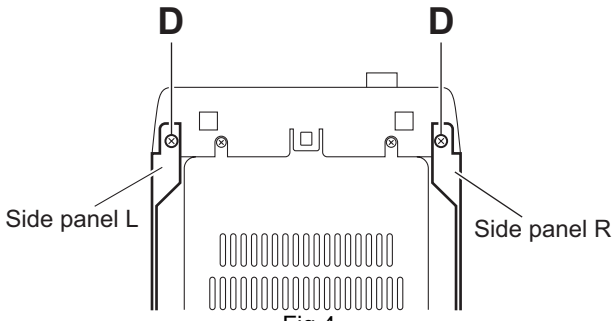


Fig.4

3.1.2 Removing the top cover (See Figs.5 to 7)

- Prior to performing the following procedure, remove the side panels L/R.
  (1) From the back side of the main body, remove the screw **E** attaching the top cover to the rear cover. (See Fig.5)
  (2) From the right side of the main body, disconnect the card wires from the connectors CN790 and CN791 on the main board. (See Fig.6)
  (3) From the both sides of the main body, remove the two screws **F** attaching the top cover to the front panel assembly. (See Fig.7)
  (4) Release the claws **b** and remove the top cover from the main body in the direction of the arrow. (See Fig.7)

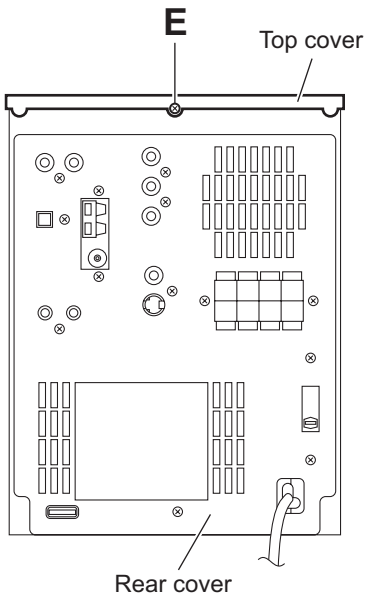


Fig.5

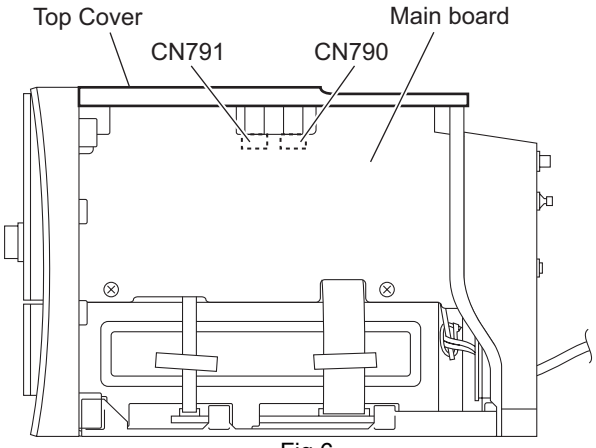


Fig.6

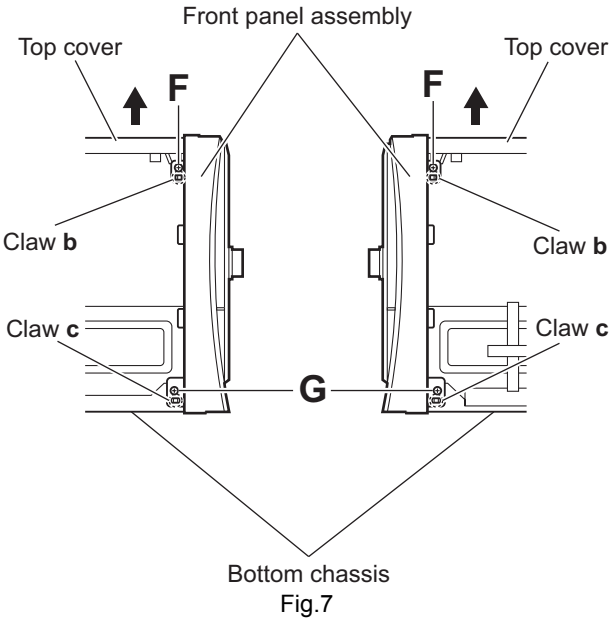


Fig.7

3.1.3 Removing the front panel assembly (See Figs.7 to 10)

- Prior to performing the following procedures, remove the side panels L/R and top cover.
  (1) From the both sides of the main body, remove the two screws **G** attaching the front panel assembly to the bottom chassis. (See Fig.7)
  (2) From the top side of the main body, remove the screw **H** attaching the earth wire on the shield case. (See Fig.8)

  Reference:

  When attaching the screw **H**, attach the earth wire with it. (See Fig.8)

  (3) From the left side of the main body, disconnect the card wire from the connector CN700 on the main board. (See Fig.9)
  (4) Disconnect the wire from the connector CN767 on the main board. (See Fig.9)
  (5) From the both and bottom sides of the main body, release the claws **c** and **d** attaching the front panel assembly. (See Figs.7 and 10)
  (6) Remove the front panel assembly from the main body in the direction of the arrow. (See Fig.10)

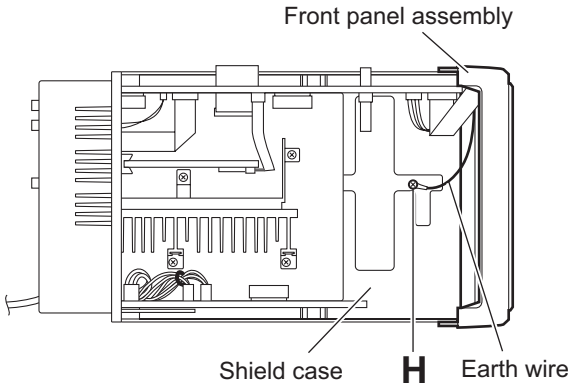


Fig.8

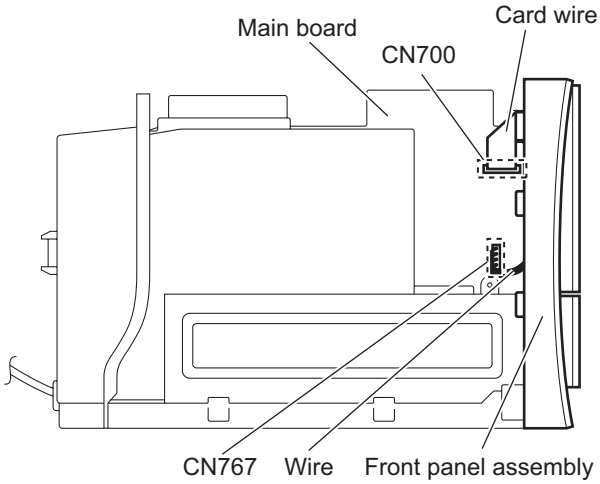


Fig.9

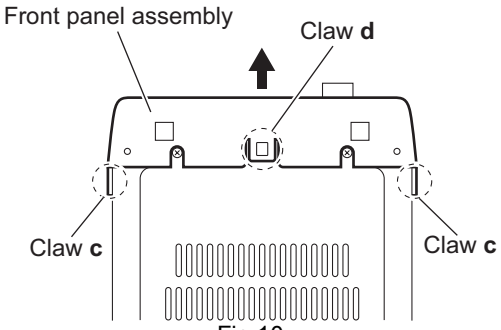


Fig.10

3.1.4 Removing the rear cover (See Figs.11 and 12)

- Prior to performing the following procedures, remove the side panels L/R and top cover.
  (1) From the left side of the main body, cut off the tie band attaching the barrier. (See Fig.11)
  (2) Disconnect the wire from the connector CN760 on the main board. (See Fig.11)
  (3) From the back side of the main body, remove the twelve screws **J** and screw **K** attaching the rear cover. (See Fig.12)
  (4) Remove the rear cover from the main body.

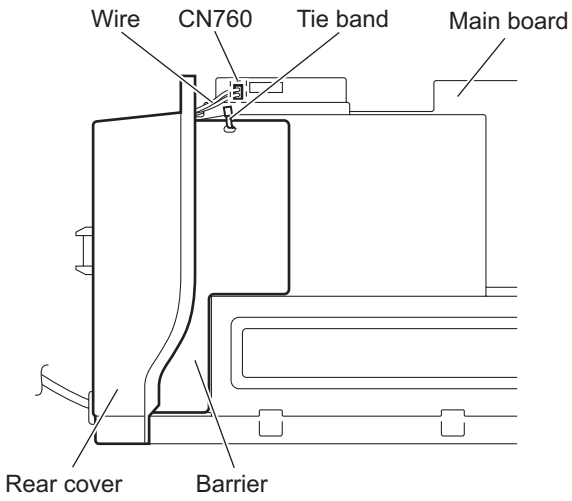


Fig.11

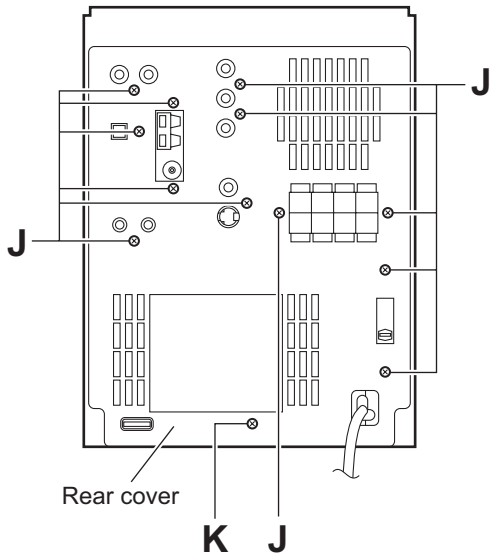


Fig.12

3.1.5 Removing the fan (See Fig.13)

- Prior to performing the following procedures, remove the side panels L/R, top cover and rear panel.
  (1) From the inside of the rear cover, remove the two screws **L** attaching the fan to the rear cover.
  (2) Take out the fan from the rear cover.

  Reference:
  After attaching the fan, pass the wire through the slots **e** and fix the wire with the spacer.

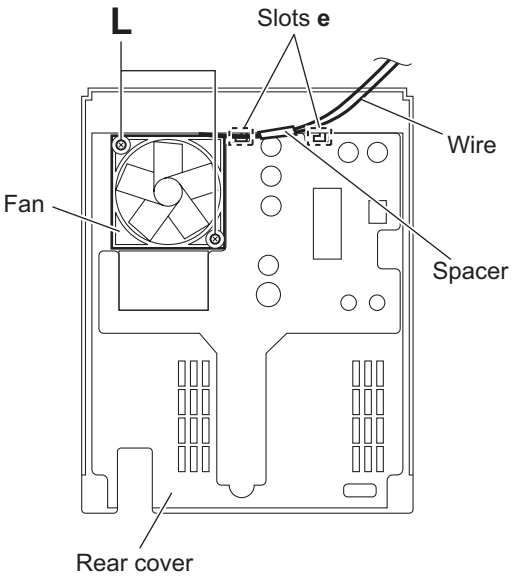


Fig.13

3.1.6 Removing the tuner (See Figs.14 and 15)

- Prior to performing the following procedures, remove the side panels L/R and top cover.
  (1) From the top side of the main body, disconnect the card wire from the connector CN766 on the main board. (See Fig.14)
  (2) From the back side of the main body, remove the two screws **M** attaching the tuner to the rear cover. (See Fig.15)
  (3) Take out the tuner from the main body.

Reference:

Disconnect the card wire from the connector CN1 on the tuner as required. (See Fig.14)

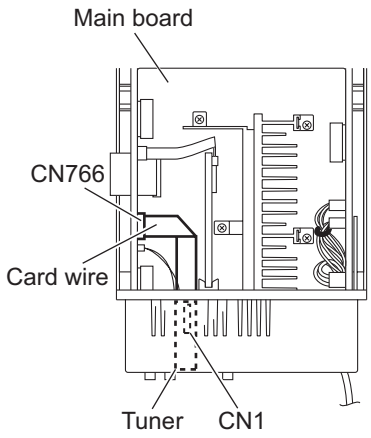


Fig.14

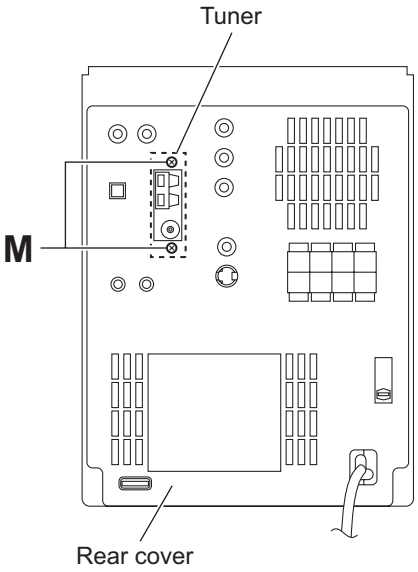


Fig.15

3.1.7 Removing the video output board (See Fig.16)

- Prior to performing the following procedures, remove the side panels L/R, top cover and rear cover.
  (1) From the top side of the main body, disconnect the card wire from the connector CN452 on the video output board.
  (2) Disconnect the connector CN451 on the video output board from the connector CN301 on the power amplifier board.

Reference:

When attaching the video output board, insert the video output board in the slot **f** of the bracket.

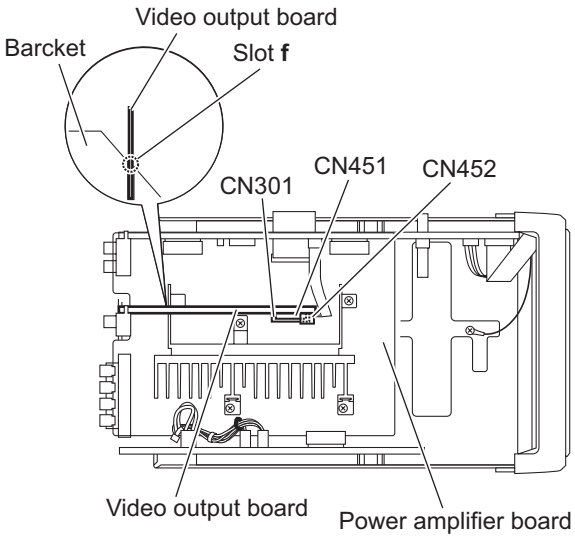


Fig.16

3.1.8 Removing the main board (See Fig.17)

- Prior to performing the following procedures, remove the side panels L/R, top cover assembly and rear cover.

Reference:

Remove the tuner as required. (See 3.1.6 "Removing the tuner")

(1) From the right side of the main body, remove the two screws **N** attaching the main board.
(2) Remove the main board to the direction of this side and disconnect the connectors CN761 and CN762 on the main board.
(3) From the forward side of the main board, disconnect the card wires from the connectors CN700, CN763 and CN764 on the main board.
(4) Disconnect the wire from the connector CN767 on the forward side of the main board.

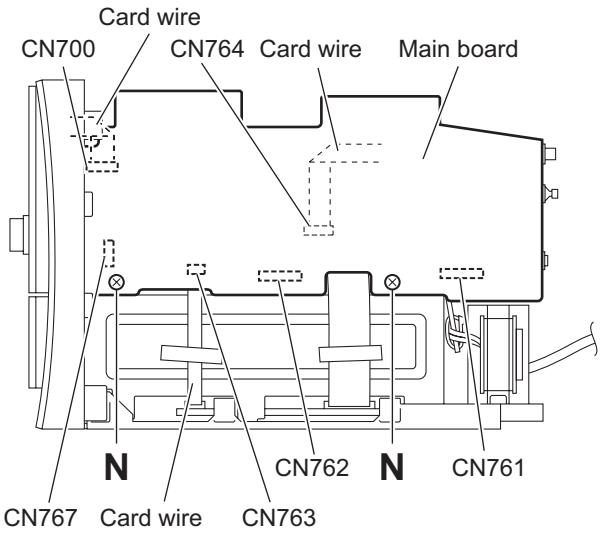


Fig.17

3.1.9 Removing the power supply board (See Fig.18)

- Prior to performing the following procedures, remove the side panels L/R, top cover assembly and rear cover.

Reference:

Remove the tuner as required. (See 3.1.6 "Removing the tuner")

(1) From the left side of the main body, remove the two screws **P** attaching the power supply board.
(2) Cut off the tie band bundling the power cord.
(3) Remove the power supply board toward this side and disconnect the connector CN902 on the power supply board.
(4) From the forward side of the power supply board, disconnect the power cord and wires from the connectors CN901, CN904, CN905 and CN907 on the power supply board.

Reference:

- When connecting the wires to the connectors CN904 and CN905 on the power supply board, bundling the wires with the wire clamps as before.
- After connecting the power cord to the connector CN901 on the power supply board, bundle the power cord with the new tie band as before.

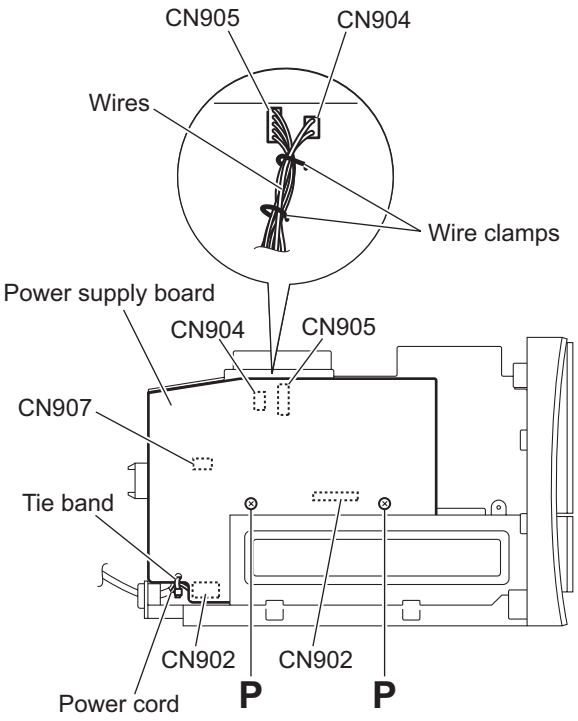


Fig.18

3.1.10 Removing the power amplifier board (See Fig.19)

- Prior to performing the following procedures, remove the side panels L/R, top cover assembly, rear cover, tuner, video output board, main board and power supply board.
  (1) From the top side of the main body, disconnect the card wire from the connector CN303 on the power amplifier board.
  (2) Remove the tie bands and wire holder bundling the wires.
  (3) Remove the four screws **Q** attaching the power amplifier board on the shield chassis.

Reference:

- When attaching the power amplifier board on the shield chassis, align the projections **g** of the shield case in the slots of the power amplifier board before attaching the power amplifier board with the screws **Q**.
- After attaching the power amplifier board, insert the wires in the slot **h** and bundle the wires with the new tie bands and wire clamp as before.

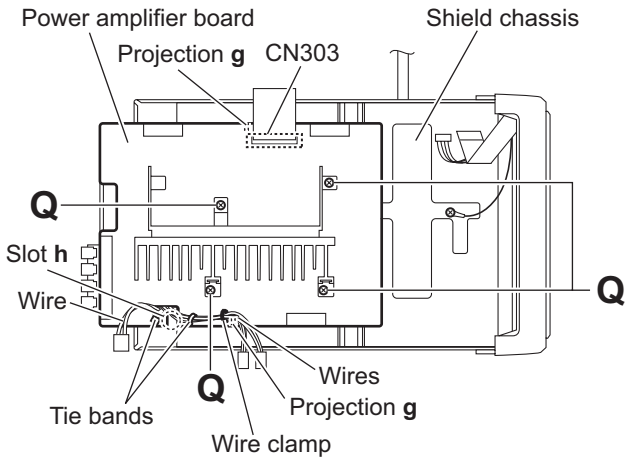


Fig.19

3.1.11 Removing the heat sink (See Figs.20 and 21)

- Prior to performing the following procedures, remove the side panels L/R, top cover assembly, rear cover, tuner, video output board, main board, power supply board and power amplifier board.
  (1) From the reverse side of the power amplifier board, bend the claws **i** in the direction of the arrow. (See Fig.20)
  (2) From the forward side of the power amplifier board, remove the four screws **R** attaching the heat sink to the bracket. (See Fig.21)
  (3) Release the joints **j** and remove the heat sink in the direction of the arrow. (See Fig.21)

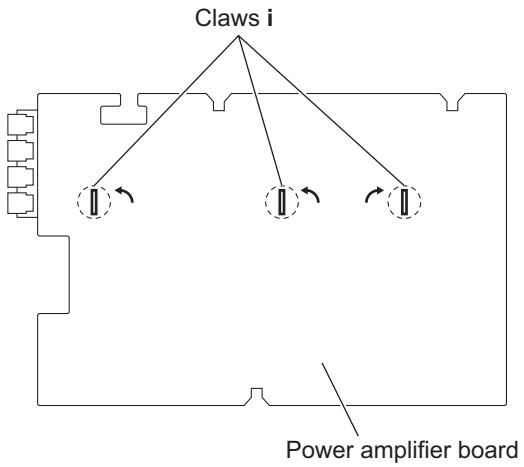


Fig.20

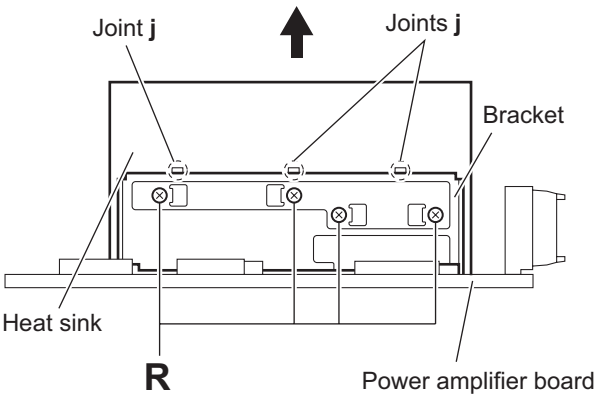


Fig.21

3.1.12 Removing the power transformer (See Fig.22)

- Prior to performing the following procedures, remove the side panels L/R, top cover assembly, rear cover, tuner, video output board, main board, power supply board and power amplifier board.
  (1) From the top side of the main body, cut off the tie bands holding the wire to the support board.

  Reference:
  After reassembling, hold the wire with the new tie bands as before.
  (2) Remove the four screws **S** attaching the power transformer.

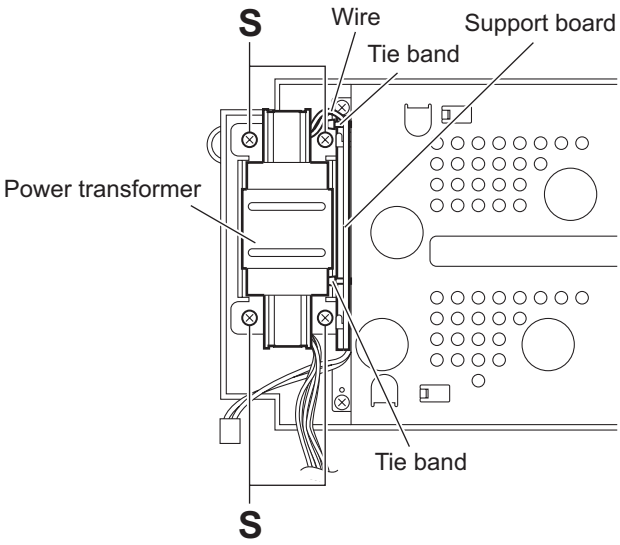


Fig.22

3.1.13 Removing the DVD changer mechanism assembly (See Figs.23 to 26)

- Prior to performing the following procedures, remove the side panels L/R, top cover and front panel assembly.

(1) From the bottom side of the main body, remove the two screws **T** attaching the bracket (F) to the bottom chassis. (See Fig.23)

Reference:

When attaching the bracket (F), align the projections **k** of the bottom chassis in the holes of the bracket (F). (See Fig.23)

(2) From the front side of the main body, remove the two screws **U** attaching the bracket (F) to the shield case. (See Fig.23)

Reference:

When attaching the bracket (F), align the projection **m** of the shield case in the holes of the bracket (F). (See Fig.23)

(3) From the top side of the main body, remove the two screws V attaching the DVD changer mechanism assembly. (See Fig.24)

Reference:

Align the projections **n** on the bottom chassis in the holes of the DVD changer mechanism assembly before attaching the screws **V**. (See Fig.24)

(4) From the right side of the main body, disconnect the card wires from the connectors CN603 and CN604 on the connect board. (See Fig.25)

(5) Take out the DVD changer mechanism assembly from the main body in the direction of the arrow. (See Fig.25)

Note:

When take out the DVD changer mechanism assembly, be careful not to damage the several parts on the connect board.

(6) From the rear side of the DVD changer mechanism assembly, remove the two screws **W** attaching the bracket (R). (See Fig.26)

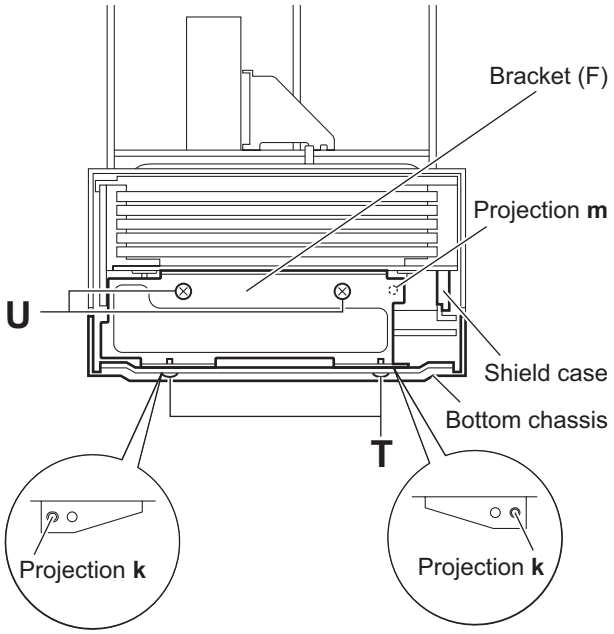


Fig.23

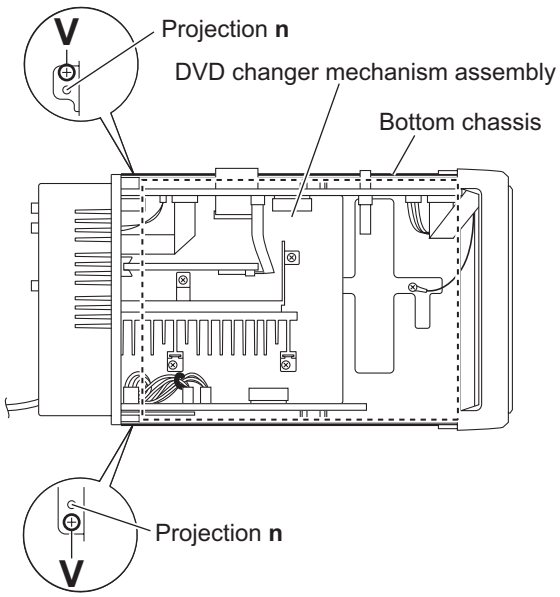


Fig.24

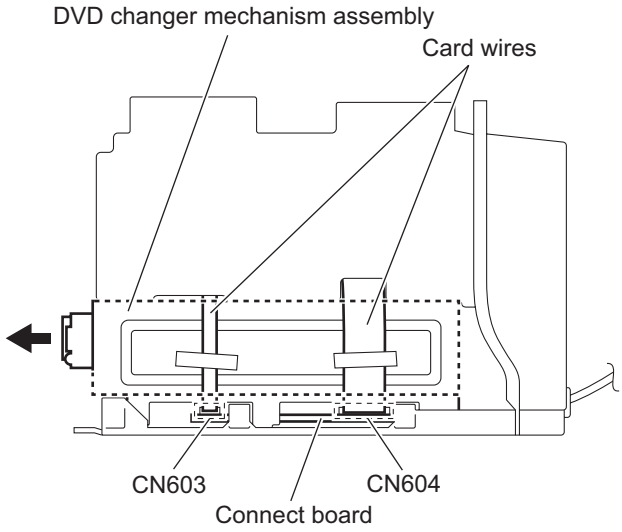


Fig.25

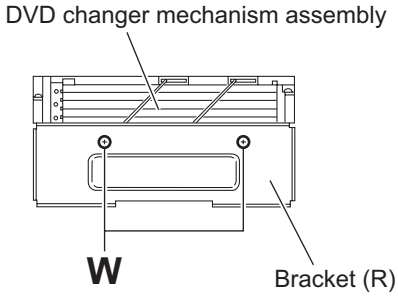


Fig.26

3.1.14 Removing the connector board (See Fig.27)

- Prior to performing the following procedures, remove the side panels L/R, top cover, front panel assembly and DVD changer mechanism assembly.
  (1) From the bottom side of the DVD changer mechanism assembly, remove the two screws **X** attaching the connector board.
  (2) Disconnect the card wire from the connector CN501 and CN503 on the DVD servo board.

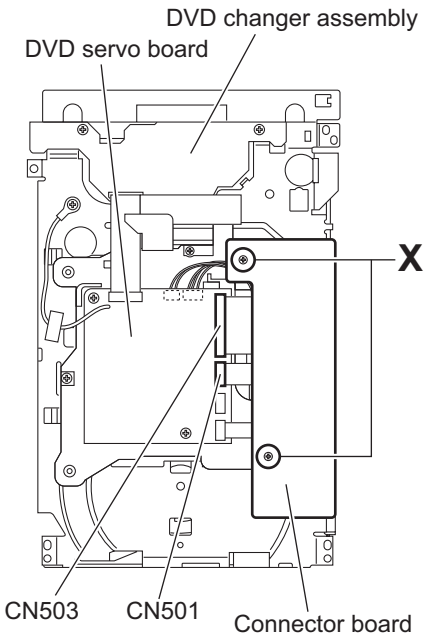


Fig.27

3.1.15 Removing the cassette mechanism assembly (See Fig.28)

- Prior to performing the following procedures, remove the side panels L/R and top cover.
  (1) From the reverse side of the top cover, remove the screws **Y** attaching the dummy board.
  (2) Take out dummy board.
  (3) Remove the four screws **Z** attaching the cassette mechanism assembly, and take out the cassette mechanism assembly.

Reference:

After attaching the cassette mechanism assembly, fix the card wires with the dummy board.

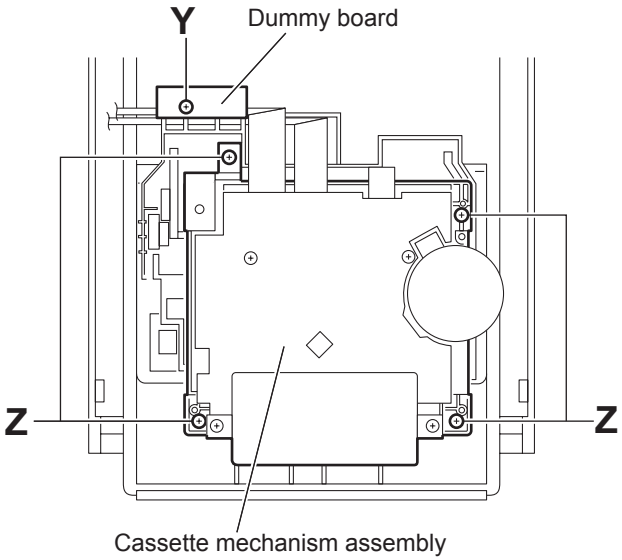


Fig.28

3.1.16 Removing the FL board (See Fig.29)

- Prior to performing the following procedures, remove the side panels L/R, top cover and front panel assembly.
  (1) From the inside of the front panel assembly, remove the five screws **AA** attaching the FL board.
  (2) Take out the FL board from the front panel assembly and remove the solders from the soldered section **p** to remove the parallel wire.

Reference:

When attaching the FL board, align the projection **q** of the front panel assembly in the hole of the FL board.

3.1.17 Removing the headphone jack board (See Fig.29)

- Prior to performing the following procedures, remove the side panels L/R, top cover and front panel assembly.
  (1) From the inside of the front panel assembly, remove the screw **AB** and screw **AB'** attaching the headphone jack board.
  (2) Take out the headphone jack board with the wires.

Reference:

- When attaching the wires, attach the washer board with the screw **AB'**.
- After attaching the headphone jack board, fix the wires with the spacer.

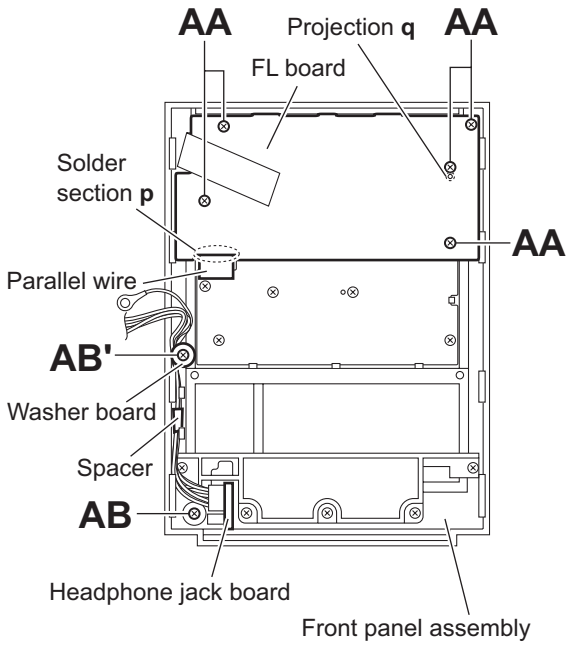


Fig.29

3.1.18 Removing the switch board (See Figs.30 and 31)

- Prior to performing the following procedures, remove the side panels L/R, top cover, front panel assembly and FL board.
  (1) From the front side of the front panel assembly, pull out the volume knob. (See Fig.30)
  (2) From the inside of the front panel assembly, remove the five screws **AC** attaching the switch board. (See Fig.31)
  (3) Release the claws **r** in the direction of the arrow and remove the switch board from the joints **s** of the front panel assembly. (See Fig.31)
  (4) Take out the switch board from the front panel assembly.

Reference:

- Remove the parallel wire from the soldered section **t** on the switch board as required. (See Fig.31)
- When attaching the switch board, align the projection **u** of the front panel assembly in the hole of the switch board. (See Fig.31)

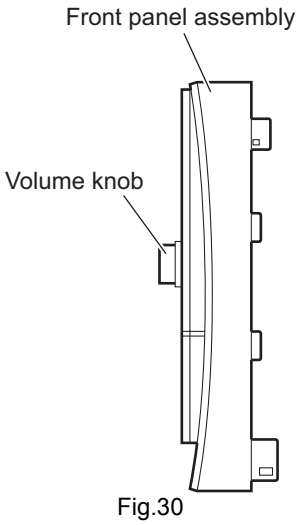


Fig.30

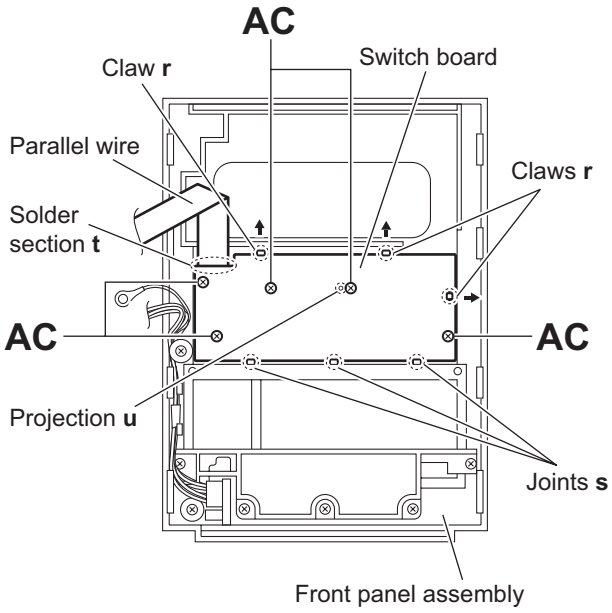


Fig.31

3.2 DVD changer mechanism assembly section

3.2.1 Removing the tray assemblies (See Figs.1 to 5)

(1) From the top side of the main body, remove the two screws **A** from the top cover and release the two joints **a** on the both sides of the DVD changer mechanism assembly. (See Figs.1 and 2.)
(2) Remove the two rods from the top cover and remove the top cover from the lifter assembly. (See Figs.1 and 2.)
(3) Remove the open det. lever on the left side of the DVD changer mechanism assembly. (See Fig.3.)
(4) From the right side of the DVD changer mechanism assembly, draw out the tray assemblies toward the front while pushing the part **b** of the side (R) assembly. (See Figs.4 and 5.)

Note:
The tray can be locked if all tray assemblies are attached.

(5) From the topside of the DVD changer mechanism assembly, move the stopper tabs **c** in the direction of the arrow and release them. Pull out the tray assemblies from the DVD changer mechanism assembly. (See Fig. 5.)

Note:
Remove the tray assembly from top tray 5 in order.

Reference:
When reattaching the tray assembly, or when removing the disc remaining inside, refer to another section"3.2.15 Taking out the disc in the play mode".

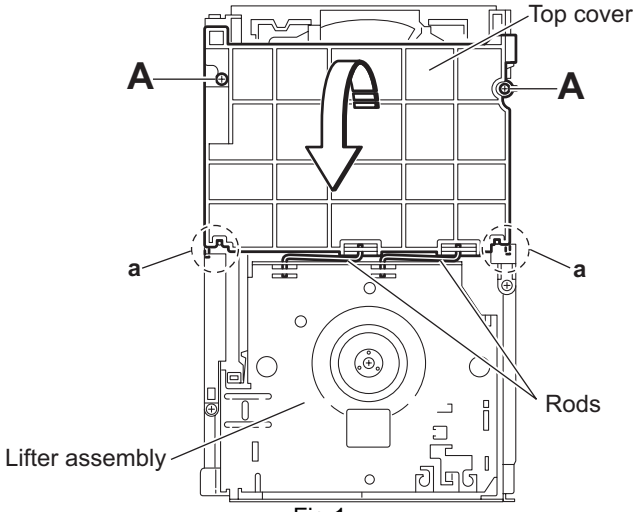


Fig.1

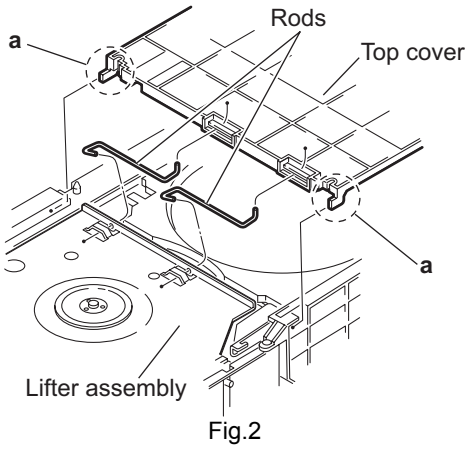


Fig.2

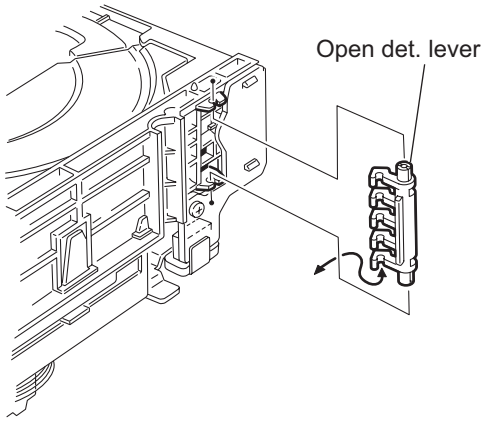


Fig.3

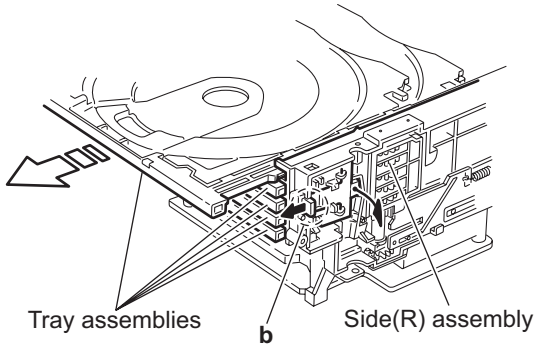


Fig.4

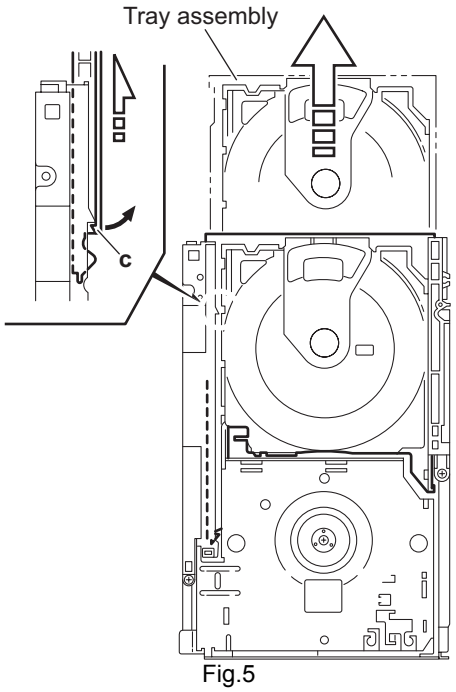


Fig.5

3.2.2 Removing the DVD servo board (See Figs.6 to 8)

Caution:

Solder the short land sections **d** on the DVD pickup before disconnecting the card wire extending from the DVD pickup. If you do not follow this instruction, the DVD pickup may be damaged.

(1) From the topside of the DVD changer mechanism assembly, solder the short land sections **d** on the DVD pick up. (See Fig.6.)

(2) From the bottom side of the DVD changer mechanism assembly, disconnect the card wire from the connectors (CN201, CN451) on the DVD servo board. (See Fig.7.)

(3) Disconnect the wires from the connectors (CN452, CN453) on the DVD servo board. (See Fig.7.)

(4) Remove the screw **B** attaching the earth wire. (See Fig.7.)

Reference:

After attaching the earth wire, fix it with the spacer as before. (See Fig.7.)

(5) Remove the two screws **C** attaching the DVD servo board. (See Fig.7.)

(6) From the reverse side of the DVD servo board, release the lock of the connector CN101 in the direction of the arrow and disconnect the card wire. (See Fig.8.)

Caution:

Unsolder the solders from the short land sections **d** after reassembling. (See Fig.6.)

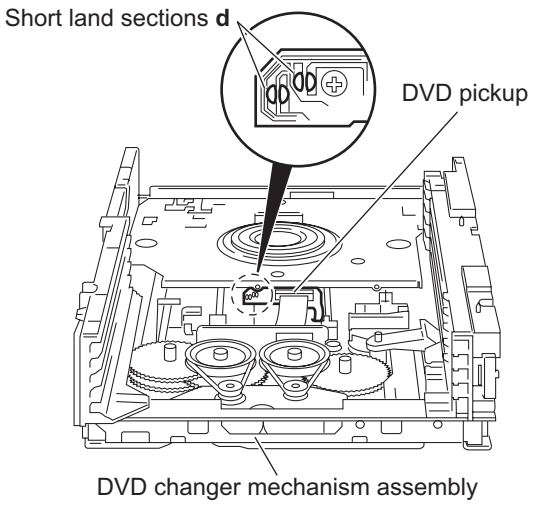


Fig.6

3.2.3 Removing the switch board (See Fig.7)

- Prior to performing the following procedures, remove the DVD servo board.

(1) From the bottom side of the DVD changer mechanism assembly, remove the screw **D** attaching the switch board to the DVD changer mechanism assembly.

(2) Loosen the screw **E** attaching the DVD traverse mechanism assembly and take out the switch board while lifting the section **e** of the DVD traverse mechanism assembly.

(3) Release the wires from the slots **f** of the switch board.

Reference:

When reassembling, pass the wire through the section **g** of the DVD traverse mechanism assembly.

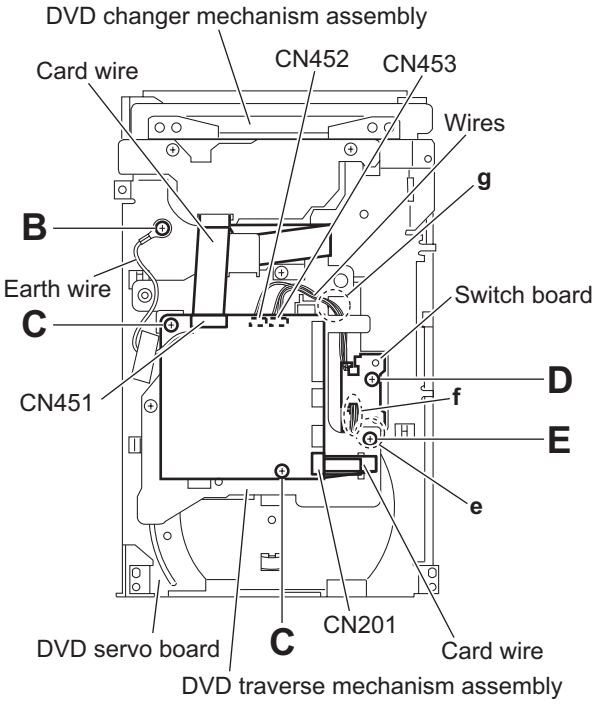


Fig.7

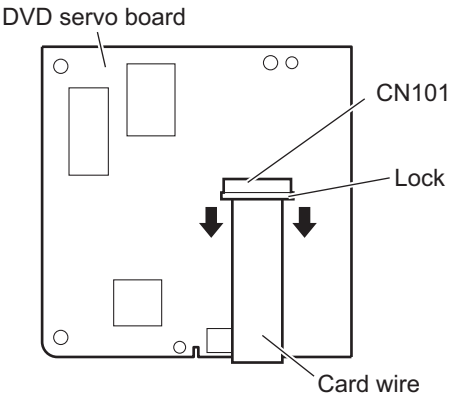


Fig.8

3.2.4 Removing the motor board (See Figs.9 and 10)

(1) From the top side of the DVD changer mechanism assembly, remove the two belts from the motor pulleys. (See Fig.9.)

Note:
Take care not to attach grease on the belt.

(2) Remove the four screws **F** attaching the motors to the loader assembly. (See Fig.9.)

(3) From the bottom side of the DVD changer mechanism assembly, remove the two screws **G**. (See Fig.10.)

(4) Disconnect the connector CN2 on the motor board from the tray switch board and remove the motor board. (See Fig.10.)

(5) Disconnect the card wire from the connector CN1 on the motor board. (See Fig.10.)

Note:
When connecting the card wire, let the card wire through the slots **g** of the motor board. (See Fig.10.)

Reference:
You need not to remove the tray assemblies, and in such case, move it.

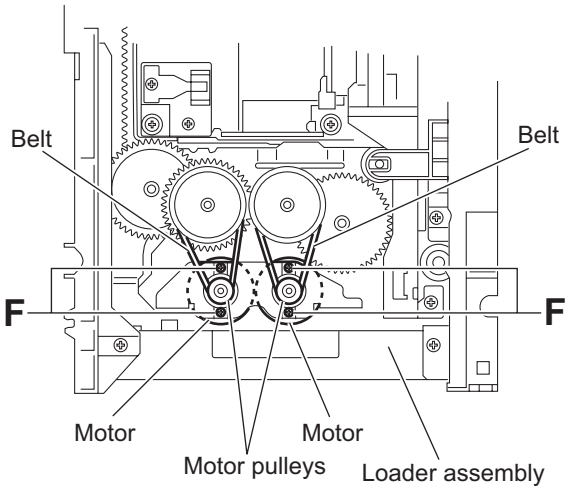


Fig.9

3.2.5 Removing the motor (See Fig. 10)

- Prior to performing the following procedures, remove the motor board.

(1) From the reverse side of the motor board, unsolder the four soldered sections **h** on the motor board.

(2) From the forward side of the motor board, remove the motors.

Note:
When reattaching the motor, turn the side where the label should be put to the front side.

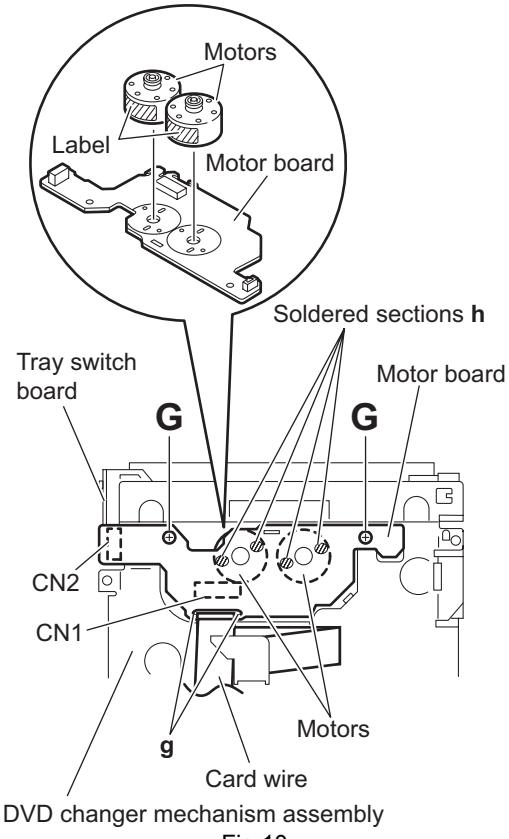


Fig.10

3.2.6 Removing the DVD traverse mechanism assembly (See Fig.11)

- Prior to performing the following procedures, remove the tray assemblies and DVD servo board.
  (1) From the bottom side of the DVD changer mechanism assembly, remove the three screws **H** attaching the DVD traverse mechanism assembly.
  (2) Remove the card wire from the section **i**.
  (3) Remove the wire from the section **j**.
  (4) Take out the DVD traverse mechanism assembly from the DVD changer mechanism assembly.

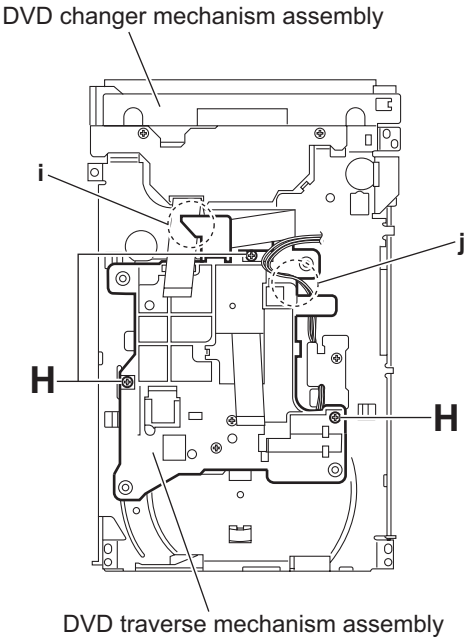


Fig.11

3.2.7 Removing the DVD pickup (See Figs.12 to 14)

- Prior to performing the following procedures, remove the tray assemblies, DVD servo board and DVD traverse mechanism assembly.
  (1) From top side of the DVD traverse mechanism assembly, release the lock of the connector on the DVD pickup and disconnect the card wire in the direction of the arrow. (See Fig.12.)
  (2) Turn the screw shaft gear in the direction of the arrow 1 to move the DVD pickup in the direction of the arrow 2. (See Fig.12.)
  (3) Remove the screw **J** attaching the gear holder. (See Fig.12.)
  (4) Remove the screw **K** attaching the SS adj. spring. (See Fig.12.)
  (5) Move the DVD pickup in the direction of the arrow and remove the screw shaft from the section **k** on the screw shaft holder. (See Fig.13.)
  (6) Remove the section **m** of the DVD pickup from the guide shaft. (See Fig.13.)
  (7) Remove the two screws **L** attaching the rack arm to the DVD pickup. (See Fig.14.)
  (8) Pull the screw shaft from the DVD pickup in the direction of the arrow. (See Fig.14.)

3.2.8 Attaching the DVD pickup (See Figs.12 to 14)

(1) Attach the screw shaft to the DVD pickup and attach the rack arm with the screws **L**. (See Fig.14.)

Reference:

After attaching the screw shaft to the DVD pickup, attach the screw shaft collor to the screw shaft. (See Fig.14.)

(2) Attach the section **m** of the DVD pickup to the guide shaft first and attach the screw shaft to the section **k** on the screw shaft holder. (See Fig.13.)
(3) Attach the gear holder and SS adj. spring with the screws **J** and **K**. (See Fig.12.)
(4) Turn the screw shaft gear to move the DVD pickup toward the left. (See Fig.12.)
(5) Connect the card wire to the connector on the DVD pickup. (See Fig.12.)

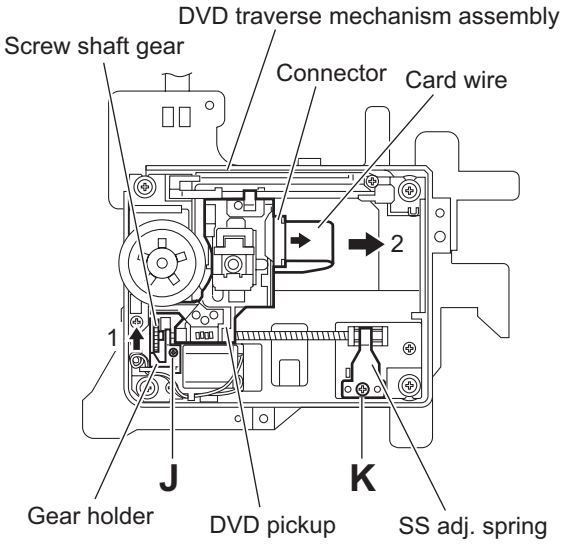


Fig.12

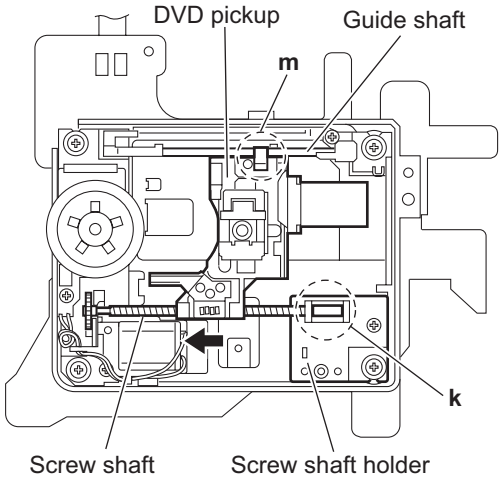


Fig.13

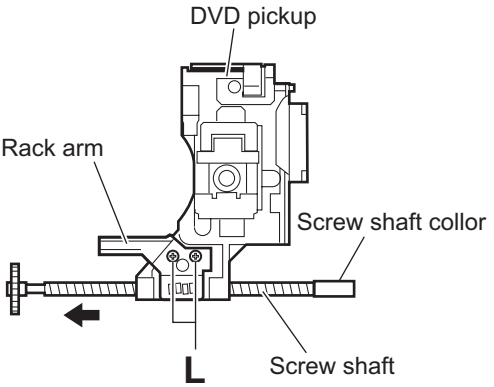


Fig.14

3.2.9 Removing the spindle motor board (See Figs.15 and 16)

- Prior to performing the following procedures, remove the tray assemblies and DVD traverse mechanism assembly.
  (1) From the top side of the DVD traverse mechanism assembly, remove the four screws **M** attaching the DVD traverse mechanism assembly to the DVD traverse mechanism base 3. (See Fig.15.)
  (2) Remove the wires from the soldered section **n** on the spindle motor board. (See Fig.15.)
  (3) Remove the screw **N** attaching the spindle motor board. (See Fig.15.)
  (4) From the bottom side of the DVD traverse mechanism assembly, remove the three screws **P** attaching the spindle motor board. (See Fig.16.)

Reference:

When attaching the spindle motor board, let the card wire through the hole **p** on the SF motor base. (See Fig.15.)

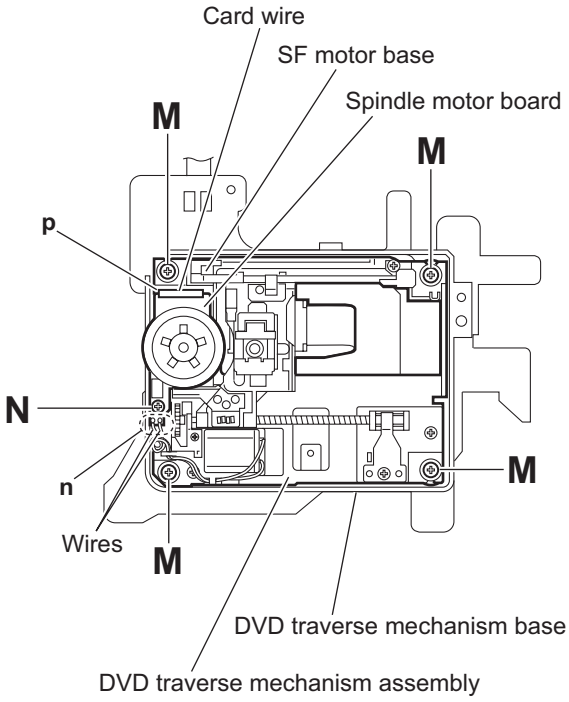


Fig.15

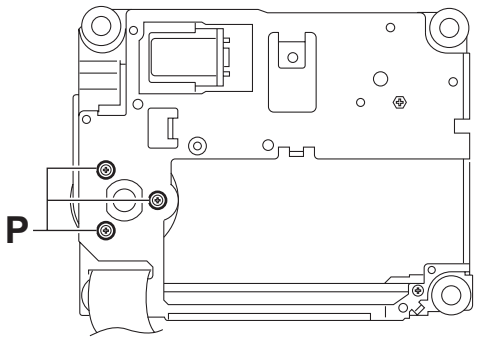


Fig.16

3.2.10 Removing the motor (See Figs.17 and 18)

- Prior to performing the following procedures, remove the tray assemblies, DVD traverse mechanism assembly, DVD pickup and spindle motor board.
- Remove the wires of the motor as required.
  (1) Remove the middle gear in the direction of the arrow. (See Fig.17.)
  (2) Remove the screw **Q** and screw **R** attaching the SF motor base. (See Fig.17.)
  (3) Remove the screw **S** attaching the motor to the SF motor base. (See Fig.18.)
  (4) Take out the motor from the motor base.

Reference:

After attaching the feed motor, let the wires through the sections **q** and **r** on the SF motor base. (See Fig.17.)

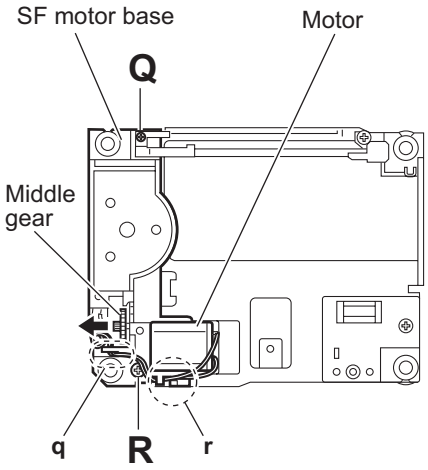


Fig.17

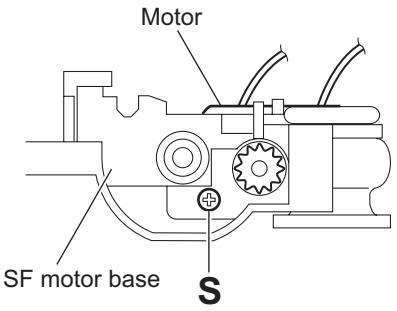


Fig.18

3.2.11 Removing the side (L) assembly and tray switch board (See Figs.19 to 21)

- Prior to performing the following procedures, remove the tray assemblies.
  (1) From the topside of the DVD changer mechanism assembly, remove the two screws **T** attaching the side (L). (See Fig.19.)
  (2) From the left side of the DVD changer mechanism assembly, remove the spacer fixing the tray switch board and motor board. (See Fig.20.)
  (3) Disconnect the connector CN3 on the tray switch board from the motor board and detach the side (L) in an upward direction. (See Fig.20.)
  (4) Remove the screw **U** attaching the tray switch board to the side (L). (See Fig.21.)
  (5) Release the joint tab **s** of the side (L) in the direction of the arrow 1 and release the joint tab **t** while removing the tray switch board in the direction of the arrow 2. (See Fig.21.)

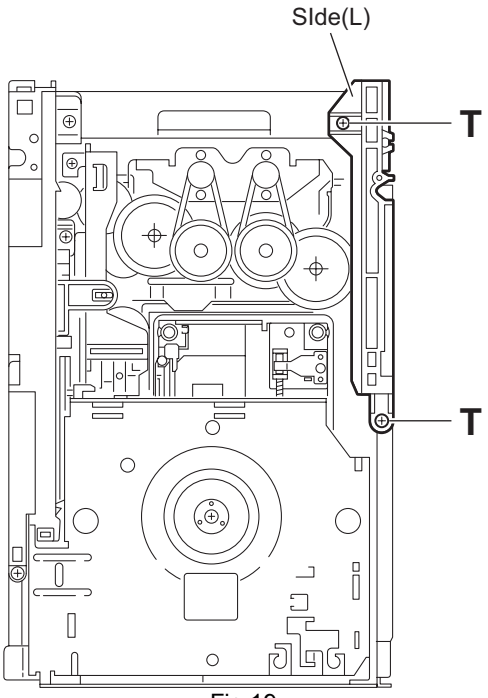


Fig.19

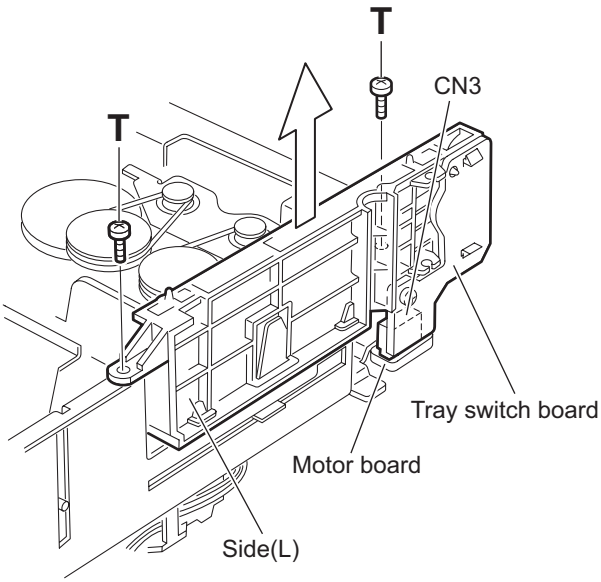


Fig.20

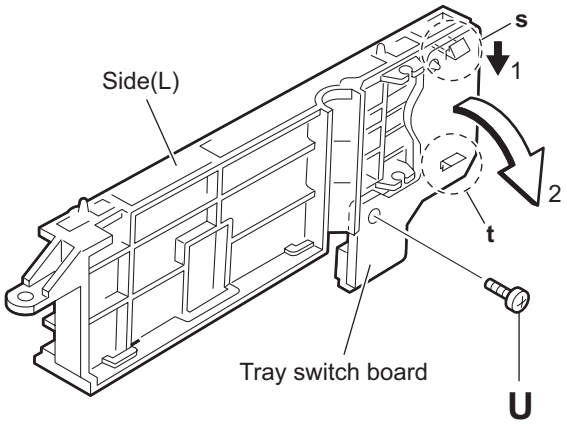


Fig.21

3.2.12 Removing the side (R) assembly (See Fig.22 to 26)

- Prior to performing the following procedures, remove the tray assemblies and DVD servo board.
  (1) From the inside of the side (R) assembly, release the two tabs **u** of the gear cover and remove the gear cover outward. (See Figs.22 and 23.)
  (2) From the right side of the DVD changer mechanism assembly, remove the elevator spring attached to the hook **v** of the loader assembly. (See Figs.23 and 24.)
  (3) From the top side of the DVD changer mechanism assembly, turn the gear 1 clockwise to move the elevator cam rearward. (See Fig.24.)
  (4) Move the two slots **w** and joint **x** of the elevator cam and remove the elevator cam outward. (See Fig.24.)
  (5) Remove the three screws **V** and detaches the side (R) assembly upward. (See Figs.25 and 26.)

Note:

When reattaching the side (R) assembly, make sure to fit the shaft (part y) into the slot of the select lever. (See Fig.25.)

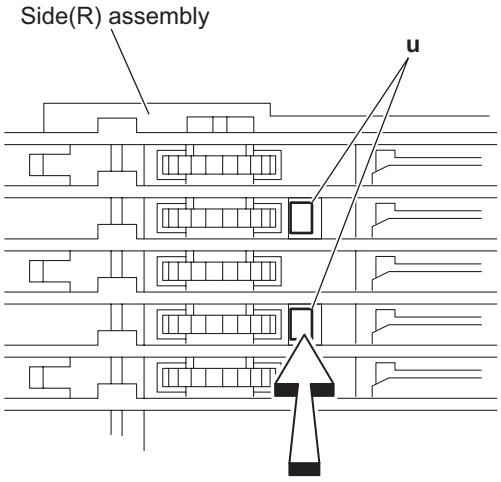


Fig.22

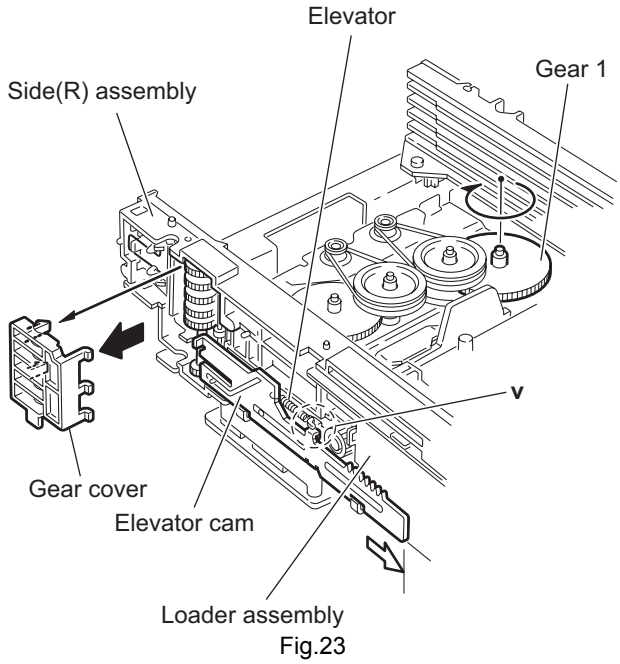


Fig.23

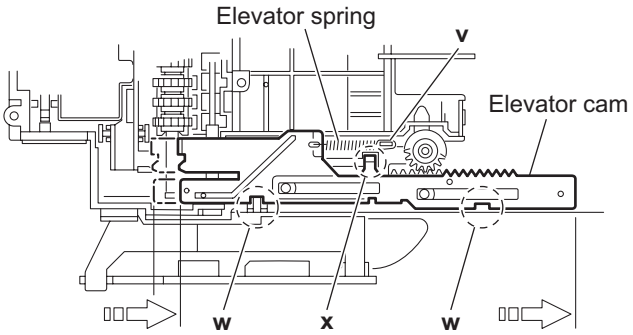


Fig.24

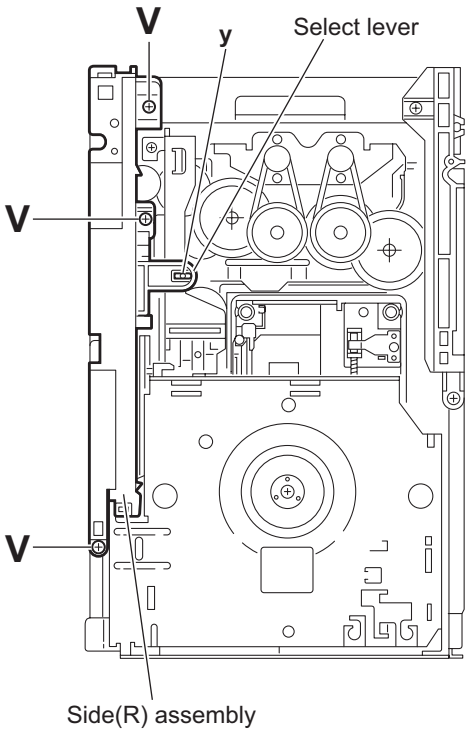


Fig.25

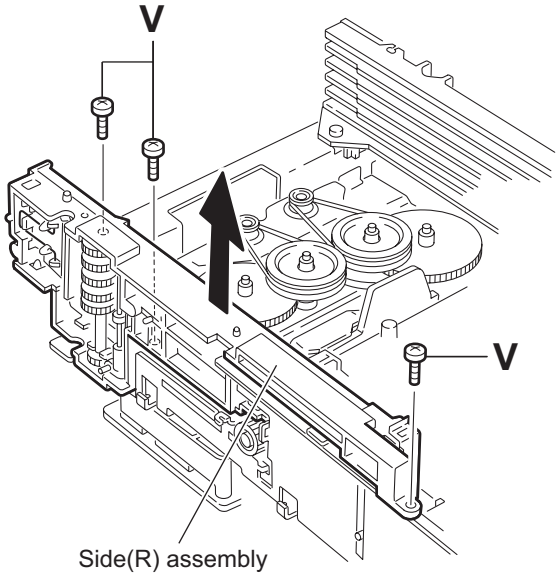


Fig.26

3.2.13 Removing the lifter assembly (See Figs.27 to 31)

- Prior to performing the following procedures, remove the tray assemblies, DVD servo board, side (L) and side (R) assembly.
  (1) From the top side of the DVD changer mechanism assembly, turn the gear 1 clockwise to move the lifter assembly upward. (See Figs.27 and 28.)
  (2) Turn the gear 2 clockwise to move the hook toward the front until it stops. (See Figs.27 and 28.)
  (3) Move the hook stopper in the direction of the arrow 2 while pushing the tab **z** of the hook stopper to unlock it in the direction of the arrow 1 and release four joints **aa** to detach from the rack holder. (See Fig.29.)
  (4) Release the rod from part ab. (See Fig.29.)
  (5) Turn the gear 1 clockwise again to move the lifter assembly upward. (See Fig.30.)
  (6) Remove the lifter assembly from the DVD changer mechanism assembly upward at the positions **ac** where the four pins on the both sides of the lifter assembly fit to the notches of the loader assembly. (See Fig.30.)
  (7) Move the lifter assembly in the direction of the arrow and release it from the hook. (See Fig.31.)

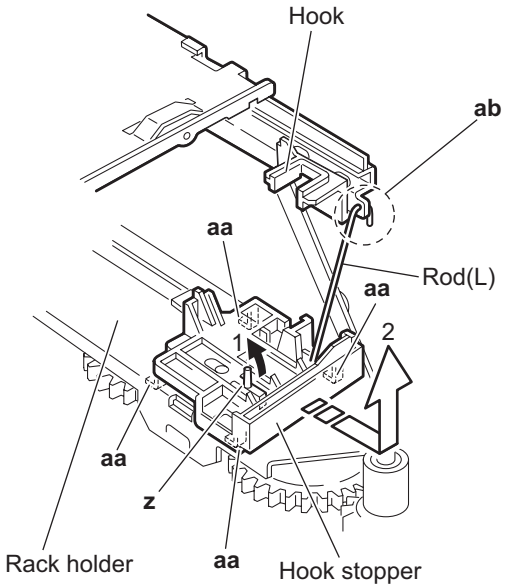


Fig.29

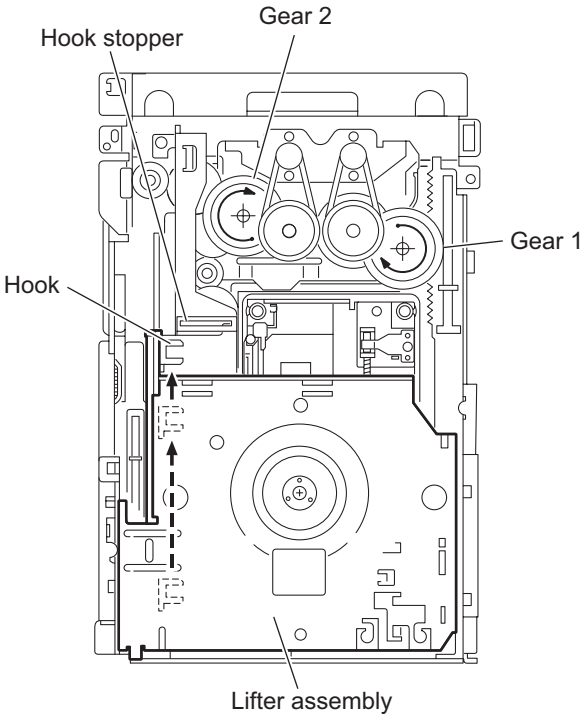


Fig.27

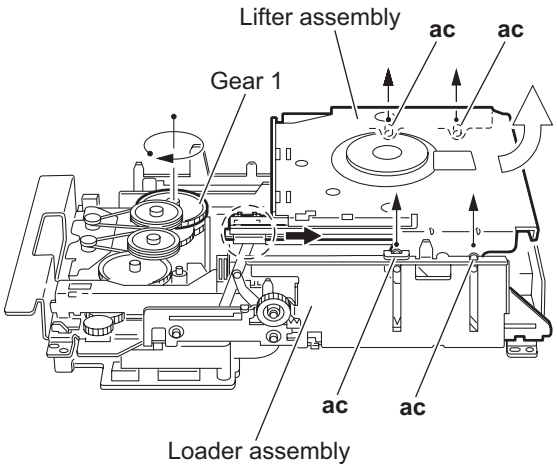


Fig.30

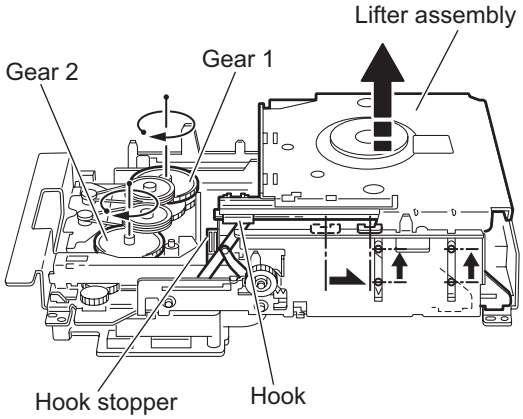


Fig.28

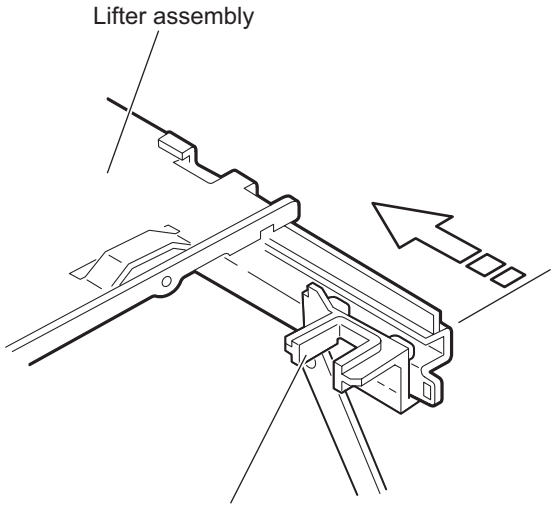


Fig.31

3.2.14 Removing the rack holder and sensor assembly (See Figs.32 to 38)

- Prior to performing the following procedures, remove the tray assemblies, side (L), side (R) assembly and lifter assembly.

Reference:

If the slide gear of the DVD changer mechanism assembly places at joint **ad** of the rack holder, turn the gear 1 counter-clockwise to move the slide gear in the direction of the arrow. Then Remove the rack holder. (See Figs.32 and 33.)

(1) Remove the three screws **W** attaching the rack holder and release joint **ad** from the notch **ae**. (See Figs.32 and 34.)

Note:

When reattaching the rack holder, do not nip the wires extending from the sensor assembly. (See Fig.32.)

(2) Remove the two screws **X** attaching the sensor assembly. (See Figs.35 and 38.)

(3) Move the sensor assembly in the direction of the arrow to release from the joint section **af**. (See Figs.35 and 38.)

(4) Remove the sensor spring attached to the bottom of the sensor assembly from the boss **ag** on the slider. (See Figs.35 and 36.)

(5) Remove the screw **Y** and **Z** attaching the sensor board and SV. resister respectively. (See Fig.37.)

Reference:

Remove the soldered section **aj** on the sensor board as required. (See Fig.37.)

Note:

- When reattaching the SV. resister, attach the slider to the sensor bracket and fit the lever on the bottom of the SV. resister into slot **ak** of the sensor slider. (See Figs.36 and 37.)
- When reattaching the rack holder, turn the gear 1 clockwise to move the slide gear and slide lever inside the body in the direction of the arrow. (See Figs.32 and 38.)
- Let the wire extending from the sensor assembly through notch **ah** to the bottom of the DVD changer mechanism assembly. (See Figs.35 and 38.)
- Fit pin am of the slide lever into hole **ai** of the slider on the bottom of the sensor assembly while attaching the sensor spring to the boss **ag** of the slider. (See Figs.36 and 38.)
- Joint section **af** of the sensor assembly to the notch **an** of the DVD changer mechanism assembly. (See Fig.38.)

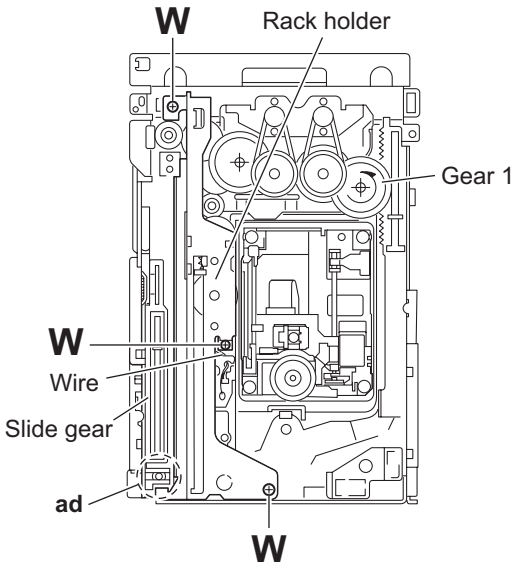


Fig.32

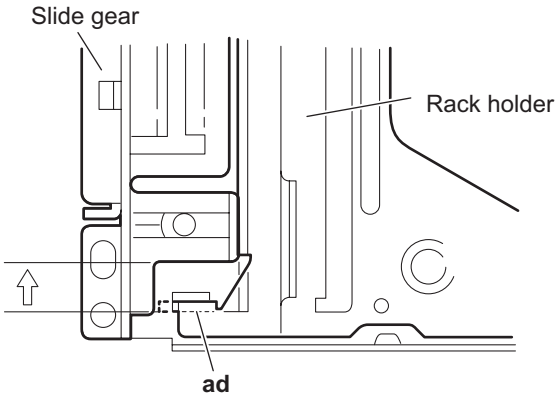


Fig.33

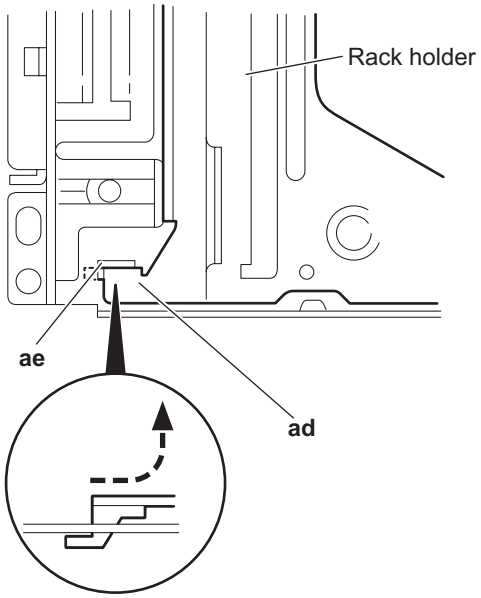


Fig.34

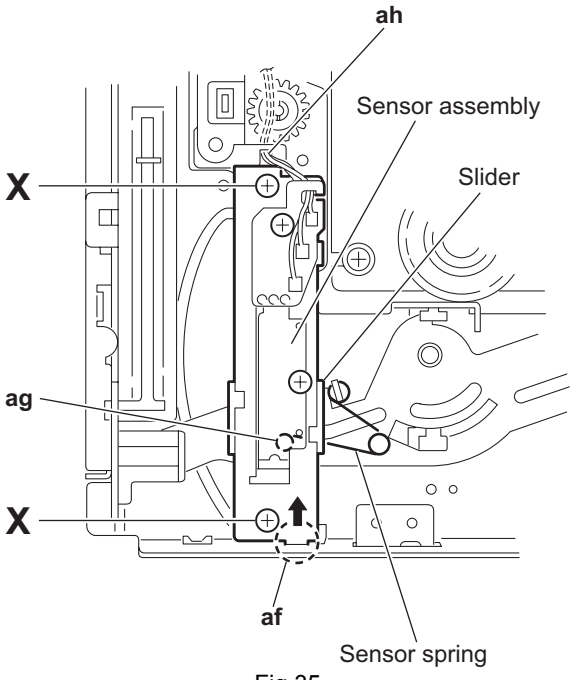


Fig.35

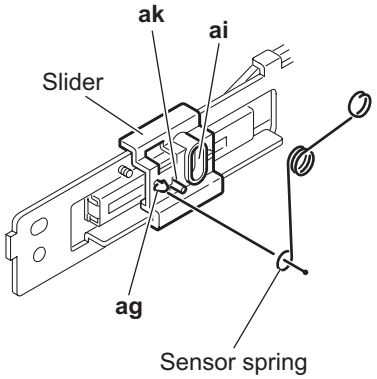


Fig.36

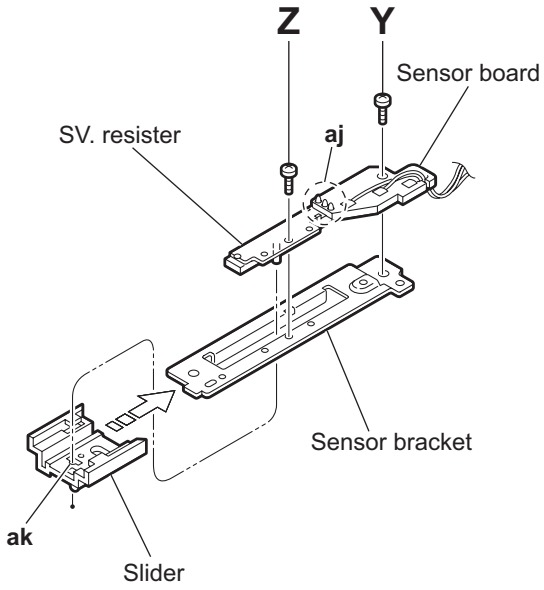


Fig.37

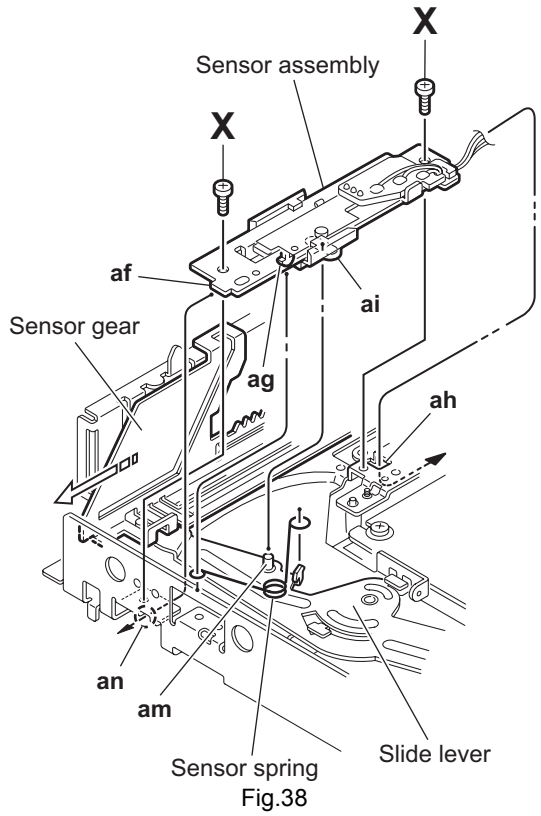


Fig.38

3.2.15 Taking out the disc in the play mode (See Fig.39 to 42)

Reference:

Refer to "Removing the tray assemblies".

(1) From the top side of the DVD changer mechanism assembly, remove the top cover.
(2) Unlock the tray assemblies and draw out the tray assemblies toward the front.
(3) From the top side of the DVD changer mechanism assembly, turn the gear 1 clockwise to move the lifter assembly upward. (See Fig.39.)
(4) Turn the gear 2 clockwise to move the sub tray remaining inside the lifter assembly toward the front, then pull out. (See Fig.39.)
(5) Take out the disc on the sub tray. (See Fig.40.)
(6) After clearing away the disc, insert the sub tray into the main tray. (See Fig.41.)

Note:

When reattaching the sub tray, move the tray stopper on the bottom of the main tray in the direction of the arrow to lock the sub tray certainly. (See Figs.41 and 42.)

(7) Push the tray assembly toward the DVD changer mechanism assembly and reattach.

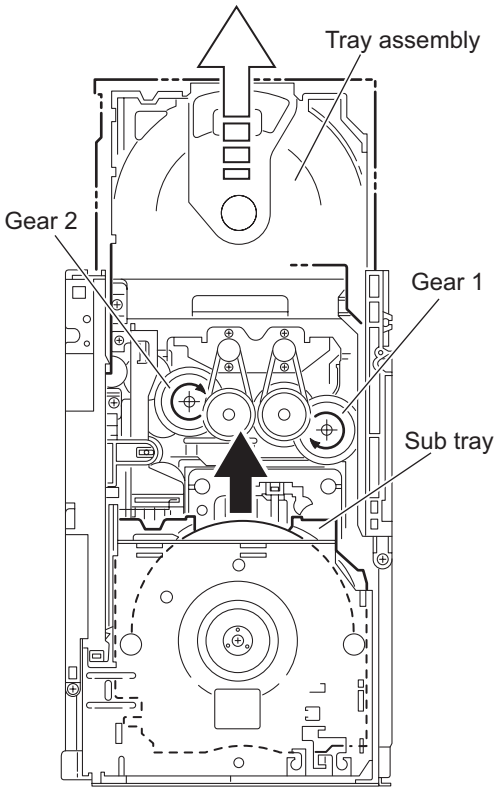


Fig.39

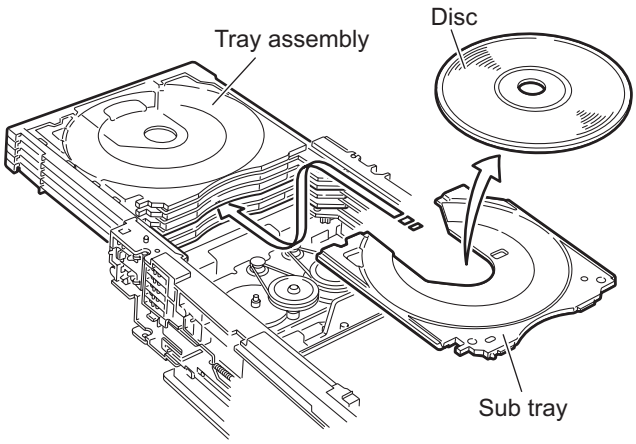


Fig.40

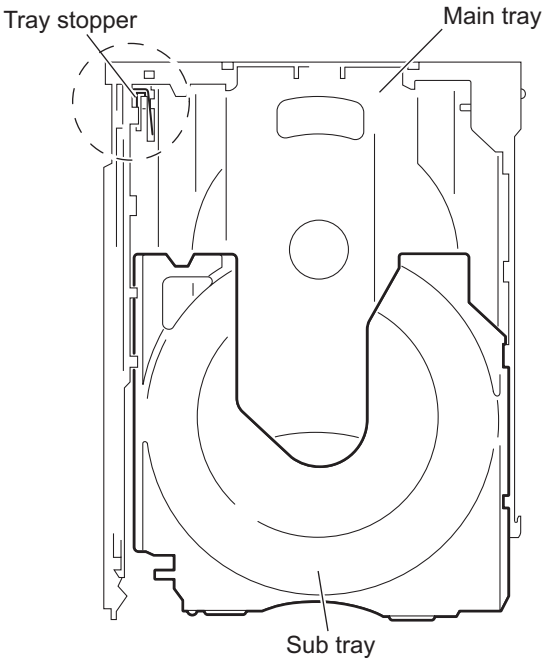


Fig.41

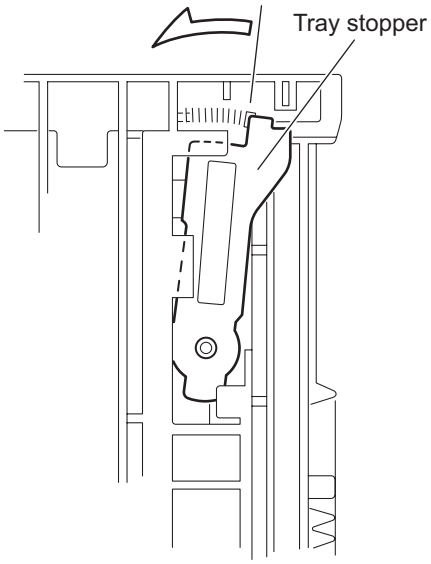


Fig.42

3.3 Cassette mechanism assembly

3.3.1 Removing the Play/Record & Clear head (See Fig.1~3)

(1) While moving the trigger arm on the right side of the head mount in the direction of the arrow, turn the flywheel R counterclockwise until the head mount comes ahead and clicks.
(2) The head turns counterclockwise as you turn the flywheel R counterclockwise (See Fig.2 and 3).
(3) Disconnect the flexible wire from connector CN31 on the head amplifier & mechanism control board.
(4) Remove the spring from the back of the head.
(5) Loosen the azimuth screw for reversing attaching the head.
(6) Remove the head on the front side of the head mount.

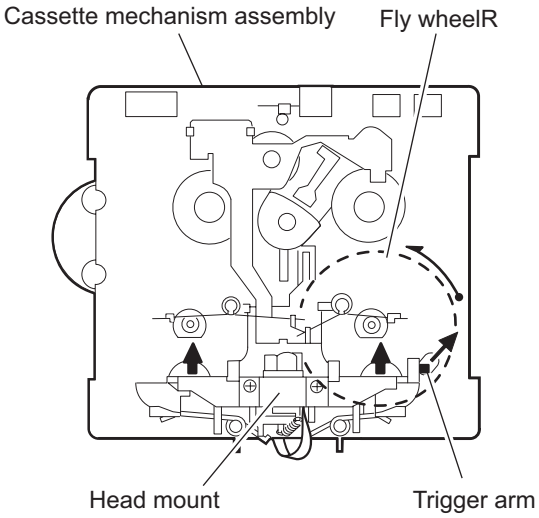


Fig.1

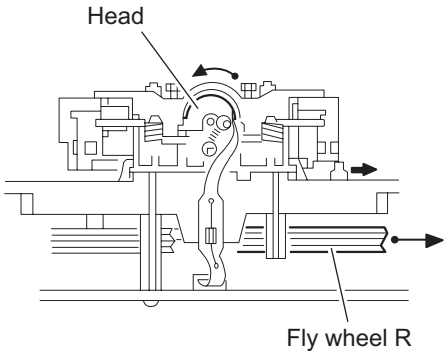


Fig.2

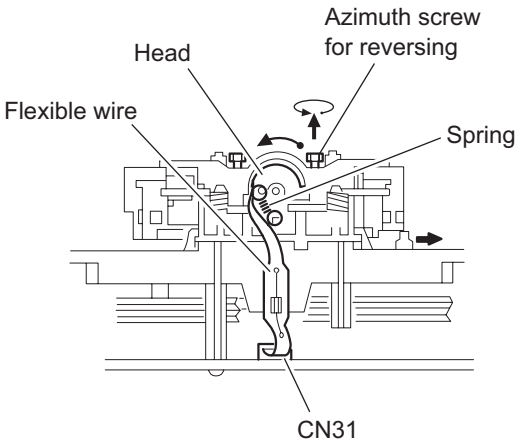


Fig.3

3.3.2 Removing the head amplifier & mechanism control board (See Fig.4)

(1) Turn over the cassette mechanism assembly and remove the three screws **A** attaching the head amplifier & mechanism control board.
(2) Disconnect the flexible wire from connector CN31 on the head amplifier & mechanism control board.
(3) Disconnect connector CN32 of the head amplifier & mechanism control board from connector CN1 on the reel pulse board.REFERENCE: If necessary, unsolder the 4-pin wire soldered to the main motor.

3.3.3 Removing the main motor (See Fig.4~7)

(1) Remove the two screws **B** .
(2) Half raise the motor and remove the capstan belt from the motor pulley.

ATTENTION:

Be careful to keep the capstan belt from grease. When reassembling, refer to Fig.6 and 7 for attaching the capstan belt.

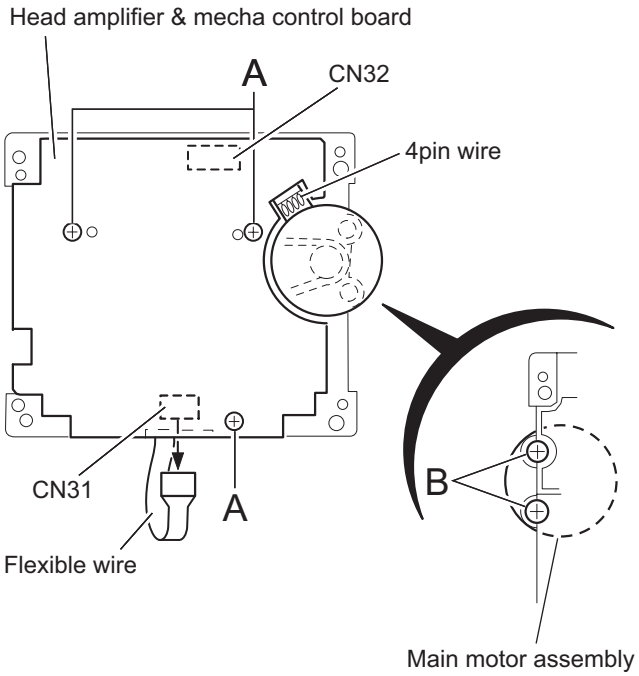


Fig.4

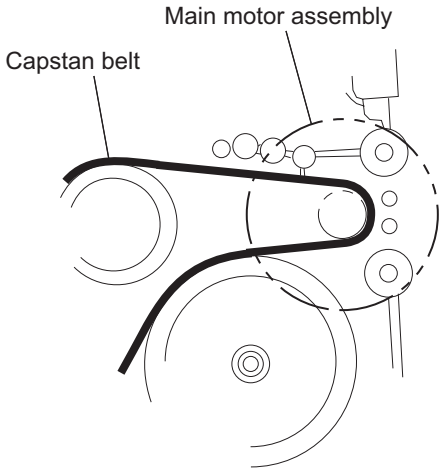


Fig.5

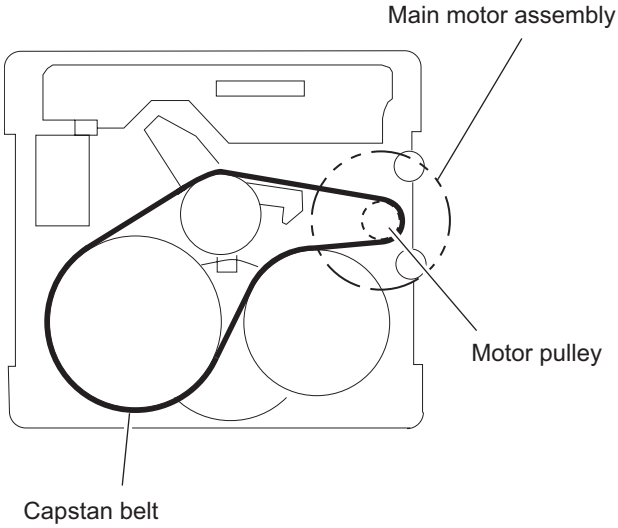


Fig.6

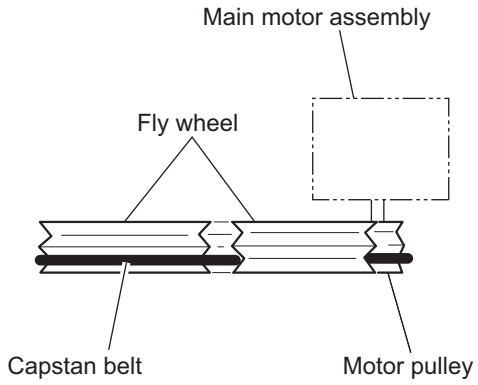


Fig.7

3.3.4 Removing the flywheel (See Fig.8, 9)

- Prior to performing the following procedure, remove the head amplifier & mechanism control board and the main motor assembly.
  (1) From the front side of the cassette mechanism, remove the slit washers attaching the capstan shaft **L** and **R**. Pull out the flywheels backward.

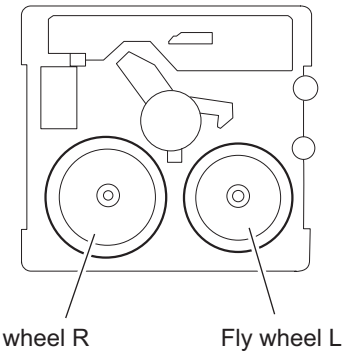


Fig.8

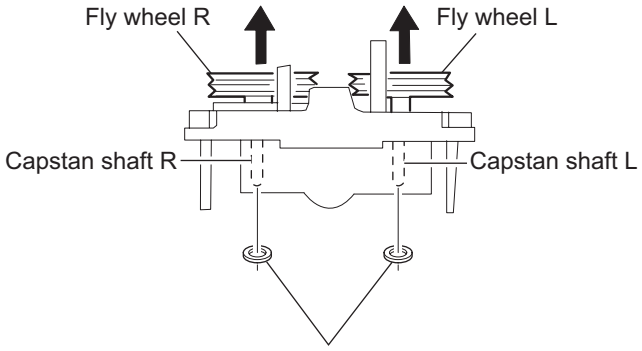


Fig.9

3.3.5 Removing the reel pulse board and solenoid (See Fig.10)

- Prior to performing the following procedure, remove the head amplifier & mechanism control board.
  (1) Remove the screw **C**.
  (2) Release the tab **a**, **b**, **c**, **d** and **e** retaining the reel pulse board.
  (3) Release the tab **f** and **g** attaching the solenoid on the reel pulse board.
  (4) The reel pulse board and the solenoid come off.

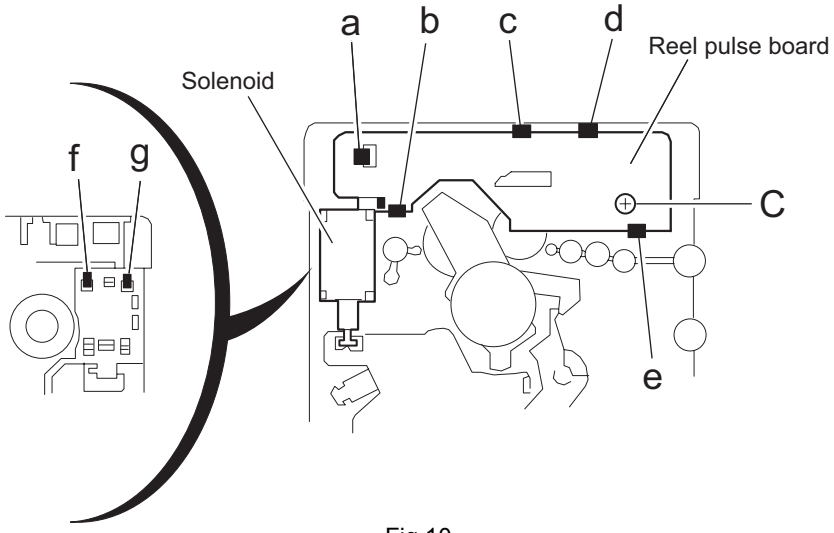


Fig.10

3.3.6 Reattaching the Play/ Record & Clear head (See Fig.11~13)

(1) Reattaching the head mount assembly.

a) Change front of the direction cover of the head mount assembly to the left (Turn the head forward).

b) Fit the bosses **O'**, **P'**, **Q'**, **U'** and **V'** on the head mount assembly to the holes **P** and **V**, the slots **O**, **U** and **Q** of the mechanism sub assembly (See Fig.11 to 13).

CAUTION:

To remove the head mount assembly, turn the direction cover to the left to disengage the gear. If the gear can not be disengaged easily, push up the boss **Q'** slightly and raise the rear side of the head mounts slightly to return the direction lever to the reversing side.

(2) Tighten the azimuth screw for reversing.

(3) Reattach the spring from the back of the Play/ Record & Clear head.

(4) Connect the flexible wire to connector CN31 on the head amplifier & mechanism control board.

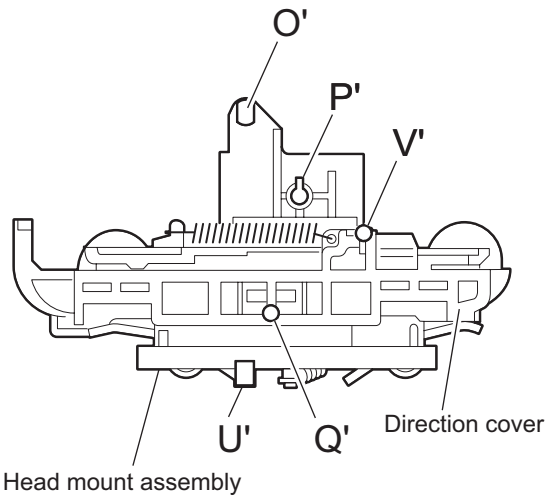


Fig.11

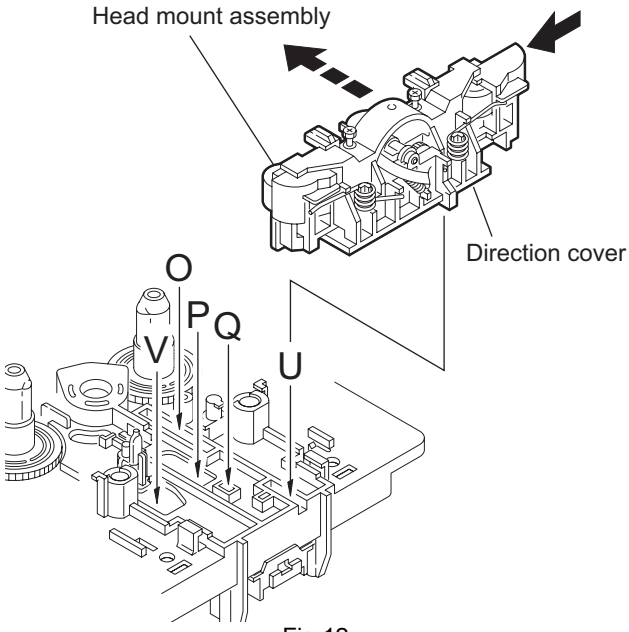


Fig.12

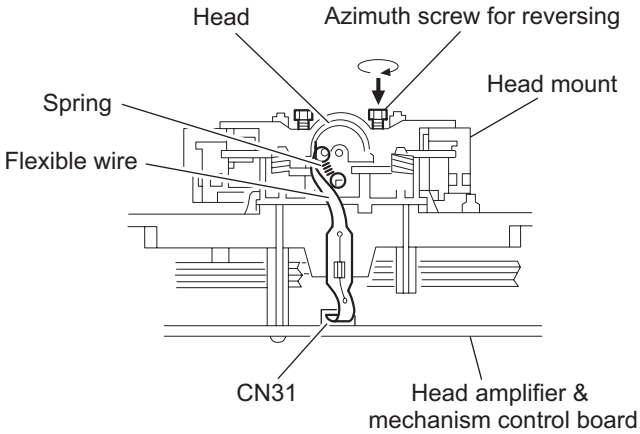


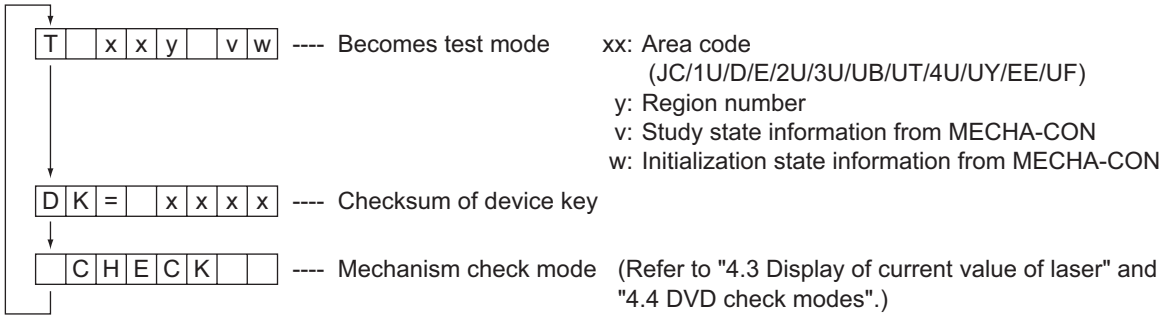
Fig.13

SECTION 4
ADJUSTMENT

4.1 DVD test mode setting method

(1) Unplug the power plug.
(2) Press and hold both "STOP" key and "DISC 5 EJECT/CLOSE" key of the main body.
(3) Insert power plug into outlet while holding the both keys.
(4) "Area code" is indicated on the display.
(5) To release test mode, press "STANDBY/ON" key of the main body.

NOTE:
Each pressing of "MENU" key of the remote controller in test mode changes the mode as follows.



4.2 Method of displaying device key checksum

(1) Set the main body at test mode.
(2) Press "MENU" key of the remote controller. Then, checksum of device key are displayed in the FL display.
(3) To release test mode, press "STANDBY/ON" key of the main body.

4.3 Display of current value of laser

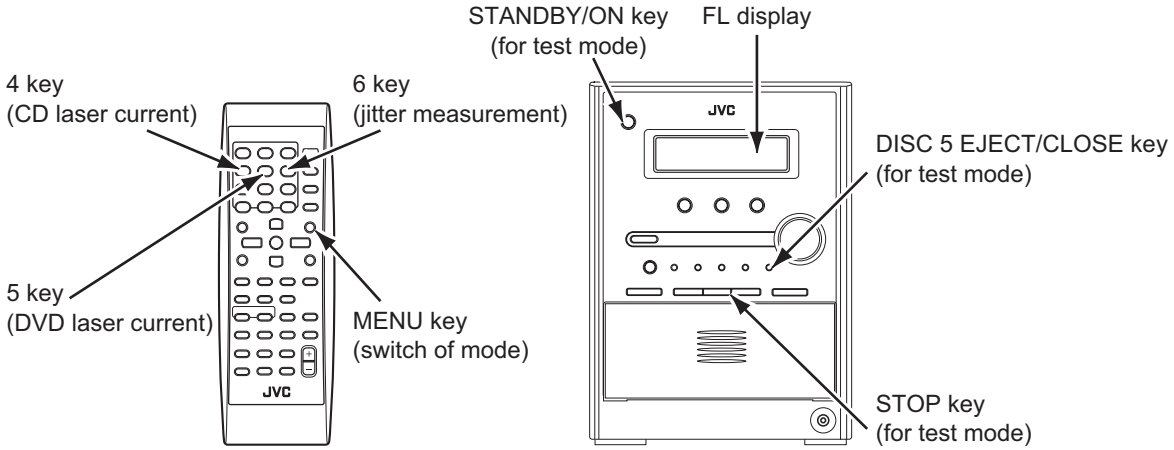
(1) Set the main body at test mode.
(2) Press "MENU" key of the remote controller twice. Then, FL display is displayed "CHECK".
(3) The laser current value can be switched between the value of CD and that of DVD by pressing the following key of the remote controller.
(4) Press "4" key of the remote controller. Then, FL display is displayed "CDLD LSR", and laser current of CD is displayed.
(5) Press "5" key of the remote controller. Then, FL display is displayed "DVDLDLSR", and laser current of DVD is displayed.
(6) Press "6" key of the remote controller. Then, FL display is displayed "JITX1", and jitter measurement of DVD is displayed.

FL Display (Example)

c	c	c	c	j	j	j	j

Remote controller "4" key --- Laser current of CD
Remote controller "5" key --- Laser current of DVD
Remote controller "6" key --- Jitter measurement mode

- To start PLAYING and obtain LASER CURRENT and JITTER value, press "PLAY" key of the remote controller.
- To stop JITTER measurement, press "STOP" key of the main body.



4.4 DVD check modes

(1) Set the main body at test mode.
(2) Press "MENU" key of the remote controller twice. Then, FL display is displayed "CHECK".
(3) The DVD check mode can be selected by pressing the following key of the remote controller.
(4) To return DVD TEST MODE, press "MENU" key of the remote controller at any time during DVD check mode.

	FL Display:
▪ To start PLAYBACK, press "1" key of the remote controller.	PLAYBACK
▪ To perform SERACH TNO +1, press "2" key of the remote controller.	WOBBLE
▪ To perform SERACH TNO -1, press "3" key of the remote controller.	CHECK
▪ To view EEPROM content in -1 address step, press "7" key of the remote controller.	EEP BWD
▪ To view EEPROM content in +1 address step, press "8" key of the remote controller.	EEP FWD
▪ To perform SERCH DVD_SL DESIGNATED POSITION and JITTER MEASUREMENT, press "9" key of the remote controller.	DVD-SL
▪ To perform SERCH DVD_DL PARALLEL DISC DESIGNATED POSITION and JITTER MEASUREMENT, press "10" key of the remote controller.	DVD-DL
▪ To perform monitor output, press "0" key of the remote controller.	MONITOR
▪ To INITIALIZE EEPROM, press "+10" key of the remote controller.	INIT

4.5 Normal initialization method

Please initialize according to the following procedures in the following case:
- Just after you upgrade the firmware.
- After you confirm the symptoms that a customer points out. First Initialize, and then confirm whether the symptoms are improved or not.
- After servicing, before returning the main body to a customer. (Initialized main body should be returned to a customer.)

(1) Set the main body at test mode.
(2) Press "3D PHONIC" key of the main body.
(3) After initialization is finished, mecha will feedback the following information.
(4) When received status, FL display is displayed as follow.

T		x	x	y		v	w

w: Initialization state information from MECHA-CON

4.6 Full-initialization method

Please perform all-initialization according to the following procedures in the following case:
- Just after you exchange the pick-up.
- Just after you exchange the spindle motor.
- Just after you exchange the traverse mechanism base.

NOTE:
Please perform all-initialization when you exchange the parts above and also when you remove the parts above.

- Just after the flap adjustment of the pick-up guide shaft.

(1) Set the main body at test mode.
(2) Press and hold "F.SKIP" key of the main body for more than 2 seconds.
(3) After initialization is finished, mecha will feedback the following information.
(4) When received status, FL display is displayed as follow.

T		x	x	y		v	w

w: Initialization state information from MECHA-CON

4.7 Confirming method of DVD region

(1) Press "STANDBY/ON" key of the main body to turn it on.
(2) Push both "B.SKIP" key and "DVD/CD" key of the main body.

NOTE:
Confirming DVD region is effective only when source is DVD mode.

(3) DVD region confirm mode set up, and DVD region is displayed temporarily on FL display for 5 seconds.

NOTE:
If there is no information feedback, SYS-CON will display "WAIT" blinking 0.5 second ON & OFF.

(4) FL display will display "AREAxxRy" where "AREAxx" is the destination information & R is the region information.
(5) After 5 seconds, return to previous display.

4.8 Displaying of micon version

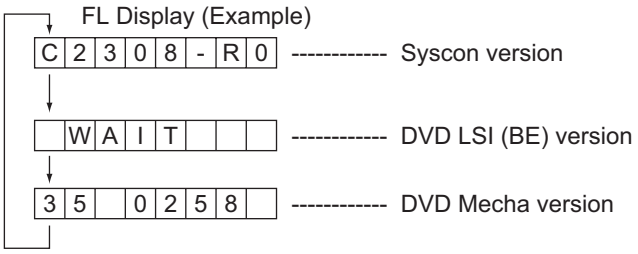
(1) Press "STANDBY/ON" key of the main body to turn it on.
(2) Push "STANDBY/ON" key, "ENTER" key and "9" key of the remote controller.

NOTE:
Displaying of micon version is effective only when source is DVD mode.

(3) Micon version is displayed temporarily on FL display for 5 seconds.

NOTE:
If there is no information feedback, SYS-CON will display "WAIT" blinking 0.5 second ON & OFF.

(4) Each "STANDBY/ON" key, "ENTER" key and "9" key of the remote controller press, change the display as follows.
(5) After 5 seconds, return to previous display.



4.9 Display of tuner version

(1) Press "STANDBY/ON" key of the main body to turn it on.
(2) Push "STANDBY/ON" key, "ENTER" key and "1" key of the remote controller.
(3) Tuner version is displayed temporarily on FL display for 5 seconds.
(4) After 5 seconds, return to previous display.

0 V J C	For JC
1 V E _ R D S	For E RDS
2 V A	For A
3 V U S 9 K	For US9K
4 V U S 1 0 K	For US10K
5 V U X 9 K	For UX9K
6 V U X 1 0 K	For UX10K
7 V U W 9 K	For UW9K
8 V U W 1 0 K	For UW10K
9 V U F 9 K	For UF9K
A V U F 1 0 K	For UF10K

4.10 FL display all lighting-up check

(1) Press "STANDBY/ON" key, "ENTER" key and "+10" key of the remote controller.
(2) Then, all segment of the FL display is blinking.
(3) To exit test mode, press "STANDBY/ON" key, "ENTER" key and "+10" key again.

4.11 Cold start

(1) Press "STANDBY/ON" key, "ENTER" key and "10" key of the remote controller.
(2) Then, cold start processing is activated, and "COLD" is displayed temporarily on FL display for 2 seconds.
(3) After 2 seconds, return to previous display.
(4) To activate cold start, the system AC OFF and AC ON again.

4.12 Clock fast forwarding (Increase clock counter speed)

(1) Press "STANDBY/ON" key, "ENTER" key and "2" key of the remote controller.
(2) Then, clock fast forwarding is activated.

NOTE:
This forwarding can be activated after system closk is set up.
(3) To exit test mode, the system AC OFF and AC ON again.

4.13 Compulsive NTSC mode

(1) Unplug the power plug.
(2) Insert power plug into outlet while pressing both "STOP" key and "DVD/CD" key of the main body.
(3) The compulsive NTSC mode is set up.

NOTE:
In E version, Y/C mode is set up.
(4) Unless the mode is canceled, regardless of input of "NTSEL" switch, it starts only at the time of the first power-on.
(5) When power-off is carried out, the mode is canceled.

4.14 Locking disc tray

(1) Press both "STOP" key and "DISC1 EJECT/CLOSE" key of the main body during standby mode.
(2) Then, the FL display of main body is displayed "LOCKED" and the disc tray is locked.
(3) For unlock the tray, press both "STOP" key and "DISC1 EJECT/CLOSE" key again.
(4) Then, the FL display of main body is displayed "UNLOCKED" and the tray is unlocked.

NOTE:
Unless unlocking disc tray, it does not process to input "OPEN/CLOSE" key.

4.15 Setting fan ON/OFF

(1) Press both "STOP" key and "DISC2 EJECT/CLOSE" key of the main body during standby mode.
(2) Each both "STOP" key and "DISC1 EJECT/CLOSE" key press, fan switch changes ON and OFF.
(3) To exit test mode, the system AC OFF and AC ON again.

4.16 Changing volume large step

(1) Press "STANDBY/ON" key, "ENTER" key and "DISPLAY" key of the remote controller.
(2) Then, volume step changes MAX (50).
(3) Each "STANDBY/ON" key, "ENTER" key and "DISPLAY" key press, volume step changes MAX (50) and CENTER (25).
(4) After performing changing volume large step, system return normal operation.

4.17 Switching tuner AM step (U version only)

- Switching 9kHz
  (1) Press both "STOP" key and "DISC3 EJECT/CLOSE" key of the main body.
- Switching 10kHz
  (1) Press both "STOP" key and "DISC4 EJECT/CLOSE" key of the main body.

NOTE:
Switching tuner AM step is effective only when source is AM.

SECTION 5
TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.

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