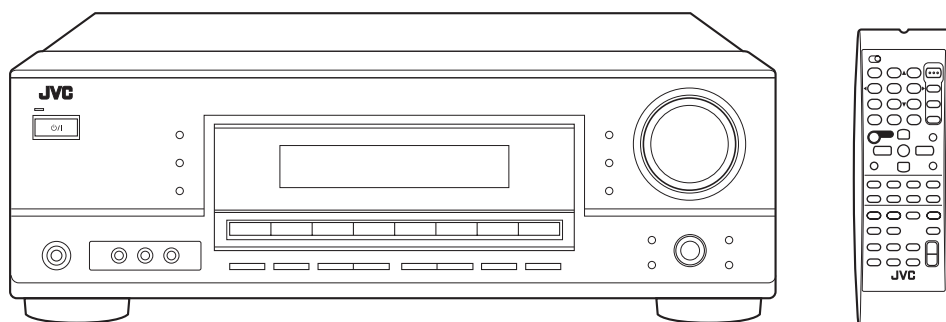


# JVC

## SERVICE MANUAL

AUDIO/VIDEO CONTROL RECEIVER

**RX-5060BJ, RX-5060BC,  
RX-5060BE, RX-5062SB,  
RX-5062SE, RX-5062SEN,  
RX-5062SEV**



**DD DOLBY**  
**DIGITAL**  
**PRO LOGIC II**

**dts** 96/24™

**COMPU LINK**  
**Remote**

**Radio Data System**

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

### TABLE OF CONTENTS

1	PRECAUTION .....	1-4
2	SPECIFIC SERVICE INSTRUCTIONS .....	1-6
3	DISASSEMBLY .....	1-7
4	ADJUSTMENT .....	1-13
5	TROUBLESHOOTING .....	1-13

# SPECIFICATION

## Northern america version

<b>Amplifier</b>			
Output Power	Front channels	100 W per channel, min. RMS, driven into 8 $\Omega$ , at 1 kHz with no more than 10% total harmonic distortion.	
	Center channel	100 W, min. RMS, driven into 8 $\Omega$ , at 1 kHz with no more than 10% total harmonic distortion.	
	Surround channels	100 W per channel, min. RMS, driven into 8 $\Omega$ , at 1 kHz with no more than 10% total harmonic distortion.	
Audio	Audio Input Sensitivity/Impedance (1 kHz)		CD, TAPE/CDR, VCR, TV SOUND, DVD, AUX : 220 mV/47 k $\Omega$
	Audio Input (DIGITAL IN)*	Coaxial	DIGITAL 1 (DVD) : 0.5 V(p-p)/75 $\Omega$
		Optical	DIGITAL 2 (CD) : -21 dBm to -15 dBm (660 nm $\pm$ 30 nm)
	Recording Output Level		TAPE/CDR, VCR : 220 mV
	Signal-to-Noise Ratio ('66 IHF/'78 IHF)		CD, TAPE/CDR, VCR, TV SOUND, DVD : 62 dB/71 dB
	Frequency Response (8 $\Omega$ )		CD, TAPE/CDR, VCR, TV SOUND, DVD, AUX : 20 Hz to 20 kHz ( $\pm$ 1 dB)
	Equalization (5 bands)		63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz : $\pm$ 8 dB (in 2 dB steps)
Video	Video Input Sensitivity/Impedance	Composite video	DVD, VCR, AUX : 1 V(p-p)/75 $\Omega$
	Video Output Level	Composite video	VCR, MONITOR OUT : 1 V(p-p)/75 $\Omega$
	Synchronization		Negative
	Signal-to-Noise Ratio		45 dB
<b>FM tuner (IHF)</b>			
Tuning Range		87.5 MHz to 108.0 MHz	
Usable Sensitivity	Monaural	12.8 dBf (1.2 $\mu$ V/75 $\Omega$ )	
50 dB Quieting Sensitivity	Monaural	16.0 dBf (1.7 $\mu$ V/75 $\Omega$ )	
	Stereo	37.5 dBf (20.5 $\mu$ V/75 $\Omega$ )	
Stereo Separation at OUT (REC)		35 dB at 1 kHz	
<b>AM tuner</b>			
Tuning Range		530 kHz to 1 710 kHz	
<b>General</b>			
Power Requirements		AC 120V , 60 Hz	
Power Consumption		155 W/200 VA (at operation) 0.8 W (in standby mode)	
Dimensions (W $\times$ H $\times$ D)		435 mm $\times$ 146.5 mm $\times$ 369.5 mm	
Mass		7.0 kg	

**European version**

<b>Amplifier</b>			
Output Power	Front channels		100 W per channel, min. RMS, driven into 8 Ω, at 1 kHz with no more than 10% total harmonic distortion.
	Center channel		100 W, min. RMS, driven into 8 Ω, at 1 kHz with no more than 10% total harmonic distortion.
	Surround channels		100 W per channel, min. RMS, driven into 8 Ω, at 1 kHz with no more than 10% total harmonic distortion.
Audio	Audio Input Sensitivity/Impedance (1 kHz)		CD, TAPE/CDR, VCR, TV SOUND, DVD, AUX : 220 mV/47 kΩ
	Audio Input (DIGITAL IN)	Coaxial	DIGITAL 1 (DVD) : 0.5 V(p-p)/75 Ω
		Optical	DIGITAL 2 (CD) : -21 dBm to -15 dBm (660 nm ±30 nm)
	Recording Output Level		TAPE/CDR, VCR : 220 mV
	Signal-to-Noise Ratio (*66 IHF/DIN)		CD, TAPE/CDR, VCR, TV SOUND, DVD : 66 dB/62 dB
	Frequency Response (8 Ω)		CD, TAPE/CDR, VCR, TV SOUND, DVD, AUX : 20 Hz to 20 kHz (±1 dB)
Equalization (5 bands)		63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz : ±8 dB (in 2 dB steps)	
Video	Video Input Sensitivity/Impedance	Composite video	DVD, VCR, AUX : 1 V(p-p)/75 Ω
	Video Output Level	Composite video	VCR, MONITOR OUT : 1 V(p-p)/75 Ω
	Synchronization		Negative
	Signal-to-Noise Ratio		45 dB
<b>FM tuner (IHF)</b>			
Tuning Range		87.50 MHz to 108.00 MHz	
Usable Sensitivity	Monaural	17.0 dBf (1.9 μV/75 Ω)	
50 dB Quieting Sensitivity	Monaural	21.3 dBf (3.2 μV/75 Ω)	
	Stereo	41.3 dBf (31.8 μV/75 Ω)	
Stereo Separation at OUT (REC)		35 dB at 1 kHz	
<b>AM (MW) tuner</b>			
Tuning Range		522 kHz to 1 629 kHz	
General			
Power Requirements		AC 230 V , 50 Hz	
Power Consumption		140 W (at operation) 0.8 W (in standby mode)	
Dimensions (W × H × D)		435 mm × 146.5 mm × 369.5 mm	
Mass		7.0 kg	

\* Corresponding to Linear PCM, Dolby Digital, and DTS Digital Surround (with sampling frequency?32 kHz, 44.1 kHz, 48 kHz)  
 Designs 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 manufacturer's warranty and will further relieve the manufacturer 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 ( $\Delta$ ) 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.

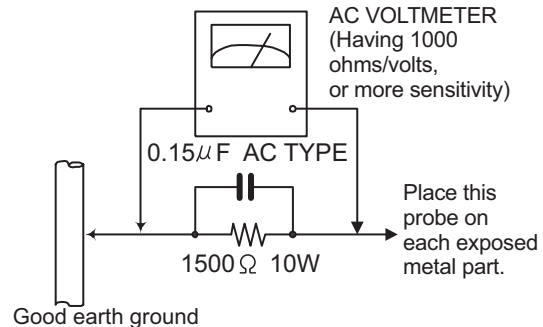
### (5) Leakage shock hazard testing

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 part 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 $\Omega$  per volt or more sensitivity in the following manner. Connect a 1,500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ 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

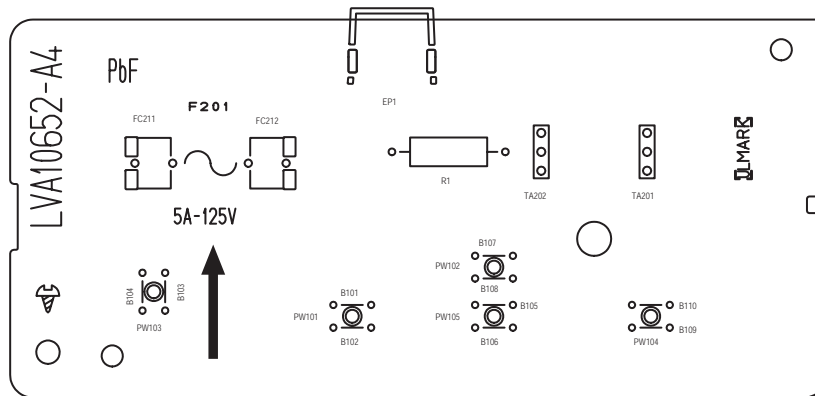
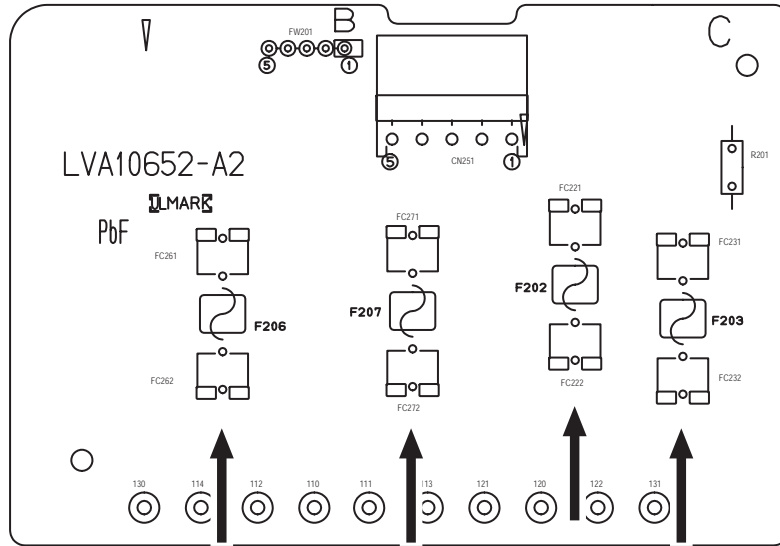
**Burrs formed during molding may be left over on some parts of the chassis.**



**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 (■), diode (■) and ICP (●) or identified by the " $\Delta$ " 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 does not Except the J and C version)

**1.5 Importance administering point on the safety**



<p><b>Full Fuse Replacement Marking</b></p> <p>Graphic symbol mark (This symbol means fast blow type fuse.)</p>  <p>should be read as follows ;</p>	<p><b>Marquage Pour Le Remplacement Complet De Fusible</b></p> <p>Le symbole graphique (Ce symbole signifie fusible de type à fusion rapide.)</p>  <p>doit être interprété comme suit ;</p>
<p><b>FUSE CAUTION</b></p>	<p><b>PRECAUTIONS SUR LES FUSIBLES</b></p>
<p><b>FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSES ;</b></p> <p>F201,F206,F207: 5A 125V F202,F203 : 2A 125V</p>	<p><b>POUR UNE PROTECTION CONTINUE CONTRE DES RISQUES D'INCENDIE, REMPLACER SEULEMENT PAR UN FUSIBLE DU MEME TYPE ;</b></p> <p>F201,F206,F207: 5A 125V F202,F203 : 2A 125V</p>

## **SECTION 2 SPECIFIC SERVICE INSTRUCTIONS**

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

# SECTION 3 DISASSEMBLY

## 3.1 Main body

### 3.1.1 Removing the top cover

(See Fig. 1 and 2)

- (1) Remove the three screws **A** attaching the top cover.
- (2) Remove the four screws **B** attaching the both side of top cover.

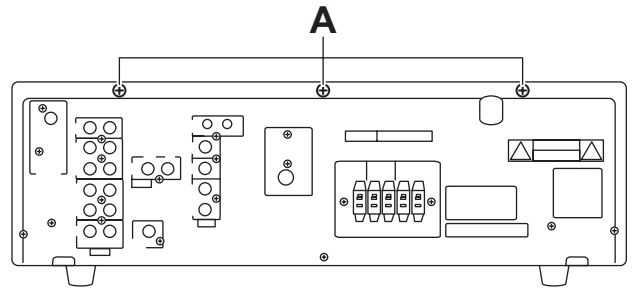
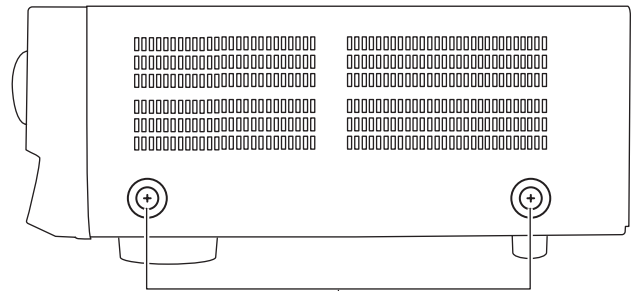


Fig.1



**B**

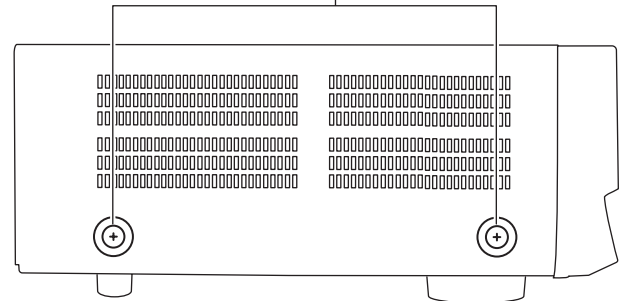


Fig.2

### 3.1.2 Removing the front panel assembly (See Fig. 3 to 5)

- (1) Remove the three screws **C** attaching the top side of front panel assembly.
- (2) Remove the four screws **D** attaching the bottom side of front panel assembly.
- (3) Remove the one screw **E** attaching the ground wire to front chassis.
- (4) Disconnect the connector to [CN404](#) of audio board, [CN504](#) of video board, [CN402](#) of main board and [CN201](#) of regulator board.

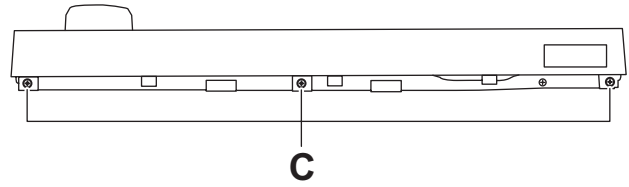


Fig.3

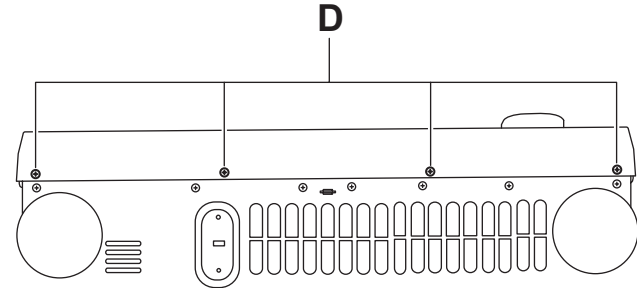


Fig.4

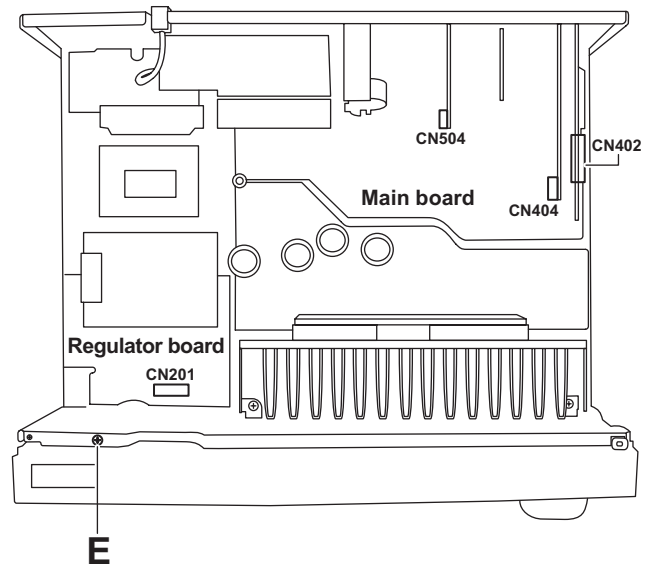


Fig.5



### 3.1.3 Removing the rear panel and each I/O boards (See Fig. 6 to 8)

- (1) Remove the two screws **F** attaching the tuner board.
- (2) Disconnect the card wire from **CN411** of main board.
- (3) Remove the three screws **G** attaching the digital board.
- (4) Disconnect the connector **CN481** and **CN482** of main board.
- (5) Remove the four screws **H** attaching the main board and remove the one screw **J** attaching the ground wire to front board.
- (6) Disconnect the connector **CN421** of main board.
- (7) Remove the two screws **K** attaching the subwoofer board.
- (8) Disconnect the connector **CN431** of main board.
- (9) Remove the three screws **L** attaching the video board (for European model, two screws **L** see Fig. 8)
- (10) Remove the two screws **M** attaching the speaker terminal board.
- (11) Remove the one screw **N** attaching the fuse board.
- (12) Remove the three screws **P** attaching the rear panel.

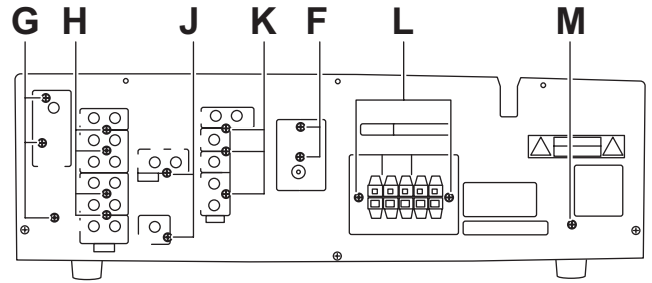


Fig.6

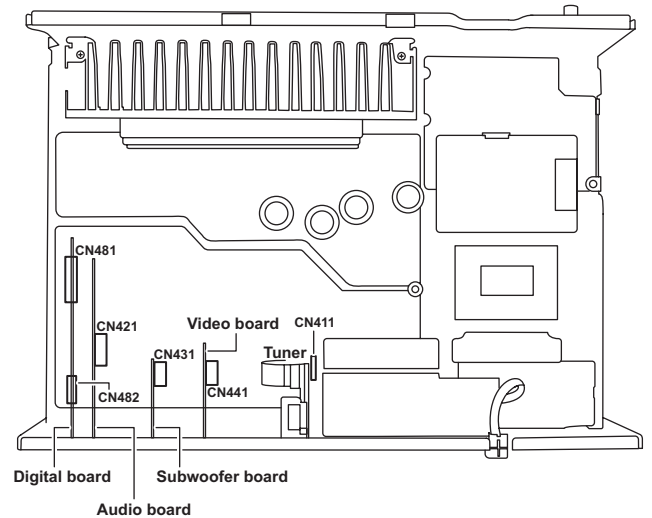


Fig.7

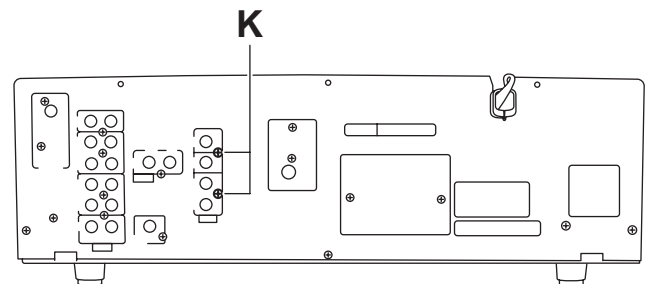


Fig.8

### 3.1.4 Removing the main board (See Fig. 9)

- (1) Disconnect the connector [CN471](#), [CN472](#) and [CN473](#) from front board.
- (2) Disconnect the connection board from [CN291](#) of regulator board and [CN491](#) of main board.
- (3) Remove the two screws **Q** and one screw **R** attaching the main board.

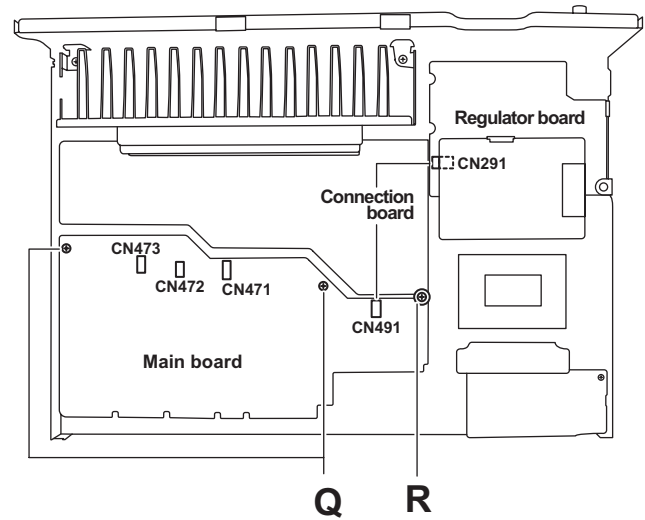


Fig.9

### 3.1.5 Removing the front board and heat sink (See Fig. 10)

- (1) Disconnect the connector from [CN203](#) and [CN241](#) of regulator board.
- (2) Disconnect the connector from [CN251](#) of transformer board.
- (3) Remove the four screws **S** attaching the heat sink.
- (4) Remove the one screw **T** attaching the front board.

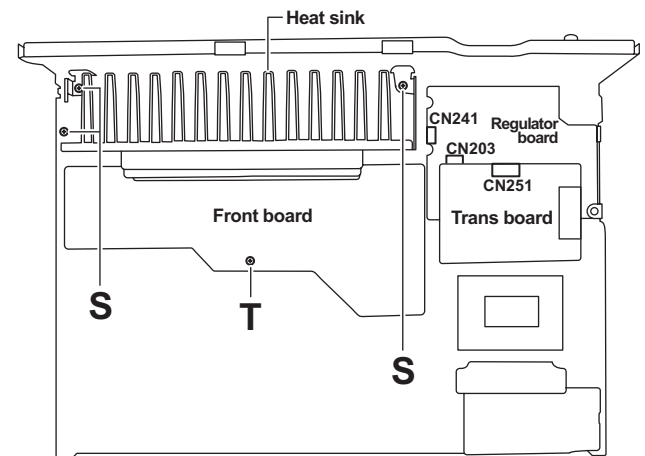


Fig.10

### 3.1.6 Removing the power transformer and regulator board (See Fig. 11 and 12)

- (1) Remove the four screws **U** attaching the power transformer.
- (2) Remove the one screw **V** attaching the fuse board.
- (3) Remove the three screws **W** and one screw **X** attaching the regulator board.
- (4) Disconnect the wire from [CN101](#) of headphone board.

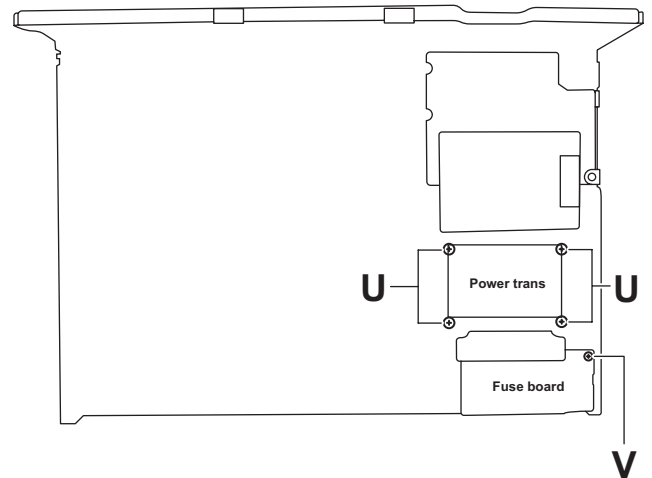


Fig.11

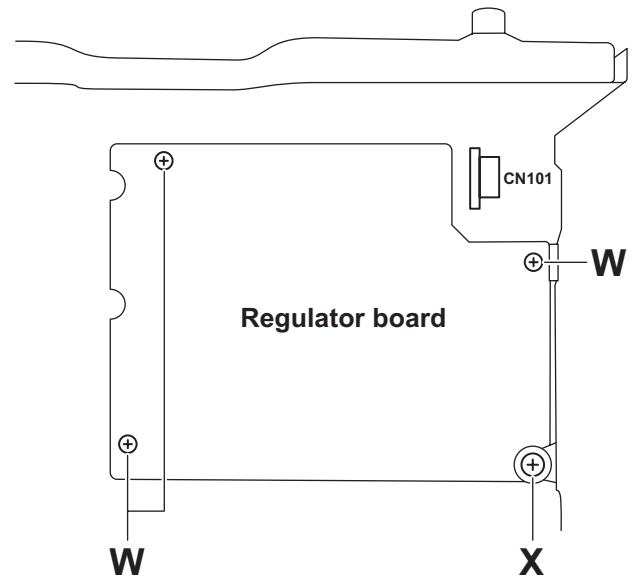


Fig.12

### 3.1.7 Removing the headphone board (See Fig. 13)

- (1) Remove the nut **Y** attaching the head phone board.

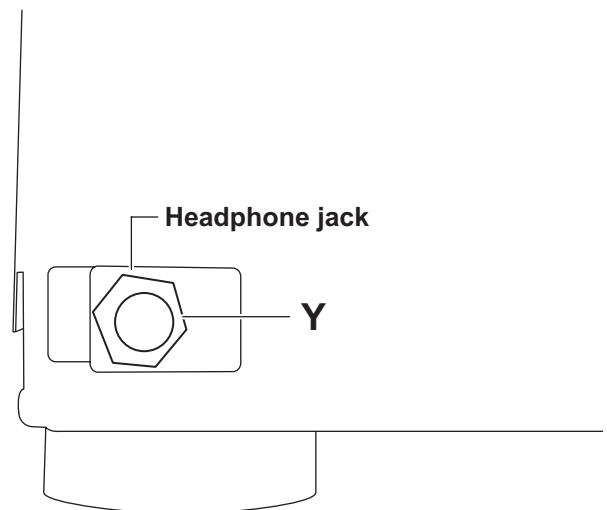


Fig.13

## 3.2 Front panel assembly

### 3.2.1 Removing the micon board (See Fig. 14 and 16)

- (1) Take out the volume knob from front panel assembly.
- (2) Remove the nut **Z** attaching the volume.
- (3) Remove the nine screws **AA** attaching the micon board.

### 3.2.2 Removing the power switch board (See Fig. 15)

- (1) Remove the two screws **BB** attaching the power switch board.

### 3.2.3 Removing the AUX board (See Fig. 14 and 16)

- (1) Take out the multi jog knob from front panel assembly.
- (2) Remove the three screws **CC** attaching the AUX board.

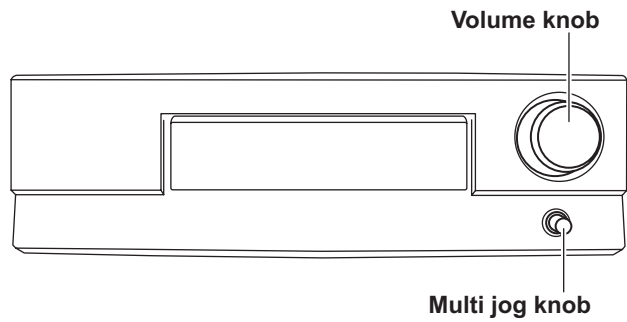


Fig.14

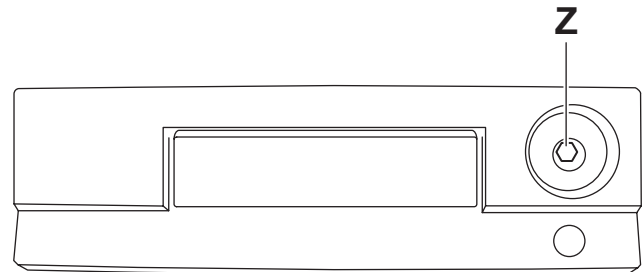


Fig.15

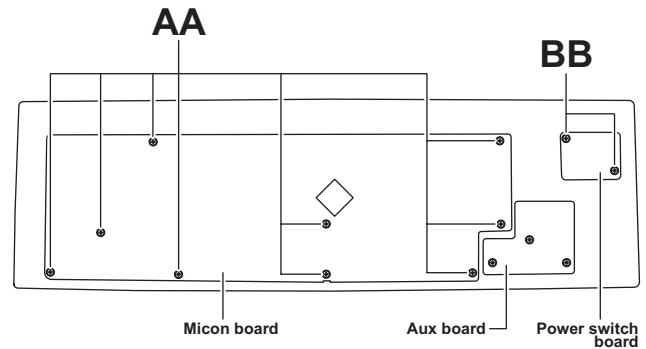


Fig.16

## **SECTION 4 ADJUSTMENT**

This service manual does not describe ADJUSTMENT.

## **SECTION 5 TROUBLESHOOTING**

This service manual does not describe TROUBLESHOOTING.



**JVC**

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