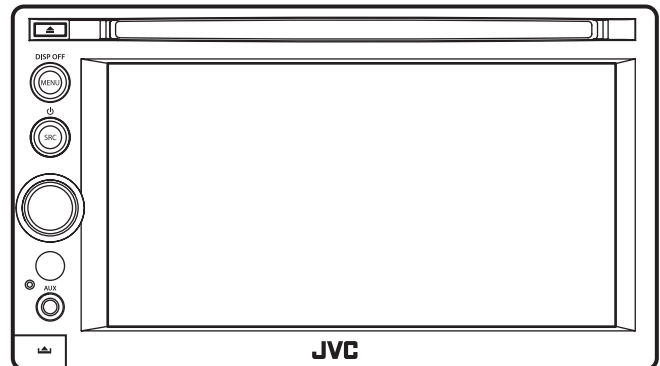


JVC

SERVICE MANUAL

DVD RECEIVER WITH MONITOR

**KW-ADV794J, KW-AVX640E, KW-AVX640J,
KW-AVX646EU, KW-AVX646U, KW-AVX648UF,
KW-AVX740E, KW-AVX740EE, KW-AVX740J,
KW-AVX746A, KW-AVX746EU, KW-AVX746U,
KW-AVX746UT, KW-AVX748JW**



Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)
Lead free solder used in the board (material : Sn-Cu, melting point : 230 Centigrade)

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SPECIFICATION

KW-ADV794J/KW-AVX748JW/KW-AVX740J/KW-AVX640J			
AMPLIFIER			
Power Output	20 W RMS × 4 Channels at 4 Ω and ≤ 1% THD+N		
Signal-to-Noise Ratio	80 dBA (reference: 1 W into 4 Ω)		
Load Impedance	4 Ω (4 Ω to 8 Ω allowance)		
Equalizer Control Range Level	±12 dB		
Audio Output Level	Line-Out Level/Impedance	4 V/20 kΩ load (full scale)	
FRONT OUT, REAR OUT, SUBWOOFER OUT	Output Impedance	1 kΩ	
Video Output (composite)	Color System	PAL/NTSC	
VIDEO OUT	Video-Out Level/Impedance	1 Vp-p/75Ω	
Other Terminals	Input	LINE IN, VIDEO IN, CAMERA IN, USB input, MIC IN*1, AUX, Antenna input	
	Others	Expansion port*2, OE REMOTE, RGB input	
FM/AM TUNER			
Frequency Range	FM	with channel interval set to 200 kHz	87.9 MHz to 107.9 MHz
		with channel interval set to 50 kHz	87.5 MHz to 108.0 MHz
	AM	with channel interval set to 10 kHz	530 kHz to 1 700 kHz
		with channel interval set to 9 kHz	531 kHz to 1 611 kHz
FM Tuner	Usable Sensitivity	9.3 dBf (0.8 μV/75 Ω)	
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μV/75 Ω)	
	Alternate Channel Selectivity (400 kHz)	65 dB	
	Frequency Response	40 Hz to 15 000 Hz	
	Stereo Separation	40 dB	
AM Tuner	Sensitivity/Selectivity	20 μV/40 dB	
DVD/CD			
Signal Detection System	Non-contact optical pickup (semiconductor laser)		
Frequency Response	DVD, fs=48 kHz/96 kHz	16 Hz to 22 000 Hz	
	VCD/CD	16 Hz to 20 000 Hz	
Dynamic Range	93 dB		
Signal-to-Noise Ratio	95 dB		
Wow and Flutter	Less than measurable limit		
USB			
USB Standards	USB 2.0 Full Speed		
Data Transfer Rate	Full Speed	Maximum 12 Mbps	
	Low Speed	Maximum 1.5 Mbps	
Compatible Device	Mass storage class		
Compatible File System	FAT 32/16/12		
Max. Current	DC 5 V --- 1A		
BLUETOOTH (Only for KW-ADV794/KW-AVX748/KW-AVX740)			
Version	Bluetooth 2.0 certified		
Output Power	+4 dBm Max. (Power class 2)		
Service Area	Within 10 m (10.9 yd)		
Profile	HFP (Hands-Free Profile) 1.5		
	OPP (Object Push Profile) 1.1		
	A2DP (Advanced Audio Distribution Profile) 1.2		
	AVRCP (Audio/Video Remote Control Profile) 1.3		
	PBAP (Phone Book Access Profile) 1.0		
MONITOR			
Screen Size	6.1 inch wide liquid crystal display		
Number of Pixel	1 152 000 pixels : 800 (horizontal) × 3 (RGB) × 480 (vertical)		
Drive Method	TFT (Thin Film Transistor) active matrix format		
Color System	NTSC/PAL		
Aspect Ratio	16:9 (wide)		
GENERAL			
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)	
Grounding System	Negative ground		
Allowable Storage Temperature	-10°C to +60°C (14°F to 140°F)		
Allowable Operating Temperature	0°C to +40°C (32°F to 104°F)		
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 111 mm × 160 mm (7-3/16" × 4-3/8" × 6-5/16")	
	Panel Size (approx.)	188 mm × 117 mm × 10 mm (7-7/16" × 4-5/8" × 7/16")	
Mass (approx.)	2.3 kg (5.1 lbs) (including the Trim plate and Sleeve)		

*1 Only for KW-ADV794/KW-AVX748/KW-AVX740

*2 Only for KW-ADV794/KW-AVX740/KW-AVX640.

Design and specifications are subject to change without notice.

If a kit is necessary for your car, consult your telephone directory for the nearest car audio speciality shop.

KW-AVX740E/KW-AVX640E/KW-AVX746EU/KW-AVX646EU		
AMPLIFIER		
Maximum Power Output	Front/Rear	50 W per channel
Continuous Power Output (RMS)	Front/Rear	20 W per channel into 4 Ω, 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion
Load Impedance	4 Ω (4 Ω to 8 Ω allowance)	
Equalizer Control Range Level	±12 dB	
Signal-to-Noise Ratio	70 dB	
Audio Output Level FRONT OUT, REAR OUT, SUBWOOFER OUT	Line-Out Level/Impedance	4 V/20 kΩ load (full scale)
	Output Impedance	1 kΩ
Video Output (composite) VIDEO OUT	Color System	PAL/NTSC
	Video-Out Level/Impedance	1 Vp-p/75 Ω
Other Terminals	Input	LINE IN, VIDEO IN, CAMERA IN, USB input, MIC IN*, AUX, Aerial input
	Others	OE REMOTE, RGB input
FM/AM TUNER		
Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	(MW) 531 kHz to 1 611 kHz (LW) 153 kHz to 279 kHz
FM Tuner	Usable Sensitivity	9.3 dBf (0.8 μV/75 Ω)
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μV/75 Ω)
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	40 dB
MW Tuner	Sensitivity/Selectivity	20 μV/40 dB
LW Tuner	Sensitivity	50 μV
DVD/CD		
Signal Detection System	Non-contact optical pickup (semiconductor laser)	
Frequency Response	DVD, fs=48 kHz/96 kHz	16 Hz to 22 000 Hz
	VCD/CD	16 Hz to 20 000 Hz
Dynamic Range	93 dB	
Signal-to-Noise Ratio	95 dB	
Wow and Flutter	Less than measurable limit	
USB		
USB Standards	USB 2.0 Full Speed	
Data Transfer Rate	Full Speed	Maximum 12 Mbps
	Low Speed	Maximum 1.5 Mbps
Compatible Device	Mass storage class	
Compatible File System	FAT 32/16/12	
Max. Current	DC 5 V --- 1A	
BLUETOOTH (Only for KW-AVX740A/KW-AVX746)		
Version	Bluetooth 2.0 certified	
Output Power	+4 dBm Max. (Power class 2)	
Service Area	Within 10 m	
Profile	HFP (Hands-Free Profile) 1.5	
	OPP (Object Push Profile) 1.1	
	A2DP (Advanced Audio Distribution Profile) 1.2	
	AVRCP (Audio/Video Remote Control Profile) 1.3	
	PBAP (Phone Book Access Profile) 1.0	
MONITOR		
Screen Size	6.1 inch wide liquid crystal display	
Number of Pixel	1 152 000 pixels : 800 (horizontal) × 3 (RGB) × 480 (vertical)	
Drive Method	TFT (Thin Film Transistor) active matrix format	
Color System	PAL/NTSC	
Aspect Ratio	16:9 (wide)	
GENERAL		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System	Negative ground	
Allowable Storage Temperature	-10°C to +60°C	
Allowable Operating Temperature	0°C to +40°C	
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 111 mm × 160 mm
	Panel Size (approx.)	188 mm × 117 mm × 10 mm
Mass (approx.)	2.3 kg (including the Trim plate and Sleeve)	

* Only for KW-AVX740,KW-AVX746

Design and specifications are subject to change without notice.

KW-AVX740EE**AMPLIFIER**

Maximum Power Output	Front/Rear	50 W per channel
Continuous Power Output (RMS)	Front/Rear	20 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion
Load Impedance	4 Ω (4 Ω to 8 Ω allowance)	
Equalizer Control Range Level	\pm 12 dB	
Signal-to-Noise Ratio	70 dB	
Audio Output Level	Line-Out Level/Impedance	4 V/20 k Ω load (full scale)
FRONT OUT, REAR OUT, SUBWOOFER OUT	Output Impedance	1 k Ω
Video Output (composite)	Color System	PAL/NTSC
VIDEO OUT	Video-Out Level/Impedance	1 Vp-p/75 Ω
Other Terminals	Input	LINE IN, VIDEO IN, CAMERA IN, USB input, MIC IN, AUX, Aerial input
	Others	OE REMOTE, RGB input

FM/AM TUNER

Frequency Range	FM	FM1, FM2	87.5 MHz to 108.0 MHz
		FM3	65.00 MHz to 74.00 MHz
	AM	(MW) 531 kHz to 1 611 kHz	
		(LW) 153 kHz to 279 kHz	
FM Tuner	Usable Sensitivity	9.3 dBf (0.8 μ V/75 Ω)	
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μ V/75 Ω)	
	Alternate Channel Selectivity (400 kHz)	65 dB	
	Frequency Response	40 Hz to 15 000 Hz	
	Stereo Separation	40 dB	
MW Tuner	Sensitivity/Selectivity	20 μ V/40 dB	
LW Tuner	Sensitivity	50 μ V	

DVD/CD

Signal Detection System	Non-contact optical pickup (semiconductor laser)		
Frequency Response	DVD, fs=48 kHz/96 kHz	16 Hz to 22 000 Hz	
	VCD/CD	16 Hz to 20 000 Hz	
Dynamic Range	93 dB		
Signal-to-Noise Ratio	95 dB		
Wow and Flutter	Less than measurable limit		

USB

USB Standards	USB 2.0 Full Speed		
Data Transfer Rate	Full Speed	Maximum 12 Mbps	
	Low Speed	Maximum 1.5 Mbps	
Compatible Device	Mass storage class		
Compatible File System	FAT 32/16/12		
Max. Current	DC 5 V \pm 1A		

BLUETOOTH

Version	Bluetooth 2.0 certified		
Output Power	+4 dBm Max. (Power class 2)		
Service Area	Within 10 m		
Profile	HFP (Hands-Free Profile) 1.5		
	OPP (Object Push Profile) 1.1		
	A2DP (Advanced Audio Distribution Profile) 1.2		
	AVRCP (Audio/Video Remote Control Profile) 1.3		
	PBAP (Phone Book Access Profile) 1.0		

MONITOR

Screen Size	6.1 inch wide liquid crystal display		
Number of Pixel	1 152 000 pixels : 800 (horizontal) \times 3 (RGB) \times 480 (vertical)		
Drive Method	TFT (Thin Film Transistor) active matrix format		
Color System	PAL/NTSC		
Aspect Ratio	16:9 (wide)		

GENERAL

Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)	
Grounding System	Negative ground		
Allowable Storage Temperature	-10°C to +60°C		
Allowable Operating Temperature	0°C to +40°C		
Dimensions (W \times H \times D)	Installation Size (approx.)	182 mm \times 111 mm \times 160 mm	
	Panel Size (approx.)	188 mm \times 117 mm \times 10 mm	
Mass (approx.)	2.3 kg (including the Trim plate and Sleeve)		

Design and specifications are subject to change without notice.

KW-AVX746A/KW-AVX746U,UT/KW-AVX646U,KW-AVX648UF		
AMPLIFIER		
Maximum Power Output	Front/Rear	50 W per channel
Continuous Power Output (RMS)	Front/Rear	20 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion
Load Impedance	4 Ω (4 Ω to 8 Ω allowance)	
Equalizer Control Range Level	\pm 12 dB	
Signal-to-Noise Ratio	70 dB	
Audio Output Level FRONT OUT, REAR OUT, SUBWOOFER OUT	Line-Out Level/Impedance	4 V/20 k Ω load (full scale)
	Output Impedance	1 k Ω
Video Output (composite) VIDEO OUT	Color System	PAL/NTSC
	Video-Out Level/Impedance	1 Vp-p/75 Ω
Other Terminals	Input	LINE IN, VIDEO IN, CAMERA IN, USB input, MIC IN*, AUX, Aerial input
	Others	OE REMOTE, RGB input
FM/AM TUNER		
Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	531 kHz to 1 611 kHz
FM Tuner	Usable Sensitivity	9.3 dBf (0.8 μ V/75 Ω)
	50 dB Quieting Sensitivity	16.3 dBf (1.8 μ V/75 Ω)
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	40 dB
AM Tuner	Sensitivity/Selectivity	20 μ V/40 dB
DVD/CD		
Signal Detection System	Non-contact optical pickup (semiconductor laser)	
Frequency Response	DVD, fs=48 kHz/96 kHz	16 Hz to 22 000 Hz
	VCD/CD	16 Hz to 20 000 Hz
Dynamic Range	93 dB	
Signal-to-Noise Ratio	95 dB	
Wow and Flutter	Less than measurable limit	
USB		
USB Standards	USB 2.0 Full Speed	
Data Transfer Rate	Full Speed	Maximum 12 Mbps
	Low Speed	Maximum 1.5 Mbps
Compatible Device	Mass storage class	
Compatible File System	FAT 32/16/12	
Max. Current	DC 5 V \leq 1A	
BLUETOOTH (Only for KW-AVX746)		
Version	Bluetooth 2.0 certified	
Output Power	+4 dBm Max. (Power class 2)	
Service Area	Within 10 m	
Profile	HFP (Hands-Free Profile) 1.5	
	OPP (Object Push Profile) 1.1	
	A2DP (Advanced Audio Distribution Profile) 1.2	
	AVRCP (Audio/Video Remote Control Profile) 1.3	
	PBAP (Phone Book Access Profile) 1.0	
MONITOR		
Screen Size	6.1 inch wide liquid crystal display	
Number of Pixel	1 152 000 pixels : 800 (horizontal) \times 3 (RGB) \times 480 (vertical)	
Drive Method	TFT (Thin Film Transistor) active matrix format	
Color System	PAL/NTSC	
Aspect Ratio	16:9 (wide)	
GENERAL		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System	Negative ground	
Allowable Storage Temperature	-10°C to +60°C	
Allowable Operating Temperature	0°C to +40°C	
Dimensions (W \times H \times D)	Installation Size (approx.)	182 mm \times 111 mm \times 160 mm 180 mm \times 100 mm \times 160 mm (KW-AVX648)
	Panel Size (approx.)	188 mm \times 117 mm \times 10 mm
Mass (approx.)	2.0 kg	

* Only for KW-AVX746

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 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 (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.

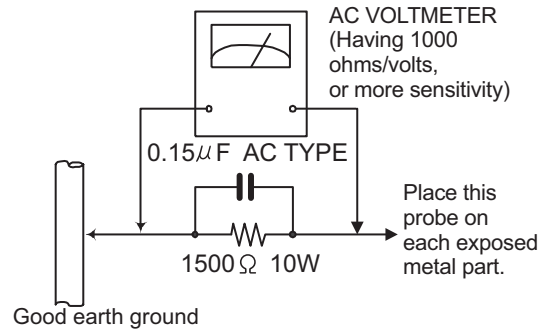
(5) Leakage shock hazard testing

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 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 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 (■), diode (■) and ICP (●) 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 does 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.

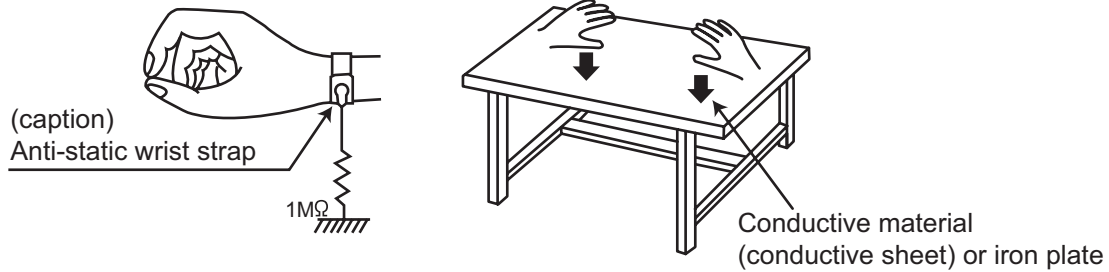
Be careful to use proper grounding in the area where repairs are being performed.

(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.

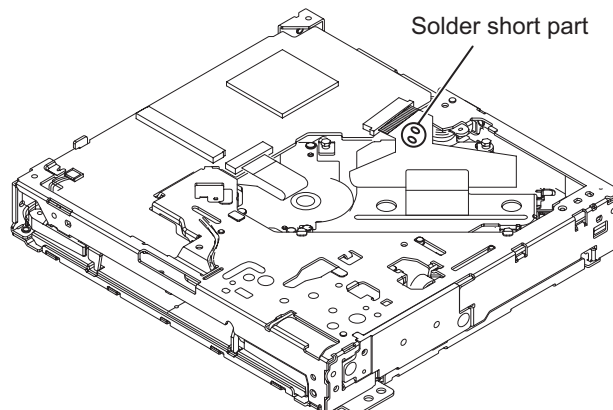
1.6 Handling the traverse unit (optical pickup)

- (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 before the card wire is disconnected from the connector on the pickup unit. (If the card 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 after connecting the card wire.



1.8 Important for laser products

1.CLASS 1 LASER PRODUCT

2.CAUTION :

(For U.S.A.) Visible and/or invisible class II laser radiation when open. Do not stare into beam.

(Others) Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments.

3.CAUTION : Visible and/or invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

4.CAUTION : This laser product uses visible and/or 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.

(For U.S.A.)

CAUTION : Visible and/or invisible class II laser radiation when open. Do not stare into beam.

(Others)

CAUTION : Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments

ACHTUNG: Sichtbare und/oder unsichtbare Laserstrahlung der Klasse 1M bei offenen Abdeckungen. Nicht direkt mit optischen Instrumenten betrachten.

ATTENTION: Rayonnement laser visible et/ou invisible de classe 1M une fois ouvert. Ne pas regarder directement avec des instruments optiques.

VOORZICHTIG: Zichtbare en/of onzichtbare klasse 1M laserstralen indien geopend. Bekijk niet direct met optische instrumenten.

ATTENZIONE: Radiazione laser in classe 1M visibile e/o invisibile quando aperto. Non osservare direttamente con strumenti ottici.

WARNING: Synlig och/eller osynlig laserstrålning, klass 1M, när denna del är öppnad. Betrakta ej strålen med optiska instrument.

VARO! Avattaessa olet alttiina nakyyvalle ja/tai näkymättömälle luokan 1M lasersateilylle. Älä tarkastele sitä optisen laitteen läpi.

ADVASEL: Synlig og/eller usynlig klasse 1M-laserstråling ved åbning. Se ikke direkte med optiske instrumenter.

AVISO: Radiación láser de clase 1M visible y/o invisible cuando está abierto. No mirar directamente con instrumental óptico.

PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe diretamente com instrumentos ópticos.

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.

PRECAUÇÃO: Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe diretamente com instrumentos ópticos.

ПРЕДУПРЕЖДЕНИЕ: В открытом состоянии происходит видимое и/или невидимое излучение лазера класса 1M. Не смотрите непосредственно в оптические инструменты.

UWAGA: Otwarcie spowoduje narażenie na widzialne i/lub niewidzialne promieniowanie lasera klasy 1M. Nie patrzeć bezpośrednio w przyrządy optyczne.

UPOZORNĚNÍ: Při otevření vydává viditelné popř. neviditelné laserové ozáření třídy 1M. Nedívejte se do otvoru přímo s optickými nástroji.

FIGYELMEZTETÉS: Látható és/vagy láthatatlan 1M osztályú sugárzás nyitott állapotban. Ne nézze közvetlenül optikai műszerekkel.

注意: 打開蓋板可能會產生可見或不可見的 1M 級鐳射。不要使用光學儀器直接進行窺視。

注意: 打开蓋板可能会产生可见或不可见的 1M 级辐射。不要使用光学仪器直接进行窥视。

تنبيه: يوجد إشعاع ليزري مرئي و/أو غير مرئي من الفئة 1M عندما يكون الجهاز مفتوحاً. تجنب النظر مباشرة داخل الجهاز باستخدام أدوات بصرية.

احتياط: هنگامی که باز گردد، تشعشع مرئی و یا نامرئی کلاس 1M لیزر وجود دارد. با لوازم چشمی مستقیماً به آن نگاه نکنید.

주의: 개방하면 가시 및/또는 비가시 클래스 1M 레이저 방사선이 나옵니다. 광학 기구로 직접 들여다보지 마십시오.

REPRODUCTION AND POSITION OF LABELS and PRINT WARNING LABEL and PRINT



CAUTION VISIBLE AND/OR INVISIBLE CLASS 1M LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1:2001 (ENG)	ATTENTION RAYONNEMENT LASER VISIBLE ET/OU INVISIBLE DE CLASSE 1M UNE FOIS OUVERT. NE PAS REGARDER DIRECTEMENT AVEC DES INSTRUMENTS OPTIQUES. (FRA)	AVISO RADIACIÓN LASER DE CLASE 1M VISIBLE Y/O INVISIBLE CUANDO ESTÁ ABIERTO. NO MIRAR DIRECTAMENTE CON INSTRUMENTAL ÓPTICO. (ESP)	WARNING SYNLIG OCH/ELLER OSYNLIG LASERSTRÅLNING KLASS 1M, NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN MED OPTISKA INSTRUMENT. (SWE)	注意 ニモ見なくとも可視 及び/または不可視 のクラス1M レーザー放射が 出ます。 光学装置で直接 見ないでください。 (JPN)	CAUTION VISIBLE AND/OR INVISIBLE CLASS II LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR (ENG) LV44638-003A
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SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3 DISASSEMBLY

3.1 Main body (Used model: KD-AVX740)

3.1.1 Removing the Front chassis (See Fig.1 and 2)

- (1) Remove the three screws **A**. (See Fig.1)
- (2) Disengage two hooks **a** engaged the Front chassis. (See Fig.1)

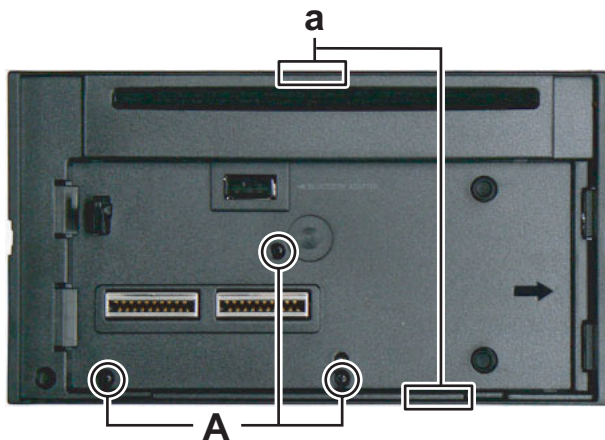


Fig.1

- (3) Remove the four screws **B** attaching the both side of the Front chassis. (See Fig.2)
- (4) Disengage two hooks **b** engaged both side of the Front chassis. (See Fig.2)

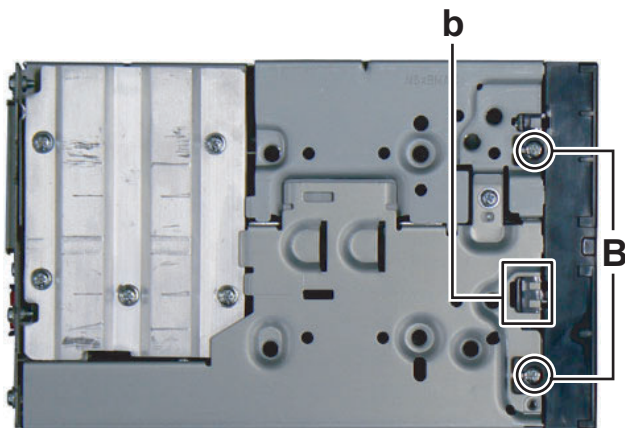


Fig.2

3.1.2 Removing the Heat sink (See Fig.3)

- (1) Remove the three screws **C** and two screws **D** attaching the Heat sink.

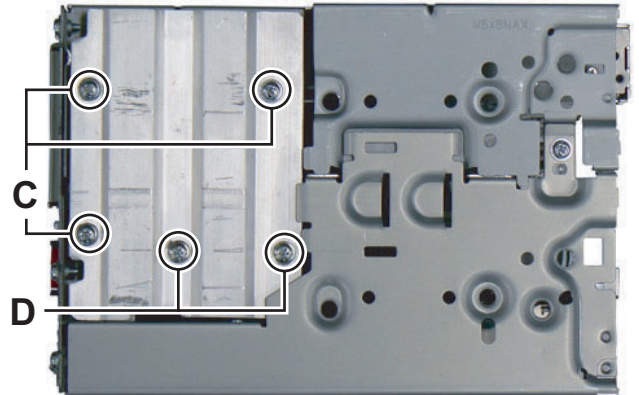


Fig.3

3.1.3 Removing the Rear heat sink (See Fig 4)

- (1) Remove the two screws **E** and two screws **F** attaching the Rear heat sink

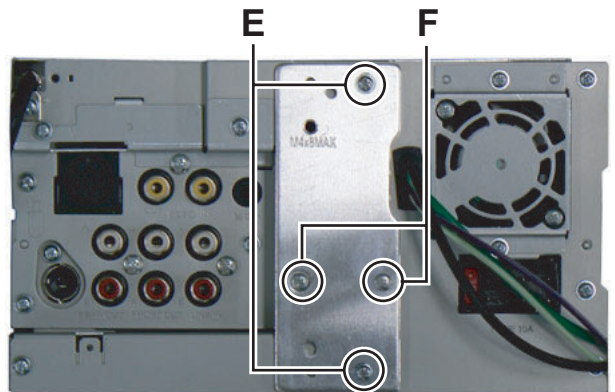
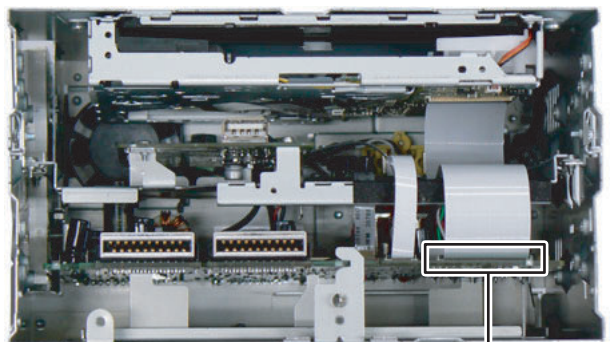


Fig.4

3.1.4 Removing the DVD mechanism (See Fig.5, 6, 7, 8, 9)

- (1) Disconnect the card wire from DVD mechanism connected to connector **CN105** of the Main board. (See Fig.5)



CN105

Fig.5

(2) Remove the two screws **G** attaching the Top chassis. (See Fig.6)

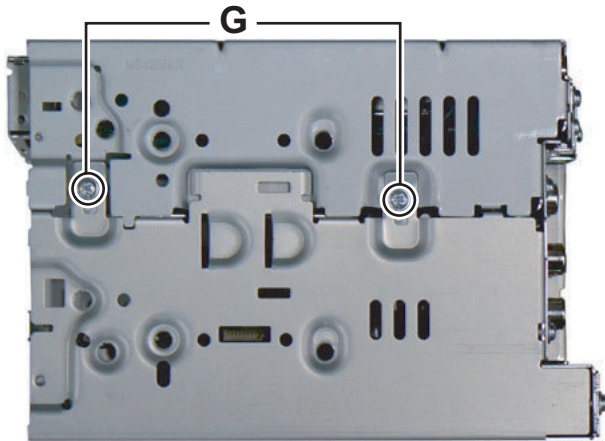


Fig.6

(3) Remove the one screw **H** attaching the Top chassis. (See Fig.7)

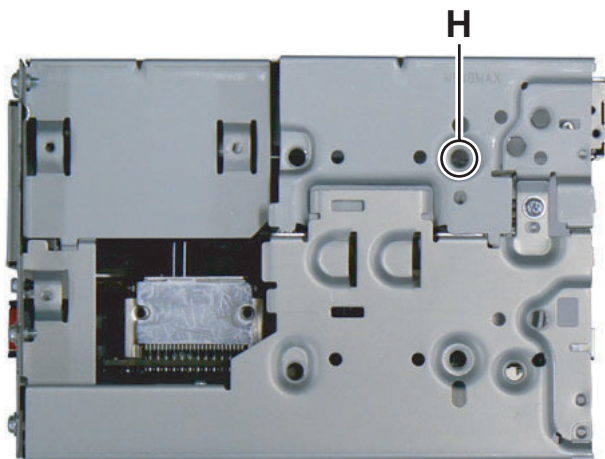


Fig.7

(4) Remove the four screws **J** attaching the Top chassis. (See Fig.8)

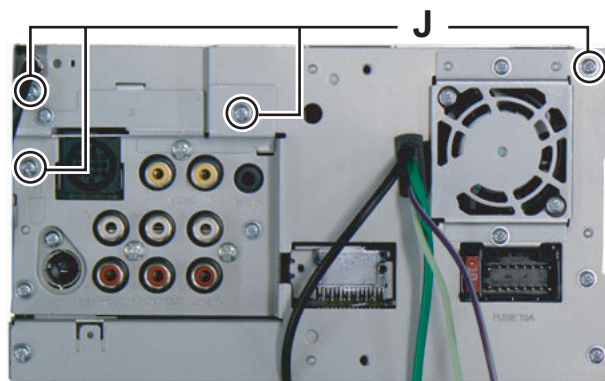


Fig.8

(5) Remove the three screws **K** attaching the DVD mechanism. (See Fig.9)

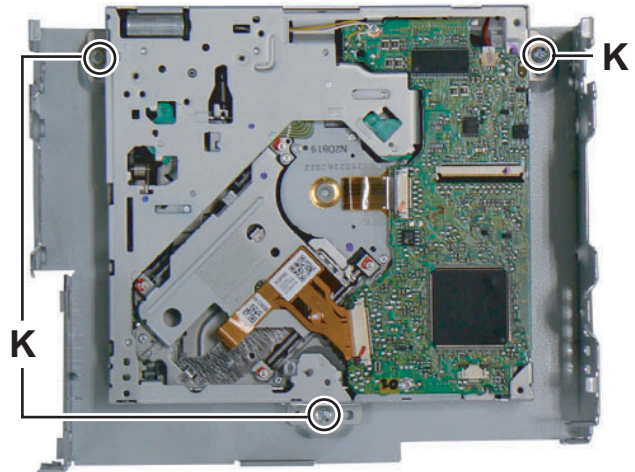


Fig.9

3.1.5 Removing the BT amp board (See Fig.10)

- (1) Disconnect the card wire from Main board connected to connector [CN311](#) of the BT amp board.
- (2) Disconnect connector wire from Sub amp board connected to connector [CN341](#) of the BT amp board.
- (3) Remove the four screws **L** attaching the BT amp board.

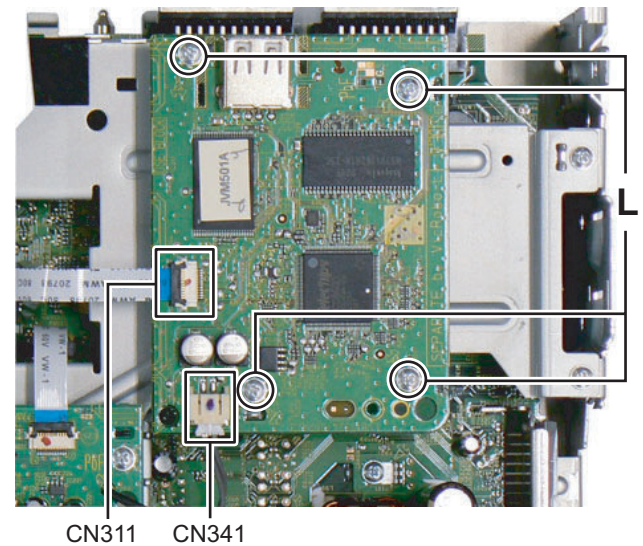


Fig.10

3.1.6 Removing the Sub amp board (See Fig.11, 12)

- (1) Remove the one screw **M** attaching the Sub amp board. (See Fig.11)

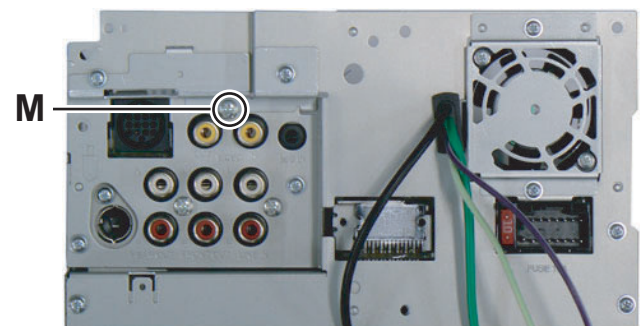


Fig.11

- (2) Disconnect the card wire from Main board connected to connectors [CN201](#) and [CN202](#) of the Sub amp board. (See Fig.12)
- (3) Disconnect the Car cable connected to connector [CN104](#) of the Main board. (See Fig.12)
- (4) Disconnect the Car cable connected to connector [CN241](#) of the Sub amp board. (See Fig.12)
- (5) Remove the three screws **N** attaching the Sub amp board. (Se Fig.12)

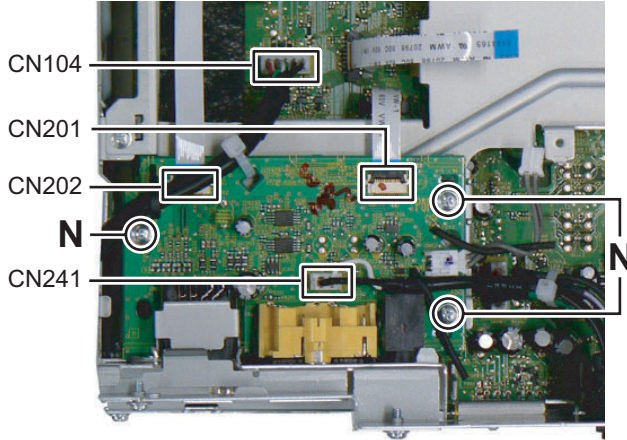


Fig.12

3.1.7 Removing the Rear panel (See Fig.13, 14)

- (1) Disconnect the connector wire from Car cable connected to connector [CN101](#) of the Main board. (See Fig.13)
- (2) Disconnect the connector wire from FAN connected to connector [CN112](#) of the Main board. (See Fig.13)

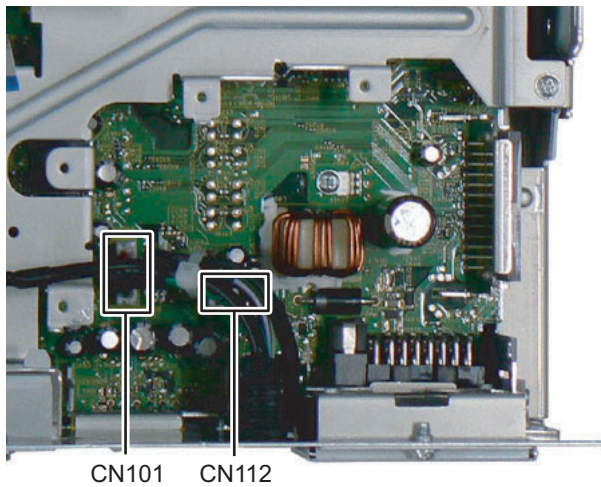


Fig.13

- (3) Remove the six screws **P** and two screws **Q** attaching the Rear panel. (Se Fig.14)

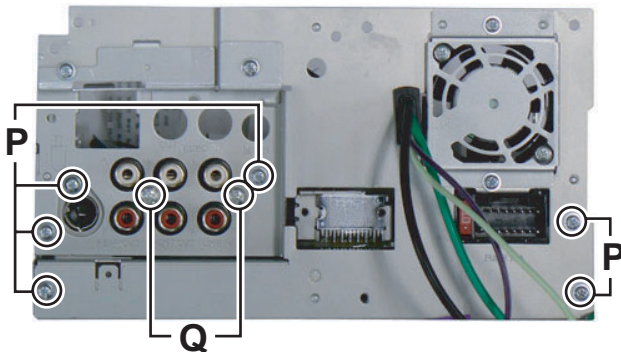


Fig.14

3.1.8 Removing the Center chassis (See Fig.15)

- (1) Remove the four screws **R** attaching the Center chassis.

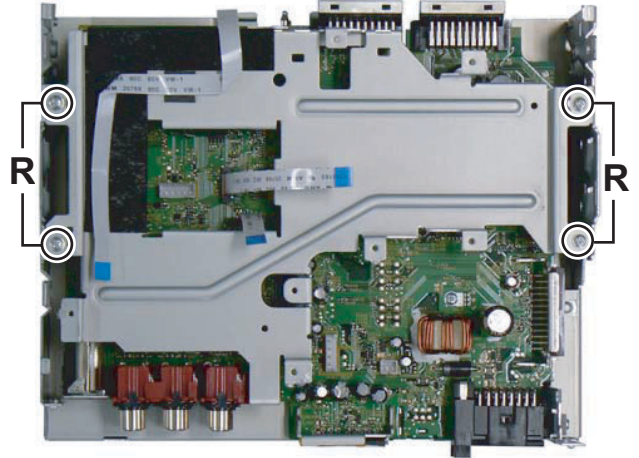


Fig.15

3.1.9 Removing the Main board (See Fig.16)

- (1) Remove the four screws **S** attaching the Main board.

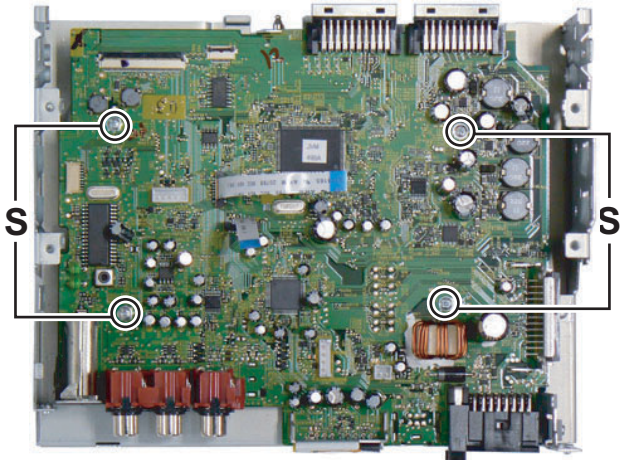


Fig.16

3.1.10 Removing the Rear cover (See Fig.17)

- (1) Remove the four screws **T** and four screws **U** attaching the Rear cover.
- (2) Disengage the four hooks **C** engaging the Rear cover.

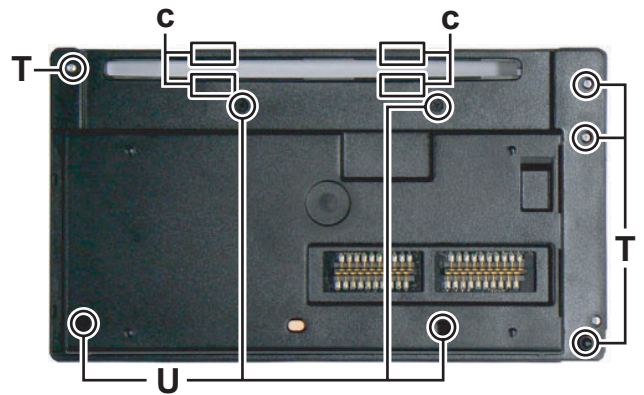


Fig.17

3.1.11 Removing the Panel-B board (See Fig.18)

- (1) Disconnect the card wires from Panel-A board connected to connector [CN603](#) of the Panel-B board.
- (2) Disconnect the card wires from Panel-B board connected to connector [CN604](#) of the Panel-B board.
- (3) Disconnect the FPC connected to connectors [CN604](#) and [CN605](#) of the Panel-B board.
- (4) Remove the four screws **V** attaching the Panel-B board.

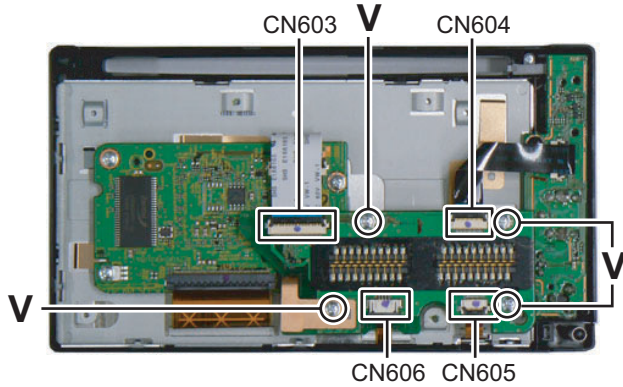


Fig.18

3.1.12 Removing the Panel-A board (See Fig.19)

- (1) Disconnect the FPC connected to connector [CN501](#) of the Panel-A board.
- (2) Remove the four screws **W** attaching the Panel-A board.

3.1.13 Removing the SW board (See Fig.19)

- (1) Remove the volume knob
- (2) Remove the one screw **X** attaching the SW board.

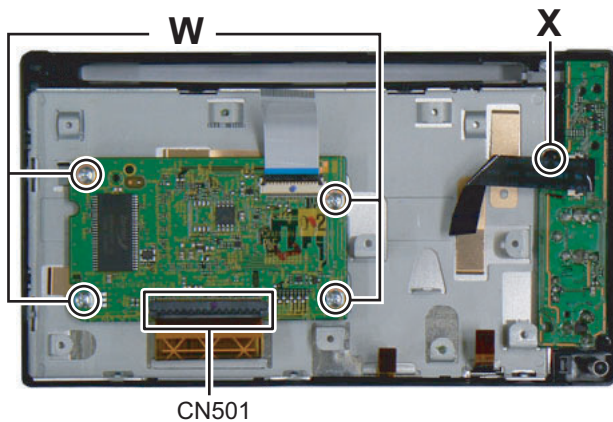


Fig.19

3.2 DVD mechanism assembly section

3.2.1 Removing the Traverse mechanism assembly (See Fig.1 to 6)

- (1) Solder the short land section on the flexible wire of pickup. (See Fig.1)

Caution:

* Solder the short land section on the flexible wire of pickup before disconnecting the flexible wire from the connector [CN101](#) on the Front end board.

If the flexible wire is disconnected without attaching the solder, the pickup may be destroyed by static electricity.

* When attaching the Traverse mechanism assembly, remove the solder from the short land section after connection the flexible wire to the connector [CN101](#) on the Front end board.

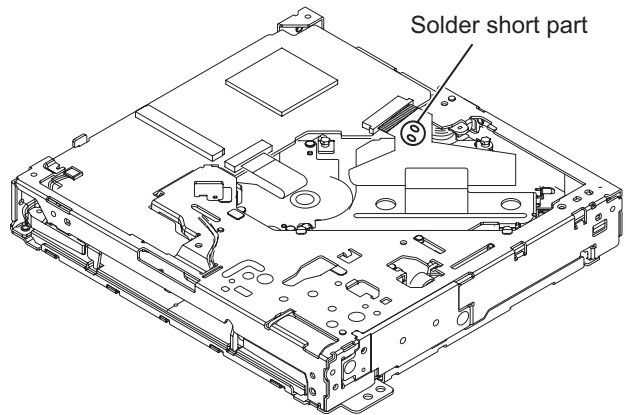


Fig.1

- (2) Voltage supply to [TP79](#) and [TP81](#) approx DC 3.0V until Clamper is shift to loading complete position. (See Fig.2)
- (3) Disconnect the flexible wires from Traverse mechanism assembly connected to connector [CN1](#) and [CN101](#) of the Front end board. (See Fig.2)

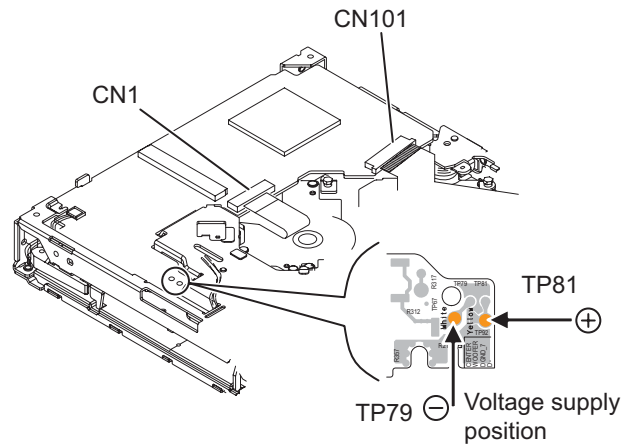


Fig.2

(4) Remove the five screws **A** attaching the Top cover assembly. (See Fig.3)

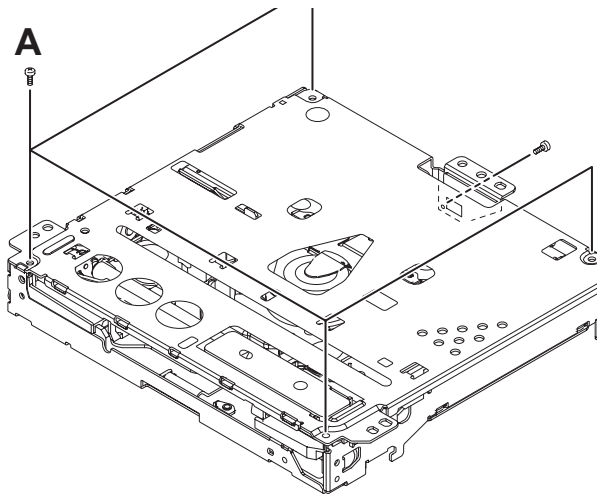


Fig.3

(5) From the bottom side, disconnect the connector wire from Top cover assembly connected to connector **CN2** of the Front end board. (See Fig.4)

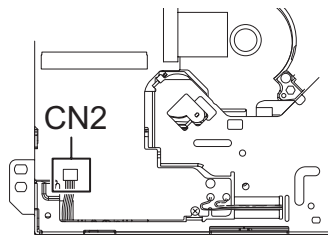


Fig.4

(6) From the bottom side, remove the spring from Traverse mechanism assembly. (See Fig.5)

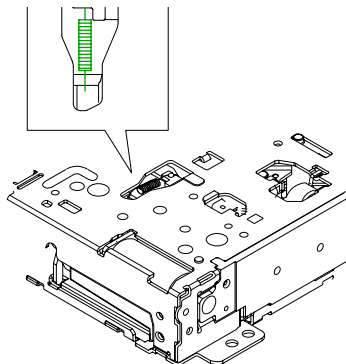


Fig.5

(7) From the top side, pull up the traverse mechanism and disengage three dumper positions. (See Fig.6)

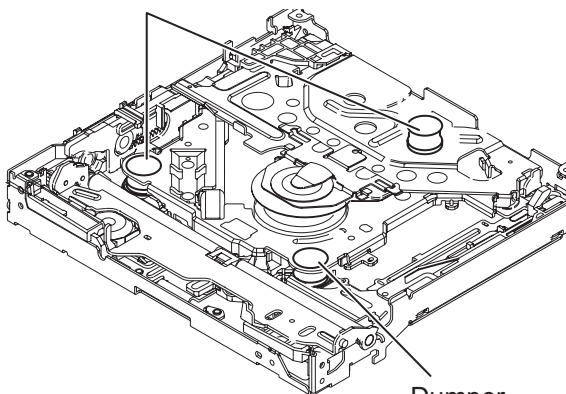


Fig.6
Dumper
(Different color sprin)

3.2.2 Removing the Front end board (See Fig.7)

- (1) Remove the Motor wires from loading motor soldered to **TP79** and **TP81** of the Front end board.
- (2) Remove the two screws **B** attaching the Front end board.

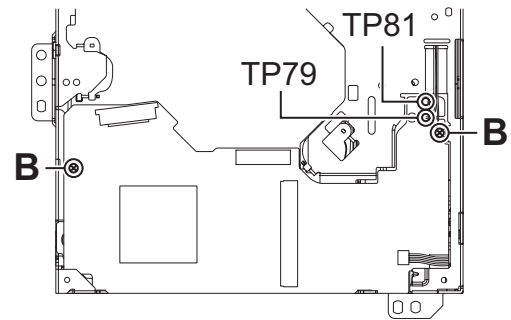


Fig.7

3.2.3 Removing the Loading arm assembly (See Fig.8)

- (1) Remove the Loading arm spring L from Loading arm assembly.
- (2) Slide to left side and then disengage hook **a** then hook **b**.

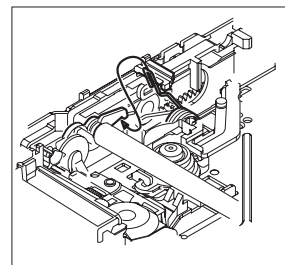
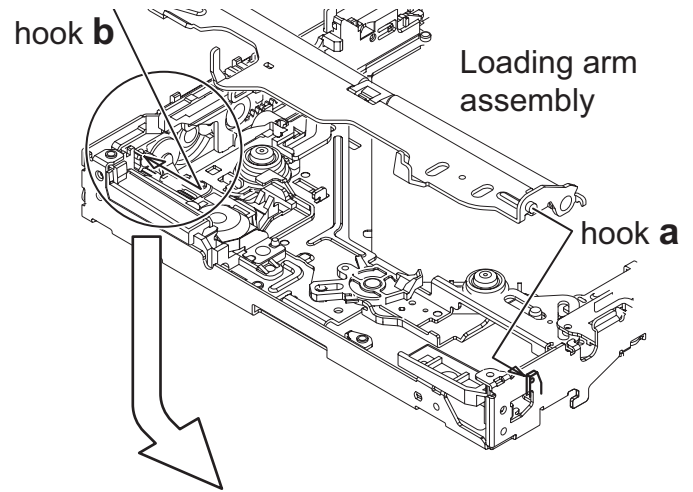


Fig.8
Loading arm spring L

3.2.4 Removing the Gear base assembly (See Fig.9, 10)

- (1) Remove the Loading arm spring L. (See Fig.9)

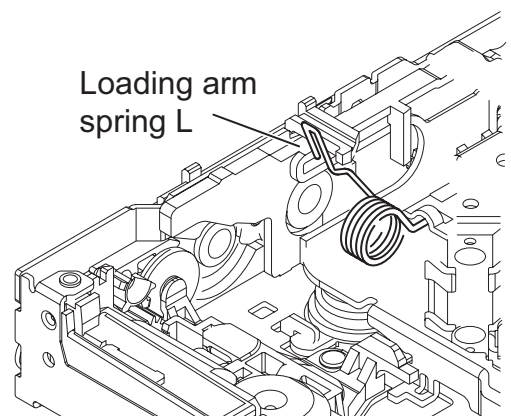


Fig.9

- (2) Remove the two screws **C** attaching the Gear base assembly.
(See Fig.10)

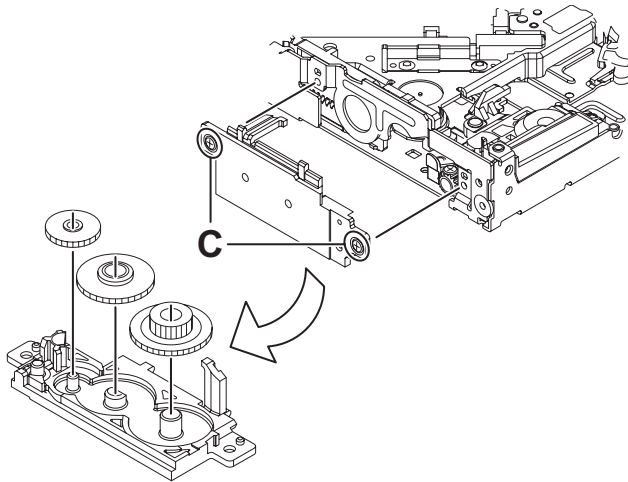


Fig.10

3.2.5 Removing the Loading arm holder. (See Fig.11)

- (1) Remove the two screws **D** attaching the Loading arm holder.
(2) Remove the Loading arm spring **R**.

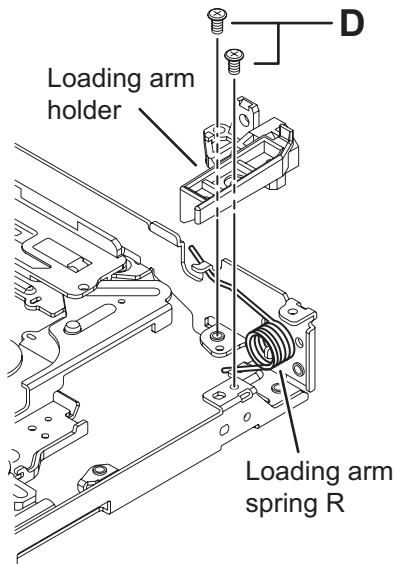


Fig.11

3.2.6 Removing the Loading motor assembly (See Fig.12)

- (1) Remove the three screws **E** attaching the Loading motor assembly.

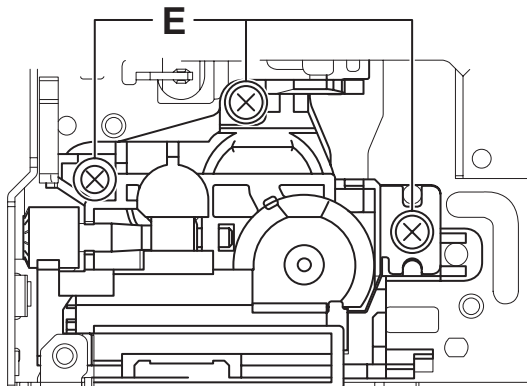


Fig.12

3.2.7 Removing the Slide cam assembly (See Fig.13)

- (1) Slide to backward the Slide cam assembly and the remove the Slide cam spring.
(2) Slide to forward the slide cam assembly, and then take out it.

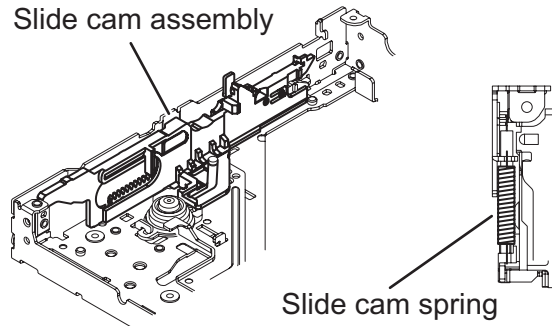


Fig.13

3.2.8 Removing the Photo board (See Fig.14)

- (1) Pressing the hook **c** and then slide to backward (slide to the arrow side) the Disc plate.
(2) Remove the one screw **F** attaching the Photo board.

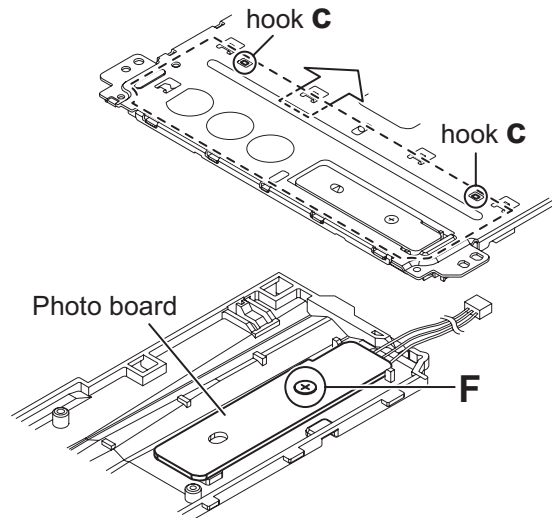


Fig.14

3.2.9 Removing the Loading motor (See Fig.15 to 18)

- (1) Remove the A wheel gear. (See Fig.15)

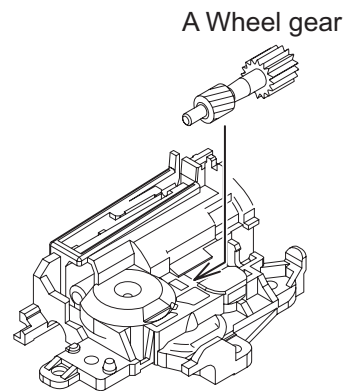


Fig.15

- (2) Remove the A worm gear, M connect gear and M wheel gear by sequentially. (See Fig.16)

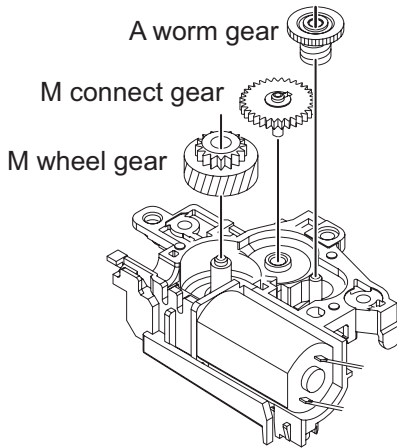


Fig.16

- (3) Remove the two screws **G** attaching the Loading motor. (See Fig.17)

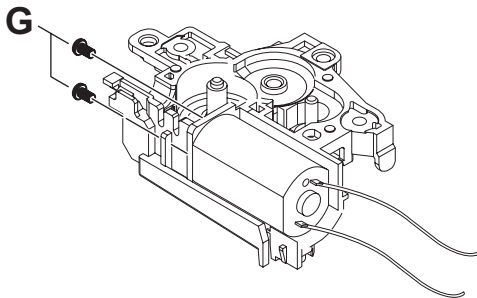


Fig.17

- (4) When attaching the Loading motor, motor wire should arrange to figure. (See Fig.18)

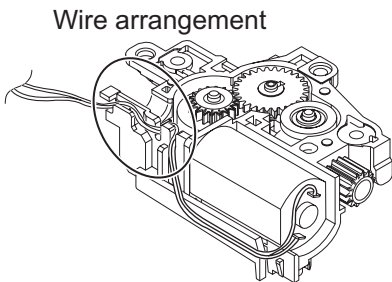


Fig.18

3.2.10 Removing the Roller assembly (See Fig.19)

- (1) Remove the Slit washer.
- (2) Remove the R middle gear.
- (3) Remove the R connect gear.
- (4) Snap off the part **a** of the Roller assembly.
- (5) Lift up the part **b** of the Roller assembly, and then release part **c** (When release part **c**, R collar R is easy to come off, does not lose it).

CAUTION:

When reattach the Roller assembly, Middle gear should keep direction and Slit washer should be change new part.

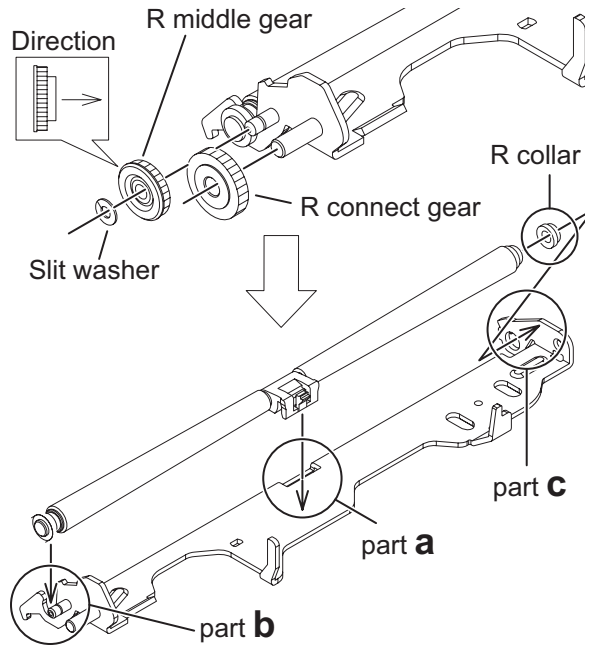


Fig.19

3.2.11 Removing the Roller (See Fig.20)

- (1) Remove the Slit washer.
- (2) Pull out the Roller shaft.

CAUTION:

When reattach the Roller shaft, Slit washer should be change new part.

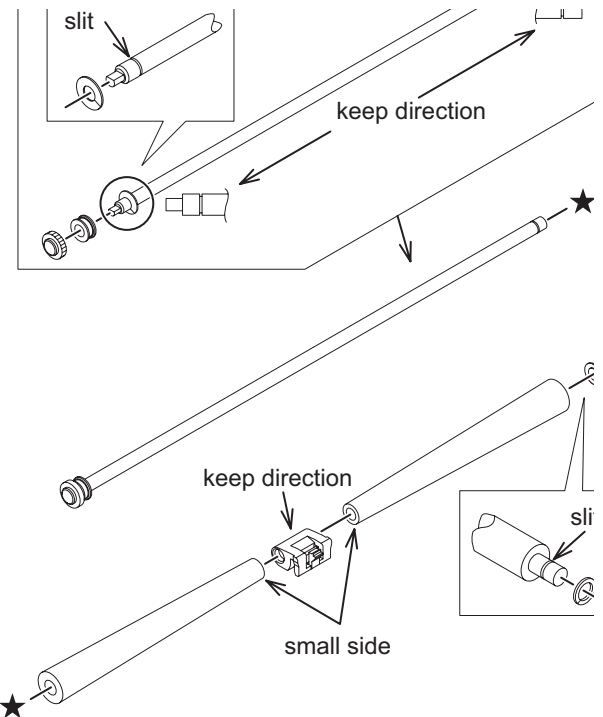


Fig.20

SECTION 4 ADJUSTMENT

4.1 Service mode

4.2 Test instruments required for adjustment

- (1) Digital oscilloscope (100MHz)
- (2) Digital tester
- (3) Test Disc
- (4) Extension cable :EXTXD001-50PF (CN403 --- CN105)

4.3 Standard measuring conditions

Power supply voltage DC14.4V(10.5 to 16V)
Load impedance 20K ohm (2 Speakers connection)
Output Level Line out 2.5V (Vol. MAX)

4.4 Standard volume position

Balance and Bass & Treble volume : Indication "0"
Loudness : OFF

4.5 Dummy load

Exclusive dummy load should be used for AM and FM.

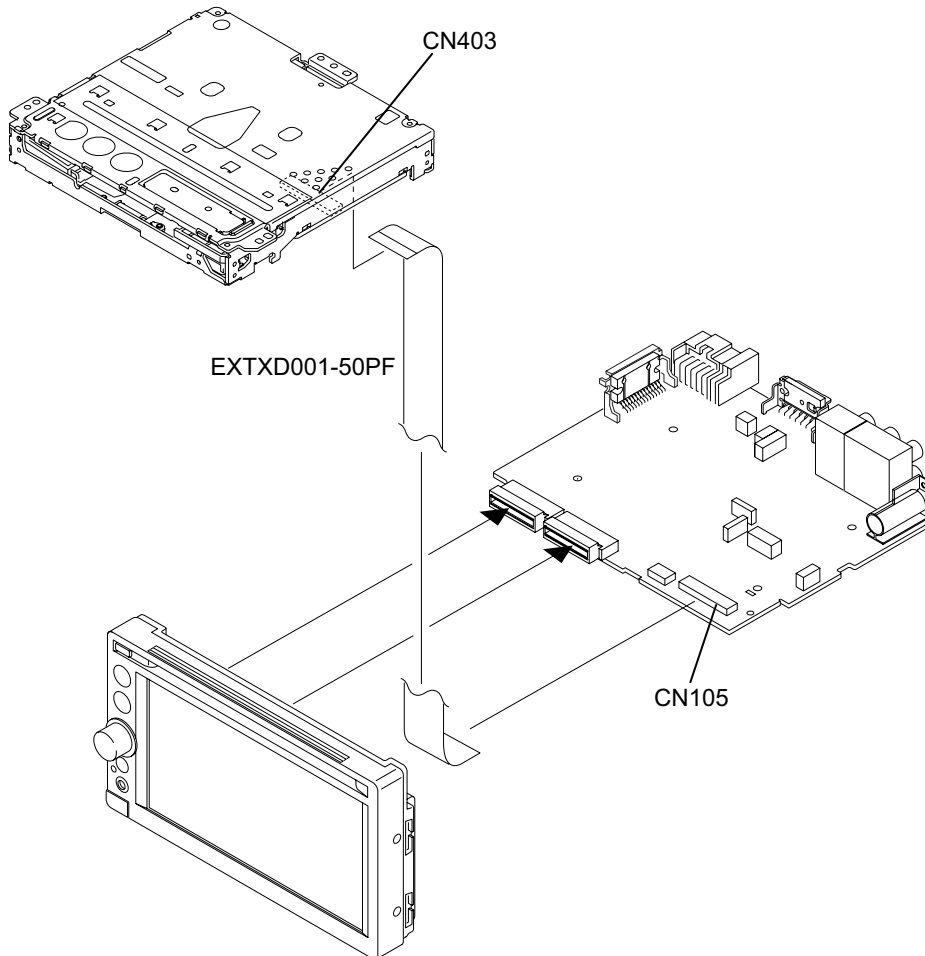
For FM dummy load, there is a loss of 6dB between SSG output and antenna input.

The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

4.6 How to connect the extension cable for adjusting

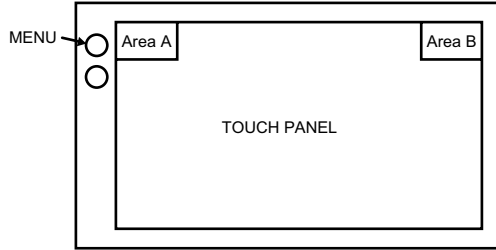
Caution:

Be sure to attach the heat sink and rear bracket onto the power amplifier IC and regulator IC respectively, before supply the power.
If voltage is applied without attaching these parts, the power amplifier IC and regulator IC will be destroyed by heat.

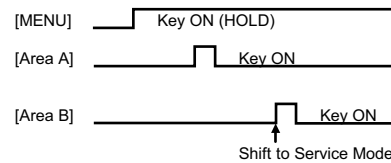


4.7 Service mode

4.7.1 Set to Service Mode.



(Multiplex push timing chart.)



4.7.2 Service mode menu

SYS Vxxxx	TUN:x	TEMPERATURE
APP Axxxx	MON:x	DVD CHECK MODE
DATA Vxxxx	TOU:x	RUNNING MODE
DISC Vxxxx		ERROR DIAG/DATA
Macrovision xxxx		
DivX xxxx		
BT Vxxx		RDS TEST MODE
Span x		BT MIC TEST
SYS-Area: x		BT DONGLE CHECK
DISC-Area: xx	reg: x	FIRM UPDATE MODE
S,No xxxxxxxx		
INITIALIZE ALL		
BACK		EXIT

SYS V: System micon version.
 APP A: Apprication software version
 DATA V: Imae data version
 DISC V: DVD module version
 Macrovision: Macrovision version
 DivX: DivX version
 BT V: Bluetooth firmware version
 Span x: No use
 SYS-Area: System area and Model name
 DISC-Area: Disc area reg: Region
 TUN: S meter level offset adjust Y=Adjust OK N=Not adjust
 MON: Monitor Adjust Y= Adjust OK N=Not adjust
 TOU: Touch panel adjust Y= Adjust OK N=Not adjust

- INITIALIZE ALL
 Initialized content.
 Backup memory. Installer memory. User memory. Tuner area setting.
 Error history. Diag data. EEPROM in the DVD module.
 EEPROM in the bluetooth module.
- TEMPERATURE
 Temperature display of DVD module.
- DVD CHECK MODE
 •See "DVD CHECK MODE" for details.
- RUNNING MODE (No use)
- ERROR DIAG/DATA (Error history display)

DVD ERROR	TOTAL xxxx	DVD ERROR CLR
E1:xxxxxx E2:xxxxxx E3:xxxxxx		
xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx		MECHA ERROR CLR
MECHA ERROR	TOTAL xxxx	DC ERROR CLR
E1:xxxxxx E2:xxxxxx E3:xxxxxx		
xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx		
DC1 OK DC2 0		
Power detected (xxxxxx)		
DISC EJECT xxxtimes		
BACK		EXIT
- RDS TEST MODE (No use)
- BT MIC TEST (Except KW-AVX64x series)

BT MICROPHONE TEST
IN PROGRESS
BACK
EXIT
- BT DONGLE CHECK (No use)
- FIRM UPDATE MODE
 When the firmware updated, it uses it.

DVD ERROR: Error history of DVD module.
 MECHA ERROR: Error history of door mechanism.
 (Except KW-AVX64x series)
 Power detected: Frequency in which power supply is turned on.
 DISC EJECT: Eject frequency.
 Power supply CLR key (No display)

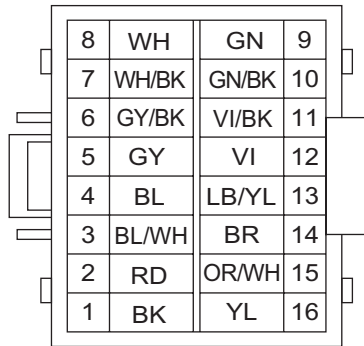
DVD CHECK MODE	
xxxxxxx	DVDx1 JITTER MODE
xxxx xxxx	SEARCH & JITTER
	MONITOR
	DVDx1 PLAY
NORMAL PLAY	STOP
EF OUT-TRACKING OFF	EJECT
EF IN-TRACKING OFF	LOAD
CD-LASER ON	SLEEP
DVD-LASER ON	EEPROM DATA OSD

Command	Mechanism unit operation	Indication contents
NORMAL PLAY	Start at normal speed (After start, jitter is measured by an inner position.)	Laser current value, jitter value
EF OUT-TRACKING OFF	Tracking off the outermost position of CD	For EF phase error
EF IN-TRACKING OFF	Tracking off the innermost position of CD	For EF phase error
CD-LASER ON	CD_LD lights and laser current is displayed.	Laser current value, jitter value
DVD-LASER ON	DVD_LD lights and laser current is displayed	Laser current value, jitter value
DVDx1 JITTER MODE	DVD x1 jitter measuring mode (for use in mechanism adjustment)	Laser current value, jitter value
SEARCH & JITTER	The search and jitter measurement to an appointed position of DVD.	Position measured with VT-501 jitter value
MONITOR	Monitor terminal setting	
DVDx1 PLAY	DVD x1 stopped start (After start, jitter is measured by an inner position.)	Not displayed.
STOP	Disc stopped, LD-OFF	Not displayed.
EJECT	EJECT	Not displayed.
LOAD	LOADING	Not displayed.
SLEEP	SLEEP	Not displayed.
EEPROM DATA OSD		EEPROM DATA (Only Engineer use)

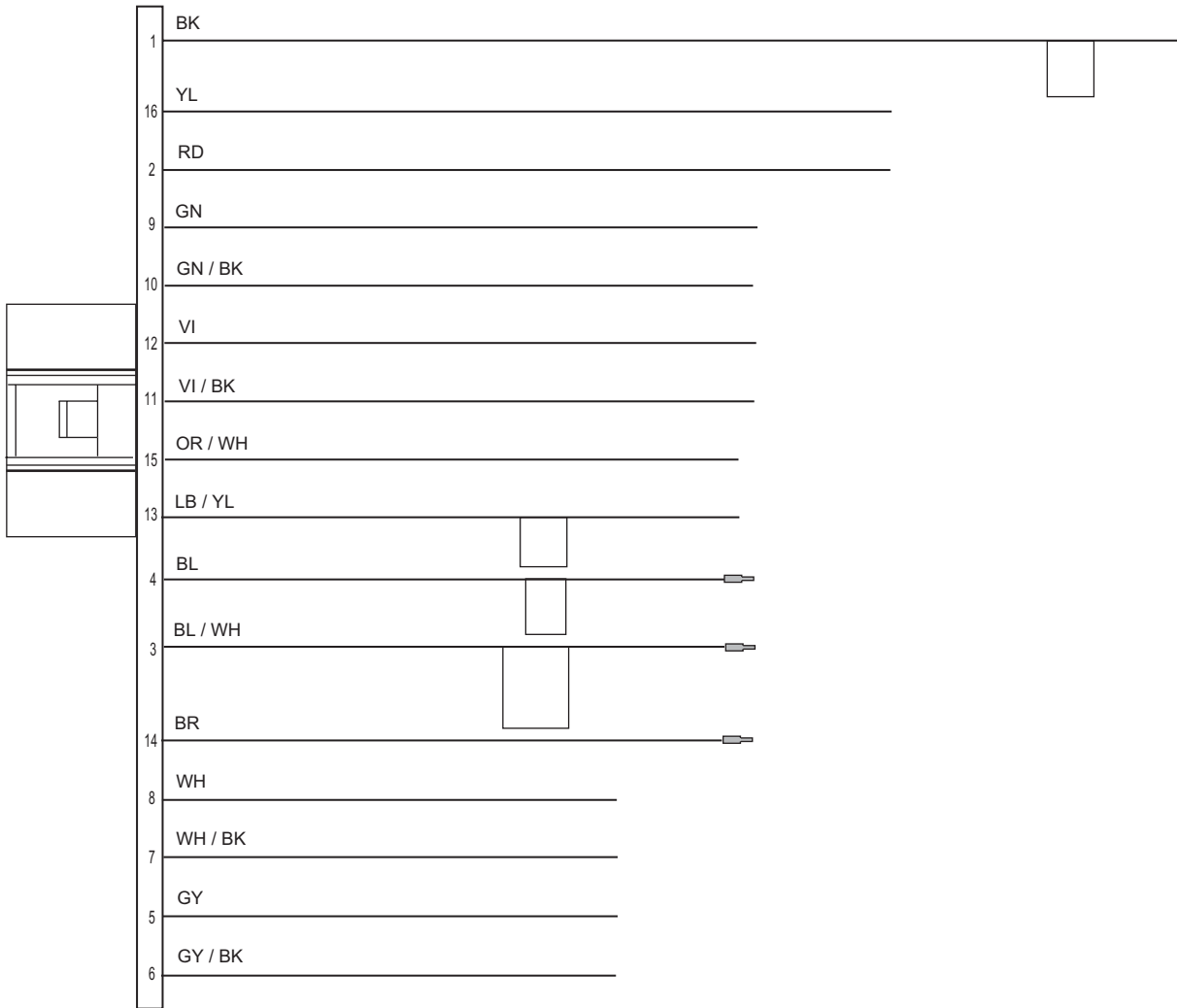
SECTION 5 TROUBLESHOOTING

5.1 16PIN CORD DIAGRAM

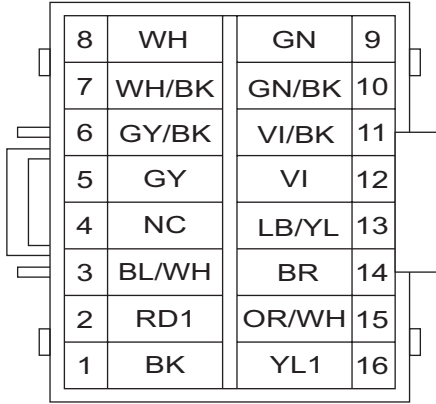
5.1.1 Except Europe



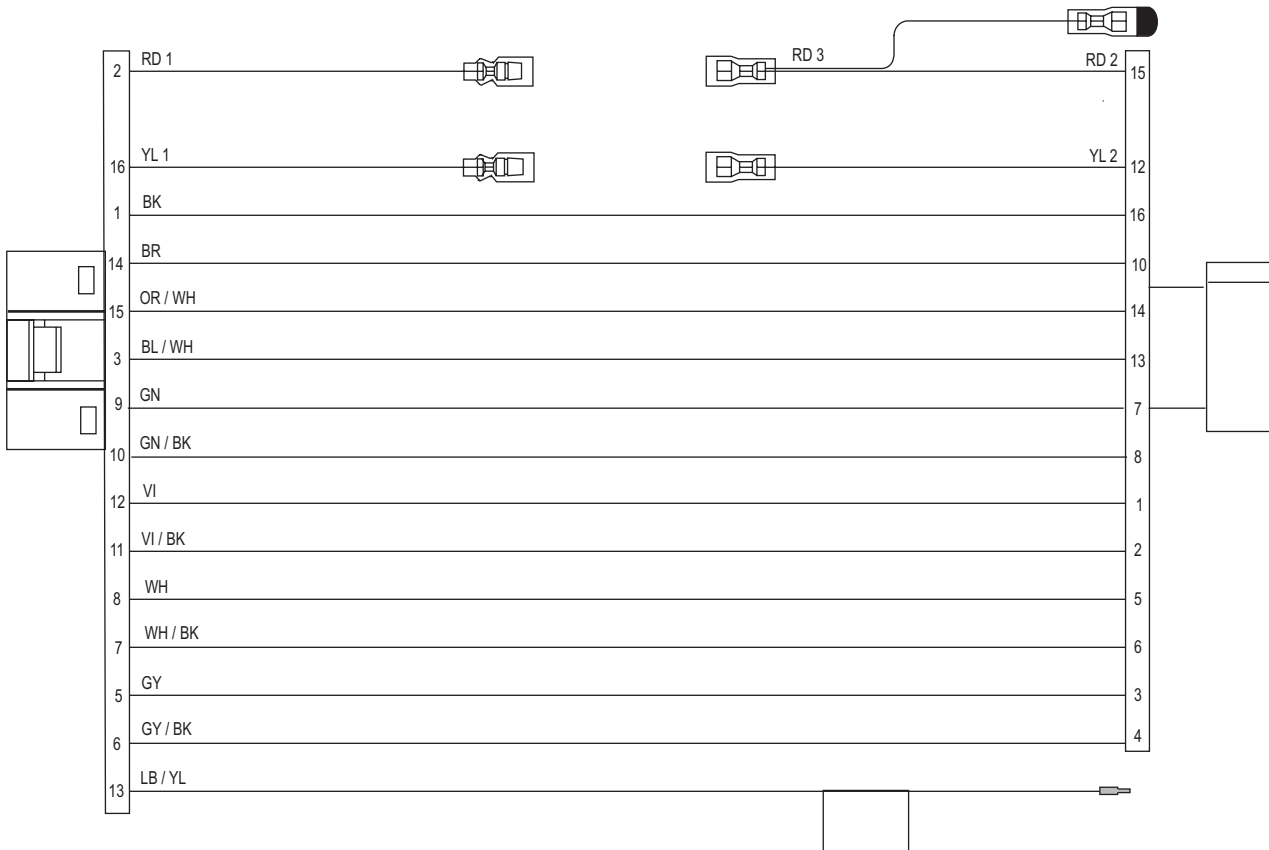
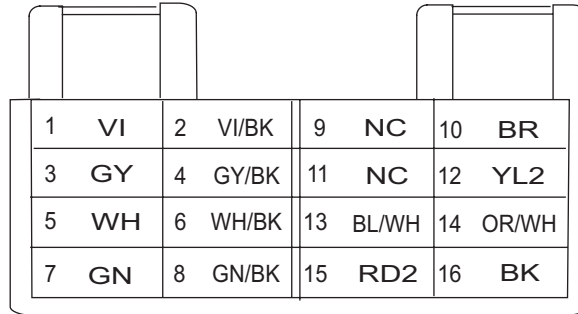
WH	White	GN	Green
BK	Black	VI	Violet
GY	Gray	LB	Light Blue
BL	Blue	YL	Yellow
RD	Red	BR	Brown
		OR	Orange



5.1.2 For Europe



WH	White	GN	Green
BK	Black	VI	Violet
GY	Gray	LB	Light Blue
BL	Blue	YL	Yellow
RD	Red	BR	Brown
		OR	Orange





JVC

Victor Company of Japan, Limited
Mobile Entertainment Division 2967-3, Ishikawa-machi, Hachioji-shi, Tokyo, 192-8525, Japan

(No.MA493<Rev.002>)

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