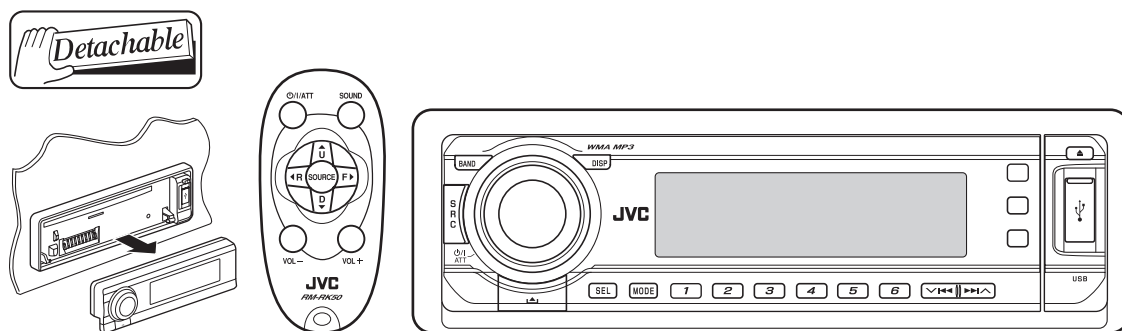


# JVC

## SERVICE MANUAL

### CD RECEIVER

**KD-AR770J, KD-G720J, KD-G721E, KD-G721EX,  
KD-G721EY, KD-G721EU, KD-G722E, KD-G722EX,  
KD-G722EY, KD-G722EU, KD-G724UI, KD-G725U,  
KD-G725UN, KD-G725UH, KD-G725UT, KD-G727EE**



**MP3 WMA**

**SAT  
RADIO  
READY**



**COMPACT  
disc  
DIGITAL AUDIO  
TEXT**

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

### TABLE OF CONTENTS

1	PRECAUTIONS .....	1-7
2	SPECIFIC SERVICE INSTRUCTIONS .....	1-10
3	DISASSEMBLY .....	1-11
4	ADJUSTMENT .....	1-15
5	TROUBLESHOOTING .....	1-16

# SPECIFICATION

## KD-AR770/KD-G720

<b>AUDIO AMPLIFIER SECTION</b>		
Power Output		20 W RMS × 4 Channels at 4 Ω and [ $\leq$ ] 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)
Tone Control Range	Bass	±10 dB at 100 Hz
	Treble	±10 dB at 10 kHz
Frequency Response		40 Hz to 20 000 Hz
Line-Out Level/Impedance	KD-AR770	4.0 V /20 kΩ load (full scale)
	KD-G720	2.5 V /20 kΩ load (full scale)
Output Impedance		1 kΩ
Subwoofer-Out Level/Impedance		2.0 V /20 kΩ load (full scale)
Other Terminals		CD changer LINE IN plugs (only for KD-AR770)
<b>TUNER SECTION</b>		
Frequency Range	FM	87.5 MHz to 107.9 MHz (with channel interval set to 100 kHz or 200 kHz) 87.5 MHz to 108.0 MHz (with channel interval set to 50 kHz)
	AM	530 kHz to 1 710 kHz (with channel interval set to 10 kHz) 531 kHz to 1 602 kHz (with channel interval set to 9 kHz)
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 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	35 dB
AM Tuner	Sensitivity	20 μV
	Selectivity	35 dB
<b>CD PLAYER/USB MEMORY SECTION</b>		
Type		Compact disc player
Signal Detection System	Non-contact optical	pickup (semiconductor laser)
Number of Channels		2 channels (stereo)
Frequency Response		5 Hz to 20 000 Hz
Dynamic Range		96 dB
Signal-to-Noise Ratio		98 dB
Wow and Flutter		Less than measurable limit
MP3 Decoding Format		MPEG1/2 Audio Layer 3 Max. Bit Rate : 320 kbps
WMA (Windows Media® Audio) Decoding Format		Max. Bit Rate : 192 kbps
Playable USB memory	Format	FAT 12/16/32
	Storage	Less than 4 GB (1 partition type)
	Playable Audio Format	MP3/WMA
	Max. Current	Less than 500 mA
<b>GENERAL</b>		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System		Negative ground
Allowable Operating Temperature		0°C to +40°C (32°F to 104°F)
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 52 mm × 152 mm (7-3/16" × 2-1/16" × 6")
	Panel Size (approx.)	188 mm × 58 mm × 11 mm (7-7/16" × 2-5/16" × 7/16")
Mass (approx.)		1.4 kg (3.1 lbs) (excluding accessories)

**KD-G722/KD-G721**

<b>AUDIO AMPLIFIER SECTION</b>		
Maximum Power Output	Front	50 W per channel
	Rear	50 W per channel
Continuous Power Output (RMS)	Front	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Rear	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
Load Impedance		4 $\Omega$ (4 $\Omega$ to 8 $\Omega$ allowance)
Tone Control Range	Bass	$\pm 10$ dB at 100 Hz
	Treble	$\pm 10$ dB at 10 kHz
Frequency Response		40 Hz to 20 000 Hz
Signal-to-Noise Ratio		70 dB
Line-Out Level/Impedance		2.5 V/20 k $\Omega$ load (full scale)
Output Impedance		1 k $\Omega$
Subwoofer-Out Level/Impedance		2.0 V/20 k $\Omega$ load (full scale)
Other Terminals		CD changer, Steering wheel remote input
<b>TUNER SECTION</b>		
Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	(MW) 522 kHz to 1 620 kHz (LW) 144 kHz to 279 kHz
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 $\mu$ V/75 $\Omega$ )
	50 dB Quieting Sensitivity	16.3 dBf (1.8 $\mu$ V/75 $\Omega$ )
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	30 dB
MW Tuner	Sensitivity	20 $\mu$ V
	Selectivity	35 dB
[LW Tuner]	Sensitivity	50 $\mu$ V
<b>CD PLAYER/USB MEMORY SECTION</b>		
Type		Compact disc player
Signal Detection System	Non-contact optical	pickup (semiconductor laser)
Number of Channels		2 channels (stereo)
Frequency Response		5 Hz to 20 000 Hz
Dynamic Range		96 dB
Signal-to-Noise Ratio		98 dB
Wow and Flutter		Less than measurable limit
MP3 Decoding Format		MPEG1/2 Audio Layer 3 Max. Bit Rate : 320 kbps
WMA (Windows Media® Audio) Decoding Format		Max. Bit Rate : 192 kbps
Playable USB memory	Format	FAT 12/16/32
	Storage	Less than 4 GB (1 partition type)
	Playable Audio Format	MP3/WMA
	Max. Current	Less than 500 mA
<b>GENERAL</b>		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System		Negative ground
Allowable Operating Temperature		0°C to +40°C
Dimensions (W $\times$ H $\times$ D)	Installation Size (approx.)	182 mm $\times$ 52 mm $\times$ 152 mm
	Panel Size (approx.)	188 mm $\times$ 58 mm $\times$ 11 mm
Mass (approx.)		1.4 kg (excluding accessories)

**KD-G724**

<b>AUDIO AMPLIFIER SECTION</b>		
Maximum Power Output	Front	50 W per channel
	Rear	50 W per channel
Continuous Power Output (RMS)	Front	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Rear	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
Load Impedance	4 $\Omega$ (4 $\Omega$ to 8 $\Omega$ allowance)	
Tone Control Range	Bass	$\pm 10$ dB at 100 Hz
	Treble	$\pm 10$ dB at 10 kHz
Frequency Response	40 Hz to 20 000 Hz	
Signal-to-Noise Ratio	70 dB	
Line-Out Level/Impedance	2.5 V/20 k $\Omega$ load (full scale)	
Output Impedance	1 k $\Omega$	
Subwoofer-Out Level/Impedance	2.0 V/20 k $\Omega$ load (full scale)	
Other Terminal	CD changer	
<b>TUNER SECTION</b>		
Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	531 kHz to 1 602 kHz
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 $\mu$ V/75 $\Omega$ )
	50 dB Quieting Sensitivity	16.3 dBf (1.8 $\mu$ V/75 $\Omega$ )
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	30 dB
AM Tuner	Sensitivity	20 $\mu$ V
	Selectivity	35 dB
<b>CD PLAYER/USB MEMORY SECTION</b>		
Type	Compact disc player	
Signal Detection System	Non-contact optical	pickup (semiconductor laser)
Number of Channels	2 channels (stereo)	
Frequency Response	5 Hz to 20 000 Hz	
Dynamic Range	96 dB	
Signal-to-Noise Ratio	98 dB	
Wow and Flutter	Less than measurable limit	
MP3 Decoding Format	MPEG1/2 Audio Layer 3 Max. Bit Rate : 320 kbps	
WMA (Windows Media® Audio) Decoding Format	Max. Bit Rate : 192 kbps	
Playable USB memory	Format	FAT 12/16/32
	Storage	Less than 4 GB (1 partition type)
	Playable Audio Format	MP3/WMA
	Max. Current	Less than 500 mA
<b>GENERAL</b>		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System	Negative ground	
Allowable Operating Temperature	0°C to +40°C	
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 52 mm × 152 mm
	Panel Size (approx.)	188 mm × 58 mm × 11 mm
Mass (approx.)	1.4 kg (excluding accessories)	

**KD-G725**

<b>AUDIO AMPLIFIER SECTION</b>		
Maximum Power Output	Front	50 W per channel
	Rear	50 W per channel
Continuous Power Output (RMS)	Front	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Rear	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
Load Impedance	4 $\Omega$ (4 $\Omega$ to 8 $\Omega$ allowance)	
Tone Control Range	Bass	$\pm 10$ dB at 100 Hz
	Treble	$\pm 10$ dB at 10 kHz
Frequency Response	40 Hz to 20 000 Hz	
Signal-to-Noise Ratio	70 dB	
Line-Out Level/Impedance	2.5 V/20 k $\Omega$ load (full scale)	
Output Impedance	1 k $\Omega$	
Subwoofer-Out Level/Impedance	2.0 V/20 k $\Omega$ load (full scale)	
Other Terminal	CD changer	
<b>TUNER SECTION</b>		
Frequency Range	FM	87.5 MHz to 108.0 MHz
	AM	531 kHz to 1 602 kHz
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 $\mu$ V/75 $\Omega$ )
	50 dB Quieting Sensitivity	16.3 dBf (1.8 $\mu$ V/75 $\Omega$ )
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	30 dB
AM Tuner	Sensitivity	20 $\mu$ V
	Selectivity	35 dB
<b>CD PLAYER/USB MEMORY SECTION</b>		
Type	Compact disc player	
Signal Detection System	Non-contact optical	pickup (semiconductor laser)
Number of Channels	2 channels (stereo)	
Frequency Response	5 Hz to 20 000 Hz	
Dynamic Range	96 dB	
Signal-to-Noise Ratio	98 dB	
Wow and Flutter	Less than measurable limit	
MP3 Decoding Format	MPEG1/2 Audio Layer 3 Max. Bit Rate : 320 kbps	
WMA (Windows Media® Audio) Decoding Format	Max. Bit Rate : 192 kbps	
Playable USB memory	Format	FAT 12/16/32
	Storage	Less than 4 GB (1 partition type)
	Playable Audio Format	MP3/WMA
	Max. Current	Less than 500 mA
<b>GENERAL</b>		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System	Negative ground	
Allowable Operating Temperature	0°C to +40°C	
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 52 mm × 152 mm
	Panel Size (approx.)	188 mm × 58 mm × 11 mm
Mass (approx.)	1.4 kg (excluding accessories)	


**KD-G727**


<b>AUDIO AMPLIFIER SECTION</b>		
Maximum Power Output	Front	50 W per channel
	Rear	50 W per channel
Continuous Power Output (RMS)	Front	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Rear	19 W per channel into 4 $\Omega$ , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
Load Impedance	4 $\Omega$ (4 $\Omega$ to 8 $\Omega$ allowance)	
Tone Control Range	Bass	$\pm 10$ dB at 100 Hz
	Treble	$\pm 10$ dB at 10 kHz
Frequency Response	40 Hz to 20 000 Hz	
Signal-to-Noise Ratio	70 dB	
Line-Out Level/Impedance	2.5 V/20 k $\Omega$ load (full scale)	
Output Impedance	1 k $\Omega$	
Subwoofer-Out Level/Impedance	2.0 V/20 k $\Omega$ load (full scale)	
Other Terminal	CD changer	
<b>TUNER SECTION</b>		
Frequency Range	FM1/FM2	87.5 MHz to 108.0 MHz
	FM3	65.00 MHz to 74.00 MHz
	AM	(MW) 522 kHz to 1 620 kHz (LW) 144 kHz to 279 kHz
FM Tuner	Usable Sensitivity	11.3 dBf (1.0 $\mu$ V/75 $\Omega$ )
	50 dB Quieting Sensitivity	16.3 dBf (1.8 $\mu$ V/75 $\Omega$ )
	Alternate Channel Selectivity (400 kHz)	65 dB
	Frequency Response	40 Hz to 15 000 Hz
	Stereo Separation	30 dB
MW Tuner	Sensitivity	20 $\mu$ V
	Selectivity	35 dB
LW Tuner	Sensitivity	50 $\mu$ V
<b>CD PLAYER/USB MEMORY SECTION</b>		
Type	Compact disc player	
Signal Detection System	Non-contact optical	pickup (semiconductor laser)
Number of Channels	2 channels (stereo)	
Frequency Response	5 Hz to 20 000 Hz	
Dynamic Range	96 dB	
Signal-to-Noise Ratio	98 dB	
Wow and Flutter	Less than measurable limit	
MP3 Decoding Format	MPEG1/2 Audio Layer 3 Max. Bit Rate : 320 kbps	
WMA (Windows Media® Audio) Decoding Format	Max. Bit Rate : 192 kbps	
Playable USB memory	Format	FAT 12/16/32
	Storage	Less than 4 GB (1 partition type)
	Playable Audio Format	MP3/WMA
	Max. Current	Less than 500 mA
<b>GENERAL</b>		
Power Requirement	Operating Voltage	DC 14.4 V (11 V to 16 V allowance)
Grounding System	Negative ground	
Allowable Operating Temperature	0°C to +40°C	
Dimensions (W × H × D)	Installation Size (approx.)	182 mm × 52 mm × 152 mm
	Panel Size (approx.)	188 mm × 58 mm × 11 mm
Mass (approx.)	1.4 kg (excluding accessories)	

- Design and specifications are subject to change without notice.
- Microsoft and Windows Media are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

# SECTION 1 PRECAUTIONS

## 1.1 Safety Precautions

 **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 performing repair of this system.

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

## 1.2 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.

### 1.2.1 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.

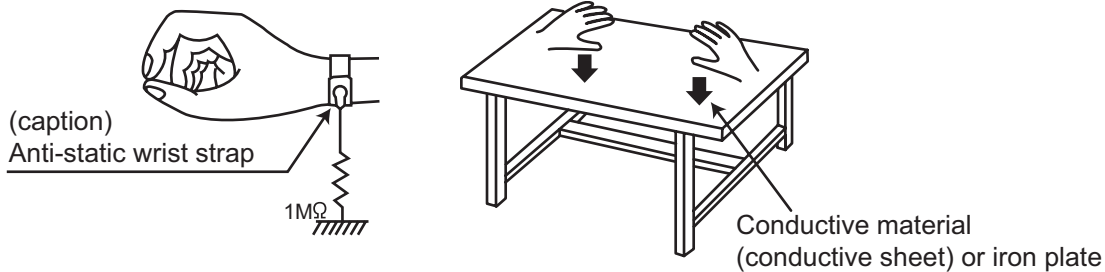
Be careful to use proper grounding in the area where repairs are being performed.

(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.

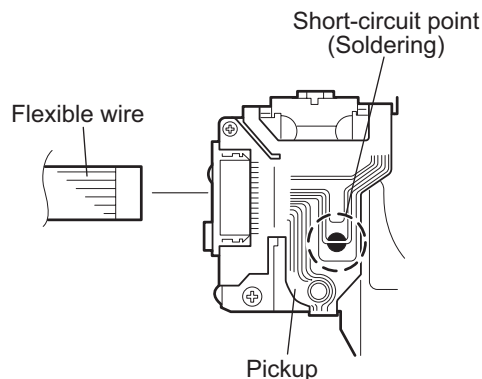
## 1.3 Handling the traverse unit (optical pickup)

- (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.

## 1.4 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 flexible wire is disconnected from the connector on the pickup unit. (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 after connecting the flexible wire.





## 1.5 Important for laser products

### 1.CLASS 1 LASER PRODUCT

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

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

**4.CAUTION** : The CD,MD and DVD player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

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

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



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

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

AVOID DIRECT EXPOSURE TO BEAM.

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

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

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

## REPRODUCTION AND POSITION OF LABELS

### WARNING LABEL

CLASS 1  
LASER PRODUCT

**CAUTION** : Visible and invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

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

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

**VARO** : Avattaessa ja suojalukitus ohitettuna tai viallisena olet alltiina näkyvälle ja näkymättömälle lasersäteilylle. Vältä säteen kohdistumista suoraan itseesi. (f)

## SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

### 2.1 DIFFERENT POINT

	KD-AR770	KD-G720	KD-G721	KD-G722	KD-G724	KD-G725	KD-G727
SAT READY	YES	YES	NO	NO	NO	NO	NO
RDS	NO	NO	YES	YES	NO	NO	YES
LINE IN plug	YES	NO	NO	NO	NO	NO	NO

## SECTION 3 DISASSEMBLY

### 3.1 Main body section

#### 3.1.1 Removing the front panel assembly (See Fig.1)

- (1) Push the detach button in the lower left part of the front panel assembly and remove the front panel assembly.

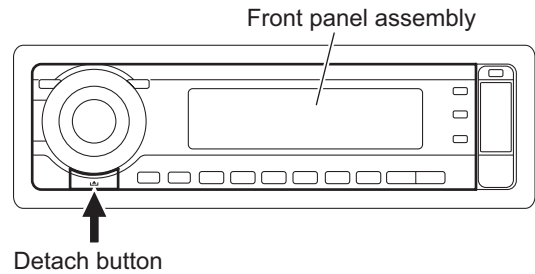


Fig.1

#### 3.1.2 Removing the bottom cover (See Fig.2)

- (1) Turn the main body up side down.
- (2) Insert a screwdriver under the joints to release the two joints **a** on the left side, two joints **b** on the right side and joint **c** on the back side of the main body, then remove the bottom cover from the main body.

**Note:**

When releasing the joints using a screwdriver, do not damage the main board.

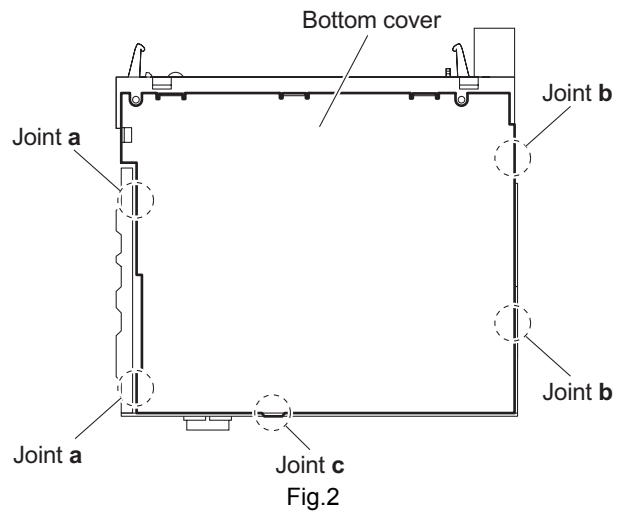


Fig.2

#### 3.1.3 Removing the front chassis assembly (See Figs.3 and 4)

- Remove the front panel assembly and bottom cover.
  - (1) Remove the two screws **A** on the both sides of the main body. (See Fig.3.)
  - (2) Remove the two screws **B** on the front sides of the main body. (See Fig.4.)
  - (3) Release the joint **d** and joint **e** on the both sides of the main body, then remove the front chassis assembly toward the front. (See Fig.3.)

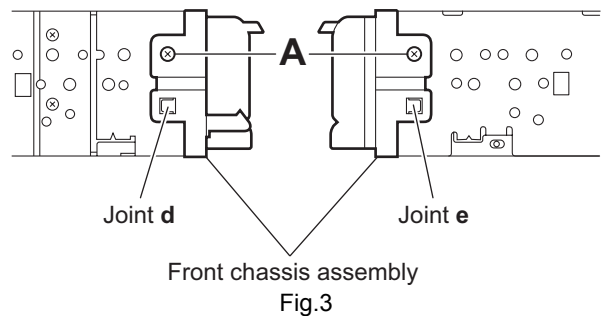


Fig.3

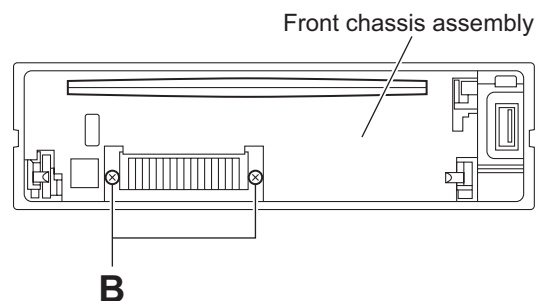


Fig.4

### 3.1.4 Removing the side panel (See Fig.5)

**Reference:**

Remove the front panel assembly as required.

- (1) Remove the two screws **C** and three screws **D** attaching the side panel on the left side of the main body.
- (2) Remove the side panel from the main body.

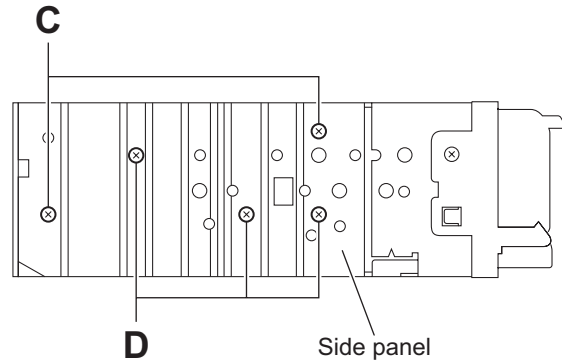


Fig.5

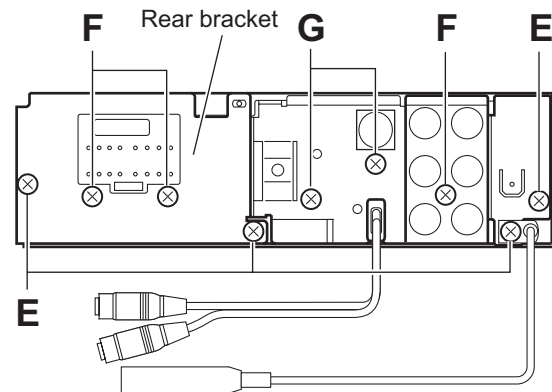
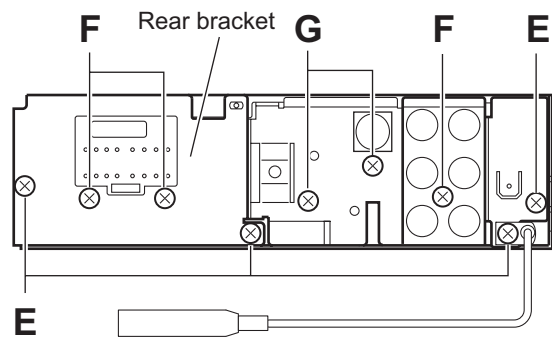
### 3.1.5 Removing the rear bracket (See Fig.6)

- Remove the bottom cover.

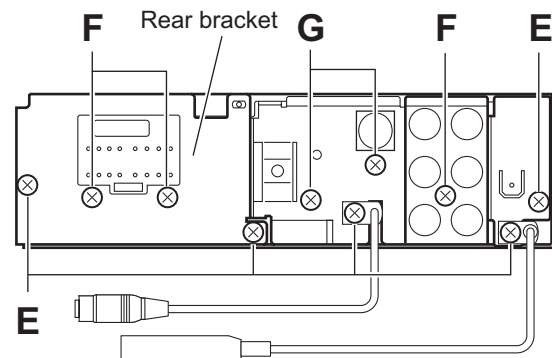
- (1) Remove the screws **E**, three screws **F** and two screws **G** attaching the rear bracket on the back side of the main body.
- (2) Remove the rear bracket.

**Reference:**

The quantity of screws **E** differs by each model.



(For KD-AR770)



(For KD-G721 and KD-G722)

Fig.6

### 3.1.6 Removing the main board (See Figs.6 and 7)

- Remove the front panel assembly, bottom cover and side panel.

#### Reference:

Remove the front chassis assembly as required.

- Remove the screws **E** attaching the rear bracket on the back side of the main body. (See Fig.6.)

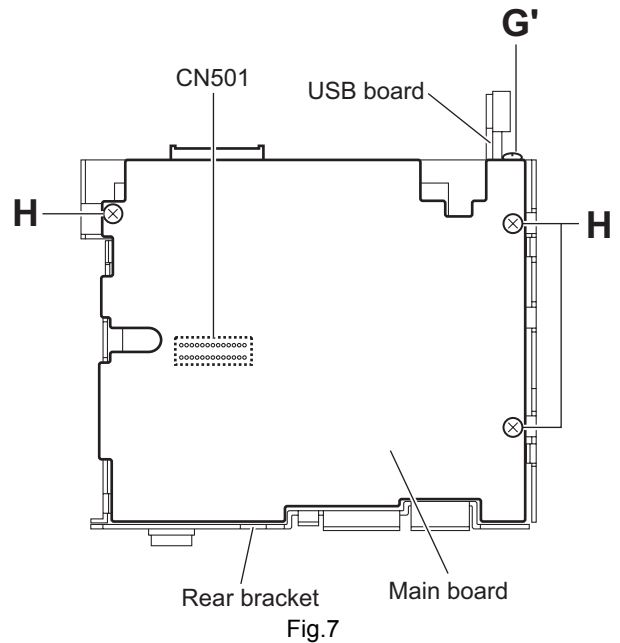
#### Reference:

The quantity of a screw **E** differs by each model.

- Remove the screw **G'** attaching the USB board on the front side of the main body. (See Fig.7.)
- Remove the three screws **H** attaching the main board. (See Fig.7.)
- Disconnect the connector [CN501](#) on the main board from the main body and take out the main board with the rear bracket. (See Fig.7.)

#### Reference:

Remove the rear bracket from the main body as required. (See "3.1.5 Removing the rear bracket".)



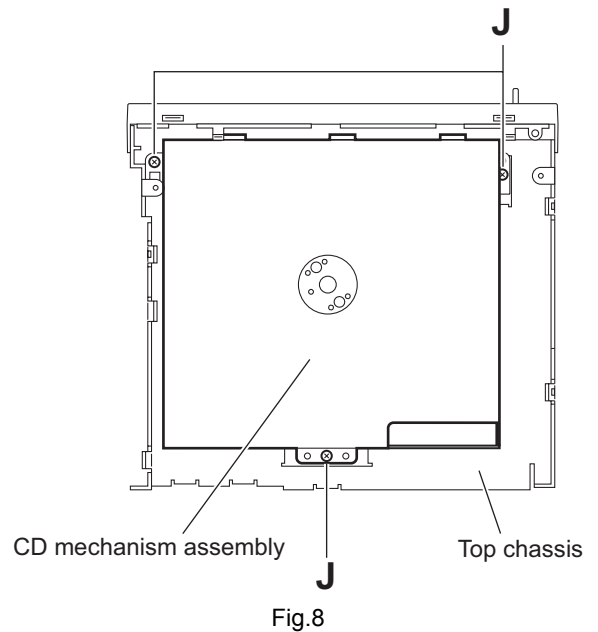
### 3.1.7 Removing the CD mechanism assembly (See Fig. 8)

- Remove the front panel assembly, bottom cover, side panel, rear bracket and main board.

#### Reference:

Remove the front chassis assembly as required.

- Remove the three screws **J** attaching the CD mechanism assembly on the top chassis.
- Take out the CD mechanism assembly.



### 3.1.8 Removing the switch board (See Figs.9 to 11)

- Remove the front panel assembly.
  - Remove the five screws **K** on the back side of the front panel assembly. (See Fig.9.)
  - Remove the screw **M** on the right side of the front panel assembly. (See Fig.9.)
  - Release the joints **f** and remove the rear cover. (See Fig.10.)
  - Take out the switch board from the front panel assembly. (See Fig.11.)

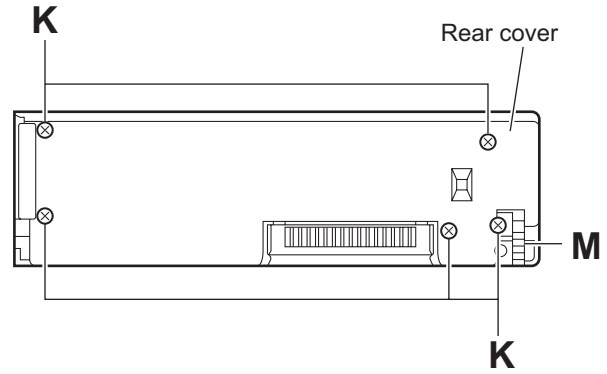


Fig.9

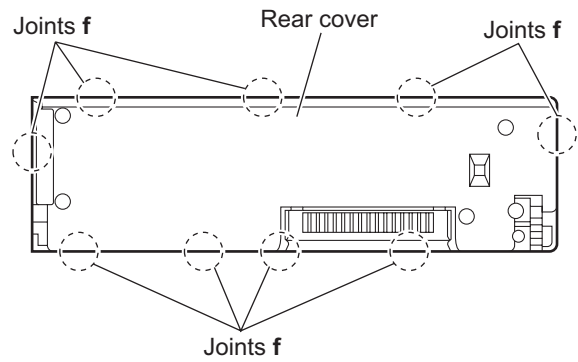


Fig.10

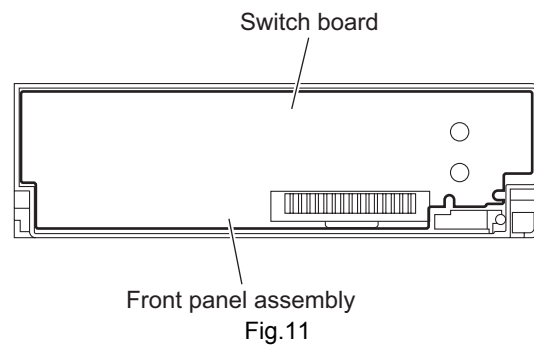


Fig.11

### 3.2 CD mechanism section

For the CD mechanism, please refer the mechanism manual TN2001-1118 (No.MY004).

# SECTION 4 ADJUSTMENT

## 4.1 Adjustment method

### ■ Test instruments required for adjustment

- (1) Digital oscilloscope (100MHz)
- (2) Electric voltmeter
- (3) Digital tester
- (4) Tracking offset meter
- (5) Test Disc JVC :CTS-1000
- (6) Extension cable for check  
EXTSH002-22P × 1

### ■ Standard volume position

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

### ■ How to connect the extension cable for adjusting

#### Caution:

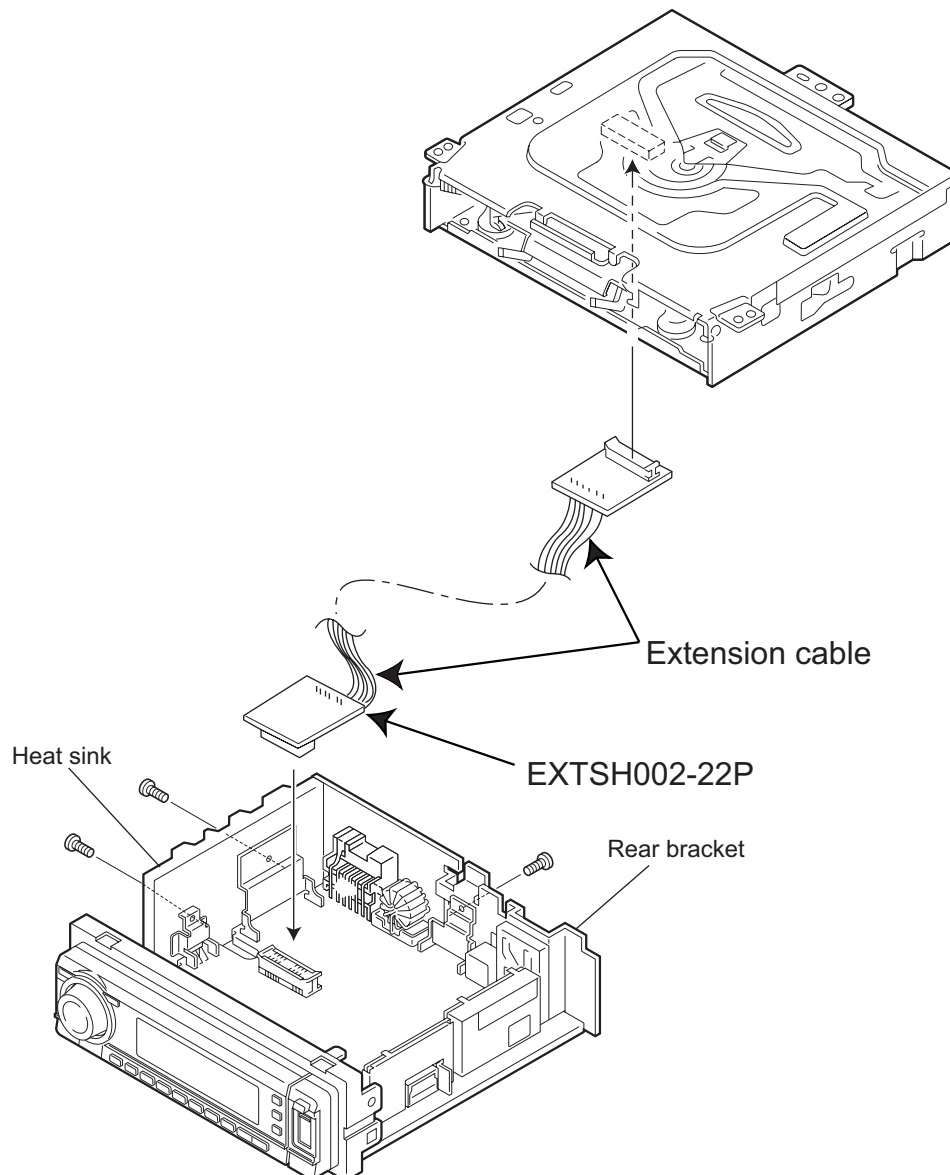
Be sure to attach the heat sink and rear bracket onto the power amplifier IC and regulator IC respectively, before supply the power. If voltage is applied without attaching these parts, the power amplifier IC and regulator IC will be destroyed by heat.

### ■ Standard measuring conditions

Power supply voltage	DC14.4V(11 to 16V)
Load impedance	20KΩ(2 Speakers connection)
Output Level	Line out 2.5V (Vol. MAX)

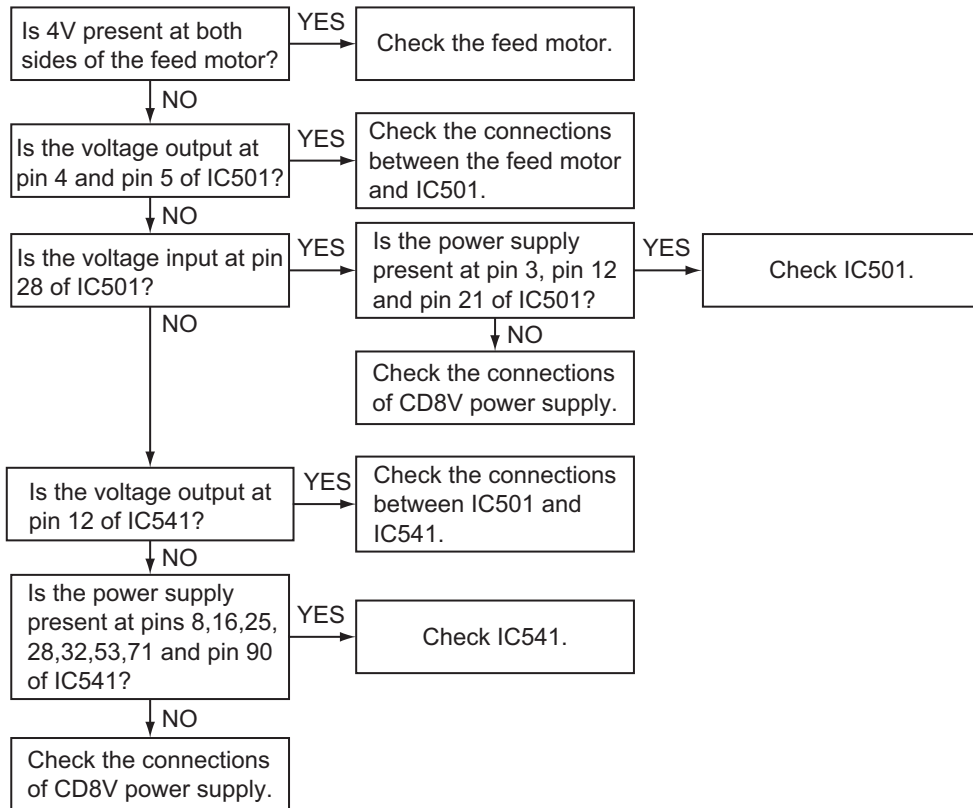
### ■ Dummy load

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.

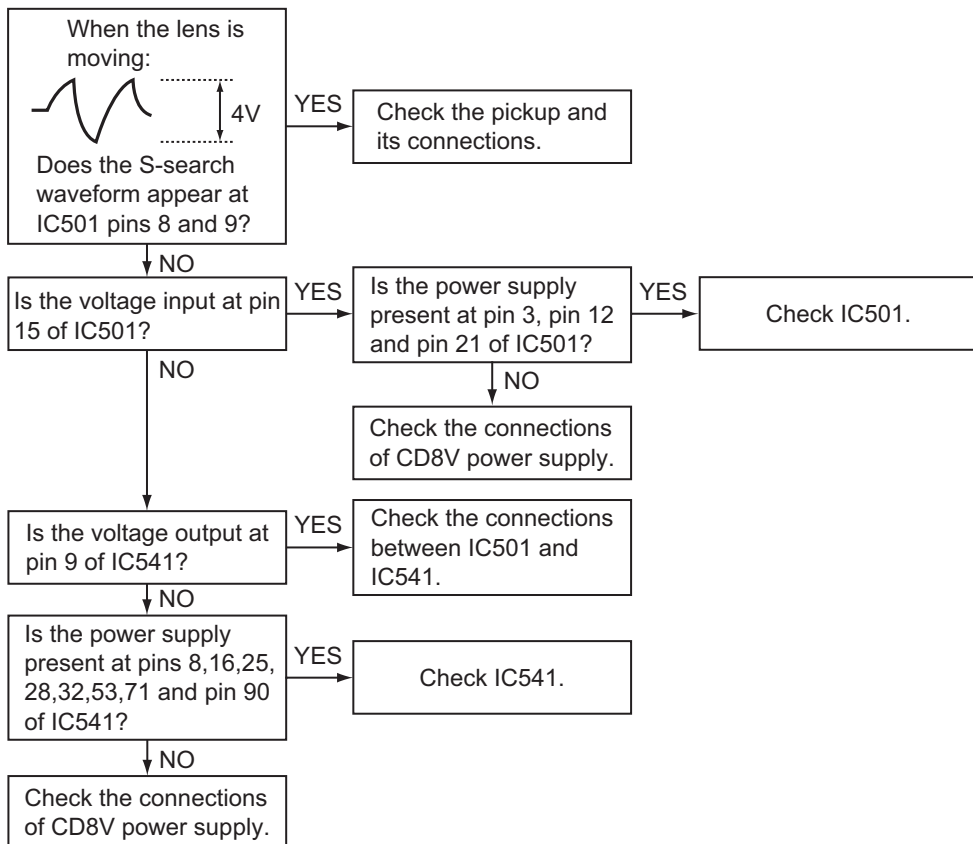


## SECTION 5 TROUBLESHOOTING

### 5.1 Feed section

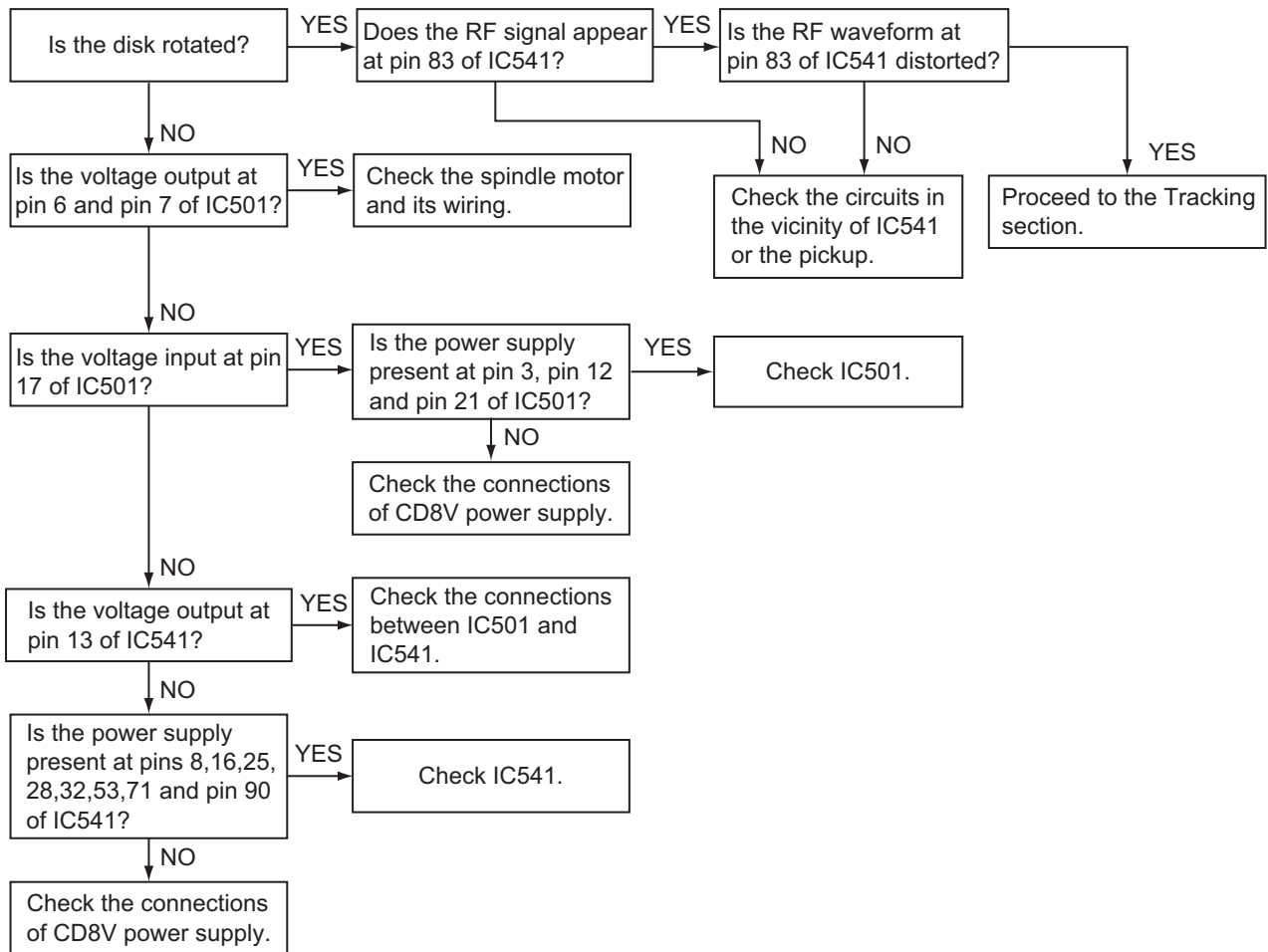


### 5.2 Focus section

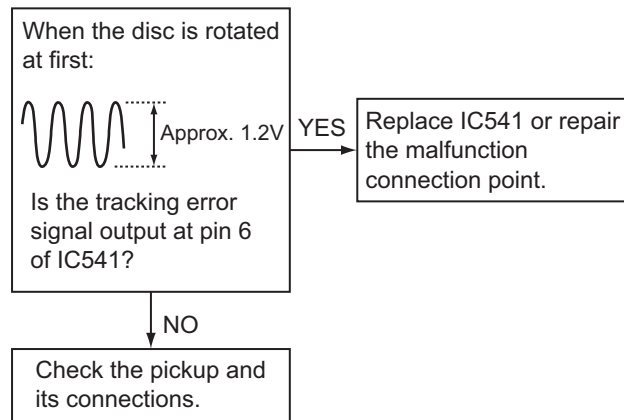




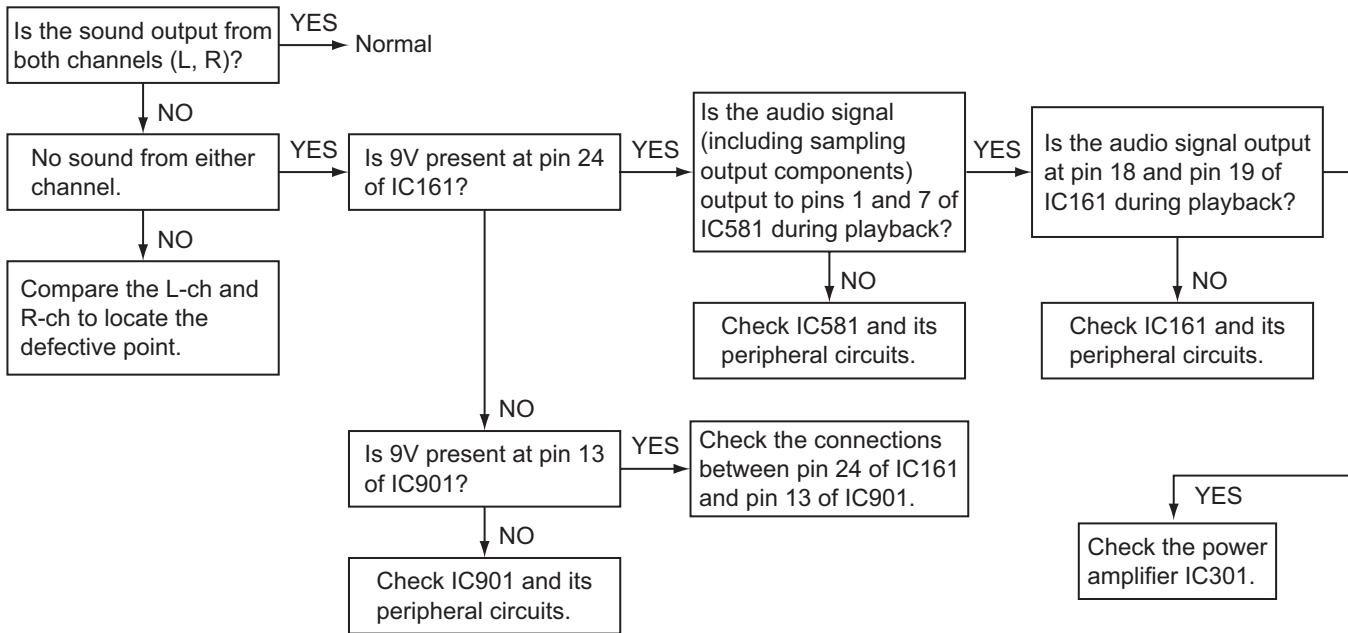
### 5.3 Spindle section



### 5.4 Tracking section

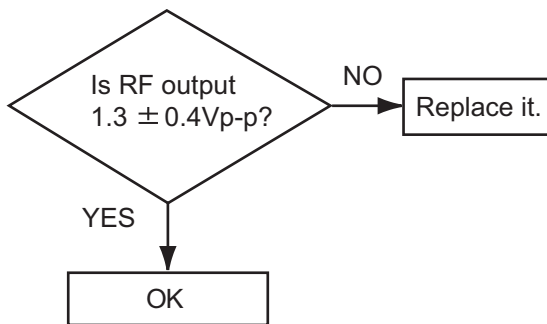


## 5.5 Signal processing section



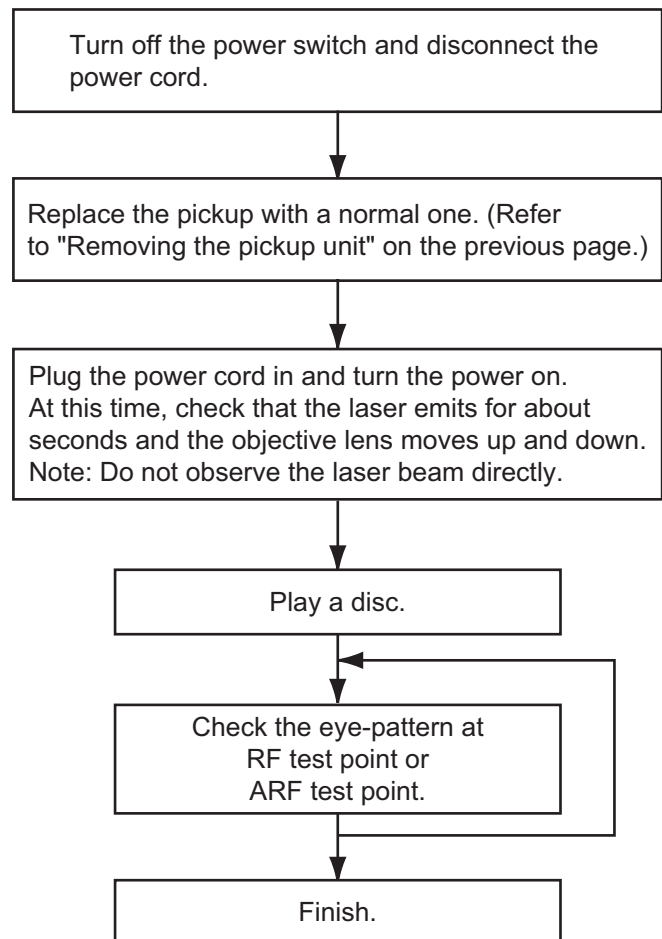
## 5.6 Maintenance of laser pickup

- (1) Cleaning the pick up lens  
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.
- (2) Life of the laser diode  
When the life of the laser diode has expired, the following symptoms will appear.
  - The level of RF output (EFM output: amplitude of eye pattern) will be low.

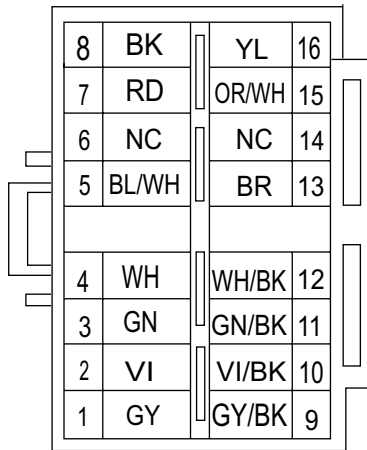


- (3) Semi-fixed resistor on the APC PC board  
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.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

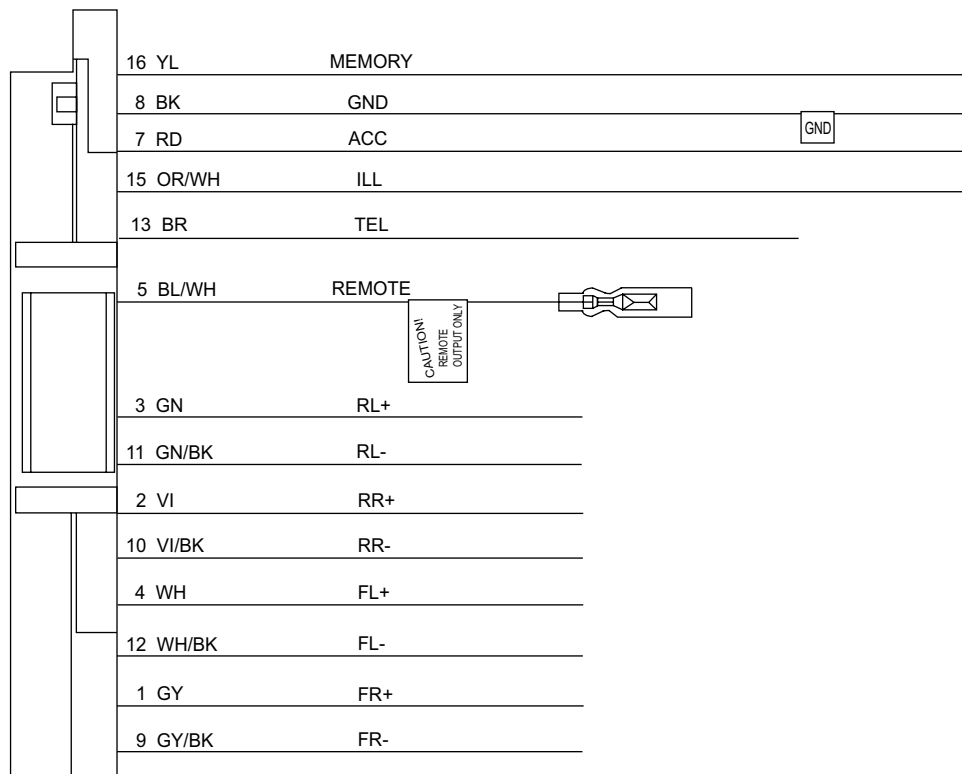
## 5.7 Replacement of laser pickup



5.8 16 PIN CORD DIAGRAM (for KD-AR770)

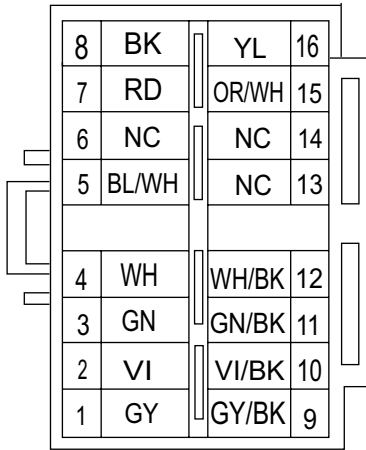


BK	Black	GN	Green
RD	Red	VI	Violet
BL	Blue	GY	Gray
WH	White	YL	Yellow
BR	Brown	OR	Orange

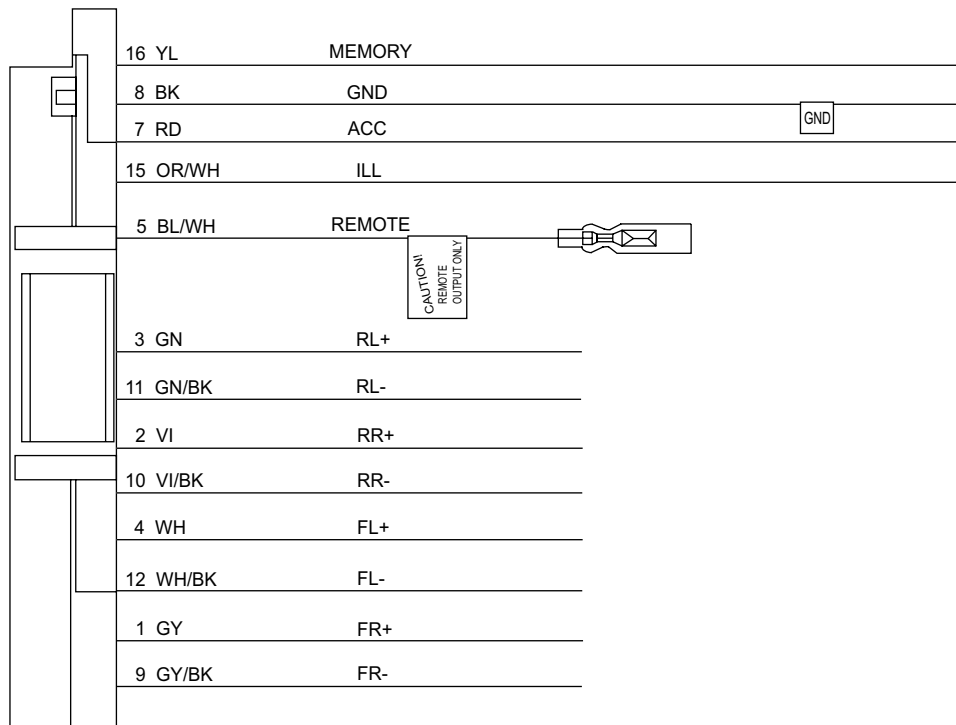


RR	Rear Right	REMOTE	Remote out
FR	Front Right	ACC	ACC Line
FL	Front Left	MEMORY	Memory Backup Battery +
RL	Rear Left	GND	Ground
TEL	Telephone muting	ILL	Illuminations Control

5.9 16 PIN CORD DIAGRAM (for KD-G720)

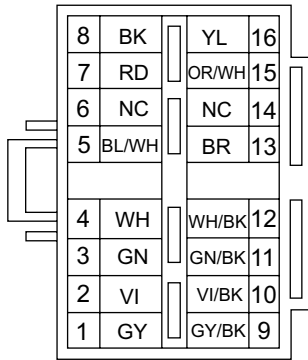


BK	Black	GN	Green
RD	Red	VI	Violet
BL	Blue	GY	Gray
WH	White	YL	Yellow
		OR	Orange

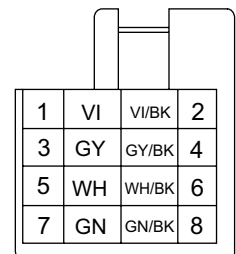
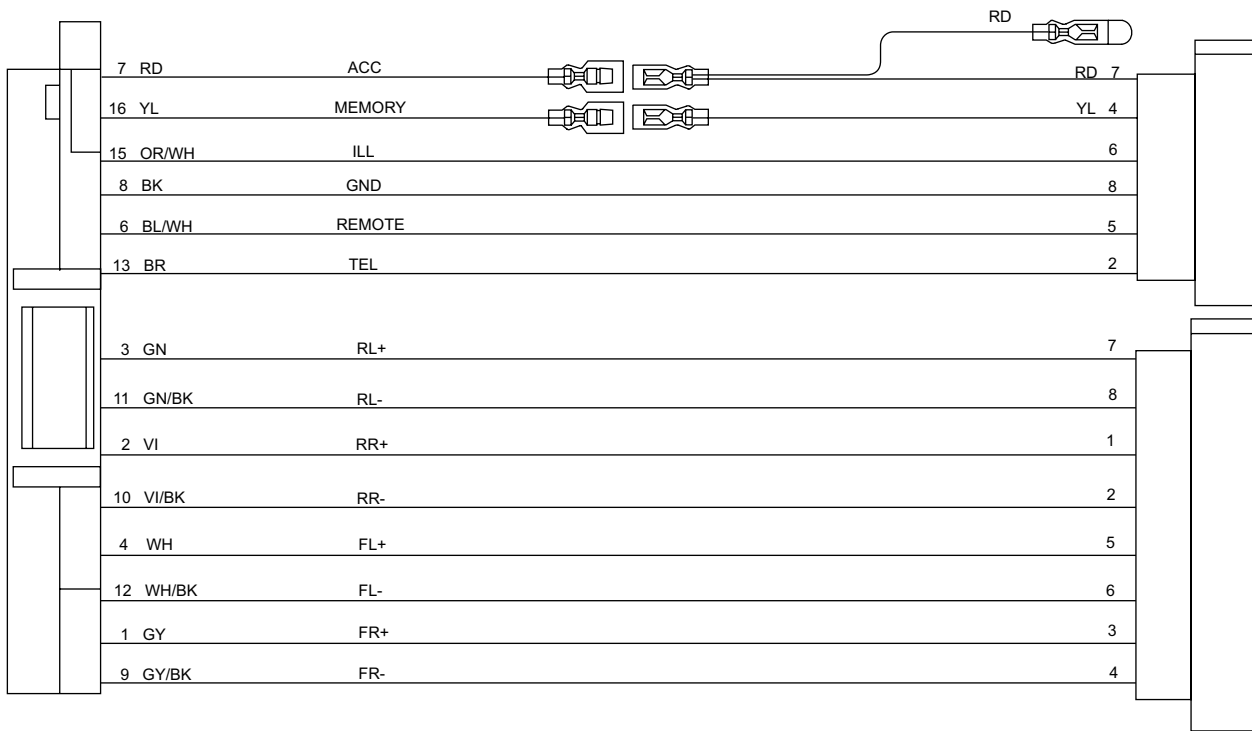
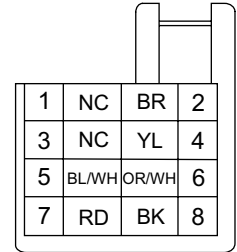


RR	Rear Right	REMOTE	Remote out
FR	Front Right	ACC	ACC Line
FL	Front Left	MEMORY	Memory Backup Battery +
RL	Rear Left	GND	Ground
		ILL	Illuminations Control

**5.10 16 PIN CORD DIAGRAM (for KD-G721,KD-G722,KD-G727)**

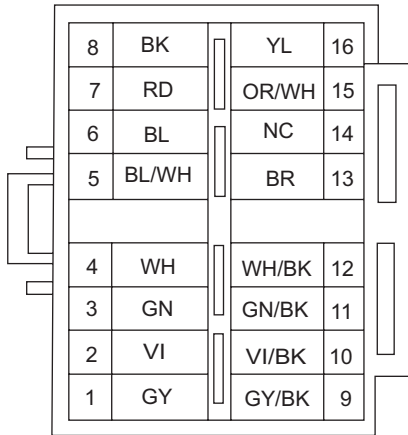


BK	Black	GN	Green
RD	Red	VI	Violet
BL	Blue	GY	Gray
WH	White	YL	Yellow
BR	Brown	OR	Orange

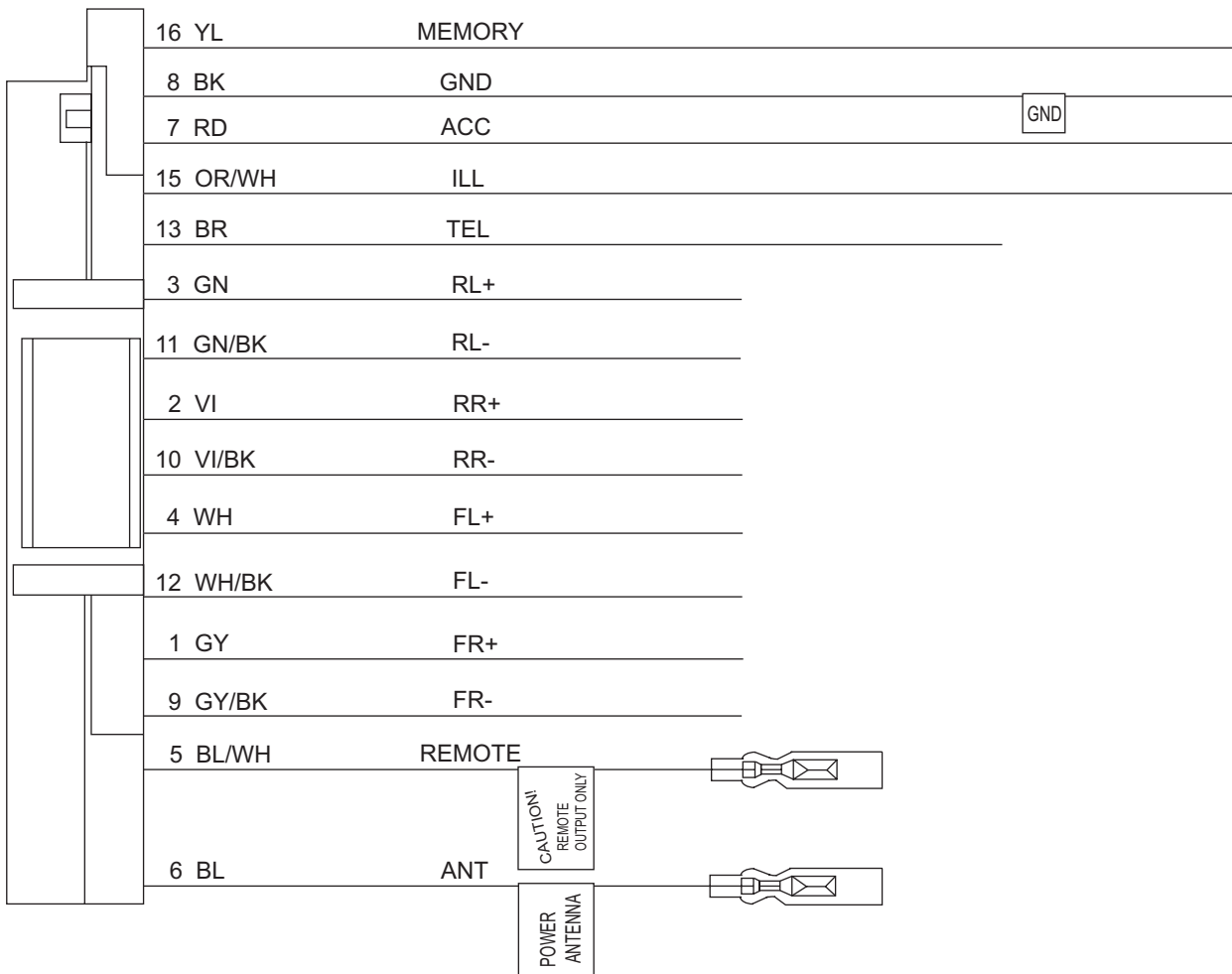


RR	Rear Right	ANT	Auto Antenna
FR	Front Right	ACC	ACC Line
FL	Front Left	TEL	Telephone Muting
RL	Rear Left	GND	Ground
REMOTE	Remote	MEMORY	Memory Backup Battery+
ILL	Illuminations Control		

5.11 16 PIN CORD DIAGRAM (for KD-G724,KD-G725)



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



RR	Rear Right	ANT	Auto Antenna
FR	Front Right	ACC	ACC Line
FL	Front Left	ILL	Illuminations Control
RL	Rear Left	GND	Ground
REMOTE	Remote out	MEMORY	Memory Backup Battery+
TEL	Telephone muting		





**JVC**

Victor Company of Japan, Limited  
Mobile Entertainment Business Group Mobile Entertainment Category 10-1,1chome,Ohwatari-machi,Maebashi-city,Gumma-ken, 371-8543,Japan

(No.MA247)