

LZH-100

INSTRUCTION MANUAL
KENWOOD CORPORATION

Overhead 10.2" Widescreen TFT with Built In DVD player

KENWOOD



Take the time to read through this instruction manual.

Familiarity with installation and operation procedures will help you obtain the best performance from the new DVD player.

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your KENWOOD dealer for information or service on the product.

Model LZH-100W Serial number _____

Designed in Japan

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Warning

⚠ CAUTION

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

KENWOOD CORPORATION
2967-3, ISHIKAWA-MACHI,
HACHIOJI-SHI
TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT
CONFORMS TO DHHS REGULATIONS NO.21 CFR
1040. 10, CHAPTER 1, SUBCHAPTER J.

⚠ Warning

Location : Bottom Panel

- To minimize the risk of improper installation, Kenwood recommends that the installation of this product be performed by an MECP-Certified professional installer.
Improper installation may cause damage to the vehicle or injury to the driver and occupants.
- Installation must be performed according to this product installation manual. Kenwood is not responsible for damages or injuries resulting from installation not performed strictly in accordance with the procedures described in this manual.
- Proper installation of this product may require the use of mounting hardware not included with this product.
- Use only new, unused and properly-sized fasteners to install this product. Do not use previously-installed or worn fasteners.
- No modifications to the product or mounting hardware are permitted.
- This product is designed to be used and viewed by rear seat passengers only. The monitor screen must not be visible to the driver. Viewing by the driver while operating the vehicle will create an unsafe condition.
- Kenwood does not recommend connecting hanging wires or cables to auxiliary connectors while the vehicle is in motion.
- This product must not obstruct the driver's rear view when installed or used.
- It is the responsibility of the purchaser and installer to comply with all applicable laws and regulations governing the installation and use of this product.
- Kenwood disclaims all liability for any property damage or personal injury that may result from improper or unintended installation or use of this product.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Safety precautions

WARNING

To prevent injury or fire, take the following precautions:

- Insert the unit all the way in until it is fully locked in place. Otherwise, it may fall out of place when jolted.
- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- If the unit starts to emit smoke or strange smells, turn off the power immediately and consult your Kenwood dealer.
- Do not connect the unit to the front monitor. This unit is for rear seat entertainment.

CAUTION

To prevent damage to the unit, take the following precautions:

- Make sure to ground the unit to a negative 12V DC power supply.
- Do not open the top or bottom covers of the unit.
- Do not install the unit in a spot exposed to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.
- Do not use your own screws. Use only the screws provided. If you use the wrong screws, you could damage the unit. When replacing a fuse, only use a new one with the prescribed rating. Using a fuse with the wrong rating may cause your unit to malfunction.

NOTE

- If you experience problems during installation, consult your Kenwood dealer.
- The illustrations of the display and the panel appearing in this manual are examples used to explain more clearly how the controls are used. Therefore, what appears on the display in the illustrations may differ from what appears on the actual display. Some of the illustrations on the display may represent something impossible in actual operation.

Lens Fogging

Right after you turn on the car heater in cold weather, dew or condensation may form on the lens in the DVD player of the unit. Called lens fogging, DVD may not be played in such condensation. If the unit still does not operate normally after while, consult your Kenwood dealer.

Cleaning the Unit

If the faceplate of this unit is stained, wipe it with a dry soft cloth such as a silicon cloth. If the faceplate is stained badly, wipe the stain off with a cloth moistened with neutral cleaner, then wipe neutral cleaner off.



- Applying spray cleaner directly to the unit may affect its mechanical parts. Wiping the faceplate with a hard cloth or using a volatile liquid such as thinner or alcohol may scratch the surface or erase characters.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision. Reverse engineering or disassembly is prohibited.






NOTE

This Class B digital apparatus complies with Canadian ICES-003.



Before use

Icons on the DVD discs

Icon	Description
	Indicates the region code where the disc can be played.
	Number of voice languages recorded with the audio function. The number in the icon indicates the number of voice languages.(Max. 8 languages)
	Number of subtitle languages recorded with the subtitle function. The number in the icon indicates the number of subtitle languages. (Max. 32 languages)
	Number of angles provided by the angle function. The number in the icon indicates the number of angles. (Max. 9 angles)
	Aspect ratios that can be selected. " LB " stands for letter Box and " PS " for Pan/Scan. In the example on the left, the 16:9 video can be converted into letter box video.

Region codes in the world



Playable discs

- CD-R
- DVD-R
- DVD-RW
- 8cm CD-R
- CD-RW
- DVD+R
- DVD+RW
- 8cm CD-RW

Playable media format

- MPEG1
- DVD-AC3
- Video CD Ver.1.0
- Video CD Ver.2.0
- MP3
- MPEG2
- DVD-Video
- Video CD Ver.1.1
- CD-DA
- JPG

Unplayable discs

This player cannot play back any of the following discs.

- DVD-ROM/DVD-RAM discs
- CDV discs (Only the audio part can be reproduced)
- CD-G/CD-EG/CD-EXTRA discs(Only the audio can be reproduced)

- HQ-VCD discs
- Photo CD discs

Also, you cannot play back the DVD-R/RW and DVD+R/RW discs if not recorded in the DVD-Video or DVD-Audio format.

Restrictions due to difference between discs

Some DVD and VCD discs can be played only in certain playback modes according to the intentions of the software producers. As this player plays discs according to their intentions, some functions may not work as intended by you.

Please be sure to read the instructions provided with each disc,

When an inhibition icon is displayed on the monitor, it indicates

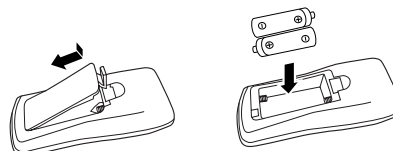
that the disc being played is under the restriction as described above.



About the remote

Loading the battery

1. Use two "AAA"- size batteries.
Open the cover while pressing downwards to remove it as illustrated.
2. Insert the batteries with the + and - poles aligned properly, following the illustration inside the case.



⚠ WARNING

- Store unused batteries out of the reach of children. Contact a doctor immediately if the battery is accidentally swallowed. Do not put the remote in a place where it moves when you drive. If it falls under the brake pedal, etc., it will hinder your driving, and cause danger.

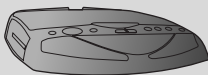


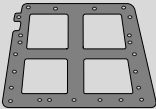
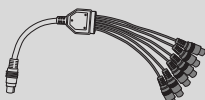
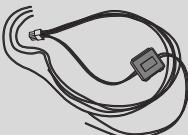

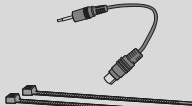

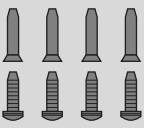
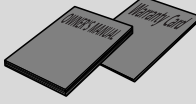
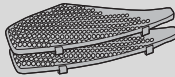
- ⚠ ▪ Do not set the remote in hot places such as on the dashboard.



- The provided batteries are intended for use in operation checking, and their service life may be short.
- When the remote controllable distance becomes short, replace both of the batteries with new ones.

Box contents

After purchasing this product, open the packaging and see if any of the components listed below are damaged or missing. If there is an abnormality, make an inquiry with your place of purchase. As these images are to facilitate the understanding of the consumer, they may differ from the actual conditions.

 Unit 1 EA	 Remote Control 1ea & Batteries 2EA	 Wireless Headphone 2EA	 Bracket 1ea & Screw 8EA
 A/V Input/Output Cable 1EA	 Power & Dome Lamp Connector 1EA	 A/V Input Cable(6m) 1EA	 Digital Audio Cable 1EA & Cable Tie 2EA
 Trim Ring 1EA	 Screw 4ea for Bracket 4ea for Unit	 Manual 1ea & Warranty Card 1EA	 Lamp Cover 2EA

About discs

Handling discs

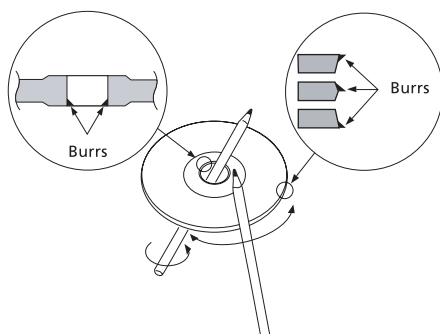
- Don't touch the recording surface of the disc.



- CD-R and CD-RW are easier to damage than a normal music CD. Use a CD-R/RW, DVD-R/RW or DVD+R/RW after reading the caution items on the package etc.
- Don't stick tape etc. on the disc.
Also, Don't use a disc with tape stuck on it.

When using a new disc

If the disc center hole or outside rim has burrs, use it after removing them with a ball point pen etc.

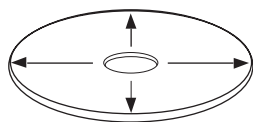


Disc accessories

Don't use disc type accessories.

Disc cleaning

Clean from the center of the disc and move outward.



Removing discs

When removing discs from this unit, pull them out horizontally.

Discs that can't be used

- Discs that aren't round can't be used.



- Discs with coloring on the recording surface or discs that are dirty can't be used.
- This unit can only play the CDs with



It may not correctly play discs which do not have the logo.

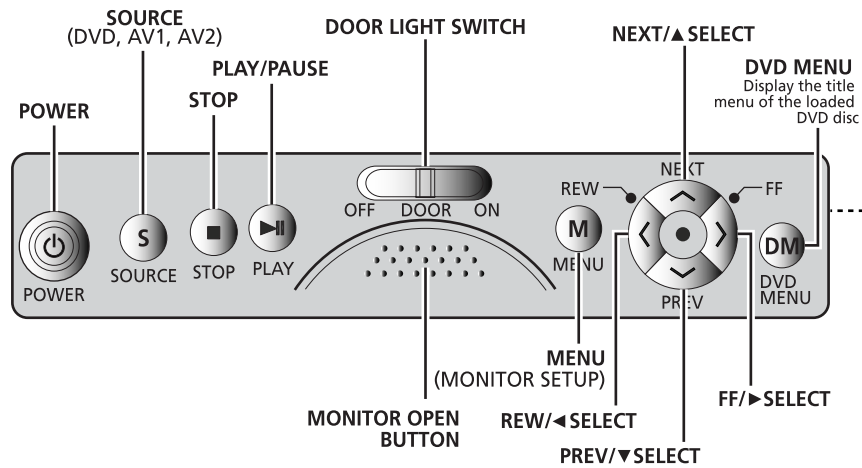
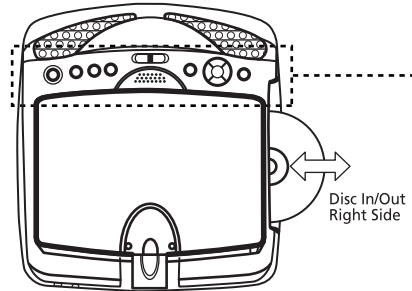
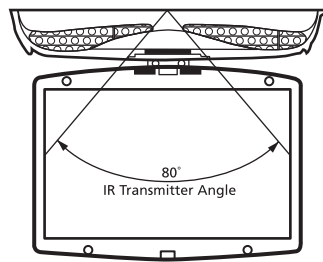
- A CD-R or CD-RW that hasn't been finalized can't be played. (For the finalization process, refer to your CD-R/CD-RW writing software and recorder instruction manual.)

Disc storage

- Don't place them in direct sunlight (on the seat or dashboard etc.) and where the temperature is high.
- Store discs in their cases.

Name and function of each part

UNIT

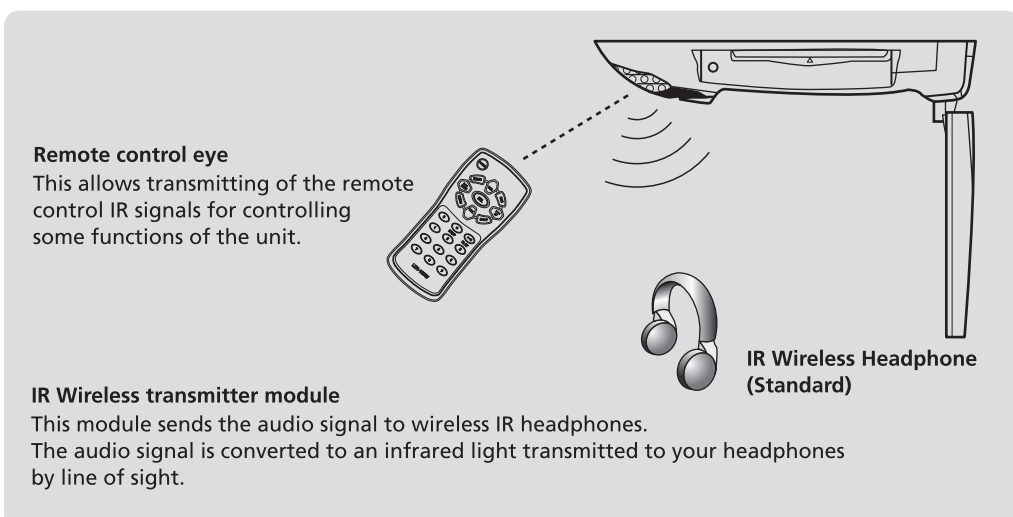
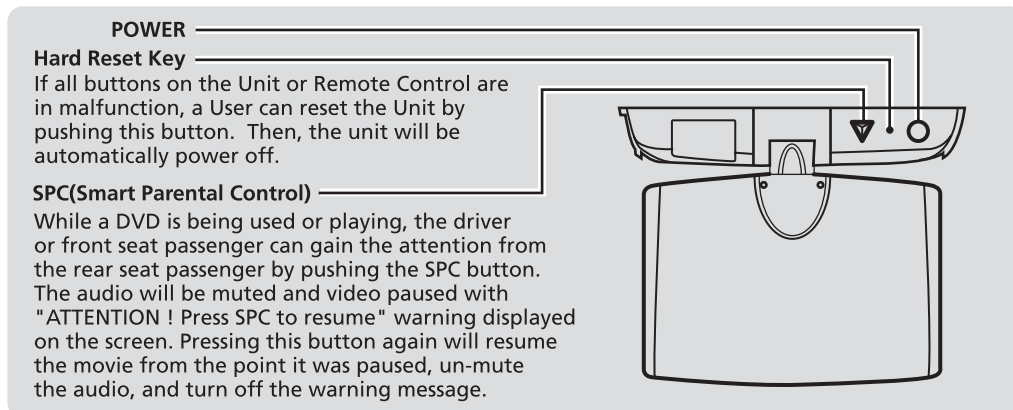
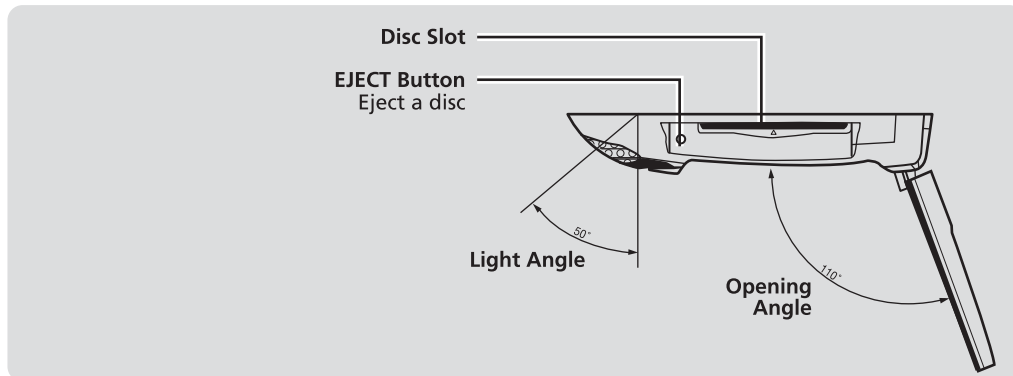


OFF : Light is off

DOOR : Light goes on when car doors are opened and goes off when car doors are closed.

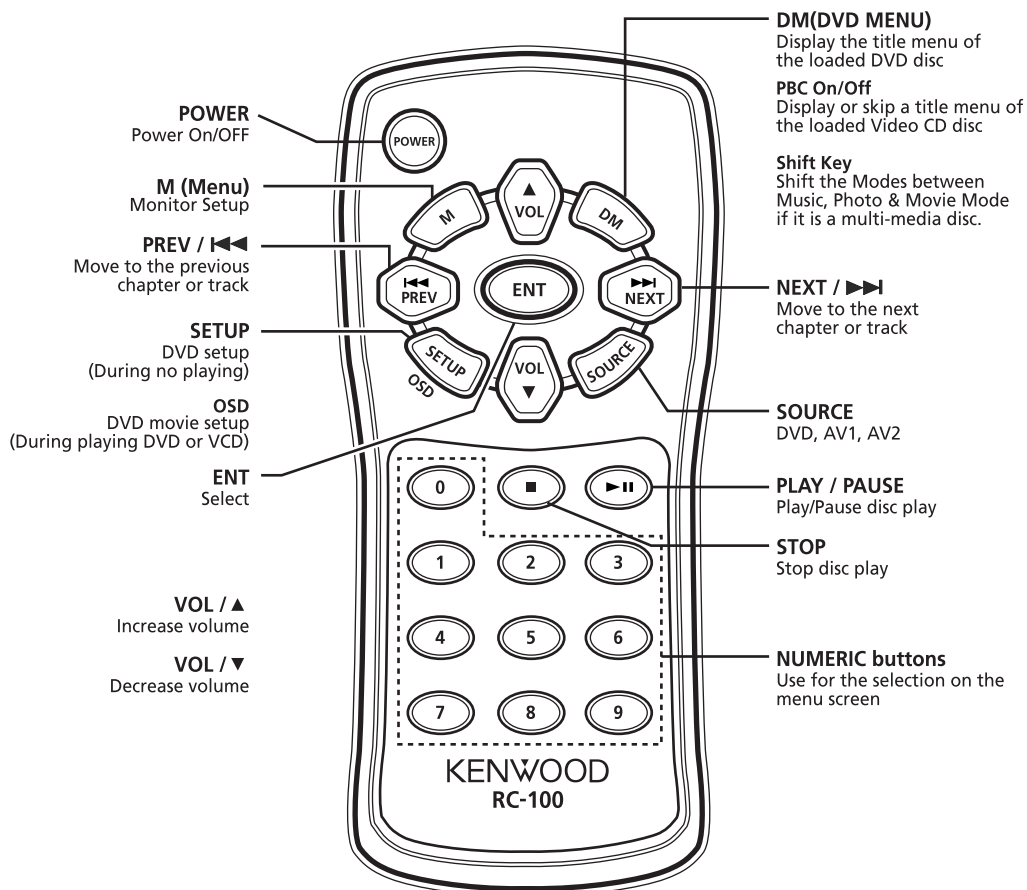
ON : Light is on and stays on until switch is moved to "DOOR" or "OFF" position.

Name and function of each part

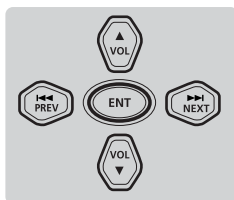


Name and function of each part

Remote Controller



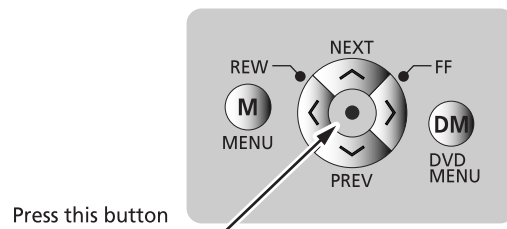
※ Special Tip



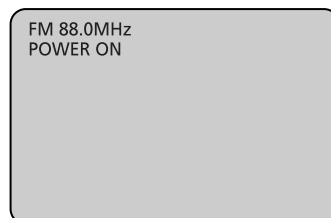
These arrow keys are useful for moving a cursor up/down or left/right while a User is changing the value & level on DVD Monitor Menu(M), DVD Setup(SETUP), DVD Title Menu(DM), DVD Movie Setup(OSD), Music Mode & Photo Mode.

FM transmitter for audio

In order to listen to the audio portion of the disc through the vehicle speakers, setup the settings once the unit has been installed.



1. Press the ● (dot) button to bring the function for FM transmitter on the screen of the unit.
 2. Press the up ▲ or down ▼ arrow buttons to turn the FM transmitter on or off.
 3. Press the left ◀ or right ▶ arrow buttons on the Unit to tune FM transmit frequency.
When the unit's FM frequency matches with vehicle audio head unit's FM frequency, the Audio will come out through vehicle speakers.
- Open FM frequency are FM 88.0MHz ~ 89.9MHz (Tuning By interval of 100KHz)

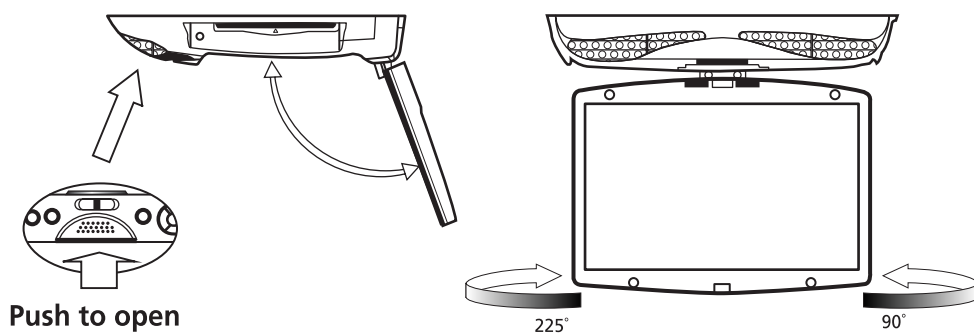


<Example>

How to play a DVD

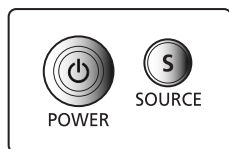
Releasing the Monitor

Push the open button (located at the front of your screen) and open the monitor to the desired level. You can also adjust the swivel angle.

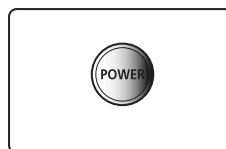


POWER and SOURCE select

1. Press the **POWER** button on either the remote control or the unit once to turn the power on. Press the same **POWER** button to turn your power off.



Unit



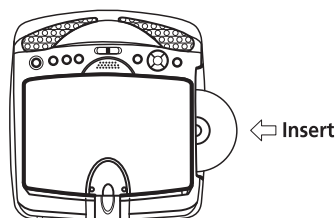
Remote Controller

2. Press the **SOURCE** button on the unit to achieve the desired mode. To change the source, press the **SOURCE** button repeatedly. You may select auxiliary mode (AV1, AV2) or DVD mode.



3. **Insert a DVD Disc**

Load a disc in the disc loading slot with the label side up, and it will be played automatically.



On Screen Display control

When the M (Menu) button on the Unit or the remote controller is pressed, the OSD will display the setting menu as follows:



PICTURE

Adjust for Brightness, Contrast, Saturation, Tint & Sharpness



OSD

Adjust for OSD Horizontal / Vertical position



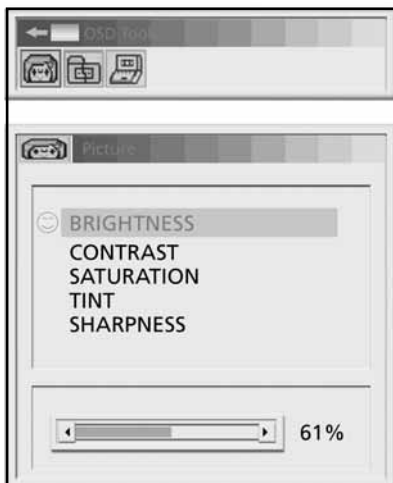
SETUP

Select for auto-application of Reset(Auto-setting for Screen)

Press the up▲ / down▼ arrow buttons on the the unit or remote controller to move the highlight cursor up / down in the menu list, and press the left ◀ or right ▶ arrow buttons to change the value / level while the menu OSD is still displayed on the screen.

On Screen Display control

PICTURE

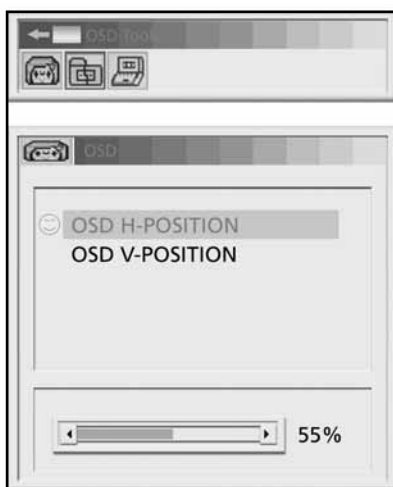


1. Use this menu to achieve the desired settings for **Brightness, Contrast, Saturation, Tint & Sharpness.**

- Brightness : Dim ↔ Bright
- Contrast : Contrast between light and shade
- Saturation : Brilliance & Hue of color
- Tint : Tint of color
- Sharpness : Sharpness of view

2. Change the values with the left/right arrow buttons after highlighting the function to control.

OSD



1. Use this menu to achieve the desired settings for **OSD H-Position & OSD V-Position.**

- OSD H-Position : Moving OSD menu horizontally
- OSD V-Position : Moving OSD menu vertically

2. Change the values with the left/right arrow buttons after highlighting the function to control.

On Screen Display control

SETUP



1. Use this menu to setup the enable/disable of auto application for **Reset**.
 - Reset : Brings its factory defaults always automatically for Brightness, Contrast, Saturation, Tint & Sharpness whenever the system power goes on.
2. Select ON/OFF with the left/right arrow buttons after highlighting the function to enable/disable.

DVD SETUP

When the SETUP button on the remote controller is pressed, the DVD OSD will display the DVD setup as follows:



Language

Select Language in OSD Menu, Disc Audio, Subtitle & Disc Menu



Display

Select Display mode(Screen frame) & TV Output(AUTO/PAL/NTSC)



Audio

Select Audio format(Dolby Digital), Sample frequency & Digital output On/Off



Lock

Input Rating & Password



Others

Select Load Default & Screen Saver

Press the up▲ / down▼ arrow buttons on the remote controller to move the highlight cursor up/down in the menu list, and press the left ◀ or right ▶ arrow buttons to change the value / level while the menu OSD is still displayed on the screen.

DVD SETUP

LANGUAGE



1. Use to setup Language Settings for **Menu, Disc Audio, Subtitle & Disc Menu**

- Menu Language : Language for OSD menu
- Disc Audio : Language for DVD movie
- Disc Subtitle : Select for Showing/Hiding of subtitle
- Disc Menu : Language for DVD movie menu

2. Select Language/values with the left/right arrow buttons after highlighting the menu to change.

DISPLAY



1. Use to achieve the desired settings for **Display & TV Output**.

- Display Mode : Selecting 4:3 Letterbox, 4:3 Panscan or 16:9 Widescreen.
- TV Output : Selecting Auto, PAL or NTSC.

2. Select values with the left/right arrow buttons after highlighting the menu to change.

Tip 2 : SCREEN DISPLAY



4:3 Letterbox



4:3 Panscan



16:9 Widescreen

AUDIO



1. Use to achieve the desired settings for **Audio Format(Dolby Digital), Sample Frequency & Digital Output**

- Dolby Digital : Selecting Bitstream or PCM
- Sample Frequency : Selecting 48KHz or 96KHz
- Digital Output : Selecting On / Off

2. Select values with the left/right arrow buttons after highlighting the menu to change.

DVD SETUP

LOCK



1. Use to achieve the desired settings for **Rating & Password**.

- **Rating** : Selecting Lock/Unlock for Parental mode. Determining how the unit re-acts to a movie disc according to rating.
- **Password** : Changing the factory setting password
※Password(Factory Default) : 0000

2. Select values with the left/right arrow buttons after highlighting the menu to change.

Tip 3 : Rating & Parental Lock



The parental lock is a rating limit system for DVD movies. It works with DVD discs that have been assigned a rating. The user can decide which ratings can be played without blocking.(The factory default is Unlock.)

OTHERS



1. Use to achieve the desired settings for **Load Default & Screen Saver**.

- **Load Default** : Loading the factory default for re-setting system.
- **Screen Saver** : Selecting Enable/Disable of Screen saver.
If it is on, Screen saver activates when the system is inactive for 5 minutes

2. Select values with the left/right arrow buttons after highlighting the menu to change.

DVD movie setup

When the SETUP(OSD) button on the remote controller is pressed, the DVD movie setup OSD will display DVD movie setup as follows:



Title

Shows current Title & total number of titles in the disc.



Chapter

Shows current Chapter.



Time

Shows Play Time.



Audio

Selects Audio Channel Format.
(Speaker Channel)



Subtitle

Selects Subtitle Language.



Angle

Selects Camera Shooting Angle

Press the up▲/ down▼ arrow buttons on the remote controller to move the highlight cursor up / down in the menu list, and press the left ◀ or right ▶ arrow buttons to change the value / level.

Music mode

When a user inserts Music Disc, the screen will show the belows.



ADD One

Add a selected song on the List, and move to the Program.



ADD All

Add all songs on the List, and move to the Program.



DELETE One

Delete a song from the Program.



DELETE All

Delete all songs from the Program.

Press the up ▲ / down ▼ arrow buttons on the remote controller, and moves the highlight cursor up▲ / down▼ on the List or the Program, and select the desired song or menu, and press the SEL button for adding or deleting songs.

※ *Special Tip*

In the Mode of Music or Photo, press the DM button to shift the Modes between Music, Photo & Movie Mode if it is a multi-media disc.

Photo mode

When a user inserts Photo Disc, the screen will show the belows.
In this mode, a user can enjoy photo previews as well as slide show.



<Photo mode main>



<Photo mode slideshow>



Start Slideshow

Press Slideshow button to change the screen to be entire view, and it starts the slideshow.



Change the speed of Slideshow <Fastest>

Press the speed button for changing the speed of Slideshow. >>> is the fastest mode in speed.



Manual change of the Slideshow <No Auto-sliding>

It is a non-auto-sliding mode.

※ Available Photo Format : JPG

Press the up ▲ / down ▼ arrow buttons on the remote controller, and move the highlight cursor up ▲ / down ▼ in the List or Menu, and see the desired photo from the preview screen or slideshow on the entire screen.

Photo mode

※ Special Tip

The number of photo or music format files detectable in a CD disc is limited.

When you write a CD with JPG, MP3 or MPG files which are representative photo, music & Video formats, you are sure to remind the following principles.

No. 1 The detectable number of the files in a CD disc is max. 199 ea respectively in format.

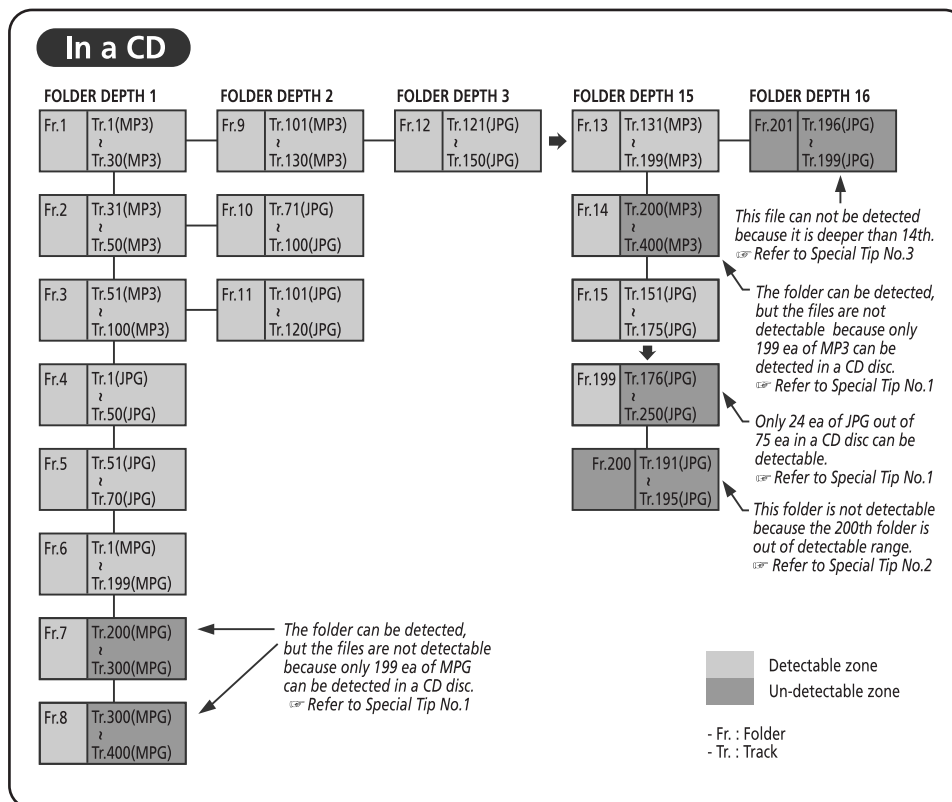
No. 2 The detectable number of folder in a CD disc is max. 199 ea.

No. 3 The detectable depth level of folder in a CD disc is max. 14 ea.

For example,

- if there are 250 ea of MP3 in a CD disc, the unit detects only 199 ea out of 250 ea.
- if there are 250 ea of MP3 and 250 ea of JPG in a CD disc, the unit detects only 199 ea of MP3 and 199 ea of JPG.
- if there are 250 ea of folder and 150 ea of MP3 are in the 240th folder, the folder would not be detected at all according to the above principle No.2.
- if there are 100 ea of folder and 100 ea of MPG are in the 20th depth folder, the MPG would not be detected at all according to the above principle No. 3.

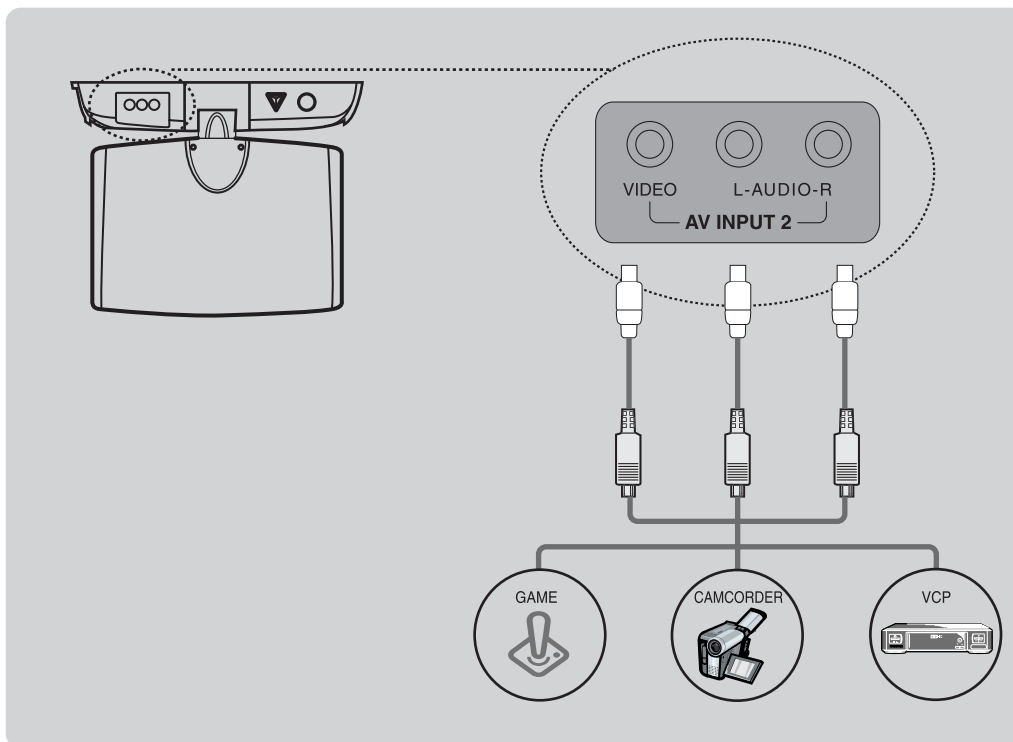
< Table : Detectable number of folders & files in a CD disc >



Connecting external devices

You can connect several external devices, as shown in the diagram below.

1. Connect all devices correctly like shown on the below diagram, and be sure to shut off all power prior to connection.



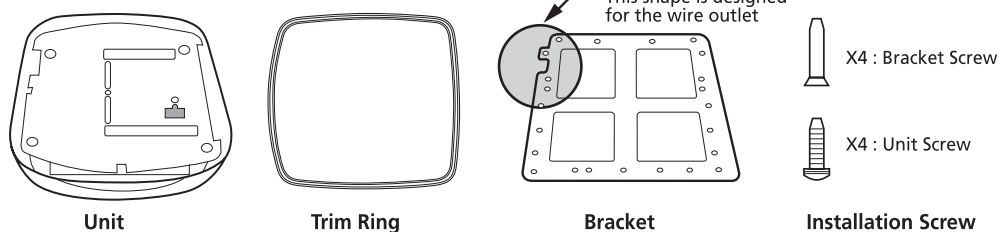
2. Turn on the power of the unit and other devices
3. Press the **SOURCE** button on the Unit to achieve the desired AV mode.
To change the source, press the **SOURCE** button repeatedly. You may select auxiliary mode(AV1, AV2).



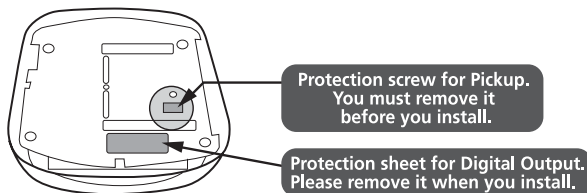
4. Play an external device.

Installation (Professional installation recommended)

1. Unpack and check the contents.

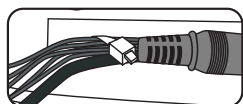
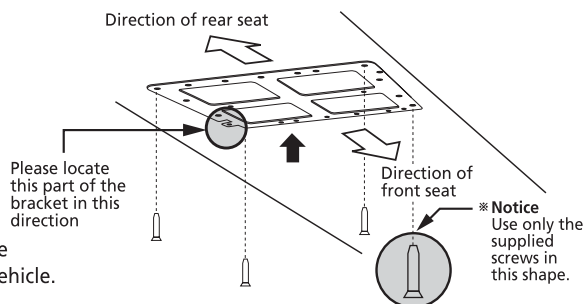


2. Remove the protection screw before you install the unit.



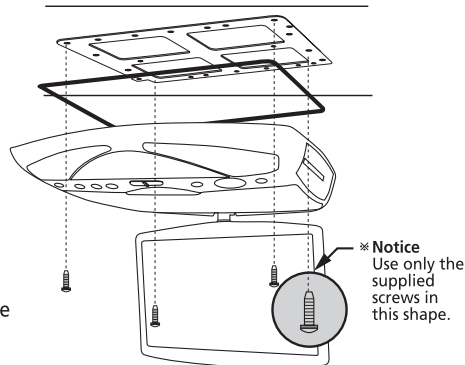
3. Attach the metal support bracket to the ceiling support beam(s) of your vehicle by using the supplied screws. Take extra care not to penetrate the roof of your vehicle.

4. Connect the wiring harness (according to the diagram under "Connection diagram" on page 25) to the wires located in the dome light of your vehicle.



※ **Special Tips**
Use the provided cable tie to fasten the Cables from the unit.

5. Open the left/right dome Lamp covers carefully and flip the monitor screen down, and you can find the screw holes inside dome Lamp covers and on the main body of unit. Screw the main unit to the support bracket by using the supplied screws. After installation, Please make sure to place the lamp covers back to the unit.



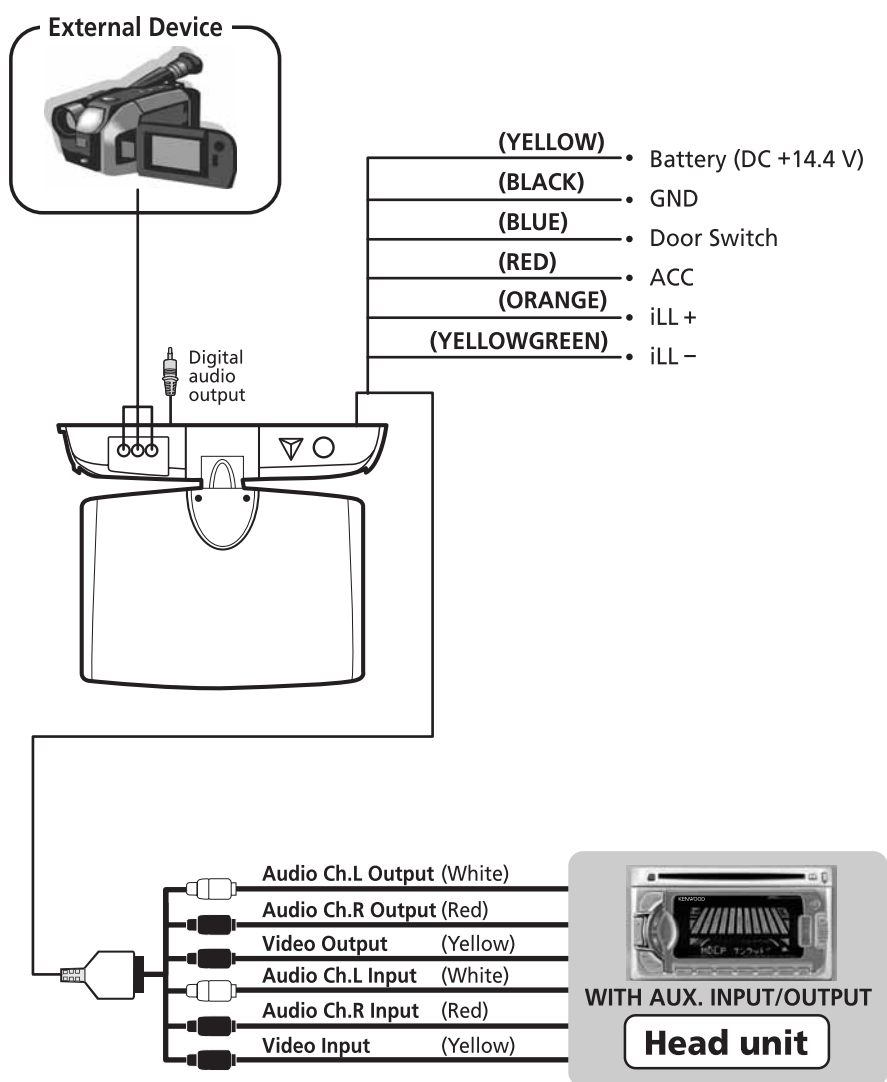
※ Special Tips

Regarding to Trim Ring, a user can choose either of the below installation methods.



Case A. Installation with Bracket only

Case B. Installation with Bracket and Trim Ring. (Using Trim Ring recommended)

Connection diagram



Troubleshooting

TROUBLE		CORRECTIVE ACTION
No Power	➡	Check that DC power cable is connected properly
No Picture	➡	1. Make sure that the equipment is connected properly. 2. Check that the connected monitor is turned on.
Stopped picture	➡	1. Check that the video cable is connected. 2. Check that the monitor is turned on.
The playback picture is poor.	➡	Clean the disc.
No color	➡	Adjust the video system by changing TV output mode (AUTO, PAL, NTSC)  Refer to Page 17(Display Setting)
The remote control doesn't work properly.	➡	Remove any obstacles between the remote controller and remote control sensor of the unit. Operate the remote control at a closer distance to the unit.
'Disc Error' is displayed on the screen.	➡	1. Turn the power off, then turn it on. 2. Turn the power off, disconnect the power plug, then reconnect it.
No function with the remote control	➡	Check the batteries and make sure that the batteries are fresh & new, or have enough battery life.
Unable to insert Disc (Only at the first Insertion after installation)	➡	Check if the protection screw was removed before installation of the unit.
No function with all buttons on the unit & remote control	➡	Press the Hard Reset Key,  Refer to Page 9 (Name & function of each Part)

Check Point

When a disc is brought from a cold environment to a hot one, there may be steam on the face of the disc, or water will appear on the pickup lens. It will affect the play.

1. Remove the disc from the DVD player.
2. Turn on the power and leave it on for an hour to vaporize the condensation.

Changing the Dome Lamp Bulbs

1. Use a screwdriver to pry the dome lamp cover off.
2. Remove the burned-out bulb.
3. Replace the bulb with a 3-Watt(12V) Type T-8 Wedge bulb.(φ8.5X29mm(Length))
4. Snap the dome lamp cover back on.

Specifications

Operating Voltage	DC 12V
Power Consumption	23 W
Screen Format	16:9 Wide, 4:3 adjustable with OSD menu
Resolution	2400 (W) X 480 (H) 1,152,000 pixels (RGB)
Brightness	400 cd / m ²
Video System	NTSC / PAL
A/V Input	Audio : 2.0 Vrms (10K Ohm), Video : 1.0 V p-p
A/V Output	Audio : 1.2 Vrms, Video : 1.0 V p-p(75 Ohm)
Screen size	10.2 Inch (Diagonal)
IR Transmitter	YES
Remote Control	YES
Dimensions	285mm(W) X 310mm(D) X 54mm(H) 11.2"(W) X 12.2"(D) X 9.1"(H)

NOTE

FCC Rule

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These Limits are designed to provide reasonable protection against harmful interference when the equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Macrovision

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INSTRUCTION MANUAL
KENWOOD CORPORATION