

MBP110V/F7

BD / DVD / CD Player with Video Cassette Player



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INTRODUCTION

Safety Instructions

The model and serial numbers of this unit may be found on the cabinet.
You should record and retain those numbers for future reference.

Model No.: _____

Serial No.: _____

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The symbol for CLASS II (Double Insulation)

The important note is located on the rear or bottom of the cabinet.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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 manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

RADIO-TV INTERFERENCE

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 generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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:

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

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

Disconnect the mains plug to shut off when find trouble or not in use. The mains plug shall remain readily operable.

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CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
WARNING: Batteries (Battery pack or battery installed) shall not be exposed to excessive heat such as sunshine, fire, or the like.

LASER SAFETY

This apparatus employs a laser. Only a qualified service person should remove the cover or attempt to service this apparatus, due to possible eye injury.

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

CAUTION: Visible and invisible laser radiation when open and interlocks defeated. Do not stare into beam.

LOCATION: Inside, near the deck mechanism.

IMPORTANT COPYRIGHT INFORMATION

Unauthorized copying, broadcasting, public performance and lending of discs are prohibited. This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

Do not place the unit on the furniture that is capable of being tilted by a child and an adult leaning, pulling, standing or climbing on it. A falling unit can cause serious injury or even death.

To Avoid the Hazards of Electrical Shock and Fire

- Do not handle the AC power cord with wet hands.
- Do not pull on the AC power cord when disconnecting it from an AC outlet. Grasp it by the plug.
- Do not put your fingers or objects into the unit.
- Do not put your fingers or objects into the cassette compartment.

Location and Handling

- Do not install the unit in direct sunlight, near strong magnetic fields, or in a place subject to dust or strong vibration.
- Avoid a place with drastic temperature changes.
- Install the unit in a horizontal and stable position. Do not place anything directly on top or bottom of the unit. Depending on your external devices, noise or disturbance of the picture and/or sound may be generated if the unit is placed too close to them. In this case, please ensure enough space between the external devices and the unit.
- Depending on the environment, the temperature of this unit may increase slightly. This is not a malfunction.
- Be sure to remove the media and unplug the AC power cord from the outlet before carrying the unit.
- This apparatus should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided. Make sure to leave a space of 7.8 inches (20cm) or more around this apparatus.

Dew Condensation Warning

- Dew condensation may form inside the unit in the following conditions. If so, do not use this unit at least for a few hours until its inside gets dry.
 - The unit is moved from a cold place to a warm place.
 - Under conditions of high humidity.
 - After heating a cold room.

Note about Recycling

- This unit's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.
- Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.



Notice for Progressive Scan Output

- Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 480 progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 480p BD/DVD player, please contact our customer service center.

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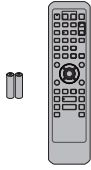
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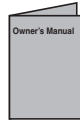
Supplied Accessories



Remote Control × 1
(NC112UD)
Batteries (AA, 1.5V × 2)



RCA audio / video cables
(WPZ0102TM018 /
WPZ102SCP001)



Owner's Manual (EN/ES/FR)
(1VMN29813)



Quick Start Guide
(1VMN29814)

Trademark Information

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HIGH-DEFINITION MULTIMEDIA INTERFACE

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DIGITAL PLUS

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dts-HD[™]
Advanced Digital Out

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AVCHD[™]

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Features

Full high-definition video playback

Watch movies in the highest picture quality available for your HDTV. This unit offers full high-definition video playback up to 1080p resolution for an amazing viewing experience. A highly detailed picture and increased sharpness delivers a more true-to-life picture.

Upconvert DVD/TAPE for enhanced picture quality

Your current DVD/TAPE will look even better than before thanks to video upconversion. Upconversion will increase the resolution of standard definition DVD/TAPE to high definition up to 1080p over an HDMI connection. The picture will be less jagged and more realistic for a near high-definition experience.

Enjoy your content on different kinds of media

Full backwards compatibility with DVD, CD and SD card ensures that you can continue to enjoy your current audio-video collection. Additionally, you can view JPEG images.

Listen to the rich multi-channel surround sound

Multi-channel surround sound, which recognizes real-to-life sound and makes you feel like you are really there.

PIP (BONUSVIEW)

Some BD-videos have the PIP function which enables you to display the secondary video in the primary video. You can call up the secondary video by pressing **[MODE]** whenever the scene contains the secondary video.

Pop-up menu

Some BD-videos have a pop-up menu which is a navigation menu that can be called up and operated on the TV screen without interrupting the playback. You can call up the pop-up menu by pressing **[POP MENU/MENU]**. Contents in the pop-up menu vary depending on the disc.

Rapid playback

Playback in slightly faster speed while keeping the sound output.

Rapid playback is available only on discs recorded in the Dolby Digital format.

Playing back the contents from an SD Memory Card

You can play back AVCHD / JPEGs stored in an SD Memory Card.

You can store picture-in-picture commentary, subtitles or other extras for BD-ROM Profile 1 ver.1.1 files in an SD Memory Card and play back with the BD-video.

Playing back AVCHD files

This unit supports playback of AVCHD format files (new format for high definition video camcorders) recorded on disc / SD card. Your high definition personal archive is playable in HD quality.

Easy and simple connection to your HDTV via HDMI

Connect this unit to your HDTV with one single HDMI (High-Definition Multimedia Interface) cable. It is recommended to use a High Speed HDMI cable for better compatibility. The high definition video output signal will be transferred to your HDTV without conversion to analog signals, so you will get excellent picture and sound quality, completely free from noise.

Thanks to other multiple outputs, you can also easily connect to your home theater system or amplifier.

HDMI 1080p24 output (BD only)

This unit is equipped with a feature which can provide the smooth movement in the playback of film originated material with the frame rate of 24 frames per second with progressive scan. (Available only when the TV is connected by an HDMI cable and compatible with 1080p24 frame input.)








Refer to "HDMI Video Resolution" in "FUNCTION SETUP" on page 31.

Copyright protection system

To play back the digital video images of a BD / DVD via an HDMI connection, it is necessary that both the unit and the TV (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your TV (or AV amplifier) for more information.

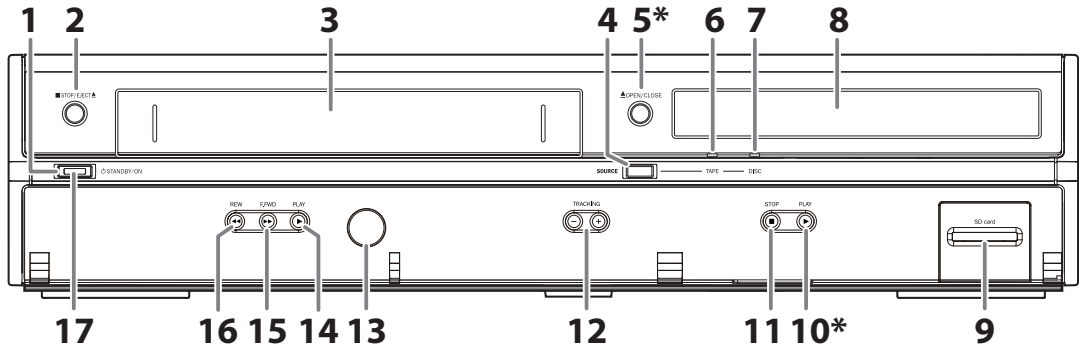
Symbols Used in this Manual

To specify for which media type each function is, we put the following symbols at the beginning of each item to operate.

Symbol	Description
	Description refers to BD-video and BD-RE (ver.2.1) / BD-R (ver.1.1/1.2/1.3) recorded in BDMV format
	Description refers to DVD-video
	Description refers to audio CD / DTS-CD
	Description refers to DVD-RW/-R and SD Memory Card with AVCHD files
	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and SD Memory Card with JPEG files
	Description refers to VHS tapes Use only cassettes marked VHS ()

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.

Front Panel



(*) The unit can also be turned on by pressing these buttons or inserting a cassette tape.

- 1. ⏻ STANDBY/ON button**
 - Press to turn on the unit, or to turn the unit into the standby mode. (To completely turn off the unit, you must unplug the AC power cord.)
 - Press and hold for 10 seconds to shut down the unit.
- 2. ■ STOP/EJECT ▲ button (TAPE)**
 - When the unit is in stop mode, press to remove the cassette tape from the cassette compartment.
 - Press to stop cassette tape playback.
- 3. Cassette compartment (TAPE)**
 - Insert a cassette tape here.
- 4. SOURCE button**
 - Press to select the component you wish to operate.
- 5. ▲ OPEN/CLOSE button***
 - Press to open or close the disc tray.
- 6. TAPE indicator**
 - Lights up when TAPE mode is selected.
- 7. DISC indicator**
 - Lights up when DISC mode is selected.
- 8. Disc tray**
 - Place a disc when opening the disc tray.
- 9. SD card slot**
 - Insert an SD Memory Card and play back the contents in it.
- 10. ► PLAY button* (DISC)**
 - Press to start or resume playback.
- 11. ■ STOP button (DISC)**
 - Press to stop playback.
- 12. TRACKING -/+ buttons (TAPE)**
 - Press to adjust the tracking manually.
- 13. Infrared sensor window**
 - Receive signals from your remote control so that you can control the unit from a distance.
- 14. ► PLAY button (TAPE)**
 - Press to start a playback of a cassette tape.
- 15. ►► F.FWD button (TAPE)**
 - Press to rapidly advance the cassette tape, or view the picture rapidly in forward during playback (forward search).
- 16. ◀◀ REW button (TAPE)**
 - Press to rewind the cassette tape, or to view the picture rapidly in reverse during playback (rewind search).
- 17. ⏻ STANDBY/ON indicator**
 - Lights up when the power is in the standby mode.

Selecting DISC or TAPE Operation

You must first select either DISC or TAPE operation.

DISC mode

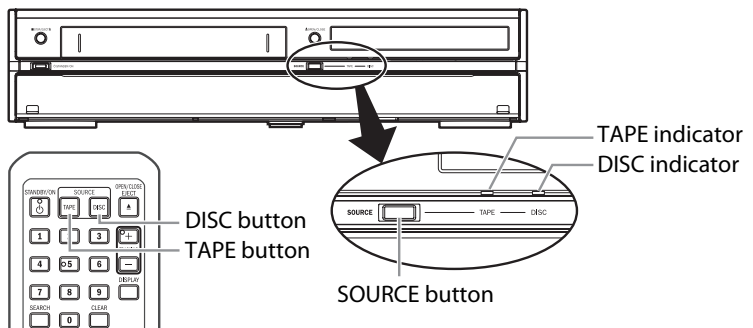
Press [DISC].

(The DISC indicator will illuminate.)

TAPE mode

Press [TAPE].

(The TAPE indicator will illuminate.)

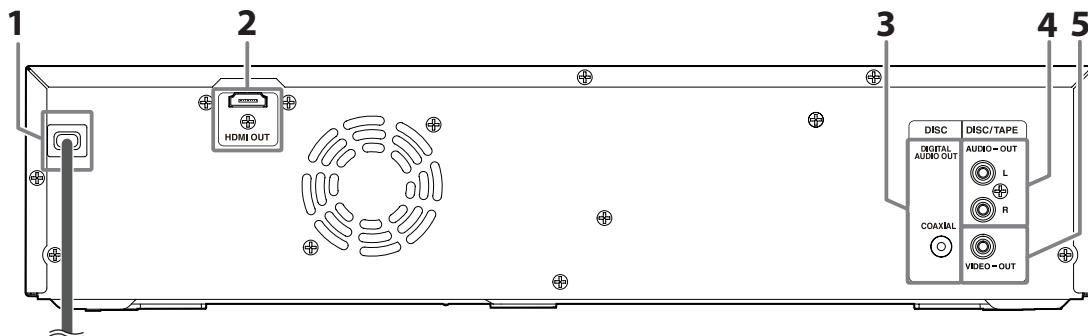


Note

- Playback will stop when you change the output mode.

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Rear Panel



1. AC power cord

- Connect to a standard AC outlet to supply power to this unit.
- Unplug this cord from the AC outlet to completely turn off the unit.

2. HDMI OUT jack

- Use to connect a TV with an HDMI compatible port with an HDMI cable.

3. DIGITAL AUDIO OUT (COAXIAL) jack (DISC)

- Use to connect an AV receiver / amplifier, Dolby Digital / DTS decoder or another device with a digital audio coaxial input jack used with a digital audio RCA cable.

4. AUDIO-OUT jacks

- Use to connect a TV, an AV receiver / amplifier or other device with an RCA audio cable.

5. VIDEO-OUT jack

- Use to connect a TV, an AV receiver or other device with an RCA video cable.

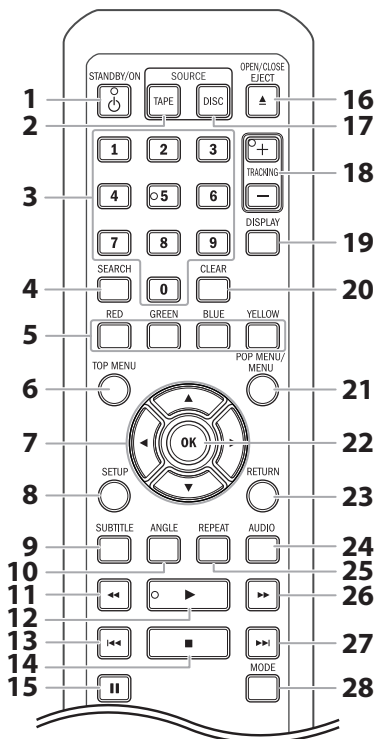
Caution

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

Note

- This unit does not have the RF modulator.
- DIGITAL AUDIO OUT (COAXIAL) jack can only be used for DISC playback.
- This unit does not support fun-Link (HDMI CEC) functions.

Remote Control



1. STANDBY/ON button

- Press to turn on the unit, or to turn the unit into the standby mode. (To completely turn off the unit, you must unplug the AC power cord.)

2. TAPE button

- Press to select the TAPE (VCP) output mode.

3. Number buttons (DISC)

- Press to enter the title, chapter, track or file number.
- Press to enter values in the input field.

4. SEARCH button

- Press to display the search menu.

5. RED / GREEN / BLUE / YELLOW button (DISC)

- Press to select items on some BD menus.
- When file list / thumbnail list is shown, press to switch between pages.

6. TOP MENU button (DISC)

- Press to display the top menu.

7. ▲ / ▼ / ◀ / ▶ buttons

- Press to select items or settings.

8. SETUP button

- Press to display the setup menu.

9. SUBTITLE button (DISC)

- Press to display the subtitle menu.

10. ANGLE button (DISC)

- Press to access various camera angles on the disc.
- Press to rotate the JPEG files clockwise by 90 degrees.

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11. ◀◀ (reverse) button

DISC mode:

- During playback, press to fast reverse the playback.

TAPE mode:

- During playback, press to view the picture rapidly in reverse.
- Press to fast reverse the cassette tape in stop mode.

12. ▶ (play) button

- Press to start playback or resume playback.

13. ◀◀ (skip) button (DISC)

- During playback, press once to return to the beginning of the current title, chapter or track.
- During playback, press twice to return to the previous title, chapter or track.
- During the JPEG playback, press to return to the previous file.

14. ■ (stop) button

- Press to stop playback.

15. || (pause) button

- Press to pause playback.
- When playback is in pause mode, press repeatedly to forward the playback step by step.

16. OPEN/CLOSE EJECT ▲ button

DISC mode:

- Press to open or close the disc tray.

TAPE mode:

- Press to remove the cassette tape from the cassette compartment.

17. DISC button

- Press to select the DISC output mode.

18. TRACKING -/+ buttons (TAPE)

- Press to adjust the tracking manually.

19. DISPLAY button

DISC mode:

- Press to display the on-screen display menu.

TAPE mode:

- Press to display the current tape counter.

20. CLEAR button

DISC mode:

- Press to clear the information once entered or to cancel the programming for audio CD, etc.

TAPE mode:

- Press to reset the tape counter.

21. POP MENU/MENU button (DISC)

- Press to display the pop-up menu / disc menu.

22. OK button (DISC)

- Press to confirm or select menu items.

23. RETURN button (DISC)

- Press to return to the previously displayed menu screen.

24. AUDIO button

DISC mode:

- Press to display the audio menu.

TAPE mode:

- During the playing of a Hi-Fi video tape, press to change the audio out setting to Hi-Fi or mono.

25. REPEAT button

DISC mode:

- Press to toggle between various repeat modes.

TAPE mode:

- Press to set or release the auto repeat playback. In the auto repeat playback mode, tape is played to its end, the tape will rewind to the beginning and start playback itself.

26. ▶▶ (forward) button

DISC mode:

- During playback, press to fast forward the playback.
- In pause mode, press to slow forward the playback.

TAPE mode:

- During playback, press to view the picture rapidly in forward.
- Press to fast forward the cassette tape in stop mode.
- When playback is paused, press to view the cassette tape in slow motion.

27. ▶▶| (skip) button (DISC)

- During playback, press to skip to the next title, chapter, track or file.

28. MODE button (DISC)

- During BD, DVD or AVCHD playback, press to display the setting for the rapid playback and the picture adjustment.
- During BD, DVD, CD and AVCHD playback, press to display the setting for the virtual surround.
- During BD playback, press to turn the picture-in-picture feature on or off (only applicable to BD-video which supports the PIP function).
- During the JPEG playback, press to display menus for changing the visual effect for switching the image or changing the size of the image.
- In stop mode with BD inserted, press to display a menu for setting the BD audio mode.
- In stop mode with audio CD or JPEG files inserted, press to display menus for program and random playback.

Note

- If you turn off this unit, [OPEN/CLOSE EJECT ▲] on the remote control is not available. Be sure to use [▲ OPEN/CLOSE] or [■ STOP/EJECT ▲] on the front panel.

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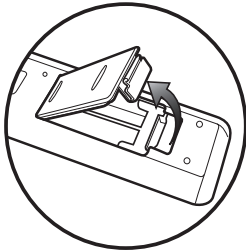
OTHERS

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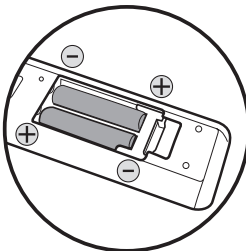
Installing the Batteries in the Remote Control

Install AA (1.5V) battery × 2 matching the polarity indicated inside battery compartment of the remote control.

1) Open the cover.

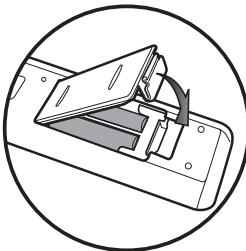


2) Insert batteries.



Make sure to match + and - on the batteries to the marks indicated in the battery compartment.

3) Close the cover.



Caution

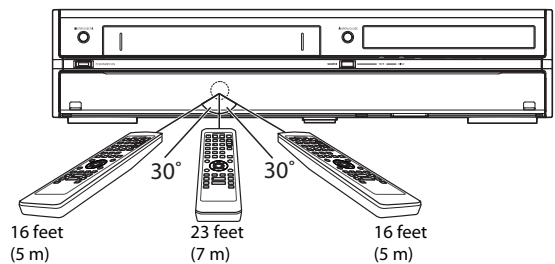
Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

- Do not mix new and old batteries together.
- Do not mix alkaline, standard (carbon-zinc), or rechargeable (ni-cad, ni-mh, etc) batteries.
- Do not use different kinds of batteries together. Although they may look similar, different batteries may have different voltages.
- Make sure that the + and - ends of each battery match the indications in the battery compartment.
- Remove batteries from battery compartment that are not going to be used for a month or more.
- When disposing of used batteries, please comply with governmental regulations or environmental public rules that apply in your country or area. (Refer to page 3.)
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

Using a Remote Control

Remote Control Usage Guidelines:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the infrared sensor window of the unit.
- Remote controls for different devices can interfere with each other. Avoid using remote controls for other devices located close to the unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
 - **Line of sight:** approx. 23 feet (7 m)
 - **Either side of the center:** approx. 16 feet (5 m) within 30°
 - **Above:** approx. 16 feet (5 m) within 15°
 - **Below:** approx. 10 feet (3 m) within 30°

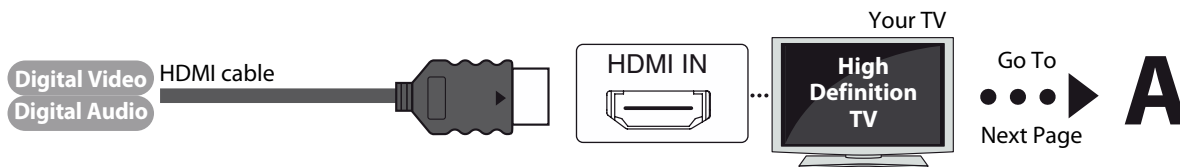


CONNECTIONS

Connection to the TV

- 1 Choose the appropriate connection, then proceed to the corresponding instruction (A or B) on the next page.

Best (Supports up to 1080i / 1080p, 1080p24 resolution.)



No analog audio connection required.

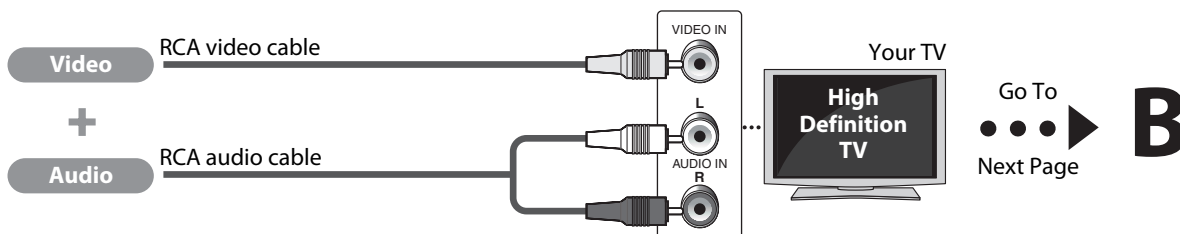
No supplied cables are used in this connection:

Please purchase the necessary cables at your local store.

Use an HDMI cable with the HDMI logo (a certified HDMI cable) for this connection.

High Speed HDMI cable (also known as HDMI category 2 cable) is recommended for better compatibility.

Basic (Supports only 480i resolution.)



- Connect this unit directly to the TV. If the RCA audio / video cables are connected to a VCR, pictures may be distorted due to the copy right protection system.

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x1
- RCA video cable x1

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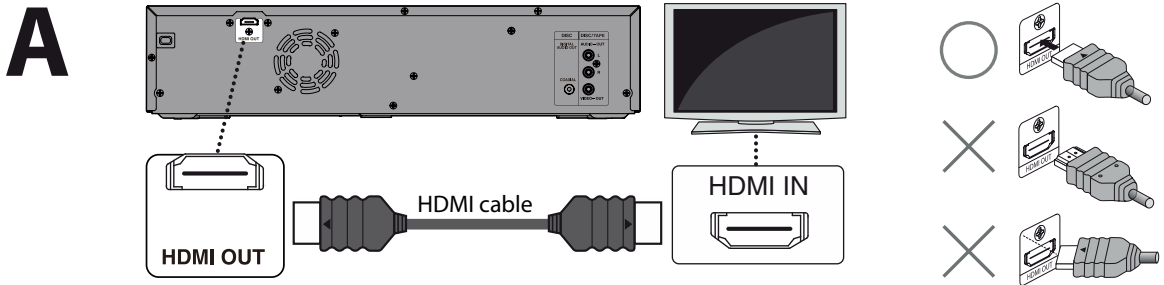
VCP FUNCTIONS

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2 Connect the cables by following the descriptions below.

HDMI Video / Audio Connection



Note

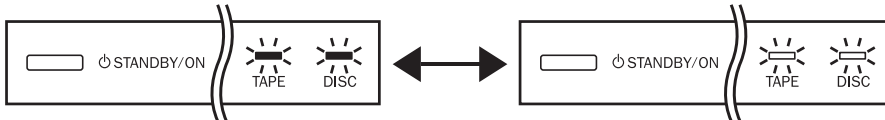
- Do not tilt the connector when inserting it into the HDMI jack, and make sure the shapes of the jack and the connector are matched.
- When using an incompatible HDCP TV, the image will not be viewed properly.

Picture is not displayed on the TV screen...

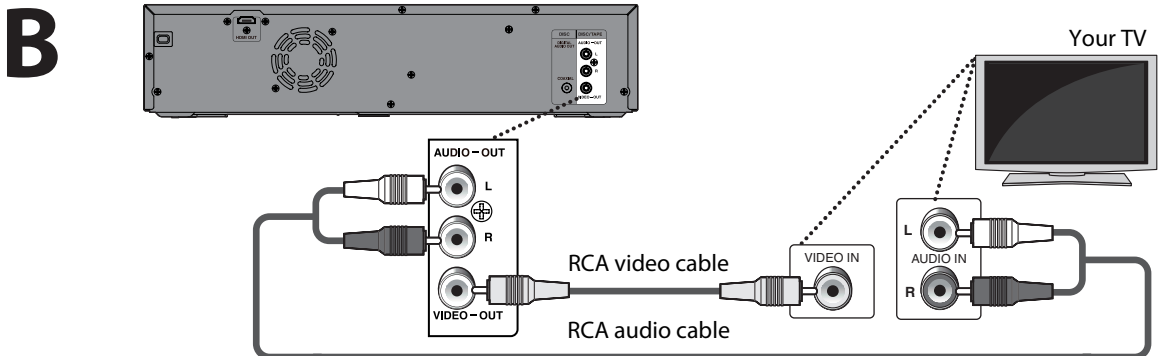
The indicators blink under the following conditions.

- When the connected device does not support HDCP.
- When the connected device is recognized as an incompatible HDCP by HDMI SRM.
- When the connected device supports HDCP but cannot be recognized as an HDCP compatible for some reason.

The indicators blink as shown below for 30 seconds.



Standard Video + Standard Audio Connection

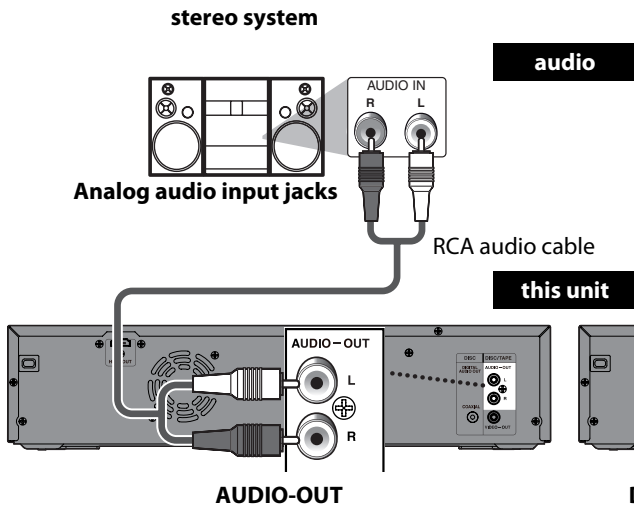


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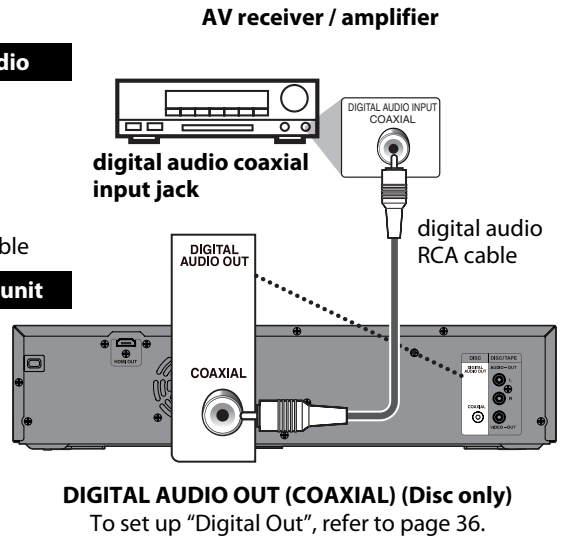
Connection to an Audio System

- When you change the connections, all devices should be turned off.
- Refer to the manual accompanying external devices for more information.

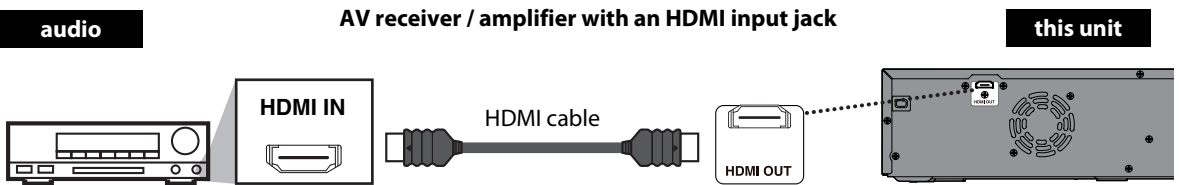
2-Channel Analog Audio Connection



Digital Audio Connection



HDMI Audio Connection



To set up "HDMI Audio Out", refer to on page 35.

Supplied cables used in this connections are as follows:

- RCA audio cable (L/R) x 1

Please purchase the rest of the necessary cables at your local store.

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
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After you have completed all the connections, you must find the correct video channel (external input channel) on your TV.

Finding the Video Channel on Your TV

- 1** After you have made all the necessary connections, press [STANDBY/ON - 2** Turn on your TV.
- 3** Press the button on the TV's remote control that accesses the external input channel. It may be labeled "SOURCE", "AV" or "SELECT" (refer to your TV's user manual).



Note

- If the TV is connected by an HDMI cable, it may take a while for the opening picture to come up.

PLAYBACK

Information on Playback

Before you start playing back a disc, read the following information.

Playable Media and Files

This unit is compatible to play back the following discs / files. To play back a medium / file, make sure that it meets the requirements for region codes and color systems as described below. You can play back discs that have the following logos.

Other media are not guaranteed to play back.

Playable media	Logos
Blu-ray Disc - BD-video (single / dual layer) - BD-RE ver. 2.1 (single / dual layer) (Recorded in BDMV format) - BD-R ver. 1.1 / 1.2 / 1.3 (single / dual layer) (Recorded in BDMV format) (Unfinalized discs may not be played back.)	
DVD-video	
DVD-RW	
DVD-R	
CD-DA (audio CD)	
CD-RW	
CD-R	
Kodak Picture CD	
DTS-CD	-
Cassette Tape	

Playable files	Media
AVCHD	DVD-RW/-R SD Memory Card (including SDHC) miniSD Card microSD Card
JPEG	BD-RE/-R, DVD-RW/-R, CD-RW/-R, SD Memory Card (including SDHC), miniSD Card, microSD Card

Readable cards	Playable files / data
SD Memory Card (8 MB - 2 GB)	AVCHD, JPEG, picture-in-picture commentary,
SDHC Memory Card (4 GB - 8 GB)	subtitles or other extras for
miniSD Card (8 MB - 2 GB)	BD-ROM
microSD Card (8 MB - 2 GB)	Profile 1 ver.1.1

Note for SD Memory Cards

- This unit supports SD Memory Card with FAT12/ FAT16 file system, and SDHC Memory Card with FAT32 file system.
- This unit does not support NTFS file system.
- This unit may not read the SD Memory Cards formatted on a computer. If that is the case, please reformat the SD Memory Cards in this unit and try again.
- This unit does not support miniSDHC and microSDHC Memory Card.
- For miniSD Card and microSD Card, the adapter is necessary.



- Portions of this product are protected under copyright law and are provided under license by ARIS / SOLANA / 4C.
- Please keep the SD Memory Cards in their cases when you are not using them.
- Do not try to open or modify the card.
- Do not touch the terminal surface with your fingers or any metals.
- Do not attach additional labels or stickers to cards.
- Do not remove the label of the SD Memory Cards.
- This unit recognizes a file name up to 8 characters long for the SD Memory Card. Any characters after 8th one will not be displayed.

Unplayable Discs and Files

The following discs will not be played back in this unit.

- CD-ROM
- CD-I (compact disc-interactive)
- DVD-RAM
- VSD (video single disc)
- DVD-audio
- Video CD
- HD DVD
- SVCD
- Unfinalized disc
- BD-RE (ver.1.0)
- BD-RE (ver.2.1) (Recorded in BDAV format)
- BD-R (ver.1.1 / 1.2 / 1.3) (Recorded in BDAV format)
- BD that contains AVCHD files
- DVD / CD / SD Memory Card contains MP3, Windows Media™ Audio and DivX® files.
- DVD-RW/-R recorded in non compatible recording format.
- Super Audio CD - Only the sound on the CD layer can be heard. The sound on the high-density Super Audio CD layer cannot be heard.
- Playability of specific dual layer discs are not guaranteed.

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Color Systems

BD-video and DVD-video are recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada).

This unit employs NTSC color system, so the disc you play back must be recorded in the NTSC system. You cannot play back the disc recorded in other color systems.

Region Codes

This unit has been designed to play back BD-video with region "A" and DVD-video with region "1" or "ALL". You cannot play back BD-video or DVD-video that are labeled for other regions. Look for the symbols on the right on your BD-video or DVD-video.

If these region symbols do not appear on your BD-video or DVD-video, you cannot play back the disc in this unit. The letter or number inside the globe refers to region of the world. A BD-video or DVD-video labeled for a specific region can only be played back in the unit with the same region code.

BD-video

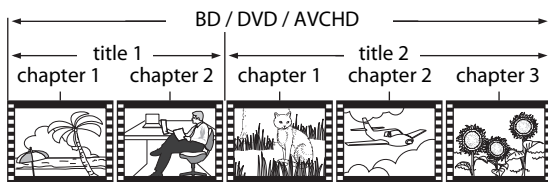


DVD-video



Structure of Disc / SD Memory Card Contents

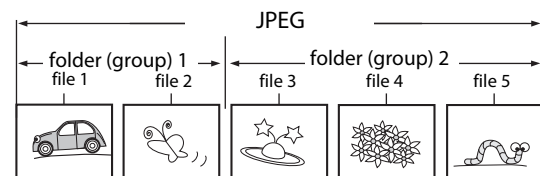
The contents of BD / DVD / AVCHD are generally divided into titles. Titles may be further subdivided into chapters.



audio CD are divided into tracks.



Data discs or SD Memory Cards containing JPEG are divided into folders, and the folders are subdivided into files.



On-Screen Display

You can check information about the current disc by pressing **[DISPLAY]**.

To call the on-screen display menu, press **[DISPLAY]** during playback. Every time you press **[DISPLAY]**, the information changes. Depending on the media, available information varies.



off → Title / Chapter information
 → Title information (elapsed time)
 → Title information (remaining time)
 → Audio format information → off



off → Chapter information (elapsed time)
 → Chapter information (remaining time)
 → Title information (elapsed time)
 → Title information (remaining time)
 → Audio format information → off



off (Track information (elapsed time))
 → Track information (remaining time)
 → Disc information* (elapsed time)
 → Disc information* (remaining time)
 → off (Track information (elapsed time))
 (* not available during program / random playback)



off → File information → File name information → off

PLAYBACK

■ Chapter information



<Title / Chapter information for BD and AVCHD>



<Chapter information for DVD>



- 1 Current title number
- 2 Current chapter number / Total number of chapters
- 3 Current repeat setting
(Only when repeat setting is active)
(C: Chapter repeat, T: Title repeat)
- 4 Indicates that the multi camera angle images are available on the scene
- 5 Current playback status
- 6 Elapsed time (or remaining time) of the current chapter

■ Title information



- 1 Current title number / Total number of titles
- 2 Elapsed time (or remaining time) of the current title

■ Track / File information



- 1 Current track (file) number / Total number of track (file)
- 2 Elapsed time (or remaining time) of the current track (except for JPEG files)
- 3 Indication of SD Memory Card playback
- 4 Current repeat setting
(Only when repeat setting is active)
(T: Track repeat (except for JPEG files),
G: Group repeat, A: All repeat)

■ Disc information



- 1 Current track number / Total number of tracks
- 2 Elapsed time (or remaining time) of the current disc

■ File name information



- 1 Media icon and file name



■ Audio format information



- 1 Audio format

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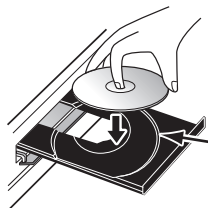
VCP FUNCTIONS

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How to Insert a Disc

1 Press [OPEN/CLOSE EJECT ▲] to open the disc tray.

2 Place the disc on the disc tray with its label side facing up.



Align the disc to the disc tray guide.

- Make sure the disc is compatible with this unit. (Refer to page 15 for the list of compatible discs.)

3 Press [OPEN/CLOSE EJECT ▲] to close the disc tray.

It may take a while to load the disc.

To eject the disc:

Press [OPEN/CLOSE EJECT ▲] to open the disc tray.

Remove the disc.

Press [OPEN/CLOSE EJECT ▲] to close the disc tray.

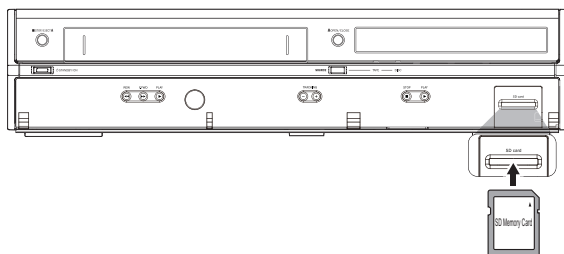
Reading the SD Memory Card

AVCHD JPEG

You can play back the AVCHD / JPEG files on an SD Memory Card. With the SD Memory Card, you can also enjoy the special additional contents for BD-ROM Profile 1 ver.1.1 which can be downloaded from the Internet. You can store the contents on an SD Memory Card via computer and play them back with the BD-video. For more information about the special additional contents, please refer to the instruction book that came with the disc.

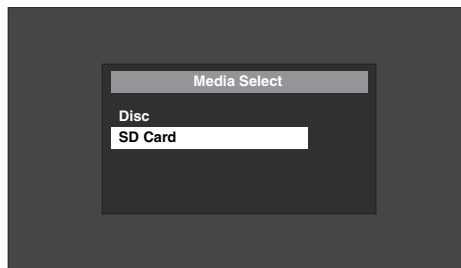
1 Insert an SD Memory Card, with the label side facing up, into the SD card slot until it clicks.

If no disc is in operation, "Media Select" screen will appear on the TV screen.



2 Use [▲ / ▼] to select "SD Card", then press [OK].

- Media filter screen will appear.
- When the SD Memory Card contains only one type of file, skip to step 4.



3 Select the type of the file you want to play back in the media filter screen. Then press [OK] to display the file list.

- Playback of AVCHD files will start right after you choose "Video". (The file list is not available for AVCHD files.)

4 Use [▲ / ▼] to select a desired track, folder or file, then press [OK]. Use [◀ / ▶] to go backward and forward between the hierarchies.

- If you press [OK] on the desired file, playback will start.

To remove the SD Memory Card:

In stop mode, gently push in the SD Memory Card, then pull it out slowly.

Caution

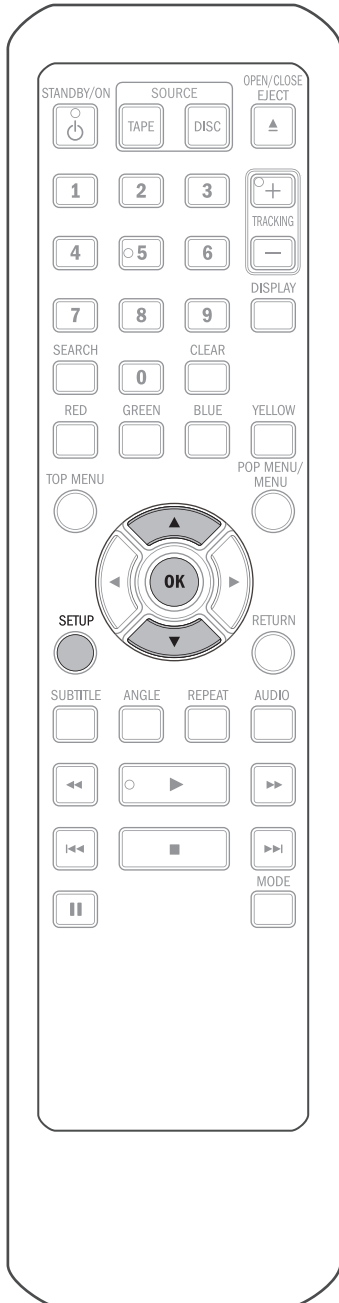
- Do not remove the SD Memory Card or turn the unit to the standby mode while the contents of the card are in playback. It may result in malfunction or loss of the card's data.

Note

- The "Media Select" screen will disappear under the conditions listed below:
 - when the screen saver is activated.
 - when [RETURN] is pressed.
 - when the setup menu is called up.
- If the "Media Select" screen disappears before you make the selection, refer to "Selecting the Media Mode" on page 19.
- Do not delete the folders or files in the SD Memory Card with your computer. This unit may not read the SD Memory Cards formatted on a computer.

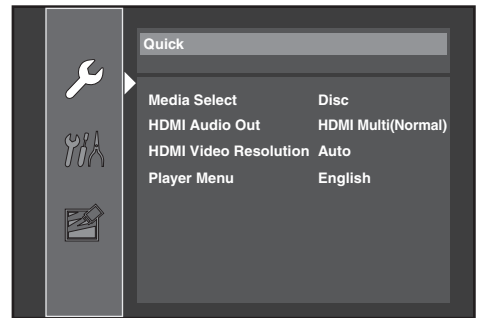
Selecting the Media Mode

For the playback media to be read by this unit, the correct media mode should be selected. You can switch the media mode by following the steps below. **"Media Select" is available only when an SD Memory Card is inserted.**

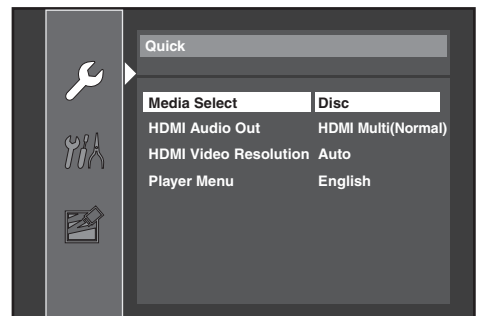


1 In stop mode, press [SETUP].

2 Use [▲ / ▼] to select , then press [OK].



3 Use [▲ / ▼] to select "Media Select".



4 Press [OK] to change the selected media. (It switches alternately between "SD Card" and "Disc" as you press [OK].)

5 Press [SETUP] to exit.
• Selected media mode is now activated.

Even if you turn the unit to the standby mode in "SD Card" mode, it will be in "Disc" mode the next time you turn it on.

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Playing Back (BD / DVD or a Disc with AVCHD Files)



- 1 Press [STANDBY/ON].
- 2 Turn on the TV and select the appropriate input on the TV to which the unit is connected.
- 3 Insert a disc (refer to page 18 on how to insert a disc).
- 4 Playback may start automatically.
If not, press [▶ (play)].
 - Some discs may show a title or a disc menu. In such case, refer to "Using the Title / Disc / Pop-up Menu" on page 21.
 - For a disc with AVCHD files, title menu is displayed.

To pause playback:
Press [⏸ (pause)].

To return to the normal playback:
Press [▶ (play)].

To stop playback:
Press [■ (stop)].
Playback will be in Resume-On-Stop mode.

Resume-On-Stop mode

If a playback is in Resume-On-Stop mode, when you press [▶ (play)] next time, the playback will start from the point where it has been stopped.

Note

- Resume playback may not be available for the BD that supports Java applications (BD-Java).
- In the "Disc" mode, the resume information will be cleared when;
 - [■ (stop)] is pressed while in the Resume-On-Stop mode.
 - the parental level is changed.
 - the disc tray is opened.
- In the "SD Card" mode, the resume information will be cleared when;
 - [■ (stop)] is pressed while in the Resume-On-Stop mode.
 - the SD Memory Card is removed.
 - the unit is turned into the standby mode.

Note

- may appear at the top-right on the TV screen when the operation is prohibited by the disc or this unit.
- During the playback of a 2-layered disc, pictures may stop for a moment. This happens when the 1st layer switches to the 2nd layer. This is not a malfunction.
- The operation may vary when you play back BD-video and DVD-video with disc menu. Refer to the manual accompanying the disc for details.
- Set "Still Mode" setting to "Field" in "Video" menu if pictures in the pause mode are blurred. Refer to "Still Mode" on page 31.

Using the Title / Disc / Pop-up Menu



Many of BD-video and DVD-video discs contain a title menu (BD-video / DVD-video / AVCHD), disc menu (DVD-video) or pop-up menu (BD-video) which guides you through the available functions on the disc. The contents of the menus may differ depending on the disc.

Title menu (BD-video / DVD-video / AVCHD)

- 1 Press [TOP MENU].
- 2 Use [▲ / ▼ / ◀ / ▶] to select an item, then press [OK].
- 3 Press [TOP MENU] to exit.

Disc menu (DVD-video)

- 1 Press [POP MENU/MENU].
- 2 Use [▲ / ▼ / ◀ / ▶] to select an item, then press [OK].
- 3 Press [POP MENU/MENU] to exit.

Pop-up menu (BD-video)

- This is a special feature available for some BD-videos. When you press [POP MENU/MENU], a menu pops out on the TV screen during play back.

- 1 During the playback of BD-video, press [POP MENU/MENU].
- 2 Use [▲ / ▼ / ◀ / ▶] to select an item, then press [OK].
- 3 Press [POP MENU/MENU] to exit.

Note

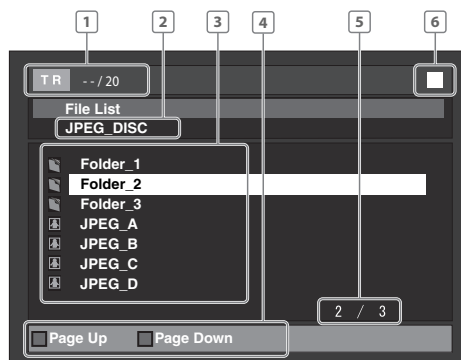
- Contents of menus and corresponding menu operations may vary among discs. Refer to the manual accompanying the disc for details.
- Title menu is also available for SD card with AVCHD files.

Playing Back (Audio CD / JPEG Files)



Before you begin, make sure the correct media mode is selected. Refer to "Selecting the Media Mode" on page 19.

- 1 Insert an audio CD or a disc/card with JPEG files.
- 2 Use [▲ / ▼] to select a desired track, folder or file, then press [OK]. Use [◀ / ▶] to go backward and forward between the hierarchies (only for JPEG files).
 - If you press [OK] on the desired file, playback will start.



e.g.) JPEG

- 1 audio CD : Track information
JPEG : File information
- 2 audio CD : "CD-DA" will be displayed.
JPEG : Current Disc, SD Memory Card, or folder name will be displayed.
- 3 audio CD : List of the track number and time
JPEG : List of the file / folder names in the current folder / disc
- 4 Operation: Press [RED] to go to the previous page.
guide Press [GREEN] to go to the next page.
- 5 Current page / Total page number
- 6 Playback status

Icons:



- 3 Press [■ (stop)] to stop playback.

PLAYBACK

It is recommended that files to be played back in this unit are recorded under the following specifications: <JPEG>

- Upper limit : 2,560 x 1,900 dots (sub sampling is 4:4:4)
5,120 x 3,840 dots (sub sampling is up to 4:2:2)
- Lower limit : 32 x 32 dots
- File size of image : 12 MB maximum

Note

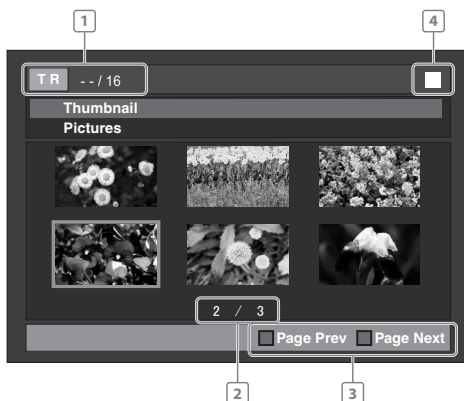
- Do not delete the folders or files in the SD Memory Card with your computer. This unit may not read the SD Memory Cards formatted on a computer.
- If a disc contains AVCHD files, the playback of other files on the same disc are not available. All files on an SD Memory Card are available.
- With regard to the multi-border BD-RE/-R, additionally recorded sections cannot be recognized.
- With regard to the multi-border DVD-RW/-R, additionally recorded sections may not be recognized.

Kodak Picture CD

JPEG

This unit can also run JPEG files stored on Kodak Picture CD. You can enjoy picture images on the TV set by playing back the Kodak Picture CD. This unit conforms to ver.7.0 of Kodak Picture CD. For details of Kodak Picture CD, contact a shop that provides developing service of Kodak Inc.

1 When Kodak Picture CD is inserted in this unit, Kodak Picture CD menu will appear automatically on the TV screen.



- 1 File information
- 2 Current page / Total page number
- 3 Operation guide: Press [BLUE] to go to the previous page.
Press [YELLOW] to go to the next page.
- 4 Playback status

2 Use [▲ / ▼ / ◀ / ▶] to select a desired file to be played back, then press [▶ (play)] or [OK].

- An image will be played back from the selected file and then go to the next file.

3 Press [■ (stop)] to stop playback.

To return to the first item:

Press [TOP MENU].

To return to the file played last:

Press [POP MENU/MENU].

Tips for JPEG / Kodak Picture CD Playback

- Every press on [ANGLE] will turn the image clockwise by 90 degrees when an image is displayed.
- To change the visual effect used when switching the playback image, press [MODE] once, then use [◀ / ▶] or [OK] to switch between "Cut In/Out" and "Fade In/Out".
- During JPEG / Kodak Picture CD playback, press [MODE] twice to change the size of the playback image, then use [◀ / ▶] or [OK] to switch between "Normal" (100 %) and "Small" (95 %). The size change may have no effect on some files (e.g. files with a small picture size).

Note

- Unrecognizable characters will be replaced with asterisks.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back in this unit.
- The system can recognize up to 255 folders / 999 files for CD, 999 folders / 9,999 files for DVD and SD Memory Card.
- The 9th and deeper hierarchies cannot be displayed for CD. The 10th and deeper hierarchies cannot be displayed for DVD and SD Memory Card.
- For the SD Memory Card playback, refer to "Reading the SD Memory Card" on page 18.
- For an SD Memory Card, only an extension of ".jpg" can be recognized. For other media, only ".jpg" and ".jpeg" can be recognized, and any other extensions cannot be read.

PLAYBACK

Fast Forward / Fast Reverse



1 During playback, press **[▶▶ (forward)]** repeatedly for fast forward.

During playback, press **[◀◀ (reverse)]** repeatedly for fast reverse.

Every time you press **[▶▶ (forward)]** or **[◀◀ (reverse)]**, the playback speed will change.

2 Press **[▶ (play)]** to return to normal playback.

Note

- For BD, DVD and AVCHD, speed changes in 5 different levels.
- For audio CD, speed changes in 3 different levels.
- For audio CD, fast forward / fast reverse search between different tracks are not available during program and random playback.

Slow Forward Playback



1 During playback, press **[|| (pause)]**, then press **[▶▶ (forward)]**.

Every time you press **[▶▶ (forward)]**, playback speed will change.

2 Press **[▶ (play)]** to return to normal playback.

Note

- Slow motion speed changes in 3 different levels.
- Only slow forward is available.
- Set "Still Mode" setting to "Field" in "Video" menu if pictures in the slow forward playback mode are blurred. Refer to "Still Mode" on page 31.

Step by Step Playback



1 In pause mode, press **[|| (pause)]** repeatedly. Every time you press **[|| (pause)]**, playback will advance one step at a time.

2 Press **[▶ (play)]** to return to normal playback.

Note

- Only step by step forward is available.
- Set "Still Mode" setting to "Field" in "Video" menu if pictures in step by step playback mode are blurred. Refer to "Still Mode" on page 31.

Repeat Playback

Available repeat functions vary depending on the discs.

1 During playback, press **[REPEAT]** repeatedly to select the desired repeat mode.

Repeat mode	Available media
Chapter repeat	
The current chapter will be played back repeatedly.	
Title repeat	
The current title will be played back repeatedly.	
Track repeat	
The current track will be played back repeatedly.	
Group repeat	
The current folder will be played back repeatedly.	
All repeat	
All tracks or files in the media will be played back repeatedly.	

Note

- The repeat setting will be canceled when you stop playback.
- The chapter, title or track or group repeat will be cleared when moving to another chapter, title, track / file or folder.
- Chapter and title repeat are not available with some scenes.

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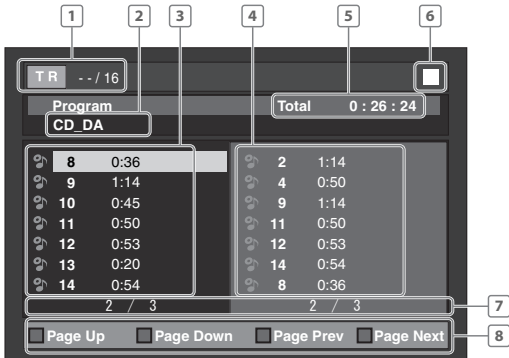
Program Playback



You can play back the disc/card in your desired order.

1 In stop mode, press [MODE].

2 Use [▲ / ▼] to select a track / file, then press [OK].



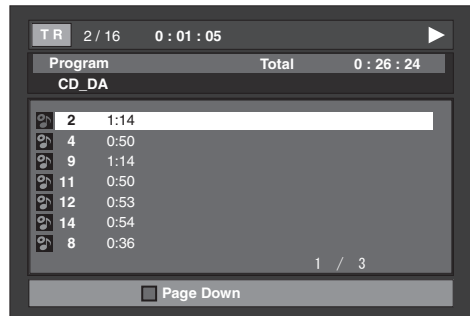
e.g.) audio CD

- 1** audio CD : Track information
JPEG : File information
- 2** audio CD : "CD-DA" will be displayed.
JPEG : Current Disc, SD Memory Card, or folder name will be displayed.
- 3** Track / File list : Track / File list in the original order
- 4** Programmed list : Track / File list in the programmed order
- 5** Cumulative playback time of all tracks / files in the programmed list
- 6** Playback status
- 7** Current page / Total page number
- 8** Operation guide: Press [RED] to go to the previous page in the track / file list. Press [GREEN] to go to the next page in the track / file list. Press [BLUE] to go to the previous page in the programmed list. Press [YELLOW] to go to the next page in the programmed list.

- For JPEG files, use [▲ / ▼] to select a folder, then press [OK] first, and then use [▲ / ▼] to select a file, then press [OK].
- Press [CLEAR] to erase the last file of the program.
- Use [▲ / ▼] to select "All Clear" at the bottom of the list to erase all the tracks / files in the program.
- The programmed tracks / files are displayed in the right hand screen.
- Use [◀ / ▶] to go backward / forward between the hierarchy of folders.

3 Press [▶ (play)] to start program playback.

- The program playback will start.



To exit from the program playback mode:

- Press [RETURN] in stop mode.

Note

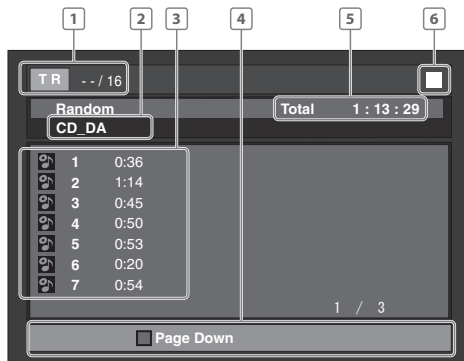
- During program playback, press [■ (stop)] once to set the resume point, and then press [▶ (play)] to resume program playback from where [■ (stop)] was pressed (audio CD) or from beginning of the file where [■ (stop)] was pressed (JPEG).
- During program playback, press [■ (stop)] twice to display the program screen. To go back to the normal program playback, press [RETURN] to exit from the program screen, then press [▶ (play)].
- Up to 99 tracks / files can be entered.
- To repeat the current track / file in the program, press [REPEAT] repeatedly until "Track" appears during playback. To repeat the entire program, press [REPEAT] repeatedly until "All" appears during playback.
- Playback from a desired track / file and random playback are not available during program playback.
- Press [MODE] to switch to the random playback mode.
- The program will be cleared when;
 - the unit is turned into the standby mode.
 - the media mode is switched to the other mode.
 - the disc / card is removed. (as for "Disc" mode, just opening the disc tray will clear the program info.)

Random Playback



This function shuffles the playback order of tracks / files.

1 In stop mode, press [MODE] twice.



e.g.) audio CD

- 1 audio CD** : Track information
- JPEG** : File information
- 2 audio CD** : "CD-DA" will be displayed.
- JPEG** : Current Disc, SD Memory Card, or folder name will be displayed.
- 3 Track / File list** : Track / File list in the original order will be displayed.
- 4 Operation guide:** Press [RED] to go to the previous page in the track / file list.
Press [GREEN] to go to the next page in the track / file list.
- 5 Total playback time of all tracks (audio CD only)**
- 6 Playback status**

2 Press [▶] (play) to start random playback.

To exit from the random playback mode:

- Press [MODE] in stop mode.

Note

- During the random playback, press [■ (stop)] once to set the resume point, and then press [▶ (play)] to resume random playback from where [■ (stop)] was pressed (audio CD) or from beginning of the file where [■ (stop)] was pressed (JPEG).
- To repeat the current track / file in the random selection, press [REPEAT] repeatedly until "⏮ Track" appears during playback. To repeat the entire random selection press [REPEAT] repeatedly until "⏮ All" appears during playback.
- Playback from a desired track / file is not available during random playback.
- Press [RETURN] to switch to the program playback mode.

Rapid Playback



This function plays back at approximately 1.3 times the normal playback while keeping the sound output. This function is available only on discs recorded in the Dolby Digital format.

1 During playback, press [MODE] repeatedly until "⏮" appears.



2 Press [OK] or [◀ / ▶] to switch to "⏮" (1.3x), or "Off".

"Off" : Plays back in normal speed.

"⏮" : Plays back at approximately 1.3 times the normal playback.

3 Press [▶] (play) to return to normal playback.

Note

- Picture adjustment and audio language setting cannot be changed during this function.
- Virtual surround does not work during this function.
- This function may not work at some points on a disc.
- During this function, 2ch LPCM will be output from HDMI OUT jack and DIGITAL AUDIO OUT (COAXIAL) jack.

PLAYBACK

Adjusting the Picture



You can adjust the picture quality.

- 1 During playback, press [MODE] repeatedly until " " appears.
- 2 Use [▲ / ▼] to select your desired item, then use [◀ / ▶] to adjust the setting.



e.g.) DVD-video

■ Black level

You can adjust the black level setting to make the black parts of the pictures as bright as you prefer. You can select "On" or "Off".

"On" : Makes the dark parts brighter.

"Off" : Shows the original picture as recorded.

■ Noise reduction (DVD-video only)

Reduces the noise of the playback picture.

"Off" : Shows the original picture as recorded.

"1" : Executes 3D noise reduction which detects and deletes the noise by comparing each picture frame.

"2" : Executes MPEG noise reduction which reduces the block noise and mosquito noise on the movie subtitle.

"3" : Executes both MPEG noise reduction and 3D noise reduction.

- 3 Press [RETURN] to exit.

Note

- The setting will remain the same even if the unit is turned to the standby mode.
- For the picture output from HDMI OUT jack, "Black Level" is not effective.
- You cannot adjust the setting during rapid playback.

Virtual Surround



You can enjoy stereophonic virtual space through your existing 2 channel stereo system.

- 1 During playback, press [MODE] repeatedly until " " appears.
- 2 Use [▲ / ▼] to select your desired setting.



"Off" : No surround effect

"1" : Natural surround effect

"2" : Stronger surround effect

- 3 Press [RETURN] to exit.

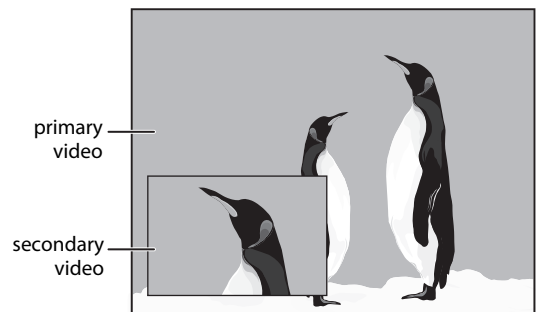
Note

- Set the virtual surround setting to "Off" or lower the volume if the sound is distorted.
- Virtual surround does not function during rapid playback.
- For the virtual surround, audio signal will always be 2-channel LPCM.

PIP (BONUSVIEW) Setting



Some BD-videos have the PIP function which enables you to display the secondary video in the primary video. You can call up the secondary video by pressing [MODE] whenever the scene contains the secondary video. Refer also to the "Note" on the next page.




- 1 During playback, press [MODE] repeatedly until the PIP function appears.
- 2 Use [▲ / ▼] to select the secondary video you want.
 - The secondary video will be displayed and the secondary audio will be output.
 - Use [◀ / ▶] to switch between current setting and "Off".
- 3 Press [RETURN] or [MODE] to remove the PIP information.

Note

- The secondary audio will not be output when the secondary audio is set to "Off" or when "BD Audio Mode" is set to "HD Audio Output". Refer to "Switching Audio Soundtrack" on page 28 and "Setting the BD Audio Mode" on page 29.

Camera Angle

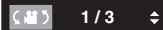


Some BD-videos and DVD-videos contain scenes which have been shot simultaneously from various angles. You can change the camera angle when  appears on the TV screen.


1 During playback, press [ANGLE].

- The selected angle will be displayed on the display bar at the top of the TV screen.

2 Use [▲ / ▼] to select your desired angle.



Note

- If "Angle Icon" setting is "Off" in "Others" menu,  will not appear. Refer to page 33.

Search

Using [◀◀ / ▶▶] (skip)]

1 During playback, press [▶▶] (skip)] to move to the next track / title / chapter / file. Press it repeatedly to skip to subsequent tracks. Press [◀◀] (skip)] once to go back to the beginning of the current track. Press it repeatedly to go to the previous tracks.














- For JPEG files, press [◀◀] (skip)] to go back to the previous file.

Note

- For BD and DVD, if title contains no chapters, [◀◀ / ▶▶] (skip)] changes the title.
- For JPEG files, [◀ / ▶] is also available.

Using [SEARCH]

By using [SEARCH], you can select the following search modes.

Search mode	Available media
 /  Chapter / Title search	  
 Track search	 
 Time search	   

1 During playback, press [SEARCH] repeatedly until your desired search mode appears.

2 Enter the desired chapter, title, track, file number or time to search using [the Number buttons].

- Chapter, title, track or time search will start.
- Press [CLEAR] to erase an incorrect input.

Note

- During program and random playback, search functions are not available except the search using [◀◀ / ▶▶] (skip)].
- Time search is available only in the same track, file or title.
- For BD and AVCHD, chapter and time search are available only during playback.

Using [the Number buttons] (Direct Search)

Title Search

In stop mode, enter the title number you want to search using [the Number buttons].

Playback of the title will start in a few seconds.

Chapter Search

During playback of a title, enter the chapter number you want to search using [the Number buttons].

Playback of the chapter will start in a few seconds.

Track / File Search

Enter the track / file number you want to search using [the Number buttons].

Playback of the track / file will start in a few seconds.

Note

- As for the BD-video, how it performs will be strongly determined by the disc, and may not perform as described here.

PLAYBACK

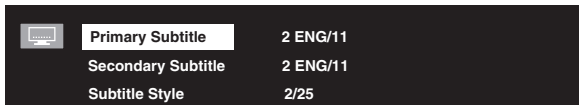
You can select the format of audio and video as you prefer depending on the contents of the disc you are playing back.

Switching Subtitles

Some video materials may have subtitles in 1 or more languages. For commercially available discs, the supported languages can be found on the disc case. Follow the steps below to switch the subtitle language during playback.



- 1 During playback, press [SUBTITLE].
- 2 Use [▲ / ▼] to select "Primary Subtitle", "Secondary Subtitle" or "Subtitle Style", then press [OK].



- "Primary Subtitle" : Sets the subtitle for the primary video.
- "Secondary Subtitle" : Sets the subtitle for the secondary video.
- "Subtitle Style" : Sets style of the subtitle.

- 3 Use [▲ / ▼] to select your desired subtitle or style.
 - Use [◀ / ▶] to switch between current subtitle setting and "Off".
- 4 Press [SUBTITLE] to exit.



- 1 During playback, press [SUBTITLE].
- 2 Use [▲ / ▼] to select your desired subtitle.



- Use [◀ / ▶] to switch between current subtitle setting and "Off".
- 3 Press [SUBTITLE] to exit.

Note

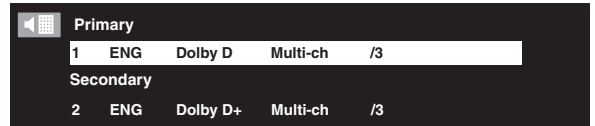
- Some discs will only allow you to change the subtitles from the disc menu or pop-up menu. Press [TOP MENU] or [POP MENU/MENU] to display the disc menu or pop-up menu.
- If 4-digit-language code appears in the subtitle menu, refer to "Language Code List" on page 44.
- If the disc has no subtitle language or subtitle style, "Not Available" will be displayed on the TV screen.
- During playback of the secondary video, the primary subtitle setting is not available except when there is no subtitle for the secondary video.
- If you select a language that has a 3-letter-language code, the code will be displayed every time you change the subtitle language setting. If you select any other languages, "---" will be displayed instead. (Refer to page 44.)

Switching Audio Soundtrack

When playing back video material recorded with 2 or more soundtracks (these are often in different audio languages or audio formats), you can switch them during playback. For BD, available audio varies depending on "BD Audio Mode" setting. Refer to page 31 for more information.



- 1 During playback, press [AUDIO].
- 2 Use [▲ / ▼] to select "Primary" or "Secondary" audio to set, then press [OK].



- "Primary" : Sets the audio for the primary video.
- "Secondary" : Sets the audio for the secondary video.

- 3 Use [▲ / ▼] to select your desired audio stream channel.
 - For "Secondary", use [◀ / ▶] to switch between current audio setting and "Off".
- 4 Press [AUDIO] to exit.



1 During playback, press [AUDIO].

2 Use [▲ / ▼] to select your desired audio stream channel.



e.g.) DVD-video

- For audio CD, you can select following options.
- “Stereo” : Both right and left channels are active (stereo).
- “L-ch” : Only left channel is active.
- “R-ch” : Only right channel is active.

3 Press [AUDIO] to exit.

Note

- The secondary audio will not be output when the secondary video is not displayed or when “BD Audio Mode” is set to “HD Audio Output”. (For some BDs, secondary audio will be output even when secondary video is off.)
- The sound mode cannot be changed during playback of discs not recorded in multiple audio.
- Some discs allow changing the audio language setting on the disc menu. (Operation varies depending on the discs. Refer to the manual accompanying the disc.)
- [AUDIO] may not work on some discs with multiple audio streams or channels (e.g. DVDs that allow changing audio setting on the disc menu).
- If you select a language that has a 3-letter-language code, the code will be displayed every time you change the audio language setting. If you select any other languages, “---” will be displayed instead. (Refer to page 44.)
- Audio Language selection cannot be made during rapid playback. (Refer to page 25.)
- If 4-digit-language code appears in the audio menu, refer to page 44.
- If the disc has no audio language, “Not Available” will be displayed on the TV screen.
- For DTS-CD (5.1 music disc), selecting audio streams or channels is not available.

Setting the BD Audio Mode



There are 2 options for the “BD Audio Mode” setting; either by setting the output to the secondary and interactive audio accompanied by the primary audio or by setting only the primary audio. Depending on the setting of the mode, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, or DTS-HD output changes between multi LPCM and bitstream.

1 In stop mode with BD inserted, press [MODE].

2 Use [▲ / ▼] to select your desired setting.



“Mix Audio Output”:

If it is available, BD-video’s secondary and interactive audio will be output with the primary audio.

- The secondary audio is the audio for the secondary video (Director’s comment etc.) and the interactive audio is the audio for the interactive application (Button click sounds etc.).

“HD Audio Output”:

Only the primary audio will be output. Set this mode in order to output , Dolby Digital Plus, Dolby TrueHD, or DTS-HD audio of BD through HDMI connection.

3 Press [RETURN] to exit.

- You can also set “BD Audio Mode” from the setup menu. Refer to page 31.
- Refer to “Audio signals output from HDMI OUT jack” on page 35 and “Audio signals output from DIGITAL AUDIO OUT (COAXIAL) jack” on page 36 for how BD Audio will be output.

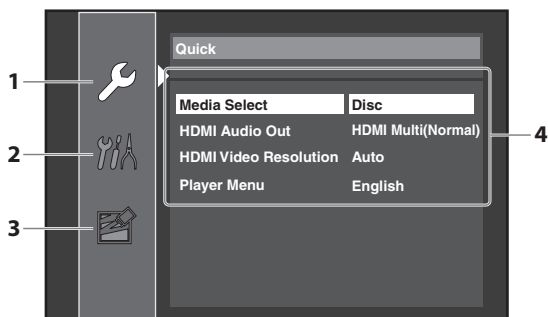
Note

- In “Mix Audio Output” mode, if there is no secondary and interactive audio, the audio will be output as “HD Audio Output” mode.

FUNCTION SETUP

In the setup menu screen, you can access various kinds of menus, and customize them as you prefer. To call up the setup menu screen, press **[SETUP]**. Then follow the instructions below to navigate through the screen.

< Setup menu screen >



1. **Quick menu**
Contains only the frequently used menus.
2. **Custom menu**
Contains all the available setup menus.
3. **Initialize menu**
Contains the menus that relates to the initialization of the unit or the SD card.
4. **Menu window**
Displays the available items for the selected menu.

How to Navigate through the Setup Menus


- Use **[▲ / ▼]** to move the highlight up and down.
- Press **[OK]** to access the options of an item, to switch settings, or to confirm the selection.
- Use **[◀ / ▶]** to switch settings in some menus.
- Press **[RETURN]** to go back to the previous screen.
- Press **[SETUP]** to exit.

List of Setup Menus

Items with (*) can be accessed from "Quick" menu also.
The items highlighted in grey are the default setting.

Category	Menus / Options			Description	
Custom	Language	Audio BD DVD AVCHD	Original English French Spanish German Italian Swedish Dutch Russian	Chinese Japanese Korean Danish Finnish Norwegian Icelandic Hungarian Romanian Turkish Greek Irish Portuguese Polish Czech Slovak Bulgarian Other	Sets the audio language for BD-video, DVD-video or AVCHD playback. "Original" : Activates the disc's original language. "Other" : If you select "Other", enter 4-digit-code for the desired language (refer to page 44).
		Subtitle BD DVD AVCHD	Off English French Spanish German Italian Swedish Dutch Russian	Chinese Japanese Korean Danish Finnish Norwegian Icelandic Hungarian Romanian Turkish Greek Irish Portuguese Polish Czech Slovak Bulgarian Other	Sets the subtitle language for BD-video, DVD-video or AVCHD playback. "Other" : If you select "Other", enter 4-digit-code for the desired language (refer to page 44).
		Disc Menu BD DVD AVCHD	English French Spanish German Italian Swedish Dutch Russian Chinese	Japanese Korean Danish Finnish Norwegian Icelandic Hungarian Romanian Turkish Greek Irish Portuguese Polish Czech Slovak Bulgarian Other	Sets the language for disc menu. "Other" : If you select "Other", enter 4-digit-code for the desired language (refer to page 44).
		Player Menu*	English Français Español		Sets the language for player menu. (on-screen display menu)

FUNCTION SETUP

Category	Menus / Options		Description
Video	TV Aspect • Refer to page 34 for more information.	16:9 Wide 4:3 Pan & Scan 4:3 Letter Box 16:9 Squeeze	Sets the aspect ratio of the playback image to fit your TV.
	HDMI Video Resolution* • This feature is available only when the display device is connected by an HDMI cable. • Refer to page 34 for more information.	Auto 480p	Sets the resolution of the video signal being output from the HDMI OUT jack.
	Progressive Mode	Auto Video	"Auto": The progressive mode will detect 24-frame film material (movies) and automatically select appropriate progressive mode. "Video": Suited for playing back video material discs (TV shows or animation).
	Still Mode	Auto Field Frame	Adjusts picture resolution and quality in still mode. "Auto": Automatically selects the best resolution setting ("Frame" or "Field") based on the data characteristics of the pictures. "Field": Stabilizes the pictures, although the picture quality may become coarse due to the limited amount of data. Select "Field" when the pictures are still unstable even if "Auto" is selected. "Frame": Displays relatively motionless pictures in higher resolution. "Frame" improves the picture quality, although it may unstabilize the pictures due to alternate output of 2-field data. • An individual picture on the TV screen is called "Frame", which consists of two separate images called "Field". Some pictures may be blurred at the auto setting in "Still Mode" setting due to their data characteristics.
Audio	BD Audio Mode 	Mix Audio Output HD Audio Output	For BD, selects whether to output the secondary and interactive audio with primary audio if it is available or only the primary audio. Refer to "Setting the BD Audio Mode" on page 29. "Mix Audio Output": The audio for the secondary video and the interactive application will be output together with the audio for the primary video. "HD Audio Output": Outputs only the primary audio. Set this mode in order to output Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS or DTS-HD audio of BD through HDMI connection.

Custom

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Category	Menus / Options			Description		
Custom	Audio	HDMI Audio Out*		<p>Outputs the multi-channel audio signals from HDMI OUT jack with bitstream or LPCM.</p> <p>Sets the audio format for the sound output from the HDMI OUT jack.</p> <ul style="list-style-type: none"> For "Speaker Size" and "Delay Time", if you change the setting of one speaker, the rest of the speakers will be set automatically. For "Delay Time", difference of the values among "Front", "Surround" and "Surround Back" cannot exceed 15 ft, and between "Front" and "Center" it cannot exceed 5 ft. Also, the value of "Center", "Surround" and "Surround Back" cannot exceed the value of "Front". 		
		• This feature is available only when the display device is connected by an HDMI cable.				
		• Refer to page 35 for more information.				
		HDMI Multi (Normal)				
		HDMI Multi (LPCM)	Speaker Size		Front	Large
					Center	Small
					Subwoofer	On
					Surround	Large
					Surround Back	Small
					Default	
		Channel Level	Test Tone		Off	<p>Outputs the test tone from each speaker.</p> <p>Use [◀/▶] to switch options, then press [OK] to confirm.</p> <ul style="list-style-type: none"> Test tone will be output automatically. To stop the test tone, press [RETURN]. <p>"Manual": Allows you to manually select the speaker to test. Use [▲/▼] to select the speaker. Use [◀/▶] to adjust the volume.</p> <p>"Auto": Automatically tests all speakers. Use [◀/▶] to adjust the volume.</p>
					Manual Auto	
		Front Lch	-12 to 0dB		<p>Sets the volume level for each speaker to get the ideal audio balance.</p> <p>Use [◀/▶] to change the setting.</p>	
		Center	0dB (Default)			
		Subwoofer	0dB			
Front Rch						
Surround Rch						
Surround Back Rch						
Surround Back Lch						
Surround Lch						
Default						
Delay Time	Distance	Feet	<p>Sets the desired measure system. This measure system will be used for "Delay Time" setting.</p> <p>Use [◀/▶] to change the setting.</p>			
		Meters				
	Front	0 to 60ft (Default 12ft)	<p>Sets the distance from the listening point to the speaker to get the ideal delay time.</p> <p>Use [◀/▶] to change the setting.</p>			
	Center					
	Surround	0 to 60ft (Default 10ft)				
Surround Back						
Default						

FUNCTION SETUP

Category	Menus / Options			Description	
Custom	Audio	Audio Mute	Digital Out	Bitstream LPCM	Sets the audio format output from DIGITAL AUDIO OUT (COAXIAL) jack. "Bitstream": When playing back discs recorded in Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS® or DTS-HD®, the corresponding core stream (Dolby Digital or DTS®) are output. "LPCM": LPCM signal will be output from DIGITAL AUDIO OUT (COAXIAL) jack.
		Down Sampling	On Off		Sets the digital audio output when playing back BD or DVD recorded in LPCM. "On": LPCM signals are converted to 48 kHz for output. Set to "On" when using digital connections to an AV amplifier that is not compatible with sampling frequencies of 96 kHz. "Off": For BD and DVD recorded in LPCM without copyright protection, 2-channel audio signals up to 192 kHz are output as LPCM signals with no conversion.
		DRC	On Off		Sets whether to compress the range of sound volume (Dynamic Range Control) when Dolby Digital, Dolby Digital Plus or Dolby TrueHD audio is played back.
	Parental • Refer to page 37 for more information.	Password input field	BD Rating Level	All Age Setting	Sets the rating level for the disc playback.
			DVD Rating Level	All 8 [Adult] to 1 [Kid Safe]	
		Password Change	Password input field		Sets the new password for "Parental" setting.
	Others	Angle Icon	On Off		Sets whether to display the angle icon on the TV when playing back the scene with various angles.
		Auto Power Off	On Off		Sets whether to turn off the unit (to the standby mode) automatically after 25 minutes of no action.
		Media Select*	Disc SD Card		Select the media to play back.
		Software Update • Refer to page 37 for more information.	Current Version		Indicates the current software version.
	Disc Update	No Yes		Allows you to update this unit's software using a disc.	
Initialize	Setup	No Yes		Resets all the settings, except for "Parental" to the factory default.	
	Format SD Card	No Yes		Re-formats SD card.	
	Erase Saved BD-ROM Data (Player)	No Yes	• Refer to page 38 for more information.	Re-formats local storage (Player) used for BD-Java.	
	Erase Saved BD-ROM Data (SD Card)	No Yes		Re-formats local storage (SD card) used for BD-Java.	

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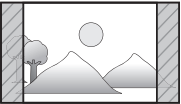

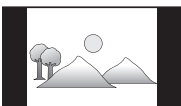
OTHERS

FUNCTION SETUP

TV Aspect Ratio

[SETUP] → "Custom" → "Video" → "TV Aspect"

Use this feature to adjust the aspect ratio of the video source which is different from your TV's ratio to fit your TV screen without distorting the picture. Descriptions of each setting are as follows:

Video source	Your TV	Option	Description
16:9	4:3	4:3 Letter Box 	To enjoy 16:9 picture on 4:3 TV: 16:9 picture is scaled down until both sides of the picture fits the 4:3 TV.
		4:3 Pan & Scan 	To enjoy 16:9 picture on 4:3 TV: Both sides of the picture are trimmed to fit the 4:3 TV without distorting the aspect ratio of the picture.
	16:9	16:9 Wide 	To enjoy 16:9 picture on 16:9 TV: Select this setting when you want to enjoy 16:9 picture on the 16:9 TV.
4:3	16:9	16:9 Squeeze 	To enjoy 4:3 picture on 16:9 TV: Use this setting to display 4:3 picture on the 16:9 TV without distorting the aspect ratio of the picture.

Note for "HDMI Video Resolution"

- The selected resolution must also be supported by your display device.
- Even if you set "HDMI Video Resolution" setting to "Auto", when this unit is connected to a DVI compatible display devices with an HDMI-DVI cable, 480p signal will be output.
- Video and audio signals may be distorted temporarily when switching to / from the HDMI output mode.
- You cannot change the video resolution during playback of BD / AVCHD. To change the resolution, stop playback.
- In order to get natural and high quality film reproduction of 24-frame film material, use an HDMI cable (High Speed HDMI cable is recommended) and select "Auto" if the connected TV is compatible with 1080p24 frame input.
- For discs with the contents which are not compatible with 1080p24 frame, 1080p60 frame will be output even if the connected TV is compatible with 1080p24 frame input and you set "HDMI Video Resolution" setting to "Auto".
- For AVCHD, outputting the video in 24 Hz (1080p/24) is not available.
- Pressing **[▶ PLAY]** (DISC) on the front panel for 5 seconds changes the setting back to its default.
- When you change the resolution, the TV screen temporarily goes blank and then comes back again. This is not a malfunction.
- If you have selected the resolution not supported by your TV by mistake and the picture gets disturbed or goes blank and does not come back, press and hold **[▶ PLAY]** (DISC) on the front panel for 5 seconds to change the setting back to its default.
- With some copy-protected BD-videos, the video image may only be output from HDMI OUT jack.
- Refer also to your TV's manual.

FUNCTION SETUP

HDMI Audio Out

[SETUP] → "Quick" → "HDMI Audio Out"

Device to be connected	"HDMI Audio Out" setting	Output HDMI audio signal
Device compatible with Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS or DTS-HD decoding	HDMI Multi(Normal)	Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, or DTS-HD bitstream are output from HDMI OUT jack. Make the speaker settings on the connected AV amplifier, etc.
Device compatible with 3 or more channels of audio inputs (not Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS or DTS-HD compatible)	HDMI Multi(LPCM)	Multi-channel audio signals are output from HDMI OUT jack. Make the speaker settings with the speaker setting items appear after you select "HDMI Multi(LPCM)". Refer to page 32.
HDMI connection to a TV and digital audio connection (coaxial) to an AV amplifier	Audio Mute	HDMI audio will be mute, and Dolby Digital / DTS bitstream or LPCM will be output from DIGITAL AUDIO OUT (COAXIAL) jack depending on "Digital Out" setting. Refer to "Digital Out" on page 36.

Audio signals output from HDMI OUT jack

Media	Recording format	"HDMI Audio Out" setting			
		HDMI Multi(Normal)		HDMI Multi(LPCM)	
		When "BD Audio Mode" is set to "HD Audio Output"	When "BD Audio Mode" is set to "Mix Audio Output"	When "BD Audio Mode" is set to "HD Audio Output"	When "BD Audio Mode" is set to "Mix Audio Output"
BD-video	Dolby Digital	Dolby Digital	Dolby Digital	Multi LPCM	Multi LPCM
	Dolby Digital Plus	Dolby Digital Plus	Dolby Digital	Multi LPCM ^{*1}	Multi LPCM ^{*1}
	Dolby TrueHD	Dolby TrueHD	Dolby Digital	Multi LPCM ^{*2}	Multi LPCM ^{*2}
	DTS [®]	DTS [®]	DTS [®]	Multi LPCM	Multi LPCM
	DTS-HD [®]	DTS-HD [®]	DTS [®]	Multi LPCM ^{*3}	Multi LPCM ^{*3}
	LPCM	Multi LPCM	Multi LPCM	Multi LPCM	Multi LPCM
DVD-video	Dolby Digital	Dolby Digital		Multi LPCM	
	DTS [®]	DTS [®]		Multi LPCM	
	LPCM	2ch LPCM		2ch LPCM	
audio CD		2ch LPCM		2ch LPCM	
DTS-CD		DTS [®]		Multi LPCM	
AVCHD	Dolby Digital	Dolby Digital	Dolby Digital	Multi LPCM	Multi LPCM
	LPCM	Multi LPCM	Multi LPCM	Multi LPCM	Multi LPCM

*1) Only the independent substream is decoded.

*2) Only the Dolby Digital substream is decoded.

*3) Only the core substream is decoded.

- If the connected device is not compatible with the HDMI BITSTREAM, audio will be output as multi LPCM or 2-channel down-mixed LPCM depending on the capability of the connected device even if you select "HDMI Multi(Normal)" in "HDMI Audio Out" setting.
- When playing back a BD-video which only contains the primary audio, the audio output will be the same as the "HD Audio Output" even if the "BD Audio Mode" is set to "Mix Audio Output".

Note

- The audio signals from HDMI OUT jack (including the sampling frequency, the number of channels and bit length) maybe limited by the device that is connected.
- Among the devices that support HDMI, some do not support audio output (e.g. projectors). In connections with device such as this unit, audio signals are not output from HDMI OUT jack.
- Video and audio signals may be distorted temporarily when switching to / from the HDMI output mode.

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Digital Out

[SETUP] → "Quick" → "HDMI Audio Out" → "Audio Mute" → "Digital Out"

When "Audio Mute" is selected in "HDMI Audio Out" setting, HDMI audio signal will be mute and the audio signals output from DIGITAL AUDIO OUT (COAXIAL) jack changes depending on "Digital Out" setting.

Audio signals output from DIGITAL AUDIO OUT (COAXIAL) jack

Media	Recording format	"Digital Out" setting			
		Bitstream		LPCM	
		When "BD Audio Mode" is set to "HD Audio Output"	When "BD Audio Mode" is set to "Mix Audio Output"	When "BD Audio Mode" is set to "HD Audio Output"	When "BD Audio Mode" is set to "Mix Audio Output"
BD-video	Dolby Digital	Dolby Digital	Dolby Digital	2ch Downmix LPCM	2ch Downmix LPCM
	Dolby Digital Plus	Dolby Digital	Dolby Digital	2ch Downmix LPCM ^{*1}	2ch Downmix LPCM ^{*1}
	Dolby TrueHD	Dolby Digital	Dolby Digital	2ch Downmix LPCM ^{*2}	2ch Downmix LPCM ^{*2}
	DTS [®]	DTS [®]	DTS [®]	2ch Downmix LPCM	2ch Downmix LPCM
	DTS-HD [®]	DTS [®]	DTS [®]	2ch Downmix LPCM ^{*3}	2ch Downmix LPCM ^{*3}
	LPCM	2ch Downmix LPCM	2ch Downmix LPCM	2ch Downmix LPCM	2ch Downmix LPCM
DVD-video	Dolby Digital	Dolby Digital		2ch Downmix LPCM	
	DTS [®]	DTS [®]		2ch Downmix LPCM	
	LPCM	2ch LPCM		2ch LPCM	
audio CD		2ch LPCM		2ch LPCM	
DTS-CD		DTS [®]		2ch Downmix LPCM	
AVCHD	Dolby Digital	Dolby Digital	Dolby Digital	2ch Downmix LPCM	2ch Downmix LPCM
	LPCM	2ch Downmix LPCM	2ch Downmix LPCM	2ch Downmix LPCM	2ch Downmix LPCM

*1) Only the independent substream is decoded.

*2) Only the Dolby Digital substream is decoded.

*3) Only the core substream is decoded.

- When playing back a BD-video which only contains the primary audio, the audio output will be the same as the "HD Audio Output" even if the "BD Audio Mode" is set to "Mix Audio Output".

Note

- In order to output LPCM signal from DIGITAL AUDIO OUT (COAXIAL) jack while outputting the HDMI audio signal, set "HDMI Audio Out" setting to "HDMI Multi(LPCM)".

FUNCTION SETUP

Parental

[SETUP] → "Custom" → "Parental"

Some BD-videos or DVD-videos feature a parental lock level. Playback will stop if the ratings exceed the levels you set, it will require you to enter a password before the disc will play back. This feature prevents your children from viewing inappropriate material.

1 With "🔒" selected press [OK].

Password input field appears.

2 If a password has not been set, follow A).

**If a password has already been set, follow B).
If you want to change the password, follow B) and C).**

If you forget the password, follow D).

- Enter 4 digit password using **[the Number buttons]**.
• "4737" cannot be used.
- Enter 4 digit password
- Select "Password Change", then press [OK]. Enter the new password.
- Enter "4737". Current password and "Parental" settings are now cleared. Enter a new password.

3 Select the desired item to set the rating level for, then press [OK].

4 Select the desired rating level, then press [OK].

<BD rating level>

All	Sets no limit.
Age Setting	Allows you to enter the age to limit, and prohibits the playback of a disc whose rating level exceeds the age setting entered here. • Enter the age as a 3-digit-number. (e.g., For age 15, enter [0], [1], [5].)

<DVD rating level>

All	Parental control is inactive; all discs can be played back.
8 [Adult]	DVD software of any grades (adult / general / children) can be played back.
7 [NC-17]	[NC-17] No one under 17 admitted.
6 [R]	[R] Restricted; under 17 requires accompanying parent or adult guardian.
5 [PGR]	[PGR] Parental Guidance Recommended.
4 [PG-13]	[PG-13] Unsuitable for children under 13.
3 [PG]	[PG] Parental Guidance suggested.
2 [G]	[G] General audience.
1 [Kid Safe]	Suitable for children.

To Cancel Parental Lock Temporarily

Some discs allow you to cancel the parental lock temporarily. With those discs, the message below will appear when you try to play them back.

"Enter current password."

Follow the instruction which appears on the TV screen to cancel the parental lock.

Software Update

This unit lets you update the software yourself using a software update disc.

To update the software, you must first download the latest version software to a disc, then execute "Software Update".

Current Version

You can confirm the current software version.

1 In stop mode, press [SETUP].

2 Use [▲ / ▼] to select , then press [OK].

3 Use [▲ / ▼] to select "Others", then press [OK].

4 Use [▲ / ▼] to select "Software Update", then press [OK].

5 Use [▲ / ▼] to select "Current Version", then press [OK].

6 Press [OK] or [RETURN] to exit.

Disc Update

1 Prepare a software update disc:

Access www.magnavox.com, and download the latest version software to a blank disc by following the directions described on the site.

- Use one blank disc to download one software update.
- For more details on how to download the software, please refer to the site.

2 Follow steps 1 to 4 in "Current Version" section above.

3 Use [▲ / ▼] to select "Disc Update", then press [OK].

4 Use [▲ / ▼] to select "Yes", then press [OK].

- Disc tray will open automatically.

5 Insert the software update disc obtained at step 1.

6 After completing loading disc, confirmation message will appear. Select "Yes" and press [OK] to start updating.

- Refer to "The indicators show the progress status..." on page 38 if an error has occurred.

7 After the disc update finishes, this unit will restart and eject the disc.

Note

- Please do not unplug the AC power cord while updating the software.
- All settings will remain the same even if you update the software version.

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The indicators show the progress status...

Getting ready



Loading / Updating



flash alternately

Finish
(Success)



(Error)




If the indicator shows Error...

- 1) Unplug the AC power cord for about 10 seconds, re-plug AC power cord and then turn the unit on.
- 2) Confirm the current software version.
- 3) If the software version is updated, the software update has succeeded. If not, please try again.

Initialize

Initialize the setting or SD card.

- 1 In stop mode, press [SETUP].
- 2 Use [▲ / ▼] to select , then press [OK].
- 3 Use [▲ / ▼] to select a desired option, then press [OK].
 - Confirmation message will appear.

“Setup”:

Resets the setup menu to the default. The setting for “Parental” and “Media Select” will not be reset.

“Format SD Card”

(Available only when an SD card is inserted.):

Initializes the SD card.

“Erase Saved BD-ROM Data (Player)”:

Clears the data saved for the BD-ROM contents, such as BD-ROM game scores, from this player.

“Erase Saved BD-ROM Data (SD Card)”

(Available only when an SD card is inserted.):

Clears the supplemental data for the BD-ROM playback, such as subtitle data, from the SD card.

- 4 Select “Yes”, then press [OK].
 - Press [OK] again to complete the settings.

- 5 Press [SETUP] to exit.

Caution

- Do not remove the SD card while executing “Format SD Card” or “Erase Saved BD-ROM Data (SD Card)”. It damages the card.
- “Format SD Card” and “Erase Saved BD-ROM Data (SD Card)” are not available when a Blu-ray Disc is in the unit.

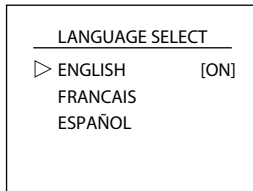
VCP FUNCTIONS

Make sure your TV's input is set to the correct video channel. (Refer to page 14.)

Selecting the Menu Language for VCP



- 1 Press [TAPE] first.
- 2 Press [SETUP].
 - The "LANGUAGE SELECT" menu appears.



- 3 Use [▲ / ▼] to select "ENGLISH", "FRANCAIS" or "ESPAÑOL", then press [SETUP] to exit.

Playback



- 1 Press [TAPE] first.
- 2 Insert a pre-recorded cassette tape into the cassette compartment of this unit. The unit will start playback automatically.

To stop playback:

Press [■ (stop)].

To return to the normal playback:

Press [▶ (play)].

- 3 Press [OPEN/CLOSE EJECT ▲] to eject the cassette tape.

Note

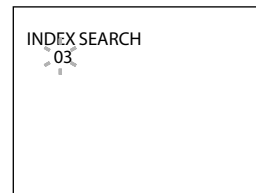
- Tracking will be automatically adjusted during playback. To adjust the tracking manually, press [TRACKING -/ +].
- If a cassette tape is inserted when the unit's power is in the standby mode, the playback will not start automatically. Press [▶ (play)] to start playback in this case.
- Playback will stop when you change the output mode.

Index Search



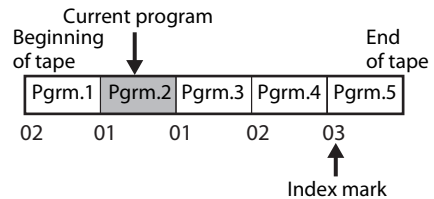
An index mark will be assigned at the beginning of each recording you make. You may skip to a specific marked point by following the steps below.

- 1 Press [TAPE] first.
- 2 Press [SEARCH] repeatedly until "INDEX SEARCH" screen appears.
- 3 Use [▲ / ▼] to select the index mark number you like to skip to.



- 4 Press [▶] to skip forward. Press [◀] to skip backward.

The playback will start automatically from the selected index mark point.



Note

- This unit does not have recording function, so you must record a tape from another VHS tape recorder.
- The time gap between index marks should be greater than 1 minute for SP mode, 2 minutes for LP mode and 3 minutes for SLP mode.

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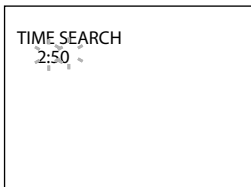
Time Search



This feature allows you to go to a specific point on a cassette tape by entering the exact amount of time you wish to skip in order to reach the point.

- 1 Press [TAPE] first.
- 2 Press [SEARCH] repeatedly until "TIME SEARCH" screen appears.
- 3 Use [▲ / ▼] to select the desired length of time to fast forward or to rewind.

You can set the time up to 9:59.



- 4 Press [▶] to fast forward. Press [◀] to rewind.

The playback will start automatically when it reaches the selected point.

Note

- Press [■ (stop)] to stop the search.
- If the end of the cassette tape is reached during search, this unit will cancel the search and rewind the cassette tape.

Other Operations



Press [TAPE] first.

To fast forward:

Press [▶▶ (forward)].

To fast rewind:

Press [◀◀ (reverse)].

To cue or review picture during playback (picture search):

Press [◀◀ (reverse)] or [▶▶ (forward)] during playback. Press it again and the unit will search in super high speed. (in the SLP mode only)

To freeze the picture on the TV screen during playback (still mode):

Press [|| (pause)]. Each time you press the button, the picture will be forwarded by one frame. If the picture begins to vibrate vertically during the still mode, stabilize the picture by pressing [TRACKING -/ +]. If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV, if equipped.

To reset the counter:

Press [CLEAR] to reset the counter to "0:00:00".

To play back in slow motion:

Press [|| (pause)] during playback, then press [▶▶ (forward)].

Press [▶▶ (forward)] or [◀◀ (reverse)] repeatedly during slow motion playback to select the desired speed.

Automatic rewind:

When a cassette tape is played back or fast forwarded to its end, the cassette tape will rewind to the beginning, stop and eject itself.

Auto repeat:

When auto repeat is on, the tape will rewind to its beginning when it reaches its end and start over from the beginning automatically.

To activate auto repeat:

Press [REPEAT] in stop mode.

"AUTO REPEAT ▶" appears, and auto repeat playback will start automatically.

To cancel the auto repeat:

Press [REPEAT] again.

"PLAY ▶" appears.

- You can check the auto repeat status by pressing [DISPLAY] during playback:

When auto repeat is off, "PLAY ▶" appears.

When auto repeat is on, "AUTO REPEAT ▶" appears.

When you playback a cassette tape recorded in Hi-Fi stereo:

Press [AUDIO] repeatedly to select Hi-Fi or MONO for playback sound mode.

- If you have connected a stereo TV to this unit, select "HIFI".
- If you have connected a monaural TV to this unit, select "MONO".

Your Selection Type of recorded tape	HIFI		MONO
	L-channel	R-channel	
non Hi-Fi tapes	-	-	Monaural
Hi-Fi tapes recorded in Hi-Fi stereo	L	R	L+R

Note

- Still/slow mode will stop after 5 minutes to prevent damage to the cassette tape and the video heads.
- To return to playback from the picture search/still/slow mode, press [▶ (play)].

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Troubleshooting

If the unit does not perform properly when operated as instructed in this manual, check the unit, consulting the following checklist.

	Problem	Solution
DISC / TAPE	No power.	<ul style="list-style-type: none"> - Check if the AC cord is properly connected. - Make sure the power is turned on. - Unplug the AC cord once, and wait for 5-10 seconds and then plug it in again.
	No sound or picture.	<ul style="list-style-type: none"> - Check if the connected TV is turned on. - Check if the connections are made securely and correctly. - Check whether the connected TV or another device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.) - Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of another connected device.
	No audio / video signal on the display device via HDMI cable.	<ul style="list-style-type: none"> - If the unit is connected to the unauthorized display device with an HDMI cable, the audio / video signal may not be output. - Perform an HDMI cable hotplug, wherein you disconnect the HDMI cable from the TV and this unit and then reconnect it to both the devices while they are powered on. - Ensure that your HDMI cable is certified.
	Distorted picture.	<ul style="list-style-type: none"> - Sometimes a small amount of picture distortion may appear. This is not a malfunction. - Interference signal may be received. Change the position and direction of the unit. - Connect this unit directly to the TV. If the RCA audio / video cables are connected to a VCR, pictures may be distorted due to the copy right protection system.
DISC	Completely distorted picture or black / white picture with BD / DVD.	<ul style="list-style-type: none"> - Make sure the disc is compatible with this unit.
	No sound or distorted sound.	<ul style="list-style-type: none"> - Adjust the volume. - Check if speakers are connected correctly. - Check the HDMI connections. - Check the settings in "Audio" menu.
	Picture freezes momentarily during playback.	<ul style="list-style-type: none"> - Check the disc for fingerprints / scratches and clean with a soft cloth wiping from center to edge. - Clean the disc.
	Disc cannot be played back.	<ul style="list-style-type: none"> - Clean the disc. - Ensure the disc label is facing up. - Check if the disc is defective by trying another disc. - Cancel the ratings control or change the control level. - Insert a disc that has been played back on this unit.
	SD Memory Card cannot be read.	<ul style="list-style-type: none"> - The format of the card does not match the format accepted by this unit or the card is not compatible. (Refer to page 15.)
	No return to start-up screen when disc is removed.	<ul style="list-style-type: none"> - Reset this unit by turning it off, then on again.
	The unit does not respond to the remote control.	<ul style="list-style-type: none"> - Aim the remote control directly at infrared sensor window on the front panel. - Reduce the distance to infrared sensor window. - Replace the batteries in the remote control. - Re-insert the batteries with their polarities (+ / - signs) as indicated.
	Buttons do not work or the unit stops responding.	<ul style="list-style-type: none"> - To completely reset the unit, press and hold [⏻ STANDBY/ON] on the front panel for 10 seconds to shut down the unit or unplug the AC cord from the AC outlet for 5-10 seconds.
	The unit does not respond to some operating commands during playback.	<ul style="list-style-type: none"> - Operations may not be permitted by the disc. Refer to the instructions of the disc.
	The unit cannot read BD / DVD / CD.	<ul style="list-style-type: none"> - Condensation? (Let sit 1 or 2 hours) - You are attempting to play back a disc other than one with one of the Logos on page 15. - Wipe any dirt or smudges off the disc or replace the disc.

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	Problem	Solution
DISC	Angle does not switch.	- The angle cannot be switched for BD / DVD which do not contain multiple angles. In some cases multiple angles are only recorded for specific scenes.
	Playback does not start when the title is selected.	- Check the settings in "Parental" menu.
	The password for rating level has been forgotten.	- Enter the default password "4737", then your forgotten password will be cleared.
TAPE	Playback picture is partially noisy.	- Adjust tracking for a better picture by pressing [TRACKING -/ +] .
	Cannot view picture but the sound is OK.	- Head cleaning may be necessary. Refer to "Auto head cleaning" on page 46. - Playback picture cannot be viewed while the menu screen is displayed.
	No or poor playback picture.	- Fine tune your TV or adjust tracking for a better picture by pressing [TRACKING -/ +] .
	Video or color fades in and out when making a copy of a videotape.	- You cannot copy a copyrighted videotape. You are experiencing copyright protection.
	Cannot remove the tape.	- Check if this unit is in the TAPE mode. If not, press [TAPE] to switch the mode.

Note

- Some functions are not available in specific modes, but this is not a malfunction. Read the description in this manual for details on correct operations.
- Some functions are prohibited on some discs.

Glossary

Analog Audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also "Digital Audio".

Aspect Ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the TV screen is almost square); widescreen models are 16:9 (the TV screen is almost twice as wide as it is high).

AVCHD

AVCHD is a new format for high definition video camcorders which can record and play high-resolution HD images.

BD-Java

With some BDs which support Java applications, you can enjoy the interactive functions such as games or interactive menus.

Blu-ray Disc (BD)

Blu-ray Disc is a next generation optical video disc which is capable of storing much more data than a conventional DVD is. The large capacity makes it possible to benefit from the features such as high-definition videos, multi-channel surround sounds, interactive menus and so on.

Chapter

Just as a book is split up into several chapters, a title on a BD-video or DVD-video is usually divided into chapters. See also "Title".

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analog-to-digital converter, generating a stream of numbers. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also "Sampling Frequency" and "Analog Audio".

Dolby Digital

The system to compress digital sound developed by Dolby Laboratories. It offers you sound of stereo (2ch) or multi-channel audio.

Dolby Digital Plus

Dolby Digital Plus is the next generation digital audio compression technology developed as an extension to Dolby Digital. Blu-ray Disc supports 7.1 multi-channel surround sound output.

Dolby TrueHD

Dolby TrueHD is a lossless coding technology developed for next generation optical discs. Blu-ray Disc supports 7.1 multi-channel surround sound output.

DTS® (Digital Theater System)

DTS® is a multi-channel surround sound system. By connecting to a DTS decoder, you can enjoy movie dynamic and realistic sound like in a movie theater. DTS surround sound technologies were developed by DTS, Inc.

DTS-HD®

DTS-HD® is a lossless coding technology developed as an extension of the original DTS Coherent Acoustics format. Blu-ray Disc supports 7.1 multi-channel surround sound output.

HDMI (High-Definition Multimedia Interface)

A digital interface between an audio and video source. It can transmit component video, audio, and control signal with a one cable connection.

JPEG (Joint Photographic Experts Group)

JPEG is a method of compressing still picture files. You can copy JPEG files on BD-RE/-R, DVD, CD-RW/-R or SD Memory Card from a computer and play back the files in this unit.

PCM (Pulse Code Modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality that requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital, DTS, and MPEG audio to PCM. See also "Digital Audio".

Region Code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling Frequency

The rate which sound is measured by a specified interval to turn into digital audio data. The numbers of sampling in one second defines as sampling frequency. The higher the rate, the better the sound quality.

Title

A collection of chapters on BD-video or DVD-video. See also "Chapter".

Track

Audio CD use tracks to divide up the content of a disc. The BD-video or DVD-video equivalent is called a chapter. See also "Chapter".

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Language Code List

Language	Code	Language	Code	Language	Code	Language	Code
A-B		French [FRE]	5264	Macedonian	5957	Siswat	6565
Abkhazian	4748	Frisian	5271	Malagasy	5953	Slovak [SLO]	6557
Afar	4747	Galician	5358	Malay	5965	Slovenian	6558
Afrikaans	4752	Georgian	5747	Malayalam	5958	Somali	6561
Albanian	6563	German [GER]	5051	Maltese	5966	Spanish [SPA]	5165
Amharic	4759	Greek [GRE]	5158	Maori	5955	Sundanese	6567
Arabic	4764	Greenlandic	5758	Marathi	5964	Swahili	6569
Armenian	5471	Guarani	5360	Moldavian	5961	Swedish [SWE]	6568
Assamese	4765	Gujarati	5367	Mongolian	5960	T	
Aymara	4771	Hausa	5447	Nauru	6047	Tagalog	6658
Azerbaijani	4772	Hebrew	5569	Nepali	6051	Tajik	6653
Bashkir	4847	Hindi	5455	Norwegian [NOR]	6061	Tamil	6647
Basque	5167	Hungarian [HUN]	5467	O-R		Tatar	6666
Bengali;Bangla	4860	I-K		Occitan	6149	Telugu	6651
Bhutani	5072	Icelandic [ICE]	5565	Oriya	6164	Thai	6654
Bihari	4854	Indonesian	5560	Oromo (Afan)	6159	Tibetan	4861
Bislama	4855	Interlingua	5547	Panjabi	6247	Tigrinya	6655
Breton	4864	Interlingue	5551	Pashto;Pushto	6265	Tonga	6661
Bulgarian [BUL]	4853	Inupiak	5557	Persian	5247	Tsonga	6665
Burmese	5971	Irish [IRI]	5347	Polish [POL]	6258	Turkish [TUR]	6664
Byelorussian	4851	Italian [ITA]	5566	Portuguese [POR]	6266	Turkmen	6657
C-E		Japanese [JPN]	5647	Quechua	6367	Twi	6669
Cambodian	5759	Javanese	5669	Rhaeto-Romance	6459	U-Z	
Catalan	4947	Kannada	5760	Romanian [RUM]	6461	Ukrainian	6757
Chinese [CHI]	7254	Kashmiri	5765	Russian [RUS]	6467	Urdu	6764
Corsican	4961	Kazakh	5757	S		Uzbek	6772
Croatian	5464	Kinyarwanda	6469	Samoa	6559	Vietnamese	6855
Czech [CZE]	4965	Kirghiz	5771	Sangho	6553	Volapuk	6861
Danish [DAN]	5047	Kirundi	6460	Sanskrit	6547	Welsh	4971
Dutch [DUT]	6058	Korean [KOR]	5761	Scots Gaelic	5350	Wolof	6961
English [ENG]	5160	Kurdish	5767	Serbian	6564	Xhosa	7054
Esperanto	5161	L-N		Serbo-Croatian	6554	Yiddish	5655
Estonian	5166	Laothian	5861	Sesotho	6566	Yoruba	7161
F-H		Latin	5847	Setswana	6660	Zulu	7267
Faroese	5261	Latvian;Lettish	5868	Shona	6560		
Fiji	5256	Lingala	5860	Sindhi	6550		
Finnish [FIN]	5255	Lithuanian	5866	Singhalese	6555		

Note

- If you choose a language that has a 3-letter-language code (written in bracket), the code will be displayed every time you change the audio or subtitle language setting on page 28. If you choose any other languages, "---" will be displayed instead.

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Specifications

General

Signal system	NTSC color
Power requirements	120 V AC, 60 Hz
Power consumption	35 W (standby: 2 W)
Dimensions (width x height x depth)	17.2 x 4.0 x 10.4 inches (435 x 99.5 x 264 mm)
Weight	10.01 lbs. (4.54 kg)
Operating temperature	41°F (5°C) to 104°F (40°C)
Operating humidity	Less than 80 % (no condensation)

Terminals

Rear	Video output	
	RCA jack x 1	1 Vp-p (75Ω)
	HDMI output	
	HDMI jack x 1	Digital Video: 480p, 720p, 1080i, 1080p, 1080p24 / Digital Audio
	Audio output (Analog)	
	RCA jack x 2	L/R: 2 Vrms (output impedance: more than 1kΩ)
	Audio output (Digital)	
	RCA jack x 1	500 mVp-p (75Ω)

Note

- The specifications and design of this product are subject to change without notice.

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Maintenance

Servicing

- Please refer to relevant topics on "Troubleshooting" on page 41 before returning the product.
- If this unit becomes inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn the unit to the standby mode, unplug the power plug, and please contact 1-800-605-8610 or visit : www.magnavox.com/support

Cleaning the cabinet

- Wipe the front panel and other exterior surfaces of the unit with a soft cloth.
- Never use a solvent, thinner, benzene or alcohol to clean the unit. Do not spray insecticide liquid near the unit. Such chemicals may discolor the surface or damage the unit.

Cleaning discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center to the outside. Do not wipe in a circular motion.
- Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analog records.

Cleaning the disc lens

- If this unit still does not perform properly although you refer to the relevant sections and to "Troubleshooting" in this manual, the laser optical pickup unit may be dirty. Consult your dealer or an authorized service center for inspection and cleaning of the laser optical pickup unit.

Disc handling

- Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
- Always store the disc in its protective case when it is not used.
- Note that discs with special shapes (heart-shaped discs, octagonal discs, etc.) cannot be played back on this unit. Do not attempt to play back such discs, as they may damage the unit.

Auto head cleaning

- Automatically cleans video heads as you insert or remove a cassette, so you can see a clear picture.
- Playback picture may become blurred or interrupted while the TV program reception is clear. Dirt accumulated on the video heads after a long period of use, or the usage of rental or worn tapes can cause this problem. If a streaky or snowy picture appears during playback, the video heads in your unit may need to be cleaned.
 1. Please visit your local Audio/Video store and purchase a good quality VHS Video Head Cleaner.
 2. If a Video Head Cleaner does not solve the problem, please call our toll free customer support line found on the back cover of this manual to locate an Authorized Service Center.

IR signal check

- If the remote control is not working properly, you can use a digital camera (including a cellular phone with built-in camera) to see if it is sending out an infrared signal.

• With a digital camera (including built-in cell phone cameras):

Point a digital camera towards the remote control. Push any button on the remote control and look through the digital camera. If the infrared light appears through the camera, the remote control is working.



MAGNAVOX

LIMITED WARRANTY

FUNAI CORP. will repair this product, free of charge in the USA in the event of defect in materials or workmanship as follows:

DURATION:

PARTS: FUNAI CORP. will provide parts to replace defective parts without charge for one (1) year from the date of original retail purchase. Certain parts are excluded from this warranty.

LABOR: FUNAI CORP. will provide the labor without charge for a period of ninety (90) days from the date of original retail purchase.

LIMITS AND EXCLUSIONS:

THIS WARRANTY IS EXTENDED ONLY TO THE ORIGINAL RETAIL PURCHASER. A PURCHASE RECEIPT OR OTHER PROOF OF ORIGINAL RETAIL PURCHASE WILL BE REQUIRED TOGETHER WITH THE PRODUCT TO OBTAIN SERVICE UNDER THIS WARRANTY.

This warranty shall not be extended to any other person or transferee.

This warranty is void and of no effect if any serial numbers on the product are altered, replaced, defaced, missing or if service was attempted by an unauthorized service center. This limited warranty does not apply to any product not purchased and used in the United States.

This warranty only covers failures due to defects in material or workmanship which occur during normal use. It does not cover damage which occurs in shipment, or failures which are caused by repairs, alterations or products not supplied by FUNAI CORP., or damage, which results from accident, misuse, abuse, mishandling, misapplication, alteration, faulty installation, improper maintenance, commercial use such as hotel, rental or office use of this product, or damage which results from fire, flood, lightning or other acts of God.

THIS WARRANTY DOES NOT COVER PACKING MATERIALS, ANY ACCESSORIES (EXCEPT REMOTE CONTROL), ANY COSMETIC PARTS, COMPLETE ASSEMBLY PARTS, DEMO OR FLOOR MODELS.

FUNAI CORP. AND ITS REPRESENTATIVES OR AGENTS SHALL IN NO EVENT BE LIABLE FOR ANY GENERAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR OCCASIONED BY THE USE OF OR THE INABILITY TO USE THIS PRODUCT. THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND OF ALL OTHER LIABILITIES ON THE PART OF FUNAI, ALL OTHER WARRANTIES INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED BY FUNAI AND ITS REPRESENTATIVES IN THE UNITED STATES.

ALL WARRANTY INSPECTIONS AND REPAIRS MUST BE PERFORMED BY AN AUTHORIZED SERVICE CENTER.

THIS WARRANTY IS ONLY VALID WHEN THE UNIT IS CARRIED-IN TO AN AUTHORIZED SERVICE CENTER.

THE PRODUCT MUST BE ACCOMPANIED BY A COPY OF THE ORIGINAL RETAIL PURCHASE RECEIPT. IF NO PROOF OF PURCHASE IS ATTACHED, THE WARRANTY WILL NOT BE HONORED AND REPAIR COSTS WILL BE CHARGED.

IMPORTANT:

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. IF, AT ANY TIME DURING THE WARRANTY PERIOD, YOU ARE UNABLE TO OBTAIN SATISFACTION WITH THE REPAIR OF THIS PRODUCT, PLEASE CONTACT FUNAI CORP.

ATTENTION:

FUNAI CORP. RESERVES THE RIGHT TO MODIFY ANY DESIGN OF THIS PRODUCT WITHOUT PRIOR NOTICE.

WARRANTY STATEMENT REGARDING NON AUTHORIZED REPAIRS:

To obtain warranty service, you must take the product, or deliver the product freight prepaid, in either its original packaging or packaging affording an equal degree of protection, to any AUTHORIZED SERVICE CENTER. FUNAI CORP. will not reimburse you for any service done by unauthorized service providers without prior written approval.

To locate your nearest AUTHORIZED SERVICE CENTER or for general service inquiries, please contact us at:

FUNAI SERVICE CORPORATION

Tel: 1-800-605-8610

www.magnavox.com/support

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