Blu-ray Disc™ & DVD Player with Built-in Wi-Fi
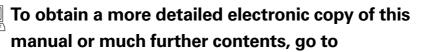
Owner's Manual

ES INSTRUCCIONES SIMPLIFICADAS INCLUIDOS EN ESPANOL.

FWBP706F

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1. INTRODUCTION

1.1. Safety instructions

See "Quick Start Guide" for more details of safety instructions.

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.

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 picture and/or sound may be generated if the unit is placed too close to them. In this case, please ensure enough space between 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 disc and unplug the AC power cord from the outlet before moving the unit.
- In order to avoid interruption of ventilation, this unit should not be placed in built-in equipment such as a book cabinet, rack, etc., and the vents of this unit should not be covered with anything such as a tablecloth, curtain, newspaper, etc. Make sure to leave a space of 5.9 inches (15 cm) or more around this apparatus.
- When installing this unit in a temperate environment, avoid a place with rapid temperature changes.
- This unit should not be used in a tropical environment as it has not been evaluated under such conditions.
- No objects should be placed directly on or under this unit, especially lighted candles or other flaming objects.

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.
- For product recycling information, please visit - www.sanyo-av.com
  Click on

  Protect Our Environment

Disposal of used batteries
- In certain localities, disposing batteries with household waste is not permitted. Please ensure you dispose of batteries according to local regulations.

The following FCC/IC RSS is description of wireless LAN adapter.
- FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
  This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country code statement

- For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.
  To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that do not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements and should be avoided.

This device complies with industry Canada

- License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

1.2. Included accessories

- Remote control (NC453UL)
- Quick start guide

2. FEATURES

2.1. Features

Blu-ray Disc™
You can enjoy Blu-ray Disc™ which is capable of storing five times more data than a conventional DVD.

BD-Java
With some Blu-ray™ discs which contain Java applications, you can enjoy interactive functions such as games or interactive menus.

DVD upscaling for enhanced picture quality
Your current DVD will look even better than before thanks to video upscaling. Upscaling will increase the resolution of standard definition DVD 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 USB memory stick ensures that you can continue to enjoy your current audio-video collection. Additionally, you can enjoy AVCHD (for DVD-RW/-R only) / photo files / music files.

Listen to rich multi-channel surround sound
Multi-channel surround sound, which realizes real-to-life sound and makes you feel that you are really there.

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.

HDMI CEC(Consumer Electronics Control)
This unit supports HDMI CEC, which allows integrated system control over an HDMI cable and is part of the HDMI standard. This function may not work properly on some devices.

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 a secondary video.

BD-Live™
BD-Live™ (BD-ROM version 2 Profile 2.0) that allows interactive functions to be used when this unit is connected to the Internet in addition to the BONUSVIEW™ function. The various functions differ depending on the disc.

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

HDMI 1080p/24 output (Blu-ray Disc™ only)
This unit is equipped with the feature which can provide smooth movement during playback of film originated material with a frame rate of 24 frames per second with progressive. (Available only when the display device is connected with an HDMI cable.) Refer to "HDMI video resolution" on page 50.

Playing back contents from a USB memory stick
You can play back photo files / music files stored on a USB memory stick. BD-ROM discs sometimes store picture-in-picture commentary, subtitles or other extras on a USB memory stick for use during playback 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 a disc / SD memory card using USB card reader. Your high definition personal archive is playable in HD quality.

x.v.Color
This unit supports playback of video contents on discs recorded with "x.v.Color" technology. To watch this video content with the "x.v.Color" space, a TV or other display device supporting both video image reproduction using "x.v.Color" standard and capability of manual switching of its color space setting is required. Please refer to the user manual of your display device for further information.

Netflix
With this unit, you can enjoy movies and TV episodes
streamed instantly from Netflix via the Internet.
In order to use this feature, you must visit
www.netflix.com/ on your PC and become a Netflix
member.

VUDU
This unit supports VUDU which is the leading HD on-
demand video service.
With VUDU, you can also enjoy movies and TV
episodes.
In order to use this feature, you must visit
www.vudu.com

YouTube™
This unit enables you to access YouTube™.
On your TV screen, you can enjoy a large number of
video clips streamed from YouTube™.

Digital rights management
This product contains technology subject to certain
intellectual property rights of Microsoft.
Use or distribution of this technology outside of
this product is prohibited without the appropriate
license(s) from Microsoft.

2.2. System information

"System Information" screen provides information about this unit's software version.
You can also download the latest software from the SANYO website and update it yourself if it is newer than the version currently on your unit. The current version of software on your unit can be seen on the "System Information" screen.
To access "System Information", follow the procedure below.

1. Press **[HOME]**.

2. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup", then press **[OK]**.

3. Use **[◀ / ▶]** to select " ⬤ ".

2.3. Symbols used in this owner's manual
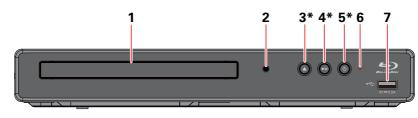
To specify which media type each function is applicable to, a combination of the symbols shown below will be depicted next to that function's explanation.

Symbol	Description
BD VIDEO	Description refers to BD-Video
DVD VIDEO	Description refers to DVD-Video
CD	Description refers to Audio CD / DTS-CD
AVCHD	Description refers to DVD-RW/-R with AVCHD files
PHOTO FILE	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and USB memory stick with photo files.
MUSIC FILE	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and USB memory stick with music files.

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

3. FUNCTIONAL OVERVIEW

3.1. Front panel

* The unit can also be turned on by pressing this button.

1. Disc tray

2. Infrared sensor window

3. ▲(OPEN/CLOSE) button*

4. ►II(PLAY/PAUSE) button*
- Press to start playback.
- During playback, press to pause playback.

5. ⏻(POWER) button*

6. Power-on indicator

7. USB input
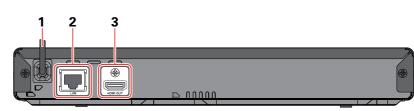
❶ Caution
- Do not connect any device other than USB memory stick or USB card reader into the USB input. (e.g. PC, external HDD, digital camera, keyboard, mouse, USB-hub, etc.)
- When connecting a USB memory stick, connect it directly to the USB input. Do not use a USB extension cable.

⊜ Note
- Due to new ENERGY STAR® requirements, this unit will automatically turn on the screen saver after 5 minutes of inactivity and enter standby mode after 25 minutes of inactivity.

3.2. Rear panel
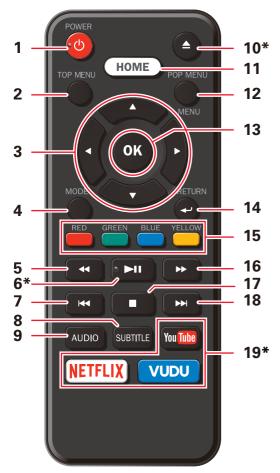
1. AC power cord

2. LAN terminal

3. HDMI OUT jack

❶ Caution
- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- This unit does not have a TV RF modulator.

3.3. Remote control

* The unit can also be turned on by pressing these buttons.

1. ⏻ **(POWER) button**
    • Press to turn on the unit, or to switch the unit into standby mode. (To completely turn off the unit, you must unplug the AC power cord.)

2. **TOP MENU button**
    Blu-ray Disc™: Press to display the top menu.
    DVD: Press to display the title menu.

3. ▲ / ▼ / ◄ / ► **(CURSOR) button**
    • Press to select items or settings.

4. **MODE button**
    • During playback, press to display the play menu to configure playback functions such as search, repeat, angle, etc.

5. ◄◄ **(REVERSE) button**
    • During playback, press to fast reverse the playback.

6. ►❚❚ **(PLAY/PAUSE) button**
    • Press to start playback.
    • Press to pause playback.

7. ❙◄◄ **(SKIP) button**
    • During playback, press once to return to the beginning of the current title, chapter, track or file.
    • During playback, press twice to return to the previous title, chapter, track or file.
    • During photo playback, press to return to the previous file.

8. **SUBTITLE button**
    • Press to select subtitles on a disc.

9. **AUDIO button**
    • Press to select the audio channel (such as audio languages) on a disc.

10. ⏏ **(OPEN/CLOSE) button**
    • Press to open or close the disc tray.

11. **HOME button**
    • Press to display the home menu.

12. **POP MENU/MENU button**
    Blu-ray Disc™: Press to display the pop menu.
    DVD: Press to display the disc menu.

13. **OK button**
    • Press to confirm or select menu items.

14. **RETURN button**
    • Press to return to the previously displayed menu or screen function.

15. **RED/GREEN/BLUE/YELLOW button**
    • Press to activate shortcut keys on some BD-Video functions.

16. ►► **(FORWARD) button**
    • During playback, press to fast forward the playback.
    • When playback is in pause, press to slow forward the playback.

17. ■ **(STOP) button**
    • Press to stop playback.

18. ►►❙ **(SKIP) button**
    • During playback, press to skip to the next chapter, track or file.
    • When playback is in pause mode, press to forward the playback picture by picture.

19. **YouTube/NETFLIX/VUDU button**
    • Press to launch VOD (Video On Demand).

⊜ Note
• Use the included remote control. Remote-control operation on any other remote control, such as a universal remote control, is not guaranteed.

■ Installing the batteries in the remote control

Install 2 AAA (1.5V) batteries matching the polarity indicated inside battery compartment of the remote control.(not included)
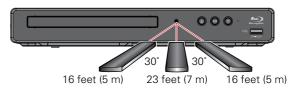
❶ Caution
Incorrect use of batteries can result in hazards such as leakage and bursting. Please follow the guidelines below:
• Lithium or ni-cad and ni-mh rechargeable batteries are not recommended to use for remote control.
• Do not mix different types of batteries such as alkaline and standard (carbon-zinc).
• Do not mix new and old batteries together.
• 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, when the remote is 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.
• Do not recharge, short-circuit, heat, burn or disassemble batteries.

■ Using the 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 of different devices can interfere with each other. Avoid using a remote control from another device which is 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°

16 feet (5 m)   23 feet (7 m)   16 feet (5 m)

3.4. Guide to on-screen display

■ **Home menu**

When you turn on the unit, home menu will appear automatically. Otherwise, press **[HOME]**.

1. **"Disc":**   Initiates playback of inserted disc, displays a list of tracks / files.
2. **"USB":**   Displays a list of tracks / files on the connected USB memory stick.
3. **"Setup":**   To access the setup menu.
4. **"Netflix" :**   Access directly to Netflix.
5. **"VUDU" :**   Access directly to VUDU.
6. **"YouTube" :**   Access directly to YouTube™ .

■ **Setup menu**

1. **Category**
2. **Menus / Options:** Displays options for the highlighted item on the left whenever available

■ **Play menu**

During playback, press **[MODE]** to display the play menu.
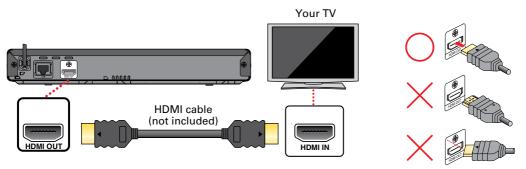
e.g.) Blu-ray Disc™

4. CONNECTIONS

4.1.   Connection to a TV

■ HDMI connection (Supports up to 1080i$^{(*1)}$, 1080p$^{(*2)}$, 1080p/24$^{(*3)}$ resolution.)

Your TV

HDMI cable
(not included)

HDMI OUT

HDMI IN

(*1) 1080i: Outputs video data with a frame rate of 30 frames per second.
(*2) 1080p: Outputs video data with a frame rate of 60 frames per second.
(*3) 1080p/24:   Outputs video data with a frame rate of 24 frames per second. To enable 1080p/24 output, set
                 "Resolution" to "Auto" or "1080p", and set "HDMI1080p 24Hz" to "On".

- 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 connected to an HDCP incompatible display device, the picture will not be displayed properly.
- 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.
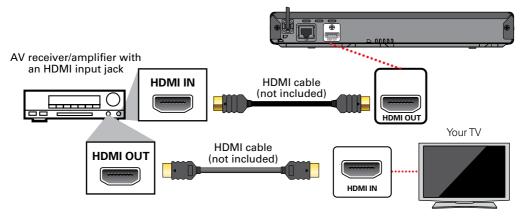
⊜ Note
- If the TV receives no audio / video signal after properly connecting the unit and the TV with an HDMI cable, it may be the TV. Please refer to the TV's user's manual.
- If the TV receives no audio signal after properly connecting the unit and the TV with an HDMI cable, make sure the TV input is not an HDMI-DVI input terminal.

4.2. Connection to an audio system

- When you change the connections, all devices should be turned off.
- When connecting the unit to an external audio system, refer to the user manual for setup / configuration help.

■ **HDMI audio connection**

AV receiver/amplifier with an HDMI input jack

HDMI IN

HDMI cable (not included)

HDMI OUT

HDMI OUT

HDMI cable (not included)

HDMI IN

Your TV

4.3. HDMI audio output

Media	"Audio Output" > "HDMI" setting ➡ Source	Bitstream	PCM	Re-encode
BD	Dolby Digital	Dolby Digital	2ch PCM	Dolby Digital
	Dolby Digital Plus	Dolby Digital Plus	2ch PCM	Dolby Digital Plus[*1]
	Dolby TrueHD	Dolby TrueHD	2ch PCM	Dolby TrueHD[*1]
	DTS	DTS	2ch PCM	DTS
	DTS-HD High Resolution	DTS-HD High Resolution	2ch PCM[*2]	DTS-HD High Resolution[*3]
	DTS-HD Master Audio	DTS-HD Master Audio	2ch PCM[*2]	DTS-HD Master Audio[*3]
	LPCM	Multi LPCM	Multi LPCM	Multi LPCM[*1]
DVD	Dolby Digital	Dolby Digital	2ch PCM	Dolby Digital
	DTS	DTS	2ch PCM	DTS
	MPEG	Multi LPCM	Multi LPCM	Multi LPCM
	PCM	Multi LPCM	Multi LPCM	Multi LPCM
Audio CD	LPCM	2ch PCM	2ch PCM	2ch PCM
DTS-CD	DTS	DTS	2ch PCM	DTS
AVCHD	Dolby Digital	Dolby Digital	2ch PCM	Dolby Digital
	LPCM	Multi PCM	Multi PCM	Multi PCM
Audio File	MP3/FLAC/WAV	2ch PCM	2ch PCM	2ch PCM
	AAC	AAC[*4]	2ch PCM	AAC[*4]
Netflix	Dolby Digital Plus	Dolby Digital Plus	2ch PCM	Dolby Digital Plus
	HE-AAC	AAC	2ch PCM	AAC
VUDU	Dolby Digital	Dolby Digital	2ch PCM	Dolby Digital
	Dolby Digital Plus	Dolby Digital Plus	2ch PCM	Dolby Digital Plus
	HE-AAC	AAC	2ch PCM	AAC
	MP3	2ch PCM	2ch PCM	2ch PCM
YouTube™	HE-AAC	AAC	2ch PCM	AAC

*1) If there is secondary audio or interactive audio, it will be output in Dolby Digital.
*2) Only the core substream is decoded.
*3) If there is secondary audio or interactive audio, it will be output in DTS.
*4) AAC Raw only supports the source with sample rate between 32kHz and 48kHz.

⊖ **Note**
- If the connected device is not compatible with 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 "Bitstream" in "HDMI" setting.
- If "HDMI" is set to "Bitstream" and this unit is connected to a bitstream compatible device, only primary audio of the BD-Video will be output. (Secondary audio and button sounds will not be output.)
- In order to configure "HDMI" settings, the following conditions must be met:
  - "Voice Guide" is set to "Off".
  - This unit is not in resume-on-stop mode.
    If this unit is in resume-on-stop mode, remove the disc to enable configuration.

4.4. Connection to the network
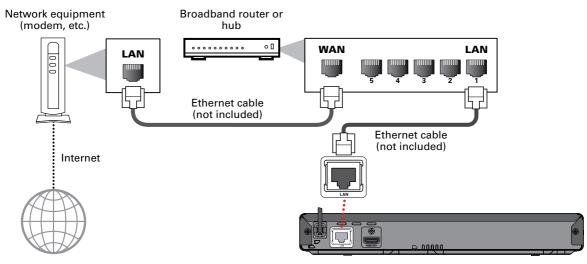
By connecting this unit to the Internet, you can update its software via the Internet, access BD-Live™ and other network services such as Netflix, VUDU and YouTube™.
- Software update: For more information, refer to "Network update" on page 55.
- BD-Live™: For more information, refer to "Enjoying BD-Live™ discs using Internet" on page 30.
- Netflix / VUDU / YouTube™ : For more information, refer to "Information on network services" on page 37

⊜ Note
• A wired connection is the preferred method of connecting this unit to the Internet, especially while performing a software update of this unit via the Internet. It also provides a more stable connection while streaming HD video versus wireless LAN. Wireless LAN performance could be unstable if there are other devices near this unit which also operate in the same frequency spectrum.

■ Wired connection

Network equipment (modem, etc.)

Broadband router or hub

Ethernet cable (not included)

Ethernet cable (not included)

Internet
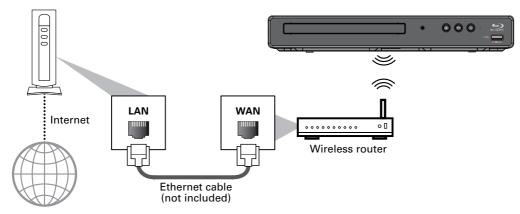
⚠ Caution
• Do not insert any cable other than an ethernet cable to the LAN terminal to avoid damaging the unit.
• Do not connect your PC directly to the LAN terminal of this unit.

⊜ Note
• When you connect an ethernet cable from a router with Internet access to this unit, it will automatically configure network settings. (You do not need to manually configure network settings unless particular settings are required.) however, when switching from wireless to wired, you need to select "Ethernet" in the setup.
• If your modem does not have router functions, connect a wired router.
• If your modem has router functions but there is no vacant port, add a switch / hub.
• Please purchase shielded ethernet cables at your local store and use them when you connect to network equipment.

■ **Wireless connection**

Internet

LAN

WAN

Wireless router

Ethernet cable
(not included)

⊖ Note
- If using the wireless connection, refer to "Wireless connection" on page 45 to configure network settings. For a wireless router, use a router that supports IEEE 802.11 b/g/n specifications.
  ("n" is preferred type for a faster stable operation of the wireless network.)
- Our player supports infrastructure mode when using a wireless router. This unit does not support ad-hoc mode.
- Other radio devices or obstacles may cause interference to the wireless network connection.
- If you are experiencing signal issues with your wireless connection, please confirm that your wireless router is placed close enough to the unit.

5. BEFORE YOU START

5.1. Finding a viewing HDMI input on your TV

After you have completed all of the connections to your TV, review the steps below.

1. Press **[⏻ (POWER)]** to turn on the unit.

2. Turn on your TV.

3. Switch your TV's input to the HDMI port which your unit is connected to.

This is the correct HDMI input view.
- It may take a few moments for the menu screen to appear.
- When this unit is turned on for the first time, the "Initial Setup" screen will appear.

5.2. Initial setup

Please follow the instructions below to complete the initial setup.

1. While Welcome screen is displayed, press **[OK]**.

2. Language setup screen will appear. Use **[▲ / ▼]** to select your language, then press **[OK]**.

3. Voice guide setup screen will appear. Use **[▲ / ▼]** to select "On" or "Off", then press **[OK]**.

4. HDMI CEC setup screen will appear. Use **[▲ / ▼]** to select "On" or "Off", then press **[OK]**.

5. Software update setup (automatically checks for the latest software) screen will appear. Use **[▲ / ▼]** to select "On" or "Off", then press **[OK]**

6. Network setup screen will appear. Use **[▲ / ▼]** to select "Set up now" or "Not now", then press **[OK]**.
   - If you select "Set up now", refer to "Network connection" on page 42 for further operation.
   - If you select "Not now", the home menu screen will appear.

■ **How to reset the OSD language**

You can reset the OSD language if you selected the wrong language.

1. Press **[HOME]** to display the home menu.

2. Use **[▲ / ▼ / ◀ / ▶]** to select " ⚙ ", then press **[OK]**.

   - This item is "Setup" (English) / "Instalación" (Spanish) / "Installation" (French).
   - From here on, please select one of the following items you can find on screen:

3. Use **[◀ / ▶]** to select ″ 🖥 ″, then press **[OK]**.

4. Use **[▲ / ▼]** to select "Language" (English) / "Idioma" (Spanish) / "Langue" (French), then press **[OK]**.

5. Use **[▲ / ▼]** to select "OSD"(English) / "OSD"(Spanish) / "Affichage sur l'écran"(French), then press **[OK]**.

6. Use **[▲ / ▼]** to select your desired language, then press **[OK]**.

7. If the items that were set are displayed in your desired language, then press **[HOME]** to exit.

6. INFORMATION ON PLAYBACK

6.1. Information on playback

■ Playable discs and files

Playable discs	Logos
Blu-ray Disc™ - BD-Video - BD-RE* (ver. 2.1) (Recorded in BDMV format) - BD-R* (ver. 1.1 / 1.2 / 1.3) (Recorded in BDMV format) (Unfinalized disc may not be played back.)	Blu-ray Disc™
DVD-Video	DVD VIDEO
DVD-RW (finalized video mode discs only)	DVD RW
DVD-R (finalized video mode discs only)	DVD R
CD-DA (Audio CD)	COMPACT DISC DIGITAL AUDIO
CD-RW	COMPACT DISC DIGITAL AUDIO ReWritable / COMPACT DISC ReWritable
CD-R	COMPACT DISC DIGITAL AUDIO Recordable / COMPACT DISC Recordable
DTS-CD	-

(*) Due to the intentional progression of the Blu-ray Disc™ format by its standard setting authority, the company cannot guarantee or warrant the playability of future extensions of the Blu-ray Disc™ format with this product.

Playable files	Media
AVCHD	DVD-RW/-R SD memory card using USB card reader
JPEG / PNG / MP3 / FLAC / AAC / WAV	BD-RE/-R DVD-RW/-R CD-RW/-R USB memory stick

Readable device	Playable files / data
USB memory stick	Photo files, music files, Picture-in-Picture commentary, subtitles or other extras for some BD-ROM.

🖨 Note
• This unit may not be able to play back discs recorded on PC's or other recorders.

■ Recommended specifications

AVCHD

This unit cannot play back stand-alone AVCHD files (*.m2ts, *.mts or *.m2t) written to a DVD or copied to an SD memory card. The DVD or SD memory card containing AVCHD files must have a proper file and folder structure meeting AVCHD format specifications. Please use AVCHD compliant device / software to burn or copy AVCHD files to DVD or SD memory card. (Please refer to user manuals of your device / software for more information.)

Music file

MP3 (.mp3)

Sampling frequency: up to 48kHz
Bit rate: up to 320kbps

AAC (.aac)

Sampling frequency: up to 98kHz
Bit rate: up to 320kbps

FLAC (.flac)

Sampling frequency: up to 192kHz
Number of bits: 8/12/16/20/24bit

WAV (.WAV)

Sampling frequency: up to 192kHz
Number of bits: 8/16/20/24bit

Photo file

JPEG(.jpg/.jpeg)

PNG(.png)

⊜ Note
• Regardless of the file type, some files may be unplayable due to their incompatible file structure.

Caution / Note for USB memory stick
❶ Caution
• Do not try to open or modify the USB memory stick.
• Do not touch the terminal surface with your fingers or any metals.

⊜ Note
• This unit supports USB memory stick with FAT16 / FAT32 file system.
• This unit does not support NTFS file system.
• Please keep the USB memory sticks in their cases when you are not using them.
• Some USB memory sticks may not work with this unit.
• This unit can read SD memory cards using a USB card reader.

  - Readable cards: SD memory card (8 MB - 2 GB)   SDHC memory card (4 GB - 32 GB)
                  miniSD memory card (16 MB - 2 GB)   miniSDHC memory card (4 GB - 8 GB)
                  microSD memory card (256 MB - 2 GB) microSDHC memory card (4 GB - 16 GB)

  - Readable files: AVCHD / JPEG / PNG / MP3 / FLAC / AAC / WAV

• Depending on a USB card reader, connected card or device may not be recognized.

■ **Unplayable media and files**

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

- CD-ROM
- DVD-RAM
- DVD-audio
- HD DVD
- SDXC memory card
- unfinalized disc
- BD-RE (ver. 2.1) (recorded in BDAV format)
- BDXL™
- CD-I (compact disc-interactive)
- VSD (video single disc)
- video CD
- SVCD
- microSDXC memory card
- BD-RE (ver. 1.0)
- BD-R (ver. 1.1 / 1.2 / 1.3) (recorded in BDAV format)
- Blu-ray Disc™ / DVD / CD / USB memory stick / SD memory card containing DivX® files
- Blu-ray Disc™ / USB memory stick that contains AVCHD files
- Blu-ray Disc™ / DVD hybrid disc (played back as a BD-Video only)
- 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 dual discs is not guaranteed.
- This unit cannot play back the disc contents protected by Windows Media™ Digital Rights Management (DRM).

■ **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 is labeled for other regions.
Look for the symbols 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 on this unit. The letter or number inside the globe refers to region of the world. BD-Video or DVD-Video discs labeled for a specific region can only be played back on players with the same region code.

BD-Video

DVD-Video

■ **Hint for disc playback**

The contents of a disc are generally divided into sections or folders (group of titles / files) as shown below.

■ Description for icons

[📁] : Folder icon

[🎵] : Music file icon

[🖼] : Photo file icon

- "Folders" refers to the group of files.
- "Track" refers to the contents recorded on the Audio CD.
- "Files" refers to the contents on a disc which are recorded in AVCHD or JPEG / PNG / MP3 / FLAC / AAC / WAV file format.

⊜ Note
• Unrecognizable characters will not be displayed.

6.2. Guide to file list

■ Photo file list

1. **Number of folders or files in this directory / Total number of folders or files in this directory**
2. **Folder**
3. **File list**

4. **File information**
5. **Thumbnail**

■ Music file list

1. **Number of folders or files in this directory / Total number of folders or files in this directory**
2. **Folder**
3. **File list**

4. **Track information**
5. **Cover art (when available)**

■ How to navigate through the file list
• Use **[▲ / ▼]** to move the highlighted text up and down. Press **[◀]** to go back to the previous hierarchy.
• If the list has multiple pages, you can switch pages using **[◀◀ (SKIP) / ▶▶ (SKIP)]**.
• To access files in a folder, select the desired folder, then press **[OK]**.
• Press **[HOME]** to exit.

⊜ Note
• When selecting a photo/music folder, all folders in the disc/USB memory stick will be displayed. If the stored files are not compatible with this unit, these incompatible files will not be displayed, although the folders will still be displayed.

6.3. How to insert a disc

1. Press **[▲(OPEN/CLOSE)]** to open the disc tray.

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

3. Press **[▲(OPEN/CLOSE)]** to close the disc tray.

   • It may take a while to load the disc.

Align the disc to the disc tray guide.

7. BASIC PLAYBACK

7.1. Playing back a disc

BD VIDEO DVD VIDEO CD AVCHD PHOTO FILE MUSIC FILE

1. Insert a disc (refer to "How to insert a disc" on page 23).

   - When the disc is BD / DVD / AVCHD / Audio CD, playback starts automatically. If not, press
     [►II(PLAY/PAUSE)].
   - When photo / music files are contained on the disc, the file list will be displayed (see step 2). Even if the
     content type is of one type only, the file list screen will still be displayed.
   - Some discs may show a title or a disc menu. In this case, refer to "Using the title / disc / pop menu" on
     page 26.
   - "BD-ROM Data (USB) Check" message may be displayed while loading a Blu-ray Disc™.
     In such cases, connect a USB memory stick first, then insert the disc. Refer to "Enjoying BD-Live™ discs
     using Internet" on page 30.

2. Select the type of the file you want to play back, then press **[OK]**.

   ```
   Item 0/2

   📁
   📁 ..                          Type : Folder
   📁 Photo
   📁 Music




                                  HOME   Exit
   ```

   - Select the folder / file to play, and press **[►II(PLAY/PAUSE)]** or **[OK]**.
     Refer to "How to navigate through the file list" on page 22.

To skip to the next title / chapter / track / file:	Press **[►►I(SKIP)]**.
To skip to the previous title / chapter / track / file:	Press **[I◄◄(SKIP)]**.
To pause playback:	Press **[►II(PLAY/PAUSE)]**
To return to normal playback:	Press **[►II(PLAY/PAUSE)]**
To stop playback:	Press **[■(STOP)]**.

Playback will be in resume-on-stop mode. To clear the resume information, press **[■(STOP)]** again.

⊖ **Note**
- Discs containing AVCHD and photo/music files will be played back as AVCHD.
- CDs/DVDs containing FLAC (.flac) files with high frequency and large quantization bit rates may not play
  properly.
- 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.

⊖ **Note for photo file playback**
- Every press of **[◄ / ►]** will turn the Image by 90 degrees when an Image is displayed.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution photo files take longer to be displayed.
- Progressive photo files (Photo files saved in Progressive format) cannot be played back on this unit.

❶ **Caution**
- The screen saver and auto power off do not function while displaying the disc menu or title menu. For that
  reason, leaving the unit on such screens may cause screen burn-in. To avoid this, turn off the unit, or press
  [HOME] to exit the disc/title menu screen after finishing disc playback.

■ Resume-on-stop mode

Blu-ray Disc™ / DVD / AVCHD
When you press **[OK]** next time, playback will start from the point where it had been stopped. If you press **[RETURN]** instead of **[OK]**, playback will start from the beginning.

Audio CD
Playback will start from the point where it was stopped next time you press **[OK]**. If you press **[RETURN]** instead of **[OK]**, playback will start from the beginning of the 1st track of the Audio CD instead of resuming from the stop point.

Music file
When you press **[▶II(PLAY/PAUSE)]** or **[OK]** next time, the playback will start from the point where it has been stopped.

⊜ Note
- If **[HOME]** is pressed during playback, the playback will stop and the resume point will be cleared.
- For BD-Java application, the resume-on-stop may not be available.
- For BD / DVD / AVCHD / Audio CD, except for photo files/music files, resume-on-stop mode remains in effect even after Power is turned off. It will be cancelled once the disc is ejected.

7.2. Playing back contents from a USB memory stick

[PHOTO FILE] [MUSIC FILE]

You can play back JPEG / PNG / MP3 / FLAC / AAC / WAV files stored on a USB memory stick. With the USB memory stick, you can also enjoy the following functions.
- Special additional contents for BD-ROM.
  (For more information about the special additional contents, refer to the Instruction book that came with the disc.)

1. Connect a USB memory stick.

2. Press **[HOME]**.

3. Use **[▲ / ▼ / ◄ / ►]** to select "USB", then press **[OK]**.

4. Select the file type you want to play back, then press **[OK]**.

❶ Caution
- **Do not disconnect** the USB memory stick or switch the unit to standby mode while contents on the USB memory stick are being accessed. It may result in in malfunction or loss of the stick's data.
- Occasionally, SD memory cards / Micro SD memory cards will not be recognized when using certain adapters. In such cases, try a different USB adapter.

⊜ Note
- The resume information will be cleared when;
  - **[■(STOP)]** or **[HOME]** is pressed while in resume-on-stop mode.
  - the USB memory stick is disconnected.
  - the unit is switched to standby mode.
- If a folder / file name contains an unrecognizable character, the folder / file name will not be displayed.
- This unit can read JPEG / PNG / MP3 / FLAC / AAC / WAV files and AVCHD on an SD memory card by using USB card reader.

7.3. Using the title / disc / pop menu

BD VIDEO | DVD VIDEO | AVCHD

Some BD-Videos, DVD-Videos or AVCHD files may contain a title menu which describes the contents of the disc, or a disc menu which guides you through the available functions on the disc.

- With such discs, a title menu or a disc menu may appear automatically when you insert the disc. Otherwise, press **[TOP MENU]** or **[POP MENU/MENU]** to call up the menu. Refer to the disc's manual on how to navigate through the menu.

⊜ Note

- Menus vary among discs. Refer to the information accompanying the disc for details.
- **[TOP MENU]** or **[POP MENU/MENU]** may not work with some discs.

8. SPECIAL PLAYBACK

8.1.   Fast forward / fast reverse

BD VIDEO   **DVD** VIDEO   **CD**   **AVCHD**   **MUSIC FILE**

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

2.   Press **[▶ΙΙ(PLAY/PAUSE)]** to return to normal playback.

⊜ Note
- For Blu-ray Disc™ , DVD, AVCHD, Audio CD, and music files, speed changes at 5 different levels.
- For Audio CD and music files, fast forward / fast reverse search between different tracks/files are not available.

8.2.   Slow forward playback

BD VIDEO   **DVD** VIDEO   **AVCHD**

1.   During playback, press **[▶ΙΙ(PLAY/PAUSE)]**. Then press **[▶▶ (FORWARD)]**.
     Every time you press **[▶▶ (FORWARD)]**, the playback speed changes at 4 different levels.

2.   Press **[▶ΙΙ(PLAY/PAUSE)]** to return to normal playback.

⊜ Note
- Slow Reverse is not available.

8.3.   Step by step playback

BD VIDEO   **DVD** VIDEO   **AVCHD**

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

2.   Press **[▶ΙΙ(PLAY/PAUSE)]** to return to normal playback.

⊜ Note
- Step by step reverse is not available.

8.4. Repeat playback

Available repeat functions vary depending on the disc.

1. During playback, press **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select the desired repeat mode, then press **[OK]**.

REPEAT MODE	AVAILABLE MEDIA
Chapter repeat The current chapter will be played back repeatedly.	BD VIDEO DVD VIDEO AVCHD
Title repeat The current title will be played back repeatedly.	BD VIDEO DVD VIDEO AVCHD
Track repeat The current track/file will be played back repeatedly.	CD PHOTO FILE MUSIC FILE
All repeat All tracks/files in the current folder will be played back repeatedly.	CD PHOTO FILE MUSIC FILE

4. Press **[MODE]** to exit.

⊜ Note
• The repeat setting will be cancelled when you stop playback.
• Repeat setting may be unavailable with some Blu-ray™ discs.

8.5. Shuffle / random playback

Available shuffle and random functions vary depending on the disc.

1. During playback, press **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select the desired playback mode, then press **[OK]**.

SHUFFLE / RANDOM MODE	AVAILABLE MEDIA
Shuffle playback Plays all songs or photo / music files in the current folder one at a time in random order.	CD PHOTO FILE MUSIC FILE
Random playback Plays all songs or photo / music files in the current folder repeatedly in random order.	CD PHOTO FILE MUSIC FILE

4. Press **[MODE]** to exit.

8.6. Slide show

PHOTO FILE

1. Follow steps 1 and 2 in "Playing back a disc" on page 24.
2. Open the folder which contains the desired photo files.
3. Use **[▲ / ▼]** to select a desired file to be played back, then press **[►II(PLAY/PAUSE)]** or **[OK]**.
   • An image will be played back from the selected file.
4. Press **[■(STOP)]** to stop playback.

⊜ Note
• Large-size photo files take time to load before being displayed on the screen.

8.7. PiP (BONUSVIEW™) setting

BD VIDEO

Some BD-Videos have the PiP function which enables you to display the secondary video in the primary video.

1. During playback, press **[MODE]** to display the play menu.

2. Use **[▲ / ▼]** to select "PiP" then press **[OK]**.

   • PiP information will appear.

3. Use **[▲ / ▼]** to select the secondary video you want to show.

   • The secondary video will be displayed with secondary audio.

4. Press **[MODE]** to exit.

   • To select the secondary audio output, refer to "Switching audio soundtrack" on page 34.

⊜ Note
• Secondary video may not be displayed all the time, depending on the scene, it may or may not be available for display.

8.8. Enjoying BD-Live™ discs using Internet

BD VIDEO

You can enjoy BD-Live™ which enables you to use interactive features when the unit is connected to the Internet.

Examples of BD-Live™ features:
• Online access to additional content such as movie trailers, subtitles, BD-Java applications, etc.
• While downloading, special video data may be played back.
  - **Service and functions differ depending on the disc. Follow the instructions given by the disc when using the BD-Live™ function.**
  - **Connect a USB memory stick with at least 1 GB of available memory before using BD-Live™ features on a Blu-ray Disc™.**
  - **Do not disconnect the USB memory stick while using BD-Live™ features.**

⊜ Note
• You must connect the unit to the Internet and set up necessary settings in order to use BD-Live™.
• For the network connection, refer to "Connection to the network" on page 15.
• For the network setup, refer to "Network connection" on page 42.
• For certain discs, "BD-Live Connection" under "Network" under "Setup" may need to be changed.
• Depending on your connection environment, it may take a few moments to connect to the Internet or the Internet may not be connected. Refer to "TROUBLESHOOTING" on page 58.
• Some discs with BD-Live™ function require memory when playing back the content. If you cannot play back a disc with BD-Live™ function, connect a USB memory stick (1GB or more of available memory).
• Not all BD-Video discs have a BD-Live™ content. To enjoy the BD-Live™ features, please use discs with a BD-Live™ content.

⊜ Note for AACS online
• The player or disc ID may be sent to the content provider when playing back a disc with BD-Live™ function.
• If you save your viewing history on the server by using these ID's, you will be introduced to other similar movies.
• You can save game score histories.

8.9. Title / chapter search

BD VIDEO DVD VIDEO AVCHD

■ Using [|◀◀(SKIP)] / [▶▶|(SKIP)]

1. During playback, press [▶▶|(SKIP)] to skip the current title or chapter and move to the next.

   The title or chapter will move forward one at a time.
   • If there is no chapter in a title, the current title may be skipped.
   To go back to the beginning of the current title or chapter, press [|◀◀(SKIP)].
   Press [|◀◀(SKIP)] repeatedly to go to the previous title or chapter. The title or chapter may move backward one at a time.

■ Using [MODE]

1. During playback, press [MODE] to display the play menu.

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

3. Use [◀ / ▶] to select title search or chapter search, then press [OK].

   e.g.) Blu-ray Disc™

   ▶ ⊙BDMV TT 001/028 CHP 005/029 ⊙ₜ 00:21:54⬍
   ◁ 1 / 3 English Dolby Audio – DolbyTrueHD 5.1 ··· 1 / 4 English

4. Use [▲ / ▼ / ◀ / ▶] to select the title / chapter number, then press [OK].

   Playback will start from the beginning of the title / chapter.

⊜ Note
• As for BD-Video, how it performs is strongly determined by the disc, and may not perform as described.
• For DVD, title search can be performed on the stop screen by pressing [MODE] while in stop mode or resume-on-stop mode.

8.10. Track / file search

CD PHOTO FILE MUSIC FILE

■ Using [|◀◀(SKIP)] / [▶▶|(SKIP)]

1. During playback, press [▶▶|(SKIP)] to skip the current track or file and move to the next.

   The track / file will move forward one at a time. To go back to the beginning of the current track / file, press [|◀◀(SKIP)].
   Press it repeatedly to go to the previous track / file. The track / file will move backward one at a time.
   • For photo files, press [|◀◀(SKIP)] once to go to the previous file.

■ Using [MODE]

1. During playback, press [MODE] to display the play menu.

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

   • For photo files, move on to step 4.

3. Use [◀ / ▶] to select track search, then press [OK].

4. Use [▲ / ▼ / ◀ / ▶] to select the track / file number, then press [OK].

   Playback will start from the beginning of the track.

8.11. Time search

BD VIDEO DVD VIDEO CD AVCHD MUSIC FILE

1. During playback, press **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select time search, then press **[OK]**.

   • Blu-ray Disc™ / DVD-Video / AVCHD: " ⏱TT " or " ⏱CHP ".
     Audio CD: " ⏱TR " or " ⏱DISC ".

   e.g.) Blu-ray Disc™

   ```
   ▶      ⦿BONUS    TT 001/028    CHP 005/029    ⏱TT 00:21:54↕
   ◁)  1 / 3 English Dolby Audio – DolbyTrueHD 5.1   ▦ 1 / 4 English
   ```

4. Enter the time count you want to jump to.

   • Use **[▲ / ▼ / ◀ / ▶]** to enter the time count, then press **[OK]**.

   Playback will start from the desired time entered.

8.12. Number select search

BD VIDEO DVD VIDEO AVCHD

Some BD-Videos and DVD-Videos or AVCHD files have button menus to jump to each button displayed scene. During playback the scenes which have the button menu, you can enter the button number by using the number select menu.

1. During playback, press **[MODE]** to display the play menu.

2. Use **[▲ / ▼]** to select "Number Select", then press **[OK]**.

   e.g.) Blu-ray Disc™

   ```
   ▲
   0 0 0 0
   ▼
   ```

   • For BD-Java, a single-digit number select menu is displayed.
   • For DVD, a double-digit number select menu is displayed.
   • For BD-Videos and AVCHD files, the number select menu is displayed even if there is no button menu in the scene.

3. Use **[▲ / ▼]** to enter the number you want to jump to.

   • To move to the digit you wish to change, press **[◀ / ▶]** .

4. After all digits are entered, press **[OK]**.

   Playback of the selected scene will start.

⊜ Note
• As for the BD-Video, how it performs is strongly determined by the disc, and may not perform as described.

8.13. Switching subtitles

Some video materials may have subtitles in one 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.

■ Using [SUBTITLE]
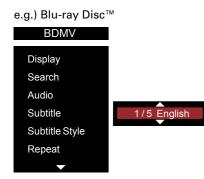
1. During playback, press **[SUBTITLE]**.

   • Pressing **[SUBTITLE]** repeatedly switches the subtitles.

   `.... 1 / 5 English`

   • For Blu-ray™ discs, **[SUBTITLE]** is only available in primary subtitle.

■ Using [MODE]

1. During playback, press **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select your desired subtitle, then press **[OK]**.

   e.g.) Blu-ray Disc™

4. Press **[MODE]** to exit.

■ Subtitle style

For Blu-ray™ discs, the text style can be changed if subtitle style is available.

1. During playback, press **[MODE]** to display the play menu.

2. Use **[▲ / ▼]** to select "Subtitle Style", then press **[OK]**.

3. Use **[▲ / ▼]** to select your desired style, then press **[OK]**.

4. Press **[MODE]** to exit.

⊜ Note
• Some discs will only allow you to change the subtitles from the disc menu or pop menu. Press **[TOP MENU]** or **[POP MENU/MENU]** to display the disc menu or pop menu.
• If the disc has no subtitle language or subtitle style, "⃠" will appear if you press **[▲ / ▼]** or **[SUBTITLE]**.
• During playback of the secondary video, the primary subtitle setting is not available except when there is no subtitle for the secondary video.

8.14. Switching audio soundtrack

When playing back video material recorded with two or more soundtracks (these are often in different audio languages or audio formats), you can switch between them during playback.

■ Using [AUDIO]

1. During playback, press **[AUDIO]**.

    • Pressing **[AUDIO]** repeatedly switches the audio.

    🔊 1 / 5 English DolbyAudio– DolbyTrueHD 5.1

    • For Blu-ray™ discs, **[AUDIO]** is only available in primary audio.

■ Using [MODE]

1. During playback, press **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select your desired audio, then press **[OK]**.

    e.g.) Blu-ray Disc™

4. Press **[MODE]** to exit.

■ Secondary audio

For Blu-ray™ discs, the audio in PiP can be switched. (Refer to "PiP (BONUSVIEW™) setting" on page 30.)

1. During playback, press **[MODE]** to display the play menu.

2. Use **[▲ / ▼]** to select "Secondary Audio", then press **[OK]**.

3. Use **[▲ / ▼]** to select your desired audio, then press **[OK]**.

4. Press **[MODE]** to exit.

⊜ Note
• Secondary audio will not be output when secondary video is not displayed or when the HDMI setting for audio output is set to "Bitstream". (For some Blu-ray™ discs, secondary audio will be output even when secondary video is off.)
• Sound mode cannot be changed during playback of discs not recorded in multiple audio mode.
• Some discs allow changing the audio language setting from 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 the disc has no audio language, " ⊘ " will appear if you press **[▲ / ▼]** or **[AUDIO]**.

8.15. Switching camera angles

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 **[MODE]** to display the play menu.

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

3. Use **[▲ / ▼]** to select your desired angle, then press **[OK]**.

4. Press **[MODE]** to exit.

⊜ Note
• If "Angle Mark" setting is set to "Off", ▣ will not appear on the TV screen.

8.16. Noise reduction

Reduces the noise of the playback picture.

1. Press **[HOME]** to access the home menu.

2. Use **[▲ / ▼ / ◄ / ►]** to select "Setup", then press **[OK]**.

3. Use **[◄ / ►]** to select " 🔧 ", then press **[OK]**.

4. Use **[▲ / ▼]** to select "Picture Control", then press **[OK]**.

5. Use **[▲ / ▼]** to select "Noise Reduction", then press **[OK]**.

6. Use **[▲ / ▼]** to select your desired setting, then press **[OK]**.

7. Press **[HOME]** to exit.

⊜ Note
• With regard to the setting value, the larger the value is, the more notably the effect appears. Value "0" turns off noise reduction.

8.17. Closed caption

BD VIDEO DVD VIDEO AVCHD

Closed caption displays subtitles in synchronization with the video.

1. During playback, press **[MODE]** to display the play menu.

2. Use **[▲ / ▼]** to select "CC Select", then press **[OK]**.

3. Use **[▲ / ▼]** to select your desired stream, then press **[OK]**.

4. Press **[MODE]** to exit.

⊜ Note
- Configure the closed caption display settings (font color, size, style, etc.) in the setup in advance. Refer to page 39-40.

9. NETWORK FEATURES

9.1. Before using network features

Please follow the instructions below before using network features.

1. Connect this unit to the Internet.
   - Refer to "Connection to the network" on page 15.
2. Set up necessary network connection settings.
   - Refer to "Network connection" on page 42.
3. Use [▲ / ▼ / ◀ / ▶] to select the desired application in the home menu, then press [OK].
4. Press [HOME] to exit.

🖨 Note
- Pressing [NETFLIX] / [VUDU] / [YouTube] allows you to directly access the corresponding network service.

9.2. Information on network services

For detailed information on the third-party Internet services, please visit each service provider's website:

Netflix : http://www.netflix.com

VUDU : http://www.vudu.com

YouTube™ : http://www.youtube.com

Netflix / VUDU / YouTube™ can be deactivated in setup.

1. Press [HOME] to access the home menu.
2. Use [▲ / ▼ / ◀ / ▶] to select "Setup", then press [OK].
3. Use [◀ / ▶] to select " 🔧 ", then press [OK].
4. Use [▲ / ▼] to select "Streaming Content", then press [OK].
5. Use [▲ / ▼] to select the desired network service from "Netflix", "VUDU", or "YouTube", then press [OK].
   - When pressing [OK], " ◎ " will be displayed before the "Deactivate" text.

❗ Caution
- Some features may require an always-on broadband Internet connection, software update and/or a minimum bandwidth. Internet services vary by location. Third party Internet services are not provided by Funai Corporation, Inc., and may change or be discontinued at any time and may be subject to third party restrictions. Funai Corporation, Inc. does not make any representations or warranties about these services, which may require the creation of a user account through a computer with Internet access and one-time and/or recurring charges.

10. LIST OF SETTINGS

In "Setup", you can customize various kinds of settings as you prefer.
Refer to the following instructions to navigate through the setup menu.

1. Press **[HOME]** to access the home menu.

2. Use **[▲ / ▼ / ◄ / ►]** to select "Setup", then press **[OK]**.

3. Use **[◄ / ►]** to select the desired setting, then press **[OK]**.

4. Use **[▲ / ▼]** to select the desired category, then press **[OK]**.

5. Use **[▲ / ▼]** to move up and down the list to select menus / options.

6. To make a selection or to access options for an item, select the desired item, then press **[OK]**.

   • To go back to the previous screen, press **[RETURN]** or **[◄]**.

7. Press **[HOME]** to exit.

Refer to the following table for the types of settings you can customize.

Settings	Category	Menus / Options		
Mode Settings	Network	Interface	Ethernet (Wired)	
			Wireless	
		Wireless Setting		
		Network Status		
		Connection Test		
		IP Setting	Auto	
			Manual	
		BD-Live Connection	Allow	
			Limited Allowance	
			Prohibit	
		Proxy Setting	Disable	
			Enable	
			Proxy Host	
			Proxy Port	
	Language	OSD	English	
			Français	
			Español	
		Menu	Chinese	German	Russian
			Danish	Italian	Spanish
			Dutch	Japanese	Swedish
			English	Korean	More
			Finnish	Norwegian	
			French	Portuguese	
		Audio	Chinese	German	Russian
			Danish	Italian	Spanish
			Dutch	Japanese	Swedish
			English	Korean	More
			Finnish	Norwegian	
			French	Portuguese	

Settings	Category	Menus / Options			
Mode Settings	Language	Subtitle	Off	French	Portuguese
			Chinese	German	Russian
			Danish	Italian	Spanish
			Dutch	Japanese	Swedish
			English	Korean	More
			Finnish	Norwegian	
	Streaming Content	Netflix Information			
		Netflix	Deactivate Netflix		
		VUDU	Deactivate VUDU		
		YouTube	Deactivate YouTube		
	Security	Change Password			
		Parental Control			
	System	HDMI CEC	On		
			Off		
		Software Update	Disc		Network
			USB memory stick		
		Automatically check for latest software	On		
			Off		
		BD-ROM Data(USB)	BD-ROM Data (USB) Information		
		Unit Name			
		Copyright			
		Disclaimer			
		Digital Rights Mgmt			
		Load Default			
Display Setting	TV	TV Screen	16:9 Full		4:3 Pan&Scan
			16:9 Normal		4:3 Letterbox
		Resolution	Auto		1080i
			480p		1080p
			720p		
		HDMI 1080p 24Hz	On		
			Off		
	Picture Control	Noise Reduction	0		2
			1		3
		Angle Mark	On		
			Off		
	Closed Caption	CC Attribute	Auto		
			Custom		
		Font color	Default	Red	Yellow
			White	Green	Magenta
			Black	Blue	Cyan
		Font size	Default		
			Standard		
			Small		
			Large		

Settings	Category	Menus / Options		
Display Setting	Closed Caption	Font style	Default	
			Monospaced with serifs	
			Proportionally spaced with serifs	
			Monospaced without serifs	
			Proportionally spaced without serifs	
			Casual font type	
			Cursive font type	
			Small capitals	
		Font opacity	Solid	
			Translucent	
			Transparent	
		Font edge	Default	Uniform
			None	Left drop shadowed
			Raised	Right drop shadowed
			Depressed	
		Font edge color	White	Blue
			Black	Yellow
			Red	Magenta
			Green	Cyan
		BG color	Default	Blue
			White	Yellow
			Black	Magenta
			Red	Cyan
			Green	
		BG opacity	Solid	
			Translucent	
			Transparent	
		Window color	Default	Blue
			White	Yellow
			Black	Magenta
			Red	Cyan
			Green	
		Window opacity	Solid	
			Translucent	
			Transparent	

Settings	Category	Menus / Options		
Audio Setting	Voice Guide	Voice Guide	On	
			Off	
		Voice Guide Volume	Loud	
			Medium	
			Soft	
		Voice Guide Speed	Fast	
			Normal	
			Slow	
		Voice Guide Pitch	High	
			Medium	
			Low	
		Voice Guide Verbosity	Detailed	
			Basic	
	Audio Output	HDMI	Bitstream	
			PCM	
			Re-encode	
		Dolby DRC	Auto	
			On	
			Off	
System Information				

11. SETUPS

11.1. Network connection

HOME ➡ "Setup" ➡ " " ➡ "Network"

Perform the network connection setup in order to use network features, such as BD-Live™, Netflix, VUDU, YouTube™ and the network update function.

■ Connection test

After you enable a network connection or change network settings, always perform the connection test to check to see if the connection is correctly made.

1. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◀ / ▶]** to select " ", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "Connection Test", then press **[OK]**.

   • Connection test will automatically start. The test result will appear right after the test finishes.

5. If the connection test passes, press **[OK]**.

● Note

- If the connection test passes, you are ready to use BD-Live™, Netflix, VUDU, YouTube™ and network update function, using the Internet without making any additional settings.
- If the connection test fails, you may need to check your router settings and make sure the physical connection is secure. If you need the MAC address of this unit to complete your router settings, you can view it in system information.
- When connecting this unit directly to a modem for the first time or connecting it to a modem which was previously connected to any other network device (e.g. a router, PC, etc.), you may have to power cycle the modem (unplug the modem's and/or router's AC power cord from its AC outlet for 30 seconds and then plug it back in), this may reset the settings in the modem. If you have a telephone/Internet modem with your cable service then you may have to use its reset button or remove the backup battery to reset this type of modem.
- If the connection test fails, this unit is not connected to the Internet. In this case, you cannot use the BD-Live™ function or access network services, such as You Tube™, Netflix or VUDU. Please confirm router settings or contact your ISP (Internet Service Provider) for troubleshooting assistance.

■ Wired connection

Auto

In order to make a wired connection, connect an ethernet cable from a router with Internet access. A network will automatically be established.
- In order to confirm that this unit is connected to the Internet, perform "Connection test" (refer to page 42).
- In order to switch from wireless connection to wired, perform the following steps.

1. Connect an ethernet cable from a router with Internet access.

2. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

3. Use **[◀ / ▶]** to select " ", then press **[OK]**.

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

5. Use **[▲ / ▼]** to select "Interface", then press **[OK]**.

6. Use **[▲ / ▼]** to select "Ethernet", then press **[OK]**.

   • When attempting to switch from "Wireless" to "Ethernet", a confirmation screen will appear. Use **[◀ / ▶]** to select "Yes", then press **[OK]**.
   • Network setting will automatically be performed.
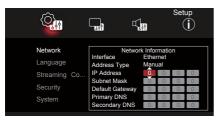
Manual

In the following cases, configure each setting as necessary.
- When connection test failed with auto setting.
- When instructed by your Internet service provider to make specific settings in accordance with your network environment.

IP setting

1. Use **[▲ / ▼ / ◄ / ►]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◄ / ►]** to select " ", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "IP setting", then press **[OK]**.

5. Use **[▲ / ▼]** to select "Manual", then press **[OK]**.

6. "Network Information" setting screen will appear.

   - Use **[▲ / ▼]** to enter a number. Every short press of **[▲ / ▼]** changes the number by 1, while every long press changes by 10.
   - The range of input numbers is between 0 and 255.
   - Use **[◄ / ►]** to move between input fields.
   - When all items are entered, press **[OK]** to confirm the entries.
   - Press **[RETURN]** to complete the configurations.

7. In order to confirm that this unit is connected to the Internet, perform "Connection test" (refer to page 42).

   - If this connection uses the proxy server, perform "Proxy setting" (refer to page 44) before "Connection Test".

⊜ Note
- Enter an IP address after checking the specifications of your router.
- If an IP address is unknown, check the IP address of other devices (e.g. PC connected with a LAN cable). Then, in the fourth cell to the right, assign a different number from those other devices.
- Enter the DNS addresses provided by your Internet service provider.
- If the DNS address is unknown, check the DNS address of other devices (e.g. PC connected via LAN cable) and assign the same DNS address.

1. Follow steps 1 to 3 in "IP setting" on page 43.

2. Use **[▲ / ▼]** to select "Proxy Setting", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "Proxy Host", then press **[OK]**.

5. "Proxy Host" setting screen will appear. Enter a proxy address using the cursor buttons and **[OK]**.

   • After completion, select "Enter" on the software keyboard.

6. Use **[▲ / ▼]** to select "Proxy Port", then press **[OK]**.

7. "Proxy Port" setting screen will appear. Use **[▲ / ▼]** to enter a number and **[◄ / ►]** to move between input fields. When all fields are entered, press **[OK]** to confirm the entries.

   • The range of input numbers for the port number is between 0 and 65535. (This number must be no greater than 65535.)

8. In order to confirm that this unit is connected to the Internet, perform "Connection test" (refer to page 42).

⊜ Note
• For proxy port, certain ports might be closed, blocked or unusable depending on your network environment.
• When the settings are changed, the network connection may be disabled depending on the device.

■ **Wireless connection**

If you connect this unit to a wireless network, select "Wireless" and set up necessary settings.
Please make a note of your SSID (Service Set Identifier – Wireless Network Name) and its WEP* / WPA / WPA2
Key before proceeding with the setup.
* "Auto" cannot be used when the security protocol is set to "WEP".

Auto

PBC (Push Button Configuration)

You can set up a wireless connection quickly.
("PBC" is only available when your router supports it. For details, please refer to the user manual of your
wireless router.)
Please confirm your wireless router has a PBC* (Push Button Configuration) button.

1. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◀ / ▶]** to select " 🖥 ", then press **[OK]**

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

4. Use **[▲ / ▼]** to select "Interface", then press **[OK]**.
   - If you would like to make a change in wireless settings, select "Wireless Setting".
   - After selecting "Wireless Setting", a confirmation screen will appear.
     Use **[◀ / ▶]** to select "Yes", then press **[OK]**. After pressing **[OK]**, move on to step 6.

5. Use **[▲ / ▼]** to select "Wireless", then press **[OK]**.
   - When attempting to switch from "Ethernet" to "Wireless", a confirmation screen will appear.
     Use **[◀ / ▶]** to select "Yes", then press **[OK]**.

6. Use **[▲ / ▼]** to select "Auto", and use **[◀ / ▶]** to select "Next", then press **[OK]**.

7. Use **[▲ / ▼]** to select "PBC".

8. Push the PBC button* on your wireless router, then quickly select "Next" using **[◀ / ▶]** and press **[OK]**.
   * PBC button may be called WPS (Wi-Fi Protected Setup) button on your wireless router.

9. "Connection success and IP is obtained." will be displayed. Press **[OK]** to complete the settings.

⊜ **Note**

"Auto" cannot be used when the security mode of your access point is set to "WEP".
Please try either method below.
- Connect the unit to the access point using "Scan" or "Manual" mode.
- Change the access point's security mode from "WEP*" to "WPA" or "WPA2".
  * "WEP" is not recommended to be used due to its "Major security flaws". Change the security protocol on
    the wireless router to "WPA" or "WPA2 (recommended)" mode.
    (For access point configuration, please consult the user manual of your wireless router or manufacturer.)

1. Follow steps 1 to 5 in "Auto" on page 45.

2. Use **[▲ / ▼]** to select "Scan", and use **[◄ / ►]** to select "Next", then press **[OK]**.
   • This unit will automatically start searching for nearby wireless networks.

3. The search result will be displayed. Use **[▲ / ▼]** to select an appropriate SSID, then press **[OK]**.
   • If you select an SSID with "NONE" in the security column, move on to step 7.

4. "WEP / WPA / WPA2 Key" entry screen will appear. Use **[▲ / ▼]** to select the input field, then press **[OK]**. The software keyboard will appear.

5. Enter the WEP / WPA / WPA2 password of the selected wireless network using cursor buttons and **[OK]**. After entering the password, select "Enter", then press **[OK]**.
   • If you do not know the WEP / WPA / WPA2 Key for your wireless network, please confirm the sticker on the router.
   • The WEP / WPA / WPA2 Key entries are case-sensitive.

6. Use **[◄ / ►]** to select "Next", then press **[OK]**.

7. "Connection success and IP is obtained." will be displayed. Press **[OK]** to complete the settings.

🖹 Note
• The Internal wireless LAN supports following specifications.
   - Wireless standards: IEEE 802.11 b/g/n
   - Frequency: 2.4 GHz
   - Security protocol: WEP* / WPA / WPA2
* "WEP" is not recommended to be used due to its "Major security flaws". Change the security protocol on the wireless router to "WPA" or "WPA2 (recommended)" mode.

Manual

Set up the connection to the wireless router manually by entering the SSID.
In the following cases, select "Manual" to set each setting as necessary.
 - When connection test failed with the setting of "Scan".

1. Follow steps 1 to 5 in "Auto" on page 45.

2. Use **[▲ / ▼]** to select "Manual", and use **[◄ / ►]** to select "Next", then press **[OK]**.

3. Use **[▲ / ▼]** to select the SSID entry field, then press **[OK]**. The software keyboard will appear.

4. Use **[▲ / ▼ / ◄ / ►]** and **[OK]** to enter the SSID. After entering the SSID, select "Enter", then press **[OK]**.

5. Use **[◄ / ►]** to select "Next", then press **[OK]**.

6. Security mode selection screen will appear. Use **[▲ / ▼]** to select the desired security mode, then press **[OK]**.

   • If you select "None", please go to step 10.

7. "WEP / WPA / WPA2 Key" entry screen will appear. Use **[▲ / ▼]** to select the WEP / WPA/ WPA2 password entry field, then press **[OK]**. The software keyboard will appear.

8. Enter the WEP/WPA/WPA2 password of the selected wireless network using cursor buttons and **[OK]**. After completing the password entry, select "Enter", then press **[OK]**.
   • If you do not know the WEP/WPA/WPA2 key for your wireless network, please check if it is on a sticker on the router or ask someone in your household who might know the password.
   • The WEP / WPA / WPA2 key entries are case-sensitive.

9. Use **[◄ / ►]** to select "Next", then press **[OK]**.

10. "Connection success and IP is obtained." will be displayed. Press **[OK]** to complete the settings.

■ Network status

You can check the current status of network status and wireless status.

1. Follow steps 1 to 3 in "Connection test" on page 42.

2. Use **[▲ / ▼]** to select "Network Status", then press **[OK]**.
   • The current network settings and wireless router setting will be displayed.

3. Press **[HOME]** to return to the home menu.

■ Netflix ESN

You can view the ESN (Electronic Serial Number, which Netflix uses to identify your device).
Netflix customer service might ask you for this number during troubleshooting.

1. Use **[▲ / ▼ / ◄ / ►]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◄ / ►]** to select " 🖼 ", then press **[OK]**.

3. Use **[▲ / ▼]** to select "Streaming Content", then press **[OK]**.

4. Use **[▲ / ▼]** to select "Netflix Information", then press **[OK]**.

5. Press **[HOME]** to return to the home menu.

11.2. HDMI CEC

| HOME ➜ "Setup" ➜ " " ➜ "System" ➜ "HDMI CEC" |

HDMI CEC allows integrated system control over HDMI and is part of the HDMI standard. This function may not work properly depending on the device connected to the unit. When "HDMI CEC" setting is set to "On" the functions listed below will be available.

■ **One touch play**

When the buttons below are pressed then operations are performed on this unit, the TV will automatically be turned on and switched to the appropriate video source input.

Buttons for one touch play:
- **[▶II(PLAY/PAUSE)]** (on the unit)
- **[▶II(PLAY/PAUSE)]**, **[I◀◀(SKIP)]**, **[▶▶I(SKIP)]**, **[HOME]** (on the remote control)
- **[TOP MENU]** or **[POP MENU/MENU]** (on the remote control when a disc is inserted in the unit)

■ **One touch standby**

When you press and hold **[⏻(POWER)]** for 2 seconds, it turns off the TV first and then turns off the power on this unit.
When the connected HDMI CEC compatible display device is turned off first, then it turns off the power to this unit.

11.3. HDMI video resolution

HOME ➜ "Setup" ➜ " 📺 " ➜ "TV" ➜ "Resolution"

Sets the resolution of the video signal output from the HDMI OUT jack.

■ Set up resolution

1. Use [▲ / ▼ / ◀ / ▶] to select "Setup" in the home menu, then press **[OK]**.

2. Use [◀ / ▶] to select " 📺 ", then press **[OK]**.

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

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

5. Use [▲ / ▼] to select your desired setting, then press **[OK]**. On the confirmation screen, use [◀ / ▶] to select "OK", then press **[OK]**.

6. Press **[HOME]** to exit.

■ Set up HDMI 1080p/24 Hz

1. Follow steps 1 to 3 in "Set up resolution" above on this page.

2. Use [▲ / ▼] to select "HDMI 1080p 24Hz", then press **[OK]**.

3. Use [▲ / ▼] to select "On" or "Off", then press **[OK]**.

4. Press **[HOME]** to exit.

You can select the desired "Resolution" among the settings listed below: "Auto", "480p", "720p", "1080i", "1080p". Actual output resolution:

Setting in "Resolution"	Setting in "HDMI 1080p 24Hz"	Source					
		480i/60	480p/60	720p/60	1080i/60	1080p/60	1080p/24*
Auto	On	The highest resolution supported by your display device will automatically be in effect. * Images will be output in 1080p/24 when the connected device supports 1080p/24.					
	Off	The highest resolution supported by your display device will automatically be in effect. * Images will be output in 1080p/60 even if the connected device supports 1080p/24.					
480p	On	480p/60					
	Off						
720p	On	720p/60					
	Off						
1080i	On	1080i/60					
	Off						
1080p	On	1080p/60 * Images will be output in 1080p/24 when the connected device supports 1080p/24.					
	Off	1080p/60 * Images will be output in 1080p/60 even if the connected device supports 1080p/24.					

⊜ Note

- The selected resolution must also be supported by your display device.
- If your TV and the unit are connected by a DVI cable and if "Auto" is selected, "480p" will be automatically in effect.
- Refer also to your TV's manual.
- When connected to an HDCP incompatible display device, the picture will not be displayed properly.
- The audio signals from the HDMI OUT jack (including the sampling frequency, the number of channels and bit length) may be limited by the connected device.
- Among the display devices that support HDMI, some do not support audio output (for example, projectors). While connected to a device such as a projector, audio will not be output from the HDMI OUT jack.
- When this unit's HDMI OUT jack is connected to a DVI-D compatible display device(s) (HDCP compatible) with an HDMI-DVI converter cable, the signals are output in digital RGB.
- HDMI video resolution does not work during playback of a BD-Video.

Copyright protection system

To play back digital video images of a BD-Video or DVD-Video via an HDMI connection, it is necessary that both the player and display device (or an AV receiver / amplifier) support a copyright protection system called HDCP (High-bandwidth Digital Content Protection system). HDCP is copy protection technology which prevents copying or playback of encrypted content when connected to a non-HDCP compliant AV device. This unit supports HDCP. Please read the operating instructions of your display device (or an AV receiver / amplifier) for more information.

11.4. Parental

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

■ Change password

HOME ➜ "Setup" ➜ " " ➜ "Security" ➜ "Change Password"

1. Use **[▲ / ▼ / ◄ / ►]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◄ / ►]** to select " ", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "Change Password", then press **[OK]**.

5. Enter your 4-digit password.
    - The default value is "0000".
    - Use **[▲ / ▼]** to enter the first digit of your password, then press **[►]**.
    - When 4-digit numbers are entered, press **[OK]**.

6. Set a new password.
    - Use **[▲ / ▼]** to enter numbers, then use **[◄ / ►]** to move the input field. After having entered the 4th number, press **[►]**. For confirmation, re-enter the same password, then press **[OK]**.
    - Record your new password, in case you forget it.

7. Press **[HOME]** to exit.

■ BD / DVD rating level

> HOME ➡ "Setup" ➡ " " ➡ "Security" ➡ "Parental Control"

1. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◀ / ▶]** to select " ", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "Parental Control", then press **[OK]**.

5. Enter your 4-digit password.
   - The default value is "0000".
   - If you have not changed the password, change it. (refer to page 52)
   - Use **[▲ / ▼]** to enter the first digit of your password, then press **[▶]**.
   - When 4-digit numbers are entered, press **[OK]**.

6. Use **[▲ / ▼]** to select your desired Level, then press **[OK]**.

7. Press **[HOME]** to exit.

	RATING EXPLANATIONS
Off	Parental control is inactive; all discs can be played back.
1 [Kid Safe]	Suitable for children.
2 [G]	General audience.
3 [PG]	Parental guidance suggested.
4 [PG-13]	Unsuitable for children under 13.
5 [PGR]	Parental guidance recommended.
6 [R]	Restricted; under 17.
7 [NC-17]	No one under 17.
8 [Adult]	BD/DVD software of any Level (adult / general / children) can be played back.

To temporarily disable parental lock:
Some discs allow you to temporarily disable parental lock. When you try to play them back, the password entry screen will be displayed.
Follow the instructions which appears on the TV screen to disable parental lock.

11.5. Software update

HOME ➡ "Setup" ➡ " " ➡ "System" ➡ "Software Update"

This unit lets you update the software yourself using a software update disc or USB memory stick, or via the Internet.
The available discs are below:
• BD-RE/-R
• DVD-RW/-R
• CD-RW/-R

■ Disc / USB memory stick update

You can update the software by using a disc or USB memory stick.
Prepare a blank disc or USB memory stick for software update:
Navigate to www.sanyo-av.com website, and download the latest software version to a blank disc or USB memory stick using a PC by following the directions described on the website.
• Use a blank disc or USB memory stick, download one software update per disc or USB memory stick. Write the software into the root directory of the disc or USB memory stick.
• For more details on how to download the software, please refer to the website.

1. Insert the disc or connect the USB memory stick for software update.

   • If a disc is inserted, the file list will appear. Press **[HOME]**.
   • After connecting a USB memory stick, wait 10-20 seconds, then move on to step 2.

2. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

3. Use **[◀ / ▶]** to select " ", then press **[OK]**.

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

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

6. Use **[▲ / ▼]** to select "Disc" or "USB memory stick", then press **[OK]**.

   • This unit now starts loading the update file, then Installs it. Update will take a while. Leave the unit until it automatically restarts.

7. After updating finishes, this unit will restart automatically. Remove the disc or USB memory stick from this unit.

🛈 Caution
• Please **Do Not Unplug** the AC power cord, eject the disc or unplug the USB memory stick or press **[⏻ (POWER)]** on unit or remote to turn the unit to standby mode while performing a "Disc / USB memory stick update".

⊜ Note
• Software update will not change any of the current settings.

■ Network update

You can update the software of this unit via the Internet if it is connected to the Internet.

1. Follow steps 2 to 5 in "Disc / USB memory stick update" on page 54.

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

    • The unit will connect to the server, then check for the latest software version.

3. Software version confirmation screen will appear. Press **[OK]**.

    • Downloading of the latest software will start. (Download may take some time.)
      After completing the download, update will start.

4. After updating finishes, this unit will restart automatically.

❶ Caution

•   Please **Do Not Unplug** the AC power cord, ethernet cable, wireless modem / router or press **[⏻(POWER)]** to turn the unit to standby mode while using "Network update".

⊜ Note

•   In order to update the software via the Internet, you must connect the unit to the Internet and set up necessary settings.
•   For the network connection, refer to "Connection to the network" on page 15.
•   For the network setup, refer to "Network connection" on page 42.
•   Software update will not change any of the current settings.

11.6. Voice guide

HOME ➡ "Setup" ➡ " 🔲 " ➡ "Voice Guide"

Menus to configure various settings for the voice guide function.

1. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◀ / ▶]** to select " 🔲 ", then press **[OK]**.

3. Use **[▲ / ▼]** to select the desired setting, then press **[OK]**.

    "Voice Guide":
    Turns on/off the voice guide function.

    "Voice Guide Volume":
    Configures the volume of the voice.

    "Voice Guide Speed":
    Configures the speech rate.

    "Voice Guide Pitch":
    Configures the voice pitch.

    "Voice Guide Verbosity":
    Configures whether to read detailed information on the current item/operation.

4. Use **[▲ / ▼]** to select the desired setting, then press **[OK]**.

5. Press **[HOME]** to exit.

🗐 Note
*   In order to enable the voice guide function, the OSD language needs to be set to English or Spanish. voice guide is not available in French.

*   When voice guide is set to on, the HDMI audio setting is fixed to LPCM. Changing the HDMI audio setting is only possible when voice guide is set to off.

*   Voice guide is not available with YouTube™.

*   While the voice guide function is enabled, operations may slow down.

11.7. Restore default settings

HOME ➜ "Setup" ➜ " " ➜ "System" ➜ "Load Default"

This unit will be reset to factory default settings. All the settings will be Initialized.

1. Use **[▲ / ▼ / ◀ / ▶]** to select "Setup" in the home menu, then press **[OK]**.

2. Use **[◀ / ▶]** to select " ", then press **[OK]**.

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

4. Use **[▲ / ▼]** to select "Load Default", then press **[OK]**.

5. Confirmation message will appear. Use **[◀ / ▶]** to select "OK".
   • Initialization will start.

🗐 Note
• The initial setup screen will appear upon completion of initialization.

12. TROUBLESHOOTING

Problem	Tip
No power.	Check if the AC power cord is properly connected.
	Try another power outlet.
	Unplug the AC power cord, and wait for about 5-10 seconds. Plug it back in and attempt to power on the unit.
No sound or picture.	Make sure both the TV and Blu-ray Disc™ player are turned on.
	Confirm the connections to the TV are made properly as shown in the "CONNECTIONS" on page 12.
	Check to see whether the connected TV or another device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.)
No reaction to the remote control.	Reduce the distance to infrared sensor window.
	Confirm that the player's AC power cord is plugged into a power outlet.
	Check the batteries in the remote control and make sure they are inserted properly by + or - symbols. See how to check the remote operation on page 64.
No audio / video signal on the display device via HDMI cable.	If the unit is connected to a non-certified HDMI device, the audio / video signal will not be sent to that device.
	Make sure the display device is on the correct input / video source.
	Perform an HDMI hotplug: Disconnecting the HDMI cable from the display device, turn on both devices, and replug the HDMI cable back in.
	Check with the TV manufacturer, if there are any software updates available for the TV.
	Check to see if the HDMI cable is a certified version.
No high-definition video signal on the TV screen.	Does the disc contain high-definition video? High-definition video is only available when the disc contains it.
	Does the TV support high-definition video? High-definition video is only available when the TV supports it.
Distorted picture.	Sometimes a small amount of picture distortion may appear. This is not a malfunction.
Completely distorted picture or black / white picture with Blu-ray Disc™ / DVD Disc.	Make sure the disc is compatible with this unit.
No sound or distorted sound.	Adjust the volume.
	Check to see if the speakers are connected correctly.
	Check the HDMI connection.
	Make sure the HDMI cable is not plugged into an HDMI-DVI adapter which does not handle digital sound.
	Check the settings in "Audio Output" menu.
Picture freezes momentarily during disc playback.	Check the disc for fingerprints / scratches and clean with a soft cloth wiping from the center to the outer edge.
Cannot play back a disc.	Make sure that the unit supports the disc.
	Check the region code for the disc. This unit supports the following region codes. - Blu-ray Disc™: "A" - DVD: "ALL" or "1"
	For DVD-RW/-R, make sure that the disc is finalized.
	Clean the disc.
	Is the disc a newer title? This problem may be solved by software update. Refer to "Software update" on page 54.
"BD-ROM Data(USB) Check" message appears when attempting to play a Blu-ray Disc™.	Connect a USB memory stick first, then insert the Blu-ray Disc™. • When this unit starts loading a Blu-ray Disc™, it will check the USB memory stick to which BD-Live™ contents will be saved.

Problem	Tip
A music/photo file does not play.	Confirm that the file type is supported. Refer to page 20 for the compatible file extensions.
	The file may be corrupted. Check to see if it is playable on a PC or other devices.
No return to start-up screen when disc is removed.	Soft reset this unit by turning it off for 30 seconds, then on again.
	To completely reset the unit, press and hold **[⏻(POWER)]** on the front panel for 10 seconds to shut down the unit or unplug the AC power cord from the AC outlet for 5-10 seconds.
⊘ in the upper left hand corner of the TV screen.	The operation is not possible.
Buttons do not work or the unit stops responding.	To soft reset the unit, press and hold **[⏻(POWER)]** on the front panel for 10 seconds to shut down the unit or to hard reset the unit by unplugging the AC power cord from the AC outlet for 5-10 seconds.
The unit does not respond to some operating commands during playback.	The operations may be prohibited by the disc. Refer to the instructions for the disc.
The unit cannot read Blu-ray Disc™ / DVD/CD Disc.	Condensation? (Let the unit sit and dry for 1 or 2 hours)
	Check to see if the disc is compatible with this unit. (Refer to page 19.)
	Wipe dirt off the disc from the center to the outside or replace the disc. Refer to "Cleaning discs" on page 64.
Scene shooting angle does not switch.	Angles cannot be switched for Blu-ray Disc™ / DVD which do not contain multiple angles. in some cases multiple angles are only recorded for specific scenes.
Playback does not start when a Title is selected.	Check the settings in "Parental Control" menu.
Cannot play back AVCHD file.	This unit cannot play back stand-alone AVCHD files (*.m2ts, *.mts or *.m2t) written to a DVD. The DVD containing AVCHD files must have a proper file and folder structure meeting AVCHD format specifications. Please use AVCHD compliant device / software to burn or copy AVCHD files to DVD. (Please refer to user manuals of the device / software for more information.)
The capacity of the USB memory stick decreased.	Data may be written on the USB memory stick when a BD-Video uses the virtual package feature while a USB memory stick is connected to the unit.
Cannot play back a MPEG-2 video and audio from the USB memory stick.	MPEG-2 is not compatible with this unit.
Cannot read the contents on the USB memory stick.	The USB memory stick is not compatible with this unit or the contents may be damaged.
	Turn off the unit, then turn it back on.
	To soft reset the unit, press and hold **[⏻(POWER)]** on the front panel for 10 seconds to shut down unit to standby mode or to hard reset the unit by unplugging the AC power cord from the AC outlet for 5-10 seconds.
Cannot play back BD-Video.	Connect a USB memory stick (1GB or more of available memory). Some discs with BD-Live™ function require memory when playing back content.
	Do not disconnect the USB memory stick during playback.
Repeat setting does not work with a Blu-ray Disc™	Repeat setting may be unavailable with some Blu-ray™ discs.
Cannot play back 3D.	3D Blu-ray™ discs are not supported by this unit.

Problem	Tip
Cannot load a Blu-ray Disc™ (that is stuck in loading mode and cannot open the disc tray to eject the disc.	Unplug unit from AC outlet for 20 seconds. Plug unit back in and press the [⏏ (OPEN/CLOSE)] on the unit to eject the disc.
Cannot read a USB memory stick.	The format of the USB memory stick is not compatible with this unit. If the USB memory stick has been formatted on a PC or another device, the file system may be incompatible with this unit. This unit supports the FAT16 / FAT32 file systems.
Cannot play back photo files from a disc.	Make sure that the disc was recorded in the UDF, ISO9660 or JOLIET format.
Cannot find a photo file.	Make sure that the file extension is .jpg / .JPG / .jpeg / .JPEG. / .png / or .PNG.
Cannot play back music files from a disc.	Make sure that the disc was recorded in the UDF, ISO9660 or JOLIET format.
	Confirm that the bitrate and sampling frequency are compatible with this unit. (Refer to page 20)
Cannot find a music file.	Make sure that the file extension is MP3, AAC, FLAC or WAV for music files.
Music files play choppy.	CDs/DVDs containing FLAC (.flac) files with high frequency and large quantization bit rates may not play properly. In such cases, copy the music files to a Blu-ray Disc™ or USB memory stick, then try playing.
No audio signal from surround system of the audio system.	Make sure the audio system is turned on.
	Check the input mode on the audio system if it is on the correct channel.
	Check if the surround system is compatible with either bitstream or LPCM. If not sure please check the user manual or contact the surround manufacturer. Once confirmed check the setting in the "Setup" on this unit.
	Increase the volume level on the surround system.
Cannot connect to the Internet although the connection test passes.	Make sure that the ethernet cable is properly connected to the modem / router.
	Confirm that another device, such as a PC, can connect to the Internet.
Cannot connect to the network.	Check to see if the modem / router has power turned on.
	Make sure that the ethernet cable is properly connected to the modem / router.
	Confirm if the Internet light is showing activity (light blinking) on the modem / router.
	Check network settings on the unit.
	Turn off this unit and the modem/router (if it has a power button), then unplug their AC cords. After 30 seconds, plug them back in and turn the devices back on. If you have a telephone / Internet modem with your cable service, then you may have to use its reset button or remove the backup battery to reset this type of modem. Now wait for the lights to show activity and try reconnecting.
	Check the cable connection to the router when connecting with an ethernet cable.
	Confirm "Network Status" in the setup.
	Turn on the DHCP function on the router.
Cannot use "Auto" to connect to the access point.	If the access point's security mode is set to "WEP", change the setting to "WPA" or "WPA2 (recommended)", then try "Auto" again. Refer to "⊜ Note " on page 45. (For access point configuration, please consult its user manual or manufacturer.)
	Connect the unit to the access point using "Scan" or "Manual" mode.
Cannot use the wireless connection.	Once you have activated the wireless connection please wait 30 seconds for the connection to be established after turning on the unit, before trying to access network features such as BD-Live™ and third-party network services.

Problem	Tip
Cannot connect to the network while my PC is connected to the network.	Check the content of your Internet service contract to see if your Internet service provider prevents multiple terminals connecting at the same time.
You are not sure if the unit is connected to the Internet.	Perform the connection test. (refer to page 42)
	Confirm that the "█Z▄▄▄" icon appears right after the unit is turned on. If the icon does not appear, the unit is not connected to the Internet. Review the connection settings.
Cannot use the BD-Live™ function or Internet data does not download properly.	Confirm that this unit is successfully connected to the internet.
	Confirm the BD-Live connection setting in the setup.
	Connect a USB memory stick before inserting a disc. The USB memory stick must have 1GB or more free space.
	Confirm that the USB memory stick is properly connected to this unit. Make sure that the USB memory stick connected to this unit is not write-protected.
Cannot add network services.	On this unit, only the network services of Netflix, Vudu, and YouTube™ can be used.
Cannot use Netflix service.	Check to see if the network connection is properly made.
	Visit www.netflix.com on your PC and become a Netflix member.
The picture quality of Netflix streaming movie is poor.	Check your Internet connection speed.
	Contact your Internet service provider. (You may need to improve the broadband speed.)
Netflix streaming movie often stops or starts buffering during playback.	Contact your Internet service provider. (You may need to improve the broadband speed.)
Cannot use the VUDU service.	VUDU is only available in the united states.
	Check to see if the network connection is properly made.
Cannot rent or buy movies / TV shows on VUDU.	You need to activate the VUDU account.
	Log into your account at http://my.vudu.com and check your payment information.
The picture quality of VUDU movie is poor.	Check your Internet connection speed. You need speeds of at least 9 Mbps to this player for high quality uninterrupted playback.
VUDU movie often stops or starts buffering during playback.	Check your Internet speed. The following are the required connection speeds for picture quality for uninterrupted streaming. SD quality (1 Mbps - 2 Mbps), HD quality (2.25 Mbps - 4.5 Mbps), HDX quality (4.5 Mbps - 9 Mbps).
Cannot use the YouTube™ service.	Check to see if the network connection is properly made.
No sound with YouTube™.	If this unit is connected to an AAC-compliant device, the sound may not be output. In such cases, configure as follows: "Setup" ➜ "Audio Setting" ➜ "Audio Output" ➜ "HDMI" ➜ "PCM".
The picture quality of the YouTube™ video is poor.	You may experience frequent buffering, distorted pictures or no picture at all depending on your network environment and Internet traffic.
	The picture and sound quality differ depending on the Internet service provider.

⊜ Note
- Do not attempt to repair the Blu-ray Disc™ player yourself. This may cause severe injury, irreparable damage to your Blu-ray Disc™ player and void your warranty.
- Please have your Blu-ray Disc™ player model and serial number available before contacting us. These numbers are available on the cabinet, as well as on the packaging.

13. SPECIFICATIONS

General	
Signal system	NTSC Color
Power requirements	120 V AC, 60 Hz
Power consumption	15 W (standby: 0.5 W)
Dimensions (width x height x depth)	11.1 x 1.7 x 7.9 inches (280.0 x 41.0 x 198.5 mm)
Weight	2.2 lbs. (1.0 kg)
Operating temperature	41°F (5°C) to 104°F (40°C)
Operating humidity	Less than 80 % (no condensation)

Terminals	
USB input TYPE A	
HDMI output HDMI jack x 1	Digital Video: 480p, 720p, 1080i, 1080p, 1080p/24 Digital Audio
LAN terminal	10BASE-T / 100BASE-TX
Wireless LAN (Internal)	IEEE 802.11 b/g/n

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

14. NETWORK SERVICE DISCLAIMER

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15. MAINTENANCE

■ Servicing
- Please refer to relevant topics in "TROUBLESHOOTING" on page 58 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. Eject the disc (if possible), disconnect the USB memory stick (if connected to the unit), place the unit into standby mode, unplug the AC power cord, and please contact: 1-866-212-0436 or visit : www.sanyo-av.com

■ 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 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 referred to relevant sections and "TROUBLESHOOTING" on page 58 in this user 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 such discs, as they may damage the unit.

■ IR signal check
- If the remote control does not work properly, you can test IR signal using a digital camera or cell phone camera to see if the remote control sends out the infrared signal.

1. Turn on the digital camera or cell phone camera.

2. Point the digital camera or cell phone camera towards the front of the remote control.

3. Press any arrow key on the remote control and look at the camera display.

- If a pulsating light appears on the display the remote control is sending out an IR signal.

⊜ Note
- Some digital cameras or smart phones with camera(s) may have an IR filter(s) and will not display the IR signal.
- Remote-control operation on any other remote control, such as a universal remote control, is not guaranteed.

16. TRADEMARK INFORMATION

"Blu-ray Disc™", "Blu-ray™" and "Blu-ray Disc™" logo are trademarks of the Blu-ray Disc Association.

"BD-Live™" and "BD-Live™" logo are trademarks of the Blu-ray Disc Association.

"BONUSVIEW™" and "BONUSVIEW™" logo are trademarks of the Blu-ray Disc Association.

Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories.

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The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

"x.v.Color" and "x.v.Color" logo are trademarks of Sony Corporation.

DVD is a trademark of DVD Format/Logo Licensing Corporation.

"AVCHD" and the "AVCHD" logo are trademarks of Panasonic Corporation and Sony Corporation.

The Wi-Fi CERTIFIED Logo is a certification mark of the Wi-Fi Alliance.

Netflix is available in certain countries. Streaming membership required. More information at www.netflix.com.

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YouTube and the YouTube logo are trademarks of Google Inc.

17. GLOSSARY

AAC (Advanced Audio Coding)

AAC is an audio compression method used in the video compression standards MPEG-2/MPEG-4. In AAC, the audio can be compressed 1.4 times smaller than MP3, while the sound quality is equivalent to MP3.

AACS (Advanced Access Content System)

AACS is the content protection scheme used with Blu-ray™ discs.

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" on page 67.

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 its height).

AVCHD

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

BD-Live™

BD-Live™ is a BD-Video (BD-ROM version 2 Profile 2.0) which contains new functions (e.g. Internet connection), in addition to the BONUSVIEW™ function.

Blu-ray Disc™

Blu-ray Disc™ is a next generation optical video disc which is capable of storing much more data than a conventional DVD. 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" on page 69.

Cinavia™

Cinavia Notice
This product uses Cinavia technology to limit the use of unauthorized copies of some commercially-produced film and videos and their soundtracks. When a prohibited use of an unauthorized copy is detected, a message will be displayed and playback or copying will be interrupted.
More information about Cinavia technology is provided at the Cinavia Online Consumer Information Center at
http://www.cinavia.com
To request additional information about Cinavia by mail, send a postcard with your mailing address to: Cinavia Consumer Information Center, P.O. Box 86851, San Diego, CA, 92138, USA.
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Default Gateway

IP address of the electronic devices (such as a router) which provide Internet access.

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".

DNS Server

A server which translates Internet domain names into IP addresses.

Dolby Audio - Dolby Digital

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

Dolby 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 Audio - 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. You can enjoy movie dynamic and realistic sound like 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.

FLAC (Free Lossless Audio Codec)

FLAC is a type of lossless sound compression file format.

HDMI (High-Definition Multimedia Interface)

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

IP Address

A set of numbers which are assigned to devices participating in a computer network.

JPEG (Joint Photographic Experts Group)

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

LAN (Local Area Network)

A group of computer networks covering a small area like a company, school or home.

Local Storage

A storage area of sub contents for playing virtual packages on BD-Video.

MP3 (MPEG audio layer 3)

MP3 is a method of compressing files. You can copy MP3 files on BD-RE/-R, DVD-RW/-R, CD-RW/-R, or USB memory stick from the computer and play back the files on this unit.

Netflix

Netflix is online movie rental service, offering online streaming to customers in the United States.

PCM (Pulse Code Modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality, but 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" on page 67.

PNG (Portable Network Graphics)

PNG is a type of bitmap (still picture) file format.

Proxy Server

Proxy server is a server which acts as an intermediary between a workstation user and the Internet to ensure security.

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).

Router

A networking device which distinguishes the IP address assigned to each device and routing and forwarding information in the computer network.

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.

Subnet Mask

A mask which is used to determine what subnet an IP address belongs to.

Switch / Hub

A device used for connecting multiple devices to the network.

Title

A collection of chapters on BD-Video or DVD-Video. See also "Chapter" on page 67.

Track

Audio CD uses Tracks to divide up the content of a disc. The BD-Video or DVD-Video equivalent is called a chapter.
See also "Chapter" on page 67.

Virtual Package

The function which copies data to other media (local storage) from the Internet and plays secondary video, secondary audio and subtitles at the same time. The method of the playback varies depending on the disc.

VUDU

VUDU is a leading HD on-demand video service which utilizes the Internet connection to deliver the highest quality on-demand video and Internet applications.

x.v.Color

"x.v.Color" is a promotion name given to the products that have the capability to realize a wide color space based on the xvYCC specifications and is a trademark of Sony Corporation.

YouTube™

YouTube™ is one of the video-sharing web sites which you can view a large number of videos posted on the web site for free. Not only can you view videos on YouTube™, you can upload your original video clips and share them with your friends all over the world.

LIMITED WARRANTY
NINETY (90) DAY LABOR / ONE (1) YEAR PARTS

WARRANTY COVERAGE:
This warranty obligation is limited to the terms as set forth below.

WHO IS COVERED:
This product warranty is issued to the original purchaser or the person receiving the product as a gift against defects in materials and workmanship as based on the date of original purchase ("Warranty Period") from an Authorized Dealer. The original sales receipt showing the product name and the purchase date from an authorized retailer is considered such proof.

WHAT IS COVERED:
This warranty covers new products if a defect in material or workmanship occurs and a valid claim is received within the Warranty Period. At its option, the company will either (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new, or serviceable used parts and is at least functionally equivalent or most comparable to the original product in current inventory, or (3) refund the original purchase price of the product.
Replacement products or parts provided under this warranty are covered against defects in materials and workmanship from the date of the replacement or repair for ninety (90) days or for the remaining portion of the original product's warranty, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes company property. When a refund is given, your product becomes company property.
Note: Any product sold and identified as refurbished or renewed carries a ninety (90) day limited warranty.
Replacement product can only be sent if all warranty requirements are met. Failure to follow all requirements can result in delay.

WHAT IS NOT COVERED - EXCLUSIONS AND LIMITATIONS:
This Limited Warranty applies only to new company manufactured products that can be identified by the trademark, trade name, or logo affixed to it. This Limited Warranty does not apply to any hardware product or any software, even if packaged or sold with the product, as manufacturers, suppliers, or publishers may provide a separate warranty for their own products packaged with the bundled product.
The company is not liable for any damage to or loss of any programs, data, or other information stored on any media contained within the product, or other additional product or part not covered by this warranty. Recovery or reinstallation of programs, data or other information is not covered under this Limited Warranty.
This warranty does not apply (a) to damage caused by accident, abuse, misuse, neglect, misapplication, or non-supplied product, (b) to damage caused by service performed by anyone other than company approved Authorized Service Location, (c) to a product or a part that has been modified without written company permission, or (d) if any serial number has been removed or defaced, or (e) product, accessories or consumables sold "AS IS" without warranty of any kind by including refurbished product sold "AS IS" by some retailers.

This Limited Warranty does not cover:
• Shipping charges to return defective product.
• Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna/signal source systems outside of the product.
• Product repair and/or part replacement because of improper installation or maintenance, connections to improper voltage supply, power line surge, lightning damage, retained images or screen markings resulting from viewing fixed stationary content for extended periods, product cosmetic appearance items due to normal wear and tear, unauthorized repair or other cause not within the control of the company.
• Damage or claims for products not being available for use, or for lost data or lost software.
• Damage from mishandled shipments or transit accidents when returning product.
• A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
• A product used for commercial or institutional purposes (including but not limited to rental purposes).
• Product lost in shipment and no signature verification receipt can be provided.
• Failure to operate per Owner's Manual.

TO OBTAIN ASSISTANCE…
Contact the Customer Care Center at:

www.sanyo-av.com
1 866 212 0436

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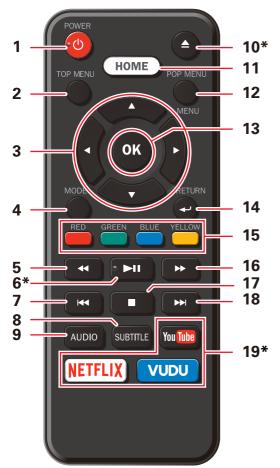Some states do not allow the exclusions or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

FUNAI CORPORATION, Inc. 19900 Van Ness Avenue, Torrance, CA 90501

18. ESPAÑOL

18.1. Mando a distancia

* La unidad también se puede encender pulsando estos botones.

1. Botón ⏻ (ENCENDIDO)
- Pulse el botón para encender la unidad, o para pasar la unidad al modo de espera. (Para apagar completamente la unidad, debe desconectar el cable de alimentación de CA.)

2. Botón TOP MENU (MENÚ SUPERIOR)
Blu-ray Disc™: Púlselo para mostrar el menú superior.
DVD: Púlselo para mostrar el menú de títulos.

3. Botones de ▲ / ▼ / ◄ / ► (CURSOR)
- Púlselos para seleccionar elementos o configuraciones.

4. Botón MODE (MODO)
- Durante la reproducción, presione para mostrar el menú de reproducción para configurar las funciones de reproducción tales como búsqueda, repetir, ángulo, etc.

5. Botón ◄◄ (REVERSO)
- Durante la reproducción, púlselo para invertir rápido la reproducción.

6. Botón ►II (REPRODUCIR/PAUSAR)
- Púlselo para iniciar la reproducción.
- Púlselo para pausar la reproducción.

7. Botón I◄◄ (SALTAR)
- Durante la reproducción, púlselo una vez para volver al comienzo del título, capítulo, pista o archivo actual.
- Durante la reproducción, pulse dos veces sobre la tecla para volver al título, capítulo, pista o archivo anterior.
- Durante la reproducción de archivos foto, púlselo para volver al archivo anterior.

8. Botón SUBTITLE (SUBTÍTULO)
- Púlselo para seleccionar los subtítulos de un disco.

9. Botón AUDIO
- Púlselo para seleccionar el canal de sonido (como idiomas de sonido) de un disco.

10. Botón ▲ (ABRIR/CERRAR)
- Púlselo para cerrar o abrir la bandeja para discos.

11. Botón HOME (INICIO)
- Púlselo para mostrar el menú de inicio.

12. Botón POP MENU/MENU (MENÚ EMERGENTE/MENÚ)
Blu-ray Disc™: Púlselo para mostrar el menú emergente.
DVD: Púlselo para mostrar el menú del disco.

13. Botón OK
- Púlselo para confirmar o seleccionar elementos de menú.

14. Botón RETURN (RETORNO)
- Púlselo para volver a la pantalla de funciones o menú mostrado anteriormente.

15. Botones de RED / GREEN / BLUE / YELLOW (ROJO / VERDE / AZUL / AMARILLO)
- Púlselos para activar las teclas de atajo en algunas funciones de BD-Vídeo.

16. Botón ►► (ADELANTAR)
- Durante la reproducción, púlselo para avanzar rápido la reproducción.
- Cuando la reproducción esté en pausa, púlselo para avanzar lentamente la reproducción.

17. Botón ■ (DETENER)
- Púlselo para detener la reproducción.

18. Botón ►►I (SALTAR)
- Durante la reproducción, púlselo para saltar al siguiente capítulo, pista o archivo.
- Cuando la reproducción esté en modo de pausa, púlselo para avanzar la reproducción imagen a imagen.

19. Botón YouTube / NETFLIX / VUDU
- Presione para Lanzar VOD.

⊜ Nota
• Use el control remoto suministrado. No se garantiza la operación de control remoto en cualquier otro control remoto, tal como un control remoto universal.

18.2. Encontrar el HDMI en su televisor

Revise los siguientes pasos despues de haber completado todas las conexiones a su TV.

1. Presione **[⏻ (ENCENDIDO)]** para encender la unidad.

2. Encienda su televisor.

3. Cambia la entrada de su TV al puerto HDMI al que está conectado su unidad.

Ésta es la vista de entrada HDMI correcta.
• Puede tomar unos momentos para que aparezca la pantalla de menú.
• Cuando se enciende esta unidad por primera vez, aparecerá la pantalla "Instalacion inicial".

18.3. Instalacion inicial

Por favor, siga las instrucciones que se exponen a continuacion para completar la configuracion inicial.

1. Mientras se muestra la pantalla de bienvenida, presione **[OK]**.

2. Aparece la pantalla de configuracion del idioma. Utilice **[▲ / ▼]** para seleccionar su idioma y pulse luego **[OK]**.

3. Aparecerá la pantalla de configuración de Guía por Voz. Use **[▲ / ▼]** para seleccionar "Enc." u "Apdo.", después presione **[OK]**.

4. Aparecerá la pantalla de configuración HDMI CEC. Use **[▲ / ▼]** para seleccionar "Enc." o "Apdo.", después presione **[OK]**.

5. Aparecerá la pantalla de configuración de actualización de software (revisa automáticamente el software más reciente. Use **[▲ / ▼]** para seleccionar "On" (encendido) u "Off" (apagado), después presione **[OK]**.

6. Aparecerá la pantalla de configuración de red. Use **[▲ / ▼]** para seleccionar "Configurar ahora" o "Más tarde", después presione **[OK]**.
   - Si selecciona "Configurar ahora", consulte "Network connection (Conexión de Red)" en la página 42 para la operación adicional.
   - Si selecciona "Más tarde", aparecerá la pantalla de menú de inicio.

■ Cómo restablecer el idioma OSD

Puede restablecer el idioma OSD si seleccionó el ajuste de idioma equivocado.

1. Presione **[HOME]** para desplegar el menú de inicio.

2. Utilice **[▲ / ▼ / ◀ / ▶]** para seleccionar " 🔧 ", despés presione **[OK]**.
   - Esta partida es "Setup" (inglés) / "Instalación" (español) / "Installation" (francés).
   - A partir de aquí, por favor seleccione una de las siguientes partidas que puede encontrar en la pantalla:

3. Utilice **[◀ / ▶]** para seleccionar " 🔧 ", despés presione **[OK]**.

4. Utilice **[▲ / ▼]** para seleccionar "Language" (inglés) / "Idioma" (español) / "Langue" (francés), después presione **[OK]**.

5. Utilice **[▲ / ▼]** para seleccionar "OSD" (inglés) / "OSD" (español) / "Affi chage sur l'écran" (francés), despué presione **[OK]**.

6. Utilice **[▲ / ▼]** para seleccionar el idioma que desee, después presione **[OK]**.

7. Si las partidas de ajuste se despliegan en el idioma que seleccionó, presione **[HOME]** para salir.

GARANTÍA LIMITADA
NOVENTA (90) DÍAS EN MANO DE OBRA / UNA (1) AÑO EN PARTES

COBERTURA DE GARANTÍA:
La obligación de ésta garantía se limita a los términos establecidos a continuación.

QUIÉNES ESTÁN CUBIERTOS:
La compañía le garantiza el producto al comprador original o a la persona que lo recibe como regalo contra defectos en los materiales y en la mano de obra, a partir de la fecha de la compra original ("período de garantía") en el distribuidor autorizado. El recibo de ventas, donde aparecen el nombre del producto y la fecha de la compra en un distribuidor autorizado, se considerará comprobante de esta fecha.

LO QUE ESTÁ CUBIERTO:
Esta garantía cubre productos nuevos si se produce algún defecto en el material o la mano de obra y la compañía recibe un reclamo válido dentro del período de garantía. A su propia discreción, ésta (1) reparará el producto sin costo, usando piezas de repuesto nuevas o reacondicionadas; (2) intercambiar el producto con uno nuevo o que se haya fabricado a partir de partes nuevas o usadas a las que se pueda dar servicio y con por lo menos la funcionalidad equivalente o más comparable con el producto original en el inventario actual, o (3) reembolsar el precio de compra original del producto.
La compañía garantiza productos o piezas de repuesto proporcionados bajo esta garantía contra defectos en los materiales y en la mano de obra durante noventa (90) días o por el resto de la garantía del producto original, lo que le proporcione más cobertura. Cuando se cambia un producto o una pieza, el artículo que usted recibe pasa a ser de su propiedad y el que le entrega a la compañía pasa a ser propiedad de ésta última. Cuando se proporcione un reembolso, su producto pasa a ser propiedad de la compañía. Nota: Cualquier producto que se venda y que esté identificado como reacondicionado o renovado tiene una garantía limitada de noventa (90) días.

El producto de reemplazo sólo se puede enviar si se cumplen todos los requisitos de la garantía. El incumplimiento de tales requisitos puede ocasionar un retardo.

LO QUE NO SE CUBRE: EXCLUSIONES Y LIMITACIONES:
La garantía limitada aplica sólo a los productos nuevos fabricados por o para la compañía que se pueden identificar por la marca registrada, el nombre comercial o por tener el logotipo correspondiente. Esta garantía limitada no se aplica a ningún producto de hardware ni de software que no sea de la compañía, incluso si viene empacado con el producto o si se vende junto con éste. Los fabricantes, proveedores o editores que no sean de la compañía pueden proporcionar una garantía por separado para sus propios productos empacados con el producto.

La compañía no es responsable por ningún daño o pérdida de programas, datos u otra información almacenados en algún medio contenido en el producto, ni por ningún otro producto o pieza que no esté cubierta por esta garantía. La recuperación o la reinstalación de programas, datos u otra información no está cubierta por esta garantía limitada.

Esta garantía no aplica (a) a daños causados por accidente, abuso, mal uso, negligencia, mala aplicación o por productos no provistos por la compañía; (b) a daño provocado por servicio realizado por cualquier persona ó establecimiento de servicio no autorizado por la compañía; (c) a productos o piezas que se hayan modificado sin la autorización por escrito de la compañía; (d) si se ha retirado o desfigurado el número de serie; y tampoco se aplica la garantía a (e) productos, accesorios o insumos vendidos TAL COMO ESTÁN sin garantía de ningún tipo, lo que incluye productos vendidos TAL COMO ESTÁN por algunos distribuidores.

Esta garantía limitada no cubre:
- Cargos de envío para regresar el producto defectuoso.
- Los costos de mano de obra por la instalación o configuración del producto, el ajuste de controles del cliente en el producto y la instalación o reparación de sistemas de antena o fuente de señal externos al producto.
- La reparación del producto o el reemplazo de piezas debido a instalación o mantenimiento inadecuada, a conexiones hechas a un suministro de voltaje inadecuado, sobrevoltaje de la línea de alimentación, daño causado por relámpagos, imágenes retenidas o marcas en la pantalla producto de la visualización de contenido fijo durante períodos prolongados, reparaciones cosméticas debido al desgaste normal, reparaciones no autorizadas u otras causas que no se encuentren bajo el control de la compañía.
- Daños o reclamos por productos que no están disponibles para su uso, por datos perdidos o por pérdida de software.
- Daños debido a mala manipuración en el transporte o accidentes de envío al devolver el producto.
- Un producto que requiera modificación o adaptación para permitir su funcionamiento en algún país que no sea el país para el que se diseñó, fabricó, aprobó y/o autorizó o la reparación de productos dañados por estas modificaciones.
- Un producto que se use para propósitos comerciales o institucionales (lo que incluye, entre otros, los de alquiler).
- La pérdida del producto en el envío y cuando no se pueda proporcionar una firma que verifique el recibo.
- No operar según el Manual del propietario.

PARA OBTENER AYUDA…
Comuníquese con el Centro de Atención al Cliente al:

www.sanyo-av.com

1 866 212 0436

LA REPARACIÓN O EL REEMPLAZO, SEGÚN LO DISPONE ESTA GARANTÍA, ES LA SOLUCIÓN EXCLUSIVA PARA EL CLIENTE. LA COMPAÑÍA NO SERÁ RESPONSABLE DE LOS DAÑOS INCIDENTALES O INDIRECTOS QUE INFRINJAN ALGUNA GARANTÍA EXPRESA O IMPLÍCITA SOBRE ESTE PRODUCTO. CON EXCEPCIÓN DE LO QUE PROHÍBA LA LEY VIGENTE, TODA GARANTÍA IMPLÍCITA DE COMERCIABILIDAD Y ADECUACIÓN PARA UN PROPÓSITO PARTICULAR EN ESTE PRODUCTO ESTÁ LIMITADA EN DURACIÓN A LO QUE ESPECIFIQUE ESTA GARANTÍA.

Algunos estados no permiten las exclusiones ni la limitación de los daños incidentales o indirectos, ni permiten limitaciones sobre la duración de la garantía implícita, de modo que las limitaciones o exclusiones anteriores pueden no aplicarse a usted.

Esta garantía le otorga derechos legales específicos. Usted puede tener otros derechos que varían entre los diferentes estados y provincias.

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