



Transport

User Guide

Check our website for the most recent user guides, firmware, and drivers:
www.msbtechnology.com

Technical support email is:
techsupport@msbtech.com

01.22.2020

Table of Contents

| | |
|-----------------------------------|---------|
| Technical Specifications | 1 |
| Setup and Quick Start | 2 |
| Loading New Firmware | 2 |
| Jack Panel Connections | 3 |
| User Interface | 4 |
| Front Panel Display Window | 5 |
| Remote Control | 6 - 7 |
| - Special Remote Commands | 6 |
| Connecting to the Internet | 8 |
| Basic Operations | 9 - 13 |
| Advanced Operations | 14 - 20 |
| Media File Playback | 21 - 26 |
| Setup Menu Options | 27 - 52 |
| - Playback Setup | 29 |
| - Video Output Setup | 32 |
| - Audio Output Setup | 38 |
| - Audio Signal Reference Chart | 40 |
| - Audio Processing Setup | 41 |
| - Device Setup | 47 |
| - Network Setup | 51 |
| Troubleshooting | 53 |
| Language Code List | 54 |
| Technical Support / RMA | 55 |
| Warranty | 56 |

Technical specifications

| | |
|----------------------|---|
| Disc Types* | UHD Blu-ray, Blu-ray, Blu-ray 3D, DVD-Video, DVD-Audio, AVCHD, SACD, CD, Kodak Picture CD, CD-R/RW, DVD±R/RW, DVD±R DL, BD-R/RE |
| BD Profile | BD-ROM Version 3.1 Profile 6 (also compatible with BD-ROM Version 2.5 Profile 5) |
| Output | <p>Primary Outputs - Up to 8ch 192kHz PCM, DSD Support</p> <p>"Surround Only" Outputs - Coaxial/Optical Audio: up to 2ch/192kHz PCM, Dolby - Digital, DTS.</p> <p>HDMI Audio: up to 7.1ch/192kHz PCM, up to 5.1ch DSD, Bitstream.</p> <p>HDMI Video: UHD/1080p24/1080p/1080i/720p/576p/576i/480p/480i, 3D frame-packing 720p/1080p24.</p> |
| Controls | <p>Isolated RS-232</p> <p>IR Remote</p> <p>7 Buttons</p> |
| Chassis Dimensions | <p>Width: 17.5 in (444 mm)</p> <p>Depth: 17.5 in (444 mm)</p> <p>Height without feet: 2.2 in (56 mm)</p> <p>Stack height: 2.85 in (72 mm)</p> <p>Weight: 28 lbs (12.7 kg)</p> |
| Shipping Dimensions | <p>Width: 25 in (635 mm)</p> <p>Depth: 25 in (625 mm)</p> <p>Height: 10 in (254 mm)</p> <p>Weight: 50 lbs (22.7 kg)</p> |
| Included Accessories | <p>User Manual</p> <p>Remote Control</p> <p>HDMI Cable</p> <p>Desktop Supply (Unless Transport Supply Upgraded)</p> <p>IEC Cable</p> <p>4x Rubber Feet M6X1 Thread</p> <p>4x Plastic inserts for feet</p> |

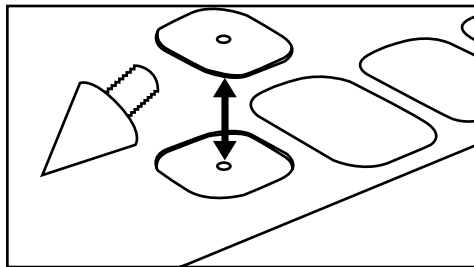
Setup and Quick Start

The interface is quite simple with few user controls.

| | |
|---------|--|
| Power | The transport comes with a desktop supply unless upgraded to the high performance transport powerbase. The standard desktop supply is simple plug and play. The power supply automatically detects and switches between 240V and 120V. The upgraded transport powerbase is similiar, but is switched on and off with a button on the front control or via the MSB IR remote. The LED in the front of the Powerbase indicates red when OFF and white when ON. |
| Outputs | A range of outputs are available to connect to your system. Choose the most suitable connection for your system. |

Chassis protection

When stacking units, you will find enclosed black plastic square inserts. These inserts fit into the square holes in the top of each chassis. This will allow you to stack units without scratching the chassis.



Pro ISL Interface

The Pro ISL interface is MSB's proprietary connection. The Pro ISL interface incorporates the best parts of any digital interface, while stripping away the bad. The proprietary connection uses an infrared laser diode to transmit over a single mode fiber cable. This enables features like clock sync and error correction all while obtaining perfect isolation and ensuring the lowest possible jitter. Remove plastic cable covers before installing. Check that the connector is pushed in firmly when installed, so the latching mechanism clicks into place, securely holding the connector as to not let it come loose.

| | |
|------------|--|
| Cable Type | LC-LC Fiber Single Mode Duplex (Yellow cable unless using MSB's custom cables) |
|------------|--|

Loading new firmware

Always be certain that you are updated with the current firmware by checking our website. The Transports' firmware is updated using a .WAV music file. If you experience issues with playback of the update file, be sure to check for bit-perfect playback in your system. The recommended method of firmware files is with a USB flash drive.

All firmware updates can be found at: www.msbtechnology.com/Support

Bit-Perfect Source Testing

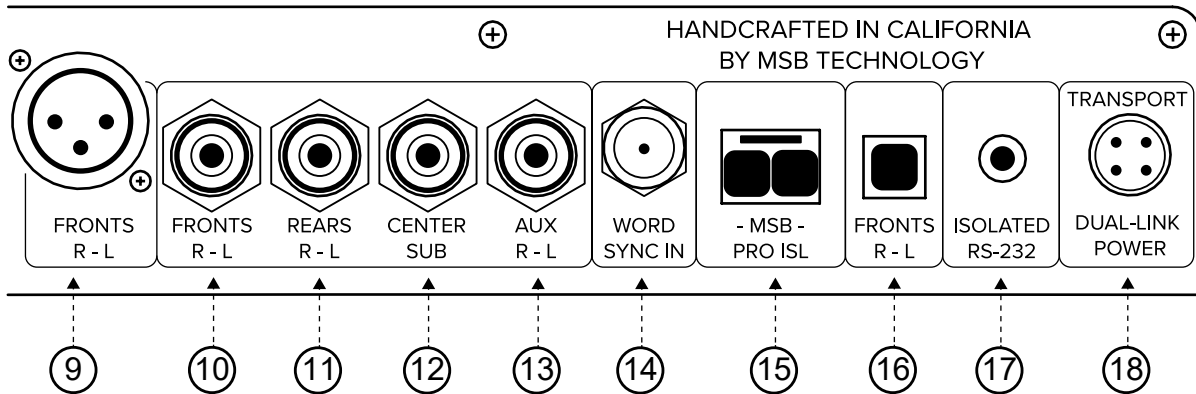
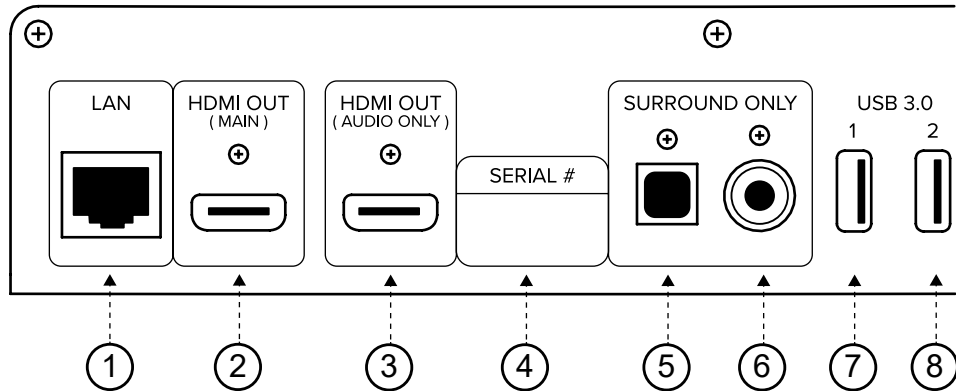
The following files can be downloaded from the MSB website to verify bit-perfect playback on the transport:

16 bit x 44.1 - 192 kHz sample rate files.

24 bit x 44.1 - 192 kHz sample rate files.

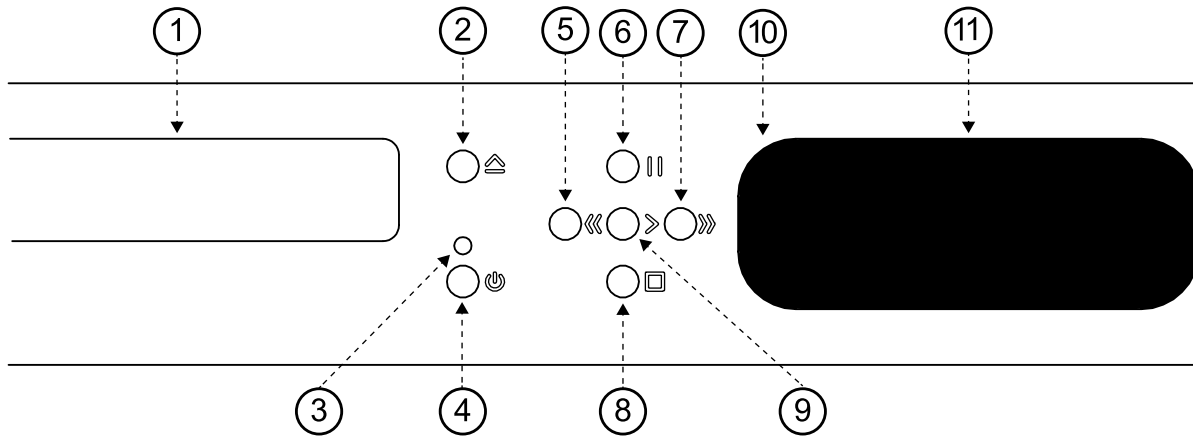
They are .WAV music test files that when played, will be identified by the DAC and checked, and will be reported on the display if the playback is bit-perfect. If there is a problem with the test, the display will not indicate any change. This system will allow you to easily test your transport to see if all your settings are correct.

Jack Panel Connections



| | |
|----|---|
| 1 | Ethernet Port |
| 2 | HDMI Out |
| 3 | HDMI Out (Audio Only) |
| 4 | Serial Number |
| 5 | Non Decoded Optical Digital Output (Toslink) |
| 6 | Non Decoded Coaxial Digital Output (RCA) |
| 7 | USB 3.0 |
| 8 | USB 3.0 |
| 9 | Balanced Digital Output (XLR) (Front Channels) |
| 10 | Coaxial Digital Output (RCA) (Front Channels) |
| 11 | Coaxial Digital Output (RCA) (Rear Channels) |
| 12 | Coaxial Digital Output (RCA) (Center/Sub Channels) |
| 13 | Coaxial Digital Output (RCA) (Aux Channels) |
| 14 | External 75 Ohm Word Sync input. Supported rates 44.1 - 192 kHz.(BNC) or 512x Clock Input. 22.5792/24.567MHz only (BNC) |
| 15 | MSB Pro ISL Interface |
| 16 | Optical Digital Output (Toslink) (Front Channels) |
| 17 | Isolated RS-232 |
| 18 | Transport Dual-Link Power (Only Connect to MSB Transport Power Supply) |

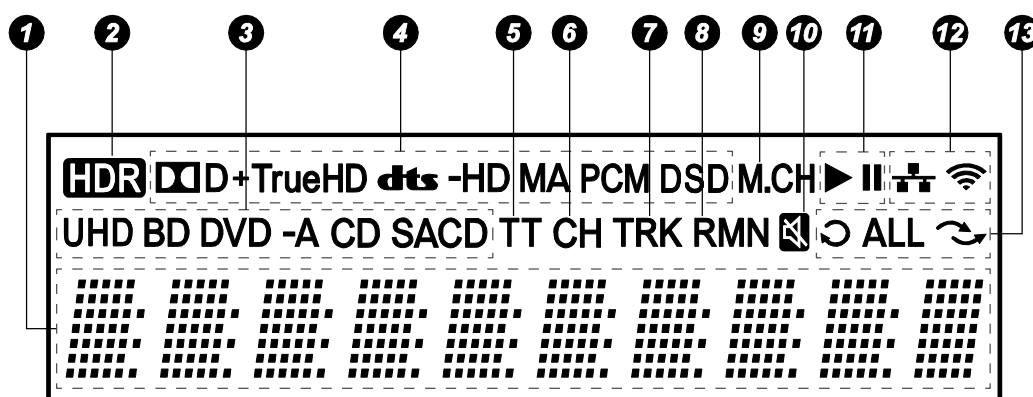
User Interface



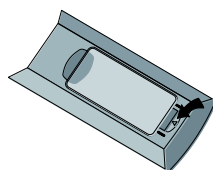
| | |
|----|---|
| 1 | Disc Drive -Plays disc media |
| 2 | Eject Button -Opens and closes CD drive |
| 3 | Power Indicator -Red is Standby, White is On |
| 4 | Power Button -Turns unit on/off |
| 5 | Back Button -Back/rewind, or left in menu |
| 6 | Pause button -Pause, or up in menu |
| 7 | Forward Button -Skip/forward, in menu |
| 8 | Stop Button -Stop, or down in menu |
| 9 | Play Button -Play, or enter in menu |
| 10 | Clock SYNC LED (In Edge of Display) -Green is clock synced |
| 11 | Display (See "Front Panel Display Window" for Details") -Displays unit media and transport functions |

Front Panel Display Window

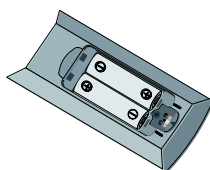
1. Main Display – Text messages and numeric display
2. HDR Icon – Indicates the current playing content is High-Dynamic Range
3. Disc Type Indication – Indicates the currently playing disc type
4. Audio Type Indication – Indicates the type of audio tracks being played
5. Title – When illuminated, the displayed time applies to a title
6. Chapter – When illuminated, the displayed time applies to a chapter
7. Track – When illuminated, the displayed time applies to a track
8. Remaining – When illuminated, the displayed time is the remaining play time
9. Multi-channel Indication – Indicates the audio being played is multi-channel surround
10. Mute Icon – Indicates that the audio is muted
11. Playback Status – Indicates playback status such as Play, Pause
12. Network Status – Indicates that the player is connected to a wired / wireless network
13. Playback Modes – Indicates playback modes such as Repeat, Repeat All, and Random Mode



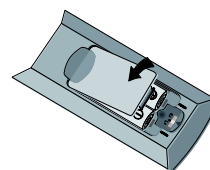
Battery Installation



1. Remove the battery compartment cover



2. Insert batteries



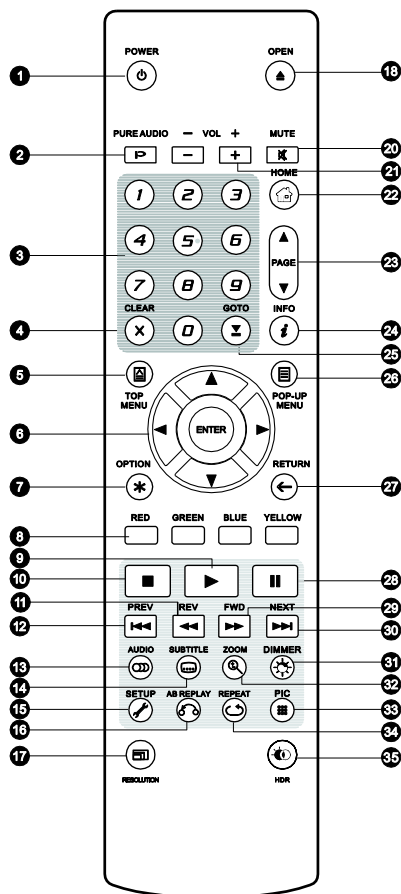
3. Replace the battery compartment cover

Using the Remote Control

When using the remote control, the front window of the remote control should be pointed to the infrared sensor on the front panel within an angle of $\pm 30^\circ$ and a range of about 26 ft.

Remote Control

Remote Control Buttons



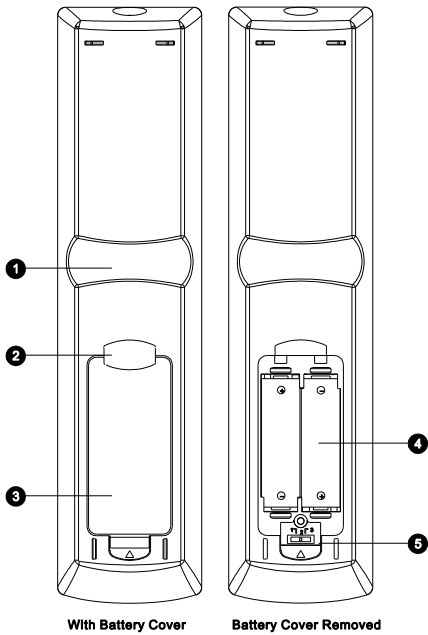
1. **POWER:** Toggle power STANDBY and ON
2. **PURE AUDIO:** Turn off/on video
3. **NUMBER** Buttons: Enter numeric values

4. **CLEAR:** Clear numeric input
5. **TOP MENU:** Show BD top menu or DVD title menu
6. **ARROW** and **ENTER** Buttons: Navigate menu selection
7. **OPTION:** Brings up the context-related menu
8. **COLOR** Buttons: Function varies by content
9. **PLAY:** Start playback
10. **STOP:** Stop playback
11. **REV:** Fast reverse play
12. **PREV:** Skip to previous
13. **AUDIO:** Change audio language or channel
14. **SUBTITLE:** Change subtitle language
15. **SETUP:** Enter the player Setup Menu
16. **A-B REPLAY:** Repeat play the selected section
17. **RESOLUTION:** Switch output resolution
18. **OPEN:** Open/close the disc tray
19. **INPUT:** N/A
20. **MUTE:** Mute audio
21. **VOLUME +/-:** Increase/Decrease volume
22. **HOME:** Go to Home Menu to select media source
23. **PAGE UP/DOWN:** Show the previous/next page
24. **INFO:** Show/hide the On-Screen Display
25. **GOTO:** Play from a specified location
26. **POP-UP MENU:** Show BD pop-up menu or DVD menu
27. **RETURN:** Return to the previous menu or mode
28. **PAUSE:** Pause playback
29. **FWD:** Fast forward play
30. **NEXT:** Skip to the next
31. **DIMMER:** Dim the front panel display
32. **ZOOM:** Zoom in/out and adjust aspect ratio
33. **PIC:** Quick access to the picture adjustment menu
34. **REPEAT:** Repeat play
35. **HDR:** Choose the output mode for High-Dynamic Range content

Special Remote Commands

| | |
|--|---|
| Dimmer > Dimmer > Dimmer > 4 | Sets DSD to DoP output The LED in the left edge of the display will flash ORANGE once. |
| Dimmer > Dimmer > Dimmer > 5 | Sets DSD to PCM output (limited to stereo only) The LED in the left edge of the display will flash ORANGE twice. |
| Dimmer > Dimmer > Dimmer > 7 | Disables the usage of "The MSB Remote" |
| Dimmer > Dimmer > Dimmer > 8 | Enables the usage of "The MSB Remote" for transport functions |
| Dimmer > Dimmer > Dimmer > Clear | Resets the unit to MSB factory defaults. The "Factory Reset" in the menu will not configure your unit to the ideal settings. The unit will need several minutes to complete this process and will restart several times during the process. Do not disturb the unit or press any buttons on the remote or it will halt the procedure. |

Back Side

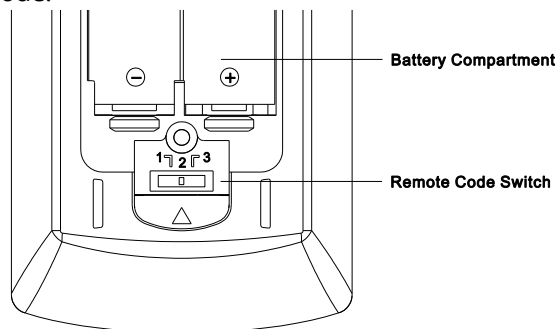


1. **Index Finger Notch 1:** When your index finger is placed at this notch while holding the remote control, your thumb is within easy reach of the navigation buttons (ARROW, ENTER, TOP MENU and POP-UP MENU).
2. **Index Finger Notch 2:** When your index finger is placed at this notch while holding the remote control, your thumb is within easy reach of the playback control buttons (STOP, PLAY, PAUSE, PREV, NEXT, REV, FWD).
3. **Battery Cover:** Remove to replace batteries or set remote code.
4. **Batteries:** Use 2 AA or LR6 batteries.
5. **Remote Code Switch:** Adjust the position of the switch to set the remote control to use the indicated remote code (see details on page 10).

Changing the Remote Code

The remote control contains three transport remote codes. The default is Code 1. If you have other OPPO products placed close to the transport, they may inadvertently respond to the transport remote control. To prevent this, you can select a different remote code.

To select a new remote code, open the battery compartment cover of the remote control, and then use a ball point pen to flip the switch to one of the positions marked as 1, 2, or 3. Close the battery compartment cover. Make sure that the transport player is turned on and that the disc tray is ejected. Aim the remote control at the player. Press and hold the **ENTER** button for 5 seconds. The player will start using the new remote code.



Motion Sensitive Backlight

The remote control features a motion sensor to activate the backlight for five seconds when you pick up the remote or press a button on the remote.

To disable or enable the backlight, press the **DIMMER** and **0** buttons at the same time on your remote.

Connecting to the Internet

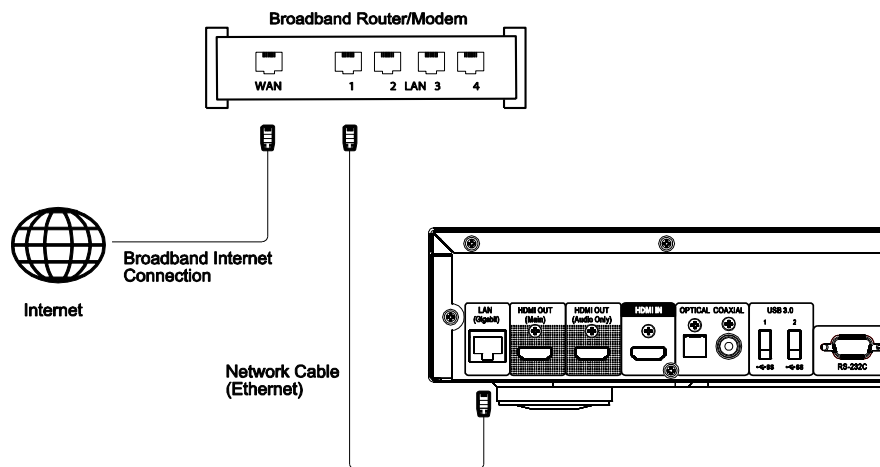
The transport can play audio, video and photos via your home network. This feature supports DLNA, SMB/CIFS and NFS protocols.

The transport also supports the BD-Live feature offered on some Blu-ray Disc titles. BD-Live offers extra downloadable content and additional online interactive programs. Content available on BD-Live varies by disc and studio, and may include additional subtitles, commentaries, movie trailers, games, and online chat.

Connecting the player to the Internet will also allow the player to obtain firmware updates. (See page 68 for more information regarding firmware updates.)

In order to utilize the BD-Live feature or to update the firmware via the Internet, the player needs to be connected to a broadband Internet connection. It is not necessary to connect to the Internet if you do not intend to use BD-Live or online firmware update features.

Internet Connection via Ethernet Cable



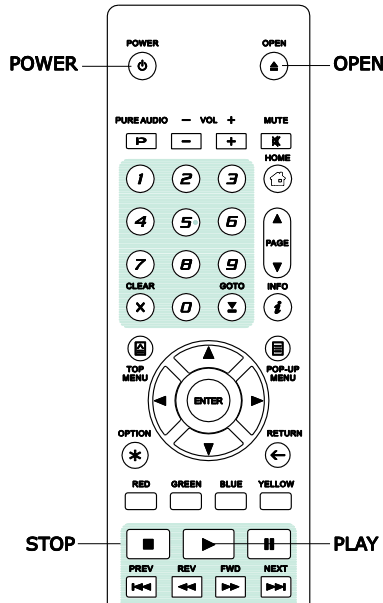
- Plug one end of a network cable (Category 5/5E straight Ethernet cable) into the LAN port on the back of the transport.
- Plug the other end of the network cable into a LAN port on the broadband router or modem.
- After physically connecting the player to a broadband Internet connection, some network configuration may be required. Refer to the **Network Setup** section on page 72 for details.
- Refer to the operating instructions supplied with the broadband router or modem, or contact the Internet service provider for questions related to setting up the router or modem.

NOTE

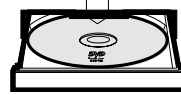
- Only connect the LAN port of the player to an Ethernet port that supports 1000BASE-T or 100BASE-TX or 10BASE-T. Connecting to any other ports or jacks, such as a phone jack, can damage the player.

BASIC OPERATIONS

Disc Playback

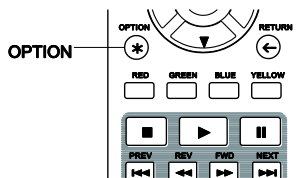


1. Press the **POWER** button to turn on the player.
2. Press the **OPEN/CLOSE** button to eject the disc tray.
3. Place the disc with the label side facing up and the recorded side facing down.



4. Press the **OPEN/CLOSE** button again to retract the tray.
5. The player will read the disc information and begin playback.
6. Depending on the content of the disc, a menu or navigation screen may appear. Use the navigation **ARROW** and **SELECT** buttons to select the content to play.
7. To stop playback, press the **STOP** button.
8. To turn off the player, press the **POWER** button.

OPTION Menu



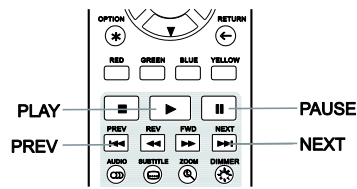
1. During media file navigation and playback, press the **OPTION** button on the remote to open the **OPTION MENU**, which allows you to conveniently access various settings and playback features.
2. When the **OPTION MENU** is displayed, press the **UP/DOWN ARROW** buttons on the remote to highlight a particular item, then press the **ENTER** button to confirm.

The **OPTION MENU** selections may vary depending on the content being played. A summary of the selections and their functionality is described as follows:

During Music File and Music Disc (CD, SACD) Playback:

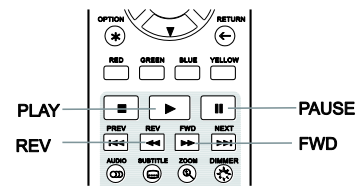
- Now Playing: Go to the Now Playing interface for the track being played.
- Shuffle/Random: Activate Shuffle or Random playback mode. See details on page 31.
- Repeat: Repeat the current track or all tracks. See details on page 30.
- Add to Favorites: Add the track to the first position in **Favorites**.
- Add to Playlist: Add the track to a Playlist.
- Add All to Playlist: Add all the tracks in the current folder to a Playlist.
- Goto Playlist: View the playlist that the track is playing from.
- Locate: Return to the MUSIC interface and highlight the track that is now playing.
- Program Play: Play the tracks in the preferred sequence (only available with CD playback).
- Gapless Play: Enable Gapless Playback mode. This feature supports APE, WAV, and FLAC files stored on an external USB drive.
- CUE Tracklist: Show the tracklist of the selected CUE file.

Pause and Frame-by-Frame



1. During playback, pressing the **PAUSE** button temporarily pauses the program. In this mode, a **PAUSE** icon will appear on the TV screen.
2. While a DVD or Blu-ray Disc is paused, pressing the **PREV** or **NEXT** button reverses or advances the video frame-by-frame.
3. Pressing the **PLAY** button resumes normal playback.

Slow Playback



To play the video in slow-motion, follow these steps:

1. Press the **PAUSE** button on the remote control to pause playback.
2. Press the **FWD** button to select a forward slow playback speed. Each press of the **FWD** button increases the playback speed in the following increments:



3. Press the **REV** button to select a reverse slow playback speed. Each press of the **REV** button reverses the playback speed in the following increments:

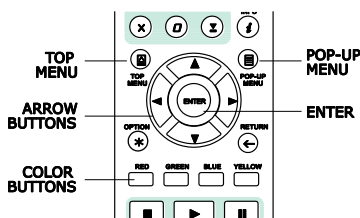


4. To exit the slow playback mode, press the **PLAY** button.

NOTE

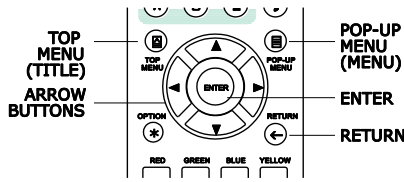
- Certain Blu-ray Discs utilizing BD-Java technology may not support slow playback.

Blu-ray Disc Menu Navigation



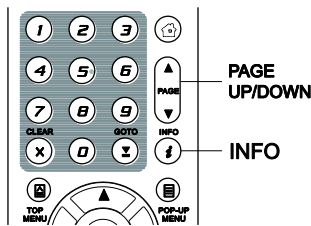
1. Blu-ray Discs usually contain a **Top Menu** and a **Pop-up Menu**. The **Top Menu** normally appears at the beginning of playback, after the previews and copyright messages. The **Pop-up Menu** can be accessed during the movie without interrupting playback.
2. During playback, press the **POP-UP MENU** button to access the **Pop-up Menu**. Press the **TOP MENU** button to access the **Top Menu**.
3. Navigate the menu using the **ARROW** buttons, and then press the **ENTER** button to make a selection.
4. Some menus make use of the **COLOR** buttons. You can select menu functions by pressing the corresponding **COLOR** button on the remote control.

DVD Menu Navigation



1. Some DVDs contain title menu or chapter menu functions.
2. During playback, press the **TOP MENU** button to return to the disc title menu. Press the **POP-UP MENU** button to display the chapter menu. Depending on the disc, one or both menus may not exist.
3. Navigate the menu using the **ARROW** buttons, and then press the **ENTER** button to make the selection.
4. Press the **RETURN** button to return to the previous menu. The return location varies by disc.

On-Screen Display



1. During the playback of a DVD or Blu-ray Disc, press the **INFO** button on the remote control to show its media information and HDMI output format. For CDs and SACDs, the status information is shown automatically.
2. When the status information is shown, press the **PAGE UP/DOWN** buttons to scroll through several different display formats. The playback time information displayed on the front panel changes together with the on-screen display.

3. Press and hold the **INFO** button for 3 seconds to show more detailed Media Playback, Media Information, and HDMI Output information.
4. Press the **INFO** button again to hide the on-screen display. The playback time information display on the front panel will remain in the selected format.

The following display formats are available: DVD and Blu-ray Disc:

- | | | | |
|---|------------------------|---|--------------------------|
| | - Title elapsed time | | - Chapter elapsed time |
| - | - Title remaining time | - | - Chapter remaining time |

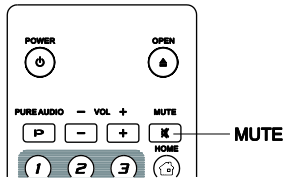
CD and SACD:

- | | | | |
|---|------------------------|---|-----------------------|
| | - Track elapsed time | | - Disc elapsed time |
| - | - Track remaining time | - | - Disc remaining time |

In addition to the playback time, the on-screen display may also contain the following information about the content currently playing:

- Playback status: an icon indicating play, pause, and fast forward/reverse status.
- Bit rate meter: an indication of the bit rate of the audio and video stream.
- Current and total title numbers. (DVD and Blu-ray Discs)
- Current and total chapter numbers of the current title. (DVD and Blu-ray Discs)
- Current and total tracks. (CDs and SACDs)
- Video format information: resolution, frame rate, HDR format, color space, codec, original aspect ratio, peak brightness.
- Subtitle information: current and total available number of subtitle tracks and language.
- Audio information: current and total available number of audio tracks, language, format, and channels.
- HDMI output information: video output resolution, frame rate, HDR format, color space, aspect ratio, audio output format, sample rate, bit depth and channels.

Mute

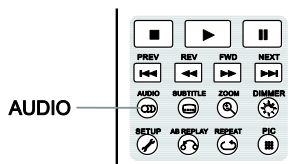


1. Press the **MUTE** button on the remote control during content playback to turn off audio output. The TV screen will display a mute icon. The front panel MUTE indicator will also light up.
2. Press the **MUTE** button again to resume audio output.

NOTE

- Check the MUTE status on the front panel display of the player when there is no audio output. You may also press the **MUTE** button to verify the MUTE status.

Audio Language/Track Selection

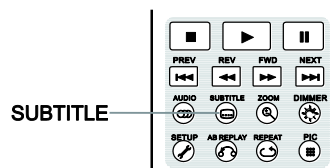


1. To select the audio language or track, press the **AUDIO** button on the remote control during playback.
2. Repeatedly press the **AUDIO** button or use the **UP/DOWN ARROW** buttons to choose from all available language or audio tracks.

NOTE

- Availability of languages and audio channels varies by disc. Some DVD-Audio discs allow audio track selection with the **AUDIO** button, while others require the user to choose from the audio setup menu of the disc. When playing an SACD with both multi-channel and stereo content, the **AUDIO** button can be used to switch between the two formats.

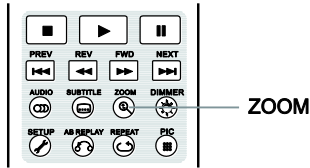
Subtitle Selection



1. When playing a DVD, Blu-ray Disc or other video programs recorded with subtitles, press the **SUBTITLE** button on the remote control to select the desired subtitle.
2. Repeatedly press the **SUBTITLE** button or use the **UP/DOWN ARROW** buttons to choose from all available subtitles.
3. To turn off subtitles, select **Off** from the list.

ADVANCED OPERATIONS

Zooming and Aspect Ratio Control



This feature zooms in and out of the displayed frame and also changes the aspect ratio (image width vs. height).

To change the zoom level, press the **ZOOM** button on the remote control. Each press of the **ZOOM** button will switch the zoom level in sequence.

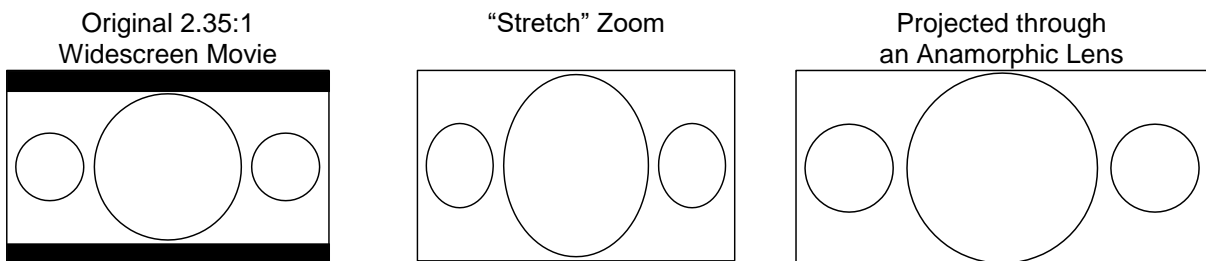
Zoom Levels for HDMI Output

The available zoom levels depend on the **TV Aspect Ratio** setting in the **Setup Menu** and the encoded aspect ratio on the BD/DVD Disc:

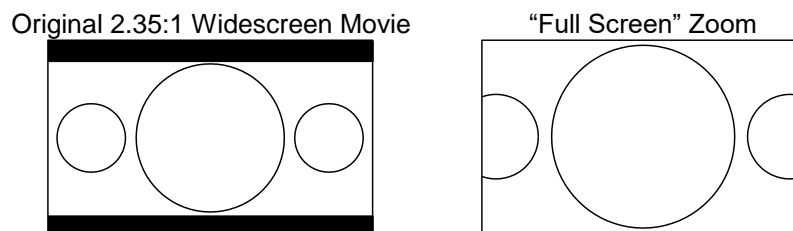
1:1 (No zoom), Stretch/Compress, Full Screen, Under Scan, 1.2X, 1.3X, 1.5X, 2X, 1/2X

The zoom level is reset to 1:1 when the disc is ejected, or when the player is turned off. The following zoom levels may be useful for specific applications:

- 1) Playing 16:9 BD or DVD when **TV Aspect Ratio** is set to **16:9 Wide** or **16:9 Wide/Auto**
 - **Stretch** – The image is vertically stretched 1.33 times. For movies with 2.35:1 aspect ratio, this zoom level cuts off the black borders at the top and bottom of the image. Users of a projector with an anamorphic lens may find this mode helpful.

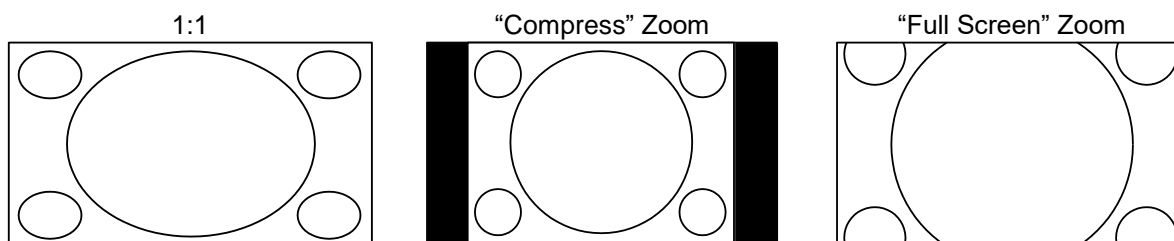


- **Full Screen** – The image is stretched by 1.33 times for both vertical and horizontal directions. For movies with 2.35:1 aspect ratio, this zoom level cuts off the black borders at the top and bottom of the image while maintaining the correct aspect ratio. The left/right sides of the image are slightly cropped.



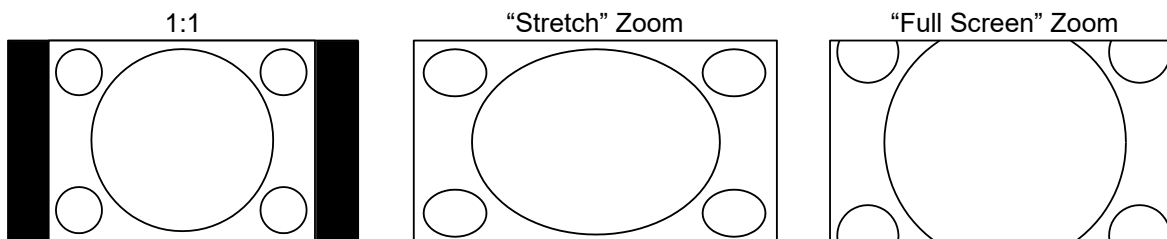
2) Playing 4:3 BD or DVD when **TV Aspect Ratio** is set to **16:9 Wide**

- **1:1** – The image fills up the entire 16:9 screen but is horizontally stretched. Figures may look shorter and wider than they should be.
- **Compress** – The player maintains the correct 4:3 aspect ratio and adds borders to the left and right sides of the image.
- **Full Screen** – This zoom level maintains the correct aspect ratio but crops the top and bottom slightly in order to fit the 4:3 image to the 16:9 screen.



3) Playing 4:3 BD or DVD when **TV Aspect Ratio** is set to **16:9 Wide/Auto**

- **1:1** – The player maintains the correct 4:3 aspect ratio and adds borders to the left and right sides of the image.
- **Stretch** – The image is horizontally stretched 1.33 times. This zoom level fills up the 16:9 screen, but figures may look shorter and wider than they should be.
- **Full Screen** – This zoom level maintains the correct aspect ratio but crops the top and bottom slightly in order to fit the 4:3 image to the 16:9 screen.



The “Under Scan” zoom level shrinks the image by 5%. This zoom level may be used to compensate for TVs that over scan, so the viewer can see the entire image area with no cropping. All other zoom levels are indicated by their respective zoom ratio.

NOTE

- Some early DVD titles (released from 1997 until early 2000’s) use a 4:3 non-anamorphic widescreen aspect ratio. When played on a 16:9 display, the content is shown in a small window with black borders on all four sides. The top and bottom borders are encoded into the video. The left and right borders are added by the player to maintain the correct aspect ratio. For these types of discs, the **Full Screen** zoom mode can be used to eliminate the borders.
- The ZOOM feature may not be available when certain DVD or Blu-ray Discs are played if the disc’s author has chosen to disable ZOOM.

Subtitle Shift

For customers using a 2.35:1 “Constant Image Height” video projection system, subtitles may get cut off because they are positioned outside of the active video area.

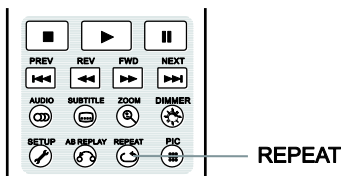
The Subtitle Shift feature can be used to shift subtitles up or down so they are displayed within the active video area.

To shift the display position of subtitles, please follow these steps:

1. When playing a DVD, Blu-ray Disc or other video programs recorded with subtitles, select the desired subtitle from the disc menu or by using the remote.
2. Press and hold the **SUBTITLE** button on the remote control until the **Shift Subtitle Position** prompt appears on the screen.
3. Wait until subtitle text is shown on the screen, and then use the **UP/DOWN ARROW** buttons to move the subtitle text to the desired position.
4. Press the **ENTER** button to set the subtitle display position.

Once the **Subtitle Shift** position is set, it is saved by the player in the **Playback Setup > Subtitle Shift** setup menu option. The setting will be applied to subtitles of all future DVD and Blu-ray Discs. You can also change the setup menu item directly.

Repeat Playback



To repeat a certain chapter, title, track or disc, press the **REPEAT** button on the remote control.

Each press of the **REPEAT** button changes the repeat mode using the following sequence:

DVD and DVD-Audio:



Blu-ray Disc:



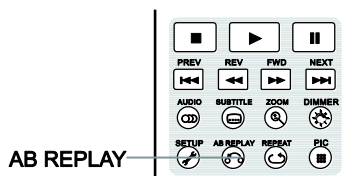
CD and SACD:



NOTE

- Certain Blu-ray Discs may not allow for repeating.

Repeat a Selected Section



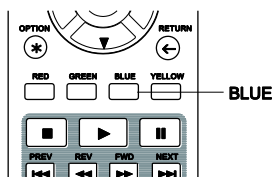
To repeatedly play a specific section, please follow these steps:

1. During normal playback, press the **AB REPLAY** button on the remote at the desired beginning point (Point A) for the repeat play. The TV screen displays "A".
2. When playback reaches the desired ending point (Point B) for the repeat play, press the **AB REPLAY** button again. The player now repeatedly plays back the specified section (A-B). The TV screen displays "A-B".
3. Press the **AB REPLAY** button for the third time to resume normal playback.

NOTE

- Not available for all disc formats or content. Certain Blu-ray Discs may not allow for repeating.
- If pressing the AB REPLAY button twice within 1 second, video playback will be automatically rewound 10 seconds.

Shuffle and Random Playback



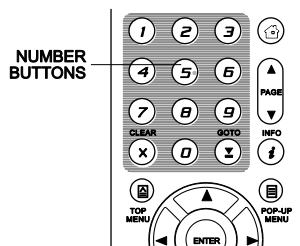
When playing a CD or SACD, press the **BLUE** button on the remote control to activate the **Shuffle** and **Random** modes. Each press of the **BLUE** button switches the playback mode in the following sequence:



In normal playback mode, each track is played back in sequential order. As the name implies, the **Random** playback mode randomly selects a track to play. The **Shuffle** mode also plays back the tracks in random order, but it ensures that each track is played only once.

Selecting the **Shuffle** or **Random** mode cancels any **Repeat** mode you may be using. Similarly, selecting a **Repeat** mode cancels any **Shuffle** or **Random** mode.

Playback by Chapter or Track Number



During the playback of a disc, you can use the **NUMBER** buttons on the remote control to directly jump to a specified chapter or track number. For example:

- To select the seventh track, press the **[7]** button.

(7)
- To select the 16th track, press **[1]** followed by **[6]** in quick succession:

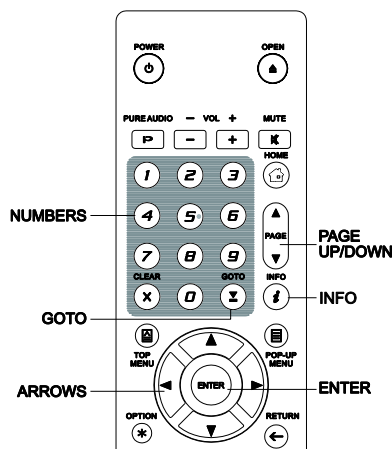
(1) + (6)

NOTE

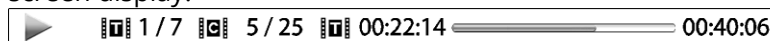
- Certain DVD-Audio and Blu-ray Discs may not allow for direct chapter selection.

Playback from a Specific Location

DVD and Blu-ray Discs



During the playback of a DVD or Blu-ray Disc, you may specify a location to start playback by entering the title, chapter or time directly. Press the **GOTO** button to bring up the on-screen display.

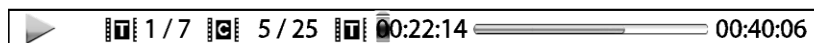


On top of the video screen, the on-screen display information has the following components (from left to right): Playing Status, Title, Chapter, Time Counter, Progress Indicator, and Total Time. After pressing the **GOTO** button for the first time, the cursor will be positioned at the Time Counter. This is the **Time Search** mode. Each subsequent press of the **GOTO** button will switch the search mode in the following sequence:



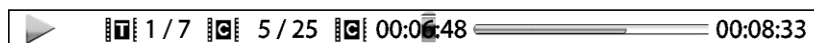
1. **Title time search.** Searches for a specific time within the currently playing title.

- Press the **GOTO** button to bring up the on-screen display. The cursor will be positioned at the Time Counter. Use the **NUMBER** or **ARROW** buttons to enter the hours, minutes and seconds for your specific search and press the **ENTER** button.



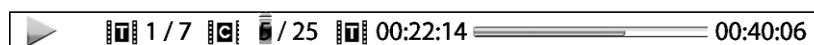
2. **Chapter time search.** Searches for a specific time within the currently playing chapter.

- Press the **INFO** button to bring up the on-screen display. Use the **PAGE UP** or **PAGE DOWN** button to switch the display to Chapter Time mode (note the icon placed on the left of the Time Counter changes from the Title icon to the Chapter icon). Press the **GOTO** button to position the cursor at the Time Counter, then use the **NUMBER** or **ARROW** buttons to enter the hours, minutes and seconds for your specified search and press the **ENTER** button.



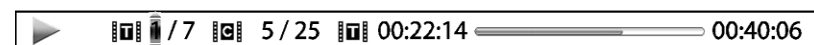
3. **Chapter search.** Allows you to search for a particular chapter.

- Repeatedly press the **GOTO** button until the cursor is positioned at the Chapter location. Use the **NUMBER** or **ARROW** buttons to enter or select the chapter number and press the **ENTER** button.



4. **Title search.** Allows you to search for a particular title.

- Repeatedly press the **GOTO** button until the cursor is positioned at the Title location. Use the **NUMBER** or **ARROW** buttons to enter or select the title number and press the **ENTER** button.

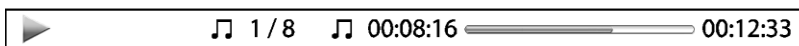


NOTE

- Some discs may prohibit the search operation. You will not be able to select a search location, or you may get an “invalid operation” icon after specifying a search location.
- Some Blu-ray Discs feature their own search function. Follow the on-screen instructions to use the search function provided by such discs.

CD and SACD discs

You may specify a point to start playback by entering the disc elapsed time, track elapsed time or track number directly. When playing CDs and SACDs, the on-screen display automatically shows on the TV screen:

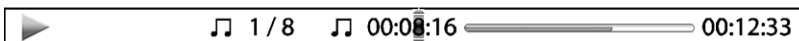


The on-screen display has the following components (from left to right): Playing Status, Track Number, Time Counter, Progress Indicator, and Total Time.

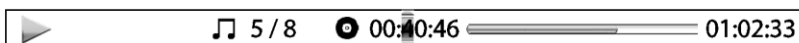
To specify a playback location using one of the following search modes, press the **GOTO** button. Each press of the **GOTO** button switches the search mode in the following sequence:



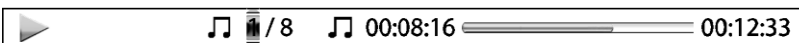
1. **Track time search.** Searches for a specific time within the currently playing track.
 - Press the **GOTO** button to place the cursor on the track Time Counter. Use the **NUMBER** or **ARROW** buttons to enter the hours, minutes and seconds for your specified search and press the **ENTER** button.



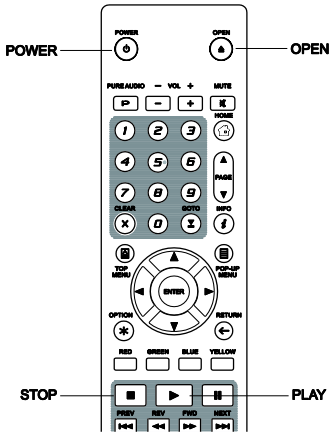
2. **Disc time search.** Navigates you to a particular timestamp.
 - While the on-screen display is shown, press the **PAGE UP** or **PAGE DOWN** button to switch the Time Counter to Disc Time mode. Press the **GOTO** button to place the cursor at the Disc Time Counter. Use the **NUMBER** or **ARROW** buttons to enter the hours, minutes and seconds for your specified search and press the **ENTER** button.



3. **Select a track.** To navigate to a particular track:
 - Repeatedly press the **GOTO** button until the cursor is placed on the Track Number position. Use the **NUMBER** or **ARROW** buttons to enter or select the track number and press the **ENTER** button.



Memory and Automatic Resume

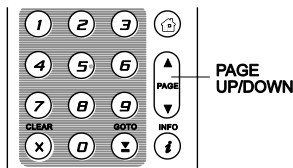


1. The player automatically saves the current position when playback is interrupted. Operations such as **STOP**, **OPEN**, and **POWER** cause the player to save the current playing position.
2. This position is saved even after turning off the unit or changing the disc.
3. The next time a disc with a saved playing position is inserted, the player will resume playback from that point. If you wish to cancel the automatic resume and start playback from the beginning, you must press the **STOP** button when prompted.
4. The player can save the playback position for up to 5 discs. When the position from the sixth disc is saved, the oldest saved position is replaced.

NOTE

- Some Blu-ray Discs do not support resuming and will always play from the beginning.

Viewing Pictures on DVD-Audio Discs

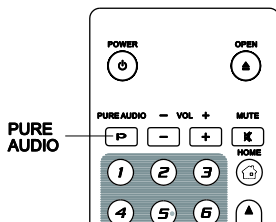


Some DVD-Audio discs contain static pictures, such as photos of the band as well as album narration. When a DVD-Audio track is playing, you may use the **PAGE UP** button to select the previous picture or the **PAGE DOWN** button to select the next picture.

NOTE

- Availability of static pictures depends on the DVD-Audio disc.

Pure Audio Mode



The **Pure Audio** mode reduces any potential interference between the video and audio signals by turning off the player's video processing and output.

1. Press the **PURE AUDIO** button on the remote control to turn off video and enter **Pure Audio** mode. Video output will cease, the power light will dim and the front panel displays will turn off.
2. Press the **PURE AUDIO** button again to resume video and cancel **Pure Audio** mode.

NOTE

- **Pure Audio** mode is automatically canceled when the unit is switched off or when playback is stopped.
- Because HDMI carries audio together with video, the HDMI video signal cannot be completely turned off. A black screen is transmitted instead to minimize any potential interference.

MEDIA FILE PLAYBACK

In addition to playing standard disc-based formats such as Blu-ray, DVD, CD and SACD, the transport can play digital media files. You can enjoy digital music, movies and photos stored on a data disc (recordable CD, DVD or Blu-ray), an external USB drive, or via network storage. Due to the variation of media, encoding software and techniques used, compatibility cannot be guaranteed for all user-created or downloaded content. Support for such content is on a best effort basis.

Playback from a USB Flash Drive

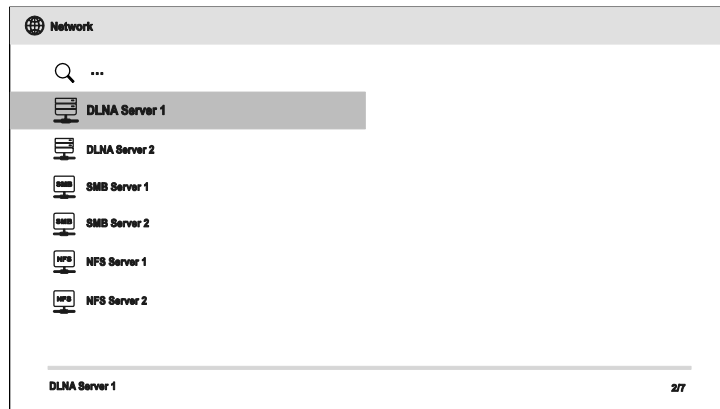
The transport is equipped with three USB ports: two USB 3.0 ports in the back. You may use any of the available USB ports to plug in a USB drive.

The USB ports are rated to provide a maximum of 5V, 1000mA power to the USB drive. It is sufficient for USB thumb drives and flash memory card readers, but may not be sufficient for USB hard disks. It is recommended to check with your drive manufacturer for power requirements, or use an external power supply.

NOTE

- This unit supports “USB Mass Storage Class Bulk-Only Transport” devices only. Most USB thumb drives, portable hard disk drives and card readers conform to this device class. Other USB devices such as MP3 players, digital cameras, and mobile phones may not be compatible.
- Supported USB drives can be formatted with the FAT (File Allocation Table), FAT32, exFAT or NTFS (New Technology File System) file systems.
- In some cases, an incompatible USB device may cause the player to stop responding. If this occurs, simply turn off the power, remove the USB device, and turn the player back on.
- In order to minimize the risk of data corruption, it is recommended that you only unplug the USB device when playback is completely stopped.

Playback from a Home Network



The transport can remotely play back music, photo, and video files stored on computers or NAS (Network Attached Storage) devices that are connected to the same home network. The computer or NAS need to run server software that supports media sharing protocols such as DLNA, SMB/CIFS or NFS. To play media files shared on your home network, press the **HOME** button on the remote to bring the **Home Menu**, select the **Network** icon and press the **ENTER** button to show the list of available servers.

The transport can play media files on the home network in one of the following three ways:

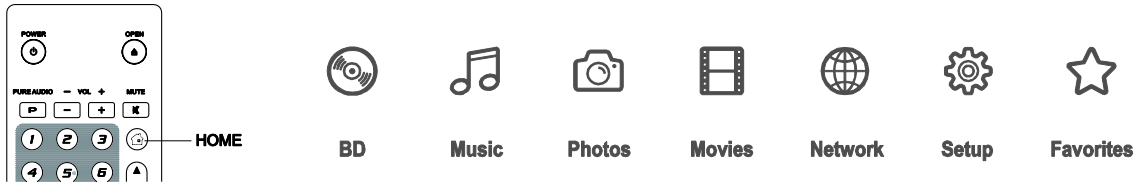
- As a digital media player (DMP): the player can actively search, access and pull content from local media servers which supports DLNA.
- As a digital media renderer (DMR): the player plays content received (“pushed”) from a digital media controller (DMC). A DMC-capable media server is required. Refer to the server’s respective user instructions for correct configuration and operation.
- As a SMB/CIFS/NFS client: the player can directly access files shared through SMB/CIFS/NFS servers over the network, as if accessing an external USB hard drive. Most computers, especially those installed with Windows, already support SMB clients. Please refer to respective OS instructions to set up the SMB/CIFS/NFS shared file/folder.

NOTE

- NAS is a networked appliance that provides file-based data storage services to other devices on the network. Commercial products are available on the market.
- SMB (Server Message Block) or CIFS (Common Internet File System) is mostly known as Microsoft Windows Network. It does not require an extra media server or perform any media format transcoding, which reduces the processing load and keeps the original content quality.

HOME Menu

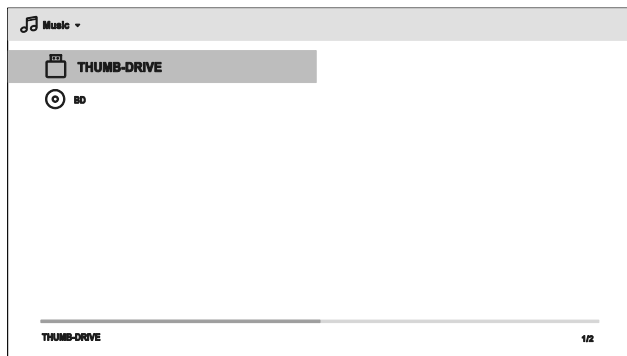
The transport presents a **Home Menu** to assist you in navigating and playing media files from an inserted optical disc, USB flash drive, external hard drive, home network sharing. Basically, the **Home Menu** is the starting point for accessing media files.



You can bring up the **Home Menu** with the **HOME** button on the remote control. Currently there are seven selections:

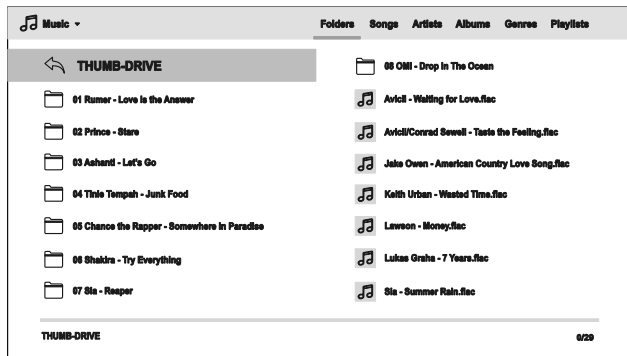
- **Disc** enables the player to start playback of an inserted optical disc.
- **Music, Movies** and **Photos** allow you to access corresponding type of media files from a connected USB drive and inserted data disc.
- **Network** enables the player to stream audio, video and photos from media servers on the home network. Compatible hardware and software may be required.
- **Setup** brings the player's **Setup Menu**, just like pressing the **SETUP** button on the remote.
- **Favorites** provides you with a shortcut to access folders or files you love or often access.

Playing Music Files



To play digital music files stored on an optical disc or USB drive, select **Music** from the **Home Menu**. A file browser will appear to assist you in navigating the files and folders.

The first step is to select the Data Disc or USB device that contains the music files. The player will take a moment to read the media and list the folders and music files.



In the music browser, you can perform the following operations:

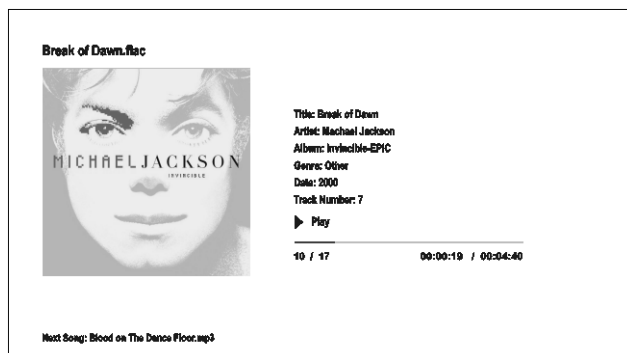
- Press the **UP/DOWN/LEFT/RIGHT ARROW** or **PAGE UP/DOWN** buttons to move the cursor and select music files.
- Press the **OPTION** button to access features such as adding to a playlist and gapless play. Details can be found on page 21.
- Press the **TOP MENU** button to move the cursor directly to the Category Menu at the top of the screen. The Category Menu contains the following choices:
 - **Media Type Filter**– Allows you to easily access the movie or photo files in the same folder by selecting Movies or Photos in the Media Type Filter at the top left corner of the screen.
 - **Sort** – Sort and display the music files and folders according to the selected category at the top right corner of the screen. The categories include Folders, Songs, Artists, Albums, Genres, and Playlists.
- When a music file is highlighted by the cursor, press the **ENTER** or **PLAY** button to start playback.

NOTE

- When a data disc or USB drive is inserted, the player automatically starts to index files and build a database in the background. Depending on the number and size of files, this process could take up to several minutes. Customers can only access the Category list (Artist, Album and Genre) when the database has been built, otherwise, a warning message will appear.

If a music file starts playing and there is no other user operation, the **Now Playing** screen will appear after a few seconds. You can also get to this screen by pressing the **OPTION** button and then selecting **Now Playing**. This screen provides the following information:

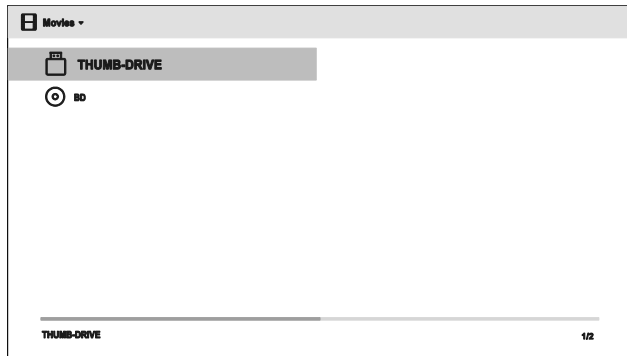
- Shows playback status: Play, Stop, Pause, Track and Time.
- Display and change playback mode: Shuffle/Random, Repeat One/All.
- Music information: Displays information like album art and tags embedded in the music file.



The following operations are available while the **Now Playing** screen is shown:

- Normal playback control: **PLAY, STOP, PAUSE, PREV/NEXT, REV, and FWD**
- Special playback modes: **REPEAT** and Shuffle/Random (**BLUE** color button)
- Press the **OPTION** button to access the Option menu. (More details on page 21)
- Return to the Browser without stopping the music: **RETURN**
- Stop playback and return to the Browser: Press **STOP**.
- Press the **INFO** button to show detail media information.

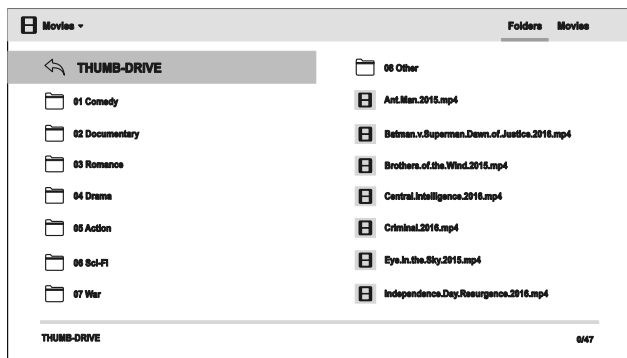
Playing Movie Files



To play movie files stored on an optical disc or USB drive, select **Movies** from the **Home Menu**. A file browser will appear to assist you in navigating through the files and folders.

The first step is to select the Data Disc or USB device that contains the movie files. The player will take a moment to read the media and list the folders and movie files.

In the movie browser, you can perform the following operations:



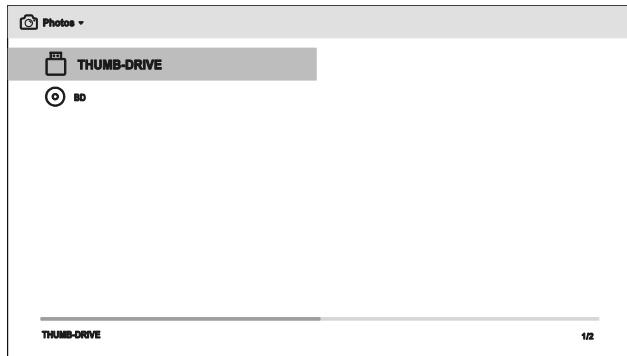
- Press the **UP/DOWN/LEFT/RIGHT ARROW** or **PAGE UP/DOWN** buttons to move the cursor and select movie files.
- Press the **TOP MENU** button to move the cursor to the category menu in the top of the screen. This menu functions the same as the one discussed in **Playing Music Files** on page 38.

- When a movie file is highlighted by the cursor, press the **ENTER** or **PLAY** buttons to start playback.

Once a movie file starts playing, the normal playback control functions are available:

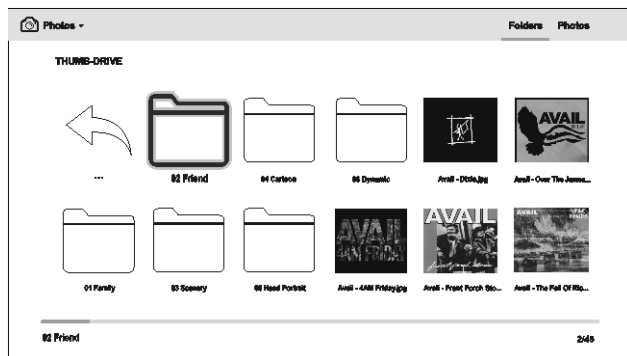
- To stop the movie and return to the file browser, press the **STOP** button. You can also press the **HOME** button at any time to stop the playback and return to the Home Menu.
- Press the **OPTION** button to access features such as Subtitle Shift, 3D and Picture Zooming. Details can be found on page 21.

Viewing Photo Files



To view digital photo files stored on an optical disc or USB drive, select **Photos** from the **Home Menu**. A file browser will appear to assist you in navigating the files and folders.

The first step is to select the Data Disc or USB device that contains the photo files. The player will take a moment to read the media and list the folders and photo files.



In the photo browser, you can perform the following operations:

- Press the **UP/DOWN/LEFT/RIGHT ARROW** or **PAGE UP/DOWN** buttons to move the cursor and select photo files.
- Press the **TOP MENU** button to move the cursor to the category menu in the top of the screen.

- When a photo file is highlighted by the cursor, press the **ENTER** or **PLAY** button to play back the photos as a full screen slideshow.

The following operations are available during the photo slideshow:

- Show EXIF Information: **GREEN** color button
- Normal playback controls: **PLAY, STOP, PAUSE,** and **PREV/NEXT**
- Adjust slideshow speed: **REV** and **FWD**
- Zoom: **ZOOM**. Once zoomed in, the **ARROW** buttons can be used to pan around the photo.
- Reflect (flips the photo horizontally to make it upside-down): **UP ARROW**
- Mirror (flips the photo vertically to make it a mirror image): **DOWN ARROW**
- Rotate left (counterclockwise): **LEFT ARROW**
- Rotate right (clockwise): **RIGHT ARROW**
- Repeat: **REPEAT**
- Play in random sequence: **BLUE** color button
- Change slideshow transition effect: **YELLOW** color button.
- Press the **OPTION** button to access to features like Image Zooming and Image Rotation. Details can be found on page 21.

Adding Background Music

You can also add background music to the photo slideshow. To do so, you will need to prepare digital music files. The music files can be stored on the same disk as the photos, or on a different USB drive. Start music playback first by selecting **Music** from the **Home Menu**. Once the music is playing, press the **HOME** button to get back to the **Home Menu**, and start the photo slideshow by selecting **Photo** in the usual manner.

SETUP MENU OPTIONS

The **Setup Menu** of the transport presents many setup and configuration options. For most users, the default configuration will be sufficient and you will not require any changes to the settings. However, if you need to configure the player to perfectly match your home theater setup and viewing preferences, please refer to the following sections for details about each configuration option.

Using the Setup Menu System

Like many other sections listed in this guide, the player's **Setup Menu** allows you to make adjustments to match your specific audio/video configuration. When performing menu adjustments, we will use the following terminology to indicate the location of the desired function:

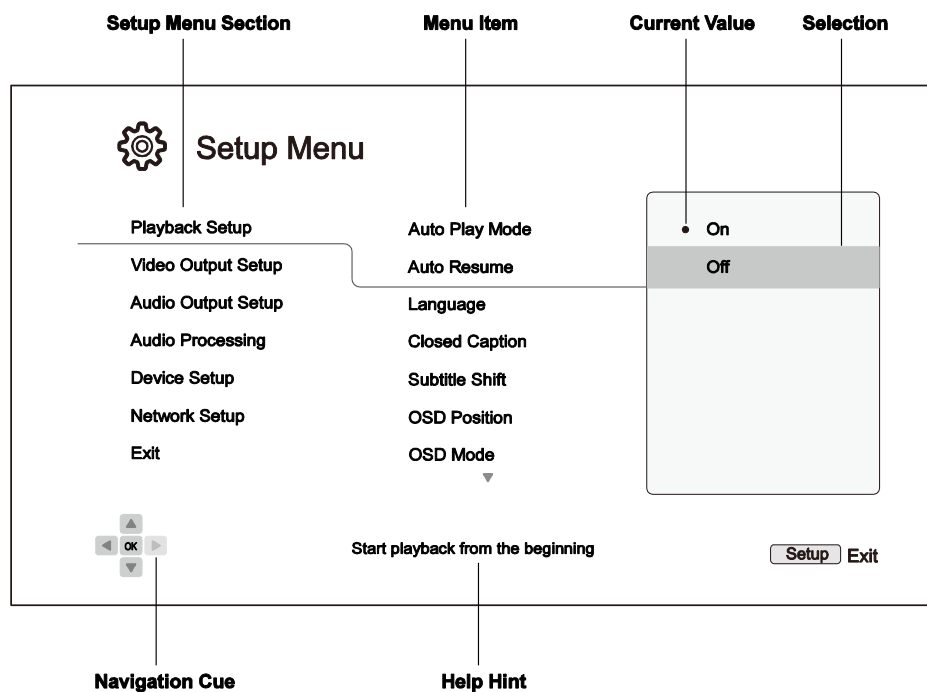
Setup Menu Section> Menu Item >Selection

Setup Menu Section is the uppermost **Setup Menu** level. Within the transport, there are six **Setup Menu** sections listed in the left column of the **Setup Menu**: **Playback Setup**, **Video Output Setup**, **Audio Output Setup**, **Audio Processing**, **Device Setup**, and **Network Setup**.

Menu Item is the parameter to be adjusted which appears in the center column of the **Setup Menu**. Once you enter a **Setup Menu Section**, the list of **Menu Items** and their current value are displayed in a box.

Selection is the actual numeric or descriptive element that represents the change being made to the selected parameter. It is the item located to the right of its corresponding **Menu Item**.

A **Scroll Mark** appears at the top or bottom of the menu when there are more **Menu Items** or **Selections** than what can fit in a screen. You may use the **UP** and **DOWN ARROW** buttons to scroll the display in order to access additional items.



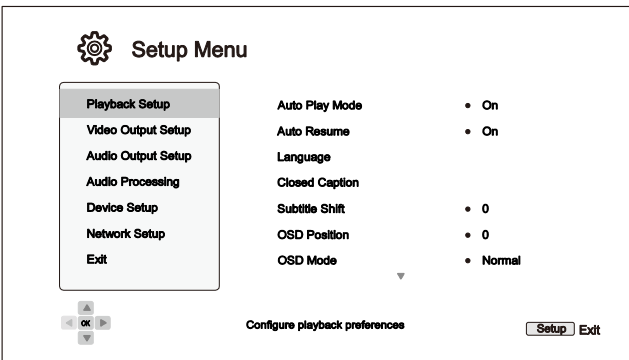
The preceding diagram should give a good description of the various elements and their context. In this screen we could, for example, instruct you to set the **Auto Resume** parameter to **Off** in the **Playback Setup** section. To indicate where we were, you would see the following: **Playback Setup>Auto Resume>Off**.

NOTE

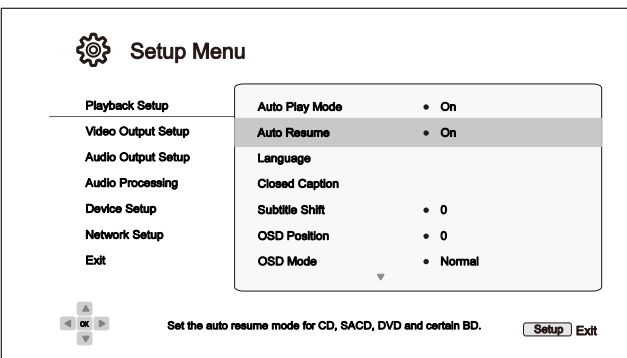
- It is possible that some setup items may be grayed-out and inaccessible. This may be caused by several reasons: playback is ongoing; a disc is in the tray; or a prerequisite setup item excludes some options. Please stop playback and eject the disc before trying to change these setup items. If you still cannot access the setup item, please check for configuration conflicts. For example, if **Network Setup > Internet Connection** is set to **Ethernet**, the **Wireless Setting** menu item will be grayed-out. Setting **Internet Connection** to **Wireless** will enable the **Wireless Setting** menu.

The **Setup Menu** can be accessed by pressing the **SETUP** button on the remote control, or by selecting the "Setup" icon from the Home Menu screen. The following steps are an example of setting **Playback Setup>Auto Resume** to **Off**.

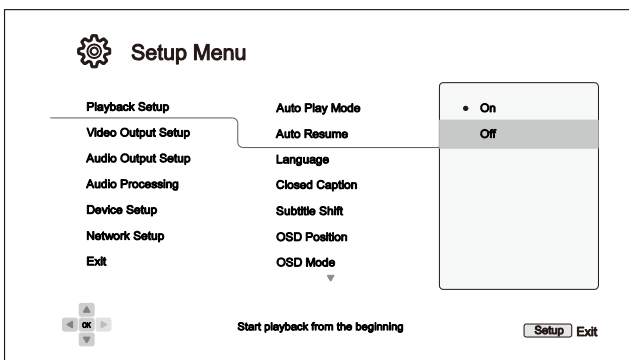
- Press the **SETUP** button on the remote control, and the TV screen displays the following:



- Press the **UP/DOWN ARROW** buttons to select the section. Press the **ENTER** button or the **RIGHT ARROW** button to enter the selected section.
- Press the **UP/DOWN ARROW** buttons to select the setup item to be changed, and press the **ENTER** or **RIGHT ARROW** button to change the setting. When the scroll icon is shown at the top or bottom of the **Setup Menu**, it indicates that there are more menu items that can be accessed by scrolling with the **UP/DOWN ARROW** buttons.



For example, in the **Playback Setup** section, you may use the **UP/DOWN ARROW** buttons to select the **Auto Resume** setup item, and press the **ENTER** button to change the **Auto Resume** setting.



- To select a value from the list of available settings, press the **UP/DOWN ARROW** buttons and then press the **ENTER** button to confirm.

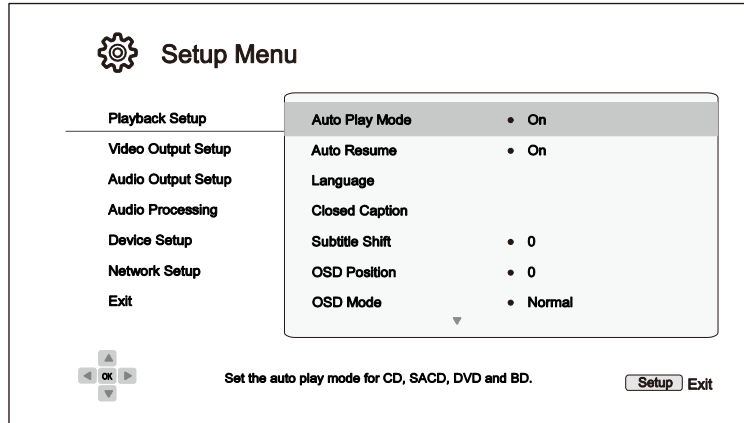
For example, to select **Off** for **Auto Resume**, use the **UP/DOWN ARROW** buttons to highlight the **Off** selection and press the **ENTER** button.

- To exit the **Setup Menu** at any time, press the **SETUP** button on the remote control or select **Exit** from the **Setup Menu** sections.

Settings are permanently saved when the player is turned off using either the front panel power button or the remote control. If the AC power is interrupted before the player enters standby, the settings will not be saved. To ensure that the settings are saved, please turn off the player and turn it back on after you make major changes to the **Setup Menu** options.

Playback Setup

The **Playback Setup** section is designed to configure playback preferences. The setup items in this section are:



1. **Auto Play Mode:** Select whether the player will start playing a CD, SACD, DVD or Blu-ray disc automatically.
 - **On** (default) – The disc starts playing upon insertion into the player.
 - **Off** – The player waits for the user to start playback by pressing the **PLAY** button.
2. **Auto Resume:** Select whether disc playback will start from the previously saved point or not. This setting applies to CDs, SACDs, DVDs and certain Blu-ray Discs.
 - **On** (default) – Playback automatically starts from the previously saved point.
 - **Off** – Playback starts from the beginning.
3. **Language:** Configures language preferences. This menu contains the following sub-items:
 - **Player Language** – Allows you to choose the language for the player's **Setup Menu** and the on-screen display. Currently the player supports 12 languages.
 - **Disc Menu Language** – Allows you to choose the preferred language for displaying DVD and Blu-ray Disc menus. If a disc menu of the selected language is available, that menu will be shown instead of the default disc menu.
 - **Audio Language** – Allows you to choose the preferred audio language for DVD and Blu-ray Discs. If an audio track of the selected language is available on the disc, the audio track will be played back.
 - **Subtitle Language** – Allows you to choose the preferred subtitle language for DVDs and Blu-ray Discs. If a subtitle of the selected language is available, it will be displayed. When **Auto** is selected, the subtitle display is determined by the disc.

NOTE

- If your preferred language is not listed in the Audio, Subtitle or Disc Menu options, select "Other" and enter the Language Code found on page 79 of this manual.

4. **Closed Caption:** Configure Closed Caption features.
- **CC Display** – Turn on or off Closed Caption display.
 - **CC Select** – Select the data channel for Closed Caption display. Available data channels depend on the content being played.
 - **CC Attribute** – Set the Closed Caption attribute. When **CC Attribute** is set to **Custom** you may configure the Closed Caption display attributes listed below.
 - **Font Color** – Set the font color for Closed Caption.
 - **Font Size** – Set the font size for Closed Caption.
 - **Font Style** – Set the font style for Closed Caption.
 - **Font Opacity** – Set the font opacity for Closed Caption.
 - **Font Edge** – Set the font edge effect for Closed Caption.
 - **Font Edge Color** – Set the font edge color for Closed Caption.
 - **BG Color** – Set the background color for Closed Caption.
 - **BG Opacity** – Set the background opacity for Closed Caption.
 - **Window Color** – Set the Closed Caption window color.
 - **Window Opacity** – Set the Closed Caption window opacity.

5. **Subtitle Shift:** Sets the display position for subtitles.
When the **Subtitle Shift** is set at 0 (default), subtitles are displayed at the original position as specified on the disc. When it is set at a value between 1 and 10, subtitles are shifted up. When it is set at a value between -1 and -10, subtitles are shifted down.
This feature is helpful for customers using a 2.35:1 “Constant Image Height” video projection system. Subtitles can be shifted to the active video area so they do not get cut off. You can also press and hold the **SUBTITLE** button for 3 seconds to activate this selection.

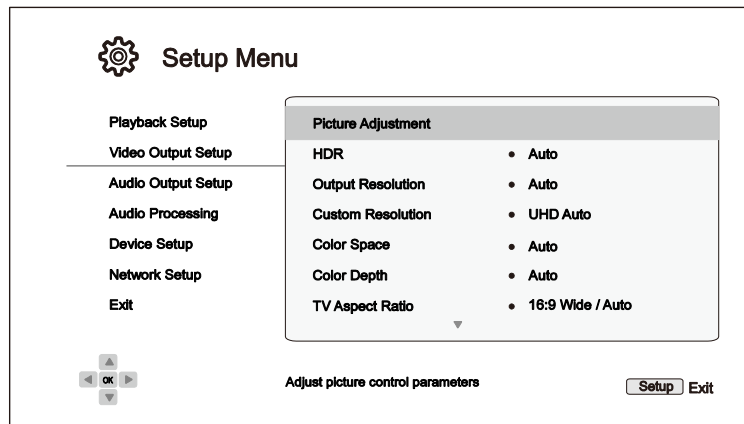
6. **OSD Position:** Allows you to set the display position for the on-screen display (OSD).
When the **OSD Position** is set to 0, the OSD is shown at the top and bottom of the video screen. When it is set at a value between 1 and 5, the OSD is shifted towards the center of the video screen.
Similar to the subtitle shift setting above, the **OSD Position** feature is helpful for customers using a 2.35:1 “Constant Image Height” video projection system.

7. **OSD Mode:** Allows you to select how long the on-screen display (OSD) information, such as playback operation icons (**PAUSE**, **STOP**, **SKIP**, etc.), stays on the TV screen.
- **Normal** (default) – OSD information stays on the TV screen until the user cancels it.
 - **Minimal** – OSD information stays on the TV screen for a few seconds and then disappears. The front panel display still maintains the selected display information.
 - **Remaining** – OSD information stays on the TV screen until the user cancels it. By default, displays remaining time instead of elapsed time.
 - **Off** – No OSD information shows on the TV screen unless the user presses the INFO button. This mode is not recommended for daily use

8. **Angle Mark (On/Off)** – Turns on/off the display of the angle icon when a DVD or Blu-ray Disc with multiple angles is played. Keeping the angle mark off avoids distraction from normal movie watching.
9. **Screen Saver** – Allows you to turn on/off the screen saver function. The screen saver is designed to minimize burn-in concerns for plasma and CRT display devices.
 - **On** (default) – After about 3 minutes of inactivity, the player will show an animated OPPO logo moving on a black background. This allows most areas of the screen time to rest and gives all areas an equal opportunity to refresh.
 - **Off** – The screen saver will not be activated. Only use this option if your TV does not have any burn-in issues.
 - **Energy Saver** – Video output will be turned off after 3 minutes of inactivity. Many projectors and LCD TVs will go into a standby or sleep mode and turn off their projection lamp or LCD backlight lamp, thus saving energy and prolonging the lamp life. When you press any button on the transport remote control or the player's front panel, the screen saver will be canceled and video output will be restored. If your TV is already in standby or sleep mode, you may need to wake up the TV by pressing a button on its remote or control panel.
10. **Parental Control:** Sets parental control ratings in order to prevent minors from watching inappropriate content. This function depends on whether the disc has been properly rated and encoded.
 - Press the **ENTER** button to bring up the rating selection menu.
 - Adjust the parental control settings by entering the current parental control password. If you have not yet set a parental control password, default the password is "0000".
 - The **Parental Control Menu** contains the following sub-items:
 - **BD Ratings** – Press the **UP/DOWN ARROW** buttons to select the rating allowed for Blu-ray Discs. **Off** means no ratings control and all discs are allowed to play. Numbers 1 to 21 corresponds to the age limit. Discs encoded with an age limit that is equal to or less than the selected age will be allowed, and any rating above the selected age will be blocked.
 - **DVD Ratings** – Press the **UP/DOWN ARROW** buttons to select the rating to allow for DVDs. The available ratings are Kid, G, PG, PG-13, PGR, R, NC-17, Adult and Off. The selected rating and below will be allowed, and any rating above will be blocked. If **Off** is selected, all discs are allowed to play.
 - **Area Code** – Some Blu-ray Discs may have different parental control ratings for different geographical areas. At this time the player only supports parental control ratings used in the United States.
 - **Change Password** – To change the parental control password, enter a 4-digit number as the new password. Enter the new password again to confirm. If the two entries match, the new password replaces the old parental control password.

Video Output Setup

The **Video Output Setup** section of the **Setup Menu** allows you to configure video output options.



- 1. Picture Adjustment:** Adjusts picture control settings. The transport provides a wide array of picture controls. Please refer to the **Picture Adjustment** section on page 53 for details about each control.
- 2. HDR:** Allows you to choose the output mode for High-Dynamic Range content.
 - **Auto** (default) – Outputs HDR if supported by both the content and the display. The player automatically checks for HDR content and whether the TV or projector is HDR compatible, and if both criteria are met, the player outputs HDR video from its HDMI (Main) output terminal. Otherwise, only SDR video is output.
 - **On** – If the video content supports HDR, the player will always output video with HDR enabled regardless of whether or not the TV or projector indicates that HDR is supported. This may result in image abnormalities if the connected display does not support HDR.
 - **Off** – Always outputs video without HDR. HDR content will be converted to SDR.
- 3. Output Resolution:** Allows you to choose the output resolution that best matches your television’s native resolution.
 - **Auto** (default) – Automatically set the optimal output resolution.
 - **Custom** – Set the output resolution according to the desired **Custom Resolution** setting.

NOTE

- DO NOT set the Output Resolution to Custom unless you know your TV’s native resolution and the selected Custom Resolution is supported by your TV. For a detailed description on how to choose a proper output resolution, please refer to the **Select the Best Output Resolution** section on page 54 of this manual.
- There will be no video output or an “unsupported video signal” message may appear on screen if an unsupported output resolution is selected. To get the video back, you need to press the **RESOLUTION** button on transport remote until “**AUTO**” is displayed on the front panel of the transport. Then press the **Enter** button on the transport remote or wait for a few seconds to confirm the selection. The player will automatically set its output resolution to a format that is supported by the TV.

4. **Custom Resolution:** Allows you to select a custom output resolution. The **Output Resolution** will be automatically changed to **Custom** if a new custom resolution is selected here. The following resolutions are available for the **Custom Resolution** setting:

- **UHD Auto** – Ultra HD (4K) output resolution with automatic frame rate. The frame rate will be 24Hz if the source content is natively 24Hz. 50/60Hz source content will be output as 4K 50/60Hz if the display device supports it, or as 4K 25/30Hz in the user specified color space.
- **UHD 24Hz** – Ultra HD (4K) output resolution with a 24Hz frame rate whenever possible. If the source content is not suitable for 4K 24Hz output, the output resolution will be 1080p 50/60Hz.
- **UHD 50Hz** – Ultra HD (4K) output resolution with a 50Hz frame rate.
- **UHD 60Hz** – Ultra HD (4K) output resolution with a 60Hz frame rate.
- **1080p Auto** – 1080p output resolution with automatic frame rate. The frame rate will be 24Hz if the source content is natively 24Hz and the display device supports 1080p 24Hz. 50/60Hz source content will be output as 1080p 50/60Hz.
- **1080p 24Hz** – 1080p output resolution with 24Hz frame rate preferred. The frame rate will be 24Hz if the source content is natively 24Hz. 50/60Hz source content will still be output as 1080p 50/60Hz.

NOTE

- **DO NOT** change the **Custom Resolution** unless you know your TV's native resolution.
- There will be no video output or an "unsupported video signal" message may appear on screen if an unsupported custom resolution is selected. To get the video back, you need to press the **RESOLUTION** button on transport remote until "**AUTO**" is displayed on the front panel of the transport. Then press the **Enter** button on the transport remote or wait for a few seconds to confirm the selection. The player will automatically set its output resolution to a format that is supported by the TV.

5. **Color Space:** Allows you to select the color space for the HDMI video output.

- **Auto** (default) – The player checks with the display device to automatically determine what color space to use. If the display device supports YCbCr 4:4:4, then it will be used to avoid extra color space conversion.
- **RGB Video Level** – The HDMI output uses RGB color space and normal signal range suitable for video displays.
- **RGB PC Level** – The HDMI output uses RGB color space and expands the signal range. The expanded signal range is suitable for personal computer (PC) displays. Some TVs are designed to be used as a PC monitor, and expect signal in expanded RGB range when the DVI input is selected. For these displays if the video signal uses the normal RGB range, the black-white contrast will be reduced. You can set the player to use the RGB PC Level output and restore proper contrast.
- **YCbCr 4:4:4** – The HDMI output uses YCbCr 4:4:4 color space.
- **YCbCr 4:2:2** – The HDMI output uses YCbCr 4:2:2 color space. Generally this is the color space that is close to the color space encoded on the discs. (All discs are encoded in YCbCr 4:2:0 color space, and the video decoder decodes it into YCbCr 4:2:2.)
- **YCbCr 4:2:0** – The HDMI output uses YCbCr 4:2:0 color space. (All Blu-ray discs are encoded in YCbCr 4:2:0 color space.)

6. **Color Depth:** Allows you to select the color depth mode for the HDMI video output. For displays that support increased color depth, you should see smoother color transitions and better gradients.
- **Auto** (default) – The player automatically determines the color depth mode based on the capabilities of the display device.
 - **12-bit** – Always uses the 12-bit color depth mode.
 - **10-bit** – Always uses the 10-bit color depth mode.
 - **8-bit** – Always uses the 8-bit color depth mode.

NOTE

- For watching a UHD movie with HDR-10 color, you need to select Auto or 10-bit color depth to enable HDR output.
- The 12-bit and 10-bit color depth mode may not be supported by all TVs. Using the 12-bit or 10-bit color depth mode when connected to a TV that does not support it may result in no video.

7. **TV Aspect Ratio:** Sets the aspect ratio of the player's output image.
- **16:9 Wide** – 16:9 content will be displayed in its native aspect ratio, and 4:3 contents will be stretched horizontally.
 - **16:9 Wide / Auto** (default) – 16:9 content will be displayed in its native aspect ratio, and 4:3 content will be displayed with black borders on both sides in order to maintain the original 4:3 aspect ratio.

For a detailed description on how to choose a proper TV Aspect Ratio, please refer to the **Determine the Display Aspect Ratio** section on page 55 of this manual.

8. **3D Setting:** Adjusts the playback settings for better 3D visual quality.
- **3D Output** – Allows you to choose the video output mode for 3D content.
 - **Auto** (default) – Outputs 3D if supported both by both the disc content and the display. The player automatically checks for the existence of 3D content on the disc and the 3D compatibility of the TV or projector. If both criteria are met, the player sends 3D video from its HDMI output terminals; otherwise, only 2D video is sent out. You may need to wear 3D glasses that come with your TV in order to view 3D movies.
 - **Off** – Always output 2D video format, even when 3D video exists on the disc. This guarantees the video quality if your TV is not 3D compatible, or if some necessary components (such as the 3D glasses) are missing.
 - **Forced** – Always output 3D video format for 3D Blu-ray Discs. You may experience a black screen (no video output) if your TV is not 3D compatible.
 - **2D->3D Depth** – Adjusts the 3D depth perception when performing 2D-to-3D conversion (also called “simulated 3D”). The default value is 8.
 - **3D TV Size** – Allows you to enter the diagonal screen size of the 3D HDTV. Use the number buttons on the remote to enter the actual diagonal size of the TV screen, and then press the **ENTER** button to confirm. The default value is 46 inches. This value does not directly affect video quality, but some 3D movies may use this value to decide how to place certain graphics.

9. DVD 24p Conversion: Allows you to enable 24Hz frame rate conversion for DVD. This option is only available when **Output Resolution** is **Auto**, **Output Resolution** is **Custom** and **Custom Resolution** is **UHD Auto/UHD 24Hz/1080p Auto/1080p 24Hz**. Many DVDs that originate from theatrical movies are encoded with a technique called “3:2 telecine” in order to convert the 24 frames per second film to 60Hz video signal. The player can convert the 60Hz video signal back to 24 frames per second film and output as 24Hz. Smoother motion may be achieved by enabling this option, if both the TV and the DVD disc meet the conversion conditions. The available options are:

- **On** – Converts DVD to 24Hz frame rate when possible. Remember that motion errors may be observed if the DVD is not suitable for such conversion.
- **Off** (default) – Does not convert DVD to 24Hz frame rate.

10. De-interlacing Mode: Allows you to select the appropriate algorithm that the player should use to convert interlaced video on a DVD or Blu-ray Disc to progressive output. A proper de-interlacing mode will ensure the output video matches the original contents and is free of de-interlacing artifacts. The available options are:

- **Auto** (default) – Automatically selects the de-interlacing mode depending on the video type. This is the recommended setting as it sets the player to optimally process a variety of signal types.
- **Film** – De-interlacing the video originally made in film mode. The mode may improve film mode detection in some cases.
- **Video** – De-interlacing the video originally shot with a video camera. Use this setting only if you are certain the disc is made from footage originally not shot with a film camera.

Picture Adjustment

Picture Adjustment is a special section of the **Video Output Setup** menu. It allows you to fine tune many picture control parameters in order to achieve optimal picture quality. To enter the **Picture Adjustment** menu, press the **SETUP** button on the remote control to enter the player's **Setup Menu** and choose **Video Output Setup>Picture Adjustment**.

Since the player is equipped with only the HDMI OUT (Main) output port for video output, the **Picture Adjustment** menu will come up directly for HDMI output.

| Picture Adjustment | | | |
|--------------------|--------|-----|-----|
| Picture Mode | Mode 1 | | |
| Brightness | 0 | -16 | +16 |
| Contrast | 0 | -16 | +16 |
| Hue | 0 | -16 | +16 |
| Saturation | 0 | -16 | +16 |
| Sharpness | 0 | 0 | +16 |
| Noise Reduction | 0 | 0 | +3 |
| Exit | | | |

Picture Adjustment Menu

To change a picture adjustment parameter, use the **UP/DOWN ARROW** buttons to highlight the parameter, and use the **LEFT/RIGHT ARROW** buttons to change its value.

To aid in the adjustment of picture control parameters, the picture adjustment menu will be reduced to only show the parameter being adjusted once you press the **LEFT/RIGHT ARROW** buttons (except the **Picture Mode**, which you will directly see the mode name switches between Mode 1, 2 and 3, and all the other parameters are adjusted automatically to the stored value). The reduced menu will be positioned near the bottom of the screen.

| | | | |
|------------|---|-----|-----|
| Brightness | 0 | -16 | +16 |
|------------|---|-----|-----|

You can continue adjusting the current parameter by pressing the **LEFT/RIGHT ARROW** buttons. To select another parameter, press the **UP/DOWN ARROW** buttons. Press the **ENTER** button to return to the main **Picture Adjustment** menu.

To exit the **Picture Adjustment** menu and return to the **Setup Menu**, either select **Exit** in the menu, or press the **RETURN** button.

1. **Picture Mode:** The transport allows you to save up to three customized modes. Press the **LEFT/RIGHT ARROW** buttons to switch the mode and all parameters will be automatically adjusted to their stored values. Changes to the current parameter values will be stored automatically when you exit the **Picture Adjustment** screen or switch to another **Picture Mode**.
2. **Brightness:** Allows you to adjust the brightness (black level) of the video output.
3. **Contrast:** Allows you to adjust the contrast (white level) of the video output.

NOTE

- Proper brightness and contrast settings are necessary for a quality video output. If you do not have the correct black and white levels, your images can appear washed out or can lose detail in shadows when watching darker scenes. Televisions have brightness (black level) and contrast (white level) controls; however, it may require a combination of tweaking both the player and your television to get the optimal result. We recommend using a calibration disc such as the *Spears & Munsil™ High Definition Benchmark Blu-ray Edition* or *Digital Video Essentials HD Basics* as aids for adjusting. First adjust the television's picture controls for the best possible picture. Once that is done, try changing the player's settings to further refine the picture to the optimal result.

4. **Hue:** Allows you to adjust the hue (tint) of the video output.
5. **Saturation:** Allows you to adjust the saturation (color intensity level) of the video output.
6. **Sharpness:** Allows you to set the sharpness of video output. Sharpness is a video processing function that can control the image sharpness but at the same time may cause unwanted artifacts. The sharpness level can be set between 0 and +16. The default is level 0. The higher the level, the sharper the video details are. However, too high a sharpness level may cause white lines or halo-like effects to appear around objects.
7. **Noise Reduction:** Allows you to select whether the player will apply video noise reduction processing. The default is level 0, which turns off noise reduction. When this level is increased, the player adjusts the picture quality by applying video noise reduction. The higher the level, the more aggressively noise reduction functions are applied.
Remember that excessive noise reduction may cause a loss of detail. We recommend using the noise reduction function only when you encounter poorly encoded or compressed video that has apparent noise artifacts.

Select the Best Output Resolution

One of the major advantages of the transport is its ability to play Ultra High-Definition Blu-ray video and also up-convert high-definition video and standard definition video to Ultra High-Definition. The player offers several standard, HD and UHD video output resolutions. For best results, it is important to select an output resolution that best matches your TV or display.

The rule of thumb when selecting an output resolution is to match the native resolution of your TV or display as closely as possible. The native resolution is the resolution of the actual display component in the TV, such as the OLED panel, Plasma panel, LCD panel, or DLP™ chip. The TV may accept input signals with lower or higher resolutions than its native resolution. In such cases, the electronics in the TV will upscale or downscale the video to fit its display component. Unfortunately, many TVs on the market only do an average job of scaling the video and if you set the transport to output a resolution that matches or is very close to the native resolution of the TV, you are more likely to get a great picture. Most TVs or projectors can communicate their native resolution to the player via the HDMI connection, so setting the **Output Resolution** to **Auto** is generally the best choice for most customers. However in rare cases the TV or projector may not correctly present its native resolution, or the installer may decide a certain resolution works better. The transport can be set to a fixed **Custom Resolution** if so desired.

For most new displays on the market, the best output resolution will be either UHD or 1080p. A few early model “1080p” displays did not accept a 1080p signal. For these displays, the best output resolution is 1080i. For small screen digital TVs this will likely be 720p. For even earlier CRT tube or rear projection TVs this will likely be 1080i. For EDTV displays (very rare if they have HDMI or DVI) this will be 480p (NTSC) or 576p (PAL). These are general recommendations that work for most users, but there can be exceptions. Advanced users may want to try all supported resolutions and choose the one that provides the best result visually.

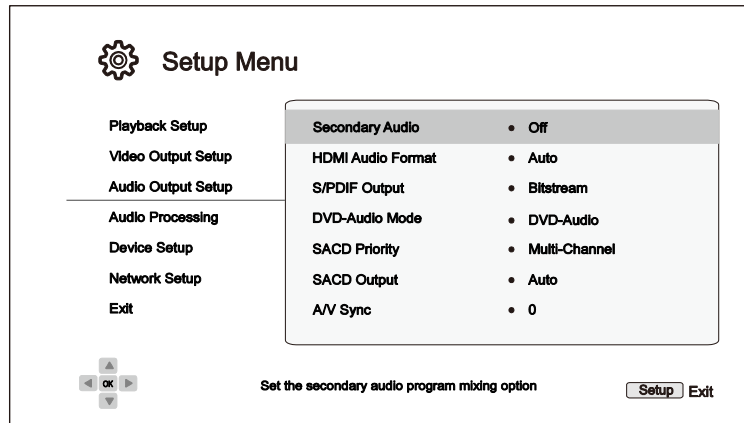
The transport supports a special **Source Direct** mode through its HDMI outputs. This resolution is recommended for use with external video processors or high-end TVs. In **Source Direct** mode, the player works as a “transport”. It decodes video from the discs and then sends the raw video signal in its native resolution and format, without extra processing, to the external video processor or TV. The actual output resolution varies by content:

| Content | Source Direct Output Resolution |
|--|--|
| NTSC DVD | 480i |
| PAL DVD | 576i |
| Most Blu-ray Movies (film-source) | Ultra HD (4K) 23.976Hz or Ultra HD (4K) 24Hz 1080p 23.976Hz or 1080p 24Hz |
| Most Blu-ray TV shows or Concerts (video-source) | 1080i |
| SACD and DVD-Audio | 1080p |

The transport allows the installer to choose a **Custom Resolution** in the **Setup Menu**. Customer can switch between the **Auto** output resolution and the pre-selected **Custom Resolution** by pressing the **RESOLUTION** button on the remote control.

Audio Output Setup

The **Audio Output Setup** section of the **Setup Menu** allows you to configure audio output options.



- 1. Secondary Audio:** Allows you to set the Secondary Audio Program mixing option. Some Blu-ray Discs contain a secondary audio and video program, such as a director's commentary. Some Blu-ray Discs have a sound effect when you make menu choices. This **Setup Menu** item allows you to decide whether to mix the Secondary Audio Program and menu sounds into the primary audio.
 - **On** – The Secondary Audio Program and menu sounds are mixed into the primary audio. Usually this will cause the primary audio volume to be slightly reduced.
 - **Off** (default) – The Secondary Audio Program and menu sounds are not mixed into the primary audio and you cannot hear the secondary audio or menu sounds. This setting preserves the highest possible audio quality for the primary audio.
- 2. HDMI Audio Format:** Allows you to select the digital audio output format from the HDMI port. The options are:
 - **Auto** (default) – The player checks with the device connecting to the HDMI output to automatically determine which audio format to use.
 - **LPCM** – Digital audio output via HDMI will be in the multi-channel Linear PCM format. When this option is selected, compressed audio bit streams will be decoded by the player. This setting is recommended when connecting the HDMI output directly to a TV or to a receiver without advanced audio decoding capabilities.
 - **Bitstream** – Digital audio output via HDMI will be in bitstream format. This option is recommended when connecting the HDMI output to an A/V receiver or processor that supports advanced audio decoding, such as Dolby Atmos, Dolby TrueHD and DTS:X, DTS-HD Master Audio.
 - **Off** (MSB Recommended) – No digital audio output via HDMI.
- 3. S/PDIF Output:** Allows you to set the audio format and the upper sample rate limit for coaxial/optical (S/PDIF) digital outputs. The upper sample rate limit is used to decide whether the player shall down-sample audio (the player does not up-sample audio to higher sample rates).
 - **48k LPCM** – Forces down-mixed 2-channel, linear PCM (LPCM) digital audio format, and sets the maximum sample rate to 48kHz. This is supported by most receivers/amplifiers.
 - **96k LPCM** – Forces down-mixed 2-channel, linear PCM (LPCM) digital audio format and sets the maximum sample rate to 96kHz. It can result in better audio quality but ensure the receiver/amplifier can support it.
 - **192k LPCM** – Forces down-mixed 2-channel, linear PCM (LPCM) digital audio format and sets the maximum sample rate to 192kHz. It can result in better audio quality but ensure the receiver/amplifier can support it.
 - **Bitstream** (default - MSB Recommended) – Passes audio as compressed bit-stream format to the receiver/amplifier. Choose this setting if your receiver/amplifier is capable of decoding Dolby Digital and/or DTS.

4. **DVD-Audio Mode:** Select which portion of a DVD-Audio disc to play.
 - **DVD-Audio** (default) – Play the DVD-Audio portion of the disc with high-resolution audio.
 - **DVD-Video** – Play the DVD-Video portion of the disc with Dolby Digital or DTS audio.
5. **SACD Priority:** Select which audio layer to play for SACD (Super Audio CD).
 - **Multi-Channel** (default) – Play the high resolution multi-channel surround audio layer
 - **Stereo** (MSB Recommended) – Play the high resolution 2-channel stereo audio layer
 - **CD Mode** – Play the CD layer of a hybrid SACD disc
6. **SACD Output:** Allows you to select the audio output format for SACD playback.
 - **Auto** (default) – The player checks with the device connected to the HDMI output to automatically determine which audio format (DSD or PCM) to use for SACD playback.
 - **PCM** – SACD data is converted into multi-channel, high-resolution PCM data. The converted PCM data is then output through HDMI or the internal DAC (Digital to Analog Converter) for the analog audio output ports. If you use a receiver that supports HDMI v1.1 to listen to SACD, please select this option. You may also want to select this option if you prefer the sound quality of the DSD-to-PCM conversion.
 - **DSD** (MSB Recommended) – SACD Direct Stream Digital (DSD) data is output over HDMI without any conversion. For the analog audio outputs, DSD data is converted into an analog signal directly by the internal DAC. If you use a receiver that supports HDMI v1.2a with DSD over HDMI, or you prefer the sound quality of straight DSD to analog, please select this option.
7. **A/V Sync:** Allows you to add a slight delay to the audio so it is synchronized to the video. You may use the **LEFT/RIGHT ARROW** buttons on the remote to decrease/increase the audio delay. The delay can be adjusted in 10ms steps and within the range of -100ms to +200ms. The delayed time will be applied to all output terminals including HDMI, Coaxial, Optical, Stereo (or 7.1) outputs.

NOTE

- The actual audio delay effect might be different for each of the output terminals due to the different audio process algorithms and signal paths used for each output. Please adjust this setting based on the actual output terminal in use.
- The negative adjustment values are for cancelling out the audio delay that the player automatically applies. Depending on the video source and the time it takes to process the video, the main decoder chip automatically applies an audio delay in order to optimize audio video synchronization. The negative manual settings reduce the automatic audio delay, while the positive manual settings apply additional delay. Any negative value setting beyond the player's automatic delay will be treated as completely cancelling the automatic delay. For example, if the A/V Sync value is manually set to -100ms and for the current video source the player applies a 70ms automatic audio delay, the final result is that the 70ms audio delay gets cancelled and the audio is not delayed at all. It is not possible to put audio ahead of video using this setting.

Audio Signal Reference Chart

Blu-ray Discs may contain many types of audio signal formats, some of which are high resolution types such as Dolby TrueHD and DTS-HD Master Audio. Blu-ray Discs also have many optional audio components such as the Secondary Audio Program and menu clicking sound. The player's **Audio Output Setup** menu allows you to configure the audio output to meet your specific preference. The following chart provides a reference to what type of audio signal can be expected.

When **Secondary Audio** is set to **Off** :

| Setting Source Format | HDMI Output | | Coaxial/Optical Output | | Analog Multi-Channel Output |
|-------------------------------|------------------------|--|------------------------|----------|-----------------------------|
| | Bitstream | LPCM | Bitstream | LPCM | |
| LPCM 2ch | LPCM 2ch | LPCM 2ch | LPCM 2ch | LPCM 2ch | 2ch |
| LPCM 5.1ch | LPCM 5.1ch | LPCM 5.1ch | DTS 5.1ch | LPCM 2ch | 5.1ch |
| LPCM 7.1ch | LPCM 7.1ch | LPCM 7.1ch | DTS 5.1ch | LPCM 2ch | 7.1ch |
| Dolby Digital | Dolby Digital | LPCM 5.1ch | Dolby Digital | LPCM 2ch | 5.1ch |
| Dolby Digital Plus | Dolby Digital Plus | LPCM up to 7.1ch | Dolby Digital | LPCM 2ch | Up to 7.1ch |
| Dolby TrueHD | Dolby TrueHD | LPCM up to 192kHz 24-bit 7.1ch | Dolby Digital | LPCM 2ch | Up to 7.1ch |
| DTS | DTS | LPCM up to 7.1ch | DTS | LPCM 2ch | Up to 7.1ch |
| DTS-HD High Resolution | DTS-HD High Resolution | LPCM up to 7.1ch | DTS (core) | LPCM 2ch | Up to 7.1ch |
| DTS-HD Master Audio | DTS-HD Master Audio | LPCM up to 96kHz 24-bit 7.1ch or 192kHz 24-bit 2ch | DTS (core) | LPCM 2ch | Up to 7.1ch |

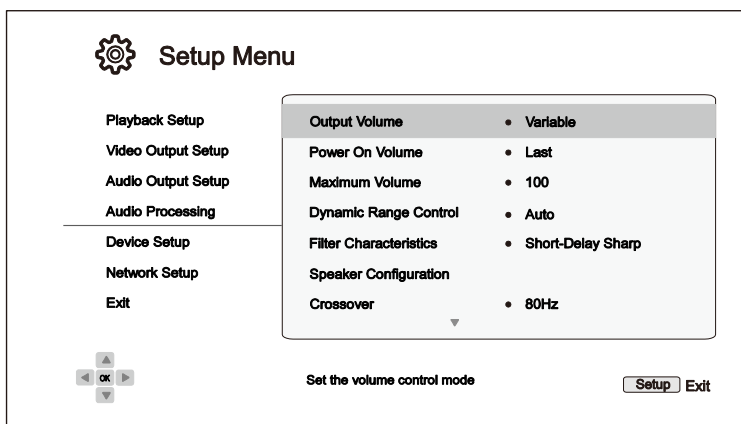
When **Secondary Audio** is set to **On** and the player encounters a disc with a secondary audio track or menu sounds:

| Setting Source Format | HDMI Output | | Coaxial/Optical Output | | Analog Multi-Channel Output |
|-------------------------------|----------------|--------------------------------|------------------------|----------|-----------------------------|
| | Bitstream | LPCM | Bitstream | LPCM | |
| LPCM 2ch | LPCM 2ch | LPCM 2ch | LPCM 2ch | LPCM 2ch | 2ch |
| LPCM 5.1ch | LPCM 5.1ch | LPCM 5.1ch | DTS 5.1ch | LPCM 2ch | 5.1ch |
| LPCM 7.1ch | LPCM 7.1ch | LPCM 7.1ch | DTS 5.1ch | LPCM 2ch | 7.1ch |
| Dolby Digital | Dolby Digital* | LPCM up to 5.1ch | Dolby Digital* | LPCM 2ch | 5.1ch |
| Dolby Digital Plus | Dolby Digital* | LPCM up to 7.1ch | Dolby Digital* | LPCM 2ch | Up to 7.1ch |
| Dolby TrueHD | Dolby Digital* | LPCM up to 192kHz 24-bit 7.1ch | Dolby Digital* | LPCM 2ch | Up to 7.1ch |
| DTS | DTS* | LPCM up to 7.1ch | DTS* | LPCM 2ch | Up to 7.1ch |
| DTS-HD High Resolution | DTS* | LPCM up to 7.1ch | DTS* | LPCM 2ch | Up to 7.1ch |
| DTS-HD Master Audio | DTS* | LPCM up to 7.1ch | DTS* | LPCM 2ch | Up to 7.1ch |

Note: All audio output signals are mixed with primary, second audio and menu sounds. "Dolby Digital*" and "DTS*" denote mixed audio re-encoded into the original bitstream audio format.

Audio Processing Setup

The **Audio Processing** section of the **Setup Menu** allows you to configure how the player will process audio signals before sending them to the output. In this section, all of the settings only affect the analog audio outputs, except for Dynamic Range Control (DRC), which also affects HDMI audio.



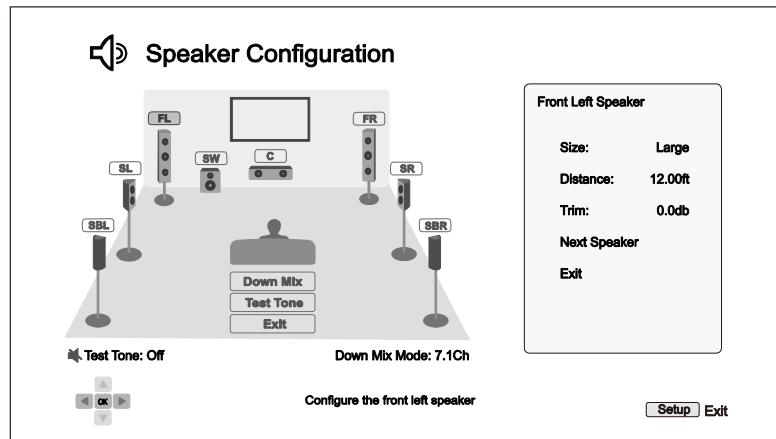
1. **Output Volume:** This setting is no longer valid. This must be set to "Fixed" at all times.
 - **Fixed** (MSB Recommended) – Disables the volume control.
2. **Power On Volume:** This setting is disabled when "Output Volume" is set to "Fixed."
3. **Maximum Volume:** This setting is disabled when "Output Volume" is set to "Fixed."
4. **Dynamic Range Control:** Allows you to set the Dynamic Range Compression (DRC). DRC can smooth out the sonic peaks and valleys common with wide-range digital audio. Enabling DRC may make low level audio more audible during low-level listening. Turning off DRC restores the sonic energy present in the original recording. MSB recommends not using this feature because it will make the transport output no longer bit perfect.
 - **Auto** (default) – Plays at the dynamic range specified by the disc. This option applies to certain Blu-ray Discs only, which have DRC instructions encoded in the Dolby TrueHD audio tracks.
 - **On** – Turn on DRC for all Dolby and DTS audio formats. This option applies to all DVD and Blu-ray Discs.
 - **Off** (MSB Recommended) – Turn off DRC.

5. **Filter Characteristics:** Configure the digital filter for the audio DAC. Some customers may prefer one type of filter over others.
 - **Sharp Roll-off** – Select the Sharp Roll-off filter.
 - **Short-Delay Sharp** (default) – Select the Short-Delay Roll-off filter.
 - **Slow Roll-off** – Select the Slow Roll-off filter.
 - **Short-Delay Slow** – Select the Short-Delay Slow Roll-off filter.
 - **Super Slow** – Select the Super Slow Roll-off filter.
6. **Speaker Configuration:** In the **Speaker Configuration** menu you can configure speaker settings such as down-mix mode, number of speakers, their distance, size and trim level. The **Speaker Configuration** menu shows an illustration of speaker placement to assist you in properly configuring your speakers. Please refer to the **Speaker Configuration** section for details of each option.
7. **Crossover:** Allows you to set the Bass Management kick-in frequency for all speakers. When the speaker size is set to **Small** in **Speaker Configuration** (see page65), bass information below this frequency is not passed to the speakers to reduce possible distortion, and if the subwoofer is available, bass information will be redirected to the subwoofer. When all speaker sizes are set to **Large**, there is no Bass Management.
 - **40Hz / 50Hz / 60Hz / 70Hz / 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 130Hz / 140Hz / 150Hz / 160Hz / 200Hz / 250Hz** – These are the available crossover frequencies. You can press the **UP/DOWN ARROW** buttons and the **ENTER** buttons to select it. This option applies to all speakers (center front, surround, and surround back speakers). By default the crossover frequency is **80Hz**.
8. **DTS Neo:6 Mode:** Allows you to enable DTS Neo:6 audio processing and select the listening mode. DTS Neo:6 is a digital signal processing that can expand the original stereo source to 7.0 (L, R, C, L_S, R_S, L_R, R_R) or 7.1 (with Bass Management) surround.
 - **Music** – Enables DTS Neo:6 audio processing for stereo music sources.
 - **Cinema** – Enables DTS Neo:6 audio processing for digital TV box or stereo movie sources.
 - **Off** (default) – Turns off the DTS Neo:6 to keep the original audio quality.

Speaker Configuration

In the **Speaker Configuration** menu you can configure speaker settings such as down-mix mode, number of speakers, their distance, size and trim level. The **Speaker Configuration** menu shows an illustration of speaker placement to assist you in properly configuring your speakers.

Upon entering this menu, the cursor is positioned on the front left speaker. You may use the **LEFT/RIGHT ARROW** buttons to move the cursor. The **RIGHT ARROW** button moves the cursor clockwise, and the **LEFT ARROW** button moves the cursor counterclockwise. When the cursor is over the **Down Mix**, **Test Tone** or **Exit** options, you can also use the **UP/DOWN ARROW** buttons to highlight these options.



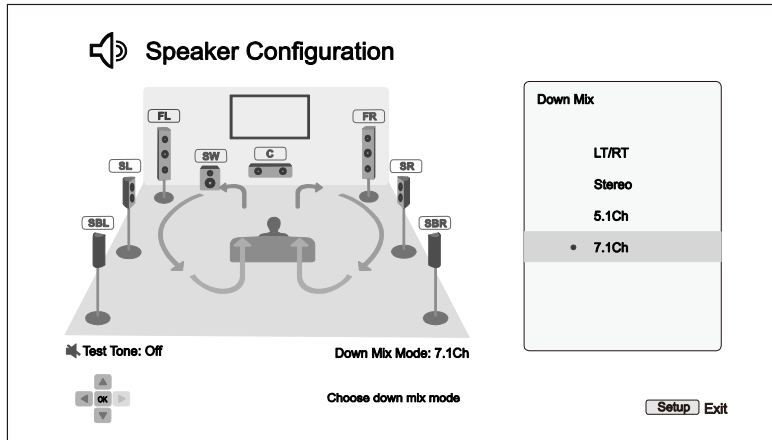
NOTE

- **Dynamic Range Control (DRC)** and **A/V Sync** also affect the HDMI, coaxial, and optical outputs.
- **Speaker Configuration** mainly applies to the multi-channel analog audio outputs. However, when **S/PDIF Output** is set to **LPCM** in the **Setup Menu**, its signal becomes a down-mixed stereo version of the multi-channel signal that is sent to the multi-channel analog audio outputs. As a result, the LPCM signal from the coaxial and optical output is affected by the settings in **Speaker Configuration**.
- HDMI is unaffected by the settings in **Speaker Configuration**, and the coaxial and optical outputs are also unaffected by these settings when **S/PDIF Output** is set to **Bitstream**.

Down Mix Mode

Downmixing is the process of converting multi-channel audio to a lesser number of channels. For example, converting a 5.1ch source to stereo or converting a 7.1ch source to 5.1ch. Downmixing allows the audio output from the player to match the exact number of speakers available in your home theater.

The current down mix mode is displayed in the lower right corner of the speaker placement illustration. To change the audio down mix setting, press the **ENTER** button while the cursor is over the **Down Mix** option. The following down mix modes are available:



- **LT/RT** – Left Total/Right Total. The center and surround channels are mixed into the two front channels according to the LT/RT matrix. A Dolby Pro Logic receiver will decode the two-channel audio into surround audio.
- **Stereo** – This mode down mixes multi-channel audio to 2-channel stereo output. For original stereo content the output will not change. For original multi-channel content the surround and center channels will be mixed with the left and right front channels. This is recommended for use with TV sets or stereo receiver/amplifiers.
- **5.1Ch** – This mode enables 5.1ch decoded audio output. The number of actual output channels depends on the disc. If the source content has more channels, the surround back channels will be mixed into the surround channels.
- **7.1Ch** (default) – This mode enables 7.1ch decoded audio output. The number of actual output channels depends on the disc. For 6.1ch contents, the left and right surround back speakers will both output the same surround back audio channel.

Test Tone

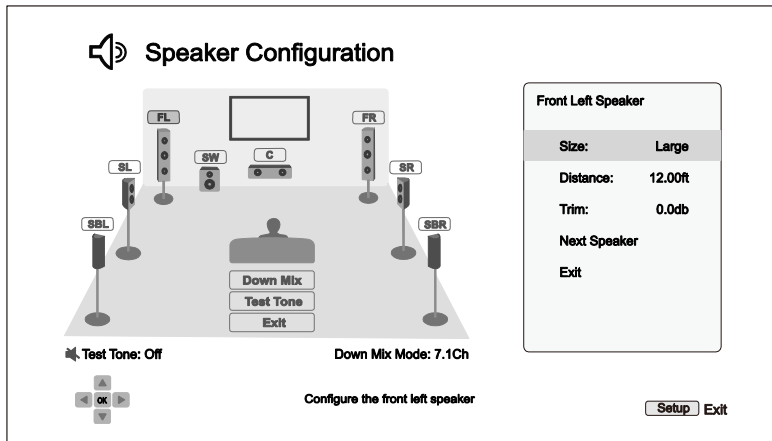
Test tones are artificially-created sounds that are used to test your audio speaker system and help to identify any wiring faults. By default the **Test Tone** is set to **Off**, with the status displayed in the lower left corner of the screen.

To begin the test, press the **ARROW** buttons to highlight the **Test Tone** option, and press the **Enter** button to change the test tone status to **On**. Press the **ARROW** buttons to select a speaker, and you will hear the test sounds. To stop the test process, press the **ARROW** buttons to highlight the **Test Tone** option and press the **Enter** button to switch the status back to **Off**.

Please note these test tones only work with the multi-channel analog audio outputs and are only suitable for channel identification purposes. For comprehensive speaker configuration, we recommend using the dedicated test tones found on professional audio calibration discs.

Speaker Settings

You can set the size, distance and trim level for each speaker by using the **LEFT/RIGHT ARROW** buttons to move the cursor to highlight the speaker and then press the **ENTER** button. The **Speaker Settings** menu on the right side of the screen will be activated. In **Speaker Settings**, use the **UP/DOWN ARROW** buttons to select a parameter, and then press the **ENTER** button to change it. To exit the **Speaker Settings** menu and return to the Speaker Configuration illustration, press the **LEFT ARROW** button or select the **Exit** option. You can also move on to configure the next speaker by selecting the **Next Speaker** option.



The following speaker parameters can be configured:

1. **Size:** The following speaker size parameters control bass filtering for the speakers.
 - **Large** (MSB Recommended) – All audio content is passed to the appropriate speaker.
 - **Small** – All audio content, except for bass frequencies, is passed to the appropriate speaker. The purpose is to reduce possible distortion. If a subwoofer is available, bass frequencies are re-directed to the subwoofer, otherwise, they are discarded. The bass frequency upper limit is set by the **Crossover Frequency** selection in the **Setup Menu** (see page 63 for details).
 - **Off** (MSB Recommended) – Speaker for the corresponding position does not exist. Audio for the missing speaker is redirected to other speakers or discarded if redirection is not possible.

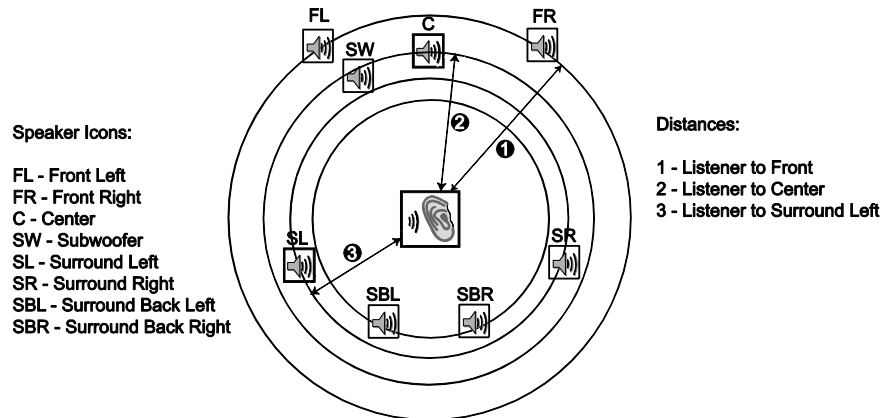
NOTE

- The **Size** for Front, Surround and Surround Back speakers is configured in pairs. Changes to the size of one speaker will automatically change the other of the pair.

2. **Distance:** The speaker distance parameters set delay control for the corresponding audio channel. The delay is to compensate for the audio propagation time difference caused by the placement of speakers.

Speaker distance compensation is not required if the A/V receiver has the capability to adjust channel delay and compensate for speaker distance differences. However, if your receiver does not have such functions (most receivers do not offer these functions for their multi-channel analog input), you may adjust them through the player. Speaker distance delay is only applied if the player is decoding multi-channel audio. If you use bitstream audio output to your A/V receiver, the bitstream audio is not adjusted for speaker distance delay.

A typical 7.1-channel speaker layout and their speaker distance measurements are displayed as below:



In the above diagram, measure the distance (in feet) from the primary listening position to the Front Left or Front Right Speaker. Enter the distance of the Front Speakers (❶ in the above picture) into the **Speaker Configuration** menu.

Next, measure the distance (in feet) from center speaker (❷) to the listening position. Move the cursor to highlight the Center speaker in the Channel Delay setup page, and enter the distance (as close as possible) in feet. Repeat for each speaker in the system (Center, Surround Left, Surround Right, Surround Back Left, Surround Back Right and Subwoofer) as available. The player will insert appropriate delay to make sure sound waves from different speakers arrive at the listener at the same time.

It is possible to independently set distances for each speaker. Speaker distances can be set to the actual spatial distance of the speakers.

If the channel delay settings cannot match your speaker configuration, please set all distances to the same and use your receiver/amplifier to set the channel delay.

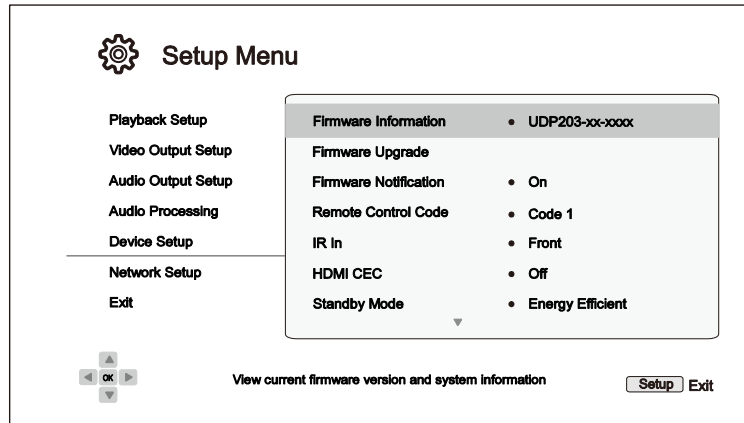
3. **Trim:** The speaker trim level parameters sets the volume of each individual channel. Channel trim is generally not required since most A/V receivers have the capability to adjust channel trim and compensate for speaker sensitivity differences. However, if your receiver does not have such functions (many receivers do not support channel trim for their multi-channel analog inputs), you may adjust channel trim through the player. For most accurate results, it is recommended that you use test tones from a calibration disc, such as *Digital Video Essentials HD Basics*, and a SPL (Sound Pressure Level) meter. The trim level can be set to +/- 10dB in 0.5dB increments.

NOTE

- Increasing the **Trim Level** above 0dB may result in distortion if the original audio level is already high. When this occurs the waveform becomes clipped and audible distortion can be heard. In this situation, it is necessary to reduce the **Trim Level** until the distortion is removed. When using the **Trim Level** for speakers, it is recommended that you set the least sensitive speaker's **Trim Level** to 0dB, and set other speakers' **Trim Level** to negative values.
- Each speaker can be set to independent trim levels and there is no linked pair limitation.

Device Setup

The **Device Setup** section of the **Setup Menu** system allows you to configure additional player options related to the hardware and control functions.



1. **Firmware Information:** Displays the currently installed firmware version.
2. **Firmware Upgrade:** Upgrades the player's firmware. This operation is only available when the playback is completely stopped or when there is no disc loaded. The firmware is the system software that controls the features and functions of the player. Since the Blu-ray Disc specifications are new and evolving, it is possible that a Blu-ray Disc manufactured after the player was manufactured uses certain new features of the Blu-ray Disc specifications. To ensure the best possible viewing experience, the player may need a firmware update from time to time. Please visit the OPPO Digital web site www.oppodigital.com to check for firmware updates and instructions on installing the updates. There are three ways to upgrade the player's firmware:
 - **Via USB** – You may download the firmware files from the OPPO Digital web site to a USB drive and then use the USB drive to upgrade the player. Please follow the instructions on the firmware download web page.
 - **Via Disc** – You may download a disc image from the OPPO Digital web site and burn an upgrade disc. Please follow the instructions that come with the upgrade disc.
 - **Via Network** – If the player has a working Internet connection, you may upgrade the player directly over the Internet. Please follow the instructions on your TV screen.
3. **Firmware Notification:** Allows you to set whether the player should automatically check for new firmware versions on the Internet server and notifies you about new firmware.
 - **On** (default) – Checks for firmware updates automatically and notifies the user about new firmware. Requires a working network connection.
 - **Off** – Does not check for new firmware version automatically.
4. **Remote Control Code:** The transport can respond to one of four sets of remote control codes. The default is "Code 1". If you have other OPPO products in the vicinity of the transport, the other products may respond to the transport remote control. To prevent this, you can select a different remote code. The available codes are:

- **Code 1** (default) – Transport remote code is set to 1. This is the default remote code.
- **Code 2** – Transport remote code is set to 2. Use this code if you have other OPPO products placed close to the transport.
- **Code 3** – Transport remote code is set to 3. Use this code if you have other OPPO products placed close to the transport.
- **Alt. Code** – Alternative remote code. The alternative remote control code enables users to program their universal remote controls that come with TV, projector or A/V receiver to operate the transport. If the universal remote control has a DVD player control function, please program it with the code for Toshiba, Philips, Magnavox, Marantz or Zenith DVD players. Since each brand of remote control may have several sets of codes, you may need to try several times using different codes to find a working code.

If you have selected a new remote code, you must set the remote control handset to use the same code. If you have selected **Alt. Code**, the supplied handset will not operate the player, and you must use a universal remote control with the properly configured code set.

5. **HDMI CEC:** Allows you to set the HDMI Consumer Electronics Control (CEC) mode. CEC is an optional HDMI feature that enables convenient remote control and automatic setup of consumer electronics over the HDMI connection. The remote control function allows you to use a single remote handset to operate multiple devices connected via HDMI. For example, you may use the TV remote to control playback of the Blu-ray Disc player. The automatic setup function can automatically turn on the TV and change to the proper input when you start playing a disc in the Blu-ray Disc player. It can also turn off the player automatically when you turn off the TV. The implementation and compatibility of this feature varies by device manufacturer. Each may only implement part of the features or add their own proprietary functions. The manufacturer-specific implementation of the HDMI CEC function is often given a proprietary name of "...Link" or "...Sync". The transport provides three HDMI CEC function modes for its HDMI Output (Main) port:
 - **Off** (default) – HDMI CEC feature is turned off on HDMI output terminal. The player will not respond to HDMI CEC commands from other devices, nor will it setup other devices automatically.
 - **On** – HDMI CEC is enabled on HDMI output. Use this mode if your other devices are compatible with the player.
 - **Limited** – HDMI CEC is enabled on HDMI output, but the transport will only respond to playback control commands. It will not respond or issue power on/off and input selection commands. Use this mode if you do not want the automatic setup function to turn on/off your devices.
6. **Standby Mode:** Allows you to choose between two standby modes. In **Energy Efficient** mode, the player consumes a minimal amount of power but takes more time to get ready for operation after being turned on. In **Network Standby** mode, the player can be woken up over the network and may start up faster at the expense of additional power consumption during the standby period.
 - **Energy Efficient** (default) – The player will take slightly longer to start up, but will consume less power in standby mode. This mode is recommended for regular use.
 - **Network Standby** – This mode allows to wake the player in standby mode over the network. The player takes less time to start up but consumes more power in standby mode.

8. **Auto Power Off:** To allow the player to auto-shutdown after 30 minutes of inactivity. This can help reduce power consumption and prolong the service life of you player.
 - **On** – Enable the Auto Power Off.
 - **Off** (default) – Disable the Auto Power Off.
9. **Sleep Timer:** Allows you to specify the amount of time before the player automatically turns itself off.
 - **Off** (default) – The player will not turn itself off automatically.
 - **30/45/60/90/120 Min** – After the specified time, the player automatically shuts itself down. You can press the **UP/DOWN ARROW** buttons and the **ENTER** button to select the desired time. Once selected, the remaining minutes will be displayed to the right of the “Sleep Timer” option.
10. **Power On Input:** Allow you to set the initial input source after power on. It is recommended that you set this option only if you plan to use the player as a dedicated processor or per-amplifier.
 - **Blu-Ray** (default) – Power on with the regular Blu-ray Home Menu. This choice is recommended for regular use.
 - **Last Input** – Power on with the last input source. Depending on the availability of the input device, you may experience a blank screen on the display or “No signal” warning message.
11. **Front Panel Brightness:** Allows you to control the display intensity of the front panel Vacuum Fluorescent Display (VFD) information window and the **Power** indicator light. If you feel that the display becomes a distraction to your enjoyment of the video, this option allows you to dim it or turn it off.
 - **Standard** (default) – The VFD window and the **Power** indicator light are at full brightness.
 - **Dim** – The VFD window and the **Power** indicator light are at reduced brightness.
 - **Off** – The VFD window is turned off and the **Power** indicator light is at dimmest brightness. In this mode, the display and indicator light will resume momentarily if there is any user operation.
12. **Persistent Storage:** Allows you to manage the persistent storage for BD-Video content. The persistent storage is a data storage area that holds additional content for *BonusView* and *BD-Live* features. The data will be kept even if you turn off the player. The following persistent storage management options are available:
 - **Storage Device** – Allows you to select which storage device should be used as the persistent storage. There are also three USB ports on the player that can accept a USB drive to be used as the persistent storage. You may choose from the following:
 - **Internal Flash** – Uses the internal flash memory for persistent storage.
 - **USB Drive** – Uses a USB drive for persistent storage. To meet the specification for BD-Live, a USB flash drive of 1GB or larger is required. A USB hard drive is not recommended.

NOTE

- The new storage device choice becomes effective only after the player is restarted. Please make sure that you turn off the player and then turn it back on after changing the **Storage Device** option.

- **Space Used** – Displays the used space of the persistent storage. If too much space is used and the available space becomes too low, some Blu-ray Discs may not play properly.
- **Erase Persistent Storage** – Erases the BD-Video data from the persistent storage or initializes a USB drive so it can be used for persistent storage.

13. **Text to Speech:** Allows you to adjust Text to Speech settings.

- **Switch** – Allows you to enable and disable the player reading the text on screen when it is highlighted:
 - **On** – The text on screen will be read out when it is highlighted.
 - **Off** (default) – The text on screen will not be read out when it is highlighted.
- **Language** – Allows you to choose the language for reading the text on screen when it is highlighted. Currently the player supports English and Spanish. The default language is English.
- **Volume** – Allows you to set the volume of the voice for reading text on screen when it is highlighted. The default value is 100.
- **Pitch** – Allows you to set the pitch of the voice for reading text on screen when it is highlighted. The default value is 100.
- **Speed** – Allows you to set the speed of the voice for reading text on screen when it is highlighted:
 - **Very Slow / Slow / Normal / Fast / Very Fast** – These are the available speed of the voice for reading text on screen when it is highlighted. You can press the **UP/DOWN ARROW** buttons and the **ENTER** buttons to select it. The default speed is **Normal**.

14. **Settings Management:** Allows you to backup or restore the player settings. This option affects the settings in **Setup Menu**. It does not export/import private information such as WiFi password or account information.

- **Backup Settings** – Backup the player settings to the first detected USB storage device. The player will create a new configuration file named “[player model].cfg”, such as “UDP203.cfg”, and the settings will be stored in binary format which can only be accessed by OPPO technical support.
- **Restore Settings** – Restore the player’s settings from external USB storage. The player will access the first detected USB storage device for the configuration file. To avoid any confusion, we recommend only connect one USB storage device to the player at this time.

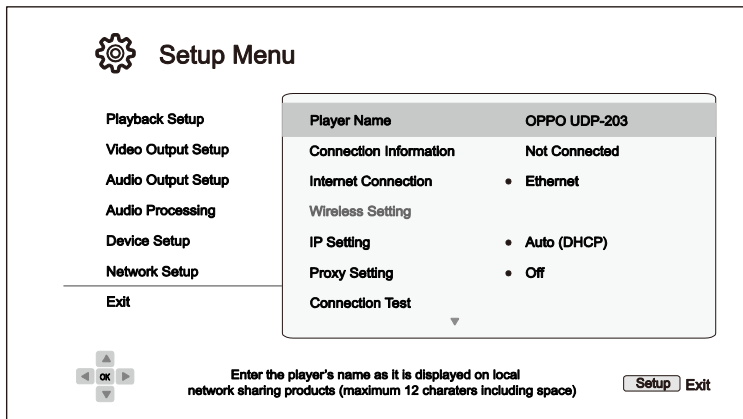
15. **Reset Factory Defaults:** To reset all settings to the factory default value. This operation also sets **BD-Live Network Access** to be **Off** and performs **Erase Persistent Storage**. However, the remote control code, parental control password and ratings will not be reset. This operation is only available when the playback is completely stopped or when there is no disc loaded.

- **Erase Accounts and Settings** – Resets all settings to their factory default values and removes all account information.
- **Erase Settings** – Resets all settings to their factory default values, but keeps account information.

NOTE - To set to MSB default settings use the "MSB Reset Command" as found at the beginning of the manual.

Network Setup

The **Network Setup** section of the **Setup Menu** system allows you to configure the player's network connection, test the connection, and enable or disable BD-Live access.



- 1. Player Name:** Enter and display the player's identification name as it is displayed on local network sharing devices. To change it, press the **ENTER** button to bring up the virtual keyboard. The name can contain maximum 12 characters including spaces.
- 2. Connection Information:** Displays the current internet connection information, such as connection type, IP address, Ethernet MAC, etc.
- 3. Internet Connection:** Allows you to select the internet connection type.
 - **Ethernet** (default) – Connect to the internet through an Ethernet cable. Please refer to the connection instructions on page 18.
 - **Wireless** – This feature is disabled.
 - **Off** – Internet access is prohibited. This will make disable the Ethernet and makes IP Setting, Proxy Setting and Connection Test options un-selectable.
- 4. IP Setting:** Determines how the player obtains its IP address.
 - **Auto (DHCP)** – The player automatically obtains its IP address information using DHCP (Dynamic Host Configuration Protocol). This is the default setting. In most cases, automatic IP configuration should be used.
 - **Manual** – Allows you to manually enter the numeric IP address. Set the IP configuration manually only when the router has no DHCP server functions or when the router's DHCP server function is disabled. For more information on how to manually configure the Internet connection and what values to use, please consult your broadband router/modem instruction manuals or call your Internet service provider.
 - **Internet Connection** – Depending on the setting in **Internet Connection**, this can be "Ethernet".
 - **IP Address:** The Internet Protocol address of the player. When **IP Setting** is set to **Auto (DHCP)**, the value displayed here is obtained using DHCP and cannot be changed.
 - **Subnet Mask:** Each IP address has an associated subnet mask. It is used by the player to decide whether to route network traffic through the router or directly to another device on the same network. When **IP Setting** is set to **Auto (DHCP)**, the value displayed here is obtained using DHCP and cannot be changed.
 - **Gateway:** The IP address of the router. It is also called "default gateway" or "default router". When **IP Setting** is set to **Auto (DHCP)**, the value displayed here is obtained using DHCP and cannot be changed.
 - **DNS 1:** The IP address of the primary DNS (Domain Name System) server. DNS is the mechanism used to translate human-readable addresses to numeric IP addresses. When **IP Setting** is set to **Auto (DHCP)**, the value displayed here is obtained using DHCP and cannot be changed.
 - **DNS 2:** The IP address of the secondary DNS server. When **IP Setting** is set to **Auto (DHCP)**, the value displayed here is obtained using DHCP and cannot be changed.

5. Proxy Setting: Allows you to configure the proxy server settings. The proxy server works as an intermediary for network communication between clients and other servers, which can provide benefits like security, anonymity, or even circumvention of regional restrictions.

- **On** – Accesses the Internet via a proxy server.
 - **Proxy Host:** Input the proxy host name using the remote control.
 - **Proxy Port:** Input the proxy host port number using the remote control.
- **Off** (default) – Disables the use of a proxy server.

We recommend keeping **Proxy Setting** set to **Off**, unless you have a working Proxy Host and Proxy Port, and have to use the proxy server in order to access the internet.

7. **Connection Test:** Allows you to test the Internet connection. It is recommended that you test the connection when you initially connect the player to the Internet, or whenever changes to **Connection Method, IP Setting** and other network parameters are made.

8. **BD-Live Network Access:** Used to permit or restrict BD-Live content access.

- **On** – BD-Live access is permitted.
- **Limited** – BD-Live access is permitted only for content that has a valid content owner certificate. Internet access is prohibited if the BD-Live content does not have a certificate. This option ensures that you are accessing only authentic content, although it may block your access to smaller independent content providers.
- **Off** (default) – BD-Live access is prohibited.

9. **My Network:** Configures the My Network (in-home media sharing) client. My Network enables the player to stream audio, video, and photos from media servers within the home network.

- **On** (default) – Enables local network streaming. A broadband internet connection is required (details on page 18), and special hardware/software configurations are required. The available media servers are listed inside the **Network** option of the **Home Menu**.
- **Off** – Disables local network streaming. No media servers will be shown in the **Network** menu, and a warning message will pop up once you try to enter the **Network** menu.

10. **IP Control:** Configure IP control functions over the network.

- **On** (default) – Enable IP control.
- **Off** – Disable IP control.

Troubleshooting

Use this chart to resolve general operational problems. If there are any problems that you cannot resolve, please contact MSB Technology.

| Symptom | Possible Cause | Solution |
|--------------------------------------|--|---|
| No sound | Audio cable is not properly connected | Check audio cable, and then reconnect if necessary. |
| | Mute is activated | Press the MUTE button to cancel the mute. |
| No picture | Video cable is not properly connected | Check video cable; reconnect if necessary. |
| | TV input is not correctly selected | Select the input to which the player is connected. |
| | “Pure Audio” mode engaged | Press the PURE button to cancel this mode. |
| | Video output format is not supported by the TV | Select a proper output resolution that is supported by your TV. |
| No color | Saturation set too low | Check the saturation setting on TV and player. |
| Incorrect color | Incorrect color space setting | If using HDMI for video output, check the color space setting on the TV and player. |
| “No Disc” or “Unknown Disc” error | No disc or incompatible disc loaded in player | Eject disc and check. |
| | Dirty disc recording surface | Eject the disc and clean any dirt or fingerprints. |
| | Disc not properly loaded | Eject disc and make sure the label side is facing up and the record side is facing down. |
| | Condensation on the laser pick-up head | Turn on the player, eject the disc and leave the player on for about an hour. |
| Remote control failure | Remote control is out of range | Use the remote control within the effective range. |
| | Low battery | Replace the batteries |
| | Incorrect remote control code | Open the disc tray. Aim the remote at the player. Press and hold the ENTER button on the remote for 5 seconds to set the remote code. |
| Temporary function failure | Scratched or damaged disc is used | Replace the disc. |
| | Some functions are not available during playback | Stop playback completely, then try again. |
| | Interference from other devices | Identify interference by turning off other devices, and then relocate or replace the offending device |
| Some Setup Menu items are grayed out | Some setup options cannot be changed while a disc is playing. Some setup options may be mutually exclusive with other setup options. | Fully stop playback, eject the disc and try the Setup Menu again. |
| “Connection Test” fails | No internet connection. | Verify that your router has a connection to the internet. Try power cycling the modem and router. Try a direct Ethernet connection if possible. |
| “Network” shows no server | No network connection. Media server not properly configured. Connected to wrong network. | Verify that other network features are functional on the device. If the network issues are isolated to the “Network” feature, consult your media server’s documentation to ensure proper configuration. |

Language Code List

| Code | Language Name |
|-------------|----------------------|
| 6565 | Afar |
| 6566 | Abkhazian |
| 6570 | Afrikaans |
| 6577 | Amharic |
| 6582 | Arabic |
| 6583 | Assamese |
| 6588 | Aymara |
| 6590 | Azerbaijani |
| 6665 | Bashkir |
| 6669 | Byelorussian |
| 6671 | Bulgarian |
| 6672 | Bihari |
| 6678 | Bengali, Bangla |
| 6679 | Tibetan |
| 6682 | Breton |
| 6765 | Catalan |
| 6779 | Corsican |
| 6783 | Czech |
| 6789 | Welsh |
| 6865 | Danish |
| 6869 | German |
| 6890 | Bhutani |
| 6976 | Greek |
| 6978 | English |
| 6979 | Esperanto |
| 6983 | Spanish |
| 6984 | Estonian |
| 6985 | Basque |
| 7065 | Persian |
| 7073 | Finnish |
| 7074 | Fijian |
| 7079 | Faroese |
| 7082 | French |
| 7089 | Frisian |
| 7165 | Irish |
| 7168 | Scots Gaelic |
| 7176 | Galician |
| 7178 | Guarani |
| 7185 | Gujarati |
| 7265 | Hausa |
| 7273 | Hindi |
| 7282 | Croatian |

| Code | Language Name |
|-------------|----------------------|
| 7285 | Hungarian |
| 7289 | Armenian |
| 7365 | Interlingua |
| 7378 | Indonesian |
| 7383 | Icelandic |
| 7384 | Italian |
| 7387 | Hebrew |
| 7465 | Japanese |
| 7473 | Yiddish |
| 7487 | Javanese |
| 7565 | Georgian |
| 7575 | Kazakh |
| 7576 | Greenlandic |
| 7577 | Cambodian |
| 7578 | Kannada |
| 7579 | Korean |
| 7583 | Kashmiri |
| 7585 | Kurdish |
| 7589 | Kirghiz |
| 7665 | Latin |
| 7678 | Lingala |
| 7679 | Laothian |
| 7684 | Lithuanian |
| 7686 | Latvian, Lettish |
| 7771 | Malagasy |
| 7773 | Maori |
| 7775 | Macedonian |
| 7776 | Malayalam |
| 7778 | Mongolian |
| 7779 | Moldavian |
| 7782 | Marathi |
| 7783 | Malay |
| 7784 | Maltese |
| 7789 | Burmese |
| 7865 | Nauru |
| 7869 | Nepali |
| 7876 | Dutch |
| 7879 | Norwegian |
| 7982 | Oriya |
| 8065 | Panjabi |
| 8076 | Polish |
| 8083 | Pashto, Pushto |

| Code | Language Name |
|-------------|----------------------|
| 8084 | Portuguese |
| 8185 | Quechua |
| 8277 | Rhaeto-Romance |
| 8279 | Romanian |
| 8285 | Russian |
| 8365 | Sanskrit |
| 8368 | Sindhi |
| 8372 | Serbo-Croatian |
| 8373 | Singhalese |
| 8375 | Slovak |
| 8376 | Slovenian |
| 8377 | Samoaan |
| 8378 | Shona |
| 8379 | Somali |
| 8381 | Albanian |
| 8382 | Serbian |
| 8385 | Sundanese |
| 8386 | Swedish |
| 8387 | Swahili |
| 8465 | Tamil |
| 8469 | Telugu |
| 8471 | Tajik |
| 8472 | Thai |
| 8473 | Tigrinya |
| 8475 | Turkmen |
| 8476 | Tagalog |
| 8479 | Tonga |
| 8482 | Turkish |
| 8484 | Tatar |
| 8487 | Twi |
| 8575 | Ukrainian |
| 8582 | Urdu |
| 8590 | Uzbek |
| 8673 | Vietnamese |
| 8679 | Volapuk |
| 8779 | Wolof |
| 8872 | Xhosa |
| 8979 | Yoruba |
| 9072 | Chinese |
| 9085 | Zulu |

Technical Support

If you are experiencing any issues with your MSB product, please contact your nearest dealer or try our support page at www.msbtechnology.com/support. Please be sure you have the most current edition of your products' firmware installed. If your issue persists please feel free to contact MSB directly. Emails are usually responded to in 24 - 48 hours.

Email: techsupport@msbtech.com

MSB Return Procedure (RMA)

If a customer, dealer, or distributor has a problem with an MSB product, they should email tech support before sending anything back to the factory. MSB will do their best to respond within 24 hours. Should it be clear that a product must be returned, tech support should be informed and all the following relevant information should be provided:

1. Product in question.
2. Serial number.
3. Detailed fault of the problem.
3. Exact configuration when symptom is observed along with a list with the input used, source material, system connections, and amplifier.
4. Customer name.
5. Customer shipping address.
6. Customer phone number and email.
7. Special return shipping instructions.

MSB will issue an RMA number and create an invoice with all details outlined except the final price as the product has not yet been seen. This invoice will be emailed so all the above information can be checked and verified by the customer.

The product should be returned with the RMA number present on the box. Work can then begin immediately and the product can be sent back quickly.

Any repair that is difficult and cannot be completed in two weeks will be identified and the customer will be informed when it is to be expected. Otherwise the majority of repairs should be shipped back within two weeks if all the required information is present on the invoice.

Link to page:

<http://www.msbtechnology.com/faq/msb-product-return-procedure/>

Transport Limited Warranty

Warranty includes:

- MSB Warranty covers the unit against defects in materials and workmanship for a period of **1 year** from the date the unit was originally shipped from MSB.
- This warranty covers parts and labor only, it does not cover shipping charges or tax/duty. During the Warranty period, there will normally be no charge for parts or labor.
- During the warranty period, MSB will repair or, at our discretion, replace a faulty product.
- Warranty repairs must be carried out by MSB or our authorized dealer. Please contact your dealer if your unit requires service.

Warranty excludes:

- The Warranty does not cover standard wear and tear.
- The product is misused in any way.
- Any unauthorised modifications or repairs were performed.
- The product is not used in accordance with the Operating Conditions stated below.
- The product is serviced or repaired by someone other than MSB or a authorized dealers.
- The product is operated without a mains earth (or ground) connection.
- The unit is returned inadequately packed.
- MSB reserves the right to apply a service charge if the product returned for warranty repair is found to be operating correctly, or if the product is returned without a returns number (RMA) being issued.

Operating Conditions:

- Ambient temperature range: 32F to 90F, non-condensing.
- The supply voltage must remain within the A.C. voltage specified on the power base.
- Do not install the unit near heat sources such as radiators, air ducts, power amplifiers or in direct strong sunlight.