

# **Blu-ray Disc Player**

# **BDP3959**



















#### **ATTENTION**

If you purchase a universal remote control from your local retailer, please contact the remote manufacturer for the required programming code.

IF CONTACT WITH CUSTOMER SERVICE IS REQUIRED PLEASE HAVE THE MODEL NUMBER READY PRIOR TO THE CALL CUSTOMER SERVICE – 1-800-289-0980

#### **ORION WEBSITE**

FOR INFORMATION ON OUR OTHER PRODUCTS, PLEASE VISIT OUR WEBSITE AT

www.orionsalesinc.com

Before operating the unit, please read this manual thoroughly.





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



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



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

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OPEN FLAMES AWAY FROM THIS PRODUCT AT TIMES.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**WARNING:** 

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

**CAUTION:** 

Changes or modifications not expressly approved by the partly responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

#### **CAUTION:**

THIS DIGITAL VIDEO PLAYER EMPLOYS A LASER SYSTEM. TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS OWNER'S MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO THE LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO THE BEAM.



Location of the required Marking
The rating sheet and the safety caution are
on the rear of the unit.

CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

Record the mode	l number and	d serial number.
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Model number	Serial number	

# IMPORTANT SAFETY INSTRUCTIONS

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



- 14) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 15) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 16) Apparatus should not be exposed to dripping or splashing, and objects filled with liquids, such as vases, should not be placed on the apparatus.
- 17) Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.
- 18) Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.
- 19) When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 20) Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
- 21) Keep your fingers clear of the disc tray as it is closing. It may cause injury.
- When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.
- 23) Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause eye damage.
- 24) Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
- 25) The socket-outlet must be installed near the unit and easily accessible.

# IMPORTANT SAFETY INSTRUCTIONS (continued)

#### CONDENSATION

Moisture will form in the operating section of the player if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, player's performance will be impaired. To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the player is exposed to the breeze from an air conditioner. In such cases, change the location of the player.

#### **VENTILATION CAUTION**

The unit emits heat when in operation. Do not place any covers or blankets on the unit, this may cause overheating. Do not block ventilation holes, or set up near radiators. Do not place in direct sunshine. When placing on a shelf leave 10 cm (4 inches) free space around the entire unit.

#### FCC Declaration of Conformity Compliance Statement(Part15):

The Sansui BDP3959, Blu-ray Disc Player complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The party responsible for compliance to these rules is:

ORION SALES, INC.

15 Essex Rd., Paramus, NJ 07652

Ph: 1-800-289-0980

# **Disc Usage Information**

# BD, DVD, CD Disc

- · Handle Discs carefully
- · Do not touch the recorded surface
- · Do not apply or paste paper on the Disc

#### **Disc Maintenance**

- To clean fingerprints or dirt from the Disc surface, use a clean soft cloth and gently wipe from the Disc's center outward.
- To clean badly smudged Discs, use a soft damp clean cloth, then dry completely before placing in this or any other player.
- Do not use any solvents such as alcohol, gas, analog recorder special cleaners, static preventatives etc., as these may cause damage to the disc.

# **Disc Storage**

- Store discs carefully
- Do not store discs in direct sunlight, near heat sources, such as radiators or heating vents, or in humid areas.
- · Do not drop discs.
- Store discs in a dry dust free environment to allow for optimal disc performance.

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# 1 INTRODUCTION

#### 1.1 OVERVIEW

BDP3959 has the capability of providing high-definition, cinema-like pictures and multi-channel audio. Soundtracks in more than one language are usually included on the disc, and subtitles in more languages are often included as well.

#### 1.2 PLAYABLE DISC TYPES

The following types of discs can play in BDP3959.

Blu-Ray <sup>™</sup> Discs	<b>B</b> lu-ray Disc	DVD-RW	RW N
DVD Video Discs (DVD-ROM)	VIDEO	DVD-R	<b>DVD</b> ®
Audio CDs (CDDA)	COMPACT DIGITAL AUDIO	Mp3/WMA/Jpeg Data CD	

- Some BD, CD-R/RW and DVD-R/RW cannot be played back depending on the recording conditions.
- BD-R/BD-RE cannot be played back.

#### **NOTES:**

For writeable **DVD** discs (DVD-RW, DVD-R)

- Only DVD-RW/-R recorded with UDF or ISO9660 format can be played back.
- The discs must be finalized, RW/R-mode only.
- Playback may not work for some types of discs, or when specific operations, such as angle change
  and aspect ratio adjustment, are being performed. Information about the discs is written in detail on
  the box. Please refer to this if necessary.

For writeable CD discs

- Only CD-R/-RW media recorded with UDF or ISO9660 format can be played back.
- This player does not support multisession discs.

#### **REGION CODE**

If the Region number of a BD or DVD disc does not correspond to the region number of this Blu-ray disc player, the BD player cannot play the disc. The region code is called out on the rear panel of the BD player.

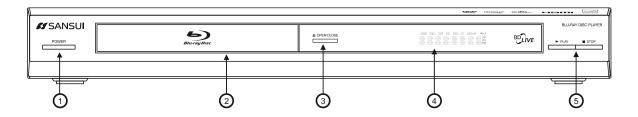
This player (BDP3959) region code





# **2 FUNCTIONAL OVERVIEW**

## 2.1 FRONT PANEL



#### 1. POWER Button

The power button turns the Blu-ray disc player on and off.

#### 2. DISC TRAY

Opens to accept a disc.

#### 3. OPEN/CLOSE BUTTON

Opens and closes the disc tray.

#### 4. FRONT PANEL DISPLAY

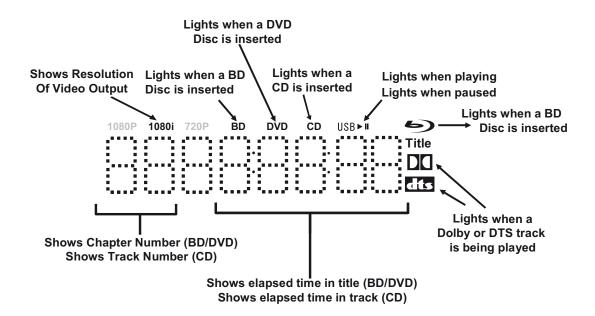
Displays the playing status, time, etc. (See next section.)

#### 5. PLAY/STOP BUTTONS

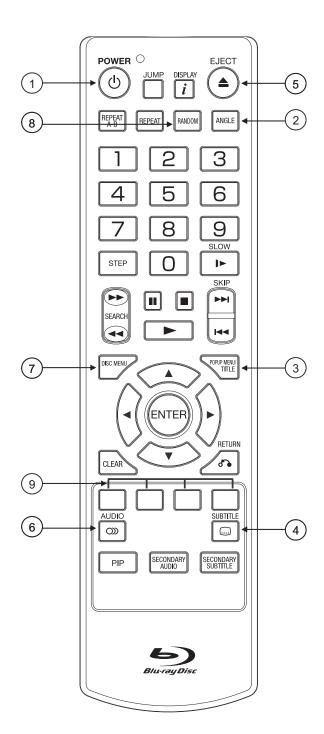
Play and stop playback.

## 2.2 FRONT PANEL DISPLAY

The front panel display is used to show the status of the disc being played back. The items which appear on the display are shown in the figure below:



#### 2.3 REMOTE CONTROL



#### 1. POWER

Press the power button to turn the BD player on or off.

#### 2. ANGLE

Some BD and DVDs are filmed with more than one camera angle. During playback of such a disc, pressing this button will allow you to switch camera angles.

#### 3. POPUP/TITLE MENU

On BD discs only, this button can be used to bring up the main movie menu. (Not available on all discs)

#### 4. SUBTITLE

This key can be used to enable/disable subtitles during BD/DVD playback. If the disc has more than one subtitle language, it can also be used to cycle through the subtitle languages.

Note: Not all discs have subtitles.

#### 5. EJECT

Press this button to open/close the disc tray.

#### 6. AUDIO

This key is used to cycle through the movie audio soundtracks available on the disc. This key has no effect for CDs.

#### 7. DISC MENU

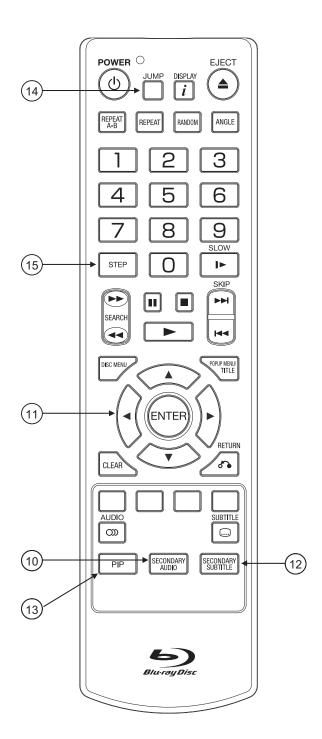
During DVD playback, press to open the disc menu.

#### 8. RANDOM

Used for random playback of tracks on an audio CD.

#### 9. A-B-C-D KEYS

The red, green, yellow, and blue keys are used to implement disc-specific features on some BD discs. These keys have no effect for DVDs and CDs.



#### 10. SECONDARY AUDIO

On BD discs equipped with multiple director's commentaries in several languages, pressing this key will cycle through all of the languages available for the director's commentaries. This key has no effect for DVDs and CDs.

**Note**: Not all BD discs have secondary (Picture-in-picture) audio and video.

#### 11. MENU NAVIGATION KEYS ▲ ▼ ◀ ▶

These keys are used to select items or menus. They are also used for navigating the setup menus for the BD player.

#### 12. SECONDARY SUBTITLE

Used to bring up the subtitle (if available) for the picture-in-picture (director's commentary, etc) on a BD title. If the disc has more than one director's commentary subtitle language, it can also be used to cycle through the subtitle languages.

**Note**: Not all BD discs have secondary (Picture-in-picture) audio and video.

#### 13. PIP

On BD discs, this button is used to turn the video portion of the director's commentary (picture-in-picture) on and off.

**Note**: Director's commentary must have been turned on in the BD's main menu in order for this key to work.

#### 14. JUMP

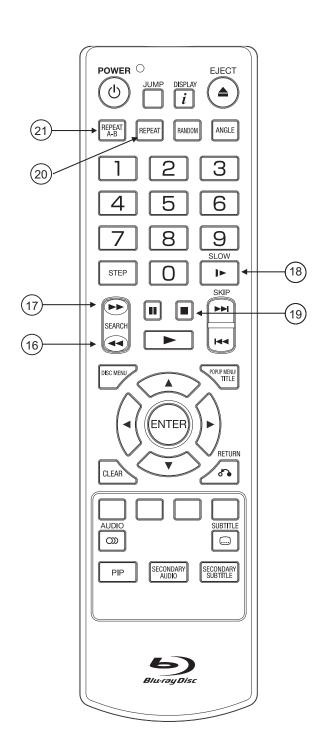
Pressing this button will show the title number, chapter number, and elapsed time for BD and DVD playback.

#### 15. STEP

When movie playback is paused, pressing this button will advance the movie one frame.

#### NOTE:

- Do not leave the remote control unit exposed to direct sunlight or in hot or humid places.
- The remote control unit uses infrared beams to transmit signals, so sunlight or fluorescent light on the remote sensor may shorten operating distance.
- Incorrect use of batteries may cause them to leak or burst. Read the battery warnings and use the batteries properly.
- Do not mix old and new batteries.
- Remove batteries if the remote control will not be operated for an extended period of time.



#### 16. SEARCH (REVERSE)

Used to "Reverse" through a BD/DVD movie or CD audio track. Each time the button is pressed, the speed of fast forwarding will increase in the following order: x2, x4, x8, x16, x32, x64, x128, x2 (repeat)

To resume normal (x1 forward) playback at any time, press the PLAY key.

#### 17. SEARCH (FORWARD)

Used to "Fast Forward" through a BD/DVD movie or CD audio track. Each time the button is pressed, the speed of fast forwarding will increase in the following order: x2, x4, x8, x16, x32, x64, x128, x2(repeat)

To resume normal (x1 forward) playback at any time, press the PLAY key.

#### 18. **SLOW**

When movie playback is paused, pressing this button will cause the video to play back at ½ speed. Pressing the button again will cause the video to play back at ¼ speed. Pressing the button a third time will cause the video to play back at 1/8 speed.

Pressing play during slow play will resume playback at normal speed.

#### 19. STOP

This button stops playback of a BD/DVD movie or CD audio track.

#### 20. REPEAT

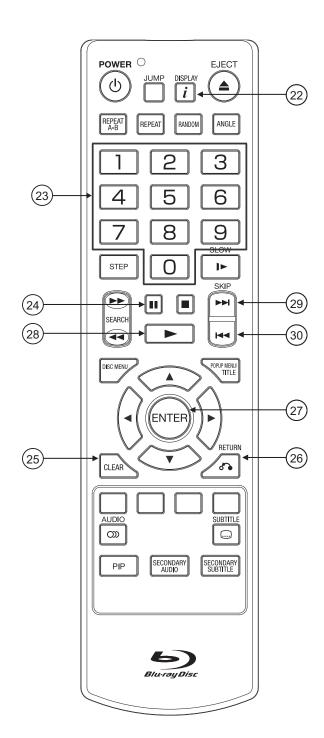
This button is used to cycle through the possible "repeat" modes. For BDs and DVDs, you can repeat the currently playing title or chapter. For audio CDs, you can repeat the currently playing track.

To stop playback from repeating, the REPEAT button should be pressed until "Repeat: OFF" is shown on the TV.

#### 21. REPEAT A-B

When a disc is playing, pressing this button once will save a "start point" for repeating playback. Pressing this button again will save an "end point" for repeating playback. Playback will repeat from the start point to the end point.

To stop playback from repeating, the REPEAT button should be pressed until "Repeat: OFF" is shown on the TV.



#### 22. DISPLAY

Press to open the on-screen display menu.

#### 23. NUMBER BUTTONS

Press to enter the title, chapter, track, or file number. Press to enter the parental password or values in menu options.

#### 24. PLAY/PAUSE

Pressing this button once will pause the audio and video playback. Pressing this button a second time will resume playback.

#### 25. CLEAR

When entering numeric values via the numeric keypad, this button is used to clear a number entered incorrectly.

#### 26. RETURN

When navigating files on a data CD or USB stick, pressing this button will return you to the previous folder or menu.

#### 27. ENTER

Press to confirm or select menu items.

#### 28. PLAY

Press to start or resume playback.

#### 29. SKIP (NEXT CHAPTER)

When the disc is playing normally, press the SKIP button once to jump to the next chapter on the disc. The next chapter will start playing automatically.

#### 30. SKIP (PREVIOUS CHAPTER)

When the disc is playing normally, press the SKIP button once to jump to the beginning of the currently playing chapter. The current chapter will start playing back (from the beginning) automatically.

When the disc is playing normally, press the SKIP button once to jump to the beginning of the currently playing chapter, *and then press the skip backwards button again* to skip to the beginning of the previous chapter. The previous chapter will start playing back (from the beginning) automatically.

#### 2.4 REAR PANEL CONNECTORS

Since the rear panel contains multiple video and audio outputs, a brief description of the capabilities of each of the outputs is described below, in order to help you choose the appropriate outputs to connect to your television and, if present, your surround-sound receiver.

## 2.4.1 Video Output Capabilities

Each of the video outputs are capable of different levels of functionality, as described in the table below. Actual output will depend on setup menu settings and TV capabilities for HDMI televisions.

BD Player Video Output	Resolutions Supported
НОМІ	1080p 60/24 1080i 720p 420p 480i
Component Out	1080i 720p 576p 480p NTSC SD (480i)
Video Out	NTSC SD (480i)

 When you connect with HDMI jack to other equipment, the Component Out jack outputs NTSC SD (480i).

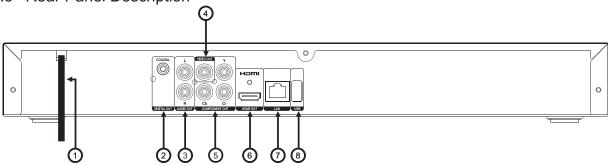
#### 2.4.2 Audio Output Capabilities

Each of the audio outputs are capable of different levels of functionality, as described in the table below. Actual output will depend on

- > BD player setup menu settings,
- > what types of audio tracks are encoded on the disc, and,
- surround sound receiver capabilities (for BD players connected to a surround-sound system through HDMI or COAXIAL)

Audio Output	Audio tracks that can be sent directly to output
HDMI	Dolby TrueHD Dolby Digital Plus Dolby Digital DTS PCM (From mono up to 7.1 channels @96 kHz)
COAXIAL	Dolby Digital DTS PCM (stereo only, up to 96 kHz)
Audio Out (L/R)	Any selected digital track will be decoded, mixed with effects and secondary channel, and converted to analog.

#### 2.4.3 Rear Panel Description



#### 1. AC CORD

Connect the AC cord into an AC outlet.

#### 2. DIGITAL OUT COAXIAL

The COAXIAL output is a digital audio output. If you have a surround-sound receiver with a COAXIAL input, connect this output to the COAXIAL input of the surround-sound receiver.

#### 3. AUDIO OUT (L/R)

These are analog stereo (left/right) outputs. If your TV does not have an HDMI input, you can connect these outputs to the stereo audio inputs of a TV.

#### 4. VIDEO OUT

If your TV does not have component or HDMI video inputs, connect this output to the composite video input of the television.

#### 5. COMPONENT OUT (Y/Cb/Cr)

Connect these outputs to the component video inputs of the television, if the television does not have an HDMI input.

Some televisions can accept digital video and audio signals via an HDMI connection.

If your television has an HDMI digital input, you should use this connection, and leave the component video outputs of the player disconnected.

NOTE: The component video output has a maximum resolution of 1080i. It is further limited to SD resolution if the HDMI output is also being used.

#### 6. HDMI OUT

If you are using a surround-sound audio receiver with an HDMI input, connect the HDMI output of the BD player to the HDMI input of the audio receiver. (You will need to connect a second HDMI cable from the HDMI output of the audio receiver to the HDMI input of the television.)

If your surround-sound audio receiver does not have an HDMI input (or if you are not using a surround-sound receiver), connect this output directly to the HDMI input of the TV. One of the other audio outputs can be connected to the audio receiver.

#### 7. LAN

For BD-Live capabilities. Use an Ethernet cable to connect this connector to an Ethernet connection.

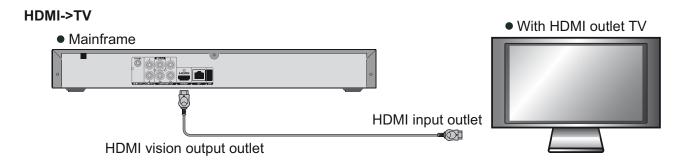
#### 8. USB

Used to insert a USB memory stick for playback of JPEG, or MP3/WMA files. The memory stick can also be used for BD-Live storage.

# 3 CONNECTING THE BD PLAYER

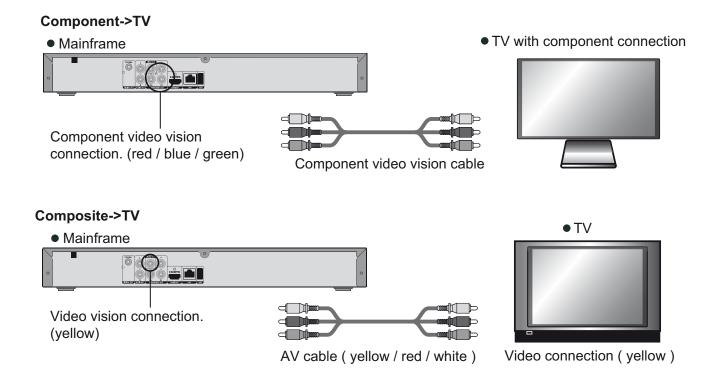
#### 3.1 CONNECTING TO A TV

Connect your BD player to a TV as you would any standard DVD player. You will need to customize this for your own configuration, including any legacy connectors added to the rear panel.



NOTE: To play back a BD or DVD disc when connected to the TV via HDMI, the TV must support the HDCP copyright protection system.

If your TV does not support HDCP, the TV picture will not be viewable over the HDMI output.

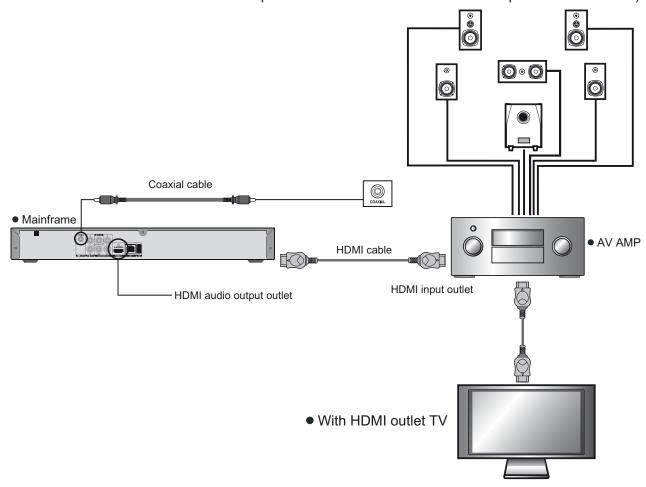


#### 3.2 CONNECTING TO A HOME THEATRE SYSTEM

Highest-fidelity audio and video setup can only be achieved using HDMI.

HDMI is BDP3959's only output capable of 1080p video, and the only output capable of high definition audio codecs.

Connect the HDMI output of the player to the HDMI input of the audio receiver. (You will need to connect a second HDMI cable from the HDMI output of the audio receiver to the HDMI input of the television.)



NOTE: To play back a BD or DVD disc when connected to a surround receiver and TV via HDMI, both the surround receiver and the TV must support the HDCP copyright protection system.

If your surround receiver and/or TV do not support HDCP, the TV picture will not be viewable over the HDMI output.

# 4 PLAYING A BD OR DVD DISC

# 4.1 STANDARD (OR NORMAL) PLAYBACK OF A BD OR DVD DISC

nat is connected to
e the tray.

When a DVD or BD disc is inserted into the BD player, the main menu will appear, as shown below:



If "Optical Disc AutoPlay" was enabled from the "System" setup menu, the main menu will disappear in a few seconds, without user intervention.

If the main menu remains on the TV screen for more than a few seconds, use the arrow keys on the remote control to select the disc, and then press ENTER key.

After a brief period of time, Chapter 1 of Title 1 on the disc will begin playback.

5

6

The front panel will display the elapsed time of playback, chapter number, etc

On many BD Discs, Chapter 1 of Title 1 is an advertisement, or preview of upcoming releases. If you wish, you may press the "DISC MENU" button on the remote to bring up the main disc menu. From there, you can use the arrow keys on the remote to select the "Play Movie" menu item.

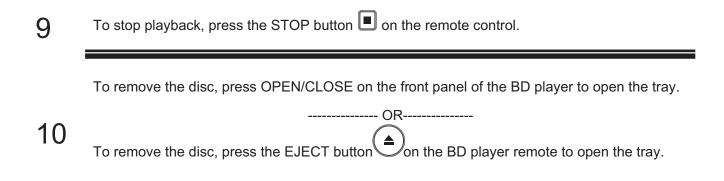
To display Chapter/Title information, press the DISPLAY button i on the remote. Chapter/Title information will appear on the screen as shown below:



To remove the Chapter/Title information, press the DISPLAY button i on the remote again.

To pause playback, press the PAUSE button on the remote control

To resume playback after pausing, press either the PAUSE button again, or press the PLAY button



# 4.2 NON-STANDARD PLAYBACK OF A BD OR DVD DISC

# 4.2.1 Fast Forward

When the disc is playing normally, press the forward SEARCH button on the remote to begin fast forward at x2 normal playback speed. Each time the forward SEARCH button is pressed, the playback speed will double. (The actual progression will be in the following order: x2,x4,x8,x16,x32,x64,x128, x2 (repeat).
To resume normal playback, press the PLAY button on the remote.
4.2.2 Fast Reverse
When the disc is playing normally, press the reverse SEARCH button on the remote to begin fast reverse at x2 normal playback speed. Each time the reverse SEARCH button is pressed, the reverse playback speed will double. (The actual progression will be x2 fast reverse, x4 fast reverse, x8 fast reverse, x16 fast reverse, then back to play).
To resume normal playback, press the PLAY button on the remote.
4.2.3 "Slow Forward" Playback
When the disc is playing normally, press the PAUSE button on the remote to pause playback. When
the player is paused, pressing the SLOW button on the remote will cause the video to play back at ½ speed. Pressing the button again will cause the video to play back at ½ speed. Pressing the button a third time will cause the video to play back at 1/8 speed.  Pressing play during slow play will resume playback at normal speed.
4.2.4 Stepping Through a Scene
When the disc is playing normally, press the PAUSE button on the remote to pause playback. When the player is paused, pressing the STEP button will cause the player to move forward one frame.
To resume normal playback, press the PLAY button on the remote.

#### 4.3 OTHER BD AND DVD PLAYBACK FEATURES

# 4.3.1 Skipping to the Next Chapter

When the disc is playing normally, press the SKIP button once to jump to the next chapter on the disc. The next chapter will start playing automatically.

# 4.3.2 Skipping to the Start of the Current Chapter

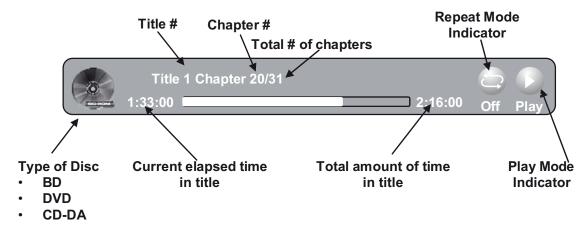
When the disc is playing normally, press the SKIP button once to jump to the beginning of the currently playing chapter. The current chapter will start playing back (from the beginning) automatically.

# 4.3.3 Skipping to a Previous Chapter

When the disc is playing normally, press the SKIP button once to jump to the beginning of the currently playing chapter, *and then press the skip backwards button again* to skip to the beginning of the previous chapter. The previous chapter will start playing back (from the beginning) automatically.

# 4.3.4 Displaying Chapter/Title Information

Pressing the DISPLAY button i on the remote will display the following:



Press the DISPLAY button i again to remove this display.

# 4.3.5 Jumping Directly to a Spot on the Disc

When the disc is playing normally, press the JUMP button once to jump to a specific title or chapter on the disc.

To jump to a specific title, after the word TITLE: appears on the screen, enter the number of the title you wish to jump to, and press ENTER key.

To jump to a specific chapter, after the word TITLE: appears on the screen, press the JUMP button again, and the word CHAPTER appears. Enter the number of the chapter you wish to jump to, and press ENTER key.

# 4.3.6 Viewing Director's Commentary During Playback of Blu-Ray discs

Blu-Ray discs sometimes (but not always) contain director's commentaries or other "secondary video" content that can be turned on and off at will. The director's commentary will typically appear in a separate picture within the movie. (This is referred to as "picture-in-picture", or "PIP".)

To view the director's commentary, after the movie has started playing, press the PIP button on the remote. If available on the disc, the director's commentary will appear in a small window on one part of the screen.

**NOTE**: Only Blu-Ray discs have director's commentaries that can be viewed via the 'PIP' feature. (DVDs do not have this feature)

**NOTE**: Not all Blu-Ray discs have director's commentaries.

**NOTE**: Blu-Ray discs that have director's commentaries may not have director's commentaries on all titles and all chapters.

## 4.3.7 Repeating a Title or Chapter

When the disc is playing normally, press the REPEAT button on the remote. The words REPEAT OFF will appear on the TV screen. To repeat a chapter, continue pressing the REPEAT button on the remote until the words REPEAT CHAPTER appear on the screen. The chapter will now continuously loop.

To repeat a Title, continue pressing the REPEAT button on the remote until the words REPEAT TITLE appear on the screen. The title will now continuously loop.

To stop the title or chapter from looping, press the REPEAT button on the remote until the words REPEAT OFF appear on the TV screen.

NOTE: The 'repeat' function is not available on most Blu-Ray titles.

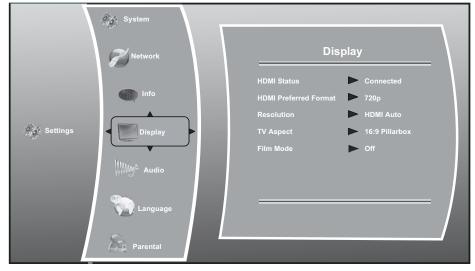
# **5 SETUP MENU**

#### 5.1 BASIC SETUP MENU OPERATION

# Action Displays the main Setup menu: Press the POWER button on the remote or front panel. player is on, but not playing-this screen will appear automatically if a disc is not being played.

# Action Result

The various setup menu *categories* appear. One category will be highlighted, and the saved settings for that category will appear:



Press the right arrow key (1).

In the example above, the "Display" menu category is highlighted. The saved settings for the "Display" menu category are shown on the right-hand side of the screen.

Pressing the up/down arrow keys ( ) will result in a different menu category (Audio, Language, etc) being highlighted.

Action Result

In order to configure the BD player for proper audio and video output, press the up/down arrow keys ( on the remote until one the following setup menu categories is highlighted:

**Display** 

**Audio** 

Language

**Parental** 

**System** 

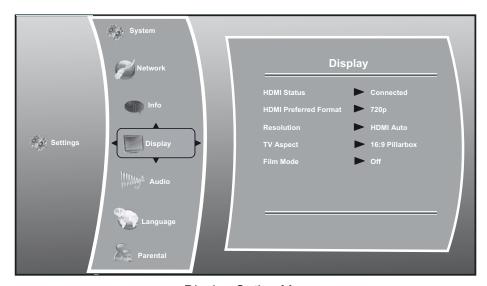
**Network** 

Info

Each of these menus is described in more detail in the next sections.

#### 5.2 DISPLAY MENU CATEGORY

To set the video outputs correctly, press the up/down arrow keys () on the remote until the **Display** menu category is highlighted on the setup menu screen. A screen showing the current settings will be displayed.



Display Option Menu

Press the right arrow key ( ) to show the available options under the Display setup menu. Each of the Display setup menu choices above will be explained in the next sections.

# 5.2.1 TV Aspect Ratio

You can use this menu item to tell the BD player whether you have a rectangular shaped 16:9-aspect ratio television set, or a more traditional (square) 4:3 aspect ratio television set.

To tell the BD player the TV's aspect ratio, make sure that the **Display**Setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Display Options Menu appear.

Press the up/down arrow keys ( on the remote until the **TV Aspect** choice is highlighted:





Press the up/down arrow keys () on the remote until the desired **Aspect Ratio** setting is highlighted. Once the desired setting has been highlighted, press the **ENTER** key on the remote to set the aspect ratio.

The circled checkmark ( $\bigcirc$ ) will then briefly move to the highlighted aspect ratio. You can then move to another Setup menu item by pressing the left arrow key ( $\P$ ) on the remote until the desired portion of the setup menu is highlighted.

# 5.2.1.1 Choosing the Correct Aspect Ratio

If the BD player is NOT connected to your TV through HDMI or component video outputs, this setting has no effect. You can move to the next section.

**If your TV has a very rectangular (16:9) aspect ratio**, you will need to choose one of the 16:9 aspect ratios (full or pillarboxed).

If your TV has a relatively square (4:3) aspect ratio, you will need to choose one of the 4:3 aspect ratios (letterboxed or pan/scan).

Your preference should be based on whether the disc you will be watching contains a movie in widescreen format, or the movie has been cropped to fit a "standard" 4:3 screen, as well as your individual preference for viewing, as shown in the following table:

	TV Aspect Menu Selection			
	If your TV is more rectangular (16:9), choose:		If your TV is more square (4:3), choose:	
	16:9 Wide	16:9 Pillarboxed	4:3 Letterboxed	4:3 Pan & Scan
Disc Contents				
Movie in widescreen format	Movie will fill entire screen	No effect - Movie will fill entire screen	Movie will be shown in rectangular "wide" aspect ratio (Horizontal bars will be shown above/below movie)	Center of movie will be shown on TV. Left and right portion of movie contents will not be shown
HD television episodes in widescreen format	Episode will fill entire screen	No effect – Episode will fill entire screen	Episode will be shown in rectangular "wide" aspect ratio (Horizontal bars will be shown above/below movie)	Center of episode will be shown on TV. Left and right portion of episode contents will not be shown
SD (4:3) television episodes	Episode will be stretched horizontally to fit entire screen	Episode will be shown in center of screen; vertical bars will appear on sides of screen	No effect – Episode will fill entire screen	No effect – Episode will fill entire screen
Cropped Movie (Movie put on disc in 4:3 Aspect Ratio)	Movie will be stretched horizontally to fit entire screen	Movie will be shown in center of screen; vertical bars will appear on sides of screen	No effect – Cropped movie will fill entire screen	No effect – cropped movie will fill entire screen

**NOTE**: Setting the player for one of the 16:9 settings when connected to a 4:3 TV could result in the inability to see video on your TV.

## 5.2.2 Film Mode

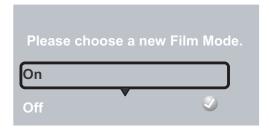
To set the player's Film Mode setting, make sure that the **Display** Setup menu item is highlighted:



Then, press the right arrow key ( ) on the remote to make the Display Options Menu appear.

Press the up/down arrow keys ( ) on the remote until the **Film Mode** choice is highlighted:





Press the up/down arrow keys ( ) on the remote until the desired **Film Mode** setting (On or Off) is highlighted. Then, press the ENTER key on the remote to set the Film Mode.

The circled checkmark ( ) will then briefly move to the highlighted Film Mode setting. You can then move to another Setup menu item by pressing the left arrow key ( ) on the remote until the desired portion of the setup menu is highlighted.

## 5.2.2.1 Choosing the Correct "Film Mode" Setting

This menu item only applies if you are connected to your TV (or surround sound receiver) via HDMI.

Movies are recorded on film at a rate of 24 pictures, or frames, per second. Many of the movies on BD discs are placed on the disc at this frame rate (24 frames per second). However, not all TVs can display 24 frames/second of video.

If the BD player is connected to the TV via HDMI, and the TV has the capability to display 24 frames/second of video, setting FILM MODE to 'yes' indicates to the BD player that it may output disc content recorded at 24 frames/second directly (without converting it to 30 or 60 frames/second).

If your TV is not connected to the BD player or surround receiver via HDMI, this menu item does not apply to the other video outputs (component, composite, etc). Set film mode to Off.

**If your TV is connected to the BD player or surround receiver via HDMI**, but it does not support 24 frames/second video (and/or 48 frames/second and/or 72 frames/second). **Set film mode to Off**.

If your TV is connected to the BD player or surround receiver via HDMI, and the TV does support 24 frames/second video (and/or 48 frames/second and/or 72 frames/second). Set film mode to On.

#### NOTE:

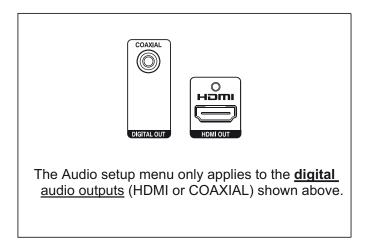
- Setting Film Mode to 'On', if not supported by your TV, may result in some discs not being viewable on your TV.
- Setting Film Mode to 'On' only affects the HDMI video output; it has no effect on the component outputs.
- Setting Film Mode to 'On' has no effect if the output resolution has not been set to to 1080p or HDMI auto.
- Setting Film Mode to 'On' has no effect if the material on the BD disc is not 24 frames/second.
- Setting Film Mode to 'On' has no effect if a DVD is being played, regardless
  of the frame rate of the material on the DVD.

# 5.2.3 Exiting the Display Category

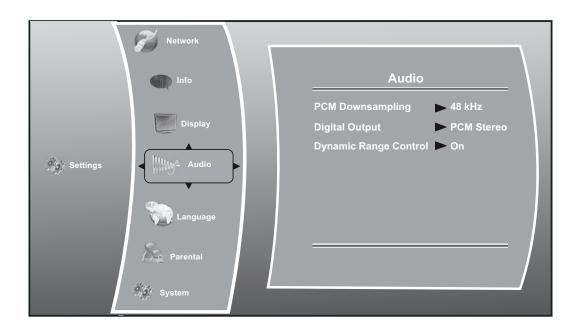
When you are done setting up the BD player's display settings, you may use the left arrow key ( $\P$ ) on the remote until the "Display" menu is highlighted, and then you can use the up/down arrow keys( $\P$ ) on the remote to choose another menu category.

## 5.3 AUDIO MENU CATEGORY

The settings in the Audio menu will configure the BD player's digital audio outputs (HDMI or COAXIAL)



To set the digital and analog audio outputs correctly, press the up/down arrow keys ((a)) on the remote until the **Audio** menu category is highlighted on the setup menu screen.



**Digital Audio Options Menu** 

Each of the menu choices above will be explained in the subsequent sections.

## 5.3.1 Digital Audio -- Overview

A summary of these audio formats is shown in the table below:

disc Type	Possible Digital Audio Tracks on the disc	BD Player Audio Output
Blu-Ray	Dolby TrueHD Dolby Digital Plus DTS-HD Master Audio Essential	HDMI
Blu-Ray and DVD	Dolby Digital DTS PCM (BD - up to 7.1 channels @96 kHz) PCM (DVD - stereo only, up to 96 kHz)	HDMI, COAXIAL
All	Any selected digital track will be decoded, mixed with effects and secondary channel, and converted to analog.	Analog Outputs

Regardless of the type of codec used to store the movie's audio track onto the disc, audio data is always stored on a disc in a digital format. The BD player therefore has digital audio outputs, so that the digital audio soundtracks on the disc can be sent straight to a surround-sound receiver, without any loss in audio quality.

Not all surround-sound receivers are capable of playing back all of the digital audio codecs listed above. In addition, some surround sound receivers can play back PCM data, but the data must be sent to the receiver at a slower rate than what is stored on the Blu-Ray disc.

Because of this, an understanding of your surround-sound receiver's capabilities is required in order to properly set up the digital audio outputs of the BD player.

Now that the various types of digital audio codecs have been explained, the next few menu items will be described in further detail.

#### 5.3.2 PCM Downsampling

You can use this menu item to tell the BD player whether your surround receiver can handle high-bitrate PCM signals over COAXIAL.

This menu item has no effect if you are connected to your TV or surround receiver over HDMI.

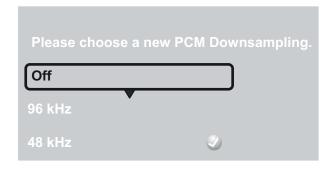
To inform the BD player of your surround sound receiver's PCM capabilities, first make sure that the **Audio** setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Digital Audio Options Menu appear.

Press the up/down arrow keys ( ) on the remote until the **PCM Downsampling** choice is highlighted:





If you don't have a surround sound receiver connected to the BD player, you should set the PCM downsampling to 48 kHz, and proceed to the next setup menu item. This is true regardless of whether the audio is connected to the TV with HDMI, SPDIF, or the analog stereo outputs.

If you have a surround sound receiver connected to the BD player, and you have connected to the surround receiver via the BD player's analog multichannel audio outputs, this setting has no effect on the audio going to the analog outputs of the player. Set the PCM downsampling to 48 kHz, and proceed to the next setup menu item.

If you have a surround sound receiver connected to the BD player, and you have connected to the surround receiver via the BD player's HDMI output, this setting has no effect on the audio going to the HDMI output of the player. Set the PCM downsampling to 48 kHz, and proceed to the next setup menu item.

If you have a surround sound receiver connected to the BD player via COAXIAL, set this menu item to the maximum PCM sampling rate that your surround receiver can accept (48 kHz or 96 kHz)

If in doubt, consult your surround receiver's manual or set to 48 kHz

**NOTE**: Incorrectly setting the digital audio output's PCM sampling rate may result in unpredictable audio playback.

Once the desired PCM sampling rate has been highlighted, press the ENTER key on the remote to set the PCM sampling rate. The circled checkmark ( $\bigcirc$ ) will then move briefly to the highlighted sampling rate. You can then move to another menu item by pressing the left arrow key ( $\bigcirc$ ) on the remote until the 'Audio' icon in the setup menu is highlighted.

# 5.3.3 Digital Output

You can tell the BD player what type of digital audio data to output over HDMI, or COAXIAL with this menu item.

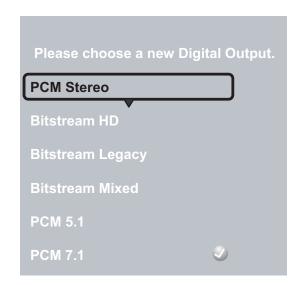
To set the type of audio output data that appears on the digital audio (HDMI, or COAXIAL) outputs, make sure that the **Audio** setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Digital Audio Options Menu appear.

Press the up/down arrow keys ( ) on the remote until the **Digital Output** choice is highlighted:





The up/down arrow keys ( on the remote can then be used to select one of the following digital audio output formats.

- PCM Stereo
- Bitstream HD
- Bitstream Legacy
- Bitstream Mixed
- PCM 5.1
- PCM 7.1

# 5.3.4 Dynamic Range Control

Dynamic Range Control means that you can allow the BD player to make the loud parts of a movie's audio track quieter than they would be in the theatre, without making the dialog of the actors any quieter.

This would be useful, for instance, when you want to watch a movie in the evening when others might be sleeping.

NOTE: This setup menu item has no effect unless:

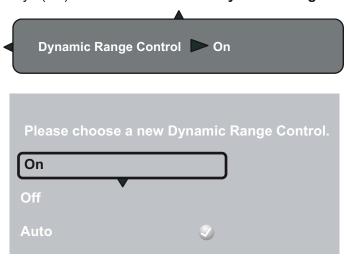
- The device playing the disc's audio (TV or surround audio receiver) is connected to the BD player's <u>analog audio outputs</u>
- you have selected "Bitstream Mixed" or "PCM" in the BD player's audio setup menu

To tell the BD player whether you want the loud noises in the movie to be quieter, make sure that the **Audio** setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Digital Audio Options Menu appear.

Press the up/down arrow keys ( on the remote until the **Dynamic Range Control** choice is highlighted:



The up/down arrow keys ( ) on the remote can then be used to turn dynamic range compression (loud noise quieting) on or off.

Selecting the "Auto" option turns on the Dynamic range control for all BD movie soundtracks *except* Dolby TrueHD. If you have selected a TrueHD track on the BD disc, the "auto" selection tells the BD player to only turn on dynamic range control if information embedded in the TrueHD sound track tells it to do so.

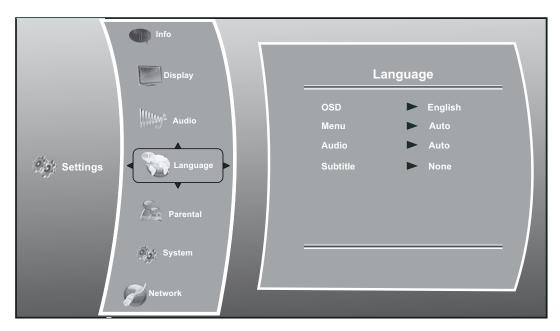
Once the desired choice has been highlighted, press the ENTER key on the remote to set the choice. The circled checkmark ( $\bigcirc$ ) will then move to the highlighted choice. You can then move to another menu item by pressing the left arrow key ( $\P$ ) on the remote until the 'Audio' icon in the setup menu is highlighted.

# 5.3.5 Exiting the Audio Setup Menu

When you are done setting up the BD player's audio, you may use the left arrow key ( $\langle \langle \rangle \rangle$ ) on the remote until only the left side of the setup menu is highlighted, and then you can use the up/down arrow keys( $\langle \langle \rangle \rangle$ ) on the remote to choose another menu category.

#### 5.4 LANGUAGE MENU CATEGORY

To set the languages of the BD player, press the up/down arrow keys ( ) on the remote until the **Language** menu category is highlighted on the setup menu screen.



**Language Options Menu** 

Each of the menu choices will be explained below.

# 5.4.1 Setup Menu (OSD) Language

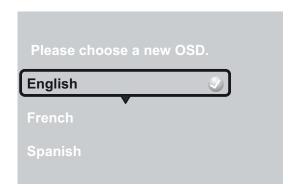
To set the language that will be displayed for the <u>BD player's setup menus</u>, (the menus you are currently reading about), make sure that the **Language** setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Language Options Menu appear.

Press the up/down arrow keys ( on the remote until the OSD choice is highlighted:





The up/down arrow keys ( ) on the remote can then be used to <u>instantly</u> change the on-screen display to English, French, Spanish.

Once the desired language has been highlighted, press the ENTER key on the remote to set the language. The circled checkmark ( $\bigcirc$ ) will then move briefly to that language. You can then move to another menu item by pressing the left arrow key ( $\P$ ) on the remote until the 'Language' icon in the setup menu is highlighted.

# 5.4.2 Menu Language

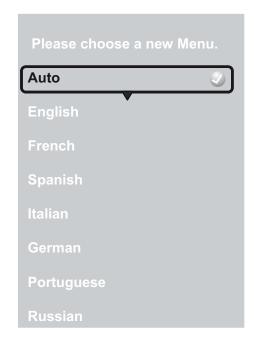
To set the language that will be displayed when the <u>BD or DVD disc's main menu appears</u>, make sure that the **Language** setup menu item is highlighted:



Then, press the right arrow key () on the remote to make the Language Options Menu appear.

Press the up/down arrow keys ( on the remote until the **Menu** choice is highlighted:





Once the desired language has been highlighted, press the ENTER key on the remote to set the default language for menus that appear after a BD disc is inserted. The circled checkmark ( $\bigcirc$ ) will then move briefly to that language.

Selecting 'Auto' will result in the default menu language being determined from information on the BD or DVD disc.

**NOTE**: Not all languages are available on all discs. Most discs only have one menu language available.

You can now move to another menu item by pressing the left arrow key  $(\P)$  on the remote until the 'Language' icon in the setup menu is highlighted.

# 5.4.3 Audio (Movie Dialog) Language

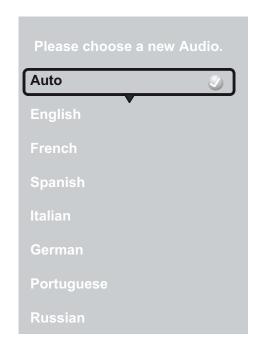
To set the language that the characters in a movie will speak, make sure that the **Language** setup menu item is highlighted:



Then, press the right arrow key (2) on the remote to make the Language Options Menu appear.

Press the up/down arrow keys ( on the remote until the **Audio** choice is highlighted:





Once the desired disc audio language has been highlighted, press the ENTER key on the remote to set the default language that characters in the movie will speak. The circled checkmark ( ) will then move briefly to that language.

Selecting 'Auto' will result in the default language being determined from information on the BD or DVD disc.

**NOTE**: Not all languages are available on all discs. Many discs only have one or two audio languages available.

**NOTE**: Some discs might not allow the user to select the audio language from the BD-player setup menu. In this case, the audio language can only be selected from the <u>BD or DVD</u> disc's setup menu. (The menu that appears after the disc has been inserted.)

You can now move to another menu item by pressing the left arrow key ( $\P$ ) on the remote until the 'Language' icon in the setup menu is highlighted.

## 5.4.4 Subtitle Language

To set the default language used to display subtitles, make sure that the **Language** setup menu item is highlighted:



Then, press the right arrow key  $(\ )$  on the remote to make the Language Options Menu appear.

Press the up/down arrow keys ( on the remote until the **Subtitle** choice is highlighted:





Once the desired subtitle language has been highlighted, press the ENTER key on the remote to set the language. The circled checkmark ( ) will then move briefly to that language.

**NOTE**: Not all subtitle languages are available on all discs. Many discs only have one or two languages available.

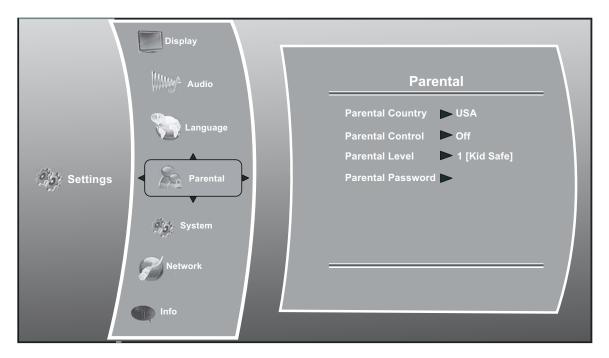
**NOTE**: Some discs might not allow the user to select the audio language from the BD-player setup menu. In this case, the audio language can only be selected from the <u>BD or DVD disc</u>'s setup menu. (The menu that appears after the disc has been inserted.)

## 5.4.5 Exiting the Language Category

When you are done setting up the BD player's language settings, you may use the left arrow key ( $\P$ ) on the remote until only the left side of the setup menu is highlighted, and then you can use the up/down arrow keys( $\clubsuit$ ) on the remote to choose another menu category.

#### 5.5 PARENTAL CONTROL

To set the player's parental control settings, from the "Settings" menu, press the right arrow key ( ) on the remote until the "Parental Control" menu choice is highlighted, as shown below:



**Parental Options Menu** 

If parental control was already turned on, attempting to change any of these items will first result in the following screen appearing:



The <u>first time</u> this screen appears, you should enter the default parental password, which is **0000**. (This can be changed later). Be advised that as you type these numbers, an "\*" (asterisk) will appear on the screen instead of the numbers you are entering.

Once you are done entering the parental control password, you will be automatically returned to the parental menu.

You can then configure the BD player for various levels of parental control, as described in the next sections.

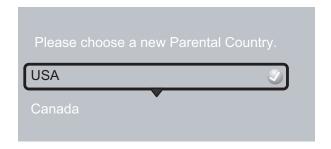
## 5.5.1 Parental Country

Use this menu item to tell the BD player what country's rating system you wish to follow.

To change the parental control country, from the parental menu, press the right arrow key () on the remote until one of the parental menu items (Parental Level, Parental Password, Parental Control, or Parental Country) is highlighted. Then, use the up or down arrow keys () until the Parental Country menu option is highlighted, as shown below:



Press the ENTER key. You will then be prompted with a message:



**NOTE**: If 'Parental Control' was previously turned *on*, you will be prompted to enter the parental control password before being allowed to change this setting.

### **NOTE**: Not all discs support multiple parental Countries.

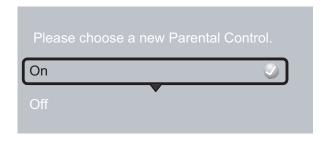
Use the up or down arrow keys ((a)) on the remote to highlight one of the countries, and press the ENTER key to save your selection. The circled checkmark ((a)) will move to the highlighted choice. You can then move to another parental setup menu item by pressing the left arrow key ((1)) on the remote until "Parental Control" is again highlighted. The up/down arrow keys ((2)) can then be used to move to a different Parental Setup menu item.

#### 5.5.2 Parental Control

To turn parental control on or off, from the parental menu, press the right arrow key () on the remote until one of the parental menu items (Parental Level, Parental Password, Parental Control, or Parental Country) is highlighted. Then, use the up or down arrow keys () until the **Parental Control** menu option is highlighted, as shown below:



Press the ENTER key. You will then be prompted with a message:



**NOTE**: If 'Parental Control' was previously turned *on*, you will be prompted to enter the parental control password before being allowed to change this setting.

Use the up or down arrow keys ( on the remote to highlight either the 'On' or 'Off' option. "On" means that playback of certain discs will be restricted, (controlled by the "Parental Level" menu, described next).

Once "On" or "Off" has been highlighted, press the ENTER key on the remote to save your selection. The circled checkmark ( ) will move to the highlighted choice. You can then move to another parental setup menu item by pressing the left arrow key ( ) on the remote until "Parental Control" is again highlighted. The up/down arrow keys ( ) can then be used to move to a different Parental Setup menu item.

#### 5.5.3 Parental Level

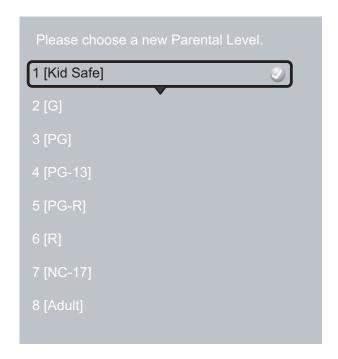
Use this menu item to restrict playback of discs encoded with a rating level equal to or higher than the level you set. Parental Control must be turned **on** for this menu item to have an affect (see previous section).

To change the Parental Level, from the parental menu, press the right arrow key () on the remote until one of the parental menu items (Parental Level, Parental Password, Parental Control, or Parental Country) is highlighted. Then, use the up or down arrow keys () until the **Parental Level** menu item is highlighted, as shown below:



Press the right arrow key ( ) on the remote. You will then see a message as shown below:

**NOTE**: If 'Parental Control' was previously turned *on*, you will be prompted to enter the parental control password before being allowed to change this setting.



Use the up or down arrow keys (()) on the remote to highlight one of the parental levels. Then, once the desired parental level has been highlighted, press the ENTER key on the remote to save your selection. The circled checkmark (()) will move to the highlighted choice. You can then move to another parental setup menu item by pressing the left arrow key (()) on the remote until "Parental Control" is again highlighted. The up/down arrow keys (()) can then be used to move to a different Parental Setup menu item.

#### 5.5.4 Parental Password

To change the parental control password, from the parental menu, press the right arrow key (\*\*) on the remote until the **Parental Password** menu option is highlighted, as shown below:



Press the right arrow key ( ) on the remote. You will then see a screen as shown below:

**NOTE**: If 'Parental Control' was previously turned *on*, you will be prompted to enter the parental control password before being allowed to change this setting.



Use the number keys on the remote to enter a 4-digit number for the parental password. Once this number has been entered, use the arrow keys to highlight the "OK" button, and then press the ENTER key on the remote.

Once a new Parental Password is saved, it must be re-entered any time someone attempts to change an item in the parental setup menu category.

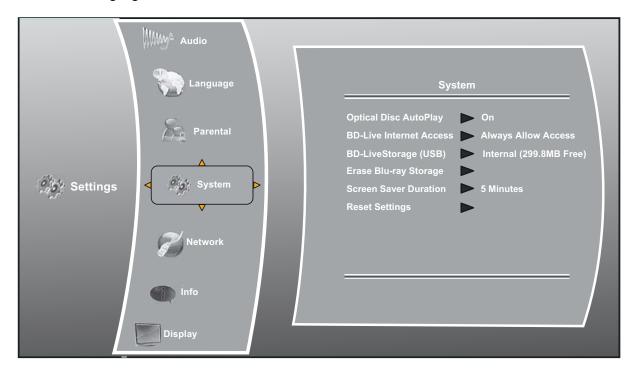
NOTE: If you forget the parental control password, you must go to the "System" Setup Menu category, and re-set the player to the factory defaults.

#### 5.5.5 Exiting the Parental Setup Menu

When you are done setting up the BD player's parental controls, you may use the left arrow key ( $\P$ ) on the remote until only the left side of the setup menu is highlighted, and then you can use the up/down arrow keys ( $\P$ ) on the remote to choose another menu category.

#### 5.6 SYSTEM MENU CATEGORY

To set the player's other settings, from the "Settings" menu, press the right arrow key( ) until the System menu choice is highlighted, as shown below:



**System Options Menu** 

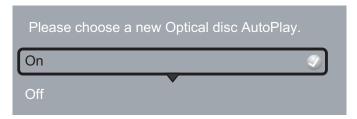
You will now be able to change a few other properties of the BD player, described below.

## 5.6.1 Optical Disc AutoPlay

This option is used to tell the BD player whether or not to start loading the main title menu of a disc as soon as the disc tray is closed. To control whether a disc's title menu starts loading immediately, from the System menu, press the right arrow key(). Then, use the up/down arrow keys(), if necessary, until "Optical Disc AutoPlay" is highlighted:



Then, press the ENTER key. The following message will appear:



Use the up/down arrow keys (🕏)to choose one of the following options:

On: When a disc is inserted into the BD player, start loading and playing the main menu

automatically, without waiting for the PLAY button to be pressed.

Off: When a disc is inserted into the BD player, wait for user commands before loading the disc's

main menu.

**NOTE**: Setting 'Optical Disc Auto Play" to ON does <u>not</u> mean that the movie will start playing automatically when the disc is inserted. The "Copyright warning" and previews will play automatically, and then the main title menu will appear.

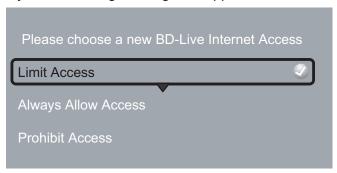
Use the up or down arrow keys  $(\begin{cases} \begin{cases} \begin{case$ 

#### 5.6.2 BD-Live Internet Access

This player is capable of accessing content (movie trailers, previews, etc) from the internet. To control which websites the BD player is allowed to access additional content, from the System menu, press the right arrow key(). Then, use the up/down arrow keys(), if necessary, until "BD-Live Internet Access" is highlighted, as shown below:



Then, press the ENTER key. The following message will appear:



Use the up/down arrow keys( ) to choose one of the following options:

**Limit Access:** 

Only allow the inserted Blu-Ray disc to download content from a BD-Live website which has a valid online certificate. This will reduce the chances of downloading malicious content onto the player.

# Always Allow Access:

Allow the BD the inserted Blu-Ray disc to access content from all BD-Live internet sites whose internet address is encoded onto the disc. There is no danger of malicious code download from valid commercial BD discs, but choosing this option and downloading BD-live content via illegally authored BD discs, or discs obtained from questionable sources, could result in malicious code being downloaded onto the player.

Prohibit Access: Blocks the inserted Blu-Ray disc from accessing BD-Live content over the internet.

Use the up or down arrow keys to highlight your desired choice. Then, once the choice has been highlighted, press the ENTER key to save your selection. The circled checkmark ( $\bigcirc$ ) will move to the highlighted choice. You can then move to another menu item by pressing the left arrow key( $\bigcirc$ ).

## 5.6.3 BD-Live Storage (USB)

This option is used to tell the BD player whether or not to use an inserted USB stick to store BD-Live content (movie trailers, additional scenes, etc). To control whether a Blu-Ray disc's BD-Live content is saved on an external USB stick, from the System menu, press the right arrow key(). Then, use the up/down arrow keys(), if necessary, until "BD-Live Storage (USB)" is highlighted, as shown below:



Press the ENTER key. The following message will appear:

#### NOTE: A USB memory stick must be inserted for this message to appear.



Use the up/down arrow keys to highlight one of the previously-inserted USB memory sticks to be used for BD-Live storage. Then, once the choice has been highlighted, press the Enter key to save your selection. The circled checkmark ( ) will move to the highlighted choice. You can then move to another menu item by pressing the left arrow key ( ).

## 5.6.4 Erase Blu-Ray Storage

Highlighting this System menu selection, and then pressing ENTER key, will clear the portion of the BD player's internal memory that is used to store "bookmarks" (which allow discs to resume play after the player has been paused). It also clears any BD-Live content (new movie trailers, new features, etc) that has been downloaded from the internet.

To erase BD storage, from the System menu, press the right arrow key(). Then, use the up/down arrow keys(), if necessary, until "Erase Blu-Ray Storage" is highlighted, as shown below:



Press the ENTER key. The following screen will appear:



Use the left/right arrow keys( ) to choose "OK", then press the ENTER key. Once you press "OK", all bookmarks and BD-live content saved in memory will be deleted.

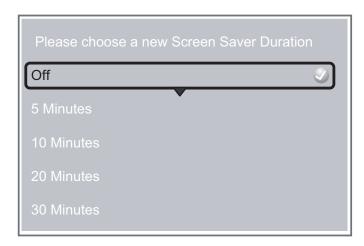
#### 5.6.5 Screen Saver Duration

The BD player has a 'screen saver' capability which will cause the TV screen to go 'blank' after a certain period of time during music playback, or when a setup menu or disc title menu is being displayed on the TV.

This option is used to tell the BD player how long to wait before the screen saver is activated. To control how long to wait before the screen saver is invoked, from the System menu, press the right arrow key(). Then, use the up/down arrow keys(), if necessary, until "Screen Saver Duration" is highlighted, as shown below:



Press the ENTER key. The following screen will appear:



Use the up/down arrow keys ( to choose:

During music playback, or while displaying a setup menu or disc title menu, invoke the screen saver after:

5 Minutes:

10 Minutes:

20 Minutes:

30 Minutes:

Off: (Do not invoke the screen saver)

Once your choice has been highlighted, press the ENTER key to save your selection. The circled checkmark  $(\bigcirc)$  will move to the highlighted choice. You can then move to another menu item by pressing the left arrow key  $(\bigcirc)$ .

#### 5.6.6 Reset Settings

This setup menu selection will allow you to return all setup menu choices to the factory default settings.

#### NOTE: This will also reset the Parental Password back to the factory default, if it was changed

To return to the factory default settings, from the Setup menu, press the right arrow key( ). Then, use the up/down arrow keys(), if necessary, until "Reset Settings" is highlighted, as shown below:



Press the ENTER key. The following screen will appear:



Use the arrow keys to choose "Ok", then press the ENTER key. Once you press "Ok", all previously-changed settings from other menus will go back to the original factory settings.

#### 5.7 CONFIGURING THE NETWORK CONNECTION – WIRED CONNECTION

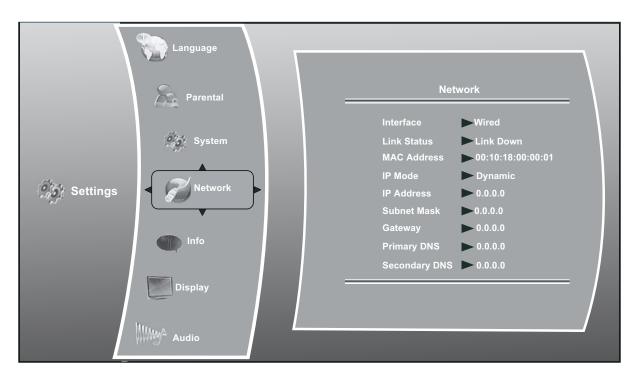
In order to access BD-Live content the BD player must be connected to the ethernet via the RJ-45 ethernet connector on the rear of the player, The RJ-45 connector is on the back of the BD player, and looks like this:



This section describes how to configure the BD-player for accessing the internet via the RJ-45 connector shown above.

To set up the BD player's Ethernet, from the Setup menu, use the arrow keys( to highlight the **Network** menu:





#### **Network Menu**

You can configure various portions of the BD player's ethernet connection, as described in the next sections.

#### 5.7.1 Interface, Link Status, and MAC Address

The top three items displayed in the "Network Menu", are status items only; they cannot be changed.

The top item, Interface, indicates that you are viewing the menu for the wired Ethernet interface.

The **Link Status** is an indication of whether the BD player is currently able to access an external internet site.

The third item is a display of the "MAC address" of the ethernet port. Your ISP may ask for this number, in order to assign you an IP address and connect to the internet.

#### 5.7.2 IP Mode

Use this menu item to tell the BD player whether to obtain ethernet settings automatically from your internet service provider or router, or whether you will manually set them yourself.

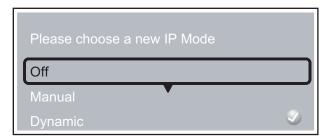
NOTE: You should contact your internet service provider (ISP) in order to determine how to properly set up the ethernet port

You may need to provide your ISP the MAC address of the BD player. The MAC address is displayed when the 'Network' Setup menu item is highlighted

To set the IP mode, from the 'Network' menu, press the right arrow key( ). Then, use the up/down arrow keys(), if necessary, until "IP Mode" is highlighted, as shown below:

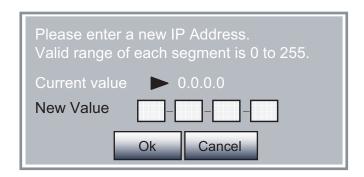


Press the ENTER key. The following screen will appear:



- Choosing Dynamic allows the BD player to obtain its ethernet address and other parameters from your ISP (or router). Select this option if your ISP (or home router) uses DHCP to assign ethernet addresses to computers and other internet devices.
- Choosing **Off** disables the BD player's ethernet capabilities.
- Choosing Manual allows you to manually enter a specific IP address, gateway, and DNS server
  information for the BD player's ethernet port. Select this option if your ISP (or home router) cannot
  assign ethernet addresses to computers and other internet devices automatically.

Selecting the 'Manual' option brings up the menu screen shown below. You can then manually enter your IP address and other settings:



⇒ If you are not sure what values to enter, contact your ISP.

Use the number and arrow keys ( ) on the remote to enter the IP address. For example, to enter the "10.28.65.23", you should press the following keys on the remote:



If you make a mistake when entering the numbers for the various addresses, you may use the left arrow key ( $\P$ ) on the remote and press CLEAR key to "CLEAR" over your mistake.

Once you have manually entered the IP address, you must repeat this procedure for the

- Subnet Mask,
- Gateway;
- Primary DNS; and
- Secondary DNS

Then, use the arrow keys to highlight Apply and press ENTER key.

Once the BD player has obtained its ethernet settings (Dynamic mode), or you have manually entered the ethernet settings (Manual mode), the player will attempt to contact an external website.

# 6 PLAYBACK OF DIGITAL AUDIO AND PHOTO FILES FROM A CD OR USB MEMORY STICK

#### 6.1 INTRODUCTION

This section explains how to playback PC-type audio and picture files that have been placed onto a disc or USB memory stick.

# 6.2 FEATURES SUPPORTED FOR DIGITAL AUDIO AND PHOTO PLAY BACK:

The following features are supported by the media player:

#### **Audio Player:**

- Music Pause, Stop, Fast Forward, Rewind, Repeat
- > Skip to next song, Skip to previous song
- Playlist:
  - Create playlist
  - Repeat playlist

#### **Photo Viewer:**

- > Thumbnail Display
- > Image Slideshow
- Playlist:
  - o Create playlist
  - o Repeat playlist

#### 6.3 SUPPORTED MUSIC AND PHOTOGRAPH FILE TYPES

The files supported by the BD player are:

#### Music:

- .mp3 files
- .wma files

#### Photos:

.jpeg files

#### 6.4 SETTING UP FOR PLAYBACK

Many audio and/or picture files that can be viewed on a personal computer can also be played back on the BD player. This is accomplished by first putting the audio or picture files onto a "data disc" or USB memory stick.

## 6.4.1 Using a Computer to Prepare a Data Disc for Music/Photo Playback

A "Data disc" is a disc that has been "burned" on a computer. Disc playback is supported for the following types of discs burned with music/picture files;

- CD;
- DVD-R;
- DVD-RW;

If you are using a data disc for music or viewing photographs, you should insert the data disc into a computer and copy the desired files to the disc.

- The BD player determines whether files on the data disc contain audio or photographs based on the 3-4 characters of the files name.
  - Song (Audio) files must end with

- Photograph files must end with

# 6.4.2 Using a Computer to Prepare a USB Memory Stick for Music/Photo Playback

If you are using a USB memory stick for music or viewing photographs, you should insert the USB memory stick into a computer and copy the desired files to the memory stick.

- The USB memory stick must be formatted as "FAT"
- The BD player determines whether files on the USB memory stick contain audio or photographs based on the *last 3-4 characters* of the file name.
  - Song (Audio) files must end with

- Photograph files must end with

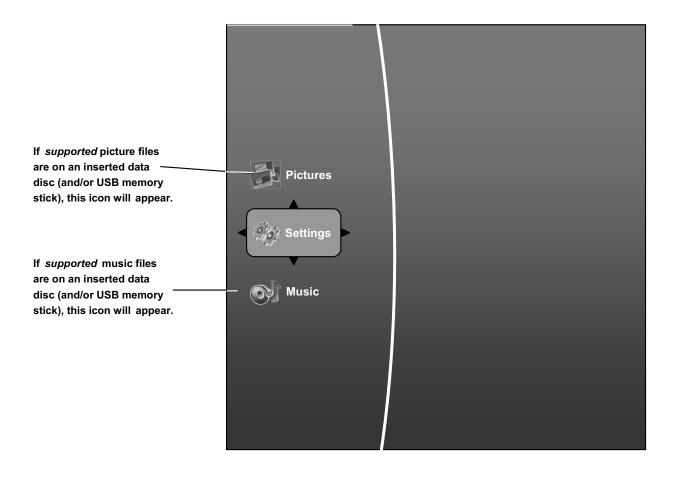
## 6.4.3 Preparing the BD Player for Music/Photo Playback

If you will be viewing photos and/or listening to music burned onto a data disc, open the tray and insert the disc.

If you will be viewing photos and/or listening to music burned onto a USB memory stick, you <u>must</u> turn off the BD Player before inserting the USB memory stick. After inserting the USB memory stick, turn the BD player on.

NOTE: Inserting/removing a USB stick when the player is ON may corrupt the data on the USB device .

When a data disc or USB memory stick containing picture audio files is inserted into the BD player, the menu screen will display icons indicating that music, or picture files are available for playback, as shown in the following:



File Type Selector

You must choose one of the file types (Music or Pictures) before starting playback.

**NOTE**: Even if a data disc (or USB stick) contains a mix of music and picture files, you will only be able to browse and playback <u>one type of file</u> (music or pictures) at a time.

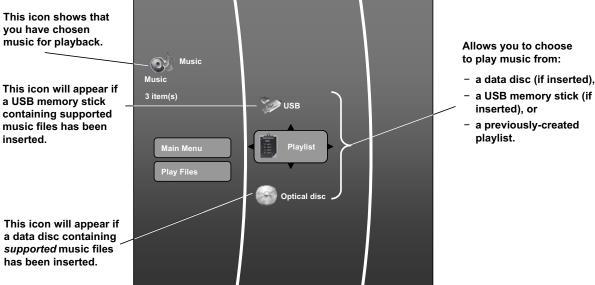
#### 6.5 AUDIO FILE PLAYBACK

The BD player can playback mp3 and wma music files that have been burned onto a data disc, DVD-R/RW.

## 6.5.1 Selecting a Source (disc or USB) for Viewing Audio Files

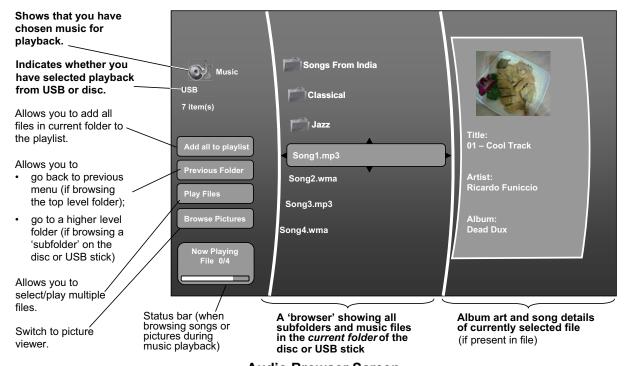
To playback audio files, after inserting the data disc (or USB memory stick), you should see a menu as shown in figure on the previous page. Use the arrow keys() on the remote to highlight "Music", and then press ENTER key.

A new menu (the *Audio Media Selector*) will appear, asking if you wish to play songs from a data disc (if one was inserted into the tray), or a USB stick (if one was inserted in the USB slot). This is shown in the figure below:



**Audio Media Selector** 

The audio media selector allows you to choose a device (data disc or USB memory stick) to use for audio playback. Use the arrow keys( to navigate to the USB (or disc) icons, and then press the ENTER key. A list of the folders and supported audio files in the *top folder* of the USB stick (or data disc) will appear, as shown in the figure below:

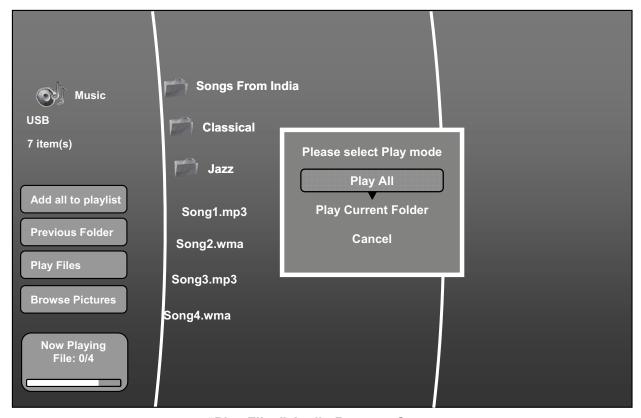


Audio Browser Screen

Once the "Audio Browser Screen" appears, you can choose to playback all files, or playback a single file.

## 6.5.2 Playing Back Multiple Audio Files

Choosing the 'play files' selection in the leftmost circle will bring up a dialog box that allows you to play all the files on the USB stick (or data disc), as shown below:

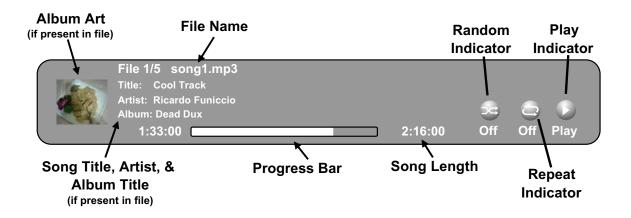


"Play Files" Audio Browser Screen

Choose "Play All" to playback all songs on the USB memory stick (or data disc).

Choose "Play Current Folder" to playback all songs on the USB memory stick (or data disc) that are currently displayed in the file browser.

Once a song starts playing, playback status will appear, showing the title, artist, album art, and album name (if available in the file), and playback duration, as shown below:

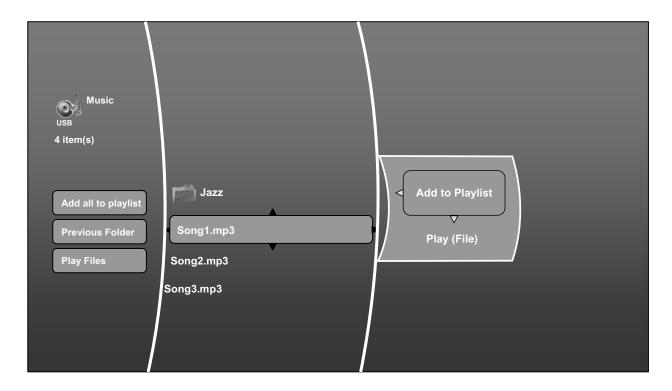


#### **Audio Playback Status Screen**

During playback of a song, pressing an arrow key will remove the audio playback status screen, and take you back to the browser screen.

## 6.5.3 Playing Back Individual Audio Files

To play individual songs on the USB stick or data disc, navigate through the files and folders using the arrow keys, highlight the file you wish to play, then press ENTER key. A screen as shown below will appear:

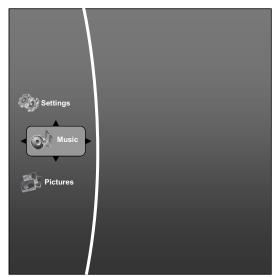


"File Selection" Audio Browser Screen

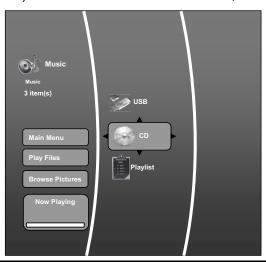
Choose "play file". Once you press 'play file', playback will begin.

## 6.5.4 Creating an Audio Playlist

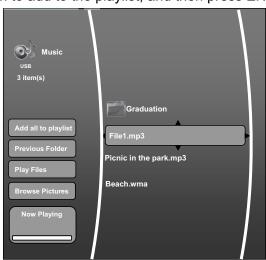
From the "File Type Selector" window, choose 'Music:



Choose 'Optical disc' (or USB) from the "Audio Media Selector", and then press ENTER key:



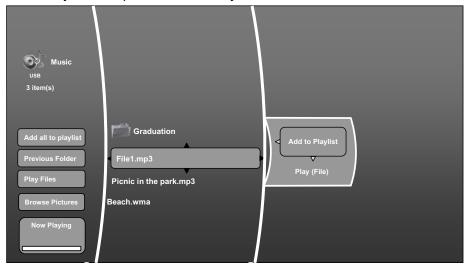
Navigate to the file you wish to add to the playlist, and then press ENTER key:



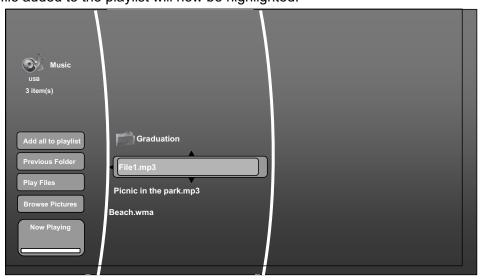
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Highlight 'Add To Playlist' and press ENTER key:



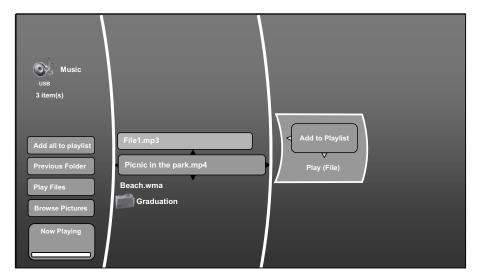
The audio file added to the playlist will now be highlighted:



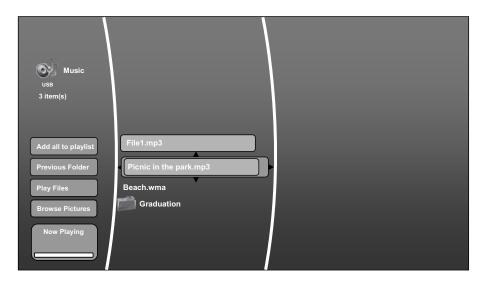
Use the arrow keys to navigate the disc (or USB stick), and choose the next file to be added to the playlist. Then, press ENTER key:



Highlight 'Add To Playlist' and press ENTER key:



The audio file added to the playlist will now be highlighted:



Repeat steps 5-6 for <u>each</u> audio file to be added to the playlist. All Audios files to be added to the playlist will be highlighted.

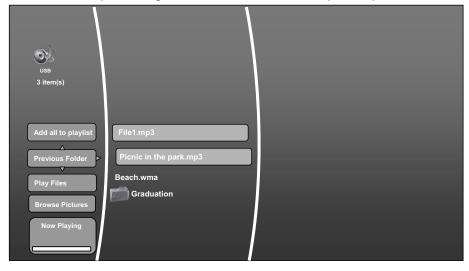
NOTE: Do <u>NOT</u> navigate back to the main menu (containing the 'setup' icon)! If you do, the playlist will be 'cleared'.

Do <u>NOT</u> remove USB memory stick (or data disc) containing the audio file in the playlist! If you do, the playlist will be 'cleared'.

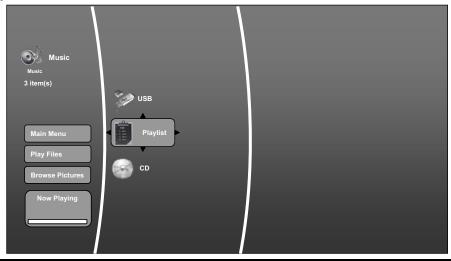
6

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Once all of the desired audio file have been entered onto the playlist, use the left arrow key(  $\langle \! \! \rangle$ ) to highlight 'Previous Folder' (on the right hand side of the screen), then press ENTER key:



Choose 'Playlist' from the Audio Media Selector:



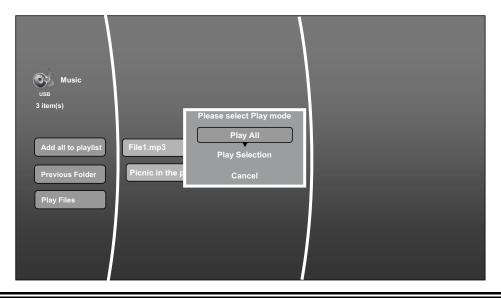
A browser showing only the files in the playlist will now appear. Press the left arrow key(  $\P$ ) and choose 'Play files':



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A box will appear showing several options. Choose ' **Play All**', and the audio files in the playlist will begin to play.



After the last audio file in the playlist has finished, playback will stop.

Press the REPEAT button on the remote control until 'Repeat All' is shown if you want to 'loop' the playlist.

Repeat All

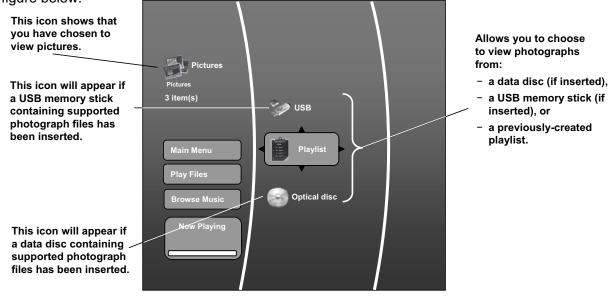
#### 6.6 VIEWING PHOTOGRAPHS

The BD player can be used to view digital photograph files that have been burned onto a data disc, DVD-R/RW.

### 6.6.1 Selecting a Source (disc or USB) for Viewing Photos

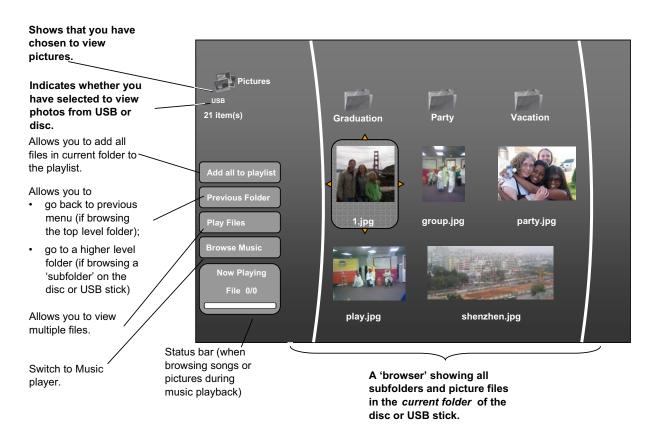
To view photographs, after inserting the data disc (or USB memory stick), you should see a menu (File Type Selector). Use the arrow keys() on the remote to highlight "Pictures" and then press ENTER key.

A new menu (the *Picture Media Selector*) will appear, asking if you wish to view pictures from a data disc (if one was inserted into the tray), or a USB stick (if one was inserted in the USB slot). This is shown in the figure below:



**Picture Media Selector** 

The picture media selector allows you to choose a device (data disc or USB memory stick) to use for viewing pictures. Use the arrow keys to navigate to the USB (or disc) icons, and then press the ENTER key. A list of the folders and supported picture files (along with 'thumbnail' views of the pictures themselves) in the *top folder* of the USB stick (or data disc) will appear, as shown in the following figure:



#### **Picture Browser Screen**

Once the "Picture Browser Screen" appears, you can choose to playback all files, or playback a single file.

## 6.6.2 Viewing Multiple Picture Files

Choosing the 'play files' selection in the leftmost circle will bring up a dialog box that allows you to view all of the pictures on the USB stick (or data disc), as shown below:



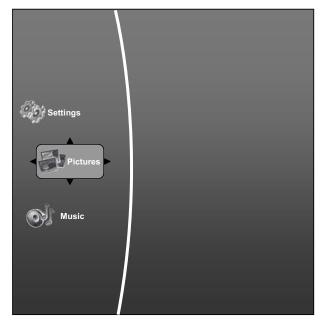
"Play Files" Picture Browser Screen

Choose "Play All" to view all pictures on the USB memory stick (or data disc).

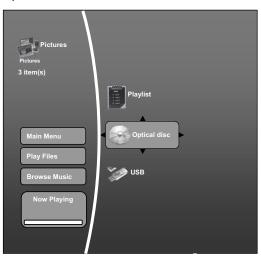
Choose "Play Current Folder" to view all pictures on the USB memory stick (or data disc) that are currently displayed in the picture browser.

## 6.6.3 Creating a Playlist with Pictures

From the "File Type Selector" window, choose 'Pictures':



Choose 'Optical disc' (or USB) from the "Pictures Media Selector", and then press ENTER key:



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Once you have chosen to browse picture files from an optical disc or USB memory stick, you can add audio files to a playlist, and select the playlist for playback as described in section 6.5.4, "Creating an Audio Playlist".

# 7 USING BD-LIVE<sup>™</sup> FEATURES

Some (but certainly not all) BD discs contain additional features that are made available to players that are connected to the internet, and have additional memory added. These additional features may include things like

the ability to download new movie trailers,

additional 'commentary' by actors and directors,

multi person game play and chat

In order to access BD-Live functions, the player must be properly configured for BD-Live internet access, and it must be equipped with additional memory.

#### 7.1 ADDING ADDITIONAL BD-LIVE MEMORY TO THE PLAYER

In order to set the player up for BD-Live Internet Access, perform the following steps:

- i) Obtain a 1Gbyte USB Stick. Insert it into a PC drive, and make sure that it is formatted as FAT32.
- ii) Insert the USB memory stick into the USB slot on the player.

#### 7.2 SETTING UP THE PLAYER FOR BD-LIVE INTERNET ACCESS

In order to set the player up for BD-Live Internet Access, perform the following steps:

- i) In the BD Player's main setup menu, go to the 'System" menu choice; Then, choose "BD-Live Internet Access". Be sure that "Limit Access" or "Always Allow Access" is checked.
- ii) Once the USB memory stick has been inserted, if there is not at least 100Mbyte of free space on the device, you should choose "Erase BD Storage" from the "System" setup menu item.
- iii) In the BD Player's main setup menu, go to the 'Network' menu choice; Set up the Network IP addresses per your router's or ISPs recommendations.

**NOTE**: • The 'Network Test' must <u>pass</u>, or you are <u>not</u> connected to the internet, and cannot access BD-Live Content on the web.

- It may take time for some BD-LIVE contents.
- Depending on disc, contents of BD-Live or customer's networking connection environment, nothing might be displayed for a long time.

## PROBLEMS AND TROUBLESHOOTING

Use the following check list for troubleshooting when you have problems with your unit. Be sure all connections are properly made when using with other units. Contact customer service if problems persist.

## **OPERATION**

#### The remote control does not function.

- Aim at the remote control at the remote sensor.
- Operate within Approx. 5 Meters or reduce the light in the room.
- Clear the path of the beam.
- The batteries are weak. Replace the batteries.
- Check the batteries are inserted correctly.

#### **Picture Freezes**

- Press the POWER button on the front of the unit to turn the unit off.
   Press the power key again to turn unit back on.
- If picture is still frozen, unplug the unit from the wall, wait a few minutes and replug the unit.

## Unit does not operate in extremely cold region

Please comply with the required temperature range when in use.

#### **NO Power**

- Assure BD Player is plugged into a functioning outlet.
- Verify power source by testing the plug used with another piece of equipment.
- Unplug unit for one minute and replug unit
  - press POWER button on the front panel.

## **NO PICTURE**

#### **NO Picture**

- Verify that the BD is correctly hooked to other equipment
- Confirm that you have selected the proper input for the BD player from you TV's menu options.
- Verify that the TV connections are inputs and not output connections.
- Verify power source
- Check the BD player's resolution ratio. For example, if the BD player is set to 720p and the content is not 720p to picture will be displayed.

#### Unable to playback BD or DVD disc

• Assure that BD or DVD disc's recording surface is not dirty. Clean disc if necessary following the instructions on page 5 of this manual.

#### TV does not display video being played

- Confirm that you have selected the proper input for the BD player from your TV's menu options.
- Hookup BD player to your TV using the AV inputs

#### HDMI connection does not display video

- Verify the connection
- Verify that the TV has a HDMI input not and output connection

#### VIDEO DISPLAY PROBLEMS

#### Screen size

- Verify that your TV has the proper screen size selected
- Proceed with setting the "TV aspect ratio" as described on page 26 of this manual

#### Video Stops playing

Vibration or impact can stop playback. Press the play button to resume play.

#### HDMI picture is not displayed or not displayed correctly

- Turn BD player off, disconnect the HDMI cable, then reconnect the cable securely.
   Failure to turn the unit off before proceeding may result in the picture not being displayed.
- Turn BD player back on by pressing the POWER button on the front panel.

## **AUDIO PROBLEMS**

#### No sound

- Check the unit is connected correctly.
- Verify the sound is adjusted on the TV or surround-sound system
- Check the input selector of the amplifier is set properly.
- Assure that BD or DVD disc's recording surface is not dirty.
   Clean disc if necessary following the instructions on page 5 of this manual.
- During pause/slow speed playback/fast forward/fast backward, the BD player cannot playback audio.
- If BD, DVD disc recorded audio is not recorded to audio specifications, the BD player may not be able to playback audio.

#### Left and Right speakers are at different levels, or only one side has audio

Confirm that all plugs are completely connected at all pieces of equipment.

#### More than one audio source is playing

Confirm audio settings and sources on all pieces of equipment are set correctly.

#### **PLAY BACK**

#### Unable playback BD, DVD disc

- Please confirm BD, DVD disc's region code is the same as BD player.
- Assure that BD or DVD disc's recording surface is not dirty.
   Clean disc if necessary following the instructions on page 5 of this manual.
- Depending on the recording style, some BD or DVD discs may not be compatible with this BD player.

#### A BD or DVD disc does not auto playback

Some discs may not perform some functions.

# Stopping playback, search, slow motion play, repeat play, or program play, etc. cannot be performed.

Some discs may not perform some functions.

#### Video playback is distorted while connected through a second video deck

Playing a BD or DVD disc in the BD player that has a second video device
hooked up between it and the TV will cause distortion due to the disc's copy
protection encoded on the disc. Even if you are not utilizing the second devices
recording feature, the disc protect its content from the possibility of such a recording.

#### **DISC TRAY OPERATION**

#### **DISC Tray opens automatically**

- Inserting a BD or DVD disc with the incorrect region code will cause the disc tray to auto-open.
- Inserting a BD or DVD disc not supported by the BD player will cause the disc tray to auto-open.
- Inserting a dirty of scratched BD or DVD disc may cause the disc tray to auto-open.

#### **Unable to remove Disc**

- Unplug the BD player from the power source, and replug the unit.
   Press the eject button on the front of the unit.
- If the BD player does not open, do not attempt to force the disc tray, contact customer service for repair.

#### **OTHER**

#### Units has returned to default settings

• If the BD player has lost power for a period of time, the unit will revert to its default settings.

## **SPECIFICATION**

Parameter	Specification
Power supply	AC120V 60Hz
Power Consumption	20W
Weight	5.8lbs (2.6kg)
Dimensions	430mm (W) x 56mm (H) x 245mm (L) (16.9inches (W) x 2.2inches (H) x 9.6inches (L))
Ambient Environment	+35°C $\sim$ +5°C (temperature), +80% $\sim$ +20% (humidity)
Accessories	Remote control x 1, Batteries (UM-4) x 2, AV Cable x 1

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Library used for 2D drawing onscreen elements and graphics LGPL version 2.1 or the Mozilla Public License (MPL) version 1.1. Info in files COPYING, COPYING-LGPL-2, COPYING-MPL-1 See COPYING for license details provided with distribution

#### **DirectFB**

Graphics drawing buffer and acceleration abstraction layer Uses LGPL2 or later. Info is found in file COPYING with distribution

#### DirectFB-extra

Provides the libpnm library used for support of PNM (Portable Network Map) graphics Uses GPL2 licenses. Info is found in file COPYING with distribution

#### libicony

Provides multi-language and localization support GNU Library General License (LGPL) Version 2, June 1991.

#### jpeg

Used for jpeg graphics decompression

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Parts of this software have been adapted from the libpng package. Although this library supports all features from the PNG specification (as MNG descends from it) it does not require the libpng package. It does require the zlib library and optionally the IJG jpeg library, and/or the "little-cms" library by Marti Maria (depending on the inclusion of support for JNG and Full-Color-Management respectively.

This library's function is primarily to read and display MNG animations. It is not meant as a full-featured image-editing component! It does however offer creation and editing functionality at the chunk level. (future modifications may include some more support for creation and or editing)

#### libpng

Portable network graphics rendering library

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#### libxml

XML parsing library

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#### **Freetype**

We currently do not enable the Truetype compile option that would cause us to use patented technology.

We therefore fall under the FreeType. License, a BSD-like license, found in the file `FTL.TXT'.

Here is more detail taken from recent emails between RM and XM:

Question: Can you provide a list of compilation/build options we use with the Freetype library.

Do you know if we are building in a manner that uses patented technology from Apple?

**Answer:** The bytecode interpreter in the TrueType driver is currently not compiled in,

so what happens is it's always the FreeType auto hinter doing the job. So there is no patent issue with the current configuration.

You need to refer to stage/usr/local/include/freetype2/freetype/config/ftoption.h

You will see that TT\_CONFIG\_OPTION\_BYTECODE\_INTERPRETER is not defined. If we were to change that we would need to define

bothTT\_CONFIG\_OPTION\_BYTECODE\_INTERPRETER and TT\_CONFIG\_OPTION\_UNPATENTED\_HINTING also set unpatented hinting when creating the face.

Define TT\_CONFIG\_OPTION\_BYTECODE\_INTERPRETER if you want to compile a bytecode interpreter in the

TrueType driver. Note that there are important patent issues related to the use of the interpreter.

By undefining this, you will only compile the code necessary to load TrueType glyphs without hinting.

Do not #undef this macro here, since the build system might define it for certain configurations only.

#define TT\_CONFIG\_OPTION\_BYTECODE\_INTERPRETER

Define TT\_CONFIG\_OPTION\_UNPATENTED\_HINTING (in addition to TT\_CONFIG\_OPTION\_BYTECODE\_INTERPRETER) to compile the unpatented work-around hinting system. Note that for the moment, the algorithm is only used when selected at runtime through the parameter tag FT\_PARAM\_TAG\_UNPATENTED\_HINTING; or when the debug hook FT\_DEBUG\_HOOK\_UNPATENTED\_HINTING is globally activated.

#define TT\_CONFIG\_OPTION\_UNPATENTED\_HINTING

Also see BdvdTrueTypeInfoFile explains why

TT CONFIG OPTION BYTECODE INTERPRETER is disabled by default. Also about patents:

http://freetype.sourceforge.net/patents.html

#### zlib

Compression library

zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.3, July 18th, 2005

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Jean-loup Gailly M

Mark Adler

jloup@gzip.org

madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments)

1950 to 1952 in the files http://www.ietf.org/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format).

#### **OpenSSL**

Crypto library uses the OpenSSL, the license is as follows:

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