ARCAM

English

# rMJ BDP100

## HANDBOOK Blu-ray Disc player

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# safety guidelines

| CAUTION | ATTENTION |
| --- | --- |
| RISK OF ELECTRIC SHOCK DO NOT OPEN | RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR |

**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.**

**WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.**

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

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

**CAUTION: In Canada and the USA, to prevent electric shock, match the wide blade of the plug to the wide slot in the socket and insert the plug fully into the socket.**

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

## Important safety instructions

**1) Read these instructions.**

**2) Keep these instructions.**

**3) Heed all warnings.**

**4) Follow all instructions.**

**5) Do not use this apparatus near water.**

**6) Clean only with dry cloth.**

**7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.**

**8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**

**9) Do not defeat the safety purpose of the polarized or grounding-type plug.**

A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

**10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**

**11) Only use attachments/accessories specified by the manufacturer.**

**12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.**

When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

**13) Unplug this apparatus during lightning storms or when unused for long periods of time.**

**14) Refer all servicing to qualified service personnel.**

Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**15) Object or liquid entry**

WARNING – Take care that objects do not fall and liquids are not spilled into the enclosure through any openings. The equipment shall not be exposed to dripping or splashing. Liquid-filled objects such as vases should not be placed on the equipment.

**16) Climate**

The equipment has been designed for use in moderate climates and in domestic situations.

**17) Cleaning**

Unplug the unit from the mains supply before cleaning.

The case should normally only require a wipe with a soft, lint-free cloth. Do not use chemical solvents for cleaning.

We do not advise the use of furniture cleaning sprays or polishes as they can cause permanent white marks.

**18) Power sources**

Only connect the equipment to a power supply of the type described in the operating instructions or as marked on the equipment.

The primary method of isolating the equipment from the mains supply is to remove the mains plug. The equipment must be installed in a manner that makes disconnection possible.

**19) Abnormal smell**

If an abnormal smell or smoke is detected from the equipment, turn the power off immediately and unplug the equipment from the wall outlet. Contact your dealer and do not reconnect the equipment.

**20) Damage requiring service**

The equipment should be serviced by qualified service personnel when:

A. the power-supply cord or the plug has been damaged, or
B. objects have fallen, or liquid has spilled into the equipment, or
C. the equipment has been exposed to rain, or
D. the equipment does not appear to operate normally or exhibits a marked change in performance, or
E. the equipment has been dropped or the enclosure damaged.

## Safety compliance

This equipment has been designed to meet the IEC/EN 60065 international electrical safety standard.

This device 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.



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# welcome

English

*Thank you and congratulations for purchasing your Arcam FMJ Blu-ray Disc player.*

*Arcam has been producing specialist hi-fi and home cinema products of remarkable quality for over three decades and the BDP100 – which plays Blu-ray Discs, DVD-Video discs and Audio CDs – is the latest in a long line of award winning home cinema equipment. The design of the FMJ range draws upon all of Arcam's experience as one of the UK's most respected audio companies and is built to give you years of trouble-free listening enjoyment.*

*This handbook has been designed to give you all the information you need to install, connect and use the Arcam BDP100 Blu-ray Disc player. The CR104 remote control handset supplied with this equipment is also described. Use the contents list shown on this page to guide you to the section of interest.*

*We hope that your FMJ Blu-ray Disc player will give you years of trouble-free operation. In the unlikely event of any fault, or if you simply require further information about Arcam products, our network of dealers will be happy to help you. Further information can also be found on the Arcam website at www.arcam.co.uk.*

**The FMJ development team**



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# installation

*Arcam's BDP100 provides class-leading sound quality from Blu-ray Discs, DVD-Video discs and compact discs.*

*The BDP100 has a state-of-the-art Delta-Sigma DAC (Digital-to-Analogue Converter) which provides audiophile sound quality for video and audio discs.*

*The BDP100 is supplied with the CR104 'universal' remote control, which is simple to use and can control up to eight audio devices – such as an amplifer, television or Personal Video Recorder.*

***The high performance BDP100 Blu-ray Disc player is designed to truly bring your movies and music to life.***

## Placing the unit

- Place the BD player on a level, firm surface, avoiding direct sunlight and sources of heat or damp.
- Do not place the BD player on top of an amplifier or other source of heat.
- Do not place the BD player in an enclosed space such as a bookcase or closed cabinet unless there is good provision for ventilation. The BD player is designed to run warm during normal operation.
- Do not place any other component or item on top of the BD player as this may obstruct airflow around the unit, causing the BD player to run hot.
- Make sure the remote-control receiver (next to the display on the front panel) is unobstructed, or remote control will be impaired.
- Do not place your record deck on top of this unit. Record decks are very sensitive to the noise generated by mains power supplies which will be heard as a background 'hum' if the record deck is too close.

## Power

The BD player is supplied with a moulded mains plug already fitted to the lead. Check that the plug supplied fits your supply – should you require a new mains lead, please contact your Arcam dealer.

If your mains supply voltage or mains plug is different, please contact your Arcam dealer immediately

Push the IEC plug end of the power cable into the socket on the back of the BD player, making sure that it is pushed in firmly. Plug the other end of the cable into your mains socket and, if necessary, switch the socket on.

## The remote control and trigger inputs

The **REMOTE IN** input can be used to pass RC5 codes (listed on page E-30) to the BDP100 if it is installed in a position, or a system, where infrared cannot be used. If this is required, please contact your dealer for further information.

The **TRIGGER IN** input can be used to switch the BDP100 in and out of stand-by. Connecting the trigger output of your Arcam amplifier (or other compatible device), will cause the BDP100 to come out of stand-by automatically when the amplifier is switched on, returning to stand-by when the amplifier is switched off. Please see your amplifier handbook for further information.

In normal use there is no need to make any connections to these inputs.

The remote control input requires a mono 3.5mm jack, with the tip active and the sleeve grounded.

The remote control signals must be in modulated RC5 format (at 36kHz), with a voltage level of between 5V and 12V.

The **RS232** input is for optional connection to a home automation system or a computer. Various third-party sytems are available providing sophisticated control over all your entertainment devices using touch screens etc. Contact your dealer or installer for further details. The technical details of the remote control protocol are available from Arcam on request (email ***support@arcam.co.uk***).

## Interconnect cables

We recommend the use of high-quality screened cables that are designed for the particular application. Other cables will have different impedance characteristics that will degrade the performance of your system (for example, do not use cabling intended for video use to carry audio signals). All cables should be kept as short as is practically possible.

It is good practice when connecting your equipment to make sure that the mains power-supply cabling is kept as far away as possible from your audio cables. Failure to do so may result in unwanted noise in the audio signals.



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### Analogue audio output

Connect these to your amplifier's CD (or other line-level) input using suitable high quality interconnect cables. Ensure that the left and right audio outputs from the BD player are connected to the same left and right inputs on your amplifier.

### Coaxial digital output

Use this socket if you are using an AV receiver with a coaxial digital input. Connect to the digital input using a suitable 75Ω screened cable.

**CAUTION: Never connect the digital output socket to a conventional audio input.**

### USB connection

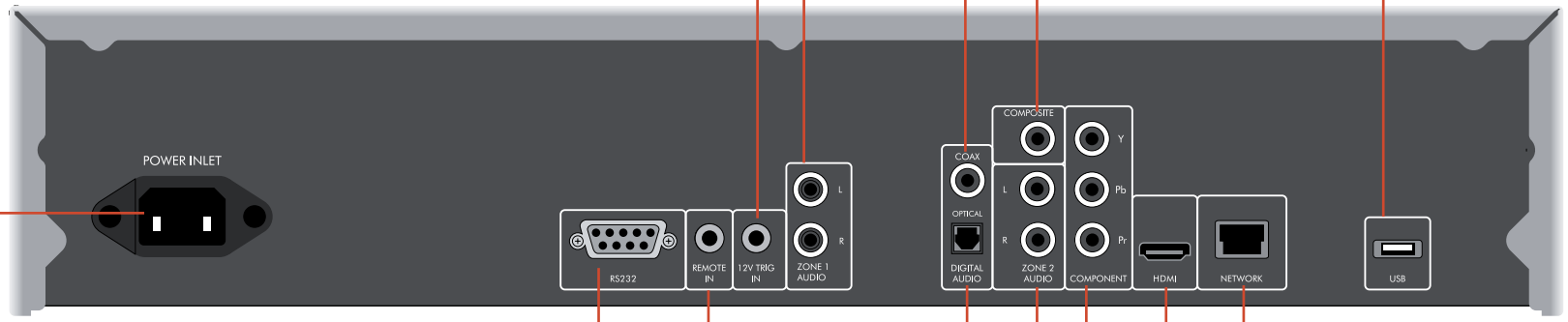
Insert USB flash memory devices here. USB memory can be used to save downloaded content. The BDP100 can also play certain digital files stored on USB memory drives (see page E-8).

### 12V trigger input

This socket allows the BDP100 to be switched in and out of stand-by mode by an amplifier (or another item of AV equipment) with a **12V TRIG OUT** function. See page E-4.

### Composite video output

Connect this output to your display if the display does not support any other connection types.




### Power inlet

Connect the correct mains cable here.

### RS232

This connection allows for remote control from a third-party home automation system or computer.

See page E-4 for more information.

### Optical digital output

Use this socket if you are using an AV receiver with an optical digital audio input.

### Network connection

Connect this socket to a port on your network router using an Ethernet patch cable (see page E-9). An internet connection enables interactive content for BD-Live discs (for setup details see "Network" on page E-22).

### Zone 2 audio output

Use this analogue output to provide audio for use in your AV receiver's Zone 2. It can also be used to connect a recording device or headphone amplifier.

### Remote in

This allows remote-control signals to be received by the BDP100 if the remote sensor is covered (or otherwise not 'visible' to the remote-control).

See page E-4 for more information.

### Component video output

If your display does not support HDMI but has a component input, connect it to this video output.

### HDMI digital video output

Connect this output to your display or AV receiver if available for the best digital video and audio connection (see. page E-7 for details).



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## Making video connections

To view the pictures from the BD player you need to connect one of its video outputs to your display device (TV, monitor, projector, etc.) or AV receiver (such as the Arcam AVR600).

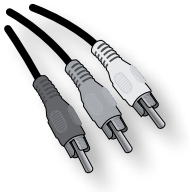
The BDP100 has three video output options, described below. You need only use one type of video from the list; choose a type that your display device or AV receiver supports. If your equipment does not support any of the above connection types then you will be unable to use it directly with the BDP100 and a video converter device may be required. In this case, please contact your dealer for further assistance.

AV receivers and other video processing devices may be connected between the BDP100 and your display. Ensure that all the equipment supports the type of video signal you intend to use. For instructions on how to connect AV equipment, consult the manual for that equipment.

### HDMI DIGITAL VIDEO

The HDMI connector offers uncompressed digital video and audio transmission between the BDP100 and the display device, and provides the highest quality output. Generally, it is also the easiest connection type to configure.

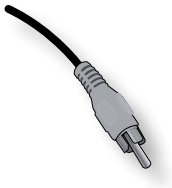
To use this video connection, you will require a HDMI or HDMI/DVI cable between the BDP100 and your display device or receiver. See page E-7 for further details.



### COMPONENT VIDEO

Use three 75Ω phono cables to connect the Component Y, Pb, Pr outputs of the BD player to the Y, Pb, Pr inputs of the display device. Ensure that the cables are suitable for video use and that they are approximately the same length.

If your television is capable of accepting a progressively scanned (de-interlaced) video signal, you may wish to use the progressive video output from the BDP100. If you are unsure whether your display device can accept progressive video, please refer to its instruction manual or consult your dealer.



### COMPOSITE VIDEO

If your display device offers only a composite input (sometimes labelled CVBS or just 'video'), connect this to the **COMPOSITE** video output of the BD player using a 75Ω phono cable suitable for video use. Note that a composite video connection gives the lowest-quality output; if your display device supports other video connection types, we advise that those are used instead.

## Making audio connections

The BDP100 offers a number of alternatives for connecting audio. The connection type to use depends on the rest of your system; chose the type most appropriate to your amplifier.

***If you want to listen to audio through...*** ***...we recommend the following:***

- Your television

  How you listen to audio through your TV depends on the inputs it has and your video connection:

  - HDMI: If you are using an HDMI connection (not DVI), this will carry both audio and video. No further connection is required.
  - Digital Audio (Coaxial or Optical): If your TV has Digital Audio ***inputs*** on Coaxial or Optical connectors, connect the appropriate digital audio lead between the TV input and the appropriate BDP100 digital output. Do not make a connection between the BDP100 and a TV's Digital Audio ***output.***
  - Stereo phono: If your TV has stereo phono inputs, follow the instructions below for a stereo amplifier.

- Your stereo amplifier

  If you wish to listen to audio from your player through a stereo amplifier, then use the stereo analogue outputs. These outputs provide a stereo down-mix of the source material.

  Using a stereo phono cable of a suitable length, connect the outputs labeled **ZONE 1 AUDIO** to the left and right inputs (respectively) for DVD or CD on your amplifier.

- Your surround-sound receiver

  Connect the HDMI output to your receiver (for audio and video) if the receiver supports audio over HDMI. The HDMI connection supports all possible audio formats including Dolby TrueHD, DTS Master Audio and multichannel PCM.

  If your receiver does not support HDMI audio, connect one of the Digital Audio outputs (Optical or Coaxial) to the 'Blu-ray', 'BD' or 'DVD' input of your receiver. These digital outputs provide PCM, Dolby Digital, DTS or MPEG multi-channel audio, depending on the source material. The BDP100 can also be set to re-encode all audio to DTS ("Bitstream Mixed") (see "Audio" on page E-21). This option provides the best surround sound quality for Digital Audio connections.

  You may also wish to connect the stereo analogue audio outputs to the CD input on your receiver, for listening to CDs. This will allow the BDP100's audiophile digital-to-analogue circuitry to be utilised, for the best stereo sound quality.

### Using two video connections simultaneously

It is possible to use two video connections simultaneously (routing one connection to a second room or display, for example). If you wish to do this, please read these notes:

- The Composite video output is always active.
  It carries interlaced output at all times.
- The Component video output is always active.
  It can be set to carry either interlaced or progressive-scan output.
- The HDMI output is active only if a compatible display is detected by the BDP100.
  It can be set to carry either interlaced, progressive-scan or high-definition output.



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## The HDMI interface

If you have a HDMI- or DVI-equipped monitor or display, you can connect it to the BDP100 using a HDMI cable. The HDMI connector carries uncompressed digital video, as well as digital audio.

## About HDMI

HDMI (High Definition Multimedia Interface) supports both video and audio on a single digital connection for use with Blu-ray Disc players, digital TV, set-top boxes, and other AV devices. HDMI was developed to combine the technologies of High-bandwidth Digital Content Protection (HDCP) and the Digital Visual Interface (DVI) in one specification, with the addition of transmission of digital audio information; HDCP is used to protect digital content transmitted to DVI-compliant displays.

HDMI has the capability to support standard or high-definition video, together with stereo or multi-channel surround-sound audio. HDMI features include uncompressed digital video, one connector (instead of several cables and connectors), and communication between the AV source and AV devices.

## Connecting using HDMI

Use a HDMI cable to connect the **HDMI** socket on this player to a HDMI socket on a compatible display device or receiver. The arrow on the cable connector body should be face up for correct alignment with the connector on the BDP100. If the BDP100 video resolution has been configured to 'HDMI Auto', then the BDP100 will configure its video output automatically to match the capabilities of the attached HDMI device.

***NOTE:*** A HDMI connection can be made only with HDMI or DVI-equipped components compatible with both DVI and HDCP. Note that if you choose to connect to a DVI device, you will need an adaptor (HDMI to DVI) to do so; a DVI/HDCP connection, however, does not support audio signals.

If you require further information on the possibilities for connecting your BDP100 to your DVI/HDMI equipped display device, please contact your Arcam dealer.

## Troubleshooting HDMI

### Problems with video

***No video (blank screen)***

- Check that the HDMI cable is connected correctly at both ends. If an HDMI-equipped A/V receiver is in use, try connecting the BDP100 directly to the display device, in order to isolate where the fault may lie.
- Check that the display device is set to display the HDMI input (i.e., has not been set to some other video input, instead).
- Check that the HDMI input of the receiver and/or display device is enabled. See the user handbook of the connected device for details on doing this.
- Using an alternative video display device (e.g., connected via the composite video out), check that video is output.
- Consult the user handbook of the display device to ensure that it can handle the output formats provided by the BDP100. The BDP100 can provide the following:

| | |
|---|---|
| 720 x 480p (NTSC progressive scan) | 1280 x 720p |
| 720(1440) x 480i (NTSC interlaced) | 1920 x 1080i |
| 720 x 576p (PAL progressive scan) | 1920 x 1080p |
| 720(1440) x 576i (PAL interlaced) | |

At least one of these standards must be supported by the connected device in order for it to work with the BDP100.

***No video (random noise)***

Random noise will be displayed if the content-protection algorithm fails to authenticate the attached device. This will occur, for example, if a DVI device that does not support HDCP (such as a computer monitor) is connected to the BDP100.

To attempt to isolate this problem, remove all discs from the BDP100, then power-off both the BDP100 and the connected display device. Switch the display device on, then the BDP100 – at this point, the idle logo of the BDP100 should be shown on the display device. If this is not the case, please check the items listed above for a blank screen.

If the noise appears when a copy-protected disc (Blu-ray/DVD) is played, then it is the authentication that is failing. Please contact your dealer for further information.

### Problems with audio

The type of audio provided by the HDMI connector depends on the configuration of the BDP100 (see 'Audio Setup' on page E-21). Choose a setting according to the capabilities of your audio system. Note that pure DVI devices (connections requiring a HDMI to DVI converter cable) do not support audio via this connection.





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# disc & file formats

## Playable discs

The player supports the following disc types:

- Blu-ray Disc
- DVD-Video
- DVD-R
- DVD-RW
- CD-Audio
- CD-R
- CD-RW

***NOTE***

- Only BD-RE/-R, DVD-R/-RW and CD-R/-RW discs recorded with UDF or ISO9660 format can be played back.
- This unit supports Ver 2.0 BD-ROM, Ver 3.0 BD-RE and Ver 2.0 BD-R.
- Unfinalized BD-RE/-R, DVD-R/-RW and CD-R/-RW discs cannot be played back.
- Some 8 cm BD-REs/8 cm BD-Rs cannot be played on this unit.
- When a BD-Java title is played, loading may take longer than a normal title, and some functions may perform slowly.
- When an Audio CD recorded in DTS-ES or Dolby Digital EX is played, noise may be heard.

***Unplayable discs***

Any disc type not listed is not supported by the BDP100. Do not attempt to play an unsupported disc.

Some BD-RE/BD-R, DVD-RWs/DVD-Rs or CD-Rs/CDRWs cannot be played due to incomplete disc finalization, poor recording quality or physical condition of the disc, incompatible characteristics of the recording device or authoring software, etc. Try recording the disc at a lower speed, or try a different brand of media.

See the operating instructions supplied with your recording device or software for more information.

***NOTE***

- Characters except "A~Z", "a~z", "0~9", " - " may be not be displayed.
- This unit supports multi-session discs. Some multisession discs may take a long time to load and some may not be loaded at all.
- For some files, it may not be possible to use certain functions during playback.
- It may not be possible to play some files, even if they have the extension of a file playable on this player.
- Files protected by DRM (Digital Rights Management) cannot be played.

## Playable files

The player supports the following file types:

- ***MP3 (".mp3")***
  Sample rate: 44.1kHz, 48kHz
  Bit rate: Up to 320kbps.
  ID3 tags are not supported.
  MP3i and MP3 Pro are not supported.
- ***WMA (".wma")***
  Sample rate: 44.1kHz, 48kHz
  Bit rate: Up to 192kbps.
  WMA tags are not supported.
- ***JPEG (".jpg, .jpeg")***
  Maximum resolution : 4,272x2,848 pixels.
  JPEG format images stored in progressive format cannot be played back.
- ***AVI (".avi")***
  Playable codec : Xvid
  Maximum size of image : 1920 x 1080@30 fps
- ***WMV (".wmv")***
  Playable codec : WMV9
  Maximum size of image : 1920 x 1080@30 fps

## Region coding

Blu-ray Disc players and Blu-ray or DVD Video discs are assigned region codes according to the region in which they are sold. If the region codes do not match, the disc will not play.

| Blu-ray Disc region code | Area |
|---|---|
| A | North America, Central America, South America, Korea, Japan, Taiwan, Hong Kong and South East Asia |
| B | Europe, Greenland, French territories, Middle East, Africa, Australia and New Zealand |
| C | India, China, Russia, Central and South Asia |
| A + B + C | All areas |

| DVD region code | Area |
|---|---|
| 1 | North America |
| 2 | Europe, Japan, Middle East, Egypt, South Africa, Greenland |
| 3 | Taiwan, Korea, the Philippines, Indonesia, Hong Kong |
| 4 | Mexico, South America, Central America, Australia, New Zealand, Pacific Islands, Caribbean |
| 5 | Russia, Eastern Europe, India, most of Africa, North Korea, Mongolia |
| 6 | China |
| All | All areas |

Symbols indicating disc will play in North America:

Blu-ray Discs: DVDs:

Symbols indicating disc will play in Europe:

Blu-ray Discs: DVDs:

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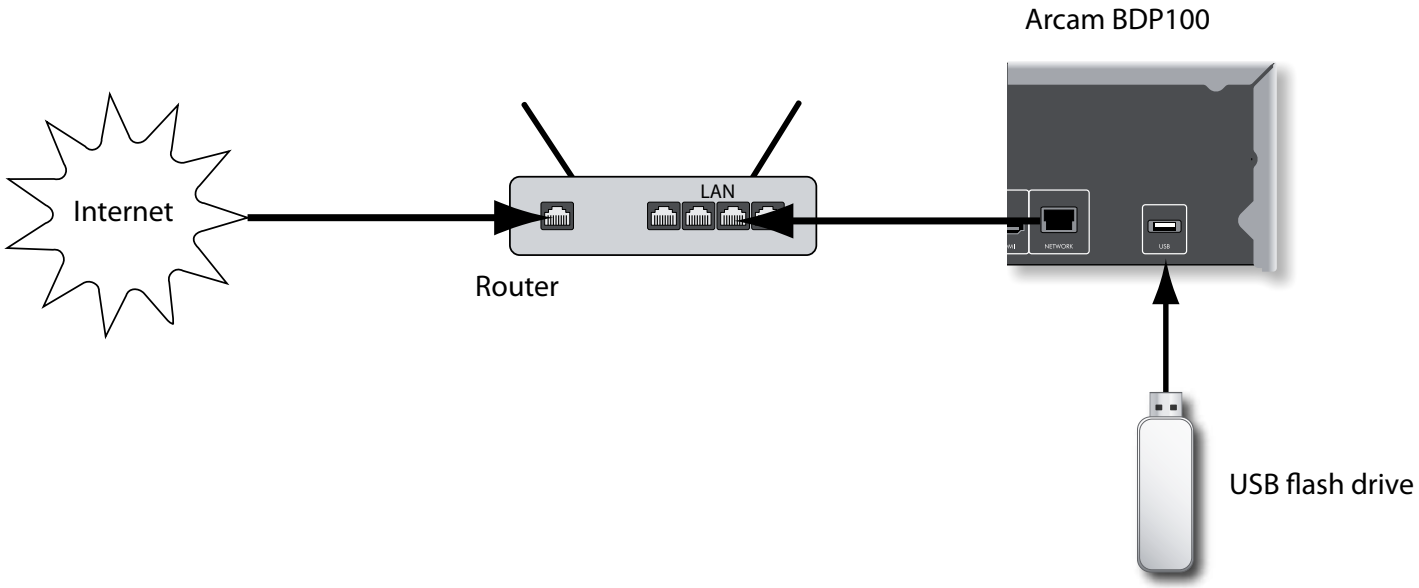
## Network connection

BD-Live discs can enable the downloading of extra content from the Internet. To enjoy on-line content, connect the Network socket of the BDP100 to a LAN port on your network router using an Ethernet patch cable (available from a computer supplies retailer).

A local network with Internet connection is required. If you do not connect to the Internet through a router (e.g. you connect a single computer directly), please contact your Internet Service Provider or an IT professional regarding setting up a home network.

***NOTE***

- When the player is powered on with no network configured, a pop-up is shown on-screen with an option to press the **RED** function key on the remote control to access network settings. Pressing **RED** will navigate directly to the Network Settings menu. Please refer to page E-22 for details.
- Remember to press the SHIFT key followed by SETUP in order to access the red button.




## USB connection

USB memory devices (flash drives) can be used for media playback and are necessary for storage of downloaded BD-Live content. To enjoy BD-Live content, the following specification is recommended:

- Capacity 2GB
- Formatted FAT32
- USB2.0 high speed (480Mbps)

Connect the USB device to the USB socket on the rear of the unit.

English



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# basic operation

## Introduction

'Basic use' explains how to play a Blu-ray Disc (BD), DVD, CD or other type of disc. Note that it may be necessary to configure your player correctly for your system before optimum – or any – playback can be achieved. Player configuration is described beginning on page E-20.

More sophisticated features – such as special playback modes and programming jumps and playback sequences – are described in the "advanced operation" section, later in this handbook.

### Switching on

Switch the unit on by pressing the **POWER** button. The status LED glows green when the unit is powered up and red when in stand-by mode. The remote control is used to enter and exit standby mode. If the **POWER** button is pressed (or power is removed) whilst in standby, the unit will enter standby mode when power is re-applied.

Note that the remote control sensor is located on the right-hand side of the display window. Do not obstruct this or the remote control will not work.

### Loading a disc

Press ■/⏏ on the front panel (or ⏏ on the handset) and place the disc on the tray, with the playback side facing down (some discs are double sided, in which case the side labelled 'side A' should face up to play side A).

Press ■/⏏ on the front panel to close the tray. The disc loads after a pause of a few seconds.

### Playing a disc

A disc may take some time to load once the tray is closed. When the 'Optical Disc Autoplay' setting is set to On (default setting), playback will automatically start. (For details, refer to "Optical Disc AutoPlay" on page page E-22).

If Autoplay is not set, the player's Main Menu will appear on your TV. Use the cursor keys to select the disc, then press (OK) to start playback.

Some titles begin by displaying a menu. Select the menu item 'Play movie' (or similar) using the cursor pad, then press **OK** to start playback.

For discs that do not play automatically, press ▶/ ❙❙ on the front panel or press ▶ on the remote control.

### Fast play

Press ▶▶ or ◀◀ on the front-panel or remote control to play fast forwards or backwards. The following speeds for fast playback are available: x2, x4, x8, x16, x32, x64 and x128 (depending on disc type). Press the button repeatedly to cycle through the different speeds. To resume normal playback speed, press **PLAY**.

### Skipping chapters/tracks

To skip chapters (or tracks on a CD), press ▶| or |◀.

When skipping back, the first button press takes you to the beginning of the current chapter. Pressing the button again takes you to the start of the previous chapter.

### Pausing playback

Press ▶/ ❙❙ on the front panel or ❙❙ on the remote control to pause playback. To resume playback, press ▶/ ❙❙ on the front panel or ▶ on the handset.

### Stopping playback

Press the ■/⏏ button on the front panel or ■ on the remote control to stop playback.

When playing a BD/DVD, pressing ■ once performs a 'resume stop'. If you now press ▶, playback resumes from the point it was stopped.

If you press ■/⏏ on the front panel or ■ on the remote control twice, this is a 'complete stop', and playback resumes from the beginning of the disc.

***NOTE***

When you press a button, if the unit does not accept its operation, ⃠ appears on the TV screen.

Operations are occasionally unacceptable even if ⃠ is not displayed.

Invalid operation may occur as expected if :

- The region codes of the unit is different from that of the disc and playback will not be allowed.
- The parental control is set to prevent operation.
  (For details, refer to "***Parental Control***" on page E-21.)
- BD/DVD Video operations and functions may be different from the explanations in this manual and some operations may be prohibited due to disc manufacturer's settings.

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# remote control



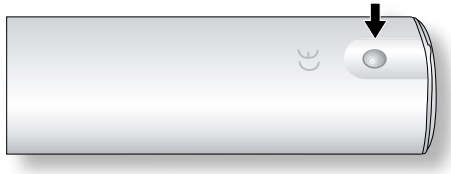
The BDP100 is supplied with the CR104 universal remote control.

### Using the remote control

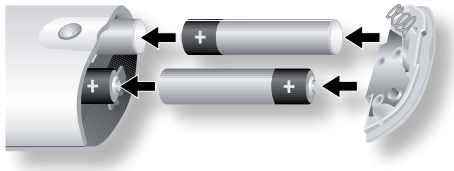
Please keep in mind the following when using the remote control:

- Ensure there are no obstacles between the remote control and the remote sensor on the front panel. The remote has a range of about 7 metres. (If the remote sensor is obscured, the IR in remote control input jack on the rear panel is available. Please consult your dealer for further information.)
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the remote sensor of the unit.
- Replace the batteries when you notice a reduction in the operating range of the remote control.

## Inserting batteries into the remote control



1. Open the battery compartment by pressing the button on the back of the handset.



2. Insert four 'AAA' batteries into the battery compartment – two facing the top of the unit, and two facing the end, as in the diagram.
3. Lower the end cap onto the plastic locating plate in the handset. This acts as a hinge, and you can now push the end cap firmly into its locked position with a click.

### Notes on batteries:

- Incorrect use of batteries can result in hazards such as leakage and bursting.
- Do not mix old and new batteries together.
- Do not use non-identical batteries together – although they may look similar, different batteries may have different voltages.
- Ensure the plus (+) and minus (-) ends of each battery match the indications in the battery compartment.
- Remove batteries from equipment that is not going to be used for a month or more.
- When disposing of used batteries, please comply with governmental or local regulations that apply in your country or area.



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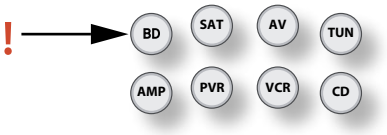
## Controlling the BDP100

The CR104 is a sophisticated 'universal' remote control that can control up to eight devices – including the BDP100. As it's a 'learning' remote, it can copy almost any function from an existing single-device remote. You can also program the CR104 to issue a sequence of commands ('macros') from a single button press.

### Select the source key first

Remember to select a source key ***before*** pressing command buttons – commands vary depending on the source selected.

To operate the BDP100 from the remote, first press the **BD** source button.




**DISP (display)**

Press to cycle through the front panel display's brightness options (dim to bright, off).

**Source selection and handset configuration**

| | |
|---|---|
| **BD** | BD input/BD controls |
| **SAT** | Satellite decoder input/SAT controls |
| **AV** | Television (sound) input/AV controls |
| **TUN** | Radio tuner input/TUN controls |
| **AMP** | Arcam amplifier |
| **PVR** | Personal Video Recorder input/controls |
| **VCR** | Video Cassette Recorder input/controls |
| **CD** | CD player input/CD controls |

Press the relevant button once to select input and reconfigure the handset.

Press and hold the button until the power LED blinks once if you wish to reconfigure the handset without changing the input.

**Navigation buttons**

Arrow buttons allow navigation around the settings menus on the BDP100 and disc menus.

Confirm a selection by pressing **OK**.

**MODE**

This button activates the Picture-in-Picture Secondary Video function, where available.

**MUTE**

Press once to mute an Arcam amplifier. Press again (or use +/– volume) to un-mute.

**VOLUME +/–**

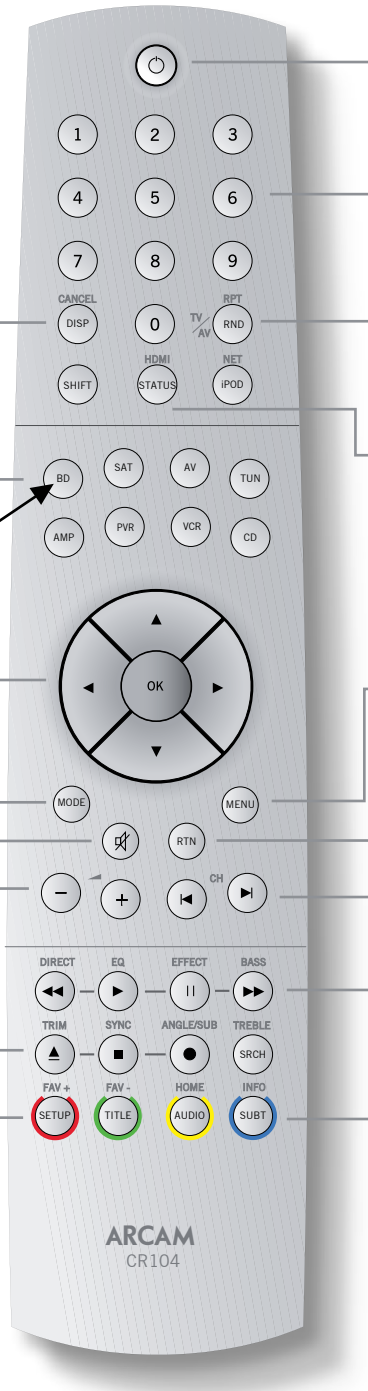
Adjusts the volume of a compatible amplifier.

**OPEN**

Opens and closes the disc tray

**SETUP**

Press **SETUP** to access the system settings menu.




**On/Stand-by**

This allows the BDP100 to be put into and taken out of stand-by remotely.

**Numeric keys**

Used for data entry. Also gives direct access to individual tracks on audio CDs.

**RND**

Toggles random ('shuffle') play of chapters/tracks on and off.

Press **SHIFT** followed by **RND** to cycle through repeat play options (chapter, title, disc, etc.).

**STATUS**

Toggles the disc information display.

Press **SHIFT** followed by **STATUS** to activate or deactivate 24p mode (supported discs and TVs only).

**MENU**

Activates the BD 'popup' menu or the DVD disc menu.

**RTN**

Navigates to the previous menu.

**⏮ ⏭**

Press to skip backwards to the previous track(⏮) or forwards to the next track (⏭).

**Playback control**

Pause (⏸), Play (▶) and Stop (■). SHIFT+Pause activates slow playback.

**Advanced controls**

These buttons are described on the next page.



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# Advanced controls

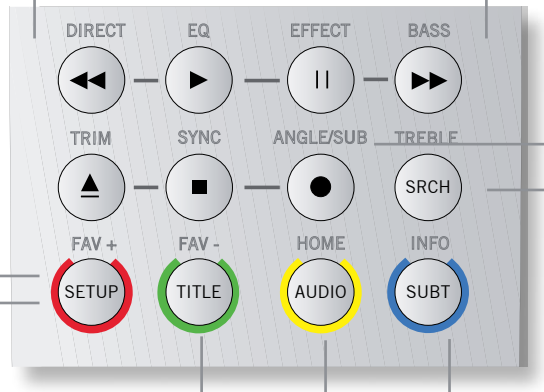


**NOTE**

Many of these controls are labelled according to the functions assigned to other device modes. For example, the ⏩ key will activate the bass control of an A/V receiver when the remote is in **AMP** mode.

**Transport control buttons**

| | |
|---|---|
| ⏪ | Fast rewind. |
| ▶ | Starts playback. |
| ⏸ | Pause playback. Press ▶ to resume playback.<br>When paused, pressing ⏸ advances one frame.<br>**SHIFT** + ⏸ activates slow motion playback. |
| ⏩ | Fast forward. |
| ⏏ | Open / Close the disc tray. |
| ■ | Stop playback |
| ● | Cycles through different camera angles, if present on the disc. |




**RED/GREEN/YELLOW/BLUE**

The colour-coded buttons **RED**, **GREEN**, **YELLOW** and **BLUE** provide interactive controls for Blu-ray Discs and some player functions and will be displayed on-screen. They are accessed by first pressing **SHIFT** followed immediately by the button required. Their function depends on the disc and the part of the disc being viewed.

**ANGLE**

Displays Angle menu, to allow selection of different camera angles, if present on the disc.

**SETUP**

Ensure no disc is playing and press **SETUP** to access the 'Settings' menu.

**SRCH**

Displays Search menu with Time, Title and Track options.

**TITLE**

Press **TITLE** to access the DVD's 'Title' menu (a feature that only applies to multi-title discs) or to access the main menu if a Blu-ray Disc.

**AUDIO**

Some discs offer the facility to select different audio tracks. Press **AUDIO** to access a menu that allows selection of the available tracks. See "Soundtrack Selection" on page E-16.

**SUBT**

Cycles through the available subtitle languages, including 'Off'. Some discs force subtitles on, overriding any set up preferences.



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# Useful information

## Backlight

A blue backlight comes on for five seconds whenever a key is pressed. This helps you use the handset in subdued lighting conditions. It may be possible to hear a quiet tone being emitted from the remote control when the backlight is on. This is perfectly normal.

## Power LED blinks

Short blinks indicate a valid key press.

Multiple short blinks convey information (such as a device code) or signal the beginning and successful completion of a programming sequence.

Long blinks indicate an invalid key press or entry.

The symbol '✲' is used in the manual to indicate a power LED blink.

## Timeouts and unassigned keys

Time out – After 10 seconds the CR104 exits the programming state and returns to normal operation.

Stuck key timeout – After any key is pressed continuously for 30 seconds, the CR104 stops sending IR transmission to conserve battery life. The CR104 remains off until all keys are released.

Unassigned keys – the CR104 ignores any unassigned key presses for a particular Device Mode and does not transmit IR.

## Low voltage indicator

When the batteries are running down, the IR transmit indicator on the CR104 (the LED under the Power button) flashes five times whenever you press a button:

✲ ✲ ✲ ✲ ✲

If this happens, please fit four new AAA alkaline batteries as soon as possible.

# Device Mode / Source keys

As the CR104 can control your BDP100, AVR500, AVR600 or AV888 as well as a range of other equipment, many of the buttons have more than one function depending on the 'device mode' selected on the remote control.

The Device Mode keys (shown below) select the source on the AVR500/AVR600/AV888. If one of these keys is pressed briefly, a command is transmitted to change the source on the unit. Also the functionality of the remote control changes to operate the selected source device. It's like having eight different remotes in your hand!

| | |
|---|---|
| **BD** | BDP100 Blu-ray player |
| **SAT** | Satellite set-top box |
| **AV** | Audio-visual sound input (use with TV) |
| **TUN** | DAB, Sirius, FM or AM tuner |
| **AMP** | Controls the amplifier and setup features of the AVR500/AVR600 and AV888 |
| **PVR** | Personal Video Recorder (or Digital Video Recorder) |
| **VCR** | Video Cassette Recorder |
| **CD** | Compact Disc player |

If you press and hold a Device Mode key for about four seconds, you change the Device Mode of the CR104 ***without*** changing the signal source on the AVR500/AVR600/AV888. This can also be done by pressing (SHIFT) followed by a Device Mode key (within two seconds). These two methods allow you to change which device the CR104 controls without also changing the AVR500/AVR600/AV888 source, allowing uninterrupted listening.

Each Device Mode changes the behaviour of many of the CR104 keys to control the source device appropriately. For example:

In **CD** mode ⏮ plays the previous CD track.

In **AV** mode ⏮ issues the TV 'channel down' command.

The CR104 remains in the last selected Device Mode so it is not necessary to press a Device Mode key before every command key if all you are doing is playing or skipping tracks on a CD, for example.

## Navigation keys

The Navigation keys steer the cursor in Setup menus or on-screen menus. They also replicate the navigation functions of original remotes supplied with other home entertainment devices in your system.

(OK) confirms a setting.

## Volume control

By default, the CR104 is set up so that the volume control buttons always control the volume of an Arcam amplifier or receiver, regardless of which Device Mode the remote is currently set for. This is known as volume 'punch through'.

For example, if you are listening to a CD, you will probably have the CR104 in **CD** Device Mode to control the CD player. You can use the volume controls on the remote directly to adjust the volume of an Arcam amplifier without first having to press (AMP) to put the remote into **AMP** Device Mode. The volume buttons 'punch through' the **CD** Device Mode on the remote to the **AMP** Device Mode. Volume 'punch through' can be disabled individually for any Device Mode if desired.

## The CR104 complies with Part 15 of the FCC rules

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 a reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiated 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 or a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.



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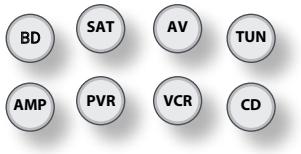
# Controlling other devices

## Method 1 (Direct code setup)

This section describes the simplest (preferred) way to program the CR104's Device Mode keys to control the non-Arcam devices in your system.




- Some of the modes are locked to Arcam operation but can be unlocked if required (see "Locking/ Unlocking a specific Device Mode" on page E-28).
- (AMP) mode **only** controls Arcam equipment.

| | |
|---|---|
| BD mode | Locked |
| SAT mode | Unlocked |
| AV mode | Unlocked |
| TUN mode | Locked |
| AUX mode | Locked |
| VCR mode | Unlocked |
| CD mode | Locked |

Here is a specific example of how to program the (AV) key to control an Addison television. The principles for controlling other devices are exactly the same.

1. Make sure your device is switched on (not just on standby).
2. Find the correct Device Code table (e.g. TV) for the type of device you want to control from the CR104.
3. Find the row containing the codes for the manufacturer of your device (e.g. Addison) (page 34). The most popular code is listed first.
4. Press the appropriate Device Mode key (e.g. (AV)) on the CR104.
5. Press and hold (SHIFT) until the red Power LED blinks twice: ✳ ✳ (It actually blinks once when you press the key, then twice after about three seconds).
6. Enter the first four-digit device code using the number keys. The power key blinks twice: ✳ ✳.
7. Aim the CR104 at the device and press (⏻). If the device switches off, the setup is complete.
8. Turn your device back on and test all the CR104's functions to ensure they are working properly.
9. **Important!** Write your device code down on the right hand side of the page so you can remember it if you ever reset the CR104.

## What if I still can't control my device?

- If your device doesn't respond, repeat the above steps until one of the device codes listed for your brand works.
- If none of the codes listed for your brand operates your device, or if your brand is not listed at all, try the Library Search Method described in the next section.

Notes:

- Some codes are quite similar. If your device does not respond or is not functioning properly with one of the codes, try another code listed under your brand.
- If your device's original remote control does not have a (⏻) (POWER) key, press (▶) instead of (⏻) when setting up your device.
- Remember to press the corresponding device key before operating your device.
- Many TVs do not switch on pressing (⏻). Please try pressing a number key ('channel select') to switch your TV back on.
- To search for the code for another device follow the instructions above, but press the appropriate device key instead of (AV) during step 2.

## Method 2 (Library search)

This section describes another way to program the CR104 to control third-party equipment.

Library Search allows you to scan through all the codes contained in the CR104's memory. It can take a lot longer than the previous method, so only use this method if:

- Your device does not respond to the CR104 after you have tried all the codes listed for your brand.
- Your brand is not listed at all in the Device Code tables.

## Example: To search for a TV code

1. Switch your TV on (not standby) and aim the CR104 at it.
2. Press (AV) on your CR104.
3. Press and hold (SHIFT) until the power LED blinks twice.
4. Press (9) (9) (1). The power LED key blinks twice: ✳ ✳.
5. Press (⏻).
6. Aim the CR104 at your Television and press (⏭) repeatedly until your Television turns off.

Every time you press (⏭) the CR104 sends out a POWER signal from the next code contained in its memory. In the worst case, you may have to press this key up to 150 times, so patience is required! If you skip past a code, step back by pressing (⏮). Remember to keep pointing the CR104 at your Television while pressing this key.

7. As soon as your television turns off, press (SHIFT) to store the code.

## Notes:

- Many TVs do not switch on by pressing (⏻). Try pressing a number key ('channel select') to switch your TV back on.
- If you cannot control your Television properly, please continue the Search Method: you may be using the wrong code.
- To search for the code for another device follow the instructions above, but press the appropriate Device Mode key instead of (AV) during step 2.
- If your device's original remote control does not have a (⏻) (**STANDBY**) key, press (▶) instead during step 5.

# Code blink-back

Once you have set up your CR104, you can blink back your device set-up codes for future reference.

## Example: To blink back your Television code

1. Press the appropriate Device Mode key (e.g. (AV)) once.
2. Press and hold (SHIFT) until the red Power LED blinks twice ✳ ✳ (It actually blinks once when you press the key, then twice after about three seconds).
3. Press (9) (9) (0). The (⏻) key blinks twice.
4. For the first digit of your four-digit code, press 1 and count all the red blinks. If there are no blinks, the digit is '0'.
5. For the second, third and fourth digits, repeat the previous step, pressing (2), (3), or (4) in order.

Now you have the four-digit code.

## Make a note of the codes

Write down the codes for your devices in the boxes below for future reference.

| Device | Code |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |

English



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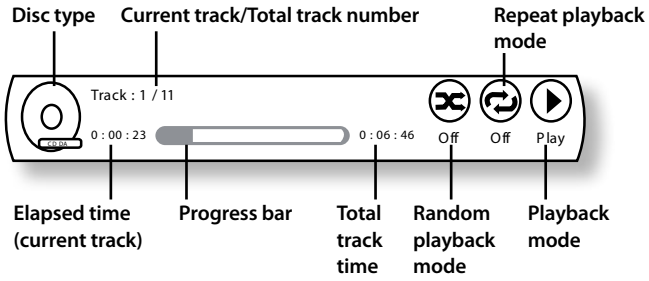
# advanced operation

## Disc Information

Press **STATUS** to display disc information on your TV screen. The information shown depends on the disc type.

For Audio CD:




Press **STATUS** again to turn off this display.

## Search

The (SRCH) button allows you to search for a specific title, chapter or track on the medium. Press (SRCH) to display the search box. Press (SRCH) repeatedly to select the search type:

| Video Discs | Audio Discs | Media Files |
|---|---|---|
| Go to Title | Go to Track | Go to File No. |
| Go to Chapter | | Go to Time |
| Go to Time | | |

Use the remote control numeric buttons to enter the search data. Press (OK) to start playback from the selected location.

## Menus

Many of BD Video and DVD Video disc contains disc menu, top menu or pop-up menu which guides you through the available functions in the disc.

The contents of menus and corresponding menu operations depend on the disc.

- **Disc Menu:** Press (TITLE) to display the disc menu ('Top Menu') on the TV.
- **Popup Menu:** Press (MENU) to display the 'Popup' menu on the TV.

Use the remote control cursor keys to navigate the menus. Highlight an item and press (OK) to select it, otherwise, press the relevant menu key to exit the menu.

***NOTE***

If the secondary audio is not heard, set the Digital Output to PCM Stereo, Bitstream Mixed, PCM 5.1 or PCM 7.1. (For details, refer to "Digital Output" on page E-21.)

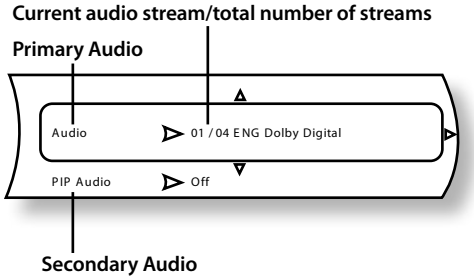
When the primary and the secondary Audio streams are all switched, they will be mixed and heard together. Set the PIP Audio to Off to switch off the secondary audio stream.

## Soundtrack Selection

Some discs contain multiple audio streams, such as a standard Dolby Digital 5.1 soundtrack and a high definition Dolby TrueHD 7.1 surround soundtrack. The audio stream can be changed during playback. The secondary audio (e.g. director's commentary) of Blu-Ray Discs (if present) can also be changed (if alternatives are available).

Note: Audio language is changed using the settings menu. Refer to page E-21.

Press (AUDIO) to display the current audio stream information:




Highlight either the Primary (Audio) or the Secondary (PIP) audio stream selection using the ▲/▼ buttons.

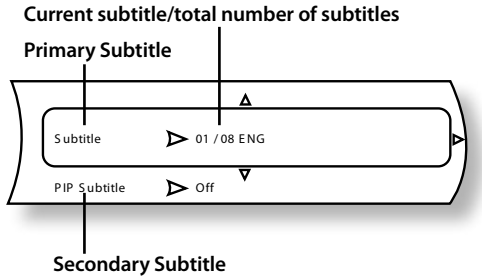
Press ▶ to show alternate audio streams. Press ▲/▼ to highlight the desired audio stream then press (OK) to select it.

## Subtitles

Some discs contain multiple subtitles. The subtitles can be changed during playback. Subtitles for the secondary video (e.g. director's commentary) of Blu-Ray Discs (if present) can also be changed (if alternatives are available).

Note: Subtitle language is changed using the settings menu. Refer to page E-21.

Press (SUBT) to display the current subtitle information:




Highlight either the Primary (Subtitle) or the Secondary (PIP Subtitle) subtitle selection using the ▲/▼ buttons.

Press ▶ to show alternate subtitles. Press ▲/▼ to highlight the desired subtitle then press (OK) to select it.



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# Bonusview & BD-Live

Bonusview and BD-Live are features of the Blu-ray Disc format.

Bonusview provides Picture in Picture and Virtual Package functions for compatible discs. BD-Live discs additionally provide a variety of features via the Internet.

Virtual Package/BD-LIVE data must be saved to a USB memory device connected to the BDP100. To enjoy these functions, connect a USB memory device (minimum 1 GB capacity, 2 GB or more recommended) supporting FAT 32 and USB 2.0 High Speed (480 Mbit/s) to the USB connector. (For details, refer to "USB Connection" on page E-9.)

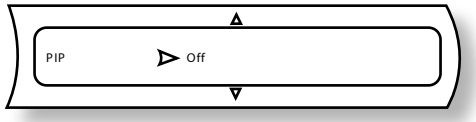
- If there is insufficient storage space, the data will not be copied/downloaded. Delete unneeded contents or use a new USB memory device.
- If a USB memory device containing other contents (previously recorded) is used, the video and audio may not play back properly.
- If the USB memory device is disconnected from this unit during playback of Virtual Package/ BD-LIVE contents, playback of the disc will stop.
- Some time may be required for the contents to load (read/write).

***NOTE***

- It may not be possible to use the BD-LIVE functions if there is insufficient space on the USB memory device. In this case, refer to "Erase Blu-ray Storage?" on page E-22 for erasing the Virtual Package contents and the BD-LIVE contents in the USB memory device.
- Operation of USB memory devices is not guaranteed.
- Do not use a USB extension cable when connecting a USB memory device to the USB connector.

## Picture in Picture (secondary video)

Some Blu-ray discs include secondary video screens that can be played back as a small video overlaid in the corner of the screen. Press the (MODE) button on the remote control to display the PiP menu:




Press (▶) to enter the PiP menu. Select a secondary video stream using the remote control cursor keys (▲)/(▼). Press (OK) to view the secondary video in PiP mode.

***NOTE***

- To listen to secondary audio or to display secondary subtitles, refer to "Soundtrack selection" or "Subtitles" on page E-16.
- Secondary video may not be present for every scene of a disc. The feature is disc-dependant, please consult the disc manual for further details.

## Virtual Package

Blu-ray discs supporting Virtual Package allow for extra content to be automatically transferred from the disc or from the Internet to USB storage for interactive viewing. Features available include secondary video and audio, subtitles and movie trailers.

***NOTE***

- Playback methods are disc-dependant — refer to the disc manual.
- Playback operations may require use of the colour-coded keys on the remote control. To access the colour key functions on the CR104 remote control, press (SHIFT) first.

## BD-Live

The BDP100 is compatible with BD-Live, allowing for a variety of functions when used with BD-Live compatible discs. BD-Live allows content such as the latest movie trailers and BD-J interactive games to be downloaded from the Internet to USB storage.

Available BD-Live functions are entirely dependant on the Blu-ray disc being played. Consult the disc manual for operational information.

***NOTE***

- The BDP100 must have an active Internet connection to use BD-Live functions. Refer to "Network connection" on page E-9 and "Network" on page E-22
- BD-Live Internet access can be disabled using the ***BD-Live Internet access*** setting in the **System** menu. See "System" on page E-22
- Playback operations may require use of the colour-coded keys on the remote control. To access the colour key functions on the CR104 remote control, press (SHIFT) first.

English



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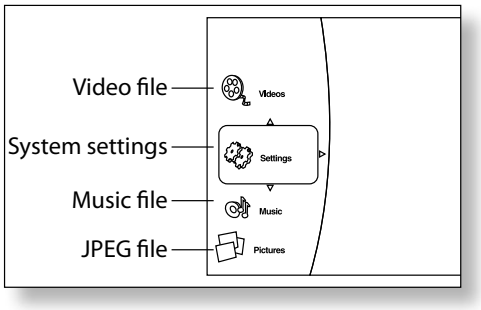
## Playing files

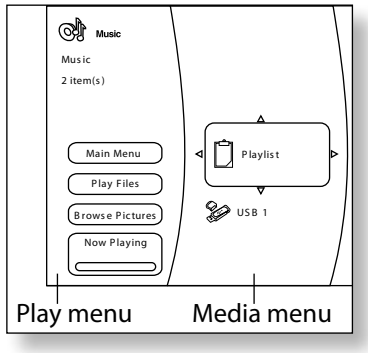
Video and audio files can be played from USB media or CD-R/RW discs. The following formats are supported:

- **Video:** AVI, WMV
- **Image:** JPG
- **Audio:** MP3, WMA

To play media files, insert the USB device or optical disc into the player. The main menu is displayed with music, video and/or picture file symbols:




Use the ▲/▼ cursor keys on the remote control to highlight the media file type to play/view. Press ▶ to select the file type. The 'Play' menu is displayed:




To play all available files without making any selection, press ◀ to go to the Play menu, described below.

To select particular files, use the ▲/▼ cursor keys on the remote control to highlight the media device to navigate in the Media menu. Press ▶ to select the media device and display the file and folder contents.

***NOTE***

- You will only be able to browse the selected type of files (music, picture or video), even if a CD-R/CD-RW or a USB memory device contains a mix of music, picture and video files. To play a different file type, return to the main menu using the **SETUP** button.
- When there are playble files or folders within the selected media or folder, "Empty" will be displayed.

A single file can be played or files can be added to a playlist in order to play a selection of files.

Highlight a file using the remote control cursor keys ▲/▼/◀/▶. Press OK to select the file.

If the file has not been added to the playlist, the following menu is displayed:

If the file has already been added to the playlist, the following menu is displayed:

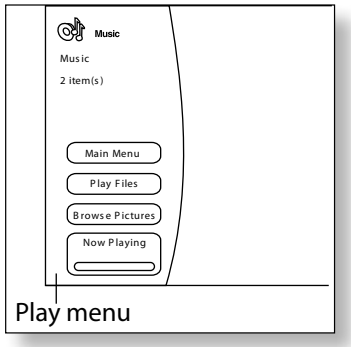
***NOTE***

- "Play (File)" cannot be selected for JPEG images. Add the images to be viewed to the playlist in order to play a slideshow of images.
- The playlist is cleared whenever the USB device is removed or the optical disc is ejected.

Use the ▲/▼ cursor keys on the remote control to highlight a menu item and press OK to select it.

Select "Play (file)" to play a single file, or select "Add to Playlist" to add the file to the playlist. When the desired files have been added to the playlist, press ◀ on the remote control to go back to the Play menu.

### The Play menu



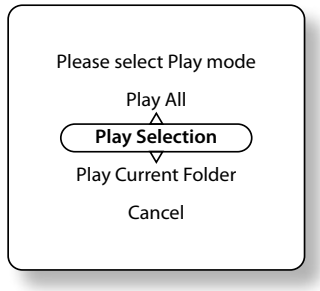

The items listed on the play menu vary according to the selected media and current status. When media is playing, press the **STOP** button to display the Play menu.

Select an option using the ▲/▼ cursor keys and press OK to select it.

- **Main Menu:** Returns to the main menu.
- **Play Files:** Navigates to the Play Mode menu.
- **Browse Pictures / Browse Music:** Changes the file type to be played and navigates to the media device showing the file type selected.
- **Add all to playlist:** Adds all files to the playlist.
- **Remove all from playlist:** Clears all files from the playlist.
- **Previous folder:** Navigates to the previous folder or menu.
- **Now Playing:** Displays the playback status for music files.

### The Play Mode menu

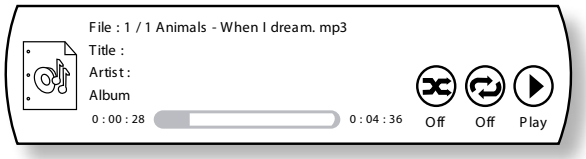
Use the ▲/▼ cursor keys on the remote control to highlight "Play Files" and press OK to show the Play Mode menu:




Select an option using the ▲/▼ cursor keys and press OK to select it.

- **Play All:** Plays all the files of the selected type on the disc or device.
- **Play Selection:** Plays all items added to the playlist.
- **Play Current Folder:** Plays all the files of the selected type in the current folder.
- **Cancel:** Return to Play menu.

When a play option is selected, the media will play and the "Now Playing" information panel will be shown:




***NOTE***

- When playing JPEG files, each file is displayed for a time interval. This can be adjusted by pressing **SHIFT** followed by II on the remote control, or by entering the Slideshow Effects menu, described opposite.
- The selectable play mode varies according to the operation status and the selected media, etc.



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## Advanced playback controls

The following advanced controls are available during disc or file playback (depending on media type):

### Slow playback

Press **SHIFT** followed by (II) to activate slow motion playback. Press this button combination again to change the playback speed. Speeds of 1/2, 1/4 and 1/8 are available.

### Time interval

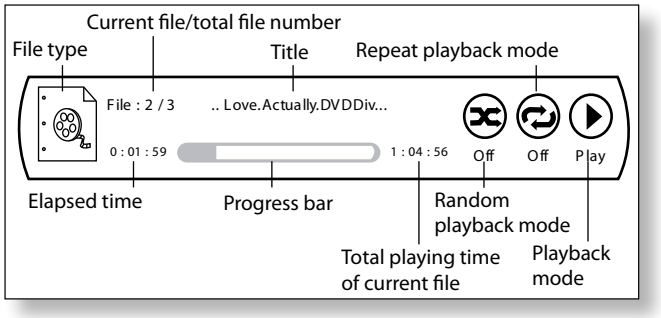
When viewing JPEG picture slideshows, the time interval between pictures can be changed between 5, 10, 15 and 30 seconds. Press **SHIFT** followed by (II) to switch between different time intervals

### Rapid Playback

Press (◀◀) or (▶▶) during playback to activate rapid reverse or forward playback. Further button presses change the playback speed. Speeds of 2x, 4x, 8x, 16x, 32x, 64x and 128x normal speed are available. Press (▶) to resume normal playback.

### Displaying File Information

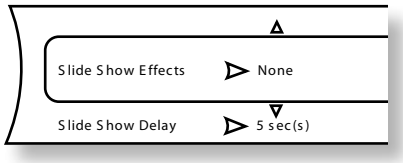
Press the **STATUS** button to display the file information panel. The file information panel shows the following information:




Press status again to hide the file information panel. Note that the file information panel is always shown when playing music files.

### Slideshow Effects

When viewing a JPEG picture slideshow, press the (MENU) button to display the Slideshow Menu:




Use the (▲)/(▼) cursor keys on the remote control to highlight a menu item and press (▶) to select it.

- **Slide Show Effects:** Use the (▲)/(▼) cursor keys to select one of the following effects:
  - Horizontal Scroll
  - Fade
  - Shutter
  - None

  Press (OK) to confirm the selection.

- **Slide Show Delay:** Use the (▲)/(▼) cursor keys to select the delay time between pictures:
  - 5 seconds
  - 2 seconds
  - 1 second
  - None
  - 10 seconds
  - 15 seconds
  - 30 seconds

  Press (OK) to confirm the selection.

### Playing music whilst viewing pictures

During the playback of music files, press the (OK) button to display the Play menu. Use the (▲)/(▼) cursor keys on the remote control to highlight "Browse Pictures" and press (OK). Select pictures and play them as described in "The Play menu" on page E-18. The JPEG pictures will be displayed whilst the music continues to play.

***NOTE***

- When playing JPEG files and music simultaneously, the playback controls affect the JPEG file playback only.
- To control the music files:
  1. Press the stop button (■) to stop the JPEG slideshow and display the Play menu.
  2. Use the (▲)/(▼) cursor keys on the remote control to highlight "Now Playing" and press (OK). The playback controls nowaffect music playback.



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# settings menus

The Settings menus allow you to configure all aspects of your BDP100. The next few pages will go through the menu items and explain their function. The Settings menus may look daunting if you are new to setting up home cinema, but the majority of them need only be configured once when you first install the system.

The only way to view the Settings menus is on your display device (TV or projector) using the on-screen display (OSD) capability of the BDP100. To view the OSD for the initial setting up, connect any of the video outputs to your display device (or AV receiver connected to your display).

### Entering the settings menu

To enter the settings menu, use the ▲ and ▼ cursor keys to highlight the 'Settings' option on the main menu. If the main menu is not currently displayed, press **SETUP** on the remote control to display it. Note that during the playback of music, video or JPEG files further button presses may be required to exit the folder structure. Press ▶ to enter the Settings menu.

### Unstable OSD menu or picture display?

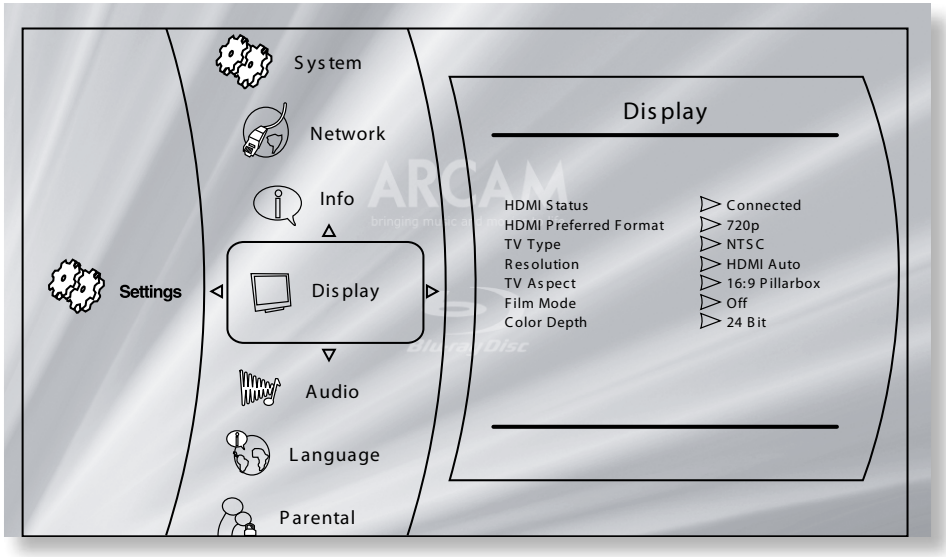
The default BDP100 output video resolution when first powered up out of the box has been chosen according to the national standard in the country wheso that most display devices can synchronise to the video signal automatically. This can be changed in the Video Outputs section of the Setup Menus.

If the output resolution and frame rate is set to a setting your display device does not support, the picture may become unstable or may not display at all. If this happens, connect the BDP100 directly to your display using the composite video connection in order to see the menus. Once the correct video settings have been entered, a higher-quality connection can be used.

## Navigating the menus

The BDP100 menus can be navigated by using the cursor (arrow) keys on the remote control.

1. To display the main menu, press the **SETUP** button.
2. Use the ▲ and ▼ keys to navigate up and down the main section headings in the left-hand panel.
3. Once you have the main section that you require highlighted, use the ▶ key to enter the section.
4. Use the ▲ and ▼ keys to navigate up and down the section settings in the right-hand panel. Some settings may be greyed out. These are either for information only (e.g. incoming sampling frequency) or are not currently selectable (e.g. network IP address when DHCP is used).
5. Pressing ▶ selects a setting to change it,
6. Use the ▲ and ▼ keys to change the setting.
7. Press **OK** to confirm the setting. Go back to step 4 to adjust the other settings in the current section.
6. Press ◀ or **RETURN** to go back to the previous screen, to select another section to adjust.

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## Display

***TV Type*** – Set the video signal format. If the colour or picture quality of analogue video appears incorrect, change this setting. It should not need to be adjusted in normal use.

- **NTSC:** USA and Canada video standard.
- **PAL:** Europe, Australia and China video standard.

***Resolution*** – Set the video resolution of the **HDMI** and **COMPONENT VIDEO** outputs.

- **HDMI Auto:** Sets the TV's preferred resolution.
- **1080p:** Full HD progressive video.
- **1080i:** interlaced HD video.
- **720p:** progressive HD video.
- **480p/576p:** 480 lines (NTSC) or 576 lines (PAL) progressive video
- **480i/576i:** 480 lines (NTSC) or 576 lines (PAL) Standard Definition interlaced video.

***NOTE***

- The HDMI Auto setting may not set the best possible resolution. If you have a 1080p Full HD display, set the resolution to 1080p.
- For full details of output resolutions available at different outputs, refer to the table on page E-25.

***TV Aspect*** – Set the aspect ratio (shape) of your display.

- **16:9 Wide:** Use with widescreen TVs. 4:3 material will be zoomed to fit the screen.
- **16:9 Pillarbox:** Use with widescreen TVs. 4:3 material will be displayed in full, with vertical black bars at the sides.
- **4:3 Pan and Scan:** Use with 4:3 non-widescreen TVs. 16:9 widescreen content will be displayed with the left- and right-hand sides of the image cropped to fit the screen (no black bars). The aspect ratio will be maintained (the image will not be stretched).
- **4:3 Letterbox:** Use with 4:3 non-widescreen TVs. 16:9 widescreen content will be displayed with black bars at the top and bottom.

***24p Mode*** – Enable or disable 24 frames-per-second video output (1080/24p).

- **On:** Select to output 24p signals from the **HDMI** output.
- **Off:** Disable 24p video output.

***NOTE***

- 1080/24p video signals can only be output using the **HDMI** connection.
- The connected equipment (AV receiver, TV/projector) must be 1080/24p compatible.
- The output resolution must be set to **1080p** or **HDMI Auto**.

***Color Depth*** – Set the level of Deep Color processing applied to the HDMI video output.

- **36-bit:** Select to output 36-bit Deep Color signals from the **HDMI** output.
- **30-bit:** Select to output 30-bit Deep Color signals from the **HDMI** output.
- **24-bit:** Select to output 24-bit standard color signals from the **HDMI** output (Deep Color off).

***NOTE***

- The connected equipment (AV receiver, TV/projector) must be Deep Color compatible in order to use 30/36-bit Deep Color signals. Refer to your TV & AV receiver user manual.
- All system HDMI interconnect cables must be Deep Color compatible in order to use 30/36-bit Deep Color signals.
- If you experience a flickering or abnormal picture after changing the Deep Color setting, connect the unit using a Composite video cable and change the setting to a value supported by the display.

## Audio

***PCM Downsampling*** – Set the maximum sample rate of audio output from the **OPTICAL** or **COAXIAL DIGITAL OUT.**

- **96kHz:** Output digital audio with a 96kHz sample rate (best quality).
- **48kHz:** Output digital audio with a 48kHz sample rate (most compatible).

***NOTE***

- If the connected equipment (e.g. AV receiver) does not support 96kHz, silence or loud noise may result from this setting. If this happens, set ***PCM Downsampling*** to 48kHz.

***Digital Output*** – Sets the audio format output from the **HDMI**, **OPTICAL** or **COAXIAL DIGITAL OUT.**

- **Bitstream HD:** Output the HD bitstream Blu-ray Disc soundtrack for decoding in your AV receiver (**HDMI** output only, requires compatible AV receiver).
- **Bitstream Legacy:** Output the relevant legacy format for the soundtrack. This option is suitab;e for older AV receivers that are not HD, HDMI Audio or DTS compatible.
- **Bitstream Mixed:** Convert all surround audio to DTS 5.1 surround format. This option gives the best quality for DTS-compatible AV receivers that are not HD or HDMI Audio compatible.
- **PCM 7.1:** Decodes all formats within the player and outputs PCM audio. Use this option for HD receivers that cannot decode all HD formats. The **OPTICAL** and **COAXIAL** digital outputs will output stereo PCM audio.
- **PCM 5.1:** As PCM 7.1 but any HD 7.1-format surround soudtracks will be converted to 5.1-format surround (**HDMI** output only).
- **PCM Stereo:** Decodes all formats within the player and outputs PCM audio. All surround-sound formats are converted to stereo on all audio output connections.

***NOTE***

- The signal at the **HDMI** output is also determined by the formats supported by the connected equipment.
- For full details of output formats, refer to the table on page E-25.

***Dynamic Range Control*** – Set whether to compress the dynamic range between the loudest and softest sounds when a Dolby Digital, Dolby Digital Plus or DolbyTrueHD audio is played back.

- **On:** Turns on Dynamic Range Control so that quiet sounds can be heard more easily.
- **Off:** Turns Dynamic Range Control off.
- **Auto:** Allows coding embedded within a Dolby TrueHD soundtrack to set the dynamic range. For other soundtracks, responds the same as '**On**'.

## Language

***OSD*** – Set the language used for the On Screen Display (OSD).

***Menu*** – Set the language used for the Disc Menu and Pop-up Menu.

- **Auto:** Sets the priority language of the disc.

***Audio*** – Set the language for the soundtrack.

- **Auto:** Sets the priority language of the disc.

***Subtitle*** – Set the language used for the subtitles.

- **Off:** Displays no subtitles.

***NOTE***

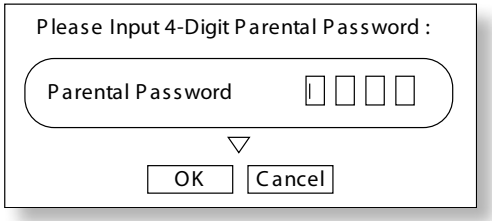
- The ability to select a particular language may depend on the disc played.

## Parental Control

Parental control settings can be engaged to prevent viewing of discs or scenes with material inappropriate for children. A 4-digit code is required to enable or disable Parental Control. Parental Control has various levels; according to the level set, a disc may be stopped or have certain scenes cut or substituted with alternative scenes, depending on the disc.

To activate Parental Control:

1. Select the Parental Control menu:
SETUP Settings ▶ Parental Control ▶
2. If Parental Control is set to On, you must enter your PIN using the remote control numeric buttons. The default PIN is 3308.




3. Once the Parental Control menu is accessed, press the ▲/▼ cursor buttons on the remote to select from the following items. Press ▶ to select an item.

English



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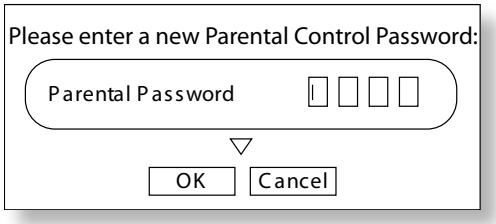
***Parental Control*** – Set whether Parental Control is On or Off.

- **Off:** All discs are played back.
- **On:** Disc palyback is restricted according to the Parental Level set in the following menu item.

***Parental Level*** – Set the degree of disc restriction. The lower the value, the stricter the limitation.

- **1 [Kid Safe]:** Suitable for children.
- **2 [G]:** General audience.
- **3 [PG]:** Parental Guidance suggested.
- **4 [PG-13]:** Unsuitable for children under 13.
- **5 [PG-R]:** Parental Guidance Recommended.
- **6 [R]:** Restricted; cinemas require children under the age of 17 to have an accompanying adult parent or guardian.
- **7 [NC-17]:** Cinemas do not admit anyone younger than 17 years old.
- **8 [Adult]:** Discs of any rating (Adult/General/Children) can be played back.

***Parental Password*** – Press ▶ with this option highlighted to enter a new password. Enter a new 4-digit code using the numeric buttons on the remote control, then navigate to the on-screen **OK** button using the remote control cursor keys, then press **OK** on the remote control. You will be prompted to re-enter the code for confirmation, repeating the process above.




## System

***Optical Disc Autoplay*** – controls whether an optical disc (e.g. Blu-ray Disc, DVD, CD) will play automatically after it has loaded.

- **On:** Optical discs will play automatically.
- **Off:** **PLAY** must be pressed to play a disc.

***BD-Live Internet access*** – sets restrictions on Internet access.

- **Limit Access:** Only allows Blu-ray discs with owner certification to access the Internet.
- **Always Allow Access:** All BD-Live discs are allowed access to BD-Live websites.
- **Prohibit Access:** Prohibit all BD-Live discs from accessing BD-Live websites.

***NOTE***

- The available on-line functions are disc-dependent.
- Refer to the BD-Live disc instructions for information about accessing on-line content.
- The BDP100 must be connected to the Internet and set up correctly to allow access to on-line content. See page E-9 for network connections and page E-22 for network settings.

***BD-Live Storage*** – BD-Live content is stored in the attached USB memory device. This menu item displays the amount of USB memory remaining.

***Erase Blu-Ray Storage*** – Press **OK** with this item highlighted to erase the BD-Live content stored on the USB storage device.

***Screensaver duration*** –sets the duration of static image display before the screensaver is shown. The screensaver prevents screen damage due to burn-in of a static image.

- **Off:** Deactivates the screensaver function.
- **5/10/20/30 minutes:** sets the period of time that a static image can be displayed before the screensaver activates.

***NOTE***

- The screensaver can be deactivated by pressing any button on the unit or remote.

***Reset Settings*** – Press **OK** with this item highlighted to reset all settings to factory defaults (except parental controls).

## Network

An active, configured Internet connection is required if you wish to use BD-Live websites and downloaded content. See page E-9 for physical connections.

Most home networks will automatically configure the connection using DHCP. If your network is not configured automatically, you will need to know the following settings:

- **IP Address**
- **Subnet Mask**
- **Gateway**
- **Primary DNS**
- **Secondary DNS**

### Wired Network

Select and press **OK** to set the network connection parameters:

***Link Status*** – Information only

***MAC Address*** – Information only

***IP Mode*** – Set whether the network settings are automatic or set manually.

- **Off:** Disables network functions.
- **Manual:** Enter settings manually, for expert users.
- **Dynamic:** Allows the connected router or modem to configure the network settings automatically, using the network's DHCP server. This setting should be used for the majority of home networks.

The following settings are only available when ***IP Mode*** is set to Manual:

***IP Address –*** Press OK to set the IP address assigned to your player by your network administrator. Use the cursors to navigate between segments and use the numeric keys on the remote control to enter the address. Navigate to the on-screen OK button and press OK on the remote to save the setting.

***Subnet Mask –*** Press OK to set the subnet mask of your network. Use the cursors to navigate between segments and use the numeric keys on the remote control to enter the subnet mask. Navigate to the on-screen OK button and press OK on the remote to save the setting.

***Gateway –*** Press OK to set the IP address of your Internet gateway. Use the cursors to navigate between segments and use the numeric keys on the remote control to enter the address. Navigate to the on-screen OK button and press OK on the remote to save the setting.

***Primary DNS –*** Press OK to set the IP address of your Primary DNS server. Use the cursors to navigate between segments and use the numeric keys on the remote control to enter the address. Navigate to the on-screen OK button and press OK on the remote to save the setting.

***Secondary DNS –*** Press OK to set the IP address of your Secondary DNS server. Use the cursors to navigate between segments and use the numeric keys on the remote control to enter the address. Navigate to the on-screen OK button and press OK on the remote to save the setting.

### Network Test

Press OK to run a network test. This will also configure the network settings automatically if they have not been configured and if automatic configuration (DHCP) is supported by the network.



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# trouble-shooting



If a fault occurs, run through the table below before taking your unit for repair.
If the fault persists, attempt to solve it by switching the unit off and on again. If this fails to resolve the situation, consult your dealer. Under no circumstances should you repair the unit yourself as this will invalidate the guarantee!

| Problem | Possible cause | Remedy |
|---|---|---|
| No power | • The AC input cord is disconnected.<br>• Poor connection at AC wall outlet or the outlet is inactive. | • Connect cord securely.<br>• Check the outlet using a lamp or another appliance. |
| No playback | • The disc is loaded upside down.<br>• The disc is not playable.<br>• The disc is dirty.<br>• The recorded disc is not correctly finalized.<br>• The parental level is not set correctly.<br>• The symbol about invalid operation is displayed. | • Reload the disc with the printed side up.<br>• Use a playable disc.<br>• Clean the disc.<br>• Load a disc that is correctly finalized.<br>• Set the parental level setting correctly. (Refer to page E-21.)<br>• Adjust the setting correctly. |
| Malfunction | • The disc is scratched, dirty, poorly recorded or unplayable. | • Press the POWER switch to switch the power off, press the POWER switch again and then unload the disc. |
| No picture | • The video cords are disconnected.<br>• The incorrect selection of input source on the TV.<br>• The disc is not playable. | • Connect the cords correctly.<br>• Select the input source correctly.<br>• Use a playable disc. |
| Noisy or distorted picture | • The unit is connected to a recording device directly and the copyguard function is activated.<br>• The disc is dirty.<br>• It is in rapid advance or reverse playback, or in frame advance playback. | • Connect the unit so that the picture signal is transferred directly to the TV.<br>• Clean the disc.<br>• Sometimes a small amount of picture distortion may appear. This is not a malfunction. |
| Abnormal picture or no picture | • The resolution is not set correctly for video signals to be output form the COMPONENT and the HDMI OUTs.<br>• The TV does not support HDCP.<br>• The TV type of this unit is different from that of your TV or the disc. | • Set the resolution correctly. (Refer to page E-21.)<br>• This unit will not transfer the video signals via the HDMI connector to TV that does not support HDCP. This is not a malfunction.<br>• Set the TV type correctly. (Refer to page E-21.) |
| Slight pause of picture | • The layer transition occurs during playback of DVD Videos, etc. recoded in dual-layer format. | • Sometimes a slight pause may occur. This is not a malfunction. |
| No sound | • The audio cords are disconnected.<br>• The speakers are disconnected to the amplifier.<br>• The incorrect selection of input source on the amplifier. | • Connect the cords correctly.<br>• Connect the speakers correctly.<br>• Select the input source correctly. |
| Noisy or distorted sound | • The disc is dirty.<br>• Poor connections. | • Clean the disc.<br>• Check the connections and connect all cords securely. |
| BD-LIVE contents cannot be loaded | • Poor connections between this unit and broadband router and/or modem.<br>• The USB memory device is disconnected.<br>• The BD-Live Internet Access is set to “Prohibit Access”.<br>• The BD disc does not support BD-LIVE.<br>• The network settings are not set correctly. | • Check the connections and connect all cords securely.<br>• Connect the USB memory device to this unit.<br>• Set it to “Always Allow Access” (Refer to page E-22.)<br>• Load a disc that supports BD-LIVE.<br>• Set the network settings correctly. (Refer to page E-22.) |
| Remote control unit does not operate. | • Batteries are not loaded or exhausted.<br>• The remote sensor is obstructed. | • Replace the batteries.<br>• Remove the obstacle. |



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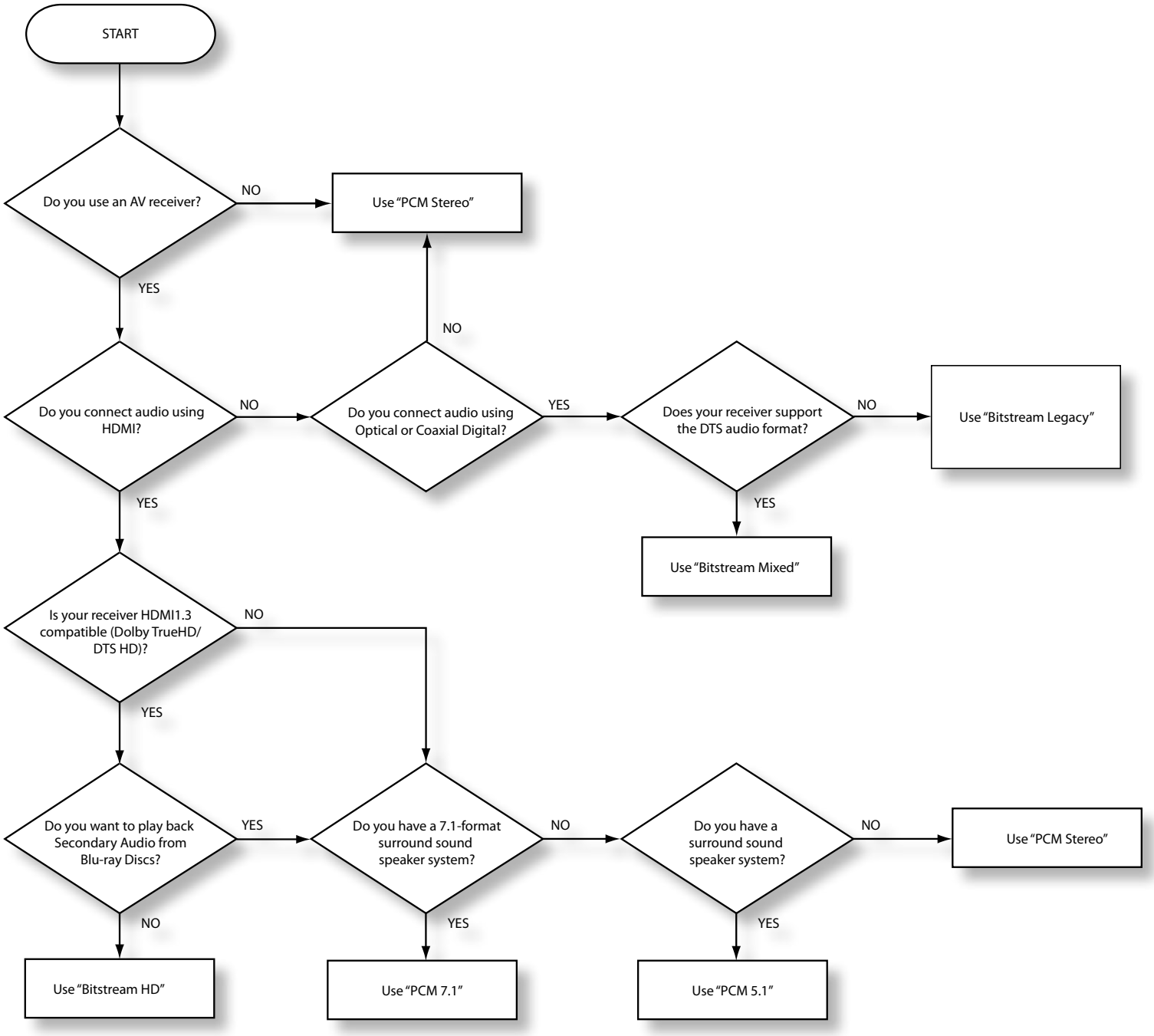
# audio & video output formats

## Audio output format

The audio output format available from the digital audio outputs depends on the soundtrack format being played, the audio output in use and the ***Digital Output*** setting in the **Audio** settings menu ("Audio" on page E-21).The table opposite shows all possible combinations.

Use the flowchart on this page to guide you to the correct setting for your home cinema setup.



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| Audio Format | Digital Output setting | HDMI out | Optical/Coax out |
|---|---|---|---|
| Dolby Digital | Bitstream HD | Dolby Digital 5.1 | Dolby Digital 5.1 |
| | Bitstream Legacy | Dolby Digital 5.1 | Dolby Digital 5.1 |
| | Bitstream Mixed | DTS 5.1 | DTS 5.1 |
| | PCM 7.1 | PCM 5.1 | PCM Stereo |
| | PCM 5.1 | PCM 5.1 | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| Dolby Digital Plus / Dolby TrueHD | Bitstream HD | Dolby Digital Plus / Dolby TrueHD | Dolby Digital 5.1 |
| | Bitstream Legacy | Dolby Digital 5.1 | Dolby Digital 5.1 |
| | Bitstream Mixed | DTS 5.1 | DTS 5.1 |
| | PCM 7.1 | PCM 7.1 | PCM Stereo |
| | PCM 5.1 | PCM 5.1 | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| DTS-HD High Resolution Audio / DTS-HD Master Audio | Bitstream HD | DTS-HD High Resolution Audio / DTS-HD Master Audio | PCM Stereo |
| | Bitstream Legacy | DTS 5.1 | DTS 5.1 |
| | Bitstream Mixed | DTS 5.1 | DTS 5.1 |
| | PCM 7.1 | PCM 7.1 | PCM Stereo |
| | PCM 5.1 | PCM 5.1 | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| DTS | Bitstream HD | DTS 5.1 | DTS 5.1 |
| | Bitstream Legacy | DTS 5.1 | DTS 5.1 |
| | Bitstream Mixed | DTS 5.1 | DTS 5.1 |
| | PCM 7.1 | PCM 5.1 | PCM Stereo |
| | PCM 5.1 | PCM 5.1 | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| LPCM 7.1 (48kHz / 96kHz) | Bitstream HD | PCM 7.1 | PCM Stereo |
| | Bitstream Legacy | PCM 7.1 | PCM Stereo |
| | Bitstream Mixed | DTS 5.1 | DTS 5.1 |
| | PCM 7.1 | PCM 7.1 | PCM Stereo |
| | PCM 5.1 | PCM 5.1 | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| LPCM 5.1 192kHz | Bitstream HD | PCM Stereo | PCM Stereo |
| | Bitstream Legacy | PCM Stereo | PCM Stereo |
| | Bitstream Mixed | DTS 5.1 | PCM Stereo |
| | PCM 7.1 | PCM Stereo | PCM Stereo |
| | PCM 5.1 | PCM Stereo | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |
| LPCM 2.0 (44.1kHz / 48kHz) | Bitstream HD | PCM Stereo | PCM Stereo |
| | Bitstream Legacy | PCM Stereo | PCM Stereo |
| | Bitstream Mixed | DTS 2.0 | DTS 2.0 |
| | PCM 7.1 | PCM Stereo | PCM Stereo |
| | PCM 5.1 | PCM Stereo | PCM Stereo |
| | PCM Stereo | PCM Stereo | PCM Stereo |

## Video Output Resolution

The following table shows the video output resolution at each video output for the different resolution settings (see “Display” on page E-21).

| Resolution setting | Video Outputs | | | | | |
|---|---|---|---|---|---|---|
| | Composite video out | | Component video out | | HDMI out | |
| | NTSC | PAL | NTSC | PAL | NTSC | PAL |
| HDMI Auto | 480i | 576i | 1080i | 1080i | Preferred | Preferred |
| 1080p | 480i | 576i | 1080i | 1080i | 1080p | 1080p |
| 1080i | 480i | 576i | 1080i | 1080i | 1080i | 1080i |
| 720p | 480i | 576i | 720p | 720p | 720p | 720p |
| 480p/576p | 480i | 576i | 480p | 576p | 480p | 576p |
| 480i/576i | 480i | 576i | 480i | 576i | 480i | 576i |

***NOTES:***

- If the HDMI and Component video outputs are used simultaneously, the Component video will be output at standard definition (480i/576i resolution).
- Copy protected DVDs can only be output at standard definition over analogue video connections (component or composite).
- If the BDP100 is set to a resolution that your TV does not support, there may be no picture. If this happens, connect the Composite Video output to your TV. Select the appropriate video input on your TV to display the settings menu. Change the resolution to a value supported by your TV then change the connections back to the desired configuration.
- The ‘HDMI Auto’ setting uses the resolution value that the TV requests. This may not be the best resolution. It is recommended to consult your TV documentation to discover the best resolution setting and to set this resolution manually.



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# customising the CR104

## Code Learning

The CR104 comes with a complete library of preprogrammed codes. After you have set up the CR104 for your device, you may find that there are one or more functions on your original remote which do not have a place on the CR104 keypad. For convenience, the CR104 offers a Code Learning feature that allows you to copy up to 16 functions from an original remote control onto the CR104 keypad.

Before you start, make sure that:

- The original remote control is working correctly.
- The remotes are not pointing at your device.
- The remotes have new batteries.
- The remotes are not in direct sunlight or under strong fluorescent lights.

Learned functions are mode-dependent: You could theoretically assign up to eight different functions to a single key (the CR104 can handle a total of 16 learned functions).

### Example: To copy the 'text hold' function from a TV remote onto the ⏭ key of your CR104

1. Place both remotes on a flat surface, 2 to 5cm apart, with the IR ports facing each other.
2. On the CR104, press and hold SHIFT until the power LED blinks twice: ✳ ✳.
3. Press 9 7 5. The power LED blinks twice: ✳ ✳.
4. On the CR104, press the device key that matches the 'source' device (e.g. if you're learning a TV function, press AV).
5. On the CR104, press the key to which you want to assign the learned function (e.g. ⏭). The device key blinks rapidly.
6. On the original remote, press and hold the function key that you want to learn (e.g. **TEXT HOLD**) until the CR104 device key blinks twice: ✳ ✳.
7. If you want to learn other functions from the same source device, simply repeat steps 5 and 6 pressing the next key you want to learn.
8. To exit Code Learning mode, press and hold SHIFT until the device key blinks twice: ✳ ✳.
9. To use the learned function on the CR104, press the Device Mode key, followed by the function key.

   In this example, you'd press AV followed by ⏭

### Shifted Learning

You can assign a learned function to a CR104 key without sacrificing its original function.

You can assign Shifted Learning functions to any key **except** for: Device Mode keys (e.g. AV), SHIFT, or number keys (0 to 9).

1. To assign a Shifted Learning function, simply follow Code Learning steps in the previous section. During step 5, press SHIFT once before you press the key to which you want to assign the learned function.
2. To access the shifted function, press SHIFT and then the target key.

### Important notes

- Once you start a Code Learning session, you have approximately 10 seconds to conduct each step. Any longer, and a timeout means that you'll have to start the process again.
- The Learning feature is mode-specific – you can copy one feature ***per mode*** onto a key.
- The CR104 can learn approximately 16 functions in total.
- To replace a learned function, simply assign a new one to the same key.
- Learned functions ***are*** retained when you change batteries.
- If Code Learning fails, try altering the distance between the two remotes; make sure that the light in the area is not too bright.

### To delete a learned function

1. Press and hold SHIFT until the power LED blinks twice: ✳ ✳.
2. Press 9 7 6. The power LED blinks twice: .
3. Press a Device Mode key once. For example, if you want to delete one of your learned TV functions, press AV.
4. Press twice on the key you want to deassign. The handset blinks twice: ✳ ✳ to confirm.

   The original function of the CR104 is restored.

### To delete a Shifted Learned function:

To delete a Shifted Learned function, press SHIFT before you press the key to be deassigned (during step 4 above).

### To delete ALL learned functions within a given Device Mode

1. Press and hold SHIFT until the power LED blinks twice: ✳ ✳.
2. Press 9 7 6 – the power LED blinks twice: ✳ ✳.
3. Press the appropriate Device Mode key twice.



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## Creating Macros

You can program your CR104 to issue a sequence of commands when you press a single key. Any sequence of commands you regularly use can be reduced to a single key press for your convenience.

For example, you might want to turn off your TV, VCR and Satellite at the same time.

- A key programmed with a Macro is available in all modes; it will replace that key's different functions for all modes.
- A Macro can consist of up to eight key presses.

### Example: To assign a Macro to the SRCH key

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 5.
3. Press SRCH (the Macro will be assigned to this key).
4. Press a, ⏻, VCR, ⏻, SAT, ⏻. (These are the Macro steps you wish to record.)
5. To store the Macro, press and hold SHIFT until the power LED blinks twice: ✳✳.

Now, whenever you press SRCH, the CR104 will toggle the power to your TV, VCR and Satellite.

- The important word here is 'toggle'. For example, if the TV and Satellite devices are currently on, but the VCR is off, pressing SRCH will switch off the TV and Satellite and switch on the VCR (rather than switching all three devices on or off).
- When using Macros, remember that you may need to change mode or use SHIFT, and that each key press (including changing modes and pressing SHIFT) counts as one of the Macro steps. You cannot use a Macro key within another Macro.
- If the amount of memory storage for a particular Macro is exceeded, the power LED comes on for five seconds. You can, however, save the macro steps up to that point by pressing SHIFT, or you can cancel the Macro recording by pressing any other key.
- The delay between key presses is recorded as part of the Macro. A delay of up to 30 seconds is permitted.

### Example: To deassign the Macro associated with the SRCH key

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 5.
3. Press SRCH.
4. Press and hold SHIFT until the power LED blinks twice: ✳✳.

## Volume punch-through

Volume punch-through means that, no matter which Device Mode is selected, the CR104 controls the AVR500, AVR600 or AV888 volume. You don't need to press AMP on your CR104; this feature is switched on by default.

There are times, however, when you might want to control a device's volume directly when in a specific Device Mode.

### Example: To cancel volume punch-through for a TV (AV mode)

1. Press AV once.
2. Press and hold SHIFT until the power LED blinks twice: ✳✳.
3. Press 9 9 3.
4. Press −. The power LED blinks four times.

Now, while in TV (AV) mode, you will be able to control the volume or mute functions of your TV directly.

### To completely cancel all volume punch-through settings

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 3.
3. Press +. The power LED blinks four times ✳✳✳✳.

Now, whichever mode you're in, you will have direct access to that device's volume or mute functions, assuming they are available. You would need to switch to **AMP** mode to alter the AVR500/AVR600/AV888 volume.

### Example: To restore default volume punch-through settings to all Device Modes

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 3.
3. Press AMP. The power key LED blinks twice: ✳✳.

## Key Mover

Sometimes you might find that a key you use a lot for your system is in the 'wrong' place on the CR104 keypad for your comfort. It's quite easy to reassign a favourite function to a more accessible key. It is even possible to move a function from one Device Mode to another Device Mode.

### Example: To assign the DISP function to the MENU key in SAT mode

1. Press SAT.
2. Press and hold SHIFT until the power LED blinks twice: ✳✳.
3. Press 9 9 4.
4. Press the key you want to move (e.g. DISP)
5. Press the key you want to move the key to (e.g. MENU).

Now, pressing either DISP or MENU while in SAT Device Mode makes the CR104 transmit the DISP function.

To completely swap over the functionality of the two keys to put the MENU functionality on the DISP key, repeat the above process again, but swap over the DISP and MENU key presses in the example.

Note that the function that is copied over to the new key is always the original function of the old key.

### Restore a moved key

To restore a key to its previous function, repeat the example above, pressing the key to be restored twice (copy it back to itself).

### Restore all moved keys for a Device Mode

To restore all keys in a Device Mode to their original functional positions, repeat the example above, but press the relevant Device Mode key (e.g. AMP) at points 1,4 and 5 in the example.





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### Copy a key between Device Modes

It is possible to copy functions between Device Modes. However, remember that button functions are Device Mode specific and therefore effectively 'punch-through' to the original Device Mode when copied over.

The following example copies the AVR500/AVR600/AV888 **DIRECT** function from the CR104 **AMP** device mode to the shifted function of the ■ button on **AV** Device Mode.

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 4.
3. Press the Device Mode key of the function you want to move (e.g. AMP).
4. Press the function key you want to move (e.g.◀◀/ **DIRECT**)
5. Press the key of the Device Mode you want to copy the function to (e.g. AV)
6. Press the SHIFT button graphic
7. Press the key you want to copy the function to (e.g. ■)

If you prefer to copy the key to the main function of the ■ button instead of the 'shifted' function, omit point 6 in the above example.

## Mode Mover

If your home entertainment setup contains devices of the same type (e.g. two TVs, perhaps from different manufacturers) you can still control both those devices with the CR104. You simply need to reassign an ***unused*** Device Mode key.

> ***NOTE***
> Before using Mode Mover, make sure both the source and destination Device Mode keys are unlocked (see next section).

### Example: To use the SAT key to control a second TV

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
3. Press 9 9 2.
3. Press the Device Mode key for the type of device you want to control (e.g. for a TV, press AV).
4. Press the Device Mode key you want to use (e.g. SAT).
5. Don't forget to set up the CR104 to control the second device, using one of the methods from "Controlling other devices" on page E-15.

Note that volume punch-through is not applied to a Device Mode that has been copied using Mode Mover. However, volume punch-through functionality can be restored when you have used Mode Mover, by copying −, + and 🔇 from the AMP Device Mode to the same physical buttons on the new moved Device Mode using the last example shown in Key Mover.

### To restore a moved Device Mode key to its original state

1. Press and hold SHIFT until the power LED blinks twice: ✳✳.
2. Press 9 9 2.
3. Press the Device Mode key you want to restore ***twice***.

## Locking/Unlocking a specific Device Mode

When you first unpack your CR104 and insert the batteries, for your convenience it is able to control certain Arcam components automatically (e.g. DVD players, Amplifiers, Tuners and CD Players). We achieve this by preprogramming specific Arcam device codes onto the relevant Device Mode keys, then locking the Device Modes so you don't reprogram them inadvertently.

If you want to override these locked default settings – to control a third-party CD player, for example – you will first need to unlock CD Mode before setting up the CR104 using one of the methods described at the start of this guide.

Here are the factory default settings:

| Device Mode | Default status | Default Arcam codes |
|---|---|---|
| **BD** | Locked | 0762 |
| **SAT** | Unlocked | 1205 |
| **AV** | Unlocked | 0586 |
| **TUN** | Locked | 2009 |
| **AMP** | Locked | 1242 |
| **PVR** | Unlocked | 1930 |
| **VCR** | Unlocked | 0111 |
| **CD** | Locked | 2010 |

Alternative codes are available for multi-room solutions, or in the case of code clashes with other manufacturer's products.

For example:

**AMP** (system code 19) 1954

You will need to change the system code on the product you wish to control, as well as the CR104.

> ***NOTE***
> The **AMP** Device Mode can only be used to control Arcam amplifiers like the AVR500, AVR600 and AV888, either on its default or alternative IR system codes.

To toggle a Device Mode lock setting:

1. Press the Device Mode key you want to unlock (e.g. CD)
2. Press and hold SHIFT until the power LED blinks twice: ✳✳.
3. Press 9 8 2.

- The power LED blinks twice when being locked, and blinks four times when being unlocked.
- If you enter an invalid key sequence, the power LED gives one long blink and returns to normal operation.

While the Device Mode key is locked, the Direct Code Setup and Move Mode functions are not available.



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## Mode key IR punch-through

The Mode key IR punch-through default is 'on'.

### Example: To set the Mode key IR punch-through to AMP

1. Press and hold (SHIFT) until the power LED blinks twice: ✲ ✲.
2. Press (9) (7) (1). The power LED blinks twice: ✲ ✲.
3. Press (AMP) to punch through IR from it.

Now, whenever you press and release a Mode key, the IR data assigned to **AMP** is transmitted, no matter what the current mode is (i.e. it 'punches through' any other device).

### To cancel Mode key IR punch-through

1. Press and hold (SHIFT) until the power LED blinks twice: ✲ ✲.
2. Press (9) (7) (1). The power LED blinks twice: ✲ ✲.
3. Press (SHIFT) until the power LED blinks twice: ✲ ✲.

## Resetting the CR104

Resetting the CR104 will erase all learned functions across all modes, as well as some other programmed functions like Macros. It will not reset the Device Mode keys; these will remain programmed to your choice of component.

1. Press and hold (SHIFT) until the power LED blinks twice: ✲ ✲.
2. Press (9) (8) (0). The power LED blinks four times: ✲ ✲ ✲ ✲.
3. Press and hold (SHIFT) until the power LED blinks twice: ✲ ✲.
4. Press (9) (9) (3).
5. Press (AMP). The power key LED blinks twice: ✲ ✲.
6. Press and hold (SHIFT) until the power LED blinks twice: ✲ ✲.
7. Press (9) (7) (1). The power LED blinks twice: ✲ ✲.
8. Press (AMP). The power key LED blinks twice: ✲ ✲.

# Command summary

### Direct code setup

(e.g. AV mode, NNNN=code number)

(AV) (SHIFT) ✲ ✲ NNNN ✲ ✲ (⏻)

### Library search

(e.g. AV mode)

(AV) (SHIFT) (9) (9) (1) ✲ ✲ (⏻) (⏯) until unit turns off

(SHIFT) to save

### Code blink back

(AV) (SHIFT) (9) (9) (0) ✲✲✲

(1) count blinks for first *N*

(2) count blinks for second *N*

(3) count blinks for third *N*

(4) count blinks for fourth *N*

### Code learning

(e.g. AV mode fast forward key)

(SHIFT) ✲ ✲ (9) (7) (5) ✲ ✲ (AV) (⏩) ✲ (many rapid blinks)

(Press key on original remote that you wish to copy)

✲ ✲ (SHIFT) ✲ ✲

### Delete a learned function

(e.g. AV mode fast forward key)

(SHIFT) ✲ ✲ (9) (7) (5) ✲ ✲ (AV) (⏩) (⏩) ✲ ✲

### Delete all learned functions with a device

(e.g. AV mode)

(SHIFT) ✲ ✲ (9) (7) (5) (AV) (AV)

### Creating macros

(e.g. SRCH key)

(SHIFT) ✲ ✲ (9) (9) (5) (SRCH) (AV) (⏻) (VCR) (⏻) (SAT) (⏻) (SHIFT) ✲ ✲

### Deassign macro

(SHIFT) ✲ ✲ (9) (9) (5) (SRCH) (SHIFT) ✲ ✲

### Key mover

(e.g. SAT mode, DISP key to MENU key)

(SAT) (SHIFT) ✲ ✲ (9) (9) (4) (DISP) (MENU)

### Mode mover

(e.g. change SAT to TV(AV))

(SHIFT) ✲ ✲ (9) (9) (2) (AV) (SAT)

### Restore device mode

(e.g. restore SAT)

(SHIFT) ✲ ✲ (9) (9) (2) (SAT) (SAT)

### Locking/unlocking a mode

(e.g. CD mode)

(CD) (SHIFT) ✲ ✲ (9) (8) (2) ✲ ✲

(i.e. two blinks for lock)

(CD) (SHIFT) ✲ ✲ (9) (8) (2) ✲ ✲ ✲ ✲

(i.e. four blinks for unlock)

### Cancel all volume punch-through

(SHIFT) ✲ ✲ (9) (9) (3) (+) ✲ ✲ ✲ ✲

### Restore volume punch-through

(SHIFT) ✲ ✲ (9) (9) (3) (AMP) ✲ ✲

### Mode key IR punch-through

(SHIFT) ✲ ✲ (9) (7) (1) ✲ ✲ (AMP)

### Cancel mode key IR punch-through

(SHIFT) ✲ ✲ (9) (7) (1) ✲ ✲ (SHIFT) ✲ ✲

***NOTE***

As elsewhere in this Handbook, a single 'blink' of the red LED behind the power button is indicated by the symbol ✲.

# Device codes

The tables that begin on page 34 (in the final section of this Handbook) list the four-figure codes for different manufacturers' devices.

Use these when setting your CR104 up to control your devices, as described in Method 1 (see page E-15).

If more than one code number is listed, try the first number. If the results are unsatisfactory, continue trying the numbers for that manufacturer to get the best 'fit' with the functionality required.

If the manufacturer of your equipment is not listed, you can try Method 2, the Library Search (see page E-15). This allows you to scan through every set of codes contained in the CR104's memory.

English



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# IR commands

These are the IR commands generated from the BD player remote control, and accepted by the BDP100. The codes are useful if you wish to programme another remote handset to control the BDP100. The codes are given in the format SystemCode–CommandCode. 25 (0x19) is the Arcam System Code for a Blu-ray Disc player.

| Key name | Decimal | Hexadecimal |
|---|---|---|
| 0 | 25–0 | 0x19–0x00 |
| 1 | 25–1 | 0x19–0x01 |
| 2 | 25–2 | 0x19–0x02 |
| 3 | 25–3 | 0x19–0x03 |
| 4 | 25–4 | 0x19–0x04 |
| 5 | 25–5 | 0x19–0x05 |
| 6 | 25–6 | 0x19–0x06 |
| 7 | 25–7 | 0x19–0x07 |
| 8 | 25–8 | 0x19–0x08 |
| 9 | 25–9 | 0x19–0x09 |
| DISP | 25–18 | 0x19–0x12 |
| RND | 25–64 | 0x19–0x40 |
| RPT | 25–29 | 0x19–0x1D |
| SRCH | 25–76 | 0x19–0x4C |
| ⏭ | 25–32 | 0x19–0x20 |
| ⏮ | 25–33 | 0x19–0x21 |
| ⏪ | 25–50 | 0x19–0x32 |
| ⏩ | 25–52 | 0x19–0x34 |
| MENU (POPUP MENU) | 25–67 | 0x19–0x43 |
| CANCEL | 25–58 | 0x19–0x3A |
| RETURN | 25–72 | 0x19–0x48 |
| TITLE (TOP MENU) | 25–66 | 0x19–0x42 |

| Key name | Decimal | Hexadecimal |
|---|---|---|
| NAVIGATE UP | 25–86 | 0x19–0x13 |
| NAVIGATE LEFT | 25–81 | 0x19–0x51 |
| OK | 25–87 | 0x19–0x57 |
| NAVIGATE RIGHT | 25–80 | 0x19–0x50 |
| NAVIGATE DOWN | 25–85 | 0x19–0x55 |
| LOAD | 25–45 | 0x19–0x2D |
| PAUSE | 25–48 | 0x19–0x30 |
| PLAY | 25–53 | 0x19–0x35 |
| STOP | 25–54 | 0x19–0x36 |
| STATUS | 25–75 | 0x19–0x4B |
| MUTE | 16–13 | 0x10–0x0D |
| VOL+ | 16–16 | 0x10–0x10 |
| VOL– | 16–17 | 0x10–0x11 |
| 24P | 25–88 | 0x19–0x58 |
| ANGLE | 25–73 | 0x19–0x49 |
| AUDIO | 25–69 | 0x19–0x45 |
| SUBT | 25–65 | 0x19–0x41 |
| SETUP | 25–74 | 0x19–0x4A |
| RED / A | 25–107 | 0x19–0x6B |
| GREEN / B | 25–108 | 0x19–0x6C |
| YELLOW / C | 25–109 | 0x19–0x6D |
| BLUE / D | 25–110 | 0x19–0x6E |



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# specifications

| | |
|---|---|
| **Analogue Audio Output** | |
| Digital to Analogue conversion | 24-bit 192kHz Delta-Sigma DAC |
| Signal to noise ratio | 110dB CCIR |
| Harmonic distortion (1kHz) | 0.002% |
| Frequency response (±0.5dB) | 10Hz–20kHz |
| Output level (0dB) | 2.2Vrms |
| Output impedance | 47Ω |
| Minimum recommended load | 5kΩ |
| **Video Outputs** | |
| Composite video | 1 x phono. 1V pk-pk in 75Ω |
| Component video | Interlaced or Progressive<br>3 phono sockets.<br>Y 1V pk-pk in 75Ω, Pb 0.7V pk-pk in 75Ω, Pr 0.7V pk-pk in 75Ω |
| HDMI | 19-pin HDMI connector<br>Supported video formats are:<br>720 x 576p, 720(1440) x 576i, 720 x 480p, 720(1440) x 480i,<br>1280 x 720p, 1920 x 1080i, 1920 x 1080p<br>Audio to 6-channel/96kHz or 2-channel/192kHz (24-bit). |
| **Digital interfaces** | |
| USB | USB 2.0 High Speed (480 Mbit/s) |
| Network | 10 BASE-T / 100 BASE-TX |
| **Physical** | |
| Dimensions | W430 x D400 x H100mm |
| Weight | 6.2kg nett/10.0kg packed |
| Power consumption | 30W maximum |
| Digital output connection | 75Ω co-axial<br>optical TOSLINK |
| **Supplied accessories** | |
| | Mains lead<br>CR104 remote control<br>4 x AAA batteries |
| E&OE | |
| **NOTE**: All specification values are typical unless otherwise stated | |

## Radio interference

The BDP100 Blu-ray Disc player is a digital device which has been designed to very high standards of electromagnetic compatibility.

All Blu-ray players generate, and can radiate RF (radio frequency) energy. In some cases this can cause interference with FM and AM radio reception. If this is the case, keep the player and its connecting cables as far from the tuner and its aerials as possible. Connecting the player and the tuner to different mains sockets can also help to reduce interference.

EC COUNTRIES – This products have been designed to comply with EMC Directive 2004/108/EC.

USA – These products comply with FCC Part 15 Class B.

## Laser radiation

If the BDP100 Blu-ray Disc player is operated whilst the outer casing is removed, invisible laser radiation could cause eye damage.

**Continual improvement policy**

Arcam has a policy of continual improvement for its products. This means that designs and specifications are subject to change without notice.





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For further details contact Arcam at:

Arcam Customer Support Department,
Pembroke Avenue, Waterbeach, CAMBRIDGE, CB25 9QR, England

or via *www.arcam.co.uk*.

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## On-line registration

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English

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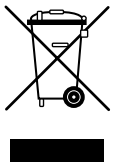

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