

ARCAM

English

f·M·J BDP300

HANDBOOK Blu-ray Disc player



safety guidelines



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.

WARNING - The mains plug is used as a disconnect device, the disconnect device shall remain readily operable.

WARNING - The batteries shall not be exposed to excessive heat, such as sunshine or fire.

CAUTION - Danger of explosion if batteries are incorrectly replaced. Replace only with the same or equivalent type.

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.

welcome

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 BDP300 – 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 BDP300 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

Contents

safety guidelines.....	E-2
Important safety instructions.....	E-2
Safety compliance	E-2
welcome.....	E-3
installation	E-4
Placing the unit	E-4
Power.....	E-4
The remote control and trigger inputs.....	E-4
Interconnect cables.....	E-4
Making video connections.....	E-6
Making audio connections	E-6
The HDMI interface	E-7
Troubleshooting HDMI	E-7
disc & file formats	E-8
Playable discs	E-8
Video file requirements (USB/Disc)	E-8
MP3/WMA audio file requirements (USB/Disc)	E-8
Photo file requirements (USB/Disc)	E-8
Region coding	E-8
Network connection.....	E-9

basic operation.....	E-10
remote control.....	E-11
The CR104 remote	E-12
remote control.....	E-12
Playback and advanced controls	E-13
Useful information.....	E-14
Device Mode / Source keys.....	E-14
Controlling other devices	E-14
Code blink-back.....	E-15
advanced operation	E-16
Disc information	E-16
Search.....	E-16
Menus.....	E-16
Soundtrack selection.....	E-16
Subtitles.....	E-16
Bonusview and BD-Live.....	E-16
Playing media files.....	E-17
Advanced playback controls	E-18
settings menus	E-19
Display.....	E-19
Audio	E-20
Language.....	E-21
Network.....	E-21

System.....	E-22
Security/Parental Control	E-22
troubleshooting	E-24
Audio output format	E-25
audio & video output formats.....	E-25
customising the CR104.....	E-26
Code learning.....	E-26
Creating Macros	E-27
Volume punch-through	E-27
Key mover	E-27
Mode mover	E-28
Locking/unlocking a specific Device Mode	E-28
Mode key IR punch-through	E-29
Resetting the CR104	E-29
Command summary.....	E-29
Device codes.....	E-29
specifications	E-30
Radio interference	E-30
Laser radiation.....	E-30
software licencing	E-31
product guarantee	E-33
device code tables	E-34

installation

Arcam's BDP300 provides class-leading sound quality from Blu-ray Discs, DVD-Video discs and compact discs.

The BDP300 has a state-of-the-art Delta-Sigma DAC (Digital-to-Analogue Converter) which provides audiophile sound quality for video and audio discs.

The BDP300 is supplied with the CR104 'universal' remote control, which is simple to use and can control up to eight audio devices – such as an amplifier, television or Personal Video Recorder.

The high performance BDP300 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 to the BDP300 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 BDP300 in and out of standby. Connecting the trigger output of your Arcam amplifier (or other compatible device), will cause the BDP300 to come out of standby automatically when the amplifier is switched on, returning to standby 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.

NOTE

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 systems 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.

Zone 1 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 BDP300 can also play certain digital files stored on USB memory drives: see page E-8.

12V trigger input

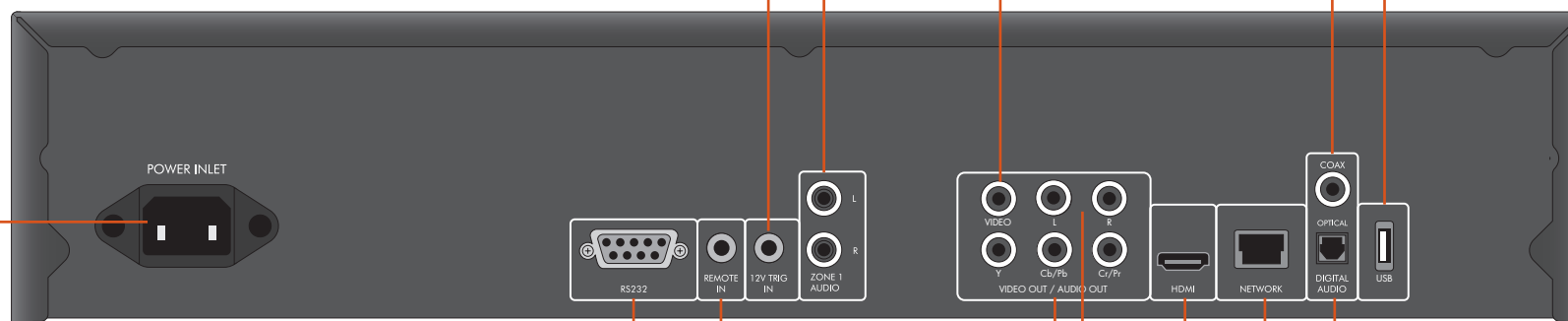
This socket allows the BDP300 to be switched in and out of standby mode by an amplifier (or another item of AV equipment) with a 12V TRIG OUT function: see page E-4.

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.

Remote in

This allows remote-control signals to be received by the BDP300 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 (Y, Pb, Pr), connect it to this video output.

L, R audio output

Use this analogue output (L, R), 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.

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.

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-21.

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 BDP300 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 BDP300 and a video converter device may be required. In this case, please contact your dealer for further assistance.

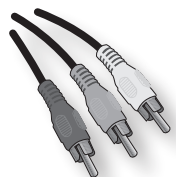
AV receivers and other video processing devices may be connected between the BDP300 and your display. Ensure that all the equipment supports the type of video signal you intend to use. For instructions on how to connect AV equipment, consult the manual for that equipment.



HDMI DIGITAL VIDEO

The HDMI connector offers uncompressed digital video and audio transmission between the BDP300 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 BDP300 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 BDP300. 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 BDP300 offers a number of alternatives for connecting audio. The connection type to use depends on the rest of your system; choose 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 BDP300 digital output. Do not make a connection between the BDP300 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 BDP300 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 BDP300's audiophile digital-to-analogue circuitry to be utilised, for the best stereo sound quality.

The HDMI interface

If you have a HDMI- or DVI-equipped monitor or display, you can connect it to the BDP300 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 BDP300. If the BDP300 video resolution has been configured to 'HDMI Auto', then the BDP300 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 BDP300 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 BDP300 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 BDP300. The BDP300 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 BDP300.

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 BDP300.

To attempt to isolate this problem, remove all discs from the BDP300, then power-off both the BDP300 and the connected display device. Switch the display device on, then the BDP300 – at this point, the idle logo of the BDP300 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.

disc & file formats

Playable discs

The player supports the following disc types:



Blu-ray 3D



Blu-ray Disc



DVD-Video



DVD-R



DVD-RW



CD-Audio



CD-R



CD-RW

Video file requirements (USB/Disc)

- Video file compatibility with your player is limited as follows:
 - Maximum resolution size: 1920x1080 (W x H) pixels
 - File extensions: .wmv, .avi, .mp4, .mpeg, .mpg, .vob, .mkv (Note: Files encoded by Divx cannot be played on this player)
 - Playable Audio format: Dolby Digital, DTS, MP3, WMA, AAC, AC3
 - Sampling frequency: within 32 to 48kHz (WMA), within 8 to 48kHz (Mp3)
 - Bit rate: within 32 to 192kbps (WMA), within 32 to 320kbps (Mp3)
- CD-R/RW, DVD R/RW, BD-R/RE Format: ISO 9660+JOLIET, UDF and UDF Bridge format
- Maximum Files/Folder: Less than 1000. The movie file name and subtitle are limited to 180 characters.
- Not all of the WMA and AAC Audio formats are compatible with your player.
- HD WMA movie files contained on a USB 1.0/1.1 flash drive may not play correctly.
- Blu-ray, DVD, or USB 2.0 are recommended to play back HD WMA movie files.
- Your player does not support files that are recorded with GMC (Global Motion Compensation) or Qpel (Quarter pixel). Those are video encoding techniques in MPEG4 standard, like DivX.

MP3/WMA audio file requirements (USB/Disc)

- File extensions: .mp3, .wma
- Sampling frequency: Within 32 to 48kHz (WMA), within 8 to 48kHz (Mp3)
- Bit rate: Within 32 to 192kbps (WMA) 32 to 320kbps (MP3)
- CD-R/RW, DVD R/RW, BD-R/RE Format: ISO 9660+JOLIET, UDF and UDF Bridge format
- Maximum Files/Folder: Less than 2000 (total number of files and folders)
- Depending on the size and number of the MP3/WMA files, it may take several minutes to read the contents of the media.
- HD WMA movie files contained on a USB 1.0/1.1 flash drive may not play correctly. Blu-ray, DVD, or USB 2.0 are recommended to play back HD WMA movie files.

Photo file requirements (USB/Disc)

- File extensions: .jpg, .jpeg, .png, .gif
- Recommended size:
 - PNG: 5120 × 5120 pixels
 - GIF: 10000 × 10000 pixels
 - JPEG/JPG: 8192 × 8192 pixels, 32MB
- CD-R/RW, DVD R/RW, BD-R/RE Format: ISO 9660+JOLIET, UDF, and UDF Bridge format
- Maximum Files/Folder: Less than 1000 (total number of files and folders)
- Progressive and lossless compression photo image files are not supported.
- Depending on the size and number of the photo files, it may take several minutes to read the contents of the media.

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:



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 BDP300 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

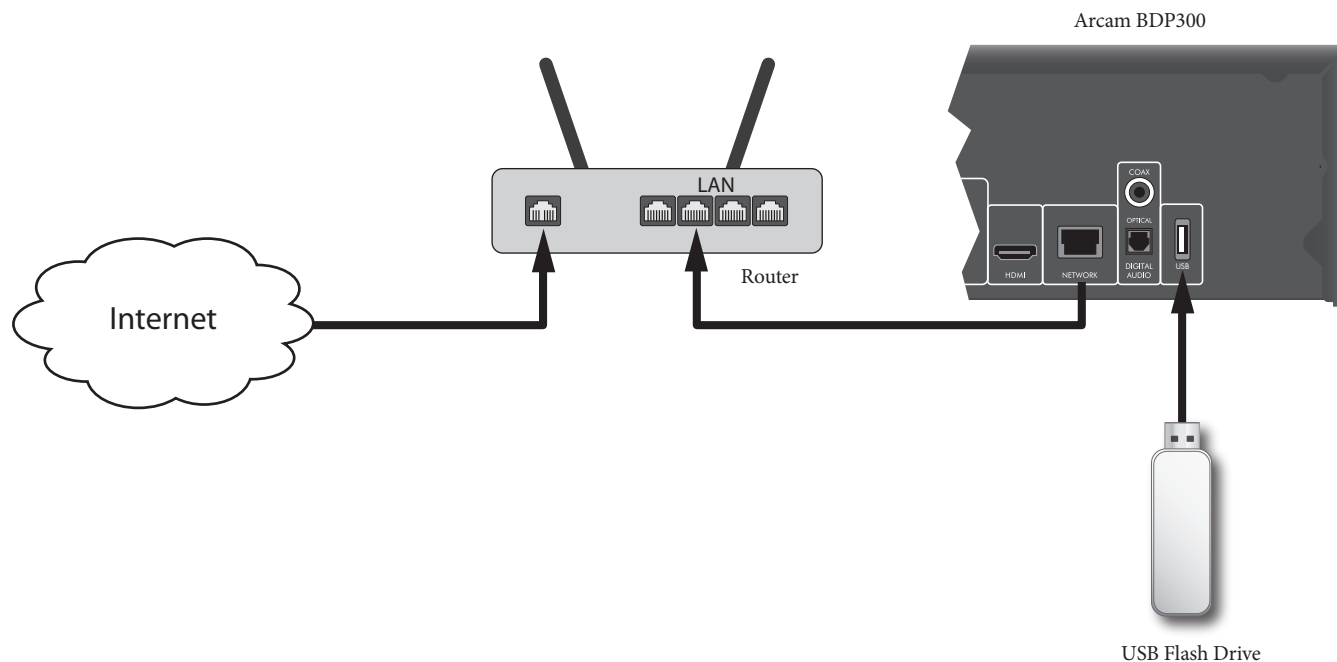
When the player is powered on with no network configured, a pop-up is shown on-screen.

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.



basic operation



Introduction

'Basic operation' 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-19.

More sophisticated features – such as special playback modes, programming jumps and playback sequences – are described in 'advanced operation' on page E-16.

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 standby 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 (the default setting), playback starts automatically. (For details, refer to 'Optical Disc AutoPlay' on page E-21).

If Autoplay is set to Off, the player's Main Menu will appear on your TV. Use the cursor keys to select the disc in **MY MEDIA**, 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 and x32 (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.

Invalid operation may also occur if:

- The region codes of the unit differs from that of the disc, so playback is not allowed.
- The parental control is set to prevent operation: see 'Security/Parental Control' on page E-22.
- Some operations may be prohibited due to disc manufacturer's settings.

remote control

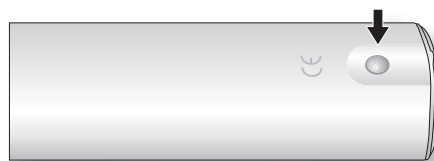
The BDP300 may be supplied with the CR104 universal remote control.

Using the remote control

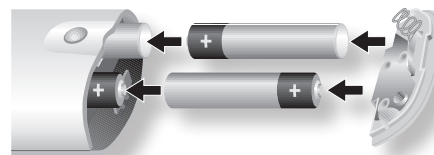
Please keep in mind the following when using the remote control:

- 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.

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

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet or a circuit different from that to which the receiver is connected.

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

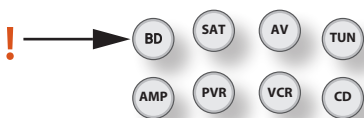
The CR104 remote

The CR104 is a sophisticated 'universal' remote control that can control up to eight devices – including the BDP300. 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 BDP300 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 BDP300 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 an Arcam amplifier.

OPEN

Opens and closes the disc tray.

SETUP

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

On/Standby

This allows the BDP300 to be put into and taken out of standby remotely.

Numeric keys, 0–9

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 cycle through the HDMI output resolutions (only available from the Home screen).

MENU

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

RTN

Navigates to the previous menu.

⏮ ⏭

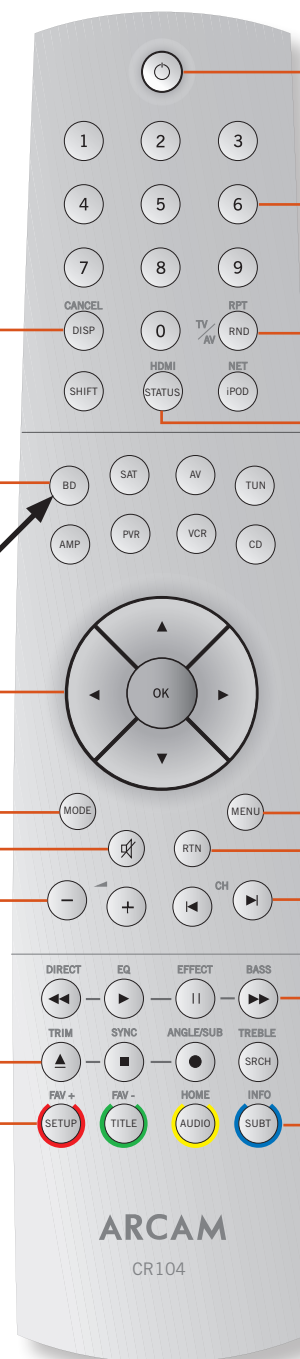
Press to skip backwards to the previous track (⏮) or forwards to the next track (⏭).

Playback control

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

Advanced controls

These buttons are described on the next page.



Playback and advanced controls

NOTE

Many of these controls are labelled according to the functions assigned to other device modes. For example, the **►►** key activates 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. When paused, pressing advances one frame. 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.

SETUP

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

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

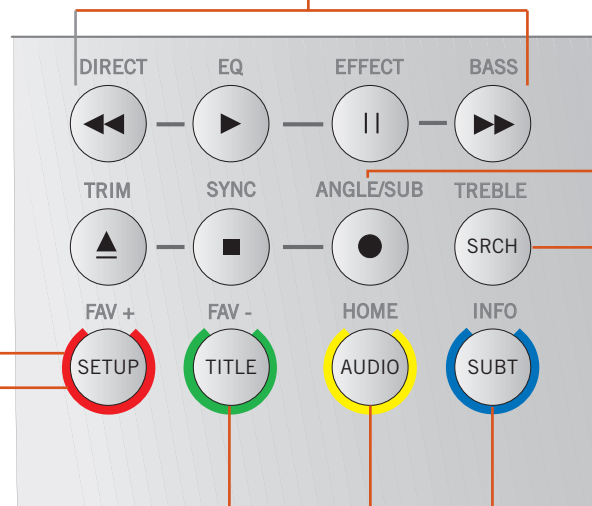
Cycles through the available subtitle languages, including 'Off'. Some discs force subtitles on, overriding any set up preferences.

ANGLE

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

SRCH

Displays Search menu with Time, Title and Track options.



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 BDP300, 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	BDP300 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  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.

 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  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.

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).
-  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  key to control an Addison television. The principles for controlling other devices are exactly the same.






- Make sure your device is switched on (not just on standby).
- Find the correct Device Code table (e.g. TV) for the type of device you want to control from the CR104.
- Find the row containing the codes for the manufacturer of your device. The most popular code is listed first.
- Press the appropriate Device Mode key (e.g. ) on the CR104.
- Press and hold  until the red Power LED blinks twice:   (It actually blinks once when you press the key, then twice after about three seconds).
- Enter the first four-digit device code using the number keys. The power key blinks twice:  .
- Aim the CR104 at the device and press . If the device switches off, the setup is complete.
- 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 by 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  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  on your CR104.
3. Press and hold  until the power LED blinks twice.

4. Press   . 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  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  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. ).
2. Press and hold  until the red Power LED blinks twice   (It actually blinks once when you press the key, then twice after about three seconds).
3. Press   . 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 , , or  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	

advanced operation



Disc information

Press **STATUS** to display the 'Information bar' at the top of your TV screen. An example is given above, but the information shown depends on the disc type. It usually includes the disc type, the current track, the total number of tracks and the elapsed track time.

For Audio CDs, press **STATUS** again to turn this display off.

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 number buttons to enter the search data. Press **OK** to start playback from the selected location.

Menus

Many BD Video and DVD Video discs contain a disc menu, top menu or popup 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.

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 Language menu: see 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 Language menu: see 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.

Bonusview and 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 BDP300. To enjoy these functions, connect a USB memory device (minimum 1 GB capacity; 2 GB or more is 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 is not 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-21 for erasing the Virtual Package contents and the BD-LIVE contents in the USB memory device.
- Operation of all USB memory devices is not guaranteed.
- Plug the USB memory device directly into the USB connector – do not use an extension cable or multiple connector socket.

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 **MODF** 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 BDP300 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 BDP300 must have an active Internet connection to use BD-Live functions. Refer to 'Network connection' on page E-9 and 'Network' on page E-21
- BD-Live Internet access can be disabled using the **BD-Live Internet access** setting in the **System** menu: see 'Network' on page E-21
- 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.

Playing media files

The **MYMEDIA** icon is shown on screen when the BDP300 is first switched on. To play video, image files (e.g. photographic slideshows) or audio files, highlight the **MYMEDIA** icon and press **OK**.



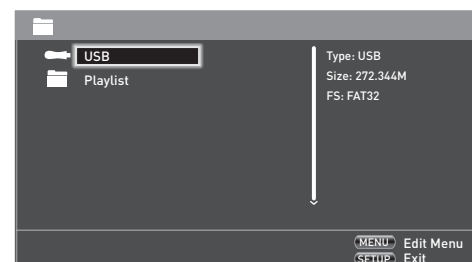
Video and audio files can be played from USB media or CD-R/RW discs. The following formats are supported:

- **Video:** AVI, MPEG4
- **Image:** JPG
- **Audio:** WMA, MP3

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

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 the MY MEDIA menu. Press **OK** to select the media device and display the file and folder contents.



NOTE

When there are no playable files or folders within the selected media or folder, 'Empty' is displayed.

You can play a single file or playlist (containing up to 100 selected files). Use the **▲/▼** cursor keys on the remote control to highlight a file or playlist and press **OK** to select it.

The Edit menu

Press **POPOP MENU** to select the Edit menu, from which the following operations are available:

- **Add to Playlist:** Add the folder/file to the Playlist.
- **Select All:** Select all folders/files in the current directory (up to a maximum of 100 files); all selected files/folders are marked with a check mark.
- **Clear All:** Deselect all selected files/folders.
- **Cancel:** Cancel and exit the Edit menu.

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.

Play a music file

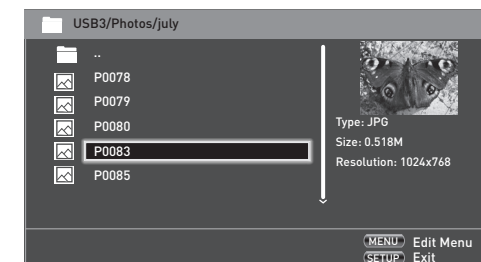
Use the **▲/▼** cursor keys to highlight a WMA or MP3 file and press **OK** or **▶** to start playback.

Play a video file

Use the **▲/▼** cursor keys to highlight an AVI or MPEG4 file and press **OK** or **▶** to start playback. Press **DISP** to view relevant video file playback information.

Play a picture file

Use the **▲/▼** cursor keys to highlight a JPEG (photo) file and press **OK** to confirm selection. Its preview and file information is shown on the right of the panel.





If you have selected a playlist (created using the Edit menu), you can press **▶** to start viewing the pictures as a slideshow.

You can use the remote cursor keys (up, down, right, left) to rotate the picture. The **REP** button cycles through the repeat options (repeat one, repeat all, repeat off). The **◀▶** and **⏮⏭** keys can be used to change the picture playback speed: fast (1 second), medium (2 seconds) and slow (3 seconds). Press **DISP** to view relevant picture file playback information.




Advanced playback controls

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


Slow playback

Press  followed by  to activate slow motion playback. Press this button combination again to change the playback speed. Speeds of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ are available.

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 or 32x normal speed are available. Press  to resume normal playback.

Displaying File Information

Press the  button to display the file information panel. The information displayed depends on the type of file playing, but may include the file type, elapsed and total playing time and a progress bar, and the playback mode (e.g. repeat, random play).

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

settings menus

The Settings menus allow you to configure all aspects of your BDP300. 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 BDP300. 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

The **SETTINGS** icon is shown on screen when the BDP300 is first switched on.



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.

With the **SETTINGS** icon highlighted, press **OK** to enter the Settings menu.

Unstable OSD menu or picture display?

The default BDP300 output video resolution when first powered up out of the box has been chosen according to the national standard in the country of purchase.

If the output resolution and frame rate is at a setting your display device does not support, the picture



may become unstable or may not display at all. If this happens, connect the BDP300 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.

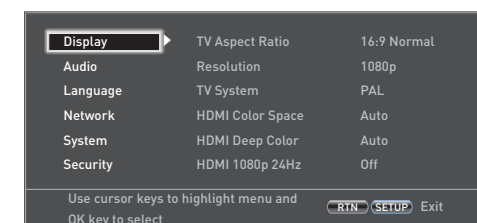
Navigating the menus

The BDP300 menus can be navigated by using the cursor (up, down, left, right) keys on the remote control.

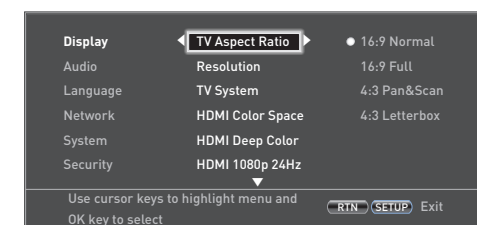
1. To display the main menu, press **SETUP**.
2. Use the **UP** and **DOWN** keys to navigate up and down the main headings in the left-hand panel.
3. With the main section you require highlighted, use the **RIGHT** key to enter the middle column.
4. Use the **UP** and **DOWN** keys to navigate up and down the options in the middle column. Some options may be greyed out because they are not currently selectable (e.g. network IP address when DHCP is used).
5. Pressing **RIGHT** selects a setting; use the **UP** and **DOWN** keys to change the setting.
6. Press **OK** to confirm the setting. Go back to step 4 to adjust any other settings in the current section.
7. Press **LEFT** to return to the previous screen if you want to select another section.

Display

With the **SETTINGS** icon highlighted on your display, press **OK** to show the 'Display' options.

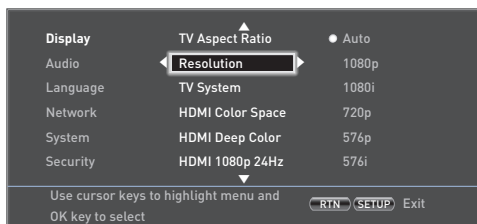


Press **RIGHT** to move to the options in the second column.



TV Aspect Ratio – Set the aspect ratio (shape) of your display. Press **RIGHT** to move to the options in the third column.

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

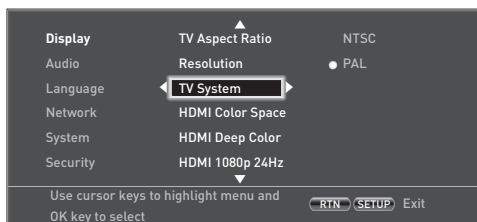


Resolution – Set the video resolution of the HDMI and COMPONENT VIDEO outputs.

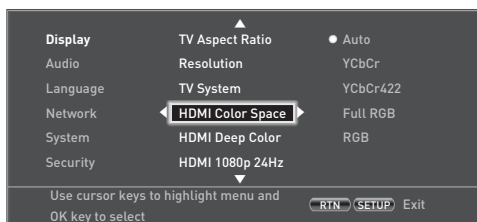
- **Auto**: Sets the TV's preferred resolution.
- **1080p**: Full HD progressive video.
- **1080i**: interlaced HD video.
- **720p**: progressive HD video.
- **480p/576p**: 480 lines (NTSC) or 576 lines (PAL) progressive video
- **480i/576i**: 480 lines (NTSC) or 576 lines (PAL) Standard Definition interlaced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



TV System – 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. You can select NTSC (the USA and Canada video standard), or PAL (the Europe, Australia and China video standard).



HDMI Color Space – 'Color Space' refers to the number of individual colors that can be displayed on the screen. If you know the color space capability for the connected TV, you can match it by selecting one of these options. We recommend you select 'Auto'.

HDMI Deep Color – sets the level of Deep Color processing applied to the HDMI video output. You can select 'Auto' or 'Off'. If this option is set to Auto and your TV supports Deep Color, the screen displays colors at 30-, 36- or 48-bit accuracy (compared to the 24-bit accuracy of standard color). Check the documentation that came with your TV to see if your TV supports Deep Color. All system HDMI interconnect cables must be Deep Color compatible in order to use 30/36-bit Deep Color signals.

NOTE

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.

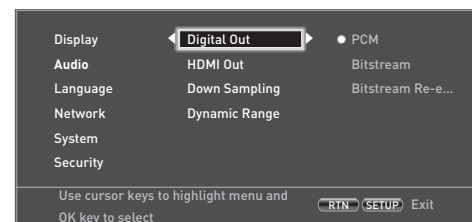
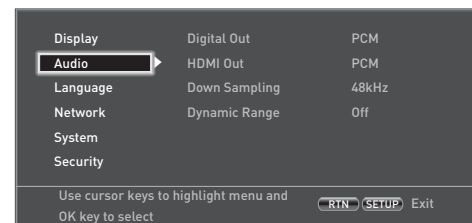
HDMI 1080p 24Hz – You can select 'Auto' or 'Off'. Movies are recorded on film at a rate of 24 pictures (frames) per second. Many of the movies on Blu-ray Discs are placed on the discs at this frame rate. If your TV supports 24 frames per second, but you would prefer to view the video at a higher frame rate, you should turn off HDMI 1080p 24Hz.

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.

HDMI 3D – To turn the 3D feature (if available) on or off. You can select 'Auto' or 'Off'.

Audio



Digital Out – Sets the audio format output from the OPTICAL or COAXIAL DIGITAL OUT connections.

You can select:

- **PCM** – Outputs the signal as processed audio ready for any receiver. Use this when your receiver cannot decode the movie soundtrack on the disc.
- **Bitstream** – Outputs the movie soundtrack without any processing. This option requires a receiver that supports the movie soundtrack format.
- **Bitstream Re-encode** – Combines all audio signals and outputs as DTS, Dolby, or PCM depending on the audio stream on the disc.

NOTE

The signal at the HDMI output is also determined by the formats supported by the connected equipment.

HDMI Out – Sets the audio format output from the HDMI connection.

You can select:

- **PCM** – (as above).
- **Bitstream** – (as above).
- **Bitstream Re-encode** – Automatically selects the HDMI digital signal type according to the audio stream on the disc.

Down Sampling – Set the maximum sample rate of audio output from the OPTICAL or COAXIAL DIGITAL OUT.

- **48kHz** – (most compatible) Select this option if the TV speakers, amplifier, or home theater is not capable of handling signals over 48kHz sampling rate. If you do not have an audio receiver or TV connected to your player through one of the digital audio jacks (optical or coaxial), select 48kHz. See the documentation that came with the receiver or TV.
- **96kHz** – Select this option if the TV speakers, amplifier, or home theater is capable of handling a digital sampling rate of 96kHz
- **192kHz** – (best quality) Select this option if the TV speakers, amplifier, or home theater is capable of handling a digital sampling rate of 192kHz.

NOTE

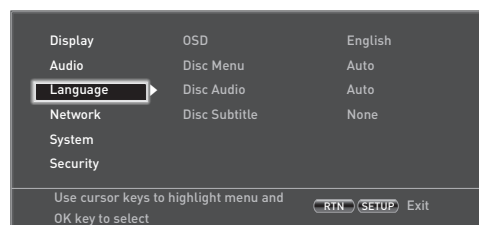
If the connected equipment (e.g. AV receiver) does not support 96kHz or 192kHz audio, silence or loud noise may result from this setting. If this happens, set **Down Sampling** to 48kHz.

Dynamic Range – Selects the Dynamic Range Control mode to 'Off' or 'On'.

Dynamic Range is the range between the loudest sounds and the quietest ones. If set to 'On' you can listen to a movie at a lower volume without losing sound clarity.

- **Off** – No dynamic range compression
- **On** – Dynamic range compression.

Language



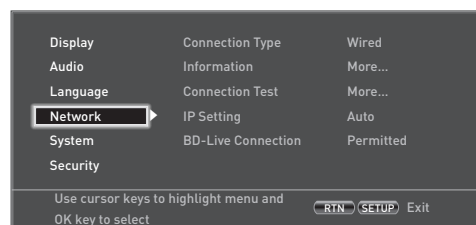
OSD – Select one language to be used for the On Screen Display (OSD).

Disc Menu – Set the language used for the Disc Menu and Pop-up Menu. The available languages depend on the disc. 'Auto' sets the priority language of the disc.

Disc Audio – Set the language for the soundtrack. The available languages depend on the disc. 'Auto' sets the priority language of the disc.

Disc Subtitle – Set the language used for the subtitles. The available languages depend on the disc. 'Off' prevents the display of subtitles.

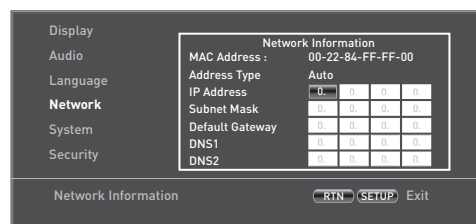
Network



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.

Connection Type – 'Wired'. Connect a network cable to the Ethernet jack and into a wired router. The BDP300 does not support wireless connections.

Information – Select and press **OK** to view or set the network connection parameters:



MAC Address – Information only

Address Type – Set whether the network settings are automatic or set manually.

- **Auto**: 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.
- **Manual**: Enter settings manually, for expert users.

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

IP Address – Use the cursors to navigate between segments and use the **0** to **9** keys to enter the IP address assigned to your player by your network administrator. Press **OK** to save the setting.

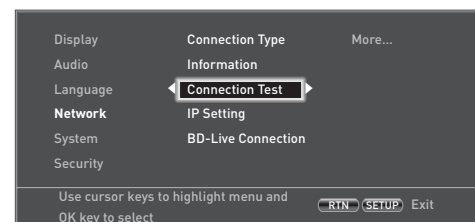
Subnet Mask – Use the cursors to navigate between segments and use the **0** to **9** keys to enter the subnet mask of your network. Press **OK** to save the setting.

Default Gateway – Use the cursors to navigate between segments and use the **0** to **9** keys to enter the Internet gateway address. Press **OK** to save the setting.

DNS1 – Use the cursors to navigate between segments and use the **0** to **9** keys to enter the IP address of your Primary DNS server. Press **OK** to save the setting.

DNS2 – Use the cursors to navigate between segments and use the **0** to **9** keys to enter the IP address of your Secondary DNS server. Press **OK** to save the setting.

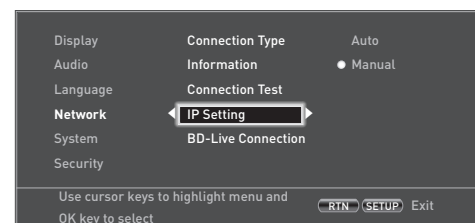
Connection Test – When your player tests your Internet connection, it sends (pings) an IP address.



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.

If this test fails, check the connections to your home network. Make sure your network cable is securely attached to your router and the BDP300. Check that your router is connected to your cable or DSL modem correctly. There may be an issue with your router or Internet Service Provider (ISP): contact your ISP for more help.

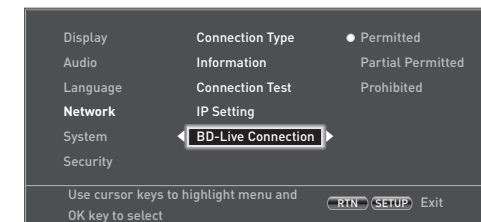
IP Setting – You can set your player to automatically obtain an IP address when it connect to your ISP. Some providers require that you enter a fixed IP address that does not change: this must be entered using the 'Manual' setting.



Highlight 'Auto' or 'Manual', then press **OK**.

If you selected Manual, the Network Information screen opens with the IP Address row highlighted. Press a number button to enter the first digit of the IP address, then press **▶** to move to the next digit. Continue using the number buttons and the **▲** or **▼** keys to enter the rest of the IP address. When you have finished, press **OK**. If you need to remove a number you entered, press **◀**.

BD-Live Connection – To set the BD-Live Internet access level.



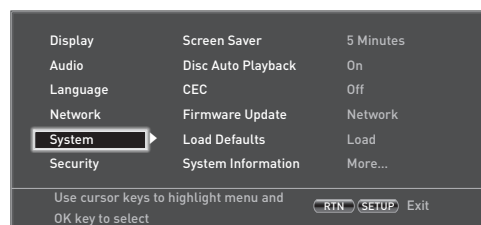
The access levels are:

- **Permitted**: All BD-Live discs are allowed access to BD-Live websites.
- **Partial Permitted**: Allows Internet access to BD-Live content with valid certificates only.
- **Prohibited**: Prohibit all BD-Live discs from accessing BD-Live websites.

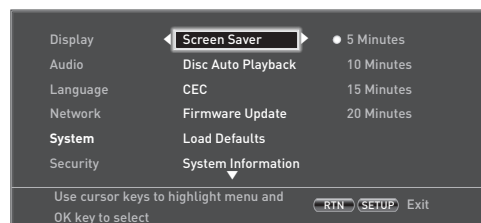
NOTE

- The available on-line functions are disc-dependent.
- Refer to the BD-Live disc instructions for information about accessing on-line content.
- The BDP300 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-21 for network settings.

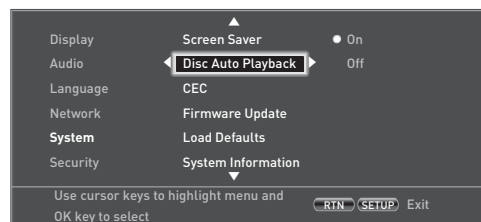
System



Screen Saver –sets the duration of a static image display before the screen saver is shown. The options are: 5/10/15/20 Minutes. Pressing any button on the unit or remote deactivates the screen saver.

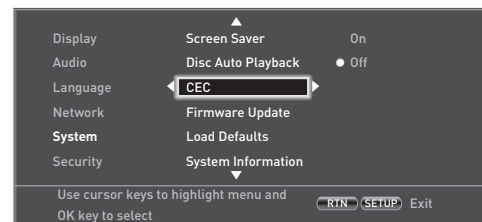


Disc Auto Playback – controls whether an optical disc (e.g. Blu-ray Disc, DVD, CD) will play automatically after it has loaded.



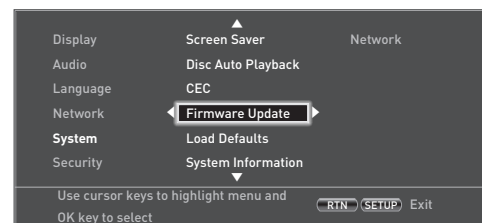
- **On:** Optical discs will play automatically.
- **Off:** PLAY must be pressed to play a disc.

CEC – The Consumer Electronics Control (CEC) option is used to allow all supported devices connected by HDMI to work together as a single system.



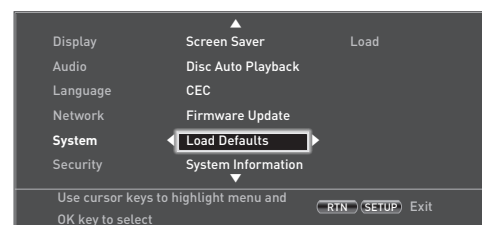
CEC may be turned 'On' or 'Off', to link or unlink the remotes.

Firmware Update – You can check for an upgrade to your player's firmware by selecting this menu item and pressing (OK) to highlight 'Network', then press (OK) again.



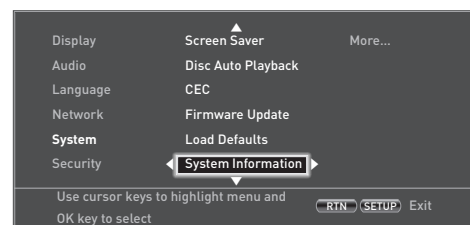
A message appears if no new firmware is available, otherwise follow the on-screen instructions. A message tells you when the upgrade is complete. Press (OK).

Load Defaults – Press (OK) with this item highlighted to reset all settings to factory defaults (including parental controls).



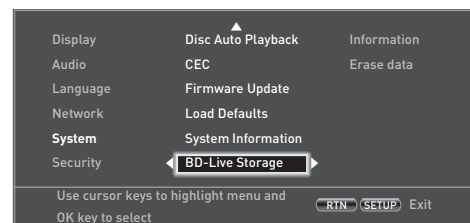
You are asked to confirm that you want to load the default settings. For 'No' press (OK); for 'Yes' press (Left Arrow) then (OK).

System Information – Highlight this option and press (OK) twice to display system information.



The System Information panel shows information about your player, such as the serial number and firmware version.

BD-Live Storage – This last System option allows you to review or delete BD-Live data stored on an external USB drive.



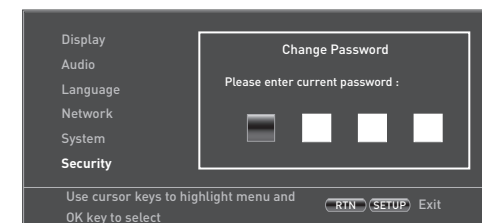
The options are:

- **Information:** Highlight and press (OK) to show file information on the BD-Live data.
- **Erase data:** Highlight and follow the on-screen instruction to erase BD-Live storage data.

Security/Parental Control



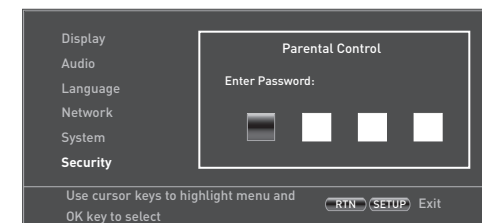
Change Password – Sets or changes the 4-digit password. Press the number buttons for the current password (the default PIN is 0000), then press (OK). Enter the new password again, then press (OK).



Parental Control – Parental control settings can be used to prevent the viewing of material inappropriate for children. 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 set the parental control level:

1. Select 'Settings' (Right Arrow) 'Parental Control' (Right Arrow)
2. If Parental Control is set to 'On', enter your PIN using the remote control number buttons. The default PIN is 0000.



3. Once the Parental Control menu is accessed, press the (Up Arrow)/ (Down Arrow) cursor buttons on the remote to select from the following items. Press (Right Arrow) to select an item.

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

- **Off:** All discs are played back.
- **On:** Disc playback 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: All children and 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: Adult rating; discs of any rating (Adult/General/Children) can be played back.

NOTE

- If the parental control level is set and you try to play a disc with a level higher than the current parental level, a password panel opens.
- If an attempt to change the parental control or parental level is made, a password panel opens.

trouble- shooting

If a fault occurs, check this troubleshooting table 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!

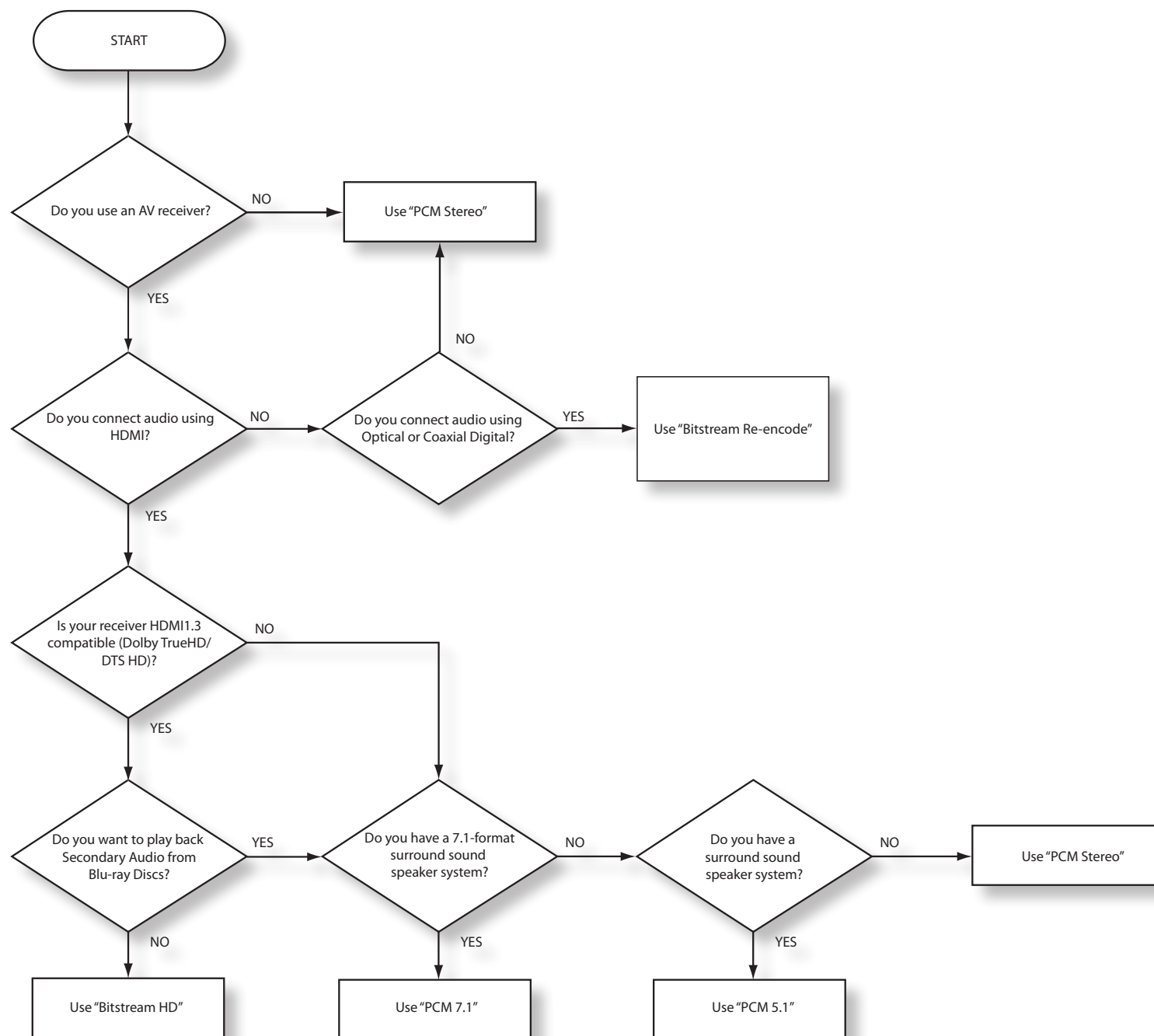
Problem	Possible cause	Remedy
No power	<ul style="list-style-type: none"> ■ The AC input cord is disconnected. ■ Poor connection at AC wall outlet or the outlet is inactive. 	<ul style="list-style-type: none"> ■ Connect cord securely. ■ Check the outlet using a lamp or another appliance.
No playback	<ul style="list-style-type: none"> ■ The disc is loaded upside down. ■ The disc is not playable. ■ The disc is dirty. ■ The recorded disc is not correctly finalized. ■ The parental level is not set correctly. ■ The symbol about invalid operation is displayed. 	<ul style="list-style-type: none"> ■ Reload the disc with the printed side up. ■ Use a playable disc. ■ Clean the disc. ■ Load a disc that is correctly finalized. ■ Set the parental level setting correctly: see page E-22. ■ Adjust the setting correctly.
Malfunction	<ul style="list-style-type: none"> ■ The disc is scratched, dirty, poorly recorded or unplayable. 	<ul style="list-style-type: none"> ■ Press the POWER switch to switch the power off, press the POWER switch again and then unload the disc.
No picture	<ul style="list-style-type: none"> ■ The video cords are disconnected. ■ The incorrect selection of input source on the TV. ■ The disc is not playable. 	<ul style="list-style-type: none"> ■ Connect the cords correctly. ■ Select the input source correctly. ■ Use a playable disc.
Noisy or distorted picture	<ul style="list-style-type: none"> ■ The unit is connected to a recording device directly and the copyguard function is activated. ■ The disc is dirty. ■ It is in rapid advance or reverse playback, or in frame advance playback. 	<ul style="list-style-type: none"> ■ Connect the unit so that the picture signal is transferred directly to the TV. ■ Clean the disc. ■ Sometimes a small amount of picture distortion may appear. This is not a malfunction.
Abnormal picture or no picture	<ul style="list-style-type: none"> ■ The resolution is not set correctly for video signals to be output from the COMPONENT and HDMI OUT sockets. ■ The TV does not support HDCP. ■ The TV type of this unit is different from that of your TV or the disc. 	<ul style="list-style-type: none"> ■ Set the resolution correctly: see page E-19. ■ This unit will not transfer the video signals via the HDMI connector to TV that does not support HDCP. This is not a malfunction. ■ Set the TV type correctly: see page E-19.
Slight pause of picture	<ul style="list-style-type: none"> ■ The layer transition occurs during playback of DVD Videos, etc. in dual-layer format. 	<ul style="list-style-type: none"> ■ Sometimes a slight pause may occur. This is not a malfunction.
No sound	<ul style="list-style-type: none"> ■ The audio cords are disconnected. ■ The speakers are disconnected to the amplifier. ■ The incorrect selection of input source on the amplifier. 	<ul style="list-style-type: none"> ■ Connect the cords correctly. ■ Connect the speakers correctly. ■ Select the input source correctly.
Noisy or distorted sound	<ul style="list-style-type: none"> ■ The disc is dirty. ■ Poor connections. 	<ul style="list-style-type: none"> ■ Clean the disc. ■ Check the connections and connect all cords securely.
BD-LIVE contents cannot be loaded	<ul style="list-style-type: none"> ■ Poor connections between this unit and broadband router and/or modem. ■ The USB memory device is disconnected. ■ The BD-Live Internet Access is set to 'Prohibit Access'. ■ The BD disc does not support BD-LIVE. ■ The network settings are not set correctly. 	<ul style="list-style-type: none"> ■ Check the connections and connect all cords securely. ■ Connect the USB memory device to this unit. ■ Set it to 'Always Allow Access': see page E-21. ■ Load a disc that supports BD-LIVE. ■ Set the network settings correctly: see page E-21.
Remote control unit does not operate.	<ul style="list-style-type: none"> ■ Batteries are not loaded or exhausted. ■ The remote sensor is obstructed. 	<ul style="list-style-type: none"> ■ Replace the batteries. ■ Remove the obstacle.

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: see 'Audio' on page E-20.

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



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.

NOTE

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.



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, **TV**, **VCR**, **SAT**, **TV**. (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.

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  until the power LED blinks twice: .
2. Press   .
3. Press the Device Mode key of the function you want to move (e.g. .
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. .
6. Press the  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 key to control a second TV

1. Press and hold  until the power LED blinks twice: .
2. Press   .
3. Press the Device Mode key for the type of device you want to control (e.g. for a TV, press .
4. Press the Device Mode key you want to use (e.g. .
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-14.

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  until the power LED blinks twice: .
2. Press   .
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. .
2. Press and hold  until the power LED blinks twice: .
3. Press   .
- 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.

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 .

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 (± 0.5 dB)	10Hz–20kHz
Output level (0dB)	2.2Vrms
Output impedance	47 Ω
Minimum recommended load	5k Ω
Video Outputs	
Composite video	1 x phono. 1V pk-pk in 75 Ω
Component video	Interlaced or Progressive 3 phono sockets. Y 1V pk-pk in 75 Ω , Pb 0.7V pk-pk in 75 Ω , Pr 0.7V pk-pk in 75 Ω
HDMI	19-pin HDMI connector Supported video formats are: 720 x 576p, 720(1440) x 576i, 720 x 480p, 720(1440) x 480i, 1280 x 720p, 1920 x 1080i, 1920 x 1080p Audio to 8-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	W433 x D400 x H100mm
Weight	6.2kg nett/8.5kg packed
Power consumption	17W maximum
Digital output connection	75 Ω co-axial optical TOSLINK
Supplied accessories	
	Mains lead CR104 remote control 4 x AAA batteries
E&OE	
NOTE: All specification values are typical unless otherwise stated	

Radio interference

The BDP300 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

**CLASS II
LASER PRODUCT**

If the BDP300 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.

software licencing

This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

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

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.


The 'BD-LIVE' logo is a trademark of Blu-ray Disc Association.

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

'BONUSVIEW' is a trademark of Blu-ray Disc Association.

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

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,392,195; 7,272,567; 7,333,929; 7,212,872 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks, & DTS-HD, DTS-HD Master Audio | Essential and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

 is a trademark of DVD format/Logo licensing Corporation.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

This product uses some software programs which are distributed under the GPL license. Accordingly, the following GPL software source codes that have been used in this product can be provided after asking at <http://www.sherwoodamerica.com>.

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it. For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The 'Program', below, refers to any such program or work, and a 'work based on the Program' means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language.

(Hereinafter, translation is included without limitation in the term 'modification'.) Each licensee is addressed as 'you'.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

ENGLISH

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on

the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of

the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program. If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and 'any later version', you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the 'copyright' line and a pointer to where the full notice is found.

One line to give the program's name and a brief idea of what it does.

Copyright (C) <year><name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a 'copyright disclaimer' for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers)

written by James Hacker.

signature of Ty Coon, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do,

use the GNU Library General Public License instead of this License.

The BDP300 Blu-Ray Disc player is an Energy Star® qualified disc player. When in idle mode, this disc player draws less than 1 Watt of idle current to help lower your electricity bills and protect the environment. Products that earn the Energy Star prevent greenhouse gas emission by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.



product guarantee

Worldwide Guarantee

This entitles you to have the unit repaired free of charge, during the first two years after purchase, provided that it was originally purchased from an authorised Arcam dealer. The Arcam dealer is responsible for all after-sales service. The manufacturer can take no responsibility for defects arising from accident, misuse, abuse, wear and tear, neglect or through unauthorised adjustment and/or repair, neither can they accept responsibility for damage or loss occurring during transit to or from the person claiming under the guarantee.

The warranty covers:

Parts and labour costs for two years from the purchase date. After two years you must pay for both parts and labour costs. **The warranty does not cover transportation costs at any time.**

Claims under guarantee

This equipment should be packed in the original packing and returned to the dealer **from whom it was purchased**. It should be sent carriage prepaid by a reputable carrier – **not** by post. No responsibility can be accepted for the unit whilst in transit to the dealer or distributor and customers are therefore advised to insure the unit against loss or damage whilst in transit.

For further details contact Arcam at:

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

or via www.arcam.co.uk.

Problems?

If your Arcam dealer is unable to answer any query regarding this or any other Arcam product please contact Arcam Customer Support at the above address and we will do our best to help you.

On-line registration

You can register your product on-line at www.arcam.co.uk.

Correct disposal of this product



This marking indicates that this product should not be disposed with other household waste throughout the EU.

To prevent possible harm to the environment or human health from uncontrolled waste disposal and to conserve material resources, this product should be recycled responsibly.

To dispose of your product, please use your local return and collection systems or contact the retailer where the product was purchased.

device code
tables

tableaux des
codes d'unité
source

code-
tabelle für
fremdgeräte

tabellen
apparaatcodes

tablas de
códigos de
dispositivos

таблицы
кодов
устройств

TV			
888	0294		
A.R. Systems	0067 0382 0586		
	0404 0485		
Accent	0039 0067 0586		
Accusound	0890		
Acoustic Research	1299		
Acoustic Solutions	1179 1067		
Acura	0039		
Adcom	0655		
Addison	0683 0138		
ADL	1247 0920		
Admiral	0123 0193 0448		
	0294		
Advent	0906		
Adyson	0247 0246		
AEA	0067 0586		
AEG	0636 1067 1179		
	1193		
Afttron	0921		
Agashi	0294 0246 0247		
Aiko	0039 0067 0586		
	0246 0065 0463		
	0910 0294 0247		
Aim	0067 0586 0783		
	0238 0736 0728		
	0664 0404 0485		
	0636 0529		
Aiwa	1535		
Akai	0039 0238 0586		
	0067 0463 0065		
	0783 0193 0759		
	0744 0736 0728		
	0745 0632 0578		
	0510 0247 0294		
	0661 0246 0208		
	0407 0636 1067		
	0503 1289 1278		
Akashi	0890 0039		
Akiba	0485 0067 0586		
Akira	0448 0783 0067		
Akito	0067 0586		
Akura	0067 0294 0586		
	0698 0039 0744		
	1393		
Alaron	0246		
Alba	0039 0067 1067		
	0586 0744 0448		
	0400 0698 0246		
	0193 0517 0473		
Alkos	0065		
Allorgan	0247		
Allstar	0067 0586		
All-Tel	0895 1299		
Amplivision	0247 0400		
Amstrad	0039 0067 0294		
	0463 0586 1067		
Anam	0067 0586 0039		
	0680		
Anam National	0067 0586 0680		
Andersson	1193 1179		
Anglo	0039 0294		
Anitech	0039 0294 0067		
	0586		
Ansonic	0400 0067 0586		
	0039 0698 0404		
	0193		
AOC	0655 0039 0090		
	0123 0138 0208		
Aolinpike	0294		
Apex Digital	1247		
Apollo	0503		
Arc en Ciel	0139		

Arcam	0246 0247		
Arçelik	0744		
Ardem	0744 0516 0663		
	0067 0586		
Arena	0067		
Aristona	0586 0067		
Arthur Martin	0193		
ASA	0135 0376 0100		
	0193		
Asberg	0067 0586		
Asora	0039		
Astra	0067 0586		
Asuka	0247 0246 0294		
ATD	0728		
Atlantic	0067 0586 0246		
Atori	0039		
Auchan	0193		
Audiosonic	0039 0067 0404		
	0850 0586 0139		
	0744 0745 0247		
	0400 0294 0516		
Audioton	0247 0516 0400		
	0294		
Audioworld	0728		
Aumark	0090		
Autovox	0247		
AWA	0039 0404 0067		
	0586 0246 0636		
	0247 0138 0294		
	1406 0208 0728		
Axxent	0039		
Axxon	0744		
B&D	1247		
Baier	0906		
Baihe	0039 0294		
Baile	0039 0404 0691		
Baird	0373 0139 0247		
	0238 1226 0636		
Bang & Olufsen	0595		
BaoHuaShi	0294		
Baosheng	0039		
Barco	0193		
Base	0810		
Basic Line	0039 0404 1179		
	0067 0193 0698		
	0586 0247 0485		
	1067		
Bastide	0247		
Bauer	0039 0728 0736		
	0294		
Baur	0039 0067 0542		
	0225 0586 1535		
Bazin	0247		
Beaumark	0208		
Beijing	0039 0238 0256		
	0294 0404 0512		
	0691		
Beko	0400 0744 0516		
	0065 0745 0067		
	0448 0586 0636		
	0838		
Belson	0728 1221		
Bennett	0586 0067		
Beon	0067 0586 0448		
Berthen	0698 0586		
Best	0400		
Bestar	0067 0586 0400		
	0404		
Bestar-Daewoo	0404		
Binatone	0247		
Black Diamond	0850 1067 0586		
	1193 0783 0617		
Black Strip	0065		

Blaupunkt	0225 0230 0357		
	0485 0200		
Blauren	0404		
Blue Sky	0067 1067 0586		
	0698 0744 1179		
	0517 0745 0655		
	1939 0485 1221		
	0838 1393		
Boots	0247 0039		
Bork	1393		
Bosch	0357		
BPL	0067 0586 0926		
Brandt	0139 0655 0365		
	0373 0590		
	0365		
Brandt	Electronique		
Brinkmann	0067 0586 0698		
	0448 0516		
Brionvega	0067 0586		
Britannia	0246 0247		
Brother	0294		
Bruns	0516		
BSR	0193		
Bush	0039 1067 0067		
	0744 0698 0404		
	0193 0728 0294		
	0517 0238 0247		
	0586 0808 1289		
	1278 0617		
Caihong	0039		
Caishi	0921		
Cameron	0586		
Camper	0067 0586 0516		
Capsonic	0294		
Carad	0640 0067 0586		
	0698 1067		
Carena	0485 0067 0586		
Carrefour	0100 0067 0586		
Carver	0200		
Cascade	0039 0067 0586		
Casio	0067 0586 0193		
Cathay	0067 0586		
CCE	0067 0247 0586		
Celestial	0850		
Centrex	0810 0921 0728		
Centrum	1067		
Centurion	0067 0586		
CGE	0104 0448 0400		
	0193		
Changcheng	0039 0294 0404		
	0691		
Changfei	0039 0404		
Changfeng	0294 0783		
Changhai	0039		
Changhong	0850 0039 0294		
	0538		
Chengdu	0039		
Chimei	1535		
Ching Tai	0039		
Chun Yun	0039		
Chunfeng	0039 0294		
Chung Hsin	0138		
Chunsun	0039		
Cimline	0039		
Citizen	0090		
City	0039		
Clarivox	0067 0448 0586		
	0100		
Clatronic	0067 0400 0744		
	0294 0586 0247		
	0039 0636 1193		
Clayton	1067		
CMS	0246		
CMS hightec	0247		

Cobolt	0921		
Concorde	0039		
Condor	0067 0400 0586		
	0246 0039 0448		
	0193 0294		
Conia	0784 0850		
Conrac	0838		
Conrad	0067 0586		
Conrowa	0039 0294 0728		
	0783 1200		
Contec	0039 0246 0294		
	0067 0586		
	0139 0517		
Continental	Edison		
Cosmel	0039 0067 0586		
CPTEC	0655 1393		
Crosley	0104 0193		
Crown	0039 0742 0067		
	0400 0516 0586		
	0448 0517 0744		
	0636 0745 0238		
	0683 1067 0698		
CS Electronics	0246		
Curtis Mathes	0090 0123		
Cytronix	1328		
D.Boss	0067		
Daewoo	0664 0691 0529		
	0404 1939 0067		
	0586 0039 0246		
	0247 1167 0208		
	0200 0910 0138		
	0906 0895 0728		
	0744 0736 0808		
Dainichi	0246		
Dansai	0067 0586 0294		
	0065 0246 0039		
	0247 0238		
Dantax	0400 0516 0744		
	1067 0636 0745		
Datsura	0238		
Dawa	0039 0067 0586		
Daytek	0728 0736 1406		
	0294		
Dayton	0039		
Daytron	0039 0404 0067		
	0586		
Dayu	0404 0691		
de Graaf	0238 0578 0193		
DEC	0890 0921 0926		
Decca	0067 0586 0247		
	1167		
Deitron	0067 0586 0404		
Denko	0294		
Denver	0067 0586 0636		
	1219 0617		
Desmet	0067 0586 0039		
Diamant	0067 0586		
Diamond	0294 0728 0039		
	0855 0246 0890		
	0850 0926 0736		
DiBoss	0067 0586		
Digatron	0067 0586		
Digihome	1179		
Digiline	0067 0586 0135		
	0698		
DigiLogic	0067 0586		
Digimate	0920		
Digitex	0850		
Digitor	0067 0586		
DigiX	0910		
DiK	0067 0586		
Dixi	0039 0067 0586		
	0247		
DL	0921 0810 0067		
	0617 0895 1393		

Domeos	0698	0067	1067
Domland	0424		
Dongda	0039		
Donghai	0039		
Dream Vision	1734		
DSE	0850	0728	
DTS	0039		
Dual	0247	0373	0067
	0586	0382	0424
	0193	1167	0661
	1179	1067	0808
	1193		
Dual Tec	0247		
Dumont	0100	0247	
Dunai	0193		
Durabrand	0067	0208	0586
	1067		
Dux	0067	0586	
D-Vision	0067	0586	
DXV	0921		
Dynatech	0247		
Dynatron	0067	0586	
e:max	0636		
Easy Living	1278	1289	1247
	0907		
Ecco	0803	0736	0728
ECE	0067	0586	
Edison-Minerva	0517		
Elbe	0640	0400	0193
	0067	0586	0247
Elcit	0193		
Electrograph	1785		
Elekta	0039	0067	0586
	0294		
Elfunk	1238	1067	
ELG	0067	0586	
Elin	0067	0246	0578
	0586	0135	0193
	0039		
Elite	0067	0586	
Elta	0039	0294	0246
Emerson	0208	0744	0067
	0586	0100	1939
	0516	0400	0193
	0698		
Enzer	0783	0803	0890
Erae	1401	1221	
Erres	0067	0586	
ESC	0067	0586	0247
Estèle	0193		
Ether	0039		
Etron	0039	0067	0586
	0850	0193	
Eurofeel	0294	0247	
EuroLine	0067		
Euroman	0246	0294	0067
	0586	0247	0400
Europa	0067	0586	
Europhon	0067	0193	0247
	0586	0246	
Evesham	1278	1289	
Excel	0067	0586	
Excello	1067		
Expert	0193		
Exquisit	0067	0586	
Fagor	0067	0586	
FairTec	1221		
Family Life	0067	0586	
Feilang	0039		
Feilu	0039		
Feiyan	0294		
Feiyue	0039		
Fenner	0404	0039	

Ferguson	0067	0139	0655
	0365	0373	0590
	0586	0065	0683
	0138	0578	0473
Fidelity	1067		
	0193	0246	0542
	0067	0586	0294
Filsai	0247		
Finlandia	0238	0376	0578
	0193	0373	
Finlux	0067	0135	0100
	0586	0744	0376
	0247	0193	0745
	0661	0522	0510
	0503	0448	0636
	0838	1278	
Fistar	0039		
Firstline	0039	0067	0586
	0246	0247	0404
	0698	0744	0193
	1939	0238	1067
	1221	0838	1393
Fisher	1193	1401	
	0247	0238	0400
Flint	0193		
	0067	0485	0586
Force	0640	0294	
	1179		
Formenti	0067	0193	0586
	0516	0246	
Formenti-Phoenix0246			
Fortress	0123		
Fraba	0067	0586	0400
Friac	0039	0067	0586
	0400	0529	0640
Frontech	0193	0294	0247
	0039		
	0810		
Fuchsware	0895		
Fujimaro	0895		
	0713	0883	0247
Fujitsu	0193	0039	0382
	0067	0586	
	0039	0247	0193
Fujitsu Siemens	1328	1289	1278
	1193	0838	
Funai	0294	1067	0698
	1535	0744	
Furi	0294		
Furichi	0890		
Futronic	0294	0890	0728
	0067	0586	
Future	0067	0586	
Gaba	1067	0067	
Galaxi	0067	0586	0193
	0400	0448	0067
Galaxis	0586		
	0039		
Galeria	0039		
Garza	0586		
Gateway	1785		
GBC	0193	0039	0404
	0373	0208	0123
GE	0590	0139	0365
	0655		
Geant Casino	0193		
GEC	0067	0193	0247
	0586		
Geloso	0039	0193	0404
	0139		
General	0373		
General Electric	0039		
	0039		
Genesis	0039	0067	0586
Genexxa	0193	0067	0586
	0039		
Gericom	0895	1328	1247
	0910	0838	
Gevalt	1401	1221	

G-Hanz	1393
	0247
	0039
	0090
Go Video	0698
Goldfunk	0246
Goldhand	0067
	0039
	0208
	0400
GoldStar	0407
	0247
	0586
	0246
Gooding	0193
	0636
	0744
	0745
Goodmans	0485
	0517
	0664
	0745
Gorenje	1289
	1067
	1278
	0067
GP	0529
	0586
	0247
	0744
Gradiente	0698
	0373
	0247
	0586
Graetz	0586
	1193
	0744
	0193
Granada	0067
	0586
	0238
	0256
Grandin	0247
	0138
	0503
	0365
Gronic	0590
	0193
	0373
	0578
Grundig	0067
	0586
	0039
	0246
Grunkel	0039
	0247
	0193
	0067
H&B	0193
	0640
	0744
	0745
Haaz	0698
	0404
	0485
	1067
Haier	0895
	1221
	0910
	0247
Haihong	0247
	0193
	0039
	0039
Haiyan	0294
	0294
	0246
	0247
Halifax	0208
	0294
	0890
	0728
Hallmark	0294
	0090
	0246
	0247
Hammerstein	0208
	0067
	0586
	0294
Hampton	0246
	0247
	0208
	0208
Hankook	0067
	0586
	0529
	0193
Hanseatic	0691
	0424
	0039
	0039
Hantarex	0247
	0407
	0744
	0838
Hantor	0516
	0655
	0039
	0067
Harsper	0586
	0895
	0067
	0586
Harwa	0246
	0247
	0208
	0208
Harwood	0067
	0586
	0517
	0067
Hauptpauge	0586
	0123
	0039
	0067
Havermy	0586
	0247
	0448
	0294
HCM	1226
	0586
	0067
	0067
Hedzon	0247
	0039
	0039
	0039
Hema	0193
	0067
	0586
	0067
Hicon	0139
	0039
	0039
	0039
Hifivox	0139
	0039
	0039
	0039
Higashi	0246
	0246
	0246
	0246

Highline Hinari	0294	0067	0586
	0039	0238	0067
	0586	0193	0473
	0517	0294	
Hisawa Hisense	0485	0640	0744
	1393	0238	0039
	0538	0783	0728
	0921	0890	0810
Hitachi	1200	1238	0586
	1606	0039	0511
	0608	0138	0774
	1067	1511	0139
	0193	1255	0664
	0208	0503	0247
	0373	0538	1193
	0578	0529	1179
	1200	0510	0067
	0586	1167	0135
	0522	0907	
	Hitachi Fujian	0138	0067
0890		0529	
Hitsu	0039	0640	0485
Höher	0744	0895	1193
Home Electronics	0636		
Hongmei	0039	0123	0294
Hongyan	0294		
Hornlyphon	0067	0586	
Hoshai	0485		
Hua Tun	0039		
Huafa	0039		
Huanghaimei	0039		
Huanghe	0039		
Huanglong	0039		
Huangshan	0039	0294	
Huanyu	0246	0404	0294
Huaqiang	0294		
Huari	0294		
Hugoson	0920	1247	
HYD	1406		
Hygashi	0247	0246	
Hyper	0039	0246	0247
Hypson	0067	0294	0586
	0744	0745	0247
	0485	1067	0698
	0516		
Hyundai	0067	0890	0895
	0586	0728	0783
	0294	1067	0906
	0736	1406	0808
Iberia	0067	0586	
ICE	0247	0294	0067
	0039	0586	0246
Ices	0246		
Ict	0067	1167	0586
IIsonic	1406		
Iiyama	1247	0920	
Imperial	0067	0104	0193
	0400	0448	0538
	0586		
Imperial Crown	0039	0294	0404
	0691		
Indiana	0067	0586	
InFocus	0782	1194	
Ingelen	0193	0517	0640
	0744		
Ingersoll	0039		
Inno Hit	0039	1067	0067
	0586	0247	1193
Innova	0067		
Innovation	0067	0586	
Innowert	0895	1328	
Inotech	0803	0850	
Interactive	0067	0586	0542
	0357	0193	0400
	0139		

TV (cont.)		
Norfolk	0193	
Normerel	0067 0586	
Novak	0067 0586	
Novatronic	0067 0135 0404 0586	
Nurnberg	0193	
NU-TEC	0485 0728 0850 0067 0586 0736 0294	
O.K.Line	1067	
Oceanic	0193 0238 0503 0578 0510	
Odeon	0294	
Okano	0400 0067 0586 0294 0039	
OKI	1067	
Olidata	1406	
Omega	0294	
Omni	0810 0921 0728	
Onida	0683	
Onn	1179 0586	
Onwa	0632 0463	
Opera	0067 0586 0744	
Optimus	0680	
Optonica	0123	
Orava	1067	
Orbit	0067 0586	
Orion	0067 0473 0744 0586 0039 0294 0910 1226	
Orline	0067 0586	
Ormond	0698 1067 0067 0586	
Osaki	0247 0294 0067 0404 0586	
Osio	0067 0586	
Osume	0067 0586	
Otto Versand	1535 0067 0247 0373 0542 0123 0586 0225 0139 0256 0039	
Pacific	0067 0586 1167 0744 1067 0473 0246	
Pael	0400 0448 0067 0744 1167 1535 0230 0586 0357 0193 0247	
Palladium	0294 0803 0067 0247 0407 0728 0586 0448 0808 1226 1299	
Palsonic	0294 0803 0067 0247 0407 0728 0586 0448 0808 1226 1299	
Panama	0039 0247 0294 0246 0067 0586	
Panasonic	0680 0256 0067 1340 0586 0193 0238 0538 0926 0883 0578 0138	
Panavision	0067 0586	
Panda	0039 0238 0256 0294 0538 0728 0810 0736 0921	
Papouw	0067 0586	
Pathe Cinema	0193 0246 0400	
Pathe Marconi	0139	
Pausa	0039	
Peng Sheng	0921	
Penney	0208 0090	
Perdio	0193 0067 0246 0586	
Perfekt	0067 0586	

Philco	0104 0448 0067 0193 0586 0400 0208 0511
Philex	0193
Philharmonic	0247
Philips	0067 0586 0802 0208 0138 0404 0373 0039 0230
Phocus	1319 0744
Phoenix	0067 0586 0400 0516 0193 0246
Phonola	0067 0586 0246
Pilot	0586 0067 0742 0736
Pioneer	1290 0790 0200 0139 0193 0067 0586 0373 0516 0542
Pionier	0400 0516
Plantron	0067 0586 0294 0039
Playsonic	0744 0067 0247 0745
Polar	0067
Polaroid	0895
Policom	0139 0193 0100 0104
Poppy	0039
Portland	0404 1939
Powerpoint	0517 0067 0586 0728
Precision	0247
Premier	0039 0294 0921
President	0890
Prima	0039 0294 1299 1226
Princess	0728
Prinston	1067
Profex	0039 0193
Profi	0039
Profitronic	0067 0586
Proline	0067 0586 0655 0664 1406 1067
Prosonic	0067 0586 0400 0404 0910 0698 1406 0744 0246 0247 0636 0745 1226
Protech	0039 0067 0586 0247 0294 0448 0698 0193 0516 1067
Proton	0208 0039 0674
Provision	0529 0067 0586 1067 0744
PVision	1221 0906
Pye	0067 0586 0404
Pymi	0039
Qingdao	0238 0256 0294
Quadro	0783 0586 0067 1179 1193
Quasar	0680 0895 0039
Quelle	0067 1535 0100 0104 0139 0542 0247 0357 0135 0698 0586 0225 0230 0294 1067 0376 0039
Radialva	0139 0193 0067 0586
Radiola	0067 0586 0247
Radiomarelli	0067 0586
Radionette	0744
RadioShack	0067 0586 0208

Radiotone	0039 0067 0586 0400 0448 0698 0294 1067
Rank	0100
Rank Arena	0632 0783
RBM	0100
RCA	0655 0090 0123 0208 0590 0365 0648 0373 0783 0855
Realistic	0208
Recor	0067 0448 0586
Rectiligne	0067 0586
Rediffusion	0578 0376
Redstar	0067 0586
Reflex	0067 0586 1067 0698
Relisys	0895 0906 0907 1328 1406
Reoc	0744 0664 1939
Revox	0067 0838 0586 0400
Rex	0193 0294
RFT	0400 0294 0067 0586 0516
Rhapsody	0246
Ricoh	0067 0586
Rinex	0803 0448 0728 0294 0736
R-Line	0067 0586 0193
Roadstar	0039 1067 0745 0294 0448 0067 0586 0744 0698 1219
Rodex	0067 0586
Rolsen	1401 1221 0067 0586
Rover	0907
Rowa	0067 0294 0728 0742 0247 0039 0246 0736 0617 0586
Royal	0448 0855 0636
Royal Lux	0400 0365
Rukopir	0586 0067
Saba	0139 0655 0193 0590 0365 0373 0578 0680 0744
Sagem	0640 0485 0860 1343 0648
Saige	0039
Saisho	0039 0664 0404 0294 0247 0193
Saivod	0067 0586 1193 0698 0742 1067
Sakai	0193
Sakyno	0485
Salora	0193 0578 0238 0510 0661 0808 1401
Salsa	0365
Sampo	1785 0039 0123 0208 0680
Samsung	0674 0796 0090 0648 0208 0617 0123 0039 0586 1279 0512 1265 0067 0294 0247 0400 0238 0256 0246 0193
Sandra	0246 0247
Sanjian	0294

Sansui	0067 0759 0586 0736 0632 0485 0783 1401 1221 0728 0294 0744 1278
Santon	0039
Sanyo	0238 1238 0400 0246 0247 0039 0538 0193 0067 0138 0586 0516 0200 0294 1067 1179 1193
Sanyuan	0039 0123
Save	0067 0586
SBR	0067 0586
Schaub Lorenz	0578 0744 0636 0516 0404 1221 1393 1401 0906
Schneider	0067 1167 0586 0698 0424 0382 0373 0247 1067 0193 0744 1939 0100
Schöntech	1067
Scotch	0208
Scotland	0193
Scott	1219 0208
Sears	0208
Seaway	0664
Seelver	0586 1067 0067
SEG	1067 0247 0067 0294 1193 0586 0698 0517 0039 0193 0664 0246 1219
SEI	1535 0193 0067 0586
Sei-Sinudyne	1535 0067 0586
Seitech	1247
Seleco	0193 0294 0376
Sencora	0039
Sentra	0065 0039
Serie Dorada	0208
Serino	0640 0485 0246 0123
Shancha	0294
Shanghai	0039 0238 0256 0294
Sharp	0123 1223 0039 1423 0680 0230
Shen Ying	0039
Shencai	0039 0294
Sheng Chai	0039
Sheng Chia	0039 0123
Shenyang	0039 0294 0783
Sherwood	0039
Shintoshi	0067 0586
Shivaki	0067 0586 0473 0404 0208
Show	0448 0039 0728 0294 0736 0067
Siarem	0193
Siemens	0067 0225 0230 0357 0586
Siera	0067 0586 0617
Siesta	0400
Silva	0067 0586 0246
Silva Schneider	0783
Silver	0485 0067 0586 0745 0193
SilverCrest	1067 0067 0586
Singer	0039 0728 0067 0586 0365 0193 0067
Sinotec	0803 0448 0636 0728

Sinudyne	0193 1535 0067 0586 0636
Sky	0067 0910 0208 0586 1406 0691 0895
Skymaster	0135
Skysonic	0783
Skyworth	0067 0586 0039 0294 0728 0783 0855
Sliding	0895 0910
SLX	0698
Smaragd	0517
S-Media	1247
Soemtron	0895 1328
Sogo	1406
Solavox	0193 0578 0067 0586
Songba	0039
Sonic	0783
Soniko	0067 0586
Soniq	1328
Sonitron	0238 0400 0247
Sonneclair	0067 0586
Sonoko	0039 0067 0586 0294 0247
Sonolor	0193 0238 1535 0578
Sontec	0067 0586 0400 0039
Sony	1535 1681 0680 1781 0383
Sound & Vision	0404 0067 0586
Soundesign	0208
Soundwave	0067 0448 0586 0745
Sowa	0090 0256 0208
Soyea	0803
Spectra	0039
Ssangyong	0039
Staksonic	0039
Standard	0039 0067 0247 0586 1067 0404
Starion	1067
Starlite	0039 0193 0067 0586 0294
Stern	0193 0294
Strato	0067 0586 0294 0039
Strong	1193 1179 1067 0067 0586
Stylandia	0247
Sungoo	1278
Sunic Line	0067 0586
Sunkai	0485 0640 0067 0586 0517 0895
Sunny	0067
Sunstar	0067 0586 0039 0294
Sunwatt	0485
Sunwood	0067 0586 0039
Super	1219
Superia	0246 0247
SuperScan	0123
Supersonic	0039 0238 0586 0728 0294 0485 0067
SuperTech	0039 0246 0067 0586
Supervision	0728 0294
Supra	0208 0404 0039
Susumu	0365
Sutron	0039

SVA	0617 0728 0294 0485 0895 0238 0736
Svasa	0728 0238 0736 0294
Swisstec	0910 1406 0895
Sydney	0246 0247
Synco	0090 0123 0208
Sysline	0067 0586
Sytong	0246
T+A	0477
Tacico	0208 0039
Tai Yi	0039
Taishan	0039 0404
Tandberg	0139 0193
Tandy	0123 0247 0193
Targa	1401 1221 0648
Tashiko	0247 0680 0200 0246 0193
Tatung	0039 0067 1278 0090 0586 0247 1401 1289 1221
TCL	0655 0728 0736
TCM	0744 1319 0838
Teac	0039 0728 0067 0294 1067 0586 0448 0542 0742 0485 0698 0247 0736 1939 0208 0200 0744 1179 1785 1393 0617
TEC	0247 0039 0365 0067 0586 0193
Tech Line	0067 0586 0698 1193
Tech Lux	1219
Technics	0680
TechniSat	0067 0586 0193
Technisson	0744 1319
Techno	1067
Technol Ace	0728 0294 0664 0404 0246
Technosonic	0067 0586 0529 0910
Techwood	1193 1067
Teckton	1406
Tecnimagen	0586
Teco	1343 0039 0123 0208 0294 0683
Tedex	0247 0728 0736 0636 0448 0067 0039 0238 0921 0617 0586 0294
Teiron	0039
Tek	0850 0067 0728 0039
Teknika	0090
TELE System	0906
Teleavia	0139 0373
Telecor	0067 0586 0193 0247 0424
Telefunken	0655 0590 0104 0139 0617 0728 0365 0373 0742 0850 0926 0784 0810 0921 0783 0736 0067 0586 0516 0744 0376
Telefusion	0067 0586
Telegazi	0067 0193 0294 0586
Telemeister	0067 0586
Telesonic	0067 0586
Telestar	0039 0067 0586

Teletech	0039 0067 0586 0698 1067
Teleton	0247 0193
Televideon	0193 0246
Televiuew	0067 0586
Tempest	0039 0067 0586 0294
Tennessee	0067 0586
Tensai	0067 0586 0247 0039 0135 0404 0407 0745 0193 1067
Tenson	0039
Tesla	1067 0067 0698 0744 0745 1167 0855 0783 0586 0640
Tevion	1328 1278 1289 0067 0586 0838 0895 0698 1167 0744 1067 1319
Textet	0246 0247 0404 0039
Thomson	0590 0655 0373 0139 0783 0365 0067 0586 0246
Thorn	0065 0138 0139 0067 0104 0373 1535 0529 0542 0586 0365 0404 0100
Thorn-Ferguson	0138 0373 0139 0365 0529 0065 0123
Tiane	1226 1299
Tiny	0208
Tobu	0039 0294
Tokai	0067 0586 0698 0193 0247 0404 0039 1067
Tokaido	1067
Tokyo	0246 0065
Tongguang	0294
Tongtel	0810 0617
Top Show	0728 0803 0448 0039 0294 0736
Topline	1067 0698
Toshiba	1538 0538 0680 0090 0039 0065 1734 1194 1319 1295 0744 0100 0123 0294 0648 0674 0247 0139 0225 0728 0067 1067
Towada	0247
Toyoda	0039 0294
Trakton	0039 0294 0247
TRANS-continents	0698 1067 0895 0586 0067 0516 0247
Transonic	0067 0728 0742 0586 0485 0617 0542 0294 0448 0039 1393 0810
Transtec	0246
Triad	0067 0586 0039
Trident	0247
Trio	1278
Tristar	0294
Triumph	0376 0586 0067
Tuntex	0039
TVTEXT 95	0586
Uher	0067 0586 0404 0448 0516 0400 0510

Ultravox	0404	0246	0193
	0067	0586	
Unic Line	0067	0586	0503
	0485		
United	0744	0067	0745
	0586	1067	0617
Universal	0744	0067	0586
Universum	0838	1067	0067
	0104	1193	0294
	0376	0400	0698
	0135	0510	0225
	0503	1179	0542
	0522	0230	0448
	0100	0193	0586
	0357	1535	0247
	0139	0661	0039
	0200	0648	
Univox	0067	0586	0193
Utax	0193		
V7 Videoseven	1785	0208	0910
	1406	1247	0648
	1681	1535	
Vanguard	0067	0586	
Vestel	0067	1067	1193
	0698	0193	0247
	0586		
Vexa	0039	0067	0586
Victor	0683	0680	
Videocon	0538		
Videologic	0246		
Videologique	0246	0247	
VideoSystem	0067	0586	
Videotechnic	0246	0247	0404
Videoton	0193		
Vidtech	0208		
Viewpia	0906		
ViewSonic	1785		
Visiola	0246		
Vision	0067	0294	0586
	0247		
Vistron	1393		
Vivax	0067		
Vortec	0067	0586	
Voxson	0193	0208	0067
	0586	0448	
Walker	1179		
Waltham	0247	0448	0067
	0586	0698	0139
	1067	0193	0473
Wards	0208		
Warumaia	0404	0691	0664
Watson	0067	1067	1278
	1289	0586	0193
	0039	0698	0424
	1406	0357	
Watt Radio	0193	0246	0516
Wega	0067	0586	
Wegavox	0039	0067	0586
Weipai	0039		
Welltech	0744		
Weltblick	0067	0586	0247
Weltstar	1067		
Westinghouse	0920		
Weston	0067	0586	
Wharfedale	0067	0926	0921
	0890	0586	0728
	0736		
White	0067	0246	0586
Westinghouse	1939		
Wilson	0586		
Windsor	0698	1067	
Windy Sam	0586		
Wintel	0744		

World-of-Vision	0910	0920	0895
	1319	1328	0907
	1247		
Worldview	0485		
XDome	0538		
Xenius	0664	0691	
Xiahua	0039	0294	0728
	0803		
Xianghai	0039		
Xiangyang	0294		
Xiangyu	0039		
Xihu	0294		
Xingfu	0039		
Xinghai	0294		
Xingyu	0039		
XLogic	0728	0890	
Xoro	1226	1247	
Xrypton	0067	0586	
X-View	1221		
Yamaha	0680	1606	
Yamishi	0485	0067	0586
	0247		
Yingge	0039		
Yokan	0067	0586	
Yoko	0067	0247	0294
	0586	0039	0400
	0246		
Yonggu	0039		
Yoshita	0855		
Yousida	0039		
Yuhang	0039		
YU-MA-TU	0067		
Zaapa	1219		
Zanussi	0247		
Zenith	1939	0208	1295
Zhuhai	0039	0404	
Zonda	0728		

VCR			
Accent	0102		
Adyson	0102		
Aim	0308	0672	0378
Aiwa	0030	0378	0382
	0067	0772	1167
	0062		
Akai	0030	0067	0136
	0345	0672	0382
	0270	0378	
Akashi	0102		
Akiba	0102		
Akura	0102		
Alba	0308	0102	0382
	0030	0345	0378
	0111		
Allorgan	0270		
Allstar	0111		
Amstrad	0030	0308	0102
Anitech	0102		
Ansonic	0030		
Aristona	0111		
ASA	0067	0111	
Asuka	0102	0067	0111
	0030		
Audiosonic	0308		
AVP	0382	0030	
AWA	0067	0308	0672
	0073		
Baird	0136	0308	0134
	0030		
Basic Line	0308	0102	0134
Beko	0134		
Bestar	0308		
Black Diamond	0672	0308	
Black Panther	0308		
Blaupunkt	1592	0256	0111
Blue Sky	0067	0378	0102
	0382	0308	0030
	0510	0672	1167
	0772		
Bondstec	0102		
Brandt	0350		
Brinkmann	0378		
Broksonic	0378	0772	0382
Bush	0102	0308	0345
	0382	0030	0378
	0111	0672	0772
Carena	0111		
Carrefour	0075		
Casio	0030		
Cathay	0308		
CGE	0030		
Cimline	0102		
CineVision	1167		
Clatronic	0102	0030	
Combitech	0382		
Condor	0308		
Crown	0067	0308	0510
	0102		
Cyrus	0111		
Daewoo	0308	0672	1167
	0667	0378	0382
	0075		
Dansai	0102	0308	
Dantax	0382	0772	
Daytron	0308		
de Graaf	0072	0196	0111
	0134	0078	
Decca	0030	0111	0097
	0378	0382	
Deitron	0308		

Denko	0102		
Denon	0072		
Diamant	0067		
Diamond	0308		
Digitor	0672		
DSE	0672		
Dual	0111	0308	0030
	0378		
Dumont	0030	0111	0134
Durabrand	0672		
Elbe	0308		
Elcatech	0102		
Elin	0270		
Elsay	0102		
Elta	0102	0308	
Emerson	0102	0075	0030
	1167		
ESC	0308	0270	
EuroLine	0378		
Ferguson	0350	0030	0308
	0378	0772	
Fidelity	0030	0102	0270
	0462	0382	
Finlandia	0134	0111	0072
	0196	0030	0078
	0067	0073	0136
	0256		
Finlux	0030	0111	0134
	0072		
Firstline	0102	0378	0073
	0067	0075	0072
	0308	1167	
Fisher	0134		
Flint	0378		
Frontech	0102		
Fujitsu	0030		
Fujitsu General	0067		
Funai	0030		
Galaxi	0030		
Galaxis	0308		
GE	0350		
GEC	0111		
General Technic	0378		
Genexxa	0134		
Go Video	1167		
Goldhand	0102		
GoldStar	0067	0510	0030
Goodmans	0030	0102	0270
	0308	0067	0111
	0378	0667	0382
	0672		
GPX	0067		
Graetz	0134	0270	
Granada	0111		
	0134	0078	0111
	0270	0067	0256
	0072	0030	
Grandin	0102	0067	0030
	0308		
Grundig	0377	0111	0256
	0350	0378	0102
	0382	0772	
Haaz	0378		
Hanimex	0382		
Hanseatic	0067	0308	0111
Harwood	0102		
HCM	0102		
Hinari	0102	0382	0308
	0270		
Hisawa	0382		
Hischito	0075		
Hitachi	0072	0196	0030
	0270	0111	0134
Höher	0308	0672	
Hornlyphon	0111		

Hypson	0102	0378	0308
	0382	0030	0067
	0510		
Imperial	0030	0270	
Ingersoll	0270		
Inno Hit	0270	0308	0102
Interbuy	0067	0102	
Interfunk	0111	0134	
Internal	0308	0667	
International	0308	0067	
Intervision	0030	0308	0067
	0378		
Irradio	0102	0067	0111
	1167		
ITT	0136	0134	0270
ITT Nokia	0078		
ITV	0308	0067	
JMB	0382	0378	
Joyce	0030		
JVC	0097		
Kaisui	0102		
Kambrook	0067		
Karcher	0308		
Kendo	0136	0345	0378
	0102	0067	0308
KIC	0030		
Kneissel	0382	0378	0067
	0308		
Kolster	0378		
Korpel	0102		
Kyoto	0102		
Lenco	0308		
Leyco	0102		
LG	0067	0510	0030
	0308	1167	
Lifetec	0378		
Loewe	0111	1592	0256
	0067		
Logik	0270	0102	0136
Lumatron	0308		
Lux May	0102		
Luxor	0136	0073	0102
	0134	0078	0345
Magnavox	0111	0672	
Magnum	0672		
Manesth	0102	0075	0111
Marantz	0111		
Mark	0308	0030	
Mascom	0672		
Mastec	0672		
Master's	0308		
Matsui	0378	0067	0270
	0382	0030	0772
Maxton	0111		
Mediator	0111		
Medion	0378	0382	
Melectronic	0030	0067	
Memorex	0134	0030	0067
	0078	0378	
Memphis	0102		
Metronic	0111		
Metz	1592	0377	0866
	0111	0256	0067
Micormay	0378		
Micromaxx	0378		
Migros	0030		
Mitsubishi	0073	0097	0111
	0510	0030	0672
Multitec	0067		
Multitech	0030	0102	0134
Murphy	0030		
Myrrad	0111		

NAD	0134		
Naiko	0672	0378	
National	1592	0256	
NEC	0097	0070	0134
	0067	0308	1167
Neckermann	0111		
Nesco	0102	0030	0382
Neufunk	0067		
Nikkai	0102	0308	
Nokia	0134	0136	0345
	0308	0270	0078
	0072	0111	
Nordmende	0350	0097	0672
NU-TEC	0378		
Oceanic	0030	0350	0078
	0136	0111	0134
Okano	0345	0378	0102
	0308		
Onimax	0672		
Orbit	0102		
Orion	0378	0382	0772
Orson	0030		
Osaki	0030	0067	0102
Osume	0102		
Otto Versand	0111		
Pace	0382		
Pacific	0030		
Palladium	0102	0345	0067
	0270	0378	0462
Palsonic	0102	0030	0672
Panasonic	1592	0256	0866
Pathe Cinema	0073		
Perdio	0030		
Philco	0102		
Philips	0111		
Phoenix	0308		
Phonola	0111		
Pioneer	0097	0111	0072
Portland	0308	0667	
Prinz	0030		
Profitronic	0111	0270	
Proline	0030	0308	0350
	0672		
Proscio	0308		
Prosonic	0308	0030	
Protech	0111	0308	
Provision	0308		
Pye	0111	0030	
Quasar	0308		
Quelle	0111		
Radialva	0067	0102	0111
	0078		
Radiola	0111		
Radionette	1167	0067	
RCA	0136	0350	
Reoc	0378	0667	0308
RFT	0102		
Roadstar	0270	0102	0067
	0308	0772	0111
Royal	0102		
Saba	0350	0308	
Saisho	0378		
Salora	0073	0136	0134
Samsung	0270	0462	
Sansui	0097	0136	0102
	0378		
Sanyo	0134	0270	0078
	0097	0378	
Saville	0382	0308	0270
SBR	0111		
ScanSonic	0270		

VCR (cont.)			
Thomson	0350	0097	0308
Thorn	0134	0067	
Thorn-Ferguson	0350		
Tokai	0102	0067	0134
Tokiwa	0102		
Topline	0378		
Toshiba	0075	0073	0111
	0772	0382	
Towada	0102		
Tradex	0111		
Tredex	0308		
Triad	0308		
Uher	0067	0270	
Ultravox	0308		
Unitech	0270		
United	0378	0772	
Universum	0030	0111	0270
	0067	0136	0378
	0134		
Victor	0097		
Video Technic	0030		
Watson	0111	0382	0308
	0672		
Weltblick	0067		
Wharfedale	0672		
White	0102		
Westinghouse			
World	0378		
Yamishi	0102	0308	
Yokan	0102		
Yoko	0067	0102	0270
Yoshita	0102		
Zenith	0667	1167	
ZX	0378	0382	
Stern	0308		
STS	0072		
Sunkai	0378	0308	
Sunstar	0030		
Suntronic	0030		
Sunwood	0102		
Supra	0067	0270	0378
	0308		
Sylvania	0030	0073	0111
Symphonic	0030	0102	
T+A	0256		
Tandberg	0308		
Tandy	0030	0134	
Tashiko	0030	0078	0270
	0111	0067	
Tatung	0030	0111	0078
	0073	0378	0382
Tchibo	0378		
TCM	0378		
Teac	0102	0030	0308
	0672	0067	0111
	0667		
TEC	0308	0102	
Tech Line	0102		
Technics	0256		
TechniSat	0378		
Tedalex	0067	0378	0672
Teknika	0030	0067	
Telefunken	0672	0350	0308
Telestar	0067		
Teletech	0102	0308	0030
Tenosal	0102		
Tensai	0030	0067	0102
	0308		
Tevion	0378	0672	
Textet	0308		

Thomas	0030
Thomson	0350 0097 0308
Thorn	0134 0067
Thorn-Ferguson	0350
TMK	0270
Tokai	0102 0067 0134
Tokiwa	0102
Topline	0378
Toshiba	0073 0075 0111
	0772 0382
Totevision	0067 0270
Towada	0102
Tradex	0111
Tredex	0308
Triad	0308
Uher	0067 0270
Ultravox	0308
Unitech	0270
United	0378 0772
United Quick Star	0308
Universum	0030 0111 0270
	0067 0136 0378
	0134
Vector	0075
Vector Research	0070
Victor	0097
Video Concepts	0070 0075
Video Technic	0030
Videosonic	0270
Wards	0030 0072 0078
	0102 0111 0270
Watson	0111 0382 0308
	0672
Weltblick	0067
Wharfedale	0672
White	0102 0308
Westinghouse	
World	0378
XR-1000	0030 0102
Yamishi	0102 0308
Yokan	0102
Yoko	0067 0102 0270
Yoshita	0102
Zenith	0030 0667 1167
ZX	0378 0382

VIDAC	
Elonex	1302
Fujitsu Siemens	1302
Gateway	1302
Hewlett Packard	1302
hFX	1302
Microsoft	1302
Pinnacle Systems	1477
Ricavision	1302
Tenosal	1302
Sony	1302
Trust	1302
Via Technologies	1302
XBox	1302

CBL	
@Home	1696
ADB	1260 1299
Alice	1654
Amstrad	1252
Auna	1299 1260
Austar	0306
Cablecom	1612
Canal Plus	0473
Com Hem	1696 0847
Comcrypt	0473
Daeryung	0507
Fastweb	1660
Filmnet	0473
Foxtel	1252
France Telecom	0847 1764
freebox	1512
Funai	0049
General Instrument	0306
Jerrold	0306
KabelBW	1090
Macab	0847
Madritel	1260
MNet	0473 0049
Motorola	0306 1136 1513
Multichoice	0049 0473
Nokia	1599
Noos	0847 1654
NTL	1090 1098
Numericable	0847
Oak	0049
Ono	1098 0306
Optus	0306 1090
Orange	0847 1764
Pace	1098 1607 1090
Philips	0847 1612
Premiere	1607
Sagem	0847 1654
Samsung	1090 1696
Scientific Atlanta	0507
SKY Deutschland	1607
StarHub	0306
Tele Danmark	0847
Tele+1	0473
Telepiu	0473
Telewest	1098 1090
Telsey	1660
Thomson	1612 1764
Trans PX	0306
UPC	1612
US Electronics	0306
Virgin Media	1090 1098
Visiopass	0847
YouSee	0847
Ziggo	1599 1696

CD	
Advantage	0062
AH!	0187
Aiwa	0187
Arcam	0187
Atoll	0187
Electronique	
Audio Research	0187
Audiolab	0187
Audiomeca	0187
Audioton	0187
Balanced Audio	0187
Technology	
Cairn	0187
California Audio Labs	0059 0333
Cambridge Audio	0187
Carver	0187
Copland	0423
Cyrus	0187
Denon	0033 0796 0656
DKK	0030
Dual	0033
Dynaco	0187
Elektra	0423
Garrard	0423
Genexxa	0030 0062
Goldmund	0187
Grundig	0187
Harman/Kardon	0187
Hitachi	0062
JVC	0102
Kenwood	0220 0656 0066
Krell	0187
Linn	0187
Loewe	0187
Magnavox	0187
Marantz	0187 0656 0059
Matsui	0187
MCS	0059
Memorex	0062
Meridian	0187
Micromega	0187
Mission	0187
Musical Fidelity	0423
Myryad	0187
NAD	0751 0030
Naim	0187
NSM	0187
Onkyo	0131
Optimus	0030 0062
Orion	0423
Panasonic	0333 0059
Philips	0187 0656
Pioneer	0062
Primare	0187
Proton	0187
QED	0187
Quad	0187
Quasar	0059
Radiola	0187
Restek	0187
Revox	0187
Rotel	0187
SAE	0187
Sansui	0187
Siemens	0187
Simaudio	0187
Sony	0030 0520 0187

Tag McLaren	0187
Tandy	0062
Teac	0423
Technics	0333 0059
Thorens	0187
Thule Audio	0187
Traxdata	0656
Universum	0187
Victor	0102
Wards	0187
Yamaha	0066 0520 0062

TUNER	
AEG	1420 1419
AFK	1419
Aim	1420
Aiwa	0151 0219 1088
	1188 1288 1652
	1752
Akai	0639 1250 1420
All-Tel	1420
Amstrad	1420
Anam	0639
Arcam	0219 1119 1219
	1299 1319
ASCOMTEC	1419
Audiolab	1119 1219 1299
	1319 0219
Audiosonic	1419
Audiovox	1420
Audioworld	1420
Balanced Audio	1119 1219 1299
Technology	1319 0219
Bang & Olufsen	0829
Basic Line	1584
Belson	1419
Blue Sky	1420
Bonnec	1219
Bose	1259 1385
Bush	1119 1219 1299
	1319
Cairn	0219
Cambridge Audio	1219 0219
Carver	0219 1119 1219
CCE	1382
Centrum	1250 1584 1419
Classic	1382
Clatronic	1250
Copland	1119 1219 1299
	1319
Denon	1390 1134
Denver	1419
Diamond	1420
DK digital	1450
DMTECH	1420
Dual	1250 1420 1450
Electrocompaniet	1219
Elta	1420
Fisher	1831
Genexxa	0216

Goldmund	0219 1119 1219
	1299 1319
Goodmans	0639 1229 1450
	1641 1419
Grundig	1119 1219 1299
	1319 0219
Hanseatic	1420
Harman/Kardon	1334 1119 1219
	1299 1319 0219
HCM	1420
HE	1419
Hitachi	1831 1250 1584
	1229
Hiteker	1419
Home Tech Industries	1419
Integra	0165 1350
JVC	0104 1404 1525
Kenwood	1343 1057 1599
	0216 1323
KLH	1420
KXD	1419
Lenoxx	1419 1641
Lenoxx Sound	1641
LG	1323
Linn	0219 1119 1219
	1299 1319
Loewe	1119 1219 1299
	1319 0219
Magnavox	0219 1119 1219
	1299
Magnum	1641
Marantz	1119 1219 1299
	1319 0219
Mark	1119 1219 1299
	1319
MBO	1382
Medion	1450
MEI	1420
Meletronic	0639
Meridian	1119 1219 1299
	1319
Metz	1584
Micromaxx	1450
Micromega	1119 1219 1299
	1319 0219
Mustek	1382
Myryad	1219 1119 1299
	1319 0219
NAD	0350 0639
Naim	1119 1219 1299
	1319
Nexius	1420
Nikkai	1419
Nikko	0639
Norcent	1419
Okano	0639
Onkyo	1350 0165
Optimus	0216 1053
Orava	1419
Palladium	1250
Panasonic	1809 1548 1338
	1793 1795 1339
Paramount Pictures	1250
Philips	1219 1299 1119
	1319 0219
Pioneer	1053 0216 1119
	1219 1299 1319
	1489
Polk Audio	1319
Proceed	1219
Proline	1420
Proson	0639
Provision	1419

QONIX	1450
Quad	1119 1219 1299
	1319
Radiola	1119 1219 1299
	1319 0219
Radionette	1664 1323
RCA	1184 1420 1489
Red Star	1419
Restek	0219
Revox	1119 1219 1299
	1319 0219 0216
Revoy	1119 1219 1299
	1319
Roadstar	1641
Rotel	0823
Saba	1184
Samsung	1325 1229
Sansui	0219 1119 0639
Sanyo	1831
Schneider	1420 1229 1250
SEG	1584
Sharp	0216 1664 1644
Sherwood	0683
Siemens	0639
Silva Schneider	1323
Sony	1188 1888 1789
	1688 1088 1288
	1752 1652 1142
Soundwave	0639
Sunfire	1343
Sunstech	1450
Tag McLaren	1219
Targa	1323
Teac	1229 0639 1420
Technics	1793 1548 1809
	1339 1338 1795
Techwood	0639 1584
Telefunken	1420 1419
Tevion	1641
Thomson	1184 1384
Thorens	1219 1119 1299
	1319 0219
Toshiba	1602
United	1420
Universum	1250 1420 0639
	1119 1219 1299
	1319 0219
Venturer	1420
Victor	0104
Voxson	1450
Waitec	1382
Wards	0219
Wharfedale	0639 1420
Xenon	1419
Yamaha	0206 1361 1306
	0742 0216
Yukai	1382

DVD			
3 Plus	0520		
3D LAB	0569		
4Kus	1188		
Acoustic Solutions	0760 0743 1258		
AEG	0818 0800 0820 1263 0705		
AFK	1258 1182 1081		
AG Electronics	1258		
Aim	0808 1195 0702 0820		
Airis	1254 1351 0702 1035 1375 1137		
Aiwa	0725 0899 0563		
Akai	0820 0809 0818 0800 0725 1145 0928 0705 0746 0743 0882 0735 1725 1263		
Akashi	0868		
AKI	1035		
Akira	0808 1351		
Akura	1201 0928 1081 1170		
Alba	0747 0743 0753 0725 0760 0569 0702 1170 1081 1560 1725		
Alize	1181		
All-Tel	0820 1481 0865		
Amitech	0800 0880		
Amoi	0882		
Amoisonic	0865		
Amstrad	0743 1145 1181 1601 0820 0800		
AMW	0902		
Ansonic	0789 0861		
Apex Digital	0702 0747 1034		
Arena	0882 1145		
Aristona	0569 0676		
Art Mito	1451		
Asono	1254		
ATACOM	1254		
A-Trend	0744		
Audiovox	0820 0747		
Audioworld	0820		
Audix	1134 1182 0743		
Autovox	0743		
Auvio	0873		
Avious	1195		
AWA	0760 0902		
Axion	0760		
Base	1481		
Basic Line	0743		
Baze	1195 0928 0702		
BBK	0892 1254		
Bel Canto Design	1601		
Bellagio	0902 1034		
Best Buy	0887		
Biostek	1035		
Black Diamond	0743 0863		
Blaupunkt	0747		
Blusens	1263 1351		
Blue Parade	0601		
Blue Sky	0743 0725 0702 0873 0808 0681 0820		
BNI	1351		
Boghe	1034		
Boman	0818 0928 1035		
Brainwave	0800 1145		

Brandt	0681 0581 0533
Broksonic	0725 1449
Bush	0743 0725 0863 1725 0760 0861 0747 0808 0546 0848 0753 1195 1466 1449 1513 1170 1560
Cambridge Audio	1139 0781
Campomatic Digital	1081
CAT	0819
Celestial	0702
cello	1760
Centrex	0702 1034
Centrum	0743 0819 0809 1035 0705
CGV	0800 0781
Cinea	0871
Cineral	0760
Cinetec	0743 0902
CineVision	0899 0863
Classic	0760 1760
Clatronic	0818 0809 0848 0702 1195 0705 1263
Clayton	0743
Coby	0808 1137 1195 0760 0882
Codex	1263
Compacks	1137
Conia	0702 0882 0546 0865 1351
Contel	0818
Continental Edison	0902 0861
Craig	0861
Crown	0800 0681
Crypto	1258
C-Tech	0798 1182
Cybercom	0861
CyberHome	0744 0846
Cytron	0746 0681 0735 0861 1377
Daenyx	0902
Daewoo	0863 0899 1513 0735 0800 0744 1466 0902 0808
Dalton	1066
Dansai	0800 1145 1725
Dantax	0753 0725 0743
Daytek	0902 1035
Dayton	0902
DCE	0861
DEC	0808 0848
Decca	0800
Denon	0520 0664 1664
Denver	0808 0818 0928 0848 1137 1351 0702
Denzel	0695
Diamond	0681 0798 0808 0781 0753 0820 1182 0800 1145
Digihome	0743
DigiLogic	0743
digIRED	0747
Digitor	1035 0681
Digitrex	0702 1034
DiK	0861
Dimarson	1263
Dinamic	0818
Disney	1253 0861

DiViDo	0735
DK digital	0861
DMTECH	0820 1301
Dragon	0861
DSE	1760 0863 1182 0705
Dual	0861 0743 0695 0681 0760 0809 0820 1466 1560 1145
Durabrand	0861 0705 0743 1560
D-Vision	1145
DVX	0798 1182
e:max	1263 1351 0800
EagleTec	0744
eBench	1182
E-Boda	0753
Eclipse	0753 0781
E-Dem	1254
Electrohome	0800
Elenberg	1258
Elfunk	0880 0743 0793
Elin	0800
Ellion	0880 1451
Elta	0800 0818 0820 1145 1181 1263 1081
Eltax	1351
Emerson	0621 0735 0899 0705
Enterprise	0621
Enzer	0695 1258 1035 0800
EuroLine	0818 1145 1263 0705
Ferguson	0681 1760 0928 0743 1725
Finlux	0771 0800 0621 0702 0781 1195
Fintec	0743 1560
Firstline	0899 0681 1560
Fisher	0700
Funai	0725 0705
Futronic	1035
Gateway	1188
GE	0747
General Electric	0747
Germatic	1081
Global Link	1254
Global Solutions	0798 1182
Global Sphere	0798 1182
Go Video	0774 1188 0899 0863
GoldStar	0621 0771
Goodmans	0743 1034 0753 0781 0760 0681 0820 0848 0863 1170 1760 1560
GP Audio	1170
GPX	0771
Gradiente	0681
Graetz	0695
Gran Prix	0861 0928
Grandin	0746 0702 0743
Greenhill	0747
Grundig	0725 0805 0569 0681 0735 0820 0743 0700 0753 1725 1034 0581 1760 1466 1513
Grunkel	0800 0861
H&B	0848 0743 0871 0880 1263 1451

Haaz	0798 0781
Haier	0873
Hanseatic	0771 0820 1301
Harman/Kardon	0732
HCM	0818
HDT	0735 1227
HE	0760
Hello Kitty	0861
Henß	0743
Hicon	0702
HiMAX	0887 0873
Hitachi	0694 0809 0695 0603 0887 0743
Hiteker	0702
Höher	0861 1034 1254 0743 1560
Home Electronics	0760 0800
Home Tech Industries	1254
HYD	1263
Hyundai	0880 1258 0818 0798 1451 1560 1182 0863
ICP	1182
Ikei	1137
Ingelen	0818
Inno Hit	0743
Insignia	0705
Integra	0657
Irradio	0771 1145 1254 1263 0899 0800
ISP	0725
it's	0747
ITT	1263
Jamo	1066
Jaton	0695
JBL	0732
JDB	0760
JDV	1258
Jeken	0808
Jepssen	1213
JGC	1560
JMB	0725
JNC	1301
JVC	0653 0588 1194 0569 0533 0897
jWIN	1081
Kansai	1137
Kansas Technologies	1263 1560
Kendo	0743 0861 0702 1377 1725
Kennex	0800 0743 0928
Kenwood	0564 0520 1936
KeyPlug	0800
Kiiro	0800
King D'Home	0863
Kingavon	0848
Kiss	0871 0695
KLH	0820
KLH Digital	0747
Koda	0848
Koss	0681
Kreisen	1451
KXD	0887 1137 1351
Lawson	0735 0746 0798 1182
Leiker	0902
Lenco	0681 0800 0808 0848 0743 0861 1195
Lenoir	1258

Lenoxx	0868 1035
Lexia	1182 0798
LG	0771 0621 1936 0899 1263
Lifetec	0681 0861 1377
Limit	0746 1182 0798
LiteOn	1188
Lodos	0743
Loewe	0569 0771
Logic3	0802
LogicLab	0798 1182
Logik	0743
Logix	0735
Lumatron	0735 1145 0771 0863 1351 0743 0760 0928
Luxman	0603
Luxor	1034 0743 1760 0760 0747
Magnavox	0533 0705 0848 1170 0569 0743
Magnex	0753 1195
Magnum	1466 1412
Majestic	1137 1375
Manhattan	0735 0743
Marantz	0569
Mark	0743 0725 1725
Marquant	0800 1481
Mastec	1036
Matsui	0681 0743 0702 0725 1760
Maxdorf	0818
Maxent	1377
Maxim	0743
Maya	1375
MBO	0760
MDS	0808
Mecotek	0800
Medialine	1301
Mediencom	0781
Medion	0861 1377 0681 0746 1375 0660 1195 1036 0771
MEI	0820
Memorex	0861
Memory	0760 1081
Metz	0601 0555 0743
MiCO	0753 0781 1253
Micromaxx	1725 0725 1377
Micromedia	0533 0569
Micromega	0569
Microsoft	0552
Microstar	0861
Minax	0743
Minerva	0735
Minoka	0800 1145
Minowa	1195
Mintek	0747
Mitsubishi	0743
Mizuda	0848 0887 1481
Monyka	0695
MPX	0873
Mustek	0760 1760
Mx Onda	0681 0781 0753 1253
Mystral	0861
NAD	0771
Naiko	0800 1034
NEC	0899 0621 0771
Neovia	1301
Nesa	0747
Neufunk	0695

Nevir	0861 0800 0702
Nexius	0820
Nintaus	1081
Nordmende	0861 1560
Nowa	0873
NU-TEC	0546 1258
Omni	0808 0863 1134 1258
Onix	0868
Onkyo	0657 0533
Oopla	1188
Oppo	1254
Optim	0873
Optimus	0601 0555
Orava	0848
Orbit	0902
Orion	0725 1725 1036 1263 1449 0928
Oritron	0681
P&B	0848 1481
Pacific	0820 1182 0798 0789 0743 0861
Packard Bell	0861
Palladium	0725 0809 0743
Palsonic	0865 0702 0882 0863
Panasonic	0520 1864 1938
Panda	0747 1137
Papouw	0563
Paramount Pictures	0809
peeKTON	1254 0928
Philips	0569 0676 1370 0705 0533 1188
Philo	1375
Phonotrend	1195
Pioneer	0601 0661 1995 0555 1601
Plu2	0880
Pointer	0800
Polk Audio	0569
Portland	0800
Powerpoint	0902 1035
Presidian	0705
Prima	1258
Prinz	0861
Prism	1036 0861
Pro2	1375
ProCaster	1034
Proline	0681 0702 0820 1034 1513 0863
Proscan	0552
Proson	0743 1035
Prosonic	1137
Provision	0848 1351 1137 0760
Pye	0676 0569
QONIX	0808 1081
Qwestar	0681
Radionette	0771 0899 1936
Radiotone	0743
Raite	0695
RCA	0552 0681 0820 1995
REC	0520
Red Star	0789 0793 0800 0818 0928 1137 1375
Relisys	1377
Reoc	0798 1182
Revoy	0871
Rex	0868

Richmond	1263
Rimax	1181
Rio Audio	0899
Roadstar	0743 0848 0760 1081 0928 0863 1257
Rocksonic	0819
Ronin	0902
Rotel	0653 0588
Rowa	0789 1034 0546 0555 0747
Rownsenic	0819 0753
S&V	1195
Saba	0681 0581
Sabaki	0798
Saivod	0861 0789 0800
Sakyno	1182 0798
Salora	0771
Sampo	1377
Samsung	0603 0774 1962 0520
Sansui	0725 0746 0798 0800 1182 0753 0781 1258 1725 1081 1145 0793
Sanyo	0700 0903 0725 0820 1466 0743 1258
Scan	0735 0865 0880
ScanMagic	0760 1760
ScanSonic	0887
SCE	0819
Schaub Lorenz	0818 1195 0800 1182
Schneider	0861 0809 0569 0735 0818 0743 0681 0899 0820 0676 1257
Schöntech	0743
Scientific Labs	0798 1182
Scott	0681 0702 1066 1263
Seeltech	1254 1481
SEG	0743 0695 0798 1182 0902 0793 1560 1513
Shanghai	0702
Sharp	1286 0660 0743 0725 1449
Sherwood	0747 0771
Shinco	0747
Siemssen	1412
Sigmathek	0887 1254
Siltex	1254
Silva	0818 0928 0861
Silva Schneider	0861 1936 0771
SilverCrest	1182 0798
Singer	0746 0753 0781 0798 1182
Sinotec	0800 1145
Sinudyne	1170
Sistemas	0702
Skymaster	0760 0798 1182
Skyworth	0928
Sliding	1145
Slim Art	0800
Slim Devices	0563
SM Electronic	0760 0798
Smart	0735 0743
Sonashi	0746 0861
Sonic Blue	0899
Soniko	0818
Sonwa	1034

DVD (cont.)			
Sony	0563	0802	0894
	1100	2011	1663
	1463		
Sound Color	1263		
Soundmaster	0798	1182	
Soundmax	0798	1182	
Soundwave	1560		
Spectra	0902		
Standard	0681	1182	0798
	0818	0861	0928
Star Clusters	0798	1257	1182
StarLogic	1035		
Starmedia	0848	1254	1035
Strato	1412	1182	
Strong	0743		
Sunfly	0887		
Sunkai	0800	0880	
Sunstech	0861	1301	
Sunwood	0818		
SuperDigital	1217		
Supervision	0760	0798	
SVA	0702		
Sylvania	0705	0660	
Symphonic	0705		
Synn	0798	1182	
Sytech	0861		
Tandberg	0743	1725	
Tangent	1351		
Targa	1188	1257	1936
	0771		
Tatung	0800		
Tchibo	0771		
TCM	0771		
Teac	0747	0771	0820
	0546	0601	0798
	1036	1182	0621
	1227	0789	0863
	1257	1195	0705
	1254	1258	
TEC	0928		
Technics	0520	1938	
Technika	0800	1145	0861
	1195	1560	1182
Technisson	0702		
Technosonic	1081	1145	
Techwood	0743	1560	0569
Tecnimagen	1263		
Tedelex	1034	1258	0798
	0800	1182	
Telefunken	0820	0819	0818
	1258	0863	1513
	1145	0800	1375
Teletech	0743	1182	0798
Tensai	0681	0800	
Tevion	0681	1066	1412
	1451	1182	0798
	1034	1257	0863
	1377	1760	
Theta Digital	0601		
Thomson	0581	0552	0861
Tokai	0695	0928	0818
	1263		
Tokiwa	0735	0746	
Tom-Tec	0819	0863	
Top Suxess	1254		
Toshiba	0533	0725	1075
	1540		
TRANS-	0902	0861	1195
continents	1263	0863	
Transonic	0702	1195	
Tredex	0873		

Trevi	0861		
Trio	0800		
TruVision	0887	1481	
TSM	1254		
TVE	0743		
Umax	1181		
United	0818	0760	0820
	1258	0702	1195
	0725	1145	0798
	1263	0743	1182
	0705		
Universal	0798	1182	
Multimedia			
Universum	0771	0743	0621
	0809	1257	0820
	1560		
Uptek	0793		
upXus	1375		
Urban Concepts	0533		
Venturer	0820		
Vestel	0743	1560	
Vieta	0735		
Viewmaster	0892	1254	
Voxson	0760	0861	
V'Trek	1258		
Waitec	1254	0760	
Walkvision	0747		
Waltham	1560		
Welkin	0861		
Wellington	0743		
Weltstar	0743		
Wharfedale	0798	0820	0753
	0781	1182	0800
	1145		
Wilson	0861	1263	
Windy Sam	0603		
Wintech	1217		
Woxter	1181	1254	
XBox	0552		
XLogic	0800	0798	1182
	1258		
XMS	0818	0800	
Xoro	1213		
Yakumo	1034		
Yamada	1034	0902	1181
	1188		
Yamaha	0569	0676	0520
	1188		
Yamakawa	0695	0902	1134
Yukai	0760		
Zenith	0533	0899	0621
	0771		

PVR	
@sat	1330
@Sky	1364
Amstrad	1205
Arnion	1330
ASCI	1364
Astro	1130
Aurora	1463
Austar	1206
B@ytronic	1442
Brainwave	1244
British Sky Broadcasting	1205
BSkyB	1205
Bush	1675
CanalSatellite	1369
Chess	1364
CityCom	1206
Comag	1442
DigiFusion	1675
DigiQuest	1330
Dream Multimedia	1267
eMTech	1244
Foxtel	1206 1386
Galaxis	1206
GbSAT	1244
Gecco	1442
General Satellite	1206
Globo	1364 1442
Hanseatic	1130
HB	1244
HDT	1189
Hirschmann	1442
Homecast	1244
Humax	1206 1457 1705
Hyundai	1189
ID Digital	1206
Imperial	1130 1364
Interstar	1244
Jaeger	1364
Jepssen	1244
Kathrein	1591
Kongque	1330
L&S Electronic	1364
Maximum	1364
Mediacom	1236
Medion	1364 1442
Multichoice	1463
Neotion	1364
Opentel	1442
Orbis	1364 1442
Orbitech	1130
Pace	1205 1386 1453 1880
Panasonic	1334
Pilotime	1369
Pino	1364
Premiere	1130 1206
Rebox	1244
Sagem	1283
Samsung	1236
Sat Control	1330
Satplus	1130
Schaub Lorenz	1244
Schneider	1236
Schwaiger	1364 1442
Siemens	1364
Sky	1205
SKY Italia	1878 1880

Sky XL	1442
SKY+	1205
Skymaster	1364
skyplus	1364 1442
Stream	1878
Strong	1189 1330
Sunny	1330
Systec	1364
TechniSat	1130
Technosat	1236
Telestar	1130 1364
Televes	1244 1330 1364
Tevion	1364
Thomson	1205 1930
Topfield	1236 1575 1813
TPS	1283
UEC	1386
Worldsat	1244
XSat	1244
Xtreme	1330
Zehnder	1364 1442
Zinwell	1206

SAT			
@sat	1330		
@Sky	1364		
ABsat	1353	0743	
Acoustic Solutions	1314		
ADB	0672	0917	1289
	1397	1503	1521
Adcom	0230		
Akai	0230		
Akura	1656		
Alba	1314	0743	
Allsat	0230	1047	
Allsonic	0399		
Alltech	0743		
Allvision	1262	1364	1442
Alpha	0230		
Amitronica	0743		
Ampere	0162		
Amstrad	0162	0877	1205
	1831	1143	1878
	0743		
Anglo	0743		
Ankaro	0399	0743	1309
AntSat	1047		
Apro	1702		
Arcon	1309	0162	1105
Arion	1309		
Armstrong	0230		
Arnion	1330		
ASA	0329		
Asat	0230		
ASCI	1364		
ASLF	0743		
AssCom	0883		
Aston	1159	1291	
Astra	0743		
Astratec	1773		
Astro	0163	0203	0399
	0688	1143	1129
	1130	0230	1303
Audioline	1459		
Aurora	0909	0672	1463
Austar	1289	0672	0909
Avanit	0329		
Axil	1487		
Axis	1141	0399	
Axitronic	1656		
B.net	1702		
B@ytronic	1442	0329	
Balmet	1487		
Bentley Walker	1047		
Best	0399		
Big Sat	1487		
Black Diamond	1314		
Blaupunkt	0203		
Blue Sky	0743		
Blue Star	1309		
Boca	0162	1396	0743
	1262		
Boshmann	1443		
Boston	0162		
Boxer	1488		
Brainwave	1244	0688	1702
British Sky	1205	0877	
Broadcasting			
Broco	0743		
BSkyB	1205	0877	
BT	1326		
Bubu Sat	0743		

Bush	1314	1656	1702
	1675	1501	1773
	1321	0382	0672
Canal Digitaal	0883		
Canal Digital	1883	0883	0197
	1076	1364	
Canal+	0883	1883	
CanalSat	0883		
CanalSatellite	0883	1369	1883
Centrex	1577		
CGV	1443	1597	
Champion	1309		
Cherokee	1353		
Chesley	1577		
Chess	1364	0743	1656
CityCom	1206	1262	0329
	0848	0534	1105
	0688		
Clatronic	1443		
Clayton	1656		
Colombia	0162		
Columbia	0162		
Com Hem	1206		
Comag	1262	1443	1442
	1396	0162	
Comsat	1443		
Condor	0399		
Connexions	0399		
Conrad	0399	0162	
Coship	1487	1702	
Crown	1314		
Cyfra+	1883	1439	0883
Cyfrowy Polsat	0883		
Cyrus	0230		
Daewoo	1326	1773	0743
	1141		
Dantax	1656		
D-box	1144	0753	
Deltasat	1105		
DGTEC	1272	1572	
Digatron	1324		
Digenius	0329	1191	
Digi Raum	1206		
Electronics			
Digitality	1364		
DigiFusion	1675	1773	
Digihome	1314		
Diginet	1577		
DigiQuest	1503	1487	1330
DigiSat	1262		
Digisky	1487		
Digital+	1883	1076	0883
DigitAlb	1262	1577	
DigitalBox	1130		
DigitAll World	1257		
DiPro	1577	1503	1397
DirectTV	0129		
Distratel	1313		
Distrisat	0230		
DMT	1105		
DNT	0230		
Doro	1702		
DRE	1206		
Dream Multimedia	1267		
DStv	0672	0909	
Dune	0399		
Durabrand	1314		
Echolink	1396		
Echostar	1230	0640	0197
	0883	0743	1353
	1503	1439	1797
Eco-Star	1443		

Edision	1309		
Einhell	0162	0743	
Elap	0743	1641	1159
	1597	1443	
Electron	1309		
Elsat	0743		
Elta	0230	0399	
Emme Esse	0399		
eMTech	1244		
Engel	1047	0743	1281
	1831		
EuroLine	1281		
Europa	0230		
Europhon	0329	0162	0743
	1364		
Europsat	1443	1641	
Eurosat	1597		
Eurosky	0162	0329	0399
Eurostar	0848		
Eutelsat	0743		
Eycos	1309		
Fagor	1641		
Fenner	0743	0399	
Ferguson	1321	0741	1773
	1309		
Finlux	1656	1262	
Flair Mate	0743		
FMD	1281	1487	1443
Force	1224		
Fortec Star	1047		
Foxtel	1386	0909	0750
	1206	1192	
Fracarro	0155		
Free Wave	1773		
Technology			
Freecom	0203		
FTEmaximal	0399	0743	
Fuba	1831	0399	0203
	1191	0329	1281
Fugionkyo	0155		
Galaxis	1141	1206	0883
	0399	0909	
Gardiner	0848		
Garnet	1105		
GbsSAT	1244		
Gecco	1442	1303	
General Satellite	1206		
Globo	1281	1656	1442
	1459	1364	
GOD Digital	0230		
Gold Box	0883		
Gold Vision	1047		
Golden Interstar	1313		
GoldMaster	1364		
Goodmans	1314	1321	
Gradiente	0917		
Grandin	1656		
Grocos	1439	1487	
Grundig	0203	0877	1321
	1314	0909	0883
H&B	1577		
Hallo	1656		
Hama	1597		
Hanseatic	1129	1130	
Hänsel & Gretel	0162		
Hauppauge	1324	1702	
HB	1244	1831	
HDT	1189		
HE@D	1309		
Healing	1577		
Hills	1262		

SAT (cont.)			
Hirschmann	1141	1143	0203 0329 1262 0399 0155 1442
Hitachi	1314		
HNE	1262	0162	
Homecast	1244		
Humax	1206	1262 1457	1705 1773 1255
Huth	0162	1047 1105	
Hyundai	1189	1105 1446	
i-CAN	1397		
ID Digital	1206		
IDTE	1189		
Imperial	1459 1364 1129	1130 1227 1225	0230 1702
Inno Hit	1656		
International	0162		
Interstar	1047	1244	
Inves	1773		
iotronic	1443	0162	
ITT Nokia	0753		
Jadeworld	0672		
Jaeger	1364		
Jeppsen	1244		
KabelBW	1225 1227 1076		
Kamm	0743		
Kansalaisboksi	1577		
Kaon	1330		
KaTelco	1141		
Kathrein	1591 1597 0688	0510 0534 0203	0230 0743 0848 1353 1446
Kennex	0155		
Kenwood	0883		
Key West	0162		
Kongque	1330		
König	1309		
KPN	1575		
Kreiling	0688 1656		
Kreiselmeyer	0203		
K-SAT	0743		
Kyostar	0162		
L&S Electronic	0399	0162 1364	
Labgear	1326		
LaSAT	0399	0162 0329	0203
Leiko	1656		
Lemon	1364		
Lenco	0743 0399		
Lennox	0399		
Lenoxx	1641		
Lexus	0230		
LG	1444 1105		
Lifesat	0162 0399 0329		
Linsar	1314		
Listo	1656		
Lodos	1314		
Logik	1314		
Logix	1047 1105		
Lorenzen	0329 1324 1191		
Lupus	0399		
Macab	0883		
Madritel	0672		
Manata	0743 0162		
Manhattan	1047 1330		

Marantz	0230		
Maspro	0743 0203		
Matsui	1656 0203 1773		
Maximum	1105 1364		
MDS	1255		
Mediabox	0883		
Mediacom	1236		
MediaSat	0883		
Medion	1262 0329 0743	0162 1105 1442	1656 1364 0399
Medison	0743		
Mega	0230		
Meletronic	0848		
Metronic	0743 1309 1313	0848 0162 1443	1702
Metz	0203		
Micro	0743 1324		
Micro electronic	0743		
Micro Technology	0743		
Micromaxx	0329 0399		
Microstar	1105 0329 1191		
Microtec	0743		
Morgan's	0162 0743 0230	1262 1442 1439	
Motorola	0886 1503		
Multichoice	0909 1463 0672		
Myryad	0230		
Mysat	0743		
MySky	1880 1386 1878		
Neotion	1364		
Netgem	1352		
Netsat	0917 0129		
Neuf TV	1352		
Neuhaus	0743		
Neuling	1262 0162		
Neusat	0743 1309		
Neveling	1191		
NextWave	1047		
Nikko	0743 0753 0230		
Nokia	1144 1753 1053	1253 0753 0883	
Noos	0883		
Nordmende	1641		
Nova	0909		
Numericable	0883		
OctalTV	1324 1459		
OKI	1597 1487		
Onn	1314		
Opentel	1262 1442		
Optex	1313 0743 1641	1656 1443	
Optima	1577		
Optus	0909 0883 1386		
Orbis	1364 1442 1262		
Orbitech	1129 1225 1227	1130 0230	
P/Sat	1262		
Pace	1386 1205 0877	1453 1878 0917	1353 1880 0271 0821 0750 0230 0883
Pacific	1314		
Packard Bell	1141		
Palcom	0329 1641 1191		
Panasat	1439		
Panasonic	0877 1334 1434		
Panda	0203		
Patriot	0162		

peekTON	1487		
Philips	0129 1144 0883	0163 0230 1702	1773 0848 0203 1459
Phoenix	1303 1577		
Phonotrend	1047 1230		
Pilotime	1369		
Pino	1364		
Pioneer	0883 1338 0382		
PMB	1641 0743		
Portland	1326		
Power Sky	1309		
Preisner	0162 1143 1396		
Premiere	1144 0753 1206	1225 1130 1705	1141 0688
Primacom	1141		
Pro Basic	0883		
Proline	1314		
PYROD	1577		
QNS	1434		
Quadral	0399 1353		
Quelle	0329		
Radiola	0230		
Radix	1143		
RCA	1321		
Rebox	1244		
Red Star	0399		
Regal	1281		
RFT	0230		
Roadstar	0743 0883		
Rollmaster	1443		
Rover	0743 0399		
Rownsonic	1597		
SAB	1281 1330		
Sagem	1144 1720		
Salora	1262		
Samsung	1273 1600 1488	1047 1236 0883	1205
Sansui	1575 1281		
Sanyo	1656		
Sat Control	1330		
Sat Industrie	1641		
Sat Team	0743		
SAT+	1439		
Satec	0743		
Satelco	0399		
Satlink	1597		
Satplus	1130		
Schaub Lorenz	1244		
Schneider	1281 1236		
Schwaiger	0534 1364 1487	1442 1459 1141	1702 0162 1105
SCS	0329		
Sedea Electronique	0155 0162 1313	1656 1309	
SEG	1281 0399 1656	1105 1314	
Serino	0640		
Servimat	1641		
ServiSat	1281 0743		
Sherwood	1641 1439		
Siemens	0203 1656 1364	1459 1702	
Silva	0329		
Skantin	0743		
SKR	0743		
SKT	0162		

Sky	0129 0886 1205	0877 0917 0741	
SKY Deutschland	1144 0753 1206	1225 1130 1705	1141 0688
SKY Italia	1878 1880		
Sky XL	1442 1281		
SKY+	1205		
Skymaster	1439 1641 0743	1230 1105 1364	1597 1575
Skymax	0230 1443		
Skypex	0329		
skyplus	1262 1364 1205	1442 1487	
SkySat	0743		
SL	0162 1702		
SM Electronic	0743 1230 1105		
Smart	1303 0162 0329	1143 1262 0743	1443 1434
SmartVision	1487		
Soniq	1597		
Sony	0877 1588 0312	0883	
SR	0162		
Star Sat	0162		
Starland	0743		
Stream	1878		
Stream System	1330		
Strong	1397 1439 0743	1656 1831 0883	1314 1189 1330 0155 0399 0909 1503
Sumin	1442		
Sunny	1330		
Sunny Sound	0399		
Sunsat	0743		
Sunstar	0399 0162 0672		
SuperMax	1313		
Supratech	1443		
Systec	0162 1364		
S-ZWO	1237		
Tarbs	1255		
TBoston	1487 1281		
Teac	1257 1255 1352	1577	
Tecatel	1230		
Technika	1314 1702		
TechniSat	1225 1227 1130	1129 1352 0230	
Technomate	1313		
Technosat	1236		
Technosonic	1702		
Technotrend	1459 1702		
Technowelt	0162		
Techsan	1047		
Techwood	1314 1656 1281		
tekComm	1047		
TELE System	1641 1831 1189	1439 1281	
TeleClub	1397		
Telecom	0743		
Telestar	1129 1130 0230	1459 1281 1364	1656 1702 1225 1227
Televes	0162 1244 1330	1364 1439	
Televisa	0917		
Telewire	1262		
Tesla	1656		

Tevion	1702 1364 0743	1439 1597	
Thomson	0741 0877 1321	1883 1076 1205	0883 1930 0743
Tiny	1702		
Tioko	0162		
Tividi	1459		
Tokai	0230		
Tonna	1641 0743		
Topfield	1575 1813 1236	1237	
Toshiba	1314		
TPS	1283		
Triax	0230 0743 0883	1281 1326 1321	0162 1129 1143 1257 1656 1641 1443
Tricolor TV	1206		
Trio	1105		
TT-micro	1459		
Turnsat	0743		
Twinner	0162 0743 1641		
UEC	0909 1192 1386		
Unimax	1577		
Unisat	0230 0162		
United	1281		
Unitymedia	1459 1206 1225	1227	
Universum	0203 0329 1129		
Van Hunen	1191 0329		
Vantage	1488		
Variosat	0203		
Vega	0399		
Ventana	0230		
Vestel	1314 1281		
VH Sat	1191 0329		
Viasat	1353 1053 1225	1227	
Viola Digital	1702		
Vision	1656		
Visionic	0155 1309		
Visiosat	1443 0743 1159	1487	
Vitecom	1443		
Vivid	1192		
Voo	0883		
VTech	0848		
Wavelength	1262 1443		
Wharfedale	1314 0230		
Winbox	1831		
Wisi	0203 0329 0162	1442 1262	
Worldsat	1503 1244 1281		
XMS	1105		
Xrypton	0399		
XSat	0743 1244 0877	1353	
Xtreme	1330		
Yakumo	1443		
YES	0917		
Yess	1577		
Zehnder	1281 1364 1105	1262 1443 1442	0534 0848 0399
Zenith	0886		
Zeta Technology	0230		
Zinwell	1206		
Zodiac	1831 1309		