

User's Guide and Warranty
Information

bel canto

PLayer: PL-1 / PL-1A

DVD ♦ DVD-A ♦ CD ♦ SACD

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CONGRATULATIONS

You have just acquired the finest player available for the playback of digitally encoded source material for both audio and video formats.

IMPORTANT

Save all packaging in a dry place away from fire hazards. Your Bel Canto player is a precision electronic instrument and should be properly packaged any time shipment is made. In the unlikely event that you have to return your unit to the factory for service, or if you send it to us for updating, the original packaging will best protect the unit from shipping damage or delay.

In order to achieve the fullest flexibility and enjoyment from your player, we at Bel Canto recommend that you read this manual in full before connecting the unit to your audio/video system.

WARRANTY REGISTRATION

Complete and return by fax or mail your warranty document enclosed in product box for extended warranty coverage. Please return this document to Bel Canto within 30 days of original purchase.

Bel Canto Design offers a 90-day factory warranty from the date of purchase that can be extended to 2 year LIMITED WARRANTY. The original owner can obtain the LIMITED WARRANTY, by returning a completed warranty form along with a copy of the original sales receipt from your authorized Bel Canto Dealer. The extended LIMITED WARRANTY coverage extends the warranty to a period of 1 year on the Laser and Loader (mechanical portion of the unit and 2 years on the electronics, from the date of purchase by the original owner and includes all parts and workmanship. The warranty automatically commences on the date of purchase or 1 year from the date of shipment to an authorized Bel Canto dealer, which ever comes first, and terminates 3 years from date of shipment to an authorized Bel Canto dealer. Units purchased from a source other than an authorized dealer are not covered by this warranty. Warranty is void if damage is due to abuse, neglect or unauthorized modification. Cost associated with the return of this product is the sole responsibility of the owner. All repair work must be done by an authorized Bel Canto repair center. Work done by unauthorized persons will void all warranty coverage. Bel Canto Design products are uniquely identified with a serial number on the back panel of each unit. This number is required to validate your warranty. Please reference your serial number if service is required. If you have any questions, comments or if we can be of service, please contact us Monday through Friday 9:00a.m. - 5:00p.m., Central Time in the United States.

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IMPORTANT



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

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

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

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

H002_En

IMPORTANT SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.

HEED WARNINGS — All warnings on the product and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

CLEANING — Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzene, insecticides or other volatile liquids since they may corrode the cabinet.

ATTACHMENTS — Do not use attachments not recommended by the product manufacturer as they may cause hazards.

WATER AND MOISTURE — Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

ACCESSORIES — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

CART — A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

POWER SOURCES — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

LOCATION — The appliance should be installed in a stable location.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

GROUNDING OR POLARIZATION

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

OUTDOOR ANTENNA GROUNDING — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

LIGHTNING — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

OBJECT AND LIQUID ENTRY — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

SERVICING — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

WALL OR CEILING MOUNTING — The product should not be mounted to a wall or ceiling.

HEAT — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

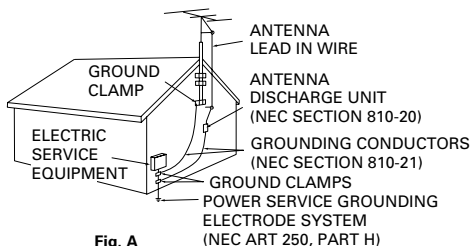


Fig. A

NEC — NATIONAL ELECTRICAL CODE

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

H001_En

**[For U.S. model]
IMPORTANT NOTICE**

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security. H006A_En

ADDITIONAL SAFETY REQUIREMENTS

Please carefully read each item of the operating instructions and safety precautions before using this product. Use extra care to follow the warnings written on the product itself and/or in the operating instructions. Keep the operating instructions and safety precautions for future reference.

Caution: to reduce the risk of electrical shock, do not remove any of the cover panels.

No user-serviceable parts inside. Refer all servicing to qualified service personnel only.

To prevent fire or shock hazard, do not allow liquids to spill or objects to fall into any openings of the product.

This unit is supplied with a 3 pin grounded AC plug. Always insert the ac plug into a grounded outlet. Do not remove the ground pin or disable the ground for any purpose.

Before making any connections to the unit, first turn off the power and then disconnect the ac power cord.

When installing the unit in your system, make certain to allow a minimum of 1½ inches of ventilation on each side of the unit. Also allow at least 2½ inches of ventilation space above the unit. Improper ventilation of the unit may cause overheating, which may damage the unit and it to fail. Place the unit on a solid surface only. i.e. not on carpet, etc.

Do not place the unit near heat sources such as direct sunlight, stoves, heat registers, radiators or other heat producing equipment.

To prevent damage to the digital or analog output circuitry, be certain not to short the output signal pin(s) to ground. Ensure that your output cables do not have any internal shorts before connecting them.

IMPORTANT NOTICE

Due to the computer-based circuitry used in this product, it is imperative that the player be connected to a ground via its three-wire AC power cord. It is important that the AC power outlet, which the unit is plugged into, is actually grounded. Failure to do so will severely compromise the performance, reliability and safety of use of the unit.

It is also important to prevent contact with static electricity when connecting other components and cables to the unit. When connecting cables, simply place one hand on top of the player and then grasp the metal “barrel” of the cable with the other hand and plug (unplug) the cable into (from) the appropriate jack on the unit.

At times a snapping sound may occur or the unit may “lockup” and fail to operate. This is NOT A MALFUNCTION of the unit. This is normally caused by exposure to static electricity and can be cured by turning off the power amplifier(s) and then turning the unit off and then on with the rear mounted power switch.

Ventilation is an important issue when placing the unit in a system. Make certain that the unit is in a well-ventilated area or rack unit.

Please take note, that some power line conditioners defeat the AC power ground on their outlets. If the intention is to plug the unit into a line conditioner, check with your dealer to make certain that the particular conditioner that is intended for use DOES NOT DEFEAT THE AC GROUND on its AC outlets.

DO NOT remove the cover from the player, as there are no user serviceable components inside. Refer servicing and updating to qualified service personnel only.

Features

DVD-Audio and SACD compatible

Experience the super high-quality audio performance of DVD-Audio and Super Audio CD (SACD).

The on-board 24-bit/192kHz DAC means that this player is fully compatible with high sampling-rate discs, capable of delivering exceptional sound quality in terms of dynamic range, low-level resolution and high-frequency detail.

Built-in Dolby*¹ Digital and DTS*² decoding with multichannel outputs

Logos:  

This player features multichannel analog outputs for connection to an AV amplifier to give you stunning surround sound from Dolby Digital, DTS and multichannel DVD-Audio discs.

TruSurround*³ and Virtual Dolby Digital

Logo: 

TruSurround/Virtual Dolby Digital creates a realistic surround-sound effect from any Dolby Digital source using just two speakers.

PureCinema progressive scan

When connected to a progressive scan-compatible TV or monitor using the component video outputs, you can enjoy extremely stable, flicker free images, with the same frame refresh rate as the original movie (see page 50).

Super Fine Focus digital filter

This improves the quality of the video output by reducing video noise and increasing the horizontal resolution to 540 lines.

MP3 compatibility

This player is compatible with CD-R, CD-RW and CD-ROM discs that contain MP3 audio tracks.

Graphical on-screen displays

Setting up and using your DVD player is made very easy using the graphical on-screen displays.

**¹ Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.*

**² "DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.*

**³ TruSurround and the  symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.*

Disc / Content Format Playback Compatibility

General Disc Compatibility

- This player was designed and engineered to be compatible with software containing one or more of the following logos.



DVD-Audio



DVD-Video



DVD-R



DVD-RW



Audio CD



Video CD



CD-R



CD-RW



SUPER AUDIO CD

Super Audio CD

- Other formats, including but not limited to the following, are not playable in this player:

Photo CD / DVD-RAM / DVD-ROM / CD-ROM

(except those that contain MP3 files formatted as specified in the "Compressed Audio Compatibility" section)

- DVD-R/RW and CD-R/RW discs (Audio CDs and Video CDs) recorded using a DVD Recorder, CD Recorder or Personal Computer may not be playable on this machine. This may be caused by a number of possibilities, including but not limited to: the type of disc used; the type of recording; or damage, dirt or condensation on either the disc or the player's pick-up lens.

Special note about particular formats or software follows below:

CD-R/RW Compatibility

- This unit will play CD-R and CD-RW discs recorded in CD Audio, Video CD, or MP3 audio formatting. However, any other content may cause the disc not to play, or create noise/distortion in the output.
- This unit cannot record CD-R or CD-RW discs.
- Un-finalized CD-R/RW discs recorded in CD Audio can be played, but not all Table of Contents (playing time, etc.) will be displayed.

DVD-R/RW Compatibility

- This unit will play DVD-R/RW discs that were recorded using the DVD Video format.
- This unit will play DVD-RW discs that were recorded using the Video Recording format.
- This unit cannot record DVD-R/RW discs.
- Un-finalized DVD-R/RW discs cannot be played in this player.

Compressed Audio Compatibility

- This unit will play compressed audio files formatted in the MPEG-1 Audio Layer 3 format (MP3) with a 44.1 or 48kHz fixed bit rate. Incompatible files will not play and "UNPLAYABLE" will be displayed on the unit.
- Variable Bit-Rate (VBR) files are playable, but playing time may not be shown correctly.
- The CD-ROM used to compile your MP3 files must be ISO 9660 Level 2 compliant.
- CD physical format: Mode1, Mode2 XA Form1.
- This player only plays tracks that are named with the file extension ".mp3" or ".MP3".

Before You Start

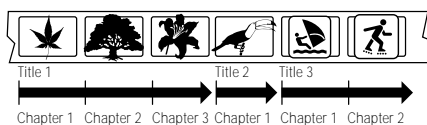
- This player is compatible with multi-session discs, but only plays sessions that are closed.
- Use CD-R or CD-RW media for recording your MP3 files.
- This player can recognize a maximum of 250 folders or 250 tracks. Discs containing more than 250 folders or 250 tracks will play, but only the first 250 folders / tracks.
- Folder and track names (excluding the ".mp3" extension) are displayed.
- There are many different recording bit-rates available to encode your MP3 files. This unit was designed to be compatible with all of them. Audio encoded at 128Kbps should sound close to regular CD Audio quality. This player will play lower bit-rate MP3 tracks, but please note that the sound quality becomes noticeably worse at lower bit-rates.

PC Created Disc Compatibility

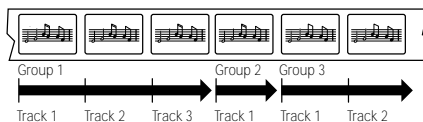
- If you record a disc using a Personal Computer, even if it is recorded in a "compatible format" as listed above, there will be cases in which the disc may not be playable in this machine due to the setting of the application software used to create the disc. In these particular incidences, check with the software publisher for more detailed information.
- DVD-R/RW and CD-R/RW software disc boxes also have additional compatibility information.

Titles, chapters, Groups and tracks

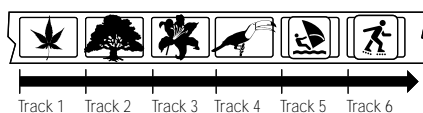
DVD-Video discs are generally divided into one or more titles. Titles may be further subdivided into chapters.



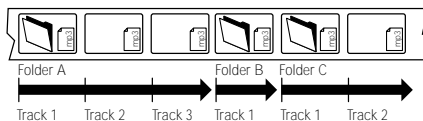
DVD-Audio discs are divided into one or more groups that can each contain a number of tracks.



CDs, SACDs and Video CD are divided into tracks.



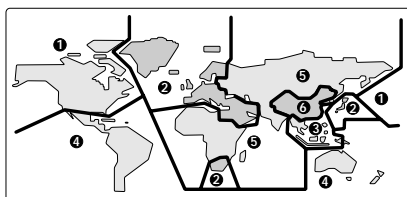
CD-ROMs containing MP3 files are divided into folders and tracks. Folders may also contain further subfolders.



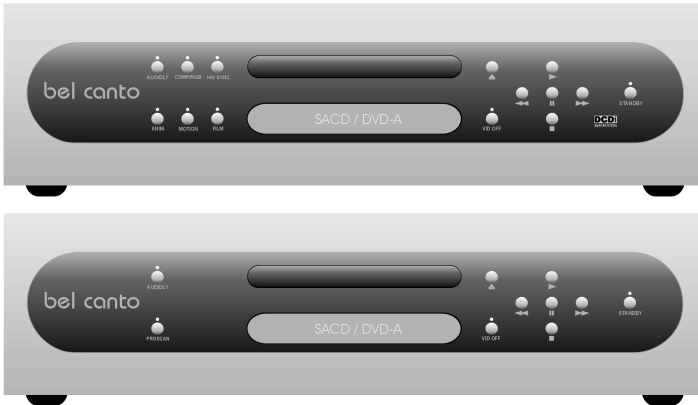
DVD-Video regions

All DVD-Video discs carry a region mark on the case somewhere that indicates which region(s) of the world the disc is compatible with. Your DVD player also has a region mark, which you can find on the rear panel. Discs from incompatible regions will not play in this player. Discs marked **ALL** will play in any player.

The diagram below shows the various DVD regions of the world.



FRONT PANEL CONTROLS



GENERAL OPERATING CONTROLS

STANDBY: Turns off non critical circuits when unit is not in use. RED LED will light in STANDBY mode.

▶ **PLAY:** Press to start or resume playback.

⏸ **PAUSE:** Press to Pause playback. Press again to resume playback.

▶▶ **FORWARD:** Press once to go to next track or chapter. Hold down to scan forward.

◀◀ **REVERSE:** Press once to go to beginning of track or chapter. Press twice to go to previous track or chapter. Hold down to scan.

VID OFF: Turns off the standard video outputs of the player. 480p output will get an unusable signal.

■ **STOP:** When a disc is playing and the STOP button is pushed play will stop. Pressing play again will resume playback at the point where the disc was stopped. If disc is left in the tray, play will resume as above even if the unit is placed in Standby. Pressing Stop twice causes the disc to return to the beginning when Play is pressed again.

DISPLAY WINDOW: Displays system information. See Display Page for detailed description.

▲ **TRAY:** Press button to open and close. Pressing the Standby button will also close the tray

PL-1A PROGRESSIVE SCAN CONTROLS

PROSCAN: Turns on the 480p progressive scan. When using the Progressive scan, the Composite and "S" Video outputs are turned off.

AUDDLY: When LED is on a 58ms delay is added to the audio signal to adjust for processing time in the 480p output board. Use only with the 480p outputs. Operates on both the PL-1A and PL-1 players.

PL-1 PROGRESSIVE SCAN CONTROLS - DCDi

COMP/RGB: Selects COMPONENT or RGB output for 480P section of unit. NO LED indicates COMPONENT. Pushing the button will switch the 480P output to RGB (RED LED ON). (See number 5 for Sync. options.)

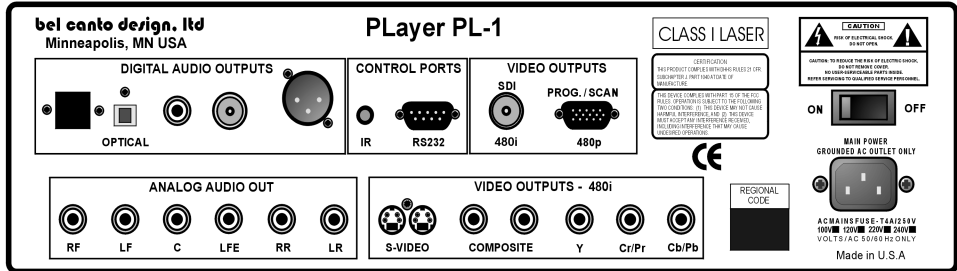
H/V SYNC: When 480P output is set to COMPONENT (Horz/Vert Sync OFF (NO LED) there is Sync on green. Turning on the H/V Sync. (Green LED ON) will **ADD** Horizontal and Vertical Sync to the output connector. If 480P output is set to RGB (Red LED ON) Sync on green will be supplied. If the H/V Sync is turned on (Green LED ON), Horizontal and Vertical Sync will be added to the output connector and the Sync on Green will be turned **OFF**.

ANIM: Controls Cross Color Suppression and should be left OFF (Green LED OFF) with the exception of watching Animation or Computer Generated Materials.

MOTION: Controls the DCDi motion adaptive system and should be left in the **ON** position (Green LED **ON**). If no motion compensation is wanted then it can be turned off.

FILM MODE: Automatically selects between film, (3:2 and 2:2 pull-down) and video source signals and processes them separately. This should be left **ON** (Green LED ON) unless there are visible problems with picture quality.

REAR PANEL CONNECTIONS



STANDARD VIDEO OUTPUTS

S-VIDEO: Output is available in 2 forms S1 and S2. The default setting is S2. If in rare cases, the picture appears stretched, switch to S1 (See Expert Menu).

COMPOSITE VIDEO: Standard video output (480i) for connection to standard video input jack.

COMPONENT VIDEO: If your display has inputs for these outputs they will provide a higher quality picture. These connections are normally marked Y, Cr, Cb, or Y, Pr, Pb. Also, outputs 480p on PL-1A version..

DIGITAL AUDIO OUTPUTS

RCA, BNC, XLR, TOS JACKS: All digital audio signals are output from these three jacks. Digital signals include: PCM, PCM 24/96, Dolby Digital AC-3, MPEG, and DTS. These jacks differ only in cable configuration. The output jack selected should be determined by your associated equipment. Subtle differences in the sound quality will be evident. Your dealer can recommend the best configuration for your system.

REGIONAL CODE: DVD's are coded for different areas of the world. This box indicates the regional code that the unit is set to. Each DVD has a regional code printed on the box and disc. Discs from regions other than indicated on the unit may not play.

MAIN POWER SWITCH: This switch controls the main power to the unit and should be left in the on position once the unit is installed. The front STANDBY button will turn off the display and other circuits leaving only heat sensitive digital circuits on. This assures maximum Audio and Video quality without lengthy warm-up periods. The switch should only be turned off if the unit is not to be used for long periods.

A/C IEC INPUT CONNECTOR: This receptacle incorporates internal RFI filter circuits to prevent radio and television interference and should be connected to a 3-wire grounded A/C cord and plugged into a 3-wire, un-switched power outlet. DO NOT DEFEAT THE GROUND PIN.

EXTERNAL CONTROL

IR IN: This "Mono" Mini Jack allows the use of a external Infra-Red repeater for the remote control. Plugging into the jack will defeat the front IR receiver. It can also be used to send IR CODES from a system controller. Voltage is 10 Volts DC max, inverted.

RS-232 PORT: This connector can be used to send single direction RS232 commands to the unit from a system controller. See Appendix for command codes.

SPECIAL VIDEO OUTPUTS

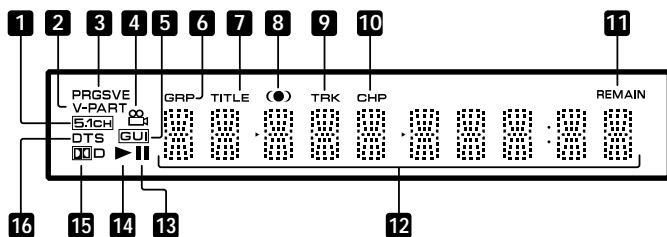
SDI: OPTIONAL (Factory installation only) Serial Digital Interface. This output provides digital video in 4:2:2/D-1 format for connection to video processors and display devices designed to accept this output. Cable must have a minimum bandwidth in excess of 300MHz.

480P PROGRESSIVE SCAN OUTPUT/ Faroudja DCDI. (STD on PL-1. Factory installation only on PL-1A) This connector outputs 480p in RGB or Component . VideoComponent: Y, Cr(Pr), Cb(Pb) is available with Sync on green and Horiz/Vert Sync can be added to the Sync on green. See front panel controls. (PL-1 only)

RGB: is available with either Sync on green or Horiz/Vert Sync. See front panel controls. (PL-1 only)

OPTION PORT: This space is reserved for future factory installed options.

Display



1 5.1CH

Lights when analog 5.1 channel output is selected.

2 V-PART

Lights when playing a video part of a DVD disc

3 PRGSVE

This indicator is not used on this player. See Section for front panel controls.

4

Lights during multi-angle scenes on a DVD disc.

5 GUI (Graphical User Interface)

Lights when a menu is displayed on-screen


6 GRP

Indicates that the character display is showing a DVD-Audio group number

7 TITLE

Indicates that the character display is showing a DVD-Video title number

8

Lights when V/TruSurround is active.

9 TRK

Indicates that the character display is showing a track number

10 CHP

Indicates that the character display is showing a DVD chapter number

11 REMAIN

Lights when the character display is showing the time or number of tracks/titles/chapters remaining

12 Character display

13

Lights when a disc is paused

14

Lights when a disc is playing

15

Lights when a Dolby Digital soundtrack is playing

16

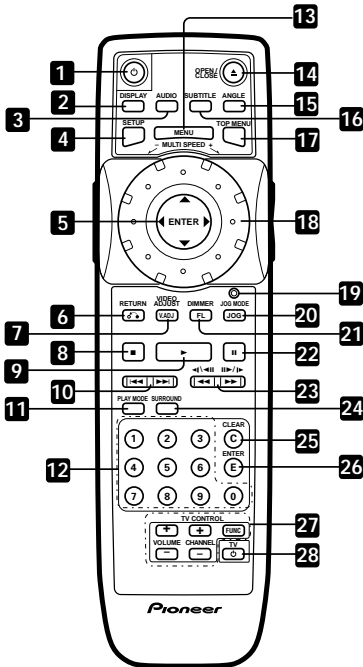
Lights when a DTS soundtrack is playing

Remote control



Tip

- Buttons **6** thru **9** and **20** thru **22** glow slightly in the dark for ease of use.



1 (STANDBY/ON)

Press to switch the player on or into standby

2 DISPLAY

Press to display information about the disc playing (**page 46**)

3 AUDIO

Press to select the audio channel or language.

4 SETUP

Press to display (or exit) the on-screen display

5 ENTER & Joystick

Use to navigate on-screen displays and menus. Press **ENTER** to select an option or execute a command

6 (RETURN)

Press to return to a previous menu screen

7 V.ADJ (VIDEO ADJUST)

Press to display the Video Adjust menu.

8

Press to stop the disc (you can resume playback by pressing (play))

9

Press to start or resume playback

10

Press to jump to the start of the previous / next chapter / track

11 PLAY MODE

Press to display the Play Mode menu. (You can also get to the Play Mode menu by pressing **SETUP** and selecting Play Mode)

12 Number buttons

13 MENU

Press to display a DVD disc menu, or the Disc Navigator if a DVD-RW, CD, Video CD or MP3 disc is loaded

14 OPEN/CLOSE

Press to open or close the disc tray

15 ANGLE

Press to change the camera angle during DVD multi-angle scene playback.

16 SUBTITLE

Press to select a subtitle display.

17 TOP MENU

Press to display the top menu of a DVD disc

18 MULTI DIAL

Use for scanning and slow motion control.

19 Jog indicator

Lights when multi dial is in jog mode .

20 JOG (JOG MODE)

Press to put switch jog mode on/off. When on, use the **MULTI DIAL** to advance or reverse frames.

21 FL (DIMMER)

Press to change the display brightness

22 II

Press to pause playback; press again to restart

23 ◀◀ and ◀/◀II / ▶▶ and ▶▶/▶

Use for reverse / forward slow motion playback, frame reverse / advance and reverse / forward scanning.

24 SURROUND

Press to activate/switch off **DIV**/TruSurround.

25 CLEAR

Press to clear a numeric entry

26 ENTER

Press to select an option or execute a command

**27 TV CONTROL buttons
VOLUME**

Use to adjust the volume

CHANNEL

Use to select TV channel

FUNC

Press FUNC to select the TV for remote control operation

28 ⏻ TV

Press **⏻ TV** to turn the TV's power on or put in to standby

Setting up the Remote Control to TV

This must be set to use buttons **27** and **28**.

1. Input the Manufacturer code.

While holding down the **CLEAR** button, input the two digit code from the table next page that corresponds to the make of your TV.

For example, If you have a Pioneer TV, press and hold **CLEAR**, then press **0, 0** on the remote control.

2. Confirm that the TV is responding to the programmed code.

On the remote, press the **⏻ TV** button. If the TV switches on (or into standby if it was on previously), then you have the correct code.

If nothing happens when you press the **⏻ TV** button, start again from step 1 using a different code.

- Some manufacturers have several codes. Try each one until you find the one that works.

Preset code list

00 , PIONEER1	18 , RCA5
01 , RCA1	19 , SHARP1
02 , SHARP3	20 , ZENITH12
03 , ZENITH1	21 , SANYO1
04 , SONY	22 , PANASONIC2
05 , TOSHIBA1	23 , GOLDSTAR2
06 , HITACHI1	24 , HITACHI2
07 , PHILIPS	25 , HITACHI3
08 , PANASONIC1	26 , TOSHIBA2
09 , MITSUBISHI	27 , SHARP2
10 , GOLDSTAR1	28 , GE2
11 , GE1	29 , MAGNAVOX2
12 , MAGNAVOX1	30 , TOSHIBA3
13 , JVC1	31 , HITACHI4
14 , SANYO2	32 , JVC2
15 , RCA2	33 , FUJITSU
16 , RCA3	34 , PIONEER2
17 , RCA4	35 , GRANDIENTE

Using the on-screen displays

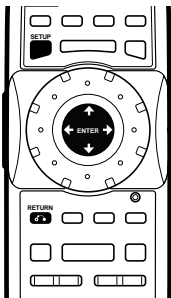
For ease of use, this player makes extensive use of graphical on-screen displays (OSDs). You should get used to the way these work as you'll need to use them when setting up the player, using some of the playback features, such as program play, and when making more advanced settings for audio and video.

All the screens are navigated in basically the same way, using the cursor buttons to change the highlighted item and pressing **ENTER** to select it.



Important

- Throughout this manual, 'Select' means use the Joystick to highlight an item on-screen, then press **ENTER**.



Button	What it does
SETUP	Display/exit the on-screen display
◀▶▶▶ (Joystick)	Changes the highlighted menu item
ENTER	Selects the highlighted menu item (both ENTER buttons work in exactly the same way)
↶ (RETURN)	Returns to the previous menu without saving changes



Tip

- Information at the bottom of every OSD screen explains the currently selected menu item and shows which buttons can be used for that screen.

Setting up with the Setup Navigator

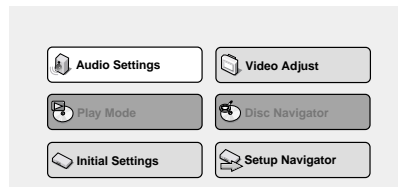
Using the Setup Navigator you can make a number of other initial settings for this player. We recommend using the Setup Navigator, especially if you connected this player to an AV receiver for playing surround sound. To answer some of the questions about digital audio formats you may need to look at the instructions that came with your AV receiver.

1 If a disc is playing, press ■ (stop).

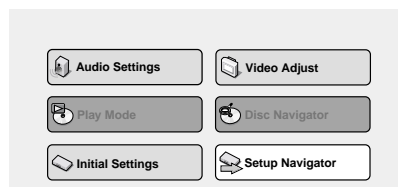
Also turn on your TV and make sure that it is set to the correct video input.

2 Press **SETUP**.

The on-screen display (OSD) appears.

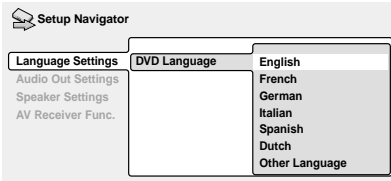


3 Select 'Setup Navigator'.



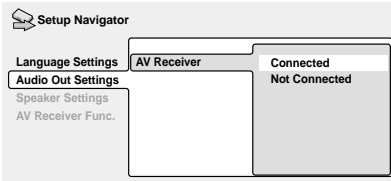
4 Select a DVD language.

Some DVD discs feature on-screen menus, soundtracks and subtitles in several languages. Set your preferred language here.



- Note that the language you choose here may not be available on all discs.
- If you want to select a language other than those listed, select **Other Language**. See *Selecting languages using the language code list* for details.

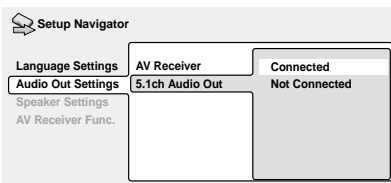
5 Did you connect this player to an AV receiver?



- If you selected **Not Connected** here, that completes the setup. Press **ENTER** to leave the Setup Navigator.

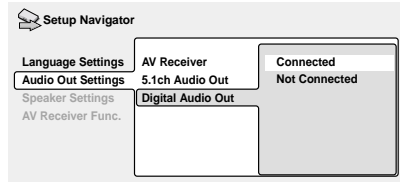
6 Did you connect the 5.1 channel analog audio outputs to your AV receiver?

Select **Connected** or **Not Connected**.



7 Did you connect a digital output to your AV receiver?

Select **Connected** or **Not Connected**.

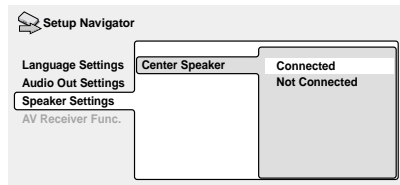


- If you selected **Not Connected** in both steps 6 and 7, that completes the setup. Press **ENTER** to leave the Setup Navigator.

If you selected Connected in step 6, then answer the following questions about the speakers in your system, otherwise jump to step 11.

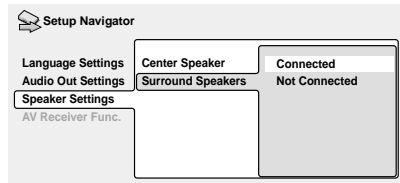
8 Do you have a center speaker connected to your AV receiver?

Select **Connected** or **Not Connected**.



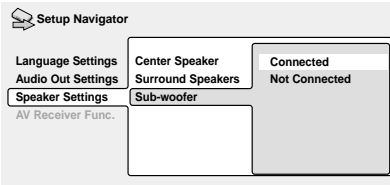
9 Do you have surround speakers connected to your AV receiver?

Select **Connected** or **Not Connected**.



10 Do you have a sub-woofer connected to your AV receiver?

Select **Connected** or **Not Connected**.

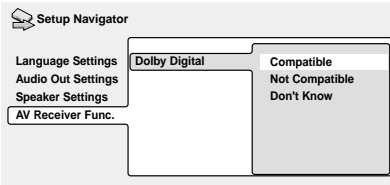


- If you selected **Not Connected** in step 7, that completes the setup. Press **ENTER** to leave the Setup Navigator.

Questions 11 through 14 are concerned with the digital decoding capabilities of your AV receiver.

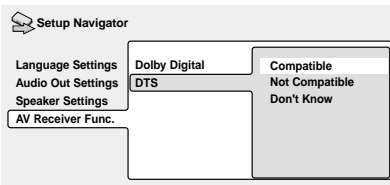
11 Is your AV receiver Dolby Digital compatible?

Select **Compatible**, **Not Compatible** or **Don't Know**.



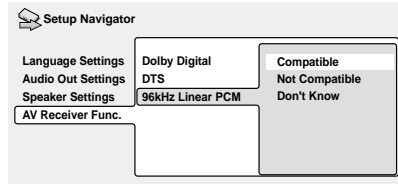
12 Is your AV receiver DTS compatible?

Select **Compatible**, **Not Compatible** or **Don't Know**.



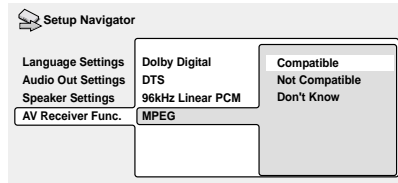
13 Is your AV receiver compatible with 96kHz Linear PCM audio?

Select **Compatible**, **Not Compatible** or **Don't Know**.

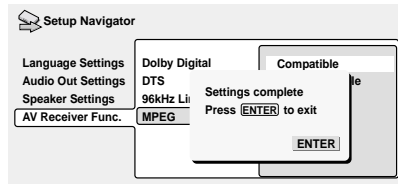


14 Is your AV receiver MPEG compatible?

Select **Compatible**, **Not Compatible** or **Don't Know**.



15 Press **ENTER** to complete the setup, or press **SETUP** to quit the Setup Navigator without making any changes.



Congratulations, setup is complete!

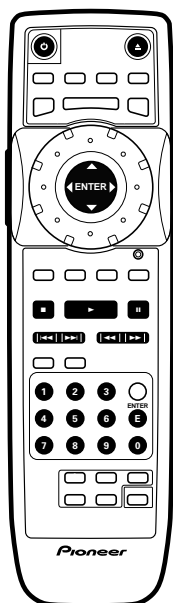
Playing discs

The basic playback controls for playing DVD, CD, SACD, Video CD and MP3 discs are covered here. Further functions are detailed in the next chapter.



Important

Throughout this manual, the term 'DVD' means DVD-Video, DVD-Audio and DVD-R/RW. If a function is specific to a particular kind of DVD disc, it is specified.



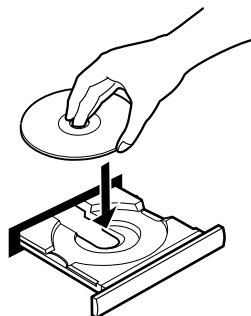
1 If the player isn't already on, press **⏻** STANDBY/ON to switch it on.

If you're playing a DVD or Video CD, also turn on your TV and make sure that it is set to the correct video input.

2 Press **⏏** OPEN/CLOSE to open the disc tray.

3 Load a disc.

Load a disc with the label side facing up, using the disc tray guide to align the disc. Never load more than one disc at a time.



4 Press **▶** (play) to start playback.

If you're playing a DVD or Video CD, a menu may appear.

If you're playing an MP3 disc, it may take a few seconds before playback starts, depending on the complexity of the file structure on the disc.

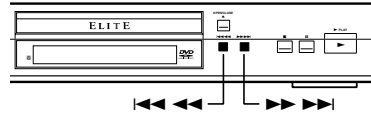
Basic playback controls

The table below shows the basic controls on the remote for playing discs. The following chapter covers more playback features in more detail.

Button	What it does
▶	Starts playback. DVD and Video CD: if the display shows RESUME , playback starts from the resume point.
	Pauses a disc that's playing, or restarts a paused disc.
■	Stops playback. DVD and Video CD: Display shows RESUME . Press ■ (stop) again to cancel the resume function (The resume function is also cancelled when you eject the disc tray).
◀◀	Press to start fast reverse scanning. Press ▶ (play) to resume normal playback.
▶▶	Press to start fast forward scanning. Press ▶ (play) to resume normal playback.
◀◀	Skips to the start of the current track or chapter, then to previous tracks/chapters.
▶▶	Skips to the next track or chapter.
Numbers	Use to enter a title/group/track number. Press ENTER to select (or wait a few seconds). <ul style="list-style-type: none"> If the disc is stopped, playback starts from the selected title/group (for DVD) or track number (for CD/SACD/Video CD/MP3). If the disc is playing, playback jumps to the start of the selected chapter or track (within the current group for DVD-Audio).

Front panel controls

The ▶ (play), ■ (stop), and || (pause) buttons on the front panel work in exactly the same way as their remote control equivalents. The combined scan/skip buttons on the front panel (◀◀◀◀ and ▶▶▶▶) work slightly differently from the remote buttons.



Press and hold for fast scan; press for track/chapter skip.



Important

- You may find with some DVD discs that some playback controls don't work in certain parts of the disc. This is not a malfunction.

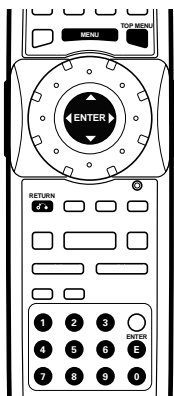
DVD disc menus

Many DVD-Video and DVD-Audio discs contain menus from which you can select what you want to watch or listen to. They may give access to additional features, such as subtitle and audio language selection, or special features such as slideshows. See the disc packaging for details.

Sometimes menus are displayed automatically when you start playback; others only appear when you press **MENU** or **TOP MENU**.

**Important**

- Some DVD-Audio discs feature a 'bonus group'. To access this group you have to input a password, which you can find on the disc's packaging.

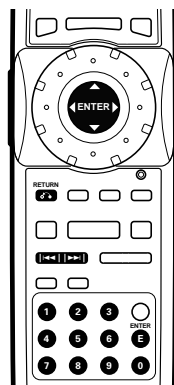


Button	What it does
TOP MENU	Displays the 'top menu' of a disc—this varies with the disc.
MENU	Displays a disc menu—this varies with the disc and may be the same as the 'top menu'.
⬅➡ (Joystick)	Moves the cursor around the screen.
ENTER	Selects the current menu option.
↶ (RETURN)	Returns to the previously displayed menu screen. On some DVD-Audio discs featuring browsable pictures, press to display the browser screen.
Numbers	Highlights a numbered menu option (some discs only). Press ENTER to select (or wait a few seconds).

Video CD PBC menus

Some Video CDs have menus from which you can choose what you want to watch. These are called PBC (Playback control) menus.

You can play a PBC Video CD/Super VCD without having to navigate the PBC menu by starting playback using a number button or track skip button (⏮) to select a track, rather than the ▶ (play) button.



Button	What it does
↶ (RETURN)	Displays the PBC menu.
Numbers	Use to enter a numbered menu option. Press ENTER to select (or wait a few seconds).
⏮	Displays the previous menu page (if there is one).
⏭	Displays the next menu page (if there is one).

 FAQ

- *After I load a DVD disc, it ejects automatically after a few seconds!*

Most likely, the disc is the wrong region for your player. The region number should be printed on the disc; check it against the region number of the player (which you can find on the rear panel).

If the region number is OK, it may be that the disc is damaged or dirty. Clean the disc and look for signs of damage. Check also that the disc is aligned properly in the disc tray and that it's loaded label-side up.

- *Why won't the disc I loaded play?*

First check that you loaded the disc the right way up (label side up), and that it's clean and not damaged.

If a disc loaded correctly won't play, it's probably an incompatible format or disc type, such as DVD-ROM.

- *There's no picture!*

Check the front panel and make sure that the **VIDEO OFF** indicator isn't lit. If it is, press the **VIDEO OFF** button to switch the video output back on.

Also make sure that if your TV isn't compatible with progressive scan video, that the **PROGRESSIVE** indicator isn't lit. If it is, press the **PROGRESSIVE** button to switch the video output back to interlace. See also **page 18**.

- *I have a widescreen TV so why are there black bars at the top and bottom of the screen when I play some discs?*

Some movie formats are such that even when played on a widescreen TV, black bars are necessary at the top and bottom of the screen. This is not a malfunction.

- *I have a standard (4:3) TV and set the player to show widescreen DVDs in pan & scan format, so why do I still get black bars top and bottom with some discs?*

Some discs override the display preferences of the player, so even if you have **4:3 (Pan & Scan)** selected, those discs will still be shown in letterbox format. This is not a malfunction.

- *My AV receiver is definitely compatible with 96/88.2kHz Linear PCM audio, but it doesn't seem to work with this player. What's wrong?*

For digital copy-protection purposes, some 96/88.2kHz DVD discs only output digital audio downsampled to 48/44.1kHz. This is not a malfunction. To fully take advantage of the high sampling rate audio, connect the analog audio outputs to your amplifier/receiver.

- *Why can't I hear SACD audio through the digital outputs?*

SACD audio is only available through the analog outputs. This is not a malfunction. Some DVD-Audio discs too only output audio through the analog outputs.

- *Is it better to listen to DVD-Audio discs through the analog outputs?*

Some DVD-Audio discs do not output anything through the digital outputs, and multichannel discs are downmixed to stereo for the digital output. In addition, high sampling rate DVD-Audio discs (higher than 96kHz) automatically downsample audio output from the digital outputs.

Using the multichannel analog audio outputs for DVD-Audio have none of these limitations.

- *My DVD-Audio disc starts playing, but then suddenly stops!*

The disc may have been illegally copied.

- *My CD with MP3 tracks won't play!*

Also make sure that the tracks are encoded in MPEG1 audio layer 3 format.

- *Some MP3 tracks don't show up. Where are they?*

Filenames that don't end with the extension ".mp3" won't be recognized by this player. Also, if there are more than 250 folders or tracks on the disc, only the first 250 are recognized.

Introduction

Most of the features described in this chapter make use of on-screen displays. For an explanation of how to navigate these see - *Using the on-screen displays*.

Many of the functions covered in this chapter apply to DVD and SACD discs, Video CDs, CDs and MP3 discs, although the exact operation of some varies slightly with the kind of disc loaded.

Some DVD discs restrict the use of some functions (random or repeat, for example). This is not a malfunction.

When playing Video CDs, some of the functions are not available during PBC playback. If you want to use them, start the disc playing using a number button to select a track.

Using the Disc Navigator to browse the contents of a disc

Use the Disc Navigator to browse through the contents of a disc to find the part you want to play. You can use the Disc Navigator when a disc is playing or stopped.

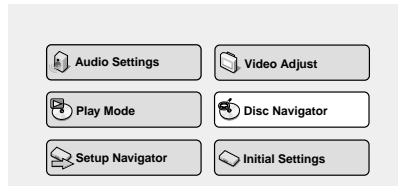


Important

- It's not possible to use the Disc Navigator when playing a Video CD/Super VCD in PBC mode, or when a DVD disc menu is displayed.

1 Press SETUP and select 'Disc Navigator' from the on-screen display.

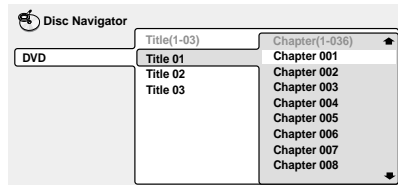
Alternatively, if a DVD-RW, CD, Video CD or MP3 disc is loaded, you can press **MENU**, which takes you straight to the Disc Navigator screen.



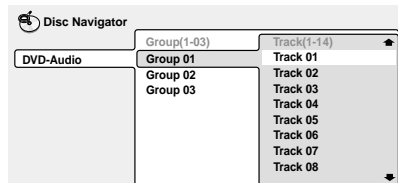
2 Select what you want to play.

Depending on the type of disc you have loaded, the Disc Navigator looks slightly different.

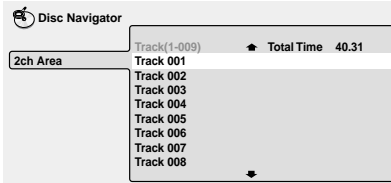
For DVD-Video discs select a title, or a chapter within a title.



For DVD-Audio discs select a group, or a track within a group.

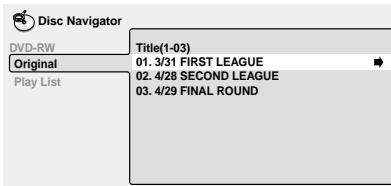


For SACD discs select a track within the current playback area.

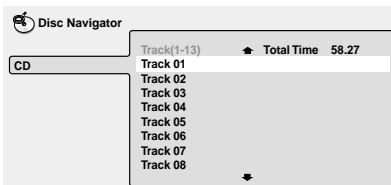


For a VR mode DVD-RW disc select between the Playlist and Original areas of the disc, or a title. Move the joystick right to preview the title.

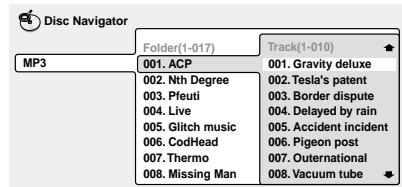
- It's not possible to switch between Original and Playlist during playback.
- Not all DVD-RW discs have a Playlist.



For CDs and Video CDs select a track.



For MP3 discs select a folder, or a track within a folder. (Note that if a folder or track name contains accented or non-roman characters, they may show up with generic names – F_033, T_035, etc.).



Playback starts after you press **ENTER**.



Tip

- The Disc Navigator is not available unless there is a disc loaded.
- Another way to find a particular place on a disc is to use one of the search modes. See *Searching a disc*.

Scanning discs

You can fast-scan discs forward or backward at various different speeds using the remote.

1 During playback, press ◀◀ or ▶▶ to start scanning.

2 Press repeatedly to increase the scanning speed.

- MP3s can only be scanned at one speed.
- The scanning speed is shown on-screen.

3 To resume normal playback, press ▶ (play).



Note

- Sound can be heard while scanning SACDs, audio CDs, and MP3 discs.
- There is no sound while scanning DVD-Videos and Video CDs, and no subtitles while scanning DVD-Video.
- Depending on the disc, normal playback may automatically resume when a new chapter is reached on a DVD-Video disc.

Using the Multi Dial

You can use the Multi Dial to control fast and slow motion scanning and frame advance of DVD-Video, DVD-R/RW and Video CDs.

When scanning, no audio is output, even when the scanning speed is 1/1 (normal playback speed).

To start scanning playback at 1/16 speed, turn the MULTI DIAL (clockwise for forward; anticlockwise for reverse) during playback.

- Turn the **MULTI DIAL** in the same direction to increase the scan speed—the speed is indicated at the top left of the screen.
- Turn in the opposite direction to slow the scan speed/reverse direction.

To start high-speed scanning, turn the MULTI DIAL quickly (clockwise for forward; anticlockwise for reverse) during playback.

- Change the speed/direction in the same way as above.
- To resume normal playback, press ▶.

To start manual scanning, press JOG (JOG MODE), then use the MULTI DIAL to advance frames in either direction.

To switch off jog mode, press JOG (JOG MODE) again. The picture remains paused until you restart playback.

- To resume normal playback, press ▶.



Note

- You can scan Video CDs in the same way as DVD-Video discs (see above). However, reverse slow-motion scanning is not possible, and there are just two fast scanning speeds.

Playing in slow motion

You can play DVD-Videos, DVD-R/RW and Video CDs at four different forward slow motion speeds, and DVD-Videos, DVD-R/RW also at two reverse speeds.

1 During playback, press **II (pause).**

2 Press and hold **◀/◀II or **II▶/▶** until slow motion playback starts.**

- The slow motion speed is shown on-screen.
- There is no sound during slow motion playback.

3 Press repeatedly to change the slow motion speed.

- The slow motion speed is displayed on-screen.

4 To resume normal playback, press **▶ (play).**



Note

- You can't use slow motion playback with some titles on some DVDs.
- Video CD only supports forward slow motion playback.
- The picture quality during slow motion playback is not as good as during normal playback.
- Depending on the disc, normal playback may automatically resume when a new chapter is reached.
- For DVD-Audio discs featuring browsable pictures, press **◀/◀II/II▶/▶** to view the previous/next picture.

Frame advance/frame reverse

You can advance or back up DVD-Video or DVD-RW discs frame-by-frame. With Video CDs, you can only use frame advance.

1 During playback, press **II (pause).**

2 Press **◀/◀II or **II▶/▶** to reverse or advance a frame at a time.**

3 To resume normal playback, press **▶ (play).**



Note

- The picture quality when using frame reverse is not as good as frame advance.
- Depending on the disc, normal playback may automatically resume when a new chapter is reached.
- When changing direction of a DVD-Video disc, the picture may 'move' in an unexpected way. This is not a malfunction.
- For DVD-Audio discs featuring browsable pictures, press **◀/◀II/II▶/▶** to view the previous/next picture.

Looping a section of a disc

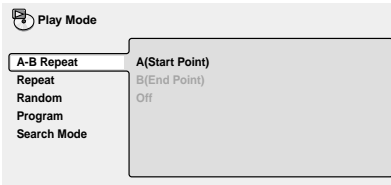
The A-B Repeat function allows you to specify two points (A and B) within a track (DVD-Audio, CD and Video CD) or title (DVD-Video and DVD-RW) that form a loop which is played over and over.



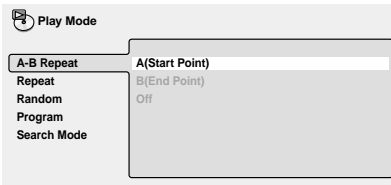
Important

- A-B Repeat is not available with SACDs, MP3s, Super VCDs, Video CD in PBC mode, or while a DVD disc menu is being displayed.

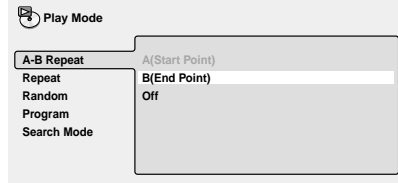
1 During playback, press **PLAY MODE** and select '**A-B Repeat**' from the list of functions on the left.



2 Press **ENTER** on '**A(Start Point)**' to set the loop start point.



3 Press **ENTER** on '**B(End Point)**' to set the loop end point.



After pressing **ENTER**, playback jumps back to the start point and plays the loop.

4 To resume normal playback, press **CLEAR** or select '**Off**' from the menu.

Using repeat play

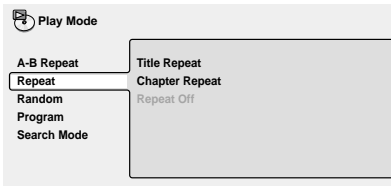
There are various repeat play options, depending on the kind of disc loaded. It's also possible to use repeat play together with program play to repeat the tracks/chapters in the program list (see *Creating a program list*).



Important

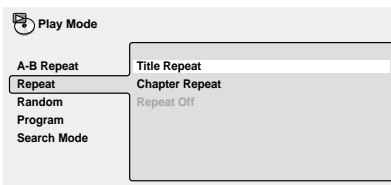
- Repeat play is not available with Video CDs/Super VCD in PBC mode, or while a DVD disc menu is being displayed.

1 During playback, press **PLAY MODE** and select 'Repeat' from the list of functions on the left.



2 Select a repeat play option.

The repeat play options available depend on the type of disc loaded. The screen below appears when a DVD-Video disc is loaded.



DVD-Video and DVD-RW discs

- **Title Repeat**
- **Chapter Repeat**
- **Repeat Off**

DVD-Audio discs

- **Group Repeat**
- **Track Repeat**
- **Repeat Off**

SACD, CD and Video CD discs

- **Disc Repeat**
- **Track Repeat**
- **Repeat Off**

MP3 discs

- **Disc Repeat**
- **Folder Repeat**
- **Track Repeat**
- **Repeat Off**



Tip

- If you've made a program list, the **Program Repeat** option also appears as a repeat option.
- To stop the disc and cancel repeat play, press **■** (stop).
- You can also cancel repeat play without stopping playback by pressing **CLEAR**. The disc will play to the end, then stop.



Note

- You can't use repeat and random play at the same time.
- If you switch camera angle during repeat play, repeat play is canceled.

Using random play

Use the random play function to play titles or chapters (DVD-Video), groups or tracks (DVD-Audio), or tracks (CD, Video CD and MP3 discs) in a random order.

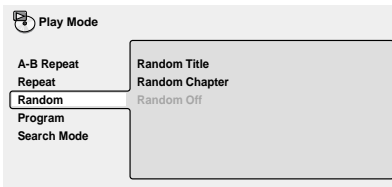
You can set the random play option when a disc is playing or stopped.



Important

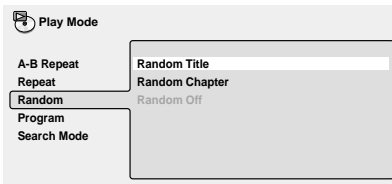
- You can't use random play with SACDs, DVD-RWs, Video CDs/Super VCDs playing in PBC mode, or while a DVD disc menu is being displayed.

1 Press **PLAY MODE** and select 'Random' from the list of functions on the left.



2 Select a random play option.

The random play options available depend on the type of disc loaded. The screen below appears when a DVD-Video disc is loaded.



DVD-Video discs

- **Random Title**
- **Random Chapter**
- **Random Off**

DVD-Audio discs

- **Random Group**
- **Random Track**
- **Random Off**

MP3, CD and Video CD discs

- **On**
- **Off**



Tip

- To stop the disc and cancel random playback, press **■** (stop).
- You can also cancel random playback without stopping the disc by pressing **CLEAR**. The disc will play to the end, then stop.
- During random play, the **⏮** and **⏭** buttons function a little differently to normal: **⏮** returns to the beginning of the current track/chapter. You can't go back further than this. **⏭** selects another track/chapter at random from those remaining.
- You can't use random play together with program or repeat play.

Creating a program list

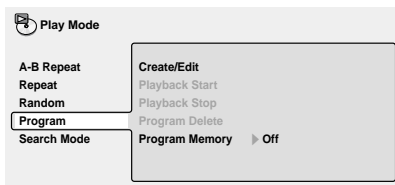
This feature lets you program the play order of titles/group/chapters/folders/tracks on a disc.



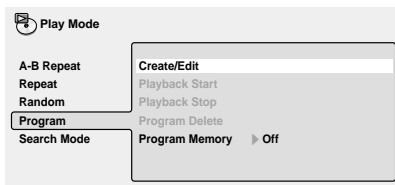
Important

- Program play is not available with DVD-RWs, Video CDs/Super VCDs playing in PBC mode, or while a DVD disc menu is being displayed.

- 1 Press **PLAY MODE** and select 'Program' from the list of functions on the left.



- 2 Select 'Create/Edit' from the list of program options.



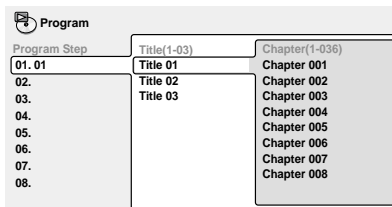
The Program edit screen that appears depends on the kind of disc loaded.

On the left side is the program list, then to the right is a list of titles (if a DVD-Video disc is loaded), groups (for DVD-Audio), tracks (for SACDs, CDs and Video CDs/Super VCD), or folder names (for MP3 discs). On the far right is a list of chapters (for DVD-Video) or tracks (for DVD-Audio and MP3).

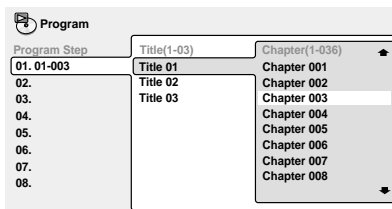
- 3 Select a title, chapter, group, folder or track for the current step in the program list.

For a DVD-Video disc, you can add a whole title, or a chapter within a title to the program list.

- To add a title, select the title.

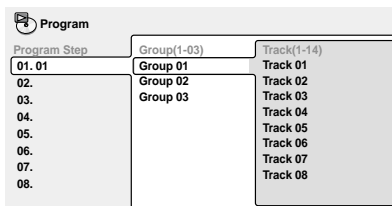


- To add a chapter, first highlight the title, then move the cursor right and select a chapter from the list.

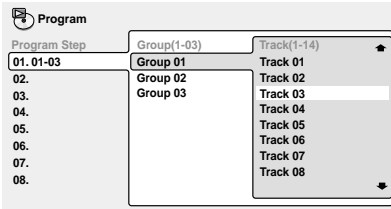


For a DVD-Audio disc, you can add a whole group, or a track within a group to the program list.

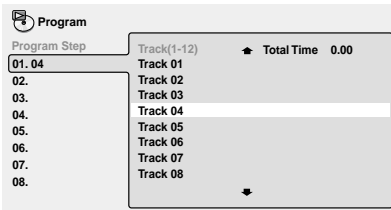
- To add a group, select the group.



- To add a track, first highlight the group, then move the cursor right and select a track from the list.

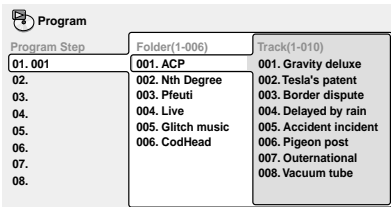


For SACD, CD or Video CD/Super VCD, select a track to add to the program list.
(The screen below shows a CD loaded.)

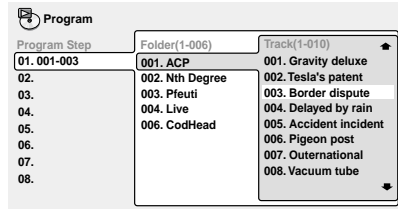


For an MP3 disc, you can add a whole folder, or a track within a folder to the program list.

- To add a folder, select the folder.



- To add a track, first find the folder, then move the cursor right and select a track name from the list.



After pressing **ENTER** to select the title/group/chapter/folder/track, the step number automatically moves down one.

4 Repeat step 3 to build up a program list.

A program list can contain up to 24 titles/chapters/groups/folders/tracks.

5 To play the program list, press ► (play).

Program play remains active until you turn off program play (see below), erase the program list (see below), eject the disc or switch off the player.



Tip

- To exit the program edit screen without starting playback, press **PLAY MODE** or **SETUP**. (Don't press **RETURN**—your program list will be lost.)
- During program play, press **►▶** to skip to the next program step.
- Press **CLEAR** during playback (though not if the program list OSD is displayed) to switch off program play. Press while stopped to erase the program list.

Editing a program list

After creating a program list, you can add, delete and change steps.

- 1 Press **PLAY MODE** and select 'Program' from the list of functions on the left.
- 2 Select 'Create/Edit' from the list of program options.
- 3 To clear a step, highlight the step number and press **CLEAR**.
- 4 To insert a step in the middle of the program list, highlight the step where you want the new step to appear, then select a title/group/chapter/folder/track to add.

After pressing **ENTER**, the new step is inserted into the list.

- 5 To add a step to the end of the program list, highlight the next free step then select a title/group/chapter/folder/track to add.



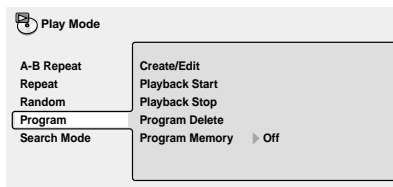
Tip

- To exit the program edit screen without starting playback, press **PLAY MODE** or **SETUP**.
- If you want to exit the program edit screen without saving the changes you made, press **RETURN**.

Other functions available from the program menu

As well as creating and editing a program list, you can start and stop program play, erase the program list, and memorize a DVD program list from the Program menu.

- 1 Press **PLAY MODE** and select 'Program' from the list of functions on the left.



- 2 Select a program play function.
 - **Create/Edit** – See Creating a program list.
 - **Playback Start** – Starts playback of the program list
 - **Playback Stop** – Turns off program play, but does not erase the program list
 - **Program Delete** – Erases the program list and turns off program play
 - **Program Memory** (DVD-Video only) – Select **On** to save the program list for the disc loaded. (Select **Off** to cancel the program memory for the disc loaded)



Tip

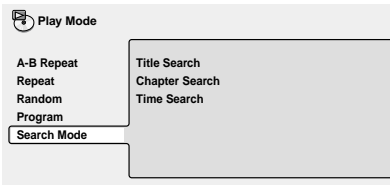
- After saving a program list using the Program Memory feature, whenever you load that disc, the program list is automatically recalled and program play switched on.
- You can save program lists for up to 24 discs. After that, the oldest one is replaced with the new one saved.

Searching a disc

Using the search mode function from the Play Mode menu you can quickly jump to a particular part of the disc that you're watching or listening to.

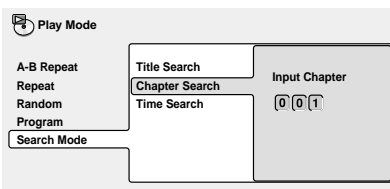
1 Press PLAY MODE and select 'Search Mode' from the list of functions on the left.

The search options that appear depend on the kind of disc loaded. The screen below shows the DVD-Video search options.



2 Select a search mode.

3 Use the number buttons to enter a title, group, chapter, page, folder or track number, or a time.



- For a time search, enter the number of minutes and seconds into the currently playing title (DVD-Video/DVD-RW) or track (Video CD) you want playback to resume from. For example, press **4, 5, 0, 0** to have playback start from 45 minutes into the disc. For 1 hour, 20 minutes and 30 seconds, press **8, 0, 3, 0**.
- Some DVD-Audio discs feature pages of browsable pictures. Enter the page number you want.

4 Press ENTER to start playback.



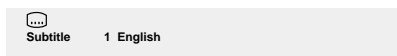
Note

- You can only use time search with DVD-Video and Video CD discs.
- The disc must be playing in order to use time search.
- Search functions are not available with Video CDs/Super VCD in PBC mode (start non-PBC playback by stopping playback, then pressing **▶▶I**, then **▶** (play)).
- You can often select what you want to watch from a DVD disc menu.

Switching subtitles

Some DVD-Video discs have subtitles in one or more languages; the disc box will usually tell you which subtitle languages are available. You can switch subtitle language during playback.

1 Press SUBTITLE repeatedly to select a subtitle option.



- While the above display is showing, you can also use the joystick (up/down) and **ENTER** to select a subtitle language from a drop-down menu.



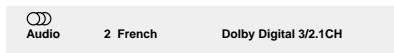
Note

- Some discs only allow you to change subtitle language from the disc menu. Press **TOP MENU** to access.
- To set subtitle preferences, see *Subtitle Language*.

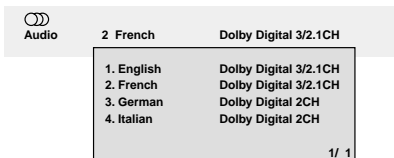
Switching DVD-Video audio language

When playing a DVD-Video disc recorded with dialog in two or more languages, you can switch audio language during playback.

1 Press AUDIO repeatedly to select an audio language option.



- With some discs, while the above display is showing, you can also use the joystick (up/down) and **ENTER** to select an audio language from a drop-down menu.



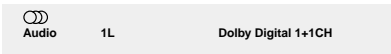
Note

- Some discs only allow you to change audio language from the disc menu. Press **TOP MENU** to access.
- To set audio language preferences, see *Audio Language*.

Switching DVD-RW audio channel

When playing a DVD-RW disc recorded with dual-mono audio, you can switch between the main, sub, and mixed channels during playback.

- 1 Press **AUDIO** repeatedly to select an audio channel option.



Switching DVD-Audio audio channel

Depending on the disc, you may be able to switch channels when playing DVD-Audio discs—see the disc box for details.

- 1 Press **AUDIO** repeatedly to select an audio channel option.



When you change the audio channel, playback restarts from the beginning of the current track.

Note

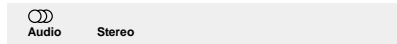
- Some discs only allow you to change audio channel from the disc menu. Press **TOP MENU** to access.
- To set audio language preferences, see *Audio Language*.

Switching CD/MP3/Video CD audio channel

You can switch between stereo, just the left channel or just the right channel of a CD/MP3/Video CD/Super VCD. (To change the audio channel of a CD it must be playing.)


Some Super VCDs have two soundtracks. With these discs you can switch between the two soundtracks as well as individual channels in each.

- 1 Press **AUDIO** repeatedly to select an audio channel option.



Switching camera angles

Some DVD-Video discs feature scenes shot from two or more angles—check the disc box for details.

When a multi-angle scene is playing, a  icon appears on screen to let you know that other angles are available (this can be switched off if you prefer).

- During playback press **ANGLE** to switch angle.

Displaying disc information

Various track, chapter and title information, as well as the video transmission rate for DVD discs, can be displayed on-screen.

1 During playback, press DISPLAY to show/switch the information displayed.

Keep pressing **DISPLAY** to change the displayed information.

- DVD-Video displays

Play		▶ DVD			
Current / Total	Elapsed	Remain	Total		
1/3	2:23	138:36	138:59		
Title	1 English		1 English	1	
Audio	Dolby Digital	3/2.1CH	Subtitle	Angle 1	

Play		▶ DVD			
Current / Total	Elapsed	Remain	Total		
2/36	0:06	1:40	1:46		
Chapter	2/36		6.0Mbps		#
Tr. Rate :	■■■■■■■■				

The # mark displayed with some DVD-Video discs means that the video is playing at 24 frames/second, progressive.

Pause		DVD			
Current / Total	Elapsed	Remain	Total		
2/36	0:06	15	1:40	1:46	
Chapter	2/36		6.0Mbps		#
Tr. Rate :	■■■■■■■■				

When the disc is paused, the display also shows the frame number.

- DVD-Audio displays

Play		▶ DVD-Audio			
Current / Total	Elapsed	Remain	Total		
1/14	3:20	2:41	6:01		
Track	1 Linear PCM		--	1	
Audio	192kHz	24bit 2/0CH	Subtitle	Angle 1	

Play		▶ DVD-Audio			
Current / Total	Elapsed	Remain	Total		
1/3	3:21	53:20	56:41		
Group	1/3		9.5Mbps		Tr. Rate :
■■■■■■■■					

- DVD-RW displays

Play		▶ DVD-RW		Original	
Current / Total	Elapsed	Remain	Total		
1/32	0:08	30:22	30:30		
Title	1		--		
Audio	Dolby Digital	2/0CH	Subtitle		

Play		▶ DVD-RW		Original	
Current / Total	Elapsed	Remain	Total		
1/1	0:00	0:00	0:00		
Chapter	1/1		4.3Mbps		Tr. Rate
■■■■■					

- SACD displays

Play		▶ SACD			
Current / Total	Elapsed	Remain	Total		
1/9	0:22	3:38	4:00		
Track	1/9		4:00		Tr. Rate
■■■■■					
Audio	3/2.1CH				

(During multichannel playback only)

Play		▶ SACD			
Current / Total	Elapsed	Remain	Total		
1/9	0:22	3:38	4:00		
Track	1/9		4:00		Tr. Rate
■■■■■					
Audio	3/2.1CH				

Play		▶ SACD			
Elapsed	Remain	Total			
0:24	40:07	40:31			
Disc					

- CD and Video CD displays

Play		▶ VCD			
Elapsed	Remain	Total			
0:23	58:51	57:14			
Disc					

Play		▶ VCD			
Current / Total	Elapsed	Remain	Total		
2/16	0:23	4:20	4:43		
Track	2/16		4:43		Tr. Rate
■■■■■					

(During PBC playback only)

Play		▶ VCD			
Elapsed	Remain	Total			
0:23	4:20	4:43			
Disc					

- MP3 disc displays

Play		▶ MP3			
Current / Total	Elapsed	Remain	Total		
1/17	0:18	12:42	13:00		
Track	1/17		13:00		Tr. Rate
■■■■■					
Track Name	International				

Play		▶ MP3			
Current / Total	Elapsed	Remain	Total		
2/7	0:00	0:00	0:00		
Folder	2/7		0:00		Tr. Rate
■■■■■					
Folder Name	ACP				



Tip

- You can see disc information (number of titles/chapters, groups, tracks, folders and so on) from the Disc Navigator screen. See *Using the Disc Navigator to browse the contents of a disc.*

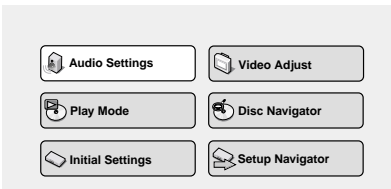
Audio DRC

- Default setting: **Off**

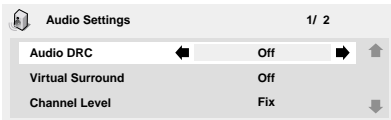
When watching Dolby Digital DVDs at low volume, it's easy to lose the quieter sounds completely—including some of the dialog. Switching Audio DRC (Dynamic Range Control) to **On** can help by bringing up the quieter sounds, while controlling loud peaks.

How much of a difference you hear depends on the material you're listening to. If the material doesn't have wide variations in volume, you may not notice much change.

1 Press SETUP and select 'Audio Settings' from the on-screen display.



2 Highlight Audio DRC, then use the Joystick (left/right) to change to 'On' or 'Off', as required.



3 Press ENTER to make the setting and exit the Audio Settings screen.



Note

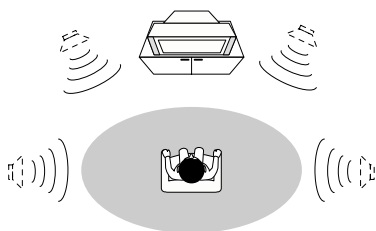
- Audio DRC is only effective with Dolby Digital audio sources.
- Audio DRC is only effective through the digital output when **Digital Out** is set to **On**, and **Dolby Digital Out** is set to **Dolby Digital > PCM**.
- The effect of Audio DRC depends on your speakers and AV receiver settings.

Virtual Surround

- Default setting: **Off**

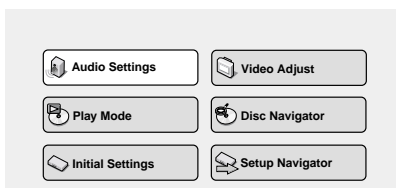
Switch on Virtual surround to enjoy surround sound effects from just two speakers.

When you play a Dolby Digital soundtrack, Virtual Dolby Digital, which uses TruSurround technology from SRS, produces a deep, realistic 3D soundspace from a pair of stereo speakers.

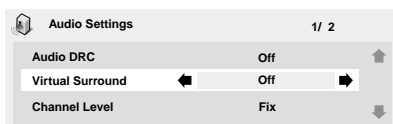


TruSurround™
by **SRS** (●)

- 1 Press **SETUP** and select 'Audio Settings' from the on-screen display.



- 2 Highlight **TruSurround**, then use the Joystick (left/right) to change to '**DDV/TruSurround**' or '**Off**', as required.



- 3 Press **ENTER** to make the setting and exit the Audio Settings screen.

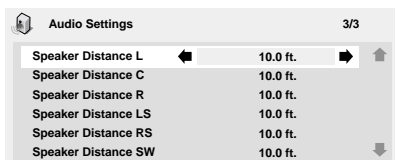
Tip

- You can also use the **SURROUND** button on the remote control to switch Virtual Surround on (**DDV/TruSurround**)/**Off**.

Note

- Virtual Surround does not work with CD, MP3, DVD-Audio or SACD discs, or 96kHz Linear PCM soundtracks.
- The Virtual Surround effect is output only through the analog **AUDIO OUT** jacks.
- Make sure that **Audio Output Mode** is set to **2 Channel**.
- How good the surround effect is varies with the disc.

Set the distance for each speaker



- Use the joystick (up/down) to select a speaker.
- Use the joystick (left/right) to adjust the distance from your listening position to that speaker.

Front left/right (**L/R**) speakers can be set from 1.0 ft. to 30 ft. in 0.5 ft. increments.

Center speaker (**C**) and subwoofer (**SW**) can be set from - 6.5 ft. to + 6.5 ft. relative to the front left/right speakers

Surround left/right (**LS/RS**) speakers can be set from -20 ft. to + 6.5 ft. relative to the front left/right speakers.

When you adjust the front left (**L**) or front right (**R**) speaker, all the other speaker distances are adjusted relative to that speaker.

6 Press ENTER to make the settings and exit the audio settings screen.



Note

- The speaker distance settings have no effect on SACD playback.
- You can't adjust the channel level for any speakers that are set to **Off** in the **Speaker Installation** menu screen (page 64).
- The **Fix** setting is equivalent to setting all the channel levels to **+6 dB**. Therefore, the **Variable** setting will usually sound quieter than the **Fix** setting.

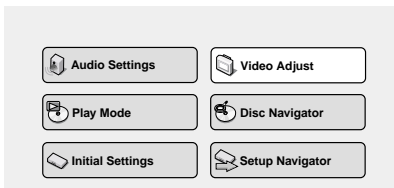
Video Adjust - Interlace Only

- Default setting: **Standard**

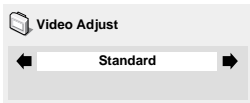
From the Video Adjust screen you can select the standard video presentation or define presets of your own.

1 Press **SETUP** and select 'Video Adjust' from the on-screen display.

You can also access these settings by pressing **V.ADJ (VIDEO ADJUST)**.



2 Use the joystick (left/right) to select a preset.



- **Standard** – Normal
- **I. Memory1-2** Use for making your own interlaced presets (see below)

3 Press **ENTER** to make the setting and exit the Video Adjust screen.

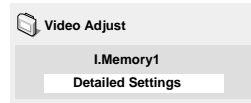
Note

- Depending on the disc and the TV/monitor, you may not see the effect clearly.

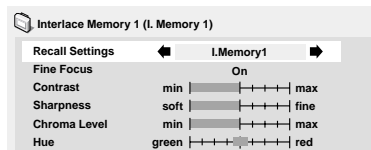
Creating your own interlace output presets

1 Select one of the Memory presets (see above).

2 Move the joystick down to select 'Detailed Settings' then press **ENTER**.



3 Adjust the picture quality settings.



- Use the joystick (up/down) to select a setting.
- Use the joystick (left/right) to adjust the current setting.
- Press **DISPLAY** to switch between full and single view.
- You can change the preset number from the **Recall Settings** menu item.
You can adjust any or all of the following picture quality settings:
 - **Fine Focus** – Switch **On** to reveal greater detail (high resolution) in the picture.
 - **Contrast** – Adjusts the contrast between light and dark elements in the picture.
 - **Sharpness** – Adjusts the sharpness of the mid-frequency (less detailed) elements in the picture. (This setting is only effective when **Fine Focus** is **On**.)
 - **Chroma Level** – Adjusts how saturated colours appear.
 - **Hue** – Adjusts the overall colour balance between red and green. (This is

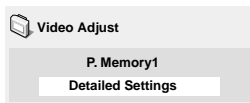
4 Press **ENTER** to save the preset and exit the Video Adjust screen.

Creating your own progressive output presets

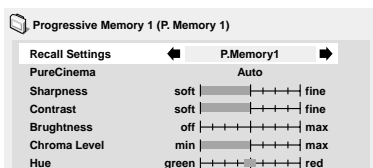
These presets are available when the video output is set to progressive. (Use the front panel **PROGRESSIVE** button to switch between interlace and progressive video output. See also **page 18**)

1 Select one of the Memory presets (see above).

2 Move the joystick down to select 'Detailed Settings' then press **ENTER**.



3 Adjust the picture quality settings.



- Use the joystick (up/down) to select a setting.
- Use the joystick (left/right) to adjust the current setting.
- Press **DISPLAY** to switch between full and single view.
- You can change the preset number from the **Recall Settings** menu item.

You can adjust any or all of the following picture quality settings:

- **PureCinema** – When watching DVD movies, PureCinema optimizes the picture quality. The default setting is **Auto**, but if the picture appears unnatural, then set to **On** or **Off**, as appropriate.
- **Sharpness** – Adjusts the sharpness of the mid-frequency (less detailed) elements in the picture.
- **Contrast** – Adjusts the contrast between light and dark elements in the picture.
- **Brightness** – Adjusts the overall brightness of the picture.
- **Chroma Level** – Adjusts how saturated colours appear.
- **Hue** – Adjusts the overall colour balance between red and green.

3 Press **ENTER** to save the preset and exit the Video Adjust screen.



Note

- Video on a DVD discs may be either video material (originally shot on video) or film material (originally shot on film). Video material has a frame rate of 30 frames/sec.(NTSC), compared with 24 frames/sec. for film. This player converts film material to 60 frames/sec. (in progressive scan mode). PureCinema adjusts the picture so that it matches more closely the picture quality of a cinema screen.

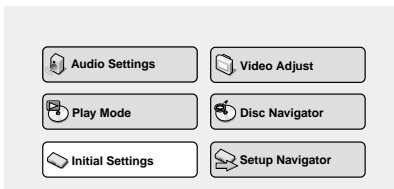
You can see whether video on a DVD disc is film or video material by displaying the video transmission rate (see If a hash mark (#) appears next to the transmission rate display, it is film material.

Using the Initial Settings menu

The Initial Settings menu is where you can set preferences for language, audio and video output, and so on.

If a menu option is grayed out it means that it cannot be changed at the current time. This is usually because a disc is playing. Stop the disc, then change the setting.

1 Press **SETUP** and select 'Initial Settings' from the on-screen display.



2 Select the setup category from the list on the left, then select an item from the menu list to the right.

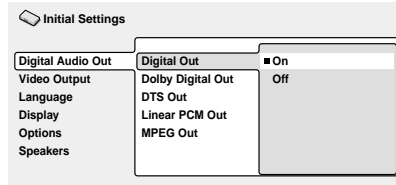
3 Make the setting you want.

Digital Audio Out settings

Digital Out

- Default setting: **On**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.



If at any time you need to switch off the digital audio output, set this to **Off**, otherwise leave it **On**.

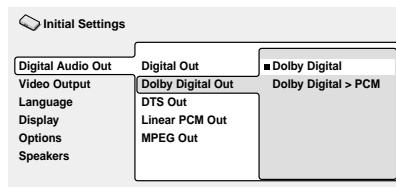
Note

- You can't switch on/off the optical and coaxial outputs individually.
- There is no digital output when playing SACDs and some DVD-Audio discs regardless of this setting.

Dolby Digital Out

- Default setting: **Dolby Digital**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.



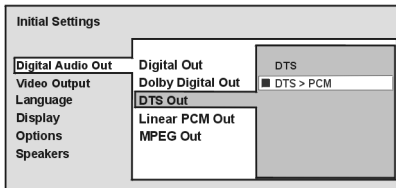
If your AV receiver (or other connected component) is Dolby Digital compatible, set to **Dolby Digital**, otherwise set to **Dolby Digital > PCM**.

The Initial Settings Menu

DTS OUT

- Default setting: **DTS > PCM**

You only need to make this setting if you connect this system to an AV receiver (or other component) using one of the digital outputs.



If your AV receiver (or other connected component) has a built-in DTS decoder, set this to **DTS**, otherwise set to **DTS > PCM** (DTS audio is converted to more compatible PCM audio). Check the manual that came with the other component if you're unsure whether it is DTS compatible.

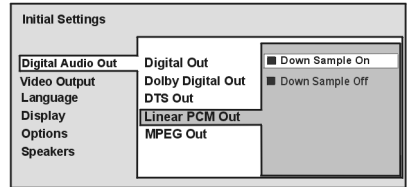
Note

- If you set to **DTS** with a non-DTS compatible amplifier, noise will be output when you play a DTS disc.
- This setting applies only to DTS audio on DVDs. DTS-CD always output DTS digital audio as-is regardless of this setting.

Linear PCM Out

- Default setting: **Down Sample On**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.



If your AV receiver (or other connected component) is compatible with high sample rates (96kHz), set this to **Down Sample Off**, otherwise set it to **Down Sample On**, (96 kHz is converted to a more compatible 48 kHz). Check the manual that came with the other component if you're unsure whether it is 96 kHz compatible.

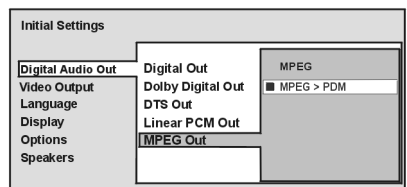
Note

- Even when set too **Down Sample Off**, some discs will still output down sampled audio through the digital outputs (you only get full sampling rate audio through the analog outputs).
- High sample rate DVD-Audio discs (192 kHz or 179.2 kHz) automatically output down sampled audio through the digital outputs.

MPEG Out

- Default setting: **MPEG > PCM**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.

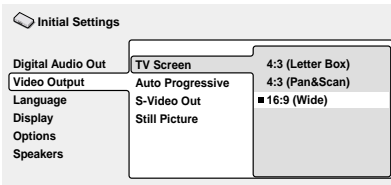


If your AV receiver (or other connected component) is compatible with MPEG audio, set this to **MPEG**, otherwise set it to **MPEG > PCM** (MPEG audio is converted to more compatible PCM audio). Check the manual that came with the other component if you're unsure whether it is MPEG audio compatible.

Video Output settings

TV Screen

- Default setting: **16:9 (Wide)**



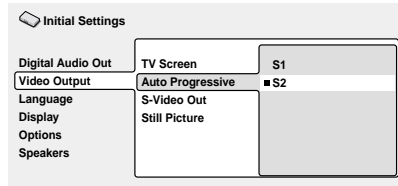
If you have a widescreen TV, select the **16:9 (Wide)** setting—widescreen DVD software is then shown using the full screen area. When playing software recorded in conventional (4:3) format, the settings on your TV will determine how the material is presented—see the manual that came with your TV for details on what options are available.

If you have a conventional TV, select either **4:3 (Letter Box)** or **4:3 (Pan & Scan)**. In Letter Box mode, widescreen software is shown with black bars at the top and bottom of the screen. Pan & Scan chops the sides off widescreen material to make it fit the 4:3 screen (so even though the image looks larger on the screen, you're actually seeing less of the picture).

S-Video Out

- Default setting: **S2**

You only need to make this setting if you connected this player to your TV using an S-Video cord.



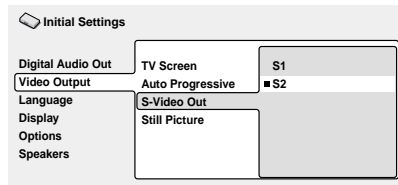
If you find that the picture is stretched or distorted on the default S2 setting, try changing it to S1. (See also S1 and S2 in the Glossary.)

experience this problem you can leave this setting as **Off**.

S-Video Out

- Default setting: **S2**

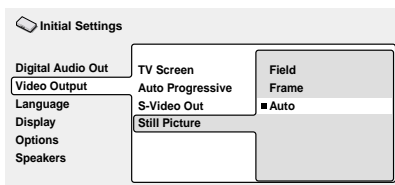
You only need to make this setting if you connected this player to your TV using an S-Video cord.



If you find that the picture is stretched or distorted on the default **S2** setting, try changing it to **S1**. (See also S1 and S2 in the Glossary.)

Still Picture

- Default setting: **Auto**



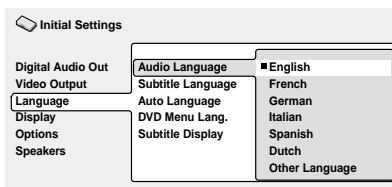
This player uses one of two processes when displaying a still frame from a DVD disc. The default **Auto** setting automatically chooses the best setting each time.

- **Field** – produces a stable, generally shake-free image
- **Frame** – produces a sharper image, but more prone to shake than field stills

Language settings

Audio Language

- Default setting: **English**



This setting is your preferred audio language for DVD-Video discs. If the language you specify here is recorded on a disc, the system automatically plays the disc in that language.

The DVD-Video format recognizes 136 different languages. Select **Other Language** if you want to specify a language other than those listed. See also *Selecting languages using the language code list*.

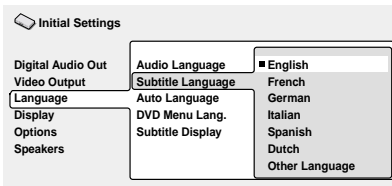


Tip

- You can switch between the languages recorded on a DVD disc during playback using the **AUDIO** button. (This does not affect this setting.)
- Some DVD discs set the audio language automatically when loaded, overriding the audio language you set in the Initial Settings menu.
- Discs with two or more audio languages usually allow you to select the audio language from the disc menu. Press **TOP MENU** to access the disc menu.

Subtitle Language

- Default setting: **English**



This setting is your preferred subtitle language for DVD-Video discs. If the language you specify here is recorded on a disc, the system automatically plays the disc with those subtitles.

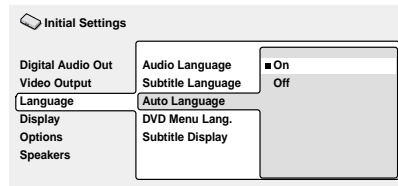
The DVD-Video format recognizes 136 different languages. Select **Other Language** if you want to specify a language other than those listed. See also *Selecting languages using the language code list*.

Tip

- You can change or switch off the subtitles on a DVD disc during playback using the **SUBTITLE** button. (This does not affect this setting.)
- Some DVD discs set the subtitle language automatically when loaded, overriding the subtitle language you set in the Initial Settings menu.
- Discs with two or more subtitle languages usually allow you to select the subtitle language from the disc menu. Press **TOP MENU** to access the disc menu.

Auto Language

- Default setting: **On**



When set to **On**, the player always selects the default audio language on a DVD-Video disc (French dialog for a French movie, for example), and displays subtitles in your preferred subtitle language only if that is set to something different. In other words, movies in your native language won't have any subtitles, while foreign language movies will be shown with subtitles.

Set to **Off** to have the player play discs strictly according to your **Audio Language** and **Subtitle Language** settings.

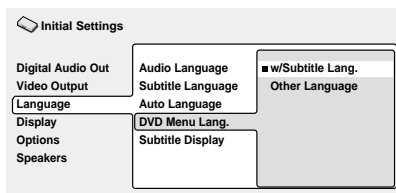
For Auto Language to work, the Audio Language and Subtitle Language settings must be the same.

Tip

- You can still switch audio and subtitle language on playback using the **AUDIO** and **SUBTITLE** buttons.

DVD Menu Language

- Default setting: **w/Subtitle Lang.**

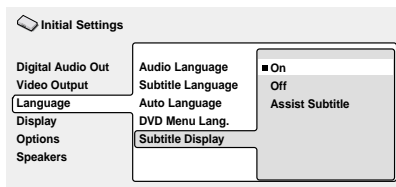


Some multilingual discs have disc menus in several languages. This setting specifies in which language the disc menus should appear. Leave on the default setting for menus to appear in the same language as your Subtitle Language.

The DVD-Video format recognizes 136 different languages. Select **Other Language** if you want to specify a language other than those listed. See also *Selecting languages using the language code list*.

Subtitle Display

- Default setting: **On**

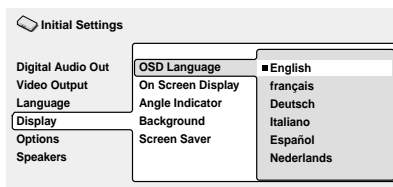


When set to **On**, the player displays subtitles according to the Subtitle Language and Auto Language settings. Set to **Assist Subtitle** to have the player display the extra assistive subtitles recorded on to some DVD discs. Set to **Off** to switch subtitles off altogether.

Display settings

OSD Language

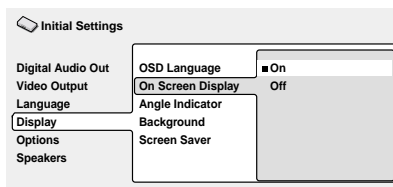
- Default setting: **English**



This sets the language of this player's on-screen displays.

On Screen Display

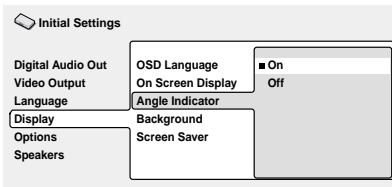
- Default setting: **On**



This sets whether operation displays are shown on-screen (**Play**, **Resume**, **Scan** and so on.)

Angle Indicator

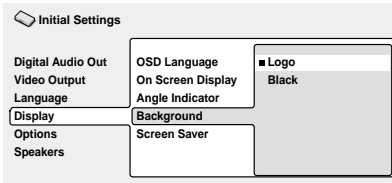
- Default setting: **On**



If you prefer not to see the camera icon on-screen during multi-angle scenes on DVD discs, change this setting to **Off**.

Background

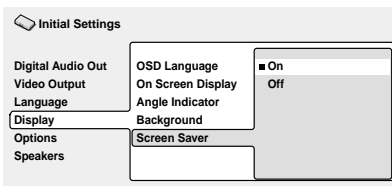
- Default setting: **Logo**



This specifies what is displayed on-screen when the player is stopped.

Screen Saver

- Default setting: **On**



If a constant image is displayed on a conventional CRT-type TV, it can 'burn in' leaving a ghost image on the screen. Switch to **On** to make sure that a constant image is not displayed for a dangerously long time.

Options

Parental Lock

- Default level: **Off**
- Default password: **none**
- Default country code: **us (2119)**

Some DVD Video discs feature a Parental Lock level. If your player is set to a lower level than the disc, the disc won't play. This gives you some control about what your children watch on your DVD player.

Some discs also support the Country Code feature. The player does not play certain scenes on these discs, depending on the country code you set.

Before you can set the Parental Lock level or the Country Code you must register a password. As the password owner, you can change the Parental Lock level or Country Code whenever you like. You can also change the password.

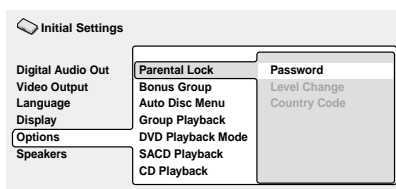
Note

- Not all discs that you may consider inappropriate for your children use the Parental Lock feature. These discs will always play without requiring the password first.
- If you forget your password, you'll need to reset the player to its factory settings then register a new password.

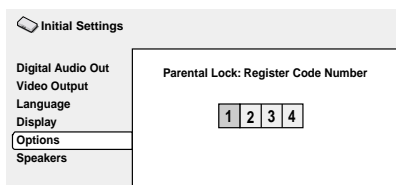
Registering a new password

You must register a password before you can change the Parental Lock level or enter a Country Code.

1 Select 'Password'.



2 Use the number buttons to enter a 4-digit password.



The numbers you enter show up as asterisks (*) on-screen.

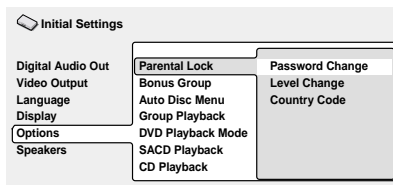
3 Press ENTER to register the password and return to the Options menu screen.

If you forget your password, you can reset the system then register a new one.

Changing your password

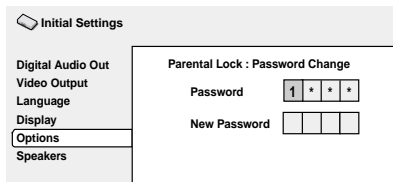
To change your password, confirm your existing password then enter a new one.

1 Select 'Password Change'.

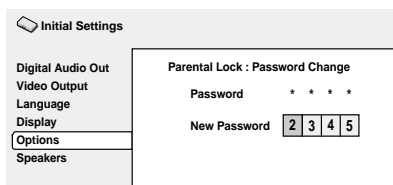


2 Use the number buttons to enter your existing password, then press ENTER.

- The numbers appear as asterisks as you enter them.



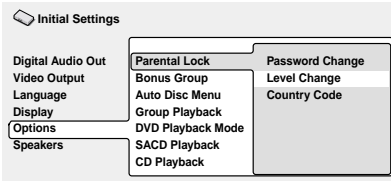
3 Enter a new password.



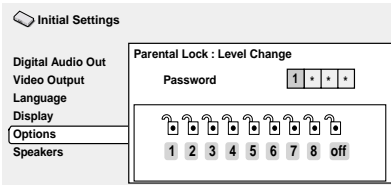
4 Press ENTER to register the new password and return to the Options menu screen.

Setting/changing the Parental Lock level

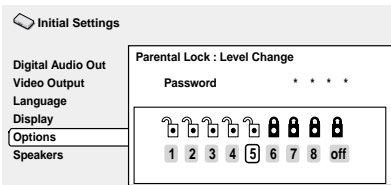
- 1 Select 'Level Change'.



- 2 Use number buttons to enter your password, then press ENTER.



- 3 Select a new level.



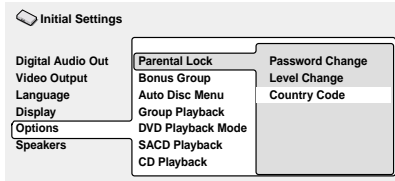
Move the joystick left to lock more levels (more discs will require the password); move right to unlock levels. You can't lock level 1.

- 4 Press ENTER to set the new level and return to the Options menu screen.

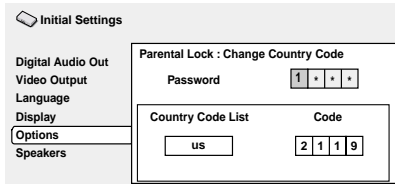
Setting/changing the Country Code

You may also want to refer to the Country code list.

- 1 Select 'Country Code'.



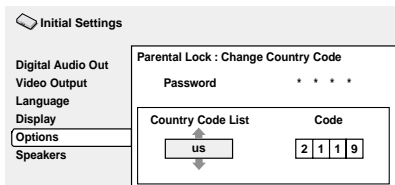
- 2 Use number buttons to enter your password, then press ENTER.



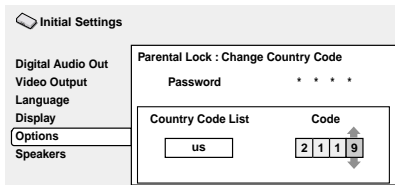
- 3 Select a country code.

There are two ways you can do this.

- Select by code letter: Use the joystick (up/down) to change the country code.



- Select by code number: Move the joystick right then use the number buttons to enter the 4-digit country code (See Country code list).



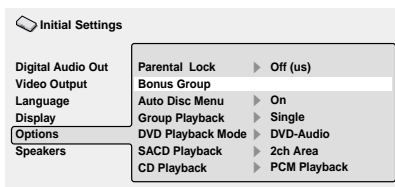
4 Press ENTER to set the new Country Code and return to the Options menu screen.



Note

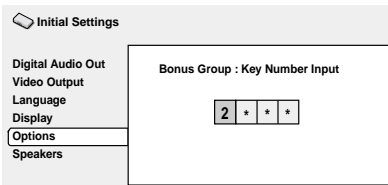
- Changing the country code does not take effect until the next disc is loaded (or the current disc is reloaded).

Bonus Group



Some DVD-Audio discs have an extra 'bonus' group that requires a 4-digit key number to access. See the disc packaging for details and the key number.

When you play a DVD-Audio disc that has a bonus group, the key number input screen appears automatically. You can also access the same screen here.

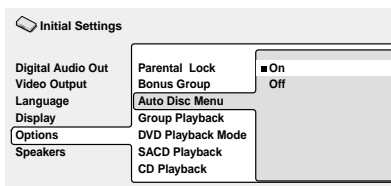


Note

- If you eject the disc, switch the power off, or unplug the player, you will need to re-enter the key number.

Auto Disc Menu

- Default setting: **On**



This specifies whether the menu (Top menu) is automatically displayed after loading a disc. Set to **On** if you want the menu displayed automatically, or **Off** if you don't want it displayed.

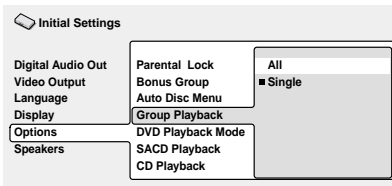


Note

- Some DVD discs display a menu automatically regardless of this setting. If you press ► while a disc is loading, this setting is ignored.

Group Playback

- Default setting: **Single**



DVD-Audio discs can have up to 9 groups of tracks. When set to **Single**, the selected group plays and then the disc stops, or returns to the menu screen. Use Group Search to select the group to play. (You cannot use the track skip **⏮** / **⏭** or scan buttons **⏪** / **⏩** in this mode.)

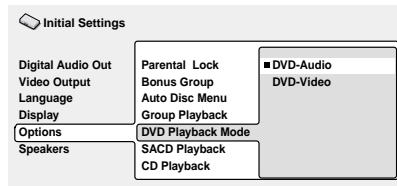
Set to **All** if you want to play all the groups on a disc consecutively.

Note

- Even if the player is set to **All** but you select a group to play from the disc menu, only that group will play. If you stop playback, all groups will play again when you restart playback.

DVD Playback Mode

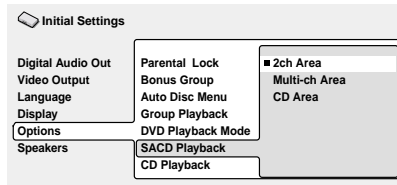
- Default setting: **DVD-Audio**



Some DVD-Audio discs contain DVD-Video content in addition to the DVD-Audio. Set to **DVD-Video** to play a DVD-Audio disc as if it were a DVD-Video disc. Note that in this case only the DVD-Video part of the disc will play.

SACD Playback

- Default setting: **2ch Area**



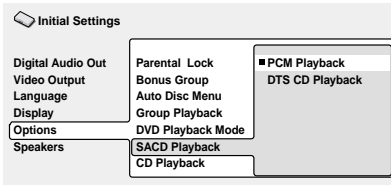
SACD discs can be divided up into several different areas — stereo audio (**2ch Area**), multi-channel audio (**Multi-ch Area**) and, for hybrid SACDs, standard CD audio (**CD Area**). Select which you want to listen to.

Note

- If you select an area that isn't on the disc loaded, a different area of the disc will play. For example, if you choose standard CD audio but the disc loaded is not a hybrid SACD, the stereo SACD audio will play.

CD Playback

- Default setting: **PCM Playback**



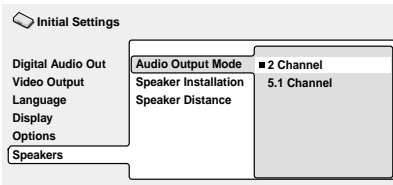
When set to **PCM Playback**, playback is optimized for standard audio CDs. You can also play DTS CDs, however you may notice some noise when a DTS CD starts playing. Also, speakers which were set to **Small** in the Speaker Installation screen are automatically set to **Large**. This is not a malfunction.

When set to **DTS CD Playback**, playback is optimized for DTS CDs. In this mode you cannot play standard audio CDs through the analog outputs. Change the setting back to **PCM Playback** to play standard CDs.

Speakers

Audio Output Mode

- Set in Setup Navigator (Default: **2 Channel**)



If you connected this player to your amplifier using the 5.1 channel analog outputs (front, surround, center and subwoofer outs), set this to **5.1 Channel**; if you connected only the stereo outs, set to **2 Channel**.



Note

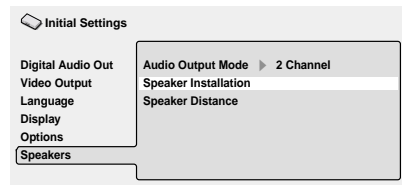
- Even if you set **Audio Output Mode** to **5.1 Channel**, you'll only get sound from all speakers when playing a multi-channel DVD-Audio disc, SACD, or Dolby Digital or DTS encoded DVD disc.
- When set to **5.1 Channel**, only the front left/right channels are output from the **AUDIO OUT (L/R)** jacks. Change to **2 Channel** if you want to listen to downmixed stereo audio (for example, because you are listening through the TV's built-in speakers).
- When set to **5.1 Channel** there is no digital output when playing DVD-Audio.
- If you set to **2 Channel**, Dolby Digital, DTS and MPEG audio is mixed down to two channels so you still hear all the audio recorded on the disc.
- Some DVD-Audio discs don't allow down-mixing of audio. These discs always output multi-channel audio regardless of the setting made here.

Speaker Installation

- Set in Setup Navigator (default: **L/R: Large | C: Large | LS/RS: Large | SW: On**)

You only need to make this setting if you connected this player to your amplifier using the 5.1 channel analog outputs.

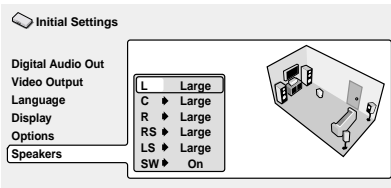
This setting does not affect digital audio output.



Use the Speaker Installation screen to tell the player what kinds of speakers you have connected.

1 Use the joystick to move the cursor up/down to select a speaker.

- The **L** and **R**, and **RS** and **LS** speakers are paired; you can't set them differently.



2 Move the cursor right to modify the selected speaker.

3 Use the joystick (up/down) to change the current setting.

- You can see the effect of your changes in the room graphic on the right of the screen.
- Except for the subwoofer, you can set speaker size to **Large** or **Small**. If the main speaker cone in the speaker is 12cm or more, set to **Large**, otherwise set to **Small** (or **Off** if you don't have that speaker).
- If you set the front **L** and **R** speakers to **Small**, the center and surround speakers are automatically set to **Small** and the subwoofer to **On**.
- The subwoofer can only be set to **On** or **Off**.

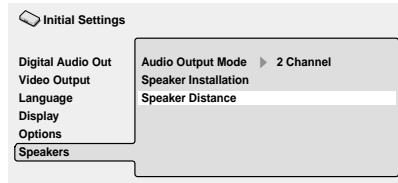
4 Move the joystick left to go back to the speaker list if you want to modify another speaker, or press ENTER to exit the Speaker Installation screen.

Speaker Distance

- Default setting: all speakers **10 ft.**

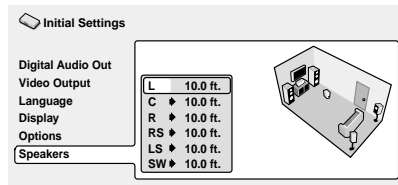
You only need to make this setting if you connected this player to your amplifier using the 5.1 channel analog outputs.

To get the best surround sound from your system, you should set up the speaker distances from your listening position.



1 Use the joystick to move the cursor up/down to select a speaker.

- The **L** and **R** speakers are paired; you can't set them differently.



2 Move the cursor right to change the speaker distance for the highlighted speaker.

3 Use the joystick (up/down) to change the distance.

- When you change the distance settings of the front left (L) or front right (R) speakers, all the other speaker distances change relative to it.
- Front left/right (L/R) speakers can be set from 1 ft. to 30 ft. in 0.5 ft. increments.
- Center speaker (C) and subwoofer (SW) can be set from -6.5 ft. to +6.5 ft. relative to the front left/right speakers
- Surround left/right (LS/RS) speakers can be set from -20 ft. to +6.5 ft. relative to the front left/right speakers.

4 Move the cursor left to go back to the speaker list if you want to modify another speaker, or press ENTER to exit the Speaker Distance screen.



Note

- Speaker Distance settings do not affect SACD playback.

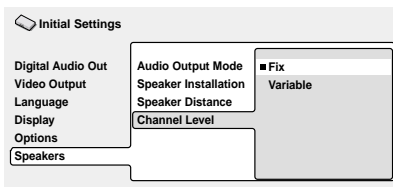
Channel Level

- Default setting: **Fix**

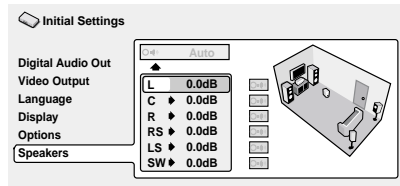
You only need to make this setting if you

use the 5.1 channel analog outputs.

Use the joystick (up/down) to adjust the channel level setting. This setting does not affect digital audio output.

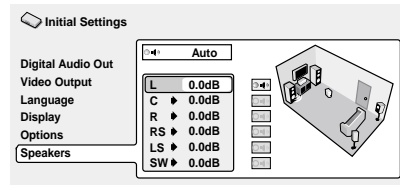


When set to **Fix**, the level of each of the 5.1 channel analog outputs is fixed. Choose **Variable** if you want to adjust the relative levels to balance the surround sound better for your listening room.



You can set the individual channel levels between -6dB and +6dB using the test tone output as a guide to set the correct levels. Adjust the levels until the output level from all channels sounds the same from your usual listening position.

Automatic: Select **Auto** to start the test tone output.



As the test tone plays through each speaker in turn, it is highlighted on-screen. Use the

output level of the current speaker. Note that the test tone is not output from the subwoofer. Move the joystick left to exit the test tone sequence, or **ENTER** to save the settings and exit the channel level setting screen.

Taking care of your player and discs

Handling discs

When holding discs of any type, take care not to leave fingerprints, dirt or scratches on the disc surface. Hold the disc by its edge or by the center hole and edge.

Damaged or dirty discs can affect playback performance. Take care also not to scratch the label side of the disc. Although not as fragile as the recorded side, scratches can still result in a disc becoming unusable.

Should a disc become marked with fingerprints, dust, etc., clean using a soft, dry cloth, wiping the disc lightly from the center to the outside edge as shown in the diagram below.



Wipe lightly from the center of the disc using straight strokes.



Don't wipe the disc surface using circular strokes.

If necessary, use a cloth soaked in alcohol, or a commercially available CD/DVD cleaning kit to clean a disc more thoroughly. Never use benzine, thinner or other cleaning agents, including products designed for cleaning vinyl records.

Storing discs

Although CDs and DVD discs are more durable than vinyl records, you should still take care to handle and store discs correctly. When you're not using a disc, return it to its case and store upright. Avoid leaving discs in excessively cold, humid, or hot environments (including under direct sunlight).

Don't glue paper or put stickers onto the disc, or use a pencil, ball-point pen or other sharp-tipped writing instrument. These could all damage the disc.

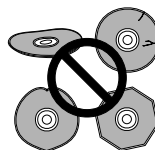


For more detailed care information see the instructions that come with discs.

Do not load more than one disc into the player at a time.

Discs to avoid

Discs spin at high speed inside the player. If you can see that a disc is cracked, chipped, warped, or otherwise damaged, don't risk using it in your player—you could end up damaging the unit.



This unit is designed for use with conventional, fully circular discs only. Use of shaped discs is not recommended for this product. Bel Canto disclaims all liability arising in connection with the use of shaped discs.

Cleaning the pickup lens

The DVD player's lens should not become dirty in normal use, but if for some reason it should malfunction due to dust or dirt, consult your nearest authorized service center. Although lens cleaners for CD players are commercially available, we do not recommend using them since some may damage the lens.

Problems with condensation

Condensation may form inside the player if it is brought into a warm room from outside, or if the temperature of the room rises quickly. Although the condensation won't damage the player, it may temporarily impair its performance. For this reason you should leave it to adjust to the warmer temperature for about an hour before switching on and using.

Hints on installation

We want you to enjoy using this unit for years to come, so please bear in mind the following points when choosing a suitable location for it:

Do...

- ✓ Use in a well-ventilated room.
- ✓ Place on a solid, flat, level surface, such as a table, shelf or stereo rack.

Don't...

- ✗ Use in a place exposed to high temperatures or humidity, including near radiators and other heat-generating appliances.
- ✗ Place on a window sill or other place where the player will be exposed to direct sunlight.
- ✗ Use in an excessively dusty or damp environment.

- ✗ Place directly on top of an amplifier, or other component in your stereo system that becomes hot in use.
- ✗ Use near a television or monitor as you may experience interference—especially if the television uses an indoor antenna.
- ✗ Use in a kitchen or other room where the player may be exposed to smoke or steam.
- ✗ Use on a thick rug or carpet, or cover with cloth—this may prevent proper cooling of the unit.
- ✗ Place on an unstable surface, or one that is not large enough to support all four of the unit's feet.

Moving the player

If you need to move the player, first press

⏻ STANDBY/ON on the front panel to turn the player off. Wait for **--OFF--** to disappear from the display, then turn off the rear switch or unplug the power cord. Never lift or move the unit during playback—discs rotate at a high speed and may be damaged.

Power cord caution

Handle the power cord by the plug part. Do not pull out the plug by tugging the cord, and never touch the power cord when your hands are wet, as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, or other object on the power cord or pinch the cord in any other way. Never make a knot in the cord or tie it with other cords. The power cords should be routed so that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electric shock. Check the power cord once in a while. If you find it damaged, ask your nearest Bel Canto authorized service center or your dealer for a replacement.

Screen sizes and disc formats

DVD-Video discs come in several different screen aspect ratios, ranging from TV programs, which are generally 4:3, to CinemaScope widescreen movies, with an aspect ratio of up to about 7:3.

Televisions, too, come in different aspect ratios; 'standard' 4:3 and widescreen 16:9.

Widescreen TV users

If you have a widescreen TV, the **TV Screen** setting of this player should be set to **16:9(Wide)**.

When you watch discs recorded in 4:3 format, you can use the TV controls to select how the picture is presented. Your TV may offer various zoom and stretch options; see the instructions that came with your TV for details.

Please note that some movie aspect ratios are wider than 16:9, so even though you have a widescreen TV, these discs will still play in a 'letterbox' style with black bars at the top and bottom of the screen.

Standard TV users

If you have a standard TV, the TV Screen setting of this player should be set to **4:3 (Letter Box)** or **4:3 (Pan&Scan)**, depending on which you prefer.

Set to **4:3 (Letter Box)**, widescreen discs are shown with black bars top and bottom.



Set to **4:3(Pan&Scan)**, widescreen discs are shown with the left and right sides cropped. Although the picture looks larger, you don't actually see the whole picture.



Please note that many widescreen discs override the player's settings so that the disc is shown in letterbox format regardless of the setting.



Tip

- Using the **16:9 (Wide)** setting with a standard 4:3 TV, or either of the **4:3** settings with a widescreen TV, will result in a distorted picture.

Resetting the player

Use this procedure to reset all the player's settings to the factory default.

- Switch the player into standby.
- Using the front panel buttons, hold down the **■ (stop) button** and press **⏻ STANDBY/ON** to switch the player back on.

All the player's settings are now reset, and you should see the 'Let's Get Started' screen.

About the audio output settings

The table below shows how the audio settings you make in the Initial Settings menu affect the output from the 5.1 channel analog outputs, and from the digital outputs with various types of disc.

Disc audio format	Player setting	Front L/R analog outputs*1	Surround L/R Center, LFE, outputs*1	Digital outputs PCM convert*2	Bitstream*3	
DVD	Dolby Digital	2 Ch	2ch downmix	-	2ch downmix	Dolby Digital
		5.1 Ch	Front L / R	Surround L/R, Center, LFE	2ch downmix	Dolby Digital
	Dolby Digital karaoke	2 Ch / 5.1 Ch	Left / Right	-	Left / Right	Dolby Digital
	Linear PCM	2 Ch / 5.1 Ch	Left / Right	-	Left / Right	Left / Right
	DTS	2 Ch	Front L / R	-	2ch downmix	DTS
		5.1 Ch	2ch downmix	Surround L/R, Center, LFE	2ch downmix	DTS
	MPEG	2 Ch / 5.1 Ch	Left / Right	-	Left / Right	MPEG
DVD-Audio	2 Ch	2ch downmix*4	-	2ch downmix*5	2ch downmix*5	
	5.1 Ch	Front L / R	Surround L/R, Center, LFE	-	-	
DVD-RW	2 Ch / 5.1 Ch	Left / Right*6	-	Left / Right	Dolby Digital MPEG or PCM	
Super Audio CD	2 Ch	2ch downmix	-	-	-	
	5.1 Ch	Front L / R	Surround L/R, Center, LFE	-	-	
CD	2 Ch / 5.1 Ch	Left / Right	-	Left / Right	Left / Right	
DTS CD	2 Ch	2ch downmix	-	DTS	DTS	
	5.1 Ch	Front L / R	Surround L/R, Center, LFE	DTS	DTS	
Video CD / Super VCD	2 Ch / 5.1 Ch	Left / Right	-	Left / Right	Left / Right	

*1 When **Audio Output Mode** is set to **2 Channel**, the **AUDIO OUT (5.1ch) FRONT L / R** jacks act as a pair of stereo audio outputs.

*2 **Dolby Digital > PCM**, **MPEG > PCM** or **DTS > PCM** setting.

*3 **Dolby Digital**, **MPEG** or **DTS** setting.

*4 Discs that prohibit downmixing will be output as 5.1 channel even if **2 Channel** is selected as the **Audio Output Mode** setting.

*5 Discs that prohibit downmixing also mute the digital output

*6 If the sound is mono, the **Left** and **Right** channels will be the same

Language code list

Language (Language code letter), **Language code**

Japanese (ja), 1001	Bhutani (dz), 0426	Kirghiz (ky), 1125	Sinhalese (si), 1909
English (en), 0514	Esperanto (eo), 0515	Latin (la), 1201	Slovak (sk), 1911
French (fr), 0618	Estonian (et), 0520	Lingala (ln), 1214	Slovenian (sl), 1912
German (de), 0405	Basque (eu), 0521	Laothian (lo), 1215	Samoan (sm), 1913
Italian (it), 0920	Persian (fa), 0601	Lithuanian (lt), 1220	Shona (sn), 1914
Spanish (es), 0519	Finnish (fi), 0609	Latvian (lv), 1222	Somali (so), 1915
Chinese (zh), 2608	Fiji (fj), 0610	Malagasy (mg), 1307	Albanian (sq), 1917
Dutch (nl), 1412	Faroese (fo), 0615	Maori (mi), 1309	Serbian (sr), 1918
Portuguese (pt), 1620	Frisian (fy), 0625	Macedonian (mk), 1311	Siswati (ss), 1919
Swedish (sv), 1922	Irish (ga), 0701	Malayalam (ml), 1312	Sesotho (st), 1920
Russian (ru), 1821	Scots-Gaelic (gd), 0704	Mongolian (mn), 1314	Sundanese (su), 1921
Korean (ko), 1115	Galician (gl), 0712	Moldavian (mo), 1315	Swahili (sw), 1923
Greek (el), 0512	Guarani (gn), 0714	Marathi (mr), 1318	Tamil (ta), 2001
Afar (aa), 0101	Gujarati (gu), 0721	Malay (ms), 1319	Telugu (te), 2005
Abkhazian (ab), 0102	Hausa (ha), 0801	Maltese (mt), 1320	Tajik (tg), 2007
Afrikaans (af), 0106	Hindi (hi), 0809	Burmese (my), 1325	Thai (th), 2008
Amharic (am), 0113	Croatian (hr), 0818	Nauru (na), 1401	Tigrinya (ti), 2009
Arabic (ar), 0118	Hungarian (hu), 0821	Nepali (ne), 1405	Turkmen (tk), 2011
Assamese (as), 0119	Armenian (hy), 0825	Norwegian (no), 1415	Tagalog (tl), 2012
Aymara (ay), 0125	Interlingua (ia), 0901	Occitan (oc), 1503	Setswana (tn), 2014
Azerbaijani (az), 0126	Interlingue (ie), 0905	Oromo (om), 1513	Tonga (to), 2015
Bashkir (ba), 0201	Inupiak (ik), 0911	Oriya (or), 1518	Turkish (tr), 2018
Byelorussian (be), 0205	Indonesian (in), 0914	Panjabi (pa), 1601	Tsonga (ts), 2019
Bulgarian (bg), 0207	Icelandic (is), 0919	Polish (pl), 1612	Tatar (tt), 2020
Bihari (bh), 0208	Hebrew (iw), 0923	Pashto, Pushto (ps), 1619	Twi (tw), 2023
Bislama (bi), 0209	Yiddish (ji), 1009	Quechua (qu), 1721	Ukrainian (uk), 2111
Bengali (bn), 0214	Javanese (jw), 1023	Rhaeto-Romance (rm), 1813	Urdu (ur), 2118
Tibetan (bo), 0215	Georgian (ka), 1101	Kirundi (rn), 1814	Uzbek (uz), 2126
Breton (br), 0218	Kazakh (kk), 1111	Romanian (ro), 1815	Vietnamese (vi), 2209
Catalan (ca), 0301	Greenlandic (kl), 1112	Kinyarwanda (rw), 1823	Volapük (vo), 2215
Corsican (co), 0315	Cambodian (km), 1113	Sanskrit (sa), 1901	Wolof (wo), 2315
Czech (cs), 0319	Kannada (kn), 1114	Sindhi (sd), 1904	Xhosa (xh), 2408
Welsh (cy), 0325	Kashmiri (ks), 1119	Sangho (sg), 1907	Yoruba (yo), 2515
Danish (da), 0401	Kurdish (ku), 1121	Serbo-Croatian (sh), 1908	Zulu (zu), 2621

Country code list

Country, **Country code**, **Country code letter**

Argentina, 0118, ar	Hong Kong, 0811, hk	Philippines, 1608, ph
Australia, 0121, au	India, 0914, in	Portugal, 1620, pt
Austria, 0120, at	Indonesia, 0904, id	Russian Federation, 1821, ru
Belgium, 0205, be	Italy, 0920, it	Singapore, 1907, sg
Brazil, 0218, br	Japan, 1016, jp	Spain, 0519, es
Canada, 0301, ca	Korea, Republic of, 1118, kr	Sweden, 1905, se
Chile, 0312, cl	Malaysia, 1325, my	Switzerland, 0308, ch
China, 0314, cn	Mexico, 1324, mx	Taiwan, 2023, tw
Denmark, 0411, dk	Netherlands, 1412, nl	Thailand, 2008, th
Finland, 0609, fi	New Zealand, 1426, nz	United Kingdom, 0702, gb
France, 0618, fr	Norway, 1415, no	United States of America, 2119, us
Germany, 0405, de	Pakistan, 1611, pk	

Selecting languages using the language code list

Some of the language options (such as 'DVD Language' in the Setup Navigator) allow you to set your preferred language from any of the 136 languages listed in the language code list on the previous page.

- 1 Select 'Other Language'.
- 2 Use the joystick (left/right) to highlight either the language name or code number.
- 3 Use the joystick (up/down) to change the language or code number.
 - You can also use the number buttons if you're entering a language code.

See the language code list on the previous page for a complete list of languages and codes.

Glossary

Analog audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also *Digital audio*.

Aspect ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the screen is almost square); widescreen models are 16:9 (the screen is almost twice as wide as it is high).

Bonus Group (DVD-Audio only)

An 'extra' group on some DVD-Audio discs that requires a key number to access. Also see *Group*.

Browsable pictures (DVD-Audio only)

A feature of some DVD-Audio discs in which the user can browse still pictures recorded on the disc as the audio is played. See also *Slideshow*.

Dolby Digital

Using a maximum of 5.1 channels of audio, this high quality surround system is used in many of the finer movie theaters around the world.

The on-screen display shows which channels are active, for example showing **3/2.1**. The **3** being the two front channels and the center channel; the **2** being the surround channels, and the **1** being the LFE channel.

DTS

DTS stands for Digital Theater System. DTS is a surround system different from Dolby Digital that has become a popular surround sound format for movies.

Dynamic range

The difference between the quietest and loudest sounds possible in an audio signal (without distorting or getting lost in noise). Dolby Digital and DTS soundtracks are capable of a very wide dynamic range, delivering dramatic cinema-like effects.

File extension

A tag added to the end of a filename to indicate the type of file. For example, ".mp3" indicates an MP3 file.

Interlaced video

A method of displaying a picture in which odd-numbered lines are updated in one pass, then even-numbered lines updated in the next. See also *Progressive scan video*.

MP3

MP3 (MPEG1 audio layer 3) is a compressed audio file format. Files are recognized by their file extension ".mp3" or ".MP3".

MPEG audio MPEG  **Multichannel**

An audio format used on Video CDs and some DVD discs. This unit can convert MPEG audio to PCM format for wider compatibility with digital recorders and AV amplifiers. See also *PCM*.

MPEG video

The video format used for Video CDs and DVDs. Video CD uses the older MPEG-1 standard, while DVD uses the newer and much better quality MPEG-2 standard.

Packed PCM (DVD-Audio only)

A lossless compression system that enables more PCM audio to be stored on a DVD-Audio disc than would otherwise be possible.

PCM (Pulse Code Modulation)

The most common system of encoding digital audio, found on CDs and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital, DTS and MPEG audio to PCM. See also *Digital audio*.

PBC (PlayBack Control) (Video CD only)

A system of navigating a Video CD through on-screen menus recorded onto the disc. Especially good for discs that you would normally not watch from beginning to end all at once—karaoke discs, for example.

Progressive scan video

Also called non-interlaced video, this method of displaying a picture updates all the lines in one pass, resulting in a more stable, flicker-free image than interlaced video (for a given scanning rate). See also *Interlaced video*.

Regions (DVD-Video only)

These associate discs and players with particular areas of the world. This unit will only play discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

S1 S-video output

This S-video signal format includes aspect ratio information (4:3 or 16:9) within the video signal. TVs which are compatible with S1 S-video automatically switch aspect ratio according to the signal.

S2 S-video output

S2 is an enhanced version of S-video which, in addition to aspect ratio information, contains letterbox / pan & scan information. Widescreen TVs which are compatible with S2 S-video automatically switch aspect ratio according to the signal.

Sampling frequency

The rate at which sound is measured to be turned into digital audio data. The higher the rate, the better the sound quality, but the more digital information is generated. Standard CD audio has a sampling frequency of 44.1kHz, which means 44,100 samples (measurements) per second. See also *Digital audio*.

Slideshow (DVD, Video CD/Super VCD)

A feature of some DVD discs in which still pictures recorded on the disc cycle automatically as the audio is played. See also *Browsable Picture*.

Super Audio CD (SACD)

Super Audio CD is a high quality audio disc format that can accommodate high sampling rate stereo and multi-channel audio, as well as conventional CD audio all on the same disc.

Troubleshooting

Incorrect operation is often mistaken for trouble or malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Inspect the other components and electrical appliances being used. If the trouble cannot be rectified after checking the items below, ask your nearest Bel Canto authorized service center or your dealer to carry out repair work.

Problem	Cause / Remedy
The disc won't play or is automatically ejected after loading.	<ul style="list-style-type: none"> • Make sure the disc is free from dirt and dust and is not damaged. • Make sure the disc is loaded with the label side face-up and aligned properly in the disc tray guide. • Incompatible region number: If the region number on a DVD-Video disc does not match the number on the player, the disc cannot be used. • Condensation inside the player: Allow time for condensation to evaporate. Avoid using the player near an air-conditioning unit. • Disc is loaded upside down: Reload the disc with the label side face up.
DVD-Audio playback stops.	<ul style="list-style-type: none"> • The disc may have been illegally copied.
Picture playback stops and the operation buttons cannot be used.	<ul style="list-style-type: none"> • Press ■, then start playback again (▶). • Switch the power off once, unplug from the wall socket, then plug back in and switch on again using the front panel ⏻ STANDBY/ON button.
New settings made in the Setup screen menus while a disc is playing are ineffective.	<ul style="list-style-type: none"> • Some settings can be changed while a disc is playing, but are not effective until the disc is stopped then restarted: Press ■, then start playback again (▶).
Settings are canceled.	<ul style="list-style-type: none"> • When the power is cut due to power failure or by unplugging the power cord, settings will be canceled: Press ⏻ STANDBY/ON on the front panel to turn the player off. Wait for -OFF- to disappear from the display, then unplug the power cord.
The remote control doesn't seem to work.	<ul style="list-style-type: none"> • The CONTROL IN jack on the rear panel is connected: Point the remote control at the connected component to control this player. • The remote control is too far from the player, or the angle with the remote sensor is too wide: Use the remote within its operating range. • The batteries are exhausted: Put in new ones.

Problem	Cause / Remedy
No picture/No color.	<ul style="list-style-type: none"> • Check that the VIDEO OFF indicator is not lit. If it is, press the VIDEO OFF button. • Incorrect video connections: Check that connections are correct and that plugs are inserted fully. Also check the video cable for damage. • TV/monitor or AV amplifier settings are incorrect: Check the instruction manual of the connected equipment. • The video output is progressive but your TV/monitor is not compatible with progressive scan.
Screen is stretched or aspect does not change.	<ul style="list-style-type: none"> • The TV Screen setting in the Initial Settings menu is incorrect. • If your TV/monitor is connected using an S-video cable, try changing the S-Video Out setting.
Picture disturbance during playback or the picture is dark.	<ul style="list-style-type: none"> • This player is compatible with Macro-Vision System copy guard. Some discs include a copy prevention signal, and when this type of disc is played back, stripes etc., may appear on some sections of the picture depending on the TV. This is not a malfunction. • Due to the player's copy protection circuits, connection of this device through a VCR or an AV selector may prevent recording or cause picture problems. This is not a malfunction.
No audio, or audio is distorted.	<ul style="list-style-type: none"> • No audio is output during slow motion playback or when scanning discs other than audio CDs • Some DVD discs do not output digital audio: Switch your amplifier to the player's analog outputs. • Check that the disc is free from dust and dirt, and that it is not damaged. • Check that all interconnects are firmly inserted. • Check that the plugs and terminals are free of dirt, oxide, etc. and clean if necessary. Also check the cable for damage. • Make sure the player's output is not connected to the amplifier's phono (turntable) inputs. • Check your amplifier/receiver's settings (volume, input function, speaker settings, etc.).

Problem	Cause / Remedy
<p>The analog audio is OK, but there appears to be no digital audio signal.</p>	<ul style="list-style-type: none"> • Make sure that the Digital Out setting is set to On. • Check that the Dolby Digital, DTS and MPEG out settings are suitable for your amplifier/receiver—check the instruction manual that came with your amplifier/receiver. • SACDs and some DVD-Audio discs do not output digital audio. Listen through the player’s analog audio outputs.
<p>Noticeable difference in DVD and CD volume.</p>	<ul style="list-style-type: none"> • This is due to differences in the audio format and is not a malfunction.
<p>Cannot play multi-channel audio.</p>	<ul style="list-style-type: none"> • Make sure that Audio Output Mode is set to 5.1 Channel. • Check that the Dolby Digital, DTS and MPEG Out settings are suitable for your amplifier/receiver—check the instruction manual that came with your amplifier/receiver. • DVD-Audio and SACDs do not output multichannel digital audio. Listen through the player’s analog outputs. • Check that the settings in the Speaker Installation screen are correct. • Check the audio options available from the disc menu.
<p>Cannot listen to high-sampling rate audio through the digital output.</p>	<ul style="list-style-type: none"> • Make sure that Linear PCM Out is set to Down Sample Off. • As a copy-protection measure, some DVDs do not output 96kHz audio. In this case, even if set to Down Sample Off, the player automatically outputs the audio at 48 kHz. This is not a malfunction.
<p>Cannot output 192kHz or 176.4kHz digital audio.</p>	<ul style="list-style-type: none"> • The player does not output digital audio at these sampling rates. The digital output is automatically downsampled.
<p>Cannot output 96kHz or 88.2kHz digital audio.</p>	<ul style="list-style-type: none"> • Check that Linear PCM Out is set to Down Sample Off. • Some discs are digital copy protected and do not output high sampling rate digital audio. In this case the output is automatically downsampled.
<p>No DTS audio output.</p>	<ul style="list-style-type: none"> • If this unit is connected to a non-DTS compatible amplifier or decoder using a digital audio cable, set DTS Out to DTS ► PCM. If you do not do this, noise will be output when you play a DTS disc. • If this unit is connected to a DTS-compatible amplifier or decoder using a digital audio cable, check the amplifier settings, and that the cable is properly connected.

Problem	Cause / Remedy
Audio mix does not sound right or sounds incomplete (for example, inaudible).	<ul style="list-style-type: none"> • Make sure that Audio Output Mode is set to 2 Channel if you've connected to the stereo inputs on your amplifier or TV.
Disc containing the MP3 tracks won't play.	<ul style="list-style-type: none"> • This player is compatible with multi-session discs, but only plays sessions that are closed. • If the message UNPLAYABLE MP3 FORMAT is displayed when you try to play a disc/track, check the audio file formats. For more information.
Can't hear effect of TruSurround.	<ul style="list-style-type: none"> • TruSurround does not work with CD, MP3, DVD-Audio, SACD or 96kHz linear PCM DVD. • The TruSurround effect is only output through the AUDIO OUT (LF/RF) analog audio outputs. • Make sure that Audio Output Mode is set to 2 Channel. • The effectiveness of TruSurround varies with the disc.

**Note**

- Static electricity or other external influences may cause malfunctioning of this unit. In this case, unplug the power cord and then plug back in. This will usually reset the unit for proper operation. If this does not correct the problem, please consult your dealer.

Specifications

General

System DVD Player
 Power requirements AC 80-260V, 50/60 Hz
 Power consumption 43 W
 Power consumption (standby) 10 W
 Weight (23 lb)
 Dimensions 17 1/2(W) x 5 1/4 (H) x 15 (D) in

Operating temperature +5°C to +35°C
 (+36°F to +96°F)
 Operating humidity 5% to 85%
 (no condensation)

Component Video output (Y, P_B, P_R)

Output level Y: 1.0 Vp-p (75 Ω)
 P_B, P_R: 0.7 Vp-p (75 Ω)
 Jacks RCA jacks

S-Video output

Y (luminance) - Output level 1 Vp-p (75 Ω)
 C (color) - Output level 286 mVp-p (75 Ω)
 Jack S-Video jack

Video output

Output level 1 Vp-p (75 Ω)
 Jack RCA jack

Audio output (1 stereo pair)

Output level During audio output
 200 mVrms (1 kHz, -20 dB)
 Number of channels 2
 Jacks RCA jack

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level During audio output
 200 mVrms (1 kHz, -20 dB)
 Number of channels 6
 Jacks RCA jack

Digital audio characteristics

Frequency response 4 Hz to 44 kHz(DVD fs: 96 kHz)
 4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
 S/N ratio 118 dB
 Dynamic range 108 dB
 Total harmonic distortion 0.001 %
 Wow and flutter Limit of measurement
 (0.001% W. PEAK) or lower

Digital output

Optical digital output Optical digital jack
 Coaxial digital output BNC, RCA jack

Accessories

Power cord 1
 Remote control 1
 Operating Instructions..... 1
 Warranty card 1
 AA dry cell batteries 2



Note

- The specifications and design of this product are subject to change without notice, due to improvement.

bel canto – PLayer-1(A)

RS-232 Protocol and Control Details - Rev. 2

Configuration - The following settings should be used for RS-232 transmission:

Baud Rate – RS-232 baud rate is configured using jumpers on the internal RS-232 interface located on the upper 480p board or on the separate RS232 board.
Available settings are 2400, 4800, 9600 and *19200. *Factory default is 19200.

Baud Rate	Jumper 1	Jumper 2
2400	Jumped	Jumped
4800	Open	Jumped
9600	Jumped	Open
19200	Open	Open

Data Bits – Eight (8) data bits.

Stop Bits – One (1) stop bit.

Parity – No parity checking.

Flow Control – None.

RS-232 Interface –

Commands are to be sent to the unit via RS-232 using the following format:

Arguments 1 through 3 are in decimal format.

<Command> = <Header><Command ID><Argument 1><Argument 2><Argument 3>

<Header> = <CAh><FEh> = HEX or <202><254> = DECIMAL

<Command ID> = <Byte>

<Argument 1> = <Byte>

<Argument 2> = <Byte>

<Argument 3> = <Byte>

<Byte> = 0 – 255

EXAMPLE OF DECIMAL COMMAND:

To send the command “Play”, send **<202><254><3><1><0><0>**

Note: Command 1 and 2 are for IR Equivalents only. Direct Commands are # 3 and higher.
Any invalid command received via RS232 is ignored and will not affect normal operation.

Status Byte –

Upon receiving the command “Poll Status” command [CAh FEh 09h 00h 00h 00h], a single status byte will be transmitted. The format for the status byte is:

<Status Byte> = <R><R><R><R><Device><Power Status>

<R> = 0b : Reserved

<Device> = 000b : Reserved

= 001b : Reserved

= 010b : Reserved

= 011b : Reserved

= 100-111 : Reserved

<Power Status> = 0b : Unit is in standby.

= 1b : Unit is not in standby.

Command Details and Explanation –

This section will outline basic functionality and usage of each command set within the RS232 interface protocol.

Note: Command IDs one(1) and two(2) are implemented to provide provision for future expandability. Command IDs three (3) through nine(9) offer more flexible control solutions and should be used for most applications.

Command ID #1: Send Single-Byte IR Code Equivalent

Command Format:

<CAh><FEh><1><Data Byte><00h><00h>

Functional Description:

This command will write the given data (<Data Byte>) to the unit's IR data bus.

Usage:

This command can be used to effectively implement any other command, which has a one-byte equivalent IR code. Equivalent IR codes for commands can be found on RS-232 command listing. Note that not all commands have equivalent IR codes.

Example:

To send the **single byte** command "Play", send <CAh><FEh><1><79h><00h><00h>
<202><254><1><121><0><0> DECIMAL Equiv.

Command ID #2: Send Three-Byte IR Code Equivalent

Command Format:

<CAh><FEh><2><Data Byte 1><Data Byte 2><Data Byte 3>

Functional Description:

This command will write the given data (<Data Byte 1><Data Byte 2><Data Byte 3>) to the unit's IR data bus.

Usage:

This command can be used to effectively implement any other command, which has a three-byte equivalent IR code. Equivalent IR codes for commands can be found on RS-232 command listing. Note that not all commands have equivalent IR codes.

Example:

To send the **three byte** command "Repeat", send <CAh><FEh><2><99h><F5h><27h>
<202><254><2><153><245><39> DECIMAL Equiv.

Command ID #3: Direct Disk Commands

Function:

These commands have a function when the unit is loaded with any Theta CD, CDV or DVD. However, the effect of a given command may vary depending on currently loaded media and state of unit.

Command ID #4: CDV/DVD Commands

Function:

These commands have a function when the unit is loaded with video media. However, the effect of a given command may vary depending on currently loaded media and state of unit.

Command ID #5: DVD Commands

Function:

These commands have an effect only when the unit is loaded with a DVD. Their function may vary depending on the current state of the unit.

Command ID #6: LD Commands **Not Used**

Function:

These commands have an effect only when the unit is loaded with a LD. Their function may vary depending of the current state of the unit.

Command ID #7: Miscellaneous Commands

Function:

These commands have the same function regardless of media type. However, their effect is dependent on current state of the unit.

Command ID #8: Menu Navigation Commands

Usage:

These commands can be used to navigate the unit's menus. Note that available menus are highly dependent on media type and state of the unit.

Command ID #9: Poll Status Command

Function:

This command will request the return of the status byte from the unit. See RS-232 specifications for format and meaning of the status byte.

Usage:

This command can be used to retrieve basic information about the current status of the unit.

RS232-Interface Usage Details –

The RS-232 interface has a first-in-first-out (FIFO) buffer which will allow 15 full-length commands to be received in direct succession. Commands are executed in the order in which they are received with approximately a $\frac{1}{2}$ **second delay** between each command. After a command is executed, it is removed from the buffer, making room to receive another command. If the buffer is full, any command received is ignored. For consistent results, no more than 15 commands should be sent in direct succession. If a longer string of commands is necessary, **a minimum of $\frac{1}{2}$ second delay** should be added before sending additional commands.

Example for sending a long string of commands:

```
[Command 1]
[Command 2]
[Command 3]
.
.
[Command 15 ]
[Delay  $\frac{1}{2}$  sec]
[Command 16 ]
[Delay  $\frac{1}{2}$  sec]
[Command 17 ]
[Delay  $\frac{1}{2}$  sec]
```

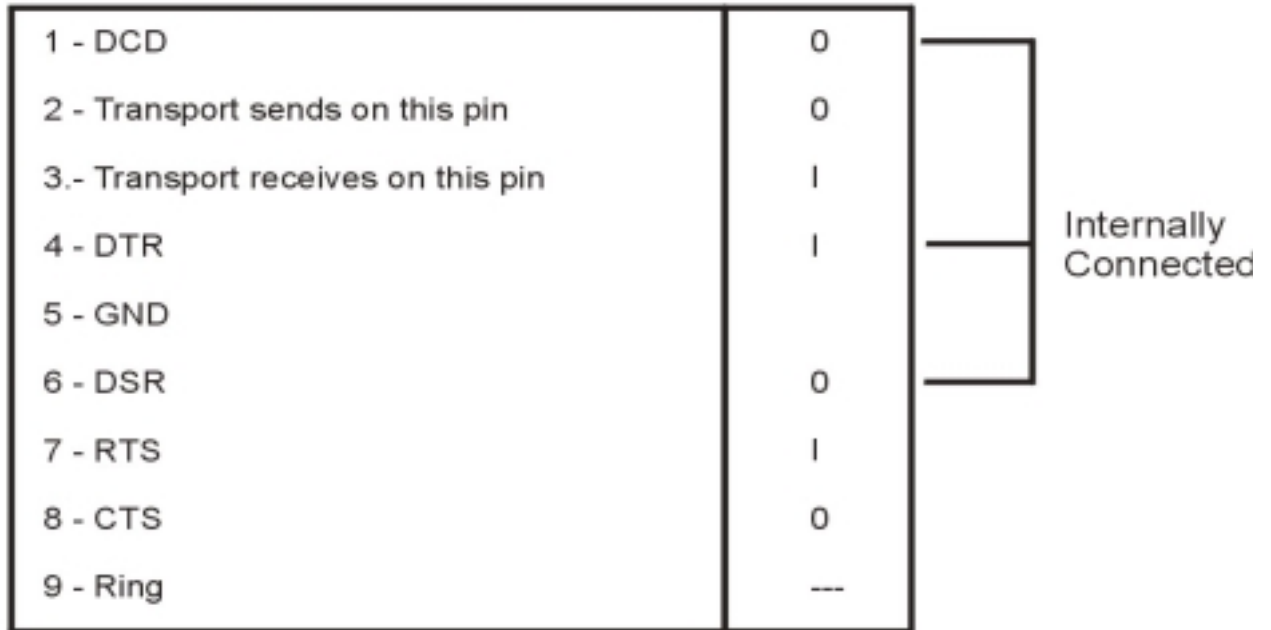
At most, it will take approximately 10 seconds for the RS-232 interface to execute all of the commands stored in a full command buffer. Overloaded buffers can cause the unit to freeze with respect to RS-232 commands. If this occurs the unit must be rebooted.

Data errors can occur in asynchronous data transmission. Parity checking is not supported in the interface and unexpected operation can occur due to data errors. However, invalid commands are ignored. For this reason, using the IR equivalent command should be avoided if possible because the RS-232 interface will perform no error checking on the data to be sent via the IR data bus.

Command	Command Description	Argument 1	Argument 1 Description	Argument 2	Argument 3	IR Code equivalent		
COMMAND	AND ALL ARGUMENTS (ie.1, 2 AND 3)	ARE TO BE	INPUT AS DECIMAL NUMBERS			<i>Byte 1</i>	<i>Byte 2</i>	<i>Byte 3</i>
4	Commands pertaining to CDV/DVD only	0	Jog reverse	0	0	99h	F5h	24h
	<i>From remote control only</i>	1	Jog reverse medium (IR ONLY)	0	0	99h	F5h	A4h
	<i>From remote control only</i>	2	Jog reverse fast (IR ONLY)	0	0	99h	F5h	64h
		3	Jog forward	0	0	99h	F5h	04h
	<i>From remote control only</i>	4	Jog forward medium (IR ONLY)	0	0	99h	F5h	84h
	<i>From remote control only</i>	5	Jog forward fast (IR ONLY)	0	0	99h	F5h	44h
		6	Shuttle reverse	0	0	99h	F5h	3Eh
		7	Shuttle forward	0	0	99h	F5h	5Eh
		8	Play Mode	0	0	99h	F5h	FEh
5	Commands pertaining to DVD only	1	Audio	0	0	99h	F5h	7Dh
		2	Subtitle	0	0	99h	F5h	6Ch
		3	Angle	0	0	99h	F5h	ADh
		4	Top menu (title)	0	0	99h	F5h	2Dh
		5	Video adjust	0	0	99h	F5h	0Ch
		6	Surround	0	0	99h	F5h	86h
		7	DVD menu	0	0	99h	F5h	62h
7	Miscellaneous commands	0	Dimmer	0	0	99h	F5h	9Fh
		1	Open/Close	0	0	99h	F5h	6Dh
		2	Toggle standby	0	0	99h	F5h	3Dh
		3	Put unit in standby	0	0	--	--	--
		4	Take unit out of standby	0	0	--	--	--
8	Menu navigation commands	0	Up	0	0	99h	99h	4Fh
		1	Down	0	0	99h	F5h	CFh
		2	Right	0	0	99h	F5h	26h
		3	Left	0	0	99h	F5h	C6h
		4	Return	0	0	99h	F5h	2Fh
		5	Enter	0	0	99h	F5h	F7h
		6	Setup menu	0	0	99h	F5h	0Dh
9	Poll status	0	Return status byte	0	0	--	--	--

RS232 Hardware Connections

DB9 CONNECTOR



Handshaking (RTS and CTS) are not implemented in the RS232 interface

CONTROL PORT

