

Pioneer

DVD Player

DV-610AV-S DV-610AV-K



HDMI

RW
COMPATIBLE

Operating Instructions

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly.
After you have finished reading the instructions, put them away in a safe place for future reference.

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.

D3-4-2-1-1_En-A

CAUTION

This product is a class 1 laser product, but this product contains a laser diode higher than Class 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.

Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: inside of the unit



CAUTION : CLASS 1M LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. 726000A140 SH
Vorsicht : KLASSE 1M LASER Strahlung: Bei geöffnetem Gerät nicht mit optischen Geräten in den Laserstrahl blicken.
PRECAUCION : RADIACION LASER CLASE 1M. AL ABRIR NO MIRAR DIRECTAMENTE CON INSTRUMENTOS OPTICOS.
VIKTIGT : KLASS 1M LASER STRÅLNING: NÅR APPARATEN ÅR ÖPPEN, TITTA INTE RAKT IN I DEN, SPECIELLT INTE OM DU HAR GLASÖGON PÅ DIG.
Varoitus! : Luokka 1M:n lasersäteily: Älä koskaan katso laitteen sisään sen ollessa auki-ei myöskään silmälasella tai muulla optisella laitteella!
ADVARSEL : LASERSTRÅLER KLASSE 1M KIG IKKE DIREKTE IND I APPARATET, NÅR DETTE ER ÅBENT. ISER IKKE MED BRILLER ELLER ANDRE OPTISKE OBJEKTER.

Singapore and Taiwanese model only

CAUTION : CLASS 1M LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

警告: 當開啟的時候, 會有 1M 等級的雷射放射光, 請不要利用光學儀器直視。

726000A142 SH

D3-4-2-1-8_En

WARNING

This equipment is not waterproof. To prevent a fire or shock hazard, do not place any container filled with liquid near this equipment (such as a vase or flower pot) or expose it to dripping, splashing, rain or moisture.

D3-4-2-1-3_B_En

WARNING

Before plugging in for the first time, read the following section carefully.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., 230 V or 120 V) written on the rear panel.

D3-4-2-1-4_A_En

Operating Environment

Operating environment temperature and humidity: +5 °C to +35 °C (+41 °F to +95 °F); less than 85 %RH (cooling vents not blocked)

Do not install this unit in a poorly ventilated area, or in locations exposed to high humidity or direct sunlight (or strong artificial light)

D3-4-2-1-7c_A_En

WARNING

To prevent a fire hazard, do not place any naked flame sources (such as a lighted candle) on the equipment.

D3-4-2-1-7a_A_En

VENTILATION CAUTION

When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 10 cm at top, 10 cm at rear, and 10 cm at each side).

WARNING

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as newspapers, table-cloths, curtains) or by operating the equipment on thick carpet or a bed.

D3-4-2-1-7b_A_En

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

D8-10-1-2_En

CAUTION: This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

D8-10-3a_En

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

D8-10-2_En

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

CAUTION : THE USE OF OPTICAL INSTRUMENTS WITH THIS PRODUCT WILL INCREASE EYE HAZARD. D6-8-2-1_En

If the AC plug of this unit does not match the AC outlet you want to use, the plug must be removed and appropriate one fitted. Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel. If connected to an AC outlet, the cut-off plug can cause severe electrical shock. Make sure it is properly disposed of after removal. The equipment should be disconnected by removing the mains plug from the wall socket when left unused for a long period of time (for example, when on vacation).

D3-4-2-2-1a_A_En

CAUTION

The ϕ STANDBY/ON switch on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation).

D3-4-2-2-2a_A_En

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period.

K041_En

POWER-CORD CAUTION

Handle the power cord by the plug. 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, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement. 5002_En

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

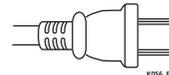
This product includes FontAvenue® fonts licenced by NEC Corporation. FontAvenue is a registered trademark of NEC Corporation.

For Australia Model



For Taiwan exclusively

Taiwanese two pin flat-bladed plug



K056_En

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Chapter 1

Before you start

Features

- **PureCinema Progressive Scan video**

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.

- **24-bit/192 kHz compatible DAC**

The on-board 24-bit/192 kHz 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.

What's in the box

Please confirm that the following accessories are in the box when you open it.

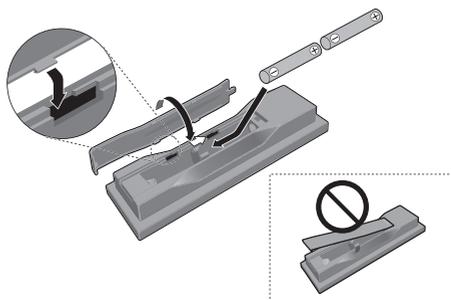
- Remote control
- AA/R6P dry cell batteries x 2
- Audio/video cable (red/white/yellow plugs)
- Power cable (*Central American, South American and Taiwan model* x2)
- Operating instructions x 2 (*Australian, Thailand and PX model* x 1)
- Front panel button names sticker (*Taiwan models only*) – Chinese language button names for the front panel controls.
- Remote control overlay (*Taiwan models only*) – Place the overlay on the remote control to be able to read the buttons in Chinese.

Putting the batteries in the remote

- **Open the battery compartment cover and insert the batteries as shown.**

Use two AA/R6P batteries and follow the indications (+, -) inside the compartment. Close the cover when you're finished.

When closing the cover, align the notch and tab, and slide in the direction indicated by the arrow →.



Important

Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

- Don't mix new and old batteries together.
- Don't use different kinds of battery together — although they may look similar, different batteries may have different voltages.
- Make sure that the plus and minus ends of each battery match the indications in the battery compartment.
- Remove batteries from equipment that isn't going to be used for a month or more.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country/area.

- Do not use or store batteries in direct sunlight or other excessively hot place, such as inside a car or near a heater. This can cause batteries to leak, overheat, explode or catch fire. It can also reduce the life or performance of batteries.

Hints on installation

We want you to enjoy using this product for years to come, so please use the following guidelines when choosing a suitable location:

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 a 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.

Disc/content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format — see below for further compatibility information.

Please also note that recordable discs cannot be recorded using this player.



DVD-Audio DVD-Video DVD-R DVD-RW



Audio CD Video CD CD-R CD-RW



SUPER AUDIO CD
Super Audio CD



Fujicolor CD

- This unit will play DVD+R/+RW discs.
- **DVD** is a trademark of DVD Format/Logo Licensing Corporation.
-  is a trademark of FUJIFILM Corporation.
- Also compatible with KODAK Picture CD.

This player supports the IEC's Super VCD standard. Compared to the Video CD standard, Super VCD offers superior picture quality, and allows two stereo soundtracks to be recorded. Super VCD also supports the widescreen size.



Super VCD

About DualDisc playback

A DualDisc is a new two-sided disc, one side of which contains DVD content video, audio, etc. while the other side contains non-DVD content such as digital audio material.

The non-DVD, audio side of the disc is not compliant with the CD audio specification and therefore may not play.

The DVD side of a DualDisc plays in this product.

For more detailed information on the DualDisc specification, please refer to the disc manufacturer or disc retailer.

CD-R/-RW compatibility

- Compatible formats: CD audio, Video CD/ Super VCD, ISO 9660 CD-ROM* containing MP3, WMA, MPEG-4 AAC, JPEG or DivX video/WMV files
* ISO 9660 Level 1 or 2 compliant. CD physical format: Mode1, Mode2 XA Form1. Romeo and Joliet file systems are both compatible with this player.
- Multi-session playback: No
- Unfinalized disc playback: No
- File structure (may differ): Up to 299 folders on a disc; up to 648 folders and files (combined) within each folder

DVD+R/+RW compatibility

Only DVD+R/DVD+RW discs recorded in 'Video Mode (DVD Video Mode)' which have been finalized, can be played back. However, some editing made during the recording may not be played back accurately.

DVD-R/-RW compatibility

- Compatible formats: DVD-Video, Video Recording (VR)*
* *Edit points may not play exactly as edited; screen may go momentarily blank at edited points.*
- Unfinalized playback: No
- MP3/WMA/MPEG-4 AAC/JPEG or DivX video/WMV file playback on DVD-R/-RW: Yes
- **RW COMPATIBLE** This label indicates playback compatibility with DVD-RW discs recorded in VR mode (Video Recording format). However, for discs recorded with a record-only-once encrypted program, playback can only be achieved using a CPRM compatible device.

Compressed audio compatibility

- Compatible formats: MPEG-1 Audio Layer 3 (MP3), Windows Media Audio (WMA), MPEG-4 AAC
- Sampling rates: 32 kHz, 44.1 kHz or 48 kHz
- Bit-rates: Any (128 kbps or higher recommended)
- VBR (Variable Bit Rate) MP3/WMA/ MPEG-4 AAC playback: No
- WMA lossless encoding compatible: No
- DRM (Digital Rights Management) compatible: No (DRM-protected audio files will *not* play in this player — see also *DRM* in the *Glossary* on page 58)
- File extensions: .mp3, .wma, .m4a (these must be used for the player to recognize MP3, WMA and MPEG-4 AAC files — do not use for other file types)

01 About MPEG-4 AAC

Advanced Audio Coding (AAC) is at the core of the MPEG-4 AAC standard, which incorporates MPEG-2 AAC, forming the basis of the MPEG-4 audio compression technology. The file format and extension used depend on the application used to encode the AAC file. This unit plays back AAC files encoded by iTunes® bearing the extension '.m4a'. DRM-protected files will not play, and files encoded with some versions of iTunes® may not play, or filenames may display incorrectly.

- *Apple and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries.*

Windows Media™ Audio (WMA) compatibility

This player can playback WMA content. WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA content can be encoded by using Windows Media Player for Windows XP, Windows Media Player 9 or Windows Media Player 10 series.

- *Windows Media is a trademark of Microsoft Corporation.*
- *This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from Microsoft Licensing, Inc.*

About DivX video

DivX is a media technology created by DivX, Inc. DivX media files contain not only video but also include advanced media features like menus, subtitles, and alternate audiotracks.

This player can play DivX videos recorded on DVDs, CDs, or USB storage devices. Keeping the same terminology as DVD-Video, individual DivX video files are called "Titles". DivX videos will be played in alphabetical order.



- *DivX, DivX Ultra Certified, and associated logos are trademarks of DivX, Inc. and are used under license.*

Displaying external subtitle files

The font sets listed below are available for external subtitle files. You can see the proper font set on-screen by setting the **Subtitle Language** (in *Language settings* on page 40) to match the subtitle file.

This player supports the following language groups:

Group 1 Albanian (sq), Basque (eu), Catalan (ca), Danish (da), Dutch (nl), English (en), Faroese (fo), Finnish (fi), French (fr), German (de), Icelandic (is), Irish (ga), Italian (it), Norwegian (no), Portuguese (pt), Rhaeto-Romanic (rm), Scottish (gd), Spanish (es), Swedish (sv)

Group 2 Albanian (sq), Croatian (hr), Czech (cs), Hungarian (hu), Polish (pl), Romanian (ro), Slovak (sk), Slovenian (sl)

Group 3 Bulgarian (bg), Byelorussian (be), Macedonian (mk), Russian (ru), Serbian (sr), Ukrainian (uk)

Group 4 Hebrew (iw), Yiddish (ji)

Group 5 Turkish (tr)

- Some external subtitle files may be displayed incorrectly or not at all.

- For external subtitle files the following subtitle format filename extensions are supported (please note that these files are not shown within the disc navigation menu): .srt, .sub, .ssa, .smi
- The filename of the movie file has to be repeated at the beginning of the filename for the external subtitle file.
- The number of external subtitle files which can be switched for the same movie file is limited to a maximum of 10.

DivX video compatibility

- Official DivX[®] Ultra Certified product.
- Plays all versions of DivX[®] video (including DivX[®] 6) with enhanced playback of DivX[®] media files and the DivX[®] Media Format.
- File extensions: .avi and .divx (these must be used for the player to recognize DivX video files). *Note that all files with the .avi extension are recognized as MPEG4, but not all of these are necessarily DivX video files and therefore may not be playable on this player.*

About Windows Media Video (WMV)

WMV is an acronym for Windows Media Video and refers to a video compression technology developed by Microsoft Corporation. WMV content can be encoded by using Windows Media Encoder.

- This player is compatible with WMV9 files that are encoded by using the Windows Media Encoder 9 Series, with .wmv as an extension.
- Compatible with size under 720x480 pixels/ 720x576 pixels.
- Advanced Profile is not supported.
- DRM-protected video files will not play in this player.

JPEG file compatibility

- Compatible formats: Baseline JPEG and EXIF 2.2* still image files up to a resolution of 3072 x 2048.
**File format used by digital still cameras.*
- Progressive JPEG compatible: No
- File extensions: .jpg (must be used for the player to recognize JPEG files — do not use for other file types)

PC-created disc compatibility

Discs recorded using a personal computer may not be playable in this unit due to the setting of the application software used to create the disc. In these particular instances, check with the software publisher for more detailed information.

Discs recorded in packet write mode (UDF format) are not compatible with this player.

Check the DVD-R/-RW or CD-R/-RW software disc boxes for additional compatibility information.

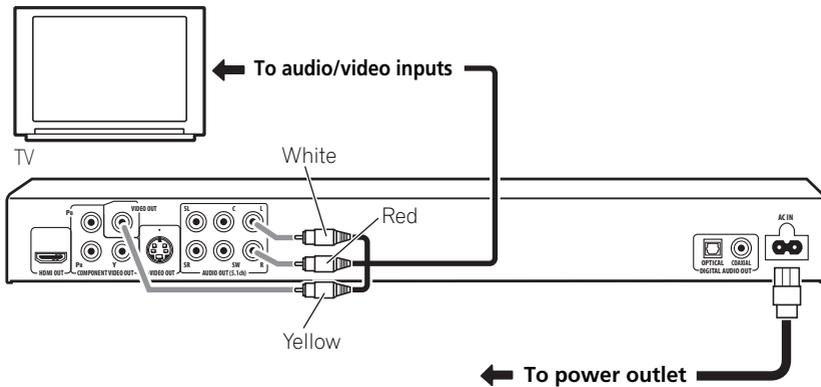
Connections

Easy connections



Important

- Before making or changing any connections, switch off the power and disconnect the power cable from the AC outlet.
- The setup described here is a basic setup that allows you to play discs using just the cables supplied with the player. In this setup, stereo audio is played through the speakers in your TV.
- This player is equipped with copy protection technology. Do not connect this player to your TV via a VCR using audio/video cables, as the picture from this player will not appear properly on your TV. (This player may also not be compatible with some combination TV/VCRs for the same reason; refer to the manufacturer for more information.)



1 Connect the VIDEO OUT and AUDIO OUT L/R jacks to a set of A/V inputs on your TV.

Use the supplied audio/video cable, connecting the red and white plugs to the audio outputs and the yellow plug to the video output. Make sure you match up the left and right audio outputs with their corresponding inputs for correct stereo sound.

See below if you want to use a component, S-Video cable for the video connection.

2 Connect the supplied AC power cable to the AC IN inlet, then plug into a power outlet.



Note

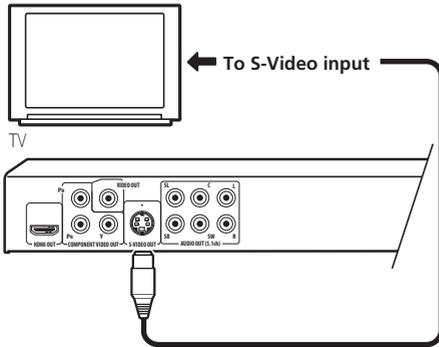
- Before unplugging the player from the power outlet, make sure you first switch it into standby using either the front panel **STANDBY/ON** button, or the remote control, and wait of the **-OFF-** message to disappear from the player's display.
- For the above reasons, do not plug this player into a switched power supply found on some amplifiers and AV receivers.

Connecting using the S-Video output

If your TV (or other equipment) has an S-Video (S1) input, you can use the S-Video output on this player instead of the standard (composite) output for a better quality picture.

- **Use an S-Video cable (not supplied) to connect the S-VIDEO OUT to an S-Video input on your TV (or monitor or AV receiver).**

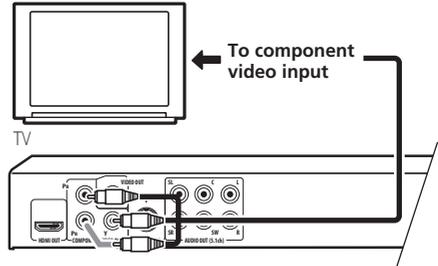
Line up the small triangle above the jack with the same mark on the plug before plugging in.



Connecting using the component video output

You can use the component video output instead of the standard video out jack to connect this player to your TV (or other equipment). This should give you the best quality picture from the three types of video output available.

- **Use a component video cable (not supplied) to connect the COMPONENT VIDEO OUT jacks to a component video input on your TV, monitor or AV receiver.**



Watching progressive scan video from the component video outputs

This player can output progressive scan video from the component video output. Compared to interlace video, progressive scan video effectively doubles the scanning rate of the picture, resulting in a very stable, flicker-free image.

To set up the player for use with a progressive scan TV, see *Video Output settings* on page 39. When the player is set to output progressive scan video, the **PRGSVE** indicator lights in the front panel display.

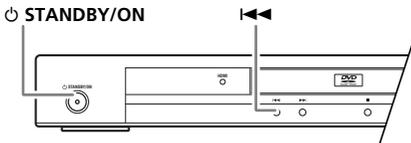
**Important**

- If you connect a TV that is not compatible with a progressive scan signal and switch the player to progressive, you will not be able to see any picture at all. In this case, switch everything off and reconnect using the supplied video cable (see *Easy connections* on page 10), then switch back to **Interlace** (see below).

Switching the video output to interlace using the front panel controls

Switch the player to standby then, using the front panel controls, press  **STANDBY/ON** while pressing  to switch the player back to **Interlace**.

- If the player is connected using HDMI, disconnect the HDMI cable before resetting the player to interlace output. (If left connected, the HDMI output resolution will be reset to its default — see *Resetting the output resolution to the default setting with HDMI connection* on page 15.)

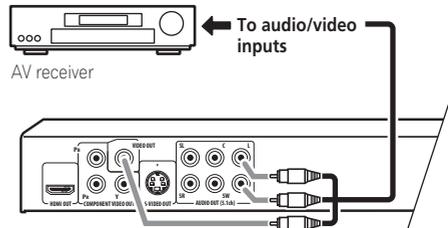
**Connecting to an AV receiver**

You can connect this player to your AV receiver using the multichannel analog outputs or one of the digital outputs.

In addition to these connections, you should also connect the 2 channel analog outputs for compatibility with all discs.

You'll probably also want to connect a video output to your AV receiver. You can use any of the video outputs available on this player (the illustration shows a standard (composite) connection).

1 Connect the analog AUDIO OUT (5.1ch) FRONT L/R and VIDEO OUT jacks on this player to a set of analog audio and video inputs on your AV receiver.



2 Connect the AV receiver's video output to a video input on your TV.

You can also use the S-Video or component video jacks to connect to the AV receiver if you prefer.

**Tip**

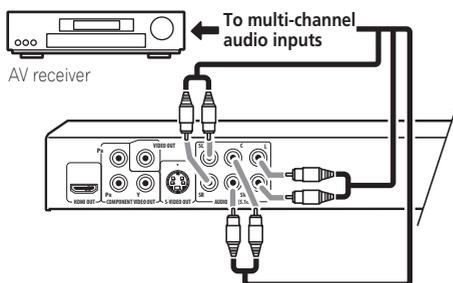
- You usually have to connect the same kind of video cable between your DVD player and AV receiver, and between your AV receiver and TV.

Connecting the multichannel analog outputs

If your AV receiver has 5.1 channel analog inputs, we recommend connecting this player to it using the multichannel analog outputs. Doing this will ensure that you can enjoy all kinds of disc, including Dolby Digital and DTS DVD-Video discs, as well as high sampling rate and multichannel DVD-Audio and SACD discs.

- **Connect the multi-channel audio outputs on this player to the multi-channel audio inputs on your AV receiver.**

It's convenient to use three stereo audio cables; one for the **FRONT**, one for the **SURROUND** and one for the **CENTER** and **SUBWOOFER** channels.



You can also use the S-Video or component video jacks to connect to the AV receiver if you prefer.



Tip

- After connecting up and switching on, you should change the **Audio Output Mode** setting in the Initial Setup menu from the default **2 Channel** to **5.1 Channel**. See also *Audio Output Mode* on page 44.

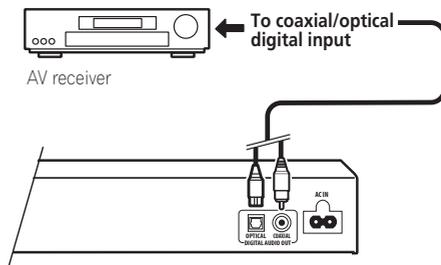
Connecting the digital output

This player has both optical and coaxial-type digital audio outputs for connection to an AV receiver. Connect whichever is convenient.

Depending on the capabilities of your AV receiver, you might have to set up this player to output only digital audio in a compatible format. See *Digital Audio Out settings* on page 38 and refer to the operating instructions that came with your AV receiver.

Note that SACD audio is not output through these jacks, so this connection should be in addition to, rather than instead of, a 5.1 channel analog connection.

- **Connect one of the DIGITAL AUDIO OUT jacks on this player to a digital input on your AV receiver.**



For an optical connection, use an optical cable (not supplied) to connect the **OPTICAL DIGITAL AUDIO OUT** jack to an optical input on your AV receiver.

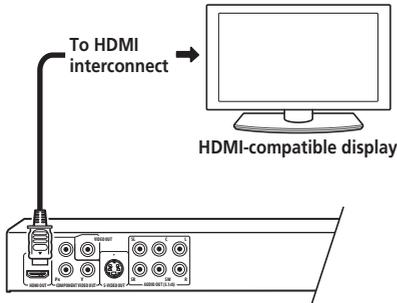
For a coaxial connection, use a coaxial cable (similar to the supplied video cable) to connect the **COAXIAL DIGITAL AUDIO OUT** jack to a coaxial input on your AV receiver.

02 Connecting using HDMI

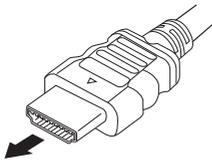
If you have a HDMI equipped monitor or display, you can connect it to this player using a commercially available HDMI cable.

The HDMI connector outputs uncompressed digital video, as well as almost every kind of digital audio that the player is compatible with, including DVD-Video, DVD-Audio, SACD, Video CD/Super VCD, CD, WMA, MP3, MPEG-4 AAC, DivX video and WMV.

- **Use an HDMI cable (not supplied) to connect the HDMI OUT interconnect on this player to an HDMI interconnect on a HDMI-compatible display.**



The arrow on the cable connector body should be face up for correct alignment with the connector on the player.



Note

- This unit has been designed to be compliant with HDMI (High-Definition Multimedia Interface). Depending on the component you have connected, using a DVI connection may result in unreliable signal transfers.

- When you change the component connected to the HDMI output, you will also need to change the HDMI settings to match the new component (see **HDMI Out** on page 38, **HDMI Resolution** on page 39 and **HDMI Color** on page 39 to do this). However, the settings for each component are then stored in memory (for up to 2 components).
- The HDMI connection is compatible with 2 channel linear PCM signals (44.1 kHz to 192 kHz, 16 bit/20 bit/24 bit), and Dolby Digital, DTS, MPEG audio bitstream, multi channel DSD, and multi channel linear PCM signals, (5.1 channel signals up to 96 kHz, 16 bit/20 bit/24 bit).



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



Digital Surround | 96/24

– Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS and DTS Digital Surround are registered trademarks and the DTS logos, Symbol and DTS 96/24 are trademarks of DTS, Inc. © 1996-2007 DTS, Inc. All Rights Reserved.

About HDMI

HDMI (High-Definition Multimedia Interface) supports both video and audio on a single digital connection for use with DVD players, DTV, set-top boxes, and other AV devices.

HDMI was developed to provide the technologies of High-bandwidth Digital Content Protection (HDCP) as well as Digital Visual Interface (DVI) in one specification.

HDCP is used to protect digital content transmitted and received by DVI-compliant displays.

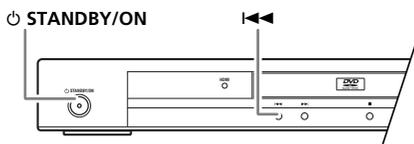
HDMI has the capability to support standard, enhanced, or high-definition video plus standard to multi-channel surround-sound audio. HDMI features include uncompressed digital video, a bandwidth of up to five gigabytes per second (with HDTV signals), one connector (instead of several cables and connectors), and communication between the AV source and AV devices such as DTVs.



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

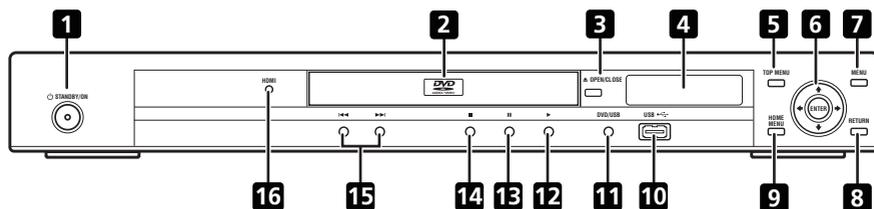
Resetting the output resolution to the default setting with HDMI connection

Switch the player to standby then, using the front panel controls, press **⏻ STANDBY/ON** while pressing **⏮** to switch the player back to **720x480p (NTSC)/720x576p (PAL)**.

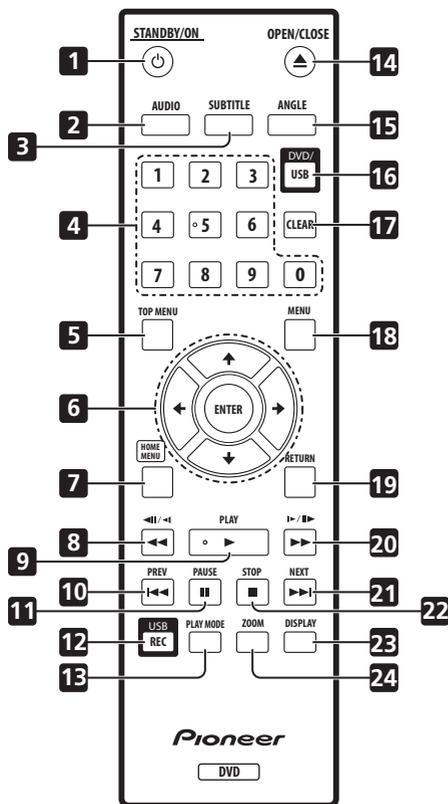


Controls and displays

Front panel



- | | | | |
|----|----------------------------------|----|---|
| 1 | ⏻ STANDBY/ON (page 18) | 11 | DVD/USB (page 32) |
| 2 | Disc tray | 12 | ▶ (page 21) |
| 3 | ▲ OPEN/CLOSE (page 20) | 13 | ⏸ (page 21) |
| 4 | Display | 14 | ■ (page 21) |
| 5 | TOP MENU (page 22) | 15 | ◀◀ and ▶▶ (page 21) |
| 6 | ENTER & cursor buttons (page 18) | 16 | HDMI indicator |
| 7 | MENU (page 22) | | Lights when this player is recognized by another HDMI or DVI/HDCP compatible component. |
| 8 | RETURN (page 22) | | |
| 9 | HOME MENU (page 18) | | |
| 10 | USB port (Type A) (page 32) | | |



- 11 **II PAUSE** (page 21)
- 12 **USB REC** (page 33)
- 13 **PLAY MODE** (page 27)
- 14 **▲ OPEN/CLOSE** (page 20)
- 15 **ANGLE** (page 31)
- 16 **DVD/USB** (page 32)
- 17 **CLEAR** (page 29)
- 18 **MENU** (page 22)
- 19 **RETURN** (page 18)
- 20 **▶▶ and ▶/II▶** (pages 21 and 23)
- 21 **▶▶I NEXT** (page 21)
- 22 **■ STOP** (page 21)
- 23 **DISPLAY** (page 31)
- 24 **ZOOM** (page 31)

Using the remote control

Keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote and the remote sensor on the unit.
- The remote has a range of about 7 m.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the unit's remote sensor.
- Remote controllers for different devices can interfere with each other. Avoid using remotes for other equipment located close to this unit.
- Replace the batteries when you notice a fall off in the operating range of the remote.

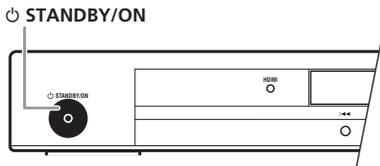
- 1 **⏻ STANDBY/ON** (page 18)
- 2 **AUDIO** (page 31)
- 3 **SUBTITLE** (page 30)
- 4 **Number buttons** (page 21)
- 5 **TOP MENU** (page 22)
- 6 **ENTER & cursor buttons** (page 18)
- 7 **HOME MENU** (page 18)
- 8 **◀◀ and ◀II/◀I** (pages 21 and 23)
- 9 **▶ PLAY** (page 21)
- 10 **◀◀ PREV** (page 21)

Getting started

Switching on

After making sure that everything is connected properly and that the player is plugged in, press **STANDBY/ON** on the front panel or remote control to switch the player on.

Also, switch on your TV and make sure that it is set to the input you connected the DVD player to.



FAQ

- My DVD player switches on but there is nothing displayed on my TV.

Make sure that the TV is set to the correct video input (not a TV channel). For example, if you connected this player to the **VIDEO 1** inputs on your TV, switch your TV to **VIDEO 1**.

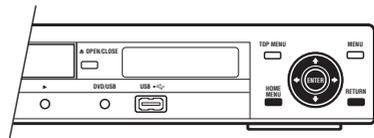
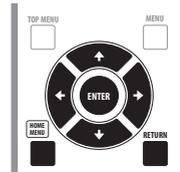


Note

- This player features a screen saver and an auto power off function. If the player is stopped and no button is pressed for around five minutes, the screen saver starts. If the disc tray is closed but no disc is playing and no control is pressed for about 30 minutes, the player automatically goes into standby.

Using the on-screen displays

For ease of use, this player makes extensive use of graphical on-screen displays (OSDs). 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.



Button	What it does
HOME MENU	Display/exit the on-screen display.
↑/↓/←/→	Changes the highlighted menu item.
ENTER	Selects the highlighted menu item.
RETURN	Returns to the main menu without saving changes.



Note

- From here on in this manual, the word 'select' generally means use the cursor buttons to highlight an item on-screen, then press **ENTER**.

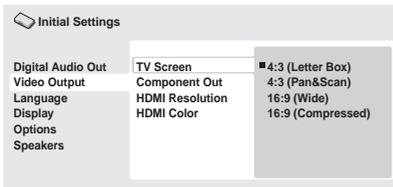
Setting up the player for your TV

If you have a widescreen (16:9) TV, you should setup the player so that the picture will be presented correctly. If you have a conventional (4:3) TV, you can leave the player on the default setting and move on to the next section.

1 Press HOME MENU and select 'Initial Settings'.



2 Select 'TV Screen' from the 'Video Output' settings.



3 If you have a widescreen (16:9) TV, select '16:9 (Wide)' or '16:9 (Compressed)'.

If you have a conventional (4:3) TV, you can change the setting from **4:3 (Letter Box)** to **4:3 (Pan & Scan)** if you prefer. See *Video Output settings* on page 39 for more details.

4 Press HOME MENU to exit the menu screen.

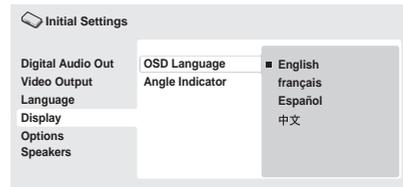
Setting the language of this player's on-screen displays

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

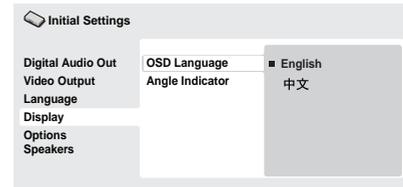
1 Press HOME MENU and select 'Initial Settings'.



2 Select 'OSD Language' from the 'Display' settings.



Taiwanese model only:



3 Select a language.

The on-screen language will change according to your selection.

4 Press HOME MENU to exit the menu screen.

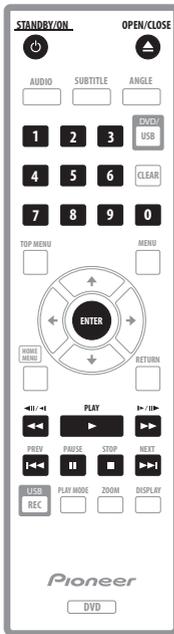
The basic playback controls for playing DVD, SACD, CD, Video CD/Super VCD, DivX video/WMV and MP3/WMA/MPEG-4 AAC discs are covered here. Further functions are detailed in the next chapter.

For details on playing JPEG picture discs, see *Viewing a JPEG slideshow* on page 24.



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.



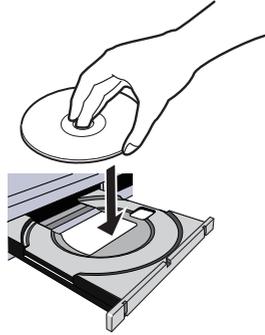
1 If the player isn't already on, press **STANDBY/ON** to switch it on.

If you're playing a DVD, disc containing DivX video/WMV files or Video CD/Super VCD, 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 (if you're loading a double-sided DVD disc, load it with the side you want to play face down).



4 Press **PLAY** to start playback.

If you're playing a DVD or Video CD/Super VCD, an on-screen menu may appear. See *DVD and DivX disc menus* and *Video CD/Super VCD PBC menus* on page 22 for more on how to navigate these.

- If you're playing a containing DivX video/WMV files or MP3/WMA/MPEG-4 AAC audio files, it may take a few seconds before playback starts, etc. This is normal.
- Please see *About DualDisc playback* on page 7 if you want to play a DualDisc (DVD/CD hybrid disc).



Note

- 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.
- If a disc contains a mixture of movie (DivX video/WMV) and other media file types (MP3, for example), first select whether to play the movie files (**DivX/WMV**) or the other media file types (**MP3/WMA/MPEG4 AAC/JPEG**) from the on-screen display.

Basic playback controls

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

Button	What it does
▶ PLAY	Starts playback. If the display shows RESUME or LAST MEM playback starts from the resume or last memory point (see also <i>Resume and Last Memory</i> below.)
⏸ PAUSE	Pauses a disc that's playing, or restarts a paused disc.
■ STOP	Stops playback. See also <i>Resume and Last Memory</i> below.
⏮ (remote only)	Press to start fast reverse scanning. Press ▶ PLAY to resume normal playback.
⏭ (remote only)	Press to start fast forward scanning. Press ▶ PLAY to resume normal playback.
⏮ PREV	Skips to the start of the current track, title or chapter, then to previous tracks/titles/chapters.
▶ NEXT	Skips to the next track, title or chapter.
Numbers (remote only)	Use to enter a title/chapter/track number. Press ENTER to select. <ul style="list-style-type: none"> • If the disc is stopped, playback starts from the selected title (for DVD), group (DVD-Audio) or track (for CD/Video CD/Super VCD). • If the disc is playing, playback jumps to the start of the selected title (VR mode DVD-RW), chapter (DVD-Video) or track (DVD-Audio*/SACD/CD/Video CD/Super VCD). <i>*within the current group</i>

Resume and Last Memory

With the exception of DVD-Audio and SACD discs, when you stop playback of a DVD, CD, or Video CD/Super VCD or DivX video/WMV discs, **RESUME** is shown in the display indicating that you can resume playback again from that point.

If the disc tray is not opened, the next time you start playback the display shows **RESUME** and playback resumes from the resume point. (If you want to clear the resume point, press **■ STOP** while **RESUME** is displayed.)

With DVDs and Video CD/Super VCDs, if you take the disc out of the player after stopping playback, the last play position is stored in memory. If the next disc you load is the same one, the display shows **LAST MEM** and playback will resume. For DVD-Video discs, the player stores the play position of the last five discs. When one of these discs is next loaded, you can resume playback.



Note

- The Last Memory function doesn't work with VR format DVD-R/RW, DVD-Audio or SACD discs.
- If you don't need the Last Memory function when you stop a disc, you can press **▲ OPEN/CLOSE** to stop playback and open the disc tray.

04 DVD and DivX disc menus

Some DivX media files and many DVD-Video and DVD-Audio discs feature menus from which you can select what you want to watch. They may also 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 DivX and DVD 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 play this group you first have to input a password, which you can find on the disc's packaging. Use the number buttons to input the password.

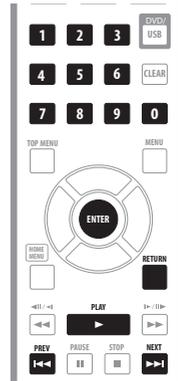
Button	What it does
TOP MENU	Displays the 'top menu' of a DVD disc — this varies with the disc.
MENU	Displays a DVD disc (or DivX media files) menu — this varies with the disc and may be the same as the 'top menu'.
↑/↓/←/→	Moves the cursor around the screen.
ENTER	Selects the current menu option.

Button	What it does
RETURN	Returns to the previously displayed menu screen. On some DVD-Audio discs featuring browsable pictures, press to display the browser screen.
Numbers (remote only)	Highlights a numbered menu option (some discs only). Press ENTER to select.

Video CD/Super VCD PBC menus

Some Video CD/Super VCDs 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 to select a track, rather than the **▶ PLAY** button.



Button	What it does
RETURN	Displays the PBC menu.
Numbers (remote only)	Use to enter a numbered menu option. Press ENTER to select.
◀◀ PREVIOUS	Displays the previous menu page (if there is one).
▶▶ NEXT	Displays the next menu page (if there is one).

Chapter 5

Playing discs

Note

- Many of the functions covered in this chapter apply to DVD, SACD, Video CDs/Super VCDs, CDs, DivX video/WMV and MP3/WMA/MPEG-4 AAC/JPEG discs, although the exact operation of some varies slightly with the kind of disc loaded.
- Some DVDs restrict the use of some functions (random or repeat, for example) in some or all parts of the disc. This is not a malfunction.
- When playing Video CD/Super VCDs, 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.

Scanning discs

You can fast-scan discs forward or backward at four different speeds (only one speed for DivX video/WMV).

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

- There is no sound while scanning DVDs, DivX video/WMV and Video CD/Super VCDs.

2 Press repeatedly to increase the scanning speed.

- The scanning speed is shown on-screen.

3 To resume normal playback, press ▶ PLAY.

- When scanning a Video CD/Super VCD playing in PBC mode or a MP3/WMA/MPEG-4 AAC track, playback automatically resumes at the end or beginning of the track.
- Depending on the disc, normal playback may automatically resume when a new chapter is reached on a DVD disc.

Playing in slow motion

You can play DVD-Videos and DVD-R/-RW at four different slow motion speeds, forwards and backwards. Video CD/Super VCDs and DivX video/WMV can be played at four different forward slow motion speeds.

1 During playback, press II PAUSE.

2 Press and hold ◀◀/◀I or I▶/▶▶ 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.

4 To resume normal playback, press ▶ PLAY.

- Depending on the disc, normal playback may automatically resume when a new chapter is reached.

05 Frame advance/frame reverse

You can advance or back up DVD-Video and DVD-R/-RW discs frame-by-frame. With Video CD/Super VCDs and DivX video/WMV file you can only use frame advance.

- 1 **During playback, press II PAUSE.**
- 2 **Press ◀◀/◀ or ▶/▶▶ to reverse or advance a frame at a time.**
- 3 **To resume normal playback, press ▶ PLAY.**
 - Depending on the disc, normal playback may automatically resume when a new chapter is reached.

Viewing a JPEG slideshow

When the ▶ **PLAY** button is pressed to play JPEG files on DVD, CD, or USB storage device, the slide show will begin from the first folder or file recorded on the media. The player displays the pictures in each folder in alphabetical order.

- If the folder contains MP3/WMA/MPEG-4 AAC files, playback of the slideshow and MP3/WMA/MPEG-4 AAC file repeats. During the audio playback, you can still use the skip (◀◀ **PREV**/▶▶ **NEXT**), scan (◀◀/▶▶) and pause (II **PAUSE**) functions.

Pictures are automatically adjusted so that they fill as much of the screen as possible (if the aspect ratio of the picture is different to your TV screen you may notice black bars at the sides, or at the top and bottom of the screen).

While the slideshow is running:

Button	What it does
II PAUSE	Pauses the slideshow; press again to restart.
◀◀ PREV	Displays the previous picture.

Button	What it does
▶▶ NEXT	Displays the next picture.
←/→	Pauses the slideshow and rotates the displayed picture 90° (counter) clockwise. (Press ▶ PLAY to restart slideshow.)
↑/↓	Pauses the slideshow and flips the displayed picture horizontally or vertically. (Press ▶ PLAY to restart slideshow.)
ZOOM	Pauses the slideshow and zooms the picture. Press again to toggle between 1x, 2x and 4x zoom. (Press ▶ PLAY to restart slideshow.)
MENU	Displays the Disc Navigator screen (see page 26).



Note

- The time it takes for the player to load a file increases with large file sizes.

Browsing Discs with the Disc Navigator

Use the Disc Navigator to browse through the contents of a DVD-Video, VR mode DVD-R/-RW or Video CD/Super VCD disc to find the part you want to play.



Important

- You can't use the Disc Navigator with Video CD/Super VCDs in PBC mode.

1 During playback, press HOME MENU and select 'Disc Navigator' from the on-screen menu.



2 Select a view option.



The options available depend on the kind of disc loaded and whether the disc is playing or not, but include:

- Title** — Titles from a DVD-Video disc.
- Chapter** — Chapters from the current title of a DVD-Video disc.
- Track** — Tracks from a Video CD/Super VCD disc.
- Time** — Thumbnails from a Video CD/Super VCD disc at 10 minute intervals.
- Original: Title** — Original titles from a VR mode DVD-R/-RW disc.
- Play List: Title** — Play List titles from a VR mode DVD-R/-RW disc.
- Original: Time** — Thumbnails from the Original content at 10 minute intervals.
- Play List: Time** — Thumbnails from the Play List at 10 minute intervals.

The screen shows up to six moving thumbnail images displayed one after another. To display the previous/next six thumbnails, press **◀◀ PREV/▶▶ NEXT** (you don't have to wait for all the thumbnails to finish playing to display the previous/next page).

3 Select the thumbnail image for what you want to play.



You can use either the cursor buttons (**↑/↓** / **←/→**) and **ENTER** to select a thumbnail, or the number buttons.

To select using the number buttons, enter a two-digit number then press **ENTER**.



Tip

- Another way to find a particular place on a disc is to use one of the search modes. See *Searching a disc* on page 30.

05 Browsing Files with the Disc Navigator

The Disc Navigator can be used to play MP3, WMA, MPEG-4 AAC, DivX video, WMV and JPEG files.

Use the Disc Navigator to find a particular file or folder by filename. Note that if there are other types of files on the same disc, these will not be displayed in the Disc Navigator.

1 Press HOME MENU and select 'Disc Navigator' from the on-screen menu.



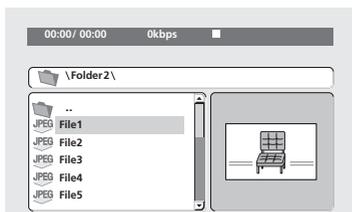
2 Use the cursor buttons (↑/↓/←/→) and ENTER to navigate.

Use the cursor up/down buttons (↑/↓) to move up and down the folder/file list.

Use the cursor left button (←) to return to the parent folder.

Use **ENTER** or cursor right (→) to open a highlighted folder.

- You can also return to the parent folder by going to the top of the list to the '..' folder, then pressing **ENTER**.
- When a JPEG file is highlighted, a thumbnail image is displayed on the right.



3 To play the highlighted track or DivX video/WMV file or display the highlighted JPEG file, press ENTER.

- When a MP3/WMA/MPEG-4 AAC or DivX video/WMV file is selected, playback begins, starting with the selected file, and continues until the end of the folder.
- When a JPEG file is selected, a slideshow begins, starting with that file, and continues to the end of the folder.



Tip

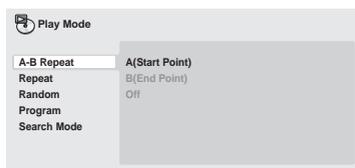
- You can also play a JPEG slideshow while listening to MP3/WMA/MPEG-4 AAC playback. Simply select the audio file you want to listen to followed by the JPEG from which you want the slideshow to start. Playback of both the slideshow and the audio files repeats.
- To play the contents of the whole disc rather than just the current folder, exit the Disc Navigator and start playback using the ► **PLAY** button.

Looping a section of a disc

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

- You can't use A-B Repeat with DVD-Audio, SACD, Video CD/Super VCDs in PBC mode, or MP3/WMA/MPEG-4 AAC/DivX video/WMV files.

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, 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* on page 29).



Important

- You can't use Repeat play with Video CD/Super VCDs in PBC mode, or with MP3/WMA/MPEG-4 AAC discs.

- You can't use repeat and random play at the same time.

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



2 Select a repeat play option.

If program play is active, select **Program Repeat** to repeat the program list, or **Repeat Off** to cancel.

The repeat options available depend on the kind of disc loaded. For example, for DVD-Video and DVD-RW discs, you can select **Title Repeat** or **Chapter Repeat** (or **Repeat Off**).



- For DVD-Audio discs, select **Group Repeat** or **Track Repeat** (or **Repeat Off**).
- For SACDs, CDs and Video CD/Super VCDs, select **Disc Repeat** or **Track Repeat** (or **Repeat Off**).
- For DivX video/WMV discs, select **Title Repeat**, and for some DivX media files, select **Chapter Repeat** (or **Repeat Off**).

05 Using random play

Use the random play function to play titles or chapters (DVD-Video), groups (DVD-Audio), or tracks (DVD-Audio, SACD, CD, Video CD/Super VCD) at random. (Note that the same track/title/chapter may play more than once.)

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



Important

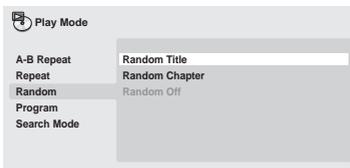
- Random play remains in effect until you select **Random Off** from the random play menu options.
- You can't use random play with VR format DVD-R/-RW discs, Video CD/Super VCDs playing in PBC mode, MP3/WMA/MPEG-4 AAC discs, DivX video/WMV discs, or while a DVD disc menu is being displayed.
- You can't use random play together with program or repeat play.

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 kind of disc loaded. For example, for DVD-Video discs, you can select **Random Title** or **Random Chapter** (or **Random Off**).



- For DVD-Audio discs, select **Random Group** or **Random Track** (or **Random Off**).
- For SACD, CDs and Video CD/Super VCDs, select **On** or **Off** to switch random play on or off.



Tip

- Use the following controls during random play:

Button	What it does
▶▶ NEXT	Selects a new track/title/chapter at random.
◀◀ PREV	Returns to the beginning of the current track/title/chapter.

Creating a program list

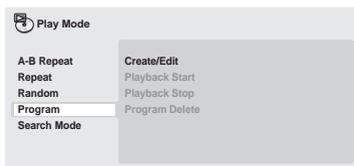
This feature lets you program the play order of titles/chapters/groups/tracks on a disc.



Important

- You can't use Program play with VR format DVD-R/-RW discs, Video CD/Super VCDs playing in PBC mode, JPEG, or while a DVD disc menu is being displayed.

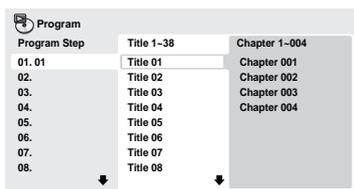
1 Press **PLAY MODE** and select 'Program' from the list of functions on the left.



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

3 Use the cursor buttons and **ENTER** to select a title, chapter or track for the current step in the program list.

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



- For a DVD-Audio disc, you can add a whole group, or a track within a group to the program list.
- For a SACD, CD or Video CD/Super VCD, select a track to add to the program list.

After pressing **ENTER** to select the title/chapter/group/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/tracks.

- To delete a step, highlight it and press **CLEAR**.

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

- Use the following controls during program play:

Button	What it does
PLAY MODE	Save the program list and exit the program edit screen without starting playback (HOME MENU does the same).
▶▶ NEXT	Skip to the next step in the program list.

Other functions available from the program menu

There are a number of other options in the program menu in addition to **Create/Edit**.

- Playback Start** — Starts playback of a saved 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.

You can search DVD-Video discs by title or chapter number, or by time; DVD-Audio discs can be searched by group or track number; SACDs by track number, CDs and Video CD/ Super VCDs by track number or time; DivX video/WMV discs by time, and some DivX media files by chapter number.



Important

- Search functions are not available with Video CD/Super VCDs in PBC mode, or with MP3/WMA/MPEG-4 AAC discs.

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

2 Select a search mode.

The search options available depend on the kind of disc loaded.

- The disc must be playing in order to use time search.

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



- For a time search, enter the number of minutes and seconds into the currently playing title (DVD/DivX video/WMV) or track (CD/Video CD/Super VCD) 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

- Time search is not available with DVD+R/+RW.

Switching subtitles

Some DVD-Video and DivX 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.

- Press **SUBTITLE** repeatedly to select a subtitle option.



Note

- Some discs only allow you to change subtitle language from the disc menu. Press **TOP MENU** or **MENU** to access.
- To set subtitle preferences, see *Subtitle Language* on page 40.
- See *Displaying external subtitle files* on page 8 for more on DivX subtitles.

Switching audio language/channels

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

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

When playing a DVD-Audio disc, you may be able to switch channels — see the disc box for details. (When you change the audio channel, playback restarts from the beginning of the current track.)

When playing a Video CD/Super VCD, you can switch between stereo, just the left channel or just the right channel.

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

The language/channel information is shown on-screen.



Note

- Some DVD discs only allow you to change audio language from the disc menu. Press **TOP MENU** or **MENU** to access.
- To set DVD audio language preferences, see **Audio Language** on page 40.

Zooming the screen

Using the zoom feature you can magnify a part of the screen by a factor of 2 or 4, while watching a DVD, DivX video/WMV title or Video CD/Super VCD or playing a JPEG disc.

- 1 **During playback, use the ZOOM button to select the zoom factor (Normal, 2x or 4x).**

- Since DVD, Video CD/Super VCD, DivX video/WMV title and JPEG pictures have a fixed resolution, picture quality will deteriorate, especially at 4x zoom. This is not a malfunction.

- 2 **Use the cursor buttons to change the zoomed area.**

You can change the zoom factor and the zoomed area freely during playback.

- If the navigation square at the top of the screen disappears, press **ZOOM** again to display it.

Switching camera angles

Some DVD 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 — see **Angle Indicator** on page 41).

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

Displaying disc information

Various track, chapter and title information, such as the elapsed and remaining playing time can be displayed on-screen while a disc is playing.

- **To show/switch/hide the information displayed, press DISPLAY repeatedly.**
- When a disc is playing, the information appears at the top of the screen. Press **DISPLAY** repeatedly to change the displayed information.

USB playback

Using the USB interface

It is possible to listen to two-channel audio and watch DivX video/WMV/JPEG files using the USB interface on the front of this unit. Connect a USB mass storage device as shown below.



Note

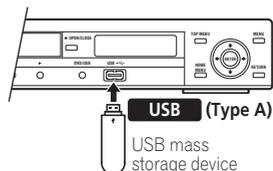
- This includes playback of DivX video/WMV/MP3/WMA/MPEG-4 AAC/JPEG files (except files with copy-protection or restricted playback).
- Compatible USB devices include portable flash memory (particularly keydrives) and digital audio players (MP3 players) of format FAT16/32. It is not possible to connect this unit to a personal computer for USB playback.
- Pioneer cannot guarantee compatibility (operation and/or bus power) with all USB mass storage devices and assumes no responsibility for any loss of data that may occur when connected to this unit.
- With large amounts of data, it may take longer for the system to read the contents of a USB device.
- Some USB devices may not be properly recognized.
- Even when they are in a supported format, some files may not play or display depending on the content.

1 With the player switched on, press DVD/USB.

Make sure your TV is on and set to the correct video input, and that **USB MODE** is showing on the front panel display.

2 Connect your USB device.

The USB terminal is located on the front panel.



- Disc Navigator is automatically displayed.

3 Press ENTER to start playback.

- The method of playback for files saved on a USB device is the same as for other discs. For more information, see *Basic playback controls* on page 21 and *Playing discs* on page 23.

4 Turn off this player and remove the USB device.

- The next time you turn this player on it will start up in USB mode. To return to DVD mode, either press **DVD/USB** or press **▲ OPEN/CLOSE** to open the disc tray.



Important

If a **USB ERR** message lights in the display, it may mean that the power requirements of the USB device are too high for this player, or that the device is incompatible. Try the following:

- Switch the player off, then on again.
- Reconnecting the USB device with the player switched off.
- Change the player back to DVD mode (**LOADING** will appear in the front panel display whether a disc is inserted or not) by pressing **DVD/USB**, then once again select USB mode (**USB MODE** will appear in the front panel display).
- Using a dedicated AC adapter (supplied with the device) for USB power.

If this doesn't remedy the problem, it is likely your USB device is incompatible.

Recording the tracks of a music CD on a USB device

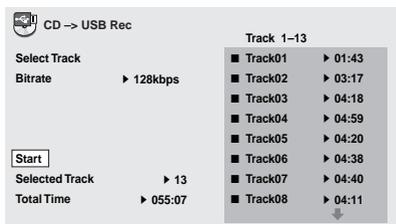
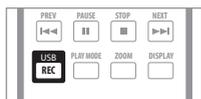
The tracks of a music CD loaded in this unit can be recorded on a USB connected to the USB port.

Recording all the tracks

1 Load the music CD.

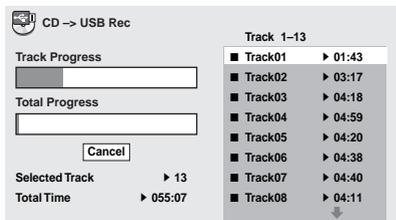
- Press **■ STOP** to stop playback.

2 Press **USB REC** to display the 'CD -> USB Rec' screen.



3 Press **ENTER** to start recording.

- Recording starts. The screen shown below is displayed during recording.



Note

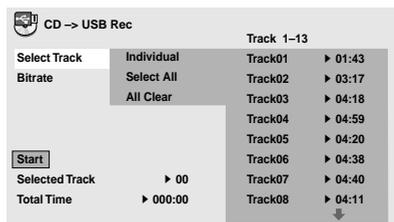
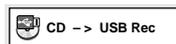
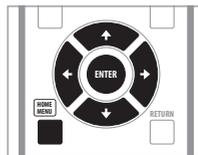
- Recording cannot be started if there is not enough free space on the USB device. In this case, "Available USB space is low" is displayed.

Recording specific tracks

1 Load the music CD.

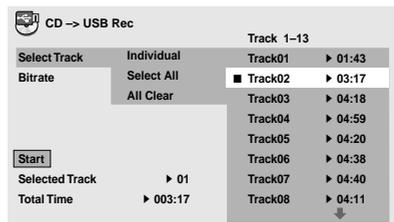
- Press **■ STOP** to stop playback.

2 Press **HOME MENU** and select 'CD -> USB Rec'.



- CD -> USB Rec** can only be selected when the music CD is stopped.

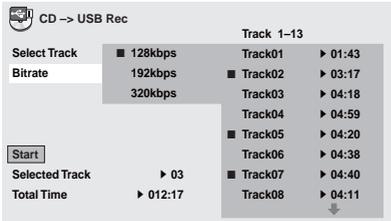
3 Select the track you want to record.



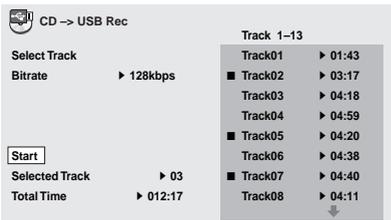
- Individual** — Select one track at a time.
- Select All** — Select all the tracks.
- All Clear** — Clear all selected tracks.

4 Select the bit rate (transfer rate).

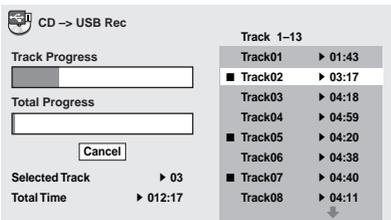
- Select **128 kbps**, **192 kbps** or **320 kbps**.



5 Select 'Start' using the $\uparrow/\downarrow/\leftarrow/\rightarrow$ (cursor) buttons, then press ENTER.



- Recording starts.



Note

- When recording is finished, a folder named "PIONEER" is created automatically on the USB device. The recorded tracks are stored in this folder.
- Up to 99 "PIONEER" folders can be created.
- Recording is not possible if the USB device contains 300 folders or more.

Chapter 7

Audio Settings and Video Adjust menus

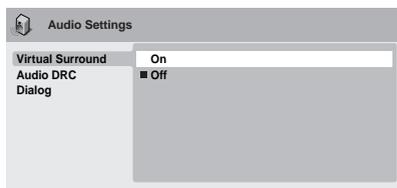
Audio Settings menu

The **Audio Settings** menu offers features for adjusting the way discs sound.

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



2 Select and change settings using the ↑/↓/←/→ (cursor) buttons, and ENTER.



Virtual Surround

- Settings: **On**, **Off** (*default*)

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

Note

- 96 kHz linear PCM audio is automatically downsampled to 48 kHz if Virtual Surround is switched on.
- If the player is outputting Dolby Digital, DTS or MPEG bitstream audio (in other words, no conversion to PCM), Virtual Surround has no effect on the audio from the digital output. See *Digital Audio Out settings* on page 38 for how to set up the digital output formats.
- How good the surround effect is varies with the disc.

Audio DRC

- Settings: **High**, **Medium**, **Low**, **Off** (*default*)

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.

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** (see *Digital Audio Out settings* on page 38).
- The effect of Audio DRC also depends on your speakers and AV receiver settings.

Dialog

- Settings: **High**, **Medium**, **Low**, **Off** (*default*)

The Dialog feature is designed to make the dialog stand out from other background sounds in the soundtracks.

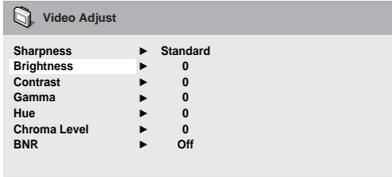
Video Adjust menu

From the **Video Adjust** screen you can adjust various settings that affect how the picture is presented.

1 Press HOME MENU and select 'Video Adjust' from the on-screen display.



2 Make settings using the ↑/↓/←/→ (cursor) buttons, and ENTER.



You can adjust the following picture quality settings:

- **Sharpness** — Adjusts the sharpness of edges in the picture (**Fine, Standard (default), Soft**).
- **Brightness** — Adjusts the overall brightness (**-20 to +20**).
- **Contrast** — Adjusts the contrast between light and dark (**-16 to +16**).
- **Gamma** — Adjusts the 'gradation' of the picture (**-3 to +3**).
- **Hue** — Adjusts the red/green balance (**green 9 to red 9**).
- **Chroma Level** — Adjusts how saturated colors appear (**-9 to +9**).
- **BNR** — Switches on/off block noise reduction (**On, Off (default)**).

Adjust the **Brightness, Contrast, Hue, Gamma** and **Chroma Level** settings using the ←/→ (cursor left/right) buttons.



3 Press ENTER to return to the Video Adjust screen, or HOME MENU to exit.

Chapter 8

Initial Settings menu

Using the Initial Settings menu

The Initial Settings menu provides audio and video output settings, parental lock settings, and display settings, among others.

If an 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 HOME MENU and select 'Initial Settings'.



2 Use the cursor buttons and ENTER to select the setting and option you want to set.

All the settings and options are explained on the following pages.

Note

- In the table below, the default setting is shown in **bold**; other settings are shown in *italics*.
- The **Digital Audio Out** settings only need to be set if you have connected the digital output of this player to an AV receiver, or other equipment.
- Check the operating instructions supplied with your other equipment to see which digital audio formats it's compatible with.
- Some settings, such as **TV Screen**, **Audio Language** and **Subtitle Language** may be overridden by the DVD disc. Often these settings can also be made from the DVD disc menu.
- The **HDMI Out**, **HDMI Resolution** and **HDMI Color** settings only need to be set if you connected this player to an HDMI-compatible component using the HDMI connector.
- The **Digital Audio Out**, **Component Out**, **AV Connector Out** and **Speakers** settings cannot be set if the player is connected to an HDMI-compatible component using the HDMI connector. Additionally, certain settings such as **HDMI Out**, **HDMI Resolution**, and **HDMI Color** may be changed automatically.

08 Digital Audio Out settings

Setting	Option	What it means
HDMI Out	<i>LPCM (2CH)</i>	Set if your monitor or device only accepts stereo input. On this setting multichannel audio is downmixed to 2 channels for stereo linear PCM output.
	<i>LPCM (5.1CH)</i>	Set if the monitor or device you have connected using HDMI is compatible with Linear PCM multichannel formats. All audio signals are output as linear PCM 5.1 format. (Use this setting if you want to decode all streams by a player.)
	Auto	Dolby Digital, DTS and MPEG sources are processed according to how they were encoded, and linear PCM sources are heard as is.
	<i>Auto (DSD)</i>	Set if you want to output DSD audio from an SACD source.
	<i>Off</i>	No digital audio output. Choose this option when you want to change the Digital Audio Out and Speakers settings.
Digital Out	On	Digital audio is output from the digital outputs.
	<i>Off</i>	No digital audio output.
Dolby Digital Out	Dolby Digital	Dolby Digital encoded digital audio is output when playing a Dolby Digital DVD disc.
	<i>Dolby Digital > PCM</i>	Dolby Digital audio is converted to PCM audio before being output.
DTS Out	DTS	DTS encoded digital audio is output when playing a DTS disc. (Noise will be output if your amplifier/receiver is not compatible with DTS audio.)
	<i>DTS > PCM</i>	No digital audio is output when playing a DTS disc. DTS audio is converted to PCM audio before being output.
Linear PCM Out	Down Sample On	96 kHz digital audio is converted to 48 kHz for digital output. <i>Note that High sampling rate DVD-Audio discs (192 kHz or 176.4 kHz) automatically output down-sampled audio through the digital outputs.</i>
	<i>Down Sample Off</i>	96 kHz digital audio is output as is at 96 kHz.
MPEG Out	<i>MPEG</i>	MPEG encoded digital audio is output as is.
	MPEG > PCM	MPEG encoded digital audio is converted to PCM audio for digital output.

Setting	Option	What it means
TV Screen <i>(This setting effective for analog and HDMI video output. See also Screen sizes and disc formats on page 51.)</i>	4:3 (Letter Box)	Set if you have a conventional 4:3 TV. Widescreen movies are shown with black bars top and bottom.
	4:3 (Pan & Scan)	Set if you have a conventional 4:3 TV. Widescreen movies are shown with the sides cropped so that the image fills the screen.
	16:9 (Wide)	Set if you have a widescreen TV.
	16:9 (Compressed)	Can be selected when you are connected via HDMI, and have the HDMI Resolution set to 1920x1080p , 1920x1080i or 1280x720p . Video in 4:3 can be properly displayed on a 16:9 high definition television (with black bars shown on either side of the screen).
Component Out	Progressive	Set if your TV is compatible with progressive scan video (see your TV's instruction manual for details). The PRGSVE indicator lights in the front panel display. See also <i>Switching the video output to interlace using the front panel controls</i> on page 12. <i>Note that progressive scan video is only output from the component video jacks.</i>
	Interlace	Set if your TV is not compatible with progressive scan video.
HDMI Resolution	1920x1080p	Set if your TV supports 1920x1080 pixel progressive-scan video (24 Hz frame rate is not supported).
	1920x1080i	Set if your TV supports 1920x1080 pixel interlace video.
	1280x720p	Set if your TV supports 1280x720 pixel progressive-scan video.
	720x480p (NTSC)/ 720x576p (PAL)	Set if your TV supports 720x480 pixel (NTSC)/720x576 pixel (PAL) progressive-scan video.
	720x480i (NTSC)/ 720x576i (PAL)	Set if your TV supports 720x480 pixel (NTSC)/720x576 pixel (PAL) interlace video.
HDMI Color	Full range RGB	If colors are weak, this gives brighter colors and deeper black.
	RGB	Use this setting if colors appear overly rich on the Full range RGB setting.
	Component	Outputs component video format (default setting for HDMI-compatible devices).

Setting	Option	What it means
Audio Language	English (for Taiwanese model, Chinese)	If there is an English (for Taiwanese model, Chinese) soundtrack on the disc then it will be played.
	<i>Languages as displayed</i>	If there is the language selected on the disc, then it will be played.
	<i>Other Language</i>	Select to choose a language other than the ones displayed (page 53).
Subtitle Language (See also <i>Displaying external subtitle files on page 8.</i>)	English (for Taiwanese model, Chinese)	If there are English (for Taiwanese model, Chinese) subtitles on the disc then they will be displayed.
	<i>Languages as displayed</i>	If there is the subtitle language selected on the disc, then it will be displayed.
	<i>Other Language</i>	Select to choose a language other than the ones displayed (page 53).
DVD Menu Lang.	w/Subtitle Lang.	DVD disc menus will be displayed in the same language as your selected subtitle language, if possible.
	<i>Languages as displayed</i>	DVD disc menus will be displayed in the selected language, if possible.
	<i>Other Language</i>	Select to choose a language other than the ones displayed (page 53).
Subtitle Display	On	Subtitles are displayed according to your selected subtitle language (see above).
	<i>Off</i>	Subtitles are always off by default when you play a DVD disc (note that some discs override this setting).

Setting	Option	What it means
OSD Language	English <i>(for Taiwanese model, Chinese)</i>	On-screen displays of the player are in English (for Taiwanese model, Chinese).
	<i>Languages as displayed</i>	On-screen displays are shown in the language selected.
Angle Indicator	On	A camera icon is displayed on-screen during multi-angle scenes on a DVD disc.
	<i>Off</i>	No multi-angle indication is shown.

Options settings

Setting	Option	What it means
Parental Lock	–	See <i>Parental Lock</i> below.
DVD Playback Mode	DVD-Audio	All material on a DVD-Audio disc is playable.
	<i>DVD-Video</i>	Only the DVD-Video part of a DVD-Audio disc is playable.
SACD Playback	2ch Area	Selects the 2 channel (stereo) SACD audio area of the disc for playback.
	<i>Multi-ch Area</i>	Selects the multi-channel SACD audio area of the disc for playback.
	<i>CD Area</i>	Selects the standard CD audio area of an SACD/CD hybrid disc for playback.
DTS Downmix	STEREO	Downmixes DTS for 2 channel output to regular stereo. (See also <i>DTS Downmix</i> on page 43.)
	<i>Lt/Rt</i>	Downmixes DTS for 2 channel output to be compatible with Dolby Surround matrix decoders. (See also <i>DTS Downmix</i> on page 43.)
DivX VOD	Display	See <i>About DivX® VOD content</i> on page 43.

Parental Lock

- Default level: **Off**; Default password: *none*; Default Country/Area code: **us (2119)**

To give you some control over what your children watch on your DVD player, 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.

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

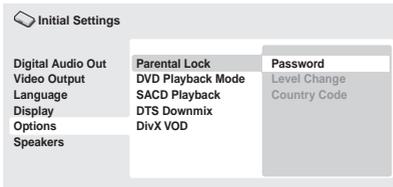
Note

- Not all discs use Parental Lock, and will play without requiring the password first.
- If you forget your password, you'll need to reset the player to register a new password (see *Resetting the player* on page 53).

Registering a new password

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

1 Select 'Options', then '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.

You will return to the Options menu screen.

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.

3 Enter a new password and press ENTER.

This registers the new password and you will return to the **Options** menu screen.

Setting/changing the Parental Lock

1 Select 'Level Change'.

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

3 Select a new level and press ENTER.

- Press ← (cursor left) repeatedly to lock more levels (more discs will require the password); press → (cursor right) to unlock levels. You can't lock level 1.

This sets the new level and you will return to the **Options** menu screen.

Setting/changing the Country/Area code

You can find the *Country/Area code list* on page 60.

1 Select 'Country Code'.

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

3 Select a Country/Area code and press ENTER.

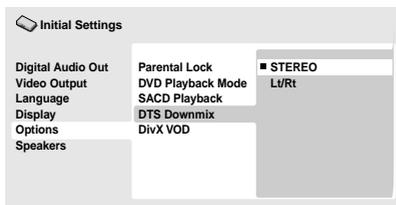
There are two ways you can do this:

- Select by code letter: Use ↑/↓ (cursor up/down) to change the Country/Area code.
- Select by code number: Press → (cursor right) then use the number buttons to enter the 4-digit Country/Area code.

The new Country/Area code is set and you will return to the **Options** menu screen. Note that the new Country/Area code doesn't take effect until the next disc is loaded (or the current disc is reloaded).

DTS Downmix

- Default setting: **STEREO**



If you've selected **DTS > PCM** in **DTS Out** on page 38 or **2 Channel** in **Audio Output Mode** on page 44, you can choose the way the signal is downmixed to PCM audio. **STEREO** will downmix the DTS signal to 2-channel stereo, whereas **Lt/Rt** will downmix to a 2-channel signal compatible with Dolby surround matrix decoders. (This allows you to hear surround sound if your AV receiver or amplifier has Dolby Pro Logic capability.)

About DivX® VOD content

In order to play DivX VOD (video on demand) content on this player, you first need to register the player with the DivX VOD registration system. You do this by generating a DivX VOD registration code from the device, which you will submit to DivX via the DivX Player program available for your computer.

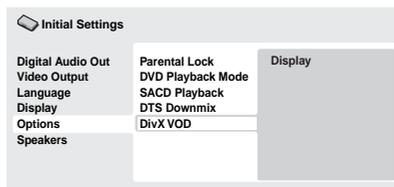


Important

- DivX VOD content is protected by a DRM (Digital Rights Management) system. This restricts playback of content to specific, registered devices.
- If you load a disc that contains DivX VOD content not authorized for your player, the message **Authorization Error** is displayed and the content will not play.
- Resetting the player (as described in *Resetting the player* on page 53) will not cause you to lose your registration code.

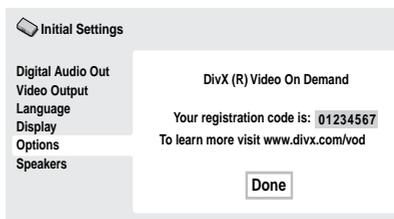
Displaying your DivX VOD registration code

- 1 Press **HOME MENU** and select '**Initial Settings**'.
- 2 Select '**Options**', then '**DivX VOD**'.



- 3 Select '**Display**'.

Your 8-digit registration code is displayed.



- Make a note of the code as you will need it to complete your registration.

Playing DivX® VOD content

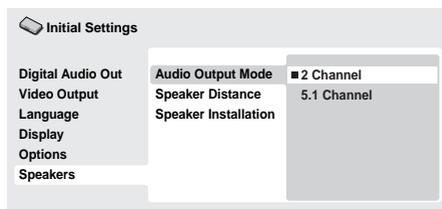
Some DivX VOD content may only be playable a fixed number of times. When you load a disc containing this type of DivX VOD content, the remaining number of plays is shown on-screen and you then have the option of playing the disc (thereby using up one of the remaining plays), or stopping. If you load a disc that contains expired DivX VOD content (for example, content that has zero remaining plays), the message **Rental Expired** is displayed.

If your DivX VOD content allows an unlimited number of plays, then you may load the disc into your player and play the content as often as you like, and no message will be displayed.

Setting	Option	What it means
Audio Output Mode	2 Channel	The player outputs analog audio in stereo only. See also <i>Audio Output Mode</i> below.
	<i>5.1 Channel</i>	The player outputs 5.1 channel analog audio. See also <i>Audio Output Mode</i> below.
Speaker Distance	–	Specify the distance of your speakers from your listening position. See also <i>Speaker Distance</i> on page 48.
Speaker Installation	–	Specify the number and size of speakers in your system. See also <i>Speaker Installation</i> on page 49.

Audio Output Mode

- Default setting: **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 5.1 channel multi-channel disc.
- When set to **5.1 Channel**, only the front left/right channels are output from the **AUDIO OUT (2ch)** 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. With DTS encoded audio, you can choose how the signal is downmixed to PCM audio. See *DTS Downmix* on page 43 to change the downmix setting.
- Some DVD-Audio discs don't allow downmixing of audio. These discs always output multi-channel audio regardless of the setting made here.

About the audio output settings

The table below shows how the audio settings you make in the Initial Settings menu (see page 37) affect the output from the 2 channel and 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, SW, outputs	Digital outputs PCM convert ²	Bitstream ³
DVD	Dolby Digital	2ch 5.1ch	2ch downmix Front L/R	— Surround L/R, Center, SW	2ch downmix	Dolby Digital
	Dolby Digital karaoke	2ch/5.1ch	Left/Right	—	Left/Right	Dolby Digital
	Linear PCM	2ch/5.1ch	Left/Right	—	Left/Right	Left/Right
	DTS	2ch 5.1ch	2ch downmix Front L/R	— Surround L/R, Center, SW	2ch downmix	DTS
	MPEG	2ch 5.1ch	Left/Right Front L/R	— Surround L/R, Center, SW	Left/Right	MPEG
	DVD-Audio	2ch 5.1ch	2ch downmix ⁴ Front L/R	— Surround L/R, Center, SW	2ch downmix ⁵ —	2ch downmix ⁵ —
	DVD-RW (VR mode)	2ch/5.1ch	Left/Right ⁶	—	Left/Right	Dolby Digital MPEG or PCM
Super Audio CD		2ch 5.1ch	2ch downmix Front L/R	— Surround L/R, Center, SW	—	—
CD		2ch/5.1ch	Left/Right	—	Left/Right	Left/Right
DTS CD		2ch 5.1ch	2ch downmix Front L/R	— Surround L/R, Center, SW	2ch downmix	DTS
Video CD		2ch/5.1ch	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 second pair of stereo audio outputs.

2. **Dolby Digital > PCM, MPEG > PCM** or **DTS > PCM** setting (page 38)

3. **Dolby Digital, MPEG** or **DTS** setting (page 38)

4. Discs that prohibit downmixing will be output as 5.1 channel even if **2 Channel** is selected as the **Audio Output Mode** setting (page 44).

5. Discs that prohibit downmixing also mute the digital output.

6. When **Audio Output Mode** is set to **5.1 Channel**, mono sources are heard from the center speaker only.

08 About the HDMI audio output settings

The table below shows how the audio settings you make in the **HDMI Out** (see **HDMI Out** on page 38) and **Audio Output Mode** screens (*Audio Output Mode* on page 44) affect the HDMI output with various types of disc.

Disc audio format		HDMI Out setting			
		LPCM (2CH)	LPCM (5.1CH)	Auto	Auto (DSD)
DVD	Linear PCM ¹	Left/Right	Left/Right	Left/Right	Left/Right
	MPEG ¹	Left/Right	5.1ch ²	MPEG ³	MPEG ³
	Dolby Digital (karaoke)	Left/Right	5.1ch ²	Dolby Digital ³	Dolby Digital ³
	Dolby Digital ¹	2ch downmix	5.1ch ²	Dolby Digital ³	Dolby Digital ³
	DTS	2ch downmix	5.1ch ²	DTS ³	DTS ³
DVD-Audio (with CPPM) ⁴		Left/Right or 2ch downmix ⁵	5.1ch ²	5.1ch ²	5.1ch ²
DVD-Audio (without CPPM)		Left/Right or 2ch downmix ⁵	5.1ch ²	5.1ch ²	5.1ch ²
CD	CD/MP3/WMA/MPEG-4 AAC	Left/Right	Left/Right	Left/Right	Left/Right
	Video CD	Left/Right	Left/Right	Left/Right	Left/Right
	DTS CD	Left/Right	5.1ch ²	DTS ³	DTS ³
Super Audio CD ⁶		Left/Right	5.1ch ²	5.1ch ²	5.1ch (DSD) ^{2,7}

1. These formats include DVD-RW discs.
2. If the HDMI device you are using is not compatible with Multi-ch formats, the output signal is the same as **LPCM (2CH)** setting.
3. If the HDMI device you are using is not compatible with these compressed formats, the signal is output as linear PCM.
4. If the connected component is not DVD-Audio (CPPM) compatible, it is not possible to output CPPM copy-controlled DVD-Audio sources from the HDMI connection (see *HDMI output with DVD-Audio and SACD sources* below for more on this).
5. If the discs prohibit downmixing, output **AUDIO OUT (5.1ch) FRONT L/R**.
6. If the connected HDMI device is not compatible with protected audio contents (such as DVD-Audio or SACD), SACD audio is not output from the HDMI terminal.
7. Analog SACD audio is not output when you have **HDMI Out** set to **Auto (DSD)**.

The way audio sources are output from the HDMI terminal depends on the specification of the connected component.

Components specification		Example component	Disc format (DVD-Audio or SACD)		SACD
			2ch	5.1ch ²	Auto (DSD)
Component /output	SACD, DVD-Audio and 5.1 channel compatible on HDMI¹	VSX-LX70	2ch	5.1ch ²	DSD 2ch/ 5.1 ch
	DVD-Audio and 5.1 channel compatible on HDMI¹	VSX-AX4AVI-G	2ch	5.1ch ²	No sound
	DVD-Audio and 2 channel compatible on HDMI¹	PDP-508XDA/ PDP-508XG PDP-428XDA/ PDP-428XG	2ch	Left/Right or 2ch downmix ³	No sound
	Incompatible with DVD-Audio on HDMI¹	PDP-505HDC PDP-435HDC	No sound ⁴	No sound ⁴	No sound

1. This unit checks the specification of the connected component (such sample rate/multichannel limitations and compatibility with protected audio contents) and outputs the signal accordingly. Note that 'DVD-Audio compatible' indicates compatibility with protected audio contents. 'SACD compatible' indicates compatibility with DSD signals.

2. If **HDMI Out** setting (page 38) is set to **LPCM (2CH)**, DVD-Audio multichannel sources will be downmixed to stereo. (In cases where the source is downmix-prohibited, only the front left/right channels are output.) For SACD sources, the 2 channel (stereo) SACD audio area is selected.

If the video output resolution is 480i, 576i, 480p or 576p, audio output may be limited to 2 channel (depending to the connected component).

3. In cases where the source is downmix-prohibited, only the front left/right channels are output.

4. If **CPPM** shows in the front panel display, it means it is not possible to output CPPM copycontrolled DVD-Audio sources from the HDMI connection. Discs with no CPPM protection are limited to 2 channel output.

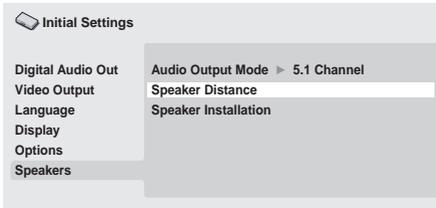
Speaker Distance

- Default settings: all speakers **3.0m**

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

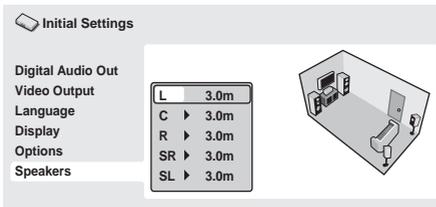
These settings do not affect any digital audio output.

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



1 Use the ↑/↓ (cursor up/down) to select a speaker.

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



2 Press → (cursor right) to change the speaker distance for the highlighted speaker.

3 Use the ↑/↓ (cursor 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**) speaker distances can be set from 30 cm to 9 m in 30 cm increments.
- The center speaker (**C**) can be set from –2.1 m to 0.0 m relative to the front left/right speakers.

- Surround left/right (**SL/SR**) speakers can be set from –6.0 m to 0.0 m relative to the front left/right speakers.
- You can't set the subwoofer (**SW**) distance.

4 Press ← (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

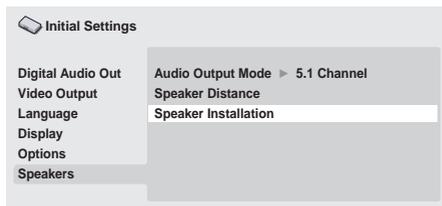
During playback of SACD and MPEG-audio DVD-Video discs, the effective **C**, **SL** and **SR** speaker distance settings are –0.9 m to 0.0 m relative to the front left/right speakers.

Speaker Installation

- Default settings: **L/R: Large** | **C: Large** | **SL/SR: 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.

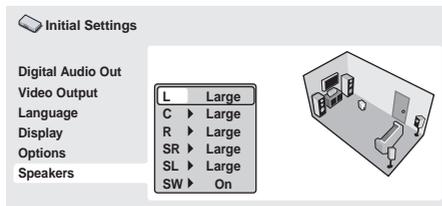
This setting does not affect digital audio output.



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

1 Use the **↑/↓** (cursor up/down) buttons to select a speaker.

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



2 Press **⇒** (cursor right) to modify the selected speaker.

3 Use the **↑/↓** (cursor up/down) buttons 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 12 cm 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 Press **←** (cursor left) to go back to the speaker list if you want to modify another speaker, or press **ENTER** to exit the Speaker Installation screen.

Additional information

Taking care of your player and discs

General

Hold discs by the edge or by the center hole and edge.

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).

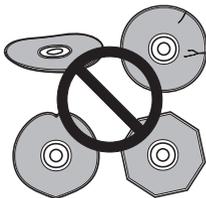
Don't glue paper or put stickers on to discs. Do not use a pencil, ball-point pen or other sharp-tipped writing instrument to write on the disc.



Don't use self-adhesive disc labels on discs as these can cause the disc to warp slightly during playback causing distortion in the picture and/or sound.

Damaged and shaped discs

Do not use cracked, chipped, warped, or otherwise damaged discs as they may damage the player.



This player is designed to be used only with conventional, fully circular discs. Do not use shaped discs. Pioneer disclaims all liability arising in connection with the use of shaped discs.

Cleaning discs

Fingerprints and dust on discs can affect playback performance. Clean using a soft, dry cloth, wiping the disc lightly from the center to the outside edge as shown below.



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

Cleaning the unit's exterior

Unplug the unit before cleaning.

Use a dry cloth to wipe off dust and dirt. If the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth.

Do not use furniture wax or cleaners. Never use thinners, benzene or insecticide sprays or other chemicals on or near this unit.

If you use a chemical-impregnated cleaning cloth, read the instructions carefully before use. These cloths may leave smear marks on half-mirror finish surfaces; if this happens, finish with a dry cloth.

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 Pioneer-authorized service center. We do not recommend using commercially available lens cleaners for CD players.

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. Leave it to adjust to the warmer temperature for about an hour before switching on.

Moving the player

If you need to move this unit, first remove the disc, if there's one loaded, and close the disc tray. Next, press **⏻ STANDBY/ON** to switch the power to standby, checking that the **-OFF-** indication in the display goes off. Lastly, disconnect the power cord.

Never lift or move the unit during playback — discs rotate at a high speed and may be damaged.

Caution for when the unit is installed in a rack with a glass door

Do not press the **▲ OPEN/CLOSE** button on the remote control to open the disc table while the glass door is closed. The door will hamper movement of the disc table, and the disc table could be damaged.

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 (page 39) of this player should be set to **16:9 (Wide)** or **16:9 (Compressed)**.

When you watch discs recorded in 4:3 format with the **16:9 (Wide)** setting, 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 'letter box' style with black bars at the top and bottom of the screen.

09 Standard TV users

If you have a standard TV, the **TV Screen** setting (page 39) 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 letter box format regardless of the setting.

Note

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

Setting the TV system

(Except Taiwanese model)

The default setting of this player is **AUTO**, and unless you notice that the picture is distorted when playing some discs, you should leave it set to **AUTO**. If you experience picture distortion with some discs, set the TV system to match your country or region's system. Doing this, however, may restrict the kinds of disc you can watch. The table below shows what kinds of disc are compatible with each setting (**AUTO**, **NTSC** and **PAL**).

1 If the player is on, press \odot STANDBY/ON to switch it to standby.

2 Using the front panel controls, hold down $\blacktriangleright\blacktriangleright$ then press \odot STANDBY/ON to switch the TV system.

The TV system changes as follows:

- AUTO** → **NTSC**
- NTSC** → **PAL**
- PAL** → **AUTO**

Note

- You have to switch the player into standby (press \odot **STANDBY/ON**) before each change.

Disc Type	Player setting			
	Format	NTSC	PAL	AUTO
DVD/ Super VCD/ Video CD/ DivX video/ WMV	NTSC	NTSC	PAL	NTSC
	PAL	NTSC	PAL	PAL
CD/MP3/ WMA/ MPEG-4 AAC /JPEG no disc	—	NTSC	PAL	NTSC or PAL

Resetting the player

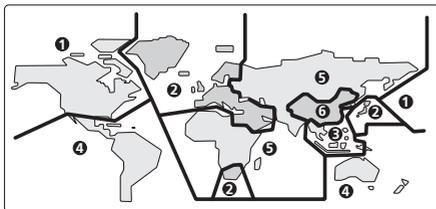
Use this procedure to reset all the player's settings to the factory default.

- 1 **Switch the player into standby.**
- 2 **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.

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. In this case the attention sentence **Incompatible disc region number Can't play disc** is displayed on screen. Discs marked **ALL** will play in any player. The diagram below shows the various DVD regions of the world.



Selecting languages using the language code list

Some of the language options (such as **'DVD Menu Lang.'** in the **Initial Settings**) allow you to set your preferred language from any of the 136 languages listed in the language code list on page 60.

- 1 **Select 'Other Language'.**
- 2 **Use the ←/→ (cursor left/right) buttons to select either a code letter or a code number.**
- 3 **Use the ↑/↓ (cursor up/down) buttons to select a code letter or a code number.**

See *Language code list* on page 60 for a complete list of languages and codes.

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 Pioneer authorized service center or your dealer to carry out repair work.

Problem	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 (page 50). • 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 (page 53). In this case the attention sentence "Incompatible disc region number Can't play disc" is displayed on screen. • 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. • A Super VCD that does not conform with the IEC standards might not play normally.
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 ■ STOP, then start playback again (▶ PLAY). • 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 ■ STOP, then start playback again (▶ PLAY).
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 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 (page 17). • The batteries are exhausted: Put in new ones (page 5).

Problem

Remedy

No picture/No color.

- 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 set to progressive but your TV/monitor is not compatible with progressive scan: See page 12 for how to set to **Interlace**.

Screen is stretched or aspect does not change.

- The **TV Screen** setting in the Initial Settings menu is incorrect. See page 51 for how to set it correctly for your TV/monitor.

Picture disturbance during playback or the picture is dark.

- 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.
- Check whether the TV system is properly set (page 52).

No audio, or audio is distorted.

- 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 (page 50).
- 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.).

The analog audio is OK, but there appears to be no digital audio signal.

- Make sure that the **Digital Out** setting is set to **On** (page 38).
- Check that the **Dolby Digital Out**, **DTS Out** and **MPEG Out** settings (page 38) 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.

Noticeable difference in DVD and CD volume.

- This is due to differences in the audio format and is not a malfunction.

Cannot play multi-channel audio.

- Make sure that **Audio Output Mode** is set to **5.1 Channel** (page 44).
- Check that the **Dolby Digital Out**, **DTS Out** and **MPEG Out** settings (page 38) 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 (page 49).
- Check the audio options available from the disc menu.

Cannot listen to high-sampling rate audio through the digital output.

- Make sure that **Linear PCM Out** is set to **Down Sample Off** (page 38).
- As a copy-protection measure, some DVDs do not output 96 kHz 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.

Cannot output 192 kHz or 176.4 kHz digital audio.

- The player does not output digital audio at these sampling rates. The digital output is automatically downsampled.

Cannot output 96 kHz or 88.2 kHz digital audio.

- Check that **Linear PCM Out** is set to **Down Sample Off** (page 38).
- Some discs are digital copy protected and do not output high sampling rate digital audio. In this case the output is automatically downsampled.

No DTS audio output.

- If this unit is connected to a non-DTS compatible amplifier or decoder using a digital audio cable, set **DTS Out** to **DTS > PCM** (page 38). 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.

Audio mix does not sound right or sounds incomplete (for example, inaudible dialog).

- Make sure that **Audio Output Mode** is set to **2 Channel** if you've connected to the stereo inputs on your amplifier or TV.

The audio recorded on a Super VCD disc is not output properly.

- If the audio is switched to **[2]** when playing a Super VCD that contains only one stereo soundtrack, there may be no sound at all. Press **AUDIO** to change the soundtrack.

Can't hear effect of Virtual Surround.

- Virtual Surround does not work with SACD or DVD-Audio.
- The Virtual Surround effect is only output through the **AUDIO OUT (5.1ch) FRONT L/R** analog audio outputs.
- Make sure that **Audio Output Mode** is set to **2 Channel** (page 44).
- The effectiveness of Virtual Surround varies with the disc.

Problem	Remedy
<p>No HDMI audio output.</p>	<ul style="list-style-type: none"> • Check whether or not HDMI Out is set to Off (page 38). • This unit has been designed to be compliant with HDMI (High-Definition Multimedia Interface). Depending on the component you have connected, unreliable signal transfers may result. • If the front panel HDMI indicator is lit: <ul style="list-style-type: none"> – You won't hear any sound from the HDMI output if the source component is only DVI/HDCP-compatible. • If the front panel HDMI indicator is unlit then: <ul style="list-style-type: none"> – Make sure that you've selected this player as the HDMI input in the settings for the component you're using. You may need to refer to the instruction manual of the component to do this. – Check that the HDMI cable is connected properly and that the cable isn't damaged. – Check that components connected using the HDMI interface are switched on and HDMI compatible.
<p>No HDMI video output.</p>	<ul style="list-style-type: none"> • Make sure that you've selected this player as the HDMI input in the settings for the component you're using. You may need to refer to the instruction manual of the component to do this. • Check that the HDMI cable is connected properly and that the cable isn't damaged. • Check that components connected using the HDMI interface are switched on and HDMI compatible. • This unit has been designed to be compliant with HDMI (High-Definition Multimedia Interface). Depending on the component you have connected, using a DVI connection may result in unreliable signal transfers. • Make sure the resolution on this player matches that of the component you have connected using HDMI. See HDMI Resolution on page 39 to change the HDMI resolution. See <i>Resetting the output resolution to the default setting with HDMI connection</i> on page 15 if you want to reset the output resolution.
<p>No multichannel HDMI audio.</p>	<ul style="list-style-type: none"> • Make sure the HDMI Out setting is set to Auto, Auto (DSD) or LPCM (5.1CH) (page 38). See also <i>About the HDMI audio output settings</i> on page 46 and <i>HDMI output with DVD-Audio and SACD sources</i> on page 47.
<p>No sound is output from the AUDIO OUT (5.1ch) jack when connected via HDMI.</p>	<ul style="list-style-type: none"> • Check whether or not HDMI Out is set to Off. (See HDMI Out on page 38.)
<p>Component Out cannot be set to Interlace.</p>	<ul style="list-style-type: none"> • You can use the Interlace setting if the HDMI Resolution is set to 720x480i (NTSC)/720x576i (PAL) (page 39).

A connected DVI component (with HDCP) doesn't work with this player.

• This unit has been designed to be compliant with HDMI (High-Definition Multimedia Interface). Depending on the component you have connected, using a DVI connection may result in unreliable signal transfers.

USB troubleshooting

Problem

Remedy

USB mass storage device is not recognized by the system.

- Make sure you have completely inserted the USB connector to this unit.
- Check that the memory format is FAT16 or FAT32.
- USB devices with an internal USB hub are not supported.

Files don't show up in the Navigator/Photo Browser.

- The files must have the correct file extension (page 6).
- Make sure the file permission hasn't been restricted (through a password, etc.).

Can't play WMA or MPEG-4 AAC files.

- The files were recorded using DRM (digital rights management) or FairPlay copy-protection. This is not a malfunction.



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 nearest Pioneer service center.

Glossary

Bonus Group (DVD-Audio only)

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

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.

DRM

DRM (digital rights management) copy protection is a technology designed to prevent unauthorized copying by restricting playback, etc. of compressed audio files on devices other than the PC (or other recording equipment) used to record it. For detailed information, please see the instruction manuals or help files that came with your PC and/or software.

DSD (Direct Stream Digital)

The Digital Audio encoding system found on SACDs, that expresses the audio signals by the pulse density of one bit data.

EXIF (Exchangeable Image File)	A file format developed by FUJIFILM for digital still cameras. Digital cameras from various manufacturers use this compressed file format which carries date, time and thumbnail information, as well as the picture data.	PCM (Pulse Code Modulation)	Digital audio encoding system found on CDs. Good quality, but requires a lot of data compared to Dolby Digital, DTS and MPEG encoded audio.
HDMI	HDMI (High-Definition Multimedia Interface) is a high-speed digital interface which has the capability to support standard, enhanced, or high-definition video plus standard to multi-channel surround-sound audio on a single digital connection. HDMI features include uncompressed digital video, a bandwidth of up to 5 gigabytes per second and communication between the AV source and AV devices such as DTVs.	Progressive scan video	All the lines that make up a video picture are updated in one pass (compared to interlace which takes two passes to update the whole picture).
ISO 9660 format	International standard for the volume and file structure of CD-ROM discs.	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.
MPEG-4 AAC	MPEG-4 AAC is a compressed stereo audio file format. Files are recognized by the extension '.m4a'. Note that some files purchased with copyright protection (such as files from the iTunes store) may not playback.	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. CD is 44.1 kHz; DVD can be up to 96 kHz.
MPEG audio	An audio format used on Video CD/Super VCDs and some DVD discs.	WMV	WMV is an acronym for Windows Media Video and refers to a video compression technology developed by Microsoft Corporation. Files are recognized by the file extension ".wmv".
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.		
PBC (PlayBack Control)	A system of navigating a Video CD/Super VCD through on-screen menus recorded onto the disc.		

Language (Language code letter), Language code

Japanese (ja), 1001	Bhutanian (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/Area code list

Country/Area, Country/Area code, Country/Area code letter

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

General

Power requirements	AC 110 V to 240 V, 50 Hz/60 Hz
Power consumption	12 W
Power consumption (standby)	0.8 W
Weight	1.7 kg
Dimensions	
	420 mm (W) x 49.5 mm (H) x 215.5 mm (D)
Operating temperature	+5 °C to +35 °C
Operating humidity	5 % to 85 % (no condensation)

Component video output

Y (luminance) - Output level	1 Vp-p (75 Ω)
P _B (color) - Output level	0.7 Vp-p (75 Ω)
P _R (color) - Output level	0.7 Vp-p (75 Ω)
Jack	RCA

S-video output

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

Video output

Output level	1 Vp-p (75 Ω)
Jack	RCA

Audio output (1 stereo pair)

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

Audio output (multi-channel / L, R, C, SW, SL, SR)

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

HDMI output

HDMI output	19 pin
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Digital audio characteristics

Frequency response	4 Hz to 44 kHz
S/N ratio	115 dB
Dynamic range	100 dB
Total harmonic distortion	0.0023 %
Wow and flutter	Limit of measurement (±0.001 % W. PEAK) or lower

Digital outputs

Coaxial digital output	RCA
Optical digital output	Optical

Accessories

Remote control	1
AA/R6P dry cell batteries	2
Audio/video cable	1
Power cable	
	<i>Central American, South American, and Taiwan model.</i>
	<i>Others</i>
Front panel button names sticker	
	<i>(Taiwan models only)</i>
Remote control overlay	1
	<i>(Taiwan models only)</i>
Operating instructions	

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



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