DVP4000
Digital Video Processor

Installation and
Operations Manual
NTSC/PAL Model

**FAROUDJA
PICTURE PLUS™**

QUICK START INSTRUCTIONS

The DVP4000 requires only a few adjustments to be set for proper operation. However, since the processor must be integrated with a display device, and the settings on one will affect the other, careful attention must be made to the settings on both products.

CONNECTIONS

Read the complete Owner's Manual for the DVP4000 before installation.

Also review the owner's manual of the display. Most display devices require specific settings to properly integrate with an external processor.

Be sure to connect all sources to the proper inputs of the DVP4000.

Note on DVDs: For proper aspect ratio and to insure the highest quality image from the DVD player, be sure to set the DVD screen shape to 16:9 in the DVD player's Setup menu. See the DVD player's owner's manual for details

Connect the proper cables from the output of the DVP4000 to the display device and audio processor. Be sure the cables are not crossed.

DVP4000 SETUP

- Plug the processor into the wall power. The unit will go through initialization identifying the output resolution.

- Turn the unit on and press the Setup button on the front panel to enter the Setup menu. Press Return again to return to the User Menu.

- Use the Function Up/Down buttons to select different Functions, press the Left/ Right buttons to change Values.

- Select Digital (DVI) or Analog (BNCs) output

- Select output type. When using the analog output, RGBHV is recommended.

- Select the proper output scan rate.

- Composite Sync on H should be Off.

- Select the screen shape of your display.

DISPLAY POSITION AND ALIGNMENT

The next step in the setup procedure is to align the display device to the processor. Be sure to follow all directions for setting up the display found in the display's manual. Using a test DVD with the Safe Area test pattern, align the image size, position and blanking first using the controls found in the display device. Only use these controls in the DVP4000 if the display device does not offer these controls or if there is not enough range.

Note: Some displays do not respond to the H & V position controls when using DVI.

SETTING DISPLAY PROFILES

The DVP4000 stores up to eight profiles for NTSC and eight profiles for PAL. Each profile stored contains all the settings for the unit at the time the information was stored. This allows the installer to store scan rates, screen shapes, etc. for multiple displays that may be using in the theater. Store the current settings by selecting the profile number (1-8) in the OSD and then hit Store on the remote. Profiles can also be stored in the Setup menu. See the manual for more details.

IMAGE ALIGNMENT

The final step is optimizing the image. Use a test pattern DVD to optimize the display and processor.

Set the brightness and contrast using the controls in the display.

Adjust the gray scale of the display using the color temperature controls in the display.

Reduce the detail or sharpness control in the display to 0 or 1 (if available).

Using video material, adjust the Detail on the DVP4000. Use of the Detail circuit is affected by the quality of the material being viewed. High quality sources need a lower Detail setting. DVDs or satellite sources that are poor quality (compression artifacts) can be cleaned up by reducing the detail level. Low bandwidth sources such as VHS can be improved by increasing the detail. Customized settings can be stored as Profiles.

SAFETY PRECAUTIONS

IMPORTANT INFORMATION

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

CAUTION :

To reduce the risk of electric shock, do not remove cover. Refer servicing to qualified service personnel.

This product is equipped with a 3-blade grounding-type plug to satisfy UL, CUL, TUV, FCC rules.
If you are unable to insert the plug into the outlet, contact your electrician.

FCC INFORMATION (U.S.A. ONLY)

CAUTION :

Changes or modifications not approved by Faroudja could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital devices, 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 encourage 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.
– 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.

About burning-in of the display device

Do not allow the same still picture to be projected for a long time or an abnormally bright video picture to be projected. Do not project video images with high-intensity or high contrast on a screen. The video image could be burned in to the display device. Use special care when projecting video games or computer program images.

About the installation place

Do not install the processor in a place that cannot support its weight securely, or that does not allow for proper heat ventilation.

IMPORTANT SAFEGUARDS

IMPROPER USE OF THIS EQUIPMENT CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARD.

In order not to defeat the safeguards incorporated into this product, observe the following basic rules for its installation, use and service.
– All the safety and operating instructions should be read before the product is operated.
– The safety and operating instructions should be followed and retained for future reference.
– All warnings on the product and in the operating instructions should be adhered to.
– Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
– Do not use attachments not recommended by the product manufacturer as they may be hazardous.
– Do not use this product near water. Do not use immediately after moving from a low temperature to high temperature, as this causes condensation, which may result in fire, electric shock, or other hazards.
– Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. The product should be mounted according to the manufacturer's instructions, and should use a mount recommended by the manufacturer.
– When the product is used on a cart, care should be taken to avoid quick stops, excessive force, and uneven surfaces which may cause the product and cart to overturn, damaging equipment or causing possible injury to the operator.
– Slots and openings in the cabinet are provided for ventilation. These ensure reliable operation of the product and protect it from overheating. These openings must not be blocked or covered. (The openings should never be blocked by placing the product on bed, sofa, rug, or similar surface. It should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.)

SAFETY PRECAUTIONS

– This product should be operated only with the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.
– This product is equipped with a three-wire plug. This plug will fit only into a grounded power outlet. If you are unable to insert the plug into the outlet, contact your electrician to install the proper outlet. Do not defeat the safety purpose of the grounded plug.
– Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at doors, plugs, receptacles, and the point where they exit from the product.
– For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the product due to lightning and power line surges.
– Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in a risk of fire or electric shock.
– Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
– Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltages and other hazards. Refer all service to qualified service personnel.
– Unplug this product from the wall outlet and refer service to qualified service personnel under the following conditions:
a) When the power supply cord or plug is damaged.
b) If liquid has been spilled, or objects have fallen on the product.
c) If the product has been exposed to rain or water.
d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the Operation Manual, as an improper adjustment of controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
e) If the product has been dropped or damaged in any way.
f) When the product exhibits a distinct change in performance – this indicates a need for service.

– When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or with same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
– Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
– The product should be placed more than one foot away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.
– When connecting other products such as VCR's, and personal computers, you should turn off the power of this product for protection against electric shock.
– Use only the accessory cord designed for this product to prevent shock.

The power supply voltage rating of this product is AC 120 V, the power cord attached conforms to the following power supply voltage. Use only the power cord designated by our dealer to ensure Safety and EMC. When it is used by other power supply voltage, power cable must be changed.

Ensure that the power cable used for the projector is the correct type for the AC outlet in your country. Consult your product dealer.

*DO NOT allow any unqualified person to install the unit.
Be sure to ask your dealer to install the unit since special technical knowledge and skills are required for installation and connection to multiple devices.

If installation is performed by an unqualified person, it may cause personal injury or electrical shock.

Processor

DVD Operation

Made in USA

INSTALLATION

Unpacking

Remove the DVP4000 unit from the shipping container and examine it for any signs of shipping damage or missing items (check inventory list below). All shipping materials should be saved if the unit is to be moved or returned for service. Shipping unit back to Faroudja for service not in the original box may result in voiding warranty or additional cost.

Inventory	
1-DVP4000 Unit	1- Remote + Batteries
1-Owner's Manual	1- Warranty Card
1- Power Cord	

Placement

The processor can be either placed on a table or rack mounted. A rack mounting installation kit is included. Securely mount the side rack brackets with the screws that are provided with the kit.

Ventilation

The unit uses convection to cool. A fan is not needed. As hot air raises out of the top vent, cool air is drawn in from the bottom and side. **These vents must not be blocked.** When rack mounted, a minimum of 1.75" (1 rack unit height) of free space is required above and below the unit to allow for proper cooling. A forced air fan should be added to the rack installation if power amps are located in the same air space. Do not install unit above power amps.

Connections

Because of the high performance of the DVP4000 unit it is very important to use the highest quality cables possible, for both input and output signals.

To avoid AC ground loop problems, the source equipment, DVP4000 unit and projector should all be running on the same grounded AC power line (one rated for the power requirements).

1. S-Video input (4-pin DIN) for sources such as DVDs, Satellite systems, S-VHS tape decks (when using S-VHS tapes only), Hi-8 tape decks.

2. Composite video input (BNC) for sources such as Laserdisc players, cable TV, VHS tape decks, 8mm tape decks.

3. YPrPb/RGBs Input (BNC): 480i and HDTV scan rates are sent to the internal processor and then output at the selected scan rate. If the output is set to analog RGBHV or digital DVI, the unit will automatically transcode the YPrPb HDTV to RGBHV.

Note on DVDs: For proper aspect ratio and to insure the highest quality image from the DVD player, be sure to set the DVD screen shape to 16:9 in the DVD player's Setup menu. See the DVD player's owner's manual for details.

4. High scan rate input (D15F) for sources such as HDTV signals or computers are passed through to the projector. The signal is sent to the outputs in the same format as the input unless Transcoding is selected. YPrPb from HDTV sources can be transcoded to RGBHV, as well. Use a BNC to D15 breakout cable if necessary. The Green, Red, Blue BNCs are used for YPrPb.

5. D15F connector output for use with computer monitors or to a second display device. Use only short cable runs. This output can be used at the same time as the BNC outputs.

6. DVI Input. The DVI Input will automatically process 480P,720P and 1080i signals. Computer rates are passed through to the DVI output if any of the pass-through inputs are selected. The DVP4000 will not convert a computer DVI output to the analog output.

7. DVI Output: Digital output interface for compatible displays. All processed analog and digital inputs are output to this connector as well as computer scan rates when the pass-through input is selected. Maximum cable length is 30ft with a high quality DVI cable. For longer lengths a distribution system or fiber optic system must be used.

8. BNC connectors for main output with RGBHV or YPrPb signals to display devices. Cable runs up to 100ft are okay if good quality cables are used. For YPrPb outputs use:
Red = Pr
Green = Y
Blue = Pb
RGBHV is recommended.

Note: If analog computer signals are to be used, the YPrPb output format cannot be used.

9. IR receiver connection allows for use with external IR receivers so unit can be installed behind walls. (3.5mm, 3 pin, Tip = +5 - +12V Pulse, Sleave = Gnd)

10. 12V trigger to activate automatic screen relays. Voltage is constant when unit power is on. (12V @ 100mA Max. 3.5mm 2 pin connector, Tip = +12V, Sleave = Gnd)

11. RS232 D9F connection for use with RS232 control systems. This connection also allows for firmware upgrades to the DVP4000.

12. AC Power connection.

13. RS232 Output - Not Active - for future upgrades

14. Digital Audio Outputs (RCA, Coaxial, AES/EBU). Be sure the audio processor is compatible with the audio formats used. These outputs are always active.

15. Analog Audio Outputs (RCA) for DVD-Audio and SACD audio formats. Be sure the audio decoder is compatible with the format used.

Note: The DVI or analog RGBHV outputs cannot be active at the same time. Select the output type in the Setup menu prior to use of the processor.

Connecting HDTV Satellite Receivers

Since HDTV ready satellite receivers offer different signal types, they require special attention for connection to the processor. Every receiver is different so be sure to consult the receivers manual for details. For this manual, we will assume the receiver being used operates as follows:

1. Non HDTV material is output from the receiver via an S-video connection

2. HDTV material is output via YPrPb outputs

3. If available, HDTV material is also output via a DVI connector.

The following diagram offers one way to connect the system.
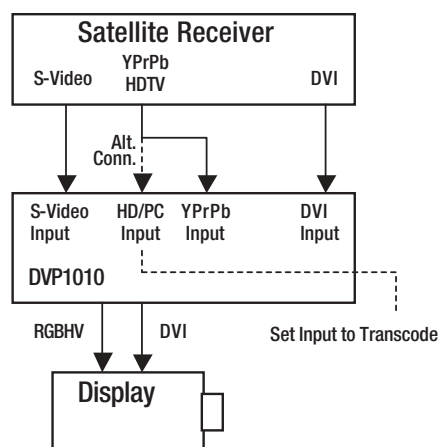
With this hookup viewing the different sources is as follows:

SOURCE	USE THIS INPUT	USE THIS OUTPUT
Non-HDTV	YPrPb or S-Video	DVI or RGBHV
HDTV Rates (480p, 720p,1080i) with and without HDCP	YPrPb or DVI	DVI or RGBHV
Computer VESA 1024x768	RGB (D15) or (DVI)	RGBHV or DVI Pass-Through

Note: The DVP4000 pass-through input will "pass" the input signal to the output stage in the same format as the input signal, i.e. analog HDTV in – analog HDTV out, DVI HDTV in – DVI HDTV out.

HDTV Cross-Conversion

The DVP4000 can cross-convert 480p, 720p and 1080i HDTV signals to the selected output of the processor. Any HDTV signal connected to the YPrPb BNC or DVI inputs will be cross-converted. Any HDTV or PC signal connected to the D15 input will be passed-through without processing. PC signals via the DVI input will be sent to the pass-through.

To pass-through HDTV signals to avoid processing, select the passthrough input. DVI is passed through to the DVI output and analog YPrPb is passed through as analog RGB (select trancode).

HDCP Compatibility

The DVP4000 is a HDCP (High Definition Content Protection) compatible processor. This means that when used with a HDCP encrypted source (satellite and DVD via DVI) and a HDCP compatible display device, the digital signal can be processed and viewed on the display device. If a non-HDCP source is used, the image can also be viewed (Note: check the display device manual to be sure this is possible when using the DVI input). If a non-HDCP compatible display is used, HDCP encrypted sources cannot be viewed.

Note: When first selecting a HDTV source with HDCP there can be an interruption of the video image for up to 20 seconds while the HDTV source unit communicates with the display device to verify compatibility.

HDMI Connectors

To use sources or displays that use the HDMI connector, simply use a HDMI to DVI converter cable (Not supplied. See www.pacificable.com).
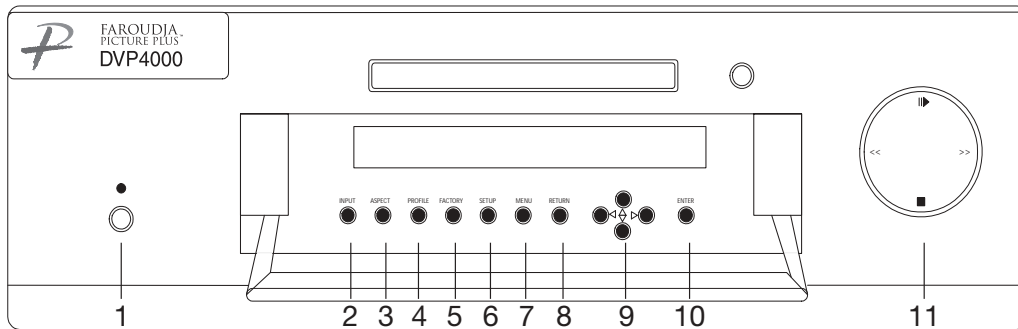
FRONT PANEL CONTROL

1. **Power/ Standby:** Press to turn on (Green LED) or for Standby (Red).
2. **Drop down door:** Open to access buttons

The following list of buttons are used in case the remote control is not available. In some cases, the selection can be made by either repeatedly pressing the button to cycle through the available functions or by pressing the button and then using the left/right directional buttons.

3. **Input:** Push to cycle through available inputs. DVD - Video - S-Video - RGB - YCrCb - DVI - Pass - Through - Pass-Through transcode
4. **Aspect Ratio:** Press to cycle through options.4:3 - Letterbox - Anamorphic
5. **Factory:** Press to recall Factory preset levels for Brightness, Contrast, Color, Tint and Detail
6. **Setup:** Press to enter the processor setup menu. Use the Up/Down buttons to cycle through the available functions. Press the Left/Right buttons to make changes to the selected function.
7. **Menu:** Press to access the DVD disc menu.
8. **Return:** Press to return the front panel control to the main picture settings menu.
9. **Directional Buttons:** Press to make changes to the processor settings. When in the DVD menu, press to navigate the DVD menu.
10. **Enter:** Press to enter selections when prompted by a menu item either with the processor setup functions or when in the DVD menu.
11. DVD transport controls.
■. Press to stop
II>. Press to toggle between Play and Pause
>>. Press to skip forward. Hold to Fastforward.
<<. Press to skip backwards. Hold to Rewind.

SYSTEM FIRMWARE SETUP

Now that all the sources and cables are connected, the processor's firmware needs to be setup for the installation. **Be sure to go through the Setup menu before doing the final setup of the display.**

When the unit is first plugged in it will go through an initializing procedure and display the output resolution.

Do not send any commands to the unit during this initialization period. Once this initialization is completed the unit is instant-on.

Note: All display devices have specific setup steps that must be completed to insure proper operation with the DVP4000 and other sources. Be sure to carefully follow those instructions as well as the instructions for this processor.

To enter the Setup menu, press the Setup button on the front panel.
Setup Functions can only be viewed on the front panel LCD, not from the OSD.

Press the Function Up or Down to select the available Functions. Press the Value Up or Down keys to change values or to select options.

SETUP MENU FUNCTIONS

Set: NTSC SCAN RATE
Select the required scanrate by using the right and left arrows. When the desired rate is displayed on the LCD display, press the Enter key. The scanrate is now selected.

Set: PAL SCAN RATE
(This new command is in addition to the NTSC scan rate selection. When the processor detects a PAL signal, the output rate will switch to the rate selected here.)

Set: Active Output
Analog/Digital (Default)
This must be selected to determine if the Analog (BNC) or Digital (DVI) output is used. **Both outputs cannot be used at the same time.**

Set: Screen Shape
Wide Screen / 4:3 / Wide 4:3
Note: This sets the processor for the screen shape of the **display** to be used. If this is not set properly, the aspect ratio selection for the different sources located in the user menu will be incorrect.

- **Wide Screen**-Choose this when the screen is Widescreen and the projector will provide the anamorphic vertical squeeze.

Example: A 16:9 plasma, a digital or CRT projector set to Anamorphic using a wide angle screen or when using a Panamorph lens, or a 1280x720 digital projector.

- **4:3** – Choose this when the projector is 4:3 and the screen is 4:3

Example: using a 1024x768 digital projector on a 4:3 screen.

- **Wide 4:3**-Choose this when the digital projector operates as 4:3 and the screen is Widescreen. (Not available on units scanning at rates below 720p)

Example: A digital projector that has a 4:3 display chip that locks the aspect ratio when sent the native resolution and then displayed on a wide angle screen.

Set: Black Level
> 0 (Default)-7.5

Note: This sets the correct setup level for the component input only. It can be used to get correct black levels for certain displays. In most cases it should be left at 0.

Set: DVI Input Level
> 0-255 (Default) / 16-235

Note: This sets the correct level range for the DVI input. 0-255 is correct for video sources, 16-235 is a range sometimes used by computer video cards.

Output Format (Analog)
> RGB (Default) /YPrPb

Note: Selecting RGB means connecting the processor to the display via five wire analog RGBHV. This function is not active when DVI output is selected. DVI is always RGBHV.

Composite Sync on H
> On/Off (Default)

Note: this function is not active when YPrPb output is selected

Note: Each input on the DVP4000 can be activated or deactivated to simplify operation so unused inputs are not accessed when cycling through the inputs with the remote control.

Set: Video Input
> Enabled (Default) /Disabled

Note: Disabling this unused input will remove it from the input menu list.

Set: S-Video Input
> Enabled (Default) /Disabled

Note: Disabling this unused input will remove it from the input menu list.

Set: RGB Input
> Enabled (Default) /Disabled

Note: Disabling this unused input will remove it from the input menu list.

Set: YCrCb Input
> Enabled (Default) /Disabled

Note: Disabling this unused input will remove it from the input menu list.

Set: DVI Input
> Enable / Disable

Note: Disabling this unused input will remove it from the input menu list.

Set: Passthru Input
> Enabled (Default) /Disabled

Note: Disabling this unused input will remove it from the input menu list.

Set: Passthru Transcode
> Disable (Default) /Enable

Note: YPrPb HDTV signals via the D15 input or the YPrPb (BNC) inputs can be transcoded to RGB when this feature is enabled.

Set: Component Input Standard
> DVD (Default) /Professional (Betacam)

Note: Only use professional setting when using a device that conforms to SMTPE Betacam levels

Set: RGB Input Sync
> Sync-on-Green (Default) /TTL/Video

Set: DVI Input H-Sync
> Normal / Wide

Note: If the input from a DVI source is unstable, try this adjustment.

OSD (On Screen Display)
> On (Default) /Off

OSD Timer
> 0-255 (30 default)

LCD Timer
> 6-255 (40 Default)

Note: setting the timer to 5 or lower sets the LCD backlight to Always On.

Set: RS232 Echo
> On (Default) /Off

Note: Allows RSR232 characters to be sent back to the controller.

Set: Baud Rate
> 19200 (Default) / 57600 / 9600

Set to match control system

Set: Store NTSC profiles 1-8

Set: Store PAL profiles 1-8

Set: Restore Factory
> Are You Sure? - Press Enter Key

Use this Function only in the event that the processor no longer functions properly and all other system checks have been performed. This command will erase all custom settings and restore the original firmware configuration. Be sure to go back through the Setup procedure for proper operation.

⚠ The next step in the setup procedure is to align the display device. Be sure to follow all directions for setting up the display found in the display's manual. Using a test DVD with the Safe Area test pattern, align the image size, position and blanking first using the controls found in the display device. Only use these controls in the DVP4000 if the display device does not offer these controls or if there is not enough range.

IR LEARNING REMOTE

The DVP4000 ships with a learning remote control that contains the codes for the video processing stage and the DVD drive. Control codes for Faroudja's other display products are also stored. See the separate manual on the remote control for programming instructions.

Touch Panel

Cycle to next touch panel

Directional Controls

Press Menu to recall main remote menu

Press VIDEO PROCESSOR to access the controls for the video processing stage. Press DVD DRIVE to access the DVD transport controls.

Page 1

Video Processor	
DVD Drive	
Plasma	
DILA	

Page 1

DVD	Video
S-Video	YCrCb
DVI RGB	PasT PastX
Menu on	Menu Off

Press the buttons for direct access. Change levels by either using the value keys or entering a 3 digit number. Some buttons are toggles between selections. See chart for creating direct access marcos.

Page 2

CLR	TNT	DTL
Contrast	Bright	
Profile	Store	
4:3	Let	ANA
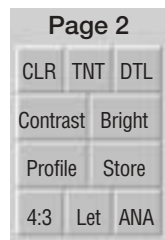
To recall a Profile, press (PROFL) + (#) enter a number 1-8.

Page 1

Press the DVD DRIVE button to access the DVD drive commands

FUNCTION	MACRO COMMANDS
Pass-Through	(Pass-T) + (0)
Pass-Through Transcode	(Pass-T) + (1)
DVI	(DVI) + (0)
RGB	(DVI) + (1)

ON SCREEN DISPLAY (OSD)

Accessing the OSD

- Press Menu button to bring up main Index.
- Use Function Up/Down Keys until the triangle at the top of the OSD turns yellow.
- Use the Left/Right keys to move to the next menu page. A list of available Functions will appear.
- Press Function Up/Down keys to select an adjustment.
- Use Value Left/Right keys to adjust. The main menu drops away and a single line menu appears.
- Use the Function keys to return to the drop down menu.
- Press Menu at any time to cancel OSD

Note: Unused inputs can be deactivated for simpler operation of the processor. See the Setup instructions for details.

INPUT	PICTURE	DISPLAY	PATTERNS

FORMATS

Press the Function UP/Down keys until the triangle turns Yellow. Press the Value Left/Right keys to cycle to the Menu tabs.

INPUTS

ASPECT   ANAMORPHIC

PROFILE

Use the Value left/Right keys to change selection or values.

RECALL

STORE   1 2 3 4

The OSD consists of four menu tabs:

Input – Picture – Display – Patterns

Input Menu

INPUT	PICTURE	DISPLAY	PATTERNS

FORMATS

INPUTS	DVD

ASPECT	ANAMORPHIC

PROFILE

RECALL	F 1 2 3 4

STORE	1 2 3 4
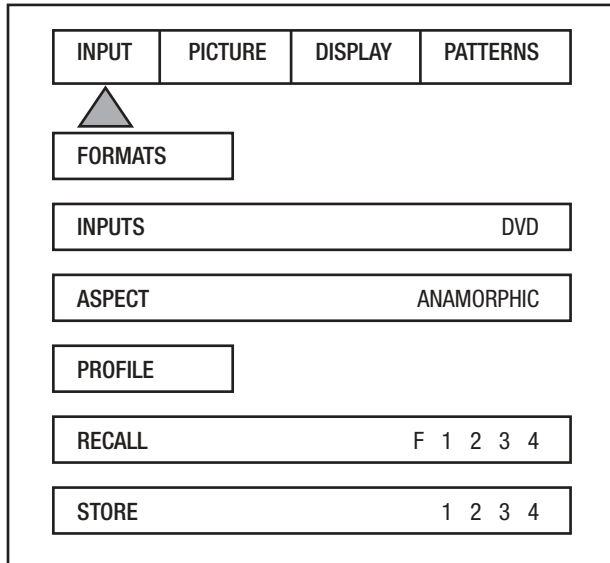
Formats

Input Select: OSD
Video-S-Video- RGB-YCrCb-DVI

Note: Note: The Pass-Thru input cannot be selected from the OSD since an OSD is not available on that input. Use the Input button on the remote to select it. The DVI Input will not display an OSD unless there is a source connected to it.

Aspect Ratio

4:3-Letterbox-Anamorphic
Note: This selection should match the aspect ratio of the **source**, not the display. The aspect ratio of the display should be selected in the Setup menu.

Profiles-

Profile: Factory-1-2-3-4-5-6-7-8
Store: 1-2-3-4-5-6-7-8

To store a Profile (in the Input Menu):
- Press **Menu** button on the remote
- Make all required adjustments.
- Use the **Function Up/down** keys to select Profile
- Use the **Value Left/Right** keys to select Profile
- Press **Store**

To recall a Profile (in the Input menu):
- Press **Menu** button on the remote
- Use the **Function Up/Down** keys to select Recall
- Use the **Value Left/Right** keys to select profile 1-8
- Press **Store**

- There are separate banks of eight Profiles for NTSC and PAL

Note: When using a 4:3 source on a Wide Angle screen there are black bars on the left and right of the image. The sidebars can be changed to gray using the Blanking Level control located in the Display menu. If filling the entire screen is desired, select Letterbox. The image will fill the screen but the top and bottom 1/3 of the image will be cut off (overscanned).

When watching 2:35 aspect ratio movies on a 16:9 (1:77) screen, it is normal to see black bars at the top and bottom of the image.

Note: The screen shape used in the installation must be set in the Setup Menu during installation for proper Aspect Ratio mapping. Anamorphic Aspect Ratio with 4:3 screens and the Wide-4:3 settings are not available on units with scan rates, 540p, 600p and Frame Doubling. See Setup section for details.

Note: Do not leave the 4:3 image with a Wide Angle screen on for long periods of time on a CRT projector or plasma display. This can cause permanent image burn-in. Image burn-in is not covered by Faroudja's warranty

Picture Menu
Use these commands to fine-tune the image.

INPUT	PICTURE	DISPLAY	PATTERNS

BRIGHTNESS	50

CONTRAST	50

COLOR	50

TINT	50

DETAIL	4

ADVANCED COLOR SYS	NORMAL
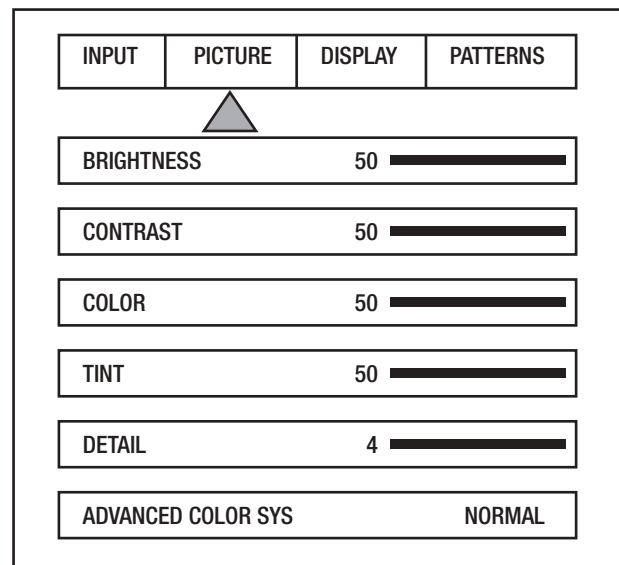
Brightness

Factory 50

Contrast
Factory 50

Note: It is best to set Brightness and Contrast levels using the **controls of the display** with the proper test pattern and with the DVP4000 in the Factory default setting for the initial setup. This means with day-to-day use, when the Factory preset button is pressed, the system is back to the original optimum settings, while changes made for specific sources can be saved in the custom Profiles.

Color
Factory 50

This adjusts the amount of color. The Faroudja processor is calibrated to meet broadcast (SMPTE) color specifications so only minor color adjustments should be needed. Using DVI may require a lower chroma level.

Tint
Factory 50

Tint is not available with YPrPb or PAL sources

Detail
Factory 4

Note: The Detail circuit is a powerful tool for image quality. The settings have been optimized for the output scan rate and resolution. However, the viewer's tastes plus the types of software and display require making adjustments of this setting to fine-tune the image. This control is very effective to increase detail in poor quality video material. It is recommended that adjustments be made in small increments until the desired results are achieved and then store these custom settings in the Profiles. It is important to not use too much Detail since the image will start to look artificial.

Typically, digital displays will need less detail than analog displays. High quality software will need less detail than poor quality ones. Reducing the Detail level can help to reduce the visibility of MPEG artifacts on some DVDs and satellite systems and noise with VHS tapes. The best results are achieved by adjusting the levels to the software being viewed instead of just using test patterns.

Advanced Color System
Normal (default) /Bypass

For some DVDs with computer animation or with very high levels of color, the Faroudja patented chroma edge processing circuits may not be needed and can be turned off (Bypass). For most sources, the Normal setting should be selected. These settings can be stored as a Profile.

Note: Any changes to the picture level adjustments are automatically stored after one minute has passed without making any changes. This information is stored separately for each input. As each input is selected the last used settings will automatically be recalled. If picture levels are adjusted but then the input is changed before one minute has passed, the changes for that input will not be stored and the previous settings will be recalled the next time that input is used.

Display Menu
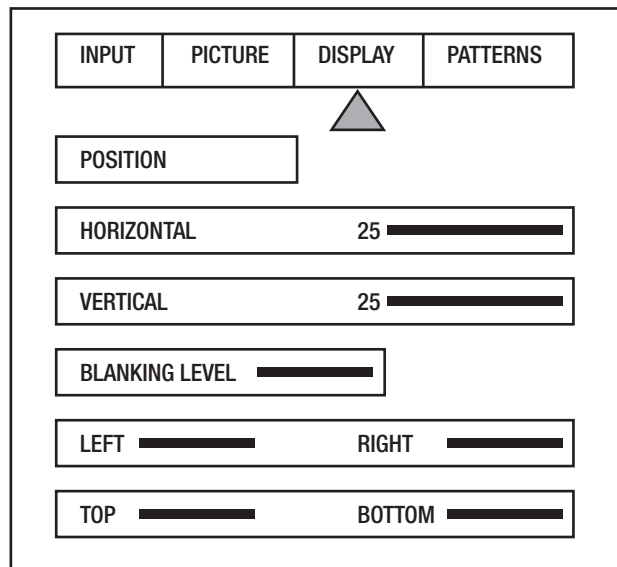
Use these commands to adjust the image position and edge blanking. It is recommended to adjust sizing, position and blanking in the display device first with the DVP4000 in the Factory preset setting. Then use the DVP4000 controls only if the display runs out of range or does not offer these controls. This should be done by a qualified technician.

Horizontal Position
(See chart on page 13 for default settings)
Moves image left or right of center.

Vertical Position
(See chart on page 13 for default settings)
Moves image up or down from center.

Note: Moving the image too far to the left or right can cause the display to stop working. Move image to center to correct. Use the positioning controls in the display first– if available. Also, many display devices require a specific setting when using high scan rate sources such as the DVP4000 or HDTV. Be sure to completely read the installation manual for the display device before making adjustments.

Note: some displays do not respond to H & V commands with DVI

Bottom Blanking
This adjusts the bottom edge blanking

Right Blanking
Adjusts the right edge blanking

Left Blanking
Adjusts the left edge blanking

Top Blanking
Adjusts the top edge blanking

Blanking Level
This adjusts the blanking from black to white. This can be used to create a gray side bar for use with 4:3 aspect ratio sources on wideangle screens to help reduce the chance of image burn-in. Image burn in is not covered by Faroudja's warrantee.
Note: The DVP4000 will store unique blanking and H&V position settings for each aspect ratio which are automatically stored and recalled when the different aspect ratios are selected

Patterns Menu

The best approach to system setup is to use a DVD that offers the proper test patterns. This way, the system is aligned for the entire signal path. If a test DVD is not available, then use the internal test patterns provided in the DVP4000.

Note: The test pattern generator in the DVP4000 is set to SMPTE standards. To insure proper output levels for display setup, the picture controls in the DVP4000 cannot be accessed when the test patterns are being used. Adjust levels, if needed, in the display device.
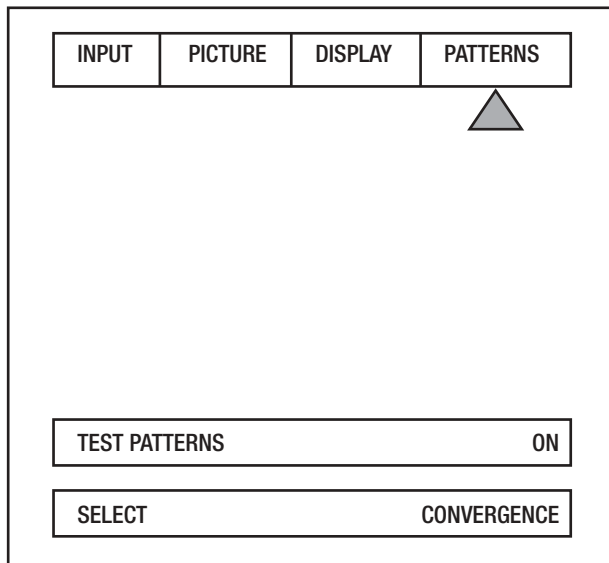
AVAILABLE PATTERNS:

10-step Gray Scale: Check gray scale

Cb Ramp: Check linearity of Cb channel

Cr Ramp: Check linearity of Cr channel

Black: Full Black screen

Green Screen : Check for defective pixels

Red Screen: Check for defective pixels

Blue Screen: Check for defective pixels

Convergence: Check convergence of display

Active Borders: Use for H&V positioning

Multiburst: to check bandwidth

100IRE Window: Check displays power supply

PLUGE: Set Brightness and Contrast

100IRE CB: Color bars for decoder check

100IRE Rev. CB: Color bars for decoder check

RS232 INSTRUCTIONS

Connector: DB-9 Female

Baud rate: 19,200 default, 8 bit,
1 stop bit and No Parity

Pin Configuration:

Pin 5 = Ground
Pin 3 = RX in
Pin 2 = TX out

All commands are sent using ASCII text strings.

Note: A command must start with the string header DVP

INPUT	PICTURE	DISPLAY	PATTERNS

TEST PATTERNS	ON

SELECT	CONVERGENCE

Following the header, a comma is used to delimit the header from the command. All the commands with their descriptions are listed below. All the text strings are terminated with a carriage return (0x0d or 13). Maximum command string length is 250 characters. The header and command are not case sensitive.

OPERATION COMMANDS		(Used for day-to-day operation)
COMMAND	**OPTIONS OR RANGE**	**DESCRIPTION**
A#	(0-2) 0=4x3,1=Letterbox, 2=Anamorphic	Input Aspect Ratio – for all sources
B#	(0-170) 128 default	Brightness
C#	(0-155) 110 default	Contrast
D#	(0-13) 8 default	Detail
DVI		DVI Input
EXT		Pass-through Input
FST		Report Current System Status
HELP		Displays full list of commands for this unit
K#	(0-220) 128 default	Color
OFF		Power OFF
ON		Power ON
P#	(0-8) [1-8=User, 0=Factory]	Recall Profiles
PM#	(0-1) [0=Normal1=Bypass]	Advanced Color System
PY		PassThru Transcoded Input
R		RGB input
ST		Report Current Status
T#	(0-255) 128 default	Tint
TP#	0=Off 1=100% Color Bars 2=Reverse Color Bars 3=10-step Grayscale 4=Luma Ramp 5=Cb Ramp 6=Cr Ramp 7=Green 8=Red 9=Blue 10=Convergence 11=Active Boarder 12=Multiburst 13=100% Window 14=PLUGE Test Pattern Selection	
TPHELP		Display Test Pattern Help
V		Video input
X		YCrCb input
Y		S-Video input
SETUP COMMANDS		(Normally not controlled by RS232)
COMMAND	**OPTIONS OR RANGE**	**DESCRIPTION**
BB#	(0-192)	Bottom Blanking
BL#	(0-252)	Border Level – black to white
BLT#	(0-255)	LCD Backlite Timer on front panel
BLV#	0=0IRE (DEFAULT) , 1 = 7.5 IRE	BLACK LEVEL
CR#	0=0-255, 1=16-235	DVI INPUT LEVEL
CS#	1=On 0=OFF	Composite Sync – for RGB output
DVD		DVI Input Disabled
DHS#	0=NORMAL, 1=WIDE	DVI INPUT H SYNC

DVE		DVI Input Enabler
E#	1=On 0=OFF	RS-232 ECHO
EXTD		PassThru Input Disabled
EXTE		PassThru Input Enabled
HP#	(0-50) 25 default	Horizontal Position
LB#(0-200)	Left Blanking	
M#	(0-1) [0=RGB, 1=YPrPb]	Output Mode
OSDOFF		OSD Off – for processor
OSDON		OSD On -for processor
OUTMOD	0=Analog, 1=Digital	Output Mode
PYD		PassThru Transcode Disable
PYE		Pass-Thru Transcoder Enabled
RB#	000-192	Right Blanking
RD		RGB Input Disabled
RE		RGB Input Enabled
SETFT		Restore Factory Defaults
STPP#	1-8	Store PAL Profile
STNP#	1-8	Store NTSC Profile
SRNHELP		NTSC Scan Rate Help Menu
SRPHELP		PAL Scan Rate Help Menu
TB#	000-192	Top Blanking
VD		Video Input Disabled
STHELP		Setup Help Menu
VE		Video Input Enabled
VPOL#	(0=Neg 1=Pos)	Vsync Polarity
W#	0=4:3, 1=Widescreen, 2=Wide 4:3	Screen Shape
XD		YCrCb Input Disabled
XE		YCrCb Input Enabled
YD		S-Video Input Disabled
YE		S-Video Input Enabled

NTSC SCAN RATE LIST		**USE ONLY BY QUALIFIED TECHNICIAN!**	
SRN2	1920 x 540	SRN3	800 x 600
SRN4	1280 x 720	SRN5	1024 x 768
SRN6	1280 x 768	SRN7	1366 x 768
SRN8	1440 x 960	SRN9	1280 X 1024
SRN10	DILA	SRN11	1400 x 1050
SRN12	1920 x 1080		

Note: Enter DVP, FST in a terminal driver program to get the default numbers or contact Faroudja.

PAL SCAN RATE LIST			
SRP1	720x576/50Hz	SRP4	1024x768/75Hz
SRP2	720x576/100Hz	SRP5	1024x768/100Hz
SRP3	1280x720/50Hz	SRP6	1920x1080/50Hz

HELP MENUS

DVD OPERATION COMMANDS	
DHELP	DVD HELP TABLE
PLAY	DVD PLAY
STOP	DVD STOP
PAUSE	DVD PAUSE
EJCT	DVD OPEN/CLOSE TOGGLE
DIG#	DVD DIGITS 0-9
SETUP	DVD SETUP MENU
MENU	DVD MOVIE MENU
FU	DVD FUNCTION UP
FD	DVD FUNCTION DOWN
VL	DVD VALUE LEFT
VR	DVD VALUE RIGHT
PREV	DVD PREVIOUS CHAPTER
NXT	DVD NEXT CHAPTER
REW	DVD REWIND
FOR	DVD FORWARD
RTN	DVD RETURN
ENT	DVD ENTER
TMENU	DVD TOP MENU
STEPP	DVD STEP +
STEPN	DVD STEP -
AUD	DVD AUDIO
ANG	DVD ANGLE
SBT	DVD SUBTITLES
DSP	DVD DISPLAY
CL	DVD CLEAR MEMORY

TEST PATTERN HELP MENU			
		TPHELP	TEST PATTERN HELP MENU
TP0	TEST PATTERN OFF	TP1	100% COLOR BARS
TP2	REVERSE COLOR BARS	TP3	10 STEP GREY
TP4	LUMA RAMP	TP5	CB RAMP
TP6	CR RAMP	TP7	BLACK SCREEN
TP8	GREEN SCREEN	TP9	RED SCREEN
TP10	BLUE SCREEN	TP11	CONVERGENCE
TP12	ACTIVE BORDER	TP13	SMPTE PATTERN
TP14	WHITE WINDOW	TP15	PLUGE

Output Scan Rate	Horizontal Frequency	Vertical Frequency
1920 x 540P	33.8 Khz	59.94 Hz
720 x 576P	31.3 Khz	50.00 Hz
720 x 576P	62.5 Khz	100.00 Hz
800 x 600P	37.6 Khz	59.94 Hz
1280 x 720P	45.0 Khz	59.94 Hz
1280 x 720P	37.5 Khz	50.00 Hz
1024 x 768P	60.5 Khz	75.00 Hz
1024 x 768P	80.6 Khz	100.00 Hz
1024 x 768P	48.3 Khz	59.94 Hz
1366 x 768P	48.3 Khz	59.94 Hz
1440 x 960P	62.9 Khz	59.94 Hz
1280 x 1024P	63.9 Khz	59.94 Hz
1365 x 1024P	63.5 Khz	59.94 Hz
1400 x 1050P	64.0 Khz	59.94 Hz
1920 x 1080P	56.3 Khz	50.00 Hz
1920 x 1080P	67.4 Khz	59.94 Hz

HORIZONTAL AND VERTICAL POSITION

The horizontal and Vertical default position is optimized for each scan rate. Below is the chart of the default numbers

NTSC Scan Rate	Horizontal Default	Vertical Default
852 x 480	25	10
1920 x 540	23	14
800 x 600	14	17
1280 x 720	25	15
1024 x 768	25	17
1280 x 768	22	15
1366 x 768	28	14
1440 x 960	37	10
1280 x 1024	34	20
1365 x 1024	49	19
1400 x 1050	49	19
1920 x 1080	39	4
PAL Scan Rate	Horizontal Default	Vertical Default
720 x 576/50	39	17
720 x 576/100	44	17
1280 x 720/50	25	15
1024 x 768/75	39	18
1024 x 768/100	37	18
1920 x 1080/50	40	18

SPECIFICATIONS

Inputs	
Format NTSC	
Composite(BNC)	1v pp
S-Video (4-pin DIN)	Y – 1v pp, C – 286mv pp
Component (BNC) 480i/480p/720p/1080i	Y – 1v pp(SMPTE) Cr – 700mv pp Cb – 700mv pp
RGB (BNC) interlaced 480i/480p/720p/1080i	Comp. Sync – 1v pp RGB – 700mv pp
HD/PC Pass-Thru	D15M
DVI Input	DVI – I (female) Digital Only
Outputs (Progressive)	
RGBHV H&V Sync	700mv pp, TTL Sync 2.5v pp@75ohm min.
YPrPb	700mv pp, Sync on Y-1v pp
RGsB	Gs – 1v pp, RGB – 700mv pp
Digital Video Interface	DVI – I(female) digital only
Digital Audio Connections	RCA, BNC, AES/EBU
Audio Output	
Output level: Multi-channel: Left,Right,Center, Sub.Woofer,Left Surround,Right Surround(Left/Right as Stereo)	200 mVrms (1 kHz, –20 dB)
Number of channels	6 (RCA)
Frequency response:	4 Hz to 44 kHz (DVD fs: 96 kHz) 4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio:	118 dB
Dynamic range:	108 dB
Total harmonic distortion:	0.001 %
Wow and flutter	Limit of measurement (0.001% W. PEAK) or lower
Dimensions (with feet and connectors)	13.5DX17.25WX5.75H
Weight	21lbs
Power Consumption	50wts/115VAC/60Hz
Power Supply	100 – 240VAC 50/60Hz Auto Ranging

Features

DVD-Audio and SACD compatible

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

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

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

Logos:

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

TruSurround*³ and Virtual Dolby Digital

Logo:

TruSurround/Virtual Dolby Digital creates a realistic surround-sound effect from any Dolby Digital source using just two speakers (see **page 48**).

PureCinema progressive scan

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

Super Fine Focus digital filter

This improves the quality of the video output by reducing video noise and increasing the horizonatal resolution to 540 lines (see **page 51**).

MP3 compatibility

This player is compatible with CD-R, CD-RW and CD-ROM discs that contain MP3 audio tracks (see **pages 10-11**).

Graphical on-screen displays

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

Energy saving design

This unit is designed to use 0.3 W of power when in standby mode.

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

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

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

Disc / Content Format Playback Compatibility

General Disc Compatibility

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

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

Audio CD   Video CD   CD-R   CD-RW

Super Audio CD

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

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

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

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

Special note about particular formats or software follows below:

CD-R/RW Compatibility

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

DVD-R/RW Compatibility

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

Compressed Audio Compatibility

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

• This player is compatible with multi-session discs, but only plays sessions that are closed.

• Use CD-R or CD-RW media for recording your MP3 files.

• This player can recognize a maximum of 250 folders or 250 tracks. Discs containing more than 250 folders or 250 tracks will play, but only the first 250 folders / tracks.

• Folder and track names (excluding the ".mp3" extension) are displayed.

• There are many different recording bit-rates available to encode your MP3 files. This unit was designed to be compatible with all of them. Audio encoded at 128Kbps should sound close to regular CD Audio quality. This player will play lower bit-rate MP3 tracks, but please note that the sound quality becomes noticeably worse at lower bit-rates.

PC Created Disc Compatibility

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

• DVD-R/RW and CD-R/RW software disc boxes also have additional compatibility information.

Titles, chapters, Groups and tracks

DVD-Video discs are generally divided into one or more titles. Titles may be further subdivided into chapters.
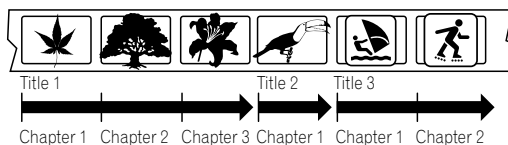
DVD-Audio discs are divided into one or more groups that can each contain a number of tracks.
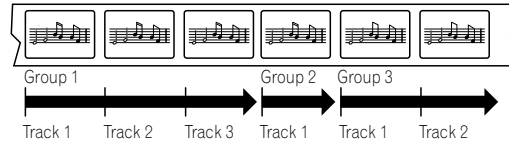
CDs, SACDs and Video CD are divided into tracks.
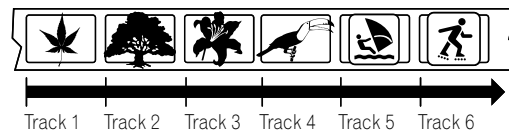
CD-ROMs containing MP3 files are divided into folders and tracks. Folders may also contain further subfolders.
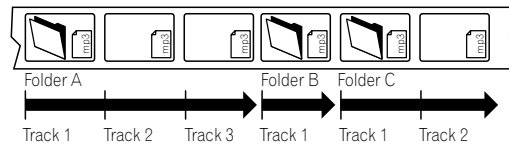
DVD-Video regions

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

The diagram below shows the various DVD regions of the world.
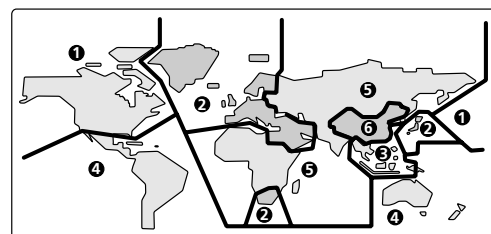
Remote Control for DVD Transport

Touch screen to access the different controls

Touch arrows to cycle through availabel touch screens

Navigation buttons.
Press Up/Down to select functions, press Left/Right to change values.

Press Enter to execute a command.

Press Menu to cycle through the available menu pages.

Touch screen page 1 - transport controls

Page 1	
▶ ‖	PLAY / PAUSE
◀◀ ▶▶	REWIND / FAST FORWARD
◀◀ ▶▶	SKIP BACK / SKIP FORWARD
◀‖ ‖▶ ■	STEP BACK / STEP FORWARD / STOP

Touch screen page 2 - extra feature access.

Page 2		
▲	Return	EJECT / RETURN TO MENU
Audio	Angle	AUDIO OPTION / ANGLE SELECT
Subtitle	Display	SUBTITLE ON-OFF / DISPLAY ON-OFF
Clear	Play Mode	CLEAR ENTRY / PLAY OPTIONS

Touch screen page 3 - menu access

Page 3		
Menu	Setup	DVD MENU ACCESS / SETUP ACCESS
Top		RETURN TO TOP OF MENU

Page 4		
1	2	3
4	5	6
7	8	9
	10	

Touch screen page 4 - number selections

‖
Press to pauseplayback; press again to restart

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

CLEAR
Press to clear a numeric entry

ENTER
Press to select an option or execute a command

⏻ **(STANDBY/ ON)**
Press to switch the player on or into standby

DISPLAY
Press to display information about the disc playing

AUDIO
Press to select the audio channel or language

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

↩ **(RETURN)**
Press to return to a previous menu screen

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

▶
Press to start or resume playback

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

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

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

▲ **OPEN/CLOSE**
Press to open or close the disc tray

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

SUBTITLE
Press to select a subtitle display

TOP MENU
Press to display the top menu of a DVD disc

Using the on-screen displays

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

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

⚠ Important

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

Button	What it does
SETUP	Display/exit the on-screen display
◄▲▼►	Changes the highlighted menu item
ENTER	Selects the highlighted menu item (both **ENTER** buttons work in exactly the same way)
⟳ **(RETURN)**	Returns to the previous menu without saving changes

NOTE: THE DVP4000 HAS BEEN PRE-ALIGNED BY FAROUDJA. CHANGING SETTINGS IN THE SETUP NAVIGATOR IS NOT RECOMMENDED

☼ Tip

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

Setting up with the Setup Navigator

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

1   If a disc is playing, press ■ (stop).
Also turn on your TV and make sure that it is set to the correct video input.

2   Press SETUP.
The on-screen display (OSD) appears.
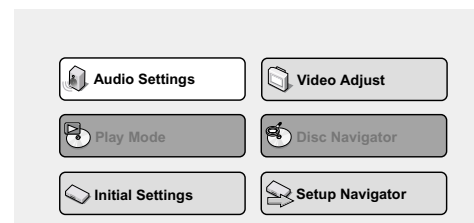
3   Select 'Setup Navigator'.
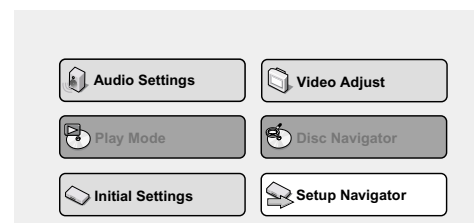
4 Select a DVD language.
Some DVD discs feature on-screen menus, soundtracks and subtitles in several languages. Set your preferred language here.

Setup Navigator		
Language Settings	**DVD Language**	**English**
Audio Out Settings		**French**
Speaker Settings		**German**
AV Receiver Func.		**Italian**
		Spanish
		Dutch
		Other Language

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

5 Did you connect this player to an AV receiver?

Setup Navigator		
Language Settings	**AV Receiver**	**Connected**
Audio Out Settings		**Not Connected**
Speaker Settings		
AV Receiver Func.		

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

6 Did you connect the 5.1 channel analog audio outputs to your AV receiver?
Select **Connected** or **Not Connected**.

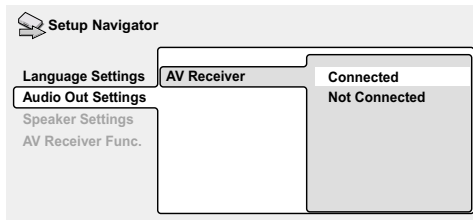| Setup Navigator		
Language Settings	**AV Receiver**	**Connected**
Audio Out Settings	**5.1ch Audio Out**	**Not Connected**
Speaker Settings		
AV Receiver Func.		
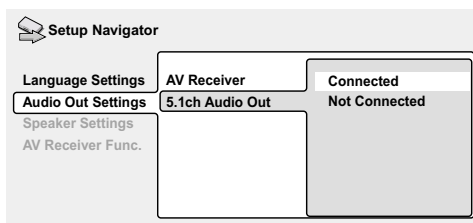
7 Did you connect a digital output to your AV receiver?
Select **Connected** or **Not Connected**.

Setup Navigator		
Language Settings	**AV Receiver**	**Connected**
Audio Out Settings	**5.1ch Audio Out**	**Not Connected**
Speaker Settings	**Digital Audio Out**	
AV Receiver Func.		
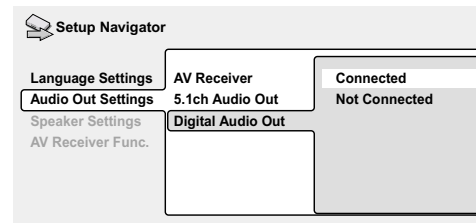
- If you selected **Not Connected** in both steps 6 and 7, that completes the setup. Press **ENTER** to leave the Setup Navigator.

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

8 Do you have a center speaker connected to your AV receiver?
Select **Connected** or **Not Connected**.

Setup Navigator		
Language Settings	**Center Speaker**	**Connected**
Audio Out Settings		**Not Connected**
Speaker Settings		
AV Receiver Func.		

9 Do you have surround speakers connected to your AV receiver?
Select **Connected** or **Not Connected**.

Setup Navigator		
Language Settings	**Center Speaker**	**Connected**
Audio Out Settings	**Surround Speakers**	**Not Connected**
Speaker Settings		
AV Receiver Func.		
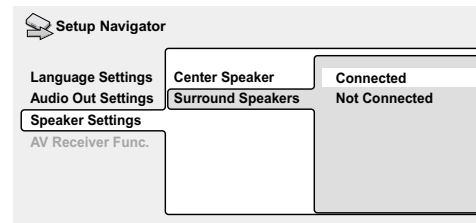
10 Do you have a sub-woofer connected to your AV receiver?
Select **Connected** or **Not Connected**.

Setup Navigator		
Language Settings	Center Speaker	Connected
Audio Out Settings	Surround Speakers	Not Connected
Speaker Settings	Sub-woofer	
AV Receiver Func.		

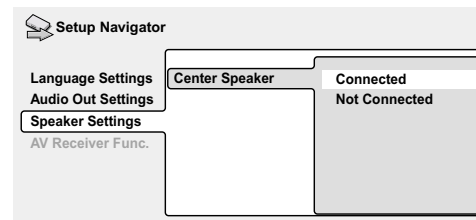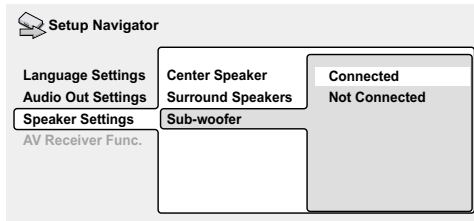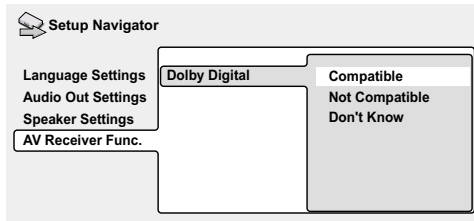- If you selected **Not Connected** in step 7, that completes the setup. Press **ENTER** to leave the Setup Navigator.

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

11 Is your AV receiver Dolby Digital compatible?
Select **Compatible**, **Not Compatible** or **Don't Know**.

Setup Navigator		
Language Settings	Dolby Digital	Compatible
Audio Out Settings		Not Compatible
Speaker Settings		Don't Know
AV Receiver Func.		

12 Is your AV receiver DTS compatible?
Select **Compatible**, **Not Compatible** or **Don't Know**.

Setup Navigator		
Language Settings	Dolby Digital	Compatible
Audio Out Settings	DTS	Not Compatible
Speaker Settings		Don't Know
AV Receiver Func.		
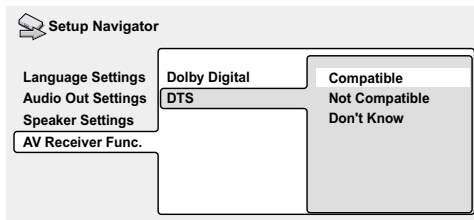
13 Is your AV receiver compatible with 96kHz Linear PCM audio?
Select **Compatible**, **Not Compatible** or **Don't Know**.

Setup Navigator		
Language Settings	Dolby Digital	Compatible
Audio Out Settings	DTS	Not Compatible
Speaker Settings	96kHz Linear PCM	Don't Know
AV Receiver Func.		
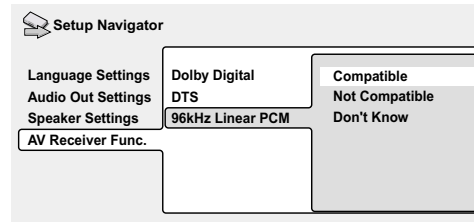
14 Is your AV receiver MPEG compatible?
Select **Compatible**, **Not Compatible** or **Don't Know**.

Setup Navigator		
Language Settings	Dolby Digital	Compatible
Audio Out Settings	DTS	Not Compatible
Speaker Settings	96kHz Linear PCM	Don't Know
AV Receiver Func.	MPEG	
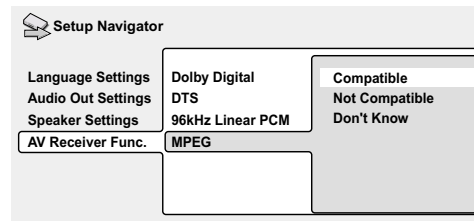
15 Press ENTER to complete the setup, or press SETUP to quit the Setup Navigator without making any changes.

Setup Navigator		
Language Settings	Dolby Digital	Compatible
Audio Out Settings	DTS	
Speaker Settings	96kHz Li	Settings complete
AV Receiver Func.	MPEG	Press ENTER to exit
		ENTER
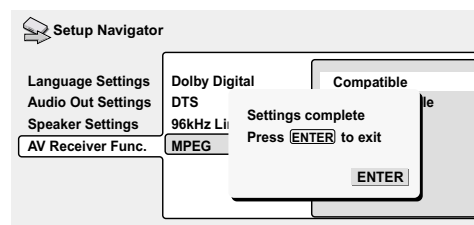
Congratulations, setup is complete!

Playing discs

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

⚠️ **Important**

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

1   If the player isn't already on, press ⏻ STANDBY/ON to switch it on.
If you're playing a DVD or Video CD, also turn on your TV and make sure that it is set to the correct video input.

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

3   Load a disc.
Load a disc with the label side facing up, using the disc tray guide to align the disc.

Never load more than one disc at a time.
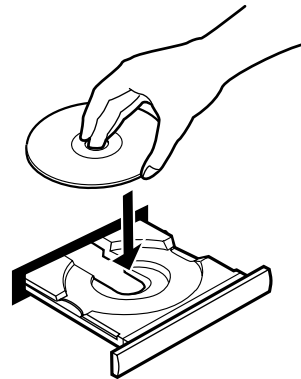
4   Press ► (play) to start playback.
If you're playing a DVD or Video CD, a menu may appear.

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

Basic playback controls

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

Button	What it does
►	Starts playback. DVD and Video CD: if the display shows **RESUME**, playback starts from the resume point.
❚❚	Pauses a disc that's playing, or restarts a paused disc.
■	Stops playback. DVD and Video CD: Display shows **RESUME**. Press ■ (stop) again to cancel the resume function (The resume function is also cancelled when you eject the disc tray.).
◄◄	Press to start fast reverse scanning. Press ► (play) to resume normal playback.
►►	Press to start fast forward scanning. Press ► (play) to resume normal playback.
I◄◄	Skips to the start of the current track or chapter, then to previous tracks/chapters.
►►I	Skips to the next track or chapter.
Numbers	Use to enter a title/group/track number. Press **ENTER** to select (or wait a few seconds). • If the disc is stopped, playback starts from the selected title/group (for DVD) or track number (for CD/SACD/Video CD/MP3). • If the disc is playing, playback jumps to the start of the selected chapter or track (within the current group for DVD-Audio).

⚠ **Important**

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

DVD disc menus

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

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

⚠ **Important**

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

Video CD PBC menus

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

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

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

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

FAQ

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

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

If the region number is OK, it may be that the disc is damaged or dirty. Clean the disc and look for signs of damage.

disc is aligned properly in the disc tray and that it's loaded label-side up.

• *Why won't the disc I loaded play?*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

  The disc may have been illegally copied.

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

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

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

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

Introduction

Most of the features described in this chapter make use of on-screen displays.

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

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

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

Using the Disc Navigator to browse the contents of a disc

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

⚠ **Important**

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

1 Press SETUP and select 'Disc Navigator' from the on-screen display.
Alternatively, if a DVD-RW, CD, Video CD or MP3 disc is loaded, you can press **MENU**, which takes you straight to the Disc Navigator screen.

🎚 Audio Settings	📹 Video Adjust
🎵 Play Mode	💿 Disc Navigator
↪ Setup Navigator	◇ Initial Settings
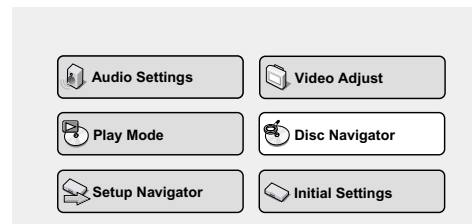
2 Select what you want to play.
Depending on the type of disc you have loaded, the Disc Navigator looks slightly different.

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

💿 Disc Navigator	Title(1-03)	Chapter(1-036) ▲
DVD	Title 01	Chapter 001
	Title 02	Chapter 002
	Title 03	Chapter 003
		Chapter 004
		Chapter 005
		Chapter 006
		Chapter 007
		Chapter 008 ▼
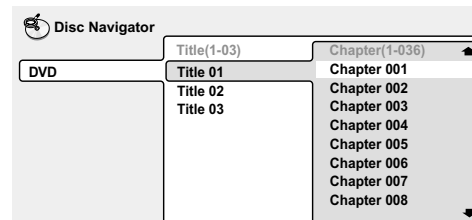
For DVD-Audio discs select a group, or a track within a group.

💿 Disc Navigator	Group(1-03)	Track(1-14) ▲
DVD-Audio	Group 01	Track 01
	Group 02	Track 02
	Group 03	Track 03
		Track 04
		Track 05
		Track 06
		Track 07
		Track 08 ▼
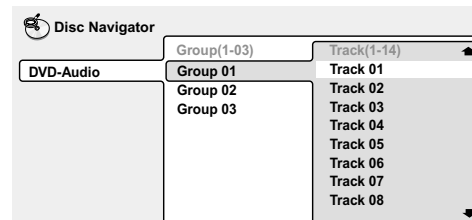
For SACD discs select a track within the current playback area.

Disc Navigator	
	Track(1-009) ⬆ Total Time 40.31
2ch Area	**Track 001**
	Track 002
	Track 003
	Track 004
	Track 005
	Track 006
	Track 007
	Track 008
	⬇
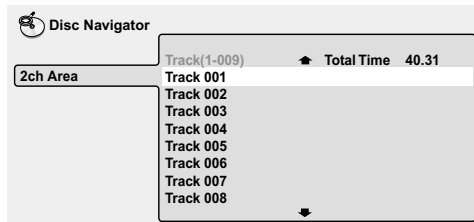
For a VR mode DVD-RW disc select beween the Playlist and Original areas of the disc, or a title. Push the right cursor button to preview the title.

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

Disc Navigator	
DVD-RW	**Title(1-03)**
Original	**01. 3/31 FIRST LEAGUE** ➡
Play List	**02. 4/28 SECOND LEAGUE**
	03. 4/29 FINAL ROUND
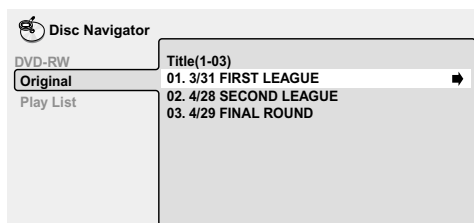
For CDs and Video CDs select a track.

Disc Navigator	
	Track(1-13) ⬆ Total Time 58.27
CD	**Track 01**
	Track 02
	Track 03
	Track 04
	Track 05
	Track 06
	Track 07
	Track 08
	⬇
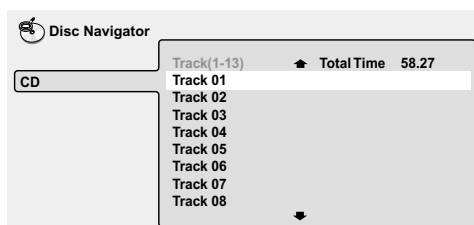
For MP3 discs select a folder, or a track within a folder. (Note that if a folder or track name contains accented or non-roman characters, they may show up with generic names – F_033, T_035, etc.).

Disc Navigator		
	Folder(1-017)	Track(1-010) ⬆
MP3	**001. ACP**	**001. Gravity deluxe**
	002. Nth Degree	**002. Tesla's patent**
	003. Pfeuti	**003. Border dispute**
	004. Live	**004. Delayed by rain**
	005. Glitch music	**005. Accident incident**
	006. CodHead	**006. Pigeon post**
	007. Thermo	**007. Outernational**
	008. Missing Man	**008. Vacuum tube** ⬇
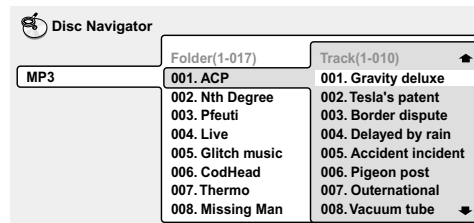
Playback starts after you press **ENTER.**

🔆 Tip

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

Scanning discs

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

1   During playback, press ◄◄ or ►► to start scanning.

2   Press repeatedly to increase the scanning speed.
- MP3s can only be scanned at one speed.
- The scanning speed is shown on-screen.

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

✎ Note

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

Playing in slow motion

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

1   During playback, press ❙❙ (pause).

2   Press and hold ◀❙/◀❙❙ or ❙❙▶/❙▶ until slow motion playback starts.
- The slow motion speed is shown on-screen.
- There is no sound during slow motion playback.

3   Press repeatedly to change the slow motion speed.
- The slow motion speed is displayed on-screen.

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

🖉 **Note**

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

Frame advance/frame reverse

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

1   During playback, press ❙❙ (pause).

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

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

🖉 **Note**

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

Looping a section of a disc

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

⚠ **Important**

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

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

📀 **Play Mode**

A-B Repeat	A(Start Point)
Repeat	B(End Point)
Random	Off
Program	
Search Mode	
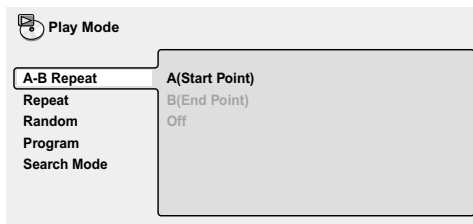
2   Press ENTER on 'A(Start Point)' to set the loop start point.

📀 **Play Mode**

A-B Repeat	A(Start Point)
Repeat	B(End Point)
Random	Off
Program	
Search Mode	
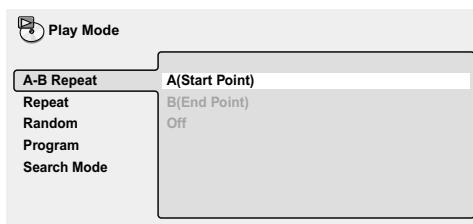
3   Press ENTER on 'B(End Point)' to set the loop end point.

📀 **Play Mode**

A-B Repeat	A(Start Point)
Repeat	B(End Point)
Random	Off
Program	
Search Mode	
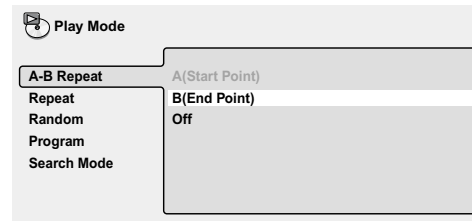
After pressing **ENTER**, playback jumps back to the start point and plays the loop.

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

Using repeat play

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

⚠️ **Important**

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

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

```
🖥 Play Mode

A-B Repeat      Title Repeat
Repeat          Chapter Repeat
Random          Repeat Off
Program
Search Mode
```
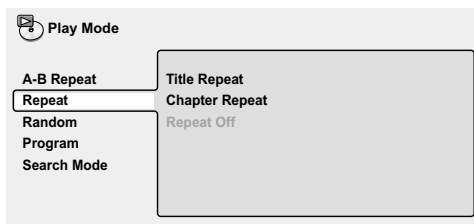
2 Select a repeat play option.
The repeat play options available depend on the type of disc loaded. The screen below appears when a DVD-Video disc is loaded.

```
🖥 Play Mode

A-B Repeat      Title Repeat
Repeat          Chapter Repeat
Random          Repeat Off
Program
Search Mode
```

DVD-Video and DVD-RW discs
• **Title Repeat**
• **Chapter Repeat**
• **Repeat Off**

DVD-Audio discs
• **Group Repeat**
• **Track Repeat**
• **Repeat Off**

SACD, CD and Video CD discs
• **Disc Repeat**
• **Track Repeat**
• **Repeat Off**

MP3 discs
• **Disc Repeat**
• **Folder Repeat**
• **Track Repeat**
• **Repeat Off**

⚙️ **Tip**

• If you've made a program list, the **Program Repeat** option also appears as a repeat option.

• To stop the disc and cancel repeat play, press ■ (stop).

• You can also cancel repeat play without stopping playback by pressing **CLEAR**. The disc will play to the end, then stop.

✏️ **Note**

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

• If you switch camera angle during repeat play, repeat play is canceled.

Using random play

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

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

⚠ **Important**

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

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

🔲 Play Mode	
A-B Repeat	**Random Title**
Repeat	**Random Chapter**
Random	Random Off
Program	
Search Mode	
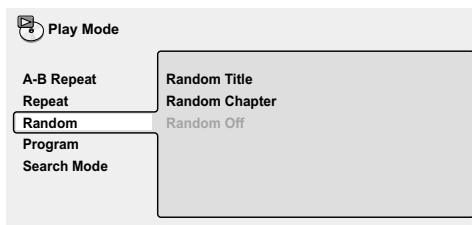
2   Select a random play option.
The random play options available depend on the type of disc loaded. The screen below appears when a DVD-Video disc is loaded.

🔲 Play Mode	
A-B Repeat	**Random Title**
Repeat	**Random Chapter**
Random	Random Off
Program	
Search Mode	

DVD-Video discs
- **Random Title**
- **Random Chapter**
- **Random Off**

DVD-Audio discs
- **Random Group**
- **Random Track**
- **Random Off**

MP3, CD and Video CD discs
- **On**
- **Off**

💡 **Tip**

- To stop the disc and cancel random playback, press ■ (stop).

- You can also cancel random playback without stopping the disc by presssing **CLEAR**. The disc will play to the end, then stop.

- During random play, the I◀◀ and ▶▶I buttons function a little differently to normal: I◀◀ returns to the beginning of the current track/chapter. You can't go back further than this. ▶▶I selects another track/chapter at random from those remaining.

- You can't use random play together with program or repeat play.

Creating a program list

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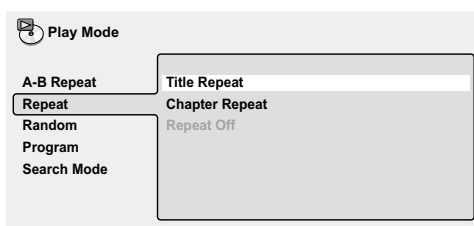
⚠ **Important**

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

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

🖳 Play Mode	
A-B Repeat	Create/Edit
Repeat	Playback Start
Random	Playback Stop
Program	Program Delete
Search Mode	Program Memory ▷ Off

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

🖳 Play Mode	
A-B Repeat	Create/Edit
Repeat	Playback Start
Random	Playback Stop
Program	Program Delete
Search Mode	Program Memory ▷ Off
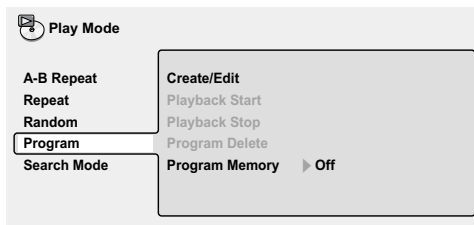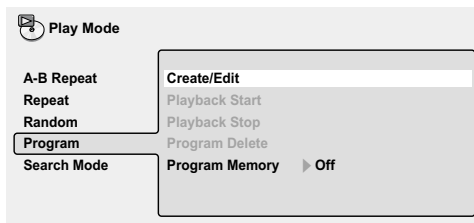
The Program edit screen that appears depends on the kind of disc loaded.

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

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

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

- To add a title, select the title.

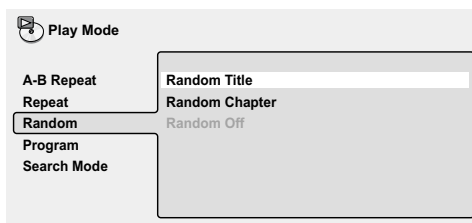| 🖳 Program		
Program Step	Title(1-03)	Chapter(1-036)
01. 01	Title 01	Chapter 001
02.	Title 02	Chapter 002
03.	Title 03	Chapter 003
04.		Chapter 004
05.		Chapter 005
06.		Chapter 006
07.		Chapter 007
08.		Chapter 008

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

🖳 Program		
Program Step	Title(1-03)	Chapter(1-036) ⬆
01. 01-003	Title 01	Chapter 001
02.	Title 02	Chapter 002
03.	Title 03	Chapter 003
04.		Chapter 004
05.		Chapter 005
06.		Chapter 006
07.		Chapter 007
08.		Chapter 008 ⬇
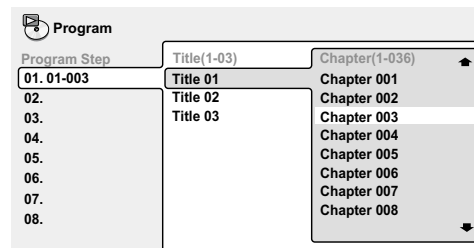
For a DVD-Audio disc, you can add a whole group, or a track within a group to the program list.

- To add a group, select the group.

🖳 Program		
Program Step	Group(1-03)	Track(1-14)
01. 01	Group 01	Track 01
02.	Group 02	Track 02
03.	Group 03	Track 03
04.		Track 04
05.		Track 05
06.		Track 06
07.		Track 07
08.		Track 08
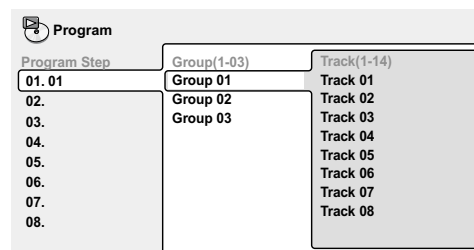
- To add a track, first highlight the group, then move the cursor right and select a track from the list.

Program		
Program Step	**Group(1-03)**	**Track(1-14)** ⬆
01. 01-03	**Group 01**	**Track 01**
02.	**Group 02**	**Track 02**
03.	**Group 03**	**Track 03**
04.		**Track 04**
05.		**Track 05**
06.		**Track 06**
07.		**Track 07**
08.		**Track 08** ⬇

For SACD, CD or Video CD/Super VCD, select a track to add to the program list.

(The screen below shows a CD loaded.)

Program		
Program Step	**Track(1-12)** ⬆	**Total Time 0.00**
01. 04	**Track 01**	
02.	**Track 02**	
03.	**Track 03**	
04.	**Track 04**	
05.	**Track 05**	
06.	**Track 06**	
07.	**Track 07**	
08.	**Track 08** ⬇	

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

- To add a folder, select the folder.

Program		
Program Step	**Folder(1-006)**	**Track(1-010)**
01. 001	**001. ACP**	**001. Gravity deluxe**
02.	**002. Nth Degree**	**002. Tesla's patent**
03.	**003. Pfeuti**	**003. Border dispute**
04.	**004. Live**	**004. Delayed by rain**
05.	**005. Glitch music**	**005. Accident incident**
06.	**006. CodHead**	**006. Pigeon post**
07.		**007. Outernational**
08.		**008. Vacuum tube**

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

Program		
Program Step	**Folder(1-006)**	**Track(1-010)** ⬆
01. 001-003	**001. ACP**	**001. Gravity deluxe**
02.	**002. Nth Degree**	**002. Tesla's patent**
03.	**003. Pfeuti**	**003. Border dispute**
04.	**004. Live**	**004. Delayed by rain**
05.	**006. CodHead**	**005. Accident incident**
06.		**006. Pigeon post**
07.		**007. Outernational**
08.		**008. Vacuum tube** ⬇

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

4 Repeat step 3 to build up a program list.
A program list can contain up to 24 titles/chapters/groups/folders/tracks.

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

🎖 Tip

- To exit the program edit screen without starting playback, press **PLAY MODE** or **SETUP**. (Don't press **RETURN**—your program list will be lost.)

- During program play, press ▶▶I to skip to the next program step.

- Press **CLEAR** during playback (though not if the program list OSD is displayed) to switch off program play. Press while stopped to erase the program list.

Editing a program list

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

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

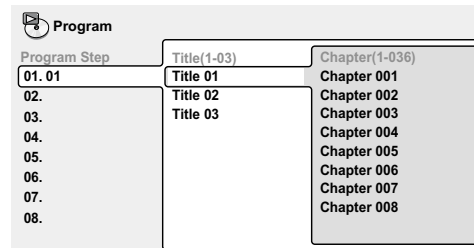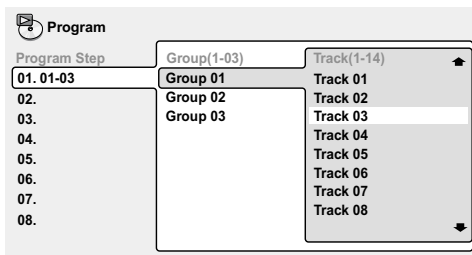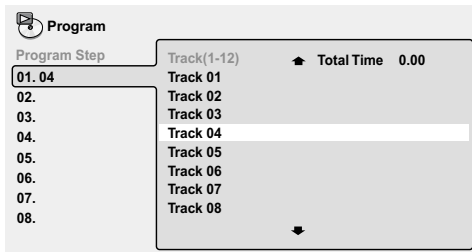**2   Select 'Create/Edit' from the list of program options.**

3   To clear a step, highlight the step number and press CLEAR.

4   To insert a step in the middle of the program list, highlight the step where you want the new step to appear, then select a title/group/chapter/folder/track to add.
After pressing **ENTER**, the new step is inserted into the list.

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

☼ Tip

• To exit the program edit screen without starting playback, press **PLAY MODE** or **SETUP**.

• If you want to exit the program edit screen without saving the changes you made, press **RETURN**.

Other functions available from the program menu

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

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

```
 🖻  Play Mode

   A-B Repeat        Create/Edit
   Repeat            Playback Start
   Random            Playback Stop
   Program           Program Delete
   Search Mode       Program Memory   ▸ Off
```
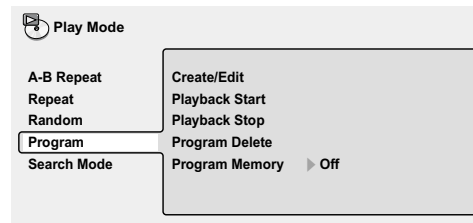
2   Select a program play function.
• **Create/Edit** –

• **Playback Start** – Starts playback of the program list

• **Playback Stop** – Turns off program play, but does not erase the program list

• **Program Delete** – Erases the program list and turns off program play

• **Program Memory** (DVD-Video only) – Select **On** to save the program list for the disc loaded. (Select **Off** to cancel the program memory for the disc loaded)

☼ Tip

• After saving a program list using the Program Memory feature, whenever you load that disc, the program list is automatically recalled and program play switched on.

• You can save program lists for up to 24 discs. After that, the oldest one is replaced with the new one saved.

Searching a disc

Using the search mode function from the Play Mode menu you can quickly jump to a particular part of the disc that you're watching or listening to.
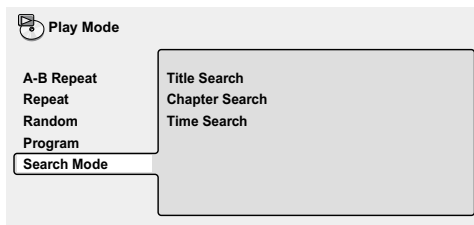
1   Press PLAY MODE and select 'Search Mode' from the list of functions on the left.

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

2   Select a search mode.

3   Use the number buttons to enter a title, group, chapter, page, folder or track number, or a time.
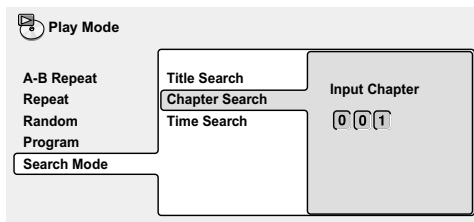
- For a time search, enter the number of minutes and seconds into the currently playing title (DVD-Video/DVD-RW) or track (Video CD) you want playback to resume from. For example, press **4**, **5**, **0**, **0** to have playback start from 45 minutes into the disc. For 1 hour, 20 minutes and 30 seconds, press **8**, **0**, **3**, **0**.

- Some DVD-Audio discs feature pages of browsable pictures. Enter the page number you want.

4   Press ENTER to start playback.

📝 **Note**

- You can only use time search with DVD-Video and Video CD discs.

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

- Search functions are not available with Video CDs/Super VCD in PBC mode (start non-PBC playback by stopping playback, then pressing ►►I, then ► (play)).

- You can often select what you want to watch from a DVD disc menu.

Switching subtitles

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

1   Press SUBTITLE repeatedly to select a subtitle option.

> Subtitle   1 English

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

> Subtitle   1 English
>
> **Off**
> **1. English**
> **2. French**
> **3. German**
> **4. Italian**
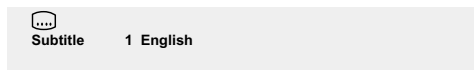>   1/ 1

📝 Note

- Some discs only allow you to change subtitle language from the disc menu. Press **TOP MENU** to access.

- To set subtitle preferences, see *Subtitle Language*.

Switching DVD-Video audio language

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

1   Press AUDIO repeatedly to select an audio language option.

> Audio   2 French   Dolby Digital 3/2.1CH

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

> Audio   2 French   Dolby Digital 3/2.1CH
>
> **1. English   Dolby Digital 3/2.1CH**
> **2. French   Dolby Digital 3/2.1CH**
> **3. German   Dolby Digital 2CH**
> **4. Italian   Dolby Digital 2CH**
>   1/ 1

📝 Note

- Some discs only allow you to change audio language from the disc menu. Press **TOP MENU** to access.

- To set audio language preferences, see *Audio Language.*

Switching DVD-RW audio channel

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

1 Press AUDIO repeatedly to select an audio channel option.

◯◯◯		
Audio	**1L**	**Dolby Digital 1+1CH**
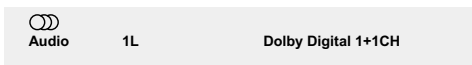
Switching DVD-Audio audio channel

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

1 Press AUDIO repeatly to select an audio channel option.

◯◯◯		**Digital Out Converted**
Audio	**1**	**Linear PCM 192kHz24bit**
		2CH

When you change the audio channel, playback restarts from the beginning of the current track.
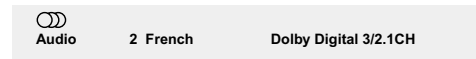
> 📝 **Note**

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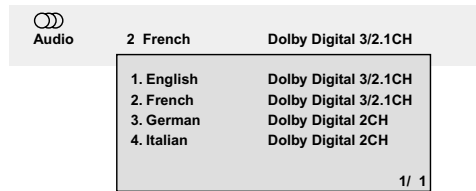
- To set audio language preferences, see *Audio Language.*

Switching CD/MP3/Video CD audio channel

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

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

1 Press AUDIO repeatly to select an audio channel option.

◯◯◯	
Audio	**Stereo**
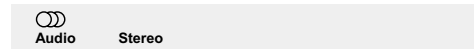
Switching camera angles

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

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

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

Displaying disc information

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

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

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

- DVD-Video displays

Play	▶	DVD			
	Current / Total	**Elapsed**		**Remain**	**Total**
Title	1/3	2.23		138.36	138.59
Audio	1 English Dolby Digital 3/2.1CH		Subtitle 1 English		Angle 1

Play	▶	DVD			
	Current / Total	**Elapsed**	**Remain**		**Total**
Chapter	2/36	0.06	1.40		1.46
#	Tr. Rate :	▮▮▮▮▮▮▮▮▮			6.0Mbps

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

Pause	∥	DVD			
	Current / Total	**Elapsed**		**Remain**	**Total**
Chapter	2/36	0.06 15		1.40	1.46
	Tr. Rate :	▮▮▮▮▮▮▮▮▮			6.0Mbps

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

- DVD-Audio displays

Play	▶	DVD-Audio			
	Current / Total	**Elapsed**	**Remain**	**Total**	
Track	1/14	3.20	2.41	6.01	
Audio	1 Linear PCM 192kHz 24bit 2/0CH		Subtitle - -		Angle 1

Play	▶	DVD -Audio			
	Current / Total	**Elapsed**	**Remain**	**Total**	
Group	1/3	3.21	53.20	56.41	
	Tr. Rate :	▮▮▮▮▮▮▮▮▮▮▮		9.5Mbps	

- DVD-RW displays

Play	▶	DVD-RW Original			
	Current / Total	**Elapsed**	**Remain**	**Total**	
Title	1/32	0.08	30.22	30.30	
Audio	1 Dolby Digital 2/0CH		Subtitle - -		

Play	▶	DVD-RW Original	
	Current / Total		
Chapter	1/1		
Tr. Rate	▮▮▮▮▮		4.3Mbps

- SACD displays

Play	▶	SACD		
	Current / Total	**Elapsed**	**Remain**	**Total**
Track	1/9	0.22	3.38	4.00

(During multichannel playback only)

Play	▶	SACD		
	Current / Total	**Elapsed**	**Remain**	**Total**
Track	1/9	0.22	3.38	4.00
Audio	3/2.1CH			

Play	▶	SACD		
		Elapsed	**Remain**	**Total**
Disc		0.24	40.07	40.31

- CD and Video CD displays

Play	▶	VCD		
		Elapsed	**Remain**	**Total**
Disc		0.23	58.51	57.14

Play	▶	VCD		
	Current / Total	**Elapsed**	**Remain**	**Total**
Track	2/16	0.23	4.20	4.43

(During PBC playback only)

Play	▶	VCD

- MP3 disc displays

Play	▶	MP3		
	Current / Total	**Elapsed**	**Remain**	**Total**
Track	1/17	0.18	12.42	13.00
Track Name	Outernational			

Play	▶	MP3
	Current / Total	
Folder	2/7	
Folder Name	ACP	

🔧 Tip

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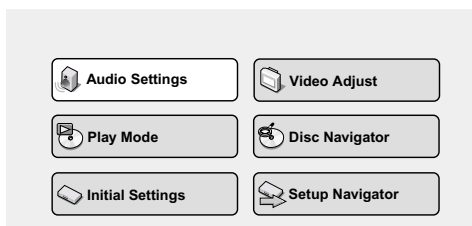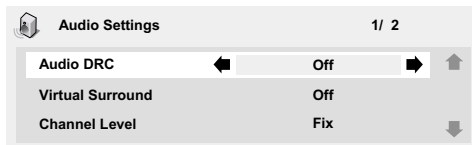
Audio DRC

• Default setting: **Off**

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

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

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

🔊 Audio Settings	📺 Video Adjust
📼 Play Mode	💿 Disc Navigator
📀 Initial Settings	➡ Setup Navigator

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

🔊 Audio Settings		1/ 2	
Audio DRC	◀	Off	▶ 🔼
Virtual Surround		Off	
Channel Level		Fix	🔽

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

📝 Note

• Audio DRC is only effective with Dolby Digital audio sources.

• Audio DRC is only effective through the digital output when **Digital Out** is set to **On**, and **Dolby Digital Out** is set to **Dolby Digital > PCM**. See **page 53**.

• The effect of Audio DRC depends on your speakers and AV receiver settings.
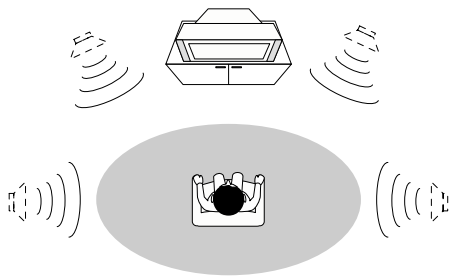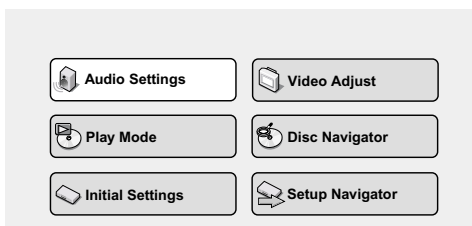
Virtual Surround

- Default setting: **Off**

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

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

TruSurround™
by **SRS(●)**°

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

🔲 Audio Settings	🔲 Video Adjust
🔲 Play Mode	🔲 Disc Navigator
🔲 Initial Settings	🔲 Setup Navigator

2 Highlight TruSurround, then use the cursor left/right buttons to change to '⫿⫿V/ TruSurround' or 'Off', as required.

🔲 Audio Settings		1/ 2
Audio DRC	Off	⬆
Virtual Surround ◀	Off ➡	
Channel Level	Fix	⬇
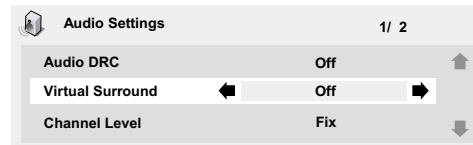
3 Press ENTER to make the setting and exit the Audio Settings screen.

💠 **Tip**

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

📝 **Note**

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

Channel Level

• Default setting: **Fix / all speakers 10 ft.**

This setting allows you to set the level of each channel sent to the 5.1 channel analog outputs, and to set the distance of the speakers from your listening position so that the player can optimize the surround sound.
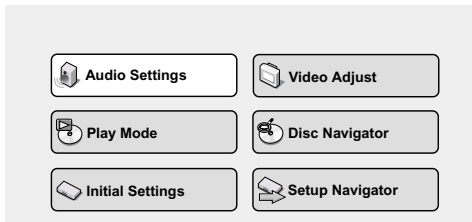
**1 Press SETUP and select 'Audio Settings' from the on-screen display.**

🔊 **Audio Settings**	📺 **Video Adjust**
🎵 **Play Mode**	💿 **Disc Navigator**
🔷 **Initial Settings**	📂 **Setup Navigator**

2 Highlight Channel Level, then use the cursor left/right buttons to change to 'Fix' or 'Variable', as required.

🔊 Audio Settings		1/ 2	
Audio DRC	Off		🔼
Virtual Surround	Off		
Channel Level	◀ Fix	▶	🔽

• **Fix** – Channel levels are fixed, but you can set the speaker distances

• **Variable** – You can specify variable channel levels as well as speaker distances

3 If you chose Variable, move the cursor button down to proceed to the next screen.

🔊 Audio Settings		1/ 3	
Audio DRC	Off		🔼
Virtual Surround	Off		
Channel Level	◀ Variable	▶	🔽
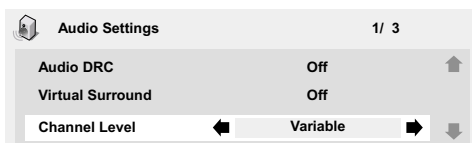
4 Variable setting only: Set the channel levels for each speaker.

🔊 Audio Settings		2/ 3	
Channel Level L	◀ 0.0 dB	▶	🔼
Channel Level C	0.0 dB		
Channel Level R	0.0 dB		
Channel Level RS	0.0 dB		
Channel Level LS	0.0 dB		
Channel Level SW	0.0 dB		🔽

• Use the cursor up/down buttons to select a speaker.

• Use the cursor left/right buttons to adjust th channel level for that speaker.

Channel levels can be set from –6 dB to +6 dB. in 0.5 dB increments.

After setting up all the channel levels, move the cursor button down until you reach the speaker distance setting screen.

5   Fix and Variable settings: Set the distance for each speaker.

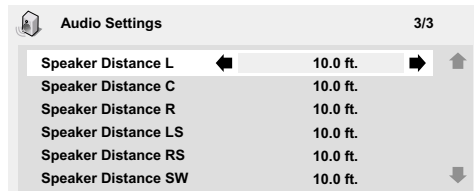| ⬢ Audio Settings			3/3
Speaker Distance L	⬅	**10.0 ft.**	➡ ⬆
Speaker Distance C		**10.0 ft.**	
Speaker Distance R		**10.0 ft.**	
Speaker Distance LS		**10.0 ft.**	
Speaker Distance RS		**10.0 ft.**	
Speaker Distance SW		**10.0 ft.**	⬇

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

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

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

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

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

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

📝 **Note**

- The speaker distance settings have no effect on SACD playback. The channel level settings, however, do apply.
- You can't adjust the channel level for any speakers that are set to **Off** in the **Speaker Installation** menu screen.

- The **Fix** setting is equivalent to setting all the channel levels to **+6 dB**. Therefore, the **Variable** setting will usually sound quieter than the **Fix** setting.

NOTE: THE DVP4000 VIDEO SETTINGS
FOR THE DVD TRANSPORT HAVE BEEN
PRE-ALIGNED BY FAROUDJA. VIDEO
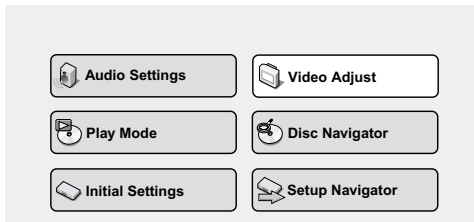IMAGE ADJUSTMENTS SHOULD BE ONLY
MADE IN THE VIDEO PROCESSOR MENU

Video Adjust
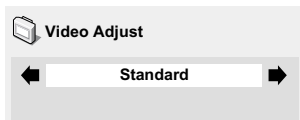
• Default setting: **Standard**

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

**1   Press SETUP and select 'Video Adjust'
from the on-screen display.**
You can also access these settings by
pressing **V.ADJ (VIDEO ADJUST)**.

📻 **Audio Settings**	📺 **Video Adjust**
📑 **Play Mode**	💿 **Disc Navigator**
📄 **Initial Settings**	🔧 **Setup Navigator**

**2   Use the cursor left/right buttons to
select a preset.**

📺 **Video Adjust**

◀   **Standard**   ▶

• **Standard** – Normal

• **I. Memory1–2 / P. Memory1–2** – Use
for making your own interlaced /
progressive presets (see below)

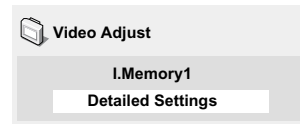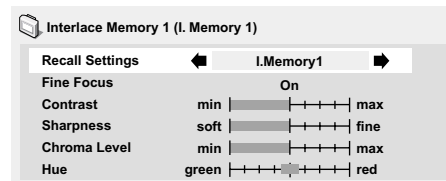**3   Press ENTER to make the setting and
exit the Video Adjust screen.**

> 📝 **Note**
>
> • Depending on the disc and the TV/
> monitor, you may not see the effect
> clearly.

Creating your own output presets

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

**2   Press the down button to select
'Detailed Settings' then press ENTER.**

📺 **Video Adjust**

I.Memory1
Detailed Settings

3   Adjust the picture quality settings.

📺 **Interlace Memory 1 (I. Memory 1)**

Recall Settings	◀ I.Memory1 ▶	
Fine Focus	**On**	
Contrast	min ├──┼┼┼┼┤	max
Sharpness	soft ├──┼┼┼┼┤	fine
Chroma Level	min ├──┼┼┼┼┤	max
Hue	green ├┼┼┼┼┼┼┤	red

• Use the curser buttons to select a
setting.

• Use the curser buttons to adjust the
current setting.

• Press **DISPLAY** to switch between full
and single view.

• You can change the preset number from
the **Recall Settings** menu item.

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

• **Fine Focus** – Switch **On** to reveal
greater detail (high resolution) in the
picture.

• **Contrast** – Adjusts the contrast
between light and dark elements in the
picture.

• **Sharpness** – Adjusts the sharpness of
the mid-frequency (less detailed)
elements in the picture. (This setting is
only effective when **Fine Focus** is **On**.)

• **Chroma Level** – Adjusts how saturated
colours appear.

• **Hue** – Adjusts the overall colour
balance between red and green. (This is
only effective when the player is
connected using the **VIDEO OUT** or
**S-VIDEO OUT** jacks.)

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

Using the Initial Settings menu

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

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

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

🔊 Audio Settings	📺 Video Adjust
📑 Play Mode	💿 Disc Navigator
📂 Initial Settings	🔍 Setup Navigator
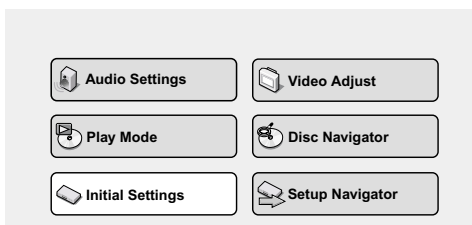
2 Select the setup category from the list on the left, then select an item from the menu list to the right.

3 Make the setting you want.

Digital Audio Out settings

Digital Out

- Default setting: **On**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.
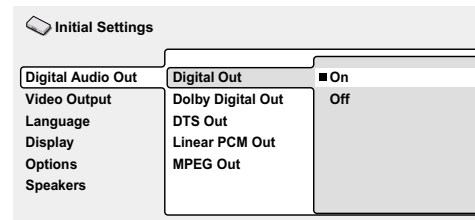
If at any time you need to switch off the digital audio output, set this to **Off**, otherwise leave it **On**.

> 📝 **Note**

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

Dolby Digital Out

- Default setting: **Dolby Digital**

You only need to make this setting if you connected this system to an AV receiver (or other component) using one of the digital outputs.
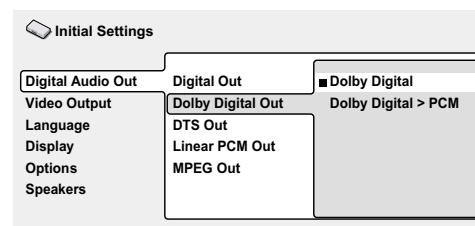
If your AV receiver (or other connected component) is Dolby Digital compatible, set to **Dolby Digital**, otherwise set to **Dolby Digital > PCM**.

Initial Settings

Digital Audio Out	Digital Out	■ Down Sample On
Video Output	Dolby Digital Out	Down Sample Off
Language	DTS Out	
Display	Linear PCM Out	
Options	MPEG Out	
Speakers		

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

✎ **Note**

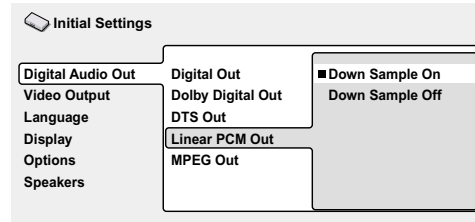• Even when set to **Down Sample Off**, some discs will still output down-sampled audio through the digital outputs (you only get full sampling rate audio through the analog outputs).

• High sampling rate DVD-Audio discs (192kHz or 176.2kHz) automatically output down-sampled audio through the digital outputs.

MPEG Out

• Default setting: **MPEG > PCM**

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

Initial Settings

Digital Audio Out	Digital Out	MPEG
Video Output	Dolby Digital Out	■ MPEG > PCM
Language	DTS Out	
Display	Linear PCM Out	
Options	MPEG Out	
Speakers		

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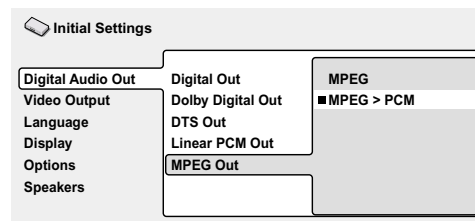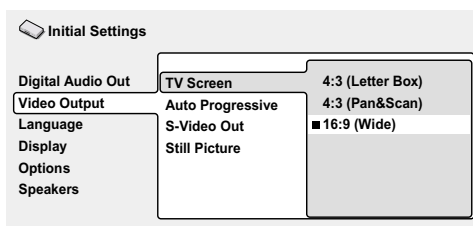
Video Output settings

TV Screen

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

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

If you have a conventional TV, select either **4:3 (Letter Box)** or **4:3 (Pan & Scan)**. In Letter Box mode, widescreen software is shown with black bars at the top and bottom of the screen. Pan & Scan chops the sides off widescreen material to make it fit the 4:3 screen (so even though the image looks larger on the screen, you're actually seeing less of the picture). See also **page 70**.

Note: THE VIDEO OUTPUT SETTINGS HAVE BEEN OPTIMIZED BY FAROUDJA. DO NOT CHANGE SETTINGS.

Auto Progressive

- Default setting: **Off**

You only need to make this setting if you connected this player to your TV using the component video outputs.
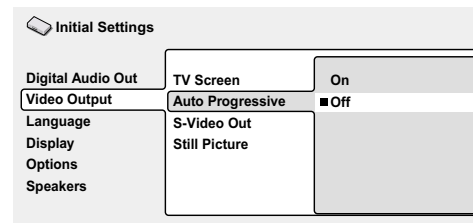
When set to **On**, 16:9 format DVD-Video discs are output as progressive video, while 4:3 format discs are output as interlaced video. DVD-RW, DVD-Audio and Video CD discs are always output as 4:3 interlace video. This corrects a problem with some TVs that display 4:3 material stretched when fed a progressive scan signal. If you do not experience this problem you can leave this setting as **Off**.

S-Video Out

- Default setting: **S2**

NOTE: *S-VIDEO OUTPUT NOT AVAILABLE*

Still Picture

• Default setting: **Auto**

```
⬭ Initial Settings

Digital Audio Out    TV Screen          Field
Video Output         Auto Progressive   Frame
Language             S-Video Out        ■ Auto
Display              Still Picture
Options
Speakers
```

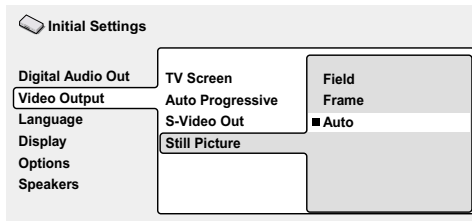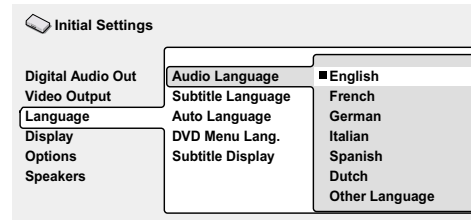This player uses one of two processes when displaying a still frame from a DVD disc. The default **Auto** setting automatically chooses the best setting each time.

• **Field** – produces a stable, generally shake-free image

• **Frame** – produces a sharper image, but more prone to shake than field stills

Language settings

Audio Language

• Default setting: **English**

```
⬭ Initial Settings

Digital Audio Out    Audio Language      ■ English
Video Output         Subtitle Language     French
Language             Auto Language         German
Display              DVD Menu Lang.        Italian
Options              Subtitle Display      Spanish
Speakers                                   Dutch
                                           Other Language
```

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

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

☀ Tip

• You can switch between the languages recorded on a DVD disc during playback using the **AUDIO** button. (This does not affect this setting.).

• Some DVD discs set the audio language automatically when loaded, overriding the audio language you set in the Initial Settings menu.

• Discs with two or more audio languages usually allow you to select the audio language from the disc menu. Press **TOP MENU** to access the disc menu.

Subtitle Language

- Default setting: **English**

Initial Settings		
Digital Audio Out	Audio Language	■ English
Video Output	Subtitle Language	French
Language	Auto Language	German
Display	DVD Menu Lang.	Italian
Options	Subtitle Display	Spanish
Speakers		Dutch
		Other Language

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

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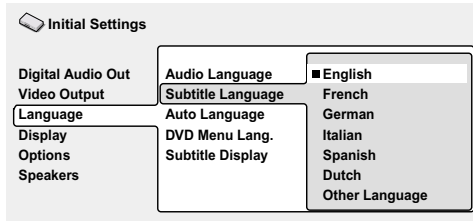
☀ Tip

- You can change or switch off the subtitles on a DVD disc during playback using the **SUBTITLE** button. (This does not affect this setting.).

- Some DVD discs set the subtitle language automatically when loaded, overriding the subtitle language you set in the Initial Settings menu.

- Discs with two or more subtitle languages usually allow you to select the subtitle language from the disc menu. Press **TOP MENU** to access the disc menu.

Auto Language

- Default setting: **On**

Initial Settings		
Digital Audio Out	Audio Language	■ On
Video Output	Subtitle Language	Off
Language	Auto Language	
Display	DVD Menu Lang.	
Options	Subtitle Display	
Speakers		

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

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

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

☀ Tip

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

DVD Menu Language

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

Some multilingual discs have disc menus in several languages. This setting specifies in which language the disc menus should appear. Leave on the default setting for menus to appear in the same language as your Subtitle Language.
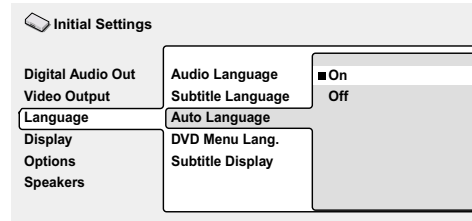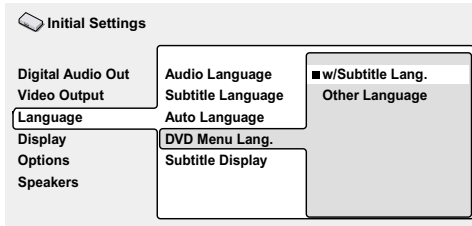
The DVD-Video format recognizes 136 different languages. Select **Other Language** if you want to specify a language other than those listed. See also *Selecting languages using the language code list* .

Subtitle Display

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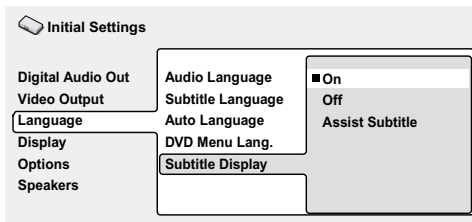
When set to **On**, the player displays subtitles according to the Subtitle Language and Auto Language settings. Set to **Assist Subtitle** to have the player display the extra assistive subtitles recorded on to some DVD discs. Set to **Off** to switch subtitles off altogether.

Display settings

OSD Language

• Default setting: **English**
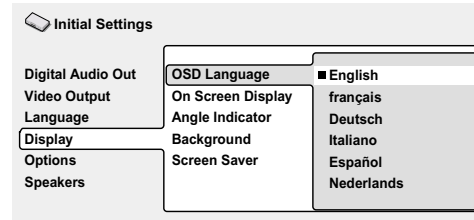
This sets the language of this player's on-screen displays.

On Screen Display

• Default setting: **On**

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

Angle Indicator

• Default setting: **On**

```
 Initial Settings

Digital Audio Out      OSD Language        ■ On
Video Output           On Screen Display     Off
Language               Angle Indicator
Display                Background
Options                Screen Saver
Speakers
```

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

Background

• Default setting: **Pioneer Logo**

```
 Initial Settings

Digital Audio Out      OSD Language        ■ Pioneer Logo
Video Output           On Screen Display     Black
Language               Angle Indicator
Display                Background
Options                Screen Saver
Speakers
```

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

Screen Saver

• Default setting: **On**

```
 Initial Settings

Digital Audio Out      OSD Language        ■ On
Video Output           On Screen Display     Off
Language               Angle Indicator
Display                Background
Options                Screen Saver
Speakers
```
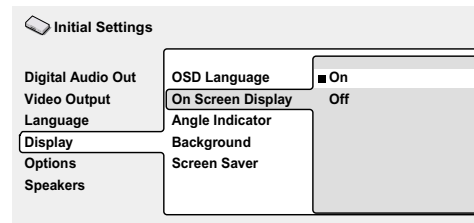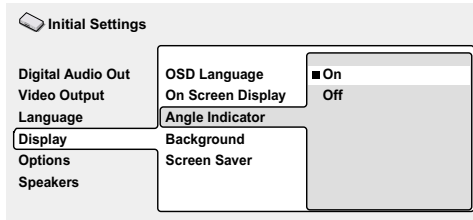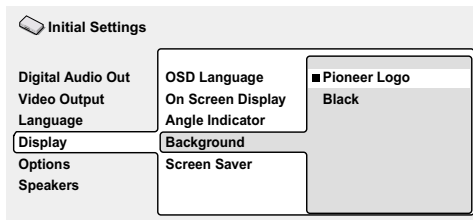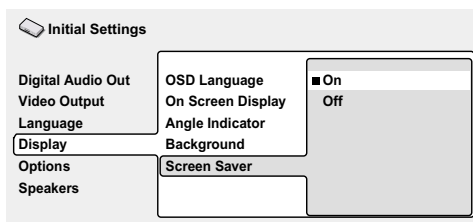
If a constant image is displayed on a conventional CRT-type TV, it can 'burn in' leaving a ghost image on the screen. Switch to **On** to make sure that a constant image is not displayed for a dangerously long time.

Options

Parental Lock

• Default level: **Off**

• Default password: **none**

• Default country code: **us (2119)**

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

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

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

 Note

• Not all discs that you may consider inappropriate for your children use the Parental Lock feature. These discs will always play without requiring the password first.

• If you forget your password, you'll need to reset the player to it's factory settings, then register a new pass-word.

Registering a new password

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

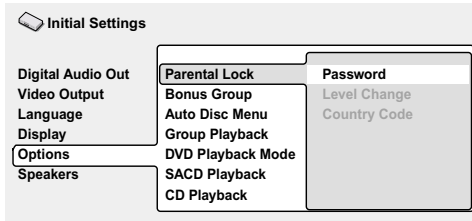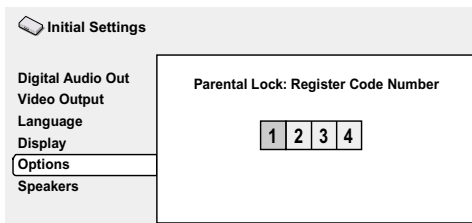**1   Select 'Password'.**

```
◇ Initial Settings

Digital Audio Out      Parental Lock       Password
Video Output           Bonus Group         Level Change
Language               Auto Disc Menu      Country Code
Display                Group Playback
 Options               DVD Playback Mode
Speakers               SACD Playback
                       CD Playback
```

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

```
◇ Initial Settings

Digital Audio Out      Parental Lock: Register Code Number
Video Output
Language                        1  2  3  4
Display
 Options
Speakers
```

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

3   Press ENTER to register the password and return to the Options menu screen.
If you forget your password, you can reset the system then register a new one.

Changing your password

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

1   Select 'Password Change'.

```
◇ Initial Settings

Digital Audio Out      Parental Lock       Password Change
Video Output           Bonus Group         Level Change
Language               Auto Disc Menu      Country Code
Display                Group Playback
 Options               DVD Playback Mode
Speakers               SACD Playback
                       CD Playback
```
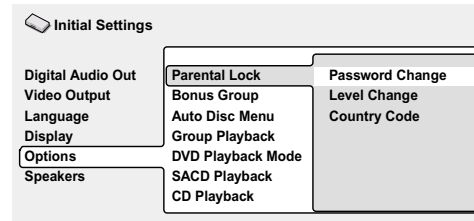
2   Use the number buttons to enter your existing password, then press ENTER.
  • The numbers appear as asterisks as you enter them.

```
◇ Initial Settings

Digital Audio Out      Parental Lock : Password Change
Video Output
Language               Password     1  *  *  *
Display
 Options               New Password
Speakers
```

3   Enter a new password.

```
◇ Initial Settings

Digital Audio Out      Parental Lock : Password Change
Video Output
Language               Password     *  *  *  *
Display
 Options               New Password  2  3  4  5
Speakers
```
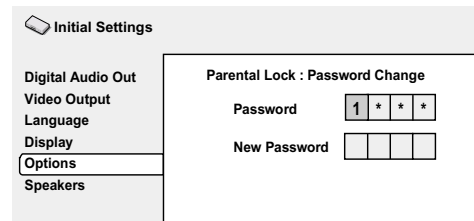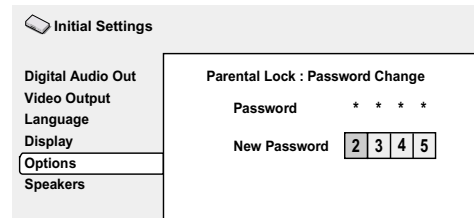
4   Press ENTER to register the new password and return to the Options menu screen.

Setting/changing the Parental Lock level

1   Select 'Level Change'.

◇ **Initial Settings**		
Digital Audio Out	**Parental Lock**	**Password Change**
Video Output	**Bonus Group**	**Level Change**
Language	**Auto Disc Menu**	**Country Code**
Display	**Group Playback**	
Options	**DVD Playback Mode**	
Speakers	**SACD Playback**	
	CD Playback	

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

◇ **Initial Settings**	
Digital Audio Out	**Parental Lock : Level Change**
Video Output	**Password 1 * * ***
Language	
Display	
Options	
Speakers	**1 2 3 4 5 6 7 8 off**

3   Select a new level.

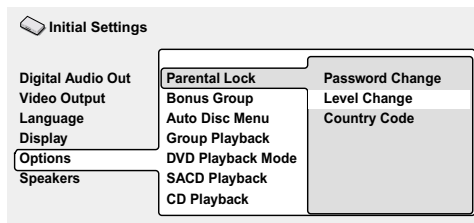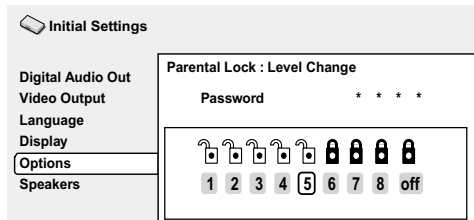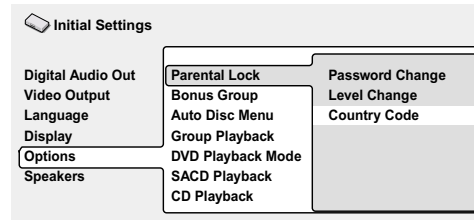|	
◇ **Initial Settings**	
Digital Audio Out	**Parental Lock : Level Change**
Video Output	**Password * * * ***
Language	
Display	
Options	
Speakers	**1 2 3 4 5 6 7 8 off**

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

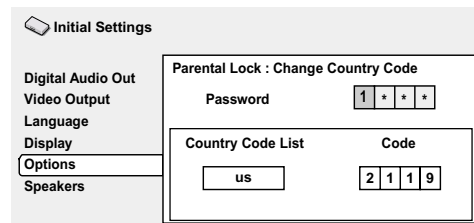**4   Press ENTER to set the new level and return to the Options menu screen.**

Setting/changing the Country Code
You may also want to refer to the Country code list.
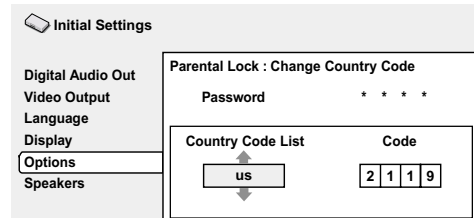
1   Select 'Country Code'.

◇ **Initial Settings**		
Digital Audio Out	**Parental Lock**	**Password Change**
Video Output	**Bonus Group**	**Level Change**
Language	**Auto Disc Menu**	**Country Code**
Display	**Group Playback**	
Options	**DVD Playback Mode**	
Speakers	**SACD Playback**	
	CD Playback	

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

◇ **Initial Settings**	
Digital Audio Out	**Parental Lock : Change Country Code**
Video Output	**Password 1 * * ***
Language	
Display	**Country Code List Code**
Options	
Speakers	**us 2 1 1 9**

3   Select a country code.
There are two ways you can do this.

• Select by code letter: Use the cursor up/down buttons to change the country code.

◇ **Initial Settings**	
Digital Audio Out	**Parental Lock : Change Country Code**
Video Output	**Password * * * ***
Language	
Display	**Country Code List Code**
Options	
Speakers	**us 2 1 1 9**

• Select by code number:

Initial Settings

Digital Audio Out
Video Output
Language
Display
Options
Speakers

Parental Lock : Change Country Code

Password   *   *   *   *

Country Code List   Code

us   2 1 1 9

Initial Settings

Digital Audio Out
Video Output
Language
Display
Options
Speakers

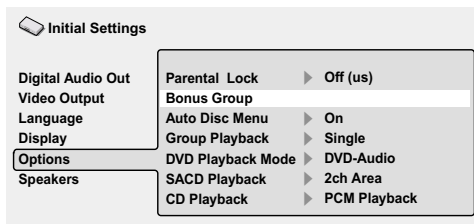Bonus Group : Key Number Input

2 * * *

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

✎ **Note**

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

Bonus Group

Initial Settings

Digital Audio Out
Video Output
Language
Display
Options
Speakers

Parental Lock	▶	Off (us)
Bonus Group		
Auto Disc Menu	▶	On
Group Playback	▶	Single
DVD Playback Mode	▶	DVD-Audio
SACD Playback	▶	2ch Area
CD Playback	▶	PCM Playback

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

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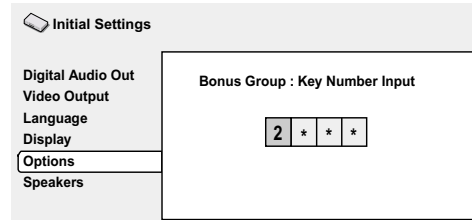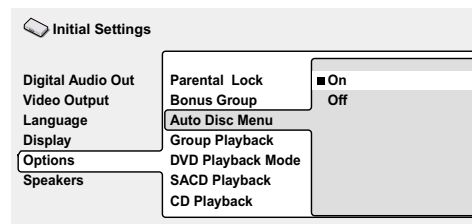
✎ **Note**

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

Auto Disc Menu

• Default setting: **On**

Initial Settings

Digital Audio Out
Video Output
Language
Display
Options
Speakers

Parental Lock	■On
Bonus Group	Off
Auto Disc Menu	
Group Playback	
DVD Playback Mode	
SACD Playback	
CD Playback	

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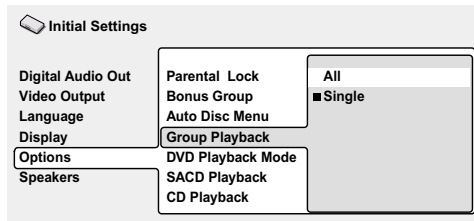
✎ **Note**

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

Group Playback

• Default setting: **Single**

```
  Initial Settings

Digital Audio Out    Parental  Lock        All
Video Output         Bonus Group        ▪ Single
Language             Auto Disc Menu
Display              Group Playback
Options              DVD Playback Mode
Speakers             SACD Playback
                     CD Playback
```

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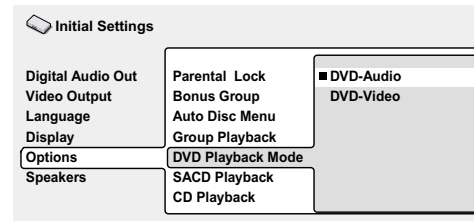(You cannot use the track skip I◄◄ / ►►I or scan buttons ◄◄ / ►► in this mode.)

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

> 📝 **Note**

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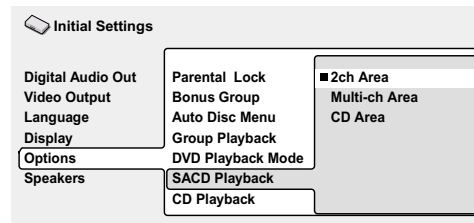
DVD Playback Mode

• Default setting: **DVD-Audio**

```
  Initial Settings

Digital Audio Out    Parental  Lock     ▪ DVD-Audio
Video Output         Bonus Group          DVD-Video
Language             Auto Disc Menu
Display              Group Playback
Options              DVD Playback Mode
Speakers             SACD Playback
                     CD Playback
```

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

SACD Playback

• Default setting: **2ch Area**

```
  Initial Settings

Digital Audio Out    Parental  Lock     ▪ 2ch Area
Video Output         Bonus Group          Multi-ch Area
Language             Auto Disc Menu       CD Area
Display              Group Playback
Options              DVD Playback Mode
Speakers             SACD Playback
                     CD Playback
```
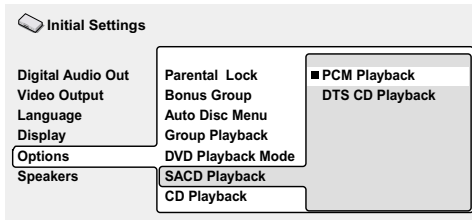
SACD discs can be divided up into several different areas — stereo audio (**2ch Area**), multi-channel audio (**Multi-ch Area**) and, for hybrid SACDs, standard CD audio (**CD Area**). Select which you want to listen to.

> 📝 **Note**

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

CD Playback

• Default setting: **PCM Playback**

```
Initial Settings

Digital Audio Out        Parental Lock        ■ PCM Playback
Video Output             Bonus Group            DTS CD Playback
Language                 Auto Disc Menu
Display                  Group Playback
Options                  DVD Playback Mode
Speakers                 SACD Playback
                         CD Playback
```

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

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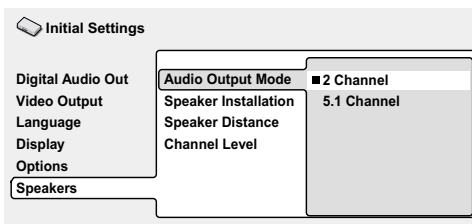
Speakers

Audio Output Mode

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

```
Initial Settings

Digital Audio Out        Audio Output Mode    ■ 2 Channel
Video Output             Speaker Installation   5.1 Channel
Language                 Speaker Distance
Display                  Channel Level
Options
Speakers
```
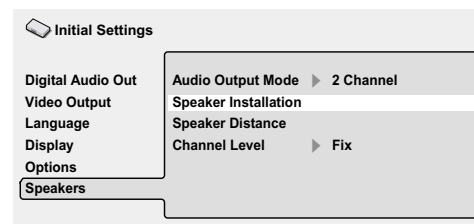
If you connected this player to your amplifier using the 5.1 channel analog outputs (front, surround, center and subwoofer outs), set this to **5.1 Channel**; if you connected only the stereo outs, set to **2 Channel**.

✐ Note

• Even if you set **Audio Output Mode** to **5.1 Channel**, you'll only get sound from all speakers when playing a multi-channel DVD-Audio disc, SACD, or Dolby Digital or DTS encoded DVD disc.

• When set to **5.1 Channel**, only the front left/right channels are output from the **AUDIO OUT (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.

• Some DVD-Audio discs don't allow down-mixing of audio. These discs always output multi-channel audio regardless of the setting made here.

Speaker Installation

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

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

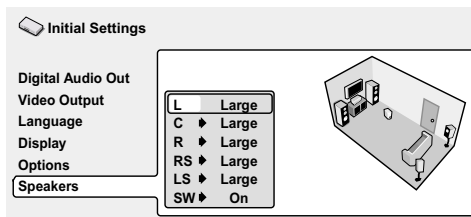*This setting does not affect digital audio output.*

```
Initial Settings

Digital Audio Out        Audio Output Mode    ▷  2 Channel
Video Output             Speaker Installation
Language                 Speaker Distance
Display                  Channel Level        ▷  Fix
Options
Speakers
```

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

1 Use the cursor buttons to move the cursor up/down to select a speaker.
- The **L** and **R**, and **RS** and **LS** speakers are paired; you can't set them differently.

Initial Settings

Digital Audio Out
Video Output   L   Large
Language   C   ▶   Large
Display   R   ▶   Large
Options   RS ▶   Large
                  LS ▶   Large
Speakers   SW ▶   On

2 Move the cursor right to modify the selected speaker.

3 Use the cursor 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 12cm or more, set to **Large**, otherwise set to **Small** (or **Off** if you don't have that speaker).
- If you set the front **L** and **R** speakers to **Small**, the center and surround speakers are automatically set to **Small** and the subwoofer to **On**.
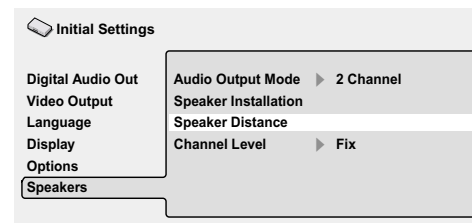- The subwoofer can only be set to **On** or **Off**.

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

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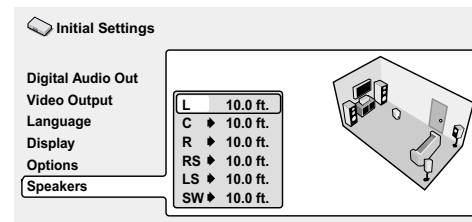- Default setting: all speakers **10 ft.**

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

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

Initial Settings

Digital Audio Out   Audio Output Mode ▶ 2 Channel
Video Output   Speaker Installation
Language   Speaker Distance
Display   Channel Level   ▶ Fix
Options
Speakers

1 Use the cursor up/down buttons to select a speaker.
- The **L** and **R** speakers are paired; you can't set them differently.

Initial Settings

Digital Audio Out
Video Output   L   10.0 ft.
Language   C   ▶   10.0 ft.
Display   R   ▶   10.0 ft.
Options   RS   ▶   10.0 ft.
Speakers   LS   ▶   10.0 ft.
                  SW   ▶   10.0 ft.

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

3 Use the cursor buttons to change the distance.

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

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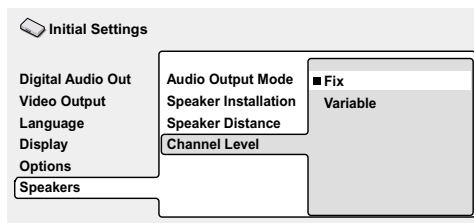
✏ Note

- Speaker Distance settings do not affect SACD playback.

Channel Level

- Default setting: **Fix**

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

*This setting does not affect digital audio output.*

When set to **Fix**, the level of each of the 5.1 channel analog outputs is fixed. Choose **Variable** if you want to adjust the relative levels to balance the surround sound better for your listening room.
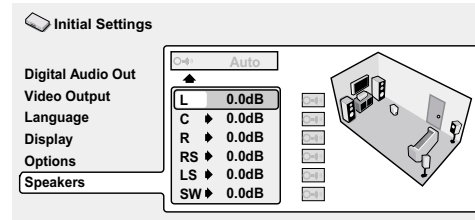
You can set the individual channel levels between –6dB and +6dB using the test tone output as a guide to set the correct levels. Adjust the levels until the output level from all channels sounds the same from your usual listening position.

*Automatic*: Select **Auto** to start the test tone output.
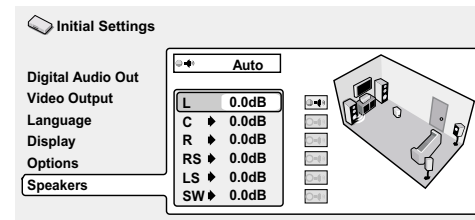
As the test tone plays through each speaker in turn, it is highlighted on-screen. Use the cursor buttons to adjust the channel output level of the current speaker. Note that the test tone is not output from the subwoofer. Move the cursor button left to exit the test tone sequence, or **ENTER** to save the settings and exit the channel level setting screen.
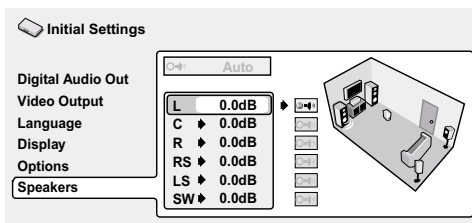
Manual: Move the cursor up/down to select a speaker.
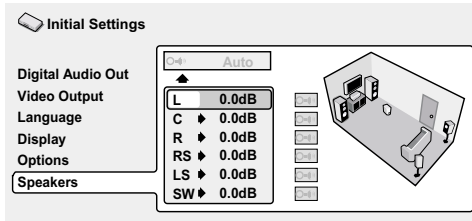
Move right then
set the channel output level.
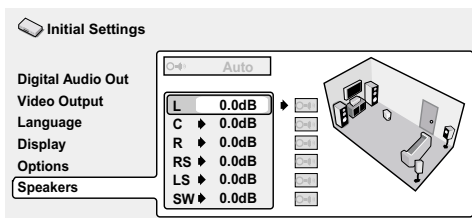
To turn the test tone on/off for an individual speaker, press ➜. The test
tone continues playing even when you select a different speaker.

Press **ENTER** to save the settings and exit the channel level setting screen.

Taking care of your player and discs

Handling discs

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

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

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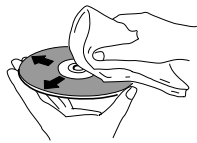
Wipe lightly from the center of the disc using straight strokes.

Don't wipe the disc surface using circular strokes.

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

Storing discs

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

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

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

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

Discs to avoid

Discs spin at high speed inside the player. If you can see that a disc is cracked, chipped, warped, or otherwise damaged, don't risk using it in your player—you could end up damaging the unit.
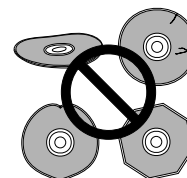
This unit is designed for use with conventional, fully circular discs only. Use of shaped discs is not recommended for this product. Pioneer disclaims all liability arising in connection with the use of shaped discs.

Cleaning the pickup lens

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

Problems with condensation

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

Hints on installation

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

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

Don't...
✗ Use in a place exposed to high temperatures or humidity, including near radiators and other heat-generating appliances.
✗ Place on a window sill or other place where the player will be exposed to direct sunlight.
✗ Use in an excessively dusty or damp environment.

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

Moving the player

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

Power cord caution

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

About the audio output settings

The table below shows how the audio settings you make in the Initial Settings menu affect the output from the 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, LFE, outputs*1	Digital outputs PCM convert*2	Bitstream*3
DVD	Dolby Digital	2 Ch	2ch downmix	–	2ch downmix	Dolby Digital
		5.1 Ch	Front L / R	Surround L/R, Center, LFE		
	Dolby Digital karaoke	2 Ch / 5.1 Ch	Left / Right	–	Left / Right	Dolby Digital
	Linear PCM	2 Ch / 5.1 Ch	Left / Right	–	Left / Right	Left / Right
	DTS	2 Ch	Front L / R	–	2ch downmix	DTS
		5.1 Ch	2ch downmix	Surround L/R, Center, LFE		
	MPEG	2 Ch / 5.1 Ch	Left / Right	–	Left / Right	MPEG
	DVD-Audio	2 Ch	2ch downmix*4	–	2ch downmix*5	2ch downmix*5
		5.1 Ch	Front L / R	Surround L/R, Center, LFE	–	–
	DVD-RW	2 Ch / 5.1 Ch	Left / Right*6	–	Left / Right	Dolby Digital MPEG or PCM
Super Audio CD		2 Ch	2ch downmix	–	–	–
		5.1 Ch	Front L / R	Surround L/R, Center, LFE		
CD		2 Ch / 5.1 Ch	Left / Right	–	Left / Right	Left / Right
DTS CD		2 Ch	2ch downmix	–	DTS	DTS
		5.1 Ch	Front L / R	Surround L/R, Center, LFE		
Video CD / Super VCD		2 Ch / 5.1 Ch	Left / Right	–	Left / Right	Left / Right

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

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

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

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

*5 Discs that prohibit downmixing also mute the digital output

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

Language code list

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

Japanese (ja), **1001**
English (en), **0514**
French (fr), **0618**
German (de), **0405**
Italian (it), **0920**
Spanish (es), **0519**
Chinese (zh), **2608**
Dutch (nl), **1412**
Portuguese (pt), **1620**
Swedish (sv), **1922**
Russian (ru), **1821**
Korean (ko), **1115**
Greek (el), **0512**
Afar (aa), **0101**
Abkhazian (ab), **0102**
Afrikaans (af), **0106**
Amharic (am), **0113**
Arabic (ar), **0118**
Assamese (as), **0119**
Aymara (ay), **0125**
Azerbaijani (az), **0126**
Bashkir (ba), **0201**
Byelorussian (be), **0205**
Bulgarian (bg), **0207**
Bihari (bh), **0208**
Bislama (bi), **0209**
Bengali (bn), **0214**
Tibetan (bo), **0215**
Breton (br), **0218**
Catalan (ca), **0301**
Corsican (co), **0315**
Czech (cs), **0319**
Welsh (cy), **0325**
Danish (da), **0401**

Bhutani (dz), **0426**
Esperanto (eo), **0515**
Estonian (et), **0520**
Basque (eu), **0521**
Persian (fa), **0601**
Finnish (fi), **0609**
Fiji (fj), **0610**
Faroese (fo), **0615**
Frisian (fy), **0625**
Irish (ga), **0701**
Scots-Gaelic (gd), **0704**
Galician (gl), **0712**
Guarani (gn), **0714**
Gujarati (gu), **0721**
Hausa (ha), **0801**
Hindi (hi), **0809**
Croatian (hr), **0818**
Hungarian (hu), **0821**
Armenian (hy), **0825**
Interlingua (ia), **0901**
Interlingue (ie), **0905**
Inupiak (ik), **0911**
Indonesian (in), **0914**
Icelandic (is), **0919**
Hebrew (iw), **0923**
Yiddish (ji), **1009**
Javanese (jw), **1023**
Georgian (ka), **1101**
Kazakh (kk), **1111**
Greenlandic (kl), **1112**
Cambodian (km), **1113**
Kannada (kn), **1114**
Kashmiri (ks), **1119**
Kurdish (ku), **1121**

Kirghiz (ky), **1125**
Latin (la), **1201**
Lingala (ln), **1214**
Laothian (lo), **1215**
Lithuanian (lt), **1220**
Latvian (lv), **1222**
Malagasy (mg), **1307**
Maori (mi), **1309**
Macedonian (mk), **1311**
Malayalam (ml), **1312**
Mongolian (mn), **1314**
Moldavian (mo), **1315**
Marathi (mr), **1318**
Malay (ms), **1319**
Maltese (mt), **1320**
Burmese (my), **1325**
Nauru (na), **1401**
Nepali (ne), **1405**
Norwegian (no), **1415**
Occitan (oc), **1503**
Oromo (om), **1513**
Oriya (or), **1518**
Panjabi (pa), **1601**
Polish (pl), **1612**
Pashto, Pushto (ps), **1619**
Quechua (qu), **1721**
Rhaeto-Romance (rm), **1813**
Kirundi (rn), **1814**
Romanian (ro), **1815**
Kinyarwanda (rw), **1823**
Sanskrit (sa), **1901**
Sindhi (sd), **1904**
Sangho (sg), **1907**
Serbo-Croatian (sh), **1908**

Sinhalese (si), **1909**
Slovak (sk), **1911**
Slovenian (sl), **1912**
Samoan (sm), **1913**
Shona (sn), **1914**
Somali (so), **1915**
Albanian (sq), **1917**
Serbian (sr), **1918**
Siswati (ss), **1919**
Sesotho (st), **1920**
Sundanese (su), **1921**
Swahili (sw), **1923**
Tamil (ta), **2001**
Telugu (te), **2005**
Tajik (tg), **2007**
Thai (th), **2008**
Tigrinya (ti), **2009**
Turkmen (tk), **2011**
Tagalog (tl), **2012**
Setswana (tn), **2014**
Tonga (to), **2015**
Turkish (tr), **2018**
Tsonga (ts), **2019**
Tatar (tt), **2020**
Twi (tw), **2023**
Ukrainian (uk), **2111**
Urdu (ur), **2118**
Uzbek (uz), **2126**
Vietnamese (vi), **2209**
Volapük (vo), **2215**
Wolof (wo), **2315**
Xhosa (xh), **2408**
Yoruba (yo), **2515**
Zulu (zu), **2621**

Country code list

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

Argentina, **0118**, **ar**
Australia, **0121**, **au**
Austria, **0120**, **at**
Belgium, **0205**, **be**
Brazil, **0218**, **br**
Canada, **0301**, **ca**
Chile, **0312**, **cl**
China, **0314**, **cn**
Denmark, **0411**, **dk**
Finland, **0609**, **fi**
France, **0618**, **fr**
Germany, **0405**, **de**

Hong Kong, **0811**, **hk**
India, **0914**, **in**
Indonesia, **0904**, **id**
Italy, **0920**, **it**
Japan, **1016**, **jp**
Korea, Republic of, **1118**, **kr**
Malaysia, **1325**, **my**
Mexico, **1324**, **mx**
Netherlands, **1412**, **nl**
New Zealand, **1426**, **nz**
Norway, **1415**, **no**
Pakistan, **1611**, **pk**

Philippines, **1608**, **ph**
Portugal, **1620**, **pt**
Russian Federation, **1821**, **ru**
Singapore, **1907**, **sg**
Spain, **0519**, **es**
Sweden, **1905**, **se**
Switzerland, **0308**, **ch**
Taiwan, **2023**, **tw**
Thailand, **2008**, **th**
United Kingdom, **0702**, **gb**
United States of America, **2119**, **us**

Selecting languages using the language code list

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

1   Select 'Other Language'.

2   Use the cursor left/right button to highlight either the language name or code number.

3   Use the cursor up/down buttons to change the language or code number.
   • You can also use the number buttons if you're entering a language code.

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

Glossary

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

Aspect ratio
The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the screen is almost square); widescreen models are 16:9 (the screen is almost twice as wide as it is high). See also **page 55**.

Bonus Group (DVD-Audio only)
An 'extra' group on some DVD-Audio discs that requires a key number to access. See also *Group*.

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

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

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

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

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

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

Interlaced video
A method of displaying a picture in which odd-numbered lines are updated in one pass, then even-numbered lines updated in the next.

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

MPEG audio MPEG)((Multichannel

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

MPEG video

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

Packed PCM (DVD-Audio only)

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

PCM (Pulse Code Modulation)

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

PBC (PlayBack Control) (Video CD only)

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

Progressive scan video

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

Regions (DVD-Video only)

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

S1 S-video output

This S-video output is not available

S2 S-video output

S2 is an enhanced version of S-video which, in addition to aspect ratio information, contains letterbox / pan & scan information. Widescreen TVs which are compatible with S2 S-video automatically switch aspect ratio according to the signal. See also **page 55**.

Sampling frequency

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

Slideshow (DVD, Video CD/Super VCD)

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

Super Audio CD (SACD)

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

Troubleshooting

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

Problem	Cause / Remedy
The disc won't play or is automatically ejected after loading.	• Make sure the disc is free from dirt and dust and is not damaged • Make sure the disc is loaded with the label side face-up and aligned properly in the disc tray guide. • Incompatible region number: If the region number on a DVD-Video disc does not match the number on the player, the disc cannot be used • Condensation inside the player: Allow time for condensation to evaporate. Avoid using the player near an air-conditioning unit. • Disc is loaded upside down: Reload the disc with the label side face up.
DVD-Audio playback stops.	• The disc may have been illegally copied.
Picture playback stops and the operation buttons cannot be used.	• Press ■, then start playback again (►). • Switch the power off once, unplug from the wall socket, then plug back in and switch on again using the front panel ⏻ **STANDBY/ON** button.
New settings made in the Setup screen menus while a disc is playing are ineffective.	• Some settings can be changed while a disc is playing, but are not effective until the disc is stopped then restarted: Press ■, then start playback again (►).
Settings are canceled.	• 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.	• The **CONTROL IN** jack on the rear panel is connected: Point the remote control at the connected component to control this player. • The remote control is too far from the player, or the angle with the remote sensor is too wide: Use the remote within its operating range • The batteries are exhausted: Put in new ones

Problem	Cause / Remedy
No picture/No color.	• Check that the **VIDEO OFF** indicator is not lit. If it is, press the **VIDEO OFF** button.
	• When set to progressive video output, there is no video output from the composite or S-video outputs.
Screen is stretched or aspect does not change.	• The **TV Screen** setting in the Initial Settings menu is incorrect
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.
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 • Check that all interconnects are firmly inserted. • Check that the plugs and terminals are free of dirt, oxide, etc. and clean if necessary. Also check the cable for damage. • Make sure the player's output is not connected to the amplifier's phono (turntable) inputs. • Check your amplifier/receiver's settings (volume, input function, speaker settings, etc.).

Problem	Cause / Remedy
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** • Check that the Dolby Digital, DTS and MPEG out settings are suitable for your amplifier/receiver—check the instruction manual that came with your amplifier/receiver. • SACDs and some DVD-Audio discs do not output digital audio. Listen through the player's analog audio outputs.
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** • Check that the Dolby Digital, DTS and MPEG Out settings are suitable for your amplifier/receiver—check the instruction manual that came with your amplifier/receiver. • DVD-Audio and SACDs do not output multichannel digital audio. Listen through the player's analog outputs. • Check that the settings in the Speaker Installation screen are correct • Check the audio options available from the disc menu.
Cannot listen to high-sampling rate audio through the digital output.	• Make sure that **Linear PCM Out** is set to **Down Sample Off** • As a copy-protection measure, some DVDs do not output 96kHz audio. In this case, even if set to **Down Sample Off**, the player automatically outputs the audio at 48 kHz. This is not a malfunction.
Cannot output 192kHz or 176.4kHz digital audio.	• The player does not output digital audio at these sampling rates. The digital output is automatically downsampled.
Cannot output 96kHz or 88.2kHz digital audio.	• Check that **Linear PCM Out** is set to **Down Sample Off** • Some discs are digital copy protected and do not output high sampling rate digital audio. In this case the output is automatically downsampled.
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**. If you do not do this, noise will be output when you play a DTS disc. • If this unit is connected to a DTS-compatible amplifier or decoder using a digital audio cable, check the amplifier settings, and that the cable is properly connected.

Problem	Cause / Remedy
Audio mix does not sound right or sounds incomplete (for example, inaudible).	• Make sure that **Audio Output Mode** is set to **2 Channel** if you've connected to the stereo inputs on your amplifier or TV
Disc containing the MP3 tracks won't play.	• This player is compatible with multi-session discs, but only plays sessions that are closed. • If the message **UNPLAYABLE MP3 FORMAT** is displayed when you try to play a disc/track, check the audio file formats.
Can't hear effect of TruSurround.	• TruSurround does not work with CD, MP3, DVD-Audio, SACD or 96kHz linear PCM DVD. • The TruSurround effect is only output through the **AUDIO OUT (2ch)** analog audio outputs. • Make sure that **Audio Output Mode** is set to **2 Channel** • The effectiveness of TruSurround varies with the disc.

✎ Note

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

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