



Native Rate Series Digital Cinema Source Digital Video Processor

Installation and
Operations Manual



FAROUDJA
PICTURE PLUS™

QUICK START OPERATION MENU

SETUP MINIMUM TO-DO LIST:

- When unit is first plugged in to Power it will go through an initialization process. Do not send any commands to the unit during this time. Once initialized, the unit is instant On/Off
- Set the proper screen shape in the Setup Menu (default is 4:3)
- Set the proper output type (default is RGBHV)
- Optimize the display device for image position, size, Contrast, Brightness and gray scale. Use a test pattern DVD or internal generator.
- The internal DVD player has already been setup and optimized for the processor. Do not change any of the audio or video setup options in the DVD setup menu.

REMOTES

Use eight button remote for controlling processor functions



Use larger remote to control the DVD transport features.



TO PLAY A DVD



- Press Open/Close on the front panel or on the larger remote and load the DVD
- Press Open/Close again – DVD will auto-start to the DVD Menu
- Press Enter or Play on the DVD remote or on the front panel. This will also switch the Input to DVD and start the movie.

TO ACCESS DVD MENU



Use the larger remote to access the menu and navigate through the options.

TO CHANGE ASPECT RATIOS



- Use the processor remote and press Menu
- Use the Function Keys to Select Aspect Ratio
- Use the Value keys to change Aspect Ratio

TO ADJUST PICTURE QUALITY



- Use the processor remote
- Press the Function keys to Select the Picture menu
- Use the Function keys to Select, use the Value keys to adjust.

STORING A PRESET



- Select the Input menu
- Use the Function keys to select Store
- Use the Value keys to select a preset.
- Press Enter to store.

Menu Tree Summary

	User Menu	System Menu	
How to Access	Press the Up/Down buttons	Press Setup then Enter	
Available Functions	Advanced Color System	Screen Shape	Blue Y/C Delay
	Noise Reduction	Output Select	Red Y/C Delay
	Detail	Save to All	Green Y/C Delay
	Tint	Operating Mode	V- Position
	Color	IR Receiver	H- Position
	Contrast	RS232 Echo	RGB Input Sync
	Brightness	DCDi Mode	Sync on Y
		Film Mode	Composite sync on H
		LCD Timer	Sync on green
		Red LED	Output Format
		Green LED	Input Format
		OSD V Pos.	DVD Black Level
		OSD Timer	
DVD Default Transport Settings		HDTV EXT Input	
Audio DRC:	Off	HDTV Comp Pass-Thru	
Dolby Digital and DTS:	On	Bottom Blank	
96KHz out:	96KHz	Right Blank	
MPEG out:	MPEG	Left Blank	
Virtual Surround:	Off	Top Blank	
TV Screen:	16:9	Blanking Gray Level	
Background:	DVD Logo	V-Sync Polarity	
Setup Menu:	Basic	H- Sync Polarity	

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The Faroudja Laboratories Native Rate Series Digital Cinema Source Processor
is covered by the following United States patents:
4,030,121, 4,179,705, 4,240,105, 4,262,304, 4,847, 681, 4,864,389, 4,876,596, 4,893,176, 4,916,526,
4,967,271, 4,982,280, 4,989,090, 5,014,119, 5,025,312, 5,159,451, 5,237,414.

A Division of Genesis Microchip Corp.

Made in USA

SAFETY INSTRUCTIONS

IMPORTANT



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

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

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



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

IMPORTANT SAFETY INSTRUCTIONS

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

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

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

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

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

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

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

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

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



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

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

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

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

GROUNDING OR POLARIZATION

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

- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

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

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

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

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

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

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

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

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

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

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

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

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

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

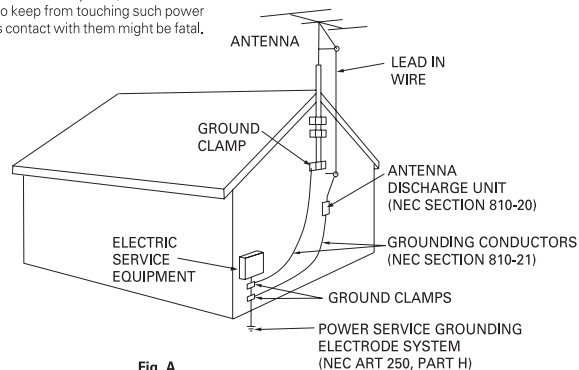


Fig. A

NEC — NATIONAL ELECTRICAL CODE

UNPACKING

Remove the NRS-DCS 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.

INSTALLATION

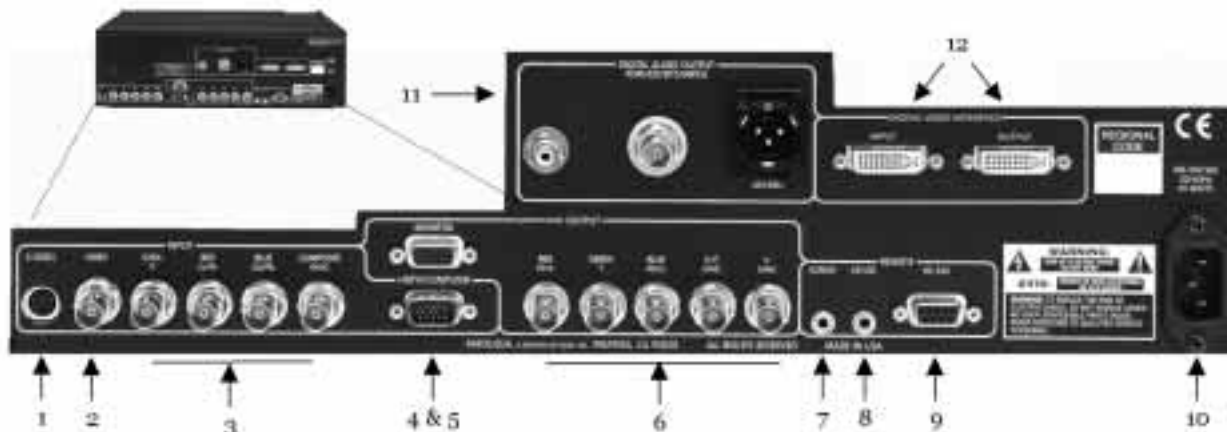
The processor can be either placed on a table or rack mounted. If the rack mounting installation kit is used, the rack mount ears are mounted by using 3 screws. It will be necessary to support the rear of the unit if it will be shipped in the rack by using rack support rails supplied by the rack manufacturer.

VENTILLATION

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. 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.

Inventory

- | | |
|---------------------|----------------------|
| 1-NRS-DCS Unit | 2-Remote + Batteries |
| 1-Remote Order Form | 1-Warrantee Card |
| 1-Power Cord | 1-Owner's Manual |



REAR PANEL I/O

1. S-Video (4 Pin DIN) Input
2. Composite Video (BNC) Input
3. Interlaced or Progressive Component or RGBs Video Input (BNC)

Note: do not use the progressive output from DVD players

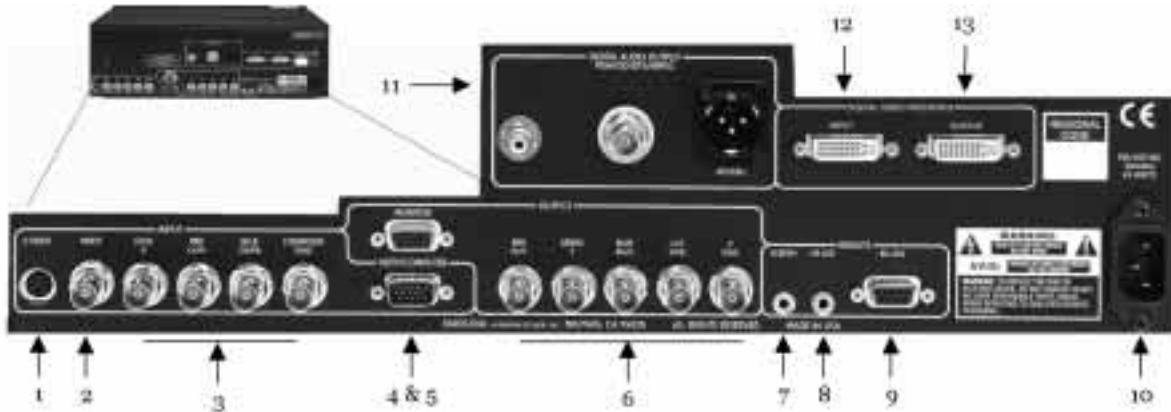
4. High Resolution HDTV/Computer Pass-Through Input - RGBHV or YPrPb (D15M)
5. RGBH/CV or YPrPb Output(D15F)

6. RGBH/CV or YPrPb Output (BNC)

Note: Both analog video outputs can be used simultaneously

7. Screen Trigger 12V, 3.5mm, 2 pin,Tip=+)
8. Remote IR sensor (5V-12V, 3.5mm, Tip=+)
9. RS232 Port (D9F)
10. AC Power
11. Digital Audio Outputs (Digital Audio from internal DVD drive only) AES/EBU, Coaxial and BNC, RCA.
12. Digital Video Interface Input and Output.

CONNECTIONS



CONNECTIONS

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

Both the RGB BNC and the D15 Monitor output connections are active at all times and can run two displays simultaneously.

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

1. S-Video input (Y/C) 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 for sources such as Laserdisc players, cable TV, VHS tape decks, 8mm tape decks.

Note: Due to the unstable nature of the VHS format, the image may become unstable during FFW, RW, and Pause modes - depending on the player used.

3. Interlaced or Progressive Component (YPrPb) or RGBs video input for sources such as DVDs or high resolution YPrPb sources from HDTV satellites. Input auto-detects input type: 480i/576i sources are sent to the internal processor, progressive sources are routed to the Pass-Through. A readout of the signal detected will be displayed on the front panel LCD.
4. High scan rate input for sources such as HDTV signals or computers are passed-through to the projector. YPrPb from HDTV sources can be transcoded to RGBHV, as well.

5. D15F connector output for use with computer monitors or to a second display device. Use only short cable runs.

6. BNC connectors for main output 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

Note: If HDTV or Computer signals are to be used, separate H & V sync cables must be connected to the display.

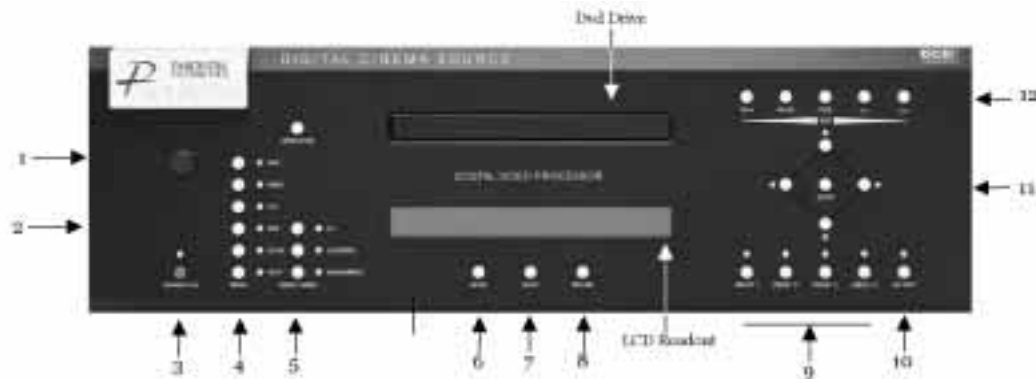
7. 12V trigger to activate automatic screen relays. Voltage is constant when unit power is on.
8. IR receiver connection allows for use with external IR receivers so unit can be installed behind walls.
9. RS232 D9F connection for use with RS232 control systems
10. AC Power connection.

11. Digital Audio outputs from internal DVD drive: Coaxial (RCA, BNC) and AES/EBU. Be sure the audio decoder is compatible with the output used. These outputs are always active.

12. Digital Video Interface (DVI) Input . DVI input is for pass-through to the DVI output only. DVI to RGB output is not available

13. DVI Output: Digital interface for compatible displays. All analog and digital inputs are output through this connection. Maximum cable length is 15ft. For longer lengths a distribution system or fiber optic system must be used

Note: Whether the DVI or analog RGBHV outputs are used must be selected in the Setup menu prior to use of the processor.



FRONT PANEL CONTROL

- 1. Infrared Receiver / Flasher window**
 - 2. Firmware Reset:** push a small paper clip into this opening to reset the unit's CPU.
 - 3. Power/Standby:** Press to turn the unit On (LED turns Green) or to Standby (Red)
 - 4. Input Selection**
 - 5. Aspect Ratio Selection:** If an aspect ratio is not available (LED is not activated), it cannot be selected.
- 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 480p, 540p, 600p and Frame Doubling. See Setup section for details.
- Note:** Do not leave a 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.
- 6. Menu:** Accesses DVD Menu when the internal DVD drive is selected and a DVD disc is playing. Menu does not function with other inputs or when there is not a DVD disc in the player.
 - 7. Setup:** Accesses the various Setup menus in the processor: System Setup, DVD Setup, IR Setup and Test Patterns. See each section in this manual for details.
 - 8. Return:** Pressing this button from any location in any menu returns the front panel controls to the User menu.

- 9. Custom Presets:** There are a total of four custom presets that store all image and setup parameters and includes the Input. In addition, when changing inputs, the last used setting for each input will be recalled even if the settings were not stored in a Preset.
- 10. Factory Preset:** Recalls all settings to Factory levels. Pressing once while adjusting a setting will recall that setting back to the factory default. Pressing the Factory button twice returns all image settings to the factory default.

STORING PRESETS

- Adjust the image and other parameters as needed.
 - Press the Enter button, the Preset LEDs turn Red. (Press Enter again to cancel procedure)
 - Press the Preset you want to use and the LED on that Preset will turn green, storing the pre-set.
- 11. Directional buttons and Enter:** These buttons have multiple uses. While viewing any input, pressing the Up/Down buttons will select the User Menu Functions (Contrast, Brightness, etc), pressing the Left/Right buttons will change the Values of the Functions. When in the different Setup menus (System Setup, DVD, etc) the directional buttons will navigate within those menu choices. Press the Enter when prompted by the menu to select the Function listed.
 - 12. DVD Transport buttons:** These will control the internal DVD drive. Pressing the Play button will switch the input of the processor to the DVD input. See the DVD portion of the manual for details.

SYSTEM FIRMWARE SETUP

SYSTEM FIRMWARE SETUP

Now that all the sources and cables are connected, the processor's firmware needs to be fine-tuned for the installation. The System Setup menu is only accessible from the front panel. RS232 commands can also be used.

Be sure to go through the Setup menu before doing the final setup of the display.

To enter the System menu, press the Setup button and then Enter

There are four sections to the System Setting. Pressing the Enter key to open that set of Functions:

- **System Menu**
- **User Mode**
- **I/R Setup**
- **Test Patterns**

Pressing the Up button will recall the available Functions. Press the Left or Right keys to select or change values. When no commands are entered after a short period the front panel LCD will switch to the main window. Just hit the Up or Down buttons to jump back to the control menu last used.

SYSTEM MENU FUNCTIONS

Screen Shape

4:3 / WideScreen / Wide 4:3
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.

WideScreen-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.

Wide 4:3-choose this when the projector is 4:3 only and the screen is Widescreen. (Not available on units scanning at rates below 720p)

Example: A digital projector that is 4:3 only with a wide angle screen.

Initial Storing of the main Screen Shape.

The NRS-DCS allows for storing different screen shapes in the Custom Presets such as with instal-

lations where two different display types are used.

Step one is to set the main screen shape:

- Select an Input (not Pass-Through)
- Enter the System Setup Menu
- Select desired Screen Shape
- Use the Function keys to select Save to All and press Enter

The screen shape is now stored for all Inputs and Presets.

Storing a second screen shape in the Custom Presets

A secondary screen shape or position setting or blanking setting can be saved as a Custom Preset:

- Enter the System Menu and choose the new settings

Note: Do NOT use the Save to All command)

- Press Return
- Press Enter, then press Preset 1-4

Output Select - Analog/Digital

This must be selected to determine if the Analog ((BNC/D15) or Digital (DVI) outputs are used.

Both outputs cannot be used at the same time. When DVI is selected the following controls are not available:
Output Format, Sync on Green and Sync on H.

Save to All – Press Enter

Saves System setup (screen shape, blanking, image position) to all presets.

Be sure to do this when initial installation is completed.

I/R Receiver – On/Off

Controls front panel IR receiver

RS232 Echo:

On(Default)/Off

Select if the RS232 commands returns a status report to the control system.

DCDi Mode:

On (Default)/ Off

Should always be On

Film Mode:

On (Default)/Off

Should always be On

LCD Display Backlight Timer

5-255 seconds (Default 10)

Sets how long the front panel LCD stays on.

Red LED Brightness

0-15 (Default 8)

Front panel LED brightness

Green LED Brightness

0-15 (Default 8)

Front panel LED brightness

OSD Vertical Position

0-255(0=Top)

This sets the single line adjustment OSD position.

OSD Timer

4-255 seconds (10 Default)

HDTV Ext. Format

480p / 720p / 1080i

This option is accessible and only needs to be set if the Transcode option is selected for the pass-thru.

HDTV External Input (D15) (Pass-Through)

Pass-thru / YPrPb to RGB

HDTV Component External Input (BNCs)

Pass-thru / YPrPb to RGB

Note: When the component BNC inputs auto-detect a HDTV signal then this command is activated as the signal is sent to the pass-through

Note: The HD Pass-through inputs can transcode YPrPb HDTV signals to RGBHV. It cannot transcode RGBHV signals to YPrPb. Sync on Green is NOT available when using the HD Pass-through input.

Note: Blanking and image position controls can be returned to the Factory default setting by pressing the Factory button when accessing that control.

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 Gray 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 prevent image burn-in.

Vertical Sync Polarity

Negative / Positive

Changes sync polarity which may be needed for compatibility with some displays.

Horizontal Sync Polarity

Negative / Positive

Changes sync polarity which may be needed for compatibility with some displays.

Y/C Delay Adjustments: The following commands allow for aligning the RGB color timing to the luminance timing. These adjustments should only be done by a qualified technician. A Y/C delay test pattern must be used for proper alignment, such as the Y/C delay pattern in the AVIA test DVD. The range of adjustment is 0-6, 3 is the default center and the timing can be adjusted +-3 steps. Be sure to adjust the Green position first.

Blue Y/C delay

0-6, 3 default

Red Y/C delay

0-6, 3 default

Green Y/C delay

0-6, 3 default

Sync on Green

On/Off(Default)

Vertical Position

0-64, 32 default

Moves image up from center

Horizontal Position

0-170, 85 default

Moves image left or right of center

Note: moving the image too far to the left or right can cause the display to stop working. Use positioning controls in the display first--if available.

RGB Input Sync

Sync on Green / Ext. Sync High / Low

(Low sync is used with PAL sources where composite video is applied as sync with RGB)

Sync on Y

Bi-level

Tri-level

OPERATING THE PROCESSOR

Note: This option is visible only on 540p and 720p units when the YPrPb output format is selected.

Composite Sync on H

On/Off(Default)

Note: Comp. Sync on H and Sync on Green Functions are only available if RGB output is selected. Both should be set to off if HDTV or computer signals will be used for the pass-through input

Output Format

RGB(Default)/YCrCb/YPrPb

Input Format

Auto NTSC/PAL(Default), NTSC, PAL, PAL N, PAL M

OPERATING THE PROCESSOR

User Menu

There are three ways to control the unit: from the front panel, from the remote using the On-Screen-Display and via RS232.

These are the image adjustment controls that are used most often. To access the image controls, press the Up or Down key on the directional keypad. Keep pressing to toggle through the available Functions. Use the Left or Right keys to adjust.

Advanced Color System

Factory/DVD Animation

For some very high quality DVDs the Faroudja patented chroma edge processing circuits can be turned off (DVD Animation). For most sources, the Factory setting should be selected. These settings can be stored as a User Preset.

Noise Reduction

0-15, Factory 8

This sets the threshold for the Detail circuit and interacts with the detail setting. For most sources this setting should not be changed.

Detail

0-31, Factory 8

Note: The Detail circuit is a powerful tool for image quality. The settings have been optimized for the scan rate and resolution for most displays and sources. However, the viewers tastes and the types of software and display type require making adjustments of these settings to fine tune the image. These controls are very effective

to either increase detail or to help clean up 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 Presets. It is important to not use too much Detail as the image will start to look artificial.

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 artifacts on DVDs, Satellite and cable systems. The best results are by adjusting the levels to the software being viewed instead of using just test patterns.

Tint

0-255, Factory 128

Tint is not available with YPrPb sources

Color

0-255, Factory 128

Contrast

0-155, Factory 110

Brightness

0-170, Factory 128

Note: It is best to set Brightness and Contrast levels using the controls of the display with the proper test pattern and with the NRS-DCS in the factory default setting. This means that when the Factory preset button is pressed, the system is back to the original optimum settings.

Note: When the HD/PC or YPrPb pass through is selected, the OSD and image adjustment controls are not functional.

IR REMOTE AND OSD OPERATION

There are two remotes that ship with the NRS-DCS processor. The eight button remote is used to only control the NRS-DCS processor operations.



The large remote only controls all the operations for the DVD transport.



This section describes the operation of the NRS-DCS processor and remote. See the DVD section starting on page 11 for details on the operation of the DVD transport and remote. The IR remote teaching starts on page 42.

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.

The remote control allows for easy operation by simple navigation through the On Screen Display (OSD) menus. Repeated Pressing of a button toggles through the available choices.

- Power On/Off:** Press Power
Select Presets: Press Preset
Select Input: Press Input Mode
Activate OSD: Press Menu
Select OSD Functions:
Press Function Up/Down
Change Value: Press Value Up/Down

On Screen Display

Control of many functions can be done using the remote to interact with the OSD.

Accessing the OSD

- Press Menu button to bring up main Index.
- Use Function keys until the triangle at the top of the OSD turns yellow.
- Use the Value keys to move the triangle to select a different index and the available control menu drops down.
- Press Function again to select an adjustment.
- Use Value to adjust. The main menu drops away and a single line menu appears.
- Use the Function keys return to the drop down menu.
- Press Menu again to cancel OSD

The OSD consists of four index tabs:

Input – Picture – Display – Patterns

Input OSD



FORMATS

Input Select:

DVD-Video-S-Video-YCrCb-RGB-Pass-thru

Aspect

4:3-Letterbox-Anamorphic

Presets-

Recall: Factory-1-2-3-4

Store: 1-2-3-4

TO STORE A PRESET:

- Make all required adjustments.
- Use the Function keys to select Store 1 2 3 4.
- Use the Value keys to select the desired preset
- Press Enter

*Aspect Ratio Selection

Press the Aspect Ratio button to toggle between the different choices on the OSD. The aspect ratio selected needs to match the aspect ratio of the source.

Note: When using a Wide Angle screen a 4:3 source will have black bars on the left and right of the image. 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. For 4:3 images on wideangle screens the side bars of the image can be changed to gray using the Blanking level control located in the System Setup menu.

Note: Anamorphic on a 4:3 screen is not available on units with scan rates below 720p.

IR REMOTE AND OSD OPERATION

Picture OSD



Use these commands to fine tune the image

Display OSD



Use these commands to adjust the image position and edge blanking. It is recommended to adjust sizing and blanking in the display device first. This should be done by a qualified technician.

Patterns OSD



These patterns are used to setup and align the image. This should be done by a qualified technician only.

Available Patterns:

PLUGE:

Set Brightness and Contrast

100IRE Window:

Check displays power supply

Active Borders:

Use for H&V positioning

10-step Gray Scale:

Check gray scale

Convergence:

Check convergence of display

100IRE Rev.

CB: color bars for decoder check

100IRE CB:

Color bars for decoder check

Blue Screen:

Check for defective pixels

Red Screen:

Check for defective pixels

Green Screen:

Check for defective pixels

Cr Ramp:

Check linearity of Cr channel

Cb Ramp:

Check linearity of Cb channel

Luma Ramp:










Check linearity of Luma channel

Use these patterns to adjust the image and processor. Use the Function key on the remote to the Select bar after activating the test patterns. Use the Value key to select the test patterns. Select the Picture menu to adjust the image. Store the new settings in a preset. Then be sure to return to the patterns menu to turn off the test patterns.

Features of This Player

Compatible with DVD, Super VCD/ Video CD and CD formats

DVD, Super VCD/Video CD and CD discs that display the logos shown below can be played back on PIONEER DVD players. For more information on discs compatible with this player, refer to the table below.

Types of playable discs and their marks	Diameter/Playable sides	Playback time	
	DVD VIDEO	Digital audio Digital video (MPEG 2)	
	12 cm (5 in.)/ single-sided	1 layer 2 layer	133 min. 242 min.
	12 cm (5 in.)/ double-sided	1 layer 2 layer	266 min. 484 min.
	DVD VIDEO	Digital audio Digital video (MPEG 2)	
	Super VCD	Digital audio (MPEG 1) Digital video (MPEG 2) 40 min.	
	12 cm (5 in.)/ single-sided		
	Super VCD single	Digital audio (MPEG 1) Digital video (MPEG 2) 10 min.	
	8 cm (3 in.)/ single-sided		
	VIDEO CD	Digital audio Digital video (MPEG 1) Max. 74 minutes	
	12 cm (5 in.)/ single-sided		
	VIDEO CD single	Digital audio Digital video (MPEG 1) Max. 20 minutes	
	8 cm (3 in.)/ single-sided		
	CD	Digital audio	
	12 cm (5 in.)/ single-sided		Max. 74 minutes
	CD single		Digital audio
	8 cm (3 in.)/ single-sided		Max. 20 minutes
			

The disc format logos shown above are found on disc labels or on disc jackets.

- To prevent malfunction, do not use an 8 cm (3 in.) adaptor (for CDs).
- Discs other than the ones indicated above cannot be played on this unit.
- DVDs that have incompatible region numbers, DVD-Audio, DVD-ROM, and DVD-RAM cannot be played on this unit. The region number of the player can be found on the rear panel.

*1Playing recordable CDs

This unit can play CD-R and CD-RW discs recorded in CD Audio or Video CD format, or with MP3 audio files.

MP3 compatibility information

- The CD-ROM must be ISO 9660 compatible.
- Files should be MPEG1 Audio Layer 3 format, 44.1 or 48kHz. Incompatible files will not play and "UNPLAYABLE MP3 FORMAT" will be displayed.
- Not compatible with some variable bit-rate (VBR) files.
- VBR files may not show play times correctly.
- This player only plays tracks that are named with the file extension ".mp3" or ".MP3".
- This player is not compatible with multi-session discs. If you try and play a multi-session disc, only the first session will be played.
- Use CD-R or CD-RW media for recording your MP3 files. The disc must be finalized in order to play.
- Audio encoded at 128Kbps should sound close to regular audio CD quality. Although this player will play lower bit-rate MP3 tracks, the sound quality becomes noticeably worse at lower bit-rates.
- Only the first 8 characters of folder and track names (excluding the ".mp3" extension) are displayed.
- This player can recognize a maximum of 250 folders and 250 tracks. Discs containing more than 250 folders or tracks will play, but only the first 250 folders/tracks.

Caution!

- CD-R/RW discs recorded using a personal computer or a CD recorder may not play if the disc is damaged or dirty, or if there is dirt or condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format, there are cases in which it may not play because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Unfinalized CD-R/RW discs can be played, but not all time information (playing time, etc.) will be displayed.

What is Super VCD? (DV-533 and DV-533K only)



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

Compatible with a wide range of DVD digital audio output formats



DVDs are recorded in one of four types of digital audio formats (as of October 1998). The digital audio output jacks of this player output Dolby*2 Digital, DTS*3, MPEG, and linear PCM digital bitstreams.

TruSurround



TruSurround*4 uses technology that simulates multichannel surround sound using only two speakers. TruSurround works in conjunction with 2 channel audio sources to create a realistic surround sound.

MP3 compatibility

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

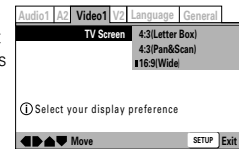
Easy setup and adjustment using onscreen menus

Press **SETUP** on the remote control to open the Setup screen and you'll find setting up and adjusting the system easy to do with on-screen menus conveniently organized and arranged. Additionally, on-screen information (i) appears to clarify the functions and explain the options available. Below are just a few examples.



Answer a few questions and have all the necessary audio, video, and on-screen language adjustments set automatically by the player using the Setup Navigator (pages 17, 18).

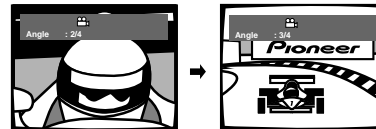
Select the type of TV screen you are using and the preferred screen format you'd like to use when watching DVDs in the **Video 1** menu (pages 29)



Wide range of DVD viewing options

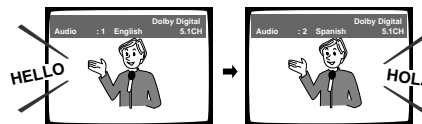
Multi-Angle (page 33) ☆

You can view scenes from different camera angles when watching movies or other media with multiple angle playback available.



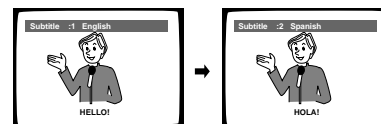
Multiple Languages (page 34) ☆

You can select the language on when watching movies or other media that have multiple language and/or audio soundtracks recorded on them.



Multi-Language Subtitles (page 36) ☆

You can select a subtitle language or turn subtitles off when watching movies or other media with subtitles available.



☆ This mark indicates this may not be possible with certain discs.

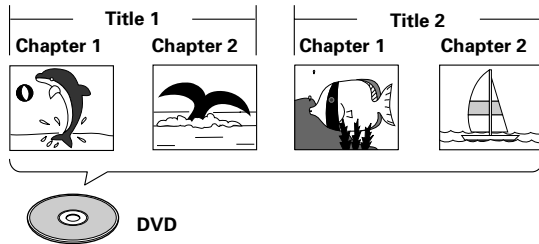
- *2 Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.
- *3 "DTS" is a registered trademark of Digital Theater Systems, Inc.
- *4 TruSurround and the (●) symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

How to Proceed in This Manual

DVD

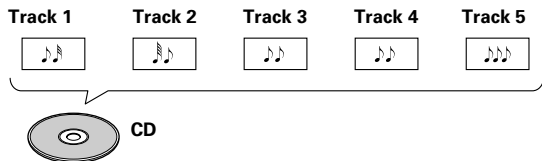
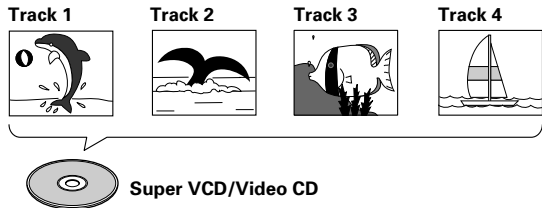
All discs are divided up into smaller, more manageable sections so that you can find specific content more easily.

DVD discs are divided into one or more titles. Each title may be further divided into several chapters. Occasionally, a chapter may contain index points, effectively dividing the chapter up into several parts, too.



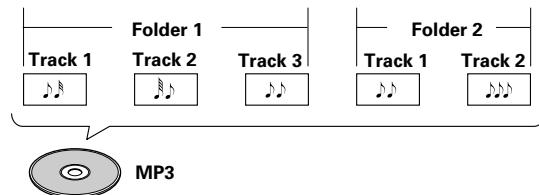
Super VCD/Video CD/CD

Super VCD/Video CDs and CDs are divided into a number of tracks. In rare cases, a track may contain a number of index points, effectively dividing the track up into several parts.



MP3

MP3 (MPEG1 audio layer 3) is a compressed audio file format. Files are recognized by their file extension ".mp3" or ".MP3". Folders that contain mp3 files are automatically numbered F_001, F_002, etc. Tracks within folders are automatically numbered T_001, T_002, etc.



Differences in Disc Composition

DVD is an incredible format that presents the highest quality digital audio and video available today. Because using the DVD player and DVDs may be confusing at first, following the order below should help you get through the important stages of getting set up so you can start using your player as soon as possible.

Get familiar with the player.

Refer to the section '*Before Using*' on to confirm that all the accessories were included with the player. If you are new to DVD, it might be beneficial for you to go through the '*Names and Functions*' section starting on to get familiar with the parts and buttons on the main unit and remote control as they will be referred to throughout this manual.

There is also a list of terms that can be found on if you are having trouble understanding some of the terminology associated with DVD.

Make the necessary connections.

No entertainment system seems to be set up exactly the same way. The '*Making Connections*' section starting on shows how video and audio connections may be made to suit your home entertainment system.

Set up the necessary player menus.

Before you can begin to enjoy the benefits of the DVD format, it is first necessary to set up the player to output the video and audio information that corresponds to your system. The section '*Setting Up the Player*' starting on explains how to use the Setup Navigator, a function that automatically sets up the player corresponding to the answers given in a multiple-choice on-screen procedure. The Setup screen menus, described in the section starting on, are also used in a number of other functions. Learning the procedure for operating these menus will make using this player much easier and more enjoyable.

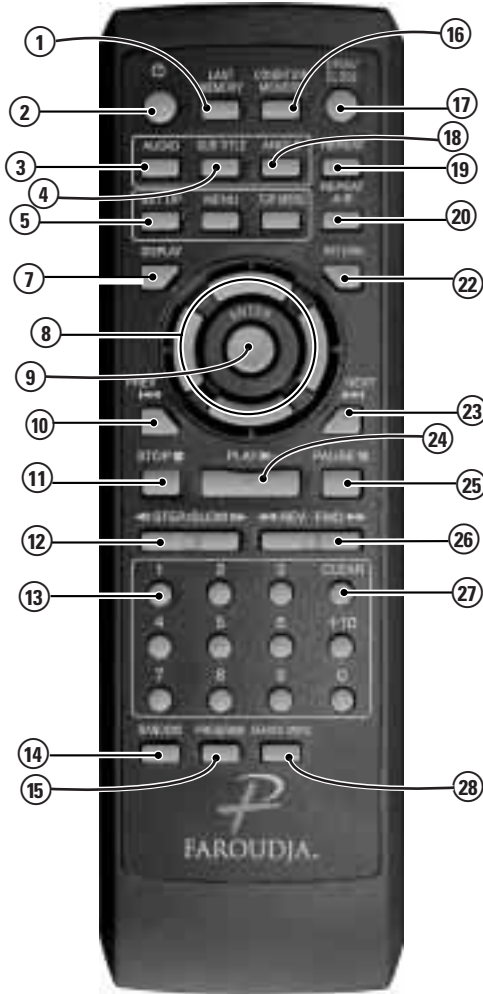
Play a disc.

When all the connections and setups have been made, you are ready to play a DVD, Super VCD/Video CD, CD, or MP3 with the player. The section '*Getting Started Using Your DVD Player*' starting on outlines the basic player operations.

Enjoy the many features available.

Once you are comfortable using the basic player functions, you are ready to take advantage of the various options DVD and this player have to offer. The section '*Advanced Functions*' starting on describes how to use the features available on many DVDs.

Remote Control



(Buttons indicated with * are used for menu operation.)

① **LAST MEMORY button**

You can resume DVD or Super VCD/Video CD playback from the point you last watched even if the disc is removed from the player. Press **LAST MEMORY** during playback to set a Last Memory point. When you want to resume playback of that disc, press **LAST MEMORY** in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs and 1 Super VCD/Video CD.

② **⏻ (standby/on) button**
NOT ACTIVE.

③ **AUDIO button**

Press repeatedly to select one of the audio languages programmed on a DVD. For Video CD, CD and MP3, each press changes the audio output as follows.

Stereo =1/L (Left) =2/R (Right)

For Super VCD, each press changes the audio output as follows.

1 Stereo	1L	1R
2R	2L	2 Stereo

④ **SUBTITLE button**

Press repeatedly to select one of the subtitle languages programmed on a DVD or to turn the subtitles off.

⑤ **SETUP button***

Press when the player is in either play or stop mode to open and close the Setup screen.

⑥ **MENU button***

Use to display or close the DVD menu or MP3 Navigator screen

⑦ **DISPLAY button**

Press during playback to display statistical disc information. Press repeatedly to display different information.

⑧ **Cursor buttons (◀/▶/▲/▼)***

Use to move through the options on menu screens and to change settings.

⑨ **ENTER button***

Use to implement settings selected with the cursor buttons or to set items highlighted in a menu.

⑩ **PREV II◀◀ (previous) button**

During playback, press **PREV I◀◀** to go back to a previous chapter/track.

11 STOP ■ button

Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it was stopped. Pressing twice causes the disc to return to the beginning of the disc when playback starts again.

12 STEP/SLOW ◀◀II / II▶▶ buttons

Press **STEP/SLOW ◀◀II** or **II▶▶** during playback to view still frame. Press and hold **STEP/SLOW◀◀II** or **II▶▶** during playback to view slow playback. In still frame, press **STEP/SLOW II▶▶** to advance DVDs and Video CDs frame by frame and **STEP/SLOW◀◀II** to back up a few frames at a time (DVD only).

13 Number buttons (1-9, 0, +10)*

Use to perform direct title and chapter/track searches, and to input numerical values.

14 RANDOM button

Press to play title and chapters/tracks in random order (**page 43**).

15 PROGRAM button

You can program titles, chapters, or tracks to play back in a desired order. Programs can be a maximum of 24 steps. Additionally, DVD programs for up to 24 discs can be stored in the player's memory for future use.

16 CONDITION MEMORY button

You can store in memory the settings for up to 15 DVDs. Press **CONDITION MEMORY** during DVD playback to memorize the settings (**page 49**).

17 OPEN/CLOSE button

Press to open or close the disc tray.

18 ANGLE button

Some DVDs are recorded with various camera angle playback options. Press **ANGLE** repeatedly to display different camera angles.

19 REPEAT button

Use to set the repeat mode.

20 REPEAT A-B button

Press at the beginning and end of the section you want to repeat or to mark a location you want to return to.

21 TOP MENU button*

Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.

22 RETURN button*

Use to go one menu back (current settings are maintained). Use **RETURN** when you do not want to change the option setting in a menu.

23 NEXT ▶▶I button

During playback, press **NEXT▶▶I** to advance to the next chapter/track.

24 PLAY ▶ button

Press to start or resume playback (**pages 20, 23**).

25 PAUSE II button

Press to pause playback of a disc. Press again to resume playback.

26 REV◀◀I / FWD I▶▶ (fast reverse/forward) buttons

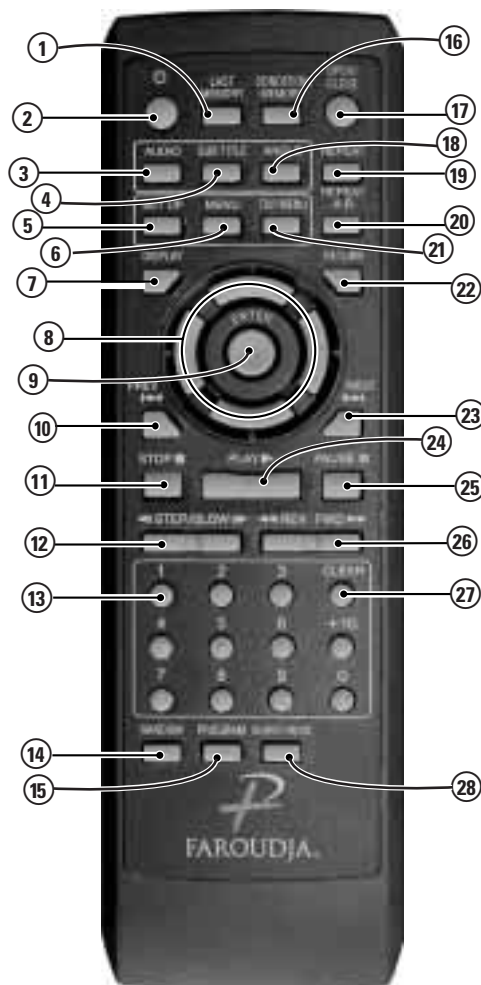
During playback of DVD and Super VCD/Video CD, press **FWD I▶▶** to perform fast forward scanning. Press **REV◀◀I** to perform fast reverse scanning of DVD and Super VCD/Video CD. When a CD or MP3 is loaded, audio scanning is performed.

27 CLEAR button

Works in conjunction with a number of player functions. Use to cancel repeat and random playback, and to edit programs.

28 SEARCH MODE button

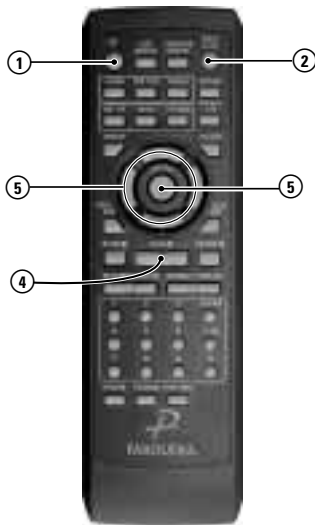
Press to perform a title/folder, chapter/track or elapsed time search.



Using Your DVD Player

Playing DVDs, Super VCDs/ Video CDs, CDs and MP3s – DVD/Super VCD/VideoCD/CD/MP3

Before you can start to enjoy the digital audio and video on DVDs, be sure that you have either performed the Setup Navigator procedure described in the previous section or made the necessary settings in the Setup screen menus as outlined in the next section to set up the player to correspond to your home system. Having made these settings, you are now ready to start using the player to enjoy DVDs, Super VCDs/Video CDs, CDs and MP3s.



1 NOT ACTIVE

2 Press OPEN/CLOSE (▲ on the front panel). The disc tray comes out.

3 Load a disc.

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

4 Press PLAY ► (▶ on the front panel).

- The disc tray closes, and playback begins.
- MP3 only: It may take a few seconds for the player to locate the track on the disc, depending on the complexity of the file structure. During this time, "Please wait a moment" is displayed.
- Depending on the disc, a menu may be displayed. If a menu is displayed, proceed to step 5.

5 Select the item you want to view.

- When a DVD is loaded:
Select the item with the **cursor buttons** (◀/▶/▲/▼) or the **number buttons** then press **ENTER**.
- When a Super VCD/Video CD is loaded:
Use the number buttons to select the item.

Notes

- Noise is output if you make digital audio connections to a receiver or amplifier that does not have a built-in decoder. Check that the digital audio output format selected in the **Audio 1** menu corresponds to the audio components you have made connections to ().
- The TV screen size is factory set to present the wide screen format (16:9 aspect ratio). If you have a standard TV screen (4:3 aspect ratio), this setting can be changed to match your TV screen size in the **Video 1** menu ().

When an operation is prohibited

There are times when you are using the player and attempt to perform an operation, but for some reason it cannot be performed. When this occurs, one of the two following icons appears on the screen.

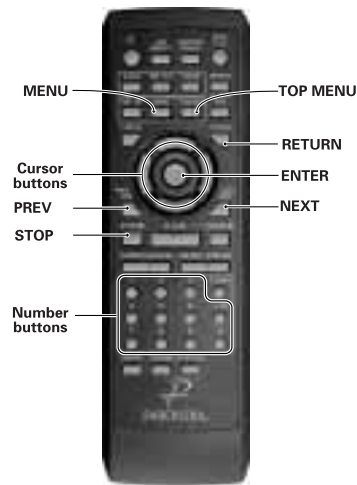


The operation is prohibited by the player.



The operation is prohibited by the programming on the disc.

When a Menu Screen is Displayed – DVD/Super VCD/VideoCD



Example 1: When a DVD that has menu screens is loaded

Main Menu	
1	Highlight Clips
2	Chapter List
3	Commercial Header
4	Subtitles
5	Soundtrack
6	Start Main Feature

STANDARD VOCAL BEST		
1	Don't Tekno for an Answer	Bertie B. & the Goons
2	Bad Whack Naff Riff	Hood in the Boz
3	dubmyheadbassman	Sleek Machine
4	Goony Love Jingle	Philip William
5	Praise the Day	Formerly an Artist
6	G3, Ba-san	Pfeuti
7	Abstract Jazz Phunk	John Torn
8	Rock the Love Jive	Hot Monkey Stick

Example 2: When a Super VCD/Video CD that has Playback Control is loaded

To navigate a menu screen

- Although individual DVD titles may differ, when a menu screen is displayed, use the **cursor buttons** (◀/▶/▲/▼) and **ENTER** on the remote control. The **cursor buttons** are used to move around the options on the screen and **ENTER** is used for selection.
- Occasionally, the **number buttons** may also be used to make selections. If this is possible, using **number buttons** serves to directly select an option on a menu screen. Only **number buttons** are used to make selections on Super VCD/Video CD menu screens.
- When the Super VCD/Video CD has more than one menu, pages can be advanced to or returned to with **PREV** |◀◀ or **NEXT** ▶▶.

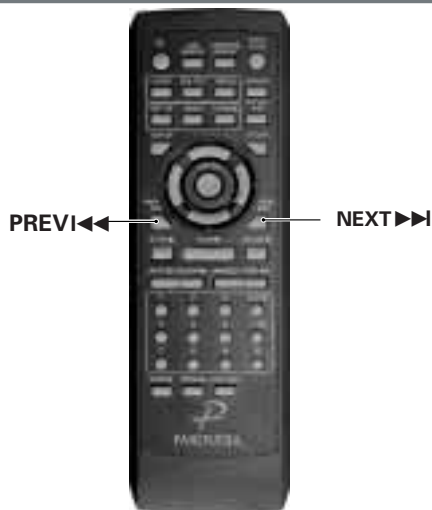
mD or Super VCD/Video CD Menu Screen

Although this differs depending on the disc, pressing **MENU**, **TOP MENU**, or **RETURN** during DVD playback or **RETURN** during Super VCD/Video CD playback displays the menu screen. Refer to the DVD or Super VCD/Video CD disc jacket and accompanying documentation for more information.

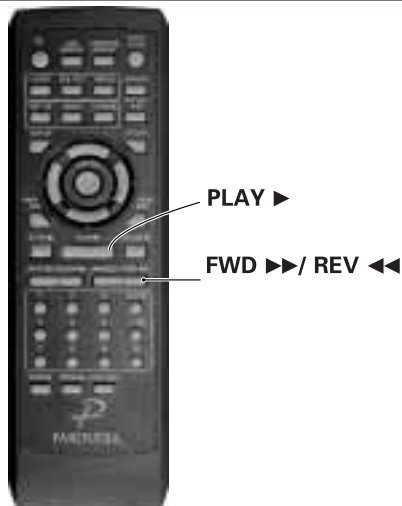
VCDs/Video CDs without displaying menu screens

Super VCD/Video CDs with Playback Control (PBC) display a menu screen when play is started. It is possible, however, to play back Super VCDs/Video CDs without displaying menu screens. When a Super VCD/Video CD with PBC is loaded, press **STOP** ■, and then the **number button** of the track you want to play.

Chapter (Track) Skip Forward/Skip Back – DVD/Super VCD/Video CD/CD/MP3



Forward and Reverse Scanning – DVD/Super VCD/Video CD/CD/MP3



Advancing to the next chapter (track)

Press **NEXT >>>I** (>>>>>I on the front panel).

- Press to skip forward to the next chapter (track).
- You can advance more than one chapter (track) forward by pressing and holding **NEXT >>>I** and releasing when the desired chapter (track) number appears in the display.

Skipping back to the previous chapter (track)

Press **PREVI <<<I** (<<<<<I on the front panel).

- Press once to skip back to the start of the chapter (track) currently playing.
- Press twice to skip back to the start of the previous chapter (track).
- You can skip back to previous chapters (tracks) by pressing and holding **PREVI <<<I** and releasing when the desired chapter (track) number appears in the display.

Fast forward and reverse scanning

Press and hold **FWD >>>I** or **REV <<<I** (>>>>>I or <<<<<I on the front panel) during playback to scan forwards or backwards.

While “>>>1” or “1<<<” is displayed on-screen blinking, release the button to resume normal playback.

Variable speed scanning

- 1 Press (but don't hold) **FWD >>>I** or **REV <<<I** during playback to start scanning. “>>>1” or “<<<1” appears on screen.
- 2 Depending on the type of disc playing, you can increase the scanning speed by pressing **FWD >>>I** or **REV <<<I**. The scan speed is shown on-screen.
 - DVD discs have three scanning speeds; 1, 2 and 3.
 - CD and Video CDs have two scanning speeds; 1 and 2.
 - MP3 have only one scanning speed.
- 3 Press **PLAY >** to resume normal playback.

Resuming playback from where you stopped

– DVD/Super VCD/Video CD

Use the resume feature to restart playback from the point that the disc was stopped last time. This features cannot be used with MP3s and CDs.

Press STOP ■ once.

The display shows “RESUME” and the stop position is memorized.

- The resume position remains memorized as long as the disc is in the player — even if you switch the power off.
- Pressing **STOP ■** twice causes the disc to return to the beginning when **PLAY ►** is pressed again. The display shows the disc type (DVDs or Super VCDs/Video CDs).

Press PLAY ►.

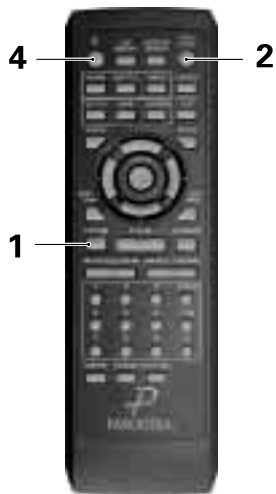
Playback starts from the resume position.

Notes

- The actual restart position may be slightly before or after the resume position.
- If you want to remove the disc, but still want to resume playback from the last stopped position, use the **LAST MEMORY** feature instead (page 48).

Stopping Playback and Switching Power Off

– DVD/Super VCD/Video CD/CD/MP35



1 Press STOP ■ (■ on the front panel).
Playback stops.

2 Press OPEN/CLOSE (▲ on the front panel).
The disc tray comes out.

3 Remove the disc.

4 Press the Power button on the small remote or the front panel
The disc tray goes back in.

Adjusting Audio and Video Settings

Using the Setup Screen Menus

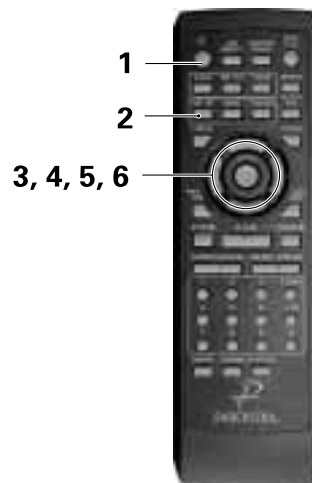
The procedure on this page describes how to operate the menus on the Setup screen. These menus are used to set and adjust a number of system settings. The various functions that can be adjusted are covered throughout this manual. The procedure on this page provides a basic outline for using the Setup screen menus.

When setting up for the first time

It is recommended to set up player using the Setup Navigator (page 17). If you selected **[Auto Start Off]** when the Setup Navigator appeared, you may still set up the player using the Setup Navigator in the **General** menu screen.

If you choose not to use the Setup Navigator, be sure to make the necessary settings in the Setup screen **Audio 1, Audio 2, Video 1, Video 2** and **Language** menus as described on the following pages.

Some DVDs start playing automatically when loaded in the player. If a DVD has been loaded, be sure to press **STOP ■** before proceeding.

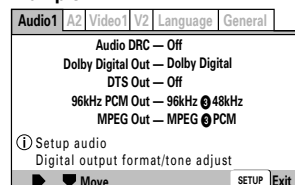


1 NOT ACTIVE

2 Press SETUP.

The Setup screen appears.

Example



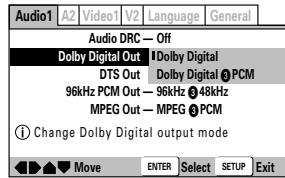
3 Use the cursor buttons (◀/▶) to select the menu you want.

As each menu is selected with the cursor, the settings appear below the menu heading.

4 Use the cursor buttons (■) to enter the menu.

The top item within the menu becomes highlighted.

Example

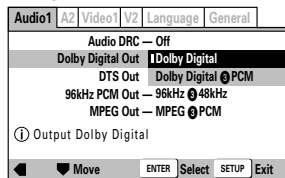


5 Use the cursor buttons (▲/▼) to select the setting you want to change.

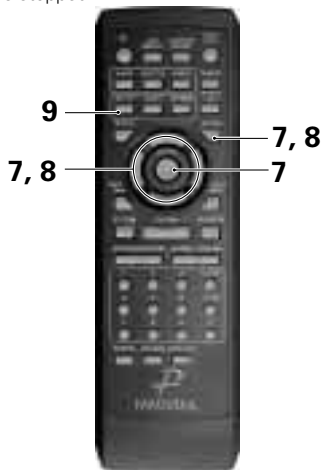
The options available for each setting appear to the right when the setting is selected. The current setting appears with the setting indicator lit.

6 Use the cursor buttons (▶) to enter the setting options.

Example



- Not all menu options can be changed while a disc is playing. In these cases, the options appear grayed out on the screen and cannot be adjusted. To change these settings, press **STOP** ■ first before pressing **SETUP**.
- Operating the menu after pressing **STOP** ■ may cancel the resume function.
- Some menu options are not immediately effective if set while a disc is playing. To make these settings effective, stop playback and then start again, or change the settings while the disc is stopped.



7 Use the cursor buttons (▲/▼) to select a new setting and press ENTER to set the new setting in memory. Press RETURN or the cursor button (◀) to exit the options without making any changes.

8 Press RETURN or the cursor button (◀) to go back to the main menu bar to select another menu.

9 Press SETUP to close the Setup screen.

The Setup screen closes.

Note

The next time you press **SETUP**, you'll see the menu screen that you exited from last time.

How to interpret the setting indicator colors in the Setup screen menus

When setting up the system, or when making adjustments, it is convenient to know what settings are applicable to the different disc formats. When the settings appear for each menu option, the currently selected setting appears with the setting indicator highlighted in one of three colors: blue, green or yellow. These colors correspond to what formats the menu option effects as shown in the table below.

Color of indicator	Disc format(s)
Blue	DVD only
Yellow	DVD/Super VCD/Video CD
Green	All compatible formats

Notes

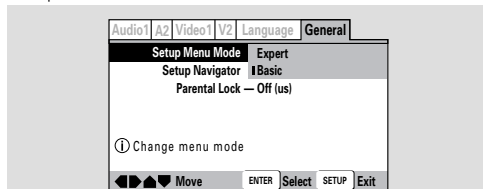
- If a setting applicable only to DVDs is changed while a Super VCD/Video CD or CD is loaded, a blue DVD icon appears in the upper right hand corner of the screen to indicate that the setting is not applicable to the currently loaded disc. The setting will be effective the next time a DVD is loaded.
- The blue indicator is shown for the **[TV Screen]**, but the aspect can be switched for Super VCD.

IMPORTANT

Changing to the Setup Screen "Expert" Menu Mode

The Setup screen menus are divided into two levels, **[Basic]** and **[Expert]**, to make this unit more convenient to operate for different levels of users. The **[Basic]** menu mode contains functions that may be considered necessary for the basic operations of this player and helpful on-screen information identified by the ⓘ mark. The **[Expert]** menu mode adds to the **[Basic]** menu mode additional functions of the player that can be adjusted to further personalize performance of the player.

In this manual, functions that are contained in the **[Expert]** menu mode are identified by the **[Expert]** icon. Make changes to the **[Setup Menu Mode]** setting in the Setup screen **General** menu.



Settings: **Expert**
Basic*

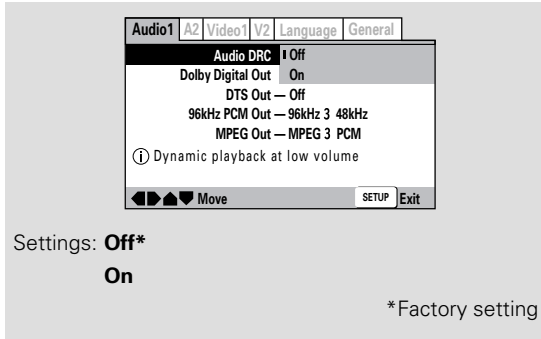
*Factory setting

Note

On-screen information only appears in the **[Basic]** menu mode.

Adjusting the Dynamic Range of the Audio Soundtrack – DVD

Audio DRC stands for Audio Dynamic Range Compression. When Audio DRC is on, soft sounds such as dialog can be heard more clearly without making loud sounds even louder. When Audio DRC is set to **[Off]**, there is no effect on the audio source. Make changes to the **[Audio DRC]** setting in the Setup screen **Audio 1** menu.



Notes

- Audio DRC is only effective with Dolby Digital audio sources.
- If you have set the player to convert Dolby Digital audio to PCM, also make sure that you set the **[Digital Out]** to **[On]** to hear the Audio DRC effect.
- The effect of Audio DRC depends on your speakers and AV amplifier settings.

NOTICE:
THE DIGITAL AUDIO SETTINGS
HAVE BEEN OPTIMIZED BY
FAROUDJA FOR THE NRS-DCS.
DO NOT CHANGE
THESE SETTINGS.

Setting the Digital Audio Output To Be Compatible with Your AV Component – DVD

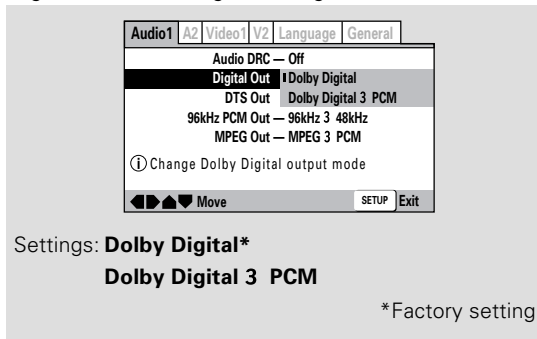
This player is capable of digital audio output for Dolby Digital, DTS, MPEG, and signals with a sampling rate of 96 kHz. Make settings in the Setup screen **Audio 1** menu to reflect the capabilities of the components that you have made digital connections to.

Notes

- If you have already completed the Setup Navigator screen operations, the settings on this page have already been set by the player.
- If you have made only stereo line connections (analog) using the supplied audio cord, it is not necessary to make any changes in this menu.

Dolby Digital Out

This player is capable of outputting the Dolby Digital surround sound audio signal. When the player is connected to an AV component that has a built-in Dolby Digital decoder, select **[Dolby Digital]**. This player can also convert the Dolby Digital signal to a digital Linear PCM signal, the same digital signal output from a CD. Select **[Dolby Digital 3 PCM]** when you have made connections to an amplifier or receiver with a Dolby Pro Logic decoder or a Digital Analog Converter (DAC).



DTS Out

This player is capable of outputting DTS digital audio for DVDs recorded in DTS. When this player is connected to an AV component that has a built-in DTS decoder, select **[DTS]**. If your system is not equipped to decode DTS, select **[OFF]**. Refer to the operating instructions supplied with your audio components if you are unsure about compatibility with DTS.



Note
If you have made digital audio connections to component(s) not equipped to decode the DTS digital bitstream, be sure to select **[OFF]**. If a DTS signal is output without decoding, the output is digital noise that could potentially cause damage to your speakers.

96 kHz PCM Out

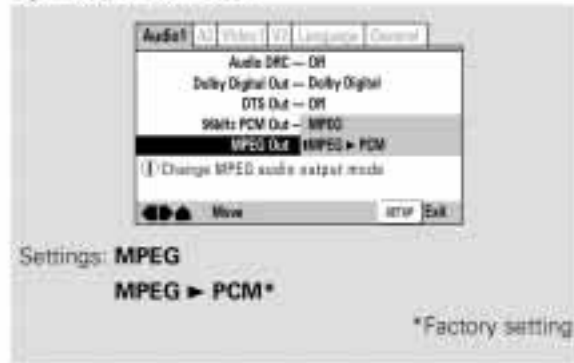
This player is capable of outputting digital signals with a sampling frequency of 96 kHz. If you have made connections to a component capable of processing this signal rate, select **[96 kHz]** for the signal to be output as is. As some components are incapable of processing digital signal input with sampling rates of 96 kHz, selecting **[96 kHz > 48 kHz]** compresses the signal to a standard signal with a sampling rate of 48 kHz.



Note
On DVDs that contain copy protection, the 96 kHz signal may only be output from the analog audio jacks.

MPEG Out

This player is capable of outputting the MPEG digital bitstream. When the player is connected to an AV component that has a built-in MPEG decoder, select the **[MPEG]** setting. Otherwise, select **[MPEG > PCM]** to convert the digital signal to the PCM signal, the digital signal output from a CD.

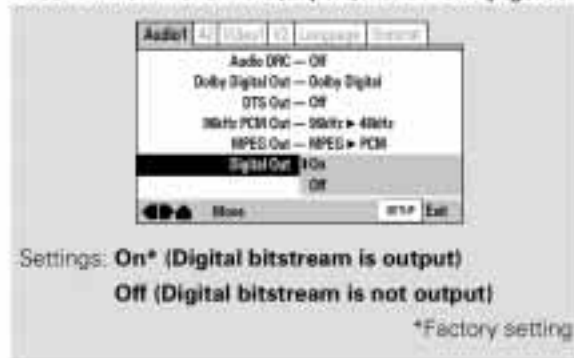


Digital Out Expert

- DVD/Super VCD/VCD/CD

Depending on your preferences and the type of connections made, you may opt not to have the digital audio signal output at all. When this setting is set to **[Off]** there is no signal output from the digital audio output jacks.

Make changes to the **[Digital Out]** setting in the Setup screen **Audio 1** menu in the **[Expert]** menu mode (page 25).



NOTICE:
THE DIGITAL AUDIO SETTINGS
HAVE BEEN OPTIMIZED BY
FAROUDJA FOR THE NRS-DCS.
DO NOT CHANGE
THESE SETTINGS.

Switching the S-Video Output

Expert – DVD

You can Switch the kind of S-Video signal output from the S-Video outputs. If you connected your TV with an S-Video cord, in rare cases the TV picture may appear stretched. In this case switch the output from **[S2]** to **[S1]**.

Make changes in the **[S-Video Out]** in the Setup screen **Video 1** menu in the **[Expert]** menu mode (page 25).



Settings: **S1**
S2*

*Factory Setting

Selecting the Type of Paused Image to Display

This function lets you view a clear still-image when DVD playback is paused.

Make changes in the **[Still Picture]** setting in the Setup screen **Video 2** menu in the **[Expert]** menu mode (page 25).



Settings: **Field**
(Picture shake will be eliminated during a paused picture.)

Frame
(Select to obtain higher picture quality.)

Auto*
(Selects **[Field]** or **[Frame]** automatically according to the disc.)

*Factory setting

Setting the Position of the On-screen Display

Expert

When watching conventional software on a wide screen TV, the operation display is at the very top of the screen, and may be difficult to see. Changing the position of the display lets you see operation indicators clearly even on a wide screen TV.

Alternatively, you can choose to turn them off completely with the **[Off]** setting.

Make changes in the **[On Screen Display]** in the Setup screen **Video 2** menu in the **[Expert]** menu mode (page 25).



Settings: **Position-Wide**
Position-Normal*
Off

*Factory setting

Note

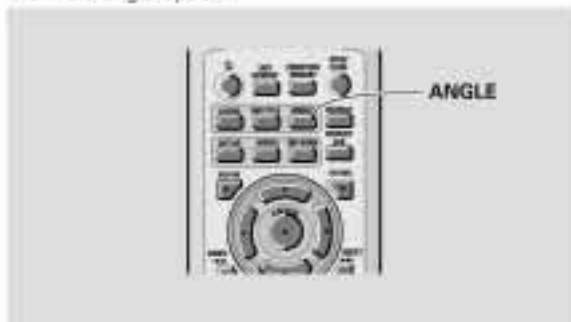
This setting is only effective with DVDs that contain a 4:3 aspect ratio video presentation.

NOTICE:
THE S-VIDEO OUTPUT IS NOT AVAILABLE WITH THE NRS-DCS.

Viewing from a Desired Camera Angle (Multi-Angle)

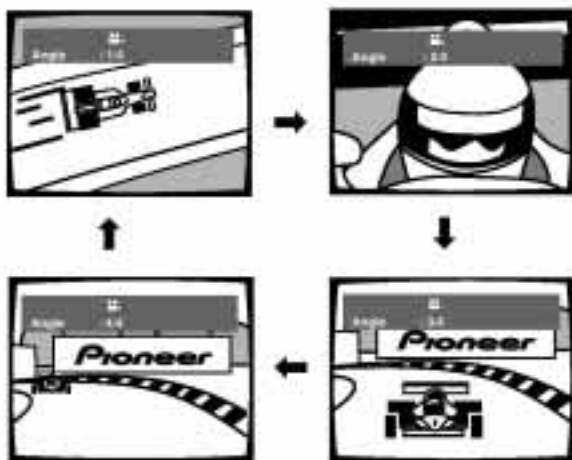
– DVD

You can select a camera angle when viewing DVDs with the multi-angle option.



Press ANGLE during playback.



The camera angle changes each time you press the button.



Notes


- You can use the Multi-Angle function only with discs featuring recordings of images shot from different camera angles.
- During Multi-Angle playback, the  indicator in the display lights.
- For some discs, selection can be made using the DVD menu. In this case, press **MENU** to display the DVD menu screen and then make your selection.

To check whether or not a disc is recorded with angles

The jacket of discs that are recorded with angles will be marked with . When locations on discs that are recorded with angles are played back, the  indicator can be displayed.

To cancel the angle mark, set **[Angle Indicator]** to **[Off]** in the Setup screen **Video 2** menu described in the section below.

Turning the angle indicator on and off **Expert**

When a picture recorded in different angles is played back  is displayed on the screen. This setting lets you see clearly whether the playback picture is recorded in multiple angles or not.

Turn the angle indicator on or off in the **[Angle Indicator]** setting in the Setup screen **Video 2** menu in the **[Expert]** menu mode (page 25).



Note

Even when the **[Angle Indicator]** setting is set to **[Off]**, the  indicator in the display panel of the player lights during multi-angle playback. Therefore, it is possible to know when the multi-angle function can be used without having to display the icon on the screen.

Setting the Language Options

DVDs have the capacity to contain a great deal of audio information, which includes the ability to hold up to 8 different language tracks and subtitle information in as many as 32 different languages. This section outlines the variety of audio language and subtitle options available with this player.

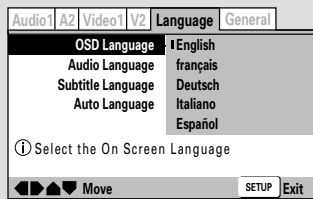
Please note that if you have completed the Setup Navigator, the audio and subtitle language options have automatically been set in accordance with the **[OSD Language]** (the language that appears on the screen).

Note

DVDs differ in content and do not all contain multiple language or subtitle information. Therefore making settings in this section may have no effect on some DVDs.

Setting the On-screen Display (OSD) Language

This setting is used to establish the language that operation indicators and on-screen messages and operations display. Change this setting in the Setup screen **Language** menu **[OSD Language]** setting.



- | | |
|---------------------------|------------------------------|
| Settings: English* | Taiwanese model only: |
| français | English* |
| Deutsch | 汉语 |
| Italiano | |
| Español | |

* Factory setting

Notes

- The menu settings may be different from those shown above.
- The **[OSD Language]** setting is factory set to **[English]**. If you want English to be displayed, it is not necessary to adjust this setting.

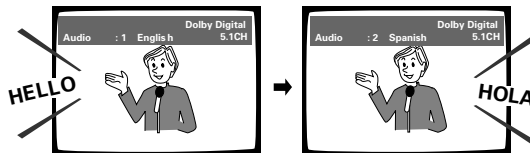
Changing the Audio Language (Multi-Language Function) – DVD

Dolby Digital, PCM, and other audio data can be recorded on DVDs in a number of languages or audio tracks, letting you choose the desired language or audio.



Press AUDIO repeatedly to select the desired language.

Pressing **AUDIO** once displays the currently selected language. Subsequent presses rotate through the audio languages available on the DVD.



Notes

- You cannot switch languages if there is only one language recorded on the disc.
- Switching the audio language may not be possible with some titles. In this case, the mark is displayed.
- For some titles, selection can be made using the DVD menu. In these cases, press **MENU** to display the DVD menu screen and then make your selection.

Changing Audio Type

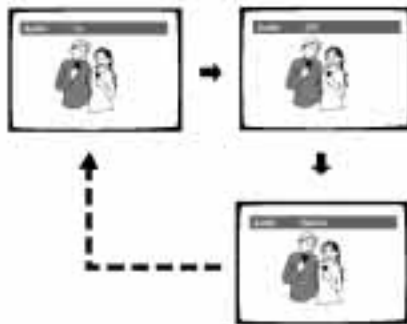
– Super VCD/Video CD/CD/MP3

For enjoyment of karaoke or similar format Super VCDs/ Video CDs, CDs and MP3s, it is possible to select stereo audio, or either right or left channel mono depending on the requirements of the source.

Video CD/CD/MP3

Press **AUDIO** repeatedly during playback to switch the audio type.

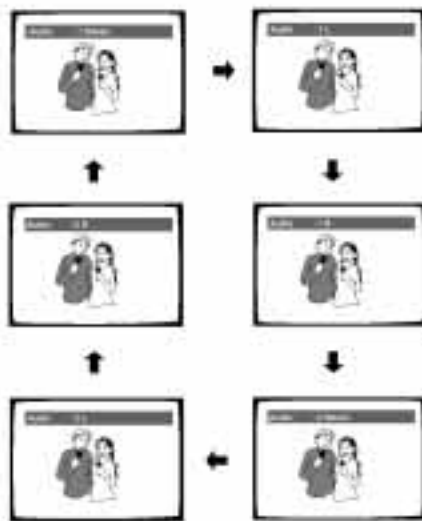
Audio output changes from **[1/L]** (Left channel) to **[2/R]** (Right channel) to **[Stereo]**.



Super VCD

Press **AUDIO** repeatedly during playback to switch the audio type. Choose the audio type that lets you hear the soundtrack (the sound may not be audible with some audio types).

The audio changes according to the diagram above.



Note
With karaoke and other discs, set the appropriate audio type for singing and accompaniment after referring to information on the disc jacket or accompanying material.

Selecting an audio language preference

The audio language that you normally listen to can be selected from the various audio languages on a DVD. Even when the audio language is changed during playback by pressing **AUDIO**, the language selected at this setting will be selected as the default when the DVD is changed.

Make changes to the **[Audio Language]** setting in the Setup screen **Language** menu.

You cannot make this setting with a disc playing

The screenshot shows the DVD Language menu. The 'Audio Language' is currently set to 'English'. Other options include French, German, Italian, Spanish, and Other. Below the menu, there are two columns of settings:

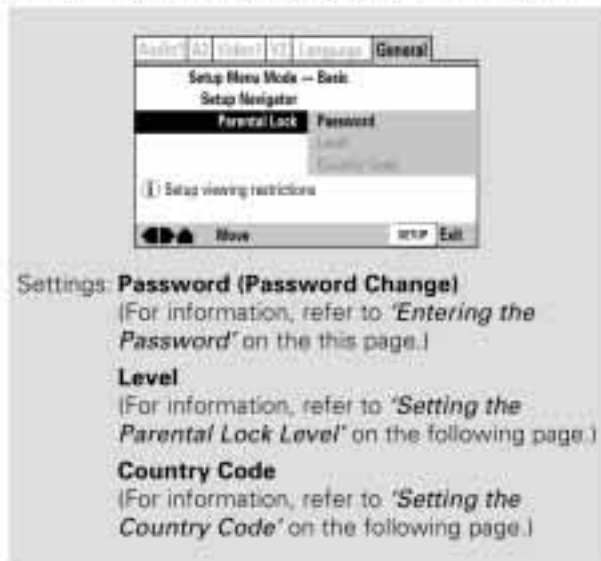
Settings: English*	Taiwanese model only:
French	English*
German	Chinese
Italian	Other
Spanish	
Other	

Note
The menu settings may be different from those shown above.

Setting the Parental Lock Level – DVD

This player lets you set the Parental Lock if the DVD has a parental lock level recorded on it. With Parental Lock capable discs, you can block access to material you feel is inappropriate for your children. Refer to the DVD disc jacket and the accompanying documentation to see if a particular disc contains a parental lock level. Make changes to the **[Parental Lock]** setting in the Setup screen **General** menu. Please note that changes to the Parental Lock level cannot be made when a disc is playing. Stop playback of the disc before attempting to make any changes.

You cannot select **[Level]** or **[Country Code]** until you have registered a password. Select **[Password]** to register a new password. See *‘Entering the password’* on the this page for how to register a new password.



Settings: **Password (Password Change)**
(For information, refer to *‘Entering the Password’* on the this page.)

Level
(For information, refer to *‘Setting the Parental Lock Level’* on the following page.)

Country Code
(For information, refer to *‘Setting the Country Code’* on the following page.)

When a DVD with a set Parental Lock level is loaded

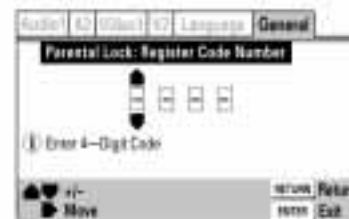
Playback cannot be started until the code number has been correctly input by using the **cursor buttons** (◀/▶/▲/▼) or the **number buttons**, and **ENTER** has been pressed.

Entering the Password

When you select either **[Level]** or **[Country Code]**, it is necessary to register the password (4-digit code number). You'll be asked to confirm your existing password before registering a new one. Use the following steps at any time you are asked to enter or confirm your password.

1 Use the cursor buttons (▲/▼) or the number buttons to select a number between 0 and 9.

You can also use the **number buttons** to enter the numbers directly. When entering your password for the first time, or changing it, you will be asked to reenter your password. When using the **number buttons** to confirm the password, the numbers appear as asterisks, and the cursor advances automatically to the next position.



2 Use the cursor buttons (◀/▶) to move the cursor to a different position in the password.

When all four numbers of the password have been entered, **ENTER** appears on the screen.



3 Press ENTER to set the password.

The password is entered.

Note

Be sure not to forget your password. If you should forget it, reset the system, and enter a new password. To reset the system, see *‘Resetting the Player to System Settings’* (page 53). Please note that this procedure resets the system, and clears all saved settings, not just the password.

Setting the Parental Lock Level

Change the Parental Lock level to a higher or lower level according to the settings printed on the DVD disc jacket or accompanying documentation. If you use the Condition Memory function to save the settings for a particular disc, the Parental Lock level is saved as well. Because it is saved in memory, Parental Lock levels can be set for individual discs according to their content rather than a set level for all DVDs.

1 Select [Level] in the [Parental Lock] setting and press ENTER.

The screen changes to the password input screen. To enter the password, refer to *'Entering the Password'* on the previous page.

You cannot select [Level] until you have registered a password.

2 Use the cursor buttons (◀/▶) to adjust the Parental Lock Level.

The lock icons appear "unlocked" up to the selected level to indicate that access is available.



3 Press ENTER to set the new level.

The new Parental Lock level is set and the screen returns to the **General** menu screen. To go back to the **General** menu screen without making any changes, press **RETURN**.

Changing the Password

Change your password whenever you feel it is necessary. However, if you forget your existing password, you cannot enter this screen to change it.

1 Select [Password Change] in the [Parental Lock] setting and press ENTER.

The screen changes to the password input screen. To enter the password, refer to *'Entering the Password'* on the previous page.

2 Use the cursor buttons (◀/▶/▲/▼) or the number buttons to enter the new password.

3 When the new password has been entered, press ENTER.

The new password is set and the screen returns to the **General** menu screen. To go back to the **General** menu screen without making any changes, press **RETURN**.

Setting the Country Code

Change your Country Code whenever you feel it is necessary. However, if you forget your existing password, you cannot enter this screen to change it.

1 Select [Country Code] in the [Parental Lock] setting and press ENTER.

The screen changes to the password input screen. To enter the password, refer to *'Entering the Password'* on the previous page.

The Country Code selection screen appears.



2 Use the cursor buttons (◀/▶) to select either "List of Codes" or "Code".

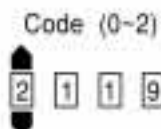
3 If you select "List of Codes", use the cursor buttons (▲/▼) to select the country.

For country codes which are only shown as a code, please refer to *'Country Code List'* on page 53.



If you select "Code", use the cursor buttons (▲/▼) to input the numbers of the input code.

Use the **cursor buttons** (◀/▶) to change the position of the cursor. You can also use the **number buttons** to enter the code.



4 Press ENTER to set the new Country Code.

To exit the screen without making any changes, press **RETURN**.

Country Code List

Country	Input-code	Country-code
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, PROVINCE OF CHINA	2023	tw
THAILAND	2008	th
UNITED KINGDOM	0702	gb
UNITED STATES OF AMERICA	2119	us

Changing the Background of the Screen

You can select a background to appear when the player is in the stop mode.

Make changes to the **[Background]** setting in the Setup screen **Video 2** menu.



Turning the Screen Saver On and Off **Expert**

As a protective function against residual images on the TV screen or monitor, a phenomenon referred to as "screen burn", the screen saver appears when the same screen has been displayed for a length of time. By default, the screen saver is turned on. However, the screen saver function can be turned on and off at your discretion.

Make changes to the **[Screen Saver]** setting in the Setup screen **Video 1** menu in the **[Expert]** menu mode (page 25).



Resetting the Player to System Settings

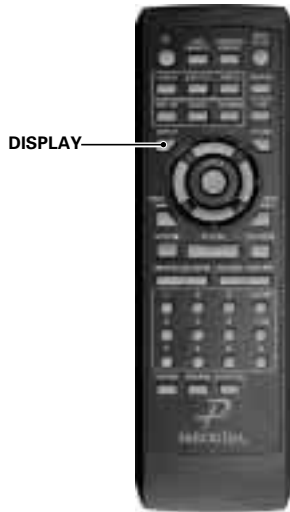
To reset the player, press and hold **■ |stop|** on the front panel when pressing **⏻ STANDBY/ON** to turn the unit from standby to on.

All program memory, saved settings from functions such as Video Memory, Last Memory and Condition Memory are cleared, TV System is reset to **AUTO** and all Setup screen menus are returned to factory settings.

Viewing Disc Information

– DVD/Super VCD/Video CD/CD/MP3

Use **DISPLAY** to get current information about the disc currently loaded. You can get information about the titles and chapters on a DVD or tracks on a Super VCD/Video CD or CD or folders and tracks on a MP3. When viewing DVDs, you can also check the digital bitstream transmission rate.



Press DISPLAY during while a disc is playing. Press DISPLAY repeatedly to change the information being displayed.

The disc information is displayed superimposed over the video image on the screen.

Press and hold DISPLAY to display the time remaining on the disc.

When you release the button, the information disappears.

Notes

- Depending on the format and type of disc being used, not all screens may be displayed.
- When playing Video CDs in PBC mode or unfinalized CD-Rs not all the above information is displayed.

The display changes for each type of disc as follows each time the button is pressed.

DVD

current title/chapter number | elapsed time of current title

Play	3-29	49.58
Title	-51.06/	101.04

remaining time of current title | remaining total time of current title

<<

current title/chapter number | elapsed time of current title

Play	3-32	54.53
Chapter	0.21/	1.51

elapsed time of current chapter | elapsed total time of current chapter

<<

current title/chapter number | elapsed time of current title

Play	3-32	54.53
Chapter	-1.30/	1.51

remaining time of current chapter | remaining total time of current chapter

<<

current title/chapter number | elapsed time of current title

Play	3-32	54.53
Tr. Rate:	■■■■■■■■	6.3

transmission rate level meter | transmission rate level

<<

Display off

Video CD (with PBC disabled)

current track number/ total number of tracks | Video CD's total elapsed time

Play	3/12	10.53
All	-59.26/	70.19

Video CD's remaining time | Video CD's total time

<<

current track number | Video CD's total elapsed time

Play	3	10.53
Track	3.56/	5.23

elapsed time of current track | total time of current tracks

<<

current track number | Video CD's total elapsed time

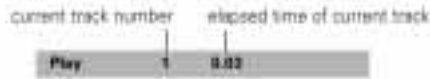
Play	3	10.53
Track	1.27/	5.23

remaining time of current track | total time of current tracks

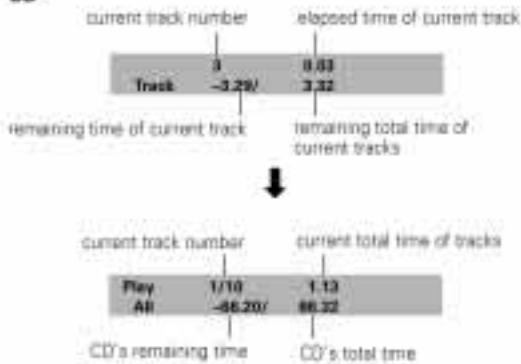
<<

Display off

Super VCD

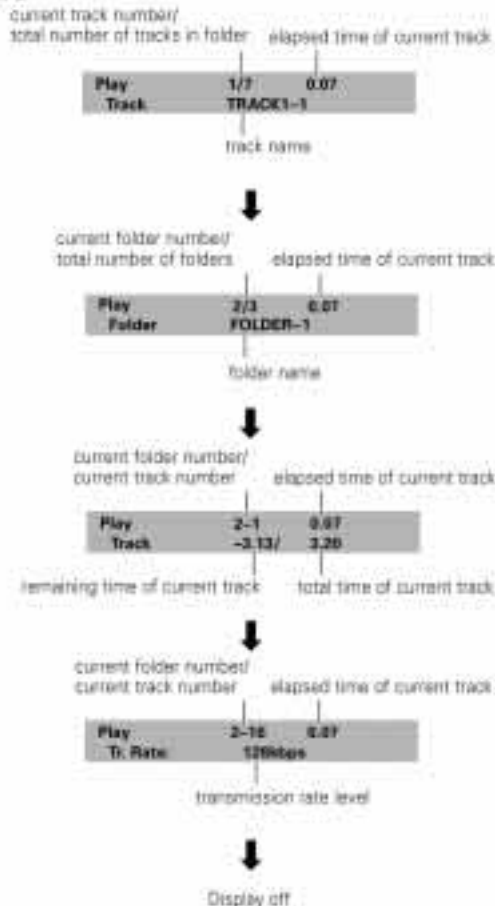


CD



Display off

MP3



Press **DISPLAY** during while a disc is stopped to display DVD title and chapter information or Video CD and CD track information or MP3 folder and track information. Press **DISPLAY** again to turn the display off.

Information about the titles and chapters or folders and tracks on a disc is displayed. When the information exceeds the space on the screen, use the **cursor buttons** (◀▶) to move to other screens.

DVD

Information DVD			
Title	Chapter	Title	Chapter
01	1-30	06	1-10
02	1-21	07	1-12
03	1-46	08	1-5
04	1-12	09	1-4
05	1-8	10	1-8

1/2 ▶ DISPLAY Exit

Titles and number of chapters in each title

Video CD and CD

Information Compact Disc			
Total time		72.34	
Track	Time	Track	Time
01	5.23	06	6.51
02	4.55	07	3.16
03	6.12	08	6.90
04	5.45	09	4.16
05	5.10	10	3.22

1/2 ▶ DISPLAY Exit

Total playing time of disc, tracks and track times

MP3

Information MP3			
Folder	Track	Folder	Track
001	1-9	001	1-10
002	1-11	002	1-13
003	1-3	003	1-5
004	1-22	004	1-4
005	1-15	005	1-3

1/2 ▶ DISPLAY Exit

Folders and number of tracks in each folder

Note

Information for Super VCD is not displayed.

Additional Information

Disc Care

How to hold discs

When loading or removing discs, try not to touch their playing surfaces.



Cleaning

Fingerprints or other dirt on the disc may affect sound and picture quality.

To clean your discs, use a soft clean cloth to wipe them. If necessary, moisten a soft cloth with diluted neutral detergent to remove heavy dirt or fingerprints.



Do not wipe in a circular direction (Concentric scratches in the disc groove tend to cause noise).



Gently wipe from the inside toward the outer edge.

Discs must not be cleaned with record cleaning sprays, or static prevention sprays, etc. Also do not use volatile liquids such as benzine, or thinner, etc.

Never play cracked or warped discs

The disc revolves in the player at high speed when it is played. Never play a cracked, scratched or warped disc. This may damage the player or cause it to malfunction.



Never use discs with special shapes

CD's with special shapes (heart-shaped CDs, octagonal CDs, etc.) cannot be played on this set. Attempting to do so may damage the set. Do not use such CDs.



After using discs, store them upright

After playing a disc, always remove it from the player and return it to its jacket. Then store it standing upright away from heat and humidity.

- Store discs carefully. If you store discs at an angle, or stacked on top of each other, discs may become warped even when in their jackets.
- Do not leave discs in locations such as the seat of a car, which may become excessively hot.
- Do not fix labels or stickers to discs. The disc may become unplayable as a result.
- Do not load more than one disc into the player.

CAUTION WHEN USING THE DISC

All rights reserved.

Unauthorized public performance, broadcasting or copying is a violation of applicable laws.

For Proper and Long Use of This Unit

Do not move the unit during playback

During playback, the disc rotates at high speed. Do NOT lift or move the unit during playback. Doing so may damage the disc.

When moving the unit

When changing places of installation or pecking the unit for moving, be sure to remove the disc and return the disc table to its original position in the player. Then, press **STANDBY/ON** and switch the power to standby. **Check that the "--OFF--" indication on the display goes off**, then disconnect the power cord. Moving this unit with the disc loaded may result in damage to this unit.

Installation

- Select a stable place to the side of a TV set or stereo system to be connected to the unit.
- When using the unit with a stereo system, install the speakers a little bit away from the TV.
- Do NOT install the unit on top of a TV or color monitor. Install the unit away from equipment that may be affected by magnetism, such as a cassette deck.
- Do NOT place objects on top of the unit.

Avoid installing in a place that is:

- Exposed to direct sunlight
- Exposed to humidity or where ventilation is poor
- Extremely hot or cold
- Exposed to vibration
- Exposed to dust
- Exposed to oily smoke, steam or heat (for example, a kitchen)

Do not block vents

Do NOT use the player on top of a long-fibered carpet, bed or sofa, and do not cover it with a cloth, etc. This will prevent heat radiation and could result in damage.

Avoid heat

Do NOT place the unit on equipment which generates heat, such as an amplifier. When installing the unit in a rack, place it on the lowest shelf possible (however, not where it is exposed to dust) and separated from the amplifier to avoid the heat generated by the amplifier or other audio equipment.

CAUTION: WHEN PLACING THE UNIT IN A STEREO RACK WITH GLASS DOORS

Be sure there is ample space between the unit and the glass doors when opening the disc table using the remote control. If the disc table opens against strong resistance, such as a closed glass door, damage to the unit may result.

Condensation

Moisture may form in the operating section of the player if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, the player's performance will be impaired.

To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually. Condensation may also form during the summer if the player is exposed to the breeze from an air conditioner. In such cases, change the location of the player.



Switch POWER to STANDBY when not using the unit

Depending on the strength of the TV or radio broadcast signal, having the TV or radio on while power to the unit is on may result in stripes on the TV screen or noise.

However, this is not a malfunction of this unit or the TV or radio. In such a case, switch the power of the unit to standby.



Power-cord caution

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed in such a way that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock.

Cleaning the player

To clean the PLAYER, wipe with a soft, dry cloth. For stubborn dirt, wet a soft cloth with a mild detergent solution made by diluting one part detergent to 5 or 6 parts water, wring well, then wipe off the dirt. Also use a dry cloth to wipe the surface dry. Do not use volatile liquids such as benzene and thinner which are harmful to the unit.

Lens cleaner

The player's pickup lens should not become dirty in normal use, but if for some reason it should malfunction due to soiling, contact your nearest Faroudja authorized service center. Lens cleaners are commercially available, but special care should be exercised in their use since some may cause damage to the lens.

Language Code List

Language codes are used when setting the audio and subtitle language preferences.

Language	Input-code
Japanese (ja)	1001
English (en)	0514
French (fr)	0618
German (de)	0405
Italian (it)	0920
Spanish (es)	0519
Chinese (zh)	2606
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
Scotts-Gaelic (gd)	0704
Galician (gl)	0712
Guarani (gn)	0714

Language	Input-code
Gujarati (gu)	0721
Hause (ha)	0801
Hindi (hi)	0809
Croatian (hr)	0816
Hungarian (hu)	0821
Armenian (hy)	0825
Interlingue (ia)	0901
Interlingue (ie)	0905
Inupiak (ik)	0911
Indonesian (in)	0914
Icelandic (is)	0919
Hebrew (iw)	0923
Yiddish (j)	1009
Javanese (jv)	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
Laotian (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)	1316
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
Punjabi (pa)	1601
Polish (pl)	1612
Pashto, Pushto (ps)	1619
Quechua (qu)	1721

Language	Input-code
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
Volapok (vo)	2215
Wolof (wo)	2315
Xhosa (xh)	2408
Yoruba (yo)	2515
Zulu (zu)	2621

Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. 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 even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

The disc table comes back out automatically, shortly after the disc table is closed.

The disc is dirty or warped.

- ➔ Refer to 'Disc Care'.

The disc is not placed properly on the disc table.

- ➔ Use the disc table guide to align the disc.

Region number does not conform with this unit.

- ➔ If the region number on the disc does not match the number on the player, the disc cannot be used.

There is condensation on the operating section of the player.

- ➔ Allow time for condensation to evaporate. If player is near an air conditioning unit, you should move the player.

Playback is not possible.

The disc has been loaded upside down.

- ➔ Check that the disc has been loaded with the label side facing up.
- ➔ A Super VCD that does not conform with the IEC standards might not play normally.

mark appears on screen.

The selected function does not operate for that disc.

mark appears on screen.

The operation is prohibited by the player.

Picture playback stops and the operation buttons cannot be used.

- ➔ Stop disc playback (press **STOP** ■), then start playback again.

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. This is not a malfunction.

- ➔ Make the same setting when the player is stopped.
- ➔ Stop disc playback (press **STOP** ■), then start playback again. When playback is resumed, the new settings should be in effect. Please note that making settings in the Setup screen menus may cancel the resume function.

When making changes in the Setup screen menus, is displayed.

There is a Video CD, CD or MP3 loaded in the player and the setting that was changed only applies to DVD performance.

- ➔ The setting will be effective the next time a DVD is loaded.

Settings are canceled.

When the power is turned off by power failure or by unplugging the power cord, settings will be canceled.

- ➔ Before unplugging the power cord, press **○ STANDBY/ON** and check that "--OFF--" disappears in the display.

No picture.

Connection is incorrect.

- ➔ Check that cord connections are correct and that plugs are firmly connected.

Operation (settings) of TV or AV amplifier is not appropriate.

- ➔ Be sure that your TV, receiver, or amplifier is set up to view DVD playback.

Picture disturbance during playback or dark.

This is not a malfunction.

- ➔ 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.

The TV system may be set inappropriately.

- ➔ See 'Setting the TV System' on.

Discs respond differently to particular player functions which may result in the screen becoming black for a brief instant or shaking slightly when the function is executed.

- ➔ These problems are largely due to differences between discs and disc content and are not malfunctions of this player.

When recorded on a VCR or passed through an AV selector, there is disturbance in the playback picture.

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.

Remote control operation is not possible.

- ➔ Using the wrong remote

➤ Point the remote control at the component that the player is connected to.

The remote control is too far from the player, or the angle with the remote sensor is too wide.

- ➔ Be sure to operate the remote from a location within its operating range.

The batteries are exhausted.

- ➔ Replace the exhausted batteries with all new batteries.

Some settings in the Setup Menu do not appear.

- ➔ The Setup Menu Mode is set to **[Basic]**; set it to **[Expert]**.

The disc is dirty.

- ➔ Refer to 'Disc Care'.

The connection plugs are not inserted fully into the terminals or are not connected.

- ➔ Check that all connection plugs are firmly inserted.

The connection plug or terminal is dirty.

- ➔ Check that the plugs and terminals are wiped clean of dirt, etc.

Audio cable connection is wrong.

- ➔ Check to make sure that the audio cables are connected correctly.

Connection is made to the stereo amplifier's PHONO input terminal.

- ➔ Change connection to any input terminal except PHONO.

The pause mode is engaged.

- ➔ Press **PLAY ▶** or **PAUSE II** to exit the pause mode.

Stereo amplifier operation is incorrect.

- ➔ Check input (CD, AUX, etc.) selector to determine if it is selected for DVD playback.

Noticeable difference in DVD and CD volume.

DVDs and CDs use different recording methods.

- ➔ This is not a malfunction.

No DTS audio output.

- ➔ You can only play DTS discs if you have a DTS-compatible amplifier or a DTS decoder. From the disc menu screen, or using the **AUDIO** button, select a non-DTS setting.
- ➔ If this unit is connected to a non-DTS compatible amplifier or decoder using a digital audio cable, set **[DTS Out]** to **[Off]** in the Setup menu. If you do not do this, noise will be output if you try and 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.

"DTS DIGITAL OUT OFF" is displayed on-screen.

If this unit is connected to a DTS-compatible amplifier or decoder, set **[DTS Out]** and **[Digital Out]** to **[On]** from the Setup menu. If you do not have a DTS-compatible amplifier or decoder, you cannot play DTS discs. In this case, select a non-DTS setting from the disc menu or by using the **AUDIO** button.

The disc containing the MP3 tracks won't play.

If the disc is a recordable CD, make sure that the disc is finalized. If the message **"UNPLAYABLE MP3 FORMAT"** is displayed when you try to play a disc/track:

- ➔ Check that the track(s) are in the MPEG1 Audio Layer 3 format.
- ➔ Check that the sampling rate of the track(s) are 44.1 or 48kHz.

Some MP3 tracks appear to be missing from a disc.

- ➔ If a track name does not end in ".mp3" or ".MP3", this player will not recognize it as an MP3 track.
- ➔ This player only recognizes the first 250 folders and tracks on a disc. If there are more folders/tracks than this, you will not be able to play them.
- ➔ This player is not compatible with multi-session discs. If the disc is multi-session, you will only be able to play tracks recorded onto the first session.

The audio recorded on the disc is not output properly.

- ➔ If the audio is switched to **[2]** when playing a Super VCD that contains only one stereo soundtrack, there may be no sound at all. To restore the sound, return the **AUDIO** button back to its original position.

Caution

Static electricity or other external influence may cause malfunctioning of this unit. In this case, unplugging the power cord and then re-plugging it in will usually reset the unit for proper operation. If this does not correct the problem, please consult your nearest faroudja service center.

Terms

Aspect ratio

Aspect ratio refers to the length to height ratio of TV screens. The ratio of a standard TV is 4:3, while the ratio of a high-definition or wide TV is 16:9. The latter allows you to enjoy a picture with a wider perspective.

Chapter number

Chapter numbers are the numbers assigned to sections of a title on the disc, similar to chapters in a book. If the disc includes chapter numbers, you can locate the section you want very quickly using search and other functions.

Component (color difference) video output

The color signal of the TV is divided into the luminance (Y) signal and the color (Pa and Pb) signals and then output. In this way mutual interference of each signal is avoided. On a TV with component input jacks, these signals are synthesized to produce the picture.

Condition memory

"Condition" refers to the various mode settings, etc. On this player, various conditions, such as those set during playback, can be memorized. This function allows you to play back the same disc at any time without having to redo your preferred settings.

Digital bitstream

The bitstream does not refer to the audio signal, but rather to the digital data that, once converted, becomes the audio signal. The player outputs digital bitstreams via the digital optical or digital coaxial output. If the bitstream cannot be decoded by the connected AV amplifier etc., digital noise is produced. Digital bitstream formats compatible with different entertainment systems can be selected in the Setup screen **Audio 1** menu.

Digital output (Coaxial)

Output of the digital audio signal is transmitted electronically using a coaxial cable. Because the signal being transmitted is digital, connection must be made to the coaxial digital input of another component. Noise will be output if connected to the analog audio inputs as the digital signal cannot be decoded.

Digital output (Optical)

Normally, audio is converted to an electric signal and transmitted through an electric wire from the player to the amplifier, etc. Changing this signal to a digital signal and transmitting it through a fiber-optic cable is called optical digital output. Similarly, optical digital input receives digital signals from external units such as an AV amplifier or receiver.

Multi-session

A CD-R/RW that contains two or more "sessions". Each session is a complete recording process, so each session is read as a complete disc.

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.



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. In order to enjoy the benefits of DTS encoded discs, the digital output jack (either coaxial or optical) of this player needs to be connected to an AV amplifier or receiver or to a DTS decoder to be able to enjoy the surround sound of DTS audio. DTS audio is not output from the analog audio outputs.



Dynamic range

Dynamic range refers to the difference between the maximum and minimum levels of the audio soundtrack as measured in decibels (dB).

Compressing the dynamic range raises the minimum signal level and lowers the maximum signal level. This allows you to hear voices and other low level audio signals clearly while lowering strong audio signals like the sound of explosions.

File extension

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

MP3

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

MPEG

Short for Moving Picture Experts Group. This is an international standard for compression of moving images. On some DVDs, digital audio has been compressed and recorded in this format.

Multi-angle

When you watch a TV program, you are watching the image filmed through the TV camera. Because of this, the picture is displayed on your TV from the viewpoint of the TV camera's position. In a TV studio, the image is filmed by many cameras at the same time, and one of those images is selected by the program director and transmitted to your TV. If all the filmed images were transmitted to your TV you would be able to select the camera image you want. Some DVD discs are recorded with the angles of more than one camera used for filming, and these can be selected using this player. These types of discs are called multi-angle discs.

Parental lock level

This function was suggested by parents concerned about what type of media their children were able to watch. Parental lock restrictions are restrictions incorporated into titles which include scenes that parents may not wish their children to view.

PCM

PCM stands for Pulse Code Modulation and is digital audio. The digital audio of CDs is PCM. This player also has a function that converts Dolby Digital and MPEG digital bitstreams into PCM to enable you to listen to quality digital sound even without a special decoder.

Playback Control (PBC)

This refers to signals recorded on a Super VCD/Video CD (Version 2.0) enabling playback control.

You can use menus recorded on discs with PBC for easy, interactive search for desired scenes, and playback.

You can also enjoy viewing high-resolution/standard resolution still images.

Regional restriction codes (region number)

Regional restriction codes are built in to DVD players and DVD discs for each sales region. If the regional code of the DVD player does not match one of the regional codes of the DVD disc, playback is not possible.

The region number can be found on the rear panel of the DVD player. The illustration below shows the regions and corresponding region numbers.



Sampling Frequency

When a sound wave is converted to a digital signal, the sound is sampled and converted to data at a specific frequency rate. For example, a signal with a 96 kHz sampling rate indicates that in one second, the analog signal was sampled 96000 times to produce the digital signal.


Subtitle

Subtitles are language titles superimposed on movies, or other media. Up to 32 different subtitle languages can be recorded on a DVD disc. The subtitle function can be used to select the language of your choice.

S-video

Connecting the S-video output on the player to a TV or monitor with S-video input via an S-video cable produces clearer picture reproduction by sending separate signals for the luminance and the color. These signals are then combined by the television to produce a better quality picture.

System control

When you connect this player via a cord with a mini plug to another Pioneer component such as a receiver or an amplifier bearing the  mark, you can control the player as though it were a component in a system. To control the player, point the player's remote control at the component that the player is connected to, and not the player itself.

Time number

The time number corresponds to the elapsed playback time of a disc from its beginning. When using the time search function, use the time number to locate scenes that occur at the time selected.

Title number

DVD discs are divided into units referred to as titles, and titles are divided into chapters. Menu screens do not belong to any title. A disc which contains a movie may have only one title with many or no chapter divisions. Karaoke discs may have many titles, assigning a title to each song on the disc.

TruSurround

TruSurround is a simulated surround system which produces a surround sound effect from stereo speakers.

SPECIFICATIONS

Inputs (Interlaced)																							
Format NTSC/PAL	Auto Detect																						
Composite(BNC)	1v pp																						
S-Video(4-pin DIN)	Y – 1v pp C –286mv pp																						
Component (BNC) Interlaced Auto-detect - if signal is above 15.75KHz it will be sent to the pass-through.	Y--1v pp(SMPTE) Cr--700mv pp Cb – 700mv pp																						
RGB (BNC) Interlaced	Comp. Sync--1v pp RGB—700mv pp																						
HD/PC Pass-Thru	D15M																						
DVI Input (for pass-through only to DVI out)	DVI-I (female) Digital Video Only																						
Remote Control "D9F"	RS-232 ASCII																						
Remote IR sensor input	5V-12V, 3.5mm, Tip=+																						
Outputs (Progressive)																							
R,G,B (BNC or DB15)	700mv pp, TTL Sync																						
YPrPb	700mv pp, Sync on Y-1v pp																						
RGsB	Gs – 1v pp RGB – 700mv pp																						
D15F	<table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>Red Out</td></tr> <tr><td>2</td><td>Green Out</td></tr> <tr><td>3</td><td>Blue Out</td></tr> <tr><td>7</td><td>Red Gnd</td></tr> <tr><td>8</td><td>Green Gnd</td></tr> <tr><td>9</td><td>Blue Gnd</td></tr> <tr><td>10</td><td>Sync Gnd</td></tr> <tr><td>11</td><td>Sync Gnd</td></tr> <tr><td>13</td><td>H Sync Out</td></tr> <tr><td>14</td><td>V Sync Out</td></tr> </tbody> </table>	Pin	Function	1	Red Out	2	Green Out	3	Blue Out	7	Red Gnd	8	Green Gnd	9	Blue Gnd	10	Sync Gnd	11	Sync Gnd	13	H Sync Out	14	V Sync Out
Pin	Function																						
1	Red Out																						
2	Green Out																						
3	Blue Out																						
7	Red Gnd																						
8	Green Gnd																						
9	Blue Gnd																						
10	Sync Gnd																						
11	Sync Gnd																						
13	H Sync Out																						
14	V Sync Out																						
Digital Video Interface	DVI-I (Female) Digital Video Only																						
Digital Audio Connections	RCA (1), BNC (1), AES/EBU (1)																						
Horizontal Sync:	NTSC: 33.75KHz-63KHz- depending on model PAL: 31.2KHz - 53KHz – depending on model 4.0 v pp TTL																						
Screen Trigger	12V, 3.5mm, 2 pin, Tip=+																						
Vertical Sync:	60Hz/50Hz, 4.0 v pp TTL																						
Composite Sync :	4.0 v pp TTL																						
Dimensions	13.5D X 17.25W X 5.75H (with feet) (Depth includes rear BNC)																						
Weight	19.5lbs, 25.25lbs shipping																						
Power Consumption	30.5wts/115VAC/60Hz, 42.5wts/230VAC/50Hz																						
Power Supply	100-240VAC 50/60Hz Auto Ranging																						

RS232 INSTRUCTIONS

Connector: DB-9 Female

Baud rate: 9600 default, 8 bit,
1 stop bit and No Parity

Pin Configuration:

- Pin 5 = Ground
- Pin 3 = Rx
- Pin 2 = Tx

All commands are sent using ASCII text strings.

Note: A command must start with the string header "NRS"

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 (0x13). Maximum command string length is 50 characters. The header and command are not case sensitive.

	CONTROL COMMANDS	(Used for day-to-day operation)
COMMAND	OPTIONS OR RANGE	DESCRIPTION
AD		Audio – select audio type from DVD drive
A#	(0-2) 0=4x3,1=Letterbox, 2=Anamorphic	Input Aspect Ratio – for all sources
AN		Angle – multi-camera angle for DVD drive
B#	(0-170) 128 default	Brightness
C#	(0-155) 110 default	Contrast
CL		Close/Open - for DVD transport
CM		Condition Memory – for DVD transport
D#	(0-13) 8 default	Detail
DC#	1=On 0=OFF	DCDi Mode – this should stay ON
DIG#	(0-9)	Digits 0-9
DSP		Display – for DVD transport
DVD		DVD – input select
ENT		Enter – functions for processor and DVD transport
EXT		Pass-through Input
FD		Function Down
FM#	1=On 0=OFF	Film Mode – This should always be On
FOR		Forward
FST		Report Current System Status
FU		Function Up
HELP		Display this Help Menu
K#	(0-220) 128 default	Color
L#	(1-4)	Store User Preset
LM		Last Memory – for DVD transport
MENU		Menu – recalls DVD menu when input is selected
N#	(0-18) 8 default	Noise Reduction
NXT		Next – chapter skip forward for DVD transport
OFF		Power OFF
ON		Power ON
OP		Open/Close – DVD transport door
P#	(0-4) [1-4=User, 0=Factory]	Recall Preset

RS232 INSTRUCTION

PATT		Display Test Pattern Help
PAUSE		Pause – for DVD transport
PGM		Program – for DVD transport
PLAY		Play – for DVD transport
PM#	(0-1) [0=Factory 1=DVD Animation]	Advanced Color System
PR		Pass-through input
PRE		Previous
REL		Release
REW		Reverse – rewind DVD transport
RND		Random – play for DVD transport
RP		Repeat – chapter on/off toggle for DVD transport
RPAB		Repeat A-B – enter once for A, again for B, again for repeat off
RTN		Return
SBT		Subtitles
SETUP		Setup – for processor and DVD
SLOWN		Slow - - slower playback on DVD transport
SLOWP		Slow + - increase slow playback on DVD transport
SRM		Search Mode – for DVD transport
ST		Report Current Status
STEPN		Step - - for DVD transport
STEPP		Step + -for DVD transport
STOP		Stop – for DVD transport
T#	(0-255) 128 default	Tint
TEN		10
TMENU		Top Menu - for DVD transport
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=SMPTE Color Bars 13=100% Window 14=PLUGE	Test Pattern Selection
V		Video input
VL		Value Left adjust
VR		Value Right adjust
X		YCrCb input
Y		Y/C input

	INSTALLATION COMMANDS	(Normally not controlled by RS232)
COMMAND	OPTIONS OR RANGE	DESCRIPTION
BB#	(0-200)	Bottom Blanking
BL#	(0-240)	Blanking Level – black to white
BLT#	(0-255)	LCD Backlite Timer on front panel
CS#	1=On 0=OFF	Composite Sync – for RGB output
E#	1=On 0=OFF	RS-232 ECHO
G#	(0-2) [0=OFF 1=Bi-Level 2=Tri-Level]	SYNC on G/Y
GL#	(0-15)	Green LED Brightness
HP#	(0-170) 85 default	Horizontal Position
HPOL	0=Neg 1=Pos	Horizontal Sync Polarity
IR#	1=On 0=OFF	I/R Receiver
LB#	(0-200)	Left Blanking
M#	(0-2) [0=RGB, 1=YCrCb, 2=YPrPb]	Output Mode
OSDOFF		OSD Off – for processor
OSDON		OSD On -for processor
OSDT#	(0-255)	OSD Menu Timer – for processor
OSDV#	(0-255)	OSD Vertical Position – for processor
PY		YCrCb to RGB – activates transcoding for pass-through inputs
R		RGB input
RB#	(0-200)	Right Blanking
RL#	(0-15)	Red LED Brightness
SET		Save Screenshape To All
SH		1080I – pass-through transcoding option
SL		480P - pass-through transcoding option
SM		720P - pass-through transcoding option
TB#	(0-200)	Top Blanking
VP#	(0-64) 32 default	Vertical Position
VPOL#	(0=Neg 1=Pos)	Vsync Polarity
	ADVANCED ENHANCER CONTROLS	USE ONLY BY QUALIFIED TECHNICIAN!
COMMAND	OPTIONS OR RANGE	DESCRIPTION
CHLEG	0-31	CHLE Gain
CHLET	0-31	CHLEE Threshold
CVLEG	0-31	CVLE Gain
HDPG	0-31	HDP Gain
HDPT	0-31	HDP Threshold
HLEG	0-31	HLE Gain
HLET	0-31	HLE Threshold
VDPG	0-31	VDP Gain
VDPT	0-31	VDP Threshold
VLEG	0-31	VLE Gain
VLET	0-31	VLE Threshold
ENHRST		Enhancer Reset Restores Enhancer settings to factory

INFRARED TEACHING COMMANDS

To control all the functions in the NRS-DCS processor commands from both remotes will need to be learned.

- For the larger remote with operations for the DVD transport, simply point the remote at the learning remote to store all the available operations (See list of commands below).
- For the smaller remote and to control the operations for the NRS-DCS processor the discrete commands are taught by flashing the commands from the front of the NRS-DCS processor. The flasher is located behind the IR receiver lens located on the left side of the front panel.
- To learn the NRS-DCS codes, position the learning remote in front of the IR receiver lens.
- Press the Setup key on the front panel.
- Use the Up/Down keys to locate IR Setup Menu, press Enter.
- Use the Value key to select the different commands. Each time the Enter button is pressed it flashes the commands out through the IR receiver window on the front panel.
- Number of Samples: defines how many times the NRS-DCS will send the sample IR command. Adjust this if learning remote does not respond properly.

IR TEACHING COMMAND LIST (From NRS-DCS front panel)		
Power On/Off (toggle)	0	4:3 (aspect ratio)
	1	Letterbox (aspect ratio)
Input	2	Anamorphic (aspect ratio)
Aspect Ratio	3	Power On
Brightness	4	Power Off
Contrast	5	Preset 1
Color	6	Preset 2
Tint	7	Preset 3
Detail	8	Preset 4
Noise Reduction	9	Factory
Function Up / (Up Direction)	DVD (input)	Return NRS-DCS
Function Down / (Down Direction)	Video (input)	DVD Factory
Value up / (Right Direction)	S-video (input)	DVD Animation
Value Down / (Left Direction)	YCrCb (input)	
Preset / Enter	RGB (input)	

Use the large DVD remote to learn the DVD transport commands

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