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# DVP1010

## Digital Video Processor

Installation and  
Operations Manual  
NTSC/PAL Model

  
FAROUDJA  
PICTURE PLUS™

## QUICK START OPERATION MENU

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### QUICK START INSTRUCTIONS

The DVP1010 requires only a few adjustments to be set for proper operation. However, since the processor must be integrated with a display device, and the settings on one will affect the other, careful attention must be made to the settings on both products.

### CONNECTIONS

Read the complete Owner's Manual for the DVP1010 before installation.

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

Be sure to connect all sources to the proper inputs of the DVP1010.

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

Connect the proper cables from the output of the DVP1010 to the display device. Be sure the cables are not crossed.

### DVP1010 SETUP

- Plug the processor into the wall power. The unit will go through initialization identifying the output resolution.
- Turn the unit on and press the Menu button on the remote for about seven seconds to enter the Setup menu. Press Menu again to return to the User Menu.
- Use the Function Up/Down buttons to select different Functions, press the Left/ Right buttons to change Values.
- Select Digital (DVI) or Analog (BNCs) output
- Select output type. When using the analog output, RGBHV is recommended.
- Select the proper output scan rate.
- Composite Sync on H should be Off.
- Select the screen shape of your display.

### DISPLAY POSITION AND ALIGNMENT

The next step in the setup procedure is to align the display device to the processor. Be sure to follow all directions for setting up the display found in the display's manual. Using a test DVD with the Safe Area test pattern, align the image size, position and blanking first using the controls found in the display device. Only use these controls in the DVP1010 if the display device does not offer these controls or if there is not enough range.

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

### SETTING DISPLAY PROFILES

The DVP1010 stores up to eight profiles for NTSC and eight profiles for PAL. Each profile stored contains all the settings for the unit at the time the information was stored. This allows the installer to store scan rates, screen shapes, etc. for multiple displays that may be using in the theater. Store the current settings by selecting the profile number (1-8) in the OSD and then hit Store on the remote. Profiles can also be stored in the Setup menu. See the manual for more details.

### IMAGE ALIGNMENT

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

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

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

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

Using video material, adjust the Detail on the DVP1010. Use of the Detail circuit is affected by the quality of the material being viewed. High quality sources need a lower Detail setting. DVDs or satellite sources that are poor quality (compression artifacts) can be cleaned up by reducing the detail level. Low bandwidth sources such as VHS can be improved by increasing the detail. Customized settings can be stored as Profiles.

# SAFETY PRECAUTIONS

## IMPORTANT INFORMATION

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

### CAUTION :

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

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

## FCC INFORMATION (U.S.A. ONLY)

### CAUTION :

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

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

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

### About burning-in of the display device

Do not allow the same still picture to be projected for a long time or an abnormally bright video picture to be projected. Do not project video images with high-intensity or high contrast on a screen. The video

image could be burned in to the display device. Use special care when projecting video games or computer program images.

### About the installation place

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

## IMPORTANT SAFEGUARDS

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

In order not to defeat the safeguards incorporated into this product, observe the following basic rules for its installation, use and service.

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

## SAFETY PRECAUTIONS

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

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

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

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

### **\*DO NOT allow any unqualified person to install the unit.**

Be sure to ask your dealer to install the unit since special technical knowledge and skills are required for installation and connection to multiple devices.

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

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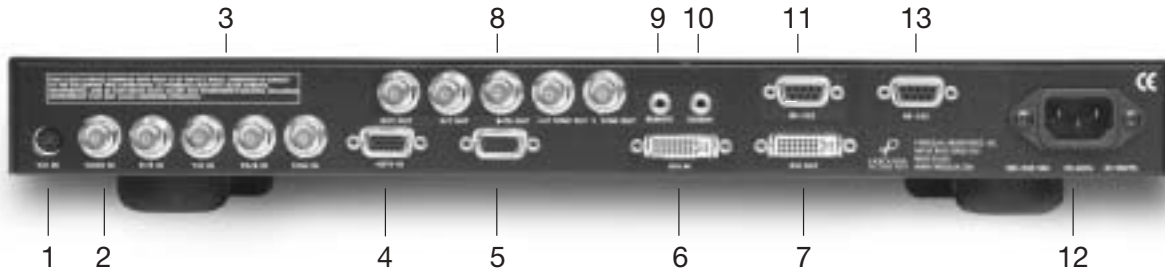
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The Faroudja DVP1010 is covered by the following United States patents:  
4,030,121, 4,179,705, 4,240,105, 4,262,304, 4,847, 681, 4,864,389, 4,876,596, 4,893,176, 4,916,526,  
4,967,271, 4,982,280, 4,989,090, 5,014,119, 5,025,312, 5,159,451, 5,237,414.

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**Made in USA**

## INSTALLATION



## INSTALLATION

### Unpacking

Remove the DVP1010 unit from the shipping container and examine it for any signs of shipping damage or missing items (check inventory list below). All shipping materials should be saved if the unit is to be moved or returned for service. Shipping unit back to Faroudja for service not in the original box may result in voiding warranty or additional cost.

### Inventory

1-DVP1010 Unit	1- Remote + Batteries
1-Owner's Manual	1- Warranty Card
1- Power Cord	

### Placement

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

### Ventilation

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

### Connections

Because of the high performance of the DVP1010 unit it is very important to use the highest quality cables possible, for both input and output signals.

To avoid AC ground loop problems, the source equipment, DVP1010 unit and projector should all be running on the same grounded AC power line (one rated for the power requirements).

1. S-Video input (4-pin DIN) for sources such as DVDs, Satellite systems, S-VHS tape decks (when using S-VHS tapes only), Hi-8 tape decks.
2. Composite video input (BNC) for sources such as Laserdisc players, cable TV, VHS tape decks, 8mm tape decks.

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

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

4. High scan rate input (D15F) for sources such as HDTV signals or computers are passed through to the projector. The signal is sent to the outputs in the same format as the input unless Transcoding is selected. YPrPb from HDTV sources can be transcoded to RGBHV, as well. Use a BNC to D15 breakout cable if necessary. The Green, Red, Blue BNCs are used for YPrPb.
5. D15F connector output for use with computer monitors or to a second display device. Use only short cable runs. This output can be used at the same time as the BNC outputs.
6. DVI Input. The DVI Input will automatically process 480i, 480P, 720P and 1080i signals. Computer rates are passed through to the DVI output if any of the pass-through inputs are selected. The DVP1010 will not convert a computer DVI output to the analog output.
7. DVI Output: Digital output interface for compatible displays. All processed analog and digital inputs are output to this connector as well as computer scan rates when the pass-through input is selected. Maximum cable length is 50ft with a high quality DVI cable. For longer lengths a distribution system or fiber optic system must be used.
8. BNC connectors for main output with RGBHV or YPrPb signals to display devices. Cable runs up to 100ft are okay if good quality cables are used. For YPrPb outputs use:  
Red = Pr  
Green = Y  
Blue = Pb  
RGBHV is recommended.



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

9. IR receiver connection allows for use with external IR receivers so unit can be installed behind walls. (3.5mm, 3 pin, Tip = +5 - +12V Pulse, Sleeve = Gnd)
10. 12V trigger to activate automatic screen relays. Voltage is constant when unit power is on. (12V @ 100mA Max. 3.5mm 2 pin connector, Tip = +12V, Sleeve = Gnd)
11. RS232 D9F connection for use with RS232 control systems. This connection also allows for firmware upgrades to the DVP1010.
12. AC Power connection.
13. RS232 Output - Not Active - for future upgrades

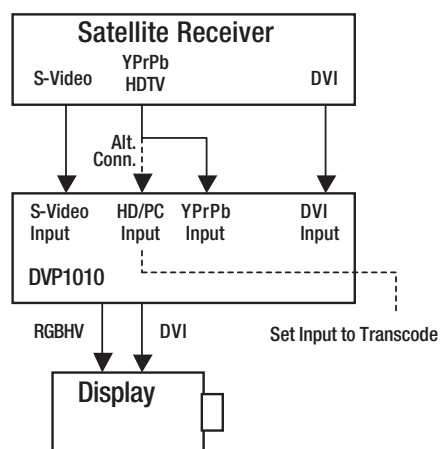
**Note: The DVI or analog RGBHV outputs cannot be active at the same time. Select the output type in the Setup menu prior to use of the processor.**

## Connecting HDTV Satellite Receivers

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

1. Non HDTV material is output from the receiver via an S-video connection
2. HDTV material is output via YPrPb outputs
3. If available, HDTV material is also output via a DVI connector.

The following diagram offers one way to connect the system.



With this hookup viewing the different sources is as follows:

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

**Note:** The DVP1010 pass-through input will “pass ” the input signal to the output stage in the same format as the input signal, i.e. analog HDTV in – analog HDTV out, DVI HDTV in – DVI HDTV out.

## HDTV Cross-Conversion

The DVP1010 can cross-convert 480p, 720p and 1080i HDTV signals to the selected output of the processor. Any HDTV signal connected to the YPrPb BNC or DVI inputs will be cross-converted. Any HDTV or PC signal connected to the D15 input will be passed-through without processing. PC signals via the DVI input will be sent to the pass-through.

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

## HDCP Compatibility

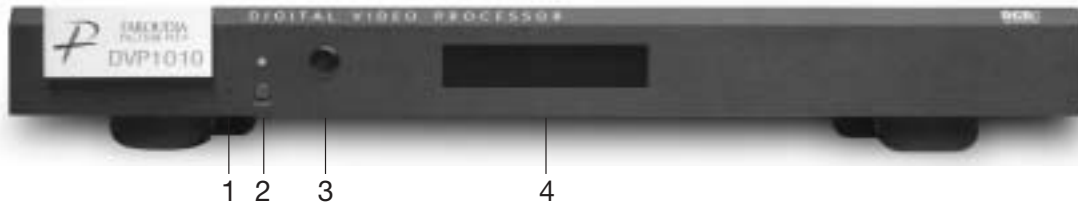
The DVP1010 is a HDCP (High Definition Content Protection) compatible processor. This means that when used with a HDCP encrypted source (satellite and DVD via DVI) and a HDCP compatible display device, the digital signal can be processed and viewed on the display device. If a non-HDCP source is used, the image can also be viewed (Note: check the display device manual to be sure this is possible when using the DVI input). If a non-HDCP compatible display is used, HDCP encrypted sources cannot be viewed.

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

## HDMI Connectors

To use sources or displays that use the HDMI connector, simply use a HDMI to DVI converter cable (Not supplied. See [www.pacificable.com](http://www.pacificable.com)).

## SETUP



### FRONT PANEL CONTROL

1. **Firmware Reset:** push a small paper clip into this opening to reset the unit's CPU.

**Note:** Use this reset only if the unit will not respond to commands. It will not erase custom settings. Use the Factory Restore command in the Setup Menu to completely reset firmware. See the setup section of the manual for details.

2. **Power/Standby:** Press to turn the unit On (LED turns Green) or to Standby (Red).
3. **Infrared Receiver Window**
4. **LCD Readout:** Provides information on control of the processor. Displays current Function being used, matching the On-Screen-Display. When in the Setup Menu, the OSD is not available, use the LCD display.

### SYSTEM FIRMWARE SETUP

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

When the unit is first plugged in it will go through an initializing procedure and display the output resolution. Do not send any commands to the unit during this initialization period. Once this initialization is completed the unit is instant-on.

**Note:** All display devices have specific setup steps that must be completed to insure proper operation with the DVP1010 and other sources. Be sure to carefully follow those instructions as well as the instructions for this processor.



**To enter the Setup menu, press and hold the Menu button on the remote for five seconds. Setup Functions can only be viewed on the front panel LCD, not from the OSD.**

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

### SETUP MENU FUNCTIONS

#### Set: NTSC SCAN RATE

Select the required scanrate by using the right and left arrows. When the desired rate is displayed on the LCD display, press the STORE key. The DVP1010 will ask you "Are you sure" and press the STORE key again. The scanrate is now selected.

#### Set: PAL SCAN RATE

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

#### Set: Active Output

Analog/Digital (Default)

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

#### Set: Screen Shape

Wide Screen / 4:3 / Wide 4:3

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

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

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

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

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

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

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



**Set: Black Level**

0 (Default)-7.5

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

**Set: DVI Input Level**

0-255 (Default) / 16-235

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

**Output Format (Analog)**

RGB (Default) /YPrPb

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

**Composite Sync on H**

On/Off (Default)

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

**Note:** Each input on the DVP1010 can be activated or deactivated to simplify operation so unused inputs are not accessed when cycling through the inputs with the remote control.

**Set: Video Input**

Enabled (Default) /Disabled

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

**Set: S-Video Input**

Enabled (Default) /Disabled

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

**Set: RGB Input**

Enabled (Default) /Disabled

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

**Set: YCrCb Input**

Enabled (Default) /Disabled

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

**Set: DVI Input**

Enable / Disable

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

**Set: Passthru Input**

Enabled (Default) /Disabled

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

**Set: Passthru Transcode**

Disable (Default) /Enable

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

**Set: Component Input Standard**

DVD (Default) /Professional (Betacam)

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

**Set: RGB Input Sync**

Sync-on-Green (Default) /TTL/Video

**Set: DVI Input H-Sync**

Normal / Wide

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

**OSD (On Screen Display)**

On (Default) /Off

**OSD Timer**

0-255 (30 default)

**LCD Timer**

6-255 (40 Default)

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

**Set: RS232 Echo**

On (Default) /Off

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

**Set: Baud Rate**

19200 (Default) / 57600 / 9600

Set to match control system

**Set: Store NTSC profiles 1-8**

**Set: Store PAL profiles 1-8**

**Set: Restore Factory**

Are You Sure? - Press Enter Key

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



The next step in the setup procedure is to align the display device. Be sure to follow all directions for setting up the display found in the display's manual. Using a test DVD with the Safe Area test pattern, align the image size, position and blanking first using the controls found in the display device. Only use these controls in the DVP1010 if the display device does not offer these controls or if there is not enough range.

## IR REMOTE

# IR REMOTE AND OSD OPERATION

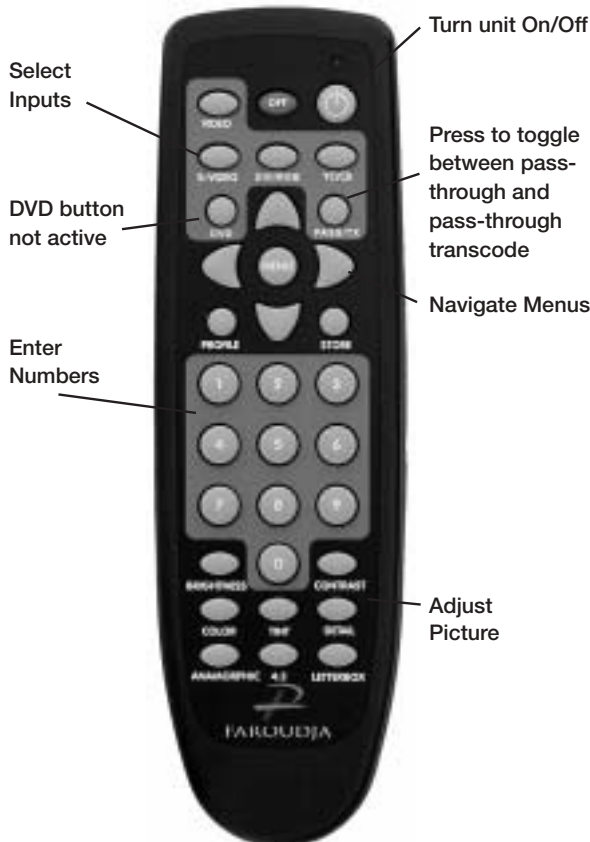
The DVP1010 is now shipped with a simplified remote control that allows for direct access to most commands used to control the processor.

Adjustments can be made three different ways:

1. Press the Menu button to activate the OSD and use the Function and Value keys to make changes. Press Menu again to remove OSD.
2. Press the direct access key (Brightness, etc.) and then adjust using the left/right value keys.
3. Press the direct access key and then enter a three digit number (i.e. 040 for 40).

### Direct Access Commands for Dual Function Remote Buttons

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

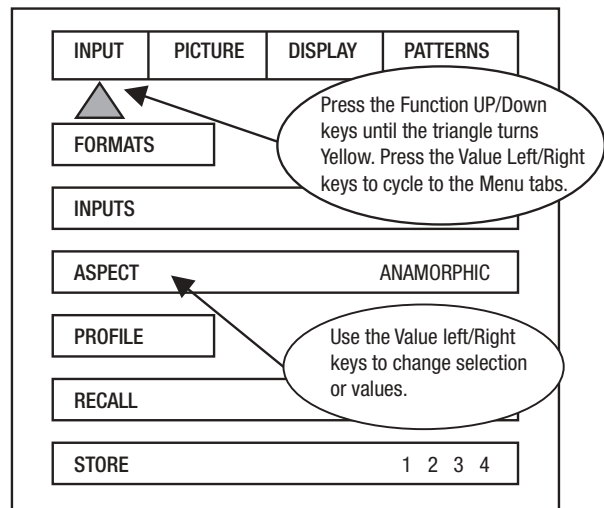


# ON SCREEN DISPLAY (OSD)

## Accessing the OSD

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

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

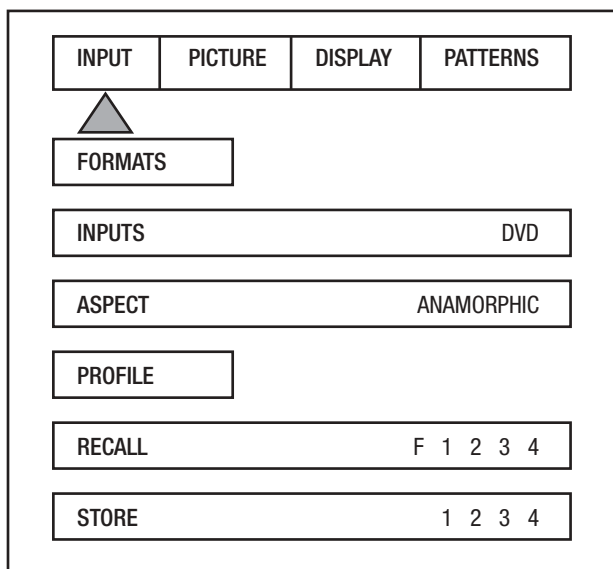


## OSD / OPERATING INSTRUCTIONS

The OSD consists of four menu tabs:

Input – Picture – Display – Patterns

### Input Menu



#### Formats

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

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

#### Aspect Ratio

4:3-Letterbox-Anamorphic

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

#### Profiles-

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

To store a Profile (in the Input Menu):

- Press **Menu** button on the remote
- Make all required adjustments.
- Use the **Function Up/down** keys to select **Profile**
- Use the **Value Left/Right** keys to select Profile
- Press **Store**

To recall a Profile (in the Input menu):

- Press **Menu** button on the remote
- Use the **Function Up/Down** keys to select Recall
- Use the **Value Left/Right** keys to select profile 1-8
- Press **Store**

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

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

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

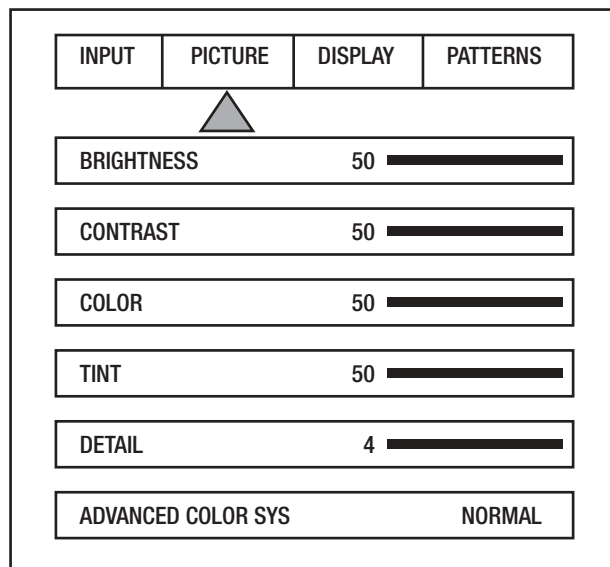
**Note:** The screen shape used in the installation must be set in the Setup Menu during installation for proper Aspect Ratio mapping. Anamorphic Aspect Ratio with 4:3 screens and the Wide-4:3 settings are not available on units with scan rates, 540p, 600p and Frame Doubling. See Setup section for details.

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



### Picture Menu

Use these commands to fine-tune the image.



#### Brightness

Factory 50

## OSD / OPERATING INSTRUCTIONS

### Contrast

Factory 50

**Note:** It is best to set Brightness and Contrast levels using the **controls of the display** with the proper test pattern and with the DVP1010 in the Factory default setting for the initial setup. This means with day-to-day use, when the Factory preset button is pressed, the system is back to the original optimum settings, while changes made for specific sources can be saved in the custom Profiles.

### Color

Factory 50

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

### Tint

Factory 50

Tint is not available with YPrPb or PAL sources

### Detail

Factory 4

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

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

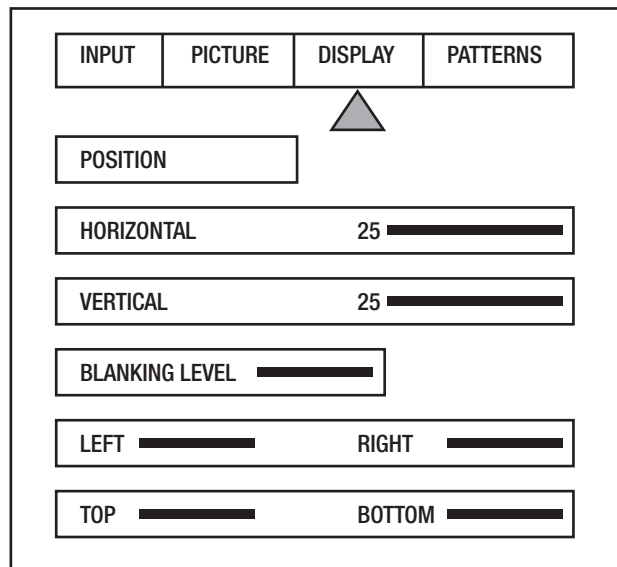
### Advanced Color System

Normal (default) /Bypass

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

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

### Display Menu



Use these commands to adjust the image position and edge blanking. It is recommended to adjust sizing, position and blanking in the display device first with the DVP1010 in the Factory preset setting. Then use the DVP1010 controls only if the display runs out of range or does not offer these controls. This should be done by a qualified technician.

#### Horizontal Position

(See chart on page 12 for default settings)

Moves image left or right of center.

#### Vertical Position

(See chart on page 14 for default settings)

Moves image up or down from center.

**Note:** Moving the image too far to the left or right can cause the display to stop working. Move image to center to correct. Use the positioning controls in the display first— if available. Also, many display devices require a specific setting when using high scan rate sources such as the DVP1010 or HDTV. Be sure to completely read the installation manual for the display device before making adjustments.

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

**Bottom Blanking**

This adjusts the bottom edge blanking

**Right Blanking**

Adjusts the right edge blanking

**Left Blanking**

Adjusts the left edge blanking

**Top Blanking**

Adjusts the top edge blanking

**Blanking Level**

This adjusts the blanking from black to white.

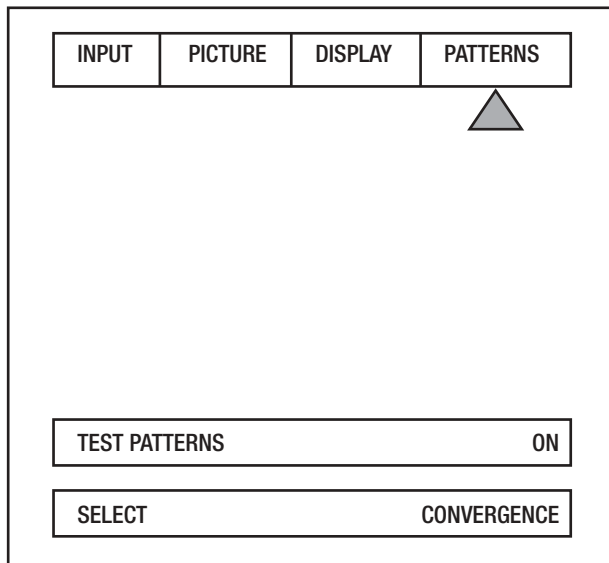
This can be used to create a gray side bar for use with 4:3 aspect ratio sources on wideangle screens to help reduce the chance of image burn-in. Image burn in is not covered by Faroudja's warrantee.

**Note:** The DVP1010 will store unique blanking and H&V position settings for each aspect ratio which are automatically stored and recalled when the different aspect ratios are selected

**Patterns Menu**

The best approach to system setup is to use a DVD that offers the proper test patterns. This way, the system is aligned for the entire signal path. If a test DVD is not available, then use the internal test patterns provided in the DVP1010.

Note: The test pattern generator in the DVP1010 is set to SMPTE standards. To insure proper output levels for display setup, the picture controls in the DVP1010 cannot be accessed when the test patterns are being used. Adjust levels, if needed, in the display device.



**AVAILABLE PATTERNS:**

- 10-step Gray Scale: Check gray scale
- Cb Ramp: Check linearity of Cb channel
- Cr Ramp: Check linearity of Cr channel
- Black: Full Black screen
- Green Screen : Check for defective pixels
- Red Screen: Check for defective pixels
- Blue Screen: Check for defective pixels
- Convergence: Check convergence of display
- Active Borders: Use for H&V positioning
- Multiburst: to check bandwidth
- 100IRE Window: Check displays power supply
- PLUGE: Set Brightness and Contrast
- 100IRE CB: Color bars for decoder check
- 100IRE Rev. CB: Color bars for decoder check

**RS232 INSTRUCTIONS**

Connector: DB-9 Female

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

**Pin Configuration:**

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

All commands are sent using ASCII text strings.

**Note: A command must start with the string header DVP**

## RS232 CODES

Following the header, a comma is used to delimit the header from the command. All the commands with their descriptions are listed below. All the text strings

are terminated with a carriage return (0x0d or 13). Maximum command string length is 250 characters. The header and command are not case sensitive.

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



## RS232 CODES

DVE		DVI Input Enabler	
E#	1=On 0=OFF	RS-232 ECHO	
EXTD		PassThru Input Disabled	
EXTE		PassThru Input Enabled	
HP#	(0-50) 25 default	Horizontal Position	
LB#(0-200)	Left Blanking		
M#	(0-1) [0=RGB, 1=YPrPb]	Output Mode	
OSDOFF		OSD Off – for processor	
OSDON		OSD On -for processor	
OUTMOD	0=Analog, 1=Digital	Output Mode	
PYD		PassThru Transcode Disable	
PYE		Pass-Thru Transcoder Enabled	
RB#	000-192	Right Blanking	
RD		RGB Input Disabled	
RE		RGB Input Enabled	
SETFT		Restore Factory Defaults	
STPP#	1-8	Store PAL Profile	
STNP#	1-8	Store NTSC Profile	
SRNHELP		NTSC Scan Rate Help Menu	
SRPHELP		PAL Scan Rate Help Menu	
TB#	000-192	Top Blanking	
VD		Video Input Disabled	
STHELP		Setup Help Menu	
VE		Video Input Enabled	
W#	0=4:3, 1=Widescreen, 2=Wide 4:3	Screen Shape	
XD		YCrCb Input Disabled	
XE		YCrCb Input Enabled	
YD		S-Video Input Disabled	
YE		S-Video Input Enabled	
<b>NTSC SCAN RATE LIST</b>		<b>USE ONLY BY QUALIFIED TECHNICIAN!</b>	
SRN2	1920 x 540	SRN3	800 x 600
SRN4	1280 x 720	SRN5	1024 x 768
SRN6	1280 x 768	SRN7	1366 x 768
SRN8	1440 x 960	SRN9	1280 X 1024
SRN10	DILA	SRN11	1400 x 1050
SRN12	1920 x 1080		
<b>Note:</b> Enter DVP, FST in a terminal driver program to get the default numbers or contact Faroudja.			
<b>PAL SCAN RATE LIST</b>			
SRP1	720x576/50Hz	SRP4	1024x768/75Hz
SRP2	720x576/100Hz	SRP5	1024x768/100Hz
SRP3	1280x720/50Hz	SRP6	1920x1080/50Hz

## HELP MENUS

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

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

## HORIZONTAL AND VERTICAL POSITION

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

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

## SPECIFICATIONS

<b>Inputs</b>	
Composite(BNC)	CVBS 1.0Vpk-pk, 75 Ω
S-Video (4-pin DIN)	Y,.714mVpk-pk, 0.286mV Sync,75 Ω C .286mVpk-pk (Burst)
Component (BNC) Auto-detect: 480i/480p 1080i or 720p sent to upconverter.	Pr, 714mVpk-pk, 75 Ω Y, 1Vpk-pk, 75 Ω Pb, 714mVpk-pk, 75 Ω
RGB (BNC) Interlaced or progressive	R, 700mVpk-pk, 75Ω G, 700mVpk-pk, 75Ω B, 700mVpk-pk, 75Ω Sync, negative < 286mVpk-pk, 75 Ω
HD/PC Pass-Thru	D15F
DVI Input	DVI-D per EIA/CEA-861 w/HDCP
Remote Control "D9F"	RS-232 ASCII
Remote IR sensor input	5V to 12V, 3.5mm, Tip=+
<b>Outputs (Progressive)</b>	
R,G,B (BNC or DB15)	RGB,700mVpk-pk @ 75Ω H/Cs, V Sync 4V @ 2KΩ
YPrPb	700mvpp, Sync on Y, 1Vpk-pk
RGsB RGB	Gs,1Vpk-pk 700mVpk-pk
D15F	Pin Function
Fuse Type:	LT4AI250V
Safety Standards:	UL, CUL, TUV, J60950
EMC Standards:	FCC Part 15 Class B, CISPR 22 Class B,EN61000-3-2, EN61000-3-3, EN55022 Class B
Digital Video Interface	DVI- (Female)
<b>Screen</b>	Trigger 12V, 3.5mm, 2 pin, Tip=+
<b>Composite Sync :</b>	4.0 vpp TTL
<b>Dimensions (Depth includes rear BNC)</b>	1.75" H x 17" W x 12.5" D Allow 3" in rear for cables
<b>Weight</b>	14 lbs.
<b>Power Consumption</b>	35watts
<b>Operational Temperature Range</b>	41 F to 104 F (+5 C to + 40 C)
<b>Power Supply</b>	100-240VAC 50/60Hz Auto Ranging

## FAROUDJA WARRANTY STATEMENT

FAROUDJA®, a division of Genesis Microchip Inc. warrants that its products will substantially conform to published specifications, subject to the terms and conditions below. These warranties are limited to the first purchaser of the products ("Purchaser") for the period listed below from the date of sale.

Video Processors: Two (2) years limited parts and labor

DVD Drives: One (1) year limited parts and labor

Plasmas (HD20 version): Four (4) years limited parts and labor  
(Image burn-in is not covered)

Projectors:

DILA3 and DLPHD20 Two (2) years limited parts and labor  
(Image burn-in is not covered)

DILA2 Three (3) years limited parts and labor  
(Image burn-in is not covered)

These limited warranties are contingent upon proper use and installation and does not apply to products damaged as a result of accident, misuse, neglect, alteration, improper installation, unusual physical or electrical stress or unauthorized repair. Image burn-in on display devices is not covered under warranty. See individual product warranty statement for warranty limitations. All warranty claims should be made at the place of purchase. No products may be returned to Faroudja without its consent. If requested by Faroudja, Purchaser must provide proof of purchase and return defective products to Faroudja with the appropriate Return Material Authorization (RMA) completed, a Faroudja RMA number assigned and transportation charges prepaid. Warranty may be void if unit is not returned to Faroudja Service in the original shipping carton.

Should a product fail to conform to the warranty above, then Faroudja shall, at Faroudja's sole option, (i) repair the non-conforming product or portion thereof, provided that the product is returned to Faroudja within the warranty period in accordance with the return procedures set forth above, or (ii) provide Purchaser with replacement for the non-conforming product or portion thereof. The preceding sentence states Faroudja's entire liability and Purchaser's exclusive remedy with respect to breach of the warranty.

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FAROUDJA may change product specifications and warranty policy at any time without notice. The Warranty policy outlined above effective September 1, 2003.

Our most current warranty policy can be viewed online at [www.faroudja.com/warranty](http://www.faroudja.com/warranty).

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