



DVP1080

HD Digital Video Processor

Installation and Operation Manual

IMPORTANT: THE DVP1080 OFFERS MANY SETUP OPTIONS TO INSURE PROPER INTEGRATION WITH SOURCES AND DISPLAY DEVICES. PLEASE READ THIS COMPLETE MANUAL TO INSURE PROPER INSTALLATION AND OPERATION. ANSWERS TO MOST TECHNICAL QUESTIONS CAN BE FOUND HERE.

INSTALLERS: PLEASE REVIEW THIS MANUAL BEFORE CONTACTING FAROUDJA TECHNICAL SUPPORT.

PRODUCT OWNERS: PLEASE CONTACT YOUR AUTHORIZED FAROUDJA DEALER FOR PRODUCT OR INSTALLATION QUESTIONS.

FAROUDJA

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Please review the installation and operations instructions in the following pages of this manual. Each part now include application NOTES and suggestions that offer important additional information to help insure a smooth installation and a happy customer.

The Faroudja web site contains manuals, RS232 information and FAQ's to assist with installations.

**Faroudja Main Number:
(408)635-4200
www.faroudja.com**

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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.

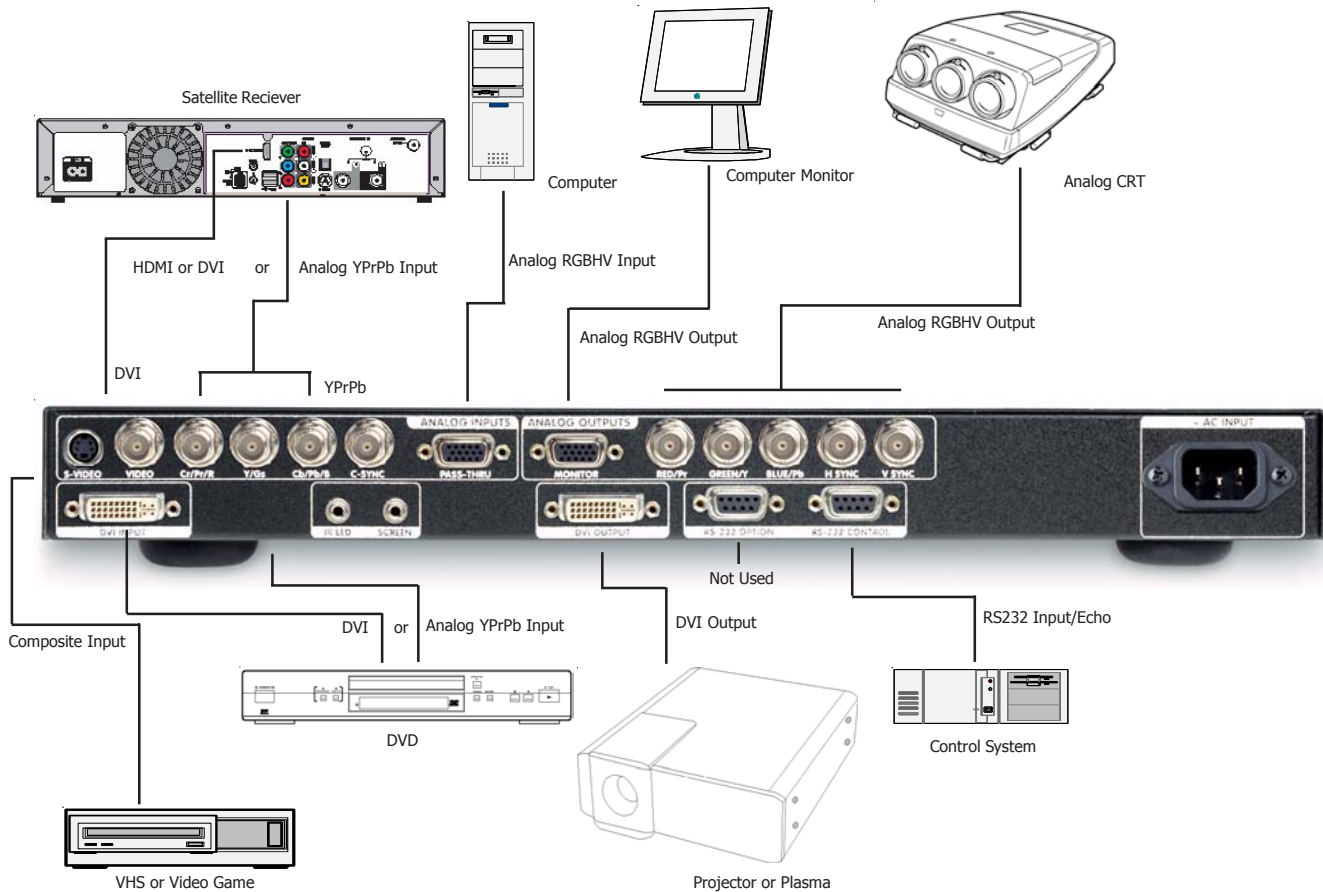
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INSTALLATION BASICS

QUICKSTART INSTRUCTIONS

It is recommended that the entire manual be reviewed prior to installing video equipment. Here are the basic steps to install the DVP1080. Due to the long list of available setup options for the different sources and displays, it is important to review each component's manual for proper operation.



NOTE#1: In installations where there are multiple sources using the same connection on the DVP1080, an external switcher should be used.

NOTE #2: S-Video is an alternate input to use with satellite, DVD and video game sources.

- 1. Install equipment:** Make sure there is **proper ventilation** to avoid overheating. Double check all projector/screen calculations for best performance. Avoid using keystone correction, if possible.
- 2. Connect Sources:** Make sure source devices are set to output the correct signal type that matches the installation (Digital vs Analog, YPrPb vs S-video, etc).
- 3. Connect display:** Make sure display device is set for the correct input signal type. Review the display's scan rate table (found in the rear of most manuals) to see what scan rates are supported (for example - most displays will not accept 1024x768 via YPrPb but will via RGBHV or DVI). DVI cables must be rated for the scan rate/length being used; up to 50' non-fiber cable okay if rated to 1280x1024. For 1920x1080p, fiber must be used for cables runs over 15'.
- 4. DVP1080:** press the MENU button for 7 seconds to enter the SETUP menu. Set the output scan rate.
- 5. DVP1080:** set the proper screen shape.
- 6. DVP1080:** Set the correct output type - Digital/Analog (RGB or YPrPb)
- 7. Display Device:** Adjust Brightness and Contrast. Use adjustments in the DVP1080 if they are not available in the display.

QUICK START CONTINUED - MENU STRUCTURE

ON-SCREEN-DISPLAY

- INPUT - INPUT
 - ASPECT RATIO
 - PROFILE RECALL
 - PROFILE STORE
- PICTURE - BRIGHTNESS
 - CONTRAST
 - COLOR
 - TINT
 - DETAIL
 - ADVANCED COLOR
- DISPLAY - H-POSITION
 - V-POSITION
 - BLANKING LEVEL
 - L/R BLANKING
 - T/B BLANKING
- PATTERNS - TEST PATTERNS
 - PATTERN SELECT

SETUP MENU (Default Setting in Bold)

- SET: NTSC SCAN RATE
 - ADJUSTABLE (**720P DEFAULT**)
- SET: PAL SCAN RATE
 - ADJUSTABLE (**576P DEFAULT**)
- SET: ACTIVE OUTPUT TYPE
 - DIGITAL&ANALOG**/DIGITAL/ANALOG
- SET: SCREEN SHAPE
 - WIDESCREEN**/WIDE 4:3/4:3
- SET: BLACK LEVEL
 - 0/**7.5IRE**
- SET: INPUT HD H-ADJUST
 - 0-50 (**25 DEFAULT**)
- SET: DVI INPUT
 - 16-235/**0-255**
- SET: OUTPUT FORMAT
 - RGB**/YPRPB
- SET: COMP SYNC ON H
 - ON/OFF**

- SET: INPUT ENABLE / DISABLE
 - SET FOR EACH INPUT
- SET: RGB INPUT SYNC
 - SYNC-ON-GREEN/**COMPOSITE SYNC**
- SET: OSD
 - ON/OFF**
- SET: OSD TIMER
 - 0-255 (**30 DEFAULT**)
- SET: LCD TIMER
 - 0-255 (**30 DEFAULT**)
- SET: RS232 ECHO
 - ON/OFF**
- SET: BAUD RATE
 - 9600/**19200**/57600
- SET: SCREEN TRIGGER
 - ON/OFF**
- SET: STORE NTSC PROFILE
 - STORE PROFILE 1-8
- SET: STORE PAL PROFILE
 - STORE PROFILE 1-8
- SET: 1080I TO 1080P
 - ENHANCED/**HI-BANDWIDTH**
- SET: RESTORE FACTORY
 - PRESS STORE

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.)

– 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-220V, the power cord attached conforms to the 120V 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 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. Only use an authorized Faroudja dealer.** 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.

NOTE TO AUTHORIZED FAROUDJA INSTALLERS

Please review the installation and operations instructions in the following pages of this manual. Each part now includes application NOTES and suggestions that offer important additional information to help insure a smooth installation and a happy customer.

The Faroudja web site contains manuals, RS232 information and FAQ's to assist with installation.

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Notes Legend

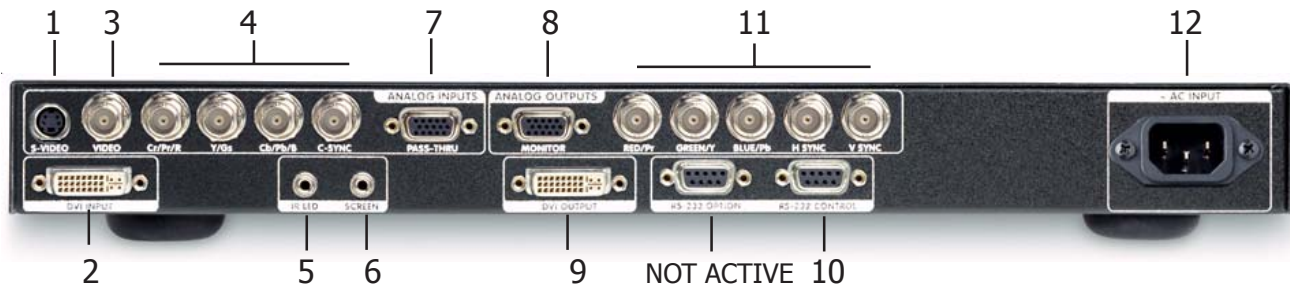
NOTE ##: = Important application notes

⇒ = Installation or operation suggestion

**Faroudja Main Number:
(408)635-4200**

Accessory Kit

- 1 - DVP1080 Processor
- 1 - Manual
- 1 - Remote
- 1 - Rack Kit
- 1 - Power Cord



INSTALLATION AND SETUP

UNPACKING

- ⇒ Inspect product box and unit for any shipping damage.
- ⇒ Save product box in the event the unit needs to be shipped in the future. Shipping the unit in a generic box may void warranty.

MOUNTING

- ⇒ Shelf or rack mountable (rack kit included).

Note #1: EXCESSIVE HEAT MAY CAUSE THE PROCESSOR TO MALFUNCTION OR SHORTEN PRODUCT LIFE. Follow regular installation rules for proper ventilation.

Note #2: Be sure rack location has adequate ventilation. Allow a minimum of 1RU rack space (1.75") above and below unit for ventilation.

- ⇒ Do not mount above power amps or other equipment that may generate excessive heat.

OVERHEAT WARNING

To help insure long term operation, the processor has a built in heat sensor to monitor the internal temperatures of the unit . There are three warning levels that appear on the front panel LCD.

LEVEL 1 WARNING HIGH TEMPERATURE

- ⇒ The internal temperature is exceeding optimum operating temperature. Steps should be taken to improve ventilation.

LEVEL 2 WARNING HIGH TEMPERATURE

- ⇒ The internal temperature is close to the maximum limit. Immediate steps should be taken to improve the installation ventilation and obtain an optimum operating temperature.

LEVEL 3 WARNING EXCESSIVE TEMPERATURE

- ⇒ The internal temperature has reached the maximum limit. This warning will display for five seconds, then the unit will shut down and cannot be powered up by the Power button or Remote.

- ⇒ Unplug the unit from the wall power to reset. Once the unit has cooled down, normal operation returns.

CONNECTIONS

OVERVIEW: Be sure to use high quality cables for both sources and output signals. All video and High Definition scan rates are processed and converted to the selected output rate and format. VESA (PC) rates are pass-through only.

1. S-VIDEO INPUT: Use for video games, satellite and DVD sources if Component or DVI outputs are not available.

2. DVI INPUT: Use with satellite or DVD sources. The processor is always monitoring the DVI input and output status and provides information on the front panel LCD. The LCD status screens are:

DVI: Input signal is supported

NO INPUT: No signal is detected.

VERIFYING OUT-LINK: DVI connection to the display has been interrupted.

DVI PASS-THROUGH: A VESA rate has been detected and sent to the output unprocessed.

RATE NOT SUPPORTED: A VESA or non-video rate has been detected but the selected output is analog RGB or YPrPb.

NOTE #1: Input type is auto-detected. Supported video rates for processing are 480i/480p, 576i/576p, 720p/1080i @ 50Hz/60Hz. VESA rates are sent to PASS-THROUGH only. (Continued next page)

(DVI Input Continued)

NOTE #2: Select the DVI INPUT [DVI/RGB] + [1] for the processor to “process” the signal to the selected output rate. Select PASS-THRU, press [PASS/TX] to display the signal without processing.

⇒ A DVI cable must be connected from the processor to the display and the digital output must be activated in the processor SETUP menu.

NOTE #3: With HDCP encrypted sources, it may take up to 30 seconds for the HDCP authorization between source and display to be acquired. The display device must be HDCP compatible to view an image.

⇒ If a switcher is used, it must also be HDCP compliant. HDCP acquisition problems may be displayed as snow or a flashing image on the screen.

NOTE #4: The DVI input levels and sync type must be matched to the DVI source in the SETUP menu. See PG 11 for details.

NOTE #5: Some DVD players may offer a better image using the analog YPrPb connections with the player set to 480i output. This allows the DVP1080 to do all the deinterlacing and digital conversion.

3. COMPOSITE VIDEO INPUT: Use with low quality sources such as VHS and security cameras.

NOTE #1: Older VHS decks and tapes may cause an unstable image. A distorted image is normal during FFW, RW and Pause. A Time Base Corrector can be added to help stabilise the image.

4. YPrPb / RGBs INPUTS

Input type is auto-detected. Supported video rates for processing are 480i/480p, 576i/576p, 720p and 1080i @ 50Hz/60Hz.

NOTE #1: When using RGBs, be sure to check settings for this input in the SETUP menu. See PG:11 for details.

5. INFRARED RECEIVER: for use with external IR receivers. (3.5mm, 3 pin, Tip = +, Sleeve = Gnd)

6.12V TRIGGER CONNECTIONS: For use with electronic screens and other devices requiring a 12volt trigger sequence. This connection can be programmed for on/off operation in the SETUP menu or via RS232. (12V @ 100mA Max. 3.5mm 2 pin connector, Tip = +12V, Sleeve = Gnd)

7. D15F COMPUTER PASS-THRU INPUT: Use with high scan rate analog signals to pass-through to the display device.

NOTE #1: Signals connected to this input are not processed or transcoded (YPrPb to RGBHV).

NOTE #2: Analog cables must be connected from the processor to the display to get an image from this input. If the signal on the input is 5-wire RGBHV, the analog cables on the output must also be 5-wire RGBHV.

NOTE #3: Be sure display device is compatible with the signal type being sent through this input.

NOTE #4: Use a BNC to D15M breakout cable to connect to the source. Do not use D15 to D15 cables longer than 10’ to prevent ringing and signal loss.

8. D15 ANALOG OUTPUT: For use with computer monitors or as a second video output. Connector is active if ANALOG or ANALOG/DIGITAL output is selected in the SETUP menu.

NOTE #1: If a HDCP encrypted DVI source is selected, the analog outputs are deactivated by law. The front panel LCD will display:

ENCRYPTED SOURCE
ANALOG OUT DISABLED

NOTE #2: Do not use D15 to D15 cables longer than 10’ to prevent ringing and signal loss. Use a D15 to BNC breakout cable to 5-75Ohm cables if longer runs are required.

9. DVI OUTPUT: For use with compatible digital displays that use single link DVI connectivity.

NOTE #1: The processor is always monitoring the DVI input and output status and provides information on the front panel LCD. The LCD status screens are:

DVI: Input signal is supported

NO INPUT: No signal is detected.

VERIFYING OUT-LINK: DVI connection to the display has been interrupted.

DVI PASS-THROUGH: A VESA rate has been detected and sent to the output unprocessed.

RATE NOT SUPPORTED: A VESA or non-video rate has been detected and the selected output is analog RGB or YPrPb. (Continued next page)

(DVI output - Continued)

Notes

NOTE #2: With HDCP encrypted sources, it can take up to 30 seconds for the HDCP authorization between source and display to be acquired. The display device must be HDCP compatible to get an image.

NOTE #3: Higher resolution displays require higher quality DVI cables. Using cables not rated for the resolution being used will result in images with colored sparkles and lines. Always verify maximum resolution rating of the cable with cable supplier.

⇒ For 1080p, fiber optic cables must be used for lengths over 15' (cables rated for 1600x1200 resolution).

NOTE #4: The SETUP menu offers selections for setting the output type. See Page 10 for details.

10. DB9F RS232 CONNECTOR: Use for control system interface.

NOTE #1: The SETUP menu offers selections for RS232 operation. See Page 11 for details.

11. RGBHV/YPrPb ANALOG OUTPUTS: For use with high scan rate analog displays.

NOTE #1: If a HDCP encrypted DVI source is selected, the analog outputs are deactivated by law. In this case, the front panel LCD will display:

ENCRYPTED SOURCE
ANALOG OUT DISABLED

NOTE #2: RGBHV (5-wire) is highly recommended to use over YPrPb (3-wire).

NOTE #3: The SETUP menu offers selections for output type. See Page 10 for details.

NOTE #4: RGBHV must use 5-wires. Be careful not to swap the H&V cables. Only use high quality 75ohm cables.

12. AC POWER CONNECTOR

Connect to a stable 120-220volt power line.

NOTE #1: To avoid ground loops, a power conditioner for the equipment rack is recommended.

NOTE #2: Static electricity can cause equipment problems. Be sure installer is grounded to chassis or equipment rack before connecting sources.

SETUP MENU

OVERVIEW: The SETUP Menu offers many selections to optimize the processor for installation. Be sure to completely review the menu items and application notes to insure proper operation.

PRESS THE MENU KEY ON THE REMOTE FOR 7-SECONDS TO ENTER THE SETUP MENU



SETUP Menu functions are visible on the front panel, not on the On-Screen-Display. Use the directional buttons on the remote to navigate.

SET: NTSC SCAN RATE

This sets the output rate when a NTSC source is auto-detected.

NOTE #1: Press STORE TWICE (2X) to enter the new scan rate. Store different output rates as Profiles. See Storing Profiles on page 12.

NOTE #2: Be sure to review the display device manual to determine which output rate to choose.

SET: PAL SCAN RATE

This sets the output rate when a PAL source is auto-detected.

NOTE #1: Press STORE TWICE (2X) to enter the new scan rate. Store different output rates as Profiles. See Storing Profiles on page 12.

NOTE #3: Many digital displays have limited support of 50Hz signals. Be sure to check with the display device's manual to determine the proper output rate.

SET: ACTIVE OUTPUT TYPE
DIGITAL & ANALOG / DIGITAL / ANALOG
Set the output type desired.

NOTE #1: Analog output offers RGBHV (5-wire) or YPrPb (3-wire). See OUTPUT FORMAT in the SETUP menu. RGBHV is highly recommended over YPrPb.

NOTE #2: When DIGITAL & ANALOG is selected, both output types are active. **YPrPb analog output is not available in this mode.**

⇒ The image levels (contrast, color, etc.) in the processor are shared between the two outputs so some level adjustment may be required in the analog display for proper imaging.

NOTE #3: Different output formats can be stored as Profiles. See STORING PROFILES in the SETUP menu.

NOTE #4: If the DVI input is selected and a source encrypted with HDCP is playing, the analog outputs will be deactivated (required by law). The DVI outputs remain active if the display is HDCP compatible.

SET: SCREEN SHAPE
WIDESCREEN / WIDE-4:3 / 4:3

Set Screenshape to match the shape of the display device.

NOTE #1: Select Wide-4:3 when using a 4:3 native projector on a 16:9 screen.

NOTE #2: When using a 4:3 projector + anamorphic lens on a 16:9 screen, select Widescreen.

SET: BLACK LEVEL
0 / 7.5IRE

Sets the correct black level for YPrPb DVD sources.

NOTE #1: Many DVD players offer black level options (sometimes called "Enhanced Blacks"). The player should be left in default and adjust level in the DVP1080.

SET: INPUT HD H-ADJUST
0-50 (25 Default)

Adjusts the horizontal position of High Definition sources (720p/1080i) to match the horizontal position from Standard Definition sources.

NOTE #1: First align the proper image size and position on the display using a test pattern from a DVD. Use the H/V, L/R and sizing controls in the display device, if available. Use the H/V adjustments in the DVP1080 OSD if the display does not offer them. Then switch to the HD source and adjust the INPUT HD H-ADJUST to match.

⇒ The input for the HD source must be selected in order to make the HD H-ADJUSTMENT. This adjustment is locked when the source is not HD.

⇒ Some display devices offer minimal image adjustments when using the DVI inputs.

⇒ Some HD satellite receivers offer H-adjustments. Those can also be used in conjunction with this function to get the best results.

SET:DVI INPUT

16-235 / **0-255**

Sets the correct input signal level to match the DVI input source.

NOTE #1: 0-255 is typical for digital display devices inputs (the processor output is 0-255), 16-235 is typical for video sources. However, not all sources follow the rules. If the processor DVI input level is set to 0-255 but the source is 16-235, the image will lack dynamic range.

Note #2: To test what the output is from the source, put up a 10 step gray scale pattern from a test pattern DVD. Toggle between 16-235 and 0-255. The correct setting is when all 10 bars are visible and evenly lit. An incorrect setting will produce an image that either looks dull or the brightest and darkest bars are missing (clipping).

0-225 Source + 16-235 Setting = Image too bright

16-235 Source + 0-255 Setting = Dull Image

SET:OUTPUT FORMAT

RGB / YPrPb

Sets the analog output format when the processor OUTPUT TYPE is set to ANALOG in the SETUP menu.

NOTE #1: If DIGITALI&ANALOG is selected as the output type, RGBHV is the only analog output format allowed. YPrPb is deactivated.

NOTE #2: If a HDCP encrypted DVI source is selected, the analog outputs are deactivated by law. The front panel LCD will display:

ENCRYPTED SOURCE

ANALOG OUT DISABLED

⇒ RGB means RGBHV (5-wire), YPrPb means 3-wire. RGBHV will provide the best results. Many display devices have only limited compatibility with YPrPb signals.

SET: COMP SYNC ON H

ON / **OFF**

Sets H&V sync as composite sync on the H connector when using analog RGB output (4-wire connection).

Note #1: This option defaults to AUTO and is locked when YPrPb output is selected.

⇒ RGBHV is recommended for best results.

INPUT ENABLE / DISABLE

Each input can be enabled or disabled depending on the installation. Deactivating unused inputs helps to streamline operation. Each input is listed in the SETUP menu for control: VIDEO-S/VIDEO-RGB-YCrCb-DVI-PASSTHRU

NOTE#1: The VIDEO input cannot be disabled to prevent having all inputs disabled making the unit non-functioning.

SET:RGB INPUT SYNC

SYNC-ON-GREEN / **COMPOSITE SYNC**

Sets the sync type for the RGB input.

NOTE #1: Composite sync option should be selected when using PAL RGB.

SET:DVI INPUT H SYNC

NORMAL / WIDE

Sets the DVI sync position. With some nonstandard DVI sources, selecting WIDE will correct improper sync timing (seen as a horizontal image shift).

SET:OSD

ON / OFF

Sets if the On-Screen-Display is visible.

SET: OSD TIMER

0-255 (**30 DEFAULT**)

Sets how long the OSD will be visible

SET: LCD TIMER

0-255 (**30 DEFAULT**)

Sets how long the front panel LCD backlight stays on. 0=OFF, 255=ALWAYS ON

SET: RS232 ECHO

ON / OFF

Sets if command echos are sent back to the RS232 control device. See page ## for RS232 codes.

SET: BAUD RATE

9600/ **19200** / 57600

Sets the RS232 communication baud rate.

SET: SCREEN TRIGGER

OFF / **ON**

Allows programming of 12volt external trigger to control accessories such as screens and motorized lenses. OFF sets the 12v to NOT turn on when the unit is powered up. ON sets the 12v to turn ON. Store each command as a profile to select using the remote or use RS232 commands.

SET:1080i TO 1080P

ENHANCED / HI-BANDWIDTH

Sets how 1080i signals will be processed when the **output rate is set to 1080p only**. HI-BANDWIDTH mode has full bandwidth processing with no image adjustments (levels, aspect ratio, etc.). ENHANCED mode offers full image adjustment control at a slightly reduced bandwidth.

NOTE #1: This function only applies to displays with a native resolution of 1920x1080p (or 9" CRTs) and with the DVP1080 set to the 1080p output scan rate. Do not run 1080p scan rate on displays not rated for such a high scan rate.

SET: STORE NTSC PROFILE

STORE PROFILE 1-8

Stores all current settings for NTSC sources (30 different parameters) to the profile number selected.

TO STORE DATA:

1. MAKE ALL ADJUSTMENTS AND SETTINGS DESIRED IN THE SETUP MENU.

2. SELECT WHICH PROFILE NUMBER, THEN PRESS STORE.

3. PROFILES CAN BE RECALLED USING THE REMOTE CONTROL AND THE OSD.

⇒ Profiles can be recalled with the IR remote using the OSD or via RS232. Profiles can also be stored using the OSD which will over-write Profiles stored here and vis-versa.

SET: STORE PAL PROFILE

STORE PROFILE 1-8

Stores all current settings for PAL sources (30 different parameters) to the preset number selected. See STORE NTSC for more details.

SET: RESTORE FACTORY

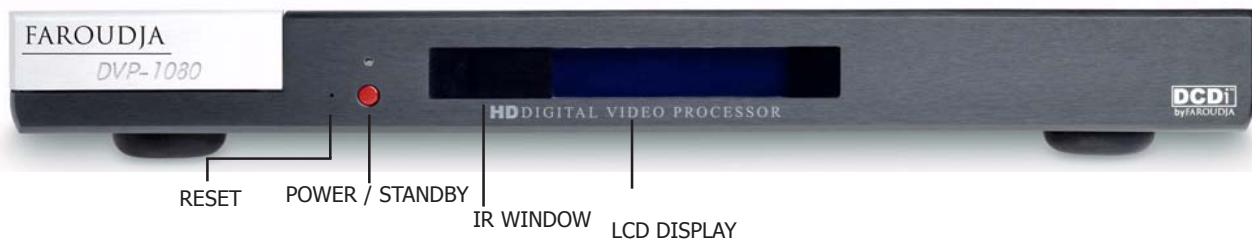
PRESS STORE

Resets processor firmware to original factory levels.

NOTE #1: ALL PROFILES AND SETTINGS WILL BE ERASED. Be sure to go back and readjust all required settings for the specific installation.

NOTE #2: Only use this command if processor completely locks up and other troubleshooting steps do not solve the problem.

Note #3: Before using this option, try first unplugging unit from power (Or push paper clip into small opening on the front panel). This will often clear software lockups, without erasing settings.



DVP1080 OPERATION

FRONT PANEL CONTROLS

Each time the processor is powered up, it will go through an initializing power-up sequence.

RESET: In the event of a processor firmware lockup, insert a small paper clip into opening to reset. Stored profiles and system settings will not be erased.

NOTE #1: Unplugging the unit from power source will accomplish the same task.

POWER / STANDBY: Press to turn ON unit (LED Green), press again to put unit in STANDBY (LED Red).

NOTE #1: All settings are stored in nonvolatile memory so a power loss will not result in loss of settings.

IR WINDOW: Location of IR sensor for remote control and IR remote systems

LCD READOUT: Provides information on the status of the processor. The readout will match what is being controlled via the OSD. It also provides readout of the SETUP menu functions and unit warnings.

NOTE #1: The SETUP menu is only visible via the front panel LCD.

ON-SCREEN DISPLAY (OSD)

There are four OSD menu pages: INPUT, PICTURE, DISPLAY, PATTERNS.

INPUT: INPUT, ASPECT RATIO, PROFILES

PICTURE: BRIGHTNESS, CONTRAST, COLOR, TINT, DETAIL, ADVANCED COLOR CONTROL

DISPLAY: IMAGE POSITION, IMAGE BLANKING

PATTERNS: TEST PATTERN ON/OFF, SELECT

The remote control is used to access these menus.

INFRARED REMOTE CONTROL

The DVP1080 offers easy control of picture adjustments via an on-screen menu controlled by the 33 button remote control.

ON/OFF CONTROL

INPUT SELECTIONS

DIRECTIONAL CONTROL/MENU

PROFILE/STORE

NUMBER PAD

IMAGE ADJUSTMENT



REMOTE BUTTON OPERATION

ON / OFF CONTROL: Press the [GREEN] button to turn on the unit, press the [RED] button to enter the standby mode.

INPUT SELECT: Press the desired button to have direct access to the different inputs.

NOTE #1: Press the [DVI/RGB] button to toggle between the digital DVI input and the analog RGB inputs.

Direct access IR commands are:

Press [DVI/RGB]+[0] = DVI
Press [DVI/RGB]+[1] = RGB.

NOTE #2: The [PASS/TX] button selects the PASS-THROUGH input. Transcoding (TX) is not available with the DVP1080

NOTE #3: The [DVD] button is not active with this processor

NOTE #4 - PASSTHROUGH: When PASS-THROUGH is selected, sources connected to the DVI input will be sent to the DVI output unchanged by the processor. Analog sources connected to the D15 input will be sent to the analog outputs unchanged by the processor.

PASSTHROUGH=

DIGITAL (DVI) ⇔ DIGITAL(DVI)
ANALOG RGBHV (D15) ⇔ RGBHV (BNC&D15)
YPrPb (BNC&D15) ⇔ YPrPb (BNC&D15)

⇒ An alternative approach is to select the input using the On-Screen-Display: Press [MENU] + select INPUTS + use the [LEFT / RIGHT] directional buttons to change inputs.

⇒ The SETUP menu has a setting for deactivating unused inputs. If an input is deactivated, it will not be visible on the OSD, and the front panel LCD will report INPUT NOT AVAILABLE if the direct access button is pressed on the remote.

DIRECTIONAL BUTTONS: Press [MENU] to access the OSD. Press again to deactivate. Use the DIRECTIONAL keys to navigate through the OSD options.

NOTE #1: To move to different OSD menu pages, press [MENU], then [UP/DOWN] until the top triangle turns yellow, then [RIGHT/LEFT]. A new MENU page will appear as they are selected.

PROFILE BUTTON: Press to recall Profiles that have been stored in the unit.

NOTE#1: After pressing the [PROFILE] button, then quickly press a number button [1-8] to recall the desired profile.

⇒ An alternative method is to press the [PROFILE] button then use the [LEFT/RIGHT] buttons on the remote to select the desired Profile on the OSD, then press [STORE] to select.

STORE BUTTON: Press to store changes or selections when selecting the output scan rate or storing and recalling Profile numbers. Profiles store 30 different image parameters.

STORING PRESETS USING THE OSD

1. Make all the desired image changes.
2. Using the DIRECTIONAL keys, go to the INPUT menu.
3. Highlight the Profile number to store in.
4. Press the [STORE] button on the remote.

⇒ Profiles can also be stored in the SETUP menu. Profiles stored using the OSD will override Profiles stored via the SETUP menu AND visa-versa.

IMAGE ADJUSTMENTS: Adjusting picture levels can be done by pressing a direct access button such as [CONTRAST] and then pressing a three digit number on the NUMBER PAD or by using the OSD and directional arrows to move the adjustment sliders on the OSD.

NOTE #1: It is recommended that Brightness and Contrast be adjusted in the display device first, if possible, then adjust for individual movies or channels using the DVP1080.

NOTE #2: A properly adjusted image is key to a good picture. For each installation, the processor should be calibrated for the sources using reference test patterns whenever possible. The following section will list a suggested test pattern to use to get the best results.

BRIGHTNESS BUTTON: Adjusts the darkest areas of the screen.

⇒ Adjust so the shadows are as dark as possible but subtle details are still visible (such as seeing the wrinkles in a dark suit on a person standing in the shadows). Suggested test pattern: PLUGE

CONTRAST BUTTON: Adjusts the lightest areas of the image.

⇒ Adjust so the lightest areas are as bright as possible but detail is still visible (such as seeing the details in clouds on a sunny sky. Suggested test pattern: 10 step gray scale.

⇒ The image is too bright if the lightest bars in the test pattern disappear or if they start to change color.

COLOR BUTTON: Adjust to reproduce accurate colors.

⇒ Film originated sources typically have more subtle color levels compared to video originated sources (sports, TV shows). Suggested test pattern: SMPTE color bars (using blue filter).

TINT BUTTON: Adjust to reproduce accurate tint.

NOTE #1: Tint adjust is not available with Component YPrPb sources.

⇒ If the image color still seems off balance with the Tint set correctly, the gray scale of the display may need adjusting. Contact your installer for assistance. Suggested test pattern: SMPTE color bars using a blue filter.

DETAIL BUTTON: Adjusts the amount of enhancement in the image.

Proper enhancement levels should add subtle improvements in detail. Too much enhancement will produce fake looking edges and ringing. The higher quality the source, typically, the less enhancement required.

⇒ If a digital source (A poorly transferred DVD or a very compressed satellite channel) has excessive compression artifacts, reducing the detail level can help to make the artifact less visible.

NOTE #3: Suggested test pattern: DVD movie with a close up of a face in still frame. Adjust so the face has detail but the edges do not look fake (such as along the bridge of the nose).

ASPECT RATIO BUTTONS: Each selects the proper aspect ratio of the source being viewed.

NOTE #1: The proper screen shape must be set in the SETUP menu during initial installation in order for these settings to function properly. See page 10 for details.

ANAMORPHIC BUTTON: Selects proper aspect ratio for sources formatted for wide screen displays (sometimes called "Enhanced for Widescreen TVs").

Note #1: DVD players must be set for 16:9 displays for proper screen shape. See the DVD player setup menu to adjust.

LETTERBOX BUTTON: Selects proper aspect ratio for sources formatted for the letterbox screenshape (non-anamorphic letterbox).

⇒ This mode can also be used with anamorphic 2.35:1 (Cinemascope) sources when combined with an anamorphic lens on a 16:9 projector. The benefit is the full resolution of the 16:9 display chip is used to create the active video. This improves resolution and light output. The 12Volt trigger can be programmed to control motorized lens attachments.

4:3 BUTTON: Selects proper aspect ratio for sources formatted for 4:3 screenshape.

NOTE #1: On 16:9 displays, the side curtains of the image will be blank. To protect displays from image burn-in, the side curtains can be adjusted to any level of gray from black to full white. Adjust the level in the PICTURE OSD menu.

⇒ Do not view 4:3 images on 16:9 plasma or CRT displays for extended periods of time with the side curtains black. This can cause permanent image burn-in. Image burn-in is not covered under the Faroudja warranty.

OTHER OSD IMAGE ADJUSTMENTS

DISPLAY MENU PAGE -

IMAGE POSITION: Use to adjust the horizontal and vertical position of the image.

NOTE #1: Many digital displays will not allow any image adjustments when using DVI. Check with the display manual to see if there is a service mode to allow adjustments.

NOTE #2: Always use Image Adjust controls in the display device first, if available.

⇒ Shifting the image too far to the side can cause the image to be lost or introduce moving horizontal gray bars in the image. Use a safe area test pattern to properly align image position and size.

BLANKING LEVEL: Adjusts the gray level of the side curtains when using 4:3 sources on a 16:9 display.

BLANKING (LEFT, RIGHT, TOP, BOTTOM): Adjusts the amount of blanking for the edges of the image to assist with proper image sizing.

NOTE: #1: Be sure image size and position is properly set first, before setting side blanking. Blanking can be stored as Profile.

PATTERNS MENU PAGE -

TEST PATTERNS ON/OFF: Activates the test patterns circuit.

NOTE #1: When test patterns are activated, the image level adjustments are fixed to reference levels and cannot be changed. Use these patterns to align or test your system. Many patterns are designed for technician use only.

⇒ For best results, all image adjustments should be done with a test DVD from the DVD player and patterns from the satellite box, if available, This way the final image is adjusted for the complete signal path from source, through the processor, to the display.

RS 232 INSTRUCTIONS

The **DVP** Header, followed by a comma (no space), is used to delimit the Header from the Command. The following is an example, using **Windows HyperTerminal**, for **Power On** using a standard Modem Cable:

⇒ **dvp,on**[↵ Enter]

([↵ Enter] denotes a carriage return, or rather, pressing [↵ Enter] on the keyboard)

NOTE #1: The DVP1080 goes through a 10-second initializing process when the ON command is sent. Do not send any commands for 10 seconds after the ON command is sent.

You may also issue simultaneous commands by adding a comma to delimit each Function Command prior to issuing the Carriage Return Command.

⇒ **dvp,on,x,a2,srn4**[↵ Enter]

(Control Syntax = Header, Power ON, YCrCb (Component Input), Anamorphic, Scan Rate 1280x720[carriage return])

Personal Computer (PC Control)

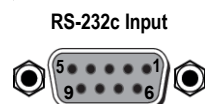
Use the standard **Windows HyperTerminal** program to control the DVP-1080. Select the options listed below and utilize a standard 9-pin Modem Cable (not a null-modem cable). Once connection has been established: **TYPE dvp,help** and then press [↵ Enter]. The OPERATION COMMANDS available will then be echoed back to your personal computer.

BPS	19200
Data bits	8
Parity	None
Stop bits	1
Flow control	None

AMX and **Crestron** control examples; including their respective Carriage Return commands:

AMX "dvp,on',13"
 "dvp,off',13"

Crestron dvp,on\r
 dvp,off\r



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

RS232 CONTROL COMMANDS

CODE	RANGE	DESCRIPTION
OPERATION COMMANDS		
A#	(0-2) 0=4x3,1=Letterbox, 2=Anamorphic	Input Aspect Ratio
B#	(0-100) 50 default	Brightness
C#	(0-100) 50 default	Contrast
D#	(0-15) 04 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) 50 default	Color
OFF		Power OFF
ON		Power ON
P#	(0-8) [1-8=User, 0=Factory]	Recall Profiles
PM#	(0-1) [0=Normal, 1=Bypass]	Advanced Color System
R		RGB input
ST		Report Current Status
STHELP		Display Setup Menu
STNP#	(1-8)	Store NTSC Profile
STPP#	(1-8)	Store PAL Profile
T#	(0-100) 50 default	Tint
V		Video Input
X		YCrCb Input
Y		S-Video Input

SETUP COMMANDS

BB#	(0-100)	Bottom Blanking
BL#	(0-100)	Border Curtain Level – black to white
BLT#	(6-255)	LCD Backlite Timer on front panel
BLV#	(0=0IRE, 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
DHS#	(0=NORMAL, 1=WIDE)	DVI INPUT H SYNC
DVID		DVI Input Disabled
DVIE		DVI Enabled
E#	(1=On 0=OFF)	RS-232 ECHO
EX#	(0=SOG, 1=Comp Sync)	RGB Input Sync
EXTD		PassThru Input Disabled
EXTE		PassThru Input Enabled
HDPROC#	(0=NORMAL, 1=HIGH BANDWIDTH)	
HP#	(0-50) 25 default	Horizontal Position
IHA#	(0-50) 25 default	HD Input Adjust
LB#	(0-100)	Left Blanking
M#	(0=RGB, 1=YPrPb)	Output Format
OSDOFF		OSD Off
OSDON		OSD On
OSDT #	(0-255) 30 default	OSD Timer
OUTMOD	(0=YPrPb, 1=DVI, 2=RGB, 3=RGB/DVI)	Output Mode
RB#	(0-100)	Right Blanking

SETUP COMMAND - CONTINUED:

CODE	RANGE	DESCRIPTION
RD		RGB Input Disabled
RE		RGB Input Enabled
SCRTRG# (0=Off, 1=ON)		12v Screen Trigger
SETFT		Restore Factory Defaults
SRN#	(1-12)	Scan Rate Selection
SRNHELP		NTSC Scan Rate Help Menu
SRP#	(1-6)	PAL Scan rate Selection
SRPHELP		PAL Scan Rate Help Menu
TB#	(0-100)	Top Blanking
TPHLP		Display Test Pattern Help Menu
STHELP		Setup Help Menu
VP #	(0-20) 25 default	Vertical Position
VPOL#	(0=Neg 1=Pos)	Vsync Polarity
W#	(0=4:3, 1=Widescreen, 2=Wide 4:3)	Screen Shape
XD		YCrCb Input Disabled
XE		YCrCb Input Enabled
YD		S-Video Input Disabled
YE		S-Video Input Enabled

NTSC SCAN RATES

SRN1 1400X788	SRN2 1920 x 540
SRN3 800X600	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(DILA3)	SRN12 1920 x 1080

PAL SCAN RATES

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

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

INFRARED DIRECT ACCESS COMMANDS

Press DVI/RGB+0 = DVI, Press DVI/RGB+1 =RGB
 All others are available directly from remote

SPECIFICATIONS

Processing

10-bit signal path

1080i deinterlacing with MADI and 3:2 pulldown

High Bandwidth Mode: full resolution 1920x1080p (Straight deinterlacing without scaling)

Enhanced mode: 1080i converted to 1280x720 resolution then scaled to the selected output rate

Inputs

Format NTSC/PAL(TBD)

Composite(BNC)	1v pp
S-Video (4-pin DIN)	Y – 1v pp, C – 286mv pp
Component (BNC)	Y – 1v pp(SMPTE)
480i/480p/720p/1080i	Cr – 700mv pp Cb – 700mv pp
RGB (BNC)	Comp. Sync – 1v pp
480i/480p/720p/1080i	RGB – 700mv pp
HD/PC Pass-Thru	D15M
DVI Input	DVI – I (female) Digital Only(0-255/16-235)

Outputs (Progressive)

RGBHV	700mv pp, TTL Sync
H&V Sync	2.5v pp@75ohm min.
YPrPb	700mv pp, Sync on Y-1v pp
RGsB	Gs – 1v pp, RGB – 700mv pp
Digital Video Interface:	DVI – I(female) digital only 0-255 HDCP Compliant

Operational Temperature Range 41 F to 104 F (+5 C to + 40 C)
with internal temperature warning

Power Supply 100-240VAC 50/60Hz Auto Ranging

Power Consumption 35watts

Dimensions: 1.75" H x 17" W x 12.5" D
(Depth includes rear BNC) Allow 3" in rear for cables

Weight: 14 lbs

Specifications and features subject to change without notice

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 (HD25 version): one(1) year limited parts and labor
(Image burn-in is not covered)

Projectors:

DILA-Based products: Two (2) 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 nonconforming 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.

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