

# DVP1080HD

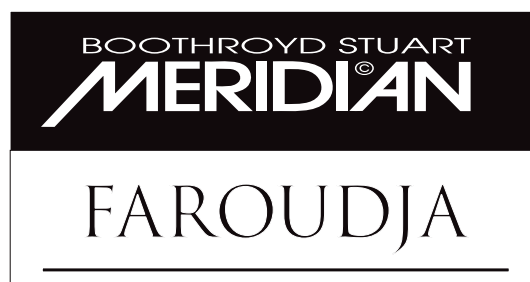
## HD Digital Video Processor

### Interim Installation and Operation Manual



**IMPORTANT: THE DVP1080HD OFFERS MANY SETUP OPTIONS TO INSURE PROPER INTEGRATION WITH SOURCES AND DISPLAY DEVICES. PLEASE READ THIS COMPLETE MANUAL TO ENSURE PROPER INSTALLATION AND OPERATION. ANSWERS TO MOST TECHNICAL QUESTIONS CAN BE FOUND HERE.**

**INSTALLERS:** Please review this manual carefully before contacting Technical Support.  
**PRODUCT OWNERS:** Please contact your authorised Meridian/Faroudja dealer for product or installation questions.



*This page intentionally left blank*

## IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- (North America) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade, or the third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and at the point they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug the apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen in to the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



### Safety warnings

- Do not expose the product to dripping or splashing.
- Do not place any object filled with liquid, such as a vase, on the product.
- Do not place naked flame sources, such as lighted candles, on the product.

To avoid interference

Do not position the product:

- Near strong magnetic radiation, such as near a power amplifier.
- Near to a television, or where connecting cables may be subject to or cause interference.

## WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE

This apparatus has been designed with Class 1 construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding pin).

To avoid overheating

- Leave at least 10cm around the equipment to ensure sufficient ventilation.

Do not position the product:

- In direct sunlight.
- Near heat sources, such as a radiator.
- Directly on top of heat producing equipment, such as a power amplifier.
- On a soft surface, such as a carpet, which would obstruct the ventilation holes in the base.

The product normally runs warm to the touch.

## FCC Information (USA Only)

### CAUTION:

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

### FCC Warning

This equipment generates and can radiate radio frequency energy and if not installed and used correctly in accordance with our instructions may cause interference to radio communications or radio and television reception. It has been type-tested and complies with the limits set out in Subpart J, Part 15 of FCC rules for a Class B computing device. These limits are intended to provide reasonable protection against such interference in home installations. 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.

## TABLE OF CONTENTS

SAFETY STATEMENT AND GUIDANCE .....	3
QUICK START INSTALLATION GUIDE.....	5-6
NOTE TO INSTALLERS.....	7
INSTALLATION AND SETUP.....	8-10
UNPACKING.....	8
MOUNTING.....	8
CONNECTIONS .....	8-10
SETUP MENU .....	11-13
DVP1080 OPERATION .....	14-17
FRONT PANEL.....	14
INFRARED REMOTE AND ON-SCREEN-DISPLAY .....	14-16
RS232 COMMANDS .....	17-19
SPECIFICATIONS.....	20
WARRANTY .....	21

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

The Faroudja section of the Meridian web site, [www.meridian-audio.com](http://www.meridian-audio.com), contains manuals, RS232 information and FAQs to assist with installations.

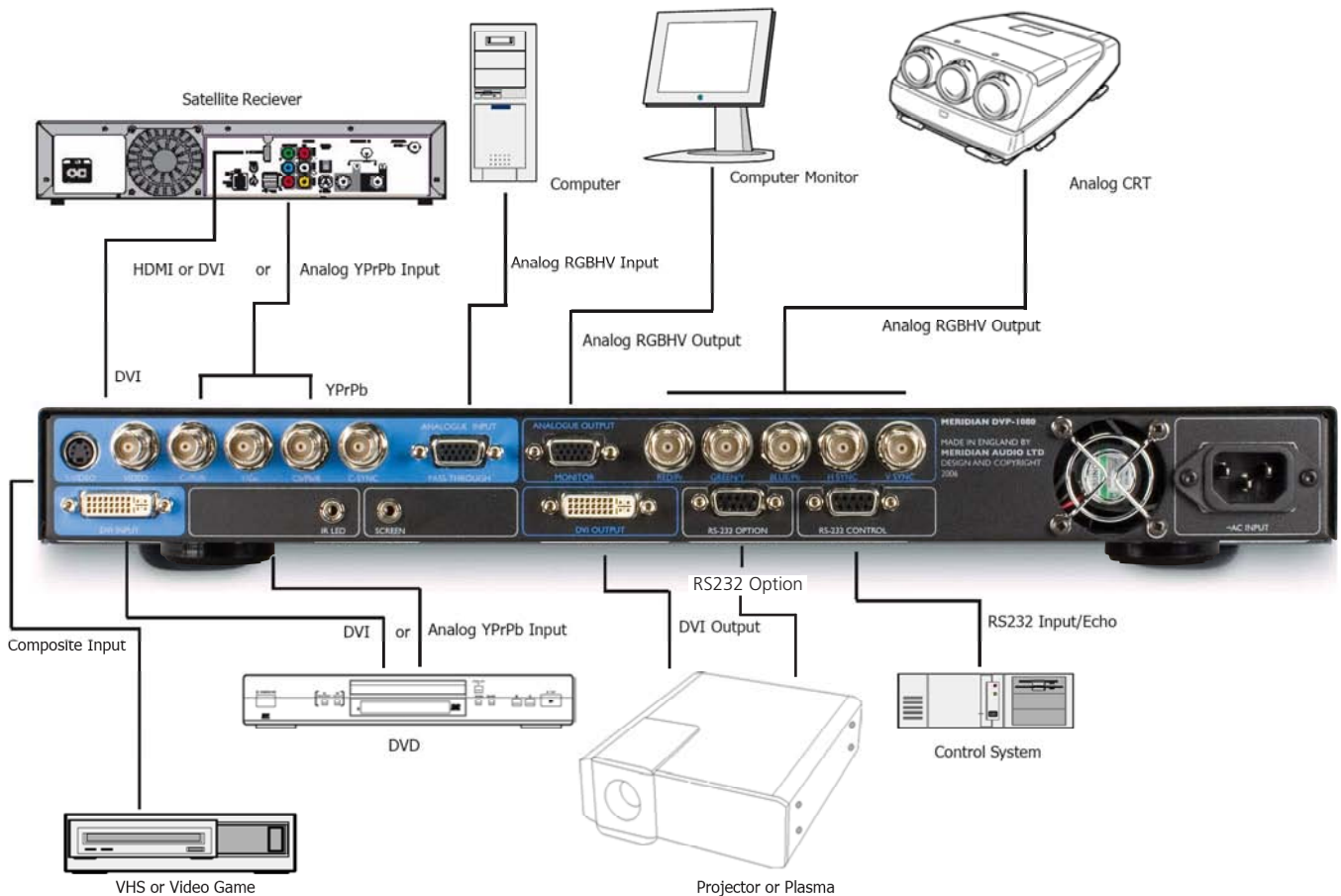
Copyright © 2006 Meridian Audio Limited. No part of this document may be copied, photocopied, translated, or reproduced to any electronic medium or machine readable form without prior consent, in writing, from Meridian. The Faroudja name and logo, and 'DCDi by Faroudja' are registered trademarks of Genesis Microchip Inc. Specifications subject to change without notice. All Rights Reserved.

The Faroudja DVP1080 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.

Faroudja equipment is manufactured by Meridian Audio Limited under licence from Genesis Microchip Inc. Country of origin as specified on product label.

## 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.*



- In installations where there are multiple sources using the same connection on the DVP1080, an external switcher should be used.
- S-Video is an alternate input to use with satellite, DVD and video game sources.
- A thermally-activated low-noise fan is included on the rear panel in recent units.

- 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 Analogue, YPrPb vs S-video, etc).
- 3 Connect display:** Make sure display device is set for the correct input signal type from the video processor. Review the display's scan rate table (found in the rear of the User Guide for most models) 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 50ft, non-fibre cable is OK if rated to 1280x1024 for output resolutions of 1365x1024 and lower; for 1920x1080p, DVI cable must be rated to 1600x1200 for the length required.
- 4 Enter SETUP:** Press the MENU button for 7 seconds to enter the SETUP menu. Set the output scan rate. Set the proper screen shape. Set the correct output type - Digital/Analogue (RGB or YPrPb)
- 7 Display Device:** Adjust Brightness and Contrast. Use adjustments in the DVP1080 if they are not available in the display.

## QUICKSTART INSTRUCTIONS: MENU STRUCTURE

### ON-SCREEN-DISPLAY

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

**SETUP MENU** (Default setting in **Bold**)  
*Shown on Front-Panel Vacuum Fluorescent Display (VFD) – NOT On-Screen Display (OSD)*

**SET: NTSC SCAN RATE**  
ADJUSTABLE (**720P DEFAULT**)

**SET: PAL SCAN RATE**  
ADJUSTABLE (**720P DEFAULT**)

**SET: ACTIVE OUTPUT**  
ANALOG YPrPb / DVI / ANALOG RGB /  
**ANALOG RGB + DVI (DEFAULT)**

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

- 'WIDE 4:3' is also known as '4:3 LB' or 'Letter-box'
- WIDESCREEN corresponds to an aspect ratio of 16:9

**SET: ANALOG BLACK LVL**  
0/7.5 IRE

**SET: HD INPUT H-ADJ**  
0-50 (**25 DEFAULT**)

**SET: DVI INPUT LEVEL**  
**DVI-VIDEO (16-235) /DVI-PC (0-255)**

**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: DVI INPUT H SYNC**  
WIDE/**NORMAL**

**SET: OSD TIMER**  
0-255 (**30 DEFAULT**)

**SET: VFD TIMER**  
0-255 (**30 DEFAULT**)

**SET: VFD TIMEOUT LVL**  
OFF/**LOW**

**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/**HIGH-BANDWIDTH MODE**

**SET: RESTORE FACTORY**  
PRESS STORE

## **NOTE TO AUTHORISED MERIDIAN/FAROUDJA INSTALLERS**

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

The Faroudja section of the Meridian web site contains manuals, RS232 information and FAQs to assist with installation.

**[www.meridian-audio.com](http://www.meridian-audio.com)**

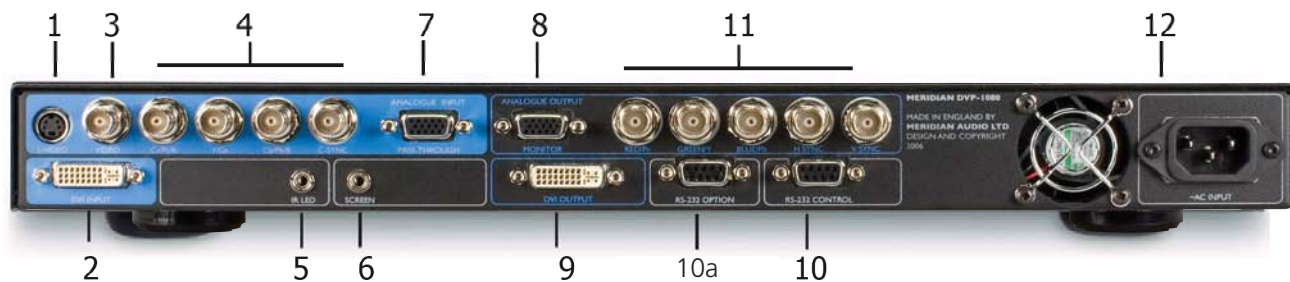
In this manual, bullets • indicate important application notes and » indicates an installation or operational suggestion.

While this manual generally uses British English spellings, you may find that the product displays American English spellings in some cases, and these are also used in this manual where a mode or message displayed by the unit is described. These spellings should be understood as equivalent.

### **Accessory Kit**

supplied with 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).
- EXCESSIVE HEAT MAY CAUSE THE PROCESSOR TO MALFUNCTION OR SHORTEN PRODUCT LIFE. Follow regular installation rules for proper ventilation.
- Be sure rack location has adequate ventilation. Allow a minimum of 1U rack space (1.75in) 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 two warning levels that appear on the front panel display.

#### LEVEL 1 WARNING

##### HIGH TEMPERATURE

- » The internal temperature is exceeding optimum operating temperature.
- Steps should be taken to improve ventilation.
- The rear panel exhaust fan will activate.

#### LEVEL 2 WARNING

##### HIGH TEMPERATURE SHUTDOWN

- » The internal temperature has exceeded safe operating limits and the unit has shut down.
- Unplug the unit from the wall power to reset. Once the unit has cooled down, normal operation returns. Steps must be taken to improve ventilation.

### 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. Numbers refer to the diagram above.

**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 VFD. The VFD status screens are:

**DVI:** Input signal is supported  
**NO INPUT:** No signal is detected.  
**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 analogue RGB or YPrPb.

- 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.
- 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.
- With HDCP encrypted sources, it may take up to 15 seconds for the HDCP authorisation 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.
- The DVI input levels and sync type must be matched to the DVI source in the SETUP menu. See pp11–12 for details.



- Some DVD players may offer a better image using the analogue 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.

- 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. (VESA 640x480 not supported)

- When using RGBs, be sure to check settings for this input in the SETUP menu. See Page 11 for details.

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

**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 analogue signals to pass-through to the display device.

- Signals connected to this input are not processed or transcoded (YPrPb to RGBHV).
- Analogue 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 analogue cables on the output must also be 5-wire RGBHV.
- Be sure display device is compatible with the signal type being sent through this input.
- 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 ANALOGUE OUTPUT:** For use with computer monitors or as a second video output. Connector is active if ANALOGUE or

ANALOGUE/DIGITAL output is selected in the SETUP menu.

- If a HDCP encrypted DVI source is selected, the analogue outputs are deactivated by law. The front panel VFD will display:

ENCRYPTED SOURCE  
ANALOG OUT DISABLED

- Do not use D15 to D15 cables longer than 10' to prevent ringing and signal loss. Use a D15 to BNC breakout cable to 5-75Ω cables if longer runs are required.

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

- The processor is always monitoring the DVI input and output status and provides information on the front panel VFD. The VFD status screens are:

**DVI:** Input signal is supported  
**NO INPUT:** No signal is detected.  
**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 analogue RGB or YPrPb.

- With HDCP encrypted sources, it can take up to 15 seconds for the HDCP authorisation between source and display to be acquired. The display device must be HDCP compatible to get an image.
- Higher resolution displays require higher quality DVI cables. Using cables not rated for the resolution being used will result in images with coloured sparkles and lines. Always verify maximum resolution rating of the cable with cable supplier.  
For 1080p, fibre optic cables should be used for lengths over 15ft (or any cable rated for 1600x1200 resolution. Check with cable supplier).
- The SETUP menu offers selections for setting the output type. See Page 10 for details.

**10/10a. DB9F RS232 CONNECTORS:** Use for control system interface (10) and device control (10a 'option' connector).

- The SETUP menu offers selections for RS232 operation. See Page 12 for details.
- The left-hand 'option' connector 10a allows control of some Faroudja projector switching functions, eg power on/off and 50/60Hz frame rates. Contact technical support for details.

**11. RGBHV/YPrPb ANALOGUE OUTPUTS:**

For use with high scan rate analogue displays.

- If a HDCP encrypted DVI source is selected, the analogue outputs are deactivated by law. In this case, the front panel VFD will display:

ENCRYPTED SOURCE  
ANALOG OUT DISABLED

- RGBHV (5-wire) is highly recommended to use over YPrPb (3-wire).
- The SETUP menu offers selections for output type. See Page 11 for details.
- RGBHV must use 5-wires. Be careful not to swap the H&V cables. Only use high quality 75 $\Omega$  cables.

**12. AC POWER CONNECTOR** Connect to a stable 100-240 volt AC 50/60Hz power line.

- To avoid ground loops, a power conditioner for the equipment rack is recommended.
- 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 optimise 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 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. Defaults are shown in **Bold** below.

#### SET: NTSC SCAN RATE

This sets the output rate when a 60Hz source is auto-detected.

- Press STORE TWICE (2X) to enter the new scan rate. Store different output rates as Profiles. See Storing Profiles on Page 13.
- 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 50Hz source is auto-detected.

- Press STORE TWICE (2X) to enter the new scan rate. Store different output rates as Profiles. See Storing Profiles on page 13.
- 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

**ANALOG RGB + DVI** / ANALOG YPRPB / DVI / ANALOG RGB

Set the output type desired.

- Analogue output offers RGBHV (5-wire) or YPrPb (3-wire). RGBHV is highly recommended over YPrPb.
- When ANALOGUE RGB+DVI is selected, both output types are active. YPrPb analogue output is not available in this mode.
- » The image levels (contrast, colour, etc.) in the processor are shared between the two outputs so some level adjustment may be required in the analogue display for proper imaging.
- Different output formats can be stored as

Profiles. See STORING PROFILES in the SETUP menu.

- If the DVI input is selected and a source encrypted with HDCP is playing, the analogue 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 Screen shape to match the aspect ratio of the display device.

- Select Wide-4:3 (4:3 Letterbox) when using a 4:3 native projector on a 16:9 screen.
- When using a 4:3 projector and anamorphic lens on a 16:9 screen, select Widescreen.
- Screen shape defaults to AUTO when in HIGH BANDWIDTH mode

#### SET: ANALOG BLACK LEVEL

0 / **7.5IRE**

Sets the correct black level for YPrPb DVD sources.

- Many DVD players offer black level options (sometimes called "Enhanced Blacks"). **The player should be left at default settings: adjust level in the DVP1080.**
- Only available when the Component input is selected with a 60Hz source.

#### SET: HD INPUT 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.

- 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 HD INPUT H-ADJUST to match.
- Available only when a 1080i/720p signal is detected. Not available in HIGH BANDWIDTH mode
  - » The input for the HD source must be selected in order to make the HD H-ADJUSTMENT.
  - » 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 LEVEL

### DVI-VIDEO(16-235) / DVI-PC(0-255)

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

- 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.
- To test what the output is from the source, put up a 10 step gray scale pattern from a test pattern DVD. 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

- Only available when DVI input is selected

## SET: COMP SYNC ON H

### ON / OFF

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

- This option Only available when Analogue RGB output is selected and not in HIGH BANDWIDTH mode.
- » 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

- If all inputs are disabled, Composite becomes the default input

## SET: RGB INPUT SYNC

### SYNC-ON-GREEN / COMPOSITE SYNC

Sets the sync type for the RGB input.

- Composite sync option should be selected when using PAL RGB.
- Only available when RGB input is selected and not in HIGH BANDWIDTH mode

## 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).

- Only available when the DVI input is selected, a video-HD rate is detected.

## SET: OSD

### ON / OFF

Determines visibility of On-Screen-Display.

## SET: OSD TIMER

### 0-255 (30 DEFAULT)

Sets how long the OSD will be visible after an operation

## SET: VFD TIMER

### 0-255 (30 DEFAULT)

Sets how long the front panel Vacuum Fluorescent Display (VFD) stays at full brightness after an operation.

0=OFF, 255=ALWAYS ON

## SET: VFD TIMEOUT LVL

Sets the brightness level of the front panel VFD after the timer period has elapsed.

### OFF/LOW

## SET: RS232 ECHO

### ON / OFF

Determines whether command echoes are sent back to the RS232 control device. See page 18 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 limited image adjustments (Brightness/Contrast/Colour). ENHANCED mode offers full image adjustment control at a slightly reduced bandwidth.

- This function only applies to displays with a native resolution of 1920x1080p (or 9in 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.
- Colour adjustment is only available when using the YPrPb input.

### **SET: STORE NTSC PROFILE**

STORE PROFILE 1-8

Stores all current settings for 60Hz sources (30 different parameters) to the profile number selected in the NTSC memory bank

#### **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 vice-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.

- The processor auto-detects the input refresh rate (60Hz/50Hz) and recalls Profiles stored for that rate. 60Hz Profiles cannot be recalled while viewing 50Hz sources and vice-versa.

### **SET: RESTORE FACTORY**

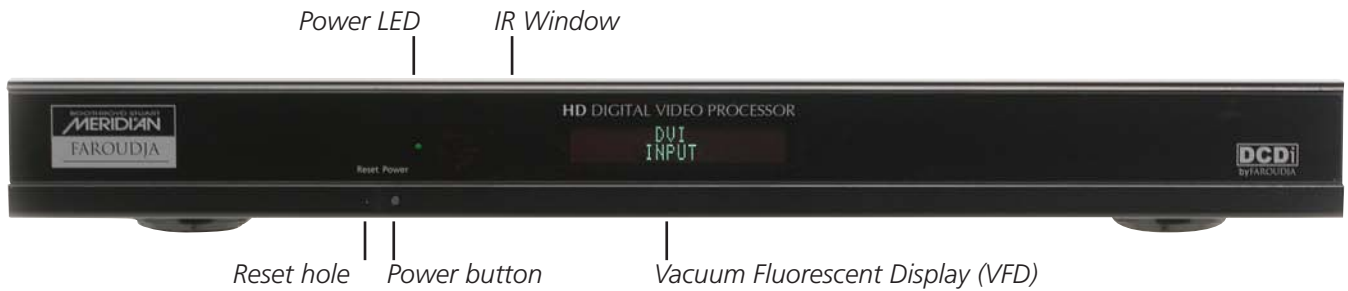
PRESS STORE

Resets processor firmware to original factory levels.

- Only use this command if processor completely locks up and other troubleshooting steps do not solve the problem.

- 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, and does not erase settings.

## **NOTES**



## DVP1080 OPERATION

### FRONT PANEL CONTROLS

Each time the processor is powered up, it will go through an initialising 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.

- Unplugging the unit from power source will accomplish the same task.

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

- 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

### VACUUM FLUORESCENT DISPLAY (VFD):

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.

- The SETUP menu is only visible via the front-panel VFD

### 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

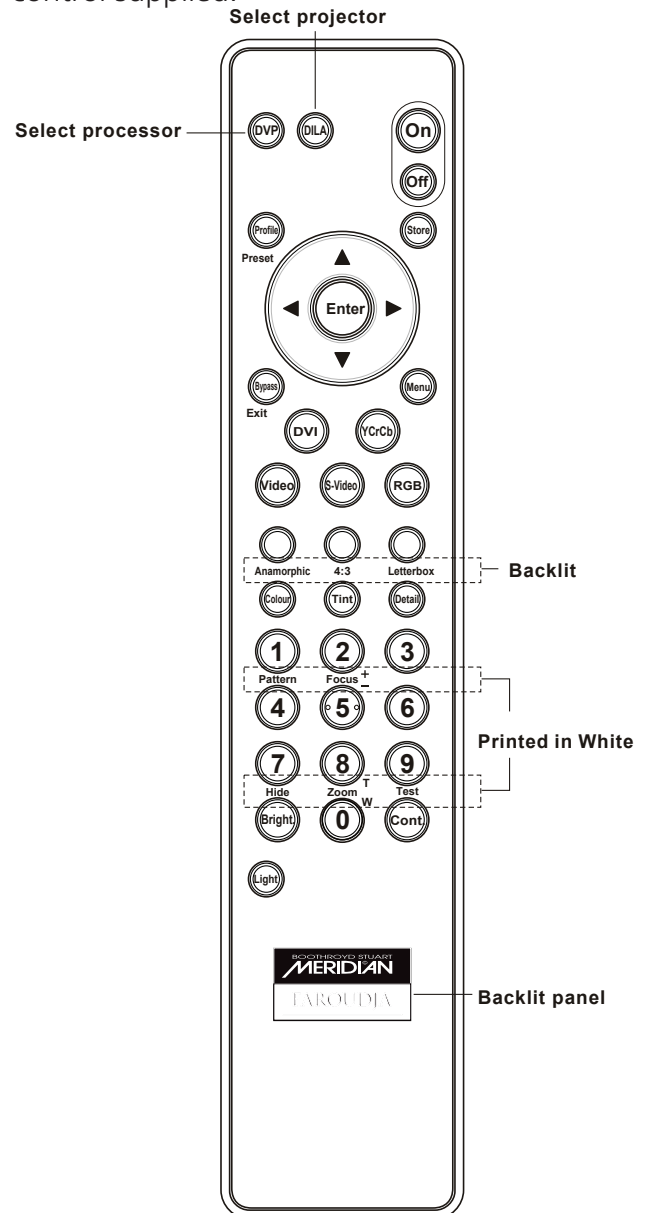
**DISPLAY:** IMAGE POSITION, IMAGE BLANKING

**PATTERNS:** TEST PATTERN ON/OFF, SELECT

The remote control is used to access these menus.

### INFRARED REMOTE CONTROL

The DVP1080HD offers simple control of picture adjustments via an on-screen menu, controlled by the multi-function remote control supplied.



### REMOTE BUTTON OPERATION

#### DEVICE SELECT BUTTONS

Press the [DVP] button to select the processor before attempting to control it. If you have a Meridian projector you can press the [DILA] button before addressing it.

## ON & OFF BUTTONS

Press the [ON] button to turn on the unit, press the [OFF] button to enter the standby mode.

## INPUT SELECT

Press the desired button for direct access to the different inputs: [VIDEO] (Composite), [S-VIDEO], [RGB], [DVI], [YCrCb] (Component).

- When [BYPASS] is selected, sources connected to the DVI input will be sent to the DVI output unchanged by the processor.
- » 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 VFD 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.

- 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.

- 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 vice-versa.

**IMAGE ADJUSTMENTS:** Adjusting picture levels can be done by pressing a direct access button such as [CONT.] 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.

- 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 DVP1080MF.
- 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.

## BRIGHT. 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

## CONT. 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 colour.

## COLOUR BUTTON

Adjust to reproduce accurate colours.

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

## TINT BUTTON

Adjust for accurate tint.

- Tint adjust is only available with Composite or S-Video sources.
- » If the image colour 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 colour 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 (eg 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.
- 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.

- 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 (sometime called "Enhanced for Widescreen" TVs).

- 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 screen shape (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 motorised lens attachments.

## 4:3 BUTTON

Selects proper aspect ratio for sources formatted for 4:3 screen shape.

- 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 warranty.

## LIGHT BUTTON

Activates the remote backlight for several seconds.

## OTHER OSD IMAGE ADJUSTMENTS

### DISPLAY MENU PAGE

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

- 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.
- 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.

- 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.

- 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.

## PICTURE MENU PAGE

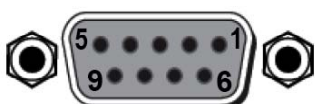
**ADVANCED COLOR:** The 'Advanced Color' mode activates colour edge enhancement and cross-colour suppression to improve the image and remove certain video artifacts. This should be set to Normal for most sources. With a few movies that contain large amounts of colour (such as animation), these circuits may cause colour flickering. Set the mode to Bypass if this occurs.

### RS232 OPTION CONNECTOR

The RS232 Option connector (10a in the diagram on page 8) is used in the latest firmware revisions as a serial OUTPUT to control some display functions. At present this control is limited to handling power on/off and 50/60Hz switching on Meridian/Faroudja projectors. When the DVP1080 is powered up, it will command the projector to switch on; and when powered down, it will also power-down the projector. Similarly, the DVP1080 will switch the projector to 50/60 Hz operation depending on the active input source (if not auto-detected by the projector). Contact Meridian Technical Support for details on implementing this function, as additional features may become available in due course.

## RS232 CONNECTIONS

### RS-232c Input



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

## RS232 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 – pressing the Enter key on the keyboard)

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

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

» **dvp,x,a2,srn4[Enter]**

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

**Personal Computer (PC Control)** Use the standard Windows **HyperTerminal** program to control the DVP-1080. You can use an equivalent program on a Macintosh computer. If an RS232 port is unavailable, many types of USB/Serial converters will work. 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

## RS232 CONTROL COMMANDS

CODE	RANGE	DESCRIPTION
<b>OPERATION COMMANDS</b>		
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	Colour
OFF		Power OFF
ON		Power ON
P#	(0-8) [1-8=User, 0=Factory]	Recall Profiles
PM#	(0-1) [0=Normal, 1=Bypass]	Advanced Colour System
R		RGB input
ST		Report Current Status
STHLP		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)	VFD Blanking Timer on front panel
BLV#	(0=0IRE, 1 = 7.5 IRE)	Analogue 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)	HD processing
HP#	(0-50) 25 default	Horizontal Position
IHA#	(0-50) 25 default	HD Input Adjust
LB#	(0-100)	Left Blanking
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

CODE	RANGE	DESCRIPTION
RB#	(0-100)	Right Blanking
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
SRNHLP		NTSC Scan Rate Help Menu
SRP#	(1-6)	PAL Scan rate Selection
SRPHLP		PAL Scan Rate Help Menu
TB#	(0-100)	Top Blanking
TPHLP		Display Test Pattern Help Menu
STHLP		Setup Help Menu
VP #	(0-20) 25 default	Vertical Position
W#	(0=4:3, 1=Widescreen, 2=Wide 4:3/LB)	Aspect Ratio
XD		YCrCb Input Disabled
XE		YCrCb Input Enabled
YD		S-Video Input Disabled
YE		S-Video Input Enabled

### NTSC SCAN RATES

SRN1	1400X788	SRN7	1366 x 768
SRN2	1920 x 540	SRN8	1440 x 960
SRN3	800X600	SRN9	1280 X 1024
SRN4	1280 x 720	SRN10	DILA*
SRN5	1024 x 768	SRN11	DILA3*
SRN6	1280 x 768	SRN12	1920 x 1080

- DILA setting: Analogue Out =1365x1024; Digital Out= 1280x1024
- DILA3 Setting: Analogue Out= 1400x1050; Digital Out= 1280x1024

### PAL SCAN RATES

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

### TEST PATTERN HELP MENU

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

## DVP1080HD SPECIFICATIONS

### PROCESSING

10-bit signal path

1080i deinterlacing with MADi (Motion Adaptive DeInterlacing) 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
Composite (BNC)	1v pp
S-Video (4-pin DIN)	Y - 1v pp, C - 700mv 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	35 watts
Dimensions:	1.75in (44.45mm) H x 17in (431.80mm) W x 12.5in (317.50mm) D (includes rear BNC) Allow 3in in rear for cables Optional 19in rack mounting
Weight:	14 lbs

Specifications and features subject to change without notice

## WARRANTY STATEMENT

Meridian Audio Limited ("Meridian"), manufacturing Faroudja products under licence from 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 labour

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

Projectors: DILA-Based products: Two (2) years limited parts and labour (Image burn-in is not covered)

These limited warranties are contingent upon proper use and installation and do not apply to products damaged as a result of accident, misuse, neglect, alteration, improper installation, unusual physical or electrical stress or unauthorised 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 Meridian without its consent. If requested by Meridian, Purchaser must provide proof of purchase and return defective products to Meridian with the appropriate Return Material Authorisation (RMA) completed, a Meridian RMA number assigned and transportation charges prepaid. Warranty may be void if unit is not returned to Meridian Service in the original shipping carton.

Should a product fail to conform to the warranty above, then Meridian shall, at Meridian's sole option, (i) repair the non-conforming product or portion thereof, provided that the product is returned to Meridian 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 Meridian's entire liability and Purchaser's exclusive remedy with respect to breach of the warranty.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL WARRANTIES EXPRESSED, IMPLIED OR STATUTORY, REGARDING THE PRODUCTS, AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY OTHER WARRANTY OBLIGATIONS ON THE PART OF MERIDIAN OR GENESIS MICROCHIP INC. IN NO EVENT WILL MERIDIAN OR GENESIS MICROCHIP INC. BE LIABLE FOR LOSS OF PROFITS OR GOODWILL, OR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND, HOWEVER CAUSED, WHETHER BY MERIDIAN'S BREACH OF WARRANTY OR BY MERIDIAN'S SOLE OR CONCURRENT NEGLIGENCE OR OTHERWISE.

Meridian 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 on-line at [www.meridian-audio.com](http://www.meridian-audio.com).

---

**Meridian Audio Limited**

Latham Road,  
Huntingdon, Cambridgeshire PE29 6YE  
United Kingdom  
Tel +44 (0) 1480 445678  
Fax +44 (0) 1480 445686

**Web:** [www.meridian-audio.com](http://www.meridian-audio.com)



Faroudja is a trademark of Genesis Microchip Inc.  
Other trademarks are the property of their respective owners.

**Meridian America Inc**

8055 Troon Circle, Suite C  
Austell, Atlanta GA 30168-7849  
USA  
Tel +1 (404) 344 7111  
Fax +1 (404) 346 7111

**Email:** [info@meridian-audio.com](mailto:info@meridian-audio.com)