Crestron **DVPHD**
High Definition Digital Video Processor
Operations Guide

Regulatory Compliance

As of the date of manufacture, the DVPHD has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

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Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:
(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance 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 device, 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 encouraged 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 and receiver

- 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

Industry Canada (IC) Compliance Statement

CAN ICES-3(B)/NMB-3(B)

Contents

High Definition Digital Video Processor: DVPHD

Introduction

Envision a world class multimedia presentation system for a boardroom, auditorium, command center, home theater, or house of worship. Picture all the video and computer resources in a system displayed in perfect harmony and clarity within a dramatic graphical environment all on one high definition screen. Imagine the ability to seamlessly control the presentation and annotate ideas with a stroke of a finger.

That is the DVPHD High Definition Digital Video Processor from Crestron®, the world's only multiwindow video processor that displays high res computer and high definition video signals with HDCP, provides a fully customizable HD graphics environment and enables real time annotation and touch screen control, all in a modular, scalable hardware platform that is easy to install.

Features and Functions

- The first multiwindow video presentation processor available that supports HD video with HDCP
- Displays up to eight fully scalable video windows
- Features VXP® high definition scaling and deinterlacing
- Modular design accepts the choice of up to eight simultaneous inputs[1]
- Handles HDMI®, DVI, DisplayPort Multimode, and HD-SDI digital video sources[2]
- Handles analog RGB, component, S-video, and composite video sources[2]

(Continued on following page)

1. Actual signal types and quantities are dependent on the on the selected input/output card configuration. To configure a DVPHD with input and output cards, please select one of the pre-configured models or use the online DVPHD Configuration Tool at www.crestron.com/resources/system_design_resources/product_configuration_tools/dvphd/ to configure a custom model. All input and output cards must be factory installed.
2. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA, or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.

Features and Functions

(Continued)

- QuickSwitch HD[®] achieves ultra-fast switching with transition effects
- Advanced HDCP compliance manages DRM for eight digital sources[1]
- Includes integrated Crestron graphics engine and touch screen interface
- Enables real time, interactive annotation over high definition video and computer images
- Supports DVI, HDMI, and RGB display devices and touch screen monitors[2]
- Compatible with a vast range of third-party touch screens[3]
- Compatible with Crestron V-Panel™ HD Touch Screen Displays[4]
- Supports resolutions up to WUXGA 1920 x 1200 and HDTV 1080p60[5]
- Configures itself automatically using sync detection and EDID (Extended Display Identification Data)[6]
- Allows easy setup via LCD front panel, on-screen display, or Web browser
- Features built-in test patterns
- Includes high speed Ethernet and Cresnet[®] communications
- Affords native Crestron control system integration
- Available QuickMedia[®] (QM) inputs and output[1, 6, 7, 8]
- Integrates seamlessly with Crestron DigitalMedia™ systems

1. The analog RGB and QM outputs are disabled if HDCP is utilized.
2. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.
3. For the latest touch screen device support information, refer to Crestron True Blue Online Help Answer ID #4666 or contact Crestron True Blue Support at www.crestron.com/contact/phone_and_email_support/.
4. A LAN connection and Ethernet-enabled control system are required for use with a V-Panel™ display. Refer to the Crestron DigitalMedia Design Guide (Doc. #4546) at www.crestron.com/manuals for complete DM[®] wiring guidelines.
5. Refresh rate is limited to 60 Hz or lower for resolutions of 1600 x 1200 or higher. Support for 1920 x 1200 via analog RGB or QM requires a source or display device that supports reduced blanking.
6. The QM inputs do not support input sync detection. QM inputs require a QM transmitter or other QM device (all sold separately) to accommodate conventional video sources.
7. The DVPHD does not process or pass audio signals, except each HDMI input passes video with audio to its corresponding HDMI output only. The DVI-I, SDI and QM inputs and outputs do not support audio.
8. The QM output supports RGBHV format only. QM output requires a QM receiver or other QM device (all sold separately).

The DVPHD is configurable to handle up to eight different inputs of virtually any type, including HDMI®, DVI, DisplayPort (Multimode), HD-SDI, and analog signals.[1, 2] Industry leading support for HDCP ensures compatibility with content protected DVD, Blu-ray Disc™, digital HDTV, and multimedia computer sources. Advanced high definition image processing achieves astounding realism and detail for every input signal, with the ability to display up to eight separate video images at once, or switch fluently between them using alluring digital transition effects and customizable graphics.

Multiwindow Video Processor

The DVPHD displays up to eight simultaneous, full motion video windows[3] on any high resolution monitor, projector or flat panel display. The video windows can be displayed on screen in any combination, with enhanced dynamic text capabilities for labeling each window. Video images can even fade or fly in and out over a personalized background using digital transition effects and customizable graphics, lending enhanced flow and vibe to the total presentation. Each window is fully scalable and independently controllable, allowing for display at any position, size or aspect ratio.

QuickSwitch HD

Crestron exclusive QuickSwitch HD technology eliminates the annoying latency and blanking that plagues other digital switchers and video processors. Switching between inputs of any type is fast and fluid on the DVPHD.

Advanced Image Processing

On any size display, whether viewing a full screen image or multiple windows with graphics, the DVPHD scales its output perfectly to match the display's native resolution and aspect ratio. VXP® video processing with fully adaptive deinterlacing achieves exceptional realism and rich detail from standard definition, high definition and computer sources.

Customizable Graphics

Besides displaying video and computer images, the DVPHD includes our 24-bit graphics engine with alpha transparency for creating dramatic visual effects and conveying all kinds of useful data. Use a choice of background textures, full color images, logos, and other design elements to create the perfect look and feel for the application. Use dynamic graphics and text, crawling text, pop-up windows, animations, and multimode objects to deliver a message with clarity and style.

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1. Actual signal types and quantities are dependent on the on the selected input/output card configuration. To configure a DVPHD with input and output cards, please select one of the pre-configured models or use the online DVPHD Configuration Tool at www.crestron.com/resources/system_design_resources/product_configuration_tools/dvphd/ to configure a custom model. All input and output cards must be factory installed.
2. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.
3. Each video window is fed by a dedicated input and the quantity of windows is limited to the quantity of inputs. While it is possible to dynamically select which input appears in a single window, it is not possible to view a single input in more than one window at a time.

HDCP Management

The DVPHD is the first multiwindow video processor of its kind that handles HDCP (High-bandwidth Digital Content Protection) to work with a complete range of digital video players, cable and satellite receivers, multimedia computers, displays and projectors, now and into the future. While other manufacturers ignore HDCP completely, the DVPHD actually performs advanced HDCP signal management, allowing up to eight HDCP encrypted sources to be combined on one high definition screen.

Touch Screen Interface

The DVPHD can transform a third-party touch screen monitor, pen display, whiteboard, or touch-enabled flat panel display into a full featured, large scale Crestron touch screen.[1] This opens a host of possibilities for special control and presentation applications such as interactive kiosks, museum and tradeshow exhibits, training rooms, and command centers. Employing Crestron DNav technology, the DVPHD lets users scroll effortlessly through menus and toolbars with a natural sweep of the finger to select from lists of touch screen apps, media titles and more.

As an alternative to a touch screen, the graphical interface can also be navigated using an on-screen cursor driven by a wired or wireless mouse or by discrete commands from a separate touch screen, computer, keypad or handheld remote.

Vast Touch Screen Support

The DVPHD is compatible with more touch screen displays than any other touch screen interface on the market. Many dozens of models are supported from numerous manufacturers with more being added all the time. With a vast array of sizes available, in a variety of tabletop, flush mount, and other specialized configurations, there is sure to be a solution that is perfect for any custom application.[1]

V-Panel Integration

A Creston V-Panel™ display works impeccably with the DVPHD to deliver a very stylish and flexible high definition touch screen solution for a range of uses. The V-Panel display connects to the output of the DVPHD via a DigitalMedia™ transmitter or switcher (both sold separately), affording a very streamlined single-wire interface to the V-Panel up to 450 feet (137 meters) away.[2]

HD Annotation

Only Crestron allows annotation in real time over any high definition video image. Whether conducting a boardroom meeting, training seminar, or classroom lecture, annotation helps put the fine point on any presentation. In combination with a touch screen display, the DVPHD provides the essential annotation tools to make a point with maximum impact, letting the user illustrate their thoughts over video and computer sources, and sketch out ideas on a whiteboard screen, easily and intuitively. Brush sizes and colors are selectable on the fly for ultimate clarity. Moving images can be frozen on screen to allow pinpoint annotation over a still picture. Annotation over two or more different sources at once is possible, for easy side by side comparison of multiple related images.

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1. For the latest touch screen device support information, refer to Crestron True Blue Online Help Answer ID #4666 or contact Crestron True Blue Support.
2. A LAN connection and Ethernet-enabled control system are required for use with a V-Panel display. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete DM wiring guidelines.

Interactive Annotation

Crestron exclusive Remote Annotation capability lets up to 90 individual touch screen users "mass annotate" over the same image, supporting efficient and effective interaction between participants in a classroom, courtroom, council chamber, operating room, or command center.

Multiformat Support

The DVPHD is custom configurable to accommodate a full range of input signal types[1]. Any resolution up to 1920 x 1200[2] can be supported, with an incredible 125 pre-defined "standard" resolutions and the ability to define any custom resolution. Available inputs include:

- **HDMI** – Supports high definition digital video with HDCP and Deep Color. Handles resolutions up to HD 1080p60 or 1080i30 and WUXGA 1920 x 1200. Each HDMI input includes a complementary HDMI output to pass the incoming video and audio signals through to another HDMI device. HDMI inputs are also compatible with DVI and DisplayPort Multimode sources. The DVPHD can be configured with up to four HDMI inputs.[3, 4]

- **DVI-I** – Supports DVI digital video signals as well as RGB/VGA or component analog signals. Handles HDCP and Deep Color at resolutions up to 1080p60 and WUXGA. Also handles 1080i interlaced signals via analog. DVI is also compatible with HDMI and DisplayPort Multimode sources. The DVPHD can be configured with up to four DVI-I inputs.[3, 4]

- **Multiformat BNC video** – Supports analog component, S-video and composite video sources. Handles NTSC, PAL, and HD1080i interlaced signals as well as progressive signals up to 720p. The DVPHD can be configured with up to eight multiformat BNC video inputs.

- **SDI** – Supports SDI and HD-SDI digital video signals up to 1080i30 or 1080p30. The DVPHD can be configured with up to four SDI inputs.

- **QuickMedia** – Allows for direct connection to a Crestron QuickMedia® system.[4, 5]

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2. Refresh rate is limited to 60 Hz or lower for resolutions of 1600 x 1200 or higher. Support for 1920 x 1200 via analog RGB or QM requires a source or display device that supports reduced blanking.
3. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.
4. The DVPHD does not process or pass audio signals, except each HDMI input passes video with audio to its corresponding HDMI output only. The DVI-I, SDI and QM inputs and outputs do not support audio.
5. The QM inputs do not support input sync detection. QM inputs require a QM transmitter or other QM device (all sold separately) to accommodate conventional video sources.

HD Display Output

Through its DVI-I output, the DVPHD can handle virtually any display device, providing a DVI, HDMI, or analog RGB signal at any resolution up to 1920 x 1200. Interlaced 1080i output is also supported via DVI or HDMI only. A QM output is included, allowing easy extension of the RGB output signal to feed a display device up to 450 feet (137 meters) away.[1, 2, 3, 4, 5]

Auto-Configuration

The DVPHD is easy to install, configuring itself automatically to match all the different sources and displays as they are connected. Input sync detection sets the optimum format, resolution, and scan rate for each source[6], while EDID (Extended Display Identification Data) adapts the output to match the connected display device. Manual adjustments and built-in test patterns are also available to allow fine adjustment of every input and output when desired.

Installer Friendly Setup

Whether testing a new install or setting up for final operation, the DVPHD provides several easy methods for accessing all the essential controls and settings. On-screen setup is available right from the main output, navigable using a touch screen or mouse. The onboard Web server affords an alternate setup option, allowing for secure configuration and operation from any location using an ordinary Web browser on a networked computer. Setup can even be attained right from the front panel using the large LCD display.

Right out of the box, the DVPHD provides several display scenarios to choose from, with the ability to define a fully working setup in minutes. Built-in test patterns eliminate the need for an external pattern generator for proper display calibration. Advanced functionality and appearance is afforded through custom programming using the Crestron suite of software solutions.

Unparalleled System Integration

Both Cresnet® and high speed Ethernet are standard on the DVPHD, providing full connectivity and seamless communication with one or more Crestron control systems to deliver the ultimate in system integration and advanced presentation control. The DVPHD is also well suited for integration with DigitalMedia systems, allowing for even greater input expansion and distribution to multiple displays.

1. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.
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3. The DVPHD does not process or pass audio signals, except each HDMI input passes video with audio to its corresponding HDMI output only. The DVI-I, SDI and QM inputs and outputs do not support audio.
4. The QM output supports RGBHV format only. QM output requires a QM receiver or other QM device (all sold separately).
5. The analog RGB and QM outputs are disabled if HDCP is utilized.
6. The QM inputs do not support input sync detection. QM inputs require a QM transmitter or other QM device (all sold separately) to accommodate conventional video sources.

Specifications

Specifications for the DVPHD are listed in the following table.

DVPHD Specifications

SPECIFICATION	DETAILS
Video	
Scaling/Windowing Processor	VXP video processing, 8-channel image processing, resolution management, QuickSwitch HD technology
Input Signal Types[1]	Auto-detecting DVI, HDMI, DisplayPort Multimode[2], SDI, RGB, component (YPbPr), S-video (Y/C), composite, QuickMedia
Input Formats	HDMI with Deep Color, DVI, HDCP content protection support, SDI, HD-SDI, computer up to UXGA/WUXGA, HD up to 1080i and 1080p60, NTSC or PAL
Input Resolutions, Progressive	640 x 400 to 1920 x 1200, 480p, 576p, 720p, 1080p[3]
Input Resolutions, Interlaced	480i, 487i (SDI), 576i, 1080i
Output Signal Types	DVI, HDMI, RGB, QuickMedia[2, 4, 5]
Output Formats	DVI, HDMI with Deep Color, HDCP content protection support, computer up to UXGA/WUXGA, HD progressive up to 1080p60, HDTV interlaced @ 1080i only
Output Resolutions, Progressive	640 x 400 to 1920 x 1200, 480p, 576p, 720p, 1080p[3]
Output Resolutions, Interlaced	1080i via DVI or HDMI only
Color Depth	24-bit, 16.7 million colors
Analog Gain	0 dB (75 Ω terminated)
Analog Bandwidth	400 MHz
Graphics Engine	24-bit color depth (non-palette), 8-bit alpha channel transparency, 16.7 million colors, Synapse™ image rendering algorithm, multimode objects, DNav dynamic menu objects, dynamic graphics, crawling text, PNG translucency, full motion (60 fps) animation, transition effects, color key video windowing, real time and remote annotation
Memory	
DDR RAM	256 MB
Flash	64 MB
Compact Flash®	Accepts up to 4 GB (1 GB Type II Compact Flash card included)
Maximum Project Size	200 MB

(Continued on following page)

DVPHD Specifications (Continued)

SPECIFICATION	DETAILS
Touch/Mouse Device Support	In addition to Crestron V-Panel, compatible touch screen products are offered by (but not limited to) the following manufacturers: 3M[6] Touch Systems, AU Optronics (AUO)[6], Bi-Search International[6], Canvys[6], Comprel (Italy)[6], CyberTouch, DCD Display Solutions (Italy)[6], Dialectica (Russia)[6], Digital Systems Engineering, DisplayLite (UK)[6], Display Werks[6], Elo Touch Solutions™, Equipements Scientifiques (France)[6], Hatteland Display[6], Horizon Display[6], HP Compaq, Hyundai, IQ Automation (Germany)[6], Kristel Displays[6], LG[6], NEC[6], NextWindow, One World Touch[6], Planar, Power Products (Czech Republic)[6], Samsung, SMART, Telac Elektronik (Sweden)[6], TouchTable, TouchSystems[6], ViewSonic[6], VTS Medical Systems, Wacom. Please contact the respective manufacture for further details. For latest touch screen and mouse device support information, refer to Crestron True Blue Online Help Answer ID #4666 or Contact Crestron True Blue Support.
Communications	
Ethernet	10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, for control and console
Cresnet	Cresnet slave port for control and console
USB	Rear panel host posts for mouse/touch screen input, front panel client port for console
RS-232	Bidirectional, up to 115.2 kBd, hardware and software handshaking, for console and mouse/touch screen input
Power Requirements	
Main Power	4 amps @ 100-250 Vac, 50/60 Hz
Cresnet Power Usage	Does not draw power from Cresnet
Environmental	
Temperature	32º to 104º F (0º to 40º C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	342 Btu/h
Enclosure	
Chassis	Steel, black finish, side vented variable speed fan cooling
Faceplate	Metal, black finish with polycarbonate label overlay
Mounting	Freestanding or 3U 19-inch rack mountable (adhesive feet and rack ears included)

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DVPHD Specifications (Continued)

SPECIFICATION	DETAILS
Dimensions	
Height	5.20 (133 mm) 5.32 in (136 mm) with feet
Width	17.29 in (439 mm) 19.00 in (483 mm) with ears
Depth	14.44 in (367 mm)
Weight	15.4 lb (7.0 kg)

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2. HDMI inputs require an appropriate adapter or interface cable to support DVI or DisplayPort Multimode signals. DVI-I inputs require an appropriate adapter or interface cable to support HDMI, DisplayPort Multimode, RGB/VGA or component signals. RGB (VGA) or component signals. DVI-I output requires an appropriate adapter or interface cable to support HDMI or RGB/VGA signals. A VGA to DVI-A adapter is included for use with each DVI-I input and output. CBL-HD-DVI interface cables are sold separately.

3. Refresh rate is limited to 60 Hz or lower for resolutions of 1600 x 1200 or higher. Support for 1920 x 1200 via analog RGB or QM requires a source or display device that supports reduced blanking.

4. The QM output supports RGBHV format only. QM output requires a QM receiver or other QM device (all sold separately).

5. The analog RGB and QM outputs are disabled if HDCP is utilized.

6. Utilizes 3M MicroTouch® technology.

Physical Description

This section provides information on the connections, controls and indicators available on the DVPHD.

DVPHD Physical View (Front)

DVPHD Physical View (Rear)

DVPHD Overall Dimensions (Front)

DVPHD Overall Dimensions (Top)

NOTE: Depth dimension includes maximum connector length of installed video input cards (not shown). Cable connections can extend the overall depth of the DVPHD by an additional 2 – 3 inches (51 – 76 mm).
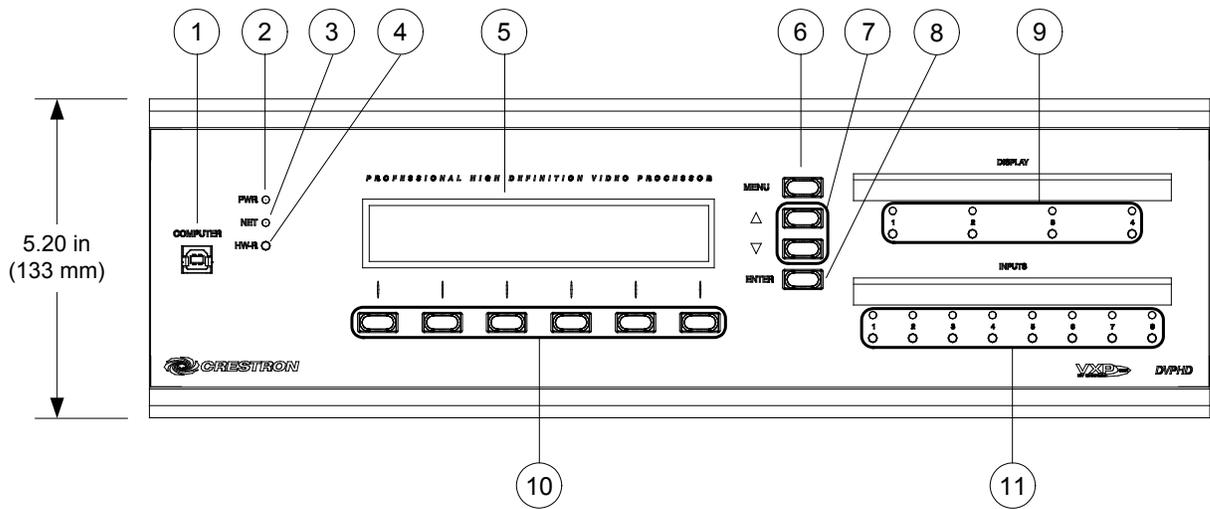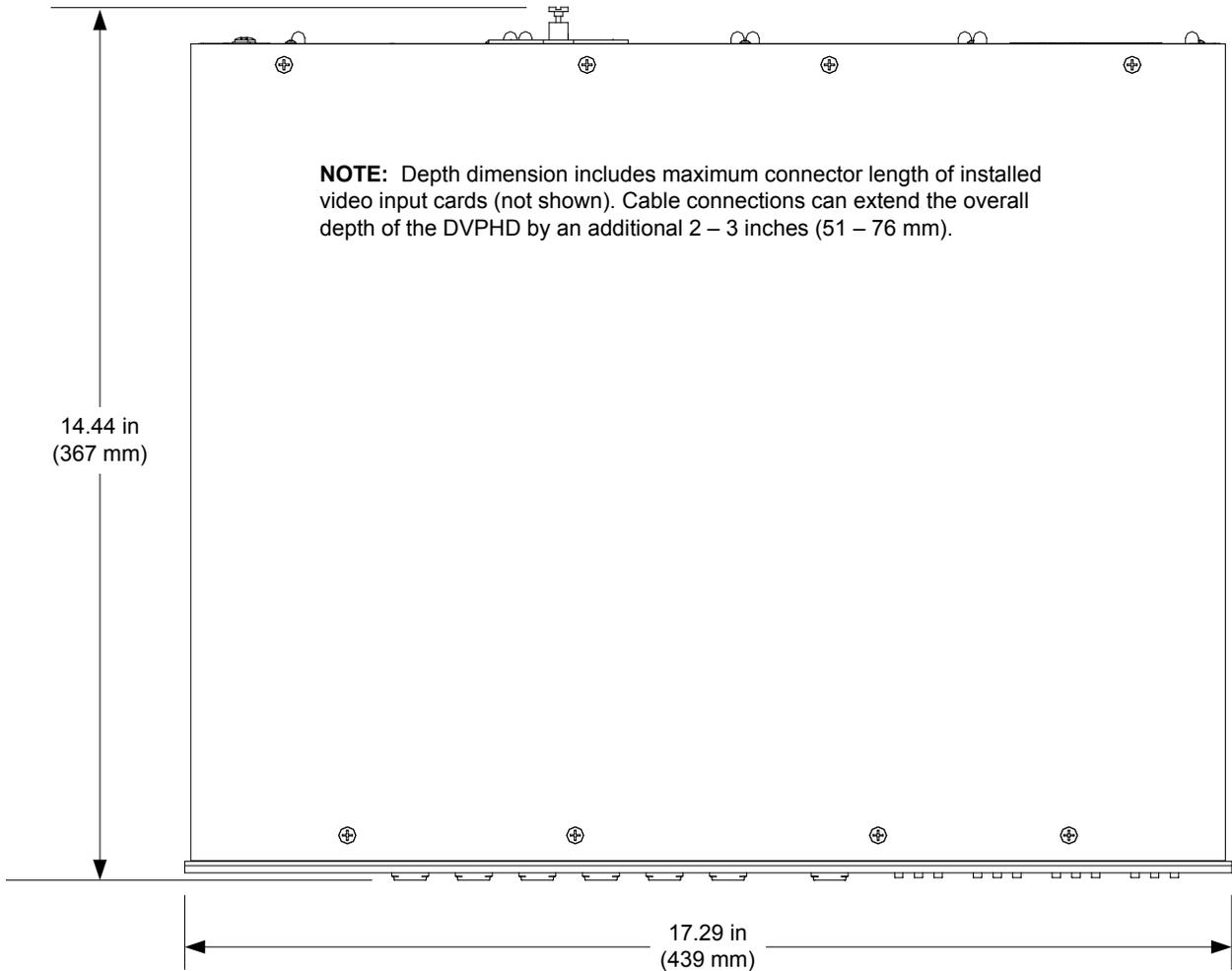
DVPHD Overall Dimensions (Rear)
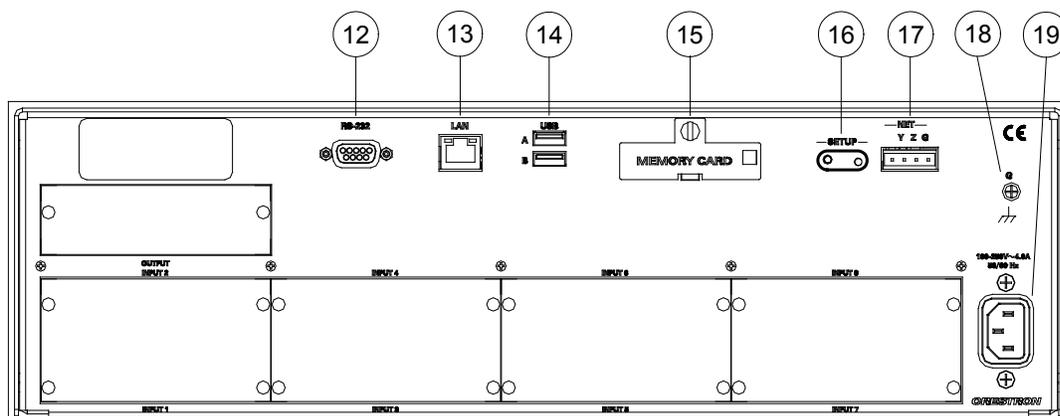
Connectors, Controls, and Indicators

#	CONNECTORS[1], CONTROLS, AND INDICATORS	DESCRIPTION
1	COMPUTER Pin 2 — USB — Pin 1 Pin 3 — Pin 4	(1) Type B USB client port for computer console (cable included) | PIN | DESCRIPTION | | 1 | +5 VDC | | 2 | Data - | | 3 | Data + | | 4 | Ground |
2	PWR LED	(1) Green LED indicates connection to ac power source
3	NET LED	(1) Yellow LED Cresnet bus activity
4	HW-R	(1) Recessed miniature push button for hardware reset, reboots the processor
5	LCD Display	Green LCD alphanumeric, adjustable backlight, 4 lines x 40 characters per line
6	MENU	(1) Push button, steps menu back one level
7	▲ ▼	(2) Push buttons, scroll up or down through menu and adjust menu parameters
8	ENTER	(1) Push button, executes highlighted menu or value
9	DISPLAY (1 — 4)	(4) Push buttons and red LEDs, used to configure out-of-the-box functionality (OOTBF) or select output
10	Soft Keys[2]	(6) Push buttons for activation of LCD driven functions and passcode entry
11	INPUTS (1 — 8)	(8) Push buttons and red LEDs, select input source

(Continued on following page)

Connectors, Controls, and Indicators (Continued)

#	CONNECTORS[1], CONTROLS, AND INDICATORS	DESCRIPTION
12	RS-232[3] Pin 1 Pin 9	(1) DB9 female, bidirectional RS-232 port; Computer console and mouse/touch screen input[3]; Up to 115.2 kBd; hardware and software handshaking support

PIN #	ABBREVIATION	DESCRIPTION
2	TXD	Transmit Data
3	RXD	Receive Data
5	SG	Signal Ground
7	CTS	Clear To Send
8	RTS	Request To Send

#	CONNECTORS, CONTROLS, AND INDICATORS	DESCRIPTION
13	LAN Yellow LED Green LED Pin 8 Pin 1	(1) 8-pin RJ-45 with 2 LED indicators; 10/100BASE-T Ethernet port for console and control; Green LED indicates link status; Yellow LED indicates Ethernet activity

PIN	SIGNALS
1	TD+
2	TD-
3	RD+
4	Connected to pin 5
5	Connected to pin 4
6	RD-
7	Connected to pin 8
8	Connected to pin 7

#	CONNECTORS, CONTROLS, AND INDICATORS	DESCRIPTION
14	USB (A – B) Pins 1 2 3 4	(2) Type A USB 1.1 host ports for mouse or touch screen input
15	MEMORY CARD MEMORY CARD	(1) Compact Flash Type II card slot; For memory expansion up to 4 GB, 1 GB included
16	SETUP (Button and LED)	(1) Miniature push button and (1) red LED, used for TSID (Touch Settable ID) and Ethernet autodiscovery
17	NET Y Z G	(1) 4-pin 5 mm detachable terminal block; Cresnet slave port, connects to Cresnet control network **Y**: Data **Z**: Data **G**: Ground
18	G	(1) 6-32 screw, chassis ground lug

(Continued on following page)

Connectors, Controls, and Indicators (Continued)

#	CONNECTORS[1], CONTROLS, AND INDICATORS	DESCRIPTION
19	100–250V ~4.0 A 50/60 Hz	(1) IEC 60320 C14 main power inlet; Mates with removable power cord (included)
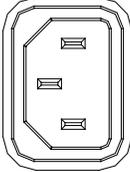
1. An interface connector for the **NET** port is provided with the unit.
2. Refer to "Operation" on page 48 for details.
3. Refer to the Crestron Web site or contact Crestron for the latest firmware capabilities and device support.

Setup

Network Wiring

When wiring the Cresnet or Ethernet network, consider the following:

- Use Crestron Certified Wire.

- Use Crestron power supplies for Crestron equipment.

- Provide sufficient power to the system.

CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

For Cresnet networks with 20 or more devices, use a Cresnet Hub/Repeater (CNXHUB) to maintain signal quality.

For more details, refer to "Check Network Wiring" on page 82.

The DVPHD can also use high-speed Ethernet for communications between the device and a control system, computer, media server and other IP-based devices.

For general information on connecting Ethernet devices in a Crestron system, refer to the Crestron e-Control® Reference Guide (Doc. 6052) at www.crestron.com/manuals.

Identity Code

NOTE: The latest software can be downloaded from the Crestron Web site (www.crestron.com/software).

Net ID

The Net ID of the DVPHD has been factory set to **03**. The Net IDs of multiple DVPHD devices in the same system must be unique. Net IDs are changed from a personal computer (PC) via the Crestron Toolbox™ (refer to "Establishing Communication" on page 44).

When setting the Net ID, consider the following:

- The Net ID of each unit must match an ID code specified in the Crestron Studio™ or SIMPL Windows program.

- Each network device must have a unique Net ID.

For more details, refer to the Crestron Toolbox help file.

IP ID

The IP ID is set within the DVPHD's IP table using Crestron Toolbox. For information on setting an IP table, refer to the Crestron Toolbox help file. The IP IDs of multiple DVPHD devices in the same system must be unique.

When setting the IP ID, consider the following:

- The IP ID of each unit must match an IP ID specified in the Crestron Studio or SIMPL Windows program.

- Each device using IP to communicate with a control system must have a unique IP ID.

Video Processor Configuration

NOTE: In order to configure the DVPHD, power and a connection to an external touch screen or a connection via Ethernet are required. Refer to "Hardware Hookup" on page 42 for details.

To configure the unit, it may be necessary to access a series of setup screens prior to viewing run-time screens that are loaded into the interface for normal operation. The method for accessing these setup screens differs depending on whether an external touch screen or an Ethernet connection is used.

To enter Setup via the Web interface:

Enter the IP address provided for the video processor on the network. The e-Control, XPanel interface is displayed. Click on the **Setup** button.

To enter Setup via the touch screen:

Place a finger on the touch screen, left click the mouse or press the **Display 1** front panel button as power is applied, or after the hardware reset button is pressed and released. Remove the finger when the message "Entering Setup. Please wait while system initializes." briefly appears on the touch screen.

To enter Setup via the front panel menu:

Access Setup by pressing the **Enter** front panel button. Select ENTER/EXIT SETUP PAGE and press **B5** (**SAVE**).

Upon entering setup mode, the "Main Menu", as shown in the following illustration, displays five buttons: **Touch Screen Calibration**, **Reboot and Run Project**, **Exit Setup and Run Project**, **Setup**, and **Diagnostics**.

The **Exit Setup and Run Project** button verifies that all of the setup information has been saved to the EEPROM and displays the main page that has been programmed into the system. The remaining buttons on the "Main Menu" open other menus, which are discussed in subsequent paragraphs.

"Main Menu"

Calibration Query

"Calibration Query" Menu
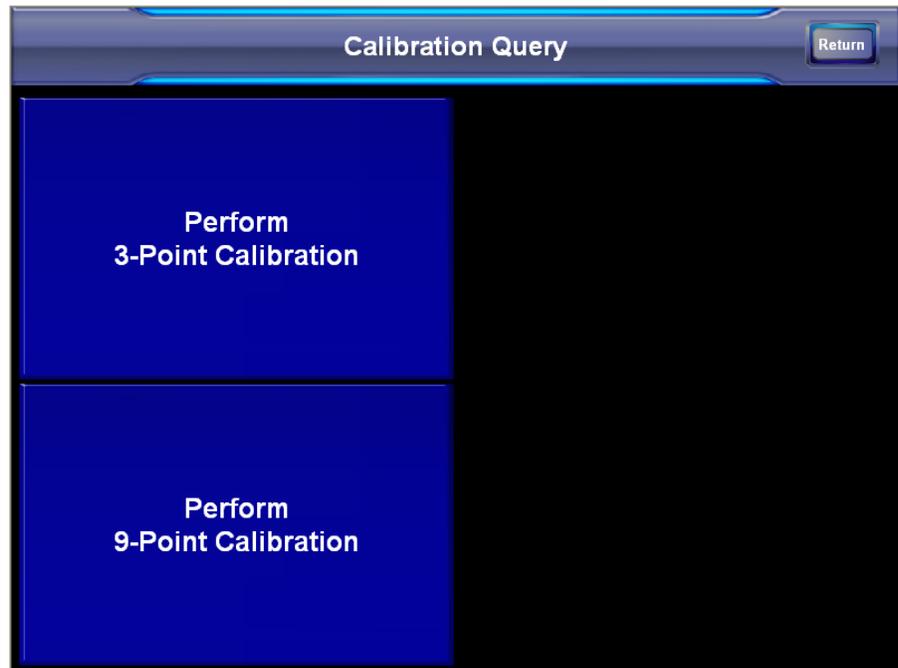
Touch **Touch Screen Calibration** on the "Main Menu" and then either **Perform 3-Point Calibration** or **Perform 9-Point Calibration** on the Calibration Query menu. Cross hairs appear in various places depending on which calibration method chosen. Touch the center of each cross hair as they appear until calibration is complete and the display returns to the "Main Menu".

NOTE: When touching the screen during calibration, be as accurate as possible. Use the tip of a capped pen or the eraser end of a pencil. To cancel calibration and return to the "Calibration Query" menu without saving calibration data, create a calibration error by touching the screen in the same spot three times for 3-Point Calibration or nine times for 9-Point Calibration. The system can also be allowed to timeout by touching nothing for one minute.

NOTE: During calibration the point where the screen is touched is recorded when the screen is *released* rather than pressed. This makes it possible to be more accurate when touching the screen because the user can ensure they are centered on the cross hairs before releasing.

Setup Menu

To open the "Setup Menu", press the **Setup** button from the "Main Menu". The "Setup Menu" offers a series of buttons, which open additional menus and displays, and are detailed in subsequent paragraphs. The "Setup Menu" also provides the *Standby Timeout* setting and *Mouse Pointer Size* controls. After setup parameters have been selected, press the **Return** button to return to the "Main Menu".

NOTE: For convenience, the current *Cresnet ID* setting is displayed in the upper left corner of the screen.

> **NOTE:** All DVPHD Video Processor settings are automatically saved in non-volatile memory.

"Setup Menu"
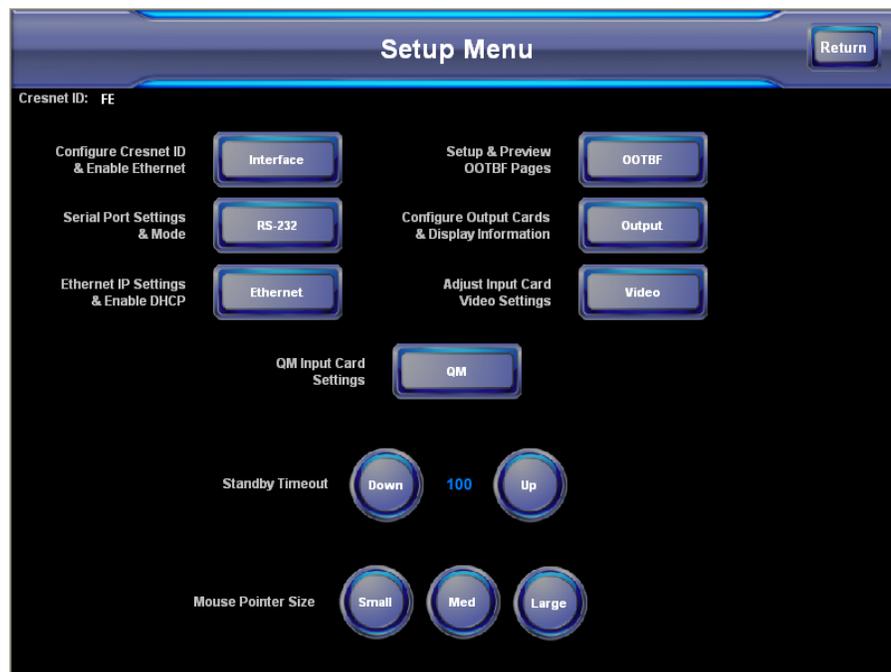
Interface Menu

The DVPHD communicates with a control system to activate commands or to display feedback from components within the system. The communication interface must be correctly configured or communication does not occur. To set communication parameters, touch **Interface** on the "Setup Menu" to display the "Interface Menu".

The Cresnet network identity number (*Cresnet ID* also known as the Net ID) is displayed on the "Interface Menu". Cresnet ID is the two-digit hexadecimal number. The hexadecimal number can range from 03 to FE and must correspond to the Net ID set in the SIMPL Windows program of the Cresnet system. Matching IDs between the DVPHD and the SIMPL Windows program is required if data is to be successfully transferred. Net ID for the DVPHD is factory set to **03**. No two devices in the same system can have the same Net ID.

"Interface Menu"
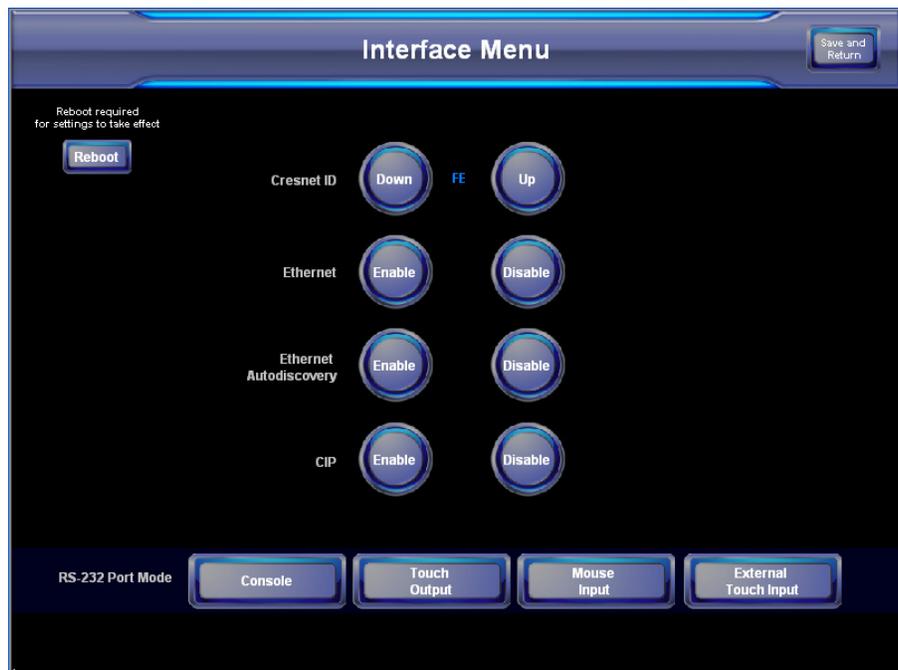
Two buttons adjacent to the *Cresnet ID* and its displayed hexadecimal number, **Down** and **Up**, decrease and increase the Cresnet ID by one, respectively.

The *Ethernet* **Enable** and **Disable** buttons select the status of the device's Ethernet communications.

The *Ethernet Autodiscovery* **Enable** and **Disable** buttons select the status of the device's ability to determine the state and shape of the network and the devices attached to the network. Autodiscovery is enabled by default when the local system setup (not Web setup) is active.

There may be Ethernet devices (such as a control system) on the network that communicate with the DVPHD via CIP (Cresnet Internet Protocol). The *CIP* buttons, located on the "Interface Menu" select whether the DVPHD is set to perform this type of communication. Select **Enable** to permit this protocol recognition and **Disable** to prohibit any CIP connection. *CIP* must be enabled for the DVPHD to communicate with other Crestron Ethernet devices.

The four buttons on the bottom of the menu define how the RS-232 port is used: as a console port (that is, for loading DVPHD projects and firmware), a touch output port (communication of touch coordinates to an external device), a mouse input port (allowing a mouse to control the interface) and an external touch input (allowing another device to control the touch screen).

Touch **Save and Return** to save changes and return to the "Setup Menu" if additional changes are intended. Select **Reboot** to save the settings and restart the DVPHD if no other changes are required.

RS-232 Menu

The DVPHD interface allows for one of four RS-232 communication modes:

- **Console** (that is, for loading DVPHD interface projects and firmware)
- **Touch Output** (communication of touch coordinates to an external device)
- **Mouse Input** (allowing a mouse to control the interface)
- **External Touch Input** (allowing another device to control the interface).

For convenience, the "RS-232 Menu" console port mode also permits the selection of the RS-232 communication options, *Baud Rate*, *Data Bits*, *Stop Bits*, *Parity*, *RTS* **On**/**Off**, and *XON-XOFF* **On**/**Off**.

Touch the communication options to select communication parameters and then touch **Return** to save the RS-232 settings and return to the "Setup Menu" if additional changes are intended. Touch **Reboot** to save the settings and restart the DVPHD if no other changes are required.

Default settings: console mode, baud rate: 115200, data bits: 8, stop bit: 1, parity: none, RTS off, and XON/XOFF off.

"RS-232 Menu"

Ethernet Setup

Touch **Ethernet** on the "Setup Menu" to open the "Ethernet Setup" menu. This menu provides buttons for **Ethernet Status Test** (for details such as the IP Address, Subnet Mask, Default Router, IP Table, etc.), *DHCP* **Enable**/**Disable** and *Static IP Options*. Each of the *Static IP Options* has its own menu, as shown in the illustrations on the following pages. The **Enable/Disable** Ethernet feature is provided on the "Interface Menu". Ethernet settings are made through Crestron Toolbox. Refer to the TCP/IP Communications section of "Establishing Communication" on page 44 for additional Ethernet setup details.

NOTE: The IP addresses shown in the following examples are only representative and do not reflect real or suggested addresses.

"Ethernet Setup" Menu (Static)
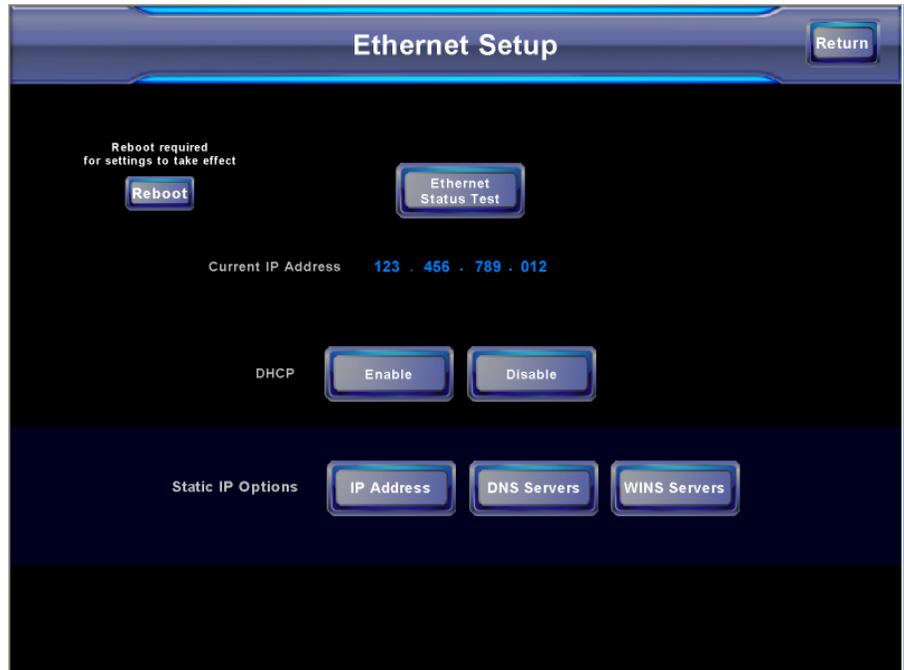
"Ethernet Static IP Settings" Menu
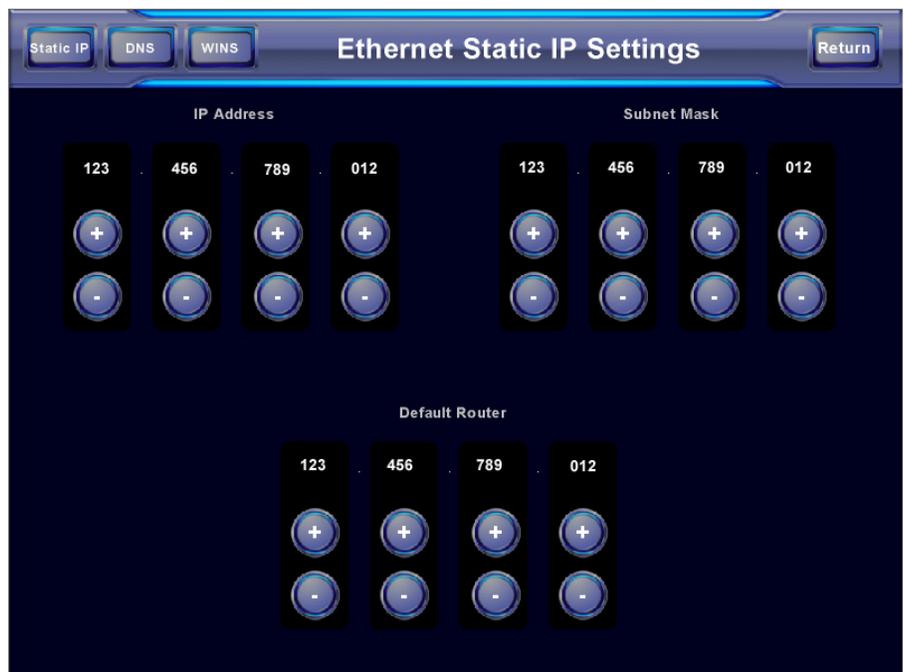
"Ethernet DNS Settings" Menu
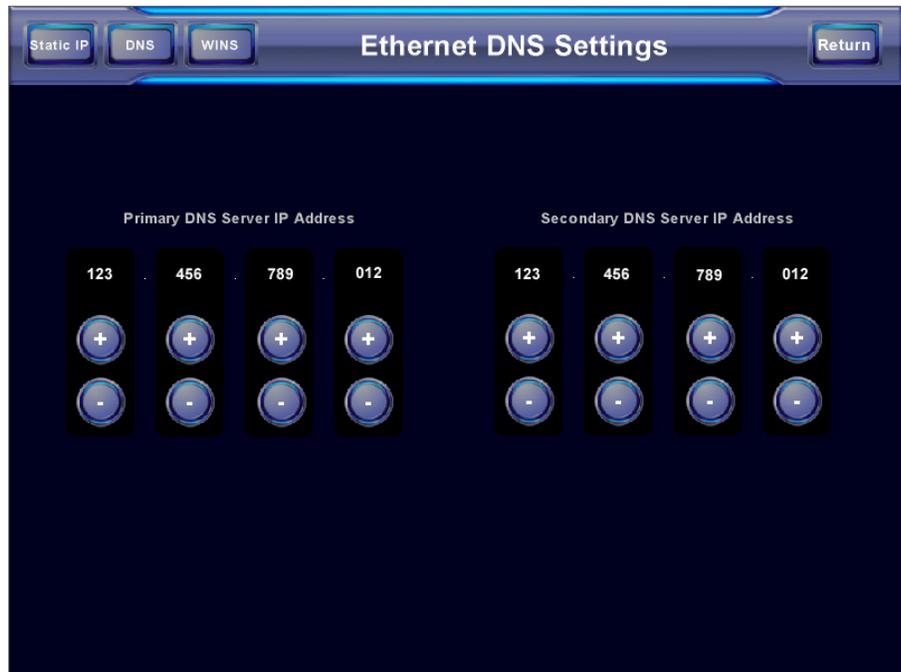
"Ethernet Wins Settings" Menu
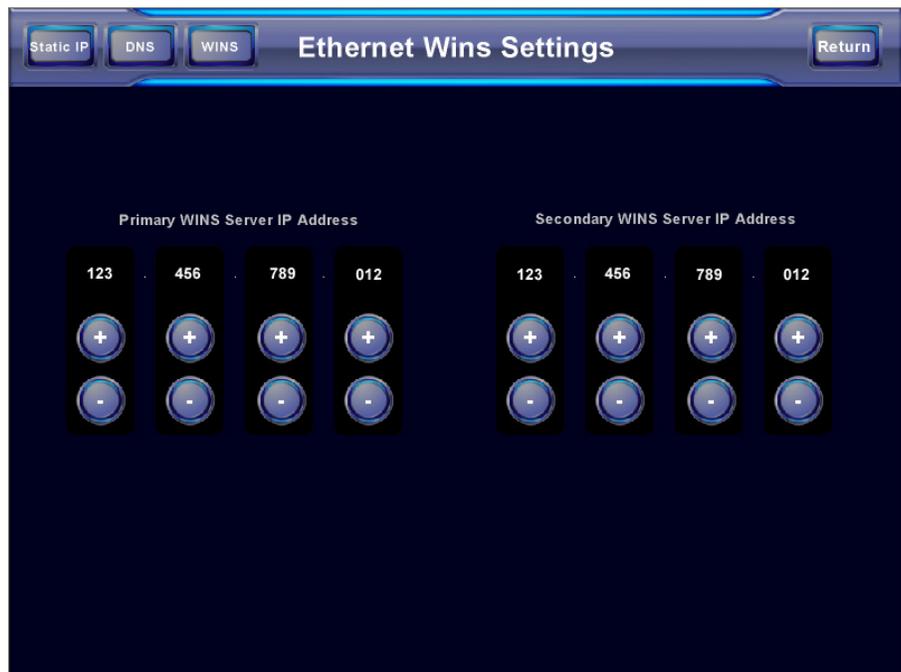
Touching *DHCP* **Enable** on the "Ethernet Setup" menu displays the *DHCP options* **Renew** and **Release**.

"Ethernet Setup" Menu (DHCP Enabled)
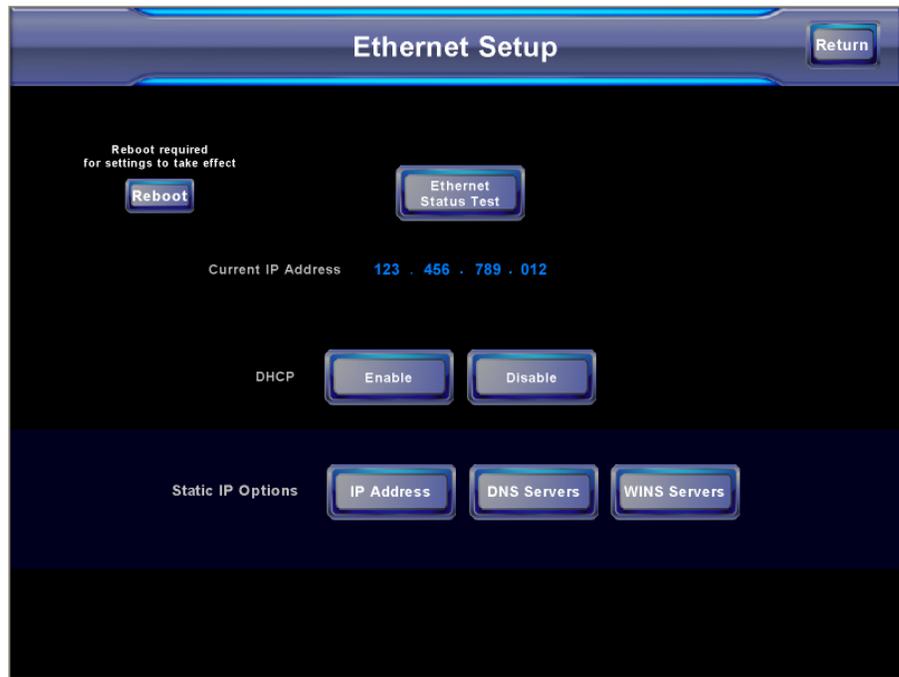
OOTBF Setup

The DVPHD can be configured to display up to nine pre-set and 255 custom layout combinations of video outputs consisting of a wide variety of screens and nested screens along with background color and output resolution controls. Each configuration, accessed by clicking on the sample graphics, is individually customizable for S*ource*, *Transition Effect*, *Transition Duration*, *Z-Order* (if applicable), *Position and Size* (if applicable), *Preview Window Aspect Ratio*, *Output Resolution*, *Window Color, Text Color*, and *Text Justify*. **Maintain Aspect Ratio** and **Active** buttons are provided as are **Apply** and **Cancel** to confirm or reject any changes.

"OOTBF Setup" Menu
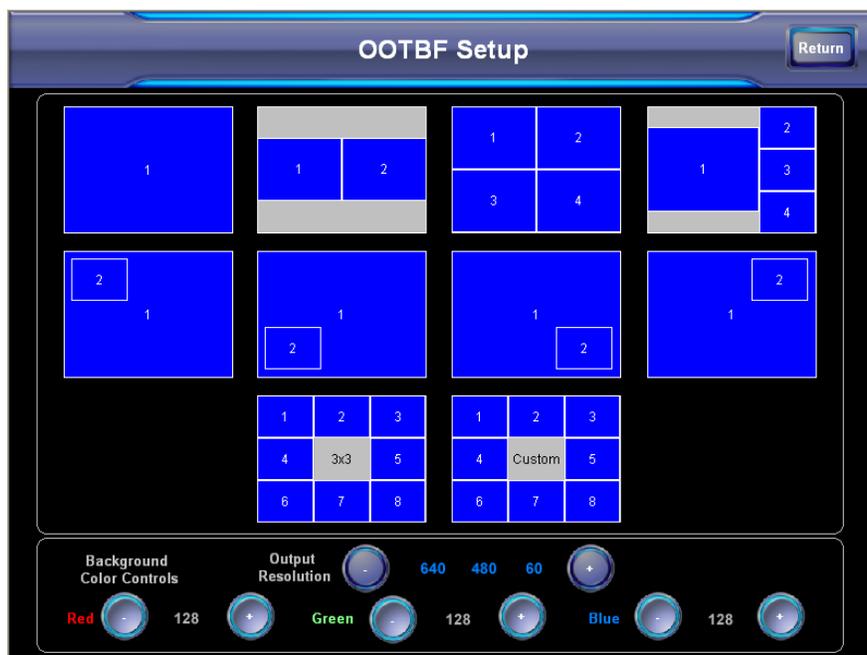
Refer to the following table for additional "OOTBF Setup" menu details.

"OOTBF Setup" Details

OOTBF SETUP MENU CONTROLS	DESCRIPTION
1X1 Screen	Displays the 1X1 screen and its controls.
1X2 Screen	Displays the 1X2 screen and its controls.
2X2 Screen	Displays the 2X2 screen and its controls.
1X3 Screen	Displays the 1X3 screen and its controls.
PIP UL Screen	Displays the PIP UL (Picture in Picture Upper Left) screen and its controls.
PIP LL Screen	Displays the PIP LL (Picture in Picture Lower Left) screen and its controls.
PIP LR Screen	Displays the PIP LR (Picture in Picture Lower Right) screen and its controls.
PIP UR Screen	Displays the PIP UR (Picture in Picture Upper Right) screen and its controls.
3X3 Screen	Displays the 3X3 screen and its controls.
Custom Screen	Displays the Custom screen and its controls.
Background Color Controls	
Red	Adjusts the amount of red in the layout background with the **–** and **+** buttons.
Green	Adjusts the amount of green in the layout background with the **–** and **+** buttons.
Blue	Adjusts the amount of blue in the layout background with the **–** and **+** buttons.

(Continued on following page)

"OOTBF Setup" Details (Continued)

OOTBF SETUP MENU CONTROLS	DESCRIPTION
Output Resolution	Adjusts the output resolution in the range of 640 x 400 @ 85Hz minimum to 1920 x 1200 @60Hz maximum with the **–** and **+** buttons.

The following screen is displayed when **1X3** option is selected. This screen allows setting parameters for a display configuration consisting of one large and three smaller video screens. Every "OOTBF Setup" menu allows the user to customize a similar configuration of screens from the simple **1X1** screen to the complex **Custom** screen.

NOTE: The majority of controls present on the 10 different screens are the same. The **Custom** screen has some additional controls that are explained at the end of the 1X3 screen description. It is necessary to select a window in order to change its properties.

"1X3" Screen
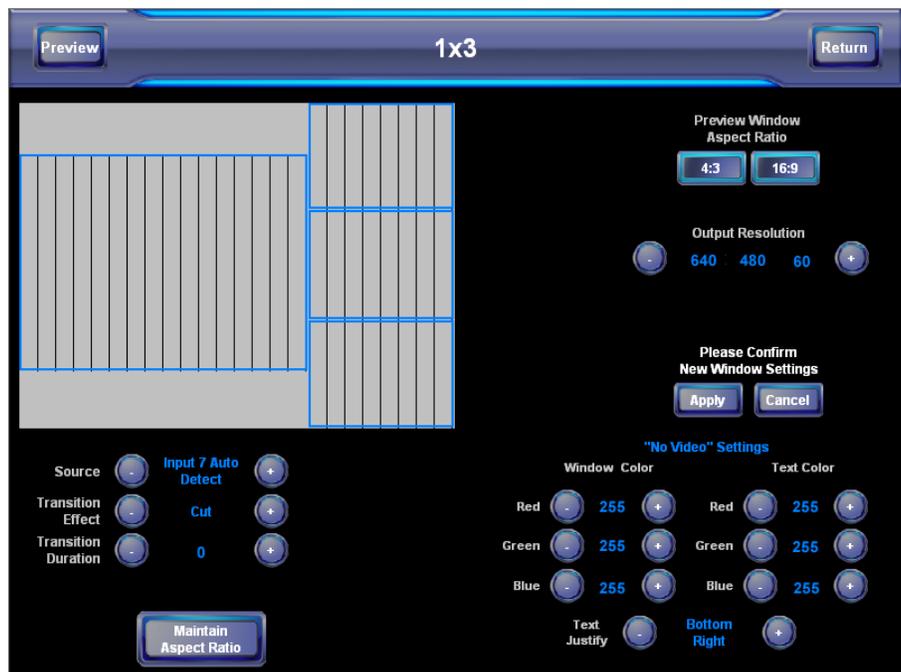
Refer to the following table for additional "1X3" screen details. Changes take effect when **Apply** is touched.

"1X3" Details

1X3 SCREEN CONTROLS	DESCRIPTION
Preview	Displays the video screen configuration based on the settings. Touch anywhere to return to the "Setup Menu".
Source	**-** and **+** buttons allow a choice of one of eight input sources.
Transition Effect	**-** and **+** buttons allow a choice between a wide variety of transition effects.
Transition Duration	**-** and **+** buttons allow setting the amount of time each transition takes.
Maintain Aspect Ratio	This button automatically resizes the video window aspect ratio (4:3 or 16:9) to match the aspect ratio of the source.
Return	This button returns to the previous menu.
Preview Window Aspect Ratio	Sets the preview window aspect ratio to either 4:3 or 16:9 by pressing the corresponding buttons.
Output Resolution	Adjusts the output resolution in the range of 640 x 400 @85Hz minimum to 1920 x 1200 @60Hz maximum with the **–** and **+** buttons.
Please Confirm New Window Settings	The **Apply** and **Cancel** buttons appear only after a change is made to the settings on the menu. In order to save the changes, **Apply** must be touched before moving on to the next function to be changed.
Window Color	
Red	Adjusts the amount of red in the selected video window background (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Green	Adjusts the amount of green in the selected video window background (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Blue	Adjusts the amount of blue in the selected video window background (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Text Color	
Red	Adjusts the amount of red in the selected video window's text (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Green	Adjusts the amount of green in the selected video window's text (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Blue	Adjusts the amount of blue in the selected video window's text (when no video is present, but a source is selected) with the **–** and **+** buttons. Touch **Preview** to view.
Text Justify	Adjusts the position of text on the selected window with the **–** and **+** buttons. Touch **Preview** to view.

Additional Controls – Custom Screen Only

CUSTOM SCREEN CONTROLS	DESCRIPTION
Presets	Displays the "OOTBF Presets" screen and its controls.
X Pos	Adjusts the X coordinate position of the video window on the selected screen with the **–** and **+** buttons. The number indicates the position of the upper left corner of the selected screen.
Y Pos	Adjusts the Y coordinate position of the video window on the selected screen with the **–** and **+** buttons. The number indicates the position of the upper left corner of the selected screen.
X Size	Adjusts the X dimension size of the video window on the selected screen with the **–** and **+** buttons.
Y Size	Adjusts the Y dimension size of the video window on the selected screen with the **–** and **+** buttons.
Active	Sets the selected window to the active state so it displays. Only active windows are displayed. Only takes effect after the **Apply** is touched.

The following screen is displayed when the **Presets** button is selected. This screen allows loading and saving presents to the **Custom** screen as well as loading from and saving to Compact Flash®.

"OOTBF Presets" Screen
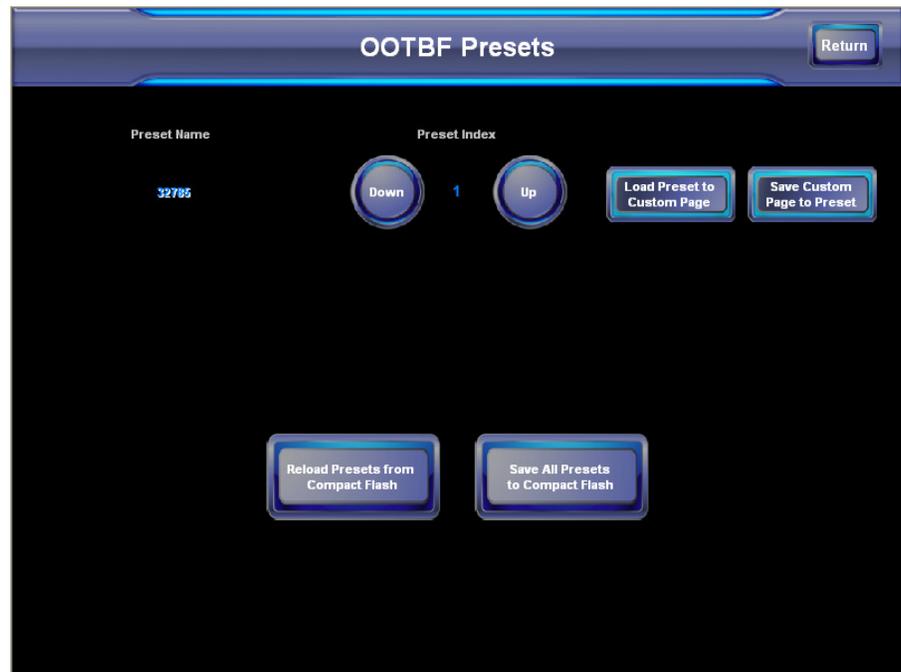
Additional Controls – Custom Screen Only – "OOTBF Presets" Screen

OOTBF PRESETS SCREEN CONTROLS	DESCRIPTION
Preset Name	Displays the assigned name of the current preset.
Preset Index	The **–** and **+** buttons allow selecting the preset to be loaded or the Preset Index number where the user can save a new custom configuration. Up 256 custom presets can be saved.
Load Preset to Custom Page	This button loads the preset selected by the Preset Index controls to the **Custom** page.
Save Custom Page to Preset	This button saves the current **Custom** page configuration to the Preset Index.
Return	This button returns to the previous menu.
Reload Presets from Compact Flash	This button loads presets stored in compact flash to the DVPHD for use in the **Custom** page.
Save All Presets to Compact Flash	This button saves all presets to compact flash.

Output Setup

To open the "Output Setup" screen, touch **Output** on the "Setup Menu". The "Output Setup" screen offers *QuickMedia Transmit ID* controls as well as EDID (Extended Display Identification Data) information on the DVI display attached to the DVPHD.

NOTE: EDID information is only displayed for EDID compliant display devices.

"Output Setup" Screen
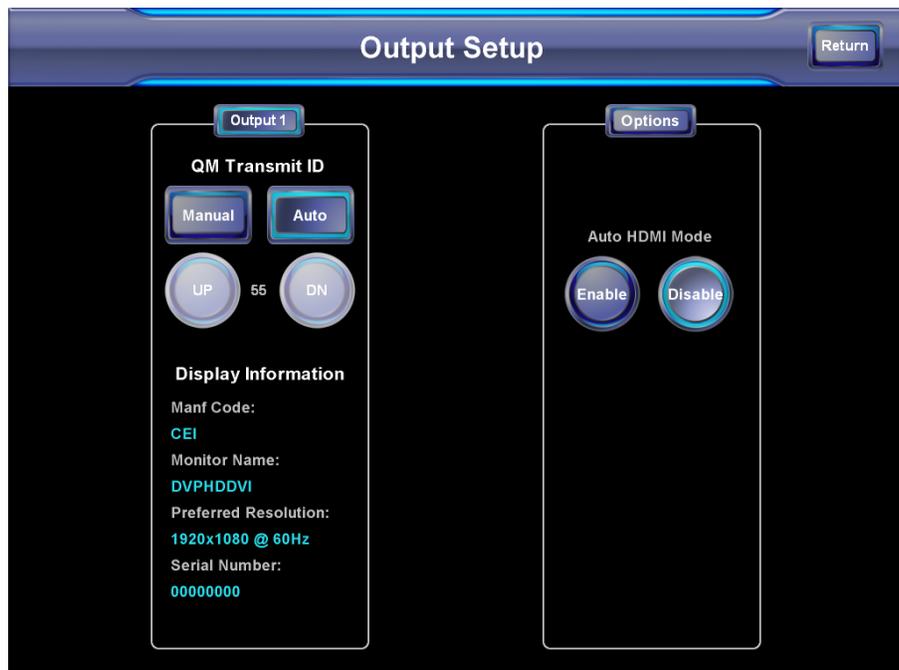
Refer to the following table for additional "Output Setup" screen details.

Output Setup Details

OUTPUT SETUP SCREEN CONTROLS	DESCRIPTION
QM Transmit ID	Allows transmission of video processor's QM ID. **Manual** transmits a specific QM ID, adjustable with the **DN** and **UP** buttons. **Auto**, the default setting, transmits the Cresnet ID as the QM ID.
Auto HDMI Mode	Allows Auto HDMI Mode to be switched on or off using the **Enable** and **Disable** buttons. When enabled, the optimum resolution of the attached monitor is detected and the output is set to match. When disabled, the output is user-defined. It is enabled by default.

Video Setup

The DVPHD can display up to eight fully-scalable and movable full motion video windows, each supporting DVI, HDMI, RGB, SDI, HD-SDI, component, S-video, and composite video signals from external AV and computer sources. These units also use auto-detect for DVI, HDMI, RGB, component, S-video, and composite video. They support NTSC/PAL interlaced video; HDTV up to 1080i/1080p; DVI/HDCP, HDMI/HDCP, and RGB up to WUXGA. Up to eight video inputs provide signals that can be routed to DVI, HDMI, or RGB, plus RGB via QM.

A table describing the video menu controls follows the illustrations. Touching **Video** on the "Setup Menu" opens the "Video Setup" menu shown on the following page. From here, the user can enter the setup screens for any of the eight video inputs by touching their respective buttons.

"Video Setup" Menu
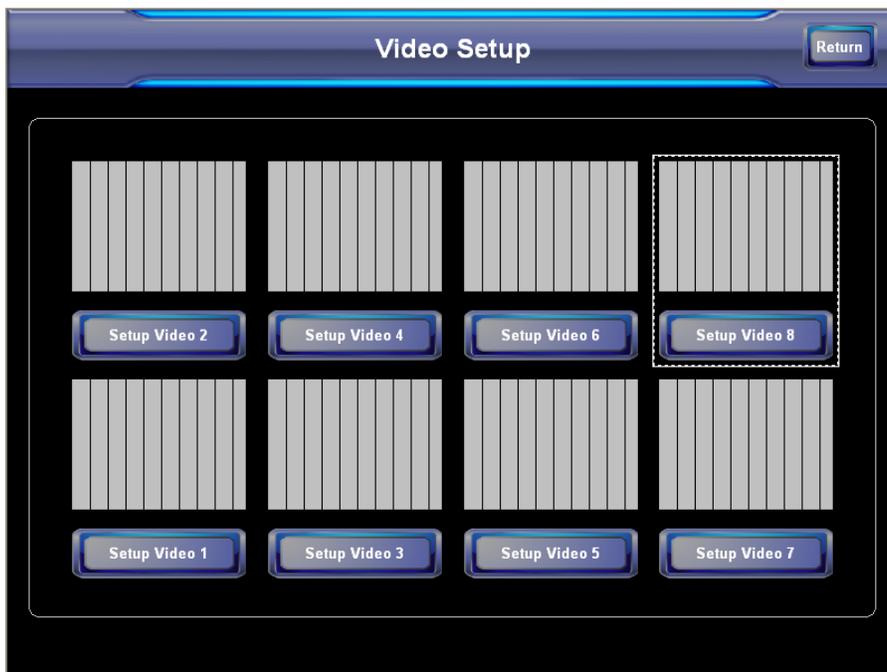
Refer to the following table for additional "Video Setup" menu details. Each video input control, or button, shown on the "Video Setup" menu reflects the type of video input detected by that window. The various button states are described in the following table.

"Video Setup" Details

VIDEO SETUP MENU CONTROLS	DESCRIPTION
Setup Video 1	Displays the "Video 1 Setup" screen. By default, the "Video 1 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Saturation*, *Hue*, *Detail Enhancement*, *Noise Reduction* and *Noise Threshold* on the right side of the screen.
Setup Video 2	Displays the "Video 2 Setup" screen. By default, the "Video 2 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Red*, *Green*, *Blue*, *Detail Enhancement*, *Noise Reduction* and *Noise Threshold* on the right side of the screen.
Setup Video 3	Displays the "Video 3 Setup" screen. By default, the "Video 3 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Saturation*, *Hue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.
Setup Video 4	Displays the "Video 4 Setup" screen. By default, the "Video 4 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Red*, *Green*, *Blue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.

(Continued on following page)

"Video Setup" Details (Continued)

VIDEO SETUP MENU CONTROLS	DESCRIPTION
Setup Video 5	Displays the "Video 5 Setup" screen. By default, the "Video 5 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Saturation*, *Hue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.
Setup Video 6	Displays the "Video 6 Setup" screen. By default, the "Video 6 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Red*, *Green*, *Blue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.
Setup Video 7	Displays the "Video 7 Setup" screen. By default, the "Video 7 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Saturation*, *Hue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.
Setup Video 8	Displays the "Video 8 Setup" screen. By default, the "Video 8 Setup" screen displays video controls for: *Brightness*, *Contrast*, *Red*, *Green*, *Blue*, *Detail Enhancement*, *Noise Reduction*, and *Noise Threshold* on the right side of the screen.

The following screen is displayed when **Setup Video 1, 3, 5 or 7** is selected.

"Video 1 Setup" Screen
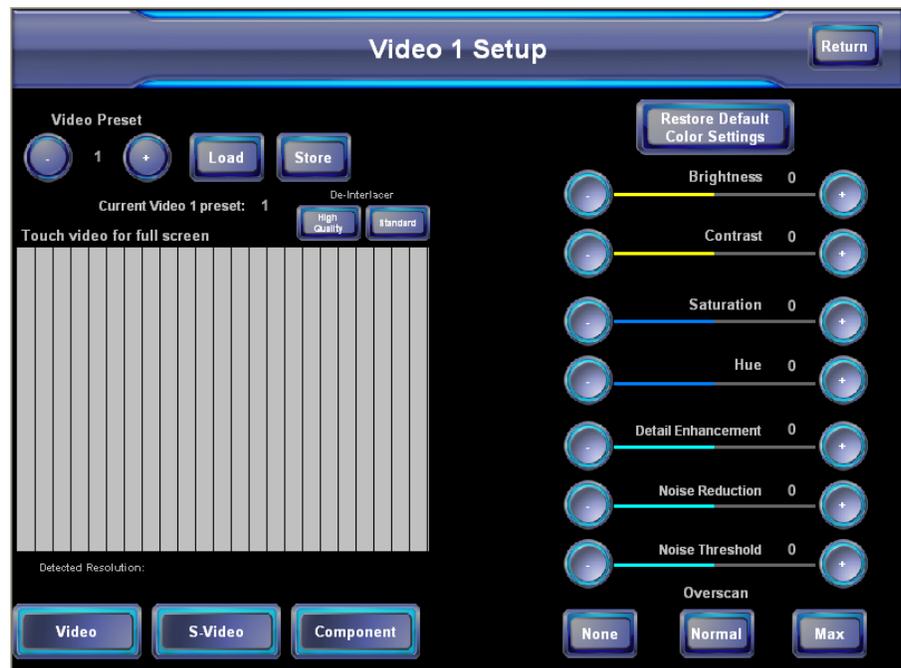
"Video 1 Setup" Details – Video, S-Video and Component

VIDEO 1 SETUP SCREEN CONTROLS	DESCRIPTION
Video Preset	Displays the current Video Preset number. Saved presets can also be called up using this control. The **–** and **+** buttons decrement and increment the displayed value.
Load Preset	Loads the selected Video Preset.
Store Preset	Stores any changes made to the video setup at the displayed preset number.
De-interlacer[1]	Video de-interlacer can be switched between High Quality and Standard for the selected input.
Detected Signal Types	These buttons display the detected signal type. They are not otherwise active.
Video	Highlighted when a video signal is detected.
S-Video	Highlighted when an S-video signal is detected.
Component	Highlighted when component video is detected.
Restore Default Color Settings	Restores the video settings to their original defaults.
Color Control	When **Video**, **S-Video** or **Component** is selected as the video type, these controls are available. The **Restore Default Color Settings** button places the controls at their midpoint.
Brightness[2]	Adjusts video image brightness with the **–** and **+** buttons.
Contrast[2]	Adjusts video image contrast with the **–** and **+** buttons.
Saturation[2]	Adjusts video image saturation with the **–** and **+** buttons.
Hue[2]	Adjusts video image hue with the **–** and **+** buttons.
Detail Enhancement	Adjusts video image sharpness with the **–** and **+** buttons.
Noise Reduction	Adjusts the amount of video image noise reduction with the **–** and **+** buttons.
Noise Threshold	Adjusts the threshold of video image noise with the **–** and **+** buttons.
Overscan	These controls adjust the amount of video information at the edges of the image. This part of the video picture is usually beyond the display capabilities of the screen.
None	Sets the video screen so there is 1% overscan. The amount of used screen area is smallest in this configuration.
Normal	Sets the video screen for 3% overscan (default). This results in more area of the screen being used.
Max	This sets the video screen for 5% overscan. This results in some loss of information at the screen edges.

1. When one input on an input card is set to Standard the other input on the same card is set to High Quality and vice versa.

2. Video default is zero (0) for each of the video parameters (*Brightness*, *Contrast*, *Saturation*, and *Hue*).

The following screens are displayed when **Setup Video 2, 4, 6 or 8** is selected depending on the type of input detected. When RGB Color is detected the default configuration is shown in the following illustration.

"Video 2 Setup" Screen (RGB Color shown)
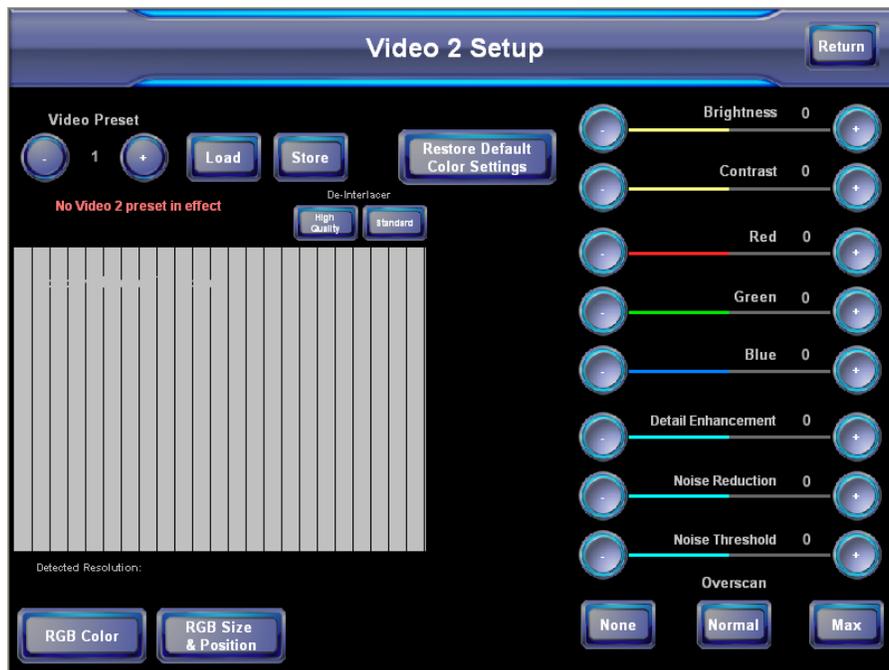
When **RGB Size & Position** is selected, the auto calibration, size and position and phase controls replace the color controls at the right.

"Video 2 Setup" Screen (RGB Size and Position shown)
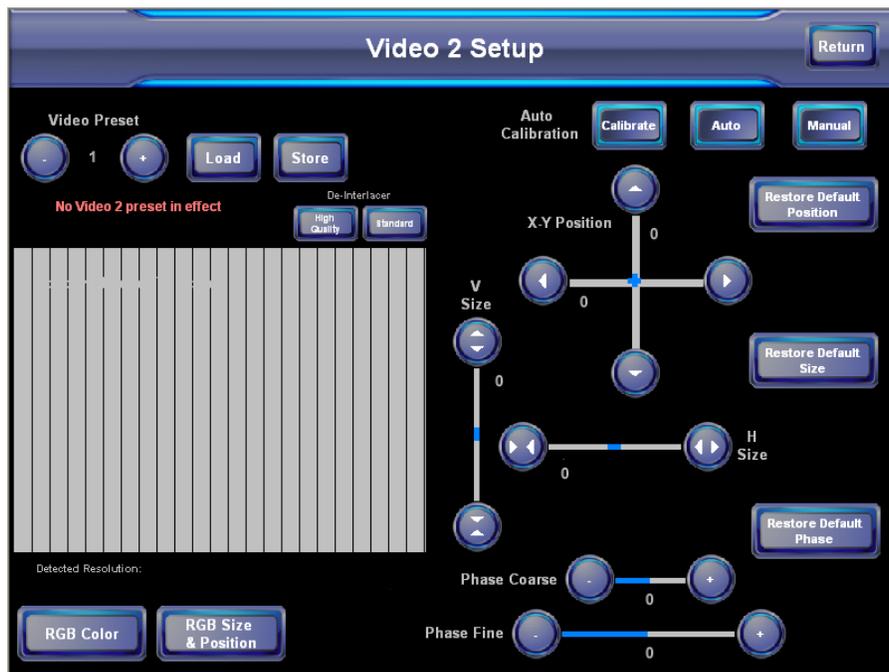
When DVI input is detected, size and position and signal adjustment controls are displayed as shown in the two following two illustrations.

'Video 2 Setup" Screen (DVI Color Controls shown)

"Video 2 Setup" Screen (DVI Size and Position Controls shown)
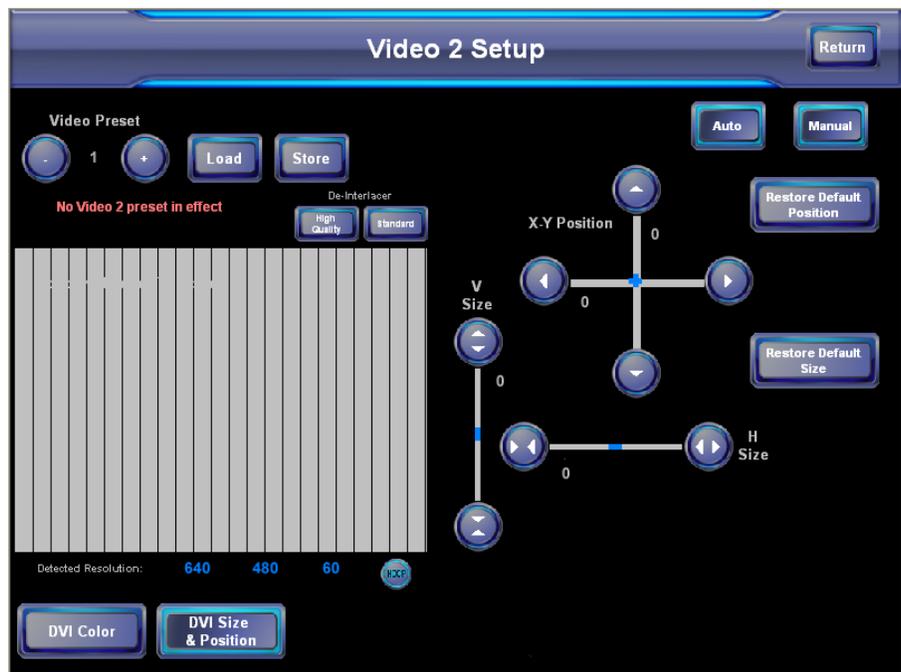
When SDI input is detected, only adjustment controls are displayed as shown in the following illustration.

"Video 2 Setup" Screen (SDI Controls shown)
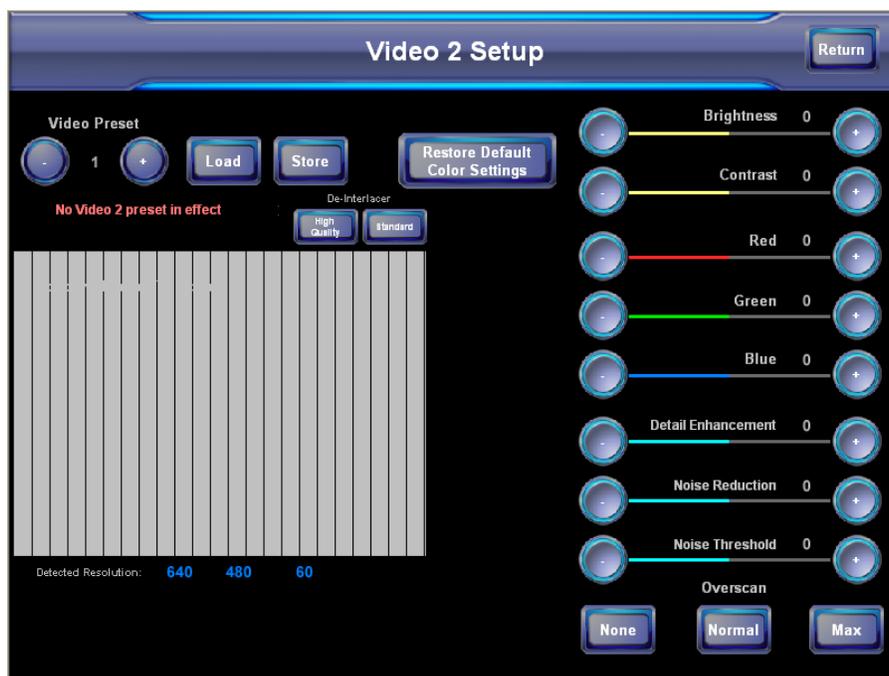
"Video 2 Setup" Details – RGB Color and RGB Size and Position

VIDEO 2 SETUP SCREEN CONTROLS	DESCRIPTION
Video Preset	Displays the current *Video Preset* number. Saved presets can also be called up using this control. The **–** and **+** buttons decrement and increment the displayed value.
Load Preset	Loads the selected *Video Preset*.
Store Preset	Stores any changes made to the video setup at the displayed preset number.
Detected Resolution	Displays the video resolution detected by the DVPHD.
HDCP	Indicates that HDCP is active. (DVI-HDMI connections only.)
Restore Default Color Settings	Restores the video settings to their original defaults.

(Continued on following page)

"Video 2 Setup" Details – RGB Color and RGB Size and Position (Continued)

VIDEO 2 SETUP SCREEN CONTROLS	DESCRIPTION
Color Control	When **RGB Color** is selected as the video type, these controls are available. The **Restore Default Color Settings** button places the controls at their midpoint.
Brightness[1, 2]	Adjusts video image brightness with the **–** and **+** buttons.
Contrast[1, 2]	Adjusts video image contrast with the **–** and **+** buttons.
Red[1, 2]	Adjusts the amount of red in the video signal with the **–** and **+** buttons.
Green[1, 2]	Adjusts the amount of green in the video signal with the **–** and **+** buttons.
Blue[1, 2]	Adjusts the amount of blue in the video signal with the **–** and **+** buttons.
Detail Enhancement	Adjusts video image sharpness with the **–** and **+** buttons.
Noise Reduction	Adjusts the amount of video image noise reduction with the **–** and **+** buttons.
Noise Threshold	Adjusts the threshold of video image noise with the **–** and **+** buttons.
Overscan	These controls adjust the amount of video information at the edges of the image. This part of the video picture is usually beyond the display capabilities of the screen.
None	Sets the video screen so there is 0% overscan. The amount of used screen area is smallest in this configuration. This must be set for PC sources.
Normal	Sets the video screen for 3% overscan (default). This results in more area of the screen being used.
Max	This sets the video screen for 5% overscan. This results in some loss of information at the screen edges.

(Continued on following page)

"Video 2 Setup" Details – RGB Color and RGB Size and Position (Continued)

VIDEO 2 SETUP SCREEN CONTROLS	DESCRIPTION
Size and Position	When **RGB** is selected as the video source, these controls are available when the **RGB Size and Position** button has been pressed.
Calibration	When **Perform Calibration** button is pressed, the device attempts to center the current video signal and find the correct clock and phase settings. When **Auto Mode** is pressed, the device first looks for a preset that matches the current video characteristics (for example, resolution, refresh rate, etc.). If one is found, it is loaded. If one is not found, an automatic calibration is performed. **Manual Mode** button allows manual adjustment.
	Note that for DVI inputs, **Auto** skips the calibration step and only looks for the preset that matches the current video characteristics.
Position[3]	This control allows setting the position of the video inside the window. The arrow buttons move the screen along the X and Y axis.
Restore Default Position	Returns the video to its original position.
Size[4]	Allows setting the size of the video in both the vertical and horizontal directions.
Restore Default Size	Returns the video to its original size.
Phase[4]	These controls adjust the phase of the RGB signal. Controls are shown for both coarse and fine adjustments.
Restore Default Phase[4]	Returns the video signal to its original default phase.

1. Video default is zero (0) for each of the video parameters (*Brightness*, *Contrast*, *Red*, *Green* and *Blue*).
2. Adjustment applies to the currently selected video source only.
3. These controls not available for SDI inputs.
4. These controls not available for DVI inputs.

QM Input Setup

The DVPHD can display up to four full motion QM video inputs on inputs 2, 4, 6 and 8. These inputs auto-detect the video resolution while the video type can be selected from the "QM Setup" menu.

A table describing the "QM Setup" menu controls follows the illustrations. Touching the **QM** button on the "Setup Menu" opens the "QM Setup" menu shown on the following page. From here, the user can enter the setup screens for any of the four video inputs by touching their respective buttons.

"QM Setup" Menu
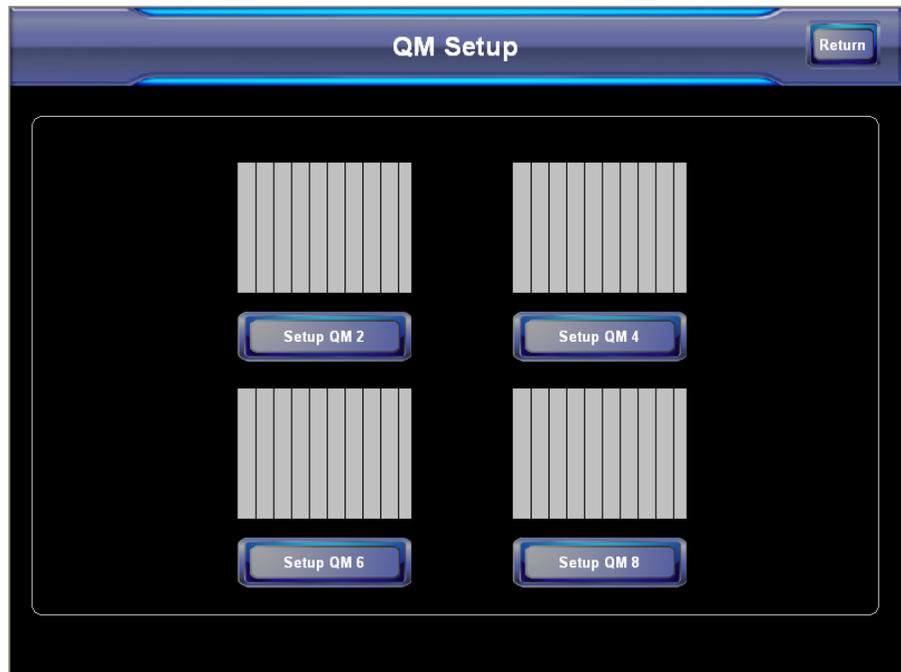
When **Setup QM 2** is selected as the input to configure, the following screen is displayed. The QM setup screens for all of the QM inputs are the same.

"QM 2 Setup" Screen
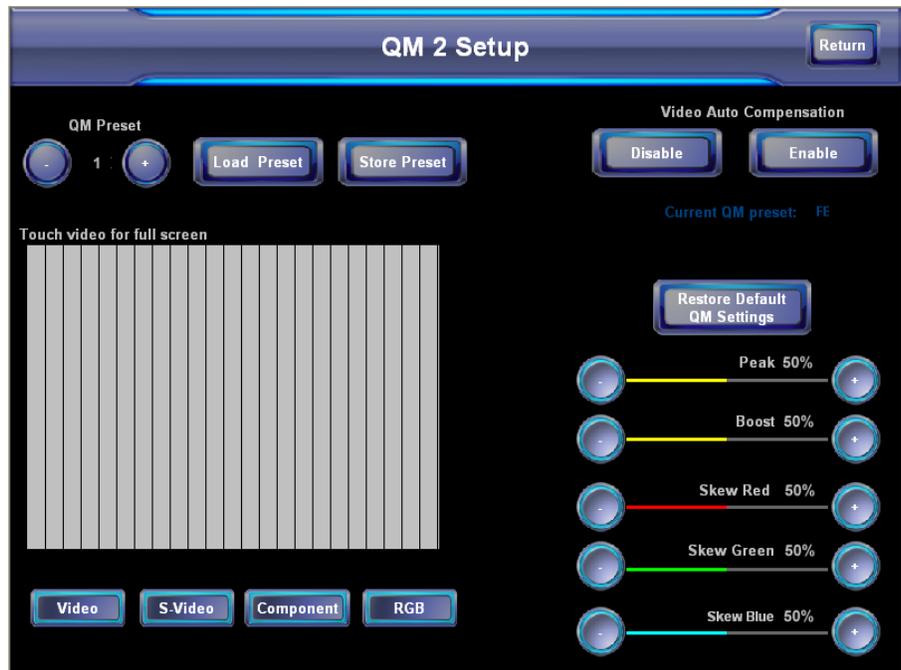
"QM 2 Setup" Details

QM 2 SETUP SCREEN CONTROLS	DESCRIPTION
QM Preset	Displays the current QM Preset number. Saved presets can also be called up using this control. The **–** and **+** buttons decrement and increment the displayed value.
Load Preset	Loads the selected QM Preset.
Store Preset	Stores any changes made to the QM setup at the displayed preset number.
Detected Signal Types	These buttons allow the signal type to be selected on a QM source.
Video	Selects a video signal.
S-Video	Selects an S-video signal.
Component	Selects a component video signal.
RGB	Selects an RGB video signal.
Video Auto Compensation	These buttons disable or enable auto compensation on the selected QM input. When enabled the QM preset transmitted with the signal is automatically loaded.
Current QM Preset	Displays the QM preset currently in force.
Restore Default QM Settings	Pressing this button restores QM settings to their original default values.
Peak	Peak adjusts for high-frequency attenuation that can occur over long cable lengths.
Boost	Boost compensates for overall signal loss that can occur over long cable lengths.
Skew Red	Adjusts the timing position of the red signal on the skew test pattern to compensate for any losses caused by long cable runs.
Skew Green	Adjusts the timing position of the green signal on the skew test pattern to compensate for any losses caused by long cable runs.
Skew Blue	Adjusts the timing position of the blue signal on the skew test pattern to compensate for any losses caused by long cable runs.

Diagnostics

To obtain the "Diagnostics Menu", touch **Diagnostics** on the "Main Menu". The "Diagnostics Menu" offers a series of buttons for various diagnostic tools. These tools should only be used under the supervision of a Crestron customer service representative during telephone support. A detailed discussion of the options available from the 'Diagnostics Menu" is beyond the scope of this manual.

Installation

Ventilation

The DVPHD should be used in a well-ventilated area. The venting holes should not be obstructed under any circumstances

To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications. Consider using forced air ventilation and/or incrementing the spacing between units to reduce overheating. Contact with thermal insulating materials should be avoided on all sides of the unit.

Rack Mounting

The DVPHD can be mounted in a rack or stacked with other equipment. Two "ears" are provided with the DVPHD so that the unit can be rack mounted. These ears must be installed prior to mounting. Complete the following procedure to attach the ears to the unit. The only tool required is a #1 or #2 Phillips screwdriver.

WARNING: To prevent bodily injury when mounting or servicing this unit in a rack, observe the following guidelines:

- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

NOTE: Observe the following guidelines when installing equipment in a rack:

- Elevated Operating Ambient Temperature - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

- Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

- Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

- Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

- Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips)

NOTE: If rack mounting is not required, rubber feet are provided for tabletop mounting or stacking. Apply the feet near the corner edges on the underside of the unit.

To install the ears use the following procedure.

CAUTION: To prevent equipment damage, use only the rack ears Crestron provides for this device.

1. There are screws that secure each side of the DVPHD top cover. Using a #1 or #2 Phillips screwdriver, remove the three screws closest to the front panel from one side of the unit. Refer to the illustration following step 3 for a detailed view.

2. Position a rack ear so that its mounting holes align with the holes vacated by the screws in step 1.

3. Secure the ear to the unit using three of the six included #06-32 x 3/8" rack mount screws included with the DVPHD, as shown in the following illustration.

Ear Attachment for Rack Mounting

Replace original cover screws with 06-32 x 3/8" screws included with DVPHD
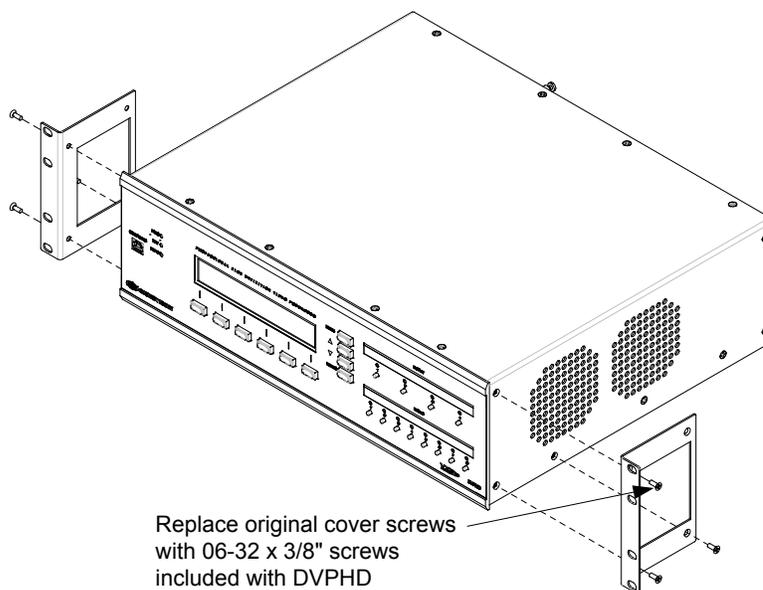
4. Repeat procedure (steps 1 through 3) to attach the remaining ear to the opposite side.

Stacking

Four "feet" are provided with the DVPHD so that if the unit is not rack mounted, the rubber feet can provide stability when the unit is placed on a flat surface or stacked. These feet should be attached prior to the hookup procedure. Refer to the following illustration for placement of the feet.

Foot Placement for the DVPHD

Place feet in corners
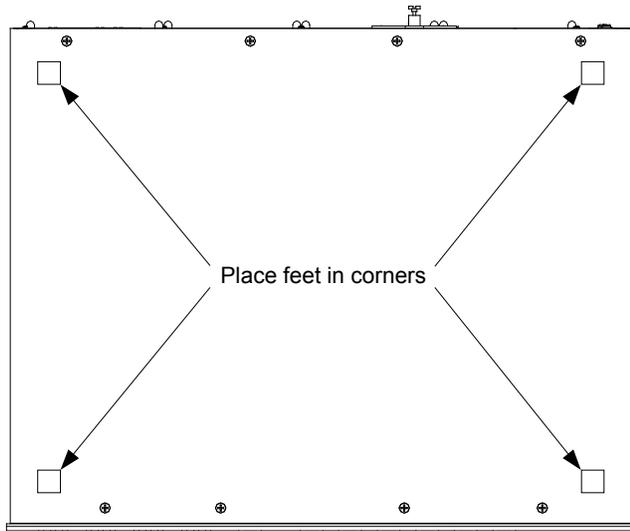
NOTE: No more than two DVPHD units should be stacked.

Hardware Hookup

Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Refer to "Network Wiring" on page 15 before attaching the 4-position terminal block connector. Apply power after all connections have been made.

When making connections to the DVPHD, note the following:

- Use Crestron power supplies for Crestron equipment.

- The included cable cannot be extended.

Hardware Connections for the DVPHD (Front View)

COMPUTER:
Console Interface
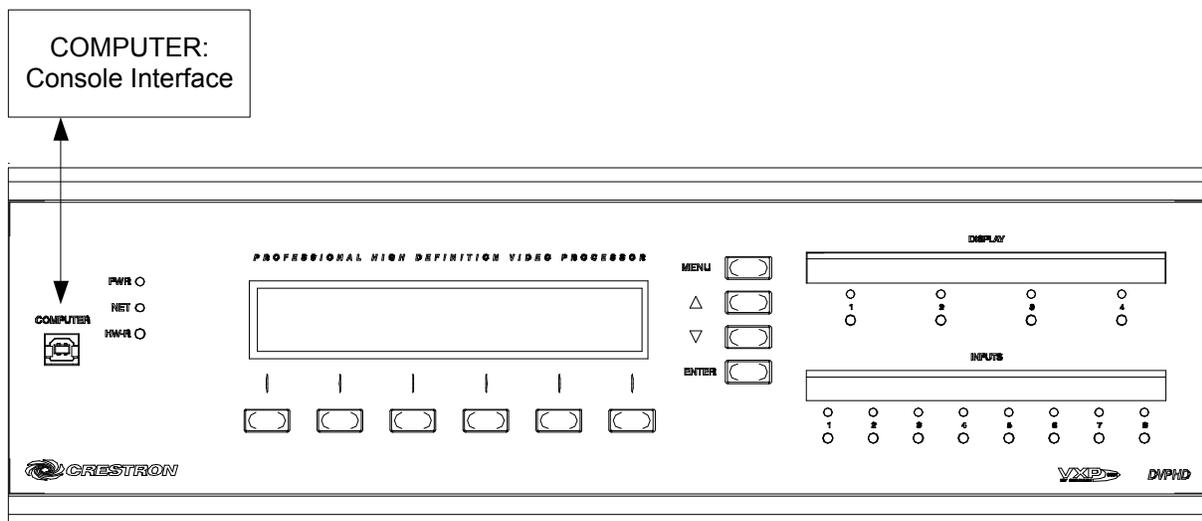
Hardware Connections for the DVPHD (Rear View)
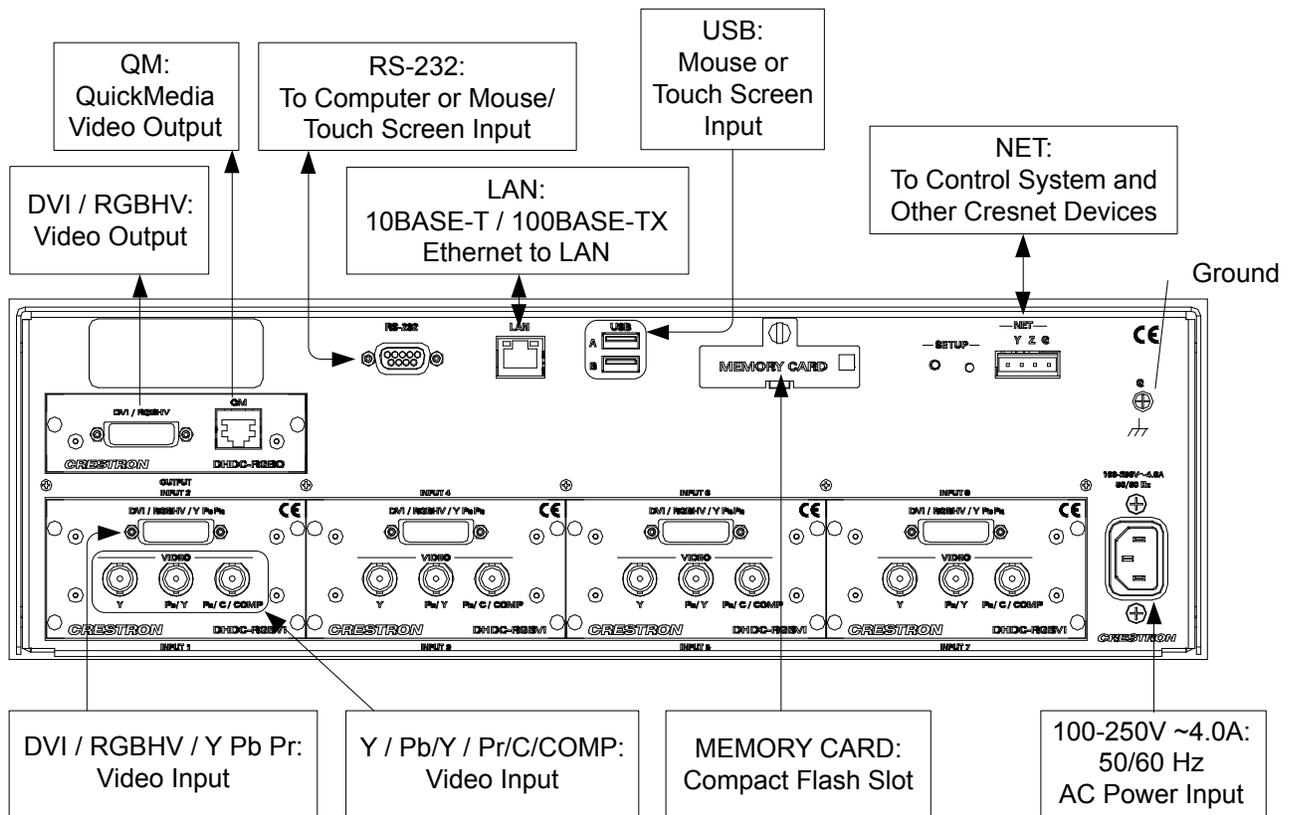
NOTE: Video input and output cards shown for illustrative purposes only.
Please refer to their individual manuals for more information.

NOTE: Ensure the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).

NOTE: The DVPHD can only be powered by IEC male, main power input, which mates with the included removable cord. No power is supplied through the **NET** connector.

Label the Buttons

Use Crestron Engraver software to print custom labels for the DVPHD's front panel buttons and LEDS. Crestron recommends printing on 100-pound paper. Paper weighing less than 100 pounds tends to crumple while sliding in, while paper weighing more than 100 pounds may not fit.

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs, projects or firmware) can be transferred to the control system (and/or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

NOTE: The DVPHD out-of-the-box functionality allows communication parameters to be set from the front panel, an attached touch screen or via the Web interface.

Establishing Communication

Use Crestron Toolbox for communicating with the DVPHD; refer to the Crestron Toolbox help file for details. There are four methods of communication: direct serial, indirect, USB and TCP/IP.

Direct Serial

Direct Serial Communication

The **RS-232** port on the DVPHD connects to the serial port on the PC via a serial cable (Crestron STCP-502 or equivalent):

1. Click **Tools | System Info**.

2. Click the ✎ icon.

3. For *Connection Type*, select *RS-232*.

4. Enter the following parameters: *Port: COM*, *Baud Rate: Auto-detect*, *Parity: None*, *Data Bits: Eight*, *Stop Bits: One*. The *XON/XOFF* checkbox should not be checked. The *RTS/CTS* checkbox should be checked.

5. Click **OK**. Communications are confirmed when the device information is displayed.

Indirect Communication

DVPHD connects to control system via Cresnet:

1. Click **Tools | System Info**.

2. Click the ✎ icon.

3. For *Connection Type*, select *Cresnet ID*. In the *Through* drop-down menu, select the control system.

4. Click **OK**. Communications are confirmed when the device information is displayed.

USB Communication
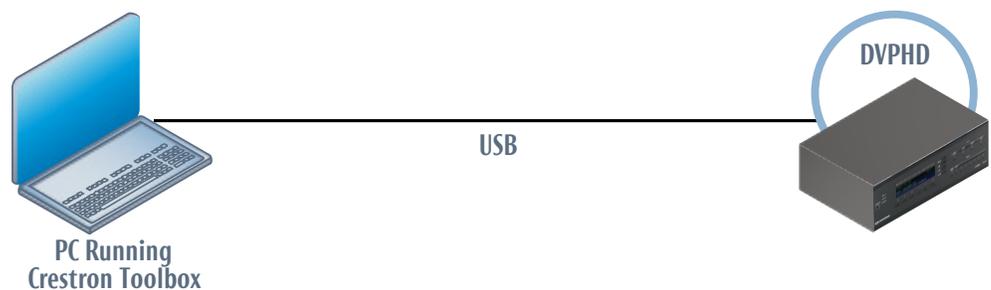
The **COMPUTER** port on the DVPHD connects to the USB port on the PC via the included Type A to Type B USB cable:

1. Click **Tools | System Info**.

2. Click the ✎ icon.

3. For *Connection Type*, select *USB*. When multiple USB devices are connected, identify the DVPHD by entering "DVPHD" in the *Model* text box, the unit's serial number in the *Serial* text box or the unit's hostname (if known) in the *Hostname* text box.

4. Click **OK**. Communications are confirmed when the device information is displayed.
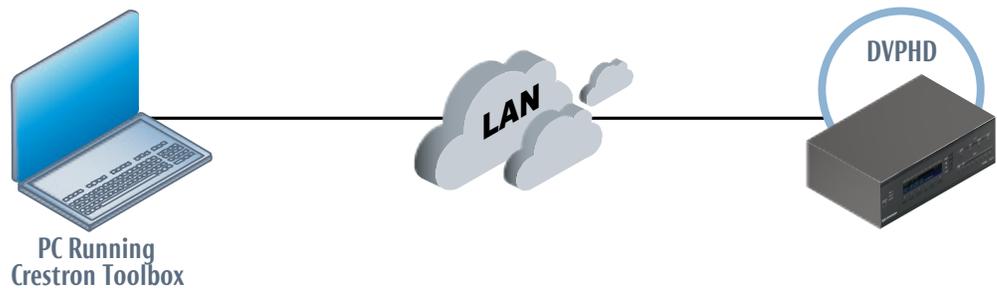
The DVPHD connects to PC via Ethernet:

1. Use the Device Discovery Tool (click the 🔍 icon) in Crestron Toolbox to detect all Ethernet devices on the network and their IP configuration. The tool is available in Toolbox version 1.15.143 or later.

1. Click on the DVPHD to display information about the device.

Programs, Projects and Firmware

Program, project or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron Web site as new features are developed after product releases. One has the option to upload programs and projects via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the Crestron Studio help file, SIMPL Windows help file, VT Pro-e® help file or the Crestron Toolbox help file.

Crestron Studio /
SIMPL Windows

If a Crestron Studio (or SIMPL Windows) program is provided, it can be uploaded to the control system using Crestron Studio (or SIMPL Windows) or Crestron Toolbox.

Crestron Studio / VT Pro-e

Upload the Crestron Studio (or VT Pro-e) file to the DVPHD using Crestron Studio (or VT Pro-e) or Crestron Toolbox.

Firmware

Check the Crestron Web site to find the latest firmware. (New users must register to obtain access to certain areas of the site, including the FTP site.)

Upgrade DVPHD firmware via Crestron Toolbox.

1. Establish serial or TCP/IP communications with the DVPHD and display the "System Info" window.

2. Select **Functions | Firmware…** to upgrade the DVPHD firmware.

Program Checks

Actions that can be performed on the DVPHD vary depending on whether it is connected via Cresnet or Ethernet.

Cresnet Connections

For Cresnet connections, using Crestron Toolbox, display the network device tree (**Tools | Network Device Tree View**) to show all network devices connected to the control system. Right-click on the DVPHD to display actions that can be performed on the DVPHD.

Ethernet Connections

For Ethernet connections, using Crestron Toolbox, display the "System Info window (**Tools | System Info**) and select the **Functions** menu to display actions that can be performed on the DVPHD.

Be sure to use the Crestron Toolbox to create the DVPHD IP table.

1. Select **Functions | IP Table Setup**.

2. Add, modify or delete entries in the IP table. The DVPHD can have only one IP table entry.

3. A defined IP table can be saved to a file or sent to the device.

Edit the control system's IP table to include an entry for the DVPHD. The entry should list the DVPHD's IP ID (specified on the DVPHD's IP table) and the internal gateway IP address 127.0.0.1.

Operation

The out-of-the-box functionality built into it the DVPHD allows it to be operated from the front panel by means of the buttons and LCD display. The following sections describe the available functionality and menu structure.

The overall front panel menu structure of the DVPHD is illustrated by the following figure. Subsequent paragraphs describe the individual pages and their functions.

Front Panel Menu Structure
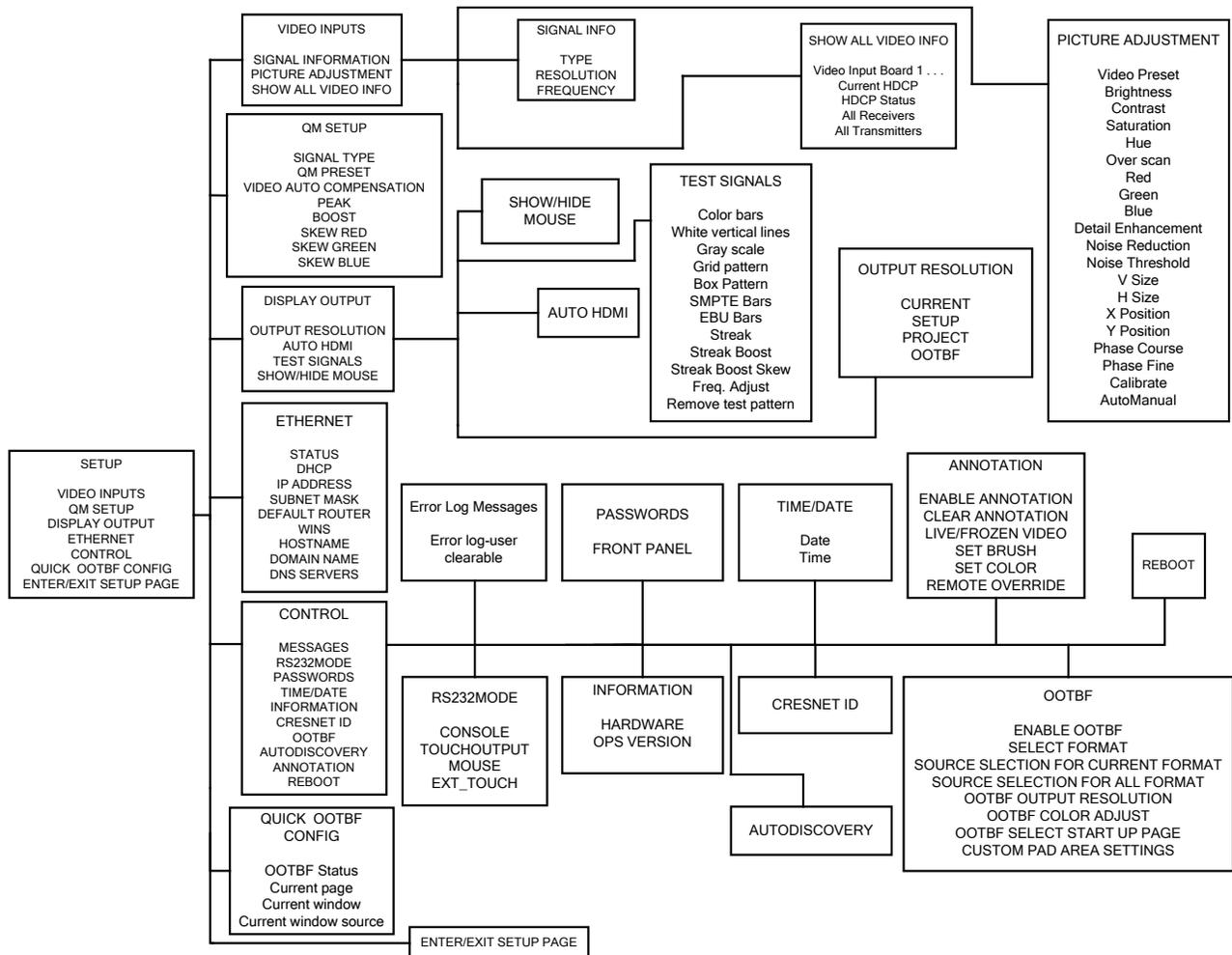
The Default screen is displayed when the DVPHD has booted up, if the unit has not
been locked or password protected.

DEFAULT Screen (DVPHD Unlocked)

MENU | B6

DVPHD v3.000.0022   01/01/00   01:03:06AM

▲ | B7

INPUT 1: YPrPb 720p
INPUT 2: DVI 1600x1200 60Hz

▼ | B8

ENTER | B9

B0 | B1 | B2 | B3 | B4 | B5

The device, firmware version, date and time are listed across the top of the screen.
Each input and the type of video detected is listed beneath. To scroll through the list
of inputs press **B7** and/or **B8**.

If the front panel is locked, the following screen is displayed.

NOTE: To set the front panel password, proceed as described in "FRONT PANEL
PASSWORD" on page 64.

Default Screen (DVPHD Locked)

MENU | B6

HD Digital Video Processor   01:03:06AM
                              01/01/00

▲ | B7

FRONT PANEL LOCKED

▼ | B8

ENTER | B9

B0 | B1 | B2 | B3 | B4 | B5

To unlock the front panel, press the **ENTER** button (**B9**). The "UNLOCK CODE"
screen is displayed.

"UNLOCK CODE" Screen

MENU | B6

UNLOCK CODE:

▲ | B7

1   2   3   4   5   6

▼ | B8

ENTER | B9

B0 | B1 | B2 | B3 | B4 | B5

To unlock the front panel, enter the four-number numeric password with the **B0** through **B5** keys and then press **ENTER**.

NOTE: Refer to "FRONT PANEL PASSWORD" on page 64 for instruction on setting up the password.

"SETUP" Menu

The "SETUP" menu is accessed by pressing **B9** (**ENTER**) while the Default screen (unlocked) is displayed.

"SETUP" Menu

```
                                          MENU    B6

┌─────────────────────────────────────┐
│              SETUP                   │            B7
│  >VIDEO INPUTS                       │    ▲
│   DISPLAY OUTPUT                     │
│   ETHERNET                           │    ▼       B8
│                                      │
└─────────────────────────────────────┘

                                          ENTER   B9

 B0      B1      B2      B3      B4      B5
```
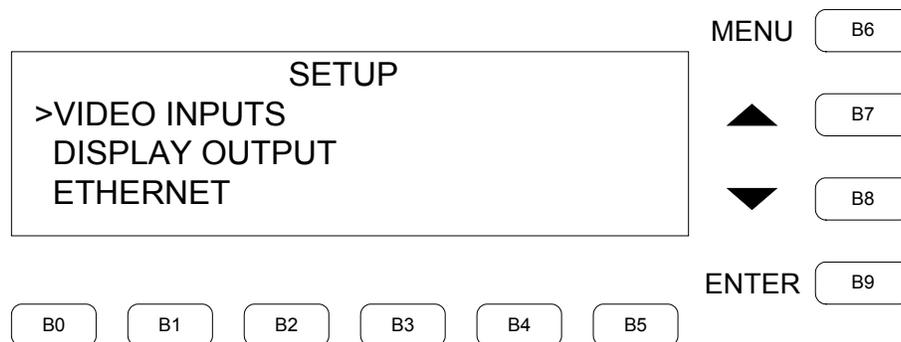
The SETUP menu provides access to five other menus: "VIDEO INPUTS", "DISPLAY OUTPUT", "ETHERNET", "CONTROL", "QUICK OOTBF CONFIG". Press **B7** or **B8** to scroll through the selections. Press **B9 (ENTER)** to reach the selected menu.

VIDEO INPUTS

The VIDEO INPUTS menu shows the current input on the first line. Other active inputs can be selected by pressing the appropriate input button to the right of the display.

"VIDEO INPUTS" Menu

```
                                          MENU    B 6

┌─────────────────────────────────────┐
│           VIDEO INPUTS 1             │            B 7
│  >SIGNAL INFORMATION                 │    ▲
│   PICTURE ADJUSTMENT                 │
│   SHOW ALL VIDEO INFO                │    ▼       B 8
│                                      │
└─────────────────────────────────────┘

                                          ENTER   B 9

 B 0     B 1     B 2     B 3     B 4     B 5
```
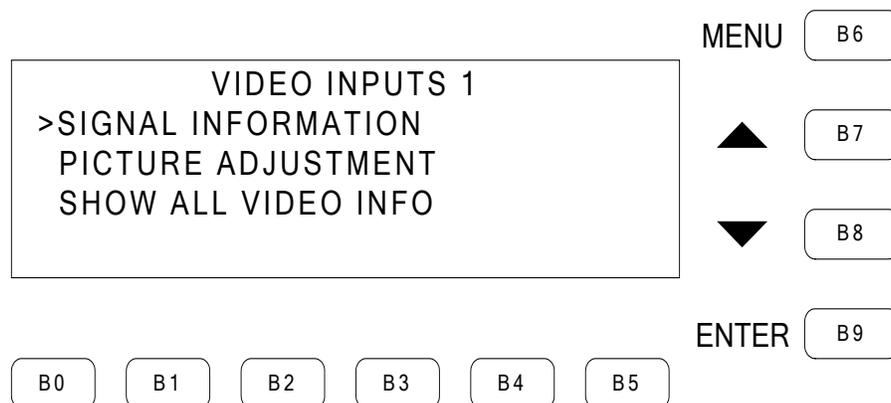
This menu provides access to the "SIGNAL INFORMATION" screen, the "PICTURE ADJUSTMENT" menu and the "SHOW ALL VIDEO INFO" menu. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selection.

SIGNAL INFORMATION

The "SIGNAL INFORMATION" screen displays the *TYPE*, *RESOLUTION* and *FREQUENCY* of the selected video input. Individual settings cannot be accessed from this screen. Select other active inputs by pressing the appropriate input button to the right of the display.

"SIGNAL INFORMATION" Screen

MENU | B6

```
   SIGNAL INFORMATION   3
 >TYPE              (component)
  RESOLUTION
  FREQUENCY
```

B7

B8

ENTER | B9

B0   B1   B2   B3   B4   B5
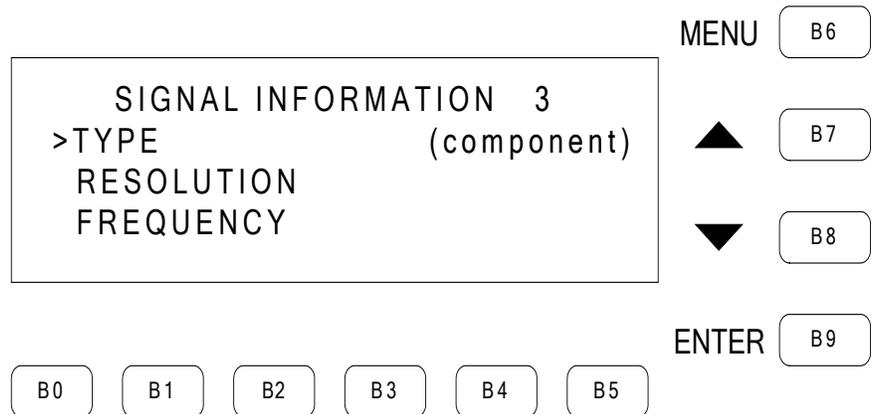
PICTURE ADJUSTMENT

The "PICTURE ADJUSTMENT" menu allows setup of *Video preset*, *Brightness*, *Contrast*, *Saturation*, *Hue*, *Detail Enhancement*, *Noise Reduction*, *Noise Threshold*, and *Overscan* on non-RGB signals. On RGB, DVI, and SDI signals, *Saturation* and *Hue* are replaced by *Red*, *Green*, and *Blue* controls. RGB and DVI signals add *V Size*, *H Size*, *X Position*, *Y Position*, and *Auto/Manual* controls. In addition, for RGB signals, there are *Phase Coarse*, *Phase Fine*, and *Calibrate* controls.

Select active input by pressing the appropriate input button to the right of the display. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen.

"PICTURE ADJUSTMENT" Menu

MENU

```
   PICTURE ADJUSTMENT   3
 >Video preset          (0)
  Brightness            (5)
  Contrast              (0)
```

B7

B8

ENTER | B9

B0   B1   B2   B3   B4   B5
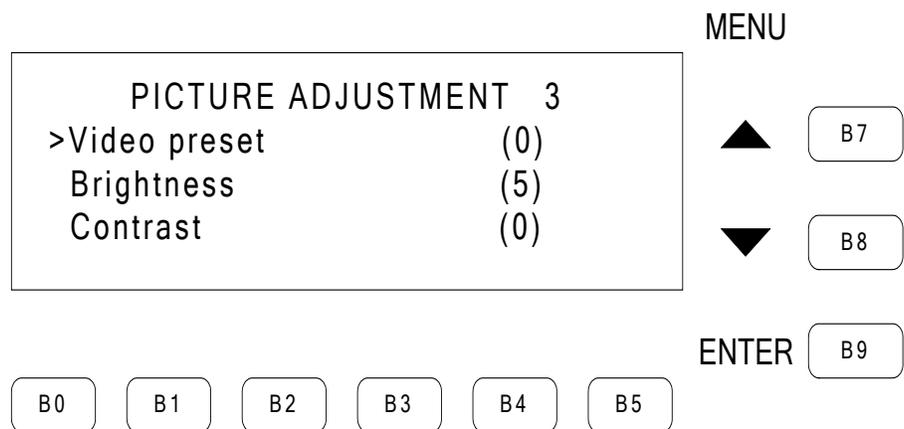
VIDEO PRESET

The "VIDEO PRESET" screen is used to **LOAD** and **STORE** a video preset for the selected input. Use the eight input buttons to select the input to change. Use **B7** and **B8** to change settings and then press **B0** to **LOAD** the new present and **B1** to **STORE** it.

"VIDEO PRESET' Screen

```
                                                    MENU    B6

   VIDEO PRESET:
              Current Setting:    5                   ▲      B7
              New Setting:        5
   LOAD  STORE
                                                      ▼      B8


                                                    ENTER    B9

   B0      B1      B2      B3      B4      B5
```
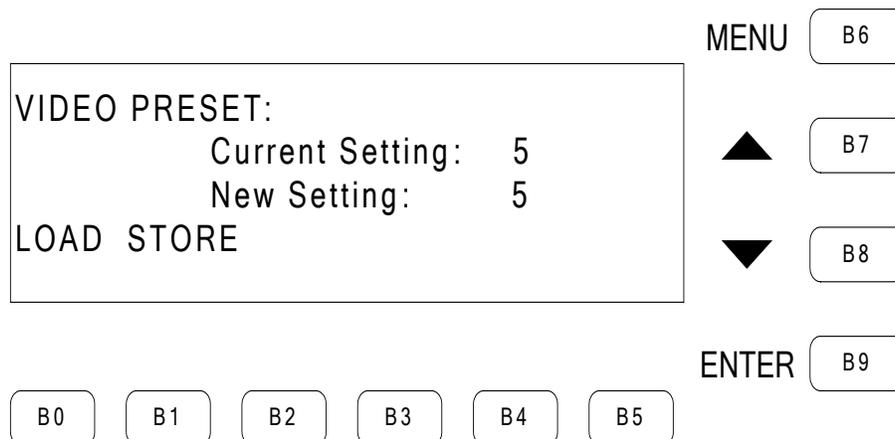
PICTURE BRIGHTNESS

The "PICTURE BRIGHTNESS" screen is used to adjust the brightness of the current input. Use **B7** or **B8** to change settings. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change. Press **B5** to **SAVE** the setting and return to the previous menu.

"PICTURE BRIGHTNESS" Screen

```
                                                    MENU    B6

   PICTURE BRIGHTNESS:
              Current Setting:    5                   ▲      B7
              New Setting:        5
                                                      ▼      B8
   CANCEL                          SAVE


                                                    ENTER    B9

   B0      B1      B2      B3      B4      B5
```

NOTE: The "PICTURE CONTRAST", "PICTURE SATURATION", "PICTURE HUE", "RED", "GREEN", and "BLUE", "Detail Enhancement", "Noise Reduction", "Noise Threshold", "V Size", "H Size", "X Position", "Y Position", "Phase Coarse", and "Phase Fine" screens are the same as the "PICTURE BRIGHTNESS" screen.

Calibrate

The "Calibrate?" screen is used to calibrate the current input. Press **B5** (**CONFIRM**) to trigger calibration and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without calibration.

"Calibrate?" Screen

MENU B6

```
Calibrate?


CANCEL                 CONFIRM
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
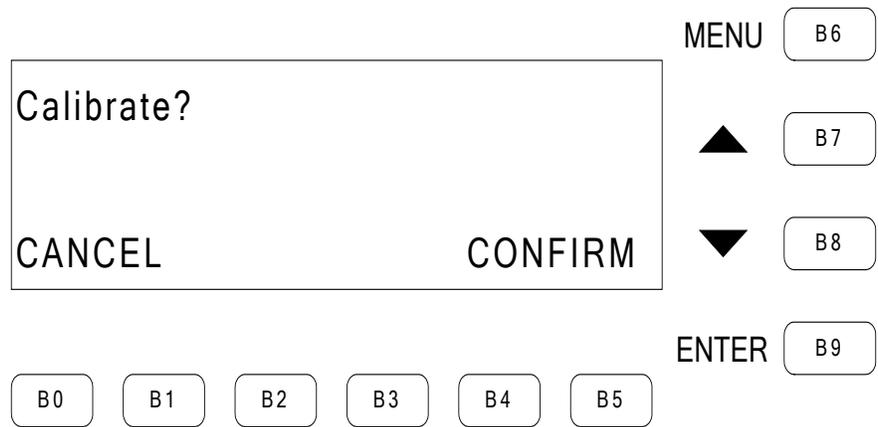
AUTO/MANUAL

The "AUTO/MANUAL" screen is used to set up *Auto* or *Manual* mode for the current input. Use **B7** and **B8** to toggle between modes. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"AUTO/MANUAL" Screen

MENU B6

```
AUTO/MANUAL
        Current:      (Manual)
        New:          (Manual)
CANCEL                    SAVE
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

INPUT SIGNAL OVERSCAN

The "INPUT SIGNAL OVERSCAN" screen is used to set overscan for the current input to *None*, *Normal*, or *Max*. Use **B7** and **B8** to make the desired selection. Press ENTER to confirm the selection and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"INPUT SIGNAL OVERSCAN" Screen

```
                                                    MENU   [ B6 ]
 ┌─────────────────────────────────────┐
 │     INPUT SIGNAL OVERSCAN            │            ▲     [ B7 ]
 │   >None                             │
 │    Normal                           │
 │    Max                              │            ▼     [ B8 ]
 └─────────────────────────────────────┘

                                                  ENTER [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

SHOW ALL VIDEO INFO

The "SHOW ALL VIDEO INFO" screen displays the type of signal present at each video input board and the parameters associated with that signal type; the current HDCP mode and status; the status of attached receivers and the status of attached transmitters. Use **B7** and **B8** to scroll through the information. Press **B6** (**MENU**) to go back to the previous menu.

"SHOW ALL VIDEO INFO" Screen

```
                                                    MENU   [ B6 ]
 ┌─────────────────────────────────────┐
 │ SHOW ALL VIDEO INFO                 │            ▲     [ B7 ]
 │ Video Input Board 1:                │
 │    Type              : RGB          │
 │    Video Preset      : None         │            ▼     [ B8 ]
 └─────────────────────────────────────┘

                                                  ENTER [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

QM SETUP

The "QM SETUP" menu provides access to the "SIGNAL TYPE", "QM PRESET", "VIDEO AUTO COMPENSATION", "PEAK", "BOOST", "SKEW RED", "SKEW GREEN", and "SKEW BLUE" screens. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the screen.

NOTE: The number listed next to "QM SETUP PAGE" on the "QM SETUP" menu is the installed location of the QM input card, DHDC-QMVI.

"QM SETUP" Menu

```
                              MENU  [ B6 ]

  ┌─────────────────────────────────────┐
  │        QM SETUP PAGE   2             │      ▲    [ B7 ]
  │ > SIGNAL TYPE          (RGB)         │
  │   QM PRESET            (NONE)        │
  │   VIDEO AUTO COMPEN  (ENABLED)       │      ▼    [ B8 ]
  └─────────────────────────────────────┘

                              ENTER [ B9 ]

 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

SIGNAL TYPE

The "SIGNAL TYPE" screen is use to select signal type: *Composite*, *S-Video*, *Component* or *RGB*. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"SIGNAL TYPE" Screen

```
                              MENU  [ B6 ]

  ┌─────────────────────────────────────┐
  │          SIGNAL TYPE                 │      ▲    [ B7 ]
  │    Current Type :      (Unknown)     │
  │    New  Type:          (RGB)         │
  │ CANCEL                      SAVE     │      ▼    [ B8 ]
  └─────────────────────────────────────┘

                              ENTER [ B9 ]

 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

QM PRESET

The "QM PRESET" screen is used to **LOAD** and **STORE** the QM preset. Press input buttons **1** through **8** to select desired input. Press **B7** or **B8** to scroll through the selections. Press **B0** (**LOAD**) to load the current present. Press **B1** (**STORE**) to store the current settings to the preset.

"QM PRESET" Screen

```
                              MENU  [ B6 ]

  ┌─────────────────────────────────────┐
  │ VIDEO PRESET:                        │      ▲    [ B7 ]
  │        Current Setting:   5          │
  │        New Setting:       5          │
  │ LOAD  STORE                          │      ▼    [ B8 ]
  └─────────────────────────────────────┘

                              ENTER [ B9 ]

 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

VIDEO AUTO COMPENSATION

The "VIDEO AUTO COMPENSATION" screen is used to enable or disable the QM COMPENSATION. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"VIDEO AUTO COMPENSATION" Screen

MENU   B6

```
VIDEO AUTO COMPENSATION
     Current:      (ENABLED)
     New:          (DISABLED)
CANCEL                      SAVE
```
▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5
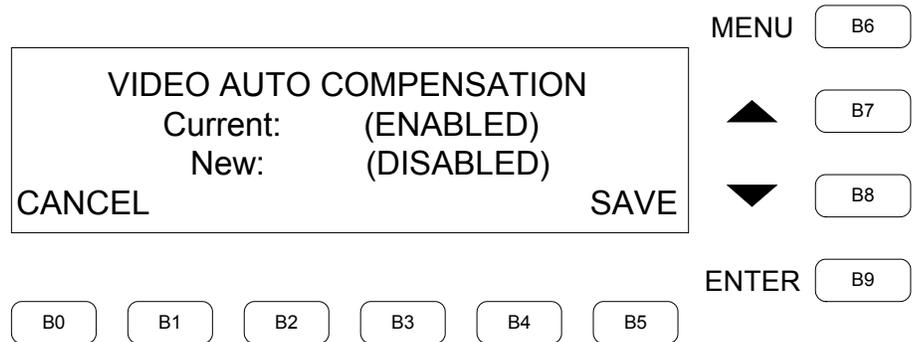
PEAK

The "PEAK" screen is used to change the peak value. Press **B7** or **B8** to scroll through the values. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"PEAK" Screen

MENU   B6

```
PEAK:
        Current:      0
        New:          2
CANCEL                      SAVE
```
▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

NOTE: The "BOOST", "SKEW RED", "SKEW GREEN", and "SKEW BLUE" screens operate in the same way as the "PEAK" screen.

DISPLAY OUTPUT

The "DISPLAY OUTPUT" menu is used to access the "OUTPUT RESOLUTION" menu, the "SET AUTO HDMI" screen, the "TEST SIGNAL" menu and the "SHOW/HIDE MOUSE" and "SET TOUCH DISPLAY" screens. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selection.

"DISPLAY OUTPUT" Menu

MENU   B6

```
            DISPLAY OUTPUT
>OUTPUT RESOLUTION (1024 X 768 @ 60)
   AUTO HDMI            (ON)
   TEST SIGNALS
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

OUTPUT RESOLUTION

The "OUTPUT RESOLUTION" menu is used to set the output resolution for *CURRENT*, *SETUP*, *PROJECT*, and *OOTBF* pages. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen. Press **B6** (**MENU**) to return to the previous menu without change.

"OUTPUT RESOLUTION" Menu

MENU   B6

```
        OUTPUT RESOLUTION
>CURRENT          (1152 X 864 @75)
 SETUP            (1152 X 864 @75)
 PROJECT          (1152 X 864 @75)
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

"OUTPUT RESOLUTION" Menu (Showing Example)

MENU   B6

```
OUTPUT RESOLUTION: for current output
>1152 X 864 @ 75Hz
 1280 X 960 @ 75Hz
 1280 X 1024 @ 60Hz
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SET AUTO HDMI

The "SET AUTO HDMI" screen is used to set auto HDMI *ON* or *OFF*. Press **B7** or **B8** to toggle to the desired selection. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without any action.

"SET AUTO HDMI" Screen

MENU   B6

```
SET AUTO HDMI:
        Current:          (ON)
        New:              (ON)
CANCEL                         SAVE
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5
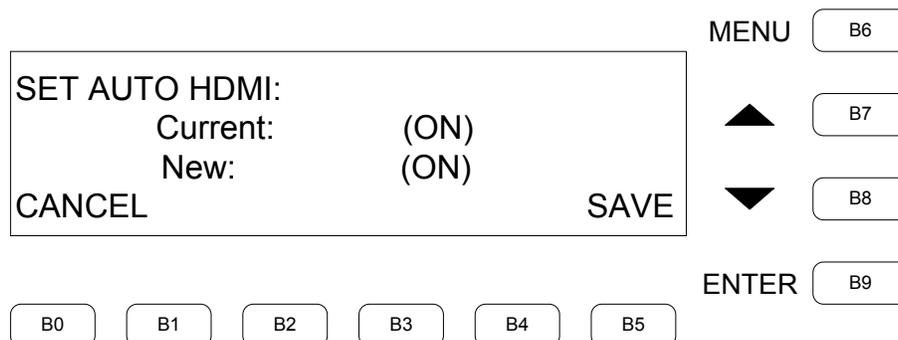
TEST SIGNAL

The "TEST SIGNAL" menu is used to set up *Color bars*, *White vertical lines*, *Gray scale*, *Grid pattern*, *Box pattern*, *SMPTE bars*, *EBU bars*, *Streak*, *Streak boost*, *Streak boost skew*, *Skew*, and *Freq adjust*. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen.

NOTE: The signal continues to display after set up. Select the "Remove Test Pattern" option to go back.

"TEST SIGNAL" Menu

MENU   B6

```
            TEST SIGNAL
 >Color bars
   White vertical lines
   Gray scale
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5
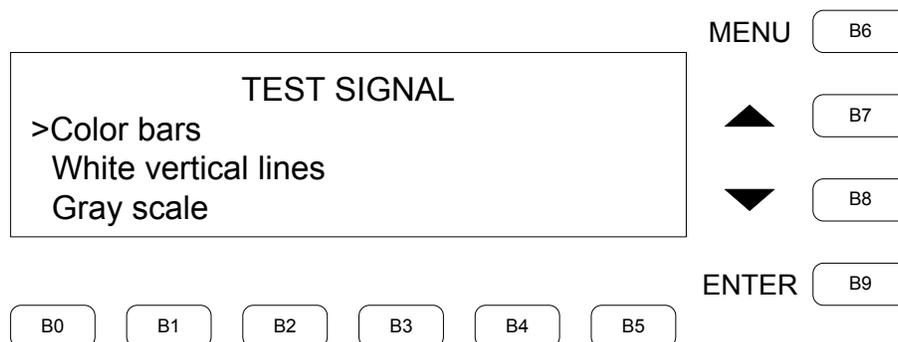
SHOW/HIDE MOUSE

The "SHOW/HIDE MOUSE" screen is used to turn the mouse *ON* or *OFF*. Press **B7** or **B8** to toggle to the desired selection. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without any action.

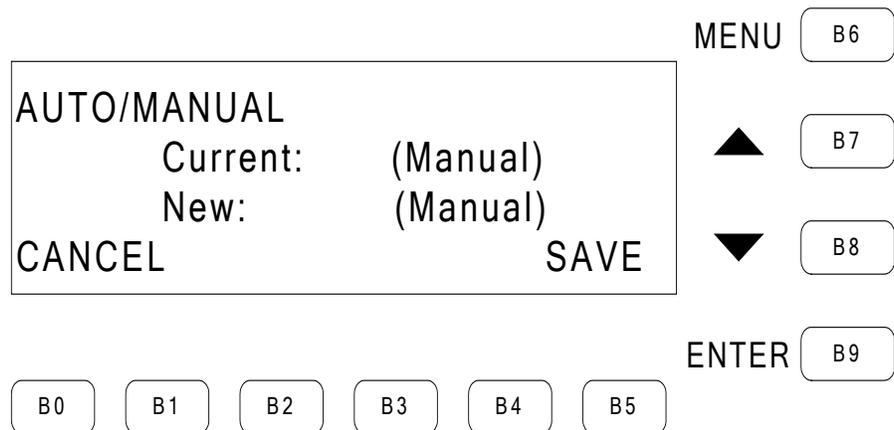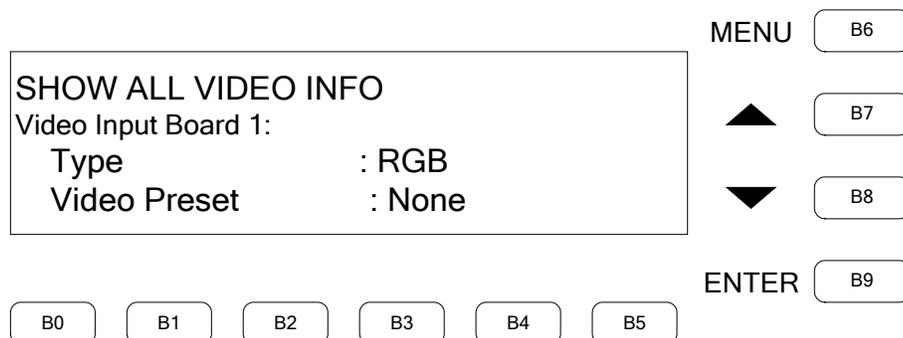*"SHOW/HIDE MOUSE" Screen*

MENU   B6

```
SHOW/HIDE MOUSE:
        Current:           (ON)
        New:               (ON)
CANCEL                            SAVE
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

ETHERNET

The "ETHERNET" menu provides access to the "ETHERNET STATUS", "DHCP", "STATIC IP ADDRESS", "SUBNET MASK", "DEFAULT ROUTER", "WINS", "HOST NAME" screens, and the "ETHERNET DNS SETTING" menu. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selection.

"ETHERNET" Menu

MENU   B6

```
              ETHERNET
 >STATUS               (OK)
  DHCP                 (OFF)
  IP ADDRESS      (192.168.122.81)
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

ETHERNET STATUS

The "ETHERNET STATUS" screen is used to show the current Ethernet settings. Press **B6** (**MENU**) to return to the previous menu.

"ETHERNET STATUS" Screen

MENU   B6

```
           ETHERNET STATUS:
 Link Status :    OK
 Link Speed :    100 Mbps
 Full Duplex :    YES
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

DHCP

The "DHCP" screen is used to turn DHCP *ON* or *OFF*. Press **B7** or **B8** to toggle to the desired selection. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without any action.

"DHCP" Screen

```
                                                          MENU  [ B6 ]

 ┌─────────────────────────────────────────────┐
 │ DHCP:                                         │        ▲     [ B7 ]
 │         Current:          (OFF)               │
 │         New:              (OFF)               │
 │ CANCEL                         SAVE           │        ▼     [ B8 ]
 └─────────────────────────────────────────────┘

                                                         ENTER  [ B9 ]
 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

NOTE: The "WINS" screen operates the same way as the "DHCP" screen.

STATIC IP ADDRESS

The "STATIC IP ADDRESS" screen is used to set up the Ethernet IP address. Press **B7** or **B8** to increase or decrease the single underscored number. Pres **B3** (**PREV**) to move the cursor back one step. Press **B4** (**NEXT**) to more the cursor forward one step. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

NOTE: Access to the "STATIC IP ADDRESS" screen is not allowed if DHCP is enabled.

"STATIC IP ADDRESS" Screen

```
                                                          MENU  [ B6 ]

 ┌─────────────────────────────────────────────┐
 │ STATIC IP ADDRESS:                            │        ▲     [ B7 ]
 │ 192.168.122.81                                │
 │                                               │
 │ DOWN  UP            PREV  NEXT  SAVE           │        ▼     [ B8 ]
 └─────────────────────────────────────────────┘

                                                         ENTER  [ B9 ]
 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

NOTE: Both the "SUBNET MASK" and "DEFAULT ROUTER" screens operate the same way as the "STATIC IP ADDRESS" screen.

HOST NAME

The "HOST NAME" screen is used to set up the *HOST NAME* (or domain name). Press **B7** or **B8** to scroll through the available characters. Pres **B3** (**PREV**) to move the cursor back one step and delete the character. Press **B4** (**NEXT**) or **B9** (**ENTER**) to move the cursor forward one step. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"HOST NAME" Screen

MENU

```
HOST NAME:
Crestron

DOWN  UP            BKSP  NEXT  SAVE
```

▲ [B7]

▼ [B8]

ENTER [B9]

[B0] [B1] [B2] [B3] [B4] [B5]

ETHERNET DNS SETTING

The "ETHERNET DNS SETTING" menu is used to select the *DNS Primary*, *DNS Secondary*, *WINS Primary*, and *WINS Secondary* addresses. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen. Press **B6** (**MENU**) to return to the previous menu.
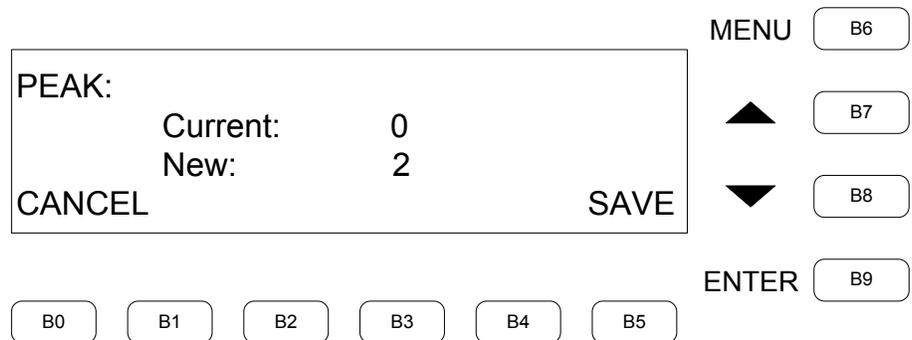
NOTE: Access to the "ETHERNET DNS SETTING" menu is not allowed if DHCP is enabled.

"ETHERNET DNS SETTING" Menu

MENU [B6]

```
        ETHERNET DNS SETTING
>DNS Primary            (0.0.0.0)
 DNS Secondary          (0.0.0.0)
 WINS Primary           (0.0.0.0)
```

▲ [B7]

▼ [B8]

ENTER [B9]

[B0] [B1] [B2] [B3] [B4] [B5]

NOTE: The screens allowing setting the *DNS Primary*, *DNS Secondary*, *WINS Primary*, and *WINS Secondary* addresses operate the same way as the "STATIC IP ADDRESS" screen.

CONTROL

The "CONTROL" menu provides access to the "Error Log Message", "RS232 MODE" and "FRONT PANEL PASSWORD" screens, the "TIME/DATE" and "INFORMATION" menus, the "CRESNET ID" screen, the "Out Of The Box Functionality" menu, the "AUTODISCOVERY" screen, the "ANNOTATION" menu, and the "REBOOT" screen. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selection.

"CONTROL" Menu

MENU   B6

```
          CONTROL
>MESSAGES
 RS-232 MODE
 PASSWORD
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

Error Log Message

The "Error Log Message" screen is used to display the system Error Log Message. Press **B0** (**FIRST**) or **B1** (**LAST**) to switch between the first line and the last line of the message. Press **B2** (**CLEAR**) to clear the message log. Press **B4** (**<<**) or **B5** (**>>**) to see messages beyond the left or right of the current screen. Press **B6** (**MENU**) to return to the previous menu.

"Error Log Message" Screen

MENU   B6

```
Error Log Message
No Error Have been Logged

FIRST  LAST  CLEAR      <<     >>
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

RS232 MODE

The "RS232 MODE" screen is used to select between *CONSOLE*, *TOUCH OUTPUT*, *MOUSE INPUT* or *EXTERNAL TOUCH*. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to make a selection. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without any action.

B2 (**serial**) is used to access the screen for *CONSOLE* mode or *EXT_TOUCH* mode. **B2** (**serial**) is for serial port setup when the *New Mode* is *CONSOLE* and it is for external touch input selection when the *New Mode* is *EXT_TOUCH*.

"RS-232 MODE" Screen

MENU B6

RS-232 MODE
Current Mode: CONSOLE
New Mode: CONSOLE
CANCEL   serial   SAVE

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

SERIAL PORT

The "SERIAL PORT" screen is used to set the *Baud Rate*, *Data Bits*, *Stop Bits*, *Parity*, *RTS* and *XON_OFF* parameters of the serial port. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to edit the parameter.

"SERIAL PORT" Screen

MENU B6

SERIAL PORT
>Baud Rate   (115200)
 Data Bits   (8)
 Stop Bits   (1)

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

SELECT EXTERNAL TOUCH INPUT

When *EXT_TOUCH* is selected as the RS-232 mode, "panel select" is displayed at the bottom of the "RS232 MODE" screen. The "SELECT EXTERNAL TOUCH INPUT" screen is used to select external touch screen input devices. The choices are *SMART*, *ELO*, *MICROT*, *DISPLAYMATE*, *WACOM*, and *SMART2*. Press **B7** or **B8** to scroll through the available devices. Press **B9** (**ENTER**) to select the touch screen input and return to the "RS232 MODE" screen. Press **B6** (**MENU**) to return to the "RS232 MODE" screen without changes.

NOTE: USB touch input devices are auto-detected and override any selected device when plugged into the DVPHD. If both a USB and serial touch input are connected, the DVPHD displays a message stating that one device must be disconnected.

"SELECT EXTERNAL TOUCH INPUT" Screen

MENU   B6

```
┌─────────────────────────────────────────────┐
│                                               │
│     SELECT EXTERNAL TOUCH INPUT               │       ▲      B7
│                                               │
│   SMART                                        │
│   ELO                                          │       ▼      B8
│                                               │
└─────────────────────────────────────────────┘
```

ENTER   B9

B0   B1   B2   B3   B4   B5
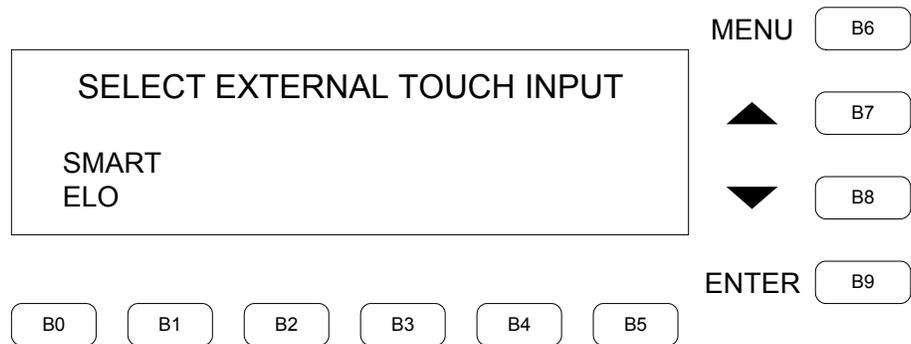
FRONT PANEL PASSWORD

The "FRONT PANEL PASSWORD" screen is used to delete or enable a front panel password. If a valid password is saved, the front panel is locked until the correct password has been entered. If an empty string is saved, the password is disabled.

Press **B7** or **B8** to increase or decrease the underscored digit. Press **B2** (**DEL**) to move the cursor back one step and delete the digit. Press **B9** (**ENTER**) to move the cursor forward one step. Press **B5** (**SAVE**) to confirm the password and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

NOTE: A password must be four digits only. Passwords with less or more than four digits are ignored.

"FRONT PANEL PASSWORD" Screen

MENU   B6

```
┌─────────────────────────────────────────────┐
│ FRONT PANEL PASSWORD:                         │
│          Current:  1234                       │       ▲      B7
│          New:      12                         │
│ CANCEL          DEL              SAVE          │       ▼      B8
└─────────────────────────────────────────────┘
```

ENTER   B9

B0   B1   B2   B3   B4   B5
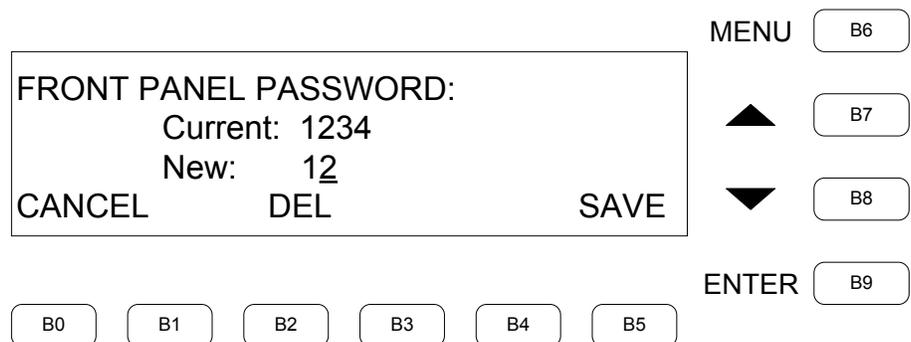
TIME/DATE

The 'TIME/DATE" menu is used to set up time and date. Press **B0** (**Date**) or **B1** (**Time**) to enter the appropriate menu. Press **B6** (**MENU**) to return to the previous menu.

NOTE: If the DVPHD is connected to a control system the date and time are synchronized with it.

Date Set

The "Date Set" screen is used to set the date in the device. To set the *Month*, press **B0** (**Dn**) or **B1** (**Up**). To set the *Day*, press **B2** (**Dn**) or **B3** (**Up**). To set the *Year*, press **B4** (**Dn**) or **B5** (**Up**). Press **B9** (**ENTER**) to save settings and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"Date Set" Screen

```
                                              MENU   [ B6 ]

 ┌─────────────────────────────────────┐
 │ Date Set:              01/01/2000    │      ▲      [ B7 ]
 │                                      │
 │                                      │             [ B8 ]
 │ Dn Month Up    Dn Day Up    Dn Year Up│     ▼
 └─────────────────────────────────────┘
                                            ENTER   [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```
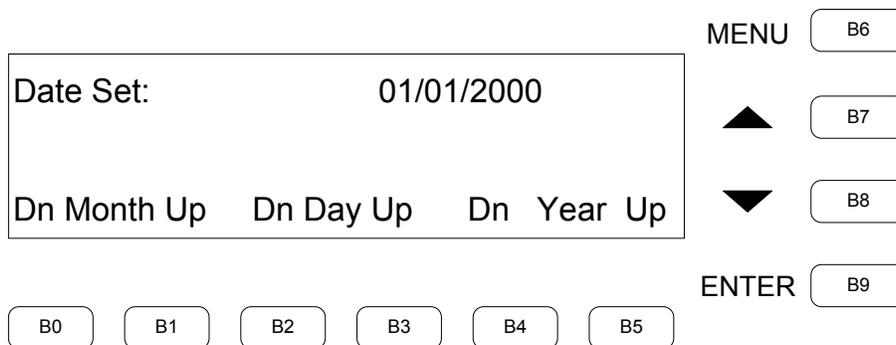
Time Set

The "Time Set" screen is used to set the time in the device. To set the *Hour*, press **B0** (**Dn**) or **B1** (**Up**). To set the *Minute*, press **B2** (**Dn**) or **B3** (**Up**). Press **B5** (**Am/Pm**) to toggle between *Am* and *Pm*. Press **B9** (**ENTER**) to save settings and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"Time Set" Screen

```
                                              MENU   [ B6 ]

 ┌─────────────────────────────────────┐
 │ Time Set              01:16:17Am     │      ▲      [ B7 ]
 │                                      │
 │                                      │             [ B8 ]
 │ Dn Hour  Up    Dn  Min  Up    Am/Pm  │     ▼
 └─────────────────────────────────────┘
                                            ENTER   [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

INFORMATION

The "INFORMATION" menu provides access to the 'HARDWARE" and "OPSVERSION" screens. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen. Press **B6** (**MENU**) to return to the previous menu.

HARDWARE

The "HARDWARE" screen displays all hardware information. Press **B7** or **B8** to scroll through the available information. Press **B6** (**MENU**) to return to the previous menu.

OPSVERSION

The "OPSVERSION" screen displays the current operating system version information. Press **B7** or **B8** to scroll through the available information. Press **B6** (**MENU**) to return to the previous menu.

CRESNET ID

The "CRESNET ID" screen is used to set the CRESNET ID number. Press **B7** or **B8** to change the ID. Press **B5** (**SAVE**) to confirm the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"CRESNET ID" Screen

```
MENU   [ B6 ]

CRESNET ID                        [ ▲ ]  [ B7 ]
        Current ID:   3
        New ID:       0           [ ▼ ]  [ B8 ]
CANCEL                SAVE

                                  ENTER  [ B9 ]

[B0] [B1] [B2] [B3] [B4] [B5]
```

Out Of The Box Functionality

The "Out Of The Box Functionality" menu provides access to the: "ENABLE OOTBF", "SELECT FORMAT", "SOURCE SELECTION FOR CURRENT FORMAT", "SOURCE SELECTION FOR ALL FORMAT", "OOTBF OUTPUT RESOLUTION" screens, the "OOTBF COLOR ADJUST" menu, and the "OTTBF SELECT START UP PAGE" and "STATIC PAD AREA SETTINGS" screens. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen. Press **B6** (**MENU**) to return to the previous menu.
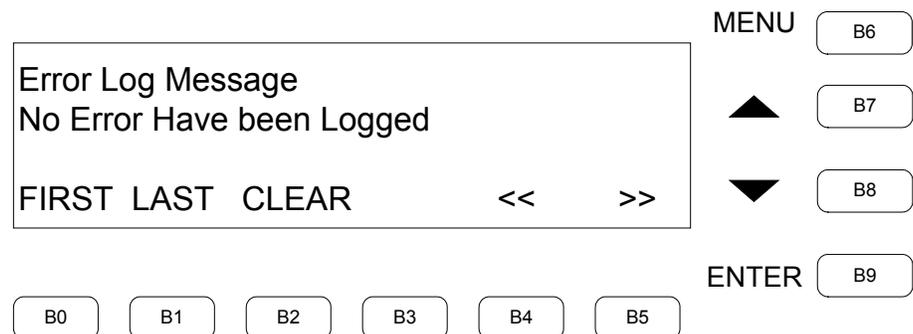
"Out Of The Box Functionality" Menu

MENU B6

```
┌─────────────────────────────────────────────┐
│          Out Of The Box Functionality         │
│  >ENABLE OOTBF        (Disabled)               │
│   SELECT FORMAT       (CUSTOM)                 │
│   SOURCE SELECTION FOR CURRENT FORMAT          │
│                                                │
└─────────────────────────────────────────────┘
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
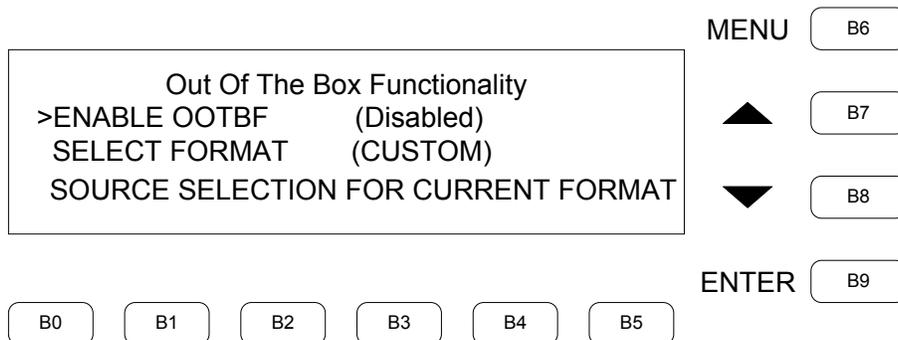
ENABLE OOTBF

The "ENABLE OOTBF" screen is used to enable or disable out-of-the-box functionality. Press **B7** or **B8** to toggle between *ON* and *OFF*. Press **B5** (**SAVE**) to confirm the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without any change.

"ENABLE OOTBF" Screen

MENU B6

```
┌─────────────────────────────────────────────┐
│  ENABLE OOTBF:                                 │
│          Current:    (OFF)                     │
│          New:        (OFF)                     │
│  CANCEL                          SAVE          │
└─────────────────────────────────────────────┘
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
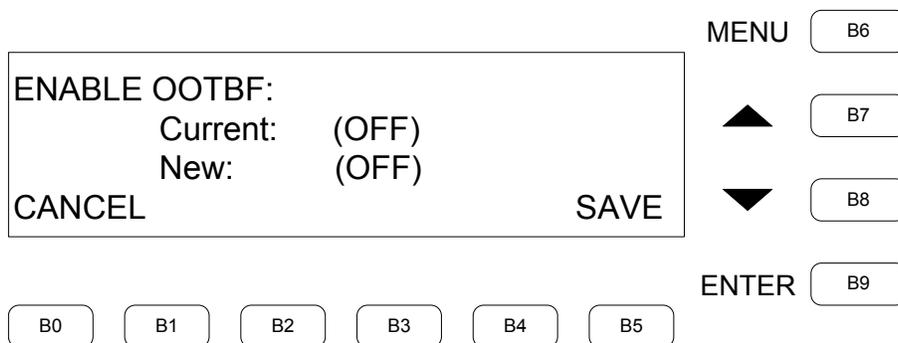
SELECT FORMAT

The "SELECT FORMAT" screen is used to select OOTBF format. The choices are: *CUSTOM, 1X1, 1X2, 1X3, 2X2, 3X3, PIP RIGHT BOTTOM*, *PIP RIGHT TOP*, *PIP LEFT TOP*, and *PIP LEFT BOTTOM*. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to confirm the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SELECT FORMAT" Screen

MENU B6

```
┌─────────────────────────────────────────────┐
│              SELECT FORMAT                     │
│  >CUSTOM                                       │
│   1X1                                          │
│   1X2                                          │
└─────────────────────────────────────────────┘
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

SELECT WHAT WINDOW

The "SELECT WHAT WINDOW" menu is used to select the window for the format listed as *TARGET FORMAT*. The *TARGET FORMAT* displays the format to be configured. Press **B7** or **B8** to scroll through the selections. Press **B0** (**SOURCE**), **B1** (**EFFECT**), **B2** (**DURAT**), **B3** (**CONTROL**) or **B4** (**PRESET**) (custom format only) and **B5** (**PAD**) for more options in the selected menu. Press **B6** (**MENU**) to return to the previous menu.

"SELECT WHAT WINDOW" Menu

MENU   B6

```
SELECT WHAT WINDOW:
        TARGET FORMAT: CUSTOM
        SELECT WINDOW:  1
SOURCE EFFECT  DURAT   CONTROL PRESET
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SELECT SOURCE FOR WINDOW

The "SELECT SOURCE FOR WINDOW" screen is used to select the source for the target window. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to confirm the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SELECT SOURCE FOR WINDOW" Screen

MENU   B6

```
SELECT SOURCE FOR WINDOW:   1
 >NONE
   Input 1 Auto
   Input 2 Auto
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SELECT EFFECT FOR WINDOW

The "SELECT EFFECT FOR WINDOW" screen is used to select effects for the target window. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to confirm the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SELECT EFFECT FOR WINDOW" Screen

MENU   B6

```
SELECT EFFECT FOR WINDOW:   1
  >VIDEO CUT
   VIDEO STRETCH NORTH
   VIDEO STRETCH NORTHWEST
```
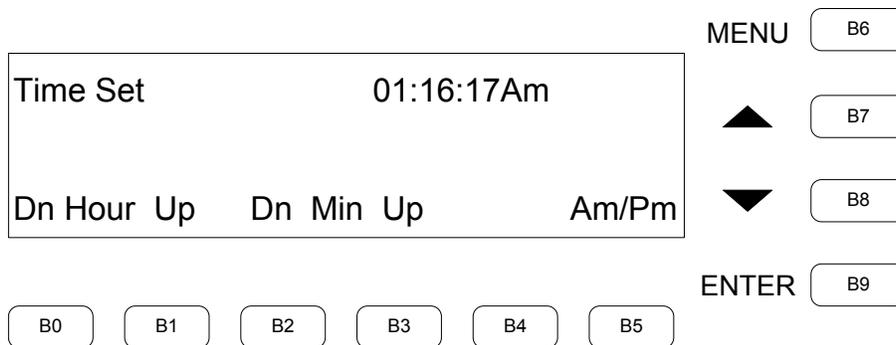
▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SET DURATION FOR WINDOW

The "SET DURATION FOR WINDOW" screen is used to set duration time for the target window. Press **B7** or **B8** to change the time for the target window. Press **B5** (**SAVE**) to confirm the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"SET DURATION FOR WINDOW" Screen

MENU   B6

```
SET DURATION FOR WINDOW:   1
          Current Duration:   2
          New Duration:       2
CANCEL                           SAVE
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SELECT CONTROL FOR WINDOW

Press **B3** (**CONTROL**) on the "SELECT WHAT WINDOW" menu to open the "SELECT CONTROL FOR WINDOW" menu. A number of other screens can be accessed from this menu. The screens are: "ACTIVE WINDOWS" (custom format only), "SET ASPECT RATIO", "SET VERTICAL POSITION" (custom format only), "SET HORIZONTAL POSITION" (custom format only), "SET VERTICAL SIZE" (custom format only), "SET HORIZONTAL SIZE" (custom format only), "SET Z ORDER" (custom format only), "SET WINDOW COLOR", "SET TEXT COLOR", and "SET TEXT JUSTIFY". Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen. Press **B6** (**MENU**) to return to the previous menu.

"SELECT CONTROL FOR WINDOW" Menu

MENU   B6

```
SELECT CONTROL FOR WINDOW:   1
  >ACTIVE WINDOWS
   SET ASPECT RATIO
   SET VERTICAL POSITION
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

ACTIVE/DEACTIVE WINDOW

The "ACTIVE/DEACTIVE WINDOW" screen is used to activate or deactivate the targeted window for *CUSTOM* format. Press **B7** or **B8** to toggle between *ON* and *OFF*. Press **B5** (**SAVE**) to save the setting and go back to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to go back to the previous menu without change.

"ACTIVE/DEACTIVE WINDOW" Screen

MENU   B6

```
ACTIVE/DEACTIVE WINDOW:
        Current:       (OFF)
        New:           (OFF)
CANCEL                       SAVE
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

NOTE: The "SET ASPECT RATIO", "SET VERTICAL POSITION", "SET HORIZONTAL POSITION", "SET VERTICAL SIZE", "SET HORIZONTAL SIZE", and "SET Z ORDER" screens of the "SELECT CONTROL FOR WINDOW" menu, operate the same way as the "ACTIVE/DEACTIVE WINDOW" screen shown above.

NOTE: The value of the Z Order moves the window back or forward. A setting of 1 places the window at the back while a setting of 8 places the window in the front.

WINDOW COLOR SELECTION

Use **B7** and **B8** to scroll to the desired color. Press **ENTER** to set the color value. Press **MENU** to abandon any changes and return to the "SELECT CONTROL FOR WINDOW" menu.

"WINDOW COLOR SELECTION" Menu

MENU [B6]

```
WINDOW COLOR SELECTION
SET RED COLOR        (0)
SET GREEN COLOR      (0)
SET BLUE COLOR       (0)
```

▲ [B7]

▼ [B8]

ENTER [B9]

[B0] [B1] [B2] [B3] [B4] [B5]

SETUP (COLOR)

This screen is to set the color value selected in the "WINDOW COLOR SELECTION" menu. Use **B7** or **B8** to select a number between 0 and 255. Press **B0** (**CANCEL**) or **MENU** to go back to the previous menu without change. Press **B5** (**SAVE**) to save the setting and go back to the previous menu.

"SETUP (COLOR)" Screen

MENU [B6]

```
SETUP RED
        Current Setting:     (0)
        New Setting:         (0)
CANCEL                          SAVE
```

▲ [B7]

▼ [B8]

ENTER [B9]

[B0] [B1] [B2] [B3] [B4] [B5]

NOTE: The "SETUP (COLOR)" screen operates the same way for red, green and blue.

TEXT JUSTIFY

Use **B7** or **B8** to scroll all available settings for the target window. Press **B9** (**ENTER**) to make the selection and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"TEXT JUSTIFY" Screen

MENU ⎡B6⎤
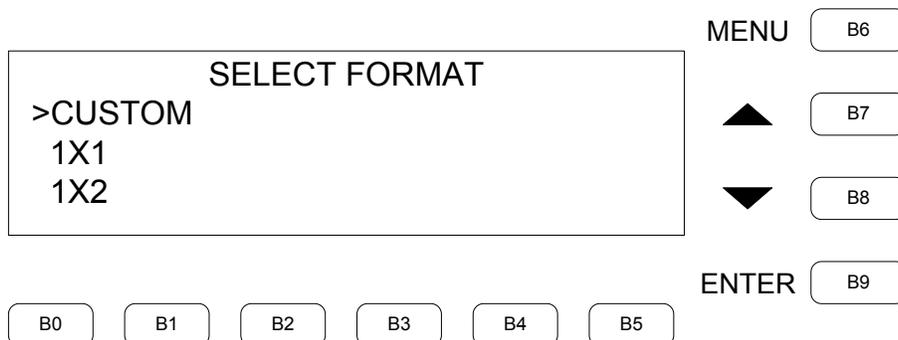
```
┌─────────────────────────────────────┐
│            TEXT JUSTIFY              │
│  >TOP LEFT                           │
│   TOP CENTER                         │
│   TOP RIGHT                          │
└─────────────────────────────────────┘
```

▲ ⎡B7⎤

▼ ⎡B8⎤

ENTER ⎡B9⎤

⎡B0⎤ ⎡B1⎤ ⎡B2⎤ ⎡B3⎤ ⎡B4⎤ ⎡B5⎤

OOTB PRESETS

Pressing **B4** (**PRESET**) on the" SELECT WHAT WINDOW" menu opens the "OOTB PRESETS" screen. Use **B7** or **B8** to choose a new preset. Press **B0** (**LOAD**) to load a preset and **B5** (**SAVE**) to save a preset that has been changed. Press **B9** **(ENTER)** to access the screen. Press **B6 (MENU)** to return to the previous menu.

"OOTB PRESETS" Screen

MENU ⎡B6⎤

```
┌─────────────────────────────────────┐
│ OOTB PRESETS                         │
│       Current Setting:     (0)       │
│       New Setting:         (0)       │
│ LOAD                         SAVE    │
└─────────────────────────────────────┘
```

▲ ⎡B7⎤

▼ ⎡B8⎤

ENTER ⎡B9⎤

⎡B0⎤ ⎡B1⎤ ⎡B2⎤ ⎡B3⎤ ⎡B4⎤ ⎡B5⎤

PAD AREA SELECTION

The "PAD AREA SELECTION" screen is used to select a target pad area for: *TOUCHOUT CHANNEL*, *TOUCHOUT DESTINATION*, and *TOUCHOUT FORMAT*. The first line displays the current system setting for *CUSTOM* or *STATIC* page. Use **B7** or **B8** to scroll to the available pad area. Press **B5** (**SAVE**) to select this pad area and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"PAD AREA SELECTION" Screen

MENU B6

```
PAD AREA SELECTION: CUSTOM WINDOW
          Current Pad Area:        (0)
          New Pad Area:            (0)
CANCEL                            SAVE
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

SELECT WHAT FORMAT

The "SELECT WHAT FORMAT" screen is used to select OOTBF format. The choices are: *CUSTOM*, *1X1*, *1X2*, *1X3*, *2X2*, *3X3*, *PIP RIGHT BOTTOM*, *PIP RIGHT TOP*, *PIP LEFT TOP*, and *PIP LEFT BOTTOM*. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to confirm the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SELECT WHAT FORMAT" Screen

MENU B6

```
SELECT WHAT FORMAT:
 >CUSTOM
  1X1
  1X2
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

OOTBF OUTPUT RESOLUTION

The "OOTBF OUTPUT RESOLUTION" screen is used to set the output resolution. Use **B7** or **B8** to scroll to the desired selection. Press **B9** (**ENTER**) to make the selection and return to the previous menu.

"OOTBF OUTPUT RESOLUTION" Screen

MENU B6

```
    OOTBF OUTPUT RESOLUTION:
 >1920 X 1200 @ 60Hz
  640 X 400 @ 85Hz
  640 X 480 @ 60Hz
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

COLOR SELECTION

The "COLOR SELECTION" menu is used to set the OOTBF color. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected screen.

NOTE: This menu allows changing the OOTBF background color of both static and custom pages.

"COLOR SELECTION" Menu

```
                                              MENU     B6
 ┌──────────────────────────────────────┐
 │          COLOR SELECTION:            │
 │   >RED                                │    ▲       B7
 │    GREEN                              │
 │    BLUE                               │    ▼       B8
 │                                       │
 └──────────────────────────────────────┘
                                            ENTER     B9

   B0      B1      B2      B3      B4      B5
```

OOTBF SELECT START UP PAGE

The "OOTBF SELECT START UP PAGE" screen is used to set the OOTBF default start up page. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"OOTBF SELECT START UP PAGE" Screen

```
                                              MENU     B6
 ┌──────────────────────────────────────┐
 │ OOTBF SELECT START UP PAGE:           │
 │        Current Page:   CUSTOM 0       │    ▲       B7
 │        New Page:       CUSTOM 100     │
 │ CANCEL                         SAVE   │    ▼       B8
 │                                       │
 └──────────────────────────────────────┘
                                            ENTER     B9

   B0      B1      B2      B3      B4      B5
```

PAD AREA SETTING

The "PAD AREA SETTING" menu is used to set target pad area for: *TOUCHOUT CHANNEL*, *TOUCHOUT DESTINATION*, and *TOUCHOUT FORMAT*. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the menu. Press **B6** (**MENU**) to return to the previous menu.

"PAD AREA SETTING" Menu

```
                                                          MENU   ┌──────┐
                                                                 │  B6  │
┌────────────────────────────────────────────┐                  └──────┘
│ PAD AREA SETTING :                          │
│   >SELECT PAD AREA            (1)           │                  ┌──────┐
│    TOUCHOUT CHANNEL                         │          ▲       │  B7  │
│    TOUCHOUT DESTINATION                     │                  └──────┘
│                                             │
│                                             │                  ┌──────┐
│                                             │          ▼       │  B8  │
└────────────────────────────────────────────┘                  └──────┘

                                                          ENTER  ┌──────┐
  ┌────┐  ┌────┐  ┌────┐  ┌────┐  ┌────┐  ┌────┐                 │  B9  │
  │ B0 │  │ B1 │  │ B2 │  │ B3 │  │ B4 │  │ B5 │                 └──────┘
  └────┘  └────┘  └────┘  └────┘  └────┘  └────┘
```

PAD AREA SELECTION

The "PAD AREA SELECTION" screen is used to select a target pad area for: *TOUCHOUT CHANNEL*, *TOUCHOUT DESTINATION*, and *TOUCHOUT FORMAT*. The first line displays the current system setting for *CUSTOM* or *STATIC* page. Use **B7** or **B8** to scroll to the available pad area. Press **B5** (**SAVE**) to select this pad area and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"PAD AREA SELECTION" Screen

```
                                                          MENU   ┌──────┐
                                                                 │  B6  │
┌────────────────────────────────────────────┐                  └──────┘
│ PAD AREA SELECTION :  STATIC WINDOW         │
│      Current Pad Area:     1                │                  ┌──────┐
│      New Pad Area :        1                │          ▲       │  B7  │
│ CANCEL                          SAVE        │                  └──────┘
│                                             │
│                                             │                  ┌──────┐
│                                             │          ▼       │  B8  │
└────────────────────────────────────────────┘                  └──────┘

                                                          ENTER  ┌──────┐
  ┌────┐  ┌────┐  ┌────┐  ┌────┐  ┌────┐  ┌────┐                 │  B9  │
  │ B0 │  │ B1 │  │ B2 │  │ B3 │  │ B4 │  │ B5 │                 └──────┘
  └────┘  └────┘  └────┘  └────┘  └────┘  └────┘
```

NOTE: The "SELECT TOUGHOUT CHANNEL", "SELECT TOUCHOUT DESTINATION", and "SELECT TOUCHOUT FORMAT" screens operate the same way as the "PAD AREA SELECTION" screen shown above.

AUTODISCOVERY

The "AUTODISCOVERY" screen is used to enable or disable the autodiscovery feature. Use **B7** or **B8** to toggle between *Enabled* and *Disabled*. Press **B5** (**SAVE**) to confirm the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"AUTODISCOVERY" Screen

```
                                          MENU   [ B6 ]

┌─────────────────────────────────────┐
│ AUTODISCOVERY:                       │          [ B7 ]
│        Current:        (Disabled)    │     ▲
│        New:            (Disabled)    │
│ CANCEL                       SAVE    │     ▼    [ B8 ]
└─────────────────────────────────────┘

                                         ENTER  [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```

ANNOTATION

The "ANNOTATION" menu is used to access the "ENABLE ANNOTATION", "CLEAR ANNOTATION", "LIVE/FROZEN VIDEO", "SET BRUSH", "SET COLOR", and "REMOTE OVERRIDE" screens. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the menu. Press **B6** (**MENU**) to return to the previous menu.

> **NOTE:** A video window must have a pad area assigned to it for annotation to function.

"ANNOTATION" Menu

```
                                          MENU   [ B6 ]

┌─────────────────────────────────────┐
│          ANNOTATION                  │          [ B7 ]
│ >ENABLE ANNOTATION    (Disabled)     │     ▲
│  CLEAR ANNOTATION                    │
│  LIVE/FROZEN VIDEO     (Live)        │     ▼    [ B8 ]
└─────────────────────────────────────┘

                                         ENTER  [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```
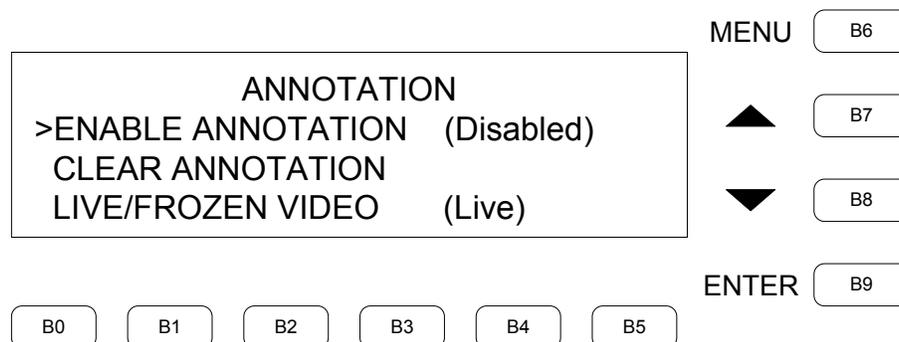
ENABLE ANNOTATION

The "ENABLE ANNOTATION" screen is used to enable or disable annotation. Press **B7** or **B8** to toggle between *Enabled* and *Disabled*. Press **B5** (**SAVE**) to confirm the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"ENABLE ANNOTATION" Screen

```
                                        MENU    B6

ENABLE ANNOTATION
        Current:     (Disabled)                 B7
        New :        (Disabled)
CANCEL                           SAVE           B8


                                        ENTER   B9

  B0      B1      B2      B3      B4      B5
```
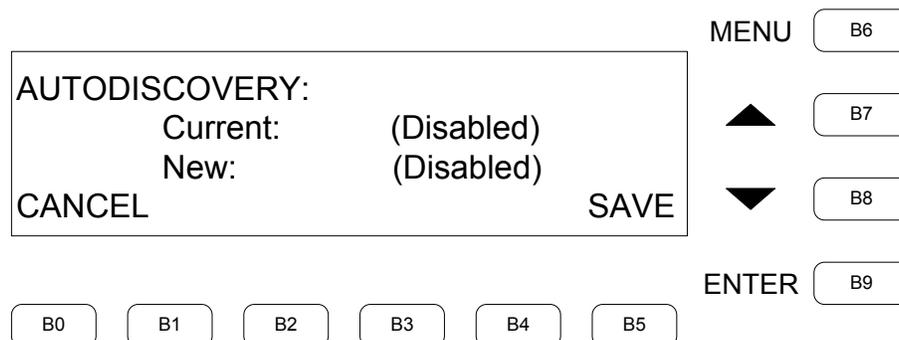
CLEAR ANNOTATION

The "CLEAR ANNOTATION" screen is used to clear annotation. Press **B0** (**CONFIRM**) to clear annotation and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"CLEAR ANNOTATION" Screen

```
                                        MENU    B6

CLEAR ANNOTATION?                               B7



CANCEL                        CONFIRM           B8


                                        ENTER   B9

  B0      B1      B2      B3      B4      B5
```

LIVE/FROZEN VIDEO

The "LIVE/FROZEN VIDEO" screen is used to freeze or unfreeze video. Press **B7** or **B8** to toggle between *LIVE* and *FROZEN* video. Press **B5** (**SAVE**) to confirm the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"LIVE/FROZEN VIDEO" Screen

```
                                        MENU    B6

LIVE/FROZEN VIDEO
        Current :      LIVE                      B7
        New :          LIVE
CANCEL                            SAVE           B8


                                        ENTER   B9

  B0      B1      B2      B3      B4      B5
```

SET BRUSH

The "SET BRUSH" screen is used to set the brush to: *THIN*, *MEDIUM*, or *THICK*. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SET BRUSH" Screen

```
                                          MENU  [  B6  ]

┌──────────────────────────────┐
│ SET BRUSH:                   │          ▲      [  B7  ]
│  >THIN                       │
│   MEDIUM                     │
│   THICK                      │          ▼      [  B8  ]
│                              │
└──────────────────────────────┘
                                          ENTER [  B9  ]

[  B0  ] [  B1  ] [  B2  ] [  B3  ] [  B4  ] [  B5  ]
```
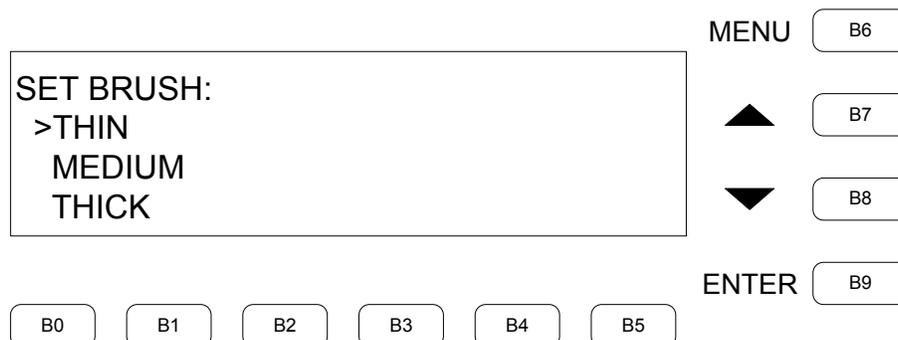
SET COLOR

The "SET COLOR" screen is used to set color to: *RED*, *GREEN*, *BLUE*, *YELLOW*, *CYAN*, *MAGENTA*, *WHITE*, *BLACK*, and to *ERASE* color. Press **B7** or **B8** to scroll through the selections. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"SET COLOR" Screen

```
                                          MENU  [  B6  ]

┌──────────────────────────────┐
│ SET COLOR:                   │          ▲      [  B7  ]
│  >RED                        │
│   GREEN                      │
│   BLUE                       │          ▼      [  B8  ]
│                              │
└──────────────────────────────┘
                                          ENTER [  B9  ]
[  B0  ] [  B1  ] [  B2  ] [  B3  ] [  B4  ] [  B5  ]
```

REMOTE OVERRIDE

The "REMOTE OVERRIDE" screen is used to turn remote override *ON* or *OFF*. Press **B7** or **B8** to toggle between *ON* and *OFF*. Press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.
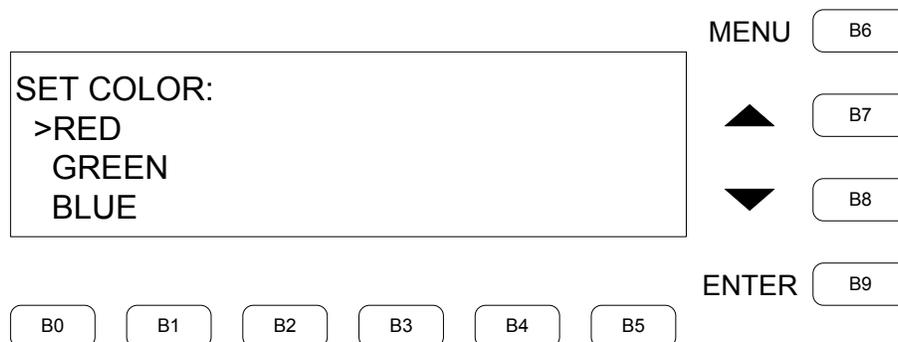
NOTE: Remote Override is used to allow annotation on a remote DVPHD (that is, annotation on one unit, displaying on another). When this feature is enabled on a source DVPHD, Remote Override on the target DVPHD need not be enabled.

"REMOTE OVERRIDE" Screen

MENU B6

```
REMOTE OVERRIDE
     Current :        (OFF)
     New   :          (OFF)
CANCEL                        SAVE
```
▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

REBOOT SYSTEM

The "REBOOT SYSTEM" screen can be used to reboot the system. Press **B5** (**CONFIRM**) to reboot the system. Press **B0** (**CANCEL**), **B6** (**MENU**) or **B9** (**ENTER**) to return to the previous menu without change.

"REBOOT SYSTEM" Screen

MENU B6

```
REBOOT SYSTEM?


CANCEL                     CONFIRM
```
▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

QUICK OOTBF CONFIG

The "QUICK OOTBF CONFIG" screen is used to set up OOTBF. Press display button **1** to enable or disable OOTBF. Press display button **2** to step through all possible OOTBF pages. Press top display button **3** to step through all available windows for that page. Press display button **4** to select **NO** source for that window. Press input buttons **1** through **8** to select sources for that window. Press **B6** (**MENU**) to return to the previous menu.

"QUICK OOTBF CONFIG" Screen

MENU B6

```
OOTBF Status              (Enabled)
Current page              (CUSTOM)
Current window            (1)
Current window source     (Input 1 Auto)
```
▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5

Display and Input Front Panel Buttons

DISPLAY

ENABLE OOTBF	PAGE SELECT	WINDOW SELECT	NO INPUT
○	○	○	○
1	**2**	**3**	**4**
⬡	⬡	⬡	⬡

INPUTS

INPUT 1 BNC	INPUT 2 DVI	INPUT 3 BNC	INPUT 4 DVI	INPUT 5 BNC	INPUT 6 DVI	INPUT 7 BNC	INPUT 8 DVI
○	○	○	○	○	○	○	○
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
○	○	○	○	○	○	○	○

ENTER/EXIT SETUP

In the "ENTER/EXIT SETUP" screen, press **B5** (**SAVE**) to save the setting and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"ENTER/EXIT SETUP" Screen

MENU   [B 6]

```
ENTER/EXIT SETUP
    Current :      Setup page is on
    New    :      Exit setup page
CANCEL                        SAVE
```

▲   [B 7]

▼   [B 8]

ENTER   [B 9]

[B 0]   [B 1]   [B 2]   [B 3]   [B 4]   [B 5]

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

DVPHD Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Device does not function.	Device is not receiving sufficient power.	Verify correct power to the device.
	Incorrect firmware/software.	Update firmware/software versions as indicated in the Specifications section.
	Incorrect cable connections.	Follow connection procedures in this guide and inspect connector pins.
No video output displayed.	Incorrect cable connections.	Verify connections and any adapters being used.
	Output display resolution set incorrectly.	Set correct output display resolution.
DVPHD does not boot properly.	Firmware or program not properly loaded.	Use Toolbox to reload firmware or program.
Wrong source or video displayed.	Wrong VT Pro-e or SIMPL programs.	Verify correct programs.
	VT Pro-e project not set up correctly.	Verify proper video set up for each displayed video window.
	Front panel program not properly set up.	Verify proper video set up for each displayed video window.
Video from RGB source garbled or no output.	Incorrect cable connections.	Verify BNC and DVI cable connections.
Incorrect video effect in video window or video effect is different than expected.	VT Pro-e project not properly set up.	Verify video effect selected for the video window.
	Front panel program not properly set up.	Verify video effect selected for the video window.
	Wrong effect selected.	Select the correct effect.
	Analog join value has been set.	Change analog join value to zero (0).
Mouse or touch screen does not work.	Incorrect touch settings.	Ensure that the correct touch screen is selected in the front panel menus or by using Toolbox.
	Incorrect calibration.	Recalibrate touch screen.

(Continued on following page)

DVPHD Troubleshooting (Continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Incorrect displayed time and date.	Device recently rebooted.	The device does not have an internal real time clock. The time and date resets to 01/01/00 12:00:00 when rebooted.
HD sources do not display (Black Window), but other sources do.	The display device does not support HDCP.	Make sure the display is HDCP compliant and the device connected to the DVI or HDMI port on the display.
When HD sources are connected the QM output only displays a black screen	HDCP requires all non-encrypted outputs be disabled when displaying protected content.	None.

Check Network Wiring

Use the Right Wire

To ensure optimum performance over the full range of the installation topology, use Crestron Certified Wire only. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy chained on the run, the Cresnet power usage of each network unit to be daisy chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is run from a Crestron system power supply network port, the Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40,000}{R \times P}$$

Where: L = Length of run (or chain) in feet
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 mm^2))
or 1.6 Ohms (Cresnet HP: 12 AWG (4 mm^2))
P = Cresnet power usage of entire run (or chain)

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run using 18 AWG Crestron Certified Wire and drawing 20 watts should not have a length of run more than 333 feet (101 meters). If Cresnet HP is used for the same run, its length could extend to 1250 feet (381 meters).

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the **24** and **G** pair and the other twisted pair is the **Y** and **Z** pair.

Strip and Tin Wire

When daisy chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

Use of a Cresnet Hub/Repeater (CNXHUB) is advised whenever the number of Cresnet devices on a network exceeds 20 or when the combined total length of Cresnet cable exceeds 3000 feet (914 meters).

Reference Documents

All documents mentioned in this guide are available at www.crestron.com/manuals.

List of Related Reference Documents

DOCUMENT TITLE
2-Series Control Systems Reference Guide
Crestron DigitalMedia Design Guide
Crestron e-Control Reference Guide

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or, for assistance within a particular geographic region, refer to the listing of Crestron worldwide offices at www.crestron.com/offices.

To post a question about Crestron products, log onto Crestron's Online Help at www.crestron.com/onlinehelp. First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the DVPHD, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron Web site periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.

2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.

3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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