Crestron **DVPHD-CUSTOM-GB**
High Definition Digital Video Annotator
Operations Guide

CRESTRON

The specific patents that cover Crestron products are listed at patents.crestron.com.

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High Definition Digital Video Annotator: DVPHD-CUSTOM-GB

Introduction

Whether conducting a boardroom meeting, training seminar or classroom lecture, annotation helps put the fine point on any presentation. Crestron[®] annotation provides the ability to illustrate thoughts on the fly, allows drawing and writing over high definition video and computer images and sketch out ideas on a whiteboard screen, without leaving the podium. In fact, only Crestron lets the user control varied media sources and present them to any sized audience, with stunning effect and ease, using just a single touch screen.

Introducing the DVPHD-CUSTOM-GB High Definition Video Annotator with Guidebar[®] technology: the world's only multiwindow annotation processor that displays high res computer and HD video signals with HDCP and enables complete control over the entire presentation.

Its modular design affords versatile configurations for handling up to eight different inputs of virtually any type.* 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.

Features and Functions

- The first multiwindow annotator available that supports HD video with HDCP
- Enables real time, interactive annotation over high definition video and computer images
- Guidebar technology affords complete presentation control
- Displays up to eight fully scalable video windows with annotation
- QuickSwitch HD[®] achieves ultra fast switching with transition effects
- Modular design accepts the choice of up to eight simultaneous inputs*

(Continued on following page)

* Actual signal types and quantities are dependent on the selected input/output card configuration. To configure a DVPHD-CUSTOM-GB with input and output cards, please use the online DVPHD-GB Configuration Tool at www.crestron.com/resources/system_design_resources/product_configuration_tools/dvphd/. All input and output cards must be factory installed.

Features and Functions
(Continued)

- Handles HDMI®, DVI, DisplayPort Multimode and HD-SDI digital video sources[1]
- Handles analog RGB, component, S-video and composite video sources[1]
- Supports DVI, HDMI and RGB display devices and touch screen monitors[1]
- Compatible with a vast range of third-party touch screens[2]
- Includes integrated Crestron graphics engine
- Features VXP® high definition scaling and deinterlacing
- Supports resolutions up to WUXGA 1920 x 1200 and HDTV 1080p60[3]
- Automatic input/output configuration via sync detection and EDID (Extended Display Identification Data)[4]
- Advanced HDCP compliance manages DRM for eight digital sources[5]
- Features built-in test patterns for easy setup and fine adjustment
- Allows easy setup via LCD front panel, on-screen display or Web browser
- Affords native Crestron control system integration
- Includes high speed Ethernet and Cresnet® communications
- Available QuickMedia® inputs and outputs[4, 5, 6, 7]

Guidebar Technology

The DVPHD-CUSTOM-GB delivers a powerful, polished presentation and annotation solution, featuring "Guidebar" controls on the presenter's touch screen to enable command over annotation, AV, lighting and other functions. The Guidebar resides conveniently at the top, bottom or sides of the presenter's screen without obscuring the video image, allowing immediate access to all the annotation tools, plus buttons for audio volume, source selection, transport control and room lighting. Just like any Crestron touch screen, the Guidebar is completely customizable for any appearance or functionality and is only visible to the presenter, so the audience sees just the full screen video image with annotations.

NOTE: For more information on the Guidebar, refer to the DVPHD-CUSTOM-GB Quickstart Guide (Doc. 6902) at www.crestron.com/manuals.

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. 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.
2. For the latest touch screen device support information, refer to Crestron True Blue Online Help Answer ID #4666 or contact Crestron True Blue Support.
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 QuickMedia (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.
5. The analog RGB and QM outputs are disabled if HDCP is utilized.
6. 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.
7. The QM outputs support RGBHV format only. Each QM output requires a QM receiver or other QM device (all sold separately).

HD Annotation

The DVPHD-CUSTOM-GB provides the essential annotation tools to make a point with maximum impact, 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. High definition annotation processing guarantees both the presenter and the audience sees everything in crisp detail.

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.

HDCP Management

The DVPHD-CUSTOM-GB is the first annotation 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-CUSTOM-GB actually performs advanced HDCP signal management, allowing up to eight HDCP encrypted sources to be combined on one high definition screen along with non-HDCP sources, graphics and live annotation.

More and more content providers are using HDCP to protect their DVDs, Blu-ray Discs, broadcast signals and online content against unauthorized copying. Analog connectivity, which cannot support HDCP, is being eliminated from the computers and AV equipment being sold today and soon, content providers are taking full advantage of the new digital technology to ensure only authorized users may view their content in all its high definition glory. Systems that do not support HDCP simply do allow display of all this HD content.

QuickSwitch HD

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

Multiformat Support

The DVPHD-CUSTOM-GB 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-CUSTOM-GB 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-CUSTOM-GB 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-CUSTOM-GB 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-CUSTOM-GB 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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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. All input and output cards must be factory installed.
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 Outputs

Separate DVI-I outputs are provided for the audience display and presenter's touch screen. Each output can support a DVI, HDMI or analog RGB signal at any resolution up to 1920 x 1200. To enable Guidebar functionality, the presenter's touch screen simply needs to have a higher resolution than the audience display. For instance, a 1920 x 1200 pixel touch screen can display a 1080p (1920 x 1080) video image, with the Guidebar occupying the remaining 120 rows of pixels above or below the video image. The audience, viewing on a 1080p display, sees just the full screen 1080p video image. So, everyone enjoys the same full resolution HD video image while only the presenter sees the Guidebar controls.[1, 2, 3, 4, 5]

Vast Touch Screen Support

The DVPHD-CUSTOM-GB is compatible with more touch screen displays than any other annotator or video processor 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.[6]

Advanced Image Processing

Among annotators, the DVPHD-CUSTOM-GB is also a venerable video processor and scaler in its own right, scaling its output perfectly to match the native resolution and aspect ratio of a high definition display. VXP® video processing with fully adaptive deinterlacing achieves exceptional realism and rich detail from standard definition, high definition and computer sources.

Auto-Configuration

The DVPHD-CUSTOM-GB 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[7], 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.

1. 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.
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. 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 outputs support RGBHV format only. Each 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. For the latest touch screen device support information, refer to Crestron True Blue Online Help Answer ID #4666 or contact Crestron True Blue Support.
7. 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.

System Integration

Both Cresnet® and high speed Ethernet are standard on the DVPHD-CUSTOM-GB, 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-CUSTOM-GB is also well suited for integration with DigitalMedia™ systems, allowing for even greater input extension and distribution to multiple displays.

Applications

The following diagram shows a DVPHD-CUSTOM-GB in a typical application.

DVPHD-CUSTOM-GB in a Typical Application
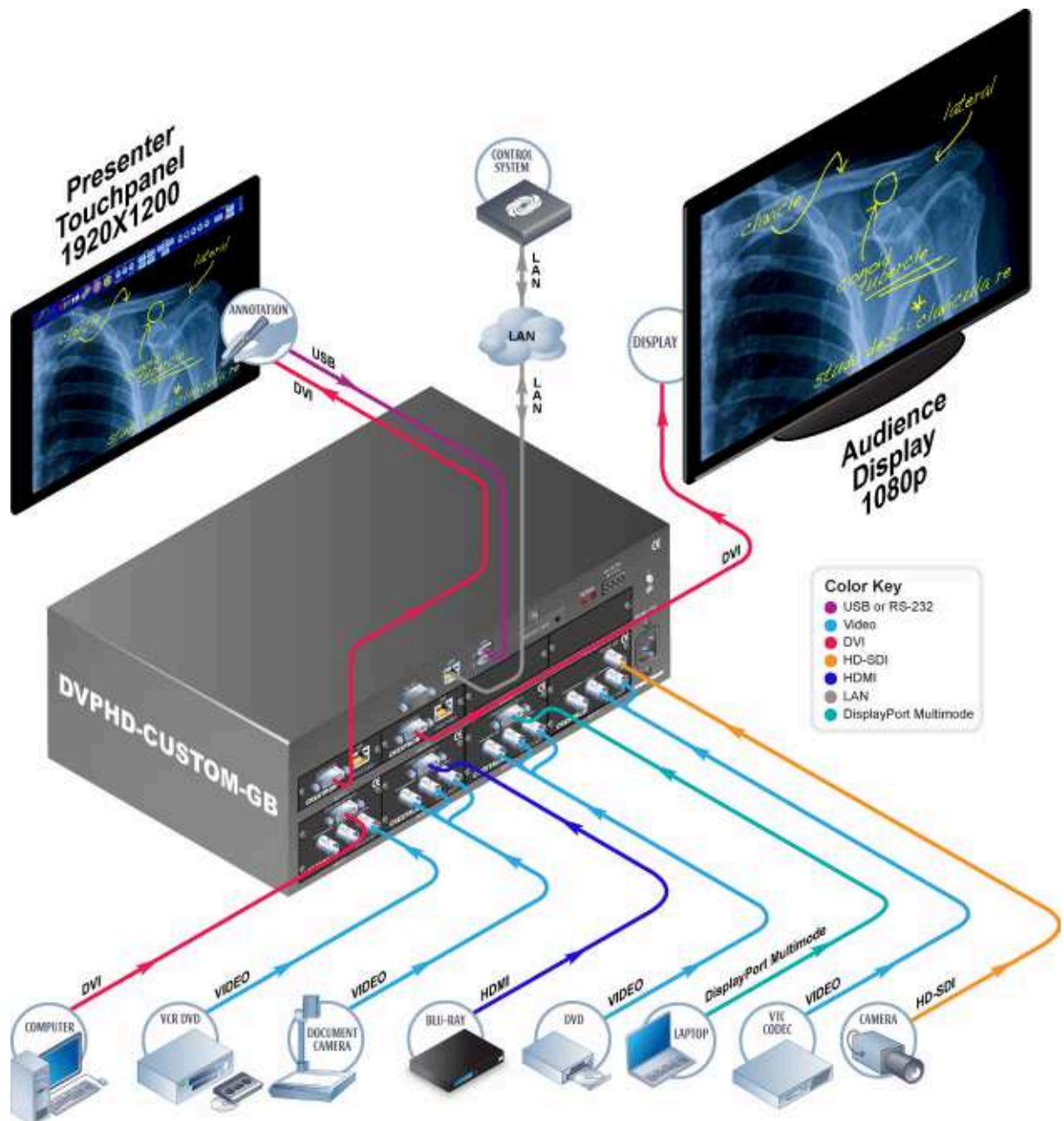
Specifications

Specifications for the DVPHD-CUSTOM-GB are listed in the following table.

DVPHD-CUSTOM-GB Specifications

SPECIFICATION	DETAILS
Video	
Scaling/Windowing Processor	VXP video processing, 8-channel image processing, resolution management, Crestron QuickSwitch HD technology
Input Signal Types[1]	HDMI, DVI, DisplayPort Multimode[2], SDI, RGB[1], 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 M colors
Analog Gain	0 dB (75 ohms 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, remote annotation
Memory	
DDR RAM	256 MB
Flash	64 MB
Compact Flash	Accepts up to 4 GB (1 GB Compact Flash® card included)
Maximum Project Size	200 MB

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DVPHD-CUSTOM-GB 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[6] (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], 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-discover, full/half duplex, DHCP, for control and console
Cresnet	Cresnet slave port for control and console
USB	Rear panel host ports 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	Metal, 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-CUSTOM-GB 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)

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. 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. 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 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.

6. Utilizes 3M MicroTouch™ technology.

Physical Description

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

DVPHD-CUSTOM-GB Physical View (Front)

DVPHD-CUSTOM-GB Physical View (Rear)

DVPHD-CUSTOM-GB Overall Dimensions (Front View)
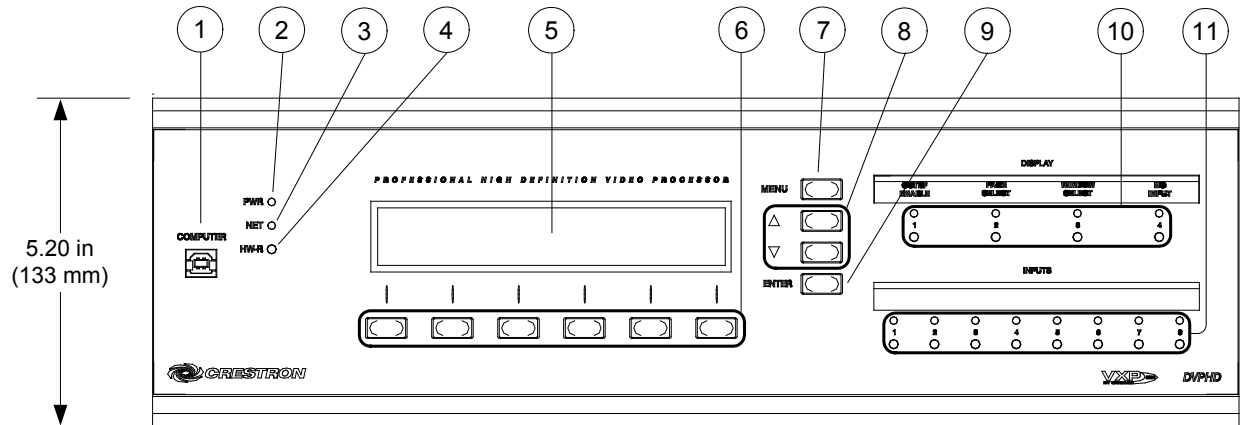
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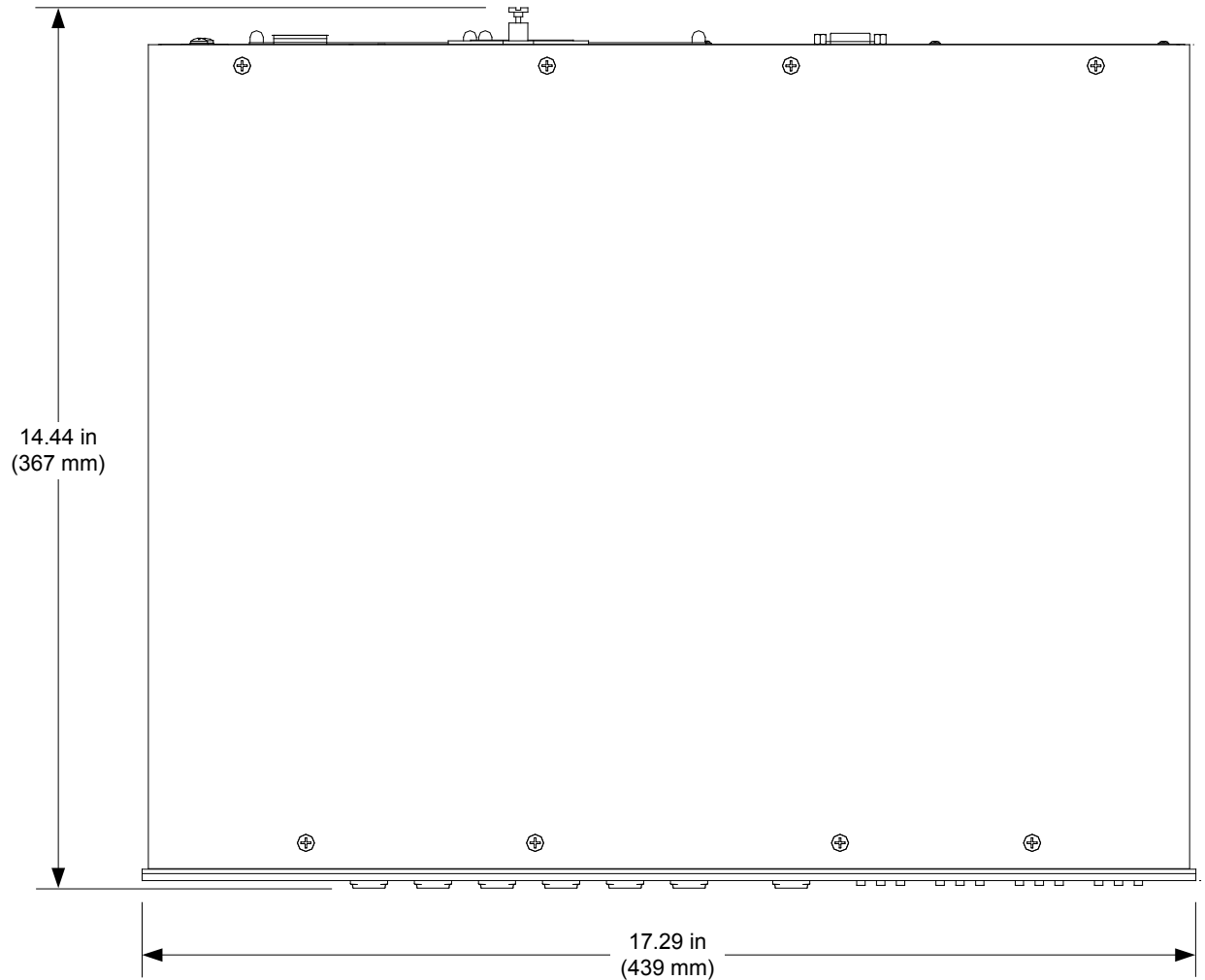
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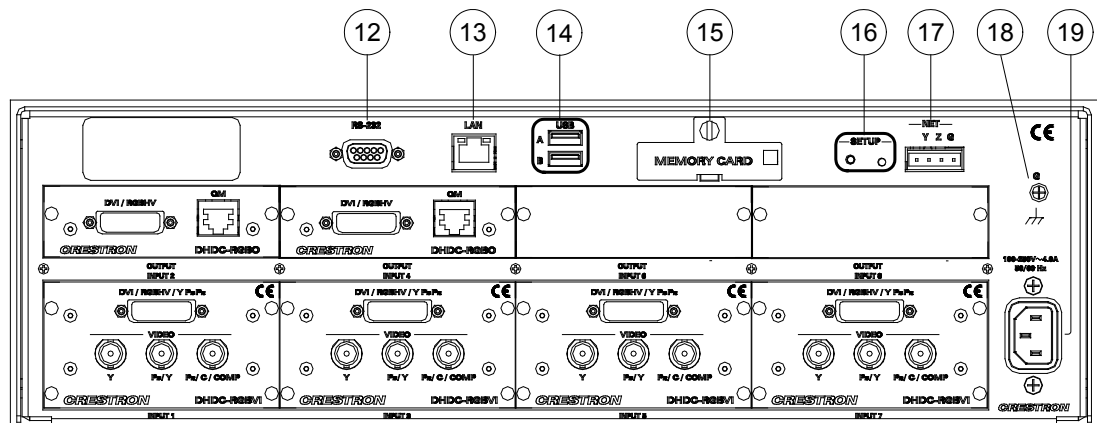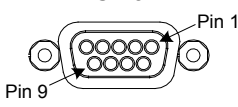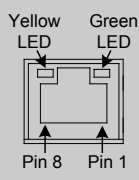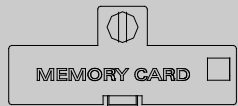
Connectors, Controls, and Indicators

#	CONNECTORS[1], CONTROLS, AND INDICATORS	DESCRIPTION
1	COMPUTER Pin 2 — USB — Pin 1 Pin 3 — Pin 4	(1) USB Type B female client port for computer console **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 indicates 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	Soft Keys[2]	(6) Push buttons for activation of LCD driven functions and passcode entry
7	MENU	(1) Push button, steps menu back one level
8	▲ ▼	(2) Push buttons, scroll up or down through menu and adjust menu parameters
9	ENTER	(1) Push button, executes highlighted menu or value
10	DISPLAY (1 – 4)	(4) Push buttons and red LEDs, used to configure out of the box functionality (OOTBF) or select output
11	INPUTS (1 - 8)	(8) Push buttons and red LEDs, select input source
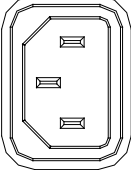
(Continued on following page)

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; 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-wire 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	SIGNAL	PIN	SIGNAL
1	TX +	5	N/C
2	TX -	6	RX -
3	RX +	7	N/C
4	N/C	8	N/C

#	CONNECTORS, CONTROLS, AND INDICATORS	DESCRIPTION
14	USB (A – B) Pins 1 2 3 4	(2) USB Type A female 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 3.5 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 and 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. Please 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 85.

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

For 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-CUSTOM-GB has been factory set to **03**. The Net IDs of multiple DVPHD-CUSTOM-GB 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-CUSTOM-GB'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-CUSTOM-GB 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.

Configuring the Video Processor

NOTE: In order to configure the DVPHD-CUSTOM-GB, 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 menus prior to viewing run-time screens that are loaded into the interface for normal operation. The method for accessing these setup menus 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, the "Main Menu", as shown in the following illustration, displays five buttons: **Touch Screen Calibration**, **Reboot and Run Program**, **Exit Setup and Run Program**, **Setup** and **Diagnostics**.

The **Exit and Run Program** 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
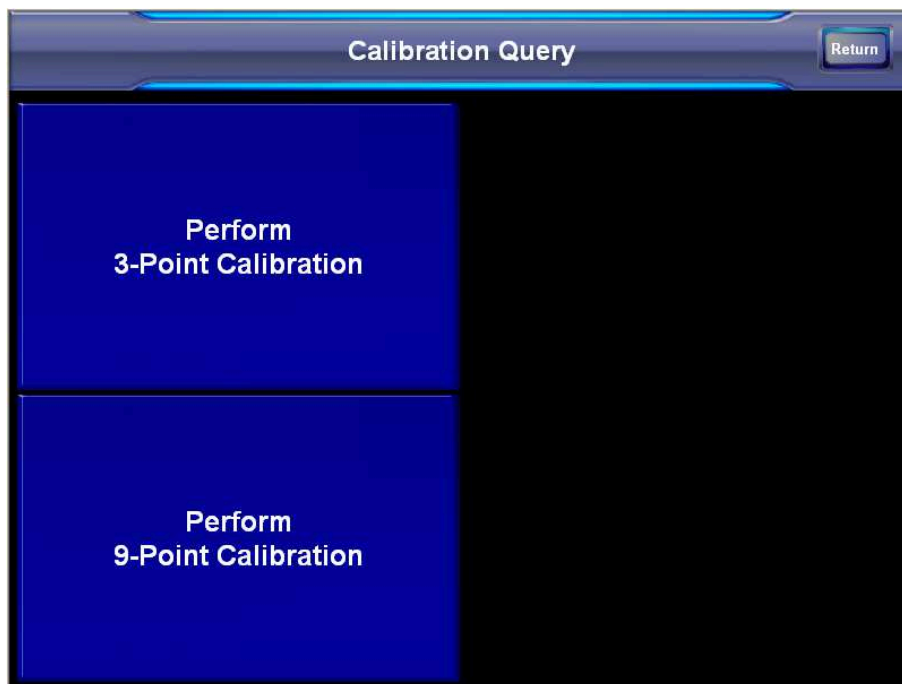
Touch **Touch Screen Calibration** on the "Main Menu" and then either **Perform 3-Point Calibration** or **Perform 9-Point Calibration** on the "Calibration Query" menu. The message "Touch Upper Left" appears centered on the panel with a cross hair in the upper left corner. Touch the center of the cross hair in the corner of the screen to initiate calibration. Another message, "Touch Upper Right", appears with a cross hair in the correct corner. Touch the center of the cross hair in the corner of the screen. A final message, "Touch Lower Right", appears with a cross hair in the correct corner. Touch the center of the cross hair in the corner of the screen to conclude calibration and return to the "Main Menu".

NOTE: It is not possible to calibrate a touch screen if a USB mouse is connected or the RS-232 port is set to **Mouse Input**.

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 when it is first touched. 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", touch **Setup** on 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, touch **Return** 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-CUSTOM-GB Video Processor settings are automatically saved in non-volatile memory.

"Setup Menu"
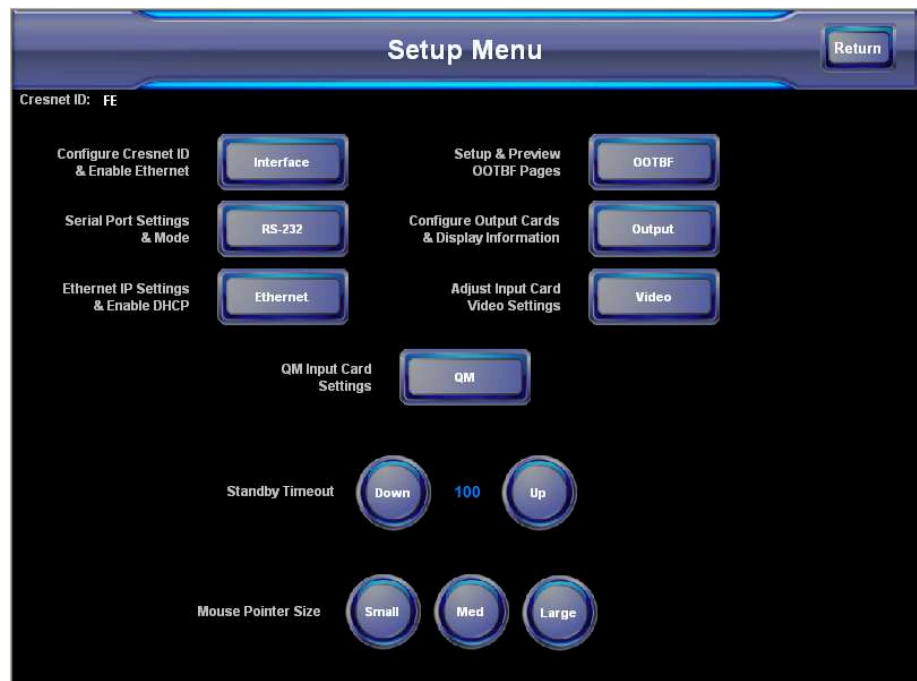
Interface Menu

The DVPHD-CUSTOM-GB 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-CUSTOM-GB and the SIMPL Windows program is required if data is to be successfully transferred. Net ID for the DVPHD-CUSTOM-GB is factory set to **03**. No two devices in the same system can have the same Net ID.

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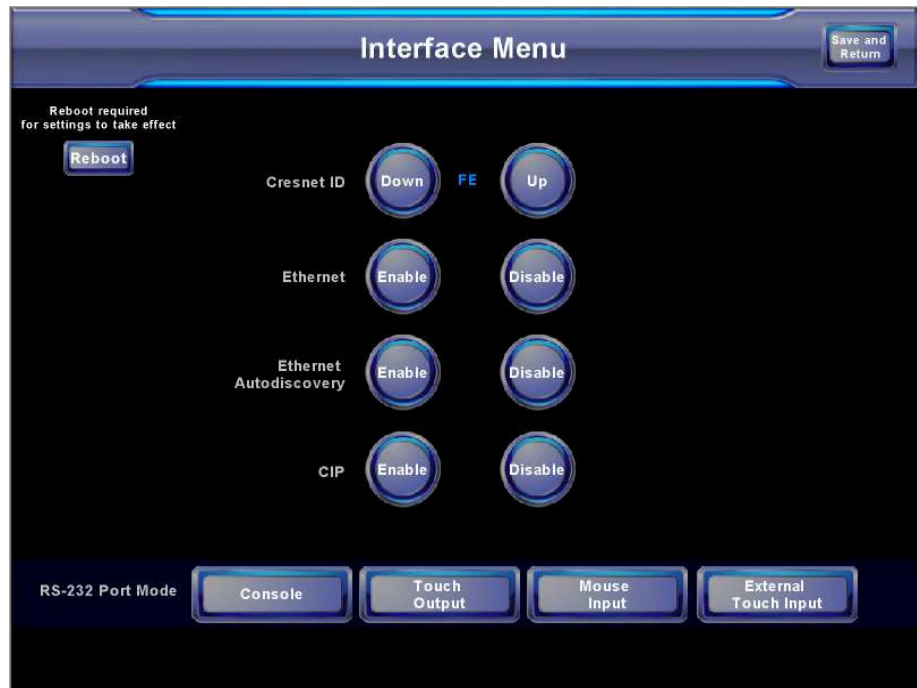
Two buttons adjacent to the *Cresnet ID* and its displayed hexadecimal number, **Down** and **Up**, decrease and increase the Cresnet ID by one, respectively.

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-CUSTOM-GB via CIP (Cresnet Internet Protocol). The *CIP* buttons, located on the "Interface Menu", select whether the DVPHD-CUSTOM-GB 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-CUSTOM-GB 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 (such as loading DVPHD-CUSTOM-GB 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. Touch **Reboot** to save the settings and restart the DVPHD-CUSTOM-GB if no other changes are required.

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), *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 in the "Establishing Communication" section on page 44 for additional Ethernet setup details.

NOTE: The address shown for the *Current IP Address* in the following illustration is only representative. It does not reflect a real or suggested address.

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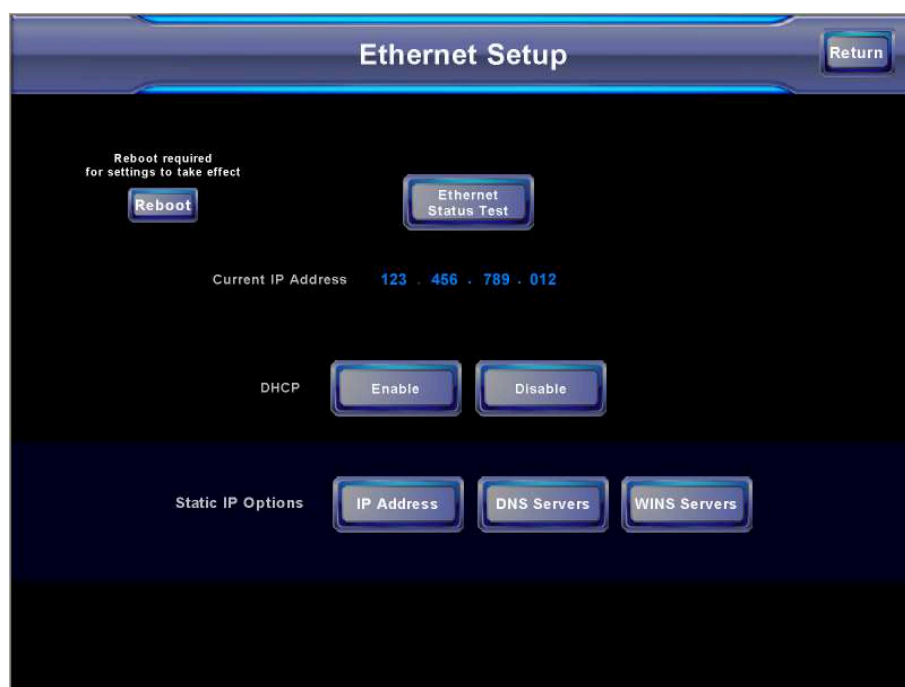
"Ethernet Static IP Settings" Menu
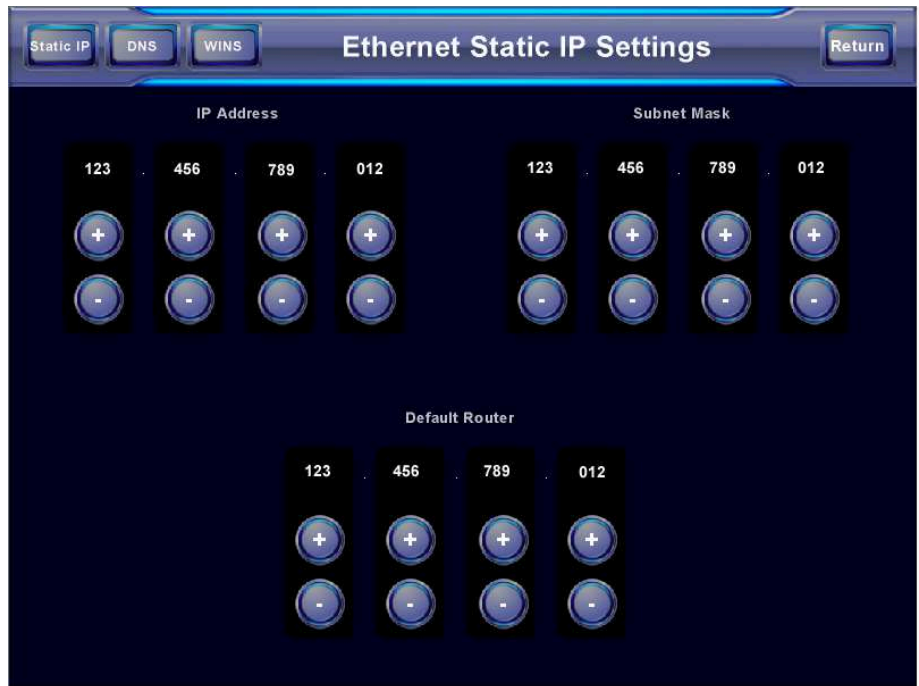
"Ethernet DNS Settings" Menu
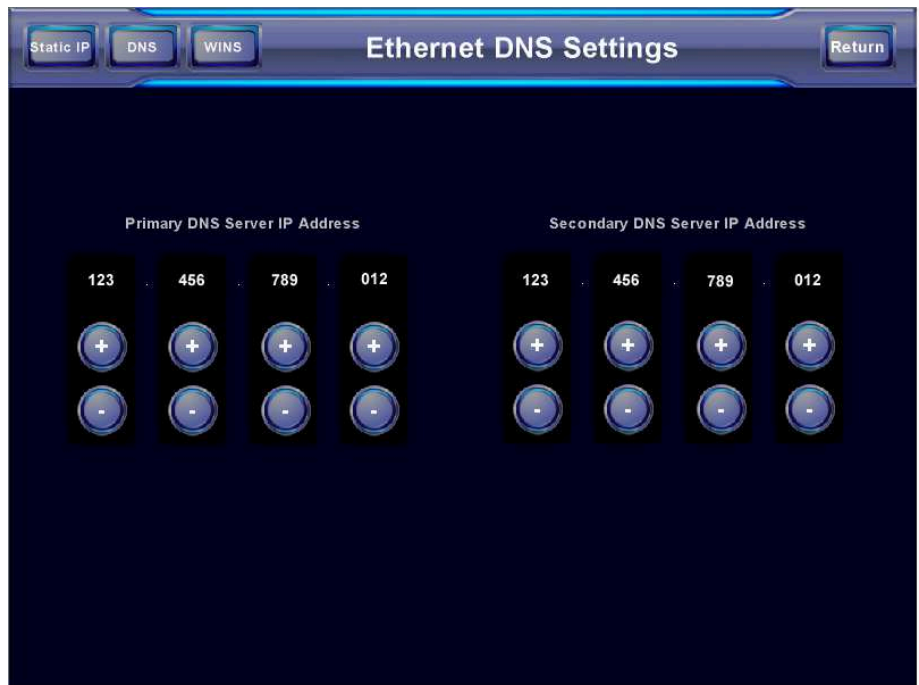
"Ethernet Wins Settings" Menu
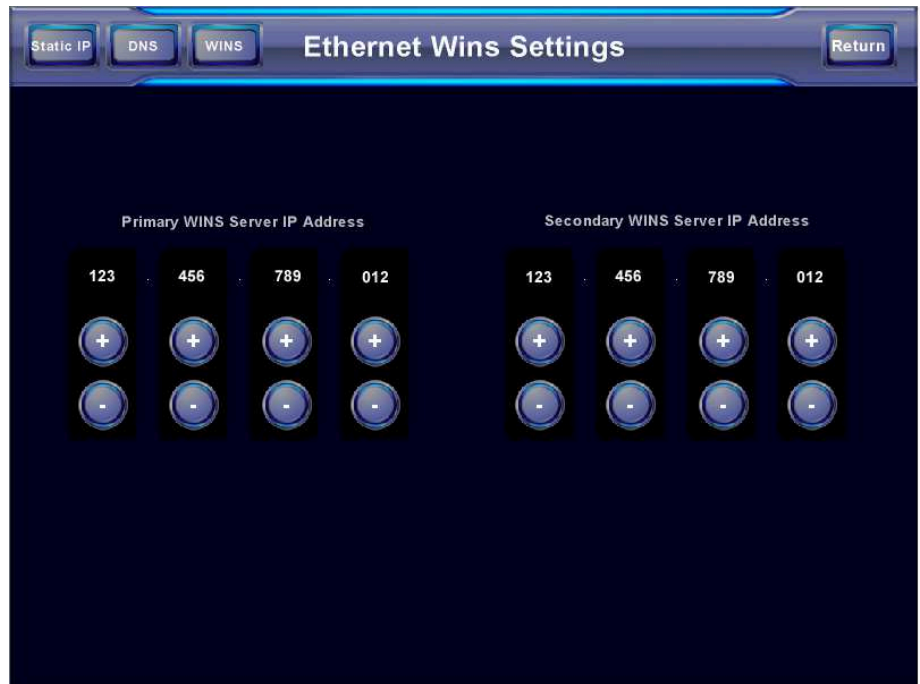
Touching *DHCP* **Enable** on the "Ethernet Setup" menu displays the *DHCP options* **Renew** and **Release**.

"Ethernet Setup" Menu (DHCP Enabled)
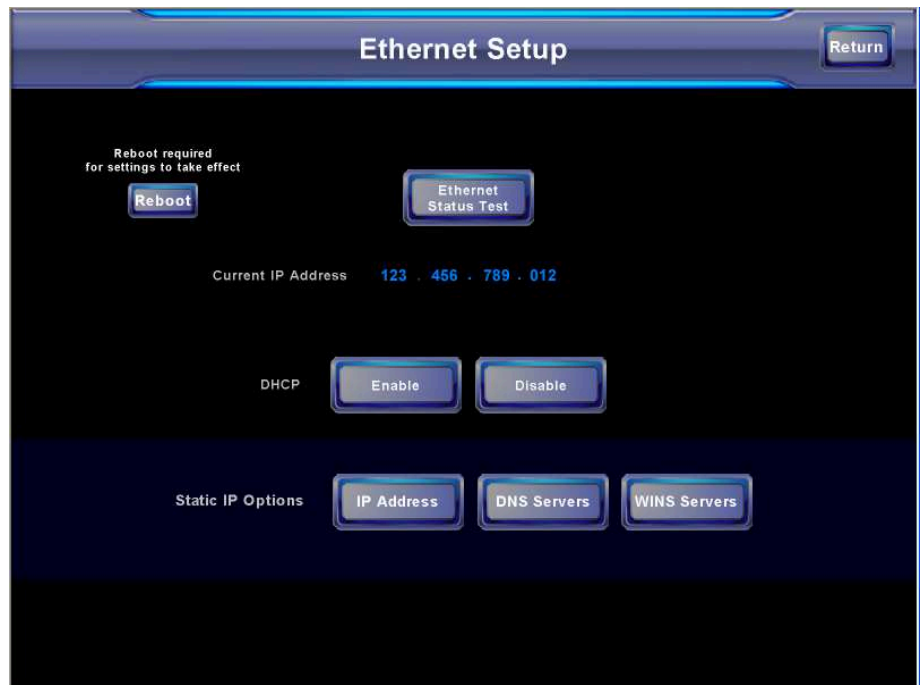
RS-232 Menu

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

- **Console** (loading DVPHD-CUSTOM-GB 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 *RS-232 Port Mode* communication option 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-CUSTOM-GB 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"

Output Setup

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

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

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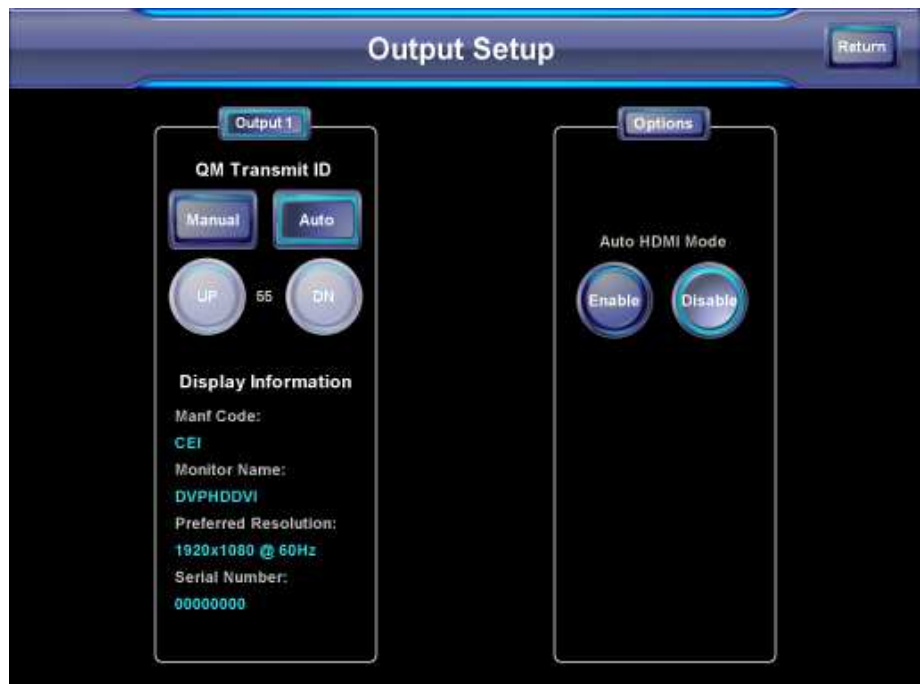
Refer to the following table for additional "Output Setup" screen details.

"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 **UP** and **DN** 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.

OOTBF Setup

The DVPHD-CUSTOM-GB 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** buttons to confirm or reject any changes.

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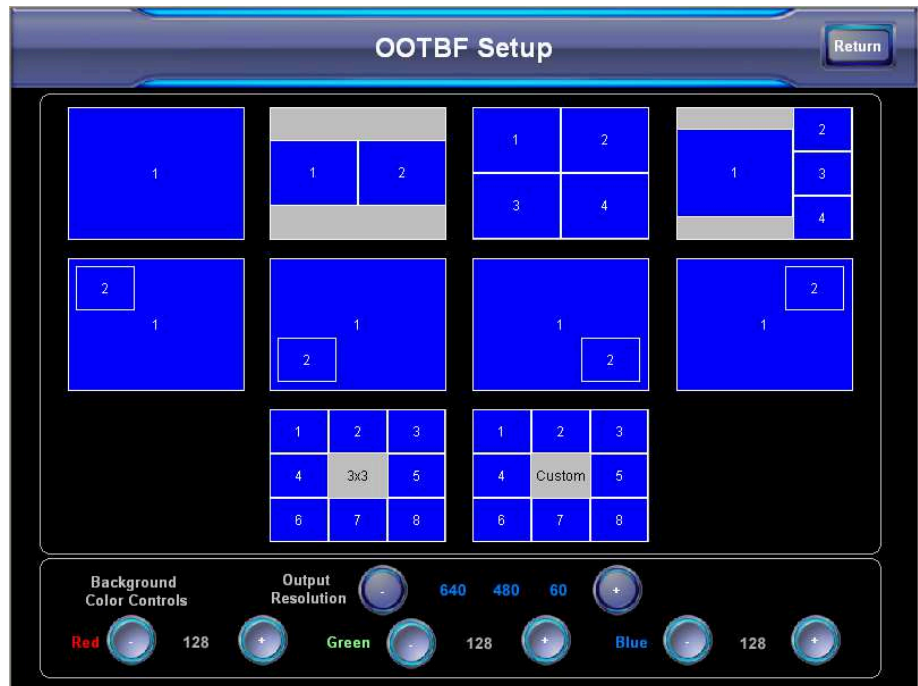
Refer to the following table for additional "OOTBF Setup" menu details.

"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.

(Continued on following page)

"OOTBF Setup" Details (Continued)

OOTBF SETUP MENU CONTROLS	DESCRIPTION
Background Color Controls (Continued)	
Blue	Adjusts the amount of blue in the layout background with the **–** and **+** buttons.
Output Resolution	Adjusts the output resolution in the range of 640 x 400 @ 85 Hz minimum to 1920 x 1200 @ 60 Hz 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
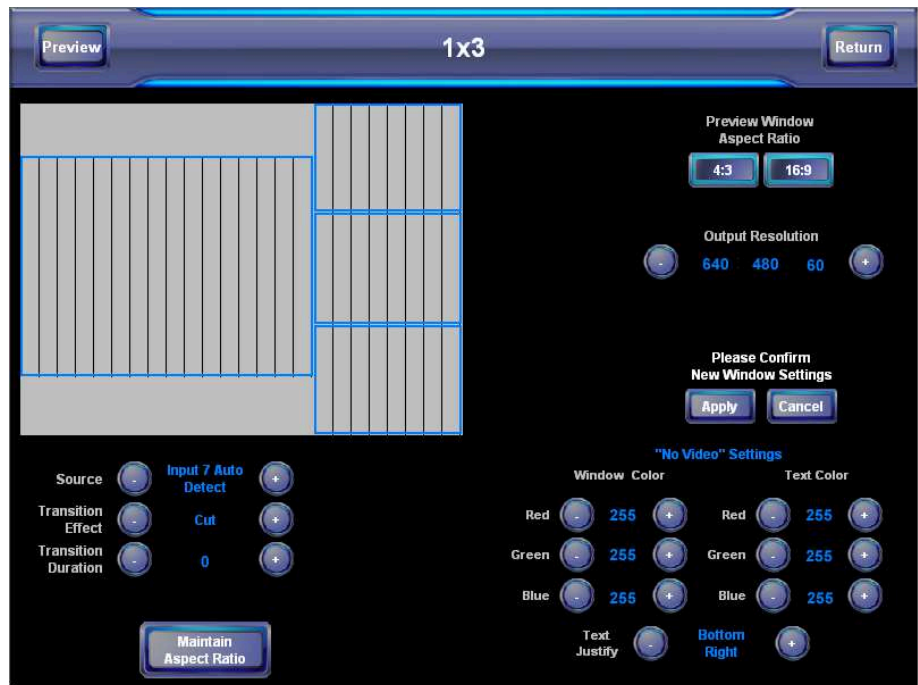
Refer to the following table for additional "1X3" screen details. Changes take effect when **Apply** is touched.

"1X3" Details

1X3 SCREEN CONTROLS	DESCRIPTION
Preview	Displays the video screen configuration based on the settings.
Source	**-** and **+** buttons allow choice of one of eight input sources.
Transition Effect	**-** and **+** buttons allow 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 @ 85 Hz minimum to 1920 x 1200 @ 60 Hz 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 (when no video is present) with the **–** and **+** buttons.
Green	Adjusts the amount of green in the selected video window (when no video is present) with the **–** and **+** buttons.
Blue	Adjusts the amount of blue in the selected video window (when no video is present) with the **–** and **+** buttons.
Text Color	
Red	Adjusts the amount of red in the selected video window's text (when no video is present) with the **–** and **+** buttons.
Green	Adjusts the amount of green in the selected video window's text (when no video is present) with the **–** and **+** buttons.
Blue	Adjusts the amount of blue in the selected video window's text (when no video is present) with the **–** and **+** buttons.
Text Justify	Adjusts the position of text on the selected window with the **–** and **+** buttons.

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 **Apply** is touched.

The following screen is displayed when the **Presets** button is selected. This screen allows loading and saving presets to the **Custom** screen as well as loading from and saving to compact flash.

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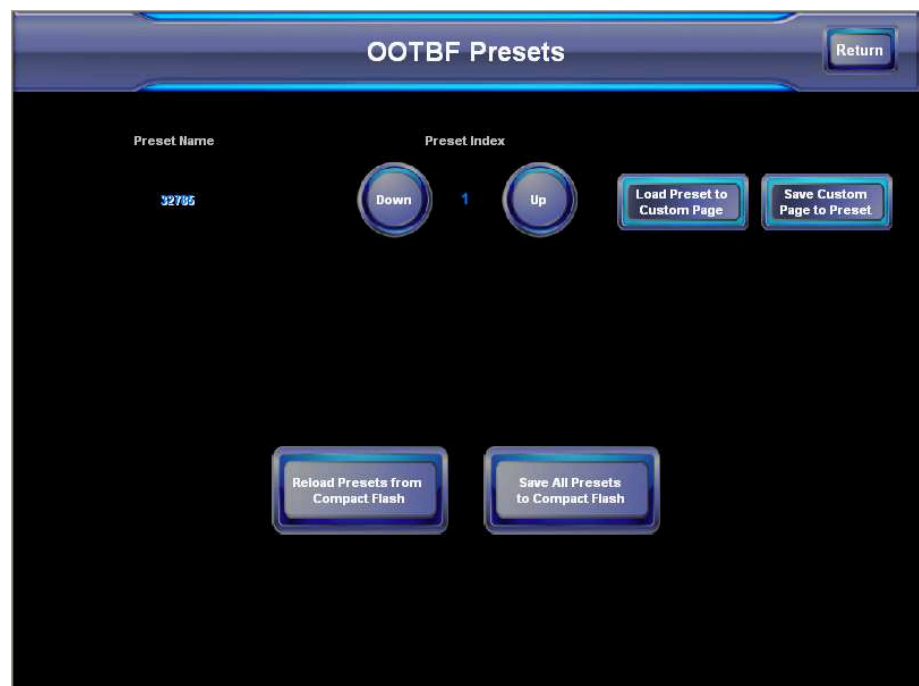
Additional Controls – Custom Screen Only – "OOTBF Presets" Screen

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-CUSTOM-GB for use in the **Custom** page.
Save All Presets to Compact Flash	This button saves all presets to compact flash.

Video Setup

The DVPHD-CUSTOM-GB can display up to eight fully scalable and movable full motion video windows, each supporting DVI, HDMI, SDI, HD-SDI, RGB, component, S-video and composite video signals from external AV and computer sources. These units also use auto-detect for DVI, HDMI, SDI, 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, SDI 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 menus for any of the eight video inputs by touching their respective buttons.

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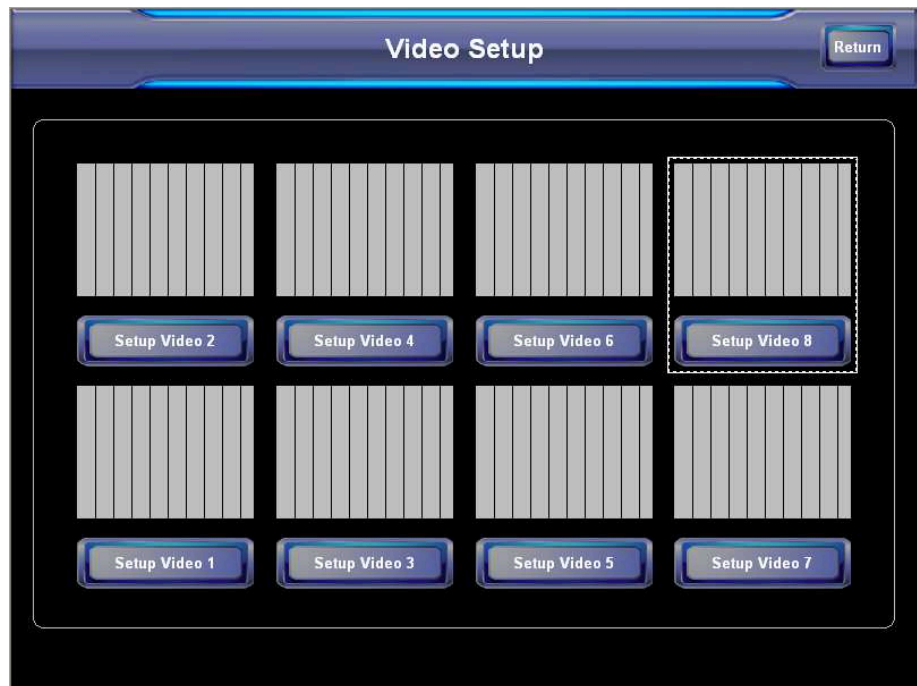
Refer to the following table for additional "Video Setup" menu details. Each video input control or button shown on the "Video Setup" menu reflects the type of video input detected by that window. The various button states are described in the following table.

"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 menu.
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 menu.
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 menu.
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 menu.

(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 menu.
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 menu.
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 menu.
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 menu.

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

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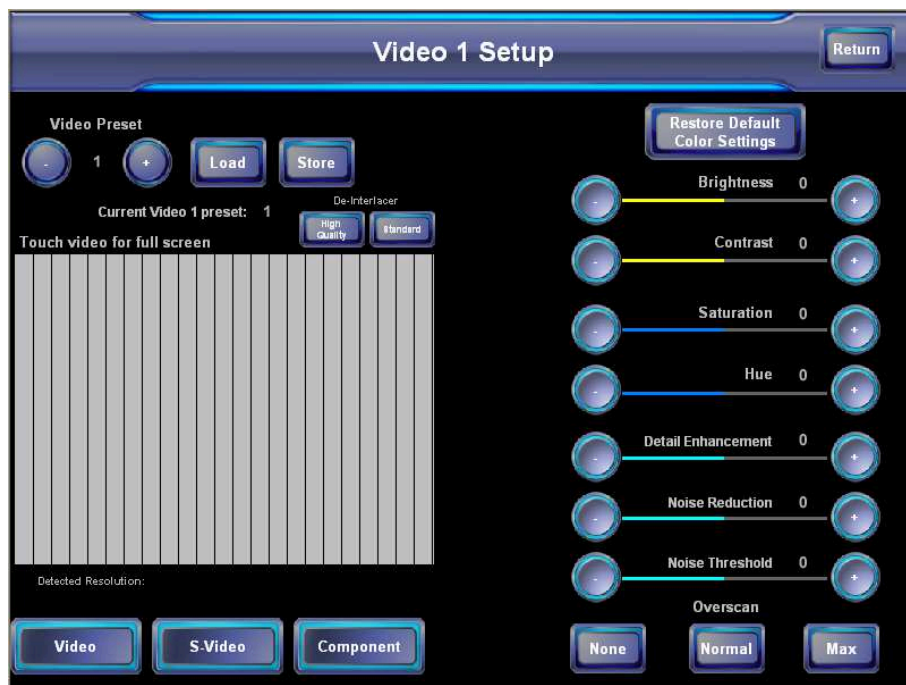
"Video 1 Setup" Details – Video, S-Video and Component

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 illustration below.

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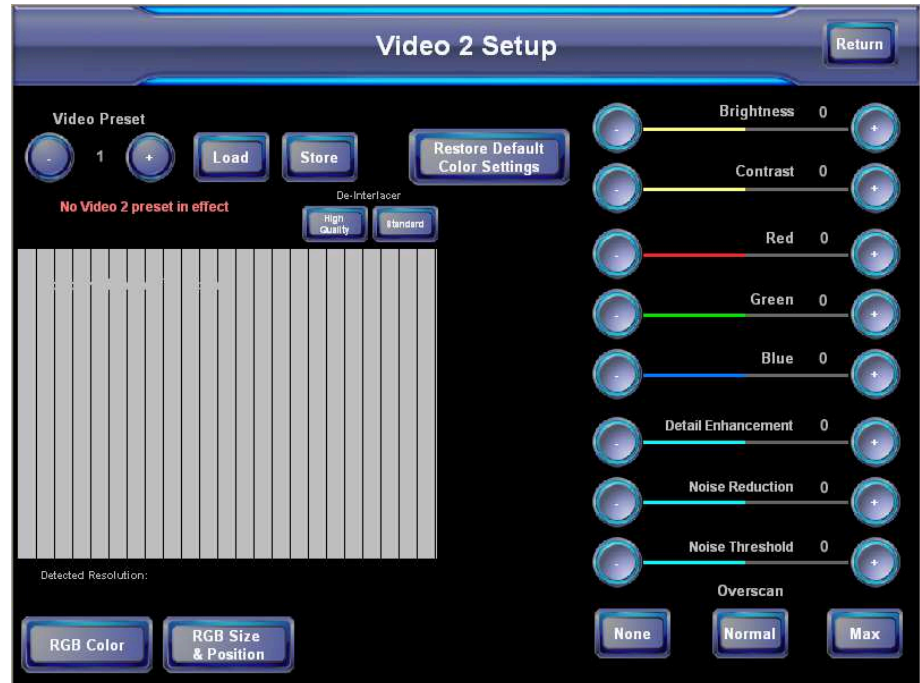
When **RGB Size & Position** is selected, the auto calibration, size and position and phase controls replace the color controls at the right.

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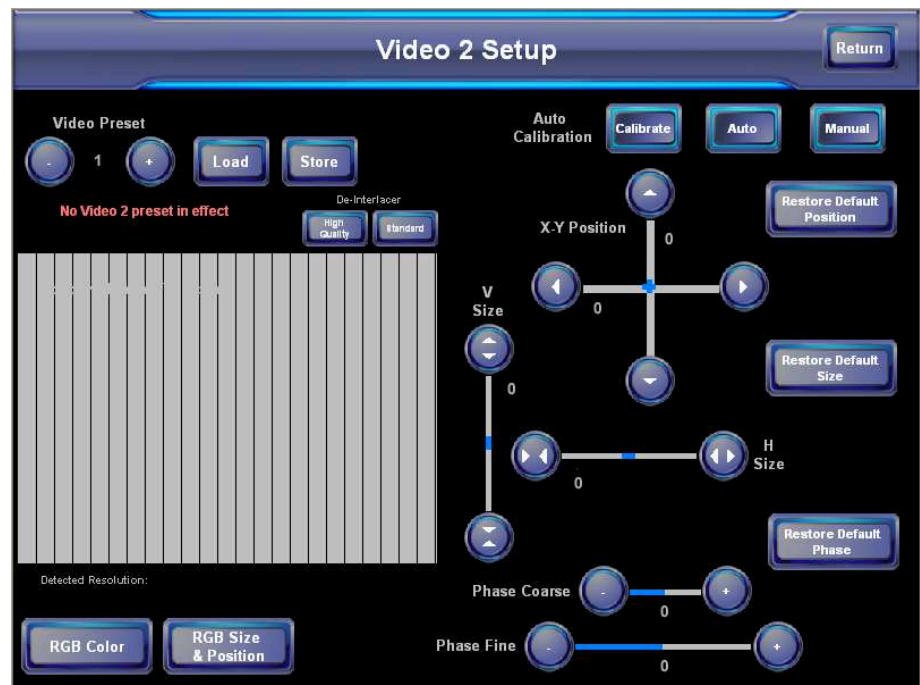
When DVI input is detected, size and position as well as signal adjustment controls are displayed as shown in the two following illustrations.

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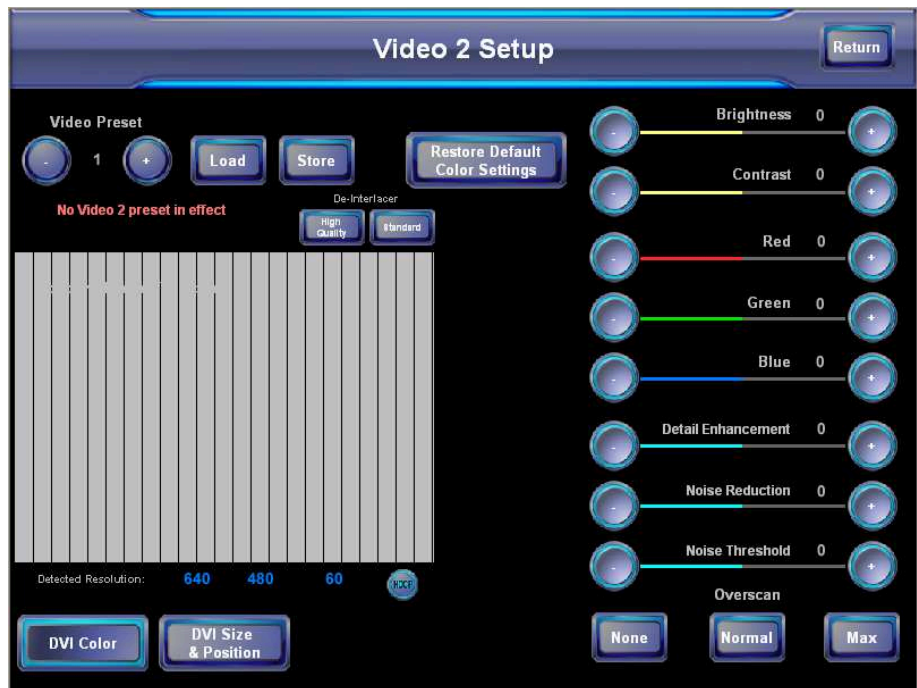
"Video 2 Setup" Screen (DVI Size and Position Controls shown)
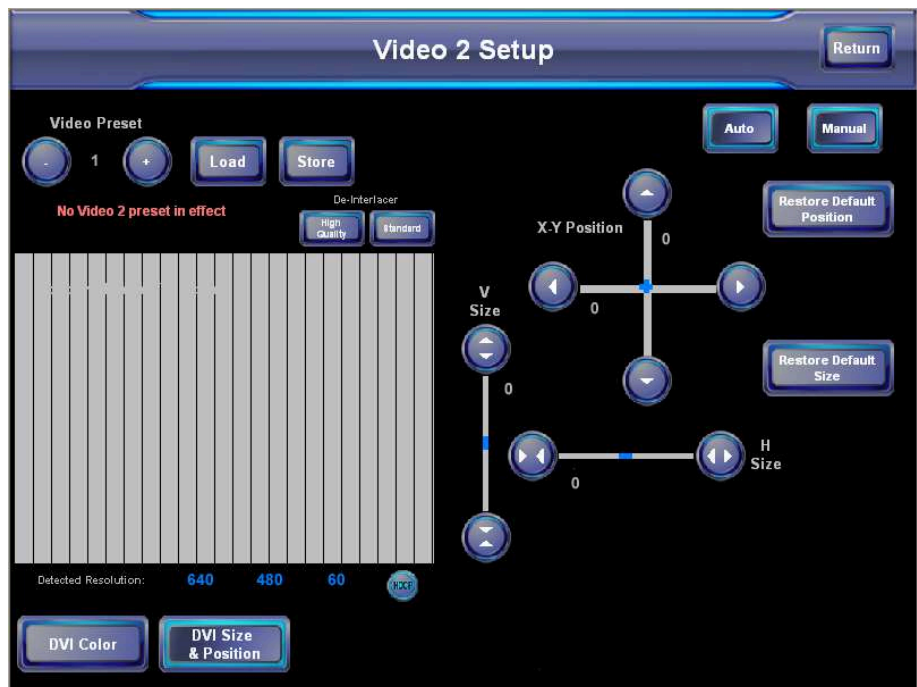
When SDI input is detected, only adjustment controls are displayed as shown in the following illustration.

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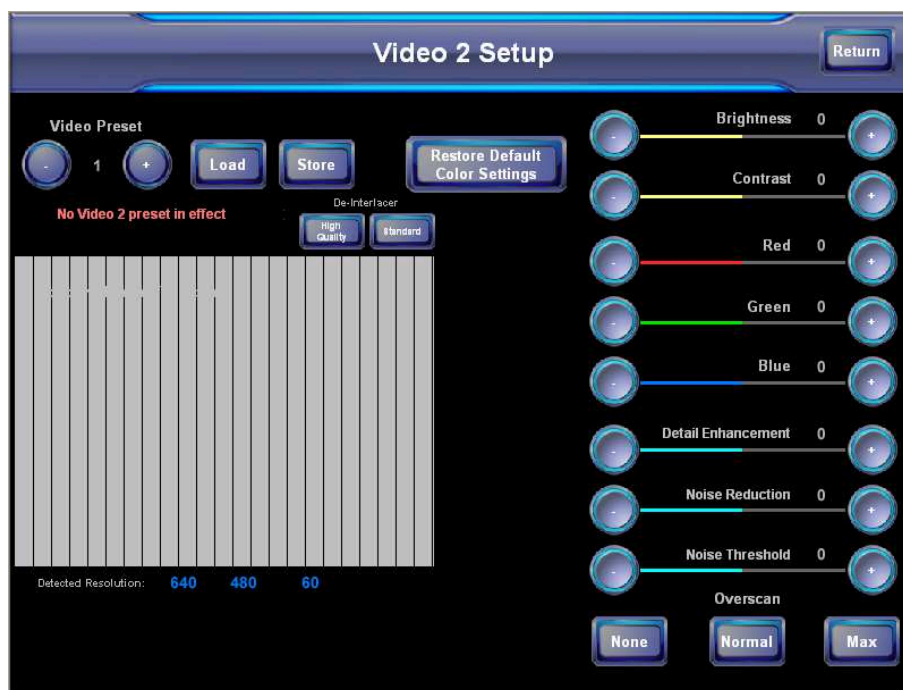
"Video 2 Setup" Details – RGB Color and RGB Size and Position

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-CUSTOM-GB.
HDCP	Indicates HDCP is active. (DVI-HDMI connections only.)
Restore Default Color Settings	Restores the video settings to their original defaults.
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.

(Continued on following page)

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

VIDEO 2 SETUP SCREEN CONTROLS	DESCRIPTION
Color Control (Continued)	
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.
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 **Calibrate** is touched, the device attempts to center the current video signal and find the correct clock and phase settings. When **Auto** is touched, the device first looks for a preset that matches the current video characteristics (for example, resolution, refresh rate). If one is found, it is loaded. If one is not found, an automatic calibration is performed. **Manual** 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 dimensions.
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-CUSTOM-GB 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 below. 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
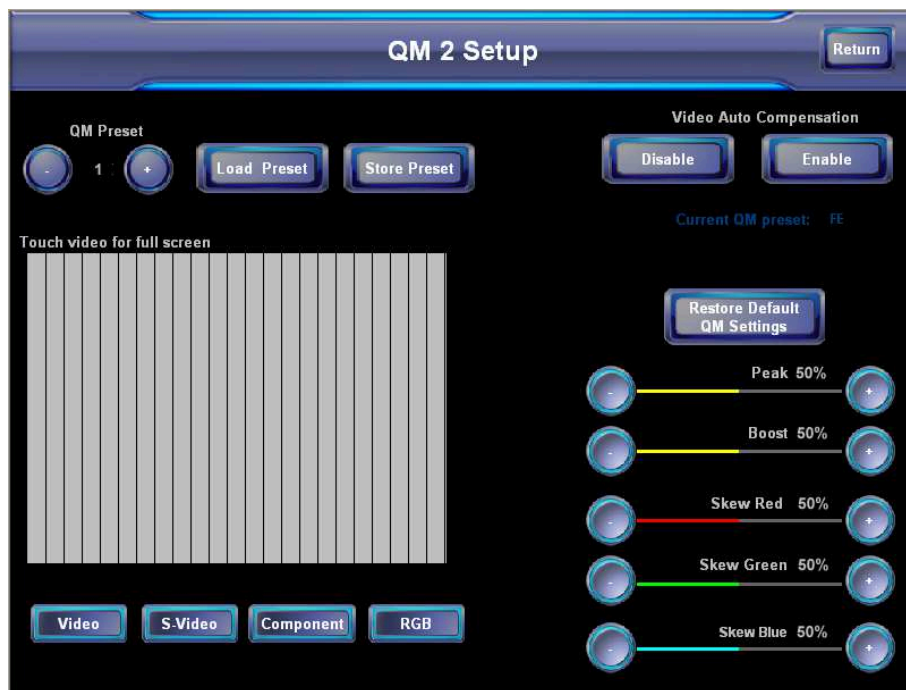
"QM 2 Setup" Details

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.

(Continued on following page)

"QM 2 Setup" Details (Continued)

QM 2 SETUP SCREEN CONTROLS	DESCRIPTION
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 open 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-CUSTOM-GB 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-CUSTOM-GB can be mounted in a rack or stacked with other equipment. Two "ears" are provided with the DVPHD-CUSTOM-GB 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 a #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:

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-CUSTOM-GB top cover. Using a #1 or a #2 Phillips screwdriver, remove the three screws closest to the front panel from one side of the unit. Refer to the diagram 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-CUSTOM-GB, 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
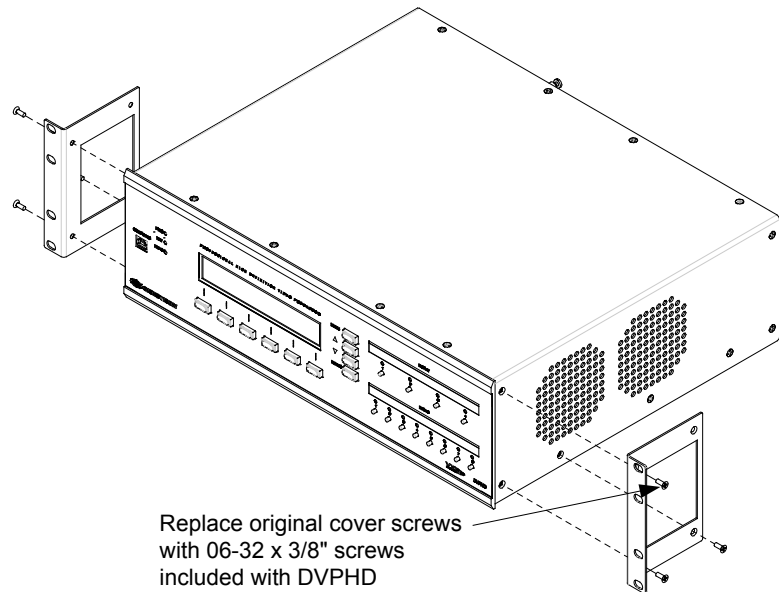
4. Repeat procedure (steps 1 through 3) to attach the remaining ear to the opposite side.

Stacking

Four "feet" are provided with the DVPHD-CUSTOM-GB 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-CUSTOM-GB

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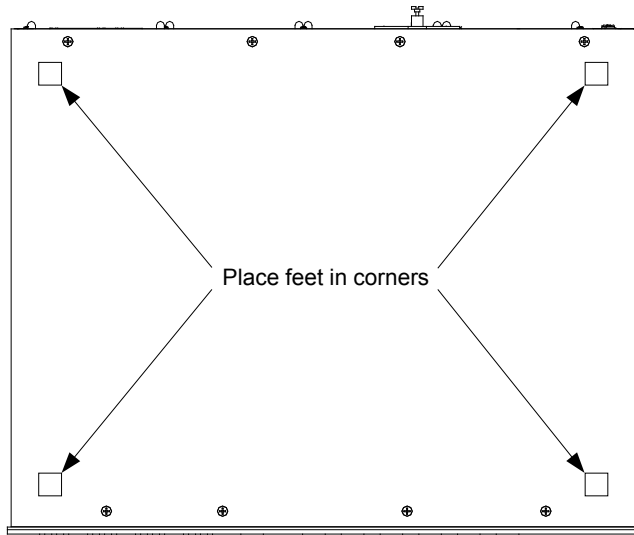
NOTE: No more than two DVPHD-CUSTOM-GB units should be stacked.

Hardware Hookup

Connect the Device

Make the necessary connections as called out in the illustrations that follow 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-CUSTOM-GB, note the following:

- Use Crestron power supplies for Crestron equipment.

- The included cable cannot be extended.

Hardware Connections for the DVPHD-CUSTOM-GB (Front View)
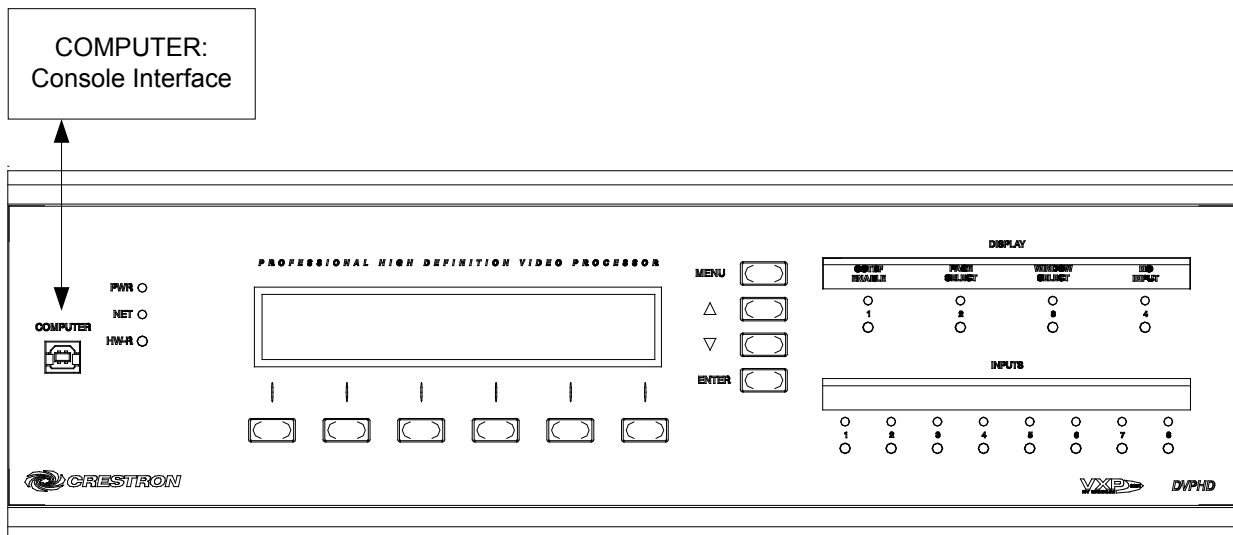
Hardware Connections for the DVPHD-CUSTOM-GB (Rear View)

QM:
QuickMedia
Video Output

RS-232:
To Computer or Mouse/
Touch Screen Input

USB:
Mouse or
Touch Screen
Input

NET:
To Control System and
Other Cresnet Devices

DVI / RGBHV:
Video Output

LAN:
10BASE-T / 100BASE-TX
Ethernet to LAN

Ground

DVI / RGBHV / Y P$_b$ P$_r$:
Video Input

Y / P$_b$/Y / P$_r$/C/COMP:
Video Input

MEMORY CARD:
Compact Flash Slot

100-250V ~4.0A
50/60 Hz:
AC Power Input
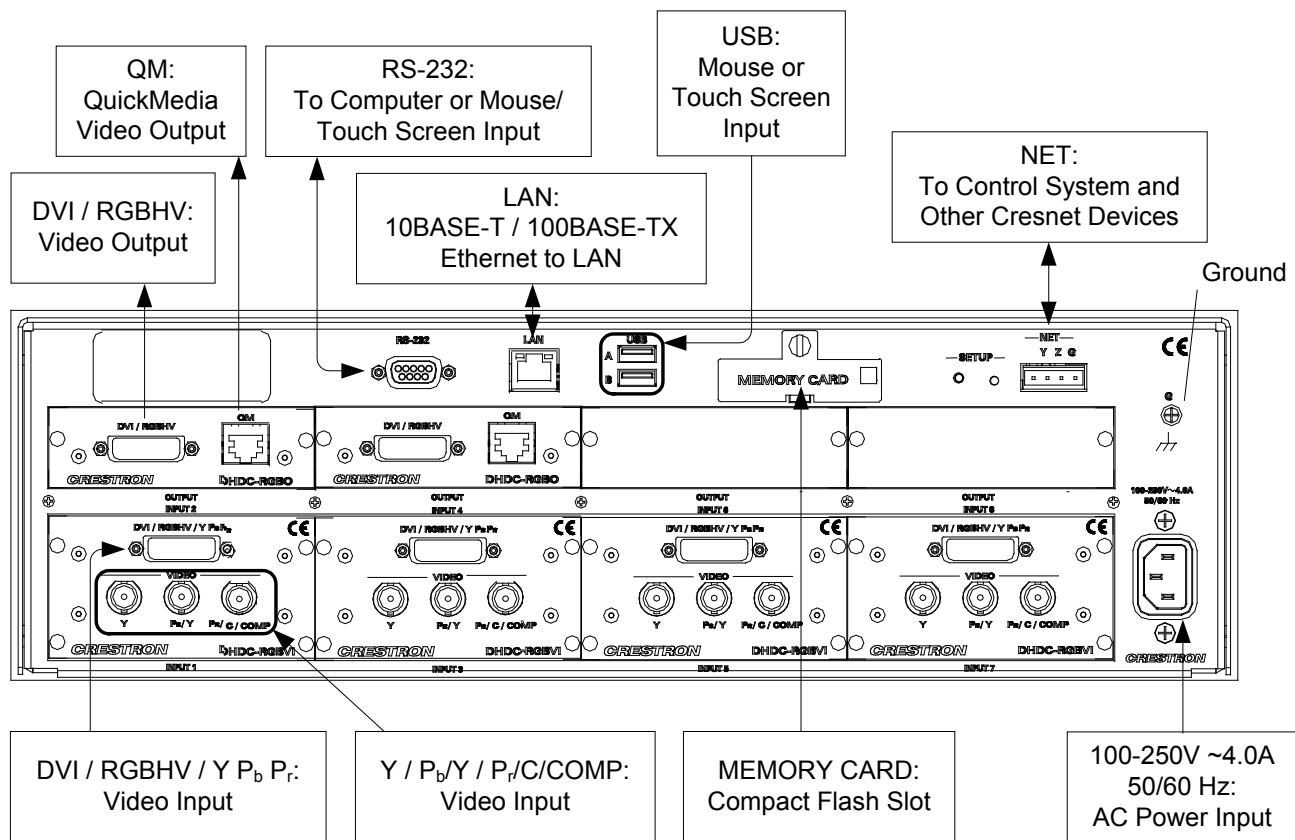
NOTE: Video input and output cards shown for illustrative purposes only.
Please refer to their individual manuals for more information.

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

NOTE: The DVPHD-CUSTOM-GB can only be powered by the 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-CUSTOM-GB'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: Crestron software and any files on the Web site are for authorized Crestron dealers and Crestron Service Providers (CSPs) only. New users must register to obtain access to certain areas of the site (including the FTP site).

Establishing Communication

Use Crestron Toolbox for communicating with the DVPHD-CUSTOM-GB; 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

Serial via Crestron STCP-502 or Equivalent

DVPHD-CUSTOM-GB

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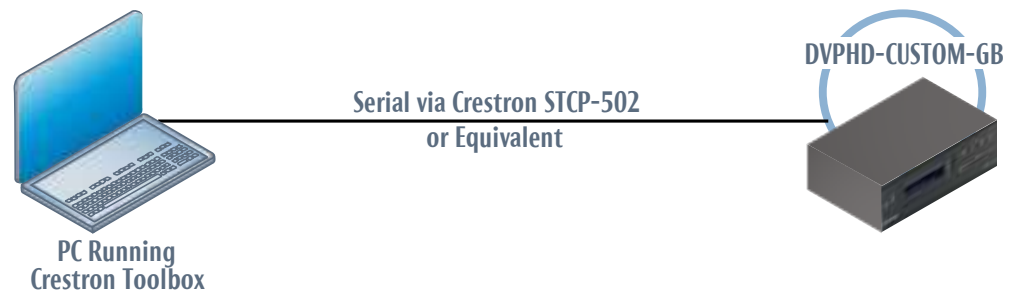
The **RS-232** port on the DVPHD-CUSTOM-GB connects to the serial port on the PC via a serial cable (Crestron STCP-502 or equivalent):

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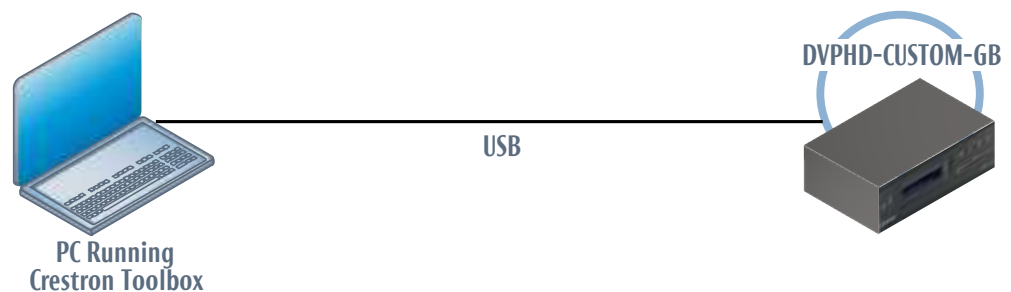
The **COMPUTER** port on the DVPHD-CUSTOM-GB connects to the USB port on the PC via the included Type A to Type B USB cable:

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

2. Click the ✎ icon.

3. For *Connection Type*, select *USB*. When multiple USB devices are connected, identify the DVPHD-CUSTOM-GB by entering "DVPHD-CUSTOM-GB" 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.

Ethernet Communication

PC Running
Crestron Toolbox
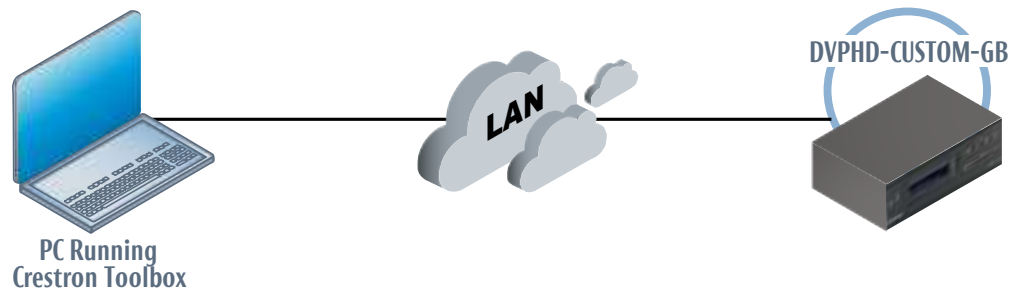
DVPHD-CUSTOM-GB

The DVPHD-CUSTOM-GB 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.

2. 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 touch screen using Crestron Studio (or VT Pro-e) or Crestron Toolbox. If loading a project to a DVPHD-CUSTOM-GB equipped with an external Compact Flash slot, please use Crestron Toolbox.

Firmware

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

Upgrade DVPHD-CUSTOM-GB firmware via Crestron Toolbox.

1. Establish communication with the DVPHD-CUSTOM-GB and display the "System Info" window.

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

Program Checks

Actions that can be performed on the DVPHD-CUSTOM-GB 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**) to show all network devices connected to the control system. Right-click on the DVPHD-CUSTOM-GB to display actions that can be performed on the DVPHD-CUSTOM-GB.

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-CUSTOM-GB.

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

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

2. Add, modify or delete entries in the IP table. The DVPHD-CUSTOM-GB 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-CUSTOM-GB. The entry should list the DVPHD-CUSTOM-GB's IP ID (specified on the DVPHD-CUSTOM-GB'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-CUSTOM-GB 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-CUSTOM-GB is shown in the following illustration. Subsequent paragraphs describe the individual pages and their functions.

DVPHD-CUSTOM-GB Front Panel Menu Structure

VIDEO INPUTS
SIGNAL INFORMATION
PICTURE ADJUSTMENT
SHOW ALL VIDEO INFO

SIGNAL INFO
TYPE
RESOLUTION
FREQUENCY

SHOW ALL VIDEO INFO

PICTURE ADJUSTMENT
VIDEO PRESET
BRIGHTNESS
CONTRAST
SATURATION
HUE
RED
GREEN
BLUE
Detail Enhancement
Noise Reduction
Noise Threshold
V Size
H Size
X Position
Y Position
Phase Coarse
Phase Fine
Calibrate
AUTO/MANUAL
INPUT SIGNAL OVERSCAN

DISPLAY OUTPUT
OUTPUT RESOLUTION
AUTO HDMI
TEST SIGNALS
SHOW/HIDE MOUSE
SET TOUCH DISPLAY

SHOW/HIDE MOUSE

SET AUTO HDMI

SET TOUCH DISPLAY

TEST SIGNAL
Color bars
White vertical lines
Gray scale
Grid pattern
Remove test pattern

OUTPUT RESOLUTION
CURRENT
SETUP
PROJECT
OOTBF

ETHERNET
ETHERNET STATUS
DHCP
IP ADDRESS
SUBNET MASK
DEFAULT ROUTER
WINS
HOST NAME
(DOMAIN NAME)
DNS Servers

SETUP
VIDEO INPUTS
DISPLAY OUTPUT
ETHERNET
CONTROL
QUICK OOTBF CONFIG
ENTER/EXIT SETUP PAGE
QM SETUP

CONTROL
MESSAGES
RS232 MODE
FRONT PANEL PASSWORD
TIME/DATE
INFORMATION
CRESNET ID
OOTBF
AUTODISCOVERY
ANNOTATION
REBOOT

Error Log Message
<Show error log here and allow the user to clear it>

FRONT PANEL PASSWORD

TIME/DATE
Date Set
Time Set

REBOOT SYSTEM

AUTODISCOVERY

ANNOTATION
ENABLE ANNOTATOIN
CLEAR ANNOTATION
LIVE/FROZEN VIDEO
SET BRUSH
SET COLOR
REMOTE OVERRIDE

RS232 MODE
CONSOLE
TOUCH OUTPUT
MOUSE INPUT
EXT_TOUCH

INFORMATION
HARDWARE
OPSVERSION

CRESNET ID

OOTBF
ENABLE OOTBF
SELECT FORMAT
SOURCE SELECTION FOR CURRENT FORMAT
SOURCE SELECTION FOR ALL FORMAT
SELECT WHAT WINDOW
SELECT WHAT FORMAT
SELECT SOURCE FOR WINDOW
SELECT EFFECT FOR WINDOW
SET DURATION FOR WINDOW
SELECT CONTROL FOR WINDOW
ACTIVE/DEACTIVE WINDOW
SET ASPECT RATIO
SET VERTICAL POSITION
SET HORIZONTAL POSITION
SET VERTICAL SIZE
SET HORIZONTAL SIZE
SET WINDOW COLOR
SET TEXT COLOR
TEXT JUSTIFY
SET Z ORDER
OOTBF OUTPUT RESOLUTION
OOTBF COLOR ADJUST
OOTBF START UP PAGE
PAD AREA SETTING
PAD AREA SELECTION
SELECT TOUCHOUT CHANNEL
SELECT TOUCHOUT DESINATION
SELECT TOUCHOUT FORMAT

QUICK OOTBF CONFIG
OOTB Status
Current page
Current window
Current window source

SIGNAL TYPE

QM PRESET

VIDEO AUTO COMPENSATION

ENTER/EXIT SETUP PAGE

QM SETUP

PEAK
BOOST
SKEW RED
SKEW GREEN
SKEW BLUE

Default Screen

The Default screen is displayed when the DVPHD-CUSTOM-GB has booted up, if the unit has not been locked or password protected.

Default Screen (Unlocked)

MENU   B6

HD Digital Video Processor	01:03:06AM
	01/01/00
INPUT 1: YPrPb 720p	
INPUT 2: DVI 1600x1200 60Hz	BKLT

▲ B7

▼ 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: For information on setting the password, refer to "FRONT PANEL PASSWORD" on page 63.

Default Screen (Locked)

MENU   B6

HD Digital Video Processor	01:03:06AM
	01/01/00
FRONT PANEL LOCKED	

▲ B7

▼ B8

ENTER   B9

B0   B1   B2   B3   B4   B5

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

"UNLOCK CODE" Screen

MENU   B6

UNLOCK CODE:					
1	2	3	4	5	6

▲ B7

▼ B8

ENTER   B9

B0   B1   B2   B3   B4   B5

To unlock the front panel, enter the four-digit numeric password with the **B0** through **B5** keys and then press **B9** (**ENTER**).

NOTE: For information on setting the password, refer to the "FRONT PANEL PASSWORD" on page 63.

"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 ]
```
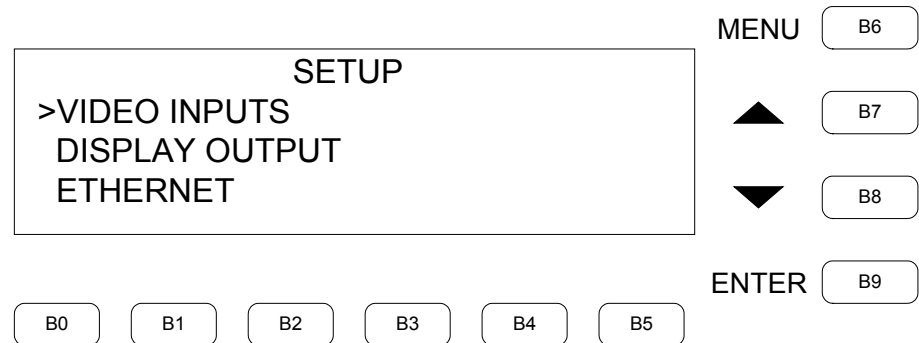
The SETUP menu provides access to five other menus: "VIDEO INPUTS", "DISPLAY OUTPUT", "ETHERNET", "CONTROL" and "QUICK OOTBF CONFIG". Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selected menu.

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  [ B6 ]

  ┌─────────────────────────────────┐
  │          VIDEO INPUTS 1         │     ▲    [ B7 ]
  │ >SIGNAL INFORMATION             │
  │   PICTURE ADJUSTMENT            │
  │   SHOW ALL VIDEO INFO           │     ▼    [ B8 ]
  │                                 │
  └─────────────────────────────────┘
                                   ENTER [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```
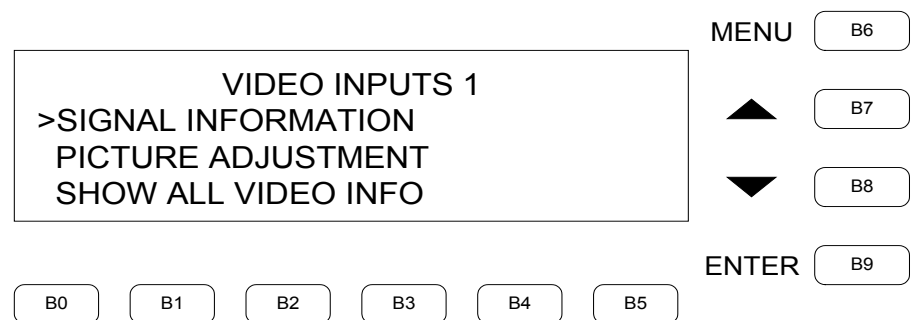
This menu provides access to the "SIGNAL INFORMATION" screen, the "PICTURE ADJUSTMENT" and menu and the "SHOW ALL VIDEO INFO" menu. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to open the selection.

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        (720X487)
 FREQUENCY         (29Hz)
```
▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
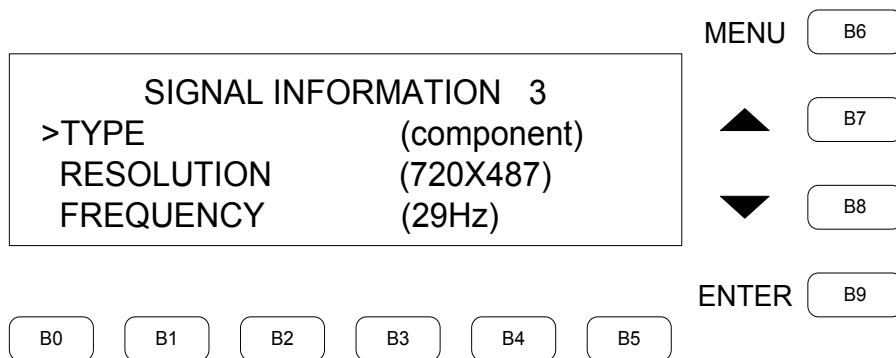
PICTURE ADJUSTMENT

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.

The current settings are shown in parentheses.

"PICTURE ADJUSTMENT" Menu

MENU   B6

```
   PICTURE ADJUSTMENT   3
>Video preset         (0)
 Brightness           (5)
 Contrast             (0)
```
▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
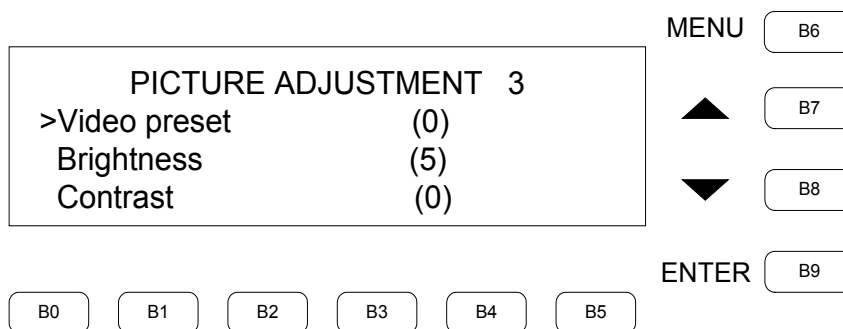
VIDEO PRESET

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
        New Setting:       5
LOAD  STORE
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
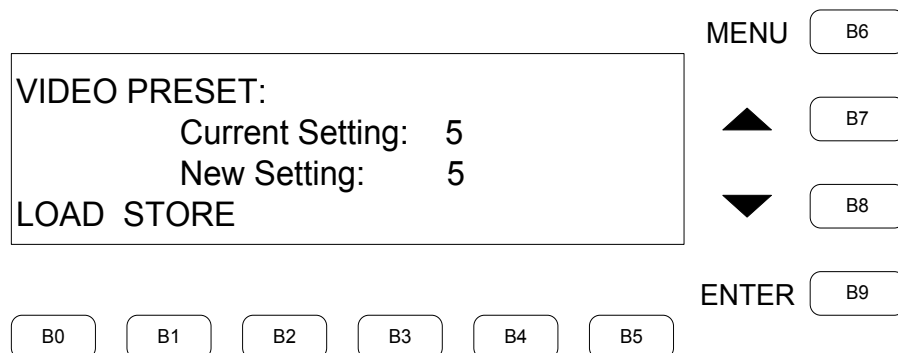
PICTURE BRIGHTNESS

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
        New Setting:       5
CANCEL                       SAVE
```

▲ B7

▼ B8

ENTER B9

B0   B1   B2   B3   B4   B5
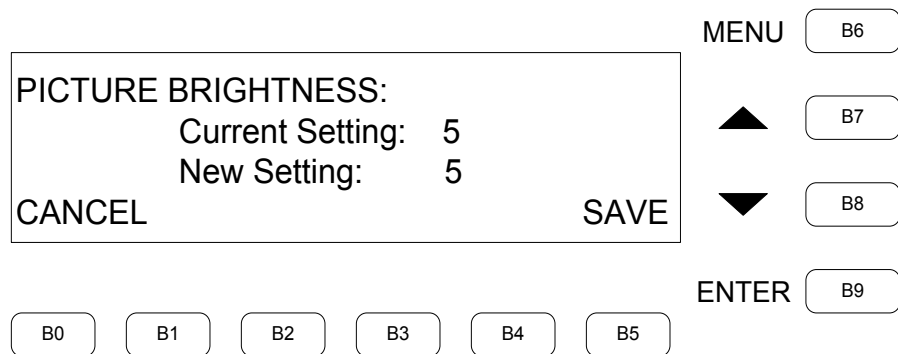
NOTE: The "PICTURE CONTRAST", "PICTURE SATURATION", "PICTURE HUE", "RED", "GREEN" and "BLUE", "Detail Enhancement", "Noise Reduction", "Noise Threshold", "V Size", "H Size", "X Position", "Y Position", "Phase Coarse" and "Phase Fine" screens are the same as the "PICTURE BRIGHTNESS" screen.

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?

▲   [B7]

[B8]

CANCEL   CONFIRM   ▼

ENTER   [B9]

[B0]   [B1]   [B2]   [B3]   [B4]   [B5]
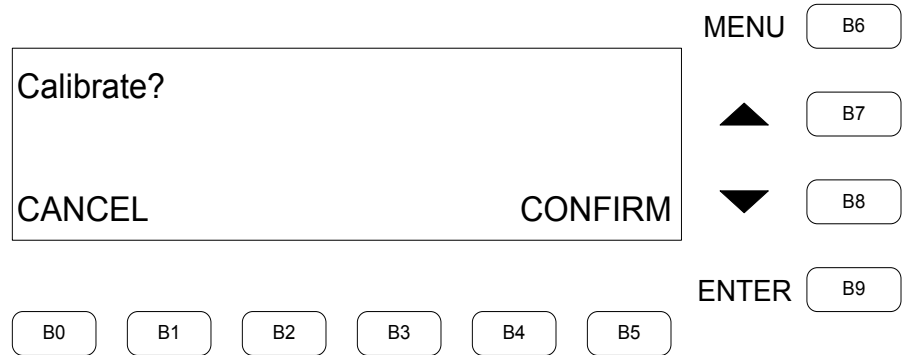
AUTO/MANUAL

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)   ▲   [B7]
CANCEL   SAVE

[B8]

▼

ENTER   [B9]

[B0]   [B1]   [B2]   [B3]   [B4]   [B5]
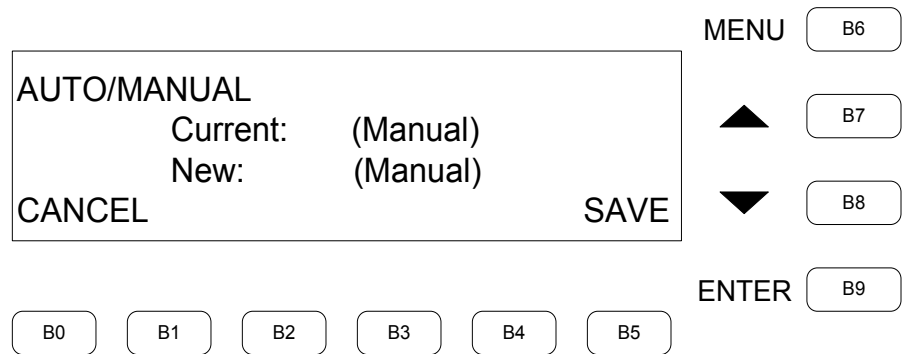
The "INPUT SIGNAL OVERSCAN" screen is used to set overscan for the current input to *None*, *Normal* or *Max*. Use **B7** and **B8** to make the desired selection. Press ENTER to confirm the selection and return to the previous menu. Press **B6** (**MENU**) to return to the previous menu without change.

"INPUT SIGNAL OVERSCAN" Screen

MENU   B6

```
┌─────────────────────────────────────────┐
│        INPUT SIGNAL OVERSCAN            │
│  >None                                   │
│   Normal                                 │
│   Max                                    │
└─────────────────────────────────────────┘
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5
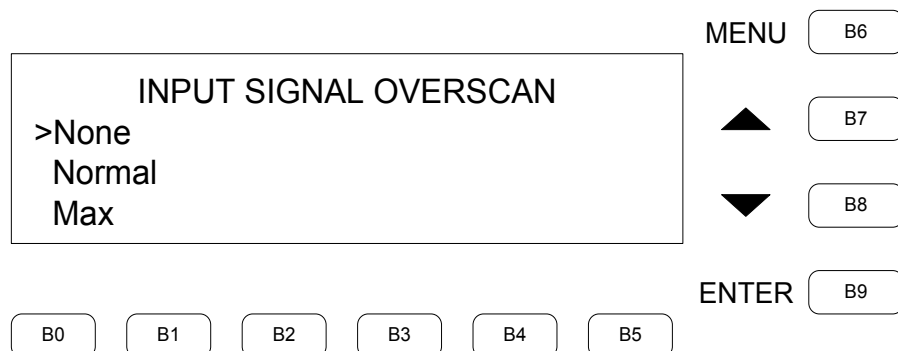
DISPLAY OUTPUT

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
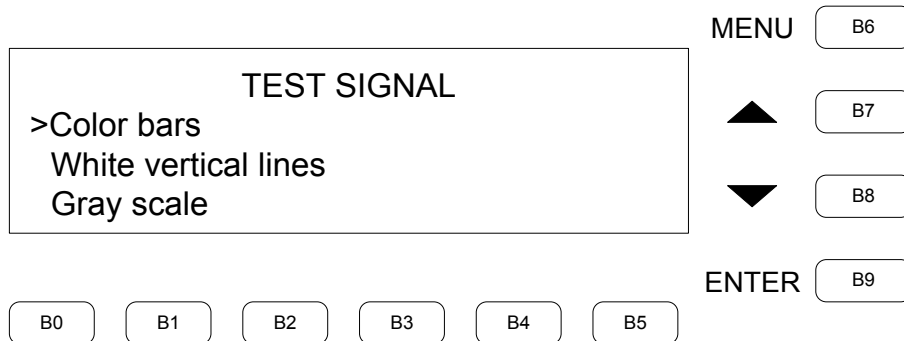
SHOW/HIDE MOUSE

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
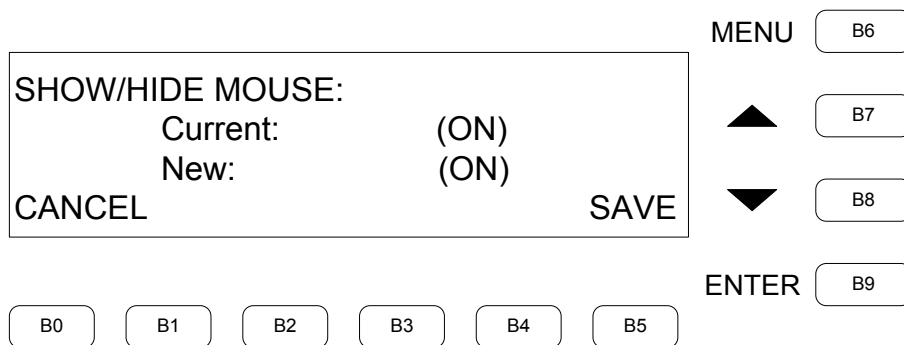
TOUCH DISPLAY

The "TOUCH DISPLAY" screen is used to set the output that is connected to the external touch display. 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.

"TOUCH DISPLAY" Screen

```
                                              MENU  [ B6 ]

  ┌──────────────────────────────────┐
  │ TOUCH DISPLAY:                   │       ▲     [ B7 ]
  │        Current output:  2        │
  │        New output:      2        │
  │ CANCEL                    SAVE   │       ▼     [ 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               │       ▲     [ B7 ]
  │ >STATUS            (OK)           │
  │  DHCP              (OFF)          │
  │  IP ADDRESS        (192.168.122.81)│     ▼     [ 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:
         Current:              (OFF)
         New:                  (OFF)
CANCEL                              SAVE
```

▲ [B7]

▼ [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

                                               ▼      [ B8 ]
  DOWN  UP          PREV  NEXT  SAVE

                                              ENTER   [ B9 ]

  [B0]   [B1]   [B2]   [B3]   [B4]   [B5]
```
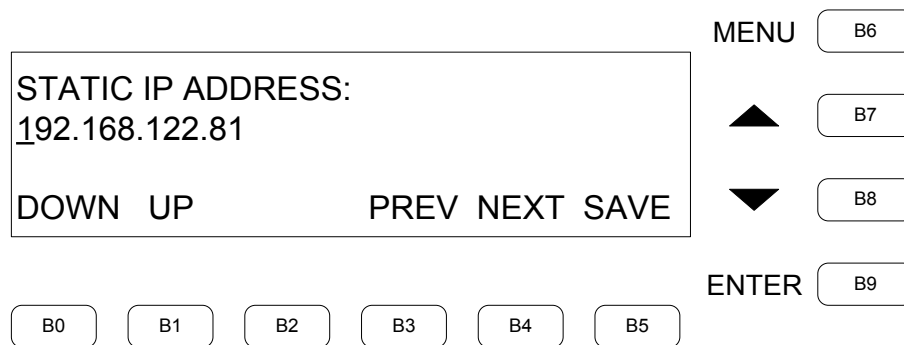
NOTE: Both the "SUBNET MASK" and "DEFAULT ROUTER" screens operate the same way as the "STATIC IP ADDRESS" screen.

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 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.

"HOST NAME" Screen

```
                                              MENU

  HOST NAME:                                   ▲      [ B7 ]
  Crestron

                                               ▼      [ B8 ]
  DOWN  UP          BKSP  NEXT  SAVE

                                              ENTER   [ B9 ]

  [B0]   [B1]   [B2]   [B3]   [B4]   [B5]
```
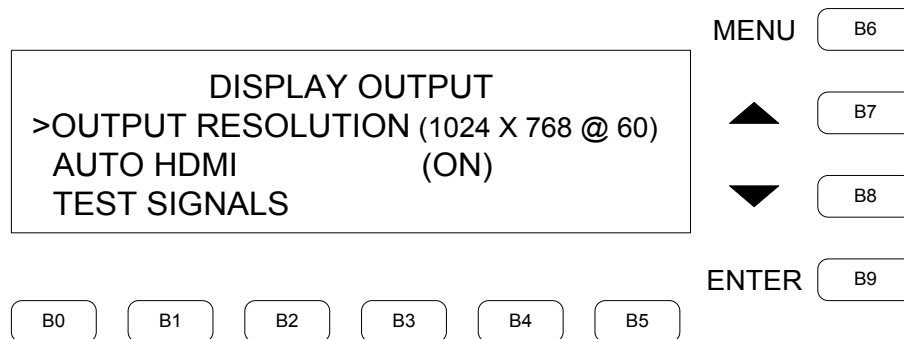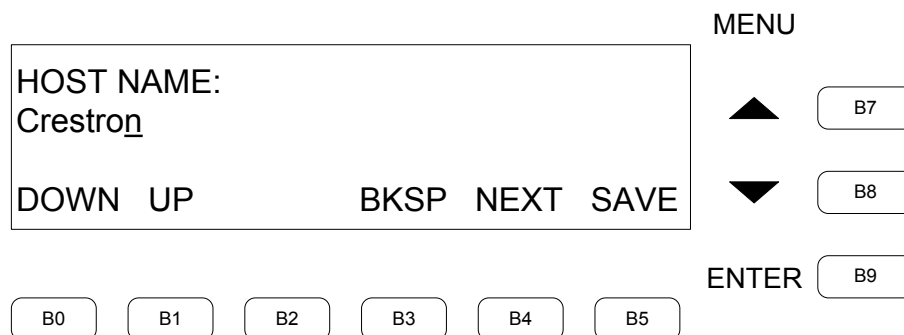
ETHERNET DNS SETTING

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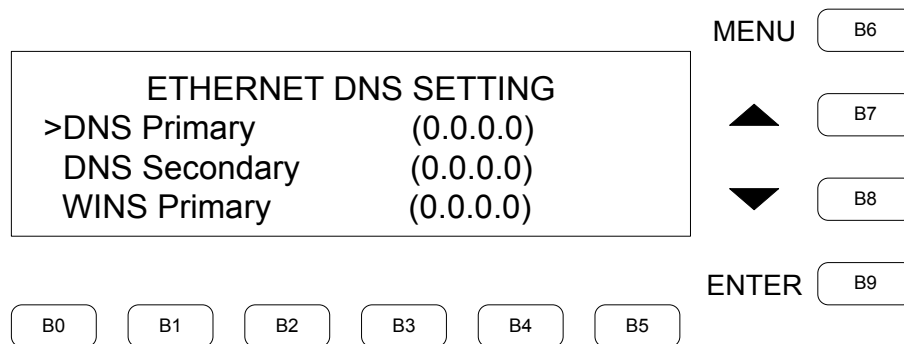
NOTE: The screens allowing setting the *DNS Primary*, *DNS Secondary*, *WINS Primary* and *WINS Secondary* addresses operate the same way as the "STATIC IP ADDRESS" screen.

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        (CONSOLE)
 PASSWORD
```

▲ B7

▼ B8

ENTER   B9

B0   B1   B2   B3   B4   B5
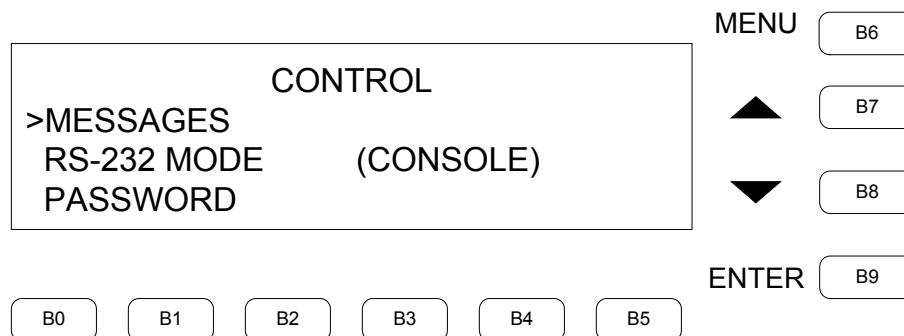
Error Log Message

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                        │               ▲     [ B7 ]
 │ No Error Have been Logged                │
 │                                          │
 │ FIRST  LAST  CLEAR          <<     >>     │               ▼     [ B8 ]
 └─────────────────────────────────────────┘

                                                          ENTER   [ B9 ]

   [ B0 ]   [ B1 ]   [ B2 ]   [ B3 ]   [ B4 ]   [ B5 ]
```
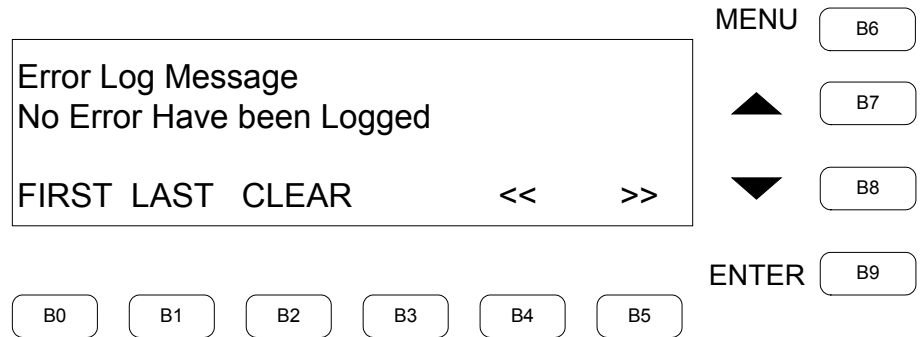
RS232 MODE

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 ]

 ┌─────────────────────────────────────────┐
 │              RS232 MODE                  │               ▲     [ B7 ]
 │        Current Mode:    CONSOLE          │
 │        New Mode:        CONSOLE          │
 │ CANCEL         serial           SAVE     │               ▼     [ B8 ]
 └─────────────────────────────────────────┘

                                                          ENTER   [ B9 ]

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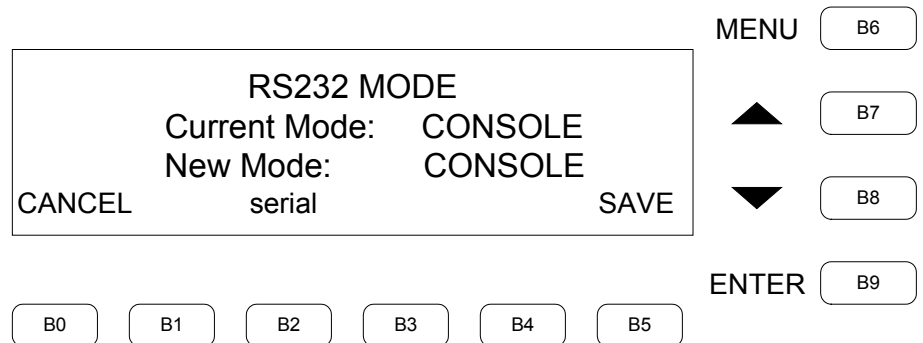
SERIAL PORT

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             │      ▲   [ B7 ]
│ >Baud Rate          (115200)    │
│  Data Bits          (8)         │
│  Stop Bits          (1)         │      ▼   [ B8 ]
│                                 │
└─────────────────────────────────┘
                            ENTER  [ B9 ]

[ B0 ] [ B1 ] [ B2 ] [ B3 ] [ B4 ] [ B5 ]
```
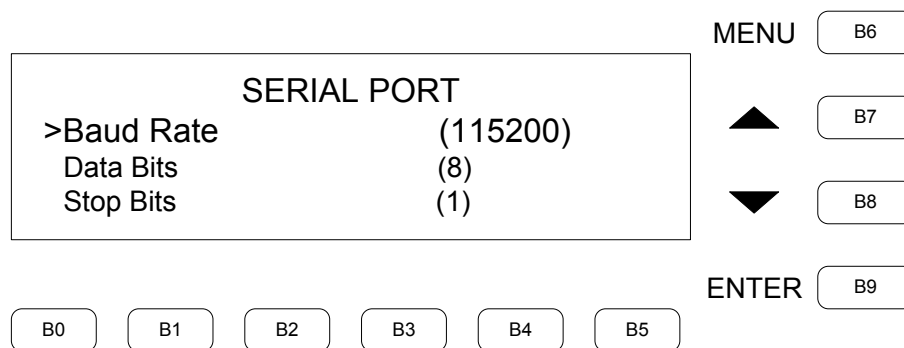
SELECT EXTERNAL TOUCH INPUT

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-CUSTOM-GB. If both a USB and serial touch input are connected, the DVPHD-CUSTOM-GB displays a message stating that one device must be disconnected.

"SELECT EXTERNAL TOUCH INPUT" Screen

```
                            MENU   [ B6 ]

┌─────────────────────────────────┐
│  SELECT EXTERNAL TOUCH INPUT    │      ▲   [ B7 ]
│ >AUTO                           │
│  SMART                          │
│  ELO                            │      ▼   [ B8 ]
│                                 │
└─────────────────────────────────┘
                            ENTER  [ B9 ]

[ B0 ] [ B1 ] [ B2 ] [ B3 ] [ B4 ] [ B5 ]
```
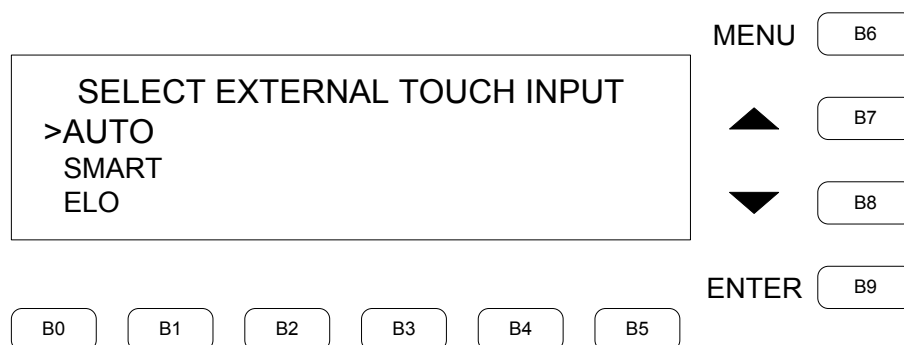
FRONT PANEL PASSWORD

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:                │      ▲    [ B7 ]
  │        Current:  1234                │
  │        New:      12                  │      ▼    [ B8 ]
  │ CANCEL         DEL          SAVE     │
  └─────────────────────────────────────┘
                                             ENTER  [ B9 ]

  [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```
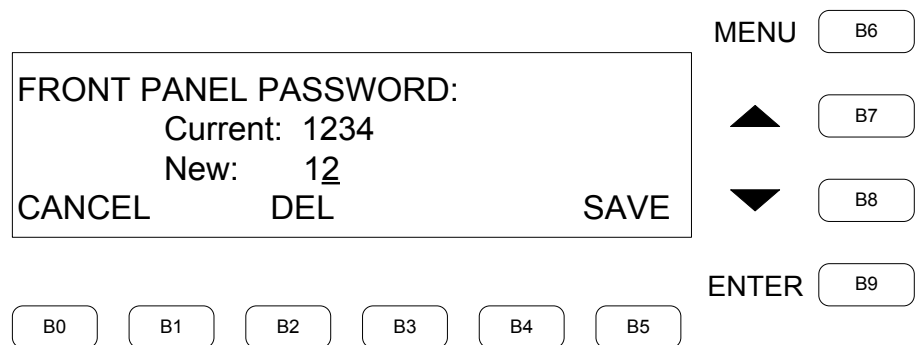
TIME/DATE

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-CUSTOM-GB 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:        3            │
 │ CANCEL                        SAVE   │     ▼    [ B8 ]
 └──────────────────────────────────────┘
                                             ENTER  [ B9 ]

 [ B0 ]  [ B1 ]  [ B2 ]  [ B3 ]  [ B4 ]  [ B5 ]
```
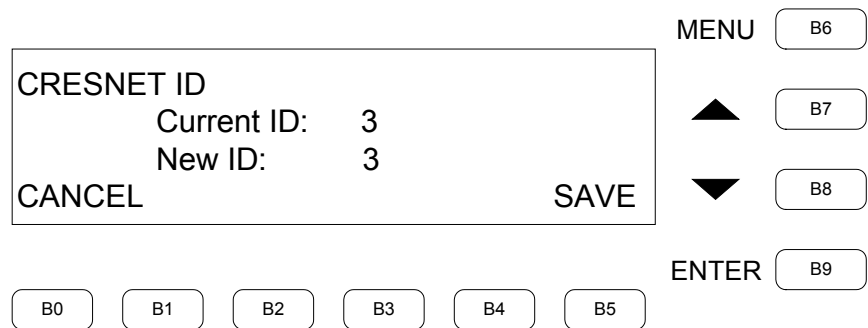
Out Of The Box Functionality

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" screens, the "SELECT WHAT WINDOW" menu, the "SELECT WHAT FORMAT", "SELECT SOURCE FOR WINDOW"," SELECT EFFECT FOR WINDOW", "SET DURATION FOR WINDOW", "SELECT CONTROL FOR WINDOW", "ACTIVE/DEACTIVE WINDOW", "SET ASPECT RATIO", "SET VERTICAL POSITION", "SET HORIZONTAL POSITION", "SET VERTICAL SIZE", "SET HORIZONTAL SIZE", "SET WINDOW COLOR", "SET TEXT COLOR", "TEXT JUSTIFY", "SET Z ORDER" and "OOTBF OUTPUT RESOLUTION" screens, the "OOTBF COLOR ADJUST" menu, the "OTTBF START UP PAGE" screen**,** the "PAD AREA SETTING" menu, the "PAD AREA SELECTION", "SELECT TOUCHOUT CHANNEL", "SELECT TOUCHOUT DESTINATION" and "SELECT TOUCHOUT FORMAT" 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          │        ┌─ B7 ─┐
 │  >ENABLE OOTBF        (Disabled)            │   ▲
 │   SELECT FORMAT       (CUSTOM)              │        ┌─ B8 ─┐
 │   SOURCE SELECTION FOR CURRENT FORMAT       │   ▼
 └─────────────────────────────────────────────┘

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

                                          ENTER  ┌─ B9 ─┐

   ┌ B0 ┐  ┌ B1 ┐  ┌ B2 ┐  ┌ B3 ┐  ┌ B4 ┐  ┌ B5 ┐
```
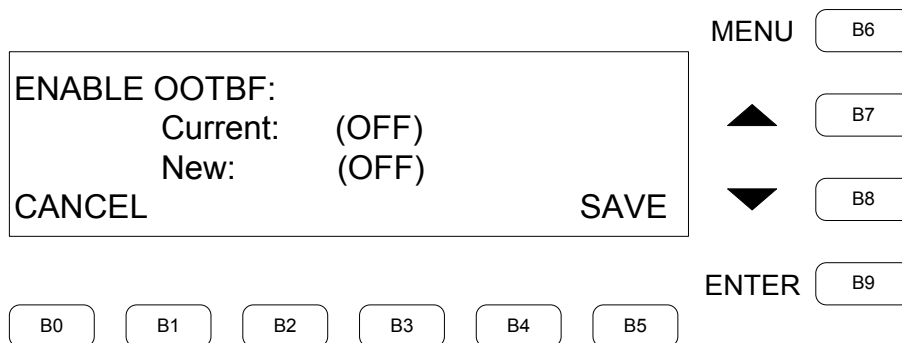
SELECT FORMAT

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
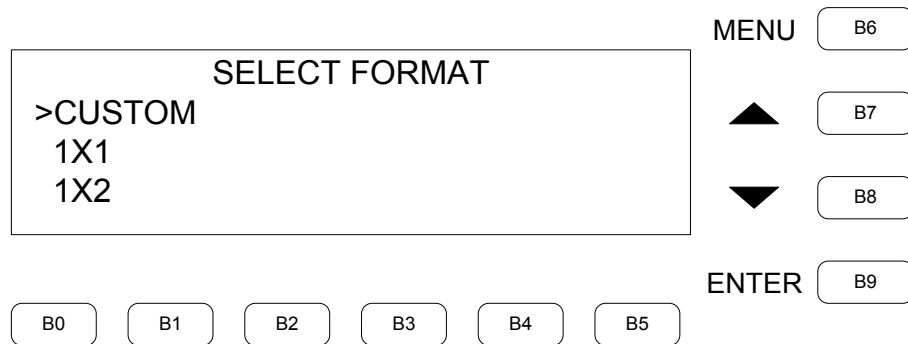
SELECT WHAT WINDOW

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    PAD
```

B7

B8

ENTER   B9

B0   B1   B2   B3   B4   B5

SELECT WHAT FORMAT

The "SELECT WHAT FORMAT" screen is used to select any *TARGET FORMAT* to configure. Press **B7** or **B8** to scroll through the selections. Press **B9** (**ENTER**) to select the format. Press **B6** (**MENU**) to return to the previous menu.

"SELECT WHAT FORMAT" Screen

MENU   B6

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

B7

B8

ENTER   B9

B0   B1   B2   B3   B4   B5
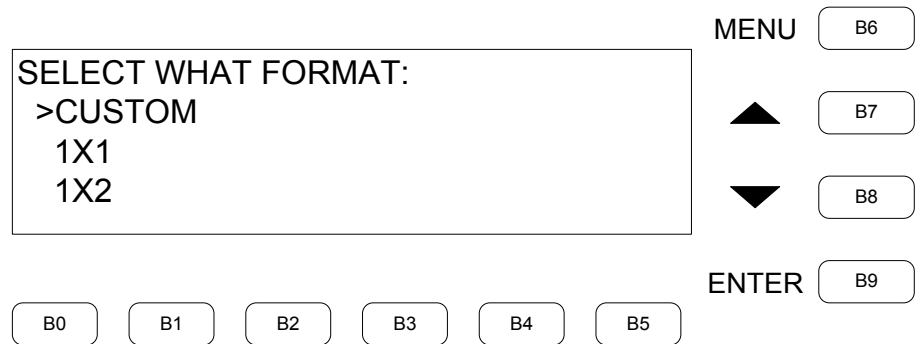
SELECT SOURCE FOR WINDOW

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
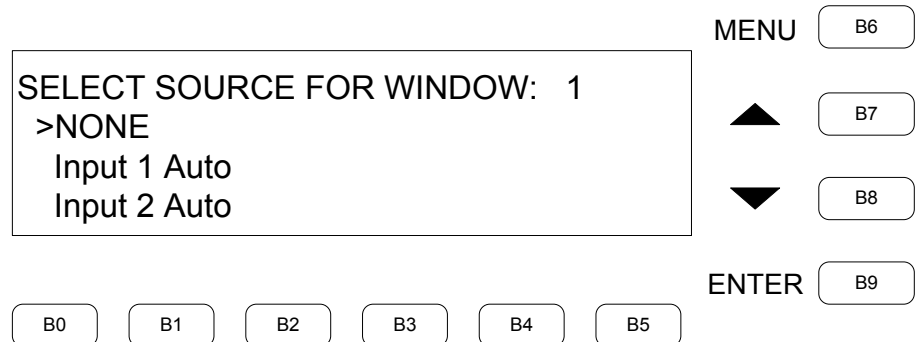
SELECT EFFECT FOR WINDOW

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.
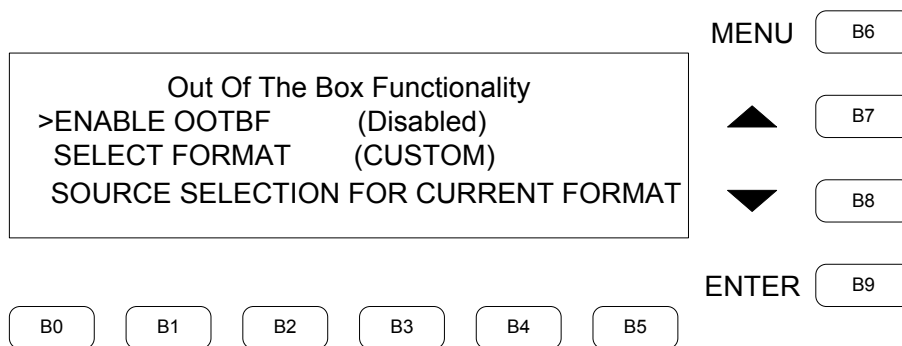
"SELECT EFFECT FOR WINDOW" Screen

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                                             ▲    [ B7 ]
   SET ASPECT RATIO
   SET VERTICAL POSITION                                      ▼    [ B8 ]


                                                             ENTER  [ B9 ]
 [B0]   [B1]   [B2]   [B3]   [B4]   [B5]
```
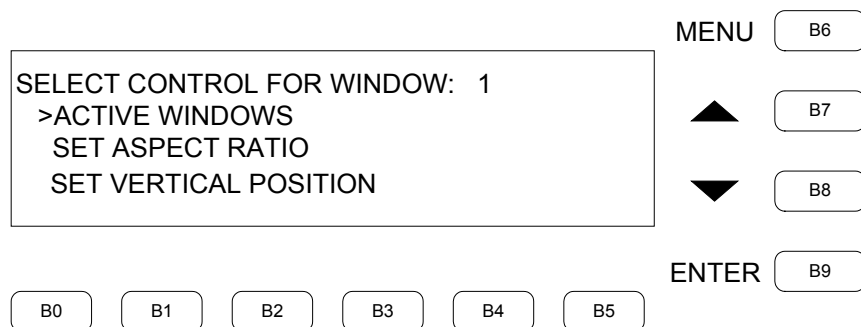
ACTIVE/DEACTIVE WINDOW

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)                                 ▲    [ B7 ]
        New:            (OFF)
CANCEL                          SAVE                          ▼    [ B8 ]


                                                             ENTER  [ B9 ]
 [B0]   [B1]   [B2]   [B3]   [B4]   [B5]
```
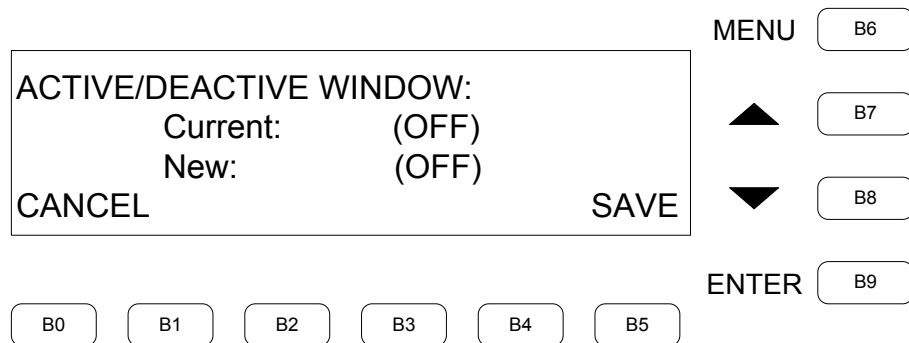
SET ASPECT RATIO

The "SET ASPECT RATIO" screen is used to set or reset the targeted window's aspect ratio. 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.

"SET ASPECT RATIO" Screen

MENU [B6]

```
SET ASPECT RATIO:
        Current:       (OFF)
        New:           (OFF)
CANCEL                          SAVE
```

▲ [B7]

▼ [B8]

ENTER [B9]

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

SET VERTICAL POSITION

The "SET VERTICAL POSITION" screen is used to set the targeted window's vertical position for *CUSTOM* format. Press **B7** or **B8** to increase or decrease the value. Hold the button for more than three seconds to have the number change by itself. Press **B5** (**SAVE**) button 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.

"SET VERTICAL POSITION" Screen

MENU [B6]

```
SET VERTICAL POSITION:
        Current Position:  258
        New Position:      258
CANCEL                          SAVE
```

▲ [B7]

▼ [B8]

ENTER [B9]

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

NOTE: The "SET HORIZONTAL POSITION", "SET VERTICAL SIZE" and "SET HORIZONTAL SIZE" screens are identical to the "SET VERTICAL POSITION" screen. The "SET WINDOW COLOR" and "SET TEXT COLOR" screens are also the same, but with an intermediate menu where the user chooses the color (*RED*, *GREEN* or *BLUE*) to adjust. The "SET WINDOW COLOR" and "SET TEXT COLOR" screens only apply when no video is detected on the selected window.

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]

SET Z ORDER

The "SET Z ORDER" screen is used to set the targeted window's Z order for *CUSTOM* format. Press **B7** or **B8** to increase or decrease the value. Press **B5** (**SAVE**) button 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.

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.

"SET Z ORDER" Screen

MENU [B6]

```
SET Z ORDER:   1
              Current Order:   2
              New Order:       2
CANCEL                              SAVE
```

▲ [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.
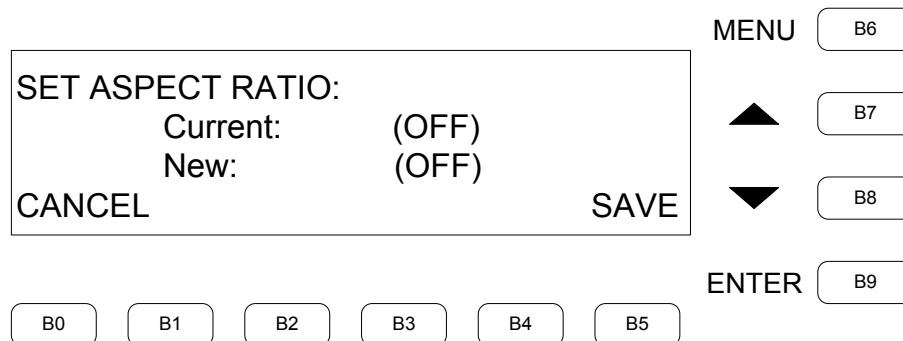
"OOTBF OUTPUT RESOLUTION" Screen

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

OOTBF COLOR ADJUST

The "OOTBF COLOR ADJUST" 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.

"OOTBF COLOR ADJUST" Menu

MENU   B6

```
      OOTBF COLOR ADJUST:
  >RED
   GREEN
   BLUE
```

▲   B7

▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

OOTBF START UP PAGE

The "OOTBF 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.
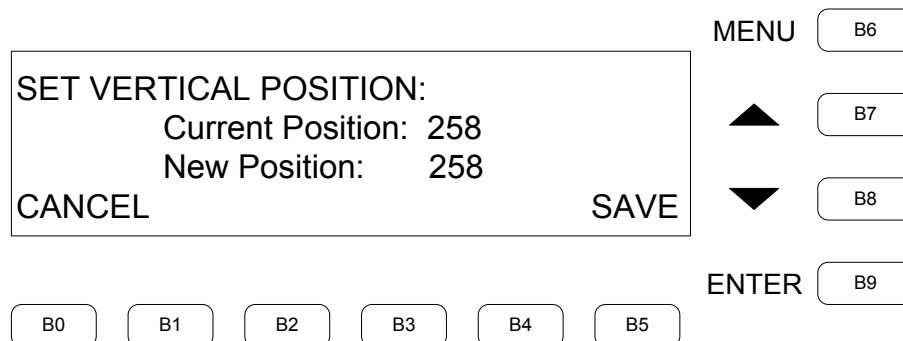
"OOTBF START UP PAGE" Screen

```
                                                    MENU    B6

  OOTBF 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)                           B7
     TOUCHOUT CHANNEL
     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 :  CUSTOM              │          ▲      [ B7 ]
 │     Current Pad Area:      1              │
 │     New Pad Area :         1              │
 │ CANCEL                          SAVE      │          ▼      [ B8 ]
 └──────────────────────────────────────────┘

                                                  ENTER [ B9 ]

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

SELECT TOUCHOUT CHANNEL

The "SELECT TOUCHOUT CHANNEL" 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 make the selection and return to the previous menu. Press **B0** (**CANCEL**) or **B6** (**MENU**) to return to the previous menu without change.

"SELECT TOUCHOUT CHANNEL" Screen

```
                                                  MENU  [ B6 ]

 ┌──────────────────────────────────────────┐
 │ SELECT TOUCHOUT CHANNEL: CUSTOM          │          ▲      [ B7 ]
 │     Current Channel:      1              │
 │     New Channel :         1              │
 │ CANCEL                          SAVE     │          ▼      [ B8 ]
 └──────────────────────────────────────────┘

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

NOTE: The "SELECT TOUCHOUT DESTINATION" and "SELECT TOUCHOUT FORMAT" screens operate in the same way as the "SELECT TOUCHOUT CHANNEL" screen.

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 ]
```
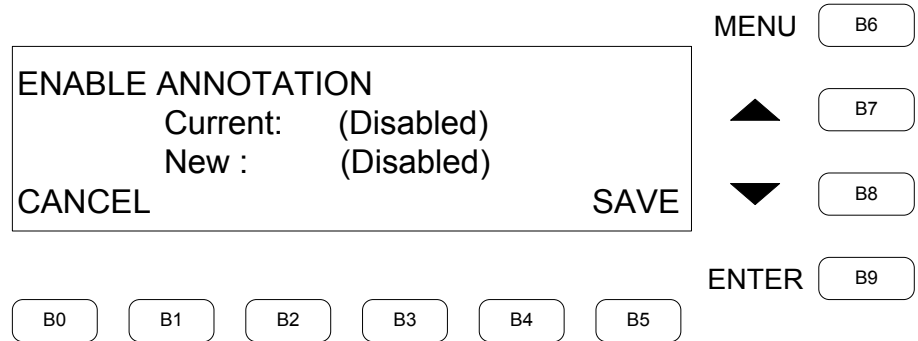
CLEAR ANNOTATION

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 ]
```
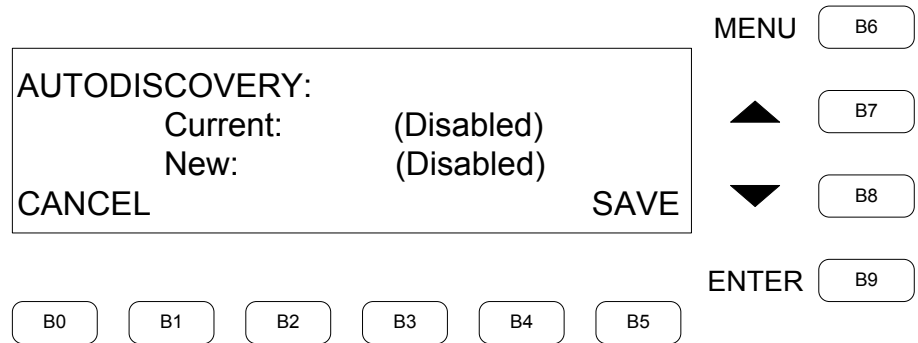
LIVE/FROZEN VIDEO

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                      │    ▲     [ B7 ]
│       Current :      LIVE              │
│       New   :        LIVE              │
│ CANCEL                         SAVE    │    ▼     [ B8 ]
└──────────────────────────────────────┘

                                          ENTER [ B9 ]

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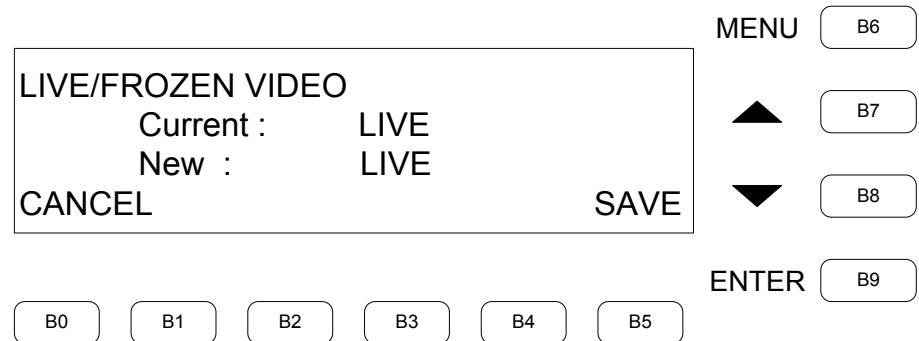
SET BRUSH

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 ]
```
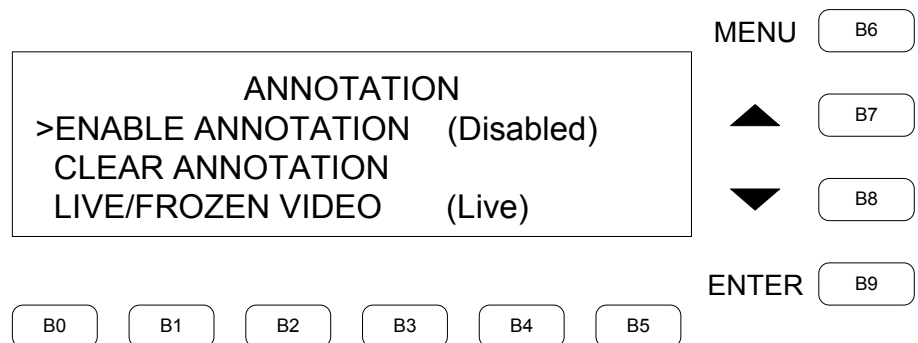
SET COLOR

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
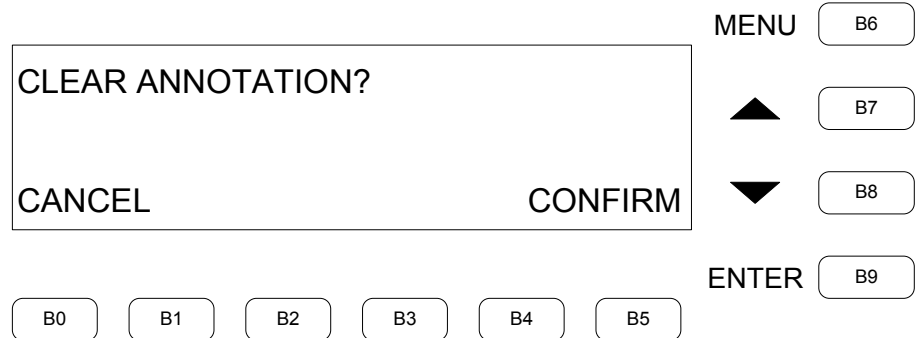
MENU [B6]

```
SET COLOR:
 >RED
  GREEN
  BLUE
```

▲ [B7]

▼ [B8]

ENTER [B9]

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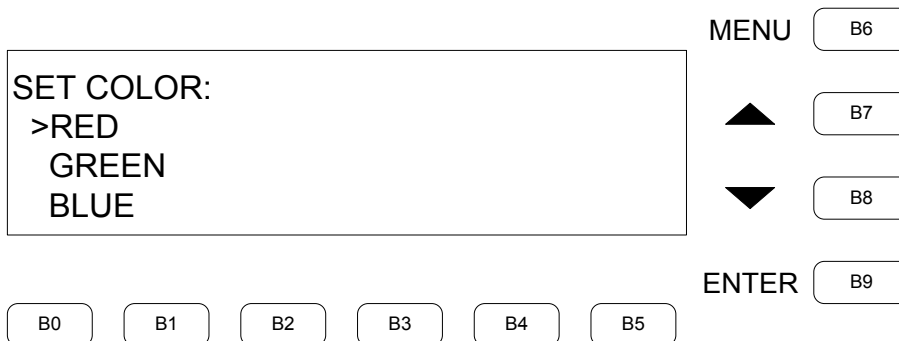
REMOTE OVERRIDE

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.

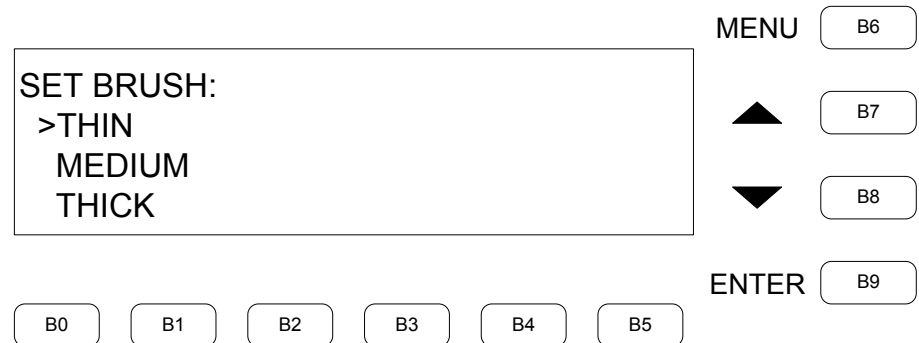**NOTE:** Remote Override is used to allow annotation on a remote DVPHD-CUSTOM-GB. (i.e, annotation on one unit, displaying on another). When this feature is enabled on a source DVPHD-CUSTOM-GB, Remote Override on the target DVPHD-CUSTOM-GB need not be enabled.

"REMOTE OVERRIDE" Screen

MENU [B6]

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

▲ [B7]

▼ [B8]

ENTER [B9]

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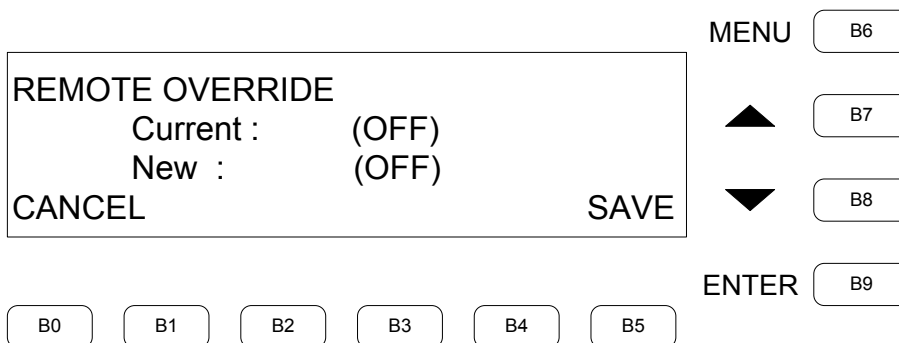
REBOOT SYSTEM

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?

    ▲   B7

CANCEL   CONFIRM   ▼   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-default   (CUSTOM)
Current window   (1)
Current window source   (Input 1 Auto)

    ▲   B7

    ▼   B8

ENTER   B9

B0   B1   B2   B3   B4   B5

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    [ B6 ]

┌─────────────────────────────────────────┐
│ ENTER/EXIT SETUP                         │                 [ B7 ]
│     Current :    Setup page is on        │       ▲
│     New     :    Exit setup page         │
│ CANCEL                          SAVE     │       ▼         [ 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 "QM SETUP" menu is only visible for products that include QM.

"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
Current Type :   (RGB)
New Type: (RGB)
CANCEL   SAVE

B7

B8

ENTER   B9

B0   B1   B2   B3   B4   B5
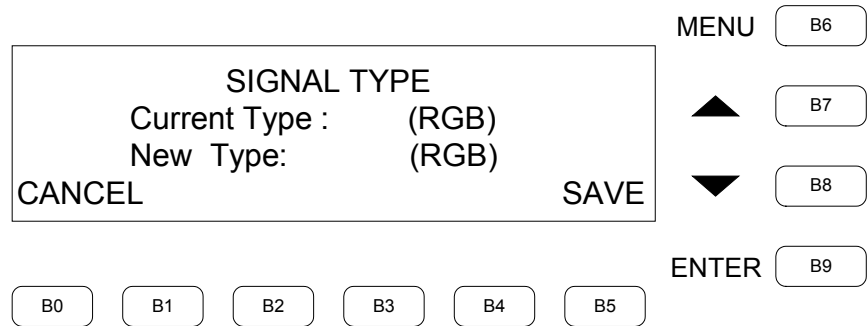
QM PRESET

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

QM PRESET:
    Current Setting: 5
    New Setting: 5
LOAD STORE

B7

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.
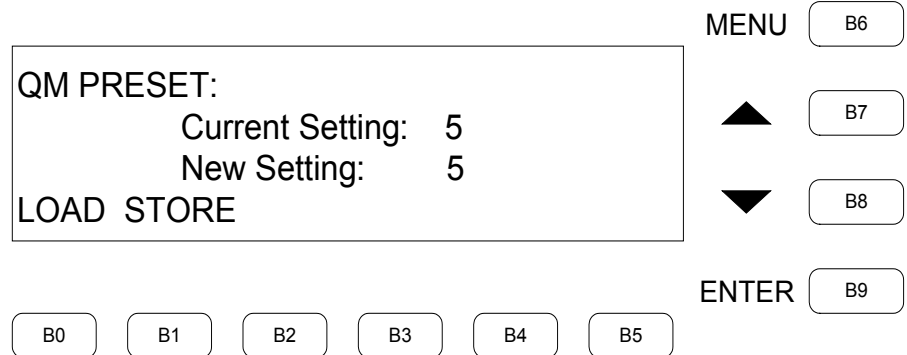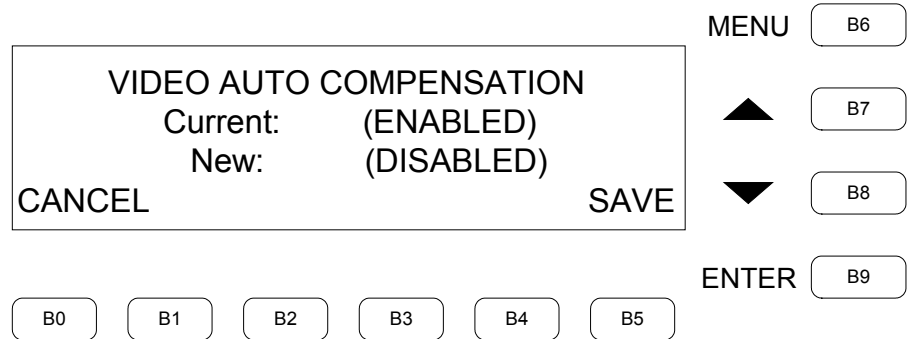
"VIDEO AUTO COMPENSATION" Screen

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.
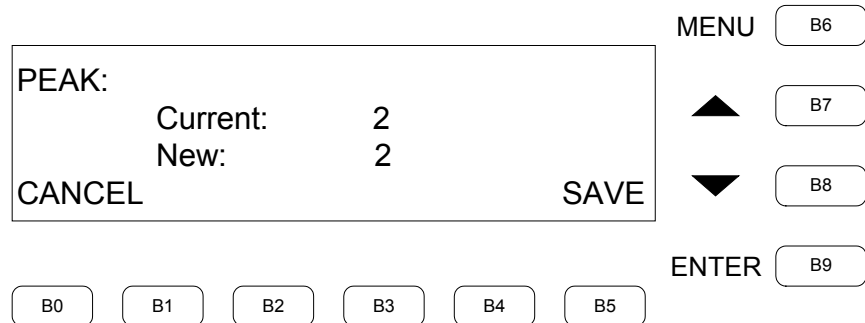
"PEAK" Screen

MENU   B6

```
┌──────────────────────────────────────────┐
│ PEAK:                                     │
│          Current:        2                │
│          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.

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-CUSTOM-GB 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-CUSTOM-GB 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.	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.
Video effect is different than expected.	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.

(Continued on following page)

DVPHD-CUSTOM-GB 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 is 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. Please 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 e-Control Reference Guide
DVPHD-CUSTOM-GB Quickstart 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-CUSTOM-GB, 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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