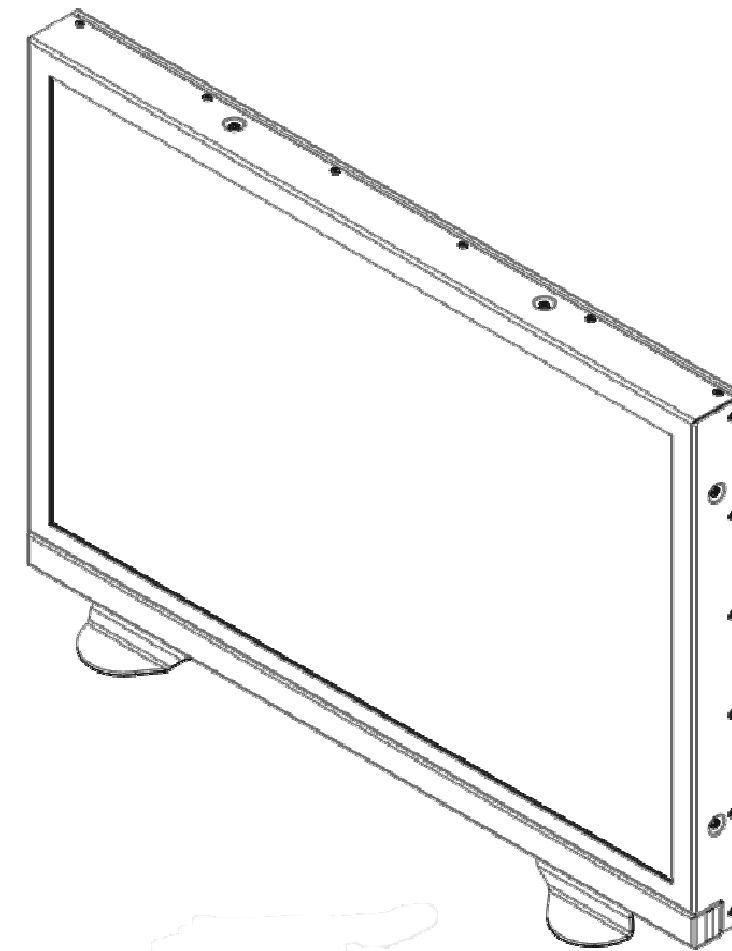


# Marshall Electronics

**QV261-HDSI**

26" Full Resolution Quad-Viewer Monitor



## Operating Instructions

**Marshall Electronics, Inc.**

1910 East Maple Ave.  
El Segundo, CA 90245

Tel: (800) 800-6608 / (310) 333-0606 • Fax: 310-333-0688  
[www.LCDRacks.com](http://www.LCDRacks.com) • [sales@lcdracks.com](mailto:sales@lcdracks.com)

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# Contents

- Product Overview**.....4
- Features**.....4
- Installation and Initial Setup**.....5
  - Unpacking.....5
  - Installation.....5
  - Connections and Power-On.....5
- Top and Front Panel Features**.....6
  - Power Button.....6
  - Input Channel Buttons.....6
  - Quad Mode Button.....6
  - DVI-I Button.....6
  - User-Definable Function Buttons.....6
  - RotoMenu™ Knob.....6
  - Image Adjustment Knobs.....6
- Rear Panel Features**.....7
  - RS-422/485 Serial Interface.....7
  - PG-1 Connector.....7
  - Tally Interface (HD-15).....7
  - HD-SDI Input and Output.....7
  - Power Input.....7
  - VESA 75mm Hole Pattern.....7
  - Desktop Mounting Holes.....7
  - DVI-I Input Connector.....7
- Compatible Input Formats**.....8
- Quad Mode**.....9
- On-Screen Menu**.....11
  - STRUCTURE OVERVIEW.....11
  - MAIN MENU AND NAVIGATION.....12
    - Making Changes to an Individual Channel.....12
    - Group Link Changes.....13
  - VIDEO CONFIGURATION SUBMENU.....14
    - Monochrome Mode.....14
    - Blue-Only Mode.....15
    - Pixel-to-Pixel Mode.....15
    - Aspect Ratio Settings.....15
    - Curtain Color.....16
    - Ctemp/Gamma.....16
    - Framelock Preference.....16
    - Analog Phase.....16
  - COLOR CONFIGURATION SUBMENU.....17
  - SYSTEM CONFIGURATION SUBMENU.....17
    - User-Definable Function Buttons.....17
    - Saving and Loading User Presets.....18
  - OSD CONFIGURATION SUBMENU.....18
    - IMD State.....18
    - Status Display.....19
    - Time Code.....19
    - OSD Tally.....20
    - Audio Monitor.....21
    - CC Monitor.....21
    - OSD Timeout.....21
  - IMD CONFIGURATION SUBMENU.....22
    - Overview.....22
    - IMD ID#.....22
    - IMD Group #.....22
    - IMD Protocol.....23
    - Tally Source.....23
    - IMD Baud Rate.....24
    - IMD Name (S/N).....24
    - IMD Tally Mode.....24
  - IMD FIXED SUBMENU.....25
    - IMD Fixed Color.....25
    - IMD Fixed Align.....25
    - IMD Fixed String.....25
  - SERVICE SUBMENU.....26
    - Software Version Display.....26
- Specifications**.....27
- Maintenance**.....28
- Warranty**.....28

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# Product Overview

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The QUAD VIEWER Series is the latest addition to Marshall's line of IMD-equipped monitors. The monitor features a full resolution 1920 x 1200 LCD panel, built-in high quality HD Quad Splitter, four independent HDSDI inputs, one DVI-I input, IMD (In-Monitor Display) capability, Audio Presence indicator, and Time Code. Video and DVI-I both offer full screen mode, while quad-split mode is scaled to fit onscreen in the highest resolution. IMD and Tally are supported via manual mode, along with Image Video, NVISION, MEI (Marshall), and TSL protocols. Other features include Closed-Caption presence display, front panel user-configurable function buttons, RS-422/485 port with pass-through, and field-upgradeable firmware.

## Features

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- **1920 x 1200 Full Resolution 26" Panel**

The QV261-HDSDI features an all-digital TFT-MegaPixel active matrix LCD system with 1920x1200 native resolution. The LCD panel features a brightness of 500 cd/m<sup>2</sup> and a 800:1 contrast ratio making it ideal in a variety of environments and lighting conditions.

- **Quad-Viewer and Side by Side mode**

Ability to view 4 inputs on the screen at once. Each input source is scaled and positioned in real-time so that all 4 can be seen. DVI-I input can replace HD/SDI input #4 in this mode. There are 3 different Quad-Layouts from which to choose. Also, the Side by Side mode allows you to select any two consecutive channels to view on the screen at one time.

- **In-Monitor Display**

In-Monitor Display allows on-screen text and tally indication, controlled locally or remotely via a variety of industry standard protocols.

- **OSD Features (On Screen Display)**

Embedded time code and an embedded audio presence indicator can be displayed on the screen in a variety of configurations. Closed Caption presence indication is also provided for 608/708 captions.

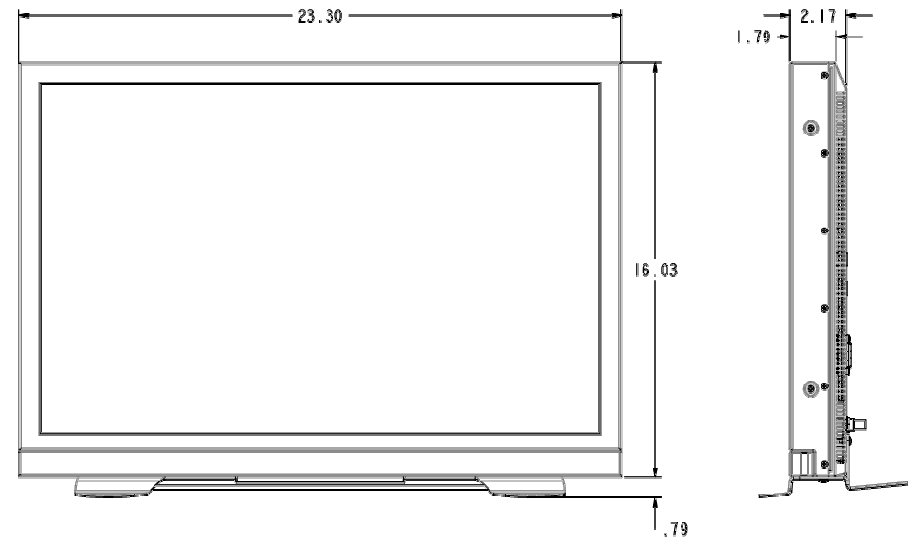
- **Advanced Features**

Color temperature adjustment, aspect ratio settings, blue-only mode, and monochrome mode are a few of the advanced features allowing the QV261-HDSDI to be at home in any broadcast environment. Pixel-to-Pixel mode also allows native display of any incoming image format.

- **User-Definable Function Buttons**

Two user-definable function buttons allow quick access to numerous settings and features including aspect ratio, monochrome mode, color temperature, and more.

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## Maintenance

### ■ Screen Cleaning

Periodically clean the screen surface using ammonia-free cleaning wipes (Marshall Part No. **V-HWP-K**). A clean micro-fiber cloth can also be used using only non-abrasive and ammonia-free cleaning agents. Do not use paper towels. Paper towel fibers are coarse and may scratch the surface of the polycarbonate faceplate or leave streaks on the surface. Antistatic and fingerprint resistant cleaning agents are recommended. Do not apply excessive pressure to the screen to avoid damaging the LCD.

### ■ Faceplate Dusting

Dust the unit with a soft, damp cloth or chamois. Dry or abrasive cloths may cause electrostatic charge on the surface, attracting dust particles. Neutralize static electricity effects by using the recommended cleaning and polishing practice.

## Warranty

Marshall Electronics warrants to the first consumer that this **QV261-HSDI** LCD monitor will, under normal use, be free from defects in workmanship and materials, when received in its original container, for a period of one year from the purchase date. This warranty is extended to the first consumer only, and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, Marshall Electronics reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to the consumer. This warranty does not apply to the product exterior or cosmetics. Misuse, abnormal handling, alterations or modifications in design or construction void this warranty. *It is considered normal for a minimal amount of pixels, not to exceed three, to fail on the periphery of the display active viewing area.* Marshall Electronics reserves the option to refuse service for display pixel failure if deemed unobtrusive to effective use of the monitor by our technicians. No sales personnel of the seller or any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of Marshall Electronics, beyond the time period described above. Due to constant effort to improve products and product features, specifications may change without notice.

## Installation and Initial Setup

### ■ Unpacking

Carefully unpack the QV261-HSDI monitor and verify that the following items are included:

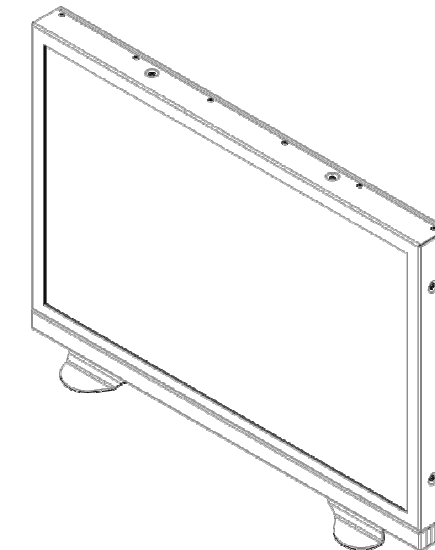
- QV261-HSDI Monitor
- V-PS24-7.5 Power Supply with 4-Pin XLR Connector
- Operating Instructions

Inspect the unit for any physical damage that may have occurred during shipping. Should there be any damage, immediately contact Marshall Electronics at (800) 800-6608. If you are not located within the continental United States, call +1 (310) 333-0606.

### ■ Installation

The QV261-HSDI comes with a desktop stand (Marshall Part V-ST23-32).

VESA standard 75mm and 200 mm hole patterns allows custom mounting installations (Marshall Part VP-LCD171H-ST-01).



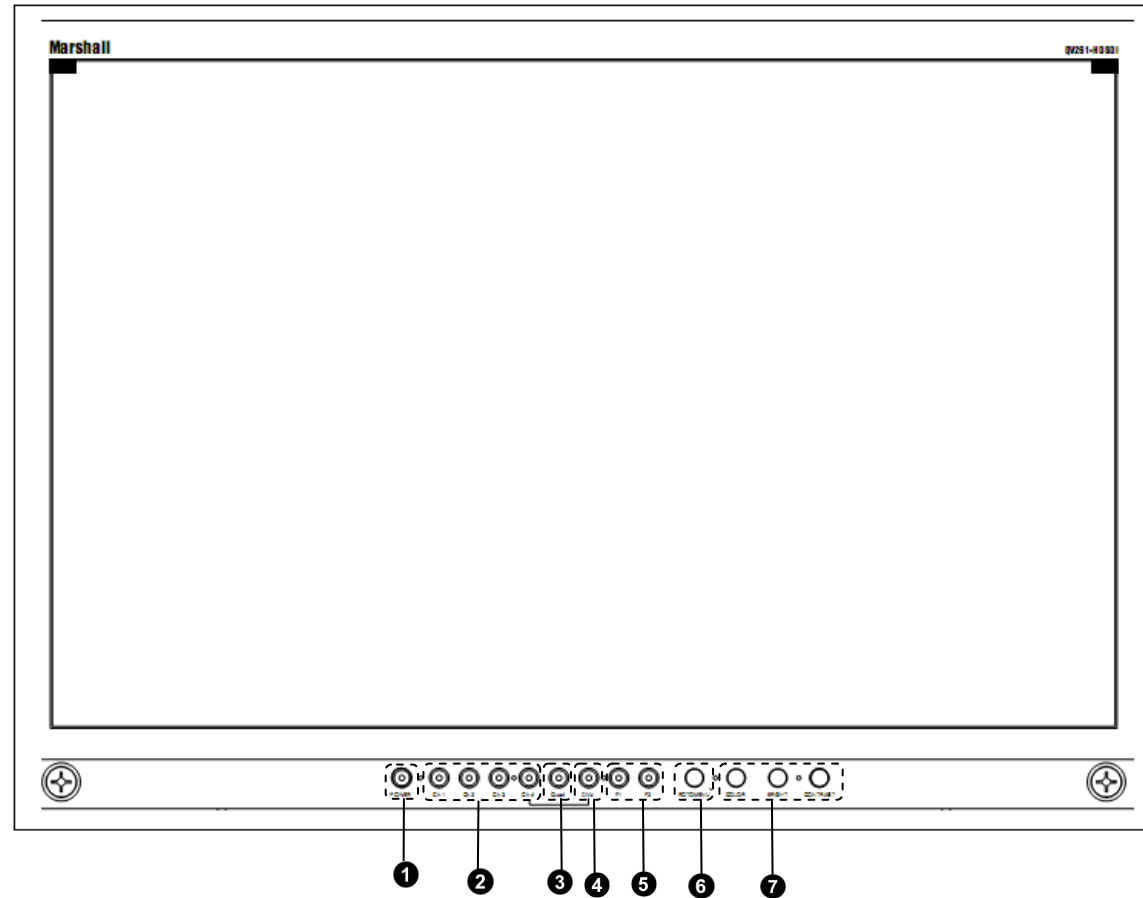
QV261-HSDI with desktop stand (Marshall Part Number V-ST23-32)

### ■ Connections, Power-On and Initial Setup

Plug the V-PS24-7.5 power supply into an AC power source (100-240 V @ 50/60 Hz). Attach the XLR connector to the back of the monitor. Connect the required cables for video signals input and output. (Power must be applied to the QV261-HSDI for the active loop-through output to be activated.) The monitor defaults to 'ON' when power is supplied.

**For IMD setup details, see IMD Configuration Submenu on page 21.**

# Top and Front Panel Features



## 1 Power Button

Turn the monitor off or on by pressing the power button. The LED on the power button is at maximum illumination when the unit is OFF. The LED is at minimum illumination when the unit is on.

## 2 Input Channel Buttons

Pressing **Ch.1**, **Ch.2**, **Ch.3**, or **Ch.4** will select HDSDI-SDI Video Inputs 1, 2, 3 or 4. This also switches the monitor to **Full Screen Mode**.

## 3 Quad Mode Button

Allows user to switch monitor to **Quad Mode and Dual Layout**. Alternate presses will switch between the three different **Quad Layouts and Dual Layout**. (See **Quad and Dual Mode – Page 9**).

## 4 DVI-I Button

Selects DVI-I input as the video source for Ch.4 (This replaces HDSDI-SDI input #4 when in Quad Mode). When activated, the LED will light.

## 5 User-Definable Function Buttons

Two user-definable function buttons can be used for direct access to various settings. Functions are assigned using the on-screen menu (See **User-Definable Function Buttons – Page 17**).

## 6 RotoMenu™ Knob

The RotoMenu™ knob allows for accessing and navigating the main menu, using only a single control.

## 7 Image Adjustment Knobs

Use the image adjustment knobs to adjust color saturation, brightness and contrast of the image. The status of each image adjustment parameter is shown on the top left of the screen, with values ranging from 0 to 100. Pressing a knob once displays the current value. Pressing a knob twice resets the corresponding adjustment to the default setting. Adjusting the knobs while in any of the Quad layouts will adjust only the first channel (left most) on the screen.

# Specifications

## PANEL

Screen Size	25.54" Diagonal
Display Area (h x v)	552 x 345 mm
Aspect Ratio	16:10 Native (4:3/16:9 Modes)
Pixels	1920 x RGB x 1200
Color Depth	8-bit
Viewing Angle (h x v)	178° x 178°
Brightness	500 cd/m <sup>2</sup>
Contrast Ratio	800:1
Pixel Pitch (h x v)	0.2865x 0.2865mm

### Burn-In Warning

The QV261-HDSDI uses a high quality TFT LCD panel. However, if a static image is left on the screen for 48 hours, there may be a 10 to 20 minute recovery period for the panel. During recovery, a very faint image may be retained on the display. Put up a white curtain for 30 minutes to eliminate the retained image.

## VIDEO INPUT/OUTPUT

### HD-SDI Input / Output

Supports ITU-R BT.656, SMPTE 259M, 292M, 274M

### DVI-I Video/VESA input

## CONNECTORS

### HD-SDI Video Input

4 x BNC Female (75 Ω)

### HD-SDI Video Output (Active Loop-Through)

4 x BNC Female (75 Ω)

### DVI-I Video/VESA input

1 x DVI-I Female connector

### Power Input

4-Pin XLR Connector

### Tally Hardware Interface

HD-15 Female

### RS-422/485 Interface

2 x RJ12 (Modular 6P6C)

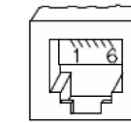
## TALLY HARDWARE INTERFACE (HD-15)

Activation requires contact closure of pin to ground on the HD-15 connector:

Pin No.	Signal
1	Channel 1 Green
2	Channel 1 Red
3	Channel 1 Yellow
4	Ground
5	Channel 4 Green
6	Channel 2 Green
7	Channel 2 Red
8	Channel 2 Yellow
9	Ground
10	Channel 4 Red
11	Channel 3 Green
12	Channel 3 Red
13	Channel 3 Yellow
14	Ground
15	Channel 4 Yellow

## RS-422/485 SERIAL INTERFACE (RJ12)

Protocols: Image Video, TSL v4.0, MEI



Pin No.	Signal
1	Tx-
2	Ground
3	Rx+ (Receive from host)
4	Rx- (Receive from host)
5	N/C
6	Tx+

## ELECTRICAL

Power Consumption	145 W
Voltage Requirement	24 VDC

### V-PS24-7.5 Power Supply:

Input	100V-240V, 2.5A, 50-60Hz
Output	18-24VDC, 7.5A, 150W Max

## MECHANICAL

Dimensions (w x h x d): 23.3" x 16.03" x 2.94"

Weight (with rack ears): 19.3 lbs

Operating Temperature	32°F to 120°F (0°C to 50 °C)
Storage Temperature	-4°F to 120°F (-20°C to 50°C)

Compliance CE, FCC-Class A, ANSI-63.4 (Certificates on file)

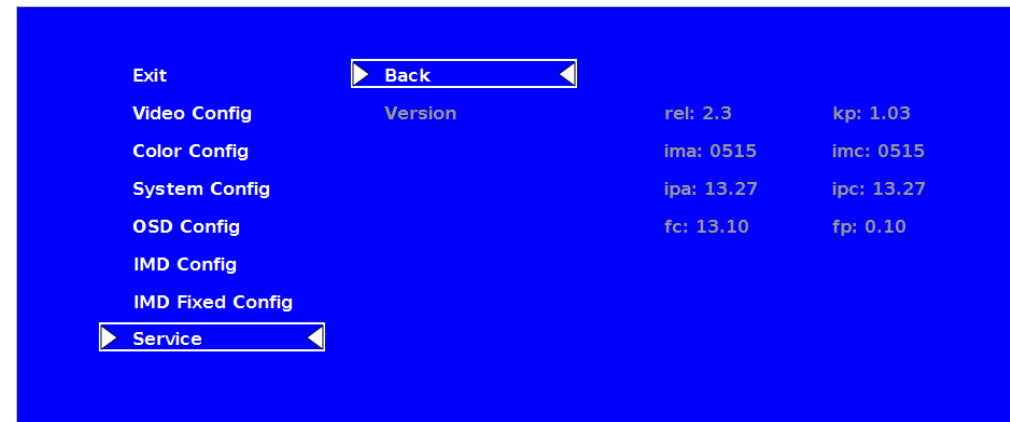
RoHs Do not dispose. Return to Manufacturer or Authorized Recycle Facility.

## Specifications (continued)

### SERVICE SUBMENU

#### ■ Software Version Display

The Main Board, Keypad, and FPGA software version numbers are displayed.

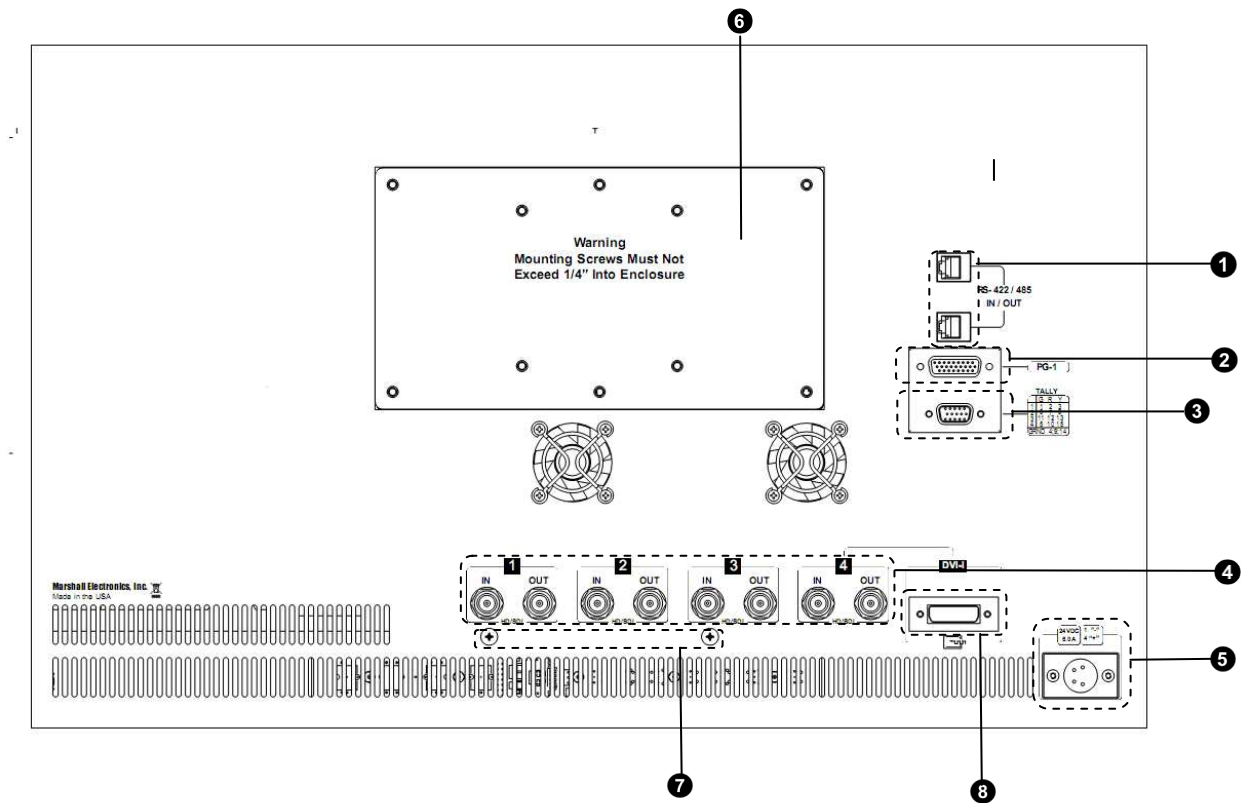


Service Menu

The following information is displayed:

- rel: Release Package version number
- kp: Keypad version number
- ima: A/B Input module version
- imc: C/D Input module version
- ipa: Input processor firmware
- ipc: Input processor firmware
- fc: Combiner FPGA version
- fp: Packet decoder FPGA version

## Rear Panel Features



#### 1 RS-422/485 Serial Interface

The RS-422/485 ports are used to remotely control the IMD or all QV261-HDSDI features, using a variety of industry standard protocols. **(Note: Connector/pin-out may need to be adapted depending on protocol and controlling device used. See pin-out details on page 27.)** Only one connection to either port is needed to control the monitor. The second port can be used to loop multiple monitors in the same bus.

#### 2 PG-1 Connector

**DO NOT USE!** This is for factory use only. Connecting any device to this port may damage the unit.

#### 3 Tally Interface (HD-15)

The OSD tally can be activated via the HD-15 connector by connecting the corresponding pin to ground. A variety of external devices can be used to perform the contact closure. No additional power should be supplied to the HD-15 port. **See pin-out details on page 28.**

#### 4 HD-SDI Inputs and Outputs

The QV261-HDSDI has four HD-SDI inputs and four active loop-through outputs.

#### 5 Power Input

Connect the 24VDC input to the XLR power input connector. Power can be supplied from the included power supply, or from a variety of DC sources supplying at least 6.0 Amps at 24 Volts. **IMPORTANT:** If using a power source other than the included power supply, be sure that the polarity of the DC input is correct:

- Pin 1: GND
- Pin 2: N/C
- Pin 3: N/C
- Pin 4: +24VDC

#### 6 VESA 75mm and 200 mm Hole Pattern

VESA-standard 75 mm and 200 mm hole-patterns are provided to accommodate a variety of custom mounting options.

#### 7 Desktop Mounting Holes

These holes are used when attaching the monitor to the optional desktop stand. **See page 5 for details.**

#### 8 DVI-I Input Connector

Integrated DVI Digital and Analog VGA input. Includes EDID and HDCP for connection to Computers, DVD Players, Rasterizers, etc.

# Compatible Input Formats

The following SDI standards are supported by the QV261-HDSDI:

525i, 625i  
 1035i/60, 1035i/59.94  
 1080i/60, 1080i/59.94, 1080i/50  
 1080psF/24, 1080psF/23.98  
 1080p23.98, 1080p/24, 1080p/25, 1080p/29.97, 1080p/30  
 720p/60, 720p/59.94, 720p/50  
 720p/23.98, 720p/24, 720p/25, 720p/29.97, 720p/30

The following VESA standards are supported by the QV261-HDSDI (DVI-I input):

640x480 @60Hz  
 800x600 @60Hz  
 1280x1024 @60Hz  
 1680x1050 @60Hz  
 1600x1200 @60Hz

The following DVI-Video standards are supported by the QV261-HDSDI (DVI input):

525i, 625i  
 480p/59.94, 576p/50  
 1035i/60, 1035i/59.94  
 1080i/60, 1080i/59.94, 1080i/50  
 1080p/23.98, 1080p/24, 1080p/25, 1080p/29.97, 1080p/30  
 720p/60, 720p/59.94, 720p/50

# On-Screen Menu (continued)

## IMD FIXED CONFIGURATION SUBMENU

### ■ IMD Fixed Color

Use this setting to choose the color of the IMD Fixed String text (see below). Available colors are **red**, **green**, and **yellow**. This setting does not affect text color when using IMD text via the Image Video or TSL v4.0 protocols (text color is set via the protocols).

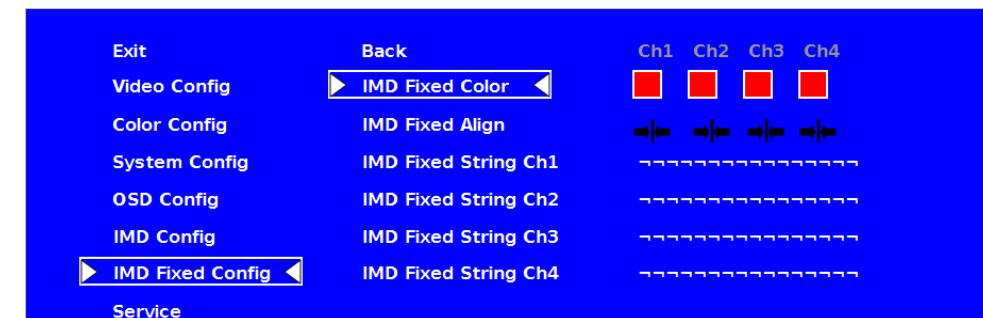
### ■ IMD Fixed Align

Use this setting to choose the horizontal alignment of the IMD text. IMD text can be justified on the **left**, **center** or **right** of the screen. This setting is overridden when using IMD text via the Image Video protocol (alignment is set via Image Video protocol).

### ■ IMD Fixed String

Use this setting to display static IMD text on the screen. This setting is used to enter IMD text locally, when a serial protocol is not used for remote control. The IMD Fixed String is saved after power cycle. *The IMD Fixed String will be overridden by serial protocol commands.*

Press RotoMenu™ knob to edit the IMD Fixed String. Rotate the RotoMenu™ knob to move the cursor. Press the RotoMenu™ knob with the cursor on the character to be changed, then rotate the knob to scroll through the character set. Press the RotoMenu™ knob to choose a character. The '↵' character indicates an unused (NULL) value in the string. The string entered will be terminated by the first '↵'. Characters to the right of a '↵' character will be displayed in the menu, but will not be shown in the IMD string.



IMD Fixed Configuration Submenu



## On-Screen Menu (continued)

### IMD CONFIGURATION SUBMENU (continued)

#### TSL/MEI 422

Use the TSL/MEI 422 setting to control OSD tally via the TSL or Marshall serial protocols.

#### ■ IMD Baud Rate

Use this setting to choose the baud rate. The baud rate must be set in conjunction with the controlling device. Available baud rates are **300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200**. The TSL v4.0 protocol is fixed at 38400 bauds.

#### ■ IMD Name (S/N)

Use this setting to assign a name to each screen when using the Image Video or Marshall-IV protocols. **The IMD name is equivalent to the Image Video serial number and is used by the Image Video controlling device to identify each screen.** The default IMD Name(S/N) is "M00000." It is recommended to maintain this naming scheme in order to avoid serial number conflicts with other Image Video devices on the same serial bus. Each name can be up to 16 ASCII characters.

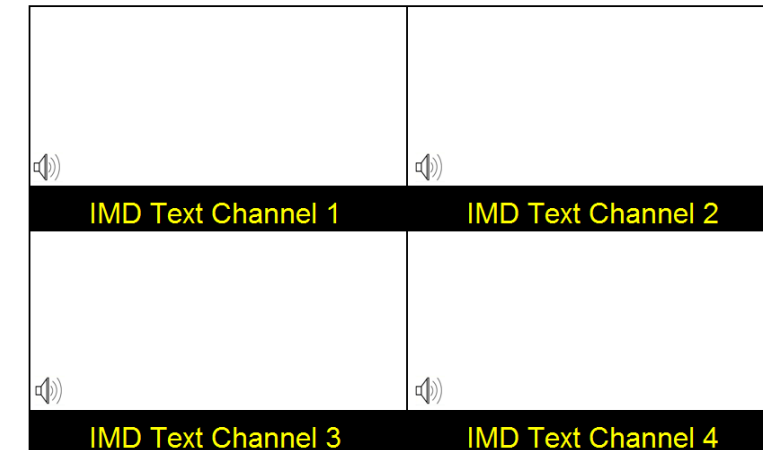
Press RotoMenu™ knob to edit the IMD Name. Rotate the RotoMenu™ knob to move the cursor. Press the RotoMenu™ knob with the cursor on the character to be changed, then rotate the knob to scroll through the character set. Press the RotoMenu™ knob to choose a character.

#### ■ IMD Tally Mode

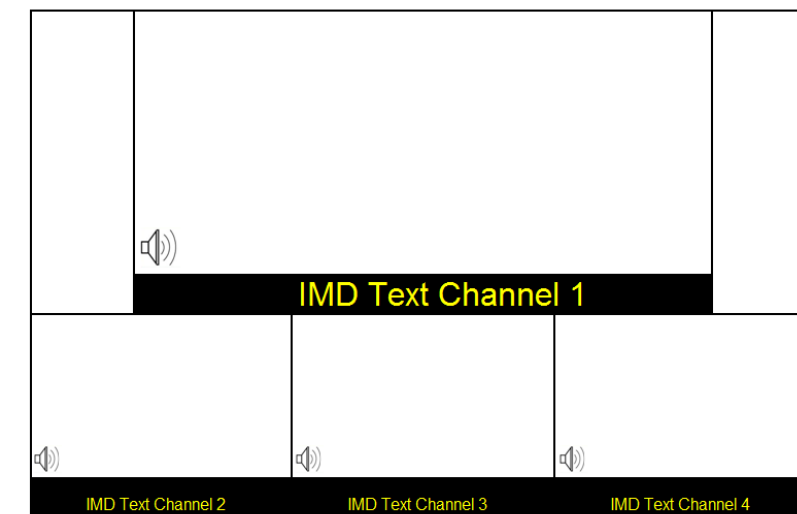
Use this setting when using Image Video tally control. Choose one of the following settings, in conjunction with the Image Video controlling device. **T1, T2, T1T2, T2T1, T1-, T2-, T1T2-, T2T1-**. Consult Image Video documentation for further information.

## Quad and Dual Mode and Layouts

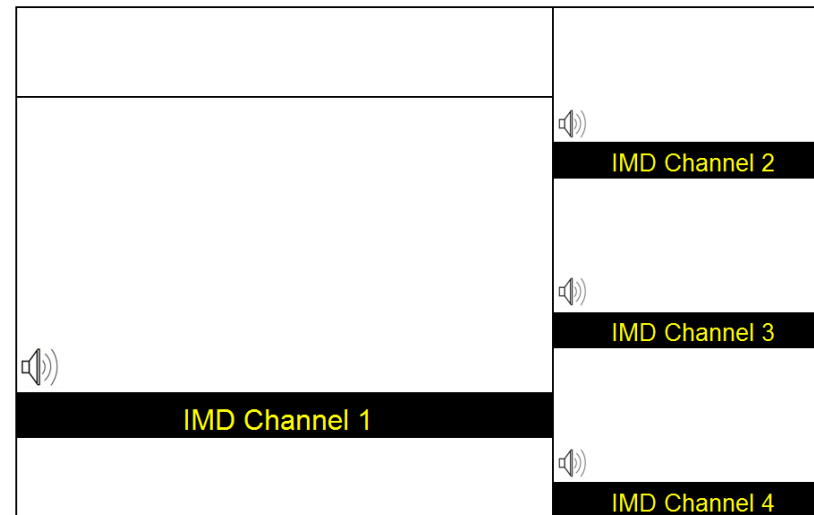
The QV261-HDSDI can display 4 different input sources simultaneously. Each source is scaled and positioned to fit the desired layout. There are a total of 4 different layouts illustrated below. Each press of the QUAD Button will change the current layout to next available layout. When in Quad Mode, Ch.4 Video Source can be changed to be the DVI-I source at any time by pressing the DVI-I Button. This will illuminate the DVI-I Button LED. Any HD/SDI Video Source connected to BNC Connector # 4 will not be viewable when the DVI-I LED is lit.



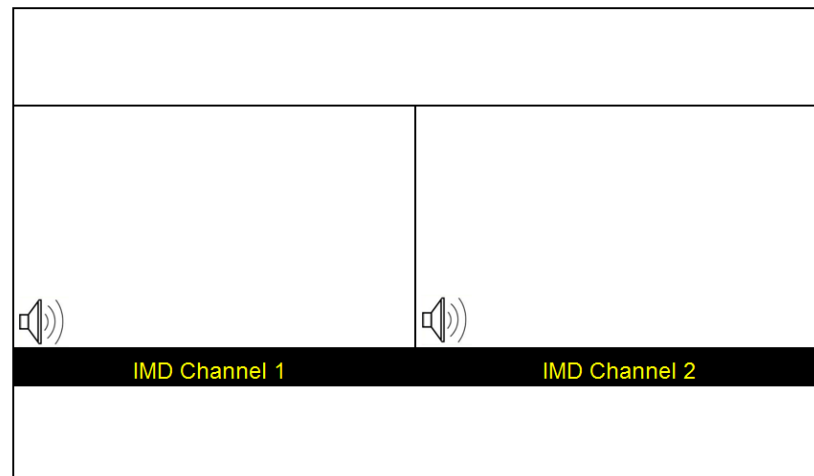
Default Quad Layout



Quad Layout 2



Quad Layout 3



Layout 4

**IMD CONFIGURATION SUBMENU (continued)**

■ **IMD Protocol**

Use the IMD Protocol menu option to choose the protocol with which the QV261-HDSDI receives remote commands. Currently, four protocols are available. Contact Marshall Electronics for the latest protocol compatibility.

**Image Video**

Use the Image Video protocol setting when controlling the IMD from an Image Video tally controller (e.g. TSI-1000) or other controlling device which utilizes the Image Video protocol. The **IMD #**, **IMD Name(S/N)**, and **Baud Rate** parameters must be set for each screen in conjunction with the controlling device.

**TSL v4.0**

Use the TSL v4.0 protocol setting when controlling the IMD from a TSL tally controller, or other controlling device which utilizes the TSL v4.0 protocol. The **IMD #** must be set for each screen in conjunction with the controlling device.

**MEI**

Use the MEI protocol setting when controlling the QV261-HDSDI using the Marshall Network Controller box. This protocol allows remote control of all features on the QV261-HDSDI, including marker setup, video configuration, system configuration, and image adjustments (brightness, contrast, etc.). The **IMD #**, **IMD Group #**, and **Baud Rate** parameters must be set in conjunction with the Network Controller Box.

**MEI-Image Video**

This protocol setting accepts Image Video commands *via* MEI protocol, for use when an Image Video controller is connected to the Marshall Network Controller box.

■ **Tally Source**

The QV261-HDSDI OSD tally can be controlled in a variety of different ways. Use the Tally Source setting to choose how tally is controlled:

**Standard**

Use the Standard setting to control tally via contact closure on the HD-15 tally interface.

**Image Video HW**

Use the Image Video HW setting to control Image Video tally states via contact closure on the HD-15 tally interface. Contact closure of the **Red** pin corresponds to **Image Video Tally 1**, and the **Green** pin maps to **Image Video Tally 2**. Contact closure (ground) corresponds to a LOW state, and open circuit corresponds to a HIGH state. This mode requires the IMD Tally Mode parameter to be set. Consult Image Video documentation for further information.

**Image Video 422**

Use the Image Video 422 setting to control Image Video tally states via the Image Video serial protocol. OSD tally will be disabled in this mode, as Image Video tally states are manifested in the text color and other parameters. This mode requires the IMD Tally Mode parameter to be set. Consult Image Video documentation for further information.

**Standard + IV422**

Use the Image Video 422 setting to control Image Video tally states via the Image Video serial protocol, while controlling OSD tally using contact closure on the HD-15 tally interface. This mode requires the IMD Tally Mode parameter to be set. Consult Image Video documentation for further information.

## IMD CONFIGURATION SUBMENU

### ■ Overview

The QV261-HDSDI features an In-Monitor Display (IMD) with the ability to display on-screen text and tally in three colors. IMD text, color, and alignment can be assigned to each screen locally using menu options (see below). Alternately, IMD text and tally can be remotely controlled via the RS-422/485 serial interface using several industry-standard protocols, including TSL v4.0 and Image Video. Multiple QV261-HDSDI monitors can be looped together and each addressed individually via the protocol. All menu features of the QV261-HDSDI can also be controlled via the Marshall Network Controller box using MEI protocol. (Contact Marshall Electronics for additional information).

Use the IMD Configuration submenu to configure various IMD parameters as described below.

Exit	Back	Ch1	Ch2	Ch3	Ch4
Video Config	▶ IMD ID # ◀	000	000	000	000
Color Config	IMD Group #	001	001	001	001
System Config	IMD Protocol	MEI			
OSD Config	Tally Source	Standard			
▶ IMD Config ◀	IMD Baud Rate	57600			
IMD Fixed Config	IMD Name (S/N) Ch1	M00000-~			
Service	IMD Name (S/N) Ch2	M00000-~			
	IMD Name (S/N) Ch3	M00000-~			
	IMD Name (S/N) Ch4	M00000-~			
	IMD Tally Mode	T1T2-			

IMD Configuration Submenu

### ■ IMD ID #

The IMD ID # identifies each screen to the controlling device. When using the TSL protocol, the ID # of each screen should be manually set in conjunction with the controlling device. When using the Image Video protocol, the ID # may be set automatically by the controlling device, after each IMD is initially identified by IMD Name (see "IMD Name[S/N]" below). Available ID #s are **000-254**.

### ■ IMD Group #

Each screen can be assigned an IMD Group # when using the Marshall protocol. Available Group #s are **01-254**.

## On-Screen Menu

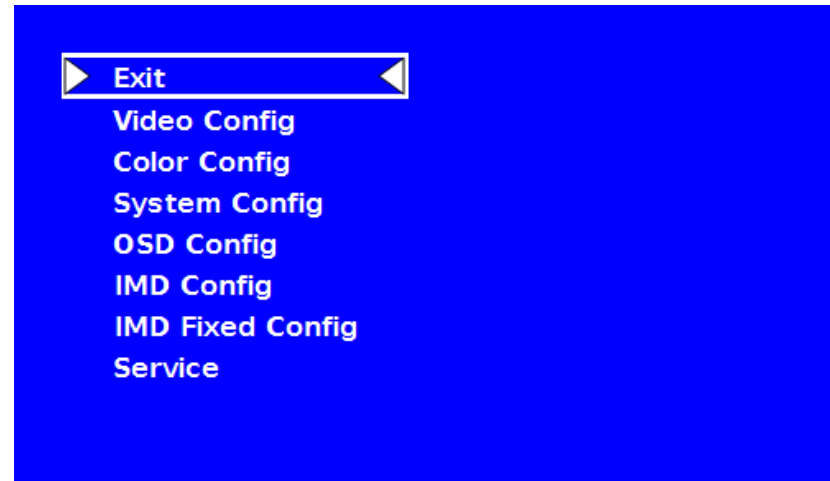
### STRUCTURE OVERVIEW

Main	Video Config	Back		Return to Main Menu
		Monochrome	Link All	Off, On
		Blue Only	Link All	Off, On
		Pixel to Pixel	Link All	Off, On
		Aspect Ratio	Link All	Full, 4:3, Scaled 4:3, 16:9
		Curtain Color	Link All	Blue, Red, Green, White, Black
		Ctemp/Gamma		55k, 65k, 93k, Linear
		Framelock Preference		Ch1, Ch2, Ch3, Ch4, Freerun
		Analog Phase		0-31 (DVI-Analog input only)
		Color Config	Back	
Red Offset	Per Channel		0-100	
Green Offset	Per Channel		0-100	
Blue Offset	Per Channel		0-100	
Red Gain	Per Channel		0-100	
Green Gain	Per Channel		0-100	
Blue Gain	Per Channel		0-100	
Reset			Back, Ch1, Ch2, Ch3, Ch4, DVID, DVIA (Resets values on the select channel)	
System Config	Back		Return to Main Menu	
	Function 1		Monochrome, IMD State, Anc. Timecode, OSD Tally, Audio Monitor, CC Monitor, Aspect Ratio, Pixel to Pixel, Ctemp/Gamma, Blue Only	
	Function 2		Monochrome, IMD State, Anc. Timecode, OSD Tally, Audio Monitor, CC Monitor, Aspect Ratio, Pixel to Pixel, Ctemp/Gamma, Blue Only	
	Load Config		Mfg, Back	
	Save Config		User 1, User 2, User 3, User 4, User 5, User 6, Back	
OSD Config	Back		Return to Main Menu	
	IMD State	Link All	Off, On	
	Status Display	Link All	Off, On	
	Anc. Timecode	Link All	Off, LTC, VITC	
	OSD Tally	Link All	Off, RGY, RG, GR	
	Audio Monitor	Link All	Off, On	
	CC Monitor	Link All	Off, On	
	OSD Timeout		000-060	
	IMD Config	Back		Return to Main Menu
IMD ID #			000-255	
IMD Group #			001-254	
IMD Protocol			MEI, Image Video, TSL 4.0, MEI-Image Video	
Tally Source			Standard, TSL/MEI 422, Image Video HW, Image Video 422, Standard + IV 422	
IMD Baud Rate			300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
IMD Name (S/N) Ch1			User Defined (16 chars max.)	
IMD Name (S/N) Ch2			User Defined (16 chars max.)	
IMD Name (S/N) Ch3			User Defined (16 chars max.)	
IMD Name (S/N) Ch4			User Defined (16 chars max.)	
IMD Tally Mode			T1, T2, T1T2, T2T1, T1-, T2-, T1T2-, T2T1-	
IMD Fixed Config	Back		Return to Main Menu	
	IMD Fixed Color	Link All	Green, Yellow, Red	
	IMD Fixed Align	Link All	Left, Center, Right	
	IMD Fixed String Ch1		User Defined (16 chars max.)	
	IMD Fixed String Ch2		User Defined (16 chars max.)	
	IMD Fixed String Ch3		User Defined (16 chars max.)	
Service	Back		Return to Main Menu	
	Version		Displays current firmware version	

## On-Screen Menu (continued)

### MAIN MENU AND NAVIGATION

Access and navigate the main menu using the RotoMenu™ knob:



Main Menu

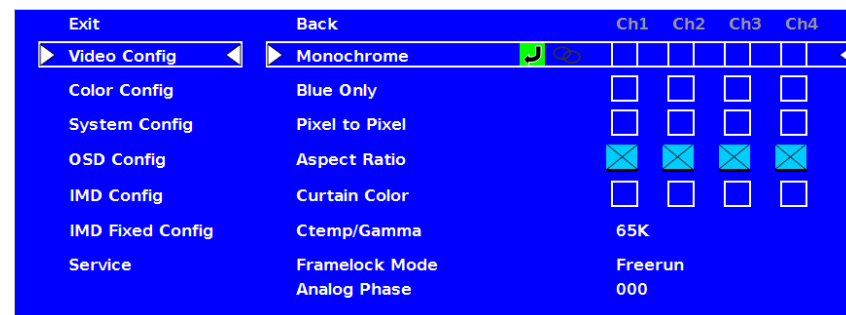
#### Using the RotoMenu knob

- Press the **RotoMenu™** knob to enter the main menu.
- Rotate the knob to scroll up or down in the main menu or each submenu.
- Press the **RotoMenu™** knob to enter a submenu or choose a setting.
- To return to main menu from submenu, select 'Back' and press the **RotoMenu™**.

The menu timeout can be set in the OSD Timeout section of the OSD Config submenu.

### Making Changes to an Individual Channel

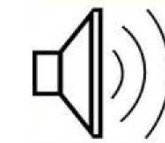
The Quad-Viewer RotoMenu allows for Video, Color, System, OSD and IMD Configuration changes to be made to individual channels in the Quad-Viewer system. Items in the menu that can be changed for each individual channel will have a Ch1, Ch2, Ch3, Ch4 indicator on the right side of the menu and a small white box for each individual channel, as shown below:



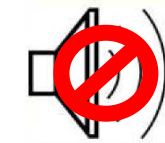
To modify an individual channel, select the particular submenu you would like to modify (in this case, the Monochrome option) by turning your RotoMenu left or right from the screen above.

### Audio Monitor

Use the Audio Monitor menu option to enable or disable the audio presence indicator icon. When enabled, this icon indicates whether embedded audio is present in the HD/SDI video input. A red circle and cross will flash on the icon if no embedded audio is present.



Embedded Audio Present



No Embedded Audio

### CC Monitor (Closed Captioning)

Use the CC Monitor menu option to enable or disable the Closed Captioning presence indicator icon. When enabled, this icon indicates the presence of 608 and/or 708 embedded Closed Captioning in the SDI video input. A **green** dot indicates the presence of CC Data. A **red** dot indicates no captioning data.



Both 608 and 708 CC Data present



No CC Data present

### OSD Timeout

Use the OSD Timeout setting to set the amount of time you would like to see the Menu on screen. A value of **000** allows the menu to stay on screen until it is manually exited.

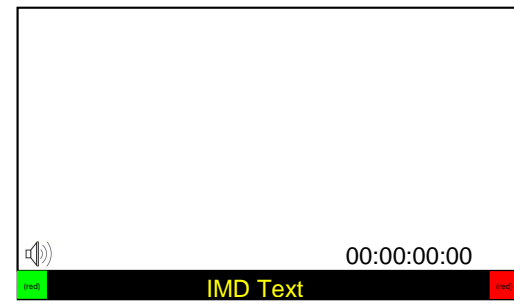
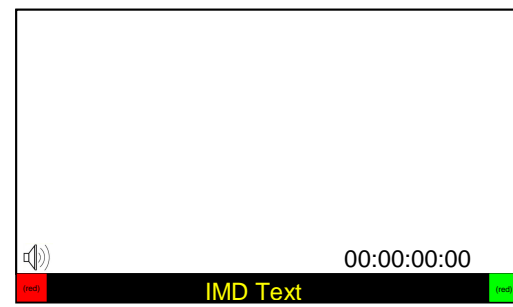
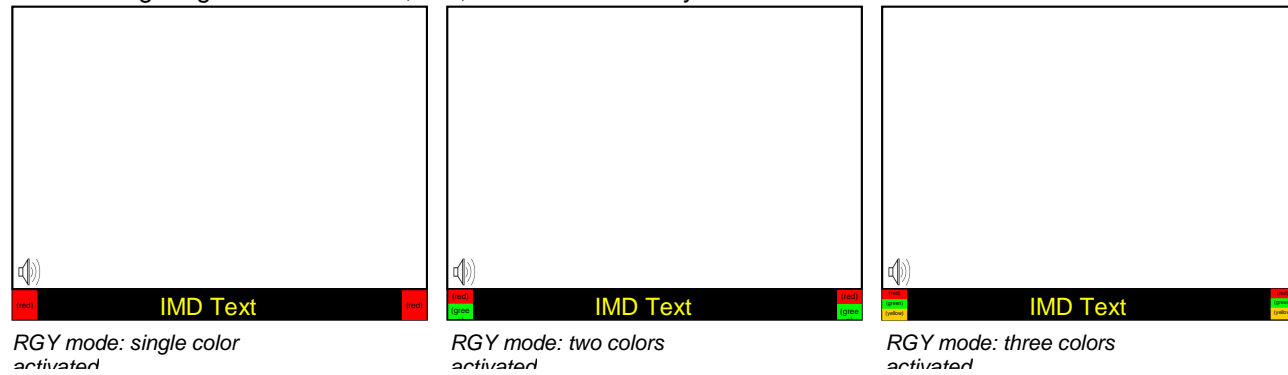
## OSD Tally

Use this setting to choose how tally is displayed on the screen. The available OSD Tally options depend on the Tally Source selected in the IMD Configuration submenu (see page 22).

When the Tally Source is set to Standard (contact closure), OSD Tally can be set to **Off**, **RGY**, **RG**, or **GR**:

- **Off** On-screen tally is disabled
- **RGY** Red, yellow, or green tally signals are indicated at both the bottom left and bottom right corners of the screen. Two or three colors are shown simultaneously by subdividing each tally indicator
- **RG** Red tally is shown at the bottom left of the screen, and green is shown at the bottom right.
- **GR** Green tally is shown at the bottom left of the screen, and red is shown at the bottom right.

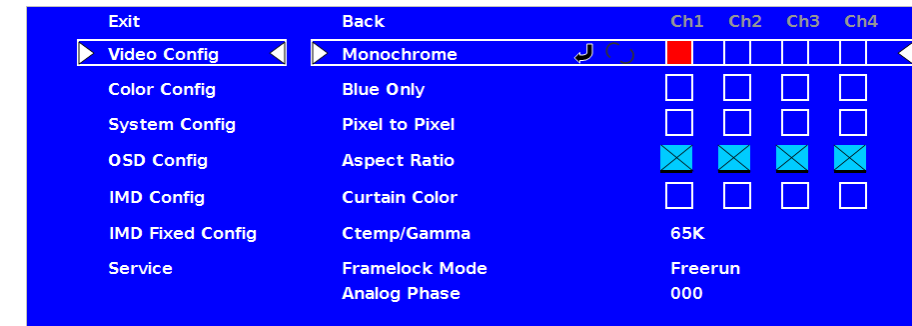
The following diagrams show RGY, RG, and GR OSD Tally modes:



When the Tally Source is set to TSL/MEI 422, OSD Tally can be set to **Off** or **IMD**:

- **Off** On-screen tally is disabled
- **IMD** Red, yellow, and green tally is displayed according the protocol commands. Green, red, and yellow colors are shown individually on either the bottom left or right of the screen.

Your current position in the menu is indicated by the green highlight. When you have highlighted the particular channel you would like to modify, press the RotoMenu knob. The box you have selected will turn red, indicating that this channel is now your choice to be modified, as shown below:



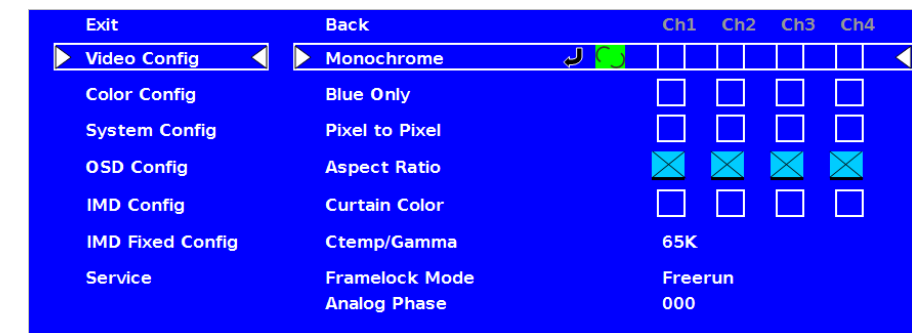
To apply a change to the particular channel, turn your RotoMenu left or right after you have selected a channel (the channel is highlighted in red). A black X will appear in your chosen channel box when your setting is active in the channel, and the black X will go away when your setting is inactive.



To move away from modifying an individual channel, simply press the RotoMenu button again. When the channel box is highlighted green again, you will know you are free to access any other channel or option.

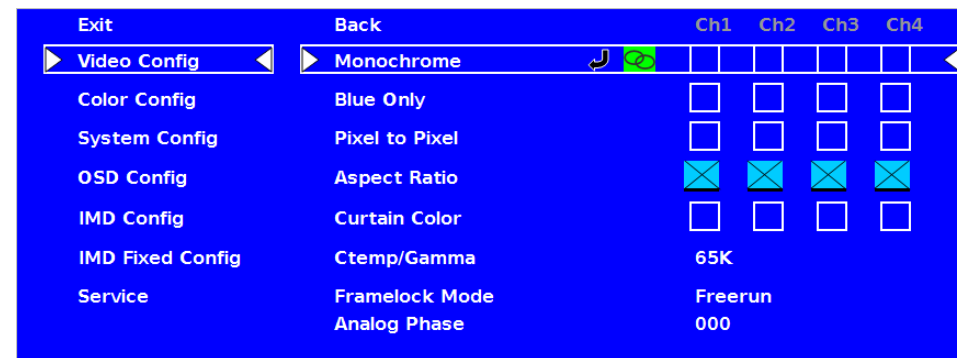
## Group Link Changes

The RotoMenu also allows for changes to input Channels as a group, known as Group Linking. If a menu item can be applied to multiple channels, the group link option will be shown as follows:



In this image, the Monochrome option in the Video Config submenu is being accessed. By turning the RotoMenu left and right, the Back arrow, Group Link icon and each of the four individual channels can be accessed. The green highlight indicates your current position in the menu. In this case, the current RotoMenu position is over the Group Link icon.

To turn the Group Link option on from the above state, simply press the RotoMenu knob. The Group Link Icon will change from a broken Group Link icon to a completed Group Link icon, as shown below:



The completed Group Link icon indicates that any change that you make to an individual channel, as shown section before this, will be applied to all other channels. To turn this off, simply highlight the Group Link icon again and press the RotoMenu knob.

## VIDEO CONFIGURATION SUBMENU

Use the Video Configuration submenu to select various video settings such as monochrome mode or blue-only mode.



Video Configuration Submenu

## Monochrome Mode

Use this setting to enable monochrome mode. Only the luminance of the image will be displayed as a grayscale picture.

## Status Display

Use this setting to enable or disable status display. When enabled, the current video input standard is displayed on the top left of the screen. When disabled, status is only displayed for 2 seconds when the monitor is powered on, when an input is applied, or when the input video standard changes. The status display reads "No Input" when no video input is present.

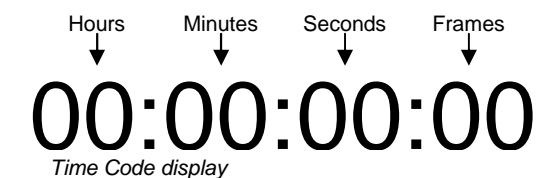


Status Display

## Time Code

Use this setting to enable time code display on the screen. Time code is de-embedded from the vertical ancillary data (VANC) within the HD/SDI signal. Two types of time code can be selected to display on the screen: **LTC (linear time code)** or **VITC (vertical interval time code)**.

The position of the time code display varies based on the aspect ratio setting and presence of IMD text (**see Aspect Ratio diagrams on page 15**).



## On-Screen Menu (continued)

### SYSTEM CONFIGURATION SUBMENU (continued)

- Blue Only      Enable/disable Blue Only mode
- Monochrome    Enable/disable Monochrome mode

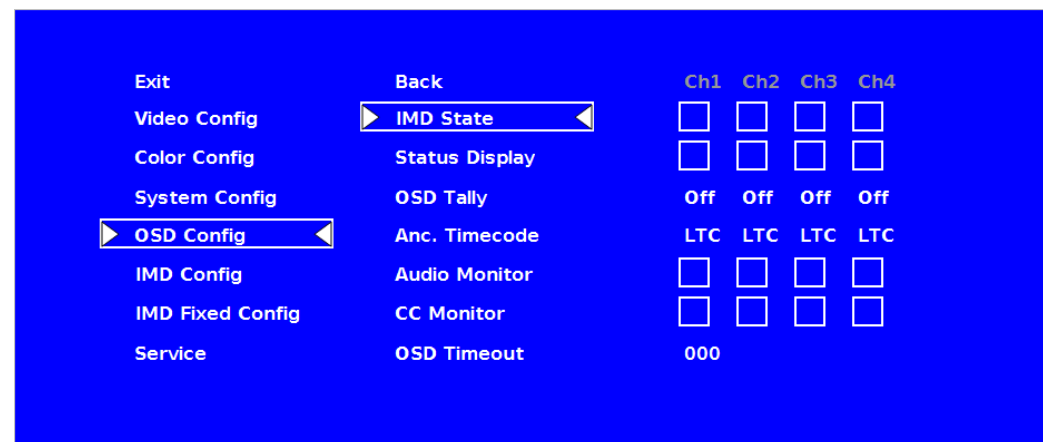
#### ■ Saving and Loading User Presets

Use the SAVE CONFIG and LOAD CONFIG menus to save current settings to one of 6 presets, or load a preset. Each Preset saves all monitor settings except for IMD configuration.

- Use the LOAD CONFIG menu to load one of presets USR1 – USR6. Factory default settings can also be loaded by selecting MFG. (Factory defaults cannot be overwritten.)
- Use To perform a full system restore, which resets ALL adjustable fields on the monitor to their “fresh-from-factory” state, press the Power, F1 and F2 button simultaneously. **Note: You will lose ALL user adjustable settings on your monitor.**
- Use the SAVE CONFIG menu to save the current settings to a preset from USR1- USR6.

### OSD CONFIGURATION SUBMENU

Use the OSD Configuration submenu to select a variety of information to be displayed on the screen.



OSD Configuration Submenu

#### ■ IMD State

Use this setting to turn the IMD text display on or off. This setting affects both fixed string IMD text and remote IMD text commands (see **IMD Configuration Submenu for details – page 22**).

#### ■ Blue-Only Mode

Use this setting to enable Blue-Only mode. This mode displays only the blue color component of the image, switching off the red and green components. Use this mode when calibrating the monitor to SMPTE color bars with the following procedure:

1. Allow the monitor to warm up for at least 5-10 minutes.
2. Display SMPTE split-field color bars on the monitor using an external source.
3. Enable **Monochrome mode**.
4. Locate the pluge pattern (super black, black, and gray bars) at the lower-right corner of the screen. Adjust the **Brightness** knob until there is no visible difference between the super black and black bars, but the gray bar is still visible.
5. Adjust the **Contrast** knob until an even grayscale appears along the top bars.
6. Disable **Monochrome mode**.
7. Enable **Blue-Only mode** and adjust the **Color** knob so that the outermost bars (white and blue) appear to match in brightness.

#### ■ Pixel-to-Pixel Mode

Use this setting to enable Pixel-to-Pixel mode.

This mode bypasses the monitor's internal scaling function and displays images in their native resolution and aspect ratio, with a one-to-one mapping of incoming image pixels to screen pixels:

- For incoming formats smaller than the native resolution of the window (or selected aspect ratio), the image will be displayed in the center of the window using only the necessary LCD pixels. For example, 480i images will only occupy exactly 640x480 pixels in a particular channel window in Quad mode, or if the channel is selected full screen, it will occupy exactly 640x480 pixels in the center of the screen. The surrounding screen area will be black.

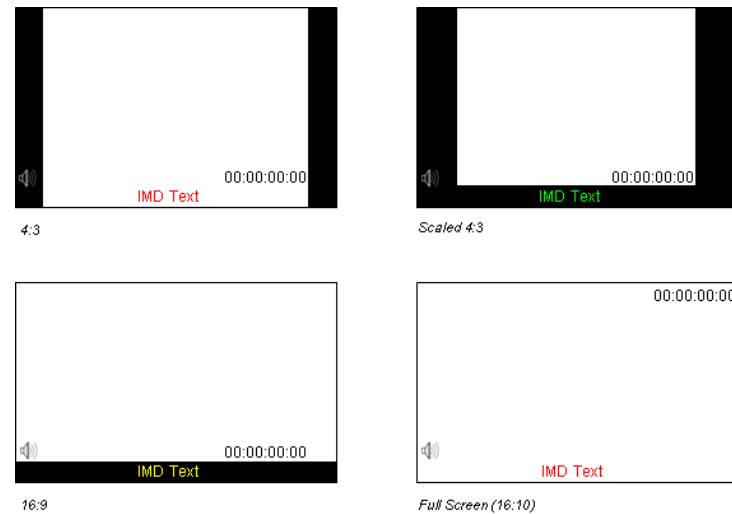
#### ■ Aspect Ratio Settings

Use this menu option to switch between several aspect ratio settings.

As the QV261-HDSI monitor has a native resolution of 1920x1200 RGB pixels, incoming images are automatically scaled to fit the screen:

- In **4:3** mode, images are scaled up or down to fill the maximum 4:3 portion of the screen (1600 x 1200). IMD text and time code are superimposed on the lower portion of the image. The audio presence indicator and on-screen tally are displayed at the bottom of the screen, outside the image.
- In **Scaled 4:3** mode, images are scaled to a smaller 4:3 portion of the screen, leaving space for IMD text, tally, and audio presence indicator to be displayed below or around the image. Time code is superimposed on the lower portion of the image.
- In **16:9** mode, images are scaled to fill the maximum 16:9 portion at the top of the screen (1920 x 1080). In this mode, IMD text and on-screen tally are displayed below the image. Time code and the audio presence indicator are superimposed on the lower portion of the image.
- In **Full Screen (16:10)** mode, images are scaled to fill the entire 16:10 screen (1920 x 1200). In this mode, all OSD features are superimposed on the image. **Note that when using a 16:9 input image in this mode, the image will be vertically stretched by approximately 10%.**

The diagrams on the following page show how IMD text, timecode, and the audio monitor icon are simultaneously displayed on the screen in each aspect ratio setting. The white area represents the video image.



### ■ Curtain Color

Use this setting to choose the default color displayed on the screen when no video input is present. Available colors are **blue, red, green, white, and black**.

### ■ Ctemp/Gamma

Use this setting to choose one of three color temperature / gamma presets or to remove gamma settings:

- Linear (No gamma applied)
- 55K
- 65K
- 93K

### ■ Framelock Preference

Used to designate one of the inputs as a reference for synchronizing image scaling when in any Quad Mode. This allows monitor to use a known-stable input source as a reference-lock to the entire system. This can improve performance when 1 or more inputs are frequently switched and are non-synchronous. In some conditions, selecting freerun will reduce the time needed for image lock.

- Ch.1
- Ch.2
- Ch.3
- Ch.4
- Freerun

### ■ Analog Phase (DVI-Analog or VGA input only)

Adjusts the analog phase value to improve picture quality on DVI-A or VGA Sources. This adjusts the signal phase (not color phase) of the analog-to-digital conversion.

- 0-31 (value)

## COLOR CONFIGURATION SUBMENU

Use the Color Configuration submenu to adjust the Red, Green and Blue Offset and Gain values of all four HD/SDI channels, the DVI-D input and DVI-A input.

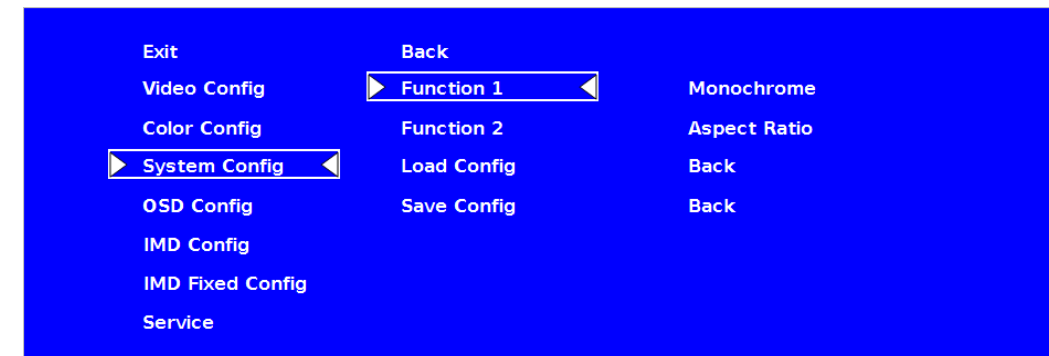


Each column adjusts a particular input channel, from HD/SDI Ch1-Ch4 to the DVI-I input. For the DVI-I input, you can adjust the Offset and Gain for either a DVI-D or DVI-A input.

The Reset option allows you to return to the default settings for each individual channel.

## SYSTEM CONFIGURATION SUBMENU

Use the System Configuration submenu to control various system parameters.



System Configuration Submenu

### ■ User-Definable Function Buttons

Use the **Function 1** and **Function 2** menu items to define each function button on the front panel of the monitor. The following options are available for each button:

- IMD Display/hide IMD text
- Time Code Display/hide time code
- OSD Tally Rotate amongst types of OSD Tally
- Audio Monitor Display/hide audio presence indicator
- Aspect Ratio Toggle between 4:3 and 16:9 aspect ratios
- Pixel to Pixel Enable/disable Pixel-to-Pixel mode
- Ctemp/Gamma Rotate amongst color temperature settings