

Color Temperature

The V-R842P-AFHD has four color temperature settings that adjust the color balance of the screen for varying ambient conditions.

D-55 (5500K) - Simulates indoor incandescent light conditions.

D-65 (6500K) - Standard setting recommended by SMPTE and EBU. Simulates normal daylight conditions.

D-75 (7500K) - Simulates bright daylight conditions.

DEFAULT- 7900K

Blue Gun & Mono (Monochrome Black & White)

Use to adjust SMPTE or split field color bars.

1. Allow monitor to warm up for 5-10 minutes minimum. Adjustments will not be accurate on a cold monitor.
2. Display SMPTE color bars on monitor. Turn on Mono
3. Find the PLUGE (superblack, black, and gray bars) at the lower right of the pattern.
Adjust BRIGHTNESS control until there is no difference visible between the superblack and black bars, but a difference is visible between the black and gray bars.
4. Adjust CONTRAST control to achieve a balanced gray scale across top bars.
5. Turn off Mono then turn on BLUE GUN
6. Turn up CHROMA (color level) control until the two outermost bars (white and blue appear to match in brightness.
7. NTSC Only - Adjust COLOR PHASE (tint or hue) control until the third bar from the left (cyan) and the third bar from the right (magenta) appear to match in brightness.

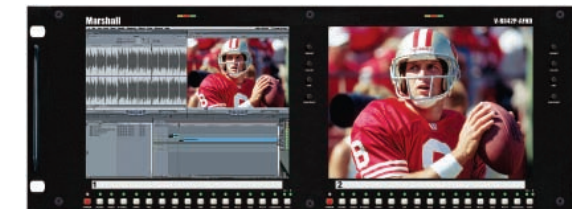
Frame Marker (Only active in 16:9 display mode)

Frame Aspect Markers are used to frame the image for an additional screen format when 16:9 display is enabled. For example 4:3 marker is often used for HD broadcasts that are also down converted and cropped for SD transmission.

Frame markers are available for 4:3, 15:9, 14:9, 13:9, 1.85:1, 2.35:1 and 2.37:1 screen aspects.

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V-R842P-AFHD Users Guide

9 Warranty

Marshall Electronics warrants to the first consumer, that this V-R842P-AFHD Dual 8.4-inch LCD rack mounted monitor set 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 purchasing end user 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 you.

This warranty does not apply to product exterior and cosmetics. Misuse, abnormal service or handling, improper alterations or modifications in design or construction, voids this warranty. No sales personnel of the seller, nor 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.

An extra note about LCD displays: 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 has the option to reserve service for display pixel failure if deemed unobtrusive to effective use of the monitor by our technicians.

Due to constant effort to improve products and product features, specifications may change without notice.

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1 Product Overview

The **V-R842P-AFHD** features our Completely Digital TFT-Megapixel™ high definition LCD screen with 2.4 million pixels, V-Mount battery adapter, 4 pin XLR power jack, and optical grade polycarbonate screen protection. Analog signals are digitized using an advanced 10 bit process with 4x over sampling and adaptive 5 line comb filter plus exacting color space conversion. Video is scaled to fit on screen in the highest resolution using a state of the art LSI that incorporates 4x4 pixel interpolation with precision Gamma correction to product the best images available. Additional features include, Pixel-to-Pixel™ native resolution scaling, setup memory, Zoom function, 6 Frame Marker Overlays, Blue Gun, and direct access for all adjustment and selection functions.

2 Features

- TFT-MegaPixel™ totally digital end to end signal processing
- 180 degree viewing angle in all directions
- Multiple format acceptance for virtually any analog or digital video signal
- Display PC Signals to XGA 1024x768
- Frame Marker Screen Overlay with cursor and safe area
- ColorMatch Conversion™ with SMPTE/EBU color space emulation of CRT
- Color temperature presets for D75, D65, D55
- HyperProcess™ motion interpolation of interlace images
- On screen display of input status, formats, and menu functions
- Pixel to Pixel™ native resolution display
- Ready to mount – all brackets are factory installed
- Lightweight – 75% lighter than CRT models
- Settings memory restores active state with power off/on cycle
- Direct front panel selection of all functions
- Blue Gun for adjustment to SMPTE color bars
- Includes V-PS12-5V-1 Universal power supply (U.L. class 2)
- Three LEDs (Red, Green, Amber) produce 7 different tally indications on each screen
- Dry erase label for each screen

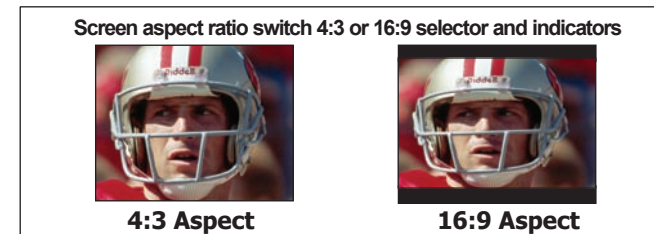
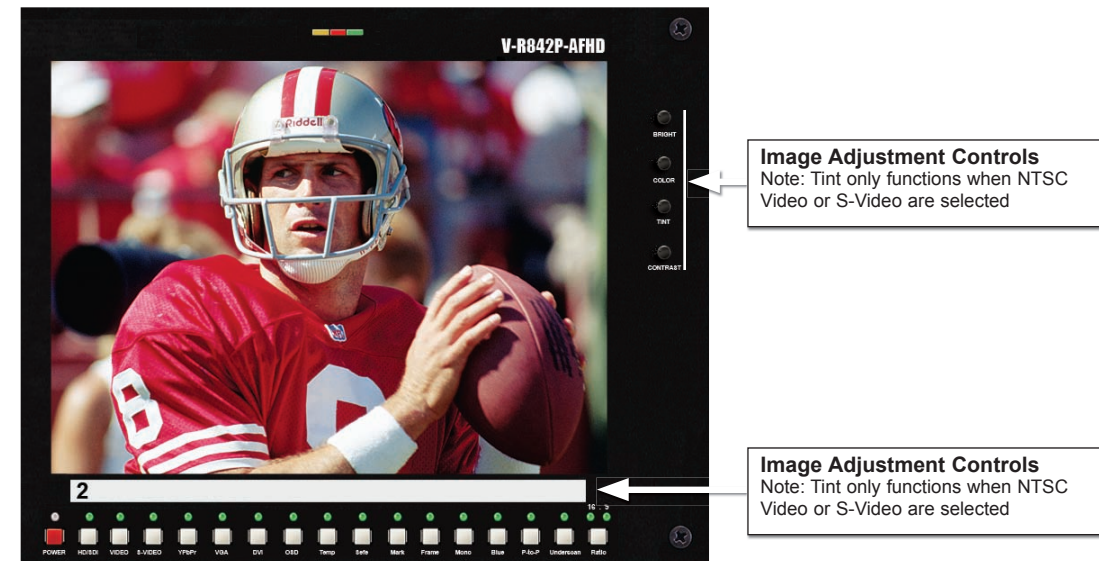
3 Video Screen Formats and Frame Rates All signal types and frame rates are automatically detected

- 525 - 60i / 625 - 50i (Interlaced NTSC/PAL)
 - 720 x 486P (Progressive)
 - 720 x 576P (Progressive)
 - 720 x 1280 - Analog-50P, 59.94P, 60P / Digital 23.97P, 24P, 25P, 50P, 59.94P, 60P (Progressive)
 - 1035 x 1920 - 59.94i, 60i (Interlaced)
 - 1080 x 1920 - 50i, 59.94i, 60i / 23.973Psf, 24Psf, 25Psf, 29.97Psf, 30Psf
- Psf=Progressive or Segmented Frame format

4 Specifications

Screen Aspect	4:3/16:9 switchable
Display (Viewing Area)	8.4 Inch diagonal (170.4mm w x 127.8mm h)
Resolution (RGB Dots)	1024HxRGBx768V (2.4 million pixels)
Color Depth	16.7 Million Colors (8-Bit)
LCD Screen Treatment	Anti Reflection, Anti Glare, Hardcoat
Dot Pitch	.1665mm square pixel
Pixel Response	12ms rise/13ms fall (measured gray to gray)
Viewing Angles	180° in all directions
Brightness (in cd/m²)	400 cd/m²
Color Temp	D55, D65, D75
Color Gamut	SMPTE-C/EBU 80% CIE
Backlight	Field Replaceable CCFL (50,000 hour half life)
Contrast Ratio	500:1
Luma Linearity	Typical +/- 3% with 5 ire increments (0 to 10 ire)
System	NTSC/PAL with auto recognition
Inputs	HDSDI/SDI (SMPTE259M, 292M) (ITR-U601) per screen (BNC) YPrPb Component (3 BNC) Composite Video PAL/NTSC auto detect (BNC) S-Video (Y/C) (4 Pin Mini Din female) XGA 15Pin HD-15 Female DVI 27 (Pin DVI-I Female) Tally (HD-15 Female)
Active Outputs	HDSDI/SDI (SMPTE259M, 292M) (ITR-U601) per screen (BNC) YPrPb Component (3 BNC) Composite Video PAL/NTSC auto detect
Estimated MTBF	5 years of 24/7/365 operation
Power Required	10.4 to 16.8 VDC
Power Consumption	Approx. 60 watt nominal
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	FCC-Class A, ANSI-63.4 (Certificates on file)
RoHS WEEE/Environmental	Do not dispose. Return to Manufacturer or Authorized Recycle Facility

8 Switch Settings, Adjustments and Indicators



Power On/Off Button

Illuminates Red when system power is present. Illuminates Green when monitor is ON
Active Outputs require power to be applied. All input signals appear as output signal.
Analog output signals are buffered and amplified

Source Selection Buttons

HDSDI - Digital Input for Standard Definition (SDI-270Mbs) or High Definition (HDSDI-1.43Gbs)

Video - Composite NTSC or PAL. Composite video must comply to SMPTE-RS170A.

Images without color burst (Subcarrier) component may not display.

S-Video - Y/C (Luminance + Chrominance) NTSC or PAL

YPrPb - Analog Component color difference signals for Standard Definition (YCrCb) or High Definition (YPrPb)

XGA - Analog PC

DVI - Digital or Analog Computer or Video Signals. Includes ED-ID and HDCP for use with HDMI originated signals

Under Scan

(Not Available for HD and PC Signals)

Displays scaled images without vertical and horizontal blanking applied. This function can only be used with Standard definition signals. SDI signals will display all data input with ancillary data appearing to the right of the image.

Pixel to Pixel Function

As the native LCD displays of the V-R842P-AFHD are 1080 pixels wide by 768 pixels high, it is necessary to change the size of the image to fill the whole screen. Pixel to Pixel mode bypasses the enlargement/shrink of this scaling function and displays the native incoming format.

For 525-NTSC/480P based images, pixel to pixel will appear as a 480hx640w (4:3 aspect) or 480hx720w (16:9 aspect).

For 625-PAL/576P based images, pixel to pixel will appear as a 576wx640h (4:3 aspect) or 576wx720h (16:9 aspect).

For 1080 line HD based images, pixel to pixel will appear as cropped 768hx1024w (4:3 aspect) starting from the center of the image.

For 720 line HD based images, pixel to pixel will appear as a 720Hx1024h (4:3 aspect) with 128 lines from the top and 128 lines from the bottom cropped.



5 Mechanical Specifications

Dimensions	19.12" w x 8.67" h x 1.5" d (485.7mm x 220.22mm x 38.1mm)
V-R842P-AFHD Weight	7.9 lbs (3.58 kg)
V-PS12-5V-1 Power Supply Weight	1 lbs (0.45kg)

6 Operational Setup

1. Unpack the V-R842P-AFHD and accompanying V-PS12-5V-1 power supply. Physically inspect for any 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.
2. After inspection, install in your desired location of a standard EIA 19-inch equipment rack. Adequate ventilation is required when installed to prevent possible damage to the V-R842P-AFHD internal components.
3. Connect required cables for signal input and output. Please note that power must be applied to the V-R842P-AFHD for all outputs to be activated. All BNC connectors should be rated for 75Ω.
4. Plug the V-PS12-5V-1 power supply into the A.C. source
5. Attach twist lock power connection from V-PS12-5V-1 power supply to the back of the unit.
6. Turn on the V-R842P-AFHD by depressing the power switch located on the front of the unit.

7 Connectors

- * Composite Video Inputs comply to SMPTE-170M
- * Component Inputs comply to SMPTE274M, 294M,295M,296M
- * HDSDI/SDI Inputs comply to SMPTE-259M, 292M SDI-270Mbps, HDSDI-1.42 Gbs

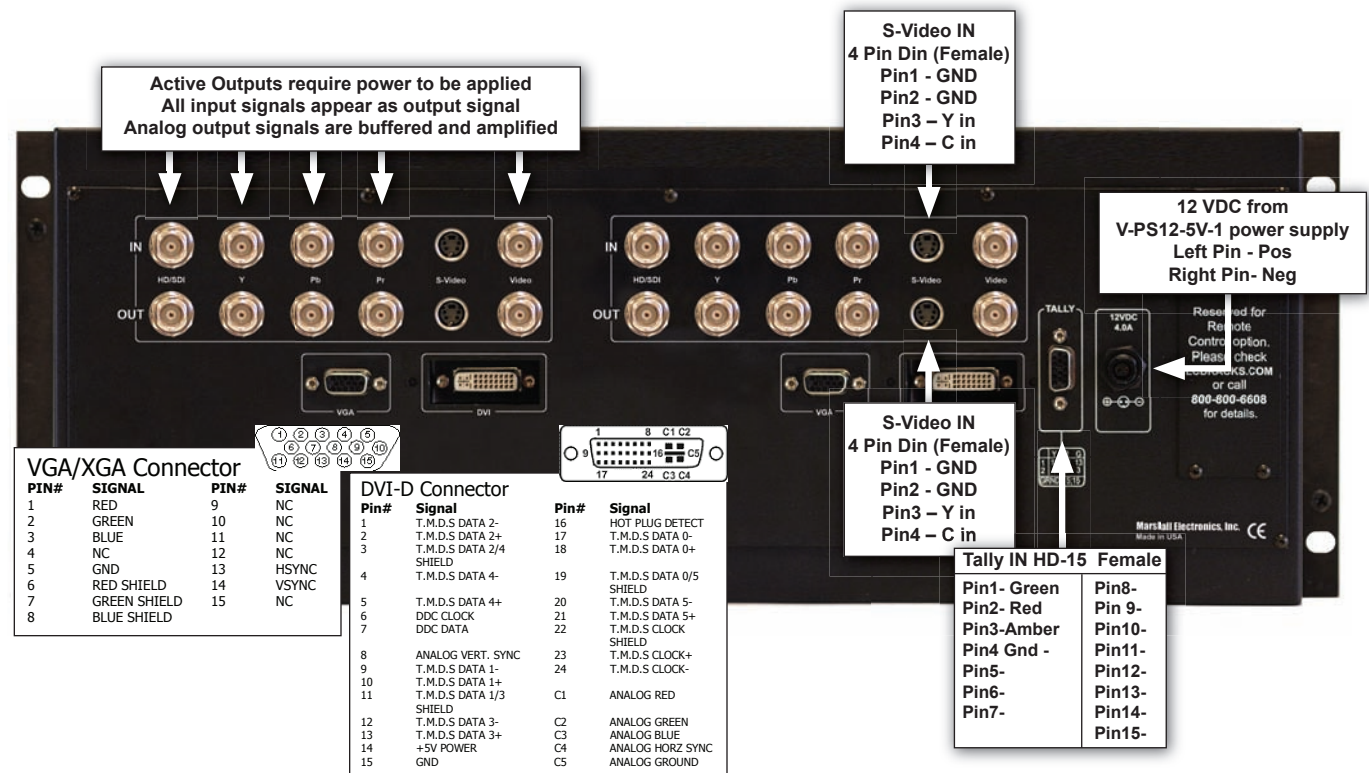


Table 1 Computer Signals Displayed via DVI-I connector

(VGA to DVI adapter may be required)

Input Signal Type and aspect	DVI-D		DVI-A	
	4x3	16x9	4x3	16x9
640 x 480 60Hz	Y	Y	Y	Y
640 x 480 75Hz	Y	Y	Y	Y
640 x 480 85Hz	Y	Y	Y	Y
800 x 600 60Hz	Y	Y	Y	Y
800 x 600 75Hz	Y	Y	Y	Y
800 x 600 85Hz	Y	Y	Y	Y
1024 x 768 60Hz	Y	Y	Y	Y
1024 x 768 75Hz	Y	Y	Y	Y
1024 x 768 85Hz	Y	Y	Y	Y

Table 2 Video Signals Displayed via DVI-I and YPrPb connections

(x=not available) (HDMI requires adapter to DVI)

Input Signal Type and aspect	Y Pr Pb		DVI-D		DVI-A	
	4x3	16x9	4x3	16x9	4x3	16x9
720 x 486 60i	Y	Y	x	x	Y	Y
720 x 576 50i	Y	Y	x	x	Y	Y
1280 x 720 60P	Y	Y	N	Y	N	Y
1280 x 720 50P	Y	Y	N	Y	N	Y
1280 x 720 30P	Y	Y	x	x	x	x
1280 x720 29.97P	Y	Y	x	x	x	x
1280 x720 25P	Y	Y	x	x	x	x
1280 x 720 24P	Y	Y	x	x	x	x
1280 x 720 23.98P	Y	Y	x	x	x	x
1920 x 1080 60i	Y	Y	N	Y	N	Y
1920x1080 59.94i	Y	Y	N	Y	N	Y
1920 x 1080 50i	Y	Y	N	Y	N	Y
1920 x 1080 30P	Y	Y	N	Y	N	Y
1920x1080 29.97P	Y	Y	N	Y	N	Y
1920 x 1080 25P	Y	Y	N	Y	N	Y
1920 x 1080 24P	Y	Y	N	Y	N	Y
1920 x 1080 24Psf	Y	Y	N	Y	N	Y