

## 7 Switch Settings, Adjustments and Indicators

**Power (Standby) On/Off selection switch**  
Illuminates bright Green when power is applied  
Turns dim Green when monitor is switched on

**Source selector switches for images displayed on screen**  
Selected source button will be illuminated.  
COMPONENT/XGA selects HD-15 input connector used for Y-Pr-Pb, RGB, or computer VGA signals. VGA button toggles between RGB and YPrPb display modes.  
OSD shows 5 seconds with each selection or signal change.


**Color Bar and Blue Gun selection switch**  
Tap for Bars On/Off. Hold 2 Seconds for Blue Gun toggle On/Off.  
Blinks when bars or blue gun are active.

**Aspect Marker and Reticule selection switch**  
Tap to toggle through Aspect markers- 14:9, 13:9, 4:3, 1.85:1, 2.35:1  
Hold 2 seconds for Safe Area and Center Reticule toggle On/Off


**Monochrome selection switch**  
Turns off Chroma. Light blinks when active.

**ZOOM and Pixel to Pixel selection switch**  
Tap for ZOOM On/Off. Zoom brings center 25% of screen to full Screen. Lights when Zoom is active.  
Hold 2 Seconds for Pixel to Pixel display 16:9 & 4:3 LEDs light when Pixel to Pixel is active. Blinks when ZOOM or Pixel to Pixel are active.


**Screen aspect switch toggles 4:3, 16:9, 15:9 display aspect.**  
Hold 2 seconds for pixel to pixel mode toggle



15:9 Aspect full screen display both indicators off



4:3 Aspect screen display single LED



16:9 Aspect screen display single LED illuminated

**Screen adjustments**  
TINT adjust is not available for PAL, component, SDI and HDSDI signal standards.  
TINT and COLOR adjust are not available for VGA signals

### TALLY INDICATORS



## 8 Warranty

Marshall Electronics warrants to the first consumer, that this **V-R171P-AFHD** inch LCD rack mounted 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 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.

## Marshall Electronics

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### V-R171P-AFHD Users Guide

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### Built in color bars

- For screen set up and test

### Supplied Accessories:

- Users manual
- Universal 14VDC Class 2 power supply model V-PS14-6.6A
- 6 foot Component signals hook up cable

### Remote Control Option

- Available Mid 2005

### Desk Stand Option

- Part number TBD



## 3 Electrical Specifications

Screen Aspect	16:9/ 15:9/ 4:3/switchable
Display (Viewing Area)	17.1 Inch/434.38mm diagonal (372.48mm H x 223.488mm W)
Viewing Angles	180° In all directions
Resolution (RGB Dots)	11280H×RGBx768V (2.95 million pixels)
Dot Pitch	.291mm square pixel
Color Depth	16.7 million colors (8-bit)
Brightness (in cd/m <sup>2</sup> )	450 cd/m <sup>2</sup>
Contrast Ratio	600:1
Pixel Response	12ms rise/13ms fall
Backlight	Field Replaceable CCFL (50,000 hour half life)
LCD Screen Treatments	Anti Reflection, Anti Glare, Hardcoat
Estimated MTBF	5 years of 24/7/365 operation
Color temperature	D65 (6500° Kelvin)
Color Gamut	SMPTE-C/EBU
Luma Linearity	Typical +/- 3% with 5 ire increments (0 to 10 ire)
Storage Temperature	-4°F to 120°F (-20°C to 50°C)
Compliance	CE, FCC-Class A, ANSI-63.4 (Certificates on file)
System	NTSC/PAL with auto recognition
Inputs	HD-15 (VGA, SVGA, XGA, SXGA, RGBHV, YUV, Y-Pr-Pb 75Ω with AGC) BNC for HDS/SDI/SDI (PAL/NTSC) 75Ω with cable compensation to 1000' BNC for Composite Video (PAL/NTSC) 75Ω with AGC 4 Pin Mini Din for S-Video (Y/C) with AGC, HD-15 Female for Tally 12-14VDC-Conxall Female
Active Outputs	Composite Active Loop - BNC, HDS/SDI/SDI Shaped and Re-clocked - BNC Y/C (S-video) Active Loop-4 Pin Mini-din Female VGA, SVGA, XGA, SXGA, RGBHV, YUV, Y-Pr-Pb HD-15
Power Required	11.4 to 16.8 VDC
Power Consumption	prox. 35 watt nominal
Operating Temperature	32°F to 120°F (0°C to 50°C)
RoHS WEEE/Environmental	Do not dispose. Return to Manufacturer or Authorized Recycle Facility

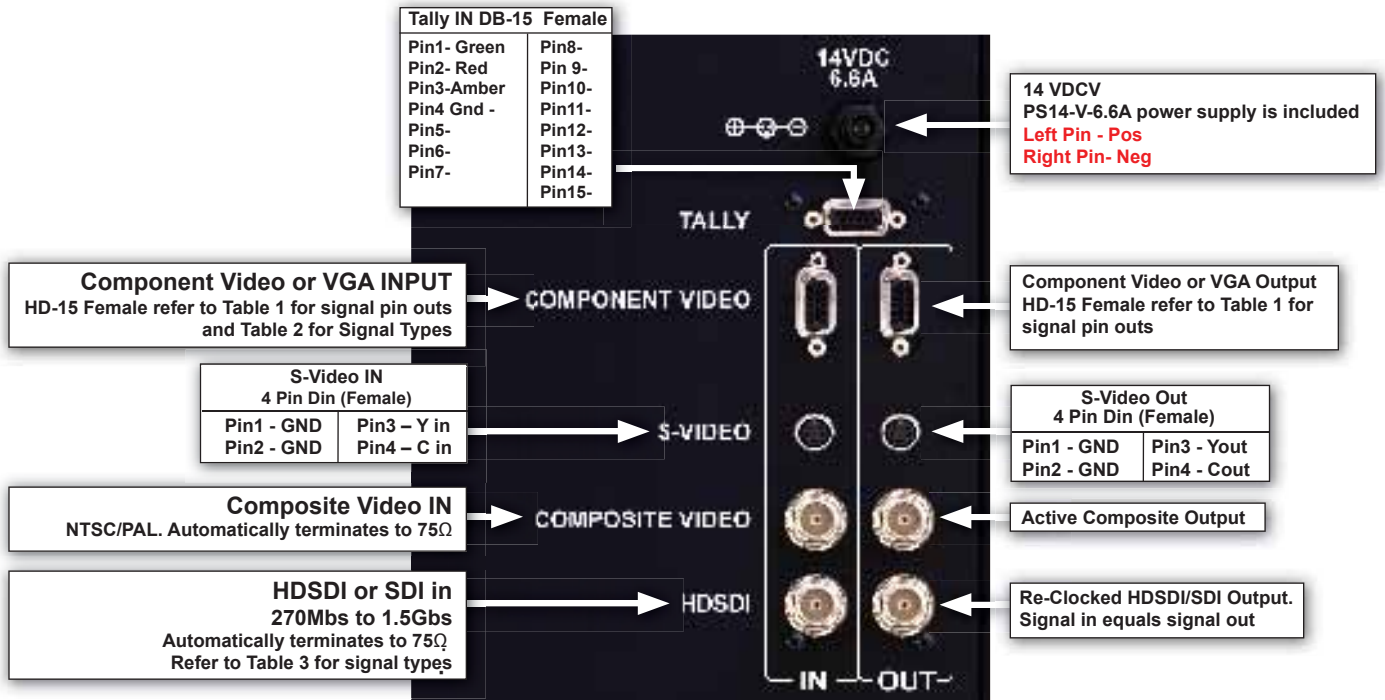
## 4 Mechanical Specifications

V-R171P-HD Dimensions	19.12"W x 13.77"H x 2.5"D (48.56cm x 34.98cm x 63.50cm)
V-R171P-HD Approx. Weight	12 lbs (5.4kg)
V-PS12-3.3A Power Supply Weight	1 lbs (0.45kg)

## 5 Operational Setup

1. Unpack the V-R171P-AFHD and accompanying V-PS12-3.3A 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-R171P-AFHD internal components.
3. Connect required cables for signal input and output.  
**Please note that power must be applied to the V-R171P-AFHD for all of the looped outputs to be activated.**  
**All BNC connectors should be rated for 75Ω**
4. Plug the V-PS14-6.6A power supply into the A.C. source
5. Attach twist lock power connection from V-PS14-6.6A power supply to the back of the unit.
6. Turn on the V-R171P-AFHD by depressing the power switch located on the front of the unit.

## 5 Connectors



- \* All Outputs Require Power to be applied for activation
- \* Tally lamps active when connected to ground

**TABLE-1**

Analog Component High Definition Video, Standard Definition Video or Computer VGA to UGA Connector - Pin Assignment In and Out

Signal Type	HD Analog color difference YPbPr	SD Analog color difference Y, R-Y, B-Y	HD or SD Analog RGB (Sync on Green)	VGA to UXGA
Pin1	Pr	R-Y	Red	Red
Pin 2	Y	Y	Green	Green
Pin3	Pb	B-Y	Blue	Blue
Pin4				
Pin5				
Pin6	Ground	Ground	Ground	Ground
Pin7	Ground	Ground	Ground	Ground
Pin8	Ground	Ground	Ground	Ground
Pin9				
Pin10				
Pin11				
Pin12				
Pin13				H Sync
Pin14				V Sync
Pin15				

## 1 Product Overview

Occupying only 6 SRU and weighing just 12 pounds, the **V-R171P-AFHD** includes our universal input configuration and does not require any adapter boxes or expensive options. Standard inputs include active loop through on each connection for HDS/SDI, Y/C, and composite video with PAL/NTSC automatic recognition. There is also a multiformat connector for HD or SD analog component signals. If you have computer graphic applications, this unit also has a scalable WXGA input. Additional features include, setup memory, Zoom function, 6 Frame Marker Overlays, Pixel to Pixel direct display of input format, Blue Gun, On-Screen Format display, and direct access for all adjustment and selection functions.

## 2 Features

### Superb Imaging

- High Resolution 1280 H x 768V wide screen (2.95 million total RGB pixels)
- 16.7 Million Colors
- CRT style viewing radius - 170° in any direction
- Bright 450 candelas per square meter (cd/m<sup>2</sup>) luminance
- Ultra high 500:1 contrast ratio with response rates less than 23 milliseconds
- All video formats are scaled to fit on screen in the highest resolution using a state of the art LSI with proprietary embedded programming that incorporates 4x4 pixel interpolations with precision Gamma correction to produce the best images available
- Calibrated to SMPTE specifications for Color Temperature and Gamma

### Display Multiple Screen Formats and Frame Rates

- 525 -60i / 625 - 50i - SDI & Analog Composite, Component, Y/C Interlaced with automatic NTSC/PAL system detection
- 720 x 486P -Analog Component Progressive
- 720 x 576P -Analog Component Progressive
- 720 x 1280 - 23.973P, 24P, 25P, 29.97P, 30P, 59.94P, 60P Analog Component and HDS/SDI Progressive
- 1035 x 1920 - 59.94i, 60i Analog Component and HDS/SDI Interlaced
- 1080 x 1920 - 50i, 59.94i, 60i / 23.973Psf, 24Psf, 25Psf, 29.97Psf, 30Psf in Analog Component and HDS/SDI signal formats  
Psf=Progressive or Segmented Frame formats

### Signal Input Flexibility

- HDS/SDI (SMPTE292M/294M/296M) With reclocked and shaped output
- SDI (SMPTE259M) (ITR-U601) With reclocked and shaped output
- Component Analog High Definition YPrPb (SMPTE274M,/295M,/296M)
- Component Analog Standard Definition (SMPTE/EBU N-10))
- Composite PAL/NTSC (ITU-R BT.470/SMPTE170M) with active loop out
- Y/C (S-Video) with active loop out
- Computer VGA to WXGA
- All analog signals have AGC
- Analog signals are digitized using an advanced 10 bit process on each signal path with 4x oversampling and adaptive 5 line comb filter with exacting color space conversion

### On Screen Frame Markers in 16:9 Mode

- Center Frame Mark (Black plus White Super Imposed)
- Active Area Marker (Black plus White Super Imposed)
- 4:3, 13:9, 14:9, 15:9, 1.85:1, 2.35:1 Shaded Overlay

### Monochrome Mode

- Luma only checks for lighting, Bright and Contrast adjustment, etc.

### Blue Gun

- Adjust color settings to SMPTE color bars

### Zoom Function

- Use for screen center camera focus. Zoom available for all inputs

### Pixel to Pixel Mode

- Bypass of screen scaling functions with exact mapping of input pixels to the display.  
Maximum or 1280 x 720 pixels mapped

TABLE-2

YPbPr/RGB Analog Component and Composite Video Systems Supported by the V-R171P-HD

Signal	Frames per Second	Aspect	Active Lines	Scanning Method
525-60i	30/29.97	4:3/16:9/15:9	483	Interlaced
625-50i	25	4:3/16:9/15:9	576	Interlaced
480P(720x480)	50/60/59.94	15:9/16:9	480	Progressive
1280x720P	60/59.94/50	15:9/16:9	720	Progressive
1920x1035	60/59.94	4:3/16:9/15:9	1035	Interlaced
1920x1080	60/59.94/50	4:3/16:9/15:9	1080	Interlaced
1920x1080	30/29.97/25/24/23.97	4:3/16:9/15:9	1080	Progressive

Computer Display Systems Supported by the V-R171P-HD

Standard	Resolution (Frequency)
SVGA	800 x 600 (60 , 75 ,85 Hz)
XGA	1024 x 768 (60 ,75 ,85 Hz)
SXGA	1280 x 960 (60 Hz)
SXGA	1280 x 1024 (60 Hz)

TABLE-3

HDS/SDI Input BNC Connector Signals

Signal	Frames per Second	Aspect	Active Lines	Scanning Method	Data Rate
525-60i	30/29.97	4:3/16:9	483	Interlaced	270Mb/s
625-50i	25	4:3/16:9	576	Interlaced	270Mb/s
1280x720P	60/59.94/30/29.97/24/23.97	16:9	720	Progressive	1.5Gb/s
1920x1035	60/59.94	4:3/16:9	1035	Interlaced	1.5Gb/s
1920x1080	60/59.94/50	4:3/16:9	1080	Interlaced	1.5Gb/s
1920x1080	30/29.97/25/24/23.97	4:3/16:9	1080	Progressive	1.5Gb/s

TABLE-4

Analog Composite Input BNC Connector Signals

Signal	Frames per Second	Aspect	Active Lines	Scanning Method	Data Rate
525-60i	30/29.97	4:3/16:9	483	Interlaced	270Mb/s
625-50i	25	4:3/16:9	576	Interlaced	270Mb/s