

Marshall Electronics

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V-R70P-HDA Users Guide

Product Overview	1
Features	2
Standard Accessories	3
Optional Accessories	4
Electrical Specifications	5
Mechanical Specification	6
Faceplate Cleaning	7
Operational Setup	8
Input Connectors	9
Switch Settings, Functions and Indicators	10
Warranty	11

1 Product Overview

The **V-R70P-HDA** features Marshall's proprietary TFT-MegaPixel™ display system and represents leading edge technology in LCD imaging for broadcast and professional video applications. This is a low cost stand alone monitor and is constructed with a durable enclosure featuring an optical grade polycarbonate protective cover for the antiglare/antireflective screen. A V-Mount battery adapter is also included and the monitor can be powered for over 5 hours with a 50WH battery. The 1.2-million pixel TFT screen has 130 degree viewing angles and incorporates completely digital signal processing to provide image reproduction that exceeds all CRT displays available in a similar form factor. All SMPTE/ITU High Definition and Standard Definition digital video standards and signal types are accepted and displayed on this model. All video formats are scaled to fit on screen in the highest resolution using a state of the art LSI that incorporates 4x4 pixel interpolations with precision Gamma correction to produce the best images available. Additional features include, three LED tally, setup memory, Blue Gun, and direct access for all adjustment and selection functions.

2 Features

High Definition Displays	Capable of displaying more than 900 TV Lines resolution. Standard definition is internally up converted to High Definition. All signals remain completely digital to provide the most exact images available.
Standard Inputs	<ul style="list-style-type: none"> • Analog Component YPrPb (3 BNC with loop out) (SMPTE170M/274M) • Analog Composite PAL/NTSC Auto Detect (BNC with loop out) (SMPTE170M) • Y/C (S-video) (4 Pin Mini-din with loop out)
Durable metal enclosure	• Protection for all connections and controls with strategically placed ventilation for use in harsh environments
Protective Screen Cover	• Optical grade polycarbonate screen cover with Antireflective / Antiglare coating
Display Multiple Screen Formats and Frame Rates	<ul style="list-style-type: none"> • 525 -60i / 625 - 50i (Interlaced) • 720 x 1280 - - 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
Memory Function	Adjustment Settings Memory stored on shutdown and recalled when power is applied
Blue Screen	Use for adjustment to SMPTE color Bars
Built in color bars	For screen testing purposes
Tally (DB-15)	Three LEDs (Red, Green, Amber) produce 7 different tally indications









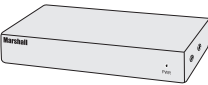



3 Standard Accessories Accessories Supplied with the V-R70P-HDA

- Users manual
- “Brick” type 12vdc power supply with 4 Pin Female XLR connector
- “V” Mount battery adapter
- ¼”-20 mounting plate

4 Optional Accessories

Stand	V-LCD4-ST		Use for table top mount
Camera Hot Shoe Mount	V-LCD4-MT		Attaches monitor to camera
Sun Hood	V-H700P		Use for viewing in bright lighting or outdoors
Power Adapter Cable	V-PAC-D-XLR		Use with Anton Bauer D-type connection
Power Adapter Cable	V-PAC-XLR-1		Use with 4 Pin XLR connections

Optional Accessories (continued)

Sequential 2 channel charger	IDX-VL-2Plus		2-channel sequential charger with a built-in 60W power supply. Charges 2 ENDURA E series batteries in fewer than 5 hours. One 10' XLR cable included. Weighs only 2 lbs
Sequential 4 channel charger	IDX-VL-4		Economically charges 4 ENDURA E series batteries in under 6 hours using Full Power Charge (FPC) method
Simultaneous 4 channel charger	IDX-VL-4S		Charges 4 ENDURA E series batteries in 2.5 hours or less
55 W Lithium Battery	IDX-E50S		V-Mount battery pack with 3 LED power Indicator
55 W Lithium Battery with Power Link	IDX-E50		V-Mount Battery Pack with PowerLink includes accurate Power Status Display and supports Digi-View
82 W Lithium Battery	IDX-E80S		V-Mount battery pack with 3 LED power Indicator
82 W Lithium Battery with Power Link	IDX-E80		V-Mount Battery Pack with PowerLink includes accurate Power Status Display and supports Digi-View
Protective Carry Case	V-CC1		Manufactured by Storm Case
Analog to Digital Converter	BC-0909-AD		Converts analog Composite, YC, or component to HDSDI/SDI
Digital to Analog Converter	BC-0909-DA		Converts SDI/HDSDI to analog Composite, YC, or Component video
Mounting Plate			Attaches to any side for mount to 1/4-20 threaded component
Cleaning Wipes	V-HWP-K		Package of 10 non-toxic, antistatic, alcohol and ammonia free cleaning wipes.

5 Electrical Specifications

Display (Viewing Area)	7" (6.14"H x 3.27"V) (156.0mm x 83.28mm)
Viewing Angles	130°H x 120°V
Resolution (RGB Dots)	800H x RGB x 480V (1.2 million pixels)
Contrast Ratio	400:1
Color temperature	D65 (6500° Kelvin)
Color Gamut	SMPTE-C of CEI-1931
Gamma	2.2
Luma Linearity	Typical +/- 3% with 5 ire increments (0 to 10 ire)
Dot Pitch	0.065mm H x 0.173mm V
Pixel Response	30ms average
Screen Refresh Rate	50/60 Frames per second
Backlight Type / Life	CCFL / 10,000 to 20,000 Hours Typical
Brightness	400 cd/m ²
System	NTSC/PAL auto recognition
Inputs	Analog Component (YPrPb / YCrCb / Y R-y B-y) (3 BNC) Analog Composite (BNC) S-Video (Y/C) (4 pin mini din female) 3 Lamp Tally (DB-15 Female) Power (4 pin male XLR)
Active Outputs Available when power is applied to monitor	Component Video (3 BNC) Composite Video (BNC) S-Video (Y/C) (4 pin mini din female)

6 Mechanical Specification

Dimensions	7.44"W x 5.0"H x 2.5"D (18.89cm x 12.7cm x 6.35cm)
Approx. Weight	3 lbs
Power Consumption	14-10 VDC, 15 Watt nominal (3.0Amps max - UL Class 2 supply included)
Operating Temperature	-20° C to 65° C Ambient
Storage Temperature	-30° C to 85° C

7 Faceplate Cleaning

When cleaning the faceplate it is very important to use non-abrasive and ammonia free cleaning agents and a clean micro fiber clothe, or cheese clothe. Do not use paper towels. Paper towel fibers are coarse and may scratch the surface of the Polycarbonate faceplate. Paper towels may also leave streaks on the surface. Antistatic and fingerprint resistant cleaning agents are recommended.

8 Operational Setup

1. Unpack the V-R70P-HDA and accompanying 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. Connect required cables for signal input and output.

Please note that power must be applied to the V-R70P-HDA for the HDA/SDI outputs to be activated.

All BNC connectors should be rated for 75Ω.

3. Plug the power supply into the A.C. source.

Please note that power can be supplied from a variety of DC sources, such as batteries or Vehicle power.

Input power range is 10.7 to 15 Volt D.C.

In operation, the V-R70P-HDA will draw approx. 0.8 amp.

Attach 4 Pin XLR power connection from V-PS12-V-5 power supply to the back of the unit.

4. Turn on the V-R70P-HDA by depressing the power switch located on the front of the unit.

9 Input Connectors

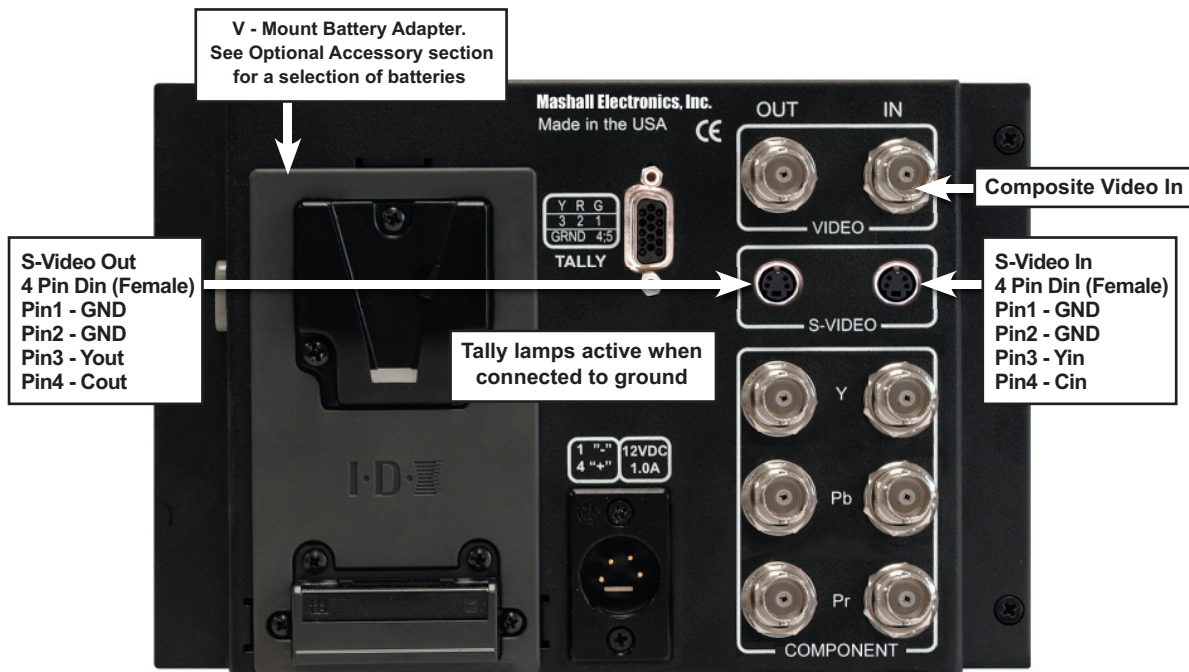
* Composite Video Inputs comply to SMPTE-170M

* Component Inputs comply to SMPTE274M, 294M

* Outputs Require Power to be applied for activation

* Battery and External Power can not be used simultaneously

* Active Outputs require power to be applied. All input signals appear as output signal. Analog output signals are buffered and amplified.



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

10 Switch Settings, Functions and Indicators

Tally Indicators

Marshall V-R70P-HDA

CAMERA 1

16/9 4/3

POWER VIDEO S-VIDEO YPbPr BAR RATIO

BRIGHT COLOR TINT CONTRAST

Power On/Off switch
Illuminates red when system power is present
Illuminates Green when monitor is ON

Image Adjustment Controls
Note: Tint only functions when NTSC Video or S-Video are selected

HDS/SDI Signal indication Lights for active format

Screen aspect ratio switch 4:3 or 16:9 selector and indicators

16:9 Aspect

4:3 Aspect

Note: Tapping any active input signal toggles BLUE GUN On/Off. Signal selection is active when Blue Gun is on. Tap active selection to turn off.

11 Warranty

Marshall Electronics warrants to the first consumer, that this V-R70P-HDA portable 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 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. Due to constant effort to improve products and product features, specifications may change without notice.