

# VR75 Video/Audio/Data Receiver

UHF, L-Band, S-Band, C-Band

**Rugged, Reliable, Efficient, Feature Rich in a Small Package. Ideal for Covert Operations, UAVs, and UGVs!**



AMP's VR75 Series 7.4 cubic inch video receivers offer high quality reception with many advanced features, including the miniature packaging, low power consumption, low noise figure, and video inversion. All receivers utilize a robust machined aluminum chassis and high quality connectors designed to withstand harsh environments.

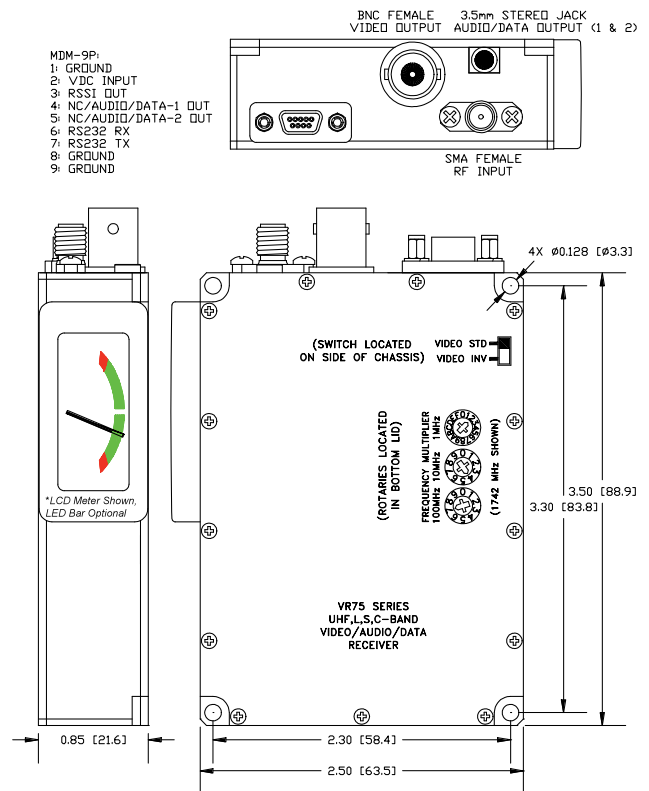
VR75 Series receivers feature innovative circuit designs to reduce power consumption for significantly longer battery life and to reduce noise figure for substantially more range. Lower noise figure improves video quality and reduces the required transmitter output power thereby reducing transmitter battery requirements.

Receiver carrier frequency may be selected locally with BCD rotary switches, remotely with RS232 interface, and locally/remotely with a programmable binary switch. A slide switch allows selection between standard (positive) and inverted (negative) video. Received signal strength is indicated with a local display (LCD meter or LED bar) and an output pin on the I/O connector.

VR75 Series receivers are ideal for law enforcement, surveillance, UAV, UGV, Military, and other applications requiring high quality video reception in a compact, rugged package. If your application requires video and audio or data reception, AMP's receivers are optionally configured with up to two audio or data subcarriers. Dual buffered subcarrier outputs are provided for simultaneous monitoring and recording.

## Design Features:

- 7.4 Cubic Inch Package (2.5" x 3.5" x 0.85")
- Weighs < 6 oz.
- Low Current Draw (Longer Battery Life)
- Low Noise Figure (More Range)
- Full Frequency Band Channelized
- Three Frequency Selection Modes (BCD Switches, RS232, Programmable Switch)
- Dual L/S-Band (1.7-1.85 GHz and 2.2-2.5 GHz)
- Video Inversion (Slide Switch Control)
- NTSC or PAL Video (Bandwidth & De-Emphasis)
- Optional Dual Audio or Data Subcarriers
- Dual Buffered Subcarrier Outputs (Monitor & Record)
- RS232 Data Subcarriers up to 48 kbps
- Received Signal Strength Indication (Local Display and Connector Output Pin)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)



### \*\* NOTES:

- 1) NC = No Connection
- 2) Models with no subcarriers have 3.5mm Stereo Jack omitted



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# AMP VR75 Series Video/Audio/Data Receiver

## RF Characteristics

Frequency Range (Specify): (Other Ranges Available)	UHF: 340.0 – 399.9 MHz Lower L-Band: 1435 – 1535 MHz Upper L-Band: 1700 – 1850 MHz S-Band: 2200 – 2399 MHz ISM S-Band: 2400.00 – 2499.75 MHz Dual L/S-Band: 1700–1850/2200–2500 MHz C-Band: 4400 – 4999 MHz Public Safety C-Band: 4940 – 4990 MHz	Steps: 100 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 250 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other
Frequency Selection (Specify):	Fixed or Channelized (Full Band - BCD Rotary Switches, RS232 Remote Control, and Programmable Binary Switch)	
Maximum RF Input:	+10 dBm Without Damage	
Input Impedance:	50 $\Omega$ Nominal, VSWR 1.5:1 Maximum	
Noise Figure:	UHF, Dual L/S: 4.5 dB Typical L/S/C-Band: 4.0 dB Typical ISM S-Band: 2.5 dB Typical	
Image Rejection:	UHF/L/S/Dual: 60 dB Minimum C-Band: 50 dB Minimum	
Signal Strength Output:	0.3 Vdc @ -90 dBm to 5.0 Vdc @ -20 dBm, Monotonic	

## LO/IF Characteristics

LO Stability:	$\pm 4$ ppm Over -20°C to +60°C	
IF Frequency:	UHF: 140 MHz	L/S/C-Band, Dual: 480 MHz
IF Bandwidth:	UHF: 18 MHz	L/S/C-Band, Dual: 20 MHz
Harmonic and Spurious Level:	-50 dB Maximum	

## Video Characteristics

Modulation Type:	Analog FM	
Modulation Sense:	Standard (Positive) or Inverted (Negative), Slide Switch Selectable	
Frequency Response (Specify):	10 Hz to 3.5 MHz (Monochrome), 4.2 MHz (NTSC), or 5.0 MHz (PAL), $\pm 1.5$ dB	
De-Emphasis:	525-Line (NTSC) or 625-Line (PAL)	
Output Level:	1 Vpk-pk / $\pm 4$ MHz @ Crossover Frequency, into 75 $\Omega$ Load	
Output Impedance:	75 $\Omega$ Nominal, Unbalanced	

## Audio/Data Subcarrier Characteristics

Subcarriers (Specify):	None, One, or Two	
Subcarrier Type (Specify):	Audio or Data	
Subcarrier Frequency (Specify):	4.83, 5.8, 6.0, 6.2, 6.5, 6.8, 7.2, 7.5, 8.3, 8.5, or 8.59 MHz, or Custom	
Subcarrier Separation (Two):	1 MHz Minimum	
Modulation Type:	Analog FM, Positive Sense	
Frequency Response:	100 Hz to 10 kHz $\pm 1.5$ dB (Audio) or 100 bps to 48 kbps (Data)	
De-Emphasis:	75 $\mu$ sec NTSC or 50 $\mu$ sec PAL (Audio) or None (Data)	
Output Level:	-10 dBV Line / 100 kHz pk-pk @ 1 kHz Rate into 600 $\Omega$ Load (Audio) or RS232 / 150 kHz pk-pk Deviation (Data)	
Output Impedance:	600 $\Omega$ Nominal, Unbalanced (Audio) or 300 $\Omega$ (Data)	

## Power Requirements

Input Voltage:	+9 to +16 Vdc, Reverse Polarity Protected
Current Draw:	275 mA Maximum

## Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish (Specify):	Nickel Plated or Black Plated	
Dimensions:	2.50" W x 3.50" L x 0.85" H	
Weight:	6 oz. Maximum	
RSSI Display (Specify):	LCD Analog Bar Meter or LED Light Bar	
Connectors:	RF Inputs: SMA Female Video Output: BNC Female Audio/Data Output: 3.5mm Stereo Jack (If Applicable) DC Supply, Audio/Data, RSSI, RS232: MDM-9P	

## Environmental

Temperature (Operating):	-20°C to +60°C
Acceleration:	100 g, 3 Axes
Altitude:	Unlimited
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation