

**Installation and  
Operation Manual**  
**VH856**  
**VH1656**

***NITEK***<sup>®</sup>

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Reduce risk of fire or electrical shock do not expose this product to rain or moisture.

## ***Features of the VH856 and VH1656***

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- Live video over twisted pair lines for ***up to 3,000 feet***
- Live video ***up to 6,000 feet*** when used with NITEK® TT560
- Easy to install with just a screwdriver
- High resolution color or monochrome video
- Virtually impervious to hum and noise

## ***System Specifications***

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**VH856** System includes the following:

- (1) VH856 Hub
- (1) Wall power transformer

**VH1656** System includes the following:

- (1) VH1656 Hub
- (1) Wall power transformer

<b>Size</b>	1.75"H x 17"W x 6.0"D
<b>Power Requirements</b>	24VAC, 50/60Hz, Class 2 @550mA
<b>Input</b>	Low voltage current loop from balanced UTP transmitters
<b>Output-Video</b>	1.0 vpp composite video Monochrome or Color

## ***Installation***

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**The VH856 and VH1656 UTP Video Receiver Hubs are designed to receive standard UTP video and output standard coax video.**

### **Step 1)**

Check the twisted pair for continuity. Do this by shorting the pair of wires at one end and use an ohm meter to check the resistance at the other end. Also, use a multimeter to test the line to make sure there is no voltage on it. The chart below will give you the length of your wires for a measured resistance. Testing each line and recording the length for each camera run can greatly reduce installation time.

For distances greater than 3,000 feet an amplified transmit source may be needed.

WIRE GAGE	DISTANCE IN FEET (METERS)						
	500 (152)	1,000 (304)	2,000 (610)	3,000 (914)	4,000 (1219)	5,000 (1524)	6,000 (1829)
22	16	32	64	97	129	161	194
24	26	51	103	154	205	257	308
26	41	82	163	245	326	408	490

### **Step 2)**

Connect the twisted pair from each transmitter to the screw terminals noting the polarity of the connection. If the wires are reversed the video will be unviewable on the monitor. Reversing the wires will not damage the unit.

### **Step 3)**

The VH856 and VH1656 are powered from a 24VAC wall pack. In the case of several units a larger class 2 central supply may be used. Contact NITEK® Tech Support for recommendations. It is recommended that each video out BNC jack be connected to a test monitor first for the purpose of adjusting the receivers. After having adjusted each receiver, connect them to the rest of your video system.

## ***Installation - continued***

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### **Step 4)**

Remove the front panel of the VH856 or VH1656 by pulling the knobs toward you. Inside locate the receiver unit to match the camera you are working on. Set the DIP switches for your camera distance as listed below, use the setting closest to your actual cable length. If you have no video or a streak through your video your wire pair may be reversed. When finished replace the front panel and lock it in place by pushing the knobs in.

Unmarked Positions are Off				Video Level Gain		Video Peaking		
Distance	Switch Position							
	1	2	3	4	5	6	7	8
<500 ft. (152 m)								
1,000 ft. (304 m)					ON		ON	
1,500 ft. (457 m)			ON	ON	ON			
2,000 ft. (610 m)			ON	ON		ON	ON	
2,500 ft. (762 m)	ON	ON	ON	ON		ON	ON	
3,000 ft. (915 m)	ON	ON	ON	ON	ON	ON	ON	

The settings listed are for normal conditions. Other settings are possible. For added sharpness adjust switches 7 and 8. For more gain adjust 5 and 6. Switches 1 and 2 or 3 and 4 must be operated in pairs to adjust for frequency compensation.

### **Step 5)**

There is also an “Earth Ground” terminal on the rear of the VH1656, this connection provides improved surge protection, it is not required for operation. If the “Earth Ground” is not connected the unit will be grounded through the coax shield.

## ***Troubleshooting***

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<b>Problem</b> <b><i>Fix/Cause</i></b>	<b>Video inverted or rolling and unstable.</b> <ul style="list-style-type: none"><li>• Reverse the wires of the twisted pair at either the transmitter or receiver.</li></ul>
<b>Problem</b> <b><i>Fix/Cause</i></b>	<b>No video out at the receiver.</b> <ul style="list-style-type: none"><li>• Check to make sure that there is video in at the transmit end.</li><li>• Make sure that the pair of wires you are using is not open or shorted between the transmit and receiver points.</li><li>• Check power to the receiver.</li></ul>
<b>Problem</b> <b><i>Fix/Cause</i></b>	<b>Ghost image at the receiver.</b> <ul style="list-style-type: none"><li>• Bridge tap or "T" tap on the twisted pair video line. Remove tap.</li></ul>

For additional help with problems please call NITEK® Technical Assistance at (800) 528-4343. Hours are from 8am to 5pm Central Standard Time Monday through Friday. We are always ready to help.

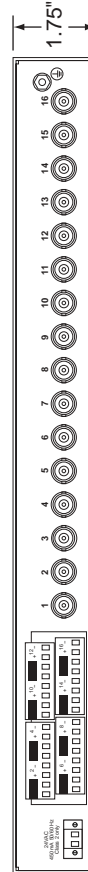
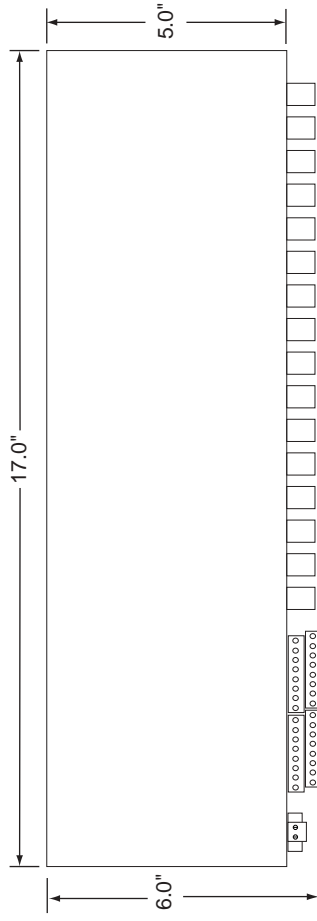
## ***Limited Warranty***

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NITEK® warranties that this unit will be free from defects in materials and/or workmanship. Defective units will be repaired or replaced at our option within 2 years from the date of shipment. This warranty does not apply to units abused through misuse or subjected to improper and/or excessive voltage, beyond our control.

**For complete warranty details contact NITEK®**

## VH1656 Top



## VH1656 Back

**\*Note:** VH856 is identical with the exception of 8 BNC ports instead of 16