



## USER'S MANUAL

Thank you for purchasing the Videobaluns Unlimited AB-6010-T/AB-6010-R Active UTP Transmitter/Receiver.

Please read this manual carefully prior to installing and using the product. You must read the precautions required for safe operation. The contents of these operating instructions may differ slightly due to the ongoing functional improvement of our products and based on the specification chosen by the user.

|  |   |   |
|--|---|---|
|    | <b>CAUTION</b><br>RISK OF ELECTRIC SHOCK<br>DO NOT OPEN |  |
| <p><b>CAUTION :</b><br/>TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p> |   |   |



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

All Videobaluns Unlimited products are listed and/or conform to UL and CE certifications.

 CE mark under EMC and low voltage Directives for the European Union.



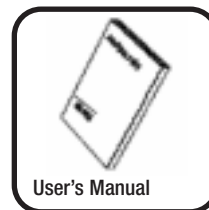
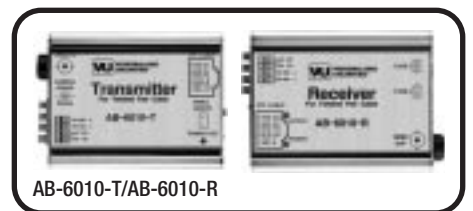
## Introduction

### SUMMARY

The AB-6010-T & AB-6010-R UTP transmitter & receiver can transmit high quality video for long distances without interference. In addition to video, you can transmit power to the camera and its control data using one UTP cable.

### PRODUCT FEATURES

- Transmission of video, power and data on one UTP cable
- Excellent interference rejection
- Transmits high quality video up to 8000 feet (B/W) and 6000 feet (Color)
- Adjustable sync and burst (A.Level/F.Level) for optimal image quality
- Accepts 24V AC or 12V DC
- Small and lightweight, it can be installed inside the camera housing.



## Appearance and Connection

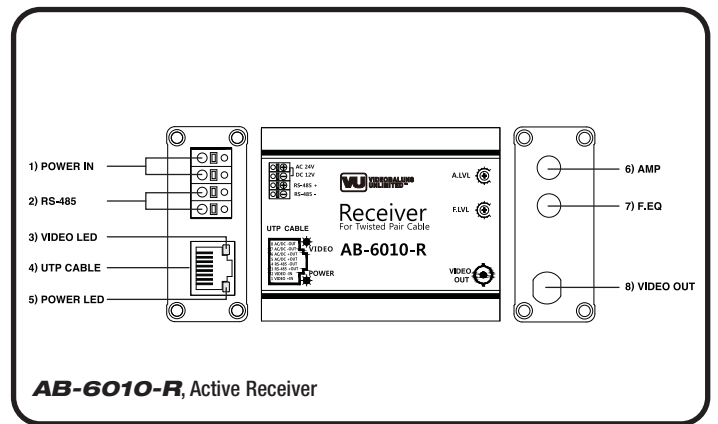
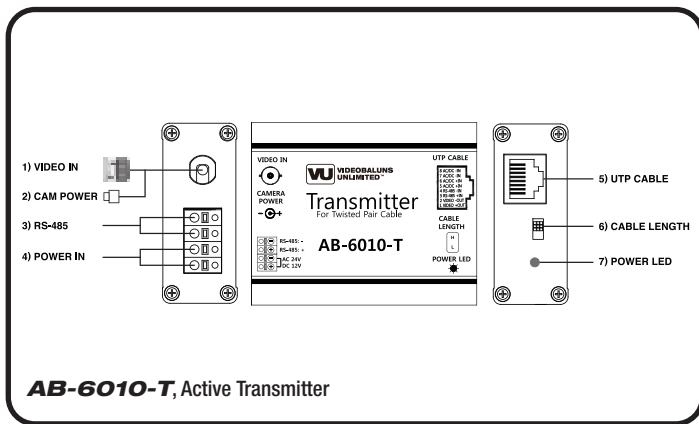
### NAME OF PART AND FUNCTION

#### AB-6010-T, Active Transmitter

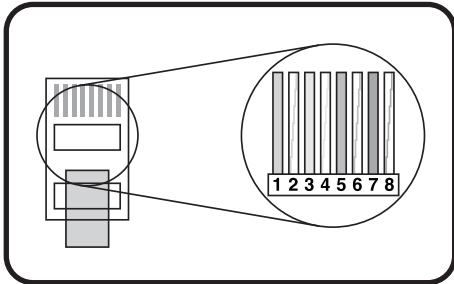
- 1) VIDEO IN: Connect with the video output terminal of Camera.
- 2) CAM POWER: Connects to Camera Power input.  
For a Camera using separate power, it should not be connected.
- 3) RS-485: RS485 DATA connection terminal. Insure that correct polarity is maintained.
- 4) POWER IN: Used when a separate Power Adaptor needs to be connected.  
/ If power is supplied from Junction Box, it should not be connected.
- 5) UTP CABLE: Use an RJ-45 Plug to connect the UTP cable.
- 6) CABLE LENGTH: Adjust the H/L switch according to the UTP Cable distance.
- 7) POWER LED: Indicates if power is supplied to the AB-6010-T.

#### AB-6010-R, Active Receiver

- 1) POWER IN: Connects to power adaptor.
- 2) RS-485: RS-485 DATA connection terminal.  
**Insure that correct polarity is maintained.**
- 3) VIDEO LED: Indicates if a video signal is detected
- 4) UTP CABLE: Use an RJ-45 Plug to connect the UTP cable.
- 5) POWER LED: Indicates if power is supplied to the AB-6010-R.
- 6) AMP: To adjust video image level.
- 7) F.EQ: Allows for the fine adjustment of the video image.
- 8) VIDEO OUT: Connect with the video input of DVR, Monitor, Multiplexer or other CCTV equipment.



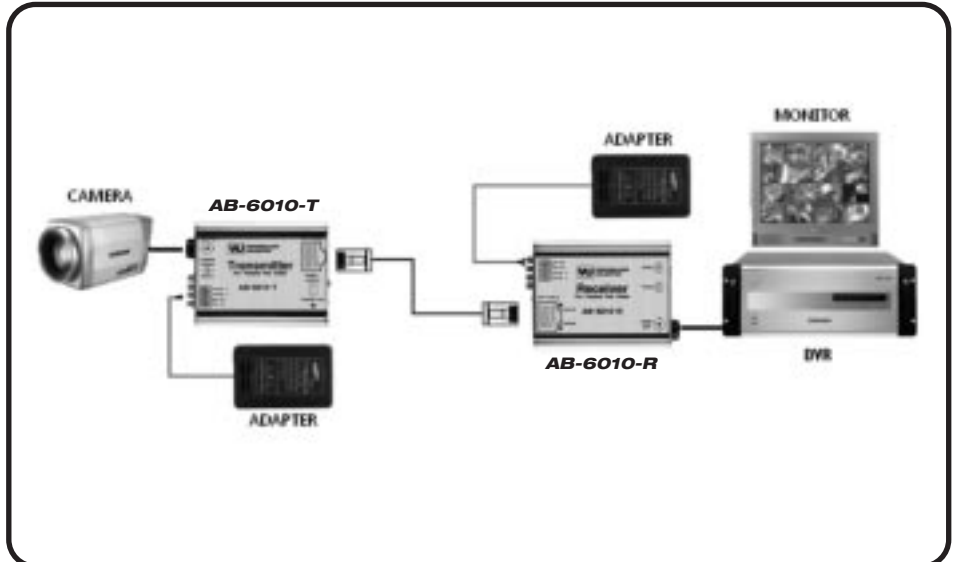
### CONNECTION FOR UTP WIRE



### Copper Connector & Coating Color

| No. | Color          | Function |
|-----|----------------|----------|
| 1   | Orange         | VIDEO +  |
| 2   | Orange + White | VIDEO -  |
| 3   | Green          | DATA +   |
| 4   | Green + White  | DATA -   |
| 5   | Blue           | POWER +  |
| 6   | Blue + White   | POWER +  |
| 7   | Brown          | POWER -  |
| 8   | Brown + White  | POWER -  |

### Application



## Precautions and Troubleshooting

### PRECAUTIONS ON USE

- The power switch must be turned off prior to installation.
- Please install in a place well-ventilated avoiding extremely hot, humid or cold places.
- Avoid installing near sources of electromagnetic interference such as many types of fluorescent lights.
- Use in ambient temperatures between -50F and 120F.
- Avoid installing where there is strong vibration.
- Always use the correct power and signal polarity.
- When using the AB-6010 to transmit camera power, make sure to supply the correct type of power at the receiver. Confirm that the camera uses 24vAC, or 12vDC.

### TROUBLESHOOTING

| Symptoms   | Check Point   | Solution  |
|--|---|---|
| Power is not supplied.   | Verify that the power supply is functioning properly.                       | Replace a non functioning power supply.   |
| The camera doesn't work while power is supplied to the receiver (Power LED is ON). | Check if the distance between Rx and Tx is under 300 feet.                  | Due to the characteristic of UTP cable, the maximum power distance is up to 300 feet.   |
| When the camera requires DC power.   | Verify that the receiver is connected to a DC power supply.                 | Convert the input power for the receiver to DC.   |
| The color of video image doesn't match.  | Confirm that the sync controls have been adjusted.                          | Adjust the F.EQ and make a fine adjustment to video image.  |
| The level of the video image is inadequate.  | Verify the fine adjustment condition of the burst control.                  | Adjust the burst control.   |
| When no video image transmission is made.  | Insure that UTP connections are sound, and that pin arrangement is correct. | Repair loose connections, deficient cable or incorrect RJ-45 jack wiring.   |
| RS-485 communication is deficient.   | Inspect the RS-485 data cable and connection points.                        | Correct the RS-485 data terminal polarity and pin arrangement.  |
| The video image freezes.   | Adjust the cable length based on the cable distance.                        | If the cable distance is further than 2000 feet, set the cable length switch at the transmitter to H, if below 2000 feet, set to L. |

## Specifications

| Model                                 | AB-6010-T  | AB-6010-R   |
|---------------------------------------|--|---|
| Video Input                           | CVBS 1.0Vp-p, 75Ω  | Low 51Ω 1Vp-p,<br>High 51Ω 2.5Vp-p  |
| Video Output                          | Low 51Ω 1Vp-p<br>High 51Ω 2.5Vp-p  | CVBS 1.0Vp-p, 75Ω   |
| Power                                 | Input<br>DC 12V 500mA<br>AC 24V 300mA<br>Loop Through  | DC 12V 500mA<br>AC 24V 300mA<br>Loop Through  |
| Bandwidth                             | DC to 8MHz   | DC to 8MHz  |
| Maximum Transmission Distance (CAT 5) | 2 Step Adjustment Switch   | 2 Step Adjustment Switch  |
| Connection Port                       | Video Input<br>DC-F & BNC Harness(18 in.)<br>RJ-45<br>DATA: 4P Terminal Block (1-2:DATA/ 3-4: POWER) | Video Output<br>RJ-45<br>BNC Harness (18 in.)<br>DATA: 4P Terminal Block (1-2: POWER / 3-4: DATA) |
| Temperature /Humidity                 | -18°F ~ +120°F / 0 ~ 80%   | -18°F ~ +120°F / 0 ~ 80%  |
| Material / Weight                     | Aluminum / 4.2 ounces  | Aluminum/ 4.2 ounces  |
| Dimension                             | 3.0(W) x 2 3/8(H) x 1.0(D)in.  | 3.0(W) x 2 3/8(H) x 1.0(D)in.   |

### RECOMMENDED INSTALLATION DISTANCE

| Classification       | Video Image       |                   | Power            | Data              |
|----------------------|-------------------|-------------------|------------------|-------------------|
|                      | Color             | B/W               |                  |                   |
| Maximum Distance     | 6000 feet         | 8000 feet         | 300 feet         | 4000 feet         |
| Recommended Distance | 4000 feet or less | 6000 feet or less | 300 feet or less | 4000 feet or less |

## Warranty Certificate

This product has been tested and inspected rigorously, but if a problem occurs, it is covered by a full 12 month warranty.

|  |
|--|
| Model No.  |
| Distributor  |
| Date you purchased                                       |
| Place you purchased                                      |
| Warranty Period (One (1) year from the date of purchase) |
| Customer Name  |
| Customer Address   |
|  |
|  |

For technical support, please contact:

*technicalsupport@videobaluns.com*  
Tel: (508) 532-0556