

# Model TR515

Active Receiver for UTP Transmission

# Model TS515

System Includes (1) VB37 Balun Unit

# Installation and Operation Manual

Note: This installation should be made by a qualified service person and conform with local codes.



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

## Installation

- 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. The chart below will give you the length of your wires for a measured resistance. Use a multimeter to make sure there is no voltage on the line. For distances greater than 1,500 feet, there are several other systems available. Contact you local Distributor or Nitek Tech Support for assistance.

| Wire Gage | Distance in Feet (Meters) |               |               |               |                |                |                |
|-----------|---------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
|           | 500<br>(150)              | 1000<br>(300) | 2000<br>(600) | 3000<br>(900) | 4000<br>(1200) | 5000<br>(1500) | 6000<br>(1800) |
| 22        | 16                        | 32            | 64            | 97            | 129            | 161            | 194            |
| 24        | 26                        | 51            | 103           | 154           | 205            | 257            | 308            |
| 26        | 41                        | 82            | 163           | 245           | 326            | 408            | 490            |

The TR515 receiver can be used with any standard twisted pair video camera or Balun type transceiver unit.

- 2) If using a VB37 Balun connect it to your camera and connect the twisted pair wiring to the balun. If using a UTP output camera connect the camera as recommended by the manufacturer.
- 3) At the receiver connect the BNC video jack to your monitor or DVR.
- 4) Locate the twisted pair input terminals of the receiver, marked "Wire Pair +" and "Wire Pair -". Connect the twisted pair, note that the polarity of the connection matches the polarity at the transmitter unit. If the wires are reversed the video will not be viewable, this will not damage the unit. Reverse the wires and the video will be correct.
- 5) The receiver unit can be powered using 12 to 24 volts AC or DC current. There is no polarity to the power connection.
- 6) DIP switches are provided so that the unit can be adjusted for best picture. The following settings are factory recommended for normal conditions. For added sharpness adjust switches 7 and 8. For more gain adjust 5 and 6. Switches 1, 2 and 3, 4 must be operated in pairs. (See Chart on page 2.)

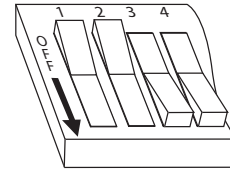
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| Unmarked Positions are Off |                 |    |    | Video Level Gain | Video Peaking |    |    |   |
|----------------------------|-----------------|----|----|------------------|---------------|----|----|---|
| Distance                   | Switch Position |    |    |                  |               |    |    |   |
|                            | 1               | 2  | 3  | 4                | 5             | 6  | 7  | 8 |
| 100-400ft<br>(30-120m)     |                 |    |    |                  |               |    |    |   |
| 400-700ft<br>(120-200m)    |                 |    |    |                  | ON            |    |    |   |
| 700-900ft<br>(200-275m)    |                 |    | ON | ON               | ON            |    |    |   |
| 900-1100ft<br>(275-330m)   |                 |    | ON | ON               |               | ON |    |   |
| 1100-1300ft<br>(330-400m)  |                 |    | ON | ON               |               | ON | ON |   |
| >1300ft<br>(>400m)         | ON              | ON | ON | ON               |               | ON |    |   |

SAMPLE



Switches 1 and 2 are in the 'OFF' position  
Switches 3 and 4 are in the 'ON' position

## Troubleshooting

**Problem**  
*Fix/Cause*

**Video inverted or rolling and unstable.**

- Reverse the wires of the twisted pair at either the transmitter or receiver.

**Problem**  
*Fix/Cause*

**No video out at the receiver.**

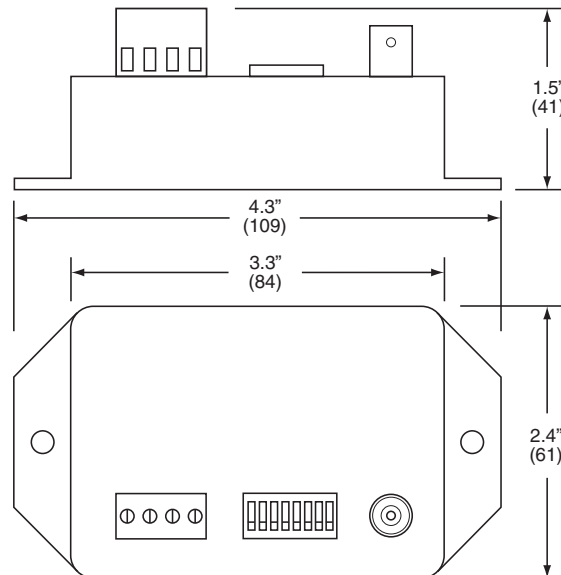
- Check to make sure that there is video in at the transmit end.
- Make sure that the pair of wires you are using is not open or shorted between the transmit and receive points.
- Check power to the receiver. The receiver must be powered with the supplied wall pack

**Problem**  
*Fix/Cause*

**Ghost image at the receiver.**

- Bridge tap or "T" tap on the twisted pair video line. Remove tap.

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



**Power Requirements**

12 to 24 AC/DC  
100mA 60/50Hz  
Class 2 only