Specifications

Environment	Composite video. NTSC, PAL, SECAM. Component video (480i/p).
Devices	DVD players, cable boxes, video distribution amplifiers, security video cameras, digital video recorders and other composite video equipment.
Transmission	Transparent to the user
Bandwidth	Video: DC to 8 MHz
Maximum Video Input	1.1 Vp-p
Insertion Loss	Less than 2 dB per pair over the frequency range from DC to 8 MHz
Return Loss	Greater than 15 dB over the frequency range from DC to 8 MHz
Common Mode Rejection Ratio	Greater than 40 dB at 8 MHz
Max. Distance: Cat 5E/6 UTP/STP	Composite video: 2,200 ft (less distance may result with DVR equip.) Component video (YPbPr): 500 ft (152 m) (480i/p only)
Cable: Cat 5E/6 UTP/STP	24 AWG or lower solid copper twisted pair wire Impedance: 100 ohms at 1 MHz Maximum capacitance: 20 pf/ft Attenuation: 6.6 dB/1,000 ft at 1 MHz
Cable: Coax	75-ohm coaxial cable.
Connectors	Option 1: Four (4) RCA-receptacles for video, one (1) RJ45 jack Option 2: Four (4) BNC-receptacles for video, one (1) RJ45 jack
Pin Configuration	Video 1: Pins 7(R) & 8(T) Video 2. Pins 3(R) & 6(T) Video 3: Pins 4(R) & 5(T) Video 4: Pins 1(R) & 2(T)
Impedance	Video: 75 ohms (RCA) unbalanced
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Enclosure	Fire retardant plastic
Dimensions	2.40" x 2.25" x 1.00" (6.10 x 5.72 x 2.54 cm)
Warranty	Lifetime
Order Information	500032 Quad Video Balun – RCA 500037 Quad Video Balun – BNC

Quad Video Balun – RCA (500032)
Quad Video Balun – BNC (500037)
Quick Installation Guide

Overview

The Quad Video Balun allows up to four (4) composite video signals to be transmitted via an unshielded twisted pair (UTP) cable in a point-to-point connection. Used in pairs, the Quad Video Balun eliminates up to four (4) coaxial cables, allowing audio-video equipment to be connected via a space-efficient and cost-effective Category 5E/6 twisted pair cable. The Quad Video Balun also works in conjunction with other MuxLab composite video baluns such as the 500000, 500009 and 500021.

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Installation

One (1) pair of baluns support four (4) composite video signals or one (1) component video (YPbPr) and one (1) composite video signal via a Cat 5E/6 twisted pair. To install the baluns, perform the following steps:

1. Identify the pin configuration of the baluns. Four (4) twisted pairs are required if all four (4) signals are transmitted. The pin configuration follows the EIA/TIA 568A/B standard. The Quad Video Balun is reverse polarity sensitive. Please ensure that wiring is straight-through (Ring to Ring, Tip to Tip).
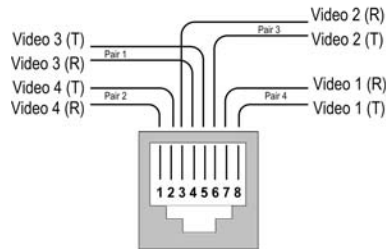
2. At the video source end, connect a Quad Video Balun to the video output using the appropriate number of RCA or BNC cables.

3. At the video display end, connect a Quad Video Balun to the video input using the appropriate number of RCA or BNC cables.

4. Complete the connection between the two baluns, using standard Cat 5E/6 twisted pair cable and connecting hardware, terminated on RJ45 plugs at both ends. Ensure that there are no split pairs or taps.

5. Power-on the video equipment. Check the image quality and refer to the troubleshooting table below if the image quality is unsatisfactory. The following diagram shows a typical installation.

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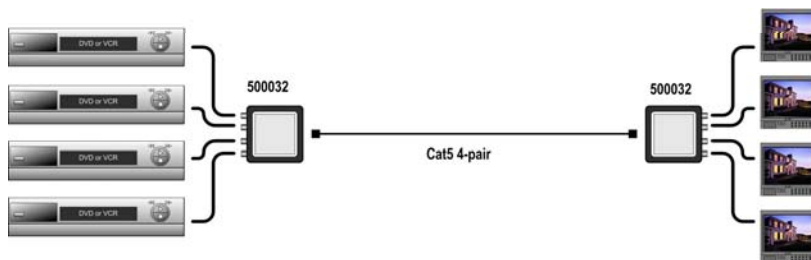
Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in respect to the installation of the Quad Video Balun:

Symptom	Probable Cause	Possible Solutions
No video	No continuity in video link	Verify cable continuity between pairs of baluns.
	Power off	Check power supplies of video equipment.
	Improper connection and/or swapped pair	Check that baluns are connected to correct video inputs and outputs.
Unusual colors	Reversed polarity	Check wiring and ensure straight-through polarity
Background pattern	EMI interference	Identify possible radiating frequency sources (*i.e.*, wireless LANs, switching power supplies). Try to isolate them from the video connection. Use shielded twisted pair grounded at both ends.
Smearing	Exceeded distance	Verify cable grade. Use higher grade cable if necessary.
Weak contrast	Exceeded distance	Verify cable grade. Use higher grade cable if necessary. Increase contrast on monitor.
	Unusual link attenuation	Verify cable distance using ohmmeter or cable tester.
Image not stable	Defective link or equipment	Verify video equipment interface integrity.
Horizontal bars moving slowly	Substantial crosstalk between multiple video sources	Consecutively turn off other video sources to determine which video source is the cause of interference.
Snowy picture	Distance is near limit	Verify cable grade. Use higher grade cable if necessary. Reduce color intensity at monitor.

If you still cannot diagnose the problem, please call MuxLab Customer Technical Support at 877-689-5228 (toll-free in North America) or (+1) 514-905-0588 (International).