

# Specifications

<b>Environment</b>	Component Video (YPbPr), RGB Video (sync on green). 480i/p, 720p, 1080i/p.
<b>Devices</b>	DVD players, satellite receivers, plasma displays, projectors, monitors, amplifiers, switchers, home theatre and other equipment supporting HDTV component video.
<b>Transmission</b>	Transparent to the user
<b>Bandwidth</b>	Video: 60 MHz, 3 dB roll off
<b>Maximum Input</b>	1.1 Vp-p
<b>Insertion Loss</b>	0.1 dB for 0.1 MHz Gradually increasing to 2.5 dB over the frequency range
<b>Return Loss</b>	Greater than 15 dB over the frequency range
<b>Common Mode Rejection Ratio (CMRR)</b>	-55 dB at 0.1 MHz Gradually increasing to -20 dB at 60 MHz
<b>Maximum Distance</b>	480i/p: 1,000 ft (305 m)      720p and 1080i: 500 ft (152 m)
<b>Cable: Cat 5E/6 UTP/STP</b>	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
<b>Cable: BNC</b>	Impedance: 75 ohms at 1 MHz
<b>Connectors</b>	Three (3) BNC-F connectors: Green (Y), Blue (Pb), Red (Pr) RJ45 for twisted pair
<b>Pin Configuration</b> <i>Reverse polarity sensitive</i>	Red (Pr): Pins 7(R) & 8(T) Green (Y): Pins 3(R) & 6(T) Blue (Pb): Pins 1(R) & 2(T)
<b>Accessories Included</b>	Three (3) 10" (25.4 cm) coax jumper cables included BNC-male to BNC-male
<b>Temperature</b>	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
<b>Enclosure</b>	ABS fire retardant plastic
<b>Dimensions</b>	2.40" x 2.25" x 1.00" (6.10 x 5.72 x 2.54 cm)
<b>Weight</b>	7.5 oz (212 g)
<b>Regulatory</b>	FCC, CE
<b>Warranty</b>	Lifetime
<b>Order Information</b>	500002 RGB Video Balun



## RGB Video Balun 500002

### Quick Installation Guide

#### Overview

The RGB Video Balun (500002) allows one component video (YPbPr or RGB) signal to be transmitted via cost-effective unshielded twisted pair (UTP) cables in the commercial AV environment.

Used in pairs, the RGB Video Balun supports 480i/p, 720p and 1080i/p resolution for hi-definition (HDTV) video applications.

The product allows four coaxial cables to be replaced by one Category 5E/6 twisted pair cable allowing standard structured cabling techniques to be used for more efficient cabling.



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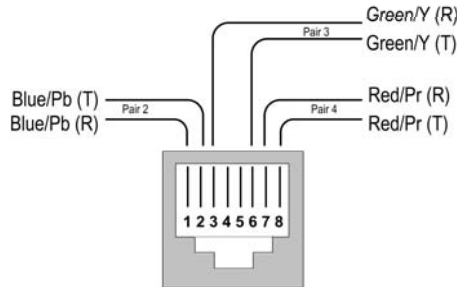
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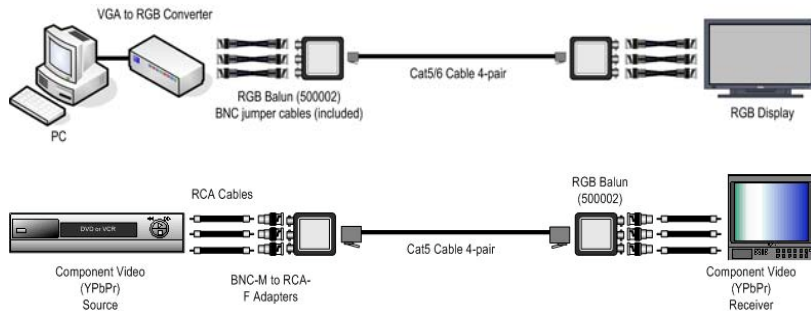
# Installation

One (1) pair of baluns is needed to complete one component (YPbPr/RGB) connection via Cat 5E/6 twisted pair. To install the baluns, perform the following steps:

1. Identify the pin configuration of the baluns. Three (3) twisted pairs are required. The pin configuration follows the EIA/TIA 568A/B standard. The RGB Video Balun is reverse polarity sensitive. Please ensure that wiring is straight-through (Ring to Ring, Tip to Tip).



2. The RGB Video Balun comes with three (3) 10" (25 cm) color-coded BNC jumper cables. Connect the jumper cables to the RGB Video Balun. Connect the other end of the jumper cables to the corresponding BNC connectors on the RGB video equipment.
3. Plug the second balun into the component video coaxial cable input of the video screen or receiver at the remote end.
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 component video equipment. Check the image quality and refer to the troubleshooting table below if the image quality is unsatisfactory. The following diagrams show some typical applications.



# Troubleshooting

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

Video Symptom	Probable Causes	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>i.e.</i> , 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 up or down the screen	Possible ground loop	Isolate ground loop using ground loop isolators or lift AC ground using GFCI outlet.
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).