Specifications

Environment	Component Video (YPbPr), RGB Video (sync on green). 480i/p, 720p, 1080i/p. Line level Composite Video (NTSC, PAL, SECAM).
Devices	DVD players, satellite receivers, plasma displays, projectors, monitors, up-converters, amplifiers, switchers, home theatre and other equipment supporting HDTV component video and/or Composite Video.
Transmission	Transparent to the user
Bandwidth	Component: 60 MHz, 3 dB roll off Composite: DC to 8 MHz
Maximum Input	1.1 Vp-p
Insertion Loss per Pair	Component: Less than 3 dB per pair over the frequency range. Composite: Less than 2 dB per pair over the frequency range.
Return Loss	Greater than 15 dB over the frequency range
Common Mode Rejection Ratio	Component: -55 dB max. Composite: Greater than 40 dB at 8 MHz
Max. Distance via Cat 5E/6 UTP/STP Cable	480i/p: 1,000 ft (305 m) 720p and 1080i/p: 500 ft (152 m) Composite Video: 2,200 ft (670 m)
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	Impedance: 75 ohms at 1 MHz
Connectors	500056: Three (3) RCA-M connectors: Green (Y), Blue (Pb), Red (Pr) 500057: Three (3) RCA-F connectors: Green (Y), Blue (Pb), Red (Pr) One (1) RCA-F connector for Composite Video RJ45S for twisted pair
Pin Configuration *Reverse polarity sensitive*	Red (Pr): Pins 7(R) & 8(T) Green (Y): Pins 3(R) & 6(T) Blue (Pb): Pins 1(R) & 2(T) Composite Video: Pins 4(R) & 5(T)
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Enclosure	ABS fire retardant plastic
Dimensions	500056: plus 6” (15 cm) cable lead for video 500057: 2.40” x 2.25” x 1.00” (6.10 x 5.72 x 2.54 cm)
Weight	2.6 oz (74 g)
Regulatory	FCC, CE, RoHS
Warranty	Lifetime
Order Information	500056 Component/Composite Video Balun, M 500057 Component/Composite Video Balun, F

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Component / Composite Video Balun
500056, 500057
Quick Installation Guide

Overview

The Component/Composite Video Balun (500056, 500057) allows one component video (YPbPr or RGB) signal and one composite video signal to be transmitted via a cost-effective unshielded twisted pair (UTP) cable.

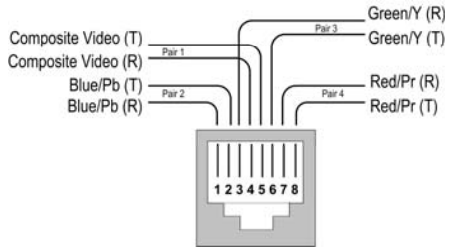
Used in pairs, the Component/Composite Video Balun supports 480i/p, 720p and 1080i/p resolution for hi-definition (HDTV) video applications.

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

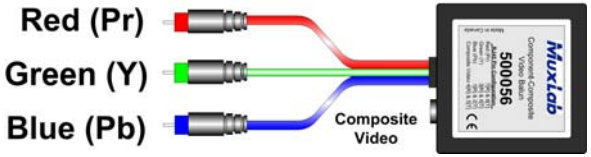
Installation

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

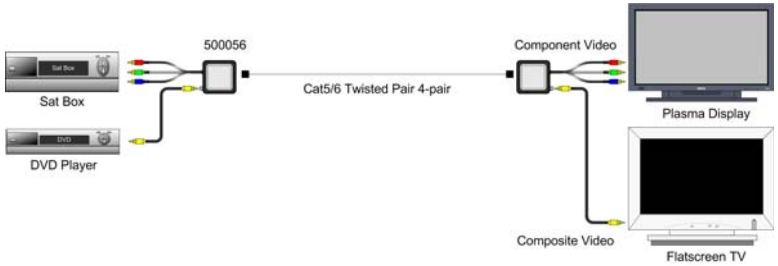
1. Identify the pin configuration of the baluns. Three (3) twisted pairs are required for video and one (1) twisted pair is required for optional Composite video. The pin configuration follows the EIA/TIA 568A/B standard. The Component/Composite Video Balun is reverse polarity sensitive. Please ensure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



2. Plug one (1) balun into the component video coaxial cable output of the video source according to the color code of the RCA cable leads.



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 a 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. If Composite Video is to be connected (optional), connect an RCA lead between the balun and the Composite Video equipment at both ends.



6. 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 diagram shows a typical installation.

Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in respect to the installation of the Component/Composite 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.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).