Specifications

Environment	Component Video (YPbPr), RGB Video (sync on green). 480i/p, 720p, 1080i/p.
Devices	DVD players, satellite receivers, plasma displays, projectors, monitors, up-converters, amplifiers, switchers, home theatre & other equipment supporting HDTV component video and/or stereo audio.
Transmission	Transparent to the user
Bandwidth	Video (Y): DC to 60 MHz, 3 dB roll off Analog audio: 20 Hz to 20 kHz
Maximum Input	1.1 Vp-p
Insertion Loss (Y channel)	0.1 dB for 0.1 MHz Gradually increasing to 2.5 dB over the frequency range
Insertion Loss (Audio)	Less than 2 dB over the frequency range per pair of baluns
THD	Less than 0.007% at 1 kHz
Return Loss (Y channel)	Greater than 15 dB over the frequency range
Common Mode Rejection Ratio (Y channel)	-55 dB at 0.1 MHz Gradually increasing to -20 dB at 60 MHz
Ground Loop Coupling (GLC)	Proprietary technique helps eliminate hum bars *US Patent Pending*
Max. Distance via Cat 5E/6 UTP/STP Cable	Video: 480i/p: 1,000 ft (305 m). 720p and 1080i/p: 500 ft (152 m) Stereo Audio: 3,250 ft (1 km)
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: RCA	Impedance: 75 ohms at 1 MHz
Connectors Video	Three (3) RCA jacks: Green (Y), Blue (Pb), Red (Pr). RCA shields are on common ground. Grounding screw available. RJ45 Shielded for twisted pair.
Connectors Audio	Two (2) RCA jacks for analog audio. RCA shields are on common ground
Pin Configuration *Reverse polarity sensitive*	Use EIA 568 A or B wiring standard and straight-through wiring
Compatibility	Not compatible with 500050/51/52/53/54/55/56/57/250/251/252/253
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing
Enclosure	ABS fire retardant plastic, Color white, Finish glossy.
Dimensions	86 mm x 86 mm x 36 mm. Choose 40 mm deep back box to allow for Cat 5E/6 wiring connection.
Weight	4.1 oz (115 g)
Compliance	FCC, CE, RoHS, European Standard for 86 mm faceplate
Warranty	Lifetime
Order Information	500058-WP-UK Component Video/Stereo Audio Wall Balun UPC: 6-27699-91058-0

MuxLab

8495 Dalton Road, Mount Royal, Quebec, Canada. H4T 1V5
Tel: (514) 905-0588   Fax: (514) 905-0589
Toll Free (North America): (877) 689-5228
E-mail: videoease@muxlab.com   URL: www.muxlab.com

Component Video/Stereo Audio Wall Balun

500058-WP-UK

Quick Installation Guide

Overview

The Component Video/Stereo Audio Wall Balun (500058-WP-UK) allows one component video (YPbPr or RGB) signal and one (1) Stereo Audio channel to be transmitted via a Cat 5E/6 twisted pair cable for more cost-efficient cabling. The product features Ground Loop Coupling (GLC) to help eliminate "hum" bars. The product fits UK 86 x 86 mm back boxes for neater wall mount installation. Used in pairs, or in conjunction with the 500058, the Component Video/Stereo Audio Wall Balun supports high-definition resolution and true left/right stereo audio for hi-fidelity commercial and residential AV applications. *The 500058-WP-UK is compatible to the 500058 and is not compatible with part numbers 500050/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 250/ 251/ 252/ 253.*

Installation

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

1. The pin configuration must be according to EIA 568, either A or B and wired straight through (no crossover).

2. 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, ensuring that there are no split pairs or taps.
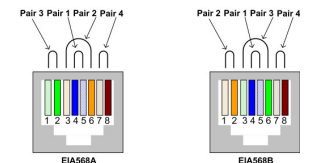
3. To install the balun in a single back box, choose a back box with a depth of 40 mm or more. Connect the RJ45 plug into the rear of the balun. Secure the balun with the 2 front screws.
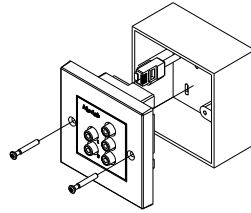

4. Plug one (1) balun into the component video output of the audio-video source according to the color code of the RCA cables and jacks.

5. If Stereo Audio is to be connected (optional), connect left/right RCA jumper cables between the balun and the stereo audio 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.
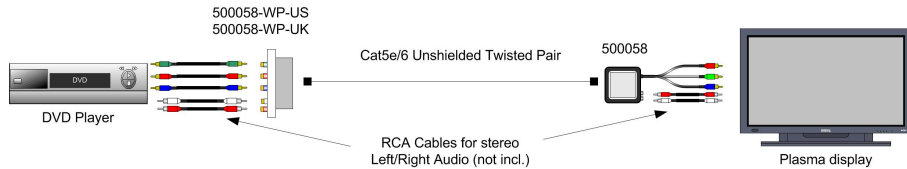
7. To mount the wall plate balun in a gang plate, you must first remove the rear 4 screws, then remove the balun. Then unclip the balun front plastic panel.
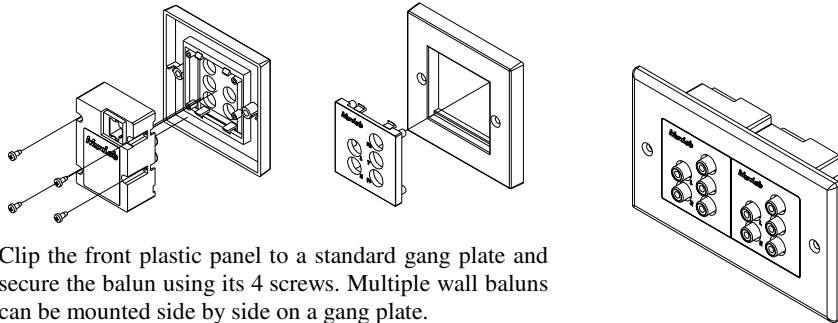
8. Clip the front plastic panel to a standard gang plate and secure the balun using its 4 screws. Multiple wall baluns can be mounted side by side on a gang plate.

Front view   Side view   Rear view
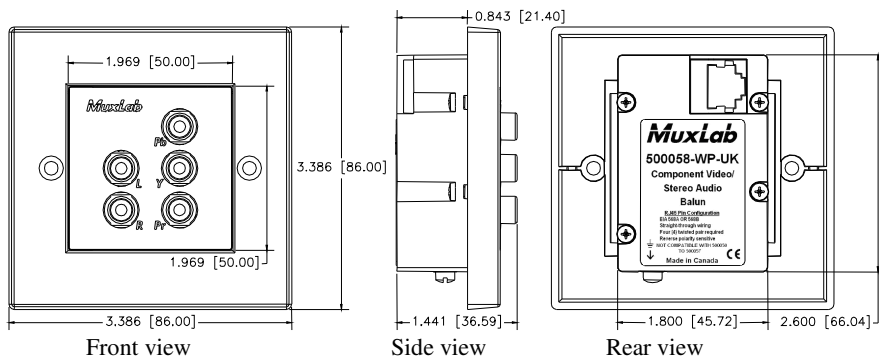
Troubleshooting

The following tables describe some of the symptoms, probable causes and possible solutions in respect to the installation of the Component Video/Stereo Wall Balun:

Video 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 or faulty UTP cable or crimping	Verify cable. 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.
Slowly moving noise or horizontal bars	Missing ground (GND)	Ensure that at least the video source or display has a 3-prong AC power plug, grounded antenna coax cable or any grounded device in the link that can help clear up the interference. A single ground in the link is recommended.
Horizontal hum bars moving slowly	Substantial cross-talk 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.
Poor image	EMI interference	Check that wiring is not too close to transformers, ballast's, air conditioners, RF transmitters or similar equipment. Use of power conditioner may help.

Audio Symptom	Probable Cause	Possible Solutions
No audio	Missing continuity in the circuit	Verify and correct the circuit.
	Power-off	Check power supplies of audio equip.
Missing channel	Cabling problem between the sound source and the audio speakers	Check audio speaker cabling.
Noise, static	EMI interference	Check that wiring is not too close to transformers, ballasts, air conditioners, RF transmitters or similar equipment.
	Distance exceeded or unusual cable attenuation	Check cable distance and cable grade. Also lifting GND on transmitter or receiver side may help.

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).