

Specifications

Environment	Unbalanced line-level analog audio.
Devices	DVD players, audio receivers, audio amplifiers and audio mixers, audio matrix switchers and other unbalanced line-level audio equipment.
Transmission	Transparent to the user.
Bandwidth (3dB roll-off point) (400 Ω source & 50 kΩ receiver)	Up to 1,000 ft (305m): 60Hz - 20 kHz 1,000 ft (305m) to 5,000 ft (1.5 km): 100Hz - 20 kHz
Maximum Input Level	1.1Vp-p (+20 dBu, unbalanced < 1% THD)
Insertion Loss per Balun Pair	Less than 1 dB per pair over the frequency range
Common Mode Rejection (CMRR)	Greater than 60 dB @ 1 kHz
Audio Source Impedance	100 to 600 Ω
Audio Receiver Impedance	10 k Ω to 100 k Ω
Impedance Transformation Ratio	Single unit: 4:1 (source:line)
Cable – UTP	24 gauge or lower solid copper twisted pair wire impedance: 100 ohms at 1 MHz. Maximum capacitance: 20 pf/foot. Attenuation: 6.6 dB/1000 ft at 1 MHz
Cable - Coax	75-ohm coaxial cable
Connectors	Four (4) RCA-receptacle for audio. One (1) RJ45 jack
Pin Configuration	Audio 1: Pins 7 (R) & 8 (T) Audio 2: Pins 3 (R) & 6 (T) Audio 3: Pins 4 (R) & 5 (T) Audio 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%
Enclosure	Fire retardant plastic
Dimensions	2.40" x 2.25" x 1.00" (6.1 x 5.7 x 2.54 cm)
Warranty	Lifetime
Order Information	500033 VideoEase Quad Audio Balun

MuxLab

8114 Trans Canada Hwy, St. Laurent, Quebec, Canada, H4S 1M5

Tel.: (514) 905-0588 Fax: (514) 905-0589

Toll Free (North America): (877) 689-5228

E-mail: videoease@muxlab.com URL: www.muxlab.com

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Quad Audio Balun (500033) Installation Guide

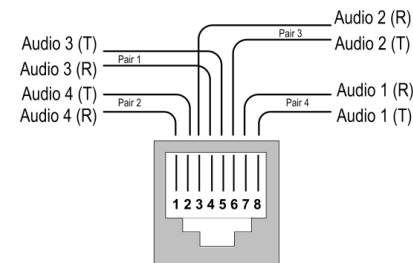
Introduction

The VideoEase Quad Audio Balun allows up to four (4) analog line audio signals to be transmitted via unshielded twisted pair (UTP) cable in a point-to-point connection. Used in pairs, the Quad Audio Balun eliminates up to four (4) coaxial cables, allowing audio-video equipment to be connected via space-efficient and cost-effective Category 5 twisted pair cable. The Quad Audio Balun also works in conjunction with other MuxLab analog audio baluns such as the 500019.

Installation

One (1) pair of baluns support four (4) mono unbalanced analog audio channels or two (2) stereo audio channels via Cat5 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 Audio Balun is reverse polarity sensitive. Please ensure that wiring is straight-through (Ring to Ring, Tip to Tip).



2. At the audio source end, connect a Quad Audio Balun to the audio output using the appropriate number of RCA cables.
3. At the audio receiver end, connect a Quad Audio Balun to the audio input using the appropriate number of RCA cables.
4. Complete the connection between the two baluns, using standard Cat5 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 audio equipment. Check the sound quality and refer to the troubleshooting table below if the sound quality is unsatisfactory. The following diagram shows a typical installation.



Troubleshooting

The following tables describe some of the symptoms, probable causes and possible solutions in respect to the installation of the Quad Audio Balun. 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).

Symptom	Probable Causes	Possible Solutions
Poor audio quality	1. EMI interference.	Check that wiring is not too close to transformers and ballasts.
	2. Split pair	Check if the UTP pairs are split and correct. Each signal pair must be twisted.
No audio	1. Power-off.	Check power supply.
	2. Open contact	Check wiring to ensure continuity
	3. Defective Audio Balun	Change Audio Baluns for another pair.
Audio weak	1. Exceeded distance specifications	Check DC loop resistance and verify if distance spec is exceeded. Reduce cable length or eliminate high-loss components.
	2. Lower grade UTP cable is introducing high signal losses.	Use signal repeater for extended distance.
		Replace cable by higher grade.