

# Specifications

<b>Environment</b>	Unbalanced analog mono or stereo audio.
<b>Devices</b>	DVD, VCR, Camcorders, audio mixers, audio matrix switchers, audio splitters, audio distribution amplifiers, boosters, Hi-Fi, microphones, home theatre, and other commercial or consumer analog audio equipment.
<b>Transmission</b>	Transparent to the user.
<b>Bandwidth (3dB roll-off) (400 O source &amp; 50 kO receiver)</b>	Up to 1,000 ft (305m): 60Hz - 20 kHz 1,000 ft (305m) to 5,000 ft (1.5 km): 100Hz - 20 kHz
<b>Maximum Input Level</b>	1.1Vp-p (+20 dBu, unbalanced < 1% THD)
<b>Insertion Loss per Balun Pair</b>	Less than 1 dB per pair over the frequency range
<b>Common Mode Rejection (CMRR)</b>	Greater than 60 dB @ 1 kHz
<b>Audio Source Impedance</b>	100 to 600 O
<b>Audio Receiver Impedance</b>	10 kO to 100 kO
<b>Impedance Transformation Ratio</b>	Single unit: 4:1 (source:line)
<b>Cable – UIP</b>	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
<b>Connectors</b>	One (1) RCA-Male connector Two (2) screw terminals * <i>* Phase error sensitive. Ensure straight-thru polarity in stereo audio applications.</i>
<b>Temperature</b>	Operating: 0° to 55° C. Storage: -20° to 85° C. Humidity: up to 95%
<b>Enclosure</b>	Fire retardant plastic
<b>Dimensions</b>	1.25 x 0.5 x 0.5" (3.1 x 1.2 x 1.2 cm)
<b>Weight</b>	1.5 oz (42.5 gms)
<b>Regulatory</b>	FCC, CE. Design patent pending.
<b>Warranty</b>	Lifetime
<b>Order Information</b>	500019 Analog Audio Balun

**MuxLab**

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## Analog Audio Balun (500019) Installation Guide

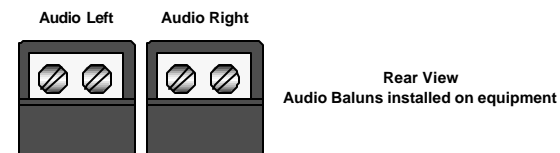
### Introduction

The VideoEase Analog Audio Balun allows any unbalanced analogue audio signal to be transmitted via a single unshielded twisted pair (UTP) cable for more versatile cabling. Used in pairs, the Audio Balun eliminates costly and bulky coax cable, allowing consumer and commercial audio equipment to be connected using standard premises wiring techniques. One or two pair of baluns is required depending on whether the application is for monaural or stereo audio. The Audio Balun features screw terminals and built-in cable strain relief for ease of installation and reliable connectivity.

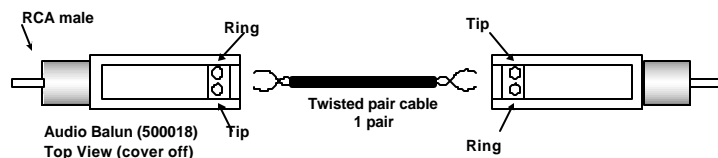
### Installation

To install the Audio Baluns, perform the following steps:

1. Depending on the number of audio signals to be transmitted, use one pair of Audio Baluns for each audio signal. For example; mono audio – two (2) baluns, stereo audio - four (4) baluns, etc.
2. The Audio Balun is compact enough to allow multiple baluns to be mounted adjacent to one another on the back of any audio equipment, thus eliminating the need for RCA jumper cables and allowing maximum utilization of each Category 5 cable.



- Identify the pin configuration of the baluns. One twisted pair is required for each audio balun connection. The Audio Balun is polarity sensitive. Therefore stereo audio applications, for full stereo audio quality, please ensure straight-thru polarity as shown in the next diagram.



- The Audio Baluns work in pairs. Plug one Audio Balun into the RCA connector of the audio source equipment. If stereo audio is being transmitted connect one Audio Balun to Audio-Left and one Audio Balun to Audio-Right as shown in the photo below.
- Plug a second Audio Balun into the RCA connector of the audio receiver equipment at the remote end. If stereo audio is being transmitted connect one Audio Balun to Audio-Left and one Audio Balun to Audio-Right as shown in the photo below.
- Complete the connection between the two baluns, using standard UTP cable, connector blocks and modular wall outlets.
- Power-on the audio equipment and check the audio quality. The audio should be clear within the maximum specified distances.

## Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in respect to the installation of the Analog Audio Balun. If you still cannot diagnose the problem, please call MuxLab Customer Technical Support at 877-689-5228 (toll-free in N.Am) or 514-905-0588 (Intl).

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.

