Specifications

Specifications	Analog Audio	Digital Audio
Environment	Balanced line level or microphone analog audio	Balanced line level digital audio
Signal Amplitude	2.3 Vp-p	2 – 7Vp-p
Polarity Sensitive	Phase polarity sensitive	Not polarity sensitive
Impedance	Output: 600 Ω Input: 600-20kΩ	110 Ω
Signal type	Professional balanced analog line level or microphone	Professional balanced digital line level
Maximum Distance via Cat5 UTP	Line level: 5,000 ft (1.5 km) Passive Mic level: 3,000 ft (914m)* * Active microphone supported. Requires ground pin connected at both ends. Distance unspecified.	Sampling Rate Distance 32 kHz 1,400ft (426m) 44.1 kHz 1,300ft (396m) 48 kHz 1,250ft (381m) 96 kHz unspecified
Frequency response	DC to 6 MHz	
Pro Audio Devices	mixers, routers, switchers, format converters, splitters, distribution amplifiers, boosters, receivers, encoders, CD players, DAT recorders, microphone pre-amps, compressors, passive microphones, equalizers, active loudspeakers, public address systems, rental and staging equipment.	
Transmission	Transparent to the user.	
Insertion Loss (per pair)	Less than 1 dB /pair from DC to 6 MHz	
Return Loss	Less than 15dB from DC to 6 MHz	
Common Mode Rejection (CMMR)	Greater than 45 dB	
Cable – UTP	24 gauge or lower solid copper twisted pair wire impedance: 100 Ω at 1 MHz. Maximum capacitance: 20 pf/foot. Attenuation: 6.6 dB/1000 ft at 1 MHz	
Connectors	XLR3-M or XLR3-F depending on model Two (2) screw terminals for signal One (1) screw terminal for optional shield (ground)	
Pin Configuration	XLR3 Signal UTP Pin 1 Shield Gnd (optional) Pin 2 Positive Tip [T] Pin 3 Return Ring [R]	
Cable Strain Relief	Threaded and tapered cable grip mechanism.	
Temperature	Operating: 0° to 55° C. Storage:-20° to 85°C. Humidity: 95% non-condensing	
Enclosure	Fire retardant plastic. UL94-V0	
Dimensions	1.875" x 1" diameter (4.76 cm x 2.54 cm diameter) plus 5" (12.7cm) XLR3 lead	
Weight	2.64 oz (75 gms)	
Standards	AES/EBU 1982, AES-1992, ANSI S.40-1992, IEC-958	
Regulatory	FCC, CE.	
Warranty	Lifetime	
Order Information	500025 MonoPro XLR, XLR3-M 500026 MonoPro XLR, XLR3-F	

## VideoEase MonoPro™ XLR (500025, 500026) Installation Guide

Introduction

The MonoPro™ XLR (500025, 500026) allows a standard AES analog or digital audio channel to be connected via Cat5 unshielded twisted pair cable (UTP) in the professional audio environment.   The product features heavy duty cable strain relief for rugged environments such as rental and staging and is available with male or female locking XLR3 connectors for added cabling versatility.

Installation

To install the MonoPro XLR, perform the following steps:

1. The MonoPro™ XLR works in pairs.   Depending on the number of audio signals to be transmitted, use one pair of MonoPro XLR adapters for each audio signal. For example; mono audio – two (2) adapters, stereo audio - four (4) adapters, etc.

2. Identify the pin configuration of the adapter. One twisted pair is required for each audio connection with an optional connection for shield. MonoPro™ XLR is polarity sensitive. Therefore, please ensure straight-through polarity.

3. Remove the adapter cover by inserting a screwdriver at the lower edge of the cover.
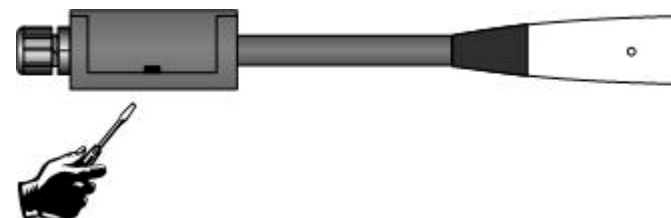
4. Loosen the cable strain relief nut and feed the Cat5 cable through the opening into the adapter.

5. Strip back about 1" of the cable jacket and expose about ¼" of copper wire at the end of the appropriate wires.

6. Connect the UTP wires to the screw terminal blocks, respecting the wiring polarity.   If STP is used, connect the drain wire to the Ground terminal.

7. Tighten the cable strain relief nut at the end of the adapter.

8. Plug the MonoPro™ XLR into the XLR3 connector of the audio source equipment.

9. Repeat steps 4 to 6 for the MonoPro XLR at the receiver side.

10. Plug the second MonoPro™ XLR into the XLR3 connector of the audio receiver equipment at the remote side.

11. Complete the connection between the two adapters, using standard UTP cable, connector blocks and modular wall outlets as required.   The following diagram shows a typical connection.
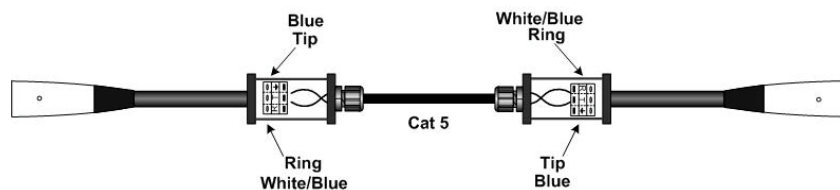
12. Power-on the audio equipment and check the audio quality.   The audio should
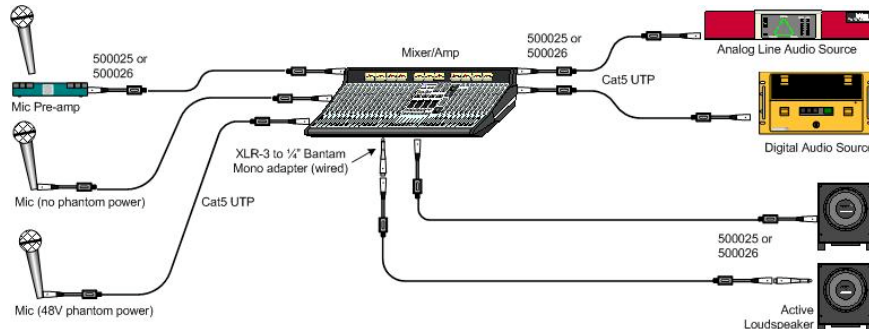
be clear within the maximum specified distances. The following diagram shows a typical application.

Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in regard to the installation of the MonoPro XLR 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. Use STP if necessary.
	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 balun	Change MonoPro™ XLR for another pair.
Audio weak	1. Distance exceeded	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.
Missing digital audio channels	1. Cabling problem between the decoder/amp and the audio speakers.	Check audio speaker cabling.
Intermittent static noise on one or more digital audio channels.	1. Distance exceeded or unusual cable attenuation	Check cable distance and cable grade.