

# Specifications

<b>Environment</b>	S-Video equipment
<b>Devices</b>	DVD players, VCR, satellite receivers, MPEG players, laptops, notebooks, monitors, LCD projectors, CCD cameras, video switchers, sequencers, digital video servers, video multiplexers, S-Video splitters, S-Video converters and other S-Video equipment.
<b>Transmission</b>	Transparent to the user

	S-Video	Audio
<b>Bandwidth</b>	DC to 6 MHz	20 Hz to 20 kHz
<b>Impedance</b>	75 ohms	600 ohms min.
<b>Maximum Input</b>	1.1 Vp-p	1.1 Vp-p
<b>Insertion Loss</b>	Less than 2 dB per pair over the frequency range from DC to 6 MHz	Less than 2 dB per pair over the frequency range
<b>Return Loss</b>	Better than 15 dB over the frequency range	N/A
<b>Common Mode Rejection Ratio (CMRR)</b>	Greater than 40 dB over the frequency range	Greater than 60 dB at 1 kHz Greater than 40 dB over the frequency and distance range
<b>Max. Distance via Cat 5E/6 UTP/STP Cable</b>	1,000 ft (305 m)	3,250 ft (990 m)
<b>Pin Configuration (RJ45) EIA 568 A or B</b>	S-Video Luma: Pins 7(R) & 8(T) S-Video Chroma: Pins 4(R) & 5(T) <i>Reverse Polarity Sensitive</i>	Audio 1: Pins 1(R) & 2(T) Audio 2: Pins 3(R) & 6(T)
<b>Cable: Cat 5E/6 UTP/STP</b>	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	
<b>Connectors</b>	One (1) 4-pin Mini DIN jack for S-Video Two (2) RCA audio jacks for stereo audio One (1) Ethercon RJ45 for Cat 5e/6	
<b>Temperature</b>	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing	
<b>Enclosure</b>	ALUMINUM 6061-T6	
<b>Dimensions</b>	2.75" x 2.64" x 1.975" (6.99cm x 6.71cm x 5.02cm)	
<b>Weight</b>	.542lb (245.85g)	
<b>Warranty</b>	Lifetime	
<b>Order Information</b>	500017-Pro	S-Video-Audio ProAV Balun



## S-Video/Audio ProAV Balun 500017-Pro Quick Installation Guide

### Overview

The S-Video-Audio ProAV Balun allows one S-Video signal and one stereo audio channel to be transmitted via an unshielded twisted pair (UTP) cable in a point-to-point connection for more versatile cabling.

The 500017-Pro features Ethercon™ RJ45, ruggedized cast aluminum enclosure and built-in 12-inch (30cm) heavy duty AV cable lead for the demanding professional environment.

Used in pairs, the S-Video/Audio ProAV Balun eliminates costly and bulky S-Video and audio cable, allowing S-Video equipment to be connected or moved to any convenient modular outlet. The S-Video/Audio ProAV Balun also works in conjunction with MuxLab's Audio/Video Distribution Hub (500200) to allow S-Video programming to be distributed via UTP. Applications include: Classroom video distribution, commercial and home audio/video systems, hospital video training, video conferencing, and video kiosks.

## MuxLab

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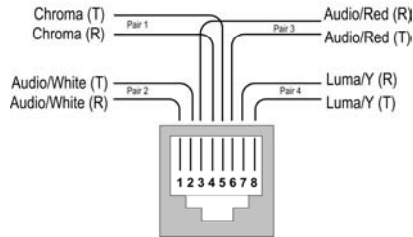
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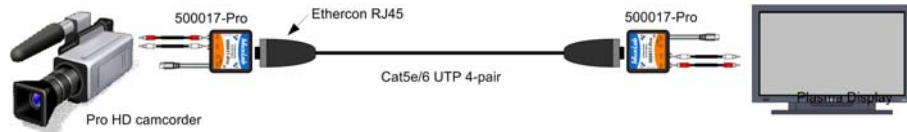
# Installation

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

1. Identify the pin configuration of the baluns. Two (2) twisted pairs are required for S-Video and two (2) twisted pairs are required for stereo analog audio. The pin configuration follows the EIA/TIA 568A/B standard. S-Video-Audio ProAV 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 S-Video/stereo audio output of the video source according to the color code of the RCA cable leads.
3. Plug the second balun into the S-Video-Audio ProAV Balun input of the video screen or receiver at the remote end.
4. 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. Ensure that there are no split pairs or taps.
5. Power-on the audio-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 tables describe some of the symptoms, probable causes and possible solutions in respect to the installation of the S-Video-Audio ProAV 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>i.e.</i> , 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.

Audio Symptoms	Probable Causes	Possible Solutions
Poor audio quality	EMI interference	Check that wiring is not too close to transformers and ballasts.
	Split pair	Ensure that the UTP pairs are not split and that each pair of wires is twisted.
No audio	No power	Check your audio system for power.
	Open circuit	Check wiring to ensure continuity
	Defective balun	Change S-Video/Hi-Fi Baluns for another pair.
Audio phase cancellation	Reversed wires	Check for straight-through wiring.
Audio weak	Distance specifications exceeded	Check DC loop resistance and verify if distance spec is exceeded. Reduce cable length or eliminate high-loss components.

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).