Specifications

	Video	Audio
Environment	Composite video and unbalanced audio for the consumer and commercial market.	
Devices	DVD, VCR, camcorders, audio receivers, audio amplifiers, AV switchers, splitters, AV mixers and other analogue audio-video equipment featuring coaxial input or output with BNC or RCA connectors.	
Transmission	Transparent to the user	
	Video	Audio
Bandwidth	DC to 8 MHz	20 Hz to 20 kHz
Peripherals' impedance	75 ohms	Source 100 Ω Max, Receiver 10 kΩ min.
Maximum Voltage Input	1.1 Vp-p	1.1 Vp-p
THD	NA	Less then 0.007% @ 1 kHz
Insertion Loss	Less than 2 dB per pair	Less than 2 dB per pair
Return Loss	Better than 15 dB	NA
Common Mode Rejection Ratio (CMRR)	Greater than 40 dB	NA
Max. Distance	Cat5e/6: 2,200 ft	Cat5e/6: 3250 ft
Cable: Cat5e/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	Standard audio cable terminated by RCA connectors	
Cable: BNC	75-ohm coaxial cable	
Connectors	One (1) BNC-receptacle (includes 9" coax jumper cable) Two (2) RCA-receptacles One (1) RJ45 jack	
Pin Configuration	Video: Pins 7(R) & 8(T) Audio 1: Pins 1(R) & 2(T) Audio 2: Pins 3(R) & 6(T)	
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: Up to 95% non-condensing	
Enclosure	Fire retardant plastic	
Dimensions	2.40" x 2.25" x 1.00" (6.10 x 5.72 x 2.54 cm)	
Weight	4.25 oz (121 g)	
Warranty	Lifetime	
Order Information	500001 Stereo Audio-Video Balun	

Stereo Audio-Video Balun
500001
Quick Installation Guide

Overview

The Stereo Audio-Video Balun allows the transmission of composite baseband video signals and audio signals via unshielded twisted pair (UTP) cables in a Structured Cabling System. The Stereo Audio/Video Balun is used in pairs to transmit standard NTSC, SECAM and PAL composite video. It converts a composite baseband video (75 ohms) and stereo-audio signal from coax to UTP.

The Stereo Audio-Video Balun is connected to the structured cabling via a modular wall jack in the work area. It is equipped with a BNC 75-ohm connector and two standard RCA phono jacks at one end and a RJ45 jack at the other end. The 500001 has a 20 Hz- 20 kHz bandwidth for high fidelity applications.

Applications

The Stereo Audio-Video Balun is designed for use with CCTV cameras, monitors, DVR, DVD players, cableboxes, AVR, video-conferencing, camcorders and other composite video/audio equipment. Applications include: security/surveillance monitoring, video bulletin boards, financial information services, news services, education, video training, airport displays, video capture, stock exchange, hotels and convention centers.

Installation

To install a Stereo Audio-Video Balun, perform the following steps:

Caution: Do not attempt to open the housing. There are no user-serviceable parts inside the Video Stereo Audio Balun. Opening the unit will void your warranty.

1. Turn off power and disconnect the video equipment by following the manufacturer's instructions.

2. Make certain that telecommunications outlets and cross connects to which you will connect the Stereo Audio-Video Balun are configured properly and labeled appropriately to identify the circuit.

Caution: Do not connect the Stereo Audio-Video Balun to a telecommunication outlet wired to unrelated equipment. Making such a connection may damage the equipment and/or the balun. Please ensure that all wiring is "straight-through."

3. Verify that the desired twisted pairs are not being used for other LAN or telephony equipment.

Caution: Do not mount the balun over equipment ventilation openings. Covering the openings may cause the equipment to overheat.

4. The Stereo Audio-Video Baluns operate in pairs.

5. Depending on the equipment being connected, connect the BNC connector of the Stereo Audio-Video Balun to the coax connector or cable of the video equipment. The two audio channels provided may be used if required. Either one or both channels may be used depending on the application. (BNC and phono plug cables must be obtained separately.)

6. Connect one end of a UTP line cord to the RJ45 modular jack of the Stereo Audio-Video Balun.

7. Plug the other end of the line cord into the appropriate video wall outlet or patch panel.

8. Power up the video and/or audio equipment. The following diagram shows a typical configuration.

DVD Player   Stereo AV Balun   Cat5e/6 cable   Display
              (500001)
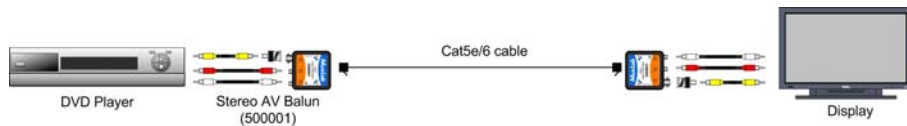
Troubleshooting

The following tables describe some of the Stereo Audio-Video Balun symptoms, probable causes and possible solutions regarding the Video 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	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 Symptom	Probable Cause	Possible Solutions
Poor Quality Audio	EMI interference	Check that wiring is not too close to
	Split pair	Correct the UTP pairs if they are split.
No Audio	Power-off	Check power supply.
	Open contact	Check wiring to ensure continuity.
	Defective Audio Balun	Change Audio Baluns for another pair.
Weak Audio	Distance exceeds specs	Check DC loop resistance. Reduce cable length or eliminate high-loss components.
	Lower grade UTP cable is introducing high signal losses.	Use signal repeater for extended distance. Replace cable by higher grade.