

Technical Specifications

Bandwidth	Video: 60 MHz, 3 dB roll off Digital audio: 25 MHz, 1dB roll off
Maximum Input	1.1Vp-p
Insertion Loss (video)	.1 dB for 0.1 MHz. <i>Gradually increasing to 2.5 dB over the frequency range</i>
Insertion Loss (audio)	Less than 1 dB over the frequency range
Return Loss (video)	Greater than 15 dB over the frequency range
Return Loss (audio)	Greater than 15 dB over the frequency range
Common Mode Rejection (video)	-55 dB at 0.1MHz. <i>Gradually increasing to -20 dB at 60 MHz</i>
Common Mode Rejection (audio)	-50 dB at 0.1MHz. <i>Gradually increasing to -30 dB at 25 MHz</i>
Max. Distance	Digital audio only: 600 feet 480i/p video only: 1,000 feet 480i/p video with digital audio: 600 feet 720p video only: 500 feet 720p video with digital audio: 500 feet 1080i/p video only: 500 feet 1080i/p video with digital audio: 500 feet
Cable – Cat5 UTP/STP	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	Impedance: 75 ohms at 1 MHz
Connectors	Three (3) female RCA for Green (Y), Blue (Pb), and Red (Pr) One (1) female RCA for digital audio One (1) Shielded RJ45 for twisted pair
Pin Configuration <i>Reverse polarity sensitive</i>	Red (Pr): Pins 7 & 8 Green (Y): Pins 3 & 6 Blue (Pb): Pins 1 & 2 Digital Audio: Pins 4 & 5
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: up to 95%
Enclosure	ABS fire retardant plastic
Dimensions	4.3" x 2.5" x 1.0"
Weight	0.2 lbs.
Regulatory	FCC, CE
Warranty	2 years
Order Information	AVO-V3AD-F: single AVO-V3AD-F in bulk packaging AVO-V3AD-PAC-F: two AVO-V3AD-F baluns in retail-ready packaging



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Intelix AVO-V3AD-F HDTV Component Video and Digital Audio Balun Installation Guide



Introduction

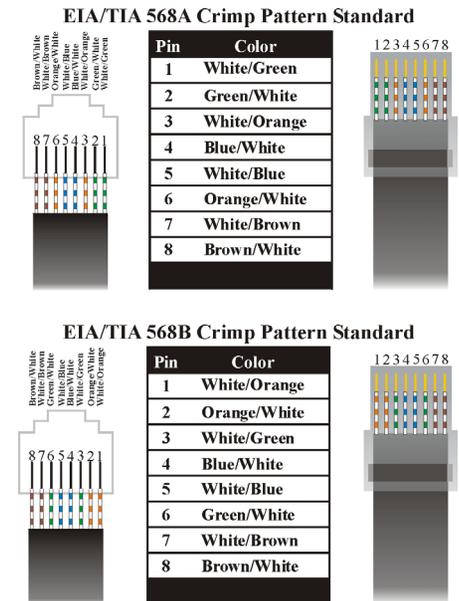
The Intelix AVO-V3AD-F component video and digital audio HDTV balun transmits a YPbPr (RGB) signal and digital audio over inexpensive structured pair cabling, such as Cat 5.

Used in pairs, the AVO-V3AD-F supports 480i/p, 720p and 1080i/p resolutions for hi-definition multimedia applications.

Installation

One (1) pair of baluns is needed to complete one component (YPbPr) or RGB connection via Cat5 twisted pair. To install the baluns, perform the following steps:

- Identify the pin configuration of the baluns. Three (3) twisted pairs are required for video and one (1) twisted pair is required for digital audio. The pin configuration follows the EIA/TIA 568A/B standard. The Intelix AVO-V3AD-F balun is reverse polarity sensitive. Please ensure that wiring is straight-through.
- Connect one AVO-V3AD-F balun to the component video coaxial cable output of the video source using three RCA video cables. Ensure the color codes of the AVO-V3AD-F and video equipment match.
- Connect a second AVO-V3AD-F balun to the component video coaxial cable input of the receiver(s) at the remote end using three RCA video cables.
- Complete the connection between the two baluns using standard Cat 5 twisted pair cable. Verify the Cat 5 is terminated with RJ45 connectors on both ends. Ensure that there are no split pairs or taps.

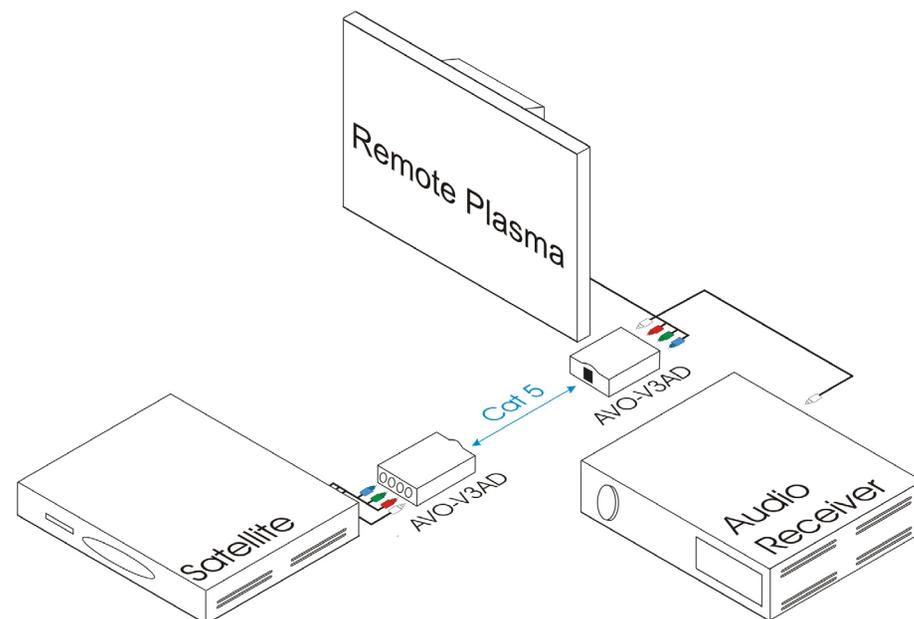


- If digital audio is to be connected (optional), connect an RCA lead between the balun and the digital audio equipment at both ends.
- Power-on the component video equipment. Check the image quality and refer to troubleshooting if the image quality is unsatisfactory.

Troubleshooting

Video		
Symptom	Probable Causes	Possible Solutions
No video	No continuity in video link	Verify cable continuity between pairs of baluns.
No video	Power off	Check power supplies of video equipment.
No video	Improper connection or swapped pairs	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.
Weak contrast	Exceeded distance	Verify cable grade. Use higher grade cable if necessary. Increase contrast on monitor.
Weak contrast	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.
Rolling horizontal bars or other interference	Improper grounding	Confirm that either the send or destination side is grounded. If the source device, cable run, and output device are all floating, ground the chassis of the source or output device.
Smearing	Exceeded distance	Verify cable grade. Use higher grade cable if necessary.

Digital Audio		
Symptom	Probable Causes	Possible Solutions
No audio	Distance exceeded	Verify cable length between the two baluns.
No audio	Split pair	Check if the UTP pairs are split and correct. Each signal pair must be twisted.
No audio	Power-off.	Check power supplies of digital audio equipment.
Missing channels	Cabling problem between the decoder/amp and the audio speakers.	Check audio speaker cabling. Verify Content is multi-channel and decoder is working when attached straight through.
Noise, static	EMI interference.	Check that wiring is not too close to transformers and ballasts.
Noise, static	Distance exceeded or unusual cable attenuation	Check cable distance and cable grade.



AVO-V3AD-F System Diagram