Specifications

Specifications subject to change without notice.

Maximum Distance*	2,200 feet
Maximum Video Input	1.1 Vp-p
Bandwidth (video)	DC to 8 MHz
Bandwidth (audio)	20 Hz to 20 kHz
Impedance (video)	75 ohms
Impedance (audio)	600 ohms
Insertion Loss	Less than 2 dB per pair over the frequency range from DC to 8 MHz
Return Loss	Greater than 15 dB over the frequency range from DC to 8 MHz
Common Mode Rejection	Greater than 40 dB @ 8 MHz
Unshielded Twisted Pair Cabling Specifications (24 gauge or lower solid copper)	Maximum capacitance: 20 pf/foot Impedance: 100 ohms @ 1 MHz Attenuation: 6.6 dB/1000 ft. @ 1 MHz *Cat 3, Cat 5, Cat 5e, Cat 6, Cat 7 compatible*
Connectors	Three (3) female RCA to one (1) RJ45
RJ45 Pinout	Video 1: 7 & 8, pair 4 Audio 1: 1 & 2, pair 2 Audio 2: 3 & 6, pair 3
Temperature	Operating: 32 to 131 F (0 to 55 C) Storage: -4 to 185 F (-20 to 85 C) Humidity: up to 95%
Enclosure	Front: standard decora-style wallplate Rear: metal
Dimensions	4.0” x 1.4” x 1.7”
Weight	0.2 lbs (3.2 oz.)
Ordering Information	*AVO-V1A2-WP*: single AVO-V1A2-WP balun in bulk packaging
Warranty	2 years

* Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches. Intelix specifications are based on straight-through cabling with standard-grade Cat 5.

Contact Information

Intelix
2222 Pleasant View Road
Middleton, WI 53562

Toll-free: 866-4-MATMIX
Phone: 608-831-0880
Fax: 608-831-1833
www.intelix.com

AvoCat Series — Intelix AVO-V1A2-WP Video & Stereo Audio Balun Installation Manual

The Intelix AVO-V1A2-WP wallplate balun transmits a composite video signal and two analog audio signals up to 2,200 feet over standard structured cabling, such as Cat 5. Used in pairs or with the rack-mountable Intelix AVO-V1A2, AVO-V1A2-WP baluns replace bulky coaxial cable and utilize a building’s existing structured cabling system.

The Intelix **AvoCat** Series of baluns is the ideal solution for sending audio and video over structured cabling. **When signal quality matters, choose Intelix.**

Installation

> **Caution:** Do not attempt to disassemble or alter the balun housing. There are no user-serviceable parts inside the AVO-V1A2-WP. Modifying the unit will void your warranty.

To install an AVO-V1A2-WP balun, perform the following steps:

1. Turn off power and disconnect the video equipment by following the manufacturer’s instructions.
2. Make certain that outlets and cross connects to which you will connect the AVO-V1A2-WP are configured properly and labeled appropriately to identify the circuit.

> **Caution:** Do not connect the AVO-V1A2-WP to a telecommunication outlet wired to unrelated equipment. Making such a connection may damage the equipment and/or balun. Please ensure all wiring is “straight-through.”

3. Verify the desired twisted pairs are not being used for other LAN or telephony equipment.
4. Connect the RCA outputs from the source equipment to the AVO-V1A2-WP. Connect the RCA inputs from the receive input to a second AVO-V1A2-WP or another compatible Intelix balun, such as the AVO-V1A2.

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

5. Connect the two baluns with a structured cable with RJ45 connectors, such as Cat 5. Verify the cable’s pinout conforms to EIA/TIA 568A or 568B pattern standards.
6. Power on the source and destination equipment and test for correct operation.

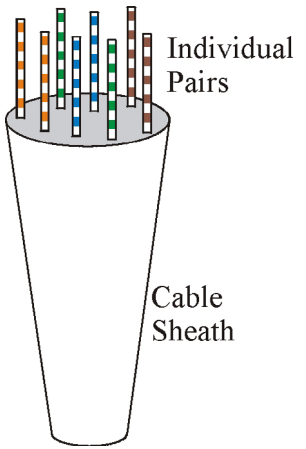
Troubleshooting

If your equipment malfunctions with AVO-V1A2-WP baluns in place, follow the trouble-shooting procedures below:

1. Perform diagnostics on your audio equipment by following the manufacturer's instructions.
2. Check all the connections and the structured cabling system. Verify the RJ45 crimp pattern conforms to either EIA/TIA 568A or 568B standards.
3. Check the pin configuration of the structured cabling.
4. The maximum operational distances over which the AVO-V1A2-WP can be transmitted is dependant on the equipment used and cable. Ensure that the maximum recommended operational distances have not been exceeded.
5. Check that only twisted pair patch cords are being used.
6. Replace the AVO-V1A2-WP balun with another AVO-V1A2-WP that is known to be working.
7. If you still cannot diagnose the problem, contact Intelix for support.

Frequently Asked Questions

How do I expose the individual pairs in Cat 5 cabling?
There is no single method when exposing the four individual pairs in twisted pair cabling, such as Cat 5 and Cat 6; however, it does help to have a cable stripping tool designed to strip the cable jacket/ insulation.

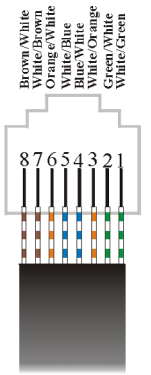


Begin by stripping back the cable's outer jacket/ insulation about an inch (or more depending on whether multiple baluns will be connected to the pairs of a single cable) so that the internal wires are exposed. Be careful not to cut the internal wires when stripping the insulation/jacket. Eight twisted wires and a string should now be visible; the string is unnecessary and may be removed. These eight wires, which when combined form four pairs, connect directly to the baluns. Typical protocol pairs similar colors; the important thing is to verify the same color-coded pairs are used on each end.

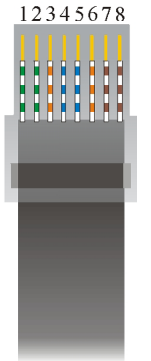
How do I crimp an unshielded RJ45 connector onto Cat 5?
Crimping an RJ45 connector onto Cat 5 is a fairly straight forward task, assuming you have the proper tools. Keep in mind that baluns require either the EIA/TIA 568A or 568B crimp pattern, which are the industry standards for networking.

1. First, strip a portion of the insulation about 3/4" to expose the four twisted pairs.
2. Next, untwist the wires and fan them out so that they match either EIA/TIA 568A or 568B pattern.
3. Evenly trim the wires to about 1/2". Most RJ45 crimp tools feature a built-in wire trimmer.
4. Insert the trimmed wires into the RJ45 connector so that each wire is in its individual slot. Verify each wire is completely inserted.
5. Finally, insert the RJ45 connector into the crimp tool and squeeze firmly.
6. Repeat the above steps on the other end of the Cat 5 cable and verify pinout is identical on each end.

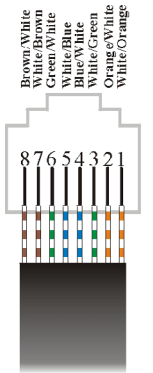
EIA/TIA 568A Crimp Pattern Standard



Pin	Color
1	White/Green
2	Green/White
3	White/Orange
4	Blue/White
5	White/Blue
6	Orange/White
7	White/Brown
8	Brown/White



EIA/TIA 568B Crimp Pattern Standard



Pin	Color
1	White/Orange
2	Orange/White
3	White/Green
4	Blue/White
5	White/Blue
6	Green/White
7	White/Brown
8	Brown/White