Specifications

Environment Devices Chose-circuit TV (CCTV) cameras, monitors, switchers, sequencers, multiplexers, digital video recorders (DVR) and other CCTV equipment. Transmission Transparent to the user. Video Transparent to the user. Standwidth DC to 8 MHz. Impedance Input: 75 ohms (BNC); Output: 100 ohms (RJ45) Maximum Input 1.1Vp-p Insertion Loss Creater than 15 dB over the frequency range from DC to 8 MHz Common Mode Rejection Greater than 15 dB over the frequency range from DC to 8 MHz Common Mode Rejection Greater than 40 dB @ 8 MHz Max. Distance - Colour Cat 3 - 1,200 ft (365m); Cat 5 - 2,200 ft. (670m)* "Ectrain models of DVR may yield shorter distances of 1,000 to 1,500 ft Max. Distance - Black & White Cat 3 - 1,500 ft (457m); Cat 5 - 2,500 ft (762m) Remote Power (i.e.; 24 VAC, 28 VAC) Wiring Max. Distance @ 24VAC via Fx 4: 518 ft (170m)* 10 VA: 259 ft (85 m)* #Longer distances may be achieved vendor for more detailed performance specifications. #Based on 10% voltage drop at camera. Please consult your CCTV equipment vendor for more detailed performance specifications. @ 28 VAC. Vacieo: BNC-male 8" mini-coax allowed end to end. Connectors Combined si	Environment	Research wideo: NTSC DAL SECAM			
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Power B6 (common with 2&4)BlackVideo BNC Center (Tip)7 [T] opposite to 500000Mini-coax		Power B	4 (common with 2&6)	Black	
Video BNC Center (Tip) 7 [T] opposite to 500000 Mini-coax		Power A	5 (common with 1&3)	Red	
		Power B	6 (common with 2&4)	Black	
Video BNC Ground (Ring) 8 [R] opposite to 500000 Mini-coax		Video BNC Center (Tip)	7 [T] opposite to 500000	Mini-coax	
		Video BNC Ground (Ring)	8 [R] opposite to 500000	Mini-coax	
Temperature Operating: 0° to 55°C. Storage:-20° to 85°C. Humidity: up to 95%	Temperature				
Enclosure ABS fire retardant plastic	Enclosure				
Dimensions 1.875" (4.7cm)x 1.0" (2.54cm) diameter plus cable leads; 8" (20cm) for video; 10" (25.4cm) for power lead	Dimensions				
Weight 1.95 oz (55 gms)	Weight				
Warranty Lifetime	Warranty	Lifetime			
Order Information IC560A CCTV Power-Thru Balun, RJ45	Onder Information	IC560A CCTV Power-Thru Balun, RJ45 IC561A CCTV Power-Thru Balun, Screw Terminals			

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CCTV Power-Thru Balun (IC560A, IC561A) Quick Installation Guide

Introduction

The CCTV Power-Thru Balun allows video and remote power to be transmitted via one 4-pair Cat 5 cable, thus eliminating the need to install multiple cables for more efficient cabling. There are two models: IC560A; with modular RJ45 connector and IC561A; with screw terminal connectivity. The CCTV Power-Thru Balun may be used in pairs or in conjunction with other Black Box CCTV baluns such as the IC440A, IC444A, IC451A, IC452A and IC453A.

Installation

Pre-Installation Check List:

Note: For regulatory reasons, use of a Class II power supply is recommended and may be required with the use of this product in some regions.

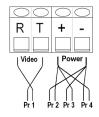
- 1. Ensure the CCTV equipment and remote power supply is turned off.
- 2. One (1) twisted pair is required for the camera video signal. Three (3) twisted pairs are required for remote power.
- 3. Verify that the cable length is within Black Box specifications.
- 4. If the IC560A is being used, identify the pin configuration of the balun by checking the product label or the specification section of this installation guide.
- 5. If the IC561A is being used, remove the balun cover with the help of a small flathead screwdriver. The screw terminals are labeled "R/T" (Ring/Tip) and "+/-" for video and remote power respectively.

\bigcirc	\bigcirc	\bigcirc
R	Т	+ -

Connections:

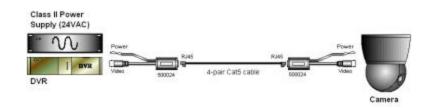
- 1. At the camera side, connect the balun's coaxial cable lead into the BNC-F connector of the CCTV camera.
- 2. At the camera side, connect the balun's red and black wires to the power input of the camera.

- 3. If the IC560A is being used, connect a 4-pair unshielded twisted pair cable to the balun. The cable must be terminated with an RJ45 modular plug. Cross-connection hardware such as wall outlets and patch panels may be used as required. The IC560A supports TIA 568A and 568B wiring standards.
- 4. If the IC561A is being used, connect one (1) twisted pair to the "R/T" terminals for video. Connect three (3) twisted pairs to the "+/-" terminals for remote power, by connecting one wire from each twisted pair to each terminal. See diagram below.



<u>Note:</u> The CCTV Power-Thru Balun is reverse polarity sensitive. When connecting the baluns, ensure that "Ring [R]" is connected to "Ring [R]" and "Tip [T]" is connected to "Tip [T]". Verify that there are no split pairs or crossed wires.

- 5. At the receiver side (i.e.; DVR side), repeat steps 1 to 4 for the second balun.
- 6. Power-on the CCTV equipment and remote power supply. Verify image quality.
- 7. The following diagram shows a typical configuration using the IC560A.



Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions regarding the CCTV Power-Thru Balun. If you still cannot diagnose the problem, please call Black Box Technical Support at 724-746-5500.

Symptom	Probable Causes	Possible Solutions
Poor picture quality, distortion, interference	1. EMI interference.	Check that wiring is not too close to transformers and ballasts.
	2. Wires reversed on signal pair on one side	Make sure that the wires on the signal pair are not reversed on one side.
	3. Split pair	Check if the UTP pairs are split and correct. Each signal pair must be twisted.
No video image	1. Power-off.	Check power supplies of CCTV equipment. Check power supply fuse.
	2. Wrong pin configuration	Check pin configuration and verify straight-through wiring.
	3. Defective CCTV Balun	Change CCTV baluns for another pair.
Picture faded or weak	1. Exceeded distance specifications	Check DC loop resistance and verify if distance spec is exceeded. Reduce cable length or eliminate high-loss components.
	 Lower grade UTP cable is introducing high signal losses. 	Use signal repeater for extended distance or replace cable by higher grade.
No power or intermittent power at camera	1. Wrong pin config.	Check wiring
	2. Distance exceeded	Verify distance specifications for remote power. Move power closer to camera.