



HD-SDI Balun

Quick Installation Guide

1. Overview

The HD-SDI Balun (IC740A) allows one SDI signal to be transmitted up to 150 feet (45 m) via CAT cable at HD resolution (720p, 1080i) in a point-to-point configuration. The HD-SDI Balun supports transmission of uncompressed, un-encrypted digital video (optionally including embedded Audio and/or Time Code) within television facilities and between professional video equipment.

NOTE: Two identical baluns are required.

Use the IC740A in video production, broadcasting, HD camcorder, studio-to-studio, post-production, live events, mobile video, HD/SD routing, and HD-CCTV applications.

2. Installation

NOTE: One (1) pair of HD-SDI Baluns is needed to complete one connection via UTP cable. To install the HD-SDI Balun, perform the following steps:

CAUTION: Do not attempt to open the housing. There are no user-serviceable parts inside the HD-SDI Balun. Opening the unit will void your warranty.

1. Turn off power and disconnect the HD-SDI video source and HD-SDI video receiver.

CAUTION: Do not connect the HD-SDI Balun to a telecommunication outlet wired to unrelated equipment. Making such a connection may damage the equipment and/or the balun. Make sure all wiring is "straight-through" twisted pair.

Customer Support Information

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500)
FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax
724-746-0746 • Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence,
PA 15055-1018 • Web site: www.blackbox.com • E-mail: info@blackbox.com

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2. Verify that the desired twisted pairs are not being used for other LAN or telephone equipment.
3. The HD-SDI Baluns operate in pairs.
4. Connect the HD-SDI Balun (IC740A) to the HD-SDI video port of the source equipment (i.e., HD camcorder or HD-CCTV camera).
5. Connect a dedicated 4-pair CAT5e/6 cable between the source-side HD-SDI Balun and the receiver-side HD-SDI Balun.
6. At the destination point, connect the HD-SDI Balun to the HD-SDI receiver (i.e. monitor or DVR).
7. Power on the HD-SDI video equipment at both ends and adjust the monitor image and audio levels to the desired settings.
8. The following diagrams show a couple of typical configurations.

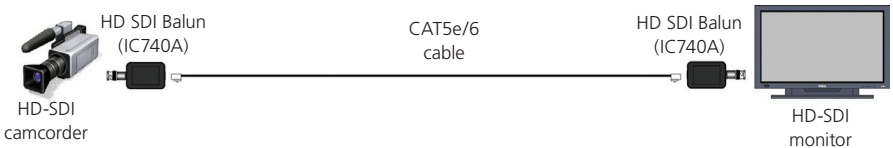


Figure 1. HD SDI baluns linking a camcorder to a monitor.

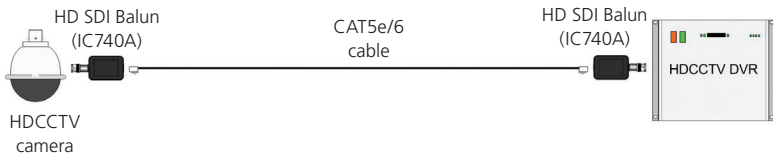


Figure 2. HD SDI baluns linking a camera to a DVR.

3. Troubleshooting

The following table describes some of the symptoms, probable causes and possible solutions in respect to the installation of the HD-SDI Balun.

Table 3-1. Troubleshooting tips.

Symptom	Probable Causes	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.
Part of picture missing or intermittent.	Exceeded distance	Verify cable length and grade. Use higher-grade cable if necessary.
	Unusual link attenuation	Verify cable distance using a cable tester.
	EMI interference	Try turning off (or move) nearby wireless LANs, switching power supplies, radio transmission to see if problem disappear.
Image not stable, noise, incorrect color or sound.	Defective source or receiving equipment	Try swapping source/monitor equipment or verify video equipment interface integrity.

NOTE: If you still cannot diagnose the problem, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

Black Box Tech Support: FREE! Live. 24/7.

4. Specifications

Table 4-1. Specifications.

Approvals	CE, RoHS
Devices	SDI equipment
Distance (Maximum)	<p>For resolution 720p and 1080i (HD speed)*: Up to 100 ft. (30 m) using CAT5 UTP, Up to 150 ft. (45 m) for CAT5e and 6 UTP.</p> <p>Maximum distance is function of the receiving equipment equalizer and cables. Dedicated Cat5e/6 cables are recommended. Patch panels, patch cables and wallplate interconnect are not recommended. Will not work with STP cable.</p> <p>*Please note that many new equipment that are referring to HD-SDI are using the 3G speed. The balun is not recommended for this speed.</p>
Enclosure	Cast Aluminum
Environment	<p>Temperature Tolerance: Operating: -4° to 122° F (-20° to 50° C); Storage: +22° to +158° F (-30° to +70° C); Humidity Tolerance: Up to 95%, noncondensing</p>
Insertion Loss	Per balun: <6 dB: 5 –1500 MHz
Isolation	None. There is no voltage between units
Pin Configuration (RJ-45)	Female RJ-45 Pins 7 and 8
Transmission	Transparent to the user
Interface	SDI (SD, HD, or 3G), HD-SDI
Connectors	(1) RJ-45, (1) BNC male
Dimensions	1.85" x 1.05" x 0.8"L (4.7 x 2.7 x 2 cm)
Weight	0.1 lb. (0.045 kg)

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