

Specifications:

| | |
|-----------------------|--|
| Range* | 980 feet (300m) |
| Maximum Input | 1.0Vp-p |
| Insertion Loss | <0.5dB |
| Frequency Response | 0-3dB at 10MHz |
| Isolation Voltage | 600VDC (Min) |
| Insulation Resistance | 100Ω |
| Bandwidth | Video DC to 8MHz |
| Impedance | 75Ω (BNC) 100Ω (UTP) |
| Dimensions | 3 ¹ / ₈ " x 1 ³ / ₁₆ " x 1 ¹ / ₁₆ " (79 x 30 x 26 mm). (Case only - 2 ¹ / ₈ " (54mm) long. See pg. 3) |
| Temperature | Operating temp. 32°~131° F (0°~55° C) |
| Wire Type | UTP (Unshielded Twisted Pair) 24 AWG |
| Wire Category | CAT 5 or better |
| Connector In | BNC Male |
| UTP Connector Out | Removable terminal block |
| Case | ABS plastic black |

*NOTE: Shorter range may result when Baluns are used with DVR.

IMPORTANT: Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.

WARNING: Incorrect mounting which leads to exposure to rain or moisture inside the enclosure could cause a dangerous electric shock, damage the device, and void the warranty. Do not open the case of this device, as there are no field-serviceable components inside.

WARRANTY: This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for a period of one (1) year from the date of sale to the original consumer customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair, or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM, and the purchaser's exclusive remedy, shall be limited to replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damages of any kind to the purchaser or anyone else.

NOTICE: The information and specifications printed in this manual are current at the time of publication. However, the SECO-LARM policy is one of continual development and improvement. For this reason, SECO-LARM reserves the right to change specifications without notice. SECO-LARM is also not responsible for misprints or typographical errors.

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Installation Manual

ENFORCER®

EVT-PB1-V1TGQ

Passive Video Balun
with Ground Loop Isolator

Range: 980 feet (300m)

Note: Passive Video Baluns work in pairs. A standard passive video balun (SECO-LARM model EVT-PB1Q) must be purchased separately.

**What it is:**

The EVT-PB1-V1TGQ is a Passive Video Balun with Ground Loop Isolator. A Passive Video Balun allows a CCTV camera's video signal to be transmitted over low-cost CAT5 unshielded twisted pair (UTP) cable instead of costly coax cable. They are suitable for full-motion color and monochrome cameras and provide a quick, low-cost way to connect CCTV cameras to a monitor, multiplexer, or video recorder at up to 980 feet away.

Video ground loop isolators are passive devices that help to reduce ground loop interference caused by multiple building grounds and differences in ground potential. Ground loop isolators can be installed in new installations or added to existing installations. Video ground loop isolators should be installed on the camera side of your cable.

Features:

- Transmits a video signal up to 980 feet (300m).
- Built-in ground loop isolation.
- Built-in surge protection.
- Gold-plated BNC connector improves reliability and product life.
- RoHS compliant.
- Passive operation – No external power required.
- Uses low-cost CAT 5 cable instead of costly coaxial cable.
- High immunity from interference – Built-in impedance coupled device and noise filter. Helps to reduce RF interference, cross talk, picture tearing, and other picture quality problems.
- BNC and removable terminal block.
- Small size, only 3¹/₈" x 1³/₁₆" x 1¹/₁₆" (79 x 30 x 26 mm). (Case only - 2¹/₈" (54mm))

Installation:

NOTE: Video baluns are connected in pairs. The EVT-PB1-VITGQ connects to the CCTV camera's BNC connector, and a standard passive video balun (EVT-PB1Q purchased separately) connects to the BNC connector of a remote video device. See fig. 1.

1. Make sure the maximum distance between the CCTV camera and the remote video monitor, recorder, multiplexer, or other device to which it is connected does not exceed 980 feet. See fig. 2.
2. Run the UTP cable from the remote video device to where it will be connected to the CCTV camera. Follow the CCTV camera's wiring instructions for information on how to safely run and hide this wire.
3. Connect the UTP cable to the two video baluns. NOTE: The video baluns are polarity-sensitive.
 - a. Strip approximately 1/4" of insulation from two of the wires at one end of the UTP cable. Do the same to the two same-colored wires at the other end of the cable. (Note: Use the convenient "Ideal Copper Length" gauge on the bottom of the balun.)
 - b. Attach the wires to the baluns. Note the polarity of the wires. See fig. 1
4. Plug the video balun with ground loop isolator into the BNC connector of the CCTV camera and the other video balun into the remote video device.
5. Test the connection by powering up the CCTV camera and remote video device to make sure they operate as expected.

NOTE: Bare wires must not be exposed outside of the video baluns.

Multiple cameras:

Standard CAT5 UTP cable includes four pairs of colored wires. Up to four CCTV cameras can be connected using video baluns per single run of CAT5 UTP cable without interfering with each other under normal conditions.

Other cable types:

The ENFORCER video baluns, when used with CAT5 UTP cable, offer the performance characteristics mentioned in this manual. Other types of twisted-pair cable can be used as well. However, the performance characteristics vary from cable to cable, and so care must be taken when using other types of cable. Specifically, the maximum distance between the camera and the remote device may decrease significantly with lower grades of cable.

Figure 1:

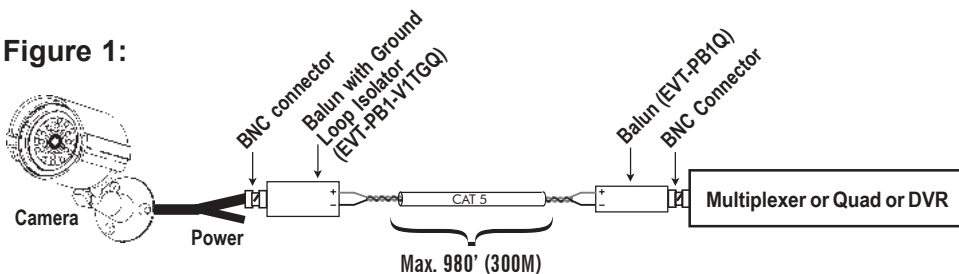
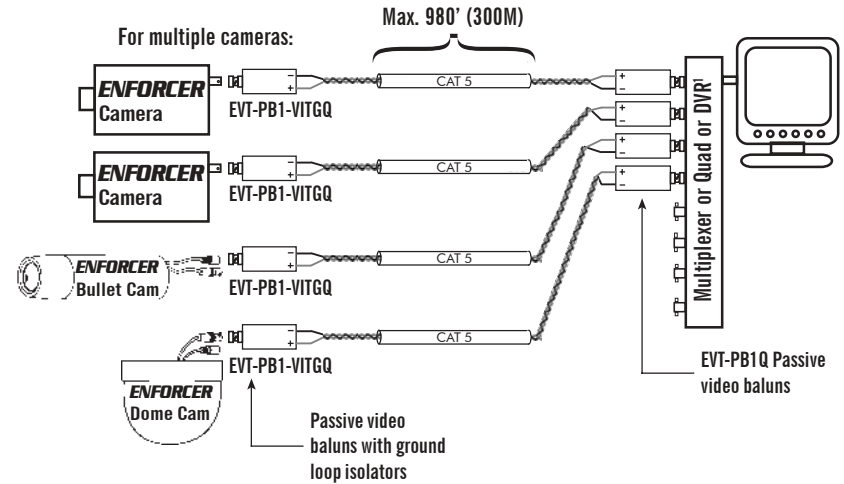
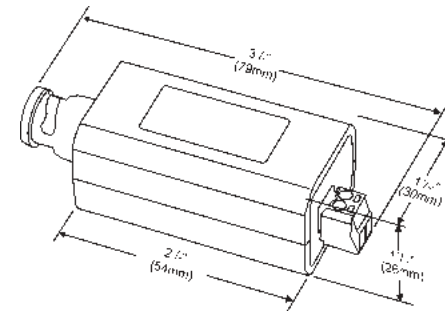


Figure 2:

Connecting multiple CCTV cameras to a remote device over multiple CAT5 cables.



Dimensions:



Trouble Shooting:

| Problem | Possible Cause | Possible Solution |
|---|---|--|
| Wavy or ghost image if connected to image processor (e.g., multiplexer or DVR), but not if directly to monitor? | a. Strong electromagnetic interference. b. Poor signal, or balun separation is too long. c. Split pairs. d. Crimped cable. | a. Move the cable away from possible sources of interference. b. Replace with active balun. c. Ensure same twisted pair connects to balun at both ends of cable. d. Replace cable with new cable. |
| Image background flutters between dark and light. | Interference from external power source. | Remove power source, or adjust monitor's brightness and contrast. |
| Image is weak or faded? | a. Exceeded recommended balun separation. b. Using lower-grade cable than recommended. | a. Reduce cable length. b. Replace with a higher-grade cable. CAT5 cable meets specifications in the manual. CAT6 cable allows longer range. |
| No image? | a. Cable is incorrectly connected. b. Cable was accidentally cut. c. Defective camera or remote video device. d. Defective video balun. e. Twisted pair wires reversed. | a. Double-check that the cable was connected properly. b. Run a continuity test on all wires in the cable. c. Replace the unit with a new unit. d. Replace the unit with a new unit. e. Try reversing polarity of the 2 wires at one end of cable. |