



~Introduction~

Thank you for buying this GEM product.

BLN-SV is a passive type S-Video balun to allow you to send S-Video signal through CAT5/6 cable and requires no power. The transmission distance is about 1,000 feet via a CAT5 cable. The BLN-SVLRA is a S-Video balun plus stereo audio.

~Installation~

[Step 1] Cable preparation

Run the CAT5 cable between your audio/video source and the output unit with proper length.

Assemble the RJ45 plug on CAT5 cable. Please refer to the following diagram (fig. 1) of standard connection order carefully. Mistakes are easy to make at this point. Please make sure that the cores slide into the RJ45 plug with correct order and all cores go to the end of the plug before crimping. The crimp tool will press the brass pins in to the individual cores and lock the plug on to the cable.

[Step 2] Connect BLN-SV or BLN-SVLRA to your system

Put on the BLN-SV or BLN-SVLRA on both end of the prepared CAT5 cable with RJ45 plug.

Connect the audio/video source on the BLN-SV or BLN-SVLRA and connect the output unit (ie. TV set with S-video connection or audio/video distribution amplifier etc.) on the other end.

~Important Notice for Installation~

1. The fig. 2 shows the connection order for standard CAT5 cable with RJ45 plug.
2. Strip the cable with proper length (10mm) will make the connection stronger and the cable will be locked by the RJ45 plug.

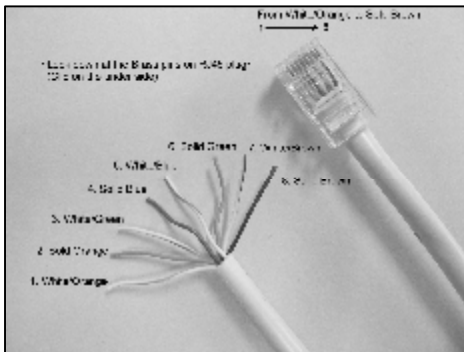


fig. 1

Looking down at the brass pins on the RJ45 plug
From Left to right:

Pin	Color of Core
1 (Left)	White/Orange
2	Solid Orange
3	White/Green
4	Solid Blue
5	White/Blue
6	Solid Green
7	White/Brown
8 (Right)	Solid Brown

fig. 2

~Trouble Shooting~

[No Picture]

1. Audio/Video source is not working or not power on. Please make sure the source is working normally.
2. The connection of CAT5 and RJ45 plug is not correct please re-check the connection order to standard.
3. The RJ45 plug has not been put on correctly, either with incorrect connection order or the cores are not far enough into the plug and not been crimped properly. Cut off the end again and re-crimp.
4. The cable is damaged or there is a short or open circuit on the wire, please replace the wire.

[Poor Picture]

1. Source is not working properly. Please make sure the source is sending good quality signal.



2. The RJ45 plug has not been put on correctly, either with incorrect connection order or the cores are not far enough into the plug and not been crimped properly. Cut off the end again and re-crimp.
3. Polarity incorrect with one balun being wired opposite to the other one, please re-wire.
4. Cable run too long. The picture will deteriorate if the CAT5 cable run too long. 1,000 feet is the maximum distance for this S-video balun with color picture.

Specifications:

Environment	S-Video equipment.
Devices	DVD players, VCR, satellite receivers, MPEG players, laptops, notebooks, monitors, LCD projectors, CCD cameras, video switchers, sequencers, digital video servers, video multiplexers, S-Video splitters, S-Video converters and other S-Video equipment.
Connectors	BLN-SV: One (1) 4-pin Mini DIN and one (1) RJ45 BLN-SVLRA: One (1) 4-pin Mini DIN, two (2) RCA audio jacks and one (1) RJ45
Cable-UTP	24 AWG or lower solid copper twisted pair wires Impedance: 100 ohms at 1 MHz. Maximum capacitance: 20 pf / foot. Attenuation: 6.6 dB/1000 ft at 1 MHz
Max. distance	Color Video: 1,000 ft. (300m) Audio: 5,000 ft (1525m)
RJ45 Pin Configuration Reverse Polarity Sensitive	S-Video Luma: Pins (R) & 7 (T) S-Video Chroma: Pins 4 (R) & 5 (T) Audio White: Pins 3 (R) & 6 (T) Audio Red: Pins 1 (R) & 2 (T)
Environment required	Operating: 0 to 55°C. Storage: -20 to 85°C. Humidity: up to 95% non-cond.
Dimension	BLN-SV: 34x51.2x24.2 in mm BLN-SVLRA: 81x60x24.5 in mm
Housing	Black ABS

Electrical Characteristic and Performance:

Bandwidth	Video : DC to 6 MHz Audio : 600 ohms: 73 Hz to 156 KHz@ 1,000 ft 1.2K ohms: 128 Hz to 91 KHz @ 1,000 ft
Maximum Video Input	1.1Vp-p
Impedance	Video: 75 ohms (RCA) unbalanced. Audio: 600 ohms (RCA) unbalanced.
Insertion loss	Video: Less than 2 dB per pair over the frequency range from DC to 6 MHz Audio: 600 ohms : < 3dB per pair ; 1.2K ohms: < 1.9dB per pair
Return loss	Greater than 13 dB over the frequency range from DC to 8 MHz
Common mode rejection (CMMR)	Greater than 40 dB over the frequency range

~Limited Lifetime Warranty~

Gem Electronics warrants that this product is to be free from defect in materials and workmanship, for the life of the product. The warranty given by Gem is in lieu of any other warranties, express or implied. This warranty does not apply to units abused through misuse or subjected to improper and/or excessive voltage, beyond our control. Gem assumes no responsibility for damages or penalties incurred resulting from the use of this product. Gem's liability under any warranties shall be discharged by replacing or repairing, at our option, the defective product. Gem's liability for any product shall not exceed a refund of the purchase price. The warranty listed here is intended only as a summary of your full and complete warranty. For a full and complete warranty of this product contact Gem Electronics.