



~Introduction~

Thank you for buying this GEM product.

BLN-CATVF is a passive type CATV balun allows traditional 75 ohm coaxial cable to be replaced by one-pair UTP for the CATV, VHF and FM signal. The CATV balun saves extra cost of expensive and space-consuming coax cable and can connect RF video equipment to TV, monitors, etc. with CAT5 cable maximum length 200 feet, or 330 feet with proper amplification.

~Installation~

[Step 1] Cable preparation

Run the CAT5 cable between your CATV signal source and the TV set or 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-CATVF to your system

Put on the BLN-CATVF on both end of the prepared CAT5 cable with RJ45 plug.

Connect the CATV signal source on one of the BLN-CATVF and connect the output unit (ie. TV set or VCR 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 CAT5 cable will be locked by the RJ45 plug.
3. The active pins of BLN-CATVF is pin 4(+) and 5(-)

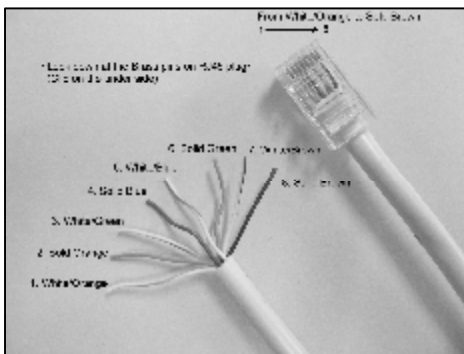


fig.1

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

~Tip~

You may need a tilt amplifier to get the best picture for long distance application or for higher frequency channel, as the UTP has higher signal losses in higher frequency than coax cable. A tilt amplifier can assist to get suitable signal level in both higher frequency and lower frequency.



Part Number: BLN-CATVF

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~Trouble Shooting~

[No Picture]

1. CATV signal source is not sending signal. Please make sure the signal source is working normally with a test monitor.
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. CATV signal source is not sending good quality signal. Please make sure the signal source is working normally and sending good quality signal by a test monitor.
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. 330 feet is the maximum distance for a passive balun to be functioned with proper amplification. HOWEVER, a maximum distance 200 feet is recommended general application.

~Electrical Characteristic & Performance~

Bandwidth:	5 to 862MHz
Used with:	CATV, SAT receiver and video recorder
Insertion Loss:	Less than 3dB (5dB max. for CATV 2-27)
Impedance F connector:	75ohm
Impedance RJ45:	100ohm
Return Loss:	More than 18dB from 10 to 862MHz
Common Mode Rejection:	More than 20dB from 40 to 862MHz
Max. Distance:	200 feet with CAT5 cable 24AWG or 330 feet with proper amplification
Operating Condition:	0-55°C (storage N20 to 85°C), Humidity up to 95

~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.