



GENESIS | CCTV™
Vision with Integrity.

Product Manual

GLI-BNC



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High Performance Video Ground Loop Isolator Filter – BNC

Model: VGIBNC

The video ground loop isolator reduces ground loop interference with CCTV signals. It can be installed easily to a new system or as an additional isolator in an existing system. The isolator is useful where a video signal is transmitted via cable between points with different ground potentials. Differences in ground potentials are typically caused by unbalanced power line loads.

Features:

- BNC male to BNC female with mini cable – 200 mm / 7.87" on both sides.
- Built-in **TVS** (Transient Voltage Suppressors) for surge protection.
- High Performance to eliminate ground loop problem.
- Low video loss, Bandwidth: 0-3dB / 0-10MHz
- Passive; No power required.
- Prevents video-signal distortion caused by video ground loops.
- Eliminates picture tearing, cross talk, and rolling.
- Prevents power cables laid by others interfering with the CCTV system.
- It is useful where a video signal is transmitted via cable between points with different ground potentials.



Since all UTP Balun's Passive and Active Video Baluns have multiple protections, adding a High Performance Ground Loop Isolator will make it immune to interference from sources of noise: data signals, other video signals, nearby power, ringing telephones, fluorescent lights, transformers and more.

Application Diagram



Troubleshooting: Electromagnetic Interference = EMI

Ground loop interference is caused by **EMI**. When there is large difference in ground potentials between two points **EMI** may occur. Differences in ground potentials are typically caused by unbalanced power line loads, and the peak-to-peak magnitude may vary from 0 volts to more than 10 volts.

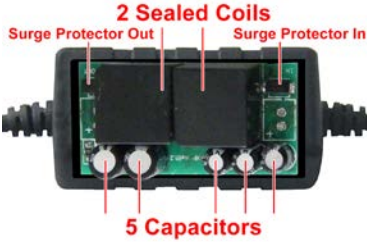
Using **Ground Loop Isolators** may help prevent **EMI**. **Ground Loop Isolators** reduce the interference between the camera and the DVR by producing equal and opposite magnetic field that cancels one another. It is often recommended to use the **Ground Loop Isolator at the DVR end**. Also our **Ground Loop Isolators** has built-in **Wave / Interference Rejection and Noise Filter**.

Note: If that does not solve your ground loop interference it is suggested that you change your power supply. Or if the camera is dual power, change to 24V AC.

Before



After



Our High Performance Video Ground Loop Isolator has 5 Capacitors and 2 Sealed Coils to reduce signal interference and thus contribute to a clear quality video picture.

Package Contents

1. One (1) High Performance Video Ground Loop Isolator Filter
2. One (1) User Manual

1. 

2. 



Caution:

- Do not connect this device to any power source.
- Do not handle the unit with wet hands.
- The unit is not waterproof and should not be used outdoors.

R&D Designed in Taiwan
Assembled in China

Specification

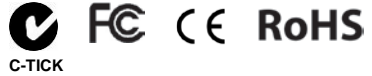
Model		VGIBNC
Performance	Isolation Voltage	800V AC/DC
	Cable Connections	BNC Male to BNC Female
	Insertion Loss	0.5 dB
	Frequency Response	0-3dB / 0-10MHz
	Input / Output Resistance	75 Ohms
	Insulation Resistance	100M Ohms
Protections	Electromagnetic Discharge Protection	1a Contact Discharge Level 3 1b Air to Discharge Level 3 Standard: IEC61000-4-2
	Surge Protection	2kV 10/700µs, Standard: IEC61000-4-5
Physical Properties	Dimensions L x W x H	46 x 27 x 18 mm with 2x 200 mm cable 1.81 x 1.06 x 0.71 inches with 2x 7.87" cable
	Material & Color	ABS, Black
	Weight	65 g / 2.3 oz
Environment	Operating Temperature	20°C ~ 55°C / 68°F ~ 131°F
	Humidity	0~95%
	Storage Temperature	-40°C ~ 80°C / -40°F ~ 176°F
Reliability	Mean time between failure (MTBF)	>10,000hours

*Specifications are subject to change without notice

Limited Warranty




LIMITED ONE (1) YEAR WARRANTY AND EXCLUSIONS

Manufacturer warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Manufacturer is free of defects in materials and workmanship under normal and proper use for one (1) year from the purchase date. Manufacturer's only obligation is to correct such defects by repair or replacement, at its option, if within such one (1) year period the product is returned prepaid, with proof of purchase date, and a description of the problem. This warrant excludes and there is disclaimed liability for labor for removal of this product or reinstallation. **This warranty is voided if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warrant, including merchantability and fitness of or a particular purpose, is limited to one (1) year. Manufacturer is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, loss sales or profits or delay or failure to perform this warranty obligation.** The remedies, provided therein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.



Why Us? Quality

A. Passive Video Balun Comparison with Our Competitors

OURS		Other Competitors'		
UTP Balun		Taiwan	China	China
* Lifetime warranty				
	<p>A. PCB Placement welding Fewer welding points machinery production High Reliability Vibration Proof</p> <p>B. Jumper welding Many welding points Easy to be broken by vibration Complicated production procedure</p>			
YES	Surge / Lightning Protection	NO	NO	NO
YES	ESD Protection	NO	NO	NO
YES	Built-in Filter	YES	YES	NO
Standard for Us		Options for others		

Most of our competitors do not have all multiple protections with Lifetime Warranty

We build all our CCTV video baluns through technologies to protect them with:

Surge/Lightning Protection

10/700 us Pulses: 2KV
Standard E06100-4-5

ESD: Electrostatic Discharge Protection

Contact Discharge: Up to 6KV
Air Discharge: Up to 8KV Standard: IE061000-4-2

Wave/Interference Rejection & Noise Filter

Built-in Filter: 0-6MHz with Extra Interference
Rejection <60db

B. Even a Small Part Makes a Big Difference!

We care for every small part & we learn from the mistakes we make!

Even a BNC connector can make a BIG difference.

All our BNC connectors have passed the Shaking Test without video loss.

UTP Balun's BNC Connector has a thicker center pin & thicker surrounding. This will avoid video loss while the balun is shaking.

UTP Balun's BNC

Thicker Center Pin



Thicker Center Pin

Other Company's BNC



OK! But still not good enough



NO GOOD! Thin Pin and Thin Surrounding

C. On-going Testing for Quality Control

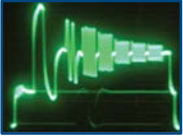
Comparison with other Name Brand



Test Instruments



Multiburst Waveform Test



Full Field Color Bar Test: Waveform



Full Field Color Bar Test: Signal Phase Diagram



Related Products

Passive Video Filter Balun

VPB100P – Pair

..
A-1



BNC Passive Video Transceiver – K1

VPBB-100

A-1b



Passive Video Filter Balun with Pigtail

VPB100LP – Pair

A-2_A-2a



Passive Video Balun with Power Connector

VPB110TK = VPB110TM + VPB110TF as a Kit

A-3_A-3a_A-3b



VPB110TM - Male
For Camera Side
A-3a



VPB110TF - Female
For Using Single Power Adaptor
A-3b

Passive Video/Power Lead Balun – RJ45

VPB110RJK = VPB110RJM + VPB110RJF as a Kit

A-3C_A-3d_A-3e



VPB110RJM - Male
For Camera Side
A-3d



VPB110RJF - Female
For Using Single Power Adaptor
A-3e

Passive Video Balun with Video, Power Connector & Data

VPB111RJ

A-4



UTP = Unshielded Twisted Pair