

**Single Video Ground Loop Isolator**  
 - for Backend DVR using in CCTV application  
 -for Frontend Camera using in CCTV application

**PRODUCT MANUAL**



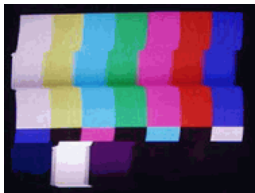
Single Channel Video Ground Loop Isolator  
 Output/Input with two mini cable BNC-F/M connectors  
 I/O with min cable BNC-M/Screw Terminal connectors

**Video Ground Loop Description**

Solving Ground Loop Problems: A ground loop is an electrical problem that happens when an AC current interferes with the ground reference level of the video signal. It occurs on the conductive path formed by the shield of the video cable and the chassis of the video equipment. A loop results from the difference between the voltage potential of the shield at one end of the cable, versus the voltage potential of the shield at the other end. The electrical level of the shield is usually zero volts. When a ground loop is present, this level fluctuates above and below zero volts. The greater the difference, the more severe the distortion or tearing. If the potential is too great it can destroy the equipment. Ground loops are an after-the-fact type of problem in which the end-user blames the installer, the installer blames the manufacturer, and actually nobody is at fault. Neither the manufacturer nor the installer can predict where a loop will occur. Only after the system is installed can it be determined if a problem will exist. Ground loop problems can be corrected. It is important for both the dealer and the end-user to be aware that this problem can occur. A ground loop problem may occur at several points in the system, and each occurrence of the problem must be corrected individually. Loops can occur between a camera and monitor, from a camera to a switch, or one of many other possibilities.

**Functional Characteristics**

- Can effectively suppress interference AC power and uneven ground caused by various factors such as interference
- Address issues such as picture interference
- In the harsh environment to ensure the quality of video transmission, stable and reliable
- Can balance the DVR video sync signal value
- Used in the coaxial openings can balance the impedance mismatch problem
- Effectively extend the transmission distance and other characteristics



Ground Loop Problem (Before)



Ground Loop Isolation (After)

**Video Ground Loop Isolator Features**

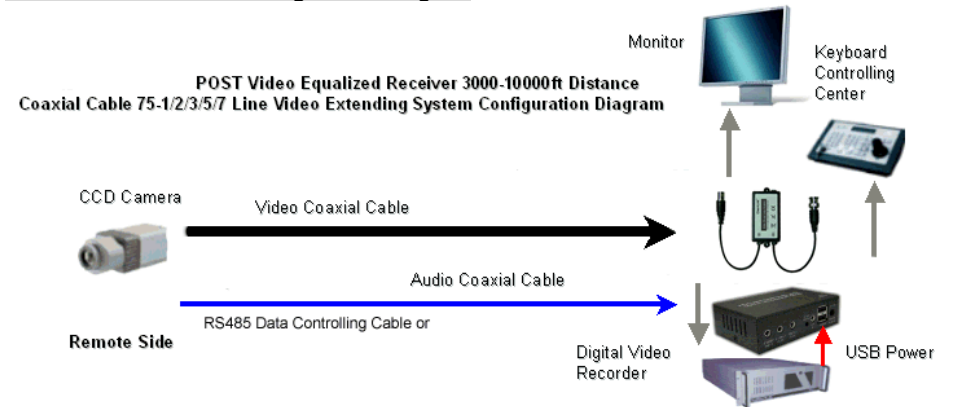
Video Ground Loop Isolator product could reduce "Ground Loop Interference" with CCTV signals and can easily install in a new or added to existing systems. It is useful where a video signal is transmitted via cable between points with different ground potentials, differences in ground potentials are typically caused by unbalanced power line loads. The 'CABLE' terminal has DC block and TVS

transient clamp to compliance DC output camera during signal transmission. The ground loop isolator has been developed with mounting tabs after consulting with installers who had fitted many single units without any means to be able to secure the units. The end result was a very untidy control room.

**Specification**

- Insertion Loss: less 0.5dB
- Frequency Response: 0-3dB range in 20Hz to 12MHz
- CMRR: 48dB @ 1MHz
- Differential phase: less than 2 degrees
- Differential gain: less than 2%
- S/N ratio: >60dB
- Ground loop circuit isolation: >90dB and >50Hz
- DC loop resistance: 18 ohms/100m
- Isolation Voltage: 800VDC (Min)
- Input Resistance: 75 ohm
- Output Resistance: 75 ohm
- Insulation Resistance: 100M ohm
- Build in internal passive isolation circuit with isolation transformer  
 DC video input signal saturation rejection, line termination  
 perfect to immunity interference, for extra interference rejection
- Two 150 mini cable with BNC-Female for 'CABLE' and BNC-Male Output for 'EQUIPMENT' connectors, passive, and no power required.
- Two 150 mini cable with screw terminal connector for 'CABLE' and BNC-Male Output for 'EQUIPMENT' connectors, passive, and 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.
- Built in TVS (Transient Voltage Suppressors) for surge protection: 12V rms.

**Installation Schematic Configuration Diagram**



**Environmental**

Working Temperature Rang: -20°C to +65°C.  
 Humidity (non-condensing): 0 to 95%.

**Transient Immunity** Per ANSI/IEEE 587 C62.41

**Dimension:** 63mmx36mmx21mm with two 150m mini cable -RCA male and female or screw terminal connectors

**Material:** Plastic Black