Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

User's Guide

GLI 1000 5BNC
GLI 1000 2BNC
GLI 1000 2RCA
GLI 1000 15HD

Passive Ground Loop Inhibitors

Introduction

The GLI 1000 family of ground loop inhibitors (GLIs) eliminates the hum bars and common mode noise associated with improper video equipment grounding (figure 1). Ground loop problems can be caused by using AC power sources with different ground levels or by plugging high current equipment into the same power source as video equipment.
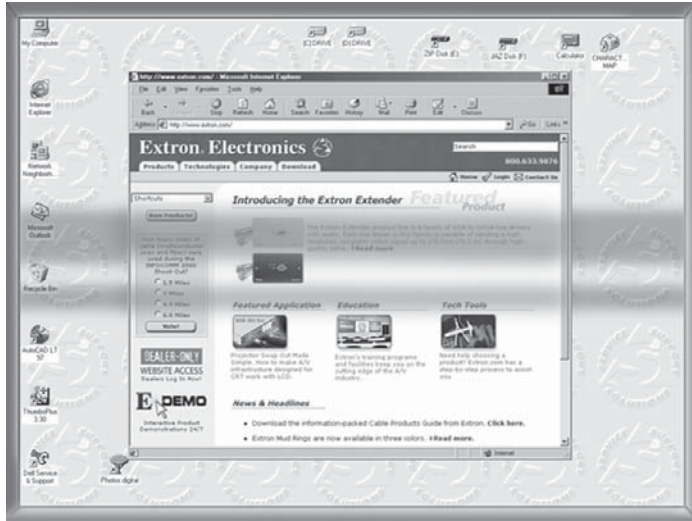
Figure 1 — Hum bars

The GLI 1000 family consists of the following four models:

- **GLI 1000 5BNC** — The GLI 1000 5BNC has five female BNCs on the input and five on the output. This GLI cleans ground noise from RGB or component video. It can also be used for one or two S-video signals or up to five composite video signals.
- **GLI 1000 15HD** — The GLI 1000 15HD has a female 15HD connector on the input and another on the output. This GLI inhibits ground loops on VGA, XGA, and UXGA video. With an adapter cable, it can be used for S-video signals or composite video signals.
- **GLI 1000 2RCA** — The GLI 1000 2RCA has two female RCA connectors on the input and two on the output. This GLI removes ground problems from one or two composite video signals. With an adapter, it can also be used with S-video.
- **GLI 1000 2BNC** — The GLI 1000 2BNC has two female BNCs on the input and two on the output. This GLI inhibits ground loops on S-video. It can also be used for one or two composite video signals.

The passive, non-powered, GLIs have a 1.0 GHz (-3dB) bandwidth, and can handle any video format. Guardrails protect the GLI connectors from damage caused by rough handling. With optional mounting brackets, the GLIs can be mounted to a projector mount or under a desk. The GLIs can also be mounted to optional 1U or 2U rack panels.

Installation

Installation consists of mounting the GLI and making connections.

Rack mounting

The GLI 1000 5BNC and GLI 1000 15HD are one third of a standard rack in width and 2U high. Up to three of these units can be mounted to the rear of a flat 2U rack panel (figure 2) or the front of a recessed 2U rack panel using four 6-32 x 3/8 screws.
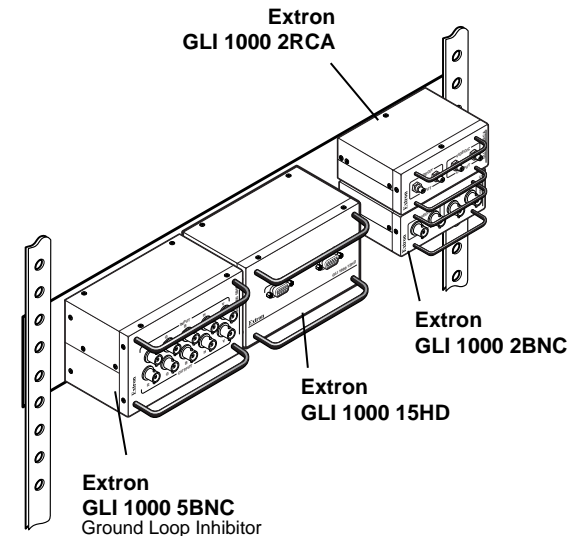
Figure 2 — Rack mounting the GLI Inhibitor

The GLI 1000 2RCA and GLI 1000 2BNC are a quarter of a rack in width and 1U high. Up to four of these units can be mounted to the rear of the flat 1U rack panel or the front of the recessed 1U rack panel.

A mix of larger and smaller GLIs can be mounted on either 2U panel, for example, two GLI 1000 15HDs, a GLI 1000 2RCA, and a GLI 1000 2BNC. Another example is one GLI 1000 5BNC and four GLI 1000 2BNCs.
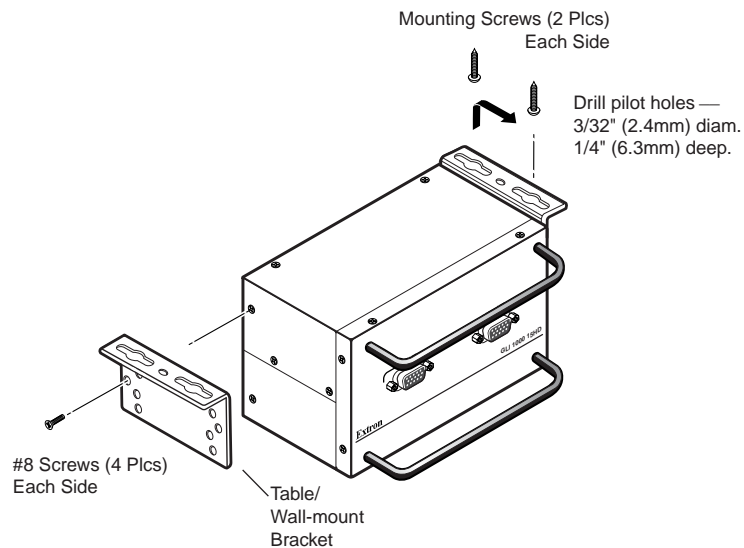
Bracket mounting

Secure the optional mounting bracket to the GLI using four #8 machine screws already installed in the side of the GLI. Secure the GLI to a projector mount or other surface by inserting the mounting screw through the bracket's slotted hole (figure 3).

Under table mounting

1. Secure both optional mounting brackets to the GLI with eight #8 machine screws already installed in the side of the GLI (figure 4).

Installation
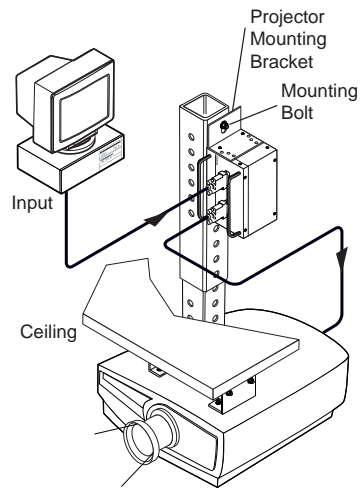
Figure 3 — Bracket mounting a GLI

Figure 4 — Table mounting a GLI

2. Hold the GLI with the attached brackets against the underside of the table or other furniture. Mark the location of the screw holes.

3. Drill 3/32" (2 mm) diameter pilot holes, 1/4" (6.3 mm) deep in the mounting surface at the marked screw locations.

4. Insert #8 wood screws into the four pilot holes. Tighten each screw into the surface until just less than 1/4" of the screw protrudes.

5. Align the mounting screws with the brackets' slots and place the GLI against the surface, with the screws through the bracket slots.

6. Slide the inhibitor slightly forward or back, then tighten all four screws to secure the inhibitor in place.

Connections

Install the GLI near the display rather than near the source device.

GLI 1000 5BNC

① **Input connectors** — Connect an RGBHV, RGBS, RGsB, RsGsBs, component video source, one or two S-video sources, or up to five composite video sources to the five Input BNCs (figure 5).
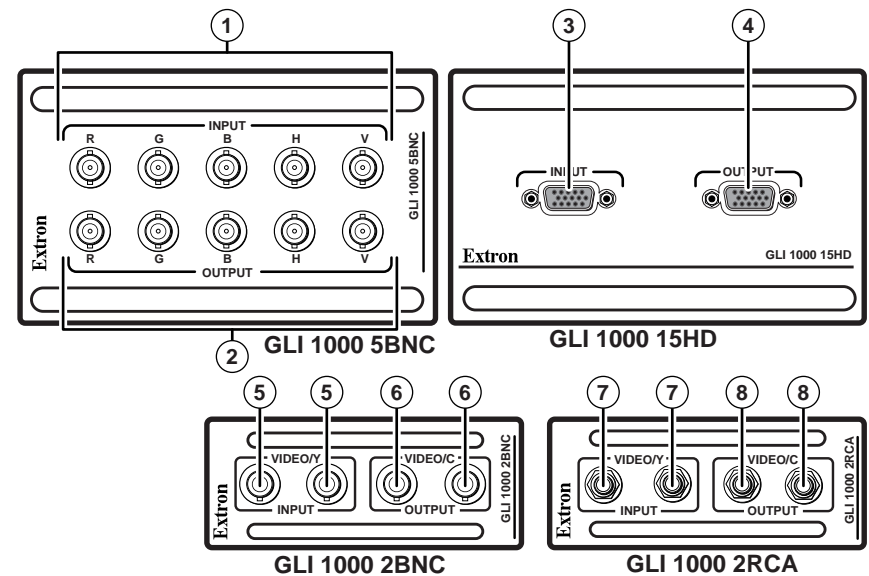
Figure 5 — GLI 1000 connections

② **Output connectors** — Connect an RGBHV, RGBS, RGsB, RsGsBs, or component video display, one or two S-video display, or up to five composite video displays to the five Output BNCs.

GLI 1000 15HD

③ **Input connectors** — Connect an RGBHV, RGBS, RGsB, RsGsBs, or component video source to the Input 15HD connector or with an optional SY-VGA cable, connect one or two S-video sources, or up to five composite video sources.

Operation

④ **Output connectors** — Connect an RGBHV, RGBS, RGsB, RsGsBs, component video display to the Output 15HD connector or with an optional SY-VGA cable, connect one or two S-video display, or up to five composite video displays

GLI 1000 2BNC

⑤ **Video/Y and Video/C Input connectors** — Connect an S-video source or two composite video sources to the two Input BNCs (figure 5).

⑥ **Video/Y and Video/C Output connectors** — Connect an S-video display or two composite video displays to the two Output BNCs.

GLI 1000 2RCA

⑦ **Video/Y and Video/C Input connectors** — Connect an S-video source or two composite video sources to the two Input RCA connectors.

⑧ **Video/Y and Video/C Output connectors** — Connect an S-video display or two composite video displays to the two Output RCA connectors.

Specifications

Video

Gain	Unity
Bandwidth	1.0 GHz (-3dB)
CMRR	-60 dB @ 60Hz/50Hz

Video input

Number/signal type

GLI 1000 15HD	1 analog VGA-XGA, RGBHV, RGBS, RGsB, RsGsBs, or component video; *or* 2 S-video and 1 NTSC/PAL/SECAM composite video; *or* 1 S-video and 3 NTSC/PAL/SECAM composite video; *or* 5 NTSC/PAL/SECAM composite video
GLI 1000 5BNC	1 analog RGBHV, RGBS, RGsB, RsGsBs, or component video; *or* 2 S-video and 1 NTSC/PAL/SECAM composite video; *or* 1 S-video and 3 NTSC/PAL/SECAM composite video; *or* 5 NTSC/PAL/SECAM composite video
GLI 1000 2BNC/2RCA	1 NTSC/PAL/SECAM S-video *or* 2 NTSC/PAL/SECAM composite video

Connectors

GLI 1000 15HD	1 female 15HD connector

GLI 1000 5BNC	5 female BNCs
GLI 1000 2BNC	2 female BNCs
GLI 1000 2RCA	2 female RCA connectors
Minimum/maximum level(s)	Analog -10.0V to +10.0V p-p with no offset
Impedance	75 ohms
Horizontal frequency	10 kHz to 200 kHz
Vertical frequency	15 Hz to 180 Hz

Video output

Number/signal type

GLI 1000 15HD	1 analog VGA-UXGA, RGBHV, RGBS, RGsB, RsGsBs, or component video; *or* 2 S-video and 1 NTSC/PAL/SECAM composite video; *or* 1 S-video and 3 NTSC/PAL/SECAM composite video; *or* 5 NTSC/PAL/SECAM composite video
GLI 1000 5BNC	1 analog RGBHV, RGBS, RGsB, RsGsBs, or component video; *or* 2 S-video and 1 NTSC/PAL/SECAM composite video; *or* 1 S-video and 3 NTSC/PAL/SECAM composite video; *or* 5 NTSC/PAL/SECAM composite video
GLI 1000 2BNC/ 2RCA	1 S-video *or* 2 composite video

Connectors

GLI 1000 15HD	1 female 15HD connector
GLI 1000 5BNC	5 female BNCs
GLI 1000 2BNC	2 female BNCs
GLI 1000 2RCA	2 female RCA connector
Minimum/maximum level(s)	Analog -10.0V to 10.0V p-p with no offset
Impedance	75 ohms
Return loss	Better than 30dB up to 100 MHz

Sync

Input/Output type

GLI 1000 15HD, 5BNC	RGBHV, RGBS, RsGsBs, RGsB
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level	0.5V to 5.0V p-p
Output level	TTL: 0V to 10.0V p-p
Input/Output impedance	75 ohms
Polarity	Follows input

General

Power	Non-powered

Temperature/humidity .... Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing

Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing

Rack mount

GLI 1000 15HD/5BNC .... Yes, with optional flat or recessed 2U rack panel

GLI 1000 2BNC/2RCA ... Yes, with optional flat or recessed 1U rack panel

Also table and projector bracket mountable with optional brackets

Enclosure type .... Metal

Enclosure dimensions

GLI 1000 15HD/5BNC .... 5.6″ H x 3.75″ W x 4.1″ D, 14.3 cm H x 9.5 cm W x 10.4 cm D (Depth excludes guardrails)

GLI 1000 2BNC/2RCA ... 4.25″ H x 1.75″ W x 3.8″ D, 10.8 cm H x 4.4 cm W x 9.7 cm D (Depth excludes guardrails)

Protective guards .... 1.0″ H

Shipping weight

GLI 1000 5BNC .... 1.5 lbs (0.6 kg)

GLI 1000 15HD................. 1.4 lbs (0.6 kg)

GLI 1000 2BNC/2RCA ... 0.7 lb (0.3 kg)

Vibration .... ISTA/NSTA 1A in carton (International Safe Transit Association)

Listings .... UL

Compliances .... CE

MTBF .... 30,000 hours

Warranty .... 3 years parts and labor

NOTE *Specifications are subject to change without notice.*

Optional Accessories

- Mini bracket furniture mount   70-212-01
- 1U recessed vertical rack   70-213-01
- 2U recessed vertical rack plate   70-214-01
- 1U flat vertical rack plate   70-215-01
- 2U flat vertical rack plate   70-216-01
- GLI 1000 projector mount   70-217-01

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