

Use Loop Start Devices on Ground Start Trunks

Model **GLS-12** is designed to allow up to 12 standard telephone sets, multi-line key systems or other loop start equipment to be connected to and operate on two-wire ground start CO trunk lines. The **GLS-12** provides the CO ground start line with the signalling required to draw dial tone when the loop start equipment goes off-hook. Incoming calls are not affected by the **GLS-12** and ring directly to the loop start devices.



Features

- 12 circuit automatic ground start to loop start equipment converter
- Stackable to increase capacity
- Easy, straight forward installation via an RJ-21X 25 pair connector

Applications

- Allows PABX and key systems configured for loop start trunks, as well as standard telephones to be connected to C.O. ground start trunks
- Eliminates wiring ground start buttons in standard telephones

Specifications

Power: The unit is powered by the 48V ground start C.O. trunk lines - no AC power supply required

Dimensions: 133mm x 89mm x 44mm (5.25" x 3.5" x 1.75")

Shipping Weight: 1.13 kg (2.5 lbs)

Environmental: 0°C to 32°C (32°F to 90°F) with 5% to 95% non-condensing humidity

Connections: (1) RJ-21X female, 25 pair

www.vikingelectronics.com
Information: (715) 386-8861

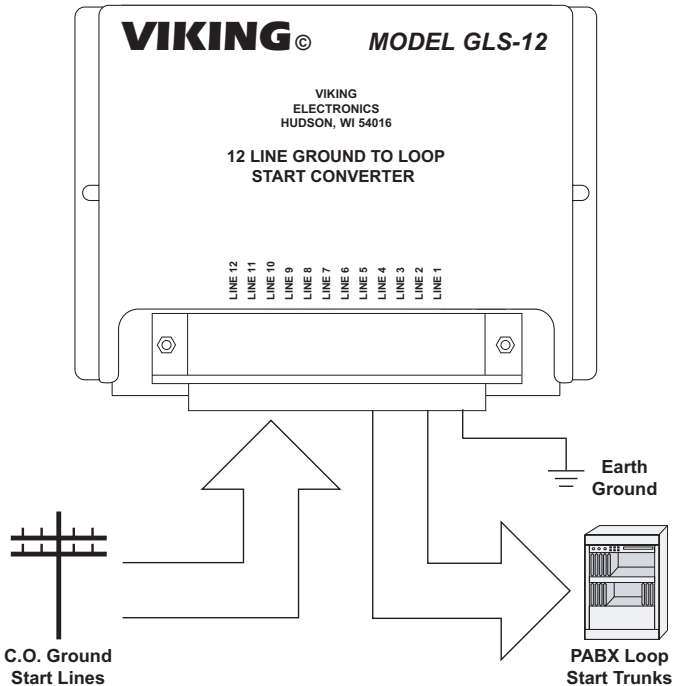
Installation

Circuit	C.O. Line/PABX Trunk	Line (C.O. Inputs are Polarity Sensitive)	Pins	Color
Circuit 1	C.O. Line 1	CO1T (+) CO1R (-)	26 1	W/BL BL/W
	PABX Trunk 1	PABX1T PABX1R	27 2	W/O O/W
Circuit 2	C.O. Line 2	CO2T (+) CO2R (-)	28 3	W/G G/W
	PABX Trunk 2	PABX2T PABX2R	29 4	W/BN BN/W
Circuit 3	C.O. Line 3	CO3T (+) CO3R (-)	30 5	W/S S/W
	PABX Trunk 3	PABX3T PABX3R	31 6	R/BL BL/R
Circuit 4	C.O. Line 4	CO4T (+) CO4R (-)	32 7	R/O O/R
	PABX Trunk 4	PABX4T PABX4R	33 8	R/G G/R
Circuit 5	C.O. Line 5	CO5T (+) CO5R (-)	34 9	R/BN BN/R
	PABX Trunk 5	PABX5T PABX5R	35 10	R/S S/R
Circuit 6	C.O. Line 6	CO6T (+) CO6R (-)	36 11	BK/BL BL/BK
	PABX Trunk 6	PABX6T PABX6R	37 12	BK/O O/BK
Circuit 7	C.O. Line 7	CO7T (+) CO7R (-)	38 13	BK/G G/BK
	PABX Trunk 7	PABX7T PABX7R	39 14	BK/BN BN/BK
Circuit 8	C.O. Line 8	CO8T (+) CO8R (-)	40 15	BK/S S/BK
	PABX Trunk 8	PABX8T PABX8R	41 16	Y/BL BL/Y
Circuit 9	C.O. Line 9	CO9T (+) CO9R (-)	42 17	Y/O O/Y
	PABX Trunk 9	PABX9T PABX9R	43 18	Y/GN GN/Y
Circuit 10	C.O. Line 10	CO10T (+) CO10R (-)	44 19	Y/BN BN/Y
	PABX Trunk 10	PABX10T PABX10R	45 20	Y/S S/Y
Circuit 11	C.O. Line 11	CO11T (+) CO11R (-)	46 21	V/BL BL/V
	PABX Trunk 11	PABX11T PABX11R	47 22	V/O O/V
Circuit 12	C.O. Line 12	CO12T (+) CO12R (-)	48 23	V/GN GN/V
	PABX Trunk 12	PABX12T PABX12R	49 24	V/BN BN/V

GND	50	V/S
GND	25	S/V

IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges.

Note: The **GLS-12** is polarity sensitive.



Troubleshooting

1. Verify the V/S pair, pins 50 and 25, are connected to a solid earth ground.
2. The ground start trunk must be connected to the **GLS-12** in the correct polarity. The station output will be dead when the polarity is reversed.
3. Disconnect all other ground start equipment from the line. The **GLS-12** may not work properly if the line is left connected to a PBX or any other ground start equipment.

Warranty

IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, CONTACT: VIKING TECHNICAL SUPPORT AT (715) 386-8666

Our Technical Support Department is available for assistance Monday 8am - 4pm and Tuesday through Friday 8am - 5pm central time. So that we can give you better service, before you call please:

1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Technical Practice in front of you.
3. It is best if you are on site.

RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that needs repair:

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to: **Viking Electronics, 1531 Industrial Street, Hudson, WI 54016**
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a P.O. Box.
4. RA number on carton: In large printing, write the R.A. number on the outside of each carton being returned.

RETURNING PRODUCT FOR EXCHANGE

The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):

1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the Viking product using the same R.A. number.
4. The distributor will NOT exchange this product without first obtaining the R.A. number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.

LIMITED WARRANTY

Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of one year from the date of purchase from any authorized Viking distributor or 18 months from the date manufactured, whichever ever is greater. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI, 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others. This warranty does not cover non-EWP products that have been exposed to wet or corrosive environments.

NO OTHER WARRANTIES, VIKING MAKES NO WARRANTIES RELATING TO ITS PRODUCTS OTHER THAN AS DESCRIBED ABOVE AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

EXCLUSION OF CONSEQUENTIAL DAMAGES, VIKING SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO PURCHASER, OR ANY OTHER PARTY, FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THE SALE OR USE OF THE PRODUCT SOLD HEREUNDER.

EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY, WHETHER IN AN ACTION BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR ANY OTHER LEGAL THEORY, ANY LIABILITY OF VIKING SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR AT VIKING'S OPTION, REFUND OF THE PURCHASE PRICE AS THE EXCLUSIVE REMEDY AND ANY LIABILITY OF VIKING SHALL BE SO LIMITED.

IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT EACH AND EVERY PROVISION OF THIS AGREEMENT WHICH PROVIDES FOR DISCLAIMER OF WARRANTIES, EXCLUSION OF CONSEQUENTIAL DAMAGES, AND EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY, ARE SEVERABLE FROM ANY OTHER PROVISION AND EACH PROVISION IS A SEPARABLE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

FCC REQUIREMENTS

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the side of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ#TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive REN's on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total REN's, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ#TXXXX. The digits represented by ## are the REN without a decimal point (e.g., .03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

The plug used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this E-10A/E-20B does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

If the E-10A/E-20B causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

If trouble is experienced with the E-10A/E-20B, for repair or warranty information, please contact:

Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI 54016 (715) 386-8666

If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to Party Line Service is subject to State Tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

WHEN PROGRAMMING EMERGENCY NUMBERS AND (OR) MAKING TEST CALLS TO EMERGENCY NUMBERS:

Remain on the line and briefly explain to the dispatcher the reason for the call. Perform such activities in the off-peak hours, such as early morning or late evenings.

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.

PART 15 LIMITATIONS

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Product Support: (715) 386-8666

Due to the dynamic nature of the product design, the information contained in this document is subject to change without notice. Viking Electronics, and its affiliates and/or subsidiaries assume no responsibility for errors and omissions contained in this information. Revisions of this document or new editions of it may be issued to incorporate such changes.