LOGIC RAIL™ TECHNOLOGIES

"Sophisticated Model Railroad Electronics"

21175 Tomball Pkwy
Suite 287
Houston, TX 77070

Phone: (281) 251-5813
email: info@logicrailtech.com
http://www.logicrailtech.com

GCP/2 grade crossing bell module

Instructions

Revised 10/9/2020

Getting started

Thank you for purchasing a ***Logic Rail Technologies*** product! This bell module plugs directly onto the ***Grade Crossing Pro/2*** circuit board. The ***Grade Crossing Pro/2*** will activate the bell module when the signals start flashing and it will fade the sound off when shutting off the bell. There are two sockets on the board to accept the module as shown in Figure 1a below. Carefully install the bell module by lining up the pins on the bottom of the module to the mating sockets on the ***Grade Crossing Pro/2*** board. Note that when the module is properly installed the bell module label will have the printing oriented in the same direction as the ***Grade Crossing Pro/2's*** main chip. Also, there will be two open socket locations along the top end of the lefthand socket. A properly installed bell module is shown in Figure 1b below. The bell module requires an 8Ω speaker connected to the SPKR outputs as shown in Figure 1b. You can adjust the volume of the bell sound using the potentiometer labeled VOLUME next to the SPKR terminals. The bell module consumes approximately 80 mA of current.

Figure 1a - Location for bell module

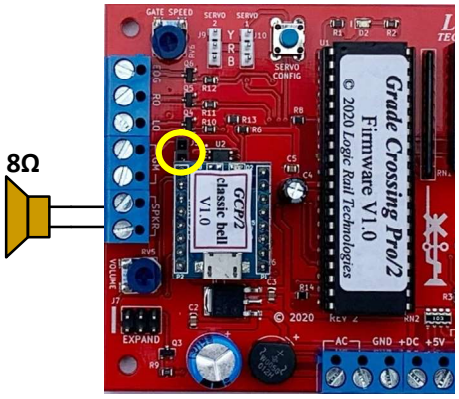

Figure 1b – Bell module installed

Gate and bell timing options

The ***Grade Crossing Pro/2*** has three configuration switches which give you several options for the timing of the gates lowering and ringing the bell. The bell module will always be turned on as soon as the signals start flashing. When the bell rings after that is based on the combination of the GATES USED, BELL MODE and BELL SHUTOFF switches. The behavior is described below. There are examples of prototype crossing bells behaving in each of these ways!

GATES USED	BELL MODE	BELL SHUTOFF	Bell behavior
OFF	(doesn't matter)	(doesn't matter)	Rings continuously while signals are flashing
ON	OFF	OFF	Rings continuously while signals are flashing
ON	OFF	ON	Stops ringing as the train clears but before flashing stops
ON	ON	OFF	Only rings while gates are lowering or raising
ON	ON	ON	Only rings while gates are lowering; no ringing when gates rise!

NOTE: if the bell rings continuously for over approximately 2-1/4 minutes you will hear a brief gap in the sound and then it will resume. This is an unavoidable characteristic of the sound chip on the module.

Warranty

This product is warranted to be free from defects in materials or workmanship for a period of one year from the date of purchase. ***Logic Rail Technologies*** reserves the right to repair or replace a defective product. The product must be returned to ***Logic Rail Technologies*** in satisfactory condition. This warranty covers all defects incurred during normal use of this product. This warranty is void under the following conditions:

1) If damage to the product results from mishandling or abuse.
2) If the product has been altered in any way (e.g. soldering to the circuit board).
3) If the current or voltage limitations of the product have been exceeded.

Requests for warranty service must include a dated proof of purchase, a written description of the problem, and return shipping and handling ($8.00 inside U.S./$20.00 outside U.S. - U.S. funds only). Except as written above, no other warranty or guarantee, either expressed or implied by any other person, firm or corporation, applies to this product.

Technical Support

We hope the preceding instructions sufficiently answer any questions you might have about the installation of this product. However, technical support is available should you need it. You can reach us via phone or email.

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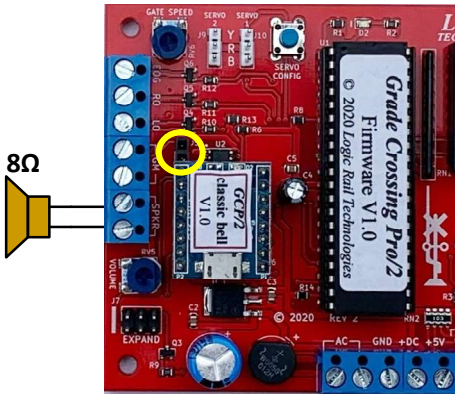

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