

Introduction

This application note describes how to manually trigger the *Grade Crossing Pro* (GCP-IR or GCP). You may wish to do this with or without use of the detector method (i.e. photocell or infrared). In this application note, for the sake of simplicity, all other wiring (power, signals, etc) is NOT shown so please refer to the GCP/GCP-IR instructions for those details. An SPST on/off (i.e. non-momentary) switch is used. There are no special electrical requirements for the switch as this is a very low power connection.

Manually Triggering a GCP-IR

You will connect the SPST switch between the GCP-IR's GND terminal and its TI (Trigger Input) terminal. Whenever the switch is closed the "action" will be on (i.e. signals flashing, optional gate motor powered, or optional bell module on). This simple wiring scheme is shown in Figure 1 below. If you have the GCP-IR and will also be using the IR components then simply connect them as shown in the GCP-IR instructions. In this way the GCP-IR will be triggered either by the SPST switch or by the IR detectors. If you aren't using the IR components then nothing needs to be connected to the sensor inputs (PWF, PWN, PEN, PEF).

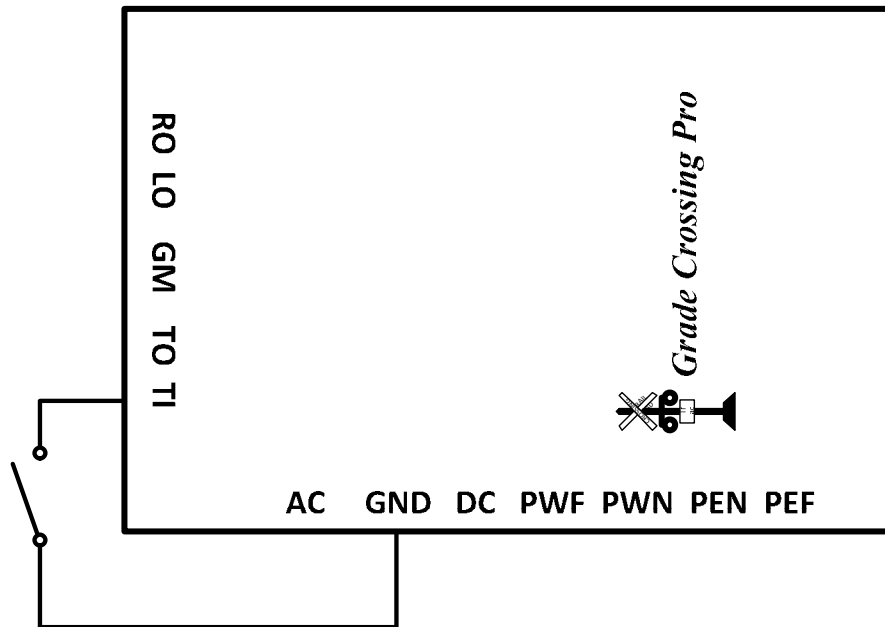


Figure 1 – Manually triggering a GCP-IR

Manually Triggering a GCP

You will connect the SPST switch between the GCP's GND terminal and its TI (Trigger Input) terminal. Whenever the switch is closed the "action" will be on (i.e. signals flashing, optional gate motor powered, or optional bell module on). If you will also be using the photocells then simply connect them as shown in the GCP instructions and use Figure 1 above for the SPST switch wiring. In this way the GCP will be triggered either by the SPST switch or by the photocells. HOWEVER, if you are NOT using the photocells then you MUST use the wiring scheme shown in Figure 2 below! This is required because a photocell input without an actual photocell connected is interpreted by the GCP as a COVERED photocell. As such the "action" would always be on! So, in order to prevent this you must connect ALL FOUR photocell inputs (PWF, PWN, PEN, PEF) to the GND terminal as shown. This mimics a photocell that is permanently UNCOVERED so that only the SPST switch can trigger the GCP.

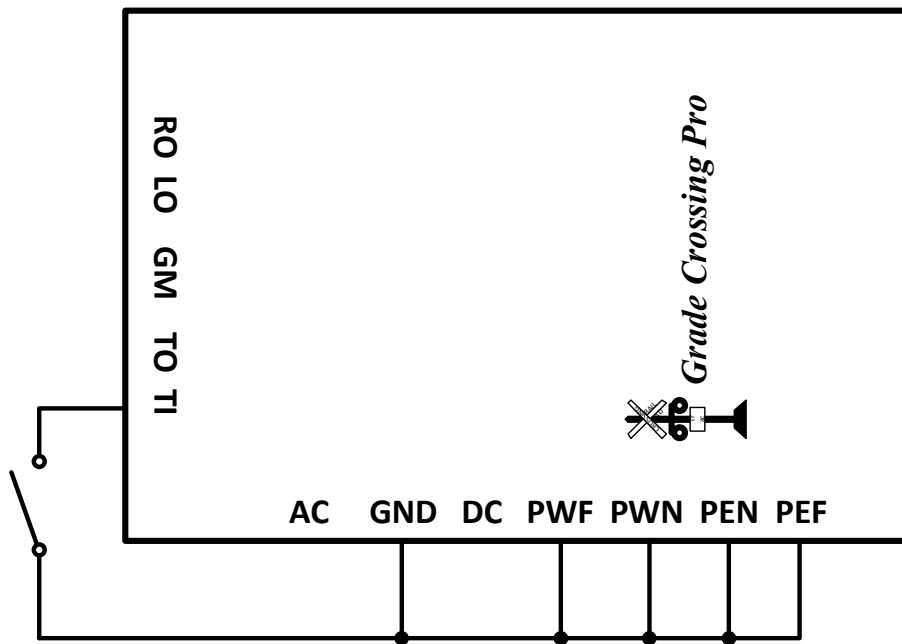


Figure 2 – Manually triggering a GCP without photocells connected

Trigger the *Grade Crossing Pro* using other methods

You may wish to trigger the *Grade Crossing Pro* using an external electronic circuit rather than a mechanical on/off switch. This is also possible using a wiring scheme similar to what’s shown previously. You will need an “open-collector” type of connection that when “active” serves the same purpose as an SPST switch. Figure 3 below shows an example of this where the controlling circuit has an NPN transistor output. Also refer to a portion of Figure 2 above if you’re using the GCP without photocells.

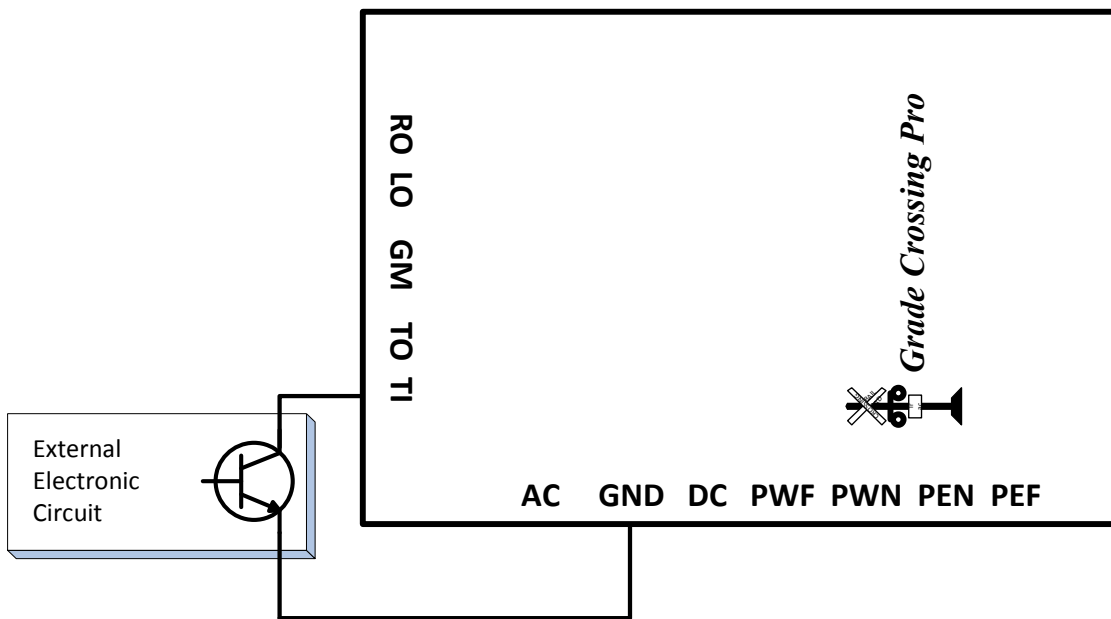


Figure 3 – Manually triggering a GCP from another electronic circuit

Technical Support

If you need further assistance with this application please do not hesitate to contact us by phone, mail and email; our contact information can be found on the top of Page 1.