

GPI-10,
GPI-10K

General Purpose Interface
(GPI) to RS232 Converter,
10 Channel

Manual Version 3.01



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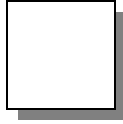
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GPI to RS232 Converter

Introduction

Congratulations on your purchase of the Burst Electronics model GPI-10. This product converts a momentary contact closure (factory default) or momentary contact open (user selectable internal jumper) to a RS232 stream of data. The GPI-10 was originally designed to command the Burst Electronics MCG-2 (or MCG-3) Micro Character Generator to overlay, on to video, each of its 10 pages stored in memory. Another option is to have the GPI-10 factory programmed with RS232 data that you provide (contact Burst Electronics for details and pricing).

The GPI-10 has 11 screw terminal connectors on the back. One of these connectors, called COM (meaning common), is used with each of the other connectors through a contact closure such as a momentary push button switch to create the trigger. Activation of the push button switch is all that is required to transmit the preprogrammed data. The trigger only needs to be active for 5mS (0.005 seconds). If a trigger is active while a second trigger is activated, no data will be transmitted. You must release the first trigger before activating the next trigger.

There is also a model with a keypad on the top of the unit (GPI-10K). Each of the numbered pushbuttons (0-9), when pressed, will stream RS232 data in the same manner as stated above. The zero (0) key is used as number 10. The pound (#) key and the asterix (*) key are not used.

The RS232 connector is RJ11 style (standard telephone plug). The RJ11 cable used is also a standard 4 conductor

telephone cable. If you are using the GPI-10 to communicate to a PC computer, you will need a Null Modem Adapter (included with the GPI-10). The Null Modem Adapter converts DB9 (standard computer serial port) to RJ11.

If you use normally closed contacts, vs. normally open contacts, to command the GPI-10, you will need to change the internal jumper (factory default is for normally open contacts). To select normally closed triggering, remove the front panel of the GPI-10 and slide the top cover off. Remove the shunt at W1 for normally closed trigger. Replace the shunt if normally open contacts are going to be used. (Note: if normally closed is selected, the front panel LEDs corresponding to each contact will remain lit until you perform an open trigger). Burst Electronics' default for this selection has the shunt installed (normally open operation). When using normally closed contacts, use only the terminal connectors on the rear of the unit, as the keypad is configured for Normally Open operation only.

The GPI-10 communicates at 9600 baud, 8 data bits, No stop bits, and 1 parity bit (9600,8,N,1). There is no flow control associated with this device.

MCG Operation

Connect the supplied RJ11 cable between the GPI-10 and the "Host" input of the MCG. Apply appropriate power to the GPI-10 and the MCG (consult your users manual for specifications). Each numbered output of the GPI-10 corresponds to the same numbered page of the MCG (keypad 1-9 displays pages 1-9 and keypad zero (0) displays page 10). As you trigger each of the GPI contacts, the appropriate page is displayed from the MCG. Example: If input terminal 5 is triggered (5 on the keypad), then page 5 in the MCG's memory will be displayed.

The data sent in this example is:

<u>Data</u>	<u>Description</u>
WK,01	Wake up MCG
DP,5	Display Page 5
MX,1	Turn Mixer On
SP	Put MCG to sleep

Custom Programming of the GPI-10

If you are familiar with the programming of the PIC16C5x family of controllers, contact Burst Electronics for advice on programming and sample of the code that is programmed into the GPI-10's PIC.

SPECIFICATIONS

Input:	Either normally open or normally closed (jumper selectable) or Keypad (normally open only)
Input Duration:	50mS minimum
Output Data:	RS232, 9600,8,N,1, Flow: None
GPI Connector:	11 Screw terminals
RS232 Connector:	RJ11
Size:	4.2"W x 1.5"H x 5.5"D
Power Requirements:	11 to 15Vdc @ 100mA, center pin negative
Power Supply (included):	12Vdc @ 500mA, center pin negative
Rack Mount kit:	RM-334 - can hold one GPI-10 and two MCG's RM-344 - can hold two GPI-10's and one MCG RM-4 - can hold four GPI-10's

NOTES

