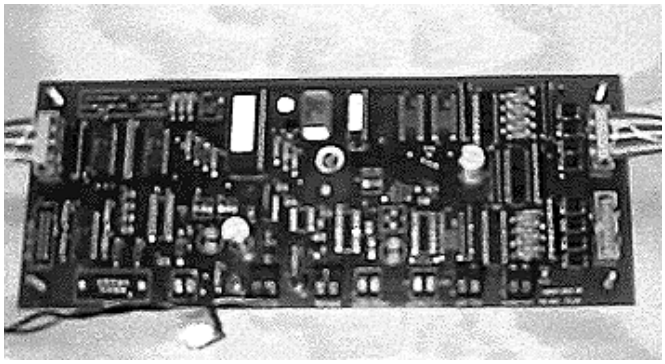
EMPACT SERIES
Communications & Control Equipment

Communications & Documentation Technologies

GRAPHIC INTERFACE UNIT (GIU)



- Interface up to 128 inputs, expandable to 256
- Optional RS232 interface
- Closed contact or switching transistor alarm inputs
- Individual inputs/outputs "on board"
- Multiple lamp capability
- Software controlled lamp interaction
- "Off-the-shelf" software available
- Annunciator programming available

Connecting your Graphic Display Annunciator to other systems usually requires an interface between the output signals of the driving system and the graphic display lamps. Many times the interface is unique to the driving system, so a unique interface has to be designed. In some cases, additional features such as lamp tests, audible alarms, etc., must also be added, which complicates the interface.

The *Graphic Interface Unit (GIU)* has been developed to solve the graphic display interface problems. The *GIU* is a microcontroller-based interface circuit board which is mounted on the reverse side of the graphic display and performs the interface functions required. Because the *GIU* is microcontroller based, interface requirements are handled in software. Software "patches" are available for most standard interface requirements so your interface can usually be quickly and inexpensively produced. The interface is prepared at the same time as graphic drawings using a Computer-Aided-Design (CAD) system. When **CDT** provides you the full-size graphic design for approval, you also receive a summary of the interface. If interface changes are ever required, a replacement PROM can be furnished quickly because a copy of each interface software shipped is archived.

The *GIU* will interface up to 128 inputs with up to 128 lamp outputs. Each *GIU* is expandable to a maximum of 256 inputs and 256 lamp outputs by cascading *GIU* circuit boards.

An optional RS-232 interface allows the *GIU* to be controlled by a host computer system.

Closed contact or switching transistor alarm inputs can be either normally closed or normally open. Normally closed inputs can be provided with supervision. Inputs are connected by ribbon cable or metal-to-metal captive screw terminals on an optional paddle board assembly.

Individual inputs/outputs are provided "on board" for the following features:

—*Lamp test* (from front panel switch or host computer input)
—*Audible alarm* (3 different tone outputs)
—*Alarm silence* (silence of audible alarm)
—*Alarm acknowledge*
—*Alarm reset*

Each lamp output is capable of powering up to 4 lamps simultaneously for multiple lamp requirements.

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Some applications require the interaction to two or more lamps. Lamp interaction is software controlled and changeable to meet special requirements.

"Off-the-shelf" software is available for most popular applications. Contact the factory for more details on each operation scenario. The following scenarios are currently available.

—*Perimeter alarm* (red, yellow, green lamps in zones)

—*Fire alarm* (red lamps with yellow lamp trouble indications)

—*Building security* (red, or other color lamps, with trouble)

—*Personal alarm* (red and green indications)

—*Process control* (individual lamps of any colors)

—*Access control* (red, yellow, green lamps in zones)

Unique annunciator programming services available. Contact **CDT** for details.

SPECIFICATIONS

Alarm Inputs: 128 discrete inputs from closed contacts, open collector gate, or serial data, RS-232 (optional). Can be expanded in increments of 64 to 256 inputs maximum.

Input Configuration: Inputs can be normally open or normally closed, jumper selectable. Supervision is available when using the normally closed input configuration.

Input Connections: Inputs are available on ribbon cable or optional metal-to-metal captive screw terminals. The optional screw terminals are mounted on a "paddle" board which can be mounted next to or within 10 feet of the *GIU*. (Convenient mounting is in the rear of the annunciator enclosure.)

Serial Interface: Optional RS-232 serial interface is available on the circuit board. Protocol uses a simplified instruction set.

Control Inputs: Control inputs are provided on board for the following functions. Each function is energized by a single contact, normally open switch connection to ground (or common).
—*Lamp test*—illuminates all lamps
—*Alarm silence*—silences the audible alarm (if connected) and changes flashing lamps to solid (when programmed)
—*Alarm acknowledge*—changes flashing lamps to steady (when programmed). Other operations available.
—*Alarm reset*—extinguishes alarm indications (when programmed). When reset, normal operation calls for system to recheck inputs for presence of alarm signals. Realarm will occur if alarms are still present.
—*Silence with ringback*—silences a trouble condition but will realarm when the trouble condition is repaired, informing the operator that silence must be reset.

Realarm Feature: Normally programming requires the audible alarm to sound whenever a new alarm condition is received.

Lamp Outputs: 128 discrete lamp driver outputs. Each output is capable of driving up to 4 lamps simultaneously. Any color lamp can be connected to any output.

Lamp Control: Relationship of input conditions to lamp illumination is controlled by the one-chip microcontroller. Each operation is controlled by a preprogrammed operational scenario. Contact the factory for the description of each of the currently available scenarios. Custom programming is available to meet your unique application. Contact the factory for details.

Audible Alarms: Three separate audio outputs with volume control are available. Each output is programmable. Current outputs are:
Steady tone: 1000 Hz.
Interrupted tone: 1000 Hz., 50% duty cycle. 1 cycle per second.
Warble tone: 1000 Hz. center freq., 250 Hz deviation.

Power Requirement: 12VDC, 1.8 amps. (max) provided by external UL-listed, wall-mounted transformer. Backup battery optional.

Size: GDI circuit board; 6" W x 12" L (approx. 1-1/4-inch component height) Paddle board terminal strip, 64 terminals each, 2 required for 128 inputs; 3" W x 8" L

Weight: Circuit board 1 lb.

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