

# SuperBus® 2000 Printer or Automation Module

Document Number: 466-1364 Rev. A  
May 2000

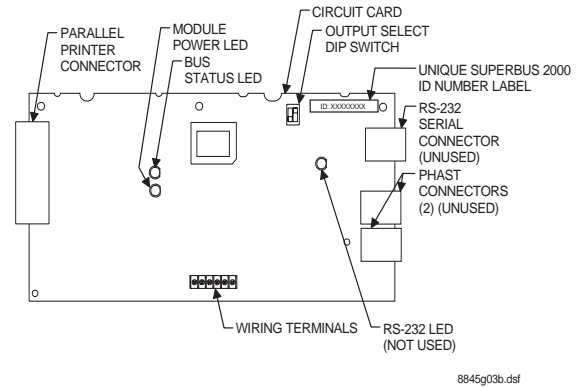
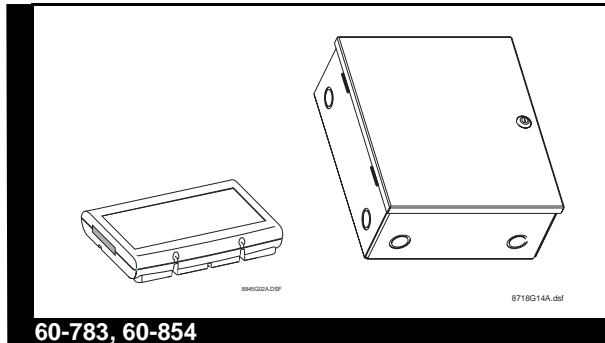


Figure 1. Module Circuit Board Components

## Installation Instructions

Table 1. Module Component Descriptions

### Product Summary

The ITI® SuperBus® 2000 Printer Module allows you to connect a parallel printer to any compatible system panel. The module allows you to print (or log) selected system events as they occur.

For additional security, a magnetic switch can be added and connected to the built-in input zone to provide module tamper protection.

Power for the module is provided by the system panel.

Component	Function
Parallel Connector	Provides connection to a parallel printer.
Power LED	Indicates module power status.
Bus Status LED	Flashes to indicate normal communication to the panel bus.
Output Select DIP Switch	Selects output type.
RS-232 Status LED	Indicates RS-232 transmission. (Not used.)
Unique ID Number Label	Indicates module unique identification number.
RS-232 Connector	Not used.
PHAST Connectors	Not used.
Wiring Terminals	Used for panel SuperBus and module zone input connections.

### Features

- “Centronics™” type parallel printer output.
- Supervised, fire-rated zone input.
- On-board status indication.
- SuperBus 2000 automatic addressing data bus.
- Two case styles:  
60-783 - Plastic  
60-854 - Metal

Figure 1 shows the main module components and Table 1 describes them.

### Installation Guidelines

- Do not exceed the panel total auxiliary output power when using panel power for bus devices and hardwired sensors that require panel power (see the specific panel *Installation Instructions*).
- Maximum current draw of the module (from the panel) is 100 mA.

- Use 4-conductor, 18-gauge or larger wire from the module to the panel.

## Tools and Supplies Needed

- Small blade and Phillips screwdrivers
- Drill and bits for screws and/or anchors
- Case tamper switch and magnet (optional)
- 25-pin “Centronics” parallel printer cable

### Plastic case accessory kit includes:

- 3/8-inch self-tapping screws
- #6 panhead screws
- 2K Ohm EOL resistor (49-467)
- Wall anchors

### Metal case accessory kit includes:

- 1/4-inch plastic circuit board spacers (40-178)
- 6 x 32 x 1/4-inch circuit board mounting screw (40-006)
- 2K Ohm EOL resistor (49-467)
- Door key lock and keys (40-577)

## Installation

The plastic or metal cased module can be mounted on any interior wall (protected from the elements).

### Installing the Plastic Case Module

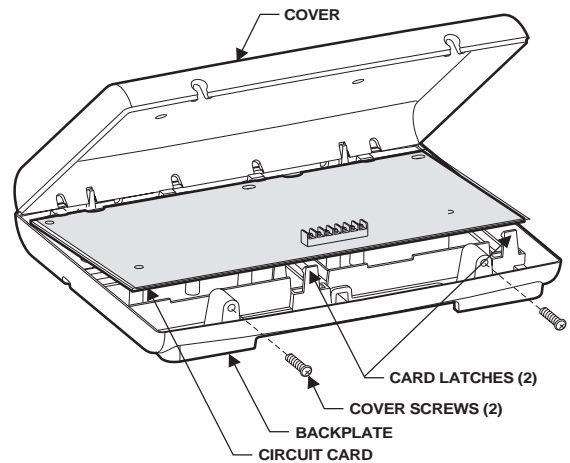
The plastic case module can be wall or gang-box mounted.



**CAUTION:** You must be free of static electricity before handling circuit boards. Wear a grounding strap or touch a bare metal surface to discharge static electricity.

#### To mount the plastic case module on a wall:

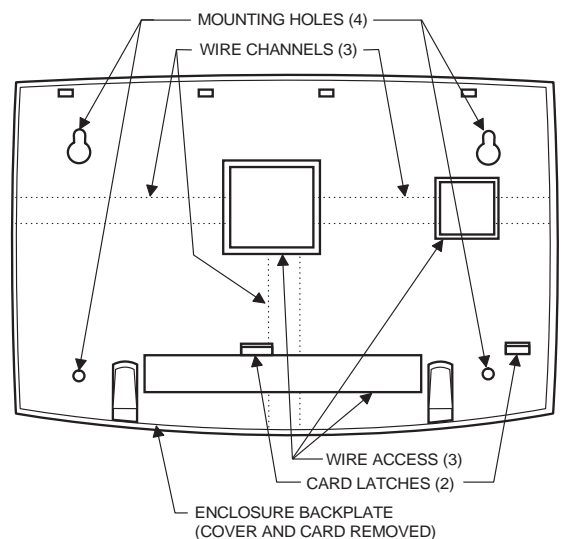
1. Turn off panel power and disconnect backup battery(s).
2. Remove the module cover and circuit card and set them aside (Figure 2).



8845G1A.DSF

**Figure 2. Removing Plastic Case Cover and Circuit Card**

3. Place the module on the wall and mark the mounting holes locations (Figure 3).



8845G08A.DSF

**Figure 3. Plastic Case Mounting Holes**

4. Drill the holes and insert the appropriate anchors.
5. Secure the back plate to the wall with panhead screws.
6. Snap the circuit card back into the back plate.

## Installing the Metal Case Module

### To mount the metal case module:



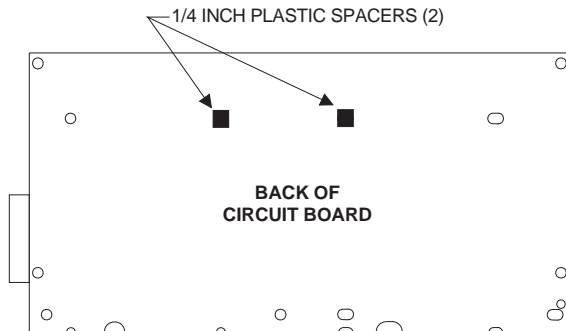
**CAUTION:** You must be free of static electricity before handling circuit boards. Wear a grounding strap or touch a bare metal surface to discharge static electricity.

1. Remove the metal case cover and module circuit board and set them aside.
2. Hold the case against the mounting surface and mark the four [larger] mounting holes.
3. Drill the mounting holes in the wall and insert the appropriate anchors.
4. Remove case wiring knockouts as necessary.
5. Remove case rectangular connector knockout.
6. Secure the case to the wall with panhead screws.

## Mounting the Module Board into the Metal Case

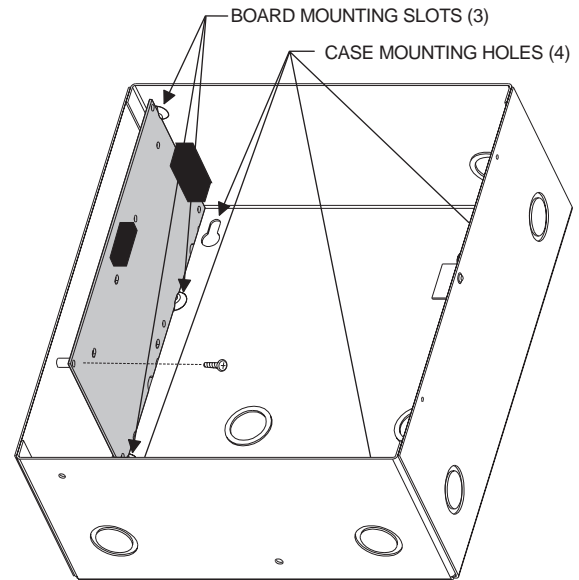
### To mount the board into the metal case:

1. Snap the included 1/4 inch plastic spacers into the back of the circuit board as shown in Figure 4.
2. Slide the board into the three board slots in the left side of the enclosure as shown in Figure 5. Make sure the connector fits through the case knockout.
3. Secure the board to the enclosure with the included button head machine screw.



8845G05A.DSF

**Figure 4. Installing the Board Mounting Spacers**



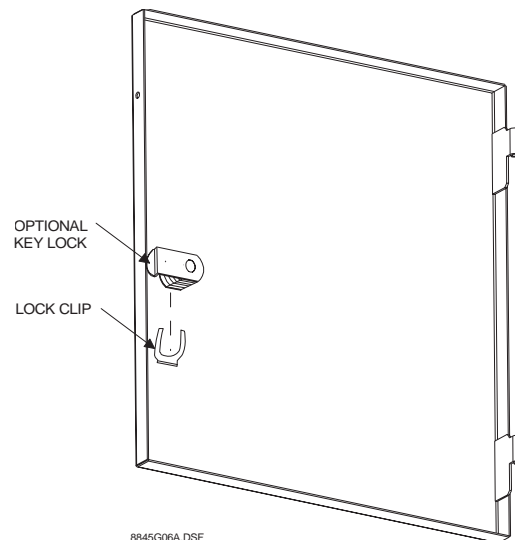
8845G07A.DSF

**Figure 5. Mounting the Board into Metal Case**

## Mounting the Optional Key Lock

### To mount the optional key lock into the metal case:

1. Remove the lock knockout from the panel door.
2. With the key in the lock, insert the lock into the knockout hole as shown in Figure 6.
3. Slide the lock clip onto the lock body as shown.



8845G06A.DSF

**Figure 6. Optional Key Lock Mounting**

## Advent Panel Wiring

This section describes how to wire the module to the Advent panel and how to connect hardwire sensors to the module. Refer to Figure 8 and Table 2 for wiring examples and connection descriptions.

### To wire the module to the panel:

1. Make sure power is turned off to the panel.
2. Make sure the power transformer and backup battery(s) are disconnected from the panel.
3. Wire the module to the panel SuperBus wiring harness as shown in Figure 7.
4. Plug the wiring harness into the panel primary SuperBus connector.

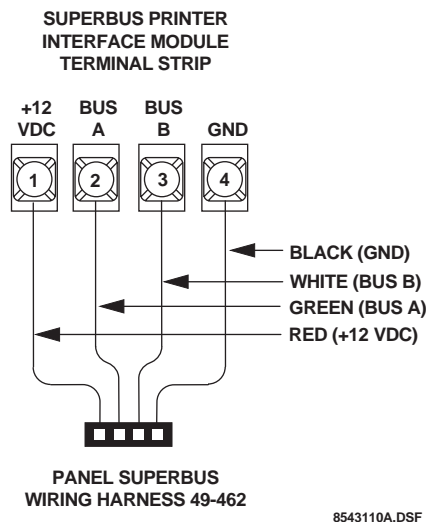


Figure 7. Advent Panel SuperBus Wiring

### To connect a device to the module:

1. Attach the appropriate parallel printer cable to the connector on the module (Figure 8).
2. Connect an input device (if used) to the module wiring terminals (Figure 8).

## Setting the Output Select DIP Switch

**CAUTION:** The module output select DIP switch *must* be set before the module is powered up.

### To set the DIP switch to “Printer:”

1. Set switch 1 to “off” (down).
2. Set switch 2 to “on” (up).

**Note:** Other switch settings are not used.

3. Connect an input device (if used) to the module wiring terminals as shown in Figure 8.

## Installing a Case Tamper Switch

If the module is visible, you may want to add case tamper detection. Then, if someone opens the cover, the switch opens and causes an alarm. To add module case tampering, install a magnet in the cover and a reed switch into the back plate or case. Wire the switch to the module or one of the panel zone inputs. (See Figure 8 or panel *Installation Instructions*.)

## Power Up and Bus Communication

This section describes how to power up the panel and the module and get them communicating with each other.

### To power up the panel and the module:

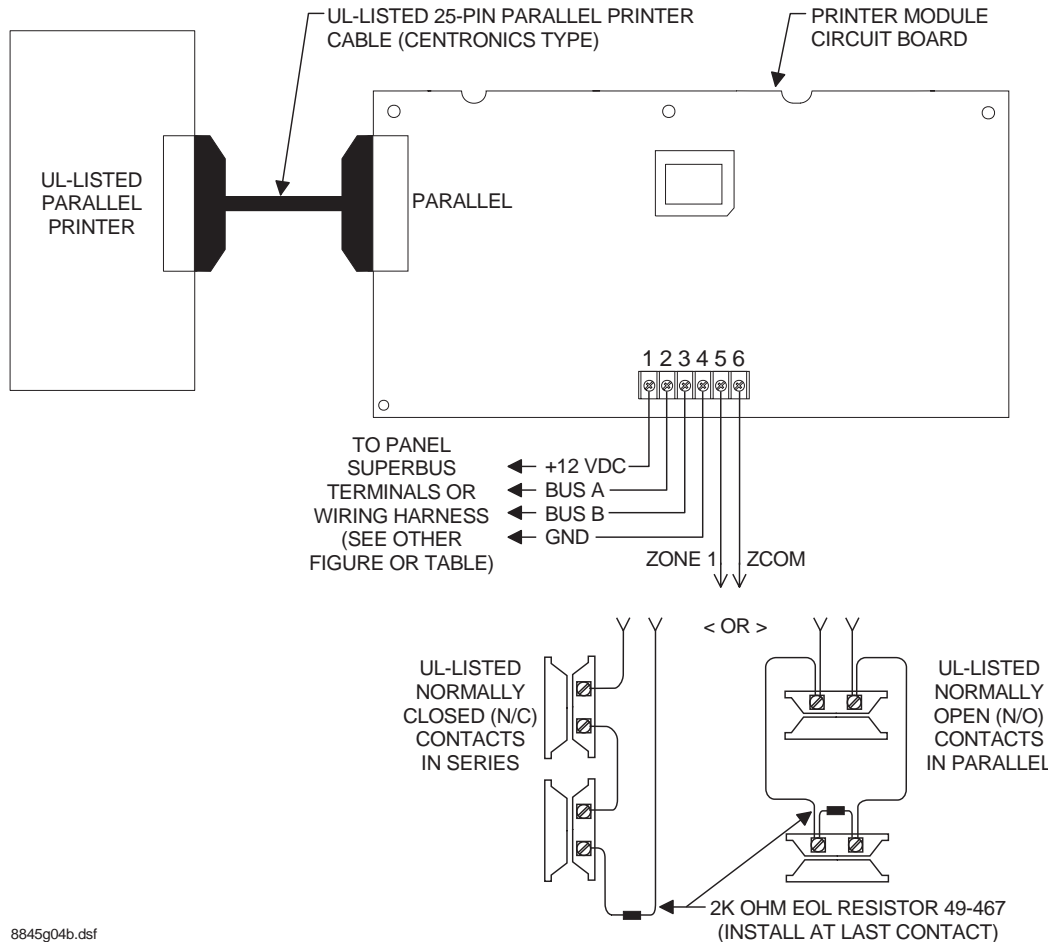
1. Verify that all wiring at the panel and the module are correct.
2. Reconnect the panel batteries and plug in the power transformer. The module power LED should be on.
3. On initial power up, the panel automatically adds (learns) the module into panel memory.

After a few seconds, the module bus status LED should flash to indicate successful communication with the panel.

If the module bus status LED does not flash, the module must be manually added (learned) into panel memory. (Refer to the panel *Installation Instructions* for adding SuperBus modules.)

## Programming/Operating the Module

Refer to the panel *Installation Instructions* for module input/output programming and operation.



8845g04b.dsf

**Figure 8. Advent Panel/Module Wiring**

## Module Wiring Terminal Connections

**Table 2. SuperBus 2000 Printer or Automation Module Terminal Connections**

Terminal	Name	Used for
1	+12V DC	SuperBus DC power supply input. 12 VDC @100 mA maximum draw from panel.
2	BUS A	SuperBus communication connection
3	BUS B	SuperBus communication connection
4	GND	SuperBus common ground connection.
5	ZONE 1	Zone 1 input connection.
6	ZCOM	Zone input common connection.

## Testing

### To test the module:

1. Verify that all wiring at the panel and the module is correct.
2. Connect panel AC transformer and backup battery.
3. Press \* twice to return to the normal mode of operation and test for proper parallel printer operation with the selected system events.

## Troubleshooting

### Module POWER LED stays off.

Check module and panel power.

### Module BUS STATUS LED stays off.

1. Check SuperBus wiring and connections.
2. Check for proper panel/SuperBus module programming and initialization.

### Module BUS STATUS LED stays on.

1. Reinitialize panel and module by turning panel power off and on.
2. Module circuit failure. Replace the module.

### Module BUS STATUS LED blinks, but no printer operation.

1. Check that the printer power is on.
2. Check for correct module DIP switch setting.

**Note: If module DIP switch settings are changed after initial power up, the module must be powered down and back up. Then the module must be deleted and then added (re-learned) into panel memory (see panel *Installation Instructions* for details).**

3. Blinking LED indicates that the panel and module are communicating correctly by way of the SuperBus.
4. Check module and device cables and connections.
5. Check panel/module programming.

## Specifications

**Compatibility:** Advent (and Custom Versions) fire/security panels.

**Power Requirements:** 12 VDC nominal, 100 mA maximum draw from panel.

**Panel Data Bus:** ITI SuperBus auto addressing digital data bus.

**Parallel Printer Port:** "Centronics" type (DB-25, female connector).

**Zone Input:** One supervised, fire-rated zone.

**Storage Temperature:** -30° to 140° F (-34° to 60° C)

**Operating Temperature:** 32° to 140° F (0° to 60° C)

**Maximum Humidity:** 85% relative humidity, noncondensing.

### Approvals/Listings:

FCC Part 15

UL 365 for Police Connected Burglar Alarm Units and Systems

UL 609 for Local Burglar Alarm Units and Systems

UL 864 for Control Units for Fire-Protective Signaling Systems

UL 985 for Household Fire Warning System Units

UL 1023 for Household Burglar Alarm System Units

UL 1610 for Central Station Burglar Alarm System Units

UL 1635 for Digital Alarm Communications System Units

UL 1637 for Home Health Care Signaling Equipment

ULC Canada Commercial Fire/Burglary Warning

System (applied for)

CSFM California State Fire Marshall (applied for)

DOD Sensitive Compartment Information Fac. (applied for)

FM Factory Mutual (applied for)

MEA New York City Material Equipment Acceptance (applied for)

Complies with NFPA 72 for National Fire Alarm Code

### Dimensions:

Plastic case: 6.0" x 8.5" x 1.5" (L x W x D).

Metal case: 11.25" x 9.75" x 4.63" (L x W x D).

### Case Material:

60-783 - High-Impact, ABS plastic.

60-854 - 16 Gauge Steel.

### Case Color:

60-783 - Belgian gray.

60-854 - "Fire" red.

**Installation:** Wall mount.

## Notices

### FCC Notices

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Install a quality radio or television outdoor antenna if the indoor antenna is not adequate.
- Reorient or relocate the panel.
- Move the panel away from the affected equipment.
- Move the panel away from any wire runs to the affected equipment.
- Connect the affected equipment and the panel to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.
- Send for the FCC booklet How to Identify and Resolve Radio-TV Interference Problems, available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock Number: 004-000-00345-4.

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the user's authority to operate the equipment.

### Declaration of Conformity (DoC)

Interactive Technologies, Inc. declares that the ITI model no. 60-792-95R is in conformity with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### Industry Canada Warnings

Notice:

The Industry Canada Label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected

together. This precaution may be particularly important in rural areas.

**Caution:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

**Notice:** The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5.

### AVIS D'INDUSTRIE CANADA

AVIS:

L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.



Security  
Automation  
Fire Protection  
Access Control

### Interactive Technologies, Inc.

2266 Second Street North  
North Saint Paul, MN 55109-2900  
T: 1-800-777-1415  
F: 651-779-4890

ITI, Advent, and SuperBus are registered trademarks of Interactive Technologies, Inc. Centronics is a trademark of Centronics, Inc.

