Simplex

Introduction   This publication describes the installation procedure for the 4100-6030 Service Modem Card, and describes the difference between the service modem card and the CPU card service port.

This product is compatible with the 4100U and the 4100ES Fire Alarm Control Panel (FACP).

In this Publication   This publication discusses the following topics:

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Cautions, Warnings, and Regulatory Information

Cautions and Warnings

READ AND SAVE THESE INSTRUCTIONS- Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depend upon proper installation.

DO NOT INSTALL ANY SIMPLEX® PRODUCT THAT APPEARS DAMAGED- Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify an authorized Simplex product supplier.

ELECTRICAL HAZARD - Disconnect electrical field power when making any internal adjustments or repairs. All repairs should be performed by a representative or authorized agent of your local Simplex product supplier.

STATIC HAZARD - Static electricity can damage components. Handle as follows:

- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.

Information You May Need to Provide to the Telephone Company

If requested by the telephone company, the following information must be provided before connecting the service modem to telephone lines:

- **Original Manufacturer:** Simplex Time Recorder Company
- **Model Number:** 4100-6030
- **Compliance:** FCC Part 68 Rules
- **Type of Jack(s)** (to be installed by the telephone company): RJ-31X
- **Type of Connector(s)**: RJ-11

Cautions, Warnings, and Regulatory Information, *Continued*

Manufacturer's Declaration of Conformity

The Federal Communications Commission (FCC) has established specifications that permit this device to be directly connected to the telephone network.

Simplex Time Recorder
100 Simplex Drive
Westminster, MA 01441
U.S.A.

declares that the Simplex Model 4100-6030 Service Modem Cards conform to the FCC's specifications:

Part 15:

Operation is subject to the following two conditions:
1. This device may not cause harmful electromagnetic interference, and
2. This device must accept any interference received including interference that may cause undesired operation.

Part 68:

This equipment complies with FCC Rules Part 68. A label containing the FCC Registration Number and the Ringer Equivalence Number (REN) is located on the top of the Fire Alarm Control Panel cabinet in which this card is installed. You must provide this information to the telephone company when requested.

The REN is used to determine the number of devices that you may legally connect to your telephone lines. In most areas, the sum of the REN of all devices connected to one line must not exceed five (5.0). You should contact your telephone company to determine the maximum REN for your calling area.

This equipment uses the following USOC plug: RJ-11.

This equipment may not be used on party lines or on coin service provided by the telephone company.

An FCC-compliant telephone cord and modular plug are available for this equipment, which is designed to connect to the telephone network or premises wiring using a Part 68-compliant compatible jack. See installation instructions for details.

Introduction to the Service Modem

Overview

The 4100-6030 Service Modem is an option card that can be attached to the CPU board. The service modem provides support for remote access to PCs.

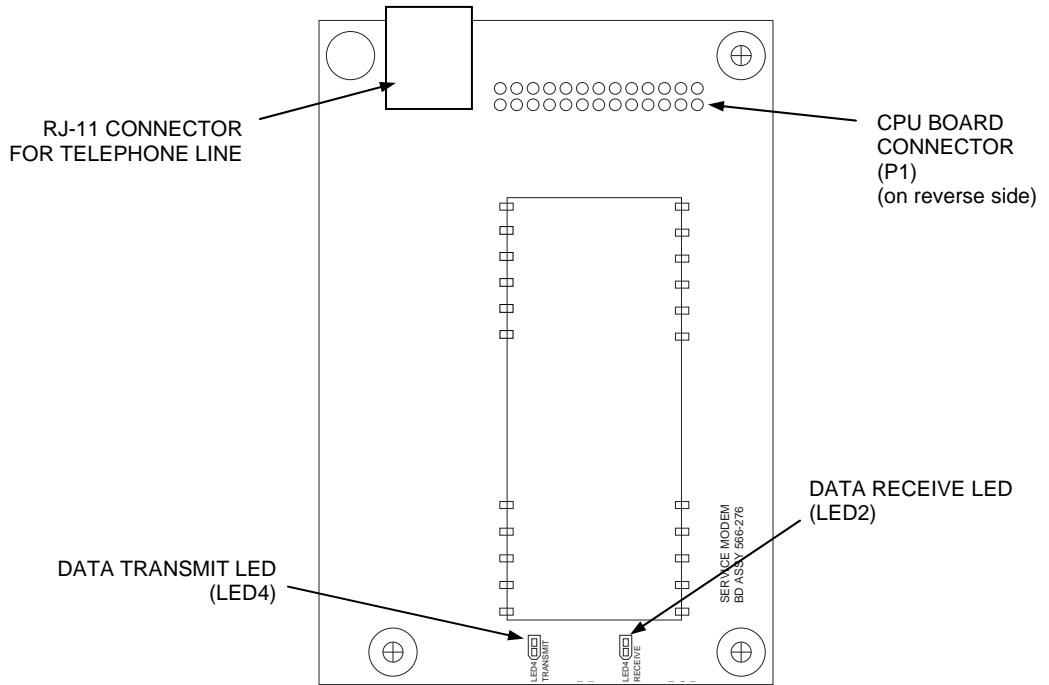Figure 1, below, is an illustration of the service modem.

Figure 1. The Service Modem

Service Modem LED Indications

The service modem has the following LEDs:

LED 2. Illuminates when the modem receives data.

LED 4. Illuminates when the modem is transmitting data.

Specifications

Table 1 lists the service modem specifications.

Table 1. Specifications

Environmental Specifications	
Normal Operating Temperature	0° C (32° F) to 49° C (120° F)
Humidity	93% relative humidity, non-condensing, at 32° C (90° F)

Installing the Service Modem

Overview

This section describes the mounting procedure for the service modem, and a guideline as to how to connect to a computer.

Mounting

The service modem mounts on the CPU daughter card. Use the following instructions to mount the service modem to the CPU card.

1. Attach the metal standoff (524-253) with a nut (322-122) to the CPU card.

2. Secure the modem to the CPU card with the plastic standoffs as shown in Figure 2. At the same time, connect P4 on the CPU card to P1 on the modem.

3. Attach a ground wire to the service modem above the metal standoff with a 441-002 screw.

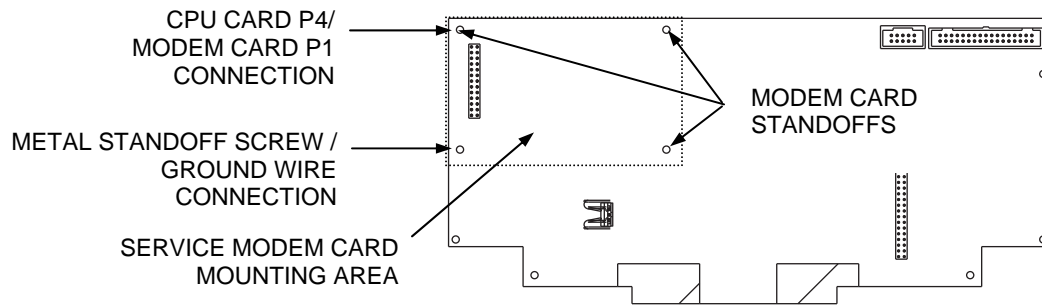4. Connect the ground wire to the backplane of the FACP chassis.

CPU CARD P4/
MODEM CARD P1
CONNECTION

METAL STANDOFF SCREW /
GROUND WIRE
CONNECTION

SERVICE MODEM CARD
MOUNTING AREA

MODEM CARD
STANDOFFS

Figure 2. Mounting the Service Modem

Connecting to a Computer

An RJ-11 port is provided on the service modem for a standard phone line connection to the PC. The remote PC must be set up with its own modem for the connection to operate.

The HyperTerminal parameters must be set as follows:

Emulation = VT100/VT220
Baud Rate = 19,200
Data Bits = 8
Parity = None
Stop Bits = 1
Flow Control = None
Modulation Type = Standard

Refer to the corresponding chapter in the *ES Panel Programmer's Manual* (574-849) for further information.

Note: If a DACT is installed, the RJ-11 port can be connected to TELCO line 2 (TB1) on the house R2/T2 terminals. This eliminates the need for a third phone line.

Software Modes

Overview
The FACP can connect to PCs running important utilities, such as diagnostics, programming, CPU firmware downloading, and channel monitoring. It connects to PCs running all of these utilities via the service port on the CPU daughter card. When a PC is located remotely from the FACP, the 4100-9832 Service Modem is used.

Software Modes
There are three basic software modes that the service port or service modem can be used to connect to:

- Service and Diagnostics Mode
- Data Transfer Interface Mode
- Master Bootloader Interface Mode

Each mode is described below.

Service and Diagnostics Mode. The default functionality when a PC is connected to the FACP. On a PC, this mode provides application startup messages, an ASCII interface to a UI command set for diagnostics, and event reporting. The PC must be running terminal emulation software. Connection to a PC is made via serial port or service modem.
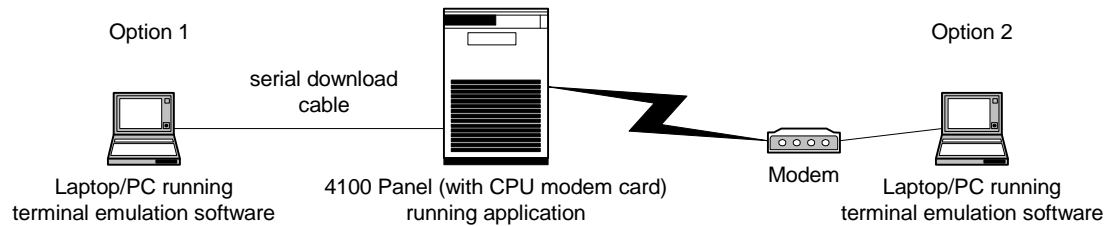

Option 1

serial download cable

Option 2

Laptop/PC running
terminal emulation software

4100 Panel (with CPU modem card)
running application

Modem

Laptop/PC running
terminal emulation software

Figure 3. Service and Diagnostic Interface

Data Transfer Interface Mode. In this mode, the FACP Programmer is enabled. This allows for slave downloading, as well as downloading a configuration and audio messages to the FACP, and uploading a configuration or history log from the FACP. Connection to a PC is made via serial port or service modem.
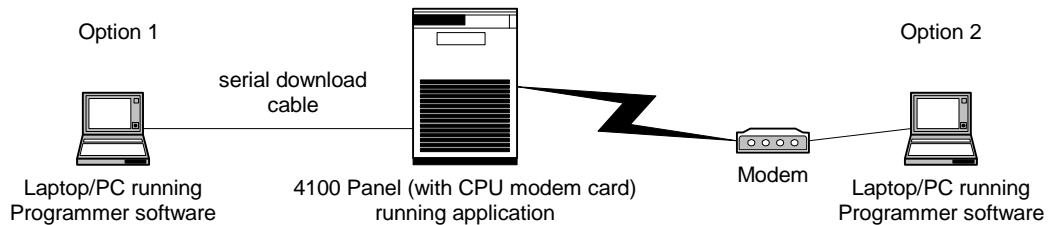

Option 1

serial download cable

Option 2

Laptop/PC running
Programmer software

4100 Panel (with CPU modem card)
running application

Modem

Laptop/PC running
Programmer software

Figure 4. Data Transfer Interface

Software Modes, *Continued*

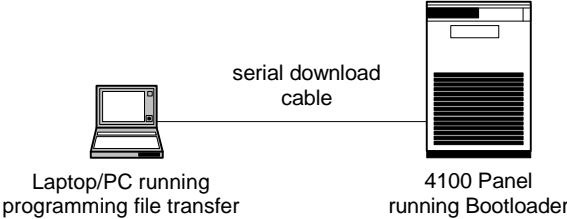**Master Bootloader Interface Mode.** This mode downloads the Master CPU Exec firmware and the CFG.TXT file to the CPU via the serial port.

Figure 5. Bootloader Interface

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