4010-9810 and -9816 DACTs (Digital Alarm Communication Transmitters) Installation Instructions

Cautions and Warnings

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 Simplex.

ELECTRICAL HAZARD - Disconnect electrical power when making any internal adjustments or repairs. Servicing should be performed by qualified Simplex Representatives.

STATIC HAZARD - Static electricity can damage components. Therefore, handle as follows:

1. Ground yourself before opening or installing components (use the 553-484 Static Control Kit).
2. Keep uninstalled components wrapped in anti-static material at all times.

RADIO FREQUENCY ENERGY - This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Overview

This publication shows how to install the 4010-9810 Common Event Reporting or 4010-9816 Point Reporting Digital Alarm Communication Transmitter (DACT) Cards into a 4010 Fire Alarm Control Panel (FACP). Only one of these option cards is allowed per system. ***You cannot have a 4010 DACT card and a network interface card in the same 4010 FACP***. Refer to the *Serial DACT Installation/Programming Instructions* (574-090) for configuration information. Refer to the 842-058 Field Wiring Diagram for additional wiring information.

In this Publication

This publication discusses the following topics:

FCC and IC Requirements

FCC Requirements

1. The Federal Communications Commission (FCC) has established Rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin lines.
2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.
3. The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes.
4. If the telephone company requests information on what equipment is connected to their lines, inform them of:
   a) The telephone number that this unit is connected to,
   b) The Ringer Equivalence Number [0.1B]
   c) The USOC jack required [RJ31X], and
   d) The FCC Registration Number [5QWUSA-32102-AL-E]

   Items (b) and (d) are indicated on the label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all device on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our Company or to one of our authorized agents. Service can be facilitated through our office at:

Simplex Time Recorder
100 Simplex Drive
Westminster, MA 01441
TEL: (978) 731-2500

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FCC and IC Requirements, *Continued*

Equipment Attachment Limitations

"NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements 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.

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 Numbers of all the devices does not exceed 5."

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Applying the FCC and/or Industry Canada Label

When a DACT card is installed in the 4010 Fire Alarm Control Panel, the panel must be labeled accordingly. The label lets all persons servicing the system know that the panel is configured with a DACT card and complies with FCC Part 68 (519-748) and Industry Canada (519-750) listings. To apply the label, do the following:

1. Refer to Figure 1 and locate the LCD Display and the touch pad keys below it.

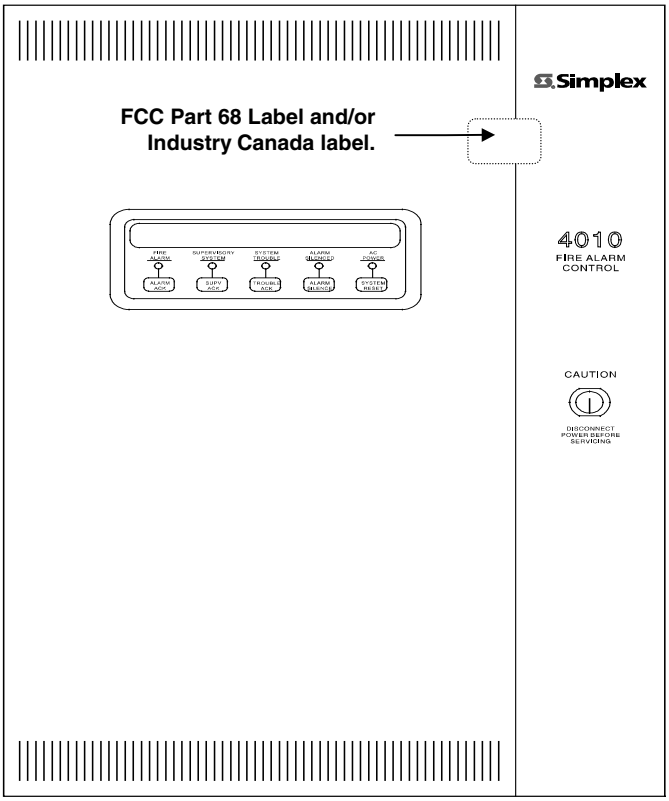

Figure 1. Placement for FCC Part 68 and Industry Canada Labels

2. Notice the placement of the labels above and to the right of the LCD display and the touch pad keys in Figure 1.

3. Place the FCC and Industry Canada labels on the 4010 FACP door in the same position as that shown in Figure 1.

Note: Do not cover vent holes when applying the label.

4010-9810 DACT Card

Overview

The 4010-9810 DACT card (742-155) supports five categories of status changes. The Central Station is notified of Alarm, Trouble, and Supervisory status changes. AC Fail trouble is delayed from 6-24 hours before reporting to the Central Station. The DACT supervises the system CPU via the N2 communications. In the event of a CPU failure, the card sends a "CPU Trouble" message to the Central Station.

Figure 2 shows the location of connectors and switches.

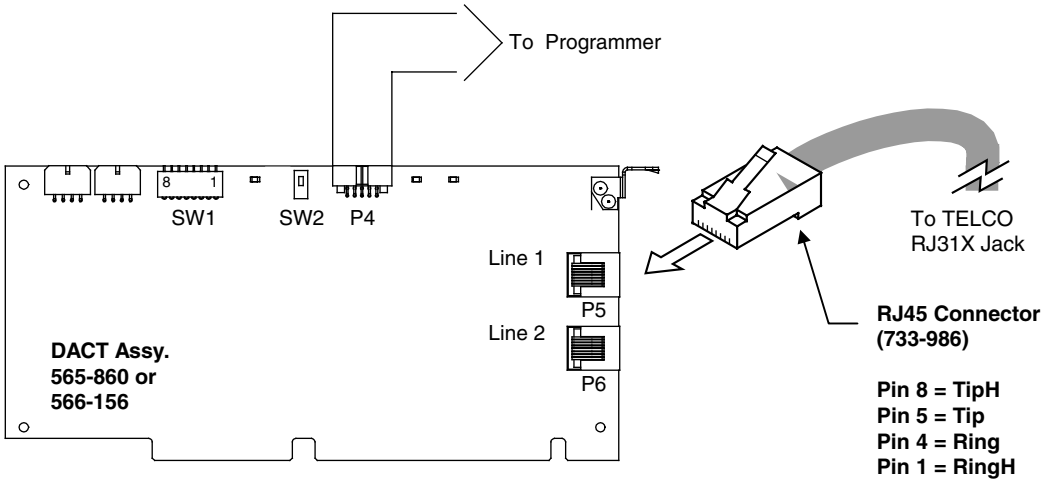

Figure 2. 4010-9810 Common Event Reporting DACT (742-155)

4010-9816 DACT Card

Overview

Specific information that is available about which point in the system experiences a status change is supported by the 4010-9816 Point Reporting DACT card (742-094). The report sent to the Central Station includes the specific CID Point address along with the point status. The Point Reporting DACT supervises the system CPU via N2 communication. In the event of a CPU failure, the DACT sends a "CPU Trouble" message to the Central Station.

Figure 3 shows the location of connectors and switches.

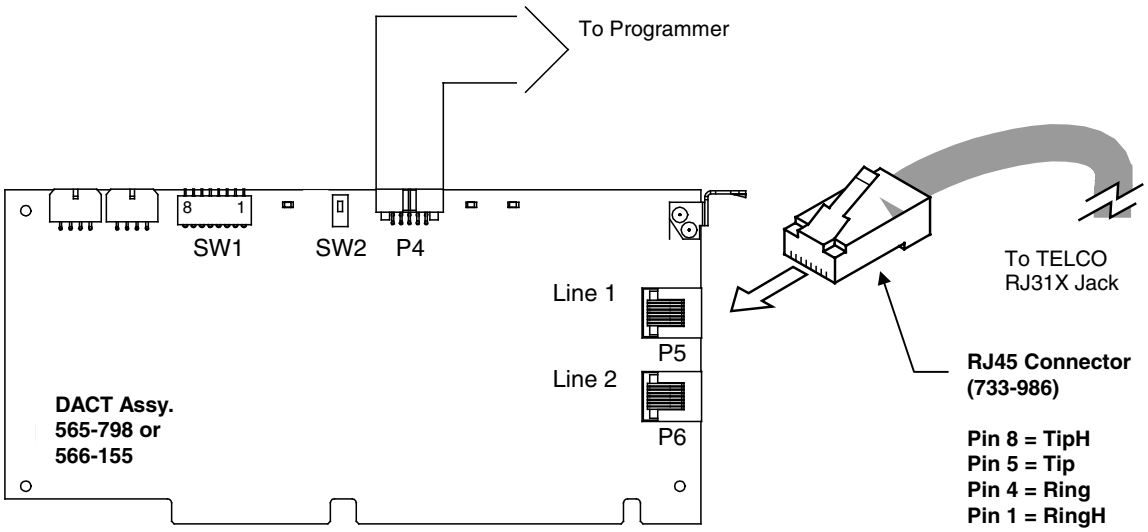

Figure 3. 4010-9816 Point Reporting DACT Card (742-094)

Configuration

Switch Settings

Card Address Setting (SW1)

Option cards in the 4010 system have specific addresses. The card address setting for both the DACT cards is Card 8. Set SW1-4 to the ON position and set the remaining DIP switches to the OFF position.

To self-test the DACTs, set SW1-8 to the ON position. To return the DACTs to normal panel operation, set SW1-8 to the OFF position.

Programmer (SW2)

When interfacing with the DACT programmer, set SW2 to the ON position. Set SW2 to the OFF position for normal panel operation.

Wiring

Telephone Wiring

Have the telephone company install two telephone lines, each terminated with a UL-Listed RJ-31X jack immediately above or as close as possible to the FACP. The connection to the RJ-31X MUST be made via the listed modular jack in installations where the DACT shares the telephone line with premises phones, or other equipment. Connect a UL-Listed RJ45 connector and cable (733-986) from the DACT to the RJ31X jack.

Note: The two telephone line harnesses must take separate paths from the host FACP to the RJ-31X blocks.

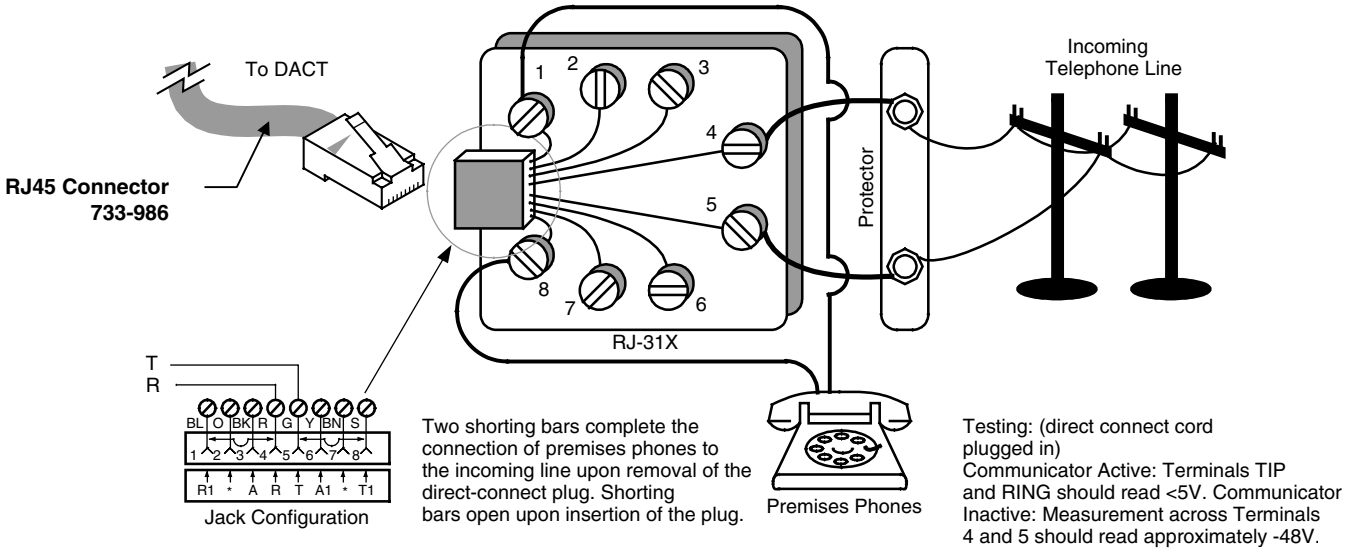

Figure 4. Telephone Company Wiring

Card Installation

Mounting

Install a single DACT card in Expansion Slot 2 shown in Figure 5. When an option card is already present, install the additional option card in Expansion Slot 1. Each option card comes with all necessary harnesses and mounting hardware. Use Steps 1 through 5 to install either card into the 4010 FACP.

1. Disconnect battery and then AC power from the FACP.
2. Set all appropriate DIP switch settings and terminate all wiring to their appropriate connectors.
3. Slide the option card into the appropriate expansion slot (see Figure 5).

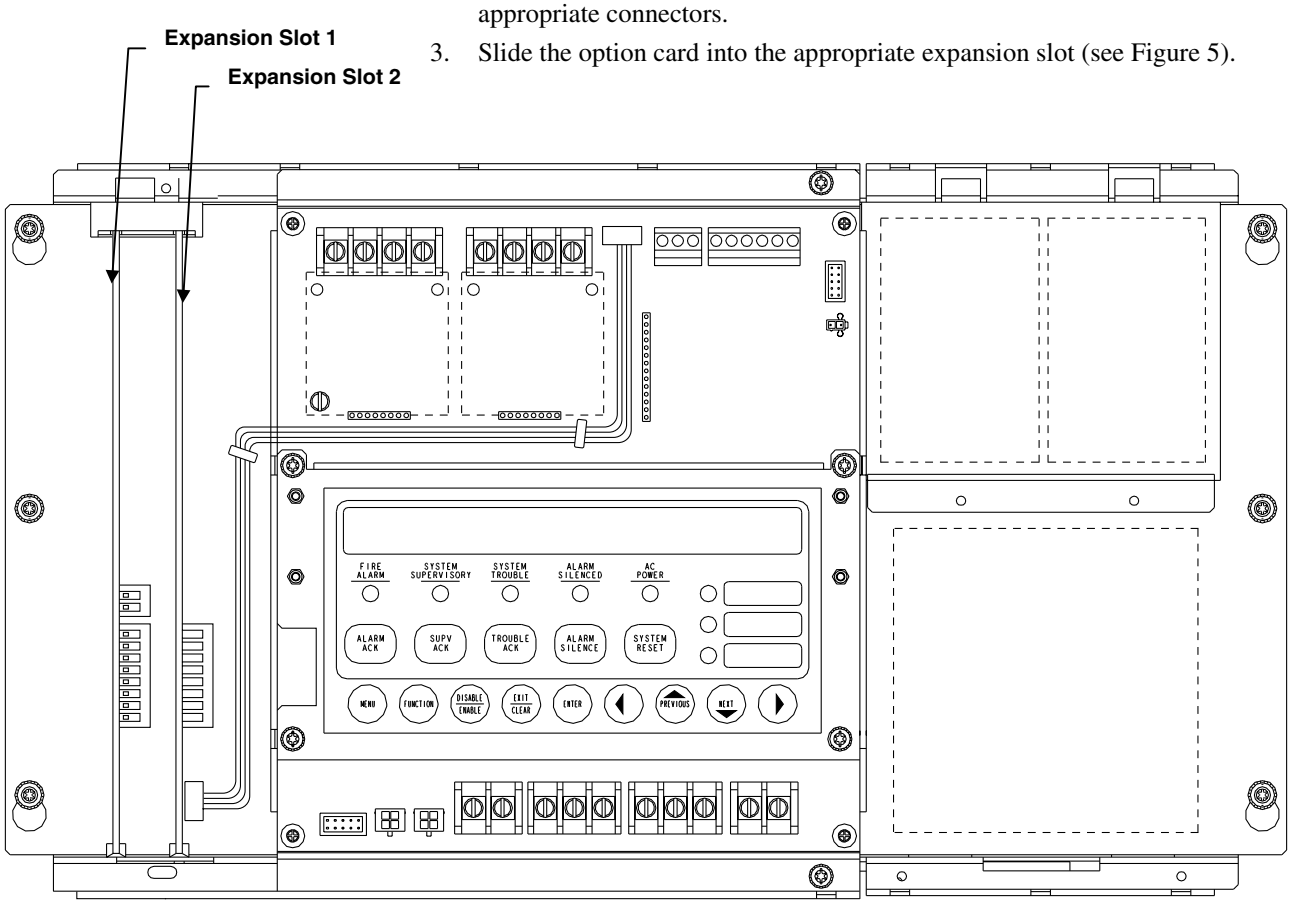

Figure 5. Option Card Expansion Slots

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Mounting *(continued)*

4. Using the screw and lockwasher provided, secure the mounting bracket to the system chassis (see Figure 6).

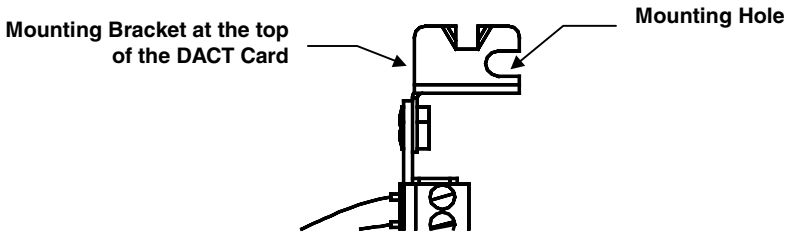

Figure 6. Option Card Mounting Bracket

5. Slide the card lock bracket into the bottom hole in the option card. Secure the bottom of the option card by tightening the card lock bracket screw (see Figure 7).

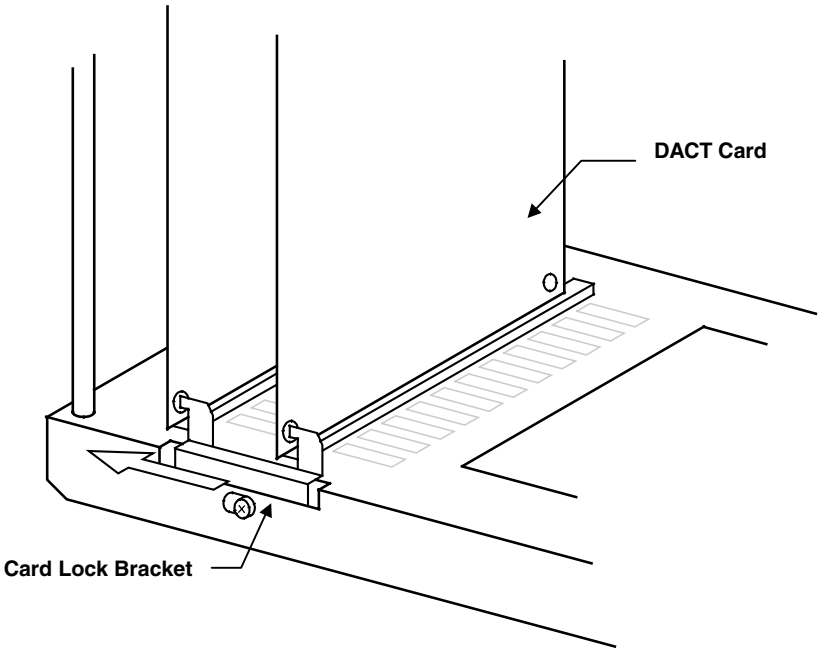

Figure 7. Card Lock Bracket

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N2 Communications/Power Connections

Each DACT card comes with two N2 Communications/Power Harnesses; the 733-953 is a long harness used to interface the option card with the FACP, the 733-956 is a short harness used to "daisy-chain" one option card to another.

Use Steps 1 through 4 to connect the N2 Communications from the option card to the FACP.

1. Remove battery and then AC power from the FACP.
2. Verify that all switches are set correctly.
3. Using the 733-953 harness, connect one end from P1 of the option card to P1 of the 4010 FACP. P1 on the FACP is located between TB2 and TB3 (see Figure 5).

IMPORTANT: Pay careful attention to the routing for Power-Limited and Non Power-Limited wiring. You must maintain a 1/4-inch separation between these two types of wiring. Neatly dress all harnesses and wiring. (See Figure 8 below.)

4. If another option card is installed that is already connected to the FACP, use the 733-956 harness to connect P2 of one option card to P2 of the other. You can now apply AC and then battery power.

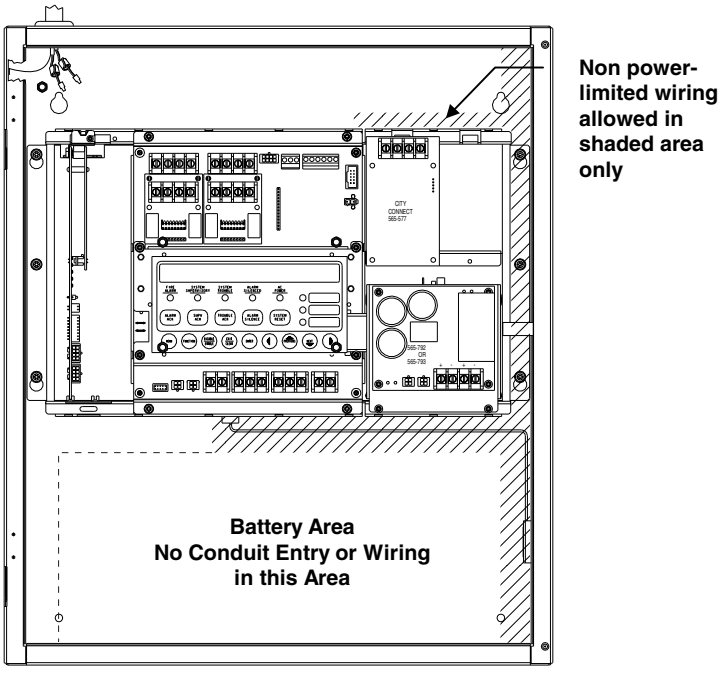

Figure 8. Wiring Information

Compatible Receivers

4010-9810 DACT

Table 1 lists compatible receivers for the 4010-9810 DACT.

Table 1. 4010-9810 Compatible Receivers

		RECEIVER						
	Comm. Format	Osborne/ Hoffman Quickalert Model II	ADEMCO 685 (Notes 2, 6)	Silent Knight 9000	Silent Knight 9800	FBI CP220FB (Notes 5, 6)	RADIONICS 6500	SUR-GARD MLR2-DG (Note 6)
1	3/1 Standard 1800/2300 Hz (Note 1)	YES	YES	YES (Note 3)	YES	YES	YES	YES
2	3/1 Standard 1900/1400 Hz (Note 1)	YES	YES	YES (Note 3)	YES	YES	YES	YES
3	4/2 Standard 1800/2300 Hz (Note 1)	YES	YES	YES (Note 3)	YES	YES	YES	YES
4	4/2 Standard 1900/1400 Hz (Note 1)	YES	YES	YES (Note 3)	YES	YES	YES	YES
5	SIA	YES	NO	YES (Note 4)	YES	NO	NO	YES
6	RADIONICS BFSK 1800/2300 Hz	YES	YES	YES (Note 3)	YES	YES	YES	YES
7	RADIONICS BFSK 1900/1400 Hz	YES	YES	YES (Note 3)	YES	YES	YES	YES

Notes:

1. **10 and 20 PPS (Pulses Per Second)**
2. **With 685-8 Line Card**
3. **With 9032 Line Card**
4. **With 9004 Line Card**
5. **With Rec-11 Line Card**
6. **These receivers are also Factory Mutual approved**

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Compatible Receivers, *Continued*

4010-9816 DACT

Table 2 lists compatible receivers for the 4010-9816 DACT.

Table 2. 4010-9816 DACT Compatible Receivers

		RECEIVER						
	Comm. Format	**Osborne/ Hoffman Quickalert Model II**	**ADEMCO 685 (Notes 2, 6)**	**Silent Knight 9000**	**Silent Knight 9800**	**FBI CP220FB (Notes 5, 6)**	**RADIONICS 6500**	**SUR-GARD MLR2-DG**
1	**3/1 Standard 1800/2300 Hz (Note 1)**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES
2	**3/1 Standard 1900/1400 Hz (Note 1)**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES
3	**4/2 Standard 1800/2300 Hz (Note 1)**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES
4	**4/2 Standard 1900/1400 Hz (Note 1)**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES
5	**ADEMCO CONTACT ID**	YES	YES	NO	YES	YES	NO	YES
6	**SIA**	YES	NO	YES **(Note 4)**	YES	NO	NO	YES
7	**RADIONICS BFSK 1800/2300 Hz**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES
8	**RADIONICS BFSK 1900/1400 Hz**	YES	YES	YES **(Note 3)**	YES	YES	YES	YES

Notes:

1. **10 and 20 PPS (Pulses Per Second)**
2. **With 685-8 Line Card**
3. **With 9032 Line Card**
4. **With 9004 Line Card**
5. **With Rec-11 Line Card**
6. **These receivers are also Factory Mutual approved**