Fire·Lite Alarms
by Honeywell

Digital Alarm Communicator/Transmitter
DACT-UD2

Fire Alarm System Limitations

An automatic fire alarm system–typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control panel with remote notification capability–can provide early warning of a developing fire. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premise following the recommendations of the current edition of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, State and local codes, and the recommendations contained in the Guides for Proper Use of System Smoke Detectors, which are made available at no charge to all installing dealers. These documents can be found at *http:/www.systemsensor.com/html/ applicat.html*. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off in as many as 35% of all fires. While fire alarm
systems are designed to provide early warning against fire, they do not guarantee warning or protection against fire. A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons:

Smoke detectors may not sense fire where smoke cannot reach the detectors such as in chimneys, in or behind walls, on roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level or floor of a building. A second-floor detector, for example, may not sense a first-floor or basement fire.

Particles of combustion or "smoke" from a developing fire may not reach the sensing chambers of smoke detectors because:

- Barriers such as closed or partially closed doors, walls, or chimneys may inhibit particle or smoke flow.
- Smoke particles may become "cold," stratify, and not reach the ceiling or upper walls where detectors are located.
- Smoke particles may be blown away from detectors by air outlets.
- Smoke particles may be drawn into air returns before reaching the detector.

The amount of "smoke" present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm at various levels of smoke density. If such density levels are not created by a developing fire at the location of detectors, the detectors will not go into alarm.

Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectronic sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast-flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.

Smoke detectors cannot be expected to provide adequate warning of fires caused by arson, children playing with matches (especially in bedrooms), smoking in bed, and violent explosions (caused by escaping gas, improper stor-

While a fire alarm system may lower insurance rates, it is not a substitute for fire insurance!

age of flammable materials, etc.).

Heat detectors do not sense particles of combustion and alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Rate-of-rise heat detectors may be subject to reduced sensitivity over time. For this reason, the rate-of-rise feature of each detector should be tested at least once per year by a qualified fire protection specialist. *Heat detectors are designed to protect property, not life.*

IMPORTANT! *Smoke detectors must be installed in the same room as the control panel and in rooms used by the system for the connection of alarm transmission wiring, communications, signaling, and/or power.* If detectors are not so located, a developing fire may damage the alarm system, crippling its ability to report a fire.

Audible warning devices such as bells may not alert people if these devices are located on the other side of closed or partly open doors or are located on another floor of a building. Any warning device may fail to alert people with a disability or those who have recently consumed drugs, alcohol or medication. Please note that:

- Strobes can, under certain circumstances, cause seizures in people with conditions such as epilepsy.
- Studies have shown that certain people, even when they hear a fire alarm signal, do not respond or comprehend the meaning of the signal. It is the property owner's responsibility to conduct fire drills and other training exercise to make people aware of fire alarm signals and instruct them on the proper reaction to alarm signals.
- In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.

A fire alarm system will not operate without any electrical power. If AC power fails, the system will operate from standby batteries only for a specified time and only if the batteries have been properly maintained and replaced regularly.

Equipment used in the system may not be technically compatible with the control. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premise to a central monitoring station may be out of service or temporarily disabled. For added protection against telephone line failure, backup radio transmission systems are recommended.

The most common cause of fire alarm malfunction is inadequate maintenance. To keep the entire fire alarm system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations, and UL and NFPA standards. At a minimum, the requirements of NFPA 72 shall be followed. Environments with large amounts of dust, dirt or high air velocity require more frequent maintenance. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be scheduled monthly or as required by National and/or local fire codes and should be performed by authorized professional fire alarm installers only. Adequate written records of all inspections should be kept.

Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - *Several different sources of power can be connected to the fire alarm control panel.* Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until this manual is read and understood.

CAUTION - *System Reacceptance Test after Software Changes.* To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

This system meets NFPA requirements for indoor dry operation at 0-49° C/32-120° F and at a relative humidity of 93 ±2% RH (non-condensing) at 32 ±2° C/90 ±3° F. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15-27° C/60-80° F.

Verify that wire sizes are adequate for all initiating and indicating device loops. Refer to manual Specifications section for maximum allowable I.R. drop from the specified device voltage.

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning-induced transients. Although no system is completely immune from lightning transients and interferences, proper grounding will reduce susceptibility. *Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes.* Consult with the Technical Services Department if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, and printed circuit board location.

Do not tighten screw terminals more than 9 in-lbs. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static-suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation by authorized personnel.

FCC Warning

WARNING: 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 class A computing device pursuant to Subpart B of Part 15 of FCC Rules, which is designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at their own expense.

Canadian Requirements
This digital apparatus does not exceed the Class A limits for radiation noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

Notes

Notes

It is imperative that the installer understand the requirements of the Authority Having Jurisdiction (AHJ) and be familiar with the standards set forth by the following regulatory agencies:

- Underwriters Laboratories Standards
- NFPA 72 National Fire Alarm Code
- CAN/ULC - S527M Standard for Control Units for Fire Alarm Systems

Before proceeding, the installer should be familiar with the following documents.

NFPA Standards

NFPA 72 National Fire Alarm Code
• Central Station Fire Alarm Systems (Automatic, Manual and Waterflow) Protected Premises Unit
• Local (Automatic, Manual, Waterflow and Sprinkler Supervisory) Fire Alarm Systems
• Proprietary Fire Alarm Systems (Protected Premises Unit)
  NFPA 70 National Electrical Code

Underwriters Laboratories Documents:
UL 38 Manually Actuated Signaling Boxes
UL 217 Smoke Detectors, Single and Multiple Station
UL 228 Door Closers–Holders for Fire Protective Signaling Systems
UL 268 Smoke Detectors for Fire Protective Signaling Systems
UL 268A Smoke Detectors for Duct Applications
UL 346 Waterflow Indicators for Fire Protective Signaling Systems
UL 464 Audible Signaling Appliances
UL 521 Heat Detectors for Fire Protective Signaling Systems
ANSI/UL 864, Control Units and Accessories for Fire Alarm Systems
UL 1481 Power Supplies for Fire Protective Signaling Systems
UL 1610 Central Station Burglar Alarm Units
UL 1638 Visual Signaling Appliances
UL 1971 Signaling Devices for Hearing Impaired

CAN/ULC - S524-01 Standard for Installation of Fire Alarm Systems
CAN/ULC - S527-99 Standard for Control Units for Fire Alarm Systems
CAN/ULC - S559-04 Equipment for Fire Signal Receiving Centers and Systems

FM Approved to ANSI/UL 864

Other:

EIA-232E Serial Interface Standard
EIA-485 Serial Interface Standard
NEC Article 250 Grounding
NEC Article 300 Wiring Methods
NEC Article 760 Fire Protective Signaling Systems
Applicable Local and State Building Codes
Requirements of the Local Authority Having Jurisdiction (LAHJ)

Fire-Lite Documents:

Fire-Lite Device Compatibility	Document #15384
MS-9600(UD)LS(E) Manual	Document #52646

This product has been certified to comply with the requirements in the ANSI/UL 864, Standard for Control Units and Accessories for Fire Alarm Systems, 9th Edition. Operation of this product with products not tested for ANSI/UL 864, 9th Edition has not been evaluated. Such operation requires the approval of the local Authority Having Jurisdiction (AHJ).

SECTION 1 — Product Description

The DACT-UD2 (Digital Alarm Communicator/Transmitter) transmits system status to UL listed Central Station Receivers via the public switched telephone network. The communicator mounts to the FACP main circuit board inside the panel cabinet and is capable of reporting 636 points or 99 zones. The DACT-UD2 is supplied standard with the MS-9600UDLS/E and is optional for the MS-9600LS/E.

1.1 Product Features

- Dual supervised telephone lines
- Mounts inside the control panel
- Extensive transient protection
- Communicates vital system status including:
    - ✓ Independent zone/point alarm
    - ✓ Independent zone/point trouble
    - ✓ Independent zone/point supervisory
    - ✓ AC power loss
    - ✓ Low/No battery
    - ✓ Battery charger trouble
    - ✓ Earth fault
    - ✓ System off normal
    - ✓ 12 or 24 hour test signal with alternating phone lines
    - ✓ Abnormal test signal
    - ✓ Annunciation at control panel of DACT troubles including loss of phone lines, communication failure with either Central Station, total communication failure
    - ✓ NAC faults
    - ✓ SLC faults
    - ✓ Annunciator/option faults

1.2 Compatible Panel

The DACT-UD2 has been designed to be compatible with the following control panel:

- MS-9600LS
- MS-9600UDLS

1.3 Specifications

DC Power - J1 Connector
Current draw in standby and alarm:

- ☐ Standby = 0.0193 amps max.
- ☐ Alarm = 0.0335 amps max. (communicating)

1.4 Digital Communicator

Two modular phone jacks allow easy connection to telephone lines. Modular jacks are labeled PRI and SEC for the Primary and Secondary phone lines. The digital communicator provides the following functions:

- Line Seizure - takes control of phone lines disconnecting any premises phones
- Off/On Hook - performs on and off-hook status to the phone lines
- Listen for dial tone - 440 hertz tone typical in most networks
- Dialing Central Station(s) number - default is Touch-Tone®, programmable to rotary
- For tone burst or touchtone type formats: determine proper 'Acknowledge' and 'Kissoff' tone(s) - the frequency and time duration of the tone(s) varies with the transmission format. The control panel will adjust accordingly
- Communicate in the following formats:
  ✓ Ademco Contact ID
  ✓ SIA

1.5 Telephone Requirements and Warnings

1.5.1 Telephone Circuitry - PH1 & PH2

Ringer Equivalence Number (REN) = 0.0B
AC Impedance: 10.0 Mega Ohm
Complies with FCC Part 68
Mates with RJ31X Male Connector
Supervision Threshold: loss of phone line connection for 2 minutes

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

1.5.2 Digital Communicator

Before connecting the control panel to the public switched telephone network, the installation of two RJ31X jacks is necessary. If trouble is experienced with this equipment, for repair or warranty information, please contact:

Manufacturer: Fire•Lite Alarms, Inc.

One Fire-Lite Place

Northford, CT 06472

(203) 484-7161

Product Model Number: **DACT-UD2**

FCC Registration Number: **1W6AL00B9600LS**

Ringer Equivalence: 0.0B

*Note: This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the DACT-UD2 module IC is a label that contains, among other information, a product identifier in the format **US:AAAEQ##TXXXX**. If requested, this number must be provided to the telephone company.*

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line. If there are any questions concerning these instructions, consult the telephone company or a qualified installer about installing the RJ31X jack and alarm dialing equipment.   Refer to Figure 2.6 on page 17 for an illustration of the proper installation of this equipment.

Important! *The DACT-UD2 must not be used to dial a phone number that is call-forwarded.*

1.5.3 Telephone Company Rights and Warnings

The telephone company, under certain circumstances, may temporarily discontinue services and/or make changes in its facilities, services, equipment or procedures which may affect the operation of this control panel. However, the telephone company is required to give advance notice of such changes or interruptions.

If the control panel causes harm to the telephone network, the telephone company reserves the right to temporarily discontinue service. Advance notification will be provided except in cases when advance notice is not practical. In such cases, notification will be provided as soon as possible. The opportunity will be given to correct any problems and to file a complaint with the FCC if you believe it is necessary.

DO NOT CONNECT THIS PRODUCT TO COIN TELEPHONE, GROUND START, OR PARTY LINE SERVICES.

When the control panel activates, premise phones will be disconnected.

Two separate phone lines are required. Do not connect both telephone interfaces to the same telephone line.

The control panel must be connected to the public switched telephone network upstream (as first device) of any private telephone system at the protected premises.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by ACTA. This equipment is designed to be connected to the telephone network or premises wiring using a compliant RJ31X male modular plug and compatible modular jack that is also compliant.

1.5.4 For Canadian Applications

The following is excerpted from CP-01 Issue 5:

"NOTICE: The Industry Canada (IC) 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 made by an authorized Canadian maintenance facility 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.

<div align="center">

CAUTION

</div>

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

"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 of an interface may consist of any combination of devices subject only to the requirement that the sum of the REN of all devices does not exceed 5."

DOC Compliance - "This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications."

Representative: NOTIFIER/FIRE-LITE, CANADA
10 Whitmore Rd.
Woodbridge, Ontario L4L 7Z4
Phone: (905) 856-8733
FAX: (905) 856-9687

IC Certificate Number: 2132A-9600LS
Ringer Equivalence Number (REN): 0.0B

SECTION 2 DACT-UD2 Installation

2.1 Installation in MS-9600LS FACP

⚠ *WARNING! Disconnect all sources of power (AC and DC) before installing or removing any modules or wiring.*

FACP Keypad/Display Removal

Removal of the keypad/display is normally not necessary. If, however, it becomes necessary to replace the keypad/display, access the auxiliary trouble bus connectors at J16 and J17 or install the DACT-UD2 option module on J2, the Keypad/Display can be removed by inserting a Phillips screwdriver into each of the three holes located in the flexible covering of the Keypad/Display and loosening the three mounting screws. Note that it is not necessary to disconnect the cables between the Keypad/Display and the main circuit board unless the unit itself is being replaced. Carefully lift the Keypad/Display and rest the unit at the bottom of the main circuit board.

Note: When installing the DACT-UD2, the main motherboard must be removed from the chassis. Unplug the power supply cable from J1 before proceeding.
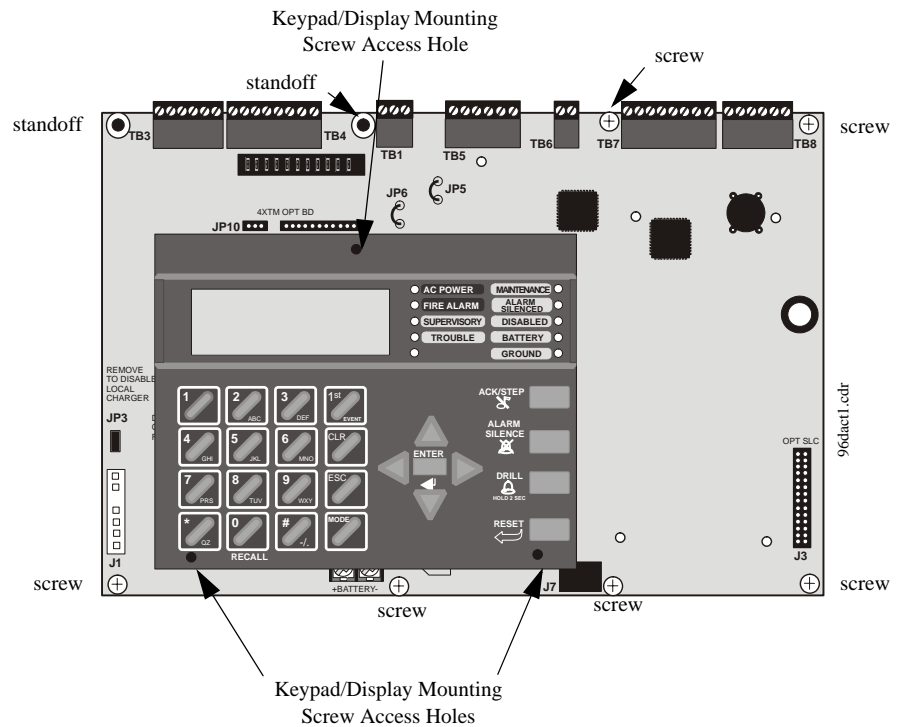
Figure 2.1 Keypad/Display Removal

2.1.1 DACT-UD2 Installation

⚠ *WARNING!* *Disconnect all sources of power (AC and DC) before installing or removing any modules or wiring.*

The DACT-UD2 module plugs into connector J2 on the FACP main circuit board.
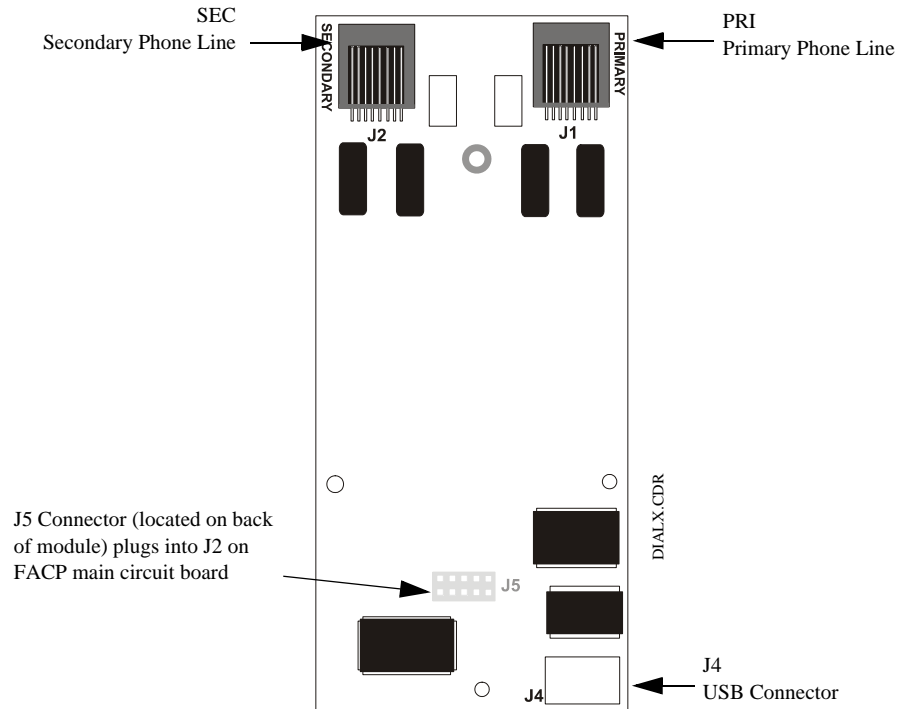
Figure 2.2 DACT-UD2 Module

The following steps must be followed when installing the DACT-UD2 module:

1. Remove all power (AC and DC) from FACP before proceeding with installation

2. Remove all main circuit board mounting screws (6 locations) and the 4XTMF module standoffs (2 locations), unplug the power supply cable from J1 and lift the main circuit board assembly off the chassis (refer to Figure 2.1)

3. Remove the Keypad/Display from the main circuit board as described in the beginning of this section

4. Remove and discard the Keypad/Display support standoff that presently occupies DACT-UD2 standoff location #3 (refer to Figure 2.3)

5. Install the supplied DACT-UD2 female/female standoffs in the three locations shown in Figure 2.3 and secure with the three supplied screws, inserted from the bottom side of the main circuit board. Be sure to tighten them fully.

6. Carefully plug connector J5 on back of the DACT-UD2 module into connector J2 on the FACP main circuit board, being careful not to bend any pins

7. Align the mounting holes in the DACT-UD2 module with the newly installed standoffs on the FACP main circuit board
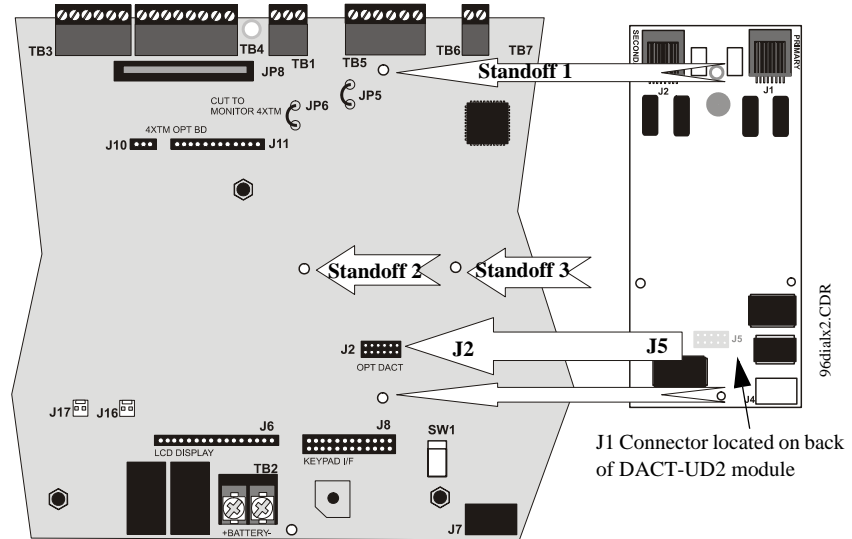
Figure 2.3 DACT-UD2 J1 Connector to FACP J2 Connector

8. Secure the module to the standoffs on the main circuit board with two of the screws supplied with the DACT-UD2 and the supplied male/female standoff which becomes the new Keypad/Display support in that location (see Figure 2.4) *Note: It is important that the supplied hardware be used to secure the module in order to help protect against electrical transients.*
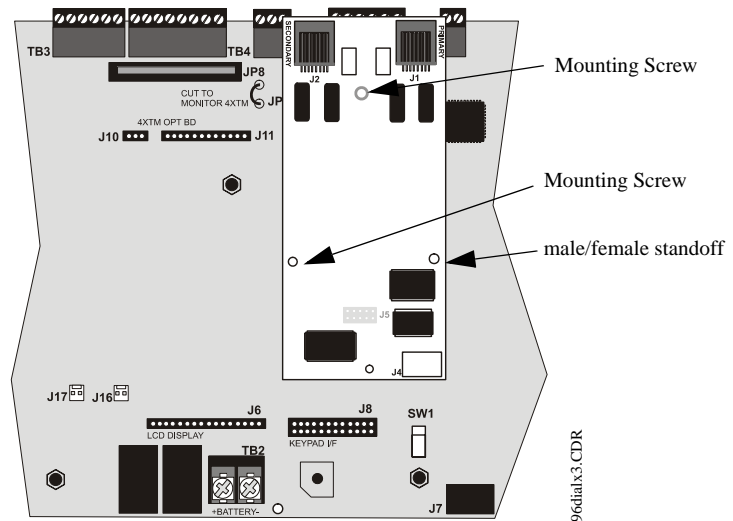
Figure 2.4 DACT-UD2 Installation on Standoffs

9. Reinstall Keypad/Display on the main circuit board by positioning the unit over the appropriate standoffs and securing with screws which were loosened in step 3

10. Remount the main circuit board assembly to the chassis using screws and standoffs in their original locations. Plug in the power supply cable at J1 on the main circuit board

11. Make certain to program the control panel for DACT-UD2 operation

12. Refer to "Digital Communicator" on page 10, before proceeding with this step. Connect the premises primary and secondary phone lines to the DACT-UD2 as illustrated in Figure 2.5 and test the system for correct operation

Important! *The DACT-UD2 must not be used to dial a phone number that is call-forwarded.*
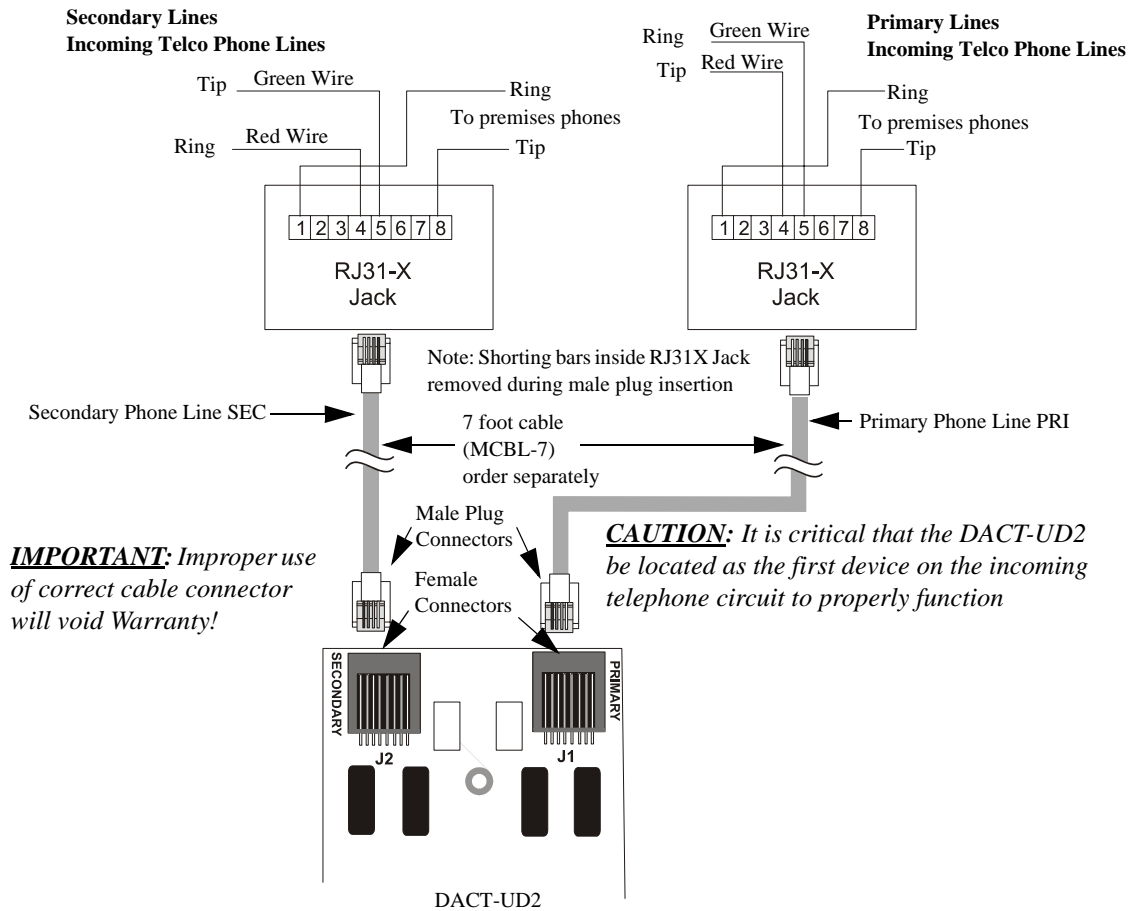
Figure 2.5 Wiring Phone Jacks

It is critical that the DACT be located as the first device on the incoming telephone circuit to properly function.

Customer Premises Equipment and Wiring

Network
Service
Provider's
Facilities

RJ31X
Jack

MS-9600LS with DACT-UD2

Unused
RJ-11 Jack

Computer

Telephone
Line

Network
Demarcation
Point

Telephone

Answering
System

Fax Machine

Telephone

Unused
RJ-11 Jack

Telephone

Telephone
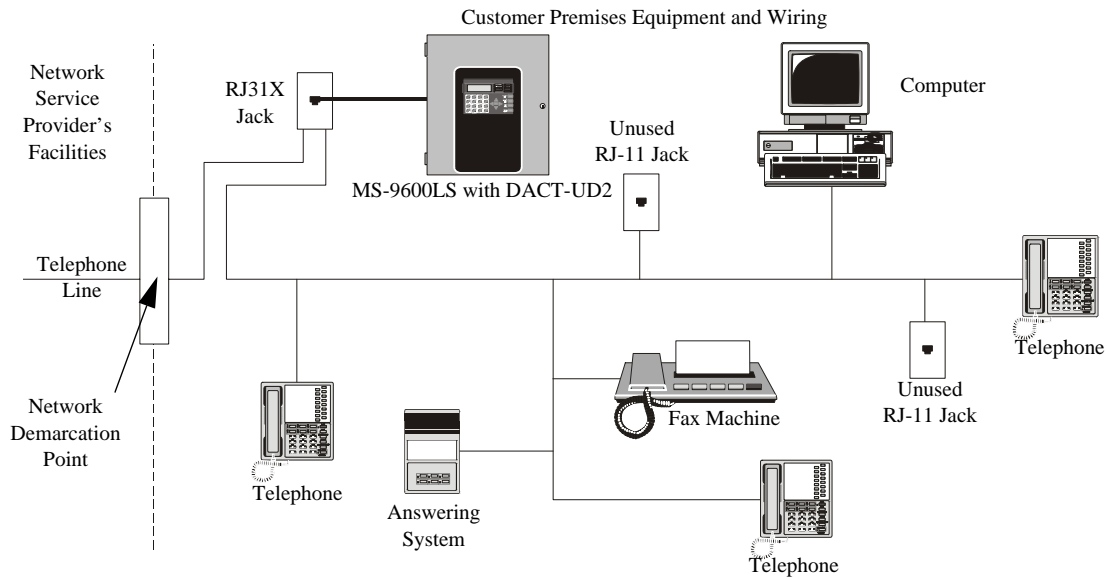
Figure 2.6 DACT-UD2 Installation

SECTION 3 Programming for DACT-UD2

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION AND OTHER INVOLVED PARTIES			
This product incorporates field-programmable software. In order for the product to comply with the requirements in ANSI/UL 864, Standard for Control Units and Accessories for Fire Alarm Systems, certain programming features or options must be limited to specific values or not used at all as indicated below:			
Program feature or option	**Permitted in ANSI/UL 864? (Y/N)**	**Possible settings**	**Settings permitted in ANSI/UL 864**
Trouble Call Limit	N	Refer to "Trouble Call Limit (Dialer Runaway Prevention)" on page 22. Trouble Call Limit = 0 (factory default): unlimited calling to Central Station for any trouble condition Trouble Call Limit = 1 - 99: limits call for each unique trouble to from 1 to 99 within a 24 hour period	Trouble Call Limit = 0 for unlimited Central Station trouble calls
Remote Download	Y	Refer to Remote Download - Proprietary No Remote Download - Proprietary Yes	Remote Download *Proprietary Yes* for Proprietary Installations Only

3.1 Programming the MS-9600LS Fire Alarm Control Panel

Refer to the MS-9600LS Manual programming section for general programming information. To program the MS-9600LS FACP for use with the DACT-UD2:

1. Press the *Enter* or *Mode* key to display the Read Status/Programming screen

2. Press *2* to access Programming

3. Enter the Master level password

4. Press the down arrow key twice to view the screen with the Option Modules choice

5. Press *3* for Option Modules to access the Option Modules screen as shown to the left

6. Program the FACP for use with the DACT-UD2 using the following procedure

3.1.1 On-Board DACT

```
   OPTION MODULES
1=ANNUNCIATORS/UDACT
2=ON BOARD DACT
3=PRINTER/PC
```
Option Module Screen

The DACT-UD2 (Digital Alarm Communicator/Transmitter) is an optional module which installs directly on the FACP main circuit board for communication to a central station. Pressing *2* while viewing the Option Module Screen will cause the following screens to be displayed:

```
   ON BOARD DACT      ⇩
1=ENABLED         YES
2=PRIMARY PHONE
3=SECONDARY PHONE
```
On Board DACT Screen #1

```
   ON BOARD DACT      ⇧
1=SERVICE TERMINAL
2=CENTRAL STATION
3=SUPERV PHONE LINE
```
On Board DACT Screen #2

3.1.1.1 DACT-UD2 DACT Enable

To enable the on-board DACT-UD2 module, press *1* while viewing On Board DACT Screen #1 until the display reads *Enabled Yes*. The display will toggle between *Enabled Yes* and *Enabled No* with each press of the key.

3.1.1.2 Primary Phone

Press *2* while viewing On Board DACT Screen #1 to program the type of primary phone line being connected to the DACT-UD2. The following screen will be displayed:

```
   ON BOARD DACT
 PRIMARY PHONE LINE
1=TYPE       TOUCHTONE
```
Primary Phone Line Screen

To select the type, press *1* while viewing the Primary Phone Line screen. The following screen will be displayed:

```
    PHONE LINE
1=TOUCHTONE
2=ROTARY 67/33
3=ROTARY 60/40
```
Primary Phone Type Screen

Press *1* to select Touchtone dialing, *2* to select Rotary dialing with a make/break ratio of 67/33 or *3* to select Rotary dialing with a make/break ratio of 62/38.

```
   ON BOARD DACT
1=ENABLED
2=PRIMARY PHONE
3=SECONDARY PHONE
```

On Board DACT Screen #1

3.1.1.3 Secondary Phone

Press *3* while viewing On Board DACT Screen #1 to program the type of secondary phone line being connected to the DACT-UD2. The following screen will be displayed:

```
    ON BOARD DACT
 SECONDARY PHONE LINE
1=TYPE        TOUCHTONE
```

Secondary Phone Line Screen

To select the type, press *1* while viewing the Secondary Phone Line screen. The following screen will be displayed:

```
      PHONE LINE
1=TOUCHTONE
2=ROTARY 67/33
3=ROTARY 60/40
```

Secondary Phone Type Screen

Press *1* to select Touchtone dialing, *2* to select Rotary dialing with a make/break ratio of 67/33 or *3* to select Rotary dialing with a make/break ratio of 62/38.

3.1.1.4 Service Terminal

```
   ON BOARD DACT
1=SERVICE TERMINAL
2=CENTRAL STATION
3=SUPERV PHONE LINE
```

On Board DACT Screen #2

The MS-9600LS can be programmed remotely from a PC using a modem and telephone line. Information can also be retrieved from the FACP using the same method. The Upload/Download option allows an operator to set the necessary parameters to allow the uploading and downloading of data between the FACP and PC. The Service Terminal selection provides the means for entering these parameters.

Pressing *1* while viewing On Board DACT Screen #2 will cause the following screen to appear:

```
   SERVICE TERMINAL
1=RING COUNT      0
```

Service Terminal Screen

3.1.1.4.1 Ring Count

The ring count designates the number of rings allowed on the phone line prior to answering an incoming call from a service terminal. The factory default is *0* which means the control panel will not answer any incoming calls. This entry may be programmed for *1* to *25* rings.

To change the Ring Count, press *1* while viewing the Service Terminal Screen #2.

The following screen will be displayed:

```
     RING COUNT

 0-25 RANGE
 ▨
```

Ring Count Screen

A flashing cursor will appear in the lower left corner of the display. Enter the two-digit ring count which can be a value between 00 and 25. After the second digit is entered, the display will return to the Service Terminal screen.

3.1.1.5 Central Station

```
ON BOARD DACT
1=SERVICE TERMINAL
2=CENTRAL STATION
3=SUPERV PHONE LINE
```

On Board DACT Screen #2

Central Station programming configures the control panel DACT-UD2 for contacting the central station. Pressing *2* while viewing On Board DACT Screen #2 will cause the following screens to be displayed:

```
 CENTRAL STATION    ⇩
 1=REPORTING DISABLED
 2=REPORT       BACKUP
 3=CALL LIMIT        0
```

Central Station Screen #1

```
 CENTRAL STATION    ⇧
 1=PRIMARY
 2=SECONDARY
 3=REPORT STYLE
```
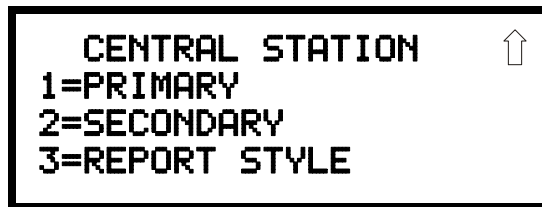
Central Station Screen #2

3.1.1.5.1 Reporting Enable

To enable the DACT-UD2 for reporting FACP activity to the central station, press *1* while viewing Central Station Screen #1 so the display reads *Reporting Enabled*. Each press of the *1* key will toggle the display between *Reporting Disabled* and *Reporting Enabled*.

3.1.1.5.2 Backup Reporting

The DACT-UD2 can be programmed to transmit reports to primary and/or secondary central station phone numbers as a backup. Press *2* while viewing Central Station Screen #1 to display the following screen:

```
 BACKUP REPORTING
1=BACKUP ONLY
2=FIRST AVAILABLE
```

Backup Reporting Screen

Press *1* to have all reports transmitted to the central station secondary phone number as a backup only if the primary phone line fails or *2* to send reports to the first available phone number.

3.1.1.5.3 Trouble Call Limit (Dialer Runaway Prevention)

The Call Limit option limits the number of DACT-UD2 trouble calls to the Central Station, to a programmed amount between 0 and 99, for each unique trouble within a 24 hour period. Separate limit counters keep track of each unique type of trouble. Note that the number of phone line (communication) faults called to the Central Station are not limited by this feature. No subsequent restoral message is sent to the Central Station(s) for a particular trouble whose call limit has been reached. Local DACT-UD2 annunciation will still track the particular trouble and restoral.

To set the Trouble Call Limit, press *3* while viewing Central Station Screen #1. The following screen will be displayed.

```
TROUBLE CALL LIMIT

  00-99 RANGE
*
```

Backup Reporting Screen

Enter a value between 00 and 99, then press Enter to set the Call Limit to this value.

Note: Entering a value of 00 will disable the Trouble Call Limit allowing the DACT-UD2 to call the Central Station an unlimited number of times. This is the factory default setting.

```
   CENTRAL STATION
1=PRIMARY
2=SECONDARY
3=REPORT STYLE
```

Central Station Screen #2

3.1.1.5.4 Central Station Primary and Secondary Phone Numbers

Pressing *1* for Primary or *2* for Secondary will cause the following screens to be displayed.

```
 CENTRAL STATION        ⇩
1=TEST TIME INT    24
2=ACCOUNT CODE     0000
3=24HR TST TIME    0000
```
Primary/Secondary Screen #1

```
 CENTRAL STATION        ⇕
1=PHONE NUMBER
```
Primary/Secondary Screen #2

```
 CENTRAL STATION        ⇕
1=COMM FORMAT
    ADEMCO-CONTACT-ID
```
Primary/Secondary Screen #3

```
 CENTRAL STATION        ⇧
1=EVENT CODES
```
Primary/Secondary Screen #4

```
 CENTRAL STATION
1=TEST TIME INT
2=ACCOUNT CODE
3=24HR TST TIME
```

Primary/Secondary Screen #1

Test Time Interval

Pressing *1* while viewing Primary/Secondary Screen #1 will cause the following screens to be displayed:

```
 TEST TIME INTERVAL ⇩
1=24 HOURS
2=12 HOURS
3=8 HOURS
```

Test Time Interval Screen #1

```
 TEST TIME INTERVAL ⇧
1=6 HOURS
```

Test Time Interval Screen #2

The test report sent to the Central Station phone number may be sent once every 6, 8, 12 or 24 hours. Select the desired Test Time Interval by pressing the corresponding digit in the screens shown above.

Account Code

Pressing *2* while viewing Primary/Secondary Screen #1 will cause the following screen to be displayed:

```
 ACCOUNT CODE

4 CHAR RANGE 0-F
■
```

Account Codes Screen

The Account Code, which is assigned by a Central Station, depends on the communication format being used. The Account Code screen will have a flashing cursor in the lower left corner. Enter the supplied account code using 0 - 9 and A- F keys.

*Note: If the Account Code being entered is a three digit number, enter the three digits first and then add a **0** (zero) as the fourth digit.*

24 Hour Test Time

```
  CENTRAL STATION
1=TEST TIME INT
2=ACCOUNT CODE
3=24HR TST TIME
```

Primary/Secondary Screen #1

Pressing 3 while viewing Primary/Secondary Screen #1 will cause the following screen to be displayed:

```
24 HOUR TEST TIME

RANGE 0000-2359
■
```

24 Hour Test Time Screen

Use the 24 Hour Test Time screen to program the time that the DACT-UD2 will transmit the 24 Hour Test to the Central Station. A flashing cursor will appear in the lower left corner of the screen. Enter a four digit number representing the test time using military time (0000 = midnight and 2359 = 11:59PM).

Phone Number

```
  CENTRAL STATION
1=PHONE NUMBER
```

Primary/Secondary Screen #2

Pressing *1* while viewing Primary/Secondary Screen #2 will cause the following screen to be displayed:

```
PHONE NUMBER

20 NUMBERS MAXIMUM
■
```

Phone Number Screen

The Phone Number screen is used to enter the Central Station phone number that the DACT-UD2 will be contacting. A maximum of 20 characters can be entered with valid entries being 0 - 9 and A - F where A = *, B = #, C = 2 second pause, D = 3 second pause and E = 5 second pause.

A flashing cursor will appear in the lower left corner of the screen. Enter the first digit then press the right arrow key to move the cursor to the right one position. Enter the second digit and repeat the process until all digits are entered. Press the *Enter* key to store the phone number in memory.

Enter the digits as you would like the number to be dialed. For example, if it's necessary to dial 9 before dialing a number outside the building, you may wish to pause after dialing 9. Enter *9* followed by *D* for a three second pause or *E* for a five second pause then the phone number followed.

```
  CENTRAL STATION
1=COMM FORMAT
```

Primary/Secondary Screen #3

Pressing *1* while viewing Primary/Secondary Screen #3 will cause the following screen to be displayed:

```
      COMM FORMAT
1=ADEMCO CONTACT ID
2=SIA 8
3=SIA 20
```

Comm Format Screen

The Communication Format is determined by the type of receiver that the DACT-UD2 is transmitting to. *Consult your Central Station for proper selection or consult our factory representatives. For any format chosen, the control panel automatically programs all of the event codes.*

Select the Communication Format by pressing the corresponding number key while viewing the appropriate Comm Format screen. The following table describes each format:

Table 3.1 Communication Formats

Screen Selection	Communication Format Description
ADEMCO CONTACT ID	Contact ID, DTMF, 1400/2300 ACK
SIA 8	Security Industry Association, 8 messages per call
SIA 20	Security Industry Association, 20 messages per call

```
  CENTRAL STATION
1=EVENT CODES
```

Primary/Secondary Screen #4

Event Codes

Pressing *1* while viewing Primary/Secondary Screen #4 will cause the following screen to be displayed:

```
   EVENT CODES          ⇩
1=PULL STATION
2=MON-USER-DEF-1
3=WATERFLOW
```

Event Code Screen

Pressing the down arrow key allows viewing of all Events associated with the selected Communication Format. Pressing the number corresponding to the event displayed in each screen will display its default event code which can be customized by the programmer. For example, pressing 1 for Pull Station will display a screen similar to the following which allows the Event Code to be changed from the default value.

```
PULL STATION          115
```

Event Code Screen

The tables on the following pages list all of the Events and their default Event Codes for the various Communication Formats.

Ademco Contact ID & SIA Formats

The information shown in Table 3.1 is automatically programmed for the Central Station phone number Event Codes when the Ademco Contact ID or SIA Format is selected. Enter *0s* for an Event Code Setting to disable the report.

Table 3.1 Event Codes

Event Description	Ademco Contact ID Active	SIA Active	SIA Restoral
PULL STATION	115	FA	FH
MON-USER-DEF-1	115	FA	FH
WATERFLOW	113	SA	SH
MON-USER-DEF-2	113	SA	SH
SMOKE (PHOTO)	111	FA	FH
DET-USER-DEF-1	111	FA	FH
SMOKE (ION)	111	FA	FH
DET-USER-DEF-2	111	FA	FH
HEAT DETECT	114	KA	KH
DET-USER-DEF-3	114	KA	KH
SMOKE DUCT-P	116	FA	FH
DET-USER-DEF-4	116	FA	FH
PHOTO W/HEAT	111	FA	FH
DET-USER-DEF-5	111	FA	FH
DUCT SUPERVISORY	200	FS	FV
DET-USER-DEF-6	200	FS	FV
PHOTO SUPERV	200	FS	FV
DET-USER-DEF-7	200	FS	FV
PHOTO ADAPT	111	FA	FH
DET-USER-DEF-8	111	FA	FH
PHOTO BEAM	111	FA	FH
DET-USER-DEF-9	111	FA	FH
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
not used	000	00	00
MONITOR	110	FA	FH
MON-USER-DEF-3	110	FA	FH
not used	000	00	00
not used	000	00	00
SMOKE CONVEN	111	FA	FH
MON-USER-DEF-5	111	FA	FH
HEAT CONVENTIONAL	114	KA	KH
MON-USER-DEF-6	114	KA	KH
MEDIC ALERT	100	MA	MH
MON-USER-DEF-7	100	MA	MH
HAZARD ALERT	150	PA	PH
MON-USER-DEF-8	150	PA	PH
TORNADO ALRT	150	PA	PH
MON-USER-DEF-9	150	PA	PH
not used	000	00	00
not used	000	00	00
TAMPER	144	TA	TH
MON-USER-DEF-11	144	TA	TH
MON SUPERVISORY	200	FS	FV
MON-USER-DEF-12	200	FS	FV

Table 3.1 Event Codes (Continued)

MON SUPERV AUTO	200	FS	FV
MON-USER-DEF-13	200	FS	FV
HVAC OVRRIDE	200	FS	FV
POWER MON	330	AT	AR
MON-USER-DEF-14	330	AT	AR
TROUBLE MON	POINT_FAULT code will **always** be transmitted		
MON-USER-DEF-15	POINT_FAULT code will **always** be transmitted		
PROCESS MON	000	00	00
MON-USER-DEF-16	000	00	00
PROCMON AR	000	00	00
MON-USER-DEF-17	000	00	00
not used	000	00	00
not used	000	00	00
POINT_FAULT	380	FT	FJ
POINT_DISABLE	570	FB	FU
AC_FAIL	301	AT	AR
DRILL	604	FI	FK
SLC 1 OPEN FAULT	371	ET	ER
SLC 1 SHORT FAULT	372	ET	ER
SLC 2 OPEN FAULT	371	ET	ER
SLC 2 SHORT FAULT	372	ET	ER
GROUND FAULT	310	ET	ER
LOW BATTERY	302	YT	YR
NO_BATTERY	311	YT	YR
TELCO LINE 1	351	LT	LR
TELCO LINE 2	352	LT	LR
COMM FAULT 1	354	YC	YK
COMM FAULT 2	354	YC	YK
TOTAL COMM FLT	000	00	00
PRINTER FAULT	336	VT	VR
NAC 1 FAULT	321	YA	YR
NAC 2 FAULT	322	YA	YR
NAC 3 FAULT	326	YA	YR
NAC 4 FAULT	327	YA	YR
24V FAULT	300	YP	YQ
VOICE EVAC FAULT	330	ET	ER
ACS/ANN-BUS FAULT	333	EM	EN
LCD_80F FAULT	330	EM	EN
NAC 1 DISABLE	521	ET	ER
NAC 2 DISABLE	522	ET	ER
NAC 3 DISABLE	526	ET	ER
NAC 4 DISABLE	527	ET	ER
CS CALC FAULT	304	YF	
CHARGER FAULT	300	YP	YQ
OPTION CARD 1 FAULT	331	ET	ER
OPTION CARD 2 FAULT	332	ET	ER
SLC 2 FAULT	370	ET	ER
ZONE DISABLE	570	FB	FU
NAC_KEY_FLT	300	ET	ER
NO_DEVICES_INSTLLD	380	ET	ER
OFF_NORMAL_MESSAGE	308	LB	LX
24_HOUR_TEST	602	RP	
24 HOUR ABNORMAL TES	608	RY	
UPDOWN REQUEST	411	RB	
UPLOAD SUCCESS	416	RS	
DOWNLOAD SUCCESS	412	RS	
UPDOWN FAILURE	413	RR	
GENERAL_ALARM	110	FA	FH
GENERAL_SUPERVISORY	200	FS	FV

```
   CENTRAL STATION
1=PRIMARY
2=SECONDARY
3=REPORT STYLE
```

Central Station Screen #2

Report Style

Pressing *3* while viewing Central Station Screen #2 will cause the Report Style display to toggle between *Point* and *Zone*. Setting the Report Style to Point will program the DACT-UD2 to report individual point status to the Central Station. The control panel is capable of monitoring a total of 636 addressable devices. Setting the Report Style to Zone will program the DACT-UD2 to report zone status to the Central Station. The control panel is capable of monitoring a total of 99 individual zones.

```
   CENTRAL STATION
1=PRIMARY
2=SECONDARY
3=REPORT STYLE    POINT
```

Central Station Screen #2

Notes on Central Station Reporting:

1. **SLC Loop 1**, Detector Address 01 will be reported to the Central Station as Point 01, Detector Address 02 as Point 02, with reports continuing in a similar fashion all the way up to Detector Address 159 which will be reported as Point 159.

2. **SLC Loop 1**, Module Address 01 will be reported to the Central Station as Point 160, Module Address 02 will be reported to the Central Station as Point 161, with reports continuing in a similar fashion all the way up to Module Address 159 which will be reported as Point 318.

3. **SLC Loop 2**, Detector Address 01 will be reported to the Central Station as Point 319, Detector Address 02 as Point 320, with reports continuing in a similar fashion all the way up to Detector Address 159 which will be reported as Point 477.

4. **SLC Loop 2**, Module Address 01 will be reported to the Central Station as Point 478, Module Address 02 as Point 479, with reports continuing in a similar fashion all the way up to Module Address 159 which will be reported as Point 636.

3.1.1.5.5 Supervised Phone Line

```
   ON BOARD DACT
1=SERVICE TERMINAL
2=CENTRAL STATION
3=SUPERV PHONE LINE
```

On Board DACT Screen #2

The Supervised Phone Line feature allows the user to disable or enable the supervision of Phone Line 2 by the DACT. The factory default setting is Phone Line 2 supervised.

Pressing *3* for *Superv Phone Line* while viewing Onboard DACT Screen 2 will cause the following screen to be displayed:

```
SUPERVISE PHONE LINE
1=PHONE LINE 2    YES
```

Panel ID Screen

Each press of the *1* key while viewing this screen will toggle the option between Supervise Phone Line 2 Yes and No.

SECTION 4   Central Station Communications

The DACT-UD2 transmits zone and system status reports to Central Stations via the public switched telephone network. Two supervised telephone line connections are made to interface the DACT to the telephone lines. Two optional 7 foot telephone cords are available for this purpose and can be purchased separately.

The control panel supervises both telephone lines for proper voltage. A delay of two minutes will occur before a fault in either phone line connection is reported as a trouble. When a fault is detected, an audible trouble signal will sound, the yellow trouble LED will blink, the display will show a DACT communication trouble and the trouble condition will be reported to the Central Station over the remaining operational phone line.

The DACT-UD2 comes with line seizure capability provided for both the primary and secondary telephone line interfaces. Any time that the control panel needs to make a call to a Central Station, line seizure will disconnect any local premises phones sharing the same telephone line.

All transmissions to the Central Stations will be sent over the primary phone line. In the event of noisy phone lines, transmissions will be sent over the backup secondary phone line.

Two phone numbers must be programmed, the primary Central Station phone number and the secondary Central Station phone number. All system reports will be transmitted to the primary Central Station phone number. Reports will automatically be sent to the secondary Central Station phone number if attempts to transmits to the primary Central Station phone number are unsuccessful. Note that as an option, *all* reports may also be sent to the secondary Central Station phone number.

The DACT-UD2 installed on the MS-9600LS meets NFPA 72 National Fire Code reporting requirements for: (a) the type of signal, (b) condition and (c) location of the reporting premises. The general priority reporting structure is:

1. Zone Alarms and Restores
2. Zone Troubles and Restores
3. System Troubles and Restores
4. 24-hour Test

4.1 Transmittal Priorities

The DACT-UD2 transmits highest priority events first. Events, in terms of priority, are listed below in descending order:

1. Alarms (highest priority level)
   - ✓ Pull stations
   - ✓ Waterflow
   - ✓ Smoke detector
   - ✓ Other alarm types
2. Supervisory Zone
3. System Troubles
   - ✓ Zone disabled
   - ✓ Fire drill
   - ✓ AC fail (after delay)
   - ✓ Zonal faults
   - ✓ Earth fault
   - ✓ Low battery/no battery
   - ✓ Telephone line fault
   - ✓ Notification Appliance Circuits fault
   - ✓ Communication trouble
   - ✓ Annunciator trouble
   - ✓ System off normal
4. Restoral Reports
   - ✓ Zone alarm
   - ✓ Supervisory
   - ✓ Zone(s) enabled
   - ✓ Fire drill
   - ✓ AC
   - ✓ Zone fault
   - ✓ Earth
   - ✓ Battery
   - ✓ Telephone line
   - ✓ Notification Appliance Circuits
   - ✓ Communication
   - ✓ Annunciator trouble
   - ✓ System off normal
5. 24 Hour Test (lowest priority)

The table below shows UL listed receivers which are compatible with the DACT-UD2.

Table 4.1 Compatible UL Listed Receivers

Format	Ademco 685 (1)	Ademco MX8000 (2)	Silent Knight 9500 (3)	Silent Knight 9800 (4)	Osborne Hoffman 2000E (5)	Radionics 6600 (6)	SurGard MLR2 (7)	SurGard System III (8)	SurGard MLR-2000 (9)	FBI CP220FB (10)
0 SIA-DCS-8		✔	✔	✔	✔	✔		✔		✔
1 SIA-DCS-20		✔	✔	✔	✔	✔		✔		✔
2 Ademco Contact ID	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

1. With 685-8 Line Card with Rev. 4.4d software

2. With 124060V206B and 124063 Line Card Rev. B

3. With version V2.4 Receiver and 126047 Line Card Rev. G

4. With 124077V2.00 Receiver and 126047 Line Card Rev. M

5. With V.7301 Receiver S/W

6. With 01.01.03 Receiver S/W and Line Card 01.01.03

7. With software V1.86

8. With software V1.72

9. With DSP4016 and V1.6 Line Card

10. With software V3.9

IMPORTANT! *It is the installer's responsibility to ensure that the Digital Alarm Communicator/Transmitter is compatible with the Central Station Receiver, utilized by the monitoring service, prior to installation. The Compatibility Table provides a list of compatible receivers and associated software versions for the receivers. Changes in the hardware and/or software by the receiver manufacturers may affect the receiver compatibility with the FACP DACT. After completing the installation, communication between the DACT and Central Station Receiver must be tested and verified.*

SECTION 5
Remote Site Upload/Download

Important! *The FACP will automatically reset 2 minutes after completion of a user program download via the PS-Tools programming utility. To prevent program corruption, the operator must wait until this panel reset occurs before performing any panel operations.*

The control panel may be programmed or interrogated off-site via the public switched telephone network or locally using the USB connection at J4 on the DACT-UD2. Any personal computer with Windows™ XP or NEWER, with a 2400 baud compatible modem and Upload/Download software PS-Tools, may serve as a Service Terminal. This allows download of the entire program or upload of the entire program, history file, walktest data, current status, system voltages, time and date.

The control panel may also communicate to a local PC at the job-site. The PC must be connected to the USB connector J4 on the DACT-UD2. A standard USB cable with male-A to male-B connectors, which must be purchased separately, is required.

Important: *Remote modification of FACP programming requires that the panel be enabled for remote download (refer to "Remote Download" on page 33). Remote interrogation of panel programming, history logs, detector status, etc., is possible without enabling the remote download option.*

CAUTION: After successfully downloading a program, make certain to perform the following steps:

1. Print out all programmed data via Print Mode or manually view programmed entries and compare to intended program data

2. Test all affected panel operations

3. Immediately correct any problems found

5.1 Remote Download

NFPA 72 requirements state that a technician be on-site and at the control panel whenever the PK-Plus Programming Utility is used to download any information to the FACP. This applies to local and remote programming. For this reason, a new option has been added to the FACP which allows an individual at the FACP to enter a password and either enable the proprietary mode where downloading will be allowed at any time or access a specific password protected screen where downloading will be allowed regardless of the current proprietary setting. The Remote Download option can be selected from the main menu screen as shown below:

```
1=READ STATUS MODE
2=PROGRAMMING MODE
3=REMOTE DOWNLOAD
```

Pressing *3* for Remote Download while viewing the main menu will cause the following screen to be displayed:

```
REMOTE DOWNLOAD
ENTER PASSWORD
*****
```

The Remote Download password (default 00000) must be entered to access the Remote Download feature. Note that the default password can be changed using the Password Change option (refer to the FACP manual programming section). Entering the correct password will cause the following screen to be displayed:

```
REMOTE DOWNLOAD
1=PROPRIETARY        NO
2=ACCEPT DOWNLOAD
```

Pressing *1* for **Proprietary No** (factory default setting), while viewing the Remote Download screen, will cause the display to toggle from **Proprietary No** to **Proprietary Yes**. Each press of the *1* key will cause the display to toggle between **Proprietary No** and **Proprietary Yes**. Selecting **Proprietary Yes** will program the FACP to allow remote programming downloads from the PK-Plus programming utility at all times without the need to access the Remote Download screen.

Pressing *2* for *Accept Download* will cause the following screen to be displayed:

```
*ALLOWING DOWNLOADS*
   IF YOU EXIT THIS
   SCREEN DOWNLOADS
   WILL BE DISABLED!
```

While this screen is displayed, remote programming downloads are allowed regardless of the Proprietary setting. Exiting this screen will disable any further downloads to the FACP. Also, following 30 minutes of inactivity (including up/downloading), the Accept Download screen will time-out, causing the display to return to the System All Normal screen.

5.2 Transferring a Program

The first time that the control panel is downloaded (whether initiated at the jobsite or remotely), a secret code is loaded in by a Service Terminal. Future upload or download requests cause verification of the secret code by the control panel before processing of data is allowed. If the secret code is not verified, the control panel will terminate the request.

While the control panel is communicating with the Service Terminal, one of the DACT's red phone line active LEDs and the green *Kissoff* LED will turn on steady.

In order to download the panel (whether initiated at the jobsite or remotely), the following must be true:

- ✓ The control panel must be in the Normal Mode of operation. Downloading is not possible if the panel is in any other mode
- ✓ There cannot be any active communications ongoing with a Central Station receiver
- ✓ All active events must be successfully 'kissed-off' by the Central Station(s). The communicator must be in a standby state with no new information waiting to be transmitted to a Central Station

5.2.1 Security Features

Upload and download with the control panel have been carefully designed to include key security features to ensure proper functionality. Any time a transfer is initiated, the control panel and the Service Terminal will communicate and transfer data before contacting a Central Station. When the data transfers are completed and the control panel disconnects from the Service Terminal, the control panel will call the Central Station and report one of the following conditions:

- Upload/Download request received
- Upload and/or Download request successful
- Upload/Download failed

The key features are listed and explained in the following sections.

Secret Code Verification

A secret code is stored in the control panel by a Service Terminal to prevent unauthorized access. The secret code is created at the Service Terminal by the master user and cannot be viewed or changed by anyone other than a master user. Viewing of the secret code is prohibited at the control panel. Prior to allowing an upload or download of data, the control panel will verify the secret code transmitted by the Service Terminal.

Time-out at Control Panel

Upon answering an incoming call on either the primary or secondary Central Station phone line, the control panel will listen for a modem connection signal. If this signal is not received within 50 seconds, the control panel will disconnect the call. Upon successful connection (secret code verified), if no communication occurs within 30 minutes, the panel will disconnect the call. Upon time-out, transfer activity will be reported to the Central Station (if enabled) and the connection will be terminated.

Error Checking

As each block of data is received by the control panel, it is checked for accuracy. If an error is detected, the block is retransmitted until correct, up to a maximum of four times. If the Secret Code is not verified and four errors occur, the call is disconnected and the report that the upload/download was not successful is called to the Central Station(s).

Central Station Data Protection

The primary and secondary Central Station phone numbers, communications format, account code, test time and programmable event codes are vital Central Station information. These blocks of data are protected from partial programming due to faulty phone connections, line noise and other errors. This prevents the panel from being confused due to a wrong phone number, account code, test time and most critical formatting errors.

APPENDIX A Default Programming

The following table provides a list of the programming options and their factory default settings.

Program Option	Factory Default
ON Board DACT	Disabled
Service Terminal Primary Phone Line Type	Touch Tone
Service Terminal Secondary Phone Line Type	Touch Tone
Service Terminal Primary Phone Number	all Fs
Service Terminal Secondary Phone Number	all Fs
Service Terminal Phone Ring Count.	0
Central Station Reporting	Disabled
Central Station AC Loss Reporting Delay	2
Central Station Backup Reporting	First Available
Central Station Reporting Style	Reporting by Point
Central Station Trouble Call Limit	0
Central Station Primary Phone Line Test Time	0000
Central Station Secondary Phone Line Test Time	0000
Central Station Primary Phone Line Test Time Interval	24
Central Station Secondary Phone Line Test Time Interval	24
Central Station Primary Phone Line Account Code	0000
Central Station Secondary Phone Line Account Code	0000
Central Station Primary Phone Number	
Central Station Secondary Phone Number	
Central Station Primary Phone Communication Format	Ademco Contact ID
Central Station Secondary Phone Communication Format	Ademco Contact ID

APPENDIX B   # Ademco Contact ID Format Event Code Descriptions

This appendix describes the various Event Codes and their messages which are available for the Ademco Contact ID Format.

B.1 Transmission Format Between DACT and Receiver

The transmission string for the Ademco Contact ID Format is as follows:

SSSS 18 QXYZ GG CCC where

SSSS	= Four digit Subscriber ID Account Code
18	= Identifies transmission as Contact ID to the receiver at the Central Station
Q	= Event Qualifier where 1 = New Event and 3 = New Restore
XYZ	= Event code
GG	= Group number
CCC	= Zone/Point number (refer to Table C.1 on page 43)

Notes:

1. **18**, which is used in the reporting structure to identify the transmission as Contact ID, is not printed out in the alarm and trouble report.

2. **GG** Group Number is fixed at '00' and cannot be changed.

3. **CCC** for Zone or Point Number:
    ✓ Zone Number is transmitted as '001' for zone 1 up to '099' for zone 99
    ✓ Point Number is transmitted as '001' for point/address 1 up to '636' for point/address 636

B.2 Ademco Contact ID Typical Printout

A typical printout from a Central Station receiver (such as the Ademco 685) of alarm and trouble reports in the Ademco Contact ID Reporting Structure follows:

Time	Date	Rcvr/Line ID	SSSS	QXYZ	GG	CCCC
11:28	03/25	11	7777	E110	00	C001 - general fire alarm on zone one
11:28	03/25	11	7777	E111	00	C002 - smoke detector alarm on zone two
11:28	03/25	11	7777	E380	00	C003 - fault on zone three
11:28	03/25	11	7777	E570	00	C009 - Zone nine disabled
11:28	03/25	11	7777	R110	00	C001 - Zone one alarm restored
11:28	03/25	11	7777	R111	00	C002 - smoke detector zone two restored
11:28	03/25	11	7777	R380	00	C003 - zone three fault restored
11:28	03/25	11	7777	R570	00	C009 - zone nine reenabled
11:28	03/25	11	7777	E158	00	C006 - high temperature, zone six
11:28	03/25	11	7777	E151	00	C007 - gas detected, zone seven

Notes:

1. **11** is an example of a Receiver/Line Card, showing which receiver and line card the message was transmitted to.

2. **Q**, which is the Event Qualifier for the reporting structure, is printed out in the report as an **E** for New Event or R for New Restore.

EVENT CODE CLASSIFICATIONS

100 ALARMS	200 SUPERVISORY	300 TROUBLES	400 OPEN/CLOSE REMOTE ACCESS	500 DISABLES/ BYPASSES	600 TEST/ MISC.
Medical Fire Panic Burglary General 24 Hour	Fire	System Sounder/Relay System Peripheral Communication Protective Loop Sensor	Open/Close Remote Access Access Control	System Sounder/Relay System Peripheral Communication	Test

EVENT	MESSAGE
Medical Alarms - 100	
100 Medical	EMERG - Personal Emergency - #
101 Pendant transmitter	EMERG - Personal Emergency - #
102 Fail to report in	EMERG Fail to Check- in #
Fire Alarms - 110	
110 Fire Alarm	FIRE - Fire Alarm - #
111 Smoke	FIRE -Smoke Detector#
112 Combustion	FIRE - Combustion - #
113 Waterflow	FIRE - Waterflow - #
114 Heat	FIRE - Heat Sensor - #
115 Pull station	FIRE - Pull Station - #
116 Duct	FIRE - Duct Sensor - #
117 Flame	FIRE - Flame Sensor - #
118 Near Alarm	FIRE - Near Alarm - #
Panic Alarms - 120	
120 Panic Alarm	PANIC - Panic - #
121 Duress	PANIC - Duress
122 Silent	PANIC -Silent Panic #
123 Audible	PANIC -Audible Panic#
Burglar Alarms - 130	
130 Burglary	BURG - Burglary - #
131 Perimeter	BURG - Perimeter - #
132 Interior	BURG - Interior - #
133 24-Hour	BURG - 24-Hour - #
134 Entry/Exit	BURG - Entry/Exit - #
135 Day/Night	BURG - Day/Night - #
136 Outdoor	BURG - Outdoor - #
137 Tamper	BURG - Tamper - #
138 Near Alarm	BURG - Near Alarm - #
General Alarms - 140	
140 General Alarm	ALARM - General Alarm - #
141 Polling loop open	ALARM - Polling Loop Open - #
142 Polling loop short	ALARM - Polling Loop Short - #
143 Expansion module failure	ALARM - Exp. Module Fail - #
144 Sensor tamper	ALARM - Sensor Tamper - #
145 Expansion module tamper	ALARM - Exp.Module Tamper - #

EVENT	MESSAGE
<u>24 Hour Non-Burglary - 150 and 160</u>	
150 24-Hour Non-Burg	ALARM - 24-Hr. Non-Burg - #
151 Gas detected	ALARM - Gas Detected - #
152 Refrigeration	ALARM - Refrigeration - #
153 Loss of heat	ALARM - Heating System - #
154 Water leakage	ALARM - Water Leakage - #
155 Foil break	ALARM - Foil Break - #
156 Day trouble	ALARM - Day Zone - #
157 Low bottled gas level	ALARM - Low Gas Level - #
158 High temp	ALARM - High Temperature - #
159 Low temp	ALARM - Low Temperature - #
161 Loss of air flow	ALARM - Air Flow - #
<u>Fire Supervisory - 200 and 210</u>	
200 Fire supervisory	SUPER. - Fire Supervisory - #
201 Low water pressure	SUPER. - Low Water Pressure - #
202 Low CO2	SUPER. - Low CO2
203 Gate valve sensor	SUPER. - Gate Valve - #
204 Low water level	SUPER. - Low Water Level - #
205 Pump activated	SUPER. - Pump Activation - #
206 Pump failure	SUPER. - Pump Failure - #
<u>System Troubles - 300 and 310</u>	
300 System trouble	TROUBLE - System Trouble
301 AC loss	TROUBLE - AC Power
302 Low system battery	TROUBLE - System Low Battery
303 RAM checksum bad	TROUBLE - Bad RAM Checksum (no restore)
304 ROM checksum bad	TROUBLE - Bad ROM Checksum (no restore)
305 System reset	TROUBLE - System Reset (no restore)
306 Panel program changed	TROUBLE - Programming Changed (no restore
307 Self-test failure	TROUBLE - Self Test Failure
308 System shutdown	TROUBLE - System Shutdown
309 Battery test failure	TROUBLE - Battery Test Failure
310 Ground fault	TROUBLE - Ground Fault - #
311 No battery	TROUBLE - No Battery
<u>Sounder/Relay Troubles - 320</u>	
320 Sounder/Relay	TROUBLE - Sounder Relay - #
321 Bell 1	TROUBLE - Bell/Siren #1
322 Bell 2	TROUBLE - Bell/Siren #2
323 Alarm relay	TROUBLE - Alarm Relay
324 Trouble relay	TROUBLE - Trouble Relay
325 Reversing	TROUBLE - Reversing Relay
326 Bell 3	TROUBLE - Bell/Siren #3
327 Bell 4	TROUBLE - Bell/Siren #4
<u>System Peripheral Troubles - 330 and 340</u>	
330 System peripheral	TROUBLE - Sys. Peripheral - #
331 Polling loop open	TROUBLE - Polling Loop Open
332 Polling loop short	TROUBLE - Polling Loop Short
333 Expansion module failure	TROUBLE - Exp. Module Fail - #
334 Repeater failure	TROUBLE - Repeater Failure - #
335 Local printer paper out	TROUBLE - Printer Paper Out
336 Local printer failure	TROUBLE - Local Printer

EVENT	MESSAGE	
Communication Troubles - 350 and 360		
350 Communication	TROUBLE - Communication Trouble	
351 Telco 1 fault	TROUBLE - Phone Line #1	
352 Telco 2 fault	TROUBLE - Phone Line #2	
353 Long range radio xmitter fault	TROUBLE - Radio Transmitter	
354 Fail to communicate	TROUBLE - Fail to Communicate	
355 Loss of radio supervision	TROUBLE - Radio Supervision	
356 Loss of central polling	TROUBLE - Central Radio Polling	
Protection Loop Troubles - 370		
370 Protection loop	TROUBLE - Protection Loop - #	
371 Protection loop open	TROUBLE - Protection Loop Open - #	
372 Protection loop short	TROUBLE - Protection Loop Short - #	
373 Fire Trouble	TROUBLE - Fire Loop - #	
Sensor Troubles - 380		
380 Sensor trouble	TROUBLE - Sensor Trouble - #	
381 Loss of supervision - RF	TROUBLE - RF Sensor Supervision - #	
382 Loss of supervision - RPM	TROUBLE - RPM Sensor Supervision - #	
383 Sensor tamper	TROUBLE - Sensor Tamper - #	
384 RF transmitter low battery	TROUBLE - RF Sensor Batt. - #	
Open/Close - 400		
400 Open/Close	OPENING	CLOSING
401 Open/Close by user	OPENING - User #	CLOSING - User #
402 Group Open/Close	OPENING - GroupUser#	CLOSING-GroupUser
403 Automatic Open/Close	OPENING - Automatic	CLOSING - Automatic
404 Late Open/Close	OPENING - Late	CLOSING - Late
405 Deferred Open/Close	Opening not used	Closing not used
406 Cancel	OPENING - Cancel	Closing not used
407 Remote arm/disarm	OPENING - Remote	CLOSING - Remote
408 Quick arm	Opening not applicable	CLOSING - Quick arm
409 Keyswitch Open/Close	OPENING - Keyswitch	CLOSING - Keyswitch
Remote Access - 410		
411 Callback request made	REMOTE - Callback Requested	(no restore)
412 Success - download/access	REMOTE - Successful Access	(no restore)
413 Unsuccessful access	REMOTE - Unsuccessful Access	(no restore)
414 System shutdown	REMOTE - System Shutdown	
415 Dialer shutdown	REMOTE - Dialer Shutdown	
416 Success - upload/access	REMOTE - Successful Access	(no restore)
Access Control - 420		
421 Access denied	ACCESS - Access Denied - User #	(no restore)
422 Access report by user	ACCESS - Access Gained - User #	(no restore)
System Disables - 500 and 510		

Ademco Contact ID Format Event Code Descriptions

EVENT	MESSAGE	
Sounder/Relay Disables - 520		
520 Sounder/Relay disable	DISABLE - Sounder/Relay - #	
521 Bell 1 disable	DISABLE - Bell/Siren - #1	
522 Bell 2 disable	DISABLE - Bell/Siren - #2	
523 Alarm relay disable	DISABLE - Alarm Relay	
524 Trouble relay disable	DISABLE - Trouble Relay	
525 Reversing relay disable	DISABLE - Reversing Relay	
526 Bell 3 disable	DISABLE - Bell/Siren - #3	
527 Bell 4 disable	DISABLE - Bell/Siren - #4	

System Peripheral Disables - 530 and 540

Communication Disables - 550 and 560

551 Dialer disabled	DISABLE - Dialer Disable	
552 Radio transmitter disabled	DISABLE - Radio Disable	

Bypasses - 570

570 Zone bypass	BYPASS - Zone Bypass - #	
571 Fire bypass	BYPASS - Fire Bypass - #	
572 24-Hour zone bypass	BYPASS - 24-Hour Bypass - #	
573 Burglar bypass	BYPASS - Burg. Bypass - #	
574 Group bypass	BYPASS - Group Bypass - #	

Test Misc. - 600

601 Manual trigger test	TEST - Manually Triggered	(no restore)
602 Periodic test report	TEST - Periodic	(no restore)
603 Periodic RF transmission	TEST - Periodic Radio	(no restore)
604 Fire test	TEST - Fire Test	(restore not used)
605 Status report to follow	STATUS - Status Follows	(no restore)
606 Listen-in to follow	LISTEN - Listen-in Active	(no restore)
607 Walk test mode	TEST - Walk Test Mode	
608 System abnormal test	TEST - System Abnormal Test	

APPENDIX C   Central Station Points

The DACT-UD2 transmits Central Station Reports in a numerical format which indicates the FACP addressable device address that is reporting and the SLC loop on which it resides. The following table indicates the Central Station Report (CS Report) number that will be transmitted and the addressable device address and SLC loop number it represents.

Table C.1 Addressable DETECTORS on SLC Loop 1

CS Report	Detector Address Loop 1	CS Report	Detector Address Loop 1	CS Report	Detector Address Loop1	CS Report	Detector Address Loop 1	CS Report	Detector Address Loop 1
001	001	033	033	065	065	097	097	129	129
002	002	034	034	066	066	098	098	130	130
003	003	035	035	067	067	099	099	131	131
004	004	036	036	068	068	100	100	132	132
005	005	037	037	069	069	101	101	133	133
006	006	038	038	070	070	102	102	134	134
007	007	039	039	071	071	103	103	135	135
008	008	040	040	072	072	104	104	136	136
009	009	041	041	073	073	105	105	137	137
010	010	042	042	074	074	106	106	138	138
011	011	043	043	075	075	107	107	139	139
012	012	044	044	076	076	108	108	140	140
013	013	045	045	077	077	109	109	141	141
014	014	046	046	078	078	110	110	142	142
015	015	047	047	079	079	111	111	143	143
016	016	048	048	080	080	112	113	144	144
017	017	049	049	081	081	113	113	145	145
018	018	050	050	082	082	114	114	146	146
019	019	051	051	083	083	115	115	147	147
020	020	052	052	084	084	116	116	148	148
021	021	053	053	085	085	117	117	149	149
022	022	054	054	086	086	118	118	150	150
023	023	055	055	087	087	119	119	151	151
024	024	056	056	088	088	120	120	152	152
025	025	057	057	089	089	121	121	153	153
026	026	058	058	090	090	122	122	154	154
027	027	059	059	091	091	123	123	155	155
028	028	060	060	092	092	124	124	156	156
029	029	061	061	093	093	125	125	157	157
030	030	062	062	094	094	126	126	158	158
031	031	063	063	095	095	127	127	159	159
032	032	064	064	096	096	128	128		

Table C.2 Addressable MODULES on SLC Loop 1

CS Report	Module Address Loop 1	CS Report	Module Address Loop 1	CS Report	Module Address Loop1	CS Report	Module Address Loop 1	CS Report	Module Address Loop 1
160	001	192	033	224	065	256	097	288	129
161	002	193	034	225	066	257	098	289	130
162	003	194	035	226	067	258	099	290	131
163	004	195	036	227	068	259	100	291	132
164	005	196	037	228	069	260	101	292	133
165	006	197	038	229	070	261	102	293	134
166	007	198	039	230	071	262	103	294	135
167	008	199	040	231	072	263	104	295	136
168	009	200	041	232	073	264	105	296	137
169	010	201	042	233	074	265	106	297	138
170	011	202	043	234	075	266	107	298	139
171	012	203	044	235	076	267	108	299	140
172	013	204	045	236	077	268	109	300	141
173	014	205	046	237	078	269	110	301	142
174	015	206	047	238	079	270	111	302	143
175	016	207	048	239	080	271	113	303	144
176	017	208	049	240	081	272	113	304	145
177	018	209	050	241	082	273	114	305	146
178	019	210	051	242	083	274	115	306	147
179	020	211	052	243	084	275	116	307	148
180	021	212	053	244	085	276	117	308	149
181	022	213	054	245	086	277	118	309	150
182	023	214	055	246	087	278	119	310	151
183	024	215	056	247	088	279	120	311	152
184	025	216	057	248	089	280	121	312	153
185	026	217	058	249	090	281	122	313	154
186	027	218	059	250	091	282	123	314	155
187	028	219	060	251	092	283	124	315	156
188	029	220	061	252	093	284	125	316	157
189	030	221	062	253	094	285	126	317	158
190	031	222	063	254	095	286	127	318	159
191	032	223	064	255	096	287	128		

Table C.3 Addressable DETECTORS on SLC Loop 2

CS Report	Detector Address Loop 2	CS Report	Detector Address Loop 2	CS Report	Detector Address Loop2	CS Report	Detector Address Loop 2	CS Report	Detector Address Loop 2
319	001	351	033	383	065	415	097	447	129
320	002	352	034	384	066	416	098	448	130
321	003	353	035	385	067	417	099	449	131
322	004	354	036	386	068	418	100	450	132
323	005	355	037	387	069	419	101	451	133
324	006	356	038	388	070	420	102	452	134
325	007	357	039	389	071	421	103	453	135
326	008	358	040	390	072	422	104	454	136
327	009	359	041	391	073	423	105	455	137
328	010	360	042	392	074	424	106	456	138
329	011	361	043	393	075	425	107	457	139
330	012	362	044	394	076	426	108	458	140
331	013	363	045	395	077	427	109	459	141
332	014	364	046	396	078	428	110	460	142
333	015	365	047	397	079	429	111	461	143
334	016	366	048	398	080	430	113	462	144
335	017	367	049	399	081	431	113	463	145
336	018	368	050	400	082	432	114	464	146
337	019	369	051	401	083	433	115	465	147
338	020	370	052	402	084	434	116	466	148
339	021	371	053	403	085	435	117	467	149
340	022	372	054	404	086	436	118	468	150
341	023	373	055	405	087	437	119	469	151
342	024	374	056	406	088	438	120	470	152
343	025	375	057	407	089	439	121	471	153
344	026	376	058	408	090	440	122	472	154
345	027	377	059	409	091	441	123	473	155
346	028	378	060	410	092	442	124	474	156
347	029	379	061	411	093	443	125	475	157
348	030	380	062	412	094	444	126	476	158
349	031	381	063	413	095	445	127	477	159
350	032	382	064	414	096	446	128		

Table C.4 Addressable MODULES on SLC Loop 2

CS Report	Modules Address Loop 2	CS Report	Modules Address Loop 2	CS Report	Modules Address Loop2	CS Report	Modules Address Loop 2	CS Report	Modules Address Loop 2
478	001	510	033	542	065	574	097	606	129
479	002	511	034	543	066	575	098	607	130
480	003	512	035	544	067	576	099	608	131
481	004	513	036	545	068	577	100	609	132
482	005	514	037	546	069	578	101	610	133
483	006	515	038	547	070	579	102	611	134
484	007	516	039	548	071	580	103	612	135
485	008	517	040	549	072	581	104	613	136
486	009	518	041	550	073	582	105	614	137
487	010	519	042	551	074	583	106	615	138
488	011	520	043	552	075	584	107	616	139
489	012	521	044	553	076	585	108	617	140
490	013	522	045	554	077	586	109	618	141
491	014	523	046	555	078	587	110	619	142
492	015	524	047	556	079	588	111	620	143
493	016	525	048	557	080	589	113	621	144
494	017	526	049	558	081	590	113	622	145
495	018	527	050	559	082	591	114	623	146
496	019	528	051	560	083	592	115	624	147
497	020	529	052	561	084	593	116	625	148
498	021	530	053	562	085	594	117	626	149
499	022	531	054	563	086	595	118	627	150
500	023	532	055	564	087	596	119	628	151
501	024	533	056	565	088	597	120	629	152
502	025	534	057	566	089	598	121	630	153
503	026	535	058	567	090	599	122	631	154
504	027	536	059	568	091	600	123	632	155
505	028	537	060	569	092	601	124	633	156
506	029	538	061	570	093	602	125	634	157
507	030	539	062	571	094	603	126	635	158
508	031	540	063	572	095	604	127	636	159
509	032	541	064	573	096	605	128		

Notes

Notes

Limited Warranty

Honeywell International Inc. warrants products manufactured by it to be free from defects in materials and workmanship for eighteen (18) months from the date of manufacture, under normal use and service. Products are date stamped at time of manufacture. The sole and exclusive obligation of **Honeywell International Inc.** is to repair or replace, at its option, free of charge for parts and labor, any part that is defective in materials or workmanship under normal use and service. All returns for credit are subject to inspection and testing at the factory before actual determination is made to allow credit. **Honeywell International Inc.** does not warrant products not manufactured by it, but assigns to the purchaser any warranty extended by the manufacturer of such products. This warranty is void if the product is altered or repaired by anyone other than **Honeywell International Inc.** or as expressly authorized by **Honeywell International Inc.** in writing, or is serviced by anyone other than **Honeywell International Inc.** or its authorized distributors. This warranty is also void if there is a failure to maintain the products and systems in which they operate in a proper and workable manner. In case of defect, secure a Return Material Authorization form from our Return Authorization Department.

This writing constitutes the only warranty made by **Honeywell International Inc.**, with respect to its products. **Honeywell International Inc.**, does not represent that its products will prevent any loss by fire or otherwise, or that its products will in all cases provide the protection for which they are installed or intended. Buyer acknowledges that **Honeywell International Inc.**, is not an insurer and assumes no risk for loss or damages or the cost of any inconvenience, transportation damage, misuse, abuse, accident or similar incident.

HONEYWELL INTERNATIONAL INC. GIVES NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR OTHERWISE WHICH EXTENDS BEYOND THE DESCRIPTION ON THE FACE HEREOF. UNDER NO CIRCUMSTANCES SHALL **HONEYWELL INTERNATIONAL INC.** BE LIABLE FOR ANY LOSS OF OR DAMAGE TO PROPERTY, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE **HONEYWELL INTERNATIONAL INC.**'S PRODUCTS. FURTHERMORE, **HONEYWELL INTERNATIONAL INC.** SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL OR INDUSTRIAL USE OF ITS PRODUCTS.

This warranty replaces all previous warranties and is the only warranty made by **Honeywell International Inc**. No increase or alteration, written or verbal, of the obligation of this warranty is authorized.

Warn-HL-05-2007.fm

Fire·Lite Alarms
by Honeywell

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS