



Digital Alarm Communicator/Transmitter
DACT-UD Module

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 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 Guide for Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. 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 storage of flammable materials, etc.).

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

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 Chapter 7 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

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 Chapter 7 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 operation at 0-49° C/32-120° F and at a relative humidity of 85% RH (non-condensing) at 30° C/86° 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. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage.

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

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.

Though designed to last many years, system components can fail at any time. 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 his 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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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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

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
- UL 864 Standard for Control Units for Fire Protective Signaling 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

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 Manual Document #51335

SECTION 1 Product Description

The DACT-UD 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.

1.1 Product Features

- Dual telephone lines
- Dual telephone line voltage detect
- Mounts inside the control panel
- Extensive transient protection
- Individual LEDs for
 - ✓ Kissoff - green LED
 - ✓ Primary Phone Line Active - red LED
 - ✓ Secondary Phone Line Active - red LED
- Communicates vital system status including:
 - ✓ Independent zone/point alarm
 - ✓ Independent zone/point trouble
 - ✓ Independent zone/point supervisory
 - ✓ AC power loss
 - ✓ Low battery
 - ✓ Earth fault
 - ✓ System off normal
 - ✓ 12 or 24 hour test signal
 - ✓ Abnormal test signal per UL requirements
 - ✓ Annunciation at control panel of DACT troubles including loss of phone lines, communication failure with either Central Station, total communication failure

1.2 Compatible Panel

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

- MS-9600

1.3 Specifications

DC Power - J1 Connector

Current draw in standby and alarm:

- Standby = 0.100 amps
- Alarm = 0.132 amps (communicating)

1.4 Digital Communicator

Two modular phone jacks allow easy connection to telephone lines. Modular jacks are labeled PH1 and PH2 for the Primary and Secondary phone lines. Telephone line Primary Active and Secondary Active red LEDs are provided as well as a green KISSOFF LED. 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:
 - ✓ 12 Tone Burst Types: 20 pps
(3+1, 4+1, 4+2, 3+1 Exp., 4+1 Exp., 4+2 Exp.)
 - ✓ 3 Touchtone Types:
 - 4+1 Ademco Express
 - 4+2 Ademco Express
 - Ademco Contact ID

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: less than 4.0 volts 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-UD**
FCC Registration Number: **US:1W6AL00BDACTUD**
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-UD 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 16 for an illustration of the proper installation of this equipment.

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.

Notes

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SECTION 2 DACT-UD Installation

2.1 Installation in MS-9600 FACP

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

2.1.1 MS-9600 Keypad/Display Removal

DACT-UD (Digital Alarm Communicator/Transmitter) Module installation requires the removal of the MS-9600 Keypad/Display unit from the main circuit board. To remove the Keypad/Display, insert a Phillips screwdriver into each of the three holes located in the flexible covering of the Keypad/Display and loosen the three mounting screws. Note that it is not necessary to disconnect the cables between the Keypad/Display and the main circuit board. Carefully lift the Keypad/Display and rest the unit at the bottom of the main circuit board.

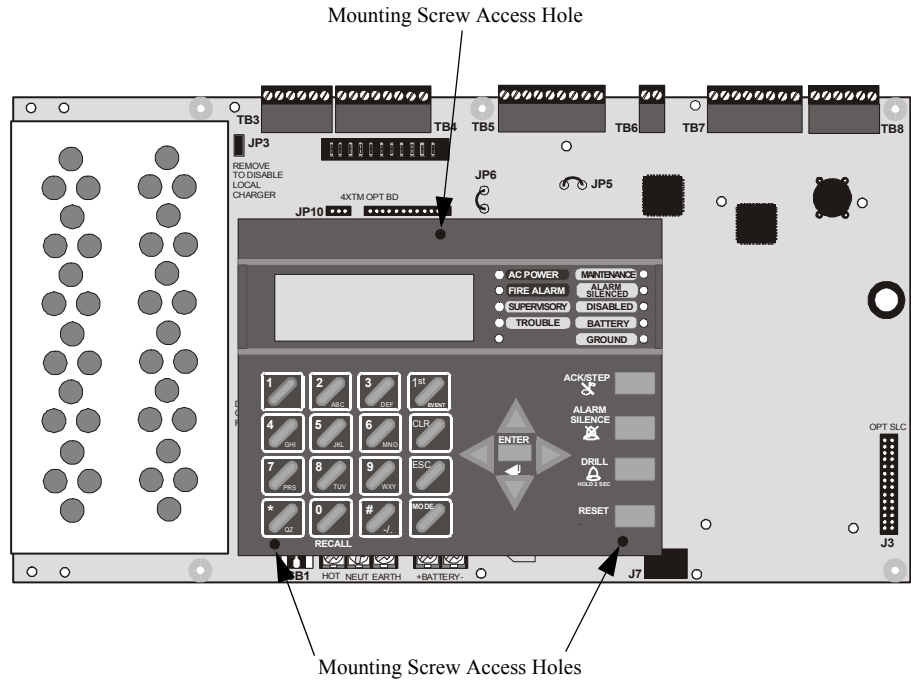


Figure 2.1 Keypad/Display Removal

2.1.2 DACT-UD Installation

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

The DACT-UD module plugs into connector J2 on the MS-9600 main circuit board.

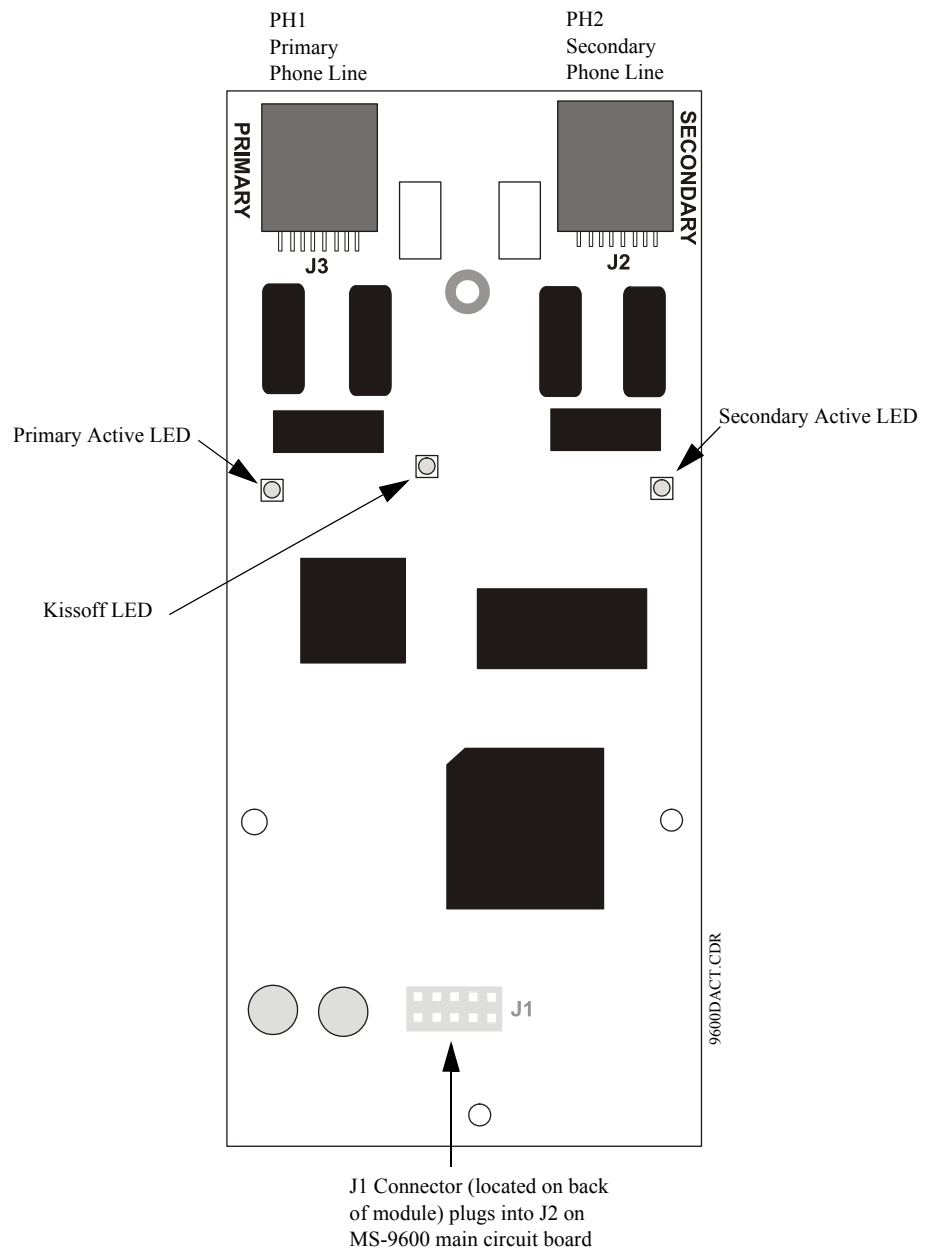


Figure 2.2 DACT-UD Module

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

1. Remove all power (AC and DC) from the FACP before proceeding with the installation
2. Remove the Keypad/Display from the main circuit board as described in the beginning of this section

3. Insert the supplied plastic snap-in standoff into mounting hole located at the bottom center of the DACT-UD module (insert into back of board)
4. Carefully plug connector J1 on the back of the DACT-UD module into connector J2 on the MS-9600 main circuit board, being careful not to bend any pins and at the same time, insert plastic snap-in standoff into mounting hole in main board
5. Align the mounting holes in the DACT module with the premounted standoffs on the FACP main circuit board

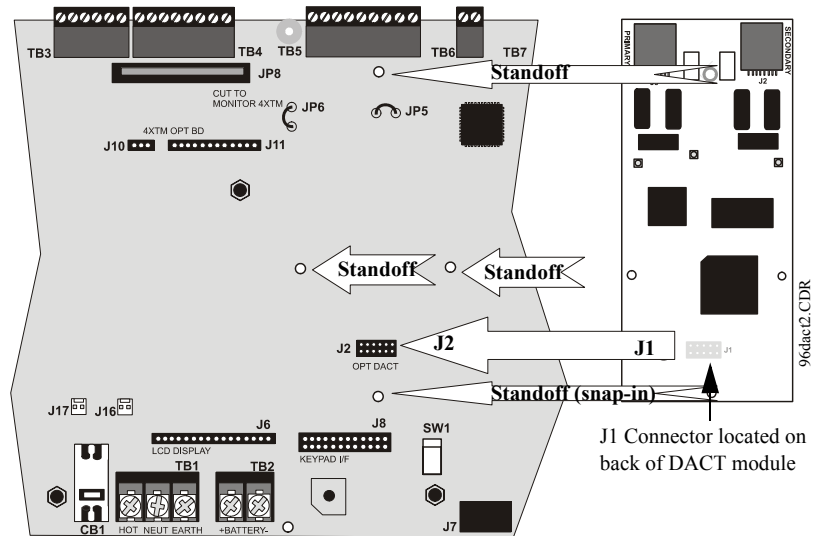


Figure 2.3 DACT J1 Connector to FACP J2 Connector

6. Secure the module to the standoffs on the main circuit board with the three screws supplied with the DACT-UD. It is important that the supplied screws be used to secure the module to the metal standoff in order to help protect against electrical transients.

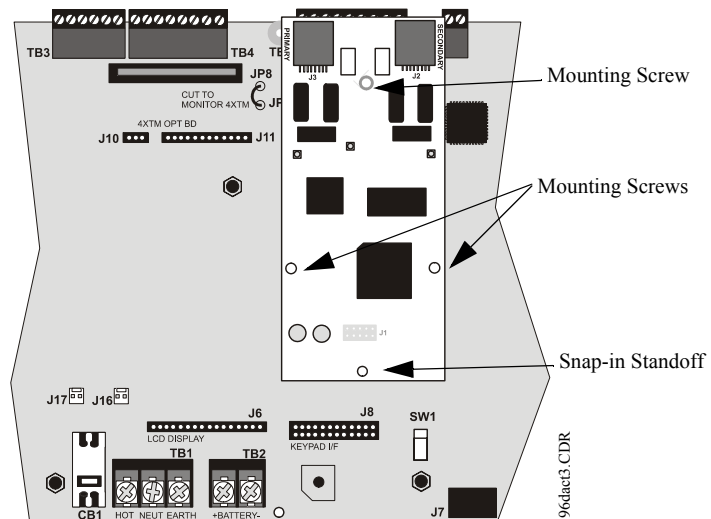


Figure 2.4 DACT Installation on Standoffs

7. Reinstall the Keypad/Display on the main circuit board by positioning the unit over the appropriate standoffs and securing with the screws which were loosened in step 2
8. Make certain to program the control panel for DACT operation

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

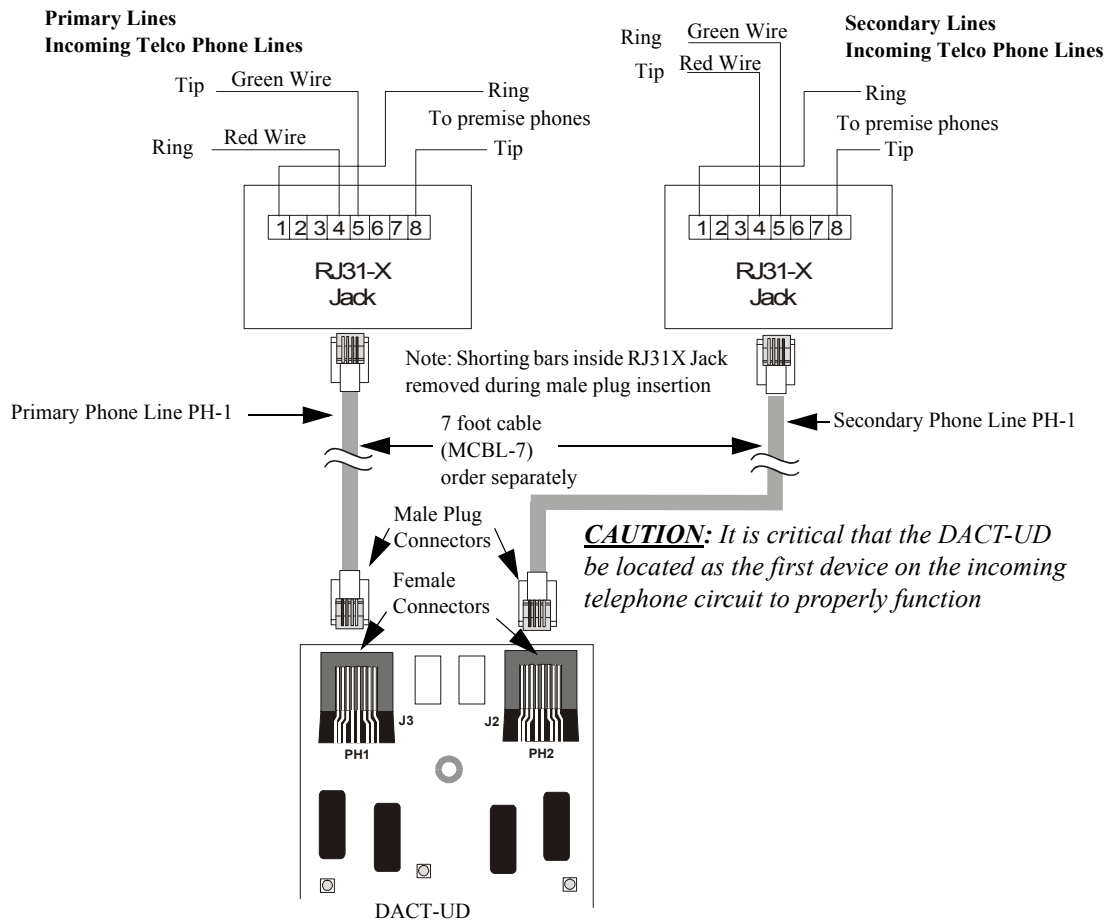


Figure 2.5 Wiring Phone Jacks

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

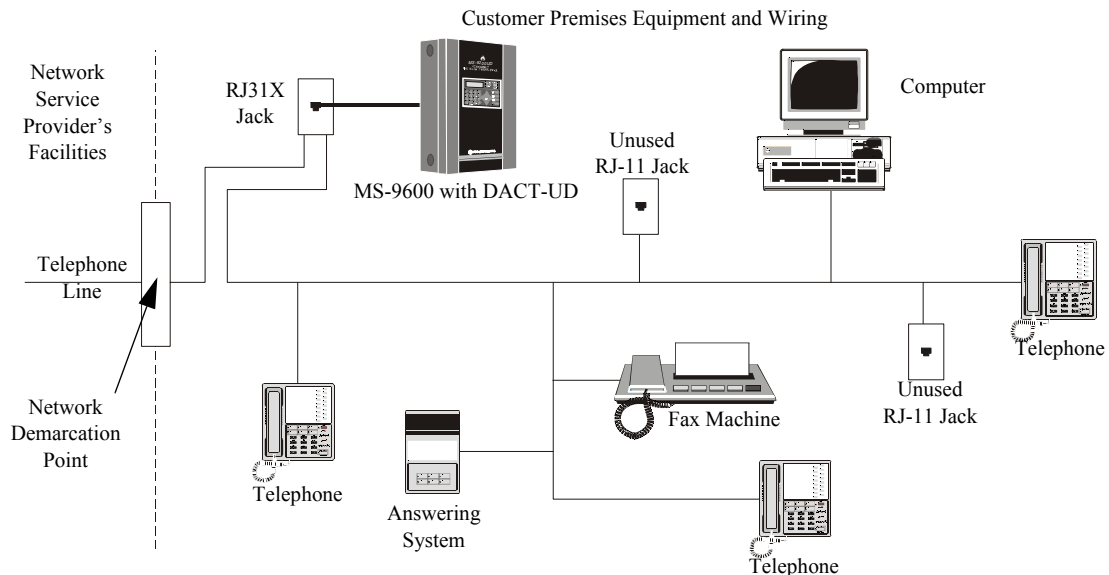


Figure 2.6 DACT Installation

SECTION 3 Programming for DACT-UD

3.1 Programming the MS-9600 Fire Alarm Control Panel

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

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-UD using the following procedure



Option Module Screen

3.1.1 On-Board DACT

The DACT-UD (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 Screen #1



On Board DACT Screen #2

3.1.1.1 DACT-UD Enable

To enable the on-board DACT 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. 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 62/38
    
```

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.

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. The following screen will be displayed:

```

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

On Board DACT Screen #1

```

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 62/38
    
```

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.

ON BOARD DACT
1=SERVICE TERMINAL
2=CENTRAL STATION
3=MANUAL DIAL MODE

On Board DACT Screen #2

3.1.1.4 Service Terminal

The MS-9600 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 screens to appear:

SERVICE TERMINAL ↓
1= PANEL ID
2= TERMINAL 1
3= TERMINAL 2

Service Terminal Screen #1

SERVICE TERMINAL ↑
1= RING COUNT 3

Service Terminal Screen #2

3.1.1.4.1 Panel ID

The Panel Identification Number is a 4-digit code (valid digits being 0 - 9 and A - F) that is used to identify the installed FACP. It is important to program this code into the FACP the first time that downloading is performed so that the called Service Terminal can identify the control panel. The factory default is *0000*.

To program the Panel ID, press *1* while viewing Service Terminal Screen #1. The following screen will be displayed:

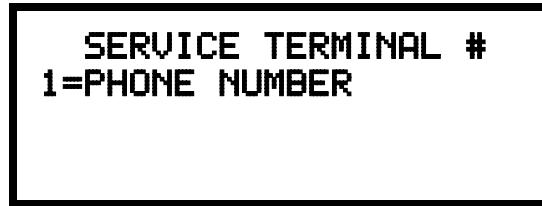
PANEL ID
4 CHARACTER 0-F
 █

Panel ID Screen

A flashing cursor will appear in the lower left corner of the display. Enter a 4-digit code using the digits 0 - 9 and/or the letters A - F by entering the first character. Press the right arrow key to move the cursor to the second position and enter the second character. Follow the same procedure to enter the remaining characters. After entering the fourth character, press the right arrow key and then press the *Enter* key to store the Panel ID number.

3.1.1.4.2 Terminal 1 and Terminal 2

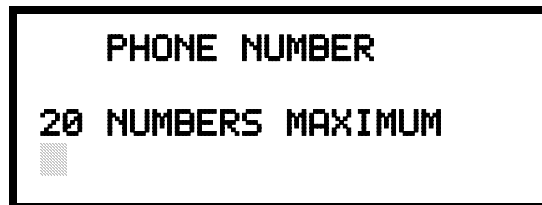
Service Terminal #1 is generally designated as the FACP primary phone line used for receiving phone calls from the service terminal (PC) being used for remote programming. Service Terminal 2 is referred to as the secondary phone line. Pressing 2 for Terminal 1 or 3 for Terminal 2 while viewing Service Terminal Screen #1 will display the following screen:



Service Terminal # Screen

Phone Number (Service Terminal)

The Service Terminal Phone Number will be used by the control panel to contact the service terminal. Pressing 1 while viewing the Service Terminal # Screen will cause the following screen to be displayed:



Printer-PC Screen

A flashing cursor will appear in the lower left corner. Enter the phone number for the service terminal by keying in the first digit, pressing the left arrow key and entering the second digit. Continue this process until all desired numbers have been entered (maximum of 20 characters). Press the *Enter* key to store the phone number in memory and return the display to the Service Terminal # Screen.

Valid entries are 0 - 9 and A - F with the numeric digits as dialed numbers and letters representing the following functions:

- A = * on a Touchtone phone keypad
- B = # on a Touchtone phone keypad
- C = look for secondary dial tone for up to two seconds (then dial anyway)
- D = three second pause
- E = five second pause
- F = end of phone number (F is automatically entered for unused entry positions)

3.1.1.4.3 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 3 which means the control panel will not answer an incoming call until 3 rings are detected. This entry may be programmed for 1 to 25 rings. A setting of 00 prevents the panel from answering incoming calls.

To change the Ring Count, press 1 while viewing the Service Terminal Screen #2. The following screen will be displayed:



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.



On Board DACT Screen #2

3.1.1.5 Central Station

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



Central Station Screen #1



Central Station Screen #2

3.1.1.5.1 Reporting Enable

To enable the DACT 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 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=BOTH
3=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, 2 to transmit all reports to both the primary and secondary phone numbers all of the time or 3 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 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 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.

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 0021

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.

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

Primary/Secondary Screen #1

24 Hour Test Time

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-UD 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).

CENTRAL STATION
1=PHONE NUMBER

Primary/Secondary Screen #2

Phone Number

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-UD will be contacting. A maximum of 20 characters can be entered with valid entries being 0 - 9 and A - F where A = *, B = #, C = look for secondary dial tone for up to 2 seconds (then dial anyway), D = 3 second pause, E = 5 second pause and F = end of phone number (must be entered at end of phone number).

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 by an F to indicate the end of the number.


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

CENTRAL STATION
1=COMM FORMAT


Primary/Secondary Screen #3

COMM FORMAT 
1=ADEMCO EXPRESS 4P1
2=ADEMCO EXPRESS 4P2
3=3P1S C18 A23


Comm Format Screen #1

COMM FORMAT 
1=3P1E C18 A23
2=3P1S C19 A14
3=3P1E C19 A14

Comm Format Screen #2

COMM FORMAT 
1=4P1S C18 A23
2=4P1E C18 A23
3=4P1S C19 A14

Comm Format Screen #3

COMM FORMAT 
1=4P1E C19 A14
2=4P2S C18 A23
3=4P2E C18 A23

Comm Format Screen #4

COMM FORMAT 
1=4P2S C19 A14
2=4P2E C19 A14
3=ADEMCO CONTACT ID

Comm Format Screen #5

The Communication Format is determined by the type of receiver that the DACT-UD 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 EXPRESS 4P1	4+1 Ademco Express Standard, DTMF, 1400/2300 ACK
ADEMCO EXPRESS 4P2	4+2 Ademco Express Standard, DTMF, 1400/2300 ACK
3P1S C18 A23	3+1 Standard 1800 Hz Carrier, 2300 Hz ACK
3P1E C18 A23	3+1 Expanded 1800 Hz Carrier, 2300 Hz ACK
3P1S C19 A14	3+1 Standard 1900 Hz Carrier, 1400 Hz ACK
3P1E C19 A14	3+1 Expanded 1900 Hz Carrier, 1400 Hz ACK
4P1S C18 A23	4+1 Standard 1800 Hz Carrier, 2300 Hz ACK
4P1E C18 A23	4+1 Expanded 1800 Hz Carrier, 2300 Hz ACK
4P1S C19 A14	4+1 Standard 1900 Hz Carrier, 1400 Hz ACK
4P1E C19 A14	4+1 Expanded 1900 Hz Carrier, 1400 Hz ACK
4P2S C18 A23	4+2 Standard 1800 Hz Carrier, 2300 Hz ACK
4P2E C18 A23	4+2 Expanded 1800 Hz Carrier, 2300 Hz ACK
4P2S C19 A14	4+2 Standard 1900 Hz Carrier, 1400 Hz ACK
4P2E C19 A14	4+2 Expanded 1900 Hz Carrier, 1400 Hz ACK
ADEMCO CONTACT ID	Contact ID, DTMF, 1400/2300 ACK



Primary/Secondary Screen #4

Event Codes

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



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.



Event Code Screen

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

3+1, 4+1 Express and 4+1 Standard

The information shown in Table 3.2 is automatically programmed for the Central Station phone number Event Codes when any of these Formats are selected. Enter 0 for an Event Code Setting to disable the report.

Table 3.2 Event Codes

Event Description	Event Code Settings	
	Active	Restoral
PULL STATION	1	E
MON-USER-DEF-1	1	E
WATERFLOW	1	E
MON-USER-DEF-2	1	E
SMOKE (PHOTO)	1	E
DET-USER-DEF-1	1	E
SMOKE (ION)	1	E
DET-USER-DEF-2	1	E
HEAT DETECT	1	E
DET-USER-DEF-3	1	E
SMOKE DUCT-P	1	E
DET-USER-DEF-4	1	E
DUCT SUPERVISORY	8	E
DET-USER-DEF-5	8	E
not used	0	0
not used	0	0
not used	0	0
not used	0	0
MONITOR	1	E
MON-USER-DEF-3	1	E
not used	0	0
not used	0	0
SMOKE CONVEN	1	E
MON-USER-DEF-5	1	E
HEAT DETECT	1	E
MON-USER-DEF-6	1	E
MEDIC ALERT	0	0
MON-USER-DEF-7	0	0
HAZARD ALERT	0	0
MON-USER-DEF-8	0	0
TORNADO ALRT	0	0
MON-USER-DEF-9	0	0
PHONE	0	0
MON-USER-DEF-10	0	0
TAMPER	8	E
MON-USER-DEF-11	8	E
MON SUPERVISORY	8	E
MON-USER-DEF-12	8	E
MON SUPERV AUTO	8	E
MON-USER-DEF-13	8	E
POWER MON	6	A
MON-USER-DEF-14	6	A
TROUBLE MON	refer to POINT_FAULT for codes	
MON-USER-DEF-15	refer to POINT_FAULT for codes	
PROCESS MON	0	0
MON-USER-DEF-16	0	0

Table 3.2 Event Codes (Continued)

PROCMON AR	0	0
MON-USER-DEF-17	0	0
not used	0	0
not used	0	0
POINT_FAULT	F	D
POINT_DISABLE	4	5
AC_FAIL	9	3
DRILL	B	C
SLC 1 OPEN FAULT	6	A
SLC 1 SHORT FAULT	6	A
SLC 2 OPEN FAULT	6	A
SLC 2 SHORT FAULT	6	A
GROUND FAULT	6	A
LOW BATTERY	6	A
NO_BATTERY	6	A
TELCO LINE 1	6	A
TELCO LINE 2	6	A
COMM FAULT 1	6	A
COMM FAULT 2	6	A
TOTAL COMM FLT	0	0
PRINTER FAULT	6	A
NAC 1 FAULT	6	A
NAC 2 FAULT	6	A
NAC 3 FAULT	6	A
NAC 4 FAULT	6	A
not used	0	0
VOICE EVACUATION	6	A
ACS FAULT	6	A
LCD_80F FAULT	6	A
NAC 1 DISABLE	4	5
NAC 2 DISABLE	4	5
NAC 3 DISABLE	4	5
NAC 4 DISABLE	4	5
MEMORY FAULT	6	A
CHARGER FAULT	6	A
OPTION CARD 1 FAULT	6	A
OPTION CARD 2 FAULT	6	A
SLC 2 FAULT	6	A
ZONE DISABLE	4	5
NAC_KEY_FLT	6	A
NO_DEVICES_INSTLLD	6	A
OFF_NORMAL_MESSAGE	6	A
24_HOUR_TEST	9	0
24 HOUR ABNORMAL TES	F	0
UPDOWN REQUEST	7	0
UPLOAD SUCCESS	7	0
DOWNLOAD SUCCESS	7	0
UPDOWN FAILURE	7	0
GENERAL_ALARM	0	0
GENERAL_SUPERVISORY	0	0

4+2 Standard, 4+2 Express, 3 + 1, 4+1 and 4+2 Expanded Formats

The information shown in Table 3.3 is automatically programmed for the Central Station phone number Event Codes when any of these Formats are selected. Enter 00 for an Event Code Setting to disable the report.

Table 3.3 Event Codes

Event Description	Event Code Settings	
	Active	Restoral
PULL STATION	11	E1
MON-USER-DEF-1	11	E1
WATERFLOW	11	E1
MON-USER-DEF-2	11	E1
SMOKE (PHOTO)	11	E1
DET-USER-DEF-1	11	E1
SMOKE (ION)	11	E1
DET-USER-DEF-2	11	E1
HEAT DETECT	11	E1
DET-USER-DEF-3	11	E1
SMOKE DUCT-P	11	E1
DET-USER-DEF-4	11	E1
DUCT SUPERVISORY	81	E1
DET-USER-DEF-5	81	E1
not used	00	00
not used	00	00
not used	00	00
not used	00	00
MONITOR	11	E1
MON-USER-DEF-3	11	E1
not used	00	00
not used	00	00
SMOKE CONVEN	11	E1
MON-USER-DEF-5	11	E1
HEAT DETECT	11	E1
MON-USER-DEF-6	11	E1
MEDIC ALERT	00	00
MON-USER-DEF-7	00	00
HAZARD ALERT	00	00
MON-USER-DEF-8	00	00
TORNADO ALRT	00	00
MON-USER-DEF-9	00	00
PHONE	00	00
MON-USER-DEF-10	00	00
TAMPER	81	E1
MON-USER-DEF-11	81	E1
MON SUPERVISORY	81	E1
MON-USER-DEF-12	81	E1
MON SUPERV AUTO	81	E1
MON-USER-DEF-13	81	E1
POWER MON	81	E1
MON-USER-DEF-14	81	E1
TROUBLE MON	refer to POINT_FAULT for codes	
MON-USER-DEF-15	refer to POINT_FAULT for codes	
PROCESS MON	00	00
MON-USER-DEF-16	00	00

Table 3.3 Event Codes (Continued)

PROCMON AR	00	00
MON-USER-DEF-17	00	00
not used	00	00
not used	00	00
POINT_FAULT	F1	D1
POINT_DISABLE	41	51
AC_FAIL	92	93
DRILL	97	98
SLC 1 OPEN FAULT	43	53
SLC 1 SHORT FAULT	44	54
SLC 2 OPEN FAULT	4B	5B
SLC 2 SHORT FAULT	4C	5C
GROUND FAULT	61	A1
LOW BATTERY	62	A2
NO_BATTERY	63	A3
TELCO LINE 1	64	A4
TELCO LINE 2	65	A5
COMM FAULT 1	6A	AA
COMM FAULT 2	6B	AB
TOTAL COMM FLT	00	00
PRINTER FAULT	6C	AC
NAC 1 FAULT	66	A6
NAC 2 FAULT	67	A7
NAC 3 FAULT	68	A8
NAC 4 FAULT	69	A9
not used	00	00
VOICE EVACUATION	00	00
ACS FAULT	6D	AD
LCD_80F FAULT	6E	AE
NAC 1 DISABLE	4B	5B
NAC 2 DISABLE	4C	5C
NAC 3 DISABLE	4D	5D
NAC 4 DISABLE	4E	5E
MEMORY FAULT	46	56
CHARGER FAULT	47	57
OPTION CARD 1 FAULT	48	58
OPTION CARD 2 FAULT	49	59
SLC 2 FAULT	4F	5F
ZONE DISABLE	42	52
NAC_KEY_FLT	4B	5B
NO_DEVICES_INSTLLD	4A	5A
OFF_NORMAL_MESSAGE	6F	AF
24_HOUR_TEST	99	00
24 HOUR ABNORMAL TES	FB	00
UPDOWN REQUEST	71	00
UPLOAD SUCCESS	72	00
DOWNLOAD SUCCESS	73	00
UPDOWN FAILURE	74	00
GENERAL_ALARM	00	00
GENERAL_SUPERVISORY	00	00

Ademco Contact ID Format

The information shown in Table 3.4 is automatically programmed for the Central Station phone number Event Codes when Ademco Contact ID Format is selected. Enter 000 for an Event Code Setting to disable the report.

Table 3.4 Event Codes

Event Description	Event Code Settings
	Active
PULL STATION	115
MON-USER-DEF-1	115
WATERFLOW	113
MON-USER-DEF-2	113
SMOKE (PHOTO)	111
DET-USER-DEF-1	111
SMOKE (ION)	111
DET-USER-DEF-2	111
HEAT DETECT	114
DET-USER-DEF-3	114
SMOKE DUCT-P	116
DET-USER-DEF-4	116
DUCT SUPERVISORY	200
DET-USER-DEF-5	200
not used	000
not used	000
not used	000
not used	000
MONITOR	110
MON-USER-DEF-3	110
not used	000
not used	000
SMOKE CONVEN	111
MON-USER-DEF-5	111
HEAT DETECT	114
MON-USER-DEF-6	114
MEDIC ALERT	100
MON-USER-DEF-7	100
HAZARD ALERT	150
MON-USER-DEF-8	150
TORNADO ALRT	150
MON-USER-DEF-9	150
PHONE	000
MON-USER-DEF-10	000
TAMPER	144
MON-USER-DEF-11	144
MON SUPERVISORY	200
MON-USER-DEF-12	200
MON SUPERV AUTO	200
MON-USER-DEF-13	200
POWER MON	330
MON-USER-DEF-14	330
TROUBLE MON	refer to POINT_FAULT for code
MON-USER-DEF-15	refer to POINT_FAULT for code
PROCESS MON	000
MON-USER-DEF-16	000

Table 3.4 Event Codes (Continued)

PROCMON AR	000
MON-USER-DEF-17	000
not used	000
not used	000
POINT_FAULT	380
POINT_DISABLE	570
AC_FAIL	301
DRILL	604
SLC 1 OPEN FAULT	371
SLC 1 SHORT FAULT	372
SLC 2 OPEN FAULT	371
SLC 2 SHORT FAULT	372
GROUND FAULT	310
LOW BATTERY	302
NO_BATTERY	311
TELCO LINE 1	351
TELCO LINE 2	352
COMM FAULT 1	354
COMM FAULT 2	355
TOTAL COMM FLT	000
PRINTER FAULT	336
NAC 1 FAULT	321
NAC 2 FAULT	322
NAC 3 FAULT	326
NAC 4 FAULT	327
not used	000
VOICE EVACUATION	337
ACS FAULT	333
LCD_80F FAULT	334
NAC 1 DISABLE	521
NAC 2 DISABLE	522
NAC 3 DISABLE	526
NAC 4 DISABLE	527
MEMORY FAULT	304
CHARGER FAULT	300
OPTION CARD 1 FAULT	331
OPTION CARD 2 FAULT	332
SLC 2 FAULT	370
ZONE DISABLE	570
NAC_KEY_FLT	300
NO_DEVICES_INSTLLD	380
OFF_NORMAL_MESSAGE	308
24_HOUR_TEST	602
24 HOUR ABNORMAL TES	608
UPDOWN REQUEST	411
UPLOAD SUCCESS	416
DOWNLOAD SUCCESS	412
UPDOWN FAILURE	413
GENERAL_ALARM	000
GENERAL_SUPERVISORY	000

```

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 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 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.

```

ON BOARD DACT
1=SERVICE TERMINAL
2=CENTRAL STATION
3=MANUAL DIAL MODE

```

On Board DACT Screen #2

3.1.1.6 Manual Dial Mode

Pressing 3 while viewing On Board DACT Screen #2 will cause the following screen to be displayed:

```

MANUAL DIAL MODE
1=PRIMARY PHONE
2=SECONDARY PHONE

```

Pressing 1 for Primary Phone or 2 for Secondary Phone will display the following:

```

MANUAL DIAL MODE
1=GO OFF HOOK
2=DIAL DIGIT(S)
3=GO ON HOOK

```

Pressing 1 for Go Off Hook will cause the DACT to access the selected phone line (similar to taking the phone handset off the cradle). The selected phone line's red Active LED will turn on.

Pressing 2 for Dial Digit(s) will display a screen which allows the user to key in the phone number to be dialed. The first digit is keyed in and then the right arrow key is pressed to move the cursor to the next position. The next digit is keyed in and the process is repeated until all digits have been entered. Pressing the *Enter* key will cause the number just entered to be dialed.

Pressing 3 for Go On Hook will cause the DACT to hang-up, deselecting the previously selected phone line. The phone line's red Active LED will turn off.

3.2 Remote Site Upload/Download

The control panel may be programmed or interrogated off-site via the public switched telephone network. Any personal computer with Windows 95, a 1200 baud Hayes compatible modem and Fire•Lite Upload/Download software P/N PK-CD may serve as a Service Terminal. The Upload/Download software allows the following:

- ✓ Download of the entire program
- ✓ Download of an individual program item
- ✓ Upload of the entire program
- ✓ Upload of an individual program item
- ✓ Upload of the entire program plus history file, walktest data, current status, system voltages and time & date
- ✓ Real-time upload, either continuous or 'snapshot' (one time) of current status or system voltages
- ✓ Execution of control panel functions such as Trouble Silence, Manual Evacuate, Manual Evacuate Restore, Zone/NAC Disable, Zone/NAC Enable and Set Time & Date

WARNING: Changes to program entries occur as a result of the downloading process. After successful downloading, 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

3.2.1 Downloading Program: General

Any time that the control panel is downloaded, whether initiated at the jobsite or remotely, a secret code (Factory Default 0000) is verified between the control panel and the Service Terminal. Changing the Secret Code may only be accomplished at the Service Terminal and subsequently loaded into the control panel. 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 immediately.

While the control panel is communicating with the Service Terminal, the DACT-UD's green Modem LED and one of the red Line Seize LEDs will remain on steady. At the conclusion of a successful download transaction, the green Kissoff LED will come on steady for one second. Upon termination of communication, the green Modem LED will turn off and the red Line Seize LED will turn off.

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

- ✓ The control panel may be in any mode of operation, including Disable, Enable and Drill. Downloading is not possible if the communicator is active during Central Station communications or while testing the phone lines while in Troubleshoot 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

Two basic communication mechanisms are supported as follows:

- Download with Callback - the Service Terminal calls the control panel. The control panel answers the call, confirms the calling party then hangs-up. The Service Terminal then waits for a callback from the control panel. After the control panel calls the Central Station and successfully reports that a request for downloading has been received, the control panel calls the Service Terminal back. Upon secret code verification, data transfers occur. When the data transfers are completed and the Service Terminal disconnects from the control panel, the panel calls the Central Station back to confirm either successful or unsuccessful results
- Download with Callback Disabled - the Service Terminal calls the control panel. No hang-up sequence occurs. Data transfers proceed.

Note: Callback enable/disable is controlled by the master user at the Service Terminal on a per call basis.

Anytime a download with callback is initiated, the control panel will first contact the primary Central Station or both the primary and secondary Central Stations or the first available Central Station phone number (depending on which option has been programmed into the control panel) to report a *request for upload/download* message. Once the request is 'Kissed-off' by the Central Station(s), the control panel will then call the appropriate Service Terminal and begin the downloading process.

Anytime a download without callback is initiated, the control panel and the Service Terminal will communicate and transfer data without first contacting a Central Station. When the data transfers are completed and the control panel disconnects from the Service Terminal, the panel will call the Central Station and report the following:

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

To prevent the *request for up/download* message(s) from being reported to the Central Stations(s), disable all upload/download reports back to both Central Stations.

During the downloading process, the fire protection remains active. Should a system trouble or alarm condition occur, the control panel immediately terminates downloading and processes the trouble or alarm locally and transmits the information to the Central Station(s).

3.2.2 Security Features

Remote site upload and download with the control panel has been carefully designed to include key security features to ensure proper functionality. The key features are listed and explained below.

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 in Password level 1 and cannot be viewed or changed by anyone other than a user with access to level 1. 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 panel will listen for a modem connection signal. If this signal is not received within 30 seconds, the panel will disconnect the call.

Upon successful connection (secret code verified and callback complete, if applicable), if no communication occurs within five minutes, the panel will disconnect the call.

Callback to Service Terminal

Anytime that the panel is remotely requested to allow an upload or download with callback, it will confirm the source of the incoming call, hang-up and call back the calling party (Service Terminal phone number).

Panel Identification Number

The panel identification number will be used to automatically identify the panel to the Service Terminal (when the panel calls the Service Terminal).

Calls initiated at the panel must be coordinated at the Service Terminal manually. Note that the Service Terminal will not pickup the incoming call unless operating on the communications screen. The Service Terminal will not recognize a control panel initiated call unless the secret code is at the factory default settings.

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 Acknowledge

There is an option whereby the control panel will report to one or both Central Stations that a request for uploading or downloading has been received prior to processing the call. This is called the *callback* option. If the Central Station(s) does not acknowledge receipt of this request, uploading or downloading is prohibited. If acknowledged by the Central Station(s), another message is transmitted informing the Central Station(s) that: (1) downloading was successful, (2) uploading was successful or (3) uploading/downloading was not successful.

Data Protection/Integrity

Options allow programming of single data entries or the entire program. Use caution when selecting programming choices and verify all entries via an upload or manual check at the control panel. Data blocks containing user programming options are protected from partial programming due to faulty phone connections, line noise and other errors.

3.3 Downloading Initiated at a Service Terminal

Before initiating the Download procedure, make certain that the control panel is in the standby state with the red Line Seize LED, green Modem and Kissoff LEDs off.

Once an incoming call is accepted/answered by the control panel, the panel will:

1. Establish basic modem connection
2. Verify secret code
3. Verify callback vs. no callback request from the Service Terminal. If callback is requested then perform steps 4 through 10. If no callback is requested then perform steps 9 and 10 only
4. Identify the Service Terminal location
5. Hang-up/disconnect call
6. Call the Central Station(s) and transmit a request for upload/download message (if programmed to do so). If this message is accepted, the control panel will proceed to the next step
7. Return call to Service Terminal
8. Verify secret code
9. Begin downloading
10. Upon completion of download, call Central Station(s) back and report a successful download or failed upload/download status (if programmed to do so)

3.4 Uploading Initiated at a Service Terminal

Items that may be uploaded from the control panel to a Service Terminal are:

- All or portions of programmed data plus the real time clock, time and date
- Entire Walktest data file in real-time continuous or as a 'snapshot'
- Troubleshoot system voltages in real-time continuous or as a 'snapshot'
- Entire event History file
- Current system status in real-time continuous or a 'snapshot'

Uploading is possible at any time provided the following conditions are true:

- ✓ The control panel may be in any mode of operation. Uploading is not possible if the communicator is active or while testing the phone lines while in troubleshoot 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

Once an incoming call is accepted/answered by the control panel, the panel will

1. Establish basic modem connection
2. Verify secret code
3. Verify callback vs. no callback request from the Service Terminal. If callback is requested then perform steps 4 through 10. If no callback is requested then perform steps 9 and 10 only
4. Identify the Service Terminal location
5. Hang-up/disconnect call
6. Call the Central Station(s) and transmit a request for upload/download message (if programmed to do so). If this message is accepted, the control panel will proceed to the next step
7. Return call to Service Terminal
8. Verify secret code
9. Begin uploading
10. Upon completion of upload, call Central Station(s) back and report a successful upload or failed upload/download status (if programmed to do so)

During the uploading process, the fire protection remains active. Should a system trouble or alarm condition occur, the control panel immediately terminates uploading and processes the trouble or alarm locally and transmits the information to the Central Station(s).

3.5 Simultaneous Data Transfers

Uploading and downloading may take place on a single telephone call. Control and selection of the data transaction is coordinated at the Service Terminal. This eliminates multiple phone calls, allows instant verification of downloaded data files and simplifies the overall process.

SECTION 4

Central Station Communications

The DACT-UD 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-UD 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 transmit 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-UD installed on the MS-9600 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

The control panel is capable of reporting detailed messages depending upon the format in use. Table 4-1 shows the reporting structure for all formats.

TABLE 4-1:Format Selection

	Format	Format	Format	Format
Report	3+1/4+1/Standard 4+1 Express	3+1/4+1/Expanded	4+2/Standard 4+2 Express	4+2/Expanded
Alarm	SSS(S) A	SSS(S) A AAA(A) Z	SSSS AA2	SSSS AZ
Alarm Restore	SSS(S) RA	SSS(S) RA RARARA(RA) Z	SSSS RARA2	SSSS RAZ
Zone Trouble (Zone Open)	SSS(S) TZ	SSS(S) TZ TZTZTZ(TZ) Z	SSSS TZTZ2	SSSS TZZ
Zone Trouble Restore	SSS(S) RTZ	SSS(S) RTZ RTZRTZRTZ(RTZ) Z	SSSS RTZRTZ2	SSSS RTZZ
System Trouble	SSS(S) TS	SSS(S) TS TSTSTS(TS) Y	SSSS TSTS2	SSSS TSY
System Trouble Restore	SSS(S) RTS	SSS(S) RTS RTSRTSRTS(RTS) Y	SSSS RTSRTS2	SSSS RTSY
Zone Disable	SSS(S) DZ	SSS(S) DZ DZDZDZ(DZ) Z	SSSS DZDZ2	SSSS DZZ
Zone Disable Restore	SSS(S) RDZ	SSS(S) RDZ RDZRDZRDZ(RDZ) Z	SSSS RDZRDZ2	SSSS RDZZ
Low Battery	SSS(S) L	SSS(S) L LLL(L) L2	SSSS LL2	SSSS LL2
Low Battery Restore	SSS(S) RL	SSS(S) RL RLRLRL(RL) L2	SSSS RLRL2	SSSS RLRL2
AC Loss	SSS(S) P	SSS(S) P PPP(P) P2	SSSS PP2	SSSS PP2
AC Loss Restore	SSS(S) RP	SSS(S) RP RPRPRP(RP) RP2	SSSS RPRP2	SSSS RPRP2
Fire Drill	SSS(S) FD	SSS(S) FD FDFDFD(FD) FD2	SSSS FDFD2	SSSS FDFD2
Fire Drill Restore	SSS(S) RFD	SSS(S) RFD RFDRFDRFD(RFD) RFD2	SSSS RFDRFD2	SSSS RFDRFD2
Supervisory Condition	SSS(S) V	SSS(S) V VVV(V) Z	SSSS VV2	SSSS VZ
Supervisory Condition Restore	SSS(S) RV	SSS(S) RV RVRVRV(RV) Z	SSSS RVRV2	SSSS RVZ
Test Report	SSS(S) X	SSS(S) X	SSSS XX2	SSSS XX2
Upload or Download	SSS(S) UD	SSS(S) UD	SSS UDUD2	SSS UDUD2

Refer to Table 4-2 for an explanation of each letter code in Table 4-1 . Refer to Table 4-3 for a list of compatible receivers.

TABLE 4-2:Format Selection Address Explanation**Where**

SSS or SSSS	=	Subscriber ID
A	=	Alarm (1st digit)
A2	=	Alarm (2nd digit)
Z	=	Zone Number
RA	=	Alarm Restore (1st digit)
RA2	=	Alarm Restore (2nd digit)
TZ	=	Zone Trouble (1st digit)
TZ2	=	Zone Trouble (2nd digit)
RTZ	=	Zone Trouble Restore (1st digit)
RTZ2	=	Zone Trouble Restore (2nd digit)
TS	=	System Trouble (1st digit)
TS2	=	System Trouble (2nd digit)
RTS	=	System Trouble Restore (1st digit)
RTS2	=	System Trouble Restore (2nd digit)
DZ	=	Zone Disable (1st digit)
DZ2	=	Zone Disable (2nd digit)
RDZ	=	Zone Disable Restore (1st digit)
RDZ2	=	Zone Disable Restore (2nd digit)
L	=	Low Battery (1st digit)
L2	=	Low Battery (2nd digit)
RL	=	Low Battery Restore (1st digit)
RL2	=	Low Battery Restore (2nd digit)
P	=	AC Loss (1st digit)
P2	=	AC Loss (2nd digit)
RP	=	AC Loss Restore (1st digit)
RP2	=	AC Loss Restore (2nd digit)
FD	=	Fire Drill (1st digit)
FD2	=	Fire Drill (2nd digit)
RFD	=	Fire Drill Restore (1st digit)
RFD2	=	Fire Drill Restore (2nd digit)
V	=	Supervisory Condition (1st digit)
V2	=	Supervisory Condition (2nd digit)
RV	=	Supervisory Condition Restore (1st digit)
RV2	=	Supervisory Condition Restore (2nd digit)
X	=	Test Report (1st digit)
X2	=	Test Report (2nd digit)
Y	=	A trouble corresponding to the following:
	7 =	Ground Fault
	8 =	Low Battery
	9 =	No Battery
	A =	Telco Primary Line Fault
	B =	Telco Secondary Line Fault
	C =	Main Bell Fault, Annunciator Bell
	D =	Communication Fault to Primary Number
	E =	Communication Fault to Secondary Number
	F =	System Off Normal Fault/System Fault (Slave Operation, see Chapter 6)
UD	=	Upload/download (1st digit)
UD2	=	Upload/download (2nd digit)

Note: For Expanded Reporting, the control panel automatically adds the digit corresponding to the zone number and the second digit corresponding to any system trouble condition. Only the first digit is programmable.

4.1 Transmittal Priorities

The DACT-UD 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)

Red LEDs are provided on the DACT-UD circuit board to identify which telephone line is activated. Also, a green LED labeled 'kissoff' will turn on whenever the DACT-UD has successfully transmitted reports to the Central Station. The 'kissoff' LED may turn on several times during communications with a Central Station.

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

TABLE 4-3:Compatible UL Listed Receivers

Format #	Ademco 685 (1)	Silent Knight 9000 (2)	ITI CS-4000 (3)	FBI CP220FB	Osborne Hoffman Models 1 & 2	Radionics 6000 (6)	Radionics 6500 (5)	Sescoa 3000R (7)	Surguard MLR-2 (9)
4+1 Ademco Express	✓			✓					✓
4+2 Ademco Express	✓			✓	✓ (8)				✓
3+1/Standard/1800/2300	✓	✓	✓	✓ (4)	✓	✓	✓	✓	✓
3+1/Expanded/1800/2300	✓	✓	✓	✓ (4)	✓			✓	✓
3+1/Standard/1900/1400	✓	✓		✓ (4)	✓			✓	✓
3+1/Expanded/1900/1400	✓	✓		✓ (4)	✓			✓	✓
4+1/Standard/1800/2300	✓	✓	✓	✓ (4)	✓		✓	✓	✓
4+1/Expanded/1800/2300	✓	✓		✓ (4)	✓			✓	✓
4+1/Standard/1900/1400	✓	✓		✓ (4)	✓			✓	✓
4+1/Expanded/1900/1400	✓	✓		✓ (4)	✓			✓	✓
4+2/Standard/1800/2300	✓	✓	✓	✓ (4)	✓		✓	✓	✓
4+2/Expanded/1800/2300	✓	✓		✓ (4)	✓			✓	✓
4+2/Standard/1900/1400	✓	✓		✓ (4)	✓			✓	✓
4+2/Expanded/1900/1400	✓	✓		✓ (4)	✓			✓	✓
Ademco Contact ID	✓			✓	✓				✓
Not Used									

1. With 685-8 Line Card with Rev. 4.4d software
2. With 9002 Line Card Rev. 9035 software or 9032 Line Card with 9326A software
3. Rev. 4.0 software
4. FBI CP220FB Rec-11 Line Card with Rev. 2.6 software and a memory card with Rev. 3.8 software
5. Model 6500 with Rev. 600 software
6. Mode 6000 with Rev. 204 software
7. With Rev. B control card at Rev. 1.4 software and Rev. C line card at Rev. 1.5 software
8. Model 2 only
9. Version 1.62 software

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 Panel ID	0000
Service Terminal Primary Phone Number	all Fs
Service Terminal Secondary Phone Number	all Fs
Service Terminal Primary Phone Ring Count.	03
Service Terminal Secondary Phone Ring Count	03
Service Terminal Upload/Download Reporting	Backup Only
Central Station Reporting	Disabled
Central Station AC Loss Reporting Delay	4
Central Station Backup Reporting	First Available
Central Station Primary Phone Line Reporting Style	Reporting by Point
Central Station Secondary Phone Line Reporting Style	Reporting by Point
Central Station Trouble Call Limit	10
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	all Fs
Central Station Secondary Phone Number	all Fs
Central Station Primary Phone Communication Format	Ademco Contact ID
Central Station Secondary Phone Communication Format	Ademco Contact ID

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Limited Warranty

The manufacturer warrants its products 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 the manufacturer is to repair or replace, at its option, free of charge for parts and labor, any part which is defective in materials or workmanship under normal use and service. For products not under the manufacturer's date-stamp control, the warranty is eighteen (18) months from date of original purchase by the manufacturer's distributor unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. This warranty is void if the product is altered, repaired, or serviced by anyone other than the manufacturer or its authorized distributors, or 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 customer service department. Return product, transportation prepaid, to the manufacturer.

This writing constitutes the only warranty made by this manufacturer with respect to its products. The manufacturer 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 the manufacturer 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.

THE MANUFACTURER GIVES NO WARRANTY, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR OTHERWISE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. UNDER NO CIRCUMSTANCES SHALL THE MANUFACTURER BE LIABLE FOR ANY LOSS OF OR DAMAGE TO PROPERTY, DIRECT, INCIDENTAL, OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE THE MANUFACTURER'S PRODUCTS. FURTHERMORE, THE MANUFACTURER 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 the manufacturer. No increase or alteration, written or verbal, of the obligation of this warranty is authorized.



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