

D9068



Fire Systems

EN | Operation & Installation Guide
Fire Communicator

BOSCH

Notices

FCC Compliance Notice

This equipment was tested and complies with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy. When this equipment is not installed and used according to the instructions, it might cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.

If this equipment causes harmful interference to radio or television reception, that can be determined by turning the equipment off and on, correct the interference by:

- Reorienting or relocating the receiving antenna.
- Increasing the separation between the equipment and the receiver.
- Connecting the equipment to an outlet on a circuit different from that the receiver is connected to.
- Consulting the dealer or an experienced radio or TV technician for help.

FCC Telephone Connection to Users

This control complies with Part 68 of the FCC rules.

The inside of the enclosure has a label containing the ringer equivalence number (REN) for this equipment. When requested, you must provide this information to your local telephone company.

The REN helps determine the quantity of devices that can be connected to your telephone line and still have all of those devices ring when your telephone number is called. In most areas the sum of the RENs of all devices connected to one line should not exceed five (5.0). To verify the number of devices you can connect to your line, contact your local telephone company to determine the maximum REN for your local calling area.

The FCC registration number is ESVMUL-46514-AL-E. The ringer equivalence is 0.0B.

Do not use this equipment on coin service provided by the telephone company or connected to party lines.

If this equipment harms the telephone network, the telephone company might temporarily discontinue your service. When possible, the telephone company notifies you in advance. If advanced notice is not practical, you are notified as soon as possible. You are informed of your right to file a complaint with the FCC. The telephone company can make changes in its facilities, equipment, operations, or procedures affecting the proper functioning of your equipment. If they do, you are notified in advance so you can maintain uninterrupted telephone service.

If you experience trouble with this equipment, contact the manufacturer for information on obtaining service or repairs.

The telephone company might ask you to disconnect this equipment from the network until the problem is corrected, or until you are sure the equipment is not malfunctioning.



The manufacturer, not the user, must make the repairs to this equipment.

Operating this equipment can also be affected if events such as accidents or acts of God interrupt telephone service.

Industry Canada Notice

The Industry Canada label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements. Industry Canada does not guarantee the equipment operates to the user's satisfaction.

Before installing this equipment, verify you have permission to connect it to the facilities of the local telecommunications company. Install the equipment using an acceptable method of connection. Verify the customer is aware that compliance with the above conditions might not prevent degradation of service in some situations.

An authorized Canadian maintenance facility, designated by the supplier, should make the repairs to the certified equipment. If you make repairs or modifications to this equipment, and if the equipment malfunctions, the telecommunications company might ask you to disconnect the equipment.



For your own protection, ensure the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together.



Do not attempt to make such connections. Contact the appropriate electric inspection authority or electrician.

Installation Guidelines for UL Systems



Failure to install and program the D9068 according to the requirements in this section voids the listing mark of Underwriters Laboratories, Inc. (UL).



Test according to NFPA 72 Chapter 10.4.1.2 (2002) following any modifications, repairs, upgrades, or adjustments to the system.

D9068 UL Requirements

- D9068 is UL Listed for Commercial Digital Alarm Communicator applications (Type service: remote station and central station), UL Standard UL864.
- Install the digital alarm communicator transmitter (DACT) according to NFPA 72 for Commercial Fire installations.
- Mount the D9068 indoors and within the protected area.
- Ground according to Article 250 of the NEC (NFPA 70).
- Use the supplied screw and clamp terminal to connect the ground wire provided with the enclosure. Refer to *Figure 5* on page 10.
- Use, enable, and supervise both telephone lines.
- Input points might be unsupervised if the D9068 is mounted within 20 ft (6.1 m) of the fire alarm control panel (FACP) with wiring in conduit.
- If mounting the D9068 more than 20 ft (6.1 m) from the FACP, configure all input points for supervisory operation whether or not conduit is used.



Use conduit for all installations.

- FACP's using open collector outputs must be compatibility-listed for use with the D9068.

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1.0 Overview

1.1 System Overview

The D9068 Fire Communicator is a complete communicator for use with compatible FACP's. Alarms and communications to the D9068 are accomplished using dry contacts or open collector outputs.

The D9068 also includes:

- 12 VDC or 24 VDC operation
- Multiple data protocols (Modem IIIa², Contact ID, SIA, and 4/2)
- 100-event history buffer
- Five programmable discrete wire inputs (Class B)
- Dual telephone line interface
- Option bus interface for built-in programming using the D7033 LCD Remote Keypad
- Form C relay output for trouble
- LEDs for heartbeat, system trouble, and telephone line trouble (one per line)
- Serial port for connection to other FACP's (such as the Bosch D8024 and D10024/D10024A Analog FACP's)
- Real-time clock

1.2 Features and Specifications

1.2.1 Power



Do not share power from the FACP with the D9068 and other peripheral devices.

Table 1: Power Specifications

Power Specification	D9068 Value
Input voltage range(use power-limited source)	10.2 VDC to 28 VDC for filtered DC; 12 VRMS to 28 VRMS for unfiltered DC
Standby current	150 mA maximum
Alarm current	190 mA maximum

Although the D9068 can withstand short power losses up to 5 min, connect it to an unswitched, uninterrupted power source.

If the D9068 loses power for more than 5 min, the:

- History buffer might clear and all stored events are lost.
- Output (report) buffer might clear and all pending reports are lost.

- Alarms initiated before the power loss might reset. If the alarm conditions persist when power is restored, new alarms can be generated.
- System time might reset to its default setting.



If a power loss occurs, programmed settings such as input point configuration, telephone numbers, and account number remain intact.

1.2.2 System Supervision

Watchdog: The D9068 is supervised with a hardware watchdog circuit. Failure of the control program causes a hardware reset within 2 sec. The trouble relay is released for the duration of the reset. Generally, this relay is held energized.

Self Testing: Occasionally, the dialer (DACT), EEPROM memory, input points, and telephone lines are automatically tested. The EEPROM checksum is verified every 10 min. If the EEPROM checksum fails, a trouble condition is locally annunciated and a Trouble Report is sent.

1.2.3 Inputs

The D9068 supports five inputs that can be triggered by dry contact relays or open collector outputs. The open collector outputs from the fire panel must be below 1.3 VDC in alarm and must sink 5 mA minimum. Refer to *Table 2* for input point specifications.

Table 2: Input Point Specifications

Number of points	5
Circuit type	Class B
EOL resistor	2.21 kΩ; UL Listed; Bosch (P/N: 25899)
Alarm operation	Short to ground or voltage less than 1.3 VDC
Minimum alarm voltage	Less than 1.3 VDC
Maximum line resistance	50 Ω
Response time	500 ms

1.2.4 Input Configuration

Initiating circuits or points can be configured for seven types of conditions: Fire Alarm, Waterflow Alarm, Supervisory, Monitor Alarm, System Fault, AC Failure, and Low Battery. Refer to *Section 4.2 Input Point Operation* on page 21 and *1: CONFIGURE* on page 33 for more information.

1.2.5 Trouble Output

The D9068 has one Form C relay rated 1 A at 30 VDC. The Form C relay, which is normally held activated, deactivates for any trouble condition the D9068 detects. Refer to *Section 4.3 Trouble Relay Operation* on page 23 for more information.

When the D9068 is deployed on a ground start network, the Form C relay can be alternatively programmed to serve as a ground start relay.



Ground start is not UL compliant.

1.2.6 User Interface

A D7033 LCD Remote Keypad connects to a five-pin connector. It is used to program and troubleshoot the D9068. The D7033 LCD Remote Keypad can be set to any address from 1 to 15.



Only use the D7033 LCD Remote Keypad to program the D9068. Temporarily connect this keypad to the D9068 for programming only.

1.2.7 Communication

Formats

The D9068 supports four protocols: Modem IIIa², Contact ID, SIA, and 4/2.

Report Routing

There are six different report groups that can be routed to one of the following phone settings:

- **PHONE 1 ONLY:** The report is sent to Phone #1 only.
- **PHONE 2 ONLY:** The report is sent to Phone #2 only.
- **PHON 1 & 2:** The report is sent to Phones #1 and #2.
- **PHN 2 BACKUP:** The report is sent to Phone #1, and then to Phone #2 if Phone #1 fails.

These reporting groups consist of non-supervisory alarms (NONSUP ALRM), supervisory alarms (SUPVSY ALRM), alarm restorals and resets (ALM RSTR, RST), supervisory restorals (SUPVSY RSTR), tests (TESTS), and troubles and trouble restorals (TBL, TBL RSTR).

Refer to *Section 4.1.4 Call Routing* on page 19, *4: RPT STEERING* on page 37, and *Appendix E* on page 52 for more information about report steering.

Reset Report

The Reset Report is issued when the D9068 is reset from any off normal condition.

Telephone Line Selection

The D9068 follows a predetermined sequence to choose between the two telephone lines. It also implements the new NFPA requirements for alternating telephone lines during test reporting. The D9068 maintains a variable that selects either Phone Line 1 or Phone Line 2 for Auto Test Reports. After each successful Test Report, the variable switches to select the other telephone line. Users can select the telephone line for Manual Test Reports.

Communication Failed Indication: The D9068 indicates a communication failure after ten attempts to communicate are completed without success. This causes the trouble output to activate and attempt to report the fault.

1.2.8 History Buffer

The D9068 has a history buffer that retains up to 100 events. Each event is tagged with the date and time of occurrence. This buffer can be viewed when a D7033 LCD Remote Keypad is attached to the D9068. When the buffer is full, old events are discarded to make room for new events. A watchdog reset is entered in the buffer and does not reset the buffer.



The history buffer might clear when the system loses power for more than 5 min.

1.2.9 General Specifications

Table 3: General Specifications

Table 3: General Specifications	
Storage/Operating Temperature	32°F to +120°F (0°C to +49°C)
Lightning Protection	Metal oxide varistors (MOVs) and spark gaps provide protection from lightning surges and static discharges for inputs and telephone interface.

1.2.10 Parts List

Table 4 identifies the parts shipped with the D9068.

Table 4: Parts List
One enclosure
One self-tapping screw for enclosure
One machine screw for enclosure cover
One D9068 PC board in static bag
Four PC board mounting screws
Four PC board mounting clips
Four sets cable assemblies
Two sets telco cable assemblies RJ31X
One ground wire
Five 2.21 k Ω end-of-line (EOL) resistors; UL Listed; Bosch (P/N: 25899)
One light pipe

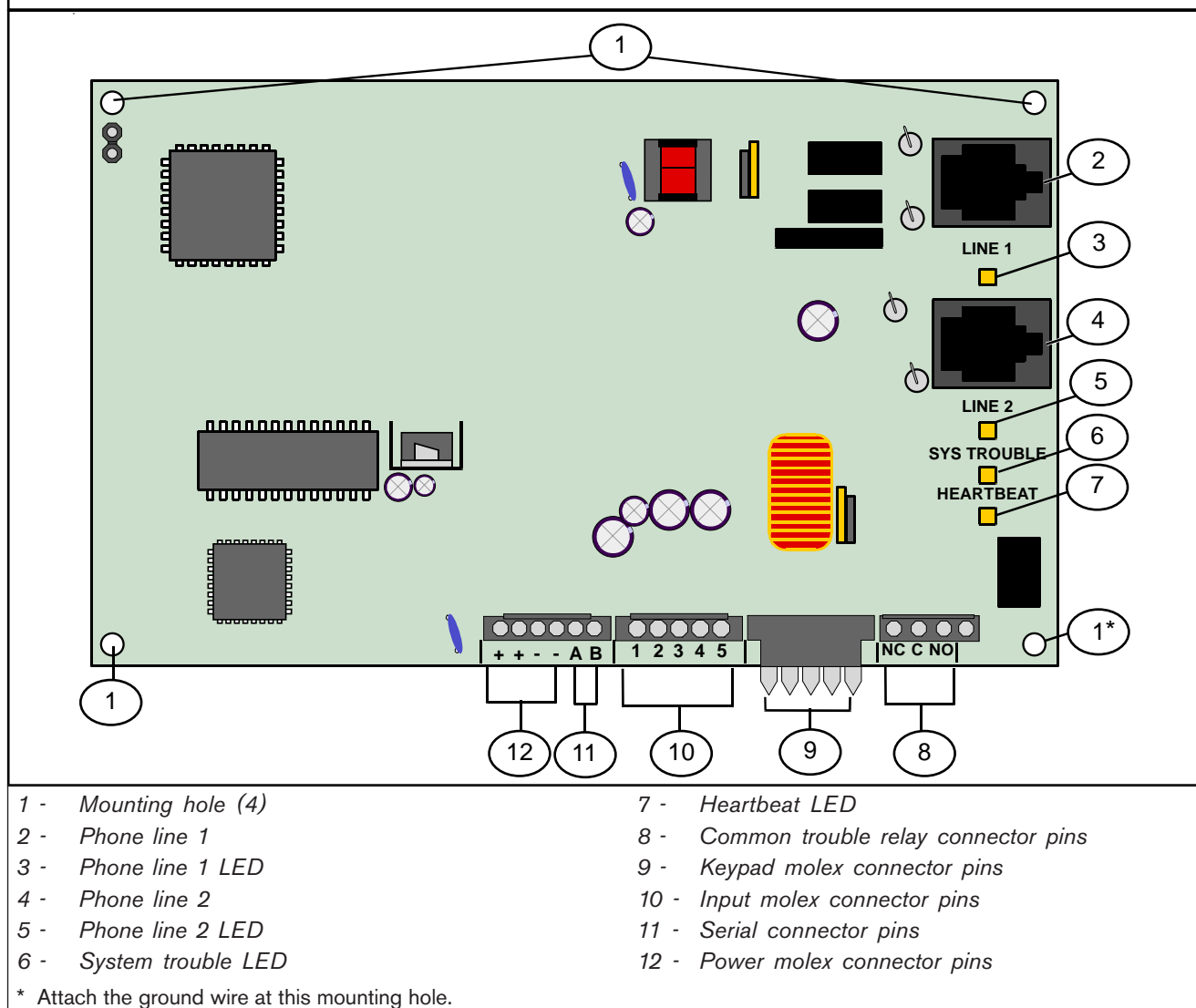


Refer to *Figure 5* on page 10 for the ground wire connections. Refer to *Figure 6* on page 10 for the cable assembly connections.

1.2.11 Printed Circuit Board (PCB) Layout

Figure 1 shows the layout of the D9068 PCB.

Figure 1: D9068 PCB Layout



2.0 Installation



You can install the D9068 up to 500 ft (152 m) from the FACP.

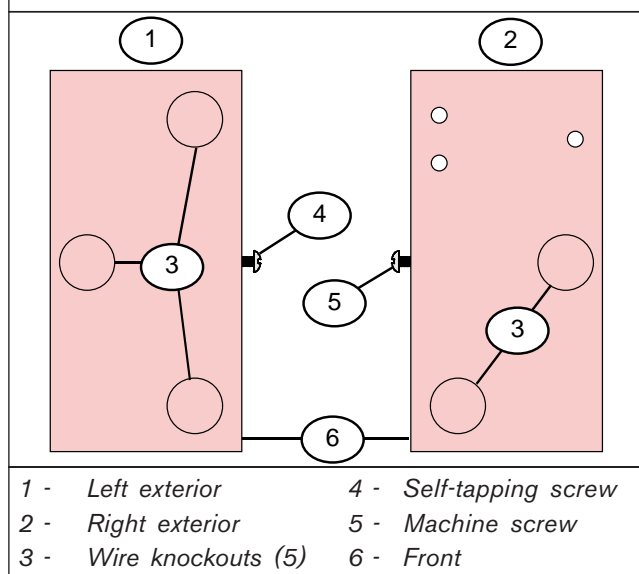
2.1 Mounting the Enclosure

The D9068 and its enclosure are shipped together. Install the D9068 inside the enclosure. The hardware for mounting the D9068 to the enclosure is located in the hardware pack.

To mount the D9068 Enclosure:

1. Remove the desired wire knockouts on the enclosure (*Figure 2*).

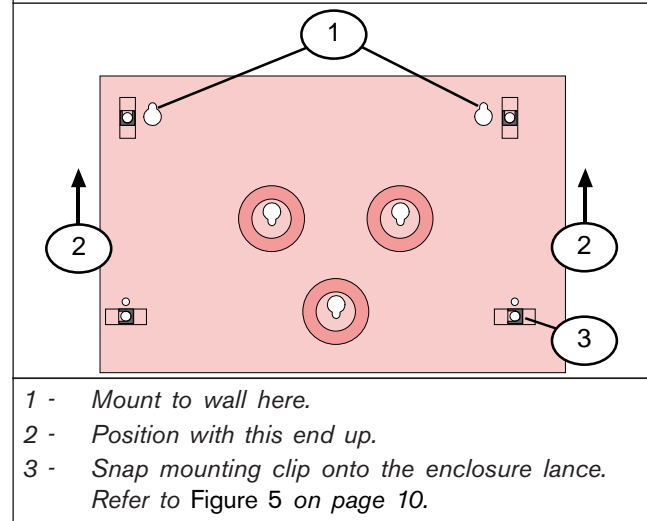
Figure 2: Wire Knockout Locations



2. Using the D9068 case as a template, mark the mounting hole locations on the desired wall.

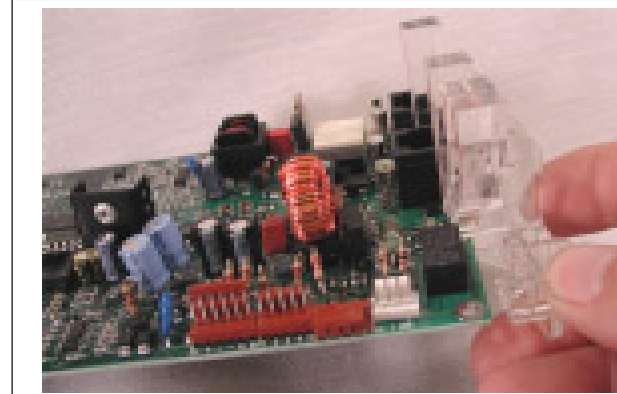
3. Hang the case on the wall using the appropriate installer-supplied mounting screws (*Figure 3*).

Figure 3: Mounting D9068 Case to Wall (Inside View)



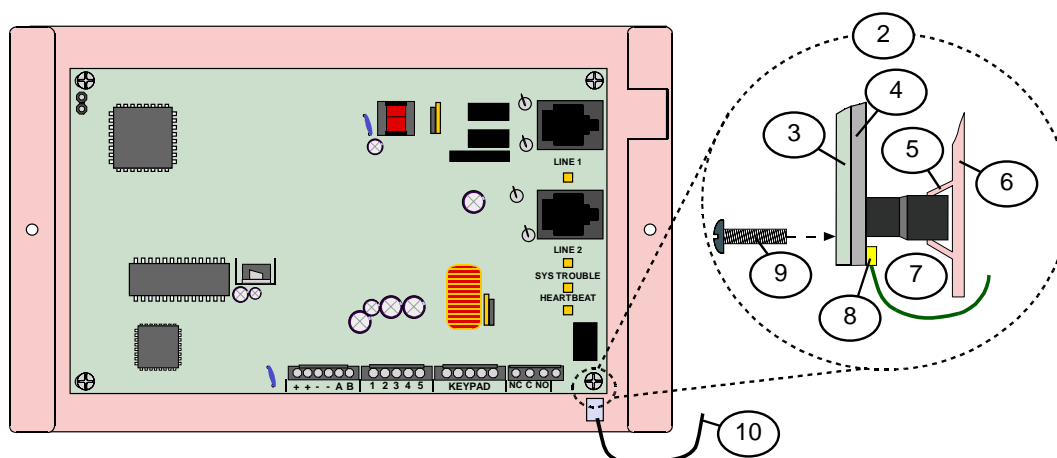
4. Slide the light pipe over the end of the PCB, aligning with the LED (*Figure 4*).

Figure 4: Light Pipe



5. Mount the D9068 board in its enclosure using the mounting screws and mounting clips provided. Then attach the ground wire (*Figure 5*).

Figure 5: Mounting the D9068 Board

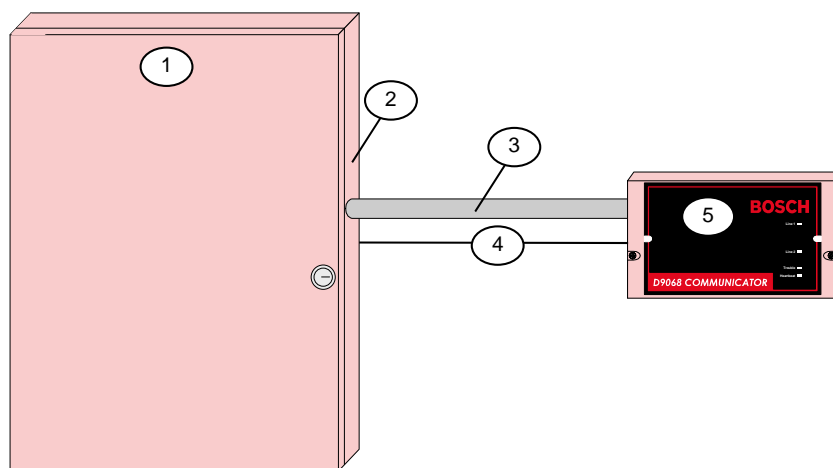


- 1 - D9068 installed in enclosure
- 2 - Support post assembly
- 3 - Light pipe
- 4 - D9068 PCB
- 5 - Lance
- 6 - Enclosure

- 7 - Mounting clip
- 8 - Ground wire lug
- 9 - Screw
- 10 - Ground wire to earth ground terminal connection on FACP

6. Connect the D9068 and FACP using conduit (*Figure 6*).

Figure 6: Conduit Connections



- 1 - FACP
- 2 - Enclosure knockouts
- 3 - Conduit

- 4 - Use no more than 500 ft (152 m)
- 5 - D9068



The FACP's using open collector outputs must be compatibility listed. When using conduit within 20 ft (6.1 m), configure the inputs for non-supervised operation. The D9068 can be installed up to 500 ft (152 m) from the FACP.

2.2 Connecting the D9068

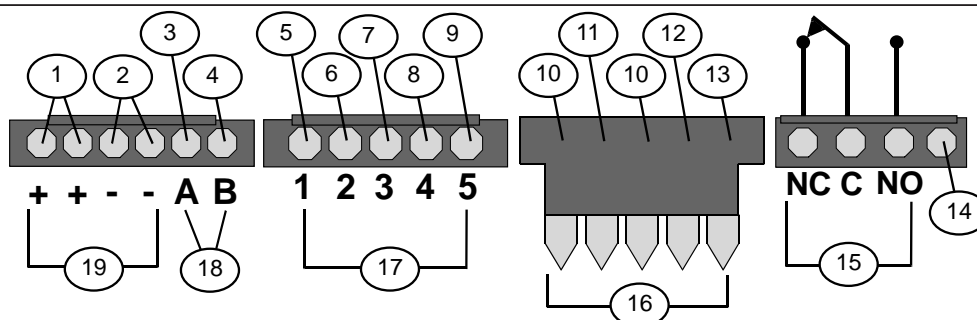
2.2.1 Input Point Connections



Remove all power before making or breaking any connections to the D9068. Failure to do so can cause personal injury and/or damage to the equipment.

When making connections to the D9068, refer to *Figures 7 through 13* on this page through 14.

Figure 7: Molex Connector Descriptions



1 - Red (Power +)

2 - Black (Power -)

3 - TX/A

4 - RX/B

5 - White/Brown (Input Point 1)

6 - White/Red (Input Point 2)

7 - White/Orange (Input Point 3)

8 - White/Yellow (Input Point 4)

9 - White/Blue (Input Point 5)

10 - Black

11 - Red

12 - Green

13 - Yellow

14 - Terminal not used

15 - Common trouble relay¹

16 - Keypad programmer

17 - Inputs (refer to Table 2 on page 6 for input specifications)

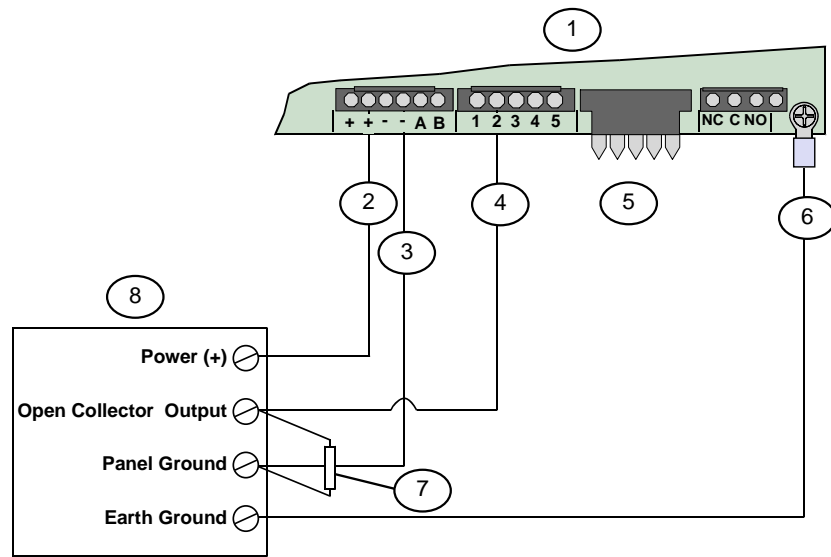
18 - Serial connection pins (future use)

19 - Power (refer to Table 1 on page 6 for specifications.)

¹ Connect to input on the FACP for trouble annunciation.

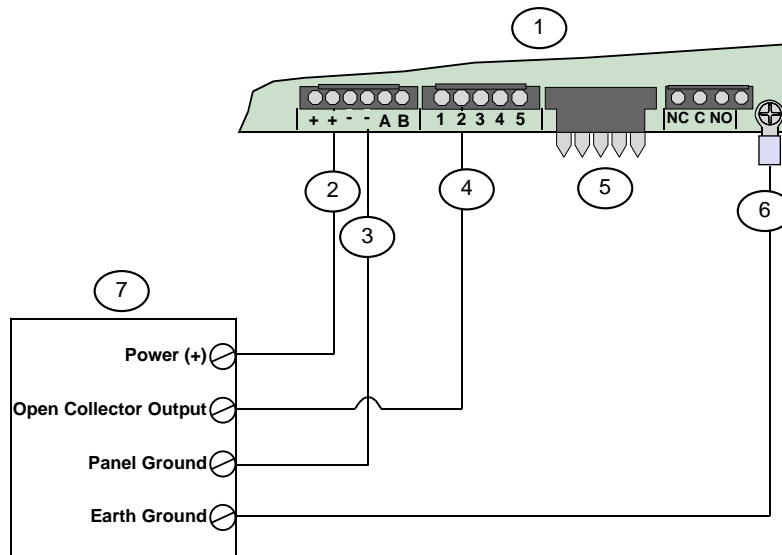
Notes: Do not use Points A and B. They are reserved to future implementations.

The contact position shows an off-normal condition. Under normal operation, the trouble relay is energized. Normally, C and NO are connected.

Figure 8: Open Collector Input Point Wiring (Supervised)

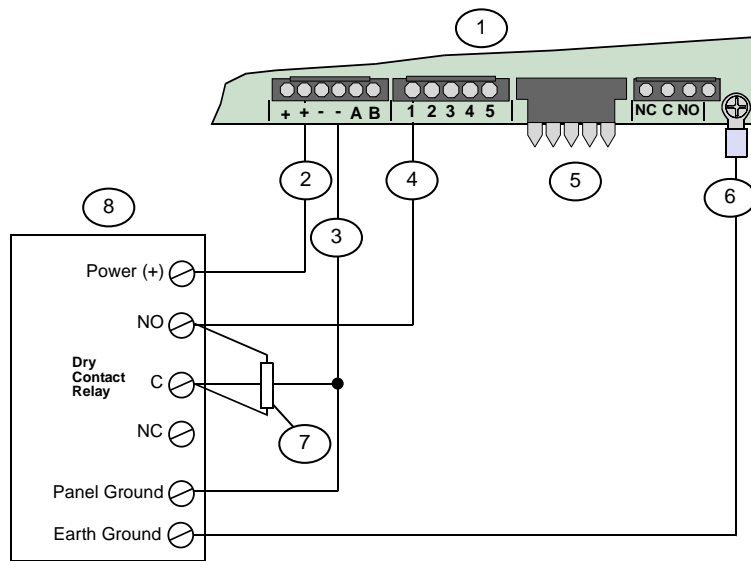
- | | |
|-----------------------------|--|
| 1 - D9068 | 6 - Earth ground (green) |
| 2 - Power + (red) | 7 - EOL resistor 2.21 k Ω , UL Listed, Bosch (P/N: 25899) |
| 3 - Panel ground (black) | 8 - FACP (refer to Section 1.2.1 Power on page 6.) |
| 4 - Point 2 (white and red) | |
| 5 - Keypad terminals | |

Note: Open collector output must current sink a minimum of 5 mA. The alarm voltage must not exceed 1.3 VDC when activated.

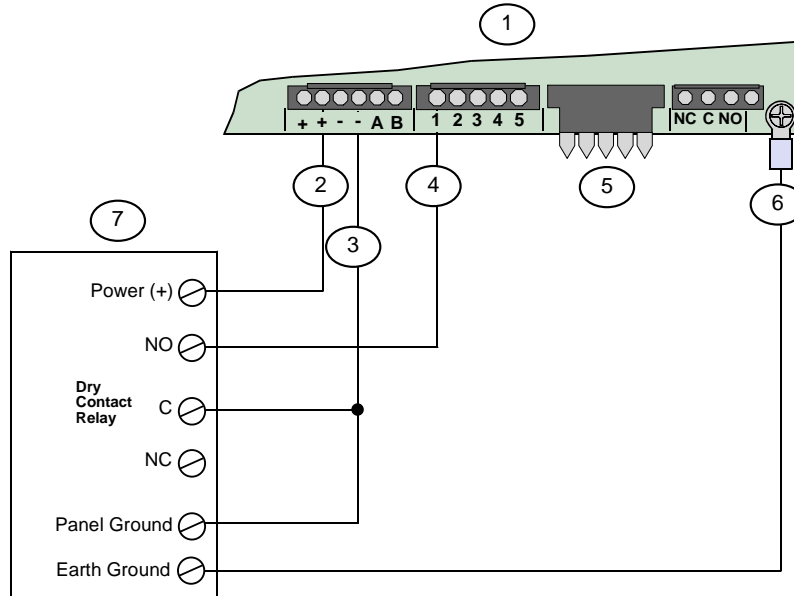
Figure 9: Open Collector Output Point Wiring (Non-supervised)

- | | |
|-----------------------------|--|
| 1 - D9068 | 5 - Keypad terminals |
| 2 - Power + (red) | 6 - Earth ground |
| 3 - Panel ground (black) | 7 - FACP (refer to Section 1.2.1 Power on page 6.) |
| 4 - Point 2 (white and red) | |

Notes: For the UL installations, non-supervised operation requires installation within 20 ft (6.1 m) inside the conduit.
Open collector output must current sink a minimum of 5 mA. The alarm voltage must not exceed 1.3 VDC when activated.

Figure 10: Dry Contact Input Point Wiring (Supervised)

- | | |
|-------------------------------|---|
| 1 - D9068 | 5 - Keypad terminals |
| 2 - Power + (red) | 6 - Earth ground (green) |
| 3 - Power - (black) | 7 - EOL resistor: 2.21 k Ω , UL Listed, Bosch (P/N: 25899) |
| 4 - Point 1 (white and brown) | 8 - FACP |

Figure 11: Dry Contact Input Point Wiring (Non-supervised)

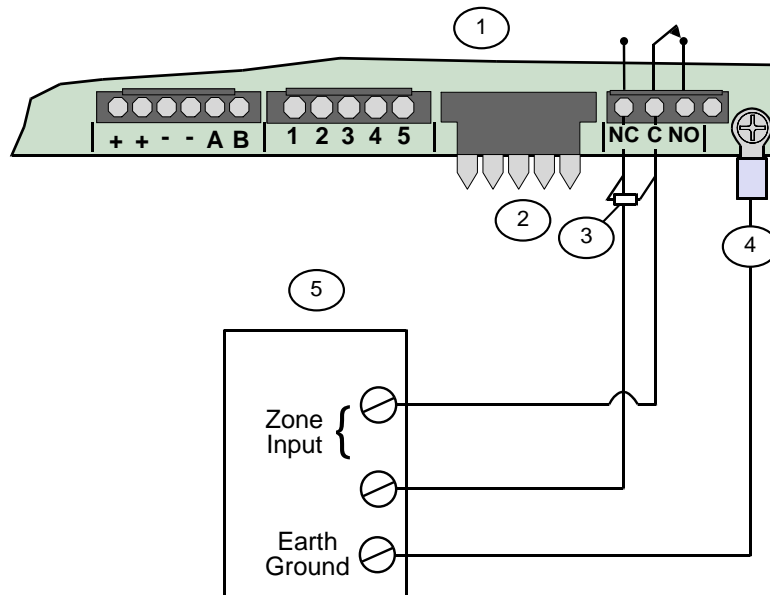
- | | |
|-------------------------------|--------------------------|
| 1 - D9068 | 5 - Keypad terminals |
| 2 - Power + (red) | 6 - Earth ground (green) |
| 3 - Power - (black) | 7 - FACP |
| 4 - Point 1 (white and brown) | |

Note: For the UL installations, non-supervised operation requires installation within 20 ft (6.1 m) inside the conduit.

2.2.2 Trouble Relay Connections

Refer to *Figure 12* when making connections to the D9068 Trouble Relay terminals.

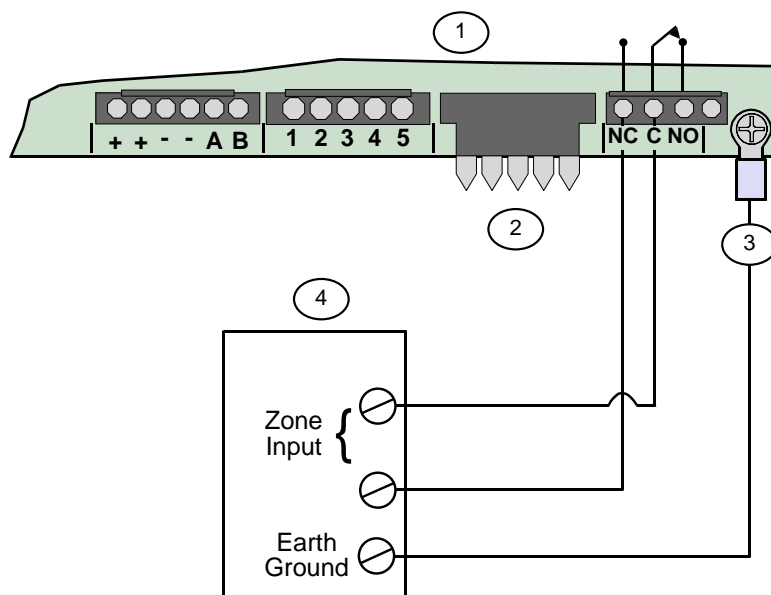
Figure 12: Typical Trouble Relay Connections (Supervised)



- | | |
|---|--------------------------|
| 1 - D9068 | 4 - Earth ground (green) |
| 2 - Keypad terminals | 5 - FACP |
| 3 - EOL resistor (Refer to the FACP Installation Instructions for UL approved EOL resistor specifications). | |

Note: The contact position shows the energized condition (normal standby).

Figure 13: Typical Trouble Relay Connections (Non-supervised)



- | | |
|----------------------|--------------------------|
| 1 - D9068 | 3 - Earth ground (green) |
| 2 - Keypad terminals | 4 - FACP |

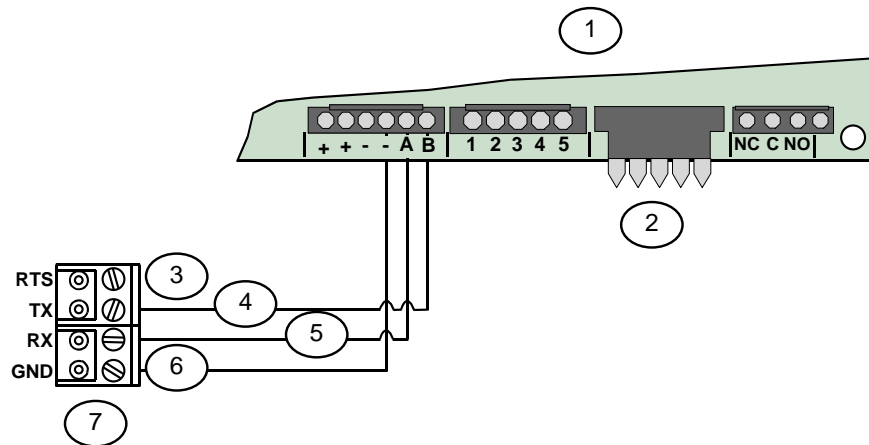
Notes: For the UL installations, non-supervised operation requires installation within 20 ft (6.1 m) inside the conduit.
The contact position shows an energized condition, normal standby.

2.2.3 Analog FACP Connections

Use the D9068 with the Bosch D8024 and D10024/D10024A Analog FACP's to send reports to a central station. A D9052 RS-232 Bus Module between the FACP and D9068 is required. The FACP must be assigned a network address of 1. Refer to *Appendix F* on page 53 for the events generated by the D8024 and D10024/D10024A.

Although the D9068 supervises its connection to the D8024 and D10024/D10024A, the analog FACP's do not supervise the connection of the D9068. If the RS-232 link between the D9068 and FACP is broken, the D9068 recognizes the problem but the FACP does not.

Figure 14: D9068 to Analog FACP Connections



- | | |
|--------------------------------|--------------------|
| 1 - D9068 | 5 - Serial receive |
| 2 - Keypad terminals | 6 - Ground |
| 3 - Request to send (not used) | 7 - D9052 |
| 4 - Serial transmit | |

Notes: For the UL installations, non-supervised operation requires installation within 20 ft (6.1 m) inside the conduit.

The D9052 mounts on the D8024 and D10024/D10024A PCB. Refer to the installation instructions that accompany the analog FACP and the D9052 RS-232 Bus Module for details.

For installations requiring the FACP to recognize faults on the D9068, connect the D9068's relay output to an analog input module such as a D326A or D339A Point Contact Module. Configure the points on the FACP for Action Fault. Configure the relay on the D9068 for Release on Trouble.

2.2.4 Telephone Connections

Telephone Cord Installation

Connect the primary phone line to the D9068 Modular Jack Line 1 using a telephone cord. Connect the secondary phone line to the D9068 Modular Jack Line 2 using another telephone cord.

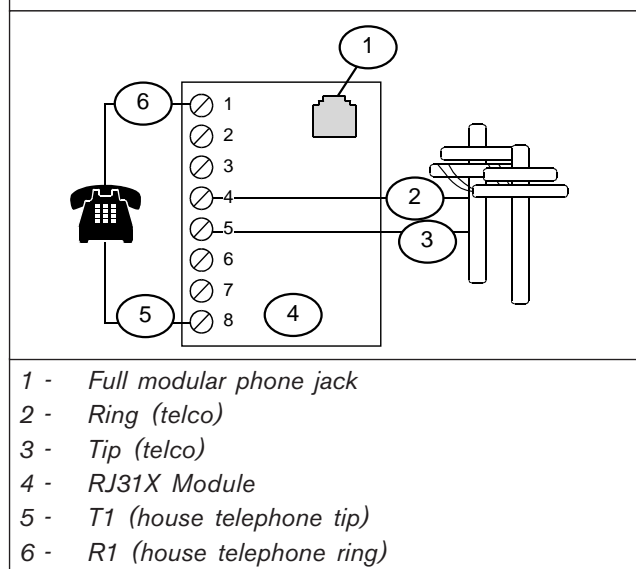


For all applications, connect separate primary and secondary phone lines to the D9068.

Location

To prevent jamming of alarm and other reports, wire and locate the RJ31X jack so normal phone use is temporarily interrupted while the D9068 transmits data (*Figure 15*). After installation, verify the D9068 seizes

Figure 15: RJ31X Wiring



Use the supplied telco cable assemblies to connect to an RJ31X jack. Ensure the RJ31X jacks are mounted in a secure location to prevent unwanted disconnections or tampering.

Notification

Do not connect registered equipment to party lines or coin-operated telephones. If the local telephone company requests notification before you connect the D9068 to the telephone network, tell them:

- which line you are connecting to the DACT.
- the make, model, and serial number of the device.
- the FCC registration number (ESVMUL-46514-AL-E) and ringer equivalence (0.0B).

If the telephone company changes its communications facilities, equipment, operations, or procedures that can affect the performance of the D9068, the telephone company is obligated to notify the user in writing.

The D9068 meets the UL1950 requirements.

Connecting the Keypad to the D9068



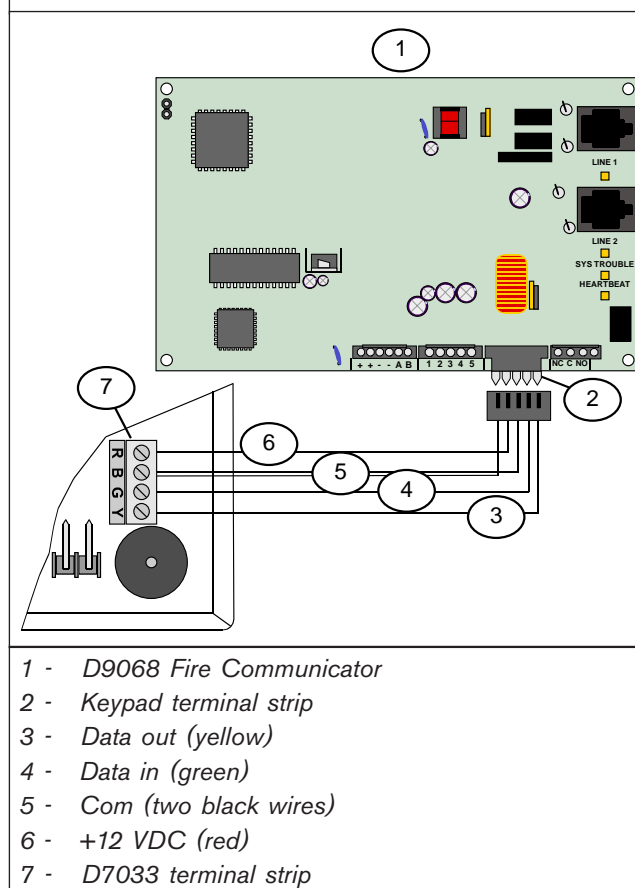
The D7033 LCD Remote Keypad is used strictly for programming and debugging purposes.

Use the D7033 LCD Remote Keypad to operate the D9068 Communicator. Remove the cover from the D9068 case and plug the molex connector from the D7033 onto the connector pins located on the D9068 board.

When programming the D9068 from the D7033:

1. Set the D7033 address between 1 and 15.
2. Use the wire connector supplied with the D9068 to connect the D7033 to the D9068 (*Figure 16*).

Figure 16: Connecting a Keypad to the D9068



3. Program the D9068 as explained in *Section 5.0 Programming* on page 26.



If there is no keypad activity for 3 min, the keypad is disabled. The keypad's buzzer sounds and a **SYSTEM FAULT** message appears on the keypad. Disconnect the keypad from the D9068 by removing the wire harness plug from the D9068's keypad pins. Then reconnect the wire plug harness to re-enable the keypad.

4. Replace the instruction label supplied with the D7033 with the one supplied with the D9068 (P/N: 45772).



While installing the D7033 Keypad Programmer, the system monitors neither the input points nor the serial connection to an FACP.

3.0 System Start Up

3.1 System Power up

This section describes the proper sequence of events when first powering up the D9068.

3.1.1 Before Power Up

Before applying power to the D9068, verify:

- All wiring connections are made according to *Section 2.2 Connecting the D9068* on page 11.
- All connectors are firmly seated onto their appropriate headers. Refer to *Section 2.2 Connecting the D9068*.
- Input power requirements comply with the power specifications in *Table 1* on page 6. The power supplied to the D9068 from the FACP is not shorted and meets the necessary power requirements for the D9068.
- All telephone line connections are made according to *Figure 13* on page 14.
- Both RJ31X male connectors are firmly seated in the RJ31X female connectors located on the D9068 board.
- All input points are properly terminated with the supplied 2.2 kΩ EOL resistors for supervised operation.
- The trouble relay connections are made according to *Figures 11 and 12* on pages 13 and 14.

3.1.2 After Power Up

After power is applied to the D9068, verify the following conditions occur:

- All LEDs briefly light and the trouble relay toggles.
- The System Trouble LED lights.
- The Heartbeat LED flashes to indicate the D9068 is functional.

3.2 System Quick Start

The D9068 starts in a trouble condition until the following steps are taken:

1. Connect the D7033 Keypad. Refer to *Connecting the Keypad to the D9068* in *Section 2.2.4 Telephone Connections* on page 15.
2. Program the D9068 using the D7033. Refer to *Section 5.1 Using the Keypad* on page 26.
3. Configure the five input points. Refer to *1: CONFIGURE* on page 33.
4. Assign the D9068 account numbers. Refer to *1: ACCOUNT NUMS* on page 35.
5. Assign the D9068 telephone numbers. Refer to *2: PHONE NUMS* on page 36.

When you complete *Steps 1* through *5*, refer to *Section 5.0 Programming* on page 26 to finish the programming sequence.



If the D9068 is correctly programmed and input wiring is properly connected and supervised, only the Heartbeat LED flashes. This indicates normal system operation.

To verify correct communications, perform a manual Communications Test. Refer to *1: TEST COMM* on page 42 for manual communication testing instructions.



Test according to NFPA 72 Chapter 10.4.1.2 (2002) following modifications, repairs, upgrades, or adjustments to the system.



Refer to *Appendix A* beginning on page 43 for information on error messages or messages indicating abnormal operating conditions.

4.0 System Operation

4.1 Communicator Operation

The D9068 has an integrated communicator that sends reports to a monitoring station. The communicator operates automatically.

When events occur, the communicator sends corresponding reports to the monitoring station by priority according to NFPA requirements. Fire and waterflow alarms are sent first, followed by supervisory alarms and trouble reports, and finally by all other reports.

4.1.1 Phone Line and Phone Number Selection



To comply with UL and NFPA standards, program both a primary and an alternate telephone number. The numbers must be different.

The D9068 can report to two telephone numbers with full single, double, and backup reporting. It communicates in Modem IIIa², Contact ID, SIA, and 4/2 formats.

To verify the delivery of critical reports, the D9068 can report over two phone lines. Reports can be directed to one or both of the two phone numbers using the report steering feature in the D9068 programming. Account Number 1 is used with Phone Number 1 and Account Number 2 is used with Phone Number 2.



Except for Test Reports, the D9068 automatically selects the telephone line to use.

Report Routing

There are two ways reports are routed:

1. Reporting routing starts using Phone Number 1 on Phone Line 1, unless the line monitor shows Phone Number 1 to be bad at the start of reporting. If the report fails on Phone Number 1 on Phone Line 1, the D9068 automatically switches and uses Phone Number 2 on Phone Line 1.
2. If the report still fails on either phone number on Phone Line 1, the D9068 tries to send the report on Phone Line 2 using Phone Number 1. If this fails, it tries Phone Number 2 on Phone Number 1.

The exception to these options occurs when sending Test Reports (Manual or Auto). Test Reports are sent to alternating telephone lines regardless of telephone monitor or initial failure to report, allowing you to test both phone lines when sending two Manual Test Reports. The first report uses one line, the second uses the other line. Auto Test automatically alternates phone lines. You determine which telephone line to use for

testing purposes in Manual Test (Phone 1, Phone 2, or alternating telephone lines).

Refer to *Table 5* for the complete report routing pattern.

Table 5: Report Routing with Primary and Alternate Phone Number, Phone 2 Backup

Attempt	Primary Phone Line (Phone 1)	Secondary Phone Line (Phone 2)
1	1 st phone number	
2	2 nd phone number	
3		1 st phone number
4		2 nd phone number
5	2 nd phone number	
6	1 st phone number	
7		1 st phone number
8		2 nd phone number
9	2 nd phone number	
10	1 st phone number	



Because the D9068 automatically selects which line to use, both telephone lines must use the same dialing sequences for reporting. For example, a telephone line that requires "9" for dialing an outside line cannot be paired with a line that does not require a "9." The PBX lines and ground start telephone lines do not comply with NFPA requirements for digital communication.



When an Automatic Test Report is received by the central station every other day, and the D9068 is configured to send a Test Report daily, it indicates that one telephone line at the protected premises is inoperative. Correct this condition immediately because other critical reports might be delayed (up to 48 h) while the dialer is attempting to send the test signal through the inoperative telephone line.

4.1.2 Telephone Line Supervision

While the communicator is idle, the D9068 monitors the primary and alternate telephone lines by "sniffing" the line for trouble.

The D9068 sniffs each line every 12 sec. When a trouble remains after three samples, 36 sec, the D9068 sends a Trouble Report and activates the yellow phone line LED and system trouble relay.

The yellow telephone line LED indicates active communication and shows line fault conditions. It flashes once every second during active communication. The LED(s) lights steadily for a line fault condition.

4.1.3 Wait for Dial Tone

When enabled, the Wait for Dial Tone feature verifies a dial tone is present before dialing. When there is no dial tone present after 7 sec, the D9068 hangs up and tries again after a 30-sec wait. When no dial tone is detected on the second try, the D9068 dials again. When this feature is not enabled, the D9068 waits 7 sec after disconnecting and then re-dials whether or not a dial tone is present.

4.1.4 Call Routing

Each type of event (non-supervisory alarms, supervisory alarms, alarm restorals, supervisory restorals, test and trouble, and trouble restorals) can be programmed with a different call routing. For example, the alarm messages can be set for Phone 2 backup while supervisory restorals are sent to Phone 2 only.



Phone 2 Backup is the default and recommended setting for all event types. Changing this setting can cause messages to transmit to the central station.

Each event is routed through the phone to the central station one of four ways:

1. **PHONE 1 Only:** Only uses Phone Number 1.
2. **PHONE 2 Only:** Only uses Phone Number 2.
3. **PHON 1 AND 2:** Uses both Phone Number 1 and Phone Number 2.
4. **PHN 2 BACKUP:** Primarily uses Phone Number 1 with Phone Number 2 as a backup when communication cannot be established with Phone Number 1. PHN 2 BACKUP is the default setting for the D9068.

Refer to *Appendix E* on page 52 for more information about report steering.



Use the default setting of Phone 1 with Phone 2 as a backup. If this setting changes, the telephone lines used also change and the messages might not transmit to the central station. *Table 4* on page 8 does not apply to the PHONE 1 ONLY and PHONE 2 ONLY route settings.

4.1.5 Call Attempts

When an event must be communicated to the central station, the D9068 makes up to ten attempts to communicate with the central station until the call is answered.

Table 5 on page 18 shows the procedure the D9068 follows in attempting to communicate with the central station when it is programmed to use Phone 2 Backup (default) or Phones 1 and 2.

4.1.6 Communication Fault

When a report must be transmitted to the central station, the D9068 makes up to ten attempts to communicate (refer to *Table 5*). If after ten attempts the D9068 does not connect successfully, a communication failure occurs and a Comm Fault Report is generated. Then, the D9068 makes up to ten attempts to communicate the Comm Fault to the central station. If the D9068 does not succeed, the original report and the Comm Fault Report clear from the D9068's buffer.

The total time from the first sequence of attempts to a communications failure is approximately 15 min. This time varies depending on how Ack Wait time is programmed. A Comm Fault Restoral Report transmits when communication restores after a communications failure.

4.1.7 Programming Fault

Programming faults indicate if specific telephone programming items are not completed.

A programming fault generates when:

- Both account numbers are not changed from their default values of 0000.
- No telephone number is programmed.
- A report is routed to Phone Number 1 and either Account Number 1 is 0000 or Phone Number 1 is invalid.
- A report is routed to Phone Number 2 and either Account Number 2 is 0000 or Phone Number 2 is invalid.
- A report is routed to Phone Numbers 1 and 2 or to Phone 1 with Phone 2 as backup. At least one of the account numbers is 0000 or one of the telephone numbers is invalid.

4.1.8 Lost Data and Limited Reports

A Data Lost Report generates when an event cannot transmit to the central station. This occurs when the:

- Reporting buffer contains the maximum of 32 events and another event occurs. The lowest priority event in the report buffer is deleted and replaced by Data Lost unless the report is already a Data Lost Report. If the new event has a higher priority than an event already in the report buffer, the lower priority event is discarded and replaced with the higher priority event. When the buffer is full, the lowest priority event is discarded when a new event occurs. The Data Lost Report is the last event sent, emptying the report buffer. If the buffer fills again, another Data Lost Report is sent.

- D9068 sent 99 Trouble Reports in a 24-hour period and another Trouble Report generates. That report becomes a Data Lost Report. The Data Lost Report tells the central station the 100-event limit for trouble messages has been reached.

The Data Lost Reports are entered into the history buffer.

The Trouble Report counter can be reset to allow more Trouble Reports sent to the central station. A Manual Test Report resets the counter to zero. The counter is always reset at 9:00 a.m. regardless of when it is manually reset.

4.1.9 Communications Tests

The D9068 can perform two types of communications tests: Auto Test and Manual Test. These tests verify the D9068's operation and its ability to transmit a report over the phone line to a receiver. The Auto Test occurs automatically at a fixed frequency set by the installer. The Manual Test occurs when you initiate it.

Auto Test

Auto Test is an automatic test used to verify proper operation of each phone line connected to the D9068. The programmable parameters for Auto Test are set at the D7033 Keypad. Refer to 2: *AUTO TEST* on page 31.

The time automatic testing begins and the testing frequency interval are established from the D7033 Keypad. This time appears in 24-hour format.

The frequency at which the Auto Test Reports are sent can be set to every 6 h, every 12 h, every 24 h, every 7 days, or every 28 days. For example, if the test time is set to 2300 (11:00 p.m.) and the test frequency is set for every 24 h, automatic testing begins at 2300 h and repeats every 24 h. There is also a Disabled option for turning off automatic testing.



If test frequency is not programmed before test time, the first Auto Test is not performed. Setting Auto Test to 7 days, 28 days, or Disabled is not compliant with UL.



A power failure of more than 5 min can change the system time to 000. Check the system time after a power outage.

The Auto Test Report is sent even if the maximum number of Trouble Reports to be sent in a 24-hour period (100) is exceeded. If the report queue is full of reports waiting to be sent, a Data Lost Report is sent unless one is already in the queue. In this case, the Auto Test Report is not sent.

Every time an Auto Test Report is sent, the telephone line is used alternates. For example, if the first report

uses Phone Line 1, the second report uses Phone Line 2, and the third report uses Phone Line 1.



Sending a Manual Test Report does not affect the alternating telephone line sequence of the Auto Test Report.

Unless it successfully sends the report on the first attempt, the D9068 continues to send the Auto Test Report up to ten times. These attempts can take up to 15 min to complete. The reports priority are reevaluated for each phone call attempt. If a higher priority event occurs while attempting an Auto Test, the higher priority event is sent on the following phone call.

If the D9068 fails to send the Auto Test Report after ten tries, a Comm Fault Report is sent. The D9068 sends the Comm Fault Report using its normal report routing. When it is time for the next Auto Test attempt, it is conducted on the alternate telephone line, not the failing telephone line.

When it is time to send a report, the D9068 checks its status. When there are any alarms, troubles, or system faults present, the D9068 sends the Off Normal at Test Report instead. When all conditions are normal, the D9068 sends the Auto Test Report.

Manual Test

Initiate a Manual Communications Test from the D7033 Keypad. Refer to *Section 5.5.4 3-TEST* on page 42.

When a Manual Test is initiated, you are prompted to select a telephone line (Line 1 or Line 2). After a phone line is selected, a Manual Test Report is sent to the receiver using the specified telephone line.

When the Manual Test Report is successfully added to the report queue, the message COMMUNICATOR INITIALIZING . . . appears on the D7033 Keypad. This message remains on the keypad until the D9068 tries to transmit the report.

While the Manual Test Report is sent, the D7033 Keypad Display updates to show the telephone line being used and the transmission attempt being made. The message COMMUNICATOR LINE 1, TRY 1 indicates Phone Line 1 is being used on transmission attempt 1.

After the report successfully transmits, the D7033 Keypad Display updates to show COMMUNICATOR PASSED . After this message appears for 2 sec, the keypad emits a brief tone and the rotating Test Menu returns to the keypad LCD.

Unless it successfully sends the report, the D9068 twice tries sending a Manual Test Report. This can take up to 3 min. The reports' priority are reevaluated on each phone call attempt. If a higher priority event occurs

while attempting a Manual Test, the higher priority event is sent on the following telephone call.



Refer to *Appendix A* on page 43 for information on error messages or messages indicating abnormal operating conditions.

4.2 Input Point Operation



Refer to *Appendix A* for information on error messages or messages indicating abnormal operating conditions.

The D9068 supports five inputs that can be triggered by dry contact relays or open collector outputs. The initiating circuits or points can be configured for seven conditions:

Fire*: When activated, the D9068 sends a Fire Alarm Report. A restoral is sent when the input is deactivated.

Waterflow*: When activated, the D9068 sends a Waterflow Alarm Report. A restoral is sent when the input is deactivated.

Supervisory*: When activated, the D9068 sends a Supervisory Alarm Report. A restoral is sent when the input is deactivated.

Monitor*: When activated, the D9068 sends a Monitor Report. A restoral is sent when the input is deactivated.

System Fault:** When activated, the D9068 sends a Trouble Input Report. An input configured for System Fault is automatically supervised. A restoral is sent when the input is deactivated.

AC Failure*: When activated, AC FAILURE appears on the keypad. To decrease the number of reports sent to the central station such as during a blackout, the D9068 can be programmed with an AC Fail Delay between 0 and 24 hours. You can also program the D9068 to Wait for DC where the D9068 must detect an AC failure on one input and a low battery condition on a second input. If there is an AC Fail input and a battery input, the D9068 monitors both inputs. If an AC failure occurs and the delay time is initialized, the D9068 looks for a low battery condition and ignores the delay to report the condition if necessary. A restoral is sent when the input is deactivated.

* Depending on the input voltage level (from 0 V to 5 V) for these input configuration types, the input operates normally, activates for the event type for which it is configured, or indicates a point trouble. Refer to *Table 6* for more information.

Table 6: Input Point Voltage Levels

Condition	Voltage Range	Description
Open	4.0 VDC to 5.0 VDC	If voltage on the input exceeds 4 V, a point trouble is indicated. EOL supervision is required.
Normal	2.0 VDC to 3.0 VDC	If voltage on the input floats between 2 V and 3 V, the input operates normally. EOL supervision is required.
Short	0.0 VDC to 1.3 VDC	If voltage on the input drops below 1.3 V, the input activates for the event type for which it was configured such as fire, waterflow, or supervisory.

** If an input point is configured for System Fault, and System Fault is set for Fault on Short, the voltage levels are those shown in *Table 6*. If System Fault is set for Fault on Open, the voltage levels shown in *Table 7* apply.

Table 7: System Fault (Fault or Open) Voltage Levels

Condition	Voltage Range	Description
Open	4.0 VDC to 5.0 VDC	If voltage on the input exceeds 4 V and EOL supervision is not present, the input indicates a point trouble and activates for System Fault or Fault on Open.
Open	2.0 VDC to 3.0 VDC	If voltage on the input is between 2 V and 3 V and EOL supervision is present, the input activates for System Fault or Fault on Open.
Normal	0.0 VDC to 1.3 VDC	If voltage on the input is between 0 V and 1.3 V, the input operates normally.



The AC Fail Delay time set for the FACP is independent of the AC Fail Delay time set for the D9068. When you program the FACP for an AC Fail Delay time and then program the D9068 for an AC Fail Delay time, the AC Fail Delay times are added together. For example, if the FACP AC Fail Delay time is set for 6 h and the D9068 AC Fail Delay time is set for 12 h, the AC Fail Report is sent from the D9068 18 h from the time of AC failure.

- ☒ All inputs are non-latching. A restoral is sent when the input is deactivated.
- ☒ For fail-safe operation, program the system fault to Fault on Open.
- ☒ To view specific active events, connect the keypad and press [1] for Status.
- ☒ Refer to *Appendix C* on page 46 for the specific messages sent for each event.

Low Battery*: When activated, the D9068 sends a Low Battery Report. A restoral is sent when the input deactivates.

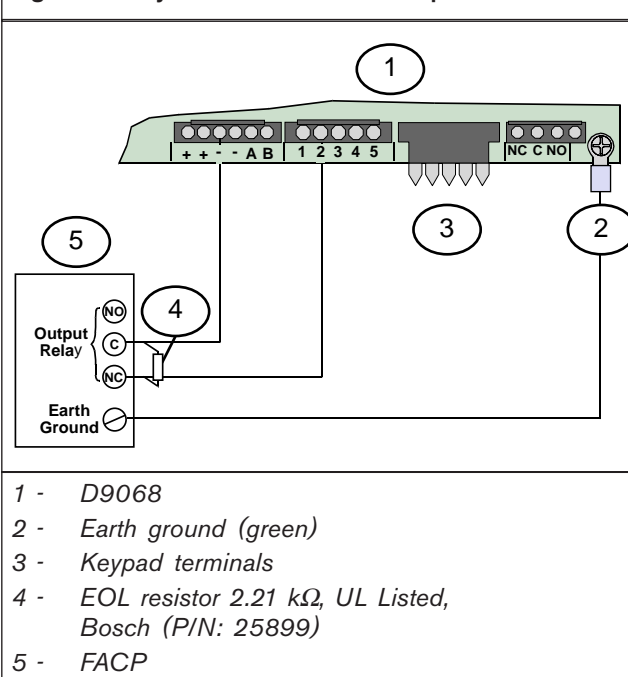
* Depending on the input voltage level (from 0 V to 5 V) for these selected input configuration types, the input operates normally, activates for the event type for which it is configured, or indicates a point trouble. Refer to *Table 6* on page 21 for more information.

- ☒ Alarm operation is independent of supervision. If an input point is not supervised and there is no EOL device attached, the input point still activates for the event type for which it is configured if the voltage is below 1.3 V or is above 2 V.

Refer to *Figure 17* for the System Fault and Fault on Open wiring connections.

- ☒ To prevent a Trouble Report from being generated every time a system fault occurs, verify an EOL resistor is connected to the FACP output relay as shown in *Figure 15* on page 16.

Figure 17: System Fault/Fault on Open Connections



4.3 Trouble Relay Operation

An input programmed to signal a trouble condition from the FACP does not affect or activate the on-board trouble relay. The on-board trouble relay activates on:

- any on-board D9068 trouble condition
- internal diagnostic faults
- phone line supervision faults
- input point supervision faults
- communication failure and faults

- ☒ Refer to *Appendix A* on page 43 for information on error messages or messages indicating abnormal operating conditions.

4.4 Keypad Operation

- ☒ While installing the D7033 Keypad, the system does not monitor the input points or the serial connection on the FACP.

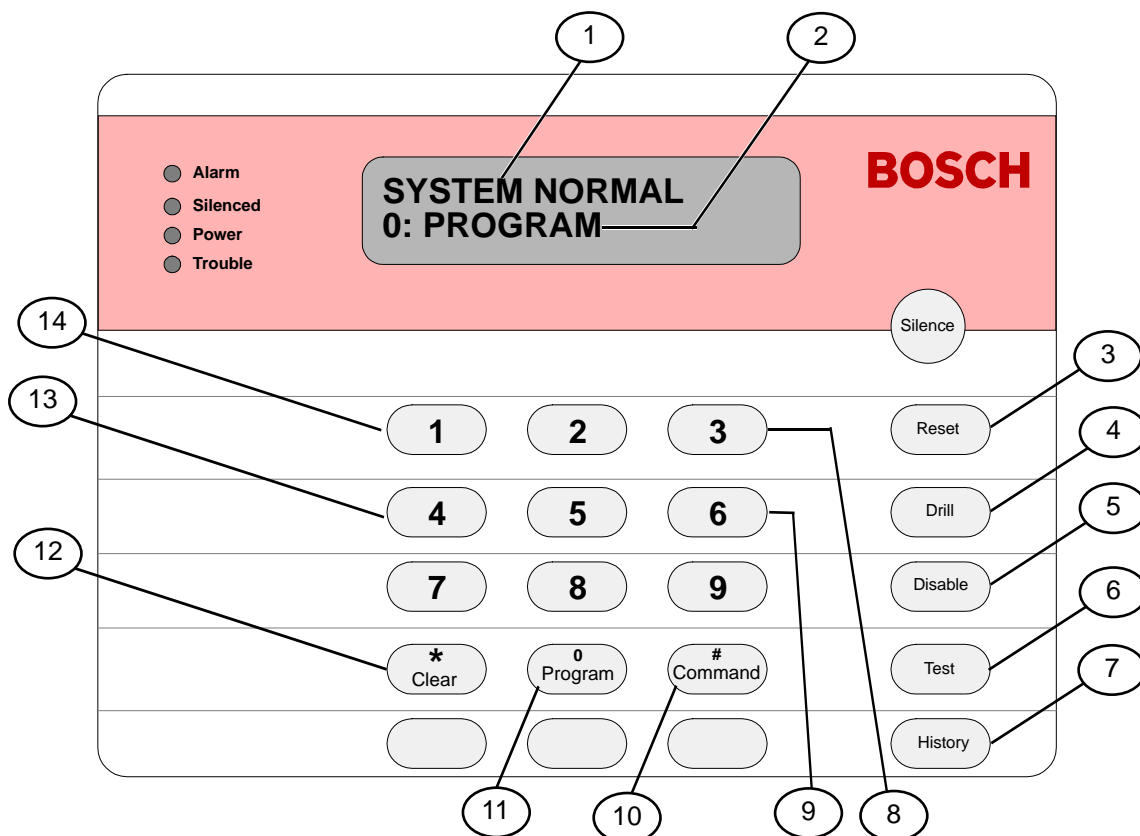
4.4.1 D7033 LCD Remote Keypad

The D7033 LCD Remote Keypad is an alphanumeric LCD keypad used for programming and debugging only while it is connected to the D9068. The D7033 has a two-line, 16-character display showing information on various D9068 programming functions. In most cases, the first line shows general system status information and the second line describes the specific programming menus and prompts.

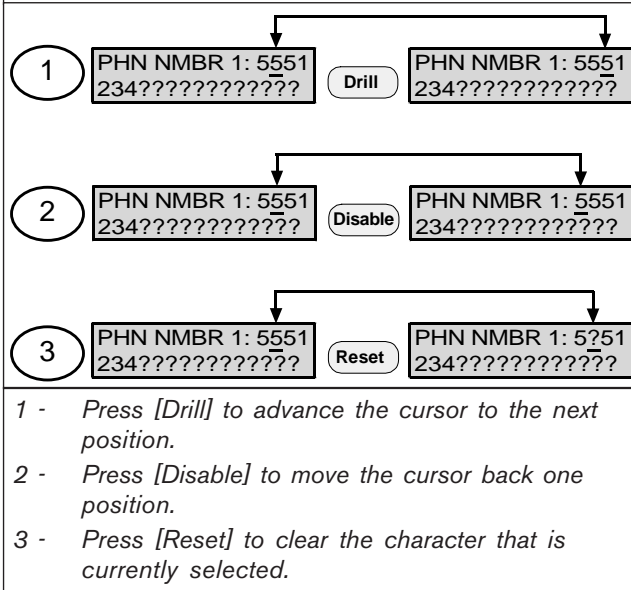
Refer to *Figure 16* on page 16 to connect the D7033 to the D9068. *Figure 18* identifies and describes the D7033 Keypad keys.

4.4.2 Scrolling Menus

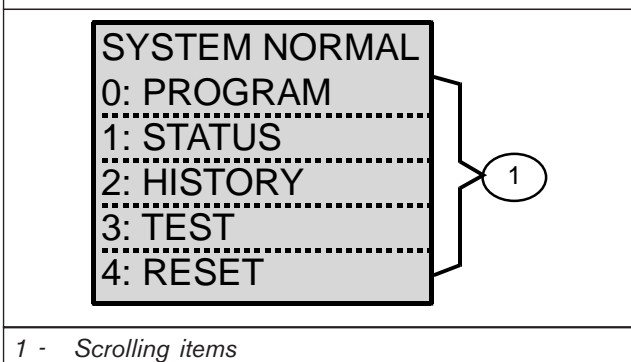
Figure 18: D7033 Keypad



- 1 - First line of display.
- 2 - Second line of display.
- 3 - [Reset] key: Initiates a manual reset of D9068. Refer to Section 4.5 Reset on page 26 for more information). Clears the character selected by the cursor. Refer to Figure 19 on page 24.
- 4 - [Drill] key: Advances to the next programmable feature or character position. Refer to Figure 19.
- 5 - [Disable] key: Returns to the previous programmable feature or character position. Refer to Figure 19.
- 6 - [Test] key: Enters Test Mode. Pressing [Test] when entering a phone number accesses three phone control code options. Refer to Section 5.5.4, 3-TEST on page 42 for more information.
- 7 - [History] key: Enters History Mode. Refer to Section 4.4.4 History on page 25 for more information.
- 8 - [3] key: Increases D7033 backlight intensity. Press and hold [* Clear] first. Then press [3] to adjust the intensity.
- 9 - [6] key: Decreases D7033 backlight intensity. Press and hold [* Clear] first, then press [6] to adjust the intensity.
- 10 - [# Command] key: Accepts programming entries into D9068. Press this key after every programming entry.
- 11 - [0 Program] key: Enters the Programming Mode menu. Refer to Section 5.0 Programming on page 26 for programming instructions.
- 12 - [* Clear] key: Cancels any programming menu without making changes. Return to the message SYSTEM NORMAL by pressing [* Clear] until SYSTEM NORMAL appears across the first line.
- 13 - [4] key: Decreases D7033 sounder volume. Press and hold [* Clear] first, then press [4] to adjust the volume.
- 14 - [1] key: Increases D7033 sounder volume. Press and hold [* Clear] first, then press [1] to adjust the volume.

Figure 19: Additional Functions of the [Drill], [Disable], and [Reset] Keys

When properly connected to the D9068, the D7033 shows a scrolling menu of possible user actions along its second line. This scrolling menu is the D9068 Main Menu. The scrolling menu items flash one at a time at 1-second intervals through the list and then start over. When operating normally, **SYSTEM NORMAL** appears on the first line on the D7033 LCD (Figure 20).

Figure 20: Scrolling Main Menu

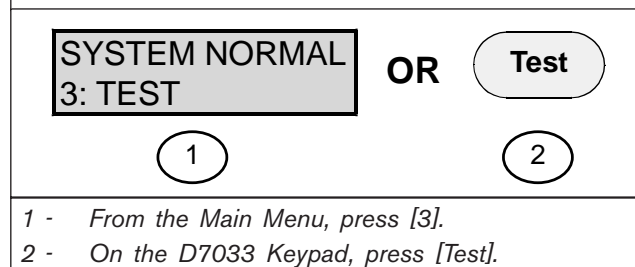
The Programming Menu and Test Menu options also flash across the second line, one at a time at 1-second intervals. The display rate speed can be adjusted. Refer to 2: **DISPLAY RATE** on page 33 for more information.

4.4.3 Selecting Menu Items

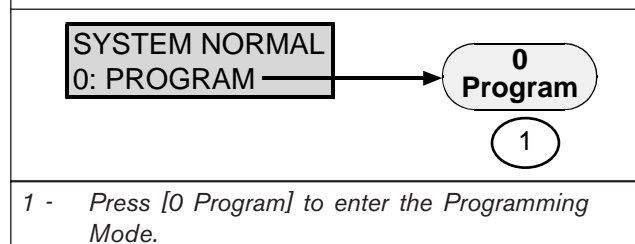
Depending on which menu level you are at such as the menu, submenu, and sub-submenu, you can select an item using exclusive keys, shared keys, or submenu items.

Exclusive Keys: In the Main Menu, **Test** and **History** have an exclusive key on the D7033 Keypad.

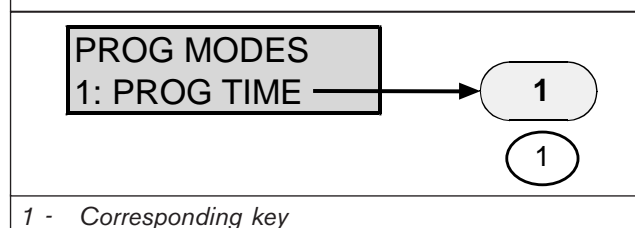
You select these options by pressing the corresponding key or the function key. For example, **3: Test** is the third option so you press [3] from the Main Menu to open the Test Mode Menu. You can also press [Test] on the keypad (Figure 21).

Figure 21: Exclusive Keys

Shared Keys: The [Program] key is not exclusive, but is shared with other characters. The character sharing the corresponding key appears on the same key. To select one of these items, press the shared key. For example, the [PROGRAM] key is also the [0] key (Figure 22).

Figure 22: Shared Keys

Submenu Items: The corresponding key to a submenu item can appear in the second line preceding a colon. Press the corresponding key to select that item. For example, press [1] to select **PROG TIME** from the Programming Mode Menu (Figure 23).

Figure 23: Submenu Items

When a scrolling menu is active, it is not necessary to wait for the desired menu item to appear before making your selection. You can select any item on the current menu rotation at any time.

4.4.4 History



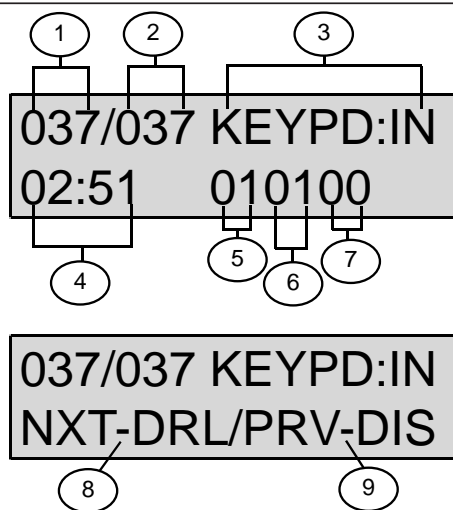
The history buffer can be cleared when the system loses all power for more than 3 min.

The **History** option accesses a list of system events that occurred. To select **History**, press [2] from the Main Menu or press [History] on the keypad.

A maximum of 100 events can be stored in the history buffer.

When you enter the History Mode, the most recent system event appears on the top line of the D7033 LCD. The time and date appears on the second line. As a reminder, the bottom line toggles every 4 sec between the time and date the event occurred and the keys used to navigate through the history buffer (*Figure 24*).

Figure 24: Event History Example



- 1 - Total of stored events
- 2 - Event #
- 3 - Event
- 4 - Time
- 5 - Month
- 6 - Day
- 7 - Year
- 8 - Press [Drill] to advance to next event.
- 9 - Press [Disable] to show previous event.

Navigate the history buffer by pressing the following D7033 Keypad keys:

- [Disable] moves to older events in the history buffer.
- [Drill] moves to newer events in the history buffer.
- [* Clear] finishes the History Mode and returns to the Main Menu.

Table 8 lists the event history abbreviations.

Table 8: Event History Abbreviations

Abbreviation	Meaning
A, ALRM	Alarm
AUTOTST	Auto test
ARST	Alarm restore
BATT:LOW	Battery low
BAT:RSTR	Battery restore
COMM	Communication
DATALOST	Data lost
EE2	EEPROM
F	Fire
FLT	Fault
KEYPD: IN	Keypad installed
KEYPD: RS	Keypad removed
M	Monitor
MANULTST	Manual test
SER:FL	Panel communication failure
OFFNORM	Off normal at test
PGMG:FLT	Trouble programming
PH1	Phone Line 1
PH2	Phone Line 2
RS, RST, RSTR	Restore
S	Supervisory
SYSFLT:F	Trouble input
SYSFLT:R	Trouble input restore
SYS:RSET	System reset
SYSTRB	System trouble
WDOG:RST	Automatic CPU reset (watchdog)
TRBL	Trouble
TRST	Trouble restore
W	Waterflow alarm
SER:RS	Panel communication restore



Events received from an analog FACP over the serial connection are not stored in the history buffer.

4.5 Reset

Reset the D9068 in one of four ways:

1. At the D7033 LCD Remote Keypad, press [4] to select **Reset** from the Main Menu or press [Reset]. Pressing either key resets the D9068 only when off-normal conditions are present. The system sends an Open Reset Report with the user ID parameter of 99.
2. Exiting the Test Mode. The system sends an Open Reset Report with the user ID parameter of 99.
3. Exiting the Programming Mode. The system sends an Open Reset Report with a user ID parameter of 01.
4. Powering up the D9068. No Open Reset Report is sent.

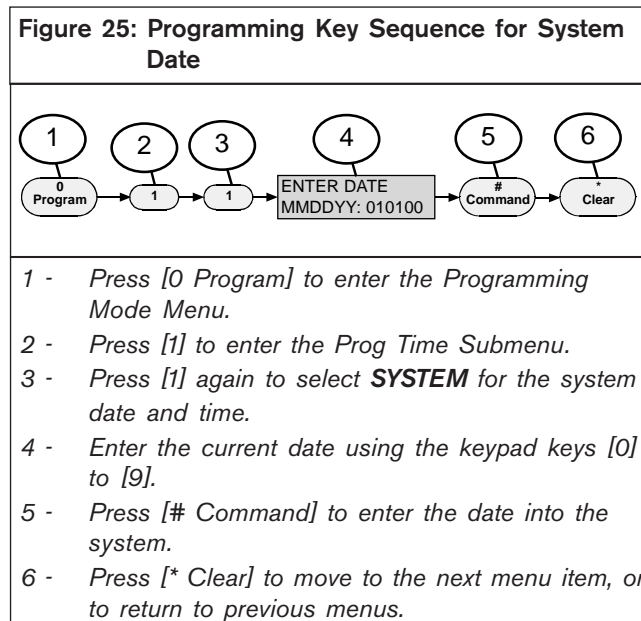
5.0 Programming

5.1 Using the Keypad

All programming for the D9068 is done using the D7033 LCD Remote Keypad. To properly program the D9068, you must always press the [* Command] and [* Clear] keys in addition to the key(s) necessary to make specific programming entries.

- Press [# Command] to accept an entry into the D9068.
- Press [* Clear] after pressing [* Command] to return to the submenu or menu selections.

Refer to *Figure 25* for the complete programming key sequence for setting the D9068 operational date.



When you enter the Programming Menu (Level 2), you no longer need to press [0] to re-enter the Programming Menu. If you press [0] while already in the Programming Menu, the keypad emits a three-beep error tone.



When Programming Mode is entered, all monitoring ceases. The D9068 does not process input point events, supervise the phone lines, or monitor the serial link. The central station communication is disabled.

5.2 Programming Key Sequences

A programming key sequence is a series of keys you press to reach the desired level option. The programming key reduces repetition and provide brief instructions when programming the D9068.

Level 1 is the Main Menu. Select [0 Program] for all system programming. The first number in the key sequence is "0". The Main Menu selections are:

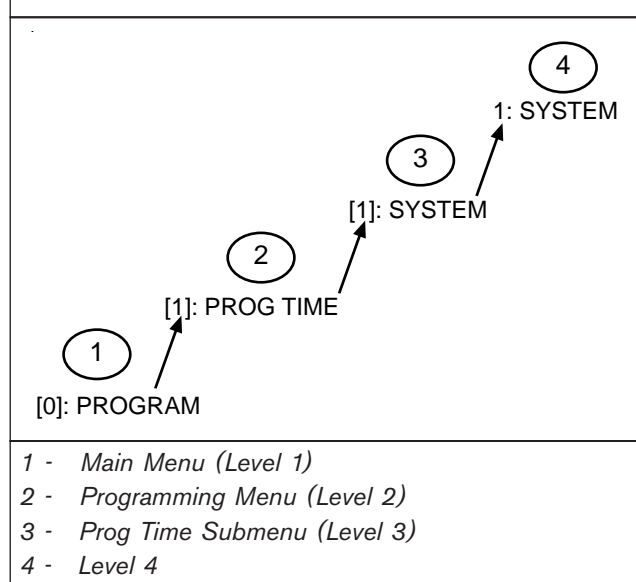
- PROGRAM
- STATUS
- HISTORY
- TEST
- RESET

Level 2 is the Programming Mode Menu. It represents the second number in the key sequence. The programming options are:

- PROG TIME
- PROG TIMERS
- PROG INPUTS
- PROG RELAY
- PROG ACC'NTS
- PROG FORMATS
- PROG DEFLT
- SERIAL CONECTN

Level 3 provides options that branch from Level 2 (*Figure 26*). The third number in the key sequence represents the option selected in Level 3.

Figure 26: Programming Key Sequence Diagram



Level 4 includes keypad prompts that supply instructions specific to the selected menu item.

Level 5 includes submenu prompts specific to Level 4.



Not all programming menus extend to Level 4. If a menu does not reach Level 4, the instructional prompts appear on the last (highest) menu level.

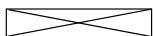
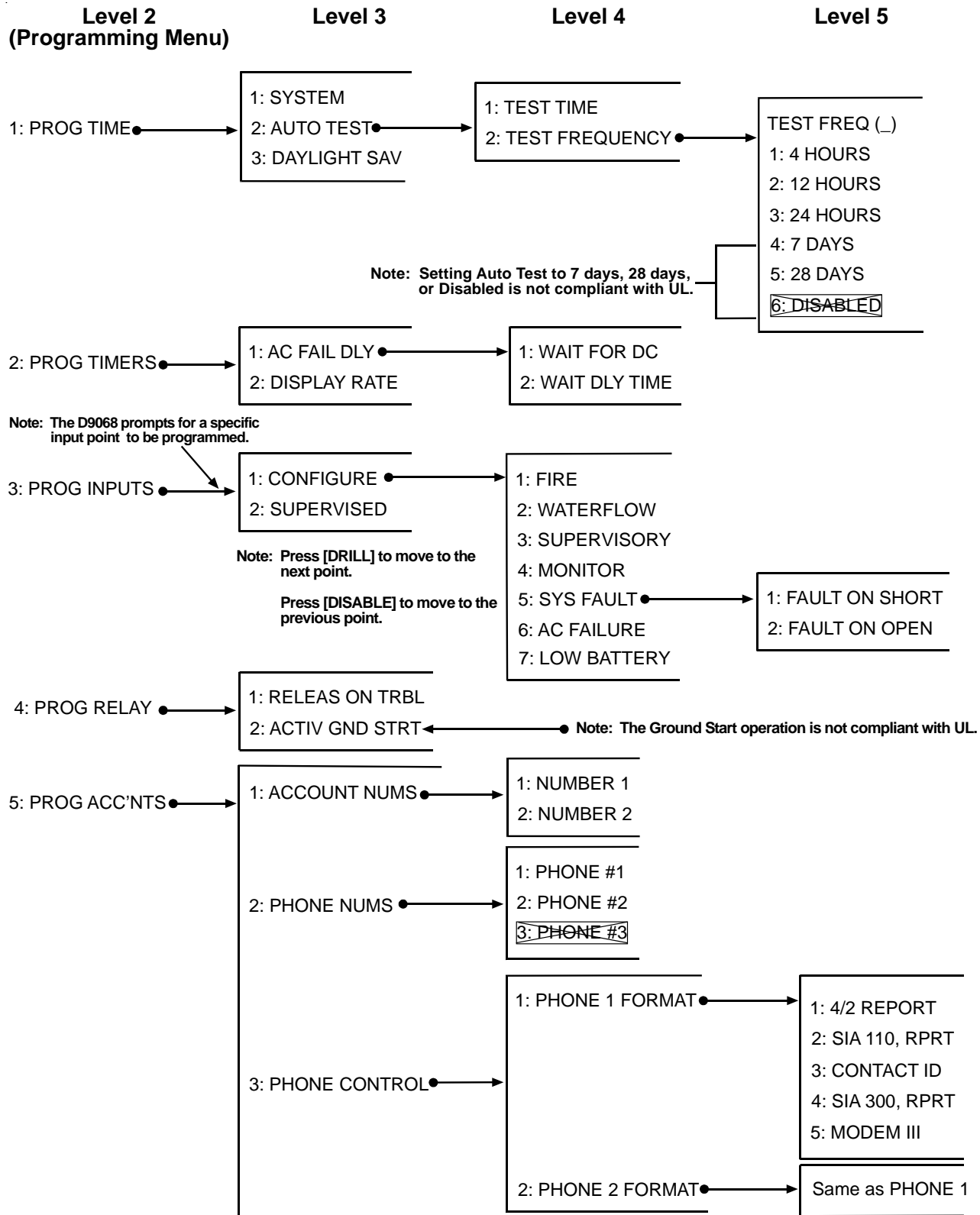
The example in *Figure 26* shows the programming key sequence used to enter system settings such as the date and time. Once you enter the key sequence, follow the procedure of the specific function you are programming.



When you enter the Programming Menu (Level 2), you no longer need to press [0] to re-enter the Programming Menu. If you press [0] while already in the Programming Menu, the keypad emits a three-beep error tone.

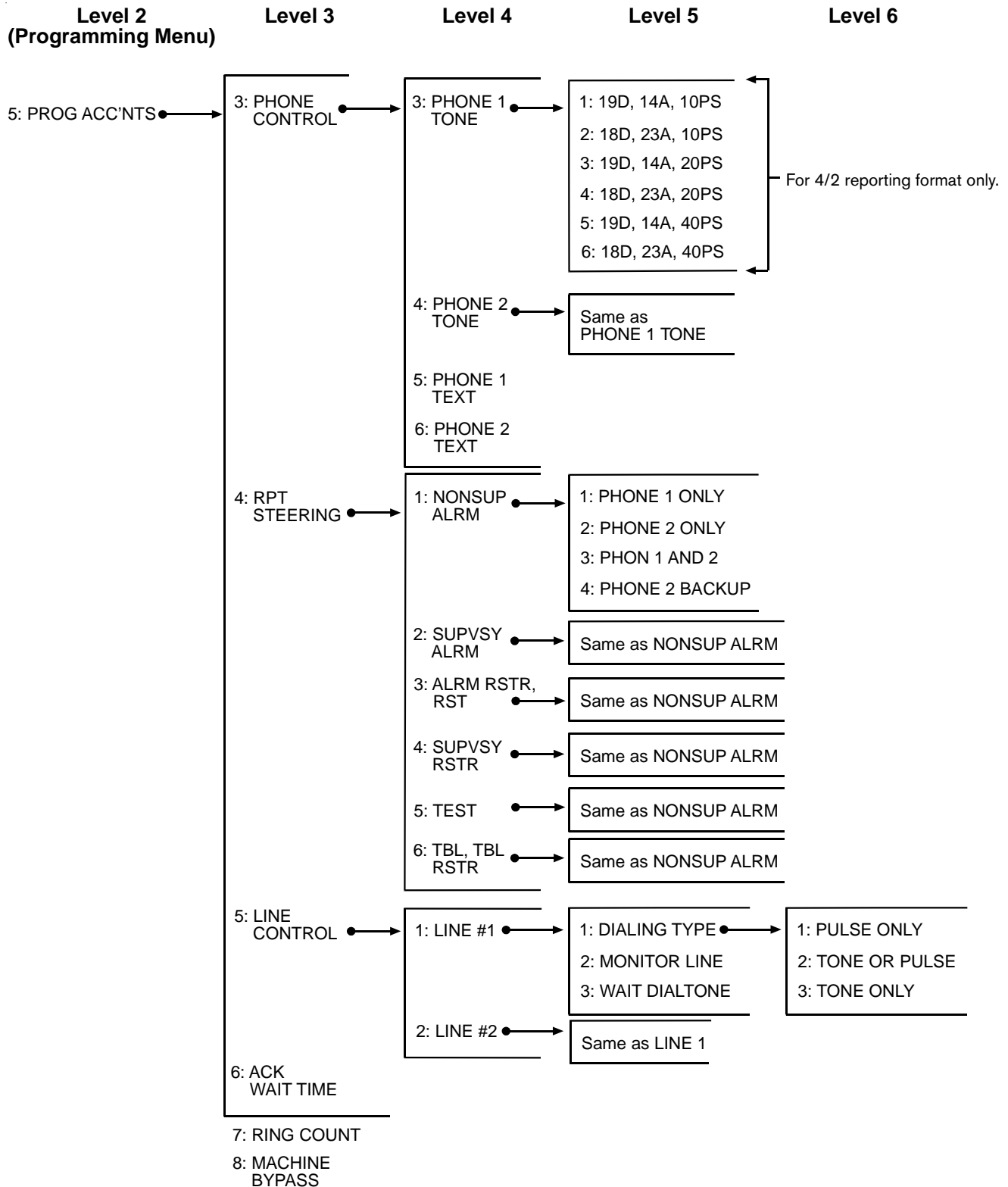
1. At the Main Menu (Level 1), press [0] to enter the Programming Menu (Level 2).
2. At the Programming Menu, press [1] to enter the Prog Time Submenu.
3. At the Prog Time Submenu (Level 3), press [1] to select **1: SYSTEM** (Level 4).
4. Follow the keypad prompts to select system settings.
5. Press [#] to verify the setting.

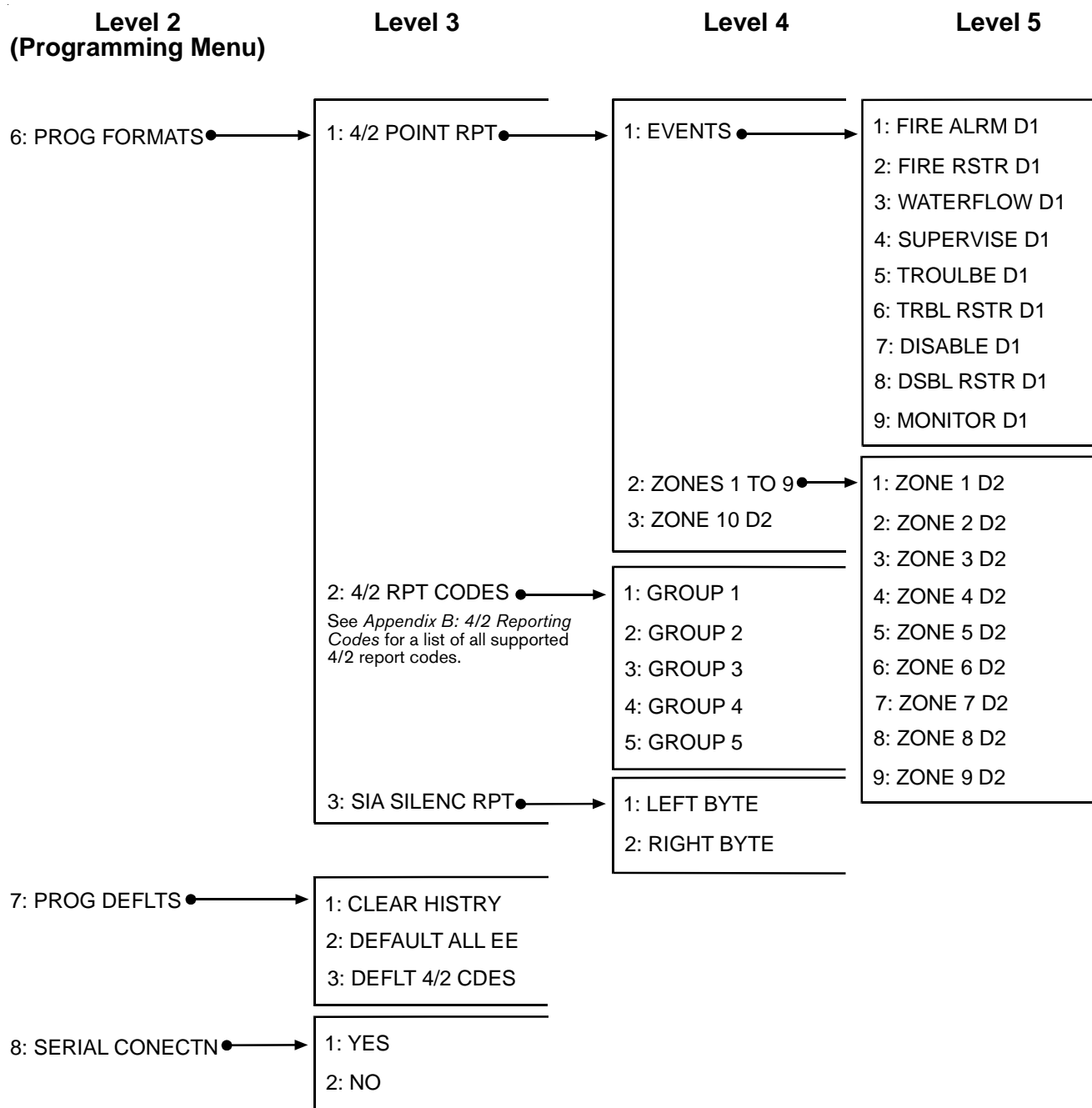
5.3 Program Menu Tree



Items crossed out are not currently supported.

5: PROG ACCTS is continued on the next page.





5.4 Programming the D9068

The D9068 uses scrolling menus to show the menu choices. The Main Menu shows:

```
SYSTEM NORMAL
0: PROGRAM
1: STATUS
2: HISTORY
3: TEST
4: RESET
```

To enter the Programming Menu, press [0]. The Programming Menu shows:

```
1: PROG TIME
2: PROG TIMERS
3: PROG INPUTS
4: PROG RELAY
5: PROG ACC'NTS
6: PROG FORMATS
7: PROG DEFLT5
8: SERIAL CONECTN
```



When you enter the Programming Menu (Level 2), you no longer need to press [0] to re-enter the Programming Menu. If you press [0] while already in the Programming Menu, the keypad emits a three-beep error tone.

5.4.1 PROG TIME

The **PROG TIME** feature provides programming options for setting the system date and time, establishing automatic testing times, and adhering to daylight savings time.

To access the **PROG TIME** programming options:

- At the Programming Menu, press [1] to select **1: PROG TIME**. The window shows:

```
DATE/TIME
1: SYSTEM
2: AUTO TEST
3: DAYLIGHT SAV
```

Refer to the following sections for the **PROG TIME** programming options.

1: SYSTEM

To access **SYSTEM**, select [0]: **PROGRAM**--->[1]: **PROG TIME**--->[1]: **SYSTEM**. This option allows you to set the current date and time for system operations:

To set the current date and time for system operations:

- At the Prog Time Submenu, press [1] to select **1: SYSTEM**. The window shows:

```
ENTER DATE
MMDDYY: _____
```

- Enter the date and press [# Command] to accept the entry.
- Press [* Clear] to move to the next feature.

```
ENTER TIME
HHMM: _____
```

- Enter the time in 24-hour format and press [# Command] to accept the entry.
- Press [* Clear] to return to the Prog Time (Date/Time) scrolling menu. The keypad shows the entries that were made before returning to the Prog Time Menu.

2: AUTO TEST

To access **AUTO TEST**, select [0]: **PROGRAM**--->[1]: **PROG TIME**--->[2]: **AUTO TEST**. This option allows you to set the time the Auto Test is sent and how often the Auto Test occurs.

To set the time the Automatic Test is sent and how often an Auto Test occurs:

- At the Prog Time Submenu, press [2] to select **2: AUTO TEST**. The window shows:

```
AUTOMATIC TEST
1: TEST TIME
2: TEST FREQUENCY
```

Refer to the following sections for the Automatic Test programming options.

2: TEST FREQUENCY

To access **TEST FREQUENCY**, select [0]: **PROGRAM**--->[1]: **PROG TIME**--->[2]: **AUTO TEST**--->[2]: **TEST FREQUENCY**. Choosing this option allows you to program how often the Auto Test Reports are sent. The first test is sent when the system time matches the next programmed test time. Subsequent reports are sent to the selected intervals.

To program the frequency of Auto Test Reports:

- At the Auto Test Submenu, press [2] to select **2: TEST FREQUENCY**. The window shows:

```
AUTO FREQ ( )
1: 4 HOURS
2: 12 HOURS
3: 24 HOURS
4: 7 DAYS
5: 28 DAYS
6: DISABLED
```

This item is currently not supported.



The **6:DISABLED** option is not currently supported.

- Press the number key that corresponds to your selection and then press [# Command]. The revised setting appears in parentheses on the first line.
- After programming this feature, press [* Clear] to return to the Auto Test Submenu.

1: TEST TIME

To access **TEST TIME**, select **[0]: PROGRAM--->[1]: PROG TIME--->[2]: AUTO TEST--->[1]: TEST TIME**. This option allows you to program the time of day the Auto Tests occur and uses a 24-hour clock. For example, enter 2300 for 11:00 p.m.

To program the time an Auto Test occurs:

- At the Auto Test Submenu, press [1] to select **1: TEST TIME**. The window shows:

```
AUTO TEST TIME
HHMM: _____
```

- Enter the time in 24-hour format and press [# Command].
- Press [* Clear] to return to the Auto Test Submenu.



If the test frequency is not programmed before the test time, the first Auto Test is not performed.

3: DAYLIGHT SAV

To access **DAYLIGHT SAV**, select **[0]: PROGRAM--->[1]: PROG TIME--->[3]: DAYLIGHT SAV**. This option enables the automatic adjustment of system time for daylight savings. The adjustment dates are pre-programmed into the system.

To set the system for Daylight Savings Time:

- At the Prog Time Submenu, press [3] to select **3: DAYLIGHT SAV**. The window shows:

```
DAYLIGHT SAVING?
NO: YES (1)/NO (0)
```

- The current setting precedes the colon (:) in the second line. Press [1] to set **DAYLIGHT SAV** to **Yes**. Press [0] to set it to **No**.
- Press [# Command] to verify your selection.
- After programming this feature, press [* Clear] to return to the Prog Time Submenu.

5.4.2 PROG TIMERS

The **PROG TIMERS** feature allows you to set time-related parameters for the AC Fail Delay and the Display Rate.

To set time-related parameters for AC Fail Delay and Display Rate:

- At the Programming Menu, press [2] to select **1: PROG TIME**. The window shows:

```
PROG TIMERS
1: AC FAIL DLY
2: DISPLAY RATE
```

Refer to the following sections for the programming options.

1: AC FAIL DLY

To access **AC FAIL DLY**, select **[0]: PROGRAM--->[2]: PROG TIMERS--->[1]: AC FAIL DLY**. The window shows:

```
AC FAIL DLY (___)
1: WAIT FOR DC
2: WAIT DLY TIME
```

This option sets the number of hours the D9068 waits after an AC failure is signaled before sending an AC Failure Report.

1: WAIT FOR DC

To access **WAIT FOR DC**, select **[0]: PROGRAM--->[2]: PROG TIMERS--->[1]: AC FAIL DLY--->[1]: WAIT FOR DC**.

Two input points must be programmed with one set for AC Fail and the other for Low Battery. Once an AC Fail signal is received on the AC Fail input, the D9068 waits for a low battery signal. The **WAIT FOR DC** function causes the D9068 to wait and then send the AC Fail and Low Batt Reports simultaneously. The current setting appears in parentheses on the first line.



When a Low Battery input, followed by an AC Fail input activates, the AC Fail Report is sent immediately.

To set the D9068 to wait and send AC Fail and Low Batt Reports simultaneously:

- Press [1] and then [# Command]. The setting in parentheses reflects the setting.
- After programming this feature, press [* Clear] to

return to the Prog Timers Submenu.

2: WAIT DLY TIME

To access **WAIT DLY TIME**, select [0]: PROGRAM--->[2]: PROG TIMERS--->[1]: AC FAIL DLY--->[2]: **WAIT DLY TIME**. This option allows you to select the length of time to wait after an AC Fail signal is received before reporting the event over the phone line.



When both the AC Fail and Low Battery events are present, the AC Fail event is reported regardless of any wait time.



Programming WAIT DLY TIME for 00 allows the D9068 to send an AC Fail Report without delay.

To choose the length of time to wait after receiving an AC Fail signal:

- At the AC Fail Dly Submenu, press [2] to select **2: WAIT DLY TIME** and then press [# Command]. The window shows:

```
AC FAIL DLY (__)
(00-24 HRS) : ____
```

- The current setting appears in parentheses on the first line. Enter the time and the press [# Command].
- After programming this feature, press [* Clear] to return to the Prog Timers Submenu.

2: DISPLAY RATE

To access **DISPLAY RATE**, select [0]: PROGRAM--->[2]: PROG TIMERS--->[2]: **DISPLAY RATE**. This option allows you to set the speed (in units of 0.25 sec) at which the menu lines are updated on the LCD.

To set the speed for updating the LCD menu lines:

- At the Prog Timers Submenu, press [2] to select **2: DISPLAY RATE**. The window shows:

```
DSPLY RATE (__)
.25 X (1-16) : ____
```

- The current setting appears in parentheses on the first line. Enter the desired value and press [# Command].
- After programming this feature, press [* Clear] to

return to the Prog Timers Submenu.

5.4.3 PROG INPUTS

The **PROG INPUTS** option allows you to program the five available inputs.

To program the programming inputs:

- At the Prog Inputs Submenu, enter the point number you want to program and press [# Command]. The window shows:

```
POINT NUMBER
(1-5) : ____
```

Once you enter the point number, the display scrolls through the **PROG INPUT** options:

```
PROG POINT (__)
1: CONFIGURE
2: SUPERVISED
```

- Press the number key that corresponds to your selection.

Press [Drill] to move to the next point. For example, if you are programming Point 2 and you press [Drill], you go to the Point 3 setting.

Press [Disable] to return to the previous point. For example, if you are programming Point 2 and you press [Disable], you go to the Point 1 setting.

1: CONFIGURE

To access **CONFIGURE**, select [0]: PROGRAM--->[3]: PROG INPUTS--->[1]: **CONFIGURE**. This feature allows each input to be set for one of seven options:

- Fire:** When activated, the D9068 sends a Fire Alarm Report. A restoral is sent when the input is deactivated.
- Waterflow:** When activated, the D9068 sends a Waterflow Alarm Report. A restoral is sent when the input is deactivated.
- Supervisory:** When activated, the D9068 sends a Supervisory Alarm Report. A restoral is sent when the input is deactivated.
- Monitor:** When activated, the D9068 sends a Monitor Report. A restoral is sent when the input is deactivated.
- System Fault:** When activated, the D9068 sends a Trouble Input Report. If a point is configured for System Fault, a window appears to determine what the point faults on. Refer to *Step 2* in the procedure for setting and input option. A restoral is sent when

the input is deactivated.

- **AC Failure:** When activated, this point shows AC FAILURE on the keypads. To decrease the number of reports sent to the central station such as during a blackout, program the D9068 with an AC Fail Delay between 0 and 24 h. You can also program the D9068 to Wait for DC where the D9068 must detect an AC failure on one input and a low battery condition on a second input. If there is an AC fail input and a battery input, the D9068 monitors both inputs. If an AC failure occurs and the delay time is initialized, the D9068 looks for a low battery condition and ignores the delay to report the condition if necessary. A restoral is sent when the input is deactivated.
- **Low Battery:** When activated, the D9068 sends a Low Battery Report. A restoral is sent when the input is deactivated.



The AC Fail Delay time set for the FACP is independent of the AC Fail Delay time set for the D9068. If you program the FACP for an AC Fail Delay time and then program the D9068 for an AC Fail Delay time, the AC Fail Delay times are combined. For example, if the FACP AC Fail Delay time is set for 6 h and the D9068 AC Fail Delay time is set for 12 h, the AC Fail Report is sent from the D9068 18 h from the time of AC failure.



All inputs are non-latching. A restoral is sent when the input is deactivated.



For fail-safe operation, program the system fault input to Fault on Open.



To view specific active events, connect the keypad and press [1] for Status.



Refer to *Appendix C* beginning on page 46 for the specific messages sent for each event.

To set an input option:

1. At the Prog Inputs Submenu, enter the point number you want to program and press [# Command]. The display scrolls through the PROG INPUT options.

2. Press [1] to select **1: CONFIGURE**. The window shows:

```
ACTVTN TYPE ( __ )
1: FIRE
2: WATERFLOW
3: SUPERVISORY
4: MONITOR
5: SYS FAULT
6: AC FAILURE
7: LOW BATTERY
```

```
FAULT ON ( __ )
1: FAULT ON SHORT
2: FAULT ON OPEN
```



Selecting **1:CONFIGURE** determines whether a system fault condition is activated on a short condition or an open condition. Refer to *Section 4.2 Input Point Operation* on page 21 for details. Press [# Command] to confirm the selection. Press [* Clear] to return to the Prog Inputs Submenu.

3. Press the number key that corresponds to your selection. The current setting appears in parentheses on the first line.
4. Press [# Command] to enter the selection into the D9068.
5. Press [* Clear] to return to the Prog Inputs Submenu.

2: SUPERVISED

To access **SUPERVISED**, select [0]: **PROGRAM---**> [3]: **PROG INPUTS---**> [2]: **SUPERVISED**. This option enables supervision for the connection between the five inputs and the FACP.



A 2.2 kΩ EOL resistor is required. Connect it according to *Figure 7* or *Figure 9* on pages 11 and 12.

To allow supervision of the input and FACP connection:

1. At the Prog Inputs Submenu, press [2] to select **2: SUPERVISED**. The window shows:

```
SUPERVISED? ( __ )
NO: YES (1) / NO (0)
```

The parentheses on the first line indicate the point that is currently being programmed. The current setting for the **SUPERVISED** option appears at the beginning of the second line.

2. Press the number key that corresponds to your selection. To verify your selection, press [# Command].
3. Press [* Clear] to return to the Prog Inputs Submenu.



An input configured for System Fault is always supervised and cannot be changed.

5.4.4 PROG RELAY

```
RELAY ( )
1: RELEAS ON TRBL
2: ACTIV GND STRT
```

The D9068 contains a general system trouble relay designed for fail-safe operation.

To access **PROG RELAY**:

1. At the Programming Menu, press [4] to select **4: PROG RELAY**.
2. Press the number key that corresponds to your selection. Refer to the following sections for trouble relay programming information.



The relay can only be programmed for RELEAS ON TRBL or ACTIV GND STRT. It cannot perform both functions simultaneously.

1: RELEAS ON TRBL

To access **RELEAS ON TRBL**, select [0]: **PROGRAM** ---> [4]: **PROG RELAY** ---> [1]: **RELEAS ON TRBL**.

This option holds the on-board trouble relay normally energized and releases it to indicate a trouble condition.

To set the system to hold and release a trouble relay:

1. At the Prog Relay Submenu, press [1] to select **RELEAS ON TRBL**. The current setting appears in parentheses.
2. Press [# Command] to verify your selection.
3. Press [* Clear] to return to the Programming Menu.

2: ACTIV GND STRT

To access **ACTIV GND STRT**, select [0]: **PROGRAM** ---> [4]: **PROG RELAY** ---> [2]: **ACTIV GND STRT**.

This option allows the D9068 to use the on-board trouble relay for ground start operation.

To set the system to use the on-board trouble relay for ground start operation:

1. At the Prog Relay Submenu, press [2] to select

2: ACTIV GND STRT. The current setting appears in parentheses.

2. Press [# Command] to verify your selection.
3. Press [* Clear] to return to the Programming Menu.

5.4.5 PROG ACC'NTS

```
PROG ACC'NTS
1: ACCOUNT NUMS
2: PHONE NUMS
3: PHONE CONTROL
4: RPT STEERING
5: LINE CONTROL
6: ACK WAIT TIME
```

The **PROG ACC'NTS** feature allows you to program parameters for event reporting.

To program parameters for event reporting:

1. At the Programming Menu, press [5] to select **5: PROG ACC'NTS**.
2. Press the number key that corresponds to your selection. Refer to the following sections for account programming information.

1: ACCOUNT NUMS

To access **ACCOUNT NUMS**, select [0]: **PROGRAM** ---> [5]: **PROG ACC'NTS** ---> [1]: **ACCOUNT NUMS**.

The account numbers identify the D9068 when it reports to the central station.

To use account numbers to identify the D9068 when reporting the central station:

1. At the PROG ACC'NTS Submenu, press [1] to select **1: ACCOUNT NUMS**. The window shows:

```
ACCOUNT NUMS
1: NUMBER 1
2: NUMBER 2
```

2. Press the number that corresponds with the account number you want to set. The window shows:

```
ACCOUNT #1: 0000
NEW NUMBER: 0000
```

3. The existing number appears on the top line. Access hexadecimal digits A through F by pressing [Test]. Press [1] for A, [2] for B, [3] for C, [4] for D, [5] for E, and [6] for F.
4. Enter the new number on the second line and press [#] to verify your entry.
5. Press [* Clear] to return to the Prog Acc'nts Submenu.
6. Program Account Number 2 using the same procedure.



0000 is not a valid account number. At least one of the digits must be non-zero.

2: PHONE NUMS

To access **PHONE NUMS**, select **[0]: PROGRAM** → **[5]: PROG ACC'NTS** → **[2]: PHONE NUMS**. The system can be programmed with two reporting phone numbers. Use Phone Number 1 with Account Number 1 and Phone Number 2 with Account Number 2. Remote programming occurs on Phone Line 1 using Phone Number 3.

- **PHONE #1** is Phone Number 1.
- **PHONE #2** is Phone Number 2.
- **PHONE #3** is Phone Number 3. This phone number is not available at this time. It is reserved for future use.



Use both telephone numbers to comply with UL and NFPA standards.

To program the system with phone numbers:

1. At the Prog Acc'nts Submenu, press **[2]** to select **PHONE NUMS**. The window shows:

```
PHONE NUMS
1- PHONE #1
2- PHONE #2
3- PHONE #3
```

2. Press the number key that corresponds with the phone number you want to configure. In this example, **[1]** was pressed to select **1: PHONE #1**. The window shows:

```
PHN NMBR 1: ????
????????????????
```

3. Enter the telephone number and press **[Drill]** or **[Disable]** to move between the digits.
4. Press **[# Command]** when the entry is complete. Then, press **[* Clear]** to return to the Prog Acc'nts Submenu.



Before exiting the Phone Numbers Programming Submenu, refer to the following information on special control codes for telephone numbers.

You can include several special control codes in the phone number by pressing **[Test]**. These phone control codes are:

PHONE CONTROL CODE

```
1: * CODE
2: # CODE
3: /3 SEC DELAY
```

- *** CODE**: Press **[Test]** and then **[1]** for Touch Tone “*” action.
- **# CODE**: Press **[Test]** and then **[2]** for Touch Tone “#” action.
- **/3 SEC DELAY**: Press **[Test]** and then **[3]** for a 3-second delay.

3: PHONE CONTROL

To access **PHONE CONTROL**, select **[0]: PROGRAM** → **[5]: PROG ACC'NTS** → **[3]: PHONE CONTROL**. The following information describes the features associated with each telephone number.

To set telephone control:

1. At the Prog Acc'nts Submenu, press **[3]** to select **3: PHONE CONTROL**. The window shows:

```
PHONE CONTROL
1: PHONE 1 FORMAT
2: PHONE 2 FORMAT
3: PHONE 1 TONE
4: PHONE 2 TONE
5: PHONE 1 TEXT
6: PHONE 2 TEXT
```



3: PHONE 1 TONE and **4: PHONE 2 TONE** options are in 4/2 format only. Refer to *Step 4* for tone settings.

2. Press the number key (1 or 2 for Phone Format) that corresponds to the phone you want to configure. In this example, **PHONE #1** is selected. The window shows:

```
PHONE FORMAT (__)
1: 4/2 REPORT
2: SIA 110, RPRT
3: CONTACT ID
4: SIA 300, RPRT
5: MODEM III
```

3. Press the number key that corresponds to your selection. The current setting appears in parentheses on the first line. Press **[# Command]** to verify your

selection. Then press [* Clear] to return to the Phone Control Submenu.

4. Use the Phone 1 Format instructions when setting the Phone 2 Format.
5. Configure the tone setting by pressing [3] at the Phone Control Submenu. In this example, **PHONE #1** is selected. The window shows:

```
TONE ( )
1: 19D, 14A, 10PS
2: 18D, 23A, 10PS
3: 19D, 14A, 20PS
4: 18D, 23A, 20PS
5: 19D, 14A, 40PS
6: 18D, 23A, 40PS
```



The "D" in "XXD" is the data frequency. "A" in "XXA" is the acknowledge tone. "PS" in "XXPS" is the pulse per second.

6. Press the number key that corresponds to your selection. The current setting appears in parentheses on the first line.
7. Press [# Command] to verify your selection. Press [* Clear] to return to the Phone Control Submenu.
8. Use the Phone 1 Tone instructions when setting Phone 2 Tone.
9. Press [5] to enable or disable sending text with reports.

```
PHONE 1 SEND TEXT
NO: (1) YES (0) NO
```

10. Press the number key that corresponds to your selection. The current setting appears in parentheses on the first line.
11. Press [# Command] to verify your selection. Press [* Clear] to return to the Phone Control Submenu.



Event text is only sent for the Modem IIIa² format, and only when the serial link to an analog FACP is used.

4: RPT STEERING

To access **RPT STEERING**, select [0]: **PROGRAM** --->[5]: **PROG ACC'NTS**--->[4]: **RPT STEERING**.

You can direct the various classes of reports to specific phone numbers. The report classes are:

- **Non-supervisory Alarms:** Include fire alarms, waterflow alarms, and monitor alarms.
- **Supervisory Alarms:** Come from points that are configured as a supervisory type.

- **Non-supervisory Restorals:** Include fire, waterflow, and monitor restorals.
- **Supervisory Restorals:** Come only from points that are configured as a supervisory type.
- **Trouble Reports:** Include all point and system troubles and restorals. The tests include Auto Tests, Manual Tests, and Off-normal at Test Reports.



Refer to *Appendix E* on page 52 for the appropriate routing of each report.

To direct reports to particular telephone numbers:

1. From the **PROG ACC'NTS** Submenu, press [4] to select **4: RPT STEERING**. The window shows:

```
REPORT STEERING
1: NONSUP ALRM
2: SUPVSY ALRM
3: ALM RSTR, RST
4: SUPVSY RSTR
5: TESTS
6: TBL, TBL RSTR
```

2. Press the number key that corresponds to your selection. The window that appears depends on your choice. In this example, the non-supervisory alarm is selected. The window shows:

```
NONSUP ALRM ( )
1- PHONE 1 ONLY
2- PHONE 2 ONLY
3- PHON 1 AND 2
4- PHN 2 BACKUP
```

The options on this window are:

- **PHONE 1 ONLY:** Sends the report only to Phone #1.
 - **PHONE 2 ONLY:** Send the report only to Phone #2.
 - **PHONE 1 AND 2:** Send the report to both Phone #1 and Phone #2.
 - **PHONE 2 BACKUP:** Sends the report to Phone #1 and then to Phone #2 if Phone #1 fails. The D9068 attempts to send the report to Phone Number 1 first, and if that attempt fails, the D9068 sends the report to Phone Number 2.
3. Press the number key that corresponds with your selection followed by [# Command]. Then press [* Clear] to return to the Report Steering Submenu.



Report Steering Menu choices 2 to 6 have the same menu options as Report Steering **1: NONSUP ALRM**. Use the instructions for NONSUP ALRM to set Report Steering Menu choices 2 through 6.

5: LINE CONTROL

To access **LINE CONTROL**, select **[0]: PROGRAM** --->**[5]: PROG ACC'NTS**--->**[5]: LINE CONTROL**. This option allows you to set the dialing type and line supervision for each telephone line.

To set the dialing type and line supervision for phone lines:

- From the Prog Acc'nts Submenu, press **[5]** to select **5: LINE CONTROL**. The window shows:

```
LINE CONTROL
1: LINE #1
2: LINE #2
```

- Press the number key that corresponds with the line you want to configure. The example here is **LINE #1**. The window shows:

```
LINE 1 CONTROL
1: DIALING TYPE
2: MONITOR LINE
3: WAIT DIALTONE
```

The Dialing Type determines which format the D9068 uses for dialing on each telephone line. Tone/Pulse attempts tone dialling first, and then pulse dialing if tone dialling fails.

Monitor Line supervises phone line integrity.



Use both telephone lines (enabled and supervised) for UL installations.

If Wait Dialtone is set to **Yes**, the D9068 starts dialing when it receives a dial tone. When the Wait Dialtone is set to **No**, the D9068 waits 7 sec before dialing.

- Press **[1]** to select **1: DIALING TYPE**. The window shows:

```
DIAL #1 (____)
1: PULSE ONLY
2: TONE/PULSE
3: TONE ONLY
```

- Press the number key that corresponds with your selection followed by **[# Command]**. Then press **[* Clear]** to return to the Line Control Submenu.
- At the Line Control Submenu, press **[2]** for **2: MONITOR LINE**. The window shows:

```
MONITOR LINE #1
YES: YES (1)/NO (0)
```

- The current selection precedes the colon (:) on the second line. Press the number key that corresponds with your selection.
- Press **[# Command]**. Then press **[* Clear]** to return to the Line Control Submenu.
- At the Line Control Submenu, press **[3]** to select **3: WAIT DIALTONE**. The window shows:

```
WAIT DIALTONE #1
YES: YES (1)/NO (0)
```

- The current selection precedes the colon (:) on the second line. Press the number key that corresponds with your selection followed by **[# Command]**. Then press **[* Clear]** to return to the Line Control Submenu.
- Use this same procedure to configure Line #2.

6: ACK WAIT TIME

To access **ACK WAIT TIME**, select **[0]: PROGRAM** --->**[5]: PROG ACC'NTS**--->**[6]: ACK WAIT TIME**. After the D9068 dials the telephone number, it waits for the receiver to answer the telephone and send the proper handshake tones. If the handshake is not detected, the D9068 hangs up. This parameter sets the length of time the D9068 waits before hanging up.

To set the amount of time the D9068 waits before hanging up:

- At the Prog Acc'nts Submenu, press **[6]** to select **6: ACK WAIT TIME**. The window shows:

```
ACK WAIT TIME (____)
(20-99 SECS) : ____
```

- Enter a value between 20 and 99 for the ACK WAIT TIME and then press **[# Command]**. The default value is 45 sec.
- Press the **[* Clear]** key to return to the Prog Acc'nts Submenu.

5.4.6 PROG FORMATS

The PROG FORMATS feature allows you to program the reporting formats and codes used by the D9068 in reporting 4/2 formats.

To program reporting formats and codes:

- At the Programming Menu, press **[6]** to enter the Prog Formats Submenu. The window shows:

```

PROG FORMATS
1: 4/2 POINT RPT
2: 4/2 RPT CODES
3: SIA SILENC RPT

```

The following sections include format programming information.

Figure 27: 4/2 Point Report Example

- 1 - Digit 1 (D1) is the event type identifier. The event type in this example is 1: FIRE ALRM.
- 2 - Digit 2 (D2) is the point identifier. The point identifier identifies the point assigned to the D1 event type. The event type in this example is assigned to Point 2. The point range is 1 to 5.

1: 4/2 POINT RPT

To access **4/2 POINT RPT**, select **[0]: PROGRAM -->[6]: PROG FORMATS-->[1]: 4/2 POINT RPT**. The 4/2 Reports consist of an event type (first digit) and a point number (second digit). These reports apply to points, and only when 4/2 format is selected. Refer to *Figure 27* for more information.

To set the event and point format of a report:

1. At the Prog Formats Submenu, press **[1]** to select **1: 4/2 POINT RPT**. The window shows:

```

4/2 POINT RPT
1: EVENTS
2: ZONES 1 TO 9
3: ZONE 10 D2

```

2. Press **[1]** to select **1: EVENTS**. The window shows:

```

4/2 POINT RPT
1: FIRE ALRM D1
2: FIRE RSTR D1
3: WATERFLOW D1
4: SUPERVISE D1
5: TROUBLE D1
6: TRBL RSTR D1
7: DISABLE D1
8: DSBL RSTR D1
9: MONITOR D1

```

3. D1 refers to Digit #1. Press the number key that corresponds with your selection of event type. In

this example, **1: FIRE ALRM D1** is selected. The window shows:

```

FIRE ALRM D1 ( )
0-9, <TEST>:

```

4. The current setting appears in parentheses on the first line. Press **[# Command]** to verify your selection.
5. If you prefer to assign a hexadecimal value, press **[Test]**. The window shows:

```

SELECT HEX CODE
1: HEX A
2: HEX B
3: HEX C
4: HEX D
5: HEX E
6: HEX F

```



In 4/2 formats, HEX a reports as 0 (zero).

6. Press the number key that corresponds with your selection.
7. Press **[# Command]** to verify the selection, then press **[* Clear]** to return to the 4/2 Point Rpt Submenu.
8. At the 4/2 Point Rpt Submenu, press **[2]** to select **ZONES 1 TO 9** and assign the event type to a point. The window shows:

```

4/2 POINT RPT
1: ZONE 1 D2
2: ZONE 2 D2
3: ZONE 3 D2
4: ZONE 4 D2
5: ZONE 5 D2
6: ZONE 6 D2
7: ZONE 7 D2
8: ZONE 8 D2
9: ZONE 9 D2

```

9. D2 refers to #2. Press the number key for the zone that corresponds with your selection of event type. In this example, Zone 2 is selected. Refer to *Figure 17* on page 22 for details. The window shows:

```

ZONE 2 D2 ( )
0-9, <TEST>:

```

10. The current setting appears in parentheses on the first line. Press **[# Command]** to verify your selection.
11. If you prefer to assign a hexadecimal value, press **[Test]**. The window shows:

SELECT HEX CODE

- 1: HEX A
- 2: HEX B
- 3: HEX C
- 4: HEX D
- 5: HEX E
- 6: HEX F

12. Press the number key that corresponds with your selection.
13. Press [# Command] to verify the selection. Then press [* Clear] to return to the 4/2 Point RPT Submenu.



If you want to assign an event type to Point (Zone) 10, choose **[3]-ZONE 10 D2** on the 4/2 Point Rpt Submenu and follow the preceding instructions for Zones 1 to 9.

2: RPT CODES

To access RPT CODES, select **[0]: PROGRAM--->[6]: PROG FORMATS--->[2]: 4/2 RPT CODES**. The 4/2 Report Codes apply to the system conditions only when the 4/2 format is selected. You can program two digits to be sent for each condition. Refer to *Appendix B* on page 45 for a description of each 4/2 Report Code that is supported by the D9068.

To set report codes for system conditions:

1. At the Prog Formats Submenu, press [2] to select **2: 4/2 RPT CODES**. The window shows:

4/2 RPT CODES

- 1: GROUP 1
- 2: GROUP 2
- 3: GROUP 3
- 4: GROUP 4
- 5: GROUP 5

2. The 4/2 reporting codes are divided into five groups. Press the number key that corresponds with your selection. In this example, **1: GROUP 1** is selected. The window shows:

4/2 RPT CODES

- 1: SYSTM IN TST
- 2: SYS TEST RST
- 3: SILENCE
- 4: FIRE DRILL
- 5: FIRE DRL RST
- 6: OPEN RST RPT
- 7: LOW BATTERY
- 8: LOW BATT RST
- 9: AC FAILURE

3. Press the number key that corresponds to your selection. In this example, **1: SYSTM IN TST** is selected. The window shows:

SYSTM IN TST ()

0-9, <TEST>:

4. The current setting appears in parentheses on the first line. Using the keypad, enter a value from 1 to 9, or press [Test] for a list of hexadecimal entries. Pressing [Test] shows the window:

SELECT HEX CODE

- 1: HEX A
- 2: HEX B
- 3: HEX C
- 4: HEX D
- 5: HEX E
- 6: HEX F



Use the programming procedure for 4/2 reporting codes in Groups 2 to 5. Refer to *Appendix A* beginning on page 43 for definitions of each 4/2 reporting code.

3: SIA SILENC RPT

To access **SIA SILENC RPT**, select **[0]: PROGRAM--->[6]: PROG FORMATS--->[3]: SIA SILENC RPT**. When using SIA reporting, all reporting codes except one are fixed and do not require programming. The Silence Report is not a standard SIA code and can be programmed.

Use hexadecimal numbers to enter the required ASCII value. Enter one number for the left character or byte and another number for the right character or byte. Use the factory default KB = 0B x 4B, 0B x 42B.

Refer to a standard table of ASCII values. All data that is entered consists of hexadecimal values. The SIA event codes use characters ranging from A to Z.

To program SIA event codes for the Silence Report:

1. At the Prog Formats Submenu, press [3] to select **3: SIA SILENC RPT**. The window shows:

SIA SILENC RPT

- 1: LEFT BYTE
- 2: RIGHT BYTE

2. Press the number key that corresponds with your selection. In this example, **1: LEFT BYTE** is selected. The window shows:

LEFT BYTE ()

0-9, <TEST>:

3. The current setting appears in the parentheses on the first line. Enter a hexadecimal value and press [# Command].
4. To view the hexadecimal codes, press [Test]. The window shows:

SELECT HEX CODE

- 1: HEX A
- 2: HEX B
- 3: HEX C
- 4: HEX D
- 5: HEX E
- 6: HEX F



Program 2: RIGHT BYTE using the same procedure as programming SIA event codes for the Silence Report.

5.4.7 PROG DEFLT

PROG DEFLT

- 1: CLEAR HISTORY
- 2: DEFAULT ALL EE
- 3: DEFLT 4/2 CDES

The **PROG DEFLT** feature clears the history logger, resets the D9068 to its default EEPROM settings, and applies default reporting codes.

1: CLEAR HISTORY

To access **CLEAR HISTORY**, select [0]: **PROGRAM** ---> [7]: **PROG DEFLT** ---> [1]: **CLEAR HISTORY**. You can clear some or all of the history records in the system using this option.

To clear the history logger, reset the D9068 to default settings, and apply default reporting codes:

- At the Prog Defaults Submenu, press [1] to select **1: CLEAR HISTORY**. The window shows:

```
HIST ITEMS= _____
DEL OLDEST ###
```

- The number on the first line shows the total number of records stored in the history logger. Enter the number of history records you want to delete and press [# Command]. Those events are erased and the D9068 returns to the Prog Defaults Menu.

2: DEFAULT ALL EE

To access **DEFAULT ALL EE**, select [0]: **PROGRAM** ---> [7]: **PROG DEFLT** ---> [2]: **DEFAULT ALL EE**. This option allows you to set the D9068 to the original factory programming configuration.



All programming, including the point configurations and option selections, is lost when this operation is performed.



Date/Time settings are not affected when placing the D9068 in the default.

To set the D9068 to the original factory programming configuration:

- At the Prog Defaults Submenu, press [2] to select **2: DEFAULT ALL EE**. The window shows:

```
DEFAULT EE?
NO: YES (1)/NO (0)
```

- The entry preceding the colon (:) on the second line indicates the current setting. To restore the D9068 to its factory settings, press [1] and [# Command].

- Then press [* Clear]. The window shows:

```
SETTING EEPROM
TO DEFAULT...
```

When the operation is complete, the Prog Defaults Submenu reappears.

3: DEFLT 4/2 CDES

To access **DEFLT 4/2 CDES**, select [0]: **PROGRAM** ---> [7]: **PROG DEFLT** ---> [3]: **DEFLT 4/2 CDES**.

This option sets all of the programming for 4/2 codes to the default.

To set all 4/2 code programming to the default:

- At the Prog Defaults Submenu, press [3] to select **3: DEFLT 4/2 CDES**. The window shows:

```
DEFLT 4/2 CDES?
NO: YES (1)/NO (0)
```

- The entry preceding the colon (:) on the second line indicates the current setting. To default 4/2 reports, press [1] followed by [# Command]. Pressing [* Clear] shows:

```
SETTING EEPROM
TO DEFAULT...
```

When the operation is complete, the Prog Defaults Submenu reappears.

5.4.8 SERIAL CONECTN

To access **SERIAL CONECTN**, select [0]: **PROGRAM** ---> [8]: **SERIAL CONECTN**. This menu selection allows the D9068 to be configured to use the serial connection to a Bosch D8024 or D10024/D10024A Analog FACP. Setting this option to **Yes** enables the D9068 to communicate with a D8024 or D10024/D10024A using an RS-232 serial link. If the serial connection is set to **YES** and interrupted such as connecting a keypad, an Event Serial Fail is generated. A Serial Restore generated when communication restores.

For more information, refer to *Appendix F* beginning on page 53 and the *D9068 Quick Start* (P/N: 48575).

To configure the D9068 to use the serial connection to a D8024 or D10024/D10024A Analog FACP:

- At the Programming Menu, press [8] to select **8: SERIAL CONECTN**. The window shows:

```
SERIAL CONECTN
NO: YES (1)/NO (0)
```

- The number preceding the colon (:) on the second line indicates the current setting. Press [1] followed by [# Command] to enable the serial connection.
- Press [0] followed by [# Command] to disable the serial connection.
- Press [* Clear] to return to the Programming Menu.

5.5 Operating Modes

The D9068 operating modes are Program, Status, History, Test, and Reset. Each mode appears as an option on the D9068's Main Menu.

```
SYSTEM NORMAL
0- PROGRAM
1- STATUS
2- HISTORY
3- TEST
4- RESET
```

5.5.1 0- PROGRAM

When the D7033 LCD Remote Keypad is connected to the D9068, the Main Menu appears a short time after the keypad starts up. Refer to *Section 5.0 Programming* on page 26 for programming instructions.

5.5.2 1- STATUS

When you select **1- STATUS**, the top line shows the highest priority off-normal condition. The second line shows each off-normal condition sequentially.

Press [* Clear] to finish the Status Mode and returns to the Main Menu.

5.5.3 2- HISTORY

When you select **2- HISTORY**, the most recent event in the history log appears. Refer to *Section 4.4.4 History* on page 26 for a detailed description of History Mode operation.

5.5.4 3- TEST



Do not select **2: TEST TONES**. This selection is for factory testing only.

When you select **3- TEST**, the window shows the test items:

```
TEST MODES
1: TEST COMM
2: TEST TONES
```

1: TEST COMM

To access **TEST COMM**, select [3]: **TEST-->[1]: TEST COMM**. Selecting this option allows you to initiate a Manual Communications Test.

To initiate a Manual Communications Test:

- At the Main Menu, press [3] to select **3: TEST**. The Test Modes window appears.
- Press [1] to select **1: TEST COMM**. The window shows:

```
SEL PHONE LINE
1: LINE 1
2: LINE 2
3: ALTERNATE
```



The **ALTERNATE** option uses the telephone line not used in the previous Comm Test.

- Select the appropriate line to be tested, LINE 1 or LINE 2. You can also press [* Clear] to end testing. Once a line is selected, a Manual Communications Test is initiated and the window shows:

```
COMMUNICATOR
LINE 1, TRY 1
```

The bottom line indicates the line on which the Manual Communications Test was initiated and the current attempt (try). The D9068 makes up to two attempts before declaring a failure. When the D9068 declares a failure, the window shows:

```
COMMUNICATOR
FAILED
```

This message appears briefly, then the LCD returns to the Test Modes Menu.

If the Manual Communications Test passes, the window shows:

```
COMMUNICATOR
PASSED
```

This message appears briefly, and then the LCD returns to the Test Modes Menu.



For more information about the types of communications tests the D9068 can perform, refer to *Section 4.1.9 Communications Tests* on page 20.

5.5.5 4- RESET

You can manually reset the D9068 by either selecting **RESET** from the Main Menu or pressing [Reset] on the D7033 Keypad. Refer to *Section 4.5 Reset* on page 26 for a details description on resetting the D9068.

Appendix A: Troubleshooting

Do not use this section as an acceptance testing procedure. This information is provided as a general guide to help you determine, recognize, and resolve a system problem during installation, maintenance, and normal standby.

A.1 On-Board LEDs

The D9068 has four on-board LEDs to indicate various system conditions.

Line 1 LED: This LED blinks when a report is being sent out on Line 1. When a line fault condition occurs on Line 1, this LED lights steadily in conjunction with the Sys Trouble LED. If the Line 1 LED lights steadily:

1. Use a voltmeter to measure the voltage present across each telephone line (Tip to Ring), while the telephone line is idle.



The voltage present while there is an incoming call can be more than 100 VAC.

Ensure the standby telco battery voltage is between 30 VDC and 50 VDC. The D9068 accepts any voltage over 6 VDC. The voltage polarity does not matter.

2. Check for other devices that using the telephone line such as fax machines, credit card verifiers, or PBX systems.

NFPA 72 requires a dedicated telephone line for fire reporting. If the devices sharing the telephone line cannot be removed, ensure they are wired so the D9068's line seizure relay disconnects them when needed. Measure the line voltage while these devices are in use, verify it remains above 6 V.

3. Check for intermittent faults on the phone line.

Make a test call to verify the line is free of distortion and noise. Temporarily swap Lines 1 and 2 on the D9068 to check if the problem indication moves to the D9068's other telephone line channel. If the problem indication moves, the telephone line is causing the problem rather than the line monitor.

Ensure the fault message is PHONE FAULT and not COMM FAULT. Set report steering for all events to Phone 1 Only if only one telephone number is available for reporting.

COMM FAULT can also happen if one of the phone lines has telco battery voltage, but does not complete a call. Make test calls to the receiver(s) on both telephone lines, listening for the receiver ACK tone.

4. Verify two phone lines are available.

NFPA 72 requires the Auto Test Report be sent on a different telephone line each time it is sent. If only one telephone line is connected to the D9068, a COMM FAULT is generated on every other test call.

Line 2 LED: This LED blinks when a report is sent on Line 2. When a line fault condition occurs on Line 2, this LED lights steadily along with the System Trouble LED. When the Line 2 LED lights steadily, refer to the preceding steps for Line 1 LED.

Heartbeat LED: This LED illuminates and blinks if the D9068 is functioning properly. When not illuminated:

- Check the D9068's main power. Refer to *Table 1* on page 6.
- Verify there are no wire faults in the power connections.
- Refer to *Section 1.2.1 Power* on page 6 for additional power requirements.

Sys Trouble LED: This LED is off when the D9068 operates properly, and lights steadily for D9068 system trouble. It also operates with the D9068's on-board trouble relay. The number of times the Sys Trouble LED flashes determines which trouble condition is indicated. Refer to *Table 9* below and continued on page 44.

Table 9: Sys Trouble LED Indications

No. of Flashes	Indicates	Description
2	Internal RAM Test failure	The internal RAM failed. This failure can occur any time. During failure, the D9068 continuously cycles through its start-up routine. Each time the start-up routine takes place, the SYS TROUBLE LED flashes two times. Contact Bosch Technical Support immediately at (888) 886-6189.
3	External RAM Test failure	The external RAM failed. This failure can occur any time. During failure, the D9068 continuously cycles through its start-up routine. Each time the start-up routine takes place, the SYS TROUBLE LED flashes three times. Contact Bosch Technical Support immediately at (888) 886-6189.



The D9068 considers the D7033 Keypad connection as an abnormal condition.

Table 9: Continued

No. of Flashes	Indicates	Description
4	ROM Checksum Failure	The ROM checksum failed. This failure can occur at any time. During failure, the D9068 continuously cycles through its start-up routine. Each time the start-up routine occurs, the SYS TROUBLE LED flashes four times. Contact Bosch Technical Support immediately at (888) 886-6189.
5	EEPROM Checksum Failure	An EEPROM Test is performed every 10 minutes. If the checksum fails, the D9068 automatically defaults. The SYS TROUBLE LED illuminates and TROUBLE PROGRAMMING appears on the keypad. You must reprogram all configuration settings. If this failure occurs often, contact Bosch Technical Support immediately at (888) 886-6189.

A.2 Input Points

When there is a problem with the D9068's input points, the Sys Trouble LED remains steady on. If the input point(s) are programmed for supervision, plug in the D7033 Remote LCD Keypad and press [1] to select **1: STATUS** from the Main Menu. If the status shows any point troubles, check the input point wiring and verify all EOL resistors, if attached, are intact. Refer to *Section 4.2 Input Point Operation* on page 21 for additional information.

A.3 Trouble Relay

When powered up, the D9068's on-board trouble relay is energized (normal standby). Refer to *Figures 12 and 13* on page 14. When the on-board trouble relay remains in the off-normal (de-energized) position, check the trouble relay's programming configuration.

Releas on Trbl: This setting, Release on Trouble, keeps the trouble relay activated and releases it to indicate a trouble condition.

Activ Gnd Strt: This setting, Activate on Ground Start, keeps the trouble relay deactivated and activates it when the D9068 needs to place a call.

If the FACP supervises the connection to the D9068's on-board trouble relay, and there is a wiring fault or the EOL resistor is missing, the FACP shows a system trouble condition on the appropriate D9068 input point (if it is used and programmed). The D9068 sends a System Trouble Report. The D9068's Sys Trouble LED or on-board trouble relay do not activate.

A.4 Manual Test Report Failure

If the D9068 fails to send the Manual Test Report in two attempts or the [* Clear] key is pressed, the report transmission is aborted. A COMM FAULT message is not sent. The D7033 Keypad emits a three-beep tone and the message COMMUNICATOR FAILED appears. After 2 sec, the keypad display is updated to show CLEARING ALL REPORTS!! Any report in the report queue, including the Manual Test Report, is deleted. The rotating Test Menu appears after 2 sec.

A.5 Reports in Queue

If there are any reports in the queue, the D7033 Keypad shows the message REPORTS IN QUEUE PLEASE WAIT. The D9068 then waits for these reports to be sent. If you press [* Clear] on the D7033 Keypad, the wait ends, the D7033 Keypad emits a three-beep tone, and the keypad's LCD shows the message, ERROR DURING COMM TEST. The rotating Test Menu returns to the keypad's LCD after showing the message for 2 sec.

When the report queue is empty, the D9068 prompts you to select the telephone line to be used (either Line 1 or Line 2). The D9068 can also prompt you to alternate the telephone lines. For details, refer to *1: TEST COMM* on page 42.

When the third option (**ALTERNATE**) is selected, the telephone line is switched from the line used in the last Manual Test Report to the other line. This switch occurs whether you select the line number or **ALTERNATE**. Pressing [* Clear] instead of a selection key switches between Line 1 and Line 2. Sending an Auto Test does not affect the phone line sequence of the Manual Test Report. When the line selection is complete, the Manual Test Report is added to the report queue.

If the report queue is full of reports to send, a Data Lost Report is sent unless one is already in the queue and the Manual Test Report is not sent. The Data Lost Report goes in the History Log when it is added to the report queue.

A.6 Error During Comm Test

When a Manual Test is requested, the D9068 verifies there is at least one good phone line. If not, the D7033 Keypad emits a three-beep tone and ERROR DURING COMM TEST appears for 2 sec. The rotating Test Menu returns to the keypad's LCD.

Appendix B: 4/2 Reporting Codes

Table 10 lists the 4/2 codes supported by the D9068 Fire Communicator. Refer to *RPT CODES* for programming information.

4/2 Report Code	Keypad Number Key	Group Number	Definition
SYSTEM IN TST*	[1]	1	System in Test. Sent for Walk Test operations.
SYS IN RPT*	[2]	1	System in Test Restore. Sent for Walk Test operations.
SILENCE*	[3]	1	Silence. Sent when the [SILENCE] key is pressed.
FIRE DRILL*	[4]	1	Fire Drill. Sent for fire drill operations.
FIRE DRL RST*	[5]	1	Fire Drill Restore. Sent for fire drill operations.
OPEN RST RPT	[6]	1	Open Reset Report. Sent when the [RESET] key is pressed.
LOW BATTERY	[7]	1	Low Battery: Sent when a low battery input is active.
LOW BATT RST	[8]	1	Low Battery Restore. Restoral occurs when a low battery input is active.
AC FAILURE	[9]	1	AC Failure. Sent when an AC Fail input is active.
AC FAIL RST	[1]	2	AC Failure Restore. Restoral occurs for AC Failure.
AUTO TST RPT	[2]	2	Automatic Test Report. Sent for automatic communicator tests.
OFF NORM TST	[3]	2	Off Normal at Test. Sent when control panel is off-normal at Automatic Test time.
PHONE 1 TRBL	[4]	2	Phone Line 1 Trouble. Sent for Phone Line 1 problems.
PN 1 TRB RST	[5]	2	Phone Line 1 Trouble Restore. Sent for Phone Line 1 problems.
PHONE 2 TRBL	[6]	2	Phone Line 2 Trouble. Sent for Phone Line 2 problems.
PN 2 TRB RST	[7]	2	Phone Line 2 Trouble Restore. Sent for Phone Line 2 problems.
SYSTEM TROUB*	[8]	2	System Trouble. Sent for general system problems.
SYS TRB RST*	[9]	2	System Trouble Restore. Sent for general system problems.
MAN TST RPT	[1]	3	Manual Test Report. Sent for manual communicator tests.
DATA LOST RP	[2]	3	Data Lost Report. Sent if events occur too rapidly.
EEPROM FAIL	[3]	3	EEPROM Failure. Sent for EEPROM problems.
RESET REBOOT*	[4]	3	System power up and reboot.
SMK PWR TBL	[5]	3	Smoke Power Trouble. Sent for smoke detector power supply problems.
SMK PWR RSTR	[6]	3	Smoke Power Trouble Restore. Sent for smoke detector power supply problems.
GND FLT TRBL	[7]	3	Ground Fault Trouble. Sent for ground fault trouble problems.
GND FLT RSTR	[8]	3	Ground Fault Trouble Restore. Sent for ground fault trouble problems.
TRBL INP RPT	[9]	3	Trouble Input Report. Sent when system fault input is active.
TRBL INP RST	[1]	4	Trouble Input Report Restore. Sent when system fault input restores.
ANALOG SERVC	[2]	4	Analog service.
ANALOG RSTR	[3]	4	Analog restore.
EQUIP FAILR*	[4]	4	Equipment Failure.: Sent for equipment failure problems.
EQUIP RESTOR*	[5]	4	Equipment Restore. Sent for equipment failure problems.
NETWORK FAIL*	[6]	4	Network Failure. Sent for network failure problems.
NETWORK RSTR	[7]	4	Network Restore. Sent for network failure problems.
SENS BUS RPT*	[8]	4	Sensor Bus Report.
SENS BUS RST	[9]	4	Sensor Bus Restore.
RMT PGM FAIL**	[1]	5	Remote Programming Failure. Sent for problems with remote programming.
RMT PGM SUCC**	[2]	5	Remote Programming Success. Sent when remote programming is successful.
UNKNOWN FALT	[3]	5	Unknown Fault. Sent for problems of an unknown nature.

* Item is sent only when the D9068 is configured to communicate with a Bosch D8024 or D10024/D10024A Analog FACP.
 ** Item is for future use.

Appendix C: Fire Communicator Report Summary

Table 11: Reporting Summaries

Point-Related Events						
Report Description	SIA Code	SIA Description	Contact ID Code	Contact ID Description	4/2 Code Default Values	Modem IIIa ² Description
Point Fire Alarm	FA pppp	Fire Alarm	1 110 aa ppp	Fire Alarm	0P	Fire Alarm Point = ppp
Point Waterflow Alarm	SA pppp	Sprinkler Alarm	1 113 aa ppp	Waterflow	0P	Fire Alarm Point = ppp
Point Supervisory Alarm	SS pppp	Sprinkler Supervisory	1 200 aa ppp	Fire Supervisory	0P	Fire Supervision Point = ppp
Point Monitor Alarm	UA pppp	Untyped Zone Alarm	1 140 aa ppp	General Alarm	0P	Alarm Point = ppp
Point Fire Trouble	FT pppp	Fire Trouble	1 373 aa ppp	Fire Trouble	6P	Fire Trouble Point = ppp
Point Waterflow Trouble	ST pppp	Sprinkler Trouble	1 373 aa ppp	Fire Trouble	6P	Fire Trouble Point = ppp
Point Supervisory Trouble	ST pppp	Sprinkler Trouble	1 373 aa ppp	Fire Trouble	6P	Fire Trouble Point = ppp
Point Monitor Trouble	UT pppp	Untyped Zone Trouble	1 373 aa ppp	Fire Trouble	6P	Trouble• Point = ppp
Point Fire Alarm Restore	FR pppp	Fire Restoral	3 110 aa ppp	Fire Alarm	3P	Fire Restoral•Point = ppp
Point Waterflow Restore	SH pppp	Sprinkler Alarm Restore	3 113 aa ppp	Waterflow	3P	Fire Restoral•Point = ppp
Point Supervisory Restore	SR pppp	Sprinkler Restoral	3 200 aa ppp	Fire Supervisory	3P	Fire Restoral•Point = ppp
Point Monitor Restore	UR pppp	Untyped Zone Restoral	3 140 aa ppp	General Alarm	3P	Restoral From Alarm Point = ppp
Point Fire Trouble Restore	FJ pppp	Fire Trouble Restore	3 373 aa ppp	Fire Trouble	3P	Fire Trouble Restoral•Point = ppp
Point Waterflow Trouble Restore	SJ pppp	Sprinkler Trouble Restore	3 373 aa ppp	Fire Trouble	3P	Fire Trouble Restoral Point = ppp
Point Supervisory Trouble Restore	SJ pppp	Sprinkler Trouble Restore	3 373 aa ppp	Fire Trouble	3P	Fire Trouble Restoral Point = ppp
Point Monitor Trouble Restore	UJ pppp	Untyped Trouble Restore	3 373 aa ppp	Fire Trouble	3P	Restoral Point = ppp
Open Reset	OR iii	Disarm From Alarm	1 305 aa iii	System Reset	9F	Sensor Reset ID = iii
Low Battery	YT	System Battery Trouble	1 302 aa 000	Low System Battery	F9	Battery Low
Low Battery Restore	YR	System Battery Restoral	3 302 aa 000	Low System Battery	E9	Battery Restoral
AC Fail	AT	AC Trouble	1 301 aa 000	AC Loss	F8	AC Fail
AC Fail Restore	AR	AC Restoral	3 301 aa 000	AC Loss	E8	AC Restoral
Auto Test	RP	Automatic Test	1 602 aa 000	Periodic Test Report	EE	Test Report Non Expanded
Off Normal at Test	YX	Service Required	6 300 aa 000	System Trouble	FD	Test-Off Normal Non Expanded
Phone 1 Trouble	LT 1	Phone Line Trouble	1 351 aa 000	Telco 1 Fault	FB	Phone Line Fail•Phone Line = 1
Phone 1 Restore	LR 1	Phone Line Restoral	3 351 aa 000	Telco 1 Fault	EB	Phone Line Restoral Phone Line = 1

Refer to Notes 1 through 9 on page 48.

Table 11: Continued

Point-Related Events						
Report Description	SIA Code	SIA Description	Contact ID Code	Contact ID Description	4/2 Code Default Values	Modem IIIa ² Description
Phone 2 Trouble	LT 2	Phone Line Trouble	1 352 aa 000	Telco 2 Fault	FC	Phone Line Fail Phone Line = 2
Phone 2 Restore	LR 2	Phone Line Restoral	3 352 aa 000	Telco 2 Fault	EC	Phone Line Restoral Phone Line = 2
System Trouble	IA	Equipment Failure Condition	1 300 aa 000	System Trouble	FD	Equipment Fail
System Trouble Restore	IR	Equipment Fail Restoral	3 300 aa 000	System Trouble	ED	Equipment Restoral
Fire Drill Start	FI	Fire Test Begin	1 607 00 000	Walk Test Mode	F2	Fire Walk Start ID: 0000
Fire Drill End	FK	Fire Test End	3 607 00 000	Walk Test Mode Restore	E2	Fire Walk End ID: 0000
System Test	TS	Test Start	1 607 aa 000	Walk Test Mode	26	Walk Test Start
System Test Restore	TE	Test End	3 607 aa 000	Walk Test Mode Restore	27	Walk Test End
Silence	KB	Heat/Bypass	1 607 aa 000	Open/Close	1F	Alarm Silence
Manual Test	RX	Manual Test	1 601 aa 000	Manual Trigger Test	FE	Test Report Non Expanded
Data Lost	RT	Data Lost	1 354 aa 000	Fail to Communicate	FF	Communications Fail*
EEPROM Failure	IA 4	Equipment Failure Condition	1 307 aa 000	Self Test Failure	FD	Parameter Checksum Fail
Trouble Input	IA 2	Equipment Failure Condition	1 300 aa 002	System Trouble	FD	Equipment Fail COND = 002
Trouble Input Restore	IR 2	Equipment Fail Restoral	3 300 aa 002	System Trouble	ED	Equipment Restoral COND = 002
System Trouble Keypad	IA 5	Equipment Failure Condition	1 300 aa 005	System Trouble	FD	Equipment Fail Cond = 005
System Restore Keypad	IR 5	Equipment Fail - Restoral	3 300 aa 005	System Trouble	ED	Equipment Restoral Cond = 005
System Trouble Comm Fault	IA 6	Equipment Failure Condition	1 300 aa 006	System Trouble	FD	Equipment Fail Cond = 006
System Restore Comm Fault	IR 6	Equipment Fail Restoral	3 300 aa 006	System Trouble	ED	Equipment Restoral Cond = 006
System Trouble Programming	IA 11	Equipment Failure Condition	1 300 aa 011	System Trouble	FD	Equipment Fail Cond = 011
System Restore Programming	IR 11	Equipment Fail Restoral	3 300 aa 011	System Trouble	ED	Equipment Restoral Cond = 011
Serial Communication Fault	YC	Communications Fail	1 350 aa 000	Communication Trouble	FD	Comm Fail, RG = 1
Serial Communication Restore	YK	Communications Restoral	6 350 aa 000	Communication Trouble Restoral	ED	Comm Fail Restr = RG1
Refer to Notes 1 through 9 on page 48.						
* In Modem IIIa2, the D9068 uses Communications Fail to report a Data Lost event. The D9068 reports an Equipment Fail and Equipment Fail Restore with Condition 006 to report an actual Communications Fault.						



Note 1: Some codes are used for more than one event type.

Note 2: For SIA and Modem III^{a2}, no area is reported.

Note 3: For contact ID, the area is 0.

Note 4: The point is reported as Points 1 to 5, corresponding to the five inputs.

Note 5: ppp and pppp are point numbers. The SIA can be one to four digits.

Note 6: a, aa, and aaaa are numbers. The SIA can be one to four digits.

Note 7: iii and iiii are used IDs. The SIA can be one to four digits.

Note 8: nn, nnn, and nnnn are condition parameters. The SIA can be one to four digits.

Note 9: For the 4/2 code, P is a programmable digit for each input point.

Table 12 identifies equipment fail conditions. These conditions appear as a System Trouble in Contact ID.

On a D9068 that is serially connected to a Bosch Analog FACP, *Table 12* only applies when the reported address (C for Contact ID, SDI for Modem III^{a2}) is less than 100. If the reported address is more than 100, the reported event is a peripheral fault. Refer to *Appendix F* on page 53 for more information.

Table 12: Equipment Fail Conditions

Code	Event	Data in Address Field	Generated By	Description
2	Dialer Trouble Input	Point	Dialer	A point configured for Fault on Open or Fault on Short tripped.
5	System Trouble Keypad	N/A	Dialer	The programming keypad was connected to the D9068.
6	Comm Fault	N/A	Dialer	A Comm Fault occurred.
11	System Trouble Programming	N/A	Dialer	Programming was entered on the D9068.
12	Network Failure	Control panel address	Control panel	A control panel failor restore occurred.
13	FACP Programming	Control panel address	Control panel	The control panel was left in the Programming Mode.
14	FACP Config RPS Fail	Control panel address	Control panel	The RPS Config failed.
15	FACP Processor Reset	Control panel address	Control panel	The processor reset.
16	FACP Unresolved IRQ	Control panel address	Control panel	There is an unresolved interrupt request (IRQ).
17	FACP Ground Fault	Control panel address	Control panel	There is a ground fault.
18	FACP Loop Wiring Fault	Control panel address	Control panel	There is a fault in wiring loop.
19	FACP NAC A Open	Control panel address	Control panel	The notification appliance circuit (NAC) A is open.
20	FACP NAC A Short	Control panel address	Control panel	The NAC A is short.
21	FACP NAC B Open	Control panel address	Control panel	The NAC B is open.
22	FACP NAC B Short	Control panel address	Control panel	The NAC B is short.
23	FACP NAC C Open	Control panel address	Control panel	The NAC C is open.
24	FACP NAC C Short	Control panel address	Control panel	The NAC C is short.

Table 12: continued

Code	Event	Data in Address Field	Generated By	Description
25	FACP NAC D Open	Control panel address	Control panel	The NAC D is open.
26	FACP NAC D Short	Control panel address	Control panel	The NAC D is short.
27	FACP NAC Other Open	Control panel address	Control panel	The other NAC is open.
28	FACP NAC Other Short	Control panel address	Control panel	The other NAC is short.
29	FACP Unknown Event	Control panel address	Control panel	An unprocessed or decoded event occurred.
30	FACP Non Point Disable	Control panel address	Control panel	There is a disable that is not a point.
32	FACP General Disable	Control panel address	Control panel	There are disables, sets, and restored.
33	FACP Trouble Input Tripped	Control panel address	Control panel	A trouble input tripped on an analog FACP.

Appendix D: Programming Defaults

This appendix contains the programming defaults for the D9068. Use the *D9068 Program Record Sheet* (P/N: 46086) to record programming entries.

Program Time

- **System Date*:** 01 01 00
- **System Time*:** 0000

* Once the user enters the system date and time, resetting the D9068 to its default settings does not reset the system date and time. The system time can be corrupted if the power fails for more than 5 minutes.

Auto Test

- **Auto Test Time:** 0400
- **Auto Test Frequency:** 24 hours

Daylight Savings: No

Timers

- **AC Fail Delay:** 6 hour
- **Display Rate:** 1 second

Program Inputs (Configure)

- **Point 1:** Waterflow
- **Point 2:** Fire
- **Point 3:** Supervisory
- **Point 4:** Fire
- **Point 5:** Fire

Program Inputs (Supervised)

- **Point 1:** No
- **Point 2:** No
- **Point 3:** No
- **Point 4:** No
- **Point 5:** No

Configure Relay: Release on Trouble

Program Accounts

- **Account #1:** 0000
- **Account #2:** 0000

Phone Numbers

- **Phone #1:** ?????????
- **Phone #2:** ?????????
- **Phone #3:** ~~????????~~

Phone Control

- **Phone #1 Format:** SIA 300
- **Phone #2 Format:** SIA 300
- **Phone #1 Tone:** 19D, 14A, 10PS
- **Phone #2 Tone:** 19D, 14A, 10PS
- **Phone #1 Text:** No
- **Phone #2 Text:** No

Report Steering

- **Non-SUP Alarm:** Phone 2 Backup
- **Supervisory Alarm:** Phone 2 Backup
- **Alarm Restor, Reset:** Phone 2 Backup
- **Supervisory Restore:** Phone 2 Backup
- **Tests:** Phone 2 Backup
- **Trbl, Trbl Restore:** Phone 2 Backup

Line Control

- **Line 1 Dialing Type:** Tone/Pulse
- **Line 2 Dialing Type:** Tone/Pulse
- **Line 1 Monitor Line:** Yes
- **Line 2 Monitor Line:** Yes
- **Line 1 Wait Dial Tone:** Yes
- **Line 2 Wait Dial Tone:** Yes

ACK WAIT TIME: 45 seconds

Program Formats (4/2 Point Rpt)

- **Fire Alarm Digit 1:** 0
- **Fire Rstrl Digit 1:** 3
- **Waterflow Digit 1:** 0
- **Supervise Digit 1:** 0
- **Trouble Digit 1:** 6
- **Trbl Rstrl Digit 1:** 3
- **Disable Digit 1:** B
- **Disable Rtrl Digit 1:** 3
- **Monitor Digit 1:** 0
- **Zone 1 Digit 1:** 1
- **Zone 2 Digit 1:** 2
- **Zone 3 Digit 1:** 3
- **Zone 4 Digit 1:** 4
- **Zone 5 Digit 1:** 5

Program Formats (4/2 Rpt Codes Group 1)

- **System in Tst:** F1
- **Sys Tst Rstrl:** E1
- **Silence:** 9F
- **Fire Drill:** F2
- **Fire Drill Rstrl:** E2
- **Open Reset:** 9F
- **Low Batt:** F9
- **Low Batt Rstrl:** E9
- **AC Fail:** F8



Items crossed out are not currently supported.

Program Formats (4/2 Rpt Codes Group 2)

- AC Fail Rst: E8
- Auto Tst Rpt: EE
- Off Norm Tst: FD
- Phone 1 Trbl: FB
- Phone 1 Trbl Rstrl: EB
- Phone 2 Trbl: FC
- Phone 2 Trbl Rstrl: EC
- System Trbl: FD
- System Trbl Rstrl: ED

Program Formats (4/2 Rpt Codes Group 3)

- Man Tst Rpt: FE
- Data Lost: FF
- EEPROM Fail: FD
- Reset Reboot: ED

- ~~Smk Pwr Trbl: FD~~
- ~~Smk Pwr Trbl Rstr: ED~~
- ~~Gnd Flt Trbl: FD~~
- ~~Gnd Flt Rstrl: ED~~

- Trbl Input Rpt: FD

Program Formats (4/2 Rpt Codes Group 4)

- Trbl Input Rstrl: ED
- Analog Servc: FD

- ~~Analog Rstrl: ED~~

- Equip Fail: FD
- Equip Restore: ED
- Network Fail: FD
- Network Restor: ED
- Sens Bus Rpt: FD
- Sens Bus Rstrl: ED

Program Formats (4/2 Rpt Codes Group 5)

- Rmt Prg Fail: FD

- ~~Rmt Prg Succ: ED~~
- ~~Unknown Flt: FF~~

SIA Silence Report

- Left Byte: 4B
- Right Byte: 42

SERIAL CONECTN No



Items crossed out are not currently supported.

Appendix E: Report Routing

The information in this appendix shows the mapping of point-related and non-point-related events to their respective report routing group, lists the priority level of each event, and identifies the reporting limit for specific types of events.

Table 13: Point-Related Report Routing

Point-Related Events		
Report Description	Report Routing	Report Priority
Point Fire Alarm	NONSUP ALRM	0
Point Waterflow Alarm	NONSUP ALRM	0
Point Supervisory Alarm	SUPVSY ALRM	3
Point Monitor Alarm	NONSUP ALRM	3
Point Fire Trouble*	TBL, TBL RSTR	3
Point Waterflow Trouble*	TBL, TBL RSTR	3
Point Supervisory Trouble*	TBL, TBL RSTR	3
Point Monitor*	TBL, TBL RSTR	3
Point Fire Dirty Report*	TBL, TBL RSTR	3
Pont Fire Disable*	TBL, TBL RSTR	3
Point Fire Alarm Restore	ALM RSTR, RST	4
Point Waterflow Restore	ALM RSTR, RST	4
Point Supervisory Restore	SUPVSY RSTR	4
Point Monitor Restore	SUPVSY RSTR	4
Point Fire Trouble Restore*	TBL, TBL RSTR	4
Point Waterflow Trouble Restore*	TBL, TBL RSTR	4
Point Supervisory Trouble Restore*	TBL, TBL RSTR	4
Point Monitor Trouble Restore*	TBL, TBL RSTR	4

* Event is limited to a total of 100 reports sent in a 24-hour period. If this limit is exceeded, the 100th event is replaced with a Data Lost Report.

Table 14: Non-Point Related Report Routing

Non-Point-Related Events		
Report Description	Report Routing	Report Priority
System Test	TESTS	4
System Test Restore	TESTS	4
Silence	TESTS	4
Fire Drill	TESTS	4
Open Reset	ALM RSTR, RST	4
Low Battery*	TBL, TBL RSTR	3
Low Battery Restore*	TBL, TBL RSTR	3
AC Fail*	TBL, TBL RSTR	3
AC Fail Restore*	TBL, TBL RSTR	3
Auto Test	TESTS	4
Off Normal at Test	TESTS	4
Phone 1 Trouble*	TBL, TBL RSTR	3
Phone 2 Trouble*	TBL, TBL RSTR	3
Phone 1 Restore*	TBL, TBL RSTR	3
Phone 2 Restore*	TBL, TBL RSTR	3
Manual Test* *	TESTS	4
Data Lost	TBL, TBL RSTR	6
EEPROM Failure*	TBL, TBL RSTR	3
System Reset, Reboot	TBL, TBL RSTR	3
Equipment Fail*	TBL, TBL RSTR	3
Equipment Restore*	TBL, TBL RSTR	3
Network Failure*	TBL, TBL RSTR	3
Sensor Bus Failure*	TBL, TBL RSTR	3
Trouble Input*	TBL, TBL RSTR	3
Trouble Input Restore*	TBL, TBL RSTR	3
System Trouble Keypad*	TBL, TBL RSTR	3
System Restore Keypad*	TBL, TBL RSTR	3
System Trouble Comm Fault*	TBL, TBL RSTR	3
System Restore Comm Fault*	TBL, TBL RSTR	3
System Trouble Programming*	TBL, TBL RSTR	3
System Restore Programming*	TBL, TBL RSTR	3

* Event is limited to a total of 100 reports sent in a 24-hour period. If this limit is exceeded, the 100th event is replaced with a Data Lost Report.

** Event resets the count of limited reports and can send 100 additional reports.

Appendix F: D8024/D10024/ D10024A Analog FACP Operation

The D9068 intelligently interfaces to either the D8024 Analog FACP or the D10024/D10024A Analog FACP through an RS-232 connection. The D9068 receives events both from the control panel it is directly connected to and from other networked FACP's.

The digital inputs on the D9068 are used as backup inputs. If the serial connection between the D9068 and the Analog FACP breaks, the inputs are monitored for alarm and trouble conditions, and the D9068 sends a report. Refer to *Section 2.2.3 Analog FACP Connections* on page 15 for more information.

Use the D9068 Trouble Relay for installations requiring the FACP to detect trouble conditions on the D9068.

F.1 Limitations

This section discusses the limitations of the connection between the D9068 and a Bosch D8024 or D10024/D10024A Analog FACP.

F.1.1 FACP Limitations

FACP Serial Connections and Networked Control Panels

The D9068 interfaces to an Analog FACP primarily through an RS-232 interface. This requires installing a D9052 RS-232 Bus Module on the Analog FACP the D9068 is connected to. On the D8024, install the D9052 in Port C. On the D10024/D10024A, install the D9052 either in Port B or Port C.

The installation limitations of the D8024 prevent the D9068 from connecting directly to a D8024 used in a network installation. The D9068 works properly if it is connected to a D10024/D10024A that is used in a network. The events from slave D8024 Control Panels correctly report through the D10024/D10024A to the D9068.

For networked control panel installations, connect the D9068 to a D10024/D10024A that functions as a network master.

D9061 PC Graphics

Because both the D9061 PC Graphics software application and the D9068 Fire Dialer use the RS-232 interface, only one device can be connected to the D9052 RS-232 Bus Module. The D9061 PC Graphics application and the D9068 can only be used on a FACP with two D9052 RS-232 Interface Modules installed. In this configuration, connect the D9068 to the second D9052 Module.

Network Addresses

The D9068 firmware only supports communications with an analog FACP using a network address of 1. The D9068 has a fixed network address of 0.

F.1.2 Restorals

No individual restorals are sent. A System Reboot/Reset Report is sent when the system is all clear.

F.2 Setup

This section discusses the setup procedures required for D9068 operation with a Bosch FACP, such as the D8024 or D10024/D10024A. Refer to the appropriate sections of this document and the *D9068 Quick Start* (P/N: 48575).

F.2.1 D9068 to FACP Connections



For UL installations, install the D9068 in the same room as the analog FACP. Ensure the D9068 is within 20 ft (6.1 m) of the analog FACP. Enclose all wiring between the D9068 and the analog FACP in conduit.

Power Connections

If the total current draw of all devices connected to the FACP's auxiliary power does not exceed the maximum rating of the control panel, connect the D9068 to the 24 V auxiliary power provided by an analog FACP.

Refer to *Figure 28* on page 54 for wiring the D9068's power to the 24 V auxiliary power from the D8024 and the D10024/D10024A.



Before making or breaking any connections, disconnect all AC power and standby battery power from the system.

To connect the D9068 to the D8024 or the D10024/D10024A:

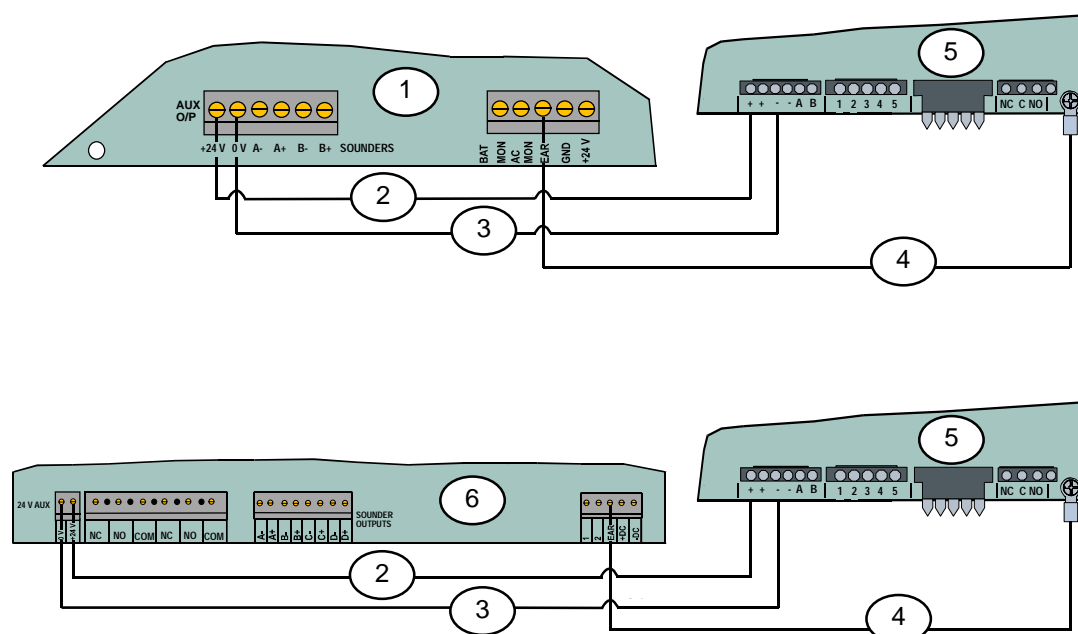
1. Connect the D9068's power (+) terminal to the FACP's +24 V auxiliary power terminal (*Figure 28*).
2. Connect the D9068's power (-) terminal to the FACP's 0 V auxiliary power terminal (*Figure 28*).
3. Connect the D9068's earth ground line (green) to the FACP terminal labeled "EAR."



The D9068 draws a maximum of 192 mA. The analog FACP can provide up to 320 mA. Verify the total draw on the analog FACP's 24 V auxiliary power is less than 320 mA.

D9068 to D9052 Serial Connections

Use the D9068 with the D8024 or D10024/D10024A Analog FACP's to send reports to a central station. A D9052 RS-232 Bus Module between the FACP and the D9068 is required.

Figure 28: D9068 to D8024 or D10024/D10024A Power Connections

- 1 - D8024 FACP
 2 - Power + terminal
 3 - Power - terminal

- 4 - Earth ground line (green)
 5 - D9068 FACP
 6 - D10024A FACP

The FACP must be assigned a network address of 1. Refer to the following information for instructions on setting the FACP's network address.



Install the D9052 in Port C on the D8024. The D8024 cannot support the D9068 and a network connection simultaneously through Port C. Connect the D9052 to Port B on the D10024/D10024A.

Refer to the *D9052 Installation Instructions* (P/N: 34096) for instructions on installing, addressing, and operating the D9052. Refer to *Figure 14* on page 15 for the D9068 to Analog FACP Serial Connections.



The D9052 mounts to the D8024/D10024/D10024A PCB. Refer to the installation instructions accompanying the analog FACP and the D9052 RS-232 Bus Module for details.

FACP Relay Connections to D9068 (Optional)

The D9068's five inputs can be used as backup connections to a FACP. The D8024 and D10024/D10024A each provide two on-board relays. Use the D328A Addressable Analog Relay Modules to add more relay outputs to the FACP.

Install and configure the relays to activate only for the specified FACP events. For FACP relay programming

instructions, refer to the *D8024/D9024/D10024 Programming Guide* (P/N: 38789). For D9068 detailed relay wiring instructions, refer to *Section 2.2.2 Trouble Relay Connections* on page 14. For D328A wiring, addressing, and operating instructions, refer to the *D328A Installation Instructions* (P/N: 37095).

When using the D9068's inputs as backup connections, use the mappings from the FACP event to the D9068 input activation type shown in *Table 15*.

Table 15: D9068 Input to FACP Event Messages

FACP General System Event	D9068 Input Activation Type
Fault Event	Fault on short
AC Fail	AC Fail
Common Fire	Alarm

To access the D9068's input point configuration from the D7033 Keypad, press [0] and [3]. Then press the corresponding number key followed by [#] and [1] to select the point number.



The D9068's inputs can only detect alarm (shorted) conditions when the RS-232 link is broken. When the RS-232 link to the FACP is active, the inputs are not monitored.

F.3 Programming

This section provides the necessary programming steps required to set up the D8024 or the D10024/D10024A for use with the D9068.

F.3.1 FACP Programming

The D9068 must be connected to an analog FACP with a network address of 1. Communication with the D9068 is not possible if the FACP's network address is set to any other number. The D9068 uses a network address of 0.

To set the network address on the D8024 or the D10024/D10024A:

1. Press [➤] to access the Main Menu.
2. Press [1] to select **Commission**.
3. When the display shows **Please key in your passcode**, enter the Control Level 3 passcode. The Commission Menu 1 appears.
4. Press [YES] twice to access Commission Menu 3.
5. Press [3] to enter the Network options.
6. If the display prompts **Memory Locked!**, unlock the memory by moving the Memory Lock switch into the OPEN position. Refer to the *D8024/D9024/D10024 Programming Guide* (P/N: 38789) for the Memory Lock switch locations.



The memory must be locked at the end of the programming session. The FACP does not exit the Commissioning Mode unless the memory is locked.

7. Press [3] to access Network Menu 1.
8. When the message **Panel Network - address number?** appears, press [1] to enter a network address of one.
9. When you complete the control panel programming, press [NO] twice to return the FACP to the Normal Operating Mode. Then press [3] to select the Normal Operation from Commission Menu 1.
10. Move the Memory Lock switch to CLOSED.

F.3.2 D9068 Programming

To operate with a Bosch Analog FACP, program the D9068 account numbers and the D9068 phone numbers as described in *Section 5.4.5 PROG ACC'NTS* on page 35. Also, enable the serial connection as described in *Section 5.4.8 SERIAL CONECTN* on page 41.

F.4 Reporting Information

F.4.1 General Report Information

The D9068 can be connected both to stand-alone and networked Bosch Analog FACPs. The FACPs can have multiple loops of detectors. The D9068 does this by encoding the control panel, loop, and detector addresses as described in the following sections.

Refer to *Appendix C* on page 46 for details on the message report formats.

Restorals

The D8024 and D10024/D10024A do not provide individual event restoral information. The D9068 does not send individual restoral messages for events. Instead, when the D9068 determines there are no active events on the control panel (or networked panel), it sends a **System Reset/Reboot** message. This message also reports when terminating a Walk Test or Fire Walk Test.

Point Events

For point events such as Fire Alarm and Point Trouble, the control panel address reports as the area parameter.

The point and loop address are encoded using the following formula and sent as the point address.

$\text{reported_point_address} = (\text{loop_number} - 1) * 200 + \text{point_on_loop}$

If Point 20 on Loop 3 goes into alarm, it is reported as 420. If Point 122 on Loop 1 goes into alarm, it is reported as Point 122. Refer to *Table 16* for clarification.

Table 16: Point Event Coding

Reported Point Address	Loop and Points
1 to 126	Loop 1, Points 1 to 126
201 to 326	Loop 2, Points 1 to 126
401 to 526	Loop 3, Points 1 to 126
601 to 726	Loop 4, Points 1 to 126
801 to 926	Loop 5, Points 1 to 126

Point Type Mapping Report: The D8024/D10024/D10024A Analog FACP and the D9068 perform point function reporting differently. *Table 17* shows the mappings made for alarm reporting. You can also refer to *Table 11* on page 46.

Table 17: Alarm Report Mapping

Point Type Configured as FACP	D9068 Reported Event
Zone Alarm	Point Fire Alarm
Sprinkler Supervisory	Point Supervisory Alarm
Fault Warning	Trouble Input or FACP Trouble Input Tripped

Point Trouble or Dirty Report: Because there is a limit on the communications between the D9068 and the Analog FACP, point troubles are not reported on a point type basis. If a point is in trouble, a Point Fire Trouble is sent regardless of what type of point it is such as fire, sprinkler supervisory, or fault warning. This also applies for Dirty Reports. All dirty points are reported with a Point Fire Dirty regardless of the configured type of point.

F.4.2 Peripheral Events

If a problem occurs with a peripheral attached to an Analog FACP, the report is sent as an Equipment Fail Report. The address of the control panel is sent as the Condition. The address of the peripheral plus 100 is sent as the Device.

For example, if the remote notification appliance circuit (NAC) at Peripheral Address 10 on Panel 5 has a fault, the message Equipment Fail, Device = 105, Condition = 10 is sent.

F.4.3 Other Non-Point Events

Most non-point events are reported using Equipment Fail Messages. *Table 12* on page 48 shows the condition codes that are reported with the equipment fail messages and causes. The control panel address is reported as the Device Number.



The data format for the Equipment Fail Report is different between the Peripheral Events and Other Non-point Events. This allows the Peripheral Address to send in Contact ID format. The two types of events are distinguishable by the device parameter. If the device parameter is greater than 100, it is a peripheral event. If it is less than 100, it is a Non-point Event.

Refer to *Section F.4.5 Sample Reports* for sample reports.

F.4.4 Event Text

When Event Text reporting is enabled, the alarm text provided by the FACP is sent for some events (refer to *3: PHONE CONTROL* on page 36). For point events, the zone and point text are sent. For non-point disables and unknown events, the event message text is sent. The event message text usually appears on the second line of the control panel display.

F.4.5 Sample Reports

Table 18 on page 57 lists the sample reports and the data sent to the central station. Refer to *Appendix C* on page 46 for information on the Equipment Fail Codes.



Table 18 does not show the event text that can be sent in Modem IIIa² format.

F.4.6 Analog FACP Event Code to D9068 Report Mapping

Table 19 on page 58 lists the event codes generated by a Bosch D8024 and D10024/D10024A Analog FACP and the respective D9068 Dialer Report Code.

F.4.7 Reported Event to FACP Cause Mapping

Table 20 on page 59 lists the events generated by a D8024 and D10024/D10024A Analog FACP and their causes.

Table 18: Sample Reports

	SIA		Contact ID		
Report Description	Code	Description	Code	Description	Modem Ila ² Printer Text
Point Fire Alarm Point 21, Loop 3, Panel 5	FA421	Fire alarm	1 110 05 421	Fire alarm	Fire Alarm Area=5 Point=421
Fire Point Trouble Point 10, Loop 1, Panel 2	FT10	Fire trouble	1 373 02 010	Fire trouble	Fire Trouble Area=2 Point=010
Low Battery on Panel 1	YT	System battery trouble	1 302 00 000	Low system battery	Battery Low
All Events Cleared	RR		1 305 00 000		Re-boot
Peripheral 10 failed on Panel 3	ET110	Equipment failure condition	1 333 03 110	System trouble	Equip Fail SDI=110 Cond=003
FACP Ground Fault, Panel 2 (Equipment Fail #17)	ET17	Equipment failure condition	1 333 17 002	System trouble	Equip Fail SDI=002 Cond=017
General Disable (any device on Panel 4 disabled - Equipment Fail #32)	ET32	Equipment failure condition	1 333 32 004	System trouble	Equip Fail SDI=004 Cond=032
General Disable Restoral (Panel 4 no longer shows disables - Equipment Restoral #32)	ER32	Restoral	3 333 32 004	System trouble	Equip Restoral SDI=004 Cond=032
Fire Drill Start Panel 2	FI	Fire Test begins	1 607 00 002	Walk Test Mode	Fire Walk Start ID=002
Fire Drill End Panel 2*	FK	Fire Test ends	3 607 00 002	Walk Test Mode restore	Fire Walk End ID=002
Silence from Panel 1	KB1	Heat or bypass	1 400 00 000	Open or close	Alarm Silence ID=001 Relay=001

* Report is not supported at this time.

Table 19: Analog FACP Event Codes

Analog FACP Event Code	Dialer Report Code	Comments
Low signal output from detector	Equipment Fail – 18	Loop wire fault.
High signal from detector	Point Trouble*	Sensor is out of calibration.
Pre-alarm signal	N/A	Pre-alarm.
Fire alarm signal	Point Alarm*	Alarm.
CPU reset****	Equipment Fail – 15	CPU reset.
Commissioning Mode entered****	Equipment Fail - 13	System left in the Programming Mode.
Panel reset	Reset Reboot	Panel reset.
Evacuation from panel keypad	Fire Drill	Fire drill.
Silence alarms****	Silence	Interpolated by panel status.
Unconfirmed interrupt from call point	Equipment Fail - 16	Sensor failed.
Confirmed interrupt from call point	Point Alarm*	Sensor failed.
Detector contaminated	Point Dirty*	Detector is dirty.
No reply from detector	Point Trouble*	Detector is not responding.
Digital input signal set from input unit	Panel Event***	Peripheral fault.
Detector failed Loop Overcurrent Test	Point Trouble*	Loop is drawing too much current.
External link master failed to poll.	Equipment Fail - 29	Network panel failure.
Detector data corrupted	Point Trouble*	Data error.
Keypad enabled	N/A	Keypad is enabled.
Problem with loop wiring	Equipment Fail - 18	Problem with the loop wiring.
Problem with sounder circuit	Equipment Fail**	Problem with the sounder circuit.
Problem with power supply	Equipment Fail**	Problem with the power supply.
Problem with internal memory	Equipment Fail - 14	Problem with the internal memory.
Earth fault on external wiring	Equipment Fail - 17	Earth fault on the external wiring.
Zone is totally disabled	Equipment Fail - 30	Zone is totally disabled.
No reply from slave panel data link	Network Fail	No reply from the slave panel.
Corrupt reply from slave panel data link	Network Fail	Data error from the slave panel.
Panel left in Commissioning Mode	N/A	Program switch.
Walk Test commenced****	System Test	Walk Test or Output Test set from the panel status.
Zone partially disabled	Equipment Fail - 30	Zone is partially disabled.

* The exact message is determined by the point function, such as fire and water flow.

** The exact message depends on the device type and condition, such as NAC A short and battery fault.

*** The exact message is determined by the priority reported.

**** Code is not supported at this time.

Table 20: Analog Reports and Causes

Analog FACP Event	Comments	Cause
Point Fire Alarm	Control panel generated.	Point zone alarm.
Point Supervisory Alarm	Control panel generated.	Sprinkler supervisory input.
Point Monitor Alarm	Control panel generated.	Alarm from the point is programmed as type = monitor.
Point Fire Trouble	Control panel generated.	Any point trouble.
Point Fire Dirty Report	Control panel generated.	Any point is dirty.
Point Fire Disable	Control panel generated.	Any point disabled.
System Test	Control panel generated.	Walk Test or Output Test entered.
System Test Restore	Control panel generated.	Walk Test or Output Test exited.
Silence	Control panel generated.	Only Silence reported; resound not reported.
Fire Drill	Control panel generated.	Fire drill initiated (local and remote).
Open Reset	Dialer generated.	Control panel reset.
Low Battery	Control panel generated.	Low battery is detected.
AC Fail	Control panel generated.	AC Fail (after the control panel and dialer time-outs).
Auto Test	Dialer generated.	Auto Test in progress.
Off Normal at Test	Dialer generated.	Control panel trouble occurred when the Test Report sent.
Phone 1 Trouble	Dialer generated.	Trouble on Phone Line 1.
Phone 1 Restore	Dialer generated.	Line restored.
Phone 2 Trouble	Dialer generated.	Trouble on Phone Line 2.
Phone 2 Restore	Dialer generated.	Line is restored.
Manual Comm Test	Dialer generated.	Communications Test in progress.
Data Lost	Dialer generated.	Communication error.
EEPROM Failure	Dialer generated.	EEPROM failure.
System Reboot Reset	Control panel generated.	All trouble and alarms are cleared. Refer to Note 1.
Trouble Input		Trouble.
Trouble Input Restore		Trouble is stored.
Equipment Fail	Control panel generated.	Refer to Note 2.
Equipment Restore	Control panel generated.	Refer to Note 2.
Network Failure	Control panel generated.	Network failure is detected.
Remote Programming Failed*	Future	Problem with programming.
Remote Programming Successful*	Future	Remote programming is successful.
Control Panel Communication Failure	Dialer generated.	Control panel lost communication.
Control Panel Communication Restore	Dialer generated.	Refer to Note 3.
System Trouble - Keypad Installed	Dialer generated.	No keypad activity for 3 min.
<p>Note 1: This message is sent when the D9068 receives an all clear message from the control panel after the control panel resets.</p> <p>Note 2: This message is used for several trouble type events. To identify the specific type of trouble, the condition parameter uses, (refer to Table 12 on page 48) and look for the Equipment Fail (Restore) Reports. Not all events have an equivalent Equipment Restore message.</p> <p>Note 3: This message is sent if control panel communications are restored. If there were any off-normal control panel conditions prior to losing communications, and the control panel is normal, a System Reboot Reset is also sent when communications are restored.</p>		

Table 20: Continued

Analog FACP Event	Comments	Cause
System Trouble - Restoral Keypad Installed	Dialer generated.	Keypad trouble restored.
System Trouble – Communications Fault	Dialer generated.	Communication error.
System Trouble Restoral - Communications Fault	Dialer generated.	Communication is restored.
System Trouble - Programming Error	Dialer generated.	Programming error.
System Trouble Restoral - Programming Invalid Events	Dialer generated. 32 to 39, 94 to 255	Programming error is restored. Not valid.

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Bosch
130 Perinton Parkway
Fairport, NY 14450-9199 USA
www.boschsecurity.us
Customer Service: (800) 289-0096
Technical Support: (888) 886-6189

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