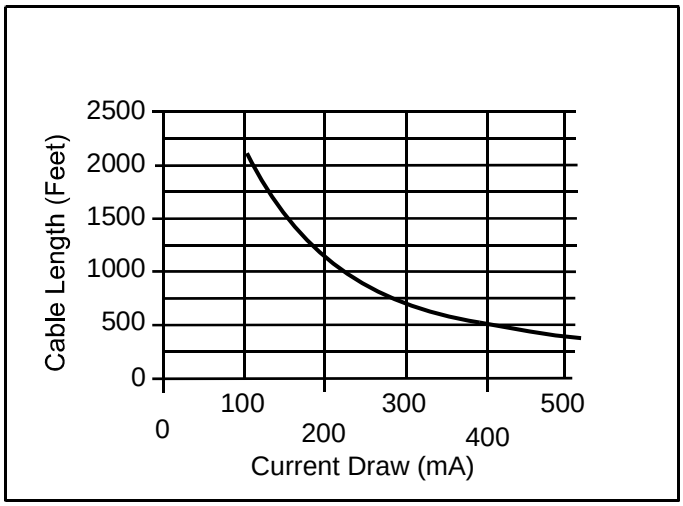
Figure 7: Option Bus Cable Length vs Current Draw



3.0 System Operation

3.1 Modes of Operation

There are four modes of system operation for the FPD-7024: Alarm, Supervisory, Trouble, and Normal.

3.1.1 Alarm

When an alarm occurs, the top line of the display shows ALARM (XXX), where XXX indicates the number of alarms. This display overrides any other system display. The second line of the display gives more instructions. When the group is entered by pushing the [6/▶] key, more details of the event appear. The top line shows the number of alarms and the point that is in alarm. The bottom line alternates between the instructions and the programmed description for the affected point. The built-in sounder turns on with a steady tone, and outputs programmed to activate with the existing alarm condition(s) activate.

When the control panel is not scanning the inputs, as during smoke power reset, alarm verification delay, or on-site programming, the trouble LED flashes to indicate this condition.

3.1.2 Supervisory

When a Supervisory condition occurs, Supervisory (XXX), XXX indicates the number of supervisory conditions. The second line of the display gives more instructions. When the group is entered by pushing the [6/▶] key, more details of the event appear. The bottom line alternates between the instructions and the programmed description for the affected point. The built-in sounder beeps. Outputs programmed to activate with the existing condition(s) then activate.

3.1.3 Trouble

When a trouble condition occurs (such as cut wiring for a point or AC power fails), the sounder beeps every 10 seconds. The Trouble LED lights and the LCD shows TROUBLE (XXX). When the [6/▶] key is pressed the group is entered and more detail appears. The system can diagnose and show a variety of trouble conditions, including those affecting the input points, NAC circuits, power, battery, system grounding, and internal operations of the fire control panel. Notify your installing company immediately if the system trouble message appears.

Press the [Silence] key to silence the system trouble beep.

3.1.4 Acknowledge

When the control panel is off-normal, the control panel's piezo (buzzer) can be silenced without silencing the NACs or resetting the control panel. Press the [ACK] button on the local or remote keypad to silence only the piezo.

3.1.5 Fire Silence/Reset

During a fire alarm, exit from the premises immediately. Do not enter the premises unless accompanied by the appropriate emergency services' personnel, or until they have given the OK to enter.

When it is determined that there is no fire, you can silence the horns or bells to allow more investigation of the devices that initiated the alarm, or you can reset the system to return it to normal operation.

Before using the [Reset] key, determine which smoke detector sounded the alarm so that the monitoring company can check that the system is operating correctly. If the control panel is being used as an addressable control panel, use the [History] key to determine which address is in alarm.

If the system is configured to allow alarm silencing, the [Silence] key turns off the horns or bells, but does not reset the alarm status and does not return the activated input to normal service. Detectors that were activated stay in alarm and can be checked (usually by observing an LED on the device) to see which detector caused the alarm. When the detectors causing the alarm are identified, reset the system to return it to normal service.

The [Reset] key clears the system alarm status, and briefly turns off power to the detectors to reset them. This command is required after any fire alarm affecting a point programmed for latching operation (which is the normal configuration). This operation is also required to reset a Class A, Style 6 multiplex (SLC) wiring fault troubles.

The software uses a system supervisor function that automatically supervises the system software for proper operation. If the system fails, a CPU FAULT message appears, and the nature of the failure can be optionally recorded in the history buffer. To enable history buffer recording for CPU faults, program Output Zone D of onboard Relay 2 to Zone 51 (unused). The history buffer message, if enabled, shows CPUFLTxxx, where xxx is an error code. If the display shows CPU FAULT, contact Bosch Security Systems, Inc. Technical Support and report the history buffer code along with a description of the operations that caused the fault. Unusual conditions during programming and debugging operations can result in a CPUFLT message in the history buffer. If, this occurs when the control panel is in service, report it to Technical Service.

3.1.6 Off-Normal Displays

Control panel alarms and problems are indicated by one of the messages shown in *Table 11* on the top line of the display. Contact your installing company if problems persist.

Table 11: Off-Normal Displays

Off-Normal Display	Description
FIRE ALARM (XXX)	One or more fire or waterflow points are in alarm.
SUPERVISORY (XXX)	One or more supervisory conditions exist.
TROUBLE (XXX)	A trouble condition exists (AC power failure, phone line trouble, and so on.).

3.1.7 Normal

When the system operates normally, it shows SYSTEM NORMAL on the top line of the display, the Power LED lights steadily, and no other LEDs are lit. The bottom line indicates the existing date MM/DD/YY and time HH:MM. If the system is programmed to require a PIN, the second line of the LCD screen shows ENTER PIN.

3.2 Basic System Use

3.2.1 Function Keys

A keypad that does not require a PIN number shows (under normal conditions) SYSTEM NORMAL on the top line, and existing date and time on the bottom line. On a keypad that does require a PIN number, enter the PIN number first. This enables the function keys.

3.2.2 Selecting Menu Items

Depending on which level in the system, (menu, sub-menu, sub-sub-menu), you can select an item three different ways:

1. In the main menu, TEST, HISTORY, DISABLE, and DRILL each have an exclusive key on the keypad. To select one of these menu items,

press the corresponding key. For example, to select TEST, press the [TEST] button.

2. The [PROG] and [ENTER] keys are not exclusive, but shared with other characters. The character sharing the corresponding key appears in the second line following a forward slash (\). To select one of these items, press the corresponding key. For example, the [PROG] key is also 0.
3. The key corresponding to a sub-menu item might appear in the second line preceding a dash. Press the corresponding key to select that item. For example, press [1] to select PROG TIMES.

While a menu is active, you do not need to wait for the desired menu item to appear before making your selection. You can select any item on the existing menu rotation at any time.

3.2.3 After a Main Menu Item is Selected

When a main menu item is selected, the keypad might prompt you to enter your PIN. If so, enter the number (factory default is 9876) and press the [#/Enter] key (or press the key labeled with the desired command directly). The display automatically retrieves the sub-menu display.

3.2.4 Returning to an Earlier Screen

To return to a previous screen at any time, press the [*/Back] key. To return to the SYSTEM NORMAL display, press the [*/Back] repeatedly until you reach SYSTEM NORMAL. When you reach SYSTEM NORMAL, you cannot go any farther.

3.2.5 Entering Data

When a sub-menu item asks you to enter data, enter the data and press the [#/Enter] key. If data already exists at a particular location, you can either accept that data or enter new data.

When you press the [#/Enter] key to enter the data, the display returns you to the previous sub-menu display.

3.2.6 Drill

The drill command activates all NACs and no relays. It creates a history log entry and as an option can be reported to the central station.

3.2.7 Disable

Use the disable command to disable input points, outputs, or the dialer. When any device is disabled, the system shows this condition on the LCD and on the system trouble LED. The Disable All Inputs operation takes several seconds to perform, during which time the system display remains fixed.

3.2.8 History

If a system without a D7039 Multiplex Expansion Module loses all power (AC and standby battery), all history events are cleared.

The HISTORY option is a chronological list of system events that occurred. Press the [History] key to HISTORY select from the Main Menu (SYSTEM NORMAL display).

On an FPD-7024 FACP with a D7039 Multiplex Expansion Module, up to 499 History events are supported.

On an FPD-7024 FACP without a D7039 Multiplex Expansion Module, up to 99 History events are supported.

After you press the [History] key, the most recent system event appears on the top line of the LCD with the time and date below it.

Example: (Assume you pressed the [History] key at the Main Menu):

While the first event shows, the bottom line toggles every four seconds between the time and date that the event occurred.

To return to a previous screen in the history buffer, press [2/▲].To scroll to the next event record, press [8/▼]. The abbreviations shown in *Table 12* on page 8 are used in history events.

Table 12: History Event Abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
ALRM	Alarm	OFFNORM	Off Normal at Test
ARST	Alarm Restore	PH1	Phone Line 1
AUTOTST	Auto Test	PH2	Phone Line 2
BATT:LOW	Battery Low	RSTR	Restore
BAT:RSTR	Battery Restore	S	Supervisory
CPUFLT	Internal Error	SMK:FLT	Smoke Power Fault
DBL	Disable	SYSRESET	System Reset
DRILL:BEG	Drill Begin	SYSRST	System Restore
DRILL:OVR	Drill Over	SYSTRB	System Trouble
DRST	Dirty Restore	SYS:WDOG	Automatic CPU Reset (Watchdog)
DRTY	Dirty	TRBL	Trouble
DSBL	Disable	TRST	Trouble Restore
EE2	EEPROM	TST:BEG	Test Begin
ENBL	Enable	TST:OVR	Test Over
F	Fire	W	Waterflow
MANULTST	Manual Test		

Refer to *Appendix C* on page 86 for additional history log ID information.