CONCORD™ Express

STUDENT TRAINING GUIDE

Concord Express

May 2000

Security
Automation
Fire Protection
Access Control

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System Operation

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Module 1-Planning the Installation

Introduction

This module teaches the installer how to plan the installation of the Concord system.

What's in This Module

Major Features

This section outlines the major features of the Concord Express Security System. You need to understand the system before planning the installation.

Standard Features

- 24 total zones, 14 zones standard—6 onboard hardwire zone inputs and 8 wireless zones
- 2- and 4-wire smoke detector compatibility
- 2 onboard programmable outputs
- Compatibility with ELM (Encrypted Learn Mode) Keychain Touchpads
- 16.5 VAC, 25 VA transformer that provides 750 mA for devices (hardwire motions, smokes, touchpads, etc.) and 1.25 amps for sirens
- 16 user-programmable access codes
- Maximum of 4 bus devices
- Latchkey numeric paging
- 50-event history buffer
- Momentary keyswitch arming using any hardwire or wireless zone
- Programmable from on-site alphanumeric touchpads or off-site using ITI ToolBox downloader software (version 4.2 and later)
- Compatible with all ITI crystal or SAW Learn Mode sensors

Expandable Options

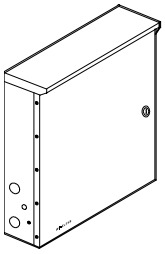
- Expandable by adding 8Z Hardwire Input SnapCard, 4Z/2 Output SnapCard, 4 Output SnapCard

Touchpad Options

- Compatible with the following touchpads:
  - SuperBus 2000 Fixed English Display Touchpad (for system operation and user programming only)
  - SuperBus 2000 2x16 LCD Alphanumeric Touchpad
  - SuperBus 2000 2x20 LCD Alphanumeric Touchpad
  - SuperBus 2000 2x20 VFD Alphanumeric Touchpad

System Components

This task familiarizes you with the basic components of the Concord Express system.

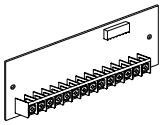


- Concord Express Control Panel

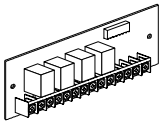
- Hardwire Touchpads (Maximum of 4)
  - Fixed English Touchpad
  - 2x16 LCD Touchpad
  - 2x20 LCD Touchpad
  - 2x20 VFD Touchpad

- Wireless Touchpads
  - Hi-Tech Handheld Touchpad
  - 2- and 4-button keychain touchpads

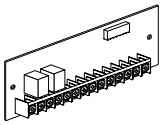
Optional Snap Cards



- 8Z Input Card
  - Adds 6 hardwire zones and two 2-wire smoke loops



- 4Z Output Card
  - Adds 4 form C relay outputs



- I/O Combo Card
  - Adds one 2-wire smoke loop
  - Three hardwire zones
  - Two hardwire outputs

Student Notes

Planning Wires and Current Draw

This task helps you determine what wire you need and minimum current draw for each device.

TABLE 1-1. Wire Length and Maximum Current Draw for Devices.

Device	Maximum Wire Length to Panel	Maximum mA Draw
SuperBus 2000 Fixed EnglishTouchpad	22 ga.—300 ft. 18 ga.—750 ft.	90 mA
SuperBus 2000 2x16 LCD Alphanumeric Touchpad	22 ga.—300 ft. 18 ga.—750 ft.	90 mA
SuperBus 2000 2x20 LCD Alphanumeric Touchpad	22 ga.—250 ft. 18 ga.—600 ft.	120 mA
SuperBus 2000 2x20 VFD Alphanumeric Touchpad	22 ga.—250 ft. 18 ga.—600 ft.	120 mA
4 Input/2 Output SnapCard	N/A	185 mA
8Z Hardwire Zone Expander SnapCard	N/A	230 mA
4 Output SnapCard	N/A	130 mA

Refer to Table 1-2 for the minimum current draw of each device when the panel is operating only from the backup battery. For 24-hour backup, the total current draw of all connected devices is limited to 100 mA continuous using a 4.0 AH battery, or 200 mA continuous using a 7.0 AH battery.

TABLE 1-2. Current Draw Minimums for Devices.

Device	Minimum mA Draw
SuperBus 2000 LCD Fixed English Touchpad	25mA
SuperBus 2000 2x16 LCD Alphanumeric Touchpad	15 mA
SuperBus 2000 2x20 LCD Alphanumeric Touchpad	20 mA
SuperBus 2000 2x20 VFD Alphanumeric Touchpad	20 mA
4 Input/2 Output SnapCard	20 mA
8Z Hardwire Zone Expander SnapCard	38 mA
4 Output SnapCard	1 mA

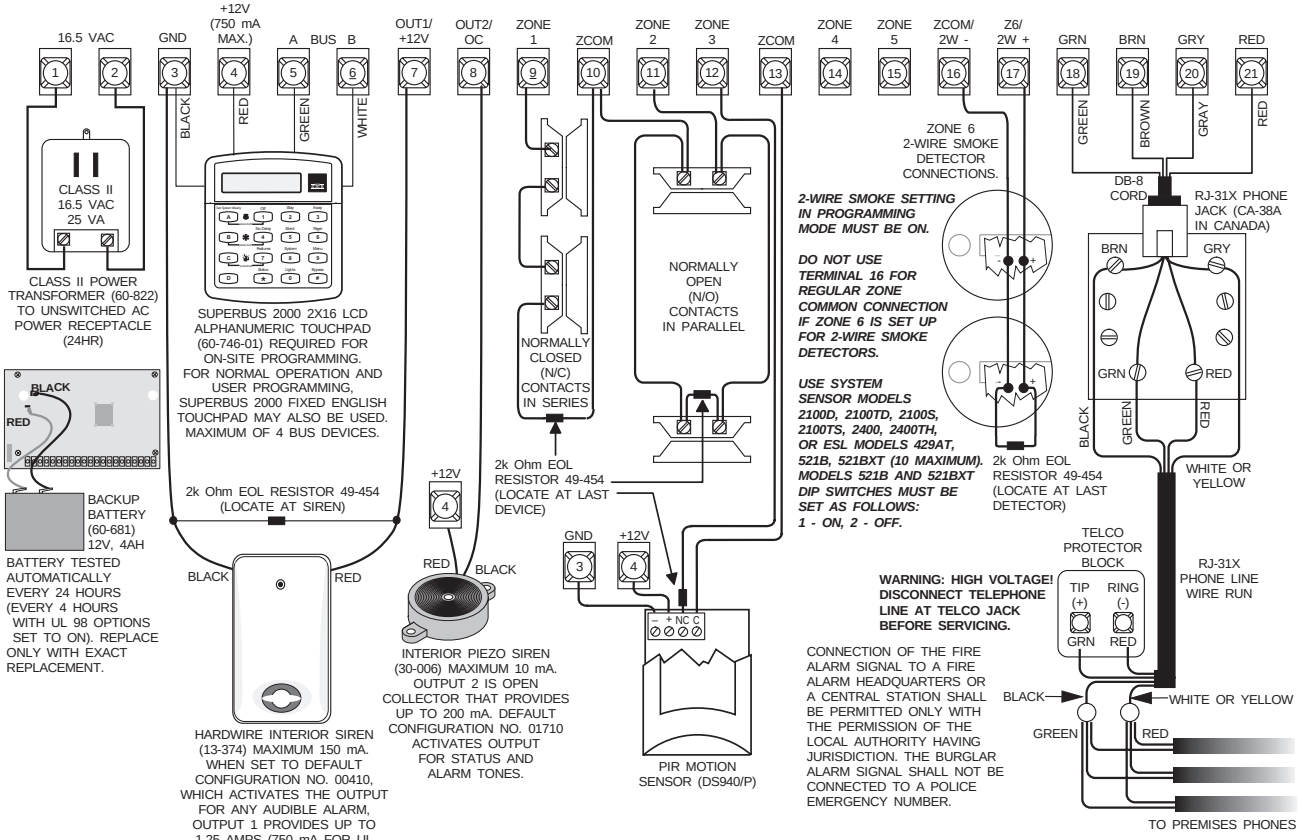
TABLE 1-3. Wiring Requirements for Devices.

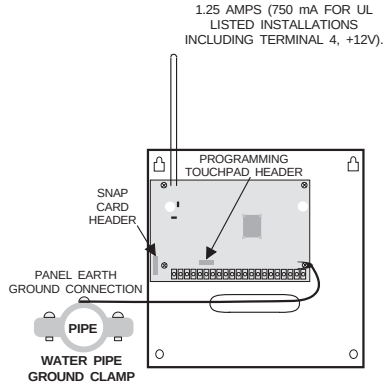
Device	Wire Requirements
AC Power Transformer	2-conductor, 18-gauge, 25 feet maximum
Earth Ground	Single conductor, 16-gauge solid, 25 feet maximum
Telephone (RJ-31X)	4-conductor
Detection Devices	2- or 4-conductor, 18- to 22-gauge, 50 ohms maximum loop resistance including device
Sirens	2-conductor, 18- 22-gauge
Bus Devices	4-conductor, 18- 22-gauge

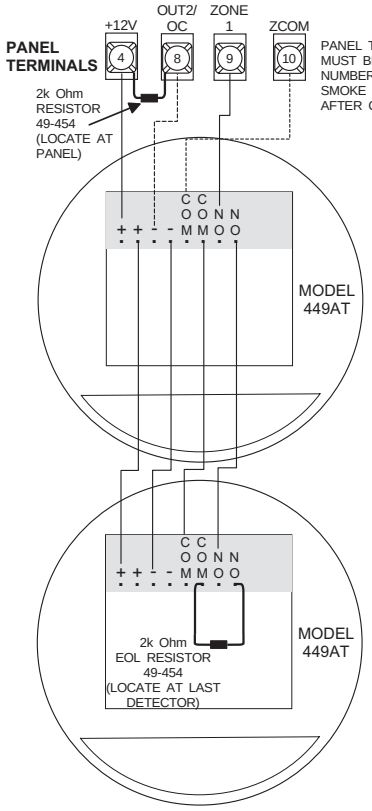
CONCORD EXPRESS SYSTEM WIRING DIAGRAM (60-806)

8642G26A.DSF

ALL PANEL TERMINAL CONNECTIONS ARE CLASS II POWER LIMITED







Install up to ten 2-wire smokes per loop.

System Planning Worksheets

Fill in customer information about this installation:

Customer _____

*Address*_____

*City*_____*State/Zip* _____

*Country*_____*Phone*_____

TABLE 1-4. Hardwire Devices.

Part No.	Description	Qty.	mA	Sub
Hardwire Sensors/Detectors				
N/A	Sentrol series 2100D, 2100TD, 2100S, 2100TS, 2400, 2400TH, or ESL series 429AT, 521B, 521BXT		10 mA	
LP-60	PIR Motion Detector		10 mA	
Hardwire Sirens				
30-006	Interior Piezo Siren		10 mA	
13-374	Hardwire Interior Siren		150 mA	
13-046	Hardwire Exterior Siren		145 mA	
SuperBus Devices (4 Maximum)				
60-746-01	2x16 LCD Alphanumeric Touchpad		90 mA	
60-820	Fixed Display Touchpad		90 mA	
60-803-04	2x20 LCD Alphanumeric Touchpad		120 mA	
60-804-04	2x20 VFD Alphanumeric Touchpad		120 mA	
SnapCards 1 per panel				
60-757	8Z Hardwire Zone Expander SnapCard		230 mA	
60-758	4 Output SnapCard		130 mA	
60-756	4 Input/2 Output SnapCard		185 mA	
Total Power				

TABLE 1-5. Sensor Groups and Locations.

No.	Group	Type and Location
01		
02		
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Module 2-Installation

Introduction

This module teaches you how to install the Concord Express system.

What's in This Module

Installing the Panel (60-806-95R)

This task illustrates finding the best location and mounting the panel.

CAUTION

Do not apply power to the panel until all module/card installation and panel wiring is completed. Determine the panel location.

- Use a central location.
- Avoid excessive metal if the built-in receiver is used (HVAC ducts, foil wallpaper, gas/water pipes, and electrical wiring)
- Mount the panel at a comfortable working height (about 45 to 55 inches from the floor).
- Allow a minimum of 10 inches above the panel for the antenna.
- Allow space to the right or left of the panel for phone jack wiring.
- Allow at least 24 inches in front of the panel for access.

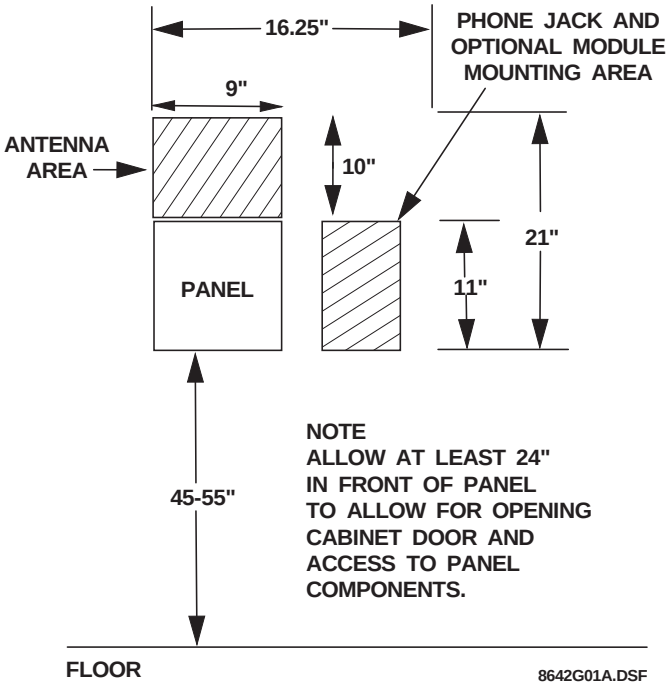


FIGURE 2-1. Determining the Panel Location.

Running Wires to the Panel Location

After determining the panel location, run all the necessary wires to the location using the Table 2-1 below.

CAUTION

Make sure you are free of static electricity whenever you work on the panel with the cover open. To discharge any static, first touch the metal panel chassis, then stay in contact with the chassis when touching the circuit board. Using an approved grounding strap is recommended.

TABLE 2-1. Control Panel Wiring Requirements.

Device	Wire Requirements
AC Power Transformer	2-conductor, 18-gauge, 25 feet maximum
Earth Ground	Single conductor, 16-gauge solid, 25 feet maximum
Telephone (RJ-31X)	4-conductor
Detection Devices	2- or 4-conductor, 18- to 22-gauge, 50 ohms maximum loop resistance including device
Sirens	2-conductor, 18- 22-gauge
Bus Devices	4-conductor, 18- 22-gauge

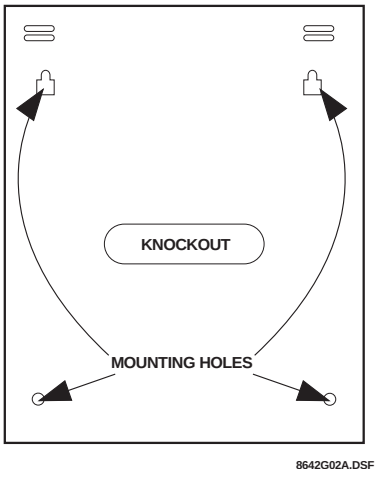


FIGURE 2-2. Mounting the Panel.

NOTE

Remember to leave room for the antenna, which extend 10 inches above the top of the enclosure.

1. Open the panel cover.
2. Remove the necessary wiring knockouts. Be careful not to damage the circuit board.
3. Feed all wires through the wiring knockouts.
4. Place the panel in position against the wall (or studs).
5. Level the enclosure and mark the locations of the two mounting holes and two keyhole mounting holes.
6. Use the right anchors and screws. Partially insert screws into the two anchors at the top keyhole locations, and then hang the panel chassis on the two screws.
7. Level the enclosure. Insert the two lower screws, and then tighten all four mounting screws.
8. Install the antenna housing (included with panel) by pushing it down into the top left hole of the cabinet until it snaps into place.

Identifying the Main Components

This task illustrates the location of the panel's main components.

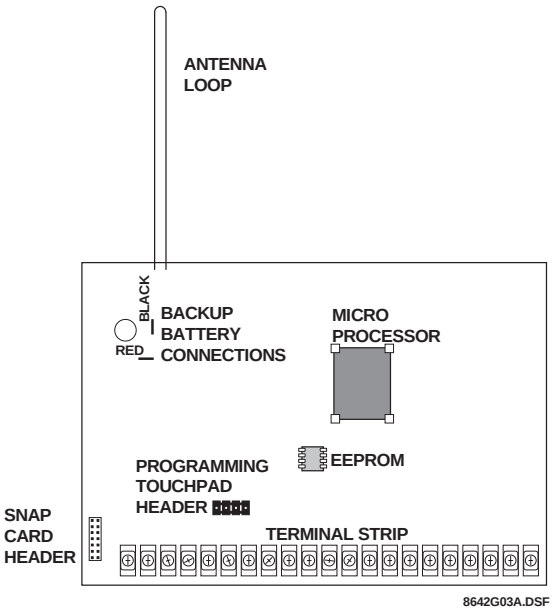


FIGURE 2-3. Concord Express Panel Main Components.

Connecting the Panel to Earth Ground

This task illustrates connecting the panel to earth ground to protect from lightning strikes and transients.

CAUTION

Do not apply power to the panel until all module/card installation and panel wiring is completed.

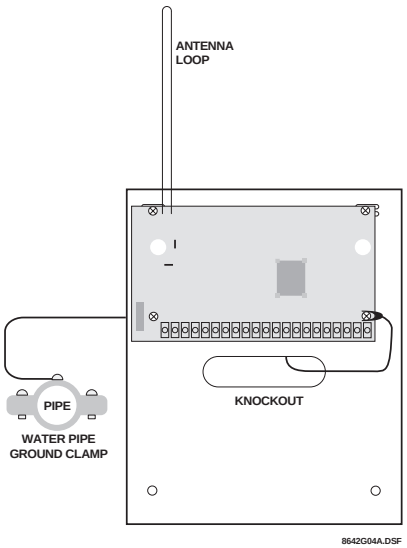


FIGURE 2-4. Grounding the Panel.

1. Using a spade lug, connect a 16-gauge, solid copper wire to the lower-left circuit board screw.
2. Connect the other end of the wire to an earth ground, for example: an earth grounded cold-water pipe clamp.

Installing SnapCards (60-756, 60-757, 60-758)

This task illustrates installing the Snap Cards.

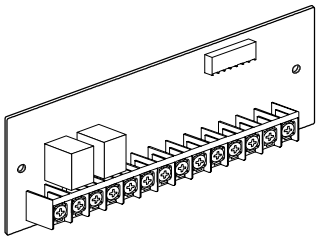
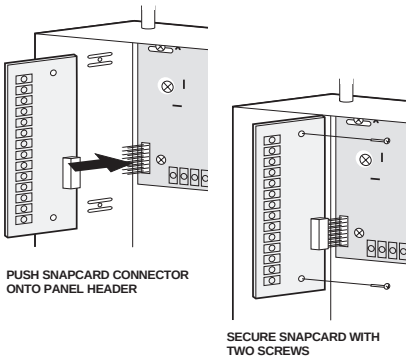


FIGURE 2-5. Installing Snap Cards.

1. Disconnect the panel power and the backup battery.



2. Install the SnapCard onto the panel's SnapCard Header.
3. Secure the card with the two screws provided with the card.
4. Wire the input devices to the card. Refer to Figures 2-5 through 2-7 and Tables 2-2 through 2-3.
5. Use end-of-line (EOL) resistors as shown on any hardwire loops.
6. Reconnect the backup battery and panel AC power.

Combo SnapCard

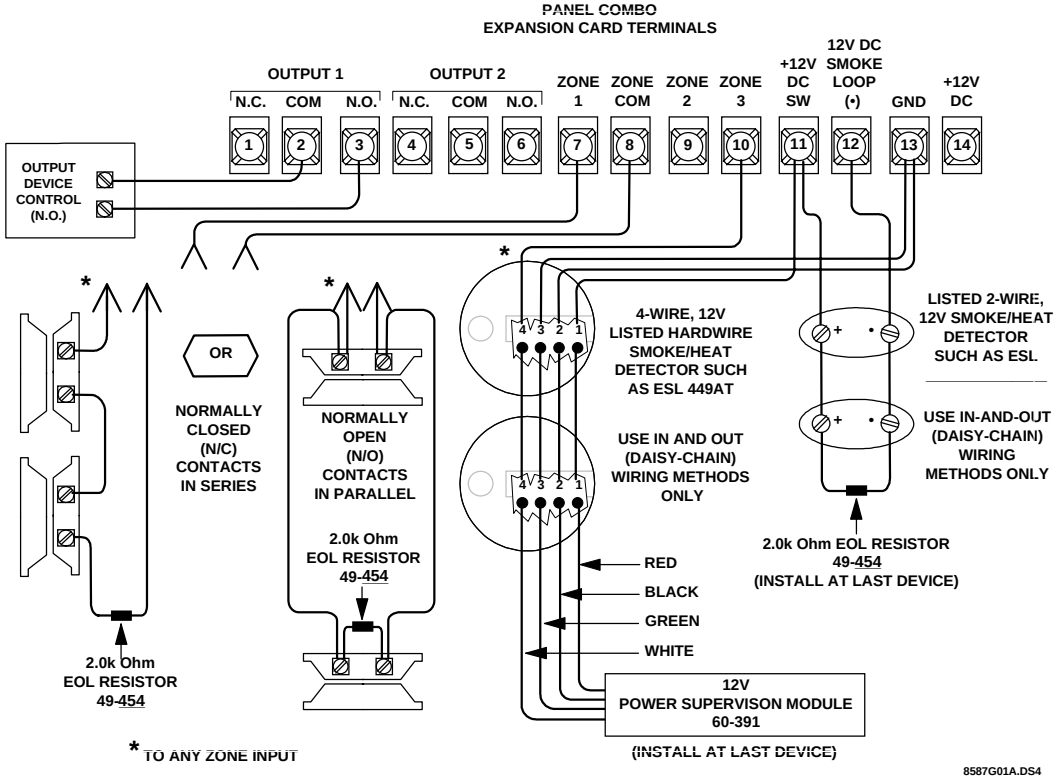


FIGURE 2-6. Combo SnapCard Wiring Diagram.

TABLE 2-2. Wiring Terminal Descriptions - Combo SnapCard.

Terminal Number	Description	Use
1	Relay 1 N/C	Normally closed (N/C) (opens on activation) output 1 dry relay contact connection.
2	Relay 1 COM	Common (C) side of output 1 dry relay N/C and N/O contacts (terminals 1 and 3). 5 AMP at 30 VDC maximum.
3	Relay 1 N/O	Normally open (N/O) (closes on activation) output 1 dry relay contact connection.
4	Relay 2 N/C	Normally closed (N/C) (opens on activation) output 2 dry relay contact connection.
5	Relay2 COM	Common (C) side of output 2 dry relay N/C and N/O contacts (terminals 2 and 6). 5 amp at 30 VDC maximum.
6	Relay 2 N/O	Normally open (N/O) (closes on activation) output 2 dry relay contact connection.
7	ZN1	Hardwire Input zone 1
8	ZCOM	Common for hardwire input zones 1, 2, and 3
9	ZN2	Hardwire Input zone 2
10	ZN3	Hardwire Input zone 3
11	SMK+	Smoke sensor power supply. Switched 12 VDC at 100 mA maximum. Positive (+) side of 2-wire, 12 VDC smoke loop.
12	SMK-	Negative (-) side of 2-wire, 12 VDC smoke loop.
13	GND	Common ground for 4-wire smoke sensors and rate-of-rise heat sensors
14	+12VDC	Auxiliary DC power supply. 12 VDC at 500 mA maximum.

Input SnapCard

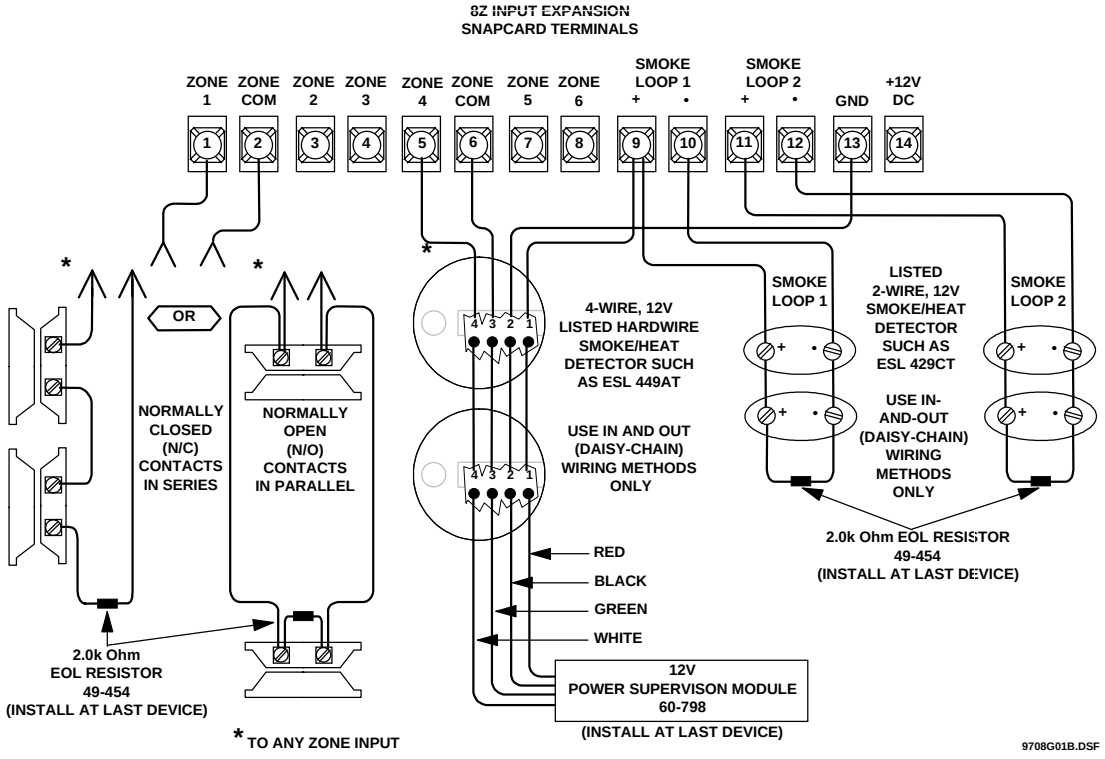


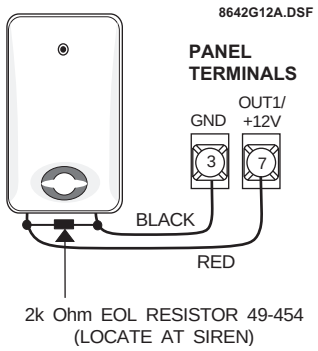
FIGURE 2-7. Input SnapCard Wiring Diagram.

TABLE 2-3. Wiring Terminal Descriptions - Input SnapCard.

Terminal Number	Description	Use
1	Zone 1	Hardwire input zone 1
2	Zone COM	Common for zones 1, 2, and 3
3	Zone 2	Hardwire input zone 2
4	Zone 3	Hardwire input zone 3
5	Zone 4	Hardwire input zone 4
6	Zone COM	Common for zones 4, 5, and 6
7	Zone 5	Hardwire input zone 5
8	Zone 6	Hardwire input zone 6
9	12V Smoke Loop 1 (Pos)	Positive side of 2-wire 12V smoke loop1. Connect up to 20 12V class B smoke detectors between terminals 9 and 10. (Terminal also supplies +12 VDC switched power to 4-wire smoke detectors).
10	12V Smoke Loop (Neg)	Negative side of 2-wire 12V smoke loop1
11	12 Smoke Loop 2 (Pos)	Positive side of 2-wire 12V smoke loop 2. Connect up to 20 12V class B smoke detectors between terminals 11 and 12. (Terminal also supplies +12 VDC switched power to 4-wire smoke detectors).
12	12 Smoke Loop 2 (Neg)	Negative side of 2-wire 12V smoke loop 2
13	GND	Auxiliary power supply ground return
14	+12VDC OUT	Auxiliary regulated DC power supply. 12 VDC at 500 mA maximum.

Connecting Hardwire Interior Siren (13-374)

This task illustrates connecting the Hardwire Interior Siren to the Concord Express panel.

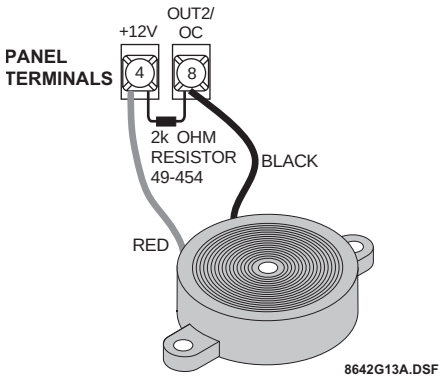


Connect siren to the panel as shown in Figure 2-8.

FIGURE 2-8. Connecting the Siren to the Contol Panel.

Connecting Interior Piezo Sirens (30-006)

This task illustrates connecting the Interior Piezo Siren to the Concord Express panel.

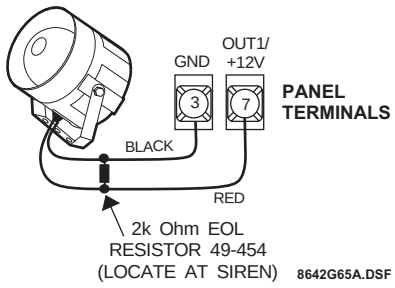


Connect piezo to the panel as shown in Figure 2-9.

FIGURE 2-9. Connecting the Interior Piezo Sirens.

Connecting the Hardwire Exterior Siren (13-046)

This task illustrates wiring the hardwire exterior siren to the Concord Express panel.



Connect siren to the panel as shown in Figure 2-10.

FIGURE 2-10. Wiring the Hardwire Exterior Siren to the Panel.

Connecting Hardwire Touchpads (60-820, 60-746, 60-803, 60-804)

This task illustrates connecting touchpads to the Concord Express panel.

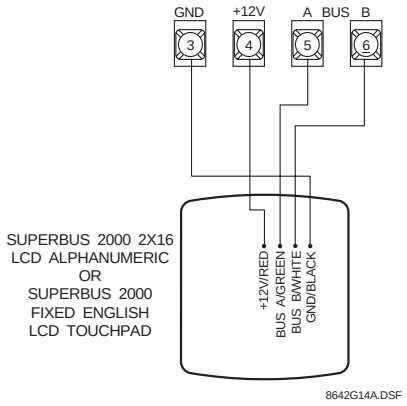


FIGURE 2-11. Wiring the Touchpad to the Panel.

1. Disconnect the panel transformer and backup battery.
2. Run a 4-conductor, 18- to 22-gauge wire from the panel to the touchpad location.
3. Splice the 4-conductor cable wires to the red, black, green, and white wires located on the back of the touchpad.
4. Connect the touchpad wiring to the panel terminals Figure 2-11.
5. On part numbers 60-803 and 60-804 the two yellow wires are for adding an unsupervised hardwire zone.

Connecting Phone Lines to the Panel

This task demonstrates connecting the Concord Express panel to the phone line using DB-8 cord.

A DB-8 cord uses a plug at one end for connecting to the RJ-31X jack and flying leads on the other end for panel terminal connections.

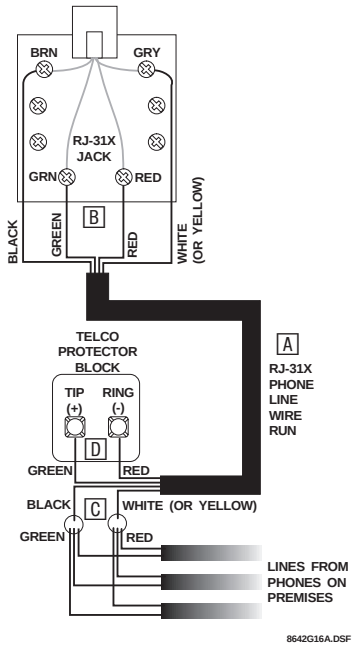


FIGURE 2-12. Wiring the Cord to the Panel and RJ-31X Jack.

1. Connect the green, brown, gray, and red flying leads from the DB-8 cord to panel terminals 18, 19, 20, and 21.
2. Insert the DB-8 cord's plug into the RJ-31X.
3. Check the phones on the premises for dial tone and the ability to dial out and make phone calls. If phones do not work correctly, refer to the troubleshooting section.

Connecting the AC Power Transformer (60-822)

This task illustrates connecting the AC Power Transformer to the Concord Express panel.

CAUTION

Do not plug in the power transformer at this time. The panel must be powered up using the sequence of steps described in the following section, "Powering Up the Panel."

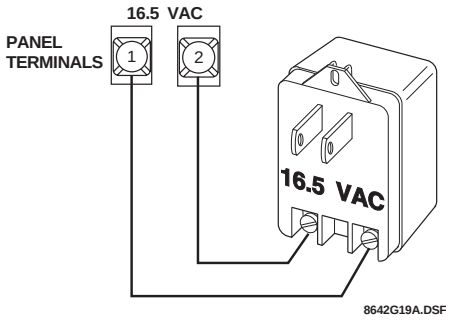


FIGURE 2-13. Connecting the Transformer to the Panel Terminals.

1. The panel must be powered by a plug-in step-down transformer that supplies 16.5 VAC, 25 VA (60-822).
2. Connect the power transformer to the panel as shown in Figure 2-13.

Powering Up the Panel

This task demonstrates powering up the Concord Express panel after the panel has been wired.

You must connect and wire all devices to the panel before applying AC and backup battery power to the panel.

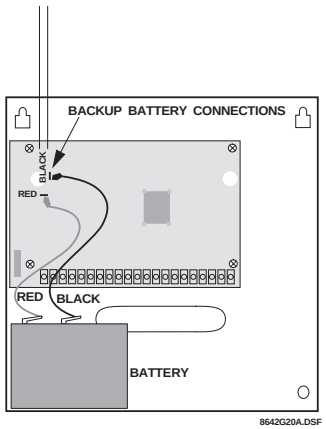


FIGURE 2-14. Connecting the Backup Battery to the Panel.

1. Connect the red (+) and black (-) battery leads (included with panel) to the + and - lugs located in the upper-left area of the panel circuit board (see Figure 2-14).
2. Connect the other ends of the battery leads to the battery terminals.
3. Verify that all wiring is correct and that there are no loose wires.
4. Plug the transformer into an outlet that is not controlled by a switch.
5. Alphanumeric touchpads show a date and time display.

   If the alphanumeric touchpad doesn't display anything, immediately unplug the transformer and disconnect the backup battery. Refer to "Troubleshooting" section.
6. To permanently mount the transformer, unplug it and remove the existing screw securing the AC outlet cover.

WARNING

Use extreme caution when securing the transformer to a metal outlet cover. You could receive a serious shock if a metal outlet cover drops down onto the prongs of the plug while you are securing the transformer and cover to the outlet box.

7. Hold the outlet cover in place and plug the transformer into the lower receptacle.
8. Use the screw supplied with the transformer to secure the transformer to the outlet cover.

Module 3-Peripheral Installation

Introduction

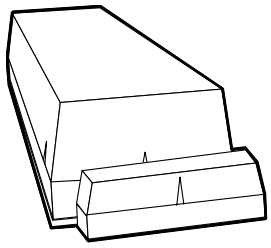
This module teaches the installer how to install peripheral devices for the Concord Express system.

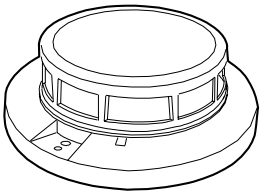
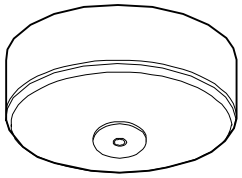
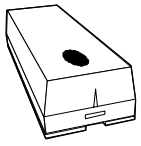
What's in This Module

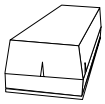
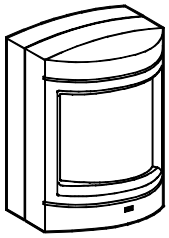
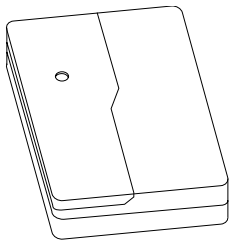
Locating Wireless Sensors

This table provides tips for finding the best locations for wireless sensors.

Sensor	Do	Don't
All Sensors	• Try to keep all sensors within 100 feet of the CPU. The 100 foot distance recommendation is given as a starting guide line. The panel has an open air range of at least 1,000 feet, but the installation environment will influence this range.	• Place sensors or magnets on any metallic surface such as metal doors or foil wallpaper. If you must, then use spacers to keep sensor and magnet away from the metal. • Place sensors in areas with excessive metal or electrical wiring, such as furnace/utility rooms. • Place sensors in areas where they will be exposed to moisture. • Place sensors in locations where the temperature will exceed the sensor's operating limits of 10 to 120 °F.

Sensor	Do	Don't
Door/Window Sensors 60-362, 60-641, 60-688, 60-499 and 60-670 	• Mount the sensor on the door frame (magnet on the door or on double doors, mount sensor on the least used door, magnet on the other door). • Mount the sensors with screws, not double-sided tape.	• Place sensors on a door within 5 inches of the floor to avoid damage to sensors.
Sensor	**Do**	**Don't**
Micro Recessed Mount Door Sensor 60-409	• Install the transmitter in the door frame to decrease the possibility of shock and moisture damage from opening/closing the door. • For doors, drill far enough into the center of the door frame for proper sensor installation.	• Mount transmitter in a metal frame. • Drill through interior walls or exterior siding.

Sensor	Do	Don't
Smoke Sensor 60-645 	• Determine the best locations for each Smoke Sensor to optimize early detection and maintain accessible escape routes out of the building. • Locate a Smoke Sensor at the bottom of the basement stairwell(s). For other stairwells, locate Smoke Sensors at top of the stairwell. • Mount sensors on ceilings whenever possible. Make sure that the Smoke Sensor is no closer than 4 inches to any wall. • Place the Smoke Sensor no more than 6 inches from ceiling for wall mounting. • Locate the Smoke Sensor in any hallway servicing bedrooms. For maximum protection, place a Smoke Sensor inside each bedroom, especially smokers' bedrooms or rooms where electric blankets and electrical devices are used.	• Mount smoke sensors in rooms with sloped, peaked, or gabled ceilings whenever possible. If unavoidable, mount detector(s) within 3 feet (measured horizontally) from the highest point of the ceiling. • Mount smoke sensor in or near damp or very humid areas such as bathrooms with showers. • Install near fluorescent light fixtures. Noise from electrical lights may cause nuisance alarms. • Place sensors in location where the temperature will exceed the Smoke Sensor's operating limits of 40 to 100 °F. • Mount in very dusty or dirty areas. • Mount near fresh air inlets or returns or excessively drafty areas. • Mount in areas where many insects are present.
Sensor	**Do**	**Don't**
Rate of Rise Heat Sensor 60-460 	• Use heat detector to protect property. Also use smoke detectors where life safety is involved. • Mount sensors within 100 feet of CPU. • Mount near the center of the ceiling in a protected area. Do not mount within 4 inches of a wall. • If wall mounting, the top of the detector must be within 4 to 6 inches of the ceiling.	• Mount where ceiling temperatures exceed 100 °F. • Mount a Rate-of-Rise Sensor too close to something that changes temperature rapidly, for example, above an oven or near a heat duct, furnace or boiler.
Sensor	**Do**	**Don't**
Freeze Sensor 60-504 	• Locate the sensor in an area that is likely to get cold first. • Locate the sensor on an interior wall where there is free movement of air.	• Locate the sensor in the same room as a furnace, water heater, or any other heat source that may stay warm after the furnace fails. • Locate the sensor on an outside wall or near the basement floor.

Sensor	Do	Don't
Glass Guard Sensor 60-462 	• Mount sensor on glass at least 1-inch from the frame. • Mount sensor on a fixed pane of glass.	• Use more than four additional devices in series with the sensor.
Sensor	**Do**	**Don't**
PIR Motion 60-511 	• Mount so there is a reference point (such as a wall) at the end of its detection pattern. • Mount so that an intruder will most likely walk across the detection pattern. • Mount 5 to 8 feet above the floor. • Mount on an insulated outside wall facing in. • Mount on a surface that is rigid and free from vibration.	• Mount in direct sunlight. • Aim at air conditioners, heat vents, wood stoves, fireplaces, or any intermittent heat source. • Aim at solar heated walls or uninsulated metal walls. • Aim at moving objects. • Mount in an area where the coverage may be blocked by any temporary items such as boxes or freight.
Sensor	**Do**	**Don't**
Sound Sensor 60-582 	• Mount the sensor on the ceiling or on a wall at least 7 feet above the floor, with a direct and unobstructed line-of-sight of the protected glass. • Mount the sensor within 25 feet of the glass to be protected.	• Mount next to air ducts, forced air fans, or bells measuring 2-inches (or larger) in diameter. • Mount the sensor near doors and windows that can be slammed. • Mount the sensor where furniture may be placed between glass and sensor. • Mount on posts, free-standing or otherwise.

Connecting Detection Devices to the Panel Zone Inputs

This task illustrates connecting hardwire devices to the panel.

If you are installing two-wire smoke detectors, you must configure the panel to recognize them. They must be connected to zone 6. See *Programming the System for Two-Wire Smoke Detectors* in *Module 4 – Programming* for step-by-step programming instructions.

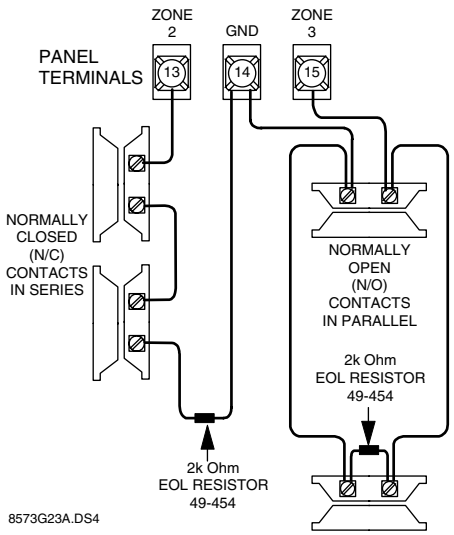


FIGURE 3-1. N/C and N/O Intrusion Detection Circuits.

Wire all zone inputs using a 2k-ohm end-of-line resistor to provide supervision for the zone.

Wire the end-of-line resistor at the last device on the circuit. Either normally open (N/O) or normally closed (N/C) detection devices can be used.

Refer to typical wiring for N/C and N/O intrusion detection circuits.

1. Using 2-conductor, 22-gauge or larger wire, connect your hardwire loops to the panel.
2. Verify that end-of-line resistors are installed properly (normally open sensors in parallel, normally closed sensor in series).

Connecting 2-Wire Smoke Detectors to the Panel

This task illustrates connecting 2-wire smoke detectors to the panel.

You can connect up to ten 2-wire smoke devices to the panel.

NOTE

If you are installing two-wire smoke detectors, you must configure the panel to recognize them. They must be connected to zone 6. See *Programming the System for Two-Wire Smoke Detectors* in *Module 4 – Programming* for step-by-step programming instructions.

NOTE

When zone input 6 is set up for 2-wire smoke detectors, the maximum loop current draw allowed is 100 mA (in alarm)

Zone input 6 can be set up in program mode, to accept 12 VDC, 2-wire smoke detectors by the following manufactures:

- System Sensor models 2100, and 2300
- Sentrol models 429C, 429CT, 521B, 521BXT

1. Using 2-conductor, 22-gauge or larger wire, connect smoke detectors to the panel.

2. Verify that end-of-line resistors are installed properly (normally open sensors in parallel, normally closed sensor in series).

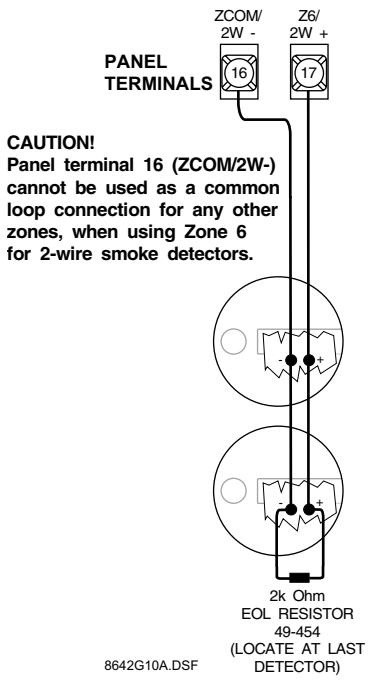


FIGURE 3-2. Connecting 2-wire Smoke Detectors to the Panel.

Connecting 4-Wire Smoke Detectors to the Panel

This task illustrates connecting 4-wire smoke detectors to the panel.

NOTE

The TWO-WIRE SMOKE setting (in program mode) must be *off* when connecting 4-wire smoke detectors to zone 6.

NOTE

Panel terminal 8 (OUT2 OC) must be set to configuration number 01500, for connected smoke detectors to reset after canceling a fire alarm

Connect up to five Sentrol (ESL) smoke detectors to panel power input as shown in Figure 3-3.

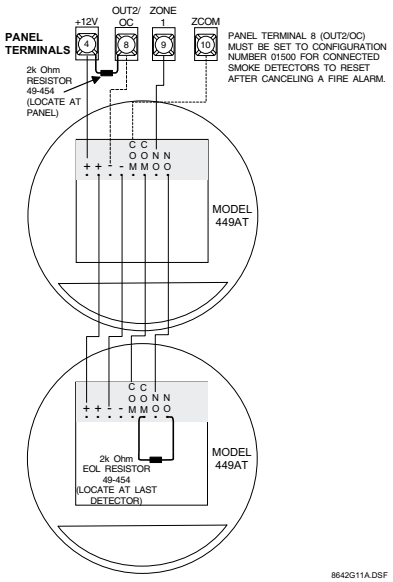
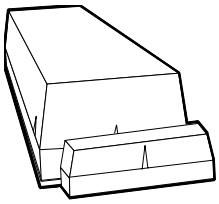


FIGURE 3-3. Connecting 4-wire Smoke Detectors to the Panel.

Installing the Door/Window Sensor (60-362)

This task details installing the door/window sensor. For programming and testing instructions, refer to the *Concord Express Security Installation Manual*.



1. Remove the sensor cover by pressing on the end of the cover (that has an opening for wire) to release the tab on the cover from the slot on the sensor base.

NOTE

It is important to be free of all static electricity when handling sensor circuit boards. Touch a grounded metal surface before handling the circuit board. Always handle the circuit board by the edges and never set the circuit board on any metallic surface.

2. Carefully remove the circuit board by pulling back on the tab and lifting the battery holder, or gently flex the plastic sensor base to release the circuit board. To guard against static, place circuit board in sensor cover before continuing.

NOTE

The sensor base has markings that indicate the position of the reed switches when the circuit board is reinstalled. Use the markings for aid in alignment. Spacers are available if the sensor will be mounted on a metallic surface or height alignment is needed.

3. Mount the sensor base using #6 flathead screws. Two screw holes are provided, one is enlarged to allow for sensor alignment. Two small additional holes are provided for mounting the sensor with 18 gauge wire nails (brads) and a brad driver.

NOTE

Ensure the magnet won't interfere with door or window opening. Do not use two sided tape to mount magnet.

4. Mount magnet base within 3/8-inch of the sensor's base, centered on the base's notch or tab.
Use two #6 x ½-inch flathead screws.

NOTE

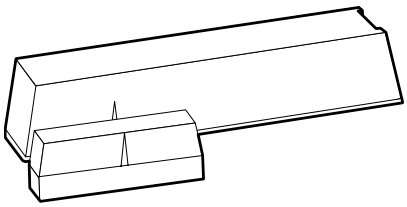
After determining which reed switch will be used, remove the other reed switch by clipping the leads as close to the board as possible.

5. Reattach the circuit board to the sensor base.

6. Reattach the sensor cover to the sensor base.

Installing the Slim Line Door/Window Sensor (60-499)

This task details installing the slim line door/window sensor. For programming and testing instructions, refer to the *Concord Express Security System Installation Manual*.



1. Remove the sensor cover by pressing on the cover release catch.

NOTE

The notch on the sensor base indicates the reed switch position when the circuit board is installed.

2. Mount the sensor base. Two screw holes are provided, one is enlarged to allow for sensor alignment.

   Use #4 x 1-inch pan head screws when mounting the sensor.

   Two small additional holes are provided for mounting the sensor with 18 gauge wire nails (brads) and a brad driver.

NOTE

Ensure the magnet won't interfere with the door or window opening. Don't use two-sided tape to mount magnet.

3. Mount the magnet base within 3/8-inch of the sensor base, centered on the notch. Use two #4 x 1-inch pan head screws or #18 x 1/2-inch wire nails.

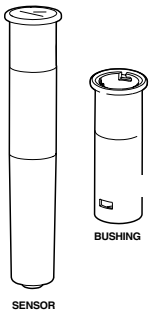
4. Remove the spring from the accessory pack and place on the tamper switch.

5. Replace the sensor cover, while positioning the tamper spring to protrude through the hole in the sensor base.

   The tamper switch detects removal of the cover or removal of the sensor from the wall.

Installing the Micro Recessed Door/Window Sensor (60-741-95)

This task details installing the recessed door/window sensor. For programming and testing instructions, refer to the *Concord Express Security System Installation Manual*.



1. Program the recessed door/window sensor and perform a dealer sensor test before installing the sensor.

   To simulate mounting, test the transmitter by holding it on the exterior side of the door frame and then tripping it.

2. Using a 5/8-inch spade or paddle bit, drill a hole to the minimum depth of 3¾-inches in the door or the window frame.
3. Slide the transmitter tube into the hole. The lip of the tube should fit snugly against the door frame surface.
4. Perform a dealer sensor test to verify that the transmitter is still working.

Installing the Magnet

5. Drill a ½-inch diameter hole for mounting the magnet in wood. The hole should be 2-inches deep and centered opposite the transmitter hole.
6. Place the magnet in the hole. It should fit tightly. If it doesn't fit tightly, secure it with an adhesive.

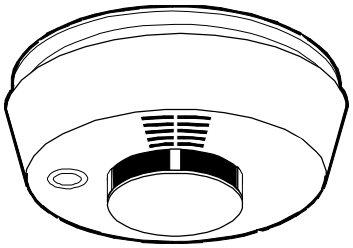
NOTE

Ensure the magnet doesn't interfere with the door or window opening.

7. Perform a customer sensor test to be sure the sensor and magnet are aligned properly.

Installing the 2100 RF (60-506-319.5) and 2100ARFT (60-838-95) Smoke Sensors

This task details installing the 2100 Smoke Sensor. For programming and testing instructions, refer to the *Concord Express Security System Installation Manual*.

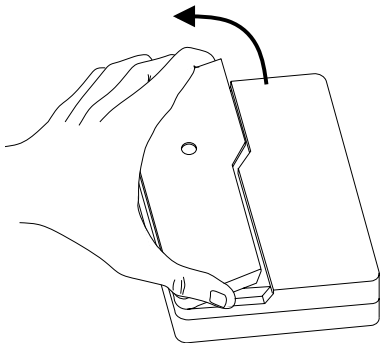


Model 2100

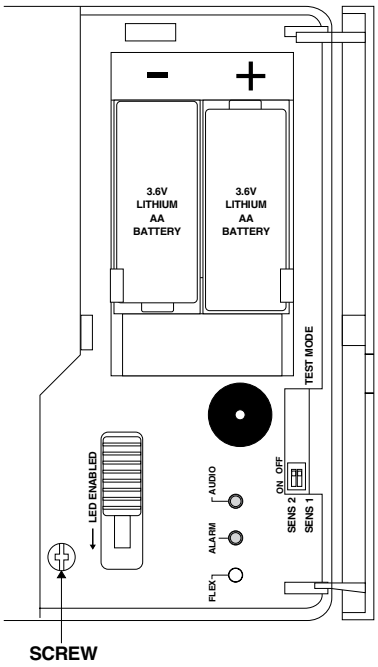
1. Remove the sensor mounting bracket.
2. Mount bracket directly onto wood surfaces using #8, 1 ½-inch wood screws. If you mount it to plaster or drywall, use appropriate anchors.
3. Insert the batteries and look for proper polarity.
4. Place the sensor in the mounting bracket by aligning the arrows on the mounting bracket and smoke detector.

Installing the FlexGuard® Sound Sensor (60-834)

This task illustrates installing the FlexGuard Sound Sensor. For programming and testing instructions, refer to the *Concord Express Security System Installation Manual*.



1. Open the sensor door by grasping it at the top and bottom with one hand and pulling upward.



2. Remove the sensor cover screw using a Phillips screwdriver.

3. Remove the sensor cover by first pulling up at the top of the cover, then lift up at the bottom.

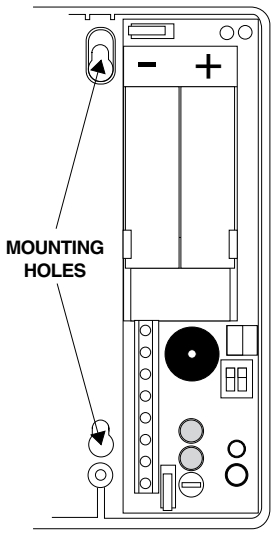


FIGURE 3-4. Mounting Hole Locations.

4. Place the sensor base on the desired location on the wall or ceiling and mark the narrow portion of the mounting holes. See Figure 3-4.

NOTE

Use anchors if installing in plaster or drywall.

5. Insert screws partially into the wall.

6. Place the sensor base on the screws and slide the narrow portion of the mounting holes onto the screws.

7. Gently tighten the screws to secure the sensor in place.

8. Before attaching the sensor cover to the sensor, first close the door on the sensor cover.

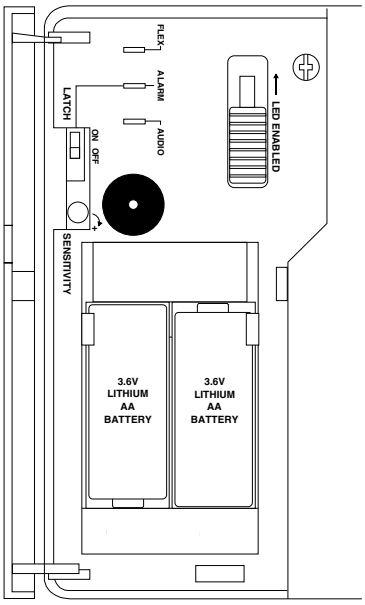
NOTE

Do not bend the tamper switch lever while installing the cover.

9. Align the top edge of the cover and base, then swing the cover down in the direction of the arrow.

10. Carefully open the door and while holding the cover in place, install the sensor cover screw.

Adjusting the Flex Sensitivity



1. Open the sensor door and slide the orange LED ENABLE switch in the direction of the arrow. An orange tab protrudes from the side of the sensor to indicate the LEDs are active.

2. Using a small pocket screwdriver, increase the sensitivity by turning the sensitivity control completely clockwise (maximum).

3. Close the sensor door.

4. Turn on any heating/air-conditioning system, and any other equipment in the sensor's vicinity.

   Observe the yellow flex LED for one minute with equipment running. Excessive subsonic (inaudible) noise typically produced by air handling systems may cause the flex LED to flash randomly.

5. If the flex LED flashes randomly, decrease the sensitivity by turning the sensitivity control counterclockwise just until the flashing stops.

Testing the Audio and Flex Ranges

NOTE

For UL listed systems, the installer should test the unit at least once a year.

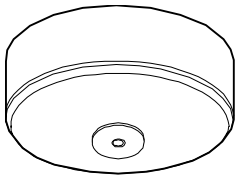
1. Hold the tester (13-332) at the farthest point of the glass to be protected (25-feet maximum).
2. Activate the tester in the manual mode. If the green LED on the sensor flashes, the audio microphone will detect breaking glass at that distance.

Testing the Flex Range

1. Set the tester to the flex mode and press the red button to arm the simulator.
2. Within 30 seconds of arming the tester, generate a flex signal by striking the glass with your hand or a cushioned tool.
3. The tester will automatically generate a burst of glass-break sound, and the sensor's red LED should light indicating an alarm condition.
4. Open the sensor door and slide the orange LED ENABLE switch back to its normal position.

Installing the Rate of Rise Heat Sensor (60-460)

This task details installing the rate of rise heat sensor. For programming and testing instructions, refer to the *Concord Express Security System Installation Manual.*



1. Remove the sensor mounting bracket.

NOTE

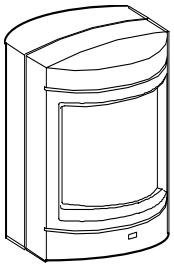
Use anchors if installing in plaster or drywall.

2. Mount bracket directly onto wood surfaces using #8, 1 ½-inch wood screws.
3. Insert the battery and look for proper polarity.
4. Place the sensor in the mounting bracket.

Installing the PIR Wall Mount Motion Sensor (60-511)

This task details installing the DS924 motion detector (PIR). For programming and testing instructions, refer to the *Concord Express Security System Installation Manual*.

Mounting without Swivel Bracket



PIR MOTION

NOTE

If you are mounting the base in drywall or plaster, first drill a 1/8-inch pilot hole. This will help you determine what type of material is behind the surface and whether to use a drywall anchor or the #6 x 1-inch wood screw.

You can mount the PIR with the swivel bracket or without.

1. Remove the mounting plate by gently pushing in with your thumb and prying it away from the PIR body.
2. Remove the PIR cover.
3. Secure the mounting plate using either of the corner-mount knock outs that fit the mounting situation.
4. Place the PIR body into the mounting plate and secure it to the mounting plate using the mounting plate screw.
5. Set the pulse sensitivity. See the DS924 instructions for more information.
6. Remove the mounting plate by gently pushing in with your thumb and prying it away from the PIR base.

Mounting with the Swivel Bracket

NOTE

If you are mounting the base in drywall or plaster, first drill a 1/8" pilot hole. This will help you determine what type of material is behind the surface and whether to use a drywall anchor or the #6 x 1" wood screw.

7. Mount the swivel bracket with the #6 x 1-inch wood screw for the corner mount or flat surface oriented with the hallway.
8. Using the #6 x 5/8-inch metal screw secure mounting plate to the swivel bracket. Tighten the screw until snug. Do not fully tighten the screw yet.
9. Replace PIR base into mounting plate. Check the PIR for correct alignment. When done gently remove the PIR base from the mounting plate and fully tighten the metal screw in the swivel bracket.
10. Replace the PIR base into the mounting plate and secure it to the mounting plate with the mounting plate screw.

Module 4-Programming

Introduction

This module teaches the installer how to program the most commonly used features of the Concord Express system.

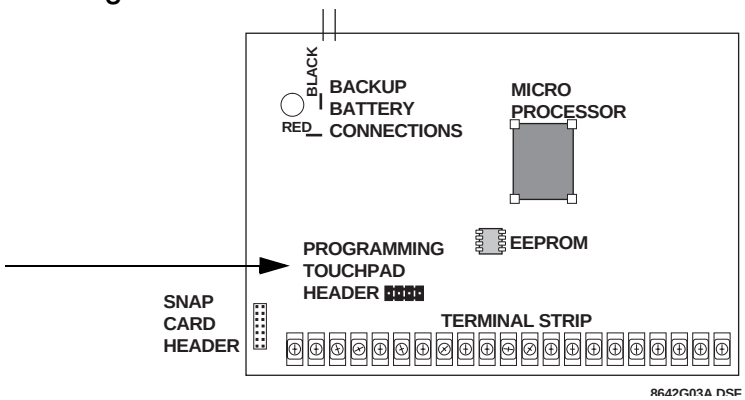
Using what they've learned here, installers should be able to complete other programming tasks not presented in this module.

What's in This Module

Entering and Exiting Programming Mode

This task illustrates entering and exiting programming mode.

Hot Plug Programming



Use installation programming cable (60-791) to setup a Concord Express system with a Fixed English Touchpad.

NOTE

An alphanumeric touchpad must be used for programming (60-746, 60-803, 60-804).

1. Plug the programming touchpad (a 2x16 LCD, 2x20 LCD, or 2x20 VFD) into the header on the CPU.
2. Enter **8** + **Installer Code** (default: **4321**)+ **0** + **2**.
3. Press **Status** to verify. The system displays:

SERVICE TOUCHPAD ACTIVE

NOTE

Exit programming BEFORE removing the touchpad.

4. Follow the steps in Entering and Exiting Programming Mode.
5. You must exit programming before you remove the touchpad—the address is automatically removed.

Entering Programming Mode

You must enter programming mode before you can program any of the system programming options.

NOTE

An alphanumeric touchpad must be used for programming.

1. Disarm the system.
2. Enter **8** + **Installer Code** (default: **4321**)+ **0** + **0**.

   The system shows:

SYSTEM PROGRAMMING

Exiting Programming Mode

You must exit programming mode to place the system back in normal mode.

1. Press **A** or **B** until the system displays:

EXIT PROGRAMMING READY

2. Press **#**.

   The system displays the day, date and time. The system is in Run mode. The fixed english touchpad will only show time.

Clearing Memory

This task illustrates resetting the Concord Express system memory back to factory defaults.

NOTE

Clearing memory will remove the pre-programmed hardwire zones.

1. Enter program mode.
2. Press **B** until the system displays:

CLEAR MEMORY

3. Press **#**.

ENTER CODE TO CLEAR MEMORY

4. Enter the installer code / dealer code.
5. Press **#**.
6. Immediately remove the programming touchpad before Concord Express performs a scan bus. This prevents the touchpad from being re-learned into the system.
7. Re-connect the touchpad.
8. Refer to the Hot Plug Programming section to enter programming.

   The panel will clear the memory, exit program mode.

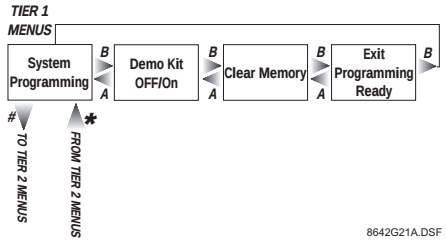
Tour of the Concord Express Programming Menus

This task illustrates navigating through the Concord programming tiers and menus.

The Concord menus are contained in two tiers: Tier 1 and Tier 2.

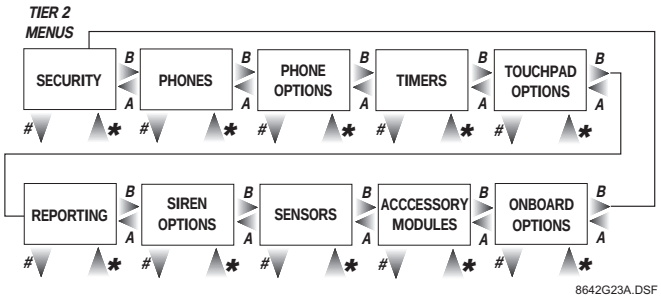
Tier 1 contains the following menus:

- System Programming
- Demo Kit
- Clear Memory
- Exit Programming Ready



Tier 2 contains the following menus under the System Programming menu of Tier 1:

- Security
- Phones
- Phone Options
- Timers
- Touchpad Options
- Reporting
- Siren Options
- Sensors
- Accessory Modules
- Onboard Options



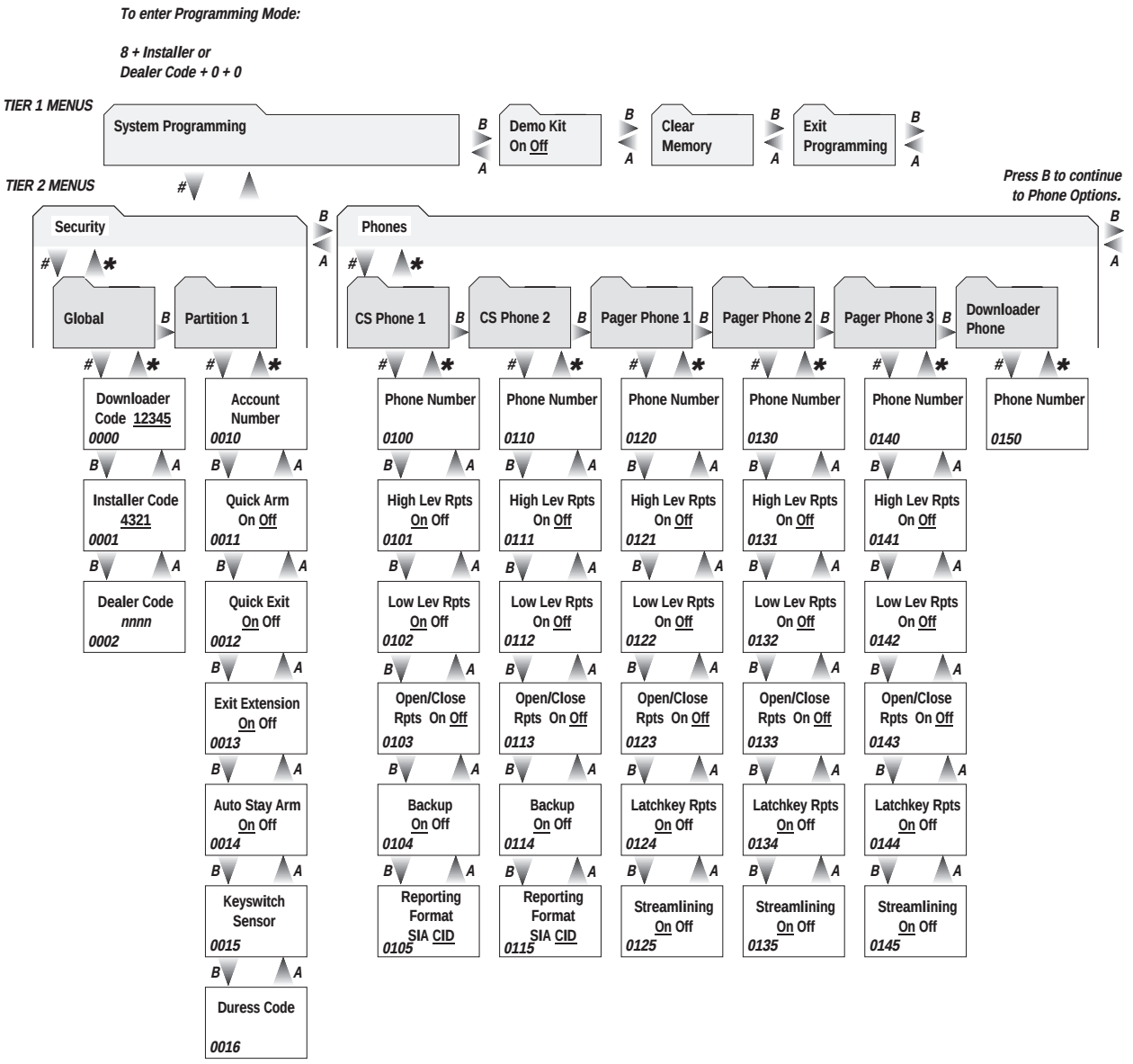
Navigating Through the Menus

Use the following touchpad buttons to navigate through the menus. Look at the programming chart while you are reviewing Table 4-1.

TABLE 4-1. Concord Express Programming Navigation.

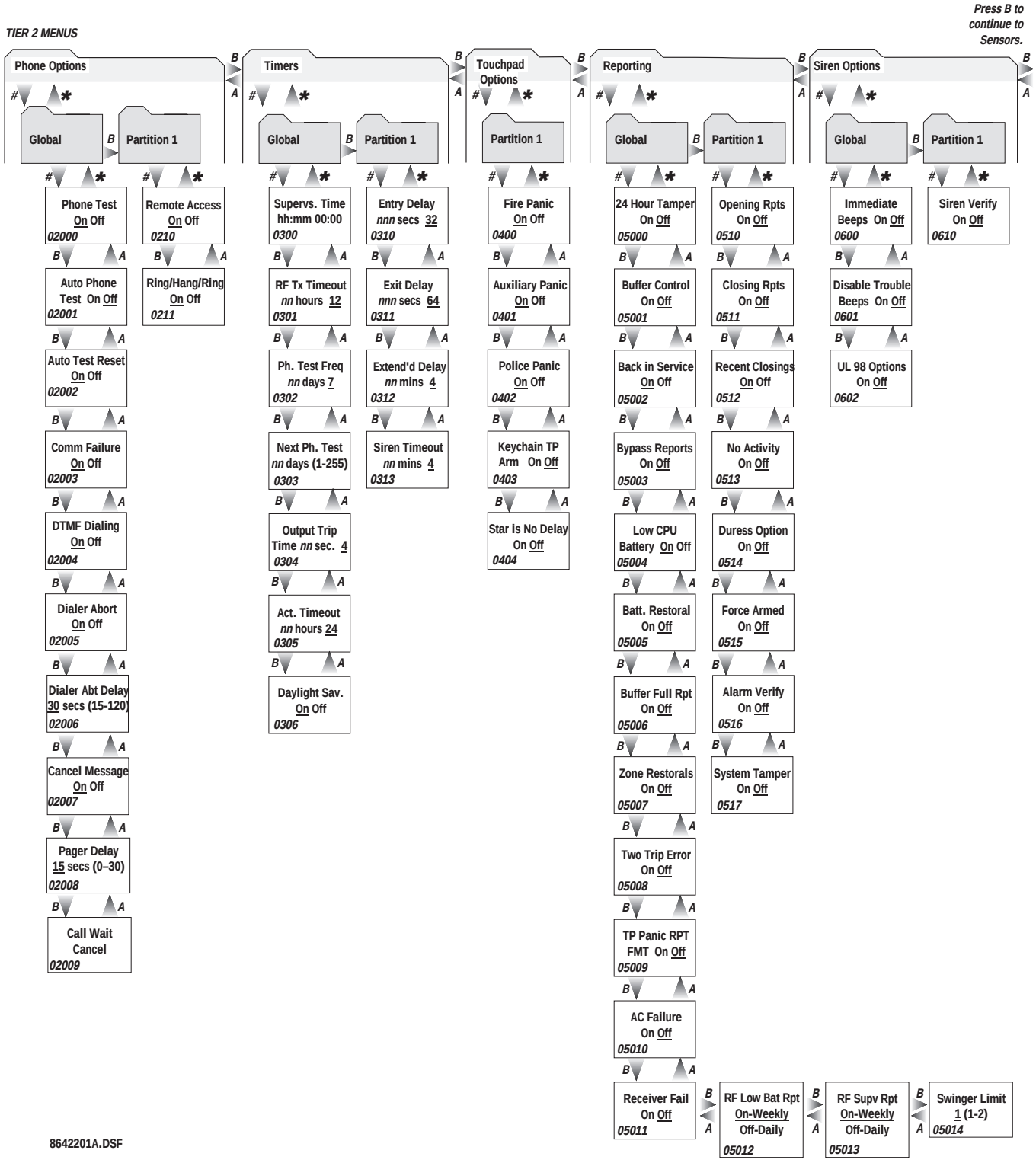
Button	Programming Function	Example
Numeric Buttons	Used to enter numeric values such as menu numbers, delay times and sensor numbers. Also used to enter text character and word codes during sensor text programming.	When you want to go to the Sensor menu and you are looking at the Security menu, press 07 + #
A	Scrolls backward to previous menu. Displays previous sensor text library character during sensor text programming.	When you want to move back to the Security menu and you are looking at the Phone Options menu, press A twice.
B	Scrolls forward to next menu on current tier. Displays next sensor text library character during sensor text programming.	When you want to move to the Touchpad Options menu and you are looking at the Security menu, press B four times.
C	Used to enter pauses when programming phone numbers.	When you need to program a pause in a phone number, use C.
D	Deletes programming for certain menu items.	
#	Used to move forward to next menu tier, and enter or accept displayed entry.	When you want to get into the Sensor menu and the touchpad shows, “SENSORS”, press # to open the Sensors menu.
*****	Cancels and exits displayed programming command (if pressed before #). Backs out to previous menu tier.	When you are done programming sensors and you want to go back to the Sensor menu, press * as many times as needed until you see “SENSOR” displayed on the touchpad.
0 thru 9	Enter numeric values wherever needed	
1 or 2	Select (1) for OFF. Select (2) for ON.	
1 thru 6	Press and hold to enter alphabetical characters A thru F for account numbers.	
7 and 9	Press and hold to enter * (7) or # (9) for phone numbers	

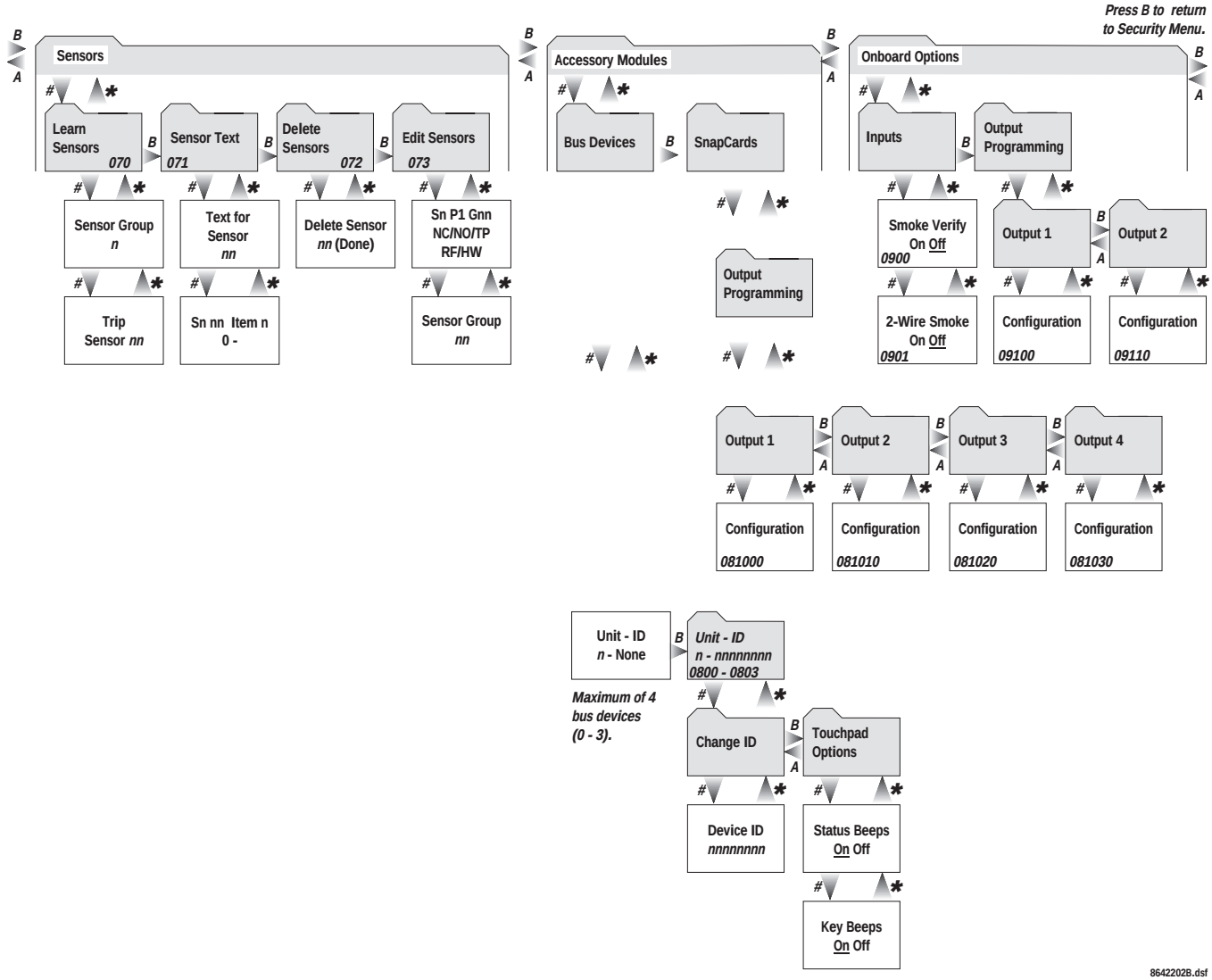
Concord Express Programming Menus



Notes

1. **Underlined settings indicate defaults.**
2. **Shortcut numbers appear in the lower-left corner of each menu box, where applicable.**


TIER 2 MENUS
Press B to continue to Sensors.
Phone Options
Global
Partition 1
Phone Test On Off 02000
Auto Phone Test On Off 02001
Auto Test Reset On Off 02002
Comm Failure On Off 02003
DTMF Dialing On Off 02004
Dialer Abort On Off 02005
Dialer Abt Delay 30 secs (15-120) 02006
Cancel Message On Off 02007
Pager Delay 15 secs (0–30) 02008
Call Wait Cancel 02009
Remote Access On Off 0210
Ring/Hang/Ring On Off 0211
Timers
Global
Partition 1
Supervs. Time hh:mm 00:00 0300
RF Tx Timeout nn hours 12 0301
Ph. Test Freq nn days 7 0302
Next Ph. Test nn days (1-255) 0303
Output Trip Time nn sec. 4 0304
Act. Timeout nn hours 24 0305
Daylight Sav. On Off 0306
Entry Delay nnn secs 32 0310
Exit Delay nnn secs 64 0311
Extend'd Delay nn mins 4 0312
Siren Timeout nn mins 4 0313
Touchpad Options
Partition 1
Fire Panic On Off 0400
Auxiliary Panic On Off 0401
Police Panic On Off 0402
Keychain TP Arm On Off 0403
Star is No Delay On Off 0404
Reporting
Global
Partition 1
24 Hour Tamper On Off 05000
Buffer Control On Off 05001
Back in Service On Off 05002
Bypass Reports On Off 05003
Low CPU Battery On Off 05004
Batt. Restoral On Off 05005
Buffer Full Rpt On Off 05006
Zone Restorals On Off 05007
Two Trip Error On Off 05008
TP Panic RPT FMT On Off 05009
AC Failure On Off 05010
Receiver Fail On Off 05011
Opening Rpts On Off 0510
Closing Rpts On Off 0511
Recent Closings On Off 0512
No Activity On Off 0513
Duress Option On Off 0514
Force Armed On Off 0515
Alarm Verify On Off 0516
System Tamper On Off 0517
RF Low Bat Rpt On-Weekly Off-Daily 05012
RF Supv Rpt On-Weekly Off-Daily 05013
Siren Options
Global
Partition 1
Immediate Beeps On Off 0600
Disable Trouble Beeps On Off 0601
UL 98 Options On Off 0602
Siren Verify On Off 0610
Swinger Limit 1 (1-2) 05014
8642201A.DSF


Press B to return to Security Menu.
Sensors
Learn Sensors 070
Sensor Text 071
Delete Sensors 072
Edit Sensors 073
Sensor Group n
Text for Sensor nn
Delete Sensor nn (Done)
Sn P1 Gnn NC/NO/TP RF/HW
Trip Sensor nn
Sn nn Item n 0 -
Sensor Group nn
Accessory Modules
Bus Devices
SnapCards
Output Programming
Onboard Options
Inputs
Output Programming
Smoke Verify On Off 0900
2-Wire Smoke On Off 0901
Output 1
Output 2
Configuration 09100
Configuration 09110
Output 1
Output 2
Output 3
Output 4
Configuration 081000
Configuration 081010
Configuration 081020
Configuration 081030
Unit - ID n - None
Unit - ID n - nnnnnnnn 0800 - 0803
Maximum of 4 bus devices (0 - 3).
Change ID
Touchpad Options
Device ID nnnnnnnn
Status Beeps On Off
Key Beeps On Off
8642202B.dsf

Programming Shortcuts

Concord Express allows you to get to the menu you want more quickly than pressing the **A**, **B**, and **#** buttons over and over.

1. Look at the programming table and find the menu item you want to display. The programming functions are listed alphabetically.
2. Enter the number of the menu item you see on the programming flowchart.
3. For example: The Reporting Menu is **05**. When the system displays, "**SECURITY**", press **05** + **#** to go directly to the Reporting Menu.
4. Almost all menu items on the programming flowchart have numbers. Use them to move directly to that choice.

System Programming	Shortcut Number	Available Settings	Defaults	Installer Setting
24-hour Tamper	05000	On/Off	Off	
AC Failure	05010	On/Off	Off	
Account Number	0010	1-10 Digits Long		
Activity Timeout	0305	01-42 Hours	24 Hours	
Alarm Verify	0516	On/Off	Off	
Auto Phone Test	02001	On/Off	Off	
Auto Stay Arming	0014	On/Off	On	
Auto Test Reset	02002	On/Off	On	
Auxiliary Panic	0401	On/Off	On	
Back in Service	05002	On/Off	On	
Backup Phone 1	0104	On/Off	On	
Backup Phone 2	0114	On/Off	Off	
Battery Restoral	05005	On/Off	Off	
Buffer Control	05001	On/Off	Off	
Buffer Full Report	05006	On/Off	Off	
Bypass Reports	05003	On/Off	Off	
Call Wait Cancel	02009			
Cancel Message	02007	On/Off	On	
Central Station Phone Number 1	0100	1-24 Digits Long	None	
Central Station Phone Number 2	0110	1-24 Digits Long	None	
Central Station Reporting Phone 1	0105	SIA/CID	CID	
Central Station Reporting Phone 2	0115	SIA/CID	CID	
Closing Reports	0511	On/Off	Off	
Configuration Output 1	09100	Output 1 or Output 2	Output 1	
Configuration Output 2	09110	Output 1 or Output 2	Output 2	
Communication Failure	02003	On/Off	On	
Daylight Saving Time	0306	On/Off	On	
Dealer Code	0002	4-Digits	None	

System Programming	Shortcut Number	Available Settings	Defaults	Installer Setting
Delete Sensors	072			
Dialer Abort	02005	On/Off	On	
Dialer Abort Delay	02006	15 - 120 Seconds	30 Seconds	
Disable Trouble Beeps	0601	On/Off	Off	
Downloader Code	12345	4-Digits	12345	
Downloader Number	0150	1-24 Digits Long	None	
DTMF Dialing	02004	On/Off	On	
Duress Code	0016	4-Digits	None	
Duress Option	0514	On/Off	Off	
Edit Sensors	073			
Entry Delay	0310	32-240 Seconds	32 Seconds	
Exit Delay	0311	48-184 Seconds	64 Seconds	
Exit Extension	0013	On/Off	On	
Extended Delay	0312	01-08 Minutes	04 Minutes	
Fire Panic	0400	On/Off	On	
Force Armed	0515	On/Off	Off	
Hang/Ring	0211	On/Off	On	
High Level Reports Pager Phone 1	0121	On/Off	Off	
High Level Reports Pager Phone 2	0131	On/Off	Off	
High Level Reports Pager Phone 3	0141	On/Off	Off	
High Level Reports Phone 1	0101	On/Off	On	
High Level Reports Phone 2	0111	On/Off	Off	
Immediate Trouble Beeps	0600	On/Off	Off	
Installer Code	0001	4-Digits	4321	
Keychain TP Arm	0403	On/Off	Off	
Keyswitch Sensor	0015	Sensor # 01 - 14		
Latchkey Reports Pager Phone 1	0124	On/Off	On	
Latchkey Reports Pager Phone 2	0134	On/Off	On	
Latchkey Reports Pager Phone 3	0144	On/Off	On	
Learn Sensors	070			
Low CPU Battery	05004	On/Off	On	
Low Level Reports Pager Phone 1	0122	On/Off	Off	
Low Level Reports Pager Phone 2	0132	On/Off	Off	
Low Level Reports Pager Phone 3	0142	On/Off	Off	
Low Level Reports Phone 1	0102	On/Off	On	
Low Level Reports Phone 2	0112	On/Off	Off	
Manual Phone Test	02000	On/Off	On	
Next Phone Test	0303	001-255 Days	7 Days	
No Activity Report	0513	On/Off	Off	
Open/Close Reports Pager Phone 1	0123	On/Off	Off	
Open/Close Reports Pager Phone 2	0133	On/Off	Off	

System Programming	Shortcut Number	Available Settings	Defaults	Installer Setting
Open/Close Reports Pager Phone 3	0143	On/Off	Off	
Open/Close Reports Phone 1	0103	On/Off	Off	
Open/Close Reports Phone 2	0113	On/Off	Off	
Opening Report	0510	On/Off	Off	
Output Trip Time	0304	1-12 Seconds	4 Seconds	
Pager Delay	02008	0-30 Seconds	15 Seconds	
Phone Number-Central Station 1	0100	1-24 Digits Long	None	
Phone Number-Central Station 2	0110	1-24 Digits Long	None	
Phone Number-Downloader	0150	1-24 Digits Long	None	
Phone Number Pager 1	0120	1-24 Digits Long	None	
Phone Number Pager 2	0130	1-24 Digits Long	None	
Phone Number Pager 3	0140	1-24 Digits Long	None	
Phone Test	02000	On/Off	On	
Phone Test Frequency	0302	1-255 Days	7 Days	
Police Panic	0402	On/Off	On	
Quick Arm	0011	On/Off	Off	
Quick Exit	0012	On/Off	On	
Receiver Failure	05011	On/Off	Off	
Recent Closings	0512	On/Off	On	
Remote Access	0210	On/Off	On	
Reporting Format Phone1 and Phone 2	0106, 0116	SIA/CID	CID	
RF Check-in Time	0301	02 -24 Hours	12 Hours	
RF Low Battery Report Weekly/Daily	05012	1 for Daily, 2 for Weekly	2	
RF Supervisory Reports Weekly/Daily	05013	1 for Daily, 2 for Weekly	2	
Ring/Hang/Ring	0211	On/Off	On	
Sensor Text	071			
Siren Timeout	0313	1-30 Minutes	4 Minutes	
Siren Verify	0610	On/Off	Off	
Smoke Verify	0900	On/Off	Off	
Star is No Delay	0404	On/Off	Off	
Streamlining Pager Phone 1	0125	On/Off	On	
Streamlining Pager Phone 2	0135	On/Off	On	
Streamlining Pager Phone 3	0145	On/Off	On	
Supervisory Time	0300	Enter Time of Day	00:00	
Swinger Limit	05014	1 or 2	1	
System Tamper	0517	On/Off	Off	
Touchpad Panic Report Format	0401	On/Off	Off	
Two Trip Error	05008	On/Off	Off	
Two Wire Smoke Loop	0901	On/Off	Off	
UL 98 Options	0602	On/Off	Off	
Zone Restoral Report	05007	On/Off	Off	

Programming Defaults and Definitions

24-HOUR TAMPER (05000) — DEFAULT = OFF

This setting determines whether the panel sounds sirens and reports a tamper alarm when wireless sensor tamper switches are activated, even when the system is disarmed (OFF).

NOTE

For U.L. Commercial Listed installations, this feature must be on.

Turning On or Off

With the display showing *24-HOUR TAMPER OFF/ON (current setting)*, press 1 (off) or 2 (on), and then press #.
The display flashes the entered setting, then stops after pressing # and displays *24-HOUR TAMPER OFF/ON (new setting)*.

AC FAILURE (05010) — DEFAULT = OFF

This setting determines whether the panel reports to the central station after AC power to the panel is out for 15 minutes.

Turning On or Off

With the display showing *AC FAILURE OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays *AC FAILURE OFF/ON (new setting).*

ACCOUNT NUMBER (0010) — DEFAULT = 00000

The account number is used as panel (or customer) identification for the central monitoring station. The panel sends the account number every time it reports to the central station. Account numbers must be 1 to 10 digits long.

Programming

With the desired partition selected, press B until the display shows *ACCOUNT NUMBER nnnnn*.
Enter the desired account number, then press #.
The display flashes the entered number, then stops after pressing # and displays *ACCOUNT NUMBER nnnnn (new account number).*

ACTIVITY TIMEOUT (0305) — DEFAULT = 24 HOURS

This setting determines how long the system goes (01 - 42 hours) without user interaction and device activation before sending a 'no activity' report to the central station.

Programming

With the display showing *ENTER ACTIVITY TIMEOUT nn HOURS (current setting)* enter the desired 2-digit time value (01 - 42), then press #.
The display flashes the entered setting, then stops after pressing # and displays *ACTIVITY TIMEOUT nn HOURS (new setting).*

ALARM VERIFY (0516) — DEFAULT = OFF

This setting determines whether the panel goes into alarm and reports after a single sensor/zone trip (off) or waits for a second trip signal (on).

NOTE

This setting applies only to sensors/zones learned into groups 10 - 20. If Alarm Verify is set to on, group 18 responds the same as group 17. See the Sensor Group Characteristics Table on page 4-33.

Turning On or Off

With the desired partition selected, press B until the display shows *ALARM VERIFY OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing ,# and displays *ALARM VERIFY OFF/ON (new setting).*

AUTO PHONE TEST (02001) — DEFAULT = OFF

This setting determines if the panel sends a phone test automatically to the central station or a pager on a predetermined schedule. (Refer to the "Phone Test Freq." and "Next Phone Test" settings found under *TIMERS—GLOBAL*).

Turning On or Off

With the display showing *AUTO PHONE TEST OFF/ON (current setting),* press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *AUTO PHONE TEST OFF/ON (new setting).*

AUTO STAY ARMING (0014) — DEFAULT = ON

This setting determines whether the system automatically arms to STAY (level 2) if the user arms the system to AWAY (level 3) without exiting the premises. This can help prevent accidental alarms by deactivating interior motion sensors during occupied arming periods.

With the feature turned on, the user arms the system to AWAY. Touchpads (and other status sounders) emit one exit delay beep every four seconds, then one every second during the last 10 seconds. If the exit delay time expires with no standard delay sensor activation, the system automatically arms to STAY.

NOTE

Arming the system to AWAY with No Delay overrides the Auto Stay Arming feature.

Turning On or Off

With the display showing *AUTO STAY ARMING OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *AUTO STAY ARMING OFF/ON (new setting).*

AUTO TEST RESET (02002) — DEFAULT = ON

This setting determines whether the Auto Phone Test interval is reset after any successful report to the central monitoring station.

Turning On or Off

With the display showing *AUTO TEST RESET OFF/ON (current setting),* press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *AUTO TEST RESET OFF/ON (new setting).*

AUXILIARY PANIC (0401) — DEFAULT = ON

This setting determines whether the auxiliary panic buttons are enabled (on) or disabled (off) on touchpads for a selected partition.

Programming

With the desired partition selected, press B until the display shows *AUXILIARY PANIC OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #. The display flashes the entered setting, then stops after pressing # and displays *AUXILIARY PANIC OFF/ON (new setting).*

BACK IN SERVICE (05002) — DEFAULT = ON

This setting determines whether or not the panel reports to the central station after AC and backup battery power are restored after an extended power outage.

Turning On or Off

With the display showing *BACK IN SERVICE OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays *BACK IN SERVICE OFF/ON (new setting)*.

BACKUP (0104-CS PHONE 1, 0114-CS PHONE 2) — DEFAULTS: CS PHONE 1 = ON, CS PHONE 2 = OFF

This setting determines whether the panel uses another programmed central station phone number for reporting if three initial attempts are unsuccessful. CS PHONE 1 is backed up by CS PHONE 2, and CS PHONE 2 is backed up by CS PHONE 1. The panel makes up to 16 attempts (8 per phone number) that alternates between the two programmed phone numbers.

For example, if *BACKUP* is on and three failed reporting attempts occur using CS PHONE 1, the panel switches to CS PHONE 2 for three more reporting attempts. If these attempts fail, the panel switches back to CS PHONE 1 for five more reporting attempts and, if necessary, switches back to CS PHONE 2 for five final attempts.

Turning On or Off

With the display showing *BACKUP OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *BACKUP OFF/ON (new setting)*.

BATTERY RESTORAL (05005) — DEFAULT = OFF

This setting determines whether the panel reports to the central monitoring station or pager when a wireless sensor reports to the panel after battery replacement.

Turning On or Off

With the display showing *BATTERY RESTORAL OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *BATTERY RESTORAL OFF/ON (new setting)*.

BUFFER CONTROL (05001) — DEFAULT = OFF

This setting determines whether all system events are logged in the buffer (off) or if only opening and closing reports are logged in the buffer (on).

Turning On or Off

With the display showing *BUFFER CONTROL OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays *BUFFER CONTROL OFF/ON (new setting)*.

BUFFER FULL REPORT (05006) — DEFAULT = OFF

This setting determines whether the panel sends an event buffer full report to the central monitoring station when the event buffer is nearly full.

Turning On or Off

With the display showing *BUFFER FULL RPT OFF/ON (current setting)*, press #.
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays *BUFFER FULL RPT OFF/ON (new setting)*.

BYPASS REPORTS (05003) — DEFAULT = OFF

This setting determines if the panel reports to the central station or a pager whenever sensors or zones are bypassed.

Turning On or Off

With the display showing *BYPASS REPORTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *BYPASS REPORTS OFF/ON (new setting)*.

CALL WAIT CANCEL (02009) — DEFAULT = NONE

This feature lets you set up a dialing prefix to disable the call waiting feature before the panel makes its first dialing attempt to any programmed central monitoring station, pager, or downloader phone number. The prefix can be up to eight digits.

Programming

With the display showing *CALL WAIT CANCEL __ (or current setting)*, enter the desired prefix, then press #.
The display flashes the entered setting, stops after pressing #, and displays *CALL WAIT CANCEL (new setting)*.

CANCEL MESSAGE (02007) — DEFAULT = ON

This setting determines whether the panel reports a cancel message to the central monitoring station after disarming the system to clear an alarm condition.

Turning On or Off

With the display showing *CANCEL MESSAGE OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *CANCEL MESSAGE OFF/ON (new setting)*.

CLOSING REPORTS (0511) — DEFAULT = OFF

This setting determines whether the panel sends a closing report to the central station or pager, after the partition is armed.

Turning On or Off

With the desired partition selected, press B until the display shows *CLOSING REPORTS OFF/ON (current setting)*.
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *CLOSING REPORTS OFF/ON (new setting)*.

CONFIGURATION-OUTPUT (09110)(09100-OUTPUT 1, 09110-OUTPUT 2) — DEFAULTS: OUTPUT 1 = 00410, OUTPUT 2 = 01710

This setting lets you assign the selected output 5-digit configuration number that determines which system event activates the output and the duration or time the output is activated.

The first three digits represent the trigger number of an event, such as an alarm, open sensor, or arming the system.

The last two digits represent how the output responds such as, momentary, sustained (or latched), or for a preset time.

Programming

With the display showing *ONBOARD OPTIONS*, press # + B. The display shows *OUTPUT PROGRAMMING*.
Press # and the display shows *OUTPUT 1*. Press B to select *OUTPUT 2*.

After selecting the desired output, press enter. The display show *CONFIGURATION (current setting)*.
Enter the desired configuration number, then press #. The display flashes the entered number, stops after pressing #, and shows the new setting.

COMMUNICATION FAILURE (02003) — DEFAULT = ON

This setting determines whether the panel activates trouble beeps to alert users on the premises that communication to the central station failed. Failure notification occurs after the third unsuccessful reporting attempt to the central station.

If a Phone Supervision Card (60-789) is installed, failure notification can occur immediately if inadequate phone line voltage is detected upon the initial dialing attempt.

NOTE

For UL Listed installations, Comm Failure must be turned on.

Turning On or Off

With the display showing *COMM FAILURE OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *COMM FAILURE OFF/ON (new setting)*.

DAYLIGHT SAVING TIME (0306) — DEFAULT = ON

This setting determines whether the panel clock automatically adjusts for daylight saving time changes in spring and fall.

Turning On or Off

With the display showing *DAYLIGHT SAVING OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DAYLIGHT SAVING OFF/ON (new setting)*.

DEALER CODE (0002) — DEFAULT = NONE

The 4-digit dealer code is used to prevent unauthorized persons from changing the programmed central station phone number. When changed from its default setting, all central station phone numbers can be changed only by entering program mode using the dealer code. (If a Dealer Code is programmed, entering program mode with the installer code lets you program all system settings except for the Dealer Code and central station phone numbers.)

Programming

With the display showing *DEALER CODE* ****, enter the desired 4-digit code + #.
The display flashes the entered code, stops after pressing #, and displays *DEALER CODE nnnn (new code)*.

Deleting

With the display showing *DEALER CODE nnnn (current code)*, press D.
The display shows *DEALER CODE* ****.

NOTE

The Dealer Code cannot be deleted by clearing panel memory. If you don't remember your Dealer Code, call Technical Services for assistance.

DELETE SENSORS (072) — DEFAULT = NONE

The following describes how to remove hardwire zone and wireless sensor numbers from panel memory.

NOTE

Deleting sensors does not delete sensor text associated with the deleted sensor number. To delete sensor text, enter the SENSOR TEXT menu and enter 000 (nulls) for each item number.

Programming

To Delete Sensors from panel memory:

- With the display showing *LEARN SENSORS*, press B until the display shows *DELETE SENSORS*.
- Press # and the display shows *DELETE SN NN (lowest zone/sensor number in panel memory)*.
- Press # to delete the displayed sensor or enter the desired sensor number, then press #.
  The display flashes the entered number, then stops and shows *DELETE SENSOR NN DONE*.

  Repeat steps 2 and 3 until all desired sensors are deleted.

DIALER ABORT (02005) — DEFAULT = ON

This setting determines whether users can stop the panel from reporting an intrusion or auxiliary alarm condition to the central station. If dialer abort is on and the user accidently causes an alarm condition, entering 1 + CODE within 30 seconds stops the panel from reporting the alarm and prevents a false dispatch. Fire alarm reports to the central station cannot be aborted.

NOTE

The Dialer Abort feature applies only to CS PHONE 1. The 30-second time setting can only be changed using ITI ToolBox.

Turning On or Off

With the display showing *DIALER ABORT OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DIALER ABORT OFF/ON (new setting)*.

DIALER ABORT DELAY (02006) — DEFAULT = 30 SECONDS

This setting determines how much time (15-120 seconds) the user has to enter the disarm command to prevent the panel from reporting an intrusion or auxiliary alarm to the central monitoring station.

Programming

With the display showing *DIAL ABORT DELAY nn (current setting)*, enter the desired time (15-120 seconds), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DIAL ABORT DELAY nn (new setting)*.

DISABLE TROUBLE BEEPS (0601) — DEFAULT = OFF

This setting determines whether the panel activates trouble beeps when a wireless sensor supervisory condition is detected.

NOTE

For UL Listed installations, this feature must be off.

Turning On or Off

With the display showing *DISABLE TR BEEPS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DISABLE TR BEEPS OFF/ON (new setting)*.

DOWNLOADER CODE (12345) — DEFAULT = 12345

The 5-digit downloader code is used in conjunction with downloader programming. The downloader operator must have the panel account number and downloader code to perform any programming.

Programming

With the display showing *DOWNLOADER CODE nnnnn (current code)*, enter the desired 5-digit code, + #.
The display flashes the entered code, stops after pressing #, and displays *DOWNLOADER CODE nnnnn (new code)*.

NOTE

The Downloader Code cannot be deleted or cleared from panel memory. To change the Downloader Code to its default setting, enter 12345 in the procedure above.

DTMF DIALING (02004) — DEFAULT = ON

This setting determines whether the panel uses DTMF tones (on) or pulse (off) for dialing programmed phone numbers.

Turning On or Off

With the display showing *DTMF DIALING OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DTMF DIALING OFF/ON (new setting)*.

DURESS CODE (0016) — DEFAULT = NONE

The duress code is a unique 4-digit access code that allows users to operate the system and, at the same time, instructs the panel to send a silent alarm report to the central station. Each partition can be programmed with a different duress code.

CAUTION

Because using duress codes often results in false alarms due to code entry errors, it is strongly recommended not to program duress codes.

Programming

With the desired partition selected, press B until the display shows *DURESS CODE* ****.
Enter the desired 4-digit duress code, then press #.
The display flashes the entered setting, stops after pressing #, and displays *DURESS CODE nnnn (new code)*.
With the desired partition selected, press B until the display shows *DURESS CODE nnnn (current code)*.

DURESS OPTION (0514) — DEFAULT = OFF

This setting determines whether or not system can be controlled using a programmed duress code.

CAUTION

Because user-code entry errors often result in false alarms, it is strongly recommended not to program any duress code.

Turning On or Off

Press B until the display shows *DURESS OPTION OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *DURESS OPTION OFF/ON (new setting).*

EDIT SENSORS (073) — DEFAULT = NONE

This menu lets you view the assignments for each learned zone/sensor. For example, the display shows:

S01 P1 G13 NC
BACK DOOR

where S01 = zone/sensor number, P1 = partition 1, G13 = sensor group 13, NC = normally closed, HW = hardwired, and DEN DOOR is the programmed text name.

Programming

With the display showing *LEARN SENSORS*, press B until the display shows *VIEW SENSORS*.
Press # and the display shows the lowest sensor number zone/sensor assignments.
Press A or B to scroll through all learned zone/sensor number assignments.

ENTRY DELAY (0310) — DEFAULT = 032 SECONDS

This setting determines how much time (32 - 240 seconds) the user has to disarm the system after entering the premises through a designated delay door to avoid causing an alarm.

NOTE

For UL Listed residential installations, the Entry Delay must be set to 45 seconds.

Programming

With the desired partition selected, press B until the display shows *ENTRY DELAY nnn SECONDS (current setting).*
Enter the desired time value then press #.
The display flashes the entered setting, stops after pressing #, and displays *ENTRY DELAY nnn SECONDS (new setting).*

EXIT DELAY (0311) — DEFAULT = 064 SECONDS

This setting determines how much time (48 - 184 seconds) the user has to leave the premises through a designated delay door after arming the system to avoid causing an alarm.

NOTE

For UL Listed residential installations, the Exit Delay must be set to 60 seconds.

Programming

With the desired partition selected, press B until the display shows *EXIT DELAY nnn SECONDS (current setting).*
Enter the desired time value, then press #.
The display flashes the entered setting, stops after pressing #, and displays *EXIT DELAY nnn SECONDS (new setting).*

EXIT EXTENSION (0013) — DEFAULT = ON

This setting determines whether the user can re-enter and exit again through an entry/exit delay door without disarming and re-arming the system. This helps prevent exit faults and false alarms by allowing users to re-enter the premises for a forgotten item.

When turned on, the panel restarts the exit delay timer if the user re-enters the premises through a designated delay door before the exit delay time expires.

When turned off, the exit delay timer does not restart if the user re-enters the premises The user is forced them to disarm the system to avoid setting off an accidental alarm.

Turning On or Off

With the display showing *EXIT EXTENSION OFF/ON (current setting),* press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays the new setting.

EXTENDED DELAY (0312) — DEFAULT = 04 MINUTES

This setting determines how much time (01 - 08 minutes) the user has to enter or exit the premises through a designated extended delay door without causing an alarm.

Programming

With the desired partition selected, press B until the display shows *EXTENDED DELAY nn MINUTES (current setting).*
Enter the desired time value then press #.
The display flashes the entered setting, stops after pressing #, and displays *EXTENDED DELAY nn MINUTES (new setting).*

FIRE PANIC (0510) — DEFAULT = ON

This setting determines whether the fire panic buttons are enabled (on) or disabled (off) on touchpads for a selected partition.

Programming

With the desired partition selected, press B until the display shows *FIRE PANIC OFF/ON (current setting).*
Press 1 (off) or 2 (on) then press #. The display flashes the entered setting, stops after pressing #, and displays *FIRE PANIC OFF/ON (new setting).*

FORCE ARMED (0515) — DEFAULT = OFF

This setting determines whether the panel reports to the central monitoring station when a user force arms the system.

Force Armed occurs if the user presses BYPASS when arming the system with open sensors/zones protesting.

NOTE

Auto Force Armed always reports to the central monitoring station. For UL Listed installations, Force Armed must be turned off.

Turning On or Off

With the display showing FORCE ARMED OFF/ON *(current setting),* press 1 (off) or 2 (On), then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

HIGH LEVEL REPORTS (0121-PAGER 1, 0131-PAGER 2, 0141-PAGER 3) — DEFAULT = ON

This setting determines whether the following alarm conditions report to a pager:

Fire, Police, Auxiliary, Duress, and Freeze alarms; No Activity, Receiver Failure (or jam), and System Tamper (40 incorrect key presses or touchpad supervisory).

Turning On or Off

With the display showing *HIGH LEVEL RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *HIGH LEVEL RPTS OFF/ON (new setting).*

HIGH LEVEL REPORTS (0101-CS PHONE 1, 0111-CS PHONE 2)

DEFAULTS: CS PHONE 1 = ON
CS PHONE 2 = OFF

This setting determines whether the following conditions report to the central station:

Fire, Police, Auxiliary, Duress, and Freeze alarms; No Activity, Receiver Failure (or jam), and System Tamper (40 incorrect keypresses or touchpad supervisory).

Turning On or Off

With the display showing *HIGH LEVEL RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *HIGH LEVEL RPTS OFF/ON (new setting)*.

IMMEDIATE TROUBLE BEEPS (0600)

DEFAULT = OFF

This setting determines when the panel activates trouble beeps once a wireless sensor supervisory condition is detected. When set to off, trouble beeps sound within 4 hours for fire (group 26) sensors and within 10 hours for all other sensors.

NOTE

For UL Listed installations, this feature must be on.

Turning On or Off

With the display showing *IMMEDIATE BEEPS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *IMMEDIATE BEEPS OFF/ON (new setting)*.

INSTALLER CODE (0001)

DEFAULT = 4321

The 4-digit installer code is used for entering program mode and changing system settings. If a dealer code (see below) is programmed, only those settings not associated with phone numbers can be changed.

Programming

With the display showing *INSTALLER CODE nnnn (current code)*, enter the desired 4-digit code + #.
The display flashes the entered code, stops after pressing #, and displays *INSTALLER CODE nnnn (new code)*.

NOTE

The Installer Code cannot be deleted or cleared from panel memory. To change the Installer Code to its default setting, enter 4321 in the procedure above.

KEYCHAIN TP ARM (0403)

DEFAULT = OFF

This setting determines whether keychain touchpads arm the selected partition directly to AWAY with NO DELAY (on) or increments from OFF to STAY or from STAY to AWAY (off).

Programming

With the desired partition selected, press B until the display shows *KEYCHAIN TOUCHPAD ARM OFF/ON (current setting)*. Press 1 (off) or 2 (on), then press #. The display flashes the entered setting, stops after pressing #, and displays *KEYCHAIN TOUCHPAD ARM OFF/ON (new setting)*.

KEYSWITCH SENSOR (0014) — DEFAULT = NONE

This feature lets users arm and disarm the system using a keyswitch wired to a hardwire zone input or a wireless door/window sensor.

For example, if sensor/zone 1 is designated as the keyswitch sensor and the system is disarmed, tripping the sensor/zone arms the system to AWAY. If the system is armed to STAY or AWAY, tripping the sensor disarms the system. The panel reports opening, closing, and force armed reports (if turned on) to the central monitoring station.

A bypassed keyswitch sensor cannot arm or disarm the system.

During an audible alarm, keyswitch sensors can disarm the system but cannot arm the system. The system arms only after siren time-out expires and the panel sends a cancel report to the central monitoring station.

Keyswitch sensors test the same as any other sensor and do not arm or disarm the system during a sensor test.

Programming

With the display showing *KEYSWITCH SENSOR n (current sensor number)*, enter the desired sensor number (01-16), then press #. The display flashes the entered sensor number, stops after pressing #, and displays the new number.

LATCHKEY REPORTS (0124-PAGER 1, 0134-PAGER 2, 0144-PAGER 3) — DEFAULT = ON

This setting determines whether the panel reports to a pager when the system is disarmed using the latchkey modifier (6) and latchkey designated access code.

Turning On or Off

With the display showing *LATCHKEY REPORTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

LEARN SENSORS (070) — DEFAULT = NONE

The following describes how to learn hardwire zones and wireless sensors into panel memory.

Programming

- With the display showing *SENSORS*, press # and the display shows *LEARN SENSORS*.
- Press # and the display shows *SENSOR PTN 1*.
- Press # to select partition 1 or press 2 + # to select partition 2. The display should show *SENSOR GROUP 00*. Enter the desired 2-digit sensor group + # (see Table A.5 in "Appendix A" for a description of all sensor group characteristics). The display shows *TRIP SENSOR nn*, where nn is the displayed (next available) sensor number.
- To change the displayed sensor number, enter the desired 2-digit sensor number, then press #.
- With the desired sensor number displayed, trip the sensor or zone as follows: Hardwire Zones—trip the zone into the alarm state.
- Wireless Sensors—follow the instructions included with each sensor.
  Wireless Door/Window Sensors with External Contacts—place the external contact in the alarm condition, then activate the sensor tamper switch.
- Continue tripping sensors to learn them into the selected sensor group and partition. To stop learning sensors into this group and partition, press * twice and start again from step 2 (*LEARN SENSORS*) to learn sensors into another group and partition.

LOW CPU BATTERY (05004) — DEFAULT = ON

This setting determines whether the panel reports a low panel battery to the central station or pager before shutting down.

Turning On or Off

With the display showing *LOW CPU BATTERY OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *LOW CPU BATTERY OFF/ON (new setting)*.

LOW LEVEL REPORTS (0122-PAGER 1, 0132-PAGER 2, 0142-PAGER 3) — DEFAULT = OFF

This setting determines whether the following non-alarm conditions report to a pager:

Force Armed, Hardwire Zone Trouble (open or short), Supervisory (wireless sensors), Low Battery (wireless sensors and touchpads).

Turning On or Off

With the display showing *LOW LEVEL RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *LOW LEVEL RPTS OFF/ON (new setting)*.

LOW LEVEL REPORTS (0102-CS PHONE 1, 0112-CS PHONE 2) — DEFAULTS: CS PHONE 1 = ON, CS PHONE 2 = OFF

This setting determines whether the following conditions report to the central station:

Force Armed, Hardwire Zone Trouble (open or short), Supervisory (wireless sensors), Low Battery (wireless sensors and touchpads).

Turning On or Off

With the display showing *LOW LEVEL RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *LOW LEVEL RPTS OFF/ON (new setting)*.

NEXT PHONE TEST (0303) — DEFAULT = 7 DAYS

This setting determines how many days (001 - 255) until the next automatic phone test occurs.

Programming

When setting up Phone Test Freq. (see above), Next Phone Test must be set to accurately count the number of days left in the cycle before the next phone test occurs. This setting should be the same or less than the Phone Test Freq. setting. For U.L. Commercial Listed installations, this feature must be set to 1.

With the display showing *NEXT PHONE TEST nnn DAYS (current setting)*, enter the 3-digit value (001 - 255), then press #.
The display flashes the entered setting, stops after pressing #, and displays *NEXT PHONE TEST nnn DAYS (new setting)*.

NO ACTIVITY (0513) — DEFAULT = OFF

This setting determines whether the panel sends a no activity report to the central station or pager, if there is no system activity within a preset time period (see *TIMERS—ACTIVITY TIMEOUT*).

Turning On or Off

With the desired partition selected, press B until the display shows *NO ACTIVITY OFF/ON (current setting)*.
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *NO ACTIVITY OFF/ON (new setting)*.

OPEN/CLOSE REPORTS (0123-PAGER 1, 0133-PAGER 2, 0143-PAGER 3) — DEFAULT = OFF

This setting determines whether opening and closing reports are sent to a pager. When turned on, the panel sends a closing report when the system is armed and an opening report when the system is disarmed.

NOTE

To use this feature, the *OPENING REPORTS* and *CLOSING REPORTS* settings under the *REPORTING* menu must be turned on for that partition.

Turning On or Off

With the display showing *OPEN/CLOSE RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #. The display flashes the entered setting, stops after pressing #, and displays *OPEN/CLOSE RPTS OFF/ON (current setting)*.

OPEN/CLOSE REPORTS (0103-CS PHONE 1, 0113-CS PHONE 2 — DEFAULTS: ALL OFF

This setting determines whether opening and closing reports are sent to the central station. When turned on, the panel sends a closing report when the system is armed and an opening report when the system is disarmed.

NOTE

To use this feature, the *OPENING REPORTS* and *CLOSING REPORTS* settings under the *REPORTING* menu must be turned on for that partition.

Turning On or Off

With the display showing *OPEN/CLOSE RPTS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *OPEN/CLOSE RPTS OFF/ON (new setting).*

OPENING REPORTS (0510) — DEFAULT = OFF

This setting determines whether the panel sends an opening report to the central station or pager after the partition is disarmed.

NOTE

To use this feature, the *OPEN/CLOSE REPORTS* settings under the *PHONES—CS PHONE 1-2* and/or *PHONES—PAGER PHONE 1-3* menus must be turned on for the specific CS Phone or Pager Phone number.

Turning On or Off

With the desired partition selected, press B until the display shows *OPENING REPORTS OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *OPENING REPORTS OFF/ON (new setting).*

OUTPUT TRIP TIME (0304) — DEFAULT = 04 SECONDS

This setting determines how long onboard SnapCards and HOMs are activated when configured for a momentary trip.

Programming

With the display showing *OUTPUT TRIP TIME nn SECONDS (current setting)*, enter the desired time (1 - 12), then press #.
The display flashes the entered setting, stops after pressing #, and displays *HOM TRIP TIME nn SECONDS (new setting).*

PAGER DELAY (02008) — DEFAULT = 15 SECONDS

This setting determines how long a report is delayed to a pager (00 - 30 seconds) after the panel dials the pager number.

NOTE

The Pager Delay time should not be set below 5 seconds, unless absolutely necessary.

Programming

With the display showing *PAGER DELAY nn (current setting)*, enter a two digit time (00 - 30), then press #.
The display flashes the entered setting, then stops after pressing # and displays *PAGER DELAY nn (new setting).*

PHONE NUMBER-CENTRAL STATION (0100-CS PHONE 1, 0110-CS PHONE 2) DEFAULT = NONE

This setting is used for programming the central station receiver phone number. Phone numbers can be 1 to 24 digits long, including pauses. To enter pauses, press C.

NOTE

The PHONE NUMBER menus are not accessible if a Dealer Code is programmed and the Installer Code is used to enter installer programming mode. To access these menus when a Dealer Code is programmed, you must enter installer programming mode using the Dealer Code.

Programming

With the display showing *PHONE NUMBER _ (or current number)*, enter the desired phone number + #.
The display flashes the entered number, stops after pressing #, and displays *PHONE NUMBER (new number)*.

Deleting

With the display showing *PHONE NUMBER (current number)*, press D.
The display shows *PHONE NUMBER _*.

PHONE NUMBER-DOWNLOADER (0150) DEFAULT = NONE

This setting is used for programming the phone number of a computer used for programming the panel from off-site. Phone numbers can be 1 to 24 digits long, including pauses. To enter pauses, press C.

Programming

With the display showing *PHONE NUMBER (current number)*, enter the desired phone number + #.
The display flashes the entered number, stops after pressing #, and displays *PHONE NUMBER (new number)*.

PHONE NUMBER-PAGER (0120-PAGER 1, 0130-PAGER 2, 0140-PAGER 3) DEFAULT = NONE

This setting is used for programming a phone number that communicates to a pager. Phone numbers can be 1 to 24 digits long and include pauses, call-waiting disable (*70), skylink number, and 7-digit PIN number.

Programming

With the display showing *PHONE NUMBER _ (or current number)*, enter the desired pager phone number including pauses (press C for 3-second pause), then press #.
The display flashes the entered number, then stops after pressing # and displays *PHONE NUMBER (new number)*.

Deleting

With the display showing *PHONE NUMBER (current number)*, press D.
The display shows *PHONE NUMBER _*.

PHONE TEST (02000) DEFAULT = ON

This setting determines if the user can, at any time, test the communication from the panel to the central station or a pager by entering 8 + CODE + 2 (# + 8 + CODE + 2 from a touch-tone phone).

NOTE

For U.L. Commercial Listed installations (UL 1610), this feature must be on.

Turning On or Off

With the display showing *PHONE TEST OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *PHONE TEST OFF/ON (new setting)*.

PHONE TEST FREQUENCY (0302) — DEFAULT = 7 DAYS

This setting determines how often the panel sends the automatic phone test (see Auto Phone Test under Phone Options—Global) to the central station or a pager. The phone test frequency can be set to report every 1 to 255 days.

NOTE

For U.L. Commercial Listed installations, this feature must be set to 1.

Programming

With the display showing *PHONE TEST FREQ nnn DAYS (current setting)*, enter the 3-digit value (001 - 255), then press #. The display flashes the entered setting, stops after pressing #, and displays *PHONE TEST FREQ nnn DAYS (new setting)*.

POLICE PANIC (0402) — DEFAULT = ON

This setting determines whether the police panic buttons are enabled (on) or disabled (off) on touchpads for a selected partition.

Programming

With the desired partition selected, press B until the display shows *POLICE PANIC OFF/ON (current setting)*. Press 1 (off) or 2 (on), then press #. The display flashes the entered setting, then stops after pressing # and displays *POLICE PANIC OFF/ON (new setting)*.

QUICK ARM (0011) — DEFAULT = OFF

Quick Arm allows system arming without using an access code. When turned on, the system arming level can be increased from Level 1-OFF to LEVEL 2-STAY, from Level 1-OFF to LEVEL 3-AWAY, or from Level 2-STAY to LEVEL 3-AWAY without entering an access code. A valid access code is still required to decrease the arming level or disarm the system.

Turning On or Off

With the desired partition selected, press B until the display shows *QUICK ARM OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays *QUICK ARM OFF/ON (new setting)*.

QUICK EXIT (0012) — DEFAULT = ON

This setting determines whether users can open and close a standard entry/exit door (sensor groups 10 and 19 only) while the system is armed without causing an alarm.

One example would be going out to get the morning paper while the system is armed. Another example would be leaving the armed premises without having to disarm and re-arm the system.

When turned on, pressing D on a touchpad while the system is armed starts a 2-minute timer that allows standard entry/exit doors to be activated once (opened, then closed).

When turned off, the system must be disarmed before opening any protected door.

Turning On or Off

With the display showing *QUICK EXIT OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, then stops after pressing # and displays the new setting.

RECEIVER FAILURE (05011) — DEFAULT = OFF

This setting determines whether the panel reports if no wireless sensor signals have been received for two hours, or if the receiver is being jammed (constant signal).

NOTE

For U.L. Listed installations that include wireless devices, this feature must be on.

Turning On or Off

With the display showing *RECEIVER FAILURE OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *RECEIVER FAILURE OFF/ON (new setting)*.

RECENT CLOSING (0512) — DEFAULT = ON

This setting determines whether the panel sends a recent closing report to the central station or a pager if an alarm occurs within two minutes *after* the exit delay time expires. Such a report is used to identify a possible exit fault.

Turning On or Off

With the display showing *RECENT CLOSINGS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

REMOTE ACCESS (0210) — DEFAULT = ON

This setting determines whether intallers can download from off premise.

Turning On or Off

With the desired partition selected, press B until the display shows *REMOTE ACCESS OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *REMOTE ACCESS OFF/ON (new setting).*

REPORTING FORMAT (0106-CS PHONE 1, 0116-CS PHONE 2) — DEFAULTS: ALL CID

This setting determines whether the panel uses the SIA or CID (Contact ID) reporting format for central station communication.

Programming

With the display showing *REPORTING FORMAT SIA/CID (current setting)*, press 1 (for SIA) or 2 (for CID), then press #.
The display flashes the entered setting, stops after pressing #, and displays *REPORTING FORMAT SIA/CID (new setting).*

RF CHECK-IN TIME (0301) — DEFAULT = 12 HOURS

This setting determines how many hours (2 - 24) the panel has to receive at least one signal from a wireless sensor (learned into a supervised group). If the panel does not receive a signal from any supervised wireless sensor within the set time, the panel reports a supervisory condition to the central station.

NOTE

For U.L. Listed commercial installations, the RF Tx Timeout must be set to 4 hours. For U.L. Listed residential installations, the RF Tx Timeout must be set to 24 hours.

Programming

With the display showing *RF TX TIMEOUT nn HOURS (current setting)*, enter the desired 2-digit timeout value (02 - 24), then press #.
The display flashes the entered setting, stops after pressing #, and displays *RF TX TIMEOUT nn HOURS (new setting).*

RF LOW BATTERY REPORT (05012) — DEFAULT = WEEKLY

This setting determines whether the panel reports to the central monitoring station or pager daily or weekly, when a wireless sensor or touchpad reports a low battery condition to the panel.

Programming

With the display showing *RF LOW BAT RPT DAILY/WEEKLY (current setting)*, press 1 (daily) or 2 (weekly), then press #.
The display flashes the entered setting, stops after pressing #, and displays *RF LOW BAT RPT DAILY/WEEKLY (new setting).*

RF SUPERVISOR REPORT (05013) — DEFAULT = WEEKLY

This setting determines whether the panel reports to the central monitoring station or pager daily or weekly, when the panel detects a wireless sensor supervisory condition.

With the display showing *RF SUPV REPORT DAILY/WEEKLY (current setting)*, press 1 (daily) or 2 (weekly), then press #.
The display flashes the entered setting, stops after pressing #, and displays *RF SUPV REPORT DAILY/WEEKLY (new* setting)

RING/HANG/RING (0211) — DEFAULT = ON

This setting determines how the panel picks up (seizes) the phone line for remote access. When turned on, the user calls the premises, listens for one or two full rings, hangs up, then calls the premises again within 10-40 seconds of hanging up. The system answers after the first ring. The "on" setting is recommended if an answering machine shares the phone line with the panel.

When turned off, the user calls the premises and listens for 12 full rings before the system answers. The "off" setting is recommended if there is no answering machine sharing the phone line with the panel.

Turning On or Off

With the desired partition selected, press B until the display shows *RING/HANG/RING OFF/ON (current setting).*
Press 1 (off) or 2 (on) then press #.
The display temporarily flashes the entered selection and displays *RING/HANG/RING OFF/ON (new setting).*

SENSOR TEXT (071) — DEFAULT = NONE

Use the following guidelines for programming text to identify zone/sensor locations.

- There are 16 character/word locations or "Item Numbers" for each zone/sensor name. Item numbers for each character/word appear on the next page.
- If a desired word does not appear in the list, create it using characters (custom text). *However, custom text is not spoken by the panel. Instead, a pause in speech occurs in the voice message.*
- When using words, spaces between them appear automatically. When creating words using characters, you must reserve an item number for a 'space' after creating the word.
- Each character or word uses up one item number. For example, a word from the list counts as one item number. A created word, such as BOY'S counts as six item numbers—4 letters, 1 apostrophe, and 1 space.
- Plan ahead before programming sensor text. You may need to abbreviate words you create to avoid running out of item numbers.
- With the display showing *LEARN SENSORS*, press B until the display shows *SENSOR TEXT.*
  Press # and the display shows *TEXT FOR SN 01.*
  Press # and the display shows:
  Sn 01 ITEM 00
  000 -
  where *ITEM 00* is the first character/word location and *000* is the 3-digit character/word number.
- Enter the 3-digit number of the desired character/word or scroll forward through the numbers by pressing B or backward by pressing A. If you make a mistake, simply enter the correct 3-digit number or continue scrolling through choices.
- Press # to accept the displayed choice and the display shows:
  Sn 01 ITEM 01
  000 -
- Repeat steps 4 and 5 as needed to complete the zone/sensor name.
- Press * after entering the last 3-digit character/word number. The display shows the complete text name. For example:
  TEXT FOR SN 01
  FRONT ENTRY DOOR

SIREN TIMEOUT (0313) — DEFAULT = 04 MINUTES

This setting determines how long sirens sound (01 - 30 minutes) if no one is present to disarm the system.

Programming

With the desired partition selected, press B until the display shows *SIREN TIMEOUT nn MINUTES (current setting).*
Enter the desired time value, then press #.
The display flashes the entered setting, stops after pressing #, and displays *SIREN TIMEOUT nn MINUTES (new setting).*

SIREN VERIFY (0610) — DEFAULT = OFF

This setting determines whether the panel monitors speakers connected to panel terminals 7 and 8.

NOTE

For UL Listed installations, this feature must be on.

Turning On or Off

With the display showing *SIREN VERIFY OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *SIREN VERIFY OFF/ON (new setting)*.

SMOKE VERIFY (0900) — DEFAULT = OFF

This setting determines whether the panel requires two alarm signals within five minutes (on) from 2- or 4-wire smoke detectors connected to panel zone input 8 and/or SnapCard zone inputs before activating system sirens and reporting to a central station or pager.

NOTE

For California State Fire Marshall Listed installations, this feature must be off.

Turning On or Off

With the display showing *ONBOARD OPTIONS*, press #. The display shows *SMOKE VERIFY OFF/ON (current setting)*.
Press 1 (off) or 2 (on), then press #.
The display flashes the entered number, stops after pressing #, and shows *SMOKE VERIFY OFF/ON (new setting)*.

STAR IS NO DELAY (0404) — DEFAULT = OFF

This setting determines whether the keychain touchpad star button controls a hardwire output (off) or the NO DELAY feature (on).

Programming

With the desired partition selected, press B until the display shows *STAR IS NO DELAY OFF/ON (current setting)*.
Press 1 (off) or 2 (on), then press #. The display flashes the entered setting, then stops after pressing # and displays *STAR IS NO DELAY OFF/ON (new setting)*.

STREAMLINING (0125-PAGER 1, 0135-PAGER 2, 0145-PAGER 3) — DEFAULT = ON

This setting determines whether the panel includes (off) or excludes (on) the account number when reporting to a pager.

Turning On or Off

With the display showing *STREAMLINING OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *STREAMLINING OFF/ON (new setting)*.

SUPERVISORY TIME (0300) — DEFAULT = RANDOM FROM 01:00 TO 05:00

This setting determines what time of day the panel reports supervisory and low battery reports to the central station. The setting is based on a 24-hour timer so a.m. and p.m. settings are not needed.

NOTE

The panel clock must be set with the correct time for accurate supervisory time reporting. Refer to the "User Programming" section for setting the panel clock.

Programming

With the display showing *SUPERVISORY TIME HH:MM (current setting)*, enter the desired 4-digit time value (for example, enter 0130 to set the supervisory time for 1:30 a.m.), then press #.
The display flashes the entered setting, stops after pressing #, and displays *SUPERVISORY TIME (new setting)*.

SWINGER LIMIT (05014) — DEFAULT = 1

This setting determines the maximum number of times a sensor/zone in groups 00-20, 29, or 34 can go into alarm during a single arming period before the panel automatically bypasses that sensor/zone. The automatic bypass is logged into the event buffer.

When set to 1, the panel automatically bypasses a sensor/zone the first time it causes an alarm. When set to 2, the panel automatically bypasses a sensor/zone if it causes a second alarm during the same arming period. A sensor/zone that is automatically bypassed can be automatically unbypassed during the same arming period, only if the system receives no further activations from that sensor/zone over the next 48-50 hours.

Changing the arming level clears all automatically bypassed sensor/zones and resets the Swinger Limit count on all sensors/zones.

Programming

With the display showing *SWINGER LIMIT n (current setting)*, press 1 or 2, then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

SYSTEM TAMPER (0517) — DEFAULT = OFF

This setting determines whether the armed partition goes into alarm if several incorrect access codes (40 consecutive keypresses) are entered. This setting also determines whether the panel reports to the central station if a bus device stops communicating with the panel.

NOTE

For U.L. Commercial Listed installations, this feature must be on.

Programming

With the desired partition selected, press B until the display shows *SYSTEM TAMPER OFF/ON (current setting).*
Press 1 (off) or 2 (on), then press #. The display flashes the entered setting, then stops after pressing # and displays *FIRE PANIC OFF/ON (new setting).*

TOUCHPAD PANIC REPORTING FORMAT (0401) — DEFAULT = OFF

This setting determines how the panel reports touchpad panic alarms to the central station.

When turned on, touchpad panic alarms report using the following 3-digit codes:

Medical—596, Auxiliary—597, Police—598, Fire—599

When turned off, touchpad panic alarms report using a 3-digit code from 500 to 503 with the last digit identifying the touchpad device number.

Turning On or Off

With the display showing *AUXILIARY PANIC OFF/ON (current setting)*, Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

TWO TRIP ERROR (5008) — DEFAULT = OFF

This setting determines if the panel sends an error report to the central monitoring station when a two-trip alarm is not verified. If this feature is turned on and a second sensor trip does not occur within a 4-minute time period, the panel sends a two trip error report to the central monitoring station.

Turning On or Off

With the display showing *TWO TRIP ERROR OFF/ON (current setting)*, Press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays the new setting.

TWO-WIRE SMOKE (0901) — DEFAULT = OFF

This setting determines whether panel zone input 8 is set up for 2-wire smoke detectors (on) or for standard intrusion or 4-wire smoke detectors (off).

NOTE

If 2-wire smoke detectors are connected to hardwire zone input 8, this setting must be turned on *before* entering the LEARN SENSORS menu.

Turning On or Off

With the display showing *ONBOARD OPTIONS*, press #. The display shows *TWO WIRE SMOKE OFF/ON (current setting)*.
Press 1 (off) or 2 (on), then press #.
The display flashes the entered number, stops after pressing #, and shows *TWO WIRE SMOKE OFF/ON (new setting)*.

UL 98 OPTIONS (0602) — DEFAULT = OFF

This setting determines whether the panel complies with UL 98 requirements (4-hour trouble beep restart, 4-hour backup battery test, 4-hour smoke (group 26) supervisory zone).

NOTE

For UL Listed installations, this feature must be on.

Turning On or Off

With the display showing *UL 98 OPTIONS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *UL 98 OPTIONS OFF/ON (new setting)*.

ZONE RESTORALS (05007) — DEFAULT = OFF

This setting determines whether the panel reports a restoral to the central monitoring station or pager for wireless or hard-wire zones in alarm before the alarm is canceled.

NOTE

As with all ITI panels, hardwire smoke detectors connected to Concord or SnapCard hardwire zones do not send restorals.

Turning On or Off

With the display showing *ZONE RESTORALS OFF/ON (current setting)*, press 1 (off) or 2 (on), then press #.
The display flashes the entered setting, stops after pressing #, and displays *ZONE RESTORAL OFF/ON (new setting)*.

Learning Sensors

This task illustrates *learning* wireless and hardwire sensors for the Concord Express system.

1. Choose the group for each sensor. Use the questions below and the chart on page 4-33 to decide which group.
   - Does the sensor need a delay?
   - Should the sensor be supervised?
   - At what level should the sensor be active?
2. Enter program mode.
3. If necessary, press **A** until the system displays:

SYSTEM PROGRAMMING

4. Press **#**. The system displays:

SECURITY

5. Press **B** until the system displays:

SENSORS

6. With the system displaying **SENSORS**, press **#**.

   The system displays:

LEARN SENSORS

7. Press **#**.

   The system displays

SENSOR GROUP 00

NOTE

See page 4-33 for a description of all sensor group characteristics.

NOTE

nn is the displayed (next available) sensor number.

8. Enter the desired 2-digit sensor group + **#**.

   The system displays:

TRIP SENSOR NN

9. To change the displayed sensor number, enter the desired 2-digit sensor number, then press **#**.

10. With the desired sensor number displayed, trip the sensor or zone as follows:

    - Hardwire Zones: trip the zone into the alarm state.
    - Wireless Sensors: follow the instructions included with each sensor or see the table on page 4-33 for a list of common wireless sensors and how to trip them.
    - Wireless Door/Window Sensors with External Contacts: place the external contact in the alarm condition, then activate the sensor's tamper switch.

11. Continue tripping sensors to learn them into the selected sensor group. To stop learning sensors into this group, press ***** twice and start again from step 5 (**LEARN SENSORS**) to learn sensors into another group.

Student Notes

Sensor Group Characteristics Table

No.	Name	Application	Alarm	Delay	Restoral	Supervisory	CS Report	Chime	Active Levels
00	Fixed Panic	24-hour audible fixed emergency buttons.	Police	Instant		✓	✓		1, 2, 3
01	Portable Panic	24-hour audible portable emergency buttons.	Police	Instant			✓		1, 2, 3
02	Fixed Panic	24-hour silent fixed emergency buttons.	Silent	Instant		✓	✓		1, 2, 3
03	Portable Panic	24-hour silent portable emergency buttons.	Silent	Instant			✓		1, 2, 3
04	Fixed Auxiliary	24-hour auxiliary sensor, such as Pendant Panic or holdup button.	Auxiliary	Instant		✓	✓		1, 2, 3
05	Fixed Auxiliary	24-hour auxiliary emergency button. Siren shutoff confirms CS report.	Auxiliary	Instant		✓	✓		1, 2, 3
06	Portable Auxiliary	24-hour portable auxiliary alert button.	Auxiliary	Instant			✓		1, 2, 3
07	Portable Auxiliary	24-hour portable auxiliary button. Siren shutoff confirms CS report.	Auxiliary	Instant			✓		1, 2, 3
08	Special Intrusion	Special belongings, such as gun cabinets and wall safes.	Police	Instant	✓	✓	✓		1, 2, 3
09	Special Intrusion	Special belongings, such as gun cabinets and wall safes.	Police	Standard	✓	✓	✓		1, 2, 3
10	Entry/Exit Delay	Entry and exit doors that require a standard delay time.	Police	Standard	✓	✓	✓	✓	2, 3
11	Entry/Exit Delay	Garage doors and entrances that require an extended delay time. *	Police	Extended	✓	✓	✓	✓	2, 3
12	Entry/Exit Delay	Driveway gates and entrances that require a twice extended delay time. *	Police	Twice Extended	✓	✓	✓	✓	2, 3
13	Instant Perimeter	Exterior doors and windows.	Police	Instant	✓	✓	✓	✓	2, 3
14	Instant Interior	Interior doors.	Police	Follower	✓	✓	✓		2, 3
15	Instant Interior	Interior PIR motion sensors. *	Police	Follower		✓	✓		2, 3
16	Instant Interior	Interior doors.	Police	Follower	✓	✓	✓		3
17	Instant Interior	PIR motion sensors. *	Police	Follower		✓	✓		3
18	Instant Interior	PIR motion sensors subject to false alarms. * †	Police	Follower		✓	✓		3
19	Delayed Interior	Interior doors that initiate a delay before going into alarm. *	Police	Standard	✓	✓	✓		3

No.	Name	Application	Alarm	Delay	Restoral	Supervisory	CS Report	Chime	Active Levels
20	Delayed Interior	PIR motion sensors that initiate a delay before going into alarm. *	Police	Standard		✓	✓		3
21	Local Instant Interior	24-hour local alarm zone protecting anything that opens and closes.	Police	Instant	✓	✓			1, 2, 3
22	Local Delayed Interior	Same as group 21, plus activation initiates a delay before going into alarm.	Police	Standard	✓	✓			1, 2, 3
23	Local Instant Auxiliary	24-hour local alarm zone protecting anything that opens and closes. ‡	Auxiliary	Instant	✓	✓			1, 2, 3
24	Local Instant Auxiliary	24-hour local alarm zone protecting anything that opens and closes. Sirens shut off at restoral. *	Auxiliary	Instant	✓	✓			1, 2, 3
25	Local Special Chime	Notify the user when a door is opened. Sounds emit from a local annunciator. *	Special Chime	Instant		✓			1, 2, 3
26	Fire	24-hour fire, rate-of-rise heat, and smoke sensors. §	Fire	Instant	✓	✓	✓		1, 2, 3
27	Output Module	Hardwire Output Module (HOM) lamp control or other customer feature. ‡	Silent	Instant	✓	✓			1, 2, 3
28	Output Module	HOM, PIR motion sensor, sound sensor, or pressure mat. ‡	Silent	Instant		✓			1, 2, 3
29	Auxiliary	Freeze sensor.	Auxiliary	Instant	✓		✓		1, 2, 3
32	Output Module	HOM, PIR motion sensor, sound sensor, or pressure mat. ‡	Silent	Instant					1, 2, 3
33	Siren	Wireless Siren Supervision. ‡	Silent	Instant		✓	✓		1, 2, 3
34	Gas	Carbon Monoxide (CO) Gas Detectors ‡	Auxiliary	Instant	✓	✓	✓		1, 2, 3
35	Local Instant Police	Local alarm in levels 1 and 2. Report to CS in level 3	Police	Instant	✓	✓	✓ (level 3 only)	✓	1, 2, 3

Note: Check marks (÷) represent characteristics present in a group.

* This group is not certified as a primary protection circuit for UL-listed systems and is for supplementary use only.

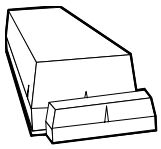
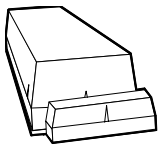
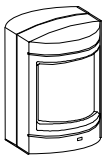
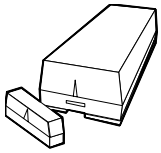
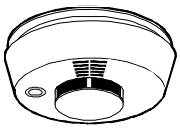
† Sounds instant police siren if two or more sensors are tripped within 4 minutes. Otherwise sensors are followers to delayed sensors. If Alarm Verification is on, group 18 functions like group 17.

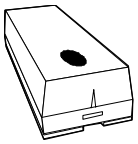
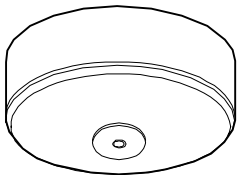
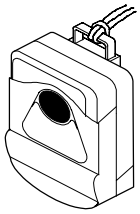
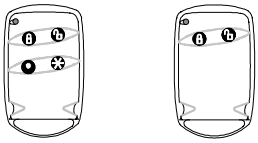
‡ This group has not been investigated by UL.

§ This group is required for UL-listed residential fire alarm applications.

Tripping Learn Mode Wireless Sensors

This task illustrates tripping the most common wireless sensors.

Sensor	Do This to Trip the Sensor
Crystal Door Window 	Remove the sensor cover.
SAW Door/Window 	Remove the sensor cover and press the *Press to Program* button.
PIR Motion 	Remove the sensor cover.
Shock 	Remove the sensor cover.
System Smoke 	Press and hold the test button until the system sounds transmission beeps.

Sensor	Do This to Trip the Sensor
Freeze 	Remove the sensor cover.
Rate-of-rise Heat Detector 	Press the Learn switch.
Glass Guard 	Remove the sensor cover.
Emergency Panics 	Press and hold the appropriate panic button(s) for 3 full seconds.
Key Chain Touchpads 	Press and hold the lock and unlock key simultaneously.
NOTE Refer to the specific sensor installation instructions for more details on tripping Learn Mode wireless sensors.	

System Configuration Worksheets

TABLE 4-2. Sensor Text/Item Numbers

001—Aborted	047—Detector	093—Interior	139—Pool	185—0
002—AC	048—Dining	094—Intrusion	140—Porch	186—1
003—Access	049—Disarmed	095—Invalid	141—Power	187—2
004—Active	050—Door	096—Is	142—Press	188—3
005—Activity	051—Down	097—Key	143—Program	189—4
006—Alarm	052—Download	098—Kids	144—Progress	190—5
007—All	053—Downstairs	099—Kitchen	145—Quiet	191—6
008—AM	054—Drawer	100—Latchkey	146—Rear	192—7
009—Area	055—Driveway	101—Laundry	147—Receiver	193—8
010—Arm	056—Duct	102—Left	148—Report	194—9
011—Armed	057—Duress	103—Level	149—RF	195—A
012—Arming	058—East	104—Library	150—Right	196—B
013—Attic	059—Energy Saver	105—Light	151—Room	197—C
014—Auxiliary	060—Enter	106—Lights	152—Safe	198—D
015—Away	061—Entry	107—Living	153—Schedule	199—E
016—Baby	062—Error	108—Load	154—Screen	200—F
017—Back	063—Exit	109—Loading	155—Second	201—G
018—Bar	064—Exterior	110—Low	156—Sensor	202—H
019—Basement	065—Factory	111—Lower	157—Service	203—I
020—Bathroom	066—Failure	112—Main	158—Shed	204—J
021—Battery	067—Family	113—Master	159—Shock	205—K
022—Bedroom	068—Father's	114—Mat	160—Side	206—L
023—Bottom	069—Feature	115—Medical	161—Siren	207—M
024—Breezeway	070—Fence	116—Memory	162—Sliding	208—N
025—Building	071—Fire	117—Menu	163—Smoke	209—O
026—Bus	072—First	118—Mother's	164—Son's	210—P
027—Bypass	073—Floor	119—Motion	165—Sound	211—Q
028—Bypassed	074—Force	120—No	166—South	212—R
029—Cabinet	075—Foyer	121—North	167—Special	213—S
030—Canceled	076—Freeze	122—Not	168—Stairs	214—T
031—Car	077—Front	123—Now	169—Stay	215—U
032—Carbon Monoxide	078—Furnace	124—Number	170—Supervisory	216—V
033—Central	079—Gallery	125—Off	171—System	217—W
034—Chime	080—Garage	126—Office	172—Tamper	218—X
035—Closed	081—Gas	127—OK	173—Temperature	219—Y
036—Closet	082—Glass	128—On	174—Test	220—Z
037—Closing	083—Goodbye	129—Open	175—Time	221— (space)
038—Code	084—Hallway	130—Opening	176—To	222—'(apostrophe)
039—Computer	085—Heat	131—Panic	177—Touchpad	223— - (dash)
040—Control	086—Hello	132—Partition	178—Trouble	224— _ (underscore)
041—Date	087—Help	133—Patio	179—Unbypass	225— *
042—Daughter's	088—High	134—Pet	180—Unit	226— #
043—Degrees	089—Home	135—Phone	181—Up	227— :
044—Delay	090—House	136—Please	182—West	228— /
045—Den	091—In	137—PM	183—Window	229— ?
046—Desk	092—Install	138—Police	184—Zone	

TABLE 4-3. System Event Trigger Numbers.

System Event	Trigger No.
Fire Alarm	001
Police Alarm	002
Auxiliary Alarm	003
Any Audible Alarm	004
Silent Alarm (sensor groups 2, 3, and duress)	005
Any Audible or Silent Alarm	006
HOM Group 27, 28, 32 in Alarm	007
Major Trouble (fail-to-communicate or receiver failure)	008
Arming to STAY or AWAY	009
Arming to AWAY	010
AVM is Interactive (audio session in progress)	011
Fail-to-Communicate (panel can't call CS or pager)	012
Partition 2 AVM Trip	013
Keychain Touchpad Star Button- Press	014
Smoke Power (when hardwire smokes need to be reset)	015
Exterior Siren	016
Interior Siren	017
AVM Trip (pulse)	018

TABLE 4-4. Sensor Group Event Trigger Numbers.

Sensor Group	Trigger No.	Sensor Group	Trigger No.
Group 00 in alarm	064	Group 17 in alarm	081
Group 01 in alarm	065	Group 18 in alarm	082
Group 02 in alarm	066	Group 19 in alarm	083
Group 03 in alarm	067	Group 20 in Alarm	084
Group 04 in alarm	068	Group 21 in Alarm	085
Group 05 in alarm	069	Group 22 in alarm	086
Group 06 in alarm	070	Group 23 in alarm	087
Group 07 in alarm	071	Group 24 in alarm	088
Group 08 in alarm	072	Group 25 in alarm	089
Group 09in alarm	073	Group 26 in alarm	090
Group 10 in alarm	074	Group 27 in alarm	091
Group 11 in alarm	075	Group 28 in alarm	092
Group 12 in alarm	076	Group 32 in alarm	096
Group 13 in alarm	077	Group 33 in alarm	097
Group 14 in alarm	078	Group 34 in alarm	098
Group 15 in alarm	079	Group 35 in alarm	099
Group 16 in alarm	080		

TABLE 4-5. Sensor Number Event Trigger Numbers .

Sensor Number	State	Trigger Number	State	Trigger Number
Sensor 01	in alarm	129	open	229
Sensor 02	in alarm	130	open	230
Sensor 03	in alarm	131	open	231
Sensor 04	in alarm	132	open	232
Sensor 05	in alarm	133	open	233
Sensor 06	in alarm	134	open	234
Sensor 07	in alarm	135	open	235
Sensor 08	in alarm	136	open	236
Sensor 09	in alarm	137	open	237
Sensor 10	in alarm	138	open	238
Sensor 11	in alarm	139	open	239
Sensor 12	in alarm	140	open	240
Sensor 13	in alarm	141	open	241
Sensor 14	in alarm	142	open	242
Sensor 15	in alarm	143	open	243
Sensor 16	in alarm	144	open	244
Sensor 17	in alarm	145	open	245
Sensor 18	in alarm	146	open	246
Sensor 19	in alarm	147	open	247
Sensor 20	in alarm	148	open	248
Sensor 21	in alarm	149	open	249
Sensor 22	in alarm	150	open	250
Sensor 23	in alarm	151	open	251
Sensor 24	in alarm	152	open	252

TABLE 4-6. System Feature Event Trigger Numbers.

Feature	State	Trigger Number	Feature	State	Trigger Number
Phone Test	in alarm	205	No Activity	in alarm	216
AC Failure	in alarm	206	Fire Panic	in alarm	217
CPU Low Battery	in alarm	207	Police Panic	in alarm	218
Auto Phone Test	in alarm	208	Auxiliary Panic	in alarm	219
Receiver Failure	in alarm	209	Opening Report	in alarm	220
Back In Service	in alarm	210	Closing Report	in alarm	221
Phone Failure	in alarm	211	Duress	in alarm	223
Buffer Full	in alarm	212	Force Armed Report	in alarm	224
Two Trip Error	in alarm	213	Recent Closing Report	in alarm	226
System Tamper	in alarm	214	Sensor Test Report	in alarm	227

TABLE 4-7. Response Numbers.

Siren Tracking	Trip Delay	Response Time	Response No.
no	no	momentary	00
no	no	3 minutes[5]	01
no	no	siren time[2]	02
no	no	sustained[3]	03
no	yes[4]	momentary	04
no	yes[4]	3 minutes[5]	05
no	yes[4]	siren time[2]	06
no	yes[4]	sustained[3]	07
yes[1]	no	momentary	08
yes[1]	no	3 minutes[5]	09
yes[1]	no	siren time[2]	10
yes[1]	no	sustained[3]	11
yes[1]	yes[4]	momentary	12
yes[1]	yes[4]	3 minutes[5]	13
yes[1]	yes[4]	siren time[2]	14
yes[1]	yes[4]	sustained[3]	15

Notes for 4-7, Response Number

1. If an event doesn't trigger sirens, siren tracking response numbers activate without turning on the output. If sirens are triggered by another event, the output pulses to match the siren. If siren cadence changes (for example, from police to fire), outputs set up for siren tracking change to match the siren and all pulsing outputs pulse to one common cadence. However, HOM outputs won't be synchronized with panel or SnapCards outputs or the panel speaker output.
2. If an event doesn't trigger siren response times the outputs activates only if sirens are active for another reason.
3. If an alarm event doesn't require disarming (no activity, closing report, etc.), outputs set up for a sustained response time remain activated until the next arming level change.
4. If an event occurs that activates an output set up for a trip delay, the delay and output activation can be cancelled by triggering the event restoral.
5. Activated outputs set up for a 3-minute response time remain active for the entire 3 minutes. To deactivate the output before the 3-minute response time expires, enter program mode or remove panel power.
   Activated outputs set up for a momentary or 3-minute response time restart if the same trigger occurs again.

Module 5-Testing the System

Introduction

This module teaches the installer how to test the Concord Express system after installation and programming.

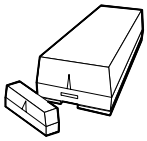
You should also test the system after any change in environment, equipment, or programming.

What's in This Module

Testing Sensors

This task illustrates testing sensors, zones, and touchpad panics after installing and programming them.

Perform this test after you finish programming all the sensors and whenever a sensor-related problem is suspected.



1. Place all zones/sensors in their secured (non-alarm) state.
2. At an alphanumeric touchpad, enter the sensor test mode by pressing 8 + Installer CODE + 3.

   The touchpad sounds one beep and displays:

   ```
   *SENSOR TEST
   ```

   The system stays in sensor test for 15 minutes. After 15 minutes the panel disarms automatically.

NOTE

See next page for instructions on how to trip the different kinds of wireless sensors.

3. Trip each zone/sensor and touchpad panic one at a time and listen for hardwire touchpads and Supervised Wireless Interior Sirens to sound one long beep.

   The display shows the sensor/zone name and OK. For example:

   ```
   FRONT DOOR OK
   ```

NOTE

See page for instructions on how to trip the different kinds of wireless sensors.

4. Press the STATUS button on the alphanumeric touchpad when you believe all sensors/zones and panics have been tested.
5. The system display will scroll through the untested sensors, for example:

   ```
   15 TEST GARAGE DOOR
   81 TEST POLICE PANIC
   ```

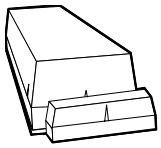
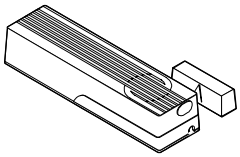
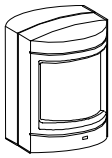
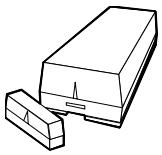
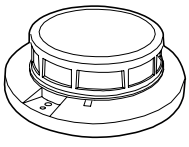
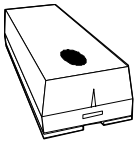
6. Test all untested sensors as above.
7. If you need more time, enter 8 + Installer CODE + 3 at the alphanumeric touchpad while the system is still in sensor test.

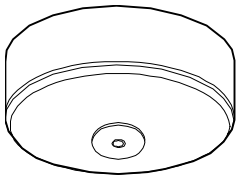
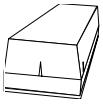
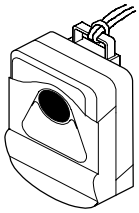
   This causes the system to stay in sensor test mode for another 15 minutes, preserving the list of untested sensors. After 15 minutes, the panel disarms.

8. To exit the sensor test, enter 1 + System Master CODE at the alphanumeric touchpad.
9. The system disarms to level 1.

Testing Learn Mode Wireless Sensors

This task illustrates testing the most common wireless sensors.

Sensor	Do This to Trip the Sensor
Crystal Door/Window 	Open the secured door or window.
SAW Door/Window 	Open the secured door or window.
PIR Motion 	Avoid the motion detector's view for 5 minutes, then enter its view.
Shock 	Tap the glass twice, away from the sensor. Wait at least 30 seconds before testing again.
System Smoke 	Press and hold the test button until the system sounds transmission beeps.
Freeze 	Apply ice to the sensor. Do not allow the sensor to get wet.

Sensor	Do This to Trip the Sensor
Rate-of-rise Heat Detector 	Rub your hands together until warm, then place one hand on the detector for 30 seconds.
Glass Guard 	Tap the glass 3 or 4 inches from the sensor.
Emergency Panic 	Press and hold the appropriate panic button(s) for 3 full seconds.
NOTE Refer to the particular sensor's installation instructions for more details on tripping Learn Mode wireless sensors.	

Correcting a Failed Sensor

This task outlines how to fix a sensor when it fails the sensor test.

Use an RF Sniffer

If touchpads and/or Supervised Wireless Interior Sirens do not beep when a sensor is tripped, use an ITI RF Sniffer (60-401) test tool to verify that the sensor is transmitting.

Constant beeps from the sniffer indicate a runaway (faulty) sensor. Remove the sensor's battery and replace the sensor.

Reposition the Sensor

1. Rotate the sensor and test for improved sensor communication at 90 and 180 degrees from the original position.
2. If poor communication persists, relocate the sensor.

Relocate the Sensor

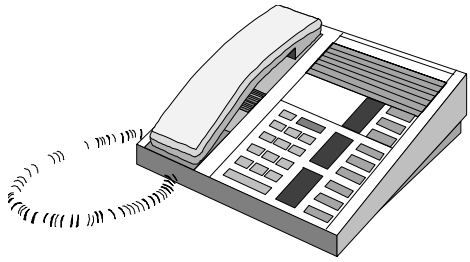
1. If possible, locate sensors within 100 feet of the panel. While a panel may have a range of 1,000 feet or more in the open, the environment at the installation site (for example, near wiring or metal objects) can have a significant effect on range.
2. Test the sensor a few inches from the original position.
3. Increase the distance from the original position and retest until you find an acceptable location.
4. Mount the sensor in the new location.
5. Replace the sensor if no location is acceptable.

Replace the Sensor

1. Using a sensor that you know works, test it at the same location.
2. If the sensor continuously fails the sensor test, avoid mounting a sensor at that location.
3. If the replacement sensor functions, contact ITI for repair or replacement of the problem sensor.

Testing Telephone Communications

This task illustrates testing phone communication between the panel and the central station (CS).



1. Inform the central station that you will be testing phone communications between the site and the CS.

2. Press 8 + System Master Code or Installation Code + 2.

   The touchpad sounds one beep and the display shows:

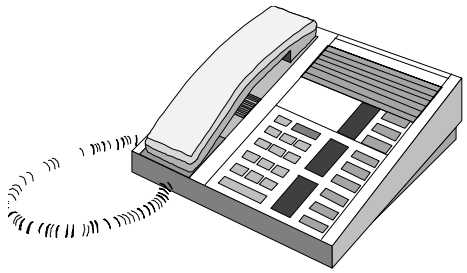
PHONE TEST

   When the panel completes the test, the system automatically returns to the previous arming level.

3. If the display shows PHONE TEST for 1½ minutes or more, enter 1 + System Master Code or Installation Code and refer to the Troubleshooting section.

Testing Central Station/Pager Communication

This task illustrates ensuring the Concord Express panel is correctly reporting alarms to a pager.



1. Make sure that all on-premises telephones are hung up (on hook).
2. Inform the central station operator that you'll be testing the communications between the Concord Express panel and the CS.
3. Arm the system.
4. Test each of the touchpad and wireless panic buttons and trip at least one sensor of each type (fire, intrusion, etc.).
5. Check the pager(s) to see if they received the correct report.

   Pagers display an event code, sensor number, and account number when they receive a message from the Concord Express panel.

   For example:

   999-02 56789

Pager Event Code Descriptions

111 System has been disarmed
222 System has been armed to STAY
333 System has been armed to AWAY
118 Trouble condition has been cleared
119 Alarm has been canceled
555 Phone test started
888 System has a trouble condition
999 System is in alarm

6. When you finish testing the system, call the CS operator again to verify that the alarms were received correctly.

Testing Outputs

This task illustrates testing the system's outputs (onboard outputs and the SnapCard).

1. Inform the central station (CS) operator that you will be testing the system.
2. Make sure that all on-premises telephones are hung up (on hook).
3. Activate each programmed item.

   Remember to arm the system to the correct level for devices that only work in a certain level.
4. Call the CS operator again to verify that the correct alarm was received at the CS.

Module 6-Troubleshooting

Introduction

This module teaches the installer how to troubleshoot the Concord Express system.

What's in This Module

Basic Troubleshooting

This task illustrates the basics of troubleshooting. Troubleshooting can help you eliminate system problems by methodically isolating and eliminating them.

Troubleshooting Equipment

- Voltmeter
- Butt Set
- RF Sniffer (Part # 60-401)
- Alphanumeric Keypad
- Appropriate Technical and Reference Manuals

NOTE

ITI Technical Support recommends that you use 22-gauge wire for Concord Express wiring.

Power Troubles

This troubleshooting section presents:

- Tips for preventing power troubles
- Power problems and solutions

Power Tips

- Make sure that the system is using the correct transformer.
- Make sure the transformer is not plugged into a switched outlet.
- For panel power problems, use a voltmeter to check the power between terminals 1 and 2. It should read 16.5 VAC.

Power Problems	Solutions
Panel does not power up. Touchpads don't display or respond.	1. Check that panel transformer is plugged into an unswitched outlet. 2. Check the AC circuit breaker to be sure the circuit is live. 3. Check that the backup battery is installed correctly and the AC power transformer is plugged in. 4. Check for proper panel and transformer wiring. 5. Measure the incoming AC voltage at panel terminals 1 and 2. It should read 16.5 VAC.
No incoming AC voltage at panel terminals 1 and 2.	1. Unplug the AC power transformer and disconnect the wires from the transformer and the panel. 2. Check the transformer-to-panel wire for short or open circuits. 3. Plug in the transformer and check for 16.5 VAC at the transformer's unconnected terminals. If zero (0) volts, replace the transformer.

Power Problems	Solutions
Touchpad displays *System Low Battery."*	1. Check that the backup battery is installed correctly and the AC power transformer is plugged in. 2. Measure the incoming AC voltage at the panel terminals 1 and 2. It should read 16.5 VAC. NOTE When the panel is running a backup battery test, the reading at the connected battery can range from 11.2 to 13.5 VDC. The panel automatically runs a backup battery test under the following conditions: (1) on initial power-up, (2) during sensor test, (3) once every minute when backup battery has failed, (4) once every 24 hours at the programmed STIME (UL 98 Options off) or once every 4 hours (UL 98 Options on). NOTE With the AC power transformer plugged in, the panel automatically charges the battery. While the battery is charging for the first time it is normal for the system to indicate *System battery failure*. This can take a number of hours depending on the battery's initial charge. Once the battery reaches 12.5 VDC (full charge as measured while in battery test), the condition clears. If the trouble condition persists after 24 hours, replace the backup battery.
After pressing STATUS the touchpad indicates *AC Power Failure*. (Panel continues to operate from backup battery.)	1. Check the AC circuit breaker to be sure the circuit is live. 2. Check for proper panel and transformer wiring. 3. Check that the transformer is plugged into an unswitched outlet and secured with the provided screw. 4. Check that the transformer is supplying AC to the panel. (Transformer internal fuse may be blown.) ⚠ WARNING Be careful when securing the transformer to an outlet with a metal cover. Hold the cover tightly in place. You could receive a serious shock if the metal outlet cover drops down onto the prongs of the plug while you are securing the transformer and cover to the outlet box.
Touchpad displays, "Sensor # trouble and/or Sensor # low battery."	Replace the sensor battery.

Phone Troubles

- Tips for preventing phone troubles
- Phone problems and solutions

Phone Tips

- Review the wiring diagram.
- Make sure the panel is wired ahead of the other telephones on the line.
- Sometimes fax machines, modems and similar devices affect communication with the central monitoring station.
- Voice mail and roll-over lines also affect remote access. If one of these features exist, isolate the phone line so the panel is the only equipment using it and test communications.

Phone Problems	Solutions
System does not seize phone line.	Check the wiring.
Phone voltage won't clear.	Check the line voltage. It should be 42.75 to 53.0 volts on hook and about 10 volts off hook.
System not sending signals to Central Station.	Make sure the Central Station phone number is programmed correctly.
Loss of dial tone on premises phones after wiring the RJ-31X/CA-38A (phone) Jack or connecting the DB-8 (phone) Cord.	1. Wait 2 minutes and try again. The panel may be busy trying to report to the central station. 2. Disconnect the panel DB-8 cord from the RJ-31 jack. If the phone still doesn't work, the system is okay and the problem is in the wiring. 3. Check RJ-31X jack wiring and TELCO block wiring. Replace RJ- 31X jack if necessary. 4. Check DB-8 cord connections at the panel and RJ-31X jack. Replace cord if necessary. 5. Perform a phone test after troubleshooting the phone line.
Constant dial tone, preventing dial-out on premises phones.	One or more polarity-sensitive phones exist on-site. Reverse the phone wires connected to the brown and gray wire terminals on the RJ-31X jack.
Phone does not work.	Disconnect the panel DB-8 Cord from the RJ-31 Jack. If the phone still doesn't work, the system is OK and the problem is in the phone wiring.

Programming Troubles

- Tips for preventing programming troubles
- Programming problems and solutions

Programming Tips

- Review the programming module.
- Bring an alphanumeric keypad to the site.

Programming Problems	Solutions
Wireless sensors and devices won't respond.	Check to see if the wireless transmitters are programmed into the panel.
Alphanumeric touchpad won't respond.	• Alphanumeric touchpads must be part numbers 60-746, 60-803-04, or 60-804-04. • Repeat the procedures for adding the touchpads. See the Concord Express Security System Reference Manual or • See Concord Express Programming Training Module - Verifying Alphanumeric Touchpad Unit Numbers.

Wireless Device Troubles

- Tips for preventing wireless device troubles
- Wireless device problems and solutions

Wireless Device Tips

- Conduct a sensor test (8 + access code + 3, then trip the sensors).
- Sensor Conditions
  - Supervisory
  - Trouble
  - Failure
  - Open
- If a sensor does not check in during the dealer sensor test, check the sensor battery or you may need a repeater.
- Duct work, concrete, and steel affect the panel's ability to hear a wireless device.
- Repositioning wireless devices may improve reception.

Wireless Device Problems	Solutions
Not checking in.	• Make sure the environment around the sensor isn't interfering with the signal. See the sensor's installation instructions for tips about placement of the sensor. • Make sure the sensor is programmed into the proper group.
Won't bypass sensor(s).	• Sensor is already bypassed. • Attempting to bypass a 24-hour sensor that cannot be bypassed (group 26 fire sensors). • Sensor that is not active in the current arming level. • Review the procedures for bypassing a sensor. • See Bypassing Window or Door Sensors in the Concord Express System Operation Training Module or see the bypassing instructions in the Concord Express Security and Home Automation Owner's Manual.
Alarm for no reason.	• Smoke sensors - Check for dirty chamber • Motion detectors: - Direct sunlight can cause false alarms - Heating/AC vents can cause false alarms - Plants and curtains that move cause false alarms. • Door/Window Sensor - Check the magnet spacing and for loose doors or windows at all door/window sensor locations.
Smoke sensor beeps once every minute.	Batteries are low. Replace all of the smoke sensor batteries.
Difficulty learning wireless sensor with HW contact.	The contact must be in the alarm state. (open if normally closed, close if normally open). If this isn't set up correctly, the sensor will be learned in backwards.

Grouping issues and explanations.	For more information on sensor groups, see the following references: - Appendix C of the Concord Security System Reference Manual - Concord Programming Training Module
Hardwired sensors showing open state.	The sensor may be learned in backwards. The contact must be learned in the alarm state. (open if normally closed, closed if normally open).
Difficulties learning in hardwired devices.	CAUTION Remove wiring for hardwire loop. Wire a 2k ohm resistor across the terminals. Complete the procedure for learning sensors (See Learning Sensors in the Concord Programming Training Module or see Adding Hardwire Sensors in the Concord Express Security System Reference Manual). Normally Open Sensors Follow the procedure and when you are prompted to trip sensors — short across terminals. Normally Closed Sensors Follow the procedure and when you are prompted to trip sensors — pull one leg of resister out of terminal. Rewire hardwire sensor (include one 2k ohm resister).
Hardwire smoke sensor. NOTE This "double disarm" procedure restores the hardwired smoke sensors to their normal condition.	1. Enter access 1 + CODE to disarm panel. 2. Enter 1 + CODE again to temporarily cut power to hardwired smoke sensors.
Receiver failure.	• Check the wiring from the panel to the receiver.
Runaway Wireless Sensor. - Sensor continuously transmitting - Sensor blocks transmissions from other sensors - Panel won't respond - All other sensors send supervisory reports to monitoring company	1. Use an RF sniffer to determine if the sensor is continuously transmitting. 2. Check for the proper installation of the antenna.

Panel doesn't respond to sensor activity (no alarm, chime, or sensor test sounds).	1. Check that the wireless sensor battery is installed. 2. Check the sensor battery for low voltage. Replace batteries, if necessary. 3. Use an RF Sniffer (60-401) to verify that sensor is transmitting. 4. Check that the sensor is programmed (learned) into panel memory. Learn the sensor, if necessary. 5. Verify panel antenna is installed correctly.
Panel doesn't respond to wireless touchpad commands.	1. Operate touchpads from different locations to locate areas of intermittent operation. 2. Check and/or replace wireless touchpad battery. 3. Program or reprogram the touchpad(s) into the panel.

Hardwire-Device Troubles

- Tips for preventing hardwire-device troubles
- Hardwire-device problems and solutions

Hardwired Problems	Solutions
Hardwired device tips.	• Review the wiring diagram. • Avoid running wires parallel to electrical lines or near fluorescent lights. • Check for hardwired zone problems, use a voltmeter to check the power between terminals.
Panel does not respond to hardwire zone input. NOTE Panel hardwire zones are ignored for 1 minute following power-up	1. Check that zones are programmed into panel and add if missing. 2. Make sure that zone is in a restoral-required group or make sure that system is armed to active level before tripping sensor.
Touchpad displays, "[sensor #], trouble" Panel zones use a 2K ohm resistor. Snapcard use a 2K ohm resistor.	1. Check that the end-of-line resistor is correctly installed in the zone loop circuit. 2. Check normally open (N/O - parallel) zone circuit for a short in the wires. 3. Check normally closed (N/C - series) zone circuit for an open (break) in the wires.
Hardwire zones will not learn into the panel.	• Verify wiring on zone 6. If the two-wire smoke loop option is off, zone 6 will be connected to terminals 16 and 17. It the two-wire smoke loop is on, zone 6 will be connected to terminals 16 and 17.

Normal Operation Troubles

- Tips for preventing normal operation troubles
- Normal operation problems and solutions

Normal Operation Tips	Review the device's installation instructions.

Normal Operation Problems	Solutions
System won't arm.	1. Wrong access code 2. If arming to level 2, make sure all monitored perimeter doors and windows are closed. 3. If arming to level 3, make sure all perimeter and interior sensors are closed. 4. Press STATUS for an indication of the problem.
Duress code isn't working.	1. Make sure the code is correct. 2. Make sure that the duress option is on and a duress code has been programmed.
Trouble beeps from panel.	• Press STATUS for an indication of the problem.

Module 7-System Operation

Introduction

This module teaches the installer how to use the basic features of the Concord Express system after it is installed and programmed.

What's in This Module

Basic System Commands

These tables include the most commonly used system commands for quick reference.

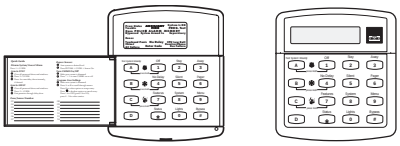
TABLE 7-1. Touchpad Commands.

System Response	Command
Indicates system's current status	* (STATUS)
Disarms to OFF	1 + CODE
Arms to STAY	2 + CODE
Arms to AWAY	3 + CODE
Arms to STAY	2 (quick arm on)
Arms to AWAY	3 (quick arm on)
Makes entry/exit doors instant (4 must be pressed within five seconds of arming)	(2 or 3) + CODE + 4 or (2 or 3) + 4
Arms silently (no arming status beeps)	5 + (2 or 3) + CODE or 5 + (2 or 3)
Arms with Latchkey feature enabled	(2 or 3) + CODE + 6 or 2 or (3 + 6)
Turns chime feature on and off	7 + 1
Identifies alarms in memory	7 + 6
Initiates a phone test	8 + CODE + 2
Initiates a sensor test	8 + CODE + 3
Initiates a dealer sensor test	8 + installer CODE + 3

Arming the System

This task illustrates arming the system to levels two and three from a touchpad and a keychain touchpad.

Arming the System: Touchpad



Arming to Level 2 - Stay or 3 - Away

Use Level 2 - Stay when the homeowner is in the home and wants security turned on.

Use Level 3 - Away when the homeowner will be off the premises.

NOTE

If the Quick Arm feature is turned on by the programmer, the user can choose the arming level without entering the code.

1. Enter **2** *for stay,* or **3** *for away.*

ENTER CODE

2. Enter the **access code**.

The touchpad will display:

ARMED TO STAY

or

ARMED TO AWAY

NOTE

Auto Stay Arming determines whether the system automatically arms to STAY (level 2) if the user arms the system to AWAY (level 3) without exiting the premises. This can help prevent accidental alarms by deactivating interior motion sensors during occupied arming periods.

During the delay period you will hear three series of beeps.

During the first series, you will hear one beep every 4 or 5 seconds (how long this lasts depends on the entry/exit delay setting).

The second series of beeps contains 10 quick beeps at the end of the delay period.

Finally, you'll hear two or three fast beeps confirming that the system is in Stay (2) or Away (3).

NOTE

If an alarm sounds, cancel it by entering 1 + access code.

3. Additional options:

   - To cancel the exit delay, press 4 within 5 seconds.

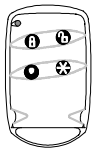
The touchpad will display:

ARMED TO STAY NO DELAY

or

ARMED TO AWAY NO DELAY

Arming the System: Keychain Touchpad



Arming to Level 2 or 3

This procedure tells how to arm the system to level 2 or 3 depending on how it was programmed.

1. Press and hold the **Lock** button until the keychain light blinks.

2. If anyone is exiting, do so during the exit delay period. An alarm will sound if you exit after the delay period is over.

   You will hear one beep every 4 seconds for most of the delay, then one beep every second for the last 10 seconds of the delay.

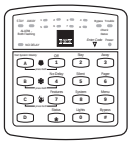
   Two short beeps indicate the end of the exit delay.

3. If the keychain is programmed to do so, you can cancel the delay by pressing the **Star** button until the keychain light blinks.

Disarming the System

This task illustrates disarming the system from a touchpad and keychain touchpad.

Disarming the System: Touchpad



Disarming the system places it in Level 1 - Off. That means that protection to doors, windows, and motion devices is turned off.

However, smoke detectors and police, fire, and auxiliary panic alarms are still on.

NOTE

If the system is in alarm, only the code is needed to disarm the system.

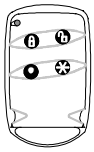
1. Enter **1** + the **access code**.

   The touchpad will display the date and time

2. You will hear:


ONE LONG BEEP.

Disarming the System: Keychain Touchpad



Disarming the system places it in Level 1 - Off. That means that protection to doors, windows, and motion devices is turned off.

However, smoke detectors and police, fire, and auxiliary panic alarms are still on.

Press and hold the **Unlock** button until the keychain light blinks.

Bypassing Window or Door Sensors

- This task illustrates two ways to arm the Concord Express system and make it ignore certain sensors. For example, use this task when you want to arm the system while a window is open (indirect) or when you want to arm the system, then use a certain door without tripping an alarm (direct).
- You can only bypass sensors using the touchpad. The keychain touchpad cannot directly bypass sensors, but it can be used to indirectly bypass sensors.

Directly Bypassing a Sensor: Touchpad

NOTE

When you directly bypass a sensor, you must use the primary access code only. Indirect bypassing allows you to use any access code.
End-user programming does allow for assigning other codes to direct bypass.

NOTE

In this procedure, *nn* represents the sensor number being bypassed.

Example: Use the *direct* method when the system is armed and you want to open a specific window while the system stays armed.

With the system armed, enter **BYPASS** + **access code** + **nn**.

The touchpad will display:

BYPASSED

Indirectly Bypassing a Sensor: Touchpad

NOTE

In this procedure, *nn* represents the sensor number being bypassed.

Example: Use the *indirect* method when the system is unarmed, you already have an upstairs window open, and you want to arm the system.

1. With the door or window(s) open that you want to bypass, enter the **access code** + **2** or **3**.

   (Enter 2 to arm to Level 2 - Stay or 3 to arm to Level 3 - Away.)

2. Press **BYPASS**.

   The touchpad will display:

   SENSOR NN BYPASSED

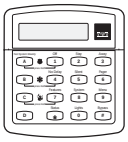
Sending Panic Alarms

This task illustrates sending a panic alarm using a touchpad or a keychain touchpad. Use a panic alarm to alert the central monitoring station to an emergency.

The system can send one of three panic alarms: *police*, *fire*, or *auxiliary.*

The *police* panic is a steady siren sound. The *fire* panic sounds a temporal 3. An *auxiliary* panic is a fast on-off siren sound.

Sending a Panic: Touchpad



Press the appropriate panic buttons: POLICE, FIRE, or AUXILIARY for 2 full seconds.

The touchpad will display:

POLICE ALARM

or

FIRE ALARM

or

AUXILIARY ALARM

Canceling a Panic

1. Within 15 seconds of activating a police or auxiliary alarm, enter the **1** + **access code** (No call is sent to the central monitoring station.)

   The touchpad will display:

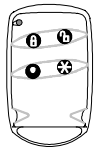
1-OFF REPORT CANCELED

2. If 15 seconds have already passed or if the alarm was a fire alarm, call the central monitoring station to cancel the alarm.

NOTE

Entering the **1** + **access code** after a fire alarm only turns off the sirens. It does not cancel the alarm.

Sending a Police Panic: Keychain Touchpad



Using a 2- button or 4-button keychain touchpad, press and hold the **Unlock** and **Lock** buttons together until the light blinks.

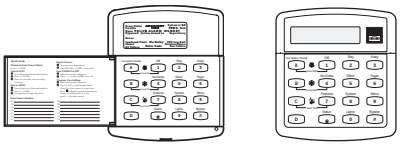
Sending an Auxiliary Panic from a 4-Button Keychain

Press and hold the **Star** and **Lights** buttons together until the light blinks.

Checking System Status

This task illustrates performing a short system status check. .

Checking System Status: Touchpad



Press the **STATUS** button.

The touchpad will display:

SYSTEM OK

or any system troubles, or any recent alarms.

Understanding Access Codes

This task provides a brief overview of the Concord Express system access codes. The system uses two types of codes: System Master Code and Regular User Codes The System Master Code is the main code for the system. Use it to control all functions and user programming of the system.

System Master Code

The system master code allows you to:

- Change System Master Code
- Add, change, and delete regular user codes

Regular User Codes

The system allows up to 16 regular user codes. The System Master Code can allow a Regular User Code to direct bypass and/or system tests. Delete additional codes when they are no longer needed.

Adding or Changing an Access Code

This task illustrates adding or changing a regular user access code or the system master code (if you are authorized).

Using the 2x16 LCD

NOTE

The system will not accept the same code for more than one user.

1. Enter user programming by pressing **9** + **System Master Code**.
2. Press **B** until the touchpad displays.

USER CODES

3. Press **#**.
4. Press **B** until the touchpad displays the type of code you want to change.
5. Press **#**.
6. Press **B** to scroll to the code you want to program.
7. Press **#**.
8. Enter the new code and press **#**.
9. Press ***** then **B** to move to another code or press ***** + **7** + **#** to exit user programming.

Deleting a Regular User Access Code

This task illustrates deleting a regular user access code. You cannot delete a System Master Code. Instead, change it to a new code when necessary.

When a code is deleted, it appears as four asterisks on alphanumeric touchpads.

1. Enter user programming by pressing **9** + **System Master Code**.

2. Press **B** until the touchpad displays.

USER CODES

3. Press **#**.
4. Press **B** until the touchpad displays the type of code you want to remove.
5. Press **#**.
6. Press **B** to scroll to the code you want to delete.
7. Press **#**.
8. Enter the System Master Code and press **#**.

   The touchpad displays:

USER 01 -- * * * *

9. Press ***** then **B** to move to another code or press ***** + **7** + **#** to exit user programming.

Module 8-End-User Training

Introduction

This module teaches the installer how to teach the homeowner to use the Concord Express system.

Rehearse the script with a coworker before you use it to teach a customer. That way, you'll be familiar with the script.

Read and follow the script that applies to the customer. For example, if the customer doesn't have a keychain touchpad, don't use that part of the script.

The script is shown in two columns: Read This and Do This. Read the script in the Read This column to the customer. Perform the steps in the Do This column.

The tasks are in a "demonstration and practice" style. Demonstration and practice is one of the best ways to teach people.

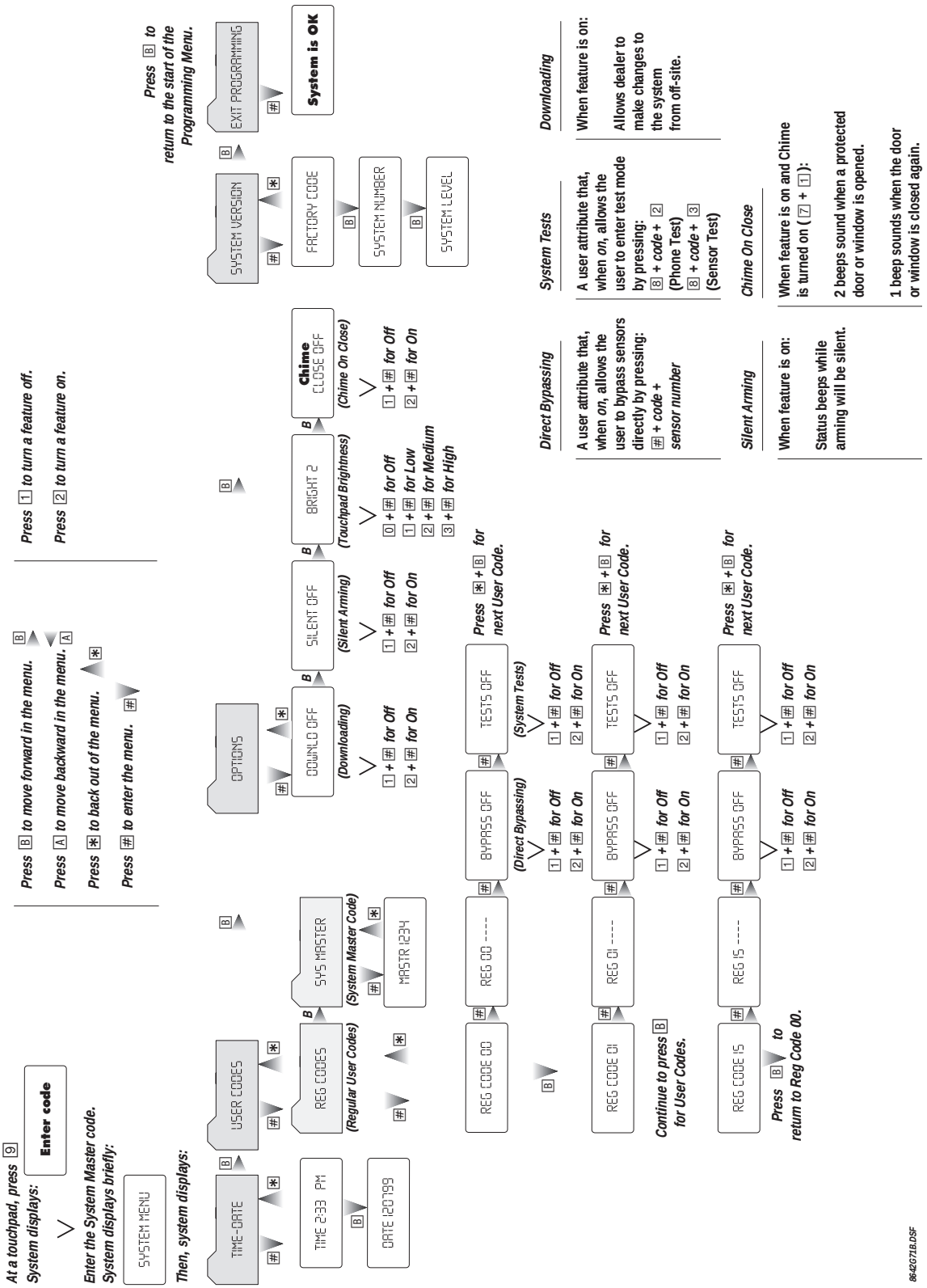
Each task begins with you demonstrating the steps to the customer and ends with you helping the customer perform the steps by themselves.

What You Need to Know to Operate Your System

CONCORD™ Express

User Programming Menu

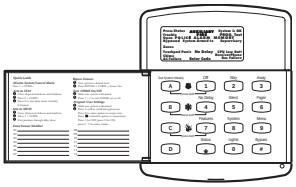
The figure below illustrates the User Programming menu, which you might find useful as you navigating through the menu. Shortcut numbers appear for each item.



Arming and Disarming the System

This task guides you through teaching the end user how to arm and disarm the system from a touchpad, telephone, and a keychain touchpad to Level 2 or 3.

Touchpad: Arming and Disarming the System



Read This	Do This
"I'm going to show you how to arm your Concord Express security system using a touchpad." "First, I'll arm the system to Level 2 - Stay." "Use Level 2 when the homeowner is in the home and wants security turned on."	1. Tell the customer what you are entering as you enter the **2** + **access code**.
"Notice that the touchpad displays, '2-STAY"	2. Show the customer the display.
"Now, I'll show you how to disarm the system." "Disarming the system places it in Level 1 - Off. That means that protection to doors, windows, and motion devices is turned off." "This is also how you turn off the system if you accidentally set off the alarm." "However, smoke detectors and police, fire, and auxiliary panic alarms are still on."	3. Tell the customer what you are entering as you enter the **1** + **access code**.
"The touchpad displays '1-OFF.'" "The speaker gives one long beep, then says, 'Alarm system is off.'"	4. Show the customer the display.
"Now it's your turn to arm the system. I'm going to tell you how to arm the system to Level 3 - Away while you push the buttons." "Use Level 3 - Away, when you will be out of the house." "Press 3 and enter your access code."	5. Watch and assist the customer.

Keychain Touchpad: Arming and Disarming the System

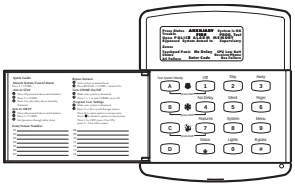
Read This	Do This
"I'm going to show you how to arm your Concord Express security system using a keychain touchpad." "First, I'll arm the system."	1. Show and tell the customer what you are entering as you press and hold the **Lock** button until the keychain light blinks.
"If you are within range of an interior siren, you will hear two or three short beeps.	
"Now, I'll show you how to disarm the system using the keychain touchpad." "Disarming the system places it in Level 1 - Off. Therefore, protection to doors, windows, and motion devices is turned off." "This is also how you turn off the system if you accidentally set off the alarm." "However, smoke detectors and police, fire, and auxiliary panic alarms are still on."	2. Tell the customer what you are doing as you press and hold the **Unlock** button until the light on the keychain blinks.
"If you are within range of an interior siren, you will hear one beep that means the system is disarmed to level one.'" "Now it's your turn to arm the system. I'm going to tell you how." "Press and hold the Lock button until the light on the keychain blinks."	3. Point to the **Lock** button, if necessary.
"Now, I'll tell you how to disarm the system." "Press and hold the Unlock button until the until the light on the keychain blinks."	4. Watch and assist the customer.

Bypassing Window or Door Sensors

This task guides you through teaching the end user how to arm the Concord Express system and make it ignore certain sensors. Use this task when you want to arm the system with a window or door open.

You can only bypass sensors using the touchpad. The keychain touchpad cannot directly bypass sensors.

Touchpad: Bypass Window or Door Sensors

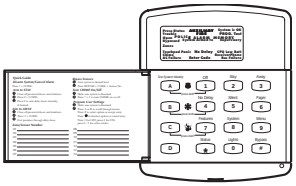


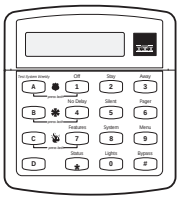
Read This	Do This
"I'm going to show you how to bypass a door or window sensor on your Concord Express security system using a touch-pad." "With the system off, open the door or window that you want to bypass."	1. Open a door or window (it must be one that has a working sensor installed.)
"Now, I'll arm the system and bypass the open window."	2. Show and tell the customer what you are doing as you enter the **2** or **3** + **access code**.
"Notice that the touchpad displays the number of the sensor that we left open."	3. Press **BYPASS** + **access code**.
"Go ahead and disarm the system now. Then it's your turn to bypass a sensor."	4. Assist the customer in disarming the system if necessary (press the **1** + **access code**).
"I'm going to talk you through bypassing a sensor." "Arm the system to level 2 and press the BYPASS button. This will bypass any open sensors."	5. Assist the customer as needed.
"Do you have any questions or do you want to try it again?"	

Checking the System Status

This task guides you through teaching the end user how to check the status of the Concord Express system.

Touchpad: Checking the System Status



Read This	Do This
"I'm going to show you how to check the status of your Concord Express system." "There are two ways to check the system status: a short status check and a full status check." "I'll show you how to make a short status check first."	1. Show and tell the customer as you press the **STATUS** button.
"Watch the touchpad display." "If your system is OK, that is, everything is right, it will display, 'System OK.'" "If there are any system troubles, it will tell display the problem area."	
"Press the STATUS button twice. *(The second press should follow the first within 5 seconds.)*	2. Watch and assist the customer as necessary.
"What problems did the system report?"	
	### Recent Alarm Check Enter **7** + **6**. The touchpad will display: ALARM MEMORY OK or Any recent alarms

End-User Training Exercise

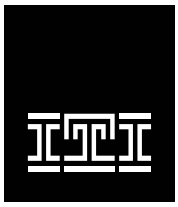
This exercise will familiarize you with teaching an end user how to use the Concord Express system.

Find a partner and take turns teaching each other how to perform the following user tasks. Use the script provided in this training module.

Tasks:

- How to arm and disarm the system from the wall-mounted touchpad
- How to bypass a sensor from the wall mount touchpad
- How to check the system status from a Touchpad

Security
Automation
Fire Protection
Access Control



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