Appendix B: Troubleshooting

This appendix contains a summary of system troubleshooting suggestions.

Table B.1 Troubleshooting System Problems

Feature	Problem	Solution
Access Code		
	Customer cannot remember access code(s).	
		1. Check your records to see if you have the customer's access code(s) on file. 2. If panel is monitored, trap the panel and read the access code(s) from the CS-4000 or read the access code(s) from the Downloader. 3. If panel is not monitored, clear memory and reprogram the panel locally.
	Installer cannot remember install code.	
		1. Check your records to see if you have the install code on file. 2. If panel is monitored, trap the panel and read the access code(s) from the CS-4000 or read the access code(s) from the downloader. 3. If the panel is not monitored and has no access to downloading, clear memory and reprogram the panel locally.
	Some access codes do "strange things."	
		1. Codes containing the number 6 are reserved. 6 is used for phone sensor bypassing. 2. Codes 7777, 8888, and 9999 are reserved for phone panic alarms. 3. Access code's last two digits must not be the same for correct duress code operation. (See duress code feature in this table.)
Arming/Disarming		
	System won't arm.	
		1. If arming to level 2, make sure all monitored perimeter doors and windows are closed. 2. If arming to level 3, make sure all perimeter and interior sensors are closed. 3. Press **STATUS** for an indication of the problem.
Batteries		
	Touchpad indicates *CPU low battery* and/or *System battery failure* is heard.	
		Check the panel backup battery and connections and replace if necessary. Also, refer to the panel power LED section in this table.
	Touchpad indicates *[sensor #] trouble* and/or *Sensor [sensor #] low battery* is heard.	
		Replace the indicated sensor's battery.

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
Bypass		
	Touchpad indicates *Fail* and/or *Invalid* is heard when you attempt to bypass a sensor.	
		Sensor may already be bypassed or you are trying to bypass a 24-hour sensor that cannot be bypassed or a sensor that is not active in the current security level.
	System cancels sensor bypass when you try to arm to level 2 or 3.	
		Arm to the desired level before bypassing a sensor.
Central Station Reporting		
	Central station is not receiving reports from panel.	
		1. Check that the DB-8 Cord is plugged into the panel phone jack and into the RJ-31X/CA-38A Jack. 2. Check for proper RJ-31X/CA-38A Jack to phone line wiring. 3. Verify with the central station operator that the correct receiver line phone number is programmed into the panel. Reprogram the phone number and retest, if necessary. 4 Verify that the correct phone format (ITI or 4/2) is being used. 5. Replace faulty RJ-31X/CA-38A Jack. 6. Replace faulty DB-8 Cord. 7. Check that the premises phone line is working. 8. Perform a phone test.
Duress Code		
	Optional duress code is not working.	
		1. Make sure last two digits of access code are not the same. (See access code feature in this table.) 2. Check that upper sensor 86 (duress alarm) is on.
False Alarm		
	Alarm is being sent by mistake.	
		Enter **ACCESS CODE + 1** immediately to cancel the alarm. This command bypasses the alarm if done within 15 seconds after activation (feature number F06 [Dialer Abort] must be on). The system will announce alarm bypassed and report will not be sent to the monitoring station. **Note** Fire alarms and duress detections cannot be bypassed.
Hardwire Alphanumeric Touchpad		
	Touchpad display seems "stuck" in the program mode.	
		Check that panel PROGRAM/RUN switch is set to RUN (up).
	Touchpad displays incorrectly or displays *DA ###* and does not respond to buttons.	
		1. If panel has been preprogrammed with an install code, enter the four-digit install code at a working touchpad or from a telephone . 2. Check for hardwire bus address confilct (two devices having the same device address). 3. Check for out-of-range device address number. Should be 000–007.

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
Hardwire Alphanumeric Touchpad (Continued)		
	Touchpad displays *"**********"* and does not respond to buttons.	
		1. Reset the touchpad by switching into and out of program mode. Switch the panel PROGRAM/RUN switch from RUN to PROGRAM. Enter the four-digit install code if panel has been preprogrammed with one using a working touchpad or telephone. Switch the panel PRO-GRAM/RUN switch back to RUN again. 2. Check for hardwire bus miswiring.
	Touchpad appears "dead" (no display or response to buttons).	
		1. Check that the wiring connector is plugged into the back of the touchpad. 2. Check for hardwire bus miswiring, opens, or shorts. 3. Check panel fuse F2.
Hardwire Output Module		
	LED is off (not blinking).	
		1. Check HOM and panel fuses. 2. Check wiring at HOM and panel. 3. Check that HOM unit number setting is different from all other con-nected bus devices. 4. Check for proper panel/HOM initialization after changing unit num-bers.
	LED stays on.	
		1. Reinitialize panel and HOM by turning panel power off and on. 2. HOM circuit failure. Replace HOM.
	LED blinks but outputs don't activate.	
		1. Check panel/HOM programming.
	One output never activates.	
		1. Check panel/HOM programming. 2. Check that the point (HOM output) programmed trigger event actu-ally occurs. 3. Check wiring at HOM terminals and connected device.
	Output(s) activates only momentarily.	
		1. Check that the panel/HOM point programming (HOM output) uses the correct response configuration.
	Output(s) activates randomly.	
		1. Check HOM and panel fuses. 2. Check wiring routing and length between panel and HOM. 3. Check that HOM unit number setting is different from all other con-nected bus devices.
Hardwire Output Module (Continued)		
	HOM tamper input is inoperable.	

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
		1. Some panels and panel versions do not "read" the HOM's built-in tamper input status. Connect the HOM tamper switch to a panel or HIM zone input.
	One output stays activated.	
		1. Check to see if the point is programmed for a 3-minute "on" time and if the triggering event for the point is repeatedly resetting the 3-minute timer. 2. Output may have failed or been overloaded. Reprogram to use a different (unused) output.
Hardwire Siren		
	Exterior sirens are not producing alarm sounds.	
		1. Check for 12 to 22 VDC between panel terminals 3 and 4 and for 12 VDC between terminals 4 and 12. 2. Check panel fuses F1 and F2. 3. Check for correct wiring at the siren and panel terminals. 4. Check for required jumper wire between panel terminals 5 and 12.
	Exterior sirens produce status sounds.	
		Check for correct wiring at the siren and panel terminals.
	Interior sirens are not producing sounds.	
		1. Check for 12 VDC between panel terminals 17 and 18 with siren on. 2. Check panel fuses F1 and F2. 3. Check for correct wiring at the siren and panel terminals. 4. Make sure that F11 (Interior Siren Sounds Disable) feature is off.
Hardwire Zones		
	Panel does not respond to hardwire zone input.	
		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. 3. If optional HIM zone, check that the HIM LED is blinking to show communication with panel. **Note** Panel hardwire zones are ignored for 1 minute following power-on (HIM zones are not ignored for this period).
	Touchpad indicates *[sensor #], trouble* and/or *Sensor [sensor #], trouble* is heard.	
		1. Check that the 4.7K ohm end-of-line resistor is correctly installed in the zone loop circuit. 2. Check normally open (N/O) circuit for a break in the wires. 3. Check normally closed (N/C) circuit for a short in the wires.

Lights	
	Light fixture using X-10 Lamp Module does not work.

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
		See X-10 Lamp Modules feature in this table.
Panel		
	Panel does not power up. Panel LED is off and alphanumeric touchpad display is dark.	
		1. Check that panel power switch is on. 2. Check the AC circuit breaker to be sure the circuit is live. 3. Check that the backup battery is installed correctly, the battery wires are connected, and the AC power transformer is plugged in. 4. Check for proper panel and transformer wiring. 5. Measure the incoming AC voltage at the panel terminals. Should read from 16 to 18.5 VAC at panel terminals 1 and 2.
	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 transfomer to panel wire for short or open circuits. 3. Plug in the transformer and check for 16.5 VAC at the transformer unconnected terminals. If zero (0) volts, replace the transformer.
	Panel power LED is on constantly, display indicates *CPU Low Battery* or voice sounds *Battery failure*.	
		1. Check that the backup battery is installed correctly, the battery wires are connected, and the AC power transformer is plugged in. 2. Measure the incoming AC voltage at the panel terminals. It should read from 16 to 18.5 VAC at panel terminals 1 and 2. 3. Remove the backup battery power by disconnecting the battery's red (positive) wire. 4. Check for 13.5 to 13.9 VDC battery charging voltage between panel terminal 4 (GND) and the disconnected battery red wire. If the charging voltage is **not** within range, call Technical Services. 5. Check for 11.5 to 13.9 VDC battery voltage between the backup battery's spade lugs. If the battery voltage is **not** within the recommended range, replace the battery. **Note** When the panel is running a backup battery test, the reading at the connected battery can range from 11.4 to 13.7 VDC. The panel automatically runs a backup battery test under the following conditions: (1) on initial power-up. (2) during sensor test (not dealer sensor test), (3) once every minute when backup battery has failed, (4) once every 24 hours, at the programmed STIME. 6. Restore the backup battery power by reconnecting the battery's red wire. **Note** While the AC power transformer is 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 arming level stops flashing. If the trouble condition persists after 24 hours, replace the backup battery.

Panel (Continued)

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
		Press **STATUS** for an indication of the problem. Doing a status or disarm (level 1) disables the trouble beeps for 10 hours.
Wireless Interior Siren (WIS)		
	No sound or LED activity from the siren.	
		1. Check that the panel AC transformer is plugged into an outlet. 2. Check that the WIS is not plugged into an outlet controlled by a switch. Relocate to a different outlet, if necessary. 3. Program the house code into the panel and set the WIS DIP switches. 4. Check that the panel is powered by the special two-wire Class II Line Carrier Power Transformer. 5. Make sure that the WIS is on the same electrical phase wiring as the AC power transformer. Relocate the WIS to various outlets to identify compatible locations. 6. Move the WIS to a circuit that is not used by any other appliances.
	Intermittent siren operation.	
		1. Check that the WIS is not plugged into an outlet controlled by a switch. Relocate to an unswitched outlet. 2. Move the WIS to a circuit that is not used by any other appliances.
	The WIS beeps once every minute.	
		The WIS may have a low battery. Replace with the appropriate battery based on the setting of DIP switch 1. (ON = NiCd, OFF = alkaline or lithium.)
Wireless Sensors		
	The panel does not respond to sensor activity. There are 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 that both panel antennas are installed and connections tight.
	The panel responds intermittently to wireless sensor signals.	
		1. Rotate the sensor position from 90 to 180 degrees. 2. Mount the sensor in a different location. 3. Verify that both panel antennas are installed and connections tight.
Wireless Touchpads		
	The panel does not 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.

X-10 Lamp Modules

Table B.1 Troubleshooting System Problems (Continued)

Feature	Problem	Solution
	Light fixtures controlled by the X-10 Lamp Module are not working.	
		1. Check that the lamp has a working bulb and that the lamps switch is on. 2. Confirm the lamp's operation at a working outlet. 3. Check that the lamps are plugged into X-10 Lamp Modules and the X-10 Lamp Modules are plugged into outlets that are not controlled by a switch. Relocate to nonswitched outlets, if necessary. 4. Check that the panel is powered by the special two-wire Class II Line Carrier Power Transformer ((60-678). 5. Check that the HOUSE dial on the X-10 Lamp Module matches the house code programmed into the panel.