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A UTC Fire & Security Company

Simon XT TableTop Control Panel Installation Manual

FCC compliance:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the affected equipment and the panel receiver to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 15 registration number: B4Z-910C-SIMON.

Part 68. This equipment complies with Part 68 of the FCC rules and the requirements adopted by ACTA. A label on this equipment contains a product identifier in the format US:AAAEQ##TXXXX. You must provide this number to the telephone company upon request.

FCC Part 68 registration number: US:B4ZAL02B55910.

The plug and jack used to connect this equipment to the premises wiring and telephone network comply with the applicable FCC Part 68 rules and requirements adopted by ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See the installation instructions for details.

The REN is used to determine the maximum number of devices that may be connected to your telephone line. Excessive RENs on a telephone line may result in devices not ringing in response to an incoming call.

In most cases, the sum of all device RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact your local telephone company.

For products approved after July 23, 2001, the REN is part of the identifier with the format *US:AAAEQ##TXXXX*. The digits represented by *##* are the REN without a decimal point. (For example, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ31X jack that is electrically in series and ahead of all other equipment attached to the same telephone line. If you have any questions concerning these instructions, consult your local telephone company or a qualified installer about installing an RJ31X jack and alarm dialing equipment for you.

If this equipment causes harm to the telephone network, the telephone company may temporarily disconnect your service. The telephone company may notify you in advance, but when advance notice isn't practical, they will notify you as soon as possible and advise you of your right to file a complaint with the FCC.

The telephone company may make changes in their facilities, equipment, operations, or procedures that could affect the operation of the equipment. If they do, they will notify you in advance so you can make the modifications to maintain uninterrupted service.

This equipment may not be used on coin service provided by the telephone company. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

If you experience trouble with this equipment, please contact the company that installed the equipment for service and repair information. If the equipment is causing harm to the telephone network, the telephone company may ask you to disconnect the equipment until the problem is resolved.

Contact information	For contact information, see www.utcfireandsecurity.com. or www.interlogix.com
Technical support	Toll-free: 888.437.3287 in the US including Alaska, Hawaii, Puerto Rico, and Canada. Outside the tool-free area, contact your dealer.

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Preface

This is the Simon XT TableTop Control Panel Installation Manual for model 600-1054-95R-TT. This document includes an overview of the product and detailed instructions explaining:

• how to install; and
• how to set up the product for customer use.

There is also information describing how to contact technical support if you have questions or concerns.

To use this document effectively, you should have a basic knowledge of electrical wiring and low-voltage electrical connections.

Read these instructions and all ancillary documentation entirely before installing or operating this product. The most current versions of this and related documentation may be found on our website. Refer to Online resources on page 60 for instructions on accessing our online publication library.

A qualified service person, complying with all applicable codes, should perform all required hardware installation.

Safety terms and symbols

These terms may appear in this manual:

Caution: Cautions identify conditions or practices that may result in damage to the equipment or other property.

WARNING: Warnings identify conditions or practices that could result in equipment damage or serious personal injury

Chapter 1
Introduction

Summary

This chapter provides an overview of the system and an outline of the steps you need to perform before you begin installing and configuring your security system.

In this chapter:

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Product overview#2
    System components#3
    Standard panel#4

Product overview

This security system can be used as a fire warning system, an intrusion alarm system, an emergency notification system, or any combination of the three. The system (Figure 1) has three types of components:

- Self-contained control panel
- Devices that report to the panel
- Devices that respond to commands from the panel

Figure 1: Simon XT TableTop Control Panel system
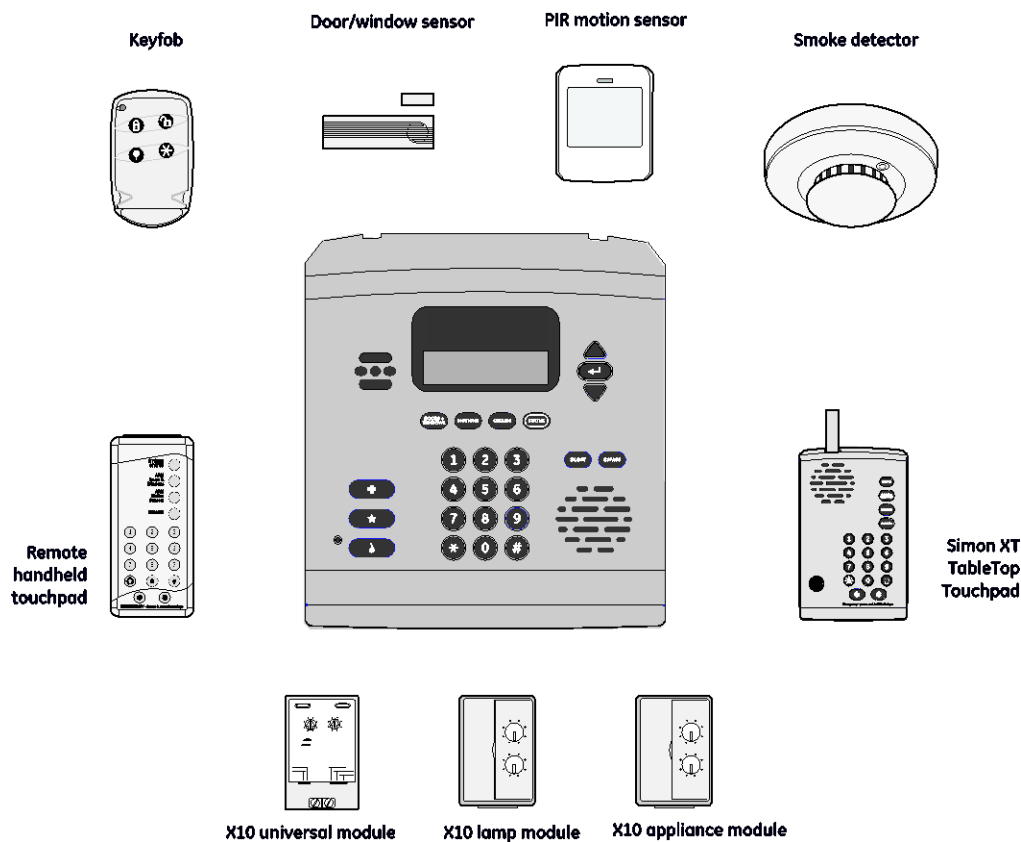
Note: The universal, lamp, and appliance modules require a special transformer.

The self-contained panel provides the main processing unit for all system functions. It receives and responds to signals from wireless sensors and wireless touchpads throughout the premises. For monitored systems, the panel can be connected to the premises phone line for central monitoring station reporting.

You can program the panel onsite from the keypad or remotely using Enterprise Downloader software. See Chapter 4 "Programming" on page 31 for complete onsite programming instructions.

System components

The system can monitor up to 40 sensors and may use any of the devices listed in Table 1

Table 1: Supported devices

Device	Description
Door/window sensor (60-670)	For intrusion protection, install door/window sensors on all ground-floor doors and windows. At a minimum, install them in the following locations: • All easily accessible exterior doors and windows. • Interior doors leading into the garage. • Doors to areas containing valuables such as cabinets and closets.
Indoor motion sensor (60-639)	Indoor motion sensors are ideal whenever it is not practical to install door/window sensors on every opening. Identify areas where an intruder is likely to walk through. Large areas in an open floor plan, downstairs family rooms, and hallways are typical locations for indoor motion sensors. For installations with pets, use the SAW Pet Immune PIR (60-807).
Outdoor motion sensor (60-639)	Use outdoor motion sensors to detect motion in a protected outdoor area. Detected motion in this protected area can sound chimes or turn on outside lights.
X10 module	When the panel is powered using the line carrier power transformer, the system can work with any of the following modules: • X10 lamp module (13-403) • X10 appliance module (13-402) • X10 power horn/remote siren module (13-398)
Freeze sensor (60-742)	Freeze sensors detect low temperature conditions which may indicate a furnace failure. The sensor contains a bimetallic thermal switch connected to the built-in transmitter. The sensor transmits an alarm signal to the panel when the surrounding temperature drops to about 41°F (5°C). When the temperature rises to 50°F (10°C), the sensor transmits a restore signal.
Water sensor (60-744)	Water sensors detect a water leak/rising water. The detector is connected to the sensor by an 8-foot (2.4-meter) cable. Water that reaches both detector contact points activates the sensor, causing it to transmit an alarm signal.
Smoke sensor (TX-6010-01)	Smoke sensors provide fire protection by causing an alarm to sound throughout the house. You can add smoke sensors near sleeping areas and on every floor of the house. Avoid areas that could have some smoke or exhaust such as attics, kitchens, above fireplaces, dusty locations, garages, and areas with temperature extremes. In these areas you may want to install Rate-of-Rise sensors to detect extreme temperature changes. Emergency planning on page 15 and the instructions packaged with the smoke sensor for complete placement information.

Device	Description
Carbon monoxide (CO) alarm (60-652-95)	The Learn Mode™ CO alarm alerts users to hazardous levels of carbon monoxide gas. If dangerous concentrations of gas are present, the red indicator light comes on, the internal siren goes off, and an alarm is transmitted to the panel. The panel sounds its own alarm and reports to the central station.
Keyfob (60-659)	The keyfob (keychain touchpad) lets you turn the system on and off from right outside the home or activate a panic alarm if there is an emergency. If you have X10 lamp modules, you can use keyfobs to turn all system controlled lights on and off.
ELM (encrypted learn mode) keyfob (60-832)	The ELM (encrypted learn mode™) 2-button keyfob is an alkaline battery-powered, wireless touchpad that allows users to arm and disarm their system, and activate a police or auxiliary panic alarm. Random encrypted signal transmissions provide high security to help prevent signal copying.
Remote handheld touchpad (60-671)	The remote handheld touchpad lets you turn the system on and off while in the home, turn system controlled lights on and off (all or individual lights), or activate a panic alarm if there is a nonmedical emergency.
Simon XT Table Top Touchpad (80-924-3-XT-TT)	The touchpad lets you turn the system on and off while in the home, turn system controlled lights on and off (all or individual lights), or activate a panic alarm if there is a nonmedical emergency.
Water-resistant personal help button (60-906-95)	The water-resistant personal help button is a wireless device used for activating police or auxiliary alarms through your system. When the help button is pressed, the light mounted under the cover will blink and an alarm signal is transmitted.

Caution: Do not use outdoor motion sensors for intrusion protection.

Standard panel

Table 2 describes the basic panel (out-of-box) hardware capabilities.

Table 2: Panel hardware capabilities

Hardware	Capability
Power	Input for an AC step-down, plug-in style transformer.
One siren output, up to two zone inputs	Terminals for connecting hardware sirens or normally closed (NC) loop switch circuits.
Phone line connection	Allows panel to communicate with central monitoring station and/or remote phone.

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Chapter 2
Planning

This chapter provides information to help you plan your installation to reduce time and costs.

In this chapter:

Content

Planning the installation

This section describes system capabilities to help you get familiar with your system. The planning sheets contain tables that let you record the hardware and programming configuration of your system. Complete all of the information ahead of time to help prepare for system installation. Refer to Sensor names on page 64 for sensor name segments listed alphabetically and by index number.

Control panel location

Locate the panel where alarm sounds can be heard and where the panel will be easily accessible for operation. Do not install the panel near a window or door where it can be reached easily by an intruder.

Planning sensor types and locations

The first step to an easy and successful installation is to decide what areas or items to protect, which lights or appliances to operate, and the best location for the panel, touchpad, sensors, and sirens.

Metal objects, mirrors, and metallic wallpaper can block signals sent by the wireless sensors. Make sure there are no metal objects in the way when installing the system.

Use Table 3 below, Recommended sensor groups and Table 4 on page 9, Sensor group characteristics to determine the appropriate sensor type for the sensors you will be adding. Use Table 5 on page 11, Sensor assignments/locations to document the planned sensor information. You will need to understand the application for each sensor. For example, keyfobs are typically programmed as sensor group 01 (portable panic) and used to send an intrusion alarm to a central monitoring station. This sensor type is instant intrusion, it does not require restoral or supervisory communication with the panel and it is active in the following arming levels:

- Level 0 - Sub-disarm.
- Level 1 - Disarm.
- Level 2 - Arm doors and windows.
- Level 3 - Arm motion sensors.
- Level 4 - Arm doors/windows and motion sensors.

Table 3: Recommended sensor groups

Device	Recommended sensor group
Indoor motion sensor	17 (intrusion), 25 (chime)

Device	Recommended sensor group
Outdoor motion sensor	25 (chime only)
Entry/exit door	10
Interior door	14
Window sensor	13
Smoke sensor	26
Keyfob	01, 03, 06, 07
ELM keyfob	01, 03, 06, 07
Remote handheld touchpad	01, 03, 06, 07
Simon XT TableTop Touchpad	01, 03, 06, 07
CO alarm	24
Freeze sensor	29
Water sensor	38
Personal help button	06, 07, 01, 03

Table 4: Sensor group characteristics

Type	Name/application	Siren type	Delay	Restoral	Supervisor	Active in arming levels
00	Fixed panic: 24-hour audible fixed emergency button.	Intrusion	I	N	Y	1234
01	Portable panic: 24-hour audible portable emergency buttons.	Intrusion	I	N	N	1234
02	Fixed panic: 24-hour silent fixed emergency buttons. Status light will not blink.	Silent	I	N	Y	01234
03	Portable panic: 24-hour silent portable emergency buttons. Status light will not blink.	Silent	I	N	N	01234
04	Fixed auxiliary: 24-hour auxiliary sensor.	Emergency	I	N	Y	01234
05	Fixed auxiliary: 24-hour emergency button. Siren shut off confirms CS report.	Emergency	I	N	Y	01234
06	Portable auxiliary: 24-hour portable auxiliary alert button.	Emergency	I	N	N	01234
07	Portable auxiliary: 24-hour portable auxiliary button. Siren shut off confirms CS report.	Emergency	I	N	N	01234
08	Special intrusion: such as gun cabinets and wall safes. DTM (tamper only).	Intrusion	I	Y	Y	1234
09	Special intrusion: such as gun cabinets and wall safes.	Intrusion	S	Y	Y	1234

Type	Name/application	Siren type	Delay	Restoral	Supervisor	Active in arming levels
10	Entry/exit delay: A delay that requires a standard delay time. chime.	Intrusion	S	Y	Y	24
13	Instant perimeter: Exterior doors and windows. chime.	Intrusion	I	Y	Y	24
14	Instant interior: Interior doors.	Intrusion	F	Y	Y	234
15	Instant interior: Interior PIR motion sensors.	Intrusion	F	Y	Y	234
16	Instant interior: Interior doors.	Intrusion	F	Y	Y	34
17	Instant interior: PIR motion sensors and Sound sensors	Intrusion	F	N	Y	34
18	Instant interior: Cross-zone PIR motion sensors.	Intrusion	F	N	Y	34
19	Delayed interior: Interior doors that initiate a delay before going into alarm.	Intrusion	S	Y	Y	34
20	Delayed interior: PIR motion sensors that initiate a delay before going into alarm.	Intrusion	S	N	Y	34
21	Local instant interior: 24-hour local alarm zone protecting anything that opens and closes. No report.	Intrusion	I	Y	Y	1234
22	Local delayed interior: same as group 21, plus activation initiates a delay before going into alarm. No report.	Intrusion	S	Y	Y	1234
23	Local instant auxiliary: 24-hour local alarm zone protecting anything that opens and closes. No report.	Emergency	I	Y	Y	01234
24	Local instant auxiliary: 24-hour local alarm zone protecting anything that opens and closes. Sirens shut off at restoral. No report.	Emergency	I	Y	Y	01234
25	Local special chime: notify the user when a door is opened.	Three beeps	I	N	Y	01234
26	Fire: 24-hour fire, rate-of-rise heat, and smoke sensors.	Fire	I	Y	Y	01234
27	Lamp control or other customer feature. No report	Silent	I	Y	Y	01234
28	PIR motion sensor, sound sensor, or pressure mat. RF thermostat. No report.	Silent	I	N	Y	01234
29	Auxiliary: freeze sensors.	Trouble beeps	I	Y	Y	01234
32	PIR motion sensor or sound sensor. No report	Silent	I	N	N	01234
34	Carbon monoxide alarm	Emergency	I	Y	Y	01234
35	Entry/exit delay interior PIR motion.	Intrusion	S	N	Y	234

Type	Name/application	Siren type	Delay	Restoral	Supervisor	Active in arming levels
36	Special Intrusion: such as gun cabinets and wall safes. Reports as tamper if tripped.	Intrusion	I	Y	Y	1234
37	Light switch control: X10 modules turn either on or off when a door is opened.	Silent	I	N	Y	01234
38	Auxiliary: water sensors.	Trouble beeps	I	Y	Y	01234
39	Local instant interior: 24-hour local alarm zone protecting anything that opens and closes. No report.	Intrusion	I	Y	Y	1234
40	Local special chime.	Three beeps	I	Y	Y	01234

Table 5: Sensor assignments/locations

Sensor #	Device	Sensor group	Sensor name/location	Notes
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				

Sensor #	Device	Sensor group	Sensor name/location	Notes
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

Cross-zoning

Cross-zoning (two-trip) refers to two different group 18 sensors that must be tripped within two minutes of each other to report an alarm to the central station. Figure 2 shows the path of a person walking from the kitchen to the living room. When the person is detected walking through the kitchen, the motion sensor in the kitchen is tripped, sounding a local alarm. If motion is detected by the living room motion sensor within two minutes, an alarm report will be sent to the central station.

Figure 2: Cross-zone diagram
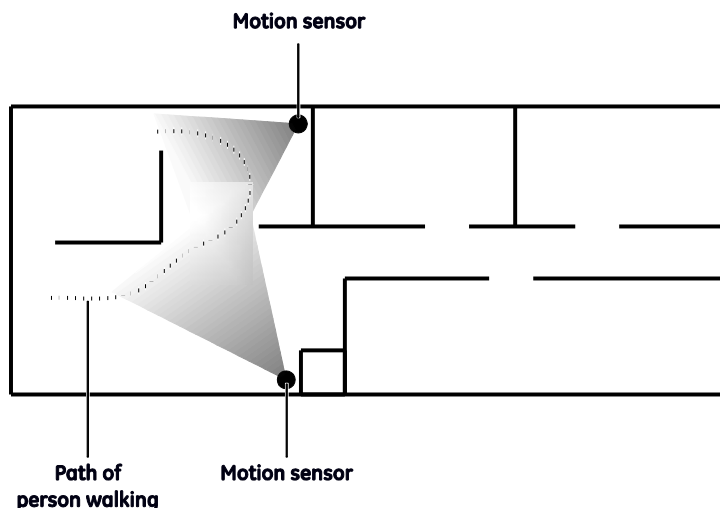
Note: We do not recommend cross-zoning for exit/entry zones. Each zone can individually protect the intended area.

System configuration

Table 6 is a worksheet for you to record the desired values for each programming option. For each option, the default value, effect of deletion (pressing Disarm while editing), range, and programming privilege are also listed. Each option is described in more detail in "Programming" on page 32.

Table 6: System programming menu options

Function	Default	Delete	Range	Access code[a]	Installer settings
Access codes menu					
Dealer code	654321, 54321, 4321, or 321	None	3 to 6 digits	D	
Installer code	654321, 54321, 4321, or 321	None	3 to 6 digits	D, I	
Master code	123456, 12345, 1234, or 123	None	3 to 6 digits	D, I, M	
User code 1	None	None	3 to 6 digits	D, I, M	
User code 2	None	None	3 to 6 digits	D, I, M	
User code 3	None	None	3 to 6 digits	D, I, M	

Function	Default	Delete	Range	Access code[a]	Installer settings
User code 4	None	None	3 to 6 digits	D, I, M	
User code 5	None	None	3 to 6 digits	D, I, M	
User code 6	None	None	3 to 6 digits	D, I, M	
User code 7	None	None	3 to 6 digits	D, I, M	
User code 8	None	None	3 to 6 digits	D, I, M	
Duress code	None	None	3 to 6 digits	D, I, M	
Code length	4	4	3 to 6	D	
Security menu					
Account number	00000	00000	0 to FFFFFFFFFF	D, I	
Downloader code	12345	12345	00000 to 99999	D	
Phone lock	Off	Off	On/Off	D	
Autoarm	On	Off	On/Off	D, I	
Exit extension	On	Off	On/Off	D, I	
Secure arming	Off	Off	On/Off	D, I	
No arm low battery	Off	Off	On/Off	D, I	
Quick exit	Off	Off	On/Off	D, I	
Downloader enable	On	Off	On/Off	D, I, M	
Supervisory protest	Off	Off	On/Off	D, I	
Phone # menu					
Phone #1	None	None	26 digits	D	
Phone #2	None	None	26 digits	D	
Phone #3	None	None	26 digits	D, I	
Phone #4	None	None	26 digits	D, I, M	
Downloader number	None	None	26 digits	D, I	
Phone options menu					
Manual phone test	On	Off	On/Off	D, I	
Fail to communicate	On	Off	On/Off	D, I	

Function	Default	Delete	Range	Access code[a]	Installer settings
DTMF	On (Touchtone)	Off (Pulse)	On/Off	D, I	
300 bps baud rate	On (300 bps)	Off (110 bps)	On/Off	D, I	
Ring/hang/ring	1	Off	1 to 7, Off	D, I	
Dial delay	30 seconds	15 sec.	15 to 45 sec.	D, I	
Call waiting code	None	None	26 digits	D, I	
Sensors menu					
Learn sensors				D, I	
Delete sensors				D, I	
Edit sensors				D, I	
Reporting menu					
Report options					
Opening reports	Off	Off	On/Off	D, I	
Closing reports	Off	Off	On/Off	D, I	
Forced armed	Off	Off	On/Off	D, I	
AC power failure report	Off	Off	5 to 254 minutes, Off	D, I	
Low CPU battery report	On	Off	On/Off	D, I	
Sensor alarm restoral report	Off	Off	1 to 3, Off	D, I	
24-hour sensor tamper report	Off	Off	On/Off	D, I	
Supervisory/tamper report	Off	Off	On/Off	D, I	
No usage	Off	Off	2 to 254 days, Off	D, I	
Swinger shutdown	On	Off	On/Off	D, I	
Programming report	Off	Off	On/Off	D, I	
Fire alarm verification	Off	Off	On/Off	D, I	

Function	Default	Delete	Range	Access code[a]	Installer settings
Report communication modes					
Phone 1 report mode	Off	Off	ALL SIA	D	
			ALL CID		
Phone 2 report mode	Off	Off	Alarms SIA	D	
			Alarms CID		
Phone 3 report mode	Off	Off	Nonalarms SIA	D, I	
Phone 4 report mode	Off	Off	Nonalarms CID Backup SIA Backup CID Voice dialer Off	D, I	
Timers menu					
Latchkey time	None	None	12:00 midnight to 11:59 PM, None	D, I, M	
Entry delay	30 sec.	30 sec.	30 to 240 sec.	D, I	
Exit delay	60 Seconds	45 sec.	45 to 254 sec.	D, I	
No activity timeout	Off	Off	2 to 24 hours	D, I	
Auto phone test	Off	Off	1 to 254 days	D, I	
Supervisory time	Midnight	None	12:00 midnight to 11:59 PM, None	D, I	
Alarm cancel	6 minutes	Off	6 to 255 minutes, Off	D, I	
RF timeout (supsync)	12 hours	12 hours	2 to 36 hours	D, I	
Fail to open time	Off	Off	12:00 midnight to 11:59 PM, Off	D, I	
Fail to close time	Off	Off	12:00 midnight to 11:59 PM, Off	D, I	
Siren timeout	5 minutes	Off - No timeout	2 to 254 minutes, Off	D, I	
Arming LED shutdown	Off	Off	On/Off	D, I	
Unvacated premises	On	Off	On/Off	D, I	
Smoke supervision	On	Off	On/Off	D, I	

Function	Default	Delete	Range	Access code[a]	Installer settings
Touchpad options menu					
Keyfob no delay	Off	Off	On/Off	D, I	
Panic alarms	On	Off	On/Off	D, I	
Remote touchpad arming	Off	Off	On/Off	D, I	
System options menu					
RF Jam detect	Off	Off	On/Off	D, I	
Demo mode	Off	Off	On/Off	D, I	
HW1 function	1	Off	1 - Interior siren output 2 - Output activated when armed 3 - Output activated when disarmed 4 - FTC output (FTC must be on) 5 - Output activated for alarm Off - No output	D	
24-hour clock	Off	Off	On/Off	D, I	
Siren options menu					
Panel piezo beeps	On	Off	On/Off	D, I, M	
Panel voice	On	Off	On/Off	D, I, M	
Panel piezo alarms	On	Off	On/Off	D, I, M	
Trouble beeps	On	Off	On/Off	D, I	
Voice chime	Off	Off	Off - No voice chime 1 - Voice chime (sensor name) 2- Chime bell 3- Soft chime bell	D, I	
Status beeps volume	7	7	1 - 10	D, I, M	
Hardwired siren supervision	Off	Off	On/Off	D, I	

Function	Default	Delete	Range	Access code[a]	Installer settings
Speaker volume	8	8	1 to 8	D, I, M	
Panel silent police panic	Off	Off	On (silent), Off (audible)	D, I	
Panel tamper alarm	Off	Off	On/Off	D, I	
Alarm report verification	Off	Off	On/Off	D, I	
Audio verify menu					
Audio mode	Off	Off	Off - Audio mode disabled 1 - Instant mode 2 - Callback mode	D, I	
Fire shutdown	Off	Off	On/Off	D, I	
Panic talk	Off	Off	On/Off	D, I	
Vox receiver gain	6	6	1 to 32	D, I	
Vox mic gain	24	24	1 to 64	D, I	
Vox mic gain range	64	64	1 to 64	D, I	
Manual mic gain	64	64	1 to 64	D, I	
Light control menu					
Set entry lights	Off	Off	On/Off for each unit number from 1 to 8	D, I, M	
Sensor light	Off	Off	1 to 8, Off	D, I, M	
Light schedule	None	None	HH:MMx for start and stop times, None	D, I, M	
Housecode	A	A	A to O	D, I, M	
Lock interval	None	None	HH:MMx for start and stop times, None	D, I, M	
System test menu					
Sensor test				D, I, M	
Communication test				D, I, M	
System download				D, I, M	

Function	Default	Delete	Range	Access code[a]	Installer settings

[a] This column tells what type of access code is allowed to make changes
D = Dealer code
I = Installer code
M = Master code

Emergency planning

Use these guidelines when drawing an emergency floor plan for the homeowner:

- Show all building levels.
- Show exits from each room. (We recommend two exits per room.)
- Show the locations of all security system components.
- Show the locations of any fire extinguishers.

Chapter 3
Installation

This section describes how to connect hardwired devices, and the AC power transformer.

In this chapter:

Content

Panel connections

The panel has three screw terminals, two telephone connections, and a 9 VAC plug (Figure 3).

Figure 3: Simon XT TableTop Control Panel terminal connections
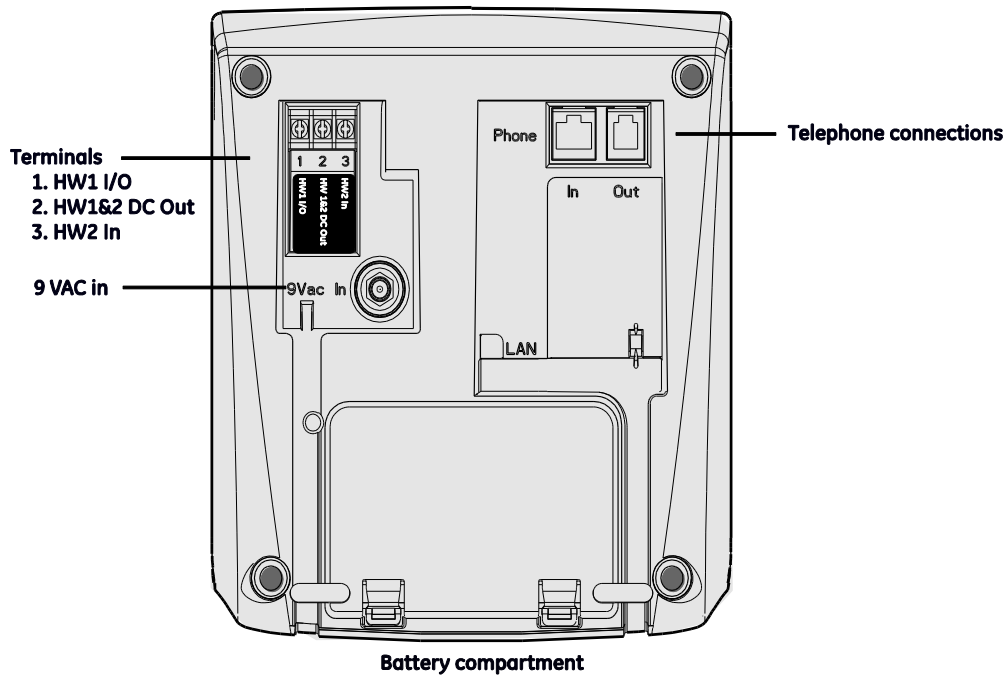
Hardwired device terminals

The screw terminals connect sirens, and/or hardwired detectors.

Program sensors and devices before you install them. Follow the instructions in Sensors on page 35 to add the sensors to panel memory.

HW1 I/O, HW2 In, and HW1&2 DC Out terminals

The HW1 I/O terminal is dual purpose and can be used for either siren or hardwired contact connections. The HW2 In terminal is an input only.

Interior sirens

From the factory, the HW1 I/O terminal input is set up for interior siren operation (status and alarm sounds). HW1&2 DC Out provides the positive (+) voltage.

Note: The total current available from HW1&2 DC Out is 250 mA at up to 120°F (49°C).

With Hardwired Siren Supervision turned on, sirens connected to HW1 I/O are supervised and require a 4.7 kohm resistor in the circuit. If this terminal is not used, turn Hardwired Siren Supervision off.

LD105 hardwired interior siren

You must always wire interior sirens with a resistor in the circuit. For circuit supervision which allows the panel to detect if the siren wire is cut (open), you must turn on Hardwired Siren Supervision. (See Table 21 on page 42).

Note: Do not install the resistor at the panel terminals. This does not provide supervision of the wire.

Connect the LD105 hardwired interior siren (13-374) to the panel using a 4.7 kohm resistor (included with the siren) as shown in Figure 4. The resistor must be connected across the siren wires as close to the siren as possible.

Figure 4: Hardwired interior siren with supervision
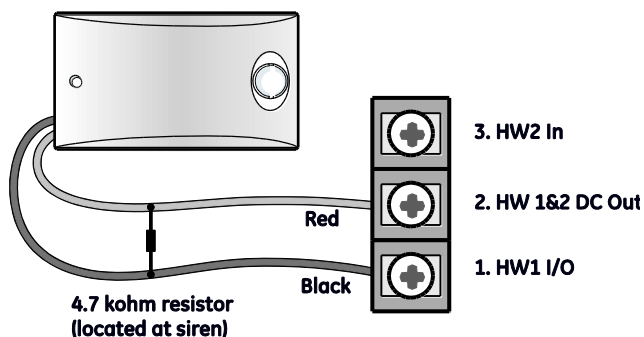
Hardwired contacts

To set up HW1 I/O and/or HW2 In for hardwired contacts, make the required connections as described below, then proceed to Programming overview on page 26 to add (learn) them into panel memory.

You can connect hardwired reed switches (normally closed loop only) to HW1 I/O, if not being used for a hardwired siren, and/or HW2 In.

Connect only normally closed (NC) reed switches to HW1 I/O and/or HW2 In. Other types of hardwired detectors should not be used.

The total resistance of the wire loop must not exceed 3 ohms. This allows you to use up to 200 ft. (61 m) of two-conductor, 22-gauge stranded wire.

Connect hardwired reed switches to the panel using a 47 kohm resistor (not a 4.7 kohm resistor) as shown in Figure 5. The resistor must be connected at the last switch in the circuit. Do not install the resistor at the panel terminals. This does not provide supervision of the wire.

Figure 5: Connecting normally closed hardwired reed switches
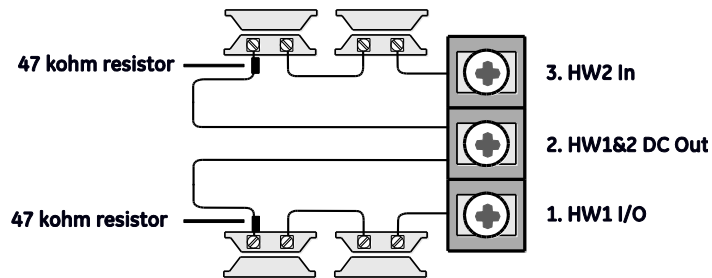
Telephone connections

You can connect a phone line to the panel for systems monitored by a central monitoring station or systems that notify users by a voice event notification.

DSL (digital subscriber line) allows the use of multiple devices on a single phone line simultaneously. For DSL environments, connect the panel line-in jack to an available phone jack on the premises. You might also need an inline filter to ensure panel reporting is successful.

Note: Avoid connecting the panel to a standard phone (voice) line in this manner. Other devices in use at the same time the panel is using the line can prevent reports from going through.

Full line seizure

Full line seizure allows the panel to take over (seize) the phone line, even if another device on the line is in use. This method requires that the panel be wired before all other phones, answering machines, computers, or other devices on the phone line.

Use the RJ31X (CA-38A) jack when wiring for full line seizure. This lets the user quickly and easily disconnect the panel from the phone line in case the panel disables the phone line due to a malfunction.

To wire a full line seizure with an RJ31X, see Figure 6 on page 21 and do the following:

1. Run a four-conductor cable from the premises Telco block to the RJ31X.

2. Connect the four-conductor cable wires to the RJ31X.

3. Disconnect the green and red premises phone jack wires from the Telco block and splice them to the four-conductor cable black and white (or yellow) wires. Use weatherproof wire connectors for these splices.

4. Connect the four-conductor cable green and red wires to the Telco block TIP (+) and red to RING (–) posts.

5. Connect the phone cord included with the panel to the RJ31X and the panel LINE jack.

Figure 6: Full line seizure wiring with RJ31X
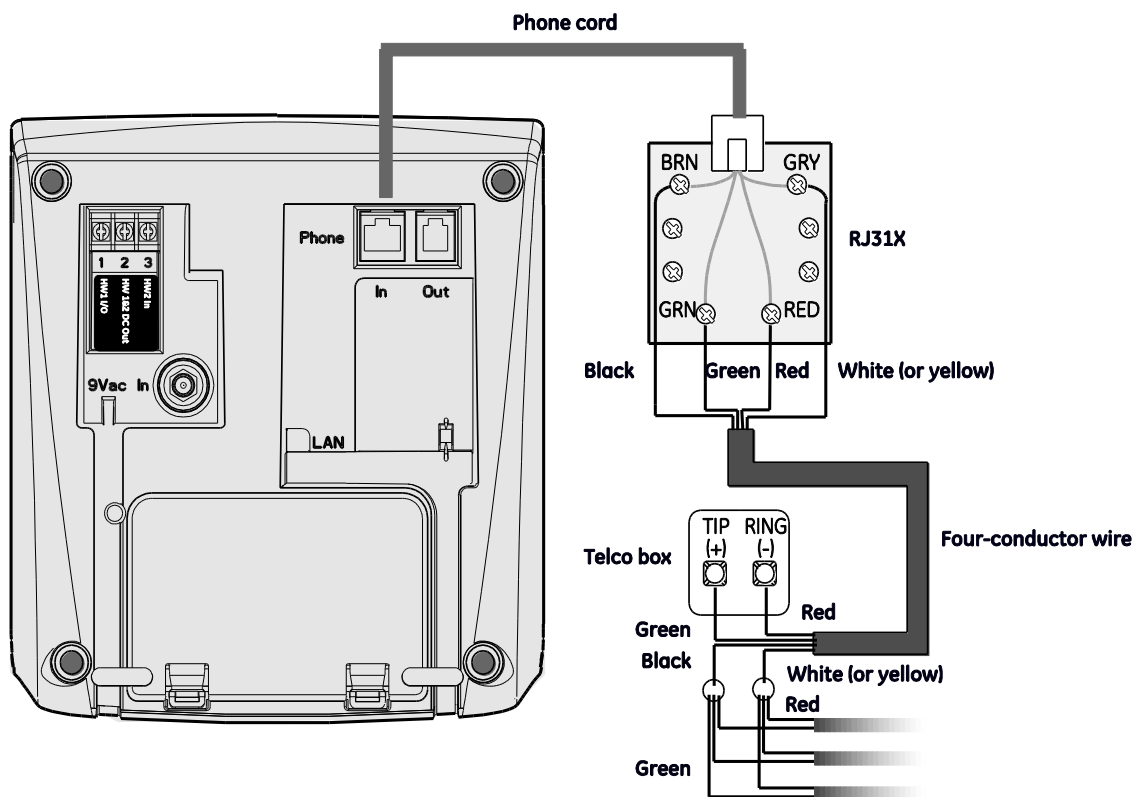
If a single phone is all that exists on the premises, full line seizure can be accomplished without an RJ31X.

To wire a single phone, see Figure 7 and do the following:

1. Disconnect the phone from the premises phone jack and plug it into the panel PHONE jack. This jack is disconnected automatically whenever the panel reports.

2. Connect the included phone cord to the panel LINE jack and the premises phone jack.

Note: If customers add phones or other phone devices to another phone jack, full line seizure no longer exists. Inform them to contact you if they want to add a phone or other device so that you can rewire for full line seizure by adding an RJ31X.

Figure 7: Full line seizure wiring with single landline phone
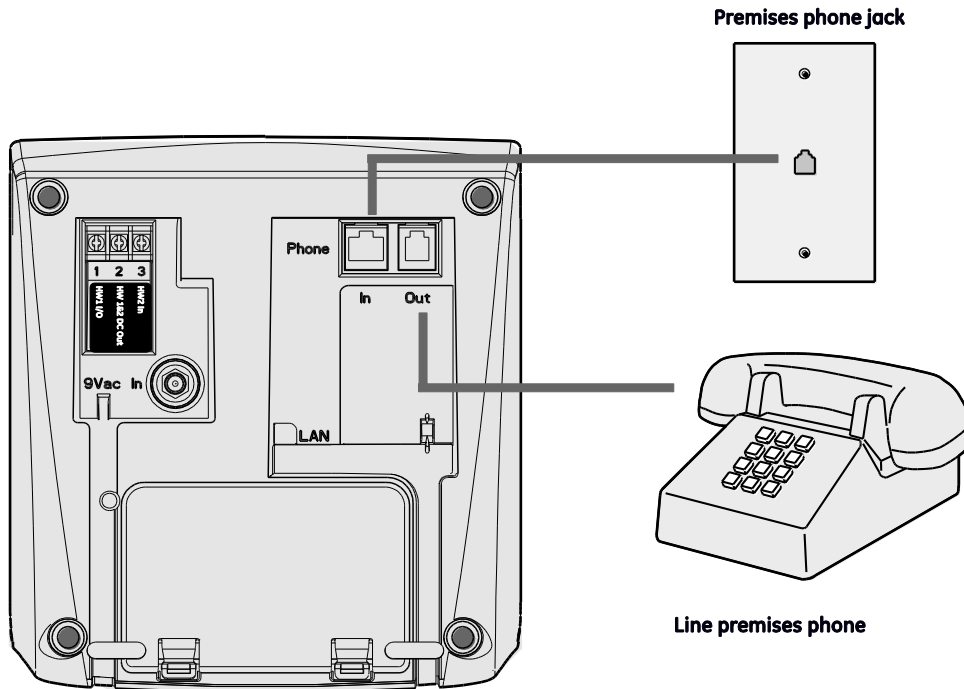
Power transformer connection

Connect the power transformer to the panel AC connector as shown in Figure 8.

Figure 8: Transformer connections
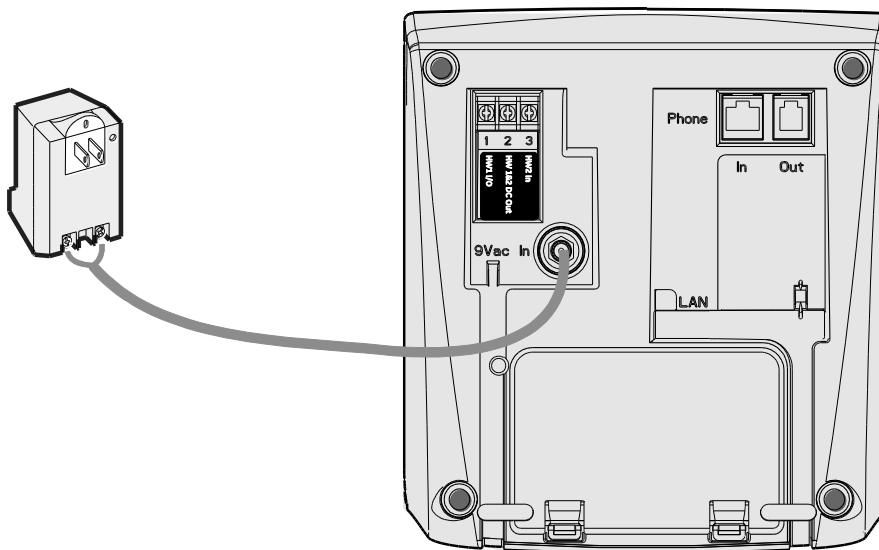
Note: Do not plug in the transformer at this time

Powering up the panel

When applying power to the panel, first connect the backup battery, then plug in the AC power transformer. This sequence prevents a battery fault condition.

Maximum battery charge current is 45 mA. It may take up to 24 hours for a new battery to fully charge.

Backup battery

To connect the backup battery (6 VDC, 1.2 Ah), do the following:

1. Pull up on the tabs at the bottom of the battery compartment cover (Figure 3 on page 18) to lift off the cover.

2. Remove the white plastic covers on the battery terminals.

3. Connect the red battery lead to the red battery terminal (+) and the black battery lead to the black battery terminal (-).

4. Place the battery in the battery compartment and replace the battery compartment cover by aligning the tabs at the top of the cover first, then snapping the bottom of the cover down.

Caution: Do not connect the battery until you are ready to power up the panel.

Applying AC power

To apply AC power, do the following:

1. Make sure the outlet is not controlled by a switch or that it is not part of a ground fault circuit interrupt (GFCI).

2. Remove the center screw from the outlet cover plate and hold the cover plate in place.

WARNING: Use extreme caution when securing the transformer to a metal outlet cover. You could receive a serious shock if a metal cover drops down onto the prongs of the plug.

3. Plug the transformer into the lower receptacle of the outlet so that the hole in the transformer tab lines up with the outlet cover screw hole.

4. Insert the cover plate screw through the transformer tab and the outlet cover plate. Tighten the screw.

X10 modules

To install lamp and appliance modules, do the following:

1. Set the unit code dial to a unit number between 1 and 8.

2. Set the housecode for the installation.

3. Plug the module into a wall outlet.

4. Plug the lamp/appliance into the module

Caution: Do not plug in appliances or lamps with 300-watt or larger bulbs into Lamp modules.

To install universal modules, do the following:

1. Set the unit code dial to a unit number different from all other X10 modules (between 1 and 8).

2. Set the housecode for the installation.

3. Set the module switches to momentary and relay only.

4. Connect the module terminals to the desired device terminals.

5. Plug the universal module into a wall outlet.

To install powerhorn modules, do the following:

1. Set the unit code dial to unit number 9 or 10.

9 - Sirens with this setting sound alarms, arming level beeps, status beeps, and trouble beeps.

10 - Sirens with this setting only sound alarms.

2. Set the powerhorn house code to one above the panel house code.

3. Plug the powerhorn module into a wall outlet.

Chapter 4
Programming

This chapter provides steps on how to program your unit.

In this chapter:

Content

Programming overview

The control panel (Figure 9 below) provides the main processing unit for all system functions. System options and features programming is menu-driven. All installer options are set in the System programming menu, except for setting the system time. Table 7 below explains the panel keys and features.

Figure 9: Simon XT TableTop Control Panel self-contained panel
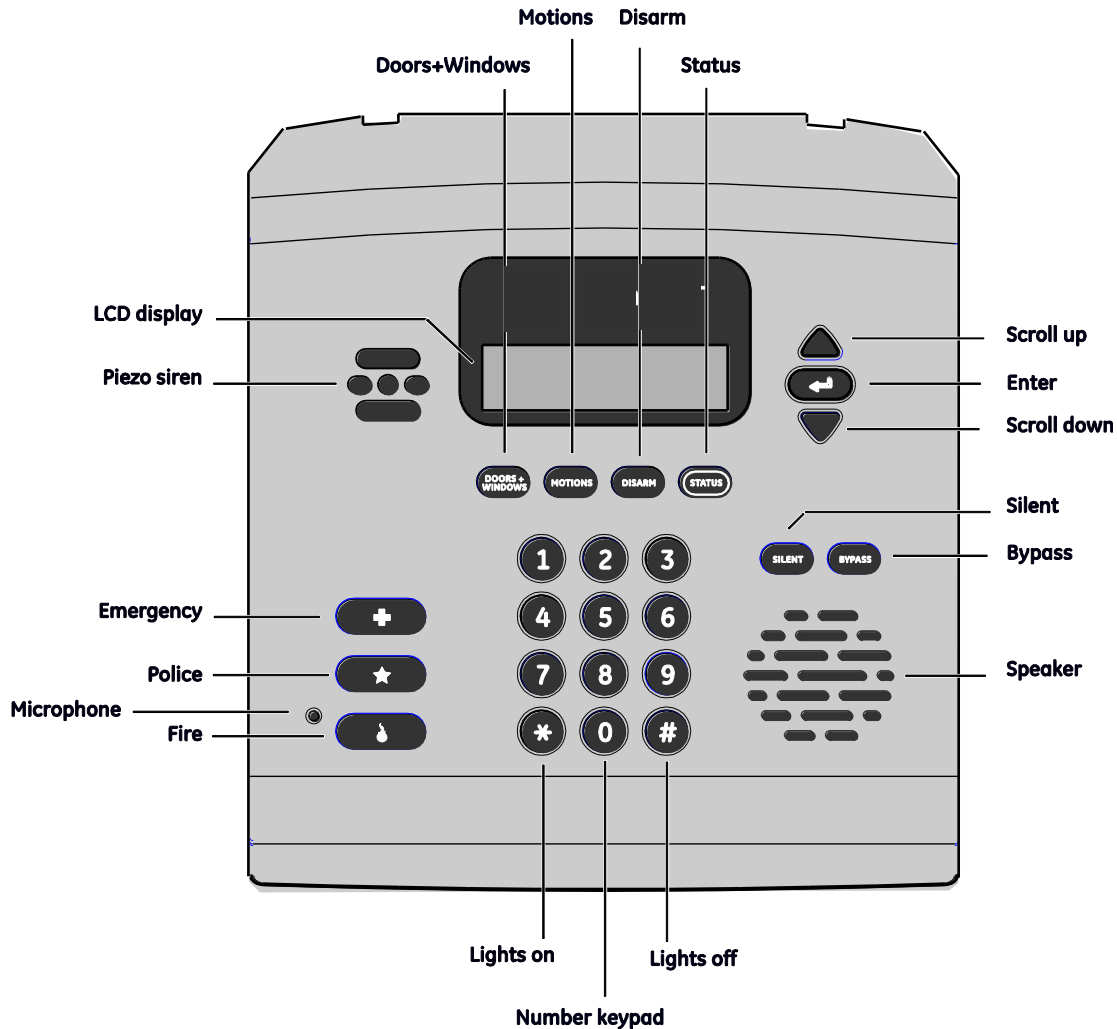
Table 7: Simon XT TableTop Control Panel keys and features

Control	Description
Piezo siren	The piezo siren makes alarm beeps and status beeps. Fire and intrusion alarm beeps are always played at high volume, while the volume of status beeps (such as trouble or chime beeps, entry and exit delay beeps, or auxiliary alarm beeps) is programmable.

Control	Description
LCD display	The LCD module has a 2 x 16 character array that displays a variety of phrases and icons.
Doors+Windows	Press to arm perimeter sensors.
Motions	Press to arm interior sensors.
Disarm	Press to turn off intrusion/burglary protection for your system. Only intrusion/burglary sensors such as doors, windows, and motion sensors are disarmed. Environmental sensors, such as smoke and carbon monoxide, stay active at all times.
Status	Press to determine system status.
Silent	Press to silence exit beeps when arming.
Bypass	Press to bypass a sensor.
Police ★	Press and hold the Police button for two seconds (or press twice quickly) to call the central monitoring station and notify them of a nonmedical call for help.
Emergency ✚	Press and hold the Emergency button for two seconds (or press twice quickly) to call the central monitoring station and notify them of a nonmedical call for help.
Fire 🔥	Press and hold the Fire button for two seconds (or press twice quickly) to call the central monitoring station and notify them of a fire call for help.
Microphone	Used to communicate with central monitoring station after an alarm.
Scroll up/scroll down	Press to scroll through lists of similar items.
Enter	Press to select a particular menu item or commit to memory a menu item that has just been programmed.
Numeric keypad	Twelve-key telephone-type keypad (0 through 9, *, #) for entering access codes or other numerical data.
Speaker	Provides voice output and sounds key beeps. The panel speaks arming level changes, system status, and voice chime sensor trips. The panel voice is also used for voice reporting and remote phone control.
*	Lights on.
#	Lights off.

Entering and exiting the system menu

To enter the system menu, press either the scroll up/down or enter buttons in the upper right of the panel.

Press the Status button to exit a menu or option edit mode and navigate up one level. Pressing the Status button while in the top menu level exits the system menu level. The panel automatically exits the system menu after a few seconds

of inactivity if no access code has been entered yet. After an access code has been entered to access a code-protected area of the system menu, the timeout is four minutes.

Menu navigation

Each menu contains a list of options and/or submenus. Press the scroll up/down buttons to navigate up and down the list of options and submenus in that menu. Pressing Enter after navigating to an option selects that option for editing and flashes the current value. Pressing Enter after navigating to a submenu enters that submenu, making a new list of options accessible. Pressing Status exits a menu and goes to the next higher level.

Programming options are arranged in a menu structure as outlined in Table 8 below. The top menu contains several features, as well as the System programming menu. When accessing the System programming or System tests menu, the panel prompts you to enter an access code. To continue, enter the dealer code or installer code, then press Enter.

To program an option, first navigate to that option until it is displayed, then press Enter. The option value will start flashing, indicating that it is ready to be changed. Use the scroll keys or enter a numerical value to change the option, then press the Enter key to save the change.

Table 8: Simon XT TableTop Control Panel menu structure

System time		Security	
Enable scheduled lights		Account number	
Enable sensor-activated lights		Downloader code	
Enable chime		Phone lock	
Enable special chime		Autoarm	
System tests		Exit extension	
	Sensor test	Secure arming	
	Communication test	No arm on panel low battery	
	Initiate download call	Quick exit	
System programming		Downloader enable	
	Access codes	Supervisory protest	
		Dealer code	Phone #s	
		Installer code	Phone #1	

Master code		Phone #2	
User code 1		Phone #3	
User code 2		Phone #4	
User code 3		Downloader phone number	
User code 4		**Phone options**	
User code 5		Manual phone test	
User code 6		Fail to communicate	
User code 7		DTMF dialing	
User code 8		300 bps baud rate	
Duress code		Ring/hang/ring	
Code length		Dialer delay	
		Call waiting code	
Sensors		**System options**	
Learn sensor		RF jam detect	
Delete sensor		Demo mode	
Edit sensor		HW1 I/O	
Reporting		24-hour clock format	
Report options		**Siren options**	
Opening report		Panel piezo beeps	
Closing report		Panel voice	
Force armed report		Panel piezo alarms	
AC power failure report		Trouble beeps	
Panel low battery report		Voice chime	
Sensor alarm restoral report		Status beep volume	
24-hour sensor tamper		Hardwired siren supervision	
Supervisory/tamper report		Speaker volume	
No usage report		Panel silent police panic	
Swinger shutdown		Panel tamper	
Programming report		Alarm report verification	
Fire alarm verification		**Audio verification**	
Communication modes		Audio mode	
Phone 1 reports		Fire shutdown	
Phone 2 reports		Panic talk	

	Phone 3 reports			Vox receiver gain	
	Phone 4 reports			Vox microphone gain	
Timers				Vox gain range	
	Latchkey time			Manual microphone gain	
	Entry delay		Light control		
	Exit delay			Set entry lights	
	No activity timeout			Sensor lights	
	Auto phone test			Light schedules	
	Supervisory time			Housecode	
	Alarm cancel window			Lock interval	
	RF timeout		System tests		
	Fail to open time			Sensor test	
	Fail to close time			Communication test	
	Siren timeout			Initiate download call	
	Arming LEDs shutdown		Revision		
	Unvacated premises		Contrast		
	Smoke sensor supervision				
Touchpad options					
	Keyfob no delay				
	Panel panic alarms				
	Remote touchpad arming				

Set clock

If the panel loses both AC and battery power, then upon restoring power the system time will reset to midnight and blink, indicating it has not been set correctly. You can set the system time to display in either 12-hour or 24-hour format.

Time of day format is HH:MMx, where:

HH = 01 to 12 (12-hour format) or 00-23 (24-hour format)

MM = 00 to 59

x = a or p (12-hour format) or none (24-hour format)

To reset the clock, do the following:

1. Scroll up/down until the display shows Set clock. Press Enter.

2. The display shows Enter code. Enter your code with numeric keys. Press Enter.

3. Press Enter.

4. The display now flashes the hours. Scroll up/down to set the hours. Press Enter to accept.

5. The display now flashes the minutes. Scroll up/down to set the minutes. Press Enter to accept.

6. The display now flashes the AM/PM. Scroll up/down to set the AM/PM. Press Enter to accept.

7. The display now shows the current time, and stops flashing. Press Status twice to exit.

Revision

To display the firmware revision of the system, do the following:

1. Scroll up/down to Revision.

2. Press Status to exit.

Contrast

To adjust the contrast of the display, do the following:

1. Scroll up/down to Contrast. Press Enter.

2. Scroll up/down to increase and decrease the contrast setting.

3. Press Status to save the setting and exit.

Note: Changes in contrast are more noticeable when not looking at the display straight-on.

System programming

To enter system programming mode, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The system prompts for an access code. Enter the access code from the codes listed in Table 9.

3. The system displays each entered access code digit as an asterisk. Press Enter.

The panel is now in program mode.

Note: Do not remove panel power while in program mode.

Table 9: Simon XT TableTop Control Panel programming codes

Code	Description
Dealer code	You can use the dealer code to program all system options, including high-security options that are not accessible with the installer code if it is different from the dealer code. Depending on how the access code is set, the default dealer access code is 654321, 54321, 4321 (factory default), or 321. This code can be used for all programming.
Installer code	Depending on how the access code is set, the default installer code is 654321, 54321, 4321 (factory default), or 321. This code is limited to changing all but the following: Dealer code, Code length, Downloader code, Phone lock, Phone #1, Phone #2, Phone 1 report mode, Phone 2 report mode, HW 1 function.

Access codes

Table 10 below provides access code option details.

Table 10: Access codes

Function	Default	Description
Dealer code	4321	You can use the dealer code to program all system options, including high-security options that are not accessible with the installer code if it is different from the dealer code. Changing the dealer code to differ from the installer code will prevent the installer from viewing certain fields. 1. Change the dealer code. 2. Enter program mode with the installer code. 3. Installer should no longer be able to see the following: Code length, Downloader code, Phone lock, Phone #1, Phone #2, Phone 1 report mode, Phone 2 report mode, HW1 function.
Installer code	4321	You can use the installer code to program most installer options, except for high-security dealer options.
Master code	1234	Master arm/disarm code. Master code able to enter user programming and bypass sensors.
User codes 1 to 8	Blank	Regular arm/disarm code.
Duress code	Blank	Use in place of master or user code to cause a silent alarm.
Code length	Four digits	Code can be three to six digits long.

Security

Table 11 provides security option details.

Table 11: Security

Function	Default	Description
Account number	00000	Lets you program up to a 10-character alphanumeric account number or delete an existing account number by pressing Disarm. You can enter numerical digits sequentially. To enter letters (A to F only), use the scroll buttons to select A to F then press Enter. To select next digit, press another number key. When finished press Enter. The CID format only supports account numbers with letters B through F, or numbers 0 through 9 (or a combination of those letters and numbers).
Downloader code	12345	Lets you set a unique five-digit code that is required for initiating Enterprise Downloader sessions. The code must be five digits long and can range from 00000 to 99999. The downloader code must match the downloader access code in the Enterprise account to perform Enterprise sessions.
Phone lock	Off	Prevents resetting of phone/reporting related options when a memory clear is performed (on) or resets these options to their default values when a memory clear is performed (off). The following are not reset when on: • Account number • Dealer code • Code length • Call wait cancel • Phone numbers 1 and 2 • Phone report modes 1 to 4 • Phone lock • Downloader phone number • Downloader code

Function	Default	Description
Autoarm	On	Determines how long the system protests (announces open/failed sensors) when attempting to arm with open/failed sensors, before bypassing these sensors and automatically arming the rest of the system. The panel protests an arming attempt when it has not received a restore (close) signal from sensors learned into restore-specific sensors groups. Sensors learned into group 26 (fire) cannot be bypassed. When this option is on, the panel announces all open/failed sensors repeatedly for 4 minutes, then automatically bypasses the open sensors and arms the rest of the system. If a sensor is opened during the exit delay and then left open, the panel will go into alarm after the exit delay has expired. This option must be on for Unvacated premises and Exit extension to work correctly. When this option is off, the panel displays all open/failed sensors once, then automatically bypasses the open sensors and arms the rest of the system after the exit delay has expired. If other sensors are opened during the exit delay, they will also be bypassed if left open. **Note**: If group 13 (instant perimeter) sensors are opened during the exit delay, the panel goes into immediate alarm.
Exit extend	On	Determines whether the panel restarts the exit delay time if the user enters the armed premises during the initial exit delay period (on), or not (off). Turning on this feature allows users to reenter during the exit delay period, without disarming and then rearming the system. Turning off this feature requires the user to disarm and rearm the system. Autoarm must be on for this option to work.
Secure arming	Off	Determines whether an access code is required when arming the system (on) or not (off). This option does not affect keyfob arm/disarm operation.
No arm on low battery	Off	Determines whether the system protests arming if a low CPU battery condition exists (on) or not (off).
Quick exit	Off	Determines whether pressing Disarm when the system is armed activates the exit delay time to allow exit and reentry without disarming the system (on) or not (off). This feature is useful if the user wants to step outside briefly and return, such as to get the paper. If the system is armed and the user presses Disarm, the panel announces Exit time is on and sounds exit delay beeps. This allows a designated entry/exit door to be open for up to 2 minutes without causing alarm. When the door is closed, the beeps stop and the door is armed again.
Downloader enable	On	Enables programming of system options with downloader software.

Function	Default	Description
Sup protest	Off	Determines whether the panel protests arming if it has not received a supervisory signal from any sensor 15 minutes before arming (on) or not (off). **Note**: This feature must be turned off for US installations.

Phone numbers

Table 12 below provides phone number option details.

Table 12: Phone numbers

Function	Default	Description
Phone # 1	Blank	Lets you program up to a 26-digit central monitoring station receiver/voice event notification phone number for monitored systems. Phone digits can be 0-9, *, #, or a pause (P).
Phone # 2	Blank	
Phone # 3	Blank	To delete the phone number, press Disarm while editing a phone digit. To add a pause to the phone number press Bypass. Pressing Enter is required if you enter fewer than 26 digits.
Phone # 4	Blank	
Downloader #	Blank	Lets you program up to a 26-digit phone number for the Enterprise Downloader.

Phone options

Table 13 below provides phone option details.

Table 13: Phone options

Function	Default	Description
Man phone test	On	Determines whether the user can perform a manual communication test to verify communication to a central station/voice dial (on), or not (off). If you have all 4 phone # programmed it should send a test report to all 4 before showing that test is okay.
FTC	On	Determines whether the panel and interior sirens sound trouble beeps if it is unable to successfully send a report to a central station (on) or not (off).
DTMF dial	On	Determines whether the panel uses DTMF (on) or pulse (off) for dialing programmed phone numbers.
300 bps enabled	On	Determines whether the baud rate used by the panel for central station communication is 300 bps (on) or 110 bps (off).

Function	Default	Description
Ring hang ring	1	Determines when the panel answers a remote phone access or Enterprise call. Depending on whether an answering machine exists at the panel location, offsite access to the panel can be done with a series of phone calls or just one. For offsite access where an answering machine does not exist, the user or Enterprise operator simply calls the panel location once and listens for 10 rings. The panel should answer after the tenth ring.
		For offsite access where an answering machine exists, the user or Enterprise operator must perform the following steps:
		• Call the panel location.
		• Let the phone ring once, then hang up.
		• Wait at least 10 seconds but not more than 40, then call the panel location again. The panel should answer on the first ring.
		Ring/hang/ring setting number and sequence of rings after which the panel answers:
		1 Ring/hang/ring or ten rings
		2 Ring/hang/ring/hang/ring or ten rings
		3 Ring/hang/ring/hang/ring/hang/ring or ten rings
		4 Ten rings
		5 Ring/hang/ring
		6 Ring/hang/ring/hang/ring
		7 Ring/hang/ring/hang/ring/hang/ring
		Off Disabled—no remote (offsite) access
Dial delay	30 seconds	Determines whether the panel delays dialing programmed phone numbers before sending reports (on).
		If Opening (disarming) Reports is on, the panel does not delay dialing if the system is disarmed before the delay time expires. The panel dials immediately for both the alarm and opening report.
		Regardless of this option setting, the panel always dials immediately for fire alarms, AC power failure and low battery reports.
Call wait code	Off	The call waiting code is dialed by the panel before a phone number to disable call waiting. Verify that the end-user has call waiting with his phone service provider before changing this option from its default.
		Caution: Changing this option from its default without call waiting will prohibit the panel from calling the central station.
		The call waiting code is programmed the same way as a phone number.

Sensors

These instructions explain how to add (learn) sensors, touchpads, and other system devices into panel memory. The panel recognizes a sensor when you press a sensor program button, press and release a tamper switch, press a sensor test button, or put a sensor into alarm. Table 14 below describes the programming method for each device.

Note: If you are installing a sensor on a gun case, jewelry box, or a similar case, and the sensor is active in level one, you must subdisarm to avoid putting the panel into alarm when the sensor and the magnet are separated.

Table 14: Device programming

Device	To program
Door/window sensor	Press the button on the top of the sensor (cover removed) or trip the tamper.
Motion sensor	Press the button on the back of the sensor (mounting plate removed) or trip the tamper.
Smoke detector	Trip the tamper, press the test button, remove the detector from its base, or put the smoke detector in alarm.
Hardwired sensor	Separate the sensor from its magnet.
CO alarm	Plug in the module wait five to seven seconds press and hold the test button for nine beeps
Freeze and water sensor	Trip the tamper or press and hold the button on the top of the sensor (cover removed) until the control panel confirms programming. If you do not hold the button down long enough, the system will report the sensor as open.
Personal help button	Press the help button until the light blinks.
Remote handheld touchpad	Press the emergency buttons.
Simon XT TableTop touchpad	Press the lights off button six times in rapid succession.
Keyfob	Press the lock and unlock buttons at the same time.
ELM keyfob	Do the following: 1. Press the unlock button twice and hold it the third time. The light flashes three times. 2. Press the unlock button once and hold it the second time. The light flashes twice. 3. Press and hold the unlock button. The light flashes once. Hold the button until the flashing stops.

When learning sensors, the panel uses an ascending number sequence starting with 1. You can override this by entering the desired sensor number using the number keys.

Adding (learning) sensors

To add (learn) a sensor, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The system prompts for an access code. Enter the dealer or installer code. Press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Sensors. Press Enter.

4. The panel displays Learn sensor. Press Enter.

5. The panel displays Trip sensor ##, with the number signs flashing.

   Note: If you wish to use a sensor number other than the next one available, use the number keys to enter a two-digit sensor number immediately.

6. Press the sensor program button or release the sensor tamper switch. The panel displays Sn ## Grp 10 <Front Door>, with the Grp 10 flashing. Use the number or scroll buttons if you want to enter a new group number; press Enter to accept the group number displayed.

7. The sensor text is now flashing. Use the scroll buttons to scroll through the text list or enter the three-digit shortcut. (See Table 38 on page 64 and Table 39 on page 65 for these three-digit codes). Press Enter to accept the first text segment. You may enter more text or press Enter again to finish adding the sensor.

8. The panel displays Trip sensor ## (with the next available sensor number). Press Status repeatedly to exit.

Deleting sensors

To delete a sensor, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The panel displays Enter code. Enter your access code and press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Sensors. Press Enter.

4. The panel displays Learn sensor. Press the scroll buttons until the panel displays Delete sensor. Press Enter.

5. The panel displays Sn ## Grp ## <Text>. Press the scroll buttons until the panel displays the sensor you want to delete. Press Enter.

6. The panel displays Deleted, then shows Delete sensor. Press Status twice to exit.

Editing sensors

You can use this feature to change the group or name of a sensor that is already in panel memory. The procedure is very similar to the procedure used to program sensor information after a sensor is learned in. Pressing Disarm while editing sensor text deletes all text for that sensor. Table 15 below provides sensor option details.

Table 15: Sensors

Function	Default	Description
Learn sensors		Adds (learns) sensors to panel memory.
Delete sensors		Deletes sensors from panel memory.
Edit sensors		Edits sensor information in panel memory.

Reporting

Table 16 below and Table 17 on page 47 provide report option details.

Table 16: Reporting options

Function	Default	Description
Opening reports	Off	Determines whether the panel sends opening reports to a central station whenever the system is disarmed (on), or not (off). User number will be reported as zone number. Keyfobs learned into zone 1 to 40 will report as zone they are learned into. Dealer code = 44 Installer code = 45 Master code = 46 User code 1 = 47 User code 2 = 48 User code 3 = 49 User code 4 = 50 User code 5 = 51 User code 6 = 52 User code 7 = 53 User code 8 = 54 Duress code = 55

Function	Default	Description
Closing reports	Off	Determines whether the panel sends closing reports to a central station whenever the system is armed (on), or not (off). User number will be reported as zone number. Keyfobs learned into zones 1 through 40 will report as the zone they are learned into. Dealer code = 44 Installer code = 45 Master code = 46 User code 1 = 47 User code 2 = 48 User code 3 = 49 User code 4 = 50 User code 5 = 51 User code 6 = 52 User code 7 = 53 User code 8 = 54 Duress code = 55
Force armed	Off	Determines whether the panel sends a force armed report to a central station if the user bypasses protesting sensors (indirect bypass) when arming the system (on) or not (off).
AC power failure	Off	Determines whether or not the panel sends AC power failure reports to a central station after the programmed time expires. The time can be set from 005 to 254 minutes. • When the panel is without AC power for 30 seconds, the panel LEDs turn off. • When the panel is without AC power for the programmed time, an AC power failure is reported. • The panel reports an AC power restoral when AC power returns to the panel.
Low CPU battery	On	Determines whether the panel sends a low CPU battery report to the central station when the panel backup battery voltage drops
Sen alarm restore	Off	Determines whether the panel reports sensor alarm restorals (on) or not (off). Setting when restorals are reported: 1. Immediately after sensor is closed or restored after dial delay. 2. After siren timeout expires if sensor is restored. 3. When system is disarmed if sensor is restored.
24-hour sensor tamper	Off	Determines whether the system (armed or disarmed) goes into and reports an alarm anytime a sensor tamper switch is tripped (on), or only when the system is armed and a tamper switch of an armed sensor is tripped (off).
Supervisory tamper	Off	Determines whether the panel sends supervisory reports to a central station as a tamper (on) or a supervisory (off). This option is typically used only in Europe where a supervisory condition is required to report as a tamper.

Function	Default	Description
No usage	Off	Determines whether the panel sends a no usage report to the central station if the user has not operated the system before the programmed time expires (on) or not (off). The timer starts each time the system is disarmed. This is a customer service feature that alerts the central station if a customer is not using their security system. The service provider can then contact the customer to find out why the system is not being used, and help correct any problems for the customer.
Swinger shutdown	On	Determines whether the panel prevents the same sensor from activating an alarm more than once in a single arming period (on) or not (off). **Note**: Swinger shutdown does not affect smoke and fire sensors.
Program report	Off	Determines whether the panel sends a report to the central station anytime the programming mode is entered/exited (on) or not at all (off). The panel sends a report whenever the dealer (Utility 1) or installer (Utility 2) code is used to enter programming mode and another report is sent when the programming session ends.
Fire verify	Off	If this option is off, the panel immediately reports to the central station when a smoke detector goes into alarm. With this option on, if a single smoke detector goes into alarm the panel will not report for 60 seconds unless another smoke detector goes into alarm. If the first smoke detector is cleared of alarm with the first 60 seconds, no report will be sent to the central station unless it or a second smoke detector goes into alarm within the panel siren timeout period (five minutes).

Table 17: Communication modes

Function	Default	Description
Phone 1 report mode	Off	All SIA
Phone 2 report mode		All CID Alarm SIA
Phone 3 report mode		Alarm CID Nonalarm SIA
Phone 4 report mode		Nonalarm CID Backup SIA (phone failure backup) Backup CID (phone failure backup) Voice dialer Off

Alarms include: Fire, Intrusion, Emergency, Silent, and Alarm Cancels.

Nonalarms include: Latchkey, No Activity, Openings, Closings, Fail to Open, Fail to Close, Force Armed, AC Power Failure, CPU Low Battery, and Trouble Restorals.

Timers

Table 18 below provides timer option details.

Table 18: Timers

Function	Default	Description
Latchkey time	Off	Determines whether the panel reports a latchkey alarm if the system is not disarmed at a preset time between midnight and 11:59 p.m. (on). If the latchkey feature is disabled (off), the panel will not report a latchkey alarm. The system clock must be set for the latchkey feature to work.
Entry delay	030 seconds	Determines how much time the user has to disarm the system after entering the armed premises through a designated delay door, before an alarm occurs. Beeps sound during the entire delay time to remind the user to disarm the system. The entry delay can be set from 030 to 250 seconds.
Exit delay	060 seconds	Determines how much time the user has to leave the premises through a designated delay door after arming the system. Beeps sound after arming the system to remind the user to leave the armed premises. If a delay door is opened after the exit delay expires, the entry delay begins. If the user arms the system with no delay and opens a delay door after the exit delay expires, an alarm occurs.
No activity tm	Off	Determines whether the panel sends a no activity report to a central station when the programmed time period elapses (on), or if the feature is disabled (off). No activity means control panel, remote handheld, and key-chain touchpad buttons have not been pressed and sensors have not been tripped within a specified period of time (except sensors in group 25). The timeout can be set from 02 to 24 hours.
Autophone test	Off	Determines whether the panel automatically performs a periodic phone test (on) or not (off). The test interval can be from 001 to 254 days. The time of day the panel performs the test is determined by supervisory time, which must be turned on for this feature to work.
Supervisory time	12:00am	Determines when the panel reports supervisory conditions (sensor failures) and automatic phone tests to the central station. The panel clock must be set to the correct time for this option and the automatic phone test to work correctly.
Alarm cancel	006	Sets the time frame that determines whether the panel reports an alarm cancel message to the central station. If the system is disarmed from an alarm state within the programmed time, the panel sends an alarm cancel message to the central station. An alarm cancel message is not reported if the system is disarmed after the programmed time expires. The time can be set from 006 to 255 minutes. When set to 255, the panel always reports alarm cancel messages. Turning off this option disables alarm cancel reporting.

Function	Default	Description
RF time-out	12 hours	Determines the time period the panel must receive at least one supervisory signal from learned sensors before identifying a sensor failure and sounding trouble beeps. Any sensor failure is reported immediately and again at the supervisory time. The timeout can be set from 02 to 36 hours. Entries must be two digits.
Fail-to-open time	Off	Determines whether the panel sends a fail to open report to a central station if the system has not been disarmed by the programmed time (on), or not (off). System time must be set correctly for this feature to work.
Fail-to-close time	Off	Determines whether the panel sends a fail to close report to a central station if the system has not been armed by the programmed time (on), or not (off). System time must be set correctly for this feature to work.
Siren time-out	005 minutes	Determines how long sirens sound alarms if no one is present to disarm the system. The time can be set from 002 to 254 minutes. When this feature is turned off, sirens sound alarms until the alarm is canceled (system is disarmed).
Arm LED shutdown	Off	Determines whether the panel LEDs (buttons) turn off 30 seconds after the last button press (on) or remain on for the entire arming period (off).
Unvacated premises	On	Determines whether the system automatically arms down to level 2 (doors and windows) if the user arms the system to level 4 (doors, windows, and motion sensors) without leaving the premises (on), or remains at the armed level chosen by the user (off). This feature does not work from a keyfob. Autobypass must be on for this feature to work.
Smoke supervision	Off	Determines how often the panel must receive supervisory signals from the smoke sensors. If this option is on, the panel must receive at least one supervisory signal from smoke sensors every four hours or it will identify a sensor failure and sound trouble beeps. If this option is off, the time for receiving supervisory signals is determined by RF timeout.

Touchpad options

Table 19 below provides touchpad option details.

Table 19: Touchpad options

Function	Default	Description
Keyfob no delay	Off	Determines whether a keyfob arms the system with no delay (on) or not (off). When this feature is on, you must disarm the system before entering the premises, since it is disabling the entry delay. If Remote touchpad arming is on, keyfobs cannot disarm the system and will cause an alarm upon entering.

Function	Default	Description
Panic alarms	On	Determines whether the panel panic buttons (police, auxiliary, and fire) activate alarms when pressed (on) or not (off)
Remote TP arm	Off	Determines whether keyfobs and remote touchpads can disarm the system only during exit and entry delays (on) or arm and disarm the system anytime (off). If this option and Keyfob no delay are on, users cannot enter and/or disarm using remote touchpads without causing an alarm.

System options

Table 20 below provides system option details.

Table 20: System options

Function	Default	Description
RF jam detect	Off	Determines whether the panel checks for and reports RF interference/jam to the central station (on) or not (off). If this option is on and the panel receives a constant 319.5 MHz signal, the panel reports the condition to the central station. If this option is off, the panel does not detect an RF jam.
Demo mode	Off	Determines whether the panel operates as a demonstration model (on) or a standard panel (off). Turning on this feature disables low battery supervision and allows the microphone to remain on continuously during an AVM session. With option on panel is not testing battery supervision.
HW 1 function	1	The setting for this option determines how the HW1 I/O output will function. Off = No output 1 = Interior siren output 2 = Output activated when armed 3 = Output activated when disarmed 4 = Fail to communicate output; activates when fail to communicate condition occurs (fail to communicate must be on) 5 = Alarm output activated when panel is in alarm.
24-hour clock	Off	Determines whether the panel uses a 24-hour clock (on) or 12-hour clock (off).

Siren options

Table 21 on page 51 provides siren option details.

Table 21: Siren options

Function	Default	Description
Piezo beeps	On	This option determines whether the panel piezo produces beeps based on system activity (on) or is silent (off).
Panel voice	On	When on, arming level changes will be spoken.
Panel piezo alarm	On	Determines whether the panel piezo emits alarm sounds (on) or not (off).
Trouble beeps	On	Determines whether the panel, X10, and hardwired interior sirens sound six beeps every minute when a trouble condition occurs (on) or not (off). The following conditions cause trouble beeps: • AC power failure (when AC power failure report is on) low CPU battery • Sensor failure (supervisory) • Sensor trouble (low battery, tamper, etc.) • Fail to communicate • Restoration of power • No Activity timer has timed out. Trouble beeps continue for five minutes and if the panel does not see activity, trouble beeps stop and the panel reports the no activity to the central station. You can silence trouble beeps by arming or disarming the system or by pressing the Status button. Trouble beeps resume four hours later if the trouble condition is not cleared.
Voice chime	Off	Determines whether the panel announces the sensor name. 1 = Sensor name 2 = Loud ding-dong bell 3 = Soft ding-dong bell Off = No sound
Status beeps vol.	7	Determines the panel piezo volume level for status sounds such as arming, trouble, and status beeps. Volume range is 1 (lowest) to 10 (highest).
HW siren sup.	Off	Determines whether the panel monitors hardwired sirens for open conditions (on) or not (off). If this option is turned on, sirens connected to the panel terminals require an EOL resistor in the wire circuit. (See "Interior sirens" on page 22 for siren wiring.) If this option is turned off, EOL resistors are not required whether sirens are connected or not.
Speaker volume	8	Sets the volume of voice messages from the panel speaker. Volume range is 1 (lowest) to 8 (highest).
Silent police panic	Off	Determines whether pressing the panel police panic button causes an audible (off) or silent (on) alarm.
Panel tamper alarm	Off	Determines whether the panel activates a tamper alarm anytime the cover is opened (On) or only when the system is armed (off).

Function	Default	Description
Alarm report verify	Off	This option determines whether the panel verifies successful alarm reports to the central station by displaying Phone comm is OK (on), or not (off).

Piezo beep options

Table 22 below provides piezo beep option details.

Table 22: Panel piezo beeps

Activity	Piezo beep response
Arm doors and windows	Exit delay—two beeps sound every five seconds and two times per second during the last ten seconds. Silent exit—two beeps sound at the beginning of the exit delay and two more sound just before the exit delay expires. Entry delay—two beeps sound every five seconds and two times per second during the last ten seconds.
Arm motion sensors	Exit delay— three beeps sound every five seconds and three times per second during the last ten seconds. Silent exit— three beeps sound at the beginning of the exit delay and three more sound just before the exit delay expires. Entry delay— three beeps sound every five seconds and three times per second during the last ten seconds.
Arm doors/windows and motion sensors	Exit delay— four beeps sound every five seconds and four times per second during the last ten seconds. Silent exit— four beeps sound at the beginning of the exit delay and four more sound just before the exit delay expires. Entry delay— four beeps sound every five seconds and four times per second during the last ten seconds.
Disarm	One beep
Chime	Two beeps (when programmed)
Special chime	Three beeps (when programmed)
Trouble beeps	Six beeps every minute. Press Status to stop beeps for four hours.
No activity	Twenty beeps every minute for five minutes (when programmed)

Audio verification options

Table 23 on page 53 provides audio verification option details.

Table 23: Audio verification

Function	Default	Description
Audio mode	Off	1 = Instant. Panel stays online with central station for an instant audio session. 2 = Callback. Panel hangs up and waits for a callback from the central station operator before starting an audio session. Off = No audio verification.
Fire shutdown	Off	Determines whether system fire sirens are silenced during a two-way audio session (on) or not (off). Beeps sound every 10 seconds while sirens are silenced.
Panic talk	Off	Determines whether the central station operator can talk to the user during a silent alarm (off) or just listen in on the premises (on). Silent alarms occur when sensors learned into groups 02 or 03 are tripped, when the duress code is entered, or when the panel Police button is pressed and the Silent panel police panic option is turned on.
Vox Rx gain	06	Determines the receiver gain level during two-way audio sessions. If the vox is switching the speaker on when the central station operator is not talking, lower both this setting and the vox microphone gain setting. If the vox is not switching the speaker on when the central station operator is talking, raise this setting and lower the vox microphone gain setting. Changing this setting does not affect speaker volume.
Vox mic gain	24	Sets the microphone gain (sensitivity) that triggers the voice-activated switching (vox). Room size, acoustics, and furnishings where the panel or Interrogator 200 are located will influence the setting. Gain range is 01 (lowest) to 64 (highest).
Vox mic gain rng	64	Sets the gain range for voice-activated switching (vox). Range is 01 (lowest) to 64 (highest). For best results, this option should be set equal to or greater than vox microphone gain. **Note:** This option works in conjunction with vox microphone gain. It is important to follow the setting recommendations as described to achieve acceptable operation.
Manual mic gain	64	Determines the gain level (sensitivity) during two-way audio sessions when audio mode is set to 0 or 1 (speak). Room size, acoustics, and furnishings where the panel is located will influence the setting. Gain range is 01 (lowest) to 64 (highest).

Light control (optional)

If your system uses optional X10 modules, you can program them to control lights.

X10 module operation

Use the following procedure to program X10 module operations into panel memory.

To program the housecode, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The panel displays Enter code. Enter your access code and press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Light control. Press Enter.

4. The panel displays Set entry lights. Press the scroll buttons until the panel displays Housecode <A-O>. Press Enter.

5. The letter flashes. Press the scroll buttons until the letter you want displays. Press Enter to accept the new housecode.

6. The panel displays Housecode <new housecode>. Press Status twice to exit program mode.

To program an entry-activated light, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The panel displays Enter code. Enter your access code and press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Light control. Press Enter.

4. The panel displays Set entry lights. Press Enter.

5. The panel displays Entry light unit 1 on/off. Press the scroll buttons until the unit number you want to program displays. Press Enter.

6. The panel displays Off, which will be flashing. Press the scroll buttons until the panel displays On. Press Enter.

7. Press STATUS three times to exit program mode.

To program a sensor-activated light, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The panel displays Enter code. Enter your access code and press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Light control. Press Enter.

4. The panel displays Set entry lights. Press the scroll buttons until the panel displays Sensor light. Press Enter.

5. The panel displays Sn ## <Text> X-10 unit = on/off. Press the scroll buttons until the panel displays the sensor number you want to activate. Press Enter.

6. The panel displays On/off, which will be flashing. Press the scroll buttons until the panel displays On. Press Enter.

7. Press Status three times to exit.

   Note: You can also program a keyfob button to control a light or appliance module.

To program a light schedule, do the following:

1. Press the scroll buttons until the panel displays System programming. Press Enter.

2. The panel displays Enter code. Enter your access code and press Enter.

3. The panel displays Access codes. Press the scroll buttons until the panel displays Light control. Press Enter.

4. The panel displays Set entry lights. Press the scroll buttons until the panel displays Set entry lights. Press Enter.

5. Press the scroll buttons until the panel displays Light schedules. Press Enter.

6. The panel displays Light schedule 1 <--:-- - --:-->. Press the scroll buttons until the panel displays the unit number you want to program. Press Enter.

7. The HH of the start time will flash. Press the scroll buttons to set the hours and press Enter.

8. The MM of the start time will flash. Press the scroll buttons to set the minutes and press Enter.

9. The AM/PM of the start time will flash. Press the scroll buttons to set the AM/PM setting and press Enter.

10. The end time starts to flash. Follow the same instructions to set the hour, minute, and AM/PM settings for the end time.

11. Press Status repeatedly to exit.

Lock interval

Sets the start and stop times that determine when the panel prevents the sensor-activated lights feature from turning on sensor-activated lights. When a time value is set (on) and the sensor-activated lights feature is on, the panel prevents sensor-activated lights from turning on between the programmed start time (this option) and the programmed stop time. When both sensor-activated light lockout start time and sensor-activated light lockout stop time are turned off and the sensor-activated lights feature is on, sensor-activated lights turn on at all times.

Note: System time must be set correctly for this feature to work. Both sensor-activated light lockout start time and sensor-activated light lockout stop time must have a time programmed for this feature to work correctly.

Table 24 below provides light control option details.

Table 24: Light control

Function	Default		Description
Set entry lights:	Entry light unit, 1 through 8	Off	This menu allows the user to set X-10 lights with unit numbers from 1 to 8 as entry lights (on).
Sensor light # 01 to 40			In this menu, each enrolled sensor can be associated with an X-10 light with unit number from 1 to 8 (or Off for no association).
Light schedules	Light schedule, 1 through 8	Off	In this menu, a light schedule can be programmed for each X-10 module with unit number from 1 to 8.
Housecode		A	
Lock interval	(Light) lock interval	Blank	This option sets the daily lockout time during which sensor trips do not activate associated X-10 lights

System tests

Table 25 below provides system test option details.

Table 25: System test

Function	Default		Description
System tests	Comm test		The communication test is used to check the phone communication between the panel and the central station or voice report destination.
	Sensor test		The sensor test is used to check proper sensor operation.
	System download		This feature initiates a phone call from the panel to the Enterprise Downloader.

Resetting memory to the factory defaults

To reset the panel to its factory defaults, do the following:

1. Unplug the transformer and disconnect the battery.

2. Press and hold the four arming/status buttons (Doors+Windows, Motions, Disarm, and Status) on the front of the panel.

3. Restore power to the panel, plugging in the AC transformer while holding the four buttons.

4. Release the buttons.

5. Remove A power.

6. Power up the panel with the battery and then the AC transformer.

   Note: The procedure to reset memory to factory defaults is meant to be difficult.

To program the panel, do the following:

1. Set the panel clock.

2. Add (learn) sensors.

3. Set the housecode and light and appliance controls (entry/exit activated lights, sensor-activated lights, time-activated lights).

4. Change options as needed.

If the phone lock is on, the following features will not reset to factory defaults:

- Phone numbers 1 and 2
- Downloader phone number
- Account number
- Phone lock
- Downloader code
- Phone report mode 1
- Phone report modes 1 to 4
- Access code length
- Call waiting
- Dealer code

Chapter 5
Testing

This section describes how to perform various test procedures. You should test the system after installing, after servicing, and after adding or removing devices from the system.

In this chapter:

Content

Control panel

Test the panel by pressing the buttons as described in Table 26 below and Table 27 on page 61 provides a list of the arming levels.

Note: An access code is required when arming if the Secure arming option is on

Table 26: Control panel test sequence

Button	Function tested	Test	Correct result
Doors+Windows	The panel arms door and window sensors.	Press Doors+Windows a second time to eliminate the programmed entry delay.	The button will blink when no entry delay is on.
Motions	The panel will arm motion sensors.	Press Motions a second time to turn latchkey on.	The button blinks when latchkey is on.
Disarm	The panel will prompt you to enter an access code.	Enter the appropriate code.	The panel will disarm doors, windows, and motion sensors.
Status		Press Status for panel to display and speak the system status.	
Police		Press and hold Police or press button twice quickly to activate a police or emergency alarm.	
Fire		Press and hold Fire or press button twice quickly to activate a fire emergency alarm.	
Emergency		Press and hold Emergency or press button twice quickly to activate a nonmedical emergency alarm.	

Note: Forty keypresses for invalid codes (ten invalid 4-digit codes, for example) will cause a system access alarm. The alarm locks all touchpads, except keyfobs, for 90 seconds.

Table 27: Arming levels

Arming level	Description	Indication
0	Subdisarms (master access and duress codes only), and bypasses 24-hour intrusion sensors (master access code only). Fire sensors (group 26) cannot be subdisarmed.	One beep indicates the system is subdisarmed. The panel displays and speaks Subdisarmed. The Disarm button blinks.
1	Disarm the system	One beep indicates the system is disarmed. The panel displays and speaks Disarmed. The Disarm button lights.
2	Arm doors and windows	Two beeps verify that door/window sensors are armed. The panel displays Doors+Windows and speaks Doors and windows on. The Doors+Windows button lights.
3	Arm motion sensors	Three beeps verify that motion sensors are armed. The panel displays Motions and speaks Motions on. The Motions button lights.
4	Arm doors, windows, and motion sensors	Four beeps verify that door/window and motion sensors are armed. The panel displays Doors + Windows & Motions and speaks Doors and windows on, motions on. The Doors+Windows and Motions buttons light.

Sensor testing

Test the sensors after all programming is completed and whenever a sensor-related problem occurs.

Note: While the sensor test is a valuable installation and service tool, it only tests sensor operation for the current conditions. You should perform a sensor test after any change in environment, equipment, or programming.

Notify the central station you will be performing a test prior to starting the test. To test the sensors, do the following:

1. Place all sensors in their secured (no alarm) state.

2. Go to the Sensor test option under the System tests menu, then press Enter.

The panel will prompt you to trip each sensor one at a time. You may follow the panel prompting or test the sensors in any order. Use Table 28 on page 62 to trip sensors

Table 28: Sensor tripping instructions

Sensor	Do this
Door/window	Open the secured door or window.
Freeze	Remove the sensor cover. Apply ice in a plastic bag to the sensor (for 10 to 15 minutes). Do not allow the sensor to get wet.
Water	Press a wet rag or wet finger over both of the round, gold-plated terminals on the underside of the sensor.
Carbon monoxide alarm	Unplug the CO Alarm. Plug it back in, wait 5 seconds, then press the TEST/RESET button until the unit beeps 8 times.
Glassbreak	Use a glassbreak tester.
Motion sensor	Avoid the motion sensor field of view for three minutes, then enter its view.
Rate-of-rise heat detector	Rub your hands together until warm, then place one hand on the detector for 30 seconds.
Shock	Tap the glass twice, away from the sensor. Wait at least 30 seconds before testing again.
Smoke	Press and hold the test button until the system sounds transmission beeps.
Personal help button	Press and hold the appropriate help button until the light blinks and the panel sounds for at least seven beeps.
Keyfob	Press and hold Lock and Unlock simultaneously for three seconds.
Remote handheld touchpad	Press and hold the two Emergency buttons simultaneously for three seconds.
Simon XT TableTop touchpad	Press the Lights off button six times in rapid succession.

3. Interior sirens sound transmission beeps, and the display identifies the tripped sensor and the number of RF packets received. Each beep represents one RF packet. Count the number of beeps and refer to Table 29 below for minimum requirements. After the beeps, the panel displays Sn # Packets=XX Name (where XX equals the number of RF packets and Name equals the sensor name). The system will continue to prompt for sensors that have not yet been tested. When all sensors have been tested, the panel will display Sn test complete press Status.

Note: If a sensor does not meet the minimum transmission beep requirements, see If a sensor fails the sensor test

Table 29: Minimum beeps

Type of sensor	Number of beeps
Wireless intrusion sensors	7 to 8

Type of sensor	Number of beeps
Wireless smoke and heat sensors	7 to 8
Wireless environmental/panic buttons	7 to 8
Hardwired loops	1
Emergency buttons (remote handheld touchpads only)	7 to 8

4. Press Status. The panel displays *Sensor test OK.*

If you press Status and the panel has not heard from all sensors, the panel will display **Sn test fail or aborted**.

If a sensor fails the sensor test

If sirens do not beep when a sensor is tripped, use an RF Sniffer (60-401) test tool to verify that the sensor is transmitting. Constant beeps from the RF Sniffer indicate a runaway (faulty) sensor. Replace the sensor.

If possible, locate sensors within 100 feet (30 meters) of the panel. While a sensor may have a range of 500 feet (152 meters) or more out in the open, the environment at the installation site can have a significant effect on transmitter range. A change in sensor location may help overcome adverse wireless conditions and can be accomplished by the following:

- Reposition the sensor.
- Relocate the sensor.
- If necessary, replace the sensor.

To reposition a sensor, do the following:

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.

To relocate a sensor, do the following:

1. Test the sensor a few inches from the original position.

2. Increase the distance from the original position and retest until an acceptable location is found.

3. Mount the sensor in the new location.

4. If no location is acceptable, replace the sensor.

To replace a sensor, do the following:

1. Test a known good sensor at the same location.

2. If the transmission beeps remain below the minimum level, avoid mounting a sensor at that location.

3. If the known-good sensor functions, contact UTC Fire and Security for repair or replacement of the problem sensor.

Phone communication

Perform a communication test to check the phone communication between the panel and the central station.

To perform a communication test, do the following:

1. Go to the Comm test option under the System tests menu.

2. Press Enter. The panel confirms that a communication test has begun. When the communication test is complete, the panel will display Comm test is OK within three minutes.

If the test is unsuccessful, the Status button will light and the panel will display Comm failure within ten minutes.

If the panel displays Comm failure, do the following:

1. Check that the panel is connected to the phone jack.

2. Check the phone number programmed into the panel.

3. Perform the communication test again.

4. If the communication test fails again, check the phone connection wiring.

Offsite phone operation

Test the system from a remote phone by calling the panel and using the commands in Table 30 below

Table 30: Phone commands

System Function	Phone command
Disarm	1
Arm doors/windows	2
Arm motion sensors	3
Arm doors/windows with no entry delay	2 – 2
Arm doors/windows and motion sensors	2 – 3
Arm doors/windows with no entry delay and motion sensors with latchkey	2 – 2 – 3 – 3
Specific light on	* – <unit_num>.

System Function	Phone command
Specific light off	# – <unit_num>.
All lights on	* – *
All lights off	# – #
System status	0
Audio verification	5 + X (X = a command from Audio Verification Set)
Terminate session	9

Central station communication

After performing sensor and communication tests, check that the system is reporting alarms successfully to the central station. Table 31 below provides a list of sensor/user report codes.

To test communication with the central station, do the following:

1. Call the central station and tell the operator that you will be testing the system.

2. Arm the system.

3. Test each of the wireless panic buttons and trip at least one sensor of each type (fire, intrusion, etc.) to verify that the appropriate alarms are working correctly.

4. When you finish testing the system, call the central station to verify that the alarms were received.

Table 31: Sensor/user report codes

Arm or disarm from	Reports as user
Panel or remote touchpad	0
Keyfob	1 to 40 (sensor number)
Panel aux panic	41
Panel tamper	42
Panel police panic	43
Panel fire panic	44
Dealer access code	44
Installer access code	45
Master code	46

Arm or disarm from	Reports as user
Access codes 1 to 8	47 to 54
Duress code	55

Two-way voice operation

For the central station operator to initiate an audio session, see Table 32 below and do the following:

1. After the panel has completed reporting the alarm, pick up the CS phone and press the * button to start the audio session.

2. Press 1 or 0 to speak, 2 for vox operation, and 3 or 6 to listen.

3. Press 99 to terminate the session.

Note: Panel voice announcements are silenced during AVM sessions. If the operator does not terminate the session correctly, panel announcements may not occur for up to 90 seconds after the operator hangs up.

Table 32: Audio verification set

Phone buttons	Function
0 and 1	Speak
2	Vox operation
3 or 6	Listen
7	Extend session for 90 more seconds
88	Terminates session with call back (the panel answers on the first ring if called within five minutes)
99	Terminates session with no call back

Voice event notification

Testing this feature requires two people; one at the alarm site and the other at the location the panel is programmed to call.

To test voice event notification, do the following:

1. Contact the central monitoring station (if system is monitored) to inform them you are testing the system and not to dispatch authorities.

2. At the system site, put the system into an alarm condition.

3. At the calling location, pick up the phone after it starts ringing. You should hear the panel voice announce Press star for alarm.

4. Press * and the panel voice identifies the alarm. If there is more than one alarm in progress, the user must press * for the panel voice to identify them.

   Note: You must terminate the call by pressing #. Otherwise, the panel may not disconnect from the phone line for up to 2 minutes.

5. After all alarms have been identified, the panel announces Press # to exit.

6. Press # to terminate the call.

X10 operation

The following sections describe how to test X10 lamp, siren, appliance, and universal module operation.

Manual lamp module control

Use the following methods to test manual lamp module control:

Control panel

Press the asterisk button (*) and the unit number of the lamp module using the numeric buttons to test individual lamp modules 1 through 8. The panel responds with Light # on/off. Press the asterisk button (*) twice to turn on all lamp modules. Press the pound button (#) twice to turn off all lamp modules.

Keyfob

Press the Light button repeatedly to turn all lights on and off. The panel responds with Lights on/off.

Remote handheld touchpad

Press the Lights on button and the unit number of the lamp module using the numeric buttons to test individual lamp modules 1 through 8. The panel responds with Light # on/off. Pressing the Lights on or Lights off button twice turns all the lights on or off.

Simon XT TableTop touchpad

Press the Lights on button and the unit number of the lamp module using the numeric buttons to test individual lamp modules 1 through 8. The panel responds with Light # on/off. Pressing the Lights on or Lights off button twice turns all the lights on or off.

X10 siren and lamp module functions

All sirens turn off when the system is disarmed or when the siren timeout expires. Siren priority is fire (highest priority), intrusion, and emergency. Table 33 below identifies the light information for each of these siren types.

Table 33: Alarm siren and X10 light information

	Fire	Intrusion	Emergency
X10 lights	Steady	Flashing	Steady
X10 siren	Steady	Steady	Alarm beeps
Interior and panel Siren	Temporal 3	Steady	Fast on/off

If an alarm of greater priority occurs during an alarm of lower priority, the greater priority alarm sirens sound. Fire alarms sound a temporal 3 pattern (0.5 seconds on, 0.5 seconds off for three beeps then 1.5 seconds off).

Note: The X10 siren must be set to unit #9 to "hear" emergency alarms and status beeps. To hear emergency alarms only, set to unit #10.

Chapter 6
Troubleshoot and support

This chapter provides information to help you troubleshoot problems and contact technical support in case you need assistance with your UTC Fire & Security equipment.

In this chapter:

Content

Troubleshooting

This section provides information to help you diagnose and solve various problems that may arise while configuring or using your UTC Fire & Security product and offers technical support contacts in case you need assistance. (See "Contacting us" on page 72.)

System status

- How do I clear Status (alarm memory)?

  From a disarmed state press Status, listen to the status message, then press Disarm.

- The panel displays and announces Siren 1 failure.

  Turn the Hardwired siren supervision option off if a hardwired siren or sensor is not connected. Check for the correct end-of-line resistor in HW1 I/O circuit.

- Panel displays and announces low battery.

  Check that panel backup battery is connected. Check panel backup battery voltage. If less than 5.4 volts, replace battery and clear system status message.

  Run a sensor test.

- The panel displays and announces RF jam.

  The control panel has detected RF interference.

- The panel displays and announces that a sensor is open.

  See "Sensors" on page 43.

- The panel displays Set time and announces system time is not set.

  Set the system time.

Control panel

The panel displays and announces Invalid.

This sensor is already programmed. Delete sensor if not correctly programmed.

Options (programmable by the homeowner)

- The panel does not beep.

  Turn on piezo beeps option.

- Latchkey does not function.

  Latchkey time is not set. Set latchkey time.

Latchkey is not enabled. Enable latchkey by pressing Motions twice.

The phone number is not programmed properly. Reprogram the phone number.

System time is not set. Set system time.

Sensors

- A sensor does not work.

   Make sure the battery is good and installed correctly.

   Check for interference from metal objects. Move or rotate the sensor.

- Door or window is closed, but the panel announces it is open.

   Be certain the arrow on the magnet and the guide line on the transmitter are aligned and within 1/4 inch of each other. The sensor tamper switch may be open (cover off).

- Motion sensors go off continuously.

   Be sure the sensor is mounted on a solid surface and the viewing field is free from sources of changing temperature. The sensor tamper switch may be open (cover off).

- Motion sensor does not respond to motion.

   Make sure the sensor battery is good and installed correctly. Wait two minutes after installing a new battery to test the sensor.

   Adjust the sensor mounting.

   Leave the area for three minutes, then retest.

   The environment is too hot or too cold. Outdoor sensors operate between 32 and 120°F (0 and 49°C).

   Dirt or dust may be causing the problem. Wipe the sensor with a clean, damp cloth.

X10 modules

- All lamp modules or siren not working.

   Be sure the panel transformer is plugged into an outlet that is not controlled by a switch.

   Check that the panel is powered using the line carrier power transformer.

   Make sure the housecode was programmed correctly.

- One lamp module or siren is not working.

Unplug nearby equipment that may be causing interference (light dimmer switches, televisions, appliances with older motors).

Check that the switch on the lamp or appliance is turned on and remains on.

Make sure the lamp has a working bulb.

Make sure the lamp or appliance is plugged into the lamp/appliance module, the module is plugged into the outlet and the outlet is not controlled by a switch.

Make sure the housecode and unit code are correct.

Move the module to a different outlet that is on the same phase (branch) of the household electrical circuit as the panel.

- Time- or sensor-activated light not working.

Make sure you have programmed the light to be activated by a timer or sensor.

Make sure the system clock is set.

Make sure these functions have been enabled. The functions are enabled if the appropriate icon is shown on the display.

Contacting us

For help installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact us during business hours (Monday through Friday, excluding holidays, between 5 a.m. and 5 p.m. Pacific Time).

Table 34: Technical support

North America		Latin America
Toll-free: 888.437.3287 in the US including Alaska, Hawaii, Puerto Rico, and Canada. www.utcfireandsecurity.com or www.interlogix.com		T: 305.593.4301 F: 305.593.4300 W: www.utcfireandsecurity.com or www.interlogix.com
		Eurpoe, Middle East, and Africa
		W: www.utcfireandsecurity.com or www.interlogix.com

Appendix A
Specifications and tables

This appendix provides lists of sensor names and a quick reference chart for operating the Simon XT TableTop system with various peripheral devices.

In this appendix:

Content

Specifications

Table 35: Simon XT TableTop Control Panel specifications

Requirement	Description
Power	9 VAC, 60 Hz, 25 VA transformer (minimum)
	Rechargeable battery: 6.0 VDC, 1.2 Ah lead-acid. The battery will last 24 hours with no AC and specified standby load of 250 mA. Maximum battery charging current is 45 mA. With loss of AC panel will continue to operate normally to a minimum of 5.1 VDC.
Radio frequency	319.5 MHz
Storage temperature range	-29 to140°F (-34 to 60°C)
Operating temperature range	32 to 120°F (0 to 49°C)
Maximum humidity	85% relative humidity, noncondensing
Auxliary power	Unregulated 5.3 to 12.3 VDC, with a maximum of 250 mA
Size (LxWxD)	7 x 5.75 x 2.125 in. (178 x 146 x 54 mm)

SIA system requirements

SIA system requirements are:

- Control panel: backup battery 6 V 1.2 Ah (model # 34-025)
- Standard class 2, 9 VAC, 3.34 A power transformer (model # 22-153)
- Hardwired siren (model # 13-374)

Plus if multiple annunciation is required, use hardwired siren part no.13-046.

SIA setting requirements

Table 36 below describes programming requirements to meet ANSI-SIA CP-01 (see "System programming" on page 37).

Call waiting services should be disabled to prevent interrupting panel communication to the central monitoring station

Table 36: SIA setting requirements

Function	Programming page reference	Default setting	Required setting
Entry delay	Table 18 on page 48	30 seconds	30 to 240 seconds
Exit delay	Table 18 on page 48	60 seconds	45 to 240 seconds
Dialer delay	Table 13 on page 41	30 seconds	15 to 45 seconds

Function	Programming page reference	Default setting	Required setting
Autoarm	Table 11 on page 39	On	On
Unvacated premises	Table 18 on page 48	On	On
Call waiting	Table 13 on page 41	Off	On if reporting to central station and customer has call waiting service
Exit extension	Table 11 on page 39	On	On
Swinger shutdown	Table 16 on page 45	On (one trip)	On (one trip)
Fire alarm verify	Table 16 on page 45	Off	On
Duress/panic code	Table 10 on page 38	Disabled	Disabled
Cross zone	"Cross-zoning" on page 12	Disabled	Disabled for zones with high probability of false alarms.

Table 37 below describes nonprogrammable (hard-coded) system operation, as required to meet ANSI-SIA CP-01, and is provided only for your reference.

Table 37: Non programmable (hard coded) system operation

Function	Operation
Silent exit	All annunciators enabled
Remote arming exit time and progress annunciation	All annunciators enabled
Abort annunciation	Enabled
Cancel report annunciation	Enabled
Recent closing	Enabled (2 minute window)
Exit error	Enabled
Restoration of power	Panel resumes operation in same arming state and disregards alarm signals from sensors for the first 60 seconds after power restoration
Cancel alarm	Enter code only.

Note: During a two-way voice session, additional alarms will be indicated at the panel immediately and reported to the Central Station as soon as the session ends.

Central station reporting

The panel has been tested with the following central station receivers using SIA and Contact ID reporting formats:

- Radionics D6600 central station receiver
- Sur-Gard central station receiver with models SG-DRL2A and SG-CPM2
- CS5000 digital alarm communicator receiver

Before beginning installation, installers must verify compatibility with the central station receiver.

Sensor names

Table 38 below and Table 39 on page 77 provide alphabetical and numerically sequential lists of the sensor name segments.

Table 38: Alphabetical list of sensor name segments

#	Phrase	#	Phrase	#	Phrase
039	Attic	002	Front door	025	Office window
137	Baby	003	Front window	133	Patio
004	Back door	028	Garage	023	Patio door
005	Back window	006	Garage door	042	Phone module
030	Basement	007	Garage window	134	Pool
031	Basement window	141	Girl's	021	Porch
010	Bedroom	012	Guest room	022	Porch window
011	Bedroom window	013	Guest room window	139	Room
140	Boy's	036	Hallway	132	Sliding door
014	Child's room	000	Keyfob (keychain)	029	Special chime
015	Child's room window	019	Kitchen	143	Sun room
038	Closet	020	Kitchen window	040	System panic
026	Den	131	Laundry	001	Touchpad
027	Den window	017	Living room	138	Toy room
129	Dining room	018	Living room window	032	Upstairs
136	Door	008	Master bedroom	033	Upstairs window
034	Downstairs	009	Master bedroom window	016	Utility room
035	Downstairs window	037	Medicine cabinet	135	Window

#	Phrase	#	Phrase	#	Phrase
130	Family room	041	Module		
142	Fire	024	Office		

Table 39: Sensor name segments by index number (in scrolling order)

#	Phrase	#	Phrase	#	Phrase
000	Keyfob (keychain)	049	G	098	.
001	Touchpad	050	H	099	<
002	Front door	051	I	100	>
003	Front window	052	J	101	?
004	Back door	053	K	102	[SPACE]
005	Back window	054	L	103	a
006	Garage door	055	M	104	b
007	Garage window	056	N	105	c
008	Master bedroom	057	O	106	d
009	Master bedroom window	058	P	107	e
010	Bedroom	059	Q	108	f
011	Bedroom window	060	R	109	g
012	Guest room	061	S	110	h
013	Guest room window	062	T	111	i
014	Child's room	063	U	112	j
015	Child's room window	064	V	113	k
016	Utility room	065	W	114	l
017	Living room	066	X	115	m
018	Living room window	067	Y	116	n
019	Kitchen	068	Z	117	o
020	Kitchen window	069	0	118	p
021	Porch	070	1	119	q
022	Porch window	071	2	120	r
023	Patio door	072	3	121	s
024	Office	073	4	122	t
025	Office window	074	5	123	u
026	Den	075	6	124	v
027	Den window	076	7	125	w

#	Phrase	#	Phrase	#	Phrase
028	Garage	077	8	126	x
029	Special chime	078	9	127	y
030	Basement	079	/	128	z
031	Basement window	080	'	129	Dining room
032	Upstairs	081	!	130	Family room
033	Upstairs window	082	@	131	Laundry
034	Downstairs	083	#	132	Sliding door
035	Downstairs window	084	$	133	Patio
036	Hallway	085	%	134	Pool
037	Medicine cabinet	086	&	135	Window
038	Closet	087	*	136	Door
039	Attic	088	(	137	Baby
040	System panic	089	)	138	Toy room
041	Module	090	"	139	Room
042	Phone module	091	-	140	Boy's
043	A	092	_	141	Girl's
044	B	093	+	142	Fire
045	C	094	=	143	Sun room
046	D	095	{		
047	E	096	}		
048	F	097				

:Simon XT TableTop System quick reference

Table 40. Simon XT TableTop system quick reference [a]

	Control panel	Touchpad	Keyfob	Telephone
Level 0: Subdisarm the system	Enter the master code while the system is disarmed.			1
Level 1: Disarm the system	**Disarm**, *<access_code>*.	Disarm	(keyfob disarm icon)	1
Level 2: Arm doors and windows	**Doors+Windows**, *<access_code>* (if required).	ARM Doors & Windows	(keyfob arm icon)	2
Level 3: Arm motion sensors	**Motions**, *<access_code>* (if required).	ARM Motion Sensors		3
Level 4: Arm doors, windows, motions	**Doors+Windows**, *<access_code>* (if required), **Motions**.	ARM Doors & Windows – ARM Motion Sensors	(icon) – (icon)	2 – 3
Activate no delay	**Doors+Windows, Doors+Windows**. Appends *–No Delay* to arming level text.	ARM Doors & Windows – ARM Doors & Windows	(icon)	2 – 2
Activate latchkey	**Motions**, *<access_code>* (if required), **Motions**.	ARM Motion Sensors – ARM Motion Sensors	(icon) – (icon) – (icon)	3 – 3
Activate panic alarm	Press **Fire, Emergency**, or **Police** twice within 3 sec. or hold it for 2 sec.	(icon) + (icon) Hold both for 3 sec.	(icon) + (icon) Hold both for 3 sec.	
Check system status	STATUS	SYSTEM STATUS		0
Toggle chime or special chime mode	Scroll to *Chime* or *Special Chime*, **Enter**, toggle *On/Off*, **Enter**.			
Bypass a sensor	**Bypass**, *<master_code>*, scroll to the sensor, **Bypass**.			
Time-activated lights on/off	Scroll to *Light Schedules*, **Enter**, toggle *On/Off*, **Enter**.			
Sensor-activated lights on/off	Scroll to *Sensor Lights*, **Enter**, toggle *On/Off*, **Enter**.			
Specific light on	Press *****, *<unit_num>*.	(icon) – *<unit_num>*.	(icon)	* – *<unit_num>*.
Specific light off	Press **#**, *<unit_num>*.	(icon) – *<unit_num>*.	(icon)	# – *<unit_num>*.
All lights on	To turn on all lights controlled by lamp modules, press ***** twice. The panel displays *All Lights On*.	(icon) – (icon)	(icon)	* – *
All lights off	To turn off all lights controlled by lamp modules, press **#** twice. The panel displays *All Lights Off*.	(icon) – (icon)	(icon)	# – #

a. A minus sign (–) between buttons means **press one then the next**; a plus sign (+) between buttons means **press both simultaneously**.