interlogix

A UTC Fire & Security Company

Concord 4 Installation Guide

Content

Contact information

For contact information, see www.utcfireandsecurity.com or www.interlogix.com.

For 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.

Description

This is the Installation Guide for the following Concord 4 control panel models:

- 600-1021-95R Concord 4 RF
- 600-1022-95R Concord Express V4
- 600-1040 Concord Commercial V4
- 600-1042 Concord Hybrid

This manual provides information for installing a basic UL Listed Fire and Security System. To modify or use for other purposes, visit the UTC Fire & Security website for additional instructions and training.

Table 1 below shows the standard panel capabilities.

Table 1: Panel capabilities

Capabilities	Concord Express v4	Concord 4/Concord Commercial v4
Zones	32	96
Partitions	2	6
Bus devices	16	16
User codes	16	230

Table 2 below describes the basic panel (out-of-box) hardware capabilities for all panels:

Table 2: Panel hardware capabilities

Power	Input for an AC step-down, plug-in style transformer.
Auxiliary power output	Output that supplies 9 to 14 VDC with up to 1 amp for bus devices and hardwired detectors, such as smoke and motion detectors.
Bus A and B	Input and output that provides communication between bus devices and the panel.
Siren driver	Output that can drive an 8-ohm load and provides intrusion and fire alarm sounds for partition 1 (6 watts maximum).
Two onboard outputs	Can be used to activate other signaling devices based on system events. Out 1 is a 9 to 14 VDC source output, limited to 1.0 amp maximum. Out 2 is an open-collector output, rated up to 14 VDC, 300 mA maximum.
Microphone input	Input used for two-way audio when used in conjunction with the Interrogator 200 audio verification module.
Eight supervised hardwired zones	Inputs for various hardwired detectors. Zone 8 can be set up in programming to accept two-wire smoke detectors. It sources 9 to 14 VDC, 90 mA maximum.
Built-in RF receiver	Allows use of up to 96 or 32 319.5 MHz crystal and/or SAW learn mode wireless sensors and touchpads.

Phone line connection	Allows panel to communicate with central monitoring station and/or pagers.

Note: The total current sourced from all terminals cannot exceed 1 amp.

Panel location

Before permanently mounting the panel, use the following guidelines to choose a mounting location.

- To help reduce wire run lengths and labor, centrally locate the panel with relation to detection devices whenever possible.
- Locate the panel where the temperature will not exceed 120ºF (49ºC) or fall below 32ºF (0ºC).
- To prevent wire runs from picking up electrical noise, avoid running wires parallel with electrical wiring or fixtures such as fluorescent lighting.
- Mount the panel at a comfortable working height.
- Leave at least 24 inches in front of the panel to open the cabinet door and access the panel.
- Leave space to the left and right of the panel for wiring, phone jack, and mounting optional modules.
- Leave at least 9 inches above the panel cabinet for antennas.

Power and wire length

The panel can supply up to 1 amp (1,000 mA) in full load alarm condition for system devices connected to panel terminals 4 (+12V), 7 and 8 (speaker terminals), 9 (OUT1), 11 (+12V), 24 (2W SMK ZONE 8), and SnapCard terminals.

For 24-hour backup, the total standby current draw for all devices connected to panel terminals 4 (+12V), 9 (OUT1), 11 (+12V), 24 (if configured for two-wire smoke loop), and SnapCard terminals is limited to 90 mA (during normal standby condition) using a 4.5 or 5.0 Ah battery, or 190 mA (during normal standby condition) using a 7.0 Ah battery.

The total system wire length allowed can vary depending on devices powered by the panel, the wire length between devices and the pane, and the combined wire length of all devices.

Table 3 below describes the maximum wire length allowed between compatible devices and the panel, and the minimum and maximum current draw of each device.

Table 3: Wire length requirements

Device	Max. wire length to panel	Standby mA draw	Alarm mA draw
SuperBus 2000 2x16 LCD alphanumeric touchpad	22 ga.: 300 ft. 18 ga.: 750 ft.	15 mA	90 mA
SuperBus 2000 ATP 1000 alphanumeric touchpad	22 ga.: 300 ft. 18 ga.: 750 ft.	12 mA	110 mA
SuperBus 2000 ATP 2100 alphanumeric touchpad	22 ga.: 300 ft. 18 ga.: 750 ft.	30 mA	165 mA
SuperBus 2000 ATP 2600 alphanumeric touchpad	22 ga.: 300 ft. 18 ga.: 750 ft.	30 mA	165 mA
SuperBus 2000 GTS 50	22 ga.: 100 ft. 18 ga.: 250 ft.	270 mA	300 mA
SuperBus 2000 fixed display touchpad	22 ga.: 300 ft. 18 ga.: 700 ft.	11 mA	65 mA
SuperBus 2000 FTP 1000 fixed display touchpad	22 ga.: 300 ft. 18 ga.: 700 ft.	12 mA	75 mA
SuperBus 2000 RF transceiver	22 ga.: 1,000 ft. 18 ga.: 2,500 ft.	45 mA	55 mA
SuperBus 2000 RF receiver [1]	22 ga.: 1,100 ft. 18 ga.: 2,800 ft.	35 mA	35 mA
SuperBus 2000 phone interface/voice module	22 ga.: 40 ft. 18 ga.: 120 ft.	25 mA	600 mA
SuperBus 2000 voice-only module	22 ga.: 40 ft. 18 ga.: 120 ft.	20 mA	300 mA (jumper) 600 mA (no jumper)
SuperBus 2000 2 amp power supply	N/A	No load	No load
4 input/2 output SnapCard	N/A	20 mA	185 mA [1]
8Z hardwired zone expander SnapCard	N/A	38 mA	230 mA [1]
4 output SnapCard	N/A	1 mA	130 mA [1]
SuperBus 2000 8Z input module	22 ga.: 1,800 ft. 18 ga.: 4,000 ft.	18 mA	35 mA
SuperBus 2000 4-relay output module	22 ga.: 350 ft. 18 ga.: 900 ft.	12 mA	180 mA
SuperBus 2000 energy saver module	22 ga.: 1,600 ft. 18 ga.: 4,000 ft.	20 mA	20 mA
SuperBus 2000 cellular backup module	Standard power 22 ga.: 15 ft. 18 ga.: 40 ft. High power 22 ga.: 10 ft. 18 ga.: 30 ft.	90 mA / 90 mA	1600 mA / 1900 mA
SuperBus 2000 automation module	22 ga.: 1,500 ft. 18 ga.: 4,000 ft.	30 mA	35 mA
SuperBus 2000 wireless gateway-ready kit	22 ga.: 40 ft. 18 ga.: 90 ft.	65 mA	1600 mA
Interrogator 200	22 ga.: 3,200 ft. 18 ga.: 4,500 ft.	10 mA	10 mA

Device	Max. wire length to panel	Standby mA draw	Alarm mA draw
Interrogator AVM	22 ga.: 110 ft. 18 ga.: 260 ft.	45 mA	300 mA
Two-wire smoke detectors (429AT, 429C, 429CT, 521B, 521BXT, 521NCSXT)	22 ga.: 330 ft. 18 ga.: 330 ft.	70 uA	60 mA
Two-wire smoke detectors (system sensor 2400, 2400TH)	22 ga.: 330 ft. 18ga.: 330 ft.	120 uA	80 mA
Hardwired interior siren (13-949)	22 ga.: 750 ft. 18 ga.: 1,500 ft.	0 mA	85 mA
Piezo dynamic exterior siren (13-060)	22 ga.: 750 ft. 18 ga.: 1,500 ft.	0 mA	150 mA
Speaker siren (60-528 or 13-060)	18 ga.: 100 ft.	0 mA	500 mA

[1] Maximum current draw for the SnapCards does not include the load which may be applied to their auxiliary DC supply.

Note: When installing SuperBus 2000 RF receiver modules, the antenna tamper feature must be set to off.

Table 4 below describes the total system wire lengths allowed for all SuperBus 2000 devices when installing systems using unshielded or shielded cable. The maximum wire length for individual devices is shown instable below.

Table 4: Total system wire lengths

Wire type	Total system wire
18-gauge, unshielded	4,000 ft.
18-gauge, shielded	3,000 ft.
22-gauge, unshielded	4,000 ft.
22-gauge, shielded	3,000 ft.

After determining panel location, run all necessary wires to that location using the guidelines in Table.

Table 5: Device wire requirements

Device	Wire requirements
AC power transformer	2-conductor, 18-gauge, 25 ft. max.
Earth ground	Single conductor, 16-gauge solid, 25 ft. max.
Telephone (RJ-31X)	4-conductor
Detection devices	2- or 4-conductor, 22-gauge, 1,000 ft. max.
	2- or 4-conductor, 18-gauge, 2,500 ft. max.
	(based on 30 ohms max. loop resistance including device)
Speakers	2-conductor, 18-gauge, 100 ft. max.

Device	Wire requirements
SuperBus 2000 devices	4-conductor, 22- or 18-gauge
Interrogator 200 AVM power and microphone	4-conductor, 22-gauge, shielded
Two-wire smoke detectors	2-conductor, 22-gauge, 330 ft. max.
	2-conductor, 18-gauge, 830 ft. max.

Mounting the panel

Mount the panel to the wall or wall studs.

Caution: Make sure you are free of static electricity whenever you work on the panel with the cover open. To discharge any static, first touch the metal panel chassis, and then stay in contact with the chassis when touching the circuit board. We recommend using a grounding strap.

To mount the panel:

1. Remove the panel door and remove the necessary wiring knockouts. Be careful not to damage the circuit board.

2. Feed all wires through wiring knockouts and place the panel in position against the wall.

3. Level the panel and mark the top and bottom mounting holes.

4. Install anchors where studs are not present.

5. Partially insert screws into the two top mounting hole locations, then hang the panel on the two screws.

6. Recheck for level, insert the two lower screws, and tighten all four mounting screws.

Figure 1 below shows the main component locations.

Figure 1: Panel components
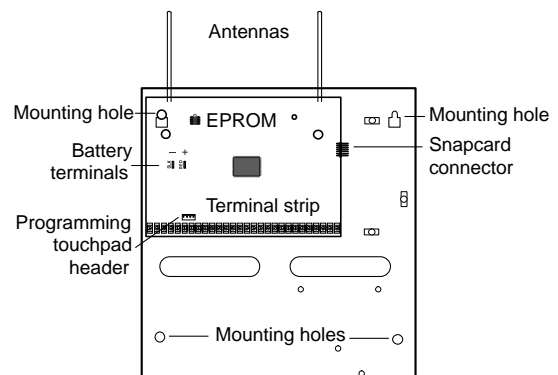
Grounding the panel

For maximum protection from lightning strikes and transients, connect the enclosure to earth ground. Use 16-gauge, solid copper wire from an earth grounded cold water pipe clamp to the enclosure. For best results, we recommend that you crimp a spade lug on the wire end at the panel and secure the lug to the enclosure.

Antenna shrouds

Install a plastic antenna shroud (included with the panel) over each antenna and snap them into the holes on top of the enclosure (skip this step for hybrid and commercial systems).

Programming

For onsite system programming, you must have an alphanumeric touchpad.

You must use an installer/dealer code (default 4321) to enter program mode. You may place the system into programming mode only when you disarm all partitions.

Note: If the system is powered up after the programming touchpad is connected or if a bus command scan is executed, the programming touchpad will be learned (programmed) into the system and must later be manually deleted.

To enter program mode:

1. Make sure you disarm the system in all partitions.

2. Press 8, 4321, 0, 0.

    The display shows SYSTEM PROGRAMMING.

To enter program mode using a programming touchpad:

1. Connect the red, black, green, and white wires from the programming touchpad cable (60-791) to the power and bus wires/terminals on an alphanumeric touchpad, matching the +12V (red), Bus A (green), Bus B (white), and GDN (black) on each.

2. Make sure the system is powered up and disarmed.

3. Connect the plug on the cable onto the panel programming touchpad header.

4. Press 8, 4321, 0, 2.

    The touchpad sounds one short beep.

5. Press * and verify that the display shows SERVICE TOUCHPAD ACTIVE.

6. Press 8, 4321, 0, 0.

The display shows SYSTEM PROGRAMMING.

7. After programming is complete, disconnect the touchpad from the panel header.

Touchpad programming options

In program mode, touchpad buttons let you navigate to all installer programming menus for configuring the system.

Table 6 below describes the touchpad button functions in program mode.

Table 6: Touchpad programming functions

Button	Programming function
#	Select menu item or data entry.
*	Deselect menu item or data entry (if pressed before #).
A (▲) B (▼)	Scroll through available option at the current menu tier. Scroll through sensor text options during sensor text programming.
C	Enter pauses when programming phone numbers.
D	Delete certain programming settings.
0 to 9	Enter numeric values wherever needed.
1 and 2	Select off (1) or on (2) wherever needed.
1 to 6	Press and hold to enter alphabetical characters A through F for account numbers.
7 and 9	Press and hold to enter * (7) or # (9) for phone numbers.

Menu navigation

There are two basic tiers of programming menus, tier 1 and tier 2.

From the tier 1 System Programming menu, you can access the following tier 2 programming menus:

*   Security
*   Phones
*   Phone options
*   Timers
*   Light controls
*   Touchpad options
*   Reporting
*   Siren options
*   Sensors
*   Audio verification
*   Accessory modules
*   Onboard options
*   Macro keys

Only when the display shows SYSTEM PROGRAMMING can you advance to tier 2 programming menus.

Press B or # to advance forward through menus. Press A or * to move backward through the menus.

Only when a specific menu is displayed can you advance to those menu settings. For example, from the SENSORS display, pressing # gives you access to learning sensors, programming sensor text, deleting sensors, and viewing/editing sensor programming.

To exit program mode:

1. Press * until the display shows SYSTEM PROGRAMMING.

2. Press A or B until the display shows EXIT PROGRAMMING READY.

3. Press # and the touchpad displays the time and date.

Sensors menu

The Sensors menu gives you access to the following settings:

- **Learn sensors.** Add (learn) hardwired zones, wireless sensors, and wireless touchpads into panel memory.
- **Sensor text.** Name the sensors and zones you have added to the system.
- **Delete sensors.** Delete zones and sensors from panel memory.
- **Edit sensors.** View or change a sensor group or partition assignment. You can also identify whether a zone is wireless or hardwired, whether it is configured as normally closed (NC) or normally open (NO), and whether the zone is a touchpad.

Table 7 below describes how to trip different types of sensors to program (learn) them in the panel.

Table 7: Tripping sensors

Sensor	How to trip the sensor
Hardwired zones	Start with the zone in its normal state, and then trip the zone into its alarm state. A normally closed door, for example, should be closed when you begin the learn sensors process. To trip the zone, open the door.
Wireless sensors	Follow the instructions included with each sensor.
Wireless door/window sensors with external contacts	Place the external contact in the alarm condition, and then activate the sensor tamper switch.
Self-actuated bells	Activate the tamper switch.

Sensor	How to trip the sensor
Handheld wireless touchpads	Press the BYPASS button.
Key fobs *	Press and hold the lock and unlock buttons together until the key fob LED flashes.
ELM key fobs *	Press and release the unlock button twice quickly, then press and hold until the LED flashes three times.
	Press and release the unlock button once quickly, then press and hold until the LED flashes two times.
	Press and hold the unlock button until the LED flashes once.

* Key fobs have not been investigated by UL for use in a UL Listed installation.

Learn sensors

The default setting is "None".

The panel comes with factory programmed onboard hardwired zones. Install 2 kohm, end of line (EOL) resistors on all unused factory sensors shown above and hardwired zones. If you don't want to install EOL resistors, delete any unused zones from memory. See Table on page 6 for onboard hardwired zone factory programming. Sensors must be placed in a partition or sensor group. To change the sensor group or partition assignment after adding a sensor or zone, use the Edit Sensors menu.

To add (learn) sensors into panel memory:

1. With the display showing SENSORS, press #.

   The display shows LEARN SENSORS.

2. Press #.

   The display shows SENSOR PTN 1.

3. Press # to select partition 1 or press 2, 3, 4, 5, or 6 and then press # to select the desired partition.

   The display shows SENSOR GROUP 0.

4. Enter the sensor group and press #. (See Table for a description of all sensor group characteristics.)

   The display shows TRIP SENSOR nn, where nn is the displayed (next available) sensor number.

5. To change the displayed sensor number, enter the desired sensor number and press #.

   The desired sensor number is displayed.

6. With the desired sensor number displayed, use the guidelines in Table 6 to force the sensor or zone you

are adding (learning) into the panel memory to send a signal to the panel.

7. To add another sensor to the same sensor group and partition, repeat the process.

8. To add sensors to another sensor group or partition, press * twice and repeat the process.

Table 8 below describes the factory default zone inputs.

Table 8: Zone factory programming

Zone input	Group number and description
1	10 - entry/exit
2	17 – instant interior follower
3	13 – instant perimeter
4	13 – instant perimeter
5	13 – instant perimeter
6	13 – instant perimeter
7	13 – instant perimeter
8	13 – instant perimeter

If the panel memory is cleared, all onboard hardwired zone factory programming will be cleared.

Quick programming mode

Use the quick programming mode to program basic system programming with a SuperBus 2000 fixed display touchpad, SuperBus 2000 FTP 1000 touchpad, or any SuperBus 2000 alphanumeric touchpad. The following menus are accessible:

- Account number (all partitions)
- SC phone 1
- CS phone 2
- CS phone 3
- Learn sensors (limited to selecting sensor number, sensor group, and partition assignment). An alphanumeric touchpad is required for programming sensor text in standard programming mode.

Use the A and B buttons to toggle across main menus and use the # and * buttons to toggle up and down through the submenus.

To enter quick programming mode:

1. Make sure the system is disarmed in all partitions.

2. Press 8, enter the installer/dealer code, and then press 03.

   The display shows ACCOUNT NUMBER.

3. Cycle through the menus as shown in Table 9 below.

Table 9: Quick programming menu structure

Account number	Partition number 1 to 6
	Account number 00000
CS phone	CS phone 1
	CS phone none
	CS phone 2
	CS phone none
	CS phone 3
	CS phone none
Learn sensors	Sensor partition number 1 to 6
	Sensor group 0
	Trip sensor number 1 to 96
End programming	

Sensor group characteristics

Table 10 below shows what the sensors on your Concord 4 system do. Every sensor is assigned to a group, and this table specifies those groups and functions. Every device must be assigned to one of these groups.

Note: The "X" marks in the table represent characteristics present in a group.

Table 10: Sensor group characteristics

Number	Name	Application	Alarm	Delay	Restoral	Supervisory	CS report	Chime (level)	Active (level)
00	Fixed panic	24-hour audible fixed emergency buttons	Police	Instant		X	X		1, 2, 3
01	Portable panic	24-hour audible portable emergency buttons	Police	Instant			X		1, 2, 3
02	Fixed panic	24-hour silent fixed emergency buttons	Silent	Instant		X	X		1, 2, 3
03	Portable panic	24-hour silent portable emergency buttons	Silent	Instant			X		1, 2, 3
04	Fixed auxiliary	24-hour auxiliary sensor, such as pendant panic or holdup button	Auxiliary	Instant		X	X		1, 2, 3
05	Fixed auxiliary	24-hour auxiliary emergency button, siren shutoff confirms CS report	Auxiliary	Instant		X	X		1, 2, 3
06	Portable auxiliary	24-hour portable auxiliary alert button	Auxiliary	Instant			X		1, 2, 3
07	Portable auxiliary	24-hour portable auxiliary button, siren shutoff confirms CS report	Auxiliary	Instant			X		1, 2, 3
08	Special intrusion	Special belongings, such as gun cabinets and wall safes	Police	Instant	X	X	X		1, 2, 3
09	Special intrusion	Special belongings, such as gun cabinets and wall safes	Police	Standard	X	X	X		1, 2, 3
10	Entry/exit delay	Entry and exit doors that require a standard delay time	Police	Standard	X	X	X	X	2, 3
11	Entry/exit delay	Garage doors and entrances that require extended delay time [1]	Police	Extended	X	X	X	X	2, 3
12	Entry/exit delay	Driveway gates and entrances that require a twice extended delay time [1]	Police	Twice extended	X	X	X	X	2, 3
13	Instant perimeter	Exterior doors and windows	Police	Instant	X	X	X	X	2, 3
14	Instant interior	Interior doors (hardwired)	Police	Follower	X	X	X		2, 3
15	Instant interior	Interior PIR motion sensors [1] (RF wireless)	Police	Follower		X	X		2, 3
16	Instant interior	Interior doors (hardwired)	Police	Follower	X	X	X		3
17	Instant interior	PIR motion sensors 1 (RF wireless)	Police	Follower		X	X		3
18	Instant interior	Instant interior cross-zone # PIR motion sensors [1,2]	Police	Follower		X	X		3

Number	Name	Application	Alarm	Delay	Restoral	Supervisory	CS report	Chime (level)	Active (level)
19	Delayed interior	Interior doors that initiate a delay before going into alarm [1]	Police	Interior	X	X	X		3
20	Delayed interior	PIR motion sensors that initiate a delay before going into alarm [1]	Police	Standard		X	X		3
21	Local instant interior	24-hour local alarm zone protecting anything that opens and closes	Police	Instant	X	X			1, 2, 3
22	Local delayed interior	Same as group 21, plus activation initiates a delay before going into alarm	Police	Standard	X	X			1, 2, 3
23	Local instant auxiliary	24-hour local alarm zone protecting anything that opens and closes [3]	Auxiliary	Instant	X	X			1, 2, 3
24	Local instant auxiliary	24-hour local alarm zone protecting anything that opens and closes, sirens shut off at restoral [1]	Auxiliary	Instant	X	X			1, 2, 3
25	Local special chime	Notify the user when a door is opened, sounds emit from a local annunciator [1]	Special chime	Instant		X			1, 2, 3
26	Fire	24-hour fire, rate-of-rise heat, and smoke sensors	Fire	Instant	X	X	X		1, 2, 3
27	Output module	Hardwired output module (HOM) lamp control or other customer features [3]	Silent	Instant	X	X			1, 2, 3
28	Output module	HOM, PIR motion sensor, sound sensor, or pressure mat [3]	Silent	Instant		X			1, 2, 3
29	Auxiliary	Freeze sensor	Auxiliary	Instant	X	X	X		1, 2, 3
32	Output module	HOM, PIR motion sensor, sound sensor, or pressure mat [3]	Silent	Instant					1, 2, 3
33	Siren	Wireless siren supervision	Silent	Instant		X	X		1, 2, 3
34	Gas	Carbon monoxide (CO) gas detectors [3]	Auxiliary	Instant	X	X	X		1, 2, 3
35	Local instant police (day zone)	Local alarm levels 1 and 2, report to CS in level [3]	Police	Instant	X	X	X (level 3 only)		1, 2, 3
38	Auxiliary	Water sensor [3]	Auxiliary	Instant	X	X	X		1, 2, 3

1. This group is not certified as a primary protection circuit for UL-listed systems and is for supplementary use only.
2. Sound instant police siren if two or more sensors are tripped within 4 minutes. Otherwise sensors are followers to delayed sensors. If Alarm Verification is on, group 18 functions like group 17.
3. This group has not been investigated by UL.
4. This group is required for UL-listed residential fire alarm applications.

Specifications

Power requirements	Class 2, 16.5 VAC, 40 VA, 60 Hz (600-1023 or 600-1024)
	Rechargeable battery: 12 VDC, 4.5 or 5.0 Ah lead-acid (60-681) or 12 VDC, 7 Ah (60-680). The battery will last 24 hours with no AC and specified stand-by load.
Auxiliary power output	1.0 A at 9 to 14 VDC (12 VDC typical)
Radio frequency	319.5 MHz
Nominal RF range	1,000 feet (305 m) typical open air
Storage temperature	-30 to 140ºF (-34 to 60ºC)
Operating temperature	32 to 120ºF (0 to 49ºC)
Maximum humidity	85% relative humidity, noncondensing
Dimensions (H x W x D)	14 x 12 x 3 in. (35.6 x 30.5 x 7.6 cm)

Regulatory information

UL listed installations

This section describes the requirements for UL listed installations.

Basic system:

- Control panel (600-1021-95R Concord 4 RF, 600-1022-95R Concord Express V4, 600-1040 Concord Commercial V4, or 600-1042 Concord 4 Hybrid).
- Standard class 2 16.5 VAC, 40 VA power transformer 22-145 or 22-156 (600-1023), 22-156-CN, or 22-145-CN (600-1023-CN), or power line carrier class 2 16.5 VAC, 40 VA power transformer 22-149 (600-1024) or 22-149-CN (600-1024-CN). You must order these transformers separately from UTC Fire & Security.
- Backup battery 12 V 4.5 or 5.0 Ah (60-681) or 12 V 7 AH (60-680).
- SuperBus 2000 fixed display touchpad (60-820), FTP 1000 (600-1020), 2x16 LCD touchpad (60-746-01), ATP 1000 (60-983), ATP 2100 (60-985), ATP 2600 (60-984), 2x20 LCD touchpad (60-803), or 2x20 VFD touchpad (60-804).
- Interior speaker siren (60-528), hardwired interior siren (13-949), or speaker siren (13-060).
- Basic system but also include a SuperBus 2000 RF receiver (60-764-95R-01) or a SuperBus transceiver (600-1025-01-95R).

Household burglary alarm system unit (UL 1023)

Basic system plus the following:

- Hardwired magnetic contact (13-068 or 13-071) or wireless learn mode door/window sensor (60-362)
- Immediate beeps set to on.
- UL 98 options set to on.
- Receiver failure set to on (if wireless devices are used).
- Siren verify set to on.
- Exit delay set to 60 seconds.
- Quick exit set to off.
- Siren timeout set to 4 minutes or more.
- Entry delay set to 45 seconds or less.
- RF TX timeout set to 24 hours (if system includes built in receiver or SuperBus 2000 RF receiver or SuperBus 2000 RF transceiver and wireless burglary sensors).
- Extended delay set to off.
- Sleep time set to off.
- Two trip error set to off.
- Alarm verify set to off.
- Disable trouble beeps set to off.

Household fire warning system (UL 985)

Basic system plus the following:

- Wireless smoke sensor 60-506-319.5, 60-848-02-95, or TX-6010-01-1 learned into sensor group 26.
- Immediate beeps set to on.
- UL 98 options set to on.
- Receiver failure set to on (if wireless devices are used).
- Siren verify set to on.
- Sleep time set to off.
- Siren timeout set to 4 minutes or more.
- Two-trip error set to off.
- Disable trouble beeps set to off.
- RF TX timeout set to 4 hours (if system includes built in receiver or SuperBus 2000 RF transceiver and wireless smoke sensors).

UL 1023 and 985 24-hour backup

For 24-hour backup, the total current draw for all connected devices is limited to 90 mA (during normal standby conditions) using a 4.5 or 5.0 Ah battery, or 190 mA (during normal standby conditions) using a 7.0 Ah battery.

SIA system requirements

SIA system requirements are the same as those described for a UL-listed basic system. If multiple annunciation is required, use additional touchpads. This applies to model numbers 60-746-01, 60-803, 60-804, 60-820, 60-983, 60-984, 60-985, and 600-1020. UL requirements take priority over SIA requirements.

Table 11 on page 10 describes programming requirements to meet ANSI-SIA CP-01.

Table 11: SIA setting requirements

Function	Default setting	Required setting
Exit extension	On	On
Duress code	Disabled	Disabled
Dialer abort delay	30 seconds	15 to 45 seconds
Cancel message	On	On
Call wait cancel	Disabled	On if reporting to central station and customer has call waiting service.
Entry delay	30 seconds	30 to 240 seconds
Exit delay	60 seconds	45 to 184 seconds
Swinger limit	1	1
Smoke verify	Off	On if smoke alarms are programmed into system.
Cross zone	Disabled	Enabled for zones with high probability of false alarms

Table 12 below describes nonprogrammable (hard-coded) system operation, as required to meet ANSI-SIA CP-01 and is provided only for your reference.

Table 12: ANSI-SIA CP-01 requirements

Function	Operation
SIA false alarm	Enabled
Auto stay arming	Enabled
Disarm during entry delay	Enter code only (or 1 + CODE)
Cancel alarm	Enter code only (or 1 + CODE).
Abort annunciation	Enabled
Exit error	Enabled
Entry/exit progress annunciation	Enabled

Note: You may use the silent arming feature to suppress arming level and exit beeps for the current arming period. Refer to the Concord 4 user manual for more information on silent arming.

Commercial burglary alarm system unit (UL 1610)

Basic system using control panel 600-1040, SuperBus 2000 RF transceiver module (600-1025-01-95R), plus the following:

- Hardwired magnetic contact (13-068 or 13-071) or wireless learn mode door/window sensor (60-499).
- SAW PIR sensor (60-639-95R), crystal PIR sensor (60-703-95R), or DS924i PIR sensor (60-511-01-95).

- UL approved bell/housing, such as Ademco #AB12M or equivalent.
- Immediate beeps set to on.
- UL 98 options set to on.
- Receiver failure set to on (if wireless devices are used).
- RF TX timeout set to 4 hours.
- 24-hour tamper set to on.
- System tamper set to on.
- Automatic phone test set to on.
- Phone text frequency set to 1.
- Next phone test set to 1.
- Siren verify set to on.
- AC failure set to on.
- Exit delay set to 120 seconds or less.
- Quick exit set to off.
- Two-trip error set to off.
- Alarm verify set to off.
- Disable trouble beeps set to off.
- Phone number must be programmed.
- High level reports set to on.
- Low level reports set to on.
- Communication failure set to on.
- Extended delay set to off.
- Sleep time set to off.
- Siren timeout set to 4 minutes or more.

UL 1610 24-hour backup

Same as UL 1023 and 985.

UL 1635 digital alarm communicator system

For UL 1635 installations, entry delay plus dialer abort delay must not exceed 60 seconds. Same as UL 1023, 985, and 1610 plus:

- AC failure set to on.
- Phone number must be programmed.
- Low CPU battery set to on.
- Next phone test set to 1.
- Phone test frequency set to 1.
- High level reports set to on.
- Low level reports set to on.
- Communication failure set to on.
- RF TX timeout set to 4 hours.

Central station reporting

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

- CS-5000 central station receiver
- Sur-Gard central station receiver with models SG-DRL2A and SG-CPM2
- Osborne Hoffman central station receiver

Note: The installer must verify the compatibility between this panel and the central station receivers being used.

UL Canada listed installations

This section describes the requirements for CUL (UL Canada) listed installations.

Residential burglary alarm system unit (ULC subject C1023-1974)

Basic system as described for UL 1023 listed installations plus:

*   Hardwired magnetic contact (13-068 or 13-071) or wireless learn mode door/window sensor (60-362)
*   Siren timeout set to 5 minutes or more

Residential fire warning system control unit (ULC-S545-M89)

Basic system as described for UL 985 listed installations plus:

*   Hardwired smoke detector: System sensor models 2400 or 2400TH learned into sensor group 26, or ESL models 429AT, 429CT, 521B, 521BXT, 521NCSXT, 711U, 711UT, 721U, 721UT, TS7-2, or TS7-2T learned into sensor group 26.
*   Wireless smoke sensor 60-319.5 60-848-02-95, TX-6010-01-1 learned into sensor group 26.
*   Siren timeout set to 5 minutes or more.
*   RF TX timeout set to 4 hours (if system includes SuperBus 2000 RF transceiver and wireless smoke sensors).
*   Immediate trouble beeps set to on.

Note: For 24-hour backup, external power drain is limited to 90 mA (during normal standby condition) using a 4.5 or 5.0 Ah battery, or 190 mA continuous using a 7.0 Ah battery.

California State Fire Marshall listed installations

Same as Household Fire Warning System (UL 985) plus:

*   Smoke verify must be set to off.

FCC compliance

Changes or modifications not expressly approved by UTC Fire & Security can void the user's authority to operate the equipment.

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, of not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

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:

*   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.

Part 68. This equipment complies with Part 68 of the FCC rules. Located on this equipment is a label that contains, among other information, the FCC registration number and the ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

FCC Part 68 registration number: US: B4ZAL02B55910.