

NX-8E Control Panel Installation Manual



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Important information

This is the NX-8E Control Panel Installation Manual. This document includes an overview of the product and detailed instructions explaining how to install the NX-8E board inside the enclosure and how to program the control panel.

To use this document effectively, you should have the following minimum qualifications:

- A basic knowledge of electrical wiring and low-voltage electrical connections
- A basic knowledge of control panels.

Chapter 1

Introduction

Summary

This chapter provides an overview of your NX-8E Control Panel, including basic installation and terminal connections.

Content

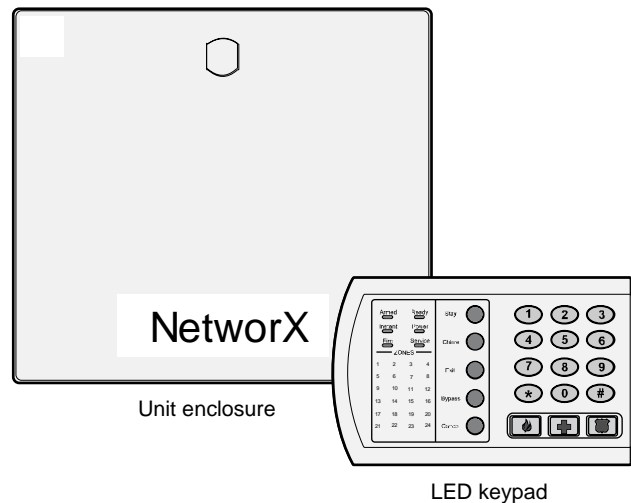
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Product overview

The NX-8E Control Panel is a residential security and alarm system and provides the following features:

- Sophisticated software allowing up to 240 users to interface with up to 192 zones and eight partitions.
- Integrated fire and input/output modules.
- Fast SIA and Contact ID formats.
- System expansion with up to 32 modules. Keypads can include NX-148E-RF keypads that have built-in wireless receivers.

Figure 1: NX-8E Control Panel



Product contents

The NX-8E Control Panel generally comes with:

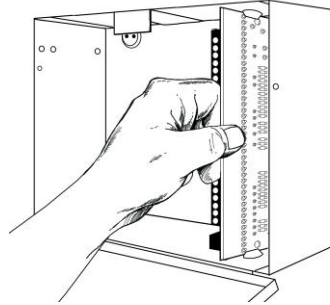
- One metal enclosure
- One LED keypad

For additional hardware, refer to the Table 3 on page 6.

Board installation

Inside the metal enclosure, there are slots for board insertions. These allow the PC board to be positioned vertically (Figure 2 below). When you slide the board between the grooves of the slots, make sure the terminal strip is toward the front opening (toward you) to allow for the wire connections.

Figure 2: Board installation



Wiring

Table 1 below lists wire lengths for one keypad at the end of the wire. When connecting more than one keypad to the end of the wire, a higher gauge wire is required.

Table 1: Maximum keypad wire run

Length in feet	Wire gauge for NX-8E	Wire gauge for NX-320 E
250	24	22
500	20	18
1000	18	16
1500	16	14
2500	14	12

Figure 3 on page 4 shows the wiring diagram for the NX-8E.

Terminal descriptions

Table 2 below describes the terminals shown in the wiring diagram.

Table 2: NX-8E terminals

Terminal	Description
R1	House telephone ring (gray).
R	Telephone ring (red)
T	Telephone tip (green)
T1	House telephone tip (brown)
EARTH	Earth ground. Connect to a cold water pipe or a 6 to 10 ft. driven rod.
AC	AC input. Connect to a 16.5 V 40 or 50 VA Class II UL approved transformer.
BELL+ and BELL-	If used as a siren output (default), the speaker rating is 15 watt at 8 or 16 ohms, or 30/40 watt at 4, 8, or 16 ohms. If voltage output is selected in Location 37, this output becomes voltage output, 12 VDC, 1 A maximum load. A 3.3 kohm resistor is required across the bell terminals when a 12 VDC siren is used. If no resistor is used, you may experience voltage leakage into the siren, which causes these devices to output a small signal.
KP DATA	Connect to the data terminal on the keypads and the expanders. Maximum number of devices (keypads plus expanders) is 32.
KP COM	Connect to the common terminal on the keypads and the expanders.
KP POS	Connect to the POS terminal on the keypads and the expanders. Individually, this terminal is limited to 1 amp. Combined, this terminal and AUX PWR+ are limited to 2 amps total current.
SMOKE+	Smoke detector power 12 VDC, 1.5 amps maximum (for those jurisdictions that allow the priority zone to be used with smoke detectors.)
COM	Connect negative wire of powered devices such as motion detectors and smoke detectors.
AUX PWR+	Connect positive wire of all powered devices except smoke detectors and keypads. Individually, this terminal is limited to 1 amp. Combined, this terminal and KP POS are limited to 2 amps total current.
ZONE 8	Connect to one side of the zone 8 loop. Connect the other side to the COM terminal. Open or short causes an alarm. Zone 8 may be used for a two-wire smoke detector using a 680 W EOL resistor. Connect one side to AUX PWR+ only if using a two-wire smoke. Refer to the wiring diagram. Program Location 37, Segment 6, Option 1.
COM	Common (-) terminal for zones 7 and 8.
ZONE 7	Connect to one side of zone 7 loop. Connect the other side to the COM terminal. Open or short causes an alarm.
ZONES 6 to 1	Connect as describes for zones 7 and 8. (Only zone 8 can be a two-wire zone).

Terminal	Description
RELAY2	C = Closed dry contact rated 1 amp at 30 volts. NO = Normally open dry contact rated 1 amp at 30 volts. Note: These terminals can be set for 12 VDC. Install J12 for AUX1 and J13 for AUX2.
COM	Common used to ground any devices connected to relays
RELAY1	NC = Normally closed dry contract rated 1 amp at 30 volts. C = Closed dry contact rated 1 amp at 30 volts. Note: These terminals can be set for 12 VDC. Install J12 for AUX1 and J13 for AUX2.

Module list

Table 3 below shows some of the modules that are compatible with the NX-8E system. Additional information is available from customer support.

Table 3: Module list

Part number	Description
NX-8E	NX-8E control only.
NX-848-KIT	NX-8E control, NX-148 LED keypad, 16.5 V 40 VA transformer.
NX-108E	8-zone LED keypad.
NX-116E	16-zone LED keypad.
NX-124E	24-zone LED keypad.
NX-148E	Alphanumeric 48-zone LCD keypad.
NX-200	Zone doubling kit (includes one hundred 3.74k and one hundred 6.98k resistors).
NX-216E	16-zone expander module
NX-320E	Smart power supply and bus extender.
NX-408E	8-zone wireless expansion module.
NX-416E	16-zone wireless expansion module.
NX-448E	48-zone wireless expansion module.
NX-507E	7-relay output module.
NX-508E	8-output module.
NX-534E	Two-way listen-in module.
NX-540E	Operator telephone interface module.

Part number	Description
NX-548E	48-zone wireless receiver.
NX-591E-GSM	Cell interface.
NX-870E	Fire supervison module
NX-1192E	192-zone LCD keypad.
NX-1208E	8-zone LED keypad.
NX-1248E	48-zone LCD keypad.
NX-1308E	8-zone LED door design keypad.
NX-1316E	16-zone LED door design keypad.
NX-1324E	24-zone LED door design keypad.
NX-1448E	48-zone fixed language icon keypad.

Note: The maximum number of zones available is 192 regardless of the devices added. Information regarding zone doubling is located in the Glossary.

Chapter 2

Programming

Summary

This chapter provides basic programming instructions and a description of the programming locations.

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LED keypad programming

This section describes how to program the address of each LED keypad, as well as the options that are available. The keypad must be addressed for control panel supervision of that keypad. Programming defaults include:

- Four-digit master code: 1, 2, 3, 4.
- Six-digit master code: 1, 2, 3, 4, 5, 6.
- Four-digit go to program code: 9, 7, 1, 3.
- Six-digit go to program code: 9, 7, 1, 3, 0, 0.

To assign the keypad's LEDs to start at a zone other than one:

1. Enter *, 9, 2, *program code*.
2. Enter the starting zone number (1 to 16).
3. Press * to save and exit.

Keypad options

To program the keypad options:

1. Enter *, 9, 3, *program code*.
2. The Service LED begins flashing. You can now toggle LEDs 1 to 8 on/off to enable/disable the functions shown in Table 4 below.
3. Press * after enabling/disabling the desired functions.

Table 4: LED 1 to 8 functions

LED	Keypad feature enabled
1	Reserved. Do not program this LED.
2	Enable silent keypad option. Silences the entry/exit sounder and chime only.
3	Enable ding dong sound for chime. If off, chime is a single tone.
4	Enable keypress silence option. Silences the pulsing keypad sounder for 5 seconds when a key is pressed.
5	Enable armed status suppression. Will not allow the keypad to display faulted or bypassed zones when the system is armed.
6	Enable panic, fire, emergency beep tone. Sounds a short beep to verify that the keypress was accepted.
7	Suppress the Service LED. Will not allow the Service LED to light for any reason. If there is a system problem, pressing *2, shows the service menu.

LED	Keypad feature enabled
8	Enable multiple partition viewing. Enable temporary viewing of all partitions by pressing *, 1, <i>partition number</i> .

Keypad number and partition

To set the keypad number and partition:

1. Enter *, 9, 4, *program code*. The Service LED and the Instant LED will flash.
2. Enter the keypad number (1 to 8).
3. Press *. The Instant LED will illuminate steady and the Service LED will remain flashing.
4. Enter the partition number (1 to 8) for the keypad. The keypad will automatically exit this mode at this time.

Elapsed increments

To set the elapsed increments since the last autotest:

1. Enter *, 9, 5, *program code*. The Service LED begins flashing.
2. Enter the three-digit increment number.
[100's digit] - [10's digit] - [1's digit] - #

System date

To set the system date:

1. Enter *, 9, 6, *master code*. The Service LED begins flashing.
2. Enter the day for the week, the month, the day of the month, and the year.

Day of the week (one digit) 1 = Sunday, 2 = Monday etc.

Month (two digits) 01 = January, 02 = February, etc.

Day of the month (two digits), 01 to 31.

Year (last two digits of the year).

For example, Sunday, May 7, 2010 = 1, 0, 5, 0, 7, 1, 0.

System clock

To set the system clock:

1. Enter *, 9, 7, *master code*. The Service LED begins flashing.
2. Enter the clock time (military time). Hour: 00 through 23, where 00 is midnight, 01 is 1:00 a.m., 23 is 11:00 p.m. Minutes: 00 to 59. For example, 3.25 a.m. = 0, 3, 2, 5; and 5:00 p.m. = 1, 7, 0, 0.

User codes

To change the user codes:

1. Enter *, 5, *master code*. The Ready LED begins flashing.
2. Enter the two-digit user number (for example, 03 for user 3). The maximum number of users is 99.
3. Enter the new user code designated for that individual. The Ready LED begins flashing, indicating the code was accepted. If the code was rejected, a beep sounds three times.

If another user code needs to be programmed, repeat the process.

4. Press # while the Ready LED is flashing to exit the user code programming mode.

User authority level

To assign user authority levels:

1. Enter *, 6, *master code*. The Ready LED begins flashing.
2. Enter the two-digit user number. The Ready LED illuminates and the Instant LED begins flashing.
3. Turn on the LED for the features you want. See Table 5 on page 14 for a description of each LED.
4. Enter *. The Instant LED will illuminate steady.
5. Now you are in partition enable mode. This tells the system what partition this user can arm/disarm. LEDs 1 through 8 illuminate for each partition that the user has authorization for. To change any of these numbers, press 1 through 8 to toggle the corresponding LED off/on, indicating the user is assigned or not assigned access to that partition.
6. Enter *. This returns you to step 2, where you can enter another user number to assign attributes for. You may continue this procedure until you have

assigned authority levels to all user numbers, or you can press # to exit assigning authority level programming.

Table 5: LED features

LED	Attributes if LED 8 is off	Attributes if LED 8 is on
1	Reserved	Activate output 1
2	Armed only	Activate output 2
3	Arm only after close window	Activate output 3
4	Master arm/disarm (can program other codes)	Activate output 4
5	Arm/disarm code	Arm/disarm
6	Allowed to bypass zones	Bypass zones
7	Code sends open/close reports	Open/close reporting
8	If this LED is on, LEDs 1 to 7 use the column to the right.	If this LED is off, LEDs 1 to 7 use the column to the left.

Note: Any master arm/disarm code can add or change a user code if the master code has access to the same partitions as the code being added/changed. Consequently, when programming the user codes for a partitioned system, leave at least one code (can be go to program code if enabled in Location 43) access to all partitions or you will not be able to add new users. If you want the end user to be able to add new codes, you must remove the partition authority from all blank codes.

Entering *, 9, 8 while the system is disarmed, causes the control panel to do a callback for a download. A valid user code is required after pressing *, 9, 8 if it is enabled in Location 41.

Entering *, 9, 9 while the system is disarmed causes the control panel to seize the phone line for a download. A valid user code is required after pressing *, 9, 9 if it is enabled in Location 41.

Control panel programming

Programming the control panel requires you to enter program mode, select the module to program, program a location, and then exit the location and program mode.

To enter program mode:

1. Press *, 8. The five function LEDs (Stay, Chime, Exit, Bypass, and Cancel) begin flashing.
2. Enter the go to program code (default 9, 7, 1, 3). If the go to program code entry is valid, the Service LED flashes, and the five function LEDs illuminate.

You are now in program mode and can select the module to program.

Select the module to program

Since all modules connected to the NX-8E are programmed through the keypad, the module you are programming should be the first entry. To select the module to program, enter 0, #. The 0 is the module number of the control, and # is the entry key. You can find other module entry numbers in the module documentation and in Table 16 on page 70.

Once you enter the module number, the Armed LED illuminates, indicating it is waiting for you to enter a programming location.

To program a location:

1. To access any location, enter the desired programming location, followed by #. If the location is a valid location, the Armed LED extinguishes, the Ready LED illuminates, and the binary data for the first segment of the location is shown by the Zone LEDs.

While entering new data, the Ready LED begins flashing to indicate a data change in process.

2. Press * to store the newly entered data. The keypad advances to the next segment and displays its data. Repeat this procedure until the last segment is reached.
3. To move to another location after exiting a location (Armed LED illuminated):
 Press the Police (badge) key for the next sequential location.
 Press the Fire (flame) key for the previous location.
 Press the Emergency (cross) key for the same location.
4. To review the data in a specific location, repeat the procedure, pressing * but with no numeric data entry. Each time you press *, the programming data of the next segment displays.

To exit the current programming location:

1. Press *. The Ready LED goes off and the Armed LED goes on. You must press * to save the data.
2. To exit before the last segment, press #. The Armed LED illuminates.

You are now ready to enter another programming location. If you attempt to program and invalid entry for a particular segment, the keypad beeps three times indicating an error and remains in that segment awaiting a valid entry.

To exit program mode:

1. When you have completed all programming, press Exit to leave the selected module.
2. If there is another module to be programmed, select it by entering its address, followed by #. The procedure for programming devices is the same as for the control panel, except the locations are for the module selected.
3. If no additional modules are to be programmed, press Exit again to leave program mode.

Programming data types

There are two types of programming data (only one is used for any segment):

- Numerical. Used to enter values from 0 to 15 or 0 to 255, depending on the location's segment.
- Feature selection. Used to turn features on or off.

Numerical data

Program numerical data by entering a number from 0 to 255 on the numeric keys of the system keypad. To view the data in a location, a binary process is used. The binary process uses the LEDs for zones 1 to 8. To determine the data in a programming location, the binary process adds the lighted LEDs numeric equivalents together. The LEDs numeric equivalents are:

Zone 1 LED = 1	Zone 2 LED = 2	Zone 3 LED = 4	Zone 4 LED = 8
Zone 5 LED = 16	Zone 6 LED = 32	Zone 7 LED = 64	Zone 8 LED = 128

For example, if 33 is programmed in a location, the LEDs for zone 1 and zone 6 illuminate, indicating 33 is in that location ($1 + 32 = 33$).

If you attempt to program a number too large for a particular segment, the keypad beeps three times, indicating an error and remains in that segment awaiting a valid entry. On the LCD keypad, the number in the location displays. For locations with a maximum of 15, the hexadecimal equivalent displays in parenthesis (F).

Feature selection data

Feature selection data displays the current condition (on or off) for eight features associated with the programming location and segment selected. Pressing a button on the touchpad (1 to 8) that corresponds to the feature number within a segment toggles (on/off) that feature. You can select numerous features within one segment.

To enter feature selection data:

1. Press a numeric key from 1 to 8 to select the feature. The corresponding LED illuminates (feature is on).
2. Press the number again, and the LED extinguishes (feature is off).
3. If you want to select all eight features of a segment, press 1, 2, 3, 4, 5, 6, 7, 8. LEDs 1 to 8 illuminate as you press the keys indicating that those features are enabled. The features not enabled display a hyphen (-) on an LCD touchpad.
4. After selecting the desired settings for features in the segment, press * to enter the data and advance to the next segment of the location.

Note: When you are in the last segment of a location and press * to enter the data, you exit that location. This turns the Ready LED off and the Armed LED on. You are now ready to enter another programming location.

Loading factory defaults

To load factory defaults, enter program mode, enter the device address and number, and then enter 9, 1, 0, #. The keypad beeps three times indicating that loading is in progress. The process takes about 6 seconds. You cannot exit the location until loading is completed.

Enrolling modules and keypads

The NX-8E automatically finds and stores all keypads, zone expanders, wireless receivers, and other modules connected to the data terminal into the NX-8E memory. This allows these modules to be supervised by the control panel.

To enroll the modules:

1. Enter program mode and program the desired settings for each module.
2. When you exit program mode, the NX-8E automatically enrolls the devices. The enrolling process takes about 12 seconds, during which time the Service LED illuminates. If a speaker is attached to the NX-8E, it clicks at this time. If a siren or bell is attached to the NX-8E, it sounds for about 1 second. If the module is not detected, the Service LED illuminates.

Note: User codes are not accepted during the enrolling process.

Programming locations

This section describes all the programming options for the control panel.

Quick start programming

For most routine installations, the quick start locations allow you to enable a majority of the options available with the NX-8E (when communicating in Contact ID or SIA formats). The quick start locations include:

- Location 0 - Phone 1
- Location 1 - Phone 1 account code
- Location 2 - Phone 1 communicator format
- Location 3 - Phone 1 dial attempts/backup control
- Location 6 - Phone 2
- Location 7 - Phone 2 account code
- Location 8 - Phone 2 communicator format
- Location 19 - Download access code
- Location 20 - Number of rings to answer
- Location 21 - Download control
- Location 22 - Download call back number
- Location 23 - Feature report selection/partition feature selection
- Location 24 - Entry/exit times
- Location 25 - Zone type selection for zones 1 to 8
- Location 37 - System reporting, operation, and siren options
- Location 38 - Swinger shutdown count
- Location 39 - Keypad sounder control
- Location 40 - System timers
- Location 42 - Go to program code
- Location 44 - Duress code
- Location 51 - Autotest control

Locations 0 to 18 - Reporting

Location 0 - Phone 1

Location 0 has 20 segments of numerical data. Use this location to program phone 1. The default for each segment is 14.

- To program a delay of 4 seconds, enter 13 in the appropriate segment.
- To program tone dialing, enter 15 in the segment where tone dialing begins.
- If the entire number is tone dialing, enter 15 in the first segment.
- Enter 11 for a *, and 12 for a #.

Caution: A call-waiting cancel on a non call-waiting line prevents successful connection to the central station.

Location 1 Phone 1 account code

Location 1 has six segments of numerical data. Use this location to program the account code sent when phone 1 is dialed. The default for each segment is 10. Program a 10 in the segment immediately after the last digit of the account code. If the account code is six digits long, program all six segments.

Location 2 - Phone 1 communicator format

Location 2 has one segment of numerical data. Use this location to program the communicator format used to transmit to the receiver connected to phone 1. Refer to your central station receiver documentation to determine which format is compatible. Table 6 below describes the formats for this location. If you need a format other than those listed, review the override options described in Location 18. Program a 15 to create a special format (in addition to the entries in Location 18). The default is 0. If this location contains a 0, the built-in communicator is disabled and the NX-8E functions as a local-only control.

Table 6: Communicator formats

Data	Format	Description
0	Local	Communicator is disabled.
1	Universal 4+2	Two-digit event code 1800 Hz transmit 2300 Hz handshake double round parity 40 pulses per second (pps)
2	3+1 fast (or 4+1)	One-digit event code 1900 Hz transmit 1400 Hz handshake double round parity 20 pps.
3	Reserved	Reserved
4	Pager	Two-digit event code DTMF transmission.
5	3/1 or 4/1 slow	1800 Hz transmit 2300 Hz handshake double round parity 20 pps hex capability.
6	3/1 or 4/1 slow	1800 Hz transmit 1400 Hz handshake double round parity 20 pps hex capability.
7	3/1 or 4/1 fast	1800 Hz transmit 2300 Hz handshake double round parity 40 pps hex capability.
8	3/1 or 4/1 fast	1800 Hz transmit 1400 Hz handshake double round parity 40 pps hex capability.
9	3/1 or 4/1 fast with parity	1800 Hz transmit 2300 Hz handshake single round parity 40 pps hex capability.
10	3/1 or 4/1 fast with parity	1800 Hz transmit 1400 Hz handshake single round parity 40 pps hex capability.

Data	Format	Description
11	4+2 express	Two-digit event code DTMF transmission.
12	4+2 fast	Two-digit event code 1900 Hz transmit 1400 Hz handshake double round parity 20 pps.
13	Ademco contact ID	DTMF (see “Reporting Ademco Contact ID transmissions” on page 69).
14	SIA	Frequency shift keys (see “Reporting fixed codes in Contact ID and SIA” on page 66).
15	Custom format	See “Location 18 - Custom communicator format” on page 25.

Location 3 - Phone 1 dial attempts/backup control

Location 3 has two segments of numerical data.

Segment 1 - Phone 1 dial attempts

Program the number of dial attempts (1 to 15) the communicator makes to phone 1 before ending the notification process. The default is 8, which means that the communicator makes eight attempts to the first number.

Segment 2 - Phone 1 backup control

Program the backup control for phone 1. The default is 0.

0 = The NX-8E will make the designated number of attempts to phone 1 before setting the fail to communicate condition to stop reporting.

1 = The NX-8E will stop trying to communicate after the designated number of attempts have been made to phone 1.

2 = The NX-8E will make the dial attempts in increments of two. The first two attempts are made to phone 1, the next two attempts to phone 2. This repeats until the total number of attempts designated in segment 1 is completed.

Location 4 - Phone 1 events reported

Location 4 has two segments of feature selection data. Use this location to select those events reported to phone 1.

- If you do not want dual or split reporting, use Location 4 to select all events to phone 1. Location 5 should be left at the factory default of 0.
- If you want dual or split reporting and the split is based on the event type (alarm, open/close, etc.), use Location 4 to select only those events that are reported to phone 1.
- If you don't want events reported to phone 1, program 0 in Location 4 (disabling all options).

Segment 1

1. Alarms and alarm restores.
2. Opening and closings.
3. Zone bypass and bypass restore.
4. Zone trouble and trouble restores.
5. Power fail, low battery, power restore, and low battery restore.
6. Bell cut, telephone line cut, bell cut restore, telephone line restore.
7. Test reports.
8. Start and end programming, download complete.

Segment 2

1. Zone and box tamper and tamper restore.
 2. Auxiliary power overcurrent, ground fault, and restore both.
 3. Sensor missing and restore.
 4. Sensor low battery and restore.
 5. Expander trouble and restore.
 6. Fail to communicate.
 7. Zone activity monitor.
 8. Reserved.
-

Location 5 - Phone 1 partitions reported

Location 5 has one segment of feature selection data. Use this location to program when events are to be reported to a phone number are based upon the partition (1 to 8) regardless of the event. Enter 1 for partition 1 through 8 for partition 8. If this location is used, Location 4 should be programmed as 0.

Location 6 - Phone 2

Location 6 has 20 segments of numerical data. Use this location to program phone 2. The default for each segment is 14.

- To program a delay of 4 seconds, enter 13 in the appropriate segment.
- To program tone dialing, enter 15 in the segment where tone dialing begins.
- If the entire number is tone dialing, enter 15 in the first segment.
- Enter 11 for a *, and 12 for a #.
- Enter 14 to indicate the end of the phone number.

Caution: A call-waiting cancel on a non call-waiting line prevents successful connection to the central station.

Location 7 - Phone 2 account code

Location 7 has six segments of numerical data. Use this location to program the account code sent when phone 2 is dialed. The default for each segment is 10. Program a 10 in the segment immediately after the last digit of the account code. If the account code is six digits long, program all six segments.

Location 8 - Phone 2 communicator format

Location 8 has one segment of numerical data. Use this location to program the communicator format used to transmit to the receiver connected to phone 2. Refer to your central station receiver documentation to determine which format is compatible. Table 6 on page 19 describes the formats for this location. If you need a format other than those listed, review the override options described in Location 18. Program a 15 to create a special format (in addition to the entries in Location 18). The default is 0. If this location contains a 0, format 1 will be used when phone 2 is dialed.

Location 9 - Phone 2 dial attempts/backup control

Location 9 has two segments of numerical data.

Segment 1 - Phone 2 dial attempts

Program the number of dial attempts (1 to 15) the communicator makes to phone 2 before ending the notification process. The default is 8, which means that the communicator makes eight attempts to the first number.

Segment 2 - Phone 2 backup control

Program the backup control for phone 2. The default is 0.

0 = The NX-8E will make the designated number of attempts to phone 2 before setting the fail to communicate condition to stop reporting.

1 = The NX-8E will stop trying to communicate after the designated number of attempts have been made to phone 2.

2 = The NX-8E will make the dial attempts in increments of two. The first two attempts are made to phone 2, the next two attempts to phone 1. This repeats until the total number of attempts designated in segment 1 is completed.

Location 10 - Phone 2 events reported

Location 10 has two segments of feature selection data. Use this location to select those events reported to phone 2.

- If you do not want dual or split reporting, use the default of 0.
- If you want dual or split reporting and the split is based on the event type (alarm, open/close, etc.), use only those events that are reported to phone 2.
- If you don't want events reported to phone 2, program 0 in Location 10.

Segment 1

1. Alarms and alarm restores.
 2. Opening and closings.
 3. Zone bypass and bypass restore.
 4. Zone trouble and trouble restores.
 5. Power fail, low battery, power restore, and low battery restore.
 6. Bell cut, telephone line cut, bell cut restore, telephone line restore.
 7. Test reports.
 8. Start and end programming, download complete.
-

Segment 2

1. Zone and box tamper and tamper restore.
 2. Auxiliary power overcurrent and restore.
 3. Sensor missing and restore.
 4. Sensor low battery and restore.
 5. Expander trouble and restore.
 6. Fail to communicate.
 7. Zone activity monitor.
 8. Reserved.
-

Location 11 - Phone 2 partitions reported

Location 11 has one segment of feature selection data. Use this location to program when events are to be reported to a phone number are based upon the partition (1 to 8) regardless of the event. Enter 1 for partition 1 through 8 for partition 8. If this location is used, Location 10 should be programmed as 0.

Location 12 - Phone 3

Location 12 has 20 segments of numerical data. Use this location to program phone 3. The default for each segment is 14.

- To program a delay of 4 seconds, enter 13 in the appropriate segment.
- To program tone dialing, enter 15 in the segment where tone dialing begins.
- If the entire number is tone dialing, enter 15 in the first segment.
- Enter 11 for a *, and 12 for a #.
- Enter 14 to indicate the end of the phone number.

Caution: A call-waiting cancel on a non call-waiting line prevents successful connection to the central station.

Location 13 - Phone 3 account code

Location 13 has six segments of numerical data. Use this location to program the account code sent when phone 3 is dialed. The default for each segment is 10. Program a 10 in the segment immediately after the last digit of the account code. If the account code is six digits long, program all six segments. If Location 6 - Phone 2 is left unprogrammed, use account code 1 when phone 3 is dialed.

Location 14 - Phone 3 communicator format

Location 14 has one segment of numerical data. Use this location to program the communicator format used to transmit to the receiver connected to phone 3. Refer to your central station receiver documentation to determine which format is compatible. Table 6 on page 19 describes the formats for this location. If you need a format other than those listed, review the override options described in Location 18. Program a 15 to create a special format (in addition to the entries in Location 18). The default is 0. If this location contains a 0, format 1 will be used when phone 3 is dialed.

Location 15 - Phone 3 dial attempts/backup control

Location 15 has two segments of numerical data.

Segment 1 - Phone 3 dial attempts

Program the number of dial attempts (1 to 15) the communicator makes to phone 3 before ending the notification process. The default is 8, which means that the communicator makes eight attempts to the first number.

Segment 2 - Phone 3 backup control

Program the backup control for phone 3. The default is 0.

0 = The NX-8E will make the designated number of attempts to phone 3 before setting the fail to communicate condition to stop reporting.

1 = The NX-8E will stop trying to communicate after the designated number of attempts have been made to phone 3.

2 = The NX-8E will make the dial attempts in increments of two. The first two attempts are made to phone 3, the next two attempts to phone 2. This repeats until the total number of attempts designated in segment 1 is completed.

Location 16 - Phone 3 events reported

Location 16 has two segments of feature selection data. Use this location to select those events reported to phone 3.

- If you do not want dual or split reporting, use the default of 0.
- If you want dual or split reporting and the split is based on the event type (alarm, open/close, etc.), use only those events that are reported to phone 3.
- If you don't want events reported to phone 3, program 0 in Location 16.

Segment 1

1. Alarms and alarm restores.
 2. Opening and closings.
 3. Zone bypass and bypass restore.
 4. Zone trouble and trouble restores.
 5. Power fail, low battery, power restore, and low battery restore.
 6. Bell cut, telephone line cut, bell cut restore, telephone line restore.
 7. Test reports.
 8. Start/end programming, download complete.
-

Segment 2

1. Zone and box tamper and tamper restore.
 2. Auxiliary power overcurrent and restore.
 3. Sensor missing and restore.
 4. Sensor low battery and restore.
 5. Expander trouble and restore.
 6. Fail to communicate.
 7. Zone activity monitor.
 8. Reserved.
-

Location 17 - Phone 3 partitions reported

Location 17 has one segment of feature selection data. Use this location to program when events are to be reported to a phone number are based upon the partition (1 to 8) regardless of the event. Enter 1 for partition 1 through 8 for partition 8. If this location is used, Location 16 should be programmed as 0.

Location 18 - Custom communicator format

Location 18 has four segments of feature selection data. Use this location to program the communicator format used to transmit to the receiver connected to phone 3. Refer to your central station receiver documentation to determine which format is compatible. Select a format from Table 6 on page 19 . If you need a format other than those listed, review the override options described in this location to build the appropriate format.

Segment 1

1. On for 1800 Hz transmit; off for 1900 Hz.
 2. On for 2300 Hz handshake; off for 1400 Hz.
 3. On for cksum parity; off for double round parity.
 4. On for two-digit event code; off for one-digit event code.
 5. Reserved.
 6. Reserved.
 7. On for 20 pps; off for 10 to 40 pps.
 8. On for 10 pps: off for 20 or 40 pps.
-

Segment 2

1. On for pager format (no handshake required).
 2. On for 1400/2300 handshake.
 3. Reserved.
 4. Reserved.
 5. On for contact ID.
 6. On for SIA.
 7. On for contact ID or 4+3.
 8. On for DTMF.
-

Segment 3 and 4 - Reserved

Locations 19 to 22 - Downloading

Location 19 - Download access code

Location 19 has eight segments of numerical data. Use this location to program the eight-digit access code that the NX-8E must receive from the downloading software before the panel permits downloading to occur. The defaults for the segments are 8, 4, 8, 0, 0, 0, 0, 0.

Location 20 - Download number of rings to answer

Location 20 has one segment of numerical data. Use this location to program the number of rings to answer for a download. Enter a number from 0 (disabled) to 15. The NX-8E answers on the same number of rings. Default is 8.

Location 21 - Download control

Location 21 has one segment of feature selection data. Use this location to program the feature selections for controlling the download sessions.

Segment 1

1. On enables two call answering machine defeat.
 2. On enables tone sniff answering machine defeat.
 3. On requires call back before download session.
 4. Shutdown. (Can only be activated with the download software).
 5. On locks all local programming. (Can only be activated with the download software.)
 6. On locks programming of all locations associated with the communicator. (Can only be activated with the download software.)
 7. On locks out download session. If on, locations 19 to 22 cannot be viewed from the keypad. They can only be viewed from the keypad when off. (Can only be activated with the download software.)
 8. On enables call back at autotest interval.
-

Location 22 - Download call back number

Location 22 has 20 segments of numerical data. Use this location to enable the control panel to hang up for approximately 36 seconds (ensuring that the calling party has disconnected) before calling back. For the control panel to perform this operation, you need to program a telephone number into this location and you need to enable option 3 (require callback) in Location 21. Each segment default is 14.

- To program a delay of 4 seconds, enter 13 in the appropriate segment.
- To program tone dialing, enter 15 in the segment where tone dialing begins.
- If the entire number is tone dialing, enter 15 in the first segment.
- Enter 11 for a *, and 12 for a #.
- Enter 14 to indicate the end of the phone number.

Caution: Verify that the callback phone number is accurate before disconnecting.

Locations 23 and 24 - Partition features

Location 23 - Feature report selection/partition feature selection

Location 23 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, you can enable certain communicator reports in this location.

Segment 1

1. On enables quick arm.
 2. On enables re-exit.
 - 3. On enables automatic bypass.**
 4. On enables silent keypad panic (overrides the audible panic selection).
 - 5. On enables audible keypad panic.**
 6. On enables keypad aux 1 (fire panic).
 7. On enables keypad aux 2 (emergency panic).
 8. On enables keypad multiple code attempt tamper.
-

Segment 2

1. On enables LED extinguish.
 2. On enables require code for bypassing.
 3. On enables zone bypassed sounder alert.
 - 4. On enables AC power/low battery sounder alert.**
 5. On enables bypass toggle.
 6. On enables silent autoarm.
 7. On enables automatic instant.
 8. On enables instant mode toggle.
-

Segment 3

1. On enables opening and closing reporting.
 2. On enables zone bypass reporting.
 3. On enables zone restore reporting.
 4. On enables zone trouble reporting.
 5. On enables zone tamper reporting.
 - 6. On enables cancel reporting.**
 - 7. On enables recent closing reporting.**
 - 8. On enables exit error reporting.**
-

Segment 4

1. Enables late to close/early to open reporting.
 2. On enables autoarm in stay mode.
 3. On disables door delays in night mode (applies to NX-1208E/NX1248E keypads).
 - 4 to 8. Reserved.
-

Segment 5 - Reserved

Location 24 - Entry/exit times

Location 24 has six segments of numerical data. Use this location to program the entry/exit times (there are two separate entry/exit times).

Segment 1 - Entry time 1. Entry time used when a delay 1 zone type initiates an entry delay. Default is 30, valid entries 30 to 255 seconds.

Segment 2 - Exit time 1. Exit time used for all zones designated as delay 1. Default is 60, valid entries 45 to 255 seconds.

Segment 3 - Entry time 2. Entry time used when a delay 2 zone type initiates an entry delay. Default is 30, valid entries 30 to 255 seconds.

Segment 4 - Exit time 2. Exit time used for all zones designated as delay 2. Default is 60, valid entries 45 to 255 seconds.

Segment 5 and 6 - Reserved

Locations 25 to 36 - Zone type and partition selection

Zones are programmed to be one of thirty different types. To customize a zone type, see Locations 110 to 169 (these are considered advanced programming and are only to be changed with a thorough understanding of the operation of each bit).

Caution: We recommend the installer bench test any custom zone types to ensure proper operation prior to making changes to a live system.

Use zone types 17 through 20 for wireless, or for hardwired zones using European double EOL configurations.

Table 7: Zone types

Zone type	Description
1. Day zone	Instant when the system is armed; trouble zone when the system is disarmed.
2. 24-hour audible	Creates an instant yelping siren alarm regardless of the armed state of the control panel.
3. Entry/exit delay 1	A trip starts entry delay 1. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed.
4. Follower with auto bypass disabled	Instant when the system is armed and no entry or exit delays are being timed. It is delayed 1 time during entry and exit. It does not automatically bypass even if enabled in segment 1 of Location 23.
5. Interior follower with auto bypass	Instant when the system is armed and no entry or exit delay is being timed. It is delayed 1 time during entry and exit. It automatically bypasses if enabled in segment 1 of Location 23.

Zone type	Description
6. Instant	Creates an instant alarm whenever it is tripped and the armed LED is on.
7. 24-hour silent	Creates an instant silent alarm regardless of the armed state of the control panel. It does not display on the keypad.
8. Fire	Illuminates the Fire LED and sounds the temporal siren each time the zone is shorted. The Fire LED flashes rapidly indicating a problem if the zone is open.
9. Entry/exit delay 2	A trip starts entry delay 2. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed.
10. 24-hour silent supervised	Creates an instant silent alarm regardless of the armed state of the control panel. It displays on the keypad.
11. Keyswitch zone	Will arm and disarm the partitions of the control panel that it resides in each time the zone is shorted. Keyswitch arming will report as user number 99.
12. Interior follower with cross zone	Instant when the system is armed and no entry or exit delay is being timed. It is delayed during entry and exit delay times. If a cross zone is not being timed, it starts a cross zone timer. If a cross zone is being timed, it creates an instant alarm. It automatically bypasses when enabled in Segment 1 of Location 23.
13. Instant entry guard	Creates an instant alarm whenever it is tripped and the Stay LED is off. It starts an entry delay type 2 if it is tripped, the system is armed, and the Stay LED is on.
14. Entry/exit delay 1 with group bypass	A trip starts entry delay 1. This zone bypasses when the group bypass command is entered at the keypad. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed.
15. Interior follower with group bypass	Instant when the system is armed and no entry or exit delays are being timed. It is delayed during entry/exit delay times. It bypasses when the group bypass command is entered at the keypad. It automatically bypasses if enabled in Segment 1 of Location 23.
16. Instant with group bypass	Creates an instant alarm whenever it is tripped and the Armed LED is on. Bypasses when the group bypass command is entered at the keypad.
17. Entry/exit delay 1 with tamper	A trip starts entry delay 1. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed. Is used to enable the tamper on a wireless transmitter.
18. Interior follower with tamper and autobypass	Instant when the system is armed and no entry or exit delay is being timed. It is delay during entry and exit delay times. It automatically bypasses if enabled in Segment 1 of Location 23. Is used to enable the tamper on a wireless transmitter.
19. Instant with tamper	Creates an instant alarm whenever it is tripped and the Armed LED is on. Is used to enable the tamper on a wireless transmitter.
20. Entry/exit delay 2 with tamper	A trip starts entry delay 2. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed. Is used to enable the tamper on a wireless transmitter.

Zone type	Description
21. Gas detection	Creates an instant alarm regardless of the armed state of the control panel. It displays on the keypad and activates the keypad sounder.
22. Low temperature detection	Creates an instant silent alarm regardless of the armed state of the control panel. It displays on the keypad and activates the keypad sounder.
23. High temperature detection	Creates an instant silent alarm regardless of the armed state of the control panel. It displays on the keypad and activates the keypad sounder.
24. Manual fire	Illuminates the Fire LED and sounds the temporal siren each time the zone is shorted. It also flashes (rapidly) the Fire LED, indicating a problem if the zone is open.
25. Chime only	This zone creates no alarm regardless of the armed state of the control panel. It chimes anytime it is faulted and displays on the keypad. Local only.
26. Interior follower delay 2	Instant when the system is armed and no entry or exit delay is being timed. It is delayed 2 times during entry and exit. It automatically bypasses if enabled in Segment 1 of Location 23.
27. Interior follower force armable	Instant when the system is armed and no entry or exit delay is being timed. It is delay 1 time during entry and exit. It automatically bypasses if enabled in Segment 1 of Location 23.
28. Entry/exit force armable delay 2	A trip starts entry delay 2. The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed.
29. Interior follower with activity supervision	Instant when the system is armed and no entry or exit delay is being timed. It is delayed during entry and exit delay times. It sends a report if the zone activity time is reached without a change of state (refer to Segment 11 of Location 40). It automatically bypasses if enabled in Segment 1 of Location 23.
30. Entry/exit with activity supervision	A trip starts entry delay 1. It sends a report if the zone activity time is reached without a change of state (refer to Segment 11 of Location 40). The lack of a trip during exit delay enables the automatic bypass or instant mode if programmed.

A zone may reside in any combination of the eight partitions. If a burglary zone resides in more than one partition, it will only be active when all partitions it resides in are armed. A zone that resides in more than one partition will be reported to its lowest partition number.

Location 25 Zones 1 to 8 zone type	Location 25 has eight segments of numerical data. Use this location to program the zone type for zones 1 to 8. Use segment 1 for zone 1, segment 2 for zone 2, etc. The segment defaults are 3, 5, 6, 6, 6, 6, 6, 6.
Location 26 Zones 1 to 8 partition	Location 26 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 1 to 8 reside in. Each segment corresponds to a zone (segment 1 to zone 1, segment 2 to zone 2, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 27 Zones 9 to 16 zone types	Location 27 has eight segments of numerical data. Use this location to program the zone type for zones 9 to 16. Use segment 1 for zone 9, segment 2 for zone 10, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 28 Zones 9 to 16 partition	Location 28 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 9 to 16 reside in. Each segment corresponds to a zone (segment 1 to zone 9, segment 2 to zone 10, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 29 Zones 17 to 24 zone types	Location 29 has eight segments of numerical data. Use this location to program the zone type for zones 17 to 24. Use segment 1 for zone 17, segment 2 for zone 18, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 30 Zones 17 to 24 partition	Location 30 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 17 to 24 reside in. Each segment corresponds to a zone (segment 1 to zone 17, segment 2 to zone 24, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 31 Zones 25 to 32 zone types	Location 31 has eight segments of numerical data. Use this location to program the zone type for zones 25 to 32. Use segment 1 for zone 25, segment 2 for zone 26, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 32 Zones 25 to 32 partition	Location 32 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 25 to 32 reside in. Each segment corresponds to a zone (segment 1 to zone 25, segment 2 to zone 26, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 33 Zones 33 to 40 zone types	Location 33 has eight segments of numerical data. Use this location to program the zone type for zones 33 to 40. Use segment 1 for zone 33, segment 2 for zone 34, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 34 Zones 33 to 40 partition	Location 34 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 33 to 40 reside in. Each segment corresponds to a zone (segment 1 to zone 33 segment 2 to zone 34, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

Location 35 Zones 41 to 48 zone types	Location 35 has eight segments of numerical data. Use this location to program the zone type for zones 41 to 48. Use segment 1 for zone 41, segment 2 for zone 42, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 36 Zones 41 to 48 partition	Location 36 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 41 to 48 reside in. Each segment corresponds to a zone (segment 1 to zone 41, segment 2 to zone 42, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

Location 37 - Siren and system supervision

Location 37 has seven segments of feature selection data. Use this location to enable various system feature and reporting options.

Segment 1

- 1. On if siren sounds for telephone line cut when armed.**
 - 2. On if siren sounds for telephone line cut when disarmed.**
 3. On if siren blast at arming.
 4. On if siren blast at exit expiration.
 5. On if siren blast at closing kissoff.
 6. On if siren sounds during a cross zone verification time.
 - 7. On if siren sounds for a zone or box tamper.**
 8. On if siren blasts one time for keyswitch or wireless arming; two times for disarming (must be disabled for SIA CP-01). Siren will blast four times when disarmed if there is an alarm in memory.
-

Segment 2

1. On if siren driver should be a voltage output; off if on board siren driver is enabled.
 2. On if siren sounds for expander trouble.
 3. On for immediate restore by zone; off for zones to restore when the siren times out.
 4. On if dynamic battery test performed at arming; off if performed at disarming.
 5. On if battery missing test is done every 12 seconds, otherwise panel tests at midnight.
 - 6. On if manual bell test is done during *-4-4 test function.**
 7. On if manual communicator test is done during *-4-4 test function.
 8. On enables box tamper terminals on the panel.
-

Segment 3

1. On enables box tamper report.
 2. On enables AC fail reporting.
 3. On enables low battery reporting.
 4. On enables auxiliary power overcurrent report.
 5. On enables siren supervision report.
 6. On enables telephone line cut report.
 7. On enables ground fault detection report.
 8. On enables expander trouble report.
-

Segment 4

1. On enables fail to communicate report.
 2. On enables log full report.
 3. On enables autotest report.
 4. On enables start/end programming report.
 5. On enables end download report.
 6. On enables low battery report.
 7. On enables sensor missing report.
 8. On enables first to open/last to close report.
-

Segment 5

1. On enables lost clock service light
 2. On enables zone doubling (requires NX-200 zone doubling kit).
 3. On disables on board 8 zones.
-

-
4. On allows two trips on same cross zone to activate an alarm.
 5. On will not allow zones that are force armed to report bypass.
 6. Reserved.
 7. On makes the clock use the internal crystal. Only use if the panel is solely powered by DC
 8. On disables the temporal siren of fire.
-

Segment 6

1. On enables two-wire smoke.
 2. Reserved.
 3. On enables zone activity in hours (not days).
 4. On enables daylight saving time (DST).
 5. On enables DC only operation.
 6. On disables clean me report.
 7. On disables start/end walk test report.
 8. On enables auto LED extinguish.
-

Segment 7 - Reserved

Location 38 - Swinger shutdown count

Location 38 has one segment of numerical data. Use this location to program the number of trips during an arming cycle that the NX-8E allows before bypassing a zone. The default is 1.

Location 39 - Keypad sounder control

Location 39 has one segment of feature selection data.

Segment 1

- 1. On if keypad sounds for a telephone line cut when the system is armed.**
 - 2. On if keypad sounds for a telephone line cut when the system is disarmed.**
 3. On if keypad sounds upon AC power failure.
 4. On if keypad sounds when a low battery is detected.
 5. On if keypad sounds during cross zone trip time.
 - 6. On if keypad sounds for zone and box tampers.**
 7. Reserved.
 8. On if keypad sounds for expander troubled.
-

Location 40 - System timers

Location 40 has 14 segments of numerical data. Use this location to program the duration of various system timing functions.

Segment 1 - Dynamic battery test duration in minutes, 0 to 255 (0 = no test). Default is 0.

Segment 2 - AC fail report delay in minutes, 0 to 255 (0 = no delay). Default is 5.

Segment 3 - Power up delay in seconds, 0 to 60 (0 = no power up delay). Default is 60.

Segment 4 - Siren time in minutes, 1 to 254. Default is 8.

Segment 5 - Telephone line cut delay in seconds, 0 to 255 (0 = no monitoring). Default is 0.

Segment 6 - Cross zone time in minutes, 0 to 255 (0 = no cross zoning). Default is 5.

Segment 7 - Chime time in 50 mS increments from 0 to 12 seconds. Default is 3.

Segment 8 - Dial delay in seconds, 15 to 255 (0 = no abort delay). Default is 30.

Segment 9 - Fire alarm verification time in seconds, 120 to 255 (0 = no fire alarm verification). Default is 0. This feature is not approved for residential use in California.

Segment 10 - Listen-in time in seconds, 0 to 255 (0 = no listen in time). Default is 0.

Segment 11 - Zone activity monitor feature timed in days, 0 to 255 (0 = disabled). Default is 0.

Segment 12 to 14 - Reserved

Location 41 - Special features

Location 41 has one segment of feature selection data.

Segment 1

1. On enables the six-digit code option. If enabled, all arm/disarm codes and the go to program code are six digits. The default user 1 code is 123456.

Caution: If you enable this option verify that the go to program code is a six-digit code before exiting programming.

2. On requires code entry for *, 9, 8 (dial call back phone number) and *, 9, 9 (answer incoming call for download) functions.

3. On enables auto cancel/abort.

4. On enables walk test mode.

5. On enables auto force arming with keyfob or keyswitch.

6 to 8. Reserved

Locations 42 and 43 - Go to program code and authorization

Location 42 - Go to program code

Location 42 has six segments of numerical data. Use this location to program the go to program code. This location contains either a four or six-digit code. If the six-digit code option is enabled in Location 41, this code must contain six digits. If not enabled in Location 41, the last two segments (digits) are ignored. With the NX-8E disarmed, use the go to program code to enter program mode. Defaults for segments 1 to 6 are 9, 7, 1, 3, 0, 0.

Location 43 - Go to program code and authorization

Location 43 has two segments of feature selection data. The go to program code can be used as a standard arm/disarm code. When using the code to arm or disarm, the user ID is 255. This code cannot be changed in run mode.

Segment 1

1. Reserved.
2. On enables go to program code as an arm only.
3. On enables go to program code as an arm only after closing.
4. On enables go to program code as a master arm/disarm code (can change user codes).
5. On enables go to program code as a arm/disarm code.
6. On enables go to program code to bypass zones.
7. On enables go to program code opening and closing reports.
8. Reserved.

Segment 2

1. On enables go to program code for partition 1.
2. On enables go to program code for partition 2.
3. On enables go to program code for partition 3.
4. On enables go to program code for partition 4.
5. On enables go to program code for partition 5.
6. On enables go to program code for partition 6.
7. On enables go to program code for partition 7.
8. On enables go to program code for partition 8.

All segment 2 features must be on for the go to program code to be used to change user codes.

Location 44 - Duress code

Location 44 has six segments of numerical data. Use this location to program the duress code. This location contains either four or six digits. If the six-digit code option is enabled, this code must contain six digits. If the six-digit option is not enabled, the last two digits are ignored. Each segment default is 15.

Locations 45 to 50 - Auxiliary outputs programming

Location 45 - Auxiliary output 1 to 4 partition selection

Location 45 has four segments of feature selection data. Use this location to select which partitions (1 to 8) the events must occur in before the output will activate. Segment 1 corresponds to output 1, segment 2 to output 2, etc. For each segment, enter 1 for partition 1 through 8 for partition 8.

Location 46 - Auxiliary outputs 1 to 4 special timing

Location 46 has four segments of feature selection data. Use this location to program the special timing feature activation for the four auxiliary outputs. Segment 1 corresponds to output 1, segment 2 to output 2, etc.

Segment 1 to 4 - Outputs 1 to 4

1. On if output is timed in minutes; off if timed in seconds.
 2. On if output latches; off if output is timed.
 3. On if output stops timing upon code entry; off if the output continues to time upon code entry.
 4. On if output only activates between the closing and opening time (Locations 52 and 53).
 5. On if output only activates between the opening and closing time (Locations 52 and 53).
 6. On to invert the output. If the output is normally on when an event occurs, if you invert the output it will be off when the event occurs.
 - 7 and 8. Reserved.
-

Location 47 - Auxiliary output 1 event and times

Location 47 has two segments of numerical data.

Segment 1 - Use Table 8 on page 39 to select the event that activates auxiliary output 1. Default is 0.

Segment 2 - Program the timing from 0 to 255 (minutes or seconds, depending on data programmed in Location 46, segment 1). Programming a 0 makes the output follow the event. Default is 10 (seconds)

Location 48 - Auxiliary output 2 event and times

Location 48 has two segments of numerical data.

Segment 1 - Use Table 8 on page 39 to select the event that activates auxiliary output 2. Default is 1.

Segment 2 - Program the timing from 0 to 255 (minutes or seconds, depending on data programmed in Location 46, segment 1). Programming a 0 makes the output follow the event. Default is 10 (seconds).

Location 49 - Auxiliary output 3 event and times

Location 49 has two segments of numerical data.

Segment 1 - Use Table 8 on page 39 to select the event that activates auxiliary output 3. Default is 21.

Segment 2 - Program the timing from 0 to 255 (minutes or seconds, depending on data programmed in Location 46, segment 1). Programming a 0 makes the output follow the event. Default is 10 (seconds).

Location 50 - Auxiliary output 4 event and times

Location 50 has two segments of numerical data.

Segment 1 - Use Table 8 below to select the event that activates auxiliary output 4.

Segment 2 - Program the timing from 0 to 255 (minutes or seconds, depending on data programmed in Location 46, segment 1). Programming a 0 makes the output follow the event. Default is 10 (seconds).

Table 8 below describes the auxiliary output event selections.

Table 8: Auxiliary output events selection

0 = Burglary alarm ^a	1 = Fire alarm (includes keypad panic) ^a
2 = 24-hour alarm (includes keypad panics and zone types 2 and 7) ^a	3 = Trouble alarm (does not include phone trouble) ^a
4 = Tamper alarm ^a	5 = Yelping siren (burglary)
6 = Temporal siren (fire)	7 = Any siren
8 = Any bypass	9 = AC fail
10 = Low battery (does not include expansion battery)	11 = Duress ^a
12 = Aux 1 keypad zone (keypad fire panic) ^a	13 = Aux 2 keypad zone (keypad emergency panic) ^a
14 = Panic keypad zone (keypad police panic) ^a	15 = Keypad tamper
16 = Autotest ^a	17 = Alarm memory
18 = Entry	19 = Exit
20 = Entry or exit	21 = Armed state (follows Armed LED)
22 = Disarmed state	23 = Ready
24 = Not ready	25 = Fire (follows Fire LED)
26 = Fire trouble	27 = Chime (chime must be on at keypad)
28 = Expander trouble ^a	29 = Dynamic battery test time
30 = Open period	31 = Closed period
32 = Listen in	33 = Line seizure
34 = Ground start (momentary at start of phone dial)	35 = Fail to communicate
36 = Telephone line fault	37 = Program mode
38 = Download in process (for modem connection only)	39 = Smoke power
40 = Short circuit (overcurrent panel only)	41 = Box tamper
42 = Siren tamper	43 = Any open

44 = Any short	45 = Any fault (short on nonfire zone)
46 = Any alarm (includes 24-hour zones but not keypad panics) ^a	47 = Beeping keypad
48 = Code entry ^{ab}	49 = Key fob function 1 ^{ac}
50 = Key fob function 2 ^{ac}	51 = Always on
52 = Alarm flash	53 = Armed away
54 = Armed stay	55 = Aux comm fail
56 = CP-01 . Progress annunciation (output toggles slowly during exit delay, then fast during the last 10 seconds; on steady during entry delay)	

a. These events are 1 second if set to follow condition.

b. When event 48 is programmed, it is possible to program a user code's authorization to select which outputs a particular code activates. In *6, user code authority assignment mode, when LED 8 is on for authorization, then LEDs 1 to 2 correspond to that code activating outputs 1 to 2 respectively.

c. Events 49 and 50 require one or more of the following to operate: NX-148E-RF, NX-408E, NX-448E wireless receivers, NX-548E or NX-1700E/NX-1710E card readers.

Location 51 - Autotest control

Location 51 has four segments of numerical data.

Segment 1 - Program the autotest interval.

Enter 0 if the interval is in days (if the panel tests once daily, program one day rather than once every 24 hours)

Enter 1 if the interval is in hours (default)

Enter 2 if the interval is in days and suppresses the test if any report has been sent within the last autotest interval.

Enter 3 if the interval is in hours and suppresses the test if any report has been sent within the last autotest interval.

Segment 2 - Program the autotest interval from 1 to 255 hours/days. Default is 24 (hours).

Segment 3 - Program the autotest report hour in 24-hour (military time) format (if the interval is in hours, this segment is ignored). Default is 2 (0200).

Segment 4 - Program the autotest report time, as the number of minutes after the hour. Default is 0.

Locations 52 to 55 - Times and days

Location 52 - Opening/automatic disarm time

Location 52 has two segments of numerical data. Use this location to program the time (24-hour format) in which the NX-8E enables codes designated as arm only after closing. This time is only valid on those days programmed in Location 54.

Segment 1 - Program the hour in military time of the opening time. Default is 8.

Segment 2 - Program the minutes after the hour of the opening time. Default is 0

Note: For autoarm, auxiliary outputs, or code authorization to function properly, make sure the opening time is earlier than the closing time.

Note: If using scheduled event outputs, enter an open time even if the panel is not auto arming/disarming.

Location 53 - Closing/automatic arming time

Location 53 has two segments of numerical data. Use this location to program the time (24-hour format) in which the NX-8E disables the disarm capability for codes designated as arm only after closing. This is also the time the automatic arming sequence begins if enabled in Location 55.

Segment 1 - Program the hour in military time of the closing/autoarm time. Default is 20.

Segment 2 - Program the minutes after the hour of the closing/autoarm time. Default is 0

Location 54 - Days of week each partition is open

Location 54 has eight segments of feature selection data. Use this location to select which days of the week each partition is open. On these days, arm only after close window codes are able to arm and disarm during open window. On days not selected here, arm only after close window codes are not disarmed (Locations 52 and 53).

Note: If the system is not programmed to be opened and is programmed to autoarm, the NX-8E tries to arm every 45 minutes for the duration of the closed period unless auto retry is disabled (Location 55).

For each segment (1 to 8), select from the following:

1 = Sunday	2 = Monday	3 = Tuesday	4 = Wednesday
5 = Thursday	6 = Friday	7 = Saturday	8 = Reserved

Location 55 - Days of week each partition will automatically arm

Location 55 has eight segments of feature selection data. Use this location to select which days each partition (1 to 8) will autoarm. If a zone is faulted when the panel tries to autoarm, the zone bypasses. Default is 0 for each segment.

For each segment (1 to 8), select the following:

1 = Sunday	2 = Monday	3 = Tuesday	4 = Wednesday
5 = Thursday	6 = Friday	7 = Saturday	8 = Disable 45 minute retry timer

Locations 56 to 83 - 4+2 format communicator codes

Use Locations 46 to 83 only when reporting events to a pager or using a slow format such as 4+2. When using Contact ID or SIA, you do not need to program these locations. There are eight segments of numerical data for each location and the default for all segments is 0.

The digit programmed in each of the segments in these locations is sent as the upper hex digit in place of the alarm event code. The zone ID or user ID is reported as the lower hex digit (1-F). For example, if the zone ID or user ID is 3, the 4+2 lower digit is 3. If the segment is left as 0 and the feature is enabled, the NX-8E reports A.

Location 56 Restore communicator code	Program the event code for any zone restore for a 4+2 format for each partition (1 to 8).
Location 57 Bypass communicator code	Program the event code for a zone bypass for a 4+2 format for each partition (1 to 8).
Location 58 Tamper communicator code	Program the event code for a zone tamper for a 4+2 format for each partition (1 to 8).
Location 59 Trouble communicator code	Program the trouble communicator code for a 4+2 format for each partition (1 to 8).
Location 60 Sensor low battery communicator code	Program the event code zone sensor low battery for a 4+2 format for each partition (1 to 8).
Location 61 Sensor missing communicator code	Program the event code for a zone sensor missing for a 4+2 format for each partition (1 to 8).
Location 62 Duress communicator code	Program the digits sent for a 2+4 format if the duress code is enabled (Location 44).
Location 63 Keypad auxiliary 1 communicator code	Program the digits sent for a 4+2 format if the keypad auxiliary 1 (fire) is enabled (Location 23).
Location 64 Keypad auxiliary 2 communicator code	Program the digits sent for a 4+2 format if the keypad auxiliary 2 (emergency) is enabled (Location 23).
Location 65 Keypad (police) panic communicator code	Program the digits for a 4+2 format if the keypad panic is enabled (Location 23).
Location 66 Keypad multiple code entry tamper communicator code	Program the digits sent for a 4+2 format if the keypad multiple code entry (tamper) is enabled (Location 23).
Location 67 Box tamper/restore communicator code	Program the digits sent for a 4+2 format if the box tamper feature is enabled (Location 37). Segment 1 = box tamper Segment 2 = box tamper restore
Location 68 AC fail/restore communicator code	Program the digits sent for a 4+2 format if AC fail reporting is enabled (Location 37). Segments 1 and 2 = AC fail Segments 3 and 4 = AC fail restore
Location 69 Low battery/restore communicator code	Program the digits sent for a 4+2 format if low battery reporting is enabled (Location 37). Segments 1 and 2 = low battery reporting Segments 3 and 4 = low battery restore
Location 70 Aux power overcurrent/restore communicator code	Program the digits sent for a 4+2 format if aux power overcurrent reporting is enabled (Location 37). Segments 1 and 2 = aux power overcurrent reporting Segments 3 and 4 = aux power overcurrent restore
Location 71 Bell tamper/restore communicator code	Program the digits sent for a 4+2 format if siren supervision reporting is enabled (Location 37). Segments 1 and 2 = bell tamper reporting Segments 3 and 4 = bell tamper restore

Location 72 Telephone line cut/restore communicator code	Program the digits sent for a 4+2 format if telephone line cut reporting is enabled. Segments 1 and 2 = telephone line cut reporting Segments 3 and 4 = telephone line cut restore.
Location 73 Ground fault/restore communicator code	Program the digits sent for a 4+2 format if ground fault reporting is enabled. Segments 1 and 2 = ground fault reporting Segments 3 and 4 = ground fault restore
Location 74 Expander trouble/restore communicator code	Program the digits sent for 4+2 format if expander trouble reporting is enabled (Location 37). Segments 1 and 2 = expander trouble tamper; Segments 3 and 4 = expander trouble restore.
Location 75 Fail to communicate communicator code	Program the digits sent for a 4+2 format that are sent if the fail to communicate reporting is enabled (Location 37).
Location 76 Log full communicator code	Program the digits sent for a 4+2 format if the log full reporting is enabled (Location 37).
Location 77 Opening communicator code	Program the digits sent for a 4+2 format if the opening report is enabled (Location 23) for each partition (1 to 8).
Location 78 Closing communicator code	Program the digits sent for a 4+2 format if the closing report is enabled (Location 23) for each partition (1 to 8).
Location 79 Autotest communicator code	Program the digits sent for a 4+2 format if the autotest or manual test is enabled (Location 37).
Location 80 Recent closing and exit error communicator code	Program the digits sent for a 4+2 format if recent closing and/or exit error reporting is enabled (Location 23). Segments 1 and 2 = recent closing report Segments 3 and 4 = exit error reporting
Location 81 Start program and end program communicator code	Program the digits sent for a 4+2 format if start/end programming reporting is enabled (Location 37). Segments 1 and 2 = start program reporting Segments 3 and 4 = end program reporting
Location 82 End download communicator code	Program the digits sent for a 4+2 format if end download reporting is enabled (Location 37). Segments 1 and 2 = Reserved Segments 3 and 4 = end download reporting
Location 83 Cancel communicator code	Program the digits sent for a 4+2 format if cancel reporting is enabled (Location 23).

Location 84 - Daylight saving time

Location 84 has four segments of numerical data. Use this location to program when daylight saving time begins and ends. This will happen at 2:00 a.m. on the

day programmed. The default is to begin daylight saving time on the second Sunday in March and end on the first Sunday in November.

Segment 1

Daylight saving time starting month (1 to 12). Default is 3.

Segment 2

Daylight saving time starting Sunday (1 to 4, first to fourth). Default is 2.

Segment 3

Daylight saving time ending month (1 to 12). Default is 11.

Segment 4

Daylight saving time ending Sunday (1 to 4, first to fourth). Default is 1.

Locations 85 to 87 - Reserved**Locations 88 to 109 - Partition account codes and features.**

If a location is left unprogrammed, the feature for partition 1 and account code for the phone number will be used.

<p>Locations 88 Partition 1 account code</p>	<p>Location 88 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account codes is six digits long, program all six segments.</p>
<p>Location 89 Partition 2 account code</p>	<p>Location 89 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 90 Partition 2 feature and reporting selection</p>	<p>Location 90 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 91 Partition 2 entry and exit times</p>	<p>Location 91 has six segments of numerical data. Use this location to program the entry/exit times for partition 2. There are two separate entry/exit times (Location 24).</p>
<p>Location 92 Partition 3 account code</p>	<p>Location 92 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 93 Partition 3 feature and reporting selection</p>	<p>Location 93 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 94 Partition 3 entry and exit times</p>	<p>Location 94 has six segments of numerical data. Use this location to program the entry/exit times for partition 3. There are two separate entry/exit times (Location 24).</p>
<p>Location 95 Partition 4 account code</p>	<p>Location 95 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 96 Partition 4 feature and reporting selection</p>	<p>Location 96 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 97 Partition 4 entry and exit times</p>	<p>Location 97 has six segments of numerical data. Use this location to program the entry/exit times for partition 4. There are two separate entry/exit times (Location 24).</p>

<p>Location 98 Partition 5 account code</p>	<p>Location 98 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 99 Partition 5 feature and reporting selection</p>	<p>Location 99 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 100 Partition 5 entry and exit times</p>	<p>Location 100 has six segments of numerical data. Use this location to program the entry/exit times for partition 5. There are two separate entry/exit times (Location 24).</p>
<p>Location 101 Partition 6 account code</p>	<p>Location 101 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 102 Partition 6 feature and reporting selection</p>	<p>Location 102 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 103 Partition 6 entry and exit times</p>	<p>Location 103 has six segments of numerical data. Use this location to program the entry/exit times for partition 6. There are two separate entry/exit times (Location 24).</p>
<p>Location 104 Partition 7 account code</p>	<p>Location 104 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account number. If the account code is six digits long, program all six segments.</p>
<p>Location 105 Partition 7 feature and reporting selection</p>	<p>Location 105 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).</p>
<p>Location 106 Partition 7 entry and exit times</p>	<p>Location 106 has six segments of numerical data. Use this location to program the entry/exit times for partition 7. There are two separate entry/exit times (Location 24).</p>
<p>Location 107 Partition 8 account code</p>	<p>Location 107 has six segments of numerical data. If the account code is less than six digits, program a 10 in the segment immediately after the last digit of the account</p>

	number. If the account code is six digits long, program all six segments.
Location 108 Partition 8 feature and reporting selection	Location 108 has five segments of feature selection data. Use this location to enable certain features that are accessed or visible to the user from the system keypad. In addition, certain communicator reports are enabled at this location. Each of these features can be enabled by partition (Location 23).
Location 109 Partition 8 entry and exit times	Location 109 has six segments of numerical data. Use this location to program the entry/exit times for partition 8. There are two separate entry/exit times (Location 24).

Locations 110 to 169 - Zone type characteristics

Locations 110 to 169 are considered advanced programming and you should only change them with a thorough understanding of the operation of each bit. Table 9 on page 49 lists the attributes for each location.

Caution: We recommend the installer bench test any custom zone types to ensure proper operation prior to making changes to a live system.

Even-numbered locations

Each even-numbered location has one segment of numerical data that programs the alarm event code for Contact ID or SIA. If 4+2 format is used, the number programmed in this location is sent as the upper hex digit. When using 4+2 formats, the digits are from 1 to 15. The zone ID or user ID is the lower hex digit of the zone that is in alarm.

Odd-numbered locations

For odd-numbered locations, the defaults represent the five segments of each of the locations separated by commas.

Segment 1

1. Fire. On if this is a fire zone.
 2. 24-hour. On for nonfire 24-hour zones.
 3. On for keyswitch zone (normally open).
 4. Follower. On for burglary zones that are instant during nonentry times).
 5. Delay 1 zone. One if zone follows timer 1 entry and exit times.
 6. Delay 2 zone. On if zone follows timer 2 entry and exit times.
 7. Interior. On if this zone automatically bypasses or bypasses for stay arming.
 8. Local only. On if this zone is not to be reported..
-

Segment 2

1. On if zone type beeps the keypad for alarm.
2. On if zone type sounds the yelping siren for alarm.
3. On if zone type sounds the temporal siren for alarm.
4. On if zone type chimes.
5. On if zone type is bypassable.
6. On if zone type is included in the group shunt.
7. On if zone type is force armable.
8. On if zone type is entry guard (see Glossary)

Segment 3

1. On enables fast loop response (50 mS; off = 500 mS).
2. On enables double end of line tamper zone (mainly used to enable the tamper on wireless zone.)
3. On enables trouble reporting zone (day zones and fire zones).
4. On if zone type is cross zoned.
5. On enables dialer delay zone (see Location 40).
6. On if zone type is swinger shutdown (see Location 38).
7. On enables restore reporting.
8. On enables listen in (see Location 40).

Segment 4

1. Enables zone activity monitor (see Location 40).
2. On enables end-of-line resistor defeat on zones that are not fire or keyswitch zones.
3. On enables zone to act as request to exit input/disables for alarm activation.
4. On enables zone to act as access entry point. Do not enable this segment unless configured with access control.
- 5 to 8. Reserved.

Segment 5 - Reserved

Note: If dialer delay (Segment 3 Option 5) is turned off, the panel will not send cancel reports even if enabled in Location 23.

Table 9: Locations 110 to 169

Location	Zone type	Description	Default
110	1	Alarm code	8
111	1	Feature selection	0, 125, 35678, 0, 0
112	2	Alarm code	2
113	2	Feature selection	2, 125, 78, 0, 0
114	3	Alarm code	7
115	3	Feature selection	5, 1245, 5678, 0, 0
116	4	Alarm code	5
117	4	Feature selection	45, 125, 5678, 0, 0
118	5	Alarm code	5
119	5	Feature selection	457, 125, 5678, 0, 0

Location	Zone type	Description	Default
120	6	Alarm code	4
121	6	Feature selection	0, 1245, 5678, 0, 0
122	7	Alarm code	0
123	7	Feature selection	2, 0, 78, 0, 0
124	8	Alarm code	1
125	8	Feature selection	1, 13, 378, 0, 0
126	9	Alarm code	7
127	9	Feature selection	6, 1245, 5678, 0, 0
128	10	Alarm code	2
129	10	Feature selection	24, 5, 78, 0,0
130	11	Alarm code	3
131	11	Feature selection	3, 0, 0, 0, 0
132	12	Alarm code	5
133	12	Feature selection	457, 125, 45678, 0, 0
134	13	Alarm code	4
135	13	Feature selection	0, 12458, 5678, 0, 0
136	14	Alarm code	7
137	14	Feature selection	5, 12456, 5678, 0, 0
138	15	Alarm code	5
139	15	Feature selection	457, 1256, 5678, 0, 0
140	16	Alarm code	4
141	16	Feature selection	0, 123456, 5678, 0, 0
142	17	Alarm code	7
143	17	Feature selection	5, 1245, 25678, 0, 0
144	18	Alarm code	5
145	18	Feature selection	457, 125, 25678, 0, 0
146	19	Alarm code	4
147	19	Feature selection	0, 1245, 25678, 0, 0
148	20	Alarm code	7
149	20	Feature selection	6, 1245, 25678, 0, 0
150	21	Alarm code	15
151	21	Feature selection	24, 15, 78, 0, 0
152	22	Alarm code	20

Location	Zone type	Description	Default
153	22	Feature selection	24, 15, 78, 0, 0
154	23	Alarm code	21
155	23	Feature selection	24, 15, 78, 0, 0
156	24	Alarm code	22
157	24	Feature selection	1, 13, 378, 0, 0
158	25	Alarm code	14
159	25	Feature selection	248, 45, 0, 0, 0
160	26	Alarm code	5
161	26	Feature selection	467, 125, 5678, 0, 0
162	27	Alarm code	5
163	27	Feature selection	457, 1257, 5678, 0, 0
164	28	Alarm code	7
165	28	Feature selection	6, 12457, 5678, 0, 0
166	29	Alarm code	5
167	29	Feature selection	457, 125, 5678, 1, 0
168	30	Alarm code	7
169	30	Feature selection	5, 1245, 5678, 1, 0

Locations 170 to 205 - Zones 49 to 192

Location 170 Zones 49 to 56 zone type	Location 170 has eight segments of numerical data. Use this location to program the zone type for zones 49 to 56. Use segment 1 for zone 49, segment 2 for zone 50, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 171 Zones 49 to 56 partition	Location 171 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 49 to 56 reside in. Each segment corresponds to a zone (segment 1 to zone 49, segment 2 to zone 50, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 172 Zones 57 to 64 zone types	Location 172 has eight segments of numerical data. Use this location to program the zone type for zones 57 to 64. Use segment 1 for zone 57, segment 2 for zone 58, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 173 Zones 57 to 64 partition	Location 173 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 57 to 64 reside in. Each segment corresponds to a zone (segment 1 to zone 57, segment 2 to zone 58, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

Location 174 Zones 65 to 72 zone types	Location 174 has eight segments of numerical data. Use this location to program the zone type for zones 65 to 72. Use segment 1 for zone 65, segment 2 for zone 66, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 175 Zones 65 to 72 partition	Location 175 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 65 to 72 reside in. Each segment corresponds to a zone (segment 1 to zone 65, segment 2 to zone 66, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 176 Zones 73 to 80 zone types	Location 176 has eight segments of numerical data. Use this location to program the zone type for zones 73 to 80. Use segment 1 for zone 73, segment 2 for zone 74, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 177 Zones 73 to 80 partition	Location 177 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 73 to 80 reside in. Each segment corresponds to a zone (segment 1 to zone 73, segment 2 to zone 74, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 178 Zones 81 to 88 zone types	Location 178 has eight segments of numerical data. Use this location to program the zone type for zones 81 to 88. Use segment 1 for zone 81, segment 2 for zone 82, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 179 Zones 81 to 88 partition	Location 179 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 81 to 88 reside in. Each segment corresponds to a zone (segment 1 to zone 81 segment 2 to zone 82, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 180 Zones 89 to 96 zone types	Location 180 has eight segments of numerical data. Use this location to program the zone type for zones 89 to 96. Use segment 1 for zone 89, segment 2 for zone 90, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 181 Zones 89 to 96 partition	Location 181 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 89 to 96 reside in. Each segment corresponds to a zone (segment 1 to zone 89, segment 2 to zone 90, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 182 Zones 97 to 104 zone types	Location 182 has eight segments of numerical data. Use this location to program the zone type for zones 97 to 104. Use segment 1 for zone 97, segment 2 for zone 98, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 183 Zones 97 to 104 partition	Location 183 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 97 to 104 reside in. Each segment corresponds to a zone (segment 1 to zone 97, segment 2 to zone 98, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

Location 184 Zones 105 to 112 zone types	Location 184 has eight segments of numerical data. Use this location to program the zone type for zones 105 to 112. Use segment 1 for zone 105, segment 2 for zone 106, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 185 Zones 105 to 112 partition	Location 185 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 105 to 112 reside in. Each segment corresponds to a zone (segment 1 to zone 105, segment 2 to zone 106, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 186 Zones 113 to 120 zone types	Location 186 has eight segments of numerical data. Use this location to program the zone type for zones 113 to 120. Use segment 1 for zone 113, segment 2 for zone 114, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 187 Zones 113 to 120 partition	Location 187 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 113 to 120 reside in. Each segment corresponds to a zone (segment 1 to zone 113, segment 2 to zone 114, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 188 Zones 121 to 128 zone types	Location 188 has eight segments of numerical data. Use this location to program the zone type for zones 121 to 128. Use segment 1 for zone 121, segment 2 for zone 122, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 189 Zones 121 to 128 partition	Location 189 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 121 to 128 reside in. Each segment corresponds to a zone (segment 1 to zone 121, segment 2 to zone 122, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 190 Zones 129 to 136 zone types	Location 190 has eight segments of numerical data. Use this location to program the zone type for zones 129 to 136. Use segment 1 for zone 129, segment 2 for zone 136, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 191 Zones 129 to 136 partition	Location 191 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 129 to 136 reside in. Each segment corresponds to a zone (segment 1 to zone 129, segment 2 to zone 130, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.
Location 192 Zones 137 to 144 zone types	Location 192 has eight segments of numerical data. Use this location to program the zone type for zones 137 to 144. Use segment 1 for zone 137, segment 2 for zone 138, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 193 Zones 137 to 144 partition	Location 193 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 137 to 144 reside in. Each segment corresponds to a zone (segment 1 to zone 137, segment 2 to zone 138, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

<p>Location 194 Zones 145 to 152 zone types</p>	<p>Location 194 has eight segments of numerical data. Use this location to program the zone type for zones 145 to 152. Use segment 1 for zone 145, segment 2 for zone 146, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.</p>
<p>Location 195 Zones 145 to 152 partition</p>	<p>Location 195 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 145 to 152 reside in. Each segment corresponds to a zone (segment 1 to zone 145, segment 2 to zone 146, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.</p>
<p>Location 196 Zones 153 to 160 zone types</p>	<p>Location 196 has eight segments of numerical data. Use this location to program the zone type for zones 153 to 160. Use segment 1 for zone 153, segment 2 for zone 154, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.</p>
<p>Location 197 Zones 153 to 160 partition</p>	<p>Location 197 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 153 to 160 reside in. Each segment corresponds to a zone (segment 1 to zone 153, segment 2 to zone 154, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.</p>
<p>Location 198 Zones 161 to 168 zone types</p>	<p>Location 198 has eight segments of numerical data. Use this location to program the zone type for zones 161 to 168. Use segment 1 for zone 161, segment 2 for zone 162, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.</p>
<p>Location 199 Zones 161 to 168 partition</p>	<p>Location 199 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 161 to 168 reside in. Each segment corresponds to a zone (segment 1 to zone 161, segment 2 to zone 162, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.</p>
<p>Location 200 Zones 169 to 176 zone types</p>	<p>Location 200 has eight segments of numerical data. Use this location to program the zone type for zones 169 to 176. Use segment 1 for zone 169, segment 2 for zone 170, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.</p>
<p>Location 201 Zones 169 to 176 partition</p>	<p>Location 201 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 169 to 176 reside in. Each segment corresponds to a zone (segment 1 to zone 169, segment 2 to zone 176, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.</p>
<p>Location 202 Zones 177 to 184 zone types</p>	<p>Location 202 has eight segments of numerical data. Use this location to program the zone type for zones 177 to 184. Use segment 1 for zone 177, segment 2 for zone 177, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.</p>
<p>Location 203 Zones 177 to 184 partition</p>	<p>Location 203 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 177 to 184 reside in. Each segment corresponds to a zone (segment 1 to zone 177, segment 2 to zone 178, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.</p>

Location 204 Zones 185 to 192 zone types	Location 204 has eight segments of numerical data. Use this location to program the zone type for zones 185 to 192. Use segment 1 for zone 185, segment 2 for zone 186, etc. The segment defaults are 6, 6, 6, 6, 6, 6, 6, 6.
Location 205 Zones 185 to 192 partition	Location 205 has eight segments of feature selection data. Use this location to select the partitions (1 to 8) that zones 185 to 192 reside in. Each segment corresponds to a zone (segment 1 to zone 185, segment 2 to zone 186, etc.). In each segment, enter 1 for partition 1 through 8 for partition 8.

Location 206 - Auto disarm day selection

Location 206 has one segment of feature selection data. Use this location to program which days the system autodisarms. If a zone is faulted when the panel tries to autodisarm, the zone is bypassed.

1 = Sunday	2 = Monday	3 = Tuesday	4 = Wednesday
5 = Thursday	6 = Friday	7 = Saturday	8 = Reserved

Location 207 - Serial port selector

Location 207 has one segment of feature selection data. Use this location to enable the serial port operations.

0 = Disabled (default)	1 = NX-584 enabled	2 = Serial printer enabled
------------------------	--------------------	----------------------------

Locations 208 to 211 - Home automation system

Location 208 - Baud rate

Location 208 has one segment of numerical data.

The NX-584 can operate on a number of different baud rates. Consult the home automation information to determine the best baud rate for your application and program it in Location 208. The default is 2 - 9600 Baud or the serial printer baud rate.

0 = 2400 Baud (2.4K)	1 = 4800 Baud (4.8 K)	2 = 9600 Baud (9.6 K)
3 = 19200 Baud (19.2 K)	4 = 38400 Baud (38.4K)	5 to 7 = Reserved

Location 209 - Home automation protocol

Location 209 has one segment of numerical data.

The NX-8E home automation protocol can operate in one of two possible modes, binary or ASCII. Consult the home automation application information to determine the proper mode for your application and program it in Location 209. The default is Off (binary).

Option 1.

LED Off = Binary (default)

LED On = ASCII

Option 2

On if serial port supervised. When enabled, the serial port expects to be polled at least once every 4 minutes. If it doesn't get polled within 4 minutes, then an expander trouble module 177 will be logged.

Default is off.

Options 3 to 8 = Reserved

Location 210 - Transition-based broadcasts

Location 210 has two segments of feature selection data.

The NX-8E can be programmed to automatically send information to the home automation system whenever there has been a change in this information. This is referred to as "transition-based broadcasting". Which information packets use transition-based broadcasting is dependent upon the application and the capabilities of the home automation system. Use Location 210 to enable and disable the appropriate transition-based broadcasts (consult the home automation application information).

Segment 1

1. Reserved.
 2. Interface configuration at power-up/end of download/program mode.
 3. and 4. Reserved.
 5. Zone status message.
 6. Zones snapshot message.
 7. Partition status message.
 8. Partitions snapshot message.
-

Segment 2

1. System status message.
 2. X-10 message received.
 3. Log event message.
 4. Keypad message received.
 - 5 to 8. Reserved.
-

Location 211 - Command/request enables

Location 211 has four segments of feature selection data.

The NX-8E has the ability to perform a variety of commands asked of it by the home automation system. For example, it is possible to allow arming and disarming of the security system, programming of the security system, or bypassing zones by the home automation system. Use Location 211 to select which commands, if any, you wish the home automation system to have access (consult the home automation application information).

Note: It is important to understand the capabilities of the home automation system to avoid compromising the security of your system when programming this location.

Segment 1

1. Reserved.
2. Interface configuration request.
3. Reserved.
4. Zone name request.
5. Zone status request.
6. Zone snapshot request.
7. Partition status request.
8. Partitions snapshot request.

Segment 2

1. System status request.
2. Send X-10 message.
3. Log event request.
4. Send keypad text message.
5. Keypad terminal mode request.
- 6 to 8. Reserved

Segment 3

1. Program data request.
2. Program data command.
3. User information request with PIN.
4. User information request without PIN.
5. Set user code command with PIN.
6. Set user code command without PIN.
7. Set user authorization command with PIN.
8. Set user authorization command without PIN.

Segment 4

1. Reserved.
 2. Reserved.
 3. Store communication event command.
 4. Set clock/calendar command.
 5. Primary keypad function with PIN.
 6. Primary keypad function without PIN.
 7. Secondary keypad function.
 8. Zone bypass toggle.
-

Location 212 - LCD keypad address

Location 212 has one segment of numerical data.

Certain commands in the NX-8E require it to know the location of at least one LCD keypad (if one exists in the system). If your system has an LCD keypad, we recommend that you place it in partition 1 keypad 1. This will allow Location 212 to be left at the factory default. If the LCD keypad is selected as something other than partition 1/keypad 1, program the appropriate address in Location 212.

Table 10: LCD keypad addresses

Keypad	Partition number							
	1	2	3	4	5	6	7	8
1	192	193	194	195	196	197	198	199
2	200	201	202	203	204	205	206	207
3	208	109	210	211	212	213	214	215
4	216	217	218	219	220	221	222	223
5	224	225	226	227	228	229	230	231
6	232	233	234	235	236	237	238	239
7	240	241	242	243	244	245	246	247
8	248	249	250	251	252	253	254	255

Chapter 3

Troubleshooting

Summary

This chapter provides product specifications and information to help you troubleshoot the product.

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General diagnosis

Trouble conditions are diagnosed by viewing the detailed information in the event log, using an LCD keypad.

To view the event log:

1. Enter *, 9, 0 at the keypad.
2. Enter the master or installer code. The most recent event displays.
3. Press the down arrow to view backward in time, or the up arrow to move forward in time.

Trouble conditions

Look for the specific problem you are experiencing and follow the instructions to correct the problem.

The control panel shows a service condition after exiting programming.

This condition is normal immediately after exiting programming because the panel scans the keypad bus for 12 seconds after the exit, while it looks for, and enrolls, any new devices.

After exiting programming, wait 12 seconds before executing any commands.

Keypad text is showing on one LCD keypad, but not on the other keypads.

Make sure all keypads are addressed using the *, 9, 4 commands.

Enter and exit programming to enroll the new device numbers.

From the keypad with text, enter the following key sequence:

*, 9, 2, *installer code*, 1, #, #, Exit.

After approximately 30 seconds, the text transfers to all keypads.

The control panel has an overcurrent service condition.

1. The control panel's auxiliary power is overused. To correct this condition, add up the current used by all devices powered by auxiliary and keypad power. The total should be under 1 A with a 40 VA or 50 VA transformer, or under 500 mA if you are using a 25 VA transformer. If that value is exceeded, power some devices from an NX-320E (or other auxiliary power supply).
2. A device powered by the keypad bus or auxiliary power may be shorted. To correct this condition, remove all powered devices except one keypad. If the trouble condition disappears, reconnect the devices back one at a time until the condition reappears, then locate the short on that device's wiring.

3. The backup battery is shorted internally or is defective. Remove the battery. If the overcurrent disappears, install a new battery.

The Fire LED is flashing.

Press *, 7. This clears most trouble conditions and resets the smoke detectors.

The control panel is in communication fail.

Try to make the control panel complete a communication with the central station receiver. If communication between the control panel and the central station is not successful:

1. Check the programming in Locations 0, 1, and 2.
2. Power down the control panel.
3. Remove both AC power and the battery.
4. Power up the control panel, AC first.
5. Reattach the battery.
6. Try sending a signal again.

The keypad shows lost zones.

This condition is usually caused by wireless zones not checking in with the panel. Delete the zone and relearn it.

Go to Location 200 in the receiver (Location 400 in the NX-148-RF) to see what the signal strength is as the transmitter learned. If the number shown is less than 6, relocate the transmitter or receiver for better reception.

The control panel does not try to dial the central station phone number.

Make sure there is a reporting format entered in Location 2. Make sure the incoming dial tone is on the R and T terminals of the panel.

The customer has Voice Over IP phone service (VoIP) and the panel tries to dial, but no signals are received at the central station.

Try sending with the SIA communication format.

Use an alternative form of communication, such as cell service, alarm.com, or TCP/IP monitoring.

The panel is not dialing in DTMF.

In Location 0, enter 15 before the phone number (for example: 15, 1, 8, 0, 0, 5, 5, 5, 1, 2, 1, 2).

The siren does not work.

The control panel has a built in siren driver. If the system uses self-contained sirens instead of speakers, go to Location 37, Segment 2, and turn on bit 1. This converts the driver output to voltage output.

The interior zones are bypassing themselves.

By default, auto bypass is on in Location 23, Segment 1, bit 3. When this bit is on, and the panel is armed and an entry zone is not violated during exit time, the panel assumes that the occupant has not left and bypasses the interior zones to prevent false alarms. Turn off Location 23, Segment 1, bit 3.

An open zone will not clear.

Take the zone out of all partitions. For example, to delete zone 9:

1. Go to Location 28, Segment 1, and disable any bits that are on.
2. Press * to save.
3. Exit programming.

Cell backup module does not work.

The NX-8E can only enroll one bus device other than keypads. If the installation requires wireless and a cell module, use an NX-148E-RF keypad with a built-in receiver and the cell module. The panel enrolls the NX-148E-RF as a keypad rather than a receiver, allowing it to enroll the cell module correctly.

Voltage tables

The following tables show normal values for control panel voltages. If these values are incorrect, you may experience trouble or fault conditions.

Table 11: Phone or power voltage values

Phone or power voltage	Value
T to R and T1 to R1	50 VDC not communicating (on hook)
T to R	7 VDC communicating (off hook)
T1 to R1	0 VDC communicating (line seized)
AC to AC	17.5 VAC
Data to common	6 VDC nominal (1.5 to 10 V, fluctuates)
Keypad positive to common	13.5 VDC
Aux power to common	13.5 VDC
Battery to battery	13.5 VDC

Table 12: Zone voltages ($\pm 10\%$)

Zone condition	Value
Zones, not doubled	
Open	13 VDC
Good (3.3 kohm resistor)	6.6 VDC
Shorted	0 VDC
Two-wire smoke (680 ohm resistor)	10.75 VDC
Zones, doubled	
Open	13 VDC
Only low zone OK (3.74 kohm resistor)	7 VDC
Only high zone OK (6398 kohm resistor)	9 VDC
Both high and low zones OK	5.5 VDC
Shorted	0 VDC
Normally open zones (such as four-wire smoke)	Use low zone resistor (3.74 kohm resistor). Cannot use the corresponding high zone.

Specifications

Operating power	16.5 VAC 40 or 50 VA transformer
Auxiliary power	
with 40 or 50 VA transformer	12 VDC regulated 2 A
with NX-320E power supply	12 VDC regulated 2 A plus control panel power
Loop resistance	
Standard loop	300 ohms max.
Two-wire smokes	30 ohms max.
Built-in siren driver	Two tone (temporal and yelp)
Loop response	Selectable 50 mS or 500 mS
Operating temperature	32 to 120°F (0 to 49°C)
LED keypad	
Current draw	130 mA max.
Without sounder	55 mA
Dimensions	6.4 x 4.0 x 1.1 in. (16.3 x 10.2 x 2.8 cm)
NX-148E LCD keypad	
Current draw	110 mA max.
Without sounder	75 mA
Dimensions	6.4 x 5.3 x 1.0 in. (16.3 x 13.5 x 2.5 cm)
Metal enclosure dimensions	11.25 x 11.25 x 3.5 in. (28.6 x 28.6 x 8.9 cm)
Shipping weight	9 lb. (4.1 kg)

Appendix A

Reporting codes

Summary

This appendix provides tables for various events and transmissions associated with the NV-8V2 control panel

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Reporting fixed codes in Contact ID and SIA

The NX-8E can report SIA level 1 transmissions to either or both phone numbers. Each report consists of an event code and a zone ID (the zone number that is in alarm) or user ID. Table 13 below shows the event code programmed in the zone type event code.

Table 13: Reporting fixed codes

Contact ID event	SIA	Description
301	AT	AC fail (device number) ^a
301	AR	AC restore (device number) ^a
602	RP	Autotest ^b
312	YP	Aux power overcurrent (device number) ^a
312	YQ	Aux power restore (device number) ^a
137	TA	Box tamper (device number) ^a
137	TR	Box tamper restore (device number) ^a
570	U ^c	Bypass restore (zone number) ^a
406	OC	Cancel (user number) ^a
401	CL	Close (user number) ^a
412	RS	Download complete ^b
393	YX	CleanMe
121	HA	Duress ^b
451	OK	Early open/late close ^b
628	LX	End program ^b
605	JL	Event log full ^b
457	EE	Exit error (user number) ^a
333	ER	Expander restore (device number) ^a
333	ET	Expander trouble (device number) ^a
454	CI	Fail to close ^b
354	RT	Fail to communicate ^b
423	DF	Forced door ^b
423	DR	Forced door restore ^b
310	GF	Ground fault ^b
310	GK	Ground fault restore ^b
110	FA	Keypad auxiliary 1 ^b
100	MA	Keypad auxiliary 2 ^b

Contact ID event	SIA	Description
120	PA	Keypad panic (audible) ^a
121	HA	Keypad panic (silent) ^a
137	TA	Keypad tamper ^b
309	YT	Low battery (device number) ^a
309	YR	Low battery restore (device number) ^a
601	RX	Manual test ^b
401	OP	Open (user number) ^a
401	CR	Recent close (user number) ^a
381	T ^c	RF sensor lost (zone number) ^a
381	R ^c	RF sensor restore (zone number) ^a
393	YZ	CleanMe restore
384	XR	Sensor battery restore (zone number) ^a
384	XT	Sensor low battery (zone number) ^a
321	YH	Siren restore (device number) ^a
321	YA	Siren tamper (device number) ^a
627	LB	Start program ^b
351	LT	Telephone fault ^b
351	LR	Telephone restore ^b
391	NA	Zone activity fault ^b
391	NS	Zone activity restore ^b
570	B ^c	Zone bypass (zone number) ^a
137	TA	Zone tamper (zone number) ^a
137	TR	Zone tamper restore (zone number) ^a
380	T ^c	Zone trouble (zone number) ^a
380	R ^c	Zone trouble restore (zone number) ^a

- a. The number reported as the zone number.
- b. Zone is 0.
- c. First character from event code of the zone that is bypassed or in trouble (Locations 110 to 169).

Reporting zone codes in Contact ID and SIA

The NX-8E has the ability to report SIA transmissions to either or both phone numbers. Each report in SIA consists of an event code and a zone ID (the number of the zone that is in alarm) or user ID. table shows the event code, SIA code, and a description that is programmed in the zone type event code (Locations 110 to 169).

Table 14: Reporting zone codes

Event code	SIA code	Description
0	HA	Holdup alarm
1	FA	Fire alarm
2	PA	Panic alarm
3	BA	Burglary alarm
4	BA	Burglary alarm
5	BA	Burglary alarm
6	UA	Untyped alarm
7	BA	Burglary alarm
8	BA	Burglary alarm
9	UA	Untyped alarm
10	HA	Holdup alarm
11	MA	Medical alarm
12	PA	Panic alarm
13	TA	Tamper alarm
14	RP	Periodic test
15	GA	Gas alarm
16	KA	Heat alarm
17	WA	Water alarm
18	QA	Emergency alarm
19	SA	Sprinkler alarm
20	ZA	Freeze alarm
21	KH	High temperature alarm
22	FA	Manual fire alarm

Reporting Ademco Contact ID transmissions

The NX-8E has the ability to report Ademco Contact ID transmissions. Each report in Contact ID consists of an event code and a zone ID (the number of the zone that is in alarm). The event codes are described in the following table and are programmed in the zone type event code (Locations 110 to 169).

Table 15: Reporting Ademco Contact ID transmissions

Event code	Contact ID	Description
0	122	Silent panic
1	110	Fire alarm
2	120	Panic alarm
3	130	Burglary alarm
4	131	Perimeter alarm
5	132	Interior alarm
6	133	24-hour burglary
7	134	Entry alarm
8	135	Day/night alarm
9	150	Nonburglary 24-hour
10	121	Duress alarm
11	100	Medical alarm
12	123	Audible panic alarm
13	137	Tamper alarm
14	602	Periodic test
15	151	Gas detected
16	158	High temperature
17	154	Water leakage
18	140	General alarm
19	140	General alarm
20	159	Low temperature alarm
21	158	High temperature alarm
22	115	Manual fire alarm

Device numbers for reporting expander troubles

The tables below list the device numbers that will be reported for trouble conditions.

Table 16: Device numbers that report trouble conditions

Device	Name	Number
Control panel/modules	NX-8E control panel	Device address 0
	NX-534E two-way listen in	Device address 64
	NX-540E operator	Device address 40
	NX-591E cell interface	Device address 76
	NX-870E fire supervision	Device address 9
Hardware expander (NX-216E)	Zone 09 (all switches off)	Expander number reported 22
	Zone 09 (switch 1 on)	Expander number reported 23
	Zone 17 (switch 2 on)	Expander number reported 16
	Zone 25 (switch 1 and 2 on)	Expander number reported 17
	Zone 33 (switch 3 on)	Expander number reported 18
	Zone 41 (switch 1 and 3 on)	Expander number reported 19
	Zone 49 (switch 2 and 3 on)	Expander number reported 20
	Zone 57 (switch 1, 2, 3 on)	Expander number reported 21
	Zone 65 (switch 4 on)	Expander number reported 96
	Zone 73 (switch 1 and 4 on)	Expander number reported 97
	Zone 81 (switch 2 and 4 on)	Expander number reported 98
	Zone 89 (switch 1, 2, 4 on)	Expander number reported 99
	Zone 97 (switch 3 and 4 on)	Expander number reported 100
	Zone 105 (switch 1, 3, 4 on)	Expander number reported 101
	Zone 113 (switch 2, 3, 4 on)	Expander number reported 102
	Zone 121 (switch 1, 2, 3, 4 on)	Expander number reported 103
	Zone 129 (switch 5 on)	Expander number reported 104
	Zone 137 (switch 1 and 5 on)	Expander number reported 105
	Zone 145 (switch 2 and 5 on)	Expander number reported 106
	Zone 153 (switch 1, 2, 5 on)	Expander number reported 107
Zone 161 (switch 3 and 5 on)	Expander number reported 108	
Zone 169 (switch 1, 3, 5 on)	Expander number reported 109	

Device	Name	Number
	Zone 177 (switch 2, 3, 5 on)	Expander number reported 110
	Zone 185 (switch 1, 2, 3, 5 on)	Expander number reported 111
Remote power supply (NX-320E)	All switches off	Device address 84
	Switch 1 on	Device address 85
	Switch 2 on	Device address 86
	Switch 1 and 2 on	Device address 87
	Switch 3 on	Device address 88
	Switch 1 and 3 on	Device address 89
	Switch 2 and 3 on	Device address 90
	Switch 1, 2, 3 on	Device address 91
Wireless receivers	All switches off	Expander number reported 35
	Switch 1 on	Expander number reported 36
	Switch 2 on	Expander number reported 37
	Switch 1 and 2 on	Expander number reported 38
	Switch 3 on	Expander number reported 39
	Switch 1 and 3 on	Expander number reported 32
	Switch 2 and 3 on	Expander number reported 33
	Switch 1, 2, 3 on	Expander number reported 34
Output module for NX-570E/580E	Switch 1 and 2 on	Device address 24
	Switch 3 on	Device address 25
	Switch 1 and 3 on	Device address 26
	Switch 2 and 3 on	Device address 27
	Switch 1, 2, 3 on	Device address 28
	All switches off	Device address 29
	Switch 1 on	Device address 30
	Switch 2 on	Device address 31

Table 17: Keypad numbers for reporting trouble conditions

Keypad number	Partition							
	1	2	3	4	5	6	7	8
1	192	193	194	195	196	197	198	199
2	200	201	202	203	204	205	206	207
3	208	209	210	211	212	213	214	215

Keypad number	Partition							
	1	2	3	4	5	6	7	8
4	216	217	218	219	220	221	222	223
5	224	225	226	227	228	229	230	231
6	232	233	234	235	236	237	238	239
7	240	241	242	243	244	245	246	247
8	248	249	250	251	252	253	254	255

Zone ID or user ID hex digit for 4+2 formats

Zone or user ID hex digits only apply to slow formats (Locations 56 to 83, lower digit). The digits programmed in these locations are sent as the upper hex digit in place of the alarm event code. The zone ID or user ID are always reported as the lower hex digits. The following table shows the hex digit for the zone/user IDs. For example, if the zone/user ID is 15, the 4+2 lower digit is F.

Table 18: Zone/user ID and hex digit

Zone/user ID = Hex digit	Zone/user ID = Hex digit	Zone/ID = Hex digit
1 = 1	2 = 2	3 = 3
4 = 4	5 = 5	6 = 6
7 = 7	8 = 8	9 = 9
10 = A	11 = B	12 = C
13 = D	14 = E	15 = F
16 = 1	17 = 2	18 = 3
19 = 4	20 = 5	21 = 6
22 = 7	23 = 8	24 = 9
25 = A	26 = B	27 = C
28 = D	29 = E	30 = F
31 = 1	32 = 2	33 = 3
34 = 4	35 = 5	36 = 6
37 = 7	38 = 8	39 = 9
40 = A	41 = B	42 = C
43 = D	44 = E	45 = F
46 = 1	47 = 2	48 = 3
49 = 4	50 = 5	51 = 6

Zone/user ID = Hex digit	Zone/user ID = Hex digit	Zone/ID = Hex digit
52 = 7	53 = 8	54 = 9
55 = A	56 = B	57 = C
58 = D	59 = E	60 = F
61 = 1	62 = 2	63 = 3
64 = 4	65 = 5	66 = 6
67 = 7	68 = 8	69 = 9
70 = A	71 = B	72 = C
73 = D	74 = E	75 = F
76 = 1	77 = 2	78 = 3
79 = 4	80 = 5	81 = 6
82 = 7	83 = 8	84 = 9
85 = A	86 = B	87 = C
88 = D	89 = E	90 = F
91 = 1	92 = 2	93 = 3
94 = 4	95 = 5	96 = 6
97 = 7	98 = 8	99 = 9
100 = A	101 = B	102 = C
103 = D	104 = E	105 = F
106 = 1	107 = 2	108 = 3
109 = 4	110 = 5	111 = 6
112 = 7	113 = 8	114 = 9
115 = A	116 = B	117 = C
118 = D	119 = E	120 = F
121 = 1	122 = 2	123 = 3
124 = 4	125 = 5	126 = 6
127 = 7	128 = 8	129 = 9
130 = A	131 = B	132 = C
133 = D	134 = E	135 = F
136 = 1	137 = 2	138 = 3
139 = 4	140 = 5	141 = 6
142 = 7	143 = 8	144 = 9
145 = A	146 = B	147 = C
148 = D	149 = E	150 = F
151 = 1	152 = 2	153 = 3

Zone/user ID = Hex digit	Zone/user ID = Hex digit	Zone/ID = Hex digit
154 = 4	155 = 5	156 = 6
157 = 7	158 = 8	159 = 9
160 = A	161 = B	162 = C
163 = D	164 = E	165 = F
166 = 1	167 = 2	168 = 3
169 = 4	170 = 5	171 = 6
172 = 7	173 = 8	174 = 9
175 = A	176 = B	177 = C
178 = D	179 = E	180 = F
181 = 1	182 = 2	183 = 3
184 = 4	185 = 5	186 = 6
187 = 7	188 = 8	189 = 9
190 = A	191 = B	192 = C
193 = D	194 = E	195 = F
196 = 1	197 = 2	198 = 3
199 = 4	200 = 5	201 = 6
202 = 7	203 = 8	204 = 9
205 = A	206 = B	207 = C
208 = D	209 = E	210 = F
211 = 1	212 = 2	213 = 3
214 = 4	215 = 5	216 = 6
217 = 7	218 = 8	219 = 9
220 = A	221 = B	222 = C
223 = D	224 = E	225 = F
226 = 1	227 = 2	228 = 3
229 = 4	230 = 5	231 = 6
232 = 7	233 = 8	234 = 9
235 = A	236 = B	237 = C
238 = D	239 = E	240 = F

Appendix B

Programming worksheet

Summary

This appendix provides a programming worksheet that shows location defaults and provides space to record your installation settings.

Content

Programming worksheet 76

Zone worksheet 98

Programming worksheet

Use the following worksheet to check location defaults and record location settings. Locations with multiple segments will show defaults as multiple numbers separated by commas. Defaults are shown in **bold**.

Table 19: Location defaults and settings

Loc.	Description	Default								Setting							
0	Phone 1 (20 segments)	14 (each segment)															
1	Phone 1 account code	10, 10, 10, 10, 10, 10															
2	Phone 1 communicator format	0															
3	Phone 1 dial attempts Backup control	8 0															
4	Phone 1 events reported Segment 1 1 = Alarms and restores 2 = Open/close 3 = Bypass 4 = Zone trouble 5 = Power trouble 6 = Siren and telephone fault 7 = Test reports 8 = Program, download and log full	Segment 2 1 - Tamper 2 = Short circuit and ground fault 3 = Sensor lost 4 = Sensor low battery 5 = Expander trouble 6 = Failure to communicate 7 = Zone activity monitor 8 = Reserved															
5	Partitions reported to phone 1																
	Segment 1 = Partitions 1 to 8	1	2	3	4	5	6	7	8								
6	Phone 2 (20 segments)	14 (each segment)															
7	Phone 2 account code	10, 10, 10, 10, 10, 10															
8	Phone 2 communicator format	0															
9	Phone 2 dial attempts Backup control	8 0															
10	Phone 2 events reported Segment 1 1 = Alarms and restores 2 = Open/close 3 = Bypass 4 = Zone trouble 5 = Power trouble 6 = Siren and telephone fault 7 = Test reports 8 = Program, download and log full	Segment 2 1 - Tamper 2 = Short circuit and ground fault 3 = Sensor lost 4 = Sensor low battery 5 = Expander trouble 6 = Failure to communicate 7 = Zone activity monitor 8 = Reserved															
11	Partition reported to phone 2																
	Segment 1 = Partitions 1 to 8	1	2	3	4	5	6	7	8								
12	Phone 3 (20 segments)	14 (each segment)															

Loc.	Description	Default	Setting
13	Phone 3 account code	10, 10, 10, 10, 10, 10	
14	Phone 3 communicator format	0	
15	Phone 3 dial attempts Backup control	8 0	
16	Phone 3 events reported Segment 1 1 = Alarms and restores 2 = Open/close 3 = Bypass 4 = Zone trouble 5 = Power trouble 6 = Siren and telephone fault 7 = Test reports 8 = Program, download and log full	Segment 2 1 - Tamper 2 = Short circuit and ground fault 3 = Sensor lost 4 = Sensor low battery 5 = Expander trouble 6 = Failure to communicate 7 = Zone activity monitor 8 = Reserved	
17	Partitions reported to phone 3		
	Segment 1 = Partitions 1 to 8	1	2
		3	4
		5	6
		7	8
18	Custom communicator format Segment 1 1 = ON-1800hz transmit, OFF-1900hz 2 = ON-2300hz handshake, OFF-1400hz 3 = ON-cksum parity, OFF-double round 4 = ON-2-digit code, OFF-1-digit code 5-6 = Reserved 7 = ON-20 pps, OFF-10 or 40 pps 8 = ON-10 pps, OFF-20 or 40 pps	Segment 2 1 = ON-pager format 2 = ON-1400/2300 handshake 3 and 4 = Reserved 5 = ON-Contact ID 6 = ON-SIA 7 = ON-Contact ID or 4+3 8 = ON-DTMF	
19	Download access code	8, 4, 8, 0, 0, 0, 0, 0	
20	Number of rings to answer	8	
21	Download control Segment 1 1 = Enable two-call answering machine defeat 2 = Enable tone sniff answering machine defeat 3 = Require callback before downloading 4 = Shutdown control panel	5 = Lock out local programming 6 = Lock out communicator programming 7 = Lock out download section 8 = Enable callback at autotest interval	
22	Download callback number (20 segments)	14 (each segment)	
23	Partition 1 feature selection Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code for bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable automatic instant 8 = Enable instant mode toggle	

Loc.	Description	Default	Setting
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 = Auto arm in stay mode 3 = Disables door delays in night mode 4 = Bypass disabled for force arm zones 5 to 8 = Reserved Segment 5 (Reserved)	
24	Entry/exit times)		
	Segment 1 = Entry time 1	30	
	Segment 2 = Exit time 1	60	
	Segment 3 = Entry time 2	30	
	Segment 4 = Exit time 2	60	
	Segment 5 and 6 = Reserved		
25	Zones 1 to 8 zone types	3, 5, 6, 6, 6, 6, 6, 6	
26	Zones 1 to 8 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
27	Zones 9 to 16 zone types	6, 6, 6, 6, 6, 6, 6, 6	
28	Zones 9 to 16 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
29	Zones 17 to 24 zone types	6, 6, 6, 6, 6, 6, 6, 6	
30	Zones 17 to 24 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
31	Zones 25 to 32 zones types	6, 6, 6, 6, 6, 6, 6, 6	
32	Zones 25 to 32 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
33	Zones 33 to 40 zone types	6, 6, 6, 6, 6, 6, 6, 6	

Loc.	Description	Default	Setting
34	Zones 33 to 40 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8		Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8
35	Zones 41 to 48 zone types	6, 6, 6, 6, 6, 6, 6, 6	
36	Zones 41 to 48 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8		Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8
37	Siren and system supervision Segment 1 1 = Siren sounds for phone line cut while armed 2 = Siren sounds for phone line cut while disarmed 3 = Siren blasts at arming 4 = Siren blasts at exit delay expiration 5 = Siren blasts at closing kissoff 6 = Siren sounds during a cross-zone verification time 7 = Siren sounds for a tamper 8 = Siren blasts one time for keyswitch, two times for disarming		Segment 2 1 = Convert siren driver to voltage out 2 = Siren sounds for expander trouble 3 = Immediate restore by zone 4 = Dynamic battery test upon arming 5 = Battery missing test every 12 seconds 6 = Manual bell test during *, 4, 4 test function 7 = Manual communicator test during *, 4, 4 test function 8 = Box tamper enabled
	Segment 3 1 = Box tamper report enabled 2 = AC fail report enabled 3 = Low battery report enabled 4 = AUX power over current report enabled 5 = Siren supervision report enabled 6 = Telephone line cut report enabled 7 = Ground fault detection report enabled 8 = Expander trouble report enabled		Segment 4 1 = Failure to communicate report enabled 2 = Log full report enabled 3 = Autotest report enabled 4 = Start and end programming report enabled 5 = End download report enabled 6 = Sensor low battery report enabled 7 = Sensor missing report enabled 8 = First to open/last to close enabled
	Segment 5 1 = Lost clock service LED enabled 2 = Zone doubling enabled 3 = Disable on-board eight zones 4 = Enable two trips on the same cross-zone to activate the alarm 5 = Disable bypass reports for force armed zones 6 = Reserved 7 = Clock uses internal crystal 8 = Disable temporal siren on fire		Segment 6 1 = Enable two-wire smoke detector 2 = Reserved 3 = Enable zone activity in hours (not days) 4 = Enable Daylight Saving Time (DST) 5 = Reserved 6 = Disable Clean Me report 7 = Disable start/end test report 8 = Enable auto LED extinguish Segment 7 = Reserved
38	Swinger shutdown count	1	

Loc.	Description	Default	Setting
39	Keypad sounder control Segment 1 1 = Keypad sounds for telephone line cut when in the armed state 2 = Keypad sounds for telephone line cut when in the disarmed state 3 = Keypad sounds upon AC power failure 4 = Keypad sounds upon low battery detection 5 = Keypad sounds during cross zone trip time 6 = Keypad sounds for tamper alarm 7 = Reserved 8 = Keypad sounds for expander trouble		
40	System timers		
	Segment 1 = Dynamic battery test duration (0 to 255)	0 (minutes)	
	Segment 2 = AC failure report delay (0 to 255 minutes)	5 (minutes)	
	Segment 3 = Power up delay (0 to 60)	60 (seconds)	
	Segment 4 = Siren time (1 to 254).	8 (minutes)	
	Segment 5 = Telephone line cut delay (0 to 255)	0 (seconds)	
	Segment 6 = Cross zone time (0 to 255)	5 (minutes)	
	Segment 7 = Chime time in 50 mS increments (0 to 255)	3	
	Segment 8 = Dialer delay (15 to 255)	30 (seconds)	
	Segment 9 = Fire alarm verification time (120 to 255)	0 (seconds)	
	Segment 10 = Listen-in time (0 to 255)	0 (seconds)	
	Segment 11 = Zone monitor timer (0 to 255)	0 (days)	
	Segments 12 to 14 = Reserved		
41	Special features Segment 1 1 = Enable six-digit code option 2 = Require valid user code entry for *, 9, 8 and * 9, 9 functions to work	3 = Enable auto cancel/abort 4 = Enable walk test mode 5 = Enable auto force-arming with keyfob or keyswitch 6 to 8 = Reserved	
42	Go to program code	9, 7, 1, 3, 0, 0	

Loc.	Description	Default				Setting			
43	Go to program code and authorization								
	Segment 1 1 = Reserved 2 = Enable go to program code as an arm only code 3 = Enable go to program code as an arm only after closing 4 = Enable go to program code as a master arm/disarm code (can change user code) 5 = Enable go to program code as an arm/disarm code 6 = Enable go to program code to bypass zones 7 = Enable go to program code opening and closing reports 8 = Reserved	Segment 2 1 = Enable go to program code for partition 1 2 = Enable go to program code for partition 2 3 = Enable go to program code for partition 3 4 = Enable go to program code for partition 4 5 = Enable go to program code for partition 5 6 = Enable go to program code for partition 6 7 = Enable go to program code for partition 7 8 = Enable go to program code for partition 8							
44	Duress code	15, 15, 15, 15, 15, 15							
45	Auxiliary outputs 1 to 4 partition selection								
	Segment 1 = Output 1 partitions	1	2	3	4	5	6	7	8
	Segment 2 = Output 2 partitions	1	2	3	4	6	6	7	8
	Segment 3 = Output 3 partitions	1	2	3	4	5	6	7	8
	Segment 4 = Output 4 partitions	1	2	3	4	5	6	7	8
46	Auxiliary outputs 1 to 4 special timing								
	Segments 1 to 4 (outputs 1 to 4)	Output 1	Output 2	Output 3	Output 4				
	1 = Aux output timed in minutes	1	1	1	1				
	2 = Aux output to latch	2	2	2	2				
	3 = Aux output to stop timing upon user code entry	3	3	3	3				
	4 = Aux output activates only between closing and opening time	4	4	4	4				
	5 = Aux output activates only between opening and closing time	5	5	5	5				
	6 = Invert aux output (0 V going to 12 V when activated)	6	6	6	6				
47	Auxiliary output 1 event/times								
	Segment 1 = Event number for output 1	0 (burglary alarm)							
	Segment 2 = Timing for output 1	10 (seconds)							
48	Auxiliary output 2 event/times								
	Segment 1 = Event number for output 2	1 (fire alarm)							
	Segment 2 = Timing for output 2	10 (seconds)							
49	Auxiliary output 3 event/times								

Loc.	Description	Default								Setting
	Segment 1 = Event number for output 3	2 (24-hour alarm)								
	Segment 2 = Timing for output 3	10 (seconds)								
50	Auxiliary output 4 event/times									
	Segment 1 = Event number for output 4	21 (armed state)								
	Segment 2 = Timing for output 4	0 (follow condition)								
51	Autotest control									
	Segment 1 = Autotest interval 0 = Days 1 = Hours 2 = Days and suppresses the test if any report has been sent within the last interval 3 = Hours and suppresses the test if any report has been sent within the last interval	1								
	Segment 2 = Autotest interval from 1 to 255 days or hours based on Segment 1	24 (hours)								
	Segment 3 = Hour of the autotest in 24-hour time format	2 (0200)								
	Segment 4 = Autotest report time, min. after the hour.	0								
52	Opening/automatic disarm times									
	Segment 1 = Hour of the opening time	8								
	Segment 2 = Minutes after the opening time	0								
53	Closing/automatic arming times									
	Segment 1 = Hour of the closing/auto arming time	20								
	Segment 2 = Minutes after hour of closing/auto arming time	0								
54	Days of week each partition (1 to 8) is open									
	Segments 1 to 8 options	1	2	3	4	5	6	7	8	
	1 = Sunday	1	1	1	1	1	1	1	1	
	2 = Monday	2	2	2	2	2	2	2	2	
	3 = Tuesday	3	3	3	3	3	3	3	3	
	4 = Wednesday	4	4	4	4	4	4	4	4	
	5 = Thursday	5	5	5	5	5	5	5	5	
	6 = Friday	6	6	6	6	6	6	6	6	
	7 = Saturday	7	7	7	7	7	7	7	7	
	8 = Reserved	8	8	8	8	8	8	8	8	
55	Days of week auto arming will occur in partitions 1 to 8									
	Segments 1 to 8 options	1	2	3	4	5	6	7	8	

Loc.	Description	Default				Setting			
	1 = Sunday	1	1	1	1	1	1	1	1
	2 = Monday	2	2	2	2	2	2	2	2
	3 = Tuesday	3	3	3	3	3	3	3	3
	4 = Wednesday	4	4	4	4	4	4	4	4
	5 = Thursday	5	5	5	5	5	5	5	5
	6 = Friday	6	6	6	6	6	6	6	6
	7 = Saturday	7	7	7	7	7	7	7	7
	8 = Disable retry timer	8	8	8	8	8	8	8	8
56	Restore communicator code								
	Segment 1 = Partition 1 restore code	0							
	Segment 2 = Partition 2 restore code	0							
	Segment 3 = Partition 3 restore code	0							
	Segment 4 = Partition 4 restore code	0							
	Segment 5 = Partition 5 restore code	0							
	Segment 6 = Partition 6 restore code	0							
	Segment 7 = Partition 7 restore code	0							
	Segment 8 = Partition 8 restore code	0							
57	Bypass communicator code								
	Segment 1 = Partition 1 bypass code	0							
	Segment 2 = Partition 2 bypass code	0							
	Segment 3 = Partition 3 bypass code	0							
	Segment 4 = Partition 4 bypass code	0							
	Segment 5 = Partition 5 bypass code	0							
	Segment 6 = Partition 6 bypass code	0							
	Segment 7 = Partition 7 bypass code	0							
	Segment 8 = Partition 8 bypass code	0							
58	Tamper communicator code								
	Segment 1 = Partition 1 tamper code	0							
	Segment 2 = Partition 2 tamper code	0							
	Segment 3 = Partition 3 tamper code	0							
	Segment 4 = Partition 4 tamper code	0							
	Segment 5 = Partition 5 tamper code	0							
	Segment 6 = Partition 6 tamper code	0							
	Segment 7 = Partition 7 tamper code	0							

Loc.	Description	Default	Setting
	Segment 8 = Partition 8 tamper code	0	
59	Trouble communicator code		
	Segment 1 = Partition 1 trouble code	0	
	Segment 2 = Partition 2 trouble code	0	
	Segment 3 = Partition 3 trouble code	0	
	Segment 4 = Partition 4 trouble code	0	
	Segment 5 = Partition 5 trouble code	0	
	Segment 6 = Partition 6 trouble code	0	
	Segment 7 = Partition 7 trouble code	0	
	Segment 8 = Partition 8 trouble code	0	
60	Sensor low battery communicator code		
	Segment 1 = Partition 1 sensor low battery code	0	
	Segment 2 = Partition 2 sensor low battery code	0	
	Segment 3 = Partition 3 sensor low battery code	0	
	Segment 4 = Partition 4 sensor low battery code	0	
	Segment 5 = Partition 5 sensor low battery code	0	
	Segment 6 = Partition 6 sensor low battery code	0	
	Segment 7 = Partition 7 sensor low battery code	0	
	Segment 8 = Partition 8 sensor low battery code	0	
61	Sensor missing communicator code		
	Segment 1 = Partition 1 sensor missing code	0	
	Segment 2 = Partition 2 sensor missing code	0	
	Segment 3 = Partition 3 sensor missing code	0	
	Segment 4 = Partition 4 sensor missing code	0	
	Segment 5 = Partition 5 sensor missing code	0	
	Segment 6 = Partition 6 sensor missing code	0	
	Segment 7 = Partition 7 sensor missing code	0	
	Segment 8 = Partition 8 sensor missing code	0	
62	Duress communicator code	0, 0	
63	Auxiliary 1 communicator code	0, 0	
64	Auxiliary 2 communicator code	0, 0	
65	Keypad panic communicator code	0, 0	
66	Keypad multiple code entry tamper code	0, 0	
67	Box tamper/restore communicator code	0, 0, 0, 0	

Loc.	Description	Default	Setting
68	AC fail/restore communicator code	0, 0, 0, 0	
69	Low battery/restore communicator code	0, 0, 0, 0	
70	Power short/restore communicator code	0, 0, 0, 0	
71	Bell tamper/restore communicator code	0, 0, 0, 0	
72	Telephone line cut/restore com. code	0, 0, 0, 0	
73	Ground fault/restore communicator code	0, 0, 0, 0	
74	Expander trouble/restore com code	0, 0, 0, 0	
75	Failure to communicate code	0, 0	
76	Log full communicator code	0, 0	
77	Opening code communicator code		
	Segment 1 = Partition 1 opening code	0	
	Segment 2 = Partition 2 opening code	0	
	Segment 3 = Partition 3 opening code	0	
	Segment 4 = Partition 4 opening code	0	
	Segment 5 = Partition 5 opening code	0	
	Segment 6 = Partition 6 opening code	0	
	Segment 7 = Partition 7 opening code	0	
	Segment 8 = Partition 8 opening code	0	
78	Closing communicator code		
	Segment 1 = Partition 1 closing code	0	
	Segment 2 = Partition 2 closing code	0	
	Segment 3 = Partition 3 closing code	0	
	Segment 4 = Partition 4 closing code	0	
	Segment 5 = Partition 5 closing code	0	
	Segment 6 = Partition 6 closing code	0	
	Segment 7 = Partition 7 closing code	0	
	Segment 8 = Partition 8 closing code	0	
79	Autotest communicator code	0, 0	
80	Recent closing and exit error com code	0, 0	
81	Start/end programming com code	0, 0, 0, 0	
82	End download communicator code	0, 0, 0, 0	
83	Cancel communicator cod	0	

Loc.	Description	Default	Setting
84 to 87	Reserved		
88	Partition 1 account code	10, 10, 10, 10, 10, 10	
89	Partition 2 account code	10, 10, 10, 10, 10, 10	
90	Partition 2 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	
91	Partition 2 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
92	Partition 3 account code	10, 10, 10, 10, 10, 10	
93	Partition 3 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	

Loc.	Description	Default	Setting
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	
94	Partition 3 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
95	Partition 4 account code	10, 10, 10, 10, 10, 10	
96	Partition 4 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	
97	Partition 4 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
98	Partition 5 account code	10, 10, 10, 10, 10, 10	

Loc.	Description	Default	Setting
99	Partition 5 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	
100	Partition 5 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
101	Partition 6 account code	10, 10, 10, 10, 10, 10	
102	Partition 6 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	

Loc.	Description	Default	Setting
103	Partition 6 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
104	Partition 7 account code	10, 10, 10, 10, 10, 10	
105	Partition 7 feature and reporting selection		
	Segment 1 1 = Quick arm 2 = Re-exit 3 = Auto bypass 4 = Silent panic 5 = Audible panic 6 = Auxiliary 1 7 = Auxiliary 2 8 = Multi-keypress tamper	Segment 2 1 = LED extinguish enable 2 = Require user code by bypassing zones 3 = Bypass sounder alert 4 = AC power/low battery sounder alert 5 = Enable bypass toggle 6 = Enable silent auto arm 7 = Enable auto instant 8 = Reserved	
	Segment 3 1 = Open/close 2 = Bypass 3 = Restore 4 = Trouble 5 = Tamper 6 = Cancel 7 = Recent closing 8 = Exit error	Segment 4 1 = Late to close/early to open 2 to 8 = Reserved Segment 5 = Reserved	
106	Partition 7 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
107	Partition 8 account code	10, 10, 10, 10, 10, 10	
108	Partition 8 feature and reporting selection		

Loc.	Description	Default	Setting
	<p>Segment 1</p> <p>1 = Quick arm</p> <p>2 = Re-exit</p> <p>3 = Auto bypass</p> <p>4 = Silent panic</p> <p>5 = Audible panic</p> <p>6 = Auxiliary 1</p> <p>7 = Auxiliary 2</p> <p>8 = Multi-keypress tamper</p>	<p>Segment 2</p> <p>1 = LED extinguish enable</p> <p>2 = Require user code by bypassing zones</p> <p>3 = Bypass sounder alert</p> <p>4 = AC power/low battery sounder alert</p> <p>5 = Enable bypass toggle</p> <p>6 = Enable silent auto arm</p> <p>7 = Enable auto instant</p> <p>8 = Reserved</p>	
	<p>Segment 3</p> <p>1 = Open/close</p> <p>2 = Bypass</p> <p>3 = Restore</p> <p>4 = Trouble</p> <p>5 = Tamper</p> <p>6 = Cancel</p> <p>7 = Recent closing</p> <p>8 = Exit error</p>	<p>Segment 4</p> <p>1 = Late to close/early to open</p> <p>2 to 8 = Reserved</p> <p>Segment 5 = Reserved</p>	
109	Partition 8 entry and exit times		
	Segment 1 = Entry time 1	0	
	Segment 2 = Exit time 1	0	
	Segment 3 = Entry time 2	0	
	Segment 3 = Exit time 2	0	
	Segments 5 and 6 = Reserved		
110	Zone type 1 alarm event code	8	
111	Zone type 1 feature select		
	<p>Segment 1</p> <p>1 = Fire (enable for fire zone)</p> <p>2 = 24-hour (enable for non-fire 24-hour)</p> <p>3 = Keypress zone</p> <p>4 = Follower (enable for burg zones that are instant during non-entry times)</p> <p>5 = Delay 1 zone (enable to follow timer 1 entry/exit times)</p> <p>6 = Delay 2 zone (enable to follow timer 2 entry/exit times)</p> <p>7 = Interior (enable for auto bypass or stay arming)</p> <p>8 = Local only (enable if zone is not to be reported)</p>	<p>Segment 2</p> <p>1 = Keypad audible on alarm</p> <p>2 = Yelping siren on alarm</p> <p>3 = Temporal siren on alarm</p> <p>4 = Chime</p> <p>5 = Bypassable</p> <p>6 = Group shunt</p> <p>7 = Force armable</p> <p>8 = Entry guard</p>	

Loc.	Description	Default	Setting
	Segment 3 1 = Fast loop response 2 = Double end of loop tamper zone 3 = Trouble zone (day zone) 4 = Cross zone 5 = Dialer delay zone 6 = Swinger zone 7 = Restore reporting 8 = Listen-in	Segment 4 1 = Zone activity monitor 2 = End of line resistor defeat 3 = Zone acts as request to exit input 4 = Zone acts as access entry point (do not enable this segment option unless configured with access control module) 5 to 8 = Reserved Segment 5 = Reserved	
112	Zone type 2 alarm event code	2	
113	Zone type 2 feature select	2, 125, 78, 0, 0	
114	Zone type 3 alarm event code	7	
115	Zone type 3 feature select	5, 1245, 5678, 0, 0	
116	Zone type 4 alarm event code	5	
117	Zone type 4 feature select	45, 125, 5678, 0, 0	
118	Zone type 5 alarm event code	5	
119	Zone type 5 feature select	457, 125, 5678, 0, 0	
120	Zone type 6 alarm event code	4	
121	Zone type 6 feature select	0, 1245, 5678, 0, 0	
122	Zone type 7 alarm event code	0	
123	Zone type 7 feature select	2, 0, 78, 0, 0	
124	Zone type 8 alarm event code	1	
125	Zone type 8 feature select	1, 13, 378, 0, 0	
126	Zone type 9 alarm code	7	
127	Zone type 9 feature select	6, 1245, 5678, 0, 0	
128	Zone type 10 alarm event code	2	
129	Zone type 10 feature select	24, 5, 78, 0, 0	
130	Zone type 11 alarm event code	3	
131	Zone type 11 feature select	3, 0, 0, 0, 0	
132	Zone type 12 alarm event code	5	
133	Zone type 12 feature select	457, 125, 45678, 0, 0	
134	Zone type 13 alarm event code	4	
135	Zone type 13 feature select	0, 12458, 5678, 0, 0	
136	Zone type 14 alarm event code	7	
137	Zone type 14 feature select	5, 12456, 5678, 0, 0	
138	Zone type 15 alarm event code	5	

Loc.	Description	Default	Setting
139	Zone type 15 feature select	457, 1256, 5678, 0, 0	
140	Zone type 16 alarm event code	4	
141	Zone type 16 feature select	0, 12456, 5678, 0, 0	
142	Zone type 17 alarm event code	7	
143	Zone type 17 feature select	5, 1245, 25678, 0, 0	
144	Zone type 18 alarm event code	5	
145	Zone type 18 feature select	457, 125, 25678, 0, 0	
146	Zone type 19 alarm event code	4	
147	Zone type 19 feature select	0, 1245, 25678, 0, 0	
148	Zone type 20 alarm event code	7	
149	Zone type 20 feature select	6, 1245, 25678, 0, 0	
150	Zone type 21 alarm event code	15	
151	Zone type 21 feature select	24, 15, 78, 0, 0	
152	Zone type 22 alarm event code	20	
153	Zone type 22 feature select	24, 15, 78, 0, 0	
154	Zone type 23 alarm event code	21	
155	Zone type 23 feature select	24, 15, 78, 0, 0	
156	Zone type 24 alarm event code	22	
157	Zone type 24 feature select	1, 13, 378, 0, 0	
158	Zone type 25 alarm event code	14	
159	Zone type 25 feature select	248, 45, 0, 0, 0	
160	Zone type 26 alarm event code	5	
161	Zone type 26 feature select	467, 125, 5678, 0, 0	
162	Zone type 27 alarm event code	5	
163	Zone type 27 feature select	457, 1257, 5678, 0, 0	
164	Zone type 28 alarm event code	7	
165	Zone type 28 feature select	6, 12457, 5678, 0, 0	
166	Zone type 29 alarm event code	5	
167	Zone type 29 feature select	457, 125, 5678, 1, 0	
168	Zone type 30 alarm event code	7	
169	Zone type 30 feature select	5, 1245, 5678, 1, 0	
170	Zones 49 to 56 zone types	6, 6, 6, 6, 6, 6, 6	

Loc.	Description	Default	Setting
171	Zones 49 to 56 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
172	Zones 57 to 64 zone types	6, 6, 6, 6, 6, 6, 6, 6	
173	Zones 57 to 64 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
174	Zones 65 to 72 zone types	6, 6, 6, 6, 6, 6, 6, 6	
175	Zones 65 to 72 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
176	Zones 73 to 80 zone types	6, 6, 6, 6, 6, 6, 6, 6	
177	Zones 73 to 80 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
178	Zones 81 to 88 zone types	6, 6, 6, 6, 6, 6, 6, 6	
179	Zones 81 to 88 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
180	Zones 89 to 96 zone types	6, 6, 6, 6, 6, 6, 6, 6	
181	Zones 89 to 96 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
182	Zones 97 to 104 zone types	6, 6, 6, 6, 6, 6, 6, 6	
183	Zones 97 to 104 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
184	Zones 105 to 112 zone types	6, 6, 6, 6, 6, 6, 6, 6	

Loc.	Description	Default	Setting
185	Zones 105 to 112 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
186	Zones 113 to 120 zone types	6, 6, 6, 6, 6, 6, 6, 6	
187	Zones 113 to 120 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
188	Zones 120 to 128 zone types	6, 6, 6, 6, 6, 6, 6, 6	
189	Zones 120 to 128 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
190	Zones 129 to 136 zone types	6, 6, 6, 6, 6, 6, 6, 6	
191	Zones 129 to 136 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
192	Zones 137 to 144 zone types	6, 6, 6, 6, 6, 6, 6, 6	
193	Zones 137 to 144 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
194	Zones 145 to 152 zone types	6, 6, 6, 6, 6, 6, 6, 6	
195	Zones 145 to 152 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
196	Zones 153 to 160 zone types	6, 6, 6, 6, 6, 6, 6, 6	
197	Zones 153 to 160 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8	
198	Zones 161 to 168 zone types	6, 6, 6, 6, 6, 6, 6, 6	

Loc.	Description	Default	Setting						
199	Zones 161 to 168 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8							
200	Zones 169 to 176 zone types	6, 6, 6, 6, 6, 6, 6, 6							
201	Zones 169 to 176 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8							
202	Zones 177 to 184 zone types	6, 6, 6, 6, 6, 6, 6, 6							
203	Zones 177 to 184 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8							
204	Zones 185 to 192 zone types	6, 6, 6, 6, 6, 6, 6, 6							
205	Zones 185 to 192 partitions Segment 1 = 1 2 3 4 5 6 7 8 Segment 2 = 1 2 3 4 5 6 7 8 Segment 3 = 1 2 3 4 5 6 7 8 Segment 4 = 1 2 3 4 5 6 7 8	Segment 5 = 1 2 3 4 5 6 7 8 Segment 6 = 1 2 3 4 5 6 7 8 Segment 7 = 1 2 3 4 5 6 7 8 Segment 8 = 1 2 3 4 5 6 7 8							
206	Days of the week auto disarming will occur in partitions 1 to 8								
	Segments 1 to 8 options	1	2	3	4	5	6	7	8
	1 = Sunday	1	1	1	1	1	1	1	1
	2 = Monday	2	2	2	2	2	2	2	2
	3 = Tuesday	3	3	3	3	3	3	3	3
	4 = Wednesday	4	4	4	4	4	4	4	4
	5 = Thursday	5	5	5	5	5	5	5	5
	6 = Friday	6	6	6	6	6	6	6	6
	7 = Saturday	7	7	7	7	7	7	7	7
	8 = Reserved	8	8	8	8	8	8	8	8
207	Serial port enable 0 = Disabled 1 = Home automation protocol enabled 2 = Serial printer mode	0							

Loc.	Description	Default	Setting
208	Serial port baud rate 0 = 2400 (2.4K) 1 = 4800 (4.8K) 2 = 9600 (9.6K) 3 = 19200 (19.2K) 4 = 38400 (38.4K) 5 to 7 = Reserved	2	
209	Home automation protocol		
	Segment 1 - LED Off = binary, LED ON = ASCII	Off	
	Segment 2 - On enables serial port supervision	Off	
	Segments 3 to 8 - Reserved		
210	NX-8E transition-based broadcasts		
	Segment 1 1 = Reserved 2 = Interface configuration 3 to 4 = Reserved 5 = Zone status message 6 = Zones snapshot message 7 = Partition status message 8 = Partitions snapshot message	Segment 2 1 = System status message 2 = X-10 message received 3 = Log event message 4 = Keypad message received 5 to 8 = Reserved	
211	NX-584 command/request enable		
	Segment 1 1 = Reserved 2 = Interface configuration request 3 = Reserved 4 = Zone name request 5 = Zone status request 6 = Zones snapshot request 7 = Partition status request 8 = Partitions snapshot request	Segment 2 1 = System status request 2 = Send X-10 message 3 = Log event request 4 = Send keypad text message 5 = Keypad terminal mode request 6 to 8 = Reserved	
	Segment 3 1 = Program data request 2 = Program data command 3 = User information request w ith PIN 4 = User information w ithout PIN 5 = Set user code command w ith PIN 6 = Set user code command w ithout PIN 7 = Set user authorization Comm w ith PIN 8 = Set user authorization Comm w ithout PIN	Segment 4 1 to 2 = Reserved 3 = Store communication event command 4 = Set clock/calendar command 5 = Primary keypad function w ith PIN 6 = Primary keypad function w ithout PIN 7 = Secondary keypad function 8 = Zone bypass toggle	
212	LCD keypad address for NX-584E	192	
213	Reserved		

LCD keypad address for NX-584E

KP	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7	Part 8
1	192	193	194	195	196	197	198	199
2	200	201	202	203	204	205	206	207
3	208	209	210	211	212	213	214	215
4	216	217	218	219	220	221	222	223
5	224	225	226	227	228	229	230	231
6	232	233	234	235	236	237	238	239
7	240	241	242	243	244	245	246	247
8	248	249	250	251	252	253	254	255

Zone worksheet

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.
13.	14.	15.
16.	17.	18.
19.	20.	21.
22.	23.	24.
25.	26.	27.
28.	29.	30.
31.	32.	33.
34.	35.	36.
37.	38.	39.
40.	41.	42.
43.	44.	45.
46.	47.	48.
49.	50.	51.
52.	53.	54.
55.	56.	57.
58.	59.	60.
61.	62.	63.
64.	65.	66.
67.	68.	69.
70.	71.	72.
73.	74.	75.
76.	77.	78.
79.	80.	81.
82.	83.	84.
85.	86.	87.
88.	89.	90.
91.	92.	93.
94.	95.	96.

97.	98.	99.
100.	101.	102.
103.	104.	105.
106.	107.	108.
109.	110.	111.
112.	113.	114.
115.	116.	117.
118.	119.	120.
121.	122.	123.
124.	125.	126.
127.	128.	129.
130.	131.	132.
133.	134.	135.
136.	137.	138.
139.	140.	141.
142.	143.	144.
145.	146.	147.
148.	149.	150.
151.	152.	153.
154.	155.	156.
157.	158.	159.
160.	161.	162.
163.	164.	165.
166.	167.	168.
169.	170.	171.
172.	173.	174.
175.	176.	177.
178.	179.	180.
181.	182.	183.
184.	185.	186.
187.	188.	189.
190.	191.	192.

Glossary

Abort	In enabled, the NX-8E waits the number of seconds programmed in Location 40 prior to sending an alarm. During this delay time, the Cancel LED flashes. To abort the report, type in a code and press the Cancel key. The LED extinguishes. If the report is not aborted within the allotted time, the LED extinguishes when the report is sent (a dialer delay must be enabled). (Locations 40 and 110 to 169)
AC fail/lower battery report/warning	If programmed, the NX-8E reports AC failure and/or low battery conditions to the central station. It also sounds the keypad immediately upon detection of the condition. If programmed, the NX-8E delays the AC failure report/warning. (Locations 37 and 39)
AC power/low battery sounder alert	If enabled, the NX-8E beeps the keypad sounder upon arming or disarming if the AC power is missing or a low battery is detected. (Location 23)
Arm/disarm codes	The NX-8E has eight four-digit or six-digit codes to arm/disarm the control panel. All codes must have the same number of digits. The default for user 1 is 1234 when using a four-digit code, or 123456 for a six-digit code. Use this code to enter the new arm/disarm codes. (Location 41)
Automatic arming	If programmed, the NX-8E auto arms at a specified time. At this time, the keypad beeps for 50 seconds before the panel arms. When a code is entered on the keypad, the arming process stops. The NX-8E attempts to arm after every 45 minutes of inactivity until the next opening time or until the system is armed. The 45-minute timer is extended when there is activity in the building that causes the Ready LED to turn off and on. The user code is 97 if closing reports are sent. (Locations 23, 52 to 55)
Automatic bypass/instant arming	When enabled, the control panel automatically bypasses interior follower zones if an exit is not detected during the exit delay time. Entry delay zones are made instant. (Location 23)

Automatic cancel/abort	If enabled, the cancel and/or abort features are automatic (pressing the Cancel button is not required). The cancel and abort features in Locations 23 and 40 must be enabled to permit this auto feature to work. For proper operation of these features a dialer delay must be enabled. (Locations 40, 41, and 110 to 169)
Autotest	This feature causes the panel to call the central station to report a communicator test at a specified interval (Location 51).
Auxiliary outputs	The NX-8E has four programmable outputs that are used to activate relays, LEDs, etc. (Locations 45 to 50)
Auxiliary power overcurrent	The NX-8E illuminates the Service LED on the keypad whenever too much current is drawn from any device powered by the system. This condition reports to the central station. (Location 37)
Box tamper	The NX-8E has an input for a normally closed tamper switch. The box tamper is programmed to report and/or sound the siren and/or the keypad. (Locations 37 and 39).
Built-in siren driver	The NX-8E has a built-in 112 db siren driver when desired, this built-in driver easily converts to a 1A voltage output through programming Location 37.
Bypass toggle	This feature enables the end user to toggle (turn off/on) the bypass of an interior zone with the system armed, by pressing the bypass key. (Location 23)
Call back	When enabled, the control panel uses the call back phone number to call the download computer before beginning a download. (Location 21).
Cancel	When enabled, the NX-8E sends a cancel report when the system is disarmed and the Cancel button is pressed within 5 minutes of an alarm. Once the Cancel button is pressed, the Cancel LED illuminates until the central station acknowledges the cancel report (a dialer delay must be enabled). (Locations 23 and 110 to 169)
Code required options	If programmed, the NX-8E requires a code for bypassing zones and/or initiating a download using the *, 9, 8 or *, 9, 9 functions. (Locations 23 and 41)
Communication formats	The NX-8E reports in multiple formats. We recommend that you use Contact ID or SIA formats if possible. if you want to report to a pager or in a 4+2 format to a central station, you must program each code to be reported. (Locations 56 to 83)
Cross zoning	This feature requires two or more trips on a zone or zones programmed as cross zones within a specified time before reporting an alarm. During the time between trips, the NX-8E sounds the keypad and/or the siren. The NX-8E can also be programmed to report an alarm after two or more trips on the same zone. (Locations 37 and 40)

Dual/split/multiple reports	The NX-8E sends communication reports to three different phone numbers for dual, split, or multiple reports selectable by event or partition. (Locations 4, 10, 16, and 18)
Duress code	If programmed, the NX-8E sends a duress signal whenever the panel is armed or disarmed with this code. The user code is 254 if open/close reports are sent. (Location 44)
Dynamic battery test	If programmed, the NX-8E performs a dynamic battery test for a selected duration the first time the panel is armed or disarmed every day, as well as being by using *, 4 (test function). If the panel is not armed or disarmed during the day, it performs the test at midnight. The NX-8E can also be programmed to report a missing battery test every 12 seconds. (Locations 37 and 40)
Early to open/late to close	If an opening occurs before the opening times the NX-8E sends an early open report. If a closing does not occur on or before the designated closing time, the NX-8E sends a late to close report.
End-of-line resistor defeat	If programmed, the NX-8E makes zones 1 to 8 for normally closed operation only, eliminating the need for the end-of-line resistors on these zones. When a zone is programmed for normally closed operation, a short on that zone does not change the loop condition, and an open on that zone produces a faulted condition. Any priority zone ignores this feature. (Locations 110 to 169)
Entry guard	This unique low level arming mode reduces the most common source of false alarms. When armed with the Instant LED on, the opening of any zones designated as an entry guard zone initiates the keypad sounder and starts the entry delay before creating an alarm. All other zones function as normal. This arming mode encourages system owners to use their system more frequently when the premises are occupied. (Locations 110 to 169)
Event log	Up to 512 events are stored in memory along with the date and time of the event. These events are viewed later through downloading or from a display keypad. All reportable events report to the log.
Exit error	If enabled, the NX-8E sends an exit error report if an entry/exit zone is faulted at the instant the exit delay expires. This report is sent along with the user number that armed the system, if the panel is not disarmed before the entry delay expires. The alarm report is also sent. Even if this feature is not enabled, the siren sounds if any entry/exit zone is faulted at the instant the exit delay expires. (Location 23)
Expander trouble	If enabled, the NX-8E reports expander trouble to the central station. This condition illuminates the Service LED on the keypad even if not reported. (Location 37) Note: The keypads are considered expanders. The expansion device number that reports can be found in Table 16 on page 70.

Fail to communicate	The NX-8E illuminates the Service LED if a report fails to reach the central station. If enabled, when the next report is successfully communicated, a fail to communicate code is reported. (Location 37)
Fire alarm verification	When enabled, the NX-8E verifies a fire alarm by requiring more than one trip on a smoke detector within a specified time before creating an alarm (Location 40) Note: This feature is not approved for residential use in California.
Force arming	When enabled, the NX-8E is force armed with zones violated. Under this condition, if a force-armable zone is not secure, the Ready LED flashes. At the end of the exit delay, these zones become bypassed. If these zones become secured any time during the arming cycle, they are unbypassed and active in the system. If bypass report is enabled, the force arming zones report bypass when they are force armed (default), or to not report bypass even if bypass report is enabled. (Locations 37 and 110 to 169)
Group bypass	You can program a designated group of zones to bypass by pressing Bypass, 0, Bypass, Bypass prior to arming (Location 110 to 169)
Immediate restore by zone	If programmed, the NX-8E sends alarm and restore reports as soon as they occur, otherwise the NX-8E waits until the siren time expires. (Locations 37 and 40)
Keypad activated panics	The NX-8E has three keypad activated panics that send reports to the central station: auxiliary 1 (fire), auxiliary 2 (medical), and keypad panic. Auxiliary 1 activates the temporal (fire) siren, auxiliary 2 sounds the keypad, and keypad panic is silent or audible (sounds). (Location 23)
Keypad sounder control	If programmed, the NX-8E sounds the keypad sounder for certain events. (Location 39)
Keypad tamper	If enabled, the NX-8E disables the keypad for 60 seconds and communicates a tamper signal to the central station if 30 keypresses are entered without producing a valid code. (Location 23)
LED extinguish	This feature extinguishes all LEDs on the keypad, except the Power LED, after 60 seconds without a keypress. Pressing any numeric key illuminates all LEDs. (Location 23)
Local programming lockout	This feature disables programming of all locations or specified location from the keypad (can only be activated via download). (Location 21)
Log full report	A report is sent to the central station when the event log is full. (Location 37)
Lost clock service light	If programmed, the NX-8E illuminates the Service LED when the internal clock has an invalid time due to power loss. (Location 37)

Manual test	If programmed, the NX-8E performs a bell and/or communicator test when *, 4, 4 is entered while the system is in the disarmed state. (Location 37)
Night mode	This mode applies to NX-1208E/1248E keypads. In this mode, the control panel bypasses all zones that have the entry guard feature enabled. (Locations 23 and 110 tp 169)
Onboard zone disable	For a completely wireless alarm system, the eight zones on the NX-8E panel can be disabled. (Location 37)
Program code	The default for the go to program code is 9, 7, 1, 3 when using a four-digit code. If a six-digit code is used, the default is 9, 7, 1, 3, 0, 0. The program code can be used as an arm/disarm code. If used as an arm/disarm code, and open/close reports are sent, the user code is 255. (Location 43)
Quick arm feature	The NX-8E has a one-button quick arm feature which is used to arm the system by pressing the Exit key or the Stay key on the keypad. User code is 98, if closing reports are sent. (Location 23)
Recent closing	If enabled, the NX-8E sends a recent closing report to the central station if an alarm occurs within 2 minutes after the panel is armed. The system always reports user 1. (Location 23)
Re-exit	The NX-8E has the ability to restart the exit delay for a quick exit without disarming the system by pressing the Exit key while the system is armed. (Location 23)
Shutdown	When enabled, the keypads turn off all LEDs except the Power LED and does not accept keypresses (can only be activated via download). (Location 21)
Siren blast for arming	If programmed, the NX-8E gives a 1-second siren blast when the panel is armed at the end of the exit delay or when the central station receiver acknowledges the closing report. It also gives one blast for remote (keyswitch) arming and two blasts for remote disarming. Four blasts at disarm means that there has been an alarm. (Location 37)
Siren supervision	The NX-8E has a siren supervision circuit that constantly monitors the siren and reports if the siren wires are cut. (Location 37)
Silent exit option	The exit delay is silenced by pressing *, Exit before arming the control panel or when using the reexit feature. (Location 37)
Start/end programming and end downloading	A report is sent when local programming starts and ends. A report is also sent when a download session ends. (Location 37)

Swinger shutdown	This feature allows a zone or zones to be automatically bypassed after a specified number of alarms. When a zone is tripped, the alarm counter reflects 1 in memory. If a new (first) alarm is detected in a different zone, the counter remains at 1. If an alarm is detected on a previously tripped zone, the count increments to 2. The counter increments each time an alarm is detected on a zone with multiple trips. Bypassing occurs on the zone that causes the count to equal the number programmed in Location 38. If the counter resets to 0 and begins a new trip count, where the next alarm sets the counter to 1. If immediate restore is enabled in Location 37, the alarms (and restores, if enabled) are sent as they occur. If immediate restore is not enabled, a second or subsequent alarm is not sent until the siren times out.
Telephone line monitor	The NX-8E has a telephone line monitor that monitors the voltage and current of the telephone line to detect a faulted phone line. This condition reports to the central station. If the report is enabled, only the telephone line restore is reported. (Locations 37, 39, and 40)
Temporal siren disable	If disabled, the fire siren is steady and fire voltage out is the same as burglary (continuous). Otherwise, the fire siren is temporal. (Location 37)
Tone-sniff answering machine defeat	If enabled, only one call is required to defeat the answering machine. To use this feature you must have a Hayes 1200 Smart Modem. From the computer, call the panel as normal. When the answering machine answers, the panel hears the tones from the modem and seizes the phone line for a download. (Location 21)
Two-call answering machine defeat	If enabled, two telephone calls must be made to the premises to defeat an answering machine. On the first call, let the phone ring one or two times. The control panel detects these rings and starts a 45-second timer, during which the control panel answers the next call on the first ring. (Location 21) Note: We do not recommend this feature for commercial applications.
Walk test mode	If enabled, entering *, Chime followed by a user code allows a walk through zone test where all zones become silent and local (nonreporting). During this test, the chime light flashes on the LED keypad. Each time a zone is faulted, the zone light on the LED keypad illuminates and the chime sounds. The number of the faulted zone or zones is displayed on the LCD keypad and also entered into alarm memory and the internal log. To exit at any time during this mode, enter a user code. Otherwise the walk test mode automatically exits after 15 minutes. (Location 41)
Wireless sensor missing/low battery	The NX-8E sends a report to the central station when a wireless sensor detects a low battery or has not reported to the receiver. The Service LED illuminates when either condition exists. (Location 37)

Zone activity monitor	This feature sends a report to the central station when a particular zone does not change conditions within a specified number of days programmed. (Locations 40 and 110 to 169) Enable Location 37, Segment 6, Option 3 to change form days to hours.
Zone bypassed sounder alert	If enabled, the NX-8E beeps the keypad sounder upon arming if a zone is bypassed. (Location 23)
Zone doubling	<p>Zone doubling can only be enabled when at least one other device is added to the basic system (consisting of the main control panel and one keypad). Additional devices include wireless receivers, extra keypads, etc. If enabled, this feature allows you to use the four zones on the panel as eight normally closed zones. When this feature is used, European double EOL configuration cannot be used. (Location 37)</p> <p>Note: This feature does not increase the total number of available zones beyond forty-eight. If one of the zones must be a fire zone, it must be one of zones 1 to 8. The corresponding upper zone becomes unavailable. For example, if zone 4 is a fire zone, then zone 8 is not available</p>
Zone types (configurations)	The NX-8E has 30 programmable zone types that determine how each zone functions and reports (see Table 7 on page 29)

