



NX-148E-RF LCD Touchpad w/Receiver Installation Instructions

466-2198 Rev. B
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Product summary

The NX-148E-RF Touchpad w/Receiver combines touchpad and receiver capabilities into a single device for use with NetworX NX-4, NX-6, NX-8, and NX-8E control panels.

Installation guidelines

Use the following guidelines when installing receiver modules:

- Mount the touchpads in an environmentally controlled area (32° to 120°F/0° to 49°C).
- When mounting the touchpad, allow at least 3 inches below it for the swing-down door.
- Table 1 describes the maximum wire lengths allowed between the touchpad and the panel.

Table 1. Wiring guidelines

Length in feet	Wire gauge
250	22
500	18
1000	16
1500	14
2500	12

Tools and supplies needed

- Pencil
- Phillips screwdriver
- Drill
- 15/64" drill bit
- Mounting screws (provided)
- Wall anchors (optional)
- 4-conductor, 22, 18, 16, 14 or 12-gauge wire (see Table 1)

Installing the touchpad

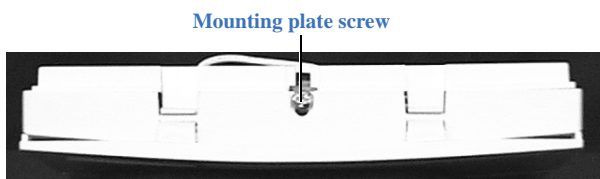
The following steps describe mounting the touchpad to the wall and wiring it to the panel.



You must be free of static electricity before handling circuit boards. Wear a grounding strap or touch a bare metal surface to discharge static electricity.

1. Remove the mounting plate by removing the screw from the bottom of the touchpad as shown in *Figure 1*.

Figure 1. Mounting plate screw



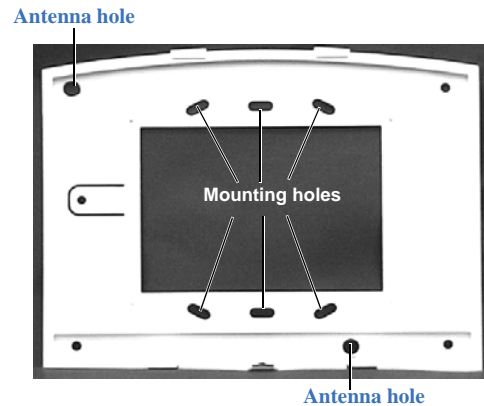
2. Choose a location on the wall to mount the touchpad.



Make sure the mounting location is free of electrical wires. Contact with electrical wires while drilling the antenna openings could result in serious injury or death.

3. At the mounting location, place the mounting plate on the wall and mark the location for the antenna holes as shown in *Figure 2*.

Figure 2. Marking the antenna and mounting holes



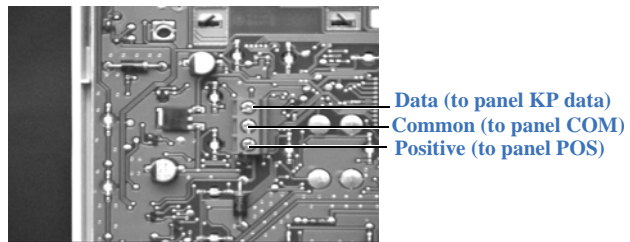
4. Drill 15/64 in. holes at the marked antenna locations.
5. At the mounting hole locations, attach the mounting plate to the wall with the screws provided. (Use wall anchors if needed.)
6. Remove power (if applied) from the control panel.



To avoid possible equipment damage or personal injury, remove power from the control panel before making any wiring connections to the module.

7. To wire the touchpad to the control panel, connect the touchpad data, common and positive terminals to the control panel power, common, and data terminals as shown in *Figure 3* using 22-gauge or larger, stranded wire. Refer to Table 1 for wiring guidelines.

Figure 3. Wiring the module to the panel



8. Run the antenna wires through the openings in the mounting plate and into the wall.

9. Reattach the touchpad to the mounting plate by placing the top of the touchpad on the clips of the mounting plate and pushing the touchpad down into place.
10. Replace the screw on the bottom of the touchpad.
11. Apply power to the control panel.

Programming

This section describes the following programming steps:

- Determine programming settings—provides tables to record wireless transmitter and partition settings.
- Enroll the module—sets up the module to be supervised by the control panel.
- Program the module—puts the module into program mode so you can program zone bank settings, transmitters and enter the settings for transmitters and partitions.
- Programming the keypad—sets up the programming options for the touchpad/receiver.
- Enrolling sensors—see example on page 6.

Determine programming settings

When programming wireless transmitters into the module, there are various options and partitions you can set for each transmitter. These settings appear in segments of each programming location.

Use *Table 2, Module programming settings* to record zone assignments and settings. Be sure to circle the module type in the location column to help identify where each zone resides; RM = receiver module, HE = hardwire expander, P = panel. This gives you all the programming information in one place and helps speed up the programming process.

Zone locations 401 to 592

Zone locations 401 to 592 are not numbered in Table 2 since these locations vary depending on location 594—Receiver Zone Bank Setting (see Table 2).

For example, if location 594 is set to 3, the first available location is 425. The total number of available locations is dependant on the zone limits for both the panel and receiver.

Note: The default settings shown for Segments 1 and 2 in the first zone location apply to all zone locations.

Special settings for door/window transmitters

Use the following guidelines when setting features 4 and 5 for door/window transmitters and wireless smoke detectors.

- Feature 4—Input Option 1

For door/window transmitters, turn on this feature to disable the transmitter’s internal reed switches.

For wireless smoke detectors with tamper switches, turn on this feature to enable the tamper feature.

Note: Feature 4—Input Option 1, must be off (disabled) when using wireless smoke detectors without tamper switches.

- Feature 5—Input Option 2

For door/window transmitters that use a normally open external contact, leave this feature off (N/O).

For door/window transmitters that use a normally closed external contact, turn this feature on (N/C).

Light and star buttons on 4-button keyfobs

When using 4-button keyfobs, turning on Input Option 1 (feature 4) changes the light button to Keyfob Function 1. Turning on Input Option 2 (feature 5) changes the star button to Keyfob

Function 2. These functions can be used to control relays, outputs, or X10 devices. See Locations 593 and 594 in Table 2.

Table 2. Module programming settings

Location	Segment 1	Segment 2
400 (Transmitter to be programmed)	None	None
Zone ____ Assigned to module # ____. RM HE P	1 - Enable sensor <input type="checkbox"/> (default = off) 2 - Supervised <input type="checkbox"/> (default = on) 3 - Fire supervision <input type="checkbox"/> (default = off) 4 - Input option 1 <input type="checkbox"/> (default = off) 5 - Input option 2 <input type="checkbox"/> (default = off) 6 - 8 Not used	Partition 1 keyfob <input type="checkbox"/> (default = on) Partition 2 keyfob <input type="checkbox"/> (default = off) Partition 3 keyfob <input type="checkbox"/> (default = off) Partition 4 keyfob <input type="checkbox"/> (default = off) Partition 5 keyfob <input type="checkbox"/> (default = off) Partition 6 keyfob <input type="checkbox"/> (default = off) Partition 7 keyfob <input type="checkbox"/> (default = off) Partition 8 keyfob <input type="checkbox"/> (default = off)
Zone ____ Assigned to module # ____. RM HE P	1 - Enable sensor <input type="checkbox"/> 2 - Supervised <input type="checkbox"/> 3 - Fire supervision <input type="checkbox"/> 4 - Input option 1 <input type="checkbox"/> 5 - Input option 2 <input type="checkbox"/> 6 - 8 Not used	Partition 1 keyfob <input type="checkbox"/> Partition 2 keyfob <input type="checkbox"/> Partition 3 keyfob <input type="checkbox"/> Partition 4 keyfob <input type="checkbox"/> Partition 5 keyfob <input type="checkbox"/> Partition 6 keyfob <input type="checkbox"/> Partition 7 keyfob <input type="checkbox"/> Partition 8 keyfob <input type="checkbox"/>
Zone ____ Assigned to module # ____. RM HE P	1 - Enable sensor <input type="checkbox"/> 2 - Supervised <input type="checkbox"/> 3 - Fire supervision <input type="checkbox"/> 4 - Input option 1 <input type="checkbox"/> 5 - Input option 2 <input type="checkbox"/> 6 - 8 Not used	Partition 1 keyfob <input type="checkbox"/> Partition 2 keyfob <input type="checkbox"/> Partition 3 keyfob <input type="checkbox"/> Partition 4 keyfob <input type="checkbox"/> Partition 5 keyfob <input type="checkbox"/> Partition 6 keyfob <input type="checkbox"/> Partition 7 keyfob <input type="checkbox"/> Partition 8 keyfob <input type="checkbox"/>
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Table 2. Module programming settings (continued)

Location	Segment 1	Segment 2
593 Receiver Options (all default off)	1 - Enable jam detect <input type="checkbox"/> 2 - Enable auto advance to next zone number <input type="checkbox"/> 3 - Keyfob user ID (off all keyfobs report as user 99; on = keyfob reports as learned zone #) <input type="checkbox"/> 4-5 Not used 6 - keyfob disarm only during entry or partial alarm <input type="checkbox"/> 7-8 Not used	None
594 Receiver Zone Bank Setting (Default = 0—set this before learning any sensors. See step 5 under <i>Enrolling wireless sensors</i>)	Starting zone numbers by bank setting: 0 = 1 <input type="checkbox"/> 1 = 9 <input type="checkbox"/> 2 = 17 <input type="checkbox"/> 3 = 25 <input type="checkbox"/> 4 = 33 <input type="checkbox"/> 5 = 41 <input type="checkbox"/> 6 = 49 <input type="checkbox"/> 7 = 57 <input type="checkbox"/> 8 = 65 <input type="checkbox"/> 9 = 73 <input type="checkbox"/> 10 = 81 <input type="checkbox"/> 11 = 89 <input type="checkbox"/> 12 = 97 <input type="checkbox"/> 13 = 105 <input type="checkbox"/> 14 = 113 <input type="checkbox"/> 15 = 121 <input type="checkbox"/> 16 = 129 <input type="checkbox"/> 17 = 137 <input type="checkbox"/> 18 = 145 <input type="checkbox"/> 19 = 153 <input type="checkbox"/> 20 = 161 <input type="checkbox"/> 21 = 169 <input type="checkbox"/> 22 = 177 <input type="checkbox"/> 23 = 185 <input type="checkbox"/>	
595 Supervision Windows	Normal ____hrs. (0 - 255 hours; default = 24 hours)	Fire ____hrs. (0 - 255 hours; default = 4 hours)
	(Do not change Segment 3 setting unless required. See step 9 under <i>Changing the transmitter supervision windows.</i>)	Segment 3 Transmitter Check-in Window ____min (1 - 30 minutes, default = 40—disabled)
600 Number of rounds received from last transmitter learned	None	None

Programming the module

This section describes programming guidelines, how to get the module into program mode and set receiver options, zone bank, and program transmitters into memory.

Programming guidelines

- NX-4 and NX-6 control panels can have receivers added with zones that overlap those contained in the control panel. No hardwire expanders can be used.
- NX-8 control panels may have expansion zones (hardwire or wireless) set the same as those contained in the control panel. To do this you must disable the onboard control panel

zones. All zone expansion modules must not overlap any blocks of 8 zones.

- NX-4 and NX-6 control panels can have wireless zones added to any zone. If a hardwire input (on either the control panel or hardwire expander) is also present on the same zone as an enabled wireless zone, the wireless transmitter takes priority. Table 3 lists the maximum number of receivers for each control panel.

Table 3. Maximum receivers

Panel	Maximum Receivers
NX-8E	8
NX-8	4
NX-6	3
NX-4	1

Example: Enroll a sensor as Zone 9:

1. Enter * **94** at the keypad.
2. Enter the *Program Code* (factory default is 9 7 1 3).
3. Press **1 * 1 *** to set the keypad and partition to 1.
4. Enter * **8**.
5. Enter the *Program Code* (factory default is 9 7 1 3).
6. Enter **192 #** for device address.
7. Enter **910 #** to restore factory defaults (optional).
8. Enter **594 #** for zone bank.
9. Enter **0 *** to set the starting zone to 1.
10. Enter **400 #** for learn sensor location.
11. Enter **9 *** for zone 9.

Trip a sensor and the system should acknowledge with a *ding dong* chime.

To edit characteristics for this zone, enter **409 #** to access location 409.

Enrolling wireless sensors:

1. Enter * **8** at the keypad.
2. Enter the *Program Code* (factory default is 9 7 1 3).
3. Press **XXX #** (where XXX is the device number) to select the desired device (see Table 4).

Table 4. Device numbers

Keypad	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
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

4. For new installations, enter **9 1 0 #** to load factory defaults and clear any unwanted information in memory before any further programming.
5. For new installations, set the receiver zone bank (Location 594) to determine the starting zone number for the specific receiver module. This must be set before learning sensors. The bank setting is based on the zone capabilities of both the receiver and the panel.
6. Enter **400 #** to enter the sensor learning location.
7. Enter **XXX ***, where *XXX* is a zone number (1 through 192) and *** is the entry key.

Note: **Three beeps from the keypad indicates an entry error. This occurs if you enter a transmitter number that is not within the module's zone block or if you try learning a sensor that is already learned into the module.**

If you change your mind about your entry, terminate programming by entering 400 # 0* and start over from step 6.

8. Trip the desired transmitter (within 250 seconds) as described in Table 5. Listen for the *ding dong* for confirmation.

Table 5. Tripping transmitters for learning

Transmitter	Action
Door/Window, Shock, Glass Guard, Freeze	Activate tamper switch by removing cover.
Door/Window with External Contact	Activate tamper switch by removing cover. (Note: Feature 4—Input Option 1, must be on.)
Recessed Door/Window	Activate tamper switch by removing circuit board until tamper switch is exposed.
Micro Door/Window	Slide the battery about half-way out of the battery holder, then back.
PIR	Activate tamper switch by removing back plate from PIR.
Smoke Detector	Press and hold the test button.
Heat Detector	Press, then release the tamper switch.
Fire Pull	Activate tamper switch by removing sensor cover.
Single Button Panic	Press and hold the button.
Dual Button Panic	Press and hold both buttons together.
Keyfobs	Press and hold the arm and disarm buttons together.
Repeater	Press, then release the tamper switch.

9. Program remaining transmitters by repeating steps 6 through 8.
10. To exit program mode, press **EXIT EXIT**.

Program transmitter and partition settings

This section describes programming guidelines, how to change the supervision windows, and program the transmitter and partition settings using the information you entered in Table 2, [Module programming settings](#).

Changing the transmitter supervision windows



Do not set the normal or fire supervision windows to 1 hour. This causes false trouble reports from all learned wireless transmitters.

1. Enter *** 8** at the keypad.
2. Enter the *Program Code* (factory default is 9 7 1 3).
3. Enter **XXX #** (where *XXX* is the device number) to select the desired device (see Table 4 on page 6).
4. Enter **595 #** to enter location 595, segment 1.
5. Enter the new normal supervision time (0 to 255).
Note: **Choosing 0 sets the normal supervision window to 256 hours.**
6. Press ***** to save any changes and automatically enter segment 2.
7. Enter the new fire supervision time (0 to 255).
Note: **Choosing 0 sets the fire supervision window to 256 hours.**
8. Press ***** to save any changes and automatically enter segment 3.
9. Enter new short supervision time (up to 30 minutes).
Note: **Segment 3 is a short supervision window setting (up to 30 minutes) that prevents arming if a transmitter has not checked in within the set time. This applies only to specific countries outside the U.S. Check the control panel installation manual to determine if this setting is available. Entering a number higher than 30 (the default value is 40) disables the feature.**
10. Press ***** to save any changes. The panel is now waiting for the next location entry.
Note: **Pressing # does not save changes to the current segment, but does save changes made in previous segments.**
11. Press **EXIT EXIT** when all changes are completed.

Programming partition settings

1. Enter *** 8** at the keypad.
2. Enter the *Program Code* (factory default is 9 7 1 3).
3. Enter **XXX #** (where *XXX* is the device number) to select the desired device (see Table 4).
4. Enter **XXX #** to enter a location. For example, enter **401 #** to enter location 401, segment 1.
5. Enter the setting number (1 to 8) from Table 2 that corresponds to the desired feature or partition setting number. The keypad displays the settings for that location and segment.
6. Press ***** to enter the changes and automatically advance to segment 2.
Note: **Pressing # does not save changes to the current segment, but does save changes made in previous segments. Repeat steps 4 through 7 to re-enter and make changes to a location and segment.**
7. Press the keypad button that corresponds to the keyfob partition number you want changed. The number will be displayed for the keyfob partitions. Pressing the partition number will toggle the partition on and off.
8. Repeat steps 4 through 8 to continue programming keyfob transmitter partition settings.
9. Press **EXIT EXIT** when finished.

Deleting transmitters

The following steps describe how to delete transmitters from the module.

This procedure makes the module ignore a transmitter but does not remove transmitter identification from the module's memory. The transmitter can be reactivated later or a new one can be learned into the zone.

1. Enter * 8 at the keypad.
2. Enter the *Program Code* (factory default is 9 7 1 3). The display prompts you to enter the device number.
3. Enter **XXX #**, where *XXX* is the device number and # is the entry key (see *Table 4* on page 6).
4. Enter **XXX #** to enter the zone location to be deleted (i.e. enter 407 # for zone 7).
5. To change transmitter feature 1 (*Transmitter Enabled*), enter **1**. The 1 turns off to indicate the feature change.
6. Press *.
7. Continue deleting transmitters by entering the desired locations and segments in steps 4 through 6.

Note: Enter **9 1 0 #** to delete all transmitters and load factory defaults.

8. Press **EXIT EXIT** when finished.

Testing wireless transmitters

Test all transmitters to verify correct programming and operation. Location 600 gives the number of rounds of the last sensor learned in. Refer to *Table 6* for information on minimum transmissions.

Note: If the number of transmissions is less than the number displayed supervisories may occur.

Table 6. Minimum transmissions

Sensor type	Number displayed on keypad
Wireless intrusion sensor	7 or 8
Wireless smoke and heat sensors	7 or 8
Wireless panic buttons	7 or 8

Troubleshooting

Any transmitters that consistently test below margin should be rotated in mounting position (90°, 180°, or 270°) and retested.

If rotating the transmitter mounting position does not improve signal reception or is not practical, move the transmitter to different locations near the desired mounting area. Test each location until the transmitter consistently tests good, then mount the transmitter.

Programming the keypad

This section describes programming the address, partition and options of each keypad.

Programming the keypad:

1. Enter * **XX**, (where *XX* is the function number) to select the desired function.

Note: Press * repeatedly to scroll through available functions.

See *Table 7 Keypad functions* for programming information on each function.

2. Press # to exit the Function Menu.

Table 7. Keypad functions

Function Number	Function
0	Adjust keypad tone
1	Temp master mode
▲	View zone status
2	Service menu
3	View alarm memory
44	Test function
45	Display function
46	Light control for X10
47	HouseCodes for X10
49	Change languages
5	Change user codes
6	Assign user authority
7	Reset function
90	Log review
91	Adjust view/brightness of LCD
92	Program custom messages
93	Set keypad options
94	Set keypad number and partition
95	Set elapsed time (in minutes) since last autotest
97	Set system time and date
98	Call back for download
99	Seize phone line for download
Chime	Walk test
Exit	Silent exit

Adjust keypad tone (0)

This feature lets you raise or lower the tone on the keypad.

1. Enter * **0**.
2. Press ▲ (to raise) or ▼ (to lower) the tone.

Note: The keypad will emit a continuous tone, allowing you to hear the selection.

3. Press # to save the tone and exit.

Temporary master mode (1)

1. Enter * **1**.
2. Enter your user code.

The keypad will revert back to its assigned partition 60 seconds after a key press or 10 seconds without a key press.

3. Press # to exit.

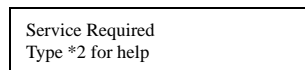
View zone status (▲)

1. Press * **▲**.

2. Press ▲ or ▼ to list all zones in sequential order by zone number.
3. Press # to exit.

Service menu (2)

If the following message is displayed on the keypad:



Enter * 2 to display one or more of the fault messages in Table 8. Use the ▲ and ▼ keys to scroll through the messages. Press ## to exit the service menu.

Table 8. Service menu messages

Message	Explanation
Control over current	A short circuit of a power supply has occurred.
Control siren trouble	Open circuit on the bell or siren circuit.
Control box tamper	(Optional) The box tamper circuit has activated.
Control phone trouble	The phone line connected to the control is not operating properly.
Control fail to Comm.	The control made an unsuccessful attempt to communicate a message to the central station.
Control ground fault	A short to ground has been detected on a control circuit.
Control loss of time	Your system has lost total power and needs the clock reset.
Control power trouble	The main power to the system is off.
Control low battery	The standby battery is low.
Expansion Aux Comm fail	A auxiliary reporting device (i.e. NX-580E, NX-582E, etc.) has failed to communicate.
Expansion over current	A short circuit of an expansion devices power supply has occurred.
Expansion power trouble	The main power to an expansion power supply is off.
Expansion low battery	An expansion power supply has a low battery.
Expansion box tamper	A box containing an expansion device has been opened.
Expansion RF jammed	A radio receiver is being jammed.
Expansion trouble	An expansion device or keypad is not reporting to the control panel.
Expansion siren trouble	An expansion device has detected trouble on the bell or siren circuit.
Zone tamper, press *	A zone is tampered. Press * to identify the tampered zone.
Zone low battery, press *	A wireless device has a low battery. Press * to identify the zone.
Zone lost, press *	A wireless or multiplexed zone device is not reporting to the control. Press * to identify the zone.
Zone trouble, press *	A zone is experiencing trouble. Press * to identify the zone.

View alarm memory (3)

1. Enter * 3.
2. Press ▲ or ▼ to display the alarm memory list in sequential order by zone number.
3. Press # to exit.

Test function (44)

Enter * 44. The system will be tested.

Display test function (45)

1. Enter * 45. All display pixels and LED indicators will flash.
2. Press any key to exit.

Light control for X10 (46)

When used with an X10 device (i.e. NX-507E, NX-508E, NX-534E or NX-540E), this menu allows the user to control up to 10 X10 devices from each keypad.

1. Enter * 46. The display prompts you to *Select Light Number 0-9*.
2. Enter the device number
3. Press ▲ (on) ▼ (off) to turn the selected device on or off.
4. Repeat steps 2 and 3 until all devices have been programmed.
5. Press # to exit.

House codes for X10 (47)

When used with an X10 output device (i.e. NX-507E, NX-508E, NX-534E or NX-540E), this menu allows the installer to program the specific X10 unit and house codes for the 10 X10 devices for this keypad.

1. Enter * 47. The display prompts you to enter your code.
2. Enter your program code.
3. Enter [X10 unit code] *.
4. Enter [X10 house code] *.
5. Press # to exit.

Change languages (49)

1. Enter * 49. The keypad toggles to the second language.
2. Enter * 49. The keypad toggles to the first language.

Change user codes (5)

For partitioned systems, the user changing the code of another person must have access to all or more partitions than the user being changed.

1. Enter * 5. The display prompts you to enter your code.
2. Enter your master code. The display prompts you to enter a user ID number.
3. Enter user ID. The display prompts you for a new code.

Note: On NX-4, NX-6, and NX-8 2-digit ID required. On NX-8E 3-digit ID required.

Assign user authority (6)

The person assigning the authority must have authority to the partition they're adding the person to.

1. Enter * 6. The display prompts you to enter your code.
2. Enter your master code. The display prompts you to enter a user ID number.
3. Enter user ID.

Note: On NX-4, NX-6, and NX-8 2-digit ID required. On NX-8E 3-digit ID required.

4. Use keys **1** and **0** to assign authorities when prompted.
5. Assign the partitions for the user.
6. Press *****
7. Press **#** to exit.

Note: Retain at least one code with access rights to all partitions to allow adding future users.

Reset function (7)

The system must be disarmed to perform this function.

Enter *** 7**.

Note: If the keypad begins beeping, the reset didn't execute properly. Enter your code to silence the keypad. Wait a few minutes and repeat the reset.

Log review (90)

The control panel has an event log that can be retrieved by entering a master code. The log contains a listing of the last 185 events along with the date, time, and partition where the event occurred.

1. Enter *** 90**. The display prompts you to enter your code.
2. Enter your master code. The display shows the most recent event.
3. Press **▲** (view events from newest to oldest) **▼** (view events from oldest to newest).

The following example screen shows an opening in Partition 3 on September 25th at 5:57 pm by user 75. The ***** shows that this event is not programmed to be reported to the central monitoring station. Table 9 lists some of the possible event log messages.

Open		75
9/25	17:57	P3*

Table 9. Log messages

Display	Description
TXlobat	Transmitter low battery
ZN Lost	Zone lost - A wireless multiplexed zone device is not reporting to the control.
Duress	Duress - The control has been armed or disarmed with a Duress code.
Man Fire	Manual fire - Keypad <i>Fire</i> has been activated.
Aux 2	Auxiliary 2 - Keypad <i>Medical</i> has been activated.
Panic	Panic - Keypad <i>Panic</i> has been activated.
KP Tamper	Keypad Tamper - The keypad tamper has been activated.
BoxTamp	Box Tamper - The box tamper circuit has been activated.
AC Fail	AC Fail - AC failure has been detected.
OverCur	Over current - A short circuit of a power supply has occurred.
Sm Tamp	Siren tamper - A siren or speaker tamper has been detected.
Tel Flt	Telephone fault - A telephone fault or tamper has been detected.
Exp Trb	Expansion trouble - An expansion device or keypad is not reporting to the control.
Log Full	Log full - The event log is full.
Open	Open - Reports, user number, date, time and partition of opening.
Close	Close - Reports, user number, date, time and partition of closing.
Exit Err	Exit error - Entry/exit zone was faulted when the exit delay expired.
Rec Close	Recent close - An alarm occurred within 5 minutes of the control being armed.
Autotest	Auto test - Sending a communicator test at a specified interval.
Start Prog	Start programming - Local Programming has started.
End Prog	End programming - Local programming has ended.
Start Dnld	Start download - Download session has started.
End Dnld	End download - Download session has ended.
Cancel	Cancel - Cancel was initiated within 5 minutes of an alarm.
Gnd Flt	Ground fault - A short to ground has been detected.
Man Test	Manual test - Bell and/or communicator test while system is disarmed.
Re-exit	The exit delay has been restarted without disarming the system.
Output Trip	A trip has occurred on an expander auxiliary output.
Data Lost	Communication of a signal has failed (log only event).

Table 9. Log messages

Display	Description
Walk-test	A zone <i>Walk Test</i> mode has been activated.
End Test	Test has ended.
Cross-Trip	The first zone of a cross zone has been tripped (log event only).
Expansion Event	An expansion module has created an unidentified event.
Partial Arm	Reports a closing in stay mode.
Listen In	A listen in function has been activated.
Service Start	Technician is on site.
Service End	Technician is off site.
Code Entry	A code has been entered.
First Open	Reports when the first partition is disarmed.
Last Close	Reports when the last partition is armed.
Sprnklr	Instant sprinkler supervisory report.
Clock Set	Clock has been reset.
RF Jammed	A wireless expansion module is jammed.
CleanMe	A smoke detector requires cleaning.

Adjust view/brightness of LCD (91)

1. Enter * **91**. The display prompts you to enter your code.
2. Enter your master code. The display prompts you to raise or lower the view angle.
3. Press ▲ (raise view angle) ▼ (lower view angle).
4. Press *. The display prompts you to brighten or dim the LCD lighting.
5. Press ▲ (brighten LCD) ▼ (dim LCD).
6. Press # to exit.

Programming custom messages (92)

It is necessary to use a *non E* keypad to program custom messages. All messages are transferred to other keypads when this mode is exited. Use the * **94** (*Set keypad number and partition*) function to set the keypad numbers prior to programming custom messages.

If a keypad is added after messages are programmed, you should either program all messages in it, or enter custom message programming on an existing keypad and make changes. Refer to * **93** (*Set keypad options*) to prevent overwriting the custom message.

1. Enter * **92**. The display prompts you to enter your code.
2. Enter your program code. The display prompts you to enter the message number followed by #.

3. Enter the message number. The display will show the zone number on the top line and description on the bottom line. Refer to Table 10 for info on editing character data.

Table 10. Editing character data

Command	Action
*	Saves character or word. Moves cursor to the right.
CANCEL	Moves cursor to the left.
▲ or ▼	Scrolls through available characters. In library mode scrolls through available words.
STAY	Inserts a blank space.
CHIME	Deletes characters.
EXIT	Accesses the Library page
BYPASS	Makes the character flash. (If you are in Library Mode, it will make the entire word flash.)
#	Exits

Set keypad options (93)

1. Press * **93**. The display prompts you to enter your code.
2. Enter your program code. The display prompts you through the keypad options.
3. Press * to advance to the next option without making changes.

Table 11. Keypad options

Option	Keypad features
1	Not used
2	Silent keypad - Enables silent keypad option. If enabled, only the entry/exit and sounder chime are silenced.
3	Ding dong chime - Enable ding dong sound for chime.
4	5 second silence - Silences the pulsing keypad sounder for 5 seconds when a key is pressed.
5	Armed zone info - Keypad will display faulted or bypassed zone information when the system is armed.
6	Beeps on panics - Will sound a short beeps when the keypress is accepted.
7	Disable service - Suppresses the <i>Service</i> message.
8	Master keypad - Enables multi-partition mode.
9	Custom message - Enables custom message display.
10	Clock - Enables clock display
11	Custom message lock - Prevents over-writing the custom message during keypad copy.
12	Select an option - Programs special characteristics. <ul style="list-style-type: none"> • 1 = Display <i>Press * For Help</i> • 2 = Disable LED extinguish on this keypad • 3 = On if PIN should be hidden when programming • 4 = On suppresses beeps when an RF Transmission is lost. • 5-8 = Reserved (DO NOT PROGRAM)

Set keypad number and partition (94)

1. Enter * **94**. The display prompts you to enter your code.
2. Enter your program code. The display prompts you to enter the keypad number.
3. Enter [keypad number] *. The display prompts you to enter the partition number.
4. Enter [partition number] * to exit the mode.

Set elapsed time in minutes since last autotest (95)

1. Enter * **95**. The display prompts you to enter your code.
2. Enter your program code. The display shows the elapsed time screen.
3. Enter the time. Use three digits (i.e. 5 minutes should be entered 005).
4. Press # to exit.

Set system time and date (97)

1. Enter * **97**. The display prompts you to enter your code.
2. Enter your master code. The display shows the date and time with the current hour flashing.
3. Press ▲ or ▼ to scroll for the proper hour.
4. Press * to advance the selection to minutes.
5. Repeat steps 3 and 4 until the time and date are set.

Call back for download (98)

While the system is disarmed, enter * **98** to cause the control to do a call back for a download.

Seize phone line for download (99)

While the system is disarmed, enter * **99** to cause the control to seize the phone line for a download.

Walk test (CHIME)

1. While the system is disarmed, press * **CHIME**. The display prompts you to enter your code.
2. Enter your user code.

This allows a walk through to test zones. Each time a zone is faulted, it will be displayed on the keypad and a chime will sound. Walk Test mode will exit after 15 minutes, or you can enter your user code to exit at anytime.

Silent exit (EXIT)

1. While the system is disarmed, press * **EXIT**. The display prompts you to enter your code.
2. Enter your user code.

The chime will be silenced during exit delay.

Specifications

Panel Compatibility	NX-4, NX-6, NX-8, NX-8E control panels
Frequency	319.5 MHz (NX-148E-RF)
Power Requirements	12.0 VDC (provided by panel)
Current Draw	75 mA maximum
Operating Temperature	32° to 120°F (0° to 49°C)
Storage Temperature	-30° to 140°F (-34° to 60°C)
Humidity	90% relative, non-condensing
Dimensions	5 x 6 x 1 in. (12.7 x 15.2 x 2.5 cm)

FCC Notices

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

1. *This device may not cause harmful interference.*
2. *This device must accept any interference received, including interference that may cause undesired operation.*

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Technical Support

Toll-free: 888.437.3287 (US, including Alaska and Hawaii; Puerto Rico; Canada).
Outside the toll-free area: Contact your local dealer.