interlogix

A UTC Fire & Security Company

NX-1700E Proximity Card Reader
Installation and Startup

These instructions do not purport to cover all details or variations in equipment nor to provide every possible contingency to be met during installation, operation, and maintenance. If further information is desired or if particular problems arise that are not covered sufficiently for the purchaser's purpose, the matter should be referred to UTC Fire & Security, Gladewater, Texas, USA.

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Symbol Legend

Warning	Indicates a procedure, practice, condition, or statement that, if not strictly observed, could result in personal injury. * This symbol indicates electrical warnings and cautions.
Caution	Indicates a procedure, practice, condition, or statement that, if not strictly observed, could result in damage to or destruction of equipment or property. ** This symbol indicates general warnings and cautions.
Note	Indicates an essential or important procedure, instruction, condition, or statement.
Tip	Indicates a user tip. Provides helpful information that is not normally defined in regular use, but from an experienced user.
Enter	Indicates a key or button should be pressed to enter data.

ORDERING INFORMATION

PART #	DESCRIPTION	PART #	DESCRIPTION
NX-1700E	Card Reader Module	NX-216E	16 Zone Expander Module
NX-8E	8 – 192 Zone Control Only	NX-320E	Smart Power Supply and Buss Extender
NX-848E-KIT	NX-8E Control, NX-148E LCD Keypad, 40VA Transformer	NX-408E ✧	8 Zone Wireless Expansion Module
NX-8	8 – 48 Zone Control Only	NX-416E ✧	16 Zone Wireless Expansion Module
NX-848-KIT	NX-8 Control, NX-148E LCD Keypad, 40VA Transformer	NX-448E ✧	48 Zone Wireless Expansion Module
NX-6	6 – 12 Zone Control Only	NX-507E	Seven Relay Module
NX-648-KIT	NX-6 Control, NX-148E LCD Keypad, 40VA Transformer	NX-508E	Eight Output Module
NX-148E	Alphanumeric 48 Zone LCD Keypad	NX-534E	Two-Way Listen In Module
NX-1192E	192 Zone LCD Keypad		

✧ These units are UL listed for residential use only.

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I.   GENERAL DESCRIPTION

The NetworX NX-1700E is a proximity card reader / door control module used to expand the capabilities of the NetworX control panels.

- $ Microprocessor-controlled
- $ Includes one (1) low current trigger output, which can be used to control a door strike relay
- $ Up to 15 card readers can be connected to the NetworX control panel
- $ Can be programmed to control access in any or all partitions
- $ LEDs can be programmed to follow the output and/or the armed or ready status of the system
- $ Has an optional optical tamper switch

II.   INSTALLATION AND WIRING

To install the card reader, simply wire it into the system. Refer to the following wiring table for details.

DESCRIPTION	
GREEN (**DATA**)	Connect to the NetworX control panel **DATA** terminal. This wire is the data-signaling terminal to all the devices on the buss.
BLACK (**COM**)	Connect to the NetworX control panel **COMMON** terminal. Supplies the common side of the power to the card reader module.
RED (**POS**)	Connect to NetworX control panel **AUX POWER +** terminal. Supplies power to the card reader module.
WHITE (**EGRESS**)	This is an optional **EGRESS** (exit) input. To use this feature, connect the normally open egress switch between this terminal and **COM**. If this feature is not used, there is no need to connect this wire.
BLUE (**OUTPUT**)	This is an optional open-collector (negative trigger) **OUTPUT**. It can be used to drive a relay. To use this feature, connect the coil contacts of a relay between this terminal and **AUX POWER +**. Absolute maximum 14 volts @ 25mA. ☞ **This is a low current output and must not be used to directly energize high current door openers.**

III.   ENROLLING

The NetworX control panels have the ability to automatically find and store in memory the presence of all keypads, zone expanders, wireless receivers, output modules, and any other device on the keypad buss. This allows these devices to be supervised by the control panel. To enroll the devices, enter the Program Mode using the procedure outlined in the control panel Installation Manual. When the Program Mode is exited, the NX control panel will automatically enroll the devices. The enrolling process takes about 12 seconds, during which time the Service LED will illuminate. User codes will not be accepted during the enrolling process. Once a module is enrolled, if it is not detected by the control, the Service LED will illuminate.

IV.   ADDRESSING

Once the reader is wired into the system, the module needs to be addressed. Unlike most NetworX expanders, the address of any particular reader is determined by itself after installation is complete. Follow the procedures outlined under the section "PROGRAMMING". When prompted to enter the module device number, a card must be scanned at the reader to initiate addressing (one short beep). When completed (1-2 seconds), the reader will beep back its address (long beeps). Refer to Table IV-1 that follows for possible addresses.

Scan: To "present" or pass a card or FOB within sensing range of the card reader module.

Table IV-1

Beeps	Address	Beeps	Address
1	113	9	121
2	114	10	122
3	115	11	123
4	116	12	124
5	117	13	125
6	118	14	126
7	119	15	127
8	120		

V. PROGRAMMING

A. USING THE LED KEYPAD

NOTE: The NX-108E / NX-116E / NX-124E series keypads should not be used to program user cards.

ACTION	RESULT

ENTERING THE PROGRAM MODE

☞ ✱ ❽ · · · · · · · · Enters the Program Mode.

Stay, *Chime*, *Exit*, *Bypass* & *Cancel* LEDS will flash.

☞ [Go To Program Code]

Factory Default is ❾❼❶❸ · · · · · · · · If the "Go To Program Code" is valid, the "Service" LED will flash and the 5 function LEDs will illuminate steady. You are now in the Program Mode and ready to select the module address.

ENTERING THE MODULE ADDRESS

Scan a card. · · · · · · · · The card reader will address itself.

☞ ❶❷❶ # · · · · · · · · Enters the module address. Refer to Table IV-1 on page 3 for the address assigned by the card reader module itself.

(example only)

The Armed LED will illuminate while it is waiting for a programming location to be entered.

PROGRAMMING A LOCATION

✎ *If an attempt is made to program an invalid entry for a particular segment, the keypad sounder will emit a triple error beep (beep, beep, beep), and remain in that segment awaiting a valid entry.*

To Enter a Location:

☞ [location] # · · · · · · · · The Armed LED will flash. If the location is valid, the "Armed" LED will extinguish, the "Ready" LED will illuminate, and the zone LED's will show the data for the first segment of this location.

To Change Location Data:

☞ [changed data] · · · · · · · · The "Ready" LED will flash to indicate a data change in process and will continue until the data is saved.

☞ ✱ · · · · · · · · The new data is saved.
The keypad will increment and display the next segment's data.

NOTE: Repeat these steps until the last segment is reached.

To Exit a Location:

☞ # · · · · · · · · Exits from this location. The "Ready" LED will extinguish. The "Armed" LED will illuminate waiting for a new programming location to be entered.

To Review The Data:

☞ [location] # · · · · · · · · The Armed LED will flash. If the location is valid, the "Armed" LED will extinguish, the "Ready" LED will illuminate, and the zone LED's will show the data for the first segment of this location.

☞ ✱ · · · · · · · · (Do not enter data.)
The next segment is displayed. Each time ✱ is pressed, the data of the next segment will be displayed for review.

Shortcuts:

☞	🔥	Previous location.
☞	✚	Same location.
☞	🛡	Next sequential location.

EXITING THE PROGRAM MODE:

☞ **EXIT** **EXIT**   · · · · · · · ·   Exits this programming level.

B. USING THE LCD KEYPAD

All steps required for programming are the same as the aforementioned LED keypad. The LCD keypad display will prompt you for the data required. While in the programming mode, and not in a location, the number in parenthesis is the location you were previously changing. For example, if the display reads "Enter location, then #   (5)", it is reminding you that location 5 was the last location you programmed. In feature selection data, the numbers of the enabled features will be displayed. The features **not** enabled will display a hyphen (-).

C. PROGRAMMING DATA TYPES

a) Numerical Data
Numerical data can take on values from 0-255 or 0-15 depending on the segment size.
b) Feature Selection
Feature selection data is used to turn features on or off.

VI.   USER CARDS

Adding and de-activating users is done through a combination of entering information at the keypad and scanning cards. Before a card can be entered, one reader on the system must be programmed with User Card Programming enabled (Location 242, Segment 1, Option 1, page 8).

☞ It is recommended that only **one** reader on the system be enabled to modify user cards and that this reader be located near a keypad. This reader will transfer information to all other readers in the system once programming is finished.

Once a reader is enabled to modify users, it must be placed into one of the following five modes:
1) Add One User
2) Add Multiple Users w/ Auto-Increment
3) Activate One User
4) De-Activate One User
5) Delete/Reset One User.

Modifying users on a card reader is similar to modifying user codes at a keypad.

✍ **MUST BE A MASTER USER IN ORDER TO MODIFY USER CARD INFORMATION.**

ACTION	RESULT
☞ ✳ ❺	· · · · · · · · Accesses Code Programming
☞ [master code] Factory Default is ❶ ❷ ❸ ❹	· · · · · · · · If the code is valid, the Ready LED will flash. User Number 2 is used to program user cards, so…
☞ ❶ ❷ if the control is an NX-6, or NX-8 ☞ ❶ ❶ ❷ if the control is an NX-8E	· · · · · · · · Unit is now ready for you to choose one of the User Card Programming modes (as if user code 2): 1) Add One User 2) Add Multiple Users (w/ Auto-Increment) 3) Activate Single User 4) De-activate One User 5) Delete / Reset One User

IMPORTANT NOTE
Adding or de-activating user cards from a reader will cause the code for User Number 2 to become invalid. Therefore, it will need to be re-entered after all user cards are programmed into the readers.

ADDING ONE USER

| ACTION		RESULT
☞ [STAY]	········	Accesses Activation mode
☞ [3-digit user number] Example: ❶ ❷ ❹ if 4-digit user code or ⓿ ⓿ ❶ ❷ ❹ if 6-digit user codes	········	If a valid user number is entered, LED1 on any enabled readers will begin to flash.
Scan the card designated for the user entered in the previous step.	········	1) If the user card is not already in the system, it will be added and mapped to the entered user number and LED1 will flash. 2) If the card is already in the system, the reader will triple beep and LED1 will continue flashing. After about 30 seconds, all the readers in the system will be updated with the new user card information.

ADDING MULTIPLE USERS WITH AUTO-INCREMENT

ACTION		RESULT
☞ [CANCEL] Use [NIGHT] on NX-1248E	········	Accesses Activation mode
☞ [3-digit user number] Example: ❶ ❷ ❹ if 4-digit user code or ⓿ ⓿ ❶ ❷ ❹ if 6-digit user codes	········	If a valid user number is entered, LED1 on any enabled readers will begin to flash.
Scan the card designated for the user entered in the previous step.	········	1) If the user card is not already in the system, it will be added and mapped to the entered user number and LED1 will continue flashing indicating that the next user card can be scanned for the next user number. 2) If the card is already in the system, the reader will triple beep and LED1 will continue flashing; the user number is not incremented in this case.
Continue scanning user cards until the desired number of cards has been added.	········	After about 30 seconds without a card being scanned, all the readers in the system will be updated with the new user card information.

> 🖎 *By default, user cards are <u>added</u> <u>and</u> <u>activated</u>. In order to add a user card and de-activate it at the same time, scan and hold the card to be added until two beeps are sounded at the reader.*

ACTIVATE ONE USER (SINGLE USER)

ACTION		RESULT
☞ [CHIME] not available on NX-1248E	········	Accesses Activation mode
☞ [3-digit user number] Example: ❶ ❷ ❹ if 4-digit user code or ⓿ ⓿ ❶ ❷ ❹ if 6-digit user codes	········	If a valid user number is entered, LED1 on any enabled readers will begin to flash.
Scan any card.	········	The card information for the user entered in the previous step will be activated, and LED1 will stop flashing. After about 30 seconds, all the readers in the system will be updated.

DE-ACTIVATE ONE USER

ACTION	RESULT
☞ [BYPASS]	· · · · · · · · Accesses De-activation mode
☞ [3-digit user number] Example: ❶ ❷ ❹ if 4-digit user code or ⓿ ⓿ ❶ ❷ ❹ if 6-digit user codes	· · · · · · · · If a valid user number is entered, LED1 on any enabled readers will begin to flash.
Scan any card	· · · · · · · · The card information for the user entered in the previous step will be cleared, and LED1 will stop flashing. After about 30 seconds, all the readers in the system will be updated.

> ✋ *If an individual keeps the card, it can still be deleted.*

DELETE / RESET ONE USER

ACTION	RESULT
☞ [EXIT]	· · · · · · · · Accesses De-activation mode
☞ [3-digit user number] Example: ❶ ❷ ❹ if 4-digit user code or ⓿ ⓿ ❶ ❷ ❹ if 6-digit user codes	· · · · · · · · If a valid user number is entered, LED1 on any enabled readers will begin to flash.
Scan any card	· · · · · · · · The card information for the user entered in the previous step will be cleared, and LED1 will stop flashing. After about 30 seconds, all the readers in the system will be updated.

✍ **ACTIVATING / DE-ACTIVATING / RESETTING USERS**
If User Number 0 is entered, the desired function will be performed on the user associated with the card scanned.

VII.   PROGRAMMING LOCATIONS

> **SCAN METHODS: Legacy mode is default. Alternative mode is shown below in brackets { }.**
> **Refer to Location 242 Segment 1 on page 8, and the Glossary on page 17 for explanation.**

LOCATION 0   PROGRAMMING THE SCAN FUNCTIONS

(3 segments of binary data) Location 0 is used to select the particular function(s) that are activated when a card is scanned. More than one function may be selected. If more than one function is selected, they will execute in order from function 1 to function 8.

> ✎ Functions 1-6 will be performed based on the user's authority as programmed by the [✱] [6] function (refer to keypad user manual).

Segment 1   Single Scan Function {Single Beep}
Program the functions that are performed when a card is scanned {one beep}.

- LED1 -   "On" to send Code Entry function to the control panel.
- LED2 -   "On" to activate the Armed Away mode.
- LED3 -   "On" to activate the Armed Stay mode.
- LED4 -   "On" to send the Disarm function to the control panel.
- LED5 -   "On" to send Auxiliary Function #1 to the control panel.
- LED6 -   "On" to send Auxiliary Function #2 to the control panel.
- LED7 -   "On" to broadcast an X-10 function (see Location 241 for programming).
- LED8 -   ***"On" to send a Request To Exit (RTE); and activate the onboard open collector output. (Default is "On")***
    > ✎ Location 243, Segment 2 must be programmed with a valid zone number for the RTE to be sent.

Segment 2   Double Scan Function {Double Beep}
Program the functions that are performed when a card is scanned twice within the 2 Scan Hold Time {two beeps}. Location 244, Segment 1 programs the length of time between beeps. The descriptions of the options are the same as for Single Beep Scan Function. Default is **1.**

Segment 3   Single Scan Hold Function {Triple Beep}
Program the functions that are performed when a card is scanned and held at the reader for the duration of the 2 Scan Hold Time {three beeps}. Location 244, Segment 1 programs the length of time between beeps. The descriptions of the options are the same as for Single Beep Scan Function. Default is **1.**

LOCATIONS 1 - 240   RESERVED

LOCATION 241   PROGRAMMING THE X-10 ADDRESS FOR THE SCAN FUNCTIONS

(5 segments of numerical data)

Segment 1   Program a number from 0 -15 to represent the corresponding X-10 *Module Number* from the following table. Default is **0**.

Module	*1*	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seg 1	*0*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Segment 2   Program a number from 0-15 to represent the corresponding X-10 *House code* from the following table. Default is **0**.

X-10 ADDRESS CODES			
0=A	4=E	8=I	12=M
1=B	5=F	9=J	13=N
2=C	6=G	10=K	14=O
3=D	7=H	11=L	15=P

Segment 3   Single Scan Function {Single Beep}
Program the X-10 function that is performed when a card is scanned {one beep}. This location only needs to be programmed if Location 0, Segment 1, Option 7 is set. Use the following table. Default is **2**.

Function #	Function performed	Function #	Function performed
0	All units off	4	Dim
1	All lights on	5	Bright
2	*On*	6	All lights off
3	Off	All others	Reserved

Segment 4   Double Scan Function {Double Beep}
Program the X-10 function that is performed when a card is scanned twice within the 2 Scan Hold Time {two beeps}. Location 244, Segment 1 programs the length of time between beeps. The descriptions of the function codes are the same as for Single Beep Scan Function. This location only needs to be programmed if Location 0, Segment 2, Option 7 is set. Use the above table. Default is **3**.

Segment 5   Single Scan Hold Function {Triple Beep}
Program the X-10 function that is performed when a card is scanned and held at the reader for the duration of the 2 Scan Hold Time {three beeps}. Location 244, Segment 1 programs the length of time between beeps. The descriptions of the function codes are the same as for Single Beep Scan Function. This location only needs to be programmed if Loc 0, Seg 3, Option 7 is set. Use the above table. Default is **2.**

LOCATION 242   PROGRAMMING THE OPTIONS AND READER PARTITION

(4 segments of binary data)
Segment 1   System Options:
   LED1 - "On" if reader is enabled for User Card Programming.
   LED2 - "On" if optical tamper is enabled.
   LED3 - *"On" if reader buzzer is to follow typical keypad buzzing. (Default is "On")*
   LED4 - "On" if ding-dong chime enabled (dependent on both Option 3 and chime being enabled).
   LED5 - *"On" if an RTE from a scanned card is to be logged as Code Entry. (Default is "On")*
   LED6 - *"On" if reader is in NX-1700E Legacy Mode (Default is "On").* Refer to note below.
   LED7 - "On" if an RTE) from a zone or the Egress input is to be logged as Code Entry.
   LED8 - "On" if LEDs to extinguish after 2 minutes without a scan. (*Note*: This option doesn't disable the flashing green LED during card programming.)

✍ The card reader is defaulted to the "Legacy mode". This mode uses the same scan method as previous NX-1700E card readers. However, an *alternative scan method* is available by turning **off LED6** in Location 242, Segment 1. Rather than passing the card (scan) within range of the card reader, the card can be held at the reader for a specified number of beeps. Example of Double Scan: Legacy mode -- Pass the card by the reader's sensor, remove it from the sensor area, then pass the card by the reader's sensor once again. Alternative mode -- Hold the card at the card reader for a total of 2 beeps. Refer to the Glossary on page 24.

NX-1700E Card Reader

IMPORTANT: If you have older models installed in the system without this enhanced feature, it could result in two different methods of scanning at various readers.

Segment 2   LED1 (Green) Options:
>   LED1 -   *"On" to follow Ready status of system. (Default is "On")*
>   LED2 -   *"On" to toggle with the open collector output activation. (Default is "On")*
>   LED3 -   "On" if inverted.
>   LED4-8   Reserved.

Segment 3   LED2 (Red) Options:
>   LED1 -   *"On" to follow Armed status of system. (Default is "On")*
>   LED2 -   "On" to toggle with the open collector output activation.
>   LED3 -   "On" if inverted.
>   LED4-8   Reserved.

Segment 4   Reader Partition:
>   LED1 -   *"On" if reader is in Partition 1. (Default is "On")*
>   LED2 -   *"On" if reader is in Partition 2. (Default is "On")*
>   LED3 -   *"On" if reader is in Partition 3. (Default is "On")*
>   LED4 -   *"On" if reader is in Partition 4. (Default is "On")*
>   LED5 -   *"On" if reader is in Partition 5. (Default is "On")*
>   LED6 -   *"On" if reader is in Partition 6. (Default is "On")*
>   LED7 -   *"On" if reader is in Partition 7. (Default is "On")*
>   LED8 -   *"On" if reader is in Partition 8. (Default is "On")*

LOCATION 243   PROGRAMMING THE ZONES

(2 segments of numerical data)
Segment 1   Door Shunt Zone
Program the zone that will be monitored as a door for access control. This location must be programmed with a valid zone for monitored access control functions to work properly.   (Default is **0**)
>   ✍ Additionally, this zone must be configured in the control panel as a Door Shunt zone by programming an unused Zone Type Characteristic in locations 111-169 (Seg 4, Opt 4).

Segment 2   Request To Exit (RTE) Zone
Program the zone that will be monitored to signal an RTE. If this segment is programmed with a valid zone and the zone is faulted, the reader will activate its onboard open collector output and send the RTE. (Default is **0**)
>   ✍ Additionally, this zone must be configured in the control panel as an RTE zone by programming an unused Zone Type Characteristic in locations 111-169 (Seg 4, Opt 3).

LOCATION 244   PROGRAMMING THE VARIOUS READER TIMERS

(4 segment of numerical data)
Segment 1   Scan Time
Enter the amount of time required to hold a card between beeps to activate the functions programmed in Location 0, Segments 2 and 3. This timer is timed in 1/100-second increments from 0 to 2.55 seconds. (Default is **100** = 1 second).

Segment 2   Relay Active Time
Enter the amount of time the onboard open collector output is energized once activated. This timer is timed in 1-second increments from 0 to 255 seconds. (Default is **10** = 10 seconds).

Segment 3   Door Fault Warning Time
Enter the amount of time a monitored zone (see Location 243, Segment 1) must be faulted before sounding a warning (local buzzer). The door fault warning is timed in 1-second increments from 0 to 255 seconds. (Default is **30** = 30 seconds).

Segment 4   Door Fault Alarm Time
Enter the amount of time a monitored zone (see Location 243, Segment 1) must be faulted before sending an alarm condition to the control panel. The door fault alarm is timed in 1-second increments from 0 to 255 seconds. (Default is **0** = disabled).

LOCATION 245   RESETTING THE READER ADDRESS

(1 segment of numerical data) If it is necessary to reset the address of the reader, enter a 0 in this location.

This will cause the reader to cease functioning. If a card is scanned with the system in Program Mode, the reader will again find an available address and set itself, beeping back to the user the address that was found as per the table on page 3. If the system is not in Program Mode and a card is scanned at a reader with a reset address, then it will sound an error beep.

LOCATION 246   PROGRAMMING THE ACCESS OPTIONS

(2 segments of binary data)
Segment 1   Door Options
>   LED1 -   "On" if locking mechanism is a Maglock or Drop Bolt.
>   LED2 -   "On" if access is allowed regardless of Armed status of the system.

LED3 - "On" if the door is not to be latched unlocked during an open schedule.
LED4 - "On" if onboard open collector output only triggers during an open schedule.
LED5 - "On" if onboard open collector output only triggers during a close schedule.
LED6 - "On" if Forced Entry Alarm is logged.
LED7 - *"On" if access allowed without an RTE. (Default is "On")*
LED8 - "On if relay operates normally during off-schedule (outside of regular operating hours).

Segment 2   Enabling the Schedules for the Onboard Open Collector Output:
LED1 - *"On" if driver follows Schedule 1.*
LED2 - *"On" if driver follows Schedule 2.*
LED3 - *"On" if driver follows Schedule 3.*
LED4 - *"On" if driver follows Schedule 4.*
LED5 - *"On" if driver follows Schedule 5.*
LED6 - *"On" if driver follows Schedule 6.*
LED7 - *"On" if driver follows Schedule 7.*
LED8 - *"On" if driver follows Schedule 8.*

Segment 3   More Door Options
LED1 - "On" if egress input is to be disabled.
LED2-8 Reserved

LOCATION 247   PROGRAMMING THE OPENING TIME FOR SCHEDULE 1

(2 segments of numerical data)
Segment 1   Program the hour of the opening time in 24-hour format. (Default is **8** = 8:00 AM)
Segment 2   Program the minutes after the hour of the opening time for Schedule 1. (Default is **0**)

LOCATION 248   PROGRAMMING THE CLOSING TIME FOR SCHEDULE 1

(2 segments of numerical data)
Segment 1   Program the hour of the closing time in 24-hour format. (Default is **20** = 8:00 PM)
Segment 2   Program the minutes after the hour of the closing time for Schedule 1. (Default is **0**)

LOCATION 249   PROGRAMMING THE DAYS FOR SCHEDULE 1

(1 segment of binary data)
LED1 - *"On" if schedule is active on Sunday.*
LED2 - *"On" if schedule is active on Monday.*
LED3 - *"On" if schedule is active on Tuesday.*
LED4 - *"On" if schedule is active on Wednesday.*
LED5 - *"On" if schedule is active on Thursday.*
LED6 - *"On" if schedule is active on Friday.*
LED7 - "On" if schedule is active on Saturday.
LED8 - "On" if schedule is disabled on holidays.

LOCATIONS 250 - 270   PROGRAMMING THE SCHEDULES 2 - 8

Locations 250 - 270 are used to program the opening times, closing times, and days for Schedules 2 - 8. Each schedule has three locations that are programmed with the same steps as Schedule 1 described previously. Refer to Schedule 1 (Locations 247 - 249 above) for specific instructions.

Location 250 – Opening Time for Schedule 2   **Location 262** – Opening Time for Schedule 6
Location 251 – Closing Time for Schedule 2   **Location 263** – Closing Time for Schedule 6
Location 252 – Days for Schedule 2   **Location 264** – Days for Schedule 6
Location 253 – Opening Time for Schedule 3   **Location 265** – Opening Time for Schedule 7
Location 254 – Closing Time for Schedule 3   **Location 266** – Closing Time for Schedule 7
Location 255 – Days for Schedule 3   **Location 267** – Days for Schedule 7
Location 256 – Opening Time for Schedule 4   **Location 268** – Opening Time for Schedule 8
Location 257 – Closing Time for Schedule 4   **Location 269** – Closing Time for Schedule 8
Location 258 – Days for Schedule 4   **Location 270** – Days for Schedule 8
Location 259 – Opening Time for Schedule 5
Location 260 – Closing Time for Schedule 5
Location 261 – Days for Schedule 5

LOCATION 271   PROGRAMMING THE DATE OF HOLIDAYS IN JANUARY

(8 segments of numerical data) Program the day of the month in January that the Opening time in a schedule is suppressed. For example, if the opening should not occur on January 1, program a "1" in Segment 1. This feature can be repeated up to a maximum of 8 holidays per location (month). (Default is **No holidays**)

LOCATIONS 272 - 282   PROGRAMMING THE DATE OF HOLIDAYS FROM FEBRUARY TO DECEMBER

(8 segments of numerical data) Locations 272 - 282 are used to program the day of each month, from February to December, in which the Opening time in a schedule is suppressed. Each location will accommodate up to a maximum of 8 holidays, and programmed with the same steps as Location 271 described previously.

Location 272 – February holidays   **Location 276** – June holidays   **Location 280** – October holidays
Location 273 – March holidays   **Location 277** – July holidays   **Location 281** – November holidays
Location 274 – April holidays   **Location 278** – August holidays   **Location 282** – December holidays
Location 275 – May holidays   **Location 279** – September holidays

Location 283   Programming Activation Data for User Cards 1 through 120

(15 segments of binary data) This location is used to select which user cards 1 - 120 are activated. If the LED is "on", the card is active. Each segment has 8 LEDs corresponding to the 8 possible user cards. Example: Segment 4, LED2 indicates that user card 26 is active.

SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS
1	1 - 8	4	25 - 32	7	49 - 56	10	73 - 80	13	97 - 104
2	9 - 16	5	33 - 40	8	57 - 64	11	81 - 88	14	105 - 112
3	17 - 24	6	41 - 48	9	65 - 72	12	89 - 96	15	113 - 120

LOCATION 284   PROGRAMMING ACTIVATION DATA FOR USER CARDS 121 THROUGH 240

(15 segments of binary data) This location is used to select which user cards 121 - 240 are activated. If the LED is "on", the card is active. Each segment has 8 LEDs corresponding to the 8 possible user cards. Example: Segment 15, LED8 indicates that user card 240 is active.

SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS	SEG	USER CARDS
1	121 - 128	4	145 - 152	7	169 – 176	10	193 - 200	13	217 - 224
2	129 - 136	5	153 - 160	8	177 - 184	11	201 - 208	14	225 - 232
3	137 - 144	6	161 - 168	9	185 - 192	12	209 - 216	15	233 - 240

LOCATION 285   CODE ENTRY LOGGING PARTITION

(1 segment of numerical data) This location programs the partition that is logged with the Code Entry message and sent when the following conditions are met:

> An RTE scan function is selected (Location 0, Segment 1/2/3, Option 8); and
> "RTE from a scanned card is to be logged as Code Entry" is enabled (Location 242, Segment 1, Option 5).

Entering a 0 (zero) will send the lowest valid partition of the reader. Entering 1-16 will send the entered value as the partition. (Default is **0**.)

VIII.   PROGRAMMING WORKSHEETS

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
0	7	SCAN FUNCTIONS		
		Seg 1 SINGLE SCAN FUNCTION (1 Beep)	*8*	
		1 = "On" to send Code Entry function to the control panel.		
		2 = "On" to activate the Armed Away mode.		
		3 = "On" to activate the Armed Stay mode.		
		4 = "On" to send the Disarm function to the control panel.		
		5 = "On" to send Auxiliary Function #1 to the control panel.		
		6 = "On" to send Auxiliary Function #2 to the control panel.		
		7 = "On" to broadcast an X-10 function (Loc 241 for programming).		
		8 = *"On" to send an RTE; and activate the onboard open collector output.*		
		Seg 2 DOUBLE SCAN FUNCTION (2 Beep)	*1*	
		1 = *"On" to send Code Entry function to the control panel.*		
		2 = "On" to activate the Armed Away mode.		
		3 = "On" to activate the Armed Stay mode.		
		4 = "On" to send the Disarm function to the control panel.		
		5 = "On" to send Auxiliary Function #1 to the control panel.		
		6 = "On" to send Auxiliary Function #2 to the control panel.		
		7 = "On" to broadcast an X-10 function (Loc 241 for programming).		
		8 = "On" to send an RTE; and activate the onboard open collector output.		
		Seg 3 SINGLE SCAN HOLD FUNCTION (3 Beep)	*1*	
		1 = *"On" to send Code Entry function to the control panel.*		
		2 = "On" to activate the Armed Away mode.		
		3 = "On" to activate the Armed Stay mode.		
		4 = "On" to send the Disarm function to the control panel.		
		5 = "On" to send Auxiliary Function #1 to the control panel.		
		6 = "On" to send Auxiliary Function #2 to the control panel.		
		7 = "On" to broadcast an X-10 function (Loc 241 for programming).		
		8 = "On" to send an RTE; and activate the onboard open collector output.		
1-240	8	RESERVED		
241	8	X-10 ADDRESS		
		Seg 1 MODULE NUMBER	*0*	
		Seg 2 HOUSE CODE	*0*	
		(see chart)		

X-10 ADDRESS CODES

0=A	4=E	8=I	12=M
1=B	5=F	9=J	13=N
2=C	6=G	10=K	14=O
3=D	7=H	11=L	15=P

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
		Seg 3 SINGLE SCAN FUNCTION (1Beep)	*2*	
		0 = All units off 4 = Dim		
		1 = All lights on 5 = Bright		
		2 = *On* 6 = All lights off		
		3 = Off		
	8	Seg 4 DOUBLE SCAN FUNCTION (2 Beep)	*3*	
		0 = All units off 4 = Dim		
		1 = All lights on 5 = Bright		
		2 = On 6 = All lights off		
		3 = *Off*		
		Seg 5 SINGLE SCAN HOLD FUNCTION (3 Beep)	*2*	
		0 = All units off 4 = Dim		
		1 = All lights on 5 = Bright		
		2 = *On* 6 = All lights off		
		3 = Off		
242	8	OPTIONS AND READER PARTITION		
		Seg 1 SYSTEM OPTIONS	*3, 5, 6*	
		1 = "On" if enabled for User Card Programming		
		2 = "On" if optical tamper enabled		
		3 = *"On" if buzzer follows keypad buzzing*		
		4 = "On" if ding-dong chime enabled (Opt 3 & chime must be enabled)		
		5 = *"On" if an RTE from a scanned card is to be logged as Code Entry*		
		6 = *"On" if reader is in NX-1700E Legacy Mode*		
		7 = "On" if an RTE from a zone or the Egress input is to be logged as Code Entry.		
		8 = "On" if LED extinguish after 2 minutes without a scan.		
		Seg 2 LED1 (GREEN) OPTIONS	*1,2*	
		1 = *"On" follows system Ready status*		
		2 = *"On" to toggle with the Open Collector output*		
		3 = "On" if inverted		
		4 = 4-8= Reserved.		

LOC	PG	DESCRIPTION		DEFAULT	YOUR DATA
242	8	Seg 3	LED2 (RED) OPTIONS	*1*	
			1 = *"On" follows system Armed status*		
			2 = "On" to toggle with the Open Collector output		
			3 = "On" if inverted		
			4 = 4-8= Reserved.		
		Seg 4	READER PARTITION	*1,2,3,4,5,6,7,8*	
			1 = *"On" if reader is in Partition 1*		
			2 = *"On" if reader is in Partition 2*		
			3 = *"On" if reader is in Partition 3*		
			4 = *"On" if reader is in Partition 4*		
			5 = *"On" if reader is in Partition 5*		
			6 = *"On" if reader is in Partition 6*		
			7 = *"On" if reader is in Partition 7*		
			8 = *"On" if reader is in Partition 8*		
243	9	PROGRAMMING THE ZONES			
		Seg 1	Door Shunt Zone	*0 = Disabled*	
		Seg 2	Request To Exit (RTE)	*0 = Disabled*	
244	9	READER TIMES			
		Seg 1	Scan Time (1/100 seconds)	*100 = 1 second*	
		Seg 2	Relay Active Time (seconds)	*10 = 10 seconds*	
		Seg 3	Door Fault Warning Time (seconds)	*30 = 30 seconds*	
		Seg 4	Door Fault Alarm Time (seconds)	*0 = Disabled*	
245	9	RESET THE READER ADDRESS			
		⚠ Entering a "0" will reset and cause the reader to cease functioning.			
246	9	PROGRAMMING THE ACCESS OPTIONS			
		Seg 1	DOOR OPTIONS		
			1 = "On" if locking mechanism is a Maglock or Drop Bolt.		
			2 = "On" if access is allowed regardless of Armed status of the system.		
			3 = "On" if the door is not to be latched unlocked during an open schedule.		
			4 = "On" if onboard open collector output only triggers during an open schedule.		
			5 = "On" if onboard open collector output only triggers during a close schedule.		
			6 = "On" if Forced Entry Alarm is logged.		
			7 = *"On" if access allowed without an RTE.*		
			8 = "On" if relay operates normally during off-schedule (outside of regular operating hours).		
		Seg 2	SCHEDULES FOR ONBOARD OPEN COLLECTOR OUTPUT		
			1 = *"On" if driver follows Schedule 1.*		
			2 = *"On" if driver follows Schedule 2.*		
			3 = *"On" if driver follows Schedule 3.*		
			4 = *"On" if driver follows Schedule 4.*		
			5 = *"On" if driver follows Schedule 5.*		
			6 = *"On" if driver follows Schedule 6.*		
			7 = *"On" if driver follows Schedule 7.*		
			8 = *"On" if driver follows Schedule 8.*		
		Seg 3	MORE DOOR OPTIONS		
			1 = "On" if egress input is to be disabled.		
			2-8 = Reserved.		
247	10	OPENING TIME FOR SCHEDULE 1			
		Seg 1	Hour of Opening Time (24-hr format)	*8 = 8 AM*	
		Seg 2	Minutes after Hour of Opening	*0*	
248	10	CLOSING TIME FOR SCHEDULE 1			
		Seg 1	Hour of Closing Time (24-hr format)	*20 = 8 PM*	
		Seg 2	Minutes after Hour of Closing	*0*	
249	10	DAYS FOR SCHEDULE 1			
			1 = "On" if schedule is active on Sunday.		
			2 = **"On" if schedule is active on Monday.**		
			3 = **"On" if schedule is active on Tuesday.**		
			4 = **"On" if schedule is active on Wednesday.**		
			5 = **"On" if schedule is active on Thursday.**		
			6 = **"On" if schedule is active on Friday.**		
			7 = "On" if schedule is active on Saturday.		
			8 = "On" if schedule is disabled on holidays.		
250	10	OPENING TIME FOR SCHEDULE 2			
		Seg 1	Hour of Opening Time (24-hr format)	*8 = 8 AM*	
		Seg 2	Minutes after Hour of Opening	*0*	
251	10	CLOSING TIME FOR SCHEDULE 2			
		Seg 1	Hour of Closing Time (24-hr format)	*20 = 8 PM*	
		Seg 2	Minutes after Hour of Closing	*0*	

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
252	10	DAYS FOR SCHEDULE 2 1 = "On" if schedule is active on Sunday. 2 = **"On" if schedule is active on Monday.** 3 = **"On" if schedule is active on Tuesday.** 4 = **"On" if schedule is active on Wednesday.** 5 = **"On" if schedule is active on Thursday.** 6 = **"On" if schedule is active on Friday.** 7 = "On" if schedule is active on Saturday. 8 = "On" if schedule is disabled on holidays.		
253	10	OPENING TIME FOR SCHEDULE 3 Seg 1 Hour of Opening Time (24-hr format) Seg 2 Minutes after Hour of Opening	 *8 = 8 AM* *0*	
254	10	CLOSING TIME FOR SCHEDULE 3 Seg 1 Hour of Closing Time (24-hr format) Seg 2 Minutes after Hour of Closing	 *20 = 8 PM* *0*	
255	10	DAYS FOR SCHEDULE 3 1 = "On" if schedule is active on Sunday. 2 = **"On" if schedule is active on Monday.** 3 = **"On" if schedule is active on Tuesday.** 4 = **"On" if schedule is active on Wednesday.** 5 = **"On" if schedule is active on Thursday.** 6 = **"On" if schedule is active on Friday.** 7 = "On" if schedule is active on Saturday. 8 = "On" if schedule is disabled on holidays.		
256	10	OPENING TIME FOR SCHEDULE 4 Seg 1 Hour of Opening Time (24-hr format) Seg 2 Minutes after Hour of Opening	 *8 = 8 AM* *0*	
257	10	CLOSING TIME FOR SCHEDULE 4 Seg 1 Hour of Closing Time (24-hr format) Seg 2 Minutes after Hour of Closing	 *20 = 8 PM* *0*	
258	10	DAYS FOR SCHEDULE 4 1 = "On" if schedule is active on Sunday. 2 = **"On" if schedule is active on Monday.** 3 = **"On" if schedule is active on Tuesday.** 4 = **"On" if schedule is active on Wednesday.** 5 = **"On" if schedule is active on Thursday.** 6 = **"On" if schedule is active on Friday.** 7 = "On" if schedule is active on Saturday. 8 = "On" if schedule is disabled on holidays.		
259	10	OPENING TIME FOR SCHEDULE 5 Seg 1 Hour of Opening Time (24-hr format) Seg 2 Minutes after Hour of Opening	 *8 = 8 AM* *0*	
260	10	CLOSING TIME FOR SCHEDULE 5 Seg 1 Hour of Closing Time (24-hr format) Seg 2 Minutes after Hour of Closing	 *20 = 8 PM* *0*	
261	10	DAYS FOR SCHEDULE 5 1 = "On" if schedule is active on Sunday. 2 = **"On" if schedule is active on Monday.** 3 = **"On" if schedule is active on Tuesday.** 4 = **"On" if schedule is active on Wednesday.** 5 = **"On" if schedule is active on Thursday.** 6 = **"On" if schedule is active on Friday.** 7 = "On" if schedule is active on Saturday. 8 = "On" if schedule is disabled on holidays.		
262	10	OPENING TIME FOR SCHEDULE 6 Seg 1 Hour of Opening Time (24-hr format) Seg 2 Minutes after Hour of Opening	 *8 = 8 AM* *0*	
263	10	CLOSING TIME FOR SCHEDULE 6 Seg 1 Hour of Closing Time (24-hr format) Seg 2 Minutes after Hour of Closing	 *20 = 8 PM* *0*	
264	10	DAYS FOR SCHEDULE 6		

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
		1 = "On" if schedule is active on Sunday.		
		2 = **"On" if schedule is active on Monday.**		
		3 = **"On" if schedule is active on Tuesday.**		
		4 = **"On" if schedule is active on Wednesday.**		
		5 = **"On" if schedule is active on Thursday.**		
		6 = **"On" if schedule is active on Friday.**		
		7 = "On" if schedule is active on Saturday.		
		8 = "On" if schedule is disabled on holidays.		

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
265	10	OPENING TIME FOR SCHEDULE 7		
		Seg 1 Hour of Opening Time (24-hr format)	*8 = 8 AM*	
		Seg 2 Minutes after Hour of Opening	*0*	
266	10	CLOSING TIME FOR SCHEDULE 7		
		Seg 1 Hour of Closing Time (24-hr format)	*20 = 8 PM*	
		Seg 2 Minutes after Hour of Closing	*0*	
267	10	DAYS FOR SCHEDULE 7		
		1 = "On" if schedule is active on Sunday.		
		2 = **"On" if schedule is active on Monday.**		
		3 = **"On" if schedule is active on Tuesday.**		
		4 = **"On" if schedule is active on Wednesday.**		
		5 = **"On" if schedule is active on Thursday.**		
		6 = **"On" if schedule is active on Friday.**		
		7 = "On" if schedule is active on Saturday.		
		8 = "On" if schedule is disabled on holidays.		
268	10	OPENING TIME FOR SCHEDULE 8		
		Seg 1 Hour of Opening Time (24-hr format)	*8 = 8 AM*	
		Seg 2 Minutes after Hour of Opening	*0*	
269	10	CLOSING TIME FOR SCHEDULE 8		
		Seg 1 Hour of Closing Time (24-hr format)	*20 = 8 PM*	
		Seg 2 Minutes after Hour of Closing	*0*	
270	10	DAYS FOR SCHEDULE 8		
		1 = "On" if schedule is active on Sunday.		
		2 = **"On" if schedule is active on Monday.**		
		3 = **"On" if schedule is active on Tuesday.**		
		4 = **"On" if schedule is active on Wednesday.**		
		5 = **"On" if schedule is active on Thursday.**		
		6 = **"On" if schedule is active on Friday.**		
		7 = "On" if schedule is active on Saturday.		
		8 = "On" if schedule is disabled on holidays.		
271	11	HOLIDAYS IN JANUARY (8 max)	*No holidays*	_ _ _ _ _ _ _ _
272	11	HOLIDAYS IN FEBRUARY (8 max)	*No holidays*	_ _ _ _ _ _ _ _
273	11	HOLIDAYS IN MARCH (8 max)	*No holidays*	_ _ _ _ _ _ _ _
274	11	HOLIDAYS IN APRIL (8 max)	*No holidays*	_ _ _ _ _ _ _ _
275	11	HOLIDAYS IN MAY (8 max)	*No holidays*	_ _ _ _ _ _ _ _
276	11	HOLIDAYS IN JUNE (8 max)	*No holidays*	_ _ _ _ _ _ _ _
277	11	HOLIDAYS IN JULY (8 max)	*No holidays*	_ _ _ _ _ _ _ _
278	11	HOLIDAYS IN AUGUST (8 max)	*No holidays*	_ _ _ _ _ _ _ _
279	11	HOLIDAYS IN SEPTEMBER (8 max)	*No holidays*	_ _ _ _ _ _ _ _
280	11	HOLIDAYS IN OCTOBER (8 max)	*No holidays*	_ _ _ _ _ _ _ _
281	11	HOLIDAYS IN NOVEMBER (8 max)	*No holidays*	_ _ _ _ _ _ _ _
282	11	HOLIDAYS IN DECEMBER (8 max)	*No holidays*	_ _ _ _ _ _ _ _
283	11	ACTIVATION DATA FOR USER CARDS 1 - 120		

283 (page 11) ACTIVATION DATA FOR USER CARDS 1 - 120

1 = User Cards 1 – 8	9 = User Cards 65 – 72
2 = User Cards 9 – 16	10 = User Cards 73 – 80
3 = User Cards 17 – 24	11 = User Cards 81 – 88
4 = User Cards 25 – 32	12 = User Cards 89 – 96
5 = User Cards 33 – 40	13 = User Cards 97 – 104
6 = User Cards 41 – 48	14 = User Cards 105 – 112
7 = User Cards 49 – 56	15 = User Cards 113 - 120
8 = User Cards 57 – 64	

LED1 = Card 1
LED2 = Card 2
LED3 = Card 3
LED4 = Card 4
LED5 = Card 5
LED6 = Card 6
LED7 = Card 7
LED8 = Card 8

284 (page 11) ACTIVATION DATA FOR USER CARDS 121 - 240

1 = User Cards 121 – 128	9 = User Cards 185 – 192
2 = User Cards 129 – 136	10 = User Cards 193 – 200
3 = User Cards 137 – 144	11 = User Cards 201 – 208
4 = User Cards 145 – 152	12 = User Cards 209 – 216
5 = User Cards 153 – 160	13 = User Cards 217 – 224
6 = User Cards 161 – 168	14 = User Cards 225 – 232
7 = User Cards 169 – 176	15 = User Cards 233 – 240
8 = User Cards 177 – 184	

LOC	PG	DESCRIPTION	DEFAULT	YOUR DATA
285	11	CODE ENTRY LOGGING PARTITION	*0*	

IX. GLOSSARY

TERM	DESCRIPTION
Alternative Mode	Alternative mode is an optional scan method, as opposed to the default Legacy mode (see below). The card is to be continuously held at the reader for a specified number of beeps. <u>Example</u>: Hold the card at the card reader's sensor for a total of 2 beeps. This is a "double beep" in the Alternative mode. This method becomes available when Location 272, Segment 1, Option 6 is disabled.
Double Beep………………	An audible indicator (beep, beep).
Double Beep Scan………..	When a user card is scanned and held at the reader for 2 beeps, the reader will perform the functions as programmed in Location 241, Segment 4.
Legacy Mode………………	Legacy mode is used to describe the default operation of the card reader's scanning method. This mode uses the same scan methods as prior versions of the card reader modules. <u>Example</u>: Pass a user card by the reader's sensor, remove it from the field, then pass the card by the reader's sensor once again during the time programmed in Location 244, Segment 1. This is a "double scan" in the legacy mode.
Request To Exit (RTE)……	A zone can be programmed to monitor an open door. The RTE activates the onboard open collector output and sends a message on the buss.
Scan……………………….	To "present" or pass a card or FOB within sensing range of the card reader module.
Single Beep………………..	An audible indicator (beep).
Single Beep Scan…………	When a user card is scanned and held at the reader for 1 beep, the reader will perform the functions as programmed in Location 241, Segment 3.
Triple Beep………………...	An audible indicator (beep, beep, beep).
Triple Beep Scan………….	When a user card is scanned and held at the reader for 3 beeps, the reader will perform the functions as programmed in Location 241, Segment 5.

X. FCC INFORMATION

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

    1. This device may not cause harmful interference.

    2. This device must accept any interference received, including interference that may cause undesired operation.

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

FCC ID: CGGNX-1700E

XI. UNDERWRITERS LABORATORIES INFORMATION

The NX-1700E module has received UL listing: **UL294   Access Control Systems Units**

XII. SPECIFICATIONS

DIMENSIONS	Approx. 1.5"W x 4.5"L x 1"D with 6' cable
OPERATING POWER	12 VDC, Supplied by NX-6, NX-8, NX-8E, or NX-320E
CURRENT DRAW	40mA Standby with Green LED 110mA Maximum
OPERATING TEMPERATURE	-31 to +151 degrees F 5 to +66 degrees C
SHIPPING WEIGHT	< 1 lb.

1420 N. MAIN STREET; GLADEWATER, TEXAS 75647

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