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# GEM-ACM1D

## Access Control Accessory

### Getting Started Guide

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## INTRODUCTION

Thank you for purchasing NAPCO's new GEM-ACM1D Access Control Accessory. The GEM-ACM1D is an accessory to the GEM-X255 that adds access control functionality to the GEM-X255 control panel. The GEM-ACM1D provides controlled access to a door by releasing a magnetic lock or electric strike when a proper Prox Card is presented to the card reader.

The GEM-ACM1D access control panel resides on the GEM-X255 system bus and uses a keypad location in the system for communication. Like the keypad, the GEM-ACM1D can be used to arm and disarm the system, and is capable of controlling door access, monitoring door status and annunciating troubles and alarms.

The GEM-ACM1D works with any standard Wiegand card reader and any UL 294 Listed door lock, however, the recommended reader is the HID Prox Point model 6005B-00. The NAPCO standard 36 bit proximity card and the HID standard 26 bit proximity card formats are both supported.

Up to 4 GEM-ACM1D modules may be connected to a GEM-X255 control panel. The GEM-ACM1D can support up to two card readers using an optional plug-in GEM-2D module. Each card reader can be programmed to function independently on different doors.

This Getting Started Guide will walk you through the following:

1. Terminal Strip Descriptions
2. GEM-2D Module for Second Door Installations
3. ACM Programming
4. Creating and Entering Proximity Cards
5. Create an ACM Schedule
6. Access Events Logs

## REQUIREMENTS

- Gem-X255 control panel with v5 firmware or higher (circuit board with expanded RAM is required for a separate ACM log capability).
- PCD-Windows Quickloader Download software v4.5 or higher.

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## HARDWARE DESCRIPTIONS

See page 11 for the GEM-ACM1D and GEM-2D wiring diagrams. Descriptions for each lug, jumper and LED on the GEM-ACM1D are detailed below:

### ACM on Board Status LEDs and Lugs

**LED D1** - Polling (Blink duration 1.6 sec=Polling, Solid= 20 sec not polling, Fast Blink= downloading)

**LED D2** - AC 'ON' (Green)

**LED D3** - Low Battery (Red)

**Lug E1** - AC 'ON'

**Lug E2** - Low Battery

**Lug E3** - AC Fail

### JP1 (3 pins)

Selects the card reader power output 5VDC or 12VDC

### JP2 (5 pins)

- Pins 1-4 are used to select Keypad/ACM address. Valid ACM addresses 2-15. Address #1 should be assigned to a keypad.
- Pin 5 is for High Security Operation. It determines the panel operation during the degrade mode. The panel enters Degrade Mode when an error in panels' memory is detected. Normally, during the degrade mode, the access will be granted to any user. Selecting Pin 5 will prevent any user from gaining the access at the reader.

### JP3 (2 pins)

Placing a shunt connector on this jumper enables battery power backup for the D1 &D2 Power outputs providing the battery backup for the locks.

## TERMINAL DESCRIPTIONS

See page 11 for the GEM-ACM1D and GEM-2D wiring diagrams. Each terminal is numbered from 1-31 for the GEM-ACM1D and 32-40 for the GEM-2D. Descriptions of terminals 1-31 are detailed below:

### ACM Power Input

1. 16.5VAC
2. 16.5VAC  
(via CLASS 2 Plug-In 40VA or 50VA Transformer)

### Door Power Output

3. Door #1 Power (+)
4. Door #1 Power (-)
5. Door #2 Power (+)
6. Door #2 Power (-)

Combined maximum current for Door #1 and Door #2 = 1.5A @12VDC. Full rated current can be drawn from either output as long as combined current does not exceed 1.5A.

### Burg Bus

7. (+) Bus RED
8. (-) Bus BLACK
9. (RX) Bus GREEN
10. (TX) Bus YELLOW

Connect ACM terminals 7,8,9,10 to GEM-X255 bus terminals 9(+), 10(-), 11(TX-Green), 12(RX-Yellow) respectively. Losing the bus connection will NOT disable ACM operation and will NOT prevent valid cardholders access through the door. All user schedules will be ignored.

Arming from the reader will not be possible while communication to the control panel is lost. If the bus con-

nection is lost while the system is armed, the corresponding door zones on the ACM will go into alarm.

11. (+) Tamper

12. (-) Tamper

Connect to the optional normally open (N/O) Tamper switch. Cut jumper J1 to enable Tamper.

13. GND (Cold Water Ground)

### Door Relay Outputs

14. Door #1 Relay COM

15. Door #1 Relay N/O

16. Door #1 Relay N/C

Wire the locking device with the Door #1 Power terminals 3, 4 and the Door #1 relay output terminals 14,15,16. Use the COM and N/C terminals for a normally energized lock such as a Mag (Magnetic) Lock and use COM and N/O terminals for a normally de-energized lock such as an Electric Strike lock. When the access is activated, the relay will trip and unlock the door for a preprogrammed period of time.

### Reader (Power Output)

17. Reader #1 - (+) Reader #1 Power

18. Reader #1 - (-) Reader #1 Power (Ground)

The reader voltage output is selectable. Use the jumper JP1 to select between 5V or 12V.

### Reader (Data Input)

19. Reader #1 Input – Data (1)

20. Reader #1 Input – Data (0)

### Reader (LED Output)

21. Reader #1 - (-) RED LED output

22. Reader #1 - (-) GREEN LED output

RED LED will be ON when the door is locked. GREEN LED will be ON when the door is unlocked. Alternating RED/GREEN will be ON when downloading to the ACM. Additionally, LED will momentarily change RED to GREEN when a proximity card is presented and read. The HID 6005B reader has one dual color Red/Green LED.

### Reader (Audible Output)

23. Reader #1 - (-) Sounder Out output

This output can sink 250mA to drive a local audible device or be connected to the BEEP control line of the card reader. The Sounder output is used for the *Door Ajar*, *Forced Door* and *Request To Arm* functions. For the *Door Ajar* and *Forced Door* functions, it annunciates a continuous tone (the sounder output terminates when the door is closed). Tripping the *Request To Arm* function produces a beeping sound until the "Exit-Arm Time" is expired. The sounder output also produces a Beep when a proximity card is presented to the reader.

### Audible Silence

24. Sounder Off input (+)

25. Ground

Wire a N/O Momentary Switch between terminals 24 & 25 to silence the Sounder output.

### Door Contact Sensor

25. Ground

26. Door #1 Contact (+) input

Wire a N/C door contact in series with a 2.2K Ohm EOL resistor between terminals 25 & 26. The door contact input is used to generate *Door Open*, *Door Ajar*, and *Forced Door* conditions at the ACM and can be mapped into specific zones in the burglary panel to generate *Zone Faulted*, *Day Zone*, and *Burglary* alarms.

## RTE – Request To Exit Input

- 27. Request To Exit (+)
- 28. Ground

Wire a N/O momentary switch between terminals 27 & 28. This egress switch is mounted on the opposite side of the Card Reader and when tripped will activate Door #1 Relay. The switch provides a means to exit the door, and operates exactly the same way as the proximity card (but is mounted on the other side of the door).

## RTA – Request To Arm Input

- 28. Ground
- 29. Request To Arm (+)

Wire the N/O momentary switch between terminals 28 & 29. The RTA switch can be mounted on either side of the door. This switch, when used together with a proximity card, can arm the system. To arm the system, first activate the switch and then present the card to the reader.

## Armed/Ready LEDs

- 30. RED Status LED
- 31. GREEN Status LED

These two LEDs will simulate RED and GREEN keypad LEDs as follows:

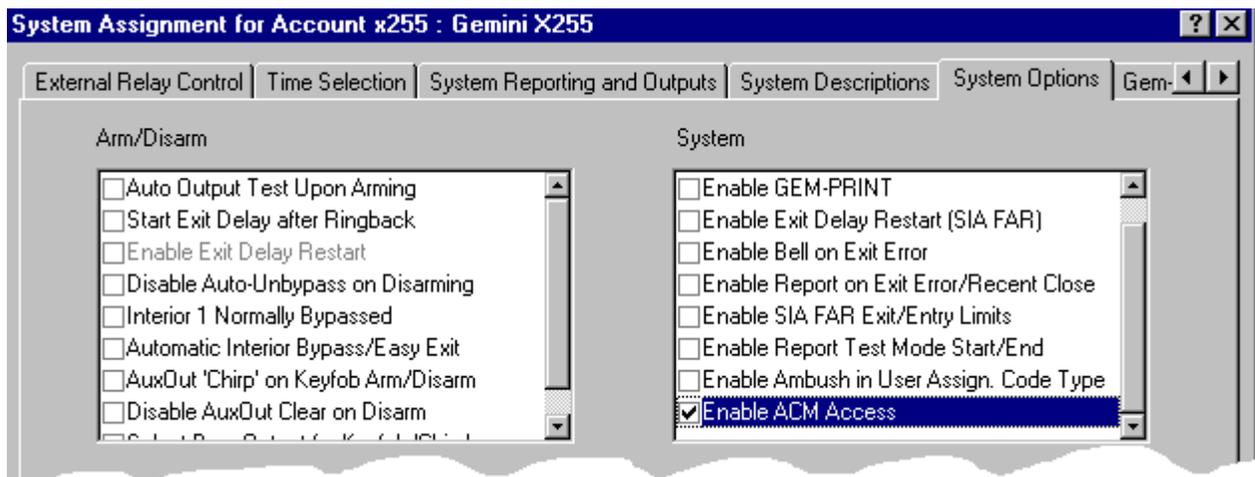
- RED 'ON' (Armed)
- RED 'OFF' (Disarmed)
- RED 'Blinking' (Alarm)
- GREEN 'ON' (Ready to Arm)
- GREEN 'OFF' (Zone Fault).

**NOTE:** If the "Stealth Mode" is enabled, the LED functionality will display only for one minute.

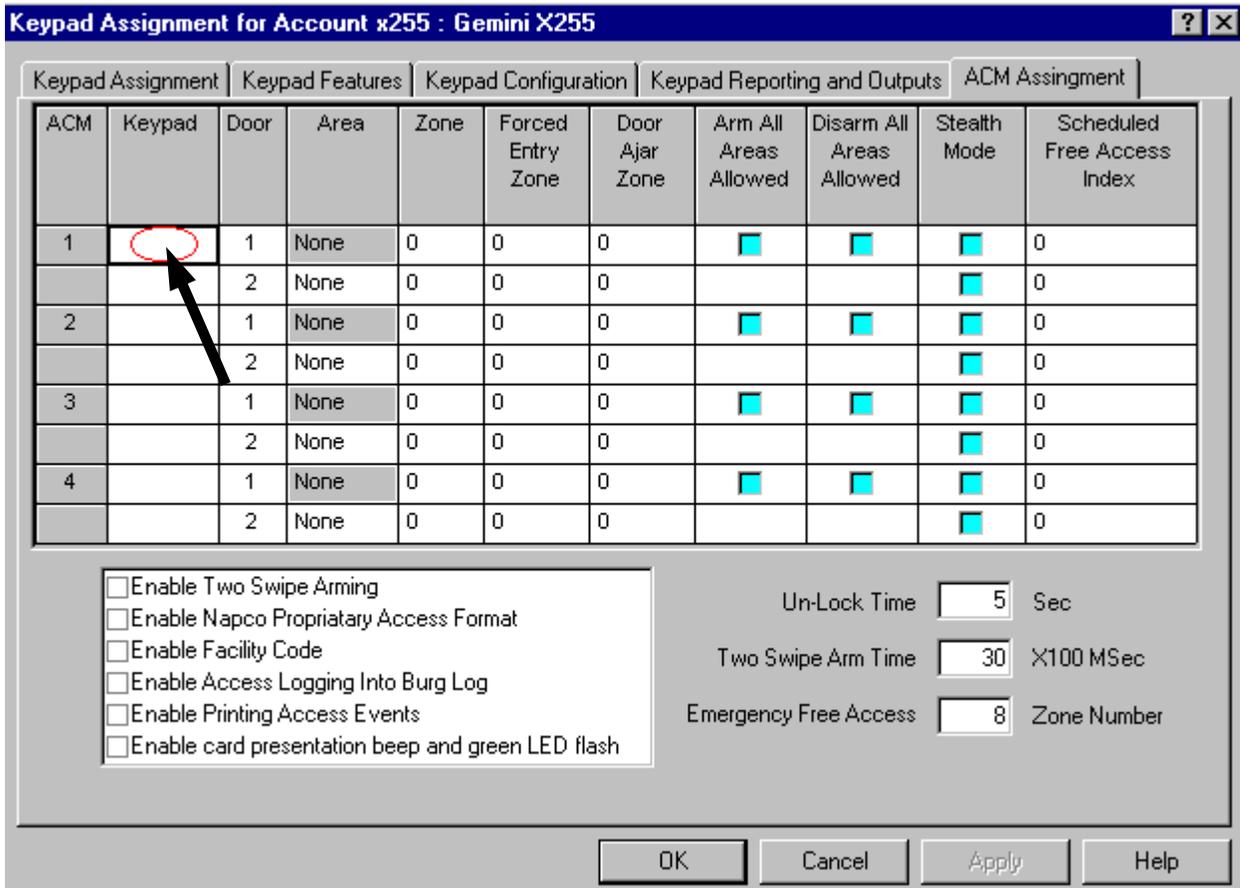
## GEM-2D MODULE FOR SECOND DOOR INSTALLATIONS

The GEM-2D is a module that plugs directly into the GEM-ACM1D providing independent control of a second reader/door. The functionality is the same except that Arm/Disarm is not allowed from the GEM-2D. Refer to the wiring diagram terminals 32-49 shown on page 11.

## ACM PROGRAMMING

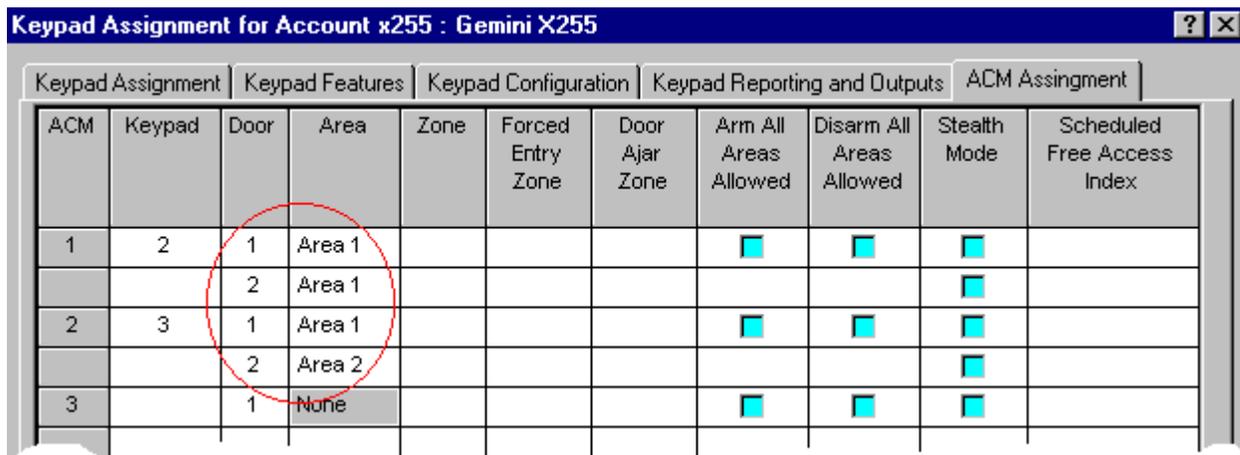


1. Enable ACM Access on the System Assignment screen, System Options tab



- Open the **Keypad Assignment** screen and click the *ACM Assingment* tab. All ACM features are displayed in this window.

**Keypad address** - Left click on the Keypad cell for ACM (see arrow above). PCD-Windows will automatically assign and enter the next available Keypad address for ACM1, ACM2, etc. Up to 4 ACM's can be selected, and there must be at least one keypad in the Access Control System. Keypad address 1 must be used for a keypad, therefore the ACM can only be addressed to keypads 2 through 15



- Up to two doors (readers) can be assigned for each ACM (when GEM-2D module is installed). Assign an Area for each door.

Keypad Assignment for Account x255 : Gemini X255										
Keypad Assignment	Keypad Features	Keypad Configuration	Keypad Reporting and Outputs	ACM Assingment						
ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Steath Mode	Scheduled Free Access Index
1	2	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		2	Area 1	0	0	0			<input checked="" type="checkbox"/>	
2	3	1	Area 1	0	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		2	Area 2	0	0	0			<input checked="" type="checkbox"/>	

4. Each ACM door can detect three possible events: *Zone*, *Forced Entry*, and *Door Ajar*.
- "Zone"** – normal opening of the door.
  - "Forced Entry"** – forceful opening of the door without unlocking it first.
  - "Door Ajar"** - the door is opened and remains open (not closed) for more then 30 seconds.
- Each of these events can be mapped to a separate zone on the GEM-X255 control panel. When the door event occurs, the associated GEM-X255 zone will be tripped.

Keypad Assignment for Account x255 : Gemini X255										
Keypad Assignment	Keypad Features	Keypad Configuration	Keypad Reporting and Outputs	ACM Assingment						
ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Steath Mode	Scheduled Free Access Index
1	2	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		2	Area 1	0	0	0			<input checked="" type="checkbox"/>	
2	3	1	Area 1	0	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		2	Area 2	0	0	0			<input checked="" type="checkbox"/>	

5. When **Arm All Areas Allowed** and **Disarm All Areas Allowed** are selected, simultaneous arming and disarming of multiple Areas from a selected reader will be allowed. Note that Arming/Disarming is only allowed from ACM's Reader #1. A user attempting to Arm/Disarm multiple areas must have their proximity card enabled in those areas and must have arming and disarming privileges. For example, in the image above, multiple arming can be accomplished from the ACM#1 Reader #1 and multiple disarming can be accomplished from ACM# 1 Reader #1 and ACM #2 Reader #1.

Keypad Assignment for Account x255 : Gemini X255										
Keypad Assignment	Keypad Features	Keypad Configuration	Keypad Reporting and Outputs	ACM Assingment						
ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Steath Mode	Scheduled Free Access Index
1	2	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		2	Area 1	0	0	0			<input checked="" type="checkbox"/>	
2	3	1	Area 1	0	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

6. Stealth Mode is used to hide the ACM's Armed and Status LEDs. The Armed and Status LEDs (which are usually located on or next to the reader) are designed to provide system feedback. If this feedback is not desired, Stealth Mode can be enabled for each individual card reader. Check to enable (and uncheck to disable) Stealth Mode. When enabled, the armed and status card reader LED's are normally off but are turned on for 1 minute by any of the following events:

- Press a Request to Exit button
- Press a Request to Arm button
- Present a valid ARM/DISARM or ARM card to the card reader

"Access Only" cards do not affect the status of Stealth Mode.

When the system is in alarm, Stealth Mode is disabled.

Keypad Assignment for Account x255 : Gemini X255										
Keypad Assignment	Keypad Features	Keypad Configuration	Keypad Reporting and Outputs	ACM Assingment						
ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Steath Mode	Scheduled Free Access Index
1	2	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1
		2	Area 1	0	0	0			<input checked="" type="checkbox"/>	2
2	3	1	Area 1	0	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5
		2	Area 2	0	0	0			<input checked="" type="checkbox"/>	

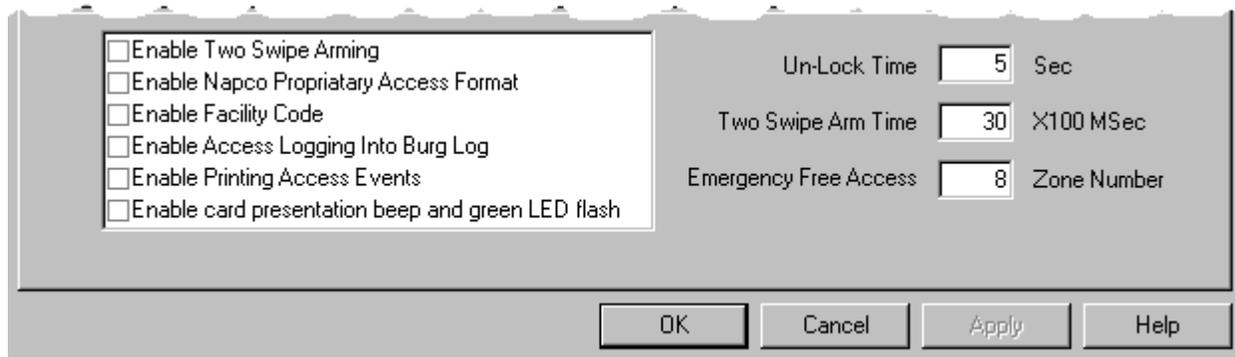
7. The **Scheduled Free Access Index** links the ACM doors to the GEM-X255 external relay. When this external relay is tripped, the linked door will become unlocked.

An external relay can be programmed in the **Schedule Assignment** screen to activate (via a schedule) to allow the protected door to unlock (allowing "free access") for the scheduled time.

Schedule Assignment for Account x255 : Gemini X255						
Schedule	Report Suppression Window	Holiday Dates				
#	Description	Event	Index	Normal Time	Holiday Time	Date
1	ACM1 Door1 Free Access	External Relay On	1	12:00-01:00	Not Set	Mo-Fr
2	ACM1 Door2 Free Access	External Relay On	2	12:00-01:00	Not Set	Mo-Fr
3	ACM2 Door1 Free Access	External Relay On	5	17:00-02:00	Not Set	Mo-Fr

In the example above, ACM #1 Door #1, and #2 will be in "Free Access" during the noon-1PM lunch time and ACM #2 Door #1 will be unlocked Monday-Friday 5 pm to 7 pm.

**Note:** The external relay board is NOT required to be on the bus in order to schedule and activate "Free Access".



8. **Enable Two Swipe Arming** - Allows Arming by presenting a proximity card twice. The proximity card used must be enabled for arming/disarming functions, and must be presented twice within the time specified in the "Two Swipe Arm Time" field (also located in above window).
9. **Enable Napco Proprietary Access Format** - Check to allow the GEM-ACM1D to recognize the NAPCO standard 36 bit proprietary card format. (The GEM-ACM1D supports two proximity card formats: (1) NAPCO standard 36 bit proprietary format or (2) HID standard 26 bit format.)
10. **Enable Facility Code** - When enabled, the proximity card's facility code in addition to its proximity card number will be checked before granting access. **Note:** Not all proximity cards possess a facility code. If the cards used contain a facility code, and you wish to allow the facility code to be used within the system, check to enable this feature. (When enabled, the least significant digit of the facility code must be used as the most significant digit of the card code. Entering proximity card codes will be discussed on page 9).
11. **Enable Access Logging Into Burg Log** - When checked, access events will be logged in the burg log. This feature allows the keypad log to display access control events. **Note:** Only the user number (not the user code) is logged in the Burg Log. When unchecked, the system will log access events in the access log (which cannot be displayed at the keypad). **Note:** The Access log (limited to 800 events) is available only in the GEM-X255 panel, triangle number 4 or higher.
12. **Enable Printing Access Events** - If you have GEM-PRINT and compatible printers, the access events can be printed as they occur. **Note:** GEM-PRINT version 4 (or later) is required.
13. **Enable card presentation beep and green LED flash** - Controls the card reader sounder and LED's. The recommended HID card reader is the HID Prox Point Plus Model 6005B-00, and this reader will operate with regard to this feature as follows:
  - Model 6005B-00** (recommended)
    - Disabled: Will beep and green LED will operate when card is read.
    - Enabled: Will double beep and green LED will double flash when card is read.
  - Model 6005B-07**
    - Disabled: Will not beep nor flash green when card is read.
    - Enabled: Will beep and green LED will operate when card is read.
14. **Un-Lock Time** - Specifies the amount of time the user is given to open the door after the proximity card is presented.
 

If the door is not opened (as sensed by the door contact) by the end of the "Un-Lock Time", the lock power is reapplied. If the door is opened during the "Un-Lock Time", lock power is immediately reapplied such that as soon as the door is closed, the door is immediately locked. Once the door is unlocked and opened, a 30 second "Door Ajar" time begins. If the door remains open after these thirty seconds, the GEM-ACM1D initiates a "Door Ajar" condition.

**Note:** When the system is programmed for "Two Swipe Arming", the first time a card (programmed

for arming) is presented, the door unlocks for the standard "Un-Lock Time". The second time the card is presented, the door access "Un-Lock Time" is extended to four (4) times this programmed "Un-Lock Time" value. The "Un-Lock Time" default is 5 seconds.

15. **Two Swipe Arm Time** - Allows arming by presenting a proximity card twice within this time period (the card used must be enabled for arming functions). The value entered is multiplied by 100 milliseconds. Default is 40 (4 seconds).
16. **Emergency Free Access** - Tripping this panel zone unlocks all ACM doors and keeps them unlocked until the zone is reset. A 24-hour zone or a Fire zone should be used for this feature. **Note:** NFPA requires that all doors must be unsecured ("unlocked") during a fire alarm and/or a primary power (typically AC) failure. Using outputs of the fire alarm panel and wiring them to the zone input, existing fire alarm systems can be integrated into the access control system. The output(s) from the fire alarm system must be wired so that if there is a fire alarm or AC failure of the fire alarm system, the "Emergency Free Access Zone" is either shorted or opened. See WI1221 for recommended wiring and additional programming information.

## CREATING AND ENTERING ACM PROXIMITY CARDS

Click the **User Assignment** button, and select the *User Assignment* tab. Configure a user (1-195) by entering or selecting information in the areas provided.

User	Description	Code	AL	Code Type	IO	BV	UP	BE	OV	Area	ACM Area
1	Boss	123	3	Arm/Disarm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1-8	
2	Boss	610001	2	Arm/Disarm	<input type="checkbox"/>		1-8				
3	Manager	610002	2	Arm/Disarm	<input type="checkbox"/>		1-7				
4	Worker	610003	1	None	<input type="checkbox"/>		1-7				
5	Worker	610004	1	None	<input type="checkbox"/>		1-7				
6	Worker	610005	1	None	<input type="checkbox"/>		1-7				
7	Spare	610006	1	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1-7

1. **Description** - Enter a description of the user, such as their name.
2. **Code** - Enter the code of the proximity card assigned to that user. The code entered must be 6 digits in length. Enter 5 numbers embossed on the card itself, and use 0 as a first number of the code. If there is a Facility Code, use the least significant digit as the first number of the Code. For example, if the embossed card number is 10001 and the Facility Code is 46, enter 610001 in the Code column for the user selected.
3. **AL** (Access Level) (Authority Level for burg code) - Select an Access Level from the drop down list. 0=No Access, 1=Disarmed Access, 2=Always Access. For example, if you wish to give the user assigned to this card the ability to enter the premises while armed, select level "2". To prevent the user from entering the premises while armed, select level "1".
4. **Code Type** - Determines the Arm/Disarm privileges assigned to the proximity card. The types in-

clude "No Arming", "Arm/Disarm", "Arm Only".

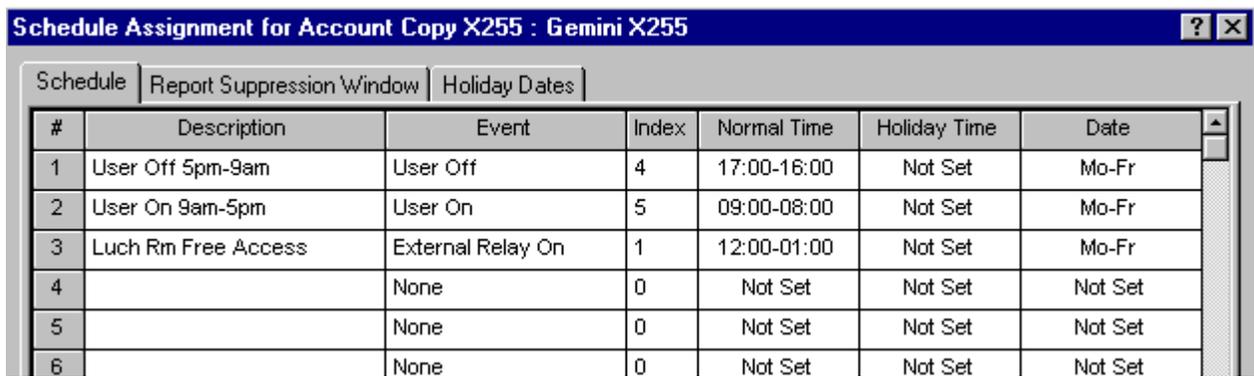
5. **IO** ("Initially Off") - Indicates whether the user is initially "On" or "Off". For example, if a user is "Off", then this user will always be disabled unless there is a "User On" schedule programmed to enable him. The default state for each user is "On" (unchecked).

**Note:** The remaining options are not used for ACM Programming, and will be grayed-out when a valid ACM area is selected in the "ACM Area" column.

6. **ACM Area** - Assign a proximity card to an ACM area. Click the drop-down box to display the areas, and click each area to highlight and select. The proximity card users assigned to the specific areas will then function (provide access or arm/disarm) only in those selected areas.

**Note:** The Area column and the ACM Area column are mutually exclusive--either can be used but not both with one user.

## CREATE AN ACM SCHEDULE



#	Description	Event	Index	Normal Time	Holiday Time	Date
1	User Off 5pm-9am	User Off	4	17:00-16:00	Not Set	Mo-Fr
2	User On 9am-5pm	User On	5	09:00-08:00	Not Set	Mo-Fr
3	Luch Rm Free Access	External Relay On	1	12:00-01:00	Not Set	Mo-Fr
4		None	0	Not Set	Not Set	Not Set
5		None	0	Not Set	Not Set	Not Set
6		None	0	Not Set	Not Set	Not Set

To create an access schedule, click the **Schedule Assignment** button and select the *Schedule* tab. Enter a description of the event in the Event column.

The following is a list of events for the GEM-X255 panel associated with access control:

- External Relay On (RB3000)
- User On (Enable)
- User Off (Disable)

**Index** - In the Index column, for the access control systems, enter a specific user/access card number or a specific External Relay number. Also, enter the Normal Time, Holiday Time, and Date as desired.

**Note:** PCD-Windows download software MUST be used to program schedules.

Users are controlled by assigning them to a schedule. By default, all users (i.e. their proximity cards) are active; with the schedules restricting user card access. For example, if an employee works 9AM through 5PM, program the schedule to turn off starting at 5PM for the next 16 hours (until 9AM the next day).

## KEYFOB CONTROL OF ACM DOOR ACCESS

The Napco's Keyfob can be configured to provide control of the ACM doors. This can be accomplished through programming of the Keyfob's A1 and A2 buttons. Activating the Keyfob's AUX 1 or AUX 2 button will trip the Relay Group, which will then trip the Relay and activate the ACM Door.

- a) Program the keyfob's wireless ID and Area and assign the "Relay Group # Toggle" function to Auxiliary 1 and Auxiliary 2 buttons.

**System Assignment for Account x255temp : Gemini X255**

EZM Assignments | **Wireless** | External Relay Control | Time Selection | System Reporting and Outputs | System Descri

Keyfob #	ID	Area	Aux 1 Function	Aux 2 Function
1	9B1AE0:F	Area 1	Relay Group 1 Toggle	Relay Group 8 Toggle
2	000000:0	None	None	None
3	000000:0	None	None	None

- b) Assign an External Relay to a Relay Group #.

**System Assignment for Account x255temp : Gemini X255**

EZM Assignments | **Wireless** | **External Relay Control** | Time Selection | System Reporting and Outputs | System Descri

#	Description	Relay #	Area Disarm	Timeout	min.sec.	Event \ Alarm Type \ Condition
1	Door 1 keyfob access	1	1	0	min.	Relay Group 1
2	Door 2 keyfob access	2	1	0	min.	Relay Group 8
3		3		0	min.	Area 1 Arm

- c) Assign a "Scheduled Free Access Index" (relay #) to an ACM door.

**Keypad Assignment for Account x255temp : Gemini X255**

Keypad Assignment | Keypad Features | Keypad Configuration | Keypad Reporting and Outputs | **ACM Assingment**

ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Stealth Mode	Scheduled Free Access Index
1	3	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1
		2	Area 1	12	13	14			<input checked="" type="checkbox"/>	2

## FIRST MAN IN FEATURE

This feature will allow the “first man” opening the premises in the morning to disarm and unlock the access door and to keep it unlocked until the system is rearmed at the end of the day.

When the security system is disarmed, either from the keypad or from the card reader, the access system will unlock the assigned door. The door can be unlocked indefinitely or for a predefined time period. Multiple doors can be unlocked simultaneously by this method. Upon the Arming of the security system, all associated doors will be locked.

Program as follows:

- a) Assign a “Scheduled Free Access Index” (relay #) to an ACM door.

ACM	Keypad	Door	Area	Zone	Forced Entry Zone	Door Ajar Zone	Arm All Areas Allowed	Disarm All Areas Allowed	Stealth Mode	Scheduled Free Access Index
1	3	1	Area 1	9	10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1
		2	Area 1	12	13	14			<input checked="" type="checkbox"/>	0

- b) Assign an External Relay to trip on “Area Disarm”. Time out “0” indicates No Timeout. You can also specify a timeout of 1 to 255 minutes.

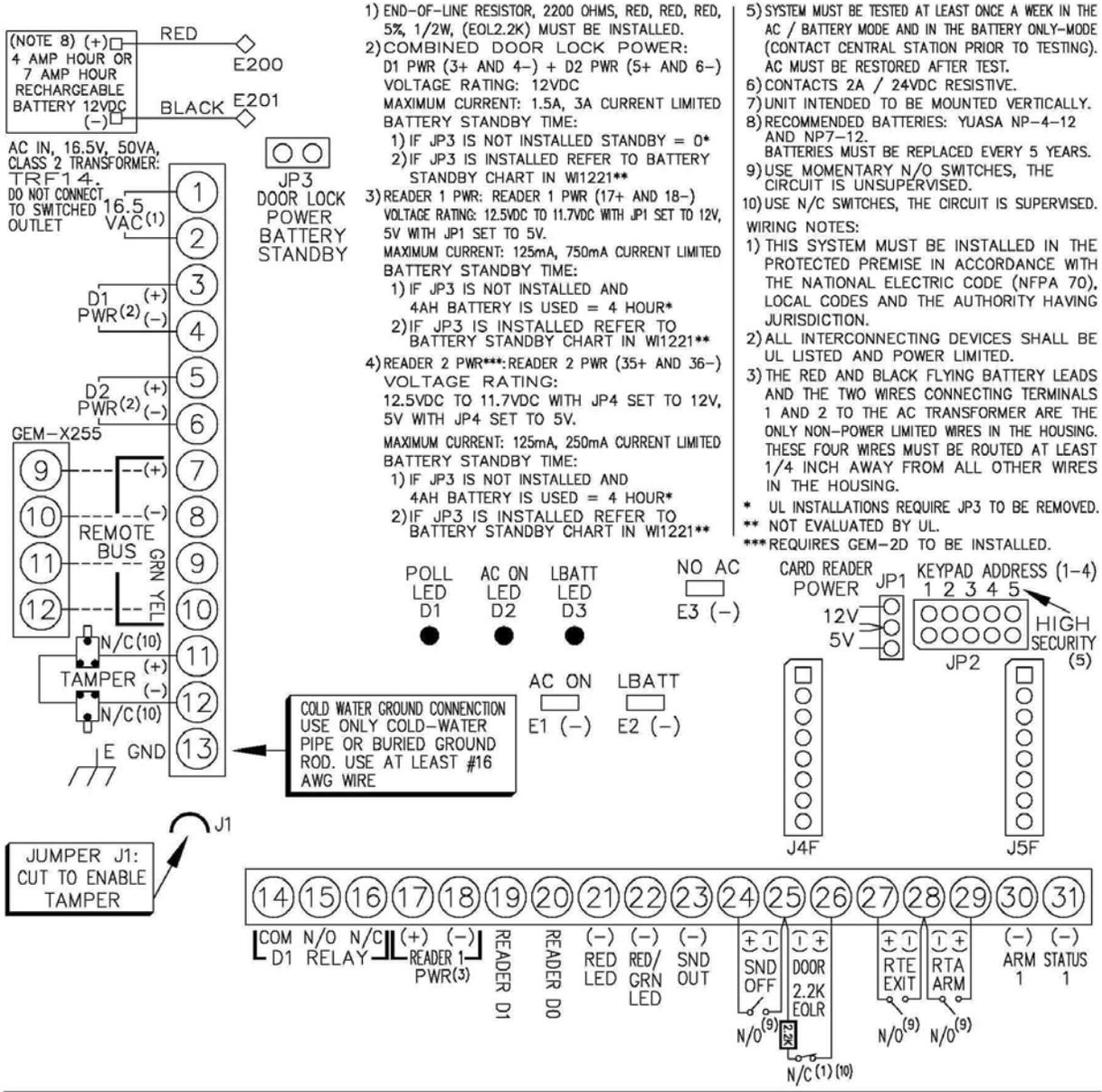
#	Description	Relay #	Area Disarm	Timeout	min.sec.	Event \ Alarm Type \ Condition
1	First Man In	1	1	0	min.	Area 1 Disarm
2		2		0	min.	Area 1 Arm
3		3		0	min.	Area 1 Arm

# NOTES

# NOTES

# GEM-ACM1D WIRING DIAGRAM

(REFER TO W1221)

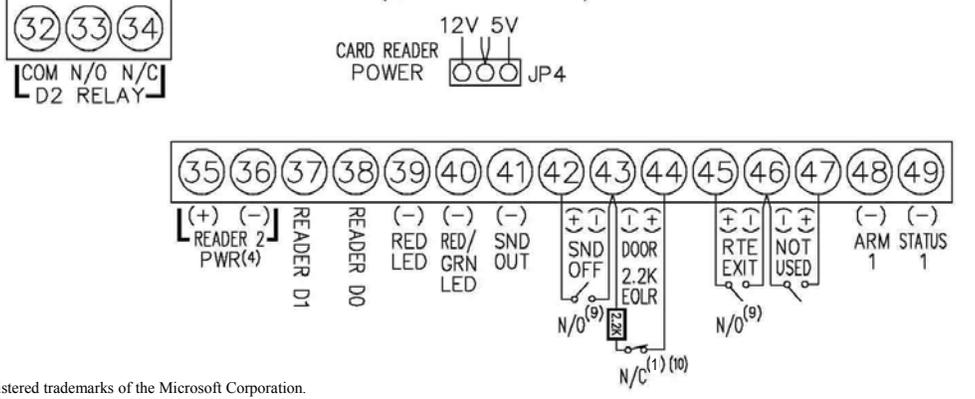


- 1) END-OF-LINE RESISTOR, 2200 OHMS, RED, RED, RED, 5%, 1/2W, (EOL2.2K) MUST BE INSTALLED.
- 2) COMBINED DOOR LOCK POWER: D1 PWR (3+ AND 4-) + D2 PWR (5+ AND 6-) VOLTAGE RATING: 12VDC MAXIMUM CURRENT: 1.5A, 3A CURRENT LIMITED BATTERY STANDBY TIME: 1) IF JP3 IS NOT INSTALLED STANDBY = 0\* 2) IF JP3 IS INSTALLED REFER TO BATTERY STANDBY CHART IN W1221\*\*
- 3) READER 1 PWR: READER 1 PWR (17+ AND 18-) VOLTAGE RATING: 12.5VDC TO 11.7VDC WITH JP1 SET TO 12V, 5V WITH JP1 SET TO 5V. MAXIMUM CURRENT: 125mA, 750mA CURRENT LIMITED BATTERY STANDBY TIME: 1) IF JP3 IS NOT INSTALLED AND 4AH BATTERY IS USED = 4 HOUR\* 2) IF JP3 IS INSTALLED REFER TO BATTERY STANDBY CHART IN W1221\*\*
- 4) READER 2 PWR\*\*\*: READER 2 PWR (35+ AND 36-) VOLTAGE RATING: 12.5VDC TO 11.7VDC WITH JP4 SET TO 12V, 5V WITH JP4 SET TO 5V. MAXIMUM CURRENT: 125mA, 250mA CURRENT LIMITED BATTERY STANDBY TIME: 1) IF JP3 IS NOT INSTALLED AND 4AH BATTERY IS USED = 4 HOUR\* 2) IF JP3 IS INSTALLED REFER TO BATTERY STANDBY CHART IN W1221\*\*

- 5) SYSTEM MUST BE TESTED AT LEAST ONCE A WEEK IN THE AC / BATTERY MODE AND IN THE BATTERY ONLY-MODE (CONTACT CENTRAL STATION PRIOR TO TESTING). AC MUST BE RESTORED AFTER TEST.
  - 6) CONTACTS 2A / 24VDC RESISTIVE.
  - 7) UNIT INTENDED TO BE MOUNTED VERTICALLY.
  - 8) RECOMMENDED BATTERIES: YUASA NP-4-12 AND NP7-12. BATTERIES MUST BE REPLACED EVERY 5 YEARS.
  - 9) USE MOMENTARY N/O SWITCHES, THE CIRCUIT IS UNSUPERVISED.
  - 10) USE N/C SWITCHES, THE CIRCUIT IS SUPERVISED.
- WIRING NOTES:**
- 1) THIS SYSTEM MUST BE INSTALLED IN THE PROTECTED PREMISE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NFPA 70), LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION.
  - 2) ALL INTERCONNECTING DEVICES SHALL BE UL LISTED AND POWER LIMITED.
  - 3) THE RED AND BLACK FLYING BATTERY LEADS AND THE TWO WIRES CONNECTING TERMINALS 1 AND 2 TO THE AC TRANSFORMER ARE THE ONLY NON-POWER LIMITED WIRES IN THE HOUSING. THESE FOUR WIRES MUST BE ROUTED AT LEAST 1/4 INCH AWAY FROM ALL OTHER WIRES IN THE HOUSING.
- \* UL INSTALLATIONS REQUIRE JP3 TO BE REMOVED.  
\*\* NOT EVALUATED BY UL.  
\*\*\* REQUIRES GEM-2D TO BE INSTALLED.

# GEM-2D (OPTIONAL) WIRING DIAGRAM

(REFER TO W1239)



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NAPCO RECOMMENDS THAT THE ENTIRE SYSTEM BE COMPLETELY TESTED WEEKLY.

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