



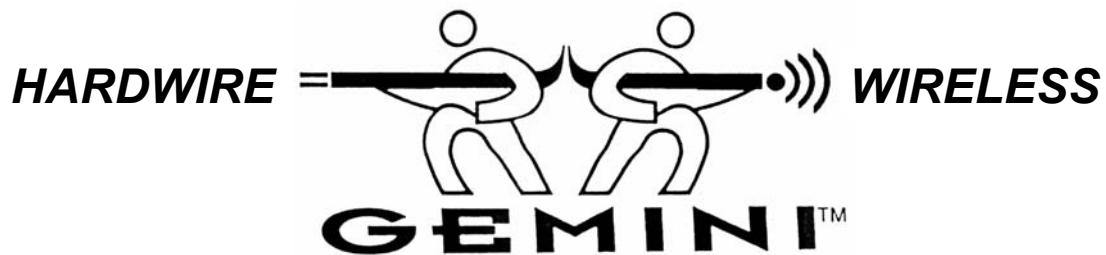
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INSTALLATION INSTRUCTIONS

VOLUME 2

COMPLIES WITH:

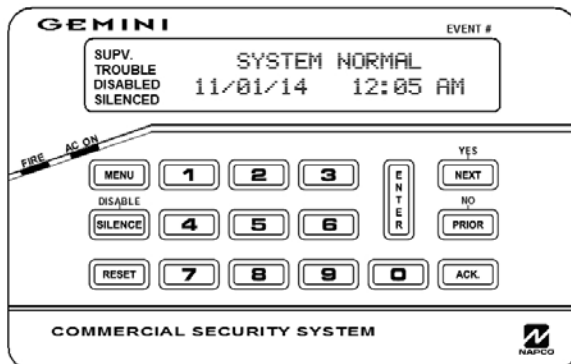
- NFPA 72 NATIONAL FIRE ALARM CODE
- UL 864 (9TH EDITION)



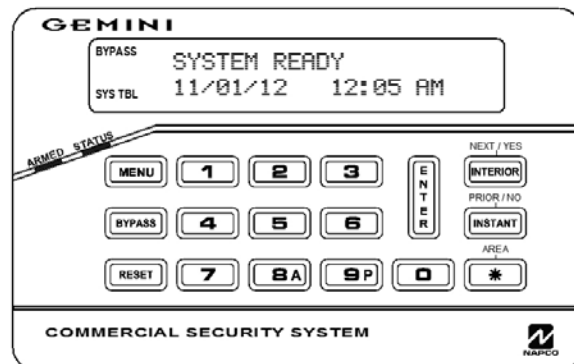
COMMERCIAL / RESIDENTIAL
GEMC-255
GEMC-128
GEMC-96
GEMC-32

CONTROL PANEL / COMMUNICATOR

Installing the GEMINI C-Series Control Panels with the **GEMC-FK1** Keypad and the **GEMC-BK1** Keypad



GEMC-FK1 Keypad



GEMC-BK1 Keypad

THIS MANUAL INCLUDES FEATURES WHICH ARE ONLY AVAILABLE IN CONTROL PANEL FIRMWARE VERSION 82G OR LATER, AND REFLECTS THE FEATURES FOUND IN PCD-WINDOWS QUICKLOADER DOWNLOAD SOFTWARE VERSION 6.0 OR GREATER.

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Note: The reference "GEMC-XXX" used in this manual is intended to include the Gemini C-Series control panel models GEMC-255, GEMC-128, GEMC-96 and/or GEMC-32. In addition, the reference "GEMC-NACXX" used in this manual is intended to include the NAC Extender models GEMC-NAC7L and/or GEMC-NAC7S.

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Refer to accompanying Gemini C-Series Control Panel Programming Instructions (WI1673)
for programming information.



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NOTE: THESE INSTRUCTIONS ARE INTENDED AND WRITTEN FOR PROFESSIONAL INSTALLATION PERSONNEL HAVING SUITABLE TRAINING, EXPERIENCE AND INSTALLATION EQUIPMENT. IT IS RECOMMENDED THAT AFTER PROGRAMMING, THE ERROR CHECK UTILITY OF PCD-WINDOWS DOWNLOAD SOFTWARE BE USED TO VERIFY THAT THE CONTROL PANEL PROGRAM CONTAINS NO ERRORS OR CONFLICTS WHICH MAY INHIBIT ITS INTENDED OPERATION.

KEYPAD TROUBLE MESSAGES

TBL #	FIRE KEYPAD DISPLAY BURG KEYPAD DISPLAY	KEYPAD TROUBLE DESCRIPTION	KEYPAD TYPE (GEMC-FK1 FIRE KEYPAD OR GEMC- BK1 BURG KEYPAD)	FIRE TROUBLE TYPE
E01-00	SYStrbl E01 xxx MM/DD/YY HH:MM 'AC Power Failure' 'E01-000 SERVICE' 'AC POWER FAIL ' 'E01-00 SERVICE'	System AC Power failure/outage. Check blown fuse or circuit breaker.	Fire & Burg Keypads	Auto-Reset
E02-00	SYStrbl E02 xxx MM/DD/YY HH:MM 'Battery Trouble ' 'E02-000 SERVICE ' 'BATTERY TROUBLE ' 'E02-00 SERVICE'	System Battery Trouble. Generated when there is either a depleted or damaged battery and/or the battery charging circuit is not working. If there has been a recent power failure, the battery may be partially depleted and must be recharged by the control panel. The control panel performs an automatic test of the battery every 100 seconds, at which time the trouble will clear if the battery has been recharged and the charging circuit is functioning correctly. See also E63 below, the description for the GEMC-BM/PS low battery.	Fire & Burg Keypads	Auto-Reset
E03-00	SYStrbl E03 xxx MM/DD/YY HH:MM 'Comm Failure ' 'E03-000 SERVICE '	Communication Failure: The system was not able to report to central station. If this is due to a temporary interruption in the telephone service, the trouble can be cleared when the service is restored by performing a Communication Test: Fire Keypads 1. Enter code to unlock keypad and press MENU. 2. Press MENU until "ACTIVATE DIALER TEST" appears in the window. 3. Press ENTER to send a test signal to the central station. 4. Allow a minute or 2 for the call to reach the Central Station then press RESET. Burg Keypads: 1. While disarmed, enter your User Code followed by MENU. 2. Answer NO until "ACTIVATE DIALER TEST" appears in the window. 3. Press YES to send a test signal to the central station. Note: Will also display if panel improperly programmed to report (Report Alarm, Report Codes, Subscriber ID Numbers, etc. must be programmed correctly).	Fire & Burg Keypads	Auto-Reset
E04- NNNNNN	SYStrbl E04 xxx MM/DD/YY HH:MM 'RFPnt Supv Trbl' 'E04-NNN XXXXXX' 'WL/SLC TROUBLE' 'E04-NNN #XXXXXX'	Wireless Transmitter or SLC Point Supervision Failure. A problem has been detected either in a wireless transmitter or a burglary SLC Point. "XXXXXX" = The wireless/SLC device 6-digit ID map number. NNN = associated zone number	Fire & Burg Keypads	Auto-Reset
E05-NN	SYStrbl E05 xxx MM/DD/YY HH:MM 'RFPnt LowBattery' 'E05-NNN XXXXXX' 'WireLessLOW BATT' 'E05-NNN #XXXXXX'	Wireless Transmitter Low Battery. The battery in a wireless transmitter is low and should be replaced. This transmitter is on the zone corresponding to the number NN. Warning: Replace batteries only with the same type as specified on the sticker mounted on the device or in the installation instructions. Use of another battery may present a risk of fire or explosion. Do not recharge or disassemble battery, or dispose of in fire. "XXXXXX" = The wireless device 6-digit ID map number. NN or NNN = Zone number.	Fire & Burg Keypads	Auto-Reset
E06-NN	SYStrbl E06 xxx MM/DD/YY HH:MM 'RFRec NoResponse' 'E06-000 SERVICE ' 'RECRf/slc NO-RES' 'E06-NNN SERVICE'	RF Receiver or SLC Module response trouble. NN = Receiver or SLC Module address (1-4). Check connection to receiver/SLC module, check Receiver wiring is on correct bus Fire or Burg and/or correct SLC connector SLC1 or SLC2, check to make sure address jumper on receiver or SLC Module is correct. Make sure no duplicate addresses are used. For Burglary keypads, NNN = receiver number (1-4).	Fire & Burg Keypads	Auto-Reset
E07-00	'Download Failure' 'E07-00 SERVICE' 'DOWNLOAD FAIL ' 'E07-00 SERVICE'	Download attempt failure.	Fire & Burg Keypads	Auto-Reset
E08-NN	SYStrbl E08 xxx MM/DD/YY HH:MM 'Telco Line Fail ' 'E08-NNN SERVICE ' 'TELCO LN TROUBLE' 'E08-NN SERVICE'	Telephone line failure (system trouble displays after a programmed delay of low on hook voltage and no off hook line current from connected phone line). NN = Telco line number 1 or 2.	Fire & Burg Keypads	Auto-Reset
E09-00	SYStrbl E09 xxx MM/DD/YY HH:MM ' COLD START ' 'E09-000 SERVICE ' 'NOT PROGRAMMED ' 'E09-00 SERVICE'	A system cold start was performed, erasing all programmed data in the control panel such as the Dealer Program, Zone Description Data and Schedules.	Fire & Burg Keypads	Latching
E10-NN	'KPD/ACM TROUBLE ' 'E10-NN SERVICE'	Burglary keypad or ACM response failure. NN is keypad number (address 001-015). Check to make sure correct Keypad address configured (no duplicates) and wired to Burg bus (not Fire bus).	Burg Keypad Only	N/A

KEYPAD TROUBLE MESSAGES (CONT'D)

E11-NN	'burgKPD/ACM TAMP' 'E11-NN SERVICE'	GEMC-BK1 keypad or ACM cover opened. NNN is keypad number (address). NN is the keypad or ACM address number.	Burg Keypad Only	N/A
E12-NN	'BURG EZM TROUBLE' 'E12-NN SERVICE'	Burg Expansion Zone Module response failure. NN = EZM address number. Check to make sure correct EZM address jumpers (no duplicates) and wired to Burg bus (not Fire bus).	Burg Keypad Only	N/A
E13-NN	'BURG EZM TAMPER ' 'E13-NN SERVICE'	Burg Expansion Zone Module cover removed. NN = module number.	Burg Keypad Only	N/A
E14-NNN	SYStrbl E14 xxx MM/DD/YY HH:MM 'NacRly BoardTrbl' 'E14-000 SERVICE '	NAC or Relay board response failure. NNN = Relay board number (address). Check to make sure correct Relay group address jumpers are set (no duplicates) and GEMC-RM3008's and GEMC-OUT8's are wired to the correct bus (either the Fire bus or the Burg bus). If the GEMC-FW-SLC or GEMC-BSLC is used, check to ensure correct relay group dip switch settings. If the GEMC-NAC7S or GEMC-NAC7L is used, check to ensure the address jumpers are set correctly.	Fire & Burg Keypads	Auto-Reset
	'RELAY BOARD TRBL' 'E14-NN SERVICE'			
E15-NNNNNN	SYStrbl E15 xxx MM/DD/YY HH:MM 'RFpnt Tamper' 'E15-NNN XXXXXX'	Wireless RF Transmitter or SLC Point cover removed or the unit is removed from its mounting location and/or an SLC device cover is removed. "XXXXXX" is the wireless device 6-digit ID map number or SLC point address. NNN is the associated zone number	Fire & Burg Keypads	Auto-Reset
	'WL/SLC TAMPER' 'E15-NNN #XXXXXX'			
E16-NN	SYStrbl E16 xxx MM/DD/YY HH:MM 'RFRc JammedTrbl' 'E16-000 SERVICE '	Wireless RF Receiver or Burg SLC Trouble. NN = Receiver/SLC Module address (1-4). Either a Receiver is receiving a constant conflicting signal or noise that may interfere with receiving signals, or a GEMC-BSLC module has detected a short on the bus (class A or B) and/or an open on a class A loop. Consider moving Receiver location or repairing SLC loop.	Fire & Burg Keypads	Auto-Reset
	'RECr/slc TRBL' 'E16-NN			
E17-NN	SYStrbl E17 xxx MM/DD/YY HH:MM 'RFRc Tamper' 'E17-000 SERVICE '	Wireless RF receiver cover removed or removed from mounting location. NN = Receiver address (1-4).	Fire & Burg Keypads	Auto-Reset
	'RECr TAMPER' 'E17-NN SERVICE'			
E18-NN	'LOBATT KEYFOB NN' 'E18-NN #XXXXXX'	Wireless keyfob transmitter low battery. NN = Keyfob transmitter number. "XXXXXX" is the wireless device 6-digit ID map number.	Burg Keypad Only	N/A
E19-00	'SystemMemoryFail' 'E19-00 SERVICE'	Internal User Program memory error. Fire Keypads: Unlock keypad and press RESET to clear. Burg Keypads: Select menu option RESET SYSTEM TBL then press ENTER .	Fire & Burg Keypads	Latching
	'USER MEM ERROR ' 'E19-00 SERVICE'			
E20-00	SYStrbl E20 xxx MM/DD/YY HH:MM 'Panel Memory ERR' 'E20-000 SERVICE '	Internal Program memory error. Fire Keypads: Unlock keypad and press RESET to clear. Burg Keypads: Select menu option RESET SYSTEM TBL then press ENTER .	Fire & Burg Keypads	Latching
	'DEALER MEM ERROR' 'E20-00 SERVICE'			
E22-NNN	'PIR SENSOR TRBL ' 'E22-NNN SERVICE'	No trip detected on PIR Supervision Zone within programmed Sensor-Watch time. NN = Zone number. To reset, press NEXT button at "RESET SENSOR MSG" function display.	Burg Keypad Only	N/A
E24-00	SYStrbl E24 xxx MM/DD/YY HH:MM 'TIME FOR SERVICE' 'E24-00 SERVICE '	A service message can be programmed through the PCD-Windows Quickloader (event-schedule screen) to remind the user to arrange for scheduled maintenance. At the programmed date and time, the keypad sounder will start to pulse and the display will read "TIME FOR SERVICE". Fire Keypads: Unlock keypad and press RESET to clear. Burg Keypads: Select menu option RESET SYSTEM TBL then press ENTER .	Fire & Burg Keypads	Latching
E26-00	SYStrbl E26 xxx MM/DD/YY HH:MM 'System Gnd Fault' 'E26-000 SERVICE '	System Ground Fault. A system wire is shorted to earth ground.	Fire Keypad Only	Auto-Reset
E27-00	SYStrbl E27 xxx MM/DD/YY HH:MM 'Printer Trouble ' 'E27-001 SERVICE '	Printer communication failure. Check printer connections.	Fire Keypad Only	Auto-Reset

KEYPAD TROUBLE MESSAGES (CONT'D)

E28-00	SYStrbl E28 xxx MM/DD/YY HH:MM 'ErrorCheck Req' 'E28-000 SERVICE'	Fire System is in "ENABLE PROGRAMMING" mode ("ENABLE PROGRAMMING" is entered via the Keypad Function menu) and therefore may not be relied upon to perform as intended. The system account program must be downloaded with PCD-Windows performing an error check. The system must always be tested after download to confirm proper operation. Access to panel programming must be enabled via the above described keypad Function menu to allow keypad programming or remote downloading of FIRE-related programming changes.	Fire Keypad Only	Auto-Reset
E31-NNN	SYStrblE31 xxx MM/DD/YY HH:MM 'FireEzmNoRespTb' 'E31-NN SERVICE'	Fire Expansion Zone Module response failure. NN = EZM address number (001-031). Check to make sure correct EZM address jumpers (no duplicates) and wired to Fire bus (not Burg bus).	Fire Keypad Only	Auto-Reset
E32-00	SYStrbl E32 xxx MM/DD/YY HH:MM 'Fire Keypad Trbl' 'E32-NNN SERVICE'	Fire keypad response failure. NNN is keypad number (address 001-015). Check to make sure correct Keypad address configured (no duplicates) and wired to Fire bus (not Burg bus).	Fire Keypad Only	Auto-Reset
E33-NNN	SYStrbl E33 xxx MM/DD/YY HH:MM 'FireEzm Tamper' 'E33-000 SERVICE'	Fire Expansion Zone Module tamper. NN = EZM address number. Check to make sure correct EZM address jumpers (no duplicates) and wired to Fire bus (not Burg bus). In addition, ensure the module is mounted to the wall correctly and the cover is in place.	Fire Keypad Only	Auto-Reset
E35-NNN	RlyTb/ E35 NN MM/DD/YY HH:MM NN-XXXXXXXXXXXXX XXXXXXXXXXXXXXXXX 'SUPV RELAY TRBL' 'E35-NN SERVICE'	Supervised output trouble. Check the following: 1. NAC's A-D open, short or overcurrent on output. 2. GEMC-SLC-SOM has open or short. 3. GEMC-SLC-SOM is not powered correctly. 4. GEMC-NAC7L or GEMC-NAC7S NAC outputs 1-4 open, shorted or overcurrent on output. 5. Output is disabled (display will read "RlyDis/ E35 NN". "NN" is the external output number, followed by a programmed 29-character NAC description (multiple "X" characters). For Burglary systems, a GEMC-BSLC-RLY is not responding or its relay is not working correctly.	Fire & Burg Keypads	Auto-Reset
E51-00	'BURG BELL TRBL' 'E51-00 SERVICE'	Burg Bell Output Supervision trouble.	Burg Keypad Only	N/A
E54-00	'ACM1 TROUBLE' 'E54-00 SERVICE'	Power failure for ACM #1. Check power transformer. Check for blown fuse or circuit breaker; general power outage. Also may indicate battery below 11 volts. If battery not recharged within 24 hours, replace it.	Burg Keypad Only	N/A
E55-00	'ACM2 TROUBLE' 'E55-00 SERVICE'	Power failure for ACM #2. Check items listed in E54 above.	Burg Keypad Only	N/A
E56-00	'ACM3 TROUBLE' 'E56-00 SERVICE'	Power failure for ACM #3. Check items listed in E54 above.	Burg Keypad Only	N/A
E57-00	'ACM4 TROUBLE' 'E57-00 SERVICE'	Power failure for ACM #4. Check items listed in E54 above.	Burg Keypad Only	N/A
E59-00	SYStrbl E59 xxx MM/DD/YY HH:MM 'Tcpi Comm Fail' 'E59-NNN SERVICE' 'Tcpi Comm Fail' 'E59-NNN SERVICE'	Fail to Communicate with NL-MOD. Caused by not getting required kiss-off with timeout of NL-MOD after a panel-initiated report has been sent. This error is reportable. "NNN" is the receiver number (1-3).	Fire & Burg Keypads	Auto-Reset
E60-00	SYStrbl E60 000 MM/DD/YY HH:MM 'Housing Tamper' 'E60-NN SERVICE'	Control panel enclosure ("housing") door was opened and/or removed from mounting location.	Burg Keypad Only	N/A
E62-00	'BURG MOD NO-RESP' 'E62-00 SERVICE'	Failure of the burglary module to respond to communications. "00" is the module number.	Burg Keypad Only	N/A
E63-00	'BURG MOD LOBATT' 'E63-00 SERVICE'	A battery trouble has been detected on the battery connected to the GEMC-BM/PS Burg Module. The battery is tested every 4 hours for disconnected or low battery. Also may indicate battery below 11 volts. If battery not recharged within 24 hours, replace it.	Burg Keypad Only	N/A
E66-00	SYStrbl E66 xxx MM/DD/YY HH:MM 'CleanSmk' 'E66-NNN XXXXXX'	Wireless or SLC Smoke Detector is indicating it needs to be cleaned or its sensitivity is falling below an acceptable level. NNN is the associated zone number; XXXXXX is the Device Six-Character ID number.	Fire Keypad Only	Auto-Reset

KEYPAD TROUBLE MESSAGES (CONT'D)

E72-00	SYStrbl E72 xxx MM/DD/YY HH:MM 'RfRec High Noise' 'E72-000 SERVICE '	Wireless Radio Receiver High Noise. Extraneous wireless signals are being detected. Try re-locating the GEMC-RECV receiver to a quieter position. XXX is the receiver number.	Fire & Burg Keypads	Auto-Reset
E90-00	SYStrbl E90 xxx MM/DD/YY HH:MM 'FslcRec Mem Fail' 'E90-000 SERVICE ' SLCmod mem TBL	Fire or Burglary SLC module memory failure. Indicates the onboard memory of the SLC device is not working as intended. Attempt to correct by downloading via PCD-Windows Quickloader download software. Replace module if trouble persists.	Fire & Burg Keypads	Latching
E91-00	SYStrbl E91 000 MM/DD/YY HH:MM 'NLM SUPV TROUBLE' 'E91-000 SERVICE ' 'NLM SUPV TROUBLE' 'E91-000 SERVICE '	NL-MOD supervision trouble. A problem has been detected with the NL-MOD. Caused when control panel is not communicating with the NL-MOD; either the NL-MOD is not working properly or it is not connected to the control panel. Check the 4 wire harness. This error is reportable.	Fire & Burg Keypads	Auto-Reset
E92-000	SYStrbl E92 xxx MM/DD/YY HH:MM 'FslcRec Unmapped' 'E92-000 SERVICE '	"Unmapped" Device Trouble. One or more Fire SCL device(s) associated with the GEMC-FW-SLC Fire SLC module was found on the loop but not mapped (programmed) to any zone.	Fire Keypad Only	Latching
E94-000	SYStrbl E94 xxx MM/DD/YY HH:MM 'FslcRec NoRespon' 'E94-000 SERVICE '	For Fire Systems: A response failure in the GEMC-FW-SLC Fire SLC Module. Ensure the associated SLC Module is correctly addressed and its wiring harness is placed in the correct connector (SLC #1 or SLC #2).	Fire Keypad Only	Auto-Reset
E96-000	SYStrbl E96 xxx MM/DD/YY HH:MM 'FslcRec LoopTrbl' 'E96-000 SERVICE '	GEMC-FW-SLC Fire SLC Module wiring trouble. Short detected on Class B loop; open or short detected on a Class A loop. Check SLC loop wiring connections. NNN = module number.	Fire Keypad Only	Latching
E97-NNNNNN	SYStrbl E97 xxx MM/DD/YY HH:MM 'FslcPnt Trouble' 'E97-NNN XXXXXX'	Trouble detected on a Fire SLC device. Each device generates troubles specific to its Type (see list numbered 1-9 below) and all troubles are indicated with this trouble except the E66 "CleanSmk" sensitivity trouble. NNN is the associated zone number; XXXXXX is the Device Six-Character ID number (the second number from left is the "Type" as per the list below). To determine the specific trouble, PCD-Windows Quickloader "Status Upload" must be performed. Each device Type is as follows: 1: FWC-FSLC-SMK Photoelectric Smoke 2: FWC-FSLC-HEAT Heat Sensor 3: FWC-FSLC-PULL Analog Manual Pull Station 4: FWC-FSLC-EZM1 Fast Response Contact Monitor Module 5: FWC-FSLC-SOM1 Supervised Output Module 6: FWC-FSLC-RM2 Dual Relay Module 7: FWC-FSLC-DUCT Photoelectric Duct Sensor 8: FWC-FSLC-EZM2 Dual Input Monitoring Module 9: FWC-FSLC-CZM Conventional Zone Module	Fire Keypad	Auto-Reset

NAC SYNCHRONIZATION RULES

NAC SYNCHRONIZATION RULES

The UL 864 9th edition standard includes the requirement that *all visible notification appliances in the same field of view and all audible notification appliances in the same notification zone* operate in a synchronized manner.

The Gemini C-Series control panels and NAC extenders comply with this standard with three different methods that must be understood before a final installation method is selected.

DEFINITIONS

1. **NAC Circuit:** One of 4 possible outputs on either the GEMC-NACXX or GEMC-XXXMB motherboard. Each NAC circuit can deliver UP TO 2.0A.
2. **Notification Zone:** A common evacuation area. Multiple circuits can be in a zone.
3. **Field of View:** All the strobes that can be seen by an individual at any point WITHIN the protected premises.
4. **Sync Pattern:** The GEMC-NACXX or GEMC-XXXMB have two sync patterns: S1 and S2. A synchronized NAC output must be assigned to S1 or S2. The two sync patterns are ½ second apart as shown in Fig 1 below. S2 is referred to as the "offset" since it is offset ½ second from S1.
5. **Sync Group:** A collection of NAC circuits on the GEMC-XXXMB and one or multiple GEMC-NACXX's sharing the same sync pattern.
6. **Sync Input:** An input connection that allows a GEMC-NACXX to synchronize its sync patterns to the main panel or to another GEMC-NACXX.

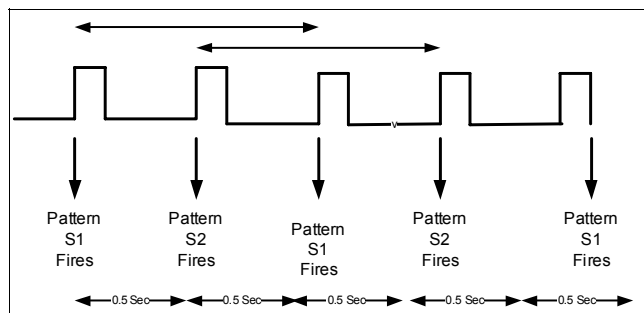


FIG. 1: TWO SYNC PATTERNS ARE ½ SECOND APART

Method 1 (Standard Temporal)

Most installations only require synchronized strobes and synchronized temporal sounding appliances. The easiest method used to comply with this requirement is to use either the compatible Wheelock or System Sensor "Smart" devices, as listed in the GEMC-XXXMB installation instructions (WI1653). When these are used, the strobes and horns can share the same NAC wires, reducing the number, length and complexity of wire runs. The following rules apply:

Rule 1: "Smart" devices must either be System Sensor or Wheelock, but both can not be used in the same system.

Rule 2: The total current from the combined NAC circuits on one GEMC-XXXMB or NAC7L/7S sharing the same sync pattern cannot exceed 4A. [Example: NAC A and B synched to S1 draw 4A and NAC C and D are offset using S2 for a total of 2.5A].

Rule 3: All notification appliances in the same field of view must use the same sync pattern.

The maximum current draw from "Smart" (Synchronized) circuits on either the GEMC-XXXMB or GEMC-NACXX can not exceed 4A (non-synchronized NAC circuits can draw a maximum 6.5A from the NAC's) if all visible notification appliances are in the same field of view and all audible notification appliances are in the same notification zone.

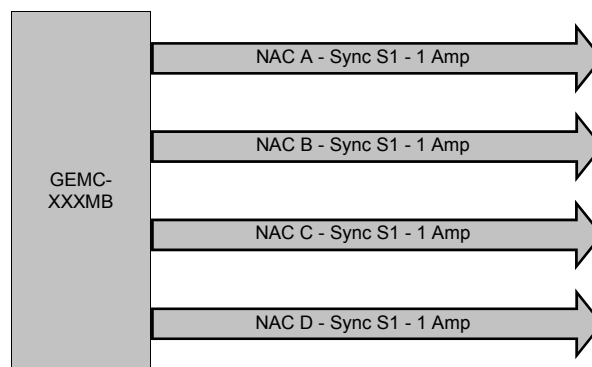
However, if there are two or more Sync Groups, then the full 6.5A maximum alarm current can be utilized by wiring one group to the first two NAC's, wiring the second group to the third and fourth NAC's and programming/configuring the GEMC-XXXMB / GEMC-NACXX for "NAC offset". This will cause the 2 pairs of NAC circuits to activate the strobes and horns ½ a second apart. **Note:** Each NAC maximum current is 2A. **Warning:** Strobes not within the same sync group may never be within the same field of view.

Rule 4: If a group of notification appliances in the same field of view and all audible notification appliances in the same notification zone require more than 4A, an additional GEMC-NACXX must be used and synchronized using a dedicated NAC circuit from a master GEMC-XXXMB or GEMC-NACXX wired to the INPUT 1 of the slave GEMC-NACXX.

Rule 5: In large systems with multiple groups of notification appliances in the same field of view and all audible notification appliances in the same notification zone, the maximum alarm current of each GEMC-XXXMB / GEMC-NACXX can be utilized by programming / configuring the GEMC-XXXMB / GEMC-NACXX for "NAC offset" and grouping all non-offset outputs together and offset outputs together.

Small System – No NAC7L/7S Extender – Long Wire Runs

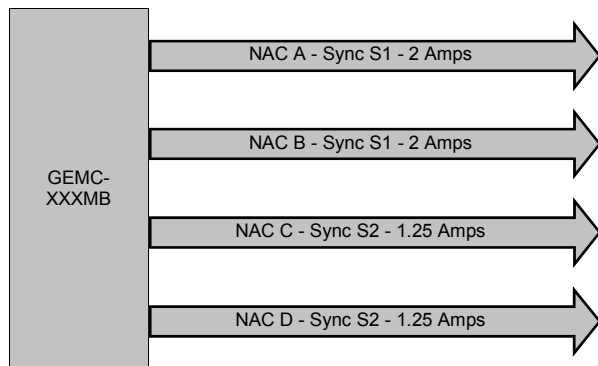
In this example, NAC A, B, C and D are one Sync Group using S1 supplying 4A on four circuits, with each circuit supplying 1A. This allows the longest wire runs but trades off against output power by limiting to 4A.



Small System – No NAC7L/7S Extender – Normal Runs

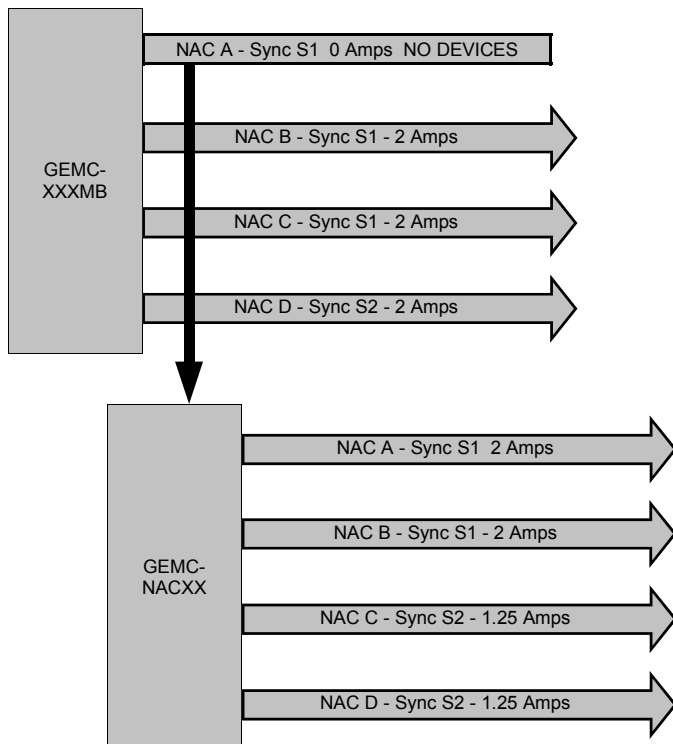
In this example, NAC A and B are one Sync Group using S1 supplying 4A and NAC C and D are a Sync Group using S2, offset from S1, supplying 2.5A:

NAC SYNCHRONIZATION RULES (CONT'D)



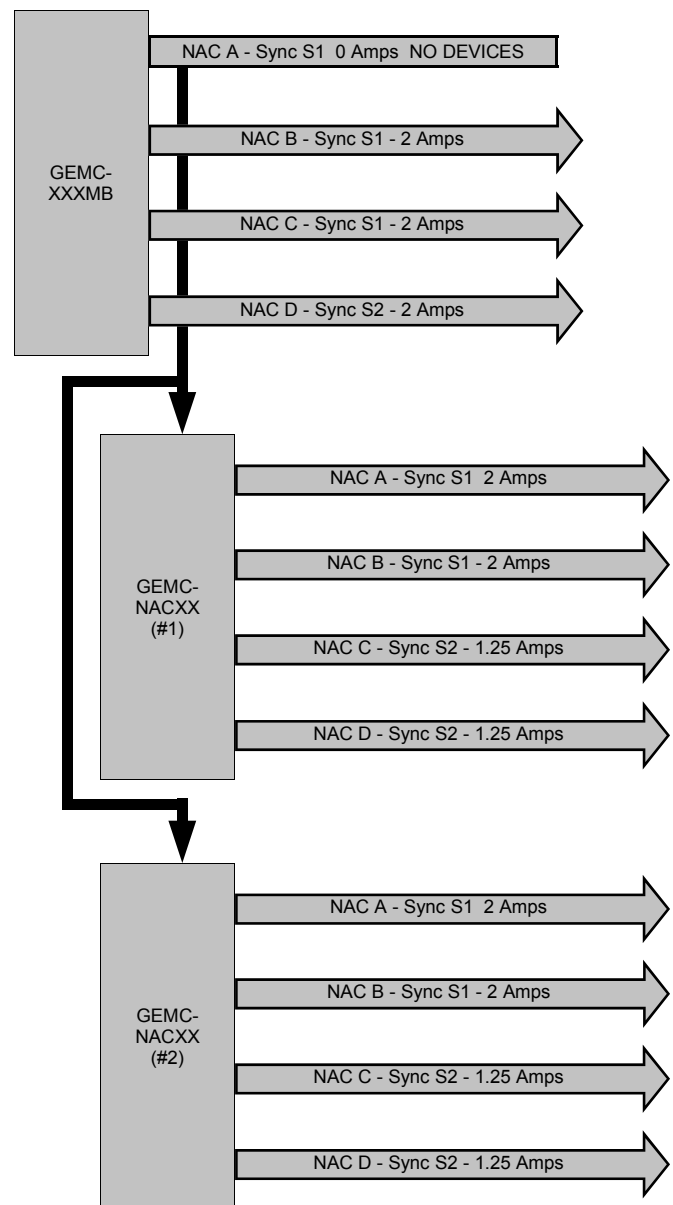
Large System - One GEMC-NACXX Extender

In this example, NAC A, B and C on the GEMC-XXXMB and NAC A and B on NAC7L/7S are one Sync Group using S1 supplying 8A on 4 circuits. NAC C and D on the GEMC-XXXMB and NAC C and D on the GEMC-NACXX are a Sync Group using S2, offset from S1, supplying 4.5A on 3 circuits.



Larger System - Two GEMC-NACXX Extenders

In this example, NAC A, B and C on the GEMC-XXXMB and NAC's A and B on each of the (2) GEMC-NACXX extenders are one Sync Group using S1 supplying 12A on 6 circuits. NAC C and D on the GEMC-XXXMB and NAC's C and D on each of the (2) GEMC-NACXX's are a Sync Group using S2, offset from S1, supplying 7.0A on 5 circuits.



Programming Method 1 (Standard Temporal):

In PCD-Windows Quickloader download software, program as follows:

1. Do not select option "Coded Alarms by Zone" in the **NAC/Output Options** screen;
2. Select "Silenceable" and "Smart" for each NAC;
3. Program the selected NAC to activate on fire alarm or specific zone alarms in the **By Zone** feature screen (A-D, 1-8) or the **NAC/Output Events** screen.

Wiring Method 1

Use only all "Smart" Wheelock or all "Smart" System Sensor Strobes and Horns. **Note:** Strobes and Horns may share NAC's.

NAC SYNCHRONIZATION RULES (CONT'D)

Method 1 Operation (Standard Temporal)

When a fire zone programmed to activate any NAC goes into alarm, all horns on the NAC's will sound synchronized temporal and all strobes will activate synchronously. The horns will continue until a Fire keypad is unlocked and the **SILENCE** button is pressed. Subsequent alarms that occur after silence, but before all fire zones are restored, will reinitiate the cadence alarm. The strobes will continue until the **RESET** button is pressed and all fire alarms are restored.

Method 2 (Non-standard Cadence)

The second method of synchronization uses non-standard cadences in place of the standard temporal audible alarm (this configuration is uncommon).

Because the system requires synchronized strobes, compatible Wheelock or System Sensor "Smart" strobes must be used. Conventional 24V sounding appliances may be used or listed Wheelock or System Sensor devices that provide for a synchronized strobe input and a separate conventional horn input (such as the Wheelock MT series).

Strobes and horns may not be shared on the same NAC, therefore each group of notification appliances in the same field of view and all audible notification appliances in the same notification zone will require at least 2 NAC's, one for the strobe device, the other for the conventional audible sounders.

Note: The strobe wiring, programming and configuring method is the same as method 1.

The horn will not be generating the temporal output and therefore does not require synchronization. Horns on the NAC circuits of the same GEMC-XXXMB or GEMC-NACXX will be synchronized to each other; but they will not be synchronized to horns wired to other GEMC-XXXMB's or GEMC-NACXX's. *It is therefore advised that horns wired to different GEMC-XXXMB's or GEMC-NACXX's not be placed too close together.*

Current requirements for the strobes are the same as method 1, rules 2, 3 and 4.

Programming Non-standard (Method 2) Cadences

In PCD-Windows Quickloader download software, program as follows:

1. Do not select option "Coded Alarms by Zone" in the **NAC/Output Options** screen;
2. Select "Silence-able", "Cadence "ENABLE" for each NAC and one of the four available cadence options in the **Cadence** column of the **NAC/Output Assignment** screen;
3. Program the selected NAC to activate on fire alarm or specific zone alarms in the **By Zone feature screen (A-D, 1-8) or the NAC/Output Events screen**

Note: All outputs selected for Cadence will only generate the single selected cadence type. NAC's can not have different cadences.

Non-standard (Method 2) Cadence Operation:

When a fire zone, programmed to activate any NAC programmed for Coded, goes into alarm, the NAC will produce the selected Cadence type until a keypad is unlocked and **SILENCE** is pressed. Subsequent alarms that occur after silence, but before all fire zones are restored will reinitiate the cadence alarm.

Method 3 (Coded Alarm by Zone)

The third method of synchronization uses *coded alarms by zone* in place of the standard temporal audible alarm. This method is requested for schools and other institutions that would like to identify the device or zone that initiated the alarm to determine the proper egress route or to allow proper instructed authorities to quickly determine if a pull station had been improperly activated prior to evacuation.

Because the system requires synchronized strobes, compatible Wheelock or System Sensor "Smart" strobes must be used. Conventional 24V sounding appliances may be used or listed Wheelock or System Sensor devices that provide for a synchronized strobe input and a separate conventional horn input (such as the Wheelock MT series).

Strobes and Horns may not be shared on the same NAC, therefore each group of notification appliances in the same field of view and all audible notification appliances in the same notification zone will require at least 2 NAC's, one for the Strobe device, the other for the conventional audible sounders.

Note: The strobe wiring, programming and configuring method is the same as method 1.

The horn will not be generating the temporal output and therefore does not require synchronization. Horns on the NAC circuits of the same GEMC-XXXMB or GEMC-NACXX will be synchronized to each other, however, they will not be synchronized to horns wired to other GEMC-XXXMB's or GEMC-NACXX's. *It is therefore advised that horns wired to different GEMC-XXXMB's or GEMC-NACXX's not be placed too close together.*

Current requirements for the strobes are the same as method 1, rules 2, 3 and 4.

Coded Alarm by Zone (Method 3) Programming:

1. Select option "Coded Alarms by Zone" in the NAC/Output Options Screen
2. Select "Silence-able", "Cadence "ENABLE" for each NAC one of the 4 available cadence options in the Cadence column of the NAC/Output Assignment screen.
3. Program the selected NAC to activate on fire alarm or specific zone alarms in the By Zone feature screen (A-D, 1-8) or the NAC/Output Events Screen
4. Select one of the 31 cadences for each zone in the Zone assignment screen.

Note: "Smart" Synchronized Wheelock and System Sensor horns are NOT synchronized with conventional horns programmed for temporal; *they must never be placed in the same audible notification appliance notification zone because they will not be synchronized.*

Coded Alarm by Zone (Method 3) Function:

When a fire zone, programmed to activate any NAC(s) programmed with a coded alarm type, goes into alarm, the NAC (s) will produce the selected Coded sequence for the zone that initiated the alarm. The coded alarm will continue until a fire keypad is unlocked and the **SILENCE** button is pressed. Subsequent alarms that occur after silence, but before all fire zones are restored, will cause all NAC's programmed for cadence enable to generate the cadence programmed for the re-initiating alarm zone.

OVER-CURRENT PROTECTION

OVER-CURRENT PROTECTION GEMC-XXXMB AND GEMC-NACXX

GEMC-XXXMB NAC Over-Current Protection

When the NAC is active (turned on), it will detect a current above 6A and turn off the output within 100mS. The output will remain off until either:

- a. The load is removed from the circuit and a short is no longer detected;
- or-
- b. The Fire keypad (GEMC-FK1) is unlocked and **RESET** pressed;
- or-
- c. The fire alarm has been reset and another alarm is detected

After an over-current has been detected and the Fire keypad (GEMC-FK1) is unlocked, **RESET** pressed (or a subsequent alarm turns on the output) and the circuit detects a current above 6A, the output will be turned off within 100mS.

Note: The system will display a NAC trouble within 200 seconds of detecting an over-current condition indicating a "RlyTb/ E35 NN" followed by the programmed description of the associated NAC.

GEMC-NACXX NAC Over-Current protection when connected to a Gemini C-Series Control Panel

When the NAC is active (turned on), it will detect a current above 6A and turn off the output within 100mS. The output will remain off until either:

- a. The load is removed from the circuit and a short is no longer detected;
- b. The fire keypad (GEMC-FK1) is unlocked and **RESET** pressed;
- c. The fire alarm has been reset and another alarm is detected.

If, after an over-current has been detected, the fire keypad (GEMC-FK1) is unlocked and **RESET** is pressed (or a subsequent alarm turns on the output), if the circuit detects a current above 6A the output will be turned off within 100mS.

Note: The system will display a NAC trouble within 200 seconds of detecting an over-current condition indicating a "RlyTb/ E35 NN" followed by the programmed description of the associated NAC. In addition, the associated NAC LED (1-4) on the GEMC-NACXX board will flash to indicate the output is in trouble.

ZONE CONFIGURATION OVERVIEW

OVERVIEW

Gemini C-Series Control Panels have a maximum number of zones supported depending on the model. An explanation of all the different ways these zones can be utilized using the different peripherals will be described below.

The GEMC-F8ZCPIM optional module plugs into the motherboard of the panel; when the GEMC-F8ZCPIM is used, all eight zones are dedicated to Fire initiating devices. These zones are all in Fire Area 1. In a Burg-Only system, SLC or wireless points may be assigned to these zones.

All other zones (up to zone 255) may be any one of the following types:

1) EZM Zones

- a. Fire GEMC-EZM8 zones (GEMC-EZM8 wired to the Fire bus)
- b. Burg GEMC-EZM8 zones (GEMC-EZM8 wired to the Burg bus)
- c. Burg GEMC-BK1 (Burg keypad) EZM zones

2) Wireless transmitter points

- a. Fire Wireless transmitter points (maximum 125 Fire and Burg wireless devices)
- b. Burg Wireless transmitter points (maximum 200 Burg wireless devices in a Burg-Only system)

3) SLC Points

- a. Fire SLC Points
- b. Burg SLC Points

Organized another way, there are Fire zones and Burglary zones, as follows:

1) Fire Zones

- a. GEMC-Z8CFPIN (first 8 zones, if used)
- b. Fire GEMC-EZM8 zones (GEMC-EZM8 wired to the Fire bus)
- c. Fire Wireless transmitter points (maximum 125 Fire and Burg wireless devices)
- d. Fire SLC Points

2) Burg Zones

- a. Burg GEMC-EZM8 zones (GEMC-EZM8 wired to the Burg bus)
- b. Burg GEMC-BK1 (Burg keypad) EZM zones
- c. Burg Wireless transmitter points (maximum 200 Burg wireless devices in a Burg-Only system)
- d. Burg SLC Points

EZM ZONES GENERAL

EZM Zones are groups of four zones that allow zones 9-255 to be monitored by the C-Series control panel. The GEMC-EZM8 is an expansion zone module designed to allow additional standard initiating devices (that open or short when an alarm is detected) to be mapped to a zone. The GEMC-EZM8 can be wired to the Fire bus or the Burg Bus--keep in mind it is the same physical GEMC-EZM8 device, used for either Fire or Burglary. Multiple devices can be wired to the same zone. Normally closed devices must be wired in series, normally open devices must be wired in parallel.

The GEMC-EZM8 can be configured to support either 1 or 2 EZM addresses, with 4 or 8 hardwire zones, respectively. When configured as two EZM's (default), it uses 2 addresses, the configured address plus the next higher address. Unlike previous Napco alarm systems, EZM addresses do not have to be contiguous--they may skip addresses--but the zone number of the hardwire device loop is determined by the EZM address and the EZM zone number to which it is wired. Every zone on the GEMC-EZM8 does not have to be used, but unused zones must be

satisfied with an EOLR device or the zone will remain faulted, preventing point devices to be mapped to the associated zone. The system must not possess overlapping EZM addresses, even if used on separate buses (Fire or Burglary).

The Fire GEMC-EZM8 must be wired to the motherboard Fire bus with all zones hardwired to listed Fire initiating devices or listed Burglary devices suitable for the application. Only Fire devices may be wired to any Fire GEMC-EZM8 zone. Fire devices are all normally open and require parallel, daisy chain wiring with the end of line device on the last device to properly supervise the loop for opens that prevent the initiation of an alarm. Any power needed to power a device on the loop should only be provided from either the motherboard, or an UL 1481 listed power supply suitable for the application and monitored by two Fire "Monitor" zones on the Fire system for AC fail and Battery Trouble. Power from the GEMC-BM, GEMC-BM/PS or any power supply not monitored by Fire zones should not be used on any Fire device, as a fault on the non-Fire device may affect the operation of the Fire system.

A Burg GEMC-EZM8 must be wired to the Burglary bus of the GEMC-BM, or GEMC-BM/PS. No Fire devices may be wired to a Burg GEMC-EZM8, as a fault on the Burglary bus would affect the operation of the Fire system.

On the Burglary Bus, GEMC-BK1 keypads can also be configured to support a single 4-zone Burglary EZM, wired to the associated flying leads.

Burg GEMC-EZM8 zones must be in groups of 4 or 8 zones, and must be wired to an associated GEMC-EZM8 or GEMC-BK1 that in turn is wired to the Burg bus on either the Burg Module, the GEMC-BM or the GEMC-BM/PS.

WIRELESS TRANSMITTER POINTS

Wireless Transmitter Points are wireless initiating devices that transmit alarm, supervision and low battery conditions to the C-Series Control Panel through at least one (and up to four) GEMC-RECV wireless receivers wired to a remote bus. Each point must be mapped to a specific, exclusive zone with no other devices on the same zone.

Fire Wireless transmitter points require all GEMC-RECV wireless receivers to be wired to the Fire bus of the motherboard, preventing faults on the Burg bus from affecting the Fire system operation. These may be mapped to any of the 255 zones. Only the GEMC-WL-SMK, GEMC-WL-HEAT and the GEMC-WL-WD2 are listed as commercial wireless Fire initiating devices with the Gemini C-Series control panel.

Burg Wireless transmitter points require at least one GEMC-RECV on the system. In a Burg-Only system, the receivers may be placed on the Burg bus; otherwise all receivers must be placed on the Fire bus.

FIRE SLC POINTS

Fire SLC points are Fire initiating devices that transmit Fire alarm conditions through a GEMC-FW-SLC Fire SLC Module to the Gemini C-Series control panel. This module also monitors the devices and will generate a supervision trouble to the panel if a device does not respond within 200 seconds (see **Zone Identification with SLC Point Troubles**, below). Each point must be mapped to a specific, exclusive zone with no other devices on the same zone. The zones can overlap existing EZM zones, if the zone is satisfied on the EZM with a 2.2K EOLR.

The system supports up to two GEMC-FW-SLC (Fire SLC Modules). Each module uses up one of the four Receiver/SLC addresses, reducing the maximum two GEMC-BSLC Burg SLC modules, and maximum four GEMC-RECV wireless receivers by one. Each SLC point must be mapped to a dedicated zone. The zones can overlap existing EZM zones, if the zone has no devices wired to it and is satisfied on the EZM with a 2.2K EOLR.

Up to 126 Fire SLC points may be wired to each of the maximum two GEMC-FW-SLC modules, for a total maximum of 252 SLC points in the system. This number is reduced by the number of SLC output devices and/or lack of sufficient standby battery power.

BURGLARY SLC POINTS

Burg SLC points are Burglary initiating devices that transmit Burglary alarm conditions through a GEMC-BSLC Burg SLC Module to the GEMINI C-Series control panel. These Modules also monitor the devices and will generate a supervision trouble to the panel if the device does not respond within 200 seconds (see **Zone Identification with SLC Point Troubles**, below). Each point must be mapped to a specific, exclusive zone with no other devices on the same

zone. The zones can overlap existing EZM zones, if the zone is satisfied on the EZM with a 2.2K EOLR.

The system supports up to two GEMC-BSLC Burg SLC Modules. Each module uses one of the four Receiver/SLC addresses, reducing the maximum two GEMC-BSLC and maximum four GEMC-RECV wireless receivers by one. Each SLC point must be mapped to a dedicated zone. The zones can overlap existing EZM zones, if the zone has no devices wired to it and is satisfied on the EZM with a 2.2K EOLR.

Up to 126 Burg SLC points may be wired to each of the maximum two GEMC-BSLC modules, for a total maximum of 252 Burg SLC points on the system. This number is reduced by the number of SLC output devices and/or lack of sufficient standby battery power.

There are many ways to wire zones into the Gemini C-Series Panels. Careful planning will allow the panel to support virtually any desired combination of devices and wiring methods required by a particular installation.

ZONE IDENTIFICATION WITH SLC POINT TROUBLES

If an SLC point generates a trouble, a printed hardcopy chart can be printed from PCD-Windows Quickloader to help determine which SLC device(s) and associated zone(s) are responsible. We recommend that all dealers using Signaling Line Circuit devices print a hardcopy of this chart after the installation process is complete. Print the charts using PCD-Windows Quickloader as follows:

1. Run the PCD-Windows Quickloader download software and click **File, Open Account**.
2. Click **File, Print Area**, and the **Print Area** dialog opens.
4. Click **Zone Assignment**, then click the View button to display a sample preview of the chart.
5. Click **Print**.
6. Click **OK** to close the **Print Area** dialog.

CONTROL PANEL OUTPUTS

DESCRIPTION OF SYSTEM OUTPUTS

The Gemini C-Series control panel motherboards have the ability to provide up to seven (7) integral programmable outputs, four (4) optional Burglary outputs requiring the GEMC-BM or GEMC-BM/PS, and 88 additional external outputs requiring external modules and devices.

These outputs are either **Fire outputs** or **Burglary outputs** as follows:

- **Fire outputs** are available on the motherboard (GEMC-XXXMB), motherboard Fire Bus modules (GEMC-OUT8, GEMC-RM3008 and/or GEMC-NACXX) or the Fire SLC modules (GEMC-FW-SLC).
- **Burglary outputs** are available on the Burglary modules (GEMC-BM or GEMC-BM/PS), Burglary Module Burg Bus modules (GEMC-OUT8 or GEMC-RM3008) or the Burglary SLC modules (GEMC-BSLC). For more information regarding the Burglary outputs, see the GEMC-BSLC Burg SLC module installation instructions, WI1648.

MOTHERBOARD INTEGRAL FIRE OUTPUTS

The motherboard has seven (7) integral programmable outputs:

- Three 24V NAC outputs;
- One NAC output selectable for 24V* or 12V regulated output;
Note: The GEMC-96MB and GEMC-32MB only provide two 2A NAC circuits (one 24V and one 12V or 24V selectable).
- One unsupervised Form-C relay output selectable for 12V regulated or dry contacts; also suitable as a trouble output;
- Two active-low unsupervised 2A outputs (requires power-limited connection from panel **AUX PWR** output or other listed power supply with maximum voltage of 28VDC).

In addition, the motherboard also has a dedicated unsupervised **TBL** (trouble) sounder output that activates when there is a keypad 1 supervision failure.

88 ADDITIONAL EXTERNAL OUTPUTS

The system supports up to 88 additional external outputs, enabled in 11 "groups" of eight and enabled only on the addressed device. Each group of eight is distinctly addressed as group "1" through group "11", and only one group of the same address may be placed on the system. Additionally, the groups do **NOT** have to be contiguous (output groups can skip addresses, if desired).

Of the 88 external outputs, only the first 40 external outputs (the first 5 groups) are capable of being supervised outputs; the remaining 48 external outputs (outputs 41-88) are unsupervised outputs. **Note:** Only these first 40 external outputs are able to have a description appear on the 28 character GEMC-FK1 Fire keypad LCD display.

Note: The integral outputs and first 8 outputs of the 88 external outputs can be "Event Driven" outputs or programmed "By Zone" to activate on alarm. Note that in this manual, all External Outputs may be either NAC's, SOM's, relays or active low outputs.

GEMC-OUT8 & GEMC-RM3008 MODULES

Of the first 40 external Fire outputs, the GEMC-OUT8 output module provides one group of eight unsupervised active low outputs, and the GEMC-RM3008 relay module provides one group of eight unsupervised Form C dry relay contact outputs. These outputs can be used for controlling bells, door latches, lights and other similar devices.

With the GEMC-RM3008 and the GEMC-OUT8, the panel controls the closure of each relay or output. The panel identifies the relay or output by the proper placement of 4 address jumpers located on the module PC board. For example, when relay number 1 is activated, relay #1 of GEMC-RM3008 module #1 activates if it is on the system. If output number 88 is activated, the 8th output of the GEMC-OUT8 module #11 is activated. See the **FIRE OUTPUT RELAY CHART** further in this manual. For more information, see WI1706 (GEMC-RM3008 installation instructions) and WI1707 (GEMC-OUT8 installation instructions).

FWC-FSLC-RM2 & FWC-FSLC-SOM1 DEVICES

Two GEMC-FW-SLC Fire SLC module output devices are available: The FWC-FSLC-RM2 Dual Relay Module

provides two unsupervised independently configurable Form C relay contacts per address, and the FWC-FSLC-SOM1 Supervised Output Module provides a single supervised NAC output (or NAC01-40 on the GEMC-NACXX which requires a UL 1481 Listed Regulated 24V power supply, properly installed, to power the output). See WI1821 for additional information.

The GEMC-FW-SLC can act like virtual relay boards 1-5, allowing up to a maximum of 40 FWC-FSLC-SOM1's or FWC-FSLC-RM2's on the GEMC-FW-SLC. The SOM / RM2 must be programmed with a FWC-FSLC-PROG2 Programmer as 126 to 102. (The progression is as follows: 126 is Relay #1, 125 is relay #2 ... 103 is relay #24).

Note: If two relays are added to the FWC-FSLC-RM2, the second relay must be mapped to the same (virtual) relay board as the first relay.

SPECIAL NOTE: FWC-FSLC-SOM1

To prevent a single break, single ground, or wire-to-wire fault on the installation conductors of a signaling line circuit for use with addressable notification appliances or modules shall not affect operation of more than one notification zone, the following is required when using more than one FWC-FSLC-SOM1 on an SLC loop:

1. The SLC must be configured and programmed as grade A style 7, and
2. The Regulated 24VDC power circuit must either be wired from different circuits, or when circuits are shared, must be protected with rigid conduit or other suitable method.
3. To ensure survivability from attack of both the SLC and power circuits, the installation must meet or exceed the *Pathway Survivability Levels* 1-3 as described in NFPA 2010 edition, clauses 12.4.2, 12.4.3 and/or 12.4.4.

Each Fire SLC can have all 5 relay boards enabled, but the system can not have duplicate relay board numbers on the same or different busses (Burg 4-wire bus, Burg SLC bus, Fire 4-wire bus or other devices on the Fire SLC bus).

To be used in the system, the FWC-FSLC-RM2 and the FWC-FSLC-SOM1 must be pre-programmed prior to installation to the correct address using the FWC-FSLC-PROG2 hand held programming tool. The address (126-187) is determined by the number of the External Relay as directed by the "**FIRE OUTPUT RELAY CHART**" further in this manual. . In addition, the selected module must also be configured for the correct relay group (1-8) using the **RELAY** dip-switch located on the module PC board.

For more information, see WI1715 (FWC-FSLC-RM2 installation instructions) and WI1717 (FWC-FSLC-SOM1 installation instructions).

Note: Only one FWC-FSLC-SOM1 may be installed per SLC loop unless the system is configured and wired as SLC loop Class A Style 7.

MAPPING ZONES TO OUTPUTS

Every Fire Zone must be programmed ("mapped") to at least one NAC, and may be programmed to activate multiple outputs. "Mapping" may be performed in one of two ways:

Method 1: Fire zones may be mapped to motherboard terminals **NAC A - NAC D** or to external NAC's 1-8 by zone using PCD-Windows Quickloader. In the "**Workspace**", click **Feature View** to open the **Feature View** screen, click the output(s) for each Zone (to select, click the intersecting row/column "dot", then press the keyboard spacebar and a "**Y**" appears).

Method 2: Fire zones may also be mapped using the **NAC/Output Assignments** screen, **NAC/Output Events** tab:

For a selected Output enabled in the **NAC/Output Assignments** screen, click the **NAC/Output Events** tab to map the selected output to a particular event or combination of events. Notice the **NAC/Output Events** tab contains rows and columns; in an unused row, select the Output in the **Relay #** column pull-down list, then click in the **Event \ Alarm Type \ Condition** column for that row, and the **Relay Event** dialog opens. Note that as events in this screen are clicked and highlighted, the **Relay Event** dialog changes to suit the nature of the event, with **Alarm Type** and/or **Condition** fields appearing that also change as their attributes are selected. For every zone programmed to initiate the event type selected (for example, "Area 1 Gen. Alarm") that zone (or zones) are now mapped to that particular relay output. **Note:** Waterflow alarms are a subset of Fire Alarm zones, therefore Waterflow and Fire alarm zones may activate the same outputs.

Outputs may not have different **Alarm** or **Trouble** conditions trigger the same output:

A particular Output may not share two or more Conditions (such as an Alarm and a Trouble Condition) simultaneously.

1. Outputs programmed to activate on a **Fire Alarm** may not also activate on a **Supervisory** alarm, **Fire Trouble** condition or non-Fire related change of state.
2. Outputs programmed to activate on a **Supervisory** may not activate on **Fire Alarm** **Fire Trouble** or non-

fire change of state.

3. Outputs programmed for **Fire Trouble** may not be programmed to activate on **Fire Alarm**, **Supervisory**, or non-fire change of state.
4. Outputs programmed to activate on *non-Fire change of state* events may not be programmed to activate on **Fire Alarm**, **Supervisory** or **Fire Trouble** events.

Note: Relay Events activated on a *Trouble* or *Trouble Restore* may only activate outputs programmed as **Supplemental**. These outputs will be activated on the Trouble and the output will remain on until a GEMC-FK1 Fire keypad is unlocked and the Function Menu option "Reset Supplemental Output" is selected.

BURGLARY OUTPUTS

Burglary outputs require either a GEMC-BM or GEMC-BM/PS (Burg Module with separate battery charger circuit, battery monitor circuit and one separate 12V 4AH, 7AH or 8AH battery).

The GEMC-BM Burglary Module (or GEMC-BM/PS) Burglary Module has 4 programmable outputs:

- One bell output, supervised for open
- Two unsupervised active low outputs, PGM1 and PGM2
- One unsupervised 12V or one unsupervised Form C relay output, selectable for 12V nominal or dry contacts

GEMC-BSLC Burg SLC Module Outputs

Based on the available current the GEMC-BSLC provides, up to 44 GEMC-BSLC-RLY modules may be used with any one GEMC-BSLC. If these 44, up to 40 (GEMC-BSLC-RLY) may have their integral relay supervised; all are supervised for connection to the SLC loop

Only the first 40 external outputs (the first 5 output groups) can have supervised outputs (for relay contact failure) that also display as outputs with descriptions on the GEMC-FK1 keypad. Supervised Burglary outputs require that they be configured as external relay 1-40, therefore the first 40 outputs should be carefully evaluated before they are used. **Note:** Burg outputs cannot be disabled from the keypad.

The **GEMC-OUT8** is wired to the Burg 4-wire bus, and is supervised for connection to this bus (an open or short on the 4-wire bus that prevents the operation of the GEMC-OUT8 will generate a trouble). The GEMC-OUT8 also provides 8 independent programmable active low unsupervised external outputs for controlling bells, door latches, lights, strobes and other similar devices. The panel controls the activation of each external output. To use the outputs as Burg outputs, the module must be wired and programmed to the Burg 4-wire bus (see W11707 for more information).

The **GEMC-RM3008** is wired to the Burg 4-wire bus, and is supervised for connection to this bus (an open or short on the 4-wire bus that prevents the operation of the GEMC-RM3008 will generate a trouble). The GEMC-RM3008 also provides one group of eight unsupervised Form C dry relay contact outputs.

There is one Burglary SLC output device, the GEMC-BSLC-RLY. The GEMC-BSLC-RLY provides a single unsupervised relay output that requires a listed power supply, properly installed, to power the output, or the use of the Burg Module AUX PWR.

The device monitors the relay to confirm that contact was activated, and will generate a trouble if it is mapped to one of the first 40 relays. This should not be confused with output supervision for an open or a short on the circuit.

The SLC devices may be configured (programmed and wired) as either Class B or Class A Signaling Line Circuit devices.

FIRE OUTPUT OPTION CHART

OUTPUT	Dealer Entered Name	OUTPUT TYPE	FIRE / BURG OPTIONS		FIRE OUTPUT OPTIONS								
			RPT TBL		RPT "DISABLED"		SILENCE-ABLE	RESET-ABLE	SUPPLE-MENTA	REV POL	FIRE RESET	SMART	CADENCE ENABLE
			TELCO 1	TELCO 3	TELCO 1	TELCO 3							
NAC A	PNCA-	Integral GEMC-255MB outputs Integral GEMC-128MB outputs Integral GEMC-96MB outputs Integral GEMC-32MB outputs											
NAC B	PNCB-												
NAC C	PNCC-												
NAC D	PNCD-												
FIRE AUX RELAY	PFAR-		N/A	N/A	N/A	N/A						N/A	N/A
TROUBLE SOUNDER	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E7	POE7-		N/A	N/A	N/A	N/A						N/A	N/A
E8	POE8-		N/A	N/A	N/A	N/A						N/A	N/A
BURG BELL	N/A	Integral GEMC-BM or GEMC-BM/PS outputs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PGM1	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PGM2	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BURG AUX RELAY	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EXT OUT 1	EO01-	Circle one:							N/A	†	†	†	†
EXT OUT 2	EO02-	●None							N/A	†	†	†	†
EXT OUT 3	EO03-	●Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 4	EO04-	●Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 5	EO05-	●Burg Output on Burg SLC 1 (GEMC-BSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 6	EO06-	●Burg Output on Burg SLC 2 (GEMC-BSLC #2)							N/A		N/A	N/A	N/A
EXT OUT 7	EO07-	●Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 8	EO08-	●Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)							N/A		N/A	N/A	N/A
		●GEMC-NACXX†							N/A		N/A	N/A	N/A
EXT OUT 9	EO09-	Circle one:							N/A	†	†	†	†
EXT OUT 10	EO10-	●None							N/A	†	†	†	†
EXT OUT 11	EO11-	●Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 12	EO12-	●Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 13	EO13-	●Burg Output on Burg SLC 1 (GEMC-BSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 14	EO14-	●Burg Output on Burg SLC 2 (GEMC-BSLC #2)							N/A		N/A	N/A	N/A
EXT OUT 15	EO15-	●Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 16	EO16-	●Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)							N/A		N/A	N/A	N/A
		●GEMC-NACXX†							N/A		N/A	N/A	N/A
EXT OUT 17	EO17-	Circle one:							N/A	†	†	†	†
EXT OUT 18	EO18-	●None							N/A	†	†	†	†
EXT OUT 19	EO19-	●Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 20	EO20-	●Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 21	EO21-	●Burg Output on Burg SLC 1 (GEMC-BSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 22	EO22-	●Burg Output on Burg SLC 2 (GEMC-BSLC #2)							N/A		N/A	N/A	N/A
EXT OUT 23	EO23-	●Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 24	EO24-	●Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)							N/A		N/A	N/A	N/A
		●GEMC-NACXX†							N/A		N/A	N/A	N/A
EXT OUT 25	EO25-	Circle one:							N/A	†	†	†	†
EXT OUT 26	EO26-	●None							N/A	†	†	†	†
EXT OUT 27	EO27-	●Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 28	EO28-	●Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 29	EO29-	●Burg Output on Burg SLC 1 (GEMC-BSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 30	EO30-	●Burg Output on Burg SLC 2 (GEMC-BSLC #2)							N/A		N/A	N/A	N/A
EXT OUT 31	EO31-	●Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 32	EO32-	●Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)							N/A		N/A	N/A	N/A
		●GEMC-NACXX†							N/A		N/A	N/A	N/A
EXT OUT 33	EO33-	Circle one:							N/A	†	†	†	†
EXT OUT 34	EO34-	●None							N/A	†	†	†	†
EXT OUT 35	EO35-	●Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 36	EO36-	●Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)							N/A	†	†	†	†
EXT OUT 37	EO37-	●Burg Output on Burg SLC 1 (GEMC-BSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 38	EO38-	●Burg Output on Burg SLC 2 (GEMC-BSLC #2)							N/A		N/A	N/A	N/A
EXT OUT 39	EO39-	●Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)							N/A		N/A	N/A	N/A
EXT OUT 40	EO40-	●Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)							N/A		N/A	N/A	N/A
		●GEMC-NACXX†							N/A		N/A	N/A	N/A
EXT OUT 41-88	EO41-88		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

† Indicates not applicable for all options except GEMC-NACXX or FWC-FSLC-SOM1 placed on a Fire Output on Fire SLC 1 or Fire SLC 2.

FIRE / BURG OUTPUT DEVICES

OUTPUT	Dealer Entered Name	OUTPUT TYPE	OUTPUT DEVICES											
			GEMC-FW-SLC					GEMC-BSLC			GEMC-OUT8 or GEMC-RM3008		GEMC-NAC7S GEMC-NAC7L	
			GEMC-FW-SLC RELAY DIP SWITCH SETTING	IS DEVICE SOM? Y/N	IS DEVICE 1st relay of RM2? Y/N	IS DEVICE 2nd relay of RM2? Y/N	FWC-FSLC-SOM1 OR FWC-FSLC-RM2 PROGRAMMED ADDRESS	GEMC-BSLC RLY SWITCH	GEMC-BSLC-RLY Dial ADD.		JUMPER ADD.	OUTPUT #	NAC ADDR Shunts	OUTPUT #
NAC A	PNCA-	Integral GEMC-255MB outputs Integral GEMC-128MB outputs Integral GEMC-96MB outputs Integral GEMC-32MB outputs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NAC B	PNCB-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NAC C	PNCC-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NAC D	PNCD-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FIRE AUX RELAY	PFAR-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TROUBLE SOUNDER	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E7	POE7-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E8	POE8-		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BURG BELL	N/A	Integral GEMC-BM or GEMC-BM/PS outputs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PGM1	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PGM2	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BURG RELAY	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EXT OUT 1	EO01-	Circle one:	1				126	1	0	1	1	1	1	NAC 1
EXT OUT 2	EO02-	• None	1				125	1	0	2	1	2	1	NAC 2
EXT OUT 3	EO03-	• Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)	1				124	1	0	3	1	3	1	NAC 3
EXT OUT 4	EO04-	• Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)	1				123	1	0	4	1	4	1	NAC 4
EXT OUT 5	EO05-	• Burg Output on Burg SLC 1 (GEMC-BSLC #1)	1				122	1	0	5	1	5	1	RLY OUT 5
EXT OUT 6	EO06-	• Burg Output on Burg SLC 2 (GEMC-BSLC #2)	1				121	1	0	6	1	6	1	RLY OUT 6
EXT OUT 7	EO07-	• Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)	1				120	1	0	7	1	7	1	RLY OUT 7
EXT OUT 8	EO08-	• Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)	1				119	1	0	8	1	8	1	N/A
EXT OUT 9	EO09-	Circle one:	2				118	2	0	9	2	1	2	NAC 1
EXT OUT 10	EO10-	• None	2				117	2	1	0	2	2	2	NAC 2
EXT OUT 11	EO11-	• Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)	2				116	2	1	1	2	3	2	NAC 3
EXT OUT 12	EO12-	• Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)	2				115	2	1	2	2	4	2	NAC 4
EXT OUT 13	EO13-	• Burg Output on Burg SLC 1 (GEMC-BSLC #1)	2				114	2	1	3	2	5	2	RLY OUT 5
EXT OUT 14	EO14-	• Burg Output on Burg SLC 2 (GEMC-BSLC #2)	2				113	2	1	4	2	6	2	RLY OUT 6
EXT OUT 15	EO15-	• Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)	2				112	2	1	5	2	7	2	RLY OUT 7
EXT OUT 16	EO16-	• Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)	2				111	2	1	6	2	8	2	N/A
EXT OUT 17	EO17-	Circle one:	3				110	3	1	7	3	1	3	NAC 1
EXT OUT 18	EO18-	• None	3				109	3	1	8	3	2	3	NAC 2
EXT OUT 19	EO19-	• Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)	3				108	3	1	9	3	3	3	NAC 3
EXT OUT 20	EO20-	• Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)	3				107	3	2	0	3	4	3	NAC 4
EXT OUT 21	EO21-	• Burg Output on Burg SLC 1 (GEMC-BSLC #1)	3				106	3	2	1	3	5	3	RLY OUT 5
EXT OUT 22	EO22-	• Burg Output on Burg SLC 2 (GEMC-BSLC #2)	3				105	3	2	2	3	6	3	RLY OUT 6
EXT OUT 23	EO23-	• Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)	3				104	3	2	3	3	7	3	RLY OUT 7
EXT OUT 24	EO24-	• Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)	3				103	3	2	4	3	8	3	N/A
EXT OUT 25	EO25-	Circle one:	4				102	4	2	5	4	1	4	NAC 1
EXT OUT 26	EO26-	• None	4				101	4	2	6	4	2	4	NAC 2
EXT OUT 27	EO27-	• Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)	4				100	4	2	7	4	3	4	NAC 3
EXT OUT 28	EO28-	• Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)	4				99	4	2	8	4	4	4	NAC 4
EXT OUT 29	EO29-	• Burg Output on Burg SLC 1 (GEMC-BSLC #1)	4				98	4	2	9	4	5	4	RLY OUT 5
EXT OUT 30	EO30-	• Burg Output on Burg SLC 2 (GEMC-BSLC #2)	4				97	4	3	0	4	6	4	RLY OUT 6
EXT OUT 31	EO31-	• Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)	4				96	4	3	1	4	7	4	RLY OUT 7
EXT OUT 32	EO32-	• Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)	4				95	4	3	2	4	8	4	N/A
EXT OUT 33	EO33-	Circle one:	5				94	5	3	3	5	1	5	NAC 1
EXT OUT 34	EO34-	• None	5				93	5	3	4	5	2	5	NAC 2
EXT OUT 35	EO35-	• Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8)	5				92	5	3	5	5	3	5	NAC 3
EXT OUT 36	EO36-	• Fire Output on 4-wire Fire Bus (FIRE GEMC-RM3008 or FIRE GEMC-OUT8)	5				91	5	3	6	5	4	5	NAC 4
EXT OUT 37	EO37-	• Burg Output on Burg SLC 1 (GEMC-BSLC #1)	5				90	5	3	7	5	5	5	RLY OUT 5
EXT OUT 38	EO38-	• Burg Output on Burg SLC 2 (GEMC-BSLC #2)	5				89	5	3	8	5	6	5	RLY OUT 6
EXT OUT 39	EO39-	• Fire Output on Fire SLC 1 (GEMC-FW-FSLC #1)	5				88	5	3	9	5	7	5	RLY OUT 7
EXT OUT 40	EO40-	• Fire Output on Fire SLC 2 (GEMC-FW-FSLC #2)	5				87	5	4	0	5	8	5	N/A

† Indicates not applicable for all options except GEMC-NACXX or FWC-FSLC-SOM1 placed on a Fire Output on Fire SLC 1 or Fire SLC 2.

FIRE / BURG OUTPUT DEVICES (CONT'D)

OUTPUT	Dealer Entered Name	OUTPUT TYPE	OUTPUT DEVICES											
			GEMC-FW-SLC					GEMC-BSLC		GEMC-OUT8 or GEMC-RM3008		GEMC-NACXX		
			GEMC-FW-SLC RELAY DIP SWITCH SETTING	IS DEVICE SOM? Y/N	IS DEVICE 1st relay of RM2? Y/N	IS DEVICE 2nd relay of RM2? Y/N	FWC-FSLC-SOM1 OR FWC-FSLC-RM2 PRO- GRAMMED ADDRESS	GEMC-BSLC RLY SWITCH	GEMC-BSLC- RLY Dial ADD.	JUMPER ADD.	OUTPUT #	NAC ADDR Shunts	OUTPUT #	
EXT OUT 41	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	6				86	6	4	1	6	1	N/A	N/A
EXT OUT 42	N/A		6				85	6	4	2	6	2	N/A	N/A
EXT OUT 43	N/A		6				84	6	4	3	6	3	N/A	N/A
EXT OUT 44	N/A		6				83	6	4	4	6	4	N/A	N/A
EXT OUT 45	N/A		6				82	6	4	5	6	5	N/A	N/A
EXT OUT 46	N/A		6				81	6	4	6	6	6	N/A	N/A
EXT OUT 47	N/A		6				80	6	4	7	6	7	N/A	N/A
EXT OUT 48	N/A		6				79	6	4	8	6	8	N/A	N/A
EXT OUT 49	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	7				78	7	4	9	7	1	N/A	N/A
EXT OUT 50	N/A		7				77	7	5	0	7	2	N/A	N/A
EXT OUT 51	N/A		7				76	7	5	1	7	3	N/A	N/A
EXT OUT 52	N/A		7				75	7	5	2	7	4	N/A	N/A
EXT OUT 53	N/A		7				74	7	5	3	7	5	N/A	N/A
EXT OUT 54	N/A		7				73	7	5	4	7	6	N/A	N/A
EXT OUT 55	N/A		7				72	7	5	5	7	7	N/A	N/A
EXT OUT 56	N/A		7				71	7	5	6	7	8	N/A	N/A
EXT OUT 57	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	8				70	8	5	7	8	1	N/A	N/A
EXT OUT 58	N/A		8				69	8	5	8	8	2	N/A	N/A
EXT OUT 58	N/A		8				68	8	5	9	8	3	N/A	N/A
EXT OUT 60	N/A		8				67	8	6	0	8	4	N/A	N/A
EXT OUT 61	N/A		8				66	8	6	1	8	5	N/A	N/A
EXT OUT 62	N/A		8				65	8	6	2	8	6	N/A	N/A
EXT OUT 63	N/A		8				64	8	6	3	8	7	N/A	N/A
EXT OUT 64	N/A		8				63	8	6	4	8	8	N/A	N/A
EXT OUT 65	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	9				62	9	6	5	9	1	N/A	N/A
EXT OUT 66	N/A		9				61	9	6	6	9	2	N/A	N/A
EXT OUT 67	N/A		9				60	9	6	7	9	3	N/A	N/A
EXT OUT 68	N/A		9				59	9	6	8	9	4	N/A	N/A
EXT OUT 69	N/A		9				58	9	6	9	9	5	N/A	N/A
EXT OUT 70	N/A		9				57	9	7	0	9	6	N/A	N/A
EXT OUT 71	N/A		9				56	9	7	1	9	7	N/A	N/A
EXT OUT 72	N/A		9				55	9	7	2	9	8	N/A	N/A
EXT OUT 73	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	10				54	10	7	3	10	1	N/A	N/A
EXT OUT 74	N/A		10				53	10	7	4	10	2	N/A	N/A
EXT OUT 75	N/A		10				52	10	7	5	10	3	N/A	N/A
EXT OUT 76	N/A		10				51	10	7	6	10	4	N/A	N/A
EXT OUT 77	N/A		10				50	10	7	7	10	5	N/A	N/A
EXT OUT 78	N/A		10				49	10	7	8	10	6	N/A	N/A
EXT OUT 79	N/A		10				48	10	7	9	10	7	N/A	N/A
EXT OUT 80	N/A		10				47	10	8	0	10	8	N/A	N/A
EXT OUT 81	N/A	Circle one: ● None ● Burg Output on 4-wire Burg Bus (BURG GEMC-RM3008 or BURG GEMC-OUT8) ● Fire Output on 4-wire Fire Bus (FIRE GEMC- RM3008 or FIRE GEMC-OUT8) ● Burg Output on Burg SLC 1 (GEMC-BSLC #1) ● Burg Output on Burg SLC 2 (GEMC-BSLC #2)	11				46	11	8	1	11	1	N/A	N/A
EXT OUT 82	N/A		11				45	11	8	2	11	2	N/A	N/A
EXT OUT 83	N/A		11				44	11	8	3	11	3	N/A	N/A
EXT OUT 84	N/A		11				43	11	8	4	11	4	N/A	N/A
EXT OUT 85	N/A		11				42	11	8	5	11	5	N/A	N/A
EXT OUT 86	N/A		11				41	11	8	6	11	6	N/A	N/A
EXT OUT 87	N/A		11				40	11	8	7	11	7	N/A	N/A
EXT OUT 88	N/A		11				39	11	8	8	11	8	N/A	N/A

† Indicates not applicable for all options except GEMC-NACXX or FWC-FSLC-SOM1 placed on a Fire Output on Fire SLC 1 or Fire SLC 2.

FIRE GLOSSARY

Note: Displayed messages shown are for the GEMC-FK1 keypad. Refer to the Gemini C-Series control panel Programming Instructions (WI1673) for address number locations.

AC Failure

AC-Fail Report Delay

If AC power is removed from the Gemini C-Series control panel or a brownout (voltage dropping below 102VAC) is detected, "E01-00 AC POWER FAIL" will display at the keypad with a flashing "SYS/TBL" reminder and a pulsing sounder. In addition, the green **AC ON** keypad LED will turn off. Press **RESET** to silence the sounder; the "SYS/TBL" as a reminder will remain on in the display.

AC Failure may be programmed to activate a Fire output or any external output. AC failures **MUST** be reported to the central station within 60-180 minutes after loss of AC power (program Panel AC-Fail Report). An alarm and/or restore report to the central station will occur immediately unless an **AC-Fail Report Delay** is programmed (see **Time Selection**). AC failures are logged immediately upon detection.

If AC power is removed from either the GEMC-12V2APS or the GEMC-NACXX, a system trouble will display at the GEMC-FK1 Fire keypad, followed by the zone number to which the power supply is connected, and the zone description.

Access Number for Outside Line

Some subscribers will have a telephone system that requires one digit to access an outside line. The first dial tone encountered (prior to the access number) may have a frequency that is different from that of the accessed dial tone (440Hz). One or more 4-second Pre-Dial Delay "D"s may be entered before the access number instead of a dial tone with frequency "E". See Pre-Dial Delay; Telephone Numbers. (**Note:** The panel features automatic dial-tone detection and will normally not require any "E"s. To disable this feature, program an "8").

If the subscriber's system uses an access number, contact the telephone-equipment supplier to find out if a dial tone other than 440Hz is received prior to dialing the access number. If the communicator must delay before dialing the access number instead of attempting to recognize the dial tone, find out how many 4-second delays must be programmed.

Alarm Outputs (See Wiring Diagram for UL requirements); see the section "**CONTROL PANEL OUTPUTS**" earlier in this manual.

Alarm; Alarm Restore Telco 1/Telco 3 See **Report Telco 1/Telco 3**

Alarm; Alarm Restore Telco 2 See **Backup Report on Telco 2**

Answer on Ring Number See **Callback-Method Download**

Anti-Jam Time

If the communicator does not detect a dial tone within 7 seconds, the Anti-Jam feature will be activated. That is, the communicator will go off line for a 16-second anti-jam interval in order to free the telephone circuit from an incoming call, then make another 7-second attempt at dial-tone detection. If still unsuccessful, the communicator will again go off line for 16 seconds, then proceed to dial anyway.

Areas

Zone Area 1-Zone Area 8

All Fire Zones must be programmed for "**Zone Area 1 (Fire)**". Each zone must be assigned to at least one area. For Fire systems, at least one zone must be assigned to Area 1 (for Burg-Only systems, Area 1 is not used).

In a multiple-area system, be sure to also program:

- Enable User Code by Area;
- Keypad Area Assignments;
- System Trouble Subscriber ID Number

Backup Reporting Telco (Central Station) #1 / Telco (Central Station) #2

Normally, 10 attempts to communicate will fail before **Fail to Communicate** trouble is triggered. **Note:** If two separate telephone lines are enabled, each subsequent attempt will alternate between the two telephone lines. If **Backup Reporting** is selected and the communicator does not reach the first telephone number after 5 attempts, 5 attempts will be made to reach the second telephone number before a **Fail to Communicate** trouble is triggered. Enter Subscriber Identification Numbers for Telephone 2 and other information required for Telephone 2. Also program Backup Report on Telco 2. Any zone programmed to report to Telco 1 will backup report to Telco 2. **Note:** Subscriber Identification Numbers for both Telephones 1 and 2 must be entered, even if they are the same.

Battery

The C-Series control panel motherboard has 24V battery backup used to provide backup protection in the event of a power

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loss. These batteries are an integral part of the system and must be installed, even if AC power is present. Change the batteries every 4 years or as required. When used, the GEMC-BM/PS uses one 12V maximum 8AH battery.

Battery Trouble

A battery trouble will annunciate at the keypad when the battery terminal voltage drops below normal or the battery charging voltage drops below the nominal 24V. An active test is performed every 100 seconds for Fire system batteries. Either of these conditions will initiate a Fire Trouble, activating the local trouble sounder of the keypad, report to a central station (program **Panel Low Bat Report Code**), or both. The system trouble will automatically restore if the battery is found to be sufficiently charged (tested every 100 seconds) and the charging voltage is correct.

Cadence See **NAC Features**

Call Waiting See **Disable Call Waiting**

Callback-Method Download

Answer on Ring Number

Disable Callback Download

Disable Keypad Function-Mode Download

Second Call (Program for UL Installations)

Data may be downloaded remotely to the panel after a programmed number of rings (3 to 15) and a control-panel confirmation callback. In the PCD-Windows Quickloader **Panel Selection** screen, **Download Callback Info** tab, program the number of rings (under the **Remote Call** area, select **Ring Count** and enter the number of rings (3-15) in the **Answer on Ring Number field**); if not programmed, the panel will pick up after 15 rings.

The feature "**Second Call**" allows downloading after (1) the panel detects 1 or 2 rings; (2) the panel does not detect another ring for 8 seconds; (3) the panel detects another ring within the next 22 seconds. In the **First Call Duration** field, enter the amount of time the panel waits between dial attempts (default 6 seconds). At this point, the panel will connect and allow the panel to communicate with the downloading computer. In this way, the panel overrides the answering machine. The answering machine will pick up on its programmed number of rings, as usual. **Note:** The number of rings programmed into the panel **MUST** exceed that of the answering machine. The panel will then listen for the signal from the PCD-Windows Quickloader software and seize the line from the house phones as well as the answering machine and the connection will subsequently be established. **Note:** For Fire systems, the GEMC-FK1 Fire keypad must be unlocked before downloading.

Program **Disable Callback Download** to prevent unauthorized downloading to an unattended panel. Program **Disable Keypad Function-Mode Download** to prevent downloading at the keypad. **Note:** For Fire systems, the keypad must be unlocked and **Enable Programming** must be selected in the Function Menu.

Callback-Method Download: If **Callback #1** or **Callback #2** are selected, after establishing a connection, the panel will immediately disconnect and call back on the associated Callback number (program in the **Dealer Program Area** screen, **Site Number** field in Quickloader).

Carbon Monoxide (For Commercial applications only)

Carbon Monoxide detectors may be added to the Gemini C-Series system, such that when a Carbon Monoxide alarm is detected:

1. The keypad will display the Supervisory condition (**SUPV** Icon Flashing) and the zone number and description of the initiating zone.
2. Supervisory NAC Outputs programmed to turn on by Zone or Event will generate a standard Supervisory Alarm (optional).
3. Keypad sounder will remain pulsing until Fire keypad is unlocked and **SILENCE** is pressed.
4. **SUPV** Icon and zone number and description will remain on until all CO and/or Supervisory Zones are restored.
5. If a Fire alarm is detected when there is a CO alarm, the CO Supervisory NAC(s) will turn off.

Program using PCD-Windows Quickloader as follows:

1. Program in the By Zone screen all Carbon Monoxide zones as Area 1 (FIRE), Supervisory, and Carbon Monoxide.
2. Program dedicated NAC outputs A-D and/or external outputs 1-4 (if GEMC-NACXX is used) in the By Zone features to activate on CO zone alarms exclusively (do not program to activate NAC on any other zone or event).
3. Enable Cadence on all CO NAC's
4. Enable "**Coded Alarms By Zone**" in the **NAC/Output Options** Tab of the **NAC/Output Assignments** screen.
5. In the Quickloader **Zone Assignment** screen, select coded alarm type "CO" for all CO NAC's.

Central Station: Report Zone Wireless Trouble/ Restore to Telco 1 / Telco 3

Send Zone Wireless Trouble/ Restore report(s) to Telco 1 and 3. See [Keypad Trouble Messages]

"CleanSmk" Clean Smoke Detector

The GEMC-WL-SMK, FWC-FSLC-SMK or FWC-FSLC-DUCT will cause a report to be sent to the central station as well as a trouble condition at the keypad (E66) indicating the device needs to be cleaned or if cleaning does not remove the trouble, replace the device.

FIRE GLOSSARY**Coded Alarm Type Options and Cadences**

Note: Each pulse (on-off) is in total 500mS. Each inter-digit duration is 750mS. Each inter-round duration is 1.5 seconds. In the table below, each "1" = [250mS on, 250mS off]. Each "." = [250mS off].

Short Format	Output (2 rounds shown)	Short Format	Output (2 rounds shown)
-	Steady	1-4-4	1...1111...1111.....1...1111...1111.....
1-1-1	1...1...1.....1...1...1.....	2-1-1	11...1...1.....11...1...1.....
1-1-2	1...1...11.....1...1...11.....	2-1-2	11...1...11.....11...1...11.....
1-1-3	1...1...111.....1...1...111.....	2-1-3	11...1...111.....11...1...111.....
1-1-4	1...1...1111.....1...1...1111.....	2-1-4	11...1...1111.....11...1...1111.....
1-2-1	1...11...1.....1...11...1.....	2-2-1	11...11...1.....11...11...1.....
1-2-2	1...11...11.....1...11...11.....	2-2-2	11...11...11.....11...11...11.....
1-2-3	1...11...111.....1...11...111.....	2-2-3	11...11...111.....11...11...111.....
1-2-4	1...11...1111.....1...11...1111.....	2-2-4	11...11...1111.....11...11...1111.....
1-3-1	1...111...1.....1...111...1.....	2-3-1	11...111...1.....11...111...1.....
1-3-2	1...111...11.....1...111...11.....	2-3-2	11...111...11.....11...111...11.....
1-3-3	1...111...111.....1...111...111.....	10-1	1111111111...1.....1111111111...1.....
1-3-4	1...111...1111.....1...111...1111.....	10-2	1111111111...11.....1111111111...11.....
1-4-1	1...1111...1.....1...1111...1.....		
1-4-2	1...1111...11.....1...1111...11.....	-	ANSI 3.41 / Temporal (required in UL 985 Residential Fire installations)
1-4-3	1...1111...111.....1...1111...111.....		

Clear Program

Caution: Erases the dealer program. Use this feature to start a new customized default program. Access address in the Programming Instructions (WI1673), then press **ENTER**.

Coded Alarms by Zone

An initiating zone can be individually programmed, using PCD-Windows Quickloader, to activate one of thirty available cadences on NAC circuits.

This feature is primarily used to assist in the identification of a particular area of a large facility, such as a hospital, where a certain section of the hospital will sound a particular code during an alarm to allow people to select the correct egress method or path. This feature can also be used to allow schools to prevent evacuations caused by inappropriate use of pull stations. If a pull station is activated, a person with the authority to unlock the GEMC-FK1 Fire keypad (such as a teacher) could quickly identify the location of the activated pull station and determine whether the alarm is warranted. If not, the authorized person would silence the alarm. See **NAC Features** entry for a description of the ANSI 3.41 / Temporal cadence.

Program as follows:

1. Open the **NAC/Output Assignment** screen, click the **NAC/Output Options** tab, then check the **Coded Alarms by Zone** checkbox and the **Coded Alarm** column appears in the **Zone Assignment** screen (Ctrl + Shift + Z). Select a cadence for each zone, as required.
2. Program at least one silence-able NAC output (typically all NAC outputs) for Enable Cadence (in the **NAC/Output Assignment** screen, click the **NAC/Output Assignments** tab, then check the **Enable** checkbox for the selected output in the **Cadence** column.

Daylight Saving Time

Enables Daylight Saving Time to be in effect within the selected account. Program using the Quickloader **Panel Selection** screen, **TimeZone - DST** tab. Programmable DST fields allow Daylight Saving Time to be adjusted for possible future changes.

Dealer Keypad Program Code

This code is left blank in the control panel memory at the factory and may be added by the dealer (in possession of the *Master*

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Security Code). The *Dealer Keypad Program Code* allows the same access to programming functions as the *Master Security Code*.

Dealer Keypad Unlock

Program this feature (in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab) to allow the reporting to the central station when any **Dealer Keypad Program Code** is used to unlock a GEMC-FK1 Fire keypad.

Digital Dialer Test

Unlocking the GEMC-FK1 Fire keypad and activating the digital dialer test from the Function Menu (**TEST COMMUNICATOR**) will send the programmed report code to the central station. Program DD TEST for SYSTEM-TROUBLE REPORTS and enter a DD TEST Report Code. Note that in this case the report code received is not indicative of a system trouble, but is an indication of a successful transmission. Should the transmission fail, the keypad will display:

```
SYStrbl E03 xxx
MM/DD/YY HH:MM
'TELCO COMM FAIL '
'E03-000 SERVICE
```

This "E03" system trouble will clear after any successful subsequent report.

Disable Audible at Keypad on Resound

Located in the **Keypad Assignment** screen, **Keypad Features** tab. Troubles will re-sound at the keypad and report to the central station (if programmed) within at least every 24 hours (some wireless transmitter troubles require resound within 4 hours). Where acceptable by the AHJ, the local keypad Audible sounder can be disabled when the trouble is being reported to the central station.

Disable Call Waiting (TouchTone® Dialing Only)

A digital communicator connected to a telephone line with Call Waiting may be disrupted by this feature. However, most lines with Call Waiting also have Selective Call Waiting, which permits the feature to be turned off by dialing a "**70" just before the telephone number. A "*" will be dialed by programming a "B".

If the installation has the Call Waiting feature, be sure that it also has Selective Call Waiting, and confirm the disable code with the telephone company. Then program this code ("B70") directly before the phone numbers (after dial-tone detection or pre-dial delay) in the telephone-number locations. See Telephone Numbers.

Caution: Should the user cancel his Call Waiting service, the communicator will dial a wrong number unless the phone number is corrected.

Disable Call Waiting on 1st Attempt

Cancel "**70" after the 1st dial attempt. Default is disabled. When enabled, this option will dial the Central Station telephone number as it is programmed in the panel. If the first communication is unsuccessful, the next and remaining dial attempts will remove the * star button (entered as a "B" from the keypad) and the 2 subsequent digits from the Central Station telephone number.

Disable Callback Download See Callback-Method Download

Disable Fire Zone

Every Fire zone may be disabled at the Fire keypad. Unlock the GEMC-FK1 Fire keypad, select DISPLAY ZONE DIRECTORY and scroll to the desired zone, and press the **DISABLE** button. Press **RESET** to exit the function Menu. The **TROUBLE** and **DISABLE** icons will flash. To un-disable the Fire zone, repeat the process and press **DISABLE** again. An alternate method, in the Function Menu, scroll to DISPLAY ZONES DISABLED and press **ENTER**, scroll using the **NEXT** button until the zone appears, then press **DISABLE** to "un-disable".

Disable Keypad Function-Mode Download See Callback-Method Download

Double Reporting See Report Telco 3

Download Security Code

This code is **not** a keypad code, but is only used to permit local or remote connections to be established between PCD-Windows Quickloader download software and the control panel. Used during the connection process, if the panel code does not match the code in Quickloader, a data connection will be denied. Some dealers with multiple PCD-Windows Quickloader accounts use the same Download Security Code for all accounts. When attempting to establish a connection, if this code is forgotten, the **Master Security Code** of the particular control panel can be used in its place.

Enable Fire Trouble Resound see Fire Trouble Resound

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Enable GEMC-F8ZCPIM

Enables the GEMC-F8ZCPIM Conventional 8 Fire Zone Expander Plug in Module. See W11651.

Enable GEMC-FPRINT

Use when the GEMC-FPRINT module is attached to the system. The GEMC-FPRINT Parallel Printer Interface is wired to the Fire bus and allows the Gemini C-Series control panels to be connected to a parallel printer for recording system activity. When installed on a control panel (programmed via Quickloader), GEMC-FPRINT will create reports using the same custom User, Area and Zone descriptions that have been entered into Quickloader.

Enable Remote Reporting

Disable Remote Reporting

This GEMC-FK1 Fire keypad menu option is intended to simplify servicing and downloading program changes, and appears only when the GEMC-FK1 Fire keypad is unlocked with the dealer or keypad program code. The system menu default on power up is "enabled", thus the option "Disable Remote Reporting" will appear in the keypad display (when disabled, the option "Enable Remote Reporting" will appear).

When "Disable Remote Reporting" is selected, any pending reporting will stop and no additional reports will be initiated (including Fire, Supervisory, Fire Trouble and/or non-Fire events). In addition, when exiting the keypad menu options (by pressing **RESET**), the keypad will display a trouble with the **TBL** and **DISABLE** icons flashing and the keypad mini-sounder pulsing:

"E89-00 ...REMOTE REPORTING DISABLED"

To silence the mini-sounder, press **RESET** (the **TBL** and **DISABLE** icons will stop flashing and will light steady).

To clear the E89 trouble, unlock the Fire keypad with the **Master Security Code** or **Dealer Keypad Program Code**, press **MENU** until "Enable Remote Reporting" appears, then press **ENTER** or **NEXT** to select. The **TBL** and **DISABLE** icons will turn off (if no other disabled zones/outputs are disabled and there are no other troubles). To exit the keypad menu, press **RESET**. **Note:** Disabling the remote reporting is recommended before any local or remote Fire download is attempted.

Enable Set Time/Date Message

In the event of, for example, a prolonged power outage of AC and DC, the loss of the system clock will occur and a message "SET TIME / DATE" will be displayed on the GEMC-FK1 keypad. The message will remain until the time and date have been re-programmed. This option is located in the PCD-Windows Quickloader **Keypad Features** screen.

Enable Telco Line 1

Enable Telco Line 2

When both features are enabled and both telephone lines are not in trouble, the panel will alternate reporting attempts between both lines. These features are located in the Quickloader **Digital Communications** screen.

Enable Telephone Line 1 Fault Test

Enable Telephone Line 2 Fault Test

Enable Telephone Line 1 Fault Test will cause the panel to monitor telephone line 1. **Enable Telephone Line 2 Fault Test** will cause the panel to monitor telephone line 2. A failure will display as "TELCO LN TROUBLE E08-NN SERVICE" (NN = Telco line number 1 or 2.). For Burglary systems, program this system trouble to activate the Burglary Bell. System trouble displays after a programmed delay of low on hook voltage and no off hook line current from connected phone line.

Enable User Code by Area

In multiple-area systems, User Codes are programmable, each with its dedicated Authority Level and Access Byte. (The Authority Level comprises an Option Code). Refer to Programming Manual W11673 for descriptions of levels and options.

Fire User Code: This code is typically used by a person in authority to control the system after an alarm. For example, after arriving at the premises, a fireman will likely need to access the system, investigate the number of alarms that occurred, determine the part of the system that was affected, view events in the Fire log, etc. Another example of a person in possession of a Fire User Code is the principal of a school who is required to initiate fire drills (the keypad has a "Do Fire Drill" selection). The Fire User Code allows the **ACK.**, **SILENCE** and **RESET** keypad buttons to operate, and allows other various "Function Menu" options to function (see "Function Menu" further in this manual).

Expansion Zones

EZM Type

Zones 9 and above are expansion zones added to the basic system using a GEMC-EZM8. Refer to **ADD EXPANSION ZONES** (in W11653, Volume 1) and the wiring diagram. Also see the instructions accompanying each module for wiring information.

Regardless of how the modules are arranged, the expansion zones are divided into consecutively-numbered Groups of four. Each module may comprise 1 Group (4 Zones) or 2 Groups (8 Zones). **NOTE:** The default setting is 2 Groups (8 Zones). Place jumper J1 on #7 for 4 Zone, remove for 8 Zone. See W11683 for additional specifications and other information.

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EZM Assignments

The "**EZM Assignments**" tab in the **System Assignment** screen in PCD-Windows Quickloader download software is used to setup the descriptions, type, and PGM output for all the EZM's used in an installation. The EZM assignment types are:

- 4 Zone Burg** - A GEMC-EZM8 configured as a 4 zone device, wired to the Burg bus.
- 4 Zone Fire** - A GEMC-EZM8 configured as a 4 zone device, wired to the Fire bus.
- 4 Zone NAC EXT** - A GEMC-NACXX configured as a NAC extender wired to the Fire bus.
- 4 Zone Fire PS** - The GEMC-12V2APS wired to the Fire bus.
- 4 Zone Burg PS** - The GEMC-12V2APS wired to the Burg bus.
- 8 Zone Burg** - A GEMC-EZM8 configured as an 8 zone device, wired to the Burg bus.
- 8 Zone Fire** - A GEMC-EZM8 configured as a 8 zone device, wired to the Fire bus.
- 4 Zone Burg-keypad** - The integral GEMC-BK1 Burglary keypad EZM wired to the Burg bus

Fire Drill Zones

Select either an unused zone dedicated for use as a Fire Drill zone or select a currently used Fire zone that will also be used as a Fire Drill Zone (we recommend using a dedicated zone, and program its Zone Description as a "Fire Drill"). Once the zone is selected, in PCD-Windows Quickloader's **NAC/Outputs Assignment** screen (**NAC/Output Options** tab) program the zone to activate outputs desired to be turned on during a fire drill. To initiate a fire drill, enter the GEMC-FK1 Fire keypad Function menu and select the "Do Fire Drill" option, and the system will activate the NAC's programmed for the selected Fire Drill Zone to go into alarm. "Fire Alarm", the zone number and the zone description will display on all GEMC-FK1 Fire keypads.

Fire Keypad Supervision Trouble

The system will always enunciate Fire keypad troubles and report them to the central station (except local systems). **Note:** If any Fire keypad troubles or Fire relay board troubles are detected, a "peripheral device trouble" ("E330" in Point ID, "IA" in SIA) will be sent to the central station; if any Fire keypad trouble restores or relay board trouble restores are detected, a "peripheral device trouble restore" ("R330" in Point ID, "IA" in SIA) will be sent to the central station. See also **Fire Trouble Resound**.

Fire SLC Loop Trbl

A short on a Class B SLC loop or an open / short on a Class A loop is detected in a GEMC-FW-SLC. See E96 in the **Keypad Trouble Messages** table earlier in this manual.

Fire SLC Recv Memory Failure

The GEMC-FW-SLC program does not match the panel program.

Fire SLC Recv No Resp

GEMC-FW-SLC stopped responding to polls due to malfunction, incorrect address, or connector missing or incorrect.

Fire Trouble Resound (required UL864)

Trouble sounders may be silenced by unlocking the Fire keypad and pressing the **RESET** button. Troubles not restored will "resound" (the keypad sound will beep and the **Trouble** icon will flash) at least once every 24 hours until the condition is corrected (**note that Fire wireless troubles resound every 4 hours**). Enable **Fire Trouble Resound** to report to the central station when a Fire system trouble resounds (in addition, if **Fire Trouble Resound** is programmed, a keypad supervision trouble/restore will report and Relay Board supervision troubles/restores will also report. Program in Quickloader **System Assignment** screen, **System Reporting and Outputs** tab. See also **Report Fire Keypad Supervision Trouble**.

Fire Alarm Verification (Not for use in California)

Fire Zones programmed for "**Fire Alarm Verification**" will, when tripped, cause all zones to power down for 5 seconds. After this 5-second power-down time, power is restored and a 20-second retard time is started. Thereafter, the zone will be active again. This represents a total processing delay of 25 seconds from the time the alarm is first detected. If an alarm condition still exists at this time or reoccurs within 100 seconds, an alarm will be initiated, otherwise the zone will return to its original state. **NOTE:** A zone programmed for "**Fire Alarm Verification**" must be programmed as a "**Fire Zone**" as well. **Do not program for wireless devices.** **Note:** The GEMC-WL-SMK does not incorporate **Fire Alarm Verification** and thus is not compliant with ANSI/SIA-CP-01.

Fire Reset

When selected, pressing **RESET** on an unlocked GEMC-FK1 Fire keypad causes the selected output to change state (on to off, off to on) for the time selected in "Fire Reset Duration". Resets GEMC-F8ZCPIM zones and re-settable power output for latching 4-wire smoke detectors and similar devices that require power to be removed for reset. See **NAC Features**

Full upload, and then put panel into service

This selection, in the PCD-Windows Quickloader **Panel Communications** screen, operates in Local, Telco, and TCP/IP modes. When this option is checked, uploads are first performed into the current account's *User* area, then the *Dealer* area, then the *Description* area of the control panel. After the data is uploaded, Quickloader immediately performs an error check; if no errors are found, Quickloader will send a command to the panel to remove the system trouble (E28). If errors are found,

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Quickloader does not send the command to remove the E28 trouble.

Note: This feature applies to those who want to remove the system trouble (E28) provided the panel is error free.

GEMC-FPRINT Formatting

The PCD-Windows Quickloader **System Assignment** screen, **GEMC-FPRINT Formatting** tab allows you to enter in GEMC-FPRINT formatting print options. Selections are performed with combo boxes and edit/thumb-wheel's for number limits.

Ground Fault

The panel will detect and annunciate a "System Grnd Fault, E26-000 SERVICE" trouble when a short to earth ground is detected on any circuit extending from the Gemini C-Series control panel housing.

Jumpers (Refer to Wiring Diagram for UL configuration.)

R: (Located on the GEMC-BM/PS and GEMC-BM/PS) Cut for dry contacts on the Aux. Relay.

Jumpers below are located on the C-Series motherboard:

J1: Fire Keypad Configuration Jumper (top-right corner, above micro shield) is installed across top and center pins for normal operation. When configuring the GEMC-BK1 keypad, move jumper across center and lower pins. **Note:** Do NOT use when configuring the GEMC-BK1 Burglary keypads if the Fire system is in operation. Use J17 **BURG SERV** jumper.

J4: Burg Only Jumper: The panel leaves the factory with keypad #1 programmed as a "Fire Keypad",. Since a "Burg Only" system will not possess a Fire keypad, place a shunt across J4 to make the panel keypad #1 a Burg keypad, allowing the system to be programmed and function as a Burg Only panel.

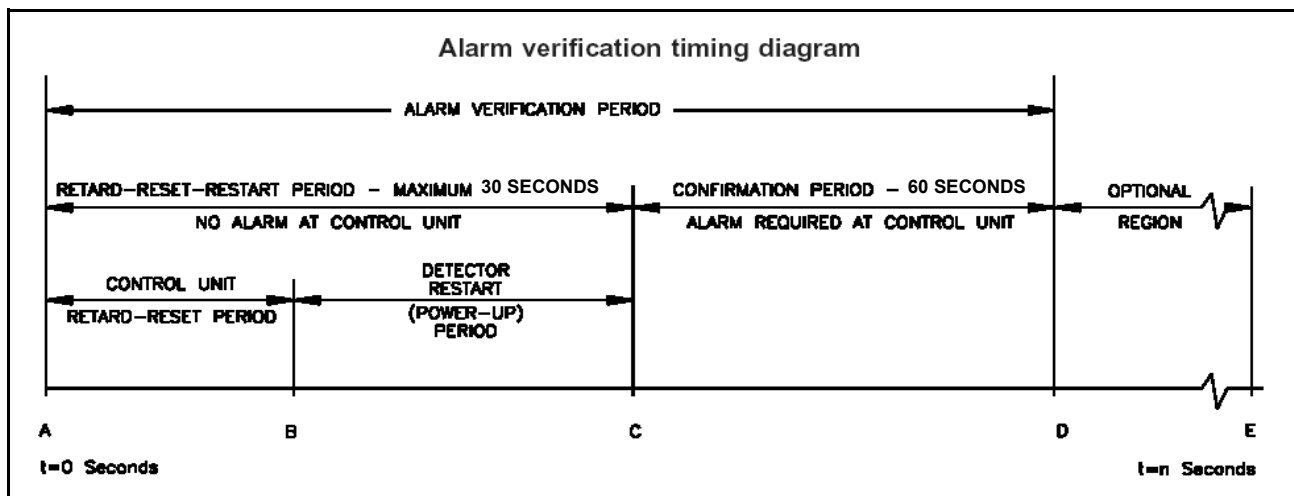
J17: Burg Service Jumper. Move the shunt from OFF to ON to enter Burg Service Mode when maintenance or changes to the Burglary hardware must be performed, while keeping the Fire system in operation. Entering Burg Service Mode will prevent the panel from processing any Burglary events (Areas 2-8) and will allow the Burglary keypad(s) to go into Configuration Mode.

J600: NAC D Voltage Jumper. Shunt should be placed on either 12V or 24V to enable NAC D associated NAC voltage output. **Note:** The shunt leaves the factory placed ON for 24V; remove shunt for 12V.

Keypad Assignment

Keypad Type

Located in the Quickloader **Keypad Assignment** screen, the **Keypad Assignment** tab determines the type of keypad, either a Burglary keypad (GEMC-BK1) or a Fire keypad (GEMC-FK1).



A	Smoke detector goes into alarm.
AB	RETARD-RESET PERIOD (Control Unit) – Control unit senses detector in alarm and retards (delays) alarm signal, usually by de-energizing power to the detector. Length of time varies with design.
AC	RETARD-RESET-RESTART PERIOD – No alarm obtained from control unit. Maximum permissible time is 60 seconds.
AD	ALARM VERIFICATION PERIOD – Consists of the retard-reset-restart and confirmation periods.
BC	DETECTOR RESTART (POWER UP) PERIOD – Power to the detector is reapplied and time is allowed for detector to become operational for alarm. Time varies with detector design.
CD	CONFIRMATION PERIOD – Detector is operational for alarm at point C. If detector is still in alarm at point C, control unit will alarm. If detector is not in alarm, system returns to standby. If the detector re-alarms at any time during the confirmation period the control unit will alarm.
DE	OPTIONAL REGION – Either an alarm can occur at control unit or restart of the alarm verification cycle can occur.

For C-Series control panels: AB = 5 seconds; BC = 20 seconds; CD = 60 seconds.

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Keypad Area Assignments

In multiple-area systems, assign an Area Number ("1"– "8") to each keypad. All Fire keypads must be programmed for Area 1 Fire in the **Keypad Assignment** screen/tab in PCD-Windows Quickloader. Areas 2-8 can be assigned to Burglary keypads, if desired.

Panel Access

When enabled, allows you to enter the Panel Access code (called "**Access Code**" located in the **User Assignment** screen, **User/System Codes** tab) at the keypad. An Access Code typically allows a user to gain access to a particular door or area if so wired (via the keypad PGM output) and if so programmed.

Keypad Configuration

See the section "**GEMC-FK1 Keypad Configuration Mode**" in the Programming Instructions (WI1673). Other columns within this screen are described below:

Version

This entry cannot be entered in Quickloader; it is only populated after a panel configuration upload / download of configurations or languages; it reflects the keypad software release used (if a keypad is in the system).

Feedback Beep

Check to enable a momentary keypad sounder when a keypad button is pressed.

Entry Sounder

EZM Address

Zone Response 50ms

Keypad Jumpers: Refer to label on the keypad circuit board fishpaper for jumper locations and a summary of settings.

Keyswitch Unlock Fire Keypad

Unsupervised normally open momentary keyswitch, when momentarily shorted and restored, unlocks Fire keypad #1 as if a Fire User Code was entered. Wiring must be in conduit, a maximum of 20 feet in length.

Locking /Unlocking Keypad

GEMC-FK1 Fire keypads must be "unlocked" before they can be used to communicate with the control panel. Use the Fire keypad to enter the **Master Security Code** or **Dealer Keypad Program Code** currently programmed into the control panel. See **Master Security Code**.

Low Battery System Trouble (E02)

A low-battery system trouble will annunciate at the keypad when the motherboard battery terminal voltage drops below normal and/or the charging voltage drops below the nominal 24V battery voltage. This condition will signal a local sounding device, report to a central station (program **Panel Low Bat Report Code**), or both. If a battery is installed and low terminal voltage is detected, a restore will not occur until the battery is recharged to its specified level and passes a dynamic test.

Master Security Code

This code is added to the control panel memory at the factory and is not changeable. This code is printed on a label placed on the Gemini C-Series control panel motherboard. Entering this code at the GEMC-FK1 Fire keypad will unlock the keypad and provide access to ALL functions in the system. This code **MUST** be entered in a Quickloader account and must match the code at the control panel. **Note:** All keypad programming must be performed at the keypad addressed as Keypad # 1.

Important! The label containing the **Master Security Code** should be removed. Physically record the code in a secure place for reference.

Memory Failure

A User or Dealer Memory error will cause the sounder to pulse, the "SYS/TBL" reminder to flash, and the display to read "E19-00 USER MEM ERROR" or "E20-00 DEALER MEM ERROR". Press **RESET** to silence the sounder ("SYSTEM READY" will display, along with the "SYS/TBL" reminder). Activate RESET SYSTEM TROUBLE to manually reset the system trouble. A Memory Failure can be programmed to activate an alarm output and/or report using its associated system Report Code.

Note: If this unusual trouble condition occurs, a full download may be needed to correct this.

Monitor Zone

Must be programmed as Zone Area 1 (Fire). This zone will generate a Fire trouble on an open or a short across the circuit. It is intended to be used on zones monitoring devices for troubles, such as the 4 zones of the integral EZM of the GEMC-NACXX NAC Extender which monitor Fire troubles, AC Fail trouble, battery trouble, tamper and ground fault troubles.

FIRE GLOSSARY

NAC

Notification Appliance Circuit

A circuit or path directly connected to a *notification appliance*. A *notification appliance* is any audible, tactile or visual signal--or any combination thereof--employed to indicate a Fire, supervisory or trouble condition (such as bells, strobes and similar appliances or parts). Up to 5 GEMC-NACXX devices may be placed on the 4 wire Fire bus. Each provide 7 programmable outputs: Four 24V Regulated NAC circuits and 3 Form C relays.

Notification Appliance Circuits can serve one of five functions: Notification of a Fire Alarm, Notification of a Fire Supervisory, Notification of a Fire Trouble, Constant Auxiliary Power or Auxiliary Power that can be momentarily removed with RESET.

Each NAC can only perform one function, therefore NAC's that activate on fire alarm may not activate on Supervisory or Trouble, NAC's that activate on Supervisory may not activate on Fire Alarm or trouble, NAC's that activate on trouble may not activate on Fire Alarm or Supervisory.

- **NAC's that activate on Fire alarm** may be programmed for all NAC features described in the glossary except: *Supplemental* (when used for required Fire Alarm function), *Reverse Polarity*, or *Fire Reset*.
- **NAC's that activate on Supervisory** may not be wired to alarm notification appliances and cannot be programmed for NAC features *Reverse Polarity*, *Fire Reset*, *Smart* or *Cadence Enable*.
- **NAC's that activate on Trouble** may not be wired to alarm notification appliances and may not be programmed for the NAC features *Silence-able*, *Reset-able*, *Supplementary*, *Reverse Polarity*, *Fire Reset*, *Smart* or *Cadence Enable*.
- **NAC's that are used for Constant Auxiliary Power** may not be wired to alarm notification appliances and must be programmed for *Reverse Polarity* and no other NAC features.
- **NAC's that are used for Auxiliary Power that can be momentarily removed with pressing RESET** may not be wired to alarm notification appliances and must be programmed with *Reverse Polarity*, *Fire Reset* and no other NAC features.

NAC Features

NAC/Output Assignments tab

Silenceable

When selected, output remains latched until a Fire keypad is unlocked (with a valid Fire code) and **SILENCE** is pressed (turning off audible Fire alarm appliances). This output will "re-sound" if another Fire alarm zone initiates an alarm before all Fire zones have reset. This feature is typically selected for audible Fire alarm sounding appliances.

Resettable

To turn off a NAC programmed for Resettable, enter a valid Fire code, then press **ENTER** to unlock the Fire system, then press **SILENCE** to silence all silence-able outputs, then press **RESET**. If all Fire alarms restore within 30 seconds, the output will turn off.

Supplemental

To turn off a NAC or other output programmed for Supplemental, enter a valid Fire code, then press **ENTER** to unlock the Fire system, then scroll through the menu options and select "SUPPLEMENTAL OUTPUT RESET".

Fire outputs can be programmed as Supplemental outputs; these Supplemental outputs should not be used for any required Fire system operation, but used for ancillary features such as remote alarm and/or trouble annunciators that are not used for evacuation sounder or required strobes. To turn off these Supplemental outputs, the GEMC-FK1 Fire keypad must be unlocked and the option "Turn off Supplemental Outputs" selected.

Reverse Polarity

When selected, the output is the opposite of the programmed state. If the output selected is programmed never to activate, the output is always on; if programmed to activate on an event, the output is normally on until the event occurs, turning the output off. The output remains off until the condition restores, then turns back on. Typically used in conjunction with the **Fire Reset** feature to create a power output for latching 4-wire smoke detectors and similar devices that require power to be removed for reset. May also be used on door latches that normally require power, thus power is removed on a "Fire Alarm" event.

Fire Reset

When selected, pressing **RESET** on an unlocked GEMC-FK1 Fire keypad causes the selected output to change state (on to off, off to on) for the time selected in "Fire Reset Duration". Typically used with **Reverse Polarity** to create a power output for latching 4-wire smoke detectors and similar devices that require power to be removed for reset.


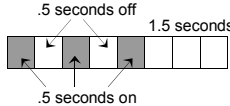
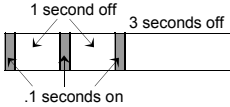
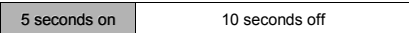
Smart

When selected, the output (only NAC A through NAC D, and GEMC-NACXX NAC outputs 01-40 [the first 4 outputs of each NAC board] are supported) supplies power and a special format that allows *Wheelock* or *System Sensor* devices (only one device type may be selected per system) to do the following:

1. Synchronize strobes;
2. Synchronize temporal audible sounders;
3. Silence audible sounders while still activating strobes;

Note: Program "Silence" on the selected output(s). For a list of *System Sensor* or *Wheelock* smart devices that are

FIRE GLOSSARY

Cadence Options (with feature "Cadence Alarms by Zone" not enabled)		
#	Name	Description (Patterns repeat until condition is cleared)
00	Constant	Continuous Sound (Note: This is the only pattern that can be used for relay circuits. The system will override any other choice).
01	March Code	 .5 seconds on. 5 seconds off
02	ANSI 3.41 / Temporal	 .5 seconds on. 1.5 seconds off
03	Single Stroke	 .1 seconds on. 1 second off
04	California	 5 seconds on. 10 seconds off

compatible with this feature, see volume 1.

Note: Select the device brand used (*System Sensor* or *Wheelock*) in the **Smart Device Type** pull-down list located in the **NAC/Output Assignment** screen, **NAC/Output Options** tab.

Cadence Enable

Used in conjunction with the **Silence** feature to generate the required cadence of audible devices. Not used with *Resetable*, *Supplemental*, *Reverse Polarity*, *Fire Reset* or *Smart* attributes. The Cadence option is global; only one Cadence type can be selected for a single system. Cadence options are **March Time**, **ANSI 3.41**, **Single Stroke** and **California**. See the **Cadence Options** table in this glossary.

NAC OUTPUT REPORTING**Report Trouble**

Only the four integral NAC A through NAC D circuits or the following external output devices addressed as 01-40 may be programmed to report trouble:

- NAC A through NAC D: If enabled, reports trouble on an open, ground fault or short across the circuit
- NAC D: If enabled, reports trouble if shunt is not placed on J600
- FWC-FSLC-SOM1: If enabled, reports trouble on "Fail to respond to poll", short on output circuit or open on output circuit
- FWC-FSLC-RM2 (Relay 1) on "Fail to respond to poll"
- FWC-FSLC-RM2 (Relay 2) on "Fail to respond to poll"

Note: PCD-Windows Quickloader requires all Fire outputs (including all NAC circuits) to be programmed to report "disabled", and all NAC circuits to be programmed to report "trouble" through Telco 1 or Telco 3 for all UL Commercial Fire (reporting) or Burg/Commercial Fire (reporting) accounts.

"Disabled"**Report "Disabled"**

Only the four integral NAC A through NAC D circuits or the following external output devices addressed as 01-40 can be disabled through the Fire keypad to report that an output has been disabled (or re-enabled). All outputs 01-40 can be disabled. Disabling an output is used by technicians to prevent unwanted reporting and activation during servicing. **Note:** System will not be functioning as intended when outputs are "disabled", therefore, be sure to re-enable the selected outputs when servicing is completed.

Program the feature "Report 'Disabled'" in the PCD-Windows Quickloader **NAC/Output Assignment** screen, **NAC/Output Reporting** tab.

- NAC A through NAC D: If enabled, reports "disabled" when disabled, and "un-disabled" when disabled is removed.
- FWC-FSLC-SOM1: If enabled, sends "disabled" and "disabled restored".
- FWC-FSLC-RM2 (Relay 1), if enabled sends "disabled" and "disabled restored".
- FWC-FSLC-RM2 (Relay 2), if enabled sends "disabled" and "disabled restored".

If a dealer unlocks the keypad and selects "Display NAC circuits", he may disable the NAC circuit selected by pressing **DIS-**

FIRE GLOSSARY

ABLE. When disabled, the output will not function and a trouble will be generated until it is re-enabled with the same process. Only the four integral NAC A through NAC D circuits or the following external output devices addressed as 1-40 may be programmed to report trouble:

NAC A through NAC D, FWC-FSLC-SOM1, FWC-FSLC-RM2 (Relay 1), FWC-FSLC-RM2 (Relay 2)

NAC Output Events

Output Events are programmed in the **NAC/Output Assignment** screen; program an Event and a Timeout duration. If the timeout is set to zero, the Event is untimed and thus requires the system be silenced or reset from the unlocked GEMC-FK1 Fire keypad in order to turn off a Fire output (depending on the output programming).

NL-MOD IP Address, Panel IP Address (see the Burglary Glossary)

NL MOD Port Number

Panel Port Number - This is the port number where the Quickloader for Windows can accept the panel. The NL-MOD must be configured to include this number.

NL-MOD Setup

See the GEMC-NL-MOD installation instructions (WI1754).

OMT

One Man Test

Both sensor devices and sounders can be tested by a single installer, without the need to return to the control panel between testing each device. After the first device in a zone is tested, the sounders give a short response and the system resets automatically, allowing the installer to proceed directly to the next device. In this mode, sounders operate for about .5 seconds (1 ding) when sensor is triggered and when sensor resets it operates for 2 dings.

Program as follows:

1. Unlock the keypad using the **Master Security Code** or **Dealer Keypad Program Code**. "Keypad Unlocked" flashes momentarily on the keypad LCD.
2. Press **NEXT** and **PRIOR** to scroll through options until "Do One Man Test" displays.
3. Press **ENTER**. System trouble "One Man Test Mode, System Offline" appears (with **TROUBLE** icon) indicating the system is in Test Mode and will not function as intended. If programmed, a report will be sent to the central station (in Quickloader, see the **System Assignment** screen, **System Reporting and Outputs** tab).
4. Activate each initiating device one at a time (for example, blow smoke into the smoke detectors, activate each pull station, etc.). When detected by the system, all output circuits programmed to activate when the associated zone is in alarm will sound a single momentary chirp.
5. Restore the device (blow clean air through the smoke detectors, restore each pull station, etc.). When the system detects the zone restored, all associated zones will sound 2 short chirps.
6. When all Fire devices have been tested and the mapped outputs confirmed, end the One Man Test mode by unlocking the GEMC-FK1 Fire keypad, then press **RESET**.

NOTE: Pressing **RESET** on any keypad will end the One Man Test mode.

Output Control (External Outputs, External Relays)

In addition to the three relays provided on the motherboard, up to 88 external outputs are supported. These outputs can be on the GEMC-RM3008, GEMC-OUT8, FWC-FSLC-SOM1 and FWC-FSLC-RM2 (supported by the GEMC-FW-SLC module). These external outputs may be controlled from the keypad, by an event or by a schedule, through the use of PCD-Windows Quickloader download software. Program these outputs to activate by event in the PCD-Windows **NAC / Output Assignment** screen. Refer to the **Fire Output Option** chart and the **Fire / Burg Output Device** chart.

Panel Relay Fire Trouble Relay

When enabled, the Gemini C-Series control panel motherboard NAC Output Relay #5 trips on a Fire Trouble. Operates "normally energized". Enable in the **NAC/Output Assignment** screen, **NAC/Output Options** tab.

PC Security Code (see the Burglary Glossary)

Pre-Alarm Warning See the Burglary Glossary. (Not for UL applications; do not program Fire zones with this feature).

Pre-Dial Delay

A **Pre-Dial Delay** duration may be used whenever a delay is required before dialing. It may be required when programming **Dial-Tone Detection**, which causes the communicator to wait before it attempts to detect a dial tone (see **Dial-Tone Detection**). Certain telephone exchanges send a nonstandard dial tone that the communicator may not be able to detect. With these nonstandard exchanges, it is possible to program **Pre-Dial Delay** rather than **Dial-Tone Detection**. This will cause the communicator to wait for a predetermined period of time before dialing rather than look for a nonstandard dial tone.

Contact the telephone-equipment supplier to find out how long a delay is required before dialing. Select **Pre-Dial Delay** by programming one "D" for each 4-second delay required immediately before the telephone number. **Note:** In UL installations,

FIRE GLOSSARY

do not program more than one "D" before the telephone number.

See glossary entries **Backup Report on Telco 2; Report Telco 3 (Dual or Split Reporting)**. Also see **Access Number for Outside Line; Telephone Numbers**.

Program Change

If enabled, the control panel will report to the central station when the panel receives a download from the Quickloader (change of program), or exits a keypad dealer program mode. Select option by enabling the "Program Change" (located in the **System Assignment** screen, **System Reporting/Outputs** tab). Required in Fire reporting accounts.

Receiver Format

The communicator can be programmed to transmit to any standard central-station receiver. A receiver format must be entered for each telephone number used, but a different format may be assigned to each.

Only SIA and Point ID are supported, pulse formats are not allowed. Use ADV. Code selection and use "**RECEIVER FORMATS**" chart to determine transmitted signal format to be sent. **Note:** The NetLink NL-CSRCV Central Station Receiver Application receives encrypted alarm data sent from the NL-MOD device through a TCP/IP network. PCD-Windows Quickloader must be used to enter this receiver information.

Refer to **Backup Report on Telco 2** and **Report Telco 3** to determine whether or not Telephones 2 and/or 3 will be programmed. Call the central station for each telephone number used to confirm the type of receiver in use. Select the receiver format entry for each telephone number from the following table.

Compatible Receivers. The following receivers are compatible with the GEMINI C-Series control panels:

- Ademco MX-8000
- Surgard MLR-2
- Osbourne Hoffman 2000e
- NAPCO Net.Link™ NL-RCV-RMPCUL
- Ademco 685

Relay Event

Relay outputs can be programmed to activate on a particular event or combination of events. Select the event(s) in the Quickloader **NAC/Output Assignment** screen, **NAC/Output Events** tab. Click in the **Event \ Alarm Type \ Condition** column, and the **Relay Event** dialog opens.

Note that as events in this screen are clicked and highlighted, the **Relay Event** dialog changes to suit the nature of the event, with **Alarm Type** and/or **Condition** fields appearing that also change as their attributes are selected. For example, Area 1 Gen. Alarm requires the Alarm Type to be "Fire". Relay Events activated on a *Trouble* or *Trouble Restore* may only activate outputs programmed as **Supplemental**. These outputs will be activated on the Trouble and the output will remain on until a GEMC-FK1 Fire keypad is unlocked and the Function Menu option "Reset Supplemental Output" is selected. The Fire-specific events are:

Fire SLC Trouble - A GEMC-FW-SLC module is not responding or is not working as intended (for example, an E06 "SLC Module Response trouble" is indicated).

Fire SLC Point Trouble - A GEMC-FW-SLC device is not responding or is not functioning as intended (for example, an E04

RECEIVER FORMATS	
ENTRY	RECEIVER FORMAT
0	Ademco Point ID*
1	SIA*
2	AES (not used)
3	GEMC-NL-MOD (Sends proprietary format to NAPCO NetLink NL-CSRCV Central Station Receiver)

*These formats do not use programmable codes, but Event ID Codes to identify the type of zone as follows:

01 – Fire	05 – Fire Supervision	0D – Burg Interior	16 – Combustion
02 – Panic	06 – Fire Waterflow	0E – Burg Exit/Entry	17 – Pull Station
03 – Burglary	08 – Heat Alarm	0F – Tamper	18 – Duct
04 – Holdup	09 – General Alarm	11 – AC Fail	19 – Carbon Monoxide
	0A – Auxiliary Alarm (keypad displays "0")	12 – Low Battery (battery test failure)	
	0B – 24-Hour Auxiliary Alarm	13 – Fire Tamper EZM	
	0C – Burg Perimeter	14 – Ground Fault	
		15 – Smoke	

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"SLC Point Supervision Failure trouble" is indicated).

Fire SLC Point Maintenance - A device on the SLC loop was powered down for maintenance or replacement, causing an SLC loop trouble.

Fire Keypad Locked - The keypad Function Menu selection "Lock Keypad" was initiated on an unlocked GEMC-FK1 Fire keypad.

Fire Service Mode Start - The Fire keypad (GEMC-FK1) Function Menu item "ENABLE PROGRAMMING" was initiated.

Fire Drill Start - The keypad Function Menu selection "Do Fire Drill" was initiated.

Fire Keypad Fail - A GEMC-FK1 Fire keypad is not responding (cut wire, defective keypad, etc.) and an E32 trouble indicated.

Area 1 Gen. Alarm - An alarm in Area 1 was tripped, as specified by the **Alarm Type** selected and the **Condition** selected.

Zone 1 - An alarm was tripped or restored within Zone 1; a Zone 1 trouble (or trouble restore) condition was indicated; an open or short-circuit condition for Zone 1 was indicated.

Zone 2-255 - For Zones 2 through 255, an alarm was tripped or restored within a Zone; a Zone trouble (or trouble restore) condition was indicated; an open or short-circuit condition for a Zone was indicated.

System Low Battery - An E02 system battery trouble is generated when there is either a depleted or damaged battery and/or the battery charging circuit is not working correctly.

AC Fail - An E01 AC power failure / brownout trouble is generated when AC power is absent from the system (or low voltage).

Telco Fault 1 - Enable Telephone Line 1 Fault Test will cause the panel to monitor telephone line 1. A failure will indicate an E08 telephone line trouble. System trouble displays after a programmed delay of low on hook voltage and no off hook line current from connected phone line.

Telco Fault 2 - Enable Telephone Line 2 Fault Test will cause the panel to monitor telephone line 2. (See "Telco Fault 1" above).

Digital Dialer Test - This keypad Function Menu feature (**TEST COMMUNICATOR**) will send a programmed report code to the central station. Note that in this case the report code received is not indicative of a system trouble, but is an indication of a successful transmission. Should the transmission fail, the keypad will indicate an E03 communication failure (the trouble will clear after any successful subsequent report).

RF Receiver Trouble - A trouble is generated when the wireless receiver or SLC module is not responding.

Gen. Alarm - Any alarm was tripped.

Communications Failure - An E03 communication failure trouble (system not able to report to the central station) is indicated.

Relay Follows Zone (see the Burglary Glossary)

Report Telco 1

Report Telco 3 (Dual or Split Reporting)

Alarms, alarm restores, troubles and trouble restores may be selected individually for each zone. Violation of a zone selected to report will communicate the code(s) selected for that zone to the central station.

Normally, **Report Telco 1** is used to report to the central station. **Report Telco 3** is used when certain zones will report to a different receiver (split reporting); **Report Telco 1** and **Report Telco 3** are both used on the same zone to report to two receivers (central stations) successively (Dual Reporting). (Dual Reporting requires a successful report to Telco 1 before reporting to Telco 3). Also see **Backup Report on Telco 2**.

Note: Dual Reporting may only be used if the Central Station suppresses redundant signals (verify with your central station before enabling).

Report Trouble See **NAC Features**

Report Zone Wireless Trouble/ Restore to Telco 1 (see the Burglary Glossary)

Reverse Polarity See **NAC Features**

RF Jam Reporting (see the Burglary Glossary)

RF Low Battery

In wireless installations, when displaying RF transmitter status, a "LoBatt" indication at the keypad denotes a low-battery condition at the transmitter.

RF Recv High Noise

RF receiver may not receive Transmitter signals due to interference from outside signals of the same or similar frequency.

RF Recv Jam

RF receiver may not receive Transmitter signals due to high amplitude signal of the same frequency.

FIRE GLOSSARY

RF Receiver No response

Receiver stopped responding to polls due to malfunction, wire open or wire short.

RF-Receiver/SLC

From the **System Assignment** screen, **RF-Receiver/SLC** tab in PCD-Windows Quickloader, you can select the RF receivers and SLC controllers used by the Gemini C-Series panel. Each address 1-4 can be set for a Receiver. Only addresses 1 and 2 can be used for SLC controllers and there cannot be any unused address before the last address used. Each SLC controllers can also be selected for "Class A" operation from this screen.

RF Recv Tamper

RF Receiver cover is removed or has been it is moved (back tamper).

RM3008, GEM-OUT8 or NAC Ext Supervision Trouble

The system will always enunciate RM3008, GEM-OUT8 or NAC Extender Supervision Troubles and report them to the central station (except local systems). See also **"Fire Trouble Resound"**.

Rotary Dialing Only See TouchTone Dialing Only

Second Call

If using the PCD-Windows Quickloader software, the Telco Answering Service can be disabled. Call the panel, hang up after one ring by pressing the F10 key. The PCD-Windows will automatically call the panel back and the panel will answer in one ring. See **Callback-Method Download** for more information.

Silence See NAC Features

Silence Auxiliary Outputs (Turn off Auxiliary Outputs)

Fire outputs can be programmed as auxiliary outputs. These auxiliary outputs should not be used for any required Fire system operation, but should only be used for ancillary features (such as remote alarm and/or trouble annunciators not used for evacuation sounder or required strobes). To turn off these auxiliary outputs, the GEMC-FK1 Fire keypad must be unlocked and the option **"Turn Off Aux Outputs"** selected.

Smart See NAC Features

Smart Download

Smart Upload

Quick method of communications that compares the sum-checks of sections of panel program to determine if they are different from the account sections and only communicates data that is different.

Smoke Detectors (Two Wire)

Smoke detectors can be wired to the GEMC-F8ZCPIM (see WI1651) or the FWC-FSLC-CZM Fire SLC Conventional Zone Module (see WI1714 for the list of compatible detectors for use with the FWC-FSLC-CZM). When the Fire keypad is unlocked and **RESET** is pressed, power is momentarily removed, allowing a detector latched in alarm to reset. Zones 1-8 of the GEMC-F8ZCPIM are 2-wire smoke detector zones also suitable for use with any *Normally Open* Fire initiating device that shorts on alarm (i.e. pull stations, thermal detectors and 4-Wire smoke detectors. See WI1651). **Caution: Do not mix pull stations and/or heat detectors on zones with smoke detectors using internal sounders.** See table **"UL Compatible Two-Wire**

UL Compatible Two-Wire Smoke Detectors using GEMC-F8ZCPIM (Providing UL Recognition or Listing)			
2 Wire Conventional Smoke Detectors			
Manufacturer	Maximum # per Loop	Model	Base
NAPCO	25	FW-2, FW-2R	N/A
Sentrol/ESL (GE)	20	429C, 429CT, 511C, 511AFT, 521B/BXT, 521NB, 521NBXT, 521NCSXT, 711U-UT, 712U, 713-5U, 713-6U, 721U, 721UT, 722U	N/A
System Sensor	20	2W-B, 2WT-B, 2WTR-B	N/A
System Sensor	1	2WTA-B	N/A

Note: Any normally-open devices that do not require power from the control panel may be used (such as pull stations, waterflow and thermostats), if acceptable to the authority having jurisdiction.

Important: Smoke detectors with sounders are NOT intended to replace the main fire alarm sounding device.

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Smoke Detectors using GEMC-F8ZCPIM".

Smoke Detectors (Four Wire)

Smoke detectors can be wired to the GEMC-F8ZCPIM (see WI1651), the GEMC-EZM8 (see WI1683) or the FWC-FSLC-CZM Fire SLC Conventional Zone Module (see WI1714). All 4-wire smoke detectors require a Listed end-of-line relay to monitor their power. Power for the 12V 4-wire smoke detectors should be wired to the GEMC-F8ZCPIM reset output or a NAC output dedicated for **Reverse Polarity** and **Re-settable** power (12VDC or 24VDC; see smoke detector installation instructions for proper voltage). When the Fire keypad is unlocked and **RESET** is pressed, power is momentarily removed, allowing a detector latched in alarm to reset. This reset output could also be used for 4-wire smoke detectors connected to the FWC-FSLC-CZM.

If using any of the NAC A-D outputs, be sure to program these outputs for **Reverse Polarity** and **Fire Reset**. NAC outputs A-C can only be 24V*; NAC D can be selected for either 12V regulated or 24V* using the option jumper.

(*24V Regulated when the GEMC-24VR is installed).

If installing 4-wire smokes, subtract smoke-detector alarm current from available standby current, and reduce the alarm current by 40mA per 4 wire smoke detector circuit.

Subscriber Identification Numbers

If reporting openings and/or closings, program Subscriber Opening/Closing Identification Numbers for each area for each telephone number used. If reporting events, program Subscriber ID Numbers for each area for each telephone number used. Subscriber ID numbers must be programmed for each area and telephone number, even if all are the same. Start with the left-most location.

Supervisory

This Zone Option, when programmed for a zone, a short on the zone will generate a Supervisory alarm indicated at the GEMC-FK1 Fire keypad with a **SUPV** icon turned on, the zone number and a description. A short will also activate all NAC outputs programmed to trip on a Supervisory output. An open on a Supervisory zone will generate a Fire trouble (**TROUBLE** keypad icon flashing and a pulsing keypad sounder). NAC outputs selected to trip on a Supervisory zone should not be activated on other types of conditions (such as a Fire alarm, Fire trouble or Burglary alarm, etc.). **Note:** Supervisory must also be programmed as a (Fire Area 1) zone type.

Supervision Disabled: (This option is located in the PCD-Windows Quickloader **NAC/Output Assignment screen, NAC/Output Options** tab).

For NAC's A-D, prevents detection of a trouble on a NAC circuit open or short. Use **ONLY** with Smoke detectors that have integral sounders (refer to GEMC-F8ZCPIM installation instructions WI1651).

Sync

See the "**NAC SYNCHRONIZATION RULES**" section earlier in this manual.

System Troubles by Output

System troubles can trip any output (Pulsed Burg, Auxiliary, etc.). **Note:** RF TROUBLE will report for RF Low Battery, RF High Noise, RF Supervision Failure or GEMC-WL-DT Self-Test Failure. See **Relay Event** glossary entry.

Tamper (Housing Tamper Trouble, RF Point Tamper Trouble, RF Receiver Tamper Trouble)

See the "**Tamper Troubles (Fire)**" table for descriptions of the various tamper Fire troubles.

TCP/IP Panel/Site Initiated Functions

Enables the panel to connect via the GEMC-NL-MOD (rather than telephone dialup) for Auto Event Log Dumps and site-

Tamper Troubles (Fire)		
E15-NNNNNN	SYStrbl E15 xxx MM/DD/YY HH:MM 'RFpnt TAMPER' 'E15-NNN XXXXXX'	RF Transmitter cover removed or the unit was removed from its mounting location. NNN is the associated zone number; XXXXXX is the Wireless transmitter ID number.
E17-NN	SYStrbl E17 xxx MM/DD/YY HH:MM 'RFreq TAMPER' 'E17-000 SERVICE '	RF receiver cover removed or removed from mounting location. NN = Receiver address (1-4).
E60-00	SYStrbl E32 xxx MM/DD/YY HH:MM 'HOUSING TAMPER' 'E60-NN SERVICE '	GEMC-NACXX enclosure door was opened and/or the housing removed from mounting location.

FIRE GLOSSARY

initiated PCPreset connections.

Telco Fail See **Enable Telephone Line-Fault Test**

Telco Line 1 Failure; Telco Line 2 Failure see **Enable Telephone Line 1 Fault Test**

Telephone Numbers

Dialing Prefix

To report to a central station, **Telephone Number 1** must be programmed. **Telephone Number 2** is programmed for **Backup Reporting**; **Telephone Number 3** is programmed for **Dual** or **Split Reporting**.

Private telephone systems may require a Dial-Tone Detection "E" or Pre-Dial Delay "D", followed by an access number to obtain an outside line. (See **Access Number for Outside Line**.)

It should be noted here that the telephone number need not actually start in the first location shown, and may not end in the last. Extra locations have been provided to allow for one or more prefix digits: a Pre-Dial Delay "D" or a Dial-Tone Detection "E". What is important is that the telephone number, with its associated **Pre-Dial Delay**, **Access Number**, and **Dial-Tone Detection**, be wholly contained within that group of locations, and that they be in their proper sequence.

If needed, a **Dialing Prefix** of up to 20 digits may be programmed. This prefix will be dialed immediately before the programmed central station telephone numbers.

Test Timer

The test timer schedule is programmed using NAPCO's PCD-Windows Quickloader Software. If **Test Timer** is programmed, an automatic test report will be transmitted to the central station on the scheduled day(s) at the scheduled time. (UL installations require a report at least every 24 hours). To report test timer, select **Report Test Timer** and program a report code. Program the **Test Timer** event schedule and reporting time.

Time Zone

In the Quickloader **Panel Selection** screen, **Time Zone** tab, select the correct time zone for the control panel to ensure the correct time is entered into the system.

TouchTone Dialing Only, Rotary Dialing Only, TouchTone Dialing with Rotary Backup (see the Burglary Glossary)

2-Wire, 4-Wire Smoke Detectors See **Smoke Detectors**

User Assignment

Controls user authority levels. The tabs are as follows:

User/System Codes

Type: Fire

When the **Type** column is selected for **Fire**, User codes may be added or changed; Area 1 (in the **Area** column) is automatically selected. **Note:** A panel default Fire User Code is programmed as User #1, with digits 1234 active in Area 1 only. In addition, all Fire User Codes must be at least 4 digits in length.

Type: Alarm

When the **Type** column is selected for **Alarm** (Burglary), User codes may be added or changed within Areas 2-8 (must be selected in the **Area** column). See **User Code** glossary entry below.

Type: Group

When the **Type** column is selected for **Group** (Enable ACM Access must be selected in the **System Options** tab of the **System Assignment** screen), User codes may be added or changed within Areas 2-8 for the GEM-ACM1D module (areas must be selected in the **Area** column). The **Cards** tab allows the addition of ACM access control cards into the system, and assign these cards to Access Groups. See **User Code** glossary entry below and the GEM-ACM1D installation instructions for more information.

User Reporting Open/Close

For each User Code added in the "User/System Codes" screen, the "User Reporting Open/Close" screen allows you to enable or disable reporting for Telco 1 or Telco 3 openings and closings.

User Code (Burg User Code / Fire User Code)

In total, up to 195 Fire User and Burg User Codes may be entered into the system. A short description of each follows:

Fire User Code: This code is typically used by a person in authority to control the system after an alarm. For example, after arriving at the premises, a fireman will likely need to access the system, investigate the number of alarms that occurred, determine the part of the system that was affected, view events in the Fire log, etc. Another example of a person in possession of a Fire User Code is the principal of a school who is required to initiate fire drills (the keypad has a "Do Fire Drill" selection). The Fire User Code allows the **ACK.**, **SILENCE** and **RESET** keypad buttons to operate, and allows other various "Function

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Menu" options to function (see "Function Menu" further in this manual).

Burg User Code: For Fire and Burglary combination systems, this code will only allow access to the Burglary functions of the system. This code is typically used by a person with the responsibility of securing the premises, arming and disarming the Burglary alarm system, silencing Burglary alarms if they occur, etc. This code is special in that each code can be assigned four different "Authority Levels" (0, 1, 2 or 3) and five "Attributes" (**Initially Off**, **BV**, **User Program**, **BE** and **Overview**) and can be assigned to Area(s) 2 - 8 (with Area 1 being reserved for Fire only).

The Gemini C-Series control panels are pre-programmed at the factory as follows:

- **For Burglary-Only systems:** The panel default Burg User Code is programmed as User #1, with digits 123, active in Area 2 only.
- **For Fire and Burglary combination systems:** The panel default Fire User Code is programmed as User #1, with digits "123", active in Area 1 only. The Burg User Code is programmed as User #2, with digits "456", active in Area 2 only.
- **For Commercial Fire-Only systems:** The panel default Fire User Code is programmed as User #1, with digits 123 active in Area 1 only.

User Keypad Unlock

Program this feature (in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab) to allow the reporting to the central station when any Fire User Code is used to unlock a Fire keypad.

Waterflow

Waterflow Retard Time

A Waterflow Zone monitors sprinkler system waterflow; it is activated by an initiating device approved for that purpose. A zone programmed as a Waterflow Zone must also be programmed as a "Zone Area 1 (Fire)" as well. For Waterflow alarms, total maximum allowable time delay (device and panel) is 90 seconds (less any inherent delay of the waterflow sensor) for UL installations.

Wireless Trouble Reporting by Zone

All reports of Wireless trouble (Transmitter Low Battery, Transmitter Tamper, Transmitter Supervision Failure) to central station will identify identifying the zone of the transmitter.

Wireless/SLC Troubles to Telco 1

Wireless/SLC Troubles to Telco 3

When selected, any of the following troubles will trigger a report to the selected central station Telco number (Telco 1 or Telco 3): E04, E92 and E97.

Wireless Smoke Low Battery Resound

If a low battery is detected on a wireless smoke detector (GEMC-WL-SMK), heat detector (GEMC-WL-HEAT) or the GEMC-WL-WD2 transmitter (if used for Fire applications), the device will re-sound the trouble at the keypad every 4 hours when disarmed and every 12 hours when armed, until the condition is corrected. Program this feature in the **System Assignment** screen, **System Options** tab.

Zone Area 1–Zone Area 8

All Fire zones must be programmed for "Zone Area 1 (Fire)". See **Areas**

Zone Type See **Data Format** in the Burglary Glossary

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Displayed messages shown are for the GEMC-BK1 keypad. Refer to the GEMINI C-Series panel Programming Instructions (WI1673) for address number locations. For Fire messages, see the Fire Glossary.

Abort Delay (Not for UL applications; MUST be disabled for Fire Zones; may be disabled for Burglary Zones).

An Abort Delay is a delay period that allows cancellation of the central-station report by disarming the control panel *before* a report is sent. By default, zones are enabled for Abort Delay with an Abort Delay Time for 30 seconds (may be changed to between 15-45 seconds). In addition, a **Pre-Alarm Warning** may be selected to allow a keypad indication of a pending report to the central station for the duration of the Abort Delay time. **Note:** If Abort Delay is selected for a 24-Hour Zone, the zone must be cleared before disarming the area. **Note:** For all non-Fire Zones, SIA CP-01 Standard requires 15-45 seconds; default must be 30 seconds.

AC Failure

AC-Fail Report Delay

If AC power is removed from the control panel, "E01-00 AC POWER FAIL" will display at the keypad with a flashing "SYS/TBL" reminder and a pulsing sounder. Press the **RESET** button to silence the sounder; the "SYS/TBL" as a reminder will remain on in the display.

AC Failure may be programmed to activate any external output (see **Relay Event**). An alarm and/or restore report to the central station will occur immediately unless an **AC-Fail Report Delay** is programmed (see **Time Selection**). AC failures are logged immediately upon detection.

If AC power is removed from either the GEMC-12V2APS or the GEMC-NACXX, a system trouble will display at the GEMC-FK1 Fire keypad, with a "Z" followed by the zone number to which the power supply is connected, and the zone description.

Access Control

Access Control on Burg Module PGM1 Output

Burg PGM1 Access Control Time

Panel Access

The PGM1 Output on the GEMC-BM can be programmed to activate for a programmable period of time (2 to 254 sec.). This allows it to be used to trip a relay, etc. This is achieved by programming a new keyfob option, **Access Control on Burg Module PGM1 Output**, into the **Aux 1 Function** or **Aux 2 Function** option locations on the **Wireless Keyfobs** screen in PCD-Windows Quickloader. This feature also requires a valid time to be entered into the **Burg PGM 1 Access Control** in the **Time Selection** screen.

If **Access Control on Burg Module PGM1 Output** is selected, entering the Access Code (see User Code Programming in Easy Menu Driven Mode Programming) while disarmed will trip the Burg Module PGM1 Output. (This is commonly used to activate a door strike for the purposes of remotely unlocking a door). Each keypad is individually selected for Panel Access. Also program **Burg PGM 1 Access Control Timeout**. **NOTE:** Do not program the Burg Module PGM1 Output as an output on alarm. Do not program **Burg PGM1 Chirp on Keyfob Arm/Disarm**, unless **Enable Burg Bell Chirp on Keyfob** is selected also.

Panel Access is selectable for any keypad 1–7 by selecting the appropriate Area Option of any User Code (see User Code Programming in Easy Menu Driven Mode Programming); select the Panel Access option for those keypad numbers (1–15) that are to respond to the User Code. However, if the Access Option is programmed, the code will no longer function as an Arm/Disarm Code.

Entering a valid code at the keypad will cause the Burg Module PGM1 Output on panel to turn on for the programmed time.

ACM Access

Enable ACM Access

The GEM-ACM1D is an accessory that adds integrated access control to the burglary alarm functions of the Gemini C-Series control panels. It provides controlled access to a door by releasing a locking device (such as a magnetic lock or electric strike) when the proper credential is presented to the card reader. Access control is integrated with the burglary functions of the control panel, and it can be used to arm and disarm the system, annunciate and report alarms and troubles, and monitor the access door without the need for additional contacts. See the GEM-ACM1D installation instructions for more information.

ACM Low Battery

The ACM is monitored for low battery conditions; if the battery drops below 11.4VDC, a report to the central station is sent. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

ACM Power Failure

The ACM is monitored for loss of AC power; if AC is not present, a report to the central station is sent. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab. .

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Access, Door Strike Control by Keyfob

The Burg Module PGM1 Output can be programmed to activate by keyfob, providing access functions such as opening and closing a garage door, or remotely activating an electric door strike. This is achieved by programming **Access Control on Burg Module PGM1 Output**, into the **Aux 1 Function** or **Aux 2 Function** option locations on the **Wireless Keyfobs** screen in PCD-Windows Quickloader. This feature also requires a valid time to be entered into the **Burg PGM 1 Access Control Timeout** in the **Time Selection** screen.

Access Number for Outside Line

Some subscribers will have a telephone system that requires one digit to access an outside line. The first dial tone encountered (prior to the access number) may have a frequency that is different from that of the accessed dial tone (440Hz). One or more 4-second Pre-Dial Delay "D"s may be entered before the access number instead of a dial tone with frequency "E". See Pre-Dial Delay; Telephone Numbers. (**Note:** The panel features automatic dial-tone detection and will normally not require any "E"s. To disable this feature, program an "8").

If the subscriber's system uses an access number, contact the telephone-equipment supplier to find out if a dial tone other than 440Hz is received prior to dialing the access number. If the communicator must delay before dialing the access number instead of attempting to recognize the dial tone, find out how many 4-second delays must be programmed.

GEMC-BM GEMC-BM/PS OUTPUT	NORMAL OPERATING OUTPUT VOLTAGE TERMINALS	WET CONTACT TERMINALS			JUMPER
		COM	N/C	N/O	
Bell Output (Burg.)	1 (+) & 2 (-)	NA	NA	NA	
Bell Output (Pulsed)	1 (+) & 2 (-)	NA	NA	NA	NA
Burg PGM1	3 (+) & 5 (-)	NA	NA	NA	NA
Burg PGM2	3 (+) & 6 (-)	NA	NA	NA	NA
Aux Relay	13 (+) & 4 (-)	11	12	13	R ⁽¹⁾

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⁽¹⁾ Cutting the "R" jumper will provide Dry Contacts for the Aux Relay (no voltage on COM, N/C and N/O contacts); for use with external power supplies and/or loads (see wiring diagram).
See **Time Selection** for timeout requirements.

Alarm on Day Zone/Trouble See **Day Zone/Trouble**

Alarm Outputs (Burglary) (See Wiring Diagram for UL requirements.)

The following table summarizes wiring for indicating an alarm in typical installations. See **Time Selection** for timeout duration.

Alarm; Alarm Restore Telco 1/Telco 3 See **Report Telco 1/Telco 3**

Alarm; Alarm Restore Telco 2 See **Backup Report on Telco 2**

Ambush (Keypad Ambush)

Ambush Codes

Enable Ambush in User Assign. Code Type

The Ambush Code must be a separate and unique User Code. Disarming with an Ambush Code will cause a silent report to be sent to a central station. Thus, should a user be forced to disarm, the user can silently signal an emergency while appearing to be merely disarming the system. The Ambush Zone will automatically report when programmed to report an alarm.

Enable as follows: In the Easy Menu Driven Program Mode (see W11673), the menu selection "Enter User Code" is used to program a user code with a "blank (●) 5" in the area for which the Ambush Code will be used. Enable all other locations and program "Ambush to Report Event Telco 1/Telco 3". *Each keypad is enabled for "Ambush" individually.*

Note: Disarm codes are used to arm and disarm Burglary areas 2-8. When used to arm an area, these codes must be entered at the area keypad. When used to disarm an area, they must be entered at the area keypad. In addition, user disarm codes must be 4, 5 or 6 digits in length, and must match the number of digits used in the Dealer Keypad Code. If the Dealer Keypad Code is not programmed (is "blank"), the disarm codes must be six digits in length.

Answer on Ring Number See **Callback-Method Download**

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Anti-Jam Time

If the communicator does not detect a dial tone within 7 seconds, the **Anti-Jam feature** will be activated. That is, the communicator will go off line for a 16-second anti-jam interval in order to free the telephone circuit from an incoming call, then make another 7-second attempt at dial-tone detection. If still unsuccessful, the communicator will again go off line for 16 seconds, then proceed to dial anyway.

Area Descriptions

The PCD-Windows Quickloader **Area Descriptions** tab of the **Area Assignment** screen provides a means of adding descriptions for each area (the **Area Description** column is for reference only within Quickloader). The **Ready Message** column is the text message that appears in the keypad display when no zones are faulted and the system is ready to arm (the message is a 13 character description that appears above the time and date). The **Interior 1** and **Interior 2** columns provide a means of adding a description (28 characters each) for these groups of zones (areas). See **Interior 1 Bypass**.

Areas

Zone Area 1-Zone Area 8

Area Disarm Silencing Options

Area Priority Arming

Although the default program will automatically set up Zones 1 through 8 for Zone Area 1, the panel may be partitioned into eight areas. Each zone must be assigned to at least one area. At least one zone must be assigned to Area 1 in a Fire or combination Fire/Burglary system. If a Burglary zone is selected for both areas, that common zone will not arm until both areas are armed. If any zone disarms, the common zone will disarm. **NOTE:** Area 1 *must* be used for Fire for all combination Fire/Burglary systems.

In a multiple-area system, be sure to also program:

- Enable User Code by Area (see User Codes/Authority Levels);
- Keypad Area Assignments
- Bell Control / **Area Disarm Silencing Options** (determines which area outputs (**Burg Bell**, **Pulse Burg Bell**, **Burg PGM1**, **Burg PGM2** and the **Burg Aux Relay**) that may be silenced);
- Subscriber Opening/Closing ID Numbers and Event ID Numbers (if reporting);
- System Trouble Subscriber ID Number

If **Priority Area Arming** is selected, the Priority Area must be armed before the Arming Area can be armed.

Program the **Area Disarm Silencing Options** in the PCD-Windows Quickloader **Area Assignment** screen.

Audible Test on Arming

Tests the alarm circuit each time the system is armed. The alarm is activated briefly (for about 8 seconds) after the panel is armed. If the alarm does not sound, the device may be defective.

Auto Bell Test on Arming see Auto Output Test Upon Arming

Auto-Bypass (Do not program for UL installations)

Auto-Bypass Re-entry

Zones programmed for **Auto-Bypass** will be bypassed (automatically removed) if in trouble when arming. A momentary beep will sound at the keypad to warn that the system has been armed without the protection of the auto-bypassed zone. (Note that the exit/entry door must be closed before arming, otherwise the Exit/Entry Zone will be auto-bypassed). **Note:** A zone in trouble that is not programmed for **Auto-Bypass** will cause an alarm on arming after a 10-second arming delay.

If **Auto-Bypass Re-entry** is selected, securing a zone that is programmed for **Auto-Bypass**, while armed, will cause that zone to re-enter the system in an armed state.

Auto Disarm / Rearm Delay (Do not program for UL installations)

If the panel was auto-disarmed on schedule and a rearm delay is programmed (see **Time Selection**), the panel will automatically rearm after the delay if no activity has been detected.


Auto Output Test Upon Arming

Auto Bell Test on Arming

(Required for UL Mercantile installations.)

This will activate the Burglary Bell briefly 10 seconds after the area is armed. If the alarm does not sound, the device may be defective.

Automatic Interior Bypass / Easy Exit (Do not program for UL installations)

Convert from Away to Stay based on no egress through exit door. Default is enabled. This feature will cause all Interior-1 Zones to automatically be bypassed if the Exit/Entry doors are not opened during the exit-delay period. If the  button is pressed while armed, exit delay will restart and the Exit/Entry doors may be opened to permit someone to exit (while others

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remain on the premises) without causing an alarm. This feature is enabled in the factory program.

Auto-Reset

Auto-Reset after Burg Bell Timeout

If a zone detects an alarm condition and is selected for **Auto-Reset**, it will automatically rearm itself as soon as the alarm condition is cleared. **Auto-Reset** may be delayed to occur after the Burglary Bell timeout period by selecting **Auto-Reset After Burglary Bell Timeout** and **Auto-Reset**. Zones that are not programmed for **Auto-Reset** will not be capable of signaling another alarm until (a) the cause of the alarm has been corrected and (b) the control panel is disarmed. Also see **Swinger Shutdown**.

Auxiliary Relay (Called "Burg PGM1 Relay"; see section "**Control Panel Outputs**" earlier in this manual).

Backup Reporting Telco #1 / Telco #2

Normally, ten attempts to communicate will fail before **Fail to Communicate** trouble is triggered. If **Backup Reporting** is selected and the communicator does not reach the first telephone number after five attempts, five attempts will be made to reach the second telephone number before a **Fail to Communicate** trouble is triggered. Enter **Subscriber Identification Numbers** for **Telephone 2** and other information required for **Telephone 2**. Also program **Backup Report on Telco 2**. Any zone programmed to report to Telco 1 will backup report to Telco 2. **Note:** Subscriber Identification Numbers for both Telephones 1 and 2 must be entered, even if they are the same.

Battery

The control panel motherboard has 24V battery backup used to provide backup protection in the event of a power loss. These batteries are an integral part of the system and must be installed, even if AC power is present. Change the batteries every 4 years or as required.

If the GEMC-BM/PS is used, it requires 12V battery backup.

BE

Bypass Enable (Alarm Code feature)

Allows alarm code user to bypass zones if security bypass is enabled.

Bell Control

In any system, the ability to silence any combination of alarm devices (outputs) initiated from any area. Bell Control must be programmed for all systems to be able to silence an alarm. For example, in an 8-area system, each area could be programmed to silence only those alarms initiated within its own area; or any area could be programmed to silence an alarm initiated from another area.

Blocked View Option for User Codes see **BV**

Burg Alarm with RF/SLC Tamper on Armed Area

Enable this feature to allow Burg Bell activation upon any Burg RF/SLC tamper violation within an armed area. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

(Burg) Alarm Supervision

(Burg) Bell Supervision

The Burg Bell output, supervised with a 2.2K EOLR, if shorted or opened, the keypad will display an E51 trouble. **Note:** E51 trouble may also be generated with a GEMC-BM or GEMC-BM/PS trouble. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burg AUX Relay

GEMC-BM and GEMC-BM/PS Form-C relay outputs, programmable by zone. Remove shunt "R" to change from wet to dry contacts.

Burg Low Battery

The GEMC-BM/PS charges and monitors its separate 12V battery; when this battery is detected as having low voltage, the GEMC-BM/PS generates a "BURG MOD LOBATT, E63-00 SERVICE" system trouble. The GEMC-BM/PS performs an active battery test every 4 hours.

Burg PGM1

Burg PGM2

GEMC-BM and GEMC-BM/PS outputs that go active low. Enabled by zone and programmable timeout for each.

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Burg PGM1 Chirp On Keyfob Arm/Disarm

If enabled, when arming with a keyfob, the PGM2 output chirps. See also **Select Burg Output for Keyfob Chirp**. This feature will cause a 1-chirp indication on arming and 2-chirp indication on disarming. Connect steady input (burglary) of external siren driver to the panel's Auxiliary Alarm Output. **Note:** Do not use an external voice siren driver.

Burg RF / SLC Point Tamper

To report an RF Transmitter or SLC Point tamper trouble (E15), to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burg RF / SLC Point Trouble

To report an RF Receiver or SLC Module response trouble (E06) to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burg Service Jumper

Burg Service Mode

For Combination Fire and Burglary systems. This jumper (JP2) is located in two places, on the motherboard and on the GEMC-BM/PS and GEMC-BM burglary modules. **Note:** Both JP2 jumpers are in parallel, therefore operate in the same manner at either location. When the shunt is placed on the two left pins ("ON") of this three-pin jumper, the system enters a special mode named "Burg Service Mode" where the system stops processing Burglary (non-Fire) alarm functions, allowing the Burglary part of the system to be serviced (changed) while allowing the Fire system to continue to function as intended. When servicing the Burglary system, we recommend entering Burg Service Mode before removing power to avoid the various troubles (such as AC Fail) that will occur. When Burg Service Mode is on, an LED located just below each jumper will light.

Burg SLC Loop Trbl

A short on a Class B SLC loop or an open on a Class A loop is detected of the GEMC-BSLC. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burg SLC Mem Fail

The GEMC-BSLC program (memory) does not match the panel program. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burg SLC No Resp

GEMC-BSLC stopped responding to polls due to malfunction, incorrect address, or connector missing or incorrect. To report to the central station, program this feature in the Quickloader **System Assignment** screen, **System Reporting and Outputs** tab.

Burglary Bell (See section "Control Panel Outputs" earlier in this manual).

BV

Blocked View (Alarm Code feature)

Specific Burg User Codes can be programmed with the attribute "BV" to prevent these users from viewing other User Codes while in keypad programming. An unblocked code cannot view a blocked code, but a blocked code can view all codes. The **Master Security Code** and the **Dealer Keypad Program Code** can view all codes. **Note:** This feature is supported in Burglary keypads (GEMC-BK1 keypads) in Burglary-Only systems.

Call Waiting See **Disable Call Waiting**

Callback-Method Download

Answer on Ring Number

Disable Callback Download

Disable Keypad Function-Mode Download

Second Call (Program for UL Installations)

Data may be downloaded remotely to the panel after a programmed number of rings (3 to 15) and a control-panel confirmation callback. In the PCD-Windows Quickloader **Panel Selection** screen, **Download Callback Info** tab, program the number of rings (under the **Remote Call** area, select **Ring Count** and enter the number of rings (3-15) in the **Answer on Ring Number field**); if not programmed, the panel will pick up after 15 rings.

The feature "**Second Call**" allows downloading after (1) the panel detects 1 or 2 rings; (2) the panel does not detect another ring for 8 seconds; (3) the panel detects another ring within the next 22 seconds. In the **First Call Duration** field, enter the amount of time the panel waits between dial attempts (default 6 seconds). At this point, the panel will connect and allow the panel to communicate with the downloading computer. In this way, the panel overrides the answering machine. The answering machine will pick up on its programmed number of rings, as usual. **Note:** The number of rings programmed into the panel MUST exceed that of the answering machine. The panel will then listen for the signal from the PCD-Windows Quickloader software and seize the line from the house phones as well as the answering machine and the connection will subse-

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quently be established. **Note:** For Fire systems, the GEMC-FK1 keypad must be unlocked before downloading.

Program **Disable Callback Download** to prevent unauthorized downloading to an unattended panel. Program **Disable Keypad Function-Mode Download** to prevent downloading at the keypad. **Note:** For Fire systems, the keypad must be unlocked and **Enable Programming** must be selected in the Function Menu.

Callback-Method Download: If **Callback #1** or **Callback #2** are selected, after establishing a connection, the panel will immediately disconnect and call back on the associated Callback number (program in the **Dealer Program Area** screen, **Site Number** field in Quickloader).

Cancel

Cancel Code

Cancel Window Duration (Report Cancel Window)

Enable Cancel Report to Telco 1 / Telco 3

CANCEL is the preventing of a report from being sent by entering a user disarm code. If the area is disarmed during Entry Delay or the "Pre-Alarm Warning", then no report will be sent and no messages will be displayed at the keypad. If the area is disarmed during the Abort-Delay, then an "Alarm Canceled" will be displayed at the keypad and no report will be sent. If the area is disarmed during or within the Cancel Window Duration, then an "Attempting to Cancel" will be followed by an "Alarm Canceled" for a successful cancellation. Otherwise, the report had been sent and will be responded appropriately to by the Central Station. Cancel must be provided with a Central Station Telephone Number, proper Subscriber O/C Report ID Numbers and a valid Cancel Code to Telco 1/3. A Cancel Window ("Report Cancel Window") is the duration that the system will attempt to cancel a report, after the report is sent.

Central Station: Report Zone Wireless Trouble/ Restore to Telco 1 / Telco 3

Send Zone Wireless Trouble/ Restore report(s) to Telco 1/3. See the **Keypad Trouble Messages** table at the beginning of this volume.

Chime

This annunciator feature may be used on any zone to sound a tone at the keypad while disarmed when the zone is faulted. Access the ACTIVATE CHIME function to enable or disable the Chime Mode from the keypad. This feature is programmable by zone and for duration of tone (see Time Selection). A time (in ¼ seconds) must be programmed for the chime to function.

Chime 2

For a distinct pulsating "Chime Zone" tone, program the zone for Chime 2. This feature allows zones to have distinctive annunciator chime to identify the door(s) or zone(s). "Chime" must be enabled on any keypad for all area keypads to chime.

Clear Program

Caution: Erases the dealer program. Use this feature to start a new customized default program. Access address in the Programming Instructions (WI1673), then press **ENTER**.

Closing Report

Closing Report Only on Conditional Close

Conditional Closing

Include Selective/Group Bypass In Conditional Close/Status

Status Report

On arming, the communicator can transmit a unique Closing Code for each user and a status report that identifies the problem zone to the central station. Note that Subscriber Identification Numbers and a Closing Code must be entered for any closing report.

Select which users will report closings for each telephone number, even if Closing Report Only on Conditional Closing is selected. Normally, a closing report will consist of the Closing Code and the number of the user that armed. If the user armed with an auto-bypassed zone (or selective/group bypassed zone if Include Selective/Group Bypass In Conditional Closing/Status was programmed), the Conditional Closing Code will also be sent.

Select Closing Report Only on Conditional Closing to report only when arming with an auto-bypassed zone (and selective- / group-bypassed zone if Include Selective/Group Bypass In Conditional Closing/Status is programmed).

Select Status Report to send a closing followed by a status report that identifies the problem zone(s).

Cold Start

Caution: Erases the entire program (codes, schedules, etc.), leaving the panel as it came right out of the box. Access address in the Programming Instructions (WI1673), then press **ENTER**.

Data Format

Ask the central station which of these formats to use.

1400Hz Handshake/Kissoff. 1400Hz Handshake overrides 2300Hz Handshake if both are selected.

2300Hz Handshake/Kissoff. Used with the following receiver formats: Radionics, DCI & Franklin Slow; Radionics Fast;

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Sescoa, Vertex, DCI & Franklin Fast; Radionics BFSK. 1400Hz Handshake overrides 2300Hz Handshake if both are selected.

Modem Formats. Modem formats (SIA and Point ID) are preset and automatic but require a Type for each zone. Program Zone Type as follows: Fire* = "1" (Note: Not for Modem 2 Receivers); Panic = "2"; Burglary = "3"; Holdup = "4"; Gas Alarm = "7"; Heat Alarm = "8"; Auxiliary Alarm = "A" (Keypad displays "0"); 24-Hour Aux. Alarm = "B".

Compatible Receivers. The following receivers are compatible with the GEMINI C-Series control panels.

- Ademco MX-8000
- Surgard MLR-2
- Osbourne Hoffman 2000e
- NAPCO Net.Link™ NL-RCV-RMPCUL
- Ademco 685

Day Zone/Trouble (Open; Short)

Alarm on Day Zone/Trouble

Disable Auto-Reset in Day Zone/Trouble

Reset Day Zone/Trouble with Arm/Disarm Only

Enable Day Zone/Trouble Watch, Areas 2-8 (By Area)

A Day Zone/Trouble will give an audible and visual indication at the keypad if there is a problem on the loop while disarmed. Open- and short-circuit conditions are programmed separately, by zone. This feature may be used to warn of a problem (a break in a window foil, for example) during the day, when the panel is not normally armed. When the Day Zone/Trouble is tripped, "DAY ZONE TRBL" and the zone number(s) will alternately display at the keypad and the sounder will pulse. Press **RESET** to silence the sounder and reset the keypad. "ZONE FAULT" will be displayed until the condition is corrected. If **Reset Day Zone/Trouble With Arm/Disarm Only** is programmed, arm and disarm the panel to reset the Day Zone/Trouble indication at the keypad.

If Alarm on Day Zone/Trouble is programmed for a zone, a Day Zone/Trouble condition will cause the alarm outputs programmed for that zone (sirens, relays) to activate.

Note: (1) If a zone is programmed for both Day Zone/Trouble Open and Day Zone/Trouble Short, either condition must be reset before the other can activate. (2) Day Zone/Trouble Short will not function if No EOL Resistor is also programmed.

Report Trouble or Trouble Restore is programmed in conjunction with Day Zone/Trouble Open/Day Zone/Trouble Short and Trouble on Open/Trouble on Short (the trouble reported will be that programmed under Day Zone/Trouble Open and/or Day Zone/Trouble Short).

Note: Do not program a Day Zone/Trouble for 24-hour protection. The keypad will annunciate as a Day Zone/Trouble but the panel will transmit an Alarm Code and a Trouble Code when tripped.

Program **Disable Auto-Reset on Day Zone/Trouble** to prevent repeated Day-Zone/Trouble trips. This will cause the keypad display and sounder to activate only once in any arm/disarm period.

If **Enable Watch** is selected (by area), zones programmed for Day Zone/Trouble can only be activated when ACTIVATE WATCH is accessed. Arming and disarming will turn off the Watch Mode. If Report Trouble is selected, a trouble on a Day Zone/Trouble will be reported only when the Watch Mode is on.

Dealer Keypad Program Code

This code is left blank in the control panel memory at the factory and may be added by the dealer (in possession of the *Master Security Code* which is the unchangeable code printed on a motherboard label). The *Dealer Keypad Program Code* allows the same access to programming functions as the *Master Security Code*. **Note:** To comply with SIA CP-01, the number of digits in the *Dealer Keypad Program Code* determines the number of digits (no more or less) that MUST be used for all *Burg User Codes*.

Dealer Security Code See Master Security Code

Delayed Trip 1 and Delayed Trip 2. (Refer to NAPCO manual WI1047).

2 programmable Trip Delays that provide a "hold-off" of an alarm indication and central station report until the selected zone(s) have been violated for the programmed Trip Delay duration. The 2 Trip Delays are programmable in minutes from 2 to 255 (4 hours 15 minutes). Typically used for non-Burglary applications, such as refrigeration temperature control.

Digital Dialer Test

Activating the digital dialer test from the Function Menu (ACTIVATE DIALER TEST) will send the programmed report code to the central station. Program DD TEST for SYSTEM-TROUBLE REPORTS and enter a DD TEST Report Code. Note that in this case the report code received is not indicative of a system trouble, but is an indication of a successful transmission. Should the transmission fail, the keypad will display "E03-00 COMM FAIL". This system trouble may be reset by pressing the **RESET** button. Any successful subsequent report will also clear the system trouble.

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Disable AC Fail Detection

Enable this feature to stop the control panel's ability to detect if AC is present (not for UL installations).

Disable Area Entry Relays See Entry/Exit Delay

Disable Auto-Reset on Day Zone/Trouble See Day Zone/Trouble

Disable Auto-Unbypass on Disarming

Normally, manually bypassed zones revert to active (disarmed) zones on disarming. Select this feature to maintain bypassed zones on disarming until manually unbypassed.

Disable Burg PGM1 Clear on Disarm

Used in conjunction with Keyfob Option "C" (see "Keyfob" glossary entry) to prevent a disarm from resetting the Aux. Relay. Associated Keyfob users must be programmed to report openings and/or closings. Keyfobs 1–16 report as Users 180–195, respectively.

Disable Call Waiting (see Fire Glossary)

Disable Call Waiting on 1st Attempt (see Fire Glossary)

Disable Callback Download See Callback-Method Download

Disable Code Required for EZ Bypass

Do not program in UL Installations. **Note:** This feature does NOT affect Fire system operation. If programmed, Selective Bypass Zones may be bypassed quickly and easily as follows: When the keypad displays [SYSTEM READY] or [ZONE FAULT], press the zone number as a three-digit number (i.e., '001', '015', etc.), then press [BYPASS]. Using this option, zones cannot be bypassed while the area is armed. **Note:** If this option is not enabled, the previous procedure will cause a 4-chirp 'rejection' signal at the keypad, with the display [INVALID ENTRY / TRY AGAIN]. When the area is subsequently disarmed, all bypassed zones revert to unbypassed zones (unless **Interior 1 Normally Bypassed** is programmed). (This option is located in the PCD-Windows Quickloader **Keypad Features** screen). See **Selective Bypass**

Disable Code Required for FM (Function Mode) Level 1

Intended primarily for residential applications, this feature eliminates the user code requirement to access the Function Mode (for Level-1 Users only), rendering the system more user friendly. (This option is located in the PCD-Windows Quickloader **Keypad Features** screen).

Disable Keypad Auto-Arm Hold-Off

Located in the Quickloader **Keypad Assignment** screen, **Keypad Features** tab, check this box to inhibit the ability to hold-off all pre-programmed **Area Arm** events in the specified area(s). The **Area Arm** event is programmed in the **Schedule Assignment** screen, **Alarm User Schedules** tab.

Disable Keypad Close-Window Hold-Off

Located in the Quickloader **Keypad Assignment** screen, **Keypad Features** tab, check this box to inhibit the ability to hold-off all pre-programmed **Closing Window** events in the specified area(s). The **Area Arm** event is programmed in the **Schedule Assignment** screen, **Open/Close Suppression Window** button/.

Disable Keypad Function-Mode Download See Callback-Method Download

Disable Keypad Instant Button: (This option is located in the PCD-Windows Quickloader **Keypad Features** screen). When enabled, keypad **INSTANT** button is disabled.

Disable Openings/Closings

Disable Open Report

Disable Close Report

Provides the flexibility of disabling the report to the Central Station of openings and/or closings from only Burglary area(s).

Disable Wait-for-Silence (Pager Format)

Causes data transmission to start immediately after the pager telephone number.

Disable Zone Fault Scrolling (Auto-Status): (

This option is located in the PCD-Windows Quickloader **Keypad Features** screen). Disables scrolling of Burg "Zones-In-Trouble" on the keypad LCD display. Bypassed zones that are faulted or open ordinarily display the words "ZONE FAULTED" and scroll zones description(s) on the keypad display while the Area is disarmed. When this option is enabled, only "ZONE

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FAULTED" displays; zone status may be viewed by using the **DISPLAY ZN FAULTS** Function Menu selection. For high-security installations, program this option so that unprotected zone(s) are not shown on the keypad LCD display.

Disable Zone Fault Scrolling (Auto Status)

Non 24-Hour Zones that are open (or shorted) normally display "ZONE FAULTS" (while disarmed) followed by the zone number (s) and description(s). In high-security applications, program **Disable Zone Fault Scrolling (Auto Status)**. Unsecured zones will then be indicated by a "CHECK STATUS" display. Status may be displayed manually using the **DISPLAY STATUS** function, however a valid user code will be required.

Disarm Codes

Disarm codes are used to arm and disarm Burglary areas 2-8. When used to arm an area, these codes must be entered at the area keypad then **ENTER** must be pressed. When used to disarm an area, they must be entered at the area keypad (**ENTER** does not have to be pressed). In addition, user disarm codes must be 4, 5 or 6 digits in length, and must match the number of digits used in the **Dealer Keypad Program Code**. If the **Dealer Keypad Program Code** is not programmed (is "blank"), the disarm codes must be six digits in length.

Double Reporting See Report Telco 3

Download Security Code See Master Security Code

Download To an Armed Panel

This allows the panel to accept a download even if Armed. However if the programming to be altered effects the arming profile of the control, such as zone features, it is recommended that the panel be disarmed and then rearmed to allow these changes to be processed properly. Any program changes such as adding/changing user codes, adding users to an area, or changing Entry/Exit Delays will be processed properly with the panel armed.

Easy Arming

Permits quick arming by simply pressing and holding the **ENTER** button for 2 seconds. Each keypad may be individually programmed for Easy Arming (see Keypad Features). Disarming still requires entry of a valid user code. Do not program Easy Arming in UL installations. If closings are reported, Easy Arming will report as User 199.

Easy Exit (Not Evaluated by UL)

While armed in the Interior Bypass/Stay Mode, **Easy Exit** can be initiated by pressing **ENTER**. **Easy Exit** restarts the Exit delay, allowing a User to exit an armed premises without disarming and rearming the system.

Enable All-Zone-in-Trouble Bypass

Do not program in UL Installations. If programmed, all zones in trouble (except Fire and PIR Zones) that are also programmed for **Selective Bypass** will be bypassed. (This option is located in the PCD-Windows Quickloader **Keypad Features** screen).

Enable Burg Bell On Exit Error

An Exit Error sequence is initiated if an entry/exit zone is violated at the expiration of the Exit Time. An Exit Error is processed as follows:

1. The local alarm shall immediately sound.
2. The keypad annunciator sounds an Entry Delay.
3. An Entry Delay is initiated.
4. If the alarm system is not Disarmed at the end of the Entry Delay, the Alarm Transmission Sequence is initiated.
5. The Alarm Transmission includes the alarm and an Exit Error.

Enable Burg Bell Warning On Entry

Causes the Burglary Bell to "chirp" if the entry door is opened within 60 seconds after exit time has elapsed. This feature may be useful in cases where a keypad is not within audible range to remind a user to disarm if inadvertently exiting after exit delay has expired.

Enable Burg Module

Enable this feature if a GEMC-BM is installed. A Burg Module is required for UL Combination Burglary and Fire installations to provide a separate, isolated bus for burglary keypad(s) that are required for annunciation and other burglary/access control peripheral devices. These devices may be NAC devices, single or dual initiating circuit-input devices, or other compatible devices that report zone status and supervision information to the GEMC-BM.

Enable Exit Delay Restart

This option allows for the following scenario prior to the end of the Exit Time: A violation of an entry/exit zone, a restore, and a second violation of an entry/exit zone *restarts the Exit Time*. The panel does not allow the Exit Time to be restarted more than once. The default setting for this option is *enabled*. Restart events are logged.

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Enable GEMC-FPRINT

Use when the GEMC-FPRINT module is attached to the system. The GEMC-FPRINT Parallel Printer Interface is a bus-mounted device that allows the Gemini C-Series control panels to be connected to a parallel printer for recording system activity. When installed on a control panel (programmed via PCD-Windows Quickloader), GEMC-FPRINT will create reports using the same custom User, Area and Zone descriptions that have been entered into PCD-Windows Quickloader.

Enable Housing Tamper

(Required for UL Commercial Burglary; optional for all other installations)

Tamper switches protect against the opening of the control panel door or the removal of the control panel housing from the wall or other mounting surface. Enable this feature if tamper switches are installed.

Enable H/A Keypad Display; Enable H/A Real Time Messages (see Fire Glossary)

Enable Keypad Blanking

(This option is located in the PCD-Windows Quickloader **Keypad Features** screen). When enabled, the GEMC-BK1 keypad display is inhibited except when a valid code is entered.

Enable Keypad Time/ Date Display

(This option is located in the PCD-Windows Quickloader **Keypad Features** screen). When enabled, this option allows the control panel internal clock be displayed on the keypad (line 2). The clock can be set by PCD-Windows Quickloader software or from the keypad. If the clock display is enabled, and the clock is known to be incorrect (for example, after a prolonged power outage of AC and DC), the keypads show either a blank line or a "SET TIME/DATE" message (if the option "Enable Set Time/ Date Message" is programmed).

Enable Manager Mode Outside Overview: (This option is located in the PCD-Windows Quickloader **Keypad Features** screen). When enabled, User(s) are allowed (using one keypad) to view, arm and disarm all areas for which they are authorized (including the current area) without the need to enter Overview Mode. Press [9][*]<User Code>[ENTER] to arm all areas assigned to that User; press [0][*]<User Code>[ENTER] to disarm all areas assigned to that user. If any areas to be armed have any zones in trouble, "CAN'T ARM SYSTEM/AREA # IN TROUBLE" message will be displayed.

Enable Report Test Mode Start/End

At the initiation of a test, the control panel sends a message to the central station that a test is in progress. The "Fault Find" function (a Function Menu selection) is enabled, and normally causes all zones to give a 7-second beep at the keypad(s) when any zone is faulted or restored. As required by SIA CP-01, Fault Find is expanded with the following features when **Enable Report Test Mode Start/End** is programmed.

- When Fault Find is entered, it reports to Central Station that "Test Mode" is in progress (Contact ID reports "E607"). On completion of the report, a Ring-Back will be given.
- Fault Find can not be initiated from an armed panel, and all digital dialer reporting is inhibited while in Fault Find.
- Keypad will display the following warning that the system is in Fault Find: "FAULT FIND RF SIG POWER - - "
- If 24-hour zone is open at end of test, no report is sent. If a 24-hour zone is tripped and not restored during Fault Find, when the mode is exited the zone will display as "Faulted" on the keypad display.
- When Fault Find is exited by pressing **RESET**, a Fault Find Restore Report will be sent (Contact ID reports "R607"), and upon completion of the report a Ring-Back will be given.

Enable Report on Exit Error/Recent Close

A Recent Closing transmission is sent if an alarm occurs within two (2) minutes after the expiration of the Exit Time. If the user number is available, it is included in the Recent Closing transmission. **Note:** Recent Closing transmissions are not sent for Fire alarms.

Enable Reporting to PC Preset

This feature allows a PC computer with Quickloader Software to function as a receiver. If programmed, all alarms sent to Telephone No. 1 will be sent to PC PRESET as well (regardless of whether or not transmissions to Telephone No. 1 were successful). PC PRESET must be in its Standby mode for this feature to operate.

Enable Set Time/Date Message

In the event of, for example, a prolonged power outage of AC and DC, the loss of the system clock will occur and a message "SET TIME / DATE" will be displayed on the GEMC-BK1 keypad. The message will remain until the time and date have been re-programmed (this option is located in the PCD-Windows Quickloader **Keypad Features** screen).

Enable SIA FAR Exit /Entry Limits

This option is always enabled on a control panel labeled "Compliant to ANSI/SIA CP-01". Three time limits are enabled as

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per the SIA CP-01 standards: (1) Exit Delay Time: If an attempt is made to change the Exit Delay time to less than 45 seconds the time will be entered as 60 seconds. The maximum programmable time is 255 seconds; (2) Entry Delay: If an attempt is made to change the Entry Delay time to less than 30 seconds the time will be entered as 30 seconds. The maximum programmable time is 255 seconds; and (3) Abort Delay: If an attempt is made to change the Abort Delay to less than 15 seconds or more than 45 seconds the time will be entered as 30 seconds.

NOTE: In accordance with UL standards, the aggregate of the Entry Delay time and Abort Delay time "window" will not be programmed to exceed one minute. **Note:** When this option is enabled, the Exit Delay keypad sounder (including the Exit Urgency sound during the final 10 seconds of the Exit Delay) is enabled. **Note:** If this option is enabled in EZ Programming, any Zone in a Group *will only activate an alarm and send a report ONCE*. After the Zone has reported, it will remain in the Group and may still initiate the Zone ANDING sequence.

Enable Telephone Line 1 Fault Test; Enable Telephone Line 2 Fault Test; Telco Line Test Delay (see Fire Glossary)

Enable User Code by Area See **User Closing and Opening Reports by Telephone Numbers**

Entry/Exit Delay, Entry/Exit 1; Entry/Exit 2, Entry Relay, Disable Area Entry Relays, Enable Exit-Delay Restart

Delays permit exit and entry through the Entry/Exit Zone(s) after the system is armed without setting off an immediate alarm. Entry delay allows the user time to enter and disarm the panel. Exit delay allows the user to leave the premises after the panel has been armed. Unless the keypad has been configured otherwise, the sounder will come on and will pulse during the last 10 seconds of entry delay to remind the user to disarm.

Two individually-programmable entry-delay times are provided to accommodate different entry zones. If two or more Exit/Entry Zones are entered in succession, the delay programmed for the last Exit/Entry Zone entered will take precedence over all others. Exit-Delay time and Entry-Delay time may each be programmed for up to 255 seconds (4 minutes). See Time Selection.

An external output/relay may be programmed to trip upon entry (see Programming Manual: "Relay Event ID Codes" & "Area Entry Relays"), and remain on for a programmed duration.

If the system has been armed with Exit-Delay Restart enabled, when the exit door is opened and then closed, the programmed exit delay will restart at 60 seconds. Thus, if a long exit delay is programmed, it will be reduced to 60 seconds after exiting, yet still allow reentry before entry time starts. If re-entry occurs within that 60 seconds, exit delay will restart once again (and only once again) at 60 seconds.

If re-entry occurs within 60 seconds after exit delay has expired, the alarm will sound a 2-second warning (with the entry sounder) to remind the user to disarm. (Exit-Delay Restart may be useful in reducing false alarms caused by a user who re-enters the premises shortly after exiting.)

Note: In UL installations, maximum exit delay is 60 seconds; maximum entry delay is 45 seconds. In UL Mercantile installations, maximum entry delay is 45 seconds.

Entry delay may be canceled by pressing the **INSTANT** button prior to arming, however it will be restored automatically upon disarming. (When armed with Instant protection, an "I" will appear at the right side of the display.)

Exit/Entry Follower

A zone programmed as an Exit/Entry Follower will ignore detection during the exit delay, and only during entry delay if the Exit/Entry Zone is entered first. Thus, detection devices (passive infrared detectors, for example) along the path between the keypad and the exit/entry door will not signal an alarm during exit/entry delay under normal conditions. However, if a device in the Exit/Entry Follower Zone detects a violation when the exit/entry door has not first been entered, there will be no entry delay and the Exit/Entry Follower Zone will go into an instant alarm.

If the panel is armed with the entry delays canceled (Instant protection), any violation on the Exit/Entry Zone or the Exit/Entry Follower Zone will cause an immediate alarm.

Expansion Zones

EZM Type

EZM PGM Armed Terminal Control

EZM Tamper See Tamper

Zones 9 and above are expansion zones added to the basic system using a GEMC-EZM8. Refer to ADD EXPANSION ZONES (in Volume 1) and the Wiring Diagram. Also see the instructions accompanying each module for wiring information.

Regardless of how the modules are arranged, the expansion zones are divided into consecutively-numbered groups of four. Each module may comprise 1 group (4 zones) or 2 groups (8 zones). **NOTE:** The default setting is 2 groups (8 zones). Place jumper J1 on #7 for 4 zone, remove for 8 zone. See W11683 for additional specifications and other information.

EZM Assignments

The "EZM Assignments" tab is used to setup the descriptions, type, and PGM output for all the EZM's used in an installation.

Full upload, and then put panel into service (see Fire Glossary)

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GEMC-FPRINT Formatting

The "GEMC-FPRINT Formatting" tab in PCD-Windows Quickloader allows you to enter in **GEMC-FPRINT** formatting print options. Selections are performed using combination boxes and Edit/Thumb wheels for number limits.

Group Bypass See Closing Report

IO

Initially Off (Alarm Code feature)

Used for scheduled access control. If a User Code is scheduled to turn on and off, upon power up it will remain off until scheduled to turn on.

Interior Stay Zones; Interior 1 Normally Bypassed; Automatic Interior Bypass/Easy Exit

Removal of a programmed group of interior (STAY) zones from the system will permit freedom of movement throughout the premises but still allow protection from intrusion through armed perimeter zones. Pressing **INTERIOR** prior to arming will select the Interior Zones, then arm to bypass. The next time the control panel is disarmed, all bypassed zones will automatically revert to non-bypassed (disarmed) zones. When **INTERIOR** is pressed, the "BYPASS" reminder will turn on.

The bypassed zones may be displayed on the keypad (see GEMC-BK1 FUNCTION MODE).

If Interior Normally Bypassed is selected, all Interior (STAY) Zones will always be inactive. The "BYPASS" reminder will always display, indicating that only partial protection will be provided upon arming. To temporarily restore interior protection, press **INTERIOR**; the "BYPASS" reminder will go out upon arming, denoting full protection, however Interior (STAY) Zones will once again be bypassed the next time the panel is disarmed.

If "Auto Interior Bypass" is programmed, all Interior Zones will automatically be bypassed if the Exit/Entry doors are not opened during exit delay. If **ENTER** is pressed while armed Stay, exit delay will restart and Exit/Entry doors may be opened to permit someone to exit (while others remain on premises) without causing an alarm.

Interior Bypass

Interior 1 Bypass

Interior 2 Bypass

Interior (STAY) Bypass

"Interior Bypass" zones allow freedom of movement inside the premises, while still providing perimeter protection, in "ARMED STAY" mode by pressing **INTERIOR** before arming. All zones (including Interior Bypass zones) are all protected with full protection, in "ARMED AWAY" mode, by arming without the **INTERIOR** button. The next time the zone is disarmed, the zone will become a full protected zone. Interior zones can be made to be normally bypassed by enabling "Interior Normally Bypassed" and to be unbypassed by pressing **INTERIOR**. The next time the zone is armed, the zone will become a partially protected zone.

To bypass interior zones, press **INTERIOR** for **Interior 1**; press again for **Interior 2**; press once again for both, then press **ENTER**. To cancel entry delay on entry zones, press **INSTANT**. "ARMED***I" will display and the red light will flicker.

Jumpers (Refer to Wiring Diagram for UL configuration.)

R: (Located on the GEMC-BM/PS and GEMC-BM/PS) Cut for dry contacts on the Burg AUX Relay.

Jumpers below are located on the C-Series motherboard:

J1: Fire Keypad Configuration Jumper (top-right corner, above micro shield) is installed across top and center pins for normal operation. When configuring the GEMC-BK1 keypad, move jumper across center and lower pins. **Note:** Do NOT use when configuring the GEMC-BK1 Burglary keypads if the Fire system is in operation. Use J17 **BURG SERV** jumper.

J4: Burg Only Jumper: The panel leaves the factory with keypad #1 programmed as a "Fire Keypad",. Since a "Burg Only" system will not possess a Fire keypad, place a shunt across J4 to make the panel keypad #1 a Burg keypad, allowing the system to be programmed and function as a Burg Only panel.

J17: Burg Service Jumper. Move the shunt from OFF to ON to enter Burg Service Mode when maintenance or changes to the Burglary hardware must be performed, while keeping the Fire system in operation. Entering Burg Service Mode will prevent the panel from processing any Burglary events (Areas 2-8) and will allow the Burglary keypad(s) to go into Configuration Mode.

Keyfob Transmitters

Burg PGM1 'Chirp' on Keyfob Arm/Disarm

Select Burg Output (Bell) for Keyfob Chirp

Disable Burg PGM1 Clear on Disarm

Burg PGM1 Chirp on Keyfob Arm/Disarm will cause one 50mS chirp to sound on arming and two 50mS chirps on disarming. Use the steady output of a siren driver. Do not use a voice siren driver.

Burg Output Chirp on Keyfob Chirp will cause one 50mS chirp to sound on arming and two 50mS chirps on disarming. Use the steady output of a siren driver. Do not use a voice siren driver.

Programming a "C as the Keyfob Aux-1 Function or Aux-2 Function will provide the ability to toggle the Aux. Relay on or

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off. If there is an Aux. Relay timeout programmed, it will follow this timeout unless toggled off by the keyfob. To provide keyfob-only control, program no timeout. Program **Disable Burg PGM1 Clear on Disarm** to prevent a disarm from resetting the Aux. Relay. Associated Keyfob users must be programmed to report openings and/or closings. Keyfobs 1–16 report as Users 180–195, respectively.

Keyfob Zone Assignment

Keyfobs can be assigned to zones to allow individual reporting. Each of the 4 keyfob buttons can be assigned to a zone. For example, On button = point 1; Off button = point 2; A1 = point 3; A2 = point 4. Up to 255 keyfobs can be assigned to the Gemini GEMC C-Series control panels, providing multiple wireless panic buttons on a system, each reporting to the Central Station and/or annunciating on a keypad the keyfob zone number with description/location. To assign a keyfob to a zone, program the keyfob as you would a transmitter, entering the keyfob's ID code, check sum and point number at the appropriate zone.

Keyfob or Keypad Activation of Relay

The Auxiliary Relay can be programmed to activate for a programmable period of time. This is achieved through a new keyfob option, Access control, by programming (**Access Control on Burg Module PGM1 Output**) into the **Aux-1 Function or Aux-2 Function** locations. Also program the option **Burg Module PGM1 Output Access Control**, and a time into the **Burg PGM1 Access Control Timeout**. If an Access Control from the keypad is desired, also program a Panel Access Code.

Keyfob Disarm Activates Entry Lighting

Disarming with a keyfob can activate Remote Relays or X-10 Devices by programming the event Ext Burg Rel 1, or Ext Burg Rel 2 on the **NAC/Output Assignment** screen (**NAC/Output Events** tab) in PCD-Windows Quickloader. This event will cause the programmed outputs to activate on either a Keyfob Disarm OR the opening of the Exit Entry zone while the system is armed.

Keypad Assignment

Keypad Auxiliary, Keypad Panic and Keypad Ambush

Check these boxes to enable the desired keypad button functionality. For Auxiliary functionality, the user presses 8 and * simultaneously; for Panic, the user presses 9 and * simultaneously; for ambush, see **Ambush** Glossary entry.

EZ Arm

See **Easy Arming** entry.

Entry Sounder

(Burglary Only). If enabled, a sounder will turn on during Entry Delay time (system armed and an entry delay zone activated).

(also see Fire Glossary)

Keypad Configuration screen (see Fire Glossary)

Keypad Digital Dialer Test

A Digital Dialer Test (Central Station Comm. Test) can be initiated from the function menu. Press **[MENU]** until "DIGITAL DIALER TEST Y/N" is displayed and then press **[NEXT/YES]** to initiate the transmission of a Test Timer signal. Note: Test Timer reporting codes and *Report Test Timer on Telco1 or Telco 3* must be programmed.

Keypad Jumpers: Refer to label on the keypad circuit board fishpaper for jumper locations and a summary of settings.

Keypad Access See **Access Control**

Keypad Area Assignments

In multiple-area systems, assign an Area Number ("1"–"8") to each keypad.

Keypad Features

The following programmed system features will activate only if they have also been enabled at the keypad.

- Ambush
- Easy Arming
- Access Control
- Keypad (Police) Panic
- Keypad Auxiliary Panic

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Keypad Reporting and Outputs

This screen is used to select reporting/outputs for certain keypad features (see individual Glossary entries for the following):

Ambush
Fail to Close
Fail to Open
Auxiliary
Panic
Tamper

Keypad Sounder on Alarm

If a programmed zone goes into alarm, the keypad sounder will activate and will remain activated until **RESET** is pressed or the system is disarmed.

Keypad Tamper See Tamper

Keyswitch Arming

The area will arm/disarm when the programmed zone is momentarily shorted (momentary keyswitch). To supervise the key-switch, program the zone for **Day Zone/Trouble on Open**.

Leading Digits for Pager Format

In Pager Format reporting, the message typically begins with 00. With some pager services, this will cause the Pager's Voice Mail feature to activate. Program these digits to any number desired. Typical Pager report - 003 022 1234, where 3 is the Event, 22 is the zone, and 1234 is the Subscriber ID number.

If the Leading Digits are programmed as 98, the Pager report will now appear as 983 022 1234.

Logging of Security Bypassed Zones

The panel will log by User, Date, Time, and Zone any zones which are bypassed with the Security Bypass Mode. This is useful in a system where openings are on 24 hour protection zones and access is only allowed if the zone is Bypassed by an authorized User, and then Unbypassed when done. A typical application would be a warehouse or shipping terminal where the overhead doors are programmed for 24 hour protection and must be Bypassed to allow access, and then Unbypassed again. To activate this feature, DO NOT program *Disable Code Required for EZ Bypass* is Program BE (Bypass Enable) for each user who is to have this ability.

- To Security Bypass a zone:
1. Enter Arm/ Disarm code * *Code must be Bypass Enabled*
 2. Press the **[BYPASS]** button. The display will read, "BYPASS ENABLED".
 3. Press the **[BYPASS]** button, again.
 4. Enter the zone #. The display will read, "BYPASSED ZONE #"
 5. To bypass another zone, repeat steps 3 and 4.

To Security Unbypass a zone, follow the same procedure. When the zone # is entered (step 4), the display will read "UNBYPASSED ZONE #".

To Arm/Disarm the system without altering the state of Bypassed zones, program the option *Disable Auto-Unbypass on Disarming* (see Programming Instructions WI1673 for the keypad programming address).

- It is not possible to Bypass/Unbypass Zones using the Directory Mode procedure.
- Typically, any zone, other than a Fire zone, will automatically be unbypassed when the panel is disarmed. In order to unbypass a Fire zone, follow procedures 1 through 4. After executing step 4 the display will read - Unbypassed, Zone #.
- When a Fire zone is bypassed, the panel will go into a Fire trouble condition. It will also transmit the Fire trouble to the central station, if programmed to do so.
- Zones 1-9 are entered with three digits (001 - 009).

Loop Response (750mS required for UL installations)

Loop response is the amount of time in milliseconds (mS) that a normally-closed circuit must remain open, or a normally-open circuit must remain closed, to trigger an alarm. The slower the loop response, the more immune the system will be to intermittents ("swingers"). Loop response times for Zones 1 through 8 are programmed into the control panel; those for Zones 9 through 255 loop responses are selected at the respective keypad configuration mode. The GEMC-EZM8 is fixed at 750mS.

Selectable loop-response times for Zones 1–8 are:

- 750mS (.75 sec.): The slowest loop-response time, recommended for use with magnetic contacts, window foil, etc. Unless programmed otherwise, loop-response time will be 750mS for all zones.
- 50mS (.05 sec.): Used for momentary Panic Buttons and area-protection devices, such as photoelectric eyes, passive infrared sensors, floor mats, etc.
- 20mS (.02 sec.): An extremely fast loop response used primarily for window bugs.

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Low Battery System Trouble (E02) (see Fire Glossary)

MAC Address

Each device on a network contains a unique identifier called a MAC Address encoded within the circuitry of the NL-MOD by the manufacturer. The MAC Address is printed on the bottom of the NL-MOD housing.

Master Security Code

Dealer Keypad Program Code

Download Security Code

The factory-programmed **Master Security Code** (printed on the label affixed to the label stuck to the top of the GEMC-XXXMB motherboard PCB). The **Master Security Code** is unique and cannot be changed. Use this code to enter the Dealer Program to program (or change) the **Dealer Keypad Program Code**. If a **Dealer Keypad Program Code** is programmed, both the **Dealer Keypad Program Code** and the **Master Security Code** will work.

The **Dealer Keypad Program Code** or the **Master Security Code** is needed to enter the Dealer Program, thus allowing the dealer to program codes, zone features, reporting features and zone descriptions (see Programming Manual WI1673). This code may be changed as required.

Important! The label containing the **Master Security Code** should be removed. Physically record the code in a secure place for reference as programming changes cannot be made without it (or the **Dealer Keypad Program Code**).

The **Dealer Keypad Program Code** can be entered or changed via PCD-Windows Quickloader or via Keypad Easy Program Mode.

The **Download Security Code** is used to permit local or remote connections to be established between PCD-Windows Quickloader download software and the control panel (the **Master Security Code** can also be used in place of the **Download Security Code** to establish a connection).

Memory Failure (see Fire Glossary)

Never Arm (Do not use in UL installations)

A zone programmed as **Never Arm** cannot go into alarm. If tripped, it will display at the keypad when the DISPLAY STATUS function is selected. If **Chime** is programmed for that zone and has been enabled, a chime will sound at the keypad while armed or disarmed when that zone is opened. This feature is suggested for use as a driveway monitor, or similar application.

NL-MOD IP Address

Panel IP Address

This is the network IP address of the NL-MOD. The NL-MOD must be configured to include this IP address. **Note:** The Panel IP address can only be set with NL-MODCONFIG software and cannot be programmed from the keypad (see WI1754).

NL MOD Port Number

Panel Port Number - This is the port number where PCD-Windows Quickloader can accept the panel. The NL-MOD must be configured to include this number.

No EOL Resistor (Do not use in UL installations)

Program for any zone not wired with a 2200Ω end-of-line resistor (Napco Part No. EOL2.2K). This will disable any zone-short indication (if programmed, Day Zone/Trouble Short is disabled). If not programmed, an end-of-line resistor must be installed.

Note: This selection is automatically disabled for zones selected as Fire. Do not program for UL installations.

One-Button Arming See **Easy Arming**

Opening Report

Opening Report Only After Alarm Report (Do not program for UL installations)

Opening and closing reports are generally used in commercial installations. On disarming, the communicator can send an Opening Code for Users 1–195 (**Opening Report**), or it may transmit only when the control panel is disarmed after an alarm has been reported (**Opening Report Only After Alarm Report**). Subscriber Identification Numbers and Opening Codes must be entered for either opening report.

Program **Opening Report Only After Alarm Report** to report only when disarming after an alarm report. This feature may be used by the central station to verify that the subscriber has responded and disarmed the panel. If **Opening Report Only After Alarm Report** is selected, also select **Opening Report** for each user.

Opening/Closing Reporting for Keyfob Users

Associated Keyfob users must be programmed to report openings and/or closings..

- GEMINI C-Series control panels: Keyfobs 1-16 report as Users 180-195.

Output Control (External Outputs, External Relays)

In addition to the three relays provided on the motherboard, up to 88 external outputs are supported. These outputs can be

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on the GEMC-RM3008, GEMC-OUT8, GEMC-BSLC-RLY (supported by the GEMC-BSLC module). These external outputs may be controlled from the keypad, by an event or by a schedule, through the use of PCD-Windows Quickloader download software. Program these outputs to activate by event in the PCD-Windows **NAC / Output Assignment** screen. Refer to the **Fire Output Option** chart and the **Fire / Burg Output Device** chart.

Output Events

Output Events are programmed in the **NAC/Output Events** screen. These Output Events require an event, an area disarm selection and a Timeout duration. If the timeout is set to 0 (zero), the event is untimed and thus requires the system be disarmed at the keypad in order to turn off the output (depending on the output programming).

Output Follows Zone

External Output/relays can be programmed to follow an open or shorted zone. On the PCD-Windows NAC/Output Assignment screen, program the External Output to "follow " an open zone, or to "follow" a shorted zone.

OV

Overview (Alarm Code feature)





Allows alarm code user to view status of all Burg areas simultaneously.

Panics

Keypad Aux Panic

Keypad (Police) Panic

Remote Panic

The Panic Zone is always a 24-Hour Zone. Each GEMC-BK1 Burglary keypad is individually selectable for keypad panics (see **Keypad Features**). If Keypad Panic is programmed for a keypad, police panic is activated by simultaneously pressing the  and  buttons. If Keypad Aux. is programmed, pressing  and  buttons simultaneously will trip an auxiliary emergency alarm. Additional panic buttons may be wired in parallel with the first. If remote panic will not be used, insulate both white wires, as a short across them will cause a panic alarm. In UL installations, remote-panic buttons must be located within 3 feet of the keypad, with no intervening walls or barriers. Tamper must be enabled on the keypad.

PC Security Code

This is the security key for the current computer. It is used for authentication during a TCP/IP communication. The same security code must be configured in the NL-MOD. TCP/IP communication will not begin without a correct PC security code. Each sub-field of the PC security code is ranged from 0 to 255. The user can toggle to the next sub-field by either pressing the tab key or the "-" key. This PC security code will be programmed into the NL-MOD from the NL-MODCONFIG software, and must match when using the PCD-Windows Quickloader software.

Power-Up Delay

If programmed, power-up will be delayed for 5 minutes to allow devices such as PIR's time to stabilize (warm up). This will prevent false alarms when ac power is restored after a long power outage and the backup battery is discharged. SIA CP-01 requires you must program this feature on all zones with sensors. **Note:** Press RESET in the 5-minute power up window to cancel the power-up delay.

Pre-Alarm Warning (Not for UL applications; MUST be disabled for Fire Zones)

Programmable by zone, this feature will cause the keypad sounder to sound warning of a pending report to the central station. (See **Abort Delay; Time Selection**). The Pre-Alarm Warning time is placed into the Abort Delay time, and after the Abort Delay time has elapsed, the alarm output will activate and a report will be sent. **Note:** If no Abort Delay time is programmed, **Pre-Alarm Warning** time will be 10 seconds.

Pre-Dial Delay

A Pre-Dial Delay may be used whenever a delay is required before dialing. It may be required when programming Dial-Tone Detection, which causes the communicator to wait before it attempts to detect a dial tone (see Dial-Tone Detection). Certain telephone exchanges send a nonstandard dial tone that the communicator may not be able to detect. With these nonstandard exchanges, it is possible to program Pre-Dial Delay rather than Dial-Tone Detection. This will cause the communicator to wait for a predetermined period of time before dialing rather than look for a nonstandard dial tone.

Contact the telephone-equipment supplier to find out how long a delay is required before dialing. Select Pre-Dial Delay by programming one "D" for each 4-second delay required immediately before the telephone number. **Note:** In UL installations, do not program more than one "D" before the telephone number.

See Backup Report on Telco 2; Report Telco 3 (Double or Split Reporting). Also see Access Number for Outside Line; Telephone Numbers.

Priority Area Arming

Prevents area arming if the alternate Priority Area has not yet been armed.

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Priority Zone (Required for all zones in UL installations).

A zone that will prevent arming if in trouble. If an attempt is made to arm, the sounder will come on and "ZONES NOT NORMAL/CAN'T ARM" will be displayed for 4 seconds. The keypad may be reset by simply pressing the **[RESET]** button. The Priority Zone must be corrected or bypassed before the panel can be armed. Any zone may be selected as a Priority Zone. A zone in trouble that is neither a Priority Zone nor an Auto-Bypass Zone will cause an alarm on arming.

Priority Zone with Bypass

A Priority Zone that will permit arming if the priority condition is bypassed. If the system is so programmed, the zone will auto-bypass and (optional) the condition will be reported to a central station.

As above, if an attempt is made to arm, the sounder will come on and "ZONES NOT NORMAL/CAN'T ARM" will be displayed. To reset the keypad, press the **[RESET]** button; the display will read "ZONE FAULTS". To arm the panel, press the **[RESET]** button, then enter the User Code.

Any zone not selected as a Priority Zone may be programmed as a Priority Zone with Bypass.

Pulse Burglary Bell (See section "Control Panel Outputs" earlier in this manual).

RF Low Battery

In wireless installations, when displaying RF transmitter status, a "LoBatt" indication at the keypad denotes a low-battery condition at the transmitter.

RF Recv High Noise

RF receiver may not receive Transmitter signals due to interference from outside signals of the same or similar frequency.

RF Recv Jam

RF receiver may not receive Transmitter signals due to high amplitude signal of the same frequency.

RF Receiver No response

Receiver stopped responding to polls due to malfunction, wire open or wire short.

RF Receiver Tamper

RF Receiver cover is removed or has been it is moved (back tamper).

Receiver Format (see Fire Glossary)

Relay Event

Relay outputs can be programmed to activate on a particular event or combination of events. Select the event(s) in the Quick-loader **NAC/Output Assignment** screen, **NAC/Output Events** tab. Click in the **Event \ Alarm Type \ Condition** column, and the **Relay Event** dialog opens.

Note that as events in this screen are clicked and highlighted, the **Relay Event** dialog changes to suit the nature of the event, with **Alarm Type** and/or **Condition** fields appearing that also change as their attributes are selected. Relay Events activated on a *Trouble* or *Trouble Restore* may only activate outputs programmed as **Supplemental**. These outputs will be activated on the *Trouble* and the output will remain on until a GEMC-FK1 Fire keypad is unlocked and the Function Menu option "Reset Supplemental Output" is selected. The Burglary-related events are:

Area 2-8 Gen. Alarm - A Burglary alarm was tripped in Area 2, 3, 4, 5, 6, 7 or 8.

Area 2-8 Arm - Area 2, 3, 4, 5, 6, 7 or 8 was armed.

Zone 1 - An alarm was tripped or restored within Zone 1; a Zone 1 trouble (or trouble restore) condition was indicated; an open or short-circuit condition for Zone 1 was indicated.

Zone 2-255 - For Zones 2 through 255, an alarm was tripped or restored within a Zone; a Zone trouble (or trouble restore) condition was indicated; an open or short-circuit condition for a Zone was indicated.

Burg Keypad Tamper - The GEMC-BK1 Burglary keypad cover was opened.

Area 2-8 Keypad Ambush - For any Area 2 through Area 8 keypad, a silent "Ambush" signal was initiated.

Area 2-8 Keypad Panic - For any Area 2 through Area 8 keypad, a Police "Panic" emergency signal was initiated (**[9P]** + **[*]** pressed at the keypad).

Area 2-8 Keypad Auxiliary - For any Area 2 through Area 8 keypad, an Auxiliary emergency signal was initiated (**[8A]** + **[*]** pressed at the keypad).

Area 2-8 Fail to open - If any Area 2 through Area 8 is not disarmed at a specified time, the panel will send a "Fail to Open" signal to the central station.

Area 2-8 Fail to close - If any Area 2 through Area 8 is not armed at a specified time, the panel will send a "Fail to Close" signal to the central station.

Test Timer - Test Timer is a programming feature where an automatic test report is transmitted to the central station on a scheduled day(s) at a scheduled time.

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Memory Fail - A User or Dealer Memory error will cause the sounder to pulse, the "SYS/TBL" reminder to flash, and the display to indicate an E19 or E20 memory error.

System Low Battery - An E02 system battery trouble is generated when there is either a depleted or damaged battery and/or the battery charging circuit is not working correctly.

AC Fail - An E01 AC power failure / brownout trouble is generated when AC power is absent from the system (or low voltage).

EZM Tamper - A GEMC-EZM8 Zone Expansion Module cover was removed, causing an E13 EZM Tamper trouble.

Sensor Watch - This feature can be used for any zone containing a PIR or dual-technology sensor, floor mats, door contacts, or other device where some activity is expected. Program this feature to supervise the sensor by verifying that the zone activates before the PIR timer runs out. If no trip is detected within the programmed Sensor-Watch time, a "E22-NN PIR SENSOR TRBL" system trouble will result.

Telco Fault 1 - Enable Telephone Line 1 Fault Test will cause the panel to monitor telephone line 1. A failure will indicate an E08 telephone line trouble. For Burglary systems, this system trouble is used to activate the Burglary Bell. System trouble displays after a programmed delay of low on hook voltage and no off hook line current from connected phone line.

Telco Fault 2 - Enable Telephone Line 2 Fault Test will cause the panel to monitor telephone line 2. (See "Telco Fault 1" above).

Digital Dialer Test - This keypad Function Menu feature (**TEST COMMUNICATOR**) will send a programmed report code to the central station. Note that in this case the report code received is not indicative of a system trouble, but is an indication of a successful transmission. Should the transmission fail, the keypad will indicate an E03 communication failure (the trouble will clear after any successful subsequent report).

Service Message - A service message can be programmed through the PCD-Windows Quickloader Event-Schedule screen to remind the user to arrange for scheduled maintenance. At the programmed date and time, the keypad sounder will pulse and display will indicate an E24 "Time for Service" message.

Program Change - If enabled, the panel will report to the central station when the panel receives a download from the Quickloader (change of program), or exits a keypad dealer program mode. Select option by enabling the "Program Change" (located in the **System Assignment** screen, **System Reporting/Outputs** tab). Required in Fire reporting accounts.

RF Receiver Trouble - An trouble is generated when the wireless receiver or SLC module is not responding.

Wireless Tamper - An E15 "Wireless RF Transmitter or SLC Point cover removed" is indicated. The unit may be removed from its mounting location and/or an SLC device cover is removed.

Wireless Trouble - Any wireless trouble was indicated.

Keypad Fail - An E10 "Burglary keypad or ACM response failure" or E32 "Fire keypad response failure" keypad response failure is generated.

EZM Fail - An E12 "Burg Expansion Zone Module response failure" or E31 "Fire Expansion Zone Module response failure" is indicated.

QL Device Control - A status change for any output shown in the Quickloader **Status/Control** screen (click **Panel History**, **Status History**, then click the **Output Status** tab; the **Relay Output Control** button is located at the bottom of this screen).

Gen. Alarm - Any alarm was tripped.

Communications Failure - An E03 communication failure trouble (system not able to report to the central station) is indicated.

Burg Module - An E62 Burglary Module (GEMC-BM or GEMC-BM/PS) response trouble is indicated.

Burg SLC Trouble - Any GEMC-BSLC trouble is indicated.

Burg SLC Point Trouble - A Burglary GEMC-BSLC device trouble is indicated.

Burg Module Low Battery - An low battery is detected on the battery connected to the GEMC-BM/PS Burg Module.

Relay Group 1-8 - A device status change within a relay group occurred.

Entry Relay Area 2-8 - A change in status of an entry relay/output (an external output/relay programmed to trip upon entry) is indicated.

Area 2-8 Disarm - Areas 2, 3, 4, 5, 6, 7, or 8 was disarmed.

Area 2-8 Armed Away - Areas 2, 3, 4, 5, 6, 7, or 8 was armed "AWAY".

Report Telco 1

Report Telco 3 (Dual or Split Reporting)

Alarms, alarm restores, troubles and trouble restores may be selected individually for each zone. Violation of a zone selected to report will communicate the code(s) selected for that zone to the central station.

Normally, Report Telco 1 is used to report to the central station. Report Telco 3 is used when certain zones will report to a different receiver (split reporting); Report Telco 1 and Report Telco 3 are both used on the same zone to report to two receivers successively (Dual Reporting). (Dual Reporting requires a successful report to Telco 1 before reporting to Telco 3). Also see Backup Report on Telco 2.

Report Zone Wireless Trouble/ Restore to Telco 1

Send Zone Wireless Trouble/ Restore report(s) to Telco 1.

Reset Day Zone/Trouble with Arm/Disarm Only See Day Zone/Trouble

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RF Jam Reporting

RF Receiver Jam will report as RF Receiver Trouble.

Rotary Dialing Only See **TouchTone Dialing Only**

Schedule Assignment (Event Scheduler)

Access Schedules

For a particular User Code or Area, this screen allows the addition of pre-programmed events to take effect at a pre-programmed Time / Date and/or time period. The Event selections are:

User On - Enables the User Code

User Off - Disables the User Code

Test Timer (required in UL installations) - sends periodic test signal to the central station

Autodump History -

Area Arm - Auto arms the panel at a scheduled time

Area Disarm - Auto disarms the panel at a scheduled time

Service Message - a service reminder can be added

Test if Armed - Used for Fail to Arm reporting; if the panel is not armed at a specified time, the panel will send a signal to the central station

Test if Disarmed - Used for Fail to Open reporting; if the panel is not disarmed at a specified time, the panel will send a signal to the central station

Trouble Resound -

Open/Close Suppression Window

Used to suppress opening and closing reports to the central station during specified start and end times.

Holiday Dates

Used to suppress events during a specified holiday date / Time.

Second Call

If using the PCD-Windows PC downloader Software, the Telco Answering Service can now be disabled. Call the panel, hang up after one ring. The PCD-Windows will automatically call the panel back and the panel will answer in one ring. See Call-back-Method Download for more information.

Select Burg Bell on Keyfob Arming

This feature is associated with programming feature **Burg PGM1 Chirp on Keyfob Arm/Disarm**. Normally the chirp on a keyfob arm/disarm is transmitted to the Burg Module PGM1 Output. Selecting "**Select Burg Bell on Keyfob Arming**" causes the "Burg Bell" to chirp instead of the "Burg Module PGM1 Output" upon remote arming.

Selective Bypass

Disable Code Required for EZ Bypass (Not for UL installations.)

Any or all zones (1–255) programmed for Selective Bypass may be removed from the system, but each must be removed separately. Refer to BYPASSING ZONES in Section 3 for operation. Security Bypass: Recommended for commercial applications, requires entry of a valid user code. EZ Bypass: Recommended for residential applications, is selected by programming Disable Code Entry for EZ Bypass; this will permit bypassing/unbypassing zones without the need of entering a code (see EZ Bypass in Section 3). Do not program this feature in high-security applications. When one or more zones is bypassed, the "BYPASSED" reminder on the GEMC-BK1 keypad will display.

Sensor Watch

Program for any zone containing a PIR or dual-technology sensor, floor mats, door contacts, or other device where some activity is expected. This feature supervises the sensor by verifying that the zone activates before the PIR timer runs out. If no trip is detected within the programmed Sensor-Watch time, a system trouble will result and "E22-NN PIR SENSOR TRBL" will be displayed at the keypad, where NN are the zone number(s). Select the RESET SENSOR MSG function to reset this system trouble.

Program the Sensor-Watch Timer in the Quickloader **Time Selection** screen. Select a value in accordance with the anticipated activity within the coverage area while disarmed. In calculating the Sensor-Watch time, note that only the disarmed hours (the time between armed periods) are added. In moderate traffic areas, a Sensor-Watch time of perhaps 1 hour may be appropriate, whereas in remote areas, a time of 8 hours or more may be in order. Supervision time should be calculated for the supervised zone with the least amount of traffic. Up to 255 hours may be programmed (see Time Selection).

Service Message: A

Report Telco 1

Report Telco

Service Message is programmed in the Event scheduler screen in PCD-Windows Quickloader. When schedule event

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"Service Message" occurs, a service message will display on the keypad and if programmed will report to Telco 1 and/or Telco 3. A service message "E24-00 Time for Service" may be programmed to appear at the GEMC-BK1 Burg keypad and report to central station using the Quickloader Event scheduler.

Shed Burg on AC Fail

This feature specifies the amount of time the GEMC-BM or GEMC-BM/PS Burglary Modules will continue to operate using battery power after no AC is detected by the motherboard.

Program a number (0-255) of 10-minute intervals for the selection of untimed (program "0") or 10 through 2550 minutes (program "1-255"). **Note:** If the number selected is non-zero and less than or equal to 4 hours and 30 minutes (program "27"), the selection timeout is 4 hours and 30 minutes.

When using a GEMC-BM/PS, program zero (untimed) as the GEMC-BM/PS battery backup automatically sends a "very low battery" status to the motherboard when voltage drops below 10.2V. When this "very low battery" status is received by the motherboard, the GEMC-BM/PS will stop accepting status changes from the burglary system to prevent false alarms.

When a GEMC-BM (Burg Module without an onboard power supply) is used, program at least "27" (4 hours and 30 minutes); if the system battery standby can adequately supply power, this time can be extended. When the programmed time expires, the Burglary system will stop functioning and all power will be removed to conserve the batteries for the Fire system. The GEMC-BM will stop accepting status changes from the Burglary system, thus preventing false Burglary alarms.

Smart Download

Smart Upload

Quick method of communications that compares the sum-checks of sections of panel program to determine if they are different from the account sections and only communicates data that is different.

Split Reporting See Report Telco 3

Start Exit Delay After Ringback

When a closing report is successfully received, the central station will acknowledge by returning a kissoff signal. When the kissoff is received by the communicator, a 2-second ringback tone will sound at the keypad. Start Exit Delay After Ringback will cause the exit delay to start after the ringback sounds.

If this option is chosen and no ringback sounds shortly after the control panel is armed, exit delay will not start and opening the exit/entry door will cause an instant alarm. To manually start the exit delay, select the START EXIT TIME function, then press **ENTER** to execute.

Note: (1) If this feature is selected, Exit/Entry Follower Zones will not arm until either a ringback sounds or the START EXIT TIME function is used. (2) If communicator, telephone lines or central-station receiver is not in service, the system will be armed without communication capability. **Note:** The Entry Sounder feature cannot be turned off in Keypad Configuration mode.

Status Report See Closing Report

Subscriber Identification Numbers

If reporting openings and/or closings, program Subscriber Opening/Closing Identification Numbers for each area for each telephone number used. If reporting events, program Subscriber ID Numbers for each area for each telephone number used. Subscriber ID numbers must be programmed for each area and telephone number, even if all are the same. Start with the left-most location.

Supervise Burg Bell Output

When this option is enabled, a 2.2K ohm resistor must be installed across the bell or sounding device terminals. In the event that the Burg Bell is cut, or the circuit is opened, an E51-00 BURG BELL TRBL trouble condition will occur. **Note:** E51 trouble may also be generated with a GEMC-BM or GEMC-BM/PS trouble. **Note:** Due to a constant loop current flowing through the Burg Bell Output circuit for supervision, some sirens or siren drivers may emit a low volume hum or buzz if the 2.2K EOL resistor is not installed. If a supervised Burg Bell output is not required, this can be eliminated by programming the option in PCD-Windows Quickloader (**System Assignment** screen, **System Options** tab, **Supervise Alarm Output** checkbox).

Suppress "BYPASSED" Icon When Armed

Program to inhibit the LCD "BYPASSED" display while armed. (This option is located in the PCD-Windows Quickloader **Keypad Features** screen).

Swinger Shutdown

Swinger Shutdown is a common term used in the burglary alarm industry. It is a feature of an alarm panel that prevents multiple false alarms from being generated from faulty detectors (or wiring) by limiting the number of alarms a zone may report during a single arming period. NAPCO has this programmable-by-zone feature named *Swinger Shutdown*, and has been available on its panels for years. The SIA False Alarm Reduction standard CP-01 requires the SIA definition of "swinger shutdown" on all non-Fire zones. Our programmable feature allows three trips per arming period which is unacceptable in CP-01 installations. Therefore, to reduce confusion, the following defines both definitions of "Swinger Shutdown", namely (1) the

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NAPCO Programming Feature and (2) the CP-01 Requirement:

- **Swinger Shutdown (NAPCO Programming Feature):** Program a zone with this feature to allow only three alarms per arming period. *Auto-Reset* must also be programmed for the zone for this feature to work.
- **Swinger Shutdown (CP-01 Requirement):** *To meet CP-01, all non-Fire zones **must not** be programmed for Auto-Reset.* A zone not programmed for Auto-Reset will trip only one alarm per arming period. The panel leaves the factory with no zones programmed for Auto-Reset.

System Descriptions of the System Assignment (Properties).

The "System Descriptions" screen in PCD-Windows Quickloader allows you to enter a description for each system output.

System Options of the System Assignment (Properties).

The "System Options" tab in PCD-Windows Quickloader allows various system options to be selected or deselected. System Options are grouped by category (depending on panel) and are shown in the below figures. Each feature can be selected or deselected by clicking the check box in front of the feature.

System Reporting and Outputs

System Troubles / Events (*Test Timer, Memory Fail, Low Battery, Burg Low Battery, AC Fail, EZM Tamper, Sensor Watch, Telco Line 1 Failure, Telco Line 2 Failure, Digital Dialer Test, Service Message, Program Change, Housing Tamper, Telemetry Trouble, Telemetry Failure, Ground Fault, ACM Power Failure, ACM Low Battery*) can trip any output (*Pulsed Burg, Auxiliary*, etc.). **Note:** RF TROUBLE will report for RF Low Battery, RF Supervision Failure or GEMC-BSLC-DT Self-Test Failure.

Tamper

EZM Tamper

Keypad Tamper

RF Tamper

Bell Alarm on Tamper Options (Required for Mercantile Burglary):

- **ENABLE BURG POINT SOUND BURG ALARM ON (RF-XMIT PNT/BSLC PNT-TAMPER) ONLY IF IN ZONE ARMED**
- **ENABLE BURG POINT REPORT TAMPER ON (RF-XMIT PNT/BSLC PNT TAMPER) ONLY IF ZONE ARMED**
- **ENABLE BURG RF RECEIVER TAMPER SOUND BURG ALARM ONLY IF ANY AREA ARMED**

Removing the cover of an expansion zone module will cause the sounder to pulse and the "SYS/TBL" reminder to flash. The keypad will display "E13-NN BURG EZM TAMPER", where "NN" denotes the module number. Press the **RESET** button to silence the sounder ("SYSTEM READY" will display). Correct the problem, then select **RESET SYSTEM TBL** to manually reset the system trouble display. Removing a keypad from the wall causes a similar system trouble indication. The keypad will display "E11-NN BURG KPD TAMPER", where "NN" denotes the keypad number. Press the **RESET** button to silence the sounder ("SYSTEM READY" will display). To manually reset the system trouble, correct the problem then select "RESET SYSTEM TBL".

Note: If either of the tamper conditions is not corrected within 5 minutes, the system trouble will again display at the keypad. In addition:

- A Tamper condition can be programmed to activate the burglary bell and/or report using its associated system Report Code.
- In wireless installations, when displaying RF transmitter status, a "Tamper" indication denotes that the transmitter case is open.
- In **Commercial Burglary** installations, the Tamper must generate the audible alarm if the system is armed. Program in PCD-Windows Quickloader **System Assignment** screen, **System Reporting and Outputs** tab, for both **EZM Tamper** and **Housing Tamper**, check "Burg Bell" (column).

TCP/IP Panel/Site Initiated Functions (see Fire Glossary)

Telco Fail See Enable Telephone Line-Fault Test

Telco Fail Only When Armed

The Telco Line Cut Monitor will only be active when the system is armed.

Telemetry Failure

If the device connected to the on-board Serial Port is not able to carry out its intended function, it can send a signal to the control panel, and a Telemetry Trouble system trouble will result. On the PCD-Windows System Features screen, enable Telemetry Failure: = XF to report on alarm or activate and output. On the PCD-Windows System Reporting Codes screen, program a reporting code for Telemetry Failure.

Keypad readout will be: E59-00 SERVICE

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The event Log will read: TELEMETRY COMM
 Trouble Restore: TROUBLE: TELEMETRY FAIL
 TELEMETRY FAIL

Keypad programming Address Location 1100 = [●][] 4 - Telemetry Trouble
 Telemetry Failure 8 - Telemetry Fail

Telephone Numbers See Fire Glossary

Test Timer

The test timer schedule is programmed using NAPCO's PCD-Windows Quickloader Software. If Test Timer is programmed, an automatic test report will be transmitted to the central station on the scheduled day(s) at the scheduled time. (UL installations require a report at least every 24 hours). To report test timer, select Report Test Timer and program a report code. Program the Test Timer event schedule and reporting time.

Timeout

Specifies the length of time that an alarm, alert, or delay will remain active. Burg PGM1 Access Control Timeout, Abort-Delay Time, and Chime Time must be programmed, or the feature will not activate. See **Time Selection**.

Time Selection

Any timeout up to those shown in the "**TIME SELECTION**" table may be programmed. Note that each of the time durations are programmed in two locations; the first location has an assigned time factor of 16, the second a time factor of 1. The following times are programmable as referenced in the **TIME SELECTION** table.

Note: If both programming locations are left blank, refer to the notes in the Time Selection table for feature timeout.

To select a time up to 15 seconds, 15 minutes, 15 hours, or 15 days, program the respective entry into the second box only; do not program the first box. To select a time greater than 15 seconds, 15 minutes, 15 hours or 15 days, program both boxes as follows:

1. For the feature selected, choose an appropriate time in units shown (all seconds, minutes, hours, or days — not minutes and seconds, etc.).
2. Divide the time chosen by 16. Enter the quotient in the 1st BOX and the remainder in the 2nd BOX.
3. Check entries by adding the contents of the 2nd BOX to 16 times the contents of the 1st BOX. (Remember that a "zero" entry represents 10).

Example:

Program Entry Delay 1 for 1 minutes.

1. Entry Delay 1 is in units of seconds, thus delay time is 90 seconds.
2. Divide by 16: $90/16 = 5$ (quotient) + 10 (remainder).
3. Enter the quotient in the 1st BOX and the remainder in the 2nd BOX
4. Check entries (remember, a "0" entry = 10): $(16 \times 5) + 10 = 90$

TouchTone Dialing Only**Rotary Dialing Only****TouchTone Dialing with Rotary Backup**

Select TouchTone Dialing Only if the subscriber has TouchTone service. TouchTone dialing is faster than rotary dialing, but not always as reliable.

For the communicator to use TouchTone on all dial attempts, program TouchTone Dialing Only. To use TouchTone on the first attempt with subsequent Rotary dial, program TouchTone Dialing with Rotary Backup. TouchTone Dialing Only will override TouchTone Dialing with Rotary Backup if both are selected. Note that if Backup Reporting is also selected, the communicator will alternate between TouchTone and rotary dial to reach Telephone 1, then Telephone 2. See Backup Report on Telco 2.

Trouble

An abnormal zone condition (a break in a normally-closed loop; a short on a normally-open loop; or either on an end-of-line-resistor supervised loop) when disarmed.

Trouble on a Burglary Zone is automatically displayed at the keypad unless Disable Zone Fault Scrolling (Auto Status) is programmed. If a Burglary Zone is in trouble, it will go into alarm about 10 seconds after arming. However, if Auto Bypass is programmed, the keypad will beep upon arming (does not apply to selective- or group-bypassed zones).

Trouble (open and/or short circuit) on a Day Zone/Trouble is indicated by a pulsing sounder; display the Day Zone(s) in trouble on the LCD. Keypad indications are reset by the **[RESET]** button unless **Reset Day Zone/Trouble With Arm/Disarm** is selected.

Trouble on a Fire Zone will be indicated by the "FIRE/TRBL" reminder and the sounder. An open circuit (trouble) will cause a flashing "FIRE" display and a pulsing sounder after a 15-second delay. (A short circuit will cause an alarm condition: steady-on "FIRE" display and pulsing sounder). The **[RESET]** button will silence the sounder. Clear the trouble, then press the **[RESET]** button once again. The keypad will reset after a brief delay.

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TIME SELECTION			
TIME	UNITS	MAX. PROG. TIME	UL864 Required settings
EXIT DELAY	SECONDS	4 MIN., 15 SEC. (255 SEC.) ⁽⁴⁾	N/A
ENTRY DELAY 1	SECONDS	4 MIN., 15 SEC. (255 SEC.) ⁽⁴⁾	N/A
ENTRY DELAY 2	SECONDS	4 MIN., 15 SEC. (255 SEC.) ⁽⁴⁾	N/A
AC-FAIL	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	60-180 minutes
ABORT DELAY	SECONDS	4 MIN., 15 SEC. (255 SEC.) ⁽³⁾	000 for Fire Zones
SENSOR-WATCH	(DISARMED) HOURS	255 HOURS ⁽⁶⁾	This feature only affects zones programmed for "Sensor Watch"; Fire Zones may not be programmed for Sensor Watch
BURG BELL	MINUTES	4 HR, 15 MIN. (255 MIN.) ⁽¹⁾⁽²⁾	DISABLED
PULSE-BURG BELL	MINUTES	4 HR, 15 MIN. (255 MIN.) ⁽¹⁾⁽²⁾	N/A
BURG PGM2	MINUTES	4 HR, 15 MIN. (255 MIN.) ⁽²⁾	N/A
CHIME	¼ SECONDS	63.25 SEC. (255 QTR-SEC.) ⁽³⁾	N/A
BURG AUX RELAY	MINUTES	4 HR, 15 MIN. (255 MIN.)	N/A
BURG PGM1	MINUTES	4 HR, 15 MIN. (255 MIN.) ⁽²⁾	N/A
BURG PGM1 ACCESS CONTROL	SECONDS	4 MIN., 15 SEC. (255 SEC.)	N/A
AUTO DISARM/REARM DELAY	MINUTES	4 HR, 15 MIN. (255 MIN.)	N/A
REPORT CANCEL WINDOW	MINUTES	4 HR, 15 MIN. (255 MIN.)	N/A
WATER FLOW RETARD TIME	SECONDS	4 MIN., 15 SEC. (255 SEC.)	Max 90 seconds less inherent delay of the waterflow sensor.
SHED BURG ON AC FAIL	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	Determined through battery standby calculations. Refer to Fire Glossary entry.
GEM-TRANS2 / GEMC-WL-WD2	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	4 hours (24 x 10 minutes)
GEM-PIR / GEMC-WL-PIR	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	N/A
GEM-SMK / GEM-HEAT / GEMC-WL-SMK / GEMC-WL-HEAT	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	4 hours (24 x 10 minutes)
GEM-DT / GEMC-WL-DT	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	N/A
GEM-GB / GEMC-WL-GB	x10 MINUTES	42 HR, 30 MIN. (2550 MIN.)	N/A
DELAYED TRIP TIME 1	MINUTES	4 HR, 15 MIN. (255 MIN.)	N/A
DELAYED TRIP TIME 2	MINUTES	4 HR, 15 MIN. (255 MIN.)	N/A

1st BOX	2nd BOX
tx16	tx1

Time t:	Entry:
0	*
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	0
11	B
12	C
13	D
14	E
15	F

* = blank

NOTES:

- ⁽¹⁾ The output used for Burglary must be at least 4 minutes in Residential UL installations, 15 minutes in Commercial UL installations.
- ⁽²⁾ If both locations are left blank, this feature will remain active until the system is disarmed. When both locations are programmed "F", maximum time will be 4 hours, 15 minutes (255 minutes).
- ⁽³⁾ If both locations are left blank, this feature will not activate (timeout = 0).
- ⁽⁴⁾ In UL installations: Maximum Exit Delay = 60 sec; Maximum Entry Delay = 45 sec.
- ⁽⁵⁾ If programming locations are left blank, delay will default to 10 sec.
- ⁽⁶⁾ Time in units of disarmed hours (accumulated between armed periods).

Trouble on Open**Trouble on Short****Trouble on Night Open** (Not for UL installations)

Trouble on Open will identify an open circuit on a loop as a trouble. Trouble on Short will identify a short circuit as a trouble. Trouble on Night Open, which will identify an open circuit on a normally-closed zone while armed as a trouble condition (not an alarm), is intended for use with a Napco Monitor-Series dual-technology sensor. While there will be no indication at the keypad, any of these trouble conditions can be reported if Report Trouble is programmed as well. See Sensor Watch.

Trouble/Trouble Restore Telco 1/Telco 3 See **Report Telco 1/Telco 3**

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Trouble/Trouble Restore Telco 2 See **Backup Report on Telco 2**

24-Hour Zone

A zone that provides protection at all times, whether or not the system is armed. If programmed for silent alarm (no Burg Bell, Burg Module PGM1 Output, Fire Output or Keypad Sounder on Alarm programmed) there will not be any indication on the keypad. If an Audible output is programmed, the keypad will flash the red Armed LED and display "ALARM" followed by the zone description.

Note: Do not program a Day Zone/Trouble as a 24-Hour Zone.

Unvacated Premises

Convert from Away to Stay based on no egress through exit door. Default is enabled. (GEMINI C-Series control panels--This feature is Automatic Interior Bypass/Easy Exit). The panels use the existing programmable feature "Auto Interior Bypass". This feature is enabled in the factory program. Refer to Programming Manual WI1673 for more information.

User Assignment (see Fire Glossary)

UP

User Program (Alarm Code feature)

Allows alarm code user to enter User Program Mode.

User Closing and Opening Reports by Telephone Numbers

Enable User Code by Area

If reporting to a central station, program User Closing and Opening Reports by Telephone Numbers. In multiple-area systems, program Enable User Code by Area.

User Code (Burg User Code / Fire User Code)/Authority Levels/Access Bytes

In total, up to 195 Fire User and Burg User Codes may be entered into the system, each with its dedicated Authority Level and Access Byte. (The Authority Level comprises an Option Code). A short description of each follows:

Burg User Code: For Fire and Burglary combination systems, this code will only allow access to the Burglary functions of the system. This code is typically used by a person with the responsibility of securing the premises, arming and disarming the Burglary alarm system, silencing Burglary alarms if they occur, etc. This code is special in that each code can be assigned four different "Authority Levels" (0, 1, 2 or 3) and five "Attributes" (**Initially Off**, **BV**, **User Program**, **BE** and **Overview**) and can be assigned to Area(s) 2 - 8 (with Area 1 being reserved for Fire only).

The Gemini C-Series control panels are pre-programmed at the factory as follows:

- **For Burglary-Only systems:** The panel default Burg User Code is programmed as User #1, with digits 123, active in Area 2 only.
- **For Fire and Burglary combination systems:** The panel default Fire User Code is programmed as User #1, with digits "123", active in Area 1 only. The Burg User Code is programmed as User #2, with digits "456", active in Area 2 only.
- **For Commercial Fire-Only systems:** The panel default Fire User Code is programmed as User #1, with digits 123 active in Area 1 only.

Unsupervised Transmitters

(Programmable with PCD-Windows Quickloader Download Software Only) Transmitters can now be unsupervised by programming a "9" in place of point number "1". **NOTE:** All points of that transmitter will be unsupervised.

Watch Mode (by Area) See **Day Zone/Trouble**

Wireless Keyfobs

RF-Receiver/SLC

Wireless Keyfobs are Arm/ Disarm Wireless Remote devices that require the programming of an RF ID number and an area number; Aux 1 and Aux 2 buttons can be programmed for various options (see the installation instructions included with the keyfob).

From the "RF-Receiver/SLC" screen in PCD-Windows Quickloader, you can select the RF and SLC Receivers used by the Gemini C-Series panel. Each address 1-4 can be set for a Receiver. Only addresses 1 and 2 can be used for SLC Receivers and there cannot be any unused address before the last address used. Each SLC Receiver can also be selected for "Class A" operation from this screen.

Wireless Trouble Reporting by Zone All reports of Wireless trouble (Transmitter Low Battery, Transmitter Tamper, Transmitter Supervision Failure) to central station will identify identifying the zone of the transmitter.

Zone ANDing, Groups 1-8 (Not for UL installations); Enable Local Alarm on First Zone AND Trip (Not for UL installations)

Up to 8 groups of at least two zones each can be "AND"ed, wherein the system will go into alarm only if any two zones of the

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group are tripped within 2 minutes. This feature is designed to afford redundant protection for devices, such as glass break detectors, PIR's, etc., that may show a tendency to false under certain conditions. Program each Group for any number of Zones available. All Zones in any Group must be within the same area (partition) and not overlap to other areas. Do not mix 24-Hour Zones and non-24-Hour Zones within the same Group. Do not include a Panic Zone as part of any Group. Auto-Reset must be programmed for each Zone ANDing Zone. **Note:** Any zone that is bypassed or goes into Swinger Shutdown will automatically disable Zone Anding for the entire Group. If "Enable Local Alarm on First Zone AND Trip" is programmed, a trip on any Zone of the Group will cause an alarm output and alarm display at the keypad; there will be no communication to the central station. **Note:** If "Enable CP-01 Limits" is enabled in EZ Programming, any Zone in a Group *will only activate an alarm and send a report ONCE*. After the Zone has reported, it will remain in the Group and may still initiate the Zone ANDing sequence.

Zone Area 1–Zone Area 8 See **Areas**

Zone Type See **Receiver Format**

CP-01 Quick Reference Chart--SIA False Alarm Reduction

Feature Description	Programming Address Location (for reference only)
Exit Delay. Minimum allowed programmable Exit Delay time is 45 seconds. Default is 60 seconds. If an attempt is made to change the Exit Delay time to less than 45 seconds the time will be entered as 60 seconds. The maximum programmable time is 255 seconds. The panel uses the existing programmable by zone feature "Entry/ Exit 1" to comply with CP-01. At least one Entry/Exit zone must be programmed for each area. The existing programmable Entry and Exit delay times are also used. The factory program sets the Exit Time Delay as 60 seconds and Entry Time Delay as 30 seconds.	0000
Enable SIA FAR Exit /Entry Limits. When this option is enabled, the panel will sound an audible egress sequence when it is armed Away (with interior zones not bypassed). The keypad mini-sounder will beep rapidly during exit delay to indicate exit urgency. If the panel is armed Stay (with interior zones bypassed) the keypad mini-sounder is silent and the exit time is double the programmed time. Note: This feature affects the operation of "Zone ANDing" as follows: If this feature is enabled, any Zone in a Group will only activate an alarm and send a report ONCE. After the Zone has reported, it will remain in the Group and may still initiate the Zone ANDing sequence.	7953, Option 6 (see Note 1) (7953 6 . .)*
Enable Exit Delay Restart. This option allows for the following scenario before the end of the Exit Time: a violation of an entry/exit zone, a restore, and a second violation of an entry/exit zone restarts the Exit Time. The panel does not allow the Exit Time to be restarted more than once. The default setting for this option is enabled. Restart is event logged.	7953, Option 2 (see Note 1) (7953 . 2)*
Enable Bell on Exit Error. An Exit Error sequence is initiated if an entry/exit zone is violated at the expiration of the Exit Time.	7953, Option 3 (see Note 1) (7953 . . 3)*
Automatic Interior Bypass/Easy Exit. Convert from Away to Stay based on no egress through exit door ...default is enabled. The panel uses the existing programmable feature "Auto Interior Bypass". This feature is enabled in the factory program.	5326, Option 1 (5326 1)*
Report Exit Error/Recent Closing. A Recent Closing transmission is sent if an alarm occurs within two (2) minutes after the expiration of the Exit Time. If the user number is available, it is included in the Recent Closing transmission.	7953, Option 4 (see Note 4) (7953 . . . 4)*
Entry Delay. Entry Delay time is 30 second minimum, default is 30 seconds. If an attempt is made to change the Entry Delay time to less than 30 seconds the time will be entered as 30 seconds. The maximum programmable time is 255 seconds. The panel uses the existing programmable by zone feature "Entry/ Exit 1" to comply with CP-01. At least one Entry/Exit zone must be programmed for each area. The existing programmable Entry and Exit delay times are also used. The factory program sets the Exit Time Delay as 60 seconds and Entry Time Delay as 30 seconds.	0001, 0002
Progress Annunciation. Entry urgency annunciation must be different than the alarm mini-sounder. Requires <i>Keypad Sounder on Alarm</i> on all non-Fire zones. See the Zone Options tables in the programming instructions (WI1673) for specific address locations.	Feature in EZ Programming
Disarm. The panel will silence the keypad entry delay tones and alarm annunciation on the first press of a keypad digit for 2.5 seconds.	New Panel Operation
Select Burg Bell on Keyfob Arming. Normally the chirp on a keyfob arm/disarm is transmitted to the Burg Module PGM1 Output. Selecting " Select Burg Bell on Keyfob Arming " causes the "Burg Bell" to chirp instead of the "Burg Module PGM1 Output" upon remote arming. The panel uses the existing programmable feature " Burg PGM1 Chirp On Keyfob Arm/Disarm " (Address 5326, option 4). The feature is selected in the factory program.	5327, Option 7 (see Note 3) (5327 7 . .)*
Enable SIA FAR Exit /Entry Limits. When this option is enabled, three time limits are enabled as per the SIA CP-01 standards: (1) If the Exit Delay time is programmed for less than 45 seconds, the enabled Exit Delay time will be set to 60 seconds; (2) If the Entry Delay time is programmed for less than 30 seconds, the enabled Entry Delay time will be set to 30 seconds; and (3) If an attempt is made to change the Abort Delay to less than 15 seconds or more than 45 seconds the time will be entered as 30 seconds. (4) Enables Exit Delay sounder. (5) Doubles Exit Delay time when arming Stay due to Silent Exit.	7953, Option 6 (see Note 1) (7953 6 . .)*
Abort Window Disarm. The panel will silence the keypad entry delay tones and alarm annunciation on the first press of a keypad digit for 2.5 seconds. Disarming of the area within the Abort Delay period will cause a cancellation of the Central Station alarm report.	New Panel/Keypad Feature
Abort Annunciation after Disarming. Default is enabled. If the panel is disarmed during Abort Delay, the keypad will enunciate abort. "Alarm Cancelled" is displayed on the keypad display.	New Panel/Keypad Feature
Report Cancel Window. When the system is in alarm and the user disarms in an attempt to Cancel within a maximum of 7 minutes after abort timeout, a Cancel Report will be sent. If Cancel Report is enabled by entering a cancel time, Cancel will enunciate on the keypad if the system is disarmed during the Cancel Window. The existing programmable option <i>Report Cancel Window</i> must be programmed for at least 5 minutes to comply with CP-01 (factory default is 7 minutes).	Address 8168
Duress Feature. The existing programmable option " Enable Global Ambush " must not be enabled. It is not enabled in the factory program.	Pre-existing feature

(continued)

<p>Duress Code. The panel will not allow duplicate User Codes to be programmed. Every user program code may now be selected as an Ambush Code for Area 2-8 by entering a _5 in the Area 2-8 Options. Note: Keypad(s) must be enabled for Ambush.</p>	New Operation of the Panel
<p>Cross Zoning. Required Option for cross zoning with either programmable time period or specified by manufacturer. Default is disabled. The existing programmable by zone feature "Zone ANDing Groups" are available for the cross zoning option required by CP-01. This feature is not enabled in the factory program. Cross Zone set time = one (1) minute.</p>	Pre-existing feature
<p>Swinger Shutdown. Zone will only trip once and will not restore automatically. "Auto-Reset" and "Swinger Shutdown" (see the Zone Options tables in the programming instructions (WI1673) for specific address locations) are disabled in order to meet the CP-01 requirement of only one alarm activation per zone during an arming period. These features are not selected on zones 1-8 in the factory program and must not be manually enabled if they remain Fire-zones. Auto-Reset must be programmed for all Burglary zones in a UL Installation. See the glossary entry, "Swinger Shutdown" in this manual.</p>	Pre-existing features
<p>Fire Alarms. Fire Alarm Verification available option on Fire Zones. Default is disabled. The existing programmable option "Fire Alarm Verification" is available as required by CP-01. This feature is not enabled in the factory program. Note: The GEMC-WL-SMK does not incorporate Fire Alarm Verification and thus is not compliant with ANSI/SIA-CP-01.</p>	Pre-existing feature
<p>Call Waiting. Disable Call Waiting on 1st Attempt. Default is disabled. When enabled, the telephone number must be programmed with *70 in front of the telephone number. The first attempt will dial with *70 (disabling call waiting). Subsequent attempts (if first attempt is unsuccessful) will dial without *70. Note: The digits used to disable Call Waiting may vary with location. Be sure to confirm with local telephone company. Note: Disabling Call Waiting on a non Call-Waiting line can result in a delay in the connection to Central Station.</p>	7953, Option 7 (see Note 2) (7953 7 .)*
<p>Enable Ambush Code Type in User Assignment. The Ambush Code is a separate and unique User Code. Disarming with an Ambush Code will cause a silent report to be sent to a central station. Thus, should a user be forced to disarm, he can silently signal an emergency while appearing to be merely disarming the system. The Ambush Zone will automatically report when programmed to report an alarm.</p>	7953, Option 8 (see Note 2) (7953 8 .)*
<p>System Test. Test Mode for all zones, the sounders, and communicator. The "Fault Find" function (a Function Menu selection) is enabled, and normally causes all hardwired zones to give a two second beep at the keypad(s) when any zone is faulted or restored. As required by SIA CP-01, Fault Find is expanded with the following features when Enable Report Test Mode Start/End is programmed.</p> <ul style="list-style-type: none"> • When Fault Find is entered, it reports to Central Station that "Test Mode" is in progress. • Fault Find can not be initiated from an armed panel, and all digital dialer reporting in same area is inhibited while in Fault Find. • Keypad will display the following warning that the system is in Fault Find: "FAULT FIND RF SIG POWER - -" • If a 24-hour zone is tripped and not restored during Fault Find, when the mode is exited the zone will display as "Faulted" on the keypad display. • When Fault Find is exited by pressing RESET, a Fault Find Restore Report will be sent. 	7953, Option 5 (see Note 4) (7953 5 .)*
<p>Notes:</p> <p>Note 1: This feature is enabled in the factory program.</p> <p>Note 2: This feature is not enabled in the factory program.</p> <p>Note 3: This feature is enabled in the factory program.</p> <p>Note 4: This feature is enabled in the factory program.</p> <ul style="list-style-type: none"> • At least one Exit/Entry zone must be programmed for each Burg area. (SIA CP-01 Specification 4.2.1) • A Gemini C-Series control panel and at least one GEMC-FK1 keypad (in a Fire-only system) or one GEMC-BK1 keypad (in a Burg-only system), or one GEMC-FK1 and one GEMC-BK1 in a Fire/Burg combination system. <ul style="list-style-type: none"> • In a Fire-only system, at least one zone expander or SLC controller or RF receiver is required. • In a Burglary system, a GEMC-BM or GEMC-BM/PS and at least one zone expander or SLC controller or RF receiver is required. • In addition, a minimum of one UL Listed Fire sounding device for a Fire system and a minimum one UL Listed siren for a Burglary system is required. • The following optional accessories support the SIA False Alarm Reduction (FAR) classification, and may be used if desired: GEMC-OUT8, GEMC-RM3008, GEMC-EZM8, GEMC-RECV, GEMC-WL-WD2, GEMC-WL-PIR, GEMC-WL-SMK, GEMC-WL-HEAT, GEM-KEYF. • Programming at Installation may be subordinate to other UL requirements for the intended application. • Un-vacated premises: When the system/partition is armed, the system will arm STAY if no exit. There must be a minimum of one Stay/Away or Delay Stay/Away zone enrolled on the partition. • Cross zoning is not recommended for Line security Installations nor is it to be implemented on exit / entry zones. • There is a Communication Delay of 30 seconds in this control panel. It can be removed, or it can be increased up to 45 seconds at the option of the end user by consulting with the Installer. • In UL installations, Entry Delay time plus Abort Delay time (total combined times) cannot exceed 60 seconds. • Enable Exit Delay Restart must be disabled for UL Line Security/Encryption applications. 	

*Illustrates the LCD display for the GEMC-FK1 keypad.

NON-CP-01 OPTIONS

Non CP-01 Options/Features:

In NAPCO C-Series control panels that do not have the CP-01 label affixed, non-CP-01 functions can be programmed into the control panel. These features and their associated address programming locations are described below:

- **Ambush Type 1:** (a 2-digit prefix code), this type must not be used in a SIA CP-01 compliant system. Enable as follows: (a) select "Ambush to Report Event Telco 1/Telco 3"; enter "Global Ambush Code"; and (c) enter an "Ambush CS Report Code". Each keypad is enabled for "Ambush" individually. This Arm/Disarm Code must be entered less than 10 seconds after the Ambush Code for an ambush report to be sent. When "ENABLE GLOBAL AMBUSH" is selected and no Ambush code has been entered and the keypads have been selected for AMBUSH, then the AMBUSH CODE will default to "99".

Required CP-01 Options/Features:

1. **Automatic Interior Bypass / Easy Exit.**
Address 5326, Option 1 (5326 1 ······)*
2. **Select Burg Bell on Keyfob Arming.**
This feature must be programmed in a CP-01 installation if a GEM-KEYF is used in the system.
Address 5327, Option 7 (5327 ······ 7·)*
3. **Report Cancel Window.**
Address 8168
4. **Auto-Reset**
This Zone Option feature must be programmed on all Burglary zones.

Features that may NOT be programmed in CP-01 Installations:

1. **"Enable Global Ambush"** Do not program
2. **Swinger Shutdown.** Do Not Program on any zones

Required CP-01 Error Check

Note 1: At least one **Exit / Entry zone** must be programmed for each Burg area (SIA CP-01 Specification 4.2.1).

FACTORY DEFAULT PROGRAM DESCRIPTION

When the Gemini C-Series control panel leaves the factory, or when a "Cold Start" is performed, the following programming is entered:

- Panel is programmed for Commercial Fire Only
- The GEMC-F8ZCPIM enabled
- All 8 zones are set as Fire zones and are programmed to activate the 4 NAC's. All 4 NAC's are Silence-able and in the System Sensor Format (thus requiring System Sensor Synchronized Horn/Strobes be installed)
- All 4 NAC's are synchronized (not offset, as required for more than 4A total alarm current)
- The AUX Fire relay is programmed as a Trouble relay (relay is normally energized and is de-energized for any Trouble)
- A pre-programmed Fire User Code of "1,2,3,4" is set
- Not programmed for Reporting
- Panel configured for one (1) GEMC-FK1 Fire keypad
- Standard Fire and Burglary time-outs entered.

NOTE: *If the control panel is powered up without the GEMC-F8ZCPIM installed, zones 1-8 will indicate a Trouble at the GEMC-FK1 Fire keypad.*

BATTERY STANDBY CURRENT

In addition to the charts that follow, PCD-Windows Quickloader download software can be used to provide the standby current requirement with the **System Current Calculator** utility (click **Tools, System Current Calculator**). To calculate the Standby Battery requirements for the system:

1. Create the account in the PCD-Windows Quickloader.
2. Program all peripherals used on the system.
3. Open the "System Current Calculator" utility.
4. Complete all fields within each tab of the utility.
5. Use the resultant "**24V Standby Current**", "**12V Standby Current**", "**24V Standby + Alarm Current**", and "**12V Standby + Alarm Current**" and the associated standby battery charts provided below to determine the required battery configuration.

MAXIMUM STANDBY CURRENT (Fire Only with GEMC-PS24V7A)

Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum 24V Alarm + Standby Current
2 12V 7AH	7	204	3.5A
2 12V 8AH	8	240	4A
4 12V 7AH	14	455	7A
4 12V 8AH	16	530	7A
6 12V 7AH	21	717	7A
6 12V 8AH	24	830	7A
8 12V 7AH	28	980	7A
8 12V 8AH	32	1100	7A

MAXIMUM STANDBY CURRENT (Fire Only with GEMC-PS24V4A)

Configuration	Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum Available 12V Standby Current (mA)	Maximum 12V Standby + Alarm Current	Maximum 24V Alarm+ Standby Current
Fire Only with GEMC-PS24V4A	2 12V 7AH	7	154	225	2.5A	3.5A
	2 12V 8AH	8	190	278	2.5A	4A
	4 12V 7AH	14	415	606	2.5A	4A
	4 12V 8AH	16	490	716	2.5A	4A
	6 12V 7AH	21	678	989	2.5A	4A
	6 12V 8AH	24	790	1154	2.5A	4A
	8 12V 7AH	28	940	1373	2.5A	4A
	8 12V 8AH	32	1100	1400	2.5A	4A

MAXIMUM STANDBY CURRENT (Fire with GEMC-PS24V7A and GEMC-BM)

Configuration	Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum Available 12V Standby Current (mA)	Maximum Fire and Burglary 12V Standby + Alarm Current	Maximum 24V Alarm+ Standby Current	Maximum Available Burg 12V 4.5 Hour Standby Current (Rated Maximum = 750mA)
Fire with GEMC-PS24V7A and GEMC-BM	2 12V 7AH	7	154	225	2.5A	3.5A	0.750
	2 12V 8AH	8	190	278	2.5A	4A	0.750
	4 12V 7AH	14	405	591	2.5A	7A	0.750
	4 12V 8AH	16	480	700	2.5A	7A	0.750
	6 12V 7AH	21	667	974	2.5A	7A	0.750
	6 12V 8AH	24	780	1138	2.5A	7A	0.750
	8 12V 7AH	28	930	1357	2.5A	7A	0.750
	8 12V 8AH	32	1100	1400	2.5A	7A	0.750

Notes: 24V standby current must be reduced by .68 times the amount of 12V standby current used.
 12V standby current must be reduced by 1.46 times the amount of 24V standby current used.
 24V standby + alarm current must be reduced by .68 times the amount of 12V standby + alarm current used.
 All values are calculated used 10% derating factor except for the 32AH configuration, that was evaluated through test.

continued



BATTERY STANDBY CURRENT

MAXIMUM STANDBY CURRENT (Fire with GEMC-PS24V4A and GEMC-BM)							
Configuration	Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum Available 12V Standby Current (mA)	Maximum Fire and Burglary 12V Standby + Alarm Current	Maximum 24V Alarm+ Standby Current	Maximum Available Burg 12V 4.5 Hour Standby Current (Rated Maximum = 750mA)
Fire with GEMC-PS24V4A and GEMC-BM	2 12V 7AH	7	154	225	2.5A	3.5A	0.750
	2 12V 8AH	8	190	278	2.5A	4A	0.750
	4 12V 7AH	14	415	606	2.5A	4A	0.750
	4 12V 8AH	16	490	716	2.5A	4A	0.750
	6 12V 7AH	21	678	989	2.5A	4A	0.750
	6 12V 8AH	24	790	1154	2.5A	4A	0.750
	8 12V 7AH	28	940	1373	2.5A	4A	0.750
	8 12V 8AH	32	1100	1400	2.5A	4A	0.750

MAXIMUM STANDBY CURRENT (Fire with GEMC-PS24V7A and GEMC-BM/PS)								
Configuration	Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum Available 12V Standby Current (mA)	Maximum Fire and Burglary 12V Standby + Alarm Current	Maximum 24V Alarm+ Standby Current	Maximum Available Burg 12V 4.5 hour Standby Current with 7AH battery	Maximum Available Burg 12V 4.5 hour Standby Current with 4AH battery
Fire with GEMC-PS24V7A and GEMC-BM/PS	2 12V 7AH	7	154	225	2.5A	3.5A	0.750	0.500
	2 12V 8AH	8	190	278	2.5A	4A	0.750	0.500
	4 12V 7AH	14	405	591	2.5A	7A	0.750	0.500
	4 12V 8AH	16	480	700	2.5A	7A	0.750	0.500
	6 12V 7AH	21	667	974	2.5A	7A	0.750	0.500
	6 12V 8AH	24	780	1138	2.5A	7A	0.750	0.500
	8 12V 7AH	28	930	1357	2.5A	7A	0.750	0.500
	8 12V 8AH	32	1100	1400	2.5A	7A	0.750	0.500

MAXIMUM STANDBY CURRENT (Fire with GEMC-PS24V4A and GEMC-BM/PS)								
Configuration	Batteries Used	Total 24V AH	Maximum Available 24V Standby Current (mA)	Maximum Available 12V Standby Current (mA)	Maximum Fire and Burglary 12V Standby + Alarm Current	Maximum 24V Alarm + Standby Current	Maximum Available Burg 12V 4.5 hour Standby Current with 7AH battery	Maximum Available Burg 12V 4.5 hour Standby Current with 4AH battery
Fire with GEMC-PS24V4A and GEMC-BM/PS	2 12V 7AH	7	154	225	2.5A	3.5A	0.750	0.500
	2 12V 8AH	8	190	278	2.5A	4A	0.750	0.500
	4 12V 7AH	14	415	606	2.5A	4A	0.750	0.500
	4 12V 8AH	16	490	716	2.5A	4A	0.750	0.500
	6 12V 7AH	21	678	989	2.5A	4A	0.750	0.500
	6 12V 8AH	24	790	1154	2.5A	4A	0.750	0.500
	8 12V 7AH	28	940	1373	2.5A	4A	0.750	0.500
	8 12V 8AH	32	1100	1400	2.5A	4A	0.750	0.500

Notes: 24V standby current must be reduced by .68 times the amount of 12V standby current used.
 12V standby current must be reduced by 1.46 times the amount of 24V standby current used.
 24V standby + alarm current must be reduced by .68 times the amount of 12V standby + alarm current used.
 All values are calculated used 10% derating factor except for the 32AH configuration, that was evaluated through test.

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NAPCO LIMITED WARRANTY

NAPCO SECURITY SYSTEMS, INC. (NAPCO) warrants its products to be free from manufacturing defects in materials and workmanship for *thirty-six months* following the date of manufacture. NAPCO will, within said period, at its option, repair or replace any product failing to operate correctly without charge to the original purchaser or user.

This warranty shall not apply to any equipment, or any part thereof, which has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to acts of God, or on which any serial numbers have been altered, defaced or removed. Seller will not be responsible for any dismantling or reinstallation charges.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF NAPCO.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within the six months following the end of the warranty period. IN NO CASE SHALL NAPCO BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

In case of defect, contact the security professional who installed and maintains your security system. In order to exercise the warranty, the product must be returned by the security professional, shipping costs prepaid and insured to NAPCO. After repair or replacement, NAPCO assumes the cost of returning products under warranty. NAPCO shall have no obligation under this warranty, or otherwise, if the product has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to accident, nuisance, flood, fire or acts of God, or on which any serial numbers have been altered, defaced or removed. NAPCO will not be responsible for any dismantling, reassembly or reinstallation charges.

This warranty contains the entire warranty. It is the sole warranty and any prior agreements or representations, whether oral or written, are either merged herein or are expressly cancelled. NAPCO neither assumes, nor authorizes any other person purporting to act on its

behalf to modify, to change, or to assume for it, any other warranty or liability concerning its products.

In no event shall NAPCO be liable for an amount in excess of NAPCO's original selling price of the product, for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of any failure of the product. Seller's warranty, as hereinabove set forth, shall not be enlarged, diminished or affected by and no obligation or liability shall arise or grow out of Seller's rendering of technical advice or service in connection with Buyer's order of the goods furnished hereunder.

NAPCO RECOMMENDS THAT THE ENTIRE SYSTEM BE COMPLETELY TESTED WEEKLY.

Warning: Despite frequent testing, and due to, but not limited to, any or all of the following; criminal tampering, electrical or communications disruption, it is possible for the system to fail to perform as expected. NAPCO does not represent that the product/system may not be compromised or circumvented; or that the product or system will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; nor that the product or system will in all cases provide adequate warning or protection. A properly installed and maintained alarm may only reduce risk of burglary, robbery, fire or otherwise but it is not insurance or a guarantee that these events will not occur. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. Therefore, the installer should in turn advise the consumer to take any and all precautions for his or her safety including, but not limited to, fleeing the premises and calling police or fire department, in order to mitigate the possibilities of harm and/or damage.

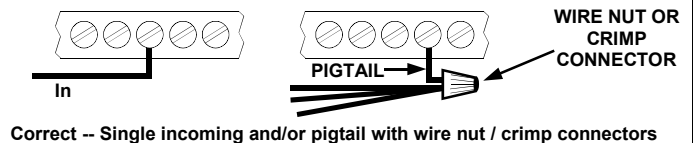
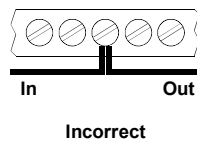
NAPCO is not an insurer of either the property or safety of the user's family or employees, and limits its liability for any loss or damage including incidental or consequential damages to NAPCO's original selling price of the product regardless of the cause of such loss or damage.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, or differentiate in their treatment of limitations of liability for ordinary or gross negligence, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

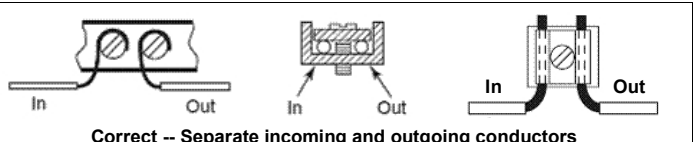
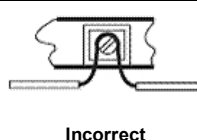
IMPORTANT WIRING METHODS



For single-conductor terminal blocks (like the type shown at left), to terminate more than one conductor to a terminal, use the wiring methods shown at right:



For "barrier" type terminal blocks (like the type shown at left), to terminate two conductors to a terminal, use the wiring methods shown at right:



To terminate more than two conductors or conductors of different wire sizes to a terminal, use the "pigtail" type wiring method as shown at right. Use insulated wire for the pigtail, and firmly secure the conductors to the pigtail using an appropriate wire nut or crimp connector for the number and gauge of conductors used.

