

..... **FA168CPS / FA168CPSSIA**
FA148CP / FA148CPSIA
Security Systems

Programming Guide



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PROGRAMMING MODE COMMANDS

TO ENTER PROGRAMMING MODE (using an alpha keypad connected to the control):

- A.** POWER UP, then press [*] and [#] at the same time, within 50 seconds of powering up (this method must be used if *98 was used to exit program mode). **OR**
B. Initially, key: Installer Code (4 + 1 + 1 + 2) plus 8 + 0 + 0.

PROGRAMMING COMMANDS

Task	Command/Explanation
Go to a Data Field	Press [*] + [Field Number], followed by the required entry.
Entering Data	When the desired field number appears, simply make the required entry. When the last entry for a field is entered, the keypad beeps three times and automatically displays the next data field in sequence. If the number of digits that you need to enter in a data field is less than the maximum digits available (for example, the phone number fields *41, *42), enter the desired data, then press [*] to end the entry. The next data field number is displayed.
Review a Data Field	Press [#] + [Field Number]. Data will be displayed for that field number. No changes will be accepted in this mode.
Deleting an Entry	Press [*] + [Field Number] + [*]. (Applies only to fields *40 thru *46, *94, and pager fields)
Initialize Download ID	Press *96. Initializes download ID and subscriber account number.
Reset Factory Defaults	Press *97. Sets all data fields to original factory default values.
Zone Programming	Press *56. Zone characteristics, report codes, alpha descriptors, and serial numbers for 5800 RF transmitters.
Function Key Programming	Press *57. Unlabeled keypad keys (known as ABCD keys) for special functions
Zone Programming (Expert Mode)	Press *58. Same options as *56 mode, but with fewer prompts. Intended for those familiar with this type of programming, otherwise *56 mode is recommended.
Output Device Mapping	Press *79. Assign module addresses and map individual relays/powerline carrier devices
Output Programming	Press *80. 4229 or 4204 Relay modules, Powerline Carrier devices, or on-board triggers
Zone List Programming	Press *81. Zone Lists for relay/powerline carrier activation, chime zones, pager zones, etc.
Alpha Programming	Press *82. Zone alpha descriptors
IP/GSM Programming	Press *29. For programming the IP/GSM options.
Exit Program Mode with installer code lockout	Press *98. Exits programming mode and <i>prevents</i> re-entry by: Installer Code + 8 + 0 + 0. To reenter programming mode, the system must be powered down, then powered up. Then use method A above. See field *88 for other *98 Program mode lockout options.
Exit Program Mode	Press *99. Exits program mode and <i>allows</i> re-entry by: Installer Code + 8 + 0 + 0 or method A above.
Scheduling Mode	Enter code + [#] +64. Create schedules to automate various system functions.
Site-Initiated Download	Installer code + [#] + 1 (perform while system is disarmed and in normal mode)

AVS QUICK PROGRAMMING COMMANDS (for AAV sessions using the AVS system)

For controls with the following firmware revision levels, these commands automatically configure the control for AVS operation. FA148CP = version 6.0 or higher; FA168CPS = version 7.0 or higher

- **installer code + [#] + 03:** enable AVS operation
 - **installer code + [#] + 04:** enable AVS operation and enable panels sounds on the AVST speaker
 - **installer code + [#] + 05:** remove all programming options that were set if [#] + 03 quick command was performed
 - **installer code + [#] + 06:** remove all programming options that were set if [#] + 04 quick command was performed
- Refer to the AVS SYSTEM ENABLE and QUICK PROGRAMMING COMMANDS section for details on the specific options that are set with each command, depending on the control used.

To select the AAV session communication path (phone line/communication device), see field *55 Dynamic Signaling Priority. To enable AAV operation, use *91 Options field (option 4).

Special Messages

OC = OPEN CIRCUIT (no communication between Keypad and Control).

EE or **ENTRY ERROR** = ERROR (invalid field number entered; re-enter valid field number).

After powering up, **AC**, **dl** (disabled) or **Busy Standby** and **NOT READY** will be displayed after approximately 4 seconds. This will revert to a **Ready** message in approximately 1 minute, which allows PIRS, etc. to stabilize. You can bypass this delay by pressing [#] + [0].

If **E4** or **E8** appears, more zones than the expansion units can handle have been programmed. The display will clear after you correct the programming.

IMPORTANT: The Real-Time Clock must be set before the end of the installation. See procedure in the Setting the Real-Time Clock section of this manual.

DATA FIELD PROGRAMMING FORM

Entries apply to the FA168CPS/FA168CPSSIA and FA148CP/FA148CPSIA controls, except entries shown in dashed boxes, which apply only to the FA168CPS/FA168CPSSIA (partition entries) and are not applicable to the FA148CP/FA148CPSIA controls.

SIA-Compliant Controls: Where noted, certain fields have special settings when used with the FA168CPSSIA and FA148CPSIA SIA-Compliant controls (indicated by **SIA-Compliant Controls** in reverse type and heavy borders for easy identification).

Entry of a number other than one specified will give unpredictable results. Values shown in brackets are factory defaults.

SIA Guidelines for Non-SIA-Compliant Controls: Notes in certain fields give instructions for programming the FA168CPS/FA148CP for False Alarm Reduction (these controls can be programmed to reduce false alarms, but they are not fully SIA compliant).

SYSTEM SETUP (*20–*29)

- *20 Installer Code** [4112]
Enter 4 digits, 0-9
The Installer Code is used to assign the 4-digit Master Security Code. The Installer Code can perform all system functions except it cannot disarm the system unless it was used to arm the system.
-
- *21 Quick Arm Enable** [0,0]
0 = no
1 = yes
Part. 1 Part. 2
If enabled, users can press the [#] followed by an arming key to arm the system instead of using a security code. The security code is always needed to disarm the system.
-
- *22 RF Jam Option** [0]
0 = no RF Jam detection
1 = send RF Jam report
If enabled, a report is sent if the system detects an RF jamming signal.
UL: must be 1 if wireless devices are used
-
- *23 Quick (Forced) Bypass** [0,0]
0 = no quick bypass
1 = allow quick bypass (code + [6] + [#])
Part. 1 Part. 2
Zones bypassed by this function will be displayed after the bypass is initiated.
UL: must be 0
-
- *24 RF House ID Code** [00,00,00]
00 = disable all wireless keypad use
01–31 = using 5827, 5827BD or 5804BD keypad
P1 P2 Common
The House ID identifies receivers and wireless keypads. If a 5827 or 5827BD Wireless Keypad or 5804BD Transmitter is being used, a House ID code **must** be entered and the keypad set to the same House ID. You can assign RF house ID for each partition
-
- *26 Chime By Zone** [0]
0 = no (chimes on fault of any entry/exit or perimeter zone when chime mode on)
1 = yes (chimes on fault of specific zones listed in chime zone list 3 when Chime mode on)
If “yes,” list chime zones on zone list 3 using *81 Menu mode.
If enabled, you can define the specific zones intended to chime when faulted while the system is in Chime mode.
-
- *27 Powerline Carrier Device (X–10) House Code** [0]
0 = A 6 = G #11 = L
1 = B 7 = H #12 = M
2 = C 8 = I #13 = N
3 = D 9 = J #14 = O
4 = E #10 = K #15 = P
5 = F
Powerline Carrier devices require a House ID, identified in this field. Program Powerline Carrier devices in interactive modes *79, *80 and *81.
UL: not for fire or UL installations
-
- *28 Access Code For Phone Module** [00]
00 = disable
1st digit: enter 1–9
2nd digit: enter # + 11 for "*", or # + 12 for "#".
(Partition 1 only)
You must assign a 2-digit access code for the 4286 Phone Module, if used. Example: If desired access code is 7*, then 7 is the first entry, and [#] + 11 (for *) is the second entry.
NOTE: A 0 in either digit disables the phone module.
UL: must be 00 for UL Commercial Burg. installations

***29 Enable IP/GSM – Communication Device Menu Mode (pass-through programming)**
This is a Menu Mode command, not a data field, for programming IP/GSM communication device options. See *29 Menu Mode section later in this document.

***31**

Single Alarm Sounding Per Zone

0 = unlimited sounding
1 = one alarm sounding per zone

[0]

If enabled, limits alarm sounding on the bell output to once per zone per armed period.

SIA-Compliant Controls: If "0" selected, "alarm sounding per zone" will be the same as the "number of reports in armed period" set in field *93 (1 if one report, 2 if 2 reports, unlimited for zones in zone list 7).

***32**

Fire Alarm Sounder Timeout

0 = sound stops at timeout selected in field *33
1 = no timeout; sounds until manually turned off

[0]

This control complies with NFPA requirements for temporal pulse sounding of fire notification appliances. Temporal pulse sounding for a fire alarm consists of the following: 3 pulses – pause – 3 pulses – pause – 3 pulses.

UL: must be 1 for fire installations

***33**

Alarm Sounder (Bell) Timeout

0 = none 3 = 12 min
1 = 4 min 4 = 16 min
2 = 8 min

[1]

This field determines whether the external sounder will shut off after time allotted, or continue until manually turned off.

UL: For residential fire alarm installation, must be set for a minimum of 4 min (option 1); for UL Commercial Burglar Alarm installations, must be minimum 16 min (option 4)

***34**

Exit Delay

00 - 96 = 0 - 96 secs
97 = 120 secs

[60,60]

Part. 1 Part. 2

The system waits the time entered before arming entry/exit zones. If the entry/exit door is left open after this time expires, an alarm will occur. Common zones use same delay as partition 1.

SIA Guidelines: minimum exit delay is 45 seconds

Common zones use part. 1 delay.

UL installations: For UL Commercial Burglar Alarm and UL Residential Burglar Alarm installations with line security, total exit time must not exceed 60 seconds.

SIA-Compliant Controls:
45 - 96 = 45 - 96 secs; 97 = 120 secs
NOTE: Entries less than 45 will result in a 45-second delay.

***35**

Entry Delay #1

00 - 96 = 0 - 96 seconds
97 = 120 secs
98 = 180 secs
99 = 240 secs

[30,30]

Part. 1 Part. 2

Upon entering, the system must be disarmed before the time entered expires, otherwise it sounds an alarm.

Common zones use same delay as part 1.

SIA Guidelines: minimum entry delay is 30 seconds

For UL Residential Burglar Alarm installations, must be set for a maximum of 30 seconds; entry delay plus dial delay should not exceed 1 min. For UL Commercial Burglar Alarm, total entry delay may not exceed 45 seconds. Upon entering, the system must be disarmed before the time entered expires, otherwise it sounds an alarm.

SIA-Compliant Controls:
30-96 = 30 - 96 secs; 97 = 120 secs;
98 = 180 secs; 99 = 240 secs
NOTE: Entries less than 30 will result in a 30-second delay.

***36**

Entry Delay #2

See *35 Entry Delay 1 for entries.

[30,30]

Part. 1 Part. 2

***37**

Audible Exit Warning

0 = no; 1 = yes

[1,1]

Part. 1 Part. 2

Warning sound consists of slow continuous beeps until the last 10 seconds, and then it changes to fast beeps. Sound ends when exit time expires.

SIA Guidelines: must be enabled

SIA-Compliant Controls: Feature always enabled; field does not exist.

***38**

Confirmation Of Arming Ding

0 = no
1 = yes (wired keypads and RF)
2 = yes, RF only (except 5827, 5827BD)

[0,0]

Part. 1 Part. 2

Confirmation of arming is 1/2-sec external sounder "ding."

If 1 selected, ding occurs when closing report is sent if open/close reporting is enabled, or at the end of Exit Delay. If 2 selected, ding occurs upon reception of the wireless arming command.

UL: must be 1 for UL Commercial Burglar Alarm inst.

***39**

Power Up In Previous State

0 = no, always power up disarmed;
1 = yes, power up in previous state

SIA-Compliant Controls: Feature always enabled; field does not exist.

When the system powers up armed, an alarm will occur 1 minute after arming if a zone is faulted. Note that if the previous state was armed Away or Stay, the system ignores sensor changes for 1 minute, which allows sensors such as PIRs to stabilize.

UL: must be 1
SIA Guidelines: must be 1

DIALER PROGRAMMING (*40 – *42)

***40**

PABX Access Code or Call Waiting Disable

Enter up to 6 digits.
To clear entries, press ***40***.
If call waiting is used, enter call waiting disable digits “* (#+11) 70” plus “# + 13” (pause).

Call Waiting: If the subscriber’s phone service has “call waiting” (and is not using PABX), enter “*70” (“# + 11”) plus “# + 13” (pause) as the PABX entry to disable “call waiting” during control panel calls. If the subscriber does not have “call waiting” and is not using PABX, make no entry in this field.

SIA-Compliant Controls: If call waiting is used, enter call waiting disable digits as described above, and also set Call Waiting Disable option in field *91.

NOTES:
1. The call waiting disable feature cannot be used on a PABX line.
2. Using Call Waiting Disable on a non-call waiting line will prevent successful communication to the central station.

***41**

Primary Phone No.

***42**

Secondary Phone No.

Do not fill unused spaces.
0–9
#+11 for ‘*’
#+12 for ‘#’
#+13 for a 2-second pause

Enter up to 20 digits. To clear entries, press ***41*** or ***42*** respectively. Enter the respective phone numbers. If fewer than the maximum digits entered, exit the field by pressing [*]. The next data field number is displayed.

***43**

Partition 1 Primary Acct. No.

[FFFFFFFF]

***44**

Part. 1 Secondary Acct. No.

[FFFFFFFF]

***45**

Partition 2 Primary Acct. No.

[FFFFFFFF]

***46**

Partition 2 Secondary Acct. No.

Enter 4 or 10 digits, as chosen in *48 Report Format. Enter digits 0–9; #+11 for B; #+12 for C; #+13 for D; #+14 for E; #+15 for F.

[FFFFFFFF]

Enter [*] as the fourth digit if a 3-digit account number (for 3+1 dialer reporting format) is used. Enter 0 as the first digit of a 4-digit account number for 0000-0999. E.g., For Acct. **B234**, enter: #+11 + 2 + 3 + 4
To clear entries in a given field, press *43*, *44*, *45*, or *46* based on the field being programmed

***47**

Phone System Select

If Cent. Sta. is not on a WATS line:
0= Pulse Dial; 1= Tone Dial
If Cent. Sta. is on a WATS line:
2 = Pulse Dial ; 3 = Tone Dial

[1]

Select the type of phone service for the installation.

***48**

Report F ormat

0 = 3+1, 4+1 ADEMCO L/S STANDARD
1 = 3+1, 4+1 RADIONICS STANDARD;
2 = 4+2 ADEMCO L/S STAND.
3 = 4+2 RADIONICS STANDARD
5 = 10-digit ADEMCO CONTACT ID® REPORTING
6 = 4+2 ADEMCO EXPRESS
7 = 4-digit ADEMCO CONTACT ID® REPORTING
8 = 3+1, 4+1 ADEMCO L/S EXP.;
9 = 3+1, 4+1 RADIONICS EXP

[77]
primary secondary

Select the format for primary/secondary phone numbers

***49**

Split/Dual Reporting

0 = Standard/backup reporting only (all to primary)
1-5 = see table at right

[0]

Backup Reporting: All reports are sent only to the primary number unless unsuccessful after 8 attempts. If unsuccessful, the system will make up to 8 attempts to send all reports to the secondary number. If still unsuccessful after the 16 attempts, the system displays the “COMM. FAILURE” message (FC for fixed-word displays).

Primary Phone No.	2nd Phone No.
1 = Alarms, Restore, Cancel	Others
2 = All except Open/Close, Test	Open/Close, Test
3 = Alarms, Restore, Cancel	All
4 = All except Open/Close, Test	All
5 = All	All

***50**

Burglary Dialer Delay

Delay Time:

- 0 = no delay
- 1 = 15 seconds
- 2 = 30 seconds
- 3 = 45 seconds

SIA-Compliant Controls:

Delay Time:

- 1 = 15 seconds
- 2 = 30 seconds
- 3 = 45 seconds

Delay Disable:

- 0 = use delay set in entry 1
- 1 = dial delay disabled for zones listed in zone list 6 (use zone list 6 to enter those zones that require dial delay to be disabled; these zones ignore the setting in entry 1)

UL: Dial delay plus entry delay must not exceed one minute; use zone list 6 to disable dial delay from appropriate zones, if necessary.

[2,0]

Delay Time

SIA-Compliant Controls:
Delay Disable

Provides delay of "BURGLARY ALARM" report to the central station, which allows time for the subscriber to avoid a false alarm transmission. This delay does not apply to zone type 24 alarms (silent burglary) or to 24-hour zone types 6, 7, and 8 (silent panic, audible alarm, auxiliary alarm), which are always sent as soon as they occur.

UL: Delay Time must be 0

SIA Guidelines: delay must be minimum of 15 seconds

***53**

SESCOA/Radionics Select

- 0 = Radionics (0-9, B-F)
- 1 = SESCOA (0-9 only reporting)

[0]

Enter 0 for all non-SESCOA formats.

***54**

Dynamic Signaling Delay

- 0 = no delay (both signals sent)
- 1 = 15 secs
- 2 = 30 secs, etc.

[0]

Select delay from 0 to 225 secs, in 15-sec increments. Intended for reporting via a communication device on the ECP bus (LRR). This field lets you select the time the panel should wait for acknowledgment from the first reporting destination (see *55) before it attempts to send a message to the second destination. Delays can be selected from 0 to 225 seconds, in 15-second increments. This delay is per message. If 0 is entered in this field, the control panel will send redundant reports to both Primary Dialer and LRR.

UL: If using line security, must be 0. Reports will be sent to both the dialer and the communication device.

***55**

Dynamic Signaling Priority / AAV Path Select

- 0 = Primary Dialer first / AAV via phone line
- 1 = Communication Device (LRR) first / AAV via communication device path (see AAV Path Select paragraph at right)

[0]

This field selects the primary communication path for reporting (dialer or communication device) of primary phone number events (see *49 Split/Dual Reporting) **and** selects the communication path used for AAV sessions (phone line or communication device path). Use *29 IP/GSM menu mode to enable the communication device being used. **For Dynamic Signaling Priority:** Select the initial reporting destination for messages as follows:

Primary Dialer First selected (0):

- If acknowledged before delay expires (see *54), then message will not be sent via LRR.
- If not acknowledged before delay expires, message is sent to both the Primary Phone No. and via LRR.

Long Range Radio First selected (1):

- If acknowledged before delay expires, then message will not be sent to the primary dialer.
- If not acknowledged before delay expires, message is sent to both the Primary Phone No. and via LRR.

For AAV Path Select:

- If using the UVS system or AVS system with non-ECP connection, option 0 must always be used.
- If using the AVS system with ECP connection, either option (0 or 1) may be used, but note the following:
IMPORTANT: If option "1" is selected, a 2-way voice (AAV) device compatible with the communication device path must be used (ex. GSMV communicator). When selected, AAV sessions **always** occur via the GSMV communicator, even if reporting reverts to phone line backup due to GSMV communicator path reporting failure.

For UL Commercial Burglary installations that use a DACT and LRR, this field must be 0.

***56, *57, *58 Menu Modes**

These are Menu Mode commands, not data fields, for Zone Programming, Function Key Programming, and Expert Mode Zone Programming respectively. See page 3 and respective sections later in this document.

TO PROGRAM SYSTEM STATUS, & RESTORE REPORT CODES (*59 thru *68, *70 thru *76, and *89):

For 3+1 or 4+1 Standard Format: Enter a code in the *first* box:

1–9, #+10 for 0, #+11 for B, #+12 for C, #+13 for D, #+14 for E, #+15 for F.

A 0 (*not* #+10) in the *first* box disables a report. A 0 (*not* #+10) in the *second* box results in advance to the next field.

For Expanded or 4+2 Format: Enter codes in *both* boxes (1st and 2nd digits) for 1–9, 0, or B–F, as described above.

A 0 (*not* #+10) in the *second* box will eliminate the expanded message for that report. A 0 (*not* #+10) in *both* boxes will disable the report.

For Ademco Contact ID® Reporting: Enter any digit (other than 0) in the *first* box, to enable zone to report (entries in the *second* boxes are ignored). A 0 (*not* #+10) in the *first* box disables the report.

UL: Report codes are required in fields *61, *65, *71, *72, for UL Commercial Burglar Alarm installations.

Report codes are required in fields *60, *62, *63, *64, *70, *73, *74, *75, *76, for UL Commercial Burglar Alarm installations and required for Residential Fire Alarm installations

SYSTEM STATUS REPORT CODES (*59–* 68)

***59**

Exit Error Alarm Report Code

See above for entries.

[0]

After arming the system, entry/exit and interior zones remaining open after exit delay expires cause an alarm sound at the keypad and external sounder (keypad also displays “EXIT ALARM”), and entry delay begins. Disarming before the end of the entry delay stops the alarm sounding and no message is sent to the central station. The keypad will display “CA” (fixed-word) or “ALARM CANCELED” (alpha display).

If the system is not disarmed before entry delay expires, an “EXIT ALARM” message (**SIA-Compliant Controls:** also zone alarm message) will be sent to the central station. The keypad will display “EA” (fixed-word) or “EXIT ALARM” (alpha display), and alarm sounding continues until the system is disarmed (or timeout occurs).

An Exit Alarm condition will also result if a fault occurs in an exit or interior zone within 2 minutes following the end of the exit delay, and an “EXIT ALARM” message will be sent to the central station (except for **SIA-Compliant Controls**, see field *69 Recent Closing report). With Contact ID format, the message will contain the zone number and error code 374 (“ALARM–EXIT ERROR”).

SIA-Compliant Controls:

[1] Always enabled.

***60**

Trouble Report Code

See above for entries.

[10]

Sent if a zone has a trouble condition.
See UL System Reporting Note above *59.

***61**

Bypass Report Code

See above for entries.

[00]

Sent when a zone is manually bypassed.
See UL System Reporting Note above *59.

***62**

AC Loss Report Code

See above for entries.

[10]

Timing of this report is random with up to a 4-hour delay. If AC restores before the report goes out, there is no “AC LOSS” report.
See UL System Reporting Note above *59.

***63**

Low Bat Report Code

See above for entries.

[10]

Sent when the system’s backup battery has a low-battery condition.
See UL System Reporting Note above *59

***64**

Test Report Code

See above for entries.

Periodic Test Report Scheduling

Commands:

installer code +[#] + [0] + 0 = report every 24 hrs

installer code +[#] + [0] + 1 = report once per week

installer code +[#] + [0] + 2 = report every 28 days

[00]

Sent periodically to test that the communicator and phone lines are operational. Frequency of report is set in Scheduling mode (event 11) or by the key commands listed at left:

Each mode sets schedule 32 (FA168CPS) or schedule 08 (FA148CP) to the stated repeat option; first test report sent 12 hours after command.†

See System Reporting UL Note above *59.

† **NOTE:** Make sure the Real-Time Clock is set to the proper time **before** entering the test report schedule command to ensure that test reports are sent when expected. (see Setting the Real-Time Clock section)

***65**

Open Report Code

See above for entries.

[0,0,0]

Part. 1 Part. 2 Common

Sent upon disarming the system in the selected partitions.
See UL System Reporting Note above *59.

***66 Arm Away/Stay Rpt Code**
See above for entries.

[0,0,0,0,0,0]

Away Stay Away Stay Away Stay
Part. 1 Part. 2 Common

This option allows for independent programming of Away and Stay reports for each partition, including the common lobby.
NOTE: "OPEN" reports are not sent if the associated closing report is not enabled.

***67 RF Trans. Low Bat Report Code**
See above for entries.

[00]

Sent when a transmitter low-battery condition exists.
UL: must be enabled if wireless devices are used

***68 Cancel Report Code**
See above for entries.

[00]

Sent upon disarming the system after an alarm condition was reported.

SIA-Compliant Controls: [10]
Report enabled.

***69 Recent Closing Report Code**
Not applicable to FA148CP/FA168CPS
See above for entries.

[11]

SIA-Compliant Controls: Field does not apply to other controls. Similar to the Exit Error condition described in field *59, but occurs if any burglary zone is faulted within two minutes **after** the initial exit delay expires. Disarming the system within the two minutes stops the alarm sound and displays "ALARM CANCELED " or "CA" and faulted zone number. No message is sent to the Central Monitoring Station. If the system is not disarmed within two minutes, the alarm sound continues and a "recent closing" and a "zone alarm" message are sent to the Central Monitoring Station (after dial delay expires).

RESTORE REPORT CODES (*70 – *76)

***70 Alarm Restore Rpt Code**
See above for entries.

[0]

Alarm restore signals indicate that respective alarm zone(s) are no longer faulted. Alarm restore reports are sent to the central station at bell timeout (field *33), if the zone(s) in alarm are actually restored to a non-faulted state at that time. Otherwise, alarm restore report(s) for respective alarm zones are sent when the system is disarmed.
See UL System Reporting Note above *59.

If **Reports Per Armed Period Per Zone** (*93) is also programmed, the system will report alarm and restore codes as described above until the "Reports Per Armed Period" count is reached. Disarming and rearming will reset the "Reports Per Armed Period" count.

***71 Trouble Restore Rpt Code**
See above for entries

[00]

Sent when a trouble in a zone is restored and code + OFF performed.
See UL System Reporting Note above *59.

***72 Bypass Restore Rpt Code**
See above for entries.

[00]

Sent when a zone that has been bypassed is unbypassed.
See UL System Reporting Note above *59.

***73 AC Restore Rpt Code**
See above for entries.

[00]

Sent after AC power has been restored after an AC power outage.
See UL System Reporting Note above *59.

***74 Low Bat Restore Rpt Code**
See above for entries.

[00]

Sent after a system low-battery condition is restored to normal.
See UL System Reporting Note above *59.

***75 RF Trans. Lo Bat Rst Rpt Code**
See above for entries.

[00]

Sent when a transmitter's low battery condition is restored (i.e., new battery installed).
UL: must be enabled if wireless devices are used. See UL System Reporting Note above *59.

***76 Test Restore Rpt Code**
See above for entries.

[00]

This is sent when the Test mode is exited or upon timeout (4hrs).
See UL System Reporting Note above *59.

OUTPUT AND SYSTEM SETUP (*77 – *93)

*77 Daylight Savings Time Start/End Month

0 = Disabled
1-9 = January-September
(1 = Jan, 2 = Feb, etc)
#+10 = October
#+11 = November
#+12 = December

[3][11]

Enter the start and end month for daylight savings time, if applicable to the region.

*78 Daylight Savings Time Start/End Weekend

0 = disabled 4 = fourth
1 = first 5 = last
2 = second 6 = next to last
3 = third 7 = third to last

[2][1]

Enter the start and end weekend for daylight savings time, if applicable to the region.

*79, *80, *81, *82 Menu Modes

These are Menu Mode commands, not data fields, for Output Device Mapping, Output Programming, Zone List Programming, and Alpha Programming respectively. See page 3 and their respective sections for procedures.

*84 Auto Stay Arm

0 = no
1 = partition 1 only
2 = partition 2 only
3 = both partitions

[FA168CPS: 3; FA148CP: 1]

If enabled, the system will automatically change AWAY mode to STAY mode if the entry/exit door **is not** opened and closed within the exit delay time after a user arms in AWAY mode from a wired keypad (non-RF device). An Opening report followed by an Armed Stay report is sent to the Central Station.

If the door **is** opened and closed within the exit delay period, the system remains in AWAY mode.

Any RF device that arms the system AWAY overrides this feature and the system remains armed AWAY.

*85 Cross Zone Timer

0 = 15 secs 6 = 2-1/2 min #+12 = 8 min
1 = 30 secs 7 = 3 min #+13 = 10 min
2 = 45 secs 8 = 4 min #+14 = 12 min
3 = 60 secs 9 = 5 min #+15 = 15 min
4 = 90 secs #+10 = 6 min
5 = 2 min #+11 = 7 min

[0]

Sets the maximum amount of time in which two cross zones must be tripped in an armed system to send an alarm message to the Central Station. If only one cross zone is tripped during this time, a trouble message (CID code 380) for that zone is sent to the Central Station.

This option not for use in UL installations.

Assign cross zones on zone list 4, using *81 Menu mode.

NOTE: Cross zoning takes effect only after Exit Delay expires.

*86 Cancel Verify Keypad Display

0 = no "alarm canceled" display
1 = display "Alarm Canceled" when system is disarmed after an alarm has occurred. (To clear the "ALARM CANCELED" display, the user must enter the security code + OFF again.)

[1]

This feature causes a "ALARM CANCELED" display on the LCD keypad under the following conditions:

- After the kissoff of the cancel message to the Central Station, indicating a successful transmission.
- When an alarm is successfully canceled before the Central Station received the Alarm message. E.g., if an alarm is incorrectly triggered and the user presses code + OFF before the dial delay time has expired, the message will never go out to the CS.
- When the Cancel report is not enabled and the system is disarmed:
 - a. **before** dialer delay expires (alarm report not sent) message "Alarm Canceled" is displayed.
 - b. **after** dialer delay expires message "Alarm Canceled" is not displayed.

*87 Misc. Fault Delay Time

0 = 15 secs 6 = 2-1/2 min #+12 = 8 min
1 = 30 sec 7 = 3 min #+13 = 10 min
2 = 45 secs 8 = 4 min #+14 = 12 min
3 = 60 secs 9 = 5 min #+15 = 15 min
4 = 90 secs #+10 = 6 min
5 = 2 min #+11 = 7 min

[0]

(used with Configurable Zone Types "digit 6")

Used with zones assigned to a configurable zone type with fault delay on (configurable zone type digit "6"), and sets a zone response time of 15 seconds to 15 min. It can be assigned to zones with sensors that provide a trouble indication when an oil tank is low, or similar applications for critical condition monitoring where a non-alarm response is desired.

UL: may only be used on non-burglar alarm/ non-fire alarm zones when used in fire and/or UL burglar alarm installation

***88**

Program Mode Lockout Options

- 0 = standard *98 installer code lockout (reentry only by [*] + [#] within 50 secs after power up)
- 1 = lockout [*] + [#] reentry after *98 exit (reenter via installer code or downloader only)
- 2 = *not applicable (option doesn't exist)*
- 3 = lockout local programming after *98 exit (reenter by downloader only)

[0]

This table summarizes the Program Mode Lockout options:

Exit Command	*88 Entry	Reentry By:		
		Installer	Power-up†	Downloader
*99	n/a	yes	yes	yes
*98	0	no	yes	yes
*98	1	yes	no	yes
*98	3	no	no	yes

† pressing [*] + [#] within 50 seconds of power up

***89**

Event Log Full Report Code

See box above field *59 for report code entries.

[00]

If an Event Logging selection is made in field *90, a message can be sent to the central station receiver when the log is 80% full. If the log becomes full, new messages overwrite the oldest messages in the log.

***90**

Event Log Enables

- 0 = None
- 1 = Alarm/Alarm Restore
- 2 = Trouble/Trouble Restore
- 4 = Bypass/Bypass Restore
- 8 = Open/Close. *Example:* To select "Alarm/Alarm Restore", and "Open/Close", enter 9 (1 + 8); To select all, enter #15.

[3]

This system can record various events in a history log (FA168CPS = 100 events; FA148CP = 50 events). At any time, the downloader operator can then upload the log and view or print out all or selected categories of the log. The downloader operator can also clear the log. Event log can also be viewed at an alpha keypad. The display/printout at the central station will show the date, time, event, and description of the occurrences.

Data Entry Example: To select Alarm/Alarm Restore" and "Open/Close", enter 9 (1+ 8); to select all events, enter #15.

NOTE: System messages are logged when any non-zero entry is made.

***91**

Option Selection

- 0 = None
- 2 = Sounder Delay (delays sounding by 15 seconds)
- 1 = Bell Supervision Processing†
- 4 = AAV
- 8 = Exit Delay Restart/Reset ††
- #+12 = AAV and Exit Delay Restart/Reset

[8, 0]

Options **SIA-Compliant Controls:**
Call Wait Disable

Select the desired options by adding the values of each desired option. Sounder Delay: If enabled, delays external sounding by 15-seconds.

IMPORTANT: AAV should not be used when Paging or Alarm Reports are sent to a secondary number unless the monitoring zone option is used (which pauses calls). Otherwise, the call to the secondary number by the communicator after the alarm report will prevent the AAV from taking control of the telephone line, and the AAV "Listen in" session cannot take place.

UL: must use ADEMCO UVCM module; Exit Delay Restart/Reset must be disabled
 UL: If Sounder Delay used, entry delay (*35) must be 30 sec. max.

SIA Guidelines: Exit Delay should be enabled.

† If bell supervision is selected, you must also cut the red PCB Bell Supervision jumper.

†† "Exit Delay Restart/reset" option allows use of the [*] key to restart the exit delay at any time when the system is armed STAY or INSTANT. This feature also enables automatic exit delay reset, which resets exit delay if the entry/exit door is re-opened and closed before exit delay time expires after arming AWAY. Automatic Exit Delay Reset occurs only once during an armed AWAY period.

SIA-Compliant Controls:

Options: Same as for FA148CP/FA148CPS.
Call Waiting Disable:
 0 = call waiting not used
 1 = call waiting disable digits (*70) entered in field *40; (when selected, the system dials the entry in field *40 only on alternate dial attempts; this allows proper dialing in the event call waiting service is later canceled by the user).

***92**

Phone Line Monitor Enable

- Entry 1:** 0 = disabled, 1-15 = 1 min - 15 min
 (#+10 = 10 min; #+11 = 11 min; #+12 = 12 min;
 #+13 = 13 min; #+14 = 14 min; #+15 = 15 min)

[0,0]

Entry 1: Sets the length of time a phone line fault must remain after detected before the second digit option is activated.

Entry 2: Selects the desired phone line fault response. Option 2 may be used even if a relay unit or Powerline carrier device is not connected to the control.

Entry 2:

- 0 = Keypad display when line is faulted
- 1 = Keypad display plus keypad trouble sound. Each partition turns off its own trouble sound. No automatic timeout.
- 2 = Same as "1", plus programmed output device STARTS. If either partition is armed, external sounder activates also. External sounder will be turned off by normal bell timeout, or by security code plus OFF from either partition (it does not have to be the one that was armed).

Programmed Output Device must either be programmed to be STOPPED in field *80 or STOPPED by entry of [security code] + [#] + 8 + device number. Partition in *80 should be set to "0," for STOP.

UL: Field *92 must be enabled for fire alarm installations, UL commercial burglar alarm installations and UL residential burglar alarm installations.
 If the control unit is used on a UL commercial burglar alarm system which requires 2 methods of remote communication, then the control unit's DACT and the other method of signal transmission must monitor each other against communication failure and line fault. The fault must be received and annunciated within 200 seconds of its occurrence.

***93**

Reports In Armed Period Per Zone (Swinger Suppression)

Restrict Report Pairs:

- 0 = Unlimited Reports
- 1 = 1 report pair per zone per armed period
- 2 = 2 report pairs per zone per armed period

[1,0]

Restrict **SIA-Compliant Controls:**
Report Pairs Unlimited Reports Enable

Selection limits the number of alarm/alarm restore message pairs per zone sent to the CS in an armed period. Swinger suppression applies to burglary zones only.

SIA Guidelines: Must be set for option 1 or 2

SIA-Compliant Controls:
Restrict Report Pairs:
 1 = 1 report pair; 2 = 2 report pairs
Unlimited Reports Enable:
 0 = restrict reports to the setting in entry 1
 1 = unlimited reports for zones listed in zone list 7; (use zone list 7 to enter those zones that require unlimited reporting; these zones ignore the setting in entry 1)

DOWNLOAD INFORMATION (*94, *95)

***94**

Download Phone No.

Enter up to 20 digits, 0-9; #+11 for '*'; #+12 for '#'; #+13 for a 2-second pause. Do not fill unused spaces. If fewer than 20 digits, exit field by pressing *. To clear entries from field, press *94*.

Enter the phone number of the downloading computer.

UL: downloading may be performed only if a technician is at the site. Up/downloading via the Internet has not been evaluated by UL.

***95**

Ring Count For Downloading

- 0 = Disable Station Initiated Download;
- 1-14 = number of rings (1-9, # +10 =10, # +11 =11, # +12 =12, # +13 =13, # +14 =14);
- 15 = answering machine defeat (# +15 =15).

NOTE: Do not enter 0 if using 4286 Phone Module.

[15]

Refer to the chart below and program accordingly.

phone module	answer machine	down-loading	Set field *95 to...
yes	no	no	1-14 (not 0)
yes	yes	no	greater than rings set on answer machine (e.g., if ans. machine is 4 rings, set this field to 5). This allows access to the phone module if the answer machine is off.
yes	no	yes	1-14 (not 0)
yes	yes	yes	15 (bypasses answer machine†)
no	no	no	0
no	yes	no	0
no	no	yes	1-14
no	yes	yes	15

† **NOTE:** If "15" is entered to bypass an answering machine, and a 4286 Phone Module is included in the system, you should note the following: When calling in from an off-premises phone, the user should make the initial call, allow 1 or 2 rings only, then hang up, then call again. The phone module will now seize the line, and 2 long tones sound, followed by the usual voice prompt for the access code. If this procedure is not followed, phone module operation will not be possible.

***96, *97**

Initialize/Reset Defaults (These are commands, not data fields. See page 3.)

***98, *99**

Exit Commands (These are commands, not data fields. See page 3.)

PAGER OPTIONS (*160- *172)

The system can send various reports to several pagers (FA168CPS = up to 4; FA148CP = up to 2).

To program pager reporting, do the following:

1. Enter the pager phone number(s), preface characters, and pager report options in data fields *160 - *171.
2. Enable Pager Delay, if desired, in field *172 (delays alarm reporting for ALL pagers).
3. Make sure appropriate user open/close pager reports are enabled (see Security Codes section in User Guide). Users that perform actions in partition 1 will, if enabled, attempt to report to all pagers enabled for open/close reporting in partition 1. Users that perform actions in partition 2 will, if enabled, attempt to report to all pagers enabled for open/close reporting in partition 2.
4. If using latchkey pager report, define the latchkey report schedule using Scheduling mode (master code + [#] [6] [4] then select event type 03). System must be armed for the Latchkey report to be sent.
5. If using a function key to manually send a message to a pager, use *57 Function Key Menu mode to define the key (function 01).
6. If reporting zone alarms and troubles to a pager, use *81 Zone List menu mode to assign the zones associated with each pager (zone lists 9-12†).

† FA148CP supports zone lists 9 and 10 only.

160*Pager 1 Phone No.**

Enter up to 20 digits.

0–9

#+11 = '*'

#+12 = '#'

#+13 = 2-second pause

If entering fewer than 20 digits, exit by pressing [*] + next field number.
To clear entries, press *160*.***161****Pager 1 Characters**

Enter the optional prefix characters, up to 16 digits.

0–9

#+11 = '*'

#+12 = '#'

#+13 = 2-second pause

Up to 16 optional characters may be sent as a prefix to the 7-digit system status code sent to Pager #1 (if used). Phone number in field *160 must have been entered. If fewer than 16 characters, exit by pressing [*] and next field number. To clear entries: press *161*.
The 16 characters may be composed of the following:

PIN number, Subscriber account number,

* (enter # + 11 to send *), # (enter # + 12 to send #), Pause (enter # + 13 to allow a 2-second pause),†

special character(s) the user may decide to transmit

† Some paging systems require pause(s) before the prefix.

The Pager format for the 7-digit status code is defined as follows: XXX-YYYY where:

XXX = 3-digit event code: 911 = Alarm, 811 = Trouble,

101 = Opening (disarm), 102 = Closing (arm AWAY)

YYYY = 4-digit user or zone number (depending on type of event).

The first digit indicates partition (0 = system, 1 = part 1, 2 = part 2, 3 = common), followed by the 3-digit user or zone number.

Display Example 1. 9 1 1 – 1 0 0 4 Indicates an alarm (911) caused by a fault in zone 4 (0004) in part. 1.

Display Example 2. 1 0 2 – 2 0 0 5 Indicates the system is reporting a closing–system arming (102) by User 5 (0005) in partition 2.

162*Pager 1 Report Options**

0 = no reports sent

1 = Opens/closes all users†

4 = All alarms and troubles

5 = All alarms / troubles, and opens/closes for all users

12 = Alarms / troubles for zones entered in zone list 9

13 = Alarms / troubles for zones entered in zone list 9, and opens/closes for all users

 [0,0,0]

P1 P2 comm

For each partition, select from the listed options.

† For users enabled for paging. Reports to pager only when arming (close)/disarming (open) from a keypad using a security code; auto-arming/disarming, arming with assigned button, and keyswitch arming do not send pager messages.

163*Pager 2 Phone No.**

See field *160 for entries.

If entering fewer than 20 digits, exit by pressing [*] + next field number.
To clear entries, press *163*.***164****Pager 2 Characters**

See field *161 for entries.

If fewer than 16 characters, exit by pressing [*] and next field number.
To clear entries, press *164*.***165****Pager 2 Report Options**

See field *162 for reporting options.

 [0,0,0]

P1 P2 comm

Select for each partition (use zone list 10 for options 12 or 13)

166*Pager 3 Phone No.**

See field *160 for entries.

If entering fewer than 20 digits, exit by pressing [*] + next field number.
To clear entries, press *166*.***167****Pager 3 Characters**

See field *161 for entries.

If fewer than 16 characters, exit by pressing [*] and next field number.
To clear entries, press *167*.***168****Pager 3 Report Options**

See field *162 for reporting options.

 [0,0,0]

P1 P2 comm

Select for each partition (use zone list 11 for options 12 or 13).

169*Pager 4 Phone No.**

See field *160 for entries.

If entering fewer than 20 digits, exit by pressing [*] + next field number.
To clear entries, press *169*.***170****Pager 4 Characters**

See field *161 for entries.

If fewer than 16 characters, exit by pressing [*] and next field number.
To clear entries, press *170*.

171*Pager 4 Report Options**

See field *162 for reporting options.

Select for each partition (use zone list 12 for options 12 or 13).

172*Pager Delay Option For Alarms**

0 = none
 1 = 1 minute
 2 = 2 minutes
 3 = 3 minutes

 [3]

This field determines the delay of alarm reports to the pager. This gives the Central Station enough time to verify the alarm report it received before the dialer attempts to dial the pager.
 This delay is for ALL pagers in the system.

MISCELLANEOUS SYSTEM FIELDS (*174-*181)***174****Clean Me Reporting Options**

0 = disable
 1 = Clean Me signal reports

 [0] For ESL smoke detectors

This is a maintenance feature for ESL 2-wire smoke detectors on Zone 1. If used, this option limits the number of smoke detectors to a maximum of 10, rather than 16. To enable the "clean me" feature, a time response setting of "3" (1.2 seconds) must be entered in *56 Zone Programming for zone 1.

NOTE: If Clean Me is enabled, you must enter "3" in field *56 programming for zone 1 response time.

177*Device Duration 1, 2**

0 = 15 secs 6 = 2-1/2 min #+11 = 7 min
 1 = 30 secs 7 = 3 min #+12 = 8 min
 2 = 45 secs 8 = 4 min #+13 = 10 min
 3 = 60 secs 9 = 5 min #+14 = 12 min
 4 = 90 secs #+10 = 6 min #+15 = 15 min
 5 = 2 min

 [0] [0]
 1 2

(used in *80 Menu mode-Device Actions 5/6)

These entries set the duration for output action options 5 (duration 1) and 6 (duration 2) programmed in *80 Output Function Programming.

181*50/60 Hertz AC Operation**

0 = 60 Hz; 1 = 50 Hz

 [0]

Select the type of AC power applied to the control (option is used for Real-Time Clock synchronization)

CONFIGURABLE ZONE TYPE OPTIONS (*182-*185)

(see Configurable Zone Type Worksheet)

- The system allows you to define custom zone types (FA168CPS supports 4 [types 90-93]; FA148CP supports 2 [types 90, 91]), based on the options described at right.
- All configurable zone types can be programmed via the downloader. Zone types 90-91 can also be programmed from a keypad using data fields *182-*185.
- **IMPORTANT:** Be careful when selecting combinations of options for configurable zone types. Contradictory options can cause unpredictable results.

Configurable Zone Type Options**Auto Restore** (entry 2): Faults on zones set for this option are cleared; restore messages sent upon restoral of faults.**Vent Zone** (entry 2): Zones set for this option are ignored if faulted when arming the system, but are protected if the zone is later restored (e.g., an open window can be ignored when arming, but if the window is later closed, it will be protected; opening the window again causes an alarm.)**Bypass Disarmed** (entry 4): Zones set for this option can be bypassed only while the system is disarmed.**Bypass Armed** (entry 4): Zones set for this option can be bypassed when the system is armed.**Dial Delay** (entry 6): Alarms on zones set for this option participate in dial delay central station reporting, if system dial delay enabled in field *50.**Fault Delay** (entry 6): Faults on zones set for this option are delayed by the time set in field *87. Do not use this option if using entry/exit delay for this zone type.**Faults Display** (entry 7): Selects how faults on zones set for this zone type are displayed.**Power Reset/Verification**(entry 7): Selects whether the system resets power (when user enters code + OFF), and whether the system performs alarm verification (see description for zone type 16 in **Zone Type Definitions** section) when a fault occurs on these zones.**Use Entry Delay** (entry 8): Selects whether to use the system's entry delay times.**Use Exit Delay** (entry 8): Selects whether to use the system's exit delay time.**Interior Type** (entry 8): Zones set for this option are treated same as standard zone type 4 (bypasses when armed STAY, faults displayed).**Alarm Sounds** (entry 9): Selects the type of alarms sound for zones set for this zone type.**Bell Timeout** (entry 9): Alarm sounding on zones set for this option remain for the duration set in fields *32 / *33.**Fire Zone** (entry 9): Zones set for this option respond in the same manner as if programmed for zone type 9. Do not set fire zones to respond as a "fault" in entries 1-6.**Trouble Sounds** (entry 10): Selects the type of trouble sounds for zones set for this zone type (periodic beeps = once every 30 seconds; trouble beeps = rapid beeping).**Chime Enable** (entry 10): Zones set for this option cause a chime when Chime mode is on.

***182**

Configurable Zone Type 90

(0-9, #+10=10, #+11=11, #+12=12, #+13=13, #+14=14, #+15=15).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8	9	10

Enter the appropriate value for each entry, 1-10, based on the charts provided in the Configurable Zone Type Worksheet section. Each entry is the sum of the values of its selected options

To calculate the value for each entry, add the values of the selected options in each of the entry's columns shown in the respective chart (one option per column). For example, to program entry 2 for "alarm response to short," "auto restore on," but not a "vent zone," enter 5 ("1" for alarm short + "4" for auto restore-yes + "0" for vent zone-no).

UL: Do not configure zones as a fire alarm or UL burglar alarm zone.

***183**

Zone Type 90 Report Codes

90 ALARM ID: XXX
TROUBLE ID: XXX

Press [*] when done to continue.

Enter the desired 3-digit Contact ID® report codes for alarms and troubles occurring on zones assigned to this zone type. Enter the codes sequentially (all 6 digits). When entering digits, [#] moves cursor back, [*] moves forward.

NOTE: Zone alarm report codes and trouble report code (*60) and relevant restore codes must be enabled in order to report configurable zone type codes.

Important Notice on Report Codes: To avoid confusion at the central station, it is recommended that existing Contact ID® codes be used with configurable zone types whenever possible. Check with the central station for a complete list of Contact ID® report codes. If none of the codes are suitable, choose a code in the reserved range of 750-789 and make sure to define the code with your central station.

***184**

Configurable Zone Type 91

(0-9, #+10=10, #+11=11, #+12=12, #+13=13, #+14=14, #+15=15)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8	9	10

See *182 for entries.

UL: Do not configure zones as a fire alarm or UL burglar alarm zone.

***185**

Zone Type 91 Report Codes

91 ALARM ID: XXX
TROUBLE ID: XXX

See *183 for entries.

***189**

AUI Device Enables (for Touch Screen Style Keypads)

FA168CPS: Enter each touch screen keypad's home partition

- 0 = disable
- 1 = partition 1
- 2 = partition 2
- 3 = partition 3 (common)

FA148CP:

- 0 = disable
- 1 = enable

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[1, 1, 0, 0]
AUI 1	AUI 2	AUI 3	AUI 4	

System supports touch screen style keypads (e.g., Symphony Advanced User Interface, and 6270 Touch Screen Keypad; FA168CPS = up to 4; FA148CP = up to 2).

NOTE: Use of touch screen style keypads does not affect the number of standard keypads supported.

AUI Compatibility Note: To ensure proper AUI device operation, use AUI devices with the following rev levels: FA700KP series use version 1.0.9 or higher; 8132/8142 (Symphony) series use version 1.1.175 or higher.

- Touch Screen (AUI) device 1: Must set device address to 1
- Touch Screen (AUI) device 2: Must set device address to 2
- Touch Screen (AUI) device 3: Must set device address to 5
- Touch Screen (AUI) device 4: Must set device address to 6

KEYPAD OPTIONS *190-*199

To enable keypads:

1. Set desired address at keypad (refer to keypad's instructions for setting the address).
2. Use data fields *190-*196 to enable keypad addresses, assign a partition, enable sound options in field.
3. Use fields *197, *198, and *199 to turn on partition number display, exit time interval display, and select fail display mode.
4. Set keypad-related data fields as appropriate: *21 Quick Arm Enable, *23 Forced Bypass, *84 Auto STAY Arm

- NOTES:**
1. Options for keypad 1, address 16, are set by the factory and cannot be changed.
 2. Each keypad must be assigned a unique address. Keypads programmed with the same address will give unpredictable results.

*190	Keypad 2 Device Address 17 Partition/ Enable: FA168CPS: Enter partition where: 0 = keypad disabled 1-3 = part. no. (3 = common) FA148CP: 0 = disable 1 = enable Sound: 0 = no suppression 1 = suppress arm/disarm and Entry/Exit beeps 2 = Suppress chime beeps only 3 = suppress arm/disarm, Entry/Exit, and chime beeps	<input type="checkbox"/> [0] [0] Partition/ Enable Sound	Partition/Enable: For FA168CPS, enter the partition in which the keypad is located; for FA148CP, enter 1 to enable, or 0 to disable the keypad. Sound: Enter the desired sound option for this keypad.
*191	Keypad 3 Device Address 18 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*192	Keypad 4 Device Address 19 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*193	Keypad 5 Device Address 20 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*194	Keypad 6 Device Address 21 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*195	Keypad 7 Device Address 22 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*196	Keypad 8 Device Address 23 See field *190 for entries.	<input type="checkbox"/> [0] [0] Part/Enable Sound	
*197	Exit Time Display Interval 0 = no display 1-5 = seconds between display refresh	<input type="checkbox"/> [0]	If enabled, keypads display the exit time remaining after arming the system, updated at the interval selected (i.e. if the exit delay is 30 seconds and "2" is selected in this field, the keypad display refreshes every 2 seconds, displaying 30, 28, 26, 24, etc.). An interval greater than "1" may be necessary for some older keypads to allow users time to enter key presses between display updates. NOTE: If enabled and using only 2-digit fixed-word keypads (e.g., FA245RF), do not set exit delay time greater than 96 seconds. Using a longer delay time may cause end-user confusion because 2-digit display keypads cannot display times greater than "99." If longer exit time is required by the installation, it is recommended that the Exit Time Display option be disabled ("0"). TOUCH SCREEN DEVICE NOTE: If using more than one touch screen device (e.g., FA700KP, Symphony) with the system, leave field *197 Exit Time Display Interval set to the default value "0." The FA700KP automatically displays remaining exit time in one-second increments.
*198	Display Partition Number 0 = no 1 = yes (partition no. displayed)	<input type="checkbox"/> [0] (FA168CPS; for Alpha Display Keypads)	If selected, the partition number is displayed in the upper-left corner of the display. This is useful when using the GOTO partition function.
*199	ECP Fail Display 0 = 3-digit display "1" + device address) 1 = 2-digit fixed-display as "91"	<input type="checkbox"/> [0]	Select "0" if using Alpha keypads and/or 3-digit Fixed-Word Display keypads. ECP faults will display "1" plus the device address (00-30) of device causing the fault (e.g., faults on device 07 display as "107"). Select "1" if using 2-digit Fixed-Word Display keypads (e.g., certain 6128 series keypads). If selected, ECP faults for all devices will display as "91" on 2-digit displays, and "191" on 3-digit or Alpha keypads.

CONFIGURABLE ZONE TYPES WORKSHEETS

Configurable zone types 90 and 91 can be programmed via downloader software or from a keypad using data fields *182-*185. Configurable zone types 92 and 93 (FA168CPS only) can only be programmed using the downloader software.

Programming Configurable Zone Type options involves making 10 entries in data field *182 for zone type 90 and field *184 for zone type 91, where each entry represents the sum of the values of the various options shown in the tables below. Use fields *183 and *185 to program Contact ID report codes for these zone types.

ENTRY 1 (See note 5 for RF zones)		ENTRY 2 (See note 5 for RF zones)		
Response when system disarmed	Open	Shorted	Auto Restore	Vent Zone
Intact EOL <i>RF zone normal</i>	<i>RF zone N/A</i>	<i>RF zn off-normal</i>		
0 = normal 1 = alarm 2 = trouble 3 = fault	0 = normal 4 = alarm 8 = trouble 12 = fault	0 = normal 1 = alarm 2 = trouble 3 = fault	0 = no 4 = yes	0 = no 8 = yes
Entry 1 = EOL + Open		Entry 2 = Short + auto restore + vent zone		

ENTRY 3 (See note 5 for RF zones)		ENTRY 4 (See note 5 for RF zones)		
Response when armed STAY and	Open	Shorted	By. when disarmed	By. when armed
Intact EOL <i>RF zone normal</i>	<i>RF zone N/A</i>	<i>RF zn off-normal</i>		
0 = normal 1 = alarm 2 = trouble 3 = fault	0 = normal 4 = alarm 8 = trouble 12 = fault	0 = normal 1 = alarm 2 = trouble 3 = fault	0 = no 4 = yes	0 = no 8 = yes
Entry 3 = EOL + Open		Entry 4 = Short + byp. disarmed + byp. armed		

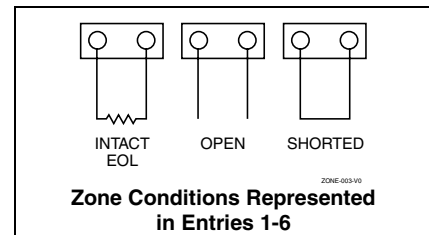
ENTRY 5 (See note 5 for RF zones)		ENTRY 6 (See note 5 for RF zones)		
Response when armed AWAY and zone is:	Open	Shorted	Dial Delay (see field *50)	Fault Delay (see field *87)
Intact EOL <i>RF zone normal</i>	<i>RF zone N/A</i>	<i>RF zn off-normal</i>		
0 = normal 1 = alarm 2 = trouble 3 = fault	0 = normal 4 = alarm 8 = trouble 12 = fault	0 = normal 1 = alarm 2 = trouble 3 = fault	0 = no 4 = use delay	0 = no 8 = use delay see note 1
Entry 5 = EOL + Open		Entry 6 = Short + dial delay + fault delay		

ENTRY 7		ENTRY 8		
Display Faults	Power Reset/ Verification	Use Entry Delay 1/2	Use Exit Delay	Respond as Interior Type
0 = show alarms when armed & disarmed 1 = don't show alarms when armed (show alarms, trbles, faults when disarmed) 3 = never show any alarms, trbles, faults	0 = no 4 = power reset after fault (by code + OFF) 12 = verification (see zone type 16)	0 = no 1 = delay 1 2 = delay 2	0 = no 4 = use exit delay	0 = no 8 = yes see note 2
Entry 7 = fault display + power reset/verification		Entry 8 = entry delay 1/entry delay 2 + exit delay + interior zone type		

ENTRY 9		ENTRY 10		
Alarm Sounds	Use Bell Timeout	Respond as Fire Zone	Trouble Sounds	Chime when Chime Mode On
0 = none 1 = steady keypad 2 = steady bell and keypad 3 = pulsing bell and keypad	0 = no 4 = yes see fields *32, *33	0 = no 8 = yes see zone type 09; see note 4	0 = none 1 = periodic beep 2 = trouble beeps	0 = no 4 = yes
Entry 9 = alarm sounds + bell timeout + fire zone		Entry 10 = trouble sounds + chime		

Entries for Fields *182 and *184		
Entry	Zone Type 90 (field *182)	Zone Type 91 (field *184)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

To calculate the value for each entry:
Simply add the values of the selected options in each of the entry's columns (one option per column). For example, to program Entry 2 for "alarm response to short," "auto restore on," but not a "vent zone," enter 5 ("1" for alarm short + "4" for auto restore yes + "0" for vent zone no).



NOTES:

- Do not use the "fault delay" option with a configurable zone type if it is set for an entry or exit delay, otherwise unpredictable results may occur.
- To create an interior type zone, select "respond as interior zone type" (entry 8, interior type = yes), and set zone response to "fault" in entries 3-4 to ensure fault displays; do not set as "normal," "alarm," or "trouble."
- Do not set fire zones to respond as a "fault" (entries 1-6), otherwise faults will not display unless the [*] key is pressed.
- 4219/4229 modules must use EOLRs or unpredictable results may occur.
- RF Zones: The "open" option in entries 1, 3, and 5 is not applicable for RF zones. Use the "intact EOL" option for normal RF zone conditions and "shorted" for off-normal RF zone conditions.
- a. Zone-Doubling/Double-Balanced: A short on either zone of a zone-doubled pair or on a double-balanced zone causes a tamper condition.
b. For double-balanced zones, this entry must be "0."
c. For zone-doubled zones, **both** zones of the doubled pair must be assigned the same response to a short.

*56 ZONE PROGRAMMING MENU MODE

(press *56 while in Program mode) The Zone Programming Worksheet is on page 36.

Zones and Partitions

Each protection zone needs to be programmed with various attributes using *56 Zone Programming mode or *58 Expert Programming Mode. Using this mode, enter the zone number to be programmed and make appropriate entries at the prompts. Finally, Confirm the serial number of wireless transmitter zones.

The FA168CPS system can control two independent areas of protection (known as partitions) for use by independent users, if desired, by simply assigning zones to one or the other partition during zone programming. The FA168CPS, by default, automatically distributes users between the two partitions. The master user can change the user number distributions.

Zones can also be assigned to a common partition, which is an area shared by users of both partitions (such as a lobby in a building). This allows either partition to arm, while leaving the common partition disarmed for access into the other partition.

The following describes the functioning of the FA168CPS common partition:

- The common zone sounds and reports alarms only when both partitions are armed. If only one partition is armed, the system ignores faults on the common zone.
- Either partition may arm its system if the common zone is faulted, but once armed, the other partition will not be able to arm unless the common zone is first bypassed or the fault is corrected.
- Faults on the common zone are displayed on common zone keypads, and will also appear on another partition's keypad when that partition is armed.
- Either partition can clear and restore the common zone after an alarm.

*56 Menu Mode

PROMPT	VALID ENTRIES	EXPLANATION																					
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> SET TO CONFIRM? 0 = NO 1 = YES 0 </div>	Confirm? 0 = no 1 = yes [*] to continue	This display appears upon entry into this mode. The default is 0 (No). If 1 (Yes) is entered, you will be prompted to confirm each transmitter after entering the serial and loop numbers (at the "XMIT TO CONFIRM" prompt later).																					
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Enter Zn Num. (00 = Quit) 10 </div>	Zone Number FA168CPS: wired 01-08 (and 09-48†); wireless 09-48; RF button zones 49-64 FA148CP: wired 01-06 (and 07-22†); wireless 09-34; RF button zones 49-56 Both Controls: 91 = addr. device report enable 92 = duress report enable 95, 96, 99 = emerg. zones [*] to continue 00 to quit	Enter the zone number that you wish to program. Zone 10 has been entered in the example display at left. Enter a report code for zone 91 to enable addressable device reporting. Enter a report code for zone 92 to enable duress reporting. 95, 96, 99 are emergency (panic) key zones. † if zone expanders are used.																					
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Zn ZT P RC In: L 10 00 1 10 RF: 1 </div>	Summary Screen [*] to continue	"IN: L" appears for wireless zones and indicates input L type and loop. "IN: AD" appears for hardwire expansion zones (AW) and indicates the module's address (AD), which is based on the zone number. "HW: RT" appears for hardwire zones and indicates configuration (EOL, NO, NC, zone doubling, double-balanced) and response time selection.																					
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> 10 Zone Type Perimeter 03 </div>	Zone Type (ZT) See table at right.	Each zone must be assigned to a zone type, which defines the way in which the system responds to faults in that zone. Enter the Zone Type code from the list below: Note: If 00 is entered, Delete Zone ? will be displayed. <table style="width: 100%; border: none;"> <tr> <td>00 = Not used</td> <td>07 = 24-Hr Audible</td> <td>20 = Arm-STAY*</td> </tr> <tr> <td>01 = Entry/exit #1</td> <td>08 = 24-Hr Aux</td> <td>21 = Arm-AWAY*</td> </tr> <tr> <td>02 = Entry/exit #2</td> <td>09 = Fire</td> <td>22 = Disarm*</td> </tr> <tr> <td>03 = Perimeter</td> <td>10 = Interior w/Delay</td> <td>23 = No Alarm Resp</td> </tr> <tr> <td>04 = Interior Follower</td> <td>12 = Monitor Zone</td> <td>24 = Silent Burglary</td> </tr> <tr> <td>05 = Day/Night</td> <td>14 = Carbon Monoxide</td> <td>77 = Keypad</td> </tr> <tr> <td>06 = 24-Hr Silent</td> <td>16 = Fire w/Verify</td> <td>81 = AAV Mon. Zone</td> </tr> </table> *5800 button-type transmitters only	00 = Not used	07 = 24-Hr Audible	20 = Arm-STAY*	01 = Entry/exit #1	08 = 24-Hr Aux	21 = Arm-AWAY*	02 = Entry/exit #2	09 = Fire	22 = Disarm*	03 = Perimeter	10 = Interior w/Delay	23 = No Alarm Resp	04 = Interior Follower	12 = Monitor Zone	24 = Silent Burglary	05 = Day/Night	14 = Carbon Monoxide	77 = Keypad	06 = 24-Hr Silent	16 = Fire w/Verify	81 = AAV Mon. Zone
00 = Not used	07 = 24-Hr Audible	20 = Arm-STAY*																					
01 = Entry/exit #1	08 = 24-Hr Aux	21 = Arm-AWAY*																					
02 = Entry/exit #2	09 = Fire	22 = Disarm*																					
03 = Perimeter	10 = Interior w/Delay	23 = No Alarm Resp																					
04 = Interior Follower	12 = Monitor Zone	24 = Silent Burglary																					
05 = Day/Night	14 = Carbon Monoxide	77 = Keypad																					
06 = 24-Hr Silent	16 = Fire w/Verify	81 = AAV Mon. Zone																					
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> 10 Partition 1 </div>	Partition No. (P) (FA168CPS) 1-3 = partition (3 = common) [*] to continue	Enter the Partition number for this zone. Partition 1 is shown entered.																					

10 Report Code
1st 01 2nd 00 10

Report Code (RC)
 First Digit: 1-9, 10 for 0, 11 for B, 12 for C, 13 for D, 14 for E, 15 for F
 00 to disable
 Second Digit: same as above
 [*] to continue

Enter the report code for this zone, which consists of 2 hexadecimal digits, each in turn consisting of 2 numerical digits. For example, for a report code of "10," enter 01 and 00. For Contact ID®, entering any non-zero entry as the first digit enables the report code for this zone.

02 HARDWIRE TYPE
EOL 0

Hardwire Type
 0 = EOL
 1 = NC
 2 = NO
 3 = zone doubling (ZD)†
 4 = double-balanced (DB)†
 [*] to continue

This prompt appears only for zone numbers 02-08. Zone 1 is automatically set for EOL operation.

† FA168CPS

02 Response Time
1

Response Time (RT)
 0 = 10mSec;
 1 = 350mSec
 2 = 700mSec
 3 = 1.2 seconds
 [*] to continue

Appears only for hardwire zones 01-08 (zone 02 is the display shown).
 Option 3: used for "clean me" option on zone 1 (see field *174).
NOTE: If zone doubling is being used, the response time selected for zones 02-08 automatically applies to each zone's associated doubled zone.

10 INPUT TYPE
RF TRANS 3

Input Device type (In)
 2 = AW (Aux wired zone)
 3 = RF (supervised RF transmitter)
 4 = UR (unsupervised RF transmitter)
 5 = Button type RF transmitter (unsupervised).
 [*] to continue

This prompt is skipped for zones 2-8, or 2-16 if zone-doubling was enabled at "Hardwire Type" prompt.

All of the RF transmitters have one or more unique factory-assigned input (loop) ID codes. Each of the inputs requires its own programming zone (e.g., a 5804's four inputs require four programming zones).

RF Transmitters can be enrolled as one of the following types:

Type	Description
RF (Supervised RF)	Sends periodic check-in signals, as well as fault, restore, and low-battery signals. The trans. must stay within receiver's range.
UR (Unsupervised RF)	Sends all the signals that the "RF" type does, but the control does not supervise the check-in signals. The transmitter may therefore be carried off-premises.
BR (Unsupervised Button RF)	Sends only fault signals. It will not send a low-battery signal until it is activated. The transmitter may be carried off-premises.

NOTE:

- For the built-in hardwired zones, the Input Device type is automatically displayed as HW and cannot be edited.
- To change the input type of a previously programmed wireless device (type RF, UR, BR) to a wired zone (type AW), you must first delete transmitter's serial number (see To Delete A Serial Number prompt)

10 INPUT S/N: L
A022-4064 1

Input Serial number and Loop Number
 [*] to continue
 Used only when enrolling wireless transmitters.

Enroll the transmitter's serial number and loop number as follows:

1. a. Transmit two open/close sequences (for button-type trans, press and release the button twice, waiting about 4 secs before pressing the button the second time).
 OR
 b. Manually enter the 7-digit serial number printed on the label of the transmitter. Press the [*] key to move to the "L" position, then enter the loop number.
 Use the [A] (Advance) and [B] (Back) keys to move the cursor forward and back within the screen. Pressing the [C] (Copy) key will insert the previously enrolled serial number, if desired (used when programming a transmitter with several input loops).

To delete an existing serial number, enter 0 in the loop number field. The serial number will change to 0's. If 0 was entered in error, simply re-enter the loop number or press [#], and the serial number will return to the display.

2. Press [*] to continue. The system now checks for a duplicate serial/loop number.
 If no duplicate is found, the display shows the serial number and loop number.
3. Press [*] to continue to confirmation screen.

<pre>10 INPUT S/N L A022-4064 ?</pre>	<p>Loop Number Change [*] to continue</p>	<p>NOTE: If the [C] key is used to copy the previously enrolled serial number, the cursor will move to the Loop column (L) with the previous serial number displayed, and display a highlighted question mark for the loop number.</p> <p>Enter the loop number and press [*]. The system will now check for a duplicate serial/loop number combination.</p>
<pre>XMIT TO CONFIRM PRESS * TO SKIP</pre>	<p>Confirmation Option [*] to continue</p>	<p>This prompt will only appear if you answered “Yes” at the first prompt in this section.</p> <p>The system will enter a confirmation mode so that the operation of the actual programmed input can be confirmed.</p> <p>Activate the loop input or button that corresponds to this zone.</p>
<pre>Entd A022-4063 1 Rcvd A022-4064 1</pre>	<p>If Serial or Loop Numbers do not match after activating the transmitter [*] to continue</p>	<p>If the serial number transmitted does not match the serial number entered, a display similar to the one shown appears. If the loop number does not match, it will also be displayed.</p> <p>If so, activate the loop input or button on the transmitter once again. If a match is not obtained (i.e., summary display does not appear), press the [#] key twice and then enter (or transmit) the correct serial number.</p>
<pre>10 INPUT S/N: L A000-0000 0</pre>	<p>To Delete a Serial No. 0 = delete serial number # = undo deletion [*] to continue</p>	<p>To delete an existing serial number, enter 0 in the loop number field. The serial number will change to 0's.</p> <p>If 0 was entered in error, simply re-enter the loop number or press [#], and the serial number will return to the display.</p>
<pre>Zn ZT RC In: L 10 03 10 RF: 1s</pre>	<p>Summary Screen [*] to continue</p>	<p>If the serial number transmitted matches the serial number entered, the keypad will beep 3 times and a summary display will appear, showing that zone's programming. Note that an “s” indicates that a transmitter's serial number has been enrolled.</p> <p>Press [*] to accept the zone information and continue.</p>
<pre>PROGRAM ALPHA? 0 = NO 1 = YES 0</pre>	<p>Alpha Descriptors 0 = no 1 = yes [*] to continue</p>	<p>If you want to program descriptors for zones now, enter 1 (Yes) and refer to the *82 Descriptor Programming section for available descriptors.</p>
<pre>ENTER ZN NUM. (00 = QUIT) 11</pre>	<p>Next Zone Number [*] to continue; 00 = quit</p>	<p>If 0 (No) was entered above, the system will return you to the ENTER ZN NUM. prompt for the next zone.</p> <p>When all zones have been programmed, enter 00 to quit</p>

Completing Zone Programming

- When you have finished programming all zones, test each zone using the system's TEST mode.
- **Do not use the Transmitter ID Sniffer Mode for checking wireless transmitting devices**, as it will only check for transmission of one zone on a particular transmitter, NOT the zones assigned to each additional loop.

*58 EXPERT ZONE PROGRAM MODE

(press *58 while in Data Programming mode)

This method is designed for use by installers with previous experience in programming First Alert Professional control panels. This mode is also used to program wireless keys using pre-defined templates.

<pre>SET TO CONFIRM? 0 = NO 1 = YES 0</pre>	<p>Confirm? 0 = no; 1 = yes; [*] to continue</p>	<p>Select whether you want confirmation of wireless device enrollment. (See “XMIT TO CONFIRM” prompt later in this section.) We recommend that you confirm the programming of every transmitter.</p> <p>If 1 (Yes) is entered, you will be prompted to confirm each transmitter after entering the serial and loop numbers (at the “XMIT TO CONFIRM” prompt later).</p>
<pre>Zn ZT P RC HW: RT 01 09 1 10 EL 1</pre>	<p>Summary Screen 01-64 = zone number; [*] to continue; 00 = quit [D] to go to prompts for wireless key programming templates</p>	<p>A summary screen appears, showing zone 1's currently programmed values.</p> <p>Enter the zone number being programmed, then press [*], which displays a summary screen for that zone and the cursor moves to the Zone Type location. The cursor then automatically moves to the next locations after each entry is made.</p> <p>If programming a wireless key, press the [D] key then skip to the Wireless Key Programming Templates section following this section. When [D] is pressed, you can choose from a series of preset templates for easy programming of wireless key zones.</p> <p>When all zones have been programmed, press 00 at this prompt to quit this menu mode.</p>

Zn	ZT	P	RC	IN:	L
10	00	1	10	RF	1

Zone Programming

ZT = see Zone Type chart shown in *56 Menu Mode "Zone Type" prompt
P = partition 1, 2, 3 (common);
RC = 1 (send CID report); 0 (no report)
IN = input type;
L = loop number
[*] to continue

A summary screen with the selected zone's current programming appears.

Begin programming zone information as follows:

- Enter Zone Type (ZT), Partition (P), Report Code (RC; 0-9 only; use *56 mode to enter hex codes), and Input Device Type (IN)* sequentially, but not the Loop No. (L).
- Use the [A] (Advance) and [B] (Back) keys on the keypad to move the cursor within the screen.
- Use the [C] key to copy the previous zone's attributes.

Press [*] to save the programming and continue to the serial number/loop number prompt. If needed, you can press the [#] key to back up without saving.

* If HW (hardwired) or AW (Auxiliary) is entered for Input Device Type, the next screen will be similar to the prompt shown, except that HW or AW will be displayed under "IN".

If RF, BR, or UR is entered, a prompt for Serial and Loop number will be displayed, as described in *56 Menu mode section.

When done, the display returns to the initial summary screen prompt to let you program the next zone.

To exit this mode, enter 00 at the Summary Screen prompt.

WIRELESS KEY PROGRAMMING TEMPLATES

(press the [D] key from *58 Menu mode Summary Screen)

This procedure programs the wireless keys, **but a key is not active for arming/disarming until it is assigned to a user number** (see **System Operation** section, Assigning Attributes Command in the User Guide).

TEMPLATE ?				
1-6				1

Template Number

1-3 = 5804 templates; 4-6 = 5804BD templates

- Enter Template number 1-6 (see chart on next page). See the defaults provided for each template in the chart that follows these procedures.
- Select from templates. Press [*] to display template (1 shown selected).
NOTE: If necessary, press [#] to back up and re-enter template number.
- Press [#] if you want to return to *58 Menu mode summary screen.

L	01	02	03	04
T	23	22	21	23

Template Display

- When [*] is pressed, the selected template will be displayed. Top line of display represents loop numbers; bottom line represents zone type assigned for each loop.
- Press [*] to accept template.

PARTITION				
				1

Partition

FA168CPS. 1 = partition 1; 2 = partition 2

- Enter the partition in which the key is to be active, then press [*] to continue.

ENTER START ZONE				
00 = QUIT				36

Start Zone Number

- The system will search for the highest available consecutive 4-zone group (the four zones in the case of the 5804 and 5804BD), and display the lowest zone number of the group. If you want to start at a different zone, enter the zone desired, and press [*]. If that zone number is displayed, the system has the required number of consecutive zones available, beginning with the zone you entered. If not, the system will again display a suggested zone that can be used. If the required number of consecutive zones is not available at all, the system will display "00".

To quit this mode and return to *58 Menu mode, enter 00 at this prompt.

- Press [*] to accept.

INPUT S/N				L
AXXX-XXXX				-

Serial Number

- Manually enter the serial number printed on the label for the wireless key or press and release the button to transmit its serial number.
- Press [*] to accept the serial number. The system will check for a duplicate.
- If necessary, press the [#] key to back up without saving, and re-enter the serial number.
- Use the [A] key to move forward within the screen, and the [B] key to move backward.

XMIT TO CONFIRM
PRESS * TO SKIP

Confirm
[*] to continue

- If "Yes" was entered at the **SET TO CONFIRM?** prompt previously (see first prompt following entry into the *58 Expert Programming Mode), the display on the left will appear. Confirm serial and loop numbers by activating the wireless key.

IMPORTANT:
When confirmed, the key is not active for arming/disarming until it is assigned to a user number (using the assigning attributes command, attribute "4"). See **System Operation** section for procedure.

Entd A022-4063
Rcvd A022-4064

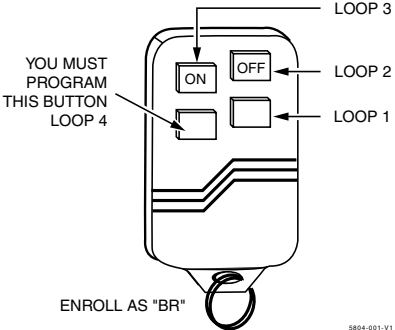
Not Confirmed
[*] to continue

If the serial number transmitted does not match the serial number entered, a display similar to the one shown will appear. If the loop number does not match, it will also be displayed. If so, activate the button on the wireless key once again. If a match is not obtained (i.e., summary display does not appear), press the [#] key and then enter the correct serial number.

If the serial number transmitted matches the serial number entered, the keypad will beep 3 times and will return you to the Zone Number prompt to enter the starting zone for the next wireless key.
Or you can return to *58 Menu mode by pressing 00 at the Zone Number prompt.

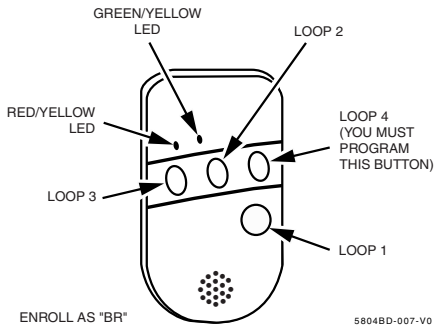
NOTE: Following the successful enrollment of each wireless device, remove **ONE** of the serial number labels from the device and affix it in the appropriate column on the ZONE PROGRAMMING worksheet of the Programming Form; then enter the other information (zone number, zone type, loop number, etc.) relevant to that device.

Wireless Key Predefined Default Templates



5804 Wireless Key Transmitter

Note:
These transmitters are not intended for use in UL installations.



5804BD 2-Way Wireless Key Transmitter

For 5804				For 5804BD			
TEMPLATE 1	Loop	Function	Zone Type	TEMPLATE 4	Loop	Function	Zone Type
	1	No Response	23		1	No Response	23
	2	Disarm	22		2	No Response	23
	3	Arm Away	21		3	Arm Away	21
	4	No Response	23		4	Disarm	22
TEMPLATE 2	Loop	Function	Zone Type	TEMPLATE 5	Loop	Function	Zone Type
	1	No Response	23		1	No Response	23
	2	Disarm	22		2	Arm Stay	20
	3	Arm Away	21		3	Arm Away	21
	4	Arm Stay	20		4	Disarm	22
TEMPLATE 3	Loop	Function	Zone Type	TEMPLATE 6	Loop	Function	Zone Type
	1	24-hour audible	7		1	24-hour audible	7
	2	Disarm	22		2	Arm Stay	20
	3	Arm Away	21		3	Arm Away	21
	4	Arm Stay	20		4	Disarm	22

*57 FUNCTION KEY PROGRAMMING MENU MODE

(press *57 while in Data Programming mode).

The system provides the ability to program each of the four keypad function keys to perform one of 12 system operations. The end user can then activate the function by simply pressing and holding the programmed key for 2 seconds. Typical functions (listed below) include single-button arming, turning lights on/off, or single-button paging.

To assign emergency key functions (function key option "00"), first program the respective emergency zone number (95 for "A" key, 96 for "C" key, 99 for "B" key) with the desired zone type using *56 (or *58) Zone Programming mode, then use *57 Function Key menu mode to assign the desired key.

To use a function key to activate a relay action (*57 Menu mode key function 07), use *79 Menu mode to map the output, and use *80 Menu mode to define the output's action; select system operation type "66."

To use a function key for a user macro, use *57 menu mode to activate the desired key, then define the actual macro functions using the user code + [#] + [6] [6] command.

Press Key to Pgm	
0 = Quit	0

Function Key

Press the desired function key, A-D.

[*] to continue
0 = Exit this mode

Press the desired function key (A-D) you want to program.

NOTE: A key programmed as a function key is no longer available to be used as an end-user macro key or panic key.

A	→	<input type="text"/>	1 OFF	2 AWAY	3 STAY
B	→	<input type="text"/>	4 MAX	5 TEST	6 BYPASS
C	→	<input type="text"/>	7 INSTANT	8 CODE	9 CHECK
D	→	<input type="text"/>	* READY	0	#

keypad_keys-00-001-V0

Partition	
	1

Partition Number (FA168CPS)

1 = partition 1
2 = partition 2
3 = common partition
[*] to continue

Enter the partition in which the function key is active.

Key "A" Func	
Zone 95	00

Define Key Function

00-12 = see list at right
[*] to continue; returns to key number prompt with the next function key letter displayed

Enter the desired function for this key, 00 to 12, from the options listed. (00 selected for example display shown at left). Press [*] to returns to key number prompt with the next function key letter displayed.

- 00[†] = For the Function key selected, the functions are predefined as follows:
 If A selected = Zone 95 (emergency key, same as [1] [*] pair)
 If B selected = Zone 99 (emergency key, same as [*] [#] pair)
 If C selected = Zone 96 (emergency key, same as [3] [#] pair)
 If D selected = Single-button paging
- 01 = Single-button paging (sends a 999-9999 message to pager)
 02 = Display time
 03 = Arm AWAY (reports as User 00 if closing reports are enabled)
 04 = Arm STAY (reports as User 00 if closing reports are enabled)
 05 = Arm NIGHT-STAY (reports as User 00 if closing reports are enabled)
 06 = Step Arming (arms STAY, then NIGHT-STAY^{†††}, then AWAY)
 07 = Output Device Command (for device programmed as system operation type 66–function key in *80 Menu Mode)
 08 = Communication Test (sends Contact ID code 601)
 09 = Macro Key 1 (define macro by user code + [#] [6] [6] command)
 10 = Macro Key 2 (define macro by user code + [#] [6] [6] command)
 11^{††} = Macro Key 3 (define macro by user code + [#] [6] [6] command)
 12^{††} = Macro Key 4 (define macro by user code + [#] [6] [6] command)
- [†] System defaults to these function key settings.
^{††} Macros 11-12 apply to FA168CPS only.
^{†††} If Night-Stay zones are listed in zone list 5

OUTPUT DEVICE PROGRAMMING GENERAL INFORMATION (*79/*80 Menu Mode)

Output Devices: The FA168CPS system supports up to 16 relays and/or Powerline Carrier devices (X-10 devices) plus 2 built-in trigger outputs in any combination. These 18 “outputs” are assigned to system-wide output numbers (01-18). Use *79 Menu Mode to assign output numbers and map them to device addresses.
The FA148CP supports 8 relays and 2 built-in trigger outputs (total 10 outputs).

Output Functions: The system also provides installer-defined output functions, which can be assigned to any of the physical outputs. Therefore, the action of any one of the outputs can be based on as many of these defined functions as desired. This lets a single relay or X-10 device perform many functions. The control supports: FA168CPS = up to 48 defined functions; FA148CP = up to 24 functions
Use *80 Menu Mode to define output functions.

WARNING: Relays and output devices are not recommended for life safety applications.

NOTE: When navigating the *79 and *80 menus: The [*] key is used to accept an entry and advance to the next prompt. The [#] key is used to revert back to the last question to check or change an entry. Press [*] to go forward again.

Programming Output Devices

1. Use *79 Menu Mode to assign module and output numbers and map them to device addresses.
NOTE: You must map output devices using *79 Menu Mode **before** you can use *80 menu Mode.
2. Use *80 Menu Mode to create output definitions, which control the output devices, if desired.
3. Use *81 Zone List Menu mode to define zone lists for use with output devices if the device action is based on more than one zone.
 - To program a device for manual activation (user code + [#] [7] / [#] [8] + 2-digit device number) or for scheduled automatic activation, simply map the device using *79 Menu mode.
 - To program a device to automatically activate upon a system event (or function key), use *79 Menu mode to map the device, then use *80 Menu mode to define the automated device action.

*79 RELAY/POWERLINE CARRIER DEVICE (X-10) PROGRAMMING MENU MODE

(press *79 while in Programming mode) The *79 Device Mapping Worksheet is on page **Error! Bookmark not defined.** Use this menu to assign Relay Module device addresses and specific relay numbers, and Powerline Carrier unit numbers. The system is based on predefined module addresses for 4204 and 4229 modules. Refer to the table shown at the “Module Address” prompt on the next page and set the modules’ addresses (via module DIP switches) accordingly.

The following table shows how these outputs are identified.

Output Identification

This output...	is identified by...
Relays	the Relay Module’s device address and the relay position on that module (i.e. the physical relay number, 1-4, on that module).
X-10 Device	a house ID (entered in data field *27) and the unit number of the device.
Built-in Outputs	the output number assigned, 17 for Trigger 1 and/or 18 for Trigger 2.

ENTER OUTPUT NO. 00 = QUIT xx	Device Output Number	
	FA168CPS: 01-16 = relays/X-10 17, 18 = on-board triggers	This is the logical (or reference) relay number as used in the system. Relays and X-10 devices are numbered 01-16; the on-board triggers are numbered 17 and 18 and can be programmed for inverted output, if required.
	FA148CP: 01-08 = relays/X-10 17, 18 = on-board triggers [*] to continue 00 to quit	

17 OUT NORM LOW 0 = NO 1 = YES 0	Output Normally Low	
	0 = no (standard default) 1 = yes [*] to continue	(prompt appears only for Triggers 17 and 18) Selecting 0 (no) sets the output level normally high (default setting). Selecting 1 (yes) sets the output normally low. Output Trigger 17 can be used for resetting 4-wire smoke detectors by connecting it to the negative power terminal of the smoke detector, selecting 1 at this prompt, and setting as zone type 54, fire zone reset, in *80 Menu mode. After entry, display returns to Output Number prompt. Use *80 Menu mode to program the function of the trigger.

<table border="1"> <tr><td>XX OUTPUT TYPE</td></tr> <tr><td>DELETE 0</td></tr> </table>	XX OUTPUT TYPE	DELETE 0	<p>Output Type 0 = delete 1 = relay on 4204/4229 module 2 = Powerline Carrier device (X-10) [*] to continue</p>	<p>Select whether this is a relay or a Powerline Carrier (X-10) device. If Powerline Carrier is selected, go to "A" prompt. If relay is selected, skip to "B" prompt.</p>																		
XX OUTPUT TYPE																						
DELETE 0																						
<p>"A"</p> <table border="1"> <tr><td>XX UNIT No.</td></tr> <tr><td> yy</td></tr> </table>	XX UNIT No.	yy	<p>Unit Number 01-16 = predefined address [*] to continue</p>	<p>(prompt appears if X-10 is selected) Enter the unit code (set at the device) and press [*]. The system returns to the Output Number prompt.</p>																		
XX UNIT No.																						
yy																						
<p>"B"</p> <table border="1"> <tr><td>XX MODULE ADDR</td></tr> <tr><td>07-15 yy</td></tr> </table>	XX MODULE ADDR	07-15 yy	<p>Module Address 07-15 = predefined address [*] to continue</p>	<p>(prompt appears if relay is selected) Enter the predefined address for this module as listed below. Make sure the module's DIP switches are set to the selected address.</p>																		
XX MODULE ADDR																						
07-15 yy																						
<p>Module Addresses</p>																						
<table border="1"> <thead> <tr> <th>Address</th> <th>Module</th> </tr> </thead> <tbody> <tr><td>07</td><td>1st 4229 (with zones 09-16)</td></tr> <tr><td>08</td><td>2nd 4229 (with zones 17-24)</td></tr> <tr><td>09†</td><td>3rd 4229 (with zones 25-32)</td></tr> <tr><td>10†</td><td>4th 4229 (with zones 33-40)</td></tr> <tr><td>11†</td><td>5th 4229 (with zones 41-48)</td></tr> <tr><td>12</td><td>1st 4204</td></tr> <tr><td>13</td><td>2nd 4204</td></tr> <tr><td>14†</td><td>3rd 4204</td></tr> <tr><td>15†</td><td>4th 4204</td></tr> </tbody> </table>			Address	Module	07	1st 4229 (with zones 09-16)	08	2nd 4229 (with zones 17-24)	09†	3rd 4229 (with zones 25-32)	10†	4th 4229 (with zones 33-40)	11†	5th 4229 (with zones 41-48)	12	1st 4204	13	2nd 4204	14†	3rd 4204	15†	4th 4204
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<table border="1"> <tr><td>XX REL POSITION</td></tr> <tr><td>1-4 zz</td></tr> </table>	XX REL POSITION	1-4 zz	<p>Relay Position 1-4 = relay position [*] to continue</p>	<p>This is the actual (or physical) relay number with respect to the Relay Module upon which it is located. For 4204 modules, relay numbers are 1-4. For 4229 modules, relay numbers are 1-2. The system returns to the Output Number prompt for programming the next device.</p>																		
XX REL POSITION																						
1-4 zz																						

*80 OUTPUT FUNCTION MENU MODE

(press *80 while in Programming mode) The Output Definition Worksheet is on page **Error! Bookmark not defined.**
Use this mode to program output function definitions (up to 48 functions) that provide automated control of any of the output devices, based on events occurring on individual zones or zones with certain zone types. Each output definition is identified by an output function number, and includes the following components:

Output Definition Components

Component	Description
Output Function No.	A reference number that defines an output's characteristics.
Activated By	Determines whether the initiating event occurs on a zone, a zone list, or a zone type.
Event	Event that triggers the output action. Can be an event occurring on a specific zone number or a zone list, or a specific zone type.
Partition	If the output is activated by zone type, this defines the partition in which the programmed event is to cause the device action.
Output Action	Defines the action of the relay/X-10 device when the defined event occurs. Can close for 2 seconds, stay closed until reset, continuously pulse (1-second close-open-close-open, etc.), toggle the device state, or activate for a defined duration (set in data field *177).
Output No.	Assigns this function to a specific output number (defined in *79 Menu Mode). This is the output number that will perform this function upon the triggering event. Note that each defined function is associated with only one output number. This means that if more than one output device needs to perform this particular function, you need to define another output function number with the same attributes, but assign the appropriate output number. (i.e. output devices can be assigned more than one function number, but each function number can only be assigned a single output number.

For example, if you want to pulse a strobe light upon fire alarms on zone 4 using a relay mapped to output number 2 (as programmed in *79 Menu Mode), program the following in *80 Menu Mode:

Prompt	Entry
Output Funct. #	= 01 (assuming this is the first output function)
Activated By:	= 3 (zone number)
Enter Zn No.	= 04 (requires 2-digit zone numbers)
Output Action	= 3 (continuous pulse)
Output Number	= 02 (device mapped in *79 Menu Mode)

80 Menu Mode

Output Funct. # (00 = Quit) 01	Output Function No. (FA168CPS: 01-48 (FA148CP: 01-24) [*] to continue; 00 to quit	Enter the output function number to be defined (or 00 to exit)																																																			
01 A E P Trig ?00 0 0 - ZL=00	Summary Screen [*] to continue	This screen displays a summary of the current output programming (for this example, Zone List has been selected-this is the default screen). A = Output Action; E = Triggering event; P = Partition; Trig = Trigger type NOTE: A question mark in the summary screen indicates that the device number shown has not been mapped. Use *79 Menu mode to map the device.																																																			
01 Activated By: Zone List	Activated By 0 = delete 1 = zone list (go to "A") 2 = zone type (go to "B") 3 = zone number (go to "C") [*] to continue	Select where the initiating event for this output definition is to occur as follows: If you enter "0," the following prompt appears: <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Delete?</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">0 = NO, 1 = YES</div> Press 1 to delete this output definition. The system deletes the output function and any previous programming.																																																			
A" 01 Zn List <div style="border: 1px solid black; padding: 2px; width: fit-content; float: right;">1</div>	Zone List 01-08 = zone list [*] to continue	(prompt appears if zone list was selected) Enter the desired zone list number associated with this output number. At the ENTER EVENT prompt, enter the zone list event that will activate this output NOTE: Do not use pager zone lists 09-12 in output definitions. <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Enter Event</div> 0 = restore; 1 = alarm; <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Alarm 1</div> 2 = fault; 3= trouble NOTE: For alarm, fault, and trouble, an event on ANY zone in the list activates the output, but ALL zones in the list must be restored before the output is restored. Press [*] to continue and skip to the "Output Action" prompt.																																																			
"B" 01 Enter Zn type Perimeter 03	Zone Type See list at right for available zone types.	(prompt appears if zone type was selected) Enter the desired zone type associated with this output number. At the PARTITION prompt, enter the partition in which this zone type will occur. CHOICES FOR ZONE TYPES: <table style="width: 100%; border-collapse: collapse;"> <tr> <td>00 = Not Used</td> <td>05 = Day/Night</td> <td>12 = Monitor Zone</td> </tr> <tr> <td>01 = Ent/Exit #1</td> <td>06 = 24 Hr Silent</td> <td>14 = Carbon Monoxide††</td> </tr> <tr> <td>02 = Ent/Exit #2</td> <td>07 = 24 Hr Audible</td> <td>16 = Fire w/verification</td> </tr> <tr> <td>03 = Perimeter</td> <td>08 = 24 Hr Aux</td> <td>23 = No Alarm Response</td> </tr> <tr> <td>04 = Interior Follower</td> <td>09 = Fire</td> <td>24 = Silent Burglary</td> </tr> <tr> <td></td> <td>10 = Interior w/Delay</td> <td>77 = Keyswitch Zone</td> </tr> <tr> <td></td> <td></td> <td>81 = AAV Monitor Zone</td> </tr> <tr> <td></td> <td></td> <td>90-91 = Configurable</td> </tr> </table> CHOICES FOR SYSTEM OPERATION: <table style="width: 100%; border-collapse: collapse;"> <tr> <td>20 = Arming-Stay</td> <td>36 = **At Bell Timeout**</td> <td>58 = Duress</td> </tr> <tr> <td>21 = Arming-Away</td> <td>38 = Chime</td> <td>60 = AAV</td> </tr> <tr> <td>22 = Disarming</td> <td>39 = Any Fire Alarm</td> <td>61 = AVS/GSMV session begin§</td> </tr> <tr> <td>31 = End of Exit Time</td> <td>40 = Bypassing</td> <td>62 = AVS/GSMV session end §</td> </tr> <tr> <td>32 = Start of Entry Time</td> <td>41 = **AC Power Failure</td> <td>66 = Function Key†</td> </tr> <tr> <td>33 = Any Burglary Alarm</td> <td>42 = **System Battery Low</td> <td>67 = Bell Fail</td> </tr> <tr> <td></td> <td>43 = Comm. Failure</td> <td>68 = Telco Line Cut</td> </tr> <tr> <td></td> <td>52 = Kissoff</td> <td>78 = Keyswitch Red LED</td> </tr> <tr> <td></td> <td>54 = Fire Zone Reset</td> <td>79 = Keyswitch Green LED</td> </tr> </table> ** Use 0 (Any) for Partition No. (P) entry. *** Or at Disarming, whichever occurs earlier. † Use *57 Menu Mode to assign the function key (function "07"). †† when used with an output function, the carbon monoxide zone type activates upon CO alarms only. Does not activate for trouble conditions. § automatically set when appropriate AVS Quick Command performed. Note: In normal operation mode: Code + # + 7 + NN Key Entry starts Device NN. Code + # + 8 + NN Key Entry stops Device NN. Enter the partition in which this zone type will occur. <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">01 Partition</div> 0 = any partition; 1 = partition 1; <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Any partition 0</div> 2 = partition 2; 3 = common Press [*] to continue and skip to the "Output Action" prompt.	00 = Not Used	05 = Day/Night	12 = Monitor Zone	01 = Ent/Exit #1	06 = 24 Hr Silent	14 = Carbon Monoxide††	02 = Ent/Exit #2	07 = 24 Hr Audible	16 = Fire w/verification	03 = Perimeter	08 = 24 Hr Aux	23 = No Alarm Response	04 = Interior Follower	09 = Fire	24 = Silent Burglary		10 = Interior w/Delay	77 = Keyswitch Zone			81 = AAV Monitor Zone			90-91 = Configurable	20 = Arming-Stay	36 = **At Bell Timeout**	58 = Duress	21 = Arming-Away	38 = Chime	60 = AAV	22 = Disarming	39 = Any Fire Alarm	61 = AVS/GSMV session begin§	31 = End of Exit Time	40 = Bypassing	62 = AVS/GSMV session end §	32 = Start of Entry Time	41 = **AC Power Failure	66 = Function Key†	33 = Any Burglary Alarm	42 = **System Battery Low	67 = Bell Fail		43 = Comm. Failure	68 = Telco Line Cut		52 = Kissoff	78 = Keyswitch Red LED		54 = Fire Zone Reset	79 = Keyswitch Green LED
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<p>"C"</p> <p>01 Enter Zn No. 12</p>	<p>Zone Number Press [*] to continue.</p>	<p>(prompt appears if zone number was selected) Enter the desired zone number associated with this output number. At the ENTER EVENT prompt, enter the zone event that will activate this output.</p> <p>01 Enter Event 0 Restore</p> <p>0 = restore; 1 = alarm/fault/trouble</p>
<p>01 Output Action Close for 2 sec 1</p>	<p>Output Action 0 = off 1 = Close for 2 seconds 2 = Stay Closed 3 = Pulse on & off (1 sec ON, 1 sec OFF) 4 = Change Device State 5 = Duration 1 (see data field *177) 6 = Duration 2 (see data field *177) Press [*] to continue.</p>	<p>Press [*] to continue to the "Output Action" prompt Enter the desired device action.</p>
<p>Enter Output No. R02 02</p>	<p>Output Number 01-16 = FA168CPS outputs 01-08 = FA148CP outputs 17-18 = on-board triggers Press [*] to continue.</p>	<p>Enter the device output number (programmed in *79 Menu Mode) you want associated with this output.</p>
<p>02 A E P TRIG R02 1 1 3 ZL=00</p>	<p>Summary Screen Press [*] to continue.</p>	<p>A summary screen appears showing the programmed settings. Press [*] to return to OUTPUT FUNCTION NUMBER prompt</p>

*81 ZONE LIST MENU MODE

(press *81 while in Programming mode) The Zone List Worksheet is on page **Error! Bookmark not defined.**

Zone lists let you group individual zones for use with certain system actions. Using this mode, simply select an appropriate zone list number, then add the desired zone numbers to be included in that list.

The following table shows the available zone lists and their purposes:

List No.	Used for...	Notes
1, 2	general purpose (GP)	<ul style="list-style-type: none"> Any list may include any or all of the system's zone numbers. A zone list can be assigned to more than one output relay. Zone List 4: When creating zone list 4 for cross zoning, include only zones assigned to zone types 3, 4, or 5. Do not include zones that have delays (entry/exit zones, interior w/delay) or 24-hour zones, as these zone types may produce unpredictable operation and may not function as intended. See field *85 for Cross Zone Timer option. Zone List 6: SIA-Compliant: See field *50 for Dial Delay Disable option. Zone List 7: SIA-Compliant: See field *93 for Unlimited Reports option.
3	chime-by-zone (see field *26 to enable option)	
4	cross zones (see note at right)	
5	night stay zones	
6	general purpose SIA-Compliant : dial delay disable	
7	general purpose SIA-Compliant : unlimited reports	
8	general purpose	
9	zones that activate Pager 1	
10	zones that activate Pager 2	
11	zones that activate Pager 3 (FA168CPS)	
12	zones that activate Pager 4 (FA168CPS)	

*81 Menu Mode

<p>Zone List No. (00 = Quit) 01</p>	<p>Zone List Number 01-12 = zone list number [*] to continue</p>	<p>Enter the Zone List Number to program (or 00 to quit). Press [*] to advance. In the following displays, zone list 01 has been selected.</p>
<p>01 Enter Zn Num. (00 = Quit) 00</p>	<p>Zone Number 01-64† = zone numbers followed by [*] to accept each zone 00 to continue</p>	<p>Enter each zone number to add to the zone list, followed by pressing [*] (example, 01*, 02*, 03*). After all zones are entered, press 00 to continue. IMPORTANT: Do not include fire zones in zone lists that are used to STOP device actions. † FA168CPS = 01-64; FA148CP = 01-06, 09-34, 49-56.</p>
<p>01 Del Zn List? 0 = No 1 = Yes 0</p>	<p>Deleting Zone Lists 0 = don't delete list 1 = delete this zone list [*] to continue</p>	<p>To delete the zone list, enter 1. All zones in the zone list will be deleted automatically and the system returns to the Zone List No. prompt. To save the zone list, enter 0.</p>

01 Delete Zone? 0 = No 1 = Yes 0	Deleting a Zone 0 = don't delete zones 1 = go to next prompt to delete zones [*] to continue	To save the zone list, enter 0 and the system returns to the Zone List No. prompt. To delete a zone or zones in a zone list, enter 1 to continue.
01 Zn to Delete? (00 = Quit) 00	Delete the Zone 01-64† = zones to be deleted from list followed by [*] to accept each zone 00 to continue	Enter each zone to be deleted from the list, followed by [*]. After all zones to be deleted are entered, enter 00 to return to the Zone List No. prompt so that another list can be programmed, if desired. † FA168CPS = 01-64; FA148CP = 01-06, 09-34, 49-56.

*82 ALPHA DESCRIPTOR MENU MODE

The system lets you assign zone descriptors for protection zones, keypad panics, and RF receiver supervision faults. Each description can be composed of a combination of up to 3 words selected from a vocabulary of words stored in memory (see Alpha Vocabulary List page). In addition, up to 10 installer-defined words can be added to those already in memory, plus 3 additional words can be assigned as partition descriptors. Thus, when an alarm or trouble occurs in a zone, an appropriate description for that zone's location can be displayed at the keypad. Zone descriptors are recommended for systems using Alpha display keypads, and are necessary if a 4286 Phone Module is used.

NOTE: You can also enter zone descriptors when the zone is being defined in *56 Menu mode.

4286 NOTE: If using a 4286 Phone Module, select from those words in the Alpha Vocabulary List shown in **boldface type**. The phone module will not provide annunciation of the other words.

If a Phone Module is added to an existing system, the Alpha descriptors presently in the system should be reprogrammed, selecting from those words shown in **boldface type** in the Alpha Vocabulary List. The phone module will not provide annunciation of any other words.

*82 Menu Mode

Program Alpha ? 0=No, 1=Yes 00	Program Alpha 0 = no (quit Alpha mode) 1 = yes [*] to continue	The "Program Alpha ?" prompt will appear. Press 1 to continue.
Custom Words ? 0=No, 1=Yes 00	Custom Words 0 = no 1 = yes	The "Custom Words" prompt will appear. Press 0 to program standard alpha descriptors from the fixed vocabulary. The system then automatically displays the descriptor for zone 1. Press 1 to define custom words (see "Adding Custom Words").
* ZN 01	Summary Screen [*] to continue to edit mode [#] = return to Program Alpha prompt (to quit)	Note that this is a "Summary mode," and that no entries can be made. Entries can be made only when the display contains a flashing cursor, which signifies Edit mode. To exit the Alpha Descriptor mode, press * + 0 + 0 at the summary display.
* ZN 01 □	Edit Mode – Flashing Cursor to edit = zone number then [*], then zone number again 6 = save word and go to next word in a descriptor 8 = save descriptor and go to next zone [#] = return to Program Alpha prompt (to quit)	Descriptor screen for zone 1 appears. To program a descriptor (up to 3 words) for a zone, do the following: 1. Enter the desired zone number (existing descriptor, if any, is displayed) and press [*], then enter the zone number again to start edit mode (flashing cursor appears). 2. a. Press [#] plus the 3-digit number from the Alpha Vocabulary List for the first word. b. Press [6] to accept the word and move the cursor for the next word in the descriptor. 3. Repeat steps 2a and 2b for the second and third words (if used). 4. When all words for that descriptor have been entered, press [8] to save the descriptor for that zone. The summary screen displays for that zone and the flashing cursor disappears. 5. Press [*] at the summary screen and repeat steps 1-4 to assign a descriptor for the next zone. 6. When all descriptors have been entered, press [#] at the last descriptor summary screen to return to the PROGRAM ALPHA? prompt. Enter 0 (no) at the prompt to exit this mode and return to Data Field mode.

EXAMPLE:

(a)

* ZN 01	B ACK
---------	--------------

(b)

* ZN 01	BACK
<input type="checkbox"/>	

(c)

* ZN 01	BACK
D OOR	

(d)

* ZN 01	BACK
DOOR	<input type="checkbox"/>

* ZN 01	BACK
DOOR	

Descriptor Example

EXAMPLE: "BACK DOOR"

- From the list, BACK = 013, so, after entering the zone number to be edited (step 1), enter #013. If you accidentally enter the wrong word, simply press [#] plus the correct 3-digit number for the word you want.
- Press [6] to accept the selected word and continue to the next word. (if this is the only word you are using for the descriptor press [8] to save it).
- Enter the 3-digit number for the next word, "DOOR," whose number is "057." Enter # 0 5 7.
- Because this is the last word in the example descriptor, press [8] to save it. (If there was a third word in the descriptor, press [6] to accept the selected word and continue to the third word.) The summary screen displays with the selected descriptor.

Summary Screen

- [*] = to enter another zone number
- [#] = return to Program Alpha prompt (to quit)

The flashing cursor disappears, indicating that the word(s) are saved for that zone, as shown in the summary display at the left. To enter a descriptor for the next zone, press [*] plus the desired zone number. The summary display appears. Repeat the previous steps to enter the descriptor for the zone.

Adding Custom Words (will not be annunciated by 4286 Phone Module)

You can add up to 10 installer-defined words to the built-in vocabulary, which can then be used when programming zone descriptors. Each of the 10 words can actually consist of a word string of one or more words, but no more than *ten* characters can be used for each word or word string.

When adding custom words, the keypad keys perform the following functions:

[4]	Moves cursor one space to the left.
[6]	Moves cursor one space to the right.
[8]	Saves the new word in the system's memory.

- Select Custom Word mode (enter 1) when the prompt "CUSTOM WORD ?" is displayed.
- Enter the number (01-10†) of the custom word or word string to be created, corresponding to index numbers 245 - 254 respectively (for example, if you are creating the first custom word or word-string, enter 01, for the second, enter 02, etc.). A cursor will now appear at the beginning of the second line.
† or 11, 12, 13 for partition 1, partition 2 and common lobby descriptors respectively. See Assigning Partition Descriptors paragraph below.
NOTE: Custom words 8, 9, and 10 are "reminder words" that are programmed using Scheduling Mode.
- Refer to the Character List of letters, numbers, and symbols on a following page. Press [#], followed by the two-digit entry for the first letter you would like to display (e.g., # 65 for "A"). The cursor moves to the right, in position for the next character.
To delete a character, simply enter the SPACE character (#32) at the unwanted character's location..
- Repeat Step 3 to create the desired word(s). Note that the "4" key can be used to move the cursor to the left, if necessary. Remember, no word or word-string can exceed 10 characters (except custom message/partition descriptor word numbers 11, 12, and 13, which can be a maximum of 16 characters).
- When the word is complete, press the [8] key to save the custom word(s) and return to the "CUSTOM WORD ?" display. Repeat Steps 2-5 for other custom words to be entered. To change a custom word, just overwrite it. When all words have been programmed, press [0] to return to the Descriptor entry. The custom word(s) will be automatically added to the built-in vocabulary.

Assigning Partition/Custom Message Descriptors

FA148CP: You can create a custom message display that appears on alpha keypads instead of "System Ready." To assign a custom message, use word number 11 as described below.

FA168CPS: You can assign a partition descriptor (up to 16 characters) for each partition plus the common lobby. The system displays the appropriate partition's word instead of "DISARMED READY TO ARM."

Use the same procedure as for adding custom words (described above), but use these word numbers in step 2:

- 11 = partition 1 _____
- 12 = partition 2 _____ (FA168CPS only)
- 13 = common lobby _____ (FA168CPS only)

Once a custom word is entered in any of these word locations (11-13), the system displays the appropriate partition's word instead of the default "DISARMED READY TO ARM" message.

ALPHA VOCABULARY LIST (For Entering Zone Descriptors)

000 (Word Space)	• 057 DOOR *	- L -	- R -	- V -
• 001 AIR	• 059 DOWN	• 106 LAUNDRY *	155 RADIO	209 VALVE
• 002 ALARM *	• 060 DOWNSTAIRS	• 107 LEFT	• 156 REAR	210 VAULT
004 ALLEY	061 DRAWER	108 LEVEL	157 RECREATION	212 VOLTAGE
005 AMBUSH	• 062 DRIVEWAY	• 109 LIBRARY *	159 REFRIGERATION	- W -
• 006 AREA	• 064 DUCT	• 110 LIGHT	160 RF	213 WALL
• 007 APARTMENT	- E -	111 LINE	• 161 RIGHT	214 WAREHOUSE
• 009 ATTIC *	• 065 EAST	• 113 LIVING *	• 162 ROOM *	• 216 WEST
010 AUDIO	066 ELECTRIC	• 114 LOADING	163 ROOF	• 217 WINDOW *
- B -	067 EMERGENCY *	115 LOCK	- S -	• 219 WING
• 012 BABY *	068 ENTRY	116 LOOP	164 SAFE	220 WIRELESS
• 013 BACK *	• 069 EQUIPMENT	117 LOW	165 SCREEN	- X -
• 014 BAR	• 071 EXIT *	• 118 LOWER	166 SENSOR	222 XMITTER
• 016 BASEMENT *	072 EXTERIOR	- M -	• 167 SERVICE	- Y -
• 017 BATHROOM *	- F -	• 119 MACHINE	• 168 SHED *	223 YARD
• 018 BED	• 073 FACTORY	121 MAIDS	169 SHOCK	- Z -
• 019 BEDROOM *	075 FAMILY	122 MAIN *	• 170 SHOP *	224 ZONE (No.)
020 BELL	• 076 FATHERS	• 123 MASTER *	171 SHORT	• 225 ZONE *
• 021 BLOWER	• 077 FENCE	• 125 MEDICAL *	• 173 SIDE *	• 226 0
• 022 BOILER	• 079 FIRE *	126 MEDICINE	174 SKYLIGHT	• 227 1
023 BOTTOM	• 080 FLOOR *	128 MONEY	175 SLIDING *	• 228 1ST *
025 BREAK	081 FLOW	129 MONITOR	• 176 SMOKE *	• 229 2
• 026 BUILDING	082 FOIL	• 130 MOTHERS	• 178 SONS	• 230 2ND *
- C -	• 083 FOYER	• 131 MOTION *	• 179 SOUTH	• 231 3
028 CABINET	084 FREEZER	132 MOTOR	180 SPRINKLER	• 232 3RD *
• 029 CALL	• 085 FRONT *	- N -	• 182 STATION	• 233 4
030 CAMERA	- G -	• 134 NORTH	184 STORE	• 234 4TH
031 CAR	• 089 GARAGE *	135 NURSERY	• 185 STORAGE *	• 235 5
033 CASH	• 090 GAS	- O -	186 STORY	• 236 5TH
034 CCTV	091 GATE	• 136 OFFICE *	190 SUPERVISED *	• 237 6
035 CEILING	• 092 GLASS	• 138 OPEN *	191 SUPERVISION	• 238 6TH
036 CELLAR	093 GUEST	139 OPENING	192 SWIMMING	• 239 7
• 037 CENTRAL	094 GUN	• 140 OUTSIDE	193 SWITCH	• 240 7TH
038 CIRCUIT	- H -	142 OVERHEAD	- T -	• 241 8
• 040 CLOSED *	• 095 HALL *	- P -	194 TAMPER	• 242 8TH
• 046 COMPUTER	• 096 HEAT	143 PAINTING	196 TELCO	• 243 9
047 CONTACT	098 HOLDUP	• 144 PANIC *	197 TELEPHONE	• 244 9TH
- D -	099 HOUSE *	145 PASSIVE	• 199 TEMPERATURE	245 Custom Word #1
• 048 DAUGHTERS	100 INFRARED	• 146 PATIO *	200 THERMOSTAT	246 Custom Word #2
049 DELAYED	• 101 INSIDE *	147 PERIMETER	• 201 TOOL	247 Custom Word #3
• 050 DEN *	102 INTERIOR	• 148 PHONE	202 TRANSMITTER	248 Custom Word #4
051 DESK	103 INTRUSION	150 POINT	- U -	249 Custom Word #5
• 052 DETECTOR *	- J -	151 POLICE *	• 205 UP	250 Custom Word #6
• 053 DINING *	104 JEWELRY	152 POOL *	• 206 UPPER	251 Custom Word #7
054 DISCRIMINATOR	- K -	• 153 POWER	• 207 UPSTAIRS *	252 Custom Word #8
055 DISPLAY	• 105 KITCHEN *		• 208 UTILITY *	253 Custom Word #9
				254 Custom Word #10

Note: Bulleted (•) words in **boldface type** are those that are also available for use by the 4286 Phone Module. If using a Phone module, and words other than these are selected for Alpha descriptors, the module will not provide announcement of those words.

Italicized words followed by an asterisk indicate those words supported by the 6160V/6150V Voice Keypads

CHARACTER (ASCII) CHART (For Adding Custom Words)

32 (space)	41)	50 2	59 ;	68 D	77 M	86 V
33 !	42 *	51 3	60 <	69 E	78 N	87 W
34 "	43 +	52 4	61 =	70 F	79 O	88 X
35 #	44 ,	53 5	62 >	71 G	80 P	89 Y
36 \$	45 -	54 6	63 ?	72 H	81 Q	90 Z
37 %	46 .	55 7	64 @	73 I	82 R	
38 &	47 /	56 8	65 A	74 J	83 S	
39 '	48 0	57 9	66 B	75 K	84 T	
40 (49 1	58 :	67 C	76 L	85 U	

SETTING SCHEDULES

(Installer Code + [#] + [6] [4])

The system provides schedules, which can be used to automatically control 11 types of system events at pre-defined times. Some events are reserved for the installer only.

FA168CPS: Provides up to 32 schedules: 16 schedules for use by the end-user, 16 for use by the installer.

FA148CP: Provides up to 8 schedules: 4 schedules for use by the end user, 4 for use by the installer.

NOTES:

- The master code can only access schedules 01-16 (FA148CP = 01-04) and events 00-07.
- System clock must be set before schedules can take effect.
- Programmed schedules do not take effect until the next scheduled “start” time. (e.g., if programming a schedule time window for 8AM to 5PM, the schedule does not take effect until 8AM after the schedule has been programmed.)

Schedule Mode

<p>ENTER SCHED NO. 00=QUIT 00</p>	<p>Schedule Number FA168CPS 01-16 = end-user schedules 17-32 = installer-only FA148CP 01-04 = end-user schedules 05-08 = installer-only [*] to continue</p>	<p>Enter the desired schedule number. To Quit, enter 00.</p>
<p>ENTER EVENT</p>	<p>Enter Event 00 = clear event 01 = Relay On/Off 02 = User Access 03 = Latch Key Report to Pager 04 = Forced Stay Arming† 05 = Forced Away Arming† 06 = Auto Disarm 07 = Display “Reminder” 10 = Display custom words †† 11 = Periodic Test Report††† Press [*] to continue.</p>	<p>Enter the desired event number for event you want to occur at a specified time. Events 10-11 are reserved for the installer only. Latch key report (option 03) is sent to all pagers in the user’s partition and is active only when the system is armed (message sent is 777-7777). User must be enabled for paging (see User Attributes in System Operation section). † Forced bypass is automatically enabled regardless of setting in field *23. †† If selected, system displays custom words 8, 9, and 10 at defined time. Can be used as installer’s reminder message to the end user. ††† See key commands in Test Report Code data field *64 section to quickly set periodic test reporting intervals.</p>
<p>DEVICE NUMBER XX</p>	<p>Device Number FA168CPS: 01-18 = device number FA148CP: 01-08, 17, 18 Press [*] to continue.</p>	<p>(For event 01-relay on/off) Enter the physical device number as programmed in *79 Menu Mode, then press [*] to continue to the “Start” prompt. Device numbers 17 and 18 designate built-in triggers 1 and 2 respectively.</p>
<p>GROUP NUMBER X</p>	<p>Group Number 1-8 = group number Press [*] to continue to the “Start” prompt.</p>	<p>(For event 02-user access)</p>
<p>PARTITION X</p>	<p>Partition 0 = all partitions 1 = partition 1 2 = partition 2 3 = common Press [*] to continue to the “Start” prompt.</p>	<p>(FA168CPS only; for events 03-07, 10)</p>
<p>START SMTWTFSS HH MMAM 0010000</p>	<p>Start Time 01-12 = hour 00-59 = minute 0 = AM; 1 = PM Days = place “1” under days Press [*] to continue.</p>	<p>Enter the event’s start time and days of the week to occur. To select days, position the cursor under the desired days using the [*] key to move forward, then press “1” to select the day.</p>
<p>STOP SMTWTFSS HH MMAM 0010000</p>	<p>Stop Time 01-12 = hour 00-59 = minute 0 = AM; 1 = PM Days = place “1” under days Press [*] to continue.</p>	<p>(For events 01-relay on/off; 02-user access; 03-latch key report) Enter the event’s stop time and days of the week to occur. To select days, position the cursor under the desired days using the [*] key to move forward, then press “1” to select the day.</p>

REPEAT OPTION	
0-4	X

Repeat Option
 0 = do not repeat
 1 = repeat weekly
 2 = repeat biweekly (every other week)
 3 = repeat every third week
 4 = repeat every fourth week
 Press [*] to continue.

Enter the desired repeat option for this schedule.
 e.g., To make a schedule that happens everyday you would select all days with a repeat count of 1. To make a schedule that runs for one week then stops, select everyday with a repeat count of 0.

RANDOMIZE		
0=NO	1=YES	X

Randomize
 0 = no
 1 = yes
 Press [*] to continue and return to ENTER SCHED NO. prompt to program the next schedule.

(For events 01 and 11)
 If selected, the scheduled start and stop times will vary within 60 minutes of the "hour" time. For example, if a schedule is set to start at 6:15pm, it will do so the first time 6:15pm arrives, but on subsequent days it will start anytime between 6:00 and 6:59 p.m.
NOTE: Do not use the random option if the start and stop times are within the same "hour" setting, otherwise unpredictable results may occur (e.g., the randomized stop time may occur before the start time).

AVS SYSTEM ENABLE and QUICK PROGRAMMING COMMANDS

Applies to an AVS system using an ECP connection to the control.

1. Install the AVS module according to its instructions.
2. Use one of the control's AVS Quick Program commands as follows (see Quick Program Command Results below for results of each command):
 - **installer code + [#] + 0 + 3:** enable AVS operation without panel sounds on the AVST speaker
 - **installer code + [#] + 0 + 4:** enable AVS operation and enable panel sounds on the AVST speaker
3. Use data field *55 Dynamic Signaling Priority to select the desired reporting paths (phone line and/or GSMV) and path for AAV communication.
4. To undo the Quick Command programming, use the following commands:
 - **installer code + [#] + 0 + 5:** remove all options that were set if [#] + 03 quick command was performed
 - **installer code + [#] + 0 + 6:** remove all options that were set if [#] + 04 quick command was performed

Quick Program Command Results

When either the #03 or #04 Quick Program command is used, the following are automatically programmed and no longer available for other control panel purposes.

Pre-Programmed	#03 Command		#04 Command	
Output Function No. (*80 mode)	FA148CP 22 (zone type 60, relay 07) 23 (zone type 61, relay 08) 24 (zone type 62, relay 08)	FA168CPS 46 (zone type 60, relay 15) 47 (zone type 61, relay 16) 48 (zone type 62, relay 16)	FA148CP Same as #03 plus: 17 (zone type 14, relay 05) 18 (zone type 22, relay 05) 19 (zone type 39, relay 06) 20 (zone type 33, relay 06) 21 (zone type 22, relay 06)	FA168CPS Same as #03 plus: 41 (zone type 14, relay 13) 42 (zone type 22, relay 13) 43 (zone type 39, relay 14) 44 (zone type 33, relay 14) 45 (zone type 22, relay 14)
Output Relay No. (*79 mode)	07 (addr 08, relay pos 2) 08 (addr 08, relay pos 1)	15 (addr 11, relay pos 2) 16 (addr 11, relay pos 1)	Same as #03 plus: 05 (addr 08, relay pos 4) 06 (addr 08, relay pos 3)	Same as #03 plus: 13 (addr 11, relay pos 4) 14 (addr 11, relay pos 3)
Protection Zone (*56/*58 mode)	4229 zn 24 (zt 81, addr 08)	4229 zn 48 (zt 81, addr 11)	Same as #03 command	Same as #03 command
Device Address	address 08 (AVS module)	address 11 (AVS module)	Same as #03 command	Same as #03 command
Data Field *91	AAV enabled	AAV enabled	AAV enabled	AAV enabled

SETTING THE REAL-TIME CLOCK

IMPORTANT: The Real-Time Clock must be set before the end of the installation.

NOTE: All partitions must be disarmed before the date/time can be set.

1. Master Code + [#] + [6] [3]
2. Press [*] when the time/date is displayed.
 A cursor appears under the first digit of the hour.
To move cursor ahead, press []. To go back, press [#].*
 - Enter the 2-digit hour setting.
 - Enter the 2-digit minute setting.
 - Press [1] for PM or [2] for AM.
 - Enter the last two digits of the current year.
 - Enter the 2-digit month setting.
 - Enter the 2-digit day setting.
3. To exit, press [*] when cursor is at the last digit, or wait 30 seconds.

*29 COMMUNICATION DEVICE MENU MODE (Pass-Through Programming)

This mode is for programming an IP, GSM, or IP/GSM Communicator Module using an alpha keypad. Alternatively, these options can be programmed via the AlarmNet Direct website. After programming is complete, the module must be registered with AlarmNet before reporting via the communication device can occur. Refer to the device's instructions for registration procedures.

NOTE: The module must be set to device address 3.

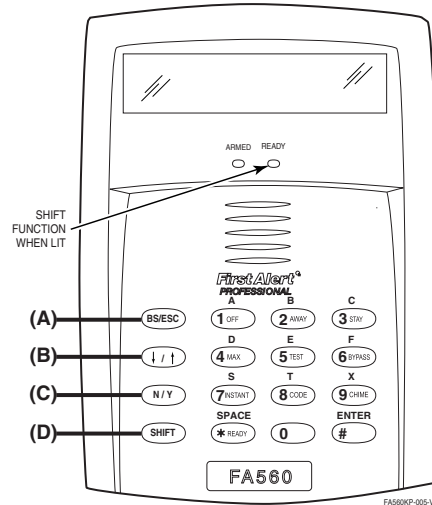
IMPORTANT: The use of an IP/GSM Communicator Module requires an AlarmNet-I account. Please obtain the account information from the central station prior to programming this module.

Using an Alpha Keypad as a 7720P Programming Tool

When programming with *29 menu mode, the alpha keypad mimics the functions of the 7720P Programming Tool. See figure to right and table below for 7720P key functions. Each key has two possible functions: a normal function and a SHIFT function.

Normal functions: The numeric values labeled directly on the keys and the left-hand functions shown in diagram on the ABC keys. To perform a normal key function, simply press the desired key.

SHIFT functions: Those functions shown in diagram above the numerical keys and the right-hand functions shown on the ABC keys. To perform a SHIFT key function, press SHIFT key (D key), then press the desired function key (shift function is indicated by the lit READY LED).



7720P Emulation Template for Alpha Keypads

*29 IP/GSM Program Mode

Press *29 while in Data Field Programming mode. The following prompts appear.

ENABLE IP/GSM?
0=No, 1=Yes

Enable IP/GSM?
0 = no, not using IP or GSM;
1 = yes using IP and/or
GSM module
[*] to continue
[Default = 0 (no IP and/or GSM)]

If using a communication device, enter 1 at this prompt and enter 1-Prog at the next prompt to program and register the device. Use the communication device's Installation Guide for details of the device's programming prompts and instructions for registration.

1=PROG 2=DIAG
0=QUIT

**Programming /
Diagnostics Select**
1 = Prog (program the
IP/GSM options)
2 = Diag (enter diagnostic
mode)
0 = Quit; returns to data field
programming mode

Select whether you want to program the communication device or enter the device's diagnostic mode.

Diagnostic Mode Note: Diagnostic mode option available only for communicators with firmware version 2.4.16 or higher.

Normal and SHIFT key Functions While in *29 Menu Mode

Key	Normal Key Function	SHIFT Key Function
(A) = BS/ESC	[BS]: Press to delete entry Also, can reset EEPROM defaults †	[ESC]: Press to quit Program Mode
(B) = ↓/↑	[↓]: Scroll down programming	[↑]: Scroll up programming
(C) = N/Y	[N]: Press for "NO" answer	[Y]: Press SHIFT-Y for "YES" answer
(D) = SHIFT	Press before pressing a SHIFT key function. Will light READY LED. LED goes out once a key is pressed. Press again for each SHIFT function desired.	
1/A	[1]: For entering the number 1	[A]: Used for entering C.S. ID number
2/B	[2]: For entering the number 2	[B]: Used for entering C.S. ID number
3/C	[3]: For entering the number 3	[C]: Used for entering C.S. ID number
4/D	[4]: For entering the number 4	[D]: Used for entering C.S. ID number
5/E	[5]: For entering the number 5	[E]: Used for entering C.S. ID number
6/F	[6]: For entering the number 6	[F]: Used for entering C.S. ID number
7/S	[7]: For entering the number 7	[S]: Press to display diagnostic status
8/T	[8]: For entering the number 8	[T]: Press to send TEST messages
9/X	[9]: For entering the number 9	[X]: Press to reset the IP/GSM
[*] / SPACE	[*]: Used to select programming options	[SPACE]: Not used
0	[0]: For entering the number 0	
[#] / ENTER	[#] / ENTER: Press to accept entries	No SHIFT function

† Active only when the "REVIEW?" prompt is displayed

ZONE TYPE DEFINITIONS

Zone types define the way in which the system responds to faults in each zone.

Type 00 Zone Not Used

Program a zone with this zone type if the zone is not used.

Type 01 Entry/Exit Burglary #1

- Assign to zones that are used for primary entry and exit.
- Provides entry delay when zone is faulted if control is armed in the Away, Stay, or Night-Stay modes.
- No entry delay provided when the panel is armed in the Instant/Maximum mode.
- Entry delay #1 is programmable for each partition (field *35).
- Exit delay begins whenever the control is armed, regardless of the arming mode selected, and is programmable (field *34).

Type 02 Entry/Exit Burglary #2

- Assign to zones that are used for entry and exit and require more time than the primary entry/exit point.
- Provides a secondary entry delay, similar to entry delay #1.
- Entry delay #2 is programmable for each partition (field *36).
- Exit delay is same as described for Type 01.

Type 03 Perimeter Burglary

- Assign to all sensors or contacts on exterior doors and windows.
- Provides an instant alarm if the zone is faulted when the panel is armed in the Away, Stay, Night-Stay, Instant or Maximum modes.

Type 04 Interior Follower

- Assign to a zone covering an area such as a foyer, lobby, or hallway through which one must pass upon entry (to and from the keypad).
- Provides a delayed alarm (using the programmed entry 1 time) if the entry/exit zone is faulted first. Otherwise this zone type gives an instant alarm.
- Active when the panel is armed in the Away mode.
- Bypassed automatically when the panel is armed in the Stay or Instant modes; if armed in Night-Stay mode, zones assigned to zone list 05 (night-stay zone list) are not bypassed when system armed in Night-Stay mode.

Type 05 Trouble by Day/Alarm by Night

- Assign to a zone that contains a foil-protected door or window (such as in a store), or to a zone covering a sensitive area such as a stock room, drug supply room, etc.
- Can also be used on a sensor or contact in an area where immediate notification of an entry is desired.
- Provides an instant alarm if faulted when armed in the Away, Stay, Night-Stay, Instant or Maximum (night) modes.
- During the disarmed state (day), the system will provide a latched trouble sounding from the keypad (and a central station report, if desired).

Type 06 24-hr Silent Alarm

- Usually assigned to a zone containing an emergency button.
- Sends a report to the central station but provides no keypad display or sounding.

Type 07 24-hour Audible Alarm

- Assign to a zone that has an emergency button.
- Sends a report to the central station, and provides an alarm sound at the keypad, and an audible external alarm.

Type 08 24-hour Auxiliary Alarm

- Assign to a zone containing an emergency button, or to a zone containing monitoring devices such as water or temperature sensors.
- Sends a report to the central station and provides an alarm sound at the keypad. (No bell output.)

Type 09 Supervised Fire

- Provides a fire alarm on short circuit and a trouble condition on open circuit. A fire alarm produces a pulsing bell output.
- This zone type is always active and cannot be bypassed.

Type 10 Interior w/Delay

- Provides entry delay (using the programmed entry time), if tripped when the panel is armed in the Away mode.
- Entry Delay 1 begins whenever sensors in this zone are violated, regardless of whether or not an entry/exit delay zone was tripped first.
- Bypassed when the panel is armed in the Stay or Instant modes; if armed in Night-Stay mode, zones assigned to zone list 05 (night-stay zone list) are not bypassed when system armed in Night-Stay mode.

Type 12 Monitor Zone

- Works as a dynamic monitor of a zone fault/trouble (not alarm). In the case of a short/open, the message, "**ALARM*-24 Hr. Non-Burg. -#XXX " (where XXX is the zone number) will be sent to the Central Station. The system keypad will display a "check" message indicating the appropriate zone (but keypad beeping does not occur). Upon restoral of the zone, the message, "**RESTORE*-24 Hr. Non-Burg. -#XXX " will be sent to the Central Station.
- The "check" message will automatically disappear from the keypad dynamically, when the zone restores; a user code + off sequence is not needed to reset the zone.
- Faults of this zone type are independent of the system, and can exist at the time of arming without interference.
- Since this is a "trouble" zone type, do not use this zone type with relays set to activate upon "alarm."

Type 14 24 Hour Carbon Monoxide Monitor

- Assigned to any zone with a carbon monoxide detector.
- A carbon monoxide alarm produces keypad and detector sounding (does not affect bell output).
- Always active and cannot be bypassed.

Type 16 Fire w/Verification

- Provides a fire alarm when zone is shorted, but only after alarm verified.
- Verifies alarm by resetting smoke detectors after short is detected (removes power 7 seconds for zone 1, 3 seconds for trigger output). Another short circuit within 90 seconds triggers fire alarm.
- Provides a trouble response when zone is open.

Type 20 Arm-Stay (BR only)

- Arms the system in Stay mode when the zone is activated.
- Pushbutton units send the user number to the central station when arming or disarming.
- User number for button must be assigned.

Type 21 Arm-Away (BR only)

- Arms the system in Away mode when the zone is activated.
- Pushbutton units send the user number to the central station when arming or disarming.
- User number for button must be assigned.

Type 22 Disarm (BR only)

- Disarms the system when the zone is activated.
- User number for button must be assigned.

Type 23 * No Alarm Response

- Can be used on a zone when an output relay action is desired, but with no accompanying alarm (e.g., lobby door access).

Type 24 Silent Burglary

- Usually assigned to all sensors or contacts on exterior doors and windows where bells and/or sirens are NOT desired.
- Provides an instant alarm, with NO audible indication at any keypad or external sounder, if the zone is faulted when the system is armed in the Away, Stay, Instant, or Maximum modes.
- A report is sent to the central station.

Type 77 Keyswitch

- Assign to zone wired to a keyswitch.
- Do not use input type "BR" devices with this zone type.

Type 81 AAV Monitor Zone

- Assign to zone connected to AAV module.
- Monitors 2-way voice sessions as follows:
 - When the zone is faulted, all alarm sounding and dialer reporting stops, except for fire alarms, which immediately terminate the voice session and cause a fire report to be sent.
 - When the zone is restored (session ended), sounding resumes (if bell timeout has not expired) and reports that were stopped are sent.

Types 90-93 Configurable

Allows for various custom responses. Options include response to entry/exit delays, response opens/shorts, types of alarm/trouble sounding, dial delay, and unique Contact ID report codes. Types 92 and 93 can only be programmed via downloader. UL installations: Zone Types 90 -93 may not be used as fire or burglar alarm zones on fire or UL burglar alarm installations.

- * The system can still be armed when these zone types are in a faulted condition.

UL NOTICES

1. Entry Delay No. 1 and No. 2 (fields *35, *36) cannot be greater than 30 seconds for UL Residential Burglar Alarm installations, and entry delay plus dial delay should not exceed 1 minute. For UL Commercial Burglar Alarm installations, total entry delay may not exceed 45 seconds.
2. For UL Commercial Burglar Alarm and UL Residential Burglar Alarm installations with line security, total exit delay time must not exceed 60 seconds.
3. The maximum number of reports per armed period (field *93) must be set to "0" (unlimited) for UL installations.
4. Periodic testing (see scheduling mode) must be at least every 24 hours.
5. Alarm Sounder plus Auxiliary Power currents must not exceed 600mA total for UL installations (Aux power 500mA max.).
6. All partitions must be owned and managed by the same person(s).
7. All partitions must be part of one building at one street address.
8. If used, the audible alarm device(s) must be placed where it/they can be heard by all partitions.
9. For UL commercial burglar alarm installations the control unit must be protected from unauthorized access. The tamper switch installed to protect the control unit enclosure door is suitable for this purpose.
10. Remote downloading without an alarm company technician on-site (unattended downloading) is not permissible for UL installations.
11. Auto-disarming is not a UL Listed feature.
12. As SIA limits for delay of alarm reporting and sounding can exceed UL limits for commercial and residential applications, the following UL requirements per UL681 are provided:
The maximum time that a control unit shall be programmed to delay the transmission of a signal to a remote monitoring location, or to delay the energizing of a local alarm sounding device to permit the alarm system user to enter and disarm the system, or to arm the system and exit shall not exceed:
 - a) 60 seconds for a system with standard line security or encrypted line security,
 - b) 120 seconds for a system without standard line security or encrypted line security, or
 - c) 120 seconds for a system that does not transmit an alarm signal to a remote monitoring location.
13. This control is not intended for bank safe and vault applications.

SIA QUICK REFERENCE GUIDE

1. *31 Single Alarm Sounding per Zone: If "0" selected, "alarm sounding per zone" will be the same as the "number of reports in armed period" set in field *93 (1 if one report, 2 if 2 reports, unlimited for zones in zone list 7).
2. *34 Exit Delay: Minimum exit delay is 45 seconds.
3. *35/*36 Entry Delay 1 and 2: Minimum entry delay is 30 seconds.
4. *37 Audible Exit Warning: Feature always enabled; field does not exist.
5. *39 Power Up in Previous State: Must be "1," power up in previous state.
6. *40 PABX Access Code or Call Waiting Disable: If call waiting is used, call waiting disable option in field *91 must be set.
7. *50 Burglary Dial Delay: Delay must be minimum of 30 seconds.
8. *59 Exit Error Alarm Report Code: Always enabled.
9. *68 Cancel Report Code: Default is "code enabled."
10. *69 Recent Closing Report Code: Always enabled.
11. *91 Option Selection: Exit Delay option should be enabled. If call waiting is used, Call Waiting Disable must be set to "1" (enabled).
12. *93 No. reports in Armed Period: Must be set for 1 or 2 report pairs.
13. Cross zone timer programming is set in field *85; cross zone pairs are assigned in zone list 4 using *81 Zone List mode.
14. Duress code is assigned by using the "add a user code" procedure found in the User Guide. Enable Duress code reporting by programming zone 92 using *56 Zone Programming mode.
15. Fire alarm verification is a built-in system feature when a zone is programmed for zone type 16.

WORKSHEET FOR *56 ZONE PROGRAMMING

(FA148CP supports up to 32 zones: 1-6, 9-34, 49-56) [default shown in brackets]

Zone	Zn Type	Part.	Report	Hardwire Type	Resp. Time	Location	
1	[09]	[1]		[EOL]	[1]		
2	[01]	[1]		[EOL]	[1]		
3	[03]	[1]		[EOL]	[1]		
4	[03]	[1]		[EOL]	[1]		
5	[03]	[1]		[EOL]	[1]		
6	[03]	[1]		[EOL]	[1]		
7	[03]	[1]		[EOL]	[1]		
8	[03]	[1]		[EOL]	[1]		
Zone	Zn Type	Part.	Report	Input Type	Loop	Serial No.	Location
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49		[1]		[BR]			
50		[1]		[BR]			
51		[1]		[BR]			
52		[1]		[BR]			
53		[1]		[BR]			
54		[1]		[BR]			
55		[1]		[BR]			
56		[1]		[BR]			
57		[1]		[BR]			
58		[1]		[BR]			
59		[1]		[BR]			
60		[1]		[BR]			
61		[1]		[BR]			
62		[1]		[BR]			
63		[1]		[BR]			
64		[1]		[BR]			
95	[00]	N/A**		N/A	N/A	N/A	keypad [1] / [*]
96	[00]	N/A**		N/A	N/A	N/A	keypad [3] / [#]
99	[06]	N/A**		N/A	N/A	N/A	keypad [*] / [#]

NOTES:
 Zone Type: see chart in *56 Zone Programming Menu mode section.
 Report Code: enabled if any digit entered as 1st digit;
 Hardwire Type (zns 2-8):
 0 = EOL 3 = ZD
 1 = NC 4 = DB
 2 = NO
 Input Type:
 2 = AW (zones 9-48)
 3 = RF (zones 9-48)
 4 = UR (zones 9-48)
 5 = BR (zones 49-64)
NOTE: Zones 9-16 not available if zone doubling enabled.
 Response Time:
 0 = 10msec
 1 = 350msec
 2 = 700msec
 3 = 1.2 sec
Reserved Zones
 91 = addressable device report enable/disable default zone type = [05].
 92 = Duress report enable/disable

** Emergency key zones 95, 96, and 99 report the partition of the keypad used to activate the emergency zones.

WORKSHEET FOR *57 FUNCTION KEY PROGRAMMING

Option	Function	A	B	C	D	Comments
01	Paging					
02	Time Display					
03	Arm AWAY					
04	Arm STAY					
05	Arm NIGHT-STAY					
06	Step Arming					
07	Device Activation					Device:
08	Comm. Test					
09	Macro Key 1					
10	Macro Key 2					
11	Macro Key 3					
12	Macro Key 4					
00	Emergency Keys:	zone 95	zone 99	zone 96	paging	
	Personal Emergency				n/a	
	Silent Alarm				n/a	
	Audible Alarm				n/a	
	Fire				n/a	

Emergency Keys: A = paired keys [1] / [*] (zone 95); B = paired keys [*] / [#] (zone 99); C = paired keys [3] / [#] (zone 96)

WORKSHEET FOR *79 RELAY/POWERLINE CARRIER (X-10) DEVICE MAPPING

Applicable only if Relays and/or Powerline Carrier Devices are to be used.

Must program before using *80.

Output No.	OUTPUT TYPE			
	Relay Module Addr.	Pos (1-4)	X10 Unit No.	Description
01				
02				
03				
04				
05				
06				
07				
08				

Output No.	OUTPUT TYPE (09-16 apply to FA168CPS only)			
	Relay Module Addr.	Pos (1-4)	X10 Unit No.	Description
09				
10				
11				
12				
13				
14				
15				
16				
17	On-Board Trigger 1			norm output =
18	On-Board Trigger 2			norm output =

WORKSHEET FOR *81 ZONE LIST PROGRAMMING

Fill in the required data on the worksheet below and follow the procedure in the installation manual as you enter the data during the displays and prompts that appear in sequence.

NOTE: Record desired zone numbers below, noting that a list may include *any* or *all* of system's zone numbers.

List No.	Used For...	Contains These Zones...
01	General Purpose (GP)	
02	General Purpose	
03	Chime-by-Zone or GP	(see field *26 for Chime-by-Zone option)
04	Cross Zones	(see field *85 for Cross Zone Timer option)
05	Night-Stay Zones or GP	
06	Dial Delay Disable or GP	SIA-Compliant Controls: see field *50 for Dial Delay Disable option
07	Unlimited Reports or GP	SIA-Compliant Controls: see field *93 for Unlimited Reports option
08	General Purpose	
09	Zones activating pager 1	
10	Zones activating pager 2	
11	Zones activating pager 3	(FA168CPS)
12	Zones activating pager 4	(FA168CPS)

WORKSHEET FOR *80 OUTPUT FUNCTION PROGRAMMING

Fill in the required data on the worksheet below and follow the programming procedure in the installation manual as you enter the data during the displays and prompts that appear in sequence.

- Notes:**
1. For Relays, 4229 and 4204 devices are programmed in *79, *80, and *81 modes.
 2. For Powerline Carrier devices (plcd), field *27 must be programmed with a House Code.
 3. Tamperers of expansion units cannot be used to operate devices.

Output Function Number (FA168CPS: 1-48) (FA148CP: 1-24)	Activation Type and Detail				Partition Number (P) (if using ZT trig) 0 = any 1 = partition 1 2 = partition 2 3 = common	Event (for zone list/activated by)		Action 0 = off 1 = close 2 secs 2 = stay closed 3 = pulse 4 = toggle 5 = duration 1††† 6 = duration 2††	Output Number FA168CPS: 1-18 FA148CP: 1-8, 17, 18	Device Type R = relay T = trigger X = X10
	Activated by 0=delete 1=zn list 2=zn type 3=zn no.	Zone List (ZL) 1-8 = list	Zone Type (ZT) (see table below)	Zone No. (ZN) 00=none FA168CPS: 01-64 FA148CP: 01-06, 09-34, 49-56		By Zone List	By Zone No. 0 = restore 1 = alarm/flt/trbl			
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
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40										
41										
42										
43										
44										
45										
46										
47										
48										

ZONE TYPE/SYSTEM OPERATION – Choices for Zone Types are:

- | | | | |
|------------------------|------------------------------|--------------------------|-----------------------|
| 00 = Not Used | 05 = Trouble Day/Alarm Night | 10 = Interior w/Delay | 24 = Silent Burglary |
| 01 = Entry/Exit#1 | 06 = 24 Hr Silent | 12 = Monitor Zone | 77 = Keypad |
| 02 = Entry/Exit#2 | 07 = 24 Hr Audible | 14 = Carbon Monoxide | 81 = AAV Monitor Zone |
| 03 = Perimeter | 08 = 24 Hr Aux | 16 = Fire w/Verification | 90-91 = Configurable |
| 04 = Interior Follower | 09 = Fire | 23 = No Alarm Response | |

Choices for System Operation are:

- | | | |
|-----------------------------|----------------------------|-------------------------------|
| 20 = Arming–Stay | 38 = Chime | 58 = Duress |
| 21 = Arming–Away | 39 = Any Fire Alarm | 60 = AAV Trigger |
| 22 = Disarming (Code + OFF) | 40 = Bypassing | 61 = AVS/GSMV session begin § |
| 31 = End of Exit Time | 41 = **AC Power Failure | 62 = AVS/GSMV session end § |
| 32 = Start of Entry Time | 42 = **System Battery Low | 66 = Function key† |
| 33 = Any Burglary Alarm | 43 = Communication Failure | 67 = Bell Failure |
| 36 = **At Bell Timeout*** | 52 = Kissoff | 68 = TELCO Line Fault |
| | 54 = Fire Zone Reset | 78 = Keypad red LED††† |
| | | 79 = Keypad green LED††† |

Note: In normal operation mode:
Code + # + 7 + NN Key Entry **starts** Device
Code + # + 8 + NN Key Entry **stops** Device

** Use 0 (any) for Partition No. (P) entry.
*** Or at Disarming, whichever occurs earlier.
† Use *57 Menu mode to assign the function key.
†† Duration is set in program field *177.
††† Device action not used for these choices.
§ automatically set when appropriate AVS Quick Command performed.

WORKSHEET FOR SCHEDULES

(installer code + [#] + [6] [4]; master code can only access schedules 01-16 for FA168CPS, 01-04 for FA148CP, and events 00-07 for both controls; FA148CP supports up to 8 schedules, FA168CPS supports up to 32 schedules)

No.	Event (see list below)	Device No. for "01" events: enter 01-18	Group No. for "02" events: enter 1-8	Partition for "04-06" events: enter 1, 2, or 3	Start Time/ Days	Stop Time/ Days	Repeat (1-4)	Random (yes/no)
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
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22								
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24								
25								
26								
27								
28								
29								
30								
31								
32								

Events: Master/Installer
 00 = clear event 03 = latch key report 06 = auto disarm Installer Only
 01 = device on/off 04 = forced STAY arm 07 = display "reminder" 10 = display custom words 8-10
 02 = user access 05 = forced AWAY arm 11 = periodic test report

Repeat Options: 0 = none; 1 = repeat weekly; 2 = repeat every other week; 3 = repeat every third week; 4 = repeat every fourth week

TABLE OF DEVICE ADDRESSES



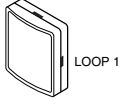
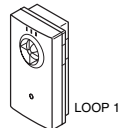
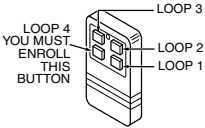
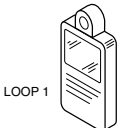
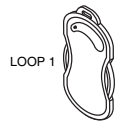
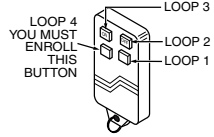
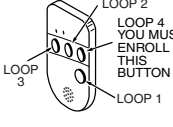
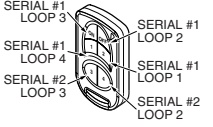
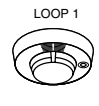
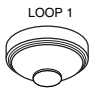
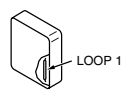
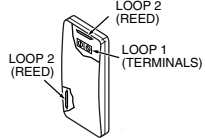
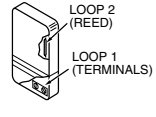
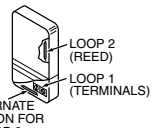
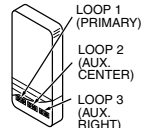

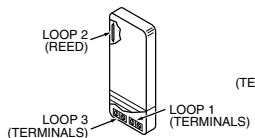
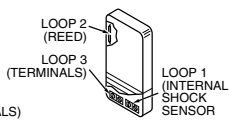
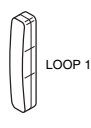
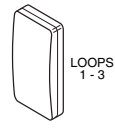
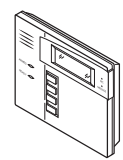
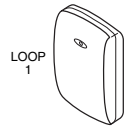
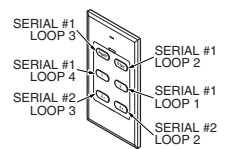
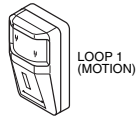
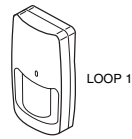
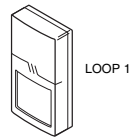
This Device	Uses Address	Reports as††	Enabled By...
RF Receiver	00	100	*56 zone programming: input device type entry
AUI 1	01		automatic if AUI enable field *189 enabled for AUI 1
AUI 2	02		automatic if AUI enable field *189 enabled for AUI 2
AUI 3	05		automatic if AUI enable field *189 enabled for AUI 3 (FA168CPS)
AUI 4	06		automatic if AUI enable field *189 enabled for AUI 4 (FA168CPS)
Communication Device (LRR)	03	103	automatic if communication device enabled in *29 Menu mode
4286 Voice Module	04	104	automatic if phone module access code field *28 enabled
Zone Expanders (4219/4229):			*56 zone programming: input device type entry, then:
module 1 (for zones 09 - 16)	07	107	automatic if zone no. 9-16 entered as AW type or relay assigned
module 2 (for zones 17 - 24)	08	108	automatic if zone no. 17-24 entered as AW type or relay assigned
module 3 (for zones 25 - 32)	09 (FA168CPS)	109	automatic if zone no. 25-32 entered as AW type or relay assigned
module 4 (for zones 33 - 40)	10 (FA168CPS)	110	automatic if zone no. 33-40 entered as AW type or relay assigned
module 5 (for zones 41 - 48)	11 (FA168CPS)	111	automatic if zone no. 41-48 entered as AW type or relay assigned
Relay Modules (4204):			*79 output device programming: device address prompt:
module 1	12	112	entered at device address prompt
module 2	13	113	entered at device address prompt
module 3	14 (FA168CPS)	114	entered at device address prompt
module 4	15 (FA168CPS)	115	entered at device address prompt
Keypads:			data field programming as listed below:
keypad 1	16	n/a	always enabled, all sounds enabled.
keypad 2	17	n/a	data field *190
keypad 3	18	n/a	data field *191
keypad 4	19	n/a	data field *192
keypad 5	20	n/a	data field *193
keypad 6	21	n/a	data field *194
keypad 7	22	n/a	data field *195
keypad 8	23	n/a	data field *196
5800TM Module	28	n/a	automatic

†† Addressable devices are identified by "1" plus the device address when reporting. Enter report code for zone 91 to enable addressable device reporting (default = reports enabled). See field *19 for addressable device (ECP) 3-digit/2-digit identification keypad display options.

5800 SERIES TRANSMITTER INPUT LOOP IDENTIFICATION

All of the transmitters illustrated have one or more unique factory assigned input (loop) ID numbers. Each of the inputs requires its own programming zone (e.g., a 5804's four inputs require four programming zones). For information on any transmitter not shown, refer to the instructions accompanying that transmitter for details regarding loop numbers, etc.

UL NOTE: The following transmitters are not intended for use in UL installations: 5802MN, 5802MN2, 5804, 5804BD, 5814, 5816TEMP, 5819, 5819WHS & BRS, and 5850.
The 5827BD and 5800TM can be used in UL Listed Residential Burglar installations.

 <p>5800CO ENROLL AS "RF"</p>	 <p>5800Micra ENROLL AS "RF"</p>	 <p>5800SS1 ENROLL AS "RF"</p>	 <p>5800WAVE SET HOUSE ID ENROLL AS "RF"</p>	 <p>5801 ENROLL AS "UR OR" "RF"</p>	 <p>5802 MN ENROLL AS "UR" OR "RF"</p>
 <p>5802 MN2 ENROLL AS "UR" OR "RF"</p>	 <p>5804/5804E ENROLL AS "BR"</p>	 <p>5804BD/5804BDV ENROLL AS "BR" SET HOUSE ID</p>	 <p>5805-6 ENROLL AS "BR"</p>	 <p>5806/5806W3 5808/5808LST/5808W3 ENROLL AS "RF"</p>	 <p>5809 ENROLL AS "RF"</p>
 <p>5814 ENROLL AS "RF"</p>	 <p>5815 ENROLL AS "RF"</p>	 <p>5816 ENROLL AS "RF"</p>	 <p>5816MN ENROLL AS "RF"</p>	 <p>5817 ENROLL AS "RF"</p>	 <p>5818MNL ENROLL AS "RF"</p>
 <p>5819 ENROLL AS "RF"</p>	 <p>5819S (WHS & BRS) ENROLL AS "RF"</p>	 <p>5820/5820L ENROLL AS "RF"</p>	 <p>5821 ENROLL AS "RF"</p>	 <p>5828/5828V SET HOUSE ID</p>	 <p>5853 ENROLL AS "RF"</p>
 <p>5878 ENROLL AS "BR"</p>	 <p>5890/5890PI ENROLL AS "RF"</p>	 <p>5894PI ENROLL AS "RF"</p>	 <p>5897-35 ENROLL AS "RF"</p>		

5800-003-V0



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