

FA168C / FA168C-CN FA148CP / FA148CP-CN

Programming Guide



TO ENTER PROGRAMMING MODE:

Local programming requires the use of an alpha keypad connected to the keypad terminals on the control.

1. POWER UP, then depress [*] and [#] both at once, within 50 seconds of powering up.
OR
2. Initially, key: **Installer Code** (default = 4112) plus **8 + 0 + 0**.
(if *98 was used to exit previously, see *To Exit Programming Mode* paragraph below.)

Data Field Programming Procedures

Task	Procedure
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 [*] and the next data field number to be programmed to end the entry.
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–*46, *94, and pager programming fields)

Interactive Mode Programming (*56, *57, *58, *79, *80, *81, *82)

Press [*] + [Interactive Mode No.] (for example, *56). The alpha display keypad will display the first of a series of prompts requesting entries.

Interactive Mode	Used to Program
*56 Zone Programming	Zone characteristics, report codes, alpha descriptors, and serial numbers for 5800 RF transmitters.
*57 Function Key Programming	Unlabeled keypad keys (known as ABCD keys) for special functions
*58 Zone Programming (Expert mode)	Same options as *56 mode, but with fewer prompts. Intended for those familiar with this type of programming, otherwise *56 mode is recommended.
*79 Output Device Mapping	Assign module addresses and map individual relays/powerline carrier devices
*80 Output Programming	4229 or 4204 Relay modules, Powerline Carrier devices, or on-board triggers
*81 Zone List Programming	Zone Lists for relay/powerline carrier activation, chime zones, pager zones, etc.
*82 Alpha Programming	Zone alpha descriptors

INITIALIZE DOWNLOAD and RESET DEFAULTS

- *96 Initializes download ID and subscriber account number.
- *97 Sets all data fields to original factory default values.

TO EXIT PROGRAMMING MODE:

- *98 Exits programming mode and *prevents* re-entry by: **Installer Code + 8 + 0 + 0**. To reenter the programming mode, the system must be powered down, then powered up, then press both [*] and [#] at same time within 50 seconds of powering up (method 1 described above), UNLESS Local Lockout (in field *91) is enabled. If so, re-entry to programming mode is permitted *only* by **Installer Code + 8 + 0 + 0** (method 2 described above).
- *99 Exits programming mode and *allows* re-entry by: **Installer Code + 8 + 0 + 0** or method 1 above.

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. Correct the programming and then completely de-power and re-power the control to clear this indication and remove the disable indication.

NOTE: Entry of a number other than one specified will give unpredictable results.

For fields *43-46: Enter 0-9; #+11 for B; #+12 for C; #+13 for D; #+14 for E; #+15 for F. 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 Nos. 0000-0999. Exit field by pressing * (and press next field number) if only 3 digits are used. E.g., For Acct. B234, enter:

- * 43 PARTITION 1 PRIMARY SUBS. ACCT. No. [FFFF] See box above for entries. To clear entries from field, press *43*.
- * 44 PARTITION 1 SECONDARY SUBS. ACCT. No. [FFFF] See box above for entries. To clear entries from field, press *44*.
- * 45 PARTITION 2 PRIMARY SUBS. ACCT. No. [FFFF] See box above for entries. To clear entries from field, press *45*.
- * 46 PARTITION 2 SECONDARY SUBS. ACCT. No. [FFFF] See box above for entries. To clear entries from field, press *46*.
- *47 PHONE SYSTEM SELECT [1] 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
- *48 REPORT FORMAT [70] 0 = 3+1, 4+1 ADEMCO L/S STANDARD
1 = 3+1, 4+1 RADIONICS STANDARD
2 = 4+2 ADEMCO L/S STANDARD
3 = 4+2 RADIONICS STANDARD
6 = 4+2 ADEMCO EXPRESS
7 = ADEMCO CONTACT ID® REPORTING
8 = 3+1, 4+1 ADEMCO L/S EXPANDED
9 = 3+1, 4+1 RADIONICS EXPANDED
primary secondary
- *49 SPLIT/DUAL REPORTING [0] 0 = Disable (Backup report only)

Primary Phone No.	Second 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 15 SEC DIALER DELAY (BURG) [0] 0 = no [UL: must be "0"]; 1 = yes
- *53 SESCOA/RADIONICS SELECT [0] 0 = Radionics (0-9, B-F)
1 = SESCOA (0-9 only reporting)
Select "0" for all other formats.
- *54 DYNAMIC SIGNALING DELAY [0] Delay selectable from 0 to 225 secs in 15-sec increments.
0 = no delay (both signals sent), 1 = 15 secs, 2 = 30 secs, etc. [UL: must be "0"]
- *55 DYNAMIC SIGNALING PRIORITY [0] 0 = Primary Dialer first; 1 = Long Range Radio first.

TO PROGRAM SYSTEM STATUS, & RESTORE REPORT CODES (*59 – *76, & *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 will disable a report. A 0 (not #+10) in the second box will result in automatic 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: see installation instructions for requirements]

SYSTEM STATUS REPORT CODES (*59- * 68)

- *59 EXIT ERROR REPORT CODE [0] See box above.
- *60 TROUBLE REPORT CODE [00] See box above.
- *61 BYPASS REPORT CODE [00] See box above.
- *62 AC LOSS REPORT CODE [00] See box above.
- *63 LOW BAT REPORT CODE [00] See box above.
- *64 TEST REPORT CODE [00] See box above. Use Scheduling mode to set periodic test reports.
- *65 OPEN REPORT CODE [0,0,0] See box above.
Part. 1 Part. 2 Common
- *66 ARM AWAY/STAY RPT CODE [0,0,0,0,0,0] See box above.
Away Stay Away Stay Away Stay
Part. 1 Part. 2 Common

★67	RF XMTR LOW BAT REPORT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★68	CANCEL REPORT CODE	<input type="text"/> <input type="text"/> [00]	<div style="border: 1px solid black; padding: 2px;">UL: must be enabled if wireless devices are used</div> See box on previous page.
RESTORE REPORT CODES (★70 – ★76)			
★70	ALARM RESTORE RPT CODE	<input type="text"/> [0]	See box on previous page.
★71	TROUBLE RESTORE RPT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★72	BYPASS RESTORE RPT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★73	AC RESTORE RPT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★74	LOW BAT RESTORE RPT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★75	RF XMTR LO BAT RST RPT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page.
★76	TEST RESTORE RPT CODE	<input type="text"/> <input type="text"/> [00]	<div style="border: 1px solid black; padding: 2px;">UL: must be enabled if wireless devices are used</div> See box on previous page.
OUTPUT AND SYSTEM SETUP (★77 – ★93)			
★77	DAYLIGHT SAVINGS TIME START\END MONTH	<input type="text"/> <input type="text"/> [4][10]	0 = Disabled 1-12 = January-September (1 = Jan, 2 = Feb, etc) #+10 = October; #+11 = November; #+12 = December
★78	DAYLIGHT SAVINGS TIME START\END WEEKEND	<input type="text"/> <input type="text"/> [1][5]	0 = disabled, 1 = first, 2 = second, 3 = third 4 = fourth, 5 = last, 6 = next to last, 7 = third to last
★84	AUTO STAY ARM	<input type="text"/> [0]	0 = no, 1 = partition 1 only 2 = partition 2 only, 3 = both partitions
★85	CROSS ZONE TIMER	<input type="text"/> [0]	0 = 15 seconds 6 = 2-1/2 min #+12 = 8 min 1 = 30 seconds 7 = 3 min #+13 = 10 min 2 = 45 seconds 8 = 4 min #+14 = 12 min 3 = 60 seconds 9 = 5 min #+15 = 15 min 4 = 90 seconds #+10 = 6 min 5 = 2 minutes #+11 = 7 min (assign cross zones on zone list 4, with *81 Menu mode)
	<div style="border: 1px solid black; padding: 2px;">This option not for use in UL installations.</div>		0 = no, 1 = yes
★86	CANCEL VERIFY	<input type="text"/> [0]	0 = 15 seconds 6 = 2-1/2 min #+12 = 8 min 1 = 30 seconds 7 = 3 min #+13 = 10 min 2 = 45 seconds 8 = 4 min #+14 = 12 min 3 = 60 seconds 9 = 5 min #+15 = 15 min 4 = 90 seconds #+10 = 6 min 5 = 2 minutes #+11 = 7 min
★87	MISC. FAULT DELAY TIME (used with Configurable Zone Types "digit 6")	<input type="text"/> [0]	<div style="border: 1px solid black; padding: 2px;">UL: may only be used on non-burglar alarm/ non-fire alarm zones when used in fire and/or UL burglar alarm installation</div>
★89	EVENT LOG FULL REPORT CODE	<input type="text"/> <input type="text"/> [00]	See box on previous page for report code entries.
★90	EVENT LOG ENABLES	<input type="text"/> [3]	0 = None; 1 = Alarm/Alarm Restore 2 = Trouble/Trouble Restore; 4 = Bypass/Bypass Restore; 8 = Open/Close. <i>Example:</i> To select "Alarm/Alarm Restore", and "Open/Close", enter 9 (1 + 8); To select all, enter #15.
★91	OPTION SELECTION	<input type="text"/> [8]	0 = None 1 = Local Lockout 4 = AAV <div style="border: 1px solid black; padding: 2px;">UL: do not use AAV</div> 2 = Sounder Delay 8 = Exit Delay Restart E.g. (multiple choice): for AAV (4) plus Exit Delay restart (8) enter # + 12; for all (1 + 2 + 4 + 8), enter # + 15.
★92	PHONE LINE MONITOR ENABLE	<input type="text"/> <input type="text"/> [0,0]	Digit 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)
	<div style="border: 1px solid black; padding: 2px;">UL: see Inst. Instructions for requirements</div>		Digit 2: 0 = Keypad display when line is faulted 1 = Keypad display plus keypad trouble sound 2 = Same as "1", plus programmed output device STARTS. If either partition is armed, external sounder activates also. NOTE: Output Device must either be programmed to be STOPPED in field ★80 or STOPPED by Code + # + 8 + output number.
★93	No. OF REPORTS IN ARMED PERIOD PER ZONE (Swinger Suppression)	<input type="text"/> [0]	0 = Unlimited Reports; 1 = 1 report; 2 = 2 reports <div style="border: 1px solid black; padding: 2px;">UL: must be "0"</div>

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 * (and press 95, if entering next field). To clear entries from field, press *94*. UL: downloading may be performed only if a technician is at the site.

***95** RING COUNT FOR DOWNLOADING [15]

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 4285/4286 Phone Module.

PAGER OPTIONS (*160-*172)

***160** PAGER 1 PHONE No.

Enter up to 20 digits. 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***161** PAGER 1 CHARACTERS

Enter the optional prefix characters, up to 16 digits.
 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***162** PAGER 1 REPORTING OPTIONS
 Part. 1 Part. 2 common
 [0,0,0]

For each partition, select from the following options:
 0 = no reports sent
 1 = Open/closes all users
 4 = All alarms and troubles
 5 = All alarms / troubles, and open/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 open/closes for all users

***163** PAGER 2 PHONE No.

Enter up to 20 digits. 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***164** PAGER 2 CHARACTERS

Enter the optional prefix characters, up to 16 digits.
 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***165** PAGER 2 REPORTING OPTIONS [0,0,0]
 Part. 1 Part. 2 common

See field *162 for reporting options. Select for each partition (use zone list 10 if using options 12 or 13).

***166** PAGER 3 PHONE No.

Enter up to 20 digits. 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***167** PAGER 3 CHARACTERS

Enter the optional prefix characters, up to 16 digits.
 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***168** PAGER 3 REPORTING OPTIONS [0,0,0]
 Part. 1 Part. 2 common

See field *162 for reporting options. Select for each partition (use zone list 11 if using options 12 or 13).

***169** PAGER 4 PHONE No.

Enter up to 20 digits. 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***170** PAGER 4 CHARACTERS

Enter the optional prefix characters, up to 16 digits.
 0-9; #+11 = '*'; #+12 = '#'; #+13 = 2-second pause.

***171** PAGER 4 REPORTING OPTIONS [0,0,0]
 Part. 1 Part. 2 common

See field *162 for reporting options. Select for each partition (use zone list 12 if using options 12 or 13).

***172** PAGER DELAY OPTION FOR ALARMS [3]

0 = none, 1 = 1 minute, 2 = 2 minutes, 3 = 3 minutes
 This delay is for ALL pagers in the system.
NOTE: The delay does not reset for new alarms occurring while an existing pager delay is in progress.

MISCELLANEOUS SYSTEM FIELDS (*174-*181)

***174** CLEAN ME REPORTING OPTIONS [0]
 (for ESL smoke detectors)

0 = disable; 1 = Clean Me signal reports;
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] [0]
 (used in *80 Menu mode-Device Actions 5/6)
 1 2

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

***181** 50/60 HERTZ AC OPERATION [0]

0 = 60 Hz; 1 = 50 Hz

CONFIGURABLE ZONE TYPE OPTIONS (*182-*185)

***182 CONFIGURABLE ZONE TYPE 90**

<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 on next page. Each entry is the sum of the values of its selected options (0-9, #+10=10, #+11=11, #+12=12, #+13=13, #+14=14, #+15=15).

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

***183 ZONE TYPE 90 REPORT CODES**
IMPORTANT: Use existing Contact ID® codes, if appropriate, or define unique codes in CID code range 750-789. See important note in installation instructions.

90 ALARM ID: XXX
TROUBLE ID: XXX

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. Press [*] when done to continue.

***184 CONFIGURABLE ZONE TYPE 91**

<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 on next page. Each entry is the sum of the values of its selected options (0-9, #+10=10, #+11=11, #+12=12, #+13=13, #+14=14, #+15=15).

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

***185 ZONE TYPE 91 REPORT CODES**
IMPORTANT: Use existing Contact ID® codes, if appropriate, or define unique codes in CID code range 750-789. See important note in installation instructions.

91 ALARM ID: XXX
TROUBLE ID: XXX

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. Press [*] when done to continue.

KEYPAD OPTIONS (*190-*196 NOTE: Options for keypad address 16 are set by the factory and cannot be changed.)

NOTE: Each keypad must be assigned a unique address. Keypads programmed with the same address will give unpredictable results.

*** 190 KEYPAD 2 ADDRESS 17**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Partition/	Sound	
Enable		
FA168C: enter partition		
FA148CP: 1 = enable		
0 = disable		

Partition: 0 = keypad disabled; 1-3 = part. no. (3 = com)
 Sound: 0 = no suppression
 1 = suppress arm/disarm and E/E beeps
 2 = Suppress chime beeps only
 3 = suppress arm/disarm, E/E, and chime beeps

*** 191 KEYPAD 3 ADDRESS 18**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part./Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 192 KEYPAD 4 ADDRESS 19**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part. /Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 193 KEYPAD 5 ADDRESS 20**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part. /Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 194 KEYPAD 6 ADDRESS 21**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part. /Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 195 KEYPAD 7 ADDRESS 22**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part. /Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 196 KEYPAD 8 ADDRESS 23**

<input type="checkbox"/>	<input type="checkbox"/>	[0] [0]
Part. /Enable†	Sound	

See field *190 for entries.
 † FA168C: enter partition
 FA148CP: 1 = enable; 0 = disable

*** 197 EXIT TIME DISPLAY INTERVAL**

<input type="checkbox"/>	[0]
--------------------------	-----

0 = no display; 1-5 = seconds between display refresh

*** 198 DISPLAY PARTITION NUMBER (for Alpha Display Keypads)**

<input type="checkbox"/>	[0]
--------------------------	-----

0 = no; 1 = yes (partition no. appears on Alpha Display)

*** 199 ECP FAIL DISPLAY**

<input type="checkbox"/>	[0]
--------------------------	-----

0 = 3-digit display ("1" + device address)
 1 = 2-digit fixed-display as "91"

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 (FA168C 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 and zone is:				
Intact EOL <i>RF zone normal</i>	Open <i>RF zone N/A</i>	Shorted <i>RF zn off-normal</i>	Auto Restore	Vent Zone
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 zone is:				
Intact EOL <i>RF zone normal</i>	Open <i>RF zone N/A</i>	Shorted <i>RF zn off-normal</i>	Byp. when disarmed	Byp. when armed
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		

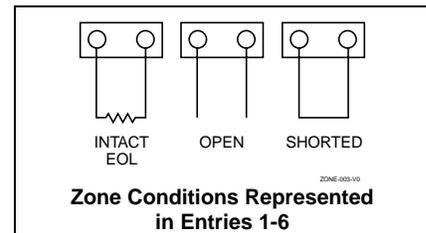
ENTRY 5 (see note 5 for RF zones)		ENTRY 6 (see note 5 for RF zones)		
Response when armed AWAY and zone is:				
Intact EOL <i>RF zone normal</i>	Open <i>RF zone N/A</i>	Shorted <i>RF zn off-normal</i>	Dial Delay (see field *50)	Fault Delay (see field *87)
0 = normal 1 = alarm 2 = trouble 3 = fault	0 = 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.
 - Zone-Doubling/Double-Balanced: A short on either zone of a zone-doubled pair or on a double-balanced zone causes a tamper condition.

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

Zone	Zn Type	Part.	Report	Input Type	Loop	Rsp. Time	Serial No.	Location
1	[09]	[1]		[HW]		[1]		
2	[01]	[1]		[HW]		[1]		
3	[03]	[1]		[HW]		[1]		
4	[03]	[1]		[HW]		[1]		
5	[03]	[1]		[HW]		[1]		
6	[03]	[1]		[HW]		[1]		
7	[03]	[1]		[HW]		[1]		
8	[03]	[1]		[HW]		[1]		
9								
10								
11								
12								
13								
14								
15								
16								
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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 [*] / [#]

Reserved Zones
 91 = addressable device report enable/disable default zone type = [05].
 92 = Duress report enable/disable

NOTES: Zone Type: see chart on page 12; Input Type: HW (1-zones 1-8), AW (2-zones 9-48), RF (3-zones 9-48), UR (4-zones 9-48), BR (5-zones 49-64); Response Time: 0 (10msec), 1 (350msec), 2 (700msec), 3 (1.2 sec)

***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:					
	Personal Emergency					
	Silent Alarm					
	Audible Alarm					
	Fire					
Emergency Keys: A = [1] / [*] B = [*] / [#] C = [3] / [#]						

OUTPUT RELAYS/POWERLINE CARRIER DEVICES WORKSHEET FOR *79, *80 and *81.
 Applicable only if Relays and/or Powerline Carrier Devices are to be used.

***79 RELAY/POWERLINE CARRIER DEVICE MAPPING (Must program before using *80)**

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

Output No.	OUTPUT TYPE (09-16 apply to FA168C only)				Description
	Module Addr.	Relay Pos (1-4)	Unit No.	X10	
09					
10					
11					
12					
13					
14					
15					
16					
17		On-Board Trigger 1			
18		On-Board Trigger 2			

***81 ZONE LISTS FOR OUTPUT DEVICES**

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	
04	Cross Zones	
05	Night-Stay Zones or GP	
06	General Purpose	
07	General Purpose	
08	General Purpose	
09	Zones activating pager 1	
10	Zones activating pager 2	
11	Zones activating pager 3	
12	Zones activating pager 4	

Zone Type Definitions

Type 00 Use this zone type if the zone is not used.
Zone Not Used

Type 01 Entry/Exit Burglary #1	<ul style="list-style-type: none"> • Assign to zones that are used for primary entry and exit. • Provides entry delay if the control is armed in the Away or Stay modes. • No entry delay is provided when the panel is armed in the Instant mode. • Entry delay #1 is programmable from 0 to 99 seconds for each partition. • Exit delay begins whenever the control is armed, regardless of the arming mode selected, and is independently programmable from 0 to 99 seconds (field *34).
Type 02 Entry/Exit Burglary #2	<ul style="list-style-type: none"> • 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, in same manner as entry delay #1. • Entry delay #2 is programmable from 0 to 99 seconds for each partition. • Exit delay is same as described for Type 01.
Type 03 Perimeter Burglary	<ul style="list-style-type: none"> • 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, or Instant modes.
Type 04 Interior Follower	<ul style="list-style-type: none"> • 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/exit 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.
Type 05 Trouble by Day/ Alarm by Night	<ul style="list-style-type: none"> • 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, or Instant (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-hour Silent Alarm	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 is provided.)
Type 09 Fire	<ul style="list-style-type: none"> • 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. <p>Note: Hardwired zone 1 should be used with 2-wire smoke detectors; zones 2-8 can be used with 4-wire smoke detectors; any wireless zone can be used as a fire zone.</p>
Type 10 Interior w/Delay	<ul style="list-style-type: none"> • Provides entry delay (using the programmed entry time), if tripped when the panel is armed in the Away mode. • Entry Delay 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.
Type 12 Monitor Zone	<ul style="list-style-type: none"> • Works as a dynamic monitor of a zone fault/trouble. 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. Upon restoration 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. The zone restores dynamically; therefore 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 Carbon Monoxide	<ul style="list-style-type: none"> • Assigned to any zone with a carbon monoxide detector. • The bell output will pulse when this zone type is alarmed. • Always active and cannot be bypassed.
Type 16 Fire w/Verification	<ul style="list-style-type: none"> • Provides a fire alarm when zone is shorted, but only after alarm verified. • System verifies alarm by resetting zones for 12 seconds after short is detected. A subsequent short circuit within 90 seconds triggers fire alarm. • Provides a trouble response when zone is open. • <u>UL: may not be used on zone 1.</u>
Type 20 Arm-Stay	<ul style="list-style-type: none"> • 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 code for button must be assigned.

**Type 21
Arm-Away**

- 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 code for button must be assigned.

**Type 22
Disarm**

- Disarms the system when the zone is activated.
- User code 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, or Instant, modes.
- A report is sent to the central station.

**Type 77
Keyswitch**

- Assign to zone wired to a keyswitch.

**Types 90-93
Installer Defined**

- These zone types can be programmed for various custom responses. See data fields *182-*185.
UL: Zone types 90-93 may not be used as fire or burglar zones in fire or UL burglar alarm installations.

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

Schedules (installer code + [#] + [6] [4]; *master code can only access schedules 01-16 for FA168C, 01-04 for FA148CP, and events 00-07 for both controls; FA148CP supports up to 8 schedules, FA168C 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 (yes/no)	Random (yes/no)
00								
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

Events: Master/Installer
 01 = device on/off
 02 = user access
 03 = latch key report
 04 = forced STAY arm

Installer Only
 05 = forced AWAY arm
 06 = auto disarm
 07 = display "reminder"
 10 = display custom words 8-10
 11 = periodic test report

ALPHA VOCABULARY LIST (For Entering Zone Descriptors)

000 (Word Space)	• 057 DOOR	- L -	- R -
- A -	• 059 DOWN	• 106 LAUNDRY	155 RADIO
• 001 AIR	• 060 DOWNSTAIRS	• 107 LEFT	• 156 REAR
• 002 ALARM	061 DRAWER	108 LEVEL	157 RECREATION
004 ALLEY	• 062 DRIVEWAY	• 109 LIBRARY	159 REFRIGERATION
005 AMBUSH	• 064 DUCT	• 110 LIGHT	160 RF
• 006 AREA	- E -	111 LINE	• 161 RIGHT
• 007 APARTMENT	• 065 EAST	• 113 LIVING	• 162 ROOM
• 009 ATTIC	066 ELECTRIC	• 114 LOADING	163 ROOF
010 AUDIO	067 EMERGENCY	115 LOCK	- S -
- B -	068 ENTRY	116 LOOP	164 SAFE
• 012 BABY	• 069 EQUIPMENT	117 LOW	165 SCREEN
• 013 BACK	• 071 EXIT	• 118 LOWER	166 SENSOR
• 014 BAR	072 EXTERIOR	- M -	• 167 SERVICE
• 016 BASEMENT	- F -	• 119 MACHINE	• 168 SHED
• 017 BATHROOM	• 073 FACTORY	121 MAIDS	169 SHOCK
• 018 BED	075 FAMILY	122 MAIN	• 170 SHOP
• 019 BEDROOM	• 076 FATHERS	• 123 MASTER	171 SHORT
020 BELL	• 077 FENCE	• 125 MEDICAL	• 173 SIDE
• 021 BLOWER	• 079 FIRE	126 MEDICINE	174 SKYLIGHT
• 022 BOILER	• 080 FLOOR	128 MONEY	175 SLIDING
023 BOTTOM	081 FLOW	129 MONITOR	• 176 SMOKE
025 BREAK	082 FOIL	• 130 MOTHERS	• 178 SONS
• 026 BUILDING	• 083 FOYER	• 131 MOTION	• 179 SOUTH
- C -	084 FREEZER	132 MOTOR	180 SPRINKLER
028 CABINET	• 085 FRONT	- N -	• 182 STATION
• 029 CALL	- G -	• 134 NORTH	184 STORE
030 CAMERA	• 089 GARAGE	135 NURSERY	• 185 STORAGE
031 CAR	• 090 GAS	- O -	186 STORY
033 CASH	091 GATE	• 136 OFFICE	190 SUPERVISED
034 CCTV	• 092 GLASS	• 138 OPEN	191 SUPERVISION
035 CEILING	093 GUEST	139 OPENING	192 SWIMMING
036 CELLAR	094 GUN	• 140 OUTSIDE	193 SWITCH
• 037 CENTRAL	- H -	142 OVERHEAD	- T -
038 CIRCUIT	• 095 HALL	- P -	194 TAMPER
• 040 CLOSED	• 096 HEAT	143 PAINTING	196 TELCO
• 046 COMPUTER	098 HOLDUP	• 144 PANIC	197 TELEPHONE
047 CONTACT	099 HOUSE	145 PASSIVE	• 199 TEMPERATURE
- D -	100 INFRARED	• 146 PATIO	200 THERMOSTAT
• 048 DAUGHTERS	• 101 INSIDE	147 PERIMETER	• 201 TOOL
049 DELAYED	102 INTERIOR	• 148 PHONE	202 TRANSMITTER
• 050 DEN	103 INTRUSION	150 POINT	- U -
051 DESK	- J -	151 POLICE	• 205 UP
• 052 DETECTOR	104 JEWELRY	152 POOL	• 206 UPPER
• 053 DINING	- K -	• 153 POWER	• 207 UPSTAIRS
054 DISCRIMINATOR	• 105 KITCHEN		• 208 UTILITY
055 DISPLAY			245 Custom Word #1
			246 Custom Word #2
			247 Custom Word #3
			248 Custom Word #4
			249 Custom Word #5
			250 Custom Word #6
			251 Custom Word #7
			252 Custom Word #8
			253 Custom Word #9
			254 Custom Word #10

Note: Bulleted (*) words in **boldface type** are those that are also available for use by the 4285/4286 Phone Module. If using a Phone module, and words other than these are selected for Alpha descriptors, the module will not provide annunciation of those words.

CHARACTER (ASCII) CHART (For Adding Custom Words)

32 (space)	41)	50 2	59 ;	68 D	77 M	87 W
33 !	42 *	51 3	60 <	69 E	78 N	88 X
34 "	43 +	52 4	61 =	70 F	79 O	89 Y
35 #	44 ,	53 5	62 >	71 G	80 P	90 Z
36 \$	45 -	54 6	63 ?	72 H	81 Q	
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	
					86 V	

5800 Series Transmitter Input Loop Identification

- All of the transmitters illustrated below 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).
- Transmitter inputs entered as:

"RF" (Supervised RF) Type send periodic check-in signals, as well as fault, restore and low battery signals. The transmitter must remain within the receiver's range.

"UR" (Unsupervised RF) Type send 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) Type only send fault signals. They do not send restore or check-in signals. They will indicate a low battery condition when tested or activated normally. The transmitter may be carried off-premises.

Note: For information on any transmitter not shown above, refer to the instructions accompanying that transmitter for details regarding loop numbers, etc.

UL NOTE: The 5802MN, 5802MN2, 5804, 5804BD, 5814, 5816TEMP, 5819, 5819WHS & BRS, 5827BD, and 5850 transmitters are not intended for use in UL installations

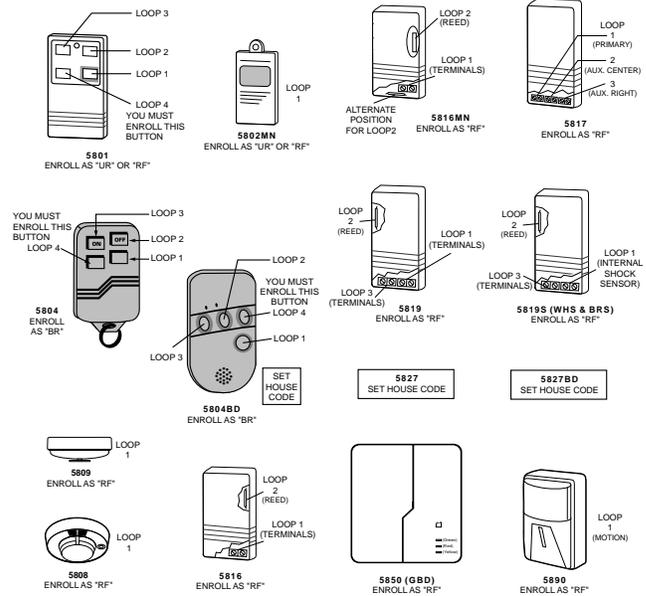


Table of Device Addresses

Address	Report††	Device	Programmed by...
00	100	RF Receiver	*56 zone programming: input device type entry
03	103	Long Range Radio	automatic if output to long range radio field *29 enabled
04	104	4286 Voice Module	automatic if phone module access code field *28 enabled
07	107	Zone Expanders (4219/4229): module 1 zones 09 - 16	*56 zone programming: input device type entry, then: • automatic if zone no. 9-16 entered as AW type or relay assigned • automatic if zone no. 17-24 entered as AW type or relay assigned • automatic if zone no. 25-32 entered as AW type or relay assigned • automatic if zone no. 33-40 entered as AW type or relay assigned • automatic if zone no. 41-48 entered as AW type or relay assigned
08	108	module 2 zones 17 - 24	
09†	109	module 3 zones 25 - 32	
10†	110	module 4 zones 33 - 40	
11†	111	module 5 zones 41 - 48	
12	112	Relay Modules (4204): module 1	*79 output device programming: device address prompt: • entered at device address prompt • entered at device address prompt • entered at device address prompt • entered at device address prompt
13	113	module 2	
14†	114	module 3	
15†	115	module 4	
16	n/a	Keypads: keypad 1	
17	n/a	keypad 2	
18	n/a	keypad 3	
19	n/a	keypad 4	
20	n/a	keypad 5	
21	n/a	keypad 6	
22	n/a	keypad 7	
23	n/a	keypad 8	
28	n/a	5800TM Module	automatic

† These module addresses apply to FA168C only.

†† 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 *199 for addressable device (ECP) 3-digit/2-digit identification touchpad display options.

