SYSTEM PROGRAMMING GUIDE (728ULT)

Software Version 4.0

INSTALLER CODE (Default: 282828)

Full access to programming, except user access codes (PINs). No access to arming/disarming. Use only numeric keys from **[0]** to **[9]**.

ZONE RECOGNITION

Table 1: *Zone Recognition*

Device connected to which input?	No ATZ	With ATZ
Control Panel		
Input 1 =	Zone 1	Zones 1 & 2
Input 2 =	Zone 2	Zones 3 & 4
Input 3 =	Zone 3	Zones 5 & 6
Input 4 =	Zone 4	Zones 7 & 8
Keypad		
Zone 1 =	Zone 5	Zone 9
Zone 2 =	Zone 6	Zone 10

STREAMLINED SECTION PROGRAMMING

This is an alternate method to Hexa Programming (see page 2). Addresses **000** to **043** and **300** to **527** are grouped into 67 sections where each section contains four addresses (i.e. section **00** = addresses **000** to **003**). Using this method allows you to program 8 digits (4 addresses) without having to exit and reenter addresses.

Note, the keypad will not display the current data in the Streamlined Section Programming method.

Table 2: *Streamlined Section Programming Method*

1)	Press **[ENTER]** + **[INSTALLER CODE]** *(default: 282828)* + **[7]**
2)	The **[ENTER]** and **[2ND]** keys will flash to indicate you are in programming mode
3)	Enter 2-digit **[SECTION]** (**00** to **67**)
4)	The **[ENTER]** key will remain on while the **[2ND]** key will be off
5)	Enter 8-digit **[DATA]** to program the section
6)	The keypad will "beep" to indicate that the section has been programmed, data is saved and the software has advanced to the next section
7)	Return to step 4 or press **[CLEAR]** to exit programming mode

KEYPAD TROUBLE DISPLAY

Press the **[TBL]/[TRBL]** key to view the trouble. Any illuminated keys represent a specific trouble as indicate in Table 3 below. Press the **[CLEAR]** button to exit the trouble display.

Table 3: *Trouble Display*

[1] - No Battery or Low Voltage	**[7]** - Communicator Report Failure
[2] - Power Failure	**[8]** - Timer Loss* (to clear, see [MEM] key in Table 11 on page 11)
[4] - Bell Output Disconnected	**[9]** - Tamper or Zone Wiring Failure
[5] - Exceeded Maximum Bell Current	**[10]** - Telephone Line Monitoring Failure
[6] - Exceeded Maximum Auxiliary Current	**[11]** - Fire Loop Trouble

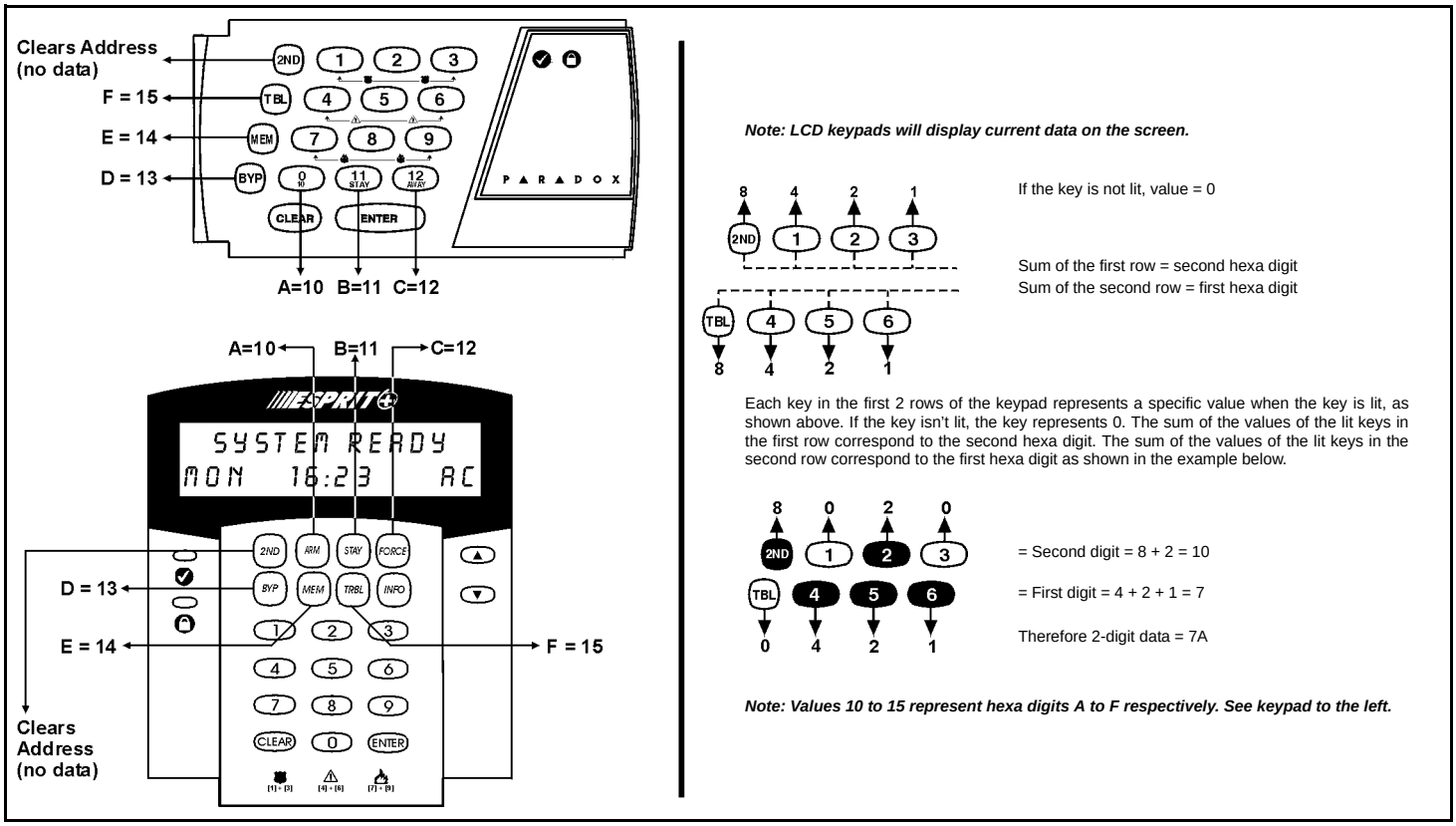
HEXA PROGRAMMING

This is an alternate method to the Streamlined Section Programming (see page 1). Addresses **000** to **043** and **300** to **527** can be programmed using the Hexa Programming method. In this mode, you can enter any hexadecimal digit from 0 - F where keys **[1]** to **[9]** represent digits 1 to 9 respectively; the other keys represent hexadecimal digits A to F as shown in Figure 1 below.

Table 4: *Hexa Programming Method*

1)	Press **[ENTER]** + **[INSTALLER CODE]** *(default: 282828)*
2)	The **[ENTER]** key will flash indicating you are in programming mode
3)	Enter the desired 3-digit **[ADDRESS]**
4)	The keypad will display the 2-digit data currently saved at this address as described in Figure 1 below
5)	Enter 2-digit **[DATA]** and do not press [ENTER], the software automatically saves the data
6)	Return to step 2 or press **[CLEAR]** to exit programming mode

Figure 1*: Hexa Digit Data Entry and Data Display for LED Keypads*



INSTALLER / PANEL ANSWER OPTIONS

Streamline Section	Data	Description	Address
00	___ / ___	Installer code (1st, 2nd digit)	**000**
	___ / ___	Installer code (3rd, 4th digit)	**001**
	___ / ___	Installer code (5th, 6th digit)	**002**
	___ / ___	Panel answer options	**003**
		↳ Number of rings (Max. 15)	

Answering Machine Override

[2ND] or **[1]** = disabled	**[5]** = 40 seconds
[2] = 16 seconds	**[6]** = 48 seconds
[3] = 24 seconds	**[7]** = 56 seconds
[4] = 32 seconds	**[8]** to **[F]** = 60 seconds

First digit disables "Answering Machine Override" (key **[2ND]** or key **[1]**), or determines period of time between first and second call. Second digit determines number of rings required before panel will answer. If **[2ND][2ND]** is entered, panel will not answer *(default value is **[2ND] [8]**)*.

Streamline Section	Data	Description	Address	
01	___ / ___	Panel Identifier (1st, 2nd digit)	**004**	{ Identifies the control panel to the PC.
	___ / ___	Panel Identifier (3rd, 4th digit)	**005**	
	___ / ___	PC Password (1st, 2nd digit)	**006**	{ Identifies the PC to the control panel.
	___ / ___	PC Password (3rd, 4th digit)	**007**	

TELEPHONE AND ACCOUNT NUMBERS

If only one central station phone number is used, program the same number for telephone number 1 and 2. If only one account number is required, the same number must be entered for both account "A" and "B".

[0] to **[9]** = numeric value
[11] = *
[12] = #
[BYP] = switch from pulse to tone while dialing
[MEM] = pause 4 seconds
[TRBL] = end of number

Computer Telephone Number (View at addresses 008 to 015)

Streamline Section 02

__/__/__/__/__/__/__/__
1 2 3 4 5 6 7 8

Streamline Section 03

__/__/__/__/__/__/__/__
9 10 11 12 13 14 15 16

Press the [TBL]/[TRBL] key to end phone number if less than 16 digits are programmed.

Central Station Telephone Number 1 (View at addresses 016 to 023)

Streamline Section 04

__/__/__/__/__/__/__/__
1 2 3 4 5 6 7 8

Streamline Section 05

__/__/__/__/__/__/__/__
9 10 11 12 13 14 15 16

Press the [TBL]/[TRBL] key to end phone number if less than 16 digits are programmed.

Central Station Telephone Number 2 (View at addresses 024 to 031)

Streamline Section 06

__/__/__/__/__/__/__/__
1 2 3 4 5 6 7 8

Streamline Section 07

__/__/__/__/__/__/__/__
9 10 11 12 13 14 15 16

Press the [TBL]/[TRBL] key to end phone number if less than 16 digits are programmed.

Account "A" and "B" (View at addresses 032 to 035)

Streamline Section 08

__/__/__/__ __/__/__/__
1 2 3 4 5 6 7 8
A **B**

For 3 digit account numbers, enter "skip" ([2ND]) as first digit.

Streamline Section	Data	Description	Address
09	[2ND] / [2ND]	Future Use	036
	___ / ___	*1st digit:* Pager Delay (see table at right) *2nd digit:* Time correction (see table at right)	037
	___ / ___	*1st digit:* Communicator Format 1 *2nd digit:* Communicator Format 2	038
	___ / [2ND]	*1st digit:* PGM1 type	039

Pager Delay Table *(1st digit)*

[2ND] or **[1]** = 8 secs.	**[9]** = 72 secs.
[2] = 16 secs.	**[A]** = 80 secs.
[3] = 24 secs.	**[B]** = 88 secs.
[4] = 32 secs.	**[C]** = 96 secs.
[5] = 40 secs.	**[D]** = 104 secs.
[6] = 48 secs.	**[E]** = 112 secs.
[7] = 56 secs.	**[F]** = 120 secs.
[8] = 64 secs.	

Time Correction Table *(2nd digit)*

[2ND] = No adjustment	**[8]** = Minus 4 secs.
[1] = Plus 4 secs.	**[9]** = Minus 8 secs.
[2] = Plus 8 secs.	**[10]** = Minus 12 secs.
[3] = Plus 12 secs.	**[11]** = Minus 16 secs.
[4] = Plus 16 secs.	**[12]** = Minus 20 secs.
[5] = Plus 20 secs.	**[BYP]** = Minus 24 secs.
[6] = Plus 24 secs.	**[MEM]** = Minus 28 secs.
[7] = Plus 28 secs.	**[TRBL]** = Minus 32 secs.

Streamline Section	Data	Description	Address
10	___ / ___	PGM1	040
	[2ND] / [2ND]	Future Use	041
	___ / ___	PGM Mask 1	042
	[2ND] / [2ND]	Future Use	043

Communicator Formats (* = supports 4-digit account codes only)

Key		Key	
[2ND]	= **ADEMCO** slow (1400Hz, 1900Hz, 10bps)	**[6]**	= **RADIONICS** with PARITY (1400Hz, 40bps)
[1]	= (1400Hz, 1800Hz, 10bps)	**[7]**	= **RADIONICS** with PARITY (2300Hz, 40bps)
[2]	= **SILENT KNIGHT** fast (1400Hz, 1900Hz, 20bps)	**[8]**	= *** ADEMCO** express
[3]	= **SESCOA** (2300Hz, 1800Hz, 20bps)	**[9]**	= *** ADEMCO** contact ID (programmable codes)
[4]	= **RADIONICS** (40bps with 1400Hz handshake)	**[10]**	= *** ADEMCO** contact ID (all codes)
[5]	= **RADIONICS** (40bps with 2300Hz handshake)	**[TRBL]**	= *** PAGER FORMAT** (personal dialing)

Programmable Contact ID Event Codes

All addresses from **300** to **527** (sections 11 to 67) programmed with values other than **[2ND] [2ND]** will report the contact ID codes corresponding to the values programmed. Values to be programmed should be selected from this table.

CID	Reporting Code	Prog. Value	CID	Reporting Code	Prog. Value
100:	Auxiliary Alarm	**[2ND] / [1]**	300:	System Trouble	**[2] / [2]**
110:	Fire Alarm	**[2ND] / [2]**	301:	AC Loss	**[2] / [3]**
111:	Fire Smoke	**[2ND] / [3]**	302:	Low system Battery	**[2] / [4]**
112:	Combustion	**[2ND] / [4]**	305:	System Reset	**[2] / [5]**
113:	Water Flow	**[2ND] / [5]**	306:	Program Changed	**[2] / [6]**
114:	Heat	**[2ND] / [6]**	309:	Battery Test Fail	**[2] / [7]**
115:	Pullstation	**[2ND] / [7]**	320:	Sounder/Relay Trouble	**[2] / [8]**
116:	Duct	**[2ND] / [8]**	321:	Bell 1 Trouble	**[2] / [9]**
117:	Flame	**[2ND] / [9]**	323:	Alarm Relay Trouble	**[2] / [10]**
118:	Near Alarm	**[2ND] / [10]**	350:	Communication Trouble	**[2] / [11]**
120:	Panic Alarm	**[2ND] / [11]**	351:	Telco 1 Fault	**[2] / [12]**
121:	Duress	**[2ND] / [12]**	354:	Fail to Communicate	**[2] / [BYP]**
122:	Silent Panic	**[2ND] / [BYP]**	370:	Protection Loop Trouble	**[2] / [MEM]**
123:	Audible Panic	**[2ND] / [MEM]**	371:	Protection Loop Open	**[2] / [TRBL]**
130:	Burglary	**[2ND] / [TRBL]**	372:	Protection Loop Short	**[3] / [2ND]**
131:	Perimeter Burglary	**[1] / [2ND]**	373:	Fire Loop Trouble	**[3] / [1]**
132:	Interior Burglary	**[1] / [1]**	382:	Sensor Trouble	**[3] / [2]**
133:	24Hr Burglary	**[1] / [2]**	383:	Sensor Tamper	**[3] / [3]**
136:	Burglary Outdoor	**[1] / [3]**	400:	Open / Close	**[3] / [4]**
137:	Burglary Tamper	**[1] / [4]**	401:	Open / Close by User #	**[3] / [5]**
138:	Burglary Near Alarm	**[1] / [5]**	402:	Group Open / Close	**[3] / [6]**
140:	General Alarm	**[1] / [6]**	403:	Automatic Opening / closing	**[3] / [7]**
150:	24 Hour Auxiliary	**[1] / [7]**	404:	Late to Open / Close	**[3] / [8]**
151:	Gas Detected	**[1] / [8]**	407:	Remote Arm Download	**[3] / [9]**
152:	Refrigeration	**[1] / [9]**	410:	Remote Access	**[3] / [10]**
153:	Loss of Heat	**[1] / [10]**	441:	Open / Close - Stay Mode	**[3] / [11]**
154:	Water Leakage	**[1] / [11]**	570:	Bypass	**[3] / [12]**
155:	Foil Break Alarm	**[1] / [12]**	572:	24 Hour Zone Bypass	**[3] / [BYP]**
156:	Day Trouble Alarm	**[1] / [BYP]**	573:	Burglary Bypass #	**[3] / [MEM]**
157:	Low Gas Level	**[1] / [MEM]**	574:	Group Bypass	**[3] / [TRBL]**
158:	High Temperature	**[1] / [TRBL]**	601:	Manual Test	**[4] / [2ND]**
159:	Low Temperature	**[2] / [2ND]**	602:	Periodic Test	**[4] / [1]**
161:	Loss Air Flow	**[2] / [1]**	625:	Time / Date Reset	**[4] / [2]**
			654:	System Inactivity	**[4] / [3]**

REPORTING CODES

All digits from **[1]** to **[F]** are valid. **[2ND]** = digit will not be reported except for Contact ID programmable codes. For single digit reporting, enter "skip" (**[2ND]**) as the first digit *(default = **[2ND]** / **[2ND]**)*.

Enter FF to program the default Ademco Contact ID report code when using the Ademco Contact ID (programmable codes) or Pager report formats.
If the Contact ID Format (all codes) is selected, addresses 300 to 527 (sections 11 to 67) do not have to be programmed. To select Contact ID (all codes) you must set key [10] at section 09/address 038 for both central station numbers (see page 4).

ARMING (CLOSING) REPORT CODES:

Streamline Section	Data	Description	Address
11	___ / ___	Auto / Esplad	**300**
	___ / ___	Master	**301**
	___ / ___	User Code 1	**302**
	___ / ___	User Code 2	**303**
12	___ / ___	User Code 3	**304**
	___ / ___	User Code 4	**305**
	___ / ___	User Code 5	**306**
	___ / ___	User Code 6	**307**
13	___ / ___	User Code 7	**308**
	___ / ___	User Code 8	**309**
	___ / ___	User Code 9	**310**
	___ / ___	User Code 10	**311**
14	___ / ___	User Code 11	**312**
	___ / ___	User Code 12	**313**
	___ / ___	User Code 13	**314**
	___ / ___	User Code 14	**315**
15	___ / ___	User Code 15	**316**
	___ / ___	User Code 16	**317**
	___ / ___	User Code 17	**318**
	___ / ___	User Code 18	**319**
16	___ / ___	User Code 19	**320**
	___ / ___	User Code 20	**321**
	___ / ___	User Code 21	**322**
	___ / ___	User Code 22	**323**

Streamline Section	Data	Description	Address
17	___ / ___	User Code 23	**324**
	___ / ___	User Code 24	**325**
	___ / ___	User Code 25	**326**
	___ / ___	User Code 26	**327**
18	___ / ___	User Code 27	**328**
	___ / ___	User Code 28	**329**
	___ / ___	User Code 29	**330**
	___ / ___	User Code 30	**331**
19	___ / ___	User Code 31	**332**
	___ / ___	User Code 32	**333**
	___ / ___	User Code 33	**334**
	___ / ___	User Code 34	**335**
20	___ / ___	User Code 35	**336**
	___ / ___	User Code 36	**337**
	___ / ___	User Code 37	**338**
	___ / ___	User Code 38	**339**
21	___ / ___	User Code 39	**340**
	___ / ___	User Code 40	**341**
	___ / ___	User Code 41	**342**
	___ / ___	User Code 42	**343**
22	___ / ___	User Code 43	**344**
	___ / ___	User Code 44	**345**
	___ / ___	User Code 45	**346**
	___ / ___	User Code 46	**347**
23	___ / ___	User Code 47	**348**
	___ / ___	User Code 48 / (Duress)	**349**

Continues on next page.

DISARMING (OPENING) REPORT CODES *(reset code **"empty"**)*

Streamline Section	Data	Description	Address
23	See previous page		
	___ / ___	Auto / Esploade	**350**
	___ / ___	Master	**351**
24	___ / ___	User Code 1	**352**
	___ / ___	User Code 2	**353**
	___ / ___	User Code 3	**354**
	___ / ___	User Code 4	**355**
25	___ / ___	User Code 5	**356**
	___ / ___	User Code 6	**357**
	___ / ___	User Code 7	**358**
	___ / ___	User Code 8	**359**
26	___ / ___	User Code 9	**360**
	___ / ___	User Code 10	**361**
	___ / ___	User Code 11	**362**
	___ / ___	User Code 12	**363**
27	___ / ___	User Code 13	**364**
	___ / ___	User Code 14	**365**
	___ / ___	User Code 15	**366**
	___ / ___	User Code 16	**367**
28	___ / ___	User Code 17	**368**
	___ / ___	User Code 18	**369**
	___ / ___	User Code 19	**370**
	___ / ___	User Code 20	**371**
29	___ / ___	User Code 21	**372**
	___ / ___	User Code 22	**373**
	___ / ___	User Code 23	**374**
	___ / ___	User Code 24	**375**
30	___ / ___	User Code 25	**376**
	___ / ___	User Code 26	**377**
	___ / ___	User Code 27	**378**
	___ / ___	User Code 28	**379**
31	___ / ___	User Code 29	**380**
	___ / ___	User Code 30	**381**
	___ / ___	User Code 31	**382**
	___ / ___	User Code 32	**383**
32	___ / ___	User Code 33	**384**
	___ / ___	User Code 34	**385**
	___ / ___	User Code 35	**386**
	___ / ___	User Code 36	**387**
33	___ / ___	User Code 37	**388**
	___ / ___	User Code 38	**389**
	___ / ___	User Code 39	**390**
	___ / ___	User Code 40	**391**
34	___ / ___	User Code 41	**392**
	___ / ___	User Code 42	**393**
	___ / ___	User Code 43	**394**
	___ / ___	User Code 44	**395**
35	___ / ___	User Code 45	**396**
	___ / ___	User Code 46	**397**
	___ / ___	User Code 47	**398**
	___ / ___	User Code 48 / (Duress)	**399**

ALARM REPORT CODES FOR ZONES 1 TO 10:

Streamline Section	Data	Description	Address
36	___ / ___	Zone 1	**400**
	___ / ___	Zone 2	**401**
	___ / ___	Zone 3 ***(fire add. 100)***	**402**
	___ / ___	Zone 4	**403**
37	___ / ___	Zone 5	**404**
	___ / ___	Zone 6	**405**
	___ / ___	Zone 7	**406**
	___ / ___	Zone 8	**407**
38	___ / ___	Zone 9	**408**
	___ / ___	Zone 10	**409**
	[2ND] / [2ND]	Future Use	**410**
	[2ND] / [2ND]	Future Use	**411**
39 to 41		Future Use	**412-423**

ALARM RESTORE REPORT CODES FOR ZONES 1 TO 10

Streamline Section	Data	Description	Address
42	___ / ___	Zone 1	**424**
	___ / ___	Zone 2	**425**
	___ / ___	Zone 3 ***(fire add. 100)***	**426**
	___ / ___	Zone 4	**427**
43	___ / ___	Zone 5	**428**
	___ / ___	Zone 6	**429**
	___ / ___	Zone 7	**430**
	___ / ___	Zone 8	**431**
44	___ / ___	Zone 9	**432**
	___ / ___	Zone 10	**433**
	[2ND] / [2ND]	Future Use	**434**
	[2ND] / [2ND]	Future Use	**435**
45 to 47		Future Use	**436-447**

ZONES 1 TO 10 SHUTDOWN REPORT CODES:

Streamline Section	Data	Description	Address
48	___ / ___	Zone 1	448
	___ / ___	Zone 2	449
	___ / ___	Zone 3 *(fire add. 100)*	450
	___ / ___	Zone 4	451
49	___ / ___	Zone 5	452
	___ / ___	Zone 6	453
	___ / ___	Zone 7	454
	___ / ___	Zone 8	455
50	___ / ___	Zone 9	456
	___ / ___	Zone 10	457
	[2ND] / [2ND]	Future Use	458
	[2ND] / [2ND]	Future Use	459
51 to 53		Future Use	460-471

TAMPERS 1 TO 4, 5 AND 7 REPORT CODES

Streamline Section	Data	Description	Address
54	___ / ___	Tamper 1 (ATZ)	472
	___ / ___	Tamper 2	473
	___ / ___	Tamper 3 (ATZ)	474
	___ / ___	Tamper 4	475
55	___ / ___	Tamper 5 (ATZ)	476
	[2ND] / [2ND]	Future Use	477
	___ / ___	Tamper 7 (ATZ)	478
	[2ND] / [2ND]	Future Use	479
56 to 59		Future Use	480-495

TROUBLE REPORT CODES:

Streamline Section	Data	Description	Address
60	___ / ___	Max. aux. current	496
	___ / ___	Bell disconnect / max. bell current	497
	___ / ___	Battery disconnect / low voltage	498
	___ / ___	Power failure	499
61	___ / ___	Fire loop trouble	500
	___ / ___	Timer loss	501
	[2ND]/[2ND]	Future Use	502
	[2ND]/[2ND]	Future Use	503

TROUBLE RESTORE REPORT CODES:

Streamline Section	Data	Description	Address
62	___ / ___	Max. aux. current	504
	___ / ___	Bell disconnect / max. bell current	505
	___ / ___	Battery disconnect / low voltage	506
	___ / ___	Power failure	507
63	___ / ___	Fire loop trouble	508
	___ / ___	Timer programmed	509
	___ / ___	Tamper / wiring fault	510
	___ / ___	TLM restore	511

SPECIAL REPORT CODES:

Streamline Section	Data	Description	Address
64	___ / ___	Test report	512
	___ / ___	Panic 1	513
	___ / ___	Panic 2	514
	___ / ___	Panic 3	515
65	___ / ___	Late to close	516
	___ / ___	No movement	517
	___ / ___	Partial Arming	518
	___ / ___	Recent Close	519
66	___ / ___	Duress	520
	___ / ___	Closing Delinquency	521
	[2ND]/[2ND]	Future Use	522
	[2ND]/[2ND]	Future Use	523
67	___ / ___	Login (Esploud)	524
	___ / ___	Program Change	525
	[2ND]/[2ND]	Future Use	526
	[2ND]/[2ND]	Future Use	527

DECIMAL PROGRAMMING

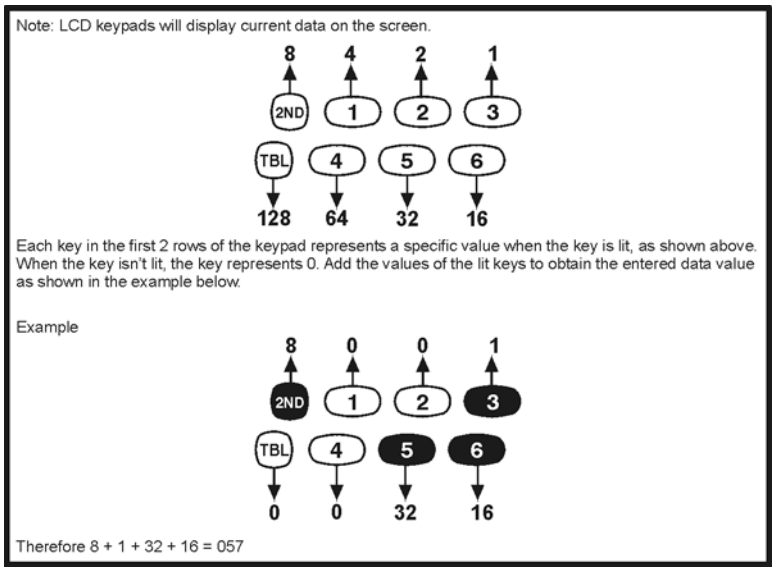
The decimal programming method is used to program all of the system's timers. This method uses a 3-digit address from **044** to **061** and each address is programmed with a value from **000** to **255**.

Table 5: *Decimal Programming Method*

1)	Press **[ENTER]** + **[INSTALLER CODE]** *(default: 282828)*
2)	The **[ENTER]** key will flash to indicate you are in programming mode
3)	Enter 3-digit **[ADDRESS]** (**044** to **061**)
4)	The keypad displays the current 3-digit data saved at this address as described in Figure 2 below
5)	Enter 3-digit **[DATA]** (000 to 255) and do not press [ENTER], the software will automatically save the data
6)	Return to step 2 or press **[CLEAR]** to exit programming mode

Address	Data	Description	Default
044	___ / ___ / ___	(hours) Auto arm time (between "000" and "023")	
045	___ / ___ / ___	(minutes) Auto arm time (between "000" and "059")	
046	___ / ___ / ___	(days or hours) Auto test report every ? (between "001" and "255") (000 = disabled) If address 090 key **[3]** OFF = address 046 in days (see page 10) If address 090 key **[3]** ON = address 046 in hours (see page 10)	
047	___ / ___ / ___	(hours) Auto test report (between "000" and "023")	
048	___ / ___ / ___	(minutes) Auto test report (between "000" and "059")	
049	___ / ___ / ___	(seconds) Exit delay	*60 seconds*
050	___ / ___ / ___	(seconds) Entry delay 1	*45 seconds*
051	___ / ___ / ___	(seconds) Entry delay 2	*45 seconds*
052	___ / ___ / ___	(minutes) Bell cut-off time	*5 minutes*
053	___ / ___ / ___	(x 15 ms) Zone speed	*600 ms*
054	___ / ___ / ___	(minutes) Power failure report delay (000 = disabled)	*30 minutes*
055	___ / ___ / ___	(x 15 minutes) "No movement" report time (000 = disabled)	*Disabled*
056	___ / ___ / ___	PGM timer setting (001 to 127 for seconds and 129 to 255 for minutes) Add 128 to desired value in minutes (i.e. for 5 minutes: enter 5 + 128 = 133)	*5 seconds*
057	___ / ___ / ___	Intellizone delay (in seconds, minimum = 10 seconds)	*48 seconds*
058	___ / ___ / ___	Installer code lock (147 = locked, 000 = unlocked). When Installer Lock is enabled on a control panel: For 4 seconds during power up, the STATUS LED flashes while the dialer relay opens and closes making a clicking noise.	
059	___ / ___ / ___	(seconds) Programmable delay before alarm transmission (005 to 063 seconds) (000 = disabled)	
060	___ / ___ / ___	(seconds) Recent closing delay (000 = disabled)	
061	___ / ___ / ___	(days or hours) Closing delinquency timer (System A) If address 090 key **[3]** OFF = address 061 in days (see page 10) If address 090 key **[3]** ON = address 061 in hours (see page 10)	*Disabled*

Figure 2*: Decimal Display For LED Keypads*



FEATURE SELECT PROGRAMMING

Addresses **062** to **126** are programmed using the Feature Select Programming method. In this method, every key on the keypad in each address represents an option or feature. Pressing a key will display it on the keypad and pressing it again will extinguish the key. The ON or OFF status of each key determines the selected feature. Addresses **080** to **085** are reserved for future use. To program using the Feature Select Programming method:

Table 6: *Feature Select Programming Method*

1)	Press **[ENTER]** + **[INSTALLER CODE]** *(default: 282828)*
2)	The **[ENTER]** key will flash to indicate you are in programming mode
3)	Enter 3-digit **[ADDRESS]** (**062** to **126**)
4)	After entering the address, the keypad will display the feature selection status. Turn the keys ON or OFF by pressing the appropriate key until the desired options are set. Press the **[ENTER]** key to accept, there will be a confirmation "beep" indicating the options have been accepted. The **[ENTER]** key will flash to indicate that the software is awaiting the next address entry.
5)	Return to step 3 to continue programming or press **[CLEAR]** to exit programming mode

Table 7: *Code Priority For System "A" / STAY*

KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[BYP]	[MEM]	[TRBL]	[2ND]
User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
062	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
064	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
066:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Table 8: *Code Priority For System "B" / AWAY*

KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[BYP]	[MEM]	[TRBL]	[2ND]
User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
068:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
070:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
072:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Table 9: *Code Priority for Codes with Bypass Access*

KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[BYP]	[MEM]	[TRBL]	[2ND]
User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
074:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
076:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
078:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

086:

	OFF	KEY /	ON	
See "TLM" table at right	☐	[2ND]	☐	
	☐	[1]	☐	
Keyswitch = regular arm	☐	[2]	☐	Stay arm / System A
Keyswitch arming	☐	[3]	☐	Enabled
Call back	☐	[4]	☐	Enabled
Auto arm on time	☐	[5]	☐	Enabled
Auto arm on no movement	☐	[6]	☐	Enabled
Pulse dialing	☐	[7]	☐	Tone dialing (DTMF)
Partitioning	☐	[8]	☐	Enabled
Silent zone/panic generates a silent alarm	☐	[9]	☐	generates only a report
(1:2) Pulse Europe	☐	[10]	☐	(1:1.5) Pulse USA
See "Reporting Options" table at right	☐	[11]	☐	
	☐	[12]	☐	
N/A	☐	[BYP]	☐	N/A
Bell squawk on arm/disarm	☐	[MEM]	☐	Enabled
Auto zone shutdown	☐	[TRBL]	☐	Enabled

Telephone Line Monitoring (TLM)

KEY [2ND]	KEY [1]	
OFF	OFF	- TLM disabled
OFF	ON	- TLM generates trouble only
ON	OFF	- generates an alarm if armed
ON	ON	- silent alarm becomes audible

(address **086**, key **[9]** has to be **OFF**)

Reporting Options

KEY [11]	KEY [12]	
OFF	OFF	- Reporting disabled
OFF	ON	- Regular reporting
ON	OFF	- Split* reporting (Alarms & System)
ON	ON	- Double reporting

Report Dialing Sequence (tel. no.)

Regular:	1,2,1,2,1,2,1,2, fail to comm.
Split*:	Alarms - 1,1,1,1,1,1,1,1, fail to comm System - 2,2,2,2,2,2,2,2, fail to comm
Double:	1,1,1,1,1,1,1,1, fail to comm 2,2,2,2,2,2,2,2, fail to comm

**** On alarm, all reports are made to Tel. #1 until system is disarmed. Once disarmed, system reports are made to Tel. #2.***

088:

	OFF	KEY /	ON	
Automatic event buffer transmission	☐	[2ND]	☐	Enabled
Panic 1 (keys **[1]** and **[3]**)	☐	[1]	☐	Enabled
Panic 2 (keys **[4]** and **[6]**)	☐	[2]	☐	Enabled
Panic 3 (keys **[7]** and **[9]**)	☐	[3]	☐	Enabled
Panic 1 silent	☐	[4]	☐	Audible
Panic 2 silent	☐	[5]	☐	Audible
Panic 3 silent	☐	[6]	☐	Fire
Key **[10]** - regular arming	☐	[7]	☐	Enabled
Key **[11]** - stay or system A arm	☐	[8]	☐	Enabled
6-digit access codes	☐	[9]	☐	4-digit access codes
Tamper Recognition	☐	[10]	☐	
	☐	[11]	☐	
Beep on exit delay	☐	[12]	☐	Enabled
Report zone restore on bell cut-off	☐	[BYP]	☐	On zone closure
Zones with EOL (1kΩ)	☐	[MEM]	☐	No EOL
Always report disarm	☐	[TRBL]	☐	Only after alarm

Tamper / Wire Fault Definitions

System Armed	KEY [10]	KEY [11]	System Disarmed*
Alarm as per individual zone definitions	OFF	OFF	- Tamper supervision disabled
Always generate trouble and alarm, audible or silent as per individual zone definitions	OFF	ON	- No alarm, trouble code reported
	ON	OFF	- Silent alarm. Trouble & alarm codes reported
	ON	ON	- Audible alarm. Trouble & alarm codes reported**

**** Exception: for 24 hour zones, the tamper definition will follow the audible/silent alarm definition of the 24 hour zone.***

***** Silent zones will generate a silent alarm.***

090:

	OFF	KEY /	ON	
Exclude power failure from trouble display	☐	[2ND]	☐	Enabled
Zone 4 enabled*	☐	[1]	☐	Disabled*
Auto arm = regular arm	☐	[2]	☐	Stay / System A
Auto test report / Closing delinquency timer in days	☐	[3]	☐	In hours
Restrict arming on battery failure	☐	[4]	☐	Enabled
Restrict arming on tamper trouble**	☐	[5]	☐	Enabled**
No tamper bypass	☐	[6]	☐	Tamper follows zone bypass definition
Zone doubling (ATZ) wiring in series	☐	[7]	☐	Parallel
Zone doubling (ATZ)	☐	[8]	☐	Enabled
Audible trouble warning	☐	[9]	☐	Enabled
Duress	☐	[10]	☐	Enabled
Keypad zone 1 supervision	☐	[11]	☐	Enabled
Keypad zone 2 supervision	☐	[12]	☐	Enabled
Master code lock	☐	[BYP]	☐	Enabled
Pager format (wait delay)	☐	[MEM]	☐	Personal dialing (during delay)
Pager report alarms only	☐	[TRBL]	☐	All events

**** NOTE 1: When ATZ is enabled (address 090 key [8] ON) and zone 3 is defined as a fire zone, zone 4 must be disabled.***

***** NOTE 2: Only the installer can clear a tamper trouble***

Table 10: *Zone Definition*

Address	KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
	Zone:	1	2	3	4	5	6	7	8	9	10
092:	Intellizone = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3	4	5	6	7	8	9	10
096:	Silent = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3*	4	5	6	7	8	9	10
100:	24Hr./Fire = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3	4	5	6	7	8	9	10
104:	Instant = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3	4	5	6	7	8	9	10
108:	Follow = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3	4	5	6	7	8	9	10
112:	Delay 2 = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	SYSTEM A / STAY (if ON, zone is armed on Stay or "System A" arming)										
	Zone:	1	2	3	4	5	6	7	8	9	10
116:		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	SYSTEM B (if ON, zone is armed in "System B" arming)										
	Zone:	1	2	3	4	5	6	7	8	9	10
120:		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Zone:	1	2	3	4	5	6	7	8	9	10
124:	Bypass = **ON**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Keypad zones cannot be set as 24Hr. zones.

* When zone 3 is defined "24Hr.", it becomes a fire zone

Do not use the Intellizone feature and an entry delay for the same zone, otherwise an alarm may occur as a user tries to disarm the system. Zones that are not selected at addresses 100 to 112 become "Delay 1" zones.

KEY ACCESS PROGRAMMING

Programs features quickly, without entering addresses or sections numbers. To activate Key Access Programming, press **[ENTER]** followed by the installer code, master code or user code 1 (code required depends on the desired feature; see below). Press the key corresponding to the desired feature. Press **[ENTER]** or **[CLEAR]** to exit. When communicating with Esplad, it is impossible to enter programming mode.

Table 11: *Key Access Programming*

Key	Feature	*Codes that can access feature*
[8]	**Installer Test Mode** In Installer Test mode, a confirmation beep (intermittent) indicates that the test mode is enabled. A rejection beep indicates that the test mode is disabled. The bell will squawk during walk testing to indicate opened, functional zones.	*Installer Code Only*
[9]	**"Auto Arming" Time Program** Key **[9]** flashes. Enter 2-digit hour (00 to 23) and 2-digit minutes (00 to 59).	*Installer Code, Master Code or User Code 1*
[MEM]	**Panel Time Programming** **[MEM]** key flashes. Enter 2-digit hour (00 to 23) and 2-digit minutes (00 to 59).	*Installer Code, Master Code or User Code 1*
[BYP]	**Test Report** Reporting is enabled at address **086**, keys **[11]** and **[12]** (see page 10). A value must be entered at address **512** (page 7) and both telephone and account numbers must be programmed.	*Installer Code, Master Code or User Code 1*
[TRBL]	**Call Esplad Via Telephone** Panel identifier and PC password (addresses **004** to **007** on page 2) and computer telephone number (addresses **008** to **015** on page 3) must be programmed.	*Installer Code, Master Code or User Code 1*
[AWAY]	**Answer Esplad** This feature is available when using the ADP-1 adapter. In Esplad, "blind dial" must be activated in "modem setup" section and panel phone number programmed.	*Installer Code, Master Code or User Code 1*
[STAY]	**Cancel Communication Attempts** Until next reportable event.	*Master Code/User Code 1 only cancel calls to Esplad* *The Installer Code can cancel all communications*

CONNECTION DIAGRAMS

The system hardware will recognize the following zone conditions:

SINGLE ZONE CONNECTIONS

Figure 3*: N.C. Contacts, without EOL Resistor*

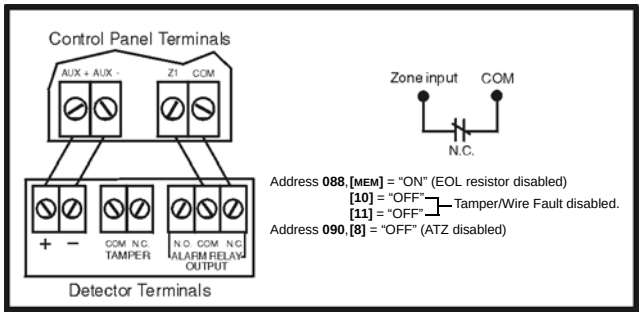


Figure 4*: N.C. Contacts, with EOL Resistor (UL/ULC)*

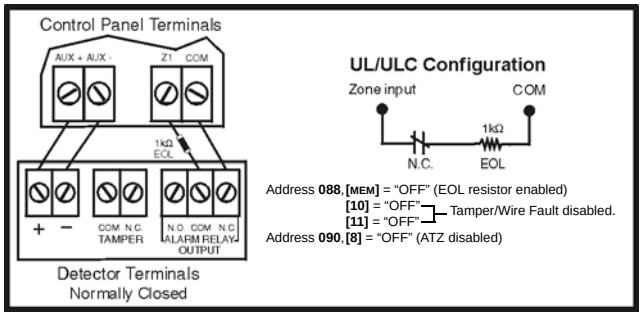


Figure 5*: N.O. Contacts, with EOL Resistor (UL/ULC)*

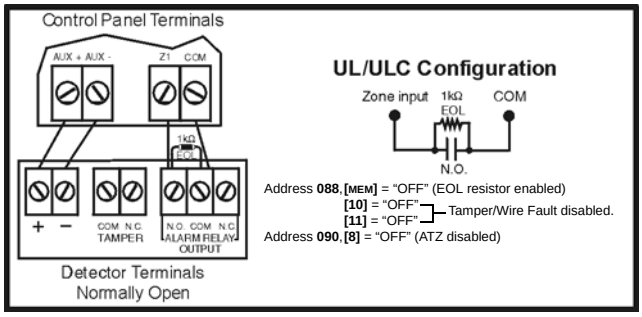


Figure 6*: N.C. Contacts, without EOL Resistor, with Tamper Recognition*

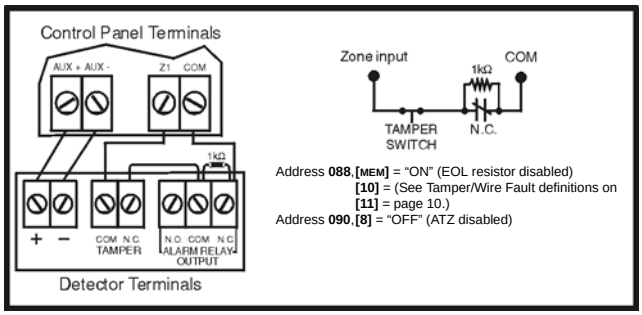
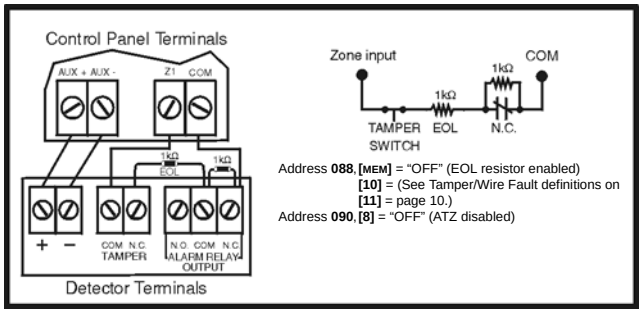
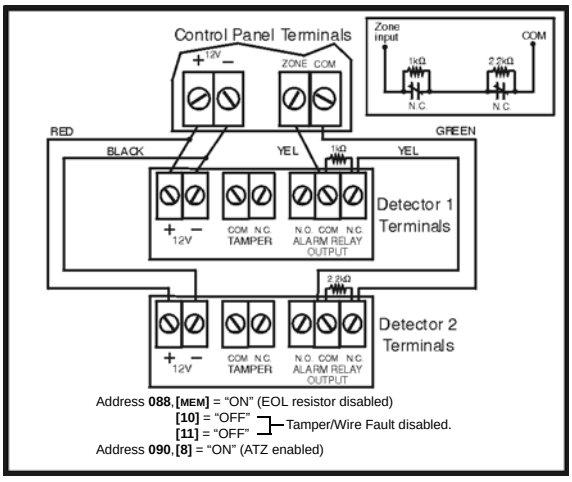


Figure 7*: N.C. Contacts, with EOL resistor, with Tamper and Wire Fault Recognition (UL/ULC)*



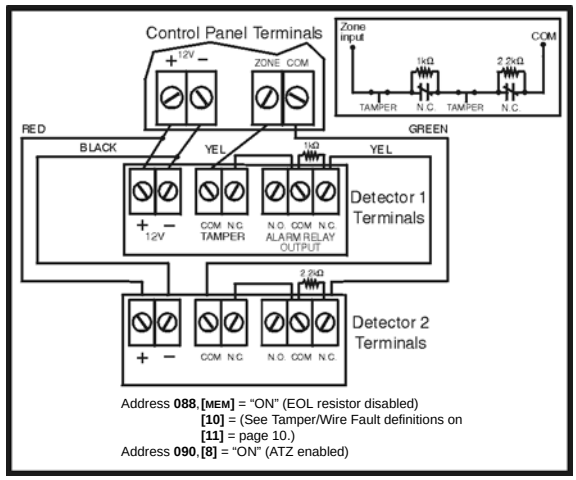
ADVANCED TECHNOLOGY ZONE CONNECTIONS

Figure 8*: N.C. Contacts, without EOL Resistor*



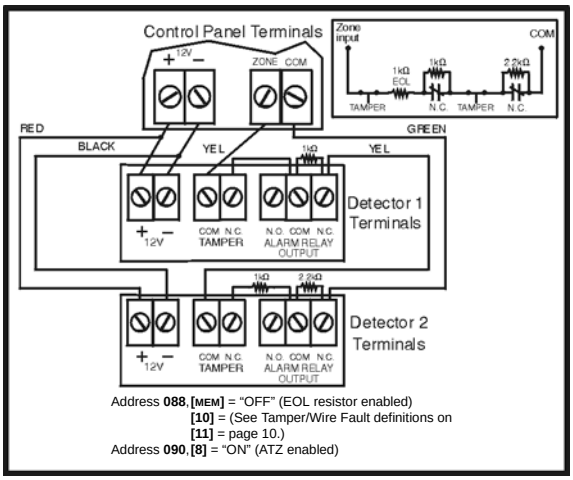
Address **088**, **[MEM]** = "ON" (EOL resistor disabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**, **[8]** = "ON" (ATZ enabled)

Figure 9*: N.C. Contacts, without EOL Resistor, with Tamper Recognition*



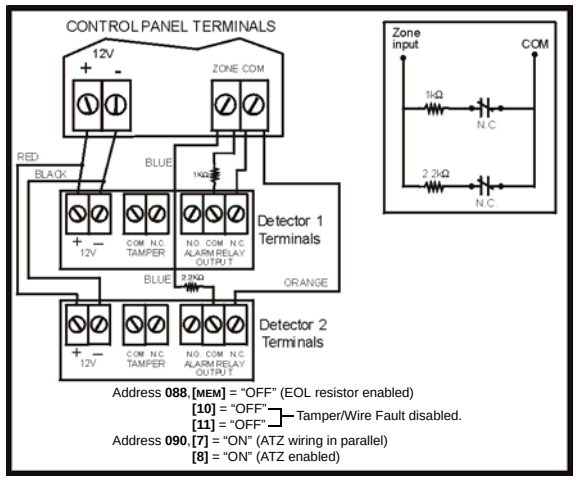
Address **088**, **[MEM]** = "ON" (EOL resistor disabled)
[10] = (See Tamper/Wire Fault definitions on
[11] = page 10.)
Address **090**, **[8]** = "ON" (ATZ enabled)

Figure 10*: N.O. Contacts, with EOL Resistor, with Tamper and Wire Fault Recognition (UL/ULC)*



Address **088**, **[MEM]** = "OFF" (EOL resistor enabled)
[10] = (See Tamper/Wire Fault definitions on
[11] = page 10.)
Address **090**, **[8]** = "ON" (ATZ enabled)

Figure 11*: Parallel Wiring*



Address **088**, **[MEM]** = "OFF" (EOL resistor enabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**, **[7]** = "ON" (ATZ wiring in parallel)
[8] = "ON" (ATZ enabled)

OTHER CONNECTION DIAGRAMS

Figure 12*: Connecting One Keypad Zone*

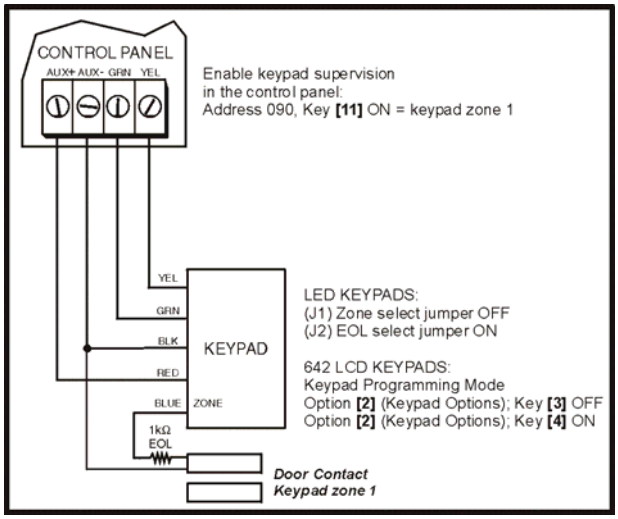


Figure 13: *Connecting Two Keypad Zones Using Two Keypads*

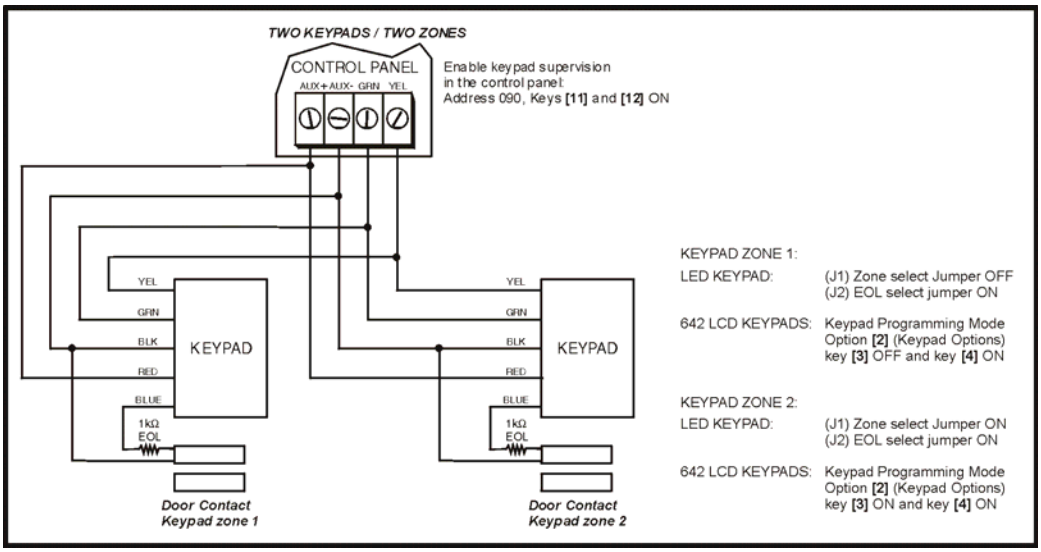


Figure 14: *Keypad Tamper Switch Connection*

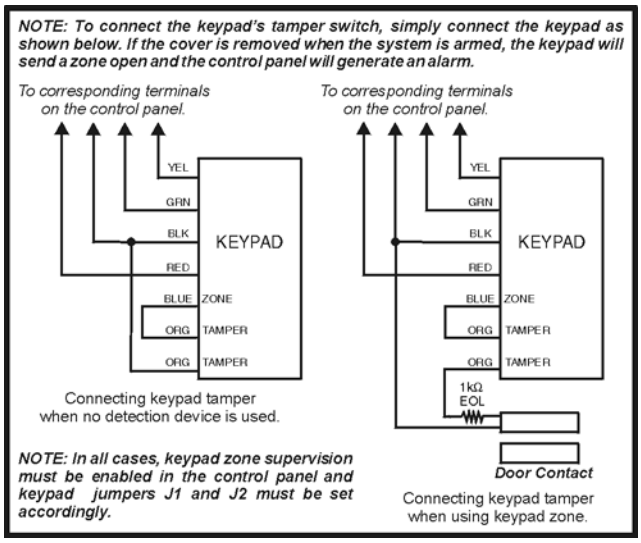


Figure 15: *PGM Output Relay*

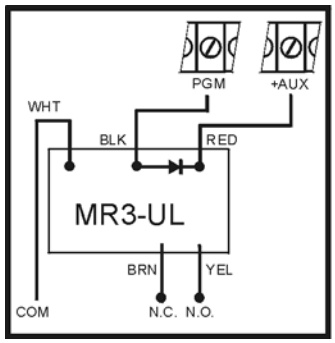


Figure 16: *Ground Start Circuit*

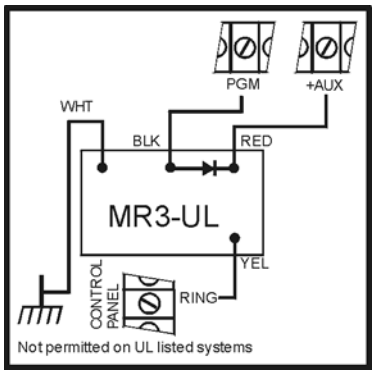


Figure 17: *Fire Alarm Zone Connections*

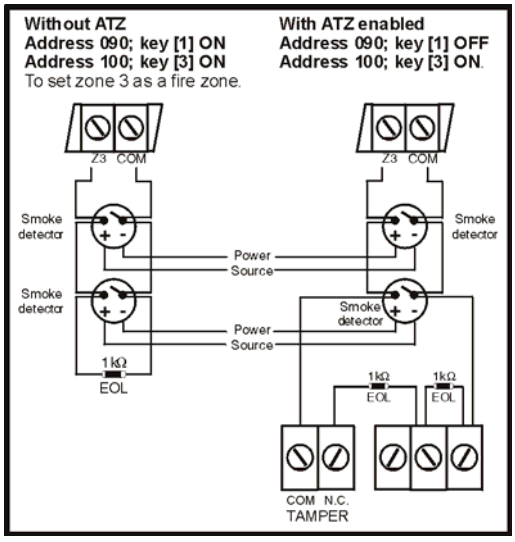
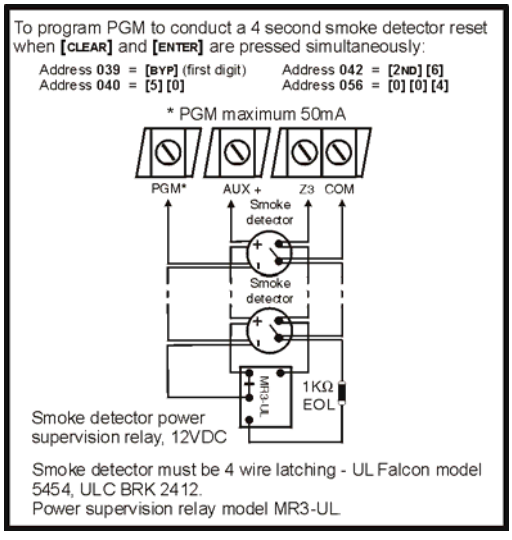
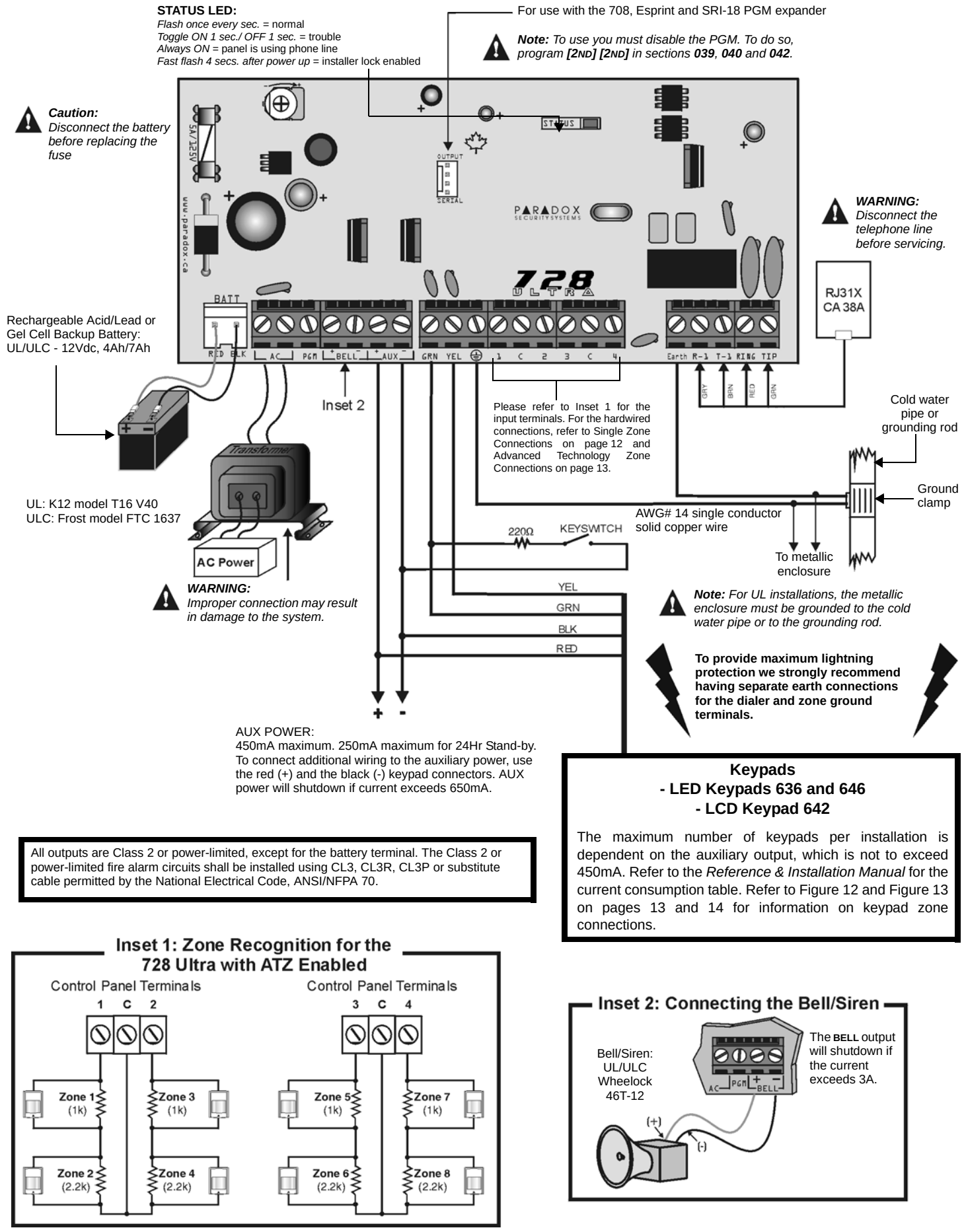


Figure 18: *Fire Reset*



Note: It recommended that the smoke detectors be connected using a daisy chain configuration.

WIRING DIAGRAM



Keypads
- LED Keypads 636 and 646
- LCD Keypad 642

The maximum number of keypads per installation is dependent on the auxiliary output, which is not to exceed 450mA. Refer to the *Reference & Installation Manual* for the current consumption table. Refer to Figure 12 and Figure 13 on pages 13 and 14 for information on keypad zone connections.

All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 or power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P or substitute cable permitted by the National Electrical Code, ANSI/NFPA 70.

Inset 1: Zone Recognition for the 728 Ultra with ATZ Enabled

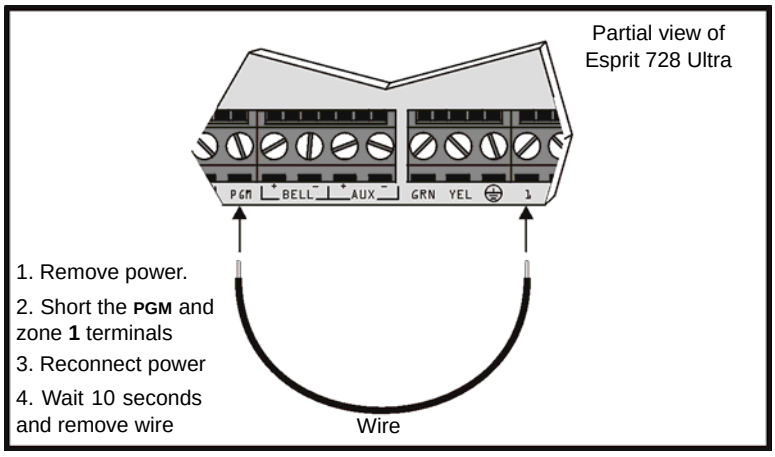
Inset 2: Connecting the Bell/Siren

POWER DOWN RESET

Performing a power down reset will set the installer and master codes to factory default. Values entered at addresses 008 to 043, 062 to 124, 300 to 527 and all user codes will be set to factory defaults. Programmed values at addresses 004 to 007 do not change. To perform a reset, the installer lock must be disabled. To perform a power down reset perform the following:

1) Verify installer lock is disabled
2) Remove the battery and AC power from the control panel.
3) Short the **PGM** and zone **1** terminals with a wire.
4) Reconnect the AC and battery power to the control panel.
5) Wait 10 seconds and remove the wire.

Figure 19*: Power Down Reset*



P A R A D O X®
SECURITY SYSTEMS
780 Boul. Industriel, St-Eustache, Montréal, Québec, Canada J7R 5V3
Fax: (450) 491-2313 www.paradox.ca

PRINTED IN CANADA 08/2003 728ULT-EP01

Made in CANADA