SYSTEM PROGRAMMING GUIDE

Software Versions 3.1 (728+, 738EX+ and 738+), 3.2 (728EX4+, 728DZ8+ and 748+) and 3.3 (728EX+)

INSTALLER CODE

Full access to programming, except user access codes (PINs). No access to arming/disarming. Use only numeric keys from **[1]** to **[10]** (key **[10]** = 0). For default installer codes, refer to Table 1 below.

Table 1: *Default Installer Codes by Control Panel*

728EX+ = ***727272***	*728EX4+ =* ***727272***	*738EX+ =* ***737373***	*748+ =* ***484848***
728+ = ***282828***	*728DZ8+ =* ***282828***	*738+ =* ***383838***	

KEYPAD TROUBLE DISPLAY

Press the **[TBL]/[TRBL]** key to view the trouble. Refer to Table 2 below.

Table 2: *Trouble Display*

[1] - No Battery or Low Voltage	**[7]** - Communicator Report Failure
[2] - Power Failure	**[8]** - Timer Loss*
[4] - Bell Output Disconnected	**[9]** - Tamper or Zone Wiring Failure
[5] - Maximum Bell Current	**[10]** - Telephone Line Monitoring Failure
[6] - Maximum Auxiliary Current	**[11]** - Fire Loop Trouble

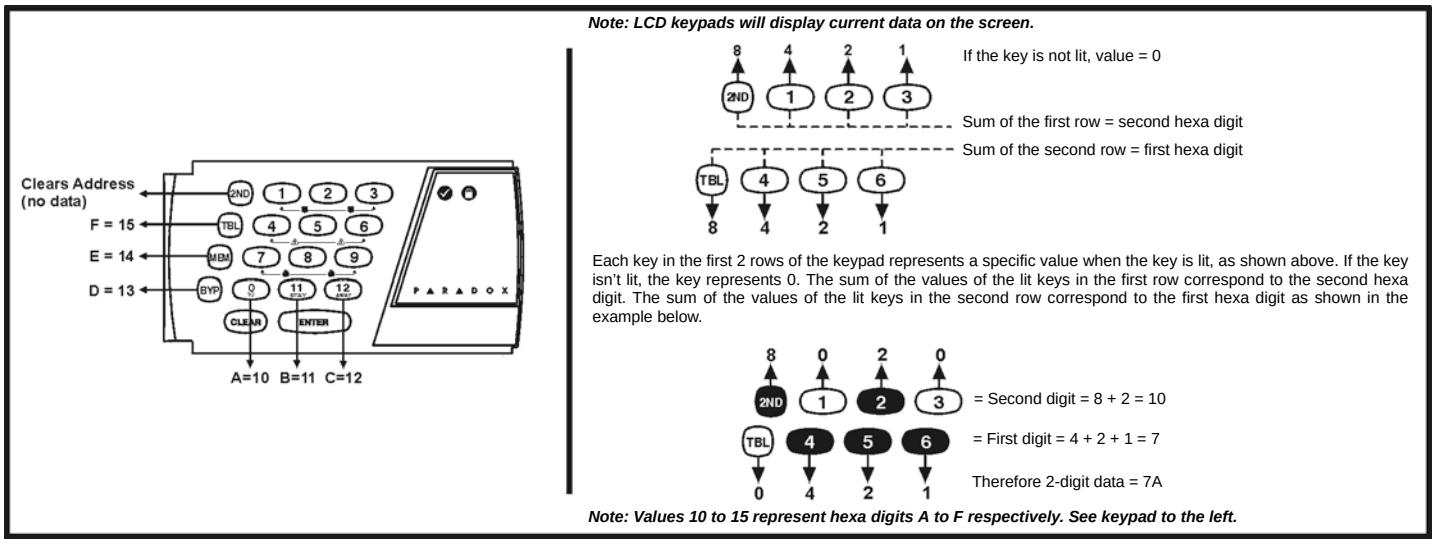
* To clear the Timer Loss trouble, refer to Key Access Programming on page 12 (the **[MEM]** key).
Press the **[CLEAR]** button to clear troubles.

HEXA PROGRAMMING

Addresses **000** to **043** and **300** to **527** are 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 on page 1. To program using the Hexa Programming method:

1) Press **[ENTER]** + **[INSTALLER CODE]** *(default: see Table 1 on page 1)*
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 on page 1
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 Display For LED Keypads



STREAMLINED SECTION PROGRAMMING

This is an alternate method to Hexa Programming. The addresses (**000** - **043** and **300** - **527**) programmed in the Hexa Programming method are grouped into 67 sections where each section contains four addresses (i.e. section **00** = addresses **000** - **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 Hexa Streamlined Programming method.

To program using the Hexa Streamlined Section method:

1) Press **[ENTER]** + **[INSTALLER CODE]** *(default: see Table 1 on page 1)* + **[7]**
2) The **[ENTER]** and **[2ND]** keys will flash to indicate you are in programming mode
3) Enter 2-digit **[SECTION]** (**00** - **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

ZONE RECOGNITION

Device connected to which input?	**728+ 728EX+ 728EX4+** 728DZ8+** No ATZ**	**728+ 728DZ8+** With ATZ**	**738EX+ No ATZ**	**738+ No ATZ**	**738+ With ATZ**	**748+ No ATZ**	**748+ With ATZ**
Control Panel							
Input 1 =	Zone 1	Zones 1 & 2	Zone 1	Zone 1	Zones 1 & 7	Zone 1	Zones 1 & 13*
Input 2 =	Zone 2	Zones 3 & 4	Zone 2	Zone 2	Zones 2 & 8	Zone 2	Zones 2 & 14*
Input 3 =	Zone 3	Zones 5 & 6	Zone 3	Zone 3	Zones 3 & 9	Zone 3	Zones 3 & 15
Input 4 =	Zone 4	Zones 7 & 8	Zone 4	Zone 4	Zones 4 & 10	Zone 4	Zones 4 & 16
Input 5 =	N/A	N/A	Zone 5	Zone 5	Zones 5 & 11	Zone 5	Zones 5 & 17
Input 6 =	N/A	N/A	Zone 6	Zone 6	Zones 6 & 12	Zone 6	Zones 6 & 18
Input 7 =	N/A	N/A	Zone 7	N/A	N/A	Zone 7	Zones 7 & 19
Input 8 =	N/A	N/A	N/A	N/A	N/A	Zone 8	Zones 8 & 20
Input 9 =	N/A	N/A	N/A	N/A	N/A	Zone 9	Zones 9 & 21
Input 10 =	N/A	N/A	N/A	N/A	N/A	Zone 10	Zones 10 & 22
Input 11 =	N/A	N/A	N/A	N/A	N/A	Zone 11	Zones 11 & 23
Input 12 =	N/A	N/A	N/A	N/A	N/A	Zone 12	Zones 12 & 24
Keypad							
Zone 1 =	Zone 5**	Zone 9**	Zone 9	Zone 7	Zone 13	Zone 13	Zone 13*
Zone 2 =	Zone 6**	Zone 10**	Zone 8	Zone 8	Zone 14	Zone 14	Zone 14*

**** Control panel does not distinguish between zones 13 and 14 and keypad zones 1 (zone 13) and 2 (zone 14).***
***** The 728EX4+ and 728DZ8+ control panels do not support any keypad zones.***

WARNING: This equipment must be installed and maintained by qualified service personnel only.

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 (see above). 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 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".

[10] = the number "0"
[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 [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 [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 [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) **A** __/__/__/__ (5 6 7 8) **B**

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

Streamline Section	Data	Description	Address
09	[2ND] / [2ND]	Future Use	036
	[2ND] / ___	*1st digit:* Value must be entered (i.e. [2ND]) *2nd digit:* Time correction (see table at right)	037
	___ / ___	*1st digit:* Communicator Format 1 *2nd digit:* Communicator Format 2	038
	___ / ___	*1st digit:* PGM1 type *2nd digit:* PGM2 type	039

Time Correction Table

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

Streamline Section	Data	Description	Address
10	___ / ___	PGM1	040
	___ / ___	PGM2	041
	___ / ___	PGM Mask 1	042
	___ / ___	PGM Mask 2	043

Communicator Formats

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]	= *** DTMF** - no handshake (personal dialing)

* = 4-digit account codes only

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]

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]**)*.

If the Contact ID Format (all codes) is selected, addresses 300 to 527 (sections 11 to 67) do not have to be programmed (select Contact ID (all codes) - key [10] for both central station numbers at section 09 - address 038 on page 4).

ARMING (CLOSING) REPORT CODES:

Streamline Section	Data	Description	Address
11	___ / ___	Auto / Espload	**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**
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 24 (see warning below):

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**
	___ / ___	Zone 11	**410**
	___ / ___	Zone 12	**411**
39	___ / ___	Zone 13	**412**
	___ / ___	Zone 14	**413**
	___ / ___	Zone 15	**414**
	___ / ___	Zone 16	**415**
40	___ / ___	Zone 17	**416**
	___ / ___	Zone 18	**417**
	___ / ___	Zone 19	**418**
	___ / ___	Zone 20	**419**
41	___ / ___	Zone 21	**420**
	___ / ___	Zone 22	**421**
	___ / ___	Zone 23	**422**
	___ / ___	Zone 24	**423**

For zone recognition, refer to "Zone Recognition" on page 2.

ALARM RESTORE REPORT CODES FOR ZONES 1 TO 24 (see warning below):

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**
	___ / ___	Zone 11	**434**
	___ / ___	Zone 12	**435**
45	___ / ___	Zone 13	**436**
	___ / ___	Zone 14	**437**
	___ / ___	Zone 15	**438**
	___ / ___	Zone 16	**439**
46	___ / ___	Zone 17	**440**
	___ / ___	Zone 18	**441**
	___ / ___	Zone 19	**442**
	___ / ___	Zone 20	**443**
47	___ / ___	Zone 21	**444**
	___ / ___	Zone 22	**445**
	___ / ___	Zone 23	**446**
	___ / ___	Zone 24	**447**

For zone recognition, refer to "Zone Recognition" on page 2.

ZONES 1 TO 24 SHUTDOWN REPORT CODES (see warning below):

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**
	___ / ___	Zone 11	**458**
	___ / ___	Zone 12	**459**
51	___ / ___	Zone 13	**460**
	___ / ___	Zone 14	**461**
	___ / ___	Zone 15	**462**
	___ / ___	Zone 16	**463**
52	___ / ___	Zone 17	**464**
	___ / ___	Zone 18	**465**
	___ / ___	Zone 19	**466**
	___ / ___	Zone 20	**467**
53	___ / ___	Zone 21	**468**
	___ / ___	Zone 22	**469**
	___ / ___	Zone 23	**470**
	___ / ___	Zone 24	**471**

For zone recognition, refer to "Zone Recognition" on page 2.

TAMPERS 1 TO 12 REPORT CODES (see warning below):

Streamline Section	Data	Description	Address
54	___ / ___	Tamper 1	**472**
	___ / ___	Tamper 2	**473**
	___ / ___	Tamper 3	**474**
	___ / ___	Tamper 4	**475**
55	___ / ___	Tamper 5	**476**
	___ / ___	Tamper 6	**477**
	___ / ___	Tamper 7	**478**
	___ / ___	Tamper 8	**479**
56	___ / ___	Tamper 9	**480**
	___ / ___	Tamper 10	**481**
	___ / ___	Tamper 11	**482**
	___ / ___	Tamper 12	**483**

Addresses **484** - **495** are reserved for future use

For zone recognition, refer to "Zone Recognition" on page 2.

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**

Streamline Section	Data	Description	Address
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**

Streamline Section	Data	Description	Address
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**

Streamline Section	Data	Description	Address
65	___ / ___	Late to close	**516**
	___ / ___	No movement	**517**
	___ / ___	Partial Arming	**518**
	___ / ___	Recent Close	**519**

Streamline Section	Data	Description	Address
66	___ / ___	Duress	**520**
	[2ND]/[2ND]	Future Use	**521**
	[2ND]/[2ND]	Future Use	**522**
	[2ND]/[2ND]	Future Use	**523**

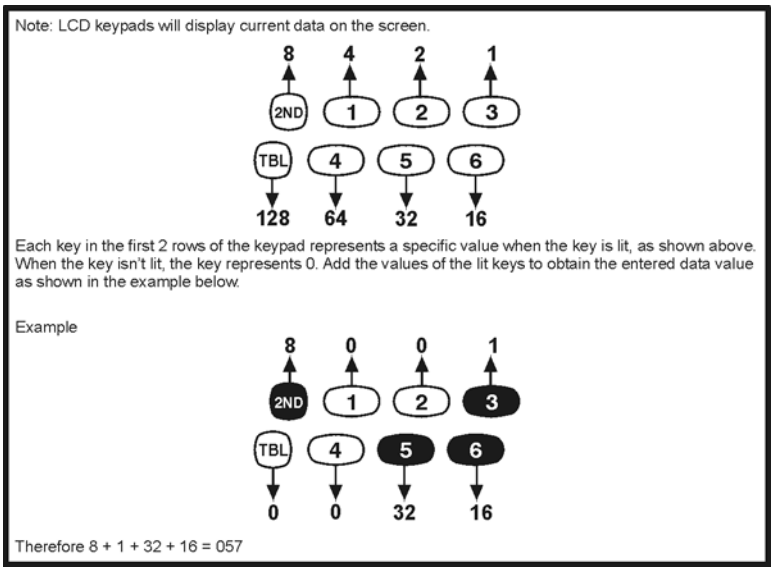
Streamline Section	Data	Description	Address
67	___ / ___	Login (Espload)	**524**
	___ / ___	Program Change	**525**
	[2ND]/[2ND]	Future Use	**526**
	[2ND]/[2ND]	Future Use	**527**

DECIMAL PROGRAMMING

1) Press **[ENTER]** + **[INSTALLER CODE]** *(default: see Table 1 on page 1)*
2) The **[ENTER]** key will flash to indicate you are in programming mode
3) Enter 3-digit **[ADDRESS]** (**044** - **061**)
4) The keypad will now display the current 3-digit data currently saved at this address as described in Figure 2 on page 9.
5) Enter 3-digit **[DATA]** (000 - 255) value 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) Auto test report every ? days (between "001" and "255") (000 = disabled)	
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 mSec.) Zone speed	*600 mSec.*
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). **Esprit 728EX+ only:** The BATT LED will flash and the dialer relay will open and close, thus making a clicking noise, for 4 seconds during power up when Installer Lock is enabled on the control panel.	
059	___ / ___ / ___	(seconds) Programmable delay before alarm transmission (005 to 063 seconds) (000 = disabled)	
060	___ / ___ / ___	(seconds) Recent closing delay (000 = disabled)	
061	___ / ___ / ___	Future Use	

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:

1) Press **[ENTER]** + **[INSTALLER CODE]** *(default: see Table 1 on page 1)*
2) The **[ENTER]** key will flash to indicate you are in programming mode
3) Enter 3-digit **[ADDRESS]** (**062** - **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 3: *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 4: *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 5: *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 code
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, 9 or 15) enabled***	☐	[1]	☐	Disabled***
Auto arm = regular arm	☐	[2]	☐	Stay / System A
N/A	☐	[3]	☐	N/A
N/A	☐	[4]	☐	N/A
N/A	☐	[5]	☐	N/A
No tamper bypass	☐	[6]	☐	Tamper follows zone bypass definition
N/A	☐	[7]	☐	N/A
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
N/A	☐	[BYP]	☐	N/A
N/A	☐	[MEM]	☐	N/A
N/A	☐	[TRBL]	☐	N/A

****** NOTE 1: This feature applies to the 728+, 728DZ8+, 738+ and 748+ only. When ATZ is enabled (address 090 key [8] ON) and zone 3 is defined as a fire zone, this zone must be disabled. If using a 728+ or 728DZ8+, zone 4 will be disabled. If using a 738+, zone 9 will be disabled. If using a 748+, zone 15 will be disabled.***

******* NOTE 2: This feature applies to the 728+, 728DZ8+, 738+ and 748+ only.***

Table 6: *Zone Definition*

KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Intellizone = **ON** **092:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**094:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Silent = **ON** **096:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**098:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3*	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
24Hr. / Fire = **ON** **100:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**102:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Instant = **ON** **104:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**106:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Follow = **ON** **108:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**110:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3*	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Delay 2 = **ON** **112:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**114:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
								SYSTEM A / STAY													**SYSTEM A / STAY**				
	1	2	3*	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
If ON, zone is armed on Stay or "System A" arming **116:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**118:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
								SYSTEM B													**SYSTEM B**				
	1	2	3*	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
If ON, zone is armed in "System B" arming **120:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**122:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	1	2	3*	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24
Bypass enable = **ON** **124:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	**126:**	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Keypad zones cannot be set as 24Hr. zones.

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

Note: 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 114 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 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.

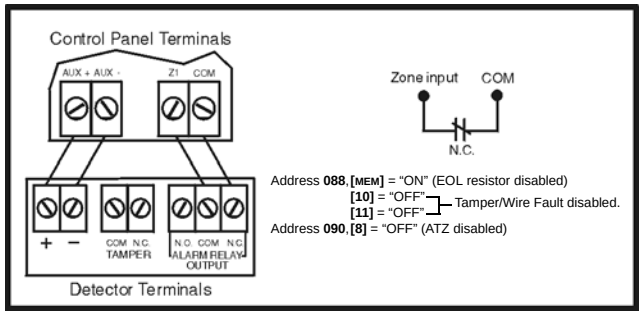
Key	Feature	*Codes that can access feature*
[8]	**Installer Test Mode** In Installer Test mode, a confirmation beep (intermittent) indicates that the test mode is enabled. A rejection beep indicates that the test mode is disabled. The bell will squawk during walk testing to indicate opened, functional 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 11). A value must be entered at address **512** (page 8) 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 3) 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 (works also with ADP-1).	*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:

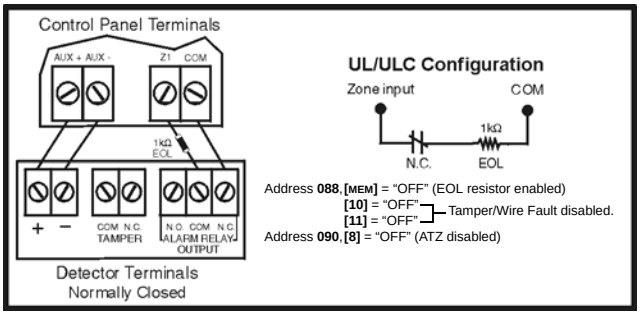
SINGLE ZONE CONNECTIONS

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



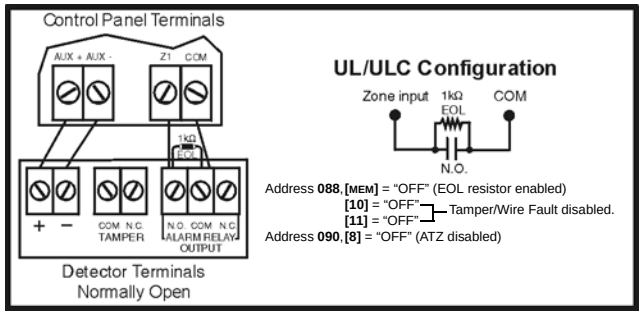
Address **088**,**[MEM]** = "ON" (EOL resistor disabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**,**[8]** = "OFF" (ATZ disabled)

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



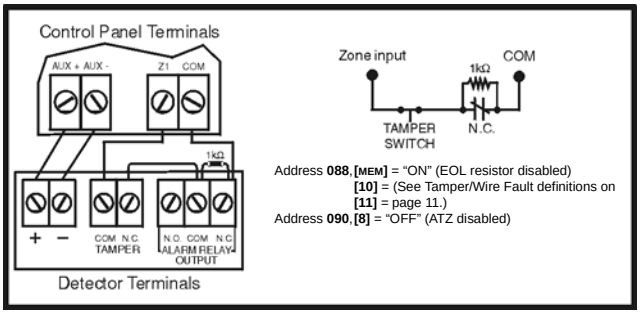
Address **088**,**[MEM]** = "OFF" (EOL resistor enabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**,**[8]** = "OFF" (ATZ disabled)

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



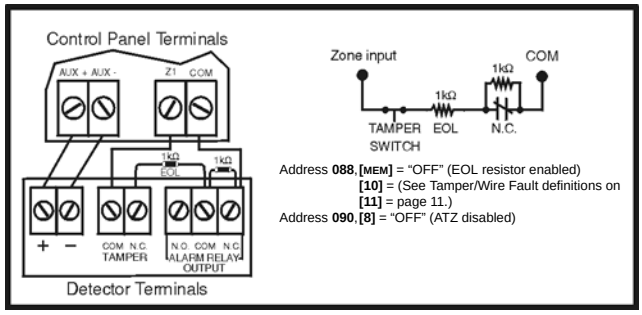
Address **088**,**[MEM]** = "OFF" (EOL resistor enabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**,**[8]** = "OFF" (ATZ disabled)

Figure 6: 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 11.)
Address **090**,**[8]** = "OFF" (ATZ disabled)

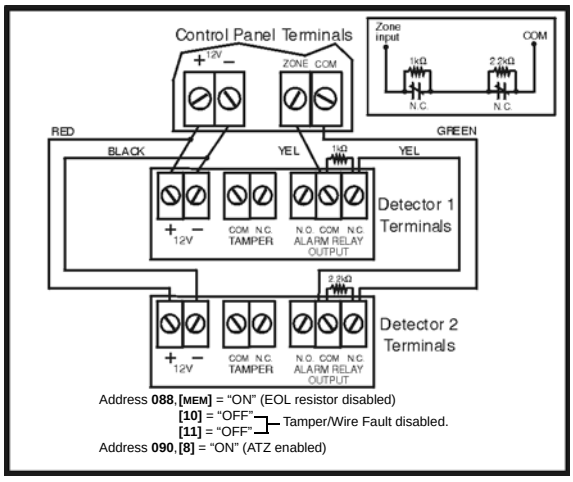
Figure 7: N.C. Contacts, with EOL resistor, with Tamper and Wire Fault Recognition (UL/ULC)



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

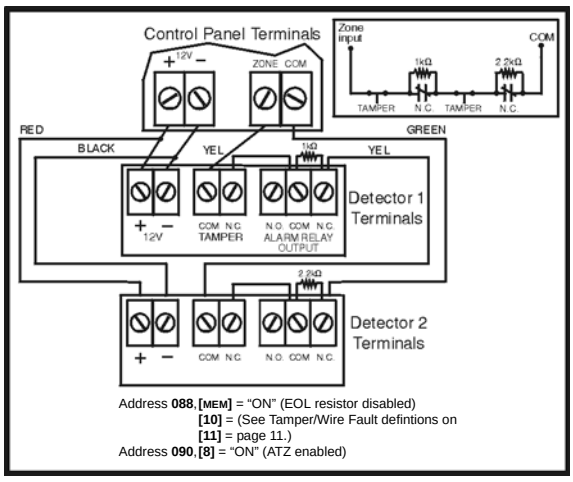
ADVANCED TECHNOLOGY ZONE CONNECTIONS (728+, 728DZ8+, 738+ AND 748+ ONLY)

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



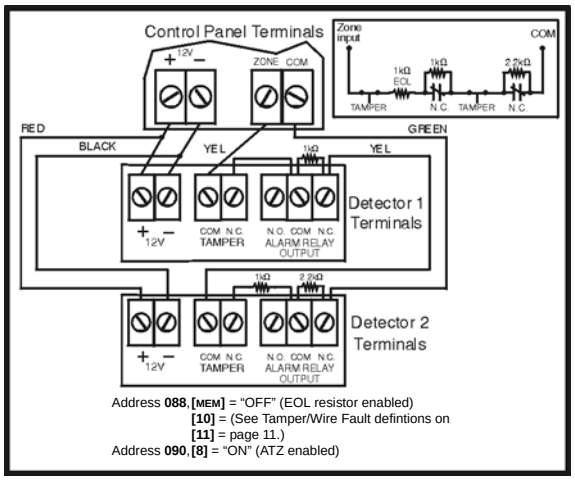
Address **088**, **[MEM]** = "ON" (EOL resistor disabled)
[10] = "OFF" ┐
[11] = "OFF" ┘ Tamper/Wire Fault disabled.
Address **090**, **[8]** = "ON" (ATZ enabled)

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



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

OTHER CONNECTION DIAGRAMS

Figure 11: Connecting One Keypad Zone

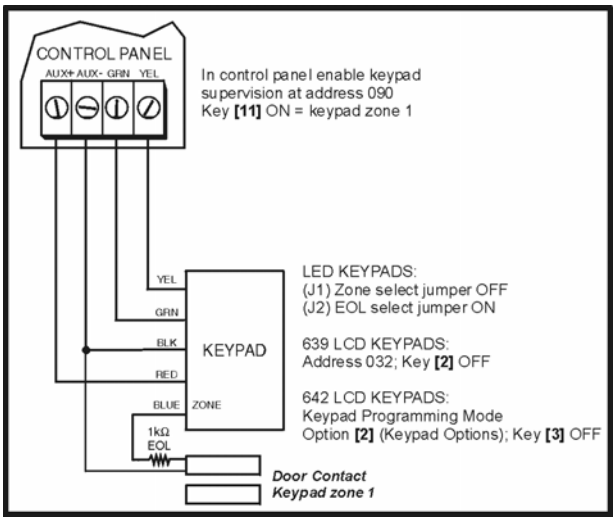


Figure 12: Connecting Two Keypad Zones (639 only)

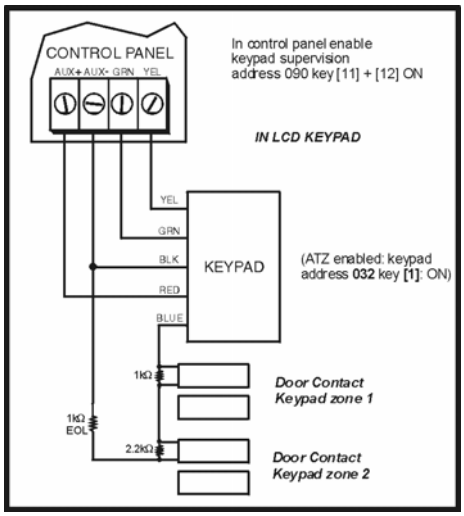


Figure 13: Connecting Two Keypad Zones Using Two Keypads

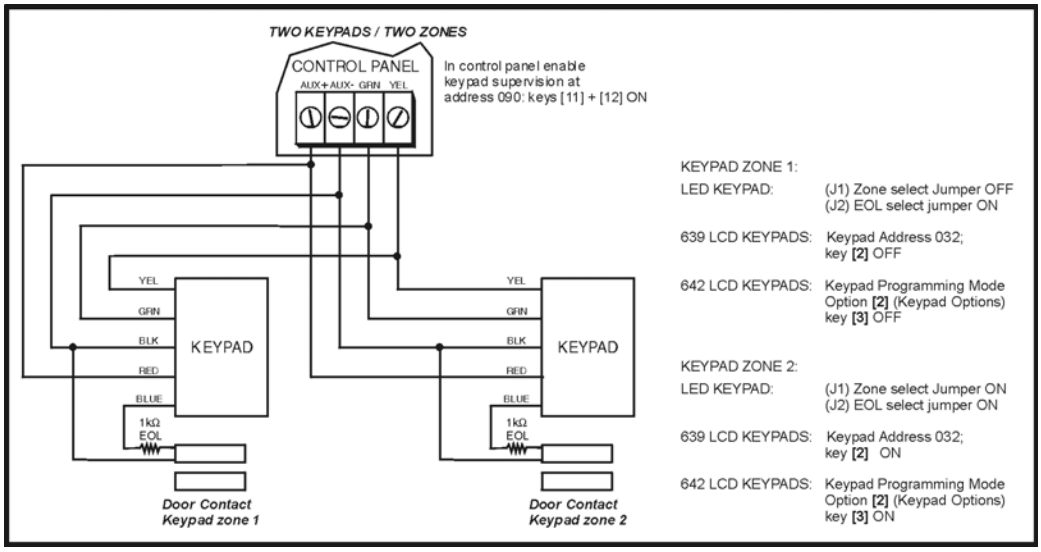


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Figure 14: Keypad Tamper Switch Connection

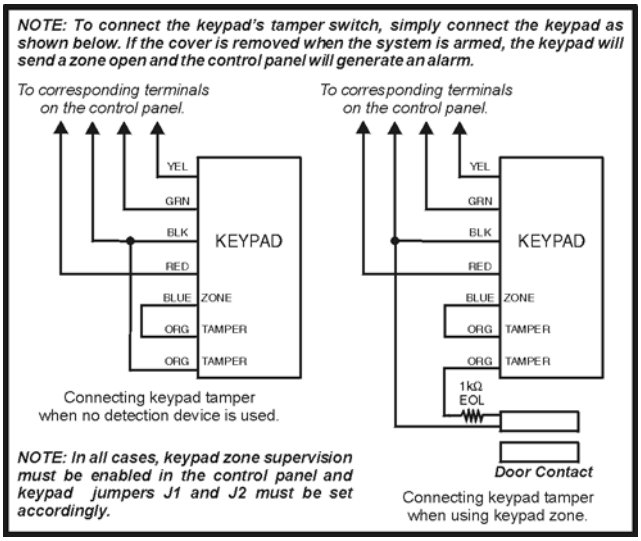


Figure 15: PGM Output Relay

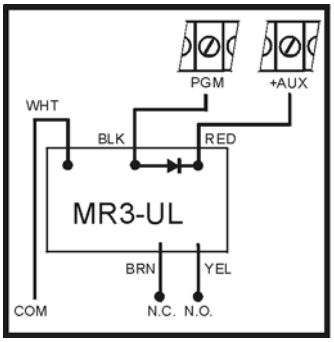


Figure 16: Ground Start Circuit

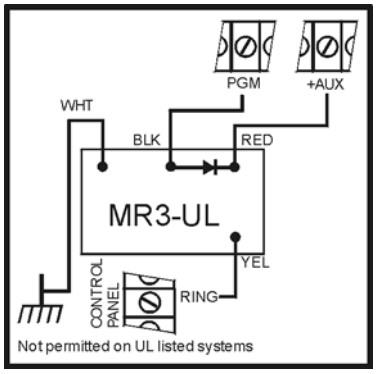


Figure 17: Fire Alarm Zone Connections

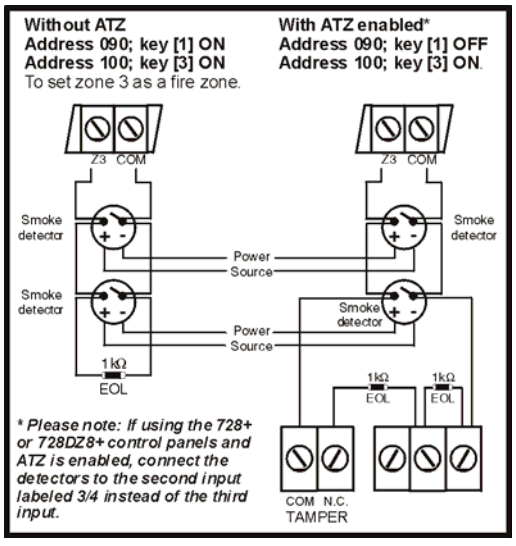
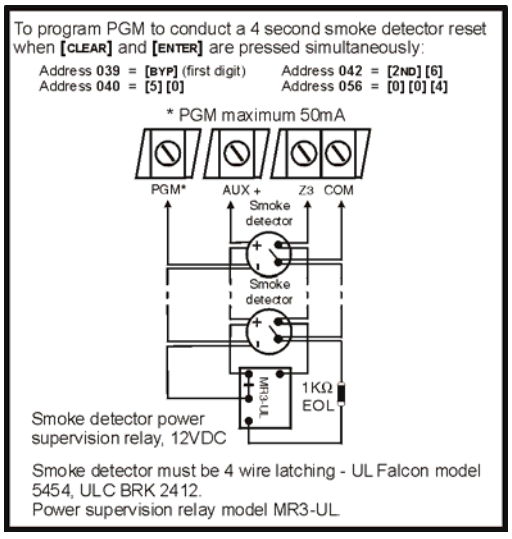
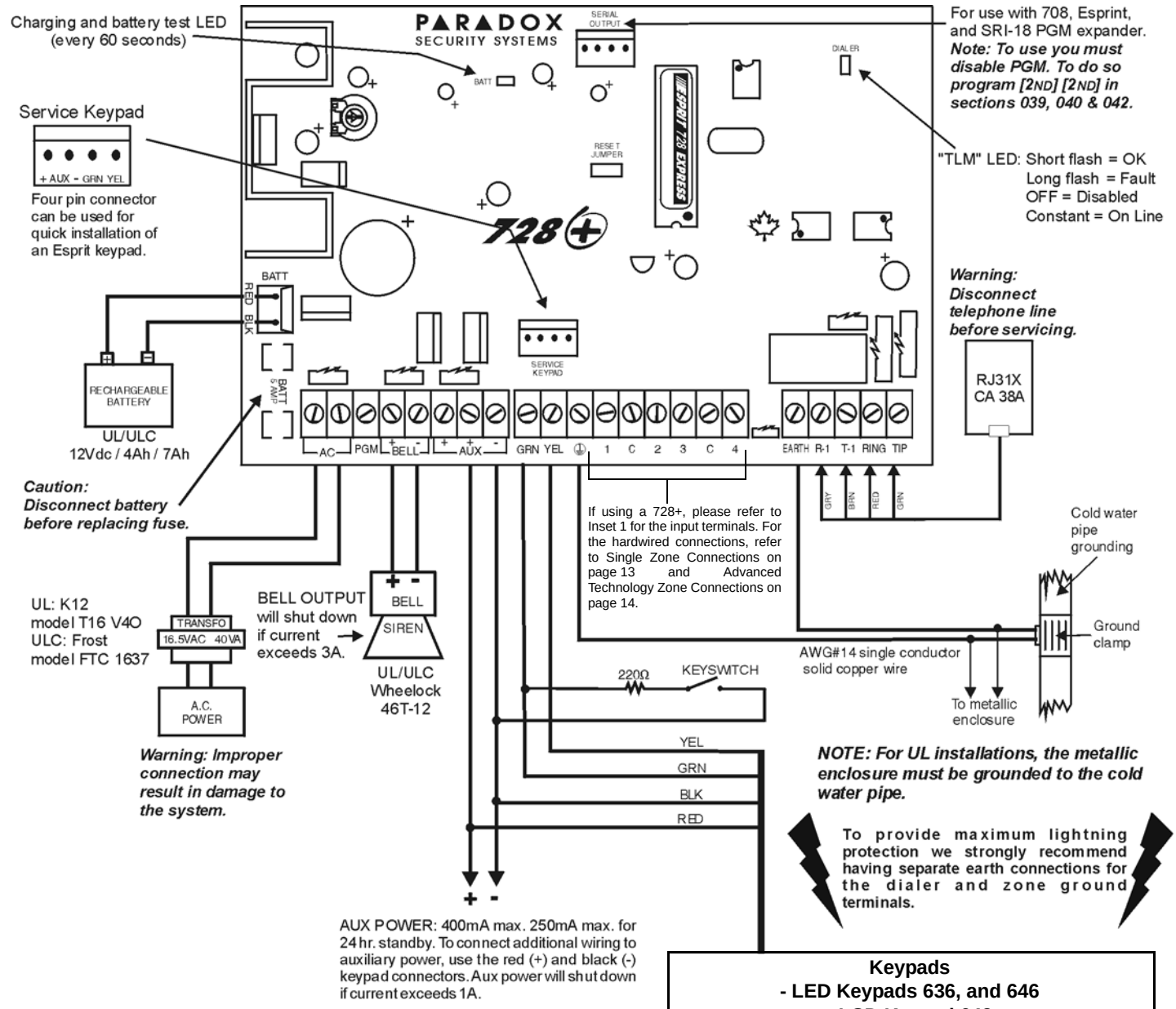


Figure 18: Fire Reset



It is recommended that all 4-wire smoke detectors be connected using a daisy chain configuration

ESPRIT 728+ / 728EX+ / 728EX4+ / 728DZ8+ WIRING DIAGRAM



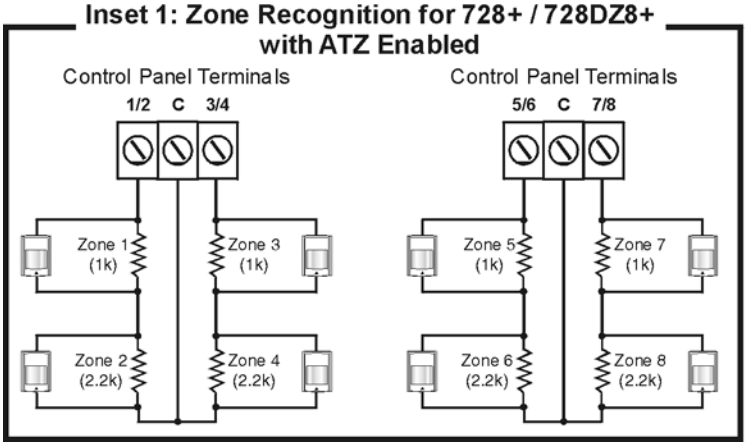
All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 or power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P, or substitute cable permitted by the National Electrical Code, ANSI/NFPA 70.

Keypads
- LED Keypads 636, and 646
- LCD Keypad 642

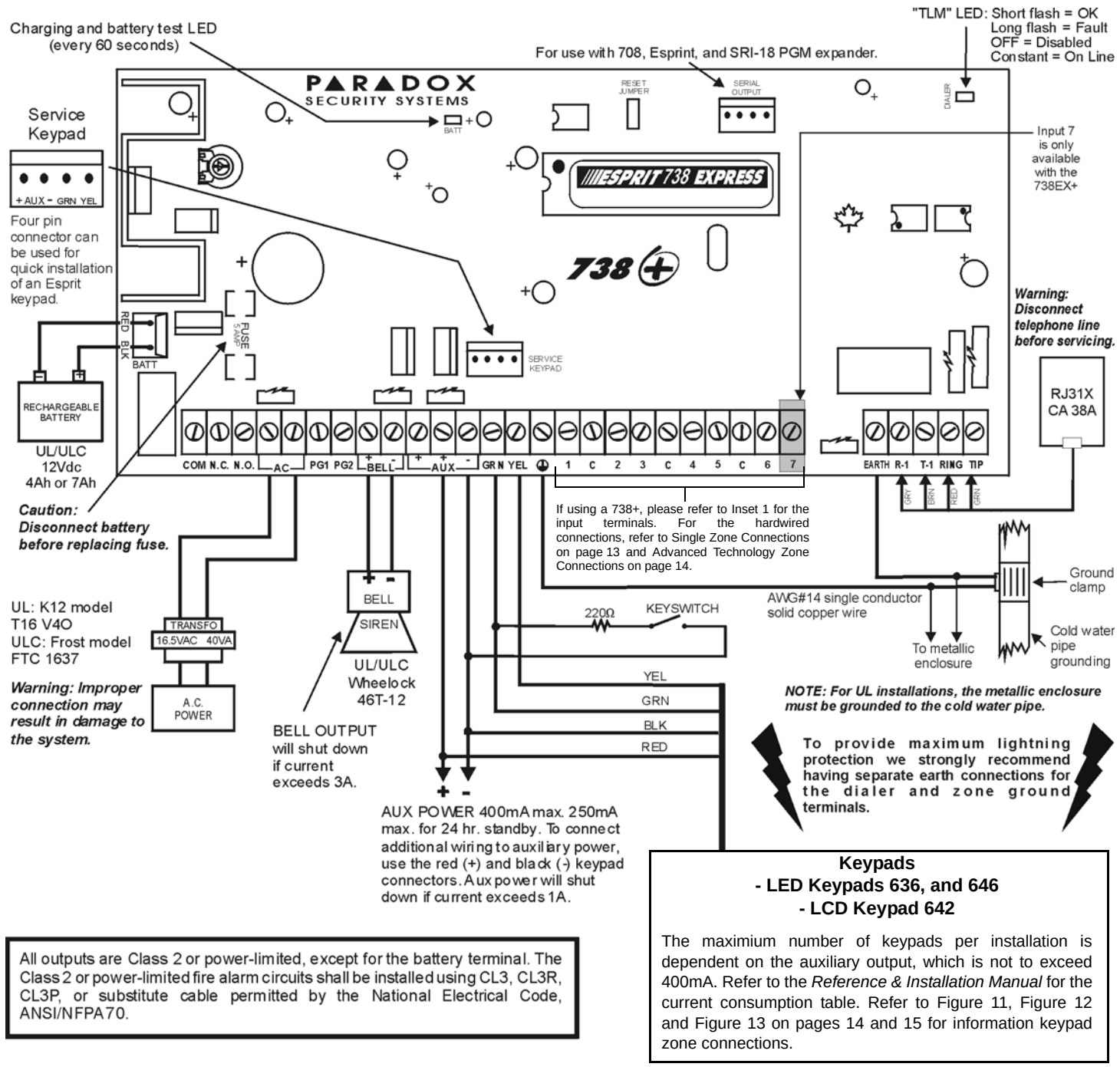
The maximium number of keypads per installation is dependent on the auxiliary output, which is not to exceed 400mA. Refer to the *Reference & Installation Manual* for the current consumption table. Refer to Figure 11, Figure 12 and Figure 13 on pages 14 and 15 for information keypad zone connections*.

**** NOTE: The 728EX4+ and 728DZ8+ control panels do not support keypad zones.***

Inset 1: Zone Recognition for 728+ / 728DZ8+ with ATZ Enabled



ESPRIT 738+ / 738EX+ WIRING DIAGRAM

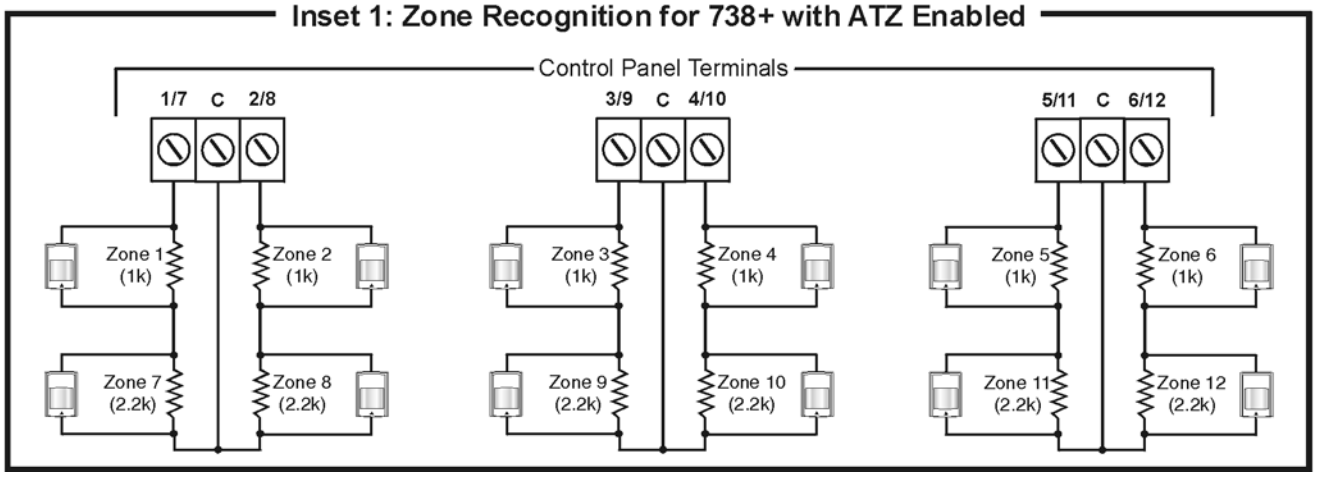


All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 or power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P, or substitute cable permitted by the National Electrical Code, ANSI/NFPA70.

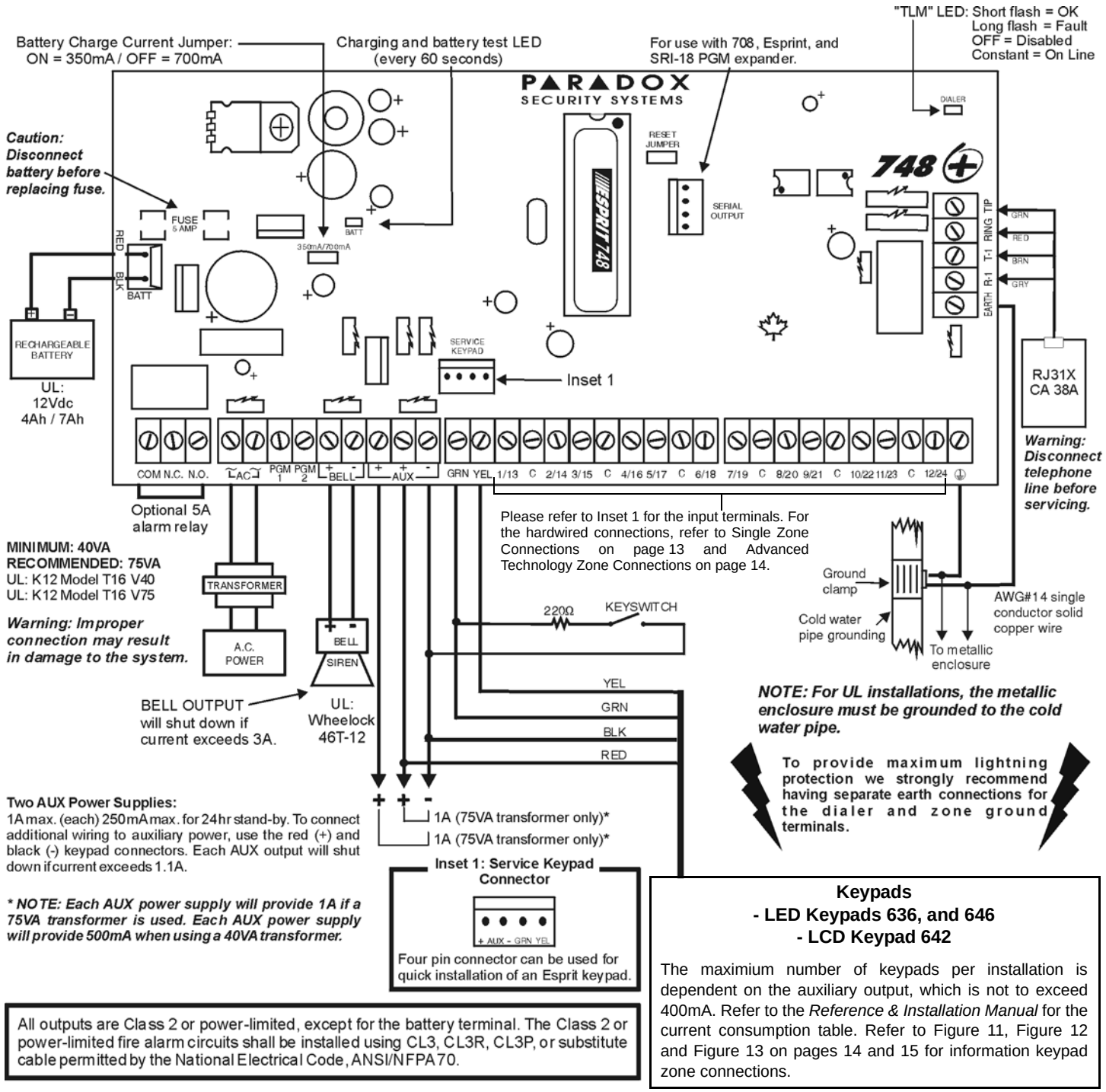
Keypads
- LED Keypads 636, and 646
- LCD Keypad 642

The maximium number of keypads per installation is dependent on the auxiliary output, which is not to exceed 400mA. Refer to the *Reference & Installation Manual* for the current consumption table. Refer to Figure 11, Figure 12 and Figure 13 on pages 14 and 15 for information keypad zone connections.

Inset 1: Zone Recognition for 738+ with ATZ Enabled



ESPRIT 748+ WIRING DIAGRAM

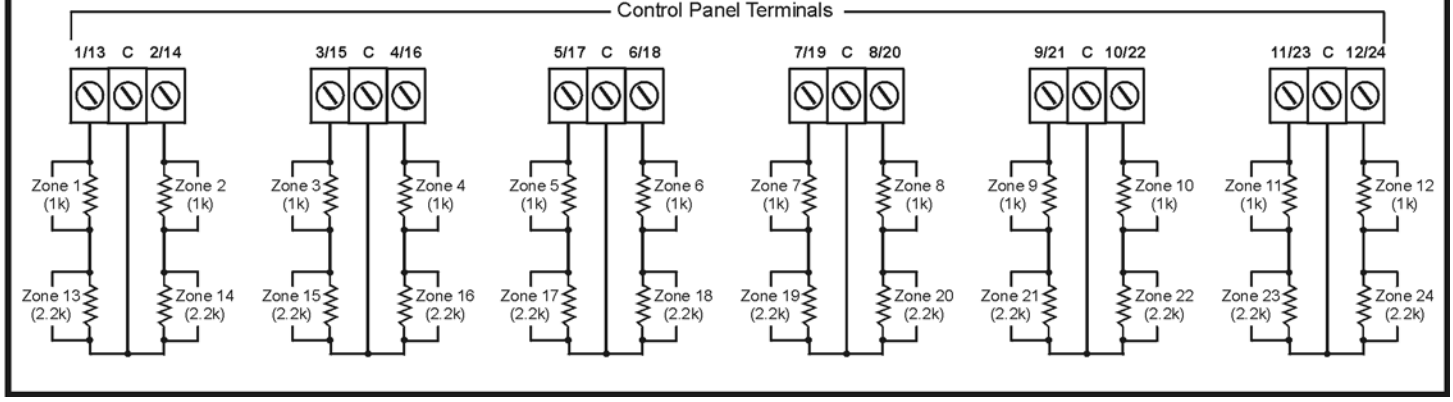


Keypads
- LED Keypads 636, and 646
- LCD Keypad 642

The maximium number of keypads per installation is dependent on the auxiliary output, which is not to exceed 400mA. Refer to the *Reference & Installation Manual* for the current consumption table. Refer to Figure 11, Figure 12 and Figure 13 on pages 14 and 15 for information 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/NFPA70.

Inset 1: Zone Recognition for 748+ with ATZ Enabled



NOTES

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