



# 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+ = <b>727272</b>	728EX4+ = <b>727272</b>	738EX+ = <b>737373</b>	748+ = <b>484848</b>
728+ = <b>282828</b>	728DZ8+ = <b>282828</b>	738+ = <b>383838</b>	

## 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

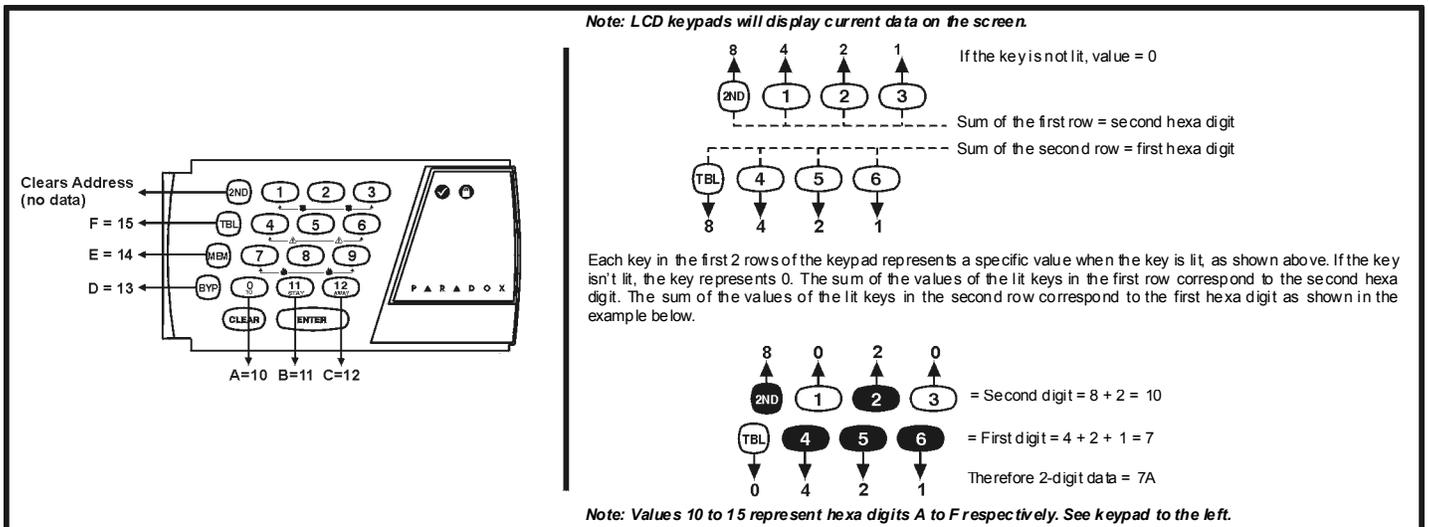
\* To clear the Timer Loss trouble, refer to Key Access Programming on page 12 (the [MEM] key). Press the [CLEAR] button to clear troubles.

## 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+	728+	738EX+	738+	738+	748+	748+
	728EX+ 728EX4+** 728DZ8+**	728DZ8+**					
	No ATZ	With ATZ	No ATZ	No ATZ	With ATZ	No ATZ	With ATZ
<b>Control Panel</b>							
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
<b>Keypad</b>							
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	Answering Machine Override
00	___ / ___	Installer code (1st, 2nd digit)	000	<b>Answering Machine Override</b> [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
	___ / ___	Installer code (3rd, 4th digit)	001	
	___ / ___	Installer code (5th, 6th digit)	002	
	___ / ___	Panel answer options	003	
		↳ Number of rings (Max. 15)		↑ First digit disables "Answering Machine Override" (key [2ND] or key [1]), or determines period of time between first and second call (see below). 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
	___ / ___	Panel Identifier (3rd, 4th digit)	005
	___ / ___	PC Password (1st, 2nd digit)	006
	___ / ___	PC Password (3rd, 4th digit)	007
			{ Identifies the control panel to the PC. { Identifies the PC to the panel.

## 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"            [BYP] = switch from pulse to tone while dialing  
 [11] = \*                            [MEM] = pause 4 seconds  
 [12] = #                            [TRBL] = end of number

### Computer Telephone Number (View at addresses 008 to 015)

Streamline Section	Data	Streamline Section	Data	Notes
02	___ / ___ / ___ / ___ / ___ / ___ / ___ / ___ 1 2 3 4 5 6 7 8	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	Data	Streamline Section	Data	Notes
04	___ / ___ / ___ / ___ / ___ / ___ / ___ / ___ 1 2 3 4 5 6 7 8	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	Data	Streamline Section	Data	Notes
06	___ / ___ / ___ / ___ / ___ / ___ / ___ / ___ 1 2 3 4 5 6 7 8	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	Data	Notes
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
09	[2ND] / [2ND]	Future Use
	[2ND] / ___	1st digit: Value must be entered (i.e. [2ND]) 2nd digit: Time correction (see table at right)
	___ / ___	1st digit: Communicator Format 1 2nd digit: Communicator Format 2
	___ / ___	1st digit: PGM1 type 2nd digit: PGM2 type

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

Address	Time Correction Table	
036	[2ND] = No adjustment	[8] = Minus 4 seconds
037	[1] = Plus 4 seconds	[9] = Minus 8 seconds
	[2] = Plus 8 seconds	[10] = Minus 12 seconds
038	[3] = Plus 12 seconds	[11] = Minus 16 seconds
	[4] = Plus 16 seconds	[12] = Minus 20 seconds
039	[5] = Plus 20 seconds	[BYP] = Minus 24 seconds
	[6] = Plus 24 seconds	[MEM] = Minus 28 seconds
	[7] = Plus 28 seconds	[TRBL] = Minus 32 seconds

Communicator Formats			
Key		Key	
[2ND]	= ADEMCO slow (1400Hz, 1900Hz, 10bps)	*	= 4-digit account codes only
[1]	= (1400Hz, 1800Hz, 10bps)	[6]	= RADIONICS with PARITY (1400Hz, 40bps)
[2]	= SILENT KNIGHT fast (1400Hz, 1900Hz, 20bps)	[7]	= RADIONICS with PARITY (2300Hz, 40bps)
[3]	= SESCOA (2300Hz, 1800Hz, 20bps)	[8]	= * ADEMCO express
[4]	= RADIONICS (40bps with 1400Hz handshake)	[9]	= * ADEMCO contact ID (programmable codes)
[5]	= RADIONICS (40bps with 2300Hz handshake)	[10]	= * ADEMCO contact ID (all codes)
		[TRBL]	= * DTMF - no handshake (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]

## 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	Streamline Section	Data	Description	Address
11	___ / ___	Auto / Espload	300	17	___ / ___	User Code 23	324
	___ / ___	Master	301		___ / ___	User Code 24	325
	___ / ___	User Code 1	302		___ / ___	User Code 25	326
	___ / ___	User Code 2	303		___ / ___	User Code 26	327
12	___ / ___	User Code 3	304	18	___ / ___	User Code 27	328
	___ / ___	User Code 4	305		___ / ___	User Code 28	329
	___ / ___	User Code 5	306		___ / ___	User Code 29	330
	___ / ___	User Code 6	307		___ / ___	User Code 30	331
13	___ / ___	User Code 7	308	19	___ / ___	User Code 31	332
	___ / ___	User Code 8	309		___ / ___	User Code 32	333
	___ / ___	User Code 9	310		___ / ___	User Code 33	334
	___ / ___	User Code 10	311		___ / ___	User Code 34	335
14	___ / ___	User Code 11	312	20	___ / ___	User Code 35	336
	___ / ___	User Code 12	313		___ / ___	User Code 36	337
	___ / ___	User Code 13	314		___ / ___	User Code 37	338
	___ / ___	User Code 14	315		___ / ___	User Code 38	339
15	___ / ___	User Code 15	316	21	___ / ___	User Code 39	340
	___ / ___	User Code 16	317		___ / ___	User Code 40	341
	___ / ___	User Code 17	318		___ / ___	User Code 41	342
	___ / ___	User Code 18	319		___ / ___	User Code 42	343
16	___ / ___	User Code 19	320	22	___ / ___	User Code 43	344
	___ / ___	User Code 20	321		___ / ___	User Code 44	345
	___ / ___	User Code 21	322		___ / ___	User Code 45	346
	___ / ___	User Code 22	323		___ / ___	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 / Espload	350				
	___/___	Master	351				
24	___/___	User Code 1	352	30	___/___	User Code 25	376
	___/___	User Code 2	353		___/___	User Code 26	377
	___/___	User Code 3	354		___/___	User Code 27	378
	___/___	User Code 4	355		___/___	User Code 28	379
25	___/___	User Code 5	356	31	___/___	User Code 29	380
	___/___	User Code 6	357		___/___	User Code 30	381
	___/___	User Code 7	358		___/___	User Code 31	382
	___/___	User Code 8	359		___/___	User Code 32	383
26	___/___	User Code 9	360	32	___/___	User Code 33	384
	___/___	User Code 10	361		___/___	User Code 34	385
	___/___	User Code 11	362		___/___	User Code 35	386
	___/___	User Code 12	363		___/___	User Code 36	387
27	___/___	User Code 13	364	33	___/___	User Code 37	388
	___/___	User Code 14	365		___/___	User Code 38	389
	___/___	User Code 15	366		___/___	User Code 39	390
	___/___	User Code 16	367		___/___	User Code 40	391
28	___/___	User Code 17	368	34	___/___	User Code 41	392
	___/___	User Code 18	369		___/___	User Code 42	393
	___/___	User Code 19	370		___/___	User Code 43	394
	___/___	User Code 20	371		___/___	User Code 44	395
29	___/___	User Code 21	372	35	___/___	User Code 45	396
	___/___	User Code 22	373		___/___	User Code 46	397
	___/___	User Code 23	374		___/___	User Code 47	398
	___/___	User Code 24	375		___/___	User Code 48 / (Duress)	399

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

Streamline Section	Data	Description	Address	Streamline Section	Data	Description	Address
36	___/___	Zone 1	400	39	___/___	Zone 13	412
	___/___	Zone 2	401		___/___	Zone 14	413
	___/___	Zone 3 (fire ad.d. 100)	402		___/___	Zone 15	414
	___/___	Zone 4	403		___/___	Zone 16	415
37	___/___	Zone 5	404	40	___/___	Zone 17	416
	___/___	Zone 6	405		___/___	Zone 18	417
	___/___	Zone 7	406		___/___	Zone 19	418
	___/___	Zone 8	407		___/___	Zone 20	419
38	___/___	Zone 9	408	41	___/___	Zone 21	420
	___/___	Zone 10	409		___/___	Zone 22	421
	___/___	Zone 11	410		___/___	Zone 23	422
	___/___	Zone 12	411		___/___	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	Streamline Section	Data	Description	Address
<b>42</b>	___/___	Zone 1	424	<b>45</b>	___/___	Zone 13	436
	___/___	Zone 2	425		___/___	Zone 14	437
	___/___	Zone 3 (fire add. 100)	426		___/___	Zone 15	438
	___/___	Zone 4	427		___/___	Zone 16	439
<b>43</b>	___/___	Zone 5	428	<b>46</b>	___/___	Zone 17	440
	___/___	Zone 6	429		___/___	Zone 18	441
	___/___	Zone 7	430		___/___	Zone 19	442
	___/___	Zone 8	431		___/___	Zone 20	443
<b>44</b>	___/___	Zone 9	432	<b>47</b>	___/___	Zone 21	444
	___/___	Zone 10	433		___/___	Zone 22	445
	___/___	Zone 11	434		___/___	Zone 23	446
	___/___	Zone 12	435		___/___	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	Streamline Section	Data	Description	Address
<b>48</b>	___/___	Zone 1	448	<b>51</b>	___/___	Zone 13	460
	___/___	Zone 2	449		___/___	Zone 14	461
	___/___	Zone 3 (fire add. 100)	450		___/___	Zone 15	462
	___/___	Zone 4	451		___/___	Zone 16	463
<b>49</b>	___/___	Zone 5	452	<b>52</b>	___/___	Zone 17	464
	___/___	Zone 6	453		___/___	Zone 18	465
	___/___	Zone 7	454		___/___	Zone 19	466
	___/___	Zone 8	455		___/___	Zone 20	467
<b>50</b>	___/___	Zone 9	456	<b>53</b>	___/___	Zone 21	468
	___/___	Zone 10	457		___/___	Zone 22	469
	___/___	Zone 11	458		___/___	Zone 23	470
	___/___	Zone 12	459		___/___	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	Streamline Section	Data	Description	Address
<b>54</b>	___/___	Tamper 1	472	<b>56</b>	___/___	Tamper 9	480
	___/___	Tamper 2	473		___/___	Tamper 10	481
	___/___	Tamper 3	474		___/___	Tamper 11	482
	___/___	Tamper 4	475		___/___	Tamper 12	483
<b>55</b>	___/___	Tamper 5	476	Addresses 484 - 495 are reserved for future use			
	___/___	Tamper 6	477				
	___/___	Tamper 7	478				
	___/___	Tamper 8	479				

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

**TROUBLE REPORT CODES:**

Streamline Section	Data	Description	Address
<b>60</b>	___/___	Max. aux. current	<b>496</b>
	___/___	Bell disconnect / max. bell current	<b>497</b>
	___/___	Battery disconnect / low voltage	<b>498</b>
	___/___	Power failure	<b>499</b>

Streamline Section	Data	Description	Address
<b>61</b>	___/___	Fire loop trouble	<b>500</b>
	___/___	Timer loss	<b>501</b>
	[2ND]/[2ND]	Future Use	<b>502</b>
	[2ND]/[2ND]	Future Use	<b>503</b>

**TROUBLE RESTORE REPORT CODES:**

Streamline Section	Data	Description	Address
<b>62</b>	___/___	Max. aux. current	<b>504</b>
	___/___	Bell disconnect / max. bell current	<b>505</b>
	___/___	Battery disconnect / low voltage	<b>506</b>
	___/___	Power failure	<b>507</b>

Streamline Section	Data	Description	Address
<b>63</b>	___/___	Fire loop trouble	<b>508</b>
	___/___	Timer programmed	<b>509</b>
	___/___	Tamper / wiring fault	<b>510</b>
	___/___	TLM restore	<b>511</b>

**SPECIAL REPORT CODES:**

Streamline Section	Data	Description	Address
<b>64</b>	___/___	Test report	<b>512</b>
	___/___	Panic 1	<b>513</b>
	___/___	Panic 2	<b>514</b>
	___/___	Panic 3	<b>515</b>

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

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

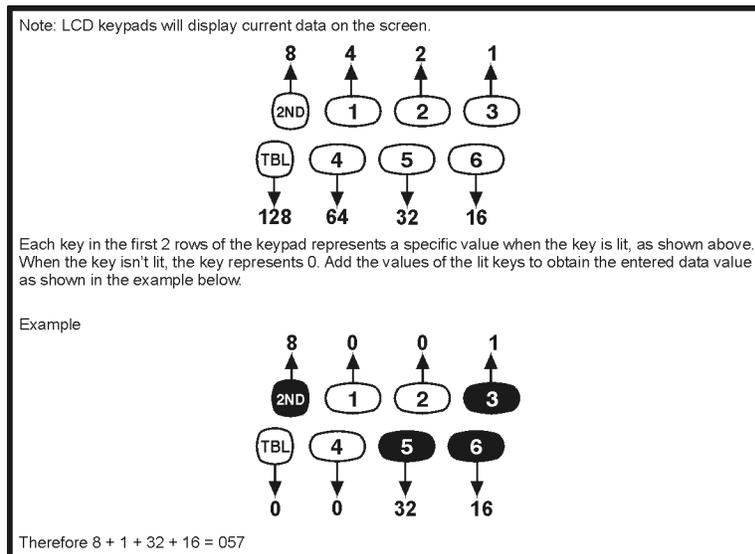
Streamline Section	Data	Description	Address
<b>67</b>	___/___	Login (Espload)	<b>524</b>
	___/___	Program Change	<b>525</b>
	[2ND]/[2ND]	Future Use	<b>526</b>
	[2ND]/[2ND]	Future Use	<b>527</b>

## 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). <b>Esprit 728EX+ only:</b> 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]
<b>062:</b>	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		<input type="checkbox"/>															
<b>064:</b>	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		<input type="checkbox"/>															
<b>066:</b>	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		<input type="checkbox"/>															

**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]
<b>068:</b>	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		<input type="checkbox"/>															
<b>070:</b>	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		<input type="checkbox"/>															
<b>072:</b>	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		<input type="checkbox"/>															

**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]
<b>074:</b>	User #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		<input type="checkbox"/>															
<b>076:</b>	User #:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		<input type="checkbox"/>															
<b>078:</b>	User #:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		<input type="checkbox"/>															

**086:**

See "TLM" table at right

Keyswitch = regular arm

Keyswitch arming

Call back

Auto arm on time

Auto arm on no movement

Pulse dialing

Partitioning

Silent zone/panic generates a silent alarm

(1:2) Pulse Europe

See "Reporting Options" table at right

N/A

Bell squawk on arm/disarm

Auto zone shutdown

	OFF	KEY / ON	
	<input type="checkbox"/>	[2ND]	<input type="checkbox"/>
	<input type="checkbox"/>	[1]	<input type="checkbox"/>
	<input type="checkbox"/>	[2]	<input type="checkbox"/>
Stay arm / System A	<input type="checkbox"/>	[3]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[4]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[5]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[6]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[7]	<input type="checkbox"/>
Tone dialing (DTMF)	<input type="checkbox"/>	[8]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[9]	<input type="checkbox"/>
generates only a report	<input type="checkbox"/>	[10]	<input type="checkbox"/>
(1:1.5) Pulse USA	<input type="checkbox"/>	[11]	<input type="checkbox"/>
	<input type="checkbox"/>	[12]	<input type="checkbox"/>
	<input type="checkbox"/>	[BYP]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[MEM]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[TRBL]	<input type="checkbox"/>
Enabled			

Telephone Line Monitoring (TLM)		
KEY		
[2ND]	[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]	[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: 1,2,12,1,2,1,2, 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:**

Automatic event buffer transmission

Panic 1 (keys [1] and [3])

Panic 2 (keys [4] and [6])

Panic 3 (keys [7] and [9])

Panic 1 silent

Panic 2 silent

Panic 3 silent

Key [10] - regular arming

Key [11] - stay or system A arm

6 digit access codes

Tamper Recognition

Beep on exit delay

Report zone restore on bell cut-off

Zones with EOL (1kΩ)

Always report disarm

	OFF	KEY / ON	
	<input type="checkbox"/>	[2ND]	<input type="checkbox"/>
	<input type="checkbox"/>	[1]	<input type="checkbox"/>
	<input type="checkbox"/>	[2]	<input type="checkbox"/>
	<input type="checkbox"/>	[3]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[4]	<input type="checkbox"/>
Audible	<input type="checkbox"/>	[5]	<input type="checkbox"/>
Audible	<input type="checkbox"/>	[6]	<input type="checkbox"/>
Fire	<input type="checkbox"/>	[7]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[8]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[9]	<input type="checkbox"/>
4 digit access code	<input type="checkbox"/>	[10]	<input type="checkbox"/>
	<input type="checkbox"/>	[11]	<input type="checkbox"/>
	<input type="checkbox"/>	[12]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[BYP]	<input type="checkbox"/>
On zone closure	<input type="checkbox"/>	[MEM]	<input type="checkbox"/>
No EOL	<input type="checkbox"/>	[TRBL]	<input type="checkbox"/>
Only after alarm			

Tamper / Wire Fault Definitions			
KEY			
System Armed	[10]	[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:**

Exclude power failure from trouble display

Zone (4, 9 or 15) enabled\*\*\*

Auto arm = regular arm

N/A

N/A

N/A

No tamper bypass

N/A

Zone doubling (ATZ)\*\*\*\*

Audible trouble warning

Duress

Keypad zone 1 supervision

Keypad zone 2 supervision

N/A

N/A

N/A

	OFF	KEY / ON	
	<input type="checkbox"/>	[2ND]	<input type="checkbox"/>
	<input type="checkbox"/>	[1]	<input type="checkbox"/>
	<input type="checkbox"/>	[2]	<input type="checkbox"/>
Stay / System A	<input type="checkbox"/>	[3]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[4]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[5]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[6]	<input type="checkbox"/>
Tamper follows zone bypass definition	<input type="checkbox"/>	[7]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[8]	<input type="checkbox"/>
Enabled****	<input type="checkbox"/>	[9]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[10]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[11]	<input type="checkbox"/>
Enabled	<input type="checkbox"/>	[12]	<input type="checkbox"/>
	<input type="checkbox"/>	[BYP]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[MEM]	<input type="checkbox"/>
N/A	<input type="checkbox"/>	[TRBL]	<input type="checkbox"/>
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]	
Intellizone = ON 092:	<input type="checkbox"/>	094:	<input type="checkbox"/>																						
Silent = ON 096:	<input type="checkbox"/>	098:	<input type="checkbox"/>																						
24Hr. / Fire = ON 100:	<input type="checkbox"/>	102:	<input type="checkbox"/>																						
 <b>Keypad zones cannot be set as 24Hr. zones.</b>													 * When zone 3 is defined "24Hr.", it becomes a fire zone												
Instant = ON 104:	<input type="checkbox"/>	106:	<input type="checkbox"/>																						
Follow = ON 108:	<input type="checkbox"/>	110:	<input type="checkbox"/>																						
Delay 2 = ON 112:	<input type="checkbox"/>	114:	<input type="checkbox"/>																						
	<b>SYSTEM A / STAY</b>												<b>SYSTEM A / STAY</b>												
If ON, zone is armed on Stay or "System A" arming 116:	<input type="checkbox"/>	118:	<input type="checkbox"/>																						
	<b>SYSTEM B</b>												<b>SYSTEM B</b>												
If ON, zone is armed in "System B" arming 120:	<input type="checkbox"/>	122:	<input type="checkbox"/>																						
Bypass enable = ON 124:	<input type="checkbox"/>	126:	<input type="checkbox"/>																						

 **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 Espload, it is impossible to enter programming mode.

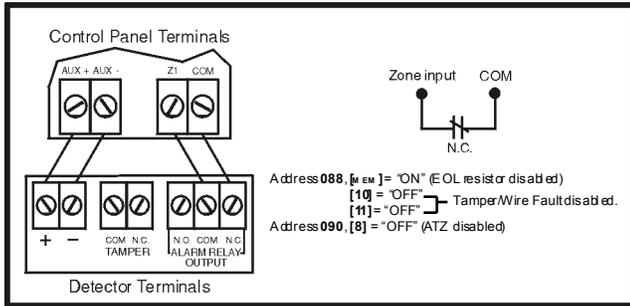
Key	Feature	Codes that can access feature
[8]	<b>Installer Test Mode</b> In Installer Test mode, a confirmation beep (intermittent) indicates that the test mode is enabled. A rejection beep indicates that the test mode is disabled. The bell will squawk during walk testing to indicate opened, functional zones.	<i>Installer Code Only</i>
[9]	<b>"Auto Arming" Time Program</b> Key [9] flashes. Enter 2-digit hour (00 to 23) and 2-digit minutes (00 to 59).	<i>Installer Code, Master Code or User Code 1</i>
[MEM]	<b>Panel Time Programming</b> [MEM] key flashes. Enter 2-digit hour (00 to 23) and 2-digit minutes (00 to 59).	<i>Installer Code, Master Code or User Code 1</i>
[BYP]	<b>Test Report</b> 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.	<i>Installer Code, Master Code or User Code 1</i>
[TRBL]	<b>Call Espload Via Telephone</b> 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.	<i>Installer Code, Master Code or User Code 1</i>
[AWAY]	<b>Answer Espload</b> This feature is available when using the ADP-1 adapter. In Espload, "blind dial" must be activated in "modem setup" section and panel phone number programmed (works also with ADP-1).	<i>Installer Code, Master Code or User Code 1</i>
[STAY]	<b>Cancel Communication Attempts</b> Until next reportable event.	<i>Master Code/User Code 1 only cancel calls to Espload The Installer Code can cancel all communications</i>

# CONNECTION DIAGRAMS

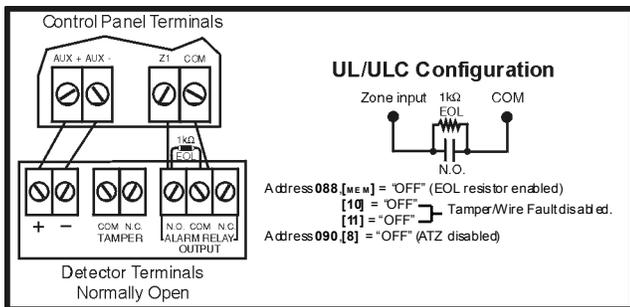
The system hardware will recognize the following zone conditions:

## SINGLE ZONE CONNECTIONS

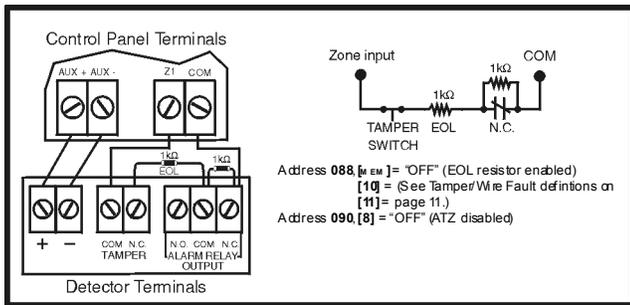
**Figure 3: N.C. Contacts, without EOL Resistor**



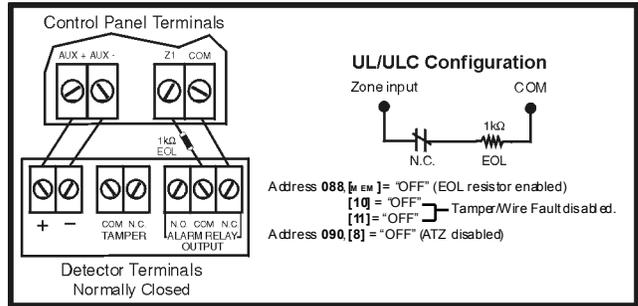
**Figure 5: N.O. Contacts, with EOL Resistor (UL/ULC)**



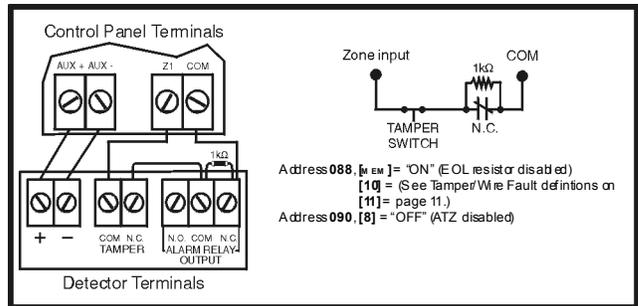
**Figure 7: N.C. Contacts, with EOL resistor, with Tamper and Wire Fault Recognition (UL/ULC)**



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

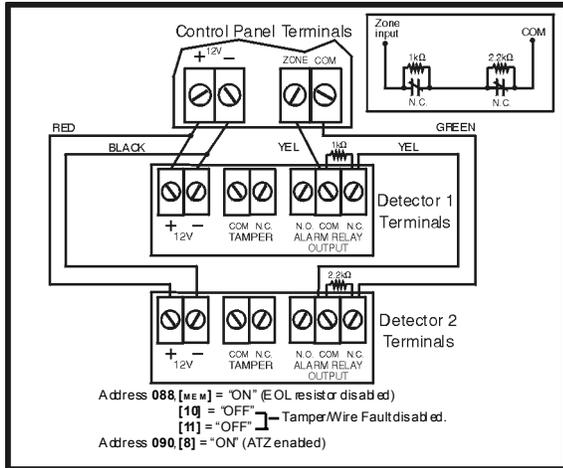


**Figure 6: N.C. Contacts, without EOL Resistor, with Tamper Recognition**

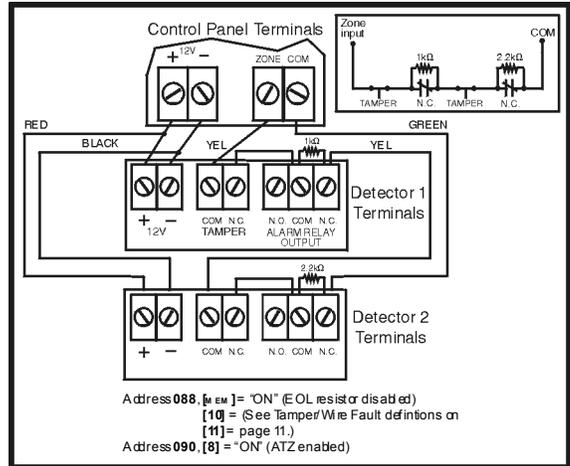


**ADVANCED TECHNOLOGY ZONE CONNECTIONS (728+, 728DZ8+, 738+ AND 748+ ONLY)**

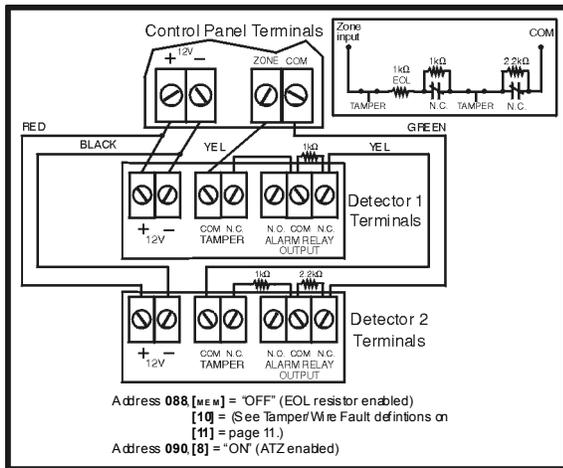
**Figure 8: N.C. Contacts, without EOL Resistor**



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

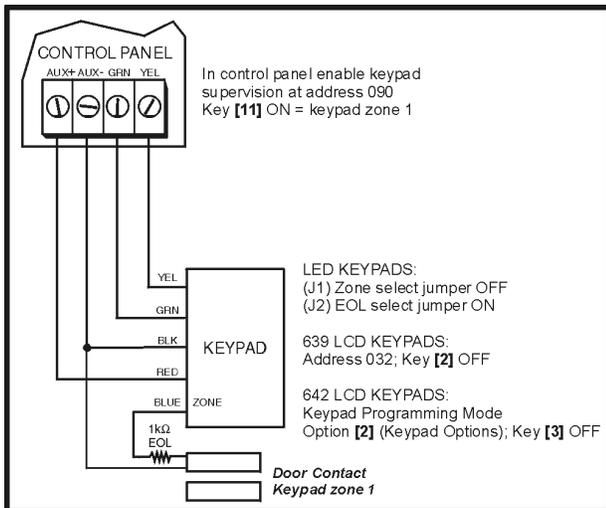


**Figure 10: N.O. Contacts, with EOL Resistor, with Tamper and Wire Fault Recognition (UL/ULC)**

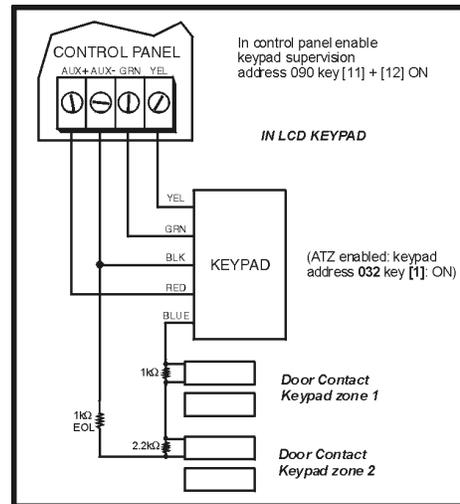


**OTHER CONNECTION DIAGRAMS**

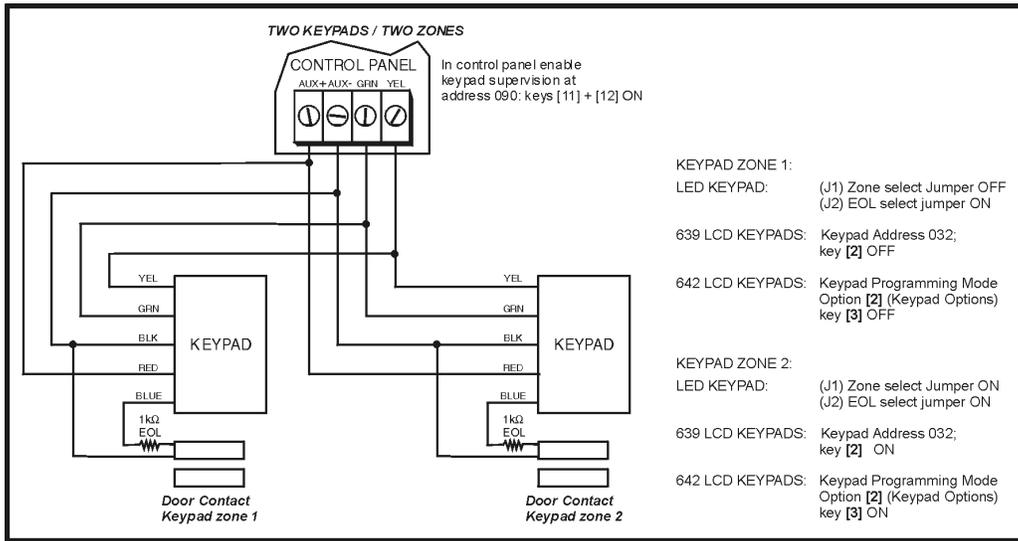
**Figure 11: Connecting One Keypad Zone**



**Figure 12: Connecting Two Keypad Zones (639 only)**



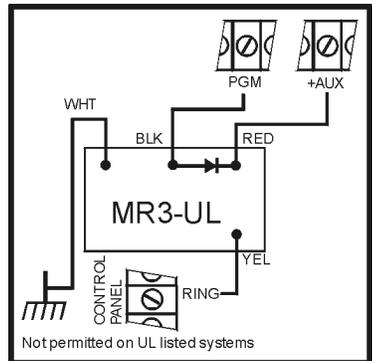
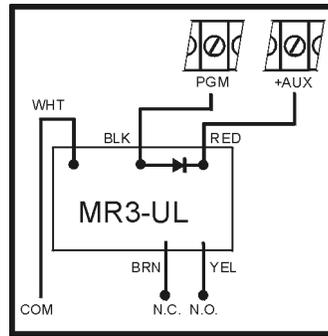
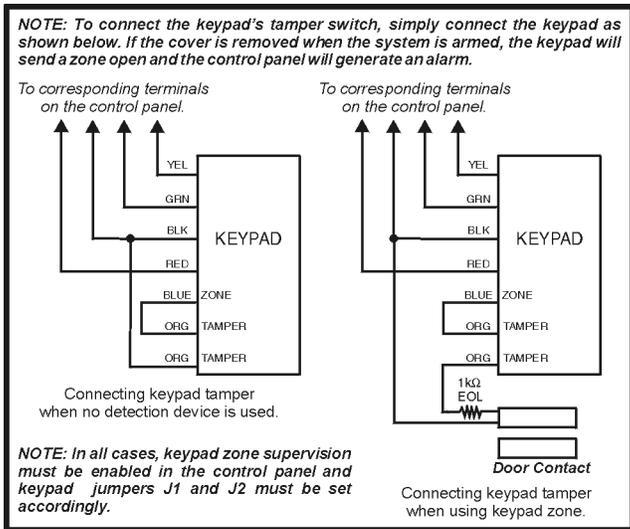
**Figure 13: Connecting Two Keypad Zones Using Two Keypads**



**Figure 14: Keypad Tamper Switch Connection**

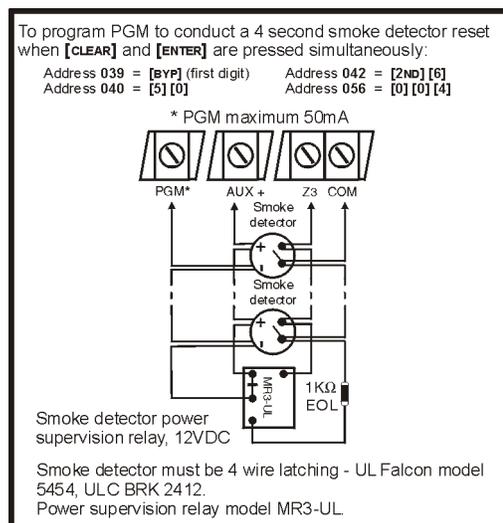
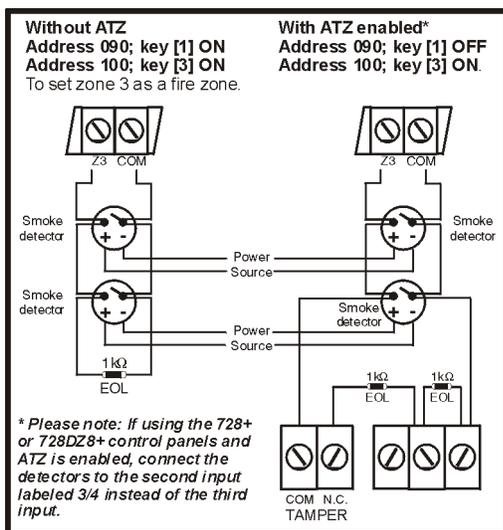
**Figure 15: PGM Output Relay**

**Figure 16: Ground Start Circuit**



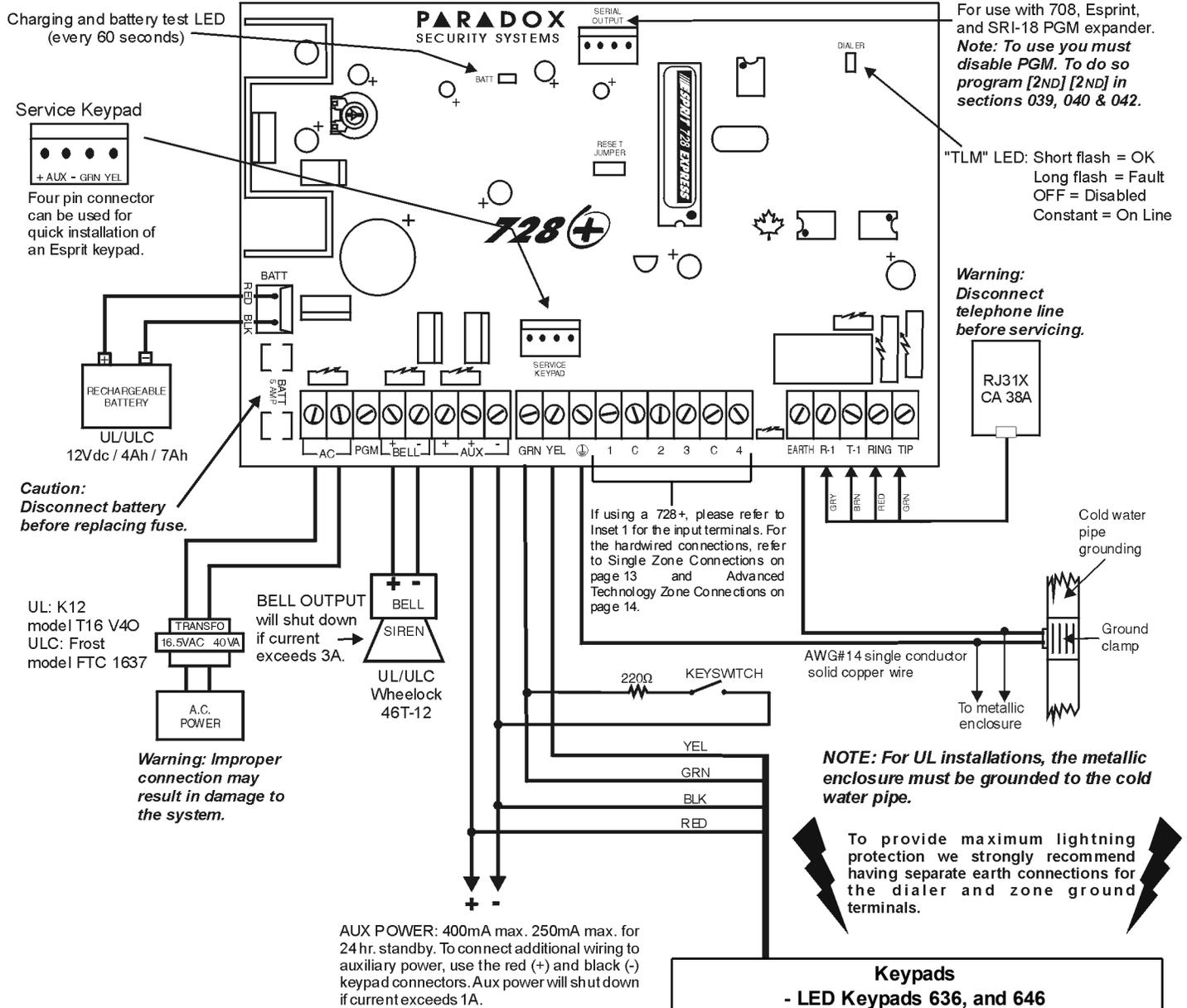
**Figure 17: Fire Alarm Zone Connections**

**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

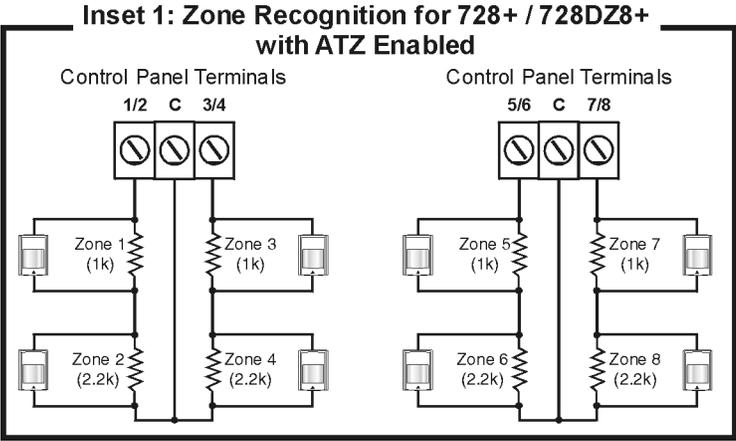


All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 or power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P, or substitute cable permitted by the National Electrical Code, ANSI/NFPA 70.

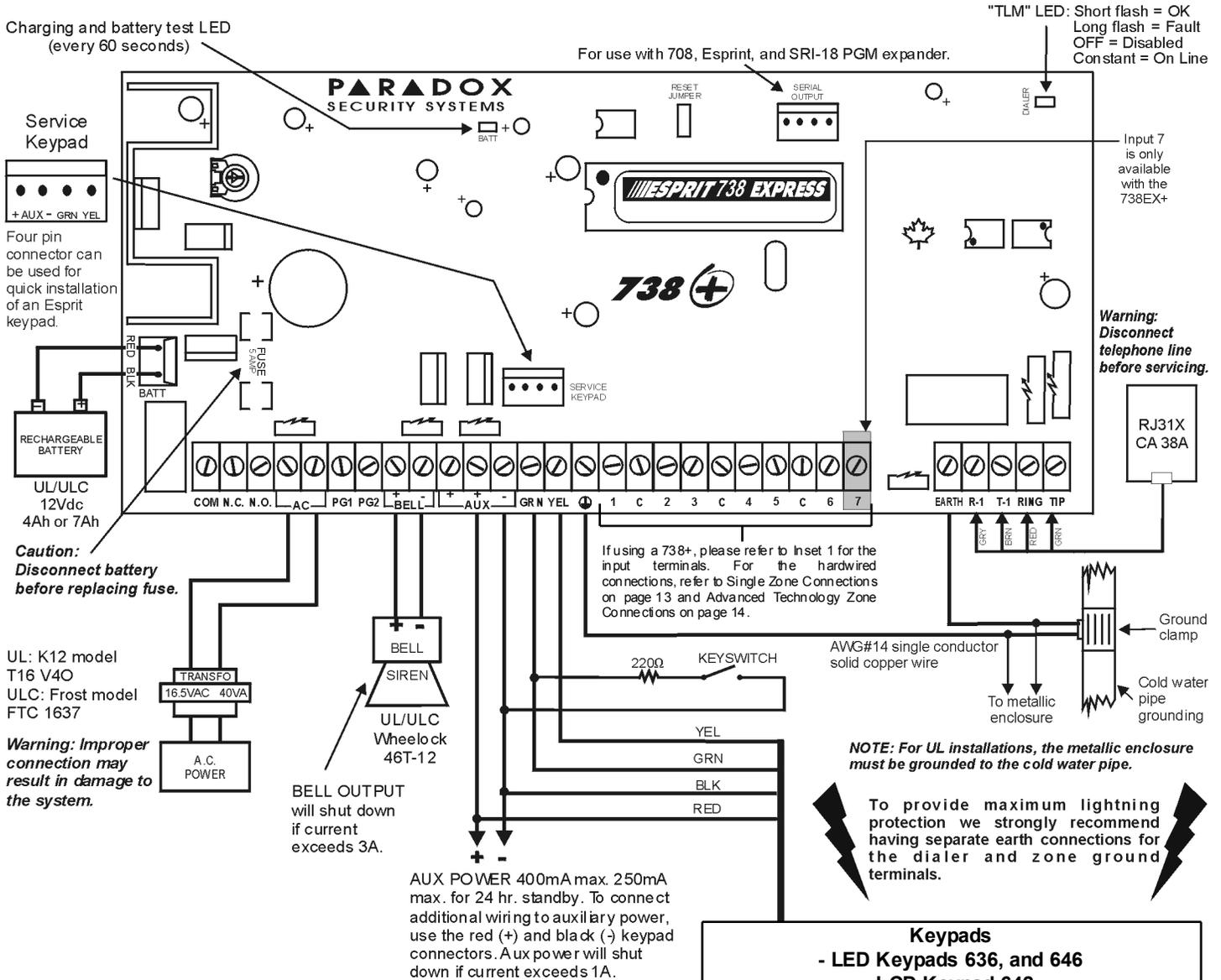
**Keypads**  
- LED Keypads 636, and 646  
- LCD Keypad 642

The maximum 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.



# ESPRIT 738+ / 738EX+ WIRING DIAGRAM

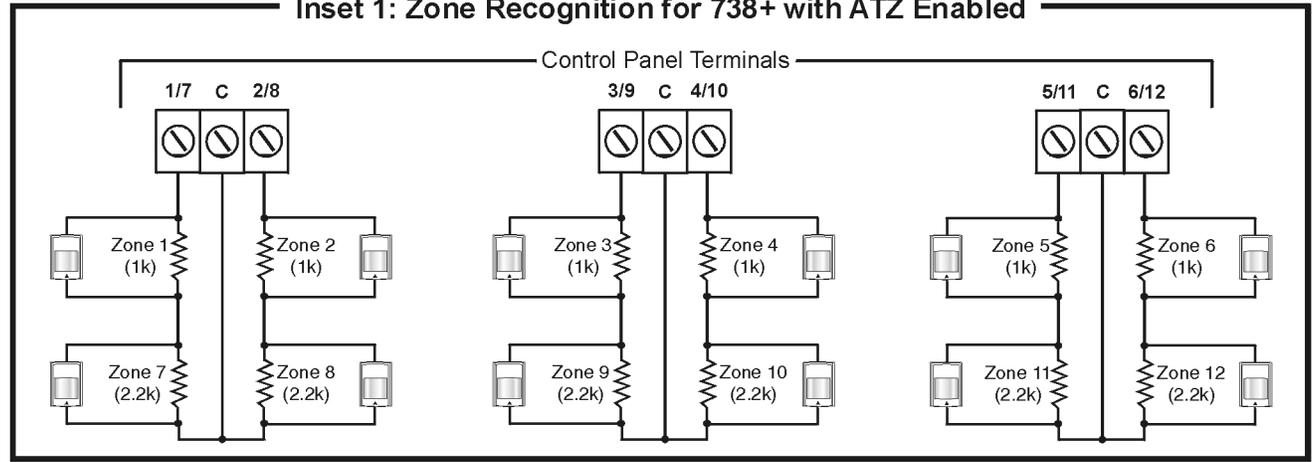


All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 or power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P, or substitute cable permitted by the National Electrical Code, ANSI/NFPA70.

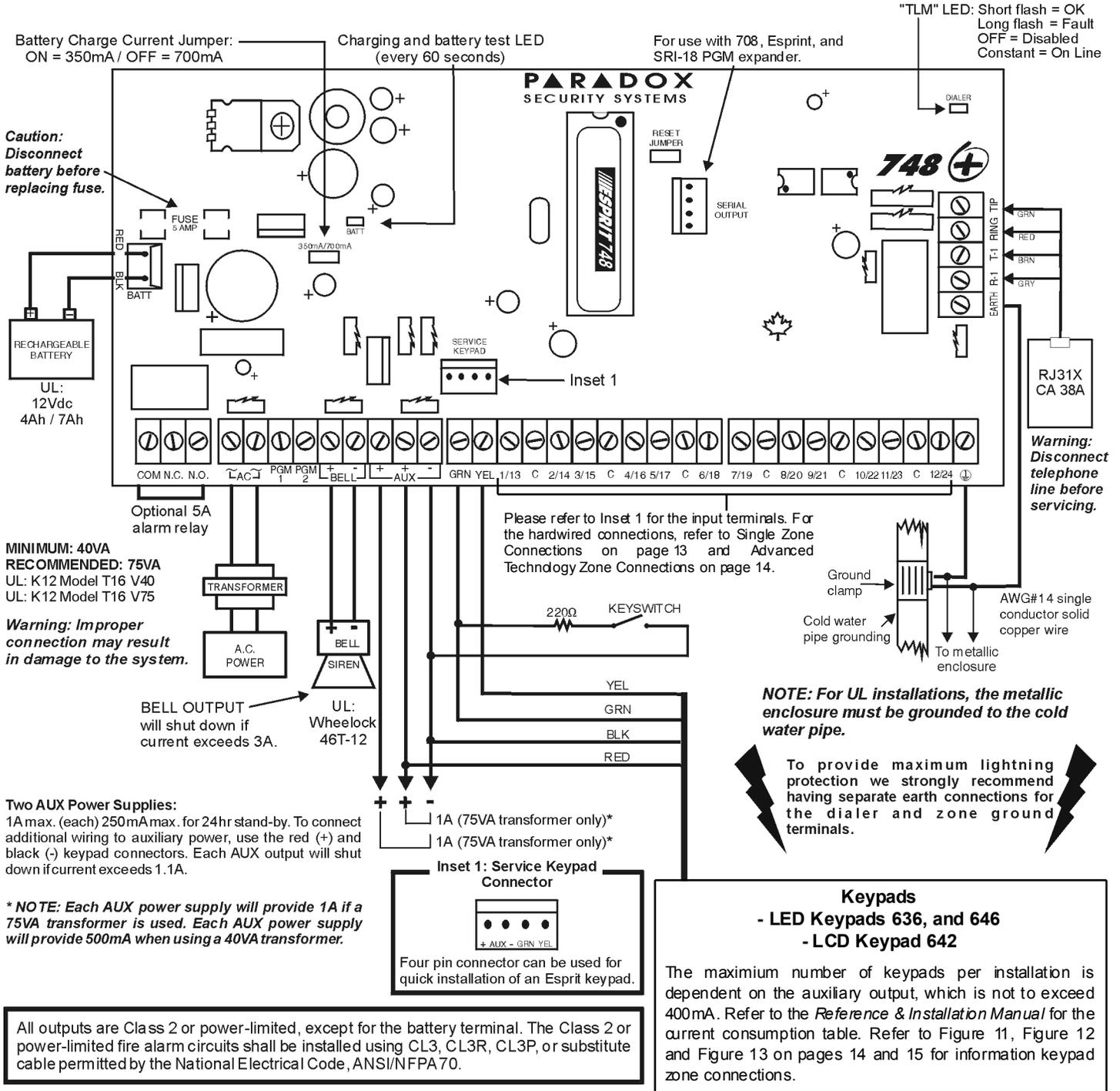
**Keypads**  
- LED Keypads 636, and 646  
- LCD Keypad 642

The maximum 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

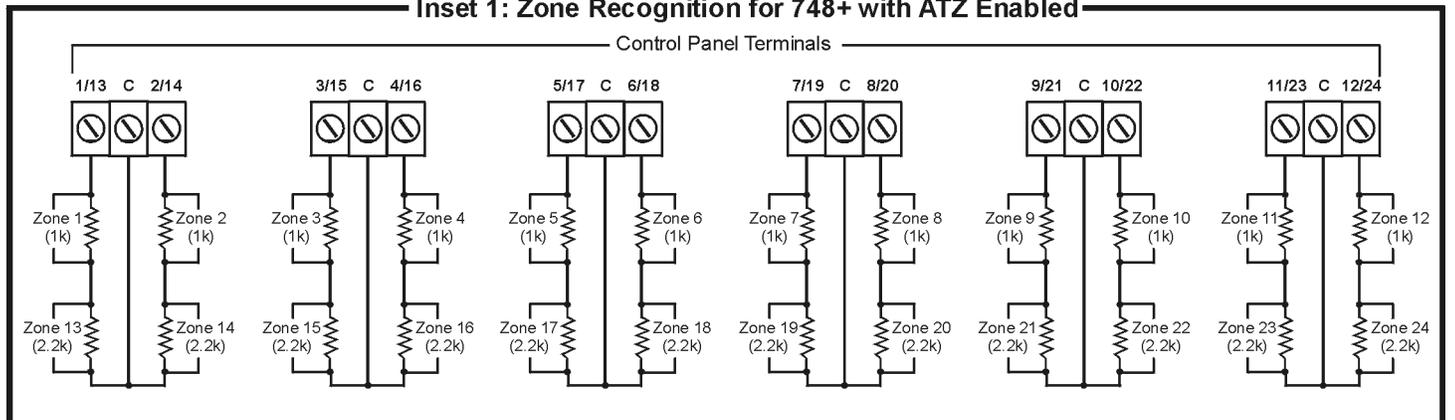


# ESPRIT 748+ WIRING DIAGRAM



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 748+ with ATZ Enabled





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