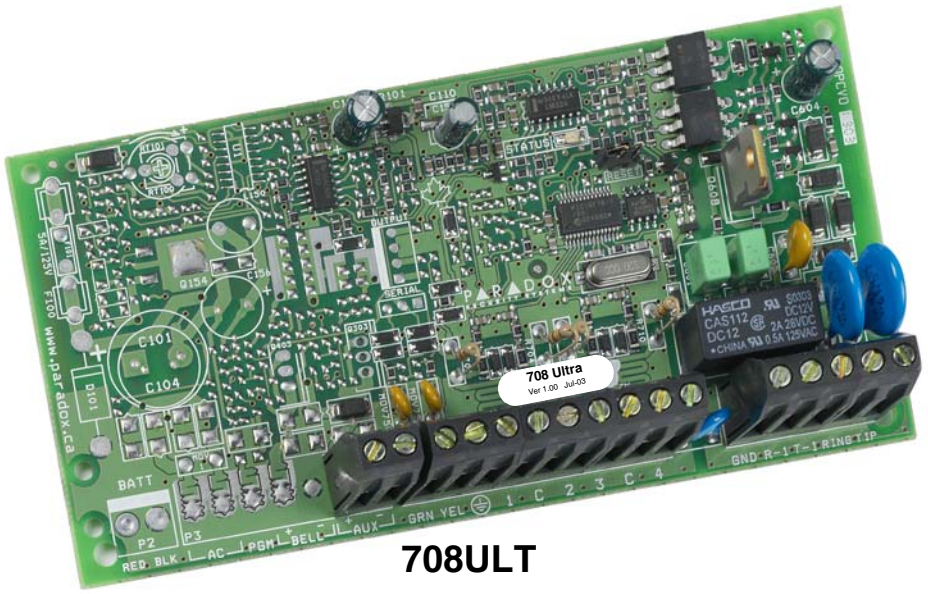
ESPRIT™ 708 ULTRA™

VERSION 1.0



708ULT

REFERENCE & INSTALLATION MANUAL

PARADOX®
SECURITY SYSTEMS

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PART 1: INTRODUCTION

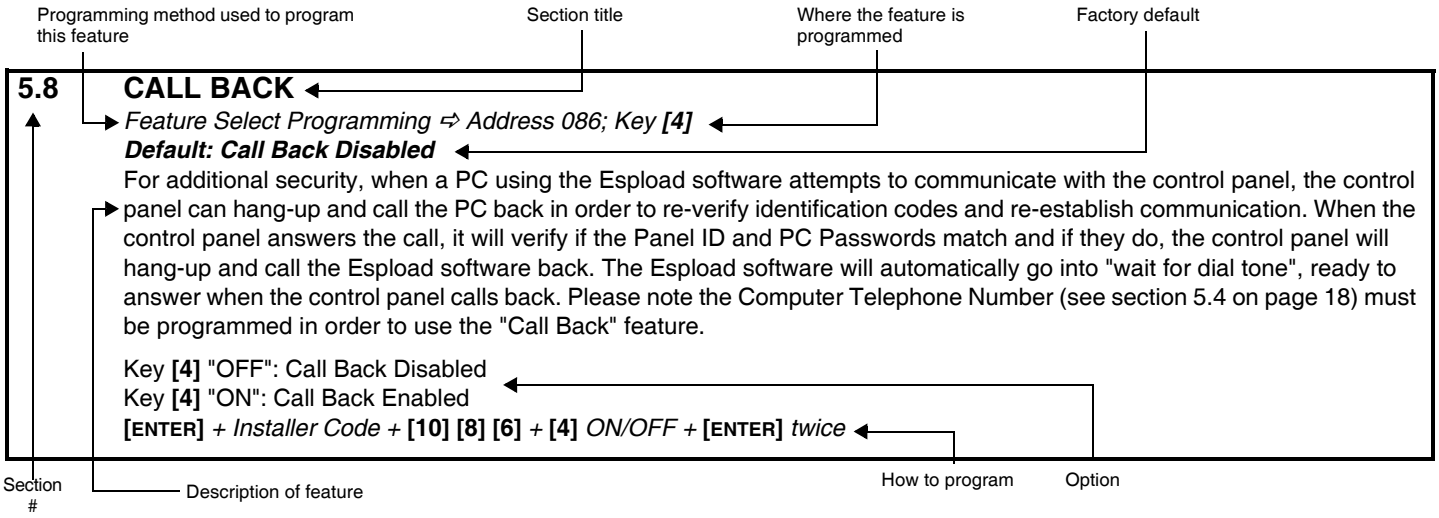
1.1 ABOUT THIS MANUAL

This manual provides all the information you will need to understand panel operation, features and functions. If you are familiar with other security control panels, we recommend that you read this manual at least once to familiarize yourself with panel features and programming. Please refer to the index for a complete list of this manual's contents.

The following terminology is used throughout this manual:
[ ] = indicates a key on the keypad
[ ] = indicates a key on the keypad must be pressed

⚠ = indicates a warning or important note

italic = indicates data that must be entered, reference to a section in the manual, or an example
"SMALL CAPS" = indicates terminals or LEDs that are located on the control panel, keypad, etc.



1.2 NEW FEATURES

- Serial or parallel wiring for ATZ connections (page 28)
- New Pager reporting options; Pager Delay (page 24), Pager Format Options (page 24) and Pager Report Event Options (page 24)
- Auto Test Report Time Option (page 26)
- New on-board green **STATUS** LED

1.3 SPECIFICATIONS

- Input voltage: 12Vdc
- Current consumption: 50mA maximum

Specifications may change without prior notice

1.4 ABOUT PARADOX

Paradox Security Systems strives to design and manufacture the best security products money could buy. Our products are of the highest quality standards and most importantly meet the needs and expectations of our customers. By refusing to settle for the limitations of existing technology, Paradox makes it clear, we are not interested in mirroring the products already on the market. Breaking down barriers to better technology is what innovation is all about.

The guiding principle behind Paradox research and development has always been to create security products that make sense. Whether the situation calls for a full range of "intelligent" and easy to use control panels, efficient peripheral security devices, or "false alarm free" motion or breaking glass detectors. We are putting all our resources into developing products that reflect our twin philosophies of innovation and user-friendliness. Now we invite you to reap the benefits.

PART 2: INSTALLATION

2.1 LOCATION AND MOUNTING

Remove the printed circuit board, mounting hardware and keypad from the packaging inside the panel box. The circuit board should not be mounted into the back of the cabinet, until all cables are pulled into the cabinet and prepared for connection. Before mounting the cabinet, push the five white nylon-mounting studs into the back of the cabinet. Select an installation site that is not easily accessible to intruders. Leave at least 2" around the panel box to permit adequate ventilation and heat dissipation. The installation site should be dry and close to an AC source, ground connection and telephone line connection.

2.2 EARTH GROUND

Connect the zone and dialer ground terminals from the control panel to the metallic enclosure and cold water pipe or grounding rod as per local electrical codes.

For maximum lightning protection, use separate earth grounds for the zone and dialer grounds as shown in Figure 2.1 on page 6. For UL installations, the metallic enclosure must be grounded to the cold water pipe or grounding rod.

2.2.1 AUXILIARY POWER TERMINALS

Connect a 12Vdc power source (external power supply, another control panel, etc.) to the AUX+ and AUX- terminals on the control panel to power the 708ULT.

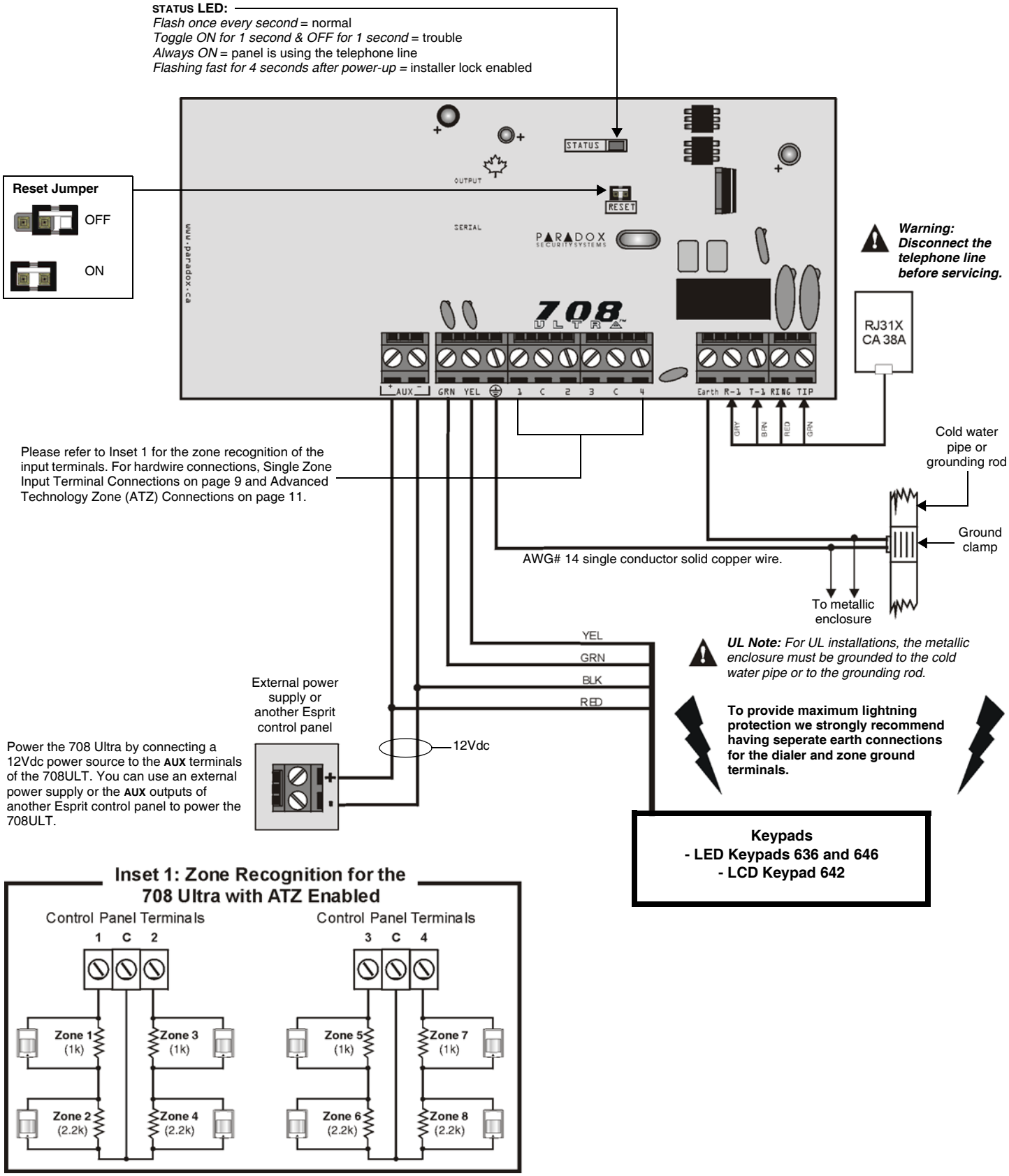
2.2.2 KEYPAD FUNCTION TEST

We recommend conducting a "power-up" test on keypads installed far from the control panel. To do so temporarily connect the keypads near the control panel and apply power. After 10 seconds, begin entering random commands on the keypad and verify that the keypad "beeps" in response to these commands. Then open a zone to ensure that the keypad and the control panel are responding to these signals. If the keypad does not respond and indicator lights do not illuminate, verify that approximately 12Vdc is present at the **AUX** terminals. If 12Vdc is present, check the keypad wiring and verify there isn't a short between the black and red keypad wires. If the keypad does not respond, please contact your local Paradox Distributor.

2.3 TELEPHONE LINE CONNECTION

Connect the incoming telephone company wires into the tip and ring connections of the control panel. Then run the wires from T-1 and R-1 to the telephone system as shown in Figure 2.1 on page 6.

Figure 2.1: 708 Ultra Control Panel PCB Layout

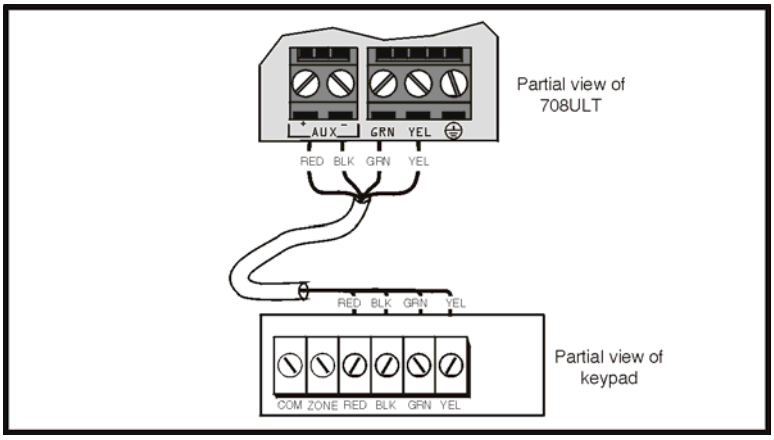


2.4 KEYPAD CONNECTIONS

Connect the four keypad connections labeled **RED**, **BLACK**, **GREEN** and **YELLOW** to the corresponding terminals on the control panel as indicated in Figure 2.2 below.

Please note that on some keypads you may have to remove the back panel to make the connections.

Figure 2.2: Keypad and Keyswitch Connections

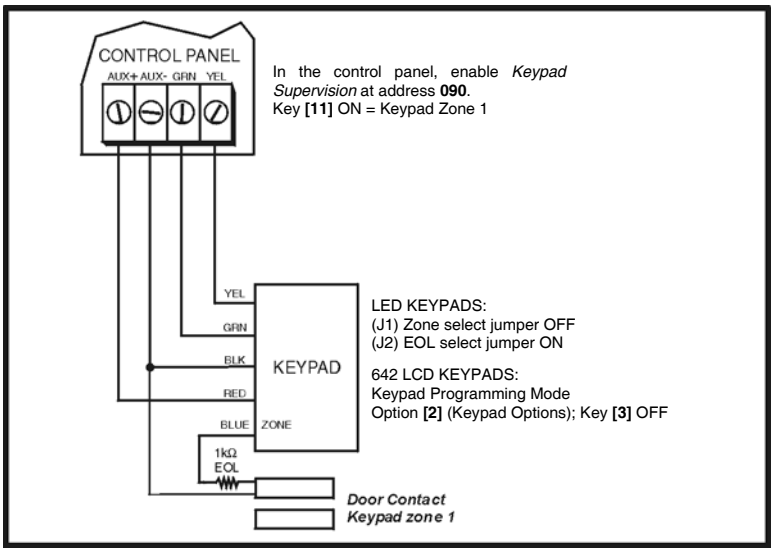


2.5 KEYPAD ZONE CONNECTIONS

Each keypad comes with one input terminal, allowing you to connect one detector or door contact directly to the keypad.

Example: A door contact located at the entry point of an establishment can be wired directly to the input terminal of the entry point keypad instead of wiring the door contact all the way to the control panel.

Figure 2.3: Connecting One Keypad Zone

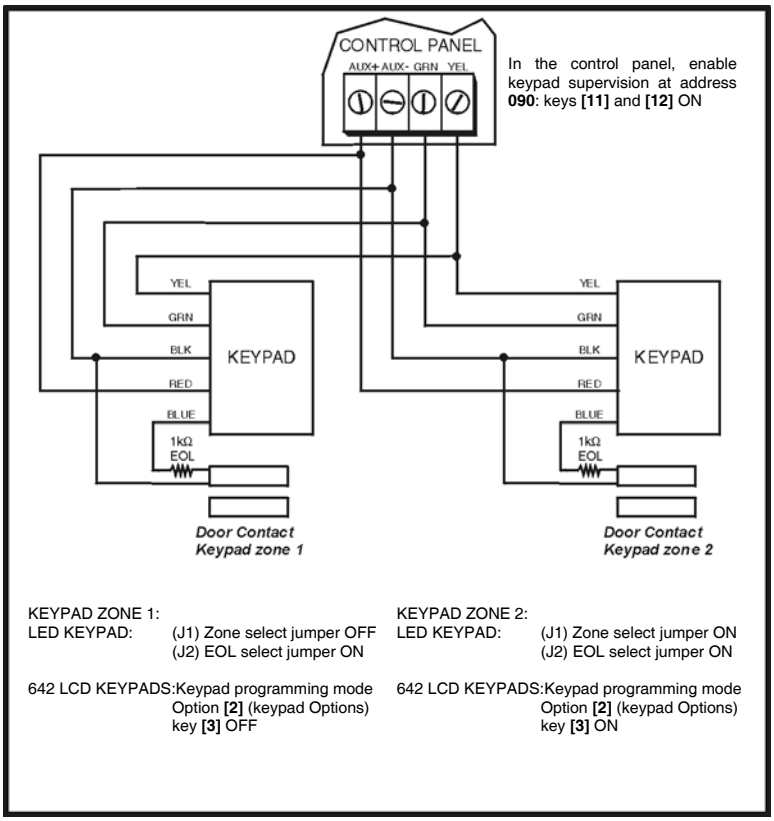


Regardless of the number of keypads in the system, the control panel supports a maximum of two keypad zones. The control panel will recognize these added zones as shown in Table 1 on page 8.

If using two keypad zones, one keypad must be defined as keypad zone 1 while the other must be defined as keypad zone 2 (see Figure 2.4 on page 8).

Example: A security installation is comprised of five keypads. Of these five keypads only two can have their zone input terminals enabled (see Figure 2.4 on page 8). The other three keypads must have their zone input terminals disabled as described Disabling 636 and 646 Keypad Zones and Disabling 642 Keypad Zones on page 8.

Figure 2.4: Connecting Two Keypad Zones Using Two Keypads



Disabling 636 and 646 Keypad Zones

If the keypad zone input terminal is not being used, disable it by shorting the blue zone wire with the black "com" wire of the keypad.

Disabling 642 Keypad Zones

If the keypad zone input terminal is not being used, disable it by shorting the zone and com terminals of the keypad with a 1kΩ resistor.

Table 1: *Keypad Zone Recognition Table*

If using an LED keypad, set the Zone Select Jumper (J1) on the back of the keypad:

Zone Select Jumper J1 OFF = Keypad Zone 1
Zone Select Jumper J2 ON = Keypad Zone 2

⚠ ***If the Zone Select Jumper is changed, the control panel will only recognize the change when the keypad is disconnected and reconnected.***

If using a 642 LCD Keypad, program the keypad definition as follows:

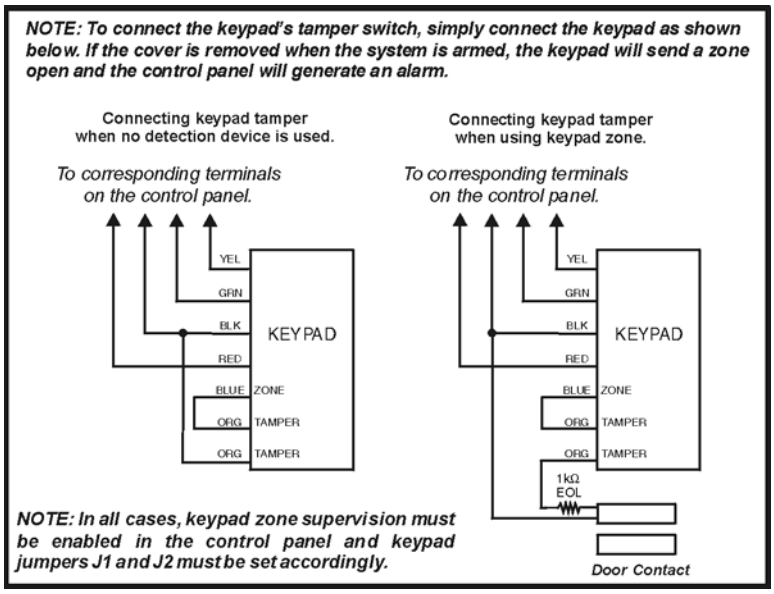
Keypad Programming Mode, option **[2]** (Keypad Options); Key **[3]** OFF = Keypad Zone 1
Keypad Programming Mode, option **[2]** (Keypad Options); Key **[3]** ON = Keypad Zone 2

The control panel will display open keypad zones as follows:

ATZ disabled	ATZ enabled
Keypad Zone 1 = Zone 5	Keypad Zone 1 = Zone 9
Keypad Zone 2 = Zone 6	Keypad Zone 2 = Zone 10

2.6 CONNECTING A TAMPER SWITCH ON A KEYPAD

Figure 2.5: Connecting a Tamper switch on a Keypad



Once the keypad zones have been defined you must enable Keypad Zone Supervision (see section 7.5 on page 28 and section 7.6 on page 28) in the control panel.

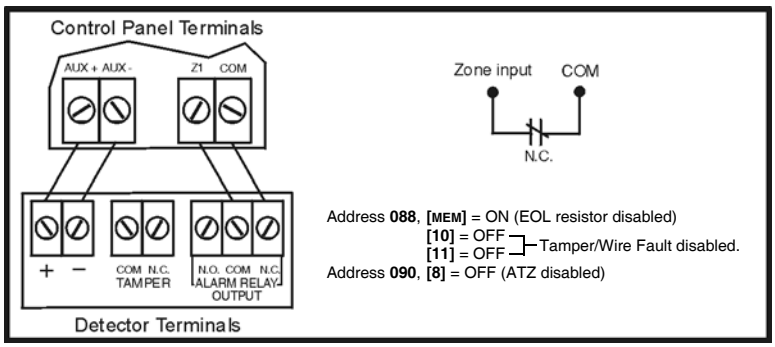
2.7 SINGLE ZONE INPUT TERMINAL CONNECTIONS

The system hardware recognizes the following single zone input terminal connections. For more information on programming the options mentioned below see ZONE DEFINITIONS on page 27.

2.7.1 N.C. CONTACTS, WITHOUT EOL RESISTOR

If your security installation does not require tamper or wire fault detection, connect the detection devices and program the control panel as shown in Figure 2.6 on page 9. This setup will communicate an open or closed zone to the control panel, displaying open zones on the keypad. Do not use devices with N.O. contacts in this setup, as this will cause the control panel to remain in alarm.

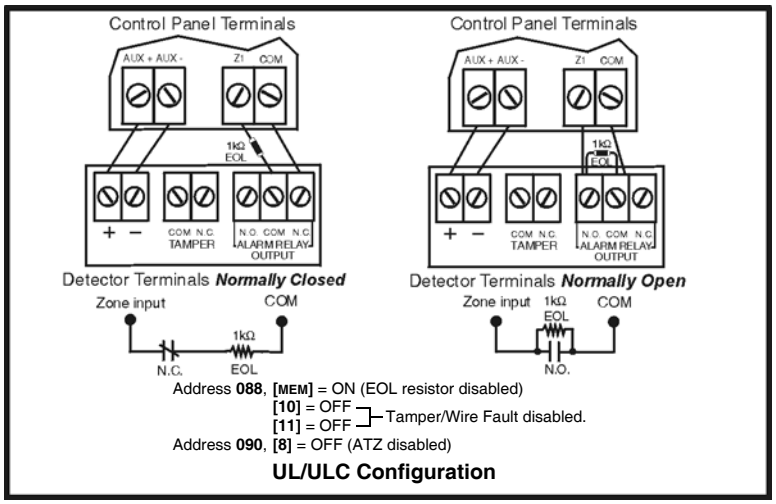
Figure 2.6: N.C. Contacts, without EOL Resistor



2.7.2 N.O. AND N.C. CONTACTS, WITH EOL RESISTOR (UL/ULC)

If your security installation does not require tamper or wire fault recognition but some detection devices will use normally open contacts. Connect all detection devices using a 1kΩ end of line (EOL) resistor and program the control panel as shown in Figure 2.7 on page 10. This setup will communicate an open or closed zone to the control panel, displaying open zones on the keypad.

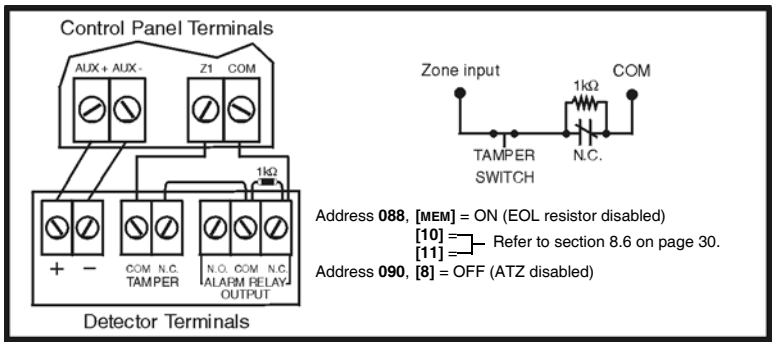
Figure 2.7: N.O. and N.C. Contacts, with EOL Resistor (UL/ULC)



2.7.3 N.C. Contacts, Without EOL Resistor, With Tamper Recognition

If your security installation requires tamper recognition, all detection devices must use normally closed contacts. Connect the devices and program the control panel as shown in Figure 2.8 on page 10. This setup will communicate an open or closed zone to the control panel, displaying open zones on the keypad. The control panel will also communicate any detected tampers (cuts) as per Tamper / Wire Fault Recognition Options on page 30 (section 8.6).

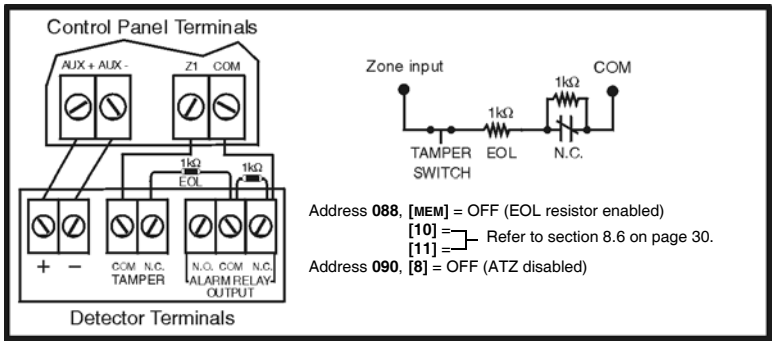
Figure 2.8: N.C. Contacts, without EOL Resistor, with Tamper Recognition



2.7.4 N.C. Contacts, With EOL Resistor, With Tamper and Wire Fault Recognition (UL/ULC)

If your security installation requires tamper (cut) and wire fault (short) recognition, all detection devices must use normally closed contacts. Connect the devices and program the control panel as shown in Figure 2.9 on page 10. This setup will communicate an open or closed zone to the control panel, displaying open zones on the keypad. The control panel will also communicate any detected tampers (cuts) and/or wire faults (short) as per Tamper / Wire Fault Recognition Options on page 30.

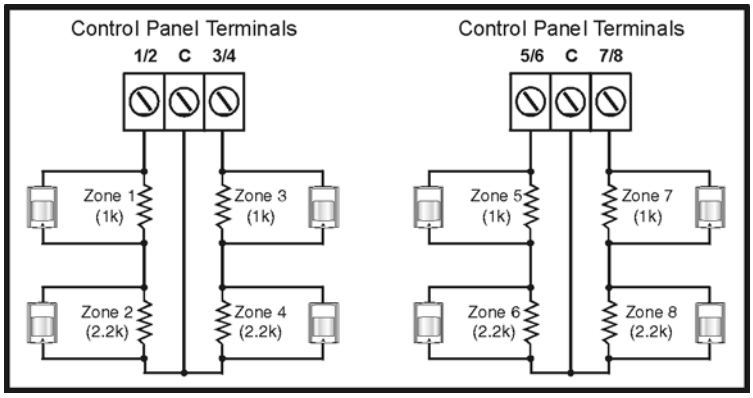
Figure 2.9: N.C. Contacts, with EOL Resistor, with Tamper and Wire Fault Recognition (UL/ULC)



2.8 ADVANCED TECHNOLOGY ZONE (ATZ) CONNECTIONS

Enabling the ATZ feature (see Advanced Technology Zoning (ATZ) on page 27) allows you install two detection devices per input terminal, therefore, doubling zone capacity of the control panel. Advanced Technology Zoning is a software-oriented feature, there is no need for extra modules, simply install the devices as shown in Figures 2.11 to 2.14 on pages 11 and 12. The control panel will recognize the installed devices as shown in Figure 2.10 on page 11. The extra zones function exactly like any other zone displaying zone status on the keypad and sending separate alarm codes for each zone. For more information on programming the options mentioned in the following sections refer to see ZONE DEFINITIONS on page 27.

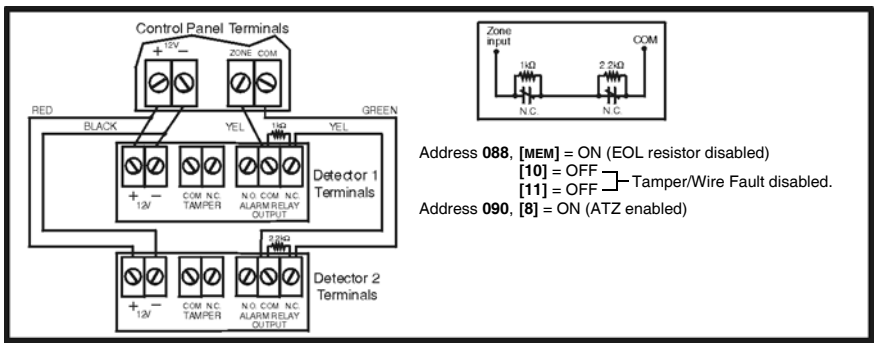
Figure 2.10: Zone Recognition with ATZ Enabled



2.8.1 N.C. CONTACTS, WITHOUT EOL RESISTOR

If your security installation does not require tamper or wire fault recognition but you are using the ATZ feature, connect the detection devices and program the control panel as shown in Figure 2.11 on page 11. Do not use devices with normally open contacts, as this will cause the system to remain in alarm. This setup will communicate the status of each device to the control panel (see Figure 2.10 on page 11), displaying open zones on the keypad.

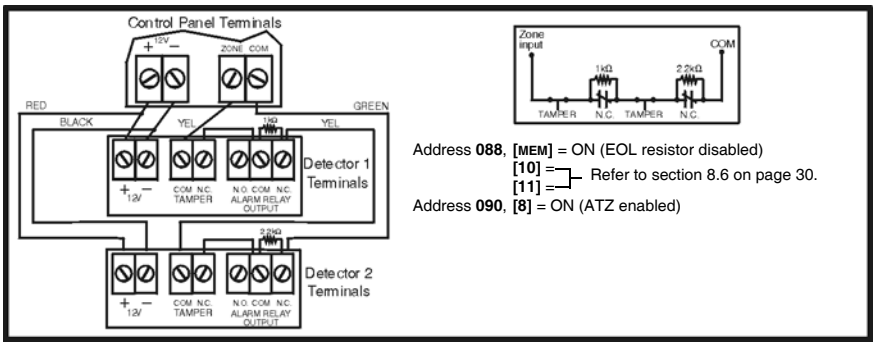
Figure 2.11: N.C. Contacts, without EOL Resistor



2.8.2 N.C. CONTACTS, WITHOUT EOL RESISTOR, WITH TAMPER RECOGNITION

If your security installation requires tamper recognition and you are using the ATZ feature, connect the detection devices and program the control panel as shown in Figure 2.12 on page 12. Do not use devices with normally open contacts, as this will cause the zone to remain open. This setup will communicate the status of each zone to the control panel (see Figure 2.10 on page 11), displaying open zones on the keypad. The control panel will also communicate any detected tampers (cuts) on the system as per Tamper / Wire Fault Recognition Options on page 30.

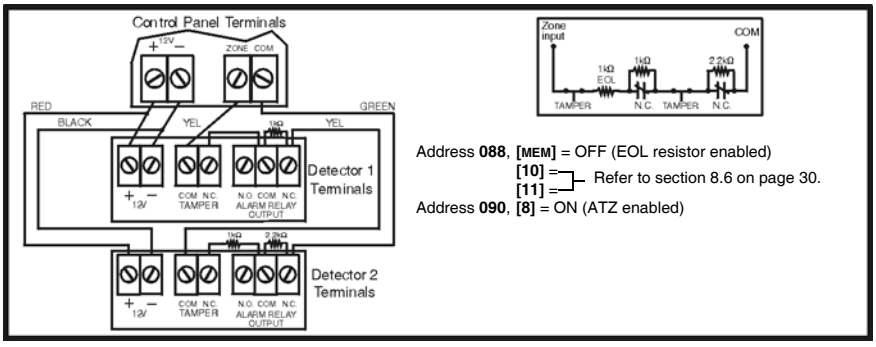
Figure 2.12: N.C. Contacts, without EOL Resistor, with Tamper Recognition



2.8.3 N.C. CONTACTS, WITH EOL RESISTOR, WITH TAMPER & WIRE FAULT RECOGNITION (UL/ULC)

If your system requires tamper (cut) and wire fault (short) recognition, connect two detection devices to one input terminal with a 1kΩ end of line (EOL) resistor and program the control panel as shown in Figure 2.13 on page 12. Do not use devices with normally open contacts, this will cause the zone to remain open. This setup will communicate the status of each zone to the control panel (see Figure 2.13 on page 12), displaying open zones on the keypad. Any tampers (cuts) and/or wire fault (shorts) detected on the system are communicated as per Tamper / Wire Fault Recognition Options on page 30.

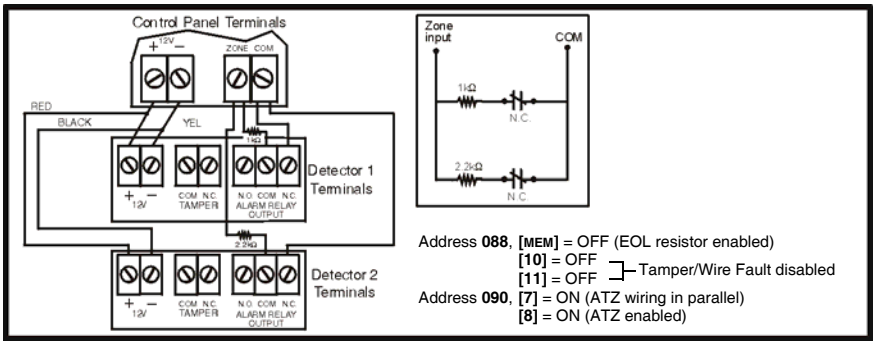
Figure 2.13: N.C. Contacts, with EOL Resistor, with Tamper and Wire Fault Recognition (UL/ULC)



2.8.4 ATZ PARALLEL WIRING

If your system is using the ATZ feature and requires the connection of two detection devices to one input to be in parallel, connect the devices and program the control panel as shown in Figure 2.14 on page 12. Do not use devices with normally open contacts as this will cause the zone to remain open. This setup will communicate the status of each zone to the control panel, displaying open zones on the keypad. For more information, see ATZ Parallel Wiring on page 28.

Figure 2.14: ATZ Parallel Wiring



Address 090, key [7] (page 28) must be ON in order to connect the zones in parallel.

PART 3: ACCESS CODES

3.1 INSTALLER CODE

Streamline - Section 00 ⇨ Hexa Programming - Addresses 000 to 002

Default: 080808

Only the installer code allows you to program all control panel settings. To program any setting in the control panel you must enter the programming mode by pressing the **[ENTER]** key followed by the installer code. The installer code contains six digits and each digit can be any value from 0 to 9. To change the installer code press:

[ENTER] *+ Installer Code +* **[10] [10] [10]** *+ First 2 digits +* **[10] [10] [1]** *+ Next 2 digits +* **[10] [10] [2]** *+ Final 2 digits +* **[ENTER]**

3.2 INSTALLER LOCK

Decimal Programming ⇨ Address 058

Default: Address Empty

Program 147 into address 058 to lock all programming. When the installer lock is enabled, the **STATUS** LED will flash and the dialer relay will make a clicking noise (made by the relay opening and closing) for 4 seconds during power up. Hence, performing a hardware reset (see Power Down Reset on page 30) will not affect the current settings. To remove the installer lock, enter any value besides 147.

[ENTER] *+ Installer Code +* **[10] [5] [8]** *+* **[1] [4] [7]** *+* **[ENTER]**

PART 4: PROGRAMMING METHODS

The 708 Ultra control panels can be programmed using either the keypad or the Espload Software (V3.0 or higher). We highly recommend programming the control panels using the Espload Software, as it simplifies the process and reduces the potential of data entry errors. You can also program the control panels manually by using a keypad.

4.1 ESPLOAD SOFTWARE

With the Espload Software (V3.0 or higher), you can program the 708 Ultra control panels remotely via modem or locally using an ADP-1 adapter. The advanced Espload software can execute fast uploads or downloads and provides many powerful features. These include a comprehensive "monitoring" mode to oversee all panel activity, a "scheduler" to initiate pre-programmed tasks at set intervals, and a "batch" mode to carry out pre-programmed tasks following a call from the control panel. Using Espload there is no limit to the number of account files or panel defaults created. Espload can also be converted to the language of your choice. Contact your local Paradox Distributor for your free copy of the Espload software.

4.2 KEYPAD

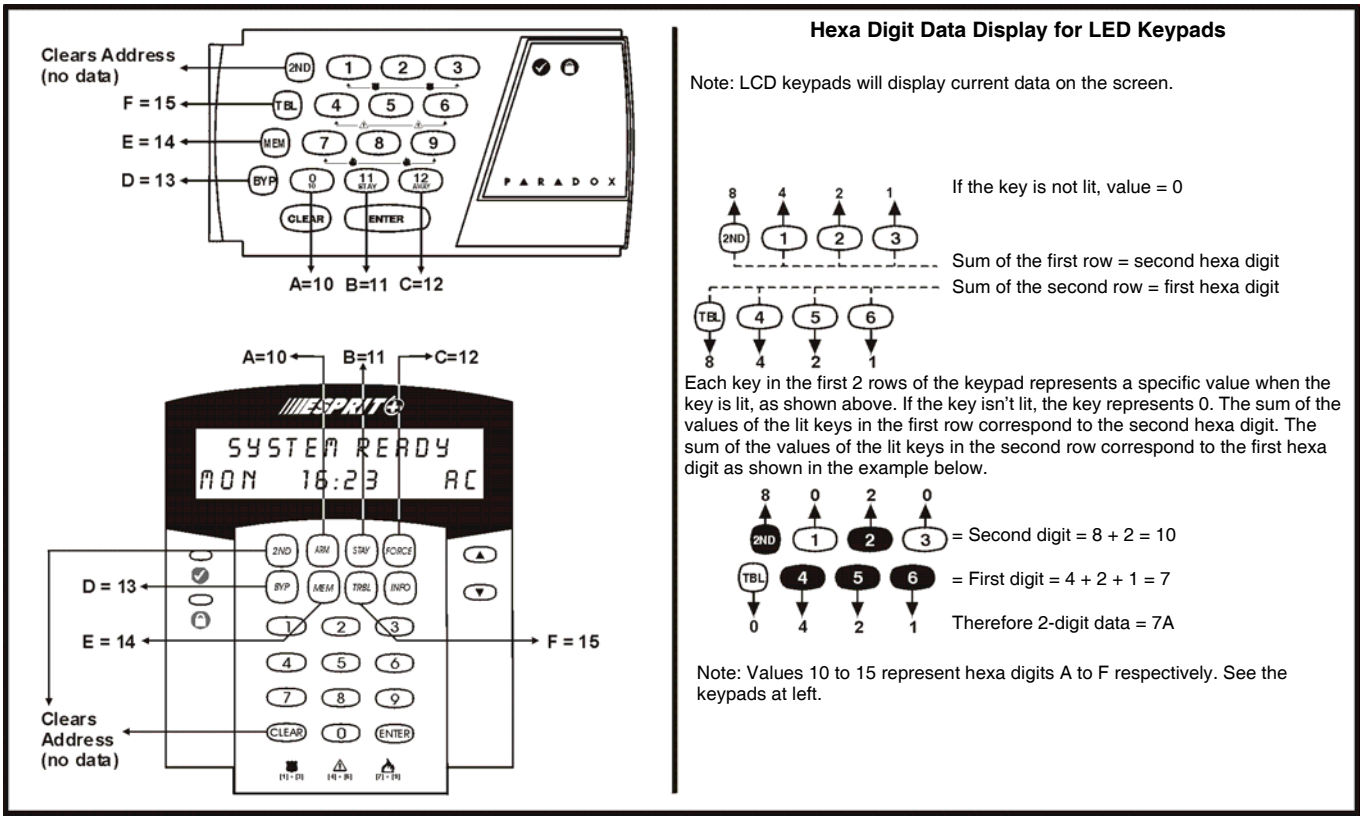
When programming, use the supplied "Programming Guide" to keep track of which addresses were programmed and how. Before programming the control panel, we recommend you read this manual in order to acquire a good understanding of the control panel and its features. When programming with the keypad, certain addresses are programmed using different methods. These methods are described in detail below. Each section in this manual will reference the appropriate programming method.

4.2.1 HEXA PROGRAMMING

Addresses 000 to 043 and 300 to 527 are programmed using the Hexa Programming method. In this mode, you can enter any hexa-digit from 0 to F where keys **[1]** to **[9]** represent digits 1 to 9 respectively; the other keys represent hexa-digits A to F as shown in Figure 4.1. To program using the Hexa Programming method:

1. Press **[ENTER]** + Installer Code.
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 4.1.
5. Enter 2-digit data; after entering data you do not need to press enter, the software will automatically save the data into the selected address.
6. Return to step 2 to continue programming or press **[CLEAR]** to exit programming mode.

Figure 4.1: Hexa Programming



4.2.2 HEXA STREAMLINED SECTION PROGRAMMING

This is an alternate method to Hexa Programming. The addresses (000 to 043 and 300 to 527) programmed in the Hexa Programming method 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 re-enter addresses. When entering the final digit, the software will automatically advance to the next section.

*Example: If you complete the "Programming Guide" with the desired data, you can program the 68 sections by entering all digits without pressing **[ENTER]** or entering any other addresses. This greatly reduces programming time.*

Note: the keypad will not display the current data in the Hexa Streamlined Programming method. To program using the Hexa Streamlined Section method:

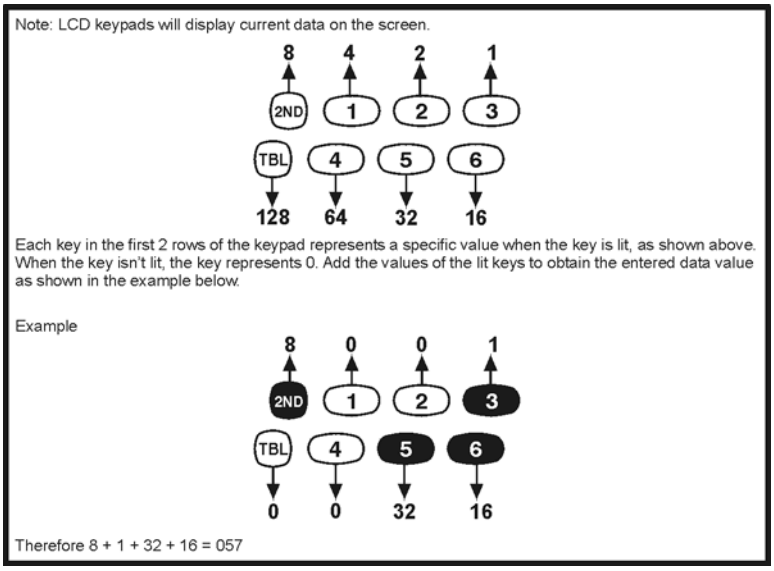
1. Press **[ENTER]** + Installer code + **[7]**.
2. The **[ENTER]** and **[2ND]** keys will flash to indicate you are in streamlined programming mode.
3. Enter 2-digit section (00 to 67).
4. The **[ENTER]** key will remain on and the **[2ND]** key will turn off.
5. Enter 8-digit data to program the section.
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 to continue programming or press **[CLEAR]** to exit programming mode.

4.2.3 DECIMAL PROGRAMMING

Addresses 044 to 061 are programmed using the Decimal Programming method. Values entered must contain three digits from 000 to 255 (where the **[10]** key = 0). To program using the Decimal Programming method:

1. Press **[ENTER]** + Installer Code.
2. The **[ENTER]** key will flash to indicate you are in programming mode.
3. Enter 3-digit address (044 to 061).
4. The keypad will now display the current 3-digit data currently saved at this address as described in Figure 4.2.
5. Enter 3-digit data (decimal) value; after entering data you do not need to press **[ENTER]**, the software will automatically save the data into the selected address.
6. Return to step 2 to continue programming or press **[CLEAR]** to exit programming mode.

Figure 4.2: Decimal Display For LED Keypads



4.2.4 FEATURE SELECT PROGRAMMING

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

1. Press **[ENTER]** + Installer Code.
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. The ON/OFF status of the keys determines the selected features as described in the "Programming Guide" and in the appropriate sections of this manual. Turn the keys ON/OFF by pressing the appropriate key until the desired options are set. Then 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.

PART 5: PANEL SETTINGS FOR ESPLOAD

5.1 PANEL ANSWER OPTIONS

Streamline - Section 00 ⇨ Hexa Programming - Address 003

Default: Answering Machine Override Disabled (Maximum 8 rings)

The following two options will define how the control panels answer an incoming call from a computer using Esplod.

In order for the Esplod software to remotely communicate with the control panel, call the installation site twice using the Esplod Software. To do so, program the first digit in address 003 with any value from 1 to F (see Table 2 on page 17), this value represents the delay period the control panel will wait between the first and second call. Using the Esplod software, call the installation site and on the second ring press **[ENTER]** on the keyboard to hang-up. After hanging up, the Esplod software will immediately call the installation site back. If the installation site is called back within the programmed delay period, the control panel will override the answering machine or service by picking-up on the first ring. To disable this option program **[2ND]** or **[1]** as the first digit in address 003.

*Example: A security installation is using an answering machine set to answer after 3 rings, the first digit at address 003 has been programmed with 5 (40 sec.) and the second digit has been programmed with 8. When you call the installation site with the Esplod software the first time, wait two rings and press **[ENTER]** on the keyboard. The Esplod software will immediately call the installation site back. If the second call is made within 40 seconds, the panel will pick up the line on the first ring. If it takes more than 40 seconds, the panel will not answer on the first ring and the answering machine will answer after three rings.*

Table 2: *Answering Machine Override Options*

[2ND] or **[1]** = Answering Machine Override disabled			
[2] = 16 seconds	**[4]** = 32 seconds	**[6]** = 48 seconds	**[8]** or **[TBL] / [TRBL]** = 60 seconds
[3] = 24 seconds	**[5]** = 40 seconds	**[7]** = 56 seconds	

[ENTER] *+ Installer Code +* **[10] [10] [3]** *+ 1st digit + 2nd digit (01 to 15 rings) +* **[ENTER]**

The second digit represents the number of rings the control panel will wait before picking-up the line. If the line is not answered after the number of re-programmed rings, the control panel will answer the call. Note the control panel resets the "ring" counter every 64 seconds. Therefore, if someone or an answering machine answers a call before the number of pre-programmed rings has elapsed, the control panel will keep the number of rings in memory for 64 seconds. If you hang-up and call the installation site back within 64 seconds, the control panel will continue to count the number of rings from the first call. After reaching the total number of rings, the control panel will answer the call. The number of rings can be set from 1 to 15 by programming the second digit at address 003 with any hexa-digit from 1 to F. Program the second digit with **[2ND]** to disable this option.

*Example: Address 003 = **[2ND] [8]**. Using the Esplod software, you call an installation site where there is no answering machine or service and no one is home. Since there is no one to answer the telephone call, the control panel will pick-up the line on the eighth ring. If someone happens to be home and answers the telephone, say, after three rings, the control panel will keep the three rings in memory for 64 seconds. If you hang-up and call back the installation site within 64 seconds the control panel will answer the call on the fifth ring. If you call back after 64 seconds the "ring" counter will have been reset and the control panel will answer the call on the eighth ring.*

If you program four or less rings, the control panel will always reset the counter.

5.2 PANEL IDENTIFIER

Streamline - Section 01 ⇨ Hexa Programming - Addresses 004 and 005

This four-digit code identifies the control panel to the Esplod software before initiating upload. Program the same 4-digit code into the control panel and the Esplod software before attempting to establish communication. If the codes do not match, the control panel will not establish communication. Enter any hexa digits from 0 to F.

[ENTER] *+ Installer Code +* **[10] [10] [4]** *+ First 2 digits +* **[10] [10] [5]** *+ Final 2 digits +* **[ENTER]**

5.3 PC PASSWORD

Streamline - Section 01 ⇨ Hexa Programming - Addresses 006 and 007

This four-digit download password identifies the PC to the panel, before beginning the download process. Enter the same password into the Esplod software and the control panel. If the passwords are not the same, Esplod will not establish communication. Enter any hexa digits from 0 to F.

[ENTER] *+ Installer Code +* **[10] [10] [6]** *+ First 2 digits +* **[10] [10] [7]** *+ Final 2 digits +* **[ENTER]**

5.4 COMPUTER TELEPHONE NUMBER

Streamline Section 02 and 03 ⇨ Hexa Programming - Address 008 to 015

The control panel will dial this telephone number when trying to initiate communication with the PC (see Call Esploadon page 18). There is no default telephone number and you can enter any number from 0 to 9 up to a maximum of 16 digits. If you would like to enter any special keys or functions refer to Table 4 on page 21. If the telephone number contains less than 16 digits, press the **[TBL] / [TRBL]** key to indicate the end of the telephone number.

[ENTER] + *Installer Code* + **[7]** + **[10] [2]** + *Telephone Number (if less than 16 digits press* **[TBL] / [TRBL]***)* + **[ENTER]**

5.5 CALL ESPLOAD

Key Access Programming ⇨ key ***[TBL] / [TRBL]***

The control panel will dial the telephone number entered at addresses 008 to 015 (see section 5.4 on page 18) in order to communicate with the Esploadsoftware. The control panel and the computer will verify that the Panel Identifier and the PC Password match before establishing communication (see section 5.2 and section 5.3 on page 17).

Press **[ENTER]** + *Installer Code* + **[TBL] / [TRBL]**

5.6 ANSWER ESPLOAD

Key Access Programming ⇨ Key ***[AWAY]***

By entering the code sequence listed below, you can manually force the control panel to answer any incoming calls from the Esploadsoftware. This option can also be used to perform an on-site upload/download by connecting your computer directly to the control panel using an ADP-1 line adapter and manually answering Esploadfrom the control panel. In Esloadgo to:

Main Menu ⇨ Program Setup ⇨ Modem and Printer Configuration

Set "Dialing Condition" to "Blind Dial". Program the panel telephone number in Esloadand follow the instructions on the ADP-1 adapter. When the computer has dialed press:

[ENTER] + *Installer Code* + **[AWAY]**

5.7 CANCEL COMMUNICATION

Key Access Programming ⇨ Key ***[STAY]***

Use the Installer Code to cancel all communication and erase any unreported events in the buffer until the next reportable event.

[ENTER] + *Installer Code* + **[STAY]**

5.8 CALL BACK

Feature Select Programming ⇨ Address 086; Key ***[4]***

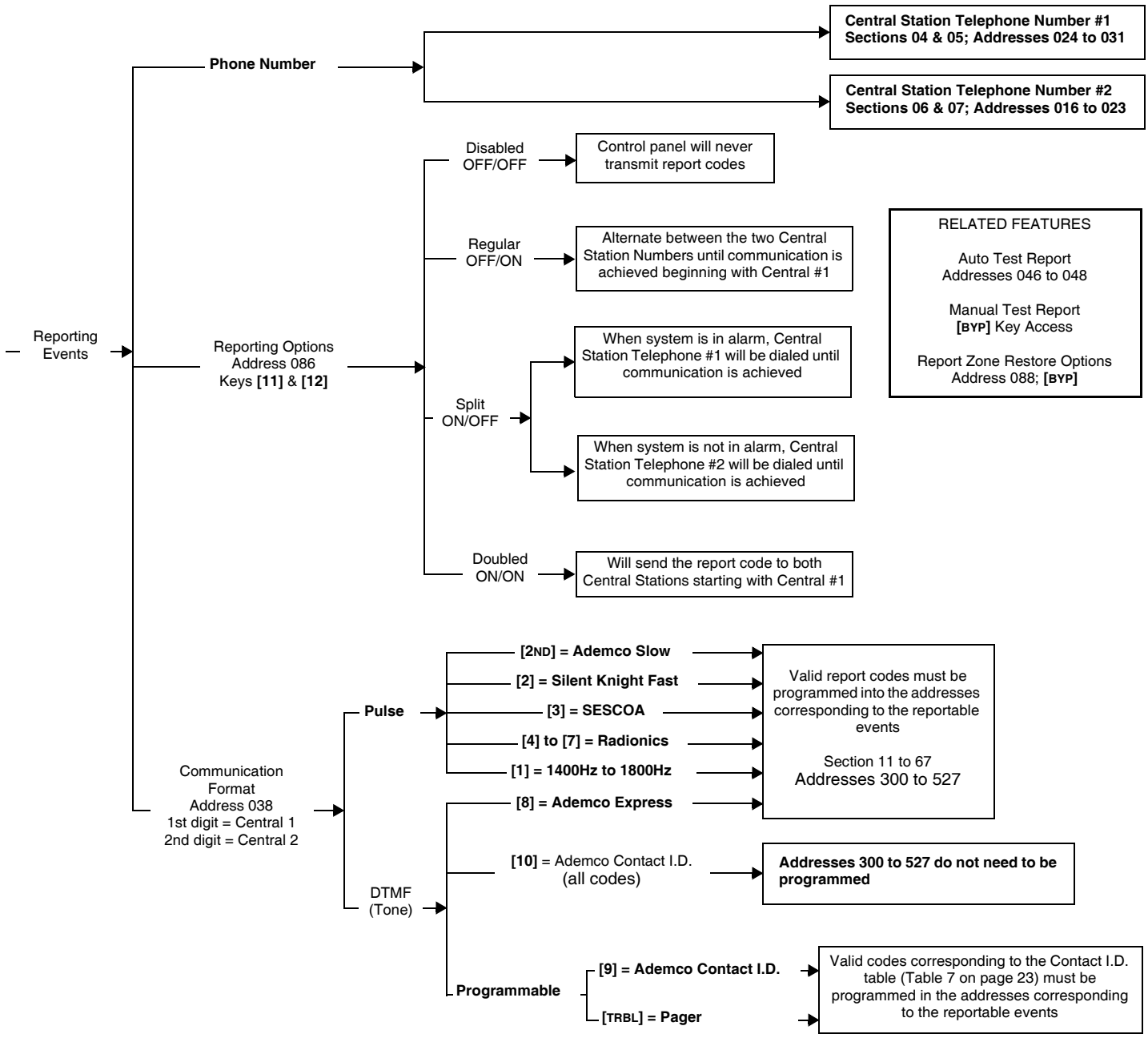
Default: Call Back Disabled

For additional security, when a PC using the Esloadsoftware attempts to communicate with the control panel, the control panel can hang-up and call the PC back in order to re-verify identification codes and re-establish communication. When the control panel answers the call, it will verify if the Panel ID and PC Passwords match and if they do, the control panel will hang-up and call the Esloadsoftware back. The Esloadsoftware will automatically go into "wait for dial tone", ready to answer when the control panel calls back. Please note the Computer Telephone Number (see section 5.4 on page 18) must be programmed in order to use the "Call Back" feature.

Key **[4]** "OFF": Call Back Disabled
Key **[4]** "ON": Call Back Enabled
[ENTER] + *Installer Code* + **[10] [8] [6]** + **[4]** *ON/OFF* + **[ENTER]** *twice*

PART 6: EVENT REPORTING

Figure 6.1: Event Reporting



6.1 REPORTING OPTIONS

*Feature Select Programming ⇨ Address 086; Keys **[11]** and **[12]***

Default: Reporting Disabled

When a specific event occurs in the system, the control panel will attempt to report the appropriate event code (if programmed) to the Central Station. The four available Reporting Options described in the table below, define where the event codes are reported. In order to establish communication with the Central Station the control panel will first access a telephone line and wait a maximum of 8 seconds for a dial tone. If a dial tone is recognized or if after 8 seconds there is no dial tone, the control panel will dial the appropriate Central Station Telephone Number as defined by the Reporting Options listed in the table below. If communication is established, the control panel will transmit the events in the event buffer to the Central Station. If communication fails during transmission, the control panel will dial the next central station telephone number, as defined by the reporting options listed below, and report only those events not reported during the interrupted attempt. For information on Reporting Event Codes see section 6.9 on page 24.

[ENTER] + *Installer Code* + **[10] [8] [6]** + **[11]** *and* **[12]** *ON/OFF* + **[ENTER]**

Table 3: *Reporting Options*

Key [11]	Key [12]	Reporting Feature
OFF	OFF	Reporting Disabled
OFF	ON	Regular Reporting
ON	OFF	Split Reporting
ON	ON	Double Reporting

6.1.1 REPORTING DISABLED

The Control Panel will never transmit any event codes to the central station.

6.1.2 REGULAR REPORTING

Using regular reporting the event codes are reported to the central station using either telephone number 1 or 2. The control panel will begin by dialing central station telephone number 1. If communication fails, the dialer will hang up, wait a predetermined period and dial central station telephone number 2. This sequence will repeat 4 times, switching back and forth between the 1st and 2nd number (see Figure 6.2 on page 21) until communication is established. After eight unsuccessful attempts, the redial sequence ends and a "communicator report failure" will appear in the keypad's trouble display (key **[7]** "ON"). When the next event occurs (reportable or non-reportable), the control panel will begin the dialing sequence again.

6.1.3 SPLIT REPORTING

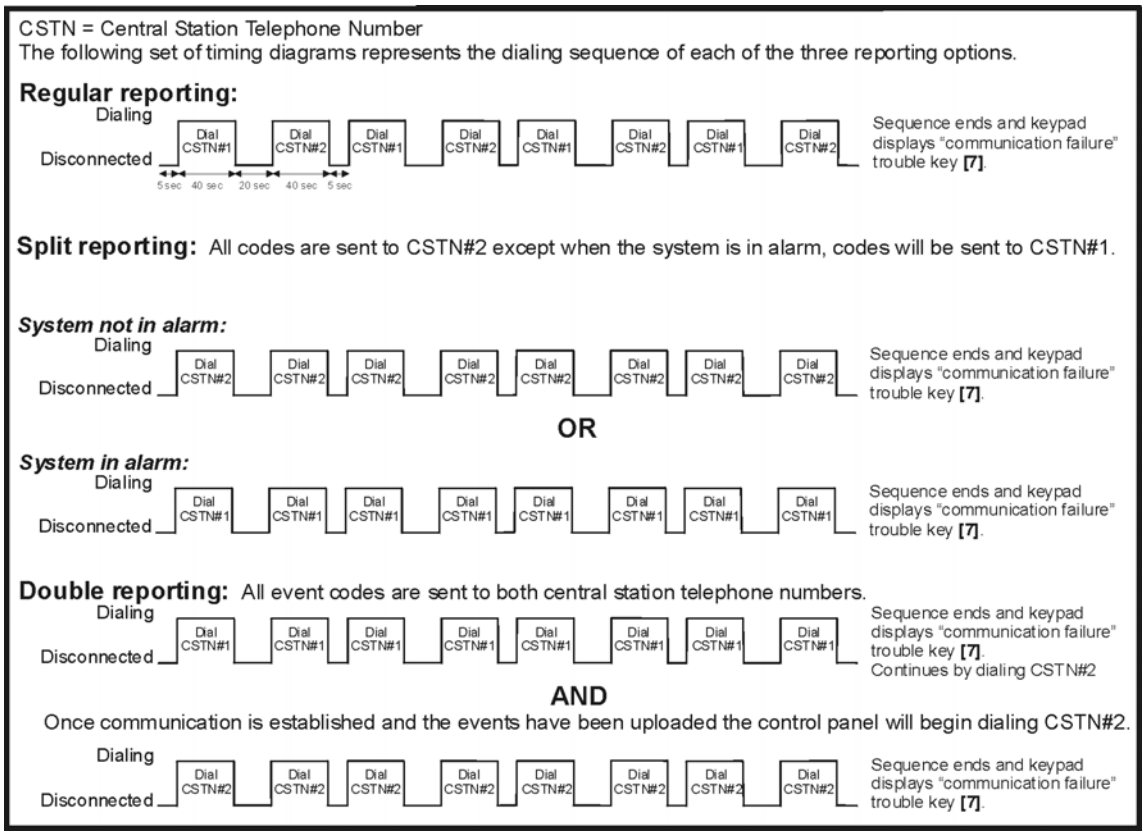
When the system is in standby, the control panel will report all Event Codes to Central Station Telephone 2. If communication fails, the dialer will hang-up, wait a predetermined period and dial the number again. The control panel will dial the number eight times until communication is established (see Figure 6.2 on page 21). After eight unsuccessful attempts, the redial sequence ends and a "communicator report failure" will appear in the keypad's trouble display (key **[7]** "ON"). When the next event occurs (reportable or non-reportable), the control panel will begin the dialing sequence again.

When the system is transmitting an alarm call, the control panel will report all Event Codes to Central Station Telephone 1. Any ongoing communication (upload/download or reporting to Telephone 2) will stop immediately and the panel will dial Telephone 1. If communication fails, the dialer will hang-up, wait a predetermined period and dial the number again. The control panel will dial the number eight times until communication is established (see Figure 6.2 on page 21). After eight unsuccessful attempts, the redial sequence ends and a "communicator report failure" will appear in the keypad's trouble display (key **[7]** "ON"). When the next event occurs (reportable or non-reportable), the control panel will begin the dialing sequence again.

6.1.4 DOUBLE REPORTING

In double reporting, the control panel will report each event code to both central station telephone numbers. The control panel will begin by attempting communication with central station telephone 1 and if communication fails, the dialer will hang-up, wait a predetermined period and dial the number again. The control panel will dial the number eight times until communication is established (see Figure 6.2 on page 21). After eight unsuccessful attempts, the redial sequence ends and a "communicator report failure" will appear in the keypad's trouble display (key **[7]** "ON"). If communication has been established and the event codes transmitted or if after eight attempts communication has not been established, the control panel will report the same Event Codes to Central Station Telephone 2.

Figure 6.2: Reporting Options



6.2 CENTRAL STATION TELEPHONE NUMBER 1

Streamline - Section 04 and 05 ⇨ Hexa Programming - Addresses 016 to 023

The control panel will dial the programmed telephone number when reporting an event code to the central station computer (see Reporting Options on page 19). For example, when a zone with a motion detector opens, the control panel may dial the telephone number in order to send the programmed event code to the central station computer. There is no default telephone number and you can enter any number from 0 to 9 up to a maximum of 16 digits. If you would like to enter any special keys or functions, refer to Table 4 below. If the telephone number contains less than 16 digits, press the **[TBL] / [TRBL]** key to indicate the end of the telephone number.

[ENTER] *+ Installer Code +* **[7]** *+* **[10] [4]** *+ Telephone Number +* **[ENTER]** *or* **[TBL] / [TRBL]** *if number is less than 16 digits*

6.3 CENTRAL STATION TELEPHONE NUMBER 2

Streamline - Section 06 and 07 ⇨ Hexa Programming - Addresses 024 to 031

The control panel can communicate with two central station numbers. The control panel may at times dial the second number depending on the selected Reporting Options (see section 6.1 on page 19). If the central station does not have a second number, you must enter the same number as the first. There is no default telephone number and you can enter any number from 0 to 9 up to a maximum of 16 digits. If you would like to enter any special keys or functions refer to Table 4 below. If the telephone number contains less than 16 digits, press the **[TBL] / [TRBL]** key to indicate the end of the telephone number.

[ENTER] *+ Installer Code +* **[7]** *+* **[10] [6]** *+ Telephone Number +* **[ENTER]** *or* **[TBL] / [TRBL]** *if number is less than 16 digits*

Table 4: *Telephone Number Special Instruction*

Enter special instructions in the telephone numbers using these keys:			
[10]	= the number "0"	**[BYP]**	= switch from pulse to tone while dialing
[11]	= *	**[MEM]**	= pause 4 seconds
[12]	= #	**[TBL] / [TRBL]**	= end of telephone number

Both Central Station Telephone Numbers must be programmed in order for event reporting to function properly.

6.4 SYSTEM ACCOUNT CODES

Streamline - Section 08 ⇨ Hexa Programming - Addresses 032 to 035

All report codes are preceded by a 3- or 4-digit system account code to ensure correct identification to the central station, identifying from which security system the event originated. For example, if a zone opens, the control panel will first send the account code followed by the appropriate report code.

Program the same value for both account numbers.

There are no defaults and you can enter any hexa digit from 0 to F. Please note if required, system account codes can have 3 digits. To do so, press the **[2ND]** key followed by the 3-digit account number.

[ENTER] *+ Installer Code +* **[7]** *+* **[10] [8]** *+ 4-digit Account Code #1 + 4-digit Account Code #2 +* **[ENTER]**

[ENTER] *+ Installer Code +* **[7]** *+* **[10] [8]** *+* **[2ND]** *+ 3-digit Account Code #1 +* **[2ND]** *3-digit Account Code #2 +* **[ENTER]**

6.5 COMMUNICATOR FORMATS

Streamline - Section 09 ⇨ Hexa Programming - Address 038

Default: Ademco Slow for both numbers

The following option will determine which format the control panel will use to communicate with the Central Station. You can select a different communicator format for each Central Station Telephone Number. Using Table 5, select the appropriate communication format. The first digit represents the Communication Format for Central Station Telephone Number 1 and the second digit represents the Communication Format for Central Station Telephone Number 2. Below you will find a brief description of all available Communicator Formats.

[ENTER] *+ Installer Code +* **[10] [3] [8]** *+ First digit = (Central Station Telephone #1) + Second digit = (Central Station Telephone #2) +* **[ENTER]**

Table 5: *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)	**[tbl]**	= *** PAGER FORMAT** - (personal dialing)
			* = 4-digit account codes only

6.5.1 ADEMCO CONTACT ID (ALL CODES)

Please note that this format must use a 4-digit system account code (see section 6.4 on page 22). Ademco Contact ID is a fast communicator format that uses tone transmission instead of pulse transmission. This communicator format also uses a pre-defined list of industry standard messages and event codes that should suit most of your basic installation needs. Using the "All Codes" format, the control panel will automatically generate the Contact ID event codes (see Table 6 below) for every event in addresses 300 to 527. Therefore, you do not need to program addresses 300 to 527.

Table 6: *Contact ID Event Codes*

SYSTEM EVENT	Event Code Addresses	Contact ID Message	Contact ID Code #
Alarms / Restores	400 to 447	Burglary Zone #	130
Zone Tamper	472 to 495	Sensor Tamper	383
Zone Tamper Reset	510	Sensor Tamper	383
Timer Loss / Timer Programmed	501 and 509	Time / Date Reset	625
TLM Trouble Restore	511	Telco 1 Fault	351
Test Report	512	Periodic Test	602
Espload Log-In	524	Remote Access	410
Program Change	525	Program Changed	306

6.5.2 ADEMCO CONTACT ID (PROGRAMMABLE CODES)

Please note that this format must use a 4-digit system account code (see section 6.4 on page 22). Ademco Contact ID is a fast communicator format that uses tone transmission instead of pulse transmission. Use the Ademco Contact event list of industry standard messages and event codes found in Table 7 on page 23 to program the desired event codes into addresses 300 to 527.

Enter FF to program the default Ademco Contact ID report code when using the Ademco Contact ID (programmable codes) report format.

Table 7: *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]**

6.5.3 ADEMCO EXPRESS

This high-speed reporting format communicates 2-digit (00 to FF) events programmed at addresses 300 to 527 at a speed of 2 seconds per event. Unlike other Ademco formats, the Contact ID Event Codes are not used. Please note this format must use a 4-digit system account code (see section 6.4 on page 22).

6.5.4 PAGER REPORTING FORMAT

Using this format allows the control panel to transmit report codes to a pager or a cellular telephone. Since the control panel cannot confirm whether the transmission was successful or not (no handshake), after dialing, it can be programmed to transmit data to the pager or cellular telephone immediately or transmit data after a programmed pager delay has elapsed (section 6.6 on page 24). The account number and the report code are included with each call. For more information, see section 6.7 on page 24 and section 6.8 on page 24. Use the Ademco Contact event list of industry standard messages and event codes found in Table 7 on page 23 to program the desired event codes into addresses 300 to 527.

Enter FF to program the default Ademco Contact ID report code when using the Pager report format.

6.5.5 STANDARD PULSE FORMATS

The control panel supports the following pulse reporting formats (see Table 5 on page 22): Ademco slow, Silent Knight, Sescoa, and Radionics.

6.6 PAGER DELAY

Streamline - Sections 09 ⇨ Hexa Programming - Address 037 (1st Digit)

When using the Pager Reporting Format (see section 6.5.4 on page 23) and depending on the Pager Format Transmission Options (see section 6.7 on page 24), after dialing, the Pager Delay will either represent the amount of time that the Pager Format will wait before transmitting data or the amount of time that the data will be continuously transmitted. Enter **[2ND]** or **[1]** to **[F]** to program a value from 8 seconds to 120 seconds. Refer to Table 8 on page 24 for the Pager Delay Values.

Table 8: *Pager Delay Values*

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

6.7 PAGER FORMAT TRANSMISSION OPTIONS

*Feature Select Programming ⇨ Address 090; Key **[MEM]***

Default: Follow Pager Delay

The Pager Reporting Format can be configured to transmit immediately or to transmit after a pager delay has elapsed. Enable address 090 key **[MEM]** to immediately transmit (personal dialing) the report code(s) to a pager or cellular telephone. The Pager Delay in address 037 will then become the amount of time that the control panel will continue to transmit the report code(s) to a pager or cellular telephone. Disable address 090 key **[MEM]** to configure the control panel to transmit the report code(s) to a pager or cellular telephone only after the Pager Delay (see Pager Delay on page 24) has elapsed.

Key **[MEM]** "OFF": Pager Report Format follows Pager Delay
Key **[MEM]** "ON": Pager Report Format transmits immediately (personal dialing)
[ENTER] + *Installer Code* + **[10] [9] [10]** + **[MEM]** *ON/OFF* + **[ENTER]**

At least one report format in address 038 must set to the Pager format to use the Pager Format Transmission Options feature.

6.8 PAGER REPORT EVENT OPTION

*Feature Select Programming ⇨ Address 090; Key **[TRBL]***

Default: Report alarm events only

The Pager Reporting Format can be configured to transmit alarm events only or all events. Enable address 090 key **[TRBL]** to transmit all events to a pager or cellular telephone. Disable address 090 key **[TRBL]** to transmit only alarm events to a pager or cellular telephone.

Key **[TRBL]** "OFF": Report alarm events only
Key **[TRBL]** "ON": Report all events
[ENTER] + *Installer Code* + **[10] [9] [10]** + **[TRBL]** *ON/OFF* + **[ENTER]**

6.9 REPORTING EVENT CODES

Streamline - Sections 36 to 67 ⇨ Hexa Programming - Addresses 400 to 527

An Event Code is a 2-digit hexadecimal value, consisting of numbers from 00 to FF. Each address between 400 and 527

represents a specific event, as described below and in the "Programming Guide". When an event occurs in the system, the control panel will attempt to transmit the 2-digit Event Code programmed at the corresponding address to the central station. The method of Event Code transmission is dependent on the Communicator Formats (see section 6.5 on page 22) and the Reporting Options (see section 6.1 on page 19).

You do not need to program addresses 400 to 527 if using the Ademco Contact I.D. (all codes) format. If you plan to program most of the event code addresses, we suggest you use the Hexa Streamlined Section Programming Method as described in section 4.2.2 on page 15. Otherwise, use the Hexa Programming Method as described in section 4.2.1 on page 14.

6.9.1 ALARM CODES

Streamline - Section 36 to 38 ⇨ Hexa Programming - Addresses 400 to 409

Whenever an alarm occurs, the control panel will send the programmed event code to the Central Station identifying which zone generated an alarm.

6.9.2 RESTORE CODES

Streamline - Sections 42 to 44 ⇨ Hexa Programming - Addresses 424 to 433

The control panel will send the programmed event code to the Central Station as soon as the zone closes after having generated an alarm or as soon as the zone closes after bell cut-off.

6.9.3 TAMPER CODES

Streamline - Sections 54 and 55 ⇨ Hexa Programming - Addresses 472 to 478

If the Tamper/Wire Fault Recognition Options are disabled (see page 30), the control panel will never transmit these event codes. Otherwise, whenever a tamper occurs on a zone, the control panel will send the programmed Event Code to the Central Station. With Advanced Technology Zoning (ATZ) enabled (see Advanced Technology Zoning (ATZ) on page 27) each Tamper Code address will represent two zones (e.g. Tamper 1 = zones 1 & 2, Tamper 2 = zones 3 & 4, etc.). The control panel will send the programmed Event Code when a tamper occurs on either zone.

Table 9: *Tamper/Trouble Zone Recognition*

WITHOUT ATZ		WITH ATZ	
[472] -	Tamper 1 = Input 1 / Zone 1	**[472] -**	Tamper 1 = Input 1 / Zones 1 and 2
[473] -	Tamper 2 = Input 2 / Zone 2	**[474] -**	Tamper 2 = Input 2 / Zones 3 and 4
[474] -	Tamper 3 = Input 3 / Zone 3	**[476] -**	Tamper 3 = Input 3 / Zones 5 and 6
[475] -	Tamper 4 = Input 4 / Zone 4	**[478] -**	Tamper 4 = Input 4 / Zones 7 and 8

6.9.4 TROUBLE / TROUBLE RESTORE CODES

Streamline - Sections 60 to 63 ⇨ Hexa Programming - Addresses 501 and 509 to 511

Each of the these addresses represent a specific trouble or restore condition. The control panel will report the appropriate event code to the central station when one of the following conditions occurs or after the condition has returned to normal.

496 to 500 Future Use
501 - Timer Loss: The control panel detects a loss in the panel timer.
502 to 508 Future Use
509 - Timer Programmed
510 - All Tamper/Trouble Codes (see page 25) have returned to "normal".
511 - TLM Trouble Restore: Telephone line restored after the TLM (see page 29) detected the loss of the telephone line.

6.9.5 SPECIAL CODES

Streamline - Sections 64 to 67 ⇨ Hexa Programming - Addresses 512, 524 and 525

Each address represents a special condition in the system. When one of these special conditions occur, the control panel will report the event code associated with the address.

512 - Test Report: The test report has been activated either manually (see Manual Test Report on page 26) or automatically (see Auto Test Report on page 26).
513 to 516 Future Use
518 to 521 Future Use
524 - Log-In (Esploud): Esploud software is used to communicate with the Control Panel.
525 - Program Change: The installer code is used to enter the programming mode
522 & 523 - Future Use
526 & 527 - Future Use

6.10 AUTO TEST REPORT

Decimal Programming ⇨ Addresses 046 to 048 ***(Default: Auto Test Report Disabled)***
Feature Select Programming ⇨ Address 090; Key ***[3] (Default: OFF)***
The report code programmed at address 512 will be reported to the central station after a specified time has elapsed. Depending on whether address 090 key **[3]** is ON or OFF, this specified time can be in days or hours. Also note that if **[2ND]** is programmed at address 512 nothing will be reported.

Address 090 Key ***[3]*** *OFF:* The Auto Test report will be transmitted after the number of days programmed at address 046 and the time programmed at address 047 (hours) and 048 (minutes) has elapsed. To disable this feature, program 000 at address 046.

[ENTER] *+ Installer Code +* **[10] [4] [6]** *+ 3 digits (days) +* **[10] [4] [7]** *+ 3 digits (hours) +* **[10] [4] [8]** *+ 3 digits (minutes) +* **[ENTER]**

Address 090 Key ***[3]*** *ON:* The time programmed in address 046 is changed from days to hours and address 047 will be ignored. The Auto Test report will be transmitted after the number of hours programmed at address 046 and the minutes programmed at address 048 have elapsed.
Example: 002 and 030 are programmed at addresses 046 and 048 respectively. With address 090 key ***[3]*** *ON, the Auto Test report will be transmitted at the 30th minute of every 2nd hour.*

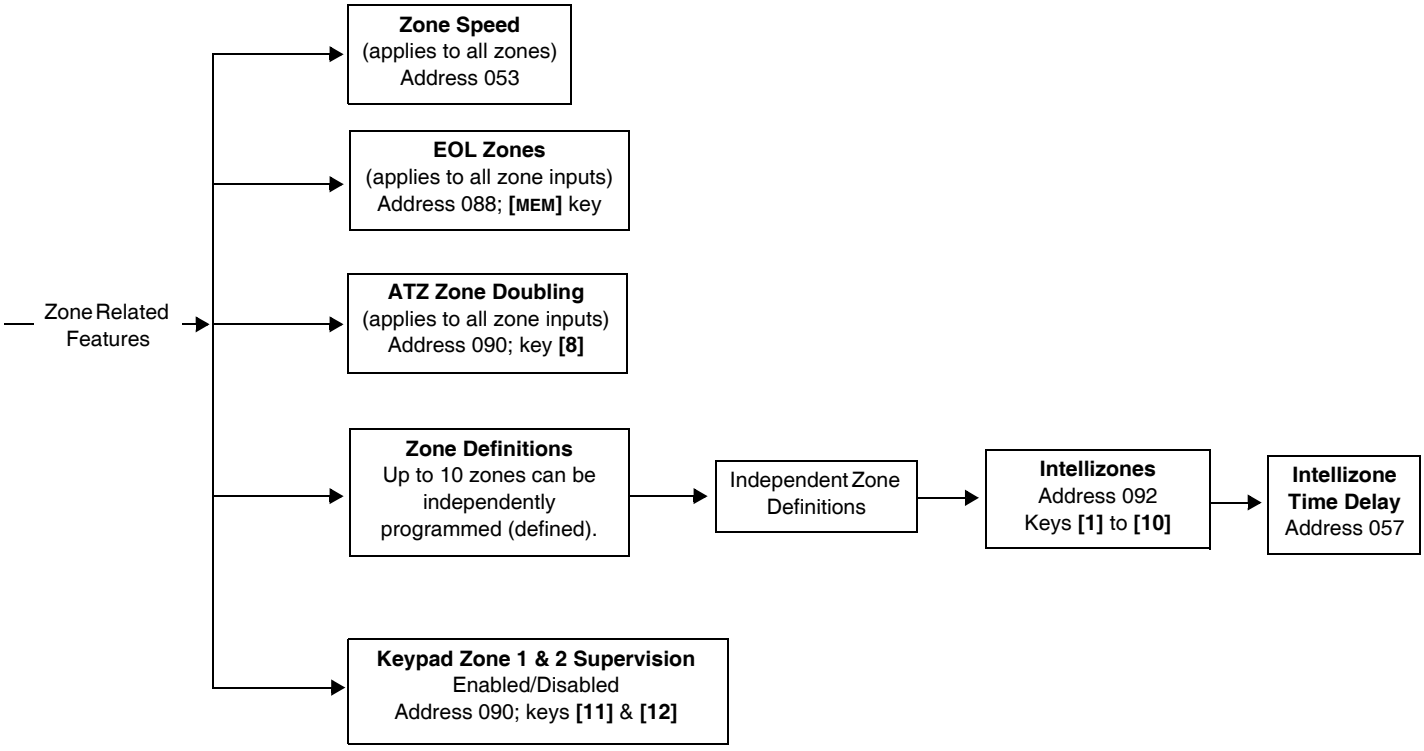
6.11 MANUAL TEST REPORT

Key Access Programming ⇨ Key ***[BYP]***
Activating the manual test report will send the Event Code programmed at address 512 to the Central Station.

[ENTER] *+ Installer +* **[BYP]** *+* **[ENTER]**

PART 7: ZONE DEFINITIONS

Figure 7.1: Zone Related Features



7.1 ZONE SPEED

Decimal Programming ⇨ Address 053
Default: 600mS

The zone speed applies to all zones whether the system is armed or disarmed. The zone speed defines how quickly the control panel will respond to an open zone. The control panel will not display and/or respond to an open zone until the programmed zone speed elapses. All other zone definitions and options do not come into effect until the zone speed has elapsed. The zone speed can be set from 15ms to 3.8s (001 to 255 X 15ms). This feature prevents any momentary glitches in the system from causing an alarm or unnecessary reporting.

Example: The zone speed is set for 1.2 seconds. A zone opens and closes in less than 1.2 seconds the control panel will not respond (i.e. no reporting, no alarm and no display on keypad).

[ENTER] + *Installer Code* + **[10] [5] [3]** + *3 digit decimal value (001 to 255)* + **[ENTER]**

7.2 ADVANCED TECHNOLOGY ZONING (ATZ)

*Feature Select Programming ⇨ Address 090; Key **[8]***
Default: ATZ Disabled

Enabling the ATZ feature allows you to install two detection devices per zone input. Each detection device will have its own zone number and each will transmit a separate alarm code that will display on the keypad. For information on how to connect the detection devices and how the panel recognizes them, please refer to Advanced Technology Zone (ATZ) Connections on page 11.

Key **[8]** "OFF": ATZ Disabled
Key **[8]** "ON": ATZ Enabled
[ENTER] + *Installer Code* + **[10] [9] [10]** + **[8]** *ON/OFF* + **[ENTER]**

7.2.1 ATZ PARALLEL WIRING

*Feature Select Programming ⇨ Address 090 Key **[7]***
Default: Disabled (Wiring in series)
Enable this feature to connect ATZ zones in parallel with the zone input. For more information, see ATZ Parallel Wiring on page 12. Enable address 090 key **[7]** to set ATZ wiring to parallel. Disable address 090 key **[7]** to set ATZ wiring to series.

[ENTER] + *Installer Code* + **[10] [9] [10]** + **[7]** *ON/OFF* + **[ENTER]**

7.3 INTELLIZONES

*Feature Select Programming ⇨ Addresses 092 and 094; Keys **[1]** to **[12]***
If an alarm condition occurs on a zone identified as Intellizone, the control panel will trigger a timer and will not generate an alarm until one of the following conditions occurs within a specified period (see Intellizone Time Delay on page 28):

- An alarm condition occurs on another zone during intellizone time delay.
- The zone that is in alarm has restored and re-occurred during intellizone time delay.
- The zone that is in alarm remains in alarm the entire intellizone time delay.

Intellizone timer will only begin after the zone speed period has elapsed (see Zone Speed on page 27).

7.3.1 INTELLIZONE TIME DELAY

Decimal Programming ⇨ Address 057
Default: 48 seconds
You can set the Intellizone Time Delay between 010 and 255 seconds. Before an Intellizone can generate an alarm, one of three conditions must occur during this time delay (see section 7.3).

[ENTER] + *Installer Code* + **[10] [5] [7]** + *3-digit decimal value (010 to 255)* + **[ENTER]**

7.4 EOL ZONES (ENABLED/DISABLED)

*Feature Select Programming ⇨ Address 088; Key **[MEM]***
Default: Enabled
If the system requires the use of 1kΩ end of line resistors on zone input terminals, enable this feature (see section 2.4 on page 7 to section 2.8 on page 11).

Key **[MEM]** "OFF": Input Zones use EOL Resistors
Key **[MEM]** "ON": Input Zones do not use EOL Resistors
[ENTER] + *Installer Code* + **[10] [8] [8]** + **[MEM]** *ON/OFF* + **[ENTER]**

7.5 KEYPAD ZONE 1 SUPERVISION

*Feature Select Programming ⇨ Address 090; Key **[11]***
Default: Disabled
When using a keypad defined as keypad zone 1, enable this feature. When enabled, the control panel will verify the presence of a keypad and the keypad zone. For more information see Keypad Zone Connections on page 7.

Key **[11]** "OFF": Keypad Zone 1 Disabled
Key **[11]** "ON": Keypad Zone 1 Enabled
[ENTER] + *Installer Code* + **[10] [9] [10]** + **[11]** *ON/OFF* + **[ENTER]**

7.6 KEYPAD ZONE 2 SUPERVISION

*Feature Select Programming ⇨ Address 090; Key **[12]***
Default: Disabled
When using a keypad defined as keypad zone 2, enable this feature. When enabled, the control panel will verify for the presence of a keypad and the keypad zone. For more information see Keypad Zone Connections on page 7.

Key **[12]** "OFF": Keypad Zone 2 Disabled
Key **[12]** "ON": Keypad Zone 2 Enabled
[ENTER] + *Installer Code* + **[10] [9] [10]** + **[12]** *ON/OFF* + **[ENTER]**

PART 8: OTHER OPTIONS

8.1 TELEPHONE LINE MONITORING (TLM)

*Feature Select Programming ⇨ Address 086; Keys **[2ND]** and **[1]***

Default: TLM Disabled

When enabled, the system verifies the existence of a telephone line every 4 seconds. After each successful test, the **STATUS** LED (green light) on the control panel flashes briefly during normal operation. If the test fails, the **STATUS** LED will flash ON for 1 second and OFF for 1 second until the control panel detects the telephone line again. TLM will activate a trouble when less than 3 volts is detected in four consecutive tests.

Note: when the dialer detects a telephone ring, the TLM test stops for 1 minute.

There are three TLM options, which are set as indicated in Table 10 below:

Table 10: *Telephone Line Monitoring (TLM)*

Key		
[2ND]	**[1]**	
OFF	OFF	- TLM is disabled (default)
OFF	ON	- TLM generates a trouble only

- **OFF / ON:** Line test failure will generate a trouble indication; key **[10]** will illuminate on the keypad.

[ENTER] *+ Installer Code +* **[10] [8] [6]** *+* **[2ND]** *and* **[1]** *ON/OFF +* **[ENTER]**

8.2 DIALING OPTIONS

*Feature Select Programming ⇨ Address 086; Key **[7]***

Default: Pulse Dialing

You can program the control panel to use the pulse dialing or tone/DTMF dialing format.

Key **[7]** "OFF": Pulse Dialing
Key **[7]** "ON": Tone/DTMF Dialing
[ENTER] *+ Installer Code +* **[10] [8] [6]** *+* **[7]** *ON/OFF+* **[ENTER]**

8.3 DIALING PULSE RATES

*Feature Select Programming ⇨ Address 086; Key **[10]***

Default: Pulse Europe 1:2

This selection reflects the ratio between "pulse" time and "quiet" time. Select Pulse Europe for a 1:2 ratio and select Pulse USA for 1:1.5. The control panel must be set to pulse dialing mode to use this option (refer to Dialing Options on page 29).

Key **[10]** "OFF": Pulse Europe 1:2
Key **[10]** "ON": Pulse USA 1:1.5
[ENTER] *+ Installer Code +* **[10] [8] [6]** *+* **[10]** *ON/OFF +* **[ENTER]**

8.4 PANEL TIME

*Key Access Programming ⇨ Key **[MEM]***

To program the current time into the control panel press:

[ENTER] *+ Installer Code +* **[MEM]** *+ 2 digits representing hours (00 to 23) + 2 digits representing minutes (00 to 59)*

8.5 TIME CORRECTION

Streamline - Section 09 ⇨ Hexa Programming - Address 037

If you notice a gain or loss in the control panel time, calculate the average gain or loss per day; select the "opposite" amount from the Time Correction table in order to automatically correct the time setting every 24 hours. Refer to Table 11 on page 30.

*Example: The control panel loses 4 minutes per month, representing an average loss of 8 seconds per day. Therefore, program **[2]** (plus 8 seconds) as the second digit in address 037 to compensate for the 8-second loss.*

Table 11: *Time Correction Table*

(address 037 second digit)							
[2nd]	- No adjustment	**[4]**	- Plus 16 seconds	**[8]**	- Minus 4 seconds	**[12]**	- Minus 20 seconds
[1]	- Plus 4 seconds	**[5]**	- Plus 20 seconds	**[9]**	- Minus 8 seconds	**[byp]**	- Minus 24 seconds
[2]	- Plus 8 seconds	**[6]**	- Plus 24 seconds	**[10]**	- Minus 12 seconds	**[mem]**	- Minus 28 seconds
[3]	- Plus 12 seconds	**[7]**	- Plus 28 seconds	**[11]**	- Minus 16 seconds	**[tbl]**	- Minus 32 seconds

8.6 TAMPER / WIRE FAULT RECOGNITION OPTIONS

*Feature Select Programming ⇨ Address 088; Keys **[10]** to **[11]***

Default: Disabled

If the control panel detects an open or a short on a zone, regardless of the tamper/wire settings, it will generate an alarm and illuminate trouble indicator (key **[9]**). Refer to Table 12 on page 30.

Table 12: *Tamper Recognition Option*

Key [10]	Key [11]	
OFF	OFF	- Tamper / Wire Fault disabled
OFF	ON	- Trouble and Alarm Codes reported
ON	ON	

Tamper / Wire disabled

Tamper / wiring failure recognition is disabled. Not permitted on UL listed systems.

Trouble and Alarm Codes Reported

Tamper/wiring failure will generate a trouble indicator (key **[9]**), a trouble report code (see Tamper/Trouble Codes in section 6.9.3 on page 25) and an alarm report code (see Alarm Codes in section 6.9.1 on page 25).

8.7 AUDIBLE TROUBLE WARNING

*Feature Select Programming ⇨ Address 090; Key **[9]***

Default: Disabled

Trouble conditions will emit an intermittent "beep" on the keypad. To silence the trouble warning, press the **[TBL]** / **[TRBL]** key.

8.8 POWER DOWN RESET

Performing a power down reset will set the installer to factory default. Values entered at addresses 008 to 043, 062 to 124 and 300 to 527 will be set to factory defaults. Programmed values at addresses 003 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 (see Installer Lock on page 13)
2. Remove power from the control panel.
3. Set the **RESET** jumper to the ON position.
4. Reconnect power to the control panel.
5. Wait 10 seconds and then set the **RESET** jumper to the OFF position.

PART 9: USER / KEYPAD FUNCTIONS

The innovative Esprit keypads take a new approach to security features and functions. Each numeral from 1 to 10 on the keypad respectively represents each zone from 1 to 10 on the control panel. When the zone light is "OFF", the status in the protected zone is normal. If the zone light is "ON", this means the zone is open. An LCD keypad will display the open zone numbers on the screen.

The green "READY" indicator on the keypad will illuminate when the status of all the zones is normal (zones are closed). Therefore, all protected windows and doors must be closed and motion detectors must not detect any movement except those zones that have been bypassed.

Confirmation Beep: an intermittent series of beeps ("beep-beep-beep") indicates a successful keypad entry or system operation.

End/Rejection Beep: one long tone ("beeeeeeep") indicates incorrect keypad entry or unsuccessful system operation.

9.1 ALARM MEMORY

If an alarm condition occurs, the **[MEM]** key will turn on. A record of all alarm situations that occur is stored in memory. Pressing once on the **[MEM]** key will display which zones were open during the alarm period by illuminating the corresponding zone indicator(s) or by displaying it on the LCD screen depending on the type of keypad used.

*Please note if the **[MEM]** key is pressed again when using LED keypads (636 and 646) you will enter the event display which can only be decoded with a 642 LCD keypad.*

If using a 642 LCD keypad press the **[MEM]** key followed by the **[INFO]** key and use the [▲] and [▼] keys to scroll through the event list in memory. After viewing the alarm memory display, press the **[CLEAR]** key to exit and clear the alarm memory display.

9.2 KEYPAD CHIME ZONES

A chimed zone "advises" you when a zone is opened by creating a rapid intermittent beep tone (beep-beep-beep-beep-beep). Up to six zones plus the local keypad zone can be programmed as chime zones. To turn on the "chime zone" feature, press and hold the key corresponding to the desired zone (**[1]** to **[6]**) for three seconds until the intermittent chime beep is heard. This means that the chime feature has been activated. If a continuous beep is heard, this means that the chime beep has been deactivated. To enable the chime feature on the keypad zone, press and hold the **[8]** key for three seconds. To mute the keypad's alarm sounder, press and hold the **[9]** key for three seconds until the intermittent chime beep is heard. This means that the muting feature has been activated. If a continuous beep is heard, this means that the muting feature has been deactivated. If there is more than one keypad in the system, please "chime" program each keypad separately. Keypad chimes must be reprogrammed if the panel suffers a total power loss.

Key **[1]**-**[6]**: Turns chime "ON" or "OFF" in zones numbered 1-6
Key **[8]**: Turns chime "ON" and "OFF" for the local keypad zone
Key **[9]**: Turns the keypad's alarm sounder muting "ON" or "OFF"

9.3 TROUBLE DISPLAY MONITORING

Trouble conditions are continuously monitored by the control panel, which recognizes and displays 10 different trouble conditions on the keypad. When a trouble condition occurs, the **[TBL] / [TRBL]** key will illuminate and the keypad will emit an intermittent beep if the Audible Trouble Warning (see Audible Trouble Warning on page 30) is enabled. Press the **[TBL] / [TRBL]** key to switch to "trouble display" mode. The **[TBL] / [TRBL]** key will flash and any illuminated keys correspond to a current trouble condition as described below. Press any key to exit the "trouble display" mode.

9.3.1 COMMUNICATOR REPORT FAILURE - KEY [7]

If the control panel was unsuccessful when attempting to communicate with the central station computer or the Espload software the **[7]** key will illuminate.

9.3.2 TIMER LOSS - KEY [8]

The illumination of the **[8]** key indicates that the control panel's internal clock must be reprogrammed. To reprogram the timer press:

[ENTER] *+ (Installer, Master or User 1 Code) +* **[MEM]** *+ 2 digits (00 to 23) representing hours + 2 digits (00 to 59) representing minutes +* **[ENTER]**

9.3.3 TAMPER / ZONE WIRING FAILURE - KEY [9]

If the Tamper / Wire Fault Recognition Options (see page 30) are enabled, the **[9]** key will illuminate to indicate a short or cut on a zone input. In order to provide line short recognition the zone connections must have EOL resistors (see section 2.5 on page 7 to section 2.8 on page 11).

9.3.4 TELEPHONE LINE MONITORING - KEY [10]

If the Telephone Line Monitoring (TLM) feature (see section 8.1 on page 29) is enabled, the **[10]** key will illuminate to indicate that the control panel has not detected the presence of a telephone line for 30 seconds.

9.4 KEY ACCESS PROGRAMMING

This method allows for quick programming of features without entering addresses or section numbers. The following features are programmed using the installer code.

- Panel Time: for details see section 8.4 on page 29.
- Manual Test Report: for details see section 6.11 on page 26.
- Call Esploud: for details see section 5.5 on page 18.
- Answer Esploud: for details see section 5.6 on page 18.
- Cancel Communication: for details see section 5.7 on page 18.

WARNINGS

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC rules subpart D and CS-03. Inside the cover of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

NOTIFICATION TO TELEPHONE COMPANY

Upon request, customer shall notify telephone company of particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC REGISTRATION NUMBER: 5A7CAN-22633 - AL - E
RINGER EQUIVALENCE NUMBER:0.1B (U.S. & CANADA)
USOC JACK: RJ31X (USA), CA31A (CANADA)

TELEPHONE CONNECTION REQUIREMENTS

Except for telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of terminal equipment. Standard jacks shall be so arranged that, if plug connected thereto is withdrawn, no interference to operation of equipment at customer's premises which remains connected to telephone network shall occur by reason of such withdrawal.

INCIDENCE OF HARM

Should terminal equipment/protective circuitry cause harm to telephone network, telephone company shall, where practicable, notify customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if action is deemed reasonable in circumstances. In case of temporary discontinuance, telephone company shall promptly notify customer and will be given opportunity to correct the situation.

CHANGES IN TELEPHONE COMPANY EQUIPMENT OR FACILITIES

The telephone company may make changes in its communication facilities, equipment operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render customer's terminal equipment incompatible with the telephone company facilities, the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

GENERAL

This equipment shall not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

RINGER EQUIVALENCE NUMBER (REN)

The ren is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, sum of the ren's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

EQUIPMENT MAINTENANCE FACILITY

If you experience trouble with this telephone equipment, please contact facility indicated below for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from network until problem is corrected or until you are sure that the equipment is not malfunctioning.

FCC PART 15, WARNINGS INFORMATION TO USER

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to equipment intermittently, the user is encouraged to try to correct the interference by one or more of the following measures: (1) re orient or relocate the receiving antenna; (2) increase the separation between the equipment and receiver; (3) connect the equipment to an outlet on a circuit other than the one to which the receiver is connected, or (4) consult the dealer or an experienced radio/tv technician for assistance.

CAUTION:

Changes or modifications not expressly approved by PARADOX SECURITY SYSTEMS could void the user's authority to operate the equipment.

WARRANTY

The Seller warrants its products to be free from defects in materials and workmanship under normal use for a period of one year (except as indicated otherwise). Except as specifically stated herein, all express or implied warranties whatsoever, statutory or otherwise, including without limitation, any implied warranty of merchantability and fitness for a particular purpose, are expressly excluded. Because Seller does not install or connect the products and because the products may be used in conjunction with products not manufactured by Seller. Seller cannot guarantee the performance of the security system. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. In no event shall the Seller be liable to the buyer or any other person for any loss or damages whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits stolen goods, or claims by any other party, caused by defective goods or otherwise arising from the improper, incorrect or otherwise faulty installation or use of the merchandise sold.

ATTACHMENT LIMITATION NOTICE

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all of the devices does not exceed 100.

Industry Canada certification is only applicable to installation of devices which include transformers approved by the Canadian Standards Association (CSA).

RESTRICTIONS CONCERNANT LE RACCORDEMENT DE MATÉRIEL

L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère garantir toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. De plus, le matériel doit être installé en suivant une méthode acceptable de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être effectuées par un centre de service d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause d'un mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'energie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à une service d'inspection des installations électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100.

La certification d'Industrie Canada s'applique seulement aux installations d'appareils utilisant un transformateur approuvé par l'Association Canadienne de Normalisation (CSA).

Requirements and Guidelines for UL Installations

UL has only evaluated the 708, 728, 728 EXPRESS, 738, 738 EXPRESS, 748 and 748ES for compatibility with the Ademco model 685, FBI model CP220FB, SUR-GUARD SG-MLR2-D6 and Silent Knight model 9000.

UL listed in accordance with standard UL1023 (Household Burglar - Alarm System Units), standard UL985 (Household Fire Warning Units) and UL1635 (Digital Alarm Communicator System Units).

Look for the UL mark on the product. Only products bearing this mark are UL listed.

Some operational features are not permitted in UL installations. To respect the standards for household applications, the installer should follow these guidelines when configuring the system.

1. All components of the system should be UL listed for the intended application.
2. If the installation is a FIRE ALARM application, refer to NFPA Standard 74 for details on smoke detector locations. There must be at least one UL-Listed Indoor Fire Alarm Warning Signalling Appliance.
3. For UL/ULC Burglar Applications:
   Maximum entry time = UL 45 seconds / ULC 60 seconds
   Maximum exit time = UL 60 seconds / ULC 120 seconds
   Minimum bell cutoff time = 4 minutes
4. Keypad Model 639 is not UL listed.
5. The upload/download software should not be used on UL listed systems.
6. All outputs are Class 2 or power-limited, except for the battery terminal. The Class 2 and power-limited fire alarm circuits shall be installed using CL3, CL3R, CL3P or substitute cable permitted by the National Electrical Code, ANSI/NFPA 70.

Requirements and Guidelines for AUSTEL Installations

Austel-approved installations: use a transformer approved by the State Electricity commission, such as "Dyen" PA series 15VAC 22VA. With this transformer, do not exceed the following maximum currents:
- maximum Auxiliary current (including keypads): 300mA
- maximum Bell current :600mA

Requirements and Guidelines for C-UL Installations

When the system controls a fire alarm system, wiring method must correspond to section 32 of the Canadian Electrical Code.

Look for the ULC mark on the product. Only products bearing this mark are ULC listed.

For technical support in the US and Canada, call 1-800-791-1919, Monday to Friday, 8 a.m. to 8 p.m. EST.
Technical support can also be reached by fax at (450) 491-2313, or via e-mail at support@paradox.ca.

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