Summit 3208GLD

CONTROL PANEL

INSTALLATION MANUAL

Electronics Line

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Introduction

The Summit 3208GLD is a fully programmable alarm control panel designed to meet the requirements of the majority of commercial and residential installations.

This manual is designed to help you, the installer, with the installation of the Summit 3208GLD. We strongly urge you to read through this manual, in its entirety, before beginning the installation process so that you can best understand all that this security system has to offer. This manual is not intended for end user use. End users are encouraged to read the Summit 3208GLD User Manual that accompanies the system. If you have any questions concerning any of the procedures described in this manual, please contact Electronics Line at (+972)-3-9211110.

Catalog Number: ZI0084C (9/02) Version 1.0

CE Hereby, Electronics Line declares that this control panel is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

All data is subject to change without prior notice.

Chapter One: Overview

1.1: Specifications

Power Input	AC: 15VAC, 30VA transformer Battery backup: 12VDC, 6.5Ah or 7Ah
Power Output	Auxiliary power: Regulated 12VDC nominal at 1A max. including keypads and detection devices for 4 hours standby Bell output: Regulated 12VDC nominal from auxiliary power, unregulated 9 to 18VDC, 600mA total auxiliary power
Zones	Number of zones: 8 onboard (expandable to 32)
Keypads	Types supported: 3106 LED, 3108 LCD, 3118 LCD, 3128 LCD Number of keypads: Up to 8 supervised Distress Keys: 3
User Codes	Number of users: 15 Number of digits per user code: 3 to 6 Authorization levels: 15
Open/Close Windows	Number of windows: 1 opening window + 1 closing window for each day of the week per sub-system Window sizes: ± 15 min, ± 30 min, ± 45 min, ±60 min
Remote Programming	Equipment: Remote Programmer software package Access: Direct (Password), Callback, Off-hook
Operating Temperature	0° to 60°C (32° to 140°F)
Dimensions	12” x 12” x 4” (30.5cm x 30.5cm x 10.2 cm)
Current Consumption	3208GLD Control Panel: 130mA (approx.) 3106 LED Keypad: 20mA (without backlight), 70mA (with backlight) 3108 LCD Keypad: 20mA (without backlight), 60mA (with backlight) 3118 LCD Keypad: 20mA (without backlight), 55mA (with backlight) 3128 LCD Keypad: 20mA (without backlight), 65mA (with backlight) 3302 Output Relay Module: 0mA (all relays deactivated), 15mA (per activated relay) 3402 Output Relay Module: 15mA (all relays deactivated), 30mA (per activated relay) 3407 Output Relay Module: 15mA (all relays deactivated), 30mA (per activated relay) 3417 Transistor Module: 10mA (all transistors deactivated) 725mA (all transistors activated, drawing max. 100mA each) 3508 Zone Expander Module: 10mA 3528 Wireless Zone Expander Module: 10mA 3606 Voice Message Module: 6mA (standby), 50mA (operation), 150mA (recording/playback) 3622 2-Way Voice Module: 35mA (standby) 200mA (active) 3800 Printer Module: 10mA MasterLink 2530 Zone Expander Module: 50mA UHF 3208GLD Long Range Radio Transmitter: 1mA (standby), 1.2A (transmission) VHF 3208GLD Long Range Radio Transmitter: 1mA (standby), 600mA (transmission) ***Note: A system employing UHF/VHF transmitters must have the aid of full battery backup; a "Low Battery" condition could distort UHF/VHF transmissions.***
Weight	Approx. 6.5 lbs. (3 Kg)

1.2: Zones

The Summit 3208GLD comprises 8 on-board zones and is expandable to a total of 32 zones. Both hardwire and wireless zone expanders are available. You can precisely configure each zone to suit a wide variety of applications.

Zone Descriptors

Each zone can be assigned an individual zone descriptor. You can choose these from the standard zone descriptor library or from one of the four custom zone descriptors that are programmable to suit the installation.

Zone Type

One of fifteen zone types can be defined for each zone. The zone type dictates the nature of a specific zone's operation. The following is an explanation of each zone type.

Perimeter and Interior Zones

Different methods of arming the system rely on the definition of zones as perimeter or interior. For example, when the user wishes to remain on the premises, STAY arming secures only perimeter zones allowing free movement within the protected area. Perimeter and Interior zones can be defined as 'Normal', 'Primary', 'Secondary' or 'Conditional'.

Normal Zone: A normal zone generates an alarm when opened.

Primary and Secondary Zones: Primary zones never actually generate an alarm; they are always used in conjunction with secondary zones. A secondary zone will generate an alarm only if opened during the entry delay of a primary zone. These zones are intended for use in situations where the primary zone is an unprotected area that is crossed by an intruder to reach the area protected by the secondary zone. This rules out the need to compromise the sensitivity of the devices installed in the secondary zone to achieve maximum false alarm immunity.

Conditional Zone: Conditional zones do not generate an alarm when opened during the entry delay - otherwise, an alarm is generated instantly. These zones can be used for detectors protecting the area in which a keypad has been installed or the area crossed in order to reach the keypad.

24hr zones

24hr zones are always operational regardless of system status and will generate an instant alarm when opened. If an exit/entry delay is defined for a 24hr zone, it will be ignored by the system.

Fire and Verified Fire Zones: Fire zones are designed for use with smoke detectors. A fire zone will generate an instant alarm when opened. Verified fire zones will not sound an alarm and will not send a message to the central station unless a second detection has been made within a minute of the first. The Summit 3208GLD control panel can be programmed to enable automatic or manual power reset for latching smoke detectors (see address 495).

Emergency/Holdup: Emergency/Holdup zones are 24hr zones designed for use with panic buttons in the case of holdup situations, medical emergencies etc. It is recommended that glassbreak detectors be connected to Emergency/Holdup zones.

Tamper: This zone type is used with tamper switches and is designed to prevent unauthorized opening of the metal housing.

Common Zone

A common zone belongs to all systems. An alarm will only be generated from a common zone if all the sub-systems are armed. Common zones are generally used in partitioned systems where a corridor is shared by more than one protected area. ***Note: When arming, if the only zones open are common zones, the system is still "Ready".***

Keyswitch zones

Two zone types offering different operational modes are available for use with a momentary keyswitch.

On/Off STAY and On/Off AWAY: A keyswitch zone can be defined to either STAY or AWAY arm the system.

Swinger Zones

Swinger zones limit the amount of alarms that can be sent from a specific zone within a predetermined time period. This feature is designed for use with zones that are highly prone to false alarms. The swinger parameters are programmed at address 388 and at the second address for each specific zone.

1.3: System Partitioning

The Summit 3208GLD can be operated in partitioned mode where the system is separated into a maximum of four sub-systems. A sub-system is created when at least one zone has been assigned to it. The following section describes how certain elements of the system are affected by system partitioning.

Zones

Each zone can be assigned to a one of the four sub-systems. A common zone is assigned to all sub-systems and will only be armed in the event that all systems are armed.

User Codes

User codes are assigned to any sub-system or to the entire system during user code programming. For more information on the programming of user codes refer to page 23.

Keypad Display

The keypad can display either the entire system or a specific sub-system. This is programmed at parameter addresses 132 - 139.

Arming & Disarming

On a keypad assigned to a specific sub-system, the STAY and AWAY keys arm that sub-system only. A user code assigned to a specific sub-system only arms that sub-system.

If the user code is assigned to all systems, the panel asks which system to arm. Entering System 5 arms all the sub-systems that are ready. There is no way of disarming all sub-systems simultaneously; sub-systems must be separately disarmed.

To disarm a sub-system, the user code entered must be assigned to either that sub-system or to all systems. All arming methods are available for each sub-system.

1.4: Telephone Dialer

You can program up to four different telephone numbers into the system, employing either pulse or DTMF tone dialing methods. Up to 16 digits can be programmed for each telephone number.

The Summit 3208GLD supports several communication protocols including Contact ID and various pulse protocols, enabling communication with most popular central station receivers. Different groups of event messages (Burglary, Fire, Open/Close messages etc.) enable message routing to up to four central stations.

In some cases the central station handles events reported per zone and in others per event. Event codes can comprise of either one or two digits and can include additional information such as the user number in opening and closing messages or zone ID in event oriented zone messages. These codes are usually assigned by the central station – consult the central station operator for a listing of the different event codes.

Follow-me

Using the Follow-me feature, the panel can notify the user that the system has undergone certain events by sounding a sequence of tones over the telephone. The user acknowledges that the message has been received by pressing 0, 9 or # on their telephone. If this acknowledgement is not received within the one-minute time window opened the moment the panel starts dialing, the control panel redials. The number of dialing attempts made depends on the value programmed at address 197.

Telephone #4 is designed for use with this feature as it is the only telephone number that can be easily programmed by the user, without the need to enter programming mode.

3606 Voice Module

The 3606 enables the recording of up to six different messages for use with the “Follow-Me” feature. When the panel calls the “Follow-Me” number, the Voice Module plays back the appropriate message to identify which type of event has occurred.

Telephone Line Supervision (firmware dependent)

Approximately 20 seconds after the telephone line is cut, all keypads sound a trouble beep and the message “Telephone Comm. Failure” appears on LCD keypads.

1.5: Remote Programming

Electronics Line's Remote Programmer (RP) software enables all programming and operation to be performed from a PC. You can do this from either a remote location or on-site using the 'Off-hook' communication option. The software provides a comprehensive interface to the Summit 3208GLD control panel facilitating and cutting down the time taken in programming the system.

A number of programmable options, relating to when and how RP communication is established, are available at address 496. The tollsaver feature, RP Callback, makes remote programming more cost-effective and increases the level of security. Using this feature, the Remote Programmer establishes a connection with the panel. The panel recognizes the passcode, hangs up and calls the number programmed at addresses 172-179 within 60 seconds.

Answering Machine Override

Answering machine override enables the control panel to distinguish between regular incoming calls and a communication attempt by the RP (remote programmer) software. An RP call is identified by the control panel as a sequence of two calls within a 30-second time window.

1. The control panel does not answer the first incoming call.
2. The control panel opens a 30-second time window from the moment the telephone stops ringing.
3. The control panel answers after the number of rings defined at address 496 and RP communication is established.

1.6: Other Features

Opening and Closing Windows

This feature helps cut down the amount of opening and closing reports sent to the central station. The opening and closing windows are programmable windows of time, during which the user usually arms or disarms the system. Disarming during an opening window or arming during a closing window does not send a report to the central station. If the system is not disarmed or armed during the appropriate window, a 'Failed to Open' or 'Failed to Close' message is sent to the central station.

You can choose from a list comprising three opening and four closing window times. The times in this list can be programmed according to the user's entry and exit scheduling requirements. If required, the user can issue the 'Late to Close' command to extend the closing window period. The Auto-Arm feature causes the system to arm itself automatically at the end of the closing window. This prevents situations where the system is left unarmed at the end of the day.

Latch-Key

The latch key feature has been designed to inform parents whether their children have arrived home safely and on schedule. The panel sends a 'Failed to Open'/'Failed to Close' message to the central station or follow-me number if the MENU/NEXT key is not pressed during the appropriate window.

Event Log

The event log records the last 100 events the system has undergone. The event log uses the FIFO (first in, first out) method. Once the log is full, the oldest event will automatically be erased. You can view the event log with the LCD keypad or the RP software. The event log records the following events:

- Zone Alarms (not including restore)
- Emergency Key Alarms (not including restore)
- Opening/Closing (Arming/Disarming) events
- Tamper Events
- User Initiated Bell Cutoff
- Duress

Dealer Lockout

During the first 60 seconds following power-up, the unalterable code "123456" is valid. This code is designed to enable you to perform initial programming tasks. Activating Dealer Lockout disables this feature and the code can only be restored using the RP software.

Listen-In (firmware dependent)

If a zone is programmed with Listen-in activated, when sending the event message the panel will stay on the line for the time programmed at Address 499. Using microphones installed on-site, the central station operator can distinguish between an actual break-in and a false alarm. In order that the siren will not interfere with the operator's ability to listen-in, the siren is not sounded until the end of the Listen-In period.

The Bell Muting feature (programmed at address 495) delays bell activation until after all pending messages have been sent to the central station.

AC Loss/Restore Report Delay

In the event of AC loss, an event message (address 247 or 281) is sent to the central station between 15 and 30 minutes after the AC loss condition is sensed. The system chooses this delay at random in order to prevent the central station being simultaneously inundated by AC Loss reports in the event of a regional power cut.

If AC power is restored before the event message is sent, the event message is cancelled and will not be sent.

The AC Restore message (address 248 or 282) is also sent at random using the same method described above. AC Restore is reported only if the AC Loss report was sent.

2.1: Parts and Options

Standard Parts

Summit 3208GLD Household Burglary Alarm Control Panel without keypad
Eight 2.2KΩ resistors
Installation Manual
User Manual

Optional Accessories

3106GLD LED Keypad
3108GLD LCD Keypad
3118 LCD Keypad
3128 LCD Keypad
3302 2 Relay Plug-in Output Relay Module
3407GLD 7 Relay Output Relay Module
3402GLD 2 Relay Output Relay Module
3417GLD 7 Transistor Output Module
3508GLD 8 Zone Expander Module
3528GLD Wireless Zone Expander
3606 Voice Message Module
3622 2-Way Voice Module
3722 15Vac 30VA Transformer
3733 Battery Cut-off Module
3800 Printer Module
3911 EL Modem & RS232 Cable
MasterLink Supervised Wireless Range
Remote Programmer - Up/Downloading Software
UHF 3208GLD Long Range Radio Transmitter
VHF 3208GLD Long Range Radio Transmitter
12Vdc/7Ah Battery

Note: Some of the accessories, listed above, are only supported by specific Summit 3208GLD hardware and software versions.

2.2: Mounting the Panel

The Summit 3208GLD should be mounted in a dry location with convenient access to AC power and telephone connections. The metal cabinet includes mounting and wiring holes on the rear, optional wiring knockouts on the sides and dedicated positions for the various peripheral modules available for use with the control panel.

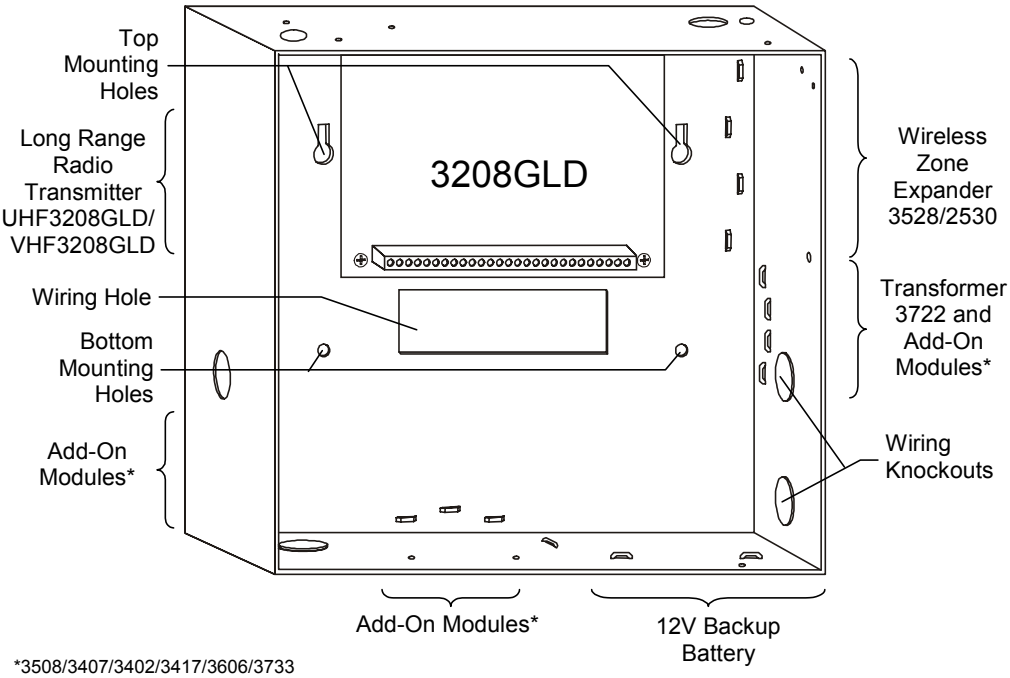


Figure 2.1: 3208GLD Metal Cabinet Layout

2.3: Earth Ground

The Summit 3208GLD control panel and its metal housing must be connected to earth ground. This is in order to ensure proper system operation, provide effective lightning and transient protection and also protect against electrical safety hazards. The earth ground connection should be made directly to an established ground point (such as a grounding rod) using standard green/yellow jacketed wire.

Note: The connection to earth ground must be direct. It is not sufficient to ground the panel only using the 3-pin plug that is connected to the electrical socket.

Power connection to the unit should be according to the national electrical code for permanent installation.

2.4: Installing Keypads

The Summit 3208GLD security system supports the keypads pictured in Figure 2.2. The layout for each keypad differs but the installation and operation instructions for all the keypads are identical.

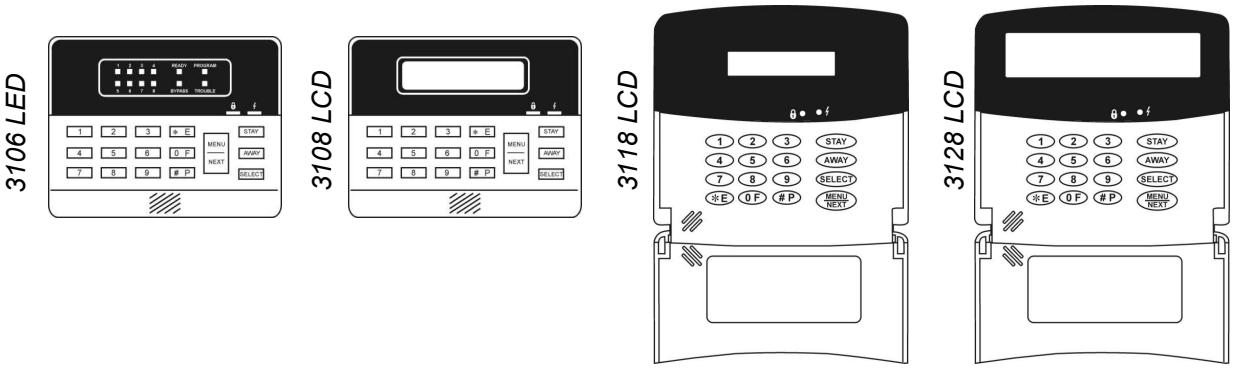


Figure 2.2: 3208GLD Keypads

All keypads are supplied configured to keypad address 1 in unsupervised mode. The maximum recommended distance between the control panel and the keypad is 1,000m (3,000ft.).

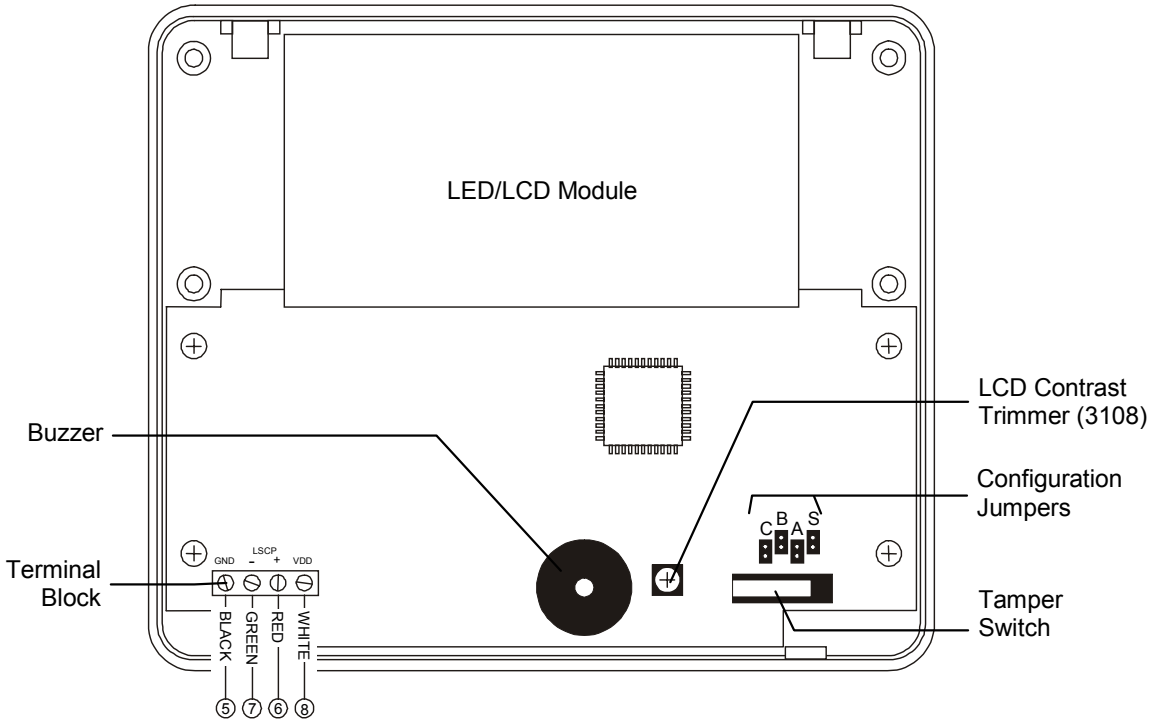


Figure 2.3: 3106/8 Keypad (cover off)

Keypad unit address

Up to eight individually addressed supervised keypads can be installed with the control panel. If more than one keypad is installed with same unit address, all keypads must be configured as unsupervised.

To configure the keypad unit address:

1. Using a small flat-head screwdriver, open the back cover of the keypad.
2. Locate the jumpers marked “CBA”.
3. Install the jumpers according to Figure 2.4.
4. Disconnect and re-connect the power supply.

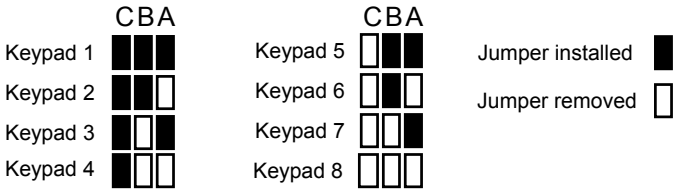


Figure 2.4: Keypad Unit Address Jumper Configuration

Keypad supervision

If a supervised keypad is disconnected, the control unit sends an LSCP Unit Tamper message (address 239 or 273) to the central station.

Note: The LSCP Unit Tamper message is also sent when the keypad’s tamper switch is opened. This event message is sent regardless of the keypad’s supervision setting.

To configure the keypad supervision setting:

1. Using a small flat-head screwdriver, open the back cover of the keypad.
2. Locate the jumper marked S.
3. To configure the keypad in supervised mode, remove the jumper.

Figure 2.5: Keypad Supervision Jumper Configuration

LCD Contrast Adjustment

If the LCD display is unclear, the contrast may be adjusted using the LCD contrast trimmer.

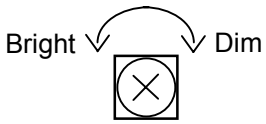
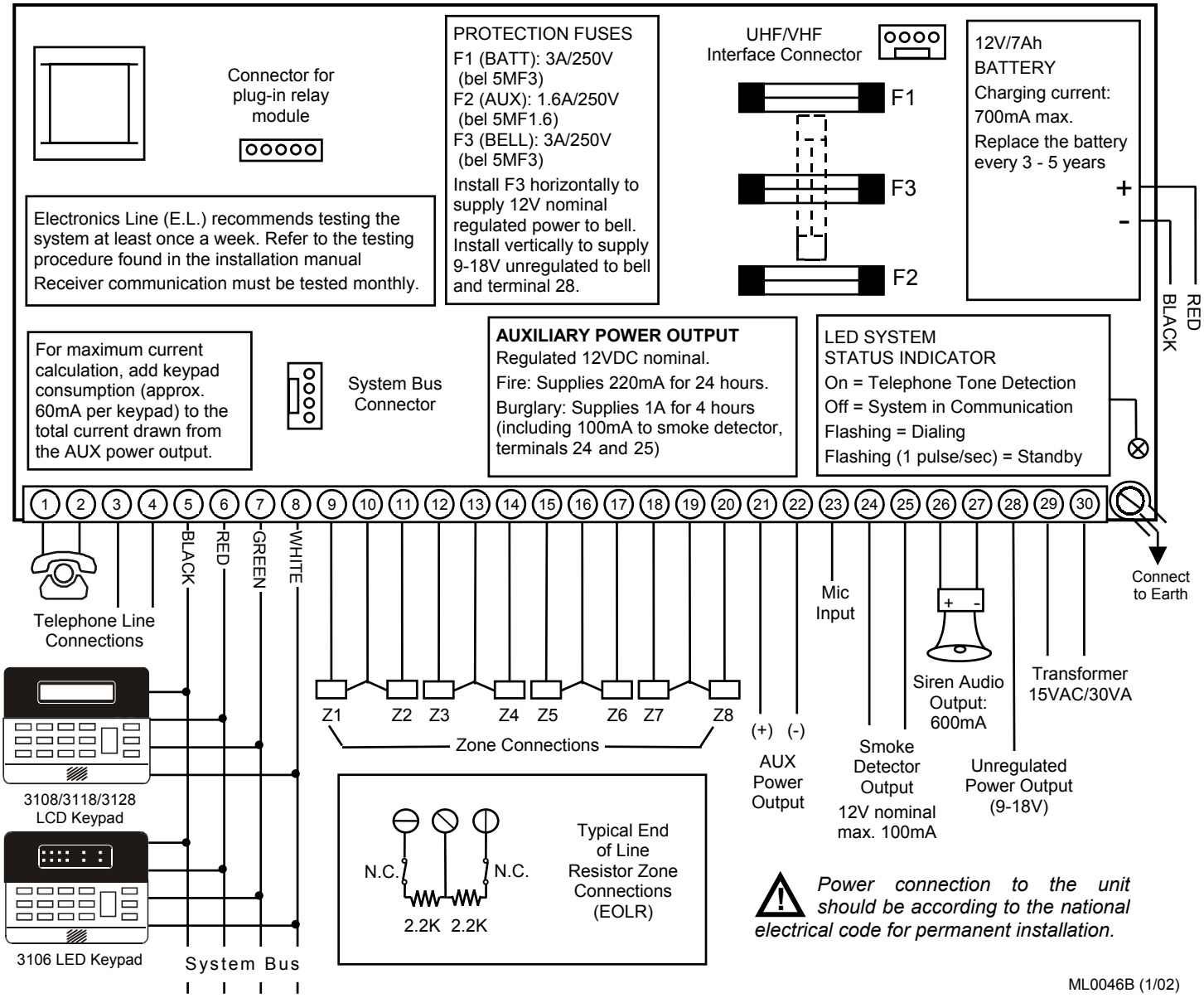


Figure 2.6: LCD Contrast Trimmer

2.5: Wiring Diagram - 3208GLD (STD)

Electronics Line (E.L.) Ltd – Summit 3208GLD Household Burglary and Fire Alarm Panel



2.6: Terminal Connections- 3208GLD (STD)

Telephone Connections

Terminals 1, 2, 3 and 4: The telephone line should be connected as follows.

Outgoing line to telephone: Terminal 1 - Home Tip, Terminal 2 - Home Ring

Incoming Line from telephone company: Terminal 3 - Telco Tip, Terminal 4 - Telco Ring.

Keypad Connections

Terminals 5(-), 6(+), 7(LSCP-), 8(LSCP+):

Terminal 5: Common Ground (Black)	Terminal 6: AUX power (Red)
Terminal 7: LSCP - (Green)	Terminal 8: LSCP + (White)

Connect these terminals to the corresponding terminals on the keypad.

Zone Connections

Terminals 9(+), 10(-), 11(+), 12(+), 13(-), 14(+), 15(+), 16(-), 17(+), 18(+), 19(-), 20(+):

Zone 1:	Terminals 9 and 10	**Zone 5:**	Terminals 15 and 16
Zone 2:	Terminals 11 and 10	**Zone 6:**	Terminals 17 and 16
Zone 3:	Terminals 12 and 13	**Zone 7:**	Terminals 18 and 19
Zone 4:	Terminals 14 and 13	**Zone 8:**	Terminals 20 and 19

Auxiliary Power Output

Terminals 21(+), 22(-): Regulated 12VDC nominal at 1A max. including keypads and detection devices for 4 hours standby.

Microphone

Terminal 23: Microphone input for listen-in applications.

Smoke Detector Power Output

Terminals 24(+), 25(-): These terminals provide up to 100mA for powering latching smoke detectors. The smoke detector output is active low and is restored either automatically or manually.

Bell Power Output

Terminals 26(+), 27(-): These terminals supply power to the bell. The power requirements are as follows: AUX power (12Vdc nominal regulated, 9 - 18VDC unregulated), rated at 600mA with 40VA transformer.

12V Unregulated Power Output

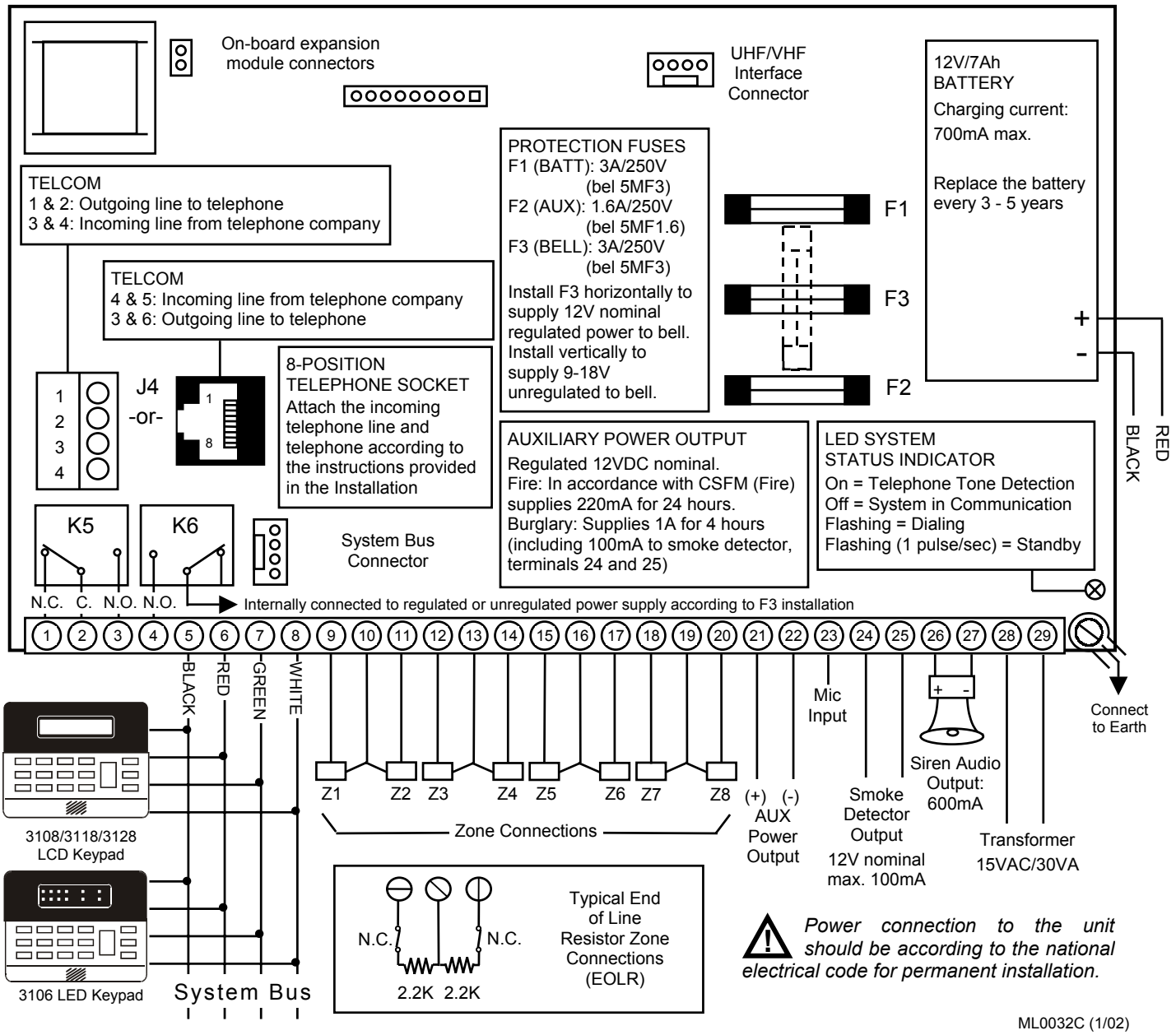
Terminal 28: This terminal provides 12V unregulated power when fuse F3 is installed in the vertical position.

AC Power Input

Terminals 29, 30: Connect a 15VAC Class II transformer rated at 30VA, using 18AWG wire.

2.7: Wiring Diagram - 3208GLD (EU)

Electronics Line (E.L.) Ltd – Summit 3208GLD Household Burglary and Fire Alarm Panel



2.8: Terminal Connections- 3208GLD (EU)

Telephone Connections

Connector J4: The telephone line should be connected as shown in Figure 2.7.

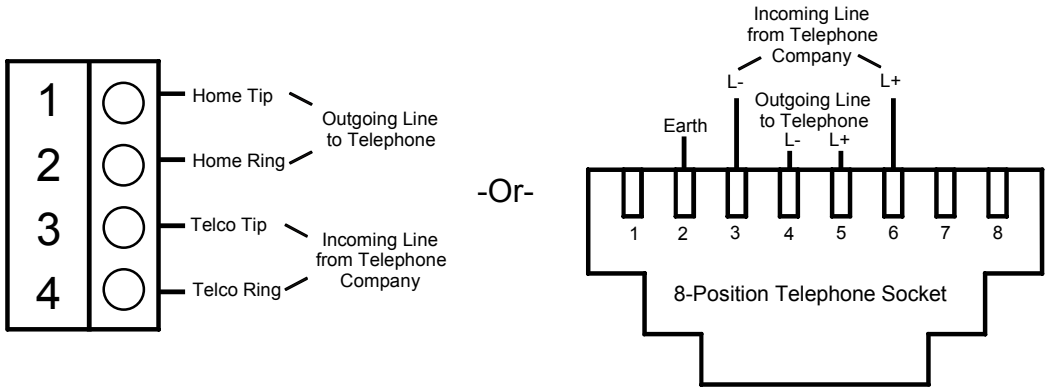


Figure 2.7: Telephone Connections

On-Board Relay Contacts

Terminals 1, 2, 3 and 4:

(K5) Terminal 1: N.C. Terminal 2: Common Terminal 3: N.O.

(K6) Terminal 4: N.O. (Relay K6 is internally connected to the regulated or unregulated power supply, according to the position of fuse F3)

Keypad Connections

Terminals 5(-), 6(+), 7(LSCP-), 8(LSCP+):

Terminal 5: Common Ground (Black) Terminal 6: AUX power (Red)

Terminal 7: LSCP - (Green) Terminal 8: LSCP + (White)

Connect these terminals to the corresponding terminals on the keypad.

Zone Connections

Terminals 9(+), 10(-), 11(+), 12(+), 13(-), 14(+), 15(+), 16(-), 17(+), 18(+), 19(-), 20(+):

Zone 1:	Terminals 9 and 10	**Zone 5:**	Terminals 15 and 16
Zone 2:	Terminals 11 and 10	**Zone 6:**	Terminals 17 and 16
Zone 3:	Terminals 12 and 13	**Zone 7:**	Terminals 18 and 19
Zone 4:	Terminals 14 and 13	**Zone 8:**	Terminals 20 and 19

Auxiliary Power Output

Terminals 21(+), 22(-): Regulated 12VDC nominal at 1A max. including keypads and detection devices for 4 hours standby.

Microphone

Terminal 23: Microphone input for listen-in applications.

Smoke Detector Power Output

Terminals 24(+), 25(-): These terminals provide up to 100mA for powering latching smoke detectors. The smoke detector output is active low and is restored either automatically or manually.

Bell Power Output

Terminals 26(+), 27(-): These terminals supply power to the bell. The power requirements are as follows: AUX power (12VDC nominal regulated; 9 - 18VDC unregulated), rated at 600mA with 30VA transformer.

AC Power Input

Terminals 28, 29: Connect a 15VAC Class II transformer rated at 30VA, using 18AWG wire.

2.9: Hardwire Zone Loop Types

The Summit 3208GLD supports the following zone loop types: N.O. (normally open); N.C. (normally closed); E.O.L.R. (end of line resistor); D.E.O.L.R. (double end of line resistor). You must define the zone's loop type accordingly at the 3rd address of each zone's programming parameters.

Note: D.E.O.L.R. zones are available only for DK firmware versions. For D.E.O.L.R. zones, do not install more than ten sensors in a circuit.

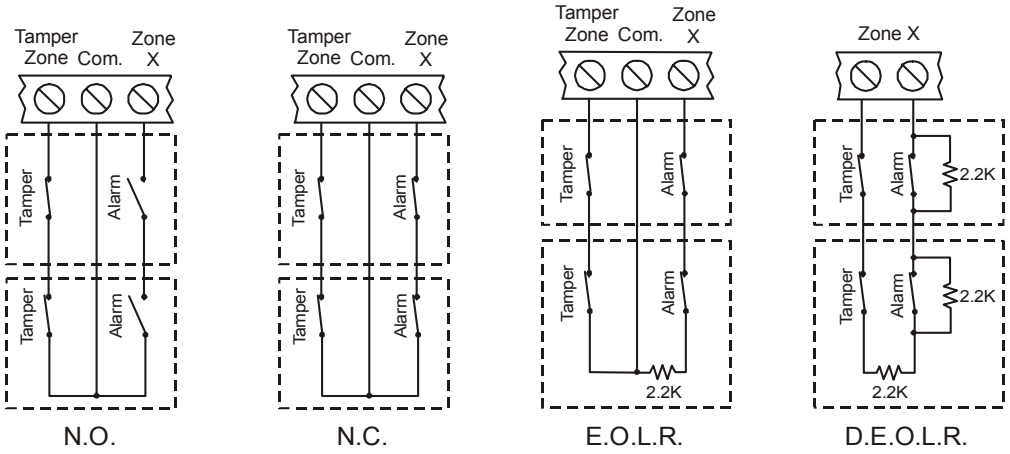


Figure 2.8: Hardwire Zone Loop Types

2.10: Fuse Replacement

The following diagram shows the 3 protection fuses on the Summit 3208GLD's main circuit board.

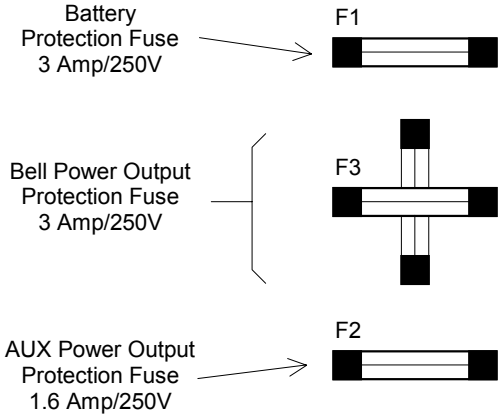


Figure 2.9: Fuse Replacement

F1 (Battery Protection Fuse): Protects the battery charger circuit and the control panel from a short circuit. To replace this fuse, use a bel 5MF3 or other 3A/250V fuse.

F2 (AUX Power Output Protection Fuse): Protects terminals 6 (keypad power), 21 (AUX output) and 24 (smoke detector power output). To replace this fuse use, a bel 5MF1.6 or other 1.6A/250V fuse.

F3 (Bell Power Protection Fuse): Protects the active bell output (terminal 26). When the fuse is installed in the horizontal position 12VDC nominal regulated power is supplied to the bell. When the fuse is installed in the vertical position, unregulated (approx. 9 to 18VDC) power is supplied to the bell and terminal 28. To replace this fuse, use a bel 5MF3 or other 3A/250V fuse.

MAKE SURE YOU REPLACE A FUSE WITH THE CORRECT RATING !

2.11: Turning on the System

Once all of the systems components are properly connected and you have checked the connections, the Summit 3208GLD is ready to be turned on. To avoid the risk of electric shock or damage to the control panel, make sure that both the AC supplier and the battery are connected properly before applying power to the system.

3.1: General

The Summit 3208GLD can be operated using any of the keypads shown in section System operation and programming is identical for all LCD keypads.

3.2: Display and Controls

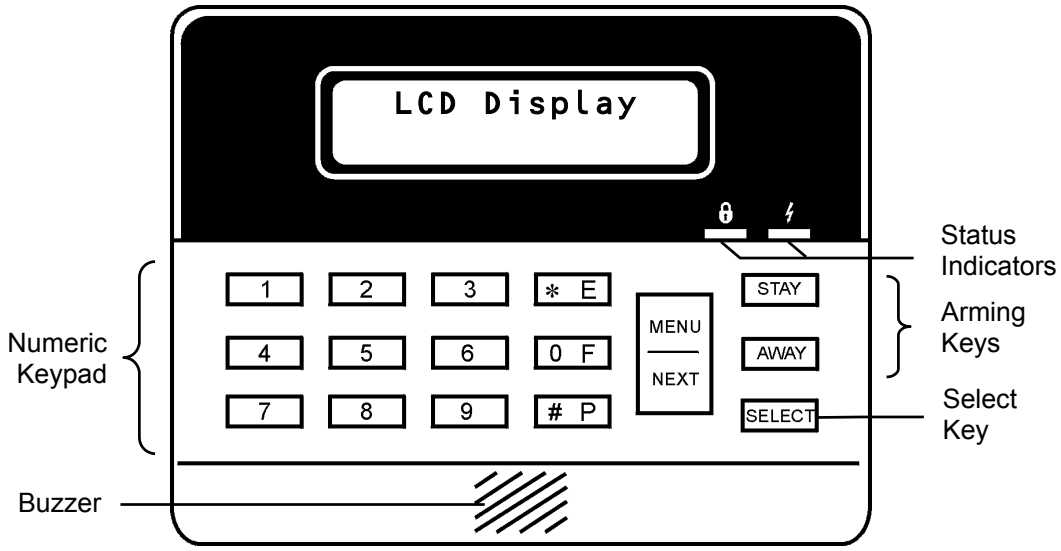


Figure 3.1: 3108 Keypad

Keys and Keypad Functions

0 - 9: The numeric keys are used to enter user codes, telephone numbers, to issue commands and for numeric programming.

∗ , #: These keys provide a number of different functions. On the LCD keypad, you can scroll backwards using the ∗ key during menu navigation and programming. Pressing the ∗ key cancels the entry and exit delays for the current arming period. During programming, use the # key to enter hexadecimal digits (A - F). Press # when the system is in standby to toggle the time from 24hr to 12hr format.

MENU/NEXT: On the LCD keypad, pressing the MENU/NEXT key displays the main menu and is used to scroll through the menu items. On both the LCD and LED keypads the MENU/NEXT key is used to log in an arrival when using the latch key feature. Additionally, the MENU/NEXT key generates an emergency alarm when held down simultaneously with one of the distress keys (E, F or P).

SELECT: Pressing SELECT, followed by a command code, issues a command to the system. On the LCD keypad, this key is also used to select menu items.

STAY: The STAY key is used to arm the system's perimeter zones.

AWAY: The AWAY key is used to arm the whole system (both perimeter and interior zones). AWAY is also used to exit the current operation (e.g. programming or view log)

Note: If one-key arming is enabled, the user can arm the system using the STAY and AWAY keys without having to enter a user code.

Status Indicators

ARMED: On when the system is armed, off when the system is disarmed.

POWER: On when both the AC and the backup battery are connected, provided that the voltage supplied by the battery is over 10.8V and AC power supply is between 50 - 60Hz. The indicator blinks slowly when the battery is low and turns off to indicate AC power loss.

Note: If the keypad is programmed to display all systems, the Armed LED lights up only when all systems are armed.

For DK firmware versions, during the arming period, the Armed LED flashes quickly after an alarm occurrence. When disarming after an alarm, the Armed LED flashes periodically. This indication is reset by arming the system, viewing the entire event log or clearing the log.

System Warning Chimes

The keypad chimes to indicate the following trouble situations: AC loss, low battery, telephone line failure (firmware dependent) and fire trouble. Pressing any key on the keypad terminates these chimes.

LED Keypad Operation (3106)

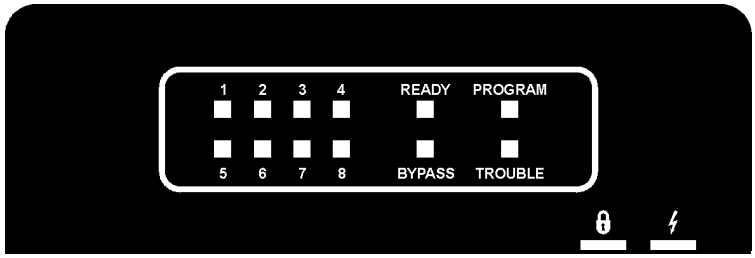


Figure 3.2: 3106 LED Display

The 3106 LED keypad is designed for use as an additional arming station. Electronics Line strongly recommends that you do not use the LED keypad to perform any complex procedures that require detailed feedback from the system, such as programming.

The following is a summary of the LED display:

1 - 8: Used to display zone status. The relevant LED is lit if the zone is open, flashes slowly if the zone is bypassed and flashes quickly if the zone was violated in the last arming period.

The keypad's system defines which zone expander is associated with the keypad, i.e. which zones are displayed by LEDs 1-8. See Addresses 132-139 for keypad system allocation.

System 1 (Zones 1-8): *Zone Expander A* **System 2 (Zones 9-16):** *Zone Expander B*

System 3 (Zones 17-24): *Zone Expander C* **System 4 (Zones 25-32):** *Zone Expander D*

If zone expander A is not in use, the control panel's 8 onboard zones are displayed from a System 1 keypad.

Note: For all zones to be displayed on LED keypads, the zones must be assigned to the correct system in programming. For example, if zones 1-8 are not assigned to System 1, their zone status will not be displayed by any LED keypad.

BYPASS: Indicates if zones have been bypassed. The Bypass LED and the relevant zone LEDs blink to indicate that zones have been bypassed.

READY: Indicates if the system is ready to arm. If lit, the system is ready and if the LED is flashing quickly, the system is not ready to arm. This LED is off when the system is armed.

PROGRAM: The Program LED lights up if SELECT is pressed and flashes to indicate that the system is waiting for a user code to be entered.

TROUBLE: Flashes if a trouble situation exists within the system (telephone communication and siren supervision failure).

3.3: LCD System Status Display

Each LCD keypad includes a two-row display with 16 characters on each row. This display provides a convenient user interface for operating and programming the Summit 3208GLD control panel. The following section shows typical LCD displays and offers a short description of each message.

Arming Display

Description	Display
System ready to arm	SYSTEM 1 READY
System ready to arm with bypassed zones	SYSTEM 1 READY (BYPASSED)
System not ready to arm due to open perimeter zones	SYSTEM NOT RDY (OPEN ZONES)
System armed, exit delay counting	SYSTEM 1 ARMED 011 SEC TO EXIT
System ready for perimeter arming (interior zones open)	SYSTEM 1 READY FOR STAY ARMING
System ready for perimeter arming with perimeter (bypassed zones)	SYSTEM 1 READY FOR STAY (BYPASSED)
System armed, exit delay ended - system is fully armed	SYSTEM 1 ARMED
System Perimeter armed, exit delay ended (STAY pressed)	SYSTEM 1 ARMED/P
System armed, immediate mode	SYSTEM 1 ARMED IMMEDIATE

Zone Status Display

Zone status is only displayed if detailed display is selected (see addresses 128-131).

Zone 1, Bedroom, is open	ZONE 1 OPEN BEDROOM
Zone 3, Front Door, has been bypassed	ZONE 3 BYPASSED FRONT DOOR
Zone 4 has been tampered with	ZONE 4 TAMPER
Zone 4, bedroom, is in alarm	ZONE 4 IN ALARM BEDROOM

System Status Display

AC power has been disconnected:	SYSTEM AC LOSS
Backup battery is low (under 10.8V) or has been disconnected:	SYSTEM LOW BATT
Communication failure or the telephone has been disconnected:	TELEPHONE COMM. FAILURE
Time and Date display (scrolls every few seconds):	THU 28 JUL 94 12:37

3.4: Entering Commands

There are two methods of entering a command:

- Direct command entry (LCD and LED keypads)
- Menu Selection (LCD keypads only)

Entering Direct Commands

To enter a direct command:

1. Press “SELECT”.
2. Enter the command code – *refer to the table below*.
3. If prompted to, enter an authorized user code; an acknowledgment tone is sounded to indicate that the command has been accepted.

Command Codes

1X	Disarm System X (1 - 4)
21X	Perimeter Arm System X (1 - 4)
22X	Normal Arm System X (1 - 4)
23X	Late to Close HHMM
31X	Bypass Zone X (1 - 32)
32X	Unbypass Zone X (1 - 32)
33	Chime On
34	Chime Off
39	Unbypass All zones
41	Set Time HHMM, DDMMYY
421	Walk Test
422	Bell Test
423	Telephone Test
425	System Test
426	Battery Test
43	Fire Sensor Reset
44	Bell Cancel
45	Stop Telephone Call
46	Follow Me
5	User Codes
61	View Log
62	Clear Log
63	Print Log
64	Show Versions
71	Manual Programming
72	Default Programming
741	Remote Programming: Off-hook
742	Remote Programming: Callback
75	Peripherals
83X	Reset Relay X (1-7)
84X	Set Relay X (1-7)
9	Access Control

Selecting menu items (LCD keypads only)

To select an item from the menu:

1. Press MENU/NEXT; the main menu is displayed and ">" indicates the current field.
2. Press MENU/NEXT to scroll forwards or “*” to scroll backwards. To abort at any time, press AWAY.
3. Press SELECT to choose the displayed menu item. Certain functions may require you to enter an authorized passcode.

   Note: Entering a command code provides a shortcut to specific menu items.

Main Menu

1 - DISARM
2 - ARM
- 21 - PERIMETER ARM
- 22 - NORMAL ARM
- 23 - LATE TO CLOSE

3 - BYPASS
- 31 - BYPASS ZONE
- 32 - UNBYPASS ZONE
- 33 - CHIME ON
- 34 - CHIME OFF
- 39 - UNBYPASS ALL

4 - SERVICE
- 41 - SET TIME & DATE
- 42 - TEST
- 421 - WALK TEST
- 422 - BELL TEST
- 423 - TELEPHONE TEST
- 425 - SYSTEM TEST
- 426 - BATTERY TEST
- 43 - FIRE SENSOR RESET
- 44 - BELL CANCEL
- 45 - STOP COMMUNICATIONS
- 46 - FOLLOW ME

5 - USER CODES
6 - VIEW/LOG
- 61 - VIEW LOG
- 62 - CLEAR LOG
- 63 - PRINT LOG
- 64 - SHOW VERSIONS

7 - PROG.
- 71 - MANUAL PROGRAMMING
- 72 - LOAD DEFAULT PROG. (1-2)
- 74 - REMOTE PROGRAMMING
  - 741 - OFF HOOK
  - 742 - CALLBACK
- 75 - PERIPHERALS

8 - AUX RELAY
- 83 - RESET RELAY
- 84 - SET RELAY

9 - ACCESS CONTROL

3.5: Arming and Disarming

Away Arming

Away arming activates the entire system. This method should be used when the user is leaving the premises.

To Away arm the system:

1. Check that no zones are open (i.e. all entrances are secured and the premises are empty) so that the system is ready for arming.
2. Press AWAY.
3. Enter an authorized user code; the LCD displays “SYSTEM X ARMED, XX SEC TO EXIT!”
4. Exit the area within the exit delay count down.

   Note: Failure to exit during the exit delay will result in an alarm.

   Entering an authorized passcode also Away arms the system.

Stay Arming

Stay arming activates the system’s perimeter zones. Stay arming is used when the occupant is remaining on the premises.

To Stay arm the system:

1. Check that no perimeter zones are open (i.e. all doors and windows are secured) so that the system is ready for perimeter arming.
2. Press STAY.
3. Enter your user code; the LCD displays “SYSTEM X ARMED/P, XX SEC TO EXIT!”; at the end of the delay, the system's perimeter is armed.

If one-key arming is enabled it is not necessary to enter a user code when arming the system with the STAY and AWAY keys – *see addresses 128-131.*

Disarming

Disarming deactivates the system. When the user opens a zone with an entry delay, the entry delay counts down. The system must be disarmed during the entry delay to prevent an alarm being generated. If the entry delay expires and the system is still armed, the siren sounds and the user has twenty seconds to disarm before a report is sent to the central station.

To disarm the system:

- Enter an authorized passcode.

If the system is in alarm, entering an authorized passcode disarms the system and terminates the alarm.

3.6: Additional Arming Methods

Forced Arming

Forced arming enables the user to arm the system even if all zones are not secured. If zones are still not secured after the exit delay has ended, an alarm will be generated. The ability to force arm the system is a programmable option – *see address 494.*

Note: Electronics Line recommends waiting until all of the zones are secured and the system can be armed normally.

Immediate Arming

The system can be immediately armed, canceling the entry and exit delay for the arming period.

To arm the system immediately:

- Press ∗ during the exit delay or at any time when the system is armed; the entry/exit delays are cancelled.

3.7: User Codes

Most operations executed from the control panel require a user code. Different user code authorization levels restrict certain functions to specific users. That is to say, of the 15 users that are able to operate the system, not all of them have access to all system operations. For example, an installer with a level 12 user code can only test and program the system. The installer does not have the ability to arm and disarm the system, which maintains a high level of security for the user. Each of the 15 user codes can be programmed with 3 to 6 digits. Each user code has an authorization level and can be assigned to either a specific sub-system or to all systems.

The following table shows the functions available to each authorization level:

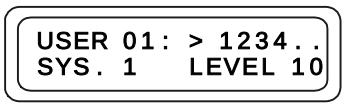
	Away Arm	Stay Arm	Disarm	Bell Cancel	Chime ON/OFF	Fire Sensor Reset	Set/Reset Relay	Follow-me	Access Control	Bypass/Unbypass	Set Clock	Late to Close	View Log/Print Log	Clear Log	Remote Programming	Stop Communications	Program User Codes	Tests	Programming
Level 0	*Access denied to all functions*																		
Level 1	✓																		
Level 2	✓	✓																	
Level 3	✓	✓																	
Level 4	✓	✓	✓	✓	✓	✓	✓												
Level 5	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓						
Level 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Level 7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Level 8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Level 9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Level 10*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Level 11	*Not available*																		
Level 12																		✓	✓
Level 13													✓	✓					
Level 14																		✓	
Level 15**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*Master Code
**Duress Code

Programming User Codes

To program user codes (LCD keypad only):

1. Press SELECT, 5; the LCD display requests a user code.
2. Enter an authorized user code; the display reads:



   In the above example: The code displayed is for User 1. The user code is “1234” - 4 digits with “..” following, signifying that two digits were not used in this user code. The user code is assigned to System 1. The user code authorization level is 10. The current field is indicated by “>”.

3. To scroll through the user codes, press MENU/NEXT to scroll forward and ✻ to scroll back.
4. To scroll through the different fields, press SELECT.

5. To change the value of the current field, enter the required value.
6. Press AWAY to exit user code programming or MENU/NEXT to program the next user code.

Note: A user cannot program a code to a higher access level or to a sub-system other than the one to which their code belongs. Additionally, a user cannot view user codes assigned to a higher access level. The system accepts the first user code it recognizes. To prevent being locked out of the system, do not program user codes beginning with the same numeric combination. For example, the 3 digit user code "123" and the 4 digit code "1234" are programmed in the same system. Any attempt to enter "1234" is impossible as the system recognizes "123" the moment the third digit is entered.

User Codes and System Partitioning

When the Summit 3208GLD is partitioned into several sub-systems, user codes can be associated either with a specific sub-system or with the entire system. Assigning a user code to only one system will default all operations to that system. For example, if a user code is assigned to System 3, entering the code arms System 3 without the need to indicate the system number. A user code authorized to all of the subsystems can perform functions affecting the entire system, such as arming. To assign a user code to all of the systems, program the code as belonging to System 5.

Duress Code

The duress code is a user code designed for situations where the user is being forced to operate the system. This user code performs the selected operation, while sending the duress event message (address 259 or 293) to the central station. A duress code has an authorization level of 15.

Note: In the message to the central station, the control panel always indicates the system of the keypad from which the duress code was entered.

3.8: Distress Keys

In the case of an emergency, 3 types of alarm can be generated from the keypad.

To generate a distress key alarm:

1. Press and hold down the MENU/NEXT key.
2. Keeping the MENU/NEXT key held down, press the required distress key, for more than 1 second; the relevant event code is reported to the central station and, if programmed, the bell is activated.

The distress key combinations are:

- *MENU/NEXT and E* - Emergency (event code at address 255 or 289)
- *MENU/NEXT and F* - Fire alarm emergency (event code at address 256 or 290)
- *MENU/NEXT and P* - Police emergency (event code at address 257 or 291)

3.9: Zone Bypassing/Unbypassing

A bypassed zone is ignored by the system; an alarm cannot be generated by a bypassed zone. A zone can only be bypassed if it is programmed as bypassable - *see parameter addresses 000-127.* Bypassing and unbypassing can only be performed if the system is disarmed.

To bypass a zone:

1. Press SELECT 3, 1.
2. Enter an authorized user code and a zone number.
3. Press AWAY to exit.

Note: On a control panel with zone expanders, the control panel waits for an extra digit when zones 1, 2 or 3 are bypassed. This allows bypassing of the additional zones (for example, 11, 24, or 32). In this case, when enter the zone number and press MENU/NEXT to indicate that no additional digit is necessary.

To unbypass a zone:

1. Press SELECT 3, 2.
2. Enter an authorized user code and the bypassed zone number.
3. Press AWAY to exit.

To unbypass all zones:

1. Press SELECT 3, 9.
2. Enter an authorized user code.

3.10: Event Log

The event log records the last 100 events the system has undergone. The event log uses the FIFO (first in, first out) method. Once the log is full, the oldest event will automatically be erased. The event log can only be viewed with the LCD keypad.

View Event Log

To view the event log:

1. Press SELECT 6, 1.
2. Enter an authorized user code.
3. Scroll through the log by pressing the MENU/NEXT key. The events are displayed starting with the most recent event registered in the log.
4. Press AWAY to exit the log.

The following table shows examples of typical event log displays.

Event	Display
Day 23 in month, time 12:45, alarm from Zone 2, Bathroom	23 12:45 ALARM BATHROOM, 02
Day 23 in month, time 12:50, system 1 was armed (perimeter) by user 11.	23 12:50 STAY SYS.1 BY USER 11
This message appears after a group of messages that were successfully sent to the central station.	REPORT SENT
Log viewing completed.	*** END OF LOG ***

Clear Event Log

To clear the log:

1. Press SELECT 6, 2.
2. Enter an authorized user code; the log is erased and the message "***END OF LOG***" is displayed.

Print Event Log

The 3800 is an LSCP add-on module that provides the Summit 3208GLD with a parallel printer port, enabling the user to print the event log.

To print the log:

1. Press SELECT 6, 3.
2. Enter an authorized user code; the log is sent to print.

3.11: Tests

Walk Test

The walk test allows detection devices to be tested without generating an alarm.

To perform a walk test:

1. Press SELECT 4, 2, 1.
2. Enter an authorized user code.
3. Test the control panel's detection devices; an opened zone causes the keypad to beep.
4. To end the walk test, press AWAY.

Walk test mode is automatically terminated after 4 minutes.

Note: During a walk test, an open zone will not create an alarm. However, this does not apply to zones programmed as tamper zones and 24hr zones (Emergency/Holdup, Fire and Verified Fire) opening these zones will create an alarm.

Bell Test

To perform a bell test:

1. Press SELECT 4, 2, 2.
2. Enter an authorized user code; a 1-second ring is heard and the test is terminated automatically.

Telephone Communicator Test

To perform a telephone communicator test:

1. Press SELECT 4, 2, 3 .
2. Enter an authorized user code; a test message is sent to all central stations that are programmed to receive communications from the control panel. The control panel returns to normal operation after the telephone communication test is initiated. The report code for this message is at address 251 or 285.

Note: The control panel seizes the telephone line to run this test.

System Test

To perform a system test:

1. Press SELECT 4, 2, 5.
2. Enter an authorized user code; the system tests the control panel's electronic circuitry. Should the LCD display the message "System Failure", contact our technical support department.

Battery Test

To perform a battery test:

1. Press SELECT 4, 2, 6.
2. Enter an authorized user code; the battery is tested under loading conditions, the control panel returns to normal operation and the battery status display is updated. For the test to be successful the voltage must not be lower than 10.8V under loading conditions. This test is automatically executed by the system every 30 seconds.

3.12: Additional Operations

Set Time & Date

To set the time and date:

1. Press SELECT 4, 1.
2. Enter an authorized user code.
3. Enter the date (DDMMYY).
4. Enter the time in 24 hour format (HHMM).
5. Press AWAY; the panel returns to normal operation.

On the LCD keypad, pressing # when the panel is in standby mode toggles the time display to either 24hr or 12hr format.

Bell Cancel

To cancel bell operation:

- Enter an authorized user code.

If the system is armed, this cancels the bell and disarms the system. If the system is disarmed, only the bell is cancelled.

Note: When the system is armed, entering the Master Code (Level 10) only cancels the bell and does not disarm the system.

When the keypad is mounted outside the protected area or when the system is armed using the Stay method, you may want to cancel the bell without disarming.

To cancel bell operation without disarming the system:

1. Press SELECT, 4, 4.
2. Enter an authorized user code.

Stop Communications

To stop all communications and clear communication message buffers:

1. Press SELECT 4, 5.
2. Enter an authorized user code; all communication buffers are cleared and all communications stop immediately.

Follow-me

To program a telephone number (telephone #4) for the Follow-me feature:

1. Press SELECT 4, 6.
2. Enter an authorized user code; the panel prompts you to enter the telephone number.
3. Enter the required telephone number using keys 0 - 9, # to include a three second pause and ∗ to switch to tone dialing (DTMF).

Examples: To program telephone number 921-1110 using DTMF dialing, enter ∗9211110. To dial telephone number 9211110 in pulse dialing, and then switch to tone dialing to access extension 231 after a pause, key in 9211110#∗231. Up to 16 digits can be entered, including pauses (#) and tone dialing switches (∗). The ∗ key will appear on the display as "T" and the # will appear as ",".

To disable the Follow-me number enter # (",") as the first digit of the number.

Note: Make sure all types of messages that need to be passed to the "follow me" number are routed correctly (see Chapter Four: Programming). A follow me number can be set on any phone number, however, only telephone number 4 can be changed through "SELECT" 4, 6.

Late To Close

When using opening/closing windows, the control panel must be armed within the programmed time frame for the closing window. If the user wishes to stay on the premises and arm the system at a later time, a "Late to Close" condition can be activated in order to extend the window and prevent a message being sent to the central station.

To activate a "Late to Close" condition:

1. Press SELECT 2, 3.
2. Enter the system number.
3. Enter an authorized user code.
4. Enter the new closing hour in 24-hour format (HH); the command is acknowledged and the system returns to normal operation.

Latch Key

When the latch key feature is activated (address 411), the MENU/NEXT key is used to acknowledge arrivals or departures from the system during opening or closing windows. If MENU/NEXT is not pressed after the user code is entered, a 'Failed to Open' or 'Failed to Close' event code is sent to the central station.

Zone Chime

A zone can be programmed to chime when opened.

To program a zone to chime:

1. Press SELECT 3,3.
2. Enter an authorized user code.
3. Enter a zone number; the zone is programmed to chime when opened.

To deactivate a zone chime:

1. Press SELECT 3, 4.
2. Enter an authorized user code.
3. Enter the zone number; the zone will not chime when opened.

Access Control

This feature is designed for use with an electric door latch. The user is able to release the door latch from the keypad by activating a relay programmed to “Access Control” mode – see address 477. A relay is controlled by its corresponding keypad. For example, ‘Keypad 1’ controls ‘Relay 1’, ‘Keypad 2’ controls ‘Relay 2’ and so on.

Note: Keypad 8 cannot be used to operate this feature as it has no corresponding relay.

To activate an access control relay:

1. Press SELECT 9.
2. Enter an authorized user code; the relay is activated for the programmed cutoff time.

Set Relay

Relays can be manually activated and deactivated using this operation. A relay activated in this way is not dependent on system status and stays activated until manually reset.

To manually activate a relay:

1. Press SELECT 8,4.
2. Enter an authorized user code.
3. Enter the number of the relay you want to activate (1-7); the relay is activated.

To manually reset a relay:

1. Press SELECT 8,3.
2. Enter an authorized user code.
3. Enter the number of the relay you want to reset (1-7); the relay is deactivated.

Fire Sensor Reset

If manual fire sensor reset is programmed at address 495, latching smoke detectors must be manually reset after detection. Power is restored 15 seconds after the zone has been reset.

To manually reset fire sensors:

1. Press SELECT 4,3.
2. Enter an authorized user code.

Peripherals (firmware dependent)

Certain peripheral expansion modules for the Summit 3208GLD, such as the MasterLink EL-2530 wireless zone expander, can be programmed and operated using this command. Detailed explanations of the programming and operation procedures are found in the installation instructions supplied with each specific module.

To program or operate peripheral modules:

1. Press SELECT 7,5.
2. Enter an authorized user code.

Chapter Four: Programming

4.1: General

You can program the Summit 3208GLD control panel using either an LCD keypad or the Remote Programmer, Electronics Line's up/downloading software. For more information on keypad operation refer to Chapter 3. Contact your nearest Electronics Line office or distributor to obtain a copy of the Remote Programmer software.

4.2: Guide to Programming

The control panel has 500 parameter addresses. All the programmed data is stored in the EEPROM memory and is saved even if both AC and battery power are disconnected. To make programming easier, the Summit 3208GLD includes a default program including typical values for most installations. This means that, in most cases, you only need to program customer specific parameters such as telephone numbers and account numbers. The data is organized according to parameter addresses. You can make programming changes by entering a new value at the appropriate address. For a complete list of parameter addresses and their options, refer to section 4.4: Programming Parameters.

Dealer Code

The Dealer code, '1,2,3,4,5,6', is valid for the first 60 seconds after power-up. This code is designed to grant access to initial programming procedures. You can cancel the Dealer code at address 411.

4.3: Programming Procedure

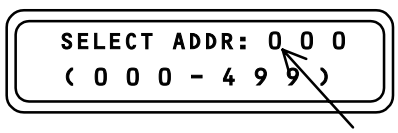
Electronics Line suggests the following:

- Always load a default program when installing a new control panel. To do so, press SELECT 7, 2, enter an authorized user code and choose a default program.
- Before installation and programming, plan the application well using the programming form provided.
- Use the following procedure to program the data from the programming form into the control panel.

To program the Summit 3208GLD using the 3108 LCD keypad:

1. Press SELECT 7, 1 to enter programming mode.
2. Enter an authorized user code.
3. Enter a 3-digit parameter address; the keypad displays the selected address within a group of related parameters (zones, telephone numbers, routing etc.). For example, if a zone parameter address is selected, the four parameters relating to that specific zone are displayed and the first digit of the selected address flashes.
4. Pressing MENU/NEXT or entering data moves the cursor to the next parameter digit. To move back to the previous digit press the ∗.
5. To move to another item, press SELECT and then MENU/NEXT or ∗ to scroll forwards and backwards through the available options. For example, if Zone 1 is selected, press SELECT and use MENU/NEXT and ∗ to scroll forward and backwards through the different zones.
6. To exit programming mode, press AWAY.
7. For the modifications to take effect, disconnect and reconnect both AC and battery power supplies.

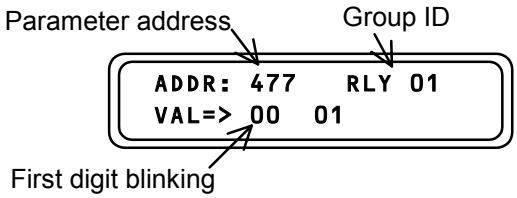
Note: The system allows two minutes to begin programming before automatically exiting programming mode. Programming mode is immediately aborted if the control panel is in communication (both incoming and outgoing calls).



First digit blinking, press any numeric key to change this digit.

Press:
∗ to move to the previous digit
SELECT to select another address or group of parameters
MENU/NEXT to move to the next digit or group
AWAY to exit programming mode

After entering a parameter address number…



Upon entering a digit, the display automatically moves to the next digit. To move to the next digit without entering a modification, press MENU/NEXT. To move back to the previous digit, press ∗.

Entering Hex data

Pressing # scrolls through the hexadecimal digits A, B, C, D, E and F. If the original digit is decimal (0-9), press # to change the digit to A. If the original digit is hexadecimal (A-F), press # to move to the next hexadecimal digit in sequence.

4.4: Programming Parameters

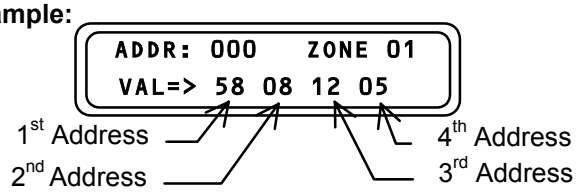
This section comprises a complete listing of the Summit 3208GLD control panel's programming parameters. The following table provides a summary of the parameter addresses.

ADDRESSES	PARAMETERS	ADDRESSES	PARAMETERS
000-127	Zone Parameters	**388**	Swinger Parameters
128-131	System Parameters	**389-409**	Opening & Closing Windows
132-139	Keypad Parameters	**410**	Bell Cut-Off
140-179	Telephone Numbers	**411**	Dealer Lockout & Latchkey
180-195	Account Numbers	**412-475**	Custom LCD Zone Descriptors
196-197	Telephone Line Parameters	**476**	3508 & 3528 Zone Expanders
198-201	Communication Protocols	**477-490**	Relay Parameters
202-261	Zone Oriented Event Codes	**491-493**	Periodic Test
262-295	Event Oriented Event Codes	**494**	Arming Options & Arming Ring
296-310	Event & Message Routing	**495**	Detailed Display, Bell Muting, Alarm Chime & Fire Sensor Reset
378-381	Exit Timers	**496**	Police Key Operation & RP Communication Options
382-384	Entry Timers	**497**	MasterLink EL-2530 Zone Expander
385-387	Pulse Counters	**499**	Listen-In Time Out

ADDRESSES 000-127: ZONE PARAMETERS

Each zone is individually defined in four parameter addresses.

Example:



1st ADDRESS

LCD Zone Descriptor and Entry Delay

Select a zone descriptor and entry delay from the table below. Entry delay options #1, #2 and #3 are set at addresses 382, 383 and 384, respectively. The four custom LCD messages can be programmed at addresses 412-475.

No Delay	Delay #1	Delay #2	Delay #3	Descriptor
00	40	80	C0	no message
01	41	81	C1	1ST FLOOR
02	42	82	C2	2ND FLOOR
03	43	83	C3	3RD FLOOR
04	44	84	C4	4TH FLOOR
05	45	85	C5	BACK DOOR
06	46	86	C6	BASEMENT
07	47	87	C7	BATHROOM
08	48	88	C8	BEDROOM
09	49	89	C9	BEDROOM 1
0A	4A	8A	CA	BEDROOM 2
0B	4B	8B	CB	BEDROOM 3
0C	4C	8C	CC	COMPUTER
0D	4D	8D	CD	CONFERENCE
0E	4E	8E	CE	CORRIDOR
0F	4F	8F	CF	DINING
10	50	90	D0	DOOR
11	51	91	D1	EAST
12	52	92	D2	EMERGENCY
13	53	93	D3	ENTRANCE
14	54	94	D4	EXIT
15	55	95	D5	EXTERIOR
16	56	96	D6	FAMILY
17	57	97	D7	FIRE
18	58	98	D8	FRONT DOOR
19	59	99	D9	GARAGE
1A	5A	9A	DA	GUEST ROOM
1B	5B	9B	DB	HALL
1C	5C	9C	DC	HOLDUP
1D	5D	9D	DD	INTERIOR
1E	5E	9E	DE	KITCHEN
1F	5F	9F	DF	LAUNDRY

No Delay	Delay #1	Delay #2	Delay #3	Descriptor
20	60	A0	E0	LOBBY
21	61	A1	E1	LIVNG ROOM
22	62	A2	E2	MSTR BEDRM
23	63	A3	E3	MAT
24	64	A4	E4	MOTION
25	65	A5	E5	NORTH
26	66	A6	E6	NURSERY
27	67	A7	E7	OFFICE
28	68	A8	E8	PANIC
29	69	A9	E9	PERIMETER
2A	6A	AA	EA	POOL
2B	6B	AB	EB	ROOF
2C	6C	AC	EC	ROOM
2D	6D	AD	ED	ROOM 1
2E	6E	AE	EE	ROOM 2
2F	6F	AF	EF	ROOM 3
30	70	B0	F0	ROOM 4
31	71	B1	F1	SHIPPING
32	72	B2	F2	SHOP
33	73	B3	F3	SLIDE DOOR
34	74	B4	F4	SOUTH
35	75	B5	F5	STAIRS
36	76	B6	F6	STORAGE
37	77	B7	F7	STUDY
38	78	B8	F8	VAULT
39	79	B9	F9	WAREHOUSE
3A	7A	BA	FA	WEST
3B	7B	BB	FB	WINDOW
3C	7C	BC	FC	(custom #1)
3D	7D	BD	FD	(custom #2)
3E	7E	BE	FE	(custom #3)
3F	7F	BF	FF	(custom #4)

2nd ADDRESS

First Digit: Loop Speed, Pulse Count and Swinger Setting

The following table lists the options for the loop speed, pulse count and swinger setting. Choose a slow loop response (150ms for on-board zones or 750ms for zone expander zones) for motion sensors and contacts. Choose a fast loop response (50ms) for shock sensors. The three optional pulse count settings can be programmed at addresses 385-387 and the swinger setting is programmed at address 388. A full explanation of these features can be found at their respective addresses.

Note: The Pulse Count option is not available for DK firmware versions.

First digit value:

Loop Speed	Pulse Count	Swinger Setting	Value
Slow	None	-	0
		Active	1
	#1	-	2
		Active	3
	#2	-	4
		Active	5
	#3	-	6
		Active	7

Loop Speed	Pulse Count	Swinger Setting	Value
Fast	None	-	8
		Active	9
	#1	-	A
		Active	B
	#2	-	C
		Active	D
	#3	-	E
		Active	F

Second Digit: Bypassability, Zone Chime and System ID

The second digit of this address deals with a number of options. Select whether the zone is bypassable, if the zone chime feature is enabled and to which system the zone is assigned from the table below.

Second digit value:

Bypassable	Chime	System	Value
No	No	1	0
		2	1
		3	2
		4	3
	Yes	1	4
		2	5
		3	6
		4	7

Bypassable	Chime	System	Value
Yes	No	1	8
		2	9
		3	A
		4	B
	Yes	1	C
		2	D
		3	E
		4	F

3rd ADDRESS

First Digit: Zone ID

When using certain protocols, Zone ID is the number that identifies the zone within the event code for specific zone events. This number replaces the second digit of the event code — *see addresses 202-261 and 262-295.*

First digit value:
Enter a value between 0 - F for Zone ID

Second Digit: Loop Type

Select the loop type for this zone from the following list.

Second digit value:

0 - N.C. restore on short, alarm on open

1 - N.O. alarm on short, restore on open

2 - E.O.L.R. (end of line resistor) alarm on short, restore on normal, alarm on open

3 - D.E.O.L.R. (double end of line resistor) – *only available for DK firmware versions.*

4th ADDRESS

First Digit: Zone Type

Select a zone type from the following list. For a full explanation of each zone type, see 1.2: Zones.

First digit value:

0 - Perimeter normal zone
1 - Perimeter primary zone
2 - Perimeter secondary zone
3 - Perimeter conditional zone
4 - Interior normal zone
5 - Interior primary zone
6 - Interior secondary zone
7 - Interior conditional zone
9 - Verified Fire Zone
A - Fire Zone
B - Common Zone
C - Emergency/Holdup (24 Hour)
D - Tamper
E - On/Off keyswitch STAY
F - On/Off keyswitch AWAY

Second Digit: Listen-In, Message Transmission to the Central Station and Bell Activation

Select the type of output for this zone in the event of an alarm.

Second digit value:

Listen-In Activated	Send Message to Central Station	Activate Bell	Value
No	No	No	0
		Yes	1
	Yes	No	4
		Yes	5
Yes		No	8
		Yes	9

ADDRESSES 000-031: Zones 1 - 8 These addresses concern the 8 on-board zones or zones added to the control panel using a zone expander (jumper setting A – see address 476).

000-003 Zone #1
004-007 Zone #2
008-011 Zone #3
012-015 Zone #4
016-019 Zone #5
020-023 Zone #6
024-027 Zone #7
028-031 Zone #8

ADDRESSES 032-063: Zones 9 - 16 These addresses concern zones added to the control panel using a zone expander (jumper setting B – see address 476).

032-035 Zone #9
036-039 Zone #10
040-043 Zone #11
044-047 Zone #12
048-051 Zone #13
052-055 Zone #14
056-059 Zone #15
060-063 Zone #16

ADDRESSES 064 – 095: Zones 17 - 24 These addresses concern zones added to the control panel using a zone expander (jumper setting C – see address 476).

064-067 Zone #17

068-071 Zone #18

072-075 Zone #19

076-079 Zone #20

080-083 Zone #21

084-087 Zone #22

088-091 Zone #23

092-095 Zone #24

ADDRESSES 096-127: Zones 25 - 32 These addresses concern zones added to the control panel using a zone expander (zone expander jumper setting D – see address 476).

096-099 Zone #25

100-103 Zone #26

104-107 Zone #27

108-111 Zone #28

112-115 Zone #29

116-119 Zone #30

120-123 Zone #31

124-127 Zone #32

ADDRESSES 128-131: SYSTEM PARAMETERS

These addresses offer a number of options for each sub-system. Program the keypad tones (beeps) and one-key arming feature for each sub-system at these addresses. Program only system 1 for unpartitioned systems.

128 First Digit: Keypad Arming/Disarming Tones for System 1

Each sub-system's keypads can be programmed to beep during arming, disarming and during the entry delay.

When using a keyswitch, wireless devices or the RP software to arm and disarm the system, the siren sounds the same pattern of arm and disarm tones as defined at this address.

Select the keypad tones for System 1 from the table below.

First digit value:

Arm Tone	Continuous on Entry	Disarm Tone	Value
No	No	No	0
		1	1
		3	2
	Yes	No	3
1	No	No	4
		1	5
		3	6
	Yes	No	7
3	No	No	8
		1	9
		3	A
	Yes	No	B
Continuous	No	No	C
		1	D
		3	E
	Yes	No	F

Second Digit: Display, Power Trouble Tones and One Key Arming for System 1

The second digit of this address offers options for the display type of each sub-system's keypads and the tones sounded for power related trouble conditions. One-Key Arming allows the user the capability to arm the system, using either the STAY or AWAY keys, without needing to enter a user code. Select these options for System 1 from the table below.

Second digit value:

Display Type	One Key Arming	Beep for AC Loss	Beep for Low Battery	Value
Summarized	Disabled	No	No	0
			Yes	1
		Yes	No	2
			Yes	3
	Enabled	No	No	4
			Yes	5
		Yes	No	6
			Yes	7
Detailed	Disabled	No	No	8
			Yes	9
		Yes	No	A
			Yes	B
	Enabled	No	No	C
			Yes	D
		Yes	No	E
			Yes	F

129 Same as above for System 2

130 Same as above for System 3

131 Same as above for System 4

ADDRESSES 132-139: KEYPAD PARAMETERS

The following addresses offer options for the configuration of each keypad.

132 First Digit: Backlight and Buzzer Operation for Keypad 1

Select the backlight and buzzer options from the following table.

First digit value:

Buzzer	Backlight	Value
Audible	On after keystroke for 1 minute	0
	On for opening windows	1
	On for closing windows	2
	On for opening/closing windows	3
	On at all times	4
Silent	On after keystroke for 1 minute	8
	On for opening windows	9
	On for closing windows	A
	On for opening/closing windows	B
	On at all times	C

Second Digit: Keypad Supervision, System Operation and Display forKeypad 1

In partitioned systems, each keypad is associated with a specific sub-system and can be programmed to display only its own sub-system or all the sub-systems. Keypad supervision is selected both at this address and on the keypad itself – *see 2.4: Installing Keypads.*

Second digit value:

Supervision	Display System	Operate System	Value
No	1	1	0
	2	2	1
	3	3	2
	4	4	3
	All	1	4
		2	5
		3	6
		4	7

Supervision	Display System	Operate System	Value
Yes	1	1	8
	2	2	9
	3	3	A
	4	4	B
	All	1	C
		2	D
		3	E
		4	F

133 Same as above for Keypad 2
134 Same as above for Keypad 3
135 Same as above for Keypad 4
136 Same as above for Keypad 5
137 Same as above for Keypad 6
138 Same as above for Keypad 7
139 Same as above for Keypad 8

ADDRESSES 140-179: TELEPHONE NUMBERS

Consecutive addresses are used to enter telephone numbers up to 16 digits. Indicate the end of the telephone number with the hex digit F. To enter a 3 second pause enter C, for a 7 second pause enter D, to switch from pulse to tone dialing, enter E.

Note: The emergency telephone numbers shall not programmed to place a call to a police station that has not been specifically assigned by that police station for such a service.

140-147 Telephone #1
148-155 Telephone #2
156-163 Telephone #3
164-171 Telephone #4 (usually used with the Follow-me feature – SELECT, 4, 6)
172-179 Telephone number for Remote Programmer Callback.

The Remote Programmer Callback telephone number is programmed using the same method as telephone numbers 1-4.

ADDRESSES 180-195: ACCOUNT NUMBERS

Account numbers are transmitted to the central station with the event code to identify the source of the event.

Each system can be given a separate account number. If the system is not partitioned, only enter the account number for System 1. For partitioned systems, program account numbers for all sub-systems.

Account numbers are entered in four consecutive addresses. To enter an account number always enter 8 digits in sequence (if the number is less than 8 digits, use leading zeros).

Variable Transmission Length Protocols

Certain protocols can handle more than one transmission length. This means that in some protocols either 5 or 8 digit account numbers, for example, can be sent. The following example illustrates how to program account numbers for a protocol that handles 3 or 4 digit account numbers.

When transmitting an account number to the central station, the control panel automatically ignores any sequence of zeros at the beginning of the number.

Enter the following to program a 3 digit account number for System 1:

Address →	180	181	182	183
Value →	00	00	01	23

In the above example the account number will be regarded as “123”. If a 4 digit account number “0123” is required, enter the following:

Address →	180	181	182	183
Value →	10	00	01	23

The first digit indicates to the control panel that the zero is to be considered as part of the 4-digit account number.

180-183 Account # for System 1

184-187 Account # for System 2

188-191 Account # for System 3

192-195 Account # for System 4

ADDRESSES 196-197: TELEPHONE LINE PARAMETERS

196 First Digit: Dialing Options and Telephone Event Message Enable/Disable

The first digit of this address comprises the following options.

- Voice Mail Override – in certain voice mail systems, a broken dial tone is sounded to indicate that messages have been received. Using voice mail override, the panel detects these tones allowing the line to be shared with the voice mail system.
- Dialing Mode – the panel can be programmed to use either pulse or tone (DTMF) dialing.
- Telephone Event Message Enable/Disable – this option enables or disables telephone communications to the central station and follow-me number. If disabled, there is no need to program any of the other parameters regarding central station communications (telephone numbers, event codes etc.).

Note: This option does not affect RP communications. The RP Callback number, addresses 172-179, may still be programmed.

First digit value:

Voice Mail Override	Dialing Mode	Telephone Event Message	Value
Enable	Pulse	No	0
		Yes	2
	DTMF	No	4
		Yes	6
Disable	Pulse	No	8
		Yes	A
	DTMF	No	C
		Yes	E

Second Digit: Time-Outs for Acknowledgment

Acknowledgments are tones transmitted from the central station to the control panel to confirm successful transmission of event codes. There are 2 acknowledgment tones, Ack1 and Ack2. Ack1 is the tone that confirms that the central station has recognized that the panel is attempting to send an event code. Time-Out for Ack1 is the amount of time the panel waits for Ack1 to be sent after the central station picks up. If Ack1 is not received within this time period, the panel makes another dialing attempt (if programmed at address 197). Ack2 is the tone that confirms that the central station has received and understood the message. Time-Out for Ack2 is the amount of time the panel waits for Ack2 after sending the message. If Ack2 is not received during this time period, the panel makes another message attempt (if programmed at address 197).

Note: When using the Follow-me feature, Ack1 is received when the user presses 0, 9 or # on their telephone and Ack2 is not relevant.

Second digit value:

Time-Out		
Ack 1	**Ack 2**	**Value**
2 sec	2 sec	0
	3 sec	1
	5 sec	2
	10 sec	3
15 sec	2 sec	4
	3 sec	5
	5 sec	6
	10 sec	7

Time-Out		
Ack 1	**Ack 2**	**Value**
30 sec	2 sec	8
	3 sec	9
	5 sec	A
	10 sec	B
60 sec	2 sec	C
	3 sec	D
	5 sec	E
	10 sec	F

197 First Digit: Dialing & Message attempts

The first digit of this address deals with the number of times the panel attempts to dial or transmit an event code message until a successful transmission is sent.

First digit value:

Dialing	Message	Value
1	1	0
	2	1
	5	2
	10	3
2	1	4
	2	5
	5	6
	10	7

Dialing	Message	Value
5	1	8
	2	9
	5	A
	10	B
10	1	C
	2	D
	5	E
	10	F

Second Digit: Dial Tone Wait and Anti Jamming

The default value for the second digit of this parameter has been chosen according to the requirements of the local telecommunications authority. If any problems are experienced, please contact Electronics Line Technical Support Dept.

Second digit value:

0 - Dial after 1 second, 2 second anti-jam

1 - Dial after 5 seconds, 2 second anti-jam

2 - Dial after 10 seconds, 2 second anti-jam

3 - Dial after 20 seconds, 2 second anti-jam

4 - Dial after 1 second or if dial tone present, 2 second anti-jam

5 - Dial after 5 seconds or if dial tone present, 2 second anti-jam

6 - Dial after 10 seconds or if dial tone present, 2 second anti-jam

7 - Dial after 20 seconds or if dial tone present, 2 second anti-jam

8 - Dial after 1 second, 10 second anti-jam

9 - Dial after 5 seconds, 10 second anti-jam

A - Dial after 10 seconds, 10 second anti-jam

B - Dial after 20 seconds, 10 second anti-jam

C - Dial after 1 second or if dial tone present, 10 second anti-jam

D - Dial after 5 seconds or if dial tone present, 10 second anti-jam

E - Dial after 10 seconds or if dial tone present, 10 second anti-jam

F - Dial after 20 seconds or if dial tone present, 10 second anti-jam

ADDRESSES 198 - 201: COMMUNICATION PROTOCOLS

Each of the four telephone numbers is associated with a telephone communication protocol programmable at these addresses. These can be defined according to the protocol used in communications with the central station and whether the message sent will be from either the zone or event oriented event code tables. Telephone #4 is usually associated with the “follow-me” feature, as it is the lowest priority telephone number and can be modified by the user.

Protocol Formats.

The availability of the communication protocols, listed below, is subject to the protocol list in the supplied firmware.

First digit value:

1 - Electronics Line
5 - Follow Me
6 - SIA 110 baud
7 - SIA 300 baud
8 - Scantronics
A - Contact ID
F - Pulse Protocols

IMPORTANT: The value entered at the second digit is dependent on the first digit. If the value entered is anything other than F, only the event code table needs to be chosen.

Event Code Table.

Second digit value:

0 - Event oriented table
8 - Zone oriented table

For pulse protocols, the data frequency and data rate should be defined in addition to the event code table. Select the second digit value from the following table.

Event Code Table, Data Frequency and Data Rate Options for Pulse Protocols.
Second digit value:

Event Code Format	Data Frequency	Ack. Frequency	Data Rate	Value
Event Oriented	1800Hz	1400Hz	10pps	0
			20pps	1
		2300Hz	10pps	2
			20pps	3
	1900Hz	1400Hz	10pps	4
			20pps	5
		2300Hz	10pps	6
			20pps	7
Zone Oriented	1800Hz	1400Hz	10pps	8
			20pps	9
		2300Hz	10pps	A
			20pps	B
	1900Hz	1400Hz	10pps	C
			20pps	D
		2300Hz	10pps	E
			20pps	F

Pulse protocol examples: 4/2 Slow (10pps) - F8
4/2 Fast (20pps) - F9

198 Protocol for Telephone #1
199 Protocol for Telephone #2
200 Protocol for Telephone #3
201 Protocol for Telephone #4

ADDRESSES 202 - 261: ZONE ORIENTED EVENT CODE TABLE

The following is a guide to programming event codes.

- 00 - No message is sent for this event.
- 0X - A one-digit event code is sent for this event.
- XX - A two-digit event code is sent for this event.
- X0 - For zone restore the 0 is replaced with the zone ID. For opening and closing events, the 0 is replaced with the user number. For other events both digits are regarded as the event code.

  Note: When providing additional event information, the 0 is replaced with a hexadecimal digit (1-F). This has its limitations when using over 15 zones. Zones 1-15 are represented by 1-F hexadecimal. The cycle then restarts at 16 (i.e. Zone 16=1, Zone 17=2 and so on).

The following are the addresses for zone oriented event code messages. For event oriented codes refer to addresses 262 - 295.

202 Event code for zone restore
203 Event code for Zone 1
204 Event code for Zone 2
205 Event code for Zone 3
206 Event code for Zone 4
207 Event code for Zone 5
208 Event code for Zone 6
209 Event code for Zone 7
210 Event code for Zone 8
211 Event code for Zone 9
212 Event code for Zone 10
213 Event code for Zone 11
214 Event code for Zone 12
215 Event code for Zone 13
216 Event code for Zone 14
217 Event code for Zone 15
218 Event code for Zone 16
219 Event code for Zone 17
220 Event code for Zone 18
221 Event code for Zone 19
222 Event code for Zone 20
223 Event code for Zone 21
224 Event code for Zone 22
225 Event code for Zone 23
226 Event code for Zone 24
227 Event code for Zone 25
228 Event code for Zone 26
229 Event code for Zone 27
230 Event code for Zone 28
231 Event code for Zone 29
232 Event code for Zone 30
233 Event code for Zone 31
234 Event code for Zone 32
235 Event code for opening (disarming)
236 Event code for normal closing (arming)
237 Event code for zones bypassed (DK firmware: closing with bypassed zones)
238 Event code for perimeter closing (STAY arming)

239 Event code for LSCP unit tamper
240 Event code for LSCP unit tamper restore
241 Event code for fire trouble
242 Event code for fire restore
243 Event code for wireless supervision failure/jamming
244 Event code for wireless supervision failure/jamming restore
245 Event code for failed to open
246 Event code for failed to close
247 Event code for AC loss
248 Event code for AC restore
249 Event code for low battery
250 Event code for battery restore
251 Event code for manual telephone test
252 Event code for zones unbypassed (DK firmware: log 75% full)
253 Event code for clock change or completion of remote programming
254 Event code for user initiated bell cutoff
255 Event code for "E" button
256 Event code for "F" button
257 Event code for "P" button
258 Event code for keypad emergency restore (E or P button)
259 Event code for duress
260 Event code for periodic test ***Note: This event code is reported with user code 0.***
261 Event code for system initialization

ADDRESSES 262 - 295: EVENT ORIENTED EVENT CODE TABLE

The following is a guide to programming event codes.

- 00 - No message is sent for this event.
- 0X - A one-digit event code is sent for this event.
- XX - A two-digit event code is sent for this event.
- X0 - For opening and closing events, the 0 is replaced with the user number. For zone events, the 0 is replaced with the zone ID. For system events, such as AC loss, both digits are regarded as the event code.

  Note: When providing additional event information, the 0 is replaced with a hexadecimal digit (1-F). This has its limitations when using over 15 zones. Zones 1-15 are represented by 1-F hexadecimal. The cycle then restarts at 16 (i.e. Zone 16=1, Zone 17=2 and so on).

The following are the addresses for event oriented event code messages. For zone oriented codes refer to addresses 202 – 261.

262 Event code for zone in alarm
263 Event code for zone alarm restore
264 Event code for zone trouble (battery low)
265 Event code for zone trouble restore (battery low)
266 Event code for zone tamper
267 Event code for zone tamper restore
268 Event code for zone emergency alarm
269 Event code for opening (disarming)
270 Event code for normal closing (arming)
271 Event code for zones bypassed (DK firmware: closing with bypassed zones)
272 Event code for perimeter closing
273 Event code for LSCP unit tamper
274 Event code for LSCP unit tamper restore

275 Event code for fire trouble
276 Event code for fire restore
277 Event code for wireless supervision failure/jamming
278 Event code for wireless supervision failure/jamming restore
279 Event code for failed to open
280 Event code for failed to close
281 Event code for AC loss
282 Event code for AC restore
283 Event code for low battery
284 Event code for battery restore
285 Event code for manual telephone test
286 Event code for zones unbypassed (DK firmware: log 75% full)
287 Event code for clock change or completion of remote programming
288 Event code for user initiated bell cutoff
289 Event code for "E" button
290 Event code for "F" button or alarm from fire zone
291 Event code for "P" button
292 Event code for keypad emergency restore (E or P button)
293 Event code for duress
294 Event code for periodic test ***Note: This event code is reported with user code 0.***
295 Event code for system initialization

ADDRESSES 296-310: EVENT & MESSAGE ROUTING

Event code messages are divided into "Routing Groups" so that they can be routed in several ways. Each telephone number can be defined as a primary or back-up number for a specific routing group. The control panel can also be programmed not to dial a telephone number for a certain routing groups.

A primary number is the first number the control panel dials when an event occurs. If the control panel is unsuccessful in dialing the primary number, the back-up number is dialed. More than one primary number can be assigned to a routing group. In this case, the numbers will be dialed in sequence. For example, if telephone numbers 1 and 3 are defined for the same routing group, telephone number 1 will be dialed first. Routing also determines whether messages are entered in the log, whether the bell is activated and which bell pattern is sounded.

296-298 Message routing for Burglary Alarm messages

See Appendix C: Message Routing

296 Telephone #4

First digit value:

0 - Do not call this telephone number

1 - Primary telephone number

3 - Backup telephone number

Telephone #3

Second digit value:

0 - Do not call this telephone number

1 - Primary telephone number

3 - Backup telephone number

297 Telephone #2

First digit value:

0 - Do not call this telephone number

1 - Primary telephone number

3 - Backup telephone number

Telephone #1

Second digit value:

0 - Do not call this telephone number

1 - Primary telephone number

3 - Backup telephone number

298 Bell Delay, Log Entry and Bell Activation for burglary alarms Select from the following options to set the 20 second bell delay, log entry and bell activation for burglary alarms.

Bell Delay and Log Entry

First digit value:

0 - No bell delay, no log

1 - Bell delay, no log

8 - No bell delay, log

9 - Bell delay, log

Bell Activation

Second digit value:

0 - No bell

1 - Bell pattern 1

2 - Bell pattern 2

3 - Steady bell

Note: Pulsed signals are available for special alarm types.

299-301 Message routing for LSCP Unit Trouble messages Same as addresses 296 – 298
See Appendix C: Message Routing

302-304 Message routings for Fire messages Same as addresses 296 - 298
See Appendix C: Message Routing

Note: Fire zones have a fixed bell pattern - pulse on and off for half a second, in groups of three, with an interval of one and a half seconds between each sequence. The cut-off time is fixed at four minutes. Bell delay does not apply to fire zones.

305-307 Message routings for Open/Close messages Same as addresses 296 – 298
See Appendix C: Message Routing

Note: Bell delay and bell activation are not relevant to this routing group and do not need to be defined.

308-310 Message routings for Service messages Same as addresses 296 – 298
See Appendix C: Message Routing

Note: Bell delay and bell activation are not relevant to this routing group and do not need to be defined.

311-377 Not available

ADDRESSES 378-381: EXIT TIMERS

The exit delay timer determines the amount of time the user has to leave the premises after arming the system. Enter a hexadecimal value between 0 - 255 seconds using the hexadecimal conversion chart in Appendix B.

378 Exit Delay Time for System 1
379 Exit Delay Time for System 2
380 Exit Delay Time for System 3
381 Exit Delay Time for System 4

ADDRESSES 382-384: ENTRY TIMERS

The entry delay timer determines the amount of time the user has to disarm the system before an alarm is generated. If the entry delay expires and the system is still armed, the siren sounds and the user has twenty seconds to disarm before a report is sent to the central station. Three different entry delay times can be programmed and each zone can be assigned one of these delays. Enter a hexadecimal value number between 0 - 235 seconds using the hexadecimal conversion chart in Appendix B.

Note: Zones defined as Emergency/Hold-up, Tamper, Fire and Verified Fire will ignore the entry delay even if defined.

The 20-second report delay is not available in DK versions and the programmable range for the entry delay is 0-255 seconds.

382 Entry Delay 1
383 Entry Delay 2
384 Entry Delay 3

ADDRESSES 385-387: PULSE COUNTERS

Using a pulse counter helps eliminate false alarms and is very similar to pulse count selection in motion detectors. When a pulse counter is assigned to a zone, the zone must be opened a certain number of times, within a specific period of time, for the panel to generate an alarm.

One of these three Pulse Counter options can be assigned to each zone (2nd address).

Note: The Pulse Count option is not available for DK firmware versions.

Second digit value:

0 - 2 pulses within a period of 2 seconds
1 - 2 pulses within a period of 5 seconds
2 - 2 pulses within a period of 10 seconds
3 - 2 pulses within a period of 20 seconds
4 - 3 pulses within a period of 5 seconds
5 - 3 pulses within a period of 10 seconds
6 - 3 pulses within a period of 20 seconds
7 - 3 pulses within a period of 30 seconds

Note: A pulse counter should not be assigned to a zone protected by door contacts.

385 Pulse Counter Option 1
386 Pulse Counter Option 2
387 Pulse Counter Option 3

ADDRESS 388: SWINGER PARAMETERS

Swinger mode.

Defining a zone as a Swinger limits the number of alarms that can be generated from that zone within a specific time period. You can activate the Swinger option for each zone. All swinger zones are assigned the same swinger setting.

Example: If zone 1 is set as a Swinger at address 001, and Swinger mode is set to “1 alarm in 1 arming period” at address 388, only one alarm will be accepted from this zone within every one arming period. Any subsequent alarms from this zone are ignored by the system.

388 00 - 1 alarm in 1 arming period

or enter a hexadecimal value at this address from 01 to FF. Each hexadecimal unit represents a period of 15 minutes. You can calculate this by multiplying the required amount of time by 4 then converting to hexadecimal using the conversion chart in Appendix B. For example, to program one alarm every three and a quarter hours, enter 0D. 3¼ x 4 = 13, 13 = D.

ADDRESSES 389-409: OPENING & CLOSING WINDOWS

For each day of the week, you can choose one of three Opening and four Closing window options. These are programmable at addresses 389-395.

To program a window time and size, use the following table. The times listed in the rows indicate the center of the window. The size of the window can be selected from the columns. For example, a window starting at 7:30 and ending at 8:30 will be programmed as 41 (8:00 ±30 minutes). ***Note: To disable an Opening or Closing window option, enter FF.***

Time	±15 min	±30 min	±45 min	±60 min
00:00				
00:30	04	05		
01:00	08	09	0A	0B
01:30	0C	0D	0E	0F
02:00	10	11	12	13
02:30	14	15	16	17
03:00	18	19	1A	1B
03:30	1C	1D	1E	1F
04:00	20	21	22	23
04:30	24	25	26	27
05:00	28	29	2A	2B
05:30	2C	2D	2E	2F
06:00	30	31	32	33
06:30	34	35	36	37
07:00	38	39	3A	3B
07:30	3C	3D	3E	3F
08:00	40	41	42	43
08:30	44	45	46	47
09:00	48	49	4A	4B
09:30	4C	4D	4E	4F
10:00	50	51	52	53
10:30	54	55	56	57
11:00	58	59	5A	5B
11:30	5C	5D	5E	5F

Time	±15 min	±30 min	±45 min	±60 min
12:00	60	61	62	63
12:30	64	65	66	67
13:00	68	69	6A	6B
13:30	6C	6D	6E	6F
14:00	70	71	72	73
14:30	74	75	76	77
15:00	78	79	7A	7B
15:30	7C	7D	7E	7F
16:00	80	81	82	83
16:30	84	85	86	87
17:00	88	89	8A	8B
17:30	8C	8D	8E	8F
18:00	90	91	92	93
18:30	94	95	96	97
19:00	98	99	9A	9B
19:30	9C	9D	9E	9F
20:00	A0	A1	A2	A3
20:30	A4	A5	A6	A7
21:00	A8	A9	AA	AB
21:30	AC	AD	AE	AF
22:00	B0	B1	B2	B3
22:30	B4	B5	B6	B7
23:00	B8	B9	BA	
23:30	BC			

389 Opening Window Option 1
390 Opening Window Option 2
391 Opening Window Option 3

392 Closing Window Option 1
393 Closing Window Option 2
394 Closing Window Option 3
395 Closing Window Option 4

396-409 Daily Windows Settings

You can program a different combination of windows for each day of the week and for each system. Select a value for each digit of these addresses from the following table.

Open	Close	Value
No Windows		0
#1	#1	4
	#2	5
	#3	6
	#4	7
#2	#1	8
	#2	9

Open	Close	Value
#2	#3	A
	#4	B
#3	#1	C
	#2	D
	#3	E
	#4	F

MONDAY

396 *First digit value:* System 1 *Second digit value:* System 2

397 *First digit value:* System 3 *Second digit value:* System 4

TUESDAY

398 *First digit value:* System 1 *Second digit value:* System 2

399 *First digit value:* System 3 *Second digit value:* System 4

WEDNESDAY

400 *First digit value:* System 1 *Second digit value:* System 2

401 *First digit value:* System 3 *Second digit value:* System 4

THURSDAY

402 *First digit value:* System 1 *Second digit value:* System 2

403 *First digit value:* System 3 *Second digit value:* System 4

FRIDAY

404 *First digit value:* System 1 *Second digit value:* System 2

405 *First digit value:* System 3 *Second digit value:* System 4

SATURDAY

406 *First digit value:* System 1 *Second digit value:* System 2

407 *First digit value:* System 3 *Second digit value:* System 4

SUNDAY

408 *First digit value:* System 1 *Second digit value:* System 2

409 *First digit value:* System 3 *Second digit value:* System 4

ADDRESS 410: BELL CUT-OFF

410 Enter the desired bell cut-off time, 1-255 (FF) seconds. Select a hexadecimal value from the hexadecimal conversion chart – *see Appendix B*.

ADDRESS 411: DEALER LOCKOUT & LATCH KEY

411 First Digit: Latch-key

When the Latch-key feature is active a 'Failed to Open' or 'Failed to Close' message is sent to the central station if MENU/NEXT is not pressed during an Opening or Closing window.

This feature is used in conjunction with the Opening/Closing windows programmed at addresses 389 - 409.

First digit value:

0 - Latch-key inactive

1 - Latch-key active

Second Digit: Dealer Lockout

For a period of 40 seconds following power-up, the dealer code '1,2,3,4,5,6' is valid. You can cancel this code by activating dealer lockout. ***Note: Once activated, the dealer lockout option can only be reversed using the Remote Programmer software.***

Second digit value:

0 - Dealer lockout not activated

1 - Dealer lockout activated

ADDRESSES 412-475: CUSTOM LCD ZONE DESCRIPTORS

Four of the descriptors that can be assigned to each zone (see Address 000) can be customized to suit a specific installation. A total of sixteen characters, including spaces, can be entered for each LCD custom zone descriptor using the following table. Each custom zone descriptor is entered in a series of consecutive addresses. It is recommended to fill in all 16 characters for each custom zone descriptor.

Example: To set Custom Zone Descriptor 1 as "ABC", enter 41, 42, 43, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20 at addresses 412-427, respectively.

20	space	2D	-	41	A	4E	N	61	a	6E	n
21	!	2E	.	42	B	4F	O	62	b	6F	o
22	"	2F	/	43	C	50	P	63	c	70	p
23	#	30	0	44	D	51	Q	64	d	71	q
25	%	31	1	45	E	52	R	65	e	72	r
26	&	32	2	46	F	53	S	66	f	73	s
27	'	33	3	47	G	54	T	67	g	74	t
28	(	34	4	48	H	55	U	68	h	75	u
29	)	35	5	49	I	56	V	69	i	76	v
2A	*	36	6	4A	J	57	W	6A	j	77	w
2B	+	37	7	4B	K	58	X	6B	k	78	x
2C	,	38	8	4C	L	59	Y	6C	l	79	y
		39	9	4D	M	5A	Z	6D	m	7A	z

412-427 Custom Zone Descriptor 1

428-443 Custom Zone Descriptor 2

444-459 Custom Zone Descriptor 3

460-475 Custom Zone Descriptor 4

ADDRESS 476: ZONE EXPANDERS

When installing zone expanders (hardwire or wireless), the system must be programmed to recognize the existence of the additional zones. All defined zone expanders are supervised. If a zone expander is disconnected, all its zones are opened. ***Note: Following any modifications made to this address, disconnect and re-apply both AC and battery power to enable the changes to take effect.***

476 Definition of 3508 and 3528 Zone Expander Modules.

3528 Wireless Zone Expander

To define wireless zone expander units, enter a value from the following table.

First digit value:

Jumper	Value	Jumper	Value	Jumper	Value	Jumper	Value
A (1-8)	1	A,B	3	B,D	A	A,C,D	D
B (9-16)	2	A,C	5	C,D	C	B,C,D	E
C (17-24)	4	A,D	9	A,B,C	7	A,B,C,D	F
D (25-32)	8	B,C	6	A,B,D	B		

3508 Hardwire Zone Expander

To define hardwire zone expander units enter the data value from the following table.

Second digit value:

Jumper	Value	Jumper	Value	Jumper	Value	Jumper	Value
A (1-8)	1	A,B	3	B,D	A	A,C,D	D
B (9-16)	2	A,C	5	C,D	C	B,C,D	E
C (17-24)	4	A,D	9	A,B,C	7	A,B,C,D	F
D (25-32)	8	B,C	6	A,B,D	B		

ADDRESSES 477-490: RELAY PARAMETERS

Output relay modules are optional add-on peripherals that are connected to the control panel via the LSCP bus. Relays can be used for various purposes including status indication, additional bell outputs and access control. Each individual relay is programmed at two addresses.

477 Operation Mode Relay 1

Each relay can be programmed to activate or deactivate based on specific events or status conditions. The following table lists the various relay operation mode options. ***Note: In some cases, changing the relay's mode type activates the relay for the duration of the cutoff time.***

Type	Description	Activated by	Deactivated by	Value
Access	Access control	Pressing SELECT, 9 on the keypad	Cutoff	00
Status	System 1 armed	System 1 armed	System disarmed/ Cutoff	01
Status	System 2 armed	System 2 armed	System disarmed/ Cutoff	02
Status	System 3 armed	System 3 armed	System disarmed/ Cutoff	03
Status	System 4 armed	System 4 armed	System disarmed/ Cutoff	04
Event	Silent alarm	Keypad/Zone Emergency, Police Emergency, Duress	Cutoff	05
Event	System 1 alarm	System 1 burglary alarm	Cutoff / System 1 disarm	06
Event	System 2 alarm	System 2 burglary alarm	Cutoff / System 2 disarm	07
Event	System 3 alarm	System 3 burglary alarm	Cutoff / System 3 disarm	08
Event	System 4 alarm	System 4 burglary alarm	Cutoff / System 4 disarm	09
Event	Fire alarm	Fire zone in alarm or keypad fire emergency	Cutoff	0A
Status	System 1 status	System 1 Not ready, Pulsing if system has bypassed zones	System 1 ready without bypassed zones	0C
Status	System 2 status	System 2 Not ready, Pulsing if system has bypassed zones	System 2 ready without bypassed zones	0D
Status	System 3 status	System 3 Not ready, Pulsing if system has bypassed zones	System 3 ready without bypassed zones	0E
Status	System 4 status	System 4 Not ready, Pulsing if system has bypassed zones	System 4 ready without bypassed zones	0F
Status	Power trouble	System power trouble (AC or Battery)	System power is OK	10
Event	Telephone trouble	Failed communication attempt (only activated after all message attempts have failed)	Cutoff	11
Status	Pre-alarm	Pre-Alarm (if 20 sec bell delay)	Bell activated/Bell Cancel/ System disarm	12
Status	Exit/Entry sys. 1	System 1 in Exit/Entry	System 1 not in Exit/Entry	14
Status	Exit/Entry sys. 2	System 2 in Exit/Entry	System 2 not in Exit/Entry	15
Status	Exit/Entry sys. 3	System 3 in Exit/Entry	System 3 not in Exit/Entry	16
Status	Exit/Entry sys. 4	System 4 in Exit/Entry	System 4 not in Exit/Entry	17
Status	Bell	Bell activated	Bell deactivated	18

478 Output and Cutoff Relay 1

The second address concerns the following characteristics of the relay's operation.

- Polarity – the relay's status when deactivated
- Output – how the relay acts when activated
- Cutoff – the duration for which the relay is activated

First digit value:

Output	Polarity	Value
Steady Relay	Normally Off	0
	Normally On	1
1sec ON, 1sec OFF	Normally Off	2
	Normally On	3

Note: After changing the relay polarity, press SELECT 8,3 or reset the relay via the remote programming software.

Certain operation modes deactivate the relay according to changes in system status, others deactivate the relay according to the cutoff time or a combination of the two. For example, if a system is in alarm, the relay is activated until the system is disarmed or after the programmed cutoff time, whichever happens first.

If the cutoff is set to be continuous, the relay is activated until manually reset using the command SELECT 8, 3.

Entering 0 – No Operation, cancels the operation of the relay even if the relay mode is not dependent on cutoff time.

Second digit value:

Cutoff	Value	Cutoff	Value	Cutoff	Value	Cutoff	Value
None	0	20 secs	4	2 mins	8	15 mins	C
2 secs	1	30 secs	5	3 mins	9	20 mins	D
5 secs	2	60 secs	6	5 mins	A	----	E
10 secs	3	90 secs	7	10 mins	B	Continuous	F

479-480 Same as above for Relay 2

481-482 Same as above for Relay 3

483-484 Same as above for Relay 4

485-486 Same as above for Relay 5

487-488 Same as above for Relay 6

489-490 Same as above for Relay 7

ADDRESSES 491-493: PERIODIC TEST

Periodic test transmissions are used to check the system's ability to communicate with the central station. The frequency of these transmissions and the time at which the transmissions take place are programmed at these three addresses.

491 Periodic Test Timer Frequency

Select the frequency of the periodic test transmissions from the following table.

Note: The control panel automatically adjusts for a leap year.

Setting	Value	Setting	Value	Setting	Value
No Test	00	Monthly, 5th	2E	Monthly, 21st	AE
1 Hour Test	01	Monthly, 6th	36	Monthly, 22nd	B6
6 Hour Test	02	Monthly, 7th	3E	Monthly, 23rd	BE
12 Hour Test	03	Monthly, 8th	46	Monthly, 24th	C6
Daily Test	04	Monthly, 9th	4E	Monthly, 25th	CE
Weekly, Monday	05	Monthly, 10th	56	Monthly, 26th	D6
Weekly, Tuesday	0D	Monthly, 11th	5E	Monthly, 27th	DE
Weekly, Wednesday	15	Monthly, 12th	66	Monthly, 28th	E6
Weekly, Thursday	1D	Monthly, 13th	6E	Monthly, 29th (except Feb)	EE
Weekly, Friday	25	Monthly, 14th	76		
Weekly, Saturday	2D	Monthly, 15th	7E	Monthly, 30th (except Feb)	F6
Weekly, Sunday	35	Monthly, 16th	86		
Monthly, 1st	0E	Monthly, 17th	8E	Monthly, 31st (except Feb, Apr, Jun, Sep & Nov)	FE
Monthly, 2nd	16	Monthly, 18th	96		
Monthly, 3rd	1E	Monthly, 19th	9E		
Monthly, 4th	26	Monthly, 20th	A6		

492 Periodic Test Time Setting (Hour)

The periodic test time is set at two addresses, 492 and 493. The hour at which the test will take place is programmed at this address. ***Note: If either the 6-hour or 12-hour test has been programmed this is the time of the first test. If the 1-hour test has been programmed, only the minutes setting needs to be defined (Address 493).***

Select a two digit value from the following table:

Time	Value	Time	Value	Time	Value	Time	Value
00:00	00	06:00	06	12:00	0C	18:00	12
01:00	01	07:00	07	13:00	0D	19:00	13
02:00	02	08:00	08	14:00	0E	20:00	14
03:00	03	09:00	09	15:00	0F	21:00	15
04:00	04	10:00	0A	16:00	10	22:00	16
05:00	05	11:00	0B	17:00	11	23:00	17

493 Periodic Test Time Setting (Minutes)

Enter a hexadecimal value between 0-59 using the hexadecimal conversion chart in Appendix B.

ADDRESSES 494-499: MISCELLANEOUS

494 First Digit: Arming Options

The first digit of this address offers the following options:

- Auto unbypass upon disarm – the control panel automatically unbypasses all bypassed zones when the system is disarmed.
- Send 'Arm' only if all systems armed – the control panel only sends the arming event code message when all existing sub-systems are armed. The panel sends this message with the account number for the last sub-system to be armed.
- Auto arming at the end of closing window – if the system has not been armed by the end of the closing window, the control panel automatically arms itself.
- Force Arm – the panel can be programmed to enable or disable forced arming.

First digit value:

Auto unbypass upon disarm	Send 'Arm' only if all systems armed	Auto arming at the end of closing window	Force Arm	Value
No	No	No	No	0
			Yes	1
		Yes	No	2
			Yes	3
	Yes	No	No	4
			Yes	5
		Yes	No	6
			Yes	7
Yes	No	No	No	8
			Yes	9
		Yes	No	A
			Yes	B
	Yes	No	No	C
			Yes	D
		Yes	No	E
			Yes	F

Second Digit: Arming Ring

The control panel can be programmed to sound the bell/siren for 1/10th of a second on arming each system or only after all sub-systems have been armed.

Second digit value:

0 - no arming ring

1 - short ring after arming of every system

5 - short ring only after all systems are armed

Note: The arming ring defined here is only relevant to system arming with a hardwired keypad. When using a keyswitch, wireless keypad or the RP software to arm and disarm the system the siren sounds the same pattern of tones defined at address 128 (except continuous).

495 First Digit: Detailed Display

You can program the keypads to show the detailed display at all times or only when the system is disarmed.

First digit value:

0 - Detailed display only when system disarmed

1 - Detailed display at all times

Second Digit: Alarm Chime, Bell Muting for Listen-In Applications and Fire Sensor Reset

The second digit of this address concerns the following:

- Alarm Chime – If enabled, the keypad chimes in the event of an alarm. These chimes function as bell follower, i.e. the parameters that apply to the bell (bell cut-off and bell pattern) also apply to the Alarm Chime. Pressing any key on the keypad cancels the chimes. Subsequent alarms re-activate the chimes. ***Note: This feature is not available for DK firmware versions.***
- Bell Muting for Listen-In applications – the bell is not sounded until after a message has been sent to the central station. ***Note: In the event that the telephone line has been disconnected, the bell is sounded immediately even if bell muting is defined.***
- Power reset for latching smoke detectors – an activated fire sensor can be reset in two ways. The fire sensor can be reset manually (SELECT, 43) or you can program the system to automatically reset fire sensors. In both cases, power is restored 15 seconds after the zone has been reset.

Second digit value:

Alarm Chime	Fire Sensor Reset	Bell Muting	Value
Disable	User Initiated	Off	0
		On	1
	Automatic	Off	2
		On	3
Enable	User Initiated	Off	8
		On	9
	Automatic	Off	A
		On	B

496 First Digit: Police Key Operation and Remote Programmer Communication Speed

The following two options are available at the first digit of this address:

- Police key operation (silent or audible).
- The Remote Programmer communication speed (110 BPS or 300 BPS).

First digit value:

Remote Programmer Communication Speed	Police (P) Key Alarm	Value
300 BPS	Silent	0
	Audible	4
110 BPS	Silent	8
	Audible	C

Second Digit: Remote Programming Communication Options

The following options are available at the second digit of this address:

- RP access enabled 24 hours a day or only when all of the sub-systems are disarmed.
- Direct RP access or RP Callback. Using the Callback feature, the panel hangs up and dials the telephone number programmed at addresses 172-179.
- The number of rings after which the panel picks up (1, 3, 7 or 17).

Second digit value:

RP Access	RP Comm.	Number of Rings	Value
24 hours	Direct Call	1	0
		3	1
		7	2
		17	3
	Callback	1	4
		3	5
		7	6
		17	7

RP Access	RP Comm.	Number of Rings	Value
Disarmed	Direct Call	1	8
		3	9
		7	A
		17	B
	Callback	1	C
		3	D
		7	E
		17	F

497 Definition of MasterLink EL-2530 Zone Expander Module

To define wireless zone expander units, enter a value from the following table.

First digit value:

Zone Group	Value	Zone Group	Value	Zone Group	Value	Zone Group	Value
1 (1-8)	1	1,2	3	2,4	A	1,3,4	D
2 (9-16)	2	1,3	5	3,4	C	2,3,4	E
3 (17-24)	4	1,4	9	1,2,3	7	1,2,3,4	F
4 (25-32)	8	2,3	6	1,2,4	B		

499 Listen-in Time Out

Select a value between 1 and 255 (FF) seconds for the listen in time out. Select a hexadecimal value from the hexadecimal conversion chart – *see Appendix B*.

Appendix A: Troubleshooting

The following is a guide to troubleshooting problems you may experience when installing the Summit 3208GLD security system.

Problem	Reason	Action
Telephone line failure appears when the telephone line is not connected (control panel used as a local alarm).	Event codes programmed at values above “00”.	Program event codes as “00” and power down the panel.
Keypad display not responsive.	A keypad at a different address has been activated.	Wait for time out to activate, or press “AWAY” key.
No display on keypad.	Auxiliary power fuse blown.	Replace fuse.
Constant low battery message on display.	Faulty battery or battery fuse blown.	Replace battery at least every five years or replace the blown fuse.
No sound from the bell.	Blown bell fuse or wrong parameters programmed.	Replace fuse or program the bell parameters correctly.
Zone expander does not give any zone indications.	Zone expander supervision is not programmed.	Reprogram parameters.
A single output does not react properly.	Programming error.	Correct the programming for the specific relay.
Incorrect alarm output or trouble indicator from zone.	Wrong zone loop type selected.	Reprogram zone parameters with the correct loop type.
Failure to communicate with the central station.	Incorrect telephone line connections or incorrect programming of telephone number, event code, protocol, or telephone line parameters.	Check wiring. Consult with the central station owner/operator and program the appropriate parameters.

Appendix B: Hexadecimal Conversion Chart

The following is a decimal (i.e. number of hours, minutes, etc.) to hexadecimal conversion chart:

Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex
0	0	43	2B	86	56	129	81	172	AC	215	D7
1	1	44	2C	87	57	130	82	173	AD	216	D8
2	2	45	2D	88	58	131	83	174	AE	217	D9
3	3	46	2E	89	59	132	84	175	AF	218	DA
4	4	47	2F	90	5A	133	85	176	B0	219	DB
5	5	48	30	91	5B	134	86	177	B1	220	DC
6	6	49	31	92	5C	135	87	178	B2	221	DD
7	7	50	32	93	5D	136	88	179	B3	222	DE
8	8	51	33	94	5E	137	89	180	B4	223	DF
9	9	52	34	95	5F	138	8A	181	B5	224	E0
10	A	53	35	96	60	139	8B	182	B6	225	E1
11	B	54	36	97	61	140	8C	183	B7	226	E2
12	C	55	37	98	62	141	8D	184	B8	227	E3
13	D	56	38	99	63	142	8E	185	B9	228	E4
14	E	57	39	100	64	143	8F	186	BA	229	E5
15	F	58	3A	101	65	144	90	187	BB	230	E6
16	10	59	3B	102	66	145	91	188	BC	231	E7
17	11	60	3C	103	67	146	92	189	BD	232	E8
18	12	61	3D	104	68	147	93	190	BE	233	E9
19	13	62	3E	105	69	148	94	191	BF	234	EA
20	14	63	3F	106	6A	149	95	192	C0	235	EB
21	15	64	40	107	6B	150	96	193	C1	236	EC
22	16	65	41	108	6C	151	97	194	C2	237	ED
23	17	66	42	109	6D	152	98	195	C3	238	EE
24	18	67	43	110	6E	153	99	196	C4	239	EF
25	19	68	44	111	6F	154	9A	197	C5	240	F0
26	1A	69	45	112	70	155	9B	198	C6	241	F1
27	1B	70	46	113	71	156	9C	199	C7	242	F2
28	1C	71	47	114	72	157	9D	200	C8	243	F3
29	1D	72	48	115	73	158	9E	201	C9	244	F4
30	1E	73	49	116	74	159	9F	202	CA	245	F5
31	1F	74	4A	117	75	160	A0	203	CB	246	F6
32	20	75	4B	118	76	161	A1	204	CC	247	F7
33	21	76	4C	119	77	162	A2	205	CD	248	F8
34	22	77	4D	120	78	163	A3	206	CE	249	F9
35	23	78	4E	121	79	164	A4	207	CF	250	FA
36	24	79	4F	122	7A	165	A5	208	D0	251	FB
37	25	80	50	123	7B	166	A6	209	D1	252	FC
38	26	81	51	124	7C	167	A7	210	D2	253	FD
39	27	82	52	125	7D	168	A8	211	D3	254	FE
40	28	83	53	126	7E	169	A9	212	D4	255	FF
41	29	84	54	127	7F	170	AA	213	D5		
42	2A	85	55	128	80	171	AB	214	D6		

Appendix C: Message Routing

Routing Group	Zone Oriented	Event Oriented
BURGLARY ALARMS	202: Zone restore 203-234: Zones 1-32* 237: Zones bypassed 249: Low battery (MasterLink transmitter) 250: Battery restore (MasterLink transmitter) 252: Zones unbypassed 255: E button 257: P button 258: Keypad emergency restore	262: Zone in alarm 263: Zone alarm restore 266: Zone tamper 267: Zone tamper restore 268: Zone emergency alarm 271: Zones bypassed 283: Low battery (MasterLink transmitter) 284: Battery restore (MasterLink transmitter) 286: Zones unbypassed 289: E button 291: P button 292: Keypad emergency restore (if E or P are pressed)
LSCP UNIT TROUBLE	239: LSCP unit tamper 240: LSCP unit tamper restore 243: Wireless supervision failure/ jamming 244: Wireless supervision failure/ jamming restore	264: Zone trouble (3528: Low Battery) 265: Zone trouble restore (3528: Low Battery) 273: LSCP unit tamper 274: LSCP unit tamper restore 277: Wireless supervision failure/ jamming 278: Wireless supervision failure/ jamming restore
FIRE	241: Fire trouble from zone 8 242: Fire alarm, F button or fire trouble restore 256: F button Any zone defined as Fire or Verified Fire is sent via this route	275: Fire trouble from zone 8 276: Fire alarm, F button or fire trouble restore 290: F button or alarm from fire zone
OPEN/CLOSE	235: Opening 236: Closing 237: Closing with bypassed zones (DK) 238: Perimeter closing 245: Failed to open 246: Failed to close 259: Duress	269: Opening 270: Closing 271: Closing with bypassed zones (DK) 272: Perimeter closing 279: Failed to open 280: Failed to close 293: Duress
SERVICE	247: AC loss 248: AC restore 249: Low battery (control panel) 250: Battery restore (control panel) 251: Manual test 252: Log 75% full (DK) 253: Clock change or completion of remote programming 254: User initiated bell cutoff 260: Periodic test 261: System initialization	281: AC loss 282: AC restore 283: Low battery (control panel) 284: Battery restore (control panel) 285: Manual test 286: Log 75% full (DK) 287: Clock change or completion of remote programming 288: User initiated bell cutoff 294: Periodic test 295: System initialization

* Excluding zones defined as Fire or Verified Fire.

24 hr zone A zone which is always active regardless of whether the system is armed or disarmed. Opening a 24hr zone always generates an alarm.

-A-

AC Loss The disruption of AC power.

Account Number The number transmitted to the central station along with an event code to identify the source of the event.

Alarm Chime An optional feature that causes the keypad to chime as bell follower in the event of an alarm.

Answering Machine Override The method used in RP communication allowing the control panel to share a telephone line with answering machines, fax machines etc.

Armed The state during which the control panel is activated. In most cases, when the system is armed, a tripped zone generates an alarm

Arming Ring A one-second ring sounded by the bell, which indicates that the system has been armed.

Audible Alarm An alarm that activates the siren when generated.

Authorization Level Each user code is assigned an authorization level. Authorization levels grant or limit access to certain system operations.

Auto Arming The system arms itself automatically at the end of a closing window – *see Closing Window.*

Auxiliary Power Output The Auxiliary Power Output supplies power to detectors and additional detection devices.

Away Arming Arming the entire system, both interior and perimeter zones.

-B-

Backup The telephone number dialed if the panel fails to communicate with the primary telephone number.

Battery Test A test that checks the control panel's battery backup. A battery test is performed automatically every 30 seconds and can also be initiated manually.

Bell Audible alarm device activated by a DC voltage.

Bell Cancel A keypad operation that immediately stops the bell/siren.

Bell Cut-Off The programmable amount of time the bell/siren is sounded when an audible alarm is generated.

Bell Muting A feature used in Listen-in applications where the bell is not sounded until after a message has been sent to the central station.

Bell Test A manual test that sounds the bell for 1 second.

Bypassed Zone Alarms from a bypassed zone are ignored by the system.

-C-

Callback A toll saver feature used during remote programming. The RP software establishes communication with the control panel, the control panel hangs up and calls the RP Callback telephone number programmed at addresses 172-179.

Central Station Communication The sending of event codes and account numbers to the central monitoring station.

Chime A series of tones sounded by the keypad. Each zone can be programmed to sound a chime when opened. Chimes also indicate system trouble conditions such as low battery or telephone line failure.

Clear Log The operation that deletes all the events recorded in the event log.

Closing Window A programmed period of time in which the user usually arms the system. Arming the system during a closing window does not send a closing message to the central station. The system can also be programmed to arm itself automatically at the end of a closing window.

Command Code A sequence of numbers that perform an operation when entered after pressing SELECT.

Common Zone A zone defined as Common belongs to all systems. The zone is designed for partitioned systems where, for example, a corridor is shared by more than one protected area. An alarm will only be generated from a common zone if all the sub-systems are armed.

Communication Protocol *See Protocol.*

Conditional Zone A zone that will not generate an alarm during the entry delay.

-D-

Dealer Lockout An option that disables the default restore code “123456”.

Default Program The default program contains the factory parameter settings. For typical installations, the default program minimizes the amount of programming that needs to be performed by the installer.

Detailed Display The keypads for each sub-system can be programmed to show a detailed or summarized display of the system. The detailed display includes system troubles, sub-system status, time/date and zone status.

Disarmed The state in which the system is deactivated. When the system is disarmed, only 24hr zones and distress keys are capable of generating an alarm.

Distress Keys The Emergency, Fire and Police keys (E, F and P) that generate an alarm when pressed with the MENU/NEXT key.

Duress Code This code sends an event message to the central station, notifying that the user has been forced to disarm their system or perform any other system operation.

-E-

EEPROM Non-volatile memory.

Emergency Holdup Zone A 24hr zone designed for use with panic buttons and glassbreak detectors – *see 24hr zones*.

End Of Line Resistor A loop type used to prevent tampering with the cables connecting detection devices. Any attempt to cut the cable results in an alarm signal.

Entry Delay Zones can be programmed to initiate an entry delay when opened. The entry delay is a pre-programmed amount of time that allows the user enough time to enter the protected area and disarm the system without generating an alarm.

Event Code The code transmitted to the central station when an event occurs.

Event Log A record of the last 100 events that the system has undergone.

Exit Delay The amount of time the user has to exit the protected area without generating an alarm.

-F-

Failed To Close The message sent to the central station when the system has still not been armed at the end of a closing window – *see Closing Window*.

Failed To Open The message sent to the central station when the system has still not been disarmed at the end of an opening window – *see Opening Window*.

Fire Zone A 24hr zone designed for use with smoke detectors – *see Verified Fire Zone.*

Follow Me A communication format typically used with telephone #4. The control panel dials the follow me number to notify the user of events that have occurred.

Forced Arming Arming the system when zones are still open. If zones are still open at the end of the exit delay an alarm is generated.

-I-

Immediate Arming The canceling of the exit/entry delay when the system is armed. This is done by pressing the “*” during the delay.

Interior Zone Zones of this type are not armed when the “STAY” key is pressed – *see Stay Arming*.

-K-

Keypad Unit Address The hardware configuration that identifies the keypad to the control panel. A keypad can be configured to one of 8 unit addresses.

Keyswitch A key operated switch used for arming and disarming the system. Keyswitches can be used to either Stay or Away arm the system.

-L-

Latch Key A feature designed to inform parents whether their children have arrived home safely. The panel sends a message to the central station and/or the follow-me number if MENU/NEXT is not pressed during the appropriate window.

Late to Close A command that extends the closing window period if the system needs to be armed later than usual – *see Closing Window.*

-M-

Manual Programming — Programming from either a LCD or LED keypad.

MENU/NEXT key — The key used for scrolling through menus on the LCD keypad. Also used with the "*", "0" or "#" keys to send distress messages and to register Latch Key arrivals.

Message Routing — The designated destinations of event messages. The system can be programmed to send different groups of events to up to four central stations.

-N-

Normal Arming — *See Away Arming.*

Normally Closed — A loop type that generates an alarm when opened.

Normally Open — A loop type that generates an alarm when closed.

-O-

Off Hook — A direct connection between a PC and the control panel enabling on-site programming using the RP software.

Opening Window — A programmed period of time in which the user usually disarms the system. Disarming the system during an opening window does not send an opening message to the central station.

Output Relay — Programmable outputs that react to different system events and status conditions.

-P-

Partitioned System — A system that is divided into a number of independent sub-systems.

Perimeter Arming — *See Stay Arming.*

Perimeter Zone — A zone intended for detection devices that protect the outer perimeter of the premises. These zones are used in conjunction with Stay arming.

Periodic Test — Test transmission used to check the control panel's capability to communicate with the central station.

Primary Number — The first telephone number the panel attempts to dial when an event occurs.

Protocol — Communication format used in event message transmissions to the central station.

Pulse Count — The setting that determines the number of times a zone must be opened within a certain time period in order to generate an alarm.

-R-

Remote Programming — Programming the control panel from a PC using the RP software. Remote Programming can be performed from a remote location or on-site – *see Off Hook*.

Relay Module — A peripheral add-on module providing a number of output relays – *see Output Relay*.

Routing Groups — The categories in which event messages are grouped, e.g. Burglary events and Open/Close events.

-S-

SELECT Key — The key used to choose menu items and enter command codes.

Silent Alarm — A silent alarm sends an event message to the central station without sounding the siren.

Stay Arming — Arming perimeter zones only, enabling unrestricted movement within the protected area.

Stop Communications — A command that immediately stops the control panel transmitting to the central station and clears all pending messages.

Sub-System — An independent division of the system – *see Partitioned System*.

Summarized Display — A keypad display mode without zone status – *see Detailed Display*.

Supervised Keypad — A supervised keypad generates an alarm when disconnected from the control panel.

Swinger Zone — A zone from which the number of alarms sent within a predetermined time period is limited.

-T-

Telephone Communicator Test — A manual test that checks the control panel's ability to communicate with all programmed telephone numbers.

Toll Saver — *See Callback.*

Transistor Module — Peripheral add-on module that uses transistors instead of relays to provide programmable outputs – *See Output Relay.*

Trouble Tones — The tones sounded by the keypad when certain trouble conditions occur.

-U-

Up/Downloading Software — *See Remote Programming.*

Unbypass — Restoration of a bypassed zone – *see Bypassed Zone*.

Unpartitioned System — Operating the control panel as one system – *see Partitioned System*.

Unsupervised Keypad — An unsupervised keypad will not generate an alarm if disconnected from the control panel. Unsupervised keypads are used when the installation requires that more than one keypad be configured to the same unit address – *see Keypad Unit Address.*

User Code — The code that grants access to certain operational capabilities. The operations available to a specific user are dependent on the authorization level assigned to their user code – *see Authorization Level.*

-V-

View Log — An LCD keypad operation that allows the user to view a record of the last 100 events the system has undergone.

Verified Fire Zone — A fire zone which will not sound an alarm and/or send a message to the central station unless a second detection has been made within a minute of the first.

-W-

Walk Test — A test that allows detection devices to be tested without generating an alarm. This does not apply to devices connected to 24hr zones.

-Z-

Zone — The physical connection of a detector to the control panel.

Zone Chime — A command that causes the keypad to chime if a specific zone is opened.

Zone Descriptor — A name assigned to a zone that appears on the LCD keypad whenever an event occurs related to the zone.

Zone Expander — A peripheral add-on module that adds extra zones to the control panel. Can be either wired or wireless.

Zone ID — The number associated with messages regarding a specific zone (event oriented event code table).

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SUMMIT 3208GLD PROGRAMMING FORM

LOAD A DEFAULT PROGRAM PRIOR TO PROGRAMMING SPECIFIC PARAMETERS

ZONE DEFINITIONS

000 - 003 1 __ __,__ __,__ __,__ _
(Sys:____ LCD:_____)

004 - 007 2 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

008 - 011 3 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

012 - 015 4 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

016 - 019 5 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

020 - 023 6 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

024 - 027 7 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

028 - 031 8 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

032 - 035 9 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

036 - 039 10 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

040 - 043 11 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

044 - 047 12 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

048 - 051 13 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

052 - 055 14 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

056 - 059 15 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

060 - 063 16 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

064 - 067 17 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

068 - 071 18 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

072 - 075 19 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

076 - 079 20 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

080 - 083 21 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

084 - 087 22 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

088 - 091 23 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

092 - 095 24 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

096 - 099 25 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

100 - 103 26 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

104 - 107 27 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

108 - 111 28 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

112 - 115 29 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

116 - 119 30 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

120 - 123 31 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

124 - 127 32 __ __,__ __,__ __,__ __
(Sys:____ LCD:_____)

SYSTEM PARAMETERS

128 System 1 __ __,__ __ **130** System 3 __ __,__ __

129 System 2 __ __,__ __ **131** System 4 __ __,__ __

KEYPAD PARAMETERS

132 Keypad 1 __,__ *(Sys: ____)*

133 Keypad 2 __,__ *(Sys: ____)*

134 Keypad 3 __,__ *(Sys: ____)*

135 Keypad 4 __,__ *(Sys: ____)*

136 Keypad 5 __,__ *(Sys: ____)*

137 Keypad 6 __,__ *(Sys: ____)*

138 Keypad 7 __,__ *(Sys: ____)*

139 Keypad 8 __,__ *(Sys: ____)*

TELEPHONE NUMBERS

Telephone # 1

140 - 147 __ __,__ __,__ __,__ __,__ __,__ __,__ __,__ __

Telephone #2

148 - 155 __ __,__ __,__ __,__ __,__ __,__ __,__ __,__ __

Telephone #3

156 - 163 __ __,__ __,__ __,__ __,__ __,__ __,__ __,__ __

Telephone #4

164 - 171 __ __,__ __,__ __,__ __,__ __,__ __,__ __,__ __

172 - 179 Tel. # for Remote Programmer Callback __ __,__ __,__ __,__ __,__ __,__ __,__ __

ACCOUNT NUMBERS

180 - 183 System 1 __ __,__ __

184 - 187 System 2 __ __,__ __

188 - 191 System 3 __ __,__ __

192 - 195 System 4 __ __,__ __

TELEPHONE PARAMETERS

196 Dialing Options and Telephone Event Message Enable/Disable __,__

197 Dialing/Message Attempts and Dial Tone Wait/Anti Jamming __,__

COMMUNICATION PROTOCOLS

198 Protocol for Tel. #1 __,__

199 Protocol for Tel. #2 __,__

200 Protocol for Tel. #3 __,__

201 Protocol for Tel. #4 __,__

ZONE ORIENTED EVENT CODE TABLE

202 Zone Restore	__ __	**227** Zone 25	__ __
203 Zone 1	__ __	**228** Zone 26	__ __
204 Zone 2	__ __	**229** Zone 27	__ __
205 Zone 3	__ __	**230** Zone 28	__ __
206 Zone 4	__ __	**231** Zone 29	__ __
207 Zone 5	__ __	**232** Zone 30	__ __
208 Zone 6	__ __	**233** Zone 31	__ __
209 Zone 7	__ __	**234** Zone 32	__ __
210 Zone 8	__ __	**235** Opening (disarming)	__ __
211 Zone 9	__ __	**236** Closing (arming)	__ __
212 Zone 10	__ __	**237** Zones Bypassed *	__ __
213 Zone 11	__ __	**238** Perimeter Closing (STAY arming)	__ __
214 Zone 12	__ __	**239** LSCP Unit Tamper	__ __
215 Zone 13	__ __	**240** LSCP Unit Tamper Restore	__ __
216 Zone 14	__ __	**241** Fire Trouble	__ __
217 Zone 15	__ __	**242** Fire Restore	__ __
218 Zone 16	__ __	**243** Wireless Supervision Failure/Jamming	__ __
219 Zone 17	__ __	**244** Wireless Sup. Failure/Jam. Restore	__ __
220 Zone 18	__ __	**245** Failed to Open	__ __
221 Zone 19	__ __	**246** Failed to Close	__ __
222 Zone 20	__ __	**247** AC Loss	__ __
223 Zone 21	__ __	**248** AC Restore	__ __
224 Zone 22	__ __	**249** Low Battery	__ __
225 Zone 23	__ __	**250** Battery Restore	__ __
226 Zone 24	__ __	**251** Manual Telephone Test	__ __

* DK Firmware – Closing with Bypassed Zones

** DK Firmware – Log 75% Full

252 Zones Unbypassed ** __ __
253 Clock Change or Completion of Remote Programming __ __
254 User Initiated Bell Cutoff __ __
255 E Button __ __
256 F Button __ __
257 P Button __ __
258 Keypad Emergency Restore (E or P) __ __
259 Duress __ __
260 Periodic Test __ __
261 System Initialization __ __

EVENT CODES FOR EVENT ORIENTED PROTOCOLS

262 Zone in Alarm __ __
263 Zone alarm restore __ __
264 Zone trouble (low batt) __ __
265 Zone trouble restore (low batt) __ __
266 Zone tamper __ __
267 Zone tamper restore __ __
268 Zone emergency alarm __ __
269 Opening __ __
270 Normal Closing (arming) __ __
271 Zones Bypassed * __ __
272 Perimeter Closing __ __
273 LSCP Unit Tamper __ __
274 LSCP Unit Tamper Restore __ __
275 Fire Trouble __ __
276 Fire Restore __ __
277 Wireless Supervision Failure/Jamming __ __
278 Wireless Sup. Failure/Jam. Restore __ __
279 Failed to Open __ __
280 Failed to Close __ __
281 AC Loss __ __
282 AC Restore __ __
283 Low Battery __ __
284 Battery Restore __ __
285 Manual Telephone Test __ __
286 Zones Unbypassed ** __ __
287 Clock Change or Completion of Remote Programming __ __
288 User Initiated Bell Cutoff __ __
289 E Button __ __
290 F Button __ __
291 P Button __ __
292 Keypad Emergency Restore (E or P) __ __
293 Duress __ __
294 Periodic Test __ __
295 System Initialization __ __

EVENT MESSAGE ROUTINGS

296 - 298 Burglary Alarm	296: Tel.4___ Tel.3___	297: Tel.2___ Tel.1___	298: Log/Bell Delay ___ Bell ___
299 - 301 LSCP Trouble	299: Tel.4___ Tel.3___	300: Tel.2___ Tel.1___	301: Log/Bell Delay ___ Bell ___
302 - 304 Fire Trouble	302: Tel.4___ Tel.3___	303: Tel.2___ Tel.1___	304: Log/Bell Delay ___ Bell ___
305 - 307 Opening/Closing	305: Tel.4___ Tel.3___	306: Tel.2___ Tel.1___	307: Log/Bell Delay ___ Bell ___
308 - 310 Service	308: Tel.4___ Tel.3___	309: Tel.2___ Tel.1___	310: Log/Bell Delay ___ Bell ___

EXIT/ENTRY TIMERS

378 Exit System 1 __ __ *(_____ secs)*
379 Exit System 2 __ __ *(_____ secs)*
380 Exit System 3 __ __ *(_____ secs)*
381 Exit System 4 __ __ *(_____ secs)*
382 Entry Timer 1 __ __ *(_____ secs)*
383 Entry Timer 2 __ __ *(_____ secs)*
384 Entry Timer 3 __ __ *(_____ secs)*

PULSE COUNTERS

385 Option 1 __ **386** Option 2 __ **387** Option 3 __

SWINGER PARAMETERS

388 Swinger Mode __ __

OPENING & CLOSING TIME WINDOWS

Window Options

389 Opening 1 __ __ *(Time:* _____ *Size* ± __ *mins)*

390 Opening 2 __ __ *(Time:* _____ *Size* ± __ *mins)*

391 Opening 3 __ __ *(Time:* _____ *Size* ± __ *mins)*

392 Closing 1 __ __ *(Time:* _____ *Size* ± __ *mins)*

393 Closing 2 __ __ *(Time:* _____ *Size* ± __ *mins)*

394 Closing 3 __ __ *(Time:* _____ *Size* ± __ *mins)*

395 Closing 4 __ __ *(Time:* _____ *Size* ± __ *mins)*

Daily Windows Settings

396 Systems 1 & 2 Mon __,__

397 Systems 3 & 4 Mon __,__

398 Systems 1 & 2 Tue __,__

399 Systems 3 & 4 Tue __,__

400 Systems 1 & 2 Wed __,__

401 Systems 3 & 4 Wed __,__

402 Systems 1 & 2 Thu __,__

403 Systems 3 & 4 Thu __,__

404 Systems 1 & 2 Fri __,__

405 Systems 3 & 4 Fri __,__

406 Systems 1 & 2 Sat __,__

407 Systems 3 & 4 Sat __,__

408 Systems 1 & 2 Sun __,__

409 Systems 3 & 4 Sun __,__

BELL CUT-OFF

410 Bell Cutoff __ __ *(* _____ *secs)*

DEALER LOCKOUT & LATCHKEY

411 Latch Key __ Dealer Lockout __

LCD CUSTOM MESSAGES

412 - 427 __,__ __,__ __,__ __,__ __,__ __,__ __,__ __,__

428 - 443 __,__ __,__ __,__ __,__ __,__ __,__ __,__ __,__

444 - 459 __,__ __,__ __,__ __,__ __,__ __,__ __,__ __,__

460 - 475 __,__ __,__ __,__ __,__ __,__ __,__ __,__ __,__

ZONE EXPANDERS (3508/3528)

476 Defined Zone Expanders __ __ *Note: EL-2530 defined at address 497*

RELAY PARAMETERS

477 - 478 1 (K5) __ __,__ __

479 - 480 2 (K6) __ __,__ __

481 - 482 3 __ __,__ __

483 - 484 4 __ __,__ __

485 - 486 5 __ __,__ __

487 - 488 6 __ __,__ __

489 - 490 7 __ __,__ __

PERIODIC TEST

491 - 493 Periodic Test __ __,__ __,__ __ *(Setting* _____ *Time* _____*)*

MISCELLANEOUS

494 Arming Options __ Arming Ring __

495 Detailed Display __ Fire Sensor Reset/Bell Muting __

496 Police Key Operation/RP Communication Speed __ RP Communication Options __

497 EI-2530 Zone Group Definition __

499 Listen-In Time Out __ __ *(* ____ *secs)*