WLS9000

Integral Wireless Alarm System

DRAFT Manual

Revision 0.01 – Sept 30th, 1999

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1.0 Introduction

1.1 Product Intentions

The WLS9000 is an integrated wall or desk mounted security system. This panel is designed to conserve time in its installation, but yet retain a large variety of user-friendly features found in our modular systems. The WLS9000 incorporates a number of features not available in other DSC products, especially those that are intended to decrease installation time and increase end user friendliness. The WLS9000 is available in both wallmount and deskmount configurations, both of which will have wireless receiver and voice prompting capabilities.

The WLS9000 is a power platform that has been packaged into one stylish controller unit.

- Alarm Panel and Communicator
- Wireless Receiver capabilities
- Voice Prompt Navigation System
- Voice Prompt User Interface with Help and Status
- Piezo Alarm to Annunciate Alarm Conditions
- Eight Programmable Function Keys
- Hardwired Remote Sounder Support
- 32 Wireless Zone Support

Included in this kit

- Two WLS915 Door/Window contacts
- One WLS904 PIR motion detector
- One AC wall adapter
- One battery for 24 hour backup
- Hardware Package, i.e. wall mounting screws
- And one set of manuals

Other Supported system Components

The WLS9000 supports 32 wireless zones and other DSC wireless peripherals and devices including:

WLS 904	Wireless Passive Infrared Detector (PIR)
WLS 906	Wireless Photoelectric Smoke Detector
WLS 907	Wireless Slimline Universal Transmitter
WLS 908	Wireless Panic Pendant
WLS 909	Wireless Key FOB
WLS 910	Wireless Handheld Keypad
WLS 912	Wireless Glassbreak Detector (future release)
WLS 914	Wireless Pet Immune PIR Motion (future release)
WLS 915	Wireless Mini Slimline Transmitter (future release)
WLS 917	Wireless Drill Mount Universal Transmitter (future release)
Remote Sounder Accessory	Hardwired Remote Sounder for use with the WLS9000 (future release)

4.1 Hardware Description

4.2 WLS9000 Main Controller

The WLS9000's main controller retains many aspects of the most current "Power Family" hardware platforms. Changes include:

- Main Processor utilizes a PLCC C63 to conserve space and assembly
- Siren and Piezo control via RF Slave
- RF "Master" function handler. This eliminates one micro from the product.
- Internal 'Keybus' for communication to ESCORT micro, and nibble bus (four lines) to RF Slave.
- Remote Sounder Control
- 'Sleep' command that turns off main power to all sections with the exception of the RF Slave. This is to conserve power during loss of AC. The time is passed to the RF slave before sleep.
- All Talk/Listen Audio control

4.3 Spread Spectrum Wireless

The WLS9000 will have the equivalent of the following built-in:

- PC5132 Receiver

The 'RF' Section does the following:

- Control of Piezo sweep via local Blue Lite's Telout.
- Monitoring of the two hardwired zone loops.
- Phone Line Energy Detect.
- Time Keeping in Sleep Mode.

4.4 Voice Prompting Components

The WLS9000 contains the equivalent of an ESCORT on the daughterboard . The ESCORT section controls the following aspects of the WLS9000 product:

- All voice prompting
- Keypad Scanning
- Status LED Control

4.5 Speaker Control

The WLS9000 has an on-board speaker that is used for the annunciation of the voice prompts. There is a function key that provides volume control of these prompts. This functionality is handled by the Main Controller.

4.6 Piezo

The WLS9000 has an on-board 95dB piezo that is used to annunciate all audible alarm conditions that occur on the system. This is controlled by the Main Controller processor.

4.1.10 Remote Sounder

The WLS9000 has an optional hardwired remote sounder accessory that may be used with the on-board siren or on its own. This sounder is connected via a four wire interface and requires software for supervision and annunciation control. It comprises of:

- High Volume Piezo (similar to the WLS9000 main unit)
- Low Volume Piezo
- Microphone
- Speaker

- Microcontroller for annunciation control and interface to the WLS9000.

This siren may be used for:
- High Volume Siren via Piezo (for Alarm Annunciation)
- Entry/Exit Delay Beeps (like the WLS-903)
- Central Station Talk/Listen (via mic and speaker)
- All Audio Annunciation.

There are four terminals used for the Remote Siren. They are:
- Vcc (Red)
- Ground (Black)
- Audio Carrier (Yellow)
- Data Line (Green)

4.1.11 Microphone for Central Station Talk/Listen

A microphone on the WLS9000 is used in conjunction with the on-board speaker for Central Station Talk/Listen.

4.1 Terminal/Jack Connections

The WLS9000 has the following terminal connections:
- Four terminals for the Remote Sounder = This interface will use a four wire connection.
- Two terminals for AC Power – A 9V (@ 20VA) transformer is used as the source of AC at these terminals.
- Double Battery Leads for wiring the batteries in parallel.
- Two terminals for two Hardwired (EOL) Zone Loops. The common is shared with the Remote Sounder Interface.
- PC-LINK Header for Local Downloading

Four Terminals for the Telco Interface (Tip/Ring/T1/R1)

4.4 Miscellaneous

The WLS9000 is shipped with a removable overlay to assist the installer through the installation process. This overlay outlines the following aspects of WLS9000 Programming and Installation:
- The Wizard's "Yes" and "No" Programming Methodology.
- Function Key 1-6's Hexadecimal Capabilities.
- Function Key 7's "Backward" Function.
- Function Key 8's "Forward" Function.
- Accessing the configuration wizard.
- Hardwired Zone Configuration.

4.3 Plastics

The WLS9000 requires all new plastics. The complete WLS9000 project comprises of the following plastics parts:
- Front Housing (08-843)
- Rear Housing w/Made in Canada (08-844)
- Rear Housing without Made in Canada – used Internationally where required (08-845)
- Wall Mount Backplate (08-846)
- Front Bezel (08-847)
- Front Bezel Sound Deflector (08-1056)
- LED Pipe (08-848)
- Rear Housing w/Made in Canada for Deskmount (08-926)
- Rear Housing without Made in Canada for Deskmount (08-927)
- Deskmount Interface Plate (08-1057)[i]

The WLS9000 will also use the Acuity Shroud (08-686) for supporting the microphone on the main unit.[ii]

The Remote Sounder will use the existing WLS902/911 Wireless Sounder plastics. They comprise of:

- RF Siren Case Front (08-166)
- RF Controller/Siren Strain Relief (08-223)
- RF Siren Jack Cover (08-225)
- RF Siren Wall Mounting Plate (08-643)
- Sounder Back Cover (08-746)

5.0 Detailed Description of Software Feature Set

5.2.1 New Function Key Types

The WLS9000 has the following new Function Key Types:

Status –The Status button on the WLS9000 may be pressed to annunciate the current status of the system. For example:

"Zones are open. Zone 1. System is OFF. To turn ON, enter your access code. For more options, press star."[iii]

Pressing this key will internally create a link between the panel, ESCORT5580, and audio portions of the WLS9000. When voice help is active, the keypad may be used to change status or program any function of the system. This new key is programmable on WLSKeys to allow wireless initiation of Status. Status is function key definition [27], and will use Mode Request %1C.

Volume Control – A new function key has been created to allow easy volume control of the voice prompts. When this function key is pressed for two seconds, the WLS9000 will increment through the four different volume levels from lowest to highest, cycling back to the lowest after the highest volume is reached.

For example, if the Volume key is pressed for two seconds, and the current Volume is Medium, the WLS9000 will prompt:

"Volume is High."

…at the new volume. If the key is held for another two seconds, the WLS9000 will state:

"Volume is Highest."

…and so on.[iv] This Function Key is Type [28], and uses Mode Request %1D.
Note: this function key only controls the volume of the main WLS9000 unit. Volume for the ESCORT prompts heard via the phone line are still handled in [*][6].

Memo Record – When pressed, this function key will initiate recording (via the local microphone) of a message. Recording begins after the three acknowledgement tones are annunciated. The recording can also be ended by pressing this same function key. This Function Key is Type [29], and uses Mode Request %1E.

Memo Playback – When pressed, this function key will annunciate the recorded message. If there is no message

recorded, an error tone will be heard. This Function Key is Type [30], and uses Mode Request %1F.

5.2.2 Installer Programming 'Wizard'

In order to facilitate an easy method to program the WLS9000, a Front End Installer's Programming Wizard is implemented into the WLS9000.

The Wizard is designed to:

- Accommodate the requirements of the mass marketer (i.e. 4-10 devices per system)
- Reduce installation time, even for those who may not be familiar with the DSC line of Products.
- Reduce the possibility of Programming errors.
- Provide easy RF and Hardwired Zone enrollment and placement.

5.2.2.1 Serial Number Programming

Once Installer's Programming is successfully entered, and the Wizard selection is made, the Installer will be prompted to enter the Serial Number of their first device. After the number is confirmed, the software will analyze the number and make the following programming change based off of the Serial Number entered:

Transmitter Type	Definition	Other
2 (UTX)	Define as Delay 1 (Type [01])	
3 (Detector)	Define as Interior Stay/Away (Type [05])	
4 (Smoke)	Define as Delayed 24 Hour Fire (Type [87])	
5 (Panic Pendant)	Define as 24 Hour Panic (Type [16])	Disable Zone Supervision (Section [804])

Note: this chart is the Programming Actions found in the Wizard Flowchart provided by Marketing.

Hardwired Zone 'Enrolling' – The Wizard can also be used to enroll Hardwired zones. Serial Numbers X00001 and X00002 have been reserved for the two on-board zones.
When a zone is enrolled in the Wizard as one of these zones, the WLS9000 will automatically assign the next available zone number and enter it in Section [020].
For example, if the Installer entered 200001 as the seventh zone, the WLS9000 will assign Zone 7 as being the first Hardwired zone in Section [20] (first entry 07).
Note: Production must be advised to no longer use X00001 and X00002 as active serial numbers.

5.2.2.2 Zone Label Programming

If an enrolled device is a detector (i.e. not a WLSKey nor HHK), the Wizard will then prompt the Installer to enter the Zone Label for the newly enrolled zone.
The WLS9000 has five presets for each type of detector programmed that may be selected via pressing the "A" to "E" keys. Pressing the "F" key will allow the Installer to manually program the label from a chart found in the manual.
The preset table is as follows:

Selection	Type 2 (UTX)	Type 3 (Detector)	Type 4 (Smoke)	Type 5 (Panic Pend)
"A" Preset	Front Door	Main Floor Motion	Main Floor Fire	No Presets[v]
"B" Preset	Back Door	Upstairs Motion	Upstairs Fire	
"C" Preset	Garage Door	Downstairs Motion	Downstairs Fire	
"D" Preset	Window	Hallway Motion	Hallway Fire	
"E" Preset	Patio Door	Garage Motion	Garage Fire	

As soon as a Label is programmed (and confirmed) either via Preset or manual entry, it is immediately stored in EEPROM.

5.2.2.3 Communications Programming

After all of the Serial Numbers have been entered, The Wizard will proceed into Communications Programming. Here the Installer is prompted for the First Telephone Number and it's corresponding Account Code. As with all Wizard Programming, each data entry is followed by a confirmation routine to ensure the data is properly entered.

5.2.2.4 Module Placement Test

The Module Placement Test of the WLS9000 is quite different from previous Power-Based products as it incorporated the following changes and enhancements:

- Each Detector Must pass three Consecutive Tests before being enabled on the system.
- Each Detector is enabled in Section [202]-[205] *only* after passing the three tests mentioned above. There is no way to manually override this enrollment process.
- There are only "Good" and "Bad" Placements. "Fair" has been removed; it's former status internal to the software is considered a "Bad".
- The piezo will squawk once for "Good" and three times for "Bad".
- If the Placement is exited before all zones are properly enrolled, a General System Trouble is generated at the keypad. This trouble can only be cleared by re-entering the Module Placement Test and testing the un-enrolled devices.
- Zones can be disabled via Section [202]-[205], but they cannot be enabled.

When Module Placement Test is entered, the system will annunciate all of the zones which have been enrolled on the system, but are not enabled in Sections [202]-[205]. This allows the Placement Test to be entered after additional devices have been enrolled on the system without the hassle or re-testing 'placed' zones.
As each device receives three "Good" placements, it is removed from the annunciation list and it's corresponding bit in Section [202]-[205] is toggled to enable the zone on the system.
After all zones have passed the Module Placement Test, the Wizard will end and the Installer will find him/herself in base Standard Programming, where he/she may do additional programming not covered by the Wizard. "#" may be pressed to exit.

5.2.3 Internal or External Annunciation Selection

A method of selecting either the internal piezo/speaker or external remote sounder for the annunciation of alarms and Audio has been implemented in the WLS9000. This feature is to deter thieves from "homing in" on the source of the alarm and tampering with the WLS9000, thus resulting in a potential security breech.
The settings are as follows:

- Local Annunciation (main unit: Section [040] Option 1)
- Remote Annunciation (Remote Sounder: Section [040] Option 2)
- Both (Section [040] Options 1 and 2 ON)

This feature is found in Section [040], Options 1 and 2, with Option 1 defaulted ON and Option 2 defaulted OFF.

5.2.4 Voice Prompting

The WLS9000 will have a complete library of prompts similar to the ESCORT5580 to assist the user through various functions of the system. This will also include Installer programming prompting similar to ESCORT programming in the ESCORT5580.

5.2.5 Volume of Annunciation

There is several different levels of volume for the on-board piezos and speaker.

- Full Siren (siren; as loud as possible for alarm conditions)
- Full Voice (speaker; used to verbosely annunciate alarms. Always = highest speaker volume setting)
- Conversational Audio (speaker; Voice Prompted Help = four selectable levels)
- Low "Beeps" (small piezo; trouble conditions)

The volume of the voice prompts may be selected one of two ways:

- Using the Volume Function Key (Type [28]) to toggle through the different volume settings.

- Within [*][6] User Programming under selection 7.

5.2.7 Verbal Chime

A feature has been added to the WLS9000 that allows Door Chime to annunciate the Zone that has been violated/restored as opposed to a series of beeps.
If the Verbal Chime Feature is enabled, whenever a zone with the Chime attribute enabled is violated, a series of beeps will sound and the WLS9000 will prompt:

"Zone X"

When the zone is restored, the WLS9000 will only sound a series of beeps similar to how Door Chime functions in our current products.

If a label was programmed for the above Zone, the WLS9000 would annunciate (after the beeps):

"Back Porch Window"

…and so on.

If this option is disabled, only the series of beeps will be heard upon the violation and restore of zones that are programmed to chime. If Chime is disabled via [*][4], no beeps nor prompts will be heard.

This option can be found in Section [017], Option 2, and is enabled (ON) at default.

5.2.8 Verbal Alarm

A feature has been added to the WLS9000 that provides verbal annunciation of alarm conditions on the system.

When an audible non-fire zone goes into alarm with this feature is enabled, the WLS9000 will sound the alarm condition via the high volume piezo, but every 5 seconds (as programmed for Alarm Tone Period – Section [807], Subsection [030])[vi] it will pause siren and the speaker an annunciate the alarm condition verbally:

"Alarm Zone 4"
or, if the label is programmed,
"Alarm South Bedroom Window"

When the zone is in alarm, the software automatically inserts the word "Alarm" in front of the appropriate zone label.

When an audible fire zone goes into alarm, the WLS9000 will sound the alarm condition via the high volume piezo, but every 5 seconds (as programmed for Alarm Tone Period – Section [807], Subsection [030]) it will pause siren and the speaker an annunciate the alarm condition verbally:

"Fire Alarm Zone 4"
or, if the label is programmed,
"Fire Alarm South Bedroom Smoke"

When the zone is in alarm, the WLS9000 automatically inserts the words "Fire" and "Alarm" in front of the appropriate zone label.
In the case of multiple alarms, the WLS9000 will annunciate the first and latest zone that has gone into alarm.
Fire Zones will override Burglary Zones, similar as a Pulsing Bell will override a steady one.
This option can be found in Section [017], Option 3 and is enabled (ON) at default.

Notes: Fire annunciation always overrides any Burglary Zone alarm annunciation.
Verbal Alarm will cease with the Siren at Bell Time Out.

5.2.9 Function Keys While in Installer's Programming

In order to facilitate a more Installer-friendly user interface, the Eight Function Keys of the WLS9000 will perform the following functions in Installer's Programming:

Function Key Number	Default Function Key Option	Installer's Programming Function	Used For:
1	Stay	Hexadecimal 'A'	Programming the corresponding Hex Entry for Account Codes, Reporting Codes, Phone Numbers, etc.
2	Away	Hexadecimal 'B'	
3	Chime	Hexadecimal 'C'	
4	Exit	Hexadecimal 'D'	
5	Status	Hexadecimal 'E'	
6	Volume	Hexadecimal 'F'	
7	Memo Record	Forward	Moving ahead in the Programming Wizard.
8	Memo Playback	Back	Moving backwards in the Programming Wizard.

- Pressing any key that performs hexadecimal functions will generate a 'Function Not Available" prompt if the current section does not support Hex entries.
- The Forward and Back keys are used for:
    1. Reviewing and editing previously entered data.
    2. Advancing through sections to get to a certain Wizard Section.

  Note: Only the Forward Key can be used outside of the Wizard.

5.2.10 Memo Feature

The WLS9000 will have a feature that allows the recording and playback of a verbal memorandum.
A user, while armed or disarmed, can record a memo via the "Memo Record" function key.
To record a memo, press and hold the Memo Record key for two seconds. After the acknowledgement beeps, speak the desired message in the direction of the WLS9000. When finished, press the "Memo Record" function key again (note: the two second debounce is not required here).
To hear the last memo recorded, press and hold the "Memo Playback" key for two seconds.
Note: Although the target record duration is 60 seconds, the exact numbers are under development by the Software department.

5.2.11 Recording of Custom Labels

The WLS9000 has the capability of recording custom labels that may be assigned to a zone like any other ESCORT Label. Labels [246] to [253] are reserved for Custom Labels 1-8.
These labels can be recorded via Installer's Programming in Sections [701]-[708] using the following format:

When in Sections [701]-[708], the 'Record' key (Function Key 7) may be pressed to begin recording. After the desired label is verbally annunciated by the Installer, 'Playback' (Function Key 8) may be pressed to end the recording and annunciate the label. 'Playback' can be pressed again to re-annunciate the Label recording.

Notes: Even if Function Keys 7 and 8 have been reprogrammed, they will still retain the same above functions in these sections.
The quantities and length of the labels recorded will directly affect the total amount of time that a Memo can be recorded. This is due to the fact as they share the same resources.

5.2.13 Function Key Programming in ESCORT Programming[vii]

Function Key programming has been moved out of the main panel and into Section [807], Sub-section [000]. This has been done in order to keep the corresponding programming in the ESCORT section of the product. This allows the desired functionality to be obtained without major impact to the existing architecture of the software.

5.2.14 New Logs[viii]

In order to support the new Module Placement functionality, a new log has been implemented for:
Event %1D5 Module Placement Test Unsuccessful

8.0 Functional Description of…

8.1 Standard Features

TWO MINUTE BYPASS ON POWER UP

When power is first applied to the system, all zones will be bypassed for two minutes. This is to allow time for the devices to "settle" without causing false alarms. If after 2 minutes any zones are still unrestored, they will be detected as open and will generate the respective alarm sequence, if applicable.

ALARMS ANNUCIATED WHILE ARMED

Zone Alarm conditions will be annunciated on all the WLS9000 by Verbally annunciating them as they occur. *This also occurs for 24 Hour alarms while disarmed.*

ACCESS CODE REQUIRED TO CANCEL AUTO ARMING

An access code must be entered to cancel (postpone) the Auto-Arm sequence during the 1-minute Auto-Arm Warning time.

HARDWIRED ZONE LOOP RESPONSE TIME

The hardwired zone loop response time is fixed at approximately 500ms.
Note: The WLS9000 hardwired zones require a single 5.6K EOL resistor.

TIME-OUTS

The general system time-out for Installers mode is 20 minutes. If the unit is left in Installer's for twenty minutes without a keypress, it will return to its base menu.

SILENT EXIT DELAY IF STAY ARMING

If the system Stay armed using any of the following methods, all audible exit features (keypad buzzer) that are enabled will be silent for the exit delay time. Bell Squawk on Exit Delay will also be silent if Home or [*][9] Armed. Bell Squawk on Arm/Disarm will still sound regardless of how the panel is armed/disarmed.

[*][9][Access Code]
[Stay Arm Function Key (Option 03)]
[No Entry Arm Function Key (Option 05)]

SPECIAL ENTRY IF ALARM IN MEMORY

If any entry delay begins on the system and there are alarms in memory, the entry tone shall sound a pulsing tone for the entire entry delay (as per Entry Delay Urgency).

SWINGER SHUTDOWN RESET

If Swinger Shutdown is enabled on the system, all counters will be reset when the system time changes from 23:59 (11:59 PM) to 00:00 (12:00 AM) OR any time the system is armed (expiration of the exit delay).

ENTRY DELAY URGENCY

The keypad will sound a steady tone during the Entry Delay. During the last 10 seconds of the Entry Delay, the keypad buzzer will sound a pulsing tone (3 tones per second) to warn that the Entry Delay is about to expire.

SIREN FOLLOWS SWINGER SHUTDOWN

The siren will not be activated for alarms on zones that have exceeded the limit of alarms set in the Swinger Shutdown counter.

ROTATING KEYPRESS BUFFER ON DISARM

The WLS9000 has a method to solve the problem of someone entering a code to disarm and getting out of sequence. The end result of this on other products when the user does not press [#] before re-entering their code is a false alarm. What the panel does now is look for any 4 digits in a row which match a valid code. If this is deemed a security risk, Keypad Lockout can be enabled and every fourth or sixth key will count as one bad attempt depending on the code length. The panel includes this feature while disarmed with the Bell active. This is useful for audible alarms that may occur in the disarmed state. This feature is hardcoded.

CROSS ZONE POLICE CODE

This event is logged and the reporting code is transmitted to the central station (if enabled) when there are two different alarms during any armed-to-armed period. This means that if there is one alarm while the panel is armed, and a second alarm on a different zone after it is disarmed, this code will still be sent. Previous software versions used to transmit this event for any two different alarms during either an armed or disarmed period, but NOT on a combination of both.

If two different zones are violated, if both or either have them have the Transmission Delay Attribute enabled, then the transmission of the Cross Zone Police Code should be delayed for the appropriate time programmed. If neither of the two zones have Transmission Delay, then the Cross Zone Police Code should be transmitted immediately with the two zone alarms.

IDENTIFIED WIRELESS KEY ARMING/DISARMING

A method has been developed to identify openings and closings by Wireless Keys. This has been done by relating each Key to an access code. Wireless Keys 1 to 16 are represented by Access Codes 17 through 32 respectively. If one of these access codes are programmed via [*][5] programming in the WLS9000, the panel will then log and transmit the opening/closing by access code, as opposed to opening/closing by keyswitch.

Note: The Function Keys Require Code Option must be on (Section [015], Option 4 OFF) in order for Wireless Keys to be identified for arming. Disarming will always be logged by access code, if one is programmed for the Key, regardless of this option.

PANIC PENDANT TEST

When a Pendant Test is executed, the WLS9000 will sound a steady 1 second tone.

Note: the LED update is not kept up for the duration of the test. The WLS9000 will not be returned to the ready state for 30 seconds or when the "#" key is pressed.

ONE TIME RESTART OF EXIT DELAY

A hardcoded feature has been implemented that allows a single restart of the exit delay with the press of the Away key *during the Exit Delay*. This feature will not be permitted if Arming With No Entry ([*][9]) or with the Stay key.

HARDWARE DEFAULT[ix]

The WLS9000 may be defaulted via hardware by shorting the Remote Sounder Data Terminal (Green) to Black. The short must be present for 1 second on power-up for the system to properly default.

Note: This only defaults the main controller. All other defaulting must be done individually through Installer's Programming.

8.2 Feature Set

8.2.1 Zone Definitions [001]-[004]

Each of these sections require 8 two digit entries. Each two digit number entered describes how a zone will operate.

00 Null Zone is for zones that are not used and does not require a closed loop or EOL resistor

01 Delay 1 follows the Entry Delay 1 and Exit Delay programmed in Section [005] and is normally used for Entry/Exit doors. The exit delay starts as soon as the panel is armed. The zone may be opened and closed during the delay time without causing an alarm. After the exit delay time has expired, opening the zone will start the Entry Delay timer. During the Entry Delay time, the keypad buzzer will sound steadily to advise the user that the system should be disarmed. If the panel is disarmed before the Entry Delay expires, no alarm will be generated.

02 Delay 2 operates the same as Type [01] zone except the Entry Delay time can be independently set in Section [005]. The Exit Delay time is common to both zone types.

03 Instant is normally used for door and window contacts and has the standard Exit Delay, but is instant when opened after the Exit Delay expires.

04 Interior are used with interior motion detectors. Interior zones feature both an Exit Delay and an Entry Delay provided that any Delay type zone has been tripped first. If the protected area is entered without coming through the a delayed entrance and an Interior zone is tripped, an immediate alarm will be generated.

05 Interior Stay/Away. If the system is armed and a Delay zone is NOT tripped during the exit delay time, this zone type will be bypassed. If the [*][1] command is used to activate all Stay/Away type zones, this zone will have the standard exit delay. Once armed, this zone will act like an Interior type zone [04].

06 Delay Stay/Away If the system is armed and a Delay zone is NOT tripped during the exit delay time, this zone type will be bypassed. If the [*][1] command is used to activate all Stay/Away type zones, this zone will have the standard exit delay. Once armed, this zone will always have follow the Entry Delay time for Entry Delay 1 when tripped.

Note: The automatic bypass on Stay/Away type zones will not be removed by any event other than a valid exit through a Delay type 1 zone during the exit delay or by pressing [*][1] while armed.

07-08 Not Used [x]

10 24 Hour Supervisory Buzzer is active at all times and will report an alarm at all times. Once tripped, the keypad buzzer will sound until a valid access code is entered. If configured for Global operation, an access code will be required on each partition to silence the buzzer on the corresponding partition.

Note: This zone type should not be used on a Keyswitch ONLY system.

11 24 Hour Burglary is active at all times and will report an alarm if the panel is armed or disarmed. This type will sound the bell for the length of Bell cutoff if the audible attribute is enabled.

12 24 Hour Holdup is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

13 24 Hour Gas is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

14 24 Hour Heat is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

15 24 Hour Medical is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

16 24 Hour Panic is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

17 24 Hour Emergency is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

18 24 Hour Sprinkler is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

19 24 Hour Water is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

20 24 Hour Freeze is similar to 24 Hour Burglary except for System Event output type and SIA identifier.

21 24 Hour Latching Tamper. This zone type, when violated, will cause arming of the system (both partitions) to be inhibited until the valid Installer code is entered. If this zone type is violated, the Installers code must be entered ([*][8] Installers Code) before the system can be armed.

22 Momentary Keyswitch Arm. A keyswitch module may be connected to the zone programmed as Momentary Keyswitch arm. Momentary activation of this zone will alternatively arm and disarm the system and silence alarms. Note that the keypad will not display an indication when this type of zone is activated.

23 Maintained Keyswitch Arm. A Normally Open Keyswitch module may be connected to the zone programmed as Maintained Keyswitch arm. In the restored state, the panel is disarmed. Any violation of the zone will cause the system to arm (Alarm, Tamper, Fault).

24-26 Not Used

87 Delayed 24 Hour Fire (Wireless) works the same way as the Standard fire zone, except the alarm memory and transmission by the communicator is delayed by 30 seconds. If the alarm is acknowledged by pressing any key within 30 seconds, the bells will silence and the transmission will be aborted. If after the alarm has been acknowledged, and the smoke detector has not been restored to normal, after 90 seconds the bell output will be activated again, in which the user then has another 30 second delay before the bell output latches and communications is activated. A code would then be required to silence the bell output.

Note: The Fire Delay will be terminated if a 2nd Fire zone is tripped or if the [F] key is pressed during a delay.

88 Standard 24 Hour Fire (Wireless) is a fire zone that is specially used for pull station type circuits. On alarm, the bell output will sound to indicate that the fire loop has been activated. If enabled, the communicator will immediately transmit the alarm to the monitoring station.

Note: For all Fire type zones the Zone Attributes should not be changed from the default settings.

8.2.2 System Times [005]

This section requires 4 three digit entries.

Note: Entry of 000 in these sections will result in 255 second times.

Entry Delay 1: (001-255) Seconds
This value determines the Entry delay time for Delay 1 type zones. The default Entry Delay 1 time is 30 seconds.

Entry Delay 2: (001-255) Seconds
This value determines the Entry delay time for Delay 2 type zones. The default Entry Delay 2 time is 45 seconds.

Exit Delay: (001-255) Seconds

The system will use one common exit delay time that must be programmed to accommodate the longest possible exit time required. The default Exit delay time is 120 seconds.

Bell Cut-off: (001-255) Minutes

This value determines the time the bell / siren will sound before automatically turning off. The default bell cutoff time is 4 minutes.
Alarms/Events which cause the Keypad Buzzer to sound (System Tampers, 24 Hour Buzzer Zone, etc) do not follow this Bell Cutoff Timer. The buzzer will sound until an access code is entered to silence the condition.

8.2.3 Special Access Codes [006]-[008]

Each of these sections require 4 or 6 digits to be entered.
Installer's Code.
Master Code.

Maintenance Code. This is a Arm/Disarm only code. It can not be used to bypass program other user codes or enter the [*][6] menu. Openings or Closings using this code report as a Special Opening/Closing and will log to the event buffer as "Maintenance Code".

8.2.4 Keypad Lockout Options [012]

This section determines how the keypad lockout function operates.

Number of Invalid Codes Before Lockout

Program a number from 000 to 255 to determine the number of invalid master, duress, user or installer access code entries to reach keypad lockout. When keypad lockout occurs, the system is rendered inoperative via keypad for the programmed duration. When any keys are pressed, an error tone will sound. Entering 000 disables the feature.

Lockout Duration

Program a time from 000 to 255 minutes to determine the length of time before lockout resets and the keypad can once again be used.

Note: If lockout is not reached within the hour roll-over, the number of invalid attempts is reset to 0.
FAP keys are still active during Keypad Lockout.

8.2.5 System Options Codes

[013] First System Options Code

[1] Hardwired Zone Supervision Option

ON = Hardwired Zones are EOL
Both hardwired zone loops on the WLS9000 use EOL supervision.
OFF = Hardwired Zones are Normally Closed
Both hardwired zone loops on the WLS9000 use Normally Closed loops.

[2]-[3] Not Used

[4] Tampers/Faults Annunciation Option

ON = Tampers and Faults Do Not Annunciate as Open
The panel will not annunciate the respective Zone if the zone is in the Tamper or Fault states,

only the Trouble LED will be on.

OFF = Tampers and Faults Annunciate as Open

The panel will annunciate the respective Zone if the zone is in the Tamper or Fault states. The Trouble LED will also be lit.

[5] Not Used

[6] Audible Exit Fault Option

ON = Audible Exit Fault is Enabled.

If a non force-armable Delay 1 or Delay 2 type zone is left open at the end of the Exit Delay, the Entry Delay will begin immediately and the bell or siren will sound a steady alarm for the time programmed as Bell Timeout. This feature is designed to immediately alert the user that their system has been armed incorrectly.

OFF = Audible Exit Fault is Disabled.

Note: For [*][9] arming, if Audible Exit Fault is enabled a violated zone will begin entry delay as per Audible Exit Fault functionality. If this option is disabled, a violated delay zone at the end of the exit delay will cause an instant alarm.

[7] Event Buffer Swinger Options

ON = Event Buffer Follows Swinger Shutdown.

Once an event reaches its Swinger Shutdown limit programmed in Section [370], it will no longer log to the Event Buffer until the Swinger Shutdown is reset. This avoids filling the Event Buffer with useless events.

OFF = Event Buffer Logs Events past Swinger Shutdown.

[8] Fire Signaling Options

ON = Temporal Three Fire Signal.

In order to comply fully with NFPA 72, all Fire Bells will sound in the Temporal Three Pattern as described in the NFPA standard if this option is enabled. This cadence is as follows: 500ms ON, 500ms OFF, 500ms ON, 500ms OFF, 500ms ON, 1.5 s OFF.

OFF = Standard Pulsed Fire Signal.

All fire bells will sound with the standard 1 second on/1 second off fire bell cadence.

[014] Second System Options Code

[1] Bell Squawk Options

ON = Arm / Disarm Bell Squawk Enabled.

The Bell output will sound a single squawk when armed in any manner, incl Auto-arm, and a double squawk upon disarming the system. If there are alarms in memory, the bell will emit a series of three squawk pairs to indicate the alarm memory.

OFF = Arm / Disarm Bell Squawk Disabled.

The Bell output will not squawk when the system is armed or disarmed in any manner.

[2] Bell During Auto-Arm Options

ON = Bell Squawk During Auto-Arm Enabled.

The Bell output will sound a single squawk every 10 seconds during the 1 minute Auto-Arm Pre-alert time.

OFF = Bell Squawk During Auto-Arm Disabled.

The Bell output will not be activated during the 1-minute Auto-Arm warning time.

[3] Bell Squawk On Exit Options

ON = Bell Squawk On Exit Delay.

The Bell output will squawk once per second during the Exit Delay time. The bell will also sound 3 squawks per second for the final 10 seconds.

OFF = No Bell Squawk On Exit Delay.

Note: This audible option applies to ALL manual arming modes (Stay, Away, No Entry, etc)

[4] Bell Squawk On Entry Options

ON = Bell Squawk On Entry Delay.

The Bell output will pulse with the same timing as the keypad buzzer during the Entry Delay time. The bell will sound 3 squawks per second for the final 10 seconds if Option 6 in this section is enabled.

OFF = No Bell Squawk On Entry Delay.

[5] Bell Squawk on Trouble Options

ON = Bell Squawks on Trouble.

Whenever there is a Trouble condition enunciated on the system keypads, the Bell will squawk 2 times every 10 seconds (as per the keypad buzzer). The Bell will be silenced when the keypad beeps are silenced (any key pressed on keypad).

OFF = No Bell Squawks on Trouble.

[6] Audible Exit Beeps

ON = Audible Exit With Urgency.

The keypad will sound a pulsing tone (once per second) during the Exit Delay. For the last 10 seconds of the Exit Delay, the keypad and bell / siren (if enabled) will sound a different tone (3 tones per second) to warn that the Exit Delay is about to expire.

OFF = Silent Exit Delay.

The keypad will not sound during the Exit Delay.

[7] Exit Delay Termination Options

ON = Exit Delay Termination Enabled.

The Exit Delay will be terminated once a Delay 1 Zone for the entry/exit door or area is restored. All audible options associated with the exit delay will be silenced when the Exit Delay is terminated. Force-Armable Delay 1 type zones will also terminate the exit delay.

OFF = Exit Delay Termination Disabled.

The Exit Delay timer will continue to count even after the Delay Zone for the entry/exit door or area is restored. All audible options associated with the Exit Delay will function until the time programmed for the Exit Delay has elapsed.

[8] Fire Bell Timeout Options

ON = Fire Bell is Continuous.

For all Fire type alarms, the Bell output will sound until an access code is entered to silence the alarm or disarm the system regardless of the time programmed for Bell Timeout in Section [005].

OFF = Fire Bell Follows Timeout.

For all Fire type alarms, the Bell output will sound for the length of Bell timeout or until an access code is entered.

[015] Third System Options Code

[1] [F] Key Options

ON = [F] Key Enabled.

Pressing and holding the [F] keys for 2 seconds will generate a Fire alarm. The keypad will sound a set of 3 beeps to acknowledge the valid alarm and the bell or siren will sound with a pulsing tone for the length of Bell time-out. An alarm reporting code (if programmed) will be transmitted.

OFF = [F] Key Disabled.

The [F] key will not sound or report an alarm when pressed.

[2] [P] Key Annunciation Options

ON = [P] Key Audible.

When a valid [P] key alarm is generated, the Keypad buzzer will sound a series of 3 beeps to acknowledge the alarm and the bell or siren will sound for the length of Bell timeout.

OFF = [P] Key Silent.

When a valid [P] key alarm is generated, the Keypad buzzer and the bell output will remain silent, but the alarm transmission will still be transmitted (if programmed).

[3] Quick Exit Options

ON = Quick Exit Enabled.

When the system is armed, users may enter the [*][0] Command to allow a single Delay 1 or Delay 2 Zone to be activated so they may leave the premises. Only one Delay zone may be activated; any additional activity on another Delay zone will cause its respective alarm sequence. If the Delay zone is still open two minutes after the [*][0] command is entered, the Entry Delay will be initiated. If armed in the Stay mode, the automatic bypass on Stay/Away zones will not be removed.

OFF = Quick Exit Disabled.

[4] Quick Arming/Function Key Options

ON = Quick Arming Enabled/Function Keys Do Not Require Code.

[*][0] arming and Stay/Away Function Keys may be used to arm the system without the entry of a valid access code. All other function Keys may also be used without the entry of an access code.

OFF = Quick Arming Disabled/Function Keys Require Code.

[*][0] arming is not permitted, and all Function Keys require the entry of an access code to activate (including Stay/Away keys).

[5] Bypass Access Code Options

ON = Access Code Required to Bypass Zones.

After entering the [*][1] Bypass Zones Command, an access code must be entered before zones may be bypassed.

OFF = Access Code Not Required to Bypass Zones.

Enter the [*][1] Bypass Zones Command to bypass zones.

Note: this option is supplemental to Option 4.

[6] Master Code Options

ON = Master Code Not User Changeable.

The Master Code (Access Code 40) may not be changed by the user, and may only be programmed in the Installer's Programming Mode.

OFF = Master Code User-Changeable.

The Master Code (#40) may be programmed by the user using the [*][5][Master Code] command. The Master Code may also be programmed in the Installer's Programming Mode.

[7] Telephone Line Monitor Options

ON = Telephone Line Monitor enabled.

The TLM function will be active and the system will indicate a Trouble #3 condition when using the [*][2] View Trouble Conditions Command.

OFF = Telephone Line Monitor disabled.

The TLM function will be shut off and telephone line troubles will not be indicated by the system.

[8] Telephone Line Monitor Trouble Options

ON = TLM Audible When Armed.

When the system is disarmed, a telephone line monitor trouble will generate a trouble indication as described above. If the system is armed, a telephone line monitor trouble will generate an audible alarm on the bell or siren for the duration programmed for Bell Timeout or until an access code is entered to disarm.

OFF = TLM Trouble Only.

A telephone line trouble will generate a trouble indication, the Trouble LED will come ON and the keypad sounder will beep until a key is pressed.

[016] Fourth System Options Code

[1]-[2] Not Used

[3] Blanking Options

ON = Blank WLS9000 When Not Used.

If no keys are pressed for 30 seconds, all on board lights except backlighting (if enabled) will be shut OFF until the next keypress, Entry delay, Audible Alarm or keypad buzzer condition.

OFF = WLS9000 Always Active.

The on-board lights will remain ON at all times.

[4] Blanking Restore Options

ON = Access Code Required to remove WLS9000 Blanking.

Before a blanked WLS9000 can be used, a valid access code must be entered.

OFF = Access Code Not Required.

Pressing any key on a WLS9000 will remove the blanking.

[5] Backlighting Options

ON = Backlighting is Enabled.

The system will have backlighting on all of the time.

OFF = Backlighting is Disabled.

[6] Not Used

[7] Bypass Status Display Options

ON = Bypass Status Displayed While Armed.

The Bypass status light will be ON if there are zones bypassed when the system is armed.

OFF = Bypass Status Not Displayed While Armed.

The Bypass light will be ON only while the system is disarmed to indicate that there are bypassed zones on the system. When the system is armed, the Bypass light will be OFF.

Note: The Bypass status LED will be ON if there are Stay/Away zones auto bypassed at the time of arming regardless of whether or not this option is enabled. This option only enables and disables manual bypass display.

[8] Not Used

[017] Fifth System Options Code

[1] WLSKey Disarming Options

A toggle option has been added to prohibit the use the Disarm key on an unidentified Wireless Key.

ON = WLSKeys Does Not Use Access Codes.

The WLS9000 will accept the disarm keycode from an unidentified Wireless Key, thereby allowing arming/disarming without a code.

OFF = WLSKeys Uses Access Codes.

The WLS9000 will NOT accept the disarm keycode from an unidentified Wireless Key, thereby an access code must be associated to a WKEY for proper operation.

[2] Verbal Door Chime Option

ON = Verbal Door Chime is Enabled.

The WLS9000 will verbally annunciate the zone (or programmed label) when it is either violated or restored if Door Chime is programmed.

OFF = Verbal Door Chime is Disabled.

The WLS9000 will only annunciate a series of beeps whenever a zone programmed for Chime is either violated or restored.

This option is defaulted ON.

[3] Verbal Alarm Option

ON = Verbal Alarm is Enabled.
The WLS9000 will verbally annunciate audible zone alarms via their zone number (or programmed label) in conjunction with the high volume piezo.
OFF = Verbal Alarm is Disabled.
The WLS9000 will only annunciate the high volume piezo during an audible alarm condition.
This option is defaulted ON.

[4]-[7] Not Used

[8] Bell Squawk on Away Arming Option

ON = Bell Squawk on Away Arming/Disarming Only
Bell Squawks will only be annunciated on Away Arming, as well as upon Disarming after being ared in the Away Mode.
OFF = Bell Squawk on All Arming/Disarming
Bell Squawks will be annunciated on all types of Arming and Disarming (if programmed in Section [014]).
This feature is defaulted OFF.
Notes: This feature is to prevent the Bell from being activated when arming from inside the premises.
This option follows the "Bell Squawk on Arming/Disarming" and "Bell Squawk Attribute" features.

8.2.6 Hardwired Zone Assignment [804] Subsections [71] and [72][xi]

This section determines which zone number corresponds to the Hardwired zones found on the main unit.
Enter the 2 digit zone number to be designated for each loop.
Please note that this section has moved to Sections [71] and [72] of the RF Slave (Section [804]).

		Default	
[71]	Hardwired Zone Loop #1 Assignment	*00*	I___II___I (Valid entries are Zones 01-32)
[72]	Hardwired Zone Loop #2 Assignment	*00*	I___II___I

8.2.7 Remote/Local Annunciation Options (Section [017] Options 4 and 5)[xii]

New toggle options have been added in Section [017] has been added to the WLS9000 that allows the Installer to have alarm/audio annunciation at the Local Unit, Remote Sounder, or both.

[4] Local Annunciation

ON = Annunciation Sounds Locally
All Audio and alarm annunciation is emitted from the main WLS9000 unit.
OFF = Annunciation Does Not Sound Locally
No alarm or audio annunciation is emitted from the main unit.
This Option is defaulted ON.

[5] Remote Annunciation

ON = Annunciation Sounds Remotely
All Audio and alarm annunciation is emitted from the Remote Sounder.
OFF = Annunciation Does Not Sound Remotely
No audio and alarm annunciation is emitted from the Remote Sounder.
This option is defaulted OFF.

8.2.8 Zone Attributes [101]-[132]

The following options can be enabled or disabled by zone.

[1] Bell Options

ON = An alarm causes the bell output to activate.
OFF = Silent Alarm.

[2] Bell Type

ON = The bell output will be steady when the zone is in alarm.
OFF = The bell output will pulse when the zone is in alarm.

[3] Chime Options

ON = The WLS9000 will chime both when the zone is violated and when the zone is secured. Door Chime will work in both the armed and disarmed states.
OFF = The zone will not chime the keypads.

[4] Bypass Options

ON = The zone may be manually bypassed.
OFF = The zone cannot be bypassed.

[5] Force Arming Options

ON = The system may be armed with the zone violated. The zone will be temporarily bypassed, and when the zone is secured it will be added back into the system.
OFF = The partition cannot be armed if this zone is open.

[6] Swinger Shutdown Options

ON = After the zone causes a programmed number of alarms, the zone will shut down so that no further transmissions are sent to the monitoring station. The bell can follow Swinger Shutdown if programmed.
OFF = Swinger Shutdown disabled

[7] Transmission Delay Options

ON = The reporting of zone alarms will be delayed for the programmed time. If a valid access code is entered within this time, no alarm signal will be communicated.
OFF = When an alarm occurs, the reporting code is transmitted immediately.

[8] Wireless Option

ON = Zone is Wireless.
All Zones on the WLS9000 are wireless with the exception of the two Hardwired loops. Enabled is the default condition of all Zone Definitions
OFF = Not Used[xiii]
Note: Fire Zones attributes should not be changed. They should remain as defined by the default settings.

[160] Maximum Dialing Attempts To Each Phone Number

This value represents the number of attempts that will be made to each telephone number when communicating. The default value is 008 attempts. Valid entries are 001-015.

[161] Post Dial Wait For Handshake

This value represents the time the communicator waits for a valid initial handshake from the receiver after dialing the programmed telephone number. The default value is 040 seconds.

[202]-[205] System Zone Assignments

These eight bit toggle section determines which zones on the system are enabled. All zones that are enabled will

be supervised via the panel's EOL supervision, and will operate according to the zone type programmed. If a zone is disabled, it will not be supervised and all activity on the zone will be ignored by the panel.

8.2.9 Telephone Numbers

[301] First Telephone Number

[302] Second Telephone Number

[303] Third Telephone Number

All telephone numbers are 32 digits in length.
Hexadecimal digits may be programmed in the telephone number to perform certain functions.

Enter [*2*] - HEX B to dial "*"
Enter [*3*] - HEX C to dial "#"
Enter [*4*] - HEX D for an additional dial tone search, as is required for PBX telephone systems.
Enter [*5*] - HEX E to insert a 2 Second Pause in the telephone number.

Notes: -There is a static delay of 2 seconds before any additional dialtone search in a phone number.
-HEX A is not used; HEX F represents the end of the Phone Number (everything after F is ignored)
-In order to comply with European PTT specification requirements, the panel will not attempt to communicate, if no phone number is programmed. This applies to Phone Numbers 1 and 2.

[310] Telephone Number 1/3 Account Code

This is the Account Code used by the panel when communicating via Phone Numbers 1 and 3.

[311] Telephone Number 2 Account Code

This is the Account Code used by the panel when communicating via Phone Number 2.
Note: Both Account Codes are 4 digits in length. Valid entries are 0000-FFFE.

8.2.10 Reporting Codes

Zone Alarms & Alarm Restorals

These reporting codes are used by the communicator to transmit zone alarms and restorals for zones 1 to 32.
These reporting codes are sent to the Alarm & Restoral call direction group.

Duress Alarm

This reporting code will be transmitted to the monitoring station whenever either Duress code is used to perform any function on the system.
This reporting code is sent to the Alarm & Restoral call direction group.

Opening After Alarm

If programmed, this reporting code will be transmitted to the monitoring station on Opening if an alarm occurred during the previous armed period.
This reporting code is sent to the Alarm & Restoral call direction group of the System.

Recent Closing

A Recent Closing transmission shall be sent if an alarm occurs within 2 minutes of an exit time expiration. The Recent Closing report will be sent for the first alarm only.
This reporting code is sent to the Alarm & Restoral call direction group of the System.

[F], [A], [P] Alarms & Restorals

If enabled, these reporting codes will be sent if the keys are used to generate manual alarms.
These reporting codes are sent to the Alarm & Restoral call direction group of Partition 1.

Zone Tampers & Tamper Restorals

These reporting codes are used by the communicator to transmit zone tampers and restorals for zones 1 to 32.
These reporting codes are sent to the system Tamper Alarm & Tamper Restoral call direction group of the System.

Keypad Lockout

This reporting code is sent whenever the System enters Keypad Lockout.
This reporting code is sent to the system Tamper Alarm & Tamper Restoral call direction group of the System.

Closing by Users 1-32, 40, 41, 42

A closing by any of these access codes will result in transmission of the corresponding reporting code.
These reporting codes are sent to the Opening and Closing call direction group of the System. This software version will log either “Armed in Stay Mode” or “Armed in Away Mode” for this closing type.

Closing by Users 33 & 34 (Duress)

Similarly, a closing by these access codes will result in transmission of the corresponding reporting code.
These reporting codes are sent to the Opening and Closing call direction group of the System.
See also Duress Alarm Reporting Code.

Partial Closing

If programmed, this reporting code will be transmitted to the Central Station with the Closing code if there were zones manually bypassed at the time of arming to warn of a security compromise. Automatic bypasses caused by Stay Arming will not cause this code to be transmitted. Zones force armed by Automatic Arming will transmit in the manner described above. If SIA is used, each zone will be identified using the UB-XX (Untyped Bypass) identifier. The identified zones will follow the partial closing code and precede the closing transmission.

Special Closing

If the system is closed (armed) using any of the following methods, this reporting code will be transmitted.
Maintenance Code, Keyswitch Zone, Downloading, Quick Arm (*0), Auto Arming. This software version will also log either “Armed in Stay Mode” or “Armed in Away Mode” for all closing types.

Opening by Users 1-32, 40, 41, 42

An opening by any of these access codes will result in transmission of the corresponding reporting code.
These reporting codes are sent to the Opening and Closing call direction group of the System.

Opening by Users 33 & 34 (Duress)

Similarly, an opening by these access codes will result in transmission of the corresponding reporting code.
These reporting codes are sent to the Opening and Closing call direction group of the System.
See also Duress Alarm Reporting Code.

Auto Arm Cancellation

This reporting code is transmitted when the Auto Arming sequence is canceled. Cancellation of the sequence can be achieved by entering an access code (if required), activating a keyswitch zone input, or by pressing the 'Disarm' Key on a WLSKey during the 1 minute pre-alert.

Special Opening

If the system is opened (disarmed) using any of the following methods, this reporting code will be transmitted. (Maintenance Code, Keyswitch Zone (WLSKey), or Downloading).

Battery Trouble & Restoral

If the standby battery is low or disconnected, this trouble will be reported.
These reporting codes are sent to the System Maintenance Call Direction Group.

AC Failure & Restoral

If the AC supply has failed or has been restored, these reporting codes will be sent. There is a programmable delay (001-255 minutes) which applies to both the trouble and the restoral.
These reporting codes are sent to the System Maintenance Call Direction Group.

Remote Sounder Trouble & Restoral

If the WLS9000 does not receive a supervisiory signal for ten seconds, this trouble condition will be logged and communicated.
These reporting codes are sent to the System Maintenance Call Direction Group.

Fire Trouble & Restoral

An open circuit on any Fire Zone or the 2 wire smoke circuit will cause this trouble to be reported.
These reporting codes are sent to the System Maintenance Call Direction Group.

TLM Restoral

The TLM Restoral code is sent when the telephone line is restored from the trouble condition.
These reporting codes are sent to the System Maintenance Call Direction Group.

Failure to Communicate (Phone Numbers 1 & 2)

When events fail to communicate to either telephone number, this reporting code will be transmitted the next time a communication is successful. The information will be transmitted in the following order.

OLD EVENT(S)
FAILURE TO COMMUNICATE (PHONE #1)
NEW EVENT(S)

If multiple FTC's occur this FTC reporting code will create blocks of old information.
The FTC reporting code does not follow any call direction "group". It is sent to every group's call directions upon transmissions of failed event transmissions.
When event(s) fail to communicate to a telephone number, there will not be an attempt to communicate again until another event is sent to that phone number.

Event Buffer is 75% Full Since Last Upload

Whenever the 128 event internal buffer has reached a level of 75% full since the last successful upload from a downloading computer, this reporting code will be transmitted.
This reporting code is sent to the System Maintenance Call Direction Group.

DLS Lead In and Lead Out

The DLS Lead Out Reporting codes will be transmitted by the panel every time DLS has completed a successful DLS call to the panel. The DLS Lead In reporting code is transmitted two ways: after the panel has been successfully called by DLS, but *before* the panel calls DLS back via the Downloading Telephone Number when Callback is enabled; or upon a User Initiated Call-up.
These reporting codes are sent to the System Maintenance Call Direction Group with the System identifier.

Zone Fault & Restoral

This reporting code is sent whenever a zone has entered the Fault state via a loss of supervisory on a

wireless zone. These reporting codes are sent to the System Maintenance Call Direction Group.

Periodic Test Transmission

When the programmed interval and time of day have elapsed, this reporting code will be transmitted to the central monitoring station. This reporting code is sent to the System Test Transmission Call Direction Group.

System Test

When the [*][6][Master Code][4] command is used to perform a manual system test, this reporting code is sent to test the communicator. This reporting code is sent to the System Test Transmission Call Direction Group.

Wireless Maintenance Reporting Codes

The following reporting codes are sent to report a Low Battery condition on the system. Individual zones are not described using the Pulse formats however the individual zones will be logged to the event buffer. SIA and Contact I.D. formats will identify the zone with the condition.

General Zone Low Battery Alarm and Restore Codes

A low battery alarm occurs when the system component's battery voltage supply drops below 3.3 (3.5) Volts. A zone trouble will be displayed immediately but the transmission may be delayed (see Section [370]). A low battery restoral may only take place after the alarm sensing device has been tampered and the batteries have been changed. These reporting codes are transmitted to the System Maintenance Call Direction group.

8.2.11 Communicator Format Options [360]

This section requires 2 two digit entries (1 per phone number). The 3rd telephone number uses the format programmed for the 1st telephone number.

01 20 BPS, 1400 HZ handshake
02 20 BPS, 2300 HZ handshake
03 CONTACT I.D.
04 SIA FSK
05 Pager

REPORTING CODES

SIA -	0 ***is*** valid in Account or Rep Code (not 00 in a Reporting code though)
ADEMCO Contact ID -	0 ***is not*** valid in Account or Rep Code (A must be used, 10 in checksum)
BPS Formats -	0 ***is not*** valid in Account or Rep Code (A must be used)

SIA

This format uses 300 Baud FSK as the communication media.
The Account Codes must be 4 hexidecimal digits in length all reporting codes must be 2 digits in length.
The SIA format will transmit a 4 digit account code, a 2 digit identifier code and a 2 digit reporting code.
The 2 digit identifier is preprogrammed by the panel.

Reporting Codes

For the programmable reporting codes, if the reporting code contains the data FF, the communicator will automatically construct the default reporting code to be sent for the SIA format (please see Appendix A). If the reporting code contains the data 00, the event is disabled and not transmitted. If the reporting code contains any other data between 01 and FE, this is sent as the reporting code (also see option SIA Transmits Automatic or Programmed Reporting codes).
Appendix A has all identifiers and the automatically constructed reporting codes.
Note: XX represents the Zone/User Number.
00 represents a System Event which is not specific to a zone or user number.

Level 2 (Hardcoded)

The SIA communication format used in this product follows the Level 2 specifications of the latest SIA Digital Communication Standard – July 1997 (Draft Only). This format will send the Partition 1 Identifier (Account Code) along with a Partition Identifier (1 or 2) in its data transmission. At the receiver, the transmission would look like .....

N Ri01/
BA 01
XX XX
Etc.

N = New Event
Ri01 = System Area (or Partition One on partitioned panels)
BA = Burglary Alarm
01 = Zone 1
XX = Next event from the same area in the same transmission.

CONTACT I.D.

The Account Codes must be 4 decimal digits in length all reporting codes must be 2 digits in length.
This format uses DTMF touch tone as the communication media. It requires a Dual-Tone initial handshake (1400/2300) and after sending the message, it requires a 1400 Hz kissoff.
This software has a built in Automatic Contact I.D. reporting Code table similar to SIA. This table may be found in its entirety in Appendix C. An option exists that determines whether or not the Contact I.D. format will transmit Automatic or Programmed reporting codes (please see Section [381] Option 7).
Contact I.D. behaves similarly to SIA with respect to reporting codes; if [00] is programmed for any event, it will not communicate. If [FF] is programmed the automatic reporting code will be transmitted (if programmed). If the "Contact I.D. Sends Programmed Codes" option is enabled, the panel will not send anything for the event as valid entries are [01]-[FE].
Please see both Appendices B and C for a total list of both suggested and automatic Contact I.D. reporting codes.
Note: The Australian Automatic Contact I.D. is different than that of the Standard Product. Please see Appendix C for differences.

The format is: **AAAA 18 Q XXX GG CCC P**

Where:
AAAA = 4 digit Account Code
18 = Unique format identifier (not programmed, displayed, or printed)
Q = Qualifier, which gives specific event information
- 1 = New Event or Opening
- 3 = New Restore or Closing
- 6 = Previously reported off normal event

XXX = Event Code
Note: XX represents the Reporting Code programmed by Installer
- 1XX = Alarms
  - Medical
  - Panic
  - Burglary
  - General
  - 24 Hour
- 2XX = Supervisories
  - Fire
- 3XX = Troubles
  - System
  - Sounder / Relay
  - System Peripheral
  - Communications
  - Protective Loop
  - Sensor
- 4XX = Open / Close Group
  - Open / Close
  - Remote Access
  - Access Control
- 5XX = Disables / Bypasses
  - System

Sounder / Relay
System Peripheral
Communications
6XX = Test / Misc.
Tests

GG = Group Number. This 2 digit number is applied when using split arming / disarming function.

CCC = 3 digit Zone Number or User ID for Opening or Closing. When system status is sent, the CCC field is defaulted to "000"

P = Check Sum
Add all 15 digits. If less than 15, complement and send. If greater than 15, repeatedly subtract 15 until it is less then complement and send. (all 0's = A's)

Zone Alarms and Restorals can be programmed to send different messages to the monitoring station. For example, if the reporting code for zone 5 is programmed with "34", the monitoring station will receive the following message; "*BURG* - ENTRY/EXIT - 5" where 5 is the number of the zone which has been activated.
Different messages to be sent to the monitoring station are:

- **EVENT CODES (as per ADEMCO)**

Event code		***Message as seen on receiver***
Medical Alarms		
1AA	Medical	*EMERG* - PERSONAL EMERGENCY - #
1A1	Pendant Transmitter	*EMERG* - PERSONAL EMERGENCY - #
1A2	Fail to Report In	*EMERG* - FAIL TO CHECK IN- #
Fire Alarms		
11A	Fire Alarm	*FIRE* - FIRE ALARM - #
111	Smoke	*FIRE* - SMOKE DETECTOR - #
112	Combustion	*FIRE* - COMBUSTION - #
113	Water Flow	*FIRE* - WATER FLOW - #
114	Heat	*FIRE* - HEAT SENSOR - #
115	Pull Station	*FIRE* - PULL STATION - #
116	Duct	*FIRE* - DUCT STATION - #
117	Flame	*FIRE* - FLAME SENSOR - #
118	Near Alarm	*FIRE* - NEAR ALARM - #
Panic Alarms		
12A	Panic	*PANIC* - PANIC - #
121	Duress	*PANIC* - DURESS - #
122	Silent	*PANIC* - SILENT PANIC - #
123	Audible	*PANIC* - AUDIBLE PANIC - #
Burglar Alarms		
13A	Burglary	*BURG* - BURGLARY - #
131	Perimeter	*BURG* - PERIMETER - #
132	Interior	*BURG* - INTERIOR - #
133	24 Hour	*BURG* - 24 HOUR - #
134	Entry / Exit	*BURG* - ENTRY / EXIT - #
135	Day / Night	*BURG* - DAY / NIGHT - #
136	Outdoor	*BURG* - OUTDOOR - #
137	Tamper	*BURG* - TAMPER - #
138	Near Alarm	*BURG* - NEAR ALARM - #
General Alarms		
14A	General Alarm	*ALARM* - GENERAL ALARM - #
143	Expansion module failure	*ALARM* - EXP. MODULE FAIL - #
144	Sensor tamper	*ALARM* - SENSOR TAMPER - #
145	Module Tamper	*ALARM* -
24 Hour Non-Burglary		
15A	24 Hour non-Burg	*ALARM* - 24 HR. NON-BURG - #
151	Gas detected	*ALARM* - GAS DETECTED - #
152	Refrigeration	*ALARM* - REFRIGERATION - #
153	Loss of Heat	*ALARM* - HEATING SYSTEM - #
154	Water Leakage	*ALARM* - WATER LEAKAGE - #
155	Foil Break	*ALARM* - FOIL BREAK - #
156	Day Trouble	*ALARM* - DAY ZONE - #
157	Low bottled Gas level	*ALARM* - LOW GAS LEVEL - #
158	High Temp	*ALARM* - HIGH TEMPERATURE - #
159	Low Temp	*ALARM* - LOW TEMPERATURE - #
161	Loss of Air Flow	*ALARM* - AIR FLOW - #
Fire Supervisory		
2AA	24 Hour non-Burg	SUPER - FIRE SUPERVISORY - #
2A1	Low Water Pressure	SUPER - LOW WATER PRESSURE - #
2A2	Low CO2	SUPER - LOW CO2

2A3	Gate Valve Sensor	SUPER - GATE VALVE -#	
2A4	Low water level	SUPER - LOW WATER LEVEL - #	
2A5	Pump activated	SUPER - PUMP ACTIVATION - #	
2A6	Pump failure	SUPER - PUMP FAILURE - #	
System Troubles			
3AA	System Trouble	TROUBLE - SYSTEM TROUBLE	
3A1	AC Loss	TROUBLE - AC POWER	
3A2	Low System Battery	TROUBLE - SYSTEM LOW BATTERY	
3A3	RAM checksum bad	TROUBLE - BAD RAM CHECKSUM	(restore not applicable)
3A4	ROM checksum bad	TROUBLE - BAD ROM CHECKSUM	(restore not applicable)
3A5	System Reset	TROUBLE - SYSTEM RESET	(restore not applicable)
3A6	Panel program changed	TROUBLE - PROGRAMMING CHANGED	(restore not applicable)
3A7	Self-test failure	TROUBLE - SELF-TEST FAILURE	
3A8	System Shutdown	TROUBLE - SYSTEM SHUTDOWN	
3A9	Battery Test Failure	TROUBLE - BATTERY TEST FAILURE	
31A	Ground Fault	TROUBLE - GROUND FAULT - #	
Sounder / Relay Troubles			
32A	Sounder / Relay	TROUBLE - SOUNDER / RELAY - #	
321	Bell 1	TROUBLE - BELL / SIREN 1	
322	Bell 2	TROUBLE - BELL / SIREN 2	
323	Alarm Relay	TROUBLE - ALARM RELAY	
324	Trouble Relay	TROUBLE - TROUBLE RELAY	
325	Reversing	TROUBLE - REVERSING RELAY	
System Peripheral Troubles			
33A	System Peripheral	TROUBLE - SYS. PERIPHERAL - #	
331	Polling Loop Open	TROUBLE - POLLING LOOP OPEN	
332	Polling Loop Short	TROUBLE - POLLING LOOP SHORT	
333	Exp. Module Failure	TROUBLE - EXP. MODULE FAIL - #	
334	Repeater Failure	TROUBLE - REPEATER FAILURE - #	
335	Local Printer Paper Out	TROUBLE - PRINTER PAPER OUT	
336	Local Printer Failure	TROUBLE - LOCAL PRINTER	
Communication Troubles			
35A	Communication	TROUBLE - COMMUNICATION TROUBLE	
351	Telco 1 Fault	TROUBLE - PHONE LINE 1	
352	Telco 2 Fault	TROUBLE - PHONE LINE 2	
353	Long Range Radio xmitter fault	TROUBLE - RADIO TRANSMITTER	
354	Fail to Communicate	TROUBLE - FAIL TO COMMUNICATE	
355	Loss of radio super.	TROUBLE - RADIO SUPERVISION	
356	Loss of central polling	TROUBLE - CENTRAL RADIO POLLING	
Protection Loop Troubles			
37A	Protection Loop	TROUBLE - PROTECTION LOOP - #	
371	Protection Loop open	TROUBLE - PROT. LOOP OPEN - #	
372	Protection Loop short	TROUBLE - PROT. LOOP SHORT - #	
373	Fire Trouble	TROUBLE - FIRE LOOP - #	
Sensor Troubles			
38A	Sensor Trouble	TROUBLE - SENSOR TROUBLE - #	
381	Loss of super. RF	TROUBLE - RF SENSOR SUPER. - #	
382	Loss of super. RPM	TROUBLE - RPM SENSOR SUPER. - #	
383	Sensor Tamper	TROUBLE - SENSOR TAMPER - #	
384	RF xmitter low batter	TROUBLE - RF SENSOR BATT. - #	
Open / Close			
4AA	Open / Close	OPENING	
		CLOSING	
4A1	O / C by User	OPENING - USER #	
		CLOSING - USER #	
4A2	Group O / C	OPENING - GROUP - USER #	
		CLOSING - GROUP - USER #	
4A3	Automatic O / C	OPENING - AUTOMATIC	
		CLOSING - AUTOMATIC	
4A4	Late to O / C	OPENING - LATE	
		CLOSING - LATE	
4A5	Deferred O / C	(Not Applicable)	
		(Not Applicable)	
4A6	Cancel	OPENING - CANCEL	
		(Not Applicable)	
4A7	Remote Arm / Disarm	OPENING - REMOTE	
		CLOSING - REMOTE	
4A8	Quick Arm	(Not Applicable)	
		CLOSING - QUICK ARM	
4A9	Keyswitch O / C	OPENING - KEYSWITCH	
		CLOSING - KEYSWITCH	

Remote Access

411	Callback request made	REMOTE - CALLBACK REQUESTED	(restore not applicable)
412	Successful Download access	REMOTE - SUCCESSFUL ACCESS	(restore not applicable)
413	Unsuccessful access	REMOTE - UNSUCCESSFUL ACCESS	(restore not applicable)
414	System Shutdown	REMOTE - SYSTEM SHUTDOWN	
415	Dialer Shutdown	REMOTE - DIALER SHUTDOWN	
Access Control			
421	Access denied	ACCESS - ACCESS DENIED - USER #	
422	Access report by user	ACCESS - ACCESS GAINED - USER #	
System Disables			
5AA-51A			
Sounder / Relay Disables			
52A	Sounder / Relay disable	DISABLE - SOUNDER / RELAY #	
521	Bell 1 disable	DISABLE - BELL / SIREN 1	
522	Bell 2 disable	DISABLE - BELL / SIREN 2	
523	Alarm relay disable	DISABLE - ALARM RELAY	
524	Trouble relay disable	DISABLE - TROUBLE RELAY	
525	Reversing relay disable	DISABLE - REVERSING RELAY	
System Peripheral Disables			
53A-54A			
Communication Disables			
551	Dialer disabled	DISABLE - DIALER DISABLE	
552	Radio xmitter disabled	DISABLE - RADIO DISABLE	
Bypasses			
57A	Zone bypass	BYPASS - ZONE BYPASS - #	
571	Fire bypass	BYPASS - FIRE BYPASS - #	
572	24 Hour zone bypass	BYPASS - 24 HOUR BYPASS - #	
573	Burg bypass	BYPASS - BURG. BYPASS - #	
574	Group bypass	BYPASS - GROUP BYPASS	
Test / Misc.			
6A1	Manual Trigger Test	TEST - MANUALLY TRIGGERED	(restore not applicable)
6A2	Periodic Test report	TEST - PERIODIC	(restore not applicable)
6A3	Periodic RF xmission	TEST - PERIODIC RADIO	(restore not applicable)
6A4	Fire test	TEST - FIRE TEST	(restore not applicable)
6A5	Status report to follow	TEST - STATUS FOLLOWS	(restore not applicable)
6A6	Listen-in to follow	TEST - LISTEN-IN ACTIVE	(restore not applicable)
6A7	Walk test mode	TEST - WALK TEST MODE	

Pager

Pager format uses SurGard 4/3 DTMF timing parameters.
It sends the Account Code, reporting code and a [#] (Hex “C”) 1 time only.
There is no checksum, parity or handshake.
This communication format cannot be used for Backup or Alternate dialing (Phone Number 3).
Communication of this format shall not generate or clear any FTC conditions.
Note: If an Automatic Communications format is used for any other phone number, the desired reporting code to be transmitted via Pager must be programmed for the event!

8.2.12 Communicator Call Directions [361]-[368]

For events from each Call Direction group the control panel can call 2 different phone numbers and use the LINKS as backup or as a redundant communicator for one or both numbers. The Third phone number can only be used as a backup or alternate of the first.

Each report falls under one of the following 5 Groups:

System Alarms & Restorals
System Openings & Closings
System Tampers & Restorals
System Maintenance Alarms & Restorals
System Test Transmissions

Each group can be assigned to the following Call Directions

Option 1 1st Telephone Number (and 3rd Telephone Number if enabled for Alternate or Backup)
Option 2 2nd Telephone Number

8.2.13 Communication Variables [370]

Swinger Shutdown (Alarms & Restorals)

This value defines the number of attempts (alarm and restoral pairs) per zone that the communicator will make before it shuts down for that zone ("swinger shutdown"). Program a 3 digit number from 000 to 014. When programmed as 000, the communicator will not be shut down and all alarms will be transmitted.

Note: The Bell and Event Buffer can follow Swinger Shutdown if enabled.

Swinger Shutdown (Tampers & Restorals)

This value defines the number of times the same system Tamper type event will occur before stopping transmissions.

Swinger Shutdown (Maintenance Troubles & Restorals)

This value defines the number of times the same system Maintenance (Trouble) type event will occur before stopping transmissions.

Notes: Fire Troubles will follow the Maintenance Swinger Shutdown Variable.

Communication Delay (seconds)

This value defines the delay before transmission. The delay is for zones which have the Transmission Delay attribute enabled. Program a time from 000 to 255 seconds.

AC Failure Communication Delay (minutes)

This value determines the delay before an AC FAILURE or AC RESTORE is reported. The AC failure or restoral is still displayed immediately. Program a time from 000 to 255 minutes.

TLM Trouble Delay

The number of valid checks (10 second interval) required before a Telephone Line trouble is generated is programmed here. Valid entries are 000-255 for trouble annunciation and transmission (LINKS) delays of 10 to 2550 Seconds (42.5 Minutes).

Test Transmission Cycle (Land-line)

This value determines the period between Test Transmissions for the Land Line. Valid entries are [000]-[255]. Whether this interval is in minutes or days is determined on Section [702], Option 3.

Wireless Zone Low Battery Transmission Delay (in days)

When a zone reports a low battery condition, the trouble condition will be indicated immediately on the keypad, but the transmission to the monitoring station will be delayed by the number of days programmed in this section. If the user does not correct the low battery condition before the delay expires, the low battery condition will be transmitted.

The Low battery alarm and restoral codes will only be reported once per armed period.

The Low Battery Restore transmission is not delayed.

Delinquency Transmission Delay

The value in this section determines the period of time that the Delinquency Event will be postponed until it logged to the Event Buffer and transmitted. Whether this value is in hours or days is determined if Delinquency is for Activity (hours) or Closing (days) as specified in Section [380] Option 8.

[371] Test Transmission Time of Day

Program the time of the test transmission in this section. Enter a 4-digit time using the 24 hour clock format (HH:MM). Valid entries are from 00 to 23 for the hours (HH) and 00 to 59 for the minutes (MM).

To disable the test transmission, enter [9999] in this section.

8.2.14 Communicator Option Codes

[380] First Communicator Options Code

[1] Communications Options

ON = Communicator Enabled.

The system's communicator will be enabled and all events with reporting codes will be reported to the monitoring station. Refer to the Telephone Number, Reporting Code and Call Direction Programming Sections.

OFF = Communicator Disabled.

The system's communicator will be shut off and events will not be transmitted to the monitoring station. Downloading may still be performed if enabled.

[2] Restoral Transmission Options

ON = Restoral Transmissions on Bell-Time-out.

Zone restoral reporting codes will not be transmitted until the zone has been restored ***and*** the Bell cut-off time has expired. If the zone is not restored when the bell cut-off time expires, the restoral will be transmitted when the zone physically restores or when the system is disarmed. Note that 24 Hour zones will not restore until the zone is physically restored.

OFF = Restoral Transmissions Follow Zones.

Zone restoral reporting codes will be transmitted when the zone is physically restored. If the zones are still active when the system is disarmed, the restoral codes will be transmitted when the system is disarmed. Note that 24 Hour zones will not restore until the zone is physically restored.

[3] Dialing Format Options

ON = Pulse Dialing.

The WLS9000 will dial telephone numbers using pulse (rotary) dialing.

OFF = DTMF Dialing.

The WLS9000 will dial telephone numbers using DTMF (dual tone multi-frequency) dialing.

[4] DTMF Crossover Options

ON = Switch to Pulse Dialing after 4 DTMF attempts.

If DTMF dialing is enabled, the WLS9000 will dial telephone numbers using DTMF dialing for the first 4 attempts. If unsuccessful, the system will switch to pulse (rotary) dialing for the final 4 attempts.

OFF = DTMF Dial for all Attempts.

If DTMF dialing is enabled, the WLS9000 will dial telephone numbers using DTMF dialing for all dialing attempts.

[5] 3rd Phone Number Enabled / Disable

ON = 3rd Phone Number Enabled.

The 3rd Phone number will be used for Alternate Dialing with the 1st Phone Number or as a Backup of the 1st Phone Number (see light 6).

OFF = 3rd Phone Number Disabled.

The 3rd Phone number will not be used.

[6] 3rd Phone Number Options

ON = Alternate Dialing Enabled (1st & 3rd).

After each dialing attempt, the communicator switches between the 1st Phone Number and 3rd Phone Number until 8 attempts have been made to each number.

OFF = Call 1st Number, Backup to 3rd Number.

If 8 attempts to communicate to the First Telephone Number fail, up to 8 attempts will be made to communicate to the Third Telephone Number. If all 8 attempts to communicate to the Third Telephone Number fail, a Failure to Communicate Trouble will be generated.

[7] Not Used

[8] Delinquency Options

ON = Delinquency Follows Zone Activity (Activity Delinquency).

This feature assists in the monitoring of the elderly and the handicapped. If there is no zone activity on the system, the Delinquency Transmission Delay timer in Section [370] will begin counting in ***hours***. When the counter reaches the programmed time, the panel will communicate the Delinquency Code to the central station, if programmed. If there is zone activity present on the system at any time, the counter will be reset. If this option is used, the Closing Delinquency option is not available.

Notes: This code will not be transmitted for panels that are "Away" armed.
Activity on Bypassed zones does not affect this timer.
This timer is also reset upon arming.

OFF = Delinquency Follows Arming (Closing Delinquency).

This reporting code is sent whenever the programmed number of days for Delinquency has expired without the panel being Armed. The timer for this feature is programmed in Section [370]. This value programmed in this section determines the number of days the panel counts when not being armed before sending the Delinquency reporting code to the central station. Once this code is sent, the timer will not be started again until the panel has been armed. Each day programmed in the counter represents one day PLUS the time it takes for the panel to reach midnight. This feature may disabled by programming 000 in Section [370].

[381] Second Communicator Options Code

[1] Opening After Alarm Keypad Ringback Options

ON = Opening After Alarm Keypad Ringback Enabled.

When the Opening After Alarm reporting code is successfully transmitted to a programmed telephone number, the keypad will sound a series of 8 beeps to confirm to the end user that the Opening After Alarm Code was sent and received. This Ringback will occur for each Opening After Alarm code successfully reported.

OFF = Opening After Alarm Keypad Ringback Disabled

[2] Opening After Alarm Bell Ringback Options

ON = Opening After Alarm Bell Ringback Enabled.

When the Opening After Alarm reporting code is successfully transmitted to a programmed telephone number, the Bell will sound a series of 8 squawks to confirm to the end user that the Opening After Alarm Code was sent and received. This Ringback will occur for each Opening After Alarm code successfully transmitted.

OFF = Opening After Alarm Bell Ringback Disabled

[3] SIA Reporting Code Options

This option is for use with the SIA communication format.). If 00 is programmed in the reporting code section, the event will not be communicated.

ON = SIA Sends Programmed Rep. Codes.

When this option is ON and there is a valid reporting code programmed in the reporting code section, the programmed reporting code will be transmitted.
If FF is programmed as a reporting code, the event will not be communicated.

OFF = SIA Sends Automatic Rep. Codes.

When this option is OFF and there is a valid reporting code (01-FE) or FF programmed in the reporting code section, the panel will transmit an automatic reporting code for SIA only. This would be used when automatic reporting codes are required but there is a requirement for a different reporting code (ie Pager Format, etc).

Reporting Code Entry	Option ON	Option OFF

00	**No Transmission**	**No Transmission**
FF	**No Transmission**	**Auto Rep Code sent**
01-FE	**01-FE sent**	**Auto Rep Code sent**

[4] Closing Confirmation Options

ON = Closing Confirmation Enabled.

When a Closing reporting code is successfully transmitted to a programmed telephone number, the keypad will sound a series of 8 beeps to confirm to the end user that the Closing Code was sent and received.

OFF = Closing Confirmation Disabled.

There will be no keypad ringback when a Closing reporting code is successfully transmitted to a programmed telephone number.

[5] Talk/Listen Options for Phone Number One/Three

ON = Talk/Listen (PC5928) on Phone #1/3 Enabled.

If Talk/Listen is requested for an event by the PC5928, the panel will request the session on the next communication on Phone Number 1/3 (via L-Block) to the central station.

OFF = Talk/Listen (PC5928) on Phone #1/3 Disabled.

The panel will not request a Talk/Listen session for an event even if the PC5928 has requested it.

[6] Talk/Listen Options for Phone Number Two

ON = Talk/Listen (PC5928) on Phone #2 Enabled.

If Talk/Listen is requested for an event by the PC5928, the panel will request the session on the next communication on Phone Number 2 (via L-Block) to the central station.

OFF = Talk/Listen (PC5928) on Phone #2 Disabled.

The panel will not request a Talk/Listen session for an event even if the PC5928 has requested it.

[7] Contact I.D. Options

ON = Contact I.D. Uses Programmed Reporting Codes.

The Contact I.D. communications format will use programmed reporting codes when transmitting to central station.

OFF = Contact I.D. Uses Automatic Reporting Codes.

The Contact I.D. communications format will use the automatic reporting codes as shown in Appendix C when transmitting to central station.

Note: The Australian Automatic Contact I.D. is different than that of the Standard Product. Please see Appendix C for differences.

[8] For Future Use.

8.2.15 Downloading Options

[401] First Downloading Option Code

[1] Downloading Answer Options

ON = Downloading Answer Enabled.

The system will answer calls for downloading if a successful Double call routine is detected. Have the downloading computer call the system and let the telephone line ring once or twice. After 1 or 2 rings, hang up. If called back within the programmed Double Call Time (000-255 seconds), the panel will answer on the first ring.

OFF = Downloading Answer Disabled.

The system will not answer incoming calls using the Double Call routine unless the User enables the DLS window. This option can be enabled by turning Option 2 ON.

[2] DLS Window Options

ON = User Can Enable DLS Window.

The user can use the [*][6][Master Code][6] Command to enable a 6 hour window in which the panel will answer calls for downloading if a successful Double Call routine is detected. If this option is enabled, the window is open upon power up. The window is on for the full 6 hours if enabled.

OFF = User Can Not Enable DLS Window.

The user can not enable a window for DLS calls.

Note: Options 1 and 2 are not related. One does not need to be enabled for the other to perform its function.

[3] Call-Back Options

ON = Call-Back Enabled.

When the system answers the downloading computer's call, both the computer and the WLS9000 will hang up. The panel will then call the Downloading Telephone Number and connect with the computer at that number. If more than one downloading computer is to be used, this function should be disabled.

OFF = Call-Back Disabled.

The downloading computer will have immediate access to the WLS9000 once it is identified as a valid system.

[5] Auto Event Buffer Upload

ON = Auto Event Buffer Upload Enabled.

After the panel has communicated the "Event Buffer 75% Full" event to central station, the panel will call the Downloading Computer's telephone number. DLS software will then perform an event buffer upload upon successful connection.

OFF = Auto Event Buffer Upload Disabled.

After the panel has communicated the "Event Buffer 75% Full" event to central station, the panel will ***not*** call the Downloading Computer's telephone number.

[6]-[8] For Future Use

[402] Downloading Computer's Telephone Number

This telephone number is 32 digits in length.

[403] Downloading Access Code

This 4-digit Hexadecimal code allows the panel to confirm that it is communicating with a valid downloading computer.

[404] Panel Identification Code

This 4-digit Hexadecimal code allows the downloading computer to confirm the identity of the control panel.

[405] Double-Call Timer

This timer sets the amount of time that can be taken between calls when using Double Call to contact the WLS9000. Valid entries are 001 to 255 (seconds)

[406] Number of Rings to Answer On

The value in this section determines how many rings that the WLS9000 will automatically pick up on in order to establish a DLS connection. Default value is 000 rings. Valid entries are [000]-[020].

NOTE: If both Section [401] Option 1 and Section [406] are enabled, either one will work depending on how the installer calls the premises.

8.2.16 International Programming Sections

[700] Automatic Clock Adjust

In order to compensate for Crystal/Ceramic Resonator inaccuracies, Software has implemented a solution. The value here is designed to add or subtract seconds at the end of each day. Valid entries are 00-99 with 60 seconds being the default minute. To determine the value to be programmed in this section, the installer will need to monitor the time lost by the panel over a length of time. The installer will then be required to calculate the average amount of time per day that the panel gains or loses. Once the installer has this value, it may be compensated for through this feature.

Example: Panel loses an average of 9 seconds a day.
Instead of loading 60 seconds for the last minute of each day, program the panel to load 51 seconds with the use of Section [700]; this will speed up the panel by 9 seconds everyday, thereby fixing the problem.

[701] First International Options Code

[1] AC Options

ON = 50 Hz AC.
The incoming AC power cycles at 50 Hz.
OFF = 60 Hz AC.
This is the North American standard where the incoming AC power cycles at 60 Hz.

[2] Time Base Options

ON = The timebase is the internal crystal oscillator.
In cases of unstable AC power input, the internal crystal can be used to keep the most accurate timebase.
OFF = The timebase is the AC power input.
The 50 or 60 Hz AC power input is normally very stable and can be used as the timebase.

[3] Arming Inhibit Options

ON = AC/DC Arming Inhibit with Battery Check Enabled.
When an AC or DC trouble is present, the system will not arm. This includes Keypad, Keyswitch, Automatic, and Downloading Arming. If enabled and arming is attempted, the system will perform a System Battery check as well as a Battery Check on all peripheral modules supported by a backup battery.
OFF = Arming not Inhibited.
The system can be armed, regardless of the presence of an AC or DC trouble and will not check all system batteries upon arming.
NOTE: If this option is enabled, it is strongly recommended that AC Troubles be displayed (Section [017], Option 1 ON).

[4] Latching System Tamper Options

ON = System Tampers Require Installer Reset and Inhibit Arming.
If any system tamper condition occurs, the Installer's code must be entered [*][8][Installer Code] and the tamper condition must be restored before the system can be armed. This also includes Auto Arming and Keyswitch. If Auto Arming is attempted with a latched tamper, the panel will not arm. The Auto Arm Cancellation code is not transmitted however because a user did not cancel the Auto Arming sequence.
Note: If enabled, the manual bypassing of a zone will not bypass the tamper or fault states (DEOL).
OFF = System Tampers Do Not Require Installer Reset.

[5] Access Code Length Options

ON = 6-digit Access Codes.

All access codes on the system will be 6 digits in length except the Panel I.D. Code and the Downloading Access Code. If this option is selected, the last digit of each code will no longer be used, the codes will remain programmed.

System Master Code = XXXX56 XXXX = previous code, (1234)
Installer Code = YYYY00 YYYY = previous code, (5010)

OFF = 4-digit Access Codes.

All access codes on the system will be 4 digits in length. For any existing codes, the last 2 digits are removed.

[6] Busy Tone Options

ON = Busy Tone Detection Enabled.

If these tones are detected, the communicator will disengage the phone line and try to place the call again following the "Delay Between Dialing Attempts".

OFF = Busy Tone Detection Disabled.

The communicator will use the standard dialing procedure for every attempt.

[7] Battery Current Charge Options

ON = High Current Battery Charge

The panel will charge the battery at a higher current rate than the DSC standard (approx 650-700 mA).. This support was added in the BlueLite ASIC.

OFF = Standard Current Battery Charge

The panel will charge the battery at the DSC standard rate of approximately 350 mA.

[8] For Future Use

[702] Second International Options Code

[1] Pulse Dial Options

ON = Pulse Dialing Make/Break Ratio is 33/67
OFF = Pulse Dialing Make/Break Ratio is 40/60

[2] Force Dial Options

ON = Force Dialing Enabled.

If the first attempt by the panel to call the monitoring station fails, on every subsequent attempt the panel will dial regardless of the presence of dialtone.

Note: The panel will go off-hook, search for dialtone for 5 seconds, hang-up for 20 seconds, go off-hook, search for dialtone for 5 seconds, then dial (assuming no presence of dialtone).

OFF = Force Dialing Disabled.

The panel will not dial the programmed telephone number if dialtone is not present.

[3] Land Line Test Transmission Options

ON = Land Line Test Transmission Interval is in Minutes.

The value programmed in Section [370] Seventh entry is in Minutes.

OFF = Land Line Test Transmission Interval is in Days.

The value programmed in Section [370] Seventh entry is in Days.

[4] Handshake Options

ON = 1600 Hz Handshake.

The communicator responds to a 1600 Hz handshake for BPS formats.

OFF = Standard Handshake.

The communicator responds to the handshake designated by the format selected (1400 or 2300 Hz).

[5] I.D. Tone Options

ON = I.D. Tone Enabled.

After the telephone number is dialed, the panel will emit a tone (as specified by Option 6) for 500

ms every two seconds to indicate that it is a digital equipment call, not voice.
OFF = I.D. Tone Disabled.

[6] I.D. Tone Frequency

ON = 2100 Hz I.D. Tone
OFF = 1300 Hz I.D. Tone

[7] DLS Window Options

ON = One Time 1-hour user Enabled DLS Window.
The User Enabled DLS Window is 1 hour in length and will be closed after a successful hang-up from a downloading call.
OFF = Full 6-hour User Enabled DLS Window.
The User Enabled DLS Window is 6 hours in length and remains open after a successful hang-up from a downloading call.
Note: this option also determines the length of the DLS window available on power up.

[8] FTC Bell Options

ON = Bell on FTC when armed.
If a Failure to Communicate Trouble is generated while EITHER Partition is armed, the Bell output will sound for the length of Bell time-out or until the system is disarmed.
OFF = FTC Trouble only when armed.
If a Failure to Communicate Trouble is generated while the panel is armed, the Bell output will not sound but the keypad buzzer will sound trouble beeps until a key is pressed.

[703] Delay Between Dialing Attempts

For standard (force) dialing, the panel will go off-hook, search for dialtone for 5 seconds, hang-up for 20 seconds, go off-hook, search for dialtone for 5 seconds, then dial. If there is no initial handshake recognized within 40 seconds, the panel will hang up. This programmable timer adds a delay before the next call is attempted.

[704] Dialtone Search Time

This is the maximum amount of time the panel searches for dial tone.
Valid Entries are 001-255 seconds. Default is 005

[705] Dialtone Duration

This is the minimum amount of tone required before the panel qualifies it as dialtone.
Valid entries are 004-255 (x25 milliseconds). Default is 004.

[706] Lower Dialtone Cutoff

This is the lower dialtone cutoff frequency.
Valid entries are 050-250. Default is 250.
Notes: The value entered does not correspond to the frequency value. A table is required (value X = frequency Y)
This *value* MUST be greater than that programmed in Section [707].

[707] Upper Dialtone Cutoff

This is the upper dialtone cutoff frequency.
Valid entries are 050-250. Default is 062.
NOTE: The value entered does not correspond to the frequency value. A table is required (value X = frequency Y)
This *value* MUST be less than that programmed in Section [706].

[708] Delay Between Force Dialing Attempts

This is the time the panel waits between the first dialing attempt and the force dial attempt. Valid Entries are 001-255 seconds. Default is 020.

[709] Busy Tone Duration

This the minimum amount of tone required before the panel qualifies it as busy tone.
Valid entries are 004-255 (x25 milliseconds). Default is 026.

Note: Sections [704] to [709] will NOT be documented. Any changes required to these parameters will be handled by ATE and/or Technical Support. All values programmed

[807] ESCORT Programming

[000] Function Key Programming[xiv]

This section is used to program the Function Keys of the WLS9000. Upon entering this section, a 1 digit entry from 1 to 8 is required to select the function key to be programmed:

[0] Not Used
[1] Function Key 1 Assignment
[2] Function Key 2 Assignment
[3] Function Key 3 Assignment
[4] Function Key 4 Assignment
[5] Function Key 5 Assignment
[6] Function Key 6 Assignment
[7] Function Key 7 Assignment
[8] Function Key 8 Assignment

Upon selecting [1-8], a 2 digit entry is required to assign a function to the key (F1-F8)
After 2 digits are entered, the system will return to the previous section (in Section [000]).

Function Keys

Below are the options available for the Function Keys. If enabled, the function key must be held for 2 seconds in order to perform the described function.

00 Null Key (Not Used)
The key is not used and will not perform any function when pressed.

01 Not Used

02 Not Used

03 Stay Arm
The system is Armed with all Stay/Away zones auto-bypassed regardless of whether or not delay zones are tripped during the exit delay. This key only works while the system is disarmed. The panel will log “Armed in Stay Mode” for this closing type.

04 Away Arm
The system is Armed with all Stay/Away zones active regardless of whether or not delay zones are tripped during the exit delay. This key only works while the system is disarmed. The panel will log “Armed in Away Mode” for this closing type.

05 [*][9] No-Entry Arm
After pressing this key, entry of a valid access code is required. Then the system will be Armed with No Entry on Delay zones and all Stay/Away zones auto-bypassed regardless of whether or not delay zones are tripped during the exit delay.
This key only works while the system is disarmed. Entry of a valid access is required following this key to perform the function.

06 [*][4] Chime On / Off
This key Enables (3 beeps) and Disables (tone) just like pressing [*][4].
This key will work while the system is armed or disarmed.

07 [*][6][----][4] System Test

This key will perform the System test when pressed. It is the equivalent of entering [*][6][Master Code][4]. This key only works while the system is disarmed.

08 [*][1] Bypass Mode

Pressing this key will put the keypad in the Zone Bypass mode. It is the equivalent of pressing [*][1] while disarmed. If an access code is required for bypassing (Section [016], Option 5), the user must enter the access code before entry will be permitted. This key only works while the system is disarmed.

09 [*][2] Trouble Display

Pressing this key will put the keypad into the Trouble display. It is the equivalent of pressing [*][2]. This key will work while the system is armed or disarmed.

10 [*][3] Alarm Memory

Pressing this key will put the keypad into the Alarm Memory display. It is the equivalent of pressing [*][3]. This key only works while the system is disarmed.

11 [*][5] User Programming

Pressing this key is the equivalent of entering [*][5]. An access code will be required before entry to this section is allowed to the User Programming menu. This key only works while the system is disarmed.

12 [*][6] User Functions

Pressing this key is the equivalent of entering [*][6]. An access code will be required before entry to this section is allowed to the User Functions menu. This key only works while the system is disarmed.

13-15 Not Used (Reserved)

16 [*][0] Quick Exit

Pressing this button will perform the Quick Exit function (if enabled). It is the equivalent of pressing [*][0] while armed. This key only works while the system is armed.
The Quick Exit feature must be enabled (Section [015], Option 3).

17 [*][1] Activate Stay/Away Zones

Pressing this key will remove the automatic bypass on all Stay/Away zones on the system.
It is the equivalent of pressing [*][1] while armed. This key only works while the system is armed.

18-26 ***Not Used (Reserved)***

27 Status (Query)

Pressing this key will result in the WLS9000 annunciating its current status. The user can then proceed to do other functions by pressing the corresponding keys on the WLS9000, or wait for the WLS9000's audio prompting to time out.

28 Volume Control

When this function key is pressed for two seconds, the WLS9000 will increment through the four different volume levels from lowest to highest, cycling back to the lowest after the highest volume is reached.

29 Memo Record

When pressed, this function key will initiate recording (via the local microphone) of a message. Recording begins after the three acknowledgement tones are annunciated.

30 Memo Playback

When pressed, this function key will annunciate the recorded message. If there is no message recorded, an error tone will be heard.

8.2.17 Special Installer Functions

[901] Installer Walk Test Mode

To initiate the Walk Test Mode, enter this section, then exit Installer's mode completely. When this mode is ON, all zones become 24 hour non-force arm-able zones that will sound the bell (steady or pulsed attribute) for 2 seconds and transmit their programmed alarm reporting codes when violated.
To cancel the test mode, re-enter this section. If the user attempts to arm while in Walk Test, the WLS9000 will sound an error tone and prompt that the function is not available.
Note: Alarm Memory is cleared upon entering Walk Test.

[902]-[903] NOT USED

[904] Module Placement Test

The Module Placement Test of the WLS9000 is quite different from previous Power-Based products as it incorporated the following changes and enhancements:

- Each Detector Must pass three Consecutive Tests before being enabled on the system.
- Each Detector is enabled in Section [202]-[205] *only* after passing the three tests mentioned above. There is no way to manually override this enrollment process.
- There is only "Good" and "Bad" Placements. "Fair" has been removed; it's former status internal to the software is considered a "Bad".
- The piezo will squawk once for "Good" and three times for "Bad".
- If the Placement is exited before all zones are properly enrolled, a General System Trouble is generated at the keypad. This trouble can only be cleared by re-entering the Module Placement Test and testing the un-enrolled devices.
- Zones can be disabled via Section [202]-[205], but they cannot be enabled.

When Module Placement Test is entered, the system will annunciate all of the zones which have been enrolled on the system, but are not enabled in Sections [202]-[205]. This allows the Placement Test to be entered after additional devices have been enrolled on the system without the hassle or re-testing 'placed' zones.
As each device receives three "Good" placements, it is removed from the annunciation list and it's corresponding bit in Section [202]-[205] is toggled to enable the zone on the system.

[990][Installer Code][990] Installer Lockout Enable

If enabled, the WLS9000 will give a distinctive audible indication on power up (the phone line relay will click 10 times).
This feature will have no effect on a Software Default (all programming will return to the factory defaults). However, if a Hardware default is attempted while lockout is enabled, the default will not occur, and the fraudulent attempt will be logged to the event buffer.

[991][Installer Code][991] Installer Lockout Disable

This disables the Installer Lockout feature described above.

[992][Installer Code][992] Restore Main Controller Programming

When this section is successfully entered, all programming within the Main Controller will be returned to factory default. This does *not* include programming found in the Rx Slave uP (i.e. Serial Numbers) or in the ESCORT (i.e. Zone descriptions, Automation programming). Section [998] and [995] may be used to perform these functions.

[995][Installer Code][995] Restore ESCORT to Factory Default Programming

When this section is successfully entered, all programming in the ESCORT VPM Module will be returned to the factory defaults.

[996][Installer Code][996] Restore Wireless Receiver Factory Default Programming

When this section is successfully entered, all programming in the Wireless Rx Slave will be returned to the factory defaults.

[999][Installer Code][999] Restore All WLS9000 Factory Default Programming[xv]

When this section is successfully entered, all programming within the WLS9000 will be returned to factory default. This includes programming found in the Rx Slave uP (i.e. Serial Numbers) and in the ESCORT (i.e. Zone descriptions, Automation programming). Sections [992], [995], and [996] may be used if only some areas of the WLS9000 are to be defaulted (i.e. Serial Number default would use [996]).

.4 User "Star" Functions

"QUICK ARM" COMMAND

[*][0] ... When Disarmed

Entering [*][0] is accepted as a valid arming code when the "Quick Arm" feature is enabled by the installer. Quick arm may be used as a convenience for regular users or when the system is to be armed by individuals who are not authorized to disarm the system. The software will log either "Armed in Stay Mode" or "Armed in Away Mode" for this closing type, depending on how the premises were armed.

ZONE BYPASSING

[*][1] or [*][1][Access Code] ... When Disarmed

A bypassed zone will not cause an alarm. If a zone is bypassed the panel may be armed ("Ready" light will be on) even if the zone is open. Use zone bypass when access is needed to part of the protected area. Also, damaged wiring or contacts on a zone may be temporarily bypassed until repairs can be made so that the panel can be armed.
To bypass zones, enter [*][1]. An access code may be required in order to gain access, if enabled.
Then enter the **TWO** digit zone number.
The individual bypassed zones are not shown while armed.

TROUBLE DISPLAY

[*][2] ... When Disarmed

The panel continuously monitors a number of possible trouble conditions. If one of these conditions occurs, the keypad "Trouble" indicator will light and the audible indication will sound, two short beeps every 10 seconds (except AC failure). When the [#] key is pressed the audible indication will stop but the trouble is not cleared. Trouble conditions are logged to the Event Buffer and most troubles can also be transmitted to the monitoring station.
To view troubles, press [*] then [2]. The WLS9000 will verbally prompt you with the trouble conditions on the system.
Troubles 1, 5, 6 and 7 can be expanded for more details by pressing the corresponding [1][5][6] or [7] key.
Press [#] to return to the "Ready" mode. There is no Trouble memory. The Event Buffer can be uploaded to achieve this function.
Annunciation of troubles is permitted while armed.

TROUBLE #1 SERVICE REQUIRED

1. Low Battery

   The standby Battery's voltage is measured under load every 4 minutes and during a System Test. The limits of Alarms and Restores are determined by the Swinger Shutdown (Maintenance Troubles & Restorals) counter. Set at 3 by default, there will be 3 Low Battery Troubles and 3 Low Battery Restores before latching. The latching is reset at Midnight or upon Arming.

2. Bell Circuit Trouble

   If the bell circuit is overdrawn or the bell circuit is open, a keypad trouble is generated and a Bell Circuit Trouble can be reported.

3. General System Trouble

Any peripheral module trouble will be indicated and communicated with a General Trouble but logged to the event buffer with a detailed description.

Module Placement Test Unsuccessful

4. General System Tamper

Any peripheral module tamper will be indicated and communicated with a General Tamper but logged to the event buffer with a detailed description.

5. General System Supervisory

Module Supervisory ..... If the system loses Supervisory signals from a peripheral module, this will be indicated and communicated with a General Supervisory but logged to the event buffer with a detailed description.

6-8. Not Used

Note: The WLS9000 does not prompt the individual troubles within Trouble #1. The user should call for assistance in the case of a "Service Required" trouble. Please note that the specific trouble will be logged in the Event Buffer.

TROUBLE #2 AC FAILURE

There is no audible annunciation on AC power failure. The system "Trouble" light will come ON but the audible indication will not sound until there is a low battery condition. Transmission delay can be programmed for 000 to 255 minutes. If the AC Fails, the battery will be continuously checked until the panel shuts down.

TROUBLE #3 TELEPHONE LINE TROUBLE

The telephone line voltage is measured every 10 seconds. If the voltage drops below 1 to 3 volts for the number of consecutive checks programmed in Section [370] plus 3 additional checks, a Telephone Line Trouble is generated. If TLM is enabled, it must perform at least 3 checks (settings of 000 and 001 in Section [370] will result in 4 checks, setting of 002 will result in 5 checks, setting of 003 will result in 6 checks, etc) The actual display can be delayed via Installer's Programming. This additional check denomination may fluctuate from board to board, as it is dependant on hardware component tolerances. The TLM Restore shall occur when the value in Section [370] is reached.

TROUBLE #4 FAILURE TO COMMUNICATE

If the digital communicator is unsuccessful in communicating with any of the programmed telephone numbers, a failure to communicate trouble will be generated. If a later attempt to communicate is successful, the panel can also transmit the FTC restore reporting code and all previous unsuccessful events.

TROUBLE #5 ZONE FAULT (Fire Zone Fault)

If any zone on the system is in the Trouble state, this trouble will be generated.
For hardwired zones (excluding Fire) using double end of line supervision, this is the shorted state, for RF sensors, this is a loss of Supervisory signals. If DEOL is not used, Zone Troubles can still be generated on Fire Zones (open state).
If [5] is pressed in the Trouble mode, the keypad will now display all of the zones in trouble.
Fire Zone Faults are identified in the Event Buffer. They log a "Fault Zone X" followed by a generic "Fire Trouble". This has been done so that intermittent wiring problems may be tracked down via the Event Buffer.
If any zone enters this Trouble state (fault), the keypad buzzers will sound trouble beeps to annunciate the condition.

TROUBLE #6 ZONE TAMPER

This trouble is used with DEOL Zone Supervision only.
If any zone is in the Tamper state (Hardwired or RF), this trouble will be generated. Zones excluded from this are Fire and zones not supporting the DEOL configuration (LINKS answer, keyswitch).
If [6] is pressed in the Trouble mode, the keypad will now display all of the tampered zones.
If any zone enters this Tamper state (open), the keypad buzzers will sound trouble beeps to annunciate the condition.

TROUBLE #7 DEVICE LOW BATTERY

If an RF Device reports a Low Battery signal to the panel, this trouble will be generated.
When the user enters [*][2][7] to view troubles, the following then will occur.
..... Keypad Beeps 1 time ..... Shows Zones (lights) 1-8
Press [7] ..... Keypad Beeps 2 times ..... Shows Handheld Keypads (lights) 1-4
Press [7] ..... Keypad Beeps 3 times ..... Shows Wireless Keys (lights) 1-16
Press [7] ..... Return to Zones 1-8
Note: an LCD keypad is required to view Wireless Key Low Batteries 9-16.

TROUBLE #8 LOSS OF SYSTEM TIME

When the panel is powered up, the internal time of day clock needs to be set to the correct time. This trouble is cleared when an attempt is made to reset the internal time of day clock.

ALARM MEMORY DISPLAY

[*][3] ... When Disarmed

Press [*] then [3] to enter the alarm memory mode. The WLS9000 will prompt the alarms by Zone Number (or label if programmed) that are in memory.
Press [#] to return to the "Ready" mode. If [#] is not pressed, the WLS9000 will time out in 30 seconds.
There is no memory of previous armed states. The Event Buffer can be uploaded to achieve this function.

DOOR CHIME ON / OFF COMMAND

[*][4] ... When Armed/Disarmed

The Door Chime feature is used to sound a tone from the keypad whenever a zone programmed as a Chime type is activated. When the Door Chime feature is turned ON, the WLS9000 will beep several times whenever a Chime zone is activated. This applies to both violating and restoring the zone.

If the Verbal Chime Feature is enabled, whenever a zone with the Chime attribute enabled is violated, a series of beeps will sound and the WLS9000 will prompt:

"Zone X"

When the zone is restored, the WLS9000 will only sound a series of beeps similar to how Door Chime functions in our current products.

If a label was programmed for the above Zone, the WLS9000 would annunciate (after the beeps):

"Back Porch Window"

…and so on.

If this option is disabled, only the series of beeps will be heard upon the violation and restore of zones that are programmed to chime.

To turn the feature on or off, enter [*][4]. If the feature is being turned ON, the WLS9000 will prompt "Door Chime is ON". If the feature is being turned OFF, the WLS9000 will prompt "Door Chime is OFF".

USER'S PROGRAMMING COMMAND

[*][5][Master Code] ... When Disarmed

The [*][5] user's programming command is used to access User code programming.

User Code Programming

The user be prompted to enter a Master or Supervisory code. This is required to gain access to the section.

User Codes (Access Codes 1-32)

Master Code (Access Code 40)
The Master code can only be changed by the Master or the Installer if the code is changeable (Installer Option).

Supervisor Codes (Access Codes 41 & 42)
Program Codes (Blank or Lesser only). These codes are always valid when entering the [*][5] User Code Programming section. However, these codes can only program codes which have equal or lesser attributes. Once programmed, the Supervisor Codes receive the Master's attributes. These attributes are changeable.

Duress Codes (Access Codes 33 & 34)
Duress codes 33 and 34 are standard user codes that will transmit the Duress Reporting Code whenever the code is entered to perform any function on the system.
NOTE: Duress codes are not valid when entering [*][5], [*][6] or [*][8] sections.

User Code Attributes
Notes: 1) The default attributes of a new code will be the attributes of the code used to enter [*][5] whether it is a new code or an existing code being programmed.
2) System Master (Code 40) has attributes 1-4 ON by default and they are not changeable

Inherent Attributes (All codes except Installer and Maintenance)
Arm / Disarm - Any Access Code with (Option 1) enabled will be valid for Arming and Disarming the system.

Bell Squawk on Arming/Disarming
Attribute 7 will be used to determine whether an access code should generate an arming/disarming Bell Squawk upon entry of the code. This is so that Wireless Keys with Access Codes associated with them may generate Arming/Disarming Bell squawks, but a normally entered access code at a keypad will not. If desired, this option may be used with codes that are manually entered. This option is defaulted off for all access codes.
Notes: The "Bell Squawk on Arming/Disarming" option (Section [014], Option 1) overrides this feature.
This feature cannot prevent the Arm/Disarming Squawks to be generated if an access code assigned to a WLSKey is manually entered at a keypad.
The Master Code cannot use the Bell Squawk attribute.

Programmable Attributes

1	User Enabled (Arming, Disarming, Alarm Reset, Auto Arm Cancel)
2	Not Used
3	Zone Bypassing enabled
4-6	Reserved (Not Used)
7	Bell Squawk upon Arming/Disarming
8	For Future Use

Notes on Access Codes and Programming
1) There will still be 39 codes if option selected for 6 digit access codes (see also Installers and Maintenance).
[*][5][MASTER CODE] [01 to 32, 33, 34, 40, 41, 42] to program access codes
[*][5][MASTER CODE][9] Enters the Attribute Mode [01 to 32, 33, 34, 41, 42] to edit access codes
2) The Master Code's attributes cannot be changed.
Note: the Master Code cannot use the Bell Squawk attribute.

Erasing an Access Code
To erase a code, select the code and enter [*] as the first digit. If [*] is entered, the system will delete the code immediately and the user will be prompted to select another code.

USER'S FUNCTIONS COMMAND

[*][6][Master Code] ... When Disarmed

The [*][6] command is used to gain access to the following list of Master functions of the system.

[1] Time and Date

Enter 4 digits for 24 Hour System Time
Enter 2 digits each for Month, Day and Year (HH-MM-MM-DD-YY)
Valid entries for the Hour are 00-23. Valid entries for the Minute are 00-59.

[2] Auto-Arm Control

Pressing [2] while in the User Function menu will enable (3 beeps) or disable (one long beep) the Auto-arm feature. With this feature enabled, the panel will automatically arm in the Away mode (Stay Away zones active) at the same time each day. The Auto Arm time is programmed with the [*][6][Master Code][3] command.

NOTES: *All arming inhibit features such as Latching Tampers, AC & DC inhibit, etc. shall also inhibit the Auto Arm and send the Auto Arm Cancellation code.*
Keypads are required if Auto-Arm is to be used.

[3] Auto-Arm Time

The system can be programmed to arm at the same time . Upon entry of this section, enter 4 digits for the 24 Hour Auto-Arm time.

At the selected Auto-Arm time, the WLS9000 will sound for 1 minute to warn that an Auto-Arm is in progress. The siren can also be programmed to squawk once every 10 seconds during this warning period. When the warning period is complete, the system will arm with no exit delay and Stay Away zones active (if programmed).

Auto-Arming can be canceled only by entering a valid access code during the 1-minute warning period. When the code has been entered, the warning will be silenced and Auto-Arming will be canceled. Auto-Arming will be attempted at the same time the next day. During the 1 minute warning period, keyswitch arming or Quick arming will cancel the Auto-Arm process and will initiate the exit delay before arming the system. Whenever the Auto-Arming process is canceled, the Auto Arm Cancellation Reporting Code will be transmitted (if programmed).

If arming is inhibited by one of the following, the Auto Arm Cancellation transmission will be communicated.

- AC / DC Inhibit Arm
- Latching System Tampers
- Zone Expander Supervisory Fault

[4] System Test

The system's Bell Output (2sec), Keypad Lights and Communicator are tested. This test will also measure the panel's standby battery.

[5] Enable DLS

If enabled, this will open a window where rings will be detected by the panel. The length and frequency of this window is dependant on the state of Option 7 in Section [701].

[6] User Call-up

If enabled by the Installer, when this command is executed, the panel will make 1 attempt to call the downloading computer. The downloading computer must be waiting for the panel to call before downloading can be performed.

[7] Volume Control

The volume in which the ESCORT prompts can be controlled by entering this section. Options are 'Low', 'Medium', 'High' and "Highest", with Low as the default. Note: Better control of the WLS9000's volume can be achieved via the Volume Function Key.

[8] Speech Rate

The rate or speech can be changed upon entry of this section. Options are 'fast' and 'slow', with fast as the default.

[9] Not Used

[0] Not Used

INSTALLER'S PROGRAMMING COMMAND

[*][8][Installer Code] ... When Disarmed

The WLS9000 is completely programmable from the Main Unit Interface using this command.
As described in Section 5.2.2, a Simple Installer's Programming Front End Interface (the Wizard) has been added to the WLS9000. Please see Section 5.2.2 for more information.

ARMING WITHOUT ENTRY DELAY

[*][9][Access Code] ... When Disarmed

Entering [*][9] or pressing a function key programmed for No Entry Arm before entering an access code, arms the panel without any entry delay on the perimeter delay zones and bypasses zones that are defined as "Stay/Away". This command is used to arm the system while at home. When the system is armed in this mode, the "Armed" light will be ON flashing and WLS9000 will prompt that there are zones bypassed. Once the panel is armed in this mode, using [*][1] will remove the bypass from the "Stay/Away" zones if they were NOT manually bypassed. The [*][1] command used here only removes the bypass from zones that have been automatically bypassed with the [*][9] command.
Note: Delay Stay/Away and Interior Delay Zones will still have Entry Delay on a [*][9] armed panel.

QUICK EXIT

[*][0] ... When Armed

Entering [*][0] when the system is armed will allow the user 2 minutes to exit the premises through any delay zone without altering the status of the system if the quick exit feature is enabled. After [*][0] is entered, one and only one delay zone may be tripped. If the delay zone is left unrestored at the end of the 2 minutes, it will begin its entry delay sequence. Any additional activity on any other active zone will cause that zone to begin its alarm or delay sequence. Quick Exit is not designed to extend the standard Exit Delay.

ACTIVATE AUTO BYPASSED STAY/AWAY ZONES

[*][1] ... When Armed

When the system is armed in the Stay mode by arming and not exiting through a Delay zone during the exit delay or by pressing a function key programmed for Stay Arm or Arming Without Entry Delay (*9), the zones programmed as "Stay/Away" type zones are automatically bypassed. This [*][1] command is used to remove the automatic bypass from these zones to fully arm the system. Once this command is executed, all "Stay/Away" type zones will become active after the programmed Exit Delay time.

9.0 Downloading Support

9.1 Downloading Software Version Support[xvi]

Downloading will be supported in DLS-3 v1.20 via the addition of a Driver Pack. This Pack's name and version will be determined when the WLS9000 project is farther along in the development cycle.
Note: DLS-1 support will not be implemented unless absolutely necessary.

9.2 New Product Support and Structure

The DLS files must be rearranged and to accommodate all new aspects of the WLS9000. These files must also remain relatively close to that of our Power line of products to ensure that this new panel keeps a "familiar feel" for those already acquainted with our products.

9.3 PC-LINK Support

All required PC-LINK support for the WLS9000 must be met.

9.4 New DLS Identifier

The WLS9000 will use the DLS Identifier of %33. This ensures that Downloading can differentiate the WLS9000 from any other DSC product.

10.0 Programming Worksheets

Note: All digits must be entered in a Programming Section for a change to be valid.
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ZONE DEFINITIONS		
00 Null Zone (Not Used)	10 24 Hour Supervisory Buzzer	20 24 Hour Freeze
01 Delay 1	11 24 Hour Burglary	21 24 Hour Latching Tamper
02 Delay 2	12 24 Hour Holdup	22 Momentary Keyswitch Arm
03 Instant	13 24 Hour Gas	23 Maintained Keyswitch Arm
04 Interior	14 24 Hour Heat	24 Not Used (Reserved)
05 Interior, Stay-Away	15 24 Hour Medical	25 Interior Delay
06 Delay, Stay-Away	16 24 Hour Panic	87 Delayed 24 Hour Fire (Wireless)
07 Not Used	17 24 Hour Emergency	88 Standard 24 Hour Fire (Wireless)
08 Not Used	18 24 Hour Sprinkler	
09 24 Hour Supervisory	19 24 Hour Water	

[001] ZONE 1-8 DEFINITIONS

Default			Default		
01	I___II___I	Zone 1	*04*	I___II___I	Zone 5
03	I___II___I	Zone 2	*04*	I___II___I	Zone 6
03	I___II___I	Zone 3	*04*	I___II___I	Zone 7
03	I___II___I	Zone 4	*04*	I___II___I	Zone 8

[002] ZONE 9-16 DEFINITIONS

Default			Default		
00	I___II___I	Zone 9	*00*	I___II___I	Zone 13
00	I___II___I	Zone 10	*00*	I___II___I	Zone 14
00	I___II___I	Zone 11	*00*	I___II___I	Zone 15
00	I___II___I	Zone 12	*00*	I___II___I	Zone 16

[003] ZONE 17-24 DEFINITIONS

Default			Default		
00	I___II___I	Zone 17	*00*	I___II___I	Zone 21
00	I___II___I	Zone 18	*00*	I___II___I	Zone 22
00	I___II___I	Zone 19	*00*	I___II___I	Zone 23
00	I___II___I	Zone 20	*00*	I___II___I	Zone 24

[004] ZONE 25-32 DEFINITIONS

Default			Default		
00	I___II___I	Zone 25	*00*	I___II___I	Zone 29
00	I___II___I	Zone 26	*00*	I___II___I	Zone 30
00	I___II___I	Zone 27	*00*	I___II___I	Zone 31
00	I___II___I	Zone 28	*00*	I___II___I	Zone 32

Note: Zone Definitions can also be programmed via the Wizard.

[005] SYSTEM TIMES

Default		*[001-255]*	
030	I___II___II___I	Entry Delay 1	Enter 3 digits from 001-255
045	I___II___II___I	Entry Delay 2	Enter 3 digits from 001-255
120	I___II___II___I	Exit Delay	Enter 3 digits from 001-255
004	I___II___II___I	Bell Cut-off	Enter 3 digits from 001-255

[006] INSTALLER'S CODE

Default
5555 I___II___II___II___I

[007] MASTER CODE

Default
1234 I___II___II___II___I

[008] MAINTENANCE CODE

Default
AAAA I___II___II___II___I

[012] KEYPAD LOCKOUT OPTIONS

Default			
000	I___II___II___I	Number of Invalid Codes Before Lockout	(Valid entries are 000-255)
000	I___II___II___I	Lockout Duration (in minutes)	(Valid entries are 000-255)

[013] FIRST SYSTEM OPTION CODE

Default		*Option ON*	*Option Off*
OFF	I___I *Option 1*	Hardwired Zones are NC	Hardwired Zones are EOL
OFF	I___I *Option 2*	***Not Used***	
ON	I___I *Option 3*	***Not Used***	
OFF	I___I *Option 4*	Tampers/Faults Do Not Sound as Open	Tampers/Faults Sound as Open
OFF	I___I *Option 5*	*Not Used*	
ON	I___I *Option 6*	Audible Exit Fault Enabled	Audible Exit Fault Disabled
ON	I___I *Option 7*	Event Buffer Follows Swinger Shutdown	Event Buffer Logs Events Past shutdown
ON	I___I *Option 8*	Temporal Three Fire Signal Enabled	Standard Pulsed Fire Signal

[014] SECOND SYSTEM OPTION CODE

Default		*Option ON*	*Option Off*
OFF	I___I *Option 1*	Arm/Disarm Bell Squawk Enabled	Arm/Disarm Bell Squawk Disabled
OFF	I___I *Option 2*	Bell Squawk During Auto Arm	No Bell Squawk During Auto Arm
OFF	I___I *Option 3*	Bell Squawk On Exit Delay	No Bell Squawk On Exit Delay
OFF	I___I *Option 4*	Bell Squawk On Entry Delay	No Bell Squawk On Entry Delay
OFF	I___I *Option 5*	Bell Squawk on Trouble	No Bell Squawk on Trouble
ON	I___I *Option 6*	Audible Exit With Urgency	Silent Exit Delay
OFF	I___I *Option 7*	Exit Delay Termination Enabled	Exit Delay Termination Disabled
OFF	I___I *Option 8*	Fire Bell is Continuous	Fire Bell follows Bell Cut-off

[015] THIRD SYSTEM OPTION CODE

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	[F] Key Enabled	[F] Key Disabled
OFF	I___I *Option 2*	[P] Key Audible (Bell / Beeps)	[P] Key Silent
OFF	I___I *Option 3*	Quick Exit Enabled	Quick Exit Disabled
ON	I___I *Option 4*	Quick Arming Enabled (*0 and Function Keys)	Quick Arming Disabled (Keys Req. Code)
OFF	I___I *Option 5*	Code Required For Bypassing	No Code Required
OFF	I___I *Option 6*	Master Code Not Changeable	Master Code Changeable
ON	I___I *Option 7*	TLM Enabled	TLM Disabled
OFF	I___I *Option 8*	TLM Audible When Armed	TLM Trouble Only When Armed

[016] FOURTH SYSTEM OPTION CODE

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	***Not Used***	
OFF	I___I *Option 2*	***Not Used***	
OFF	I___I *Option 3*	Blank Unit When Not Used	Unit Always Active
OFF	I___I *Option 4*	Code Required to Remove Blanking	No Code Required
ON	I___I *Option 5*	Backlighting is Enabled	Backlighting is Disabled
OFF	I___I *Option 6*	***Not Used***	
OFF	I___I *Option 7*	Bypass Status Displayed While Armed	Bypass Status Not Displayed While Armed
OFF	I___I *Option 8*	***Not Used***	

[017] FIFTH SYSTEM OPTION CODE

Default		*Option ON*	*Option OFF*
OFF	*Option 1*	WLSKey Does Not Use Access Codes	WLSKey Uses Access Codes
ON	*Option 2*	**Verbal Chime is Enabled**	**Verbal Chime is Disabled (Beeps only)**
ON	*Option 3*	**Verbal Alarm is Enabled**	**Verbal Alarm is Disabled (Siren Only)**
ON	*Option 4*	**Local Annunciation Enabled**	**Local Annunciation Disabled**[xviii]
OFF	*Option 5*	**Remote Annunciation Enabled**	**Remote Annunciation Disabled**
OFF	*Option 6*	*For Future Use*	
OFF	*Option 7*	*For Future Use*	
OFF	*Option 8*	Squawk on Away Arming/Disarming Only	Bell Squawk on all Arming/Disarming

ADVANCED SYSTEM PROGRAMMING

ZONE ATTRIBUTE DEFAULTS

Zone Type	On / Off	Opt. 1 Audible / Silent	Opt. 2 Steady / Pulsed	Opt. 3 Chime / No	Opt. 4 Bypass / No	Opt. 5 Force / No	Opt. 6 Swing. / No	Opt 7 Tx Del. / No	Opt. 8 Wireless / No
00 Null Zone		Off	Off	Off	Off	Off	Off	Off	On
01 Delay 1		On	On	On	On	Off	On	Off	On
02 Delay 2		On	On	On	On	Off	On	Off	On
03 Instant		On	On	On	On	Off	On	Off	On
04 Interior		On	On	Off	On	Off	On	Off	On
05 Interior, Stay-Away		On	On	Off	On	On	On	Off	On
06 Delay, Stay-Away		On	On	Off	On	On	On	Off	On
07-08 Not Used[xix]		***Off***	***Off***	***Off***	***Off***	***Off***	***Off***	***Off***	***Off***
09 24 Hour Supervisory		Off	On	Off	Off	On	Off	Off	On
10 24 Hr Superv. Buzzer		Off	On	Off	On	Off	Off	Off	On
11 24 Hour Burglary		On	On	Off	On	Off	Off	Off	On
12 24 Hour Holdup		Off	On	Off	Off	Off	Off	Off	On
13 24 Hour Gas		On	Off	Off	Off	Off	Off	Off	On
14 24 Hour Heat		On	Off	Off	Off	Off	Off	Off	On
15 24 Hour Medical		On	On	Off	Off	Off	Off	Off	On
16 24 Hour Panic		On	On	Off	Off	Off	Off	Off	On
17 24 Hour Emergency		On	On	Off	Off	Off	Off	Off	On
18 24 Hour Sprinkler		On	On	Off	Off	Off	Off	Off	On
19 24 Hour Water		On	On	Off	Off	Off	Off	Off	On
20 24 Hour Freeze		On	On	Off	Off	Off	Off	Off	On
21 24 Hour Latching Tamper		On	On	Off	Off	Off	Off	Off	On
22 Momentary Keyswitch		Off	Off	Off	Off	On	Off	Off	On
23 Maintained Keyswitch		Off	Off	Off	Off	On	Off	Off	On
24 Not Used		***Off***	***Off***	***Off***	***Off***	***Off***	***Off***	***Off***	***On***
25 Interior Delay		On	On	Off	On	Off	On	Off	On
87 Delayed 24Hr Fire (Wireless)		On	Off	Off	Off	Off	Off	Off	On
88 Standard 24Hr Fire (Wireless)		On	Off	Off	Off	Off	Off	Off	On

ZONE 1-32 ATTRIBUTES

		On Off	Opt. 1 Audible Silent	Opt. 2 Steady Pulsed	Opt. 3 Chime No	Opt. 4 Bypass No	Opt. 5 Force No	Opt. 6 Swing. No	Opt 7 Tx Del. No	Opt. 8 Wireless No
[101]	ZONE 1									
[102]	ZONE 2									
[103]	ZONE 3									
[104]	ZONE 4									
[105]	ZONE 5									
[106]	ZONE 6									
[107]	ZONE 7									
[108]	ZONE 8									
[109]	ZONE 9									
[110]	ZONE 10									
[111]	ZONE 11									
[112]	ZONE 12									
[113]	ZONE 13									
[114]	ZONE 14									
[115]	ZONE 15									
[116]	ZONE 16									
[117]	ZONE 17									
[118]	ZONE 18									
[119]	ZONE 19									
[120]	ZONE 20									
[121]	ZONE 21									
[122]	ZONE 22									
[123]	ZONE 23									
[124]	ZONE 24									
[125]	ZONE 25									
[126]	ZONE 26									
[127]	ZONE 27									
[128]	ZONE 28									
[129]	ZONE 29									
[130]	ZONE 30									
[131]	ZONE 31									
[132]	ZONE 32									

[160] MAXIMUM DIALING ATTEMPTS TO EACH PHONE NUMBER

Default
008 I___II___II___I Valid entries are 001-015 attempts

[161] POST DIAL WAIT FOR HANDSHAKE (ALL FORMATS)

Default
040 I___II___II___I Valid entries are 001-255 seconds

[202] SYSTEM ZONE ASSIGNMENTS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Zone 1 is Enabled	Zone 1 is Disabled
ON	I___I *Option 2*	Zone 2 is Enabled	Zone 2 is Disabled
ON	I___I *Option 3*	Zone 3 is Enabled	Zone 3 is Disabled
ON	I___I *Option 4*	Zone 4 is Enabled	Zone 4 is Disabled
ON	I___I *Option 5*	Zone 5 is Enabled	Zone 5 is Disabled
ON	I___I *Option 6*	Zone 6 is Enabled	Zone 6 is Disabled
ON	I___I *Option 7*	Zone 7 is Enabled	Zone 7 is Disabled
ON	I___I *Option 8*	Zone 8 is Enabled	Zone 8 is Disabled

[203] SYSTEM ZONE ASSIGNMENTS 09-16

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	Zone 9 is Enabled	Zone 9 is Disabled
OFF	I___I *Option 2*	Zone 10 is Enabled	Zone 10 is Disabled
OFF	I___I *Option 3*	Zone 11 is Enabled	Zone 11 is Disabled
OFF	I___I *Option 4*	Zone 12 is Enabled	Zone 12 is Disabled
OFF	I___I *Option 5*	Zone 13 is Enabled	Zone 13 is Disabled
OFF	I___I *Option 6*	Zone 14 is Enabled	Zone 14 is Disabled
OFF	I___I *Option 7*	Zone 15 is Enabled	Zone 15 is Disabled
OFF	I___I *Option 8*	Zone 16 is Enabled	Zone 16 is Disabled

[204] SYSTEM ZONE ASSIGNMENTS 17-24

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	Zone 17 is Enabled	Zone 17 is Disabled
OFF	I___I *Option 2*	Zone 18 is Enabled	Zone 18 is Disabled
OFF	I___I *Option 3*	Zone 19 is Enabled	Zone 19 is Disabled
OFF	I___I *Option 4*	Zone 20 is Enabled	Zone 20 is Disabled
OFF	I___I *Option 5*	Zone 21 is Enabled	Zone 21 is Disabled
OFF	I___I *Option 6*	Zone 22 is Enabled	Zone 22 is Disabled
OFF	I___I *Option 7*	Zone 23 is Enabled	Zone 23 is Disabled
OFF	I___I *Option 8*	Zone 24 is Enabled	Zone 24 is Disabled

[205] SYSTEM ZONE ASSIGNMENTS 25-32

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	Zone 25 is Enabled	Zone 25 is Disabled
OFF	I___I *Option 2*	Zone 26 is Enabled	Zone 26 is Disabled
OFF	I___I *Option 3*	Zone 27 is Enabled	Zone 27 is Disabled
OFF	I___I *Option 4*	Zone 28 is Enabled	Zone 28 is Disabled
OFF	I___I *Option 5*	Zone 29 is Enabled	Zone 29 is Disabled
OFF	I___I *Option 6*	Zone 30 is Enabled	Zone 30 is Disabled
OFF	I___I *Option 7*	Zone 31 is Enabled	Zone 31 is Disabled
OFF	I___I *Option 8*	Zone 32 is Enabled	Zone 32 is Disabled

COMMUNICATIONS PROGRAMMING

* For Sections [301] to [353], the contents of every section by default is [F].

[301] FIRST TELEPHONE NUMBER (32 Digits)

|__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__|

[302] SECOND TELEPHONE NUMBER (32 Digits)

|__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__|

[303] THIRD TELEPHONE NUMBER (32 Digits)

|__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__||__|

[310] TELEPHONE NUMBER 1/3 ACCOUNT CODE (4 Digits)

|__||__||__||__|

[311] TELEPHONE NUMBER 2 ACCOUNT CODE (4 Digits)

|__||__||__||__|

[320] ALARM REPORTING CODES, ZONES 1-8

|___||___|	Zone 1 Alarm	|___||___|	Zone 5 Alarm
|___||___|	Zone 2 Alarm	|___||___|	Zone 6 Alarm
|___||___|	Zone 3 Alarm	|___||___|	Zone 7 Alarm
|___||___|	Zone 4 Alarm	|___||___|	Zone 8 Alarm

[321] ALARM REPORTING CODES, ZONES 9-16

|___||___|	Zone 9 Alarm	|___||___|	Zone 13 Alarm
|___||___|	Zone 10 Alarm	|___||___|	Zone 14 Alarm
|___||___|	Zone 11 Alarm	|___||___|	Zone 15 Alarm
|___||___|	Zone 12 Alarm	|___||___|	Zone 16 Alarm

[322] ALARM REPORTING CODES, ZONES 17-24

|___||___|	Zone 17 Alarm	|___||___|	Zone 21 Alarm
|___||___|	Zone 18 Alarm	|___||___|	Zone 22 Alarm
|___||___|	Zone 19 Alarm	|___||___|	Zone 23 Alarm
|___||___|	Zone 20 Alarm	|___||___|	Zone 24 Alarm

[323] ALARM REPORTING CODES, ZONES 25-32

|___||___|	Zone 25 Alarm	|___||___|	Zone 29 Alarm
|___||___|	Zone 26 Alarm	|___||___|	Zone 30 Alarm
|___||___|	Zone 27 Alarm	|___||___|	Zone 31 Alarm
|___||___|	Zone 28 Alarm	|___||___|	Zone 32 Alarm

[324] ALARM RESTORAL REPORTING CODES, ZONES 1-8

|___||___|	Zone 1 Alarm Restore	|___||___|	Zone 5 Alarm Restore
|___||___|	Zone 2 Alarm Restore	|___||___|	Zone 6 Alarm Restore
|___||___|	Zone 3 Alarm Restore	|___||___|	Zone 7 Alarm Restore
|___||___|	Zone 4 Alarm Restore	|___||___|	Zone 8 Alarm Restore

[325] ALARM RESTORAL REPORTING CODES, ZONES 9-16

|___||___|	Zone 9 Alarm Restore	|___||___|	Zone 13 Alarm Restore
|___||___|	Zone 10 Alarm Restore	|___||___|	Zone 14 Alarm Restore
|___||___|	Zone 11 Alarm Restore	|___||___|	Zone 15 Alarm Restore
|___||___|	Zone 12 Alarm Restore	|___||___|	Zone 16 Alarm Restore

[326] ALARM RESTORE REPORTING CODES, ZONES 17-24

I___II___I	Zone 17 Alarm Restore	I___II___I	Zone 21 Alarm Restore
I___II___I	Zone 18 Alarm Restore	I___II___I	Zone 22 Alarm Restore
I___II___I	Zone 19 Alarm Restore	I___II___I	Zone 23 Alarm Restore
I___II___I	Zone 20 Alarm Restore	I___II___I	Zone 24 Alarm Restore

[327] ALARM REPORTING CODES, ZONES 25-32

I___II___I	Zone 25 Alarm Restore	I___II___I	Zone 29 Alarm Restore
I___II___I	Zone 26 Alarm Restore	I___II___I	Zone 30 Alarm Restore
I___II___I	Zone 27 Alarm Restore	I___II___I	Zone 31 Alarm Restore
I___II___I	Zone 28 Alarm Restore	I___II___I	Zone 32 Alarm Restore

[328] MISCELLANEOUS ALARM REPORTING CODES

I___II___I	Duress Alarm	I___II___I	*Not Used*
I___II___I	Opening After Alarm	I___II___I	*Not Used*
I___II___I	Recent Closing	I___II___I	Cross Zone Police Code Alarm

[329] PRIORITY ALARM AND RESTORAL REPORTING CODES

I___II___I	Keypad [F]ire Alarm	I___II___I	Keypad [F]ire Restoral
I___II___I	Keypad [A]uxiliary Alarm	I___II___I	Keypad [A]uxiliary Restoral
I___II___I	Keypad [P]anic Alarm	I___II___I	Keypad [P]anic Restoral
I___II___I	*Not Used*	I___II___I	*Not Used*

[330] TAMPER REPORTING CODES, ZONES 1-8

I___II___I	Zone 1 Tamper	I___II___I	Zone 5 Tamper
I___II___I	Zone 2 Tamper	I___II___I	Zone 6 Tamper
I___II___I	Zone 3 Tamper	I___II___I	Zone 7 Tamper
I___II___I	Zone 4 Tamper	I___II___I	Zone 8 Tamper

[331] TAMPER REPORTING CODES, ZONES 9-16

I___II___I	Zone 9 Tamper	I___II___I	Zone 13 Tamper
I___II___I	Zone 10 Tamper	I___II___I	Zone 14 Tamper
I___II___I	Zone 11 Tamper	I___II___I	Zone 15 Tamper
I___II___I	Zone 12 Tamper	I___II___I	Zone 16 Tamper

[332] TAMPER REPORTING CODES, ZONES 17-24

I___II___I	Zone 17 Tamper	I___II___I	Zone 21 Tamper
I___II___I	Zone 18 Tamper	I___II___I	Zone 22 Tamper
I___II___I	Zone 19 Tamper	I___II___I	Zone 23 Tamper
I___II___I	Zone 20 Tamper	I___II___I	Zone 24 Tamper

[333] TAMPER REPORTING CODES, ZONES 17-24

I___II___I	Zone 25 Tamper	I___II___I	Zone 29 Tamper
I___II___I	Zone 26 Tamper	I___II___I	Zone 30 Tamper
I___II___I	Zone 27 Tamper	I___II___I	Zone 31 Tamper
I___II___I	Zone 28 Tamper	I___II___I	Zone 32 Tamper

[334] TAMPER RESTORAL REPORTING CODES, ZONES 1-8

I___II___I	Zone 1 Tamper Restoral	I___II___I	Zone 5 Tamper Restoral
I___II___I	Zone 2 Tamper Restoral	I___II___I	Zone 6 Tamper Restoral
I___II___I	Zone 3 Tamper Restoral	I___II___I	Zone 7 Tamper Restoral
I___II___I	Zone 4 Tamper Restoral	I___II___I	Zone 8 Tamper Restoral

[335] TAMPER RESTORAL REPORTING CODES, ZONES 9-16

I___II___I	Zone 9 Tamper Restoral	I___II___I	Zone 13 Tamper Restoral
I___II___I	Zone 10 Tamper Restoral	I___II___I	Zone 14 Tamper Restoral
I___II___I	Zone 11 Tamper Restoral	I___II___I	Zone 15 Tamper Restoral
I___II___I	Zone 12 Tamper Restoral	I___II___I	Zone 16 Tamper Restoral

[336] TAMPER RESTORAL REPORTING CODES, ZONES 17-24

I___II___I	Zone 17 Tamper Restoral	I___II___I	Zone 21 Tamper Restoral
I___II___I	Zone 18 Tamper Restoral	I___II___I	Zone 22 Tamper Restoral
I___II___I	Zone 19 Tamper Restoral	I___II___I	Zone 23 Tamper Restoral
I___II___I	Zone 20 Tamper Restoral	I___II___I	Zone 24 Tamper Restoral

[337] TAMPER RESTORAL REPORTING CODES, ZONES 17-24

I___II___I	Zone 25 Tamper Restoral	I___II___I	Zone 29 Tamper Restoral
I___II___I	Zone 26 Tamper Restoral	I___II___I	Zone 30 Tamper Restoral
I___II___I	Zone 27 Tamper Restoral	I___II___I	Zone 31 Tamper Restoral
I___II___I	Zone 28 Tamper Restoral	I___II___I	Zone 32 Tamper Restoral

[338] MISCELLANEOUS TAMPER REPORTING CODES

I___II___I Keypad Lockout[xx]

[339] CLOSING (ARMING) REPORTING CODES, ACCESS CODES 1-8

I___II___I	Closing by Access Code 1	I___II___I	Closing by Access Code 5
I___II___I	Closing by Access Code 2	I___II___I	Closing by Access Code 6
I___II___I	Closing by Access Code 3	I___II___I	Closing by Access Code 7
I___II___I	Closing by Access Code 4	I___II___I	Closing by Access Code 8

[340] CLOSING (ARMING) REPORTING CODES, ACCESS CODES 9-16

I___II___I	Closing by Access Code 9	I___II___I	Closing by Access Code 13
I___II___I	Closing by Access Code 10	I___II___I	Closing by Access Code 14
I___II___I	Closing by Access Code 11	I___II___I	Closing by Access Code 15
I___II___I	Closing by Access Code 12	I___II___I	Closing by Access Code 16

[341] CLOSING (ARMING) REPORTING CODES, ACCESS CODES 17-24

I___II___I	Closing by Access Code 17	I___II___I	Closing by Access Code 21
I___II___I	Closing by Access Code 18	I___II___I	Closing by Access Code 22
I___II___I	Closing by Access Code 19	I___II___I	Closing by Access Code 23
I___II___I	Closing by Access Code 20	I___II___I	Closing by Access Code 24

[342] CLOSING (ARMING) REPORTING CODES, ACCESS CODES 25-32

I___II___I	Closing by Access Code 25	I___II___I	Closing by Access Code 29
I___II___I	Closing by Access Code 26	I___II___I	Closing by Access Code 30
I___II___I	Closing by Access Code 27	I___II___I	Closing by Access Code 31
I___II___I	Closing by Access Code 28	I___II___I	Closing by Access Code 32

[343] MISCELLANEOUS CLOSING (ARMING) REPORTING CODES

I___II___I	Closing by Duress Code 33	I___II___I	Closing by System Code 42
I___II___I	Closing by Duress Code 34	I___II___I	Partial Closing
I___II___I	Closing by System Code 40	I___II___I	Special Closing
I___II___I	Closing by System Code 41		

[344] OPENING (DISARMING) REPORTING CODES, ACCESS CODES 1-8

I___II___I	Opening by Access Code 1	I___II___I	Opening by Access Code 5
I___II___I	Opening by Access Code 2	I___II___I	Opening by Access Code 6
I___II___I	Opening by Access Code 3	I___II___I	Opening by Access Code 7
I___II___I	Opening by Access Code 4	I___II___I	Opening by Access Code 8

[345] OPENING (DISARMING) REPORTING CODES, ACCESS CODES 9-16

I___II___I	Opening by Access Code 9	I___II___I	Opening by Access Code 13
I___II___I	Opening by Access Code 10	I___II___I	Opening by Access Code 14
I___II___I	Opening by Access Code 11	I___II___I	Opening by Access Code 15
I___II___I	Opening by Access Code 12	I___II___I	Opening by Access Code 16

[346] OPENING (DISARMING) REPORTING CODES, ACCESS CODES 17-24

I___II___I	Opening by Access Code 17	I___II___I	Opening by Access Code 21
I___II___I	Opening by Access Code 18	I___II___I	Opening by Access Code 22
I___II___I	Opening by Access Code 19	I___II___I	Opening by Access Code 23
I___II___I	Opening by Access Code 20	I___II___I	Opening by Access Code 24

[347] OPENING (DISARMING) REPORTING CODES, ACCESS CODES 25-32

I___II___I	Opening by Access Code 25	I___II___I	Opening by Access Code 29
I___II___I	Opening by Access Code 26	I___II___I	Opening by Access Code 30
I___II___I	Opening by Access Code 27	I___II___I	Opening by Access Code 31
I___II___I	Opening by Access Code 28	I___II___I	Opening by Access Code 32

[348] MISCELLANEOUS OPENING (DISARMING) REPORTING CODES

I___II___I	Opening by Duress Code 33	I___II___I	Opening by System Code 42
I___II___I	Opening by Duress Code 34	I___II___I	Auto-arm Cancellation
I___II___I	Opening by System Code 40	I___II___I	Special Opening
I___II___I	Opening by System Code 41		

[349] MAINTENANCE ALARM REPORTING CODES

I___II___I	Battery Trouble Alarm	I___II___I	*Not Used*
I___II___I	AC Failure Trouble Alarm	I___II___I	*Not Used*
I___II___I	Remote Sounder Trouble Alarm	I___II___I	General System Trouble
I___II___I	Fire Trouble Alarm	I___II___I	*Not Used*

[350] MAINTENANCE RESTORAL REPORTING CODES

I___II___I	Battery Trouble Restoral	I___II___I	*Not Used*
I___II___I	AC Failure Trouble Restoral	I___II___I	TLM Restoral
I___II___I	Remote Sounder Restoral	I___II___I	General System Trouble Restore
I___II___I	Fire Trouble Restoral	I___II___I	*Not Used*

[351] MISCELLANEOUS MAINTENANCE REPORTING CODES

I___II___I	Phone #1 FTC Restore	I___II___I	DLS Lead OUT
I___II___I	Phone #2 FTC Restore	I___II___I	Zone Fault Alarm
I___II___I	Event Buffer 75% Full	I___II___I	Zone Fault Restore
I___II___I	DLS Lead IN	I___II___I	Delinquency Reporting Code

[352] TEST TRANSMISSION REPORTING CODES

I___II___I	Periodic Test Transmission	I___II___I	*Not Used*
I___II___I	System Test		

[353] WIRELESS MAINTENANCE REPORTING CODES

I___II___I	General Zone Low Battery Alarm	I___II___I	General Zone Low Battery Restore

[360] COMMUNICATOR FORMAT OPTIONS

01	20 BPS, 1400 Hz handshake
02	20 BPS, 2300 Hz handshake
03	DTMF CONTACT I.D.
04	SIA FSK
05	Pager

Note: 3rd Phone Number follows the format of the 1st Phone Number

Default		
04	I___II___I	1st Phone Number
04	I___II___I	2nd Phone Number

[361] ALARM / RESTORE COMMUNICATOR CALL DIRECTIONS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	1st Telephone Number	Disabled
OFF	I___I *Option 2*	2nd Telephone Number	Disabled
OFF	I___I *Option 3-8*	*For Future Use*	

[363] TAMPER ALARM / RESTORE COMMUNICATOR CALL DIRECTIONS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	1st Telephone Number	Disabled
OFF	I___I *Option 2*	2nd Telephone Number	Disabled
OFF	I___I *Option 3-8*	*For Future Use*	

[365] OPENING / CLOSING COMMUNICATOR CALL DIRECTIONS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	1st Telephone Number	Disabled
OFF	I___I *Option 2*	2nd Telephone Number	Disabled
OFF	I___I *Option 3-8*	*For Future Use*	

[367] SYSTEM MAINTENANCE ALARM / RESTORE COMMUNICATOR CALL DIRECTIONS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	1st Telephone Number	Disabled
OFF	I___I *Option 2*	2nd Telephone Number	Disabled
OFF	I___I *Option 3-8*	*For Future Use*	

[368] SYSTEM TEST TRANSMISSIONS COMMUNICATOR CALL DIRECTIONS

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	1st Telephone Number	Disabled
OFF	I___I *Option 2*	2nd Telephone Number	Disabled
OFF	I___I *Option 3-8*	*For Future Use*	

[370] COMMUNICATION VARIABLES

Default			
003	I___II___II___I	Swinger Shutdown (Alarms & Rest)	(000-255 Transmissions, 000=disabled)
003	I___II___II___I	Swinger Shutdown (Tampers & Rest)	(000-255 Transmissions, 000=disabled)
003	I___II___II___I	Swinger Shutdown (Maint & Rest)	(000-255 Transmissions, 000=disabled)
000	I___II___II___I	Communication Delay	(000-255 seconds)
030	I___II___II___I	AC Failure Communication Delay	(000-255 minutes)
003	I___II___II___I	TLM Trouble Delay	(# of valid checks required +3= 003-255x10s)
030	I___II___II___I	Test Transmission Cycle (land-line)	(000-255 days)/(000-255 mins)
007	I___II___II___I	Zone Low Battery Transmission Delay	(000-255 days)
030	I___II___II___I	Delinquency Transmission Delay	(000-255 days/hours)

[371] TEST TRANSMISSION TIME OF DAY

Default
9999 I___II___II___II___I (Valid entries are 0000-2359, 9999 to disable)

[380] FIRST COMMUNICATOR OPTION CODE

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Communications Enabled	Communications Disabled
OFF	I___I *Option 2*	Restorals on Bell Time-out	Restorals Follow Zones
OFF	I___I *Option 3*	Pulse Dialing	DTMF Dialing
ON	I___I *Option 4*	Switch to Pulse Dialing on 5th Attempt	DTMF Dial For All 8 Attempts
OFF	I___I *Option 5*	3rd Phone Number Enabled	3rd Phone Number Disabled
OFF	I___I *Option 6*	Alternate Dial (1st & 3rd)	Call 1st Number, Backup to 3rd
OFF	I___I *Option 7*	***Not Used***	
OFF	I___I *Option 8*	Delinquency Follows Zone Activity (Hours)	Delinquency Follows Arming (Days)

[381] SECOND COMMUNICATOR OPTION CODE

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	Opening After Alarm Kypd Ringback Enabled	Opn After Alrm Kypd Ringback Disabled
OFF	I___I *Option 2*	Opening After Alarm Bell Ringback Enabled	Opn After Alrm Bell Ringback Disabled
OFF	I___I *Option 3*	SIA Uses Programmed Rep. Codes	SIA Uses Automatic Rep. Codes
OFF	I___I *Option 4*	Closing Confirmation Enabled	Closing Confirmation Disabled
ON	I___I *Option 5*	Talk/Listen on Phone #1/3 Enabled	Talk/Listen on Phone #1/3 Disabled
OFF	I___I *Option 6*	Talk/Listen on Phone #2 Enabled	Talk/Listen on Phone #2 Disabled
ON	I___I *Option 7*	Contact I.D. Uses Pgm'd Rep. Codes	Contact I.D. Uses Auto Rep. Codes
OFF	I___I *Option 8*	*For Future Use*	

DOWNLOADING PROGRAMMING

[401] FIRST DOWNLOADING OPTION CODE

Default		*Option ON*	*Option OFF*
OFF	I___I *Option 1*	Answering Machine / Double Call Enabled	Answ. Machine / Double Call Disabled
ON	I___I *Option 2*	User Can Enable DLS Window	User Can Not Enable DLS Window
OFF	I___I *Option 3*	Call-Back Enabled	Call-Back Disabled
OFF	I___I *Option 4*	User Initiated Call-up Enabled	User Initiated Call-up Disabled
OFF	I___I *Option 5*	Auto Event Buffer Upload Enabled	Auto Event Buffer Upload Disabled
OFF	I___I *Option 6*	For Future Use	
OFF	I___I *Option 7*	For Future Use	
OFF	I___I *Option 8*	For Future Use	

[402] DOWNLOADING COMPUTER'S TELEPHONE NUMBER (32 Digits)

I__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__II__I

[403] DOWNLOADING ACCESS CODE

Default
9000 I__II__II__II__I Enter 4 Hexadecimal Digits.

[404] PANEL IDENTIFICATION CODE

Default
9000 I__II__II__II__I Enter 4 Hexadecimal Digits.

[405] ANSWERING MACHINE DOUBLE-CALL TIMER

Default
060 I__II__II__I (Valid entries are 001-255 seconds)

[406] NUMBER OF RINGS TO ANSWER ON

Default
000 I__II__II__I (Valid entries are 000-255 rings)

[499][Installer Code][499] INITIATE PCLINK

- ENTER [499] [INSTALLER CODE] [499]

INTERNATIONAL PROGRAMMING

[700] AUTOMATIC CLOCK ADJUST

Default
60 I___II___I (Valid entries are 00-99)

[701] FIRST INTERNATIONAL OPTIONS CODE

Default		*Option ON*	*Option OFF*
OFF	*Option 1*	50 Hz AC	60 Hz AC
OFF	*Option 2*	Time Base is Internal Crystal	Time Base is AC Line
OFF	*Option 3*	AC/DC Arming Inhibit Enabled	AC/DC Arming Inhibit Disabled
OFF	*Option 4*	All System Tampers Require Installer Reset	All System Tampers follow Restore
OFF	*Option 5*	6-Digit User Access Codes	4-Digit User Access Codes
OFF	*Option 6*	Busy Tone Detection Enabled	Busy Tone Detection Disabled
OFF	*Option 7*	High Current Battery Charge	Standard Current Battery Charge
OFF	*Option 8*	*For Future Use*	

[702] SECOND INTERNATIONAL OPTIONS CODE

Default		*Option ON*	*Option OFF*
OFF	*Option 1*	Pulse Dialing Make/Break Ratio is 33/67	Pulse Dialing Make/Break Ratio is 40/60
ON	*Option 2*	Force Dialing Enabled	Force Dialing Disabled
OFF	*Option 3*	Land Line Test Tx Interval is in Minutes	Land Line Test Tx Interval is in Days
OFF	*Option 4*	1600 Hz Handshake	Standard Handshake
OFF	*Option 5*	ID Tone Enabled	ID Tone Disabled
OFF	*Option 6*	2100 HZ ID Tone	1300 Hz ID Tone
OFF	*Option 7*	One Time 1-Hr User Enabled DLS Window	Full 6-Hr User Enabled DLS Window
OFF	*Option 8*	Bell on FTC when armed	FTC Trouble only when armed

[703] DELAY BETWEEN DIALING ATTEMPTS

Default
001 I___II___II___I (Valid entries are 000-255 seconds)

[801] NOT USED

[802] AUDIO INTERFACE

[10] Port Assignments, Zones 1-8

- **Enter the nearest Intercom Port Number (01= Main Unit, 02= Remote Sounder, 00 = Not Used)**

Default

00	I___II___I	Zone 1 Port Assignment
00	I___II___I	Zone 2 Port Assignment
00	I___II___I	Zone 3 Port Assignment
00	I___II___I	Zone 4 Port Assignment
00	I___II___I	Zone 5 Port Assignment
00	I___II___I	Zone 6 Port Assignment
00	I___II___I	Zone 7 Port Assignment
00	I___II___I	Zone 8 Port Assignment

[11] Port Assignments, Zones 9-16

- **Enter the nearest Intercom Port Number (01= Main Unit, 02= Remote Sounder, 00 = Not Used)**

Default

00	I___II___I	Zone 9 Port Assignment
00	I___II___I	Zone 10 Port Assignment
00	I___II___I	Zone 11 Port Assignment
00	I___II___I	Zone 12 Port Assignment
00	I___II___I	Zone 13 Port Assignment
00	I___II___I	Zone 14 Port Assignment
00	I___II___I	Zone 15 Port Assignment
00	I___II___I	Zone 16 Port Assignment

[12] Port Assignments, Zones 17-24

- **Enter the nearest Intercom Port Number (01= Main Unit, 02= Remote Sounder, 00 = Not Used)**

Default

00	I___II___I	Zone 17 Port Assignment
00	I___II___I	Zone 18 Port Assignment
00	I___II___I	Zone 19 Port Assignment
00	I___II___I	Zone 20 Port Assignment
00	I___II___I	Zone 21 Port Assignment
00	I___II___I	Zone 22 Port Assignment
00	I___II___I	Zone 23 Port Assignment
00	I___II___I	Zone 24 Port Assignment

[13] Port Assignments, Zones 25-32

- **Enter the nearest Intercom Port Number (01= Main Unit, 02= Remote Sounder, 00 = Not Used)**

Default

00	I___II___I	Zone 25 Port Assignment
00	I___II___I	Zone 26 Port Assignment
00	I___II___I	Zone 27 Port Assignment
00	I___II___I	Zone 28 Port Assignment
00	I___II___I	Zone 29 Port Assignment
00	I___II___I	Zone 30 Port Assignment
00	I___II___I	Zone 31 Port Assignment
00	I___II___I	Zone 32 Port Assignment

[20] General Broadcast Mask

Default			*Option ON*	*Option OFF*
Off	I___I	*Option 1*	*For Future Use*	
On	I___I	*Option 2*	Incoming Sounds on Main Unit Enabled	Incoming Sounds on Main Unit Disabled
Off	I___I	*Option 3*	Incoming Sounds on Rem. Sndr Enab.	Incoming Sounds on Rem Sndr. Disabled
Off	I___I	*Option 4-8*	***Not Used***	

AUDIO CONTROL TELEPHONE KEY FUNCTIONS

[00]	**Unused Key**
[01]	**Talk To All Speakers**
[02]	Not Used
[03]	**High Gain Listen To All**
[04]	Not Used
[05]	Not Used
[06]	**Low Gain Listen To All**
[07]	**Extend Time**
[08]	For Future Use
[09]	**Terminate Session**
[10]	For Future Use
[11]	**Cancel First Keypress**
[12]	For Future Use
[13]	**Zone Select (0 3 only)**
[14]	**Increment Selected Microphone (Input)**
[15]	**Decrement Selected Microphone (Input)**
[16]-[17]	Not Used

[40] Audio Control Telephone Key Programming

Default		
01	I___II___I	[1] Key
00	I___II___I	[2] Key
03	I___II___I	[3] Key
14	I___II___I	[4] Key
15	I___II___I	[5] Key
06	I___II___I	[6] Key
07	I___II___I	[7] Key
00	I___II___I	[8] Key
17	I___II___I	[9] Key
00	I___II___I	[0] Key
17	I___II___I	[*] Key
11	I___II___I	[#] Key

[54] Fifth Audio Control Option Code

Default			***Option ON***	***Option OFF***
OFF	I___I	*Option 1*	Tampers Enabled	Disabled
OFF	I___I	*Option 2*	Openings & Closings Enabled	Disabled
OFF	I___I	*Option 3*	[A] Key Alarm Enabled	Disabled
OFF	I___I	*Option 4*	[P] Key Alarm Enabled (Listen)	Disabled
OFF	I___I	*Option 5*	Duress Alarm Enabled (Listen)	Disabled
OFF	I___I	*Option 6*	***Not Used***	
OFF	I___I	*Option 7*	Opening After Alarm Enabled	Disabled
OFF	I___I	*Option 8*	*For Future Use*	

NOTE: If any event is enabled for Talk/Listen In, Communications MUST be enabled.

[55] Audio Duration

Default		
90	I___II___I	(Valid entries are 01-99 Seconds)

[60] Telephone Ring Mask

Default	***Option ON***	***Option OFF***

Off I___I *Option 1* *For Future Use*
Off I___I *Option 2* Main Unit Telephone Ring Enabled Main Unit Telephone Ring Disabled
Off I___I *Option 3* Remote Sounder Telephone Ring Enab. Remote Sounder Telephone Ring Disabled
Off I___I *Option 4-8* ***Not Used***

[803] NOT USED

[804] WIRELESS RECEIVER PROGRAMMING

[01] Zone 1 Serial Number *000000* I___II___II___II___II___II___I

- 6 digit Hexadecimal entry is required
- 1st digit represents Transmitter Type:

2 = UTX	5 = Panic Pendant
3 = Sensors (PIR, Glassbreak)	6/9 = WLSKey
4 = Smoke	7 = Handheld Keypad

- 0 must be entered in front of transmitters that have only 5 digit serial numbers

[02]	**Zone 2 Serial Number**	*000000*	I___II___II___II___II___II___I
[03]	**Zone 3 Serial Number**	*000000*	I___II___II___II___II___II___I
[04]	**Zone 4 Serial Number**	*000000*	I___II___II___II___II___II___I
[05]	**Zone 5 Serial Number**	*000000*	I___II___II___II___II___II___I
[06]	**Zone 6 Serial Number**	*000000*	I___II___II___II___II___II___I
[07]	**Zone 7 Serial Number**	*000000*	I___II___II___II___II___II___I
[08]	**Zone 8 Serial Number**	*000000*	I___II___II___II___II___II___I
[09]	**Zone 9 Serial Number**	*000000*	I___II___II___II___II___II___I
[10]	**Zone 10 Serial Number**	*000000*	I___II___II___II___II___II___I
[11]	**Zone 11 Serial Number**	*000000*	I___II___II___II___II___II___I
[12]	**Zone 12 Serial Number**	*000000*	I___II___II___II___II___II___I
[13]	**Zone 13 Serial Number**	*000000*	I___II___II___II___II___II___I
[14]	**Zone 14 Serial Number**	*000000*	I___II___II___II___II___II___I
[15]	**Zone 15 Serial Number**	*000000*	I___II___II___II___II___II___I
[16]	**Zone 16 Serial Number**	*000000*	I___II___II___II___II___II___I
[17]	**Zone 17 Serial Number**	*000000*	I___II___II___II___II___II___I
[18]	**Zone 18 Serial Number**	*000000*	I___II___II___II___II___II___I
[19]	**Zone 19 Serial Number**	*000000*	I___II___II___II___II___II___I
[20]	**Zone 20 Serial Number**	*000000*	I___II___II___II___II___II___I
[21]	**Zone 21 Serial Number**	*000000*	I___II___II___II___II___II___I
[22]	**Zone 22 Serial Number**	*000000*	I___II___II___II___II___II___I
[23]	**Zone 23 Serial Number**	*000000*	I___II___II___II___II___II___I
[24]	**Zone 24 Serial Number**	*000000*	I___II___II___II___II___II___I
[25]	**Zone 25 Serial Number**	*000000*	I___II___II___II___II___II___I
[26]	**Zone 26 Serial Number**	*000000*	I___II___II___II___II___II___I
[27]	**Zone 27 Serial Number**	*000000*	I___II___II___II___II___II___I
[28]	**Zone 28 Serial Number**	*000000*	I___II___II___II___II___II___I
[29]	**Zone 29 Serial Number**	*000000*	I___II___II___II___II___II___I
[30]	**Zone 30 Serial Number**	*000000*	I___II___II___II___II___II___I
[31]	**Zone 31 Serial Number**	*000000*	I___II___II___II___II___II___I
[32]	**Zone 32 Serial Number**	*000000*	I___II___II___II___II___II___I

HANDHELD KEYPAD SERIAL NUMBERS

[33]	**Keypad #1 Serial Number**	*000000*	I___II___II___II___II___II___I
[34]	**Keypad #2 Serial Number**	*000000*	I___II___II___II___II___II___I

[35]	**Keypad #3 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[36]	**Keypad #4 Serial Number**	*000000*	|___||___||___||___||___||___||___|

WIRELESS KEY SERIAL NUMBERS

[41]	**Wireless Key #01 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[42]	**Wireless Key #02 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[43]	**Wireless Key #03 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[44]	**Wireless Key #04 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[45]	**Wireless Key #05 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[46]	**Wireless Key #06 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[47]	**Wireless Key #07 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[48]	**Wireless Key #08 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[49]	**Wireless Key #09 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[50]	**Wireless Key #10 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[51]	**Wireless Key #11 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[52]	**Wireless Key #12 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[53]	**Wireless Key #13 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[54]	**Wireless Key #14 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[55]	**Wireless Key #15 Serial Number**	*000000*	|___||___||___||___||___||___||___|
[56]	**Wireless Key #16 Serial Number**	*000000*	|___||___||___||___||___||___||___|

Note: Serial Numbers are also Programmed via the Wizard.

HANDHELD KEYPAD / WIRELESS KEY FUNCTION KEY OPTIONS

Entry	Description	Handheld Keypad	Wireless Key
00	Null Key (Key Not Used)	YES	YES
01	Partition 1 Select (Not Used)	NO	NO
02	Partition 2 Select (Not Used)	NO	NO
03	Stay Arm	YES	YES
04	Away Arm	YES	YES
05	[*][9] No-Entry Arm	YES	NO
06	[*][4] Chime On / Off	YES	YES
07	[*][6][----][4] System Test	YES	YES
08	[*][1] Bypass Mode (Not Used)	NO	NO
09	[*][2] Trouble Display (Not Used)	NO	NO
10	[*][3] Alarm Memory (Not Used)	NO	NO
11	[*][5] User Programming (Not Used)	NO	NO
12	[*][6] User Functions (Not Used)	NO	NO
13	Command Output 1 [*][7][1]	YES	YES
14	Command Output 2 [*][7][2]	YES	YES
15	General Voice Prompted Help (Not Used)	NO	NO
16	[*][0] Quick Exit	YES	YES
17	[*][1] Activate Stay Aways	YES	YES
18	Identified Voice Prompted Help (Not Used)	NO	NO
19	Command Output 3 [*][7][3]	YES	YES
20	Pendant Test (Not Used)	NO	NO
21	Command Output 4 [*][7][4]	YES	YES
22-26	For Future Use/Not Used	NO	NO
27	Disarm (Off)	NO	YES
28	Fire Alarm	NO	YES
29	Auxiliary Alarm	NO	YES
30	Panic Alarm	NO	YES

Note: If using Unidentified Wireless Keys for arming, Quick Arming must be enabled.
If using Unidentified Wireless Keys for activating PGM Outputs, the option for requiring access code for activation MUST be OFF.

		Default[xxi]	
[57]	Keypad Function Key 1	***03***	I___I I___I
[58]	Keypad Function Key 2	***04***	I___I I___I
[59]	Keypad Function Key 3	***16***	I___I I___I
[60]	Keypad Function Key 4	***31***	I___I I___I
[61]	Wireless Key Function Key 1	***03***	I___I I___I
[62]	Wireless Key Function Key 2	***04***	I___I I___I
[63]	Wireless Key Function Key 3	***27***	I___I I___I
[64]	Wireless Key Function Key 4	***31***	I___I I___I

		Default[xxii]		
[71]	Hardwired Zone Loop #1 Assignment	*00*	I___II___I	(Valid entries are Zones 01-32)
[72]	Hardwired Zone Loop #2 Assignment	*00*	I___II___I	

Note: Hardwired Zones override any Wireless Zones that may be programmed for the same zone number. Fire Zones are not supported on these Zone Loops.

SUPERVISION

[81] WIRELESS SUPERVISORY WINDOW

Default
03 I___II___I RF Transmitter Supervisory Window (hours), Valid entries are 01-24

MANUAL NOTE: Panic Transmitters are NOT supervised and must be disabled in these sections.

[82] ZONE TRANSMITTER SUPERVISION OPTIONS (1-8)

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Zone 01 Supervision Enabled	Zone 01 Superv. Disabled
ON	I___I *Option 2*	Zone 02 Supervision Enabled	Zone 02 Superv. Disabled
ON	I___I *Option 3*	Zone 03 Supervision Enabled	Zone 03 Superv. Disabled
ON	I___I *Option 4*	Zone 04 Supervision Enabled	Zone 04 Superv. Disabled
ON	I___I *Option 5*	Zone 05 Supervision Enabled	Zone 05 Superv. Disabled
ON	I___I *Option 6*	Zone 06 Supervision Enabled	Zone 06 Superv. Disabled
ON	I___I *Option 7*	Zone 07 Supervision Enabled	Zone 07 Superv. Disabled
ON	I___I *Option 8*	Zone 08 Supervision Enabled	Zone 08 Superv. Disabled

[83] ZONE TRANSMITTER SUPERVISION OPTIONS (9-16)

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Zone 09 Supervision Enabled	Zone 09 Superv. Disabled
ON	I___I *Option 2*	Zone 10 Supervision Enabled	Zone 10 Superv. Disabled
ON	I___I *Option 3*	Zone 11 Supervision Enabled	Zone 11 Superv. Disabled
ON	I___I *Option 4*	Zone 12 Supervision Enabled	Zone 12 Superv. Disabled
ON	I___I *Option 5*	Zone 13 Supervision Enabled	Zone 13 Superv. Disabled
ON	I___I *Option 6*	Zone 14 Supervision Enabled	Zone 14 Superv. Disabled
ON	I___I *Option 7*	Zone 15 Supervision Enabled	Zone 15 Superv. Disabled
ON	I___I *Option 8*	Zone 16 Supervision Enabled	Zone 16 Superv. Disabled

[84] ZONE TRANSMITTER SUPERVISION OPTIONS (17-24)

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Zone 17 Supervision Enabled	Zone 17 Superv. Disabled
ON	I___I *Option 2*	Zone 18 Supervision Enabled	Zone 18 Superv. Disabled
ON	I___I *Option 3*	Zone 19 Supervision Enabled	Zone 19 Superv. Disabled
ON	I___I *Option 4*	Zone 20 Supervision Enabled	Zone 20 Superv. Disabled
ON	I___I *Option 5*	Zone 21 Supervision Enabled	Zone 21 Superv. Disabled
ON	I___I *Option 6*	Zone 22 Supervision Enabled	Zone 22 Superv. Disabled
ON	I___I *Option 7*	Zone 23 Supervision Enabled	Zone 23 Superv. Disabled
ON	I___I *Option 8*	Zone 24 Supervision Enabled	Zone 24 Superv. Disabled

[85] ZONE TRANSMITTER SUPERVISION OPTIONS (25-32)

Default		*Option ON*	*Option OFF*
ON	I___I *Option 1*	Zone 25 Supervision Enabled	Zone 25 Superv. Disabled
ON	I___I *Option 2*	Zone 26 Supervision Enabled	Zone 26 Superv. Disabled

ON	I___I	*Option 3*	Zone 27 Supervision Enabled	Zone 27 Superv. Disabled
ON	I___I	*Option 4*	Zone 28 Supervision Enabled	Zone 28 Superv. Disabled
ON	I___I	*Option 5*	Zone 29 Supervision Enabled	Zone 29 Superv. Disabled
ON	I___I	*Option 6*	Zone 30 Supervision Enabled	Zone 30 Superv. Disabled
ON	I___I	*Option 7*	Zone 31 Supervision Enabled	Zone 31 Superv. Disabled
ON	I___I	*Option 8*	Zone 32 Supervision Enabled	Zone 32 Superv. Disabled

[90] WIRELESS KEYPAD (1-4) ENABLE/DISABLE

Default			*Option ON*	*Option OFF*
OFF	I___I	*Option 1*	Keypad #1 is Disabled	Keypad #1 is Enabled
OFF	I___I	*Option 2*	Keypad #2 is Disabled	Keypad #2 is Enabled
OFF	I___I	*Option 3*	Keypad #3 is Disabled	Keypad #3 is Enabled
OFF	I___I	*Option 4*	Keypad #4 is Disabled	Keypad #4 is Enabled

[91] WIRELESS KEYS (1-8) ENABLE/DISABLE

Default			*Option ON*	*Option OFF*
OFF	I___I	*Option 1*	Wireless Key #01 is Disabled	Key #01 is Enabled
OFF	I___I	*Option 2*	Wireless Key #02 is Disabled	Key #02 is Enabled
OFF	I___I	*Option 3*	Wireless Key #03 is Disabled	Key #03 is Enabled
OFF	I___I	*Option 4*	Wireless Key #04 is Disabled	Key #04 is Enabled
OFF	I___I	*Option 5*	Wireless Key #05 is Disabled	Key #05 is Enabled
OFF	I___I	*Option 6*	Wireless Key #06 is Disabled	Key #06 is Enabled
OFF	I___I	*Option 7*	Wireless Key #07 is Disabled	Key #07 is Enabled
OFF	I___I	*Option 8*	Wireless Key #08 is Disabled	Key #08 is Enabled

[92] WIRELESS KEYS (9-16) ENABLE/DISABLE

Default			*Option ON*	*Option OFF*
OFF	I___I	*Option 1*	Wireless Key #09 is Disabled	Key #09 is Enabled
OFF	I___I	*Option 2*	Wireless Key #10 is Disabled	Key #10 is Enabled
OFF	I___I	*Option 3*	Wireless Key #11 is Disabled	Key #11 is Enabled
OFF	I___I	*Option 4*	Wireless Key #12 is Disabled	Key #12 is Enabled
OFF	I___I	*Option 5*	Wireless Key #13 is Disabled	Key #13 is Enabled
OFF	I___I	*Option 6*	Wireless Key #14 is Disabled	Key #14 is Enabled
OFF	I___I	*Option 7*	Wireless Key #15 is Disabled	Key #15 is Enabled
OFF	I___I	*Option 8*	Wireless Key #16 is Disabled	Key #16 is Enabled

[93] RF JAM DETECT ZONE

Default		
00	I___II___I	Select an unused zone that will go open when a jamming signal is present. (Valid entry = 01 – 32, 00 = Jam Detect disabled)

[805]-[806] NOT USED

[807] ESCORT PROGRAMMING SECTION

[000] Function Key Programming[xxiii]

[0]	Not Used	
[1]	Function Key 1 Assignment	(Valid entries are 00-30)
[2]	Function Key 2 Assignment	(Valid entries are 00-30)
[3]	Function Key 3 Assignment	(Valid entries are 00-30)
[4]	Function Key 4 Assignment	(Valid entries are 00-30)
[5]	Function Key 5 Assignment	(Valid entries are 00-30)
[6]	Function Key 6 Assignment	(Valid entries are 00-30)
[7]	Function Key 7 Assignment	(Valid entries are 00-30)
[8]	Function Key 8 Assignment	(Valid entries are 00-30)

00	Null Key (Key Not Used)
01	*Not Used*
02	*Not Used*
03	Stay Arm
04	Away Arm
05	[*][9] No Entry Arm
06	[*][4] Chime On / Off
07	[*][6][----][4] System Test
08	[*][1] Bypass Mode
09	[*][2] Trouble Display
10	[*][3] Alarm Memory
11	[*][5] User Programming
12	[*][6] User Functions
13	Not Used
14	Not Used
15	Not Used
16	[*][0] Quick Exit
17	[*][1] Activate Stay/Aways
18-26	*Not Used (Reserved)*
27	Status (Query)
28	Volume Control
29	Memo Record
30	Memo Playback

	Function Key 1	Function Key 2	Function Key 3	Function Key 4	Function Key 5	Function Key 6	Function Key 7	Function Key 8
WLS9000 Defaults	03	04	06	16	27	28	29	30

[001] NOT USED[xxiv]

[002] FIRST SYSTEM OPTION CODE[xxv]

Default			***Option ON***	***Option Off***
ON	I___I	*Option 01*	Clock Is AM/PM	Clock is 24 Hour
ON	I___I	*Option 02*	Chime Enabled for Zone Openings	Door Chime Disabled for Zone Openings
ON	I___I	*Option 03*	Chime Enabled for Zone Closings	Door Chime Disabled for Zone Closings
OFF	I___I	*Option 04-08*	*Not Used (For Future Use)*	

[003] STATUS PROMPT MASK

Default			***Option ON***	***Option Off***
ON	I___I	*Option 01*	WARNING, BYPASS ON Prompt enabled	Prompt disabled
ON	I___I	*Option 02*	SYSTEM TROUBLE .... Prompt enabled	Prompt disabled
ON	I___I	*Option 03*	SYSTEM OPEN, ZONE .... Prompt enabled	Prompt disabled
ON	I___I	*Option 04*	ALARMS IN MEMORY Prompt enabled	Prompt disabled
ON	I___I	*Option 05*	SERVICE REQUIRED Prompt enabled	Prompt disabled
ON	I___I	*Option 06*	AC POWER TROUBLE Prompt enabled	Prompt disabled
ON	I___I	*Option 07*	PHONE LINE TROUBLE Prompt enabled	Prompt disabled
ON	I___I	*Option 08*	COMMUNICATION TROUBLE Prompt enab.	Prompt disabled
ON	I___I	*Option 09*	ZONE FAULT Prompt enabled	Prompt disabled
ON	I___I	*Option 10*	ZONE TAMPER Prompt enabled	Prompt disabled
ON	I___I	*Option 11*	ZONE LOW BATTERY Prompt enabled	Prompt disabled
ON	I___I	*Option 12*	TIME AND DATE INCORRECT Prompt enab.	Prompt disabled

[004] STAR FUNCTION PROMPT MASK

Default			***Option ON***	***Option Off***
ON	I___I	*Option 01*	FOR ZONE BYPASSING Prompt enabled	Prompt disabled
ON	I___I	*Option 02*	FOR SYSTEM TROUBLES Prompt enabled	Prompt disabled
ON	I___I	*Option 03*	FOR ALARM MEMORY Prompt enabled	Prompt disabled
ON	I___I	*Option 04*	FOR DOOR CHIME CONTROL Prompt enab.	Prompt disabled
OFF	I___I	*Option 05*	***Not Used***	
ON	I___I	*Option 06*	FOR SPECIAL FUNCTIONS Prompt enabled	Prompt disabled
OFF	I___I	*Option 07*	***Not Used***	
ON	I___I	*Option 08*	FOR ARMING WITHOUT ENTRY Prompt enab.	Prompt disabled
ON	I___I	*Option 09*	FOR QUICK ARMING Prompt enabled	Prompt disabled
ON	I___I	*Option 10*	FOR QUICK EXIT Prompt enabled	Prompt disabled
ON	I___I	*Option 11*	TO ARM INTERIOR ZONES Prompt enabled	Prompt disabled
ON	I___I	*Option 12*	FOR VOLUME CONTROL Prompt enabled	Prompt disabled
ON	I___I	*Option 13*	FOR SPEECH RATE CONTROL Prompt enab.	Prompt disabled
OFF	I___I	*Option 14*	***Not Used***	
OFF	I___I	*Option 15*	***Not Used***	
ON	I___I	*Option 16*	FOR USER PROGRAMMING Prompt enabled	Prompt disabled

xxvi

[020] LOCAL/REMOTE PHONE ACCESS CODE

Default

* * * I___II___II___I Enter 3 digits (0,1,2,3,4,5,6,7,8,9,*,#)

WARNING- Avoid Codes that coincide with local telephone company 3-digit telephone numbers and services.

[021] PHONE ACCESS OPTIONS

Default			***Option ON***	***Option Off***
OFF	I___I	*Option 01*	Local Access Only	Remote and Local Access enabled
OFF	I___I	*Option 02*	Code always Req'd for Local Access	No code Required for Local Access

[030] ALARM TONE PERIOD FOR VERBAL ALARM[xxvii]

Default

005 **I___II___II___I** **Valid entries are 001-255 seconds**

SYSTEM LABEL

			Default
[561]	SYSTEM LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	System

SYSTEM ZONE LABELS

			Default
[601]	ZONE 1 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 1
[602]	ZONE 2 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 2
[603]	ZONE 3 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 3
[604]	ZONE 4 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 4
[605]	ZONE 5 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 5
[606]	ZONE 6 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 6
[607]	ZONE 7 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 7
[608]	ZONE 8 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 8
[609]	ZONE 9 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 9
[610]	ZONE 10 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 10
[611]	ZONE 11 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 11
[612]	ZONE 12 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 12
[613]	ZONE 13 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 13
[614]	ZONE 14 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 14
[615]	ZONE 15 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 15
[616]	ZONE 16 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 16
[617]	ZONE 17 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 17
[618]	ZONE 18 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 18
[619]	ZONE 19 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 19
[620]	ZONE 20 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 20
[621]	ZONE 21 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 21
[622]	ZONE 22 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 22
[623]	ZONE 23 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 23
[624]	ZONE 24 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 24
[625]	ZONE 25 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 25
[626]	ZONE 26 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 26
[627]	ZONE 27 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 27
[628]	ZONE 28 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 28
[629]	ZONE 29 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 29
[630]	ZONE 30 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 30
[631]	ZONE 31 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 31
[632]	ZONE 32 LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Zone 32
[633]	FIRE ALARM LABEL	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	Fire Zone

Note: Zone Labels are also Programmed Via the Wizard!

Custom Label Record Section

When in one of the following sections, press ‘Record’ (Function Key 7) to begin recording, and ‘Playback’ (Function Key 8) to end the recording an annunciate the label. ‘Playback’ can be pressed several times to re-annunciate the Label recording.
Note: Even if Function Keys 7 and 8 have been reprogrammed, they will still retain the same above functions in these sections.

[701] RECORD CUSTOM LABEL #1
[702] RECORD CUSTOM LABEL #2
[703] RECORD CUSTOM LABEL #3
[704] RECORD CUSTOM LABEL #4
[705] RECORD CUSTOM LABEL #5
[706] RECORD CUSTOM LABEL #6
[707] RECORD CUSTOM LABEL #7
[708] RECORD CUSTOM LABEL #8

ESCORT5580 Label Library

[000] ***(Combined # Command)***
[001] ***(Ordered # Command)***
[002] ***(Individual # Command)***
[003] ACCESS
[004] AIR-CONDITIONING
[005] ALCOVE
[006] AND
[007] APARTMENT
[008] APPLIANCE
[009] AREA
[010] ATRIUM
[011] ATTIC
[012] AUTOMATIC
[013] AWAY
[014] BACK
[015] BACKYARD
[016] BALCONY
[017] BAR
[018] BARN
[019] BASEMENT
[020] BATHROOM
[021] BAY
[022] BEAM
[023] BEDROOM
[024] BLINDS
[025] BOAT
[026] BOILER
[027] BOTTOM
[028] BOYS
[029] BUILDING
[030] CABINET
[031] CAFETERIA
[032] CAMERA
[033] CASH
[034] CEILING
[035] CENTER
[036] CHANGEROOM
[037] CHINA
[038] CIRCUIT
[039] CLASSROOM
[040] COFFEE-MAKER
[041] COLD
[042] COLLECTION
[043] COMPRESSOR
[044] COMPUTER
[045] CONTACT
[046] CONTROL *
[047] CRAWL-SPACE
[048] CURTAIN
[049] DARK
[050] DAY
[051] DECK
[052] DEGREES
[053] DEN
[054] DETECTOR
[055] DINING
[056] DISHWASHER
[057] DOOR
[058] DOWN
[059] DRIVEWAY
[060] EAST
[061] ELECTRIC
[062] ELEVATOR
[063] EMPLOYEE
[064] ENERGY-SAVE
[065] ENTERTAINMENT
[066] ENTRY
[067] EQUIPMENT
[068] EXERCISE
[069] EXHAUST
[070] EXIT
[071] EXTERIOR
[072] EXTINGUISHER
[073] FACTORY
[074] FAMILY
[075] FAN
[076] FENCE
[077] FILE
[078] FIRE *
[079] FLOOR
[080] FLORIDA
[081] FLOW
[082] FOIL
[083] FOUNTAIN
[084] FOYER
[085] FREEZER
[086] FRENCH
[087] FRONT
[088] FURNACE
[089] GAME
[090] GARAGE
[091] GARBAGE
[092] GAS
[093] GATE
[094] GIRLS
[095] GLASSBREAK
[096] GREENHOUSE
[097] GROUND
[098] GUARD
[099] GUEST
[100] GUN
[101] GYM
[102] HALLWAY
[103] HEAT
[104] HEATER
[105] HIGH
[106] HOLIDAY
[107] HOME
[108] HOSE
[109] HOT TUB
[110] HOUSE
[111] HUMIDITY
[112] INTERIOR
[113] INTRUSION
[114] ITEM *
[115] JEWELRY
[116] KITCHEN
[117] LADIES'
[118] LAMP
[119] LAUNDRY
[120] LAWN
[121] LEFT
[122] LEVEL
[123] LIBRARY
[124] LIGHT
[125] LIGHTS
[126] LIQUOR
[127] LIVING
[128] LOADING
[129] LOBBY
[130] LOT
[131] LOW
[132] LOWER
[133] MACHINE
[134] MAIDS
[135] MAIL
[136] MAIN
[137] MAINTENANCE
[138] MASTER
[139] MAT
[140] MEDICAL
[141] MEETING
[142] MEN'S
[143] MIDDLE
[144] MODE *
[145] MOTION
[146] NIGHT
[147] NORTH
[148] NUMBER
[149] NURSERY
[150] OFFICE
[151] OUTER
[152] OUTLET
[153] OUTPUT *
[154] OVER
[155] OVERFLOW
[156] OVERHEAD
[157] PANEL
[158] PANIC-BUTTON
[159] PARKING
[160] PARTITION *
[161] PATIO
[162] PERIMETER
[163] PHOTOCOPIER
[164] PICTURE
[165] PLACE
[166] PLAY
[167] PORCH
[168] PORTABLE
[169] POWER
[170] PRESSURE
[171] PROXIMITY
[172] PULL-STATION
[173] PUMP
[174] RAMP
[175] REAR
[176] RECEIVING
[177] RECREATION
[178] REFRIGERATOR
[179] RESET
[180] RESTRICTED
[181] RIGHT
[182] ROOF
[183] ROOM
[184] SAFE
[185] SAUNA
[186] SCHEDULE
[187] SENSOR
[188] SERVICE
[189] SHED
[190] SHIPPING
[191] SHOP
[192] SHUTTER
[193] SIDE
[194] SILENT
[195] SKYLIGHT
[196] SLIDING
[197] SMOKE
[198] SOLARIUM
[199] SOUNDER
[200] SOUTH
[201] SPRINKLER
[202] STAFF
[203] STAIRS
[204] STEREO
[205] STOCK
[206] STORAGE
[207] STRIKE
[208] SUMP
[209] SUPERVISION
[210] SWIMMING-POOL
[211] SYSTEM *
[212] TAMPER
[213] TELEVISION
[214] TEMPERATURE
[215] TIME
[216] TOOL
[217] TOP
[218] TRACK
[219] TRAP
[220] UNDER
[221] UNIT
[222] UP
[223] UPPER
[224] UTILITY
[225] VAULT
[226] VENT
[227] VIBRATION
[228] WALKWAY
[229] WAREHOUSE
[230] WASHROOM
[231] WATER
[232] WEEKEND
[233] WELL
[234] WEST
[235] WINDOW
[236] WINE-CELLAR
[237] WORK
[238] YARD
[239] ZONE *
[240] THERMOSTAT *
[241] *Not Used*
[242] *Not Used*
[243] *Not Used*
[244] *Not Used*
[245] ***(2 Second Pause)***
[246] Custom Record #1
[247] Custom Record #2
[248] Custom Record #3
[249] Custom Record #4
[250] Custom Record #5
[251] Custom Record #6
[252] Custom Record #7
[253] Custom Record #8

ESCORT System Words

AC
ALARM
ALARMS
ALL
AN
ARE
ATTENTION
AUTOMATION
A.M.
AUTO
ARMING
ANY
ACTIVE
AUDIO
APRIL
AUGUST
ASTERISK
AVAILABLE
AGAIN
AUXILIARY
BATTERY
BEFORE
BYPASS
BYPASSED
BYPASSING
BEEN
BUSY
BABY
CALL
CHANGE
CHIME
CLOSE
CODE
COMPLETE
CLEAR
CLEARED
CARPORT
COATROOM
CANCEL
CHECK
COMMUNICATION
CHUTE
CELSIUS
COOL
DATA
DATE
DELAY
DENIED
DIGIT
DIGITS
DOOR
DEFAULT
DECREASE
DECEMBER
DEVICES
DEVICE
ENTER
EIGHT
ELEVEN
FAST
FAULT
FOR / FOUR
FROM
FLUID
FIVE
FIF
FAULTS
FUNCTIONS
FRIDAY
FUNCTION
FEBRUARY
FAHRENHEIT
GLOBAL
GOODBYE
GRANTED
HAVE
HELLO
HAS
HUNDRED
HELP
IN
INCOMING
INCORRECT
INDIVIDUAL
INVALID
IS
ITEMS
INTRUSION
ITH
INCREASE
INPUT
JANUARY
JUNE
JULY
KEY
KEYBUS
KEYPAD
KEYS
KEYPADS
LINE
LOCKOUT
LAST
LIST
LABORATORY
LANDSCAPE
LOG
LATER
MEDIUM
MEMORY
MONTH
MACHINE
MORE
MONDAY
MUSIC
MARCH
MAY
MESSAGE
NEW
NEXT
NO
NOT
NOW
NINE
NOVEMBER
NEGATIVE
OF
OFF
ON
OPEN
OPTION
OPTIONS
OVER
OVERFLOW
OVERHEAD
ONE
OH
OR
OCTOBER
O'CLOCK
OCCUPANCY
PHONE
POUND
PRESENT
PRESS
PREVIOUS
PROGRESS
P.M.
PARTITIONS
PLEASE
PROGRAMMING
PROGRAMMED
PROCEEDING
QUICK
RATE
RECEIVE
REQUIRED
READY
RECALL
RECALLED
REMOVE
RETURNED
REST - ROOM
RD
REMOTE
RETURN
SECTION
SECURE
SELECT
SELECTION
SERVICE
SETBACK
SLOW
SPECIAL
SPEECH
STAR
SAFE
SCHEDULED
SET
SPECIAL - FUNCTIONS
SIX
SEVEN
SECOND
SUNDAY
SATURDAY
SEPTEMBER
STAY
SETTING
THE
THEN
THERE
TEEN
TROUBLE
TURN
TURNING
TO / TWO
THREE
TEN
TWELVE
TY
THIR
TWENTY
THOUSAND
TH
TROUBLES
TUESDAY
THURSDAY
THIS
TEST
TWENTY - FOUR - HOUR
TRY
TRANSMITTERS
THIRD
THERMOSTAT
UNABLE
USING
USER
USERS
USE
VOLUME
VACUUM
WARNING
WITHOUT
WORD
WEEK
WEDNESDAY
WALK
WIRELESS
YEAR
YOU
YOUR
ZONES
ZERO

SPECIAL INSTALLER FUNCTIONS

[901] INSTALLER WALK TEST MODE ENABLE / DISABLE

NOTES: Walk Test should always be entered from the normal state ([*][8][INS Code][901]).
Fire Troubles are not supported in Walk Test.
The option "Fire Bell is Continuous" should not be used in Walk Test.

[904] WIRELESS MODULE PLACEMENT TEST

[990][Installer's Code][990] INSTALLER LOCKOUT ENABLE

- ENTER [990] [INSTALLER'S CODE] [990]

[991][Installer's Code][991] INSTALLER LOCKOUT DISABLE

- ENTER [991] [INSTALLER'S CODE] [991]

[992][Installer's Code][992] RESTORE MAIN CONTROLLER DEFAULT PROGRAMMING

- ENTER [992] [INSTALLER'S CODE] [992]

[995][Installer's Code][995] RESTORE ESCORT FACTORY DEFAULT PROGRAMMING

- ENTER [995] [INSTALLER'S CODE] [995]

[996][Installer's Code][996] RESTORE RF FACTORY DEFAULT PROGRAMMING

- ENTER [996] [INSTALLER'S CODE] [996]

[999][Installer's Code][999] RESTORE ALL WLS9000 FACTORY DEFAULT PROGRAMMING[xxviii]

- ENTER [999] [INSTALLER'S CODE] [999]

15.0 Document Revision Endnotes

Note #	Revision	Section	Changes
i	1.01	Section 4.3	Added new plastic numbers for Deflector and interface plate.
ii	1.01	Section 4.3	Added the Acuity microphone shroud to the Plastic section.
iii	1.01	Section 5.2.1	Elaborated on Status.
iv	1.01	Section 5.2.1	Elaborated on the Volume Function Key.
v	1.01	Section 5.2.2.2	Removed “TBD” and replaced with “no presets” for the label programming of the Panic Pendant.
vi	1.01	Section 5.2.8	Changed section of Alarm Tone Period to Section [807], Sub [030].
vii	1.01	Section 5.2.13	Added Function Key Programming in the ESCORT.
viii	1.01	Section 5.2.14	Added new log for Module Placement Test Unsuccessful.
ix	1.01	Section 8.1	Changed Hardware Default to use Green to Black.
x	1.01	Section 8.2.1	Removed Zone Definitions 7 and 8.
xi	1.01	Section 8.2.6	Redefined the Hardwired Zone Loops’ location/programming.
xii	1.01	Section 8.2.7	Updated the Annunciation Options.
xiii	1.01	Section 8.2.9	Changed the Wireless Bit = OFF to Not Used.
xiv	1.01	Section 8.2.18	Added function key programming.
xv	1.01	Section 8.2.17	Exchanged Sections 992 and 999 (999 now defaults all; 992 defaults the Controller).
xvi	1.01	Section 9.1	Changed the DLS-3 version from v1.10 to v1.20; added the Driver Pack, and removed DLS-1 support.
xvii	1.01	Section 10.0	Moved Function Key Programming.
xviii	1.01	Section 10.0	Local and Remote Annunciation has been moved from Section [040] to Section [017].
xix	1.01	Section 10.0	Made Zone Definitions 7 and 8 not used.
xx	1.01	Section 10.0	Removed redundant *Not Used* Reporting Codes.
xxi	1.01	Section 10.0	Restructured the Handheld Keypad/WLSKey Function Key Options.
xxii	1.01	Section 10.0	Changed Hardwired Zone Programming from the main programming into Section [804].
xxiii	1.01	Section 10.0	Moved Function Key Programming to the ESCORT (Section [807]).
xxiv	1.01	Section 10.0	Removed Service Code.
xxv	1.01	Section 10.0	Removed [*][5] access and System Access; moved Clock Options to Bit 1; added Door Chime Control.
xxvi	1.01	Section 10.0	Removed Programming Lockout Count and Duration.
xxvii	1.01	Section 10.0	Moved Alarm Tone Period feature to the ESCORT (Section [030]).
xxviii	1.01	Section 10.0	Exchanged Sections 992 and 999 (999 now defaults all; 992 defaults the Controller).